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THE CROPS FOR ACID SOILS.

Why the Land is Sour.

PART I.

For the past 20 years a good share of our farm-teaching efforts at the East has been devoted to trying to make misfit crops feel at home. In the northeastern part of this country the soil is naturally acid, yet we have been working on the proposition that clover, Alfalfa and similar crops, which belong to an alkaline soil, should be made the foundation of our farming. This is responsible for the immense use of lime, which is growing all over the Eastern States. Our soil is naturally acid, and unless it be artificially sweetened by the use of lime, such crops as clover, wheat, Alfalfa and Timothy will not thrive. Where lime is cheap the practice is wise and economical. There are some localities where lime, laid down on the farm, is expensive, and in these cases it may be better economy to give up the effort to neutralize the soil with lime, and use crops which are naturally adapted to acid soils. Some of these crops are rye, vetch, cow peas, Red-top, and some varieties of flint corn.

Some of the most interesting experiments of recent years are those conducted by Prof. Frederick V. Coville. A few years ago Professor Coville found that the blueberry would not thrive except in an acid soil. Most of our cultivated plants fail when the ground is sour, because nitrification does not go readily on, and thus there is a lack of available nitrogen. Professor Coville started out to find how the blueberry could find the food under such conditions. This led to a further study of acid soils and the reasons for their acidity.

What makes land sour? One chief reason is the decay of vegetable matter, especially in soils which are naturally deficient in lime. Professor Coville found that blueberries grew successfully in very acid soils which were composed chiefly of rotted oak-leaves. The fresh oak leaf contains so much acid that it is by comparison one-third as sour as pure lemon juice. Of course we know that most of our ordinary farm crops—except perhaps cranberries and strawberries—could not grow in a soil as sour as this. Notice how the grass, especially Timothy or Blue grass, dries when fresh leaves fall from the trees and decay upon the lawn. Now since the blueberry did so well in this partly decayed oak-leaf soil, Professor Coville assumed that the plant would do still better in leaf mold which had been fully decayed. So blueberry plants were started in oak-leaf mold which had been rotting for five years. But the plants failed to grow—were practically ruined, very inferior as compared with plants started in the sour oak-leaves. Yet with Alfalfa and rose cuttings there were exactly opposite results—these in the rotted leaf mold made luxuriant growth, while those in the fresh leaves showed that they were starving. Here we have the basis for a new scientific study of the soil. What is the difference between the fresh oak-leaves and the decayed leaf mold? How can the blueberry plants extract plant food and grow well where Alfalfa starves? Most of us know that rye and Red-top will make a fair growth on soil which is so sour that wheat and Timothy will fail. Here we have been taught that bacteria are needed to break up organic matter and provide plant food. These bacteria need an alkaline soil to do their best work, and as acidity increases they stop working. Yet we find that blueberry plants make a good growth in soil even more sour than picnic lemonade! How do they do it?

A PAIR OF OHIO FARM BEAUTIES AND THEIR REFLECTION IN THE POND. FIG. 1.

Here comes one of the strangest things connected with the study of soils. Fresh fallen leaves from our common trees are full of acid. The following table shows comparatively how sour they are. This table gives the number of tons of lime which would be needed to neutralize the acid in a layer of forest leaves covering one acre six inches deep.

TABLE I.—Acidity of freshly fallen leaves, in terms of lime requirement per acre.

Kind of leaves.	Acidity.	Kind of leaves	Acidity.
	Tons.		*Tons.*
White oak	25	Sugar maple	22
Red oak	16	Tulip tree	14
Silver maple	22	Virginia pine	22

The oak leaves contain so much acid that they are

one-third as sour as pure lemon juice. All farmers who have cleared off woodland know that rye and buckwheat do better as first crops than wheat or oats. It is common remark, too, that potatoes on this new woodland soil are always remarkably free from scab. We know that the scab germ cannot develop well in a sour soil. Yet after a time wheat and Timothy do better, and scab appears on potatoes. How does it happen that this soil, originally sour from the tree leaves, slowly grows sweeter?

Strange as it may seem, these leaves, though so sour, contain considerable quantities of lime. The following table shows how much lime some of them contain:

TABLE II.—Percentage of lime in freshly fallen leaves, in terms of calcium carbonate, or ground limestone.

Kiud of leaves.	Percentage of lime.	Kind of leaves.	Percentage of lime.
White oak	1.12	Sugar maple	4.56
Red oak	3.08	Tulip tree	5.06
Silver maple	3.31	Virginia pine	.16

Here is a curious thing. Soils containing as much lime would be considered alkaline, yet, as stated, some of these leaves are much sourer than lemonade. Professor Coville shows that this lime does not exist in the form of actual calcium oxide. It is combined with the acids in the leaf, but there is not enough of it to fully neutralize them. Thus the leaves of the silver maple are nearly as sour as lemon juice, while they contain over three per cent. of lime. Now these acids are organic and, as decay slowly goes on, these acids are disorganized and pass away as gas and liquids. The lime, however, remains, and as the acids pass off, of course the remains of the leaves are alkaline. This accounts for the fact that the blueberry, an acid soil plant, does well in the sour soil, but fails when the acids have worked out of it, while the reverse of this is true of the Alfalfa.

Professor Coville shows how soils, naturally poor in lime, may, when cleared of the forest, show for 25 years or more lime in the upper soil and considerable fertility. Trees and large plants in such soils concentrate lime at the surface. They draw this lime through their roots from deep down in the soil and store it up in their leaves. These fall filled with acid and accumulate upon the ground. The acids pass off and leave the lime, which thus slowly accumulates in the upper soil—transferred from below through the trees. That is why the timber lands in our Eastern States are found to be fertile when first cleared, though upon soils which are known to be naturally deficient in lime. After some years of cropping this lime in the surface soil fails, and there being little more to take its place the soil grows sour. This is evidently the history of many of our Eastern soils which have grown non-productive in these crops which demand alkaline conditions. Farmers who handle such soils must use lime in order to sweeten them, or plant the crops which are naturally suited to acid soils. There are crops which have the power to obtain their food under acid conditions. We shall consider them next.

FARMING ON SHARES.

This is the first of several articles on the relations between landlord and tenant. The statements here given are correct—the outcome being probably better than the average tenant receives. The landlord's side will also be given. Every turn makes it more evident that the greatest need is some plan which will permit a good tenant farmer to own and stock a farm.

For two years I have been working a farm on shares. The farm was in a run-down condition, not furnishing enough to keep the stock. The owner lives on the farm, is well fixed financially, and although our methods and opinions differ we have no quarrels. I knew this place didn't pay well, but there were so many things being done haphazard that it seemed as if a better management would make better pay. April 1st I took possession, and soon had my hands full, too. The cows were a mixture of all the breeds the country could produce. They were in a half-starved condition, some of them so weak they could hardly stand. My first move was to buy grain for them. The owner said they had never been grained before, but didn't object to standing half the feed bill.

The plowing all had to be done and the manure all got out, so I was late getting the crops in the ground. The owner buys all grass seed and lime, and furnishes one-half the other seeds. I plowed deep, turning up soil that hadn't seen daylight before in years. I sowed lime on the new seeding and had good crops, all but hay; that was light and poor quality. The new seeding was good. The veals went to market clean and in pretty good condition. The milk goes to a cheese factory. It cannot be sold in the city because the barns won't stand inspection.

In the Fall I prevailed on the owner to sell off some of the poor cows; by so doing I had enough to keep the rest without buying anything but grain. A small amount of grain seemed to go farther with these cows than it does with cows that are in the habit of being grained, but a cull cow hasn't the capacity for a big flow of milk. Feed her a big amount of grain and she is more apt to take on fat than to give more milk.

The Spring I took the place there had to be a bull bought. The owner asked my advice concerning what breed would be best. I thought here was my chance to improve the herd, and, considering the cows were mostly large, some black and white, some blue roans, and but one Ayrshire and one part Jersey, I advised a Holstein. After a few days the owner informed me the bull was bought and I was to go after him. He was a purebred Holstein bull calf three days old. Shortly after this a scrubby yearling bull was bought to head the herd till the purebred grew up from calfhood. There were no hogs kept, so I bought two pigs, the owner paying for one. We each furnish one-half the feed. Of course all the work comes to me—butchering, marketing, etc. I get one-half. At the end of the first year, when I figured up, I find this place has turned me in money less than one dollar a day. The owner said: "Well, by the time my taxes are paid, grass seed and lime and one-half the other seeds, one-half the grain bill paid, I'm afraid I won't have the interest on my money invested."

WHERE PACKING IS DONE. Fig. 2.

PACKING TABLE. Fig. 3.

Now of course I have my team nearly kept, a house to live in and gas to burn, an average of one quart of milk a day, about 20 pounds of butter made in the Winter, potatoes and some apples. But out of this $323 I have to pay my hired help, buy one-half the grain for cows, buy one-half seed corn, seed potatoes, millet and oats, pay the thrashing bills and hire a binder. This year I have done no better; 90 days between killing frosts cut down the green fodder, and the hay was very light. What is the trouble? My wife and I work hard, live as economically as we can, and moreover are giving good satisfaction. That I haven't got in debt is a wonder. But it seems to me that any farm with an average of 12 head of cows, vealing all calves but two a year, and selling dressed hogs ought to do better than that.

BOXING THE FRUIT. Fig. 4.

The farm is in better shape than when I took it. The stock can be kept without buying hay. The manure has been hauled directly on the fields; they being nearly level there isn't any waste, where before it had been wheeled out behind the barn till Spring and then hauled to a field and piled up in a great heap in some corner to rot, and it usually did right there. The barns are clean and warmer, a heater put in the watering trough, and the fences improved till the cattle actually stay in their own pastures. Several people have applied for this place the coming year, where two years ago no one wanted it but me. And I have been climbing over the fence in the same length the gate was in ever since I came here. When I leave here next Spring I shall have a heifer (from one of these great cows) and a good grade yearling that I bought to take with me, also experience.

Lack of capital has prevented my raising paying crops, such as potatoes, for all of my time had to go to raising forage for these cattle. I wanted to do the farming in a more modern way, but the owner objected, and, as I said in the beginning, we have had no quarrels, but I would like sometimes to get the owner to the cow barn in hearing of the cows and express my mind fully. I am done farming on shares. When I work another farm it will be one I have bought and run in debt for. Take the one-half you have been handing your landlord and pay your taxes out of it and such improvements as you must have; you ought to have a few dollars to pay on your place; but don't take a farm to work on shares that has more cows than it can support. Better that the owner of the place has to depend on it for a living, for then they are interested and see the necessity of improving. But this one says, "Go ahead and improve all you want to, but don't make me pay for it." E. D.

THE USE OF RAW ROCK PHOSPHATE.

In looking over some old copies of THE R. N.-Y. I found an article on page 400 year 1909, in regard to raw rock phosphate, which goes to show that this material is of small benefit, and that manure does not make the phosphate available. If this is true I am in for it, as I have a carload (delivered last Spring) and a 20-acre field covered (before silage corn) with manure and raw rock at rate of 600 pounds per acre, 15 loads manure per acre. This was sod, Spring plowed, sandy loam. Corn was drilled three feet apart, six inches in row. The dry weather fired it at the bottom quite a little and otherwise damaged the growth through lack of moisture, so I cannot know if phosphate helped either way. I have finished plowing this for oats and potatoes next Spring, and have been hoping for great things from manure and phosphate. Can you tell me whether I hope in vain? Are your sources of information giving out the same statements now? Prof. Hopkins of Illinois Experiment Station seems to consider this material the proper stuff to use now in preference to high-priced available fertilizers. J. R. B.
Middle Grove, N. Y.

It is true that we reported four years ago some experiments in which it was shown that mixing the raw phosphate with manure did not make the phosphate "available." Since that time many other experiments have been made both East and West, yet the controversy is still open. Most of our expert scientists at the East seem to agree that on our thinner acid soils and with our special crops it pays better to use an "available" form of phosphoric acid like acid phosphate or bone. As a rule, they are not enthusiastic over raw phosphate. On the other hand, a number of farmers are using the rock phosphate and speak highly of it. When we get them down to facts they cannot really show results, but anticipate them in the future from what *ought to be*. On the other hand, it seems to be settled that in parts of Illinois, and perhaps in Ohio and Wisconsin, the raw rock has given definite and evident results. It does not seem possible that the Experiment Station of Illinois would continue to advocate this rock phosphate as it does unless it were now sure of its ground. So far as we can learn, the best results are obtained on soils rich in humus and highly manured and naturally deficient in phosphorus.

Across the river from Illinois, in Missouri, quite different results are noted. In that State good farmers tell us frankly that they have not been able to secure anything like the returns from rock phosphate which are mentioned by the Illinois Experiment Station. They find after fair trial that the more soluble forms of phosphoric acid, like bone meal and acid phosphate, have proved more profitable; yet there are cases where raw phosphates have done remarkably well. The difference in these results is ascribed to the fact that some soils, and particularly some in Illinois, are not only low in natural phosphates, but are high in organic matter. Of course, a soil naturally low in phosphates is one upon which the rock phosphate would be expected to give best return. On the other hand, a soil naturally supplied with phosphates, but low in organic matter, would give more profitable and quicker results with the available phosphoric acid. Thus we think the Missouri Experiment Station, as a general proposition, recommends the use of raw phosphate chiefly for farmers who own their own land, and who either grow cover crops or turn under a rich clover sod. The man who owns his own farm can afford to wait for slow results from the raw phosphate. If he is a tenant he would be more likely to obtain immediate results from the acid phosphate or bone. We think that this is a fair statement of the situation. We do not believe that our friend will lose anything from his use of the raw phosphate rock. He may be obliged to wait some years to obtain a fair showing.

PACKING BOXED APPLES.

Methods on an Eastern New York Farm.

Our crop amounted to about 1,800 barrels, the bulk ot which was sold in barrels at a satisfactory figure, graded into two sorts: each grade to be strictly uniform, all culls, wormy fruit or otherwise unfit was sold to the cider mill. Our system of packing may not strictly conform to rules laid down by agricultural colleges, but I found it answers very nicely when selling to private trade or to stores in our neighborhood. I had no college training, but had to learn by experience and observation.

GATHERING AND SELECTING.—I had from eight to 10 pickers at work, all Italians, who are about the only day labor to be had around here, and who will do very nicely if instructed right and kept under constant and strict supervision. This I did myself, and while doing it I employed my time by sorting out the perfect fruit as to size and color, by taking them out of the barrel after each basket emptied by a picker. This fruit I placed in boxes, putting paper between each layer of apples. These boxes we hauled every evening to cellar and stored them away till wanted for packing. The main points in this work are: Look well after the pickers, so that as little fruit as possible or none at all is bruised. Select only fruit perfectly clean, sound and of good color; size does not count so much, as we find a market for some small fruit as well as large, provided it is perfect.

GRADING AND PACKING.—We use standard bushel boxes, same as are used in every market, which can be bought as cheaply as barrels from different commercial houses, together with layer paper, lining paper and wrappers in different sizes. My packing table is 3x4½ feet, 30 inches high, and divided into three compartments, each either to hold one different size of the same variety of fruit, or to hold different varieties of same size in each. We grade all fruit into three grades except Greenings, where we only make two. I put two deep shelves under the table to hold layer paper, lining paper, wrappers, box covers, etc., and one shelf on top for tools, stamps, cards, order blanks, etc., so I have everything handy where it is wanted. The grading of the fruit can be done in two different ways, either on rainy days by emptying boxes gently on a sorting table, grading back into boxes and marking each; or by taking them, when ready for packing, direct to packing table and grading into the three different compartments. The table is 3x4 feet, four pieces, 2x4x 30 inches, for legs; four pieces of either 1½ or 2x4 inches for frame; a piece of strong burlap or canvas stretched over frame, three boards nailed to either sides and back, and it is finished. I nailed two extra strips 1½x4 inches, front and back, extending 18 inches on both sides; nailed two boards on top, and have a handy shelf on either side of table for three baskets, or box and basket. I don't like a wooden table; canvas protects fruit from being bruised.

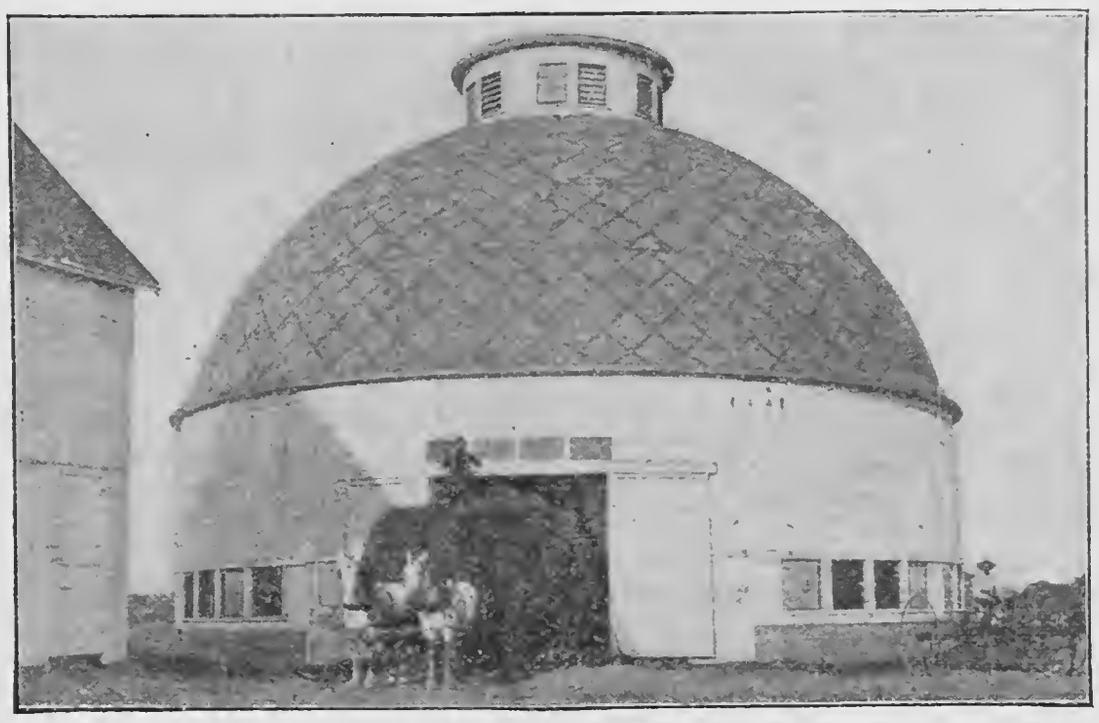
PACKING THE BOX.—I place box to my left side, pitching toward me at about 20 to 30 degrees; put piece of layer paper in bottom, line both sides with lining paper, the ends hanging over sides six to eight inches, which are turned in and protect top after box is filled. Our standard grade is 96 apples to a box, 24 to a layer, four layers to a box; every apple is wrapped in paper and placed in box, stem up. A paper is placed between each two layers. This way of packing is, I believe, the most approved one; but you will find it often hard to have 24 apples exactly of the size to fit the box so as to make a very tight and close pack, which must be done, and I therefore place now and then one apple "side up," when packing to private trade. I did this for some years, and never had a complaint, as the main point for the customer is size and quality. I also use apples slightly larger toward middle of box, so that I will have, when finished, a well-rounded box, showing a bulge on top, bottom and sides; it is well filled and tight, which is wanted. We also sell quite a number of assorted boxes; that means either two or three different varieties in one box, size about uniform, or two or three different sizes in box of same variety; but this is only done when so ordered by a customer. Our principle is to give him what he wants and, if possible, the way he wants it.

When packing for store trade, we employ a different packing. I wrap one apple, leave next one exposed, and so on till finished, the apples to be as even in size and color as possible. My reason for doing this is, it shows the fruit off well, enables the customer to see the fruit without having the storekeeper unwrap half a dozen apples to show and then dropping them back into box, tumbling the packing all to pieces and spoiling the looks of it. This way of packing helps him and me by making it easier for him and helping us in advertising the fruit. By packing grades of apples smaller than 96 to a box I find it often to advantage by placing fruit "sides up" into box, making thereby a closer and better pack, and it looks fully as well as with all stems up.

After box is filled an advertising card and order blank is placed on top, covered with one layer paper, both sides of overhanging lining paper turned in and top nailed down. We stamp all of our boxes with our trade mark, which is also printed on our wrappers, and adds greatly to the appearance. It is also a constant reminder to the customer when unwrapping an apple where it came from, and to order more if he is satisfied.

A lot of fruit is sold in boxes to-day, coming mostly from the West, where they raise apples of the finest size and color; but the East is able to raise apples of much better flavor and quality; so we should work and improve size and color by cultivation, proper pruning, spraying and thinning of fruit, which, I am sure, can very well be done. A nicely packed box of good sound apples sells as well, and often better, than a barrel of poorly grown and packed fruit, and it is a credit to the grower, while the latter one is a disgrace. As farmers get in closer touch with the consumer, they will appreciate this point more fully. In barrels slack packing is responsible for a good deal of trouble. Many who can grow good apples do not realize the uniform excellence required in boxed fruit. The purchaser of boxed apples has been educated by the fine Western fruit, which sets our pace. CARL KOEHN.

Westchester Co., N. Y.



A MAINE FARMER'S ROUND BARN. FIG. 5.

(See page 23.)

FITTING AN ABANDONED OLD MEADOW.

Late in the Fall of 1911 I plowed about four acres of abandoned old meadow-land that had become first pasture, then brush, and finally small wood; and it is again well on the way toward meadow. I think my process was probably too slow for most people, but I firmly believe it was more economical than a quicker one would have been. This land had been cropped about 25 years ago, but not seeded down, and had a lot of stones on top of the ground; these were loosened with a pick and drawn away with a one-horse dump cart before plowing. The condition of the land rendered a decent job of plowing impossible, but we did the best we could, and left it in the furrow without any harrowing, so as to have it freeze and thaw as much as possible. At odd times we drilled and dynamited all the rocks that would interfere with the mowing machine in the future, and then left it alone till September, 1912, when it was harrowed with the disk and spike-tooth harrows. This produced an enormous crop of stumps and stones, which were taken off with the dump cart; the blasted rocks were drawn off and the land seeded to rye.

In the Spring of 1913 this rye was turned under, and after a lot of harrowing was planted to fodder corn, except about an acre, which was planted to Delaware potatoes. It was a pretty hard proposition to cultivate, but we went through the corn six and the potatoes nine times, and each time made it better. The fodder corn was a good crop for the season, and rye was sown before the last cultivation, in preparation for potatoes next year. The potatoes were thoroughly hoed twice, kept sprayed in good shape, and dug the second week in October, and produced 237 bushels from 14 bushels of seed. This was a remarkable crop here this year, as we suffered from a terrible drought all Summer. Lots of crops in this section did not produce over 40 to 50 bushels to the acre. Before cultivating these potatoes the last time buckwheat was sown broadcast all over the piece, and at digging time had mellowed it wonderfully. The land was harrowed and sown to Winter wheat and Timothy as soon as possible after digging, and then after taking off 60 cart-loads of small stones and brush roots we rolled it. It has taken two years to get this land where we have it; it has been plowed twice to get one crop, and we have spent a lot of time getting off stumps and stones, which is a pretty slow, expensive process. But the potato land that is sown to wheat was ground to dust before it was rolled, and this could not have been done by a quick process, as it takes time to rot old sod; and I believe the action of the weather on these roughly plowed furrows was fully equal to another plowing and harrowing, and it cost nothing except a little patience. The rye and buckwheat did good work, added a lot of humus to the land and cost very little. I would therefore advise anyone wishing to break up tough, brushy land to make good use of Jack Frost, sow cover crops liberally, and get the rocks off before planting crops. I used 500 pounds of fine bone and 300 pounds of potash on the rye, 1,000 pounds of commercial fertilizer on the corn, and 1,000 pounds on the potatoes. This analyzed 5 per cent nitrogen, 8 to 8.5 per cent phosphoric acid, 10 to 11 per cent potash. The piece seeded to wheat got 500 pounds of bone and 100 pounds of potash this Fall. The net cost after deducting crops was $134.63. This includes cutting brush, fixing fence, all materials and labor, including my own time.

Connecticut. WILL W. CLARKE.

R. N.-Y.—We do not print this as a model for all farmers to follow. Comparatively few could afford to pay out $25 an acre simply to fit land for a crop of grass. We give all sides of farming, by way of contrast. Before Mr. Clarke is done with this land he will receive good interest on all his investment. At any rate, it pays to fit land as well as we can afford before seeding it down.

CROPS FOR A YOUNG ORCHARD.

On page 1320 C. E. L. asks about planting asparagus between the rows in a young orchard. After working in such an orchard for more than three years, the writer can possibly give some information of interest. The orchard is owned by Minch Bros.' Produce Co. It is in two parts, and contains about 7,000 trees, set 16 by 16 feet. One part contains about 1,500 Yellow Transparent apple trees, seven years old; about 1,100 Williams Red trees, six years old, and about 1,100 Red Astrachan trees, six years old. This part was set with rhubarb about six years ago. The plants were set in hills, making two rows each way in the orchard. This left about six feet between the plants and the trees. The plan was to cultivate north and south one time, and east and west the next. Manure was applied for the first year or two, and annual applications of one-half ton or more of a mixture of bone and muriate of potash was given. The cultivators were kept going until frost, no grass or weeds were permitted to mature seed. The rhubarb grew well and yielded fairly well. At first glance this seemed a desirable crop, as it more than paid for the cultivation and care of the young orchard. The writer has had entire charge of the pruning of this orchard, doing most of the work himself, and so has had a chance to study each tree at least once each year. I have been able to compare this part of the orchard with the other half, which, though younger by two years, has nearly caught up to the older trees in size, and is much easier to train in the proper shape.

The younger orchard has had peppers planted between the rows, allowing room each side of the tree row for the cultivator. The best crop to plant in an orchard is one which will require clean cultivation during the growing period of the trees, and which will allow one to plant a cover crop not later than August 1. Early beets, onions, potatoes and beans are good crops for planting in a young orchard.

A few of the disadvantages of a perennial intercrop are, the long season of cultivation, inducing a late, weak growth of wood, which adds to the work of pruning. The difficulty of cultivating after trees reach their third year, and there is more trouble when one tries to do a good job of spraying. The writer knows of a six-year apple orchard that has had three crops of corn in it, the trees being no larger and much poorer in health than a neighboring three-year-old orchard planted to potatoes and tomatoes. Give the trees first show. R. B. GILMAN.

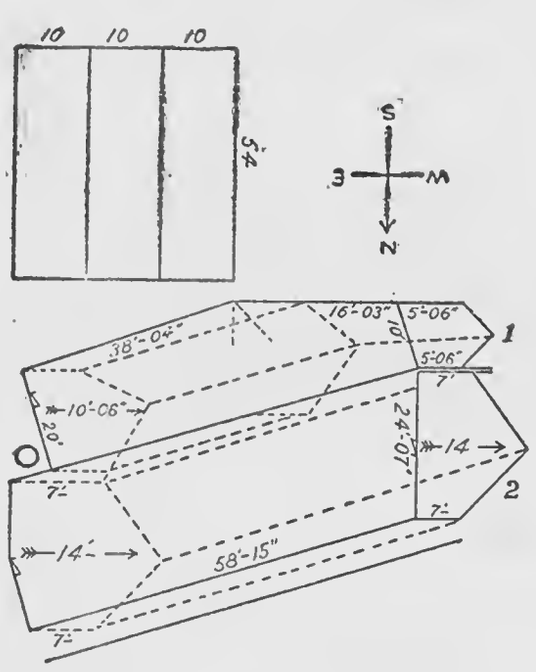
New Jersey.

PIPING A GREENHOUSE.

Diagram gives plan of our greenhouses. We have a hot-water boiler 1,050 feet radiation. House No. 1 is to be used for lettuce, with radishes for a catch crop; house No. 2 to be used for mushrooms. What size pipe, how many feet, and how should the pipe be arranged? We have always used the old system of heating. Our place is near Washington, D. C.

Syracuse, N. Y. O. M.

Greenhouse is 20 feet wide, one end; 10 feet wide at opposite end, 5 feet 6 inches high at eaves, 10 feet 6 inches ridge; temperature to be 50 degrees inside, zero outside. Mushroom house 24 feet 7 inches wide, 7 feet eaves, 14 feet ridge, 58 feet long. Heater apparently located in angle at end of houses. Heater having 1,050 square feet radiation should have 4 feet flow and 4 feet return openings. Assuming mushroom house is constructed as such houses usually are, to give best results, with double sides and roof, packed with about 6 inches to 8 inches sawdust between, about 150 square feet radiation would be required. To obtain this either 252 feet 2-inch pipe, 315 feet 1½-inch, or 345 feet 1¼-inch pipe would be necessary. Either size pipe could be used to good advantage. My preference for so short a house would be 1¼-inch, using six lines, three flows and three returns, placed at bottom of walks, so as not to dry off surface of the beds, as it is desirable to keep heating surfaces as far away from mushroom beds as possible.



PIPING GREENHOUSE. FIG. 6.

The greenhouse should have 14 lines of 1¼-inch pipe at wide end, and 10 should be carried through to narrow end, using half flows and half returns. The flows should be slightly higher than the returns, and run up hill to far end of house, which end should be at least six inches higher than at boiler. Give returns same fall toward boiler, or more if possible. An expansion tank of eight-gallon capacity should be placed 10 feet if possible above boiler, and each flow pipe at far end of house must have an air-cock so the system can be kept clear of air. Connect expansion tank to return pipe at boiler. Be careful to have all flow pipes continually ascending and all returns continually descending. Top of boiler should be several feet lower than flow pipes in mushroom house if possible. ELMER J. WEAVER.

QUESTIONS ABOUT ASPARAGUS.

In Spring, just as soon as the ground is ready for working, I sow broadcast through a fertilizer distributor a ton and a quarter (2,500 pounds) of fertilizer of the following analysis: Nitrogen, equal to ammonia, 4 to 5%; available phosphoric acid, 6 to 8%; total phosphoric acid, 7 to 10%; potash, actual, 10 to 11%. I do not put any other fertilizer or manure on land during year. Do you think I am making a mistake in putting on all the fertilizer at once, or shall I reserve some until I have done cutting for the season? Some around here use kainit after cutting for two or three weeks; do you think it pays? Some time ago you mentioned that lime killed out chickweed and also improved asparagus land. How much lime to the acre should be used, and what kind (crushed stone or air-slaked)? Could fertilizer be diminished or entirely eliminated the Spring that lime is put on?

Concord, Mass. J. B.

I should not put on 2,500 pounds of any ready mixed fertilizer. If this amount was applied to an acre, should apply 1,500 pounds in the Spring and remainder late in June. Kainit has proved of value on sandy lands, but should not apply on heavy soils. Most farmers would be better off if they mixed their own chemicals. Lime helps asparagus very much; use 2,000 pounds to the acre, and harrow in in the Spring. Air-slaked lime is good to use. If marl or limestone is used more will be necessary. Marble dust can be purchased and laid down in Concord for $3 per ton, and if this is ground fine enough should give good results. I should not use quite so much fertilizer when lime is applied. Asparagus needs about 160 pounds of available nitrogen, 230 pounds of potash and 125 pounds of phosphoric acid. Chemicals will be the cheapest form to get the above plant food. If no manure has been used perhaps it would be well to apply five or six tons of manure to get the humus necessary. Muriate of potash is best to use. Bone, acid phosphate or slag may be used for the phosphoric acid, and nitrate of soda for the nitrogen. Cover crops will soon be used in the culture of asparagus, thus increasing with very little cost the vegetable matter and humus in the soil, and giving large quantities of nitrogen, thereby saving the purchase of the costly nitrate of soda. In growing asparagus first get the best rust-resistant stock, mix your own chemicals, grow cover crops before and after the asparagus is set, and one will be surprised at the results. C. J.

MORE ABOUT COVER CROPS.

Under the caption "Cover Crops in Kansas," you refer to me, page 1301, as "opposing the cover-crop plan." You quote from a Kansas paper a story of potato growers in the Kansas River Valley who sow turnips after their early potatoes and plow them under in the Fall for green manure. You continue, "This may mean a combination of cover crop and Fall plowing." That is exactly what it is, and it is a combination that has done much toward putting the Kaw Valley on the map as a potato-growing district. Let us go back to the beginning: "Hope Farm Notes" proposed the Winter cover crop as an all-around good thing. I moved to amend, page 1206, by "excepting the average grain and stock farm," on the ground that a Winter cover crop would prevent such farmers from plowing in the Fall, preparatory to their Spring seeding and planting. The argument in favor of Fall plowing had recently been ably stated in your columns by H. E. Mern. I referred to his articles rather than restate the argument.

My opposition to the cover crop runs to only one variety of it, viz., the *Winter* cover crop; and that for only one class of farmers, viz., the "broadcast farmers," whose Spring work is their heavy work, and who, as a rule, haven't teams enough or help enough to both plow and plant their large acreages in a thorough manner in the short interval that comes "north of the Ohio," between the frost and mud of Spring and the traditional sign for planting to be done—"the hickory leaf as big as a rabbit's ear." For fruit and truck farms, like Hope Farm, the cover crop has a wider use.

Those Kansas potato men you mention—of whom I am one—furnish a case in point. The potato crop in the "bottoms" of the Kansas River is increasing every year. Between Topeka and Kansas City there were probably 15,000 acres of potatoes harvested last year. Preparation has been made for a much larger planting next year—in round numbers, perhaps 20,000 acres. Practically every acre of that prospective potato "patch" is now plowed and waiting for the disk-harrows to start, as soon as the soil is dry enough next Spring. Cow peas, Soy beans, rye, oats and turnips have all been tried to follow potatoes, when dug—ordinarily by August 1. Turnips are the favorite follow crop. But whatever the follow crops may be, all are turned under before it freezes up. The Kansas custom is to double-disk this Fall plowing as soon as the ground is fit in the Spring, which will be ordinarily several days earlier than it would do to plow, and then planting begins. Anything that would postpone the planting until the land could be plowed would be regarded as a calamity.

Kansas. EDWIN TAYLOR.

Up in Alaska there used to be a district attorney who was long on native oratory but short on education. Once, while prosecuting a big case, coming to the finish of his argument, he leaned across the rail and made this plea: "All I asts of you, gentlemen of the jury, is that you now retire and mete out justice as she deserves to be met!"—Toronto Saturday Night.

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RAILROAD WORM IN APPLES.

What is the best practise to pursue to stamp out, eradicate and destroy the cause of "railroady" apples? A. F. D.
Fall River, Mass.

I would say to anyone who would stamp out, eradicate and destroy the cause of railroady apples that he has a large job on his hands, especially if surrounded by neighbors who raise Fall apples which are allowed to decay under their trees. The trouble with the writer's apples is caused by a small fly which lays the eggs from which the maggots are hatched that cause the railroady appearance in the flesh of his apples. The only practical way known at present to keep them in check is to destroy all such fruit before the maggot leaves the apple. As the fly makes a small puncture in the skin of the apple and there deposits the egg, and the worm as soon as hatched enters the flesh of the apple, spraying as yet, has not proved effective in destroying them. Hard apples with tough skins are rarely attacked, but the earlier soft-skinned and fleshed varieties prove an ideal place for them to breed, and where growers will not unite in destroying such fruit perhaps the most practical way is to raise those varieties less subject to their attack. H. O. MEAD.
Massachusetts.

HANDLING THE SUNFLOWER CROP.

I noted your call last year for information as to care of sunflower seed, also note in a recent issue a writer's views on sunflower seed for fowl; never noted any bad effects from liberal feeding. I have never taken much interest in flower raising of any kind, except sunflowers. Back in the sixties I got the name "sunflower"; rented a piece of land and planted sunflowers around the field and up through bare spots in center. I think they are the most beautiful, easiest raised and all around beneficial flowers on earth. If you do not think so plant a few the coming Spring, and watch them grow. Give them a little care until one foot high; will take care of themselves after that. Notice the strong sturdy plant, with great large green leaves, which cattle and horses relish when green; now note the flower sometimes as large as 14 inches across, with their head turned toward the sun in the morning and nod to it until satisfied, as it were, and then gently bow until following morning, and when matured meekly bow its face toward earth and await man's time to gather. There are several kinds that do well with us, so there is no trouble in having flower seed for fowls from August until snow falls. We had this year; in fact we plant all times from April until July 12, any vacant spots in or around garden, along fences, bare spots in corn, potatoes or beans. They do best where they can grow well above their company; not more than one plant in a place, when hoed first time. No fear of planting too early in Spring, for I have often seen them do well after lying on ground all Winter farther north than New York State.

As to taking care of seed for Winter, have just finished caring for ours, about four bushels. Let them stand until you wish to shell. We have a three-wheel cart, handiest thing on place. The box holds about four bushels, cut off head and thump them against side of box and all good ripe seeds will shell. Throw the remainder with head in hen or pig yard and watch them save the rest; in fact horses will eat the green leaves with eagerness. I considered I could shell one-half bushel per hour alone. I put seed in a coarse bran sack and leave them around in wind and sun a few days, then hang up so rats or mice cannot get on them, as they will try some cute ways to get in bag. If they do you will have naught but shucks in Spring. I have priced them at times in feed stores, and never saw them offered at less than $3 per bushel. In buying prepared fowl feed first thing will show you the few flower seeds, where our fowls have had all they could eat so far this Summer and Fall, and about four bushels for Winter and seed. I just finished yesterday shelling and cutting stalks in stove lengths stored in woodshed. J. H. B.
Collins, N. Y.

PRACTICAL TILE DRAINING METHODS

PART III.

LAYING THE TILE.—After the grading is finished I lay the tile with the hook described. It is easier and quicker for me to lay the tiles with such a hook than by hand, but an expert who worked for me preferred to lay them by hand. He had done most of his ditching in marsh land in Illinois, and usually only dug from two to 2½-foot ditches, which were easier to lay tiles in by hand. I take a tile on the hook, lower it into the ditch, and lay it snugly against the last tile laid in the rounding groove cut to fit it. If it does not make a tight joint I turn it by lifting the hook quickly with a sidewise motion. Here is where the advantage of a straight ditch, well graded, becomes apparent. If straight, the tiles give very little trouble about making tight joints. One must occasionally take out one tile and try another, but not often. After the tiles are laid I throw on some of the fine clay from the bank to hold them, or else shake down some of the subsoil with a spade, walking on it to pack it. I finish filling the ditch with a plow. I cut a pole 12 or 15 feet long and hitch a team to each end and a plow to the middle. Three men and two teams can fill a 40-rod ditch in less than an hour, as two or three bouts are sufficient.

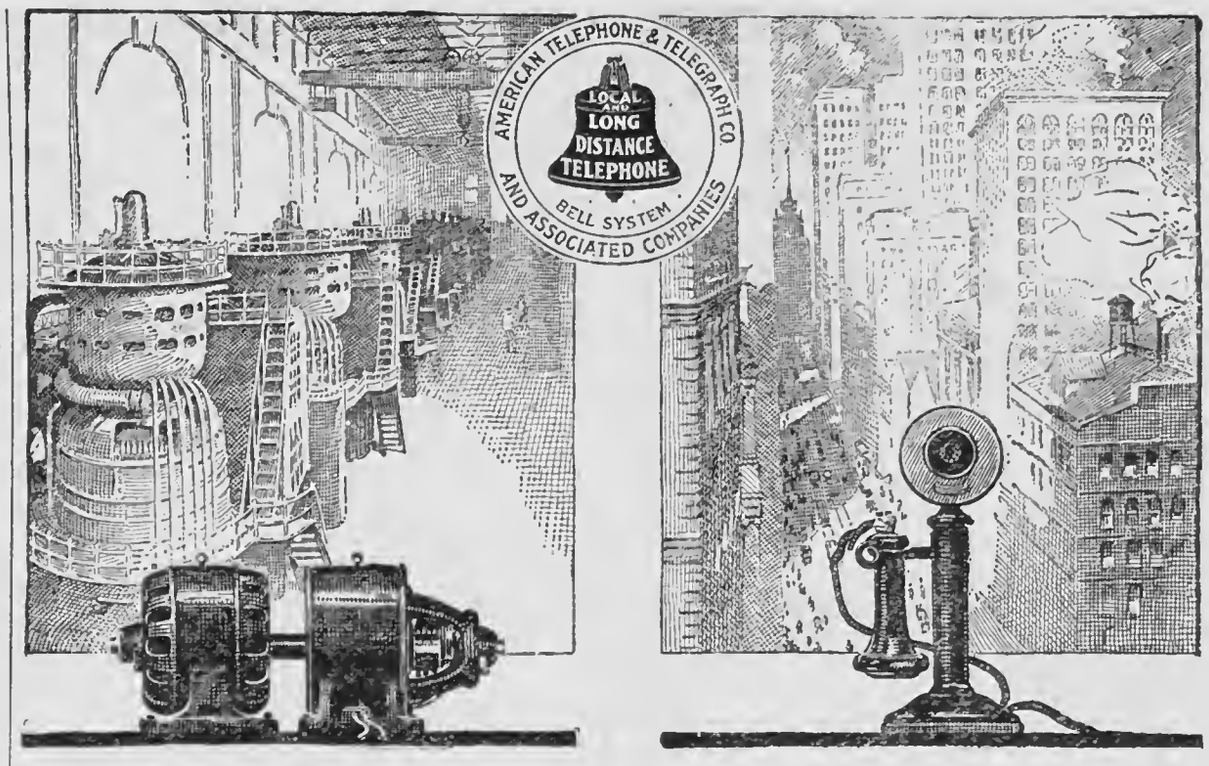
OTHER HINTS.—If I wish to put my tiles down four feet I dig three cuts with the 18-inch spade; two cuts with a 22-inch spade makes three feet four inches. Where possible it is well to plow the piece to be drained in such a manner as to leave a dead furrow where each ditch is to be. Then, by running a plow once more in the dead furrow, one can have his tiles down four feet by digging a ditch three feet or three feet two inches deep. In putting in an eight-inch tile I timed myself for speed. I easily dug one rod and a half of first cut, or one rod of second cut, per hour, in some very stiff clay, digging to grade and cleaning out as I went. This would make a little over six rods in eight hours. One can dig faster where the ditch needs to be only five inches wide instead of a foot. (The above was dug to a depth of three feet four inches.) There seems to be a prejudice against ditching. It is considered dirty, hard work. If performed in the manner which I have described it is not very dirty—certainly not so dirty as handling manure. In deep ditches a pair of slicker pants, cut off below the boot tops, and worn outside the boots, afford a great protection. Much water in the ditch is a disadvantage sometimes encountered in laying large mains. A furrow can frequently be plowed on one side of the ditch and the water diverted. This is a great help.

SIZE OF TILE.—It is hard to give advice as to the size of tile to be used. For laterals with a reasonable fall two-inch is large enough for most places. In quicksand three-inch or larger should be used. For very long laterals some larger tiles on the lower end would be advisable. For mains I should say a three-inch main would drain up to five acres, a four-inch 10 acres, five-inch 15 acres, and a six-inch 25 acres. These sizes are large enough to carry off one-half inch of water in 24 hours on a grade of six inches per hundred feet. In case of indecision between two sizes of tile I should advise that the larger be used, as the larger part of the expense of tiling is in digging and filling the ditch, and it is better to use a little larger tile than to risk having to reopen and relay a drain.
ALBERT DE GRAFF.

THE teacher, who was giving the primary class a nature talk, inquired: "Johnnie, how does a bee sting?" Johnnie, a graduate from the school of experience, replied with emphasis, "Awful!"—Judge.

"JOHNNY," the teacher asked, "can you tell me anything about Christopher Columbus?" "He discovered America." "Yes. What else did he do?" "I s'pose he went home and lectured about it."—Chicago Record-Herald.

A NEW York man in Boston was overtaken by hunger late one night. He entered a quick lunch restaurant, perched himself atop of a stool, and said to the waiter: "Sinkers and coffee." "Sinkers? Sinkers?" said the waiter. "To what do you refer, sir?" "Sinkers are doughnuts in New York," the customer explained. "Oh, I beg your pardon," replied the waiter. "Here we always refer to them as submarines."—New York Tribune.



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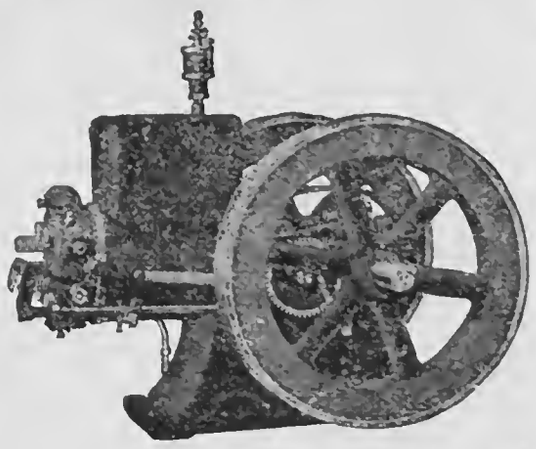

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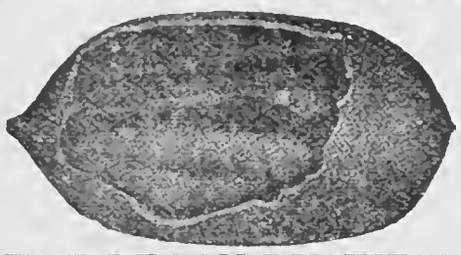

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EVENTS OF THE WEEK.

DOMESTIC.—Divorcement of the Western Union Telegraph Company from the American Telephone and Telegraph Company, the restoration of competition by the Bell system and the establishment of reciprocal relations between the Bell concern and independent lines are the essential features announced Dec. 19 of an agreement reached by Attorney General McReynolds and N. C. Kingsbury, vice-president of the Bell corporation, as a result of negotiations covering several months. The reorganization plan, which will prevent litigation to dissolve that corporation under the anti-trust act, originated with the company, although it followed many reports that a suit against it might be filed. It was regarded by Department of Justice officials as the most striking indication offered in a decade that "big business" has come to the conclusion that it is better to follow the Sherman law than fight it. The plan meets not only the approval of the Attorney General but also of his chief "trust buster," G. C. Todd, and officials of the subsidiaries of the combine, as well as President Wilson.

The second fire within eight days in the plant of the Rock Plaster Company, at 150th street and the East River, New York, destroyed a two story brick building used as a barrel factory Dec. 21 with a loss of $25,000. The plant suffered a $500,000 fire on the night of December 13.

Bart Dunn, Tammany leader of the Eighteenth Assembly district, Manhattan; Joseph J. Fogarty, an inspector for the State Highways Department, and the Dunbar Construction Company, of which Dunn is president, were found guilty in the Supreme Court at New City, N. Y., Dec. 20, of conspiring to defraud the State in constructing a road in Rockland county. This is the first conviction resulting from one of the indictments obtained by John A. Hennessy while he was special investigator of State graft for Gov. William Sulzer.

According to the report of Fourth Assistant Postmaster-General Blakslee, there were in the United States on March 3 of this year 42,644 rural routes in operation, of which 456 had been established during the current fiscal year. From that date to June 30, 1913, there were established 163 routes and two were discontinued, making a total of 42,805 in operation at the close of the fiscal year. To serve these routes 42,685 carriers were employed, whose annual salaries aggregated $45,377,442. There was a net increase of 606 routes, 14,532 miles and 606 carriers. During the year 114 tri-weekly routes were established, while four were discontinued. At the close of the fiscal year there were 745 tri-weekly routes in operation. On June 30, 1913, the total length of rural routes in operation was 1,038,076 miles; the daily travel 1,028,603 and the annual travel 315,781,121 miles. The average length of routes was 24.25 mills, the average cost per mile $43.71 and the average cost per mile of travel $0.01437.

FARM AND GARDEN.—A regulation issued Dec. 18 by the State Commissioner of Health provides that cold storage goods in New York State in the future must be advertised and sold as such. All persons and firms retailing cold storage products must display prominently a card 8 by 12 inches on which is plainly printed the notice issued by the Health Commissioner. A further regulation makes it unlawful to remove from packages containing cold storage foods the stamps showing when the articles were placed in cold storage and when they were taken out.

The Indianapolis City Health Board recently found bottles of milk in which the cream settled upon the bottom of the bottle, instead of on the top. It was discovered that for a month many persons have been using a manufactured milk, which was sold for the real product. The milk is manufactured by mixing a powder with water and adding enough cream to give the mixture the proper amount of butterfat. This fluid stands all the tests required of real milk. The discovery of the manufactured milk was brought about when one company put too much butterfat in its newly made supply. This caused the cream to settle to the bottom of the bottles. When it was found the manufactured milk fulfilled all requirements as to the various standards the board ordered that hereafter all manufactured milk must be so labelled.

Secretary of Agriculture Houston issued an order Dec. 22 extending the temporary quarantine of the United States against foreign potatoes so as to include importations of potatoes from Newfoundland, the islands of St. Pierre and Miquelon, Great Britain and Ireland, Continental Europe and the Dominion of Canada. This quarantine became effective on December 24, except that shipments covered by consular invoices on or prior to December 24 will be admitted up to January 15, 1914. Secretary Houston makes it plain that there is no potato shortage in the country. It has been contended that if the quaranitne was extended there might be a potato famine here and prices would soar. The embargo practically includes every country from which the United States can receive potatoes, but as soon as any country or district can be shown to be free from potato diseases the quarantine will be lifted. The object of the quarantine is to protect this country from powdery scab and other infections of potato plants.

The highest Christmas tree ever brought to New York was erected by the city authorities in Madison Square Park. It cost $500. This tree, a balsam, is 68 feet in height. It was erected on a 10-foot base, which will make the total a trifle over 75 feet. The tree was cut in Canada, required two flat cars to bring it to New York and the freight was $88. The supply of Christmas trees this year was lighter than last. Ordinarily it takes 150 carloads to supply the city.

THE CURRENCY BILL.—The Administration currency bill was passed Dec. 19. It includes the following features:

A Federal Reserve Board composed of the Secretary of the Treasury and six members, to designate not less than eight nor more than twelve reserve districts, each with a Federal reserve bank.

National banks must and other banks may subscribe to the stock of reserve banks. If the stock subscription is inadequate, stock may be offered to the public.

Of nine Directors of each reserve bank, three are to be designated by the Federal Board.

Stockholders are to receive dividends up to 6 per cent.

Reserve banks are to rediscount paper of other reserve banks.

Employes of the Federal Board are not to be protected by the civil service.

The Government is to make deposits in Federal reserve banks, which are empowered to discount notes, etc., arising from actual transactions.

Notes, etc., based on live stock and agricultural products and maturing in six months may be discounted.

Circulating notes are to be issued by Federal reserve banks and circulated by the member banks.

Every Federal reserve bank must maintain reserves in gold or lawful money of not less than 35 per cent.

The amount of gold in each Federal reserve bank, together with the amount deposited by it with the Treasury, shall equal 40 per cent of the Federal reserve notes in actual circulation.

Federal reserve notes shall be secured by commercial paper of prescribed character and maturity.

Not less than 5 per cent gold for redemption of Federal reserve notes must be maintained on deposit in the Treasury by each Federal reserve bank.

National banks not situated in reserve or Federal cities may make loans on farm lands.

National banks may establish branches in foreign countries.

Members of Congress may not be officers or directors of member banks.

SOUTH PACIFIC VOLCANIC ERUPTION. — Further particulars brought to Sydney, N. S. W., by incoming vessels regarding the volcanic eruption on Ambrim Island, in the New Hebrides, indicate that it was the most violent shock experienced in that part of the world for a century. It is estimated that at least 500 natives have perished. The eruption began on December 5, devastating entire villages and plantations and transforming the whole face of the island. At night the flames were seen shooting a thousand feet in the air, brilliantly illuminating the whole scene of destruction. Huge bowlders were hurled into space and were silhouetted against the brightness of the flames. Dust reaching ten miles from the scene of the volcanic activity caused a great black cloud to spread from the new craters until it blotted out the light of the stars. The ocean itself seemed to boil and effervesce as huge meteors plunged into the sea and lava streams poured down the sides of the mountains and ran into the bay.

COMING FARMERS' MEETINGS.

West Virginia College of Agriculture, Morgantown, Farmers Short Courses, January 6-13; Agricultural Associations' meetings, January 13-16.

Special Farmers' Course, Rhode Island State College, Kingston, R. I., December 30-January 2.

Ayrshire Breeders' Association annual meeting, Hotel Manhattan, New York, January 8.

Farmers' week, Pennsylvania State College P. O., December 29, 1913-January 3, 1914.

Vermont Dairymen's Association, annual meeting, Rutland, Vt., January 6-8, 1914.

New York State Fruit Growers' Association, Convention Hall, Rochester, N. Y., January 7-8-9, 1914.

Kentucky State Horticultural Society, College of Agriculture, Lexington, Ky., January 8.

Peninsula Horticultural Society, annual Winter meeting, Easton, Md., January 13-15, 1914.

Massachusetts Fruit Growers' Association, convention and trade exhibit, Springfield, Mass., January 15-17, 1914.

New York State Agricultural Society annual meeting and convention, Albany, N. Y., January 20-21, 1914.

Vermont State Poultry Association, seventeenth exhibition, St. Alban's, Vt., January 20-22, 1914.

Connecticut State Dairymen's Association, Hartford, Conn., January 20-22.

Ohio State Horticultural Society, annual meeting, Cleveland, O., January 20-23, in connection with the Fifth Annual Ohio State apple show.

Virginia State Horticultural Society, annual meeting, Richmond, Va., January 21-23, 1914.

Annual Corn Show, Pennsylvania Live Stock Breeders' Association, Pennsylvania Dairy Union, Pennsylvania Horticultural Association, York, Pa., third week in January, 1914.

Forty-first annual meeting, New Jersey State Board of Agriculture, Trenton, N. J., January 29-30, 1914.

Farmers' Week, State School of Agriculture, Canton, N. Y., January 26-31.

Ohio Corn Improvement Association, Mansfield, O., January 27-30, 1914.

Western New York Horticultural Society, Rochester, N. Y., January 28-29-30, 1914.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6, 1914.

Sixth National Corn Exhibition, State Fair Ground, Dallas, Texas, February 10-24, 1914.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6-March 13, 1914.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26, 1914.

CROPS.

Corn 90; hay $8 to $15; potatoes $1; rye 70; oats 52; small fruits 10 to 12 cts. per quart. Cows on sale $60 to $100 per head; butter 32 to 42; eggs 30 to 37. Gardening is not extensively carried on.
Richland, Pa. W. F. S.

Horse sales slow just now. Cows are bringing from $50 up to $80. Beef is selling by the side for 12½ cents; pork, dressed, 11. Milk $1.85 per hundred pounds; butter 22; eggs 34; wheat 88; corn 65; potatoes 70. W. J. Z.
Dalmatia, Pa.

Cows coming fresh in the Spring $40 to $45; dry, on foot for beef, $35; yearlings $30 to $35 for beef; butter 32; eggs 40 to 48; feed about $1.60 per cwt. for meal, $1.35 for bran and middlings; potatoes 80 cents to $1 per bushel, according to quality; apples 75 to 80 cents per bushel. G. B. M.
Cortez, Pa.

Hay $15 to $18; oat straw $8; potatoes $1; turnips 50 to 75; carrots 80; cabbage 2½ cents pound; eggs 40; oats 48 to 50; cows $60 to $80; beef 8 to 10; pork 12 to 14; horses $200 to $300; butter 40 to 42; onions $1 to $1.50; milk $1.90 to $2.10, according to grade; retail, seven cents per quart; buckwheat $1.80 per cwt. T. S. R.
Carthage, N. Y.

We have a Lawrence pear tree in our front yard which looks like one of those Oregon apple trees, from the storm of November 9, when it was in a five-foot drift. Since then we have had fine weather, dandelions in bloom most of the time, and to-day I found a Narcissus, some Crocus and campernelles above ground. Farmers report unimproved roads in very bad condition from the snow and rains.
Elyria, O. W. J. M.

Fat cattle scarce, from $7 to $8 per hundred; stockers $7.25; good grade cows from $60 to $90 per head; hogs $7 to $8 per hundred; stock hogs very scarce; lard 13. Farm horses from $1.25 to $2.25. Old hens 10; springers 11; live turkeys 20; geese 13; ducks 13; country butter 30; creamery 35; fresh country eggs 30. Hay $15 per ton; white corn 62; yellow 60; wheat 93; potatoes, scarce $1 per bushel. Apples about all sold, from $3 to $5 per barrel. The people are taking a great interest in planting new apple orchards in Ross County. F. H. S.
Chillicothe, O.

Hay is now selling for $20 per ton in Washington, D. C. Milk 22 cents per gallon; fresh cows $75 to $100, and scarce; fat grass cattle $7.50 to $8 per 100; hogs 9 to 10 cents net. Corn is all needed for home use; little sold out of the county. Robert D. Weaver, of Montgomery County, recently sold his 16 head of steers to A. Loffler, the well-known Washington butcher, at nine cents per pound. When Mr. Weaver bought them their average weight was 990 pounds; when he sold them the average weight was 1,300 pounds. When dressed they averaged 70 pounds per hundred.
Ashton, Md. T. J. L.

Cows selling from $40 to $75, with registered Holstein stock $200. Good young horses, weighing about 1,200 pounds, $200 each, with higher prices for extra points. I have heard of no hog sales for a long time. The Fillmore Belfast Dairy Product Co pays $1.85 for 100 pounds December milk, for shipment to New York, Philadelphia and Buffalo. Eggs, fresh, bring in trade or cash sometimes 40 to 45 cents; creamery butter 30¼ to patrons of creamery. The dealers paid for apples $1.50 to $2 per barrel, the dealer furnishing barrel and assisting in packing. Apples by retail 60 to 75 cents per bushel. Garden crops are not dealt in very extensively here. Potatoes about half a crop, and practically none shipped frfom this vicinity. A boarding-house nearby has been trying to stock up all the Fall, and has just succeeded in getting 100 bushels for 70 cents per bushel. Dealers buying hay for shipping pay $10 to $12.50 per ton, seller to board men while baling and deliver hay to car. W. V. R.
Canadea, N. Y.

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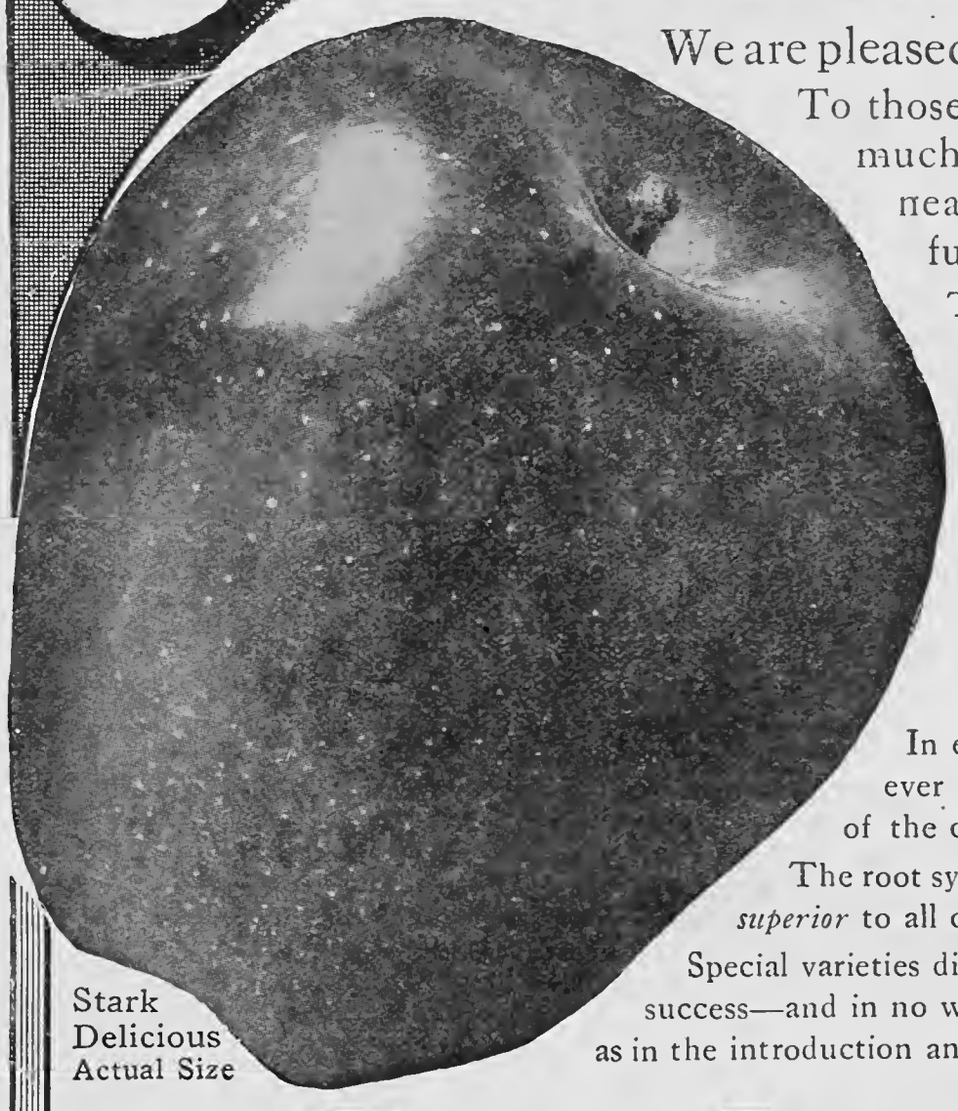

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Special varieties discovered and introduced by us have been responsible for a great measure of our success—and in no way have we served the fruit growers of this country to such profitable advantage as in the introduction and distribution of

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Practically all forest tree seeds require some sort of treatment, preparatory to being sown in the seed bed, the most common and successful of which is known as that of stratification. The seeds should be gathered as soon as ripe and should not be exposed to the air longer than is necessary for the outside of the shell or shuck to become dry, when they should be immediately mixed with damp sand to prevent the meaty part containing the germ from becoming hard and dry, as many of the seeds will fail to germinate if allowed to become thoroughly dried. Maples, elms, ash and other tree seeds of like nature are usually mixed with sand in flat boxes four or five inches deep, or placed in thin layers in the boxes with an inch or so of sand between the layers of seed, each box holding three to four layers of seed, according to its size. The after care of the boxes of seeds, that is, how they shall be cared for, depends much on the soil conditions and facilities at hand. Where the soil conditions are suitable, burying the boxes is preferable to some operators while others prefer placing the boxes on the surface and covering them with earth or clean litter of some kind, or a combination of both. If an elevated well-drained situation is available, burying the boxes will probably prove the most successful to the inexperienced. For the purpose, open a trench the width of the boxes and 15 to 20 inches deep in which place the boxes in a single row and cover them with a single thickness of one-inch boards, being careful to see that the tops of the boxes are entirely covered with the boards. Then fill the trench with earth, slightly rounding the top. The object of burying them so deeply is to prevent premature germination of any precocious individuals that may be among them. The board covering will eliminate the possible danger of destruction of the seeds by vermin, and their disturbance with the shovel when the boxes are taken out. If it is desirable or necessary to store the boxes on the surface, select some protected place, under a tree or in an open shed, place the boxes in a row and cover tightly with boards, drive strong stakes in the ground one foot away from the boxes all around, to which nail boards to a height of 18 inches. Cover the boxes up to the top of the boards with earth, or six inches of earth finishing with leaves or other clean litter, or litter alone may be used. In the storing of the seeds on the surface every precaution must be taken against the depredations from mice, squirrels, etc., and, when leaves or other litter is used alone for covering, the boxes should be examined occasionally to see if vermin has found its way into the seeds, and to water them if too much dried out. This method of storing the boxes will be found very satisfactory when the seeds are to be sown the following Spring.

The seeds of the oaks and chestnuts do not require stratifying, and may be sown as soon as ripe, but they must have protection from vermin, or all may be carried away. The ash very seldom germinates until the second year. Therefore this must be borne in mind, and the seeds be allowed to remain in the stratifying condition until the second Spring when they are to be sown in the seed bed. Mostly all forest tree seeds may be sown soon as ripe, but for the following reasons it is not advisable to do so. There is always danger of their being washed out by the Fall and Winter rains, heaved out by frost and carried away and eaten by mice and squirrels, resulting in more or less loss.

The hickory and all other hard-shelled nuts should be exposed to the sun for three or four days after gathering, when they may be buried in the ground and covered six to 12 inches deep, or, may be planted in rows 18 inches apart and four inches apart in the row. If buried in bulk soil should be mixed through them and when so handled they are taken up in early Spring and planted in rows, same as described for Fall planting. Cover about two inches deep. All Fall-sown seed should have a mulching of leaves, straw or other litter as soon as ground freezes. The mulching should be removed early in the following Spring, before the seedlings appear.

The depth the seeds of the various trees are to be covered with soil depends much on the size of the seed. The maples, ashes, etc., should be covered about one inch; oaks and chestnuts about two inches. The rule usually followed is to cover the seeds of whatever kind to a depth equal to three or four times the diameter or thickness of the seed. Seeds of maples, ash, elms, etc., may be sown in rows 16 to 18 inches apart and one inch apart in the row. The seedlings of most forest trees are as a rule transplanted to nursery rows at the age of one to two years. The rows should be four feet apart and the seedlings six to eight inches apart in the row. K.

Spring-sown Vetch and Oats.

Could Hairy vetch be sown in Spring with oats, and both cut for hay? I think it would make a possible crop, as oats here are not a sure crop. R. G. H.
Missouri.

No. The Hairy vetch would not be satisfactory. Spring vetch would be better, but we should use Canada field peas with the oats. They will give a better combination feed.

"CAN you build a stack?" said the farmer to a laborer who wanted a job. "Sure I can. I can build a stack the shape of an egg." When the stack was nearly completed, the bottom shot out and the stack came to the ground as flat as a pancake. "I thought you said you could build a stack the shape of an egg," said the farmer. "So I did. But I didn't say whether it was a boiled egg or a fried one."—Winnipeg Telegram.

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Clean and hardy—germination and purity guaranteed. Our choice home grown
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and all other grass and field seeds are the best it is possible to secure. We will send Absolutely Free samples and prices, also our new Alfalfa Guide, full of valuable information about this profitable plant. Don't buy until you have seen our samples. Write to
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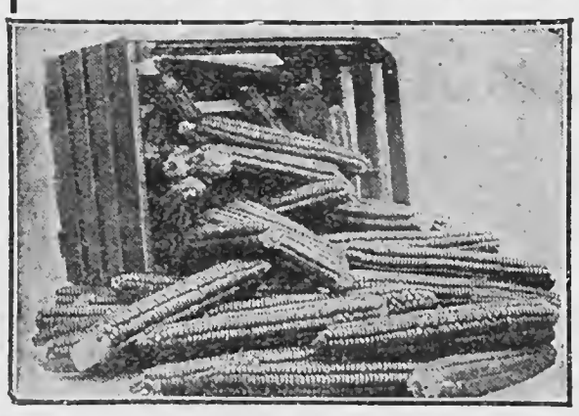
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AMERICAN POMOLOGICAL SOCIETY.

PART III.

Prof. W. R. Lazenby, of Ohio, having been in France, read a short paper on "Some Phases of French Horticulture." He told of the wonderful changes that had come about since the overthrow of the selfish domination of the kings and their courtiers, who made great palaces in the midst of vast estates for their own pleasure, to the use of these places as experiment grounds for horticulture and kindred industries, thus turning them to the good of the public. Their growing of fruits is exceedingly formal in style, and on a small scale compared with ours, but their work is well done and good returns are obtained. The vineyards have been crowded, and this has induced feeble growth and disease, but some are giving the vines more room. A few have planted grapes on both sides of rows of shade trees and trained them to spread over the tree tops and run on strands of wire stretched from tree to tree, thus giving them room to grow after a natural fashion. Many of the fine gardens are intersected by walls to which fruit trees are trained. Much of the fruit is sacked while very young and allowed to grow and ripen in the paper or muslin bags. Some use different colored bags to produce desired effects by the control of the light.

"Tropical Fruits in the Philippines" was treated by P. J. Wester, official horticulturist of those islands. He said that the cocoanut yielded the greatest value for export of anything grown there, even surpassing either the hemp or sugar industries. The form in which the product is marketed, chiefly, is copra, which is the dried meat of the nuts and is used in Europe for making oil, mainly. The banana is the principal fruit used as food, every little place having it growing for bome use. There are five edible species and about one hundred varieties found in the entire group of islands. Many of them are of small size but very soft and delicious, and others are very large and hard and are used for cooking. The papaya is next in importance for food, but is rarely grown by anyone for sale in commercial quantities. The mandarin, one of the smaller of the Citrus fruits, is very popular. The mango grows luxuriantly although little attention has been given so far to cultivating the choice varieties, only three of this class being at all common. Recently the experiment station has imported many choice varieties from India and elsewhere for trial. The pineapple is grown more for the fibre in the leaves than for its fruit, but attempts are now being made to grow the Smooth Cayenne and a few other varieties for canning for export trade. The sapodilla of the West Indies, called chico in the Philippines, does remarkably well, and is used freely, as is the case with the guava and many other fruits mentioned. The possibilities of the culture of cocoa (chocolate bean) are great but almost unknown. Fruit culture there is scarcely in its infancy as yet.

"Alaska's Pomological Resources" was ably set forth by Prof. C. C. Georgeson, Director of Experiment Stations for that territory. There is a native crabapple growing abundantly along the southern coast that yields a small fruit used extensively for making jelly, even by the natives, and it serves well as a stock upon which to grow the cultivated crabapple and a very few varieties of the hardier apples, such as the Yellow Transparent, that may be grown there in a few favored localities. A few cherries have been grown in some places along the coast, especially the Early Richmond, but with no marked success. Plums have failed and the same is true of pears and grapes. Red raspberries have succeeded, especially the Cuthbert, but the blackcaps and blackberries have failed. Alaska abounds with bush fruits of several kinds, those of the Vaccinium or huckleberry and blueberry genus being the most abundant. There are native cranberries of good quality. Some species of Rubus are found wild that are of a creeping nature, and bear rather small berries, but of good quality. Gooseberries, currants and strawberries grow wild all along the coast and in the interior to some extent. When I was in Alaska a few years ago I saw at Sitka a great many most interesting crosses that Prof. Georgeson had made between some of our cultivated bush fruits and strawberries and the native species, and they gave great hopes of securing valuable varieties. Alaska has very little in the way of cultivated fruits as yet, but there are good possibilities.

The matter of grading, packing and marketing fruits came up repeatedly, and was ably treated by good papers and also by discussions on the floor. Mr. R. G. Phillips, secretary of the International Apple Shipper's Association, strongly presented the subject, laying especial stress on the point that the western growers and packers only send their best fruit to market, whereas in the East everything was sold. This could only make a marked impression on the markets, for the buyers did not expect to find poor stuff in the western packages, but they did in those put up in the East, and were rarely mistaken in either case. If the eastern people would use the same judgment and care that the western people do there would be better profits for all. There are no regulations in the East preventing the packing and sending to market of the worst fruit that is grown, while in the West there are certain reasonable restrictions, and the growers as well as all the rest are benefited by them. The only regulations in the East are about marketing the grades, and these are often violated. The most essential point of all is that there be "a square deal." This is far too rarely given by the graders and packers and always with disastrous results in the end.

Mr. E. H. Shepard of Hood River, Oregon, was not present, but he sent a valuable paper. He stated that organization was the most important point in the whole matter of getting the most out of what the growers produce. They now only get a little over 26 per cent of what the consumers pay. By organization they may get far more, and also save in cost of production, buying things they need and in other ways. Economical and satisfactory distribution will follow proper organization. The whole Northwest has united in an organization for the purpose of establishing proper regulations as to grading, packing and sending their fruit to the markets of the world and others should do the same.

The nut growers had a convention aside from their participation in the meeting of the Pomological Society, and there were some interesting points brought out. Prof. W. W. Hutt of North Carolina gave a very full account of the growing of pecans in the South, where there are many thousands of trees of the best varieties known already in bearing, and many more not old enough, besides extensive planting still going on. There is a bright future as well as a profitable present for pecan growing. The hardiest varieties that are native to Southern Indiana and similar regions are being brought to light propagated and planted over the more Northern States, where there is every reason to expect success, except where the growing seasons are too short for the nuts to mature.

The chestnut came in for much attention and the terrible disease that is ravaging the trees in the Northeastern States. There is not yet found a ready means of stopping its spread, and no cure whatever for affected trees. Complete destruction of every tree that shows the signs of blight is the only means of fighting it, except that there is hope of growing some kinds that are immune to it. The Asiatic species are somewhat of this character. The State of Pennsylvania, where there are large and valuable chestnut orchards and groves of grafted stump sprouts, is striving to eradicate the disease with some hope of success.

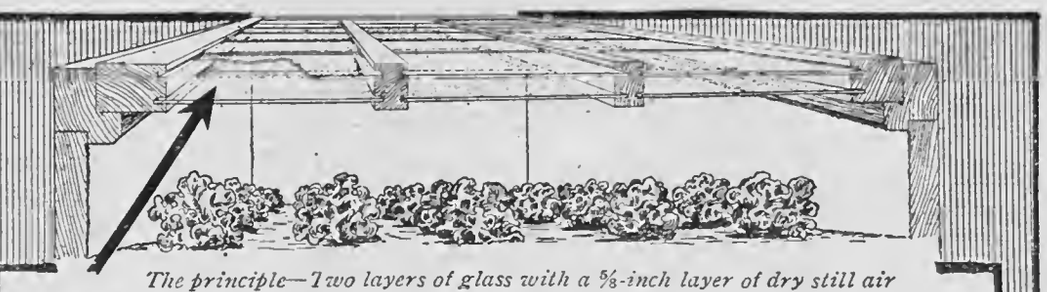
Prof. J. Russell Smith of the Pennsylvania State University gave very interesting and instructive talks about the wonderful extent to which the chestnut and acorn crops of Southern Europe are utilized. In some places they are the main crops and not only the people but the animals subsist on them. He thinks we ought to follow out and practice this idea much more than we do. Our hickories, aside from the pecan, may be a great source of profit for their nuts and their wood is always very valuable.

There was a splendid show of fruit and nuts in connection with the meetings. The best apples were from Virginia, North Carolina, New England, Canada and Washington, those of Virginia being the best of all in grade and pack. There were several extensive exhibits of seedlings, some of them being the results of careful cross-breeding. They showed some progress towards more desirable Winter varieties than many of those now grown and marketed. Notable among these new seedlings were those from the New York Experiment Station, from the Missouri Fruit Experiment Station and a lot from the Canadian Station. There were a number shown by Mr. C. G. Patten of Iowa that he has been many years in developing for the colder northern sections. A very fine new seedling Winter apple from northeast Georgia is called Rabun.

Of cross-bred Citrus fruits there was a large display from Florida that had been grown for the purpose of extending their culture farther north than is at present possible because of the tenderness of ordinary oranges. The hardy Citrus trifoliata was used extensively and some of its crosses with the sweet oranges give some hopes of partial success. The Glen St. Mary Nurseries showed a very fine lot of Asiatic persimmons and also a set of samples of trees and stocks showing that they had succeeded well in their propagation.

There was a large collection of grapes by the government expert, Mr. G. C. Husmann. The nut display was very complete, from the hickorynuts of New England to the cocoanuts of South Florida and the tropics beyond. But the most interesting and attractive exhibit was that by the Board of Trade of Miami, Florida, in which were immense clusters of Citrus fruits and many strange valuble tropical fruits as well.

H. E. VAN DEMAN.



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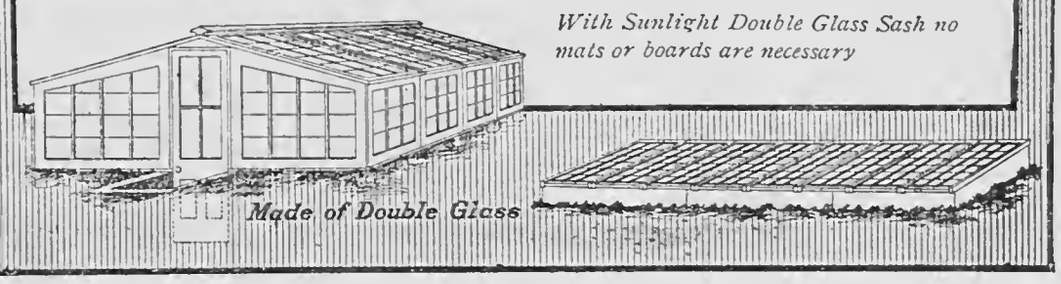

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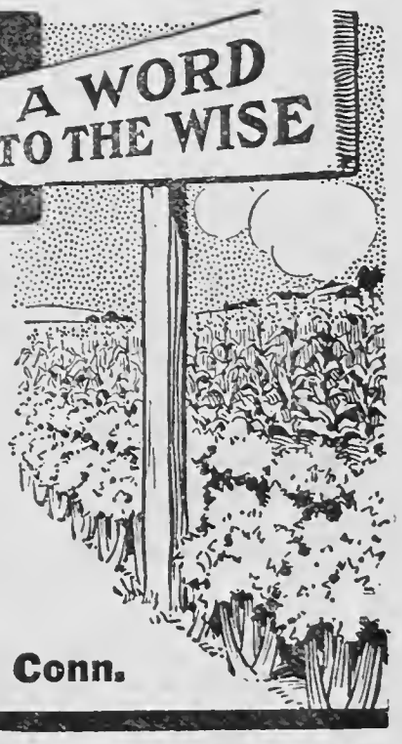

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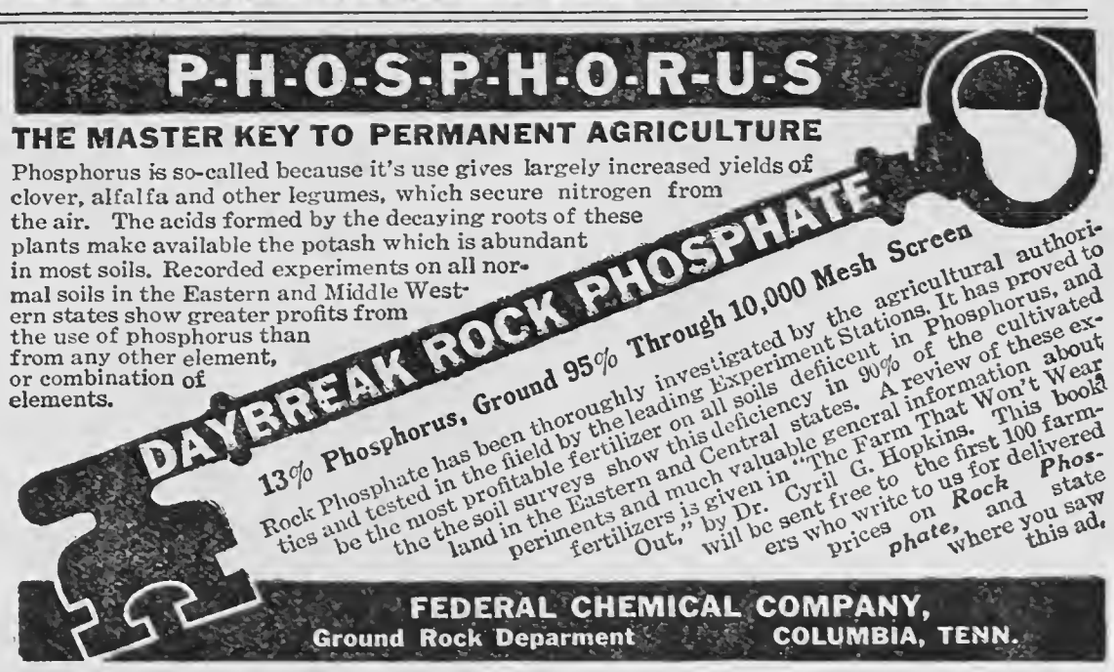

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FILBERTS IN MONTANA.

I have been a reader of THE R. N.-Y. for many years, and always found it interesting and instructive. I just read H. A. F.'s article on page 1272 in regard to growing filberts, and as I have been interested in that question for some time, I would like to ask for some information. Last Spring I wrote the Agricultural Department at Washington for information on growing filberts, but they said they had not studied the question of growing them in this section. So far as I know there is no kind of nuts growing either wild or cultivated here. I am located in what is called the Swan Valley, between the Mission and Kootenai ranges of the Rocky Mountains, near the Swan River, between the lake of that name and Flathead Lake, altitude about 3,000 feet, country pretty much covered with forest of pine, fir and tamarack. Apples, plums and cherries grow finely here, and I never saw better strawberries than can be raised here, although I have lived near the berry section of Norfolk, Va. But our market facilities are poor, as we are 23 miles from railroad, so it is necessary for us to grow something that can be marketed at leisure. I have always thought some variety of nuts on the farm would be a sound investment. Could you tell me whether nuts would grow in this locality? I would like to try filberts, as I think they would more nearly suit this locality than any other kind; but would like to hear from some one who has experience with them. Would it be best to get the nuts and plant them, or would you advise getting the seedlings? Where can I get them and when is the best time to plant? Our climate is very good, no bad storms, and the thermometer seldom goes below 10 deg. in the Winter, although down in the open country it gets considerably colder, snow gets deep back in the mountains, while here it will average about two feet on the level.

Big Fork, Mont. M. O. E.

It is almost a certainty that the filbert will flourish in the region where M. O. E. lives in Montana. I know that it is not very far west of there that the wild hazel of the Pacific Coast is abundant, and in the same region I have seen the European hazel or filbert growing and bearing without any signs of the blight that affects it in the Eastern States. It would be well to plant some of the named varieties of the filberts offered for sale by the western nurserymen. It is also quite certain that the chestnut and Persian walnut will succeed in that part of Montana described, for the Winters are comparatively mild and all seasons of the year free from violent changes. These nut trees should be given a good trial there. H. E. VAN DEMAN.

AN EXPERIENCE WITH SULPHUR.

[Last Spring we invited our readers to try experiments with sulphur used on potatoes and other crops. Some of them did so, and we print herewith the first report.]

About a year ago there were articles in THE R. N.-Y. about experiments with sulphur on different crops at the experiment stations, so I thought I would like to try sulphur in a small way. I got two barrels (520 pounds). First I scattered one barrel on the mangel patch (three-eighths of an acre; from this I saw no results whatever, perhaps due to the long dry weather. Next, when we cut the potatoes we sifted the sulphur on the cut pieces, after first soaking the whole potatoes in formalin. When nearly through cutting we decided to leave a few separate from those we put sulphur on to see if there was any noticeable difference. We planted Irish Cobbler, Miller's Favorite and Carman, all being sulphured except the last half of the Carman. I used with the drill 800 pounds kainit on 1½ acre, then about 1,600 pounds of potato fertilizer, about 2-5-10. We cultivated and hoed, and had a very nice clean piece; did not spray but used sulphur and air-slaked lime with Paris green for bugs, going over the piece with a sifter once. The blight began its work in the Cobbler and the first half of the Carman early, but worked on only occasionally a hill to start on, so that about half of these two were yet green at the time of the early frost, September 9. The Miller's Favorite had sulphur on, but were green at the time of the frost. The last half of the Carmans that had no sulphur were also green at the time of the frost. Last year our potatoes were quite scabby, hence the using of the formalin. When we came to dig we had very nice smooth tubers but not large on account of blight and frost, but nice market size, the Cobbler and Miller's Favorite being nicest. There was not a single scab where the sulphur was used, but when we dug the Carman, that had not been sulphured there were a few scabby ones, but the yield was much larger. I think if I had not used sulphur the yield would have been much larger, but the tubers would not have been so nice. Also, if I had planted all Miller's Favorite we would have harvested 100 bushels more potatoes, as they yielded better and were larger. Conclusion, no sulphur for me next year, except with lime and Paris green on tops for bugs. E. P. F.

West Kortright, N. Y.

COST OF HEATING FIXTURES.

How much more will it cost me to put heating fixtures in my house of six rooms that I am building than if I put none in? I cannot understand why one contractor can put up a house of the same size, and just as good, for three or four hundred dollars less than another.

Suffern, N. Y. G. C.

Assuming that two houses are built equally well so far as workmanship is concerned, the additional cost of one over the other is apt to be due to one of two things, the type of heating system installed or the way in which the house is finished inside. The different woods used for finishing vary greatly in their cost from the cheapest, knotty fir to the richest grained oak and mahogany. Some woods which look equally well vary greatly in first cost, and only experts can tell the difference between them when varnished while, obviously, if they are painted no person can tell which is which by mere observation. It makes a difference, too, whether or not a carpenter is allowed to use short pieces or pieces with knots in them. Particularly with hardwood floors some owners insist that only straight grained pieces must be used, and that there must be no piecing of the strips in the floor, but every strip must go the whole width. This, of course, is expensive. Some builders use 2x3-inch joists for the walls, thus making thinner walls than when the regulation 3x4-inch joists are used. This is a cheaper construction and, while it may be all right, it should not be done without the consent of the owner. Some contractors will not stoop to slighting a job, and insist on putting in the sized joists and beams which experience has shown them are proper. Such contractors have to charge more for the job.

As for the heating of a house, there are three common systems, and many are the advocates of each. There is no doubt that hot air is the cheapest form of heat. A six-room house can have a hot air system properly installed for between $200 and $250. A system can be installed for less than this, but if properly designed for more economical consumption of coal, provision being made to prevent any waste of heat, ventilation being provided for, and care being taken that the fumes from the fire cannot enter the air pipes, $250 will be about the cost, and in some sections of the country even more than this. For an equally well installed steam system the cost will be in the neighborhood of $450. A hot water system will cost slightly more than this, if properly designed. On the other hand, some contractors will put a hot-air system in a six-room house for as low as $80 and a hot water plant for less than $300. As you say, it would be interesting to have the experiences of some readers on this proposition, including the amount of coal burned last year and the number of rooms which were kept heated, and what provision is made in their system for a regular supply of fresh air. R. P. C.

WAYNE COUNTY, N.Y., FRUIT MATTERS

With a general advance of from two to three cents a pound since the season opened, evaporated apples now promise to redeem some of the prestige lost last season, when the cold storages rather than the marts of trade received so much of the finished product. Ruling warehouse quotations now are as follows: Prime, 7½ to 8 cents per pound; choice, 8½ to 9 cents; fancy 9 to 10 cents; waste, 2¼ cents; chops, 2¼ cents. The market is firm at every point. Many claim that the upward movement has just started, and that further heavy advances are in store. It is estimated that there are not to exceed 500 or 600 cars of the evaporated fruit, both old and new left in the hands of the dealers. The estimate on waste is based at 150 cars. The evaporators have had a short run, though the year has been profitable to all except those who sold short early in the season. The high prices at which fresh apples have been sold have given much stimulation to the movement of the dried product.

Considerable interest is manifest in fruit circles in the experimental work being conducted by the Government in converting cider into syrup that will in itself be a profitable product on the market as well as a product that can later be converted into its former stage of sweet cider by the addition of water. The process requires the extraction of water from the cider by centrifugal action, leaving only one-third water mixed wtih the solids. It requires about three days to freeze the cider properly before it goes into the machine for the first time after being ground fine, and this course is repeated twice in order to extract the great bulk of water. The syrup is delicious. A number of two quart jars, sealed by the vacuum process, will be placed in storage by the Government for further experimental purposes. The syrup is slow to ferment and when placed in storage will keep for a long time. H. C. Gore, expert chemist of the Department of Agriculture, has had marked success this Fall with condensed cider experiments in the Hood River district.

Cows $50 to $85; hogs $12 per hundred, dressed; calves $12 to $14, dressed; hay $15 per ton; straw $10 to $12; milk 20 cents per gallon, 2 cents off for freight to Pittsburgh; potatoes $1 to $1.10; corn 60 to 70; oats 50 to 60; wheat $1.00 to $1.10; butter 35 to 38; eggs 45 to 48; chickens 12 to 14, and very slow sale in this market. O. L. C.

Celia, Pa.

Fresh cows from $75 to $90; cows coming fresh in the Spring from $40 to $55; fed calves, about six months old, from $15 to $20. No movement in potatoes at present; in fact, there has not been any to speak of this Fall, buyers offering about 69. Fresh eggs 40. Our butter is sold through a co-operative creamery, which is bringing us about 35 cents per pound. Apples about $1 per bushel, but no crop; onions $1.25; No. 1 Timothy hay $8 to $10 per ton in the barn.

Corry, Pa. J. B. C.

Corn is being bought at the elevators at from 65 to 68 cents per bushel of 68 pounds, or about 93 cents per hundred pounds. Wheat to-day (Dec. 18) is being bought at 93 cents per bushel. Oats very scarce, as we raise but very few. Extra good fat cattle will bring $7.75, but they must be good. Inferior would not rate so high as that. Stock cattle are being bought for $5 to $5.50 and $6 per hundred pounds. Hogs are quoted at $7; good ones $7.25. Butter 26; eggs 30; chickens 10½ per pound. Turkeys almost eliminated. The growing crop of wheat is certainly looking fine. Apples $1 per bushel, and some are higher than that, but $1 is an average price. N. P.

Circleville, O.

Following are the prices at New Haven, seven miles east of Fort Wayne, the county seat. Some are a little better than Fort Wayne pays. Corn, new, 80 cents per cwt. at elevators; wheat 92 a bushel; oats 37; rye 57; barley 50; Timothy hay No. 1 $12; mixed hay $10 to $11; clover $8 to $9; straw $5, baled; baling costs $1.50 a ton; clover seed $8.25; Timothy seed $2.50 eggs 28; butter 30; chickens 10 to 11; steers $7 per cwt.; veal $10; hogs $7.25; sheep $2 to $5; lamb $6.50 to 7; potatoes 70. Last car of Michigan potatoes that I know of sold about a month ago for 70 cents, f.o.b Fort Wayne. Potato conditions are poor stock, does not keep well nor sell well; few people bought Winter supplies, expecting price to go lower. Good apples are as scarce as fresh eggs were in November, poor in color and quality; best stock brings $5 per barrel and not what I would call fancy. Commission men get $1.25 and $1.50 per bushel basket for a No. 1 apple. Fancy or best stock that cost dealer $5 per barrel retails at 60 cents a peck, or five and six cents per pound, and not all the apples are sound at that, so that a dealer makes very little on that stock. H. H.

New Haven, Ind.

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The Home Acre.

Water Sprouts; Cherry Fruit Buds.

1. What is the right name for young shoots on pear, apple trees, etc.? Is the name water sprouts or suckers? 2. Do cherry buds grow close to the bud of the last year? In other words, can you injure the next year's buds by pulling the stems off instead of twisting them off? Some authorities say you injure some buds. N. R.

New Cumberland, Pa.

1. The approved name for the shoots that come out on the larger branches of apple, pear and other trees is "water sprouts" rather than suckers. They are of a succulent nature, while in the growing state, and that is why this name is given them. Sprouts that come up from the roots of trees and bushes are usually called "suckers" and they sometimes detract from the growth of the parents and that is why the name sucker is applied.

2. The fruit buds of the cherry are always formed on short spurs and while new spurs are formed each year some of the old ones that have had fruit buds and fruit on them will set more buds of the same kind. It is possible to injure the prospects of the future crop to a very small degree by careless gathering of the fruit. To pull off the wood and buds with the cherries is all wrong.

H. E. VAN DEMAN.

Globe Artichoke.

I sowed seeds of crown artichoke December 15; last year I sowed them in January, had them established in eight-inch pots by May, then I planted them out in good rich heavy soil. They grew along slowly, are now strong crowns, but bore no fruit. I have been told that this is the only way to grow them in Northern Massachusetts, from seed every year. Is this so, and what kind of soil do they like best? J. M.

Stockbridge, Mass.

A plantation of this vegetable, whether started from seed or suckers, will make but few if any flower heads the first year, as it requires one year's growth in the open ground to form good crowns, after which, with proper care, the plantation will remain in bearing for a number of years. This plant is generally considered hardy, but north of Washington the plants will need more or less protection in Winter, varying according to the severity of the cold. In the latitude of Massachusetts, a mulching of eight to 12 inches of leaves or coarse manure should be put around the plants and between the rows to protect them from freezing. A sandy and somewhat moist loam is best suited to this vegetable, and during dry weather in Summer it should be freely watered. K.

Use of Tobacco Stems.

I send you a sample of tobacco stems which I can buy at $6 per ton of about 100 bushels, delivered on my young apple orchard, two years planted. Do you consider them worth the money or what would you suppose them worth? Would you advise them hauled on the orchard now, or not until Spring and turned down right away? Barnyard manure cannot be had here. I think two tons of the stems per acre would do some good if they are worth the price. R. A. K.

Yoe, Pa.

These stems are apparently of very good quality. As plant food they are worth about five times as much as manure. We should be glad to get any quantity at this price. You can haul them now and then scatter around the trees. Do not throw them up close to the trunk, but leave six inches or so of bare ground —then scatter the stems evenly over the ground. They are also very good for the garden or for hen's nests.

Top-Dressing With Limestone.

Would it pay to haul ground limestone four miles if you could get it for 60 cents per ton? If so, and it was applied to wheat sown last Fall, would it be any benefit to the wheat? Would it be any benefit to the clover seed to be sown in the Spring, if applied this Winter? E. G. M.

It will pay to haul this ground limestone, but we have never received benefit from lime put on top of the crops and left there. The effective way to use lime is to work it down into the soil. This is best done by spreading after plowing or digging and harrowing in.

Fruit Trees in Garden.

I have part of my garden in which I have planted some young fruit trees; I am also using it as a garden, manuring it heavily every year. Would it be possible to continue using this as a garden after the trees are bearing, by fertilizing heavily? I might add that most of these trees are dwarfs, and are planted about 20 feet each way. M. M. W.

Yes, you can continue to grow some of your vegetables among these trees. Some vegetables, like sweet corn, will not do so well in the shade, while others will make a fair growth under these conditions. They will not make full crops when grown among the trees, but can be made to pay.

Dormant Spraying.

What is meant by treating or spraying trees in the dormant season? Does this mean in the Winter? C. F. B.

Gibsonia, Pa.

A "dormant tree" refers to the Winter season, when there is no growth. The tree is practically asleep at this time. With Spring the tree wakes up, its sap begins to circulate and its buds swell. We can spray the dormant tree with a stronger solution than would be safe when the buds are tender or broken out.

Remedy for Apple Canker.

Will you give formula for making paint or wash for canker on fruit trees, and how and when to apply? J. S. M.

Springfield, Mo.

Formerly this Station recommended a mixture of whitewash, blue vitriol and wood ashes as a dressing for wounds made by apple canker; but it is now held that the best method of treating such wounds is first carefully to remove the dead bark and decayed wood, thoroughly disinfect the wound with a 1-1000 solution of corrosive sublimate, and cover with coal tar. If the canker is not too large this treatment will prolong the life of the limb sufficiently to make its use profitable. F. C. STEWART.

Geneva (N. Y.) Exp. Station.

Making a New Soil.

I have a small place here of three acres which I am putting into vegetables and fruits as fast as I can. A part of my land has been robbed of its surface soil, exposing the mixture of yellow and red clay which underlies the surface soil in this section. I wish to get this under soil in condition so that it can be used for fruit or nut trees as soon as possible. What would you recommend me to sow which would grow on such soil and bring up its fertility? I have used quite a little manure on this land, but all I have succeeded in raising so far is a crop of weeds. M. M. W.

Nyack, N. Y.

This soil needs lime and organic matter. The top soil having been taken off, the bottom or subsoil must now be thoroughly shaken up, sweetened and filled with humus. If the ground is now bare, have it plowed deeply in the Spring, and after plowing use at least one ton of slaked lime per acre. Harrow this thoroughly into the ground, and seed a combination of turnip seed and oats. This will make a fair growth, and in June plow this all under, and broadcast about 400 pounds per acre of a good fertilizer suitable for corn. Then sow two bushels of buckwheat per acre. Add to the buckwheat one bushel of rye, and 12 pounds of Crimson clover seed. This should make a fair growth. Let the buckwheat die down upon the ground after frost, and leave the rye and Crimson clover alone. They will grow on through the Fall and start up in the Spring. Plow them under when the rye is about three feet high. Work up the ground thoroughly, and you may then begin to plant corn, potatoes, or similar crops, using a fair quantity of fertilizer when you plant. The lime and these green crops will greatly help the soil.

"THEY are always talkin' about the wonders of electricity," said Farmer Corntossel, "but there's one of its greatest achievements they don't mention." "To what do you refer?" "The way it has killed off the fellers who made jokes about people who went to town an' blew out the gas."—Washington Star.

"HERE'S something queer," said the dentist. "You say this tooth has never been worked on before, but I find small flakes of gold on my instrument." "I think you have struck my back collar button," replied the victim.—Buffalo Commercial.

FATHER: "Upon my word, you children are getting too dainty for anything. Jam and butter on the same piece of bread, indeed! Why, when I was your age I was glad to get enough dry bread to eat." Robert: "You have a much better time living with us, don't you, father?"—National Monthly.

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¶If you were planning to raise 300 bushels of potatoes to the acre how far apart would you space your rows? How far apart would you drop the seed pieces in the row?

¶How much fertilizer would you use to grow 300 bushels of potatoes per acre? How would you apply it?

¶Are you sure that your seed potatoes are true to name and true to type?

¶What are you doing to prevent "scab," and early and late blight?

¶Did you have a short crop of potatoes because of dry weather? Have you decided how you will overcome this trouble in the future?

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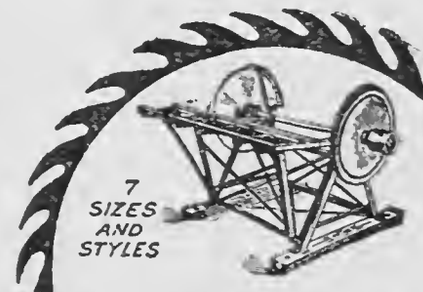

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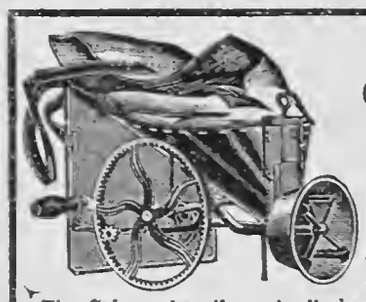

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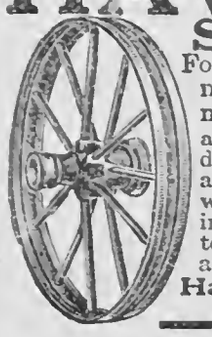

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Hope Farm Notes

People tell of the great value and virtue of a constant supply of running water in the house. They cannot say too much about it, for of all the things which make a farm home worth while a sure water supply, just where it is needed, ranks near the top of the list. You never know how useful and worthy it is until it is shut off by accident. When we bought this farm there was no convenient water supply. An old well some 80 feet deep, near the house, had failed, and former owners filled it in with stones. It had become a nuisance, as in wet times water rose in it and kept the house damp. There was a big cistern for rain water under the house, but all drinking water was carried from a distant spring. We got the farm at a low figure because of this lack of water. Customers looked the place over and liked it, but when the women folks found there was no water except far down under the rock, there was nothing more to it.

There were two ways for us to obtain a water supply. One was to clean out a spring on the hillside and pipe the water down—the other to drill a well near the buildings. After some figuring I decided upon the wells—though I now think the other plan would have been better. We had a six-inch hole drilled down into the ground—142 feet deep. At 16 feet they struck the solid rock and an iron casing was driven into this. The water rises to within about 35 feet of the surface of the ground. It is remarkably pure—better I think than much of the bottled water which is sold. We put a windmill over this well. After 13 years of constant service it is still working whenever the wind blows. There have been no repairs in all that time except a few broken chains. This past season we have helped this old veteran by taking the gasoline engine off the sprayer and mounting it near the pump, to be used when the wind is still. The water is pumped into a tank at the top of the house, which supplies a full outfit of water devices.

I think this outfit added 25 per cent to the value of the farm at once. This might not be true of some country localities but here close to the large cities, a good water supply is necessary if you would sell your property. Aside from any increase of value the comfort and character which such a water supply will give is beyond calculation. I say "character," well knowing what the word means. If a fair water supply with the fixtures and necessities which go with it could be put into every farmhouse, many of the troubles of farmers would be on the road to settlement. It would help to create the confidence and satisfaction with home which, after all, are the things which are the foundation of improvement. Whenever water runs freely through a farm home it does far more than carry dirt away, or leave warmth behind. It also takes away a lot of prejudice and the mean part of human life, which stand in the way of improvement and a broad view of life. Take it from me that if during this New Year, there is any possible way for you to bring running water to your house, and heat it after it gets there, such work will prove a big investment.

We found it so and got to the point where 500 gallons of water per day would hardly take care of us. Then our old friend, the pump, went on a strike. I admit that we have worked him hard, and perhaps we did not keep his joints tightened up or give him the finest footing to stand on. He probably tried to tell us something like this:

"You don't give me a chance to rest. These house folks come calling more water! When they are satisfied these great horses and cows come with bottomless stomachs, also calling more water. That whirling thing above me pulls my backbone up and down with jumps and starts. When his arms are tired this coughing and spitting engine takes me by the collar harder than ever. They take their days off, but there is no rest for Mr. Pump. I'm going to quit."

Nobody seemed to understand him, and so he struck. Philip and Merrill pulled him up to see what ailed him but the pump had decided that he preferred the scrap heap to being man-handled by the windmill and engine. So he just let go his grip and 40 feet or more of pipe and pump went rattling and banging down into that 142-foot hole in the ground—and the Hope Farm water works stopped working. The man who drilled the well and knew how to get that pipe out was doing jury duty. Our folks never did think so much of water as during the days needed to put another pump at work. The old pipe was to come out. To the average man the idea of fishing for a pipe in a small dark hole over 100 feet below ground would look like an impossible thing. To the man who knows how to do it it's easy. A pump pipe is not like a fish—to bite at a hook. In order to get this one they took an iron pipe just large enough to go into the well casing. It was open at both ends. At the top was a strong iron bale or handle and at the bottom two strong steel rods crossing at right angles, so as to leave four spaces for the pipe to pass up through. Held in by these small rods was a steel disk or plate just large enough to play up and down inside the large pipe, and with little notches at its rim. They fastened this tool to a rope and lowered it gently down into the well-hole, working it up and down and around. The plan was to strike the pipe and then by lunging and pushing to get the rim of this tool between the end of the pipe and casing. Then the end of the pipe would run up through this tool, lifting one side of the steel disk as it went. When it got far enough up through the rope could be pulled tight. As the pipe was lifted its weight would pull down the disk and the harder it pulled down the tighter that lip of steel held it in place. That is just what happened. After a few trials they gripped the pipe and pulled it slowly up. The first time it caught on the casing and held back. With a small mirror they could throw a light down into the hole and see where it was caught. The next time they got it and slowly pulled it out. Then we put in a new pump and the engine and windmill will soon show it that life is one steady round of labor. I now think we would have done better if in the first place we had piped the water from our spring. At any rate this has really shown us the true value of a water supply. I think we must come to irrigation before long, and in that event we shall want the well, the spring and also the brook at the lower end of the farm.

I wish to say a word on the shooting in the dark at chicken thieves. Your advice "to load with salt and aim high" will suit two classes of persons. Every chicken thief in the United States will approve that advice. Then, that pretty large class of goody-good people will fully approve your plan. This latter class includes the people who sign petitions to have criminals pardoned and who are strongly opposed to soldiers. One of these goody-good fellows is opposed to the construction of battleships—wants to rely entirely on the Bible in cases of international disputes. Say, instead of loading with salt and aiming high, would it not be better to take the Bible out and, in a loud voice read, "Thou shalt not steal." R. M. R.

Another good thing to read might be: *Thou shalt not kill!"*

It looks as if I am in the minority on this shooting business. There are some fierce fighters abroad and many of them have suffered so severely from chicken thieves that they bitterly resent any thought of mercy. I have no desire to shoot anyone. I think a good active dog will take care of most thieves. I do not know that anyone ever called me "goody-goody," though a goodly number of names have been thrown this way. Count me, however, as one opposed to war and battle. Personally I rejoice that this nation has avoided war with Mexico. I hear fire-eaters now and then telling what great things they would do on the battlefield, but it is doubtful if they would ever get within gunshot of danger. I know all about war that I care to. In the Civil War my father and two of his brothers were killed, and another was wounded. That made a large hole in a family which lived on the earnings of the men folks from day to day. You cannot tell me a thing about what war means to the widows and children who are left to fight the world when husband and father are killed. No war for your humble servant. I think my father's generation did all the fighting which may reasonably be expected of our family! As for chicken thieves I will bet on a good Airedale to tear their clothes off. H. W. C.

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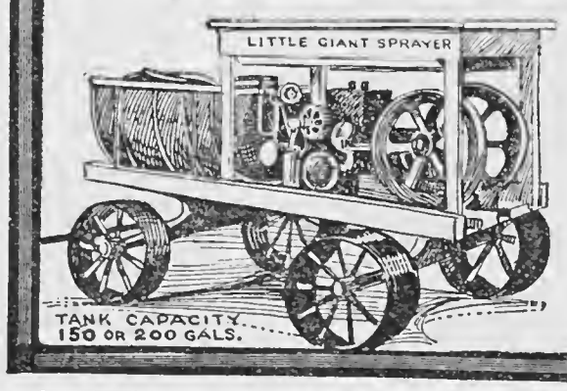

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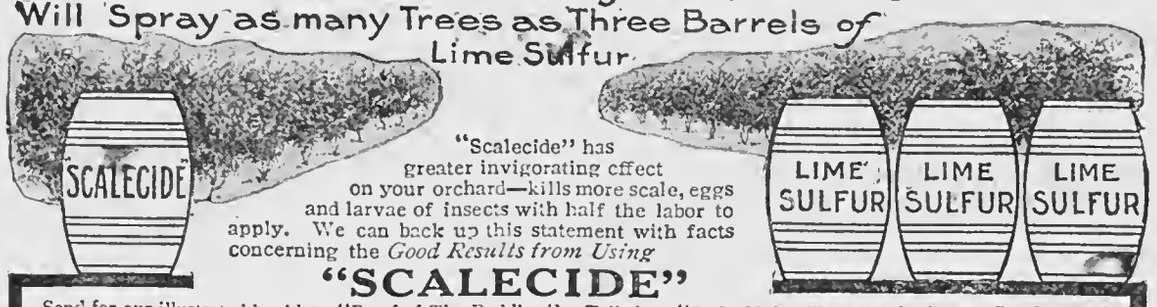

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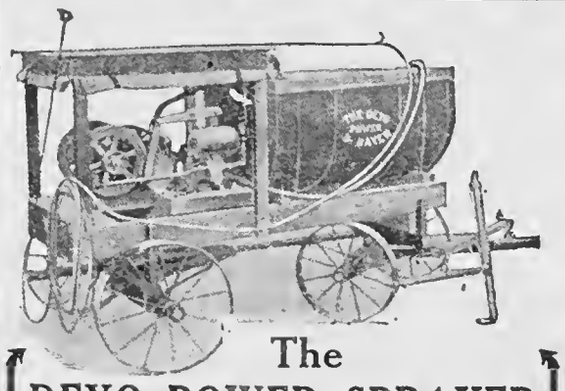

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many farmers who had despaired of growing Legumes, are now growing them with great success. FARMOGERM supplies your crops with the element they need—Nitrogen.

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for Moderate Size Orchard

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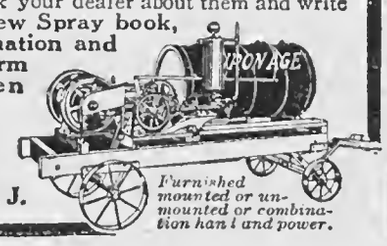

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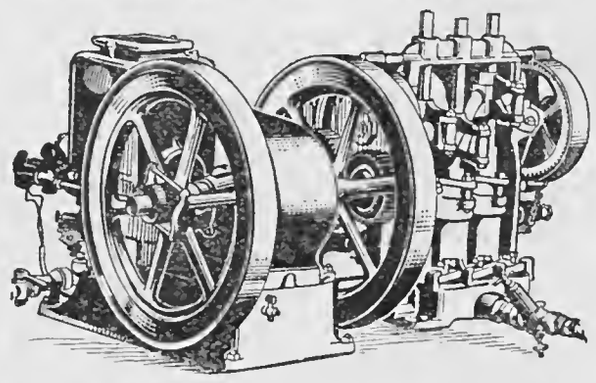

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Ruralisms

POTATOES RUNNING OUT.

I am advised by neighbors not to use my own potatoes for seed next year. They say potatoes "run out" if grown on the same type of soil for more than two years. What is your opinion about this?

No. Stoughton, Mass. A. N. S.

The weight of experience is greatly in favor of frequently procuring seed potatoes from localities where they are especially well grown rather than to rely on home saving from year to year. Unless your variety of potatoes is particularly suited to your soil and climate there will likely be deterioration as the seasons go on. Potatoes "run out" locally not so much because they are grown for successive years in the same type of soil as from the cumulative effect of adverse climatic conditions, which may not favor such thorough development of the tubers as fits them for seed purposes, though they may be entirely suitable for the food market. The northern tier of States—Maine, Vermont, New York, Wisconsin and the Dakotas—appear to have a monopoly in the production of seed potatoes, as the excess of sunlight and general climatic range during the growing season in these latitudes admirably suit the potato plant, enabling it to store the tubers with the energy needed to make vigorous growth when planted in less favorable localities. There is apparently just as good potato soil south of the forty-third parallel of latitude as north of it, but potatoes do not mature as well for seed purposes as in the North, except possibly in Colorado and other elevated regions of the central plateaus where conditions of sunlight and temperature range in Summer that obtain in the North are practically duplicated. Small potato plantings for home use may be kept for a considerable time to a satisfactory standard of production by careful selection of seed tubers from the best hills or plant, but in a larger way it is generally profitable to procure seed stocks from reliable northern sources.

V.

THE GIANT AMARYLLIS.

A catalogue for 1913 lists "Burbank's Amaryllis." It asks a good price, says they are an extra good thing and that the blooms are one foot across. Do you believe this statement? Do you know anything about them? I grow these bulbs for my own use, have a lot of my own seedlings. I have bulbs from California and I have bloomed my own seedlings, have had bloom seven inches across but never saw nor heard of one before one foot across. N. J. P.

The show Amaryllis or Hippeastrum, as the botanists term it, is one of the most highly developed of flowering plants, having been under practically continuous hybridization and critical selection for more than 100 years. Seeds are rarely produced under cultivation without careful hand pollination, as the flowers have become so large and open that the natural agencies of wind and insect life no longer appear to effect the transfer of pollen from the anthers to the stigmatic surfaces. It being necessary to fertilize the blooms artificially growers naturally make the most desirable combinations in the flower, and the result is that nearly all commercial strains are good, and the inheritance tendencies of the better forms so marked that anyone can grow fine seedlings if he uses high-class seed and pollen parents. The modern pot Amaryllis is indeed a magnificent cultural triumph. Every strain worthy of the name should include plants producing blooms quite 12 inches across when grown under congenial conditions, but the largest flowers are not always the handsomest, as they are occasionally lacking in substance and harmonious coloring. An exhibit of 2,000 of these gorgeous monsters, the result of crossing a few particularly fine imported varieties, in one of the greenhouses of the Department of Agriculture at Washington last Winter, created quite a sensation, many judges thinking the blooms surpassed anything hitherto shown. There were scores of plants with blooms a foot across, but these sometimes failed to elicit as great admiration as smaller ones of better form and brighter colors.

Those who have visited Luther Burbank's California garden will credit him with being an excellent cultivator of his specialties. It is entirely probable that he has grown seedling Amaryllis with blooms as large as advertised, but the best kinds in the experience of all growers are often slow to propagate, and do not quickly find their way into commerce. The writer has grown the Burbank strain of Amaryllis procured from dealers, and found it of only ordinary merit. Others who have tried these varieties from different sources report that it is "good stock, but nothing to brag of."

V.

POLLENIZATION OF CORN.

Has there ever been a theory advanced, regarding the sex of the rows of grain on an ear of corn? To my mind it has struck me for some time that there is the closest affinity as male and female, each male row pollenizing the next row exclusively and none other. For instance, I have never, in counting the rows on corn, found any but even rows, eight, 10, 12 and so on, as high as 24 rows. Why not nine, 11, etc, if every other row was not male and female? Again, it is always strongely marked, where an ear is defective it is never one row missing, but two rows will be equally short, stopping exactly together. H. B. G.

James Island, S. C.

The fecundation of maize or corn is effected by the pollen cells produced by the tassels or male inflorescence falling on the exposed stigmatic surfaces of the silks or styles, which represent the female flowers, as in corn the two sets of organs are developed far apart. A pollen tube grows down inside the silk and fertilizes the ovule or embryonic cell at the base, which later grows into a seed or kernel of corn. The seeds or grains of corn have nothing to do with each other in the way of pollination. Each in effect contains a miniature sexless plant, wrapped in protective coatings and attached to the standing endosperm or reserve food supply needed to maintain its early growth, and can in no way affect its neighbors in the adjoining rows. Corn is a monocotyledonous plant with one seed leaf and solitary leaves, alternately arranged on the stem, but the seed rows on the cob or spadix are binary in arrangement, occurring always in pairs. Thus we have four pairs of kernel rows in eight-rowed corn up to 11 pairs on 22 rows in some extreme varieties, but no instances are know of ears having odd numbers of rows. The even numbering of the rows is a characteristic inherent in corn and has nothing to do with pollination.

V.

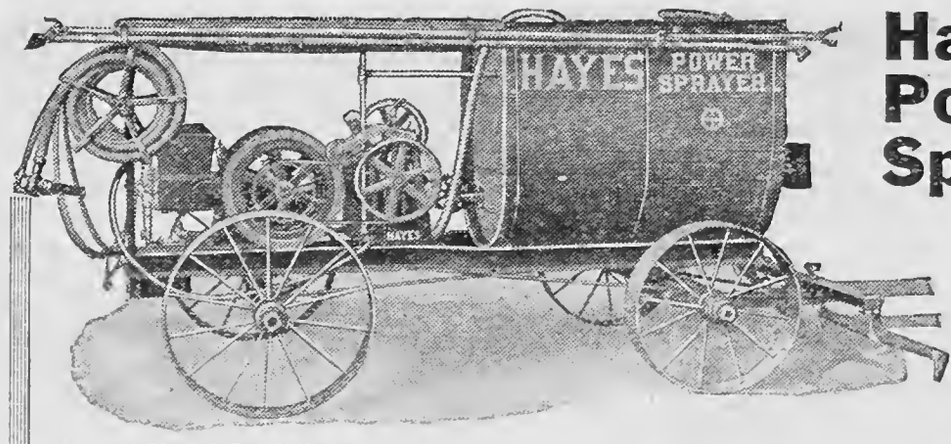
AGRICULTURAL EXPEDITION TO BRAZIL

The Bureau of Plant Industry is sending an expedition to Brazil, which will include P. H. Dorsett, Plant Introducer of the Office of Plant Introduction, Wilson Popenoe, agricultural explorer, and A. D. Shamel, physiologist of the Office of Pomological and Horticultural Investigations.

Mr. Shamel's remarkable discovery that there are at least nine distinct strains or types of the Bahia navel orange represented in the California orchards has raised the question as to whether or not Mr. William Saunders' importation in 1870 brought in the best navel in existence at Bahia and whether this remarkable variety has varied in Bahia as it has in California.

It is hoped that Mr. Shamel, with the assistance of the other members of the expedition will be able to make a thorough investigation of the matter. So little is known of the plant resources of this great unexplored area of Southern Brazil, that the expedition may be expected to discover new forms of valuable plants which are not in the literature. The high plateaus visited by occasional frosts, and the borders of the large arid regions surrounded by sub-tropical forests are habitats where forms are likely to be found which will be subject to acclimatization in our Southern States.

The Department states that the rapidly growing Mate industry, the wild fibre plant Caroa, the myrtaceous fruits such as the Jaboticaba, the Passifloras, the bamboos, and the rubber plant, are a few of the many things which have provisionally been put on the program for investigation. The expedition goes out fully equipped to get natural size photographs of fruits, and herbarium material, as well as living seeds and plants of everything worthy of introduction and it will confine its attention to the Provinces of Bahia, Rio, Minas, and Sao Paulo. This must be considered a preliminary study of the gigantic problem of utilizing for American farmers and fruit growers of the Southern States the valuable plants of Southern Brazil.



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300 Pounds Pressure Guaranteed

HIGH PRESSURE spraying produces a better quality and larger quantity of salable fruit. The HAYES is *guaranteed* to maintain 300 lbs. pressure. It thoroughly covers every particle of foliage with a penetrating fog-like mist, insures results and saves solution.

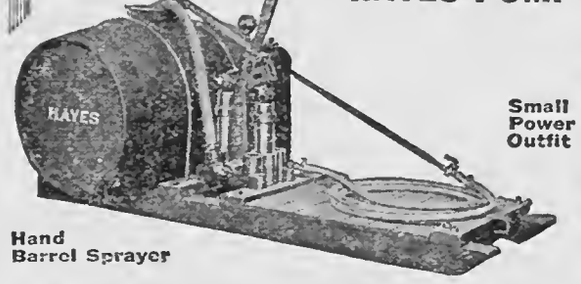
HAYES large capacity, high pressure triplex pump, special design engine and improved agitator are built for high pressure work. Strong, steel frame, cross braced and hot riveted. All steel, non-tip-over, *cross reach* orchard truck that turns in 14 ft. *Cannot strike trees in turning.* Large capacity, light weight, light draft. The HAYES is sure, reliable and easy in operation and *guaranteed* in efficiency.

25 Styles For Small or Large Orchards

We manufacture 25 styles of large and small Hand and Power Sprayers for orchards, field crops, shade trees, hops, poultry, painting, home and garden use. Complete outfits or separate pumps, hose, nozzles, fittings, bamboo rod, etc.

WRITE! Send postal for FREE book 34 on High Pressure Spraying and complete catalog of HAYES Sprayers.

HAYES PUMP & PLANTER CO., Galva, Illinois



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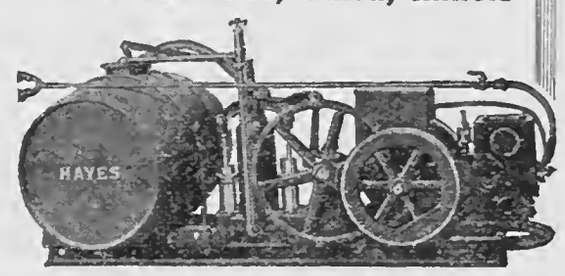

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THE BEAN HANDY JUNIOR SPRAYER

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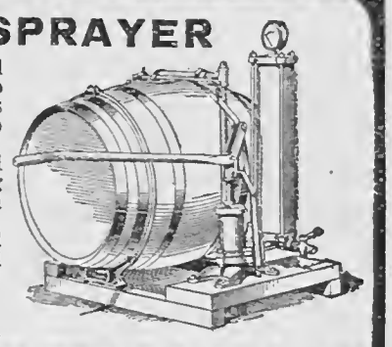

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are carefully tested and guaranteed to do thorough work. Fit any spraying outfit. Ask your dealer to show you or write us.

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Describes sprayers for all purposes. Write for it and for name of nearest dealer Today.

The Deming Co., 113 Depot St., Salem, Ohio

Fruit Growers' Favorite Pruning Saw

Save time by working on the ground without ladder. Cut several suckers at once; remove 3 inch dead limbs. Shape trees better. Saw cuts heal quickly. If dealer can't supply we pay postage and return money if not satisfactory.

Booklet free

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SPRAY Rigs of All Sizes For All Uses

Junior Leader Orchard Sprayer with 2 H. P. engine, 3-plunger pump.

Junior Leader Sprayer

Keeps 6 nozzles going at high pressure. Automatic agitation of liquid, suction strainer is brush cleaned. We also make Bucket, Barrel, Mounted 4-Row Potato Sprayers, etc. Free catalog describes entire line. Write for it. Also spraying formula, calendar and complete spraying directions. Address

FIELD FORCE PUMP CO., 2 11th St., Elmira, N.Y.

The Bastian "Oregon" Pruning Hook

Operates with a simple pump-gun action upon a powerful compound lever which forces the sharp Sheffield Steel cutting blade through a limb an inch thick with but little effort. Makes a smooth, clean cut. No side-strain on the pole-handle. The natural position of hands gives the operator ease, speed and accuracy.

The Bastian "Oregon" Pruning Shears

Have the same easy-working but powerful compound action as the pruning hook. They are especially handy for cutting out water sprouts, heading back young trees, trimming hedges, berry bushes, etc.

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picks the choice fruit that's "out of reach" without bruising it in the least. It soon saves enough fruit to pay for itself.

Try These Orchard Tools

BASTIAN "OREGON" ORCHARD TOOLS are made of the very best materials—they are powerful, durble and handy to use. Reasonable in price and guaranteed. Made in all lengths. If your dealer has no Bastian "Oregon" Tools in stock, do not accept substitutes, but write to us and we'll send prices and name of nearest dealer who can supply you—or we'll ship direct. Write now for descriptive circular.

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

WE regret to learn of the death of an old friend, John M. Jamison, of Ohio, who died at his home on December 12. Mr. Jamison was one of the most intelligent and thorough farmers in Ohio. A man of the highest character, whatever he said or wrote was accepted as sound personal experience or conviction. Mr. Jamison was one of the famons "old guard"—men who 25 years ago kept alive the spirit of agricultural education when it required hard work and strong faith to do so. In these easier and richer days our young men do not fully realize what these old veterans did in laying the foundations.

*

"That editorial is —— narrow."
"The editorial is God's truth."

What are we to say when these forcible, opposite opinions are honestly expressed by educated men? Can you easily think of a statement of which both of these remarks may be true? The editorial referred to is found on page 1205. We stated that the endowed colleges do not seem to offer great hope for the peculiar educational needs of the common people. As these colleges grow more and more independent of direct support from the public they grow more and more away from the actual needs of the working classes. Some of them do this openly and rather defiantly, while others follow the sources of their endowments unconsciously. All, however, are, we think, journeying on toward what we may call class education. This being so the great hope for the popular education of the future lies in our State universities and agricultural colleges. These are State or National institutions, supported not by private endowments but by general taxation. They are therefore for the people, which comes more and more to mean that portion of our people who need popular and truly practical education. It follows naturally if these propositions are accepted that these public universities and colleges should be administered in the direct interests of the people who need their help. This means that our agricultural colleges should be organized and dominated by the true spirit of farming or agriculture, and right here is where the two men quoted above separate. One seems to think that these colleges are best served by business or professional men who either own a farm as a plaything or as a side issue in their business, or who deal with farmers in some trade capacity. Our friend thinks that such men are by training and experience better qualified to run an institution. By having one toe or part of one foot on the soil he thinks they acquire enough of this spirit of agriculture to enable them to know what a farmer needs. The other man thinks that since these colleges are for *farmers* they should be such both by name and nature. Thus they should be dominated and controlled by men, the majority of whom make all or most of their living out of the land in practical farming. Granting that such men have the needed business capacity, they will be more likely to possess that true "spirit of agriculture" than the other class. We believe that this last proposition is correct. It is a great question, and we should welcome an argument from those who think the agricultural college should not be controlled by real farmers.

WE are now to have a new department, "The Home Acre." Under this heading will be discussed the peculiar problems of the man with a garden or comparatively small piece of land which he must work to its full capacity. These men must have their soil in the best condition, make the best selection of seeds and plants and give them the finest care. This is "intensive culture." It is absolutely necessary on a small piece of land, and becoming more and more necessary on all our Eastern farms. Our new department will give the best possible methods of making the soil productive, and take up in ample season the questions of selecting varieties, planting and care. An expert gardener of long experience will tell how to plant and beautify the grounds around a house. He can sketch plans, make lists of desirable trees and shrubs, and tell how to care for them. The best experts in garden and fruit culture will be on call to answer questions and suggestions. This work will prove invaluable to "The Home Acre" man, and the farmer with broad acres can also learn how to make the garden the most valuable spot on the farm.

*

"HAPPY DAYS."

AT this season of the year we get the real thing in heart-to-heart talks with our readers. It is the season for renewing subscriptions, and thousands of people take advantage of the opportunity to wrap some good wish or good-natured criticism or bit of experience around their dollar. They all want to help in some way—all want to prove our statement that THE R. N.-Y. is closer to its readers than any other paper in the country. What texts these good friends give us in their letters!

"My neighbors used to take THE R. N.-Y. *to please me. Now they take it to please themselves."*

New Jersey. I. S. B.

Sooner or later a paper must stand or fall by about that test. In these days few businesslike people will pay for a paper simply to please their neighbors. They might do it once, but eventually the test of actual, personal service must come and the readers will "please themselves."

I was one of the younger set of boys who whooped it up for Uncle Sam in the 'sixties, but who came home and dug hard for a living till rheumatism and heart-weakness laid me out. I am not a disgruntled old grouch, but a man fond of good literature, music and flowers, and little children, jokes and friends. Being very deaf, I have to depend on myself for ways to be entertained, which is why I take THE R. N.-Y. J. H.

Ohio.

This old veteran gives us all a text for a living sermon. Here is a man who makes "happy days," into which even these severe afflictions cannot enter. Some of us who fancy we are greatly abused may think we are justified in playing the part of a "disgruntled old grouch" during 1914. Let the thought of this brave old soldier enable us to cut that "grouch" out. "Happy days!" We might fill the paper with these original texts, but here is one more:

"I take THE R. N.-Y. *because it is the paper with a conscience and a punch."* W. H. M.

Connecticut.

Can anyone have an enduring "punch" unless there be a conscience back of it? Can any conscience be worth a single thought unless it can start a hard punch at some evil? We think that a "punch" with merely cold-blooded reason or some personal motive back of it would do far more harm than good. *"Conscience and a punch!"* What a motto for those of us who want to have a hand in the great things which open up for 1914. We shall all enjoy working on together—*"Happy days!"*

*

THE "tree dopers" are at work again. These fellows offer to cure a tree of diseases and fix it so the scale and other insects will not work by "inoculating" it. Their scheme is to cut a little hole in the bark and poke in a capsule or pill containing some mysterious powder. Then the wound is waxed over and the tree left to cure itself. These fakes charge 10 cents or more per tree, and can dope 250 trees a day in a large orchard. It is plain daylight robbery and nothing more, yet these fellows are now at work in Pennsylvania and Maryland, making more dishonest money in a day than the average honest man can make in two weeks. The scheme has been exposed again and again, yet people continue to bite at this old fraud. We know an educated man who had an argument with one of these fakes. The tree doper showed a newspaper clipping which showed how one man had given his blood into the veins of another! Then he told how doctors vaccinate to prevent smallpox, and use a toxin in cases of diphtheria, and of wonderful consumption cures through inoculation, and of feeding sulphur to sheep to kill the ticks. "Now," he said, "if these scientists can do all this by inoculation, I can do the same things through the sap of a tree!" That is the sort of logic these scamps are using, and it works the money out of many a pocket which cannot stand the loss.

THE last issue of the Tribune Farmer contains this statement:

With this issue the Tribune Farmer closes its career as a distinct publication. It has been purchased by the proprietors of THE RURAL NEW-YORKER, who will hereafter merge it with that publication. * * * Subscribers to the Tribune Farmer will receive THE RURAL NEW-YORKER to the expiration of their subscriptions to The Farmer. Persons who are now subscribers to both papers will have their subscriptions to THE RURAL NEW-YORKER extended for the period covered by their subscription to The Farmer.

We now confirm this agreement and take great pleasure in welcoming our new readers. This is the first issue of THE R. N.-Y. which goes to Tribune Farmer readers under the new arrangement. While old readers will naturally regret "the breaking of home ties" and separation from their old friend, we hope they will feel in a measure, at least, compensated and satisfied by such service as we can give them through THE R. N.-Y. We find that many farmers have been reading both papers. Their subscriptions have been extended by agreement, and we need not give them a special welcome.

To newer readers we may say with sincerity that we welcome this material increase to what we call the Rural family. We want you to feel at home at once and permanently. Call on us whenever we can be of any service to you. Tell us your needs, and we will do our best to meet them. Let us work together to make the New Year a happy and prosperous one. We cannot hope entirely to replace your favorite old friend in your affections, for we know what these long-time friendships mean. We hope, however, to win a permanent place in your lives and in your homes.

*

FOR the past few years the "two blades of grass" men have worked their theory very hard. They only needed an audience to argue that the farmers of this country would all get rich if they would only double their crops. Sometimes, when they could not get an audience, they talked to themselves. At one time they seemed to have the colleges and stations and most other agents of agricultural education going their way. We have claimed from the beginning that this "two blades of grass" theory would be the finest thing for the carriers and handlers, but the poorest thing for the producers. These carriers and handlers are able to collect fixed charges per pound or measure. When they handle 100 cars they naturally collect twice as much as when they handle 50 cars. When the farmers produce 100 cars they find that the extra 50 will be used to beat down the price of the original 50, and the more they produce the less they receive. We have proof of this in a recent statement from the Department of Agriculture. Here are the comparative figures of crops for two years in the country:

	Total crop—		Total value—	
	1913	1912	1913	1912
Corn.....	2,446,988,000	3,124,746,000	$1,692,092,000	$1,520,454,000
Potatoes...	331,525,000	420,647,000	227,903,000	212,550,000
Tobacco....	953,734,000	962,855,000	127,481,000	104,063,000
Hay	64,116,000	72,691,000	797,077,000	856,695,000

Thus with smaller crops of corn, potatoes and tobacco than last year, our farmers obtained over $200,000,000 more than they did for the larger crop. With a smaller hay crop the average ton brought 75 cents more. Now what on earth would be the inducement for the farmers of this country to double their production at increased cost and secure less for their crop? We think these "two blades of grass" men see the point. At any rate there are 100 men driving this thought home where one was doing it 10 years ago. Cut out the "two blades of grass." Make it possible for the farmers to get a 50-cent dollar for the one blade, and it will feed the nation like the widow's cruse of oil.

BREVITIES.

YES, a mossbacked soil usually needs lime.

TRY a little Alfalfa seed when you sow Red or Alsike clover.

WORCESTER COUNTY, Mass., has an Alfalfa Club. What about your county?

THE Wisconsin Dramatic Society will present "The Book of Job" as a drama. Job ranks in history as the patient farmer.

THE residue from acetylene plants is a wet, slaked lime. It may be used wherever lime is needed. There is nothing injurious in it as usually found.

WE should be careful about buying chestnut timber. The blight disease has killed many chestnuts, and these dead or dying trees are being cut up for lumber.

BE sure to follow the articles on acid soil. Some of us may be trying too hard to fit our soils for alkaline crops, when others will do well on our acid soils.

SEVERAL New York dealers in barbers' supplies have been convicted and fined for selling "bay rum" which contains wood alcohol. It seems that this stuff is quite largely used by barbers, yet whenever it comes on the face there is danger of entire or partial blindness.

THERE is no doubt that many a farmer has toiled for years without fair reward, because he kept on trying to produce something which was unsuited to his farm and his own powers. The man's soil was not well adapted to the crop. He did not feel any enthusiasm for it, and thus did not study it all through and analyze its possibilities. Then it may be that some other part of the country, more favorably situated, had come into competition on terms which he could not meet. In the face of these things a farmer cannot hope to succeed by going on in the same old way. No other business could stand it half as long as farming. In some cases the trouble between father and son is that the boy sees this when the older man does not realize it. The boy, however, lacks father's experience and caution, and does not have the patience to go slowly and prove his case. He cannot expect father to give up the habits of a lifetime without some sort of demonstration on a small scale.

*

SOME of the fruit and truck growers of the Southwest have during the past few years been selling a portion of their products in a manner that cuts the cost of distribution down to zero. When a car is ready for shipment, instead of being sent to some overstocked market center, it is billed to a small town in the adjacent territory, which is known to be in need of that particular variety of fruit or truck, and a representative is sent along to sell the products direct from the car door to the consumer. Peaches, apples and sweet potatoes have been most successfully sold in this way at a cost—outside of the freight—of about 10 cents per bushel. This plan is not entirely new. A Missouri fruit grower some years ago, in a time of glutted apple crop, "lived in a freight car" for several months. He took out load after load for his neighbors, and sold direct from the car door. Many of the people who bought never would have had apples if this man had not come to them, while his apples, left at home, would have rotted on the ground.

*

No question about the size of this problem of the city boy and the agricultural college. We are surprised to find how many city boys are attending these institutions. Wisconsin is one of the most progressive farm States, yet about 50 per cent. of the students in the agricultural college come from the larger cities. Most of these never had previous farm experience. Now the city boy has just as much right at the college as anyone else. As a rule, he is better prepared than the country boy, for the best high schools are in the cities. Yet the city boy lacks one thing, which we regard as absolutely essential either to the farmer or to the teacher of agriculture. That is a knowledge of practical farm work and a broad sympathy for farm conditions. The lack of these things is a handicap for the city boy. Filling the colleges up with boys carrying this industrial handicap will, in time, handicap and embarrass the colleges. In the very nature of things these colleges cannot perform their work of educating farmers properly if their raw material have no genuine farm flavor. Professor Wright tells us how they handle the problem at a secondary school. There seems to be need of a requirement for actual farm labor.

*

As a result of the hearing on the potato situation, Secretary of Agriculture Houston has extended the quarantine. After December 24 no potatoes will be accepted from Europe, Great Britain and Ireland, Canada or Newfoundland. This practically shuts off all imports. Shipments already invoiced will be received up to January 15. Secretary Houston says there are potatoes enough in this country to supply all. The last crop is above the 10-year average. He says:

The price of potatoes in centres of origin is still reasonable or low and the problem seems to be one merely of distribution. The tests from all parts of the country as given at the hearing was that no shortage exists at present above the usual market demands, but that the supply in farmers' hands is very large. Farmers as well as dealers denied the charge that speculators had acquired control of the potato crop. Farm prices have been low for some weeks.

For the past two months a systematic effort has been made by speculators to frighten the farmers into giving their crops away. Stories about "floods of foreign potatoes" in the Atlantic Coast markets have been circulated when retail prices here were as high as ever. Several wild men have been telling the daily papers that potatoes will go to $6 per barrel. The market should now settle to a normal condition. Farmers will do better to sell out at a fair price rather than hold for speculation. Our own plan of selling farm produce is to know as accurately as possible what it costs to produce, and then sell on a fair margin when the price rises to it.

Now that direct trade and parcel post shipments are developing, farmers cannot possibly be too careful about grading and packing their goods. It is a great mistake to ship culls, or to think that any kind of packing will answer. Here is an instance. One of our readers told us that in his city there was a good demand for apples, and that he could handle some good ones to advantage. We got him into communication with another reader in a section where the local market was poor, and a trial shipment was arranged for. This is the report:

The stock was packed loose in both barrels and boxes; barrels were short from one-half to one peck. Apples in boxes were not packed, but just poured in and cover nailed on. They were good color, but were not box grade; would caliper about two to 2½ inches. Apples brought $4 and $4.50 a barrel; $1.75 per box. He allowed me 25 cents per barrel and 10 cents per box for selling, and I spent two days and $1 looking after shipment, which was mis-ronted, and selling apples. We found he had shipped with sight draft attached to bill of lading, no permission to inspect. The firm I sold to is one of the best. It's the old story of the "cull in the package." Three or four dealers would have bought his entire output or stock if goods had been right. One said, "If the goods are all right I'll take 50 barrels and some boxes." Barrel stock was fairly good in size, but most of it looked as green as if it had been picked a month too soon.

Now we notice this case to make it as clear as possible that direct trade will require the most careful selecting and packing. The commission man would return a low price for such a lot of apples and then repack and make more by doing so than the farmer did out of the entire shipment. We must all remember that the more direct the trade the greater the responsibility which goes with it—for that is what the buyers pay for.

*

SULPHUR AS A FERTILIZER.

FOR many years the scientists taught us that three elements, nitrogen, potash and phosphoric acid, were all that we need worry about in fertilizing ordinary soils. The other elements needed to build up the plant were supposed to be present in average land. Then came Dr. J. H. Wheeler's exhaustive work with lime, and the trio of necessary plant food elements became a quartet. It became evident that all over the Eastern States, at least, from the very nature of the soil, lime was fully as necessary as potash or phosphoric acid. Now comes the proposition that we must make the quartet over into a quintet, and accept sulphur as another indispensable element, to be used in our fertilizers and manures. Last year we made a statement of the arguments for sulphur. Up to within a short time ago the scientists were figuring upon an entirely erroneous basis. They figured on the amount of sulphur contained in the ash of various plants, and somehow assumed that what they found in this way represented the total requirements of the plant, the same as of lime, potash and phosphoric acid. Then they found that while lime, for example, might all remain in the ash of the plant after burning, a portion of the sulphur might be driven off in sulphur fumes, and thus not show in the ash. Analysis with improved methods proved the truth of this assumption. For example, Alfalfa hay showed in its ash .17 of sulphur, while with the improved method there was .28. Turnips showed .35 in the ash, .74 when all was recovered. The differences found in other crops was even greater, and it became evident that many of our cultivated plants contain more sulphur than they do phosphorus. For example, a crop of turnips contained about 40 pounds of sulphur, and 14½ of phosphorus; while a crop of Alfalfa hay contained 26 pounds of sulphur and 17 pounds of phosphorus. The Kentucky Experiment Station has been investigating the soils of that State, to study their content of sulphur. We shall give a full description of this work. Briefly stated, it was found that in the majority of Kentucky soils there has been a great loss of sulphur as the result of cultivation. Most of the crops grown in Kentucky require as much sulphur as they do of phosphorus, and almost without exception they have been slowly drained of the sulphur which they contained when they were new. A small amount of sulphur is brought down each year through the rain and snow. This sulphur is put into the air in smoke and fumes from fires and factories, and on the average something like seven pounds is brought to each acre by the rainfall. The loss of sulphur by drainage is greater than that of other forms of plant food. While very little of either potash or phosphoric acid will usually be found in the drainage waters, large quantities of sulphur are washed out in this way. Experiments in Kentucky appear to show that the sulphur problem is a serious one; that the soils of that State are being depleted of that element more rapidly than of other forms of plant food, and that the crops grown upon that soil require as much sulphur as of the other mineral elements. It is now thought by some of our scientific men that the former beneficial effects from the use of land plaster were due in part at least to the sulphur which this sulphate of lime contained, and the results of these experiments may be a revival of the old use of plaster. We shall give a full statement of the work of these experiments. They are not yet conclusive, but they do show evidence that in the future our farmers must consider the problem of using sulphur as a fertilizer, either in such forms as acid phosphate, land plaster, or in some actual form of sulphur itself.

*

A SYNOPSIS of the new currency bill is printed on page 6. It is a complicated measure, designed to prevent, if possible, the concentration of money into two or three favored localities. Federal reserve banks are to be established in at least eight or possibly 12 sections. The control of these banks is to be safeguarded as far as possible by the Federal Government, and it is expected that these banks will become headquarters for general banking business in their respective sections. This ought to prevent piling up of money and final credit in a few favored localities as at present, and bring money out closer to local business. The law permits National banks, under certain conditions, to make loans on farm property and discount notes or drafts made on live stock or farm produce. The theory of the new law is sound and helpful. It may need modification before it will work properly, but it ought to bring about a more even distribution of banking money and better opportunities for obtaining credit through farm property. Such a bill as this should not be made a political issue between political parties. We are glad that on the final passage of the bill party lines were broken down—partly at least. There has been a hard fight between the banking interests and the money-borrowing classes, and both finally were forced to abandon some of the things they originally demanded. There is now a general disposition to give the new law a fair trial, and both sides, while stating that they are not fully satisfied, generally agree that the law is an improvement over the older one. The New York *Times*, organ of the banking element and of the never-changing conservatives, says of the bill:

The public and the bankers now accept the bill hopefully, not because they have in any way changed their attitude toward it, but because the bill itself has been changed, in a multitude of ways, and immensely, for the better. * * * Just as Congress worked under public supervision in making the bill, so the acts of the members of the board will every day be subject to scrutiny, and against any flagrant departure from sound principle the public protest will be so instant and emphatic as to compel a return to the safe path.

The hopeful thing about that is the admission that hereafter the public will take a hand in the enforcement of a financial law, and not leave it to a few rich men plotting in a private office.

Foreign Crops.

The Liverpool *Corn Trade News* reports:

United Kingdom.—The weather and crop outlook are generally favorable.

France.—The weather is seasonable and the crop outlook is mostly favorable. Supplies have increased materially, but offers of native wheat have practically stopped. Buying of foreign wheat continues.

Germany.—The crop outlook is generally favorable and the weather seasonable. Offers of native wheat are larger and therefore the trade in foreign wheat is dull. Best informed interests here predict that there will be a revival of foreign buying in January, as stocks are light.

Russia.—The crop outlook is generally satisfactory. Supplies are liberal. Most of the wheat area is covered with snow.

Roumania and Bulgaria.—Ontlook favorable, with supplies of native wheat liberal. The weather is too mild.

Hungary.—The weather is cold and there is no snow and apprehension is felt regarding the effects of freezing.

Italy.—The outlook is favorable, with the weather seasonable.

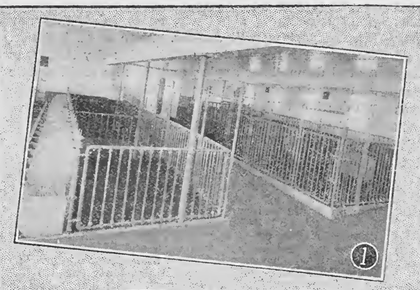
Spain and North Africa.—Dryness continues, and although there has been light rain it was not sufficient.

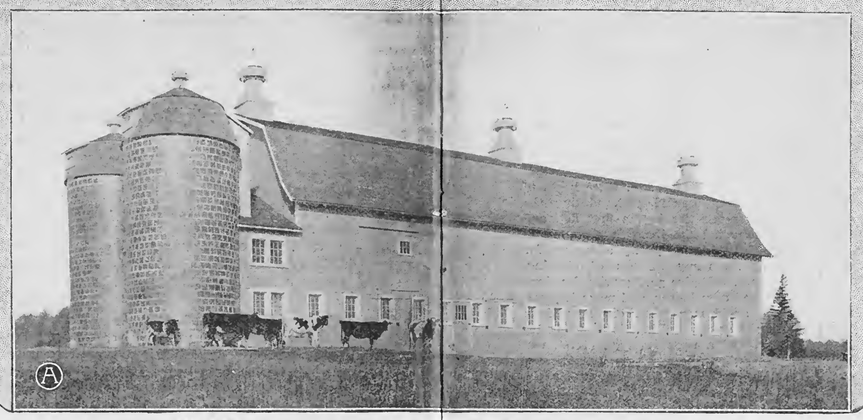
Australia.—High promise has been maintained and our agent reports that the exportable surplus may be 20,000,000 bushels over last year.

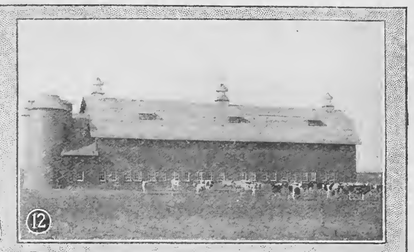
Canadian Crops.

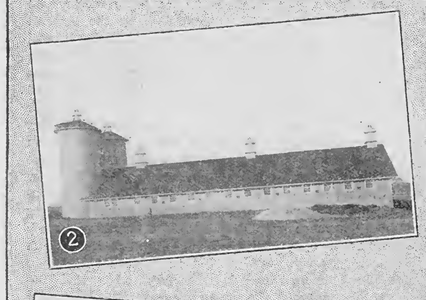
The Ontario Department of Agriculture gives the following figures of yields in the Province this year:

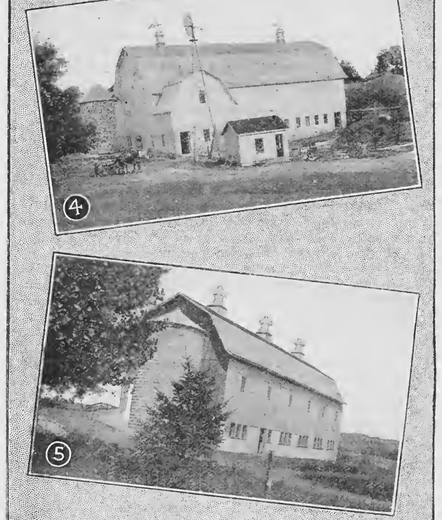
	Acreage	Bushels
Fall Wheat	646,533	15,945,717
Spring Wheat	116,581	2,068,951
Barley	623,658	18,255,958
Oats	2,699,459	98,426,902
Rye	118,429	1,979,775
Buckwheat	228,279	4,012,418
Peas	117,303	3,108,263
Beans	66,639	1,021,243
Corn, Ear	269,871	22,214,014
Corn, Silage	388,138 tons	
Potatoes	159,661	19,124,115
Carrots	2,400	592,016
Mangels	54,568	21,935,847
Turnips	97,572	41,889,894
Hay	3,428,846 tons	3,924,563

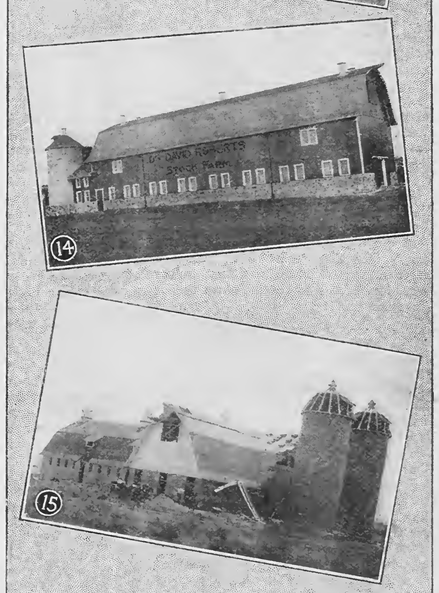


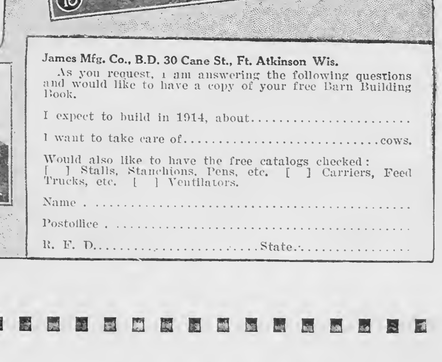


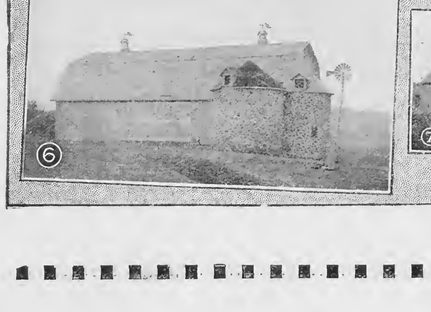


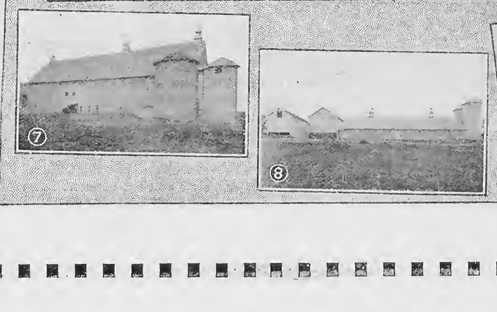


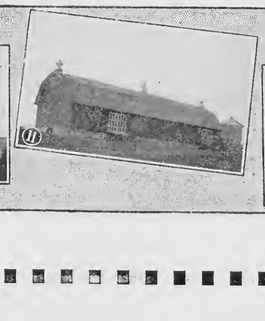












Some of the Successful Barns Designed by JAMES Experts

On this page we show a number of the JAMES barn successes—with names of their owners and their locations.

Exterior "A" and interiors "1" and "2." Barn of Browne & McMillan, Milwaukee, Wis., at Waukesha.

1 and 11 Waukesha, Wis., County Asylum Barn.

2 City of Cleveland Barn (Cooley Farms), Warrenville, Ohio.

3 Experimental Barn, James Mfg. Co., Ft. Atkinson, Wis.

4 and 6 Roloff Bros., Delafield, Wis.

5 Anton Ericksen Barn, Argyle, Wis.

7 Barn of Nashotah Mission, Nashotah, Wis.

8 T. B. Clark Barn, Honesdale, Pa.

9 Barn of Jewish Protectory and Aid Society of New York City, at Hawthorne, N. Y.

10 Barn of Mrs. W. A. Carpenter, Ft. Atkinson, Wis.

12 Wood County Asylum Barn, Marshfield, Wis.

13 Barn on Galloway Farm, Waterloo, Iowa.

14 Dr. David Roberts Barn, Waukesha, Wis.

15 St. Mary's College Barn, St. Mary's Kas.

16 Peter Reiss Barn, Sheboygan Falls, Wis.

17 Hollywood Farms Barn of F. S. Stimson, Seattle, Wash.

18 Fred Knaisch Barn, Buffalo, N. Y.

Money = Saving Plans for Good Barns

ALL barn *profits* begin with the plans.

A barn properly planned and built is a constant money maker, because it saves time, labor and feed every day it is used; and it will cost you no more than the same size barn poorly designed and inconveniently arranged.

A correctly planned barn adds to the value of your *farm*, and means a better price if you want to sell. The average farm buyer looks at the improvements *first*. The right barn plans will give you a better barn from the standpoint of looks, and more important still, from the standpoint of convenience and cow comfort.

For proper lighting, good ventilation, easy disposal of litter—floor space used economically and to best advantage so that time and labor will be saved in cleaning and feeding—a barn *must* be well planned at the start.

A good barn adds to the selling value of your cows—makes them show off better—makes them healthier and finer looking.

A *good* barn puts more value on a farm than anything else of equal or even greater cost—and the good barn requires no larger investment than one that might be full of expensive mistakes.

A barn planned wrong will lose money for you every day.

The wrong design of frame—inconvenient arrangement of feed bins and feed rooms—incorrect arrangement of carrier tracking or the wrong location of posts may compel you to take more steps—do more work and pay out more money for help each day throughout the life of the barn.

One window left out—a silo in the wrong place—a door that is not right—poor arrangement of stalls—intakes or outtakes improperly installed—mistakes in sizes of platforms, gutters, passages and alleys—even these small details may be a source of daily expense.

But all these items are *right*, in a barn planned by experts who know *dairy barn needs* down to the smallest detail.

If you intend to build a new barn or remodel your old one, avoid all the mistakes of poor, carelessly made plans. Accept the advantage of *proper* barn planning, and

Let JAMES Help You Plan Your Barn This Winter

JAMES barn plans represent all the biggest and best ideas in all the best barns built in every section of this country. In all the barns we design we incorporate the most valuable suggestions obtained from the thousands of plans which come before us every year for our inspection and criticism. So that JAMES service represents not only the original work of JAMES experts, but the results of our contact with barn conditions everywhere.

Get *your* plans and specifications *now*—while your time is not taken up with other work—while you can give the proposition the thought and consideration it deserves. Eliminate mistakes by having each point carefully worked out before the *final* plans and specifications are prepared.

You can then submit final plans to several contractors, and if all the bids are unsatisfactory you can reject them, call for new ones, and still have time to get the work finished when you want it.

By having as many sets of JAMES plans and specifications as there are contractors to bid on your barn, you will *save money* in building—as bids generally vary hundreds of dollars. JAMES blue-prints and specifications make it safe for you to accept the low bid, because the successful bidder must follow directions as to construction, workmanship and materials.

Remodeling Old Barns

We also have made a thorough study of remodeling old barns, so that they will make conditions as sanitary and the labor of caring for the cows as easy as possible under existing conditions.

One of our very successful remodeling jobs was on the dairy barn of the Kansas State Hospital at Osawatomie. Mr. Charles H. Chandler, state architect, says the manner in which we laid out the building was "the most economical that could be employed and will accommodate the largest number of cows."

Barn Plan Service FREE

For many years Mr. James and his assistants have made a careful study of barns, and have planned hundreds of the finest and most successful in this country. Some of them are shown in this advertisement. Dr. David Roberts, of Waukesha, Wis., writes us about "the splendid outlines" of the barn we planned for him. JAMES barns are *good inside* and *good looking outside*.

Fred J. Schleef, of Lodi, Cal., says his JAMES plans and specifications were "exactly what he wanted."

Cyrus Reimer, Sales Manager of the American Fork & Hoe Co. at Cleveland, Ohio, says that if he were to build a dozen more barns he would not change from the JAMES plans, and believes he has "as good a barn as stands in America."

We have many other letters of a similar nature—and can point you to *money-making* barns built according to JAMES plans in every part of the country.

James Service Covers Everything

Our knowledge of good barns covers construction and equipment, also lighting, ventilation, location, drainage, etc. In this connection, T. C. McMillan, of the firm of Browne & McMillan, of Milwaukee, Wis., for whom we designed the large barn shown above, says:

"It will no doubt interest you to know that we have completed and are now occupying the new cow stable built to per your plans and specifications and we are putting it very mildly when we state that this barn comes up to our expectations in every respect. We feel that with the advanced ideas which have been incorporated into it through the excellent service rendered by you, we have a stable that will be modern for many years to come as we are satisfied the best of foresight and judgment has been extended in the planning. In conclusion we wish to express our appreciation of the able and courteous manner we have been handled by your various department heads, which our dealings have brought us in contact with, and assure you that we are advocates of the JAMES way of doing things."

It will *pay you* to take advantage of the knowledge and experience of the JAMES organization.

Advice and Counsel Absolutely Free

A service that will help you greatly is absolutely *free* to you. We offer you the benefit of Mr. James' wide experience. We want you to know that valuable counsel is yours without cost, and we will appreciate a letter telling just what your own ideas are—when you expect to build, how many cows you will take care of, etc.

Your letter, postal card or the signed coupon will be personally answered, and every question you ask will be given most careful attention.

Save Money by Starting Early

And don't forget the value of an *early start*—because you know a contractor always figures lower on an *early* job, when work is slack, than he will after his rush season begins.

Get the Barn Building Book—FREE

When you can have a *good* barn at a cost no greater than probably some of your own neighbors have paid for poorly planned ones, *why not have it?*

Write today—and learn what JAMES can and will do for you. If you will fill out the coupon, we will send you the JAMES Barn Building Book postpaid.

James Manufacturing Co.

"Originators of Sanitary Barn Equipment Ideas"

B.D. 30 Cane St., Ft. Atkinson, Wis.

James Mfg. Co., B.D. 30 Cane St., Ft. Atkinson Wis.

As you request, I am answering the following questions and would like to have a copy of your free Barn Building Book.

I expect to build in 1914, about.....

I want to take care of.....cows.

Would also like to have the free catalogs checked: [ ] Stalls, Stanchions, Pens, etc. [ ] Carriers, Feed Trucks, etc. [ ] Ventilators.

Name .....

Postoffice .....

R. F. D.....State.....

Woman and the Home

From Day to Day

NEW YEAR'S DAY.

With mirth and joy the New Year comes again,
Fair aspirations hover in its train,
And golden hopes of peace and righteousness
That show the good to which we might attain.

Why lingers Peace? Why groans the weary earth?
And why 'mid splendors do men die of dearth?
How long for harvest must the sowers wait?
When shall the longed-for New Year Day have birth?

Be patient, brother; let us do our best,
And strive amain at Brotherhood's behest
To raise the fallen and to cheer the weak;
And leave to rip'ning Time and Heaven the rest. —W. E. A. Axon.

*

In a breadmaking contest in connection with the farmers' institute at Oberlin, Kan., Leta Moore, aged seven, made bread that was given a score of 91 by the judges. A seven-year-old bread-maker is certainly a wonder, when she can attain such a score as this.

*

Making a large batch of fruit cake is a toilsome process, because of its weight and stiffness. After butter and sugar is creamed, and eggs beaten, ours is mixed in the bread-mixer, which incorporates the materials thoroughly, with a great saving of labor. After putting into the tins, our fruit cake is steamed for two hours, and then baked in the oven one hour. This insures the proper cooking, without drying it as hard as a paving stone, and there is a fragrant richness of flavor that is very desirable. The steaming may be done just like brown bread. One of our friends does this in a closed baker, with about 2½ inches of water in it. She puts the cake in the usual tins and ties cheesecloth over the top to prevent drips of steam from falling on the dough, then closes the baker. This is a practical way of steaming things in the oven, leaving the top of the stove vacant for other cooking.

*

We made reference recently to the new vegetable, dasheen, which may be grown in the South as a substitute for potatoes. The Department of Agriculture gives the following recipe for using dasheens as a dressing for poultry: Two parts of riced dasheen, one part of bread, one egg, butter, according to quantity of above. Season to taste with salt, pepper, sage and onion. The dasheens should be boiled and riced in the same way as are potatoes. We wonder whether any of our readers have used the tubers of Jerusalem artichokes in this way? In our experience they have been but little used in the household, though they are easily grown, and prolific enough to be troublesome in a great many localities. The dasheen is said to have a pleasant nutty flavor. We have never been able to acquire a personal taste for the Jerusalem artichoke. It has often been urged as a substitute for potatoes, and is likely to come up again with the quarantine against the latter vegetable, though rice is always available as a cheap and nutritious potato substitute.

*

One of our friends, who is much interested in household art, says she always starts to decorate a room by taking a lot of needless "junk" out of it. A good many houses present an opportunity for such reform. We may multiply ornament until we lose real beauty. Nowadays decorators are going back with enthusiasm to the Colonial period, eliminating all sorts of gimcracks, and adopting the simple lines and severe ornamentation of the eighteenth century. When we study the restful effect of a Colonial interior we notice that comfort and usefulness predominate over ornament; that there is no multiplicity of adornment. Perhaps the ugliest period of house decoration was during the seventies and eighties, a time when woman's dress reached an acme of ugliness too. In arranging a country home, we can get some ideas from the Summer homes of city people in mountain or seaside resorts, and the old-fashioned simplicity of Colonial times, or the modern "craftsman" type are both suggestive models. Comfort and beauty need not mean great cost; it is the "know-how" that is needed. We have got away from nailed-down carpets and multitudinous tidies, and it is a propitious time to study for beauty, as well as comfort and convenience, in the farm home.

Heating Upstairs Room.

In a recent issue you asked for information regarding the more effective heating of stoves. Certainly a large part of the heat goes up the chimney. We have solved the problem by attaching a radiator to the pipe. This makes the second floor room nearly as comfortable as the first. The radiator idea is a good one also where furnaces are being placed in old houses where there is no chimney to the cellar, and the smoke pipe has to pass to the second floor. The radiators may be purchased for from $3 to $12. Ours cost $6. M. H. L.

Lard Does Not Keep.

Will those with experience tell us why our lard becomes rancid by early Summer? One gallon crock, often used before, kept perfectly sweet till early Fall Some of the lard was put in new tin pails, at time of rendering, but was not fit for use. H. M. B.

Trying Out Leaf Lard.

Instead of cutting up the leaf lard in pieces and then being obliged to squeeze the lard out when done, try this way: Put the leaf lard through the meat grinder, using the coarse knife. Fill the kettle nearly full, with a little water. Put on cover, stir occasionally and when done there will be no moisture on the underside of cover. Pour all ont into cheesecloth, put in colander over the jar, the scraps will drain dry and will not need to be sqneezed. They are in nice shape for either using in cooking or for feeding chickens. I found this plan worth much to me. I can try out 50 pounds of lard and make same amount of sansage in a day, whereas it took two or three days the old way. C. M. B.

Old-fashioned Apple Dumpling.

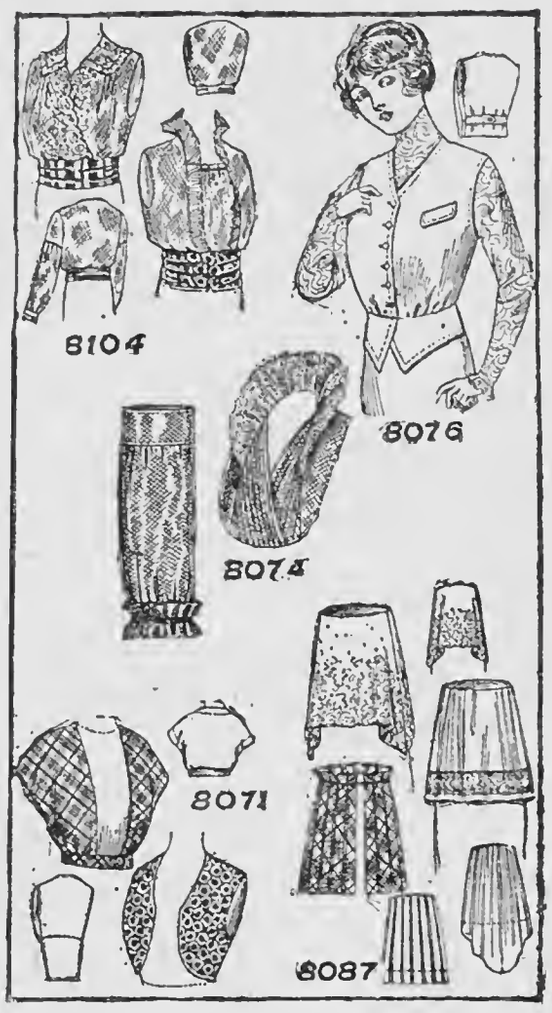
F. J. F. F. asks for a recipe for apple dumpling. I remember as a child after a walk of a mile, how fragrant the kitchen was when mother had apple dumplings for supper, which was at five o'clock, after our cold lunch at noon on school days. These were often made when the old-fashioned boiled dinner was cooked. And no dinner ever seemed like those. But we must remember that there is nothing like mother, and never fail to appreciate her. My own mother was taken from us when I was 18 years old, leaving me as housekeeper and mother to the children, two brothers and a motherless little cousin who lived with us, and today my heart often aches as I see children treating their mother with scant respect; not children alone, but young people who seem to forget the patient loving mother ever ready to give, with nothing given in return. These apple dumplings were made as follows: One cup rich buttermilk, one teaspoon salt, one teaspoon soda (scant) dissolved in hot water, two tablespoons melted butter. Flour for stiff batter that can be spread with spoon in a buttered basin. Spread a thin layer of dough, then a thick layer of apples sliced thin, dot with butter and cinnamon, cover with the rest of the batter, steam over kettle two hours. It will be white, puffy, and delicious; served with sugar and cream.

Another equally delicious dish was cornmeal pudding boiled in a bag. This usually also accompanied a dinner of boiled ham or pork and was made by using one cup buttermilk, one spoon salt, one egg, one small spoon soda in water to dissolve. (Too much soda causes a yellow tinge and disagreeable taste.) One cup raisins rolled in flour. Thicken with one part white flour and two parts cornmeal sifted (not bolted meal) until like fruit cake, and two tablespoons melted butter stirred in last. Tie up bag, place in a roomy bag, giving place to expand, and lay on the meat in the water it has cooked in and boil abont one hour. Serve with sugar and cream. This may be steamed if preferred as the dumplings were. MRS. JAMES LAMPMAN.

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired.

8104 Guimpe with or without sleeves 34 to 42 bust. 8076 Waistcoat in three styles, 34 to 44 bust. 8074 Waist garniture with under sleeves, one size.



8071 Sleeveless over-waists in bolero and jumper styles, 34 to 42 bust. Bolero to be made with coat back or finished at waist line. 8087 Set of tunics, 22 to 30 waist.

8089 Boy's suit, 4 to 8 years. 8077 Boy's single-breasted overcoat, 8 to 14 years. 7914 Girl's Russian dress, 10 to 14 years. With two-piece skirt, scalloped

or straight edges, elbow, three-quarter or long sleeves. 7235 Girl's yoke apron, 6 to 10 years. With high neck with or without collar, or with square neck, with or without sleeves. 7956 Child's feeding apron, 1, 2 and 4 years.

Who Can Dress on $15 a Year

Sometime ago a writer in a woman's periodical mentioned $15, as a yearly dress allowance. One woman asserts that she considers herself well dressed upon that amount—wears mittens and a hood during cold weather, and a cape costing less than $10, and lasting some six or seven years. The woman who can hide herself in a big city; or take to the woods, or is so situated and sonstituted that she can keep her best dress in the closet, and her best hat in a box, can dress on a very small income. She may be a law unto herself and dresses as she pleases. But for the woman who goes among people, and keeps somewhat in touch with the prevailing modes and respects at least a few social demands, the adjusting of her needs to so limited amount of money as $15, is indeed an impossibility. Women having had the benefit of a liberal dress allowance, can at a period demanding no heavy outlay, dress for a few years upon a surprisingly small amount of money, and remain well dressed; but when the time comes for a really good garment then it is that the purchasing power of the small income merges from the experimental stage.

The greatest possible help towards dressing on a small income, comfortably, and according to business and social demands, is to take a careful inventory of clothing, once a year during the month of December, then make out, not one list, but three, a list for each three years to come with estimated cost, placing the pressing necessities in the first list, and then adjusting the items in each list to harmonize with the yearly allowance for dress. So many articles of clothing, with care, will give good service for three years and even longer, and make it possible to avoid more than one large item during one year, and in this way a better article, and a more lasting material can be secured. Unless a woman knows the full extent of her dress wants for the coming year, she cannot possibly know how much money she can invest in any one garment. For instance, a very small allowance can only carry two large items, the best dress and the Winter wrap, during a period of three or five years, and the amount that can be invested in either, must leave from the allowance a balance sufficient for all the other necessary dress items for the whole year.

If a woman with a small income should by fire or flood, be deprived of all her clothing, she would be obliged to take advantage of cheap material in order to be comfortably and presentably dressed. But with more or less of clothing at hand—to spare the new—there is no economy in cheap shoes, black dress goods, or hat trimmings. Wool dress material less than 42 inches in width and one dollar a yard is a questionable investment for street wear, when a skirt pattern can be adjusted to wide goods, requiring only two breadths, or two skirt lengths for a plain walking skirt; and one yard and a half for a waist or a short jacket. Good felt, or straw hats will each last three seasons; and good satin finished trimmings from three to five years. One pair of $3.50 shoes a year, for two years, will last three years if re-heeled and re-soled, and shoes of that quality—the welt sewed—will stand repairing and never need an apology. Black brilliantine from 50 to 70 cents a yard makes an economical and most satisfactory petticoat for the housewife, and the business woman, for best and for every day wear; $5 worth of Winter underclothing with good laundry care and mending, should last three Winters, and $3 worth of knit cotton garments should last three years. As no two women dress alike, or need the same amount or kind of clothing, it is not thought helpful to consider more than a few items of dress. Every woman should for herself, discover between necessity and desire; and discriminate between cheap goods and expensive goods; and so far as she can confine herself to the standard grades, with prices that vary but little from year to year, that she may be able to look ahead and to estimate her wants and the costs, and thus have the full benefit of the purchasing power of her small income.

MEDORA CORBETT.

A Candy Suggestion.

The article on homemade candy by Rosamond Lampman, on page 1371, was fine, but I wish to add just a bit that will aid the candy maker greatly. When ready to dip the molds for the chocolate place in small saucepan two good-sized tablespoonfuls of butter to one quarter pound bitter chocolate. Place right on stove and stir constantly until chocolate is melted. It is not necessary to cut chocolate in pieces unless desired. When too cool reheat again. The result is delicious, and as it makes the chocolate thinner expedites dipping greatly. I have made Christmas candies for years, but just thought out this idea recently.

M. H. L.

Over the trackless past, somewhere,
Lie the lost days of our tropic youth—
Only regained by faith and prayer,
Only recalled by prayer and plaint;
Each lost day has its patron saint!
—Bret Harte.

The Farm Well.

I wish some practical man would write sometime on the subject of wells on farms. I know that many modern farm homes have water systems, but homes are scattered about, where the wells seem to have been dug in the most inconvenient places. These old houses will outlast those being built now, and, while the owners have wells dug "down at the barn," and in the house pay for some modern touches in the way of windows, porches, and the like, they consider it a very extravagant idea to dig a new well, but women folks continue to carry their water the length of the back porch, or the front yard, near the roadside, where the travellers in the old days through the thinly settled country, used to stop for a refreshing drink.

My nearest neighbor, who owns his farm, and has a large mortgage on the next one, has one of those roadside pumps. In addition, the house, which is on a hill, must be reached by a flight of six steps, and the width of a porch. I do not deny that it is the women who are unbusinesslike in this matter. They do not count wasted energy in such matters. There is one patient soul near by whose men-folks were not handy with tools, who waited for years until the old farm house needed re-roofing, before she asked to have built a few shelves which saved her many, many steps to and from the pantry.

I have heard women say that when they built a house, they would begin with the kitchen. When I build a house, I shall begin with a well. L. S.

Windows and Draperies.

I am glad that country women are not so much "given" to the craze for window and door draperies as city women are. In some city homes, after seeing the draperies at transoms, doors, and windows, one is almost surprised if no attempt has been made upon the skylight. But it was in a farm home where I recently saw three sets of window draperies at each of the living-room windows, and heavy, woolen portieres at the doors. Plants were not thriving in the room. They did not actually die, for, although they did not have sufficient sunlight, yet they were "tended." Did not the condition of the plants give a warning for the children who spent part of their time in that room? Was not the man of the house about right, when, after looking wonderingly for a few minutes at the dainty net and Swiss, he asked: "Mother, what are those things, anyway, just pretties'?"

I consider that we need window shades; also that draperies may be beautiful and artistic, but I think they should not be used in those rooms which are in everyday use. In our living-rooms we need light and sunshine and ventilation, and if dainty materials are hung at the windows, we are too apt to think of the effect upon them. I have been in houses where women have had doors made half glass, so as to see the glass daintily draped.

A country woman should prize her views. I should say she would be more cheerful and more efficient if she were to spend her drapery money in adding more windows. From personal experience I know that a good clear window, in the right place, can almost save a doctor's bill. My kitchen had only one window and that was placed where I could not see out of it without leaving my work. As I worked at my cook-table or stove I often longed for an out-of-doors view to relieve the monotony. I had read of women who had a map in front of their cook-tables and studied it as they worked. Think of it! It seemed to me that what I wanted to do was to punch a hole in the wall and see out-of-doors. One day I decided that I *would* have that hole punched there. And now I have a nice window, on a level with my eyes. In Winter I have in it a few pots of tulips, which, perhaps because of the steam, seem to thrive better there than in any other window. There are not enough plants, however, to obscure my view of a barnyard scene, a quiet pasture, and some beautiful hills beyond. Work in my kitchen is a more cheerful proposition to me now, nor is all my time spent in looking out of my window.

L. S.

Cream Recipes for Cake and Icing.

In November usually the cheese factories in this section close, and until Spring opens the milk from the dairy is taken care of at the farmhouse. Then, morning and evening, the whirr of the separator is heard, and the housewife finds the abundance of thick sweet cream a valuable addition to the larder, for cream adds richness and delicacy of flavor to even the simplest dishes and without materially increasing the cost. In fact in many cases the resulting dish is more cheaply prepared, as the cream takes the place of butter, which costs more in proportion. Cakes made of sweet cream are very light, delicate and wholesome, and are easily and quickly made. The following is the simplest and is useful when eggs are scarce or very high.

No. 1.—One pint bowl of sweet cream, beaten until light and foamy; one pinch salt, one cup sugar, two teaspoonfuls baking powder sifted in two cups of flour. Flavor to taste. Beat together until smooth and bake in four layers in a quick oven.

No. 2.—One white of egg beaten in a pint bowl, fluffy but not stiff. Fill the bowl with sweet cream. Beat in one cup of sugar and a pinch of salt and two cups of flour sifted with two teaspoons baking powder. Flavor to taste. This also makes a four-layer cake.

No. 3.—Two whites of eggs beaten until light, but not stiff, in a large bowl. The right size to use holds 1½ pint. Fill the bowl up with sweet cream. Beat in one generously large cup of sugar and add a pinch of salt. Two cups of flour sifted with two large teaspoons of baking powder. Bake in four layers.

Cream Icing.—One cup of sugar, five tablespoons sweet cream. Boil until it makes a soft waxy ball when dropped in cold water. Stir until smooth and creamy and a little cool. Then spread quickly on the layers.

For chocolate icing add one tablespoonful of grated chocolate or one tablespoonful of cocoa before cooking. For cocoanut icing sprinkle shredded cocoanut over cake before it cools Walnut meats pressed into the plain white icing are very good.

It is a good plan to use the left-over yolks immediately in a salad dressing as it will keep a long time if canned while hot, and is then ready for immediate use at any time. The following recipe is a good one: One cupful of cream either sweet or sour, two egg yolks beaten, one cupful of vinegar, one-quarter teaspoon red pepper or less if desired. One tablespoonful of sugar, one teaspoonful of salt, one-quarter teaspoonful celery salt. Cook until thick and if not wanted for immediate use, seal in a glass can.

F. J. F. F.

Pickled Carrots and Carrot Pie.

We once lived in a Northwestern State where very few vegetables could be grown. Here I learned to use the carrot in many useful and tasty ways.

Pickled Carrots.—Scrape and clean carrots cut in halves or quarters, boil until done in salted water. Take out carefully and drain well in a warm place, as they are rather watery. Take two cups of vinegar, not too strong, and one cup of sugar, boil until quite a heavy syrup, then pour over the carrots. For flavoring I used to vary it by using ginger and mustard one time, and cloves and cinnamon another, always putting the spice in loose muslin bags, and letting it boil in the vinegar at least part of the time. If it sticks to the bottom it can be placed in the jar containing the carrots and the syrup turned over later. These are very nice.

Carrot Pie.—While on the ranch one of the boys remarked he would give a year of his life for a pumpkin pie on Thanksgiving, so I determined to find a substitute, for the real article was not to be had. I boiled carrots in salted water, drained them, and put them through the potato ricer. I used for each pie one cup sugar, one egg, salt, ginger and nutmeg, also one tablespoonful cornstarch dissolved in milk, and enough sweet milk to make it the consistency of the real article. I let it heat until nearly boiling and turned it into rich crust crimped like the usual pumpkin pie. They were a real success, and I never saw anyone who liked pumpkin pie who did not like them.

Carrot Croquettes.—Boil until tender young carrots, put through the ricer. Add salt, a beaten egg and about one-half cup of bread crumbs to two carrots, roll in beaten egg, then in bread crumbs and fry in hot lard. Let drain on brown paper.

Carrots with roast mutton are nearly as nice as sweet potatoes. About three-quarters of an hour before the roast is done, place scraped carrots cut in halves in the roaster about the meat. Let cook until done, then take up the roast on a platter, place the carrots around it. Make a gravy of the fat left in the pan by adding flour to the fat stirring smooth. Then add milk or water, and let boil, pour about the roast and serve.

MRS. JAMES LAMPMAN.

About 15 years ago my wife pickled some carrots. The idea was new to her as well as to myself, but the pickling was a success. The carrots remaining firm and crisp until used. Use small or medium sized carrots, pickle in brine sauce as cucumbers. Use vinegar liberally, put into jars, crocks or other containers. H. H.

Candy Fondant the Children Can Make.

There is one way of making an uncooked fondant which is as simple as can be, and the resulting candies are so like the real cooked fondant that to the uninitiated there seems no difference. The whole process is so simple that even children can make these creams. Separate the whites of three eggs and beat in powdered or confectioner's sugar with a fork. Do not beat the egg first. When stiff enough to knead, take it upon a board or marble slab. It can be made up immeadiately or packed away in a jar, the fondant being first wrapped in a damp cloth. This packing away for a time takes away any raw taste to the candies, but they are very good any time. The freshly made fondant needs only to be flavored and formed into shape, to make a delicious and wholesome sweet. Melted chocolate may be used to dip the balls of cream, cocoanut may be added to the fondant or sprinkled on the finished candy and raisins and nut meats pressed into the creams give a pleasing variety. There is another similar recipe using the whites of two eggs and an equal amount of cold water, into which the powdered sugar is first beaten with a fork and afterward kneaded.

Half the fun of having homemade candy is in the making. With these recipes there is no danger of the smaller children getting burned, and instead of their being in the way, they can be kept busy and happy helping make the creams. F.

KEEPING SWEET CIDER.—We found a very simple means of keeping cider sweet, some years ago. Grate horseradish and put in barrel when cider is sweet and put the bung in tight, after letting it work a very little. We liked it very much, as the flavor of horseradish gave it a little tang, which made it very nice, and still it was not sour or like hard cider. A. E. P.

BAKED APPLES.—Pare, core, and slice enough apples to fill earthen dish. Add a little water and cover with an old plate. Set in oven and bake two or more hours until well done. Remove cover and stir in a cup or more of sugar. Served with cream or without, you will find them delicious. I sometimes add a little peach juice or a few pieces of canned peaches for a change. They seem much fresher than when the sugar is baked with the apple, and there is no taste of burnt sugar, as is often the case, where they are not covered.

ALICE E. PINNEY.

WE are subject to all sorts of reverses, great and small. There is only one way of providing against depression and that is by acquiring a large outlook. It may come to some in the form of Christianity * * * to others in philosophy, to others in art, but it is always attainable if the searcher strives hard enough, according to his intellectual and moral temperament.—Lord Haldane.

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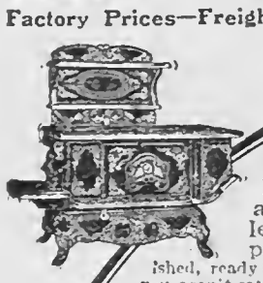

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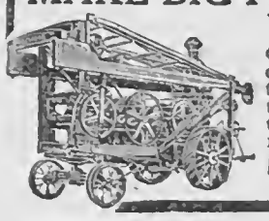

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Two classes of men are making money from farm flocks of mutton sheep. One, the man who is gifted with the natural ability to select his breeding animals and look after every detail that will add to the welfare of his sheep—the other, the man with a determination and who persistently studies and labors until he acquires a working knowledge of the sheep business. Before investing in the sheep business a man should have a fixed idea of the shape and model of the animals he wishes to breed. The ideal always comes before the actual. The plan of the building is in the builder's mind, and drawn out on paper before the work is started. The man is always greater than any of his works; and he must have his plans clearly defined in his mind before he can work to any definite purpose. If a breeder does not have in his mind what an ideal animal is, he will secure it only by accident. How to study the breeds and get this ideal clearly in mind is a question I am going to illustrate by citing an incident that marked the beginning of a young breeder's success with Shropshires.

A few years ago, while making a circuit of the State fairs, I met a young man who was studying the various breeds of mutton sheep with an idea of buying a foundation flock. He had examined a large number of exhibits and failed to

REMOVING AN OVERCOAT. FIG. 9.

buy. First, he wanted to find out as much as possible about the various breeds of mutton sheep and he asked me if I would go about with him and tell him.

He was a wise young man. He did not know, and he knew that he did not know, and that is about half the battle when a man is buying foundation stock. It is the man who thinks he knows but still does not know who gets the worst of it. The large fair is a great place to study breeds and type. A man may see representative animals of the various breeds and types in their best estate. If he observes keenly he can note many points of excellence and utility that owners and supporters of each breed prize highly. He can compare the breeds and individuals at close range, which he cannot do by visiting the flocks in different localities. Comparison of breeds and types is of great assistance in enabling a man to form an ideal of the kind of stock he should breed. By seeing all the breeds together, it takes no very positive character to form an ideal and decide for himself which animals would do best in his own locality and on his own farm.

The breeders and exhibitors are a fine set of men to visit with. They are looking for business, and will tell you more about the breeds and types than you can learn from other sources in years. A man does not need to buy until he has made up his mind as to just the kind of stock he wants. Going the rounds of the various sheep pens and watching the work of the judges while placing the awards gives a man a liberal education. The prospective buyer remarked that Shropshires and Southdowns seem to take right well in New York. They are the aristocrats of the show yard and a right valuable all around sheep. Size up the rams, note their blocky, compact form, note the growth of wool. Here is a bunch of ewes that are about right, not as well conditioned perhaps as they might be, but all have brought good lambs, which accounts for their lack of flesh. They are fine shaped individuals and possess the ideal meat-making form. Such sheep ought to do well on your New York farm.

What about the Southdowns? None better, they are very beautiful sheep, have mutton quality to spare, but are a little small. They are a little short on wool in spots, but that is no great fault, and can be largely overcome by careful selection and breeding. Great sheep for their inches, early maturers and always fit to sell. Given the right feed and treatment they make excellent feeders. Go slow on feeding them too much corn, for it frequently injures their breeding qualities.

What do you think about Hampshires and Oxfords? They are fine sheep. Pretty black in the face, good size, perhaps if anything a trifle coarse and carry a little too much bone. Given plenty of feed and they will surprise a man, starve them and they are no good. Good sheep for the man who keep two or three dozen breeding ewes and gives them the most painstaking care; make great mutton when grown to maturity. Good feed the whole year through is what these big sheep need and must have. Not quite as well adapted to New York as to the corn belt. If you like them best there is little danger of going wrong with them.

How do you like those long wools? Long wools have merit along certain lines, produce good mutton lambs, but not so good as the Downs. Cotswold and Lincolns have never been very popular in the East; seem better suited to the range. Lots of them in the Far West and some valuable flocks in Canada.

Why did we go into breeding Dorsets? We got the flock cheap. If the ewes have many more sets of triplets we shall have to buy more land. Still these Dorsets have many good qualities. There is need to go a little careful with the ewes. They all have horns. That old buck would make a good battering ram; made the stable door look like it had been through a cyclone, killed a neighbor's trail hound and thrashed our bulldog. Ewes are great breeders and give lots of milk. They grow twins and triplets to beat the band. Excellent feeders, and make the best of mothers for Christmas lambs. There is great demand for these sheep in Eastern States where the hothouse lamb business is beginning to start up. They are easy to carry along with the swine and help to meet expenses on the circuit.

"Well now, honestly, which do you think is the best breed?" asked the young man who was looking for information. "There must be a best breed among them somewhere." No, there isn't. The best breed is the one you like best and think best suited to your farm and neighborhood. W. M. K.

A BREEDER'S EXPERIENCE.

Recently I saw the statement by a correspondent of THE R. N.-Y., that he could not afford to buy purebred females for dairy purposes, but that breeders would make him every inducement to buy a bull. Why is it the average farmer hates the word purebred? Everywhere the purebred sire, when given a chance, even on the most common animal shows his superiority, be it horse, cow, hog or perhaps only a dog. Many times I have sent meritorious sons of my best cows to the butcher, when all around me my neighbors were breeding their cows to common animals picked up at an auction. These calves could have been bought for a small advance above vealing value, but they would not have them. Right now I am buying calves for feeders from dairies using a common bull that only average 25 per cent of tops; a neighbor using a purebred bull gets top price every time.

One cannot pay too much for a sire if one can afford it; on the other hand the purebred sire, no matter how low in price, if a fit animal to breed from will improve any common herd. After the first purchase the next will be more easy. When I bought my first bull I had an option on two animals, one at $80 which I was using for his keep out of a nearby herd and one from a distance at $35. As money was scarce and both pedigrees looked good on paper, I bought the cheaper bull. From my bull I got nothing, and the other later, sired a 33-pound record cow, and in my herd he sired the best two-year-old I ever put a pail under, also the best grade cow in a dairy of 30 head.

My next venture was much as your correspondent describes. While at a breeder's buying two heifers he gave me the usual song about buying a bull. I said no, and continued to say no. He walked back in his barn and brought out a bull calf and threw it in the sleigh, then he said: "If you don't pay for it this year you will next." This bull proved a great breeder; his calves were large and straight, and nearly all heifers. His first daughter at two years made a record of 15.63 pounds fat in seven days, and every time I set a pail under one of them I thank the breeder for his persistency in making the sale.

I think your correspondent could deal with the small and obscure breeder to his advantage; many a good animal at a moderate price is overlooked in a desire to buy from the top-notchers. These same men are good judges of cattle; they pick up an animal here and there at a small price, take her home and give her a record, and her price goes up to five hundred or a thousand dollars, and her bull calves are in great demand as herd headers. If one is versed in breeding lines and a judge, or perhaps I should says knows what he wants, it pays to buy from the original owner. H.

New York.

MRS. KNICKER: "Do you have eggs for breakfast?" Mrs. Bocker: "No, but we have a phonograph record of a cackle."—New York Sun.

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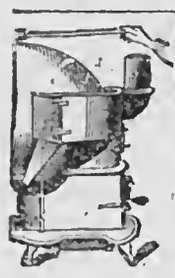

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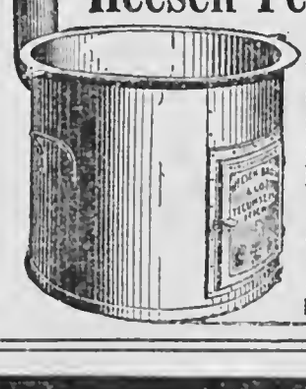

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POINTS FOR TAMWORTH SWINE.

Our reasons for preferring the Tamworth to other breeds of swine are as follows:

Under ordinary conditions it does not cost any more to produce a pound of meat on the Tamworth than it does on the fat breeds and under our conditions, it does not cost as much, and at the same time their meat is of a superior flavor, and has a much larger per cent of lean, their sides being streaked and their ham and shoulders largely lean, with a delightful admixture of fat. They are wonderfully strong and healthy and are blessed with a splendid appetite. They are very prolific, nearly always having litters of from eight to 12, and sometimes more, and usually raise all the pigs farrowed. They are better rustlers than any breed we know. They are able to make fairly good gains on large thin pastures, without grain, eating weeds and grasses on which, to say the least, the fat breeds would but maintain themselves. We do not believe there is any live stock that will pay better for the money invested than the Tamworth will, When given good clover pasturage, with a small allowance of Indian corn. As a pen hog, for those who keep but one or two for home consumption, the Tamworth has no peer. They are strong of vital organs, and are possessed of wonderful appetites, being ready at all times for the swill and other waste feeds, converting this feed into the best and most palatable of all meats. For years we have been growing, killing and curing large numbers of high grades and some purebred of this breed and we have always been able to sell their hams and sides at from three to five cents per pound higher than meats of other breeds on our local market. We now only keep purebreds, as the demand for them is growing.

North Carolina. D. J. LYBROOK.

RECORD OF 6 PURE BLOODS.

I see on page 1236 an article by G. A. Birdsall, Otsego Co., N. Y., in which he states that he wishes to step to the front and present the record of his herd of six grade Holstein cows from three to eight years old. I have six purebred Holsteins, five two-year-old heifers and one four years old. I give below the names, ages, and weight of milk.

	Milk
Aggie Alban Maid, 4 years....	14,515.6
Korndyke Ivy De Kol, 2 years..	11,970.2
Fairview Segis Malinda 2nd, 2 years	8,312.0
Aggie Alban Pontiac, 2 years..	9,368.7
Lady Butter Boy Pontiac, 2 years	9,258.0
Segis Korndyke Pontiac, 2 years	9,077.3
Total	62,501.8
Average for the six head.....	10,416.9

I cannot tell just what this milk brought as some of it went to a local milkman at five cents per quart, and some to the cream gatherer, skim-milk, being used at home for feeding calves and pigs. Figuring the milk at the average price received by Mr. Birdsall would make the milk average $168.96 per cow, in addition I have four very salable heifers, about one year old. There is plenty of room at the top; let us hear from others.

Connecticut. W. B. WHITLOCK.

WHY I KEEP JERSEYS.—There are so many reasons it would be impossible to answer all. The Jersey is a small, dainty animal, very beautiful to look at, and businesslike at the pail with her rich milk. Do you not think most people would rather have 20 quarts of rich milk than 40 quarts of milk from a cow without a high butter fat test? People argue that Jerseys are not good for anything after their usefulness at the pail is over, and that, for example, a Holstein cow brings a good price at the butcher's. My idea is, if you want a dairy cow get one, but a beef cow is a different animal altogether. I am not a believer in a dual-purpose cow; it is one thing or the other. I started with one cow a couple of years ago, and now have 15, besides each year selling young stock. I have only bought four cows and one young bull, raising all the rest of my herd. I have been very careful of the blood that runs through the veins of my cows. That is why I go slow but sure. My older bull is St. Lambert, a great-great-grandson of Ida and Bachelor of St. Lambert, and a grandson of Matilda's fourth son, and the other is a grandson of the imported Eminent. My cows are all descendants of Pedro, and in their veins runs the blood of Alphea, Europa, Eurotas, Brown Bessie, and others equally as well known. I do not exhibit, believing that it is too exciting, and I run too great a risk with disease. Never having consumption or abortion in my herd, I do not choose to risk it in the show ring. I can sell my stock on their pedigree, and that is best, for blood will tell in the animal kingdom as well as in the human family. Great care is exercised in bringing the young stock to perfection, and I never allow my matrons to milk up to their time of calving, always drying them up for two months; then I obtain good strong calves and their mother is in good condition. I have my young stock come in the Spring and early Summer, so that they can have the good sunshine and the green grass.

I believe in the tuberculin test, but I do not believe in letting any "Tom, Dick or Harry" use it—only a graduate veterinarian, and be sure he knows his business. I can approach my cows at any time. Kindliness and gentleness to dairy cows has a direct money value to one; besides, if in case of fire or accident, one can easily handle and calm them. Teach them to come at the call of their names; it can be done with no trouble. It is the little things that count.

Orange Co., N. Y. R. F. NICHOLSON.

LIVE STOCK AND DAIRY PRICES.

Cows, $60 to $90; butter, 27; eggs, 40; chickens, 10; turkeys, 16½; apples scarce, 50 cents per peck; potatoes, 75; corn, 70; hay, $15 per ton; straw, $7 to $8; hogs, $7 per 100 pounds. R. F. M.

Claysville, Pa.

We get these prices in Washington, D. C., after a wagon haul of 20 miles: Hay $18; new corn $3.25 per bushel; potatoes 50 to 60 cents per bushel. Milk 20 cents per gallon; cream 80 to $1 per gallon; apples $2 to $4 per barrel; wheat 88 cents at local mill. W. J. T.

Ednor, Md.

Cattle, live weight, eight cents; cows, $50 to $90; hogs, live, eight cents; dressed, 10; pigs, six weeks old, $5 to $7; horses, $100 to $250; apples, good, 80; potatoes, 60; wheat, $1; rye, 80; oats, 45; corn, 85; buckwheat, 75; butter, 28; eggs, 32; chickens, live weight, 12; lard, 13; milk, five cents per quart.

Clearville, Pa. I. K.

Our main products, except milk, are marketed at Utica, and as we are 12 miles from Utica, no garden truck is raised, and our main dependence is market milk, which Borden's, from Waterville, get at their contract price, with additions as earned. Potatoes are our main money crop, and are bringing to the consumer in Utica $1.10 per bushel, and from the stores 90 cents to $1 at Utica. Fruit is a failure in this section this season. Grade Holstein cows, springers, $65 to $100, depending on color, size and markings. A pea viner at Paris Hill gives a chance to those who wish to raise peas to be delivered there at their contract price, which is $2.50 per hundred weight for early peas and $2.50 per hundred weight for late peas. Timothy hay, $18 to $19 per ton loose at Utica, and $14 to $15 to dealers at barn, dealer to bale, and farmer to deliver to nearest freight depot.

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UNION, W. VA.
offer 100 Head of Imported and Home-bred
Percheron Stallions & Mares FOR SALE
Mares are heavy in foal and excellent breeders. We have recently shipped 50 stallions and mares to Newark, Ohio, where we are offering them for sale at very reasonable prices. Write
J. H. JOHNSON, - - Newark Ohio

50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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5 Lincoln Buck Lambs, 5 Shropshire Down Buck Lambs, ready for service. 50 Registered Chester White Pigs. Write for Circular.
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A CHRISTMAS PRESENT
Have 10 Spring gilts. Will close them out at $25 each. Bargains in Fall pigs at $10, or two for $16 until January first. Send at once—these will be gone in 3 weeks. SHENANGO RIVER FARMS, Transfer, Pa.

TAMWORTHS—Pigs, gilts and boars ready for service for sale at reasonable prices. All well bred and none but good individuals offered for sale.
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Berkshires of all ages and both sexes. Good individuals and bred equal to the best. Dams and sires are granddaughters and grandsons of Masterpiece and Premier Longfellow. Foundation stock from the John McLennan herd of Fayetteville, N. Y. Box R, Department of Animal Husbandry, Syracuse University, Syracuse, N. Y.

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Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.
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Apply business methods to your farm, keep a record of the net profit from each cow and you'll soon convince yourself of the economy of putting your money into efficient milkers.
You'll find one good Holstein will do the work of two, perhaps three, ordinary cows. You save greatly on feed, and divide the expense of housing and labor by two or three.
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150 HEAD—REGISTERED HOLSTEINS—150 HEAD
SYRACUSE, N. Y., JANUARY 13-14, 1914—IN NEW PAVILION
The offering includes some of the best things that ever went into a ring:
A son of the 44-lb. cow; the only forty-pound bull ever offered at a public sale;
A son of the King of the Pontiacs from a 27-lb. dam;
Two sons of King Segis Pontiac from daughters of the King of the Pontiacs;
A grandson of Pontiac Korndyke out of a 31-lb. daughter of King Segis Beets;
A son of a 29.73-lb. cow; A son of a 30-lb. daughter of Sir Veeman Hengerveld;
A son of Sir Clyde out of a 26-lb. cow; and other good bulls too numerous to mention.
A 25-lb. daughter of Sir Veeman Hengerveld; a 23-lb. daughter of Sir Clyde;
A 26-lb. cow bred to the King of the Pontiacs; due in February;
A 24-lb. jr. 4-year-old, bred to a 32-lb. bull; a 21-lb. jr. 4-year-old, bred to a 37-lb. bull;
Any number bred to such great sires as The 44-lb. bull, King of the Pontiacs,
Korndyke Butter Boy, Sir Veeman Hengerveld, Korndyke Pontiac Pet, King Segis Beets,
Albino Butter Boy, Spring Farm King Pontiac 6th, Hillside Pietje Hengerveld Lyons,
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Every effort has been made to make this the Banner Sale. If you are in the market for good breeding, attend this sale.
For further information and catalog, address
E. M. STANTON, New Woodstock, N. Y.
Sale managed by the Liverpool Sale and Pedigree Co., Liverpool, N. Y.

The Henyard.

Selecting Hens as Breeders.

The enclosed clipping is from an advertisement in a western poultry paper. Will you give us the facts concerning these trap-nest results at the Maine Station?

"The Maine Experiment Station trap-nested hens for years and bred from the best layers and the roosters that came from the best layers, and finally arrived at the conclusion that it was impossible to build up with any certainty a flock of heavy layers. That was because some people, some animals and some birds are able to transmit to their progeny their predominating characteristics and some are not, and the managers of the Experiment Station did not know how to pick out the prepotent birds. So, when they had, with the trap-nest, ascertained the best layers, they did not know how to mate so as to produce more good layers, and further progress was a matter of mere chance."

Concerning the feeding of milk. Mr. Cosgrove stated some time ago that Tom Barron "always fed his milk as sweet as possible." I think some have often said "Feed only sour milk." Perhaps you can give us some discussion on this subject. W. H. M.

Orland, Cal.

The facts are about as stated in the clipping referred to by W. H. M. But that does not contain all there is to that subject. Prof. Gowell, who began the practice of breeding from only high-producing hens and their sons, at the Maine Station several years ago, and whose experiments did not result in building up a strain of heavy laying birds as he expected, probably was not aware of one fact that has been pretty conclusively demonstrated by further experiment; viz. that the high producing hen does not necessarily transmit that quality to her daughters, in fact does not usually do so. By extended records of the performance of the daughters of high-producing hens, it was found that there were fewer 200-egg pullets produced by them than by fairly good layers, say 160-egg hens. These experiments were carried on for years after Prof. Gowell's death, until it was pretty conclusively demonstrated that the 200-egg hen transmits her laying qualities through her sons, rather than through her daughters; and to raise good pullets it was better to use fairly good laying hens mated with males from high-producing dams. Prof. Gowell doubtless thought that as Jersey cows had increased production by mating high producers with sires from high producers, the same result would follow from mating hens likewise. But there is an essential difference. The hen has to put life into every egg; part of her vitality is gone with every egg laid, while milk is a manufactured article; if the Jersey cow had to produce 10 or a dozen calves in a year, her vitality would be depleted, as is that of the high-producing hen.

In regard to feeding milk, Mr. Barron did say that he feeds his milk while sweet, and in that condition there is no doubt that it is a very valuable food. But when fed sour, milk has another value as well; that of producing conditions in the intestines of the chick that are unfavorable to the multiplication of certain harmful bacteria; notably the bacteria that produce black-head in turkeys, and white diarrhœa in chicks, and I do not know that milk loses any of its food value by becoming soured. I mean by "soured" what is variously called "lopped milk," "bonnie clabber," "schmearcase," etc. All utensils in which it is fed should be boiled and thoroughly cleaned frequently. At Storrs last Spring 100 chicks just hatched in an incubator, were divided into two lots of 50 each, and put in adjoining yards. Both lots were fed and cared for exactly alike except that one lot had sour milk every day, the other did not. I saw them when they were six to eight weeks old. No one would hesitate to give twice as much for the lot fed sour milk, as he would for the other lot. The sour milk fed chicks were at least one half larger than the others, were better feathered out, more even in size, and only one had died; while six or seven of the other lot had "gone to fertilize the earth."

No man knows it all, Mr. Barron realizes that he has something to learn from American breeders; as we have much to learn from him. And the longer a man is in the business, the humbler he becomes because he realizes more and more what a lot there is that he doesn't know.

GEO. A. COSGROVE.

Criticizing a Henhouse.

On page 1312 Harry R. Lewis in "An Efficient and Economical Poultry House" states: "It should be high enough to give ample head room when caring for the birds, and should admit sunlight in the front openings, so that at some time during the day they (it) will shine on the floor clear to the back of the pen." He further states that the sized unit found to be the most efficient and economical is a room 20 by 20 feet with nine-foot studding in front. Figure 515 shows windows five feet high placed midway between the plate and sill, making the top of the window only seven feet above the floor. Under such conditions sunlight will reach back only about 16 feet, and that distance only on December 21. To have the sun light reach clear to the back part of the pen it would be necessary to have the window placed clear up to the plate. In the building described the rear four feet of the floor will never be reached by the sun, neither through the windows nor the muslin curtain openings.

Theoretically the square pen is the most "efficient and economical," but the practical poultryman will find it rather cheaper and more satisfactory to build a single span or shed-roof" henhouse from 14 to 16 feet wide. With a building of the latter width it will be possible to have the sunlight reach clear back to the rear of the pen not only on December 21, but for nearly a month. Besides, he can do away with the middle supports for the rafters, and the posts running through the center of the pens.

The eight-inch concrete wall is much thicker than necessary for a building of this size. Such a wall will easily support a dwelling-house or a good-sized barn. While the extra thickness does no harm it adds 33 1-3 per cent to the cost of the foundation, and as the average poultryman has no State funds with which to put up his poultry buildings, it is simply good business to build amply strong and put the extra money in better poultry, or, perhaps, give it to the "missus" for kitchen conveniences. The diagram shows a door in the east end. I like to make the ends and back as tight as possible, thus cutting off any possibility of drafts. J. D. PRICKETT.

Ohio.

Concrete Poultry House Floor.

On page 1312 appears an article on poultry house construction which I cannot let pass without entering a decided criticism. The article referred to gives the plan of a poultry house which conforms very closely to those used throughout the country on the larger farms, and is without question the best that can be designed with one exception, the concrete floor. The writer of the article, Mr. H. R. Lewis, doubtless knows that many of his readers are going to adopt his house without question, and this is where the harm creeps in. They think any plan emanating from an experiment station *must* be all right, and from lack of experience and opportunity to see other houses go ahead and build. The article does not tell the important fact that a concrete floor, while being theoretically correct as far as keeping out rats and moisture is concerned, must be covered with two or three inches of sand or soft loam, and that this must be renewed twice or three times a year, and that without it you might as well hold your hen's toes to a grindstone, so quickly will it cut them down to the flesh. Then supposing the sand is used to prevent this trouble, anyone who has ever tried to fill a small hollow in his lawn with two wheelbarrow loads of dirt and found that it took six wagon loads instead, knows what the labor would be, and the result is that it gets done the first time when the house is new and the busy farmer says "never again," leaving all the filth to collect or else grinding the hens' toes off. I have seen many farms where concrete floors were used, and the results were exactly as set forth, so that, while believing concrete to be the best, I will never recommend another, but will take the dilemma by the horns and advise a double-boarded floor with six inches of suitable litter. IRVING C. LEWIS.

Pennsylvania.

Reply by Prof. H. R. Lewis.

This correspondent virtually agrees that the concrete floor was the best for moisture prevention and the keeping out of rats. In regard to the birds grinding their toes off, and in regard to the using of sand on the floor, will say that we have used concrete not only on this plant, but coöperatively with over 100 of the leading poultrymen in the State, and we have never seen the results described. We never put sand over the concrete floor, but keep it covered with a good scratching litter to a depth of from eight to 12 inches, and it is not long before this litter is broken up so that there is plenty of fine material next to the floor. From the sanitary standpoint, it is absolutely necessary to clean any poultry house, at least, twice a year. Where the floor is dirt, it is necessary to take out not only the litter, but also from six to eight inches of the top soil, and replace with clean soil; whereas in the case of concrete the poultryman can, with a shovel, hoe or broom, clean the house very quickly and completely, and then by using a good disinfectant the house is absolutely clean, and he can accomplish this with the least amount of labor and the greatest assurance of success. Mr. Lewis advises a board floor, and uses the same treatment in reference to litter as we do with our concrete floors. NEW JERSEY EXP. STATION.

Wyandottes and White Eggs.

I notice on page 1289 the note about White Wyandottes laying white shelled eggs. This does not appear to me so difficult as Mr. Cosgrove's article might indicate. I have bred White Wyandottes for seven years, and without trying to influence the color of the eggs by selecting as breeders only those females which laid white eggs, I notice from year to year that my White Wyandottes are laying whiter eggs and more of them. I have in the same breeding house four pens of Leghorns, and all eggs are collected together, and it is impossible to tell the white White Wyandotte eggs from those of the Leghorns. Of course I get some colored Wyandotte eggs, but these are mostly pinkish white. I breed as well Brahmas, Rocks and Reds, all of which lay brown and dark brown eggs, but my Wyandottes lay nothing near as dark as the above mentioned breeds. This year's pullets seem to be laying 50% clear white shells and the other 50% is a light pink color. I have done nothing to make this so, as my business is eggs for hatching and show birds, and I don't care what the color of the eggs is. From my experience, however, I feel confident that I could produce a strain of white-shelled White Wyandotte egg layers in a short time. F. M. PRESCOTT.

New Jersey.

Large White-Egg Fowls.

Would you tell me the name of the largest breed of chickens that lays white eggs suitable for the New York market? The White Wyandottes would suit me very well if they laid white eggs.

C. B. C.

There are no breeds comparable with the Wyandottes in size which lay white eggs, and you will be compelled to make a choice between color of eggs and size of fowls. The S. C. Black Minorcas are the largest of the white egg laying breeds, and they have no superiors when in comes to size and beauty of their product. As a breed, however, they do not lay as many eggs as the Leghorns, and unless in some special market, their eggs do not bring a premium. They cannot compete, therefore, with Leghorns upon commercial egg farms, but when size and beauty of the fowls and their product are the chief considerations, the Black Minorcas cannot be excelled.

Rheumatism in Fowls.

One of my R. I. Red pullets, which was just about ready to begin laying, showed lameness in her right leg, being unable to use same from the knee down. I thought perhaps she had hurt her foot, but a close examination seemed to show it was all right. Three or four days later the left foot or leg was similarly affected. The hen was isolated and from information at hand can only imagine it is what is called "leg weakness." She seems perfectly healthy and normal in all respects and eats well, but shows no improvement to treatment, i. e., I have taken away all corn, only feeding oats and wheat and some oatmeal, bathing her legs occasionally with arnica. I hope you can advise me. W. R. H.

New York.

Rheumatism is one of the most frequent causes of lameness, and final inability to stand, in fowls, and is quite likely the cause of the trouble which you describe. If the quarters which your fowls occupy are damp or expose their occupants to wind and drafts while on the perches, you should correct these conditions, and if you wish to treat this hen individually, you may remove her to warm dry quarters where she can be fed by herself. Give her soft food of which wheat bran forms a considerable proportion, plenty of green stuff, and skim-milk if you have it, and do not feed meat of any kind. As medicine, give three or four grains of sodium salicylate twice daily, dissolved in as much water as you can administer. For convenience, the drug may be obtained in tablet form, but it is irritating if given undissolved in water. M. B. D.

GRUMPY STRAPHANGER (loudly): "I wish you'd move those confounded valises out of th' aisle." Indignant Sitter: "Those aint valises—those are my feet." Grumpy Straphanger (more cheerfully): "Well, you might at least pile one on top o' t'other."—Cleveland Plain Dealer.

SMYTHE: "I dropped a penny in front of a blind beggar today to see if he'd pick it up." Tompkins: "Well, did he?" Smythe: "No; he said, 'Make it sixpence, mister, and I'll forget myself.'"—Tit-Bits.

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A ROUND BARN.

Last year we had a picture of the round barn which Mr. J. L. Dean, of Maine was building. Now we print a picture of the completed barn at Fig. 5. This building is 64 feet in diameter. The silo is at the center, and there are 37 stalls. There are a good many of these round barns scattered through the country. They are usually pronounced satisfactory by their owners, since they economize space; yet, somehow, with all the arguments in their favor they are usually a novelty, as the great majority of farmers prefer the square corners.

GRADE OR PUREBRED IN DAIRYING.

There are at least four legitimate objects to be had in view when purebred stock is introduced into the flock or herd. These are briefly: To increase the production. To improve the quality of the product. To secure uniformity in the product. To gratify the eye by pleasing color and symmetry of outline. Many farmers will say that they cannot afford to consider the fourth point, but it should be remembered that many wealthy buyers of purebred stock are as much influenced by the beauty as by the utility of the breeds or individuals which they select. It is a well-known fact also that beauty will add to the selling price of any good animal at the average farm auction sale. If a man is producing beef from a herd of native, mongrel, or low-grade cattle, the introduction of a good purebred bull of pronounced beef type will accomplish all four of these ends. In this case the product is the living animal as it goes to market, and uniformity in size, formation, quality and finish will add materially to the value of a carload of fat cattle. As this condition can be better secured in a herd of purebreds than in any herd of grades, it follows that the purebred has a positive, practical value above the grade for beef purposes, and it is probable that a very large part of our beef, pork and mutton will finally come from purebred herds.

The situation with reference to the dairy herd is, however, entirely different. The products of the various animals are not marketed separately, but are blended into a single article—a can of milk or cream, or a tub of butter, as the case may be. The individuality of the various units of the herd is wholly lost, and the purchaser of the goods has no concern whatever as to the variations in size, form, age, or color of the cows producing them. For these reasons we cannot urge the practical dairyman to invest in a registered herd with the same assurance that we feel when presenting the case to a beef raiser. The dairyman can look to an infusion of better blood to increase the milk or butter yield of his herd, and, within certain limits, to improve the quality of either or both. But the dairy cow, when past her usefulness in the herd, has a rather low beef value at best, and a registered Holstein or Jersey, full of years and honor, is worth no more at the block than her half sister which is a grade. In fact the annual average cash profit per cow will be practically the same from two herds yielding like quantities of milk or butter if one be a registered and the other a grade herd. The difference will lie wholly in the selling value of the calves, and this is a matter of geographical location to a very large extent. Furthermore many dairymen who sell milk are anxious to rid themselves of the calves as soon as possible, and do not combine dairying and stock-raising very successfully. If these men keep bull calves beyond the age at which they can be sold for veal, it is questionable whether they will ever dispose of them at a profit, no matter what their breeding may be.

What, then, is the sensible policy for the farmer who is largely dependent upon his dairy herd, and who owns chiefly native or low-grade cows? My suggestions are not at all radical. He may have some cows which do not yield him a dollar of profit in a season, and yet his situation may be like that of my neighbor who justified the purchase of a rather unpromising cow at a local auction by saying: "My contract calls for so many gallons of milk per week this Winter, and if I can't get it out of good cows I've got to get it out of poor ones." I do not approve the policy of attempting to do so much on a farm that part of it must be done at a loss, and am sure that any man can afford to take time and trouble to weigh the milk of each cow often enough to know which are being kept for nothing. If the Babcock test cannot be readily applied it is quite possible to set samples of the milk of each cow, and by comparing the cream yields arrive at some approximately correct conclusions as to the relative desirability of the members of the herd.

When unprofitable cows are located they should, of course, be disposed of as soon as they can be brought to marketable condition, or as soon as better ones can be found to take their places. But if careful tests show that the herd is composed of a fairly uniform lot of very moderate producers, giving only half the net income per cow that modern dairy teachers tell us we should obtain, I would be the last to urge the owner to sell his entire herd and invest the money in registered stock, putting in perhaps eight cows in place of 24 sold, and expecting to make three times the profit per cow that was formerly secured. The average small farmer cannot afford the risk involved in making such a change, for the death or injury of one cow would then mean the loss of too large a part of his working capital. The only logical course for this man is to secure at once a good registered bull or bull calf of the breed best suited to his needs and raise as many heifers per year as possible, meanwhile losing no opportunity to replace a poor cow with a better one. Not all bulls of the same breed have equal values as sires of dairy cows, but it is an exceptionally poor one which does not earn many times his cost when used in a grade herd.

Virginia. W. A. S.

A GENTLEMAN who had been spending a holiday at a Scottish seaside village noted for its golf links asked one of the caddies if he got much carrying in the Winter time. "Nae, sir, nae," replied the caddie. "There's nae carrying in the Winter time. Ye see, it's this way. If it's no sna' it's frost; if it's no frost it's sna'; if it's neither sna' nor frost, it's rain; if it's no rain, it's wind; an' if it's a fine day, it's the Sawbath!"—Tit-Bits.

A FOUR-year-old Harlem miss, whose homeliness is as pronounced as her lovableness, has long resented the practice of her parents and others of spelling words that they didn't want her to hear. Recently a relative who hadn't seen the child arrived for a short visit. In talking with the mother the next day in the little girl's presence she said: "Isn't it too bad she is so u-g-l-y?" "I may be u-g-l-y, auntie, but I'm s-m-a-r-t."—New York Tribune.

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WHY WE KEEP HOLSTEINS.

We keep Holsteins because we love the "black and whites." We love our friends because they help us in the dark moments of life, we love and keep the Holsteins because they help and keep us all the time and respond nobly to kind treatment; in other words, I believe them to be the most docile breed of cattle in existence, and nervousness is not conducive to large production. To be sure the Holsteins are not high testers in butterfat, but quantity offsets quality twice over in many cases, thus having the advantage over the other breeds in either milk or butter production. For instance, our herd averaged officially, including two, three, and four-year-old heifers, 430.2 pounds milk each in seven days, or 61.4 pounds per day, and 15.74 ponnds butterfat, or 18.5 pounds of good commercial butter per week. If I have a market for milk I shall sell milk, as I certainly have it in large and generous quantities; if the market changes so that butter is the highest-priced dairy product, I won't swap, sell or give away my Holsteins, but go right on making butter from them, for I surely would travel considerably to find a breed that will average better than 18.5 pounds butter per week, including cows and heifers of all ages, and this is by no means better than the average purebred Holstein breed.

The Holstein is naturally a large cow with a large capacity, therefore not so susceptible to indigestion and other ailments of like nature due to inexperienced feeding as most of the other breeds, this certainly should be considered unless the owner is experienced and can be on the job personally. Another point to be considered is the final disposition. If I allowed my sentiments to get the better of me I think I would pension that large, whole-hearted, gentle and patient beast that helped pay off the mortgage, by letting her end her days in a nice green pasture, but I don't think our Creator requires this of us, so I will put some fat on her and she, as though with a parting sign of gratitude, will tip the scales at 1,200 pounds and drop into my pocket her last generous offering to my welfare.

Holsteins are such large wholesome cattle that they are also less susceptible to disease, and invariably if properly cared for before parturition will give birth to a large healthy calf, which also is practically immune from the usual calf disorders.

I might mention in favor of the "black and whites" that doctors have discovered the rapid digestibility of Holstein milk, and are recommending its use in the sick room for infants and invalids. Spurgeon said he would not be surprised to see the horse in heaven, and I am sure that had he been associated with cattle as long as I he would certainly have included the Holstein cow in his vision of eternal bliss.

Madison Co., N. Y. S. B. JACKSON.

OHIO HOLSTEIN BREEDERS MEET.

The Western Reserve Holstein Breeders' Association met at Burton, Ohio, December 12, 1913. Although the roads were bad, a good crowd was in attendance. They were called to order by Pres. Paul McNish. Discussion followed on prizes to be awarded to boy raising best Holstein calf to be exhibited at county fair, 1914, by the Association. Prof. Erf of Columbus, Ohio, who has the official test work in charge, was the speaker. He has at present 52 testers working under his direction in Ohio now. He said that the Association at Burton was doing more for the advancement of the Holstein than any other association of its kind in the United States. It is well known that the first great record was made by Holsteins, although the professor is a friend of the other breeds of cattle too. He also explained why butterfat is used in official tests rather than butter, as it is well known that a certain per cent of water may remain in butter especially in Winter, so that a cow making 1,000 pounds of butterfat could easily make 2,000 pounds of butter, varying of course with the maker. Hence butterfat is the only way to make an accurate test. The construction of registry work, and purpose of it, is to get as nearly as possible an accurate test. It has been necessary for those making great records of several months' duration to have seven or eight testers, during the work, some coming from out of the State. While this is expensive it is the only way to convince the public that these great records have been honestly made.

Prof. Erf does not advise the inexperienced breeder to inbreed too closely, but rather follow line breeding, going back five or six generations, as is possible in a community like this. He said breeding Holsteins and Jerseys nearly always gave the Jersey quantity and Holstein quality. He believes if the work of testing is carried out according to present indications in 15 years this will be the greatest Holstein center in the world. We have now three cows whose official records are over 1,000 pounds of butterfat in one year. He said that 90% of our great producers would stand a poor show in the show ring, and that a wise man purchased cows with official records rather than show ring prizes, and tested these cows before selling, to avoid selling a $3,000 cow for $200. J. L.

TALKS ABOUT COWS.

I worked on my father's farm until 21 years old, and then spent five years in Illinois working on farms in the Summer and going to school in Winter; teaching one Winter. Then I married and settled down on a 26-acre farm in Pennsylvania. Besides farming this piece of land I worked during the forenoon for a creamery company, firing the boiler, running the separator while the milk was coming in, and testing the milk. While doing this I was producing milk on my farm also bred and raised a few cows. I bought one cow that was half Short-horn and half Jersey from registered stock on both sides. This cow was of good shape, highly nervous and a good producer. I bred this cow to a Polled Angus bull and raised a heifer that proved a good performer. The seventh week after freshening the third time she averaged 49 pounds per day with a test of 3.8 butterfat. Could I have sold this milk at eight or nine cents per quart I could have figured some profit; but as I was selling the butter and getting 80 pounds skim-milk back per 100 delivered I was compelled to figure on the skim-milk and console myself that the manure was worth something, in order to find a profit. I was compelled to make public sale last March at which time I sold this cow for $90, her yearling heifer $45, and her calf eight weeks old $21.25. Now most farmers are up against the same market for their milk products, the butter market. For 14 years I have had the inside information as to the returns of those who have attended our creamery. Many of them have kept their herds supplied by buying cows at the cow venders' sales. These cows are the discards of other farmers, sometimes advertised as coming from another county or State. In fact they almost have to be shod to keep their feet from getting sore, driving from one sale to the other. Just how these farmers figure a profit I don't know. I do know that when the creamery man pays them off at three pounds per 100 they call him all kinds of names. There are other farmers who have been with us all these years who have seemed satisfied; perhaps not because they figured to find a profit, but because they always received a good test. They have made no pretense to raise purebred stock, but they have raised all their own stock from their best cows.

Pennsylvania. J. H. B.

Garget.

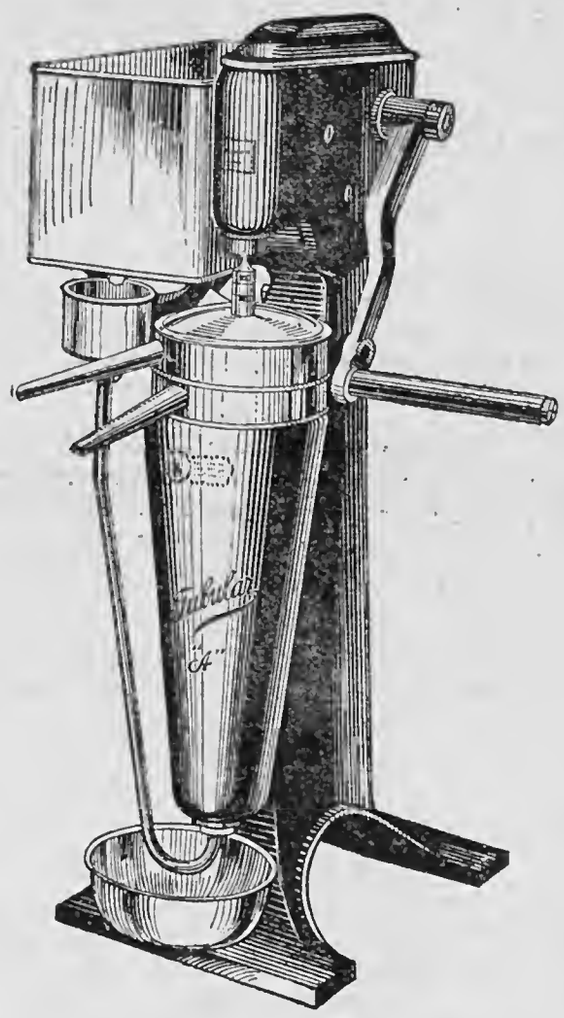
I have a very fine Jersey cow, six years old; who came in with her third calf about three weeks ago. The two left teats were hard, and the discharge was watery and yellow. The right hind teat gave and is still giving three quarts of milk in the morning and about two quarts in the evening, while the front teat gives but little milk (about a pint a day). From the time of calving I first poulticed udder and washed it three times a day with hot water, and put sweet oil all over it. The hardness has totally disappeared and the little milk that is flowing is all right. I allow the calf to suck enough to keep it in good condition. Is there any chance whatever, that those three teats will come back? B. K.

Long Island.

If the three teats give normal milk there is likelihood that full milk flow may return at next calving; but there is little prospect of a full milk flow this time. Is should be remembered too that there is great danger of the attack coming on again at the slightest provocation, and for that reason we do not consider such cows profitable to retain for dairying. A. S. A.

THE SHEPHERD DOG.—I would be glad to hear from you regarding the old Shepherd dog and why he has been replaced by the Collie among the farmers. Personlaly I do not think the Collie fills the place of the shepherd at all, and yet the shepherd is almost if not quite extinct in this section of the country. I would be very glad to have the opinion of other farmers on this subject.

Union Pier, Mich. H. W. G.



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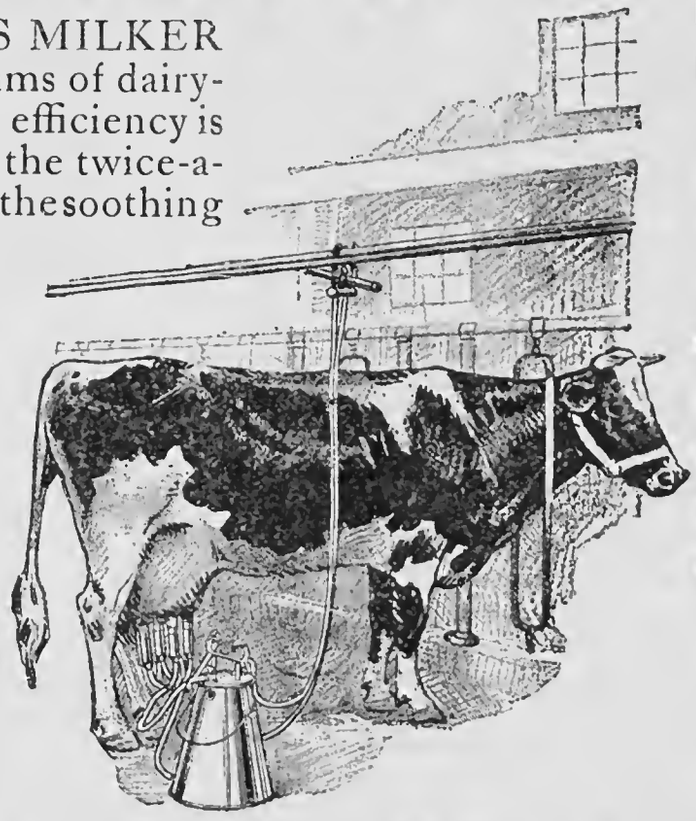

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A CHICKEN MAN'S ARITHEMTIC.

"And why White Leghorns?"

That was the question I put to the chicken man, after looking over his plant, and as we were leaning against the side of the largest and latest of his half dozen henhouses, the one which was evolved out of his 10 or 12 years' experience in the chicken business, one which embodied the idea of a 600-hen unit, and was self-contained—that is, it had water in the house, a feed room, and arranged so that the brooding for the house was provided for, and that when the hens were to be replaced by pullets the change was easy and simple.

We old farmers tried to keep to general farming, though the country was ill-adapted to field crops; a light, sandy soil made fruit, early vegetables and poultry much better suited to the region, besides a good market easy to reach.

The chicken man was not a farmer-born, but was city bred, and until he was 20 years of age had never been outside of the city, except to meet a baseball or football team in some country town. About 10 years ago he came to the neighborhood and proceeded to develop a poultry farm out of a hundred acres of stump and second-growth timber land. He had never shirked work, took advice when it seemed reasonable, was perfectly square and honest, and had developed a good business by work and attention to details with very little money, so that now his net income was one of the largest, if not the largest, in the whole neighborhood.

As to the Leghorns, he answered: "Because, as eggs are the chief source of profit in the poultry business in this region, I keep the hen that will give me the largest return on the investment."

This was an answer, but hardly a satisfactory explanation, so I said:

"Do White Leghorn hens lay more eggs than those of any other breed? Say, as do my wife's Plymouth Rocks? It seems I have seen it stated in all the poultry papers that there is practically no difference in the number of eggs laid by the different breeds in a year; that all the college contests show about the same number of eggs, from the Plymouth Rock, or the Wyandotte, or the Rhode Island Red, or the Orpington hen, and so on?"

He smiled and said: "Let me illustrate by an analogy and by a comparison: As a dairyman, when you make up your ration for your cows, there are at least two factors you consider—the weight of the cow, and how much milk she is giving. The weight is a fixed factor; for example, if you had five cows that weighed 6,000 pounds you would feed them about the same as if you had 10 cows that weighed 6,000 pounds, and your milk would likely be about the same. The feed and the receipts would both depend on the weight of cows you kept, not on the number; and to raise 6,000 pounds of mature cows would also depend on the weight and not on the number. Applying this analogy to chickens, while we make a comparison, to raise 6,000 pounds of chickens of the White Leghorn breed, at four pounds to the hen, there would be 1,500 hens. The Plymouth Rocks, Rhode Island Red, or Orpingtons would weigh, say 7½ pounds, and we would have 800 laying hens. The by-product in both cases would be almost the same.

"In White Leghorns this would be: 1,500 broilers, 1½ pounds each, 2,250 pounds; 1,500 two-year-old hens, four pounds each, 6,000 pounds. In the Plymouth Rocks, Rhode Island Reds, Orpingtons, etc., that would be: 800 broilers, at 2½ pounds each, 2,000 pounds; 800 two-year-old hens, 7½ pounds each, 6,000 pounds. If there was any difference it would be slightly in favor of the White Leghorns, as on the open market the price is the same per pound.

"In egg production, however, the showing would be overwhelmingly in favor of the White Leghorn. Say for the year the hens would average 12 dozen eggs each, a rather high average, I admit, though very conservative when you read the "200-egg hen" literature, that you would have 1,500 White Leghorns, at 12 dozen each, 500 cases; 800 heavy breeds, at 12 dozen each, 270 cases; in favor of 6,000 pounds White Leghorns, 230 cases. That is the reason why I confine myself entirely to White Leghorns. If my specialty were broilers or soft roasters, or capons, the argument might take on quite a different phase. As to the fancier, he is an artist in a class by himself; and it is well that he chooses the breed that appeals to him for other than commercial reasons, and most of the reasons given for the different breeds are not commercial reasons.

"Don't understand me that you can produce 500 cases of eggs with White Leghorn hens for the same food that you can produce 270 cases with the heavy breeds, but the machine that gives you 500 cases will take only a little more than the one that gives you 270 cases a year. Some years ago, in a little experiment one Spring, I found that the food consumed by 100 White Wyandotte hens would well feed 160 White Leghorns, and this experiment was made during the egg season. The percentage of eggs was about the same in both flocks, so I found that the food went to egg production in a much larger proportion in the one case than in the other. The White Leghorn broiler is a great favorite among my customers; so is the small compact two-year-old hen; so the by-product is very easy to dispose of. I might add housing, foraging and freedom from broodiness, but the reasons are obvious to one who is in the egg business." D. H. C.

Michigan.

Mating Breeding Pens.

My problem is how to mate up breeding pens of 50 hens and four cockerels. I know that many of your readers run several cockerels together successfully but so far I have not been able to prevent their fighting even when brought up together. I would like to hear how they manage it. R. P.

Maine.

Two vigorous cockerels are sufficient in a pen of 50 hens, and they may be either alternated or allowed to run together and fight it out. Usually one will cow the other and there will be little fighting after the question of supremacy is settled. If they are so equally mated as to cause constant fighting the only remedy is to remove one of them, allowing but one in the pen at a time, though in doing this, you lose the advantage of having the hens mate with the most vigorous cockerel. My own practice is to place enough males in the flock to insure fertility, or perhaps more than enough, and allow them to mate indiscriminately, feeling assured that the law of the survival of the fittest will aid me in getting the hens mated with the most vigorous males, whose services I would choose if I could pick them. When running alone, however, it is sometimes difficult to tell which of the two cocks has the most vim. A little competition soon settles it.

M. B. D.

Hens With Intestinal Disease.

Can you help me with my Plymouth Rock pullets? I am feeding as I did last year with success; this year there is considerable bloody mucous with their droppings. They do not appear sick. They have free range when weather permits. Their morning meal consists of a commercial mixed feed consisting of corn, wheat, buckwheat, oats and barley scattered in litter at noon, mashed potatoes, middlings and corn at night. I throw whole corn on the ear in the litters. The potato and corn are quite an economy as they are home-grown. In a couple of weeks they will have skim-milk. Green feed always before them. A. F. D.

Massachusetts.

An occasional discharge of bloody mucus with the droppings does not appear to indicate any serious condition which need cause alarm. If persistent and severe, however, it should lead to investigation to ascertain the cause. Such discharge of bloody mucus indicates more or less severe inflammation of the intestinal tract, and this may be of a catarrhal nature caused by exposure to cold and dampness, the eating of spoiled food, or drinking impure water, or it may be a much more severe inflammation resulting from the ingestion of irritant poisons, putrid food or water, or various forms of disease producing bacteria. You should look well to the foods that you are using to see that none of them are moldy or spoiled, that the hens do not have access to impure water when upon range, or that other unhealthful conditions are not present. See that the hens are not exposed to drafts when upon their perches. When you have skim-milk, it will be well to sour it before feeding as the lactic acid germs present in sour milk are a valuable preventive of diarrhœal troubles.

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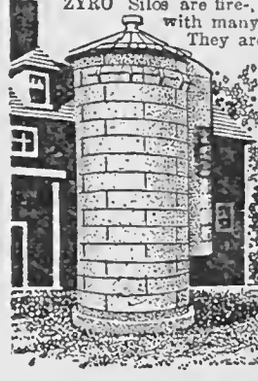

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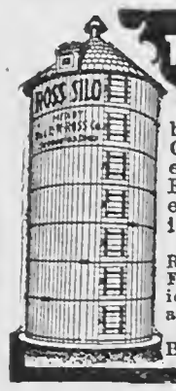

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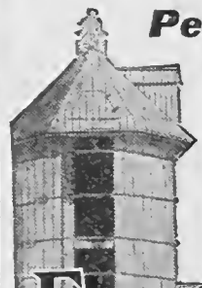

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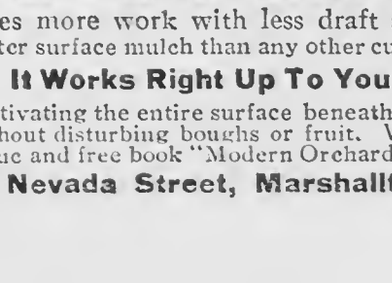

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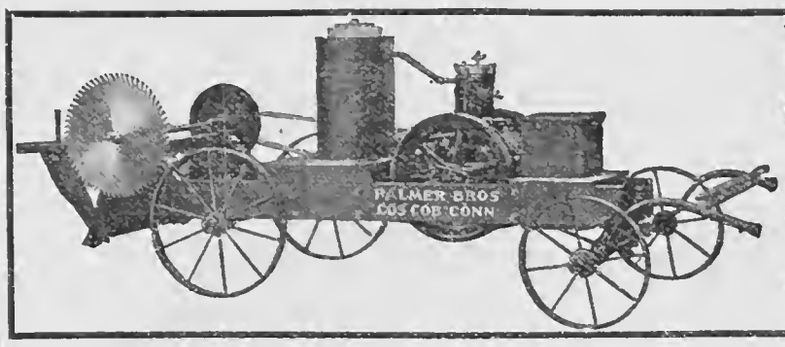

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Concentrates With Corn and Oats.

What concentrates should be fed for milk with corn and oat chop? The corn is ground with cob. We have plenty of corn silage and hay, and corn fodder. Hay is part clover and Timothy mixed.
Madison, O. W. R. K.

If you can obtain cottonseed meal to mix with the corn and oat chop, using equal parts by weight of chop and cotton-seed meal, it will be the best thing possible to balance the ration. Oil meal, buckwheat middlings, distiller's dried grains or gluten feed would also be good to mix with the chop, their value being about in the order mentioned. C. L. M.

Milk Ration.

I should like your advice regarding balanced rations for dairy cows. For roughage we have hay, mostly clover, with some Timothy and Blue grass, also good cornstalks. From grains which we raise we have oats, corn and barley. We wish to feed these and supplement to make a balanced ration as economically as possible. Should also like to ask what you would advise for fattening cattle.
New York. M. E. D.

To make an economical balanced ration you should feed all the hay your cows will eat twice a day morning and night, with a good feed of cut cornstalks at noon. For the grain ration I would advise mixing two pounds corn, two pounds barley, and two pounds oats ground together, with two pounds cotton-seed meal and four pounds of wheat bran or dried brewers' or distillers' grains. This will give you very nearly a balanced ration. The quantity to feed must be regulated by the condition your cows are in and the amount of milk they are giving. For mature cows in good condition and in full flow of milk 10 pounds a day of the mixture is a common allowance, divided into two feeds for morning and evening. For fattening cattle cornmeal or corn chop and hominy mixed, equal parts, make a very good combination, beginning with a very small amount and gradually increasing as the animals' ability increases to digest the feed. C. S. G.

Ration for Cows and Heifers.

I have one cow, two heifers, and two last Spring's calves that I do not know how to feed. There is a large quantity of cornstalks, some hay, and oat and wheat straw. All grain must be bought except corn on the cob. At present I am giving bran mash twice a day to the calves and once a day to the heifers, and bran and gluten, equal parts, twice a day to the cow. For roughage feed cornstalks twice and hay once daily. Am I on the right track? I want to give these animals a properly balanced ration to produce the best results and also to feed as economically as possible. S.
East Aurora, N. Y.

Your present system of feeding seems to be very good and if the animals are thriving properly there is no reason for a radical change. The corn which you have (on the cob) must be ground before it will be suitable to feed. It can then constitute 25 to 40% of the grain ration for your cow and 10 to 15% of the ration for the youngsters. Instead of feeding an exclusive bran mash would mix equal parts of bran middlings and ground oats with a little cornmeal added, and feed enough to keep them in a growing, thriving condition. Cornstalks can be profitably fed to cows when cut into inch lengths and fed before they have been allowed to stand out in the weather until dry and tasteless. Oat and wheat straw should be used for bedding instead of feed. Calves and heifers require more attention than older animals and should be fed on good hay and grain, the amount being carefully regulated according to their capacity for consumption which must be determined by their condition and appetite. C. S. G.

Stale Bread for Stock.

I have an opportunity to buy left-over baker's bread for one cent per loaf. Would it be advisable to buy it? What value would it be to feed to hogs, chickens and ducks? Would it pay to purchase it and draw it 10 miles? J. L. K.
Webster, N. Y.

In my experience, which has covered the use of large quantities of stale bread for several years, it appears to be very good feed for hogs, chickens and ducks when gathered and fed before it has been allowed to sour or mold. After it molds enough to turn dark colored it is unfit to feed. In regard to price, one cent per loaf is rather indefinite, as a loaf may weigh a pound or it may weigh half a pound, and still be called a loaf. For this reason it is usually preferable to buy it by the pound. At one cent per pound we find this bread a profitable feed to use, but would not pay any more than this price for it except in small quantities for the purpose of starting young chicks, when it should be used even if it costs 1½ cents per pound. To prepare bread for feeding to young chicks it is first cut into thin slices and dried in the oven until it is thoroughly dry and crisp, when it can be ground or rolled fine and mixed with raw eggs and rolled oats. The mixture to be crumbly when properly prepared for feeding. We also put a small quantity of grit and charcoal with this feed and season slightly with salt. Stale bread is prepared quite differently for hogs and ducks. For this purpose it is soaked with either milk or water and usually fed in a sloppy condition to hogs, but after being soaked for ducks it is mixed with dry ground grain to the proper consistency before feeding. With grain selling at such high prices it is necessary to look for cheaper feeds for our stock if such can be found, and stale bread is certainly a help in the right direction. C. S. G.

Cow Rations.

Will you give me a daily balanced ration from the following feeds available: Wheat bran, cornmeal, oil meal (old process), beet pulp and clover hay. Cow is giving about 10 quarts of milk a day.
Denville, N. J. J. H.

The following combination should meet the requirements in your case. Clover hay, 20 pounds, wheat bran, oil meal and cornmeal, two pounds each, and beet pulp one pound. The beet pulp should be soaked in water before feeding and mixed with the grain. C. L. M.

LIVE STOCK NOTES.

THE American Guernsey Cattle Club states that during the week ending Dec. 12, there were entered in the Herd Register eight bulls and 69 cows, a total of 77; 212 transfers were also recorded. Credits were given to 11 cows producing over 50 pounds butterfat.

Recently an itemized account of feeding a purebred Ayrshire cow was given, and all her milk credited as sold at five cents per quart. If it had been sold to Bordens', as was the milk of the grade Holsteins in the same issue, and as many other farmers would be compelled to do, the income would have been less by about 20 per cent. W. J. M.

It seems evident that those qualities of richness, color and flavor, which characterize the dairy products of the Guernsey, are winning for her a most important place in the estimation of the public. At this writing there are 943 cows, representing 157 breeders scattered from Maine to California, entered in the Advanced Register. The ability to return great value for money spent for feed has earned for the breed the slogan, most economical producers. As an economical cream and butter producer the Guernsey is making her record.

Commissioner of Agriculture Calvin J. Huson, of New York, reports that for the months of October and November agents of his department made 10,545 inspections of foods, milk, veal, oleomargarine, feeding stuffs, and also sanitary inspections. In Greater New York the food inspections were 2,426, milk 2,500, veal 1,459, oleo 2,845. Outside New York City agents of the department made inspection in 716 cities and villages. These figures do not include 3,000 inspections of orchards and nurseries and horticultural shipments during the same period, nor the inspections of State and county farms nor of agricultural lands for intended buyers.

Gloucester Spotted Pigs.

The Mark Lane Express states that in the West of England there is a breed of pigs known as the Gloucester spotted pigs, which have been kept and thought a good deal of locally for a long time. The fame of the spotted pig, however, has ended here up to the present, but the breed is likely to see developments in the future, for at a recent meeting of prominent agriculturists held at Bristol, the local and hitherto somewhat unnoticed pig was the chief topic of comment, and it was decided to form a herd book for Gloucester spotted pigs. From the warm way in which they were eulogised by the farmers attending the meeting, the wonder is, why it has not been done before, as the pigs in question fully deserve all the good things said about them. The probability is that nobody ever thought of it, and though the honour has come late it is pleasing to know that the interests of the spotted pigs as a breed are to be looked after in the matter of having a herd book of their own.

CHICKEN-KILLING HOGS.—One of your readers was asking how to stop hogs from catching chickens. Several neighbors cured them by feeding soda, just common baking soda, in their slop. C. S. L.
Jasper Co., Mo.

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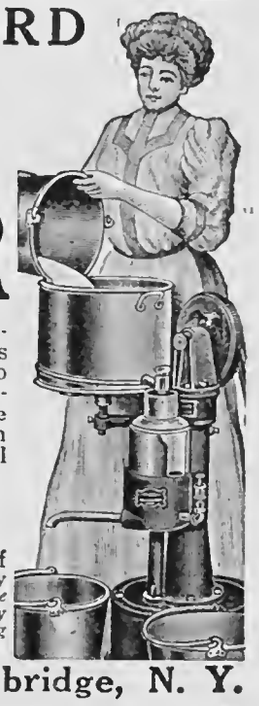

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ANNUAL MEETING OF DAIRYMEN'S LEAGUE.

The annual meeting of the stockholders of the Dairymen's League was held in Newton, N. J., Dec. 11, and directors for the coming year were chosen. This meeting followed an informal one called at Albany, N. Y., on Nov. 28 last, and was held more for the purpose of ratifying and legalizing the work of that meeting than to initiate any new movements. Being a New Jersey corporation, it was necessary that the formal stockholders' meeting be held in that State, but the convenience of the majority of the members required that a more accessible place be appointed where they might gather and express their wishes as to the election of officers and conduct of the League's business. Albany was therefore chosen, and a full report from the officers of the League was made at that place. By a resolution passed by the board of directors, the League's books will be closed on Feb. 1, 1914, and no stock will be issued to new members after that date unless the agreements consigning the milk to the League are signed at the same time. It is necessary that the directors of the League shall know just how much milk they can control before they can enter into any negotiations with buyers, and the agreements consigning milk to the League are of no effect until at least 75 per cent. of the members have signed and returned them to the directors.

The report of the League now shows 290 branches, with 9,500 stockholders, representing over 152,000 cows. The treasurer's report shows a surplus in the treasury, and so far as can be judged by the present outlook the officers of the League should be in position to take some active part in fixing prices for milk at the coming contract period in the Spring. The action of the directors will necessarily be controlled largely by the support received from the members of the League, and they desire that the local branches complete their work of organization so far as possible before Feb. 1, and place them in position to act with a united body of dairymen behind them. M. B. D.

Cat Shedding Hair.

What must I do for my cat? The last few weeks I have noticed that the fur is coming off in places. It does not look sore or inflamed or diseased and it seems to be only in the center of his back. It seems to be spreading down to the tail, but the cat does not seem to be sick or anything wrong. N. B.

Massachusetts.

Give the cat a good brushing once a day and make it take plenty of outdoor exercise. Feed light laxative rations. The trouble is due to confinement, hot quarters and overfeeding. No medicine should be necessary; but if sores appear on the skin, apply a little sulphur ointment once daily. A. S. A.

Skin Disease.

Can you tell me the cause and a cure for black scabs on my pigs, some three weeks old and some are five? It is a hard, thick, black scab, seems to be all above the skin, no depth to it. Sometimes they scratch the scabs off and the skin looks raw and blood red. J. S. S.

Delaware.

This trouble sometimes is termed "pitch mange," and is caused by wet and filth in the pens or beds or yards where the pigs sleep or lie down. Remove the cause and see that the bedding is kept clean and fresh. Keep pigs out of any old, filthy hog wallow or pond; but it would be good for them to bathe in clean water. Many farmers now have concrete wallowing places for their swine, and they now and then put in a little crude petroleum oil, which spreads out on the surface of the water and tends to coat the hogs as they leave the water, this is fine for preventing lice and also is useful in pitch mange. Treat affected hogs by scrubbing them clean with a hot, 1-100 solution of coal tar dip and then apply sulphur ointment daily to remaining sores. A. S. A.

Hog Lice.

I have about 50 pigs—large and small—and they are all bothered a great deal with hog lice. Can you tell me any inexpensive way to get rid of the vermin? The hogs have the run of a large pasture, but sleep in the hoghouses. H. J. I.

Connecticut.

Put a 1-100 solution of coal tar dip into a barrel and souse the pigs in it, tail end first; then bathe the head and neck with the dip and give the pig a good rubbing with a brush. Repeat the treatment inside of 10 days. Clean up, disinfect and whitewash the pens and stables and put in clean bedding. A mixture of two parts machine oil and one part of kerosene run along the backbone of each pig, by means of a large oil can, will prove effective. Use enough of the mixture to ooze down well over the sides. Some men bore a large hole down through the center of a post, then bore in a large hole from the side to meet the center bore and plug this side hole with a soft wood plug, or two holes and two plugs may be made. The central bore is then filled with kerosene and gunny sacking bound around the post covering the soft wood plugs which become saturated with kerosene and keep the sacking wet with it until the supply is exhausted. The pigs use this as a rubbing post and apply the kerosene where it is most required. A. S. A.

Diamond Skin Disease.

Can you give me any information about diamond skin disease in hogs? Last year I had four hogs; two of them, late in Fall, when they weighed about 300 pounds; began to show weakness in hind legs and their skin was purple mostly on back, did not care to stir around, appetite poor, lost flesh. I was advised to give epsom salts and sulphur in feed but they kept getting worse and on one pig the skin lifted from its back; both tail and ears got rashy and smaller. They are kept in barn cellar. We keep a number of horses, straw is freely used. We daily throw this manure into barn cellar and spread around where hogs are kept. They were fed swill from house which is rich and plentiful, they grow fast. We cleaned the cellar thoroughly and whitewashed with hot lime wash. Now I am having the same trouble; one hog killed recently, slaughter house inspector said was fit for food when skinned. The skin of dressed hog was scarlet on back and some places little streaks showed in fat; liver and lungs healthy. We buried that one. Is there anything I can do to be reasonably safe another year? Is it curable? I had one veterinarian to see them and he claimed the cause of it all was that hogs grew fast on feed and then got too hot in manure, cooled off quickly, causing a fever. Still hogs have been here in same place under same conditions for years, and last season was the first time we had trouble with them. The inspector called it diamond skin disease.

Massachusetts. H. C.

"Diamond skin disease" is simply a popular term for "urticaria," or "nettle-rash," or "surfeit," which is akin to "hives" of children. It is caused by derangement of the digestive organs, or liver and as a rule is caused by sudden changes of feed. Change to new corn, or any rich, heating feed, may bring it on. The meat is fit for use, but the affected patches of skin should be removed. That cellar is a poor place for hogs. Better give them a good house to live in, with clean beds and clean bedding. All manure mixing should be done in the yards if at all, or the litter may be spread on a big barn or shed floor, in Winter time, after sprinkling a little shelled corn on the floor. Then let the hogs root the grain and in so doing take needed exercise. This is fine business for sows in pig, as they particularly require exercise. Make the feed more laxative and less rich. Do not feed slop containing much soap or soap powders. Give free access to wood ashes, slaked lime and charcoal. If the trouble starts put the hogs on to a diet of milk, middlings and limewater, and physic with glauber salts in slop. Four ounces of the salts will suffice for a grown hog, but may have to be repeated. A. S. A.

Suspected Rabies.

My two little dogs died this Summer; one died May 22 and the other about a week ago with what we supposed to be poison, but others said they had rabies. Their eyes were full of matter and a slimy looking stuff ran out of each side of the mouth. Just before they died they tried to drink water but could not; they would put the nose down to the water, but it seemed as if they could not open their mouths and put their tongues out. They both had the same symptoms. Can you tell me what ailed them and if there is any cure, and also if it is contagious, as I have a little fox terrier which was around the affected dogs. These dogs that died also had a very bad odor about them. What should I do if I should have another dog sick the same way? A. F. W.

Michigan.

When it is suspected that rabies may be present the owner should chain the dogs and have them examined by a graduate veterinarian. The disease is contagious and conveyed by a bite of the affected animal. There is no cure. It seems possible that your dogs died of distemper; but without an examination we are unable to give a confident opinion, and as rabies was suspected we would not feel justified in prescribing treatment. The veterinarian should be employed. If the fox terrier was bitten by a rabid dog he will be likely to succumb to the disease and should be kept closely confined. If not bitten he will not be likely to contract rabies. Persons bitten by rabid dogs should have the Pasteur treatment applied at once and animals bitten should be confined and closely watched for three months. A. S. A.

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AILING ANIMALS.

Death of Sows.

I lost recently two brood sows. One had four pigs, the other eight. At night I fed as usual milk, which was partly sour and part water, about six quarts each with about a one-half pail apples, both sweet and sour. In the morning I found both sows dead, but pigs were all right. The oldest litter eat from same trough as its mother, the other was too young. If it was the milk, why should it not kill the little ones, also four shotes which were fed from same barrel of milk? The shotes had a much heavier feed.

New York. E. C.

This certainly is a strange case; but it seems that the sows must have died of apoplexy, which sometimes follows farrowing, if sows are too heavily fed. It was a mistake to feed the apples, along with sour milk slop. For the first feed a sow that has farrowed should merely have warm water with a little middlings stirred into it and it matters little if she gets nothing more in the first 24 hours. The slop may then be gradually increased in richness and amount; but no sour feed of any kind should be allowed. Injudicious feed was apparently the cause of the sickness and deaths. A. S. A.

Enteritis.

A neighbor has a fine Clydesdale mare, six years old. She is passing through a severe attack of enteritis, and recovery is still doubtful. Upon questioning I found that the mare is in foal. Now this mare foaled a colt last April and when the colt was nine days old she was bred again. What effects would such methods have on the mare, also upon the offspring? T. M.

Horses do not recover from severe attacks of enteritis (inflammation of the bowels) so it may be taken for granted that she has had some other less serious ailment. A severe attack of colic, or impaction, treated with the usual drugs, may result later in abortion. A mare is most sure to conceive if bred nine days after foaling and it is the general custom to have mares bred at that time. No bad results to either mare or foal result, for the mating is natural and would happen were the mare running free with the stallion, on the plains or range. A. S. A.

Stiffness.

I have a Jersey (grade) about nine years old, due to calve December 1; has been out to grass in good weather. She is stiff or lame, forward, and "off her fed." I have been giving her two quarts bran with little oil meal twice daily, also sugar beets and tops, a few cornstalks, and hay. Has not been exposed to bad weather. Can you suggest what the trouble probably is? C. L.

Long Island.

Rheumatism may be the cause, and we would stop all rich feed and give simple ration of hay, roots and fodder. If she is constipated give her a physic of epsom salts one pound, ground ginger root one ounce; salt one-half cupful, blackstrap molasses one cupful and warm water three pints. Give this slowly and carefully, from a long necked bottle, as one dose. Keep her in a box stall while under treatment.

Cow Pox.

My cow has sores on teats and lower part of udder. I have healed some of the sores, but more are coming back. When the sores first appear they look red with yellow head, and about 10 days ago one side of her udder became hard and there the sores came out more plentifully. The cow acts as though it hurts her quite badly. A. J.

New York.

Isolate the cow and milk her last. Wash the hands well before milking other cows, as the disease is spread from cow to cow by the milker's hands. Wash the udder twice daily with a lotion composed of one ounce of granular hyposulphate of soda in a quart of soft water. Piant the sores with glycerite of tannin, as often as found necessary. A. S. A.

Loss of Calf.

Could you tell us what was the matter with a calf which we just lost? Between the skin and flesh there was an inch or more all over the body and hind parts of a substance which looked like meat jelly. It has had nothing but frosted corn fodder for roughage for several weeks and oats for grain, has been tied in barn. She would not drink like the others; bloated badly. C. W. F.

New York.

Such effusions of lymph under the skin are seen in anthrax and in other diseases such as hemorrhagic septicemia. Without an examination we could not say confidently what disease was present; but the latter is most likely and would prove incurable. The frosted fodder was quite unfit for feeding of a young animal and might cause sickness in any animal. We suspect that acute indigestion was present and the chief cause of death. A. S. A.

Staggers.

I have a horse that appears to be all right except that when I leave him hitched he goes to sleep and falls down. He will stand in the pasture under a tree with no sign of going to sleep. I have had him nearly two years. He is in the pasture most of the time, and I never saw him lie down but once, excepting to roll. He rolls a great deal. I don't use him much as I don't have much use for a horse. He works and travels all right and is in fair condition. I don't give him much grain. I have heard that there was what they called sleepy grass in some places out west that makes them sleepy but mine only gets sleepy when he is hitched. Have tried him hitched to a post without the harness on, he goes to sleep just the same. Do you know of any cause or if there is any cure? D. A.

Overfeeding and lack of work cause such conditions. Clip the horse and put him to steady work every day and if there is no work for him to do make him take abundant exercise out doors. Cut down the rations. Make him earn every bite that he eats. Allow him a box stall when in the stable. The horse is in about the same condition as the big rich, idle fat man who asked a doctor to prescribe for his gout. "Earn twenty-five cents a day" advised the doctor and then he added *"and live on it!"* If the horse is free from brain disease he should brighten up wonderfully under the work and spare diet regime. A. S. A.

Itching Skin.

I have a mule which has dirt and dandruff in its hair. It seems to itch and causes it to nip itself and pull its hair up the wrong way. What could I do to prevent this? A. L. W.

Delaware.

Clip the hair from the belly and from the legs above knees and hocks; then groom the mule thoroughly once a day. Feed carrots in addition to oats, bran and hay. Make the mule work or take plenty of exercise every day. If the trouble continues give half an ounce of Fowler's solution of arsenic night and morning until a quart has been used; then gradually discontinue the medicine, taking a week or 10 days to the work. A. S. A.

Stringy Milk.

I have a cow that has been milked two years last October. She lost her last calf November 23, 1911, about four months before she was due, but milked right along just as though nothing had happened, and has up to this time and now her milk seems to be quite cheesy and stringy. The feed consists of corn, rye and oats. J. G. N.

New Jersey.

Bacteria in the milk utensils are the common cause of stringy or ropy milk, and the condition comes on after the milk has been standing for some time. If you find that the milk comes from the udder in a stringy condition, garget (mammitis) is the most likely cause, but extended lactation, as in this case, may result in abnormal quality or composition of milk. Such milk is unfit for use, and we would advise you to dry the cow off at once, or sell the cow to butcher if in good flesh. There is great likelihood that she will again abort her calf. A. S. A.

Feeding Old Horse.

Can an old horse be kept on ground feed and do well without hay or whole grain of any kind. I have a mare, probably 30 years of age. She has done nearly all the work on my small farm for a number of years. She has been running out to pasture during the Summer with but little other feed except that for the last few weeks she has had some apples besides the grass; is now in fine condition, strong and works well. When I put her in the stable for the Winter she does not do well. She cannot or will not eat hay, and oats go through without being digested. If I cut the hay and put meal on it she will try to lap the meal off and leave the hay. Would molasses feed or ground Alfalfa with ground grain be good for her? How would you recommend to feed her leaving out hay.

New York. G. O. T.

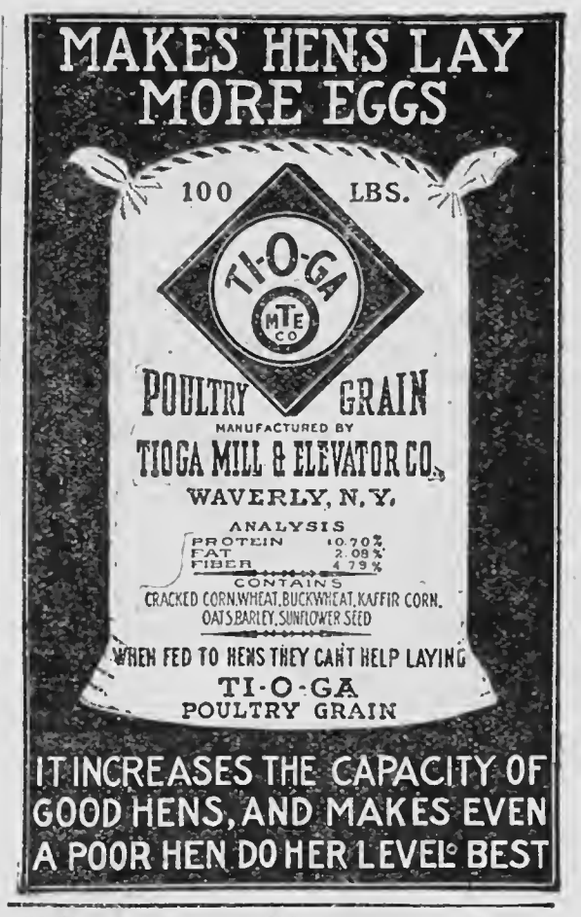
She may be able to eat good corn silage, along with crushed oats, wheat bran and cornmeal. It is necessary to feed some comparatively bulky feed to keep the meal particles apart and properly distend and stimulate the muscular action of the bowels. Alfalfa meal may be used, or finely cut clover hay, soaked in hot water until soft, and then well sprinkled with blackstrap molasses diluted with hot water. If you can get her to eat the following mixture she will be likely to do well; Dilute one quart of blackstrap molasses with three quarts of hot water and stir among fine cut hay, 5 pounds; corn meal, 4 quarts; coarse bran, 2 pints, and feed this night and morning, allowing dry meal at noon. If found necessary much larger quantities of molasses can be fed with safety and benefit. Sweet skim milk may also be given to an old horse that cannot chew feed and minced roots may be tried. A. S. A.

Nasal Gleet.

I have a very valuable mare, about six years old, very strangely affected. Last Winter she had what I at first thought was distemper but later concluded was only a cold, as there was no attendant cough—this continued through the Spring, but the discharge was from one nostril only—the left side—and became very offensive, both to sight and smell. The discharged matter was very thick and sticky and light yellow in color. At times it comes in small lumps, for the disease, whatever it is, continues now. There is no veterinarian here, and no one seems to know what it is. The mare's general health seems good—is in fine condition and eats very heartily. Any help you can give will be thankfully received. R. H. W.

Virginia.

This is a serious matter, as there is great danger that glanders is present when a nasal discharge persists and is sticky in character. In such cases the animal should at once be isolated and then a veterinarian should be employed, or if there is no graduate practitioner in the immediate vicinity it will pay to take the animal to one a distance. Glanders is not only incurable and terribly contagious among horses, but also communicable and fatal to man; hence the danger of treating a suspicious case. As there is a bad odor from the discharging nostril it is quite likely that a diseased molar tooth, in the upper jaw on the side corresponding to the discharging nostril, is the cause and the qualified veterinarian could remove the tooth by trephining and giving suitable treatment until discharge ceased and the trephining hole healed up. If he should find glanders present, however, the horse would have to be destroyed, according to State law, and the stable cleansed, disinfected, whitewashed and placed under quarantine. The quarantine would be lifted as soon as it was discovered that other horses had not become infected. As home treatment will not avail in this case, whether it be glanders or a diseased tooth, it should be evident that a graduate veterinarian must be employed.



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THE EGG-LAYING CONTEST.

The egg production at the contest continues to increase; the fifth week shows a gain of 136 eggs over the previous week, the total for the week being 841. White Wyandottes beat the Leghorns this week. Tom Barron's pen of the above breed laid 48 eggs, taking first place for the week. Francis F. Lincoln's White Leghorns are second with a score of 46. This pen leads in the total to date score, with 172. The only bird in the contest to lay every day in the week, was Tom Barron's White Wyandotte pullet No. 4 The "sour milk" pen of White Leghorns from Storrs Agricultural Station laid 41 eggs, taking third place. Their total is 120. Tom Barron's White Leghorns take fourth place with a score of 34. It looks as if his pen of Wyandottes would beat his Leghorns this year; they are 55 eggs ahead now.

The "Philadelphia North American" is carrying on an egg laying contest at Thorndale, Pa., with five birds in a pen, 100 pens being entered. Tom Barron's pen of White Wyandottes leads all the Wyandottes with 21 eggs for the week, and a total of 55 in the four weeks. Charles D. Bartholomew of Pennsylvania leads all the White Leghorns with a total of 73, and a score for the week of 21. Tom Barron is next with a week's score of 22 and a total of 69. There are seven pens of White Leghorns entered from England, and all but one are among the highest scores.

	Week	Total
Alfred Parkinson	21	60
Frank Toulmin	19	59
G. B. Sharp	10	34
Will Barron	14	30
Edward Cam	14	27
J. Collinson	8	14

Ex-Governor Rollin S. Woodruff of Connecticut has a pen of White Leghorns entered; their total is 48 and week's score 14. Mrs. Woodruff has a pen of the same breed in the contest at Storrs.

A new breed, "Red Pyle Leghorns," entered by Irvin D. Dietrich, Pennsylvania, laid 18 in the week, and total 49.

For the first time in any of the egg laying contests a pen of Light Brahmas are entered, Charles E. Colclough of New Jersey being the man with confidence enough in their egg-laying capacity, to enter that breed. But they have not laid an egg yet. The total score made by the different breeds, follows:

Barred P. Rocks	29
White P. Rocks	21
Buff P. Rocks	44
Columbian P. Rocks	31
Silver Wyandottes	21
White Wyandottes	55
Buff Wyandottes	0
Columbian Wyandottes	31
S. C. R. I. Reds	41
R. C. R. I. Reds	6
S. C. Brown Leghorns	36
S. C. White Leghorns	73
R. C. White Leghorns	0
S. C. Buff Leghorns	0
S. C. Red Pyle Leghorns	49
Anconas	52
Silver Campines	0
S. C. Buff Orpingtons	36
White Orpingtons	16
Silver Spangled Hamburgs	0

One bird in each of four different breeds, laid seven eggs during this week. In the fifth week at Thorndale, 76 pens laid 718 eggs, Tom Barron's White Wyandottes leading with 24 eggs, making his total 79. But Charles D. Bartholomew's White Leghorns laid 21, making his total 94, and Alfred Parkinson's White Leghorns laid 21, making his 81. Comparison of the records made at the contests for the three years, shows the following gains: First year at Storrs the fifth week showed a total for the week of 423 eggs; the second year a total of 698 eggs; the third year at Thorndale 718 eggs. We cannot compare the third year here at Storrs, because there are 10 birds in a pen this year instead of five, as in former years. But about half of the entrants at Thorndale are the same ones who had birds in the first and second contests at Storrs, and as there are five birds in a pen at Thorndale the comparison of yields is fairly made.

As the output shows an increase each year, it is evident that we are making progress in breeding better utility fowls; and that these egg-laying contests are furnishing the needed stimulus to American utility breeders, which will result eventually in an increased average production by American poultry.

GEO. A. COSGROVE.

Doves and Pea Fowl.

Can you tell me about the breeding of doves and the market for them?

Sergeantsville, N. J. H. C. K.

The term "dove" is used to designate certain wild species of birds very closely related to our domestic pigeons. I know of no market for them, or of any reason why people should raise them. There are several species of these doves which are kept in very limited numbers in cages by lovers of birds and other naturalists. They usually mate for life and live together during all seasons of the year. The only possible market there would be for them would be to zoological gardens, and there are very few people who care to have them in a cage, because of their affectionate disposition and gentle characteristics.

What can we do to make our young pea fowl healthier?

Pea fowl usually are quite healthy and free from diseases. It is a very frequent thing in breeding rare birds of this kind to inbreed them without any careful selection, with the result of rapidly deteriorating the vigor and stamina of the offspring. I would recommend another year that unless the parents are exceptionally strong and healthy and of no relation the inquirer change blood and that from the time the birds are five or six days old until they are nearly grown, he supply them with sour milk, both to drink and to eat in a thick clabbered form.

A. L. C.

Vermin on Hens.

I have a fine flock of White Wyandotte hens, that stopped laying about a month ago, and since then several have died. On examining one I find they are just alive with large lice, of a reddish color. The hens are getting very poor, although I feed them well. I have used insect powder on the hens but it does not do any good. Will you let me know what to do for them? J. C. D.

Your hens are doubtless suffering from the ravages of red mites, and probably, also, of body lice. These mites, which are the most serious pest of the two, do not stay upon the fowls through the day unless they are present in enormous numbers. They hide in cracks and crevices about the perches and nests, and may often be found in great masses beneath a loose board or under a perch support. They come out at night to suck the blood of their hosts and return to their retreat for the day. To get rid of them, clean up thoroughly, removing loose boards and other objects behind which the mites may hide. Then paint or spray perches with a solution of one quart of crude carbolic acid to the gallon of kerosene. With a long nozzled spring bottom oil can squirt this mixture into such cracks about the perches as you cannot otherwise reach; spare no place where the mites may hide. A little close search will probably show you thousands of them where you did not dream that any existed. If you have a nest box nailed up against the wall, tear it down and look at the crawling mass of mites behind it, red with the blood of your hens. After doing this, clean up and whitewash the interior of your henhouse, furnish your fowls with a good dust bath, and make frequent search, oil can in hand, for the vicious red mites in all places where your observation will show you that they hide.

EMPLOYER: "Yes, I advertised for a strong boy. Do you think you can fill the bill?" Applicant: "Well, I just finished lickin' fourteen other fellers that were waitin' out in de hall."—Boston Transcript.

AN insurance agent was filling out an application blank. "Have you ever had appendicitis?" he asked. "Well," answered the applicant, "I was operated on, but I never felt quite sure whether it was appendicitis or professional curiosity."—Ladies' Home Journal.

DOWN in New Orleans one day an old negro mammy entered a store, attracted by a window full of gayly colored cheap soaps on special sale. "Gimmie fo' fi' dem yar cakes," she said. "Will you have them scented or unscented?" asked the clerk. "No, Ah don' want 'em sended, foh Ah'm gwine take 'em wif me," she answered.—Credit Lost.

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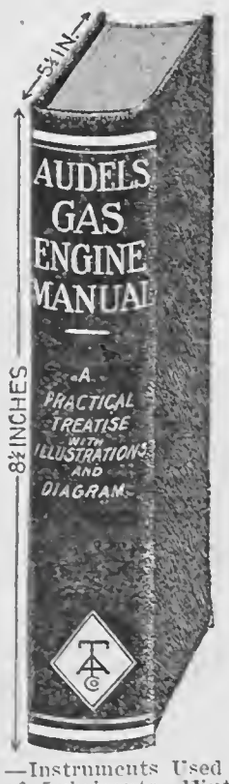

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PUBLISHER'S DESK

Our renewals of subscriptions have continued to increase up to Christmas, but as previously stated, we were a little short during the first weeks of December; and while we have no concern for the future, we do wish to ask our friends to send in the renewals early. It will save us much extra work, and confusion, and at the same time make it possible for us to devote ourselves to your service in other ways.

We are receiving many kindly words of appreciation for the enlarged Woman and Home Department, which began in the December 20th issue, and which is to be a monthly feature for the future. The next issue will be January 17. It is our purpose to make this worthy of the best traditions of the farm homes of this country, and we realize that this purpose means work and study and expense. We are prepared for it all. The first attempt was only an intimation. We expect to make it better and stronger as we go along. We have some of the best men and women in the country to help us with it, and with the coöperation of our own subscribers, men and women, we will make it a feature in the literature of the country.

With the beginning of the new year, we have decided to reject all produce commission merchant advertising for the future. For many years we have carried small cards for commission houses that we believed could be safely entrusted to handle farm products in the New York market. We always refused dozens of orders where we accepted one. But we have had frequent complaints from the best of them; and, while we have no proof of irregularities in the business of the houses that we have advertised, we have had complaints that have not been explained to our satisfaction. In the future as in the past we will, on inquiry, give our subscribers the names of commission houses with financial ratings, and with good standing in the trade; but we will not accept their advertising, nor will we be in any way responsible for them. We will, however, as in the past, receive complaints from our subscribers and do what we can to adjust them.

Edward F. McAvoy, the famous Houdan chicken man of Cambridge, N. Y., pleaded guilty in the Federal Court of Utica, N. Y., before Judge Ray on December 16, to indictment for using the United States mails with an attempt to defraud and was fined $750. McAvoy was indicted at the Binghamton term of the Federal Court in June last and was under a bond of $5,000. The charge against him was that he advertised pure-bred fowls and sold mongrel birds on orders received through the mail. There were many charges against him, from all parts of the country as far as Texas. If the case had gone to trial and the defendant was convicted, there would probably have been a prison sentence in addition to the fine, but in view of his saving the State the expense of a trial, and for the further reason that a prison sentence would embarrass his wife and child and sacrifice his poultry and farm interests, the court was lenient and confined the penalty to a money fine.

New York. B. F. E.

This ought to prove a restraining lesson for Mr. McAvoy. It is several years now since THE R. N.-Y. had occasion to criticise Mr. McAvoy and to caution its readers against his methods of poultry selling and his record and manipulation, and we have felt the necessity of repeating the caution on different occasions since. THE R. N.-Y. has no disposition to follow Mr. McAvoy further, but the public, who buy poultry through the mails, have a right to know his past record in the matter. If he will now take his lesson to heart and devote himself honestly to the poultry business, his past may be forgotten, but we caution him that a repetition of the old methods can only result in greater embarrassment to him.

The E. A. Strout Farm Agency has again been in court and has again gone down in defeat. This time the scene was laid in the Bucks County, Penn., courts. The action grew out of the sale of the Frantz farm near Quakertown to Mr. Harry Reisma. The sale was put through by George G. Cupp and W. K. George, representing the Richland Real Estate Company. It seems that George and Cupp had previously been in the Strout employ, but had left, and the contract was put through after the discontinuance of the services. On some theory that does not appear definite in the reports, the Strout Company caused the arrest of Mr. Cupp on the allegation that in accepting the fee for the service he had become guilty of embezzlement or larceny of a fee which the Strout Agency claimed belonged to them. The testimony seemed to show that the transaction was put through by Mr. Cupp as agent, and the commission paid to his attorney and afterwards turned over to himself and his partner. Receipts for the money were exhibited in court, and the transaction shown up in full, and the jury quickly brought in a verdict of not guilty.

This adds one more defeat for the Strouts in their legal battles growing out of contracts with agents and with farmers. From the number of complaints that we have received from Bucks County and from the temper of the people as we found it there, Bucks County would seem to be about the last place in the world where the Strouts ought to expect to get away with a technical advantage against a farmer or agent. If they had an enforceable claim the civil court would seem to be the place for a contention of this kind, but it was reported from the evidence that the Strout representatives admitted that it is their policy to prosecute claims in the criminal court. Some promoters and enterprising concerns seem to think that an appeal to the courts gives them the presumption of sincere contentions. They figure too that prosecutions have the effect of intimidating hesitating opponents, and besides justice is not by any means sure, and they have a chance of winning out in a weak case, if they put up bold enough a front. The records of the Strout Agency are, however, pretty well established in Bucks County, Pa., and a defendant against them is pretty sure of an intelligent judgment in that territory.

Were you to see the financial tragedies that are being enacted in this valley, by unwilling actors, lured to their ruin by bandits and buccaneers, commonly known by the name of real estate dealers, I am sure your heart would beat in sympathy with mine, over the blasted hopes and ruined fortunes of the victims of these schemes. There are more abandoned homesteads here than in any part of the State of California which it has been my privilege to visit, and you know that I get around about as much as the average person. I read very long articles by unwise boosters and uninformed writers who seem to be paid for their ability to paint word pictures from a lively imagination, with the result that many a hard-working family are separated from their savings of patient toil of years, and left to begin the struggle of life anew, with energies impaired, and the feelings of discouragement to contend with as well.

California. P. D. B.

The above letter comes to us through a mutual friend of the writer's in California. It was simply a paragraph in a friendly letter; but is so much in line with the conditions we find here in the East it was forwarded to us as an encouragement to show that others on the Pacific coast are confronted with the things we are fighting here. The mutual friend who sent us the correspondence added the following paragraph in his reply:

No better work can be done by any paper than this in making exposures of such fake real estate men. When in Florida I have felt terribly saddened by seeing the men stranded there who would give anything if they could only get back enough of the money they invested in the fake lands to return to their old homes in the North. W. A. B.

Pennsylvania.

Families who think of giving up their homes in settled sections of the country, and moving to the South and West to lands offered by these real estate promoters will do well to commit these two paragraphs from these two private letters to heart and recite them daily with their evening prayers. We have had reports aplenty to confirm these personal observations and we hope no R. N.-Y. reader will take up land contracts anywhere without first visiting the land and learning of the conditions in the neighborhood. J. J. D.

"TOMMY your subscription for the boys' paper has expired. Shall I renew it for you?" "Don't care dad, but it isn't as good as it used to be." "What do you mean—are the stories not as good?" "Everybody says it's no good—even the postoffice calls it 'second-class matter.'" —New York Tribune.

Heating a Brooding House.

I have a small brooder house 32 feet long by 10 feet wide, partitioned off in four pens, making the pens 8x10 feet, six feet high in front and four in back; ceiled sides and overhead. One end of this house is built against a small feed house with a basement cellar. Do you think it would be practical and not too expensive to put some kind of a heater in this room under the feed house and run pipes through into and down the length of the brooder house to heat it with the use of hovers to raise a few chickens in each pen? I have always used small brooders in this house, heat with lamps but as it is near my house and barn I am afraid of fire from the lamps. What kind of a heater should be put in, and what kind of hovers? L. L.

Pennsylvania.

Yes, this is the method of heating hovers used in many large poultry plants. Heaters are manufactured for this purpose and hot water pipes are run through the building at the proper height above the floor; hovers for the chicks being placed over these pipes. I would suggest that you write one or two of the large manufacturers of incubators and brooders, state your problem, and ask for plans and figures upon the cost of installation. They will be glad to furnish them.

Poultry Ration.

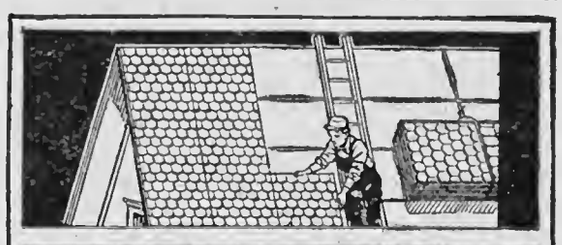
My 80 hens and pullets are W. Wyandottes and R. I. Reds, both fullbloods. I keep a mash by them at all times composed as follows: 52 pounds cornmeal; 32 pounds ground oats; 66 pounds middlings (wheat); 35 pounds bran; 14 pounds linseed; 14 pounds Alfalfa; 60 pounds beef scraps. To every 16 parts by measure one part charcoal and to the whole one part salt. I keep grit and oyster shells by them and give some green food; sprouted oats or beets. I have raised 80 or 90 bushels of oats, 12 bushels wheat, 30 bushels barley and 115 corn on ear. Will you tell me in what proportion to mix these whole grains to feed? I do not wish to have what I raised ground. Do I give animal food enough? My hens have just got over their moult and are beginning to lay. My pullets have not begun yet. How many quarts of whole grain should I feed per day?

New Hampshire. R. C.

Sixty pounds corn; 60 pounds wheat; 30 pounds barley; 30 pounds oats; would make a good proportion in which to mix your whole grains. Your mash mixture contains a large proportion of meat food, therefore, a little excess of corn in the whole grain mixture will be balanced by it when your small supply of wheat is exhausted. Your mash is expensive but should bring good results in eggs. Your 80 hens will need from four to six quarts of whole grain, twice daily. Do not give them more than they will quickly clean up and show an appetite for more at the next feeding time. Wyandottes and R. I. Reds are more easily overfed than the lighter and more active breeds.

M. B. D.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : : :



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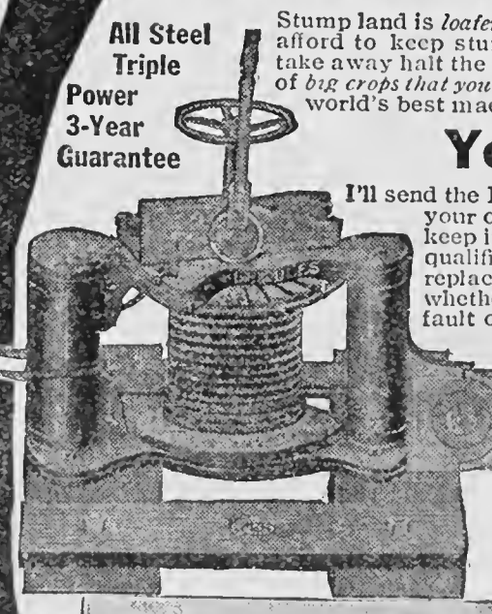

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MARKETS

Wholesale Prices at New York, Week Ending Dec. 26, 1913.

BUTTER.

Creamery, extra, lb	36	@	37
Good to Choice	30	@	34
Lower Grades	24	@	27
Storage	22	@	32
State Dairy, best	31	@	33
Common to Good	22	@	30
Factory	18	@	22
Packing Stock	17	@	20

Elgin, Ill., butter market firm at 34 cents. Philadelphia, western creamery, 36 cents.

CHEESE.

Whole Milk, best	16¼	@	17
Common to Good	14	@	15
Skims	05	@	10

EGGS.

White, choice to fancy, large	40	@	42
Common to good	33	@	37
Mixed colors, best	34	@	35
Common to good	31	@	33
Storage, best	29	@	30
Medium and low grades	20	@	25

FRESH FRUITS.

Apples—Spitzenburg, bbl.	2 50	@	4 00
Jonathan	2 50	@	6 00
Spy	2 50	@	5 00
King	3 00	@	5 00
Hubbardston	2 00	@	4 50
Greening	2 00	@	4 50
York Imperial	3 50	@	4 50
Ben Davis	2 25	@	3 75
Baldwin	2 50	@	4 50
Western, box	1 50	@	2 85
Pears—Kieffer, bbl.	2 00	@	3 50
Seckel, bbl.	4 50	@	6 50
Cranberries, Cape Cod, bbl.	8 50	@	10 00
Long Island, bbl.	7 00	@	10 00
Jersey, bbl.	7 00	@	9 00
Jersey, crate	1 75	@	2 00
Strawberries, Fla., qt.	50	@	0 75

BEANS.

Marrow, 100 lbs.	4 80	@	5 35
Medium	3 60	@	3 65
Pea	3 55	@	3 65
Red Kidney	5 10	@	5 25
White Kidney	5 80	@	5 85
Yellow Eye	4 70	@	4 75
Lima, California	5 95	@	6 00

HONEY.

Clover, comb, lb	.13	@	16
Buckwheat, lb	.12	@	.13
Extracted, gallon	75	@	1 00

NUTS.

Shellbarks, bu. of 50 lbs.	1 75	@	2 25
Butternuts, bu.	50	@	75
Black walnuts, bu.	1 00	@	1 25

HOPS.

Prime to choice	45	@	48
Common to good	40	@	44
Pacific Coast	23	@	27
Old stock	15	@	18
German crop	68	@	72

VEGETABLES.

Potatoes—Long Island, bbl.	2 25	@	2 75
Jersey, bbl.	1 75	@	2 00
Maine, 180 lbs.	2 00	@	2 25
State, bulk, 180 lbs.	2 00	@	2 12
European, 168 lb. bag	1 00	@	1 60
Bermuda, bbl.	3 00	@	5 00
Sweet Potatoes, bbl	1 00	@	1 25
Beets, bbl.	1 25	@	1 50
Brussel sprouts, qt.	08	@	15
Carrots, bbl.	1 25	@	1 50
Cucumbers, bu.	2 00	@	3 50
Cabbage, Danish seed, ton	23 00	@	26 00
Red	30 00	@	35 00
Imported	22 00	@	25 00
Celery, doz.	25	@	75
Cauliflower, bbl.	1 50	@	10 00
Lettuce, half-bbl. basket	1 00	@	2 00
Onions—White bu.	1 50	@	2 15
Red, 100 lb bag	1 50	@	1 75
Peppers, Southern, bu.	2 00	@	4 50
Peas, Southern, bu.	1 50	@	5 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl.	50	@	1 50
String Beans, bu.	1 50	@	4 50
Squash, Marrow, bbl	1 50	@	1 75
Hubbard, bbl.	1 75	@	2 25
New, bu.	1 00	@	1 50
Egg Plants, Southern, bu.	4 00	@	5 00
Tomatoes, Southern, 6 bkt. crate	2 00	@	3 00
Turnips, white, bbl.	1 25	@	1 50
Rutabaga	75	@	1 15

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 50	@	1 75
No. 2, box	2 00	@	3 50
Mushrooms, lb.	10	@	30
Radishes, 100 bunches	1 50	@	2 25
Tomatoes, lb.	20	@	25

LIVE POULTRY.

Chickens, broilers lb.	14	@	14½
Fowls	15	@	15½
Roosters	11	@	12
Ducks	16	@	18
Geese	13	@	14
Guineas, pair	60	@	65

DRESSED POULTRY.

Turkeys, fresh killed, best	23	@	26
Common to good	16	@	22
Chickens, choice broilers, lb.	26	@	28
Broilers, common to good	21	@	24
Roasters, fancy	23	@	25
Fowls	14	@	18
Ducks	10	@	18
Geese	14	@	20
Squabs, doz.	1 00	@	4 75

HAY AND STRAW.

Hay, Timothy No. 1, ton	19 50	@	20 50
Standard	18 50	@	19 00
No. 2	17 00	@	18 00
No. 3	13 00	@	16 00
Clover mixed	13 00	@	18 50
Straw, Rye	17 00	@	18 00
Oat	11 00	@	12 00

MILLFEED.

Wheat Bran, ton	23 00	@	25 50
Middlings	26 00	@	28 00
Red Dog	29 00	@	30 00
Corn Meal	29 90	@	30 00
Linseed Meal	31 00	@	31 50

LIVE STOCK.

Native Steers	7 40	@	9 00
Bulls	5 00	@	7 25
Cows	3 00	@	6 60
Calves, prime veal, 100 lbs.	8 00	@	12 50
Culls	4 00	@	7 00
Sheep, 100 lbs	3 50	@	4 75
Lambs	7 25	@	8 40
Hogs	7 00	@	8 15

COUNTRY-DRESSED MEATS.

Calves, best	16	@	16½
Fair to good	14	@	14½
Buttermilks	08	@	09
Lambs, Hothouse, each	6 00	@	7 00
Pork, light	11	@	11½
Heavy	05	@	09

GRAIN.

Wheat, No. 1, Northern Spring	99	@	..
No. 2, Red	1 01	@	..
No. 2, Hard Winter	98	@	..
Corn, as to quality, bush.	75	@	79
Oats, as to weight, bush.	45	@	47
Rye	70	@	71

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	50	@	52
Mixed colors, new laid	40	@	45
Ordinary grades	30	@	35
Butter, fancy prints, lb.	42	@	44
Tub, choice	32	@	36
Chickens, roasting, lb.	30	@	32
Fowls	22	@	25
Turkeys	26	@	31

BOSTON WHOLESALE PRICES.

Butter, nearby creamery	36	@	37
Western creamery	34	@	35
Eggs, nearby hennery	45	@	46
Gathered fresh	40	@	43
Dressed Poultry—Fowls	19	@	20
Roasters	22	@	24
Turkeys	25	@	32
Potatoes, 2 bu. bag	1 30	@	1 45
Apples—Baldwin, bbl.	3 50	@	5 00
Greening	2 00	@	4 00
Spy	3 00	@	6 00
Hay—No. 1	21 00	@	22 00
No. 2	19 50	@	20 00
No. 3	12 00	@	16 50
Stock Hay	15 00	@	15 50
Straw—Rye	18 50	@	19 00
Millfeed—Bran, ton	25 75	@	26 25
Middlings	26 00	@	28 25
Mixed Feed	27 00	@	29 00
Gluten	30 00	@	31 00
Live Stock—Milch Cows	60 00	@	125 00
Beef Cows, 100 lbs	3 50	@	5 00
Steers	7 25	@	8 50
Calves, 100 lbs.	5 00	@	9 00
Hogs, 100 lbs.	8 00	@	8 50

Stocked Leg.

About two months ago my horse got a small cut just above the hind hoof. The leg became badly swollen to the body, and though the cut healed with proper treatment. The leg remains large, or in other terms it has resulted in a stocked leg. What can you advise.
New York. J. L. L.

Three times a day give the swollen leg a good hand rubbing; then wrap it in cotton batting and bandage snugly. At night rub with druggists' soap liniment and bandage when dry. Make the horse take plenty of exercise every day and occupy a box stall when in the stable.
A. S. A.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages.

FULL COLONIES of Italian Bees for sale. CEDARHURST FARM, Pomona, N. Y.

$950 DOWN BUYS 110-ACRE FARM—Balance, $2,050; easy terms. BOX 91, Carmel, N. Y.

WANTED—No. 7 or 9 Mann Bone Cutter; good condition; state price. HEDGES, Greenville, N. Y.

HIGHEST MARKET PRICE PAID for Low's Champion Bush Bean Seed by F. H. HAYES, Dexter, Me.

WANTED—Married man to work fruit farm on shares. Owner will furnish equipment. I. M. PHILLIPS, Newark, Ohio.

14 TONS ALFALFA, one-third orchard grass and Timothy for sale; $18.50 per ton. ERNEST V. BEACH, Oriskany Falls, N. Y.

FOR SALE—Fruit farm, 96 acres; a paying proposition and beautiful home. For particulars address BOX 63, R. R. No. 3, LaPlata, Mo.

VIRGINIA FARM of 110 acres, 40 cleared but well timbered, 2½ miles to depot. Apply for fuller particulars to OWNER, Lock Box 249, Louisa, Va.

WANTED—Small farm, adapted to fruit and poultry near good markets; state full particulars with lowest price. J. H. G., care R. N.-Y., 333 West 30th St., New York.

WORKING FARMER, N. Y. STATE—General farming; beef cattle; no liquors; $45 per month; cottage, wood, garden. E. C. W., care R. N.-Y., 333 West 30th St., New York.

FOR SALE—16 tons hay, one-half or two-thirds Alfalfa, balance mostly orchard grass; all cut before June 20; large bales of good color and free from weeds. P. A. EDIC, Oriskany Falls, N. Y.

WANT—at farmer's price, good smooth farm on main road, within 100 miles of New York City. Must have bearing apple orchard of at least 10 acres. FLANAGAN, 82 Hull St., Brooklyn.

MAPLE COVE FARM—Products to Consumers. 5 lbs. butter, 6 lbs. chickens, 1 lb. honey, 2 lbs. carrots, 15 lbs. potatoes, 2 dozen eggs. Box $6. Shipped Thursdays, postpaid covering third zone. ROUTE 24, Athens, Pa.

FOR SALE—70-acre farm in potato belt, all clear; ten-room house, both hot and cold water, steam heat; 2¼ miles to depot; church; ½ mile to school. OWNER, R. F. D. No. 5, Box 454, Freehold, N. J.

FOR SALE—One Simplex Colony Oil Brooder for want of further use, at half price, $14.50; practically new; in use only two months; also some fine breeding cockerel, Young's strain, $1 each. WILLIAM LERCH, Scobeyville, N. J.

POULTRY—Single man desires position of trust on poultry plant; 10 years' practical experience; agricultural college training; knowledge of apple growing; references; state wages. Address, BOX M, R. N.-Y., 333 West 30th St., New York.

100 ACRES—Suitably divided, machine mowing, clear tillage; keep 30 head; sightly 10-mile view; maple shade, orchard, running water; house, barns, silo; near station; exceptional opportunity. M. C. MULLANE, Hawleyville, Connecticut.

WANTED—Farm adapted for fruit and trucking, 15 to 30 acres, some woodland and brook, on highway about 3 miles from a depot, within easy distance of good market; Connecticut preferred. Address, H. J. SMITH, Rosemary Farm, Huntington, N. Y.

200-ACRE FARM—Keep 35 cows, good cultivation, near village; sugar bush, 1,500; pine, hemlock, timber; good buildings; never-failing spring water to buildings; variety fruit; consider exchange for smaller place. M. E. ELLSWORTH, Bellows Falls, Vt.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

WANTED HERDSMAN—Must be single, industrious, business-like, courteous, neat in person and about his work, and of good personal habits. Applicants give experience, references and full details concerning themselves, and state compensation expected, including board, lodging, etc. GEO. O. SEDGWICK, Superintendent Mansion Farm, Foxburg, Pa.

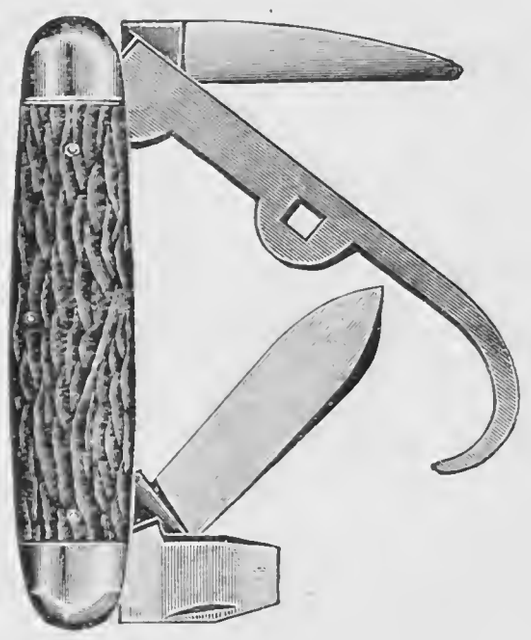
FOR SALE—Two first-class homes and money-making Warren County Ohio farms. "Settle Down," 51 1-5 acres level productive clay soil at $90. "Hill Dale View," 148 acres bottom, upland and blue-grass hills; opposite village station. For stock or dairy unsurpassed; finest location, at $75; easy terms. JOE S. KERSEY, Owner, R. F. D. 1, Oregonia, Ohio.

WANTED—Position as superintendent on gentleman's private estate; married; age 36; thoroughly experienced in all branches of intensified farming, gardening and dairying; landscape and construction work; breeding and raising of all registered stock for show or dairy results; have first-class executive ability; location immaterial. Address, with particulars, to SUPERINTENDENT, Belmont Farm, Perrysburg, Ohio.

117¾-ACRE YORK STATE DAIRY FARM—$5,400; $1,900 cash, balance easy terms; brand new 10-room house, finished oak and cherry; natural water and sink in kitchen; new cement basement; barn stanchion, 20 cows; hay track; plenty other good buildings; enough split wood for two years; $500 worth new heavy oak furniture; all tools, machinery, etc; 3½ miles to city and railroad. Address N. L. H., care R. N.-Y., 333 West 30th St., New York.

FARM—One of the best grain and stock farms in Central New York, of 127 acres; 11-room house; 3 large barns and a number of outbuildings. Buildings alone worth price asked for farm. Has a large number of fruit trees; accommodates 25 cows; soil adapted to all crops; running water from springs, and an artesian well. Three miles from Dryden; three miles from two railroads; six miles from Cortland, county seat of Cortland County; school half a mile distant. Price, $6,000; terms half cash; balance on mortgage at 5 per cent. Address, FRANK GIVENS, Dryden, N. Y.

THE NEW HANDY FARMER'S KNIFE AND TOOL KIT



It Carries Four Distinct Blades:

A large regular cutting blade; a Lock-Screw-driver Blade; a Belt Punch Blade that can be used for boring holes in leather, any size to one-half inch in diameter; the Hook Blade for cleaning horses' hoofs, and to clean out borers from fruit trees or removing Cotter pins from automobiles and other machinery. The little wrench fits the nut on a Prest-o-Lite automobile light or any small nut.

In fact this handy article can be used for hundreds of purposes. The blades are of S. & G. Wardlow's highest grade bar steel, hand forged and hand ground; tempered by an expert process. Every blade is thoroughly tested. The lining is of brass and bolsters of highly polished steel. The handle is neat and attractive. The whole is just the size of a good jackknife (exact size of picture), and so constructed that when the blades are closed the knife will not catch and tear the pocket.

One of Our Friends Writes:

"This is a great farm knife. We have carried one for months. Not long ago the horse began to limp. We found a small stone wedged in against the shoe. No pulling or pounding could release it, but a quick jerk with the little hook and the stone was out. Who has not been caught far away from a screw-driver with a screw working loose? What do you care when right in your pocket you have the strong little short blade here shown? We will guarantee you have had a strap break on the road and had to cut a new hole with your knife. The grooved blade permits you to make just the hole you want without damage to the leather or to cold fingers. Then the short strong cutting blade will do anything which a pocket edge should do. The Roman soldiers conquered the world with their short swords because these blades brought them right up to business. It is just the same with this short blade. There is power and edge to it. In fact this is a perfect workshop good for any farmer."

It is a whole Tool Kit embodied in, and taking up, the size of a jackknife. *Bear in mind that these blades are fastened to and are a part of the knife.* You cannot lose the blades as is the case with similar tool kits.

Would Make a Splendid Present.

Given for One New Yearly Subscription at $1.00; or Two Yearly Renewals at $1.00 each; or Ten 10-week Trial Subscriptions at 10 Cents each.

These articles are not given with a subscription to the R. N.-Y., but are given to the agent as a reward, in place of cash, for extending the subscription list of the R. N.-Y.

THE RURAL NEW-YORKER,

333 West 30th Street, New York City.

BUSTED PRICES!

Our Great 1914 Offer!!

BARGAIN!!

No Money Down

WIRE & FENCING PRICES

ROOFING PRICES

LUMBER PRICES

BUILDING MATERIAL PRICES

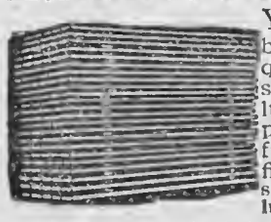
Here is the Greatest Sale ever advertised—the opportunity you have long sought for—a chance to buy staple lumber and building material—Roofing, Wire, Fencing, Furniture and Household Goods of every kind and description, in fact, Merchandise of every nature, at unheard of low prices.

We are determined that the Spring of 1914, will be the most successful in the history of this Great Company, and the Wise man will take early advantage of the great bargains shown in this advertisement.

You can order a complete carload of building material from us, including everything you need to construct and equip and we will ship it to you, without one cent cash in advance.

All we want to know is that the money will be paid us as soon as the material is received, unloaded and checked up.

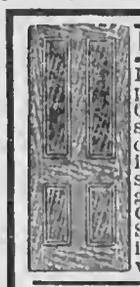
Lumber Prices S-m-a-s-h-e-d



Yes, we mean smashed. Absolutely busted to pieces. That's our policy. We quote prices on lumber that will positively save you big money. If you will send your lumber bill we will send you a freight paid price that will mean a saving to you of from 30% to 50%. Every stick is absolutely first class, brand new and fully up-to-grade such as you would buy from any reputable house in the United States.

We have determined that the year of 1914 is going to be the Banner year in our great lumber department. We have on hand 20,000,000 feet of high-grade lumber suitable for the construction of Buildings, no matter for what purpose intended. Come to our great yards in Chicago and let us show you this stuff actually in stock. No other concern in the world has a more complete stock of everything needed to build, whether Lumber, Shingles, Structural Iron, Plumbing, Heating, Doors or anything else that you may need. Do you know that lumber is getting scarcer and scarcer every year? Yet our prices are lowest and will continue so until our stock is gone. WRITE TODAY.

This Door at 98c



Lot CD-39. Four panel painted door, size 2 ft. 6 in. x 6 ft. 6 in. 500 in stock. A high quality door for the price. This is only one of our many special bargains. Our grand Building Material Catalog and Bargain Sheets will show a full line of Inside Millwork of all kinds.

Shingles At Big Saving

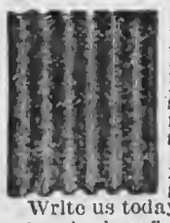
We have a special lot of 1,000,000 5 to 2 10 inch Clear Shingles on which we are making an exceptionally low price of $2.80. Order by Lot No. MS-40.

Free Building Book

A 200-page Book of Bargains in Millwork, Building material of all kinds, including Paints, Plumbing, Heating, Structural Iron, Metal and Composition Roofing, Hardware, Carpenter's and Blacksmith's Tools, Wire Fencing. No prospective builder should be without it. It is Free.

ROOFING PRICES SMASHED!

Galvanized Steel Roofing Is Fire, Water and Lightning Proof



We bought 20,000 squares of this Corrugated Iron Roofing, which we offer at this remarkably low price. It is new, perfect, and first-class, but light weight. The sheets are 22 x 24 in. x 1¼ in. corrugated. Our price of $1.25 per sq. is f. o. b. cars Chicago.

When ordering this item, specify Lot No. CD-700. This is not galvanized, but black steel roofing.

$1.25 per 100 sq. ft. buys best steel roofing

Write us today for our special FREIGHT PREPAID PRICES on new, galvanized roofing. We are offering prices lower than ever before offered in the roofing business. Galvanized roofing at $2.75 per square and up. Ask for free samples. We can furnish anything needed in Roofing, Siding or Ceiling.

62c Per 108 Square Feet Buys Best Rubber Surfaced "Ajax" Roofing

Here again we show the lowest price ever known for roofing of quality. This smooth surfaced roofing we are offering is our one-ply "Ajax" brand, and the price includes necessary cement and caps to lay it; this price is f. o. b. Chicago; at 85c per square, we pay the freight in full to any point East of Kansas and Nebraska and North of the Ohio River, provided your order is for at least 3 squares. Prices to other points on application.

Roofing is guaranteed to wear as long and give as good service as any Ready Rubber Surfaced Roofing on the market. It is put up in rolls of 108 square feet and contains 3 to 4 pieces to the roll. We have other grades of Ready Roofing, which we offer at prices easily 30 per cent below regular quotations. Write today for free samples and Roofing Catalog. Fill in the coupon.

CHICAGO HOUSE WRECKING CO.

Now operated under the name of

HARRIS BROTHERS COMPANY

FOR 22 years the CHICAGO HOUSE WRECKING COMPANY has been well and favorably known to the public. During all these years the four Harris Brothers have been the executive officers and owners and for that reason have finally decided to operate under the name of HARRIS BROTHERS COMPANY.

There is no change in our business, except that in the future the four Harris Brothers will advertise and sell their goods, heretofore advertised and sold under the name of the CHICAGO HOUSE-WRECKING COMPANY, under the new name of HARRIS BROTHERS COMPANY.

Why We Are Called the Great Price Wreckers

Consider what becomes of the stock of goods, when a manufacturer or big retail merchant goes bankrupt or "busted" as the saying goes. It is estimated that about ten thousand merchants annually meet with business disaster—this is why our company exists. If the stocks are sufficiently large and the goods are new and desirable, they find their natural way to our great forty acre plant for distribution at a small added profit, to our thousands of customers, who in this way get the benefit of wonderful bargains. In many cases our prices do not even represent the original cost of production. We stand foremost in our line. We recognize no competition. That's why we are called "THE GREAT PRICE WRECKERS."

Our Binding Guarantee

We guarantee absolute and complete satisfaction. There is no half way about this guarantee. Every purchase you make from us will be exactly as represented and you will be satisfied in every way, or we will make such just amends as are within our power. We will take back any unsatisfactory article at our freight expense both ways and refund your purchase price. We refer as to our responsibility to the publisher of this or any other publication or any bank or express company and to the public at large.

We Sell Practically Everything

Our stock includes practically "everything under the sun." It's in truth, from a needle to a locomotive. No matter what your vocation, or what position in life you occupy, or what your business, or how great a merchant you are, you have use for us, and we have the goods that you can buy from us to a decided advantage. The quicker you learn to recognize this fact, the sooner you will be "putting money in your pocket."

Our stock includes Building Material, Lumber, Roofing, Sash, Doors, Millwork, Wire and Fencing, Hardware, Plumbing Material, Heating Apparatus and Supplies, Furniture, Household Goods, Rugs, Stoves and everything needed to furnish or equip your home, your club or hotel. It includes Groceries, Clothing, Dry Goods, Boots and Shoes, Furnishing Goods and every single article to clothe a man, woman or child. It includes Sporting Goods, Fishing Tackle, Hunting Outfits, Tents, Guns, Harness and Vehicles, Jewelry, Sewing Machines, Clocks; also structural iron needed in construction of buildings, bridges, etc. Machinery, gasoline, gas and electric power outfits. In fact you cannot think of a single manufactured article that we cannot supply you at a saving in price. Let us convince you—it means but little effort on your part to prove the truth of all we say. Write us today for our Catalogue and literature. Fill in the coupon shown below.

THE GREAT PRICE WRECKERS

A THOUSAND PAGES OF BARGAINS

Write us today for a copy of our Great Big Spring Price Wrecker now off the press. It is the most stupendous Book of Bargains ever produced. It contains a thousand pages of matter true to life and describes the merchandise we are offering for sale so plain and correct that you will experience no trouble in making your selections.

It is a wonderful book of Bargains and can be used every day of your Buying Life. You need it whether you are a customer of ours or not.

WRITE US TODAY.

$759 Buys the Material to Build This House

This Is Our House, No. 6A

A beautiful up-to-date full 2 story, 7 rooms and bath, home. The biggest bargain in the world. Copied and imitated all over the U.S., but our price and quality cannot be equaled. The price is easily 25 to 50 per cent below local dealer's prices.

Immediate shipment right from our Chicago stocks, where you can come and see it loaded. *NO MONEY DOWN.* $2.00 buys perfect Blue Print Plans, complete specifications and detailed descriptive material list, with a refund of $1.50 if you do not like them.

Our House No. 6A

Original Methods

We are the originators of a system of selling practically complete Houses direct to the consumer, at a great saving.

We eliminate all in-between profits. We sell and ship direct to you from our own stocks.

Great care and study has been given all our Plans. Economy is the watch-word both in materials and construction.

No Worry No Loss No Waste

Our Binding Guarantee both as to quality and quantity goes with every sale.

Write us for letters from people in your vicinity who have bought from us. We have thousands of unsolicited testimonials.

SPECIAL INFORMATION

If you intend building, you will lose money if you don't write us at once. Tell us what you want. We will answer you promptly and give you valuable information regarding building. Send rough pencil sketch showing the kind of house you want. We will make you a freight paid price that will save you big money on material necessary to build same. Every stick first class.

If you intend to make improvements, write us what they are, and we will help you to save money on your purchases.

Our FREE BOOK OF PLANS

Our Book of Plans contains 120 pages of different kinds of buildings. Everything from a 2 room Portable House for $117.50 to the finest kind of a residence.

Houses are completely illustrated showing the floor plans, prices, etc. And it's free.

Wire and Fence Prices Smashed!

Barb Wire Less Than 2c Per Rod

Now Galvanized, heavy weight barbwire, put up on reels about 100 lbs. to the reel. Lot 2-CD-36 per 100 lbs. **$1.95.** Galvanized barb wire. Light weight, best grade, best made. Put up exactly 80 rods to reel, 2-point barbs. Lot 2-CD-28, per reel, $1.40.

WIRE NAILS, Per Keg, $1.28

5,000 kegs, put up 100 lbs. to the keg mixed, all kinds together, regular nails, such as made by nail factories. Lot 2-CD 33, price per keg, $1.28. 1,000 kegs of 10 penny-weight regular new wire nails, 100 lbs. to the keg, while they last, per keg, $1.85. Write for our free Wire and Fence Catalogue. Gives valuable information to any land owner. Fill in the coupon below.

Smooth Galvanized Wire Per 100 Lbs. $1.13

It is suitable for fences, stay wires, grape vines or for any ordinary purpose where wire is used. This galvanized wire is irregular in length—it ranges anywhere from 50 to 250 ft. $1.13 is our price for No. 9 gauge. Other sizes in proportion.

15c per Rod Buys Heavy Hog Fencing

Here is another one of our remarkable bargains. A good heavy fence, bought from Ohio flooded factory, perfectly adapted for hogs and general farm purposes, 26 in. high, square mesh, put up in suitable size rolls. Lot 2-CD-31, price per rod 15c. Other heights in proportion. Staples, 100 lbs., $1.75.

BEST QUALITY PREMIER, MICHAELSON READY Mixed House PAINT

95c Per Gal.

Our paint department is under the personal supervision of Mr. V. Michaelson, for 30 years the foremost paint man in America. His picture has appeared on over 8,000,000 cans, and his name is known from ocean to ocean. Paint of quality is his specialty. Every gallon has our strongest guarantee. Our Ready Mixed Barn Paint at 56c a gallon will outlast any similar paint produced. If you want quality paint, write us or write to Mr. Michaelson if you prefer. Finest, most valuable paint book ever published sent FREE. Send coupon.

LETTERS FROM CUSTOMERS

$1,000.00 Saved

Everything arrived in good condition. I saved on the building; also heating plant and bathroom outfit about $1000.00 as this kind of lumber would be very dear here.

Signed (LEWIS YOUNG, Pennsylvania.

$700.00 Saved

I am perfectly satisfied. Don't be backward in referring to me, for you have done more than you agreed to. I saved $700.00 and also got better material, and a better house.

(Signed) JOHN J. DUNN, Ohio.

Satisfied With Furnace

The furnace I got from you is perfect in every way. I would not be without it one winter for double its price. If farmers only knew how easy it is to install it, they would not be without it.

(Signed) HENRY D. CHARTER, Canada.

Used 12 Years and In Good Condition

Some 10 or 12 years ago, I bought quite a bill of Black Corrugated Roofing from you, and only painted it twice since I laid it, and it is in just as good condition today, as the day it was laid. Please send me your catalog, as I expect to put up a barn next Spring and am looking for something for a roof as good as that bought from you last time. (Signed) W. W. STODDARD Ohio.

Will Order More

Am pleased to say the roofing all here and in splendid shape. Allow me to congratulate you on prompt delivery. You will receive more orders from me. (Signed) D. DUCELLO.

Recommends Our Paint

I have used your Premier Paint in this salt atmosphere for the past four years and find it better for this climate than any paint I can buy, no matter what the price. (Signed) W. A. WEIDE, Florida.

Fill in This Coupon

HARRIS BROTHERS CO., Dept. C. D. 37 Chicago

Send me free of cost the following catalogs. (Place an X mark in square opposite the catalogs you wish)

- ☐ Catalog of 50,000 Bargains
- ☐ Building Material
- ☐ Plan Book of Houses & Barns
- ☐ Roofing, Siding and Ceiling
- ☐ Wire and Fencing.
- ☐ Plumbing & Heating
- ☐ Paint

*My Name is*_____

*My Address is*_____

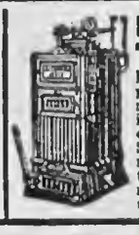
*County*_____ *State*_____

*R. R.*_____ *P. O.*_____

$13 BUYS COMPLETE BATHTUB

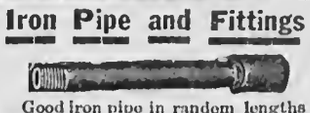
This is a white enameled, cast iron, one-piece, heavy roll rim bathtub; fitted with the latest style nickel-plated trimmings, including Fuller double bath cocks for hot and cold water, nickel-plated connected waste and overflow and nickel-plated supply pipes. It is 5 ft. long and is good enough to answer the needs of any one. Lot 5CD-101.

Hot Water Heating Plants



We are headquarters for steam, hot water and warm air heating plants. They are suitable either for new or old homes. It is easy to install one of these plants in your old building. For this great Fall Sale of ours we are offering a warm air heating plant large enough for the ordinary 6 room house, with all necessary plans and complete instructions for installing, for $46.00.

Iron Pipe and Fittings



Good iron pipe in random lengths complete with couplings, suitable for gas, oil, water and conveyance of all liquids; size 3-8 to 12 inches; our price on 1-in. per foot 3c; 1 1-4 inch at 4c per foot. Complete stock of valves and fittings. Send us your specifications.

AXMINSTER RUGS at 75c

We bought at New York Auction an enormous stock of high grade, brand new rugs and floor coverings. This is a sample of our money-saving bargains. Write for complete Free Rug Catalog, showing actual colors.

FURNITURE

We are the World's Bargain Headquarters for the Outfitting of your home, club, lodge or hotel, from the very latest to the finest. An assortment of Household Goods and everything such as will be found in no other institution in the land. Write for free copy of our Furniture and Household Goods Catalog.

HARRIS BROTHERS CO. 35th and Iron Sts. Chicago

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Cornell University Library 2713

VOL. LXXIII., No. 4237. NEW YORK, JANUARY 10, 1914 WEEKLY $1.00 PER YEAR.

THE HOME MARKET FOR POULTRY.

Great Value of Plymouth Rocks.

Again in the harness, after a lapse of some years from actual work with poultry, I find the situation much improved. It is a safe guess that the high price of beef has been the means of higher prices and improved demand for poultry products. A five-pound roasting chicken that some seven years ago retailed for 90 cents now commands $1.35. The 50 per cent advance is in large part increased gain. My staple whole grain is wheat, now selling in my section at $2 per hundred. I have paid $2.25, and occasionally as high as $2.50, in the days of lower prices for poultry products. I estimate the cost to grow a chicken to weigh five pounds at five months at 60 cents for purchased feed. Green feed, while very essential, stands for no cash outlay. This leaves a balance of 75 cents to show for labor.

It is my contention that poultry raising in New England is a safe and sane proposition. It is the custom just now to magnify the egg, possibly the result of the boom on egg contests, a thing which is to be deplored as tending to set an undue emphasis upon that form of increase. A score of chickens might be grown and profitably marketed to one at present, on the basis of the value in dressed poultry. Of these, three-quarters of the pullets, as well as the males, could be advantageously marketed, leaving only the choicest for laying and reproduction. If these were of the general purpose type, which not only give better and more flesh, but continue egg development with the shortening days, a thing the special egg-breeds find it difficult to do, the consumer would not suffer shortage.

FOUNDATION STOCK FOR FARM IMPROVEMENT. FIG. 10.

Much gratuitous advice is being given to farmers as to the growing of cattle to meet the extortion in prices; but the high price of meat will never be lowered by Eastern-grown beef. We all know that cheap ranges for the herds in the West are fast going. It is a fair guess that if a considerable proportion of the talent seeking rainbow opportunities in the West would buckle down to producing right here in the East what the hungry are clamoring for, we should have the logical solution of the high cost of living. And the poultry business, if conducted with the double aim of eggs, especially where demand is greatest, and a quality of carcass far beyond the average, and actually costing less to grow than the average, would do much to rehabilitate New England's bare farms.

As poultry is the logical substitute for beef, its production in the thickly settled sections of New England, right at the consumer's door, extends the most alluring prospects for such as enter the business wisely. Eggs are not to be lost sight of, and no indifferent laying breed is to be considered. Eggs vary little in commercial worth in average markets. But when it comes to the carcass, any breed inferior in quality to the best you may have to compete with would be a serious handicap.

I raised the past season 200 Barred Rocks, and as they grew to roaster size I sold the cockerels to family trade. Three Rhode Island Red cockerels I sold among the rest, and I heard from each buyer later that they preferred my Rocks. The city markets can name a higher figure for the choicer grades; but in towns, to get and keep a desirable retail trade is all important, and warrants much care in the selection of a breed.

The term "general-purpose breed" may suggest the union of diverse traits at the cost of some sacrifice of quality; a condition which for good reasons does not apply to the Barred Rocks. This breed stands the very highest as a flesh producer, being dependable as a breeder, the chicks thriving under conditions where some special carcass breeds prove difficult to rear. So strong a hold has the golden-hued Rock upon New England tastes that no competition in white-fleshed breeds may be feared. And going below the surface, the Rock is so superior in quality as frequently to call forth remark upon the sweetness of its meat, which has happened occasionally in my own experience. The fact that the wholesale packers pay a bonus for Barred Rocks over any other breed is in itself suggestive, for that is the last place to look for sentiment to affect price. As to laying, I have found even June-hatched Rocks dependable Winter layers; and if not making so high an annual record as some, they can hold their own in actual receipts from eggs laid in the season of scarcity.

The American Poultry Association, which receives so many hard knocks for its work in giving distinguishing form and color to each distinct breed of fowls, has now in preparation a utility standard, which is expected to do a similar work in standardizing the dressed poultry and eggs output of all breeds. It is a safe prediction that the day is not so far distant when both eggs and dressed poultry may be ordered "sight unseen" with tolerable certainty as to what one is buying. Further, the age, fatness, and all points that go to make marketable quality, will come to be a matter of as careful grading as we now observe in packing fruit. The bonus of several cents per dozen commanded by Leghorn eggs in New York market is chiefly a matter of uniform product. No one is so rash as to suppose the Leghorn is more valuable than an egg of any other breed, but it so happens that this is the only breed the output of which as marketed is strictly uniform in every particular.

This utility standard will soon be published, and is anticipated to bring order out of chaos as to poultry products. In bygone days Winter apples were gathered and stored without regard to variety, and, as a child, I remember to have seen an old farmer digging his crop of peachblows, white, red and blue potatoes, with a beautiful uncertainty as to what color each successive hill would yield. But in the coming day of uniformity in poultry products these things will appear no more absurd than miscellaneous marketing of all sorts and conditions of produce. It is already imperative in the working up of a stable market for poultry that in place of mongrels one has that degree of uniformity and quality which is possible only with pure stock, and well-bred at that. For as different stocks of the same breed vary as to laying powers, so also will they differ in the value of their meat.

I will say in closing that opportunity is now extending the glad hand to those who would venture judiciously into the poultry field, especially in the thickly settled East. In order to be most economically conducted and most surely profitable it should be

carried on jointly with tilling the soil. Fruit-growing and gardening in connection with poultry makes a strong team. Chickens and the growing crops should occupy the land at the same time, with mutual benefit; but this calls for experience and good judgment. Don't be afraid that so many will go into poultry at once as to swamp the market. The increasing demand will take care of all the poultry and eggs that can be grown. The trite saying, "Plenty of room at the top," applies here. If you are wise and have something better than your neighbor, and especially if you cultivate the faculty of making the trade believe it, you can command the cream of the trade whatever the competition.

Massachusetts. FRED. W. PROCTOR.

STORING WATER IN A WELL.

"Umpire," page 1342, has had his problem solved, but the man with the well still has his. The experts have told him what not to do. I shall endeavor to tell him what I should do under the circumstances. We all know that the digging of a well is somewhat expensive, and if this man with the well could hit on some inexpensive scheme that would enable him to store his rain-water in the same old well he would be pleased. Were this problem mine I should put about eight or 10 inches of coarse, clean gravel in the bottom of the well. In this gravel, about a foot from the side of the well, so as not to interfere with the pump, I should stand upright a piece of 1½-inch iron pipe 22 inches long. I should cover the gravel with seven inches of cement. This would allow for three inches of pipe to stick into the gravel and two inches to extend above the cement bottom. Before putting down the cement it might be a good scheme to cover the gravel with old sacks, to prevent the cement from running down; at any rate, I should mix the cement somewhat stiff. Threads would have been cut on the upper end of the pipe before putting in and a vertical check valve screwed on. Be sure you do not get the valve on upside down.

This valve would open automatically when the water level was higher on the outside of the well, and close when the water was higher in the well. Water could flow in from the bottom, but could not flow out. If the well were filled from the surface during a dry time, or at any time, the valve would remain closed until the water in the well had been drawn down to a point below the water level on the outside, when the valve would open to allow the water to flow in from the bottom. A. J. H.

Schoharie, N. Y.

RESULTS FROM SUBSOILING.

Can you give me any information about the use of a subsoil plow? What kind of soil is benefited by its use, and what kind of soil does not need it? Of the different kinds of subsoil plows, which is considered the best? Also, does the benefit derived from subsoiling justify the expense? C. T.

Moravia, N. Y.

There is very little literature dealing with the subject of subsoiling. This means that experiments and the experience of farmers have not been such as to encourage the following of the question. The Nebraska Station, in Bulletin 54, gives the results of several years' experimentation, and indicates one type of soil that seems to be benefited, and one that seems to be harmed by subsoiling. The bulletin is summarized in the Experiment Station Record as follows:

"The results obtained at the Station on a loam containing alkali and underlaid by a compact subsoil showed that the subsoiling increased the yield in most cases, but when the season was very wet, Spring subsoiling failed to show any benefit. Subsoiling in Nebraska, where the subsoil was loose and porous, reduced the yield by about one-half. The results of subsoiling obtained by farmers throughout the State are reported. On clay subsoil 80 per cent. of the trials were favorable to the subsoiling, but on a loam subsoil only 23 per cent."

Four experiments by the Royal Swedish Agricultural Academy with vetches and oats, oats, and oats and barley, showed a gain in value of crop varying from $1.75 to $5.36 per acre. Most of the tests, however, are like those reported by the Idaho Station—"Tests of the effect of subsoiling on soil moisture gave inconclusive results."

There was much more discussion regarding the advantages of subsoiling 20 or 30 years ago than there is at the present time. Theoretically it would seem that certain soils should be much improved by being subsoiled, but in practice the benefit fails to become apparent. Not only do the crops immediately following fail to show much improvement, but it seems that the subsoils so treated very quickly settle back to their former compactness. The expense of subsoiling is very considerable, and it is doubtful if sufficient increase of yields may be expected to warrant it. Probably the same expense used in drainage will give better results. Possibly subsoiling immediately after draining will make the drainage more quickly and fully effective. Most implement makers put out a subsoil plow that is intended to follow the ordinary plow and stir the subsoil five to 10 inches deeper without bringing the subsoil to the surface. These plows are often found on well-equipped farms, but they are more used for loosening carrots and other deep-rooted plants for harvesting and for loosening the soil in ditch digging, than for regular subsoiling. J. L. STONE.

Cornell Exp. Station.

R. N.-Y.—We often receive statements from farmers who have tried subsoiling—usually with apparent gain. The best results are found on stiff clays where the subsoil is very hard and stiff. We understand that "subsoiling" means breaking up the lower soil without bringing it up or over.

"TRAPPING YANKEES."

Two or three years ago we spent the Winter in Texas. A great amount of land is laid off in that State in plots of various sizes, marked at the corners with conspicuous white stakes. We were riding out of Houston on the train one day, and had been passing for miles through unoccupied, plotted land. My wife turned to a man sitting near us and asked the reason for so many stakes set in squares. "They are traps to catch Yankees in," was the answer.

And the Yankees are caught by the thousand every year. There is good land in Texas, and it is a good State to live in, and some of the land is priced at what it is worth. But those "little-lander" propositions are sometimes put forward by land companies that make their money by exaggeration and misrepresentation. No one should buy one of those 'traps" without seeing it, and reading its performance, or that of similar land nearby, in the past tense. The agents speak mainly in the future tense, singing their song of what their traps "will do." Let the prospective purchaser break away from the agent and his cappers, and ask the neighbors there what they have raised and what have been their yields in past years. However, all I ask of a land-buyer is that he shall not buy what he has not seen.

An item in the paper the other day gave the winnings of a set of Florida land-pirates at over a million dollars out of a tract of swamp. There is good land in Florida and, no doubt, good "buys" there; but land bought "unsight, unseen," as boys in my time sometimes traded jack-knives, is always a bad "buy." This Winter I am in California. I have no word to say against it, or its developed or undeveloped land. But I would like to caution the unwary against the "Yankee traps" that are set widely and are cunningly baited. Coming up the coast road the other day, I noticed in a couple of instances where the tide-lands were staked out. In a diagram or blue-print those plots would show the same as tillable land. Let the Yankees beware! Land that they have been upon may prove to be less valuable than they suppose; but land which they know nothing about except what appears on paper might easily turn out to be a "trap." EDWIN TAYLOR.

A CONCRETE MANURE PIT.

I read with interest the questions about a manure pit by R. V. B., and answers by Chas. B. Wing, on page 1246. Would it not be practicable to build a small cement pit directly at end of gutter and outside of barn, and let the liquid manure run directly into pit, and pitch or shovel the solids into same pit? This for a small farmer who keeps three or four horses in one stable and three to six cows in another stable, who does not think it would pay to put in a carrier system, but does think it would pay to take the very best of care of what manure there is. I have thought of building a concrete pit at end of each stable, to store manure in and build a roof over each one, as I thought it would be too wet if left open. Why would not this be satisfactory if plenty of absorbents were used when there was too much liquid to handle, or water used on horse manure if it was too dry? I want two small manure pits, but I want to know how to build them right. A. R. H.

Buchanan, Mich.

In my barn things are arranged so that there is not a great deal of liquid manure not absorbed. There is some, but only quite a moderate amount. I feed enough shredded stover throughout the year so that frequently the manure is decidedly dry, and no liquid whatever, and at the most there will be only, probably, 50 pounds a day of liquid that is not absorbed. Where this was not the case, however, I think it would be practical enough to take care of it, as your correspondent suggests. In fact I think, in a way, that your correspondent has a mighty good idea. The piles of manure thrown through a little stable door, frequently right under the eaves, and also frequently on a hillside, which is the method used by nine-tenths of the farmers in many places over the country, is not only slovenly in appearance but decidedly wasteful, and it would not only be very much neater but more profitable as well, for even small farmers who only had two or three cows and as many horses, to take care of the manure as your correspondent suggests.

I buy most of the manure that is produced in our village, and am a little more interested in the subject on that account also. One firm that I buy from has two horses kept in the barn the year around, well-cared for, and they have a concrete box for the horse manure. This box is about 10 feet square and five feet deep. These two horses, with liberal bedding, fill it, I think, about once a month, and we haul it with two small loads or one very large load. This pit is a little of a joke, because it has no bottom to it, but horse manure is so dry that there is less leaching than with some other forms. I mention this pit only in order to give A. R. H. a little idea of what he would need in taking care of his horses, and I might say that if he has trouble with liquid in his cow pit, a few wheelbarrow loads of the horse manure makes an excellent absorbent.

The only thing that I find about the use of concrete around manure is, that it is necessary to have the concrete of good quality, and preferably coated with whitewash before using, the acids in the manure attacking the lime in the concrete, gravel, sand, etc., and will sometimes destroy the work in a few years' time. I had this happen on some underground cement work which was fairly soaked with liquids from manure, and in two years' time the cement was decidedly rotten. CHAS. B. WING.

Ohio.

APPLE CULTURE IN WISCONSIN.

Will you advise me what commercial varieties of apples are like the Ben Davis in their preference for heavy clay lands, which varieties prefer medium soil, and which light? Would the land have any effect on the scion if the scion happens to prefer different soil from the stock? The stock will be Hibernal. I expect to plant Wealthy, McIntosh, McMahon, and possibly King or Hibernal stock, and wish to know if 30x30 feet square is all right; also if there is any real advantage in planting by hexagonal method. Give a full discussion on the relation advantages for a young man of limited means going into the orchard business as to the best method of starting. Is it best to buy one in first-class condition or to buy one in fair condition, or is it best to plant one? Will it pay to plant one-year-old whips and the following season bud to selected buds, or is there nothing in the idea of selecting buds from heavy-bearing trees? Or, would you recommend planting first-class nursery stock in preference?

If Early Richmond and Montmorency cherries are given good attention from the start, how long may they be expected to live; same for plums? H. M. S.

Racine, Wis.

It is taken for granted that the intention is to plant or buy an orchard in Wisconsin. There are sections of that State, and also in Minnesota, where apples of the hardier varieties are grown successfully, and of the varieties mentioned, the Wealthy and McMahon are of this character. The Northwestern Greening, Yellow Transparent, Oldenburg (Duchess), Pewaukee and a number more are equally hardy, but the McIntosh is not quite as hardy, although it has endured severe Winters in many cases. Tompkins King is not a hardy variety, and should not be planted in Wisconsin. I do not believe that there are any varieties of the apple that flourish better in light or sandy than in clay land, but all kinds do best in loose clay or shaly loam that is well drained. I am not able to give lists of varieties that are especially suited to particular grades of soil that are called "light, medium and heavy." Any good soil for corn or any ordinary farm crop is usually suitable for apple orchards, provided the location is right. The hardiness of the stock has an influence on the ability of the tree to endure the climate, and the Virginia crab is used for this purpose as well as the Hibernal.

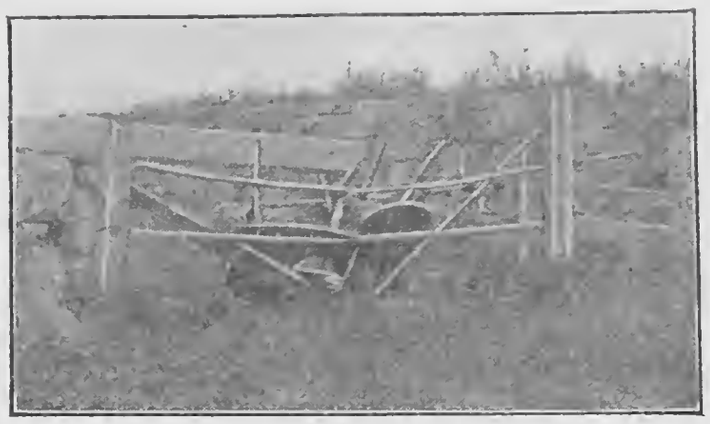
Regarding the comparative advantages of starting in the orchard business by planting or buying an orchard already planted, there are many things to consider. "A young man with limited means" can usually make a good orchard cheaper than he can buy one; but he might find a chance to buy one very low that had been well planned and for some reason had to be sold. But one in first-class condition would rarely be offered for sale at a bargain, and one that had been neglected, and yet not beyond quick recovery, might be very wisely bought and brought back into good condition at small expense. Here is where expert judgment of the best kind would be needed, and one just starting into the orchard business is not likely to have it. If such a thing is attempted the best advice possible should be secured and then followed.

Planting one-year-old apple trees and budding them the next year with buds taken from bearing trees would be no better than planting good nursery trees of the same varieties from any really reliable nursery and would cost more. Early Richmond and Montmorency cherry trees ought to live and bear well, if well cared for, until they are 30 years old; and the same is true of plum trees.

H. E. VAN DEMAN.

A PROFITABLE TURNIP CROP.

On page 1301 I notice that the farmers of Linwood community, in Leavenworth County, Kansas, are selling their turnips at $12 per acre. That seems to me a very small price if they have anything of a crop. The writer has sold this year from an acre of ground $55 worth of turnips, and has on hand 40 bushels that are altogether too large for commercial purposes. We had one weighing six pounds. A great many of them weigh 2½ to three pounds and over.



A Badge of Inefficiency. Fig. 11.

They are too large for selling, but are solid and good. We shall feed them to our cow this Winter. Our market has been two small county towns, from 1,500 to 5,000 population.

I have found turnips a valuable catch crop. They require very little work. They grow late in the season, when it is cool. The above patch I speak of was sown on the 4th of July. On the afternoon of the first of July we had one of the fiercest hailstorms that needs to visit any community. It rained hail by the bucketful, and in places ruined every green thing above ground, and tried hard to bark the trees. This patch was in sweet corn, and was ruined. We just ran the spring-tooth over the ground once, I sowed 15 cents worth of seed, and with a single horse brushed the ground lightly. This was all of the work, except harvesting and marketing them.

This acre of turnips was in a 10-acre field, and yielded enough income to pay the rent of the field. I pay cash rent. The remainder of the field was in oats and early potatoes, and was nearly completely ruined by the hail. I have also found out in other years that turnips are a good crop to raise. Last year I sold more than $60 worth, all raised in the cornfield as a companion crop. They grew mostly after the corn was cut up. I shall continue to raise them, as they bring in considerable money. This year we harvested some on December 6, and still have some in the field to get if the present cold spell moderates again. SAMUEL HEYMANN.

Huron Co., Ohio.

R. N.-Y.—The point is that these Kansas farmers had not tried a second or cover crop before. They found this $12 a clear gain in a section where most people had seldom heard of turnips as a profitable crop before. Of course the crop is worth more in an older settled country.

WHY NOT TACKLE CLOVER SEED?

Did you ever see a big table of results in clover seed growing? You've seen dozens or hundreds on wheat; a hundred pounds of phosphate made so much more wheat; plowing early or planting late made 221 pounds more or 136 pounds less. Tables on tables like that for wheat, and the same for corn, oats, barley and for clover as a hay crop. But where are we told about clover seed? Very little about how to raise the seed. The literature is mainly about how to tell the weed seeds in it.

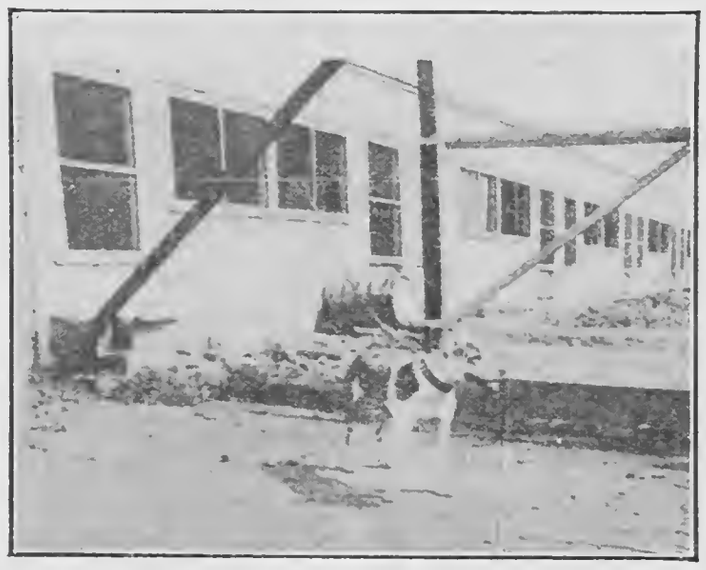
The Department of Agriculture and the various State institutions on the same line are supposed to exist to help the farmers. The R. N.-Y. has often pointed out how this help might work the other way. The bigger crops of grain the growers get the less the total money value; urbanites thus benefit from bumper crops rather than the people of the soil. Not so with clover seed, for the farmer is not only the producer of this crop; he is almost the sole consumer. If clover and other legume seeds could be produced more easily we could afford to keep more acres idle with soiling crops on them. We could get the same amount of salable grain from less land and without so much hiring to do. When everyone could raise most of his own seed there would not be so much scattering of weed seeds from one end of the country to the other. Only the cleaner stands would be thrashed. The back-breaking hoeing would be reduced and the tiller's comfort added to all around. It does not look fair to farmers to expend all the official energy teaching him how to grow cheaper grain for town people, and almost none on how to produce cheaper legume seed for himself. These farmers do not apply so much to cow peas and Soy beans. It is the small seeded and the Winter legumes that have been neglected.

Probably the stations will not undertake to grow Red clover seed, but there are thousands of other legumes, some very likely ones. More attention should be given to these and their seeding, and less to the grains. Department Bulletin No. 6 tells about legumes that will grow on acid soils, Hairy vetch, Soy beans, lupins and others. They seem to have the power of using the "unavailable" nitrogen. More work on this line ought to be done. It is fresh and interesting to see a plan of adapting the plant to the soil instead of laboriously carrying the soil to the plant. BEN. P. EDGERTON.

TENANT FARMING—THE LANDLORD'S SIDE

[The R. N.-Y. wishes to be known as a human document—giving freely the human side of farm life. This means an honest statement of the sorrows as well as the joys, the failures as well as the successes. Statements of this sort are in language which plain people can understand. There follows a personal statement from a landlord in Central Illinois. This is his point of view. If any tenant wants to give the other side we shall be glad to hear from him.]

I fortunately own four farms, which I rent for cash and grain rent for enough to keep the wolf from the door. Farm tenants call me hard to please as a rule. I do not ask more rent than they have to pay others. My buildings are in as good repair, also other improvements, as the owners who live on their land have. I would like to have all kinds of fruit on each place, sufficient for one or more families and some for sale. The fruit-growing trees, vines and shrubs have about disappeared, and how I would like to replace! When I saw a tenant wilfully break limbs on cherry trees to secure the fruit, stand on a ladder and with a long club punch and beat the



Better Than a Shotgun for Thieves. Fig. 12.

limbs of the plum and peach trees, too lazy to run a wagon under to enable him to gather from the ladder, I just concluded not to replant again. It seems to me to do so would be casting pearls before swine. I am past the three-score period of life, have been on hundreds of farms on either side of the river in the Mississippi Valley, across the country from coast to coast via Portland, Oregon and Maine. I make it a point never to let a tenant treat me better than I will him, or anyone else when it comes to doing the fair thing. No one better enjoys seeing well-tilled farms or good improvements, and I should be delighted to help my own tenants to have them, if they would only make an effort to take care of the places. I have enough outside income to pay half my living expenses. I do not want all the land that joins me, only one child to inherit, and sorry to say no good wife to enjoy the fruits of my toil and our early savings.

I have seen answers in print and heard verbal advice to such tales of woe. The advice is, look for a good tenant, rent for a term of years, so they will take more interest, etc., etc. Well, I have been looking for the *good* tenant for over 30 years, one whom I felt I dare risk binding myself up for more than one year. Tenants do not give security, as a rule, that they will keep and comply with their part of the contract, and a judgment is scarcely obtainable in court, and almost as hard to collect. True, a landlord can hold any product grown on the farm for rent due. There are so many things which a tenant or the owner living on a farm should do which the average tenant won't do. I was raised on a farm, and all my hopes, desires and interests are centered in farming. I think I know what a farmer can do or ought to do; how much the natural elements will interfere, just as well as the average tenant. So why should I bind myself up for more than one year at a time by putting a farm worth from $20,000 to $35,000 in the hands of a tenant who gives me no security that he will keep and perform his part of the contract? My word is as good as a tenant's. I do not want to sell my farms. I expect to rent so long as I live, and never want to change a tenant so long as we can get along. I feel sure I do not misstate when I say, the average tenant carelessly lets a place go down to equal five per cent of the rent he pays. So much damage is done unnecessarily.

I have had some tenants live on my places as long as seven years. If tenants will do what they agree to do, the chances are they need not move in 20 or more years. My heir will have no occasion to change them after I am gone.

TOP SOIL IN YARDS OR RUNS.

During each year we frequently have letters from farmers who ask us about the value of the surface soil found in barnyards or old chicken runs where flocks of poultry have been kept for a number of years. Many farmers appear to think that this soil must be of very great value as a fertilizer, worth scraping up and hauling away. In Arizona farmers have not yet come to any thorough use of manures, yet in localities near the towns and cities the truck growers are beginning to look about for plant food. In that country there are many old yards or corrals where sheep or cattle have been herded for a number of years. Some of these corrals are used as shearing pens for the sheep, and the theory is that the upper surface of soil in that rainless district ought to be valuable. Analyses have therefore been made. In one case such a yard was found on a well-drained or gravel soil. Even in that country of limited rainfall, most of the plant food had been washed out. Still this soil contained about 11 pounds of nitrogen to the ton, which is about the average of ordinary stable manure. Other yards or corrals were examined on heavier ground, where there was little chance for the water to soak down through the soil. In some cases the soil scraped up from the surface contained 30 to 35 pounds of nitrogen in a ton, which made it richer in this element than some of the brands of low-grade fertilizer put on the market. These yards had been used for herding sheep and goats, so that the soil was richer than would have been the case had cattle been kept there. One sample of the soil found in a goat corral actually contained 44 pounds of nitrogen, 36 of phosphoric acid, and 75 of potash, which gave a value of nearly $15 per ton, at the prices in which chemicals are sold in the Eastern States. This plant food is not yet needed for farm purposes in Arizona. Soils as rich as the last-named would be worth handling and working over by our Eastern manufacturers.

There is no doubt that the bottoms of ordinary barnyards, as well as the top soil in chicken runs, contained large quantities of plant food. The first fact is the best evidence we have of the value of a cement or water-tight bottom in the barnyard. A concrete covering, or hard clay pounded down solidly, will hold most of the plant food, which would otherwise escape in liquid form by drainage or overflow. With this firm water-tight bottom the yard can be scraped out with a scraper, and promote a great saving in the fertilizer bill. In the case of chicken yards it is well known that after a few years of constant use, these yards become foul, and the birds more and more affected by gapes, bowel diseases, and other troubles. This soil may be dug

Genuine Irish Cobbler Potato. Fig. 13.

out to a depth of eight inches or a foot, plowing up the yard and scraping. We have seen cases where this soil carted out and spread over grain or grass, or over a garden, gave wonderful results. As a rule, however, we think it more economical to plow up such yards and plant them directly to corn or garden crops. This is much less work, and rank growing crops like corn or cabbage will clean the soil, give heavy crops, and fit the place for poultry once more.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Mixing Lime and Manure.

Will you inform us what the result will be if, when loading a manure spreader with manure, a layer of manure and then a layer of burnt lime is loaded on the spreader and spread on a meadow at the rate of seven loads to the acre? I have tried wood asbes and they give great results. R. J. L.

Hannibal, N. Y.

We have never mixed lime with manure in the way mentioned, as such a mixture will liberate a considerable part of the nitrogen in the manure in the form of ammonia gas. This is also true of unleached ashes, because of the lime carried in the ashes. In case, however, a soil were deficient in potash, the application of ashes by the re-enforcing of the manure with that element might do enough good in that way to overcome the loss of nitrogen, but in such a case kainit would be the re-enforcing material indicated and not ashes. On the majority of soils, however, the deficient element is not potash but phosphorus, because of the fact that our system of agriculture has resulted in a steady depletion of our soils in this element, through the carrying off of phosphorus in the grains, in animal bones and in milk, and we are finding that manures re-enforced with phosphorus are producing a very much greater effect than those re-enforced with potash, for all Ohio soils with which we are acquainted, and probably the same holds good with respect to New York soils. The logical thing to do is to re-enforce the manure, under such conditions as your correspondent describes, with acid phosphate. Of course, if the manure were immediately plowed under, the lime might be an advantage, but if spread on the surface the addition of lime would undoubtedly cause a waste of ammonia.

Ohio Exp. Station. CHAS. E. THORNE.

Apples for Wisconsin.

Two years ago we lost 75 apple trees, so I am thinking about replanting in Spring. So many men have been here to sell trees that I do not know where to buy. One says buy Wisconsin stock, another says New York stock, for it is healthier. A nursery about 25 miles away says theirs are the only ones to buy, as they use what they call a whole-root graft, which should not rot or blight. What would you recommend for us here in Southeastern Wisconsin, and what varieties do you think best to plant?

Kansasville, Wis. J. C.

Wisconsin-grown apple trees are certainly all right for planting in Wisconsin if thrifty, well grown, true to name and free from scale and root gall. So are trees from New York, Missouri, Alabama, Indiana or any other State if they come up to these specifications. It is a matter of very slight importance where the tree is grown, but of the highest importance how it is grown. Runty, stunted trees or trees infested with root-gall are absolutely worthless and should never be accepted from the nurseryman, nor planted. While State lines should not cut much figure in business transactions, we rather like to buy from Wisconsin firms even though we know that they buy three-fourths or more of their trees outside the State, mostly from Indiana, New York and Iowa. The best apple tree for Wisconsin is a well-grown two-year-old, about three-quarter inch in diameter at base of trunk, four to six feet "over all" with three or four branches. This should be a "piece-root" grafted tree. The Wisconsin nurseryman who used the old "whole-root" argument is either very ignorant or a deliberate swindler. In Wisconsin, where root-killing is sometimes a serious factor we want trees on their own roots as soon as possible, and this is best accomplished by using a short piece root graft. It is quite possible to buy good apple trees in Wisconsin from reliable nurserymen.

The black soils of Racine County, are not well adapted to apple raising, and nothing more than a home orchard should be attempted, but on the clay ridges near Lake Michigan almost any kind may be grown that will thrive elsewhere in the United States or Canada. The selection of kinds will depend entirely on the needs of the planter. If for home use only a succession such as Tetofsky, Duchess, Wealthy, Fameuse, McIntosh, Tolman, Northwestern, Windsor, Salome and Spy. For market, plant only three or four kinds, preferably Wealthy, McMahan, Fameuse or McIntosh and Wolf River, the last named a splendid baking apple and a good seller. There is only one McIntosh, and it grows to perfection in Wisconsin. FREDCRICK CRANEFIELD.

A Home for the Hired Man.

Much complaint is heard nowadays about the inability of the farmer to secure and retain competent help, but the real reason for this condition is seldom touched upon. The average young man capable of filling satisfactorily the position of helper on a farm has much the same ambition that his employer once had, principal among which is the desire to have a home of his own. As a single man he has none, but must live under objectionable conditions in his employer's house. If he is working with the object of sometime owning a house he soon tires of these conditions and goes where he thinks he will in a shorter time be able to marry and live in his own house, or at least a rented house, which he can call a home of his own. The lure of the city has the effect of leading him on, but he drifts in time entirely away from all thought of the life and independence of a farmer until youth and perhaps middle age is passed, and he finds himself again longing for the farm that has passed out of his reach. When the farm owners wake up to the advantage of providing a house for the hired man and his wife and children, there will be less complaint of scarcity of good farm labor. F. M.

Delaware Co., Pa.

R. N.-Y.—Some farmers are already "awake" and provide all reasonable fixtures, yet they cannot always obtain desirable help.

Cement Floor for Barnyard.

I am debating whether it would pay to put a concrete floor on our barnyard (75x45 feet). I have a manure spreader and haul manure out whenever I can, but manure accumulates for several months during haymaking and harvest, and during seeding and corn cutting and husking. I know this is a big contract, but thought to gather the materials needed during spare time, have plenty of stones to bring to proper grade (grade can be considerably improved). I can get coal ashes (soft coal) and gravel for hauling, for very little cost. Then when I can arrange some way to get along without using barnyard (it is directly in front of bank barn 76x56) I plan to get help and cement and do the work. Would it pay? It would be a manure pit and I could drain liquid manure direct from stables into it. J. O.

Pennsylvania.

It will depend somewhat upon the slope of the yard and the character of the soil. If the soil is a hard clay which can be scraped into dish shape and then pounded down hard, there will not be much loss from leaching. On a lighter, open soil this loss would be considerable. We think this concrete bottom would surely pay.

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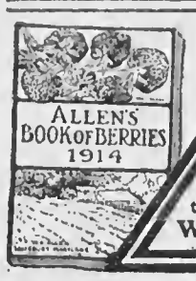

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SCAB ON PEARS.

I have about a dozen pear trees, Flemish Beauty, on my farm in Cattaraugus Co., N. Y., that bear well, but every year the fruit gets scabby and so hard that it cracks open, having three or four deep cracks in each, so it is worthless. Can you tell me a remedy to make these trees bear good pears? F. M.
Kentucky.

The trouble complained of is what is commonly termed scab. It affects the fruit of the apple and pear especially, and the Flemish Beauty is one of the most susceptible varieties known. But it is easy enough almost entirely to free the fruit from this disease by spraying with Bordeaux mixture or lime-sulphur, provided that work is begun in time and done properly. No hit and miss spraying will do it, but intelligent and faithful work will make the pears on the trees that have yielded worthless fruit in the past, clean and bright. There is no need to grow scabby pears when the means are at hand to produce good ones.

H. E. V. D.

SULPHURIC ACID ON THE FARM.

I understand the acid phosphate is made by treating the raw rock with sulphuric acid pound for pound, and that the acid phosphate is more recommended for treating manure to preserve the nitrogen. I can get the raw rock at $6 to $7 per ton. Is it possible or practical to get the acid and mix it myself? You had an article some time ago on sulphur as a fertilizer. I do not suppose mixing sulphur with raw rock would help any toward making the rock available, but wonder if there is any process I could (here on the farm) subject such a mixture to so that the rock would be made available. J. O.
Pennsylvania.

No, it will not pay you to use sulphuric acid on the farm. That is a process which should be left to manufacturers who have facilities for doing the work properly. Sulphuric acid is deadly stuff for a novice to handle. A single drop spattered into the eye may destroy the sight. Leave acid phosphate making to the manufacturers. The raw sulphur mixed with the ground phosphate rock would not help.

OIL STOVE FOR A HOT BED.

I have the following problem, which perhaps you can help me solve. I have a 6x12 hotbed covered with double sash. The pit is three feet deep. It is practically impossible for me to get suitable manure to heat it in the Spring. What can I do? I have had in mind the following: The pit is three feet deep. I would put in a bottom of sheet iron two feet from the bottom, and then use a one-burner wick oil stove to supply my heat from underneath. If I tried this wouldn't I have to have air holes underneath to supply fresh oxygen for the burner? This bed is on a slope, is banked in front, and it would easily be possible to make an opening in front to get at the burner. Or could I put the burner directly in the bed with the plants without trying to get underground heat?
Wells, Me. H. S. H.

This is an idea in hotbed heating that I have never heard of being tried out, at least not for the purpose of raising plants from seed. My many years' experience in the management of hotbeds, leads me to believe the plan would prove a failure and perhaps result in the destruction of the hotbed. I remember some years ago, I was carrying some geranium plants over Winter in the cold frame, depending upon mats and shutters to keep out frost. Sometime in January a severe cold snap set in, the mercury dropped to several degrees below zero. I knew the plants would surely be frozen, unless some additional protection was provided. The idea occurred to me to try a small oil stove which I happened to have at the time. Everything went along nicely during the day and up to midnight, when I presume from the oxygen being all consumed, the lamp began smoking. It soon filled with soot which took fire and, if the fire had not been discovered by a friend who resided nearby, there is no doubt that the cold frame and its contents would soon have been burned up. I fear you would meet with about the same results if you should attempt the heating of your hotbed with an oil stove. On the other hand, the plan would not be satisfactory (even if danger from fire could be eliminated) as not enough heat could be secured from a one-burner oil stove, placed either above or below the soil, to keep the temperature up to the required height. To be successful in the raising of plants from seed at that time of year requires bottom heat, and of much greater volume and intensity than could possibly be supplied by a small oil stove. If the stove was used above the seed bed, the air above would naturally be warmer to a certain extent, but the radiation would be too small in volume to affect the temperature of the soil to any appreciable extent. This is particularly true if the ground outside the frame is frozen, which it is apt to be at that time of year.

The following plan of arrangement of seed bed and heating would meet your requirements in a very satisfactory manner: Cut five pieces of 2x4 spruce or chestnut long enough to reach across the frame, and 10 pieces 2x4 20 inches long on which to rest the cross pieces, to which they should be toe-nailed and braced across the corner with 1x4 inch stuff nailed securely to the knee near the bottom, and to the bench six inches from the center. This will provide five benches or trusses about five feet nine inches long and two feet high. Place these trusses in the frame at equal distance apart, placing a brick under each knee, to prevent it from sinking in the ground and to preserve it from rotting. Make the benches as near level as possible. Now nail a six-inch board to the benches on each side of the frame. This will hold them in place and is the only bottom board that will need nailing. Then nail a six-inch board edgeways all around the inside of the frame. This can be nailed to the posts that support the walls of the frame, and, if not close enough together, a block the same thickness as the posts can be placed between the walls of the frame and board for additional support, where needed.

You now have a space underneath the benches 20 inches in the clear, presuming the bottom of the pit is level, but this is not clearance enough for safety. Take a spade and dig a trench 15 inches or so in width and two inches deep at the west end and 14 inches deep at the east end of the pit, and at equal distance from each side of the frame; this will give you a grade of one foot in 12. This trench is for the terra-cotta radiating pipe, which should be six or eight inches in diameter. At the west end the trench is extended far enough to allow a clearance of six inches between the vent pipe and the outside end of the frame, this pipe should be of terra-cotta and extend high enough in the air to give good draught. At the east end dig a pit four feet wide by five feet long, and deep enough to admit the installation of a cast iron heating stove, of the common type and about 18 inches in diameter. If one can be procured with the collar or pipe attachment on the side, the depth of the stove pit can be somewhat lessened. The stove should set deep enough so that the pipe collar will be on a level with the terra-cotta radiating pipe inside the pit. The sides of the stove pit should be walled with brick, or concrete for safety against fire. The roof of the stove pit should be high enough to ensure safety from fire.

Now set your stove in place and attach one joint of galvanized iron pipe, with a damper, run it into the terra-cotta pipe, and close the joint tightly with good mortar, continuing the joining of the terra cotta pipe, carefully plastering the points, until the whole line is completed. The tile should rest on bricks laid flat, as a certain per cent of radiation will be lost, if this tile comes in contact with the ground. The wood at both ends of the frame must be cut away sufficiently to eliminate all danger of fire, which should be at least 18 inches on the stove end and 12 inches at the opposite end, and as an extra precaution against fire a piece of old tin might be suspended under the seed bed, over the radiator pipe, especially the first few feet nearest the stove. Now you can finish laying the bottom in your seed bed. If the boards are the full length of the frame they will not need any nailing, just slip them in place, and put the soil in to a depth of five inches. All that end of the frame coming inside the stove pit should be cut out up to the seed bed, and a door fitted in, hung on hinges at the top, so it could be raised at any time to admit heat from the stove to enter, or to admit of going under the seed bed at any time to make repairs, if any should be necessary.

K.

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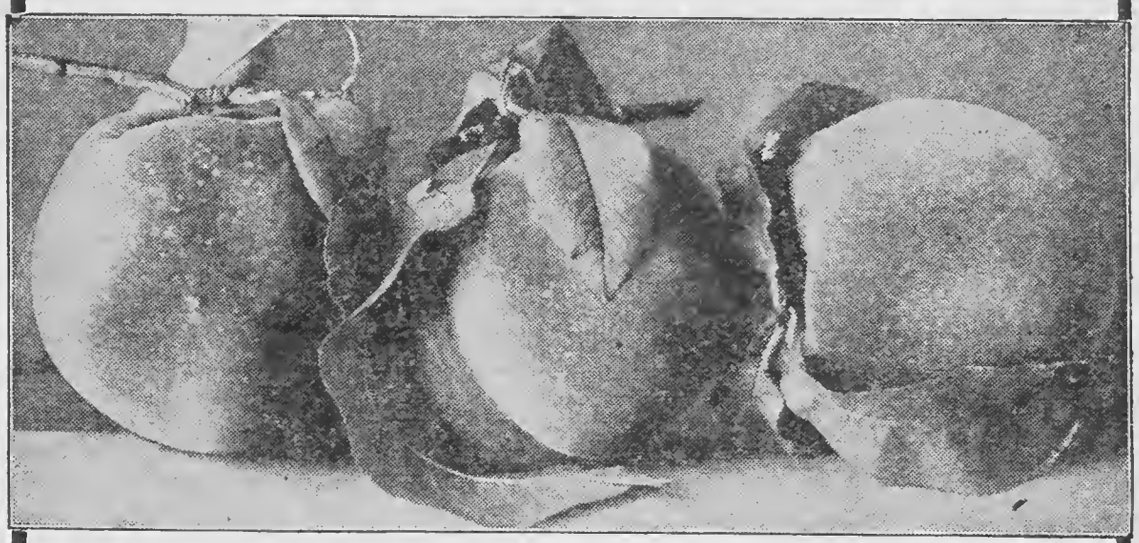

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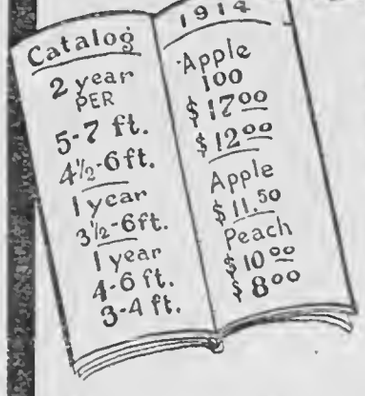

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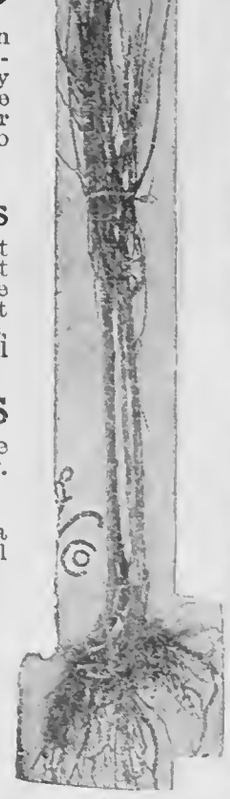

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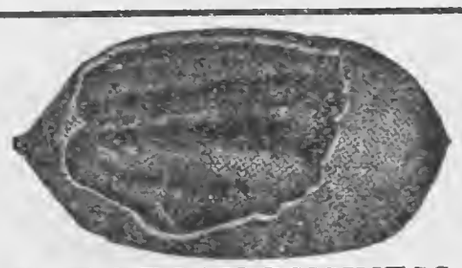

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Culture of Rape.

What fertilization is required to grow a crop of rape? O. K.
Hartford, Conn.

Rape is one of the most useful forage crops available for swine feeding. Preferably it should be seeded early in the Spring in rows 24 inches apart, utilizing about six pounds of the Dwarf Essex variety of seed per acre. If it is not convenient to drill the seed in rows it can be broadcast, in which case it will require from six to 10 pounds of seed per acre. The animals should not be turned in the rape field until the plants are from nine to 11 inches high, and care should be exercised in keeping the animals out of the field when the ground is very wet or muddy, for their presence in the field during such time would be wasteful of the forage. At no time should the rape plants be grazed off closely to the ground, and therefore, animals should never be permitted to pasture the field too closely. The plants do much better and grow more rapidly in case they have some size. Some corn should be fed in addition to the rape if it is intended to fatten the animals, and brood sows, not suckling pigs can be maintained entirely on this crop if necessary. The crop is particularly useful for feeding growing animals, and furnishes most excellent succulence for brood sows suckling pigs. A very common practice in the corn belt is to seed the rape in the corn just prior to the last cultivation of the corn, and then just before heavy frosts turn the pigs in the cornfield, and let them harvest the corn as well as the rape. It is doubtful whether pigs weighing 125 pounds will fatten any more rapidly than under such conditions, and it is a useful and economical method of harvesting the corn and rape. A good fertilizer mixture to use for rape would be as follows: 200 pounds acid phosphate, 100 pounds muriate of potash, 75 pounds nitrate of soda, and if in addition a light coating of manure could be added, the crop will grow very vigorously. We have practiced with good results the seeding of a mixture of oats, Canada field peas, rape and Red clover, and have been able to have a green forage crop that would last during the entire season.

F. C. MINKLER.

Weight of an Acre.

What is the average weight of an acre? E. M. M.
Batavia, Ill.

Hilgard in his book on soils says that an acre (43,560 square feet) one foot deep will weigh about as follows: sand 4,000,000 pounds; loam 3,500,000; clay, 3,250,000; humus or garden land and woods earth about 3,000,000, and peaty lands about 2,500,000.

Importing Fruit Trees.

I am thinking of sending to England for some fruit trees in the Spring. They will weigh about 12 pounds. Have you any idea how much the freight would be, or would they come by express? Will the custom house send them to me after duty is paid, or shall I have to go to New York to get them? H. H. N.
Carmel, N. Y.

Some European nursery houses have representatives in this country. In that case the business can be done here and the buyer saved the annoyance of looking after transportation and custom house matters. If doing the business direct, it will be necessary first to get a permit from the U. S. Department of Agriculture, Washington, D. C. This is a comparatively recent ruling intended to keep out stock infested with insects or plant diseases. Tell them what you are to get and who from, and they will send you the proper documents. For a small shipment the simplest way is to let your express company do the business. No doubt this has a foreign department with connections at the place where the trees will be shipped. When they arrive in New York, the express company will send you a bill for charges and duty, and, when this is paid, will get them from the custom house and forward to your place. If all goes well, your shipment should be on the way within three or four days after it reaches New York, but sometimes there are complications. In one case the writer was delayed 10 days in getting such a shipment through the negligence of the express company in attending to the custom house business. However, since the advent of parcel post it is noted that the mills of the express companies grind more rapidly than in former times. The transportation cost of such a package would run from $1 to $3, depending on where shipped. If the bundle could be made small enough to go by parcel post, it would be delivered to your local post office, with the bill for custom charge.

HEN MANURE FOR ONIONS.

You say to make hen manure most useful for general farm crops mix with each 100 pounds 15 pounds phosphate and 10 of muriate of potash. I wish to put in three acres of onions next Spring grown from sets; the land has been well fed, Crimson clover and rye now standing six inches high. Can I grow onions with that or would you advise York manure? How many pounds of hen manure would you use to the acre? Would you put it on top after setting onions, or before setting or would you use it for something else? L. D.
Newport, N. J.

By "York manure" we suppose you mean New York stable manure. The clover and rye plowed under with hen manure ought to produce a good onion crop. We should plow the rye and clover deep and pack down with a roller. Have the hen manure crushed fine. You ought to use one ton of hen manure, 300 pounds acid phosphate and 200 of muriate to the acre. Broadcast the manure and chemicals after rolling and then work them well into the soil with a harrow. Then set the onions and cultivate them well.

Buckwheat as a Nurse-crop.

In reply to P. M. who asks for experience with buckwheat as a nurse crop for grass and clover; I will say that I have made a practice of sowing grass and clover with buckwheat for the past 15 years, and I seldom if ever fail to get a stand. The buckwheat springs up rapidly, and furnishes the necessary protection to the young plants; and comes off in time for the young grass to have considerable time to grow before freezing weather sets in. The buckwheat has the advantage over wheat, oats and other crops as a nurse crop, since it keeps down the weeds and the ground is left when the crop comes off with nothing but the buckwheat stubble and grass and young clover on the ground. Then again the soil is left loose and in ideal condition for the young crop to do its best. With me the buckwheat has been the most successful nurse crop that I have ever tried, and I usually get enough buckwheat to pay me well for preparing the soil, sowing it and gathering the crop, besides a nice, clean uniform stand of grass and clover. A. J. LEGG.
West Virginia.

We have the best success with buckwheat as a nurse crop for clover and all grain provided always the ground is rich enough to bring clover. V. H.
Shohola, Pa.

Here in New York buckwheat is sown about the first of July, and that clover does not get good enough start to hold. When the frost goes out in the Spring I prefer rye or oats. J. W.
Hamondsport, N. Y.

My experience finds buckwheat an excellent nurse crop to Alfalfa and Crimson clover. In the early Spring of 1909 I wanted to sow one acre of southern sloped hillside to Alfalfa, but fearing a drought and the hot Summer, made me somewhat undecided. However I resolved to sow the Alfalfa and try buckwheat for a nurse crop. I sowed the buckwheat with the drill (one-half bushel to acre) and the Alfalfa with the hand seeder, running over with the horse hayrake to cover Alfalfa seed. It was a great success, and after I cut the buckwheat the Alfalfa was so well started that it required a clipping in the latter part of August. I tried the same plan this year with Crimson clover. I had a piece of wheat stubble with no grass in it. I turned it, and on July 26 sowed it to buckwheat (one bushel to the acre) and Crimson clover for a cover crop. I waited with the clover for good weather conditions, and when all signs were right for rain I sowed the seed, but wind came and dispersed the clouds, and no rain came for two weeks. In this time much of the clover was seed sun-scalded, but where it found the least mositure it did well. In my estimation buckwheat is better than oats, as it is entirely free from an undergrowth, and gives all the room to the grass plants. I shall not hesitate to sow buckwheat as a nurse crop to all grasses. L. F. NICHOLS.
Pennsylvania.

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FOUR years ago the Overland passed into the hands of its present owners. During this same time many other automobile manufacturers have come and gone—flared up and out. But our progress has not only been phenomenal, but strong and healthy. Each year our sales have increased by millions. In the last four years we have accomplished *more*, done a *larger* business and given the farmer *more* car for *less* money than any other automobile manufacturer in the world.

All this is a matter of record.

This is going to be our banner year. We are producing 50,000 cars, and the largest portion of this great output is going to the American farmer.

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One of our largest western distributors has contracted for 5,000 Overlands. This is significant and typical of the west. He would take *more* if we could supply them.

Like as not your nearest neighbor owns an Overland. Ask him. He'll tell you of its all around ability and economy.

We repeat, 1914 is going to be our bumper year. Never before has the farmer shown such keen appreciation of the Overland as he is doing right now. Never before has he so thoroughly realized that we are actually giving more car for less money than any other manufacturer in the business.

And why not?

Larger In Every Respect—But Lower In Price

Look at the car—read the big specifications—see the low price.

A wheel base as long as on most $1200 cars.

A motor as large and as powerful as the power plant in most $1200 cars.

A car as large, roomy and comfortable as most $1200 cars.

Tires as large as you find on the average $1200 car.

Electric lights—even under the dash—deep upholstery, an unusually heavy frame, a large steering wheel, Timken and Hyatt bearings, three-quarter floating rear axle, a jeweled Stewart Speedometer—all the same identical features you find on the average $1200 car.

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This is the car everyone is demanding. See it before you buy. See how economical it is on gas, oil and tires.

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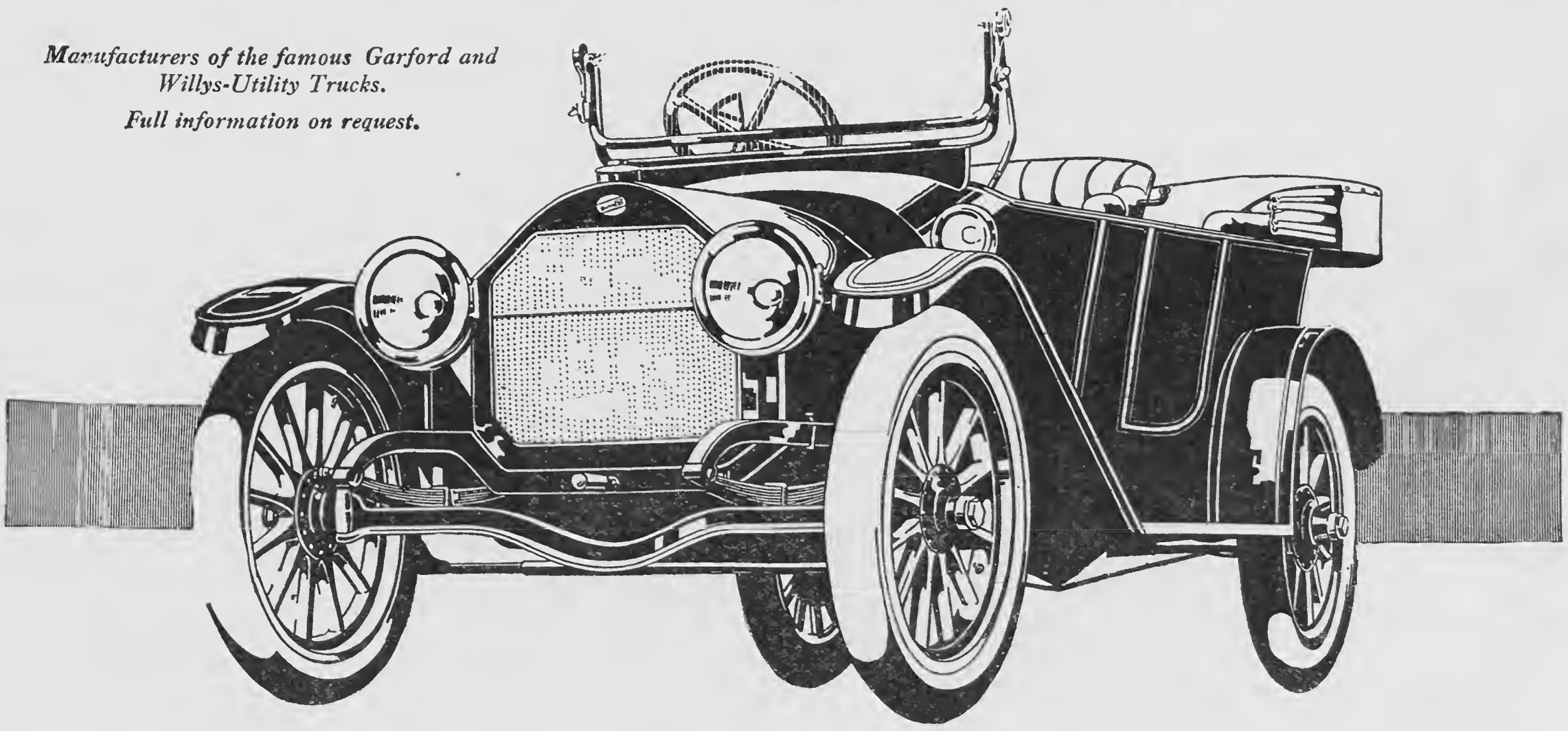

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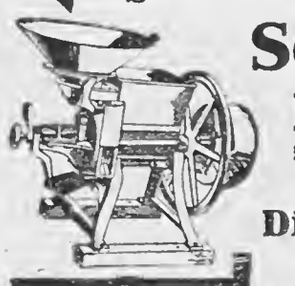

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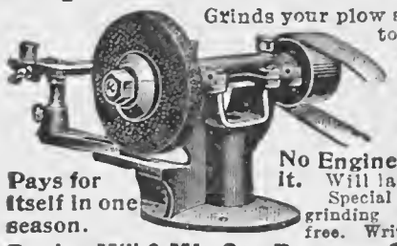

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EVENTS OF THE WEEK.

DOMESTIC.—At Red Jacket, Mich., December 24, while copper mine strikers and their families were holding a Christmas festival in Italian Hall, some one started an alarm of fire. There was no fire, but in the panic that ensued 72 persons were crushed to death; 58 were children.

A five weeks' rat hunt in Union Township, Ohio, ended Dec. 24, when the 213 men and boys engaged in the contest produced 10,336 rat tails, which were counted by the judges. The losers in the contest gave a dinner for the winners. One of the most remarkable figures in the slaughter was a small rat terrier owned by J. M. Hartman. More than two thousand tails were from rodents killed by the terrier, which made a record of thirty rats in one shock of corn. Another township hunt is on, and it is believed that when the series of contests has ended 50,000 rats will have been killed in Hancock County.

A violent gale swept the Atlantic seaboard Dec. 25, attaining along the New Jersey coast a velocity of 122 miles an hour. With the ocean lashed into mountainous seas, the bulkheads at Seabright were levelled, allowing the waves full play in their sweep over the Summer colony. Damage of more than $1,000,000 was done by the storm, in some cases entire houses being lifted from their foundations and carried bodily out to sea. Roadways were torn up, railroad tracks undermined, shipping demoralized and many towns along the coast were cut off from communication with the rest of the world. Ten men, the crews of two barges, were drowned when their vessels were swept on the bar near the Forked River life saving station, below Barnegat.

Political contributions from New York State canal employees amounting to $3,150 in 1912 and $2,600 in 1911 were sent to Arthur A. McLean, the treasurer of the Democratic State committee, by Walter G. Robinson of Schenectady, who is the superintendent of the eastern division of the State canal system extending from Albany to Utica and of the Champlain Canal. These contributions were received from about 500 employees according to recent investigation. In one year Mr. Robinson took the money to the Democratic State headquarters in New York city and in the other year he sent it by American Express. Harry Bogue, the Republican clerk to Owen Kearney, former canal section superintendent at Cohoes, and H. M. Hulsapple, a Republican of Watervliet, a special agent on the canals stationed at Schenectady, each of whom has held his position for the last 15 or 18 years, declared that during all that time under the Republican as well as the recent Democratic State administrations the canal employees were assessed for campaign purposes and the money was collected and forwarded to the State committee representing the party in power every year.

An expedition of the Royal Northwest Mounted Police has left Dawson, Alaska, for Fort MacPherson and Herschel Island, in the Arctic Ocean northwest of the mouth of the Mackenzie River. Part of the expedition will return at once after seeking from Eskimos, whalers and traders all possible information regarding Explorer Stefansson's expedition. Another police expedition from Herschel Island will meet the Dawson party at Fort MacPherson. If the Herschel Island party brings any definite news of the Stefansson party the Dawson expedition will hasten back from Fort MacPherson. The Dawson party has orders to obtain all possible news regarding Stefansson's whereabouts and hurry it to some point where it may be telegraphed to Ottawa. Sergt. Dempster, veteran of many other expeditions across the Rocky Mountains to Herschel Island, will command the Dawson party. It was Dempster who found the bodies of the Fitzgerald expedition three years ago. Corporal Hacking and four Indians will complete the party.

Fire destroyed six of the hangars on the grounds of the Hempstead Plains Aviation Company at Hempstead, L. I., Dec. 29. The loss was $29,000. Those who suffered the greatest loss were Frederick C. Hild and Edward Marshonett, who are incorporated as the American Supply Company. Some of the aviators in saving machines were severely burned.

The announcement that radium-bearing deposits have been found near Mauch Chunk, Pa., has created excitement in that section. Farmers and others owning land between Tamaqua and Mauch Chunk are busy conducting examinations of the strata. The alleged carntite or radium bearing deposits were found along the right of way of the Eastern Pennsylvania Railroad, owned by the Lehigh Coal and Navigation Company. Mining men say that if carnotite exists in this section it should be found all over the southern anthracite region, as the formation is identical. Secretary of the Interior Lane asked Congress Dec. 29 to pass a law which will give the Government control of all radium bearing ores found in public lands. Dr. James Douglas of New York, who controls concessions in radium bearing ore deposits, thought Secretary Lane's plan ambitious, but hoped for its success.

W. M. Barrett, president of the Adams Express Company, said Dec. 29, the company lost 25 per cent of its business in the last year because of the parcel post. The extension of the parcel post weight limit on January 1 still further would hit the express companies, he said. In addition, the 15 per cent decrease in express rates, to take effect then, as ordered by the Interstate Commerce Commission, will make still further inroads in the express company business. The express companies, Mr. Barrett says, have accepted the ruling of the Interstate Commerce Commission as inevitable, and they will now make retrenchments to show profits. For the year ended June 30, he said, the deficit in the Adams company was $89,872. This being the case, it is suggested that the $12 yearly dividend probably will be cut next year.

Montreal, Canada, already facing a water famine, was obliged Dec. 29, to conquer a fire to save a section of the city from destruction. To this end water was brought by fire hose from the St. Lawrence River, a mile away from the heart of the threatened district. There was but one stream besides this one available to fight the flames, as the city hydrants were all but useless owing to a break in the main water conduit on Christmas night. Two three-story buildings and 60 automobiles were destroyed while the firemen were devoting their efforts successfully to preventing the flames from reaching a 2,000-gallon tank of gasoline. The estimated property loss was nearly $300,000.

Ex-Controller Edward M. Grout and James T. Ashley were indicted by the Kings County, N. Y., grand jury Dec. 29 for perjury committed while president and cashier, respectively, of the Union Bank, now defunct. The men were indicted for misdemeanors on practically the same allegations a couple of years ago in the administration of District Attorney John F. Clark. These indictments are still pending. The charges are that Grout and Ashley wilfully made and swore to a false report as to the assets of the bank in April, 1910. Although the accusations were identical, separate indictments were found against the ex-officials. Under the 1911 indictment Grout and Ashley were charged with making a false report, and the most serious allegations in the Grout indictment were stricken out by Justice Marean. The recent indictments accuse Grout and Ashley of perjury. According to the indictments, the false statement made it appear that the resources of the bank totalled $7,165,201.82, when the total in fact was only $4,924,555.28; also the statement made it appear that the bank had loans and discounts, part of its resources, amounting to $4,954,163.52, whereas the right amount was $2,955,486.72.

W. L. Moyer, former chairman of the board of directors of the American Union Trust Company of Kansas City, Mo., was arrested at Chicago, Dec. 30, charged with having used the mails to defraud. He was arraigned before United States Commissioner Mason and his bond was fixed at $5,000. He is accused of promoting a $1,000,000 company, the actual capital of which is alleged to have been only a few thousand dollars. The Government charges that J. C. McDowell of Kansas City paid for $350,000 worth of the stock and that J. Ogden Armour was a large subscriber. Mr. Moyer was vice-president of the La Salle Street National Bank, now a State organization, for four months shortly after the bank, which was founded by William Lorimer, had begun the acceptance of deposits. He never was associated with the La Salle Street Trust and Savings Bank, the State company, according to officials.

FARM AND GARDEN.—A fatal case of anthrax, a highly contagious and fatal disease among cattle, has been reported at Binghamton, N. Y. The victim was C. J. Banta, a prominent farmer. The source of the anthrax infection is unknown, but is supposed to have come from an animal he was skinning. It is probable the State Department of Agriculture will order a quarantine until the source of the infection is located.

The Secretary of Agriculture announced, Dec. 27, the appointment of the following committee "to conduct a general inquiry into the various factors which have brought about the present unsatisfactory conditions with respect to meat production in the United States, especially in reference to beef, with a view to suggesting possible methods for improvement." Dr. B. T. Galloway, Assistant Secretary of Agriculture, chairman; Dr. H. J. Waters, president of the Kansas State Agricultural College; Professor C. F. Curtiss, dean and director of the Iowa State College; Professor H. W. Mumford, professor of animal husbandry, University of Illinois; Dr. A. D. Melvin, chief of the Bureau of Animal Industry, Department of Agriculture, and Dr. T. N. Carver, director of the Rural Organization Service, Department of Agriculture. The work of the committee will centre largely on the study of economic questions involved in the production, transportation, slaughter and marketing of meat. As the first step the committee will investigate carefully the changes within the last two or three decades which have increased cost of production and the centralizing of the meat industry. Among the important considerations to be gone into will be the taking up of the public lands, the effect of the capacity of the range, especially on the remaining public lands, and forest reserves, with a view to suggesting changes in the laws to make the public lands of greater use in cattle raising. The committee also will give special attention to the economic changes in meat production and distribution brought about through the centralizing of slaughtering and meat preparations in large packing establishments and the changes in transportation and similar matters which have resulted from this centralization and other causes. The economic possibility of communal and community effort in cattle raising and the advantages of establishing local or municipal abattoirs will also be investigated.

Inspectors of the State Department of Agriculture began Dec. 30 to check the overfeeding of live poultry just before it is unloaded and sold to consumers in New York city. For a dozen or more years poor families, who consume most of New York's live poultry, have paid on an average of $2,000,000 a year for sand and gravel in the crops of live poultry. Three arrests were made Dec. 30 at the Baltimore and Ohio Railroad terminal, at Twenty-sixth street, and others are likely to follow. Those arrested were William Goebel of Pleasanton, Kan.; E. Willcock, Berryville, Ark., and Louis Levy, 214 Division avenue, Brooklyn. Each was held in $300 bail for trial. The three men were charged with cruelty to animals and with overfeeding poultry with coal, sand and gravel. The S. P. C. A. about six months ago investigated the matter, but no action was taken. Now the evil will be attacked by the State Agricultural Department and the Federal authorities are interested, as some of the unloading is done in Jersey City.

FREIGHT SERVICE AT DANSVILLE, N. Y.

Nurserymen at Dansville, N. Y., are up in arms against the Erie Railroad for poor freight service. They appealed to the Public Service Commission and a great meeting was the result. The local paper gives this account:

"The foundation for all this demonstration lies in the fact that our nurserymen have grown sick and tired of the rotten service they have received for years, at the hands of the Erie Railroad, in the matter of transporting their nursery stock. Shipments that should have reached their destination, and been planted in the orchards of their customer within 48 hours after they left Dansville, have been delayed for weeks, and frequently until it was too late to plant them. This thing has been going on so long that our nurserymen were well-nigh discouraged. They are paying a force of high-priced help to prepare these trees for prompt shipment, and then to have them held up because of wholly inadequate railroad facilities was too much of a strain, so they appealed to the P. S. C., for redress.

"This meeting was productive of great good. The Erie officials acknowledged that the trouble was at their end of the Rochester division, as the D. and M. handled this end of the business promptly. The Erie folks promised that there should be no more trouble, as they would put on a force sufficient to handle all that came, promptly and carefully."

COMING FARMERS' MEETINGS.

West Virginia College of Agriculture, Morgantown, Farmers Short Courses, January 6-13; Agricultural Associations' meetings, January 13-16.

Peninsula Horticultural Society, annual Winter meeting, Easton, Md., January 13-15.

Massachusetts Fruit Growers' Association, convention and trade exhibit, Springfield, Mass., January 15-17.

New York State Agricultural Society annual meeting and convention, Albany, N. Y., January 20-21.

Vermont State Poultry Association, seventeenth exhibition, St. Alban's, Vt., January 20-22.

Connecticut State Dairymen's Association, Hartford, Conn., January 20-22.

Ohio State Horticultural Society, annual meeting, Cleveland, O., January 20-23, in connection with the Fifth Annual Ohio State apple show.

Virginia State Horticultural Society, annual meeting, Richmond, Va., January 21-23.

Annual Corn Show, Pennsylvania Live Stock Breeders' Association, Pennsylvania Dairy Union, Pennsylvania Horticultural Association, York, Pa., third week in January.

New York State School of Agriculture, Alfred, N. Y., short course in agriculture beginning January 26; Farmers' Week, February 23-26.

Forty-first annual meeting, New Jersey State Board of Agriculture, Trenton, N. J., January 29-30.

Farmers' Week, State School of Agriculture, Canton, N. Y., January 26-31.

Ohio Corn Improvement Association, Mansfield, O., January 27-30.

Western New York Horticultural Society, Rochester, N. Y., January 28-29-30.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6.

Sixth National Corn Exhibition, State Fair Ground, Dallas, Texas, February 10-24.

Granite State Dairymen's Association, Concord, N. H., February 12.

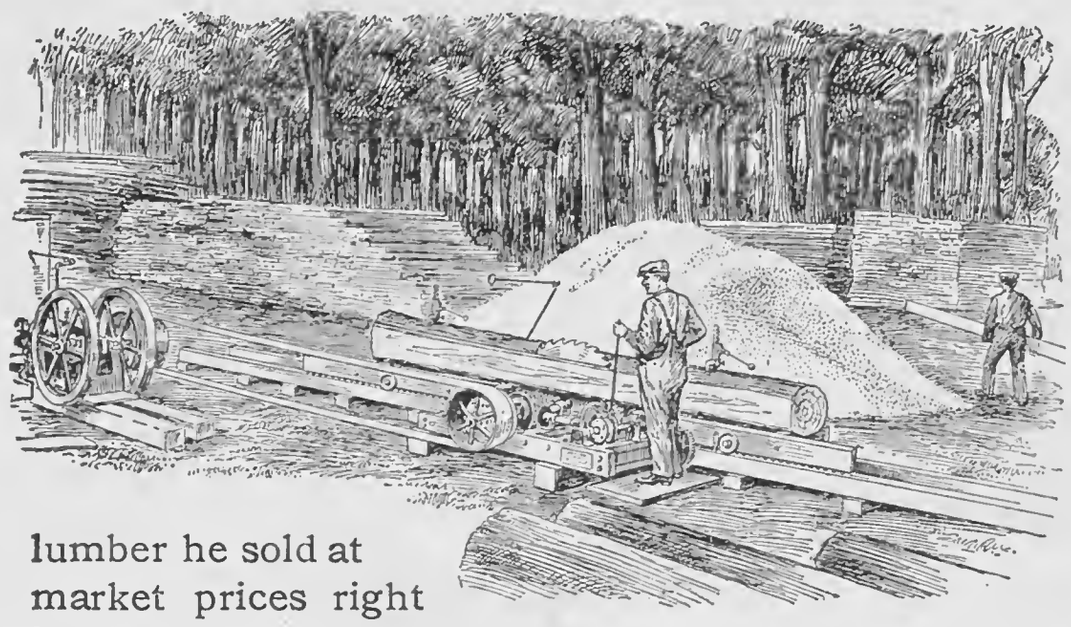
Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6-March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26.

A STORY about making money

A FARMER had a wood lot that he had used only as a source of firewood. As no saw mill man had ever been around to buy the trees to saw into lumber, this farmer had been for a long time burning up good money because he didn't know that he could make lumber money from those trees of his. But one day he saw an advertisement of the "American" Saw Mill and sent for a booklet on "Making Money Off the Wood Lot." He learned from this book that his trees were worth a whole lot more as lumber than as cord-wood, and that he himself could, with an "American" Mill and his farm engine and farm help, make (at a few dollars per thousand) lumber that would easily bring him from $25 to $40 per thousand feet, according to the kind of wood he had. He found that even the sawdust was worth money and that he'd have plenty of fire-wood from the tops and slabs. Looking into things a little, he learned that he could saw the maximum amount of lumber per horse-power with an "American" Mill and that as no experience was needed, he could run it himself.

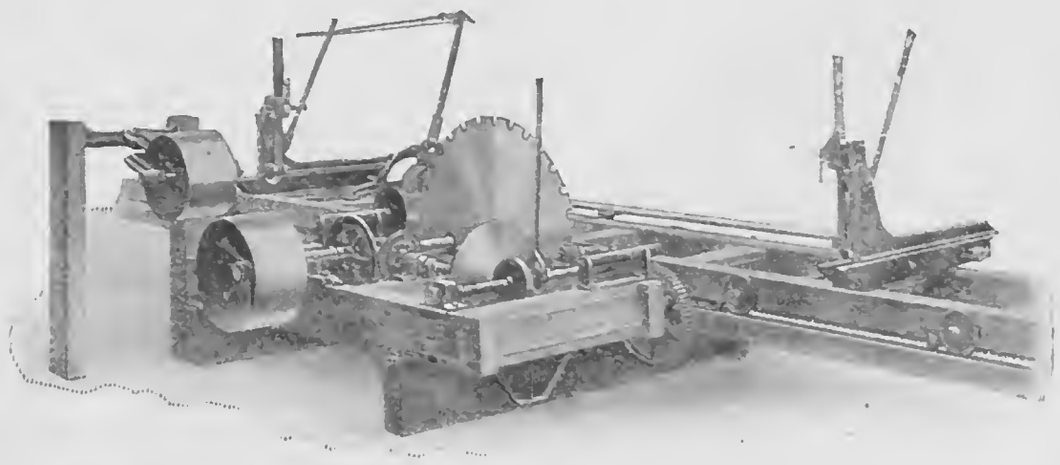
So this farmer bought an "American" Mill, belted it to his engine, cut and piled his logs; and he and the boys put in their time after harvest sawing out a lumber crop. Some of this lumber he kept for himself, for a big new barn he decided to put up. For he'd needed a new barn for a long time, but thought he couldn't afford it with lumber prices so high. But with his "American" he got all the lumber he needed, and just the sizes he needed, at the mere cost of making it. And the rest of the lumber he sold at market prices right in his own neighborhood.



At the end of the year the farmer found that his work had more than paid for his mill, and he had a first-class mill on hand ready for another year's work. Of course the neighbors heard about what he had been doing and began to think about making money off their own wood lots. So he went to them and made a deal to saw their timber into lumber during the next fall and winter. In some cases he agreed to do this on shares and in others charged so much per thousand feet sawed. He found the light, sturdy, portable "American" Mill just the machine for the custom sawing.

The upshot of it all was that this farmer found himself, after a while, with a good paying lumbering business that he could run at times when the farm didn't need him. He kept his engine and his teams busy the year 'round and made money all the time, instead of only when his crops were sold. A little later he added an "Up-To-Date" Shingle machine for making shingles and lath, box boards and crate slats and fence pickets. And he got a "Clipper" Wood Saw to cut up the slabs and tops into cord-wood lengths. For he had learned that any machine made by the American Saw Mill Machinery Company is a money-maker for the man who owns it.

WHAT this farmer did any farmer who has a wood lot can do. And even if you haven't a grove of your own, you can build up a custom sawing business with those in your neighborhood who have timber. Hundreds and hundreds of farmers all over the country are making money with "American" Saw Mills. Right now is the time for you to look into this farm lumbering business and order your "American" Mill. We can make prompt delivery and you can get busy at once. Don't wait till next year. Make this winter a harvest time. Keep the teams and wagons and engine earning money through the winter. Fill out the coupon now and mail it today.



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Address _____

_____

TAKING CARE OF PEANUTS.

I have just read the suggestions of K. A. L., page 1351, on caring for peanuts, and as I have been and still am a peanut farmer in a small way I wish to say that while the method he describes might do where only a very small quantity is grown, it would be impossible where they are grown in large quantities, and I feel sure would not be the best even for a very small crop. All through the peanut belt, after loosening the plants by running under them with a small plow having a sharp shear but no mold board, the plants are shaken free from dirt and thrown in small piles; about a good forkful in a pile. Then at suitable distances along the rows of piles, stakes about six feet high are set in holes punched with a crowbar. Cleats are nailed across the stakes eight or 10 inches from the ground, and the peanuts are shocked around the stakes with the nuts next to the pole and the tops out. These shocks are topped out with grass to shed the rains, and are allowed to stand until both vines and nuts are thoroughly cured, which will usually be in about three weeks; although if the shocks are properly built they may, and often do stand for three months without injury.

The large kinds of nuts such as are sold from peanut stands in the cities must be thrashed from the vines by a special machine called a peanut picker, but the little Spanish peanuts may be thrashed with an ordinary grain thrasher equipped with a special cylinder having a slower motion and fewer teeth than the one used in thrashing grains. On the large farms where often several hundred acres are grown, a machine somewhat like a potato digger is used for lifting the plants from the soil and shaking out the dirt. The vines after the nuts are thrashed make a hay almost equal to Alfalfa. Where one only raises a few peanuts for home use they may of course be picked from the vines by hand after being cured in shocks as described above, but be sure to give the vines to the family cow and note the increase in milk.

JOHN B. LEWIS.

Brunswick County, Va.

HUSKING CORN WITH MACHINE.

We have husked corn by machine for the last 10 years. There are two methods followed in husking. The first is to employ a large machine and change work with the neighbors as in thrashing. These machines husk from 1,000 to 1,200 bushels of ears of corn per day, or 500 to 600 bushels of shelled corn, and charge five cents per bushel for machine and three hands to run it, the farmer paying for all other help. The second plan is for a farmer, or two or three together, to own a small machine and gasoline engine and do their own husking. This is probably the cheapest way, as two men can go to the field and load a couple of wagons, drive in and husk without other help. The fodder is always cut or shredded, and put into mows, and so well do we like this for feed that we sometimes shred the bundle fodder from the hand husking. Husking with a machine is no cheaper than husking by hand if we can get the help to do it that way. The advantages are the rapidity with which the work is done, and the advantage of having the shredded fodder put in mow in less than half the space, and often on top of hay mows, where putting bundle fodder would be very hard work. For feeding in mangers it is a much more convenient feed, and whatever is not eaten is one of the best possible absorbents as bedding for the stock and leaves the manure in very much better shape for handling than with long stalks to try the patience of the farm help. While stock will not eat all the fodder when shredded, as some claim, it will feed farther than the same fodder not shredded. As to its keeping qualities, the corn should not be husked until the fodder is well cured, in central Ohio usually not before the first of November; then if care is taken not to husk when there is rain or snow on the shocks, there should be no trouble. Keep the mow level instead of allowing it to form a larger heap at end of blower, and roll down the sides. When it seems desirable to husk before the fodder is in good condition, placing alternate layers of straw and fodder is the right thing. We have done this a number of times, keeping the fodder nicely and making the straw more palatable by absorbing some of the juices of the fodder. Our plan is to husk by hand until we think the fodder is safe, and then finish with the machine. Quite cold weather is all right for machine husking, as there is plenty of exercise in hauling and feeding to the machine. If the corn is cut by hand we do not tie in bundles, but with one man on a flat-topped hay-rack and another to hand to him a load is soon put on. Beginning at one end of rack fill as high as you want the load, so that the loader may stand on floor of rack until load is nearly all on. He then stands on floor of rack and hands to the man at the machine. I do not hesitate to say that machine husking is all right. HORATIO MARKLEY.

Ohio.

NOTES AND COMMENTS.

I would suggest to Mr. Gleason (page 1374) that no agricultural college claims to send out experienced farmers, but young men prepared to profit more rapidly by experience on the farm than they would without the scientific education. No medical college turns out a physician full-fledged; he needs the hospital practice, and the lawyer graduate will not get important cases till he has proved his ability. Education for any profession is simply fitting a man to find out what he should know, to know where to get it in every difficulty. Much of the experience of the uneducated practical man is useless from his erroneous interpretation of facts in his experience. He sees cheat heading out in his Winter grain, and accepts the popular idea that the wheat has turned to cheat, while the educated man who has made a study of plant life knows that the cheat came from cheat seed. The college graduate is rid of all the old superstitions, and when he goes on the farm to acquire the practical experience, he will continue to be a student, and will not stand still or run in the old ruts. The farmer with the educated son has a fine chance to make a good farmer to follow him, if he and the son have good common sense. That man on page 1375, who has struggled with that piece of muck land without success, is a good example of the experienced man without the training the college education would have given him, for the college graduate would have known at once that the needs of that land after drainage, were lime and potash, and not stable manure.

THE DASHEEN.—I grew some of these the past Summer, but unfortunately they were planted in a dry sandy soil, and the weather was hot and dry, so that the crop did not amount to much in size of tubers. But I have more than I planted, and will try to give them a better place the coming Spring. The only difference I can see between them and the common Caladium esculentum is that their rootlets are white, while those of the Caladium are pink. In top growth they look exactly alike, and the tubers of the Caladium (Colocasia) grow larger here than those of the dasheen, and both are probably good eating. W. F. MASSEY.

Peat for Fuel.

How do the Vermont people burn muck from a swamp? I have four acres, and would like to know more about it for fuel. J. D.

Eastport, Me.

The Vermont Experiment Station at Burlington has issued a bulletin on muck and peat, which will tell you all about it. In former years a few Vermont farmers used peat as fuel, but this use was never very large.

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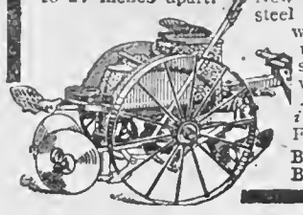

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Will you give a recipe for filling up the niches in a wood floor? We live in an old house and it is very draughty. There are cracks in the floor half an inch wide. J. W. S.

Westboro, Mass.

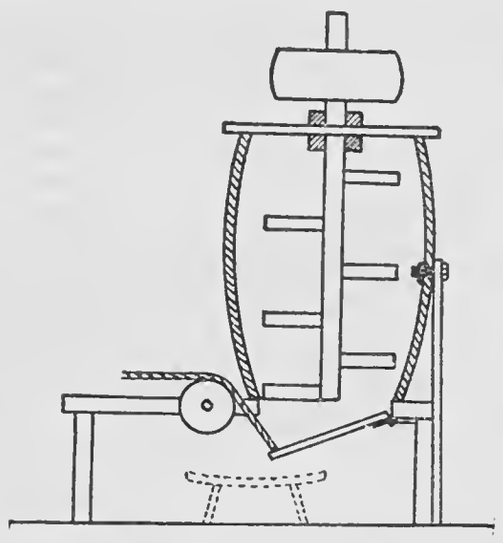
At any paint shop you can get prepared crack fillers very cheaply. It is somewhat of a question whether or not it would be worth your while buying the separate ingredients and mixing them up. Better see what you can do at the paint shop first. A mixture of concrete, using sawdust in place of stone, is the cheapest thing I can think of. It will prevent the drafts of cold air coming through but won't look very well. Another cheap and very satisfactory filler which can be prepared, varnished, etc., is made by mixing up a good flour paste of proportions, say, three pints of water, half a pound of flour and about three teaspoonfuls of alum. This should be thoroughly mixed together with care and boiled until pasty and smooth. Then thoroughly mix in with the paste enough torn-up newspapers to make a putty-like mixture. Fill the cracks tightly and the putty will harden in a short time. R. P. C.

A Concrete Mixer.

I have been trying to study out how to make a concrete cement mixer, to be operated by a two-horse gas engine, and would like to know if any of your readers have successfully used one. If they have, would you describe it? F. M. H.

Rawson, O.

There are five types of concrete mixers which might be used for any job. Each one has its own desirable features as well as more or less undesirable ones. You may have what is known as a batch mixer, in which you shovel the proper proportions of cement, sand and stone to make a certain quantity of concrete.



HOMEMADE CONCRETE MIXER.

This machine is then started, the mixture is well stirred and may then be emptied out by tilting the machine or by simply opening a slide and allowing it to fall out. The first is a tilting batch mixer, the second is a non-tilting batch mixer. Then there are the continuous mixers in which you place the materials and they are mixed by an endless screw which shoves them forward at the same time and out of the machine. These are also of two kinds. In one kind you may dump all the material you have in hoppers and they are correctly proportioned in being fed to the mixer. In the second kind, you must properly proportion the materials yourself.

The third class are known as gravity mixers. In this class of mixers, the materials are deposited within the machine and near the top. They then flow by gravity through the machine and out at the bottom. In one form the machine is merely a sloping trough which has numerous pegs extending into it from the bottom and sides. These mix up the mass as it flows by. In another kind, the materials are dropped from one bucket into another, then into a third, being thoroughly mixed in this continuous pouring back and forth much as you would mix milk and water by pouring back and forth from one pail to another.

For a small homemade mixer I would suggest the arrangement shown in the drawing above. The main part is a barrel, either a strong wooden one like oil or molasses is shipped in, or a galvanized ash barrel. The stirrer can be made of pipe. The bottom of the barrel is hinged so that after the batch is mixed, the rope or chain can be loosened, the bottom dropped part way, thus allowing the mass to slide out into the wheel-barrow standing underneath shown by the dotted lines. The engine can be mounted upon a standard at the same height as the pulley or a counter shaft can be placed up there and a belt run to the engine. After every batch is mixed and dumped, the whole machine should be washed out before the next batch is mixed. The distance the mass falls into the wheelbarrow should be small.

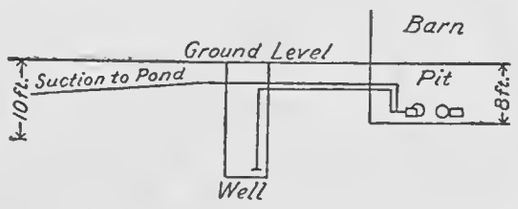
R. P. C.

An Irrigation Question.

Would you advise me of the practicability of drawing water through 150 feet of pipe to an elevation of not more than 10 feet by means of a pump for irrigation purposes? I wish the engine to be at the barn so I can use it for other purposes, also to use the same pump to draw water from a well for house and barn use independent of the irrigation. The suction pipe would run according to diagram. I would connect the suction pipes with the water supply from tank for priming. Would there be any difficulty from air collecting in these pipes so as to prevent priming? R. R. L.

Fallsington, Pa.

A pump of almost any kind or make ought to draw water to a height of ten feet through 150 feet of pipe as small as half inch, although I should not suppose you had any intention of using such

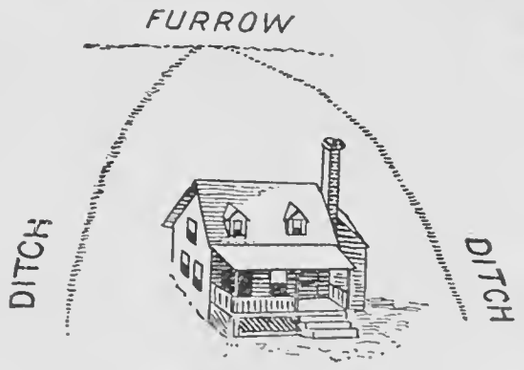


PUMPING FOR IRRIGATION.

a small pipe. If you have both pipes connected to the suction side of the pump, you would better have a tight valve in each pipe just before it reaches the pump so that when you are desirous of using the well, you can shut off the irrigation supply and when you are pumping for irrigation, you can shut off the well. As to priming, if necessary, remember that the air goes to the highest point and if you have an air valve at the highest point, you can always let the air out if it gives trouble. A simpler way would be to connect the priming pipe to the topmost point of the suction pipe, if you can. Personally, I do not see any need of priming the suction pipe if your pump is tight enough to pump air. It is not as though you were endeavoring to siphon the water. R. P. C.

Water in Cellar.

I will tell you how I overcame the trouble of water coming through cellar walls. My house stands on a slope and after a rain the cellar was flooded. About 15 feet from back door I ran a pretty deep furrow making it the full width of house and filling it with coarse gravel and broken stones. From this ditch at a point about midway of the house I ran two diagonal ditches beginning them at about three feet and ending at about 1½ feet, bringing one out at each side of the house and at least three feet from it. In



DRYING CELLAR.

the bottom I put 2½-inch tiles four inches apart, filling interspaces with gravel, and putting a layer of same on top, then filling up with dirt. Have had no more water in cellar since. M. N. G.

STOPPING A CISTERN LEAK.—On page 1301 R. L. H. wishes to know how to stop a leaky cistern. I can tell him how we did about 12 years ago, and our cistern has not leaked since. We tried cementing over the leaky places without any success; then we took the pith out of dry cornstalks, and with a blunt instrument forced the pith into the leaky places. The pith soon swelled and stopped the leak, and then we cemented over it and it has not leaked since. E. G. M.

GOOD, absent-minded old Dr. Wilder was greatly dependent upon his practical wife. One morning Mrs. Wilder sent up an announcement after he had entered the pulpit, with a footnote intended to be private. "The Women's Missionary Society," he read aloud, "will meet Wednesday afternoon, at three o'clock sharp. Your necktie is crooked; please straighten toward the right."—Woman's Journal.

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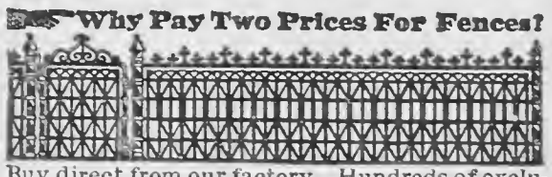

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Hope Farm Notes

THE HEN QUESTION.—My scrub pens are still at the poultry contest, apparently thinking things over. They do not seem to be doing much of anything else thus far. Already a number of people are saying: "I told you so!" and having a good laugh at the scrubs. Just what they "told" I do not know. As for laughing, the last laugh is usually happiest, and sometimes he who does not laugh at all—but merely smiles—has the best lookin at the end. The Hope Farm man has started near the end of many a procession before now. The hearse may start off in front while the healthiest mourners may be far back. We are good-natured, whether we occnpy head, tail, or middle of the race.

At this time my scrubs are at the tail, with some good companions up to Dec. 19. Seven pens out of 82 had not laid a single egg! These included two pens of White Plymouth Rocks, one of Buff Wyandottes, one R. I. Reds, one of White Laced Cornish, one of Silver Campines and the Hope Farm scrubs! In addition five pens had laid only six or less. Thus we have some blue-blooded company! In all 14 pens, or 17 per cent, have laid only one dozen or less. During the week ending Dec. 19, 15 pens never laid an egg. Out of a total of 820 hens, as I figure it, about 350 still stand at the zero mark with my scrubs! In the week I speak of these 820 hens laid 1,004 eggs out of a possible 5,740. During this week 546 of the 820 hens never laid an egg! Why are the 10 Hope Farm scrubs more laughable than the 536 others? In only two of the pens did each of the 10 hens lay one egg or more. There were 79 hens which each laid five eggs, 12 that laid six eggs and two laid seven eggs, or one each day of the week. Why not laugh at these petted and pampered blue bloods? They are "worth" 10 times as much as my scrubs, but they keep no one in omelette or custard yet!

At the end of the seventh week 68 of the birds were moulting, including two of our own scrubs. Last week I asked what these tough rangers would do with their food when fed all they wanted for a balanced ration. I presume these two scrubs have answered: "We found it too rich for our young blood, and the feathers had to go!" Over 30 years ago, out on the plains, I saw a man come to town to do jury duty. He was a dry-land farmer, times were hard and about all they could get that Summer was sorghum molasses and pancakes. This man told what great things he would do on the jury as compared with a lot of "dudes" from town. He boarded at the hotel where there was a full "balanced ration" of steak, ham and eggs, white bread and similar food before him! Did he do great things? After a week he went to the judge and begged to be excused that he might go home to simple fare. Those "dudes" did well on the "balanced ration," but it was too rich for this dry-land farmer. Still I notice that in this hen contest seven out of 10 in two pens of White Leghorns are moulting, six out of another, and six out of a pen of Reds. One man who wants to give us a little New Year's cheer writes:

Why don't you start something with your pen at Storrs? Never mind, cheer up; they will have to lay in the Spring anyway.

CHEER UP.—Why, we never got down! Thus far those hens, have kept right up to expectations—which was nothing. They will start all in good time and then several of them will be heard from.

There is another hen contest on at Thorndale, Pa., and some remarkable things are being developed. A number of hens have laid an egg each day during November, December and January, as shown by past poultry contests. In one case a hen laid 60 eggs in 61 days. Mr. Pollard, who has charge of this Thorndale contest, says that four or five birds this year are laying practically every day. As egg producers and breeders to send along this Fall laying habit to their descendants such birds are worth 10 times as much as Spring layers. Mr. Pollard makes this point:

Each year further establishes the fact that more early Fall layers must be produced; 90% of the cold storage eggs of this country are laid in March and April; the season of high prices is October, November and December. With the great object lessons taught the general poultry breeder and egg farmer through these egg laying contests an adjustment of egg production will, in the very near future, be made. Hatching in January and February for early Fall layers, starting the Fall moult about the time prices begin to drop and balancing the output on a given plant by additional layers, to begin yielding in November, will be the solution to the problem of increasing the general average price the year round.

That is only one of the things these poultry contests are developing. I cannot say that my scrubs have contributed much toward a strain of Fall layers, but the game is young yet.

In seeding down I always use with Timothy Red clover and Red-top. Is it advisable to use a little Alfalfa in the mixture? W. R. K.
Bath, Me.

I think this plan a good one, and expect to follow it hereafter. It is not the nature of Alfalfa to do its best in a mixed collection of seeds, but it will make some growth and help fit the soil later for a full Alfalfa seeding. We always use Alsike clover with the Red. Parts of our farm are very sour. When we sow Red clover alone there is usually a thin seeding. The Alsike does better, and thickens out the stand.

Will the Hope Farm man print a list of grapes that in his opinion would be suitable for planting a small vineyard in this part of Pennsylvania? We are about 100 miles south of Lake Erie. P. L. C.

In this case I must play the part of horticultural moon and offer some reflected light. I am not much of a grape grower though this is a natural grape section. When I do not know I go to some one who does and reflect some of his wisdom. This is what an expert tells me:

"It seems necessary so far away from the influences of large bodies of water that the early maturing sorts be planted. I would therefore recommend Winchell, an early white grape. Early Daisy, black, early; Berckmans, red mid-season; Lindley, fairly early, red and possibly Hartford, black, fairly early. I should further suggest that these be covered by laying down in the Fall, as I do not know how severe the Winters may be."

I just bought one of the old run-down farms, 60 acres. It has not been plowed for about eight years. It is all gone to running blackberries. It has been a good farm, but all run down; the building are in good shape. A creek runs through the barn. I wish to raise pigs and chickens. I am going to pasture the pigs on rye and oats as soon as I can get it in. What do you think about it? J. H. B.
New York.

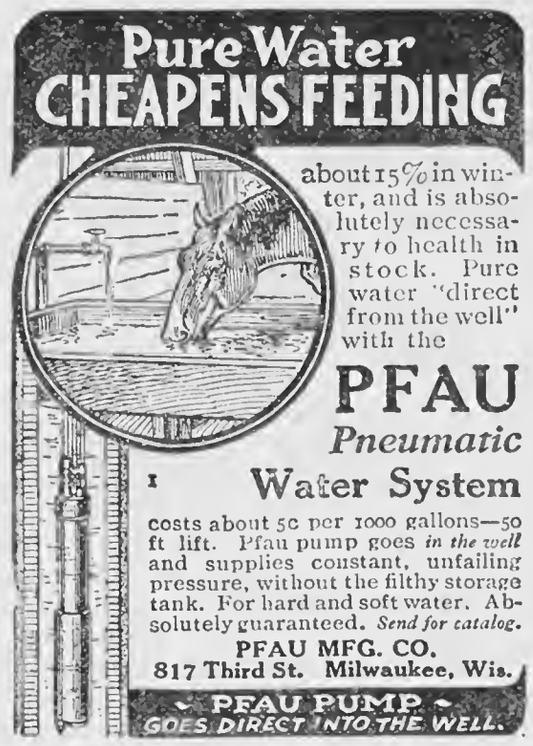
You can turn such fields into hog pasture, but it will take some time and hard work to get them going. I presume from what you say that these fields were not Fall-plowed. In the Spring start as early as possible to break them up. A disk or cutaway harrow will help in this by cutting off the roots of the vines. Put in oats and Canada peas first. Plow or chop under the peas and seed the oats on top of the furrows. Then sow an acre or two of Dwarf Essex rape with turnip seed mixed with it. Then seed a couple of acres of Early Amber cane or sorghum and follow with fodder corn. This will make a succession of pastures for the hogs, and as they eat it down the soil will improve. You will have to use some fertilizer to begin with, as these crops will not come to much on poor land alone, but if you can get them going and turn the hogs from one to another and keep some crop always coming on you will make pork and improve the farm. We have done the same thing here. There is no great profit in it, but a good way to improve the soil and handle it without great labor. You are not crazy, but have hold of a good idea if you can develop it within your means.

When it comes to the tax problem, doubtless, this State will "take the cake." In our country town the regular tax rate is 79 mills, or one mill less than 8%. And this does not include "special" taxes, as street grading, paving, etc. One-half goes to pay interest on indebtedness. In Seattle this interest charge is over $5 a year for every man, woman, and child inhabitant. Of course, it is claimed that the assessed valuation of the town and city property is very low. But the fact is that it is only a nominal one, as very little of it would sell at all even at such valuation. Fortunately people don't recognize confiscation when it comes. Some of our neighbors are paying $10 per acre annual tax on their farms here, three or four miles from town. In another county in State they are paying as high as $12 I was told. J. F. CASS.
Washington.

This beats New Jersey or any other State I have heard from yet. We ought to know more about this, and I would like to have the items which make up this enormous tax.

What is the best way to handle the droppings and litter from henhouses so as to get the most benefit from them, whether to haul direct to the field to be cultivated next year, or to store under cover till Spring? The dropping boards are cleaned twice a week, and the litter from the floors once a month. I have heard that sawdust sprinkled on the boards and kainit sprinkled over the droppings each day would hold the nitrogen until put on the crops. J. B. S.
Glencarlyn, Va.

In such a case we should take out the litter once a month as you do and either spread it on level ground or put it around the fruit trees. In our own case the latter would be the best use for the litter. We should keep the droppings separate—sprinkling land plaster, sifted coal ashes or dry dust over them to dry them out. Keep them in a dry protected place and in Spring crush fine and mix with chemicals as you will find described later on. The plan of using sawdust and Kainit is often recommended, but we like the dry fine mixture better. H. W. C.



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Tree Surgery.

Can a sugar maple tree be saved if decayed part is cut out clean and filled with cement 3:1 for grouting, finished with cement and sharp sand 1:2? The cavity extends from the ground to a height of 12 feet. About 1,500 pounds of material will be required to do the work. The tree showed good vitality this year.
Pennsylvania. S. I.

Yes, such tree can be saved if there is still enough of the live bark left to provide for a proper sap circulation. The operation may be likened to filling a tooth. All the decayed wood in the cavity must be cut out. Then it should be washed with an antiseptic solution, and the concrete packed in solidly so as to keep out all air and moisture. Good judgment is required in doing this but it is possible to save many trees which have begun to decay.

Failure of Peas and Onions.

I limed my garden, about 100 feet square, with 400 pounds hydrated lime, cultivated it in and then cultivated in four pounds of Crimson clover seed. I do not think that over 200 plants were the result. What was the trouble, poor seed or too much lime, or what? What is lacking when peas and onions are almost failures, and every other sort of truck produce abundantly. F. H.
Ohio.

That was less than one ton of lime to the acre, not enough to do any damage. Crimson clover does not usually require as much lime as Red clover or Alfalfa. You probably had a lot of "dead" seed. Where other crops do well while peas and onions fail we suspect maggots on the onions and plant lice on the peas.

Transplanting Large Trees.

I have 160 peach trees that are planted on a hillside, southeast exposure. They were set two years ago; some were bearing this year, and the owners of the land sold the land this month. Would it be wise to transplant them, in Spring?
Allentown, Pa. S. L.

We should try it. Start early while the soil is moist and before growth starts. Cut back half to two-thirds of the top. Dig up with a large ball of earth around the roots and transplant as quickly as possible in moist earth. Dig a hole just a little larger than the ball of root earth and plant about an inch deeper than the trees now stand. If possible pour a bucket of water around the trees after setting, throwing soil over and pack down hard. You will have to make special arrangement with the owner of the land, for such trees have become a part of the freehold or real estate.

Treatment of Fallow Land.

I have a field of three acres that I am not prepared to utilize for about three years. What would be the best treatment for it? I want something that will take care of itself and at the same time increase fertility. Would Sweet clover answer, and will it re-seed itself? Land is gravelly light clay, well drained.
W. H.

In this case, where there is no need of working the soil for several years, we should start clovers. You will probably have to use lime at the beginning. Fit the soil well and seed to Sweet clover as usually advised, and add three pounds each of Red and Alsike. Let the crop alone to mature, fall down and reseed itself.

Moisture on Double Glass.

I have some double-light sashes which I am using on a cold frame. These sashes steam so between the glass that the sun never gets through to the plants. The steam condenses so that the drops of water collect as large as a five-cent piece, I raise the sash every nice day but it does not seem to help. Will you advise me? I am afraid this moisture will freeze and break the glass. J. W. S.
Center Moriches, N. Y.

I have been using the double-glazed hotbed sashes for three years, and have never found any such difficulty on a cold frame. I do not use hotbeds, and it may be that on a hotbed there may be some accumulation of moisture between the glasses. I have these sashes on lettuce now heading finely (Dec. 20) and have never seen any accumulation of moisture under the outer glass. If the glazing is tight I cannot see how such a condition can arise, and really I do not think that it can do serious harm. I have a large lot of these sashes, and have never had the slightest trouble with them, except that they are heavy to handle. I would not go back to the old single-glazed sashes on any account. W. F. MASSEY.

Fruit Questions.

1. I have a Rome Beauty tree, about five years old, that was doing finely; but this Fall I noticed the leaves commence to die rather early. Two weeks later I examined it, dug away the dirt, and from the top of the ground down the bark was dead all the way around the tree, and the roots seem to be all dead, too. What is the cause and what is the remedy? 2. I need about a dozen plum trees to fill out a row. How are the Wickson and Climax for a home market? 3. I can grow black currant bushes, but they don't bear like the red ones. What is the trouble?
Beaver Falls, Pa. W. S.

1. There may have been something piled about the base of this apple tree that heated and thus killed the roots at their junction with the trunk. Or, it may be crown gall or woolly aphis that has been working on the roots for years past. As to a "remedy," I would suggest that there is no remedy now but dig out the old tree and plant another. 2. The Wickson and Climax plums are of the Japan type, and will succeed in Pennsylvania. The fruit sells fairly well. It will be necessary to spray the young fruit thoroughly to prevent rotting, for this is one of the troubles that has to be met in the culture of this fruit. 3. There is much complaint of the black currants not bearing well, and yet there are cases of good bearing. It is probably because of differences in varieties, and any who have bushes that bear well should let it be known and give the name of the varieties that succeed. There is a good market for the fruit.
H. E. VAN DEMAN.

Mixed Chemicals.

I can get two carloads very cheap of a mixture consisting of the following chemicals in powder form: 60% barium, 19% lime, 15% nitrate of soda, 2% sulphate of soda, 4% water. Will you tell me whether this has any value as a fertilizer, or whether I can mix it with anything to make it valuable as a fertilizer?
E. Aurora, N. Y. C. W. E.

If this mixture contains 15 per cent of average nitrate of soda it shows 2.4 per cent. of nitrogen. We doubt if it will pay to mix it with other chemicals. We should broadcast and harrow it in for corn, grass or grain, and use potash and phosphoric acid in the hill or drill.

Sod for Strawberries and Oats.

I am a back-to-the-lander, having bought an abandoned farm up here in Vermont. Will strawberries amount to anything if set out on sod ground plowed in the Fall and cross-plowed in the Spring? Will oats do anything if sown on sod. J. F. M.
Halifax, Vt.

The troubles with old sod for strawberries are white grubs and weeds. Such sod is usually full of these grubs, and they are death to berry plants. The grass and weeds follow an old sod, and are hard to keep down. It is better to have some hoed crop follow the sod. Oats will do quite well after sod.

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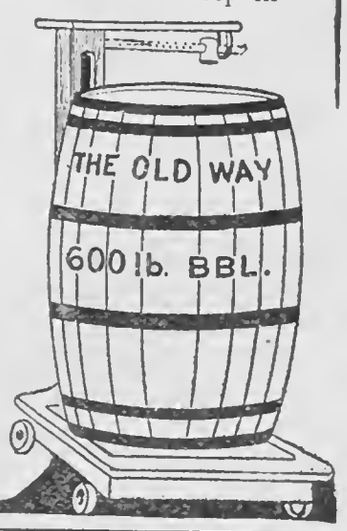

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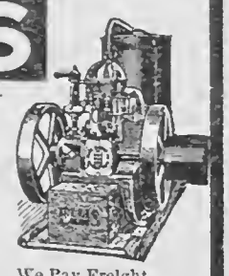

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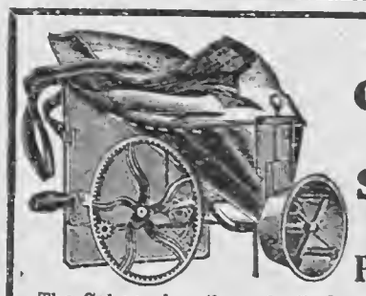

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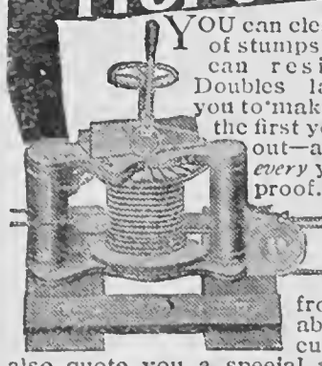

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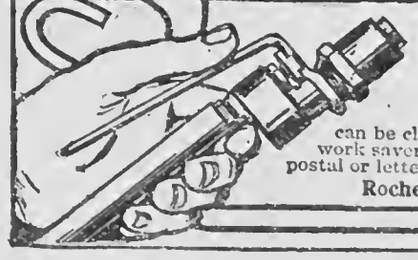

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In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

NEW YORK farmers are still writing about compensation for cattle or horses killed by agents of the Agricultural Department some years ago. The cows were afflicted with tuberculosis, while the horses were glandered. These animals were killed before the general law providing compensation was passed, and therefore no appropriation was made to cover such cases. The only way to recover is for the Legislature to pass special bills covering each case. This has been done in a number of cases within the past few years. A farmer who has suffered loss in this way should get his proof into shape and ask his Senator or Representative to make up a bill and introduce it early in the session.

*

EFFICIENCY! That is the new word which farm writers are now playing football with. The efficient man is evidently the one who makes most of his powers and learns to do his work with least waste of mental and physical force. To be efficient is to be economical of power. On page 35 you find the picture of a so-called farm gate which is a badge of wasted energy. This collection of scraps and refuse has been taken down and put up again twice a day for months to let the stock pass through. A few blows with a hammer, a few boards and hinges would save all these hours of labor. Smile at it, and then see if your gate to efficient work is like it.

*

J. H. HALE tells us of a case where a wealthy man had been in the habit of making Christmas presents of boxes of oranges. This year, after investigation, he decided that good apples would prove a more acceptable gift. So he gave an order for 21 boxes of high-class Baldwin apples, which were turned over to Santa Claus to distribute. Of course we may be prejudiced in favor of the apple, but we think this was a good substitution, not only for the consumer but in the interests of the good old American fruit. And by the way, new varieties may come and go with more or less of "boom," but the good old Baldwin, properly grown on suitable soil, is what we come back to.

*

FOR many years the "experts" taught us that Long Island is out of the "apple belt." Years ago there were some good orchards on the island, but many of them were ruined by the scale and others passed out. Somehow most people seemed to get the idea that the soil and climate of Long Island are not suited to apple culture. Mr. Peter Elbert Nostrand has taken this idea out and buried it in his orchards. Down at the east end of the island Mr. Nostrand has planted 110 acres of trees. They are coming into bearing and producing fruit of unmatched quality and beauty. In 1912 Mr. Nostrand won $69 in prizes at the New York State Fair, including nine firsts. In 1913 he won $188.25 in prizes, including 17 firsts, wth the $50 prize for best collection. Add to this 100 other local prizes and you may understand how Long Island rose up out of the sea, shook herself and beat the State at apple production. We like this because it shows how men may take what the experts call unpromising conditions and through the application of business judgment and scientific treatment beat these same experts at their own game. We are glad to be able to announce that Mr. Nostrand will tell us how he did it.

I UNDERSTAND that you have reported several criminal cases where men were punished for shooting at chicken thieves. What were the facts about these cases? J. M. G.

We have reported two cases. One was in Massachusetts. A crippled man was aroused at night by noise in his chicken house. Going out, he saw two men, who ran away. The owner fired his gun at random to frighten the thieves. In the morning the dead body of one of these men was found near the road. The cripple was tried, found guilty of manslaughter and sent to jail. Public sentiment was aroused and the prisoner was pardoned by the Governor.

The other case was in New Jersey. Two boys, living with their mother in a lonely place, were aroused at night by the dog. One of these boys fired a gun into the air. Two men ran, one climbing the fence and the other apparently dodging behind an outhouse. After calling, and hearing no response, the boy fired again in the direction of the house. Search revealed a man shot dead. The boys were put on trial and the prosecution tried to show that they fired directly at the man, who was not engaged in any unlawful act at the time. The judge ordered the jury to acquit these boys, saying:

It was their duty as sons to protect their mother's home from an invasion by trespassers. Instead of being condemned for that act they should be commended. To find these young men guilty under such facts as have been presented is to take away from the citizen the right to protect his home. These young men committed no crime.

In this case public sentiment was with the boys, and the prosecution seems to have been quite perfunctory. From this it would seem that the bed of the chicken thief will contain very few feathers if he is caught in New Jersey.

*

THE Secretary of Agriculture has decided that no potatoes shall be brought in from foreign countries. This was done to prevent the importation of potato diseases. Now it is found that germs of these diseases are carried not only on the tubers, but on the sacks or bags in which these potatoes are carried. For example, a good share of our seed-potatoes seems to have been shipped in these foreign second-hand sacks. The scientists have found these disease germs on such sacks. We might about as well use the clothing of typhoid or smallpox patients without fumigation. Thus the Department advises:

Farmers should require dealers to guarantee that the sacks have been sterilized. Purchasers of seed potatoes should specify that the seed came in new sacks or sterilized second-hand sacks. Dealers can sterilize these sacks before offering them for sale by placing the empty sacks in tight containers in which live steam should be injected for about an hour. Purchasers of second-hand sacks can protect themselves by following the same procedure or by boiling them for two or three hours in any available vessel. Unless these precautions are taken the use of new sacks exclusively is recommended.

It is such an easy matter for the dealers to boil or steam these sacks that they cannot make reasonable objection to the plan.

*

WE see from the articles on acid soils why forest leaves often prove disappointing as a fertilizer. They evidently contain plant food and considerable lime, but they are too sour. After a time the acids disappear and the lime is left. Then the decayed leaves or humus become good fertilizer or rich soil. At every turn we find fresh evidence of the need of lime on our Eastern soils if we are to grow the lime-loving plants like clover, Alfalfa or wheat. Where lime is reasonably cheap it is good farming to buy it and grow these crops, even if we are obliged to change the entire nature of the soil in order to do it. We believe, however, that there are cases where lime is too expensive to use it in large quantities. In these cases it will often prove more profitable to give up Alfalfa, Red clover and wheat and grow those crops which are naturally suited to the acid soils. Cow peas, Soy beans, Crimson and Alsike clovers will grow fairly well in acid soils to gather nitrogen. Red-top may be used in place of Timothy, and rye and buckwheat in place of wheat and oats. This is one of the new problems which scientific knowledge has brought up. As usual the scientific men work out the principles involved, while the farmer must work out the practice.

*

FOR the past few years New York farmers have been advised to plant the Rome Beauty apple. Many thousands of the trees were planted. This variety is very satisfactory where the conditions are suitable—for example, along the river in Southeastern Ohio. Could it be grown as well in New York it would prove a valuable addition to our list of market fruits. It seems to have failed at the test, having been badly injured by freezing. Many of the young trees have died, and the variety would better be cut out of the New York list. You might say that Jack Frost has sent the beauty of Rome Beauty roaming. This incident illustrates the trouble which results from substituting advice for experience. Many a farmer has bought trees or machinery or other goods upon advice alone, only to find that these things were untested, and he must pay for the needed experience. This should be remembered now when the season of "novelties" has come. We print names of these novelties and permit the introducers to make reasonable statements about them. People always come asking if we advise "plunging" or buying heavily while the price is high. We answer *No!*—unless you are prepared to gamble or take a chance, and will make no complaint if the "novelty" proves unsuited to the conditions in your locality. It pays to try these new things in a moderate way, but planting a large acreage to a high-priced novelty is simply taking a speculator's chance—and nothing more.

*

I NOTICE that THE R. N.-Y. has not changed its course, even if the wind has. Having done so much toward giving to the country the parcel post, it would be in fashion to take a well-earned vacation; but, instead, you seem to press right on to other useful things. In a way, such must be uphill work, and generally avoided by lovers of ease. All are not finding the intrinsic pleasure that comes from doing an honest day's work, and yet the uphill onward march gives a wider view of things, and a clarified air in which to live. And in those higher altitudes of striving to help the race are those who first see the dawn of a better political, social and religious day. Labor being a blessing, the fearless, honest newspaper man has his full share of both.

Of all the unhappy, useless people we know of we would hand the prize to the man who stops growing, satisfied with some little achievement, and sits down to spend his years bragging about it. There is your true "conservative"—narrow, bigoted and selfish. Sometimes our friends come here, saying: "You are doing a grand work." How well we know that if we once began to think so our work would be worth but little.

When a man can feel that his labor and thought have changed history for the better a little, he may do one of two things. One is to imagine he is IT, and proceed to pat himself upon the back. The other is to realize that he is nearer "nit" in the world's great economy, and that the more he keeps in the limelight the shabbier his poor little record will appear.

*

"SCREENINGS" from a mill often if not usually contain weed seeds, dirt, splinters and other trash. Some of this stuff has feeding value—perhaps half as much as good bran or middlings. Flour mills have taken up the practice of running this stuff in with the bran. In other cases this trash is mixed with molasses and sold as a "molasses feed." The Department of Agriculture has ruled that this mixture is adulterated when branded as "bran" or "middlings." We understand that some of the mills will try to surround this by branding as follows:

BRAN
With Screenings
Not exceeding Mill Run.

What is meant by mill run? Probably anything that could run out of a mill-spout into a bag. Under the law any mixture not harmful to stock health may be sold, provided the tag shows what it is. On the same principle, how would these millers like to buy food branded in this way?

MILK	CHICKEN
With Water	With Sand
Not exceeding Rainfall.	Not exceeding Beach Run

We should hear from these millers at once; yet their plan evidently is to work off their weeds and trash, legally, through the failure of farmers to read these tags! Farmers who want the pure bran should read every tag and refuse to buy any tagged as screenings. If you find "pure bran" containing the screenings keep the tag and the mixture and notify the Department of Agriculture at once.

BREVITIES.

GERMAN pencil manufacturers are after California cedar. They will probably start a factory there.

THE latest is a Society for the Advancement of Forest Entomology in America. It is open to anyone who is interested in preserving our forests.

No question about the great value of skunks and snakes in destroying insects, but can you convince the average farm boy that he should not kill them on sight?

IF the wife helps her husband milk when he has a sore arm, he should help with the kitchen work when she has a headache.

A GOOD New Year's resolution: "I will spend as much time *working* to put running water and similar fixtures into my house as I spent last year in *talking* about the Mexican question and other *great* problems which I could not influence."

THE papers report that a gang of outlaws in Kentucky are besieged on a mountain. They have a dozen hens, and, as the report runs, "they can hold out indefinitely if the hens continue to lay." The Hope Farm man is having an experience with some Kentucky scrub hens in the laying contest. If those outlaws cannot make their birds do better they will soon be starved out. However, these scrubs may not lay an egg all through the year, and yet in the end teach the poultry world a more practical lesson than Barron's best hen.

"TWO BLADES OF GRASS."

However desirable increased production on farms may appear to be from the consnmers' standpoint it does not follow that such increased production would resnlt in any increase in the cash income per farm or per capita of farm population, or that prices paid by consumers would be any lower. * * * When as the result of such organization and improved methods the price of farm prodncts can be maintained at a higher level without increasing the cost to consumers, farmers will be jnstified in increasing the output of their farms with a fair prospect of realizing a reasonable profit on their investment of time, labor and money, which in the aggregate is enormons.

Look who's here! What heretic is this who pulls one blade of grass out of the pleasant dream of the "authorities"? It must be some "disgruntled old grouch," or some 35-cent-dollar crank. No, gentlemen; guess again. It is Hon. David Houston, U. S. Secretary of Agriculture! That is what he says, and he proves his words by facts and figures. He says the total value of farm products for 1913 was $9,756,000,000. The net farm income, as he figures it, is $4,074,027,499. In 1912 the total crops were considerably larger than this year, yet prices were better, and the farmers received about $500,000,000 more for this year's smaller crops!

Had the total prodnction in 1913 equalled or exceeded the 1912 production it seems probable that the cash income per farm would not have been greater, and might have been less, than in 1912; but it is extremely donbtful whether the cost to the consumer would have been any less because retail prices are promptly raised on a prospect of underprodnction, but are very slow to decline if there is overprodnction.

True as gospel, and everyone knows it—including those who still talk "two blades of grass." It has been proved again and again here in New York City. Be the crop large or small, prices for such staples as bread, potatoes, milk and groceries rarely vary from year to year. There have been seasons when farmers in the interior received 20 cents a bushel for potatoes. In other years these same farmers received 90 cents or even more, yet housekeepers know they paid practically the same for a peck of potatoes each year. As we see, the farm price for crops this year is figured at about $4,000,000,000. The final consumer paid at least $13,000,000,000 for this crop before it reached his mouth or body. The best thing the present Administration has done thus far is to recognize the truth of the 35-cent dollar and the folly of the "two blades of grass" theory.

"I THROW THEM RIGHT INTO THE WASTE BASKET."

The speaker was an educated man—a teacher and clear student. He is a good speaker, capable of making a convincing address before an audience of thinking or fairly educated people. This man referred to the letters or questions from the class which he calls "cranks." This means people who get away from the conventional things and ask questions which get far below the polite falsehoods or fashionable ideas of life. Sometimes the "crank" comes with what seems from our present knowledge a wild and impossible theory. In meeting such people mentally our friend would get rid of them in the easiest way, and devote his energies to those who came nearer his own lines of thought.

"*I throw them right into the waste-basket.*"

This time it was an agricultural editor. He referred to the same classes of people, and also to the people who ask what he calls simple questions, or things which he has answered time after time. Usually, however, he referred to the man who puts up an unpleasant truth which cannot be answered without kicking over some timeworn prejudice or habit. This man pointed to several leading farm papers which refuse to answer questions by mail, and intimate that they do not want suggestions from readers.

We told both these men that they are wrong—that is, if they ever expect really to grow mentally, or in sympathy or instinct. A man may think he is growing rapidly if he is able to keep a little ahead of men of his own class and capacity. For example, a farmers' institute speaker may go about year after year, meeting the same small audiences of selected people. He may bring this small proportion of selected farmers a fresh message, and still 'be unable to answer the arguments of the "cranks" or the uninformed farmers. It is strange that such men cannot see that the mental struggle required to make their learning clear to the dull or uninformed will do them far more good than acquiring fresh knowledge which they cannot make soluble! Do they not see that "throwing it into the waste-basket" is a confession that they cannot answer the "crank," or put their learning into the plain language of homely people? We think that herein lies one great trouble with our agricultural education. We are making it too much of a class privilege for the naturally bright and strong. The best way to spread it is to learn how to answer the "cranky" and explain to the dull.

COMMISSION MEN AND TREE LEGISLATION.

There are two things that I believe the farmers of New York may reasonably seek to have enacted into laws during the coming session of the Legislature.

Pick up the loose ends of the commission merchants' bill. The things needed to perfect this law should be immediately discussed in detail, not in general terms. I may say that one of the untouched evils of the business is the ease with which the commission man may become a dealer, either as wholesaler, jobber or retailer, in the same kind of goods as he is selling on commission. If a legal way can be found, I believe it would be a good and just thing to forbid every commission man being a dealer in the same kind of things as he sells on commission. Another wrong that ought to be corrected is that refinement of means for taxing the farmer's dollar—the middleman between the commission man and the retailer. Time was when the commission man sold direct to the retailer, making his commission carry the goods into the retailers' hands direct and guaranteeing the account. Now he often saves himself much of this trouble and cost by passing the goods through a wholesaler or jobber. The worst of this is that the latter is unrestrained; being a "buyer," he may sell the goods for what he chooses. So it falls out that the farmer, instead of paying 10 per cent for getting his products into the retailer's hands, as he supposes to be the case, is very often, I fear, paying 25 per cent or more. I am well aware that there is a proper place for the wholesaler in the produce business, but that place is not in taking over the real duties of the commission man, and for which the commission man is paid. For one thing, I believe the commission charged the farmer should be, when his products are sold to a wholesaler or jobber, but one-half the amount charged when the sale is made direct to a retailer. It is to the great mutual interest of the consumers and the producers that the horde of people who stand between them be as few and as modest as may be, and any reasonable proposition to that end well backed is sure to find friendly consideration in the Legislature.

We must demand a good nursery tree bill, and stick to it till we get it, and get it right. The Vert bill as amended through the influence of the legislative committee of the New York State Fruit Growers' Association, with the full approval of Mr. Vert, was a good bill. The bill was materially modified in favor of the nurserymen as it progressed through the Assembly, the bill failing in the Senate, mainly through lack of time. It is significant of the strength of our position that we could get so good a bill through the Assembly the first year, even admitting that it had some serious defects. Mr. Vert was true to us and a good fighter. The fundamental principle of this bill is that the farmer has the right to demand that he invariably be informed where the trees were grown and by whom. The nurserymen reluctantly conceded this, but minimized its effect by providing that the farmer shall be given the information when the trees are shipped—at a time when the farmer has his ground and his mind ready for them, and would do little else then than accept and plant them, wherever they came from.

I believe it to be a reasonable proposition, and moreover an attainable one, that every nursery tree label shall give on one side the name of the variety and on the other side the name of the grower, or for whom grown, and the place where grown. We don't want a "list" giving the information, prepared in the office of the shipper and sent to the farmer at the time of the shipment. We want labels—real labels, inseparably a part of the variety label—labels put on where the tree is grown, and we want these labels on every nursery tree sold in the State of New York, wherever grown. Then we want to know this at the time of purchase, or not less than two months before delivery, because it is not a safe assumption that the trees are coming from the nursery 'selling them. And we want some penalties that will count, and count hard, for delivering trees not true to name.

Kinderhook, N. Y. DATUS C. SMITH.

As a general proposition we think there has never been in 20 years a more promising outlook for Eastern farmers to push some line of live stock. Year after year the supply of meat in proportion to population grows less and less. The future seems to offer the surest thing in the way of a market for all kinds of meat. In the past many of our farmers became discouraged because there was no competition in buying. The "Meat Trust" monopolized the trade and drove out the small buyer and slaughterer. We think this objection will be, partly at least, overcome. The development of parcel post will mean an immense direct trade in poultry, pork and smaller cuts of veal, mutton and beef. Then we think the Government will finally step in with Federal slaughter houses, where live stock may be slaughtered and dressed at a fair price. These things may come slowly, but they will surely come, and they will give our farmers a chance to obtain more than 35 cents of the dollar. Live stock, too, will help **take care of our farms** and give a more profitable winter work. We believe this development of meat-making on our Eastern farms will give opportunity once more to many of the smaller dairy farms—now dismissing their cows because the cost of producing sanitary milk is too high. One thing is sure, however, the future live stock business has no place for the "scrub." The pure blood or the high grade will be the only animal that can pay for its board. In the past farming has actually been able to carry a lot of boarders and robbers. It cannot do so in the future.

*

"*Go West, young man!*" That was the slogan which Horace Greeley took up shortly after the Civil War. Without question this advice so persistently repeated did much to feed the stream of humanity which ran down the hills away from our Eastern farms. In those days the argument was a strong one. The Eastern soils had been cultivated for a century and were losing their power to produce. The modern system of using chemicals had not been worked out, and the depleted Eastern farms were in direct competition with the new and rich soil of the West. In those days a young man could go West and obtain for almost nothing a new farm, the soil of which was nearly as rich as the leached manure in the old barnyard at home. As one of the young men who took Greeley's advice, the writer knows the power of this old argument, and something of the historical effect of this desertion of the Eastern farms. Now, however, the time has come to put Greeley's advice on the scrap heap of agricultural history.

"*Stay East, young man! Stay where you are!*"

That may be called the "up-to-date" argument. The West has no more cheap land to give you. The only low-priced land now left for you is far away in some lonely place, where you will be at the mercy of a long string of middlemen, who must finger what you raise. The hope for the future farmer is not so much in raising enormous crops as in direct trade—getting closer to his market. The strip of land 150 miles wide along the upper Atlantic is destined to provide the best markets in this country and to contain the most profitable farms. Here is to be found the future land of opportunity for the sale of farm products of high grade. And so we say in this newer time, "*Stay East, young man! Stay East!*"

Government Crop Reports.

According to the U. S. Department of Agriculture the value of home-grown crops for 1913 was as follows:

Corn	$1,692,000,000
Cotton	798,000,000
Hay	797,000,000
Wheat	610,000,000
Oats	440,000,000
Potatoes	228,000,000
Tobacco	112,000,000
Barley	96,000,000
Sweet Potatoes	43,000,000
Sugar Beets	34,000,000
Cane Sugar	26,000,000
Rye	26,000,000
Rice	22,000,000
Flaxseed	21,000,000
Hops	15,000,000
Buckwheat	10,000,000
Dairy Products	814,000,000
Eggs and Fowls	578,000,000
Wool	51,000,000

The value of all agricnltural exports in the fiscal year ending June 30 was $1,123,021,469.

Lyle's Wheat Estimate.

The estimated distribution of the domestic supply July 1, 1913, to July 1, 1914, is as follows, in bushels:

Farmers' hands, July 1, 1913	35,515,000
Visible supply, July 1, 1913	30,163,000
Crop 1913	763,380,000
Supply	829,058,000
Disappearance six months ended December 31, 1913:	
Exports (December estimated)	95,000,000
Seed, winter wheat	42,000,000
Feed, screenings' losses, etc	15,000,000
Consumption	237,500,000
Total disappearance	389,500,000
Remainder January 1, 1914	439,558,000
Disappearance six months ending June 30, 1914:	
Seed, spring wheat	22,500,000
Consumption	237,500,000
Feed, screenings' losses, etc	8,000,000
Total	268,000,000
Remainder	171,558,000

The remainder must supply the exports for six months and what will be in farmers' hands and the visible supply on July 1, 1914. The figures suggest we have about 100,000,000 bushels available for export in the coming six months that must be sold in competition with Russia, Danubian districts, Canada, Argentina and Australia.

(*Extract from Contract*)

" . . . . . S. L. Hiatt hereby agrees to furnish William P. Stark exclusively all buds, scions, grafts and wood that may in any way be cut from the original Delicious tree, as William P. Stark may direct, and give William P. Stark the exclusive right to control of the scions, buds, grafts and wood for a term of twenty (20) years."

(*Extract from Contract*)

" . . . . . John H. Hale and the J. H. Hale Company do hereby grant, assign and set over unto William P. Stark and William H. Stark the exclusive right and control of the propagation and sale of the said J. H. Hale Peach. J. H. Hale agrees to personally supervise the cutting from bearing trees of said J. H. Hale peach all such propagating wood and buds as may be requested from time to time."

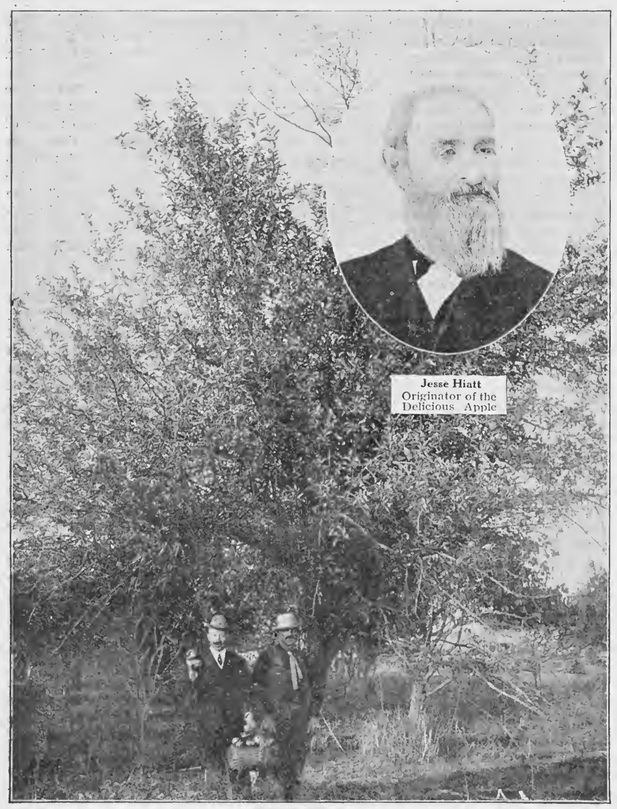
Two great fruits

and two contracts protecting tree planters

The Delicious Apple

and

The J. H. Hale Peach



William P. Stark, S. L. Hiatt and the original Delicious tree

Genuine Delicious at growers' prices

You who have wanted *genuine* Delicious trees can *now* get them direct from the William P. Stark Nurseries, of Stark City, Missouri, at *growers' prices.* We ship you direct from our nurseries one or two year old guaranteed Delicious trees, personally selected by William P. Stark.

Pictured above is the original Delicious apple tree, the most profitable apple ever produced. The tree is now 42 years old and, with one exception, has never missed a crop since it came into bearing. It has survived extreme drouths and severe winters which killed 90% of the other trees in the same orchard. Since the time when Jesse Hiatt, the originator, first gave Delicious to the world, William P. Stark has been intimately associated with its development and success. From Mr. Hiatt's son, S. L. Hiatt, we have secured the *sole* rights to all buds, scions, grafts and propagating wood from the original tree. The purity of our stock is therefore positively assured.

Tops the market everywhere

On the average Delicious brings $1.50 to $3 per box more than Jonathan, McIntosh Red, Stayman Winesap and other high-priced apples. Western growers often sell the fruit by the carload at double the price of other varieties.

It is the best money-maker and the best orchard tree you can plant. Give at least one-half to three-fourths of your apple orchard to Delicious. But be *sure* they are grown by William P. Stark of Stark City, Missouri.

Our Money-Saving Prices

We will furnish you genuine Delicious apple trees at less than you would pay traveling tree-agents for ordinary trees. These low figures are possible because we sell only *direct* from our nurseries—we pay no commissions or salaries to middlemen, nor share profits with agents. Write for catalog to-day.

These two matchless fruits command highest apple and peach prices everywhere. Fruit growers, horticulturists and experts unanimously agree that they are unequalled for high quality, flavor, shipping qualities and market returns. Our exclusive contracts guarantee orchardists everywhere genuine, pure-strain trees of both varieties; one contract with Mr. J. H. Hale, of South Glastonbury, Connecticut, originator of the J. H. Hale peach; the other with Mr. S. L. Hiatt, of Peru, Iowa, son of the late Jesse Hiatt who originated the nationally famous Delicious apple. Read these contracts printed above.

Buy direct from nursery — save 30 to 50 per cent

No agents

We do business with you direct. We have no agents, no middlemen, no plate-book men. Our catalog is our only salesman.

When you buy from the William P. Stark Nurseries you save the 30 to 50 per cent that you would otherwise pay an agent or salesman. You get your trees perfectly packed, in perfect condition. Our customers tell us they like to do business this way. It means a very pronounced saving and it means better trees. Send us your order.

William P. Stark
who, since Jesse Hiatt, the originator, first gave Delicious to the world, has been intimately associated with its development and success.

Grown under William P. Stark's supervision

"I have specialized in propagating vigorous, healthy trees for tree planters. It has been my life work and the life work of the folks in the nursery and office. This thing we do well—grow good nursery trees and sell them at the lowest possible price. I offer you trees grown under my personal supervision, by as good nurserymen as ever planted a graft and in soil that makes the finest trees I have ever seen come out of the ground. Such trees, doubly guaranteed, I offer you direct from our Stark City, Missouri, nurseries to your orchard and save you all the 'in-between' profits."—William P. Stark.

Everything for orchard or garden

We list in our catalog only tested, dependable varieties. The descriptions are clear, understandable, concise. Under each variety is given the section for which it is best adapted, so you can select the fruit which grows best in your locality. Every variety is *doubly guaranteed* to be true to name.

Apples, McIntosh Red—A good apple for New England, Middle Atlantic States, Montana, etc. High quality. Very hardy.

Wealthy—Hardy, showy bright red fall or early winter apple. A very profitable variety, and universally popular.

Baldwin—For those who want a reliable staple. We have some exceptional Baldwin trees, 1 and 2 year.

Rhode Island Greening—Well known as a standard commercial fruit throughout the East. Rich flavor, juicy.

Yellow Transparent—One of the most profitable early apples. Especially valuable near good markets.

Pears—Bartlett, Comice and Anjou—The best varieties for home or market. The standards everywhere.

Peaches, Early Elberta—A fine large freestone. Better quality than ordinary Elberta. Ripens early. Good canner.

Elberta—Needs no comment. We have splendid one-year-old trees. Lowest prices. We suggest, however, planting J. H. Hale instead.

Plums—Every home should have a few plum trees. Need little care. Pay remarkably well.

Cherries—Very profitable as orchard fillers. Montomorency, Early Richmond—the very best in sour or sweet cherries.

Grapes—Successful everywhere. We can supply the finest varieties at very low prices.

Bush Fruits—We supply selected stock in currants, gooseberries, raspberries, blackberries, etc. Field-grown roses, ornamentals, shrubs and shade trees of all sorts.

Our Parcel Post department

We make a specialty of Parcel Post orders, and furnish best grade, heavy, stocky plants and trees of mailing size. They are well developed and make large, thrifty orchard trees and ornamental shrubs. This is a decided convenience on smaller orders, or if you are distant from railroad or express office. *We pay the postage.* Our brick packing house is probably the most complete and best equipped brick packing house in the county. As it is immediately adjacent to the nursery, trees are transferred to packing quarters with no loss of time. Roots and trees are not exposed to sun or wind for a minute. They reach you with the original vigor unimpaired.

Send for 120-page book—It contains the complete J. H. Hale story. Handsomely illustrated. Lists and describes most desirable apple, peach, pear, plum, cherry, quince, apricot trees, grape, currant, blackberry, raspberry, gooseberry, roses, shrubs and ornamentals. Send the coupon to-day.

Station W-2

William P. Stark Nurseries, Stark City, Mo.

Mr. J. H. Hale among bearing J. H. Hale trees in his Connecticut orchards

J. H. Hale—the money-making peach

Mr. J. H. Hale, successful peach orchardist and foremost authority on profitable peach growing, for years sought a variety with *all* the qualities that *now* exist in the J. H. Hale peach. But not until he discovered this marvelous peach was he willing to lend his name to any fruit.

Imagine a peach that embraces *all* these splendid features:

Size like a small cannon-ball.
1/3 to ½ larger than Elberta.
Rich golden color; carmine tinged.
Ripens 5 days ahead of Elberta.
Colors 10 days before ripe.
Luscious flavor.
Flesh solid as a cling.
Perfect freestone.
Practically fuzzless skin.
Ships almost like apples.
Ideal for canning.
Ripens early—hangs late.
Hardiest known in bud and wood.
Outclasses and outsells the best Elberta that ever grew.

Stands shipping—great market peach

The tough, tight skin and firm flesh make the J. H. Hale a wonderful keeper and shipper. It does not "squash down." Its wonderful keeping quality gives the retailer more time in which to dispose of his consignments. This means bigger profits to the grower. Last fall Mr. Hale received $2.00 to $2.50 per bushel f.o.b. his orchard for J. H. Hale peaches, while the best Elbertas from the same orchard brought but $1.25 per bushel. From one acre of 133 J. H. Hale trees he took $1,462.

Big over-demand this year

Already a large part of our present stock of J. H. Hale is sold. We certainly will not be able to supply the entire demand. For peach-growers are now surer than ever of the future of this peach, because they have the 1913 record of crop returns.

Our stock is being depleted fast. From California comes an order for enough to plant an enormous ranch of several hundred acres. Mr. Bert Johnson, the famous peach-grower of Arkansas, is planting 10,000 J. H. Hale trees. A Michigan grower has taken 1,200. Massachusetts and Connecticut planters are ordering in big lots.

Reserve your trees now. We will ship whenever you direct. But we suggest you avoid the disappointment of late ordering.

William P. Stark Nurseries, (55)
Station W-2, Stark City, Mo.

Please mail me your 1914 catalog. I am interested in

☐ Delicious Apple ☐ J. H. Hale Peach
☐ Apples ☐ Plums ☐ Shade Trees
☐ Peaches ☐ Cherries ☐ Roses
☐ Pears ☐ Bush Fruits ☐ Ornamentals
.....Approximate Number of Trees Desired

Name .....

Address .....

Woman and the Home

From Day to Day

THE CHURCH BELLS.

Oh, holy Sabbath bells!
  Ye have a pleasant voice!
Through all the land your music swells
And man with one commandment tells
  To rest and to rejoice.

As thirsty travellers sing.
  Through desert paths that pass,
To hear the welcome waters spring,
And see, beyond the spray they fling,
  Tall trees and waving grass.—

So we rejoice to know
  Your melody begun;
For when our paths are parched below,
Ye tell us where green pastures glow,
  And living waters run.
—George Macdonald.

*

"LITTLE Harry wanted a dog," says Judge. "He had many arguments with his mother on the subject. He was sent to a near-by grocery. He was gone so long that his mother became anxious. Stepping to a window, she saw Harry down the street manfully pulling on a rope, the other end of which was tied around the neck of a small dog. The pup was resisting every step. Braced on all fours, it was pulling back with every ounce of its small might and barking as loudly as possible.

"Presently Harry triumphantly entered the room. 'Mother,' he called, 'won't you let me keep this little dog? It followed me home.'"

*

THE following instructions for cleaning white feathers are given by the household economics department of the Colorado Agricultural College: Make a strong suds of lukewarm water and ivory or wool soap. Put the feather into the suds and wash thoroughly, being careful not to break the shaft. Rinse well in lukewarm water and draw between the fingers to remove as much water as possible. Spread on a sheet of clean wrapping paper one-fourth to one-half cup of corn starch. Shake feather in the corn starch until it is dry and fluffy. One is apt to become discouraged during the process and think the feather is ruined, but if directions are followed she will feel more than repaid by the final results. The corn starch keeps the barbules from sticking together and makes the feather appear light and fluffy. If the feather is to be curled, cover with tissue paper. Pull out from under the paper three or four barbs of the feather and draw over the edge of a very dull knife. Repeat until all the barbs have been curled.

*

BUSY country women who have used up old materials and oddments of time in making braided rugs always feel some surprise in seeing these homemade economies included in "household arts and crafts." Such rugs are received in very good company these days, and they are not made in any way different from those that repose on many a rural kitchen floor, except that more thought is given to the color combinations. The strips of material are dyed before braiding, and some harmony of color carried out. Very attractive rugs are made by using black for the center, then bordering with blue or green, shading from a very dark to a lighter shade. Where the rags vary greatly, some dark, some light, they often take the dye differently, and this gives varying tones of the one color that are very attractive when made up. The mixed hit-or-miss braided rugs are very commonplace, but dyeing and blending harmoniously give ample returns for the trouble taken.

Old-Fashioned English Apple Dumplings.

Prepare one heaping cupful of finely chopped beef suet, turn this into two cupfuls of flour, add a pinch of salt, and mix all thoroughly while dry. Moisten with enough cold water to make a stiff dough, knead well with the hands, then cut in pieces large enough for each to cover an apple, thick and evenly. Peel and core apples, leaving them whole. Take a piece of dough, work it a little on the board to make it smooth and even; then with thumbs work it into rounded form depressed in center. Place the apple on it and mould the dough up gently until it covers the apple. Be sure to pinch the dough firmly together at the top, so as to leave no crack for the water to enter. Have a saucepan of water boiling hard, and drop the dumpling in. Keep the water boiling steadily until the dumplings are taken out; they are usually well cooked in half an hour. Some of my friends prefer tying the dumplings in a floured pudding cloth, each one separate, but for myself I prefer cooking without the cloth, but the water must boil when the dumplings are put in and be kept on the boil the whole time, or the crust becomes sodden and heavy.

MRS. J. T.

The Rural Patterns.

When ordering patterns always give number of pattern and measurement desired.

7435 Combination bust confiner and corset cover, 36 to 46 bust. 7910 One-piece corset cover for misses and small women, 14, 16 and 18 years. With or without peplum. 7742 fancy yoke nightgown, small 34 or 36, medium 38 or 40, large 42 or 44 bust. With straight or

pointed sleeve edges. 7638 Four-gored petticoat, 22 to 32 waist. With or without plaited frill. 7981 Petticoat with straight lower edge, 22 to 32 waist. Designed for flouncing or bordered material.

8072 Fancy blouse, 34 to 42 bust. With or without chemisette, with long or short sleeves. 8078 Blouse in kimono style, 34 to 42 bust. With long or three-quarter sleeves. 7592 semi-princess gown, 34 to

42 bust. With two-piece skirt having inverted plaits at the sides, with or without chemisette and peplum, with set-in sleeves in three-quarter or full length. 8066 Two-piece skirt, 22 to 32 waist. With high or natural waist line. 8086 Two-piece skirt, 24 to 34 waist. With high or natural waist line. Price of each pattern 10 cents.

Southern Girl Farmers.

The field agents of the Department of Agriculture who are engaged in demonstration work among juvenile clubs in the South tell many stirring tales of the work done by Southern girls.

From Alabama came this story: "One girl who lives on top of a mountain cleared and fenced her own plot, dragging rails one at a time down the mountainside. As she lives alone with her grandmother, she had no one to plow for her, so she and her grandmother dug the plot up with a grubbing hoe. She split her ankle with the ax while chopping stakes for her plot."

This story came from an agent in Arkansas; "Etta, Ealy and Ora Red have moved on their own farm too late for early tomatoes. They have planted bunch beans, after which they will raise late tomatoes. Their father died in February, leaving the mother with eight children. These girls, with a fourteen-year-old brother, will run the farm. It seemed as if the father could have been the least spared of any man in the country.

"One little Arkansas girl, with the aid of her sister, used a small harrow, such as is used for cotton beds, to harrow the space between the rows of tomatoes in their canning club plot. One girl took the place of the horse in the harrow while the other occupied the place of the driver."

A report from Georgia says: "A little girl of Upatore deserves special mention. Her parents are poor but good people of fine sense. She went to school, stood at the head of her class; did all the work of her patch except plowing, working morning and evening; borrowed money for canner and cans and has put up 500 cans of tomatoes and 200 cans of blackberries, besides a variety of sauces, pickles, jellies and preserves for home and market purposes."

"Three-fourths of the members of the Girls' Tomato Clubs visited this week are regular 'hands' on their fathers' farms," writes an agent of South Carolina. "One girl is twelve years old and weighs 108 pounds. She told me she learned to plough two years ago, when her father was a cripple. She prepared her one-tenth acre with a two-horse plough, hauled her fertilizer, scattered, bedded, transplanted hoed and ploughed it without any help at all. When I went to her tomato garden, about a half mile from her home, I found it to be in a very productive state."

These reports ought to be quite comforting to the good ladies who always say, in the light of new feminine enterprise, "woman's place is in the home." All these girls stayed home and did work that we have grown to consider largely the man's share—like many a woman from the earliest dawn of history.

PICKLED CARROT.—This is fine served with salmon. Scrape, wash, cut lengthwise in strips. Cook in salted water till tender, then pack tight in cans. I use pint cans and stand carrots up, making two tiers in can, leaving space at top of can for two or three slices of lemon. Pour cold vinegar over and seal.

MRS. C. H. K.

Tommy Truckfarm: "Say, Ma, I'm awful glad you're done your wash. I want a lunch to go fishing with. Oh, what do you think—I was out lookin' at the chickens and that city girl pointed to a chicken and ast me if it laid an egg what would I do with it. I sez 'I'd send it to a museum. That chicken's a rooster.' Ain't you glad you heard about Fels-Naptha Soap and can get your work done so soon?"

Anty Drudge: "It looks to me like you're glad, too. Fels-Naptha is the friend of every one. I always keep a box on hand so's I'll be *sure* to have enough."

The Fels-Naptha way is the best way and the easiest way of doing all kinds of work.

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FELS-NAPTHA

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Pea Coal for Domestic Use.

Relating to pea coal for domestic use, I have used nothing else for two years in both range and steam heater, which have revolving grates. Starting with clean grates it is necessary to get a good bed of wood to prevent coal from dropping through the grate excessively. My practice, however, is never to clean the furnace of dead ashes, after a fire has gone out, either accidentally or purposely. There is always ample draft with a few inches of ash bed in the firepot. In raking fires it is only necessary to use a little care to avoid loss of coal, and I might add that a small amount of coal in the ash represents a very small offset to the saving effected by the use of pea coal, and it can be recovered by screening if desired. The fire in my steam-heater does not go out at all during the entire season. The range fire is not quite as constant, but the coal is not to blame—but the domestic in whose care the range is. The use of pea coal is undoubtedly a large economy—approximately 25% of the fuel cost in a home.

HERBERT C. WILLIAMS.

In the Fall of 1907 we moved from a medium-sized and modern house in the country, to a very large one that had been built years ago, with high ceilings and rooms much larger than ordinary, fitted with a hot air furnace, and we were informed by several persons that it was an impossibility to keep this house warm. Our coal dealer suggested that we try a ton of pea coal to bank the fire with at nights, and in this way save as much on the fuel bill as possible. Among other things he said that the pea coal was of even better quality on the average than the larger sizes, as the slates would not be as apt to break up as the good coal would, which looked reasonable, but in experience we have not been able to see anything that would bear out this statement. For about two or three nights we tried banking the furnace fire with the pea coal, but could see no advantage from its use and discontinued it. Along during the Spring, having used up our supply of chestnut coal for the kitchen range we decided to see what we could do with the pea, so as to get some return for our investment in it, not thinking of using it as regular fuel, but to our surprise we could not see any particular difference in amount consumed or results obtained. Our kitchen range is rarely out at night, as we find it cheaper to hold the fire, by closing the drafts than to let it out and light it again, but on an average of once in a month or two it will go out through forgetting to close the drafts at bedtime, and one of these times came along soon after starting the pea coal and we then learned a few things about it that may be of use to former inquirers.

We had always cleaned out the grate completely, and as it is a rotary one with a large space between the sections, we think it is as difficult a one as exists anywhere in which to burn the pea coal, but in our ignorance we lit the fire as usual with an average amount of wood for kindlings, and when burned to a point where the embers could be easily broken with the poker, put on the usual amount of coal, and in about 10 minutes, we had the whole business down in the ashpan under the grate. We went at it again, this time using more wood so as to get a bigger bed of coals, before putting on the pea coal, and with slightly better results, inasmuch as we got a fire over about half the grate, at first, which by careful manipulation was gradually made to cover the whole surface, but the way the coal would run out of a scuttle and down through that opening in the grate was about like shelled corn running out of a hole in a bag. As soon as the fire covered the whole grate there was no more trouble, and the next time we had to light it, we took a piece of sheet iron and slipped it in over the grate from the front, something that the construction of our range allows, but would not be possible in others, and since then we have made it a practice to leave enough of the old ashes on the grate to cover it about an inch thick, and have no more trouble in lighting it; in fact think it kindles quicker than the larger coal does. When the pea coal was used up we purchased another ton of chestnut, but did not like it as well as the pea, so went back to the pea again and have continued its use ever since. It must be clean and well screened; we have had just one ton of it that was filled with dirt and fine screenings to the extent of one-quarter of its bulk, and this it was impossible to burn; it would lie dead in the fire, and as our chimney has a strong draft, it suggests that where a chimney has a poor draft the pea coal might not give as good results as the larger sizes. Here we pay $5 for pea and $6.50 for chestnut so it seems that in a New Jersey housekeeper's case a trial would be well worth making, but she should see to it that the coal is clean and well screened, and that at no time is there less than an inch or two of either ashes or fire on top of grate, before adding coal and she will have no trouble in using the pea coal without any changes whatever to her range. To hold fire over night, we try to have the fire box about half full of coals that are burning briskly, and then at bedtime fill firebox up level full with coal, and close dampers and open check damper in upper front door, and there is very little coal consumed overnight. We usually fix fire at nine, and anywhere from six to eight next morning, by simply throwing wide all dampers, cook breakfast for family of seven without adding any more fuel to the fire than was put on it the night before. T. S.

What Aunt Sally Served to Guests.

"I've always been thankful for living in Aunt Sally's home, and that Aunt Sally's time wasn't the time of salads and mayonnaises and food frills and ruffles," said Uncle Billy.

"What would Aunt Sally do when guests came unexpectedly to her?"

Lots of them came that way, for she and Uncle Joe were very hospitable. They came to her in the stage or in big wagons drawn by horses; there were no trolley lines through the country then; no autobuses nor private horseless carriages. Her afternoon guests always came early and tea was always served early, while I, or Betty, who lived with Aunt Sally many years, started a fire in the cook stove in the shed or Summer kitchen, Aunt Sally would move about putting extra touches to the table, which was always laid in the cool darkened kitchen. Without any hurry—Aunt Sally was never hurried nor flustered—she would sift a quart of flour into her mixing bowl, a pinch of salt, half teaspoonful of soda, the same of cream of tartar. This she would moisten with a teacup of sour cream—putting part buttermilk if cream wasn't sour enough; stir lightly, roll on molding board and cut into biscuits handling as little as possible. In 20 minutes these would come from the oven the lightest, whitest, fluffiest things imaginable, and served with honey (they nearly always had honey at Uncle Joe's) they were "food for the gods."

What else? If she had cold potatoes left over from dinner—baked ones preferred—she would peel, cut in thin slices, pile in her "spider" with a sprinkling of salt and a good-sized piece of butter atop, and pour milk over it. She would set the "spider," covered, over—not down on the fire—and let warm through slowly but thoroughly when she would pour fresh cream over them and cut them (not mash them) down through with a knife. No potato salad that ever was concocted equalled Aunt Sally's creamed potatoes. Of course there were other things. A roll of pot cheese, eggs scrambled with dried beef or scrambled without beef, or hard boiled and peeled and laid on a platter. Fruit cake, months old, surreptitiously fetched from the box behind the parlor tete-a-tete, or jumbles which were hidden away from "the boys"—Uncle Joe was one of the boys—in a stone jar in the spare bedroom. And there was fruit, spiced, pickled, canned or fresh, products of the farm, and tea, and a glass pitcher of sparkling water from the well with the sweep bucket in it, and milk kept close to the cold spring in the cellar, and fresh rich buttermilk. The latter was usually served with ginger bread or johnny cake. Aunt Sally's johnny cake and apple sauce are worth another story. EVANGELINE.

We toil to make an outward show,
And only now and then reveal
How far the under currents flow
Of all we think and feel.
—John Nichol.

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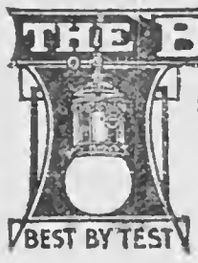

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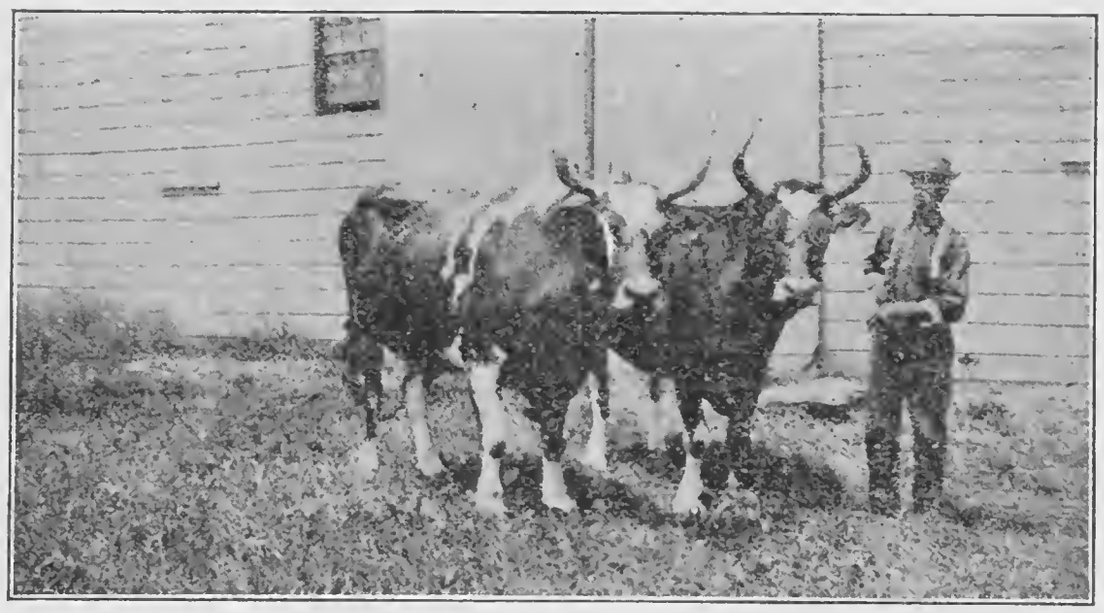
Live Stock and Dairy

RAISING BEEF CATTLE.

In raising a special beef type of cattle, what use do they make of the cow after the calf is weaned? At the present prices of beef does it pay to keep a special beef breed, or would it pay better to have a good butter cow and make out of the extra cattle what one could for beef? J. W. F.

Where extensive beef cattle production is engaged in the calves are not weaned at an early age, as is the case where representatives of the dairy breeds are used. The calves usually run with the cows until they are a good size, often until they are eight or 10 months old. Especially is this practice true in case these



"TRUE YOKEFELLOWS."

calves are to be used for show yard purposes. An ordinary farm practice is to wean them at a younger age, and in case cows are capable of milking reasonable quantities, the cows are used for dairy purposes; with a strictly beef type, however, calves are weaned off as soon as they are able to provide for their own maintenance, and they are re-bred and the profits are based upon the value of the calf produced. The present prices of beef, and particularly of feeders, naturally brings to the mind of the Eastern farmer the advisability of engaging in beef production. It would seem good judgment to suggest that ordinarily it is a wrong time to go into the industry when prices are high, for usually a man is compelled to go out of such a business when the prices are low. However, if

ALL READY FOR A SPIN.

there is market for beef products in the inquirer's territory it would certainly be more economical to use the beef-making type rather than to endeavor to make beef out of representatives of the butter or milk breeds. The milk and beef type which is represented by the milking Short-horn is a useful type of animal for the Eastern farmer to consider as a source of milk and beef production. The industry is extensively developed in Pennsylvania, and it is only a question of time until the combination animals are going to invade the Eastern States.

F. C. M.

"WHY do so many young men leave the farm?" "Well," replied Farmer Corntossel, "in most of the cases I have observed it was because they couldn't earn their salt as farm hands an' wasn't fixed to pay board."—Washington Star.

AN OHIO BREEDING ASSOCIATION.

Can you give me information about the breeders' association of which I read in THE R. N.-Y.? I want instruction about how started, use, workings of it, etc.

Deerfield, Mass. L. L. G.

Community breeding which has so lately sprung into existence in America, is nothing more or less than the common practice of the breeders of Europe, who in sections and localities breed but one particular breed. This practice is carried on for several generations, until a county becomes noted for some particular breed, either sheep, cattle, or horses, although all three may be found in one restricted territory. This obtains on the Continent to a very great extent, crossing different breeds is about unknown in recognized breeding territory, and grades are quite as scarce. Exactly the reverse of this is the common practice in the United States, and while abroad they build up and strengthen the qualities of their stock, we in this country work quite as industriously to diffuse it by a general mixing of breeds. Thousands of dairymen are doing so, and complaining about the disappointments of their industry.

The community association inquired about by the correspondent is in Geauga Co., Northeastern Ohio, and is now composed of nearly 200 active members, all breeding purebred Holsteins, though some of them in part are breeding grades from the highest type bulls. The men who compose this society are farmers, using these fine cows to supply milk every day in the year to either Cleveland or Pittsburgh. There is, with one exception, no one who could be called a professional breeder. While the society has been in existence about seven years, the owning of Holstein cows by part of the members dates back twice that many years. Hugh Van Pelt, the noted dairy authority, recently said that nowhere in the world in 20 miles square, could so many superior Holsteins be found, one man owning four world's champion cows. Prof. Oscar Erf of the Ohio State University puts it as strongly, and what is the surprising thing of the whole matter is that until within a few years every man of the society was just an unknown dairyman. Now the name of Dan Dimock, Paul McNish, Knap and Pierce, and a score of others, are known the Holstein world round.

This society is very largely a gentleman's agreement affair. In it individual opinion and action is without restraint and the bi-monthly meetings of the society are very largely for conference, and the good of the society, to confer, and to receive the scores of men from half the world who now come here to buy, instead of going to Holland. Since the world's four champion cows hail from here, the visitors come more abundantly, and prices have gone up accordingly. Heifer calves 10 days old are quick sale at from $75 to $150, and other aged stock correspond.

This is agreed upon; all shall breed from the DeKol family. Line-breeding is the rule, and in places it is hard to draw the line where line-breeding stops, and inbreeding commences, and some of the most successful breeders of the highest priced stock, have not for years gone outside of their herds for fresh blood. It is this intense breeding that has given the four world's champions all to one herd.

Feeding, care, and discussing lines of breeding, make up the gist of these meetings. The best talent that can be secured, come for addresses about every three months. There are no hard or fast rules. Each member pays $1 annually for the regular expenses. The society has what might be called a "clearing house," supervised by three members who "warrant and defend" the sales of all stock, have an eye on prices, and attempt to secure equity between members and buyers as well and such other matters as fall upon them. The society usually has "consignment sales" each year, but as their sales of surplus stock this year will aggregate about 5,000 head of all ages, in the county to outside buyers, there was no stock left to consign, and the money brought into the section this one year of surplus stock alone will total over half a million dollars. It is figured that this community breeding has made the county richer by possibly over a million dollars in addition. Not all of the men who are breeding these valuable cows are members of the society, but are still patrons of it, buying fine stock, notably sires, and not a little good registered stock and grades go out from their herds, yet with the utmost good feeling on both sides, for in a way it is carrying out the community plan.

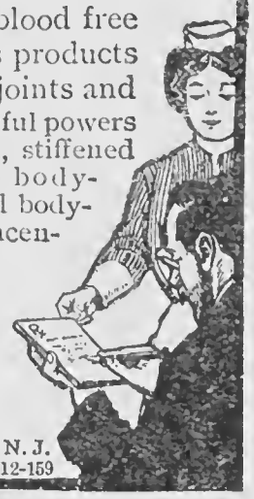
These are some of the things that have made this little society great, and sent their herds to Africa, South America, Japan, Cuba, Mexico, Central America, and scattered its representatives all over the United States as foundation stock. It is little wonder that its bi-monthly meetings are usually attended by hundreds of people from every section, sometimes a thousand, or more, and when they come, they find the everyday working farmers the owners of these herds, cows actually in use for commercial dairying, not being fitted for the showing, and when records and papers are wanted, they are produced, not promised for "future delivery." JOHN GOULD.

"WHAT makes you carry that horrible shriek machine for an automobile signal?" "For humane reasons," replied Mr. Chuggins. "If I can paralyze a person with fear, he will keep still, and I can run to one side of him."—Washington Star.

To Relieve Rheumatism

the body-waste producing uric acid must be gradually arrested and the blood purified.

Correct diet is essential. Abstain from tea and anything containing alcohol; eat meat only once a day and take SCOTT'S EMULSION which makes new blood free from the poisonous products which irritate the joints and muscles. Its wonderful powers relieve the enlarged, stiffened joints; and replace body-weakness with sound body-strength by its concentrated nourishing properties.



Physicians everywhere prescribe SCOTT'S EMULSION for Rheumatism.

Scott & Bowne, Bloomfield, N. J. 12-159

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : : :

"Licks the Bucket Clean"

Blatchford's Calf Meal

As good as New Milk at half the Cost.

100 pounds makes 100 gallons of Perfect Milk Substitute.

Send for pamphlet, **"How to Raise Calves Cheaply and Successfully Without Milk."**

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WAUKEGAN - - - ILLINOIS

Saved 23% on Feed Bills

and produced healthier, stronger, sleeker and fatter stock. That's the actual record of one man who fed

DeSoto's Brand Molasses

Molasses is high in carbohydrates but low in cost. Animals like it—thrive on it. Horses have more "work-energy"; cows produce more milk. Feed molasses to your stock or a month and note results.

Write for free booklet, "Feeding Molasses." Tells how to properly mix rations for different stock.

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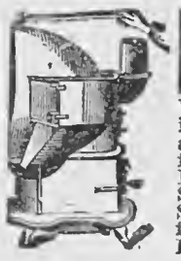

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With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for particulars and ask for circular. J. D. R. Sperry & Co., Batavia, Ill.

TRY IT 30 DAYS

Don't accept our "say so." Put this cooker to the test of *real farm-work*. A 30 days' trial will prove that

FARMERS' FAVORITE

Feed Cooker and Agricultural Boiler

is all we claim for it—and THEN SOME. Save time—feed—fuel. Guaranteed. Write for catalog and Trial Offer Coupon *today*.

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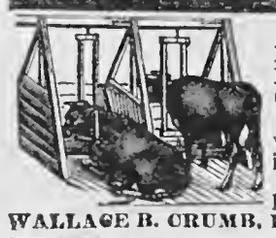

Prof. F. G. Helyar of Mt. Herman School, Mt. Herman, Mass., writes: "We could not get along without Warriner Stanchions."

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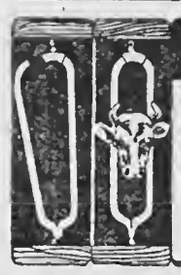

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Makes cows comfortable. Save time in stabling and cleaning. Easy to operate; cow proof; sanitary; strong, and durable.

Write for our prices and illustrated catalogue before buying.

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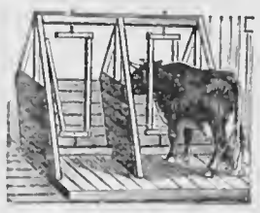


ROBERTSON'S CHAIN HANGING STANCHIONS

"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

O. H. ROBERTSON
Wash. St., Forestville, Conn.

EXCELSIOR SWING STANCHION

30 DAYS' TRIAL—STATIONARY WHEN OPEN

NOISELESS SIMPLE SANITARY DURABLE

The Wasson Stanchion Co., Box 60, -:- Cuba, N. Y.

The Best Conditioner and Worm Expeller

DEATH TO HEAVES
"Guaranteed or Money back"
Coughs, Distemper, Indigestion
NEWTON'S 50 cents and $1.00 per can

Use large size for Heaves. At Druggists or sent postpaid. Send for Booklet.

THE NEWTON REMEDY COMPANY, TOLEDO, OHIO

9 CORDS IN 10 HOURS

BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B68 showing low price and LATEST IMPROVEMENTS. First order gets agency.

Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.

Starting With Purebred Cattle.

The question many a young man has asked himself is this: "How can I start dairying with purebred registered stock with only a few hundred dollars?" Here is a young man's experience in the past six years. In April, 1907, he purchased a two-year-old heifer with a male calf by her side and half interest in a heifer calf, all for $100. He purchased the other half interest in the heifer and paid $30 to have the calf raised to one year old. He also gave the cow's milk and the male calf for the keeping of the cow the first year. The Spring of 1908 he rented a farm and took charge of his cow and heifer. On May 1 the same year the cow freshened with a heifer calf. The next Spring he had two cows to freshen but was unfortunate enough to get two male calves. The next year the same cows again freshened with male calves, but the two-year-old heifer freshened with a heifer calf, a granddaughter of one of the greatest herd sires of the world.

The Spring of 1912 fortune turned his way and each of his three cows freshened in her turn with a heifer calf. The following Fall he sold the four year old heifer and her Spring calf for $185. He then purchased two more cows, one eight and one seven years old, one for $100 (with one quarter of her udder gone) and the other straight and all right for $125. The former freshened with a heifer calf which sold at six months old for $85 and the new owner refused $115 a few days later and the cow sold this Fall for $125 (as Mrs. James Lampman said in one of her recent letters). The latter freshened with a male calf.

All male calves have been disposed of at good advantage and still the young man has nine head of Holstein registered females, the foundation cow, three daughters, three grand-daughters, and one great grand-daughter, and the cow which was purchased at $125.

His dairy is valued far above the original cost and increasing in value. He has been a member of the Holstein Friesian Association for the past three years. He intends to do some testing in future but has decided to let the cows do their own testing. MRS. A. L. CURTISS.

Ohio.

FARMERS' LAMB CLUBS.

The Department of Agriculture sends out a bulletin describing a method of selling lambs through coöperation. In 1883 the Goodlettsville Lamb Club was formed by farmers in Tennessee. These farmers found that by combining and selling their lambs in quantity they could obtain higher prices than when each farmer tried to handle a small lot. Starting with a dozen farmers the membership grew to 85. The plan of operation is quite simple. On April 1 the president calls a meeting and the members report the number of lambs and the weight of wool they can offer. Private sales are made up to April 1, but after that the members agree to sell together. When they know how much stock they have to handle the executive committee calls for bids as would be the case with any other class of merchandise. Here is a typical advertisement used in local papers:

Lambs For Sale.—The —— Lamb Club will sell by sealed bids about 800 lambs. Bids close May 20. Lambs are to be fat merchantable lambs weighing from 55 pounds up, and will be delivered from the 9th to the 12th of June. Club reserves the right to reject any or all bids. (Signed)————, Secretary.

If the bids are not satisfactory the club ships the lambs wherever it seems best to do so. In some cases they sell on futures or accept bids before the date of sale.

On the day of delivery the lambs begin to come in early in the morning in wagons or in flocks. The driven lambs are marked with bright colored paint which avoids confusion where flocks become mixed. Lambs are put upon the scales, which are handled by the executive committee. Lambs lacking in condition or weighing less than 60 pounds are discarded as culls. Comparatively few are thrown out, however, as the growers cull their lambs at the farm. Of the culls, the greater part are those lacking in age and of small size, but there are also some large ram lambs that have become what is locally known as "staggy." The president and one or two assistants weigh the lambs and credit each grower with his total weight. Delivery is commonly made before noon in time for loading. Payment is made on the day of delivery. The president or the executive committee pays the expenses, which are small, and apportions the balance among the members according to the number and weight actually delivered.

This plan of coöperative selling has paid these sheepmen. They have obtained more for their lambs and wool, and have been able to protect themselves in collecting their money.

The Robber Cow.

The Ohio Agricultural College spreads the news that some of the leading farmers of Gallia county, Ohio, are awakening to the possibilities of organized effort and coöperation. This has led them to form two coöperative organizations, the Gallia County Cow Testing Association and the Gallia County Buying Association. The same officers control both organizations, and one man can belong to both or only one. Each of the 25 men who are now in the Cow Testing Association pay $15 toward the expense of keeping a tester, and if more than 10 cows are being tested by a member, the cost is $1.50 per cow. Since there are 26 working days in the month, the tester is busy every day. One man found that one of his cows gave 1,165 pounds of milk in the month of November. The milk contained 60.75 pounds of butterfat which was sold for 33 cents per pound. The value of this and the skim-milk amounted to $23.97. The cost for feed was $6.80, leaving a profit of $17.17 for one cow for one month. This same man living on a 160-acre farm in Gallia County sold $1,500 worth of hogs during the year, and as much more was received for cream. This showing was made in a county where the soil is supposed to be poor. The activities of the association are also applied to the buying of fertilizers and feed. When orders are taken for the purchase of any large quantity of feed or fertilizer, each order must be accompanied by $2.00 in cash. When the fertilizer arrives the buyer takes it from the car and pays for it at that time. Should he refuse to take it he forfeits the $2. A saving of several dollars per ton is effected by such coöperative buying.

A Friend of Chester Whites.

Our experience with hogs is briefly as follows: We raised a few scrub hogs of no particular breed, for the purpose of letting them root up certain fields that we had planned to fertilize and plow later on. These scrubs not only did the work to our satisfaction, but actually and to our surprise showed us a good profit on our investment and care. We then decided that better hogs with better care would show better profits. After making inquiries about the different breeds from a number of good farmers in this section, we decided on the O. I. C. (which we subsequently found to be Chester Whites, for if they are bred together and their offspring eligible, we can see no difference though many farmers have a decided preference for one or the other).

As novices (not as breeders, but as breeders of hogs) we began breeding Chester Whites and O. I. C., bred from the best stock and bought from the best breeders in the business at good prices. Since then, considering investment, labor and all costs, they have been the most profitable venture in farming that we have ever had anything to do with, and we have bred horses, chickens and a few Jersey cows for over 25 years and have always bred pure stock. Our Chester Whites have in fact been profitable since the first six months after we began with them, and these profits have been creeping up all the time. As a breed, we have found the Chesters very prolific, and what is even more important, very good mothers, both as milkers and in being careful and kind with their pigs. We have found them quick growers, hardy, docile and easy to fatten. They are excellent foragers and do well on pasture. We have never had a sick (mature) hog on our farms, but have constantly used disinfectants and sanitary methods in caring for them. There has been a constant demand for Chester Whites, both as breeders and in our local markets, and not a week passes that some buyer doesn't stop at our farms for a breeder or for good pork.

Orange Co., N. Y. V. F.

SHETLAND PONIES
An unceasing source of pleasure and robust health to children. Safe and ideal playmates. Inexpensive to keep. Highest type. Complete outfits. Satisfaction guaranteed. Illustrated Catalogue. BELLE MEADE FARM, BOX 20, MARKHAM, VA.

8 REGISTERED SHROPSHIRE BRED Ewes FOR SALE. E. E. STEVENS & SON, Wilson, New York.

DOGS

COLLIE—Females only. Registered stock. $10 and up. Clark Farm, Boonton, N. J.

COLLIE PUPS—Natural drivers. Also English Bloodhounds, Nelson's, Grove City, Pa.

DAIRY CATTLE

Wanted—Young Calves, Dairy Breeds
Purchasers for pawpaw, persimmon, and elm Trees for Spring planting. WALNAPPLE FARM, Elm Grove, W. Va.

WANTED—WEANED AYRSHIRE HEIFER CALVES OR YEARLINGS—Carload, if price and quality right. WILLIAM HART, - Waukon, Iowa

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

FOR SALE—**A Registered JERSEY BULL**
St. Lambert. Dropped, March 28, 1913. Ready for service. Best of breeding and from a cow with a record of 27.5 lbs. of butter in 7 days. Cheap if taken at once. GEO. W. WALLACE & SON, Canandaigua, N. Y.

The Jerseys
Pay Dividends on $500 Per Acre Land

On the northwest coast of California there is a rainfall of from 50 to 100 inches per year. There land is worth $500 per acre, but grade Jersey herds are paying interest and dividends on that land, averaging 400 lbs. butter fat per year.

Moral: Grade up your herd by getting a pure-bred Jersey sire from a producing dam.

Get facts about Jerseys from
THE AMERICAN JERSEY CATTLE CLUB
324 W. 23d St., New York, N. Y.

If You Want Guernseys send for the Official Sales List of the NEW YORK GUERNSEY BREEDERS' ASSOCIATION, Box 96, Peekskill, N. Y.

DAIRYMEN

CUT down your feed bill and increase your cream check by keeping GUERNSEYS. A dairy of grade Guernseys will give you fine flavored yellow milk, cream, and butter.

Write for free literature

GUERNSEY CATTLE CLUB
Box Y, -:- Peterboro, N. H.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Hudson Valley Holstein Headquarters
Registered Thoroughbreds only. 1 hour from New York. MOHEGAN FARM, Mohegan Lake, Peekskill, N. Y.

Holstein BULL CALF
Six or seven nearest dams have A. R. O. record. A bargain. SABARAMA FARM, Baldwinsville, New York.

READY FOR SERVICE **Holstein Bull** Ontario Pietje Segis, No. 112,263, grandson of King Segis and Pietje 22d's Wooderest Lad. Show markings and grand individual. Price, $150. Don't buy scrub stock when you can get breeding like this at the price. Send for pedigree. Cloverdale Farm, Charlotte, N. Y.

THE TOMPKINS CO. BREEDERS' JOURNAL, with sale-list of pure-bred stock, 25cts. per year. Copy free. We have some very good offers in Holstein and Jersey cattle, German Coach Horses, Shetland Ponies, Southdown ewes and Cheshire gilts. A two-year Berkshire boar, registered, $25.00. TOMPKINS CO. BREEDERS' ASSOCIATION, Box B, Trumansburg, N. Y

FOR SALE CHEAP
Reg. HOLSTEIN BULL
ready for service. Reg. Male Calves, $25 and upwards. Choicely bred, fine individuals. Can also furnish a few cows. Satisfaction guaranteed. Write today.
HILLHURST FARM
F. H. Rivenburgh, Prop. Munnsville, N. Y.

SIX YEARLING HEIFERS
Thoroughbred Holsteins
READY TO BREED

E. T.	Born	Dam
763	Aug. 17, 1912	Nethanqua 2nd, 87713
764	Aug. 18, 1912	Nethalba, 124196
765	Sept. 19, 1912	Onira 4th Nellie, 107920
767	Nov. 23, 1912	Avoaka, 96958
768	Nov. 26, 1912	Maudekola, 91184
769	Jan. 13, 1913	Maryalba Pauline De Kol 2d Malina, 124185.

These are fine thrifty heifers. Will sell right. Come see them or write me.
EZRA HOLBERT, Lake, Orange Co., N. Y.

150 HIGH GRADE HOLSTEIN COWS
Large, fine individuals, nicely marked and heavy producers, due to freshen in August, September and October.
F. P. SAUNDERS & SON, Cortland, N. Y.

EAST RIVER GRADE HOLSTEINS FOR SALE
60 FRESH COWS, good size and well marked and in good condition; extra large producers. Come and see them milked. 40 COWS due to calf soon. They have the size and quality you like. Registered and grade Bulls always on hand. Bell Phone—14 F 5.
JOHN B. WEBSTER, Dept. Y, Cortland, N. Y.

Purebred Registered
HOLSTEIN CATTLE

You can find no way to invest your money and effort so profitably as in the selection and use of a purebred Holstein sire of good individuality. In a few years' time you can grade up a very poor herd to a profitable basis.

The Illinois State Experiment Station has been testing a herd where the average production has been increased $41.65 per cow in four years by the use of a purebred sire, and by testing the individual cows and disposing of the poor producers.

Send for FREE Illustrated Descriptive Booklets

Holstein-Friesian Asso., F. L. Houghton, Sec'y, Box 105 Brattleboro, Vt.

MILK TICKETS Latest Sanitary Style Express Paid Anywhere Samples Free. Dept. Y Travers Bros., Gardner, Mass.

SWINE

200 QUICK-GROWING MULEFOOT HOGS FOR SALE. JOHN DUNLAP, Williamsport, Ohio

CHESHIRES—Yearling sows bred. August pigs either sex. G. E. SMITH, Castile, N. Y.

Chester Whites—Registered Young Sows of Quality. Bred for April Farrow. Address, EUGENE T. BLACK, Scio, New York

FOR SALE—POLAND CHINA PIGS of Hart's Giants and A Wonder strains. Chester Hart, Barkhamsted, Conn.

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars. Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa.

DUROC-JERSEY (Thoroughbred) Boars four months old, $13.50 each. Greenfield Farms, Center Square, Pa.

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, New York

DUROCS—The Big Deep Fellows
A CHRISTMAS PRESENT
Have 10 Spring gilts. Will close them out at $25 each. Bargains in Fall pigs at $10, or two for $16 until January first. Send at once—these will be gone in 3 weeks. SHENANGO RIVER FARMS, Transfer, Pa.

TAMWORTHS—Pigs, gilts and boars ready for service for sale at reasonable prices. All well bred and none but good individuals offered for sale.
WESTVIEW STOCK FARM
D. J. LYBROOK, Mgr. - R. 1, Winston-Salem, N. C.

WANTED GOOD Jersey Red Boar ready for service. H. W. Cobb, Ridgewood, N. J.

PIGS—$5 each. Berkshire-Chester White cross. CLARK FARM, Boonton, New Jersey

Springbank Berkshire Herd
BIG BERKSHIRES I have bred more high-class hogs than any breeder in Connecticut. Watson's Masterpiece No. 123931 at head of herd. Nothing for sale but March and April pigs at present.
J. E. WATSON, Prop., Marbledale, Ct.

Large Berkshires at Highwood
A cordial invitation is extended to those interested in the care of swine to visit and inspect our herd and its surroundings. Over one hundred sows, bred and open, for sale. Service boars, and pigs all ages. H. C. & H. B. HARPENDING, Dundee, New York

Berkshires
of all ages and both sexes. Good individuals and bred equal to the best. Dams and sires are granddaughters and grandsons of Masterpiece and Premier Longfellow. Foundation stock from the John McLennan herd of Fayetteville, N. Y. Box R, Department of Animal Husbandry, Syracuse University, Syracuse, N. Y.

If you want the best hog
Write us. Our farms are devoted exclusively to the production of Berkshires. Breeders in the following States have been supplied from our great herd: N. Y.; Penna.; Dist. Col.; Md.; Va.; N. C.; S. C.; Ga.; La.; Ala.; Miss.; Fla.; Tenn.; Ky.; Texas, and Porto Rico.
Berkshires for foundation and show purposes a specialty.
THE BLUE RIDGE BERKSHIRE FARMS, Asheville, N. C.

Horses and Mules

KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

$3,000 Percheron Stallion at Stud—Imported and Registered. Iron grey; 2,020 lbs. Fee, $25-$40. MOHEGAN FARM, Peekskill, New York

50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

207 Prizes Won
At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H.
ADIRONDACK FARMS, - Glens Falls, N. Y.

GREAT AUCTION SALE —OF PERCHERONS—
THE FAIR VIEW STOCK FARMS
J. H. JOHNSON -:- UNION, W. Va.
Will sell 50 head of Stallions and Mares at the barns of Col. G. W. Crawford, Newark, Ohio., January 15th, 1914.
25 IMPORTED MARES, 15 AMERICAN BRED MARES, 10 STALLIONS
This is one of the greatest offerings of the season. Choice lot of Mares of the best of breeding. Mares all bred and most of them showing heavy in foal. All horses guaranteed breeders. Write or wire for information.
J. H. JOHNSON, Newark, Ohio

AILING ANIMALS.

Lame Cow.

I have a young cow that has lately gone lame, seems to be sore in the shoulder, walks sore and stiff as if it might be rheumatism. Could you advise treatment? G. F. M.

Michigan.

It is quite impossible for one to determine the cause or location of mysterious lameness, without making a personal examination. Rheumatism is rare in young cattle and scarcely a likely cause of the lameness. Better make a careful examination of the foot. A. S. A.

Wound.

I have a mare that stumbled and cut her kneecap. The skin is off four inches square. I have been bathing it and using powder (disinfectant). Is it advisable to take the scab off every time I bathe it, or should I let the scab remain on the sore and what should I put on it?

Pennsylvania. N. M.

Make a lotion of one ounce of sugar of lead and six drams of sulphate of zinc, in one pint of soft water and apply this three times a day. Do not remove the scab, unless it is quite loose, or if pus is exuding from under the scab. Tie horse so that he can not lie down, or bump the knee. A. S. A.

Bog Spavin.

How shall I go about it to treat a bog spavin on a horse? The injury is of quite long standing. Will it be necessary to blister it so as to take the hide and hair off, or is there some better way known at present? I want to cure it so that she will go sound, and the joint is very sore now. P. N. G.

Bog spavin of long standing and causing lameness and soreness is practically incurable; but firing and blistering may be tried, together with a prolonged rest, and the "hide" need not be taken off, although the hair will have to be removed by clipping. Only an ignorant empiric would maltreat a horse by removing "hair and hide." Employ an up-to-date graduate veterinarian. A. S. A.

Wounded Horse.

I have an old mare injured with barbed wire in hind leg. The wound refuses to heal, and the horse limps increasingly. I am not working her now; she holds leg up, evidently in pain. The wound has proudflesh growth in it, bleeds and is a deep and ugly looking one. I have frequently bathed to keep clean and applied powdered alum. What can I do for it? C. D.

New York.

Cleanse the wound perfectly and when dry swab well with tincture of iodine and apply the iodine at intervals of twenty-four hours, for three days. Do this at noon. Night and morning on days iodine is used wet wound freely with a mixture of one ounce of sugar of lead and six drams of sulphate of zinc in a pint of water and after discontinuing the use of iodine tincture use the latter lotion several times a day until the wound heals. A. S. A.

Scours.

Can you tell me what to feed my calves to keep them from having scours? I feed separated milk. Start them on whole milk, then mix with separated milk. To begin I feed one quart three times a day and gradually increase. When they are two weeks old they are having two quarts three times a day. I keep them clean and spray with creolin and not one of them has escaped the scours. O. S. B.

New York.

Do not feed frothy milk. See that the milk utensils are perfectly scalded and sun dried. Contaminated feeding vessels commonly induce scours. The trouble probably starts there. Isolate a calf as soon as it starts to scour. Clean up, disinfect, whitewash, perfectly ventilate and sun light the calf pen. If you then have any trouble with scours mix one teaspoonful of the following mixture with each pint or pound of skim milk fed: Formeldehyde, half an ounce; distilled, or freshly boiled, water, fifteen and one half ounces; to be kept in an amber or yellow colored bottle to prevent chemical changes. Give the scouring calf a two or three ounce dose of castor oil, shaken up in milk, before starting the formaldehyde medicated milk. A. S. A.

Eczema.

I have a colt and filly that were three years old last June; they have run in pasture during Summer. Neither one has done well; the filly is completely covered all over her back and some down on her sides and legs with little bunches with scabs; pick off the scab and there is just a little pimple with moisture coming out of it. They do not rub much, but like to be rubbed or curried. The colt is not quite so bad, but has some sores. Can you tell me what it is and what to do for them. J. H. W.

New York.

Have the animals clipped at once; then wash affected parts of body with 1-100 solution of coal tar dip and repeat as often as found necessary. Give two drams of Fowler's solution of arsenic night and morning, after smaller doses have been given for a week; then continue the treatment until the animals are in good condition, at which stage the medicine may be discontinued, taking at least a week to the work. Feed roots or silage along with whole oats, wheat bran and mixed hay. Let the colts run out every day, unless in stormy weather. Blanket if stable is warm until coat has grown sufficiently to protect the animals. If you do not care to clip them wholly, clip the hair from the belly and from the legs above the knees and hocks. A. S. A.

Cough and Catarrh.

I have a horse 13 years old in good condition and feeling fine, but has had a cough and discharge of nose since June. Now his cough is somewhat better except that when he rolls or gets up he coughs, and sometimes discharges from nose. Let me know what to do for him to break up cough. P. E.

Pennsylvania.

On general principles have his teeth attended to by a graduate veterinarian who will make sure that a diseased tooth is not present and causing the discharge. This is scarcely probable, however, as you do not say that a bad-smelling discharge is present. It seems more likely that the old horse has a cold and cough. Wet all feed. Keep the stable clean and perfectly ventilated. Give half an ounce of Fowler's solution of arsenic night and morning until one quart has been used; then gradually discontinue the medicine, taking at least a week to the work. If the cough persists and is troublesome it might be relieved by giving one ounce of glyco-heroin three times a day. A. S. A.

Lameness.

I have a nine-year-old horse, which started to get lame beginning of July. I had a veterinarian who blistered the horse, and when he had stood at rest one week I took him out for a drive. He went pretty well for about one mile, but all of a sudden he went very lame and stiff. The veterinarian came the second time and again blistered the horse, and after a week's rest I drove him for a short distance; he again got lame and stiff. His trouble seems to be from the knee down and the right front of leg; as he walks he throws his foot out and walks very stiff. Could it be rheumatism? The veterinarian says no. The horse did very little work during the Summer. Can you advise me what to do? F. O.

New York.

Rheumatism would not be likely suddenly to lame a horse in the way described. The symptoms indicate high lameness; not in the leg below the knee. Possibly it is a case of embolism, from plugging of the artery. Have the veterinarian make an examination for that when the horse is suddenly attacked. Nothing can be determined when the lameness has subsided. Such a trouble would prove incurable. We are taking it for granted that the horse does not interfere, and at such times bruises the fetlock joint of the lame leg. In interfering cases special showing should be done by an expert and ankle boots should be worn. A. S. A.

Pigs With Cough.

We have several pigs, and among them we have noticed some coughing. Can you advise us what to do for them or what is the nature of their disease?

New Jersey. J. D. P.

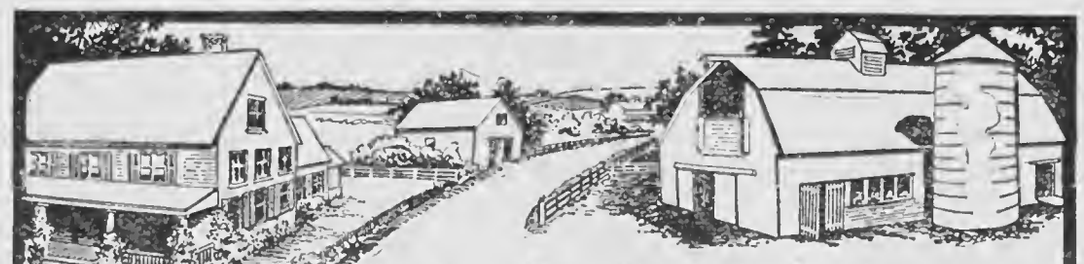
You do not state the age of the pigs or give particulars relative to their feeding or management. If they are little sucking pigs the cough may be due to dust in the bedding. This is a common cause, and often it leads to fatal pneumonia. Bedding for pigs should be as free from dust as possible and for that reason oat straw usually is a poor material. Shredded cornfodder will be found suitable, and next to it comes wheat and then rye straw. We have found that peanut straw is sometimes used in the South, and it has, to our knowledge, caused wholesale losses among little pigs. If the pigs are weaned and have run on pasture the cough is due to lung worms (strongylus paradoxus), for which pest there is no specific cure. Turpentine may be given in dram doses for each 80 pounds of body weight of pigs and continued for three consecutive days and repeated in two weeks or so if thought necessary. Some of the worms are free in the intestines and associated with other intestinal parasites, which are likely to be killed by the turpentine. Generous feeding is necessary to enable the pigs to withstand the ravages of the worms. Give them free range on clover, Alfalfa or rape; but keep them off old, contaminated pastures and especially from low-lying, wet pastures. Feed digester tankage at the rate of 10 per cent with other nutritious meals and grains in slop. Avoid contaminated drinking water and clean up, disinfect and whitewash the pens and houses. Also cleanse and sterilize all feeding and watering troughs and swill barrels. A. S. A.

Belgian Hares.

The question was recently whether Belgian hares pay where feed must be bought. I answer decidedly yes. For example, from October 1, 1913, up to the present date, I have sold 800 young rabbits for meat alone, say nothing of stock sold for breeding and pets. I have to buy every ounce of feed they eat, and my books show a fine profit if they are carried up to a system of feeding. C. E. H.

Warren, Ohio.

R. N.-Y.—There is little evidence in the markets that hares or tame rabbits would prove profitable except for a very limited trade.



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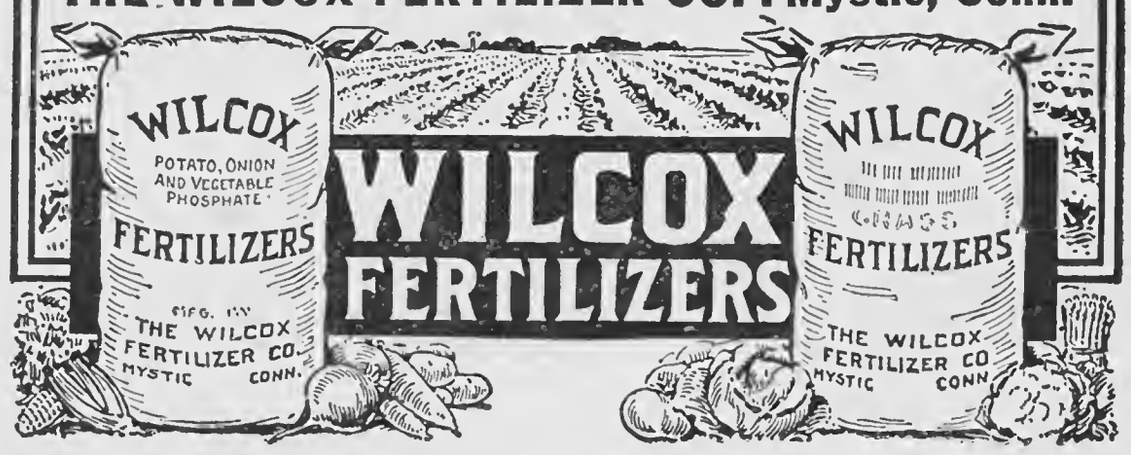

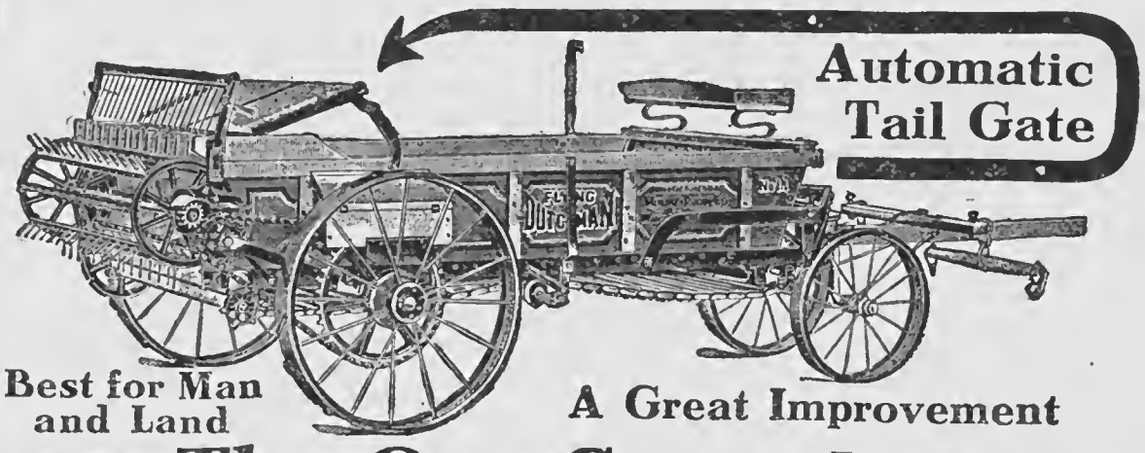

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A BELGIAN HARE MAN TALKS.

We often have questions about the profit in raising Belgian hares, or other tame rabbits. There have been many conflicting statements about the profit to be obtained from this kind of stock. We know of many people who started breeding these hares, only to give up the business in disgust, after meeting with serious loss and disappointment. Now and then, however, we meet people who come with the proof that they are making these animals pay. Mr. C. E. Hill of Ohio is a breeder of these rabbits, and he tells us something about the business.

What is the cost of feed for one good-sized doe?

Such a doe fed up to a system properly and regularly should have about one-half pint oats and bran in the morning. We mix 32 pounds of oats with 12 pounds of bran. The oats cost us 55 cents a bushel, and the bran 1½ cents a pound. At night each doe has half a pound of hay, or what she will eat up clean and not waste. At all times the rabbits should have plenty of pure water.

How many litters will a good doe handle in one year?

Five, and not overwork her.

How many young will she average?

There will be an average of seven, and with proper care she will raise an average of six.

What would be the first cost of a good doe?

All the way from $1.75 to $10, depending upon color, breeding and similar things. The average doe will cost about $2.50.

At what age age do you sell the young rabbits for meat?

At from six to 10 weeks old. We generally get 50 cents at six weeks, and 70 cents or a little more at 10 weeks.

This seems like a big statement to us, as such figures would make up a profit far in advance of even that claimed by the boom henmen or the cow wizards.

I can prove all my statements, and tell you where I sell the rabbits in four different cities.

Can anybody do it?

No, it would be nonsense to claim that. Can everybody make a fortune or even a living out of hens? Plenty of people start this rabbit business just as they start the chicken business.

What do you mean by that?

They buy one incubator, and perhaps a dozen eggs. They put the two together, and then go to bed, where they dream they have made a million dollars. By and by they wake up and find that they have got to get out into the cold and take care of their stock. Then they get that tired feeling, sell out for about 10% of what they paid, and say there is nothing to it. That's right, because they never put anything except money into it, and it takes brains and care to get money out.

You call the rabbit business a hard one then, do you?

A man must be two-thirds rabbit, and he can't raise hares simply by raising a beard. It is a business that takes time and care, lots of study, and kindly disposition, and the strictest attention to business.

Is there a demand in the city market for rabbit meat?

A bigger demand than you think. You may not know it, but many a time in the cities when you call for chicken in a pie, or similar meat dish, you get rabbit, and sometimes a poor quality of rabbit at that. A good, tender, quick grown Belgian hare is something to make a man well satisfied with life, and when you learn how to raise and sell them the satisfaction is double

Goats as Sheep Protectors.

More than 50 sheep have been killed in this vicinity during the past few weeks by dogs at night. I have heard that if a billygoat was placed in the lot with sheep he would defend the flock from the ravages of night-running dogs. Can you tell me whether this method of prevention has ever been resorted to? C. S. B.

Niverville, N. Y.

This plan has been tried, but not with full success. Some billygoats will fight hard and master a single dog, but these curs often run in packs and scatter the sheep so that the goat cannot protect them. We have one report of a flock of Angora goats, noted as good fighters, yet the dogs got in and killed many of the goats.

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Name .....

P. O..... R.F.D.....

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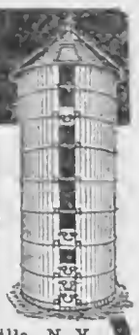

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Ration for Bull Calf.

I have bought a purebred Guernsey bull calf. I am told he will be no good for breeding, as he had no rudimentary teats. Is this true? Could you give me a feed that would force him along for service? He is 16 weeks old. How long before he is ready for service, and how much will it cost to get him registered?
Terryville, Conn. B. B.

The size of the rudimentaries on a young bull is of little consequence. Their location is considered more of a guide in determining the type of udder that might appear on the heifer calves sired by this particular bull. They should be located well apart, preferably in the form of a square or rectangle, and should not emanate from the same point. There seems to be a difference of opinion as to the importance of this index in the selection of a bull, and judgment suggests that the breeding of the bull and his individuality be limiting factors in his selection. The argument relating to the correlation between the shape of the udder appearing on heifer sired by bulls whose rudimentaries are placed in a certain way, can be both roved and disproved by considering a large number of cases. As relating to a useful ration for a growing bull I would suggest equal parts of crushed oats; wheat bran; cornmeal and distillery grains supplemented with Alfalfa or clover hay. The amount to feed would depend upon the age, size and vigor of the bull, enough being fed to keep the animal growing vigorously, yet he should not be padded with fat, especially if he is inactive and confined to the barn. Under average conditions of growth and development, a bull may be used for light service when twelve or fourteen months old. To use him at a younger age is a questionable practice, and it would be much better if his first service was delayed until he was fifteen months old.

The cost of registering a Guernsey bull with the American Guernsey Cattle Club is $1 to members and $2 to non-members of the club for each animal, provided sketches identifying color markings are filed with the Secretary, Wm. H. Caldwell at Peterboro, N. H. before the animal is 30 days old. Delays in making sketches are expensive, as the fee for registering an animal after he is one year old that has not been previously sketched, and the sketch placed on file is $10. Blanks and full information relative to the requirements of this breeders' association may be obtained by requesting same from the secretary.

F. C. MINKLER.

Ration for Young Cattle.

Will young cattle thrive and do well on roots, beets and turnips, alone, or with the addition of a few pounds of wheat bran daily, with but little roughage through the Winter? How much should two-year-olds have daily? C. B.
New Jersey.

Young cattle had best be fed in addition to such succulent feed as roots, beets and turnips, a grain mixture made up of cornmeal and wheat bran, utilizing a mixture of five parts cornmeal to two parts of wheat bran. Five pounds of this mixture to a heifer weighing 400 pounds would be about the right amount, provided she was given in addition all of the roughage that she would consume, and a reasonable amount, say 20 pounds, of any one of the root crops suggested. A two-year-old heifer might be appropriately fed six pounds of this mixture, which would insure rapid growth and good development. F. C. M.

Flax Straw for Fodder.

Is flax, cut green and not thrashed, good to feed milch cows and horses? Flax is full of seed. A. R.
Alpine, N. Y.

It is sometimes stated that flax straw is likely to form balls of undigested material in the stomach of animals eating it. According to my own observation this is not the case, and while I have known of several cases where flax straw was fed in moderation, I have never personally heard of any injury resulting therefrom. It must be remembered that the seed contains linseed oil, and fed in too large quantities, might be too laxative. Otherwise, I think it would be very good, especially for milch cows. C. L. M.

Ration for Freshening Cow.

We bought a cow in September that was to freshen this month. When we got her she gave about 10 pounds of milk to each milking and is still giving that amount. Is there any way of telling when she is to freshen? I feed about three quarts to each milking composed of ground oats, barley, bran, shorts and oil meal, also am feeding some carrots and oat hay. She loses milk from one of her teats. What can I do for this? She is a Jersey and Durham and gives very rich milk. How long ought a cow to be dry before becoming fresh? Would it be possible that she would not dry up?
Oregon. J. H. W.

I would advise, if possible, that you have some one who is familiar with cows look at your cow and give his opinion. Generally the calf can be quite plainly felt on the right side, back of the ribs and in front of the flank, rather low down. This is especially true after a cow has drank heartily, and at such times there is apt to be considerable motion. For a week or two before parturition a sinking down between the hip bones and tail is noticeable. As a general thing it is better for a cow to be dry for six or eight weeks but some cows refuse to do so. Your cow is evidently a good one, and gives very rich milk. The only remedy I know of for the leaking teat is to use a teat plug, which can be obtained from a dealer in veterinary supplies, or to paint the end of the teat after each milking with liquid collodion. If she leaks but little, let it alone.

C. L. M.

Fattening Yorkshire Hogs.

Reading about J. R., who could not fatten Yorkshire hogs, I want to tell you about mine. I bought two pigs six weeks old in April for $7. I fed them brown middlings and bran mixed, started on one pint of each, and increased monthly till I gave two quarts of each. When about 50 pounds each I started in to give all my fish scraps and a little middlings. About one month before killing I gave corn on cob twice a day and cold water and middlings once. I killed these hogs Dec. 20; the smallest weighed 260 pounds, and the largest we could not weigh on a 300-pound scale. Six weeks before killing I fed no fish scraps, and now there is no taste of any. These pigs, with the first cost, amounted to $35, and $2 for killing. I sold the small one at 12 cents, or $31.20. The large hog, over 300 pounds, cost me $5.80, and I keep it for myself. I think they did fairly good. Some say there is no money in keeping hogs here. A. C. K.
Long Island.

Effect of Silage on Butter.

Will you inform me regarding silage and its effects on butter? I am in favor of building a silo, but the neighbors say that it affects the butter, giving it a bad smell. J. B.
Napanock, N. Y.

Feeding reasonable quantities of good silage up to 30 pounds per day would not affect the butter. There might be a "bad smell" if the milk or cream were left too near the silage, so as to absorb some of its odors. These would not come to the butter through feeding.

Value of Silage.

Can you inform me what my this year's crop of silage would be worth per ton to sell? I am located in a thickly settled dairy section. I am about to sell my farm, reserving stock and fodder.
Jefferson Co., N. Y. E. C. M.

As often stated, silage for sale has a comparative value. Usually it is figured at about 35 per cent of the local price of hay in the barn. The feeding value may not correspond, but this is a fair statement of selling value.

Rye and Oats for Cow Feed.

Will rye sown with oats at the rate of one-half bushel of rye to two bushels of oats and ground with other grain for cow feed cause the cows to abort or injure them in any way? S. J. B.
Ohio.

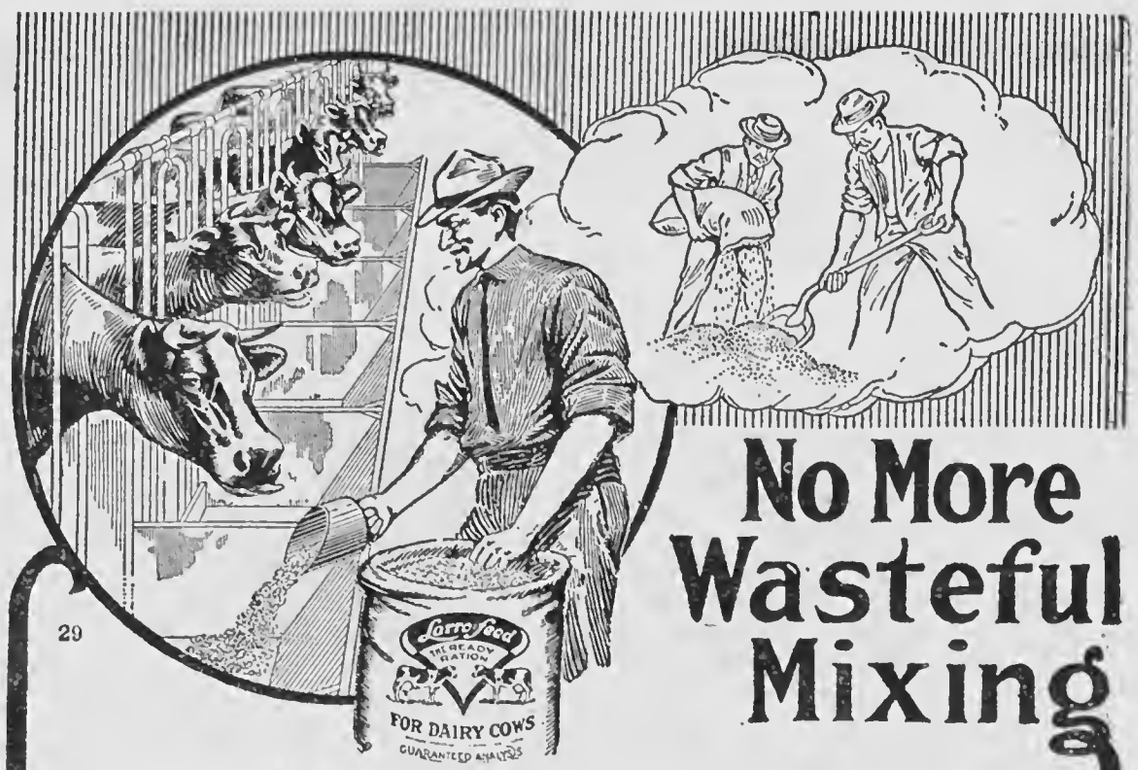
There would be little, if any, danger in your climate from ergot in the rye—which is what produces abortion. But why sow rye with oats? Canada field peas are much better—give a larger yield and are better for feeding.

SILAGE FOR HOGS.—Mature swine can utilize some corn silage to advantage. It is not sufficient ration in and of itself, but should supplement some more nitrogenous grain ration. It has a slight laxative effect, and is very good to form part of the ration for animals six months of age or older.

H. C. AND H. B. HARPENDING.

BERNIE BOSTON: "Shall we go and have a look at the apiary?" Marie Malaprop: "Gracious, no; I just detest those horrid monkeys."—Cornell Widow.

SON (a golf enthusiast): "You must acknowledge, father, that it requires a great deal of skill to drive a ball a hundred yards——" Old Farmer: "Shucks! It don't require half as much skill as it does to drive a pig fifty feet."—Boston Transcript.



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contains absolutely nothing that *you* wouldn't want to put into a ration if you mixed it at home. It contains Dried Beet Pulp, cottonseed meal, gluten feed, distillers' grains, wheat bran, wheat middlings and a little salt—that's all. Every carload of ingredients and every batch of feed is analyzed, so that LARRO-FEED is always uniform. That's why we can dare to make this famous Larrowe Guarantee: "Feed 200 lbs. to any one cow—if results don't convince you that it's the best feed you've ever used, we agree to refund every cent of your money." Read that Guarantee again—and then ask your dealer for a trial lot of this wonderful feed. Large free sample mailed on application.

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LIVE STOCK NOTES.

Why I Keep Holsteins.

We bred one of the smaller breeds of dairy cattle for a number of years, and our losses were, we thought, too heavy. The calves at birth were delicate and often subject to disease, and the local market for surplus bulls was practically nothing. We first started with the grade Holsteins, and their milk and butter production was much more than others had been, besides they had larger and stronger calves, and surplus cattle were always in demand at satisfactory prices. After a few years with the grades we put on some purebreds and have been more than pleased; with over 75 purebred calves dropped, we have not yet lost a single one. The cattle are very strong, good feeders and we found less unprofitable animals than we found with other breeds. The Holstein bull calves are ready sale at from $50 to $100 each when from one to six months of age. This of course only applies to calves from untested or small record cows. If good bulls are used, and it certainly does not pay to use any other kind on purebred cows, the bulls from large record cows are always in demand at good prices. They are of course very quiet, pleasant cattle to handle, and when they have served their usefulness at the pail they will bring something for beef, we having sold some recently weighing from 1,500 to 1,700 pounds. I have yet to find the man in this section who ever started with Holsteins now keeping one of the smaller breeds, and if properly grown (the first year of their life) they will make money for their owner. At the prices good young clean straight Holsteins are bringing at public auctions by the thousand and have for the past eight or 10 years, there is no question that there is money in breeding them. A. G. DANKS.

Warren Co., N. J.

Storing Butter.

Can I store butter away for future use? Just now I am getting more than I need, so would like to store some away.

Sandy Hook, Conn. J. S.

I think the only method of keeping butter satisfactorily through hot weather is to put it into some kind of cold storage where the temperature is not far from freezing point. When this cannot be done, perhaps the next best method is to pack it in stone crocks, after salting it as heavily as your taste will allow, cover the surface with a cloth, over which is sprinkled a good layer of salt, and store in the coolest part of the cellar. I have often eaten butter stored for several months in this way, but to my taste it could hardly be called the "golden head of the staff of life." C. L. M.

Co-operative Live Stock Improvement.

A bulletin from the United States Department of Agriculture says: "The Portage County (Ohio) Improvement Association, which was organized less than a year ago, now has more than 3,000 members. The County Agricultural Advisor, was recently designated to select a number of purebred animals for breeding purposes. The dairy interests predominate; and the agent was guided by the needs of respective communities he was serving. In all 33 registered bulls were purchased, 22 being Holsteins, seven Guernseys and four Jerseys. He also selected four purebred Percheron stallions and one Belgian. The farmers were assisted in organizing a semi-annual stock sales day. The first sale, which has just been held, was thoroughly advertised, and was in the hands of competent auctioneers. The offerings were quite large and exchanged hands to a considerable extent among the farmers of the county. Through these two agencies every part of the county is within easy access of a high-class sire for herd improvement, and is also afforded a convenient and economical method for disposing of surplus stock; two factors of fundamental importance in live stock development.

Purebred Swine for Poor Men.

I have read an article on page 1309 with great interest. I am just a beginner in raising and breeding swine. One year ago I started to study the breeds. I have taken a fancy to the Poland China; I feel satisfied that they are the poor man's pig, as they are easy feeders, mature in due time, and are fairly good breeders; farrow with little or no trouble, and are noted as good mothers. I have a registered boar, and the dam is registered. My neighbor had a litter of pigs from a scrub sow bred to my registered boar, for which I claimed a pig at the age of six weeks. He received $6 per pair at six weeks old. I had a litter of purebred stock which I sold for $10 at the same age; therefore I gained $4 per pair over the price of common stock, which shows the difference in scrub and purebred stock. Without wishing to differ with Mr. Black on the question of the Chester White, as they no doubt equal to or surpass the Poland China, as to the production of pork the Poland China looks good to me. The pigs also produce a fair quantity of lard, but are more of a bacon type, but can be made to fatten at quick notice. I am only young in the business and like many others have much to learn. G. E. S.

Mauch Chunk, Pa.

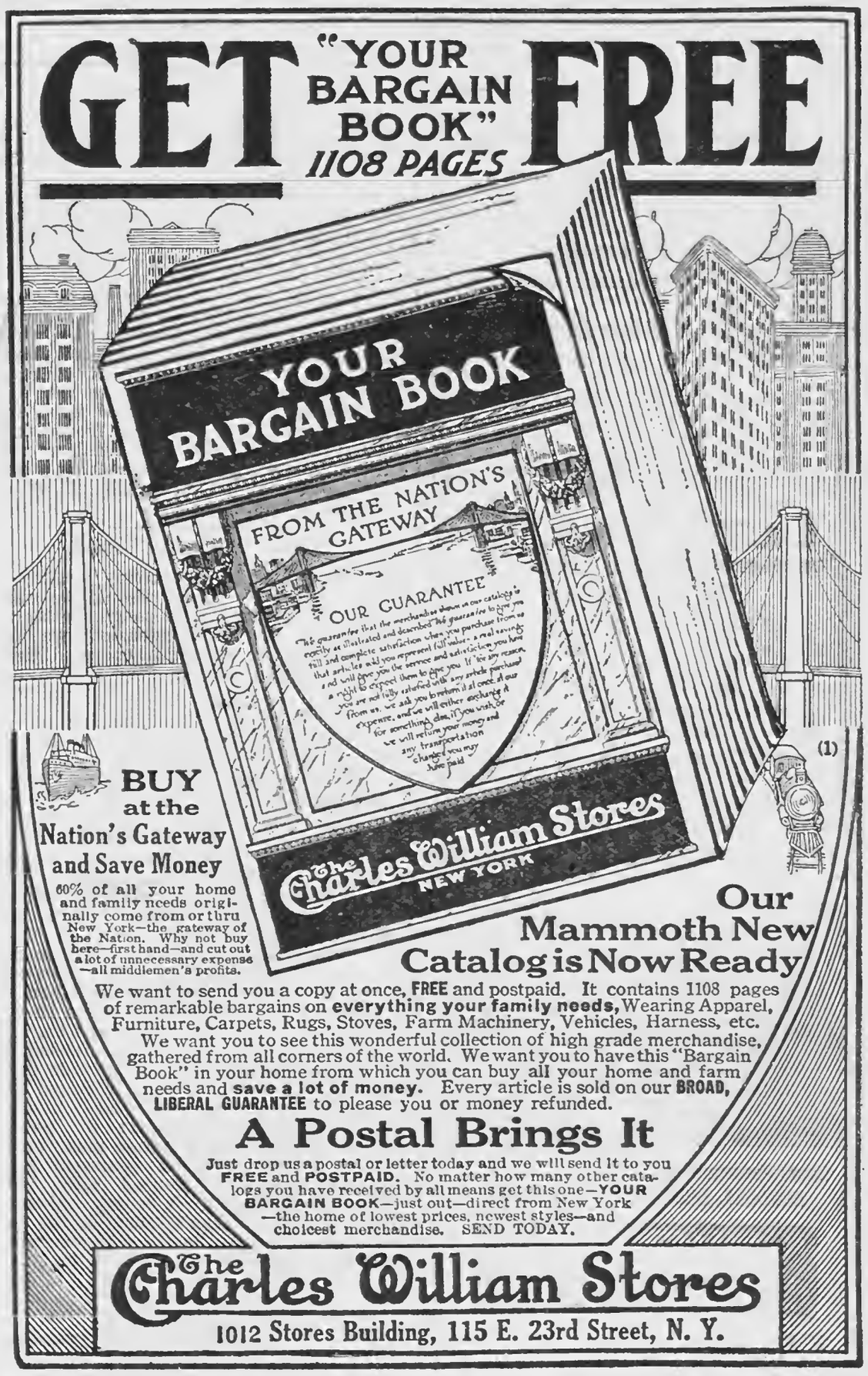
PREVENTING BUTTER FROM STICKING.—Replying to a late inquiry how to prevent a butter print from sticking, keep the print in cold brine all the time when not in use. F. O.

Castleton, N. Y.

COMPUTING PROFITS.—I notice that many farmers use the word "profit" rather loosely, since they place everything except money expended for feed under that heading, their own time and use of their buildings being apparently worth nothing. As an example I would cite the reports of the productiveness of certain sows which were given. To such I would like to recommend the report of Mr. Sidmore, "The Cost of an Oat Crop," page 1318, as a model by which to go. W. J. M.

GUERNSEY CATTLE NOTES.—At the recent meeting of the American Guernsey Cattle Club in Chicago, a report of the Club's work for the first five months of the fiscal year show a great gain in the growth of Guernsey interests. More bulls and cows and a large number more transfers have been received than during a similar period last year. The work of 942 cows is being followed in the Advanced Register. These represent 155 breeders; 2,636 cows average 8,465.40 pounds milk and 423.53 butterfat, with an average per cent of 5.003. A summary of the cattle under test showed a large majority of the breeders (122 as compared with 26) were using the two-day test period with their animals.

SILAGE FOR BEEF.—The high price of beef is starting farmers into two lines of thought. One is hunting for grain mixture which will partly take the place of milk in calf feeding—the other experimenting with silage for beef feeding. The following is printed by the Wisconsin Agricultural College: "As men make new discoveries to meet new economic conditions, so, when all kinds of food stuffs advanced in price, did the stockmen begin to look around for a feed that would lower the cost of feeding cattle for the market. They found the solution of this problem in silage, for after a series of tests made by experiment stations and by the stockmen themselves, it was found that when silage was mixed with a ration it considerably lowered the cost of gains. Just as silage for a long time has been considered necessary for profitable dairying, so it is now beginning to be considered as a necessity for the economic production of beef both on the farms of the Middle West and on the ranches of the West and Southwest."



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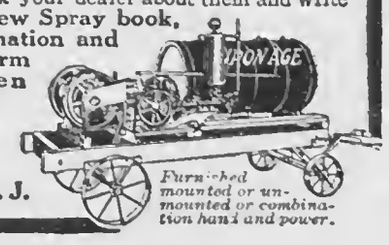

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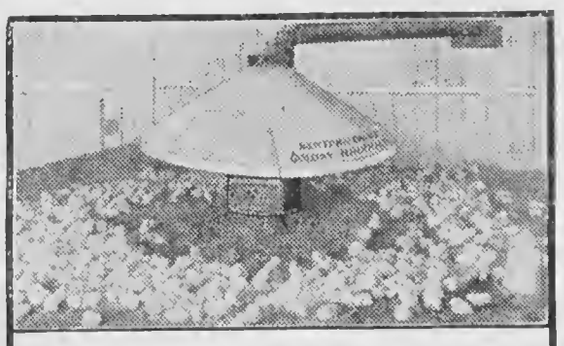

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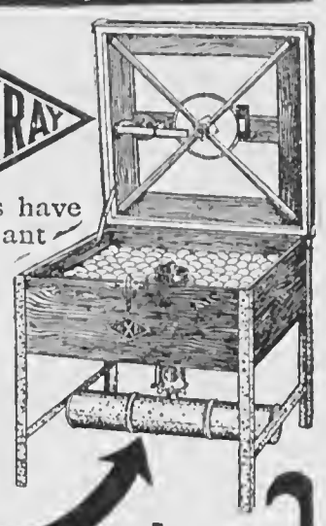

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The Henyard.

Leg Weakness in Pullets.

What is the matter with my pullets? They seem well and healthy and all at once they go lame in one leg, and then the other; then they get helpless and drop and die. Yesterday one laid her first egg and she became helpless and cannot walk. I have never had anything like it. J. S. C.

Ohio.

I cannot be certain as to the cause of the leg weakness in your pullets from the very limited amount of information which you give. Rheumatism, from cold, damp, drafty, quarters is a frequent cause of lameness and inability to use the legs, but it should not be followed by immediate death. If the trouble from which your pullets are suffering is fatal, as your letter indicates, there is something wrong which only complete knowledge of all conditions would reveal. M. B. D.

Ration for Fattening Poultry.

What is best to feed young poultry to fatten quickly? Which should be used, sweet milk or sour milk to get better results and why? It is understood we have the poultry in sanitary coops. Many use sour milk; and is that better, and why? H. M.

Boonville, Ind.

The Cornell fattening ration is composed of the following: 100 pounds cornmeal; 100 pounds buckwheat middlings; 100 pounds oat flour, or flour middlings; 30 pounds beef scrap, and one pound charcoal. These are thoroughly mixed and about 12 hours before use the desired quantity is made into a porridge with sour skim-milk or buttermilk; 10 pounds of feed requiring from seven to nine quarts of milk. Feed fattening stock three times daily, confining them to fattening crates or in small runs. Give only as much as they will quickly clean up and do not attempt to force them in this way for more than about two weeks. Another fattening ration recommended by the Maine Station is: 100 pounds cornmeal; 100 pounds wheat middlings; and 40 pounds of meat meal. Still another is: 100 pounds cornmeal; 80 pounds wheat middlings; 20 pounds meat meal; and 20 pounds oatmeal (Ontario Agricultural College). Soured milk gives better results with fattening mixtures than water, doubtless because of the beneficial effect of the lactic acid contained as well as because of its food value.

Washing a Bird for Exhibition.

What is the right way to prepare a bird for a poultry show? B. A. B.

Findlay, O.

For show purposes white birds should usually be washed unless they are exceptionally clean themselves. All birds, however, should have their legs and feet soaked in warm water and with a blunt toothpick all dirt should be cleaned from under the edges of the scales on the legs and feet. Often many of the old scales on the shanks can be worked loose with the thumb nail. That is about all that needs to be done, but white birds need washing. The washing of birds requires a lot of patience and thoroughness in the work, and if one is not willing to give this, the probability is the birds will look worse after washing than before. There should be four tubs of water. The temperature of the first should be about 100 degrees. The others should gradually cool off until the fourth tub is about 70. After immersing the bird by grasping the legs and tips of both wings in one hand, as soon as it becomes quiet, loosen up carefully the feathers on all parts of the body and let the water soak clear into the skin everywhere. Then with a cake of white soap begin to rub the bird's back and body in the same way the feathers lie, rather easily at first, but after the feathers get soaked and the soap begins to make them pliable, they can be rubbed more vigorously. After a minute or two in the water they can be scrubbed with a cake of soap. The base of the tail near the oil sac and the fluff under the vent are the parts that need washing most. Every bit of dirt everywhere in the bird must be loosened if she is to look well when finished. After scrubbing the bird and getting the soapsuds into the skin on every part of the body and every bit of dirt loosened up and removed, the bird should be transferred to the second tub for rinsing. However, the same movements should be gone through, and all soap removed from all the feathers of the wings and tail and all over the body. The third tub is also a rinsing tub, and when taken out of the third tub, the bird should be absolutely clean. The fourth tub should have some bluing in it and the bird be rinsed a little more. The drying of the bird is almost as important as the washing. It should be wrung out as dry as possibly with the hands and allowed to flutter by tossing it up into the air gently and catching it before it touches the ground. In this way the bird will shake much of the water left in the feathers out. It should then be placed in a clean coop with clean shavings where the temperature is about 90 degrees. After staying there three or four hours, the temperature should be lowered gradually in order that the bird shall not catch cold.

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Under ordinary winter conditions hens lay poorly, because they are cooped up, deprived of green stuff and cannot get exercise. The egg organs consequently become sluggish and inactive and the hen puts on fat instead of converting her ration into eggs. Hens must have a tonic during winter to tone them up, invigorate the dormant egg organs and keep them healthy.

Dr. Hess Poultry PAN-A-CE-A

is just such a tonic. It makes hens lay. It contains ingredients for toning up the whole digestive system and enriching the blood. The U. S. Dispensatory and all noted veterinarians certify each ingredient to do what I claim for it. Pan-a-ce-a is a scientific preparation—back of it is my 25 years' experience as a doctor of medicine, veterinary scientist and successful poultry raiser. But I don't want you to try my Pan-a-ce-a on anybody's claim or say so, but on a

Money-Back Guarantee

So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your hens lay during winter, that I have authorized your dealer to supply you with enough to feed your whole flock, and if it does not do as I claim, return the empty packages and get your money back. Pan-a-ce-a is never sold by peddlers, only by reliable dealers whom you know. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Send for my new poultry book—it's a stunner and it's free.

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Dr. Hess Stock Tonic

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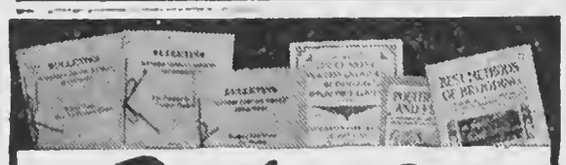

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THE EGG-LAYING CONTEST.

Egg production continues to increase; the gain during the sixth week is 121 eggs. Last week the gain over the previous week was 136; 962 eggs were laid this week, and the total to date is 3,937. Tom Barron's White Wyandottes laid 49 eggs during the week, taking first place. His total is 199. Neale Bros. pen of White Wyandottes are second with a score of 42. Francis F. Lincoln's White Leghorns are third with a score of 41; their total is 213, the leading score; 14 eggs ahead of Barron's White Wyandottes. The race between the Leghorns and Wyandottes from now on, will be interesting to watch. My money is on Barron's White Wyandottes. Having shown what he can do with Leghorns, I think Mr. Barron is going to show this year that he can beat us with an American breed. He breeds also Buff Wyandottes and Buff P. Rocks; both of these have taken premiums at egg-laying contests in England.

A peculiar thing is happening at the Storrs contest; many birds have begun to molt. In the pen from Braeside Poultry Farm seven of the ten birds are molting; in Chas Heigl's pen eight of the 10 are molting; 20 of the White Leghorn pens contain birds that are molting. There are molting birds also among the White P. Rocks, Buff P. Rocks, Rose and S. C. R. I. Reds, White Orpingtons, and even among the "dunghills." This is partly due to birds having been hatched too early, and that started laying some time before the contest began. But there are other reasons. Birds that had been laying stopped when moved to new surroundings; then the abundant and stimulating feed started the production of feathers. This may be only a partial molt, if it is a full molt, then no eggs may be expected from these birds for 60 to 90 days. Weather conditions also affect fowls to much greater extent than is usually thought; and this moulting may be partly due to that. But whatever it is due to, it will teach us the lesson that considerable care and skill are required to bring fowls to the point where they will begin laying near to a certain date, and be sufficiently well nourished just prior to that date, so that the yolks will mature rapidly and keep them laying. Dividing the total number of eggs laid by each breed, by the number of pens, shows the White Wyandottes far in the lead of any other breed. Their pen average is 128.8. The pen average of the White Leghorns is 65.6; of the Barred Rocks it is 44.5, of the Buff Rocks it is 27; of the S. C. R. I. Reds it is 35.4; of the R. C. R. I. Reds it is 67; of the White P. Rocks it is 7.

This goes to show that there are some extra good laying pens among the White Wyandottes, in fact there is only one poor laying pen among them. Taking out that pen the average for all the other pens would be 155.6. A few of the leading pens are given below:

	Week	Total
BARRED ROCKS.		
J. J. Francais, Long Island..	39	117
F. L. Tuttle, Massachusetts.	17	32
BUFF P. ROCKS.		
A. A. Hall, Connecticut....	9	10
W. C. Morgan, Connecticut..	12	44
WHITE P. ROCKS.		
F. H. Benton, Connecticut..	13	25
WHITE WYANDOTTES.		
Tom Barron, England.....	49	199
Neale Bros., Rhode Island..	42	195
Merrythought Farm, Connecticut	23	137
West Mt. Poultry Yards, Connecticut	24	92
BUFF WYANDOTTES.		
Dr. N. S. Sanborn, Massachusetts	6	26
Am. Buff Wyan. Club, New York	10	30
S. C. R. I. REDS.		
Pinecrest Orchards, Massachusetts	20	107
Dr. J. A. Fritchey, Pennsylvania	26	101
Colonial Farm, New Hampshire	15	85
I. S. Gillespie, Connecticut..	22	45
R. C. R. I. REDS.		
C. S. Scoville, Connecticut..	11	76
Glenview Farm, Connecticut	18	58
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut..	41	213
Storrs Agr. Sta., Connecticut	35	155
Tom Barron, England.....	36	131
Storrs Agr. Sta., Connecticut	20	97
Cecil Guernsey, New York..	35	107
Chas. N. St. John, New York	12	92
P. G. Platt, Pennsylvania..	8	90
F. M. Peasley, Connecticut..	19	86
WHITE ORPINGTONS.		
P. A. Demgar, New York..	3	12

Sixteen pens have not yet laid an egg.

GEO. A. COSGROVE.

An Incubation Experiment.

I have two incubators, 100 and 200-egg. I get 8 to 10 duck eggs each day. I shall not keep them over eight days. I start incubator in January, fill 100-egg machine, test out in seven days, date them and put them in 200-egg machine; fill 100 egg machine again, test out in seven days, date them and place them also in 200-egg machine and then continue. During the hatching season, each 28 days will take off ducklings and replace with tested eggs from small machine. Can an arrangement of this kind be made a success? P. A. B.

Benton Harbor, Mich.

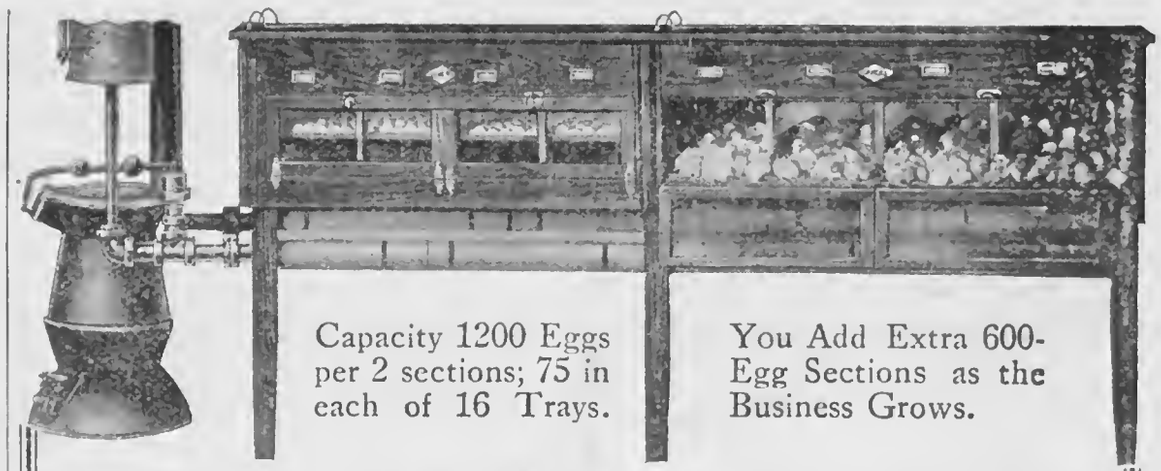
I think not. If I understand your plan, you would have considerably more than 200 eggs in your large incubator at the beginning of the fourth week for the first lot. More than this, you would have hatching ducklings and eggs at all stages of incubation in the large machine at the same time, making it impossible to keep the temperature at the right point. The animal heat given off when eggs are hatching produces a high and irregular temperature that would be detrimental to the younger eggs. So far as I know, continuous hatching in a single compartment incubator is not practicable and is not practiced. M. B. D.

Hen Ailments.

Would you give a list of hen distempers and their remedies, dose of remedy to the quart of drinking water? P. D. H.

New York.

A list of hen disorders, with enough of a description to make them recognizable, and an outline of their treatment, would occupy about all the space in one issue of THE R. N.-Y. As a rule, the ax is the best "treatment" for a sick fowl, as the time and labor consumed in treatment and the risk run of having the disease communicated to the healthy members of the flock are greater than the value of the bird. There are times, however, when a fowl of more than ordinary value may well be given special consideration. M. B. D.



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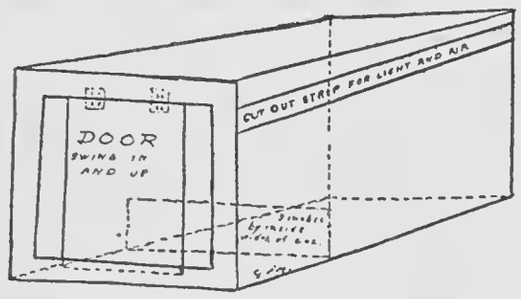
The Henyard.

Trap Nests Under Dropping Board.

Trap nests, unless placed under the dropping boards, are apt to form tempting roosting places for the fowls, if they are not capped in some way so that the fowls cannot obtain a footing on them. Nests under dropping boards are generally arranged so that hens enter from the rear, and provision is made to gather the eggs from the front. With the trap-nest, however, the hen enters from the front and is removed the same way.

There are many good nests on the market ready built, but a tier of serviceable traps can be built from cracker boxes if you have small fowls, or match boxes for the larger fowls. Remove from each side of the box, near the top, a strip of wood an inch wide. This will admit light and air. From one end of the box, which we will now call the front, cut a square opening a little larger than the hen that is to use it. Take the material sawed from the front and make a door hinged at the top and so hung that it will swing very easily inward but not at all outward. If a strip 1½ inches wide be cut from each side of this door the hen will open it herself on seeing the



CRACKER BOX TRAP NEST.

egg inside. Eight inches back from the front, across the bottom of the box, nail an upright strip three inches high. Back of this put the straw and nest egg. If the door be made solid it will have to be propped open by a short stick set under one edge. The hen will then enter and in stepping over the partition raise the door a little, dropping the stick and permitting the door to close behind her. In arranging a nest of this sort under the dropping boards, do not forget to place a three or four-inch board a little in front of and level with the bottom of the nest for the hen to fly up to from the floor.

Have all fowls banded with numbered bands that will stay put. When a hen had laid she will stand in the front part of the box waiting to be removed. Do this by raising the door with one hand and allowing the hen to walk into your other hand to have her number noted. Not over one egg in five hundred will be broken by the hens in this kind of a nest.

Michigan. P. L. W.

Eliminating Non-layers by Examination.

In a recent issue of THE R. N.-Y. M. B. D., in answering an inquiry about the condition of the pelvic bones in fowls he had bought for breeders, passes over rather lightly what is a very important means of telling whether hens are laying or not, whether they ever have laid or are, or have been, prolific layers of large eggs. Because this physiological knowledge was sold at absurd prices, and claimed to be an infallible test of the fecundity of the hens, need not relegate the large amount of useful truth in it to the discard, especially as it is of financial importance to be able to cull out all non-laying pullets in January and sell them as roasting chickens, thus cutting down feed bills and converting non-profitable producers into cash, and again in June I sell off all hens that have stopped laying except those to be carried over as breeders. A pullet that has never laid has the end of the pelvic bones rigid and close together. The orifice of the vent is yellow, and closely contracted. When she starts to lay the cartilage joint of the pelvic bones becomes soft and elastic, allowing the tips of these bones to spread apart easily, and leaving a space between these tips of the width of two or three finger tips. The vent becomes moist, easily opened and showing the mucous lining to be dark pink and quite moist. Given these conditions we can state quite positively that she is laying, as we can say in a cow where the pelvic bones become loose and settle that she will soon drop a calf. After the hen has laid out and is sitting, resting or moulting the mucous membrane becomes paler, and the pelvic bones become more rigid, and settle with the points nearer together, but never lose the unmistakable evidence that she has laid. The distance between the pelvic bones and the size and elasticity of the mucous lining of the vent determine whether she lays a large or a small egg. BUCHANAN BURR.

Line-breeding in Poultry.

What is line-breeding in fowls, and how is it carried on? W. A. ALLEN.

Bridgeport, O.

Line or inbreeding consists in mating animals to their own near kin, instead of going outside the family for new blood. The distinction between line, and inbreeding is not clearly made, but inbreeding is, perhaps, usually understood as mating sire or dam to their direct descendants, as daughter, granddaughter, etc., or son, grandson, and great-grandson in the case of females. Line breeding would, then, be mating animals of less close degree of relationship, but still belonging to the same family; as cousins, uncle and niece, etc. A flock of fowls into which no new blood is introduced from year to year is said to be inbred, as all members of the flock quickly become closely related.

Pekin Ducks vs. White Leghorns.

Once more, is there money in hens? From experiment station results and from the records of practical poultrymen who keep close tab on their expenditures, it would seem to cost from $1.80 to $2.10 to feed a hen a year, at the present cost of feeds. And this too when purchasing supplies in fairly large quantities. Now if a fair commercial yield is 120 eggs per year, at say an average price of 30 cents per dozen, where is the labor income when such factors as interest, depreciation extra help, repairs and losses of various kinds are considered? It is a rare thing for a man to fail at raising White Pekin ducks. When handled properly these birds will weigh five to six pounds at 10 weeks, and the price has been uniformly good for several years. In certain sections many folks have been raised to affluence at this business. Have any of your readers, raising both White Leghorns and White Pekin ducks in a commercial way, ever made a comparison of the profits from each? A. C.

New York.

R. N.-Y.—We welcome such comparative figures.

Can Hens Control Laying?

I read with much interest Mr. Cosgrove's remarks on page 1337 regarding the control by the hen of egg production. This may be an exceptional case, but I know of a hen being found dead, and on opening, a large cluster of eggs was found all ready with yolk and albumen but no shell. Each egg as it left the cluster and entered the oviduct simply joined onto the first original egg, and so on until filled with eggs. This must have caused pain or at least irritation, and if the hen has the power of stopping production, why did she allow this to happen as I have illustrated? I do not know of anything that has interested me more than Mr. Cosgrove's remarks, and I wish you would publish any criticisms of his statements. The question is, what surroundings does a hen need for constant egg production?

New York. F. A.

The above is a very interesting case. I never heard of one like it. At first thought it would seem to militate against the theory that a hen can stop or control egg production. Perhaps it is not the will or caprice of the hen that stops egg production, but the nervous shock which she sustains when moved to a new location, or when frightened. I had a hen that on being killed and opened, was found to have her abdomen filled with the cooked yolks of eggs The mass was as large as the doubled up fist of a large man. But it will be noticed that in neither of these cases was there any sudden shock to the nerves; the hens remained in their accustomed surroundings, with their usual food, etc., and there was nothing to stop the usual processes of nature. In the case I mentioned above the heat of the body had actually cooked the yolks, so that it was one solid mass. The cause was undoubtedly a ruptured oviduct; allowing the yolk to fall into the abdominal cavity. The white or albumen of the eggs was not visible at all; whether the yolk was dropped through before it reached the place where the white surrounds it, or whether the more liquid white was absorbed into the system, I don't pretend to say. I wish someone would explain why part of the hens at the contest stop laying after the first few days, and others in the same surroundings continue right on. There is a good deal yet to be learned in the poultry business. GEO. A. COSGROVE.

Cotton-Seed Meal for Hens.

Cotton-seed meal seems to be a cheap source of protein. For chickens would it be a good supplement for corn grain ration and dry mash bran and shorts, and in what proportion? C. W. M.

Cotton-seed meal has not found favor as a food for poultry, and has, in fact, been considered absolutely dangerous by good authorities. The Mississippi Agricultural Station has recently issued a bulletin, however, describing a series of experiments in which cotton-seed meal was made to replace meat scraps as a source of protein, and with apparently good results. Their work has not been conclusive but they state that it has tended to show that "As far as can be determined, the general condition of cotton-seed meal-fed fowls seems just as good as that of those fed upon beef scraps." They feed as large a proportion as 22 pounds in 98 of dry mash constantly before the fowls. While their feeding experiments seem to indicate that cotton-seed meal is of value as a poultry food, they do not unreservedly command it, but say that much longer tests are needed to ascertain its cumulative effects.

"WHY is it," queried the fair widow, "that they always say a man 'pines' for a woman?" "I suppose," growled the fussy bachelor, "it's because the pine is about the softest wood there is."—Pathfinder.

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BUFFALO MARKETS.

The general conditions in Boston market during the Christmas holiday trade were brisk, with the supply just about right to supply the demand in nearly all cases. The trade in trees and greens was lively and large, as general decoration was more in evidence than usual this year. Trees were perhaps not as large as in years past, yet the price of 15 to 25 cents as a general rule was in favor of a larger than usual sale. Fruit in most cases sold unusually well, as no over supply of any kind was in the market, and good stuff brought good prices. Good apples sold well; best Baldwin $5.50 per barrel, with not quite as good going at $3.50 to $5; King and Spy $5 and $6; Greenings $3.50 to $5; common box stock $1 to $2. Western box fruit $2 to $3 for Jonathan, Grimes Golden, Beauty, Winsap, etc., with Winter Banana $4. Cranberries $7 to $9 per barrel, and $2.50 to $3 per box. Bananas $2 to $3.25 for good yellows with small bunches of seconds at $1 to $1.25 each; reds $3.50 to $4.50 for best, with small bunches $1.50 to $2. California melons $4.50 per crate; California lemons $5 per box, others around $4. California oranges $2.50 to $3.50 per box; Florida $3.50 to $4.50 for best, others $2.25 to $3.25 with a good demand at these prices. Grapefruit $2.50 to $4 per box. Pineapples $3 to $5 per crate. Florida strawberries 75 cents per box; native Beurre pears, box $4.

Tomatoes were a little short of the demand, being close picked to fill the demand as far as possible with native stock which went at 40 cents per pound, Floridas $5 and $6 per six basket carrier. Native celery very short, and as demand was imperative brought $2.50 to $3.50 per dozen bunches for Boston market and Pascal, while California white stock sold at $1.50 for best. Cucumbers were up in price from last quotation, bringing $12 per box of 100 for best; other grades $5 to $11. Lettuce is always in demand at this season and at present prices of 75 cents per box of 18 heads is a good crop to grow for profit. Cabbage is not a Christmas dish, and while it has brought $2.50 and better per barrel a short time since is now going at about $1.75. Cauliflower $2.25 to $3 per crate for California and Belgian stock. Onions in good demand at $2 to $2.25 per bag for native; Spanish $3 per crate. A short crop of squash keeps prices up. Hubbard $60 to $70 per ton, while Marrow and Turbans went at $2.50 and better per barrel. Rutabaga turnips short at $1.75 per bag, with egg and purple-top going at 60 to 70 cents per box. Good beets $1.25 per box; carrots 75; parsnips $1; Southern spinach brought $1.50 per barrel. Southern kale brought $1.25. Potatoes while not plentiful were enough in evidence to supply demand at reasonable prices going at $1.35 to $1.50 per bag of two bushels. Good sweets cheap for this season at $1.75 per barrel and 85 to $1 per basket.

The chicken and turkey market is much more in favor of the common buyer than at Thanksgiving time. Good turkeys were in good supply at from 20 to 25 cents per pound wholesale and 22 to 30 cents retail; these birds were much better in condition and looks than the Thanksgiving birds. Good Western geese were offered at 16 to 18 wholesale. Best native roasting chickens were offered at 22 and 24; good 18 to 20; common chickens and fowl 14 to 20; broiler chickens and fowl at 28; Western 24. The above prices are for dressed stock.

Dressed beef, best, 12 and 13; good 11 and 12; best veal 15; good, 12 and 14; common 10 to 12. Best fancy lamb 14; good 10 and 12. Best dressed hogs 10½. Live hogs at Brighton 8 to 8½. Live beef $7.50 to $8.50 for best, good grades at $6; common $4.25 to $5.50; poor $3.25 to $4.25 per hundred. Live veals 7 to 10 cents according to size and quality.

The horse market is slow at present, second hand find hard sale and must be kept a few months to realize value on same. A few first-class heavy horses go at $325 to $450 when a sale is made; lighter stock for common average business $200 to $300 each. Fancy milch cows bring $125 and hard to find. One sale is reported at Brighton of a fancy purebred Jersey at $300. Common milch cows go at round $60 each. A. E. P.

BOSTON MARKETS.

The Buffalo produce market turns on the increasing plentifulness of certain Southern fruits and the low price of potatoes, at a time of the year when almost everything ought to be going up. Potatoes have gone down quite lately, till farmers are beginning to hold them back for better prices. Sweet potatoes, which have been about as low as white ones, are now a little higher and dealers report that their next purchases will be still higher. The consumer pays 40 cents a peck for sweets and from 80 cents to $1 per bushel for whites.

The supply of apples is increasing, a good many varieties now selling by name, both home-grown and western. The price is 10 to 15 a small measure of not over 10 apples, some fancy western retailing as high as two for five cents. A fine sample of Wealthy is offered as eastern grown. It is claimed that this variety will color up about as well here as it will anywhere. Fancy red and green apples retail at $5 a barrel and nothing is quoted at less than $3. The effort is made to handle the home-grown sorts after the fashion of western and the Snow varieties are among those that come close to the mark. The offerings are quite liberal. An effort is made to sell windfalls in quantity, but they are not making a good appearance, being quite dirty and dull appearing. The high price has kept them above canning factory and evaporator prices.

The warm weather is still telling against poultry, so that dealers are not handling it in any quantity. The quotation is 25 cents a pound for dressed turkey, but the finest turkey can be bought at retail for that. Dressed fowl is five to eight cents less than turkey. Live fowls are less plenty, as the egg-laying season returns. The Buffalo Housewives' League has shown its enterprise by selling, a few days before Christmas 3,000 dozen eggs at 33 cents a dozen. They had been in storage a short time, but at this time of the year were practically the same as newly laid. It is expected that the league will repeat the experiment in some way before long. To make the best showing these eggs should have been offered on the first of December, for the regular quotations of fancy eggs is not now above 39 cents. Prices are still declining.

The mild season has told against the shipment of vegetables. Celery arrives fairly burned up and what is saved of it sells at 10 cents for small bunches. Brussels sprouts have had a fine Fall to mature and are coming in much improved condition, but retail at 20 cents a quart, which is too much, with beets, carrots, parsnip and vegetable oyster retailing at five to eight cents a bunch or small measure. Lettuce, too, is fine, heads as big as a small cabbage retailing at 10 cents. Radishes are also plenty and low, two bunches for five cents. Watercress has ventured out again, retailing at two small bunches for five cents. Cranberries are in three grades, retailing at 5, 10 and 15 cents a quart. J. W. C.

LIVE STOCK AND DAIRY PRICES.

Buffalo had a plentiful supply of milk last Summer. The farmer's price was advanced from 14 to 16 cents per gallon, which did away with the shortage of other years. The high retail prices have also taught the consumer to economize in the use of milk, so a milk famine is out of question. The general retail price is eight cents per quart. G. E. S.
Clarence, N. Y.

Milch cows from $60 to $80. Veal calves 12 cents on foot; hogs 11 cents dressed. Beef dressed by the side 13 to 15. Chicken young and old 18 and 20; eggs 40. Cabbage $1.50 to $2 per barrel. Celery 50 cents dozen, seven and eight cents a stalk. Potatoes 90. Hay from $8 to $14, for clean Timothy straw $8 to $9. Apples 90 to $1.25 per bushel. Peaches were from 50 cents to $1.50 per basket, one-half bushel. Strawberries $3.25 to $4 per 32-quart crate.
Coopersburg, Pa. A. W. B.

The prices we get are as follows: Hay baled $15.50 wholesale; straw $9; beef 9 to 10 cents a pound; hogs 11 to 12; butter, retail to consumer, 40; eggs, strictly fresh, retail, 50; potatoes, retail, from $3.50 to $5 a barrel. These prices are what we get here in Bradford township and possibly may be a little high for people living in smaller towns, farther back. M. I.
Custer City, Pa.

Good young horses, $100 to $200; old plugs, $5 up; beef, nine cents; veal, 14; mutton, nine cents; lambs, dressed, 15; pork, 12½ to 13; at the car; veal calves, nine cents; lambs, 7½. October and November price for milk, $1.95 per cwt.; butter, 35 up; eggs, strictly fresh, 48; fowls, live, 16; dressed, 18. Apples are very scarce, $1 to $1.50 per bushel; potatoes, 90 to $1; rutabagas, 60 to 75; carrots, 75; parsnips, $1 to $1.25; onions were $1.25; are now $1.50 per bushel; cabbage, five to eight cents. Hay at auction, $10.50 to $15 in mow; just ordinary scrub cows, $20 to $50; grade Holsteins, $75 to $100. A. C. G.

There is just enough snow here to whiten the ground a little. The roads are frozen, but not very rough. Considerable plowing was done this Fall. Farmers are now busy getting up their Winter's wood supply, although this is a light task compared with 25 years ago. Now there are two or three gasoline sawing rigs in most of the neighborhoods through the country, and when a farmer gets up a large pile of wood he hires a sawing rig and the wood is cut up in a hurry. Considerable baled hay has been shipped this Fall from here, and still there are a few lots of hay for sale yet. Cows remain high. There was an auction a week ago, near here; the stock was registered grade Jerseys, and sold from $39 to $110 each. Butter 30; eggs 30; chickens, live, 12; dressed hogs 10. P. S. S.
Chautauqua Co., N. Y.

THE trial of a notorious old moonshiner was over and he had been found guilty. The judge lectured him severely on his long criminal record, and then sentenced him to thirty-six years' imprisonment, saying that the court had no feeling of anger toward him, but only of pity. The prisoner listened stolidly and said as he left the courtroom: "Well, I suah am glad he wasn't mad at me."—Credit Lost.

Five-Hundred-Year-Old Pastures

Yield Rich and Abundant Crops of Clover when Fertilized with

Genuine Thomas Phosphate Powder

(Basic Slag Meal)

Key-Tree Brand

FAILING PASTURES are fast becoming a serious problem.

For years animals that have fed upon these pastures have carried away plant food from the land; Nitrogen in the forms of milk, flesh and wool; Phosphoric Acid in enormous quantities in the bones. Cattle bones, as a matter of fact, are fifty per cent bone phosphate of lime. Consequently, old pastures are found to be especially deficient in phosphoric acid, and of a generally infertile character.

The use of nitrogenous fertilizers is rarely profitable upon pasture lands, but by the application of GENUINE THOMAS PHOSPHATE POWDER, Key-Tree Brand, (which furnishes Phosphoric Acid, Lime, Magnesia and Iron,) the character of the herbage may be completely changed.

In place of the tough wild grasses, sorrel and weeds, there comes in a rich growth of clovers and highly palatable grasses, which transform the barren fields into luxurious feeding grounds.

After trials of various fertilizers on pastures for fourteen years, Professor William Somerville says: "Basic Slag applied as a single dressing at the rate of half a ton per acre has generally proved a most effective agent in improving the feeding value of pasture and its benefits are not nearly exhausted at the end of nine years."

Clovers will take their nitrogen from the air; but clovers must have Phosphoric Acid and Lime in abundance. ***Genuine Thomas Phosphate Powder, Key-Tree Brand,*** furnishes 17 to 19 per cent Phosphoric Acid and 35 to 50 per cent of Lime.

More cattle on our pastures will help to solve the problem of the high cost of living.

The whole story is told in our new booklet, "FIVE-HUNDRED-YEAR-OLD PASTURES." Is it not worth your while to study this carefully with a view to reducing your grain bills from one-third to one-half? A copy is yours for the asking.

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Fertile and beautiful farm lands, water fronts and timber land on the Eastern shore of Maryland.
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244 ACRES—gravel soil, high cultivation; convenient to Buffalo; mile from macadamized road; two dwellings, three barns, creamery, fruit packing house, granary, hoghouse; 20 acres fruit, twenty-four acres timber, balance plow land, meadow and pasture. Sixty dollars acre. Fourth down. DURAN PALMERTON, Eden, N. Y.

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Bargain Hunters! Read This—141 acres—20 acres timber and wood; balance, level and rolling; water best; 11-room house; 3 barns, 30x45; basement, 26x40, 20x20. 4 miles to Railroad town; ½ mile to school; fruit. Must go: $2,200; $1,000 cash; balance, time. Hall's Farm Agency, Owego, Tioga Co., New York

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PUBLISHER'S DESK

An interesting case of alleged fraud was recently tried out in the New York City courts. John Forsythe ran a high-class men's furnishing store. His prices were high, but men paid the price, always feeling that they got superior value. Recently the firm failed, and the trade name and stock were sold to Lieberman Brothers, a firm also engaged in men's furnishings. Nat Presberg bought a shirt from the latter firm with the Forsythe label, and believing it to be a Forsythe $5 shirt. He paid $1.89 for it, the representations being that he was getting a bargain. Later he discovered that the Forsythe label was sewed on over another label and that he had actually bought a Manhattan shirt that sold usually for $1 at retail. Mr. Presberg brought an action against Lieberman Brothers. The defendants proved that it had been the custom of the Forsythe firm to purchase shirts from other manufacturers and have the Forsythe label sewed on over the label of the manufacturer. It was not proved definitely that the Manhattan shirts had gone through the Forsythe store, but neither was it shown that Lieberman had bought them direct from the manufacturer. The argument of the defense was that Lieberman had bought the goods and the right to use the Forsythe label, and that they were justified in selling the goods just as they came into Lieberman's possession just as Forsythe would have done. The case was dismissed on this showing. Yet Presberg paid nearly double the value of the shirt, and how many men previously paid Forsythe $5 each for similar shirts is merely a matter of conjecture. I cite this case to confirm what I have often said, namely, that city people are really more gullible than countrymen. In their egotism and pride and vanity they swallow doses that the countryman would scent miles away. When it comes to cupidity the honors seem about even. When a man or a woman becomes mesmerized with the prospect of quick riches, he or she, whether in city or country, falls for the allurement.

HELP WANTED

In locating a man representing himself to be S. M. Wilson, of 2014 Detroit Street, Cleveland, Ohio, a dealer in forest shade trees, for whom a warrant has been issued.

DESCRIPTION.

Said party is about five feet and 10 inches in height, age about 45 years, weight about 150 pounds, dark hair, slightly gray, mustache, three gold teeth, has black spot in one eye, probably caused by injury, wore dark gray suit, black overcoat, patent leather shoes, gold-rimmed spectacles. Party seemed to be well educated, and of good personal appearance.

This party buys forest shade trees of farmers, sells and transplants same for residents of towns, and after collecting for them, departs without paying for board, teaming, trees or labor.

Anyone locating this party is asked to cause his arrest and notify J. D. Yocom, Mayor, Oberlin, Ohio.

We gladly publish the above at the request of Mayor Yocom and congratulate Oberlin in having an executive officer who interests himself in the protection of the people of his city. We hope some of our people may be able to locate S. M. Wilson, and report direct to the mayor.

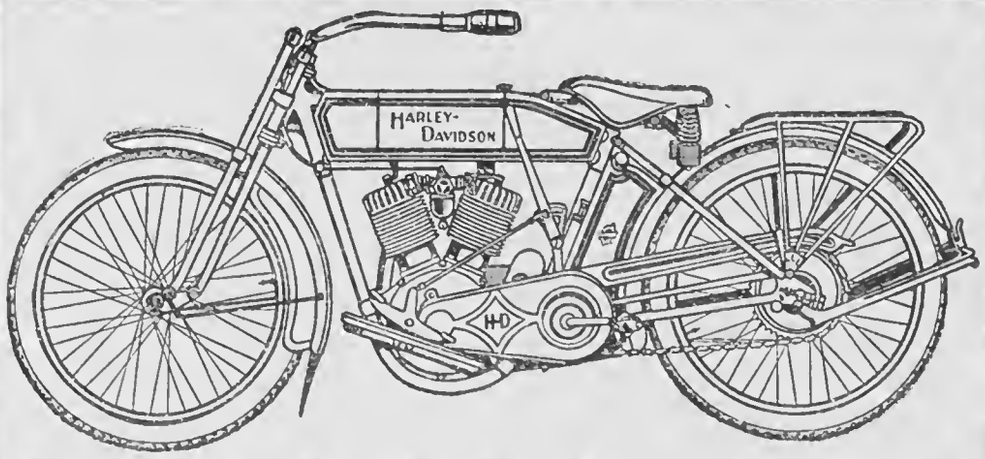
I read in the latest and enlarged R. N.-Y. that you ought to have 200,000 subscribers to support properly the increased size and expense of the paper. That may be true, but there is a better reason why you ought to have 200,000, and more; and that is, that no one who lives in the country, farmer or otherwise, can get along as well without THE R. N.-Y. as he can with its help. As to the required increase in revenue, there is another way to secure that. We all know that the public has been educated to expect to get their periodicals at less than manufacturing cost—and I am afraid a good many of them are dear even at that figure. But in the case of THE R. N.-Y. the contrast between the value and the price of the paper is too violent. For a weekly which is the efficient guide and business helper of every subscriber from January to December, which at a large money sacrifice winnows the advertising offered it till everything which might cause disappointment or loss to its readers has been blown away, which is the subscriber's indefatigable defender and champion in seeking either the passage or the repeal of legislation, which warns of business pitfalls and then stands ready to help out of the pit the unwary who despite its warnings has fallen therein, which is at once news-gatherer, instructor, adviser, problem-solver and collection agent—for such a service the price of one dollar a year is simply a joke. Make it $2 which would be say 10% of its average cash value to the subscriber, and thereby get the money needed to put back into increased service. Any present subscriber who would cease taking THE R. N.-Y. because it cost nearly four cents a week would be no serious loss to you or to your advertisers. I should be glad to get my next bill for renewal at the $2 rate. CHARLES T. ROOT.

New York.

We must be allowed the indulgence of a little pride in the receipt of the above letter. Aside from his farm interests Mr. Root is an experienced publisher of some of the most successful trade publications in this country. His judgment as to what a trade publication should be may be accepted as authoritative. Some may think him a bit too enthusiastic in his estimate of THE R. N.-Y., but those who know him and his papers will not question his sincerity or his competent judgment. Mr. Root's experience makes his suggestion valuable. The same suggestion has come to us before many times, often from farmers themselves. It has always been considered, and as often rejected. As a purely business proposition there is little doubt but that we could increase the subscription price to $2 a year, and develop the paper as a money-making basis faster than at the present price. But old fogy as a notion may seem, though a certain ratio of income to outgo must be maintained, our ambition is not to make the most money; but to render the greatest service to those farmers who most need such help as a farm paper can give them. We have some pride in the prosperous class of farmers in THE R. N.-Y. family. We aim to be of service to them. A large portion of them would not know the difference whether they pay $1 or $2 for the paper. But there are on the other hand many farmers to whom the extra dollar would mean a sacrifice in something else. It is true, as Mr. Root points out, that the extra revenue from those who could afford it, could be used to reach out for new subscribers of the more prosperous class, and that those lost would not be felt; but our life on the farm was among this needful class, and we would not like to feel that we had abandoned them or deliberately neglected an opportunity to serve them. There is one other consideration that impels us to stick to the $1 price. The circulation of the paper has been built up largely by its subscribers themselves from a small beginning to an edition this week of one hundred and sixty-odd thousand copies. Business men, professional men and bankers solicit subscriptions to THE R. N.-Y., and send in the full dollar. To quote one instance, one of the wealthiest and most successful business men in the State of Maine has been forwarding subscriptions from his neighbors, customers and friends for years. Every time we are confronted with a lawsuit he and others like him come forward with promises to help. These men do not do this to help us make money. They do it in recognition of the service we are able to do the individual farmer in things in which he is not situated so that he can protect himself. That sentiment is of course an asset. It is not our purpose to use it for individual gain. We are but the trustees of it, and it is our ambition to use it for the benefit of the family on the farm who most need help.

Robert B. Kellogg, head of the Kellogg Music Company, of No. 1,431 Broadway, was sentenced yesterday by Judge Grubb, in the United States District Court, to thirteen months in the federal penitentiary at Atlanta, Ga. Kellogg was convicted on a charge of having used the mails to defraud ambitious poets. He advertised that he would write music to song poems and market the output for a fee of $21. It was charged that he accepted the fee, but did not put the songs on the market. During the trial Kellogg admitted that the business netted him at least $800 a month, and also that he had never paid dividends to the writers of songs, except in one instance, when an author received 36 cents.—Daily Paper.

It is time something was done to stop the petty robbery of these fake music publishers. They have been at the game for a lifetime; and this seems to be the first conviction. THE R. N.-Y. refused their advertising and showed up the scheme more than 20 years ago, when the advertising was being accepted and published by papers of every class. We are certainly making some progress. J. J. D.



Startling, Exclusive Improvements Mark the 1914 Harley-Davidson

Step Starter Starts Machine With Rider in the Saddle and Both Wheels on the Ground

In case the rider accidentally stalls the motor in crowded traffic or on a steep hill it is no longer necessary to dismount, perhaps in the mud and find a level place to set the machine upon the stand in order to start the motor. Instead a downward push on either pedal—the step-starter does its work, and the motor begins again to throb.

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Ful-Floteing Seat

For the third successive year the Ful-Floteing Seat is standard. This patented device floats the weight of the rider between two concealed springs, assimilating all jars and vibration due to rough roads.

Double Clutch Control

The patented Harley-Davidson clutch can now be operated either by a foot lever on the left foot board or by a hand lever. The foot lever does away with the necessity of taking either hand off the handle bars, a great convenience when riding through sand or mud.

Double Brake Control

The new Harley-Davidson Band Brake (patented) can be operated either by a foot lever or by back pedaling on either pedal.

Folding Foot Boards

All models are equipped with Folding Foot Boards in addition to the regular pedals.

We will gladly send you on request our complete 1914 catalog giving full details of these and forty other improvements

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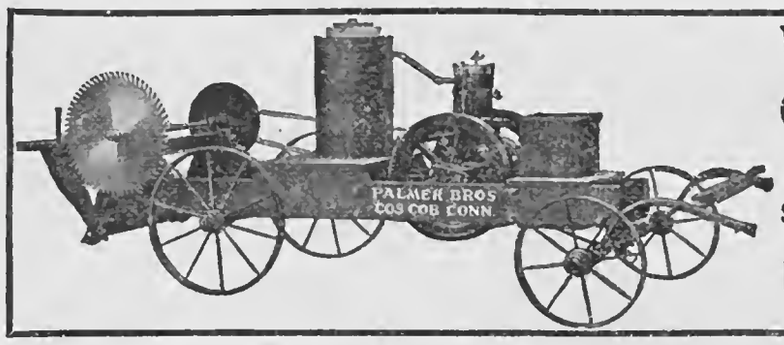

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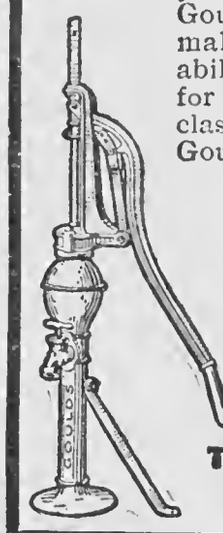

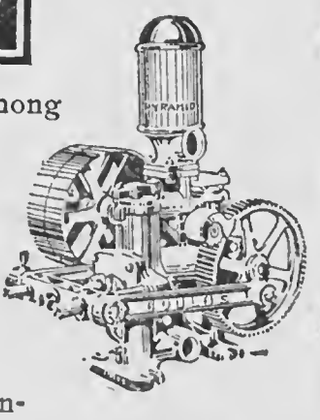

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MARKETS

BUTTER.

New York, Jan. 2, 1914.

The closing week of the year is usually a quiet period in the wholesale butter trade. Many of the jobbing houses were busy taking account of stock, and the buying was against current consumptive needs, except in one or two instances where out-of-town buyers took on lines of 500 to 1,000 tubs. Possibly the quietness tended to check any further advance in the fresh table grades, and the business was mainly at 37 and 37½ cents for creamery that rightly belongs in the class of extras. The proportion of stock that would pass official inspection is still small, but the average quality of the fresh make is improving and if this continues there will be fewer seconds and more firsts available. Colder weather has prevailed throughout the country and farmers have housed and fed their cows more generally than heretofore. There is still a considerable accumulation of "held fresh" creamery and it has quite an unsatisfactory trade, with values irregular from 23½ cents for low grade seconds to 33 cents for pretty good firsts. Storage creamery is moving into consumptive channels quite freely and not over 110,000 packages are carried over into the new year. For all the goods that are made from farmers' butter—process, ladles and packing stock—outlets are narrow and there is the widest range of values that the trade here has known for many years. This is undoubtedly due to the fact that Siberian butter has been a considerable competitor since October 1. Several thousand casks of these goods were purchased in London, Copenhagen and Hamburg, most of which were made last Summer and stored in the freezers at those points. A little of this butter, particularly the freshest lots, sells up to 28 and 30 cents, but the larger part goes to bakers' trade at 23 and 25 cents. It is packed in white wood casks, weighing 110 to 130 pounds. Several thonsand 56-pound boxes of Argentine and New Zealand butter are now on the way here. The year's statistical figures, just compiled, are of much interest. Receipts of domestic butter aggregated 2,516,485 packages, of an average weight of about 58 pounds, an increase over the previous year of a little over 82,000 packages, which makes a new record for New York.

CHEESE.

New York appears to be handling a relatively smaller part of the country's production of cheese each year. The 1913 receipts were but 642,317 boxes against 713,034 boxes for 1912 and 806,359 boxes for 1911. The exports from this part during 1913 were equivalent to about 35,000 forty-pound boxes, against about 44,500 boxes during 1912 and about 183,250 boxes during 1911. The market on storage cheese at this writing looks more favorable to holders than for some time past. Present selling values—17 and 17¼ cents for best State flats—enable holders to sell most of the high-cost Fall purchases without loss.

EGGS.

The movement of fresh gathered eggs to distributing markets has fallen off somewhat. The practical exhaustion of storage reserve at the smaller interior centers and the comparatively low prices ruling for fresh at many primary points during mid-December led to an enlargement of interior consumption of fresh and with colder weather at many points the production has made little, if any, further expansion. Reserve stock in the larger cities has been reduced to unusually small amounts, and the relation of these to the recent rate of output has given the markets an undercurrent of great strength. New York will carry into January a total stock of only about 160,000 cases of which some 25,000 cases are in receivers' hands outside of cold storage, about 15,000 cases the latter amount being of fresh gathered and the balance refrigerators and foreign eggs. The statistics indicate that New York's output of eggs into consumption was close to 400,000 cases in December and as January receipts for five years past have averaged only about 185,000 cases there is seen to be a prospect of shortage though this may be obviated by importations, by a further curtailment of demand, or by a possible increase of fresh production. Fresh Western eggs advanced up to Monday of this week when firsts to extra firsts sold at a range of 36 to 38 cents, but at the close they have eased off to 35½ and 37 cents under a quieter trading incident to the close of the year. Storage eggs however are closing strong at 30 and 32 cents for good to finest qualities.

Importations of eggs since November 1 have been 12,328 cases at New York. These cases are approximately six feet long by two feet wide and about 10 inches deep with a double partition in the middle. They contain 120 dozen eggs each, packed in a coarse excelsior or straw. They have come chiefly from Hamburg with a few from Bremen and a few from London. The eggs originate in many European countries, chiefly in Austria, but with some from Russia, Bulgaria and Italy. Few of the lots shipped as fresh have been fine enough to compete with the better grades of domestic fresh gathered and many of them have been quite poor, showing considerable loss in spots and an undesirable flavor, probably due to damp packing. On the present market most sales of foreign fresh are in range of 28 and 32 cents, only a few exceptionally good lots going higher, and some inferior lots have sold lower. Good foreign refrigerator eggs have compared favorably with ordinary grades of domestic but their irregular condition has necessitated sales at easy prices, generally 24 and 26 cents, a few higher and a few lower. Foreign limed have been of useful quality and have sold very well for bakers' trade at 23½ and 24½ cents. There is prospect of further considerable importations.

LIVE POULTRY.

There has been a fairly active demand for live poultry the past week or 10 days, on the basis of 15 cents per pound for fowls, 14 cents for chickens, 11½ cents for old roosters, 22 cents for turkeys, 16 cents for ducks, 14 cents for geese, 65 cents per pair for guineas and 20 cents per pair for pigeons. Some shippers have not been satisfied with these prices, and considerable stock has accumulated on track under limits. At the close with so much stock held off the market and dealers in want of stock, a firmer feeling has developed on fowls and chickens with prices advanced one-half cent. Receipts have been heavy, footing up since Monday, Dec. 22nd—115 carloads. Turkeys closing quite firm and ducks in good demand and firm with fattened stock bringing a considerable premium. Receipts of live poultry for the year 1913 aggregated 5,819 carloads by freight and express, against 5,607 carloads in 1912. Estimating 18,000 pounds to the carload it foots up a weight of 98,923,000 pounds. A fair estimate of the value is 15½ cents per pound which totals an amount of $15,711,300.

DRESSED POULTRY.

The demand for dressed poultry during the holidays just passed was somewhat disappointing. The heavy losses sustained at the Thanksgiving holiday, owing to poultry arriving in bad condition, when many tons were condemned by the health authorities and destroyed, naturally caused dealers to operate cautiously. Supplies of fancy turkeys were not in any surplus, and while the trading was moderate the market gradually cleaned up before the close of the year at generally 22 and 23 cents for fancy western; 23 and 24 cents for finest New York State, Pennsylvania and Virginia, and 26 and 27 cents for fancy Maryland, Delaware and Jersey with feeling stronger at the close on western at 23 and 23½ cents. The larger proportion of the western receipts, however, for the holiday market were simply fair to good grades, including quite a number packed in ice from southerly sections which sold around 20 and 21 cents. Chickens and fowls were in liberal supply, general demand slow, and a large surplus had to go into refrigerators. Ducks and geese were in moderate supply for the Christmas holiday and brought extreme prices, but since that holiday demand has been slow, stock accumulating and prices have declined from 2 to 4 cents per pound. Squabs in fair demand. Spring guineas generally slow sale. Receipts of dressed poultry for the year 1913 were 1,082,273 packages, against 1,054,121 packages in 1912. Taking the different styles of packages from small boxes, 12 birds to the box, to large barrels, a fair estimate in weight would be 160 pounds to the package, which makes a total weight of 173,163,680 pounds. Estimating the value at 18 cents per pound totals an amount of $32,035,280.

COUNTRY-DRESSED MEATS.

Calves, best	16@	17
Fair to good	14@	15
Buttermilks	08@	10
Lambs, Hothouse, each	5 00@	8 00
Pork, light	11@	11⅛
Heavy	05@	09

FRESH FRUITS.

Apples—Spitzenburg, bbl.	3 50	@ 5 00
Spy	3 50	@ 5 00
King	3 00	@ 5 00
Hubbardston	3 00	@ 4 50
Greening	3 50	@ 5 50
York Imperial	3 50	@ 5 00
Ben Davis	2 25	@ 3 75
Baldwin	3 50	@ 5 00
Western, box	1 50	@ 3 00
Pears—Kieffer, bbl	2 00	@ 4 00
Cranberries, Cape Cod, bbl	8 50	@12 00
Long Island, bbl.	9 00	@13 00
Jersey, bbl.	8 00	@10 00
Jersey, crate	2 00	@ 2 75
Strawberries, Fla., qt.	50	@ 0 50

VEGETABLES.

Potatoes—Long Island, bbl.	2 50	@ 2 75
Jersey, bbl.	1 75	@ 2 00
Maine, 180 lbs.	2 25	@ 2 50
State, bulk, 180 lbs.	2 25	@ 2 50
European, 168 lb. bag	1 40	@ 2 00
Bermuda, bbl.	3 00	@ 5 00
Sweet Potatoes, bbl	1 00	@ 1 25
Beets, bbl.	1 25	@ 1 50
Brussel sprouts, qt.	10	@ 18
Carrots, bbl.	1 25	@ 1 50
Cucumbers, bu.	2 00	@ 3 50
Cabbage, Danish seed, ton	25 00	@27 00
Red	25 00	@30 00
Imported	22 00	@25 00
Celery, doz.	25	@ 75
Cauliflower, bbl.	2 00	@10 00
Lettuce, half-bbl. basket	1 00	@ 2 00
Onions—White bu.	1 50	@ 2 25
Red, 100 lb bag	1 75	@ 2 00
Peppers, Southern, bu.	1 25	@ 3 50
Peas, Southern, bu	2 00	@ 6 00
Radishes, 100 bunches	1 00	@ 1 50
Spinach, bbl.	1 50	@ 3 50
String Beans, bu.	1 50	@ 4 50
Squash, Marrow, bbl	1 50	@ 1 75
Hubbard, bbl.	1 75	@ 2 25
New, bu.	1 00	@ 1 50
Egg Plants, Southern, bu.	3 00	@ 4 00
Tomatoes, Southern, 6 bkt. crate	2 00	@ 3 00
Turnips, white, bbl.	1 25	@ 1 50
Rutabaga	75	@ 1 15

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages.

WOULD like work on a farm. J. L. LOYD DAVIS, Box No. 62, Boston, N. Y.

POSITION as private secretary. Familiar with farm operations. Small salary for short hours. EXPERIENCE, care R. N.-Y.

SINGLE man 33, with 3 years experience, wishes work on poultry farm. J. K. G., care Rural New-Yorker, 333 W. 30th St.

POULTRYMAN wants position on poultry farm, thoroughly experienced in all lines. GEO. PARISH, 320 W. 25th St., New York, N. Y.

SITUATION WANTED—Fruit grower of long experience will contract to trim old or young orchards in scientific manner at reasonable prices. Orchards planned and planted. H. W. COBB, Ridgewood, N. J.

PRACTICAL POULTRYMAN with farm office experience, including shorthand and typewriting, seeks similar position or would invest, with services in well conducted utility plant. K. J. D., care D. N.-Y.

WANTED—Intelligent man wants position on fowl farm with orchard preferable. Some knowledge of poultry but not thoroughly experienced. Had course in fruit growing at Cornell. S. MILLER, 306 E. 165th St., Broux, N. Y.

WANTED—A chance to build up and systematize that new farm, or put life into the old one. Middle-aged, married man; small family; agricultural college training; life experience in farm problems; scientific feeding and breeding of dairy stock; rotation; accounts; handling men, soil, and stock for highest returns. No booze or tobacco. F. M. V., care R. N.-Y.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

WANTED—Married man on truck and fruit farm, experienced, sober. Address D. A. COLEMAN, Watervliet, N. Y.

WANTED—Single, young man, some experience, to work on farm, must be good milker, good wages. CHARLES BLOSS, Blossvale, N. Y.

WANTED—A single German man 35 to 45 years of age, all round farmer, who can handle a team and is not afraid of hard work. For full particulars write H. A. BENNETT, Ridgewood, N. J., R. F. D. 1.

WANTED—Man and wife as second farm hand. Cottage, heat, light, milk, and such vegetables as grow on place furnished. Must be willing to board man for which cash payment will be made. Give full particulars including wages, age, nationality and references. JOHN T. CADE, R. F. D. 1, Ridgewood, N. J.

$1300 BUYS fine 30-acre farm near Troy, sightly location. DEAN SEVENTH, Troy, N. Y.

WILL EXCHANGE lots value $10,000 on R. R., near Westbury, L. I., for a large farm, free and clear. W. B. WELLING, 2 Wall St., N. Y.

FOR SALE—Best ninety-acre river farm, Delaware Co. Write S. A. FISHER, Unadilla, N. Y.

FOR SALE—25-acre farm, good buildings, fertile Alfalfa soil, young fruit trees. Near railway town. JULIUS MILLS, Fillmore, N. Y.

250-ACRE FARM, $50 per acre, just off State road to Buffalo. ALBERT D. JAMIESON, owner, 606 White Bldg., Buffalo, N. Y.

VIRGINIA FARM of 110 acres, 40 cleared, balance well timbered. 2½ miles to depot. Apply for fuller particulars to, OWNER, Lock Box 249, Louisa, Va.

FOR SALE—68-Acre fruit farm. 3,000 pear trees of many varieties, from 2 to 10 years old. Yielded the last year over 2,400 baskets. Good farm home and out-buildings. Call on or address REV. B. F. REAVE, East Quogue P. O., Suffolk Co., N. Y.

FOR SALE—Finest twenty-five acre tract on south shore Oneida lake, best of soil, forty apple trees, ideal for fruit and poultry, or country home. No buildings, near church and school. State road. Address BOX 165, Cazenovia, N. Y.

FOR SALE—Central Jersey farm and peach orchard. 185 acres, 13 room house, steam heat, bath room, best plumbing, 6 room cottage and 16 other buildings, silo, etc. Water system. Equipment for 1,200 chickens. 5,000 young peach trees, one-half bearing. Power spraying outfit, complete farm equipment. Price R. E. $18,000. Stock and personal property $7,000. Very favorable terms. Address BOX M. C., care Rural New-Yorker.

WANTED—A tract of wild land with or without buildings, in Northern New Jersey, will give in exchange two stores, mortgage $1,500 in a suburban town. BOX 11, Hillsdale, N. J.

WANTED—Small farm, adapted to fruit and poultry near good markets; state full particulars with lowest price. J. H. G., care R. N.-Y., 333 West 30th St., New York.

WANTED—Portable rip saw. S. E. TERRY, Holtsville, N. Y.

WANTED—Good Jersey red boar, ready for service. H. W. COBB, Ridgewood, N. J.

HIGHEST MARKET PRICE PAID for Low's Champion Bush Bean Seed by F. H. HAYES, Dexter, Me.

WANTED—Ham, bacon, eggs, potatoes, butter, and apples direct from farmer. Address ALBERT D. JAMIESON, 606 White Bldg., Buffalo.

WANTED—A few boxes selected Jersey sweet apples or other good sweet table apples. BOX 412, Williamsport, Pa.

MAPLE COVE FARM—Products to Consumers. 5 lbs. butter, 6 lbs. chickens, 1 lb. honey, 2 lbs. carrots, 15 lbs. potatoes, 2 dozen eggs. Box $6. Shipped Thursdays, postpaid covering third zone. ROUTE 24, Athens, Pa.

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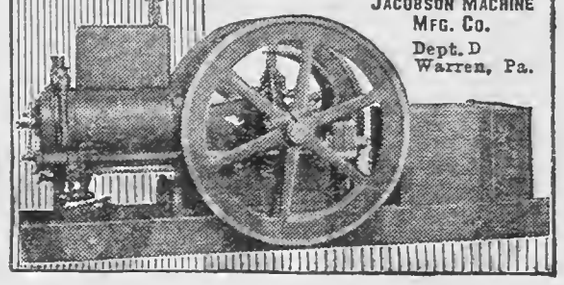

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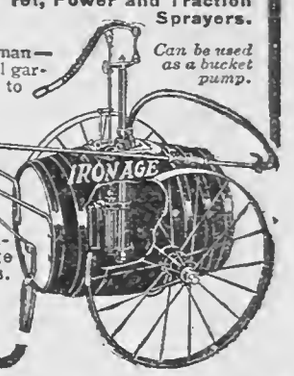

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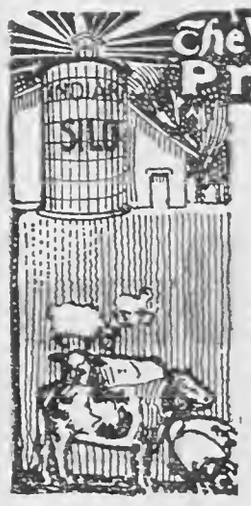

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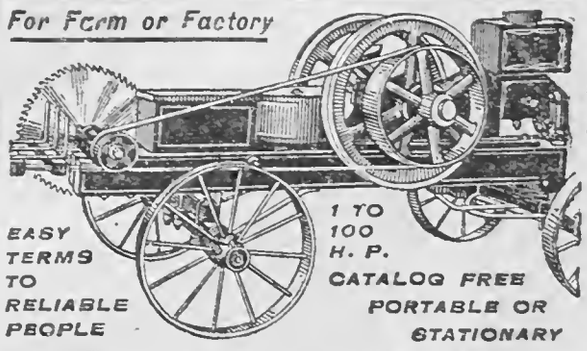

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COLT 50 light acetylene gas generator, good as new. Price $30. ALDENE M. E. CHURCH, W. McClatchey, chairman, Roselle Park, N. J.

FOR SALE—Sixteen tons Ohio Alfalfa first and second cutting. No weeds. ROBINSON BROS., Plain City, Ohio.

WANTED—Cornell colony house and heater, or heater only. G. CHAUNCEY PARSONS, Mountainville, N. Y.

FOR SALE—Several No. 2 and No. 3 Prairie State Incubators, in first-class condition, been used two seasons. Prices very reasonable if taken at once. Address WHITE HORSE FARMS, Paoli, Chester County, Pennsylvania.

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The Leading American Seed Catalog

Burpee's Annual for 1914

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With hundreds of illustrations from photographs and carefully written descriptions of Vegetable and Flower Seeds, it is a *safe guide* to Success in the garden and should be consulted by every one who plants seeds, either for pleasure or profit. We are pleased to mail it free to every one who has a garden and asks for it. Shall we mail you a copy? If so kindly mention "The Rural New-Yorker" and write to-day.

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has introduced more distinct New Varieties of Vegetables and Flowers that are now in general cultivation than have any three other American firms. Selected Stocks are produced upon our own seed farms in Pennsylvania, New Jersey, and California, while FORDHOOK FARMS are famous as the largest and most complete trial grounds in America. We travel more than thirty thousand miles each season to inspect growing crops, and yet never a single mile to solicit an order! We trust, however, that you will read our "*Silent Salesman.*"

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII., No. 4238. NEW YORK, JANUARY 17, 1914. WEEKLY $1.00 PER YEAR.

FITTING SOUTHERN SOIL FOR GRASS.

Thorough Tillage Needed.

On page 1293 of last year's volume we printed an article by Mr. Edwin Earle of Virginia on growing grass at the South. There have been so many questions for more detailed statements about preparing the land that Mr. Earle has answered them in the following.

Preliminary to putting a field in grass we invariably plow deeply during the Fall and Winter, whenever the surface will admit, regardless of moisture in the land, as the frost can be depended upon to put it in good condition for ordering in the Spring. One of the great advantages in a disk plow is the scraper, which keeps the disks clear, no matter what the consistency of the soil may be. In the Spring we drag the land and at this stage generally distribute our limestone and disk it into the soil; the final ordering we postpone until we are preparing to sow corn, save that in the event of very heavy rains we may break the crust with either disk or spring-tooth harrow. When corn has been planted and worked four or five times we usually broadcast peas and give the corn its last cultivation. The peas are disked into the land thoroughly as soon as the corn is in the shock and the field is then sown to either wheat or oats.

When the grain is off in the following Summer, we again break with the disk plow, getting every inch of depth possible and following with drag. As soon thereafter as is convenient we start a procession of disk harrow, roller and smoothing harrow until practically every lump has been worked out and the seed bed well compacted. We then leave the field for the weed and grass seeds to germinate by repeated cultivation after showers, and in the eradication of new growth the soil is kept well stirred. In the final ordering the various machines go back and forth until the soil is as fine as we can get it. We then broadcast our fertilizer with the lime distributor. This machine is 10 feet wide, and is followed by a seed broadcasting machine of the same width, sowing half of the seed, the remainder being sown later across the first sowing, and in this last sowing we usually mix about four pounds per acre of inoculated Alfalfa seed, our aim being to provide an Alfalfa inoculation in every field. The field is then rolled and we leave it.

This method has given us splendid results, the only variation is in the number of times we go over the field in our preparation. This depends so largely on the season and the character and condition of the soil, no set rule can be followed. I believe it is not possible to overdo tillage, and were it always practical I would never sow a grass seed until I had a perfect dust mulch. I also attach great importance to deep plowing for all crops, but before seeding to grasses, clovers or small grain, the seed bed should be thoroughly compacted.

Were it possible to command the weather, I would always sow my grasses soon after a shower, and provide a gentle rain to follow the planting. If, however, I can have the moisture but once, I prefer it immediately afrer the seeding. As a measure of

'CAN I GO WITH YOU, MY PRETTY MAID?" "NOBODY ASKED YOU, SIR," SHE SAID. FIG. 23.

insurance, when growth starts in the Spring, I top-dress with 100 to 200 pounds nitrate of soda, preferring nitrogen in this form, as it practically assures a good cutting of hay regardless of the season. I have described our practice in any land intended for grass; were I to pick my land, I would naturally select well-drained bottoms, with southern or eastern exposure, and seed nad fertilize heavily. I experimented on about two acres of such land a year ago, and took off about 3½ tons of baled hay in the first cutting, and now have a sod that looks good for four or five tons per acre when cut again. I went to extremes in this instance, sowing 120 pounds Timothy and nearly a bushel of Red-top; am not yet ready to confess that I sowed too heavily. I do not think I would care to sow grass on a heavy growth recently turned under; would rather lime it and sow small grains. I would, however, like to turn under a heavy crop (Crimson clover preferred) in May, and sow to grass or Alfalfa in late August, after the most perfect tillage during the intervening months. This would be ideal.

In broadcasting fertilizer, nitrate of soda, lime-stone, etc., my lime and fertilizer sower is invaluable. We can spread nitrate of soda satisfactorily down to as little as 50 pounds per acre. To illustrate its accuracy, I set aside 124 bags of basic slag for a field of 31 acres, and it worked out exactly. In broadcasting seed we either mix and sow with the fertilizer, or use a low-priced machine, which works accurately in the heavy sowing we make. We pay no attention to gauges, etc., bnt try out our machines on known acreage and ascertain just what it will sow of the various fertilizers, etc. As intimated in my former letter, my practical experience is limited to three seasons, and I am only just beginning to find out what can be accomplished. While I took a short cut to success by generous use of seed and fertilizer, I doubt if so much fertilizer, in one application, is necessary. Half the quantity might prodnce substantially the same results. I have felt, however, that I could better afford the more liberal application in view of the fact that basic slag is soluble in water and does not leach out of the soil, but remains until taken up as plant food. I use no caustic lime, nor acid fertilizer; it costs so much to put humus into the soil, I am not willing to lose any portion of it save in the development of plant life. In short, I am trying to increase production, and at the same time improve my land, and in this I am succeeding.

Albemarle Co., Va. EDWIN EARLE.

PRINCIPLES OF ICE-HOUSE BUILDING.

The details of construction of a building to store ice in are not agreed upon by all experts. The main principles involved, however, are few and may be briefly stated. The object of the whole structure is to keep the ice as long as possible with the least waste. This may be accomplished only if the ice is thoroughly insulated from the effect of the warm outside air, the heat of the sun and the radiation from the earth. The first two are almost always well provided for, but in most small icehouses the latter is not equally well taken care of. The first icehouses were merely pits dug into the earth in a sheltered spot, lined in some way, perhaps with stone or mortar, and covered over with a roof and a thick layer of leaves, grass or brush. This is still sometimes used where a small supply only is wanted. If ice is not obtainable, snow is thus kept for awhile. From this poor make-shift up to the best kind of a storage plant with solid stone foundations extending below the frost line and projecting a few feet above the ground, on top of which a double-walled building is built of matched boards, there are many grades of buildings. In every case double walls are essential, and for good insulation, the walls must be airtight. This may be accomplished by using matched boards, by covering with tar paper on the air-space side, by shingling, clapboarding or by caulking the cracks with any convenient substance. The purpose of these walls is to surround the building by a layer of dry, dead air, for such air is the best insulator there is. Sometimes the air space is filled with sawdust, excelsior, paper, wool, or some similar substance, in the belief that it is a good insulator. The only purpose served by such fillings is to keep the air dead, that is, keep it from circulating. These substances are all more or less conducting themselves, but they retain the air in their pores and in the spaces between the particles, and this air held stationary is the insulator. If the walls are really airtight, and there can be no circulation, there is no need whatever for the filling material and, in fact, it would be a decided detriment. If the walls are not perfectly airtight, the filling material—usually hay, straw, or sawdust, or dry moss—is very necessary. It is best, in all cases, to have horizontal partitions in the dead air space every four feet or so up, so as to cut off any circulation due to the hot air rising and the cold air dropping. Vertical partitions will be formed by the upright joists which support the walls. These partitions should be of as thin wood as can be handled, or may even be of tarred paper folded and tacked on each wall. The partitions at the joists may be made in the same way. Suppose an eight-inch air space is decided upon and you want to use 2x3 inch stock. There will be a two-inch space between the joists, if you put them side to side. While all this sounds like unnecessary trouble, and it seems like a long job, still after you get at it you will find it a simple matter, and far more satisfactory than any other way you could handle the work. Of course, the lower end and the upper end of the air space will be tightly closed with boarding. So much for the side walls.

The roof should be doubled and, in my opinion, the very best way to build it is as follows: Right on the four walls build a single thickness flat roof covered with tarred paper. Then over this build a hip roof and let it project over the side walls considerably on each side. I would shingle this. Some provision must be made to ventilate the space over the ice and beneath the flat roof. To do this, I would cut small doorways through the north and west sides up as near the roof as possible and near the northeast corner and the southwest corner of the icehouse, respectively. Perhaps these openings would be a foot and a half high and two feet wide for a small icehouse. The openings must be sided like a window so as not to disturb the air space, and the doors to close them may desirably be double walled. If desired, one of these openings may be made somewhat larger to be used as an entrance for inspection of the top dressing of the ice and the removal of snch ice as is needed.

The foundation of an icehouse should be of stone, brick or concrete, extending well down into the gronnd below the frost line. It is not generally built so. The common plan is to use the same sort of foundation as the rest of the farm buildings—a layer of stone on top of the ground. In this case there are a number of ways the floor can be fixed. First, a ditch should be dug in the floor six inches deep and with side branches covering the whole floor. The center ditch should, of course, be sloped to carry off the waste water. The whole floor, ditches and all, should then have a layer of broken stone placed on it a foot deep over which a layer of straw may be placed, followed by a thin layer of ashes in which are laid the snpporting beams for the board floor, if the house is large enough to require them. If not, the floor boards may be laid right on top of the ashes. In any case, the ashes should come up to the floor boards, and the latter should be laid with small cracks so that the waste water can go through. If a board floor is not desired, put a layer of sawdust on top of the ashes and pack the ice on that. It might also be desirable to have a tightly closing trap door in the roof of the house and a similar one, not directly beneath, in the flat roof. Then in case of bad steaming of the ice more decided ventilation may be obtained and, in case it is needed, the space between roofs may be utilized for storage of tools or sawdust.

The ice should be stored during freezing weather so that it will be dry when packed, and not freeze all together in the house. The packing requires great care and time. It is much better to pack as much as you need and have it keep well than to pack all you can get hold of and lose half of it from poor handling. I believe that all handling of the ice and inspection should be made from the top, and that no doors should be opened at the bottom of the walls. Then there will not be a constant circulation of warm air through the mass when the house is entered. If you use a lower door when packing, this door should afterwards be stopped up from the inside with sawdust. The cakes should be packed with broken joints, so as to prevent circulation of air in the house, and each cake should be an inch and a half from its neighbors on every side. No broken cakes nor small pieces of ice should be admitted to the house, and as little trimming should be done to the cakes as possible. Over the top of the ice should be a 12-inch layer of sawdust. Some icemen believe that if this layer is divided into two six-inch layers separated by a thick layer of paper, the wasting is less. Around the sides of the ice and within the walls it is quite common to pack sawdust, filling a space of from four to six inches. It is a question whether it is best to do that or to pack up close to the walls, leaving perhaps an inch and having every fourth tier of cakes touching the walls so as to retard circulation. A discussion of this by the readers would be helpful, no doubt, as would also be some experiences as to whether it is worth while to pack the first tier on edge in place of flat like the other tiers, the supposed advantage being that as the ice wastes edgewise, it wastes less weight during any fixed time. Personally, I have not found it so, for although each cake wastes less, there are more cakes on the lower layer when packed edgewise. R. P. C.

FARMING FOR FURS

During the past year we have received many questions like this from Sullivan Co., N. Y.:

I have a tract of land which seems suitable for fur farming. I thought of ditching around it and building below ground a strong wall of stone and concrete, with a tight wire fence above ground. Inside this enclosure I would like to breed minks or skunks. Is such an idea practicable?

We have known many skunk farms to start, run for a while and fail. The trouble usually comes through a disease which breaks out among the skunks. On reference to the Bureau of Biological Survey at Washington, we received the following:

"The growing scarcity of fur animals throughout the United States, and the consequent high prices, has led a great many persons to consider the feasibility of producing furs with animals in captivity. The subject is one of considerable importance, as the American people are facing a condition in which the supply of furs is entirely inadequate to the demands. The interest is widespread, and so far as fox farming is concerned, a considerable measure of success has been attained. In Prince Edward Island at the present time the capital invested in this industry is about ten million dollars, and the assessed valuation of foxes in captivity is but little less than this sum. The companies last year declared dividends of from 40 to 900 per cent. on their capital stock.

"The fur of the fox is much inferior in wearing quality to that of the mink and skunk, and if these two animals can be reared successfully at a profit, there is an opening for a very important industry. The Biological Survey, during the last few months, has had several hundred inquiries from people who are contemplating engaging in this business. We know of over a hundred who are making experiments with the skunk and probably half as many who are trying to raise minks. Several are also making experiments with muskrats. Some have been pretty successful, while others have failed. There are 13 licensed skunk farms in the State of New York and many others in the Middle West. Mr. E. T. Seton, the author and ntauralist, has raised about a hundred skunks at his place in Connecticut. He and a number of other breeders remove the scent sacs of the skunks when they are about a month old, and as a result the keeping of these animals is no more unpleasant than that of keeping cats or other domestic animals.

"Under these circumstances, the Biological Survey considers that it is wise to encourage the production of furs in this way and we have done all possible to help breeders with advice when they have applied to us. We have also undertaken experiments in raising minks on our own account. We have not been entirely sanguine as to the question of profits from fur farming within the United States, but the time is soon coming when the market value of furs will be much greater than at present, and should the ventures prove profitable, there is a good outlook for an industry of considerable economic importance." D. E. LANTZ.

WHAT KIND OF LIME?

Shall I purchase burned lime or raw ground rock? The best farmers in this vicinity hold opposite views on this question. Several farmers are paying from $4 to $4.20 per ton for raw ground limestone, when they could buy the burned lime analyzing 98 per cent. for $4.35 delivered at Milford. I can get the raw ground stone analyzing 52 per cent. oxide delivered at Milford for $3.70 per ton, car lots; burned analyzing 98 per cent. delivered for $4.35. M. H. F.

Milford, N. Y.

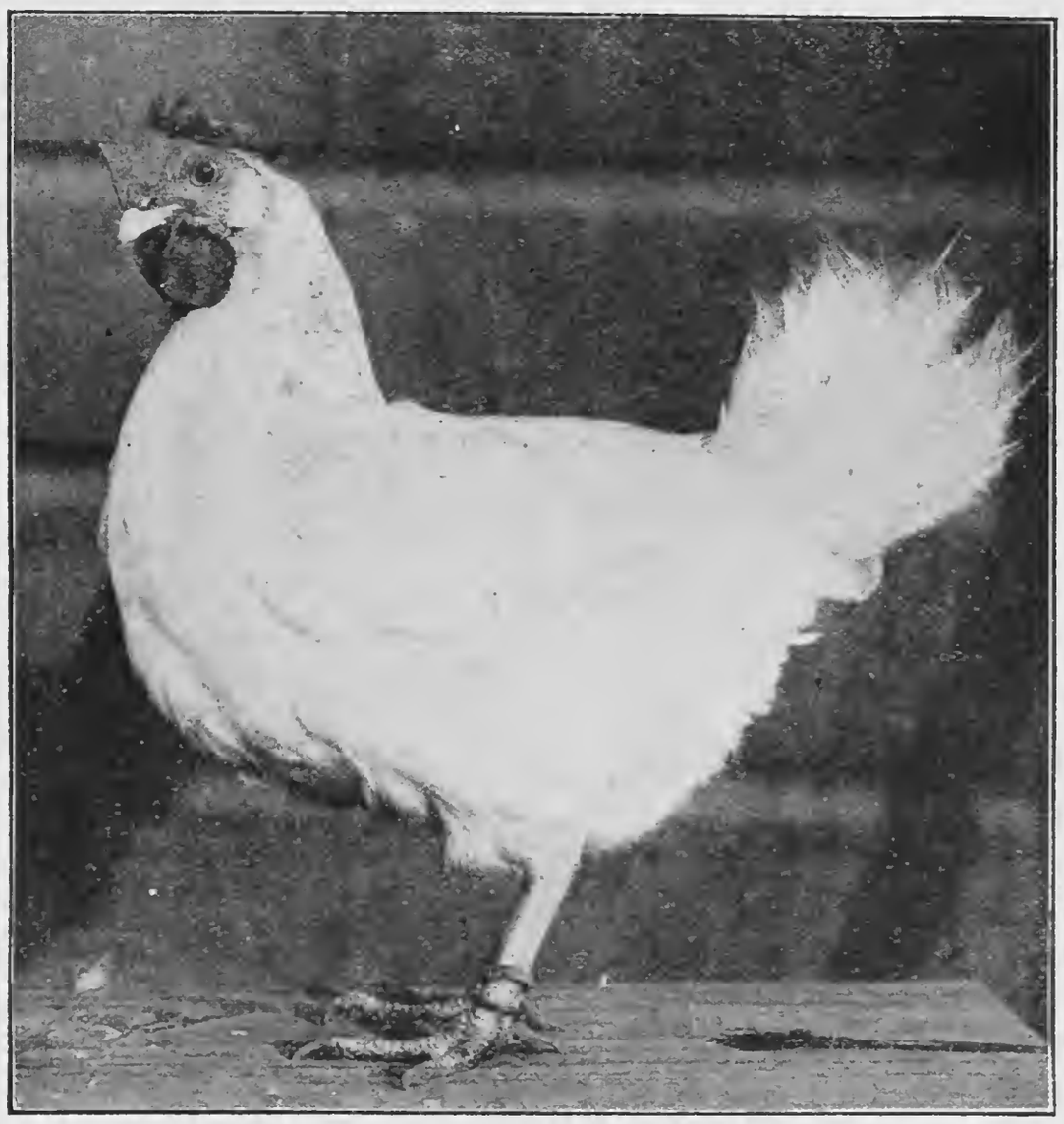
From our own experience we should consider the soil and the crop in deciding between raw limestone or slaked lime. On stiff clay inclined to bake hard in a drought we should use slaked lime and also on very sour soils not perfectly drained. The slaked lime is, we believe, usually better in such crops as clover, Alfalfa, Timothy, garden crops—all those which prefer an alkaline soil, or which respond to a quick chemical action. We prefer the ground limestone on soil well filled with humus, and not particularly acid, and on the lighter sandy soils. The ground limestone seems better adapted to corn, as that crop, like rye, is usually capable of giving a good yield on slightly acid soil. In cases where the slaked lime is preferred, the reason is that this form gives a quicker and more powerful chemical action in the soil.

THE WORLD'S CHAMPION HEN.

Poultry-work in Oregon.

[We have made several references to a hen at the Oregon Experiment Station with a record of 303 eggs in one year. Now we can show at Fig 24 a good picture of the hen, with comments by Prof. James Dryden. We understand that this hen is what you may call line-bred cross of White Leghorn and White P. Rock.]

We have a number of egg records, both individual records and yard averages, that are very encouraging. Hen C543 laid 291 eggs in 12 months of laying. Hen C521, Fig. 24, a flock mate, finished with a record of 303 eggs, both of them, I believe, being world records. There may be better hens, but there are no authentic records telling us what they are that I know of. These two high records show something of the great possibilities of the hen, but the most encouraging thing is that there are other records to back them up. These two hens were bred from 200-egg hens and their sires are from 200-egg hens, and that is the most noteworthy thing about their performance. In the contest at Storrs, Conn., out of some 500 hens selected by different breeders in different sections of the United States, Canada and England, one laid 282 eggs and it is interesting to learn that the record hens at Storrs, as well as at Missouri, were produced by one man in England, who has been trap-nesting his flock and selecting his breeding stock on the basis of his trap-nesting records. I am not informed that any other pens entered in those competitions were from trap-nested layers or had individual pedigrees showing high laying ancestry. Taken in connection with our Station records here, this is strong evidence of the utility of the trap-nest.

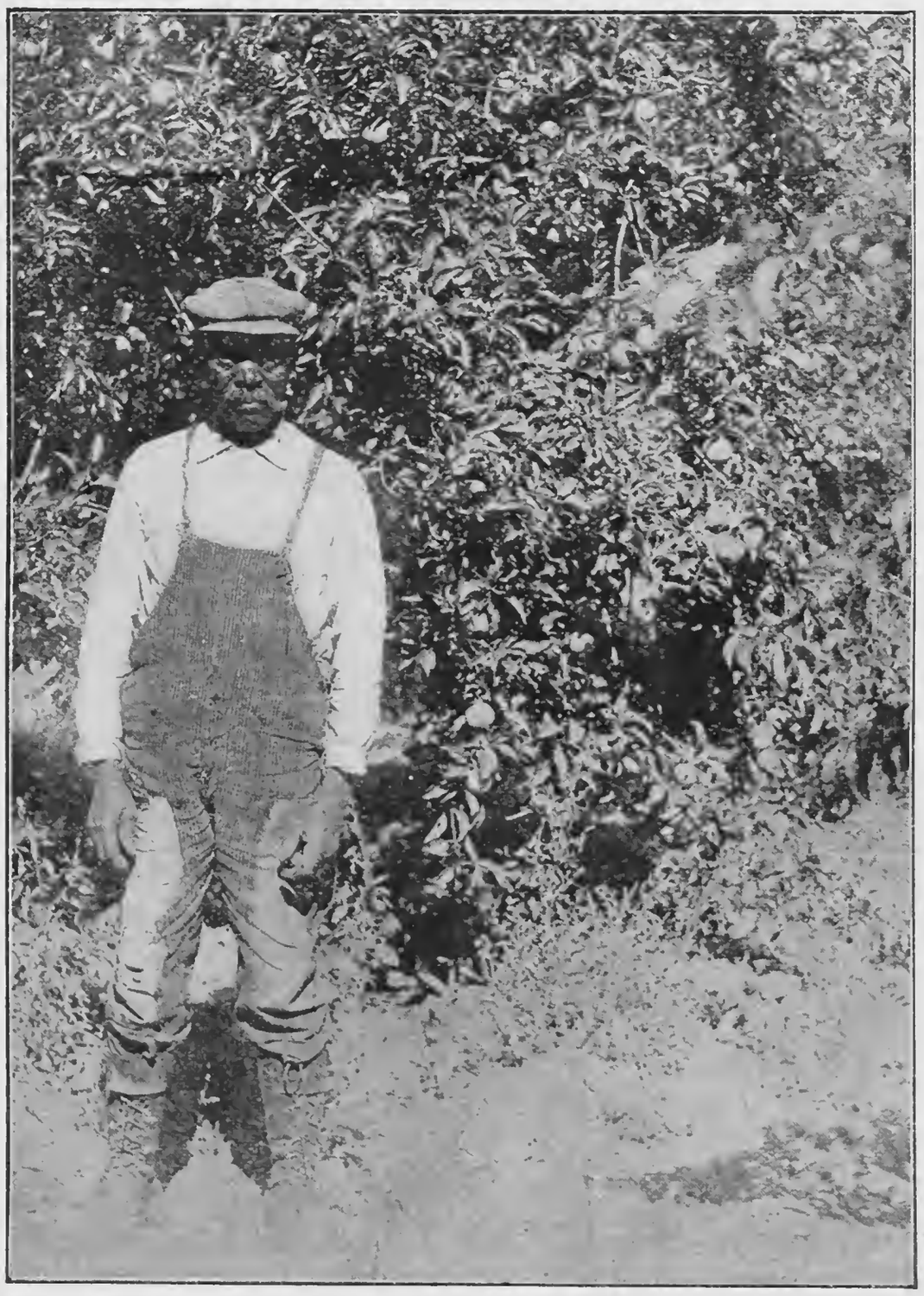


WORLD'S CHAMPION HEN. 303 EGGS IN ONE YEAR. FIG. 24.

All the high record hens we have here have been developed at the Station from an original stock purchased from poultry breeders in different parts of this State six years ago, and in a flock of 40 this year we secured the two world champions; five of the 40 averaged 280 eggs each; five sisters, including C521, averaged better than 247 eggs each, and 26 of the 40 went over 200 eggs; the average for the whole flock being about 210. Every one of them was from a hen that laid over 200 eggs and from a sire from a 200-egg hen. It has been common report heretofore that all great records were made by hens that came from average layers. The results of the nine years' very noteworthy work of Prof. Gowell at the Maine Station, showed that their heavy layers did not have an ancestry of heavy layers. While we have had heavy layers from average or medium layers, our high records are all from high record hens. We have no high records from poor producers. When our records are all tabulated and published I think they will offer much encouragement to the poultry breeder.

I believe the value of the trap-nest, or in other words the importance of individual selection in poultry breeding, has not been emphasized enough or appreciated at its real value. When it is considered with what rapidity a flock of hens is reproduced, the possibilities that open up in the way of rapid increase in poultry production are surely great. The trap-nest will, I believe, do as much for the world in the way of increasing food production as the Babcock test has done. Both emphasize the value of the individual and minimize the importance of breed. Rather it is a question of breeding than of breed. Where would the dairy industry have been, or any other livestock industry, if breeding had been based on the average of the herd rather than on the individual?

Another thing that must be considered if we are to make rapid progress in breeding for eggs, is the futility of breeding for a great many points that have no connection or correlation with egg-laying qualities. We all believe in beautiful fowls, that is, we like to see beautiful chickens, but we can have beauty without insisting on points that are not necessary from a standpoint of beauty nor desirable from the standpoint of utility. We can't expect to make progress in breeding for eggs if we are to follow a standard in our breeding that insists on 20 or 50 points of no value except in the show. If we do it will mean that it will take 100 or 1,000 years to accomplish in egg production what might be accomplished in 10 or 20 years. A profitable poultry industry must be built upon a system of breeding that encourages rather than retards the one essential thing, the improvement of productive qualities. This is the one improvement of most vital importance to commercial poultry raising.



JOHN HILL, THE FAITHFUL HIRED MAN. FIG. 25.

A FAITHFUL HIRED MAN.

A Fine Record in Fruit Culture.

John Hill was born in Charles Co., Maryland, in 1839. He served through the Civil War in the Eighth Maryland Regiment. At the close of the war, in 1865, he came North in a carload of colored people brought North by Albert Barnes. He worked on the farms of Western New York. He worked for Mr. Barnes several years, finally moving to Knowlesville, N. Y., where he engaged with Otis Lewis, and afterwards with Harry Frost, in the same neighborhood. From here he engaged with Mr. T. Backer, Medina, N. Y., and afterwards with J. E. Allis, Medina, N. Y., where he has been 27 years—48 years with five men, a pretty good record. Mr. Allis says he is one of the best men he ever had, and has set out more fruit trees than any one man in Western New York. Although Mr. Hill is now 74 years old he is still on the job and does his work well. A model farmer and faithful employe. The picture was taken under a Hubbardston apple tree set by Mr. Hill 24 years ago on the Allis farm. N. E. EATON.

CITY BOY AND AGRICULTURE.

I have been rather interested to read how serious a menace the city-bred boy is to the efficiency of the agricultural college, as voiced by many writers in the agricultural press. I cannot understand why the agricultural college should be expected to turn out a finished product any more than the medical college or the engineering school. Everyone seems to recognize that a graduate of a medical college must spend two years or more as an attendant in a hospital before he can begin to practice. No one expects a newly graduated engineer to have any practical experience

I was brought up in Boston. When I entered college I had absolutely no idea of farming or farm practice. It was costing me about five hundred dollars per year while at college, to say nothing of the time. Was not my time at college too valuable to spend in learning to milk or pitch hay, or drive a team? The faculty had all it could do to find time to give me the theoretical side of farm practice. I had no trouble in learning to milk outside of school and drew $30 per month while doing it. I am now studying in the school of practical experience. I was graduated from college in 1913, and although I do not feel competent to manage a six-hundred-acre farm at the present time, I am learning fast, and I can't see where I would be better off in 1915 if I had laboratory work in milking cows or cultivating while at college. I am sure I could not have had as thorough a foundation in agriculture if I had devoted some of my time at college to getting experience.

As a city-bred boy, I recognize my limitations, and I have set about acquiring practical experience in the only place where practical experience can be acquired, out on the farms, not in the agricultural colleges. Most city boys who adopt the profession of agriculture recognize, as I do, their limitations, and set about overcoming them. The city boys will figure in the future development of agriculture. They have no local prejudices, or family tradition practices to overcome. They have as broad a sympathy for farm practices as the hundreds of farm-bred boys who graduate from agricultural colleges, but stay away from the old farm. ISAAC COLEMAN.

R. N.-Y.—We are very glad to have this point of view. We would like to ask Mr. Coleman if he would not now be better off if he had taken his experience at practical farming before he went to college? No one has questioned the city boy's right to an agricultural education. The only point of the argument is to show that actual farm practice is as necessary as class work.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Preparing Lands for Gardens.

I am thinking of renting a small piece of land for gardening purposes. The soil is light, sandy, about 10 inches deep, and is underlaid with a sandy clay subsoil. The soil is covered with a light growth of sod, is not very rich, and in my opinion is deficient in humus. I wish to grow a variety of vegetables; beans, peas, cucumbers, tomatoes, lettuce, radishes, beets, etc., and to get at least two crops off the same space of ground. This would call for plenty of humus and plant food. The humus I had thought of supplying partly by turning under the sod and partly by the addition of manure. The plant food would he supplied partly by the manure and partly by the addition of commercial fertilizers. If the manure was applied fresh to the land the latter part of February, and plowed under with the sod about the first of March, and the land again plowed about April 10, would the sod and manure be sufficiently rotted by that time to supply the humus necessary for the earliest vegetables, as beets, lettuce, radishes and peas? Or would the manure, not being thoroughly rotted, have any undesirable effect on these vegetables? How many two-horse loads per acre should be applied to this land? In your opinion could this soil be put in fair condition for truck gardening the first season? H. N.

This land should have been plowed latter part of September and seeded to wheat or rye, to be turned under together with 30 tons of rotted manure to the acre next Spring, as early as the ground became dry enough to work. The decaying sod, together with the green and stable manure would not only have supplied a liberal amount of humus, but would have enriched the land sufficiently to produce a fair crop of vegetables the first year. I wish to state here, that ordinary farm land cannot be brought up to a high state of fertility in one year, no matter how well it is manured and worked, as this thorough incorporation of manure with the soil, their subsequent decaying and assimilation, requires time, usually two to three years. In the making of a garden from grass land, it is better to grow sweet corn or potatoes on it the first year, as the quantity of vegetables grown on such land the first year, is rarely satisfactory, and in most cases a very meager crop, and of very low quality, unless the sod is very light, it will not decay enough to allow of much disintegration by vegetable planting time, and it therefore could not be plowed again at that time and be got in proper condition for the raising of vegetables. I would advise that you spread about 20 loads to the acre of rough partially decayed manure on the sod, and plow it under as soon as possible, but not later than the latter part of February; run over it lightly with the Acme harrow (if one is available) to fill in all the interstices with fine soil, and, in the meantime have in preparation about the same quantity of composted manure for Spring use. Turn it over frequently, working up as fine as possible, the finer the better; then just before planting time, broadcast it on the land, and with a good disk harrow run over it at least twice both ways, about four inches deep. This will thoroughly incorporate the manure with the soil, and at the same time, make a well pulverized seed bed. Then before leveling and smothering apply bone-meal or a good complete fertilizer broadcast, at the rate of 800 to 1,000 pounds to the acre. If the plowing cannot be done until Spring, manure as directed above, but I would advise that you grow sweet corn, potatoes and cabbage on the land next year. The following Fall plow all that portion from which the crops have been harvested and sow to either wheat or rye at the rate of two bushels per acre; the following Spring turn the green crop under, together with 30 to 40 two-horse loads of manure, that has been well rotted and fined through composting and turning over during the Winter. By the second year you will have gained considerable knowledge of the work, and will be in a position where you can pretty safely rely on your own judgment in the preparation of the soil, manuring, planting, etc. One thing you should be absolutely sure of before taking hold of this proposition, is that this land is of good natural drainage; low wet land is of no earthly account in vegetable gardening. Such land used for this purpose, has the word failure spelled in letters large enough to cover the whole area within the lines of the undertaking. K.

The New York State Agricultural Society.

The annual meeting and convention of the New York State Agricultural Society will be held in the Capitol at Albany, on Tuesday and Wednesday, January 20th and 21st. Sessions will be held during the morning, afternoon and evening of both days.

In addition to the reports of committees and election of officers, the following interesting program has been arranged for the different sessions:

"One Coöperative Success; and a Plan to Liquefy Mortgage Credits," Lucius C. Tuckerman, Milton.

"A Practical Building and Loan Association," B. G. Parker, President of Gouverneur Building and Loan Association, Gouverneur.

"Farm Mortgage Loans," R. B. Van Cortlandt, Mt. Kisco.

Report of Committee on Coöperation. Chairman, C. R. White, Ionia.

"What the Eastern Fruit and Produce Exchange Has Done," Seth Bush, Morton.

"Coöperative Work of the State Grange," Ezra A. Tuttle, Eastport.

"How Housewives Can Coöperate," Mrs. Julian Heath, President of National Housewives' League, New York.

"Work of the State Bureau of Coöperation," Hon. Marc W. Cole, State Department of Agriculture, Albany.

President's Address: George W. Sisson, Jr., Potsdam.

"Market Roads for the Farmer," Hon. J. N. Carlisle, State Commissioner of Highways, Albany.

"Lessons in Agriculture from the Far East," Prof. Charles H. Tuck, Cornell University.

Report of Committee on Development of Agricultural Resources. Chairman, James W. Wadsworth, Jr., Mt. Morris.

Report of Committee on Drainage. Hon. Richard W. Sherman, Chief Engineer, State Conservation Commission, Albany. Discussion by Prof. E. O. Fippin, Cornell University; Prof. B. B. Rodd, Cornell University; Jas. A. D. S. Findlay, Salisbury Mills.

"County Farm Bureaus," M. C. Burritt, State Director of Farm Bureaus. Field Reports: Jefferson County, F. E. Robertson, Agent, Watertown; Oneida County, E. W. Bush, Agent, Utica; Chemung County, G. P. Scoville, Agent, Elmira.

Report of Committee on Agricultural Education. Chairman, Dr. Liberty Hyde Bailey, Ithaca. Address: Dr. Thomas E. Finegan, Assistant Commissioner of Education, Albany. "Agricultural Unification in New York," Dean H. E. Cook, State School of Agriculture at St. Lawrence University, Canton. Hon. Calvin J. Huson, Commissioner of Agriculture, presiding.

Address: Governor Martin H. Glynn. Address: Hon. Franklin D. Roosevelt, Assistant Secretary of the Navy, Washington, D. C.

This programme promises an interesting and instructive convention. It merits a larger attendance. It comes at a time when farmers can well afford a brief vacation, and our suggestion would be to invite your wife to take the journey with you, and both make a holiday of this convention.

The Use of Wood Ashes.

Are wood ashes of any value to young peach and apple trees, and would fine shavings do to mulch strawberries? The soil is light sand. Would the ashes benefit my onion bed, which is black muck? F. O.

Madison, Ohio.

The ashes contain lime, potash and phosphoric acid and are excellent to supply these elements to trees. You should use some form of nitrogen with the ashes to make a complete fertilizer. On the black muck the ashes would be fine for onions, as the muck is rich in nitrogen. We presume you mean the fine planer shavings. They are not the best for mulch, as they pack down over the plants and may smother them. The plants must have air and a coarser mulch is best.

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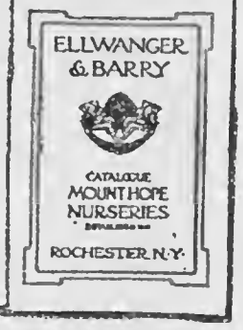

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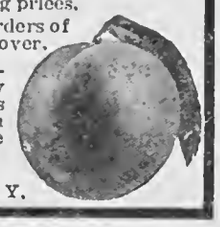

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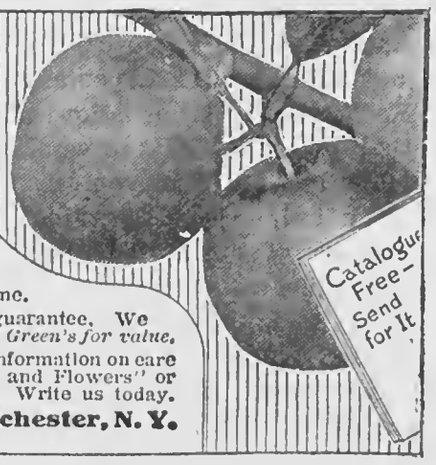

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ORCHARDING IN WEST VIRGINIA.

What does Mr. Van Deman think of West Virginia west of the Allegheny mountains, as a fruit section? I have a tract of land on the Valley River, seven miles from Fairmont, that I would like to set in fruit if I were reasonably certain of its being a commercial success. The land is 300 feet above the river and is surrounded on the east, north and west by the river. Fruit growing in this vicinity is given no attention, but where there are trees they bear fairly well. What varieties other than Grimes and York (Imperial) would be suitable?

Fairmont, W. Va. L. A. C.

Not long ago I was passing through West Virginia on my way from Chicago to Washington, D. C., and noticed the fact that there were almost no orchards planted from the Ohio River to the crest of the Alleghanies. The land is good enough and the climate also for fruit trees, as the few that had been set gave evidence. And this is a region where there are good markets for fruit at the mines and manufacturing towns. It would seem to me that there is a good field there for tree planting, and there are some very successful orchards there now, especially in the southwestern part of West Virginia and many more east of the mountains, in the valley of the Potomac and its tributaries. But there need be no fear in planting in the western regions if the land is fertile and well drained. Much of the valley land is good for apples, especially also the slopes and table lands. Peaches and cherries are also well suited to these higher places. I should think the location mentioned as being 300 feet above the river would be excellent for growing almost any kind of fruit suitable to that climate.

As to varieties of the apple there are many good ones besides Grimes and York Imperial that succeed in many parts of West Virginia. The Stayman is one of the best, and its parent the Winesap, as well. Rome Beauty, Delicious, Black Ben and Jonathan are all good kinds for that region. Yellow Transparent, Wealthy and Oldenburg should be used as fillers, the permanent trees being of the varieties formerly named, mainly, and set 50 feet apart, the fillers standing in the space between, making the complete orchard 25x25 feet apart. Stayman, Grimes and Winesap make very good fillers also ,and will not need to be dug out for about 20 years. Do not use peach trees as fillers, because they injure apple trees by their rampant growth.

H. E. VAN DEMAN.

SUNFLOWER CROWING IN MARYLAND.

As there seems to be a desire for records of experience in the growing and feeding of sunflower seeds for poultry, perhaps the results of an experiment made last Summer by the writer may be of interest to some of your readers. We have a gravelly hillside with westerly slope, shaded from the morning sun by buildings. This hillside is set to apple and dwarf pear trees, and enclosed as a chicken run. We wished to grow some kind of crop between the tree rows as an excuse for cultivation, but the land is too poor for potatoes, and the hens would eat up most other crops. The plump, meaty look of some sunflower seeds bought for chicken feed suggested the planting of sunflowers.

The land was treated to a fair coat of stable manure before plowing, and to sulphate of potash at the rate of 200 pounds per acre in the row at time of first cultivation. Plowing was difficult, as the ground was baked so hard that it was almost impossible to keep the plow in the furrow. However, by the use of cultivator and harrow, aided by a timely shower, we obtained a fairly smooth, though shallow bed. The planting was done with a hand seeder in rows three feet apart, hills 18 inches, about five seeds to hill, covered 1½ inches deep, the planting covering a strip 90 feet by 150 feet. The plants came up well and were thinned after first cultivation to two plants in each hill. Attempts to reseed and reset vacant hills failed.

About 60 hens had the run of the yard, but they did very little harm either to the seeds or to the growing plants. Our only loss was from rabbits, which burrowed under the fence and ate the tops off a few plants. The crop was cultivated with horse three times and hand-hoed once. After the plants were three feet high they shaded the ground sufficiently to keep down the weeds. When the heads grew heavy with maturing seeds and bent near the ground, the hens were shut out of the field for a few weeks until the crop was gathered. As the seeds ripened and became loose the English sparrows took heavy toll, especially of the smaller seeds. To save the crop from the sparrows and clear the field for the hens the harvesting was done as soon as the seeds could be beaten out easily with a stick. The heads were cut from the stalks and placed to dry on a warm south slope covered with sod. In spite of favorable weather, however, they gathered moisture from the ground, so that the pulp surrounding the seeds soon became soft, making it difficult to separate the seeds. About 10 per cent. of the crop was lost in this way. The shelling was done by holding the heads over a basket and beating with a square stick about 18 inches long and three-fourths-inch diameter. The seeds, amounting to 21½ bushels, were spread on attic floor for a few weeks, and stirred from time to time until thoroughly dry, then placed in bags ready for use as needed. We have had no loss from insects, but a neighbor, three miles away, lost his entire crop by some kind of weevil that ate the kernel out of nearly every seed. Our gratification at getting any returns at all under the circumstances from this bit of land is tempered by the thought that we might have done much better. The plants were altogether too crowded, as shown by the fact that while the heads near the border were 10 to 16 inches across, those toward the center were hardly half as large. E. C. O.

King, Md.

TOMATOES IN SOUTH CAROLINA.

I wish to follow my lettuce with tomatoes, and will in making the lettuce have applied 1½ tons per acre of 6½: 6½:10 and 200 pounds of nitrate of soda. I can get these tomatoes set out by March 15, which is early enough in our latitude. Would you advise as to fertilizer best adapted to side-dress these tomatoes under above conditions, and probably the best tomato for shipment, while the market was right and for canning afterward? I have been troubled with decay in blossom end just as tomato was turning. Will you give cure and probable preventive? This occurs whether stable manure is used or not.

Danfuskie Island, S. C. A. H. S.

The following is almost a perfect manure for this crop and you will no doubt find it will meet your every expectation in requirement: Phosphoric acid, 8 per cent.; equivalent to ammonia, 2 per cent.; soluble potash, 2 per cent. This compound is largely used by farmers who supply canners with tomatoes. It has made good in every instance. The question as to which is the best variety to grow for market and canning, is a matter of opinion among gardeners, and this opinion is as varied as the locations in which the tomato is grown. I have tried about every variety introduced in the last 30 years, but have found none that ever gave me better results than the old Paragon. It is early and handsome, of good size, perfectly smooth and regular, very solid and a good keeper; the color is of a bright glossy crimson. This variety some years ago was considered the standard of perfection, and was perhaps more extensively grown for market and canning purposes than any other variety. Many of the seedsmen have for some reason discarded it, and substituted other sorts, many of which never have been as good all-around tomatoes as the old Paragon. It is good and makes good where some of the later introductions are at a discount. The Stone, a later introduction, is considered by many gardners to be the best general purpose tomato on the market to-day. In my experience with it I found it a very shy cropper and the plants short-lived, under ordinary conditions such as the average grower must provide for this crop.

The rot spoken of is due to adverse climatic conditions, and will occur when these conditions are present, regardless of the kind of soil they are grown in or the kind of manures used. There is no remedy for it, as the fungus starts growth within the fruit, and for that reason any applied remedy will prove unavailing. Pick off all affected fruits as soon as discovered and destroy them.

K.

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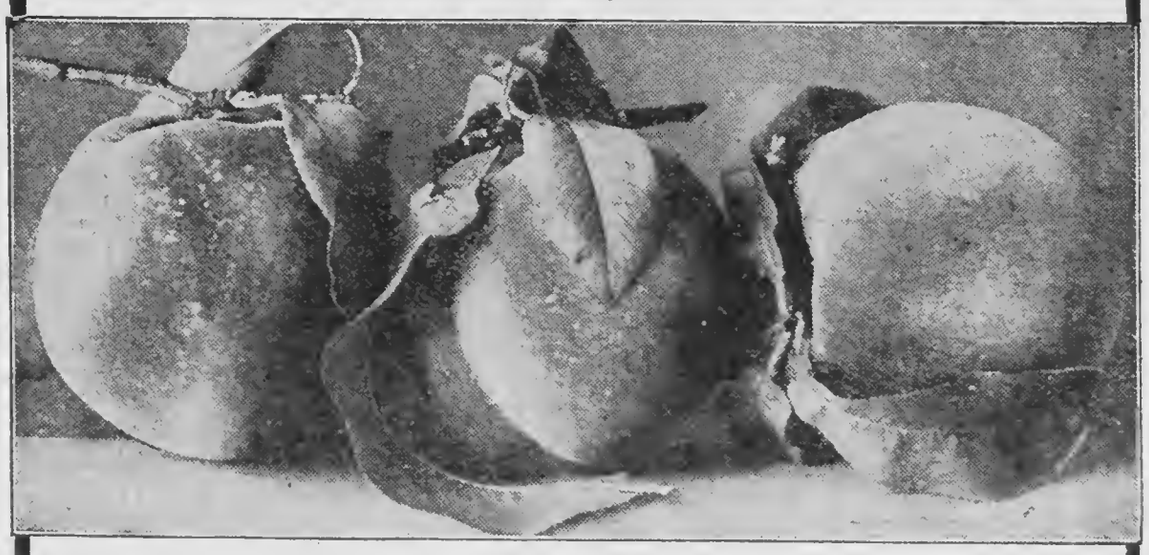

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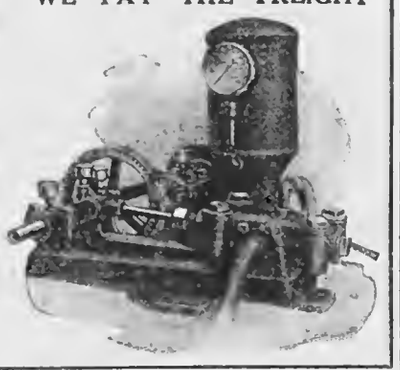

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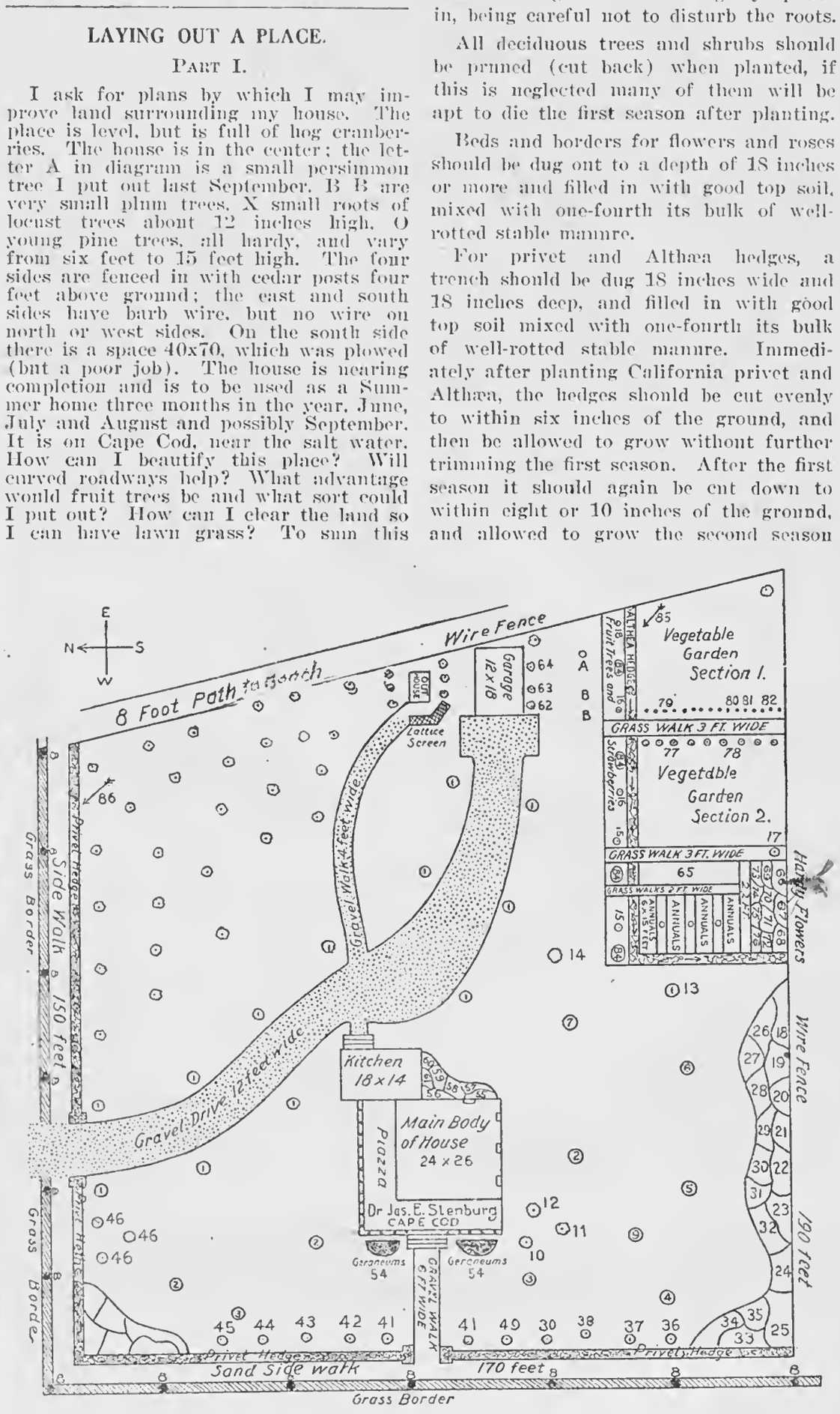
The Home Acre.

LAYING OUT A PLACE.

PART I.

I ask for plans by which I may improve land surrounding my house. The place is level, but is full of bog cranberries. The house is in the center; the letter A in diagram is a small persimmon tree I put out last September. B B are very small plum trees. X small roots of locust trees about 12 inches high. O young pine trees, all hardy, and vary from six feet to 15 feet high. The four sides are fenced in with cedar posts four feet above ground; the east and south sides have barb wire, but no wire on north or west sides. On the south side there is a space 40x70, which was plowed (but a poor job). The house is nearing completion and is to be used as a Summer home three months in the year, June, July and August and possibly September. It is on Cape Cod, near the salt water. How can I beautify this place? Will curved roadways help? What advantage would fruit trees be and what sort could I put out? How can I clear the land so I can have lawn grass? To sum this improvement in the general layout, such as walks, shade trees, a garden and a fence, either hedge or something that will look well. J. E. S.

Boston, Mass.



PLAN FOR GROUNDS OF COUNTRY HOME. FIG. 26.

For specimen trees and shrubs (individuals located by individual numbers) holes should be dug 2½ feet in diameter and two feet in depth, and filled in with good surface soil mixed with one-fourth its bulk of well-rotted stable manure. The entire space to be occupied by massed planting of shrubs and plants should be prepared by trenching. Commencing at one end of the ground to be trenched, a space, say five feet wide is dug out one spade deep, and the surface soil thrown to one side. The subsoil is then dug up to the depth of one spade and mixed with one-fourth its bulk of well-rotted stable manure, and then a second section five feet wide of the surface soil is taken out to the depth of one spade and thrown on top of the first section of spaded and manured subsoil, and the second section prepared the same as the first. These operations are to be continued until the entire space of ground to be prepared is gone over, when the top soil that was thrown aside from the first section is removed to, and placed on top of the subsoil in the last section. After digging two inches of well-rotted manure should be added to the surface soil and mixed with it. Sod should be carefully edged up to these plantings as shown on plan by the regular lines enclosing them.

The surface of the soil about all plantings should be mulched liberally with coarse strawy manure every Fall. This mulching will be a good protection to the roots in Winter, and the leachings from the manure will enrich the soil and promote growth. All the roughage should be raked off in the Spring and the remaining fine manure lightly spaded in, being careful not to disturb the roots.

All deciduous trees and shrubs should be pruned (cut back) when planted, if this is neglected many of them will be apt to die the first season after planting.

Beds and borders for flowers and roses should be dug out to a depth of 18 inches or more and filled in with good top soil, mixed with one-fourth its bulk of well-rotted stable manure.

For privet and Althæa hedges, a trench should be dug 18 inches wide and 18 inches deep, and filled in with good top soil mixed with one-fourth its bulk of well-rotted stable manure. Immediately after planting California privet and Althæa, the hedges should be cut evenly to within six inches of the ground, and then be allowed to grow without further trimming the first season. After the first season it should again be cut down to within eight or 10 inches of the ground, and allowed to grow the second season without further trimming. The hedges will now be well filled out near the ground. The privet should be lined up to the height it is desired and cut back evenly to the line on top. The sides should be likewise lined and trimmed. Subsequent shearings with the hedge shears during the growing season will keep the privet hedge at the proper height and width. To have the Althæa hedge make the best show, it should be cut down to within 10 or 12 inches of the ground every year in early Spring. It will then bloom on the young wood, almost from the ground up, thus making a fine show at a time when no other shrubs are in bloom (midsummer).

For small evergreens, the holes should be dug 18 inches deep and two feet wide, and good top soil only, used in the holes when planting. A mulching of coarse manure around them on the surface will retain moisture and help keep the ground cool during Summer.

All the cranberry bushes should be grubbed out, after which the ground should be deeply plowed, when it should be smoothed and leveled. Then apply a liberal coat of fine well-rotted manure and spade it in three inches deep and before raking apply air-slaked lime at the rate of one ton to the acre, spreading it evenly. Now rake the ground level and roll with a heavy hand roller, after which go over the ground, filling in all depressions and leveling off all bumps. Then roll cross-ways; go over the ground again raking soil into all low places and leveling down all bumps. After which it will be ready for seeding to grass, which should be of a mixture suitable for the seashore. Sow at the rate of five bushels per acre. K.

(Concluded next week.)

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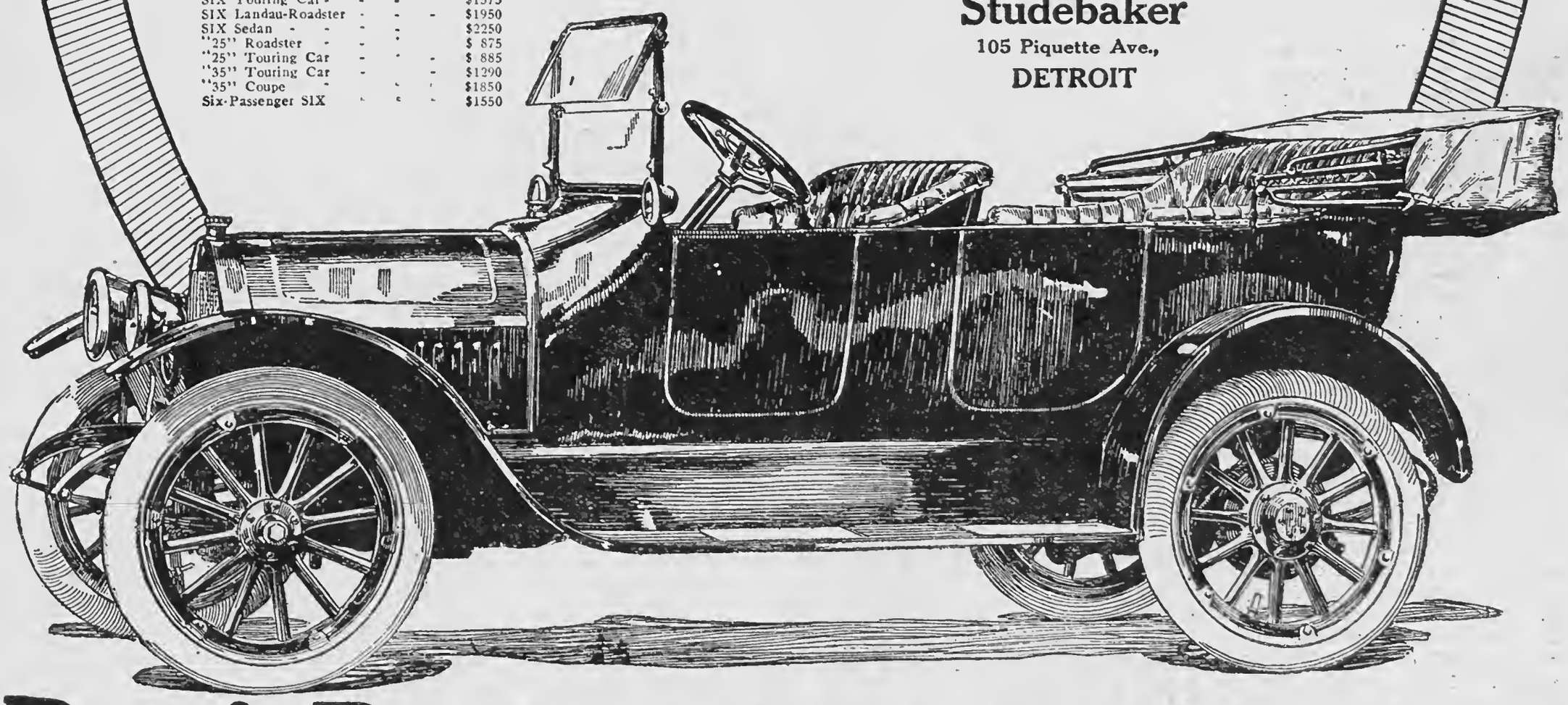

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The Home Acre.

Peas and Radishes.

I can raise everything but radishes and table peas in my flower and vegetable garden. The bugs and worm get on these when the peas are 2½ inches high, and they fall over. How can I treat to raise good healthy peas? Worms get on radish roots. What can I do for them?
East Cleveland, O. J. D. L.

The insect referred to as attacking your peas is probably the pea aphis, which of late years has become very troublesome in many sections of the country, particularly where peas are grown in large acreages from year to year. The remedy most largely used to combat them is kerosene emulsion spray, which can be purchased at any of the leading seed houses. Use according to directions. The following will also prove effective: Fir tree oil soap, lemon oil soap, potash, fish-oil soap, or strong soapsuds applied as a spray, at intervals of a week or 10 days. I would advise that you change this location for planting yearly, and use only well-rotted manure in moderate quantities, and if the soil is light and disposed to dry out quickly, to firm the soil well in the rows with the feet at time of planting. This will prevent the air reaching the roots, which is invariably more or less injurious to the plants, and sometimes causes a complete failure of the crop.

Radishes, are very subject to the attack of root maggots, particularly when grown in soil that has been repeatedly fertilized with stable manure. The following remedy will be found quite effective: To one-fourth pound of soap boiled in one quart of water, add when removing from the fire one pint of crude carbolic acid, dilute the whole with from 10 to 12 gallons of water, and apply along the rows a couple of days after the plants are up, and at intervals of eight or 10 days. Usually two applications are sufficient to free the crop from this pest. This remedy will be found quite effective in the treatment of cabbage, cauliflower, etc., that are suffering from an attack of the root maggot. K.

Trouble With Lindens.

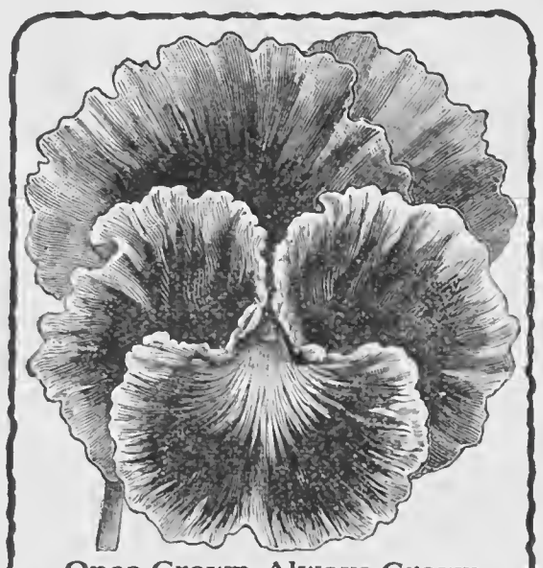
Four years ago last Spring I planted six linden trees. They all grew very nicely until last Spring, when I noticed one of them being slow in budding, and the leaves did not come out until two or three weeks after the others, and looked rather weak. Examining the trunk I found the bark loose on one side about 12 inches above the ground. I cut this part out and put grafting wax across the edges, but later the bark got loose all around and the tree died. I have now found the same trouble on another tree, but as it is yet very little I believe this tree can be saved. Will you tell me what is the cause and what can I do to save the other trees? I believe that there is some kind of a borer as I have found some small holes in the bark and a mealy stuff like fine sawdust inside.
Rockville Center, L. I. B. E. K.

I am unable to tell the author of the above question, just what is wrong with his lindens. I had the same experience a few years ago. The Spring of 1908 I planted three European lindens; they made a very satisfactory growth that year, with no visible signs of sunscald or any other bark trouble, but the next Spring one of them did not leaf out, and the other two barely unfolded their leaves in a feeble attempt to grow, but soon gave up the ghost. Upon careful examination I found the bark in exactly the same condition described in the above letter, and upon digging them up I found the roots dead, and so far as I could see the roots had never thrown out a fibre, nor had the cut roots callused the least bit. It appeared that some species of fungus disease had attacked the roots, probably at the terminals or where they had been bruised, and slowly followed the roots to their base, perhaps by Fall or early Winter, and for a certain distance up the trunks by the following Spring. I believe that sunscald might possibly produce the conditions he describes. The bark of the linden is soft and spongy, being composed of several papyrus-like layers, which quickly absorb dampness, and on account of its spongy nature will hold the dampness a long time. It is possible these trees were sunscalded the previous Summer and the dead bark becoming saturated with moisture, perhaps early in the Fall, created a favorable ground for the spores of some species of bark disease, either bred within the injured bark or communicated from some other source. The few worms mentioned are in no way responsible for the injury; they are simply an aftermath. The only thing to be done for the trees still alive is to cut out all the dead bark at once, cutting at least one-fourth of an inch beyond the dead line into the live bark; scrape the exposed parts of the wood free from all dead fiber, and paint it with asphalt paint, covering the wound well. This will prevent worms entering the wound, decay, and further infection from any live spores that may be still present on the exposed wood. Remove all bark and scrapings away from root of tree and burn them. K.

Garlic.

What is to be done with garlic on a farm in small patches in the fields? Can you get rid of it, and how? N. L.
Pennsylvania.

The garlic may be dug out with a spade or "spud." This is the surest way. Salt or kerosene put on the roots will kill many plants. If the patches can be plowed, planting with hoed crops with thorough culture will get rid of most of the garlic and constant mowing or clipping of the tops will help.



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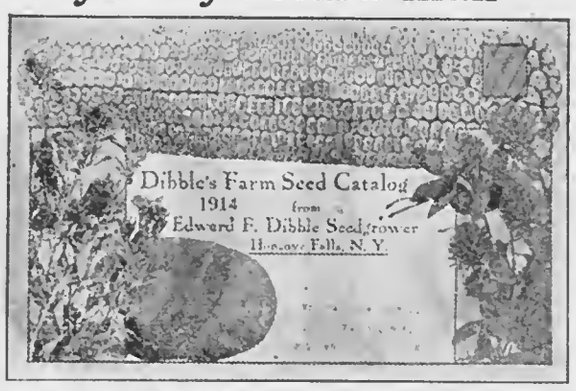

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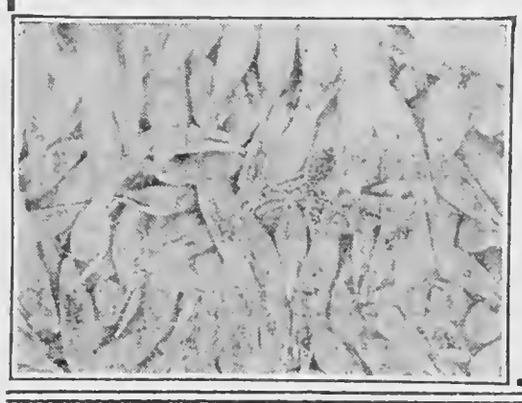

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Lots of other good things, including improved varieties of corn for the Northern States, as well as all kinds of garden seeds of highest quality **direct from our own seed farms, at wholesale prices.** Remember, Harris Seeds are carefully selected, then tested, and the results given so you know just how many will grow. Ask for free catalogue and sample of oats if you want it.

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ASPARAGUS FOR HOME MARKET.

The growing of asparagus roots for sale is mainly in the hands of professional planters, seedsmen and nurserymen, and it is a very profitable undertaking for them. Now here is, I believe, a splendid opportunity for at least one person in each community to realize quite a little extra money with a minimum of space and effort.

The demand for asparagus is universal; everyone likes it. To think of asparagus growing naturally calls to mind the finished product, but some one must first start the seed and furnish the plant. Why not you? Hardly a home garden is without its bed for table use. Not one out of a hundred grew their plants from seed, but bought from a catalogue or agent at prices ranging from $1 to $3 a hundred, and a good farm wife told me not long ago that she had been induced to pay $3.50 for 50 asparagus roots. There is good money in retailing asparagus roots at 60 cents a hundred, which is the price the writer obtains locally.

My asparagus seed bed is 80 feet across, and I put in the seed in early Spring, carefully one at a time an inch apart across the bed, and five rows each an inch apart, thus making a row five inches wide, 80 feet long and containing 4,800 seeds. I had a dozen or so such strips. As the seed is very slow to germinate I marked the rows with radish seed, a seed say each six inches, which gave me more radishes than I could use before the asparagus came up. The ground should be rich to induce a heavy growth the first year, and hand weeding under the above arrangement will have to be resorted to. But with average germination you should have a stand of 4,000 plants to such a row, which would retail for from $12 to $15 or about $2 per square foot. However, unless you felt sure of marketing the crop the first Spring, I would sow the seed two inches apart instead of one.

I believe, if you intend to sell locally only, that it is conservative to plan for an annual output of 1,200 plants, or roots, to each 200 homes in your selling territory. You will have sales occasionally up into the thousands, but the average family buys 100 roots. A family of five or more where all like it, should have a bed of 200 roots at least.

A classified advertisement in the county paper has been my best means of advertising the roots, as well as other things I had for sale. A fair proportion of orders came from out of town, say within a radius of five miles. Reports from nearly all customers last year evidenced the fact that they had had much better results in getting the roots to grow than from those that they had tried previously. This was probably due to the fact that locally purchased roots could be set the same day as dug.

Government and experiment station tests have repeatedly shown that one-year-old roots ultimately produce the greatest yields. Set forth this fact in your advertising and market the one-year-old roots if possible. You will, of course, have to charge more for two-year roots because they have taken your time and space, but your buyer is not getting as much for the money as in the first case.

Michigan. P. L. W.

HANDY DISINFECTANTS.

A GERM AGE.—In this heyday of germs when these microscopic plants are held responsible for almost everything, from souring the milk to causing typhoid fever, everyone is interested in knowing how to destroy them. Not all germs are bad; we couldn't live without them, and in some cases we can't live with them. Neither are they anything new. Adam ate and drank as many as we do, though his family physician never reminded him of it, and if his family suffered less from them than we do it is probably because they slept under the fig trees and Eve never packed away any scarlet fever germs with the children's Winter underwear.

AIR AND SUN.—The word disinfectant has become a household term, and almost everyone knows that it means something that destroys germs, though comparatively few know what our best and cheapest disinfectants are. The most useful and efficient all-round disinfectant that we have is the sun, and the air is his worthy ally. Fresh air dilutes germs as water dilutes filth, and the lustiest germ will quickly curl up its toes and die if exposed to the sunlight. But fresh air and sunlight are abundant and cheap, so, of course, we usually prefer to use some disinfectant that smells bad and can be bought at the drug store. Open windows and rolled up shades would save many lives, but what do we have windows and shades for if not to keep them down? Besides, if we left them up, it would let in the flies and fade the carpets; so we pamper the germs and employ the doctor.

HEAT HELPS.—Next to the sun, our best and cheapest disinfectant is heat. Fuel costs something, but heat, after all, is cheap. We need it in only sufficient degree and applied where we want it to destroy any germs that threaten us. As fresh air helps the sun, so moisture helps heat. For this reason, boiling water and steam make almost ideal disinfectants. They combine a temperature of 212 degrees with moisture, and this is enough, though if boiling water is used to kill germs, remember that it must be boiling; otherwise it will not have a temperature of 212 degrees and it will simply scald without killing. Most germs don't mind being scalded, a bit. For clothing, bedding, dishes, and anything else that can be boiled there is no other disinfectant equal to heat. Put these things into a washboiler, place the cover on, and set upon the kitchen stove to boil for a half-hour, and the wickedest germ that ever leered over a foot-board will be done to a mush.

DISINFECTANTS.—But we sometimes wish to disinfect things that we can neither boil, burn, nor hang upon the clothesline in the sun and air. So we need some smelly stuff from the drug store. Of these things, corrosive sublimate with water is very efficient, but it is a poison, and the tablets into which it is made for convenient use are too frequently mistaken for medicine and swallowed. Carbolic acid with water is also a splendid disinfectant, but this too is a corrosive poison and a little dangerous to have about the house. Safer than either of these, and about as effective, is chloride of lime. This may be purchased at the drug stores, but much of it found there has deteriorated and become worthless. Good chloride of lime should give off irritating fumes that the face cannot be held near it without irritating the eyes. A reasonably fresh preparation of chloride of lime dissolved in water, one pound to two gallons, makes a splendid disinfectant for privies, sinks, drains, for use in bed-pans, and with such things as may be placed in it. The fumes will bleach many colored fabrics, however, and this sometimes limits its use. It is also a powerful deodorizer, and the dry powder may be sprinkled over the contents of vaults, decaying animals, and in places where it is desired to sweeten the air. But deodorizing doesn't kill germs, it only hides them; remember that. M. B. D.

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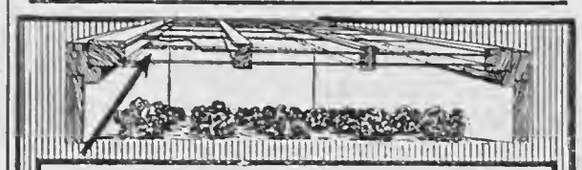

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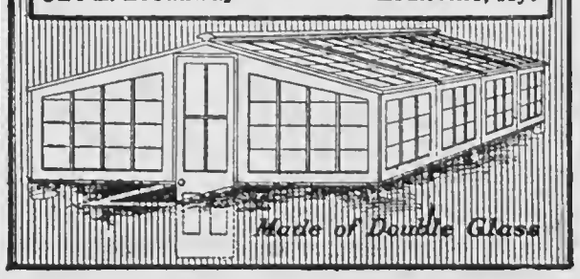

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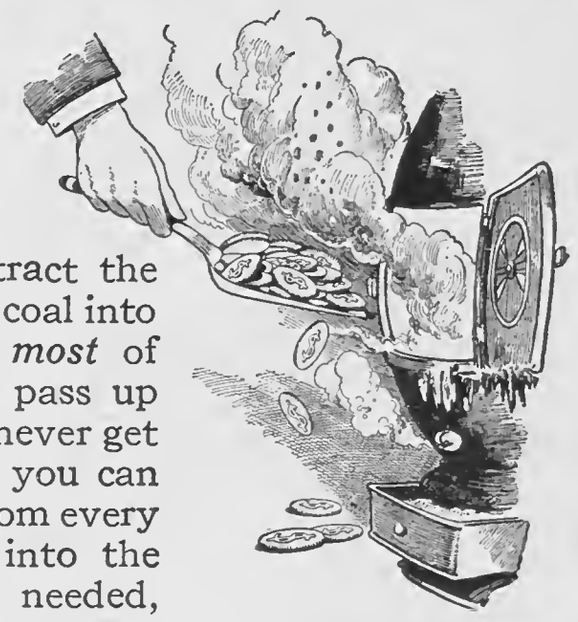

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A No. 1021 IDEAL Boiler and 262 ft. of 38 in. AMERICAN Radiators, costing owner $165, were used to heat this cottage. At this price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which are extra, and vary according to climatic and other conditions.

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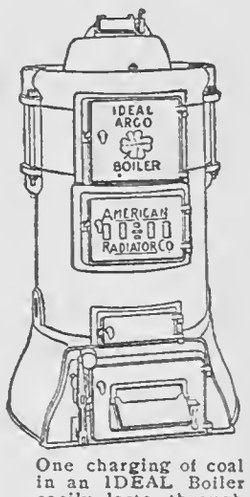

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It has cost us forty years of experience to know how to mix the right kinds and the right quantities of ingredients for fertilizer.

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accomplish also the more difficult task of getting the right blending, the right solubility into a mixture which will run readily and freely from the farmer's planter, and which will remain dry and drillable as well as efficient until used in the field. We make a brand to fit every crop need.

Write and tell us what your crops are, and we will send you our illustrated catalogue.

BOWKER FERTILIZER COMPANY
43 Chatham Street, Boston, Mass.
60 Trinity Place, New York. P. O. Box 805, Buffalo, N. Y.

Catawba-Concord Grapes.

Can you tell us anything about the Catawba-Concord grape? Does it prove all the claims made for it? W. F. B.
Ann Arbor, Mich.

The Catawba-Coneord is a comparatively new production, fruited for the first time the past season. However, the fruit was grown from wood of the Catawba-Concord grafted upon a six-year Concord root. The grafting was done in the Spring of 1912. But a few small elusters, due probably to Winter killing of buds, as a result of but one rank growing, some having developed the previous season. The quality of the fruit indicates that the variety possesses possibilities. Another year we expect to fruit it on its own roots. F. E. G.

Removing Large Stump.

When I laid out my place 15 years ago, a poplar tree was planted on a terraee bank on the corner of my stable. It died last Summer and I have had it cut down. It has left a large stump, about three feet wide. How can I get rid of it, as I want to plant a Red cedar where it was? It cannot be dug out, as it would destroy many shrubs planted near it, and cannot be blasted out as it would disturb the foundations of my stable. My old colored man says he thinks holes could be bored in it and something put in these holes. FRANK H. PRESBY.
New Jersey.

The papers often contain stories about using saltpeter to "rot out stumps," but such a plan will not satisfy you. Under the circumstances we should try the following: Dig the soil away from one side of the stump and get some expert wood chopper to cut it off as far below ground as possible. Cut it much the same as wooden meat blocks are cut off. Then bore several holes in the stump and pour in kerosene. Build a little furnace of brick and soil over the stump with a long stove pipe runing out from the side away from the barn. Leave an opening in the other side for draft and start a fire with kindling on top of the stump. By watching the fire carefully and blowing in on feed draft, you can burn the stump down to the roots. Leave the ashes in, fill with soil and plant.

New York State Fruit Growers.

The New York State Fruit Growers' Association started their program on January 7. In addition to the usual reports of committees, there were addresses by the following persons: Prof. E. P. Felt, of Albany, as State Entomologist, and Prof. Glenn W. Herrick, of Ithaca, spoke on the fruit-tree leaf-roller and its control. Prof. F. C. Stewart, of Geneva, and Prof. Donald Ruddick, of Ithaca, discussed plant diseases; and Prof. P. J. Parrott, of Geneva, talked on spraying. Mr. Edward Van Alstyne had charge of the question box. Prof. F. C. Sears, of Amherst, Mass., gave the story of his six years' experience in running a fruit farm. Seth J. Bush, of New York, discussed the problems of peach production, and also of coöperative marketing. Prof. A. P. Sandles, of Columbus, Ohio, was also down for a talk.

Prof. U. P. Hendrick, of Geneva, gave a report of his experiments, covering the past 10 years, on sod muleh vs. culture. There was also a prize speaking contest open to students in the Department of Pomology at Cornell. Dr. W. H. Jordan, of Geneva, discussed the relations between Federal and State Agricultural Extension Service. Prof. C. S. Wilson, of Ithaca, gave an address on packing apples. Dr. W. J. Spillman, of Washington, discussed the cost of growing apples, and Prof. H. B. Knapp, of Ithaca, compared prices of apples for 10 years. Mr. F. E. Gladwin gave the story of a five-year fertilizer experiment with grapes. and O. M. Taylor, of Geneva, started a discussion of bush fruits. There was the usual tremendous exhibit of fruit, in charge of Mr. Geo. R. Schanber, and a great exhibit also of all appliances and materials and machinery needed for cultivating or caring for fruit.

A LOCAL paper tells of a clergyman who received this note telling him to perform a marriage ceremony: "This is to give you notice that I and Miss Jemima Arabella Brearly is coming to your church on Saturday afternoon next to undergo the operation of matrimony at your hands. Please be prompt, as the cab is hired by the hour."—London Opinion.

COMING FARMERS' MEETINGS.

Massachusetts Fruit Growers' Association, convention and trade exhibit. Springfield, Mass, January 15-17.

New York State Agricultural Society annual meeting and convention, Albany, N. Y., January 20-21.

Vermont State Poultry Association, seventeenth exhibition, St. Albans, Vt., January 20-22.

Connecticut State Dairymen's Association, Hartford, Conn., January 20-22.

Ohio State Horticultural Society, annual meeting, Cleveland, O., January 20-23, in connection with the Fifth Annual Ohio State apple show.

Virginia State Horticultural Society, annual meeting, Richmond, Va., January 21-23.

Annual Corn Show, Pennsylvania Live Stock Breeders' Association, Pennsylvania Dairy Union, Pennsylvania Horticultural Association. American Berkshire Congress, York, Pa., January 20-22.

New York State School of Agriculture, Alfred, N. Y., short course in agriculture beginning January 26; Farmers' Week, February 23-26.

Forty-first annual meeting, New Jersey State Board of Agriculture, Trenton, N. J., January 29-30.

Farmers' Week, State School of Agriculture, Canton, N. Y., January 26-31.

Ohio Corn Improvement Association, Mansfield, O., January 27-30.

Western New York Horticultural Society, Rochester, N. Y., January 28-29-30.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6.

Sixth National Corn Exhibition, State Fair Ground, Dallas, Texas, February 10-24.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6-March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26.

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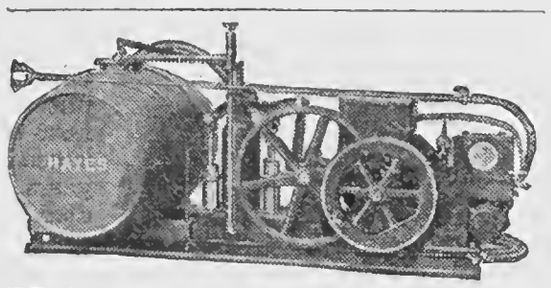

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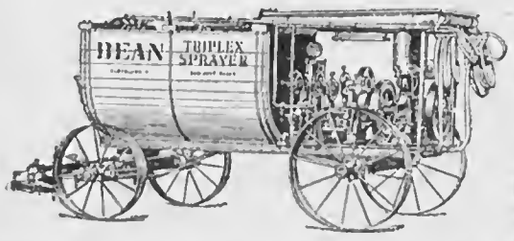

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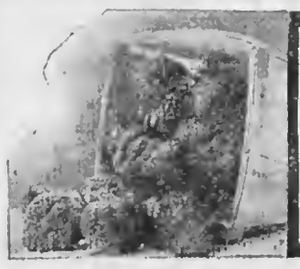

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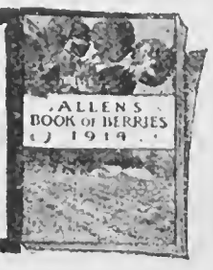

Winter in the Country.

While Winter is usually a season of joy to children in general it is often a lonely dreary season to women who live upon the farm. Usually the mother can find plenty to do to occupy her time and attention, but weeks and weeks of the same round of duties, with but little change, is very tiresome, making existence in the country a mere treadmill of wearisome tasks which must be done over and over again. An effort should be made to bring variety into the home life of the farm women. Home is always twice as sweet to one when she returns to it after being absent. We often gain contentment from going out among our neighbors and finding out that they, as well as ourselves, have rough places in their own lives. We take up our own burdens more cheerfully when we realize that we are not the only ones who have crosses to bear. We are all so differently situated that it is impossible to make out a social outline for every neighborhood, but in this rather remote New England town we have kept up a very pleasant sociability during the cold season.

At Christmas last year we had a very pleasant neighborhood party, where all were invited, young and old. It was held in a large, roomy farmhouse, decorated with red paper, evergreens and Christmas bells by young girls of the neighborhood. Nearly everyone in the neighborhood came. Whist, checkers and other games were played. Dancing, singing and music were enjoyed also. Refreshments of fruit, candy, cake and cocoa were served. A sum of money had been contributed by different ones for the fruit and candy and all the ladies brought cake, so that no great expense was entailed upon one family. The parents enjoyed themselves as much as did the children; the grandparents also entered into the fun, and the Christmas gathering was one long to be remembered.

In every neighborhood there should be some leading spirit in order for there to be genuine sociability. There must always be a leader in every undertaking great or small. It is usually for the lack of leadership in the country that life is dull and unattractive. The world is full of pleasures right at our own doors if we will but step out and find them. A Ladies' Sewing Circle could be organized which would do a world of good. The ladies in each neighborhood could meet and sew for each other. A great deal of work could be accomplished in an afternoon, and many a weary woman would rejoice in having her friends come in and help her do her work. Then another week they could meet with another neighbor, then still another, and so on until the round of the circle was completed. Or if they did not wish to sew for each other, they could sew for some over-burdened shut-in, taking their own refreshments and making the day one of pleasure and no extra work to the hostess. There are always carpet rags to sew, rugs to braid, garments to be made, mending to do. Always "something to do for somebody else." And in doing for others we enrich our own lives and bring to ourselves as well as to others the best and purest kind of happiness.

In the early days of our country, when New England was striving to regain herself after the Revolution, sociability in neighborhoods was very great. The common hardships which each family had undergone had knit them together in bonds of friendship, so practically all of their work, as far as possible, was done in "bees." Husking, paring, and quilting bees were the order of the day, which brought the people together in the evenings. Newspapers were gaining in circulation, and every town had its newspaper circle. They met at each other's home, exchanged newspapers and read them aloud. To-day, when our homes are supplied with newspapers and magazines, there may not be the need of a newspaper circle, but would it not be of benefit to have the members of the magazine clubs, of which there are many, meet frequently at each other's homes for an evening, instead of simply passing the magazines around to each other as most of them do? It would promote the taste for good literature and would do a great deal towards making country life attractive in Winter.

Why do not you who have leisure do something more than you are doing to brighten the lives of those around you? You would be surprised to find out what you could do, if you would but try. Our country neighborhoods do not need to be the lonely places they so often are, if one or two in each neighborhood would earnestly try to do something for themselves and for their neighbors. This is a good motto for each and all:

"Let me live in my house by the side of the road and be a friend to man."

SUSAN JEWETT HOWE.

White Oilcloth in the Kitchen

It has been our fortune either to build new or make over several different kitchens, and in each one we have found the use of white oilcloth one of the most helpful things about them. We like a bright clean well-lighted kitchen, not too large, with a good outlook on the world; a cozy corner by the kitchen fire where the men folks can rest a bit and pick up their paper. In fact the kitchen is the most cheerful room in the home. We never did like wainscot; it made the room look too barnlike; then too the paint was hard to clean. So we took white oilcloth and put it on the walls, from the baseboard up the full width of the oilcloth; paste it on just like wallpaper. It makes a smooth hard wall that can be wiped off like a china plate. Tile paper is used above that, with sometimes a piece of moulding to finish the edge where the two meet. We paste it on the pantry shelves, and use it on the pantry walls as in the kitchen. The kitchen table and work table is covered with it, with several thicknesses of paper beneath to make it smooth. It is neat, clean, sanitary and inexpensive, for with care it will last for years. In one kitchen we used it six years, and it was as bright at the end of that time as when put on. We have never seen it used in that way. Be careful to have it fit snugly around the window and door frames. It can be put over papered, boarded or plastered walls, with good satisfaction. F. H.

THE SHALLOT.—A recent query came to us relative to shallots, and we found that this little onion is unknown to a good many people. The name is sometimes given in the markets to small onions or scallions, but the true shallot is a different plant, having small clustered bulbs like garlic. Its botanical name is Allium Ascalonicum, its name being derived from Ascalon in Palestine, where it grows abundantly. It has been cultivated from time immemorial in the East, and was doubtless brought by the Crusaders to Europe, being used in Great Britain in the sixteenth century. The shallot is milder in flavor than garlic, and is used quite freely in sauces, catsups and salads.

Mitchell

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You've got something behind you when you buy. Our standing and prestige constitute a *bulwark of safety.* Add to this the remarkably fine character of the Mitchell Models and your purchase is *as solid as the Rock of Gibraltar.* Ask any farmer in America what he thinks of the old Mitchell-Lewis Wagon Company. Ask any one of thirty thousand Mitchell automobile owners what he thinks of the Mitchell-Lewis Motor Company. Their reputation and reliability are precisely the same.

The Mitchell Models for 1914:

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Planet Jr 12-tooth Harrow, Cultivator and Pulverizer

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No. 30 Planet Jr Single Wheel Hoe, Cultivator, Plow, Rake and Marker

A new Planet Jr Single Wheel Hoe that is light, strong and practically indestructible—the frame and handles are steel. It is completely equipped for plowing, hoeing, cultivating, and raking. The marking attachment insures rapid, economical wheel-hoeing.

No. 10 Planet Jr Horse Hoe, Cultivator, and Hiller

Does more and better work than any other horse-hoe ever invented. It is light and easily handled, yet unusually strong. Has new steel wheel which prevents clogging with trash. Quickly adjusted to rows up to 3½ feet apart. Vine-turner attachment is great for many crops at last workings.

Hope Farm Notes

This is *nice* weather! How can anyone make good resolutions, with a "stick" in them, when the first Sunday of the new year turns up like this? Instead of snow and ice, last night brought a fierce rain. This morning every little hollow has turned to a puddle. Still the rain comes, and a fierce, cold wind has risen. With church some miles away, our folks gave up the trip. The rain pounds at the windows and the wind shakes the doors, but we are all dry and warm. The cows have stalks and mangels to amuse them, and we have a good supply of books and a warm open fire. On a day like this the average man is likely to sleep, find fault, or raise "a grouch"; or he will read something that can take his mind away from himself. Of course a man is harmless while he is asleep, but the "grouch" is one of the social worms which gnaw the family heart out. The great resource for a day like this is reading. Looking back a good many years now, I can see that one blessed thing that came out of my hard childhood was the fixing of a reading habit. What is there on the surface of this good earth that I could buy with a million dollars which could even equal the satisfaction of sitting before my fire on a day like this, and wandering off into an unseen country with the author of a good book? When I was a boy the old folks made me read such books as "The History of Josephus," or "Transactions of the General Court." Such literature will start no reading habit in a boy. I suppose I ought not to tell it, but my habit was started on stolen fruit. It somehow came to that childish mind that there must be, somewhere, books which carried a message that was not like taking medicine! That kind seemed to go right into the fire if they got inside the house. I went out into the barn, and with a hay-knife cut a tunnel or hole under the hay, with a good-sized space at the end, near a window, which gave light enough for reading. The old gentleman who brought me up was lame, and I was expected to do most of the chores. I got a great reputation for industry in currying the cow and sweeping the barn, when in truth I fear I was curled up in my hole under the hay enjoying stolen fruit. For there I nibbled at "specked" apples, and read such books as I could pick up in the neighborhood. To you that would have seemed like a dusty and dreary prison. To me it was like fairyland. As I read I could forget the wild storm outside; the narrow hole in the hay mow "faded away to marble halls." The author of these books took me right by the hand and led me up to the pleasant places of life. This will be read by gray-haired men, who perhaps were placed as I was years ago. We were made orphans by the Civil War, and "given out" because the home could not carry us all. These men will know how such boys needed the sentiment and thought which came through a reading habit, and what would have happened had it been denied them.

Two books which I read over and over in those days were Dana's "Two Years Before the Mast," and a ragged and thumb-worn "History of Paraguay." To-day, on this cold, wet Sunday, it seems very much like old times to take up "Two Years Before the Mast" and imagine myself back in the old hay-mow once more. It is a surprising thing, but the old book seems just as fascinating now as in those old days half a century back. Here I am reading about the flogging aboard the brig Pilgrim, throwing the hides down the cliff at San Pedro, the fearful struggle to get around Cape Horn, the fight on deck between the big overgrown lad from Cape Cod and the boy from the Boston school. It is no wonder Dr. Eliot has put this among the "classics," to rank with the few great masterpieces which cannot be forgotten or lost. This book takes hold of you. It is so simple and true that you may lie in your hay-mow with mittens and overcoat on, and sail away under California skies with no thought of zero weather. The cow in the basement may not be carded, and the calf may bellow for her hay, but you are off in the future where great things are to be done.

Dana took his voyage in 1834. At that time California was considered a part of Mexico, and little was known about it in the Atlantic States. When gold was discovered in Upper California, "Two Years Before the Mast" was practically the only book which gave true information about the Pacific Coast. While Dana gave the actual facts—true pen pictures of what he saw—we must smile now to read his reasoning from these facts. This is what he said of California in 1835!

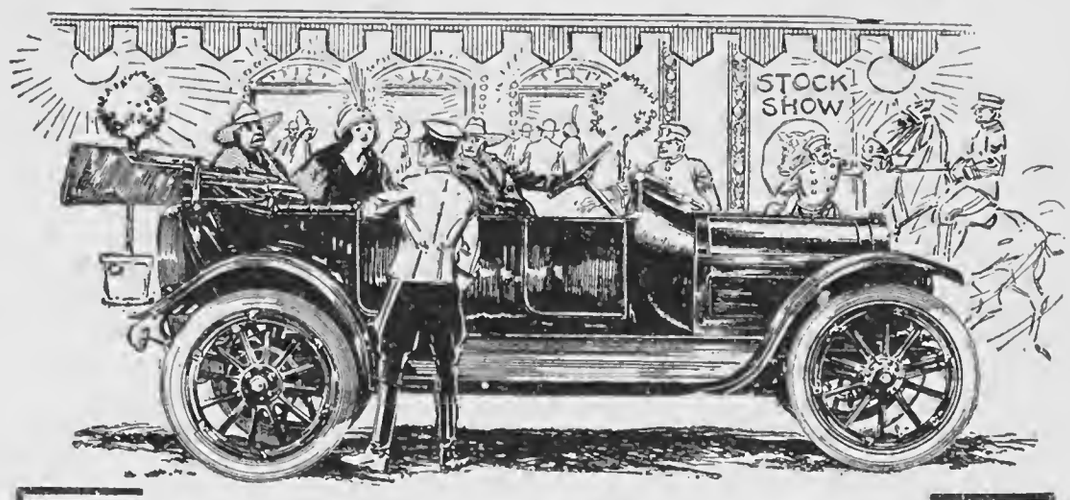
"In the hands of an enterprising people, what a country this might be, we are ready to say. Yet how long would a people remain so in such a country? The Americans (as those from the United States are called) and Englishmen, who are fast filling up the principal towns, and getting the trade into their hands, are indeed more industrious and effective than the Spaniards; yet their children are brought up Spaniards in every respect; and if the 'California fever' (laziness) spares the first generation, it always attacks the second."

Nearly 80 years ago that seemed accurate reasoning from the facts, yet how time has disproved it all. Dana could not foresee that the gold discoveries would mean to California, and he did not realize the full, enduring power of the white race under the spur of labor and necessity. Had California become a slave State Dana's estimate would have been nearer right, for there can be no permanent progress or stability of government except where the great middle class of people labor willingly and with fair profit.

What comes to me to-day on this wet and dismal January Sunday is that neither Dana on the California coast nor the boy in the New England hay-mow could reason accurately from the facts then at hand. Suppose Dana in his day could have read Smith's "Conquest of Arid America," or suppose the boy could have read with understanding such a book as "The Promised Land." One book tells what is to happen to the Far West when intelligent white men turn water upon the desert sand. The other gives a vision of the effect upon New England of the swarms which are to come from Europe to do the labor which "Americans" grow away from. Both Dana and this boy would have been far better off and would have made broader and more capable men could they have worked away from the shell of that old prejudice which prompts men to conclude that whatever is hard or out of the ordinary comprehension must be impossible. Eighty years ago Dana, the highest authority, could see little if any future for California. Look at the State now! Who can read such books and not ask himself: "If this be true, what is to happen 80 years from now?" It is a large thought, and some of you may say, "What is that to me?" Your children and their children, your property and your plans, your life work, are all to be tested in that far-off time. The rain that is beating against my window may be evaporated and condensed one thousand times over before that time, or it may work through one hundred different bodies. You cannot affect that, but the man who watches it from his fire 80 years hence may be a little short of what he ought to be if you sit and let your mind stagnate, or laze in sleep, or a "grouch" when a strong book would gladly take you in hand.

I do not even know who wrote that "History of Paraguay," but it told of the war with Brazil. The tyrant Lopez commanded, and for years the people fought on until over 60 per cent. of the men were killed. In the last battle white-haired men, women and boys of 10 fought side by side against the Brazilians. As a boy, in my hole in the hay, I used to drop the book and wonder why these people could fight like that. Lopez was a brutal tyrant. He had robbed and degraded his country. There was no hope under his rule, yet what frightful miseries these poor people endured fighting for their native land! That is one country I have always wanted to see, in order that I might learn what there is about it than can arouse such patriotism. Now comes Joe Wing's book, "In Many Lands," which gives the best idea of the South American people I have yet seen. Joe Wing went to Patagonia and Argentina for a study of the sheep and wool industry, and this book is written as simply as "Two Years Before the Mast." It is full of pen pictures which might well take a man away from a stormy Sunday. Imagine a little seaport without protection on the lower Pacific. A few straggling houses with iron roofs stand in the fierce and perpetual wind. A broad highway, fenced on either side, runs from the ocean straight back hundreds of miles away to the mountains. Down this highway toiling oxen haul great loads of wool, and great flocks of sheep come walking out of the dim, mysterious interior to the slaughterhouses. What have we to do with such a hateful place? I can remember when James G. Blaine was Secretary of State, and the speech he made to the delegates from South America. His prophecy of close trade relation with the country south of us has not yet come true, but it has only been delayed. Our children are to find in these Southern Republics a most wonderful opportunity for trade and development. To reason only from the facts of the present would be as futile as Dana's statement about California 80 years ago. I regard Joe Wing's book as one of the most useful volumes that this century has given us thus far. I saw Mr. Wing a short time ago, and told him of that old "History of Paraguay." Then I asked him how he accounted for the fact that these people endured such fearful privations for a brutal dictator like Lopez. But here we are at the end of our space, with dinner ready, too. We must let this go awhile.

H. W. C.



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35

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Yield Rich and Abundant Crops of Clover when Fertilized with

Genuine Thomas Phosphate Powder

(Basic Slag Meal)

Key-Tree Brand

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For years animals that have fed upon these pastures have carried away plant food from the land; Nitrogen in the forms of milk, flesh and wool; Phosphoric Acid in enormous quantities in the bones. Cattle bones, as a matter of fact, are fifty per cent bone phosphate of lime. Consequently, old pastures are found to be especially deficient in phosphoric acid, and of a generally infertile character.

The use of nitrogenous fertilizers is rarely profitable upon pasture lands, but by the application of GENUINE THOMAS PHOSPHATE POWDER, Key-Tree Brand, (which furnishes Phosphoric Acid, Lime, Magnesia and Iron,) the character of the herbage may be completely changed.

In place of the tough wild grasses, sorrel and weeds, there comes in a rich growth of clovers and highly palatable grasses, which transform the barren fields into luxurious feeding grounds.

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More cattle on our pastures will help to solve the problem of the high cost of living.

The whole story is told in our new booklet, "FIVE-HUNDRED-YEAR-OLD PASTURES." Is it not worth your while to study this carefully with a view to reducing your grain bills from one-third to one-half? A copy is yours for the asking.

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150 Gallons with or without Truck. Handles any kind of solutions.

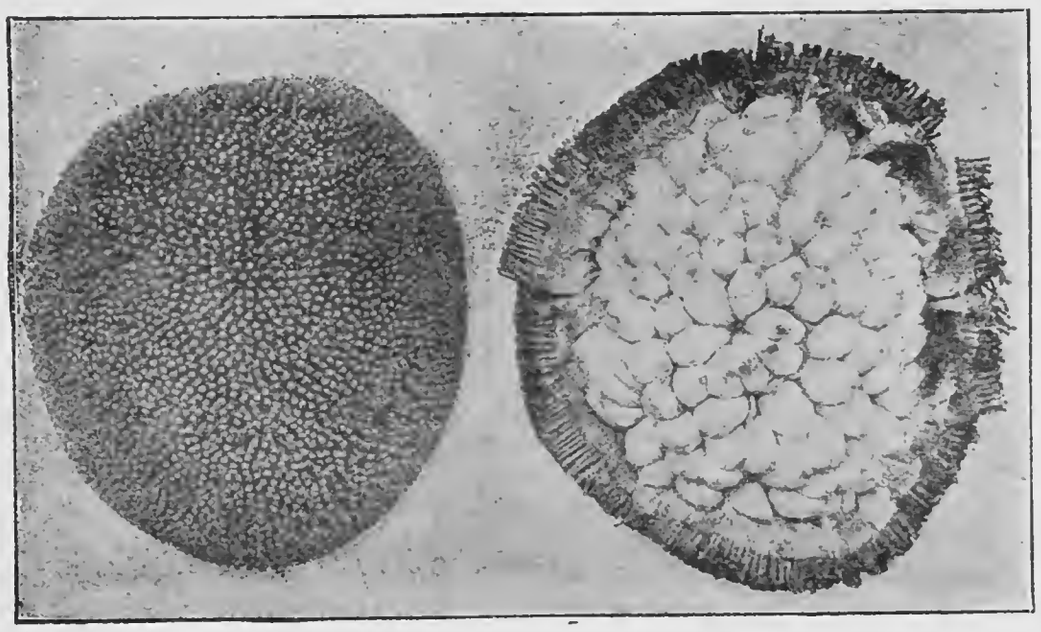
Ruralisms

A PHILIPPINE BREAD FRUIT.

The Office of Foreign Seed and Plant Introduction, in Circular No. 89, gives the interesting picture of Artocarpus odoratissimus shown in cut below. This plant is known as the marang, and Mr. P. J. Wester, in charge of Lamao Experiment Station, who collected seeds of this plant, says:

"These seeds were collected in Zamboanga during my recent trip to Mindanao. This is my second opportunity to test the marang, and I have no hesitation to declare it as one of the coming tropical fruits even in its present undeveloped state. It is very sweet and rich in flavor, and has the unique quality of having a flesh that separates readily and absolutely from the seeds and the skin. As far as I have been able to ascertain, the marang occurs only on the south coast of Mindanao and in the Sulu archipelago. On my return to Manila I met on the steamer a missionary who had lived in Borneo for three years, part of which time was spent in Sandakan. She had neither heard of nor seen the fruit before. The marang will probably not succeed except where the climate is warm and humid throughout the year and the atmosphere close and still. The tree is also known as madang. It is a medium-sized tree with large dark-green leaves, entire or more or less conspicuously trilobate, 18 to 24 inches long and 10 to 12 inches broad, similar in habit to the breadfruit, and is found on the south coast of Mindanao and in the Sulu archipelago, and was first described from Mindoro. The fruit is large, about six inches long and five inches in equatorial diameter, roundish oblong, regular, thickly studded with soft greenish-yellow spines about one-third of an inch in length on the outside; rind thick and fleshy; flesh white, sweet, rich, juicy, aromatic and of good flavor, separated into segments (of about the size of a grape) clinging to the core; each segment containing a seed; seeds many, whitish, one-third by three-fifths of an inch, smooth, separating readily from the flesh. When the fruit is ripe, by passing a knife around and through the rind, with a little care the two halves separate from the flesh, leaving this like a bunch of white grapes. Ripe fruits were obtained in August. The marang is far superior to its relatives, the jak and the ordinary breadfruits found in the Philippines."

The ordinary breadfruit, Artocarpus incisa, and the jak or jack-fruit, A. integrifolia, furnish a staple food in the Pacific islands, and are also grown freely in the West Indies, and in all countries favorable to their growth. The breadfruit was first brought into notice in Europe through the voyages of Captain Cook, and in 1787 the British Government sent the ship Bounty, under the command of Captain Bligh, to Otaheite, to secure a cargo of young trees for naturalization in the West Indies. The historic mutiny of the Bounty and the perils of Captain Bligh, who, with a few companions, was set adrift 3,618 miles from help, are well known. He made a second journey on the same mission in the ship Providence, and in 1793 breadfruit trees were flourishing in Jamaica, and with the cocoanut and banana, comprise the chief food of many tropical countries.



THE MARANG—A PHILIPPINE BREADFRUIT.

CHINESE WINTER CABBAGE.

Among new plants referred to in Bulletin 89, of the Office of Foreign Seed and Plant Introduction, is a large variety of Chinese Winter cabbage, coming from near Tientsin, called "Ta pai tsai." Chinese Winter cabbage is a vegetable of first-class quality, having a rich flavor all its own. It is very much easier digested than the ordinary cabbage and emits no offensive odors when boiled. It can be served in many different ways, and may be eaten boiled or stewed, raw, pickled or salted. To obtain the best results a rich, well-worked soil is needed; the plants must have a space of about two feet in all directions, and they must be regularly cultivated, and they must never suffer for lack of sufficient soil moisture. The best time for sowing the seed is about the end of July or early in August; for regions with a very long Summer even later will suffice. To keep them during the Winter the Chinese proceed this way: After the first heavy night frost the cabbages are pulled out by a twist of the hand, the earth roughly shaken off the roots and the plants left lying on the field for a day or so to dry them off; then the outer leaves are pulled off, the dry soil beaten from the roots and the cabbages brought to dry dug-out cellars, where they are neatly stored layer on layer with the heads facing the entrance. Dry straw is now put over them and the whole covered with a heavy coat of soil. When stored carefully they last until late next Spring. The roots must never be cut off, as otherwise the plants begin to rot. When grown for seed the roots with just an inch or so of the leaf-stumps left on them are planted out in the Spring on a special piece of land, where the soil is not too heavy. They soon form new rootlets, and in a short time stalks rise up with but very scanty foliage and bearing pale yellow flowers. The process of setting seeds takes but little time. When all goes well one has fresh seeds again in early or middle July. From the climate of North China it is believed this cabbage will do well where the days are warm but the night dry and cool.

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SPRAYER for Gardens, Estates, Parks, etc.

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Send me your Catalog, Spraying Guide and "special offer" on the sprayer marked with an X below.

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A National Weekly Journal for Country and Suburban Homes

Established 1850

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

Come all ye agriculturists
And listen unto me.
You want to study up in A,
But practice down in Z.
For up upon the heights of A
Pure science may be found,
But in the valley down in Z
Men practice on the ground.
Fill up your mind, fill up your heart,
With all that A can give,
And then translate it down to Z
Where common people live.
Some men go climbing up to A,
And drink from wisdom's cup.
And then forget their solemn vow
To help their brother up.
And others from the springs at A,
Take wisdom in their hand,
And o'er the lowly vale of Z
Translate it through the land.
They sow the patient seed of thought,
The germs of truth they cast
Into the dust of prejudice
And dead soil of the past.
Yes, those who tarry up at A
Will have a pleasant time,
But those who labor back in Z
Can make their lives sublime.

*

CAN you tell us anything definite about the use of gasoline or kerosene engines for plowing or cultivating? A number of such machines have been tried, but it is not always easy to obtain fair, unprejudiced truth about the work they do. It is evident that in some situations the gasoline horse is a success. What soil or slope or surface does he need to make him profitable? Now will those of our readers who have given these tractors a fair trial tell us just what they have found out?

*

CONSIDERABLE trouble from leaf-curl on peach trees is reported from New Jersey. It seems to be due to the fact that growers failed to spray with lime sulphate before the leaf buds made some growth. This gave the fungus a chance to take hold inside of the leaves. Then of course it was impossible for the spray to reach the disease germs and destroy them. There will be much more of this trouble during the coming season, and thorough early spraying must be done to fight off the disease.

*

WE have already mentioned Farmers' Week at Cornell, February 10-15. This gathering has come to be a great Winter event for New York farmers. The programme this season is better and more varied than ever, and there will be a hearty and eager crowd of farmers and their friends. Even if you do not attend a single lecture you will be more than repaid by mingling with this great company, hunting old friends and making new ones. You not only benefit yourself, but you will help farming generally by helping to make a great company for agricultural education.

*

DURING the year we have at least 500 cases where trouble has arisen over a loose contract, or where some verbal agreement has been made. Two parties agree to do certain things, or one lends another money on a verbal promise to pay. After a time business does not turn out as one party expected, and he repudiates the contract, or claims that it has a different meaning from what the other asserts. Then they find that the contract is not binding any way. One man lends money to another without any note or obligation, and finds that he cannot collect it. Our advice invariably is to have contracts drawn up by a lawyer, or by some first-class business man who knows how to do it. There is no other safe way. As for lending money without notes or obligation, Ex-President Taft, who is now teaching law at Yale, is credited with this story. A lent money to B, but took no written note to prove it. B repudiated the debt and claimed it was a gift. At the trial A swore he lent the money, but had no witness to support him and no written statement, so he lost his case. Shortly afterward A saw B on the street and rushed up to him saying there were four witnesses to prove B took the money. "Who are they?" said B. "Me and God and you and the devil." This was true, and yet, even with this formidable list of witnesses, A could not prove his case before a human jury. A drop of ink well distributed at the point of a pen would have saved this money.

*

"If anyone thinks he can tell me how to grow better crops, I am willing to listen to him," said one farmer. "If his plan appeals to my judgment, I will give it a good trial on my farm. If anyone has a new way of doing something that is better than my old way, I want to find out about it."

That report comes from Kansas where, it is said gray-bearded men are taking a short course at the agricultural college. What is the matter with that sentiment? Here is a man who has run a farm so as to make more than a living. Who has now a better right to use his judgment in deciding whether agricultural science is sensible? If the agricultural teacher cannot appeal to that man's judgment, which needs training, the judgment or the teacher?

*

SOME of our people are a little troubled over the future market for hay. They are ready to seed down more and more of the farm, but the hay buyers predict low prices and stagnation. It is the old argument—gasoline power taking the place of horses. We might take more stock in this argument if we had not heard it continually for 20 years. We knew this city when every street car was hauled by horses, and the application of gasoline power to motors was unheard of. Now there are hardly 100 street car horses left, and motor trucks are everywhere. Yet prices for both good horses and good hay are higher than ever, and are likely to continue so for 10 years. We must remember that the introduction of "certified milk" has started great dairies on high-priced land near the big cities. The hay for feeding these cows is mostly purchased, and this demand will greatly increase in the future.

*

THERE was a struggle at Albany over amendments to the rules in the Assembly. The progressive element in all the parties wanted to cut down the autocratic power of the Speaker. This power has been usually exercised through committees. An effort was made to take the power of appointing committees away from the Speaker and give the Assembly the right to elect the chairmen at least. This suggestion was defeated, but several reforms were made. We can know hereafter just how the members of committees vote. The committee must meet regularly and we are on the way to the point where a reasonable number of Assemblymen can compel a committee to act and where the so-called committee on rules cannot use arbitrary power to hold up needed bills or advance personal measures. Such reforms would have been impossible 10 years ago. The "folks back home" have found the way to Albany.

*

WILLIAM Waldorf Astor was born in this country, and with the rest of his family has profited greatly by the rise in American real estate without giving any particular labor in return. Mr. Astor gave up his American citizenship and became an English subject. No one can reasonably find fault with this, for thousands of Englishmen have become Americans, and if any man is not satisfied with this country both are benefited by his leaving it. Mr. Astor's young son has been in this country for a short visit and as he started back, he was "interviewed."

"What of the things you've seen in America do you like best, Bill?" said an interviewer.

"An apple. Do you want to see it?" Bill disappeared into the stateroom and returned with a big rosy apple in his hands. "They don't grow like that where I live," he commented.

It was probably a Winesap or a Baldwin. This young man seems to have taken something straight from his old ancestor, John Jacob Astor, who had such remarkable ability at seeing values and selecting almost by instinct the important things of life. A century ago John Jacob would have said furs when asked such a question. "Bill" sees in the big red apple the one desirable thing of life. It seems to us that there is great hope for "Bill."

THE meeting of the New York State Fruit Growers' Association at Rochester was a great success as usual. When this society branched off from the old Western New York Society there were many who felt that there could not be room for the two. The business of fruit growing and selling has developed so wonderfully that these predictions have been disproved. Both societies call out crowds of fruit growers and vast displays of fruit and fruit growing appliances which were undreamed of when the younger society started. These meetings cover such a vast range that it is quite impossible to give an adequate report of the proceedings. Of late years, with greater attention given to the mechanical or business side of the industry, the speaking programme is no longer the most important feature. The best part is the unreportable visiting and conversation which goes on when fruit growers come together for conference. As evidence of the way those meetings are changing the banquet was given up this year and a "popular entertainment" substituted.

*

No use talking, this poultry business is developing so fast that you can hardly keep track of it. On page 97 we are told about "Miracle Mary." This Leghorn hen was too busy laying eggs to put on fancy points. So the poultry judge turned up his nose and said "everything" was the matter with her. Then comes Mr. Proctor in his excellent article. It seems that the American Poultry Association has finally got down near the ground, and will start a "utility" score. Now follows Prof. Dryden with his remarks on that world's champion hen. This hen is a mixture of Rock and Leghorn blood, and Prof. Dryden puts up an argument for trap-nesting the breeding stock. We felt sure that just this form of discussion would follow the egg-laying contests. These contests give the facts upon which to base definite experiments, both in breeding and feeding for egg production. There is no end to the things which these contests suggest. One is the cold storage proposition. Then comes Peter Radford of Texas, with some large statements:

> We market 65 per cent. of our egg crop in April, May and June, although the consumption of eggs runs very nearly even throughout the entire year. The American farmer to-day is paying the middleman the princely sum of $238,600,000 per annum for storing and selling his eggs. This sum of money would build and equip sufficient storage to care for the agricultural production of the nation. The value of the nation's egg production during a decade is equivalent in value to all the farm property in Texas; would build a city the size of St. Louis and would pay the national debt of Spain, Japan and the United States combined.

These figures may be correct—we do not know. They are large enough anyway, but the poultry contests have matched the warm American hen against the cold storage. A. M. Pollard, who has charge of the latest contest, has another guess:

> Cold storage of eggs sprang into existence through the failure of the American to so adjust nature to his needs, that the egg demand could be supplied at all seasons, and cold storage is a blessing if rightly employed, but the destructive features of its employment, so far as price fixing goes, can be quickly overcome by adjusting the flock yield of egg farms.

His scheme is to breed from selected hens who are known to lay during the Fall, and to hatch so they will start early. It has been found that certain hens do make a business of Winter laying, while others lay later. This means keeping the "Business Hen" busy. It keeps her out of mischief, and the cold storage man as well.

BREVITIES.

A FARM planned in January is half cultivated.

WE know men who think they are "some pumpkins," when in reality they are mostly punk.

YOU will probably find feather pulling confined to a few hens in the flock. If you can catch them at it—better kill them.

OUR young apple and peach trees began to wake up during the warm Fall. The wood is too tender for comfortable Winter reflections.

IT is reported that 70 farmers and their sons are taking the short course in steam and gas engines at the Kansas Agricultural College.

It is said to be a fact that some of the sanitary back-to-the-landers actually use talking machines in the cow barn during milking to soothe the cows.

WE think that Winter pruning should be delayed until early Spring this year in particular. The wood is soft and tender, and quite likely to kill back after pruning. In such cases double pruning would be necessary.

THE dog shown at Fig. 12 last week is a brindle bull terrier guarding the chicken house at Fithian Farm, New Jersey. He has the run of the yards at night and is about as friendly to a chicken thief as a shotgun.

A YEAR ago large stories were told about the profits of fox farming in the Yukon Territory. Now the boom seems to have flattened out. Disease has swept off the captive foxes. One young black fox, costing $1,600, died five days after putting him in the pen. At this rate the Hope Farm man's scrub hens were more profitable.

WOMAN AND HOME

MY MOST USEFUL MEAL

By DR. HARVEY W. WILEY

I have been interested in the great problem of dining for nearly three score and ten years. Of my earliest experiences I have little memory. I have been told that I was one of those rare, living unfortunates foreordained to be brought up on the bottle. This doubtless explains my deep sympathy today for the infant for any cause separated from its mother's breast. When asked to give an account of the dinner that lingers most sharply limned in my memory—two stood up like mountains on the vast plane of momentous meals. I shall endeavor to tell you about the first one. The event now describing occurred at the very beginning of my struggle for existence. Its character was almost prophetic of the never-ceasing battle of my life.

Bearing a diploma from Hanover College, which told in Latin, as I thought to a waiting world, that I had been admitted to all the rights and privileges, as well as the obligations, of the Academy of Letters, I received from my father his "Good-bye, Harvey, take care of yourself" and enough paper money (specie payments had not been resumed at that time) to pay my fare to Crown Point, Indiana, just as far from my home in Jefferson County as I could get without going to Chicago. I had been told of the possibility of becoming a teacher in that new but wide-awake town. On reaching my destination my fortune consisted of a diploma, a perfectly dawn-like vision of the future, and a 50-cent shinplaster. All of this property was useful in a way, but it wasn't, with the exception of the paper scrip, a very elastic asset capable of being converted into kale.

I went directly to the office of the county superintendent, and there met the first of the almost innumerable reverses that have littered the path of my life. The teacher had already been appointed—No, at that time there were no vacancies in the county—Yes, there might be one before the snow flies. The superintendent, Mr. Cheshire, seemed to intuitively or by use of the then undiscovered X-ray, audit the contents of my pocket. He invited me home to dine (this is not *the* dinner, however). He found I could speak a little German. He was a candidate for county clerk, at that time a most remunerative office. There was a township in the county almost solidly German. Would I go with him at his expense for a few days to canvass the farmers? I should worry. I spent a whole week improving my German. We visited every farmer in the township. I learned afterwards he carried it almost unanimously. He said he felt certain that before a month passed he could get me a school. Uncle William Maxwell, my mother's brother, lived in Newton County, directly south of Lake County, of which Crown Point was the capital. Yes, I would go there and wait for a letter from him at Brook, a post office not then famous as now, where George Ade gets his mail.

But between me and my uncle's farm flowed the sluggish Kankakee, dammed by the natural limestone ledge at Momence, Illinois. An impassable marsh from 20 to 40 miles wide forbade any direct transit. Twenty miles to the east there was a poorly-marked trail, which, if it could be followed, would lead to a spot where the Kankakee could be forded or swam (swimmed or swum). I decided to undertake the journey. It wasn't very far as the crow (or buzzard) flies, but it was at least 50 miles, of which half was through an almost trackless marsh across which the youthful seeker after a job would have to walk.

After a good breakfast with Mr. Cheshire I started on the journey. It was a warm, hazy, lazy day, in late September. Already the early prairie fires were filling the air with smoke and making a dim glory of the autumnal sunsets. With my 50 cents I bought a ticket to the nearest station in the neighborhood of the trail. With my stomach full of breakfast and my heart full of hope I set forth. In one respect, at least, I was like St. Peter, for I could truly say —"Silver and gold have I none." Nor did I have any scrip in my purse.

The path on the north side of the river was well marked, and before sunset I had reached and forded the Kankakee, uplifting my little belongings to keep them dry, and felt that the worst of the journey was over. Yes, I was a bit hungry as the night came on. The morning had been so warm I had not thought of bring- a match. In Northern Indiana the late September nights are as full of chill as its noons are of balm. Before dark I chose a spot on a sand hill, where a scrub oak was growing, as a bed. But with thin clothing, moistened by the labors of the day and chilled by the frosts of the night, and without an overcoat, for I had never owned one then, sleep was coy. In vain I tried to forget cold and hunger in the fairyland of dreams. I spent much of the night walking around that tree. I can see yet the path trodden deep in the sand, made by my peripatetic vigils. With the earliest dawn I continued my journey.

But the marsh south of the river I found quite a different proposition from its neighbor on the north, there was no vestige of a path. Evidently neither white man nor red had ever set foot in this difficult region. The marsh consisted of a series of level, grassy and miry stretches, into which I would sink often up to my knees, separated by sand knolls in which the walking was almost as slavish. Fortunately I didn't weigh 240 pounds in those days—otherwise I might have entirely disappeared in the grassy mud of the marsh. Fortunately, also, my feet were as big then as they are now—which proved my salvation, for they only had to hold up 130 pounds. In spite of my light weight and the absence of impedimenta, my progress was exceedingly slow. The sky was clear and I had no difficulty in keeping to the south. With no reserve of fat I was proving a sad failure as an autophage.

At high noon I was sure I had not covered five miles—and O, how tired and weak from hunger! I realized, however, that I never would get any credit, nor the thanks of Congress, for dying in the Kankakee marsh, and so I pushed on. After a while I found the mud was not so deep nor the sand so runny, and took courage. But as the sun neared the horizon and no sight of the solid prairie gladdened my eye, and no vestige of human habitations stimulated my hope, I found myself facing the probability of another night of "ring around the rosy" with a jack oak as the central beauty. Not an inspiring thought in view of the advanced state of my accelerated katabolism! As the sun touched the horizon in the hazy west, hope died away and the grim menace of chilled starvation and sore and stiffened muscles stared me in the face. In spite of my fondness for a pun, I was not consoled by the thought that the reason the Children of Israel didn't starve in the wilderness, in spite of the fact that there was no manna, was because they lived on the "sandwhichis there." I hadn't the grit to eat it.

I was preparing to select my siliceous couch for the second night of chilled vigil, when a distant sound caught my ear, a low clicking sound which might have been (except for the continuity) the warning signal of a rattler. Could my ears deceive me? No, it is the click of a mower. In an instant the stupor of fatigue left. A glass of the delicious and refreshing beverage of far-away Atlanta could not have accomplished a greater miracle. With strides which Hiawatha with his magic moccasins might have envied, I subdued the unwilling distance and saw—Yes, a live driver, a team of horses, a real mowing machine —in fact, a life-saver. In about one thousandth of the time which you, dear reader, have given to this simple narrative, I told my story of want and wandering. He unhooked his horses (it was already time to stop gathering the wild, moist grass); he invited me to a seat in his wagon. He was five miles from home. O, those long weary miles! O, those contented horses, seemingly unaware of the flood of expectant pepsin washing the yearning coverings of an empty stomach!

And the dinner? Corn pone and home-cured bacon, potatoes, milk and butter! I felt that I might well employ the rest of my life in singing peons to the pone. The bacon would have inspired a thousand Shakespeares. The milk and butter were (soon) out of sight. And then and there a fitting tribute to the 8,000 consumed calories out of a total of not more than 9,000 available was elegantly paid. Nor Heliogabalus, nor Gargantua, nor Lucullus, ever sat (or reclined) at a feast like that!

L'envoi—My benefactor kept me overnight and sent me on my way bearing a bounteous breakfast. That night I reached Rensselaer, the capital of Jasper County, where I spent the night with an old college chum. The third day I set out to the West, and before nightfall I had reached the farm, near Brook of great fame, of my maternal uncle, farmer and physician, who gave me asylum and set me to work for a small wage on the farm.

In about a month the expected letter from Mr. Cheshire came. I had my first real job, teacher in the public school of Lowell, Lake County, situated on the northern border of the Kankakee marsh. I was launched.

N. B.—I did not walk back to Lowell —I had earned enough money husking corn to buy a railway ticket for the 75 miles of travel necessary to flank the marsh.

"When We Were a Couple of Kids."

"School Days, School Days, Dear Old Golden Rule Days."

POSSIBILITIES OF THE FARM.

I feel that the great need to-day of women on a farm is to look our methods squarely in the face and see if we are not using about the same methods of doing work our grandmothers did. The average woman takes thousands of useless steps every day, and in most households conditions could be remedied at home with comparatively little expense. How many places of business are conducted in such crude ways as the ordinary farmhouse kitchens are? They say the big packing houses have utilized every part of the pig but the squeal. In a great many farmhouses it's all squeal. Father squeals "cause farmin' don't pay." Mother squeals because the life is all drudgery, and all the children do likewise because father and mother do. The fact is they might all do better if they would only look about and see the many fine opportunities a farmer's family has to earn money, to better their condition, without leaving home. Every farm woman should have her own pocketbook. When the young farmer and wife start out they usually are a little shy on worldly goods, and fondly imagine one pocketbook will do. Later there are children to provide for, new machinery to buy, old Dobbin dies and has to be replaced, lightning strikes a cow which must be replaced, or the line fence has to be rebuilt, so the mother's hands are tied with work and care; and she fails to get the things she needs, for interest, rent and taxes must be paid. Suppose she cuts out the needless part of housework and takes up some outside work, such as raising any of the different kinds of poultry, or taking orders for nursery firms. There is money in this, and it may be done at home with telephone. Putting up garden vegetables for city trade is one of the things she may do at home. Each year would then find some new convenienee added to the home, which in time would be a place all would be proud of.

When a family all put their shoulder to the wheel it is bound to turn. It is the grandest place in the world to live if we would only do all we could to make a real home, and not simply a place to stay, until we have a chance to get away. Our little boy, 11 years old, is very proud of the fact that he has a bank book of his own with $100 to his credit at our local bank. He has made most of this with his father's help. This year he has taken care of the pigs, one of which his father bought for him in early Spring. This will bring him nearly $20, sold direct to consumer. He is enthusiastic over his work, and has had experience that will be worth many times the money received for his pig.

As for myself, I love the farm, and all the things on it. I often help my husband milk, and he is ever ready to wipe the dishes or turn a hand at any household work. One of the things I appreciate is a swift little driving horse and a buggy that doesn't rattle. The only person who could induce me to leave the farm would be the undertaker and I hope his day is far away in the shadowy future.

MRS. JAMES LAMPMAN.

Woman and the Home

From Day to Day

DAN'S WIFE.

Up in early morning light,
Sweeping, dusting, "setting right,"
Oiling all the household springs,
Sewing buttons, tying strings,
Telling Bridget what to do,
Mending rips in Johnny's shoe,
Running up and down the stair,
Tying baby in her chair,
Cutting meat and spreading bread,
Dishing out so much per head,
Eating as she can by chance,
Giving husband kindly glance;
Toiling, working, busy life—
Smart woman,
Dan's wife.

Dan comes home at fall of night,
Home so cheerful, neat, and bright;
Children meet him at the door,
Pull him in and look him o'er;
Wife asks how the work has gone,
"Busy times with us at home!"
Supper done, Dan reads with ease—
Happy Dan, but one to please!
Children must be put to bed—
All the little prayers are said;
Little shoes are placed in rows,
Bedclothes tucked o'er little toes;
Busy, noisy, wearing life—
Tired woman,
Dan's wife.

Dan reads on and falls asleep—
See the woman softly creep;
Baby rests at last, poor dear,
Not a word her heart to cheer;
Mending basket full to top,
Stockings, shirt and little frock;
Tired eyes and weary brain,
Side with darting, ugly pain;
"Never mind, 't will pass away,"
She must work, but never play;
Closed piano, unused books,
Done the walls to easy nooks,
Brightness faded out of life—
Saddened woman,
Dan's wife.

Upstairs, tossing to and fro,
Fever holds the woman low;
Children wander free to play
When and where they will to-day;
Bridget loiters—dinner's cold,
Dan looks anxious, cross, and old;
Household screws are out of place,
Lacking one dear, patient face;
Steady hands, so weak but true,
Hands that knew just what to do,
Never knowing rest or play,
Folded now—and laid away;
Work of six in one short life—
Shattered woman,
Dan's wife.

—Mrs. Woods.

*

THE appointment of a woman as Commissioner of Correction in New York City does not seem so very surprising after all. It was the devoted work of Elizabeth Fry that started the work of prison reform in Great Britain, and the philanthropy of Dorothea Dix that blazed the path for others in ameliorating the condition of the insane here. Indeed all through history we find devoted women who show their pity upon prisoners and captives, and it is quite fitting that a woman who has devoted herself to reformatory work should be rewarded by material honors. There are many little country towns to-day where practically the only reformatory influence extended to the county jail is the periodical visit of some good women, who may not be very learned, and not always very wise, but who are actuated by the same spirit as the English Quakeress who gave up her leisure to the degraded prisoners in Newgate.

*

ONE of the pleasant reminders of New Year's Day was a neat little box with the following label:

COMFORT POWDERS.

To be used in all cases of disease, sorrow, lack of courage and discomfort of any kind.

Take one powder every morning, thoroughly stirred with equal parts of loving trust and gratitude. Repeat the dose often.

Compiled from the medicine book of the *Great Physician.*

Inside the box were about two dozen little packages in red paper looking exactly like the pills or powders prepared by doctors. Opening one at random there was disclosed a slip of paper on which was printed:

"There shall no evil befall thee, neither shall any plague come nigh thy dwelling.—Psalms 91:10.

Each "powder" contained a similar slip with an appropriate passage from the Scripture. After reading these "powders" are to be wrapped once more and well mixed together so that they may be "taken" at random. Here is a new and effective variety of the good old way of inducing mind to climb up above matter.

A FARMER'S wife writes that she cares very little about fashions or how women "deck themselves out." Once in a great while is often enough for her to read about such things. On the other hand, and almost in the same mail, come letters from wives and daughters who say they want to know what women are wearing and how to make the pretty little things which add so much to a woman's dress. It is evident that the great majority of our readers want to know how they can, with their own hands, and with such material as they can find, make the things which will enable them to dress well and becomingly. We are in full sympathy with this discussion of "fashions," and such discussion will be conducted by women who know how to fit the sensible effects of Fifth Avenue to the needs of the country home.

*

ONE essential part of direct and profitable trade is bright and "catchy" advertising matter. In these days people are tired of dry statements of facts, and some strong and original way of putting a thing is sure to give it profit. Here is an illustration from the card of a Florida poultry keeper. We all think of Florida as a land of oranges, but few know that hens find it a paradise.

EGGS VS. ORANGES.

The same amount of capital and labor that is required to produce a box of oranges will produce a case of eggs. The box of oranges will sell f. o. b. for about $2.50, while the case of eggs will sell f. o. b. from $9.00 to $14.00 in the same market. There is about the same per cent. profit in a case of eggs as there is in a box of oranges. (Investigate).

This man appeals to the imagination. Everyone has a box of oranges in mind, and by associating eggs with oranges the reader is compelled to stop and think of the connection. We hear through the brain, and we must sell to a direct trade that way too.

*

A PROMINENT educator in Ohio said not long ago that no one was really fit to teach a school until *"some little white coffin had been carried out of their home."* What he meant was that only those who had children of their own, and could thus realize the parent's attitude toward the child, should teach in our public schools. What a contrast is presented between this and the attitude of the New York City Board of Education. They claim that the mother has no place in the school room, and they will, if they can carry out their plan, discharge married teachers who have children. There are said to be 1,000 married women teaching in the New York City schools. The courts have finally decided against the school board and denied their right to remove a married teacher who asks for leave of absence in case of maternity.

*

THERE is a story going around of an old farmer who came home at the close of a market day, looking quite puzzled. He had a string tied around his finger, and his daughters asked him what it was for. He told them that while in the town he tied that string around his finger in order to remember to bring something home, and now to save his life he couldn't remember what it was. The daughters tried to help him, but were unable to jog his memory, until one of them asked "Where is mother?" "Why," said the farmer, "I have actually forgotten to bring your mother home, and that's what I tied the string for." Of course, this story originated in the brain of some funny man, who tried to earn a dollar by making a joke of this sort, and yet after we laugh at it and say how absurd it is that any such thing should happen, it may do us all good to spend a little time in thinking whether mother is really ever forgotten or not. For the good patient mother often goes too far back in the meeting, and takes a seat too far back from the fire, when the younger people, busy with their own interests, do not realize that perhaps they are playing somewhat the part of father when he left her in town.

*

SEVERAL new "chain letters" are floating about through the country. The latest one is headed: "A letter from Christ." It contains about 900 words and carries a veiled threat that if the receiver does not copy it and try to have it published misfortune and loss will follow. A few years ago such letters urged the receiver to send a dollar's worth of cancelled stamps to a certain address in Australia, and millions of those worthless stamps were sent. The postal authorities try in every way to stop the circulation of these letters. They are useless and often mischievous. We hope that those of our readers who receive such "chain" letters will break the chain at once and take no further notice of such schemes.

*

I HAVEN'T much hope that much can be done for the *average* grown person. The average grown person has his or her habit of mind pretty unchangeably fixed. Some can take in new ideas, and some are always students, but mostly, I think, our hope lies with the children. The soft wax of their brains is all ready for new impressions. And I do not know but that the best way to reach the elders is through the children. The new ideas that the children can be got to advocate with their fresh enthusiasm at home will go farther, perhaps, than all our preaching.

D.

Have you considered that perhaps we have done too much preaching—or preaching of the wrong sort? We had a man tell us the other day that he was *compelled* to go to church until he was 21, and then kept it up for a few years from habit. The preachers thundered at him and expounded doctrines, but they "never touched him." Finally came a man of gentle, simple words, who somehow put a vision or picture before this man—something he could not put out of mind—and the work was started. There are wise and good people who go at their audiences as if they would cut into the head with a cold chisel and pack some of their science away inside. They find this "wax of the brain" too hard. Soften the "wax" through unconscious thought and the impression will take. It is in just this way that children influence such parents. Why not imitate the children?

*

On page 85 is a statement of the property rights of women in Pennsylvania. There will be articles to follow on the rights of women in the holding and training of their children. We have been asked about the women's pension law in Pennsylvania. The following statement covers it:

"We have a mother's pension, which is to indigent, widowed, or abandoned mothers who have continuously for three years been residents of the county from where they may receive relief for the partial support of their children in their own homes. The combined total maximum payment to one mother must not exceed $12 per month for one child; $20 a month for two children; $26 for three children, and $5 for each additional child. The payments last only until the child reaches the age when the law permits it to be employed. It is managed by not less than five, nor more than seven women trustees. The State appropriates a certain sum of money for this relief every two years, according to the population of the counties, the county must put up an equal amount. Satisfactory proof must be had before any recommendations are made."

*

CAN you suggest how I should proceed to make a comfortable living for my father, aged 84, and myself, near middle age, on a 30-acre place, 10 acres level tillage and 20 in pasture and wood, in southern New Hampshire, seven miles from town of 6,000 inhabitants? I purchased the place three years ago, paying nearly cash for it, and bought two cows and a horse and a few tools. I plant 2½ acres to corn and potatoes, and nearly one-half acre to garden truck, but frosts early and late interfere with beans, cucumbers, tomatoes, etc. I work out all the time I can spare after attending to my own work, but so far make a very poor living. My father is able to do most of the housework except the cooking, and I do most of that evenings. I wish to make the farm produce an income sufficient to supply our simple needs, but the outlook at present is discouraging. Dry weather last Summer made the hay crop short, and I have had to purchase hay this Winter, but think the place should produce hay enough for five cows and a horse when brought to proper state of cultivation. Before coming here I worked in a shop for 10 years and saved quite a sum each year, enough so that I was able to buy this little farm. I like the farm and will stick to it if there is any chance of getting ahead. Can you give me any ideas that will put me on the right track?

A. S. A.

Here we have a genuine life problem for which there must be some remedy. We know how hard it is for a stranger to advise in such cases, for the personality of this man must be considered, and we do not know it. Yet here is a brother with a hard task, and one which must demand our sympathy and help. Who has had experience that will help him? He does not want theory or random advice, but rather practical experience, and it is largely a housekeeper's job. THE R. N.-Y. has been made strong through the kindly and sincere help of its readers in just such cases. In the same way "Woman and Home" can be made to serve its purpose.

*

WE find that hundreds of women are developing a direct trade in food by parcel post. The women do this better than the men, and there are many opportunities. A New York man used our Subscribers' Exchange to call for food supplies. He received a good many offers to furnish butter, poultry, eggs, fruit and vegetables, and is buying from five different people—each supplying some particular food. He is well pleased. The goods are of fine quality and he makes a saving over city prices. The towns and cities are full of just such people, and direct trade with them offers great opportunity for farm women. In order to develop it one must be patient and accurate, prompt, and wise enough to give customers just a little more than they expect.

*

VERY few farmers hesitate to spend $50 on improved farm machinery, to carry on their own work, and they should consider the many steps, the drudgery of carrying heavy pails of water, and the exposure to bad weather which such a water supply saves the members of the household, to say nothing of the practical economy of preserving milk, butter, etc., fresh during the hot Summer days.

Virginia. MARY LEE C. ADAMS.

A description of the water system in Mrs. Adams's house is printed on page 83. She is entirely right. A good water system inside the house should be regarded as just as necessary as improved machinery on the farm. THE R. N.-Y. will make a campaign for water in the house, just as it has for Alfalfa, lime or parcel post. Let the men folks be warned. We shall make them all hot water men.

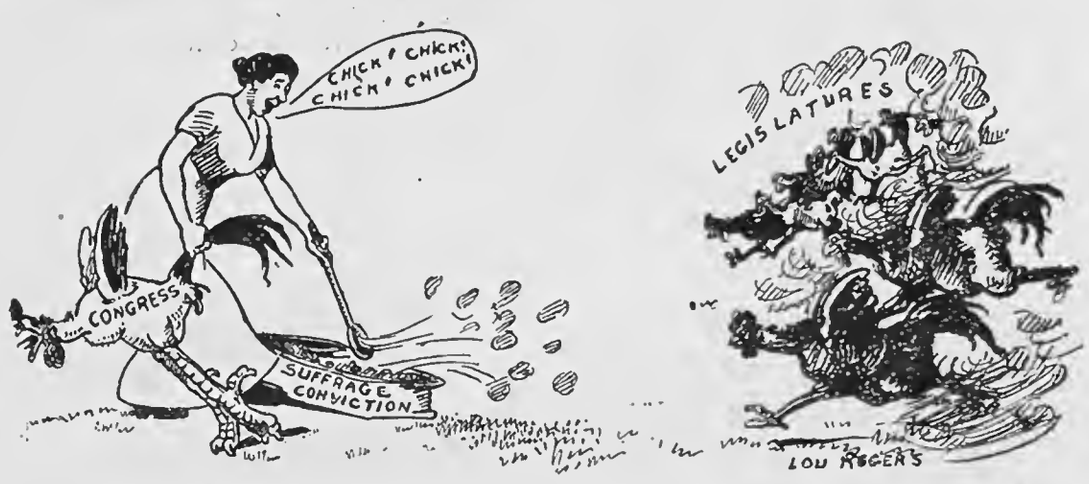
*

WE have been reading the "Letters of a Woman Homesteader" in the Atlantic Monthly, which are, we are told, the actual correspondence passing between a woman on an isolated ranch and a friend in town. The Eastern farmer's wife who thinks herself a "shut-in" because fate puts her on a hill farm four or five miles back from town would learn the meaning of real isolation from these letters, which are written so delightfully tha they give us a perfect picture, not only of surrounding conditions, but also of the courageous and light-hearted woman who wrote them. But there is one very dark side to the pleasant pictures of the wholesome ranch life, and that is the misery undergone by the women in sickness, and especially in maternity. There appeared to be, in too many cases, no help, medical or otherwise, and the sufferer must endure her burden as best she may, taking the risk of death or invalidism. It is just these conditions that have lead, in Australia, to the beginning of a great movement to supply trained nurses to the "back blocks" or frontier, the intention being to provide a nurse for a certain area, so that isolated women could receive care and hygenic instruction, even where no doctor was accessible. In the city, with abundant facilities for medical treatment, district nurses are provided both by public and private agencies. The country, which so sorely needs them, is without. Some of the Granges have, we believe, already put themselves on record as favoring the establishment of rural nurses. We think this is a matter to be taken up by farm women. In all our schemes for conservation of National resources, we cannot find any worthier assets than the life and health of the farm mother.

PERHAPS there are a few things we are apt to pride ourselves on as our good taste and culture. It is really no matter for pride at all. Good taste is a more likely comrade of humility, and goes with a childlike reverence for the work of the Creator as shown to us in the clouds, the mountains, the waves, the forests, the flowers, and in the flight of birds. These are examples of the highest attainable in beauty of form and colour.—Sydney Spalding.

"VOTES FOR WOMEN."

The cartoon on this page is taken from the Woman's Journal, the old and influential advocate of "votes for women." Probably this expresses fairly the attitude of the wiser and saner advocates for suffrage. They realize that the way to influence Congress is through popular thought or demand, and this is best expressed through the State Legislatures, and so they propose to hang on to Congress by the most convenient handle while they throw feed in the way of argument for the State legislatures. Without doubt these legislatures are coming, for more than ever before their members are being influenced by the folks back home. Everyone knows that when sensible and determined women make up their minds that they want a certain thing, they prove the worst hangers-on of any class of citizens. There is no escaping them, no frightening them, or bluffing them away when they are once convinced that what they are after is right and true. The advocates of "votes for women" will be wise if they follow out this idea. Hang on to Congress and get the legislatures



UNWILLING CONGRESS AND APPRECIATIVE LEGISLATURES.

coming. We have been asked by both the advocates of suffrage, and its bitter opponents, to take their side of the case. During the past year we have made what seemed to us as fair a test of the opinion of our readers as could be made. We quietly arranged with several people with whom we were well acquainted to make an actual personal canvass of the farm women in their own neighborhood, and asked them quietly and fairly how they stood on the question of suffrage. A great many people conducted these interviews, chiefly in New England and the Middle States. The result was that six out of eight women thus interviewed declared that they didn't wish to vote, or were not interested in the subject. Not satisfied with this, we took at random again and again a large number of names of women from our list, and asked them by mail to express an opinion. This was also confined to the Eastern States. The result was the same, with an even more decided expression against "votes for women." We concluded that in the East at least the movement for suffrage is very largely an industrial one, strongest at present in the towns and cities, among women who work for their living at manufacturing or business employments. We should say that in the Eastern States the movement is largely among those who are fighting for fairer industrial treatment in their work. At the same time it is unquestionably true that whenever country women have the case put before them fairly, by some advocate who has made a thorough study of the question, they change their minds, and we think a much larger proportion of them will join the cause. It is also unquestionably true that all the reliable reports which come to us from those States in which woman has been given the ballot, there is uniform testimony to the fact that political conditions have improved. Without argument the liquor question, the question of social improvement, and matter affecting the health and legal rights of women and children, have felt the effect of woman suffrage, and in every case conditions have been improved. Evidently this is one of the things which have come up for argument, and cannot be put down. We shall give fair statements from women in those State where suffrage has been tried, and we are quite willing to give the other side of the case from those who are opposed to suffrage. Of course, these arguments must be fair and good-tempered. We want to get at the real truth of the case, in order that our women may understand it thoroughly.

REFLECTIONS OF A RURALIST.

An Egg Lecture.—One can hardly pick up a paper without seeing something about eggs—the city end of the egg. One would almost think no eggs were used in the country. Here there is something about the egg on its native heath. Housewife No. 1 has eggs to use, plenty of them, no eggless recipes for her. She put down a goodly supply in water-glass last Spring when the price was 23 cents. The fresh-laid eggs of good size are sold at top price. The pullet-eggs that are small, the invalid has. Housewife No. 2 has a few eggs put down in salt early in the Fall when the price was 30 cents, and better. She uses them sparingly and sells the scattering fresh laid at top prices. Housewife No. 3 has no eggs laid down, uses eggless recipes, cooks the occasional fresh-laid for "him," and goes without herself. These three had a common starting point. Each began with practically nothing. No. 1 hires No. 2 to help her occasionally; No. 2 is glad to help; No. 3 can neither hire nor do much herself. Tell me how a country housewife uses eggs in November and I will tell which way the wind blows. No. 3 is drifting toward a lee shore, No. 2 is backing to windward, No. 1 is heading out to sea. Now do not think it is too early to think of putting down eggs next season. When No. 1 began she found the local store did not keep water-glass but would send for some. It didn't come, and didn't come. "Be here sure next week." In the meantime eggs steadily increased in price. Another time the jar she uses had been taken by the man of the house for pork, causing delay. It is much better to be beforehand than behindhand.

Timely Help.—It is on that lee shore that the poorhouse stands. Our community is all agog over an old man who is close inshore. Will he be washed up on the shore or will some kindly hand rescue him? It is curious how concerned we are at the eleventh hour. It isn't pleasant, the thought that earlier in the day we might have trimmed a sail or bent an oar for him. But how about that young man with a family of little folks and little work, at this off season, or that other struggling man who had the misfortune to lose his cow, leaving the babies in a sad plight? It is at such crises as these that many become discouraged. We might if we would, carry a part of the load through the shoal water and keep the boat from grounding. We ought in some degree to feel responsible for the wreckage that dots the sea of life.

Prices of Groceries.

Under the heading of "Business," J. L. C. says, that housewives are paying six cents a pound for sugar, and that he is going to get a large bag for 3½ cents a pound. Just think how unreasonable that is. The raw sugar costs more than that, and any child can tell at a glance that sugar costs $4.35 per hundred in ton lots f. o. b. New York. Why did not J. L. C. tell the whole story, and say he bought $10 (or more) worth of other goods to get the price he named? My objection to the whole thing is this: I am a grocer, and see the practical side of this, and know that a good many women are going to their grocer, saying they know of people who are getting sugar at 3½ cents a pound, which is absolutely impossible; so much so that if J. L. C. will prove it, I will give $10 to him on convincing evidence. A lot more could be said about the practice of sending away for goods under the "club order" plan, but will touch on only one phase. Let us suppose that any one of many women in many towns, who send away for their supplies are members of a church or lodge, and are going to give a harvest supper or to hold a fair. Who is the first person to be solicited? Why, dear Mr. Brown, the grocer. He always gives. See? E. G. W.

In reply to this I give below two orders for groceries and other goods. Will someone tell me where I could have bettered them?

Nov. 24, 1913.

1 pair snow excludors, 3 buckle	$1.73
3 cans salmon	.53
3 mackerel	.53
3 clam juice	.25
1 pineapple	.22
4 pkg. figs	.53
5 pkg. cluster raisins	.67
20 lbs. rolled oats	.63
33 1-3 lbs. sugar	1.00
1 tea strainer	.02
6 cans tuna fish	1.10
10 lbs. peanut butter	1.50
5½ lbs. cheese	1.03
10 lbs. beans	.41
10 lbs. honey	1.57
3 lbs. horehound candy	.30
1 doz. soap	.50
1 doz. soap	.38
3 cans powd. soap	.20
3 whiz	.20
	$13.30

Oct. 22, 1913.

1 pair slippers	$ .72
1 pair woolnap blankets	1.98
4 pkg. Kneipp malt	.76
½ lb. cinnamon	.25
3 lbs. currants	.35
5 lbs. peanut butter	.73
12 bars Magic soap	.50
6 lbs. starch	.31
5 lbs. honey	.79
1 gal. molasses	.62
10 lbs. rice	.53
25 lbs. sugar	1.14
	$8.68

Our friend says that when the women hold a harvest supper the first person they go to for a contribution is Mr. Brown the grocer. That is probably because these women have for years contributed to Mr. Brown through high retail prices! He might well "come back." The rural population has largely drifted to the city, yet my old uncle, who remembers back two generations, says there are more grocers in the small towns now than when he was a boy. I am pleased to note that one woman wants to know where those large sacks of sugar come from. It is not necessary for women to buy the five-pound sacks even if they do buy from the grocer. I know by experience they will get it for you in larger sacks if you insist. C.

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It's solid satisfaction as well as good business for us to know that eight million men are wearing "Ball-Band" Goods and talking them up as the strongest, easiest-fitting, longest-wearing rubber footwear under the sun.

Go to your dealer and talk rubber footwear with him. If he is one of the 45,000 "Ball-Band" dealers he will tell you how every kind of rubber footwear that bears the Red Ball trade mark is sure to give honest service. If he does not sell "Ball-Band," the best he can say for any rubber footwear he sells is, "It's most as good as 'Ball-Band.'" "Ball-Band" Boots are made with either rubber or leather soles and in four lengths—Knee, Storm King, Sporting and Hip.

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Look up the store which shows the Red Ball sign in the window and ask for the rubber footwear which bears the Red Ball trade mark. It is your guarantee of quality. If the Red Ball is not on the goods, you are not getting "Ball-Band" quality. If your dealer cannot supply you, write us and we will see that you are supplied.

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THE LAND OF FULFILLMENT

A STORY OF HOMESTEADING

By ROSE SEELYE-MILLER

CHAPTER II.

The New Brotherhood

"Hello, pard!" The boyish voice was full of grave anxiety, as the stalwart figure bent above a limp and white-feced object under a great tree. "Why, there's blood on his lips—and wet—about done for." The good blue eyes were full of sombre shadows as the strong young arms lifted Nate, and placed him upon a lumber wagon, near by.

"Git up there, Red! Step lively Roan," and Norman Duane using his ox goad as a persuader and encourager, started towards his own woodland cabin not far away. In the midst of the woods the boy halted the oxen, and bore Nate to the cabin, and laid him upon his own decent bed. He stripped off the sodden clothes, tucked blankets about him, and set to work to build a fire. Rubbing Nate's limbs with his rough hands, trying to force a hot liquid between his teeth. Norm was considerably astonished to have those teeth open suddenly and a voice cry out fretfully:

"Haven't I been soaked enough in rain, without being scalded into the bargain?" and Nate's arm that had been so inert, reached up swiftly, and dashed the cup of hot liquid away, almost before he had spoken.

"Your wishes, have considerable weight." Norm replied staring at the white face below him, "And you've broken a perfectly good bowl into the bargain."

Nate's dark eyes met the good blue ones, and he smiled wanly, "I guess—I must have—lost myself—a minute—" he said explanatorily.

"I guess you must have," Norm admitted laconically, "and I found you, and finding is keeping, so for the time being you belong to me, and you're going to do what you're told, even if you're told to drink scalding hot stuff." Norm laughed, from sheer joy, that this strange boy, had so unexpectedly come back to sane consciousness.

"Hand it over then," Nate said faintly, "I'd rather take hot pepper tea internally than externally though—Now remember that!"

"You can't have it now, you've spilled it, I say, and you get your arms under cover, you're as cold as a ghost, and about as white. Here," and Norman pushed a jug of hot water, to Nate's feet, and then put a hot brick on either side of him, and got more bedding and piled over him. "Now if you want to shut your eyes and faint away you can, but you don't use very good judgment, lopping down under a tree for that purpose."

Nate did not faint away, nor close his eyes, but he watched Norm as he went about his log cabin, as neatly and as deftly as a woman. Suddenly Norm paused, in his task, and spoke to Nate accusingly:

"Say, I'll bet your hungry. Now when did you have anything hot to eat?" sharply.

"I'll bet I am hungry, and as to when I had anything hot to eat, I guess about a week ago." Nate answered his inquisitor whimsically.

"Spots of Jupiter! No wonder you look as though you had pin-fever, with your legs swelled up as big as knitting needles." With a look of pity, Norm rushed about making ready a meal in the shortest possible space of time.

How like an Arabian Night's dream it all seemed to Nate, as he lay there snuggled under the warm blankets, with the hot water jug at his feet, and the bricks at his sides. Why, it seemed heavenly just to be warm again, for he had rallied at once under Norm's vigorous treatment. Norm fried bacon and eggs, he made coffee and cut great slabs of bread, then he drew his small table up close to the bedside, and placed the steaming hot food before Nate. "Wade right in anywhere," Norm said hospitably. "Or shall I feed you?" with a twinkle.

"Hardly," Nate replied also twinkling, and then both boys laughed unroariously.

"I didn't suppose you'd ever laugh again, when I picked you up out there in the woods."

"Well, I'd about made up my mind that I wouldn't laugh again myself, but it's easy enough to change your mind—if your circumstances change too. I'm in for a good time anyway," and Nate helped himself with Norm's assistance to the food before him.

"My, but this is lickin' good," he said heartily. "I wonder if I did die out there and if I've got to heaven—" Nate's dark eyes shone out at Norm luminously.

"Maybe, but I never heard of bacon and eggs in heaven."

"Nor red hot stoves and hot water bottles!" added Nate.

"It's pretty safe then to conjecture that you just struck earth a little harder than common."

"It's an awful good strike anyway," Nate said cordially, lying back on his pillows.

"You're not quitting are you?"

"Yes, I've had a full meal, but I guess—I'm tired—I kept trying to walk and get warm or get somewhere, and I couldn't do either—I seem to have to sleep an awful lot," apologetically.

"Go to it," Norm said heartily. "I'm going out to take care of the oxen."

Nate slept a great deal that day, and the next, but along towards night the second day, he slipped into his clothes, which Norm had cleaned and dried, and when that young man came in from his evening chores, Nate sat by the window waiting for him.

"This looks good," Norm's voice was full of pleasure.

"I'm all right now," Nate agreed, "I'll be ready to start out again tomorrow."

"Where are you bound anyway?" there was both curiosity and wistfulness in Norm's voice. "I wish you'd stay here."

"Why—" Nate gasped surprised—then seeing the look in Norm's eyes, he reached out his long, slim hand, and Norm grasped it with a crushing grip.

"Sit down," said Nate, "I'd like to stay—there isn't anything in the world that looks as good to me as this place and its owner does, but, I guess I'd better move along." Nate's voice was low and his eyes were looking far away.

"Sort of down on your luck," Norm said with understanding sympathy.

"Oh, I don't know, I'm lots better than I was," Nate paused—and then because Norm was so humanly near, and he, Nate, had been so inhumanly alone, he blurted out the truth. "The doctor said I'd got to strike for the high altitudes—somewhere West. So I struck," simply.

"How long you been at it?"

"I've walked about 400 miles, and I've got about ten more hundred to walk."

"Whew!" suspirated Norm. "Quite a contract," and Norm looked at Nate's long, thin legs critically. "If they were strong as they are long—" Norm began.

"Oh, they're all right—" deprecatingly. "they've carried me to more pleasure than I'd ever had in my life before. I hadn't slept in a house since I started, until you put me to bed here. If 'twould only stay pleasant I'd get along, or if there were barns or haystacks close enough or convenient when a storm came up, but people are inconsiderate enough to put such things out of my direct road. For I've gone straight West ever since I started."

"What are you going to do when you get there?"

"Why I'm going to take up land, you can get it for almost nothing, and I've lived on almost nothing. If I could manage to get there and get a tent, and anything to eat—it doesn't cost hardly anything to eat—if you eat simple. A 25-cent sack of cornmeal, made up into mush, 'll last most a week—and you can pick up a tin can and dip water anywhere to cook it in."

"Mabbe a fellow could live so cheap he'd git over livin'," Norm put in thoughtfully. "What are you going to do to pass away your time? You won't spend much in cooking."

"I figure on getting a piece of stony land—the stoniest I can find. I'll exercise my muscles and get lots of deep breathing picking up stones." Nate spoke quite earnestly.

Norm laughed out uproariously. "Say, I know a man who's picked six hundred loads of stone off of ten acres and there's plenty left."

"And how are you going to haul all those stones you pick up? You can't carry them away yourself?"

"Glo-ry!" said Nate, "I'd never even thought of that! If I had a team of oxen, like yours, they'd be just the thing. Quiet and slow, they wouldn't mind standing still all day, waiting for me to dance around and get a load."

"They're the best team in the State." Norm said warmly, "and they'll do what horses won't do or can't do. They're patient, and noble and easy to keep!" Norm enumerated all these valuable qualities enthusiastically. It was easy to see how much attached he was to that identical yoke of oxen.

"How much are oxen worth?" Nate inquired, vaguely speculative.

"Oh, all prices. I wouldn't sell Red and Roan for a bunch of money. They're all the relations I've got. I make a good living with them too. Haul lumber and loads, and plow for folks. Say—" Norm paused.

"I have a little bit of money laid up, that I earned with my work."

"I wish you were going along with me," said Nate, "you've got such a clear sight for the glint of the golden egg."

"That's just what I had started to say, when you interfered with that blamed cough of yours. I do want to go with you—" earnestly.

"What!" cried Nate. "Go with me—Oh, here's how," and Nate's slim, weak hand reached out to be lost in Norm's large, strong one, "Brother!" joyed Nate.

"Pard!" cried Norm. And so the compact was sealed, which should change and amalgamate their future lives. "There isn't a thing to keep me here. We can hit the trail as fast with Red and Roan as we could afoot, and considerably easier. Then too if you should have many such spells as you've been having the past few days, you might need a proxy to do your stone picking, on rainy days anyway."

"This is better than any nest of golden eggs I ever dreamed of," Nate said warmly and the large hand and the slender one met again in giant grip. "I guess I've got money enough to grub stake us on the trip," Nate said glowing, "I'll furnish the eatin's and you can furnish the oxen."

The boys sat long talking and planning, and the next morning Norm began selecting the things he would take with him out into the wide world of the West.

"We'll want all the tools, and shovels and axes, the fishing tackle and my gun," Norm rattled off happily, "and all the clothing, which isn't much, and the bedding, and the cooking things and the stove, it's small."

"I don't imagine we will want to cart out much furniture," Nate put in dubiously.

"There isn't much to cart, but I guess we won't take a stick of it." Deftly and quickly Norm packed his goods into a compact compass.

"I don't know, hardly what to do with the six chickens, and the cat," Norm looked askance at the hens scratching cheerfully about the clearing, and the cat rubbing against his rough clothing.

"Why, you couldn't leave them," Nate replied, "You might better kill them than do that. A cat's a lot of company, and the hens—they lay eggs, don't they?"

"You'll make a great farmer, won't you," Norm mocked. "W haven't half a load for the oxen, I've a good mind to put the chickens in a box and cart them along. We can eat them if we find we don't want to do anything better with them." And so Norm made a neat, slatted box, and installed the fowls therein. "I'm blamed if I'll leave this cat here to fend for herself, anything but a homeless cat."

"Let's take her for a mascot; she may bring us great prosperity or something."

Their last meal was cooked at the cabin, and the groceries and provisions were stored away safely on the wagon. Norm looked around his little domain thoughtfully, and his eye rested on a little pile of lumber which lay ready for use.

"I hate to leave that good lumber," Norm said meditatively. "I've a good mind to take it along—we'll need some lumber anyway," suiting the action to the word, Norm reconstructed his load, and piled the lumber on the long wagon, then the two boys in the highest kind of spirits and feeling like the oldest of friends started on their quest—the quest of fortune. Norm turned back for one last look—drew his hand across his face at the sight of the deserted cabin, and garden patch, which had already taken on that look of loneliness and abandonment common to deserted buildings.

"Sho!" deprecated Norm. "We can come back here any time, that little tract of land is mine, and it won't hurt the log shanty if someone should shelter in it. I wish I'd carved 'Come In' on the door—but then they'll go in if they want to—so—" and then both boys lapsed into silence, Norm walking beside his oxen and Nate riding, by Norm's insistence.

"You can walk sometimes to rest yourself," he had said, "but otherwise you're part of the load."

Slowly they lumbered onward, Norm stopping at the first little village he came to and getting his precious nest egg, to take with him.

"We'd better strike towards the railroad and follow West by that," Norm said, thoughtfully.

"I tried, that, but there were so many tramps I finally quit it, although I enjoyed an occasional chat even with a tramp, but my ways weren't their ways, nor their ways mine. I kept the main travelled road—or if possible keeping my direction and going through woods or fields. I always tried to find a stack of hay or straw or something to sleep in—or some out-house, where I could not possibly trouble anyone. I've lived mostly on rolls and cheese, getting a small supply as I passed through a town, and only enough to last till I could reach another place."

They jogged along steadily that day and until late that night, because they had not really put in a day's work on the road. Norm made a business-like camp, picketing the oxen in a rich, grassy place and near a stream of water; digging a little pit, and in this making a little fire, over which when it had burned down to red coals, he made some good coffee and broiled some rich slices of bacon.

"That's a great scheme, building a fire like that," Nate commented approvingly.

"That's the only woods way to make a fire," Norm replied. "Any woodsman must watch out that he sets no fire, and with this there is no possible danger, and a pail of water over the embers on quitting camp leaves everything as secure as it was found."

Both boys ate heartily, and it seemed to Nate he had never eaten so delicious a meal before. He fell asleep on a rich bed of pine needles, with the starlight sifting in upon him softly, and while he did not thank God in so many words for this new-found brotherhood, his whole attitude of mind was full of joy and gratitude. He had left home (?) without a "good bye," and had tramped many, many lonely miles without a friend, and then, when he seemed to have reached the limit of his endurance this wonderful thing had happened! A friend, a real friend, and one who would not be separated from him! Perhaps there would never be any separation. Such infinite comfort and quietness lay in this thought, his very sleep was made better thereby.

And so day by day the boys travelled onward. The trend of their travelling was northwest, and in spite of Nate's objection, they did finally follow a railroad knowing that by so doing they could not be led astray. The oxen made from 15 to 25 miles a day, according to the roads, and while this would not have been much of a walk for a man, it seemed good to Nate to lie in the blankets on the wagon, a good share of the time, although he often walked up a hill as a constitutional, breathing deeply in consequence, Norm did not think it best for him to walk more than a mile or two at a time, for Nate's cough still clung to him, and the color in his cheeks was not what Norm wanted to see.

In Minneapolis, the boys secured some literature about land, and it was a puzzle to them to know which golden opportunity to take, when there seemed so many, according to the glowing prospects, presented to the public. There seemed to be, then, a great deal of vacant land open to settlement.

"It will cost us about fourteen dollars to file on land," Nate observed, after some study of the land books.

"Well, I reckon, we can put up the price," Norm parried.

"I guess I've got enough left for that," Nate said thoughtfully. "But most things cost a good deal more than they're advertised to—I'm wondering just what our expenses will be."

"They won't be any more than the legal fees, we have our own team, and can do our own locating and haul out our own stuff. I believe it would be a good plan to buy here the supplies we think we will need for a few months, probably prices will be high in the new country."

Norm had been so long accustomed to buying his own supplies that he made a reasonable selection. Flour, cornmeal, oatmeal, bacon, and some tinned stuff. With these and other supplies packed compactly on the load, they were ready to go forward. Norm climbed on to the load beside Nate for the roads were hard and smooth, and they could talk much better when side by side.

"Now we must decide on some definite point for our destination," Norm said decisively. "We have made this jaunt with only 'some place,' in view, we must have a real location"

As the oxen jogged along, the boys looked over the land literature again, and finally decided to stop at the first place in Dakota (then a territory) where a land office could be found, and near enough vacant land to make filing feasible. They hit upon a place called Wetaske, not very far from the Jim River, and lying about 300 miles west of Minneapolis. Having settled this point to their satisfaction, and without much thought except that it seemed the nearest possible place, Norm jumped off the load, and with a hilarious, "Giddap!" to the oxen they started on the "home stretch," of their long journey.

The oxen were in fine fettle, and went along steadily and strongly, making, 30 miles a day for two days, but the third day proved to be an exceedingly warm one, it being now about the first of August. The way was rugged and difficult, and they were not making as much progress as they hoped to do, and when in mid-afternoon they came upon a thickly-wooded place, with a stream of water and everything ideal for camping, Norm thought it best to stop, and then get an early start the next morning, and so travel in the cool of the day. Both boys felt the heat, and were worn and dusty, for even Nate had walked a good deal, as the roads had been so rough and steep, riding had been no pleasure, and the load was heavier than it had been before they had taken on their new supplies. The whole outfit, boys and oxen seemed to rejoice in the cool shade of the trees. Norm unyoked the heated oxen, and when they had rested a little he fed grain, and picketed them out on a grassy plat, near a stream of water. The oxen waded out and stood knee deep in the water, chewing their cuds contentedly, and the boys after cooling somewhat took a plunge in the stream too. This refreshed them very much, and Norm went off with his gun to look for game, while Nate was ordered to lie down and sleep. This he did cheerfully enough, although he protested that he too should go along to help with the hunting.

"You stay right here, and 'knit up the ravelled sleave of care,'" Norm ordered laughing.

Nate slept and dreamed and dreamed and slept, the climax of his dreaming being that he was in the water, and the walls of the ravine fell in upon him with a terrific crash; with this he awoke to find that the crash had not been a mere dream, for the heavens were white with lightning, and the constant roar of thunder seemed almost deafening. For a moment Nate sat up questioningly, then looking about for Norm, but did not see him, nor could he see the oxen. The wagon, which stood in a comparatively sheltered place, would soon be drenched, and their precious store of food be ruined. To care for these supplies kept him busy for some time, for he had to lift them down and put them under the wagon, and then make a shelter of some of the lumber on the windward side to keep the rain from beating in upon them. He crept under the wagon too after his work was done, and the rain raged for a time, and then the sun came out. Nate rose and went to look for the oxen but he

could find no trace of them although he wandered around long searching. It had been sometime since the rain had ceased and still Norm did not come. What could be the matter? Nate had little woodsman's sense, but he was learning some, so he finally started out to hunt for Norm. He did not know where to go, but he took the general trend Norm had taken. Nate went forward slowly, a feeling of awe and depression creeping over him as he advanced into the depths of the woods. He whistled the whistle taught him by Norm, putting two fingers in his mouth, and shrilling forth a trumpet tone of sound. There came no answer but the dull echoing of his own call. Farther and farther went Nate, calling, crying, shouting, whistling, but no answer came back to his waiting heart. What could have befallen?

Nate had no idea how long he had tramped about the sodden woodland, but it had grown from sunset to twilight, and from twilight to dark, so dark in fact that he could no longer see to pick his way, and he stumbled upon the trunk of a fallen tree, and fell. His head struck a protruding tree root, and for a few minutes Nate lost consciousness from the impact of the blow. He lay there, when he came slowly back to consciousness, and he wondered dimly, dizzily, then vividly, anxiously, where Norm could be. It seemed as though he must have tramped the entire woodland over, and with the sense of depression much deepened, he struggled to rise. He knew that he had lost his direction, and the fall had set his head to throbbing painfully. He felt that he could not find the camp should he try to do so, unless by sheer accident, and he knew too that if he remained in the woods, he must seek some drier shelter than that afforded by the earth and leaves. Still his one obsession was to find Norm. Norm must be found and with that accomplished his world would revolve upon that axis successfully. Nate began to cough, roughly, harshly, and he raised himself as quickly as he could, to find himself facing an object, that sent a shudder all over him. For there upon the opposite side of the fallen tree lay Norm, his face looking wan and ghastly in the dim light. Nate noted the tree was rent and splintered, as he scrambled over it.

"Struck by lightning," he gasped as he bent over Norm's sodden form.

(*To be continued.*)

WATER SYSTEM IN A VIRGINIA FARMHOUSE.

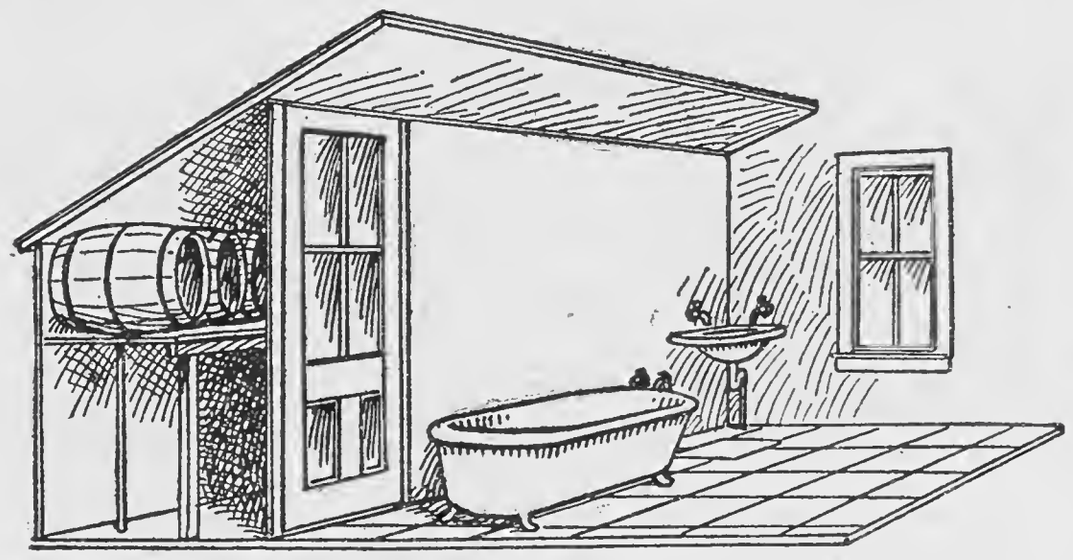
We have established a very satisfactory water supply in our home at such small cost that it must be within the reach of most country householders who own a nearby spring. The trouble and time saved soon pay for the outlay of $50 for materials. A spring about 500 feet from the house was carefully dug out and walled in with cement, in order to keep out surface water. A gable roof, with ventilated wire openings, was placed over it to exclude insects, leaves, etc. The spring-house was fitted, near the top of the cement wall, with an overflow pipe, which carries off the surplus water to a neighboring stream.

An inch pipe carries the water for 300 feet to a small $6 ram which has given steady service for two years without any attention whatever. It pumps the water through a half-inch pipe, to a 200-gallon tank, which is placed above a small room on the back porch called the milk-room. This room contains a large cement box in which the water is kept constantly fresh and cool by the overflow from the tank. Furnished with shelves placed at different levels, this box is a wonderful convenience in keeping milk, butter and many other foods, fresh and cold. The 200-gallon tank supplies the hot-water tank attached to the kitchen stove, and furnishes hot and cold water in abundance to both kitchen and bathroom. The bath, kitchen sink, and milk-box, afford more comfort and real economy than could be represented by any other $50 outlay. Any moderately handy man could install a similar system, which requires no expert workman.

MAY LEE C. ADAMS.

HOMEMADE WATER FIXTURES.

Some 10 years ago THE R. N.-Y. offered prizes for what we may call homemade bathrooms. It was stipulated, that the articles should cover homemade affairs, where the work was largely done by the farmer himself, without expensive plumbing or skilled labor. There are many situations where bathroom fixtures can be put into a house at light expense, and we were after such an outfit. We reprint herewith a picture of the outfit which won first prize. This was put together by W. N. Miller of Connecticut, who may be called an ingenious Yankee, quite handy with tools. He had purchased an old farmhouse, and the bathroom problem presented itself. At first they thought they would be obliged to build an addition, or take a needed bedroom for the bath, but they finally utilized the attic in the ell of the house over the kitchen. The entire room was ceiled with Southern pine, half an inch thick, and varnished to make a pleasing finish. The work was done at odd times, as the employment of a carpenter or plumber was out of the question. In place of a tank for the water, Mr. Miller put in what he calls a battery of six vinegar barrels. These are shown in the picture, mounted on a stout shelf. These barrels are connected together with piping, and give a combined capacity of 300 gallons. This little room is heated by an ordinary register, cut in the floor directly over the kitchen stove. A 40-gallon hot-water stove tank put on the kitchen stove



WATER SUPPLY FROM BARREL STORAGE.

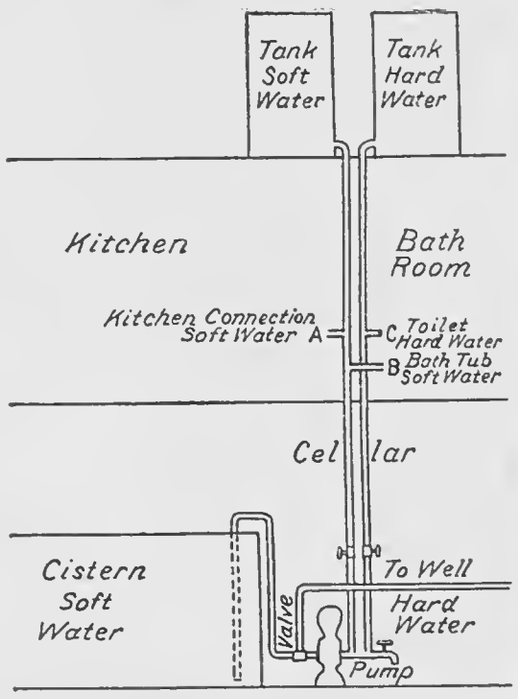
furnishes the hot water supply. Mr. Miller gives the following items of cost in putting up this useful outfit:

6 barrels	$2.00
Enameled bath tub	7.00
Force pump	5.00
Pine lumber	7.50
Studding	1.00
Nails	.25
4 faucets	1.80
Bowl and connections	1.30
Iron piping	4.25
Water back for stove	2.50
Hot water tank	7.50
Extras	7.74
Total	$47.84

The pumping was originally done by the force pump from the well, but now a hot-air engine has been installed, and also a closet. Thus for $50 cash outlay in this homemade plant, Mr. Miller was able to obtain conveniences which would be worth $100 every year to his family. There are thousands of locations where similar work could be done for the price of one cow, and no one save those who have such conveniences can realize what a blessing this would be to the entire family.

A WESTERN NEW YORK WATER SUPPLY.

The water system here described has given three years' constant service to a large farmhouse for bathroom, inside toilet and kitchen use. First cost was



ARRANGEMENT OF PIPES.

$50 for material; labor was done by home talent and at 25 cents per hour did not exceed $15. Like most farmhouses, we had a large cistern, soft water, in cellar, and a good well nearby. The first step was to connect these two sources by means of a three-way valve to a double action force pump in cellar; 1¼-inch galvanized pipe was used, the pipe to well being laid below frost. We next placed in an unused clothes press on second floor two round upright galvanized tanks 2½ feet in diameter and six feet high. These were made by a local tinsmith, and being small in diameter went easily through doors and into place. From the bottom of each of these tanks a one-inch pipe led to the cellar, one being tap fed conveniently to supply bathtub, sink and hot-water front to stove, the other tapped to supply toilet. These pipes united at the pump, but in each pipe near the pump a gate valve was placed so that either tank or both may be filled at will.

It has seldom been found necessary to draw on well, the cistern being sufficient for both tanks, so we open both valves and fill both tanks at once. In case cistern is running low we close valve in pipe supplying kitchen and bathtub, turn the three-way valve to cut out cistern and we have an unlimited supply of hard water for toilet, thus saving soft water for other use.

About five minutes pumping each morning is sufficient for the day's needs. Water in cistern is about same level as pump, total lift being 12 to 16 feet to tanks. This gives about five pounds pressure on faucets. The pump is worked easily by women of household, but this they are seldom expected to do. A faucet on side of soft water tank gives a supply of water on second floor if desired.

An addition, which is convenient, but which has not been figured in first cost, is 25 feet of hose, which is connected to pipes in cellar by a valve. Passing this through cellar

(*Concluded on page 84.*)

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A WESTERN NEW YORK WATER SUPPLY.

(*Continued from page 83.*)

window enables us to water nearby flowers, wash carriages, etc. It is kept coiled for immediate use, and might be valuable in case of fire in cellar or kitchen. Below is estimate of cost:

2 Galvanized tanks, 2½x6 ft., at $9,	$18
1 Double-action force pump	11
Piping, valves, fittings	13
30-gal. hot water tank	8
	$50

It should be noticed that the same pipe which fills the tanks also supplies the different faucets and bathroom, thus saving in first cost, reducing number of pipes in rooms below. To avoid running the tanks over when pumping a home-made electrical device rings a bell when either tank is full. This is simply a wood float which rises with water, causing two wires to lower into a cup of mercury, completing the circuit. We used the door bell already installed, so only cost was for wire, mercury and a two-way switch costing less than a dollar in all. This is not a necessity, but saves an occasional trip upstairs. I inclose sketch, which is shown on page 83.

Cayuga Co., N. Y. A. M. KOAN.

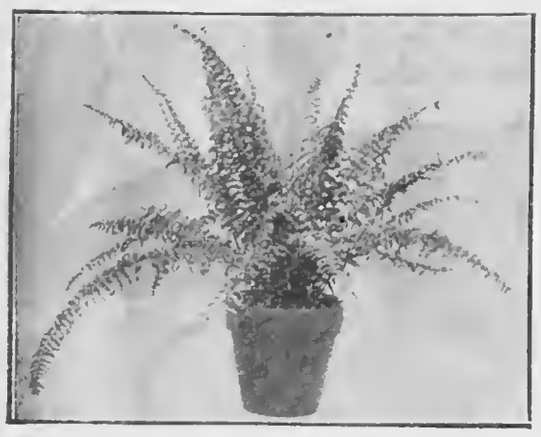
FERNS FOR THE HOUSE.

The trade in potted greenhouse ferns has now assumed enormous proportions; they are bought as individual specimens, and in pans or baskets, while florists use vast quantities of them in conjunction

PAN OF MIXED FERNS.

with cut flowers. Most of the varieties in ordinary commercial use are excellent for the house, if treated properly.

At the head of large single specimens the Nephrolepis continues to hold its place. The familiar Boston fern is a greenhouse form of Nephrolepis exaltata, though N. cordata compacta is often called dwarf Boston fern. Varieties of the Boston fern, with crested, slashed or divided fronds, are numerous; most of them are robust and desirable, and prove of distinct commercial value, though the ordinary type still holds its place. The Boston fern likes a good com-



A YOUNG BOSTON FERN.

post of loam and leaf-mold, with the addition of some well-rotted manure. There must be good drainage, as the plant needs plenty of water, but dislikes sour or waterlogged soil. In the Summer especially it will need lots of water, as the extensive root system will dry out the soil quite rapidly. During the Summer it may be out on the porch or in partial shade under a tree. We are accustomed to regard all ferns as shade-loving plants, but in the Winter the Boston ferns need all the sunshine they can get, and the house gardener must not push a specimen fern off into some dark corner, and then expect it to thrive. Yellow fronds often result from chill and starvation; the color becomes pale where the temperature gets below 60 degrees at night, in the Winter. An occasional dose of liquid manure, or a very small quantity of dried blood, will increase vigor of plant.

Insect troubles are few with the Boston fern; red spider or thrips sometimes appear in a dry hot atmosphere, but may be controlled by vigorous syringing with cold water. Several sorts of scale, or the pernicious mealy-bug, sometimes gain a foothold; the best plan with a single specimen plant is to rub them off with a brush or softened toothpick dipped in soapsuds. If the plant is clean when procured, there will be no trouble from scale unless infested plants are in its vicinity. The fancy Boston ferns, with crested or forked foliage, are very difficult to cleanse if once infested.

The small ferns in general use include Cyrtomiums, Aspidiums, Onychiums, Adiantums, Pteris, small Davallias and others; when made up in a group small plants of the asparagus vine often mingle with them. Cyrtomium falcatum and C. Rochfordianum are sometimes called holly ferns, because of their shining, slightly angular pinnæ, and they are both excellent house plants. They need good light and a reasonable amount of water; if allowed to dry out the fronds flag, and may be permanently crippled; it is not unusual to see house specimens in this condition. Our personal experience with Cyrtoniums is very favorable, as we keep them growing on year after year. After danger of frost is over these house ferns are all set outside for the Summer, in a partly shaded place. They must not be forgotten when taking their Summer vacation, for small pots dry out quickly, and they need copious watering.

The only maidenhair fern we have grown with prolonged success in the house is Adiantum cuneatum, and one specimen has stayed with us for over 20 years. The fronds are very airy and graceful, and as the plant prefers partial shade a north window will provide a congenial home. This maidenhair likes a temperature of 60 degrees to 65 degrees. In the early Summer it dies down more or less, and takes a partial rest, while placed in the shade outside; following the rest new fronds appear, and the plant is very attractive through the Winter. Our beautiful native maidenhair, Adiantum pedatum, which grows scarcer year by year, is desirable for a shaded border or window box during the Summer but dies down in Winter.

Onychium Japonicum is an Asiatic fern with light green finely cut fronds, very often used in fern pans; it requires the same treatment as Cyrtomiums, and is very dependable. Various forms of Pteris are very popular as house plants; they have fronds divided into strap-like pinnæ, some being crested and contorted. Among those most commonly grown in the trade are Pteris Cretica and its variety Albo-lineata, which has a broad white line down the center of the pinnæ; P. serrulata, light bright green, with many crested forms, and P. tremula, with bright green pinnæ on slender chestnut-brown stalks. The different forms of Pteris being strong growers, they are likely to become starved when crowded into a small fern pan with a number of other plants, and P. tremula especially will soon lose color with starvation; occasional doses of liquid manure will keep them in condition.

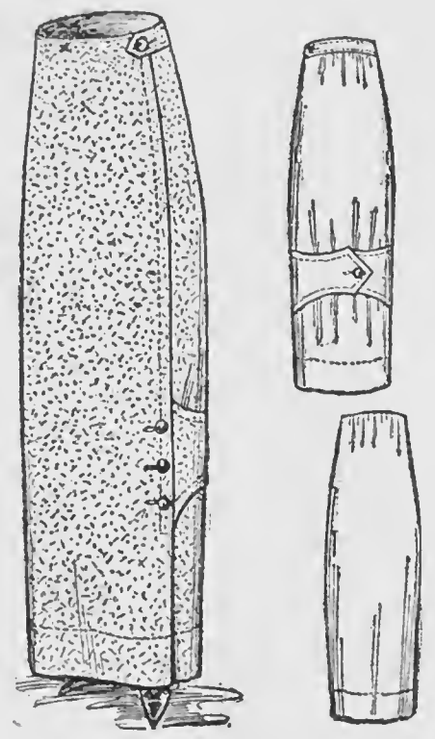
When the house ferns are put outside during the Summer, be sure they are brought in before cold Fall rains start. Many house plants, especially ferns, palms and rubber plants, get a check at this time that they never recover from. The chill received from a cold rainstorm at this season affects the fine root system, and damaged foliage results.

Several of the smaller Davallias are used in fern dishes and hanging baskets, some of these being used for the quaint monsters twisted into monkeys and other forms by the Japanese. The creeping rootstocks, covered with light brown scales, look almost like rabbits' paws. As a summary of fern-growing in the house, don't thrust them into a dark corner because "they don't need sun"; water them regularly; see that drainage is good, and feed them before they become starved. The loveliest and more delicate of ferns (apart from some tropical sorts) may be grown in a Wardian case, which is now old-fashioned as compared with the widespread fern dish.

THE RURAL PATTERNS

When ordering patterns always give number of pattern and measurements desired

PRICE OF EACH PATTERN, 10 CENTS



8030 **Two-Piece Skirt, 22 to 30 waist.**

With or without Trimming Straps, with High or Natural Waist Line.

8029 **Faacy Blouse, 34 to 42 bust.**

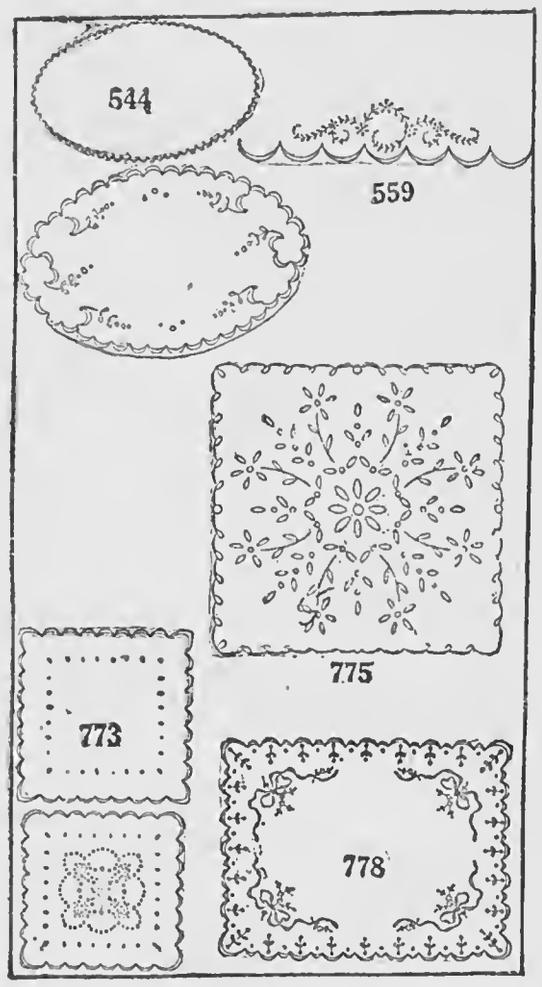
With Long or Elbow Sleeves, with or without Peplum and Chemisette.

8032 **Semi-Princess Dress for Misses and Small Women, 16 and 18 years.**

With Three-Quarter or Long Sleeves.

Embroidery Hints

The prices quoted are for stamped goods and material for working, but transfer patterns of any design will be furnished separately for 10 cents each.



No. 544. Design for embroidering two bread tray doylies. The large doyley is thirteen inches, the shorter is ten inches long.

Stamped on Best White Round Thread, Scotch Linen, with mercerized floss to work.....$ 35

No. 559. A design for embroidering the ends of a towel. It can be used for material twenty-four inches wide or narrower.

Guest Towel. Stamped on superfine 24 x 15 inch pure linen white Huckaback, with mercerized floss to work.....$ .55

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Stamped on eight inch, Round Thread, Scotch White Linen, with four skeins of white mercerized floss.....$ .20

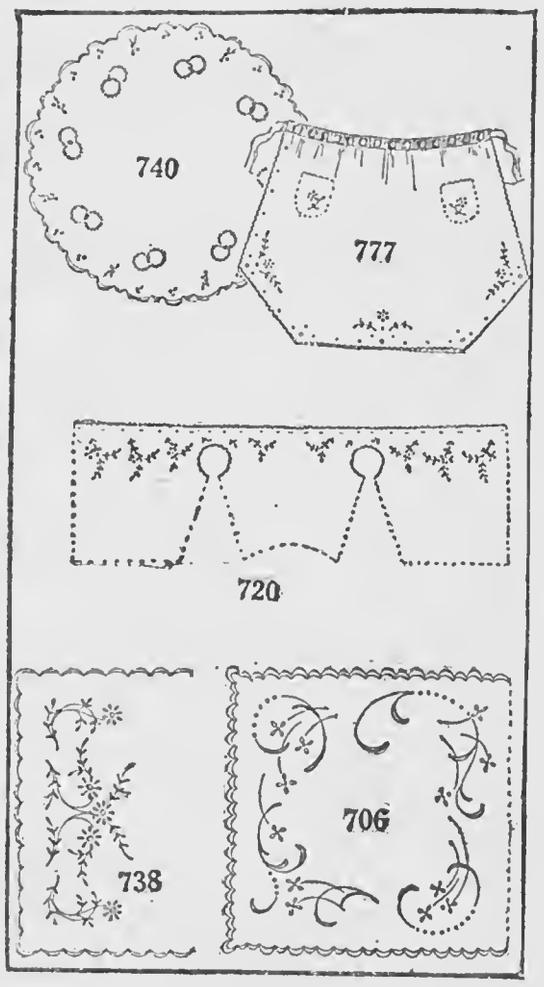
For a Set of Eight.....$ 1.50

No. 773. A design for embroidering the cover for a pincushion six inches square.

Stamped on Fine White Irish Linen for a 6 inch square cushion, with mercerized floss to work.....$ .30

No. 778. A design for embroidering an infant's pillow. The scalloped edges are to be padded and buttonholed.

Stamped on 21 x 16 inch White Pure Irish Linen, with mercerized floss to work.....$ .60



No. 740 is a design for embroidering a centerpiece thirty-six inches in diameter.

Centerpiece. Stamped on the best round thread linen, 36 inches in diameter, one dozen of 12-yard skeins of mercerized floss in two sizes.....$ .98

No. 777. A design for embroidering a fancy apron, including the outline of the apron.

Stamped on best White Irish Linen, with mercerized floss to work.....$ .30

No. 720 is a design for embroidering a corset cover.

Corset Cover. Stamped on best quality nainsook, with mercerized floss to work in three sizes, 34, 36 and 38.....$ .45

No. 706. Design for an embroidered handkerchief case.

Stamped on the best pure white linen, with mercerized floss to work.....$ .30

No. 738. A design for embroidering the ends or a dresser scarf twenty inches wide.

Dresser and Scarf. Stamped on best round thread, white linen, 20 x 54 inches.....$1 .98

One dozen of 12-yard skeins of mercerized floss in two sizes.....$ .20

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards their property and their children. There will be direct answers to actual questions and general statements of law.]

MARRIED WOMEN'S PROPERTY RIGHTS IN PENNSYLVANIA.

We are much interested in your article on married women's property rights in the State of New York, but what we want here is married women's property rights in the State of Pennsylvania, and would be glad to have you give them fully, as we are led to believe they are quite different. M. B. A.

Pennsylvania.

The laws of the State of Pennsylvania in regard to the rights of married women are somewhat behind those of New York, but changes are being made each year, so that in the near future it is hoped that married women in that State will have the same rights as are generally given to them in the other States. In brief, they are as follows:

In 1893 a law was passed giving married women the same rights and powers over all property, real, personal, and mixed, as has an unmarried person, with the exception, first, that she cannot convey or mortgage her separate real property unless her husband joins in the conveyance or mortgage, and any separate deed, lease, or mortgage in which her husband does not join is absolutely void except where her husband has been declared a lunatic, when she may dispose of her separate estate by deed or otherwise, or bind the same by mortgage as fully and completely as if unmarried, without it being necessary for her husband to join in or consent to the deed or mortgage; but she may mortgage her separate estate to secure her husband's debts and, although she may not mortgage her property, she may sell, assign, transfer, or satisfy a mortgage or judgment as if unmarried. Second, she cannot become an accommodation endorser, maker, guarantor, or surety on the note or obligation of another. If she is of full age, she may transfer railroad stock and bonds or stock of any corporation created under the laws of Pennsylvania, as if she were unmarried. She may keep a bank account in her own name and draw money on her own check, or receipt, without the consent of her husband.

Any married woman of full age may hold stock in any savings fund, building or loan association, and have all the rights and privileges of other members, including the right to borrow money from them and bid premiums therefor and to secure the loan by assigning her stock or other securities or by executing bond and mortgage upon her separate estate, provided her husband join in the bond and mortgage. When living apart from her husband under articles of separation, she may convey or mortgage her real estate without joining her husband and she may sue in divorce without a next friend, that is, may bring an action of divorce in her own name. Where property is claimed by a married woman as against the creditors of her husband she must show very clearly either that she owned it at the time of her marriage, or else acquired it afterwards by gift, bequest or purchase, and it is upon her to prove conclusively that she paid for it with her own funds or which were furnished by her husband during his solvency without fraudulent intent, and unless she does so prove and does make such claim, it is presumed that her husband furnished the means of payment.

A number of rights have been given to married women of late years, such as that of 1911, in which she was given authority to make conveyances of real estate directly to her husband as if she were unmarried, and by the same law all conveyances of real estate which had previously been made by any married woman to her husband, which had been duly executed and delivered, were made good in law. A married woman may sue and be sued civilly and in all respects and in any form of action as an unmarried woman, but she may not sue her husband except in her proceeding for divorce or in a proceeding to protect or recover her separate property; nor may he sue her except in a proceeding for divorce or in a proceeding to protect or recover his separate property. And in 1913 a law was passed by which a married woman who has been deserted, abandoned, or driven from her home by her husband may sue him upon any cause or action whatsoever and she is a competent witness against him in any such case. She may dispose of her property, real or personal, by will, but she cannot affect her husband's right to his tenancy by courtesy in her estate (which means that he has an estate for his life in her lands at her death), nor his right to take against the will as provided by existing laws.

A widow is entitled to $300 out of the husband's estate, payable in preference to debts and legacies. She may take the $300 and also what the will gives her, although the gift be expressly in place of this sum, unless the gift by will be in the alternative. Her dower right at his death, which is a one-third interest in his property for her life, attached upon all the land owned by her husband at the time of marriage or acquired by him during the marriage, and to bar this right the wife must join in the deed to any property, and if her husband conveys land during the marriage without his wife joining in the deed, her dower therein is not barred, and if she survives him she may recover one-third of such land from the buyer.

Wife's Right to Husband's Personal Property.

Can you tell me what a wife can hold out of her husband's property if he dies without a will, and the property is less than $2,000 and is with the exception of two or three hundred, all mortgages and accounts? A. R. S.

New York.

It is hard to tell what proportion would go to the wife, unless we know how many other relatives and what relation they held to the husband. As this is personal property, if there was left a wife and children, there would be no inheritance tax to pay on the estate but all of it would go to the wife and children in the proportion of one-third to the widow and the rest in equal portions to the children or their representatives.

Property of Incompetent Wife.

My wife is evidently losing her mind, and I feel that she is incapable of doing business. She has some property in her own name, which I could use to advantage. Under the circumstances, believing that her mind is unsound, would I be justified in handling and using this money without consulting her? L. M.

You would not be justified in using your wife's money at the present time, any more than you would if she was in her right mind. The proper procedure for you is to petition the court and have her adjudged an incompetent person, and have a committee of her person and property appointed, and this committee, with the leave of the court, may use her property for her support. But until this is done you should not use her money in any way, as you have no more right to it than you have to the property of a stranger.

Wife's Claim Against Husband.

A woman has property in her own right, and lends all her part of it to her husband for his personal business. She takes no note, or other acknowledgment from him, but he handles the money. In case of his death how could this woman proceed to obtain her money back, or how could she obtain it now in case of her need, or of any trouble with her husband? J. B.

A married woman may deal in property with her husband the same as with a stranger. There is a slight presumption, where no evidence of the loan is made, that the property was given to the husband as a gift which would have to be overcome by some evidence. In case of the husband's death the wife would proceed to prove her claim against his estate the same as any other creditor. The only trouble in this case is that she has no evidence of her claim other than her own word, and this would make it harder for her to prove her claim now or after her husband's death, and it is always wise, even in family matters, to take the same precautions in regard to loaning money as it is when dealing with strangers. It saves a great deal of unnecessary trouble later. She should first get from her husband some acknowledgement in writing of the indebtedness. If he will not give this, nor pay her, the only alternative is to bring an action against him.

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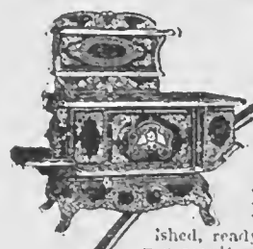

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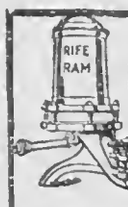

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THE ADOPTED CHILD.

PART I.

Why the Adopted Child?

[NOTE.—This article will be followed by others on the physical, mental and moral training of the adopted child.]

Before entering the field for considering the care of the adopted child, it may be worth while to answer the above question. One can answer it in all conscientiousness and good faith, and at the same time be fully conscious of not having attained the highest degree of success, as may be evidenced in the lives that have been committed to one's care.

Why the "adopted child?"

We will use this term to include any child not our own, the ordering of whose daily life becomes our duty, as well as the child legally adopted.

Why this child, or children, of other parentage than ours in our homes?

For two very simple reasons which may also apply to any effort to do one's duty in the world. First, because of the need of such child or children; and second, because of our obligation to meet this need. The world's history is full of the struggles of orphan children, and many worse than orphaned, the children of irresponsible parents. The fiction of all ages has chosen such children to be the types of heroes and heroines. Why open our homes to them when institutions may care for them?

However good and well managed an institution may be, it cannot do for the child what the home and family life should do. To be sure an institution is far better than no home; but, except to meet temporary needs, it is not an acknowledged success in the development of real character. The notable exceptions to this statement are the orphanages founded by George Muller and Dr. Barnardo, both in England, where orphans by the hundreds were trained into noble men and women. The very spirit of the founders of these orphanages seemed to enter into the lives of the children there; but George Mullers and Dr. Barnardos have not lived in great numbers in this world of ours.

Since institutions, then, cannot meet this great and obvious need, it remains for the homes of our land to do it. Not every home, of course. Many houses in which people dwell would be poor places, indeed, for a homeless child. We all know them. Yet it need not be the exceptional home, or one seeming to offer exceptional advantages. It should be, though, a home in which there exists a genuine love for children and for child life. To those who have such love for children life holds few things greater than the satisfaction of watching the physical development of a child, and the unfolding of the mental and spiritual natures; and the more unpromising the child, the greater the satisfaction.

Why our obligation? Some twenty centuries ago we were told that "To whomsoever much is given, of him shall much be required."

To most of us there comes a time when we must answer the question, "Who is my neighbor?" Then it will be for us to decide whether we will be the priest or the Levite and "pass by on the other side," or will prove ourselves "neighbor" to some one in need, oftentimes a little child.

Let no one who is unwilling to make sacrifices assume this obligation; nor should anyone do so who magnifies the sacrifice involved. Rather let him count among his blessings the influences that react upon his own nature. Everything in life that is worth while *costs;* and, if we would possess it, we must pay the price. We women hold that motherhood is the best that life has to give. Yet what is so costly? Mothering some motherless child may be counted among the next best things, and it, too, costs; but it is well worth the price.

When considering the matter of taking a child, it is surprising how much opposition one meets. "You are taking a great risk." "That child may disappoint you and bring you great sorrow." "It is not fair to your own child." Thus go the criticisms; and the eyes of the critics are ever open to watch for any seeming injustice. Confident in one's own integrity of purpose, a deaf ear can, and should be turned to any and all such; but let no one assume the care of a child who is unwilling to pay the price.

Possible disappointment? Yes, disappointment, time and again. Yet, consider over and against this, that no honest, earnest effort ever can be wholly lost; and that the one for whom the effort is made *must*, of necessity, be the better for the love and care expended.

One frequent cause of disappointment in the results of years of care and devotion to a child arises from *expecting too much.* This is also true in other relations of life. While we should have high ideals, yet there is danger of idealizing; and this, of necessity brings disappointment sooner or later. In the case of children of unknown heritage and limited possibilities, it is manifestly unfair to exact or expect too much.

The experience of all organizations whose purpose is to find homes for homeless children proves that many people who take a child are often unjustly exacting, as well as impatient of the child's development. There are cases on record

A PRIZE PACKAGE OF HUMANITY.

in which a child has been returned to the organization to be placed in another home, after months and even years of being "on trial," during which time the child's name was changed, as well as every condition of life. Oftentimes the only apparent reason for such action was that the child was expected to be a model child—something a little less than an angel. In some cases there were reasons for which the child was not in the least degree responsible, such as that would-be parents concluded that they were too advanced in years to modify the conditions of their lives as necessitated by the presence and care of a child. This uprooting must be both painful and demoralizing to the child, and may leave a shadow on the little life; but who shall say that in the end the child is not the gainer and the home left behind the loser?

The possibility of being disappointed in a child is, then, no argument against taking one or many. Recall instances, only too frequent in the most limited circle of acquaintances, in which *own* children have been bitter disappointments. "How sharper than a serpent's tooth it is to have a thankless child!" Should the disappointment in an adopted child ever be so severe as that of one's own flesh and blood?

Is the taking of a homeless child unfair to own children?

Quite the contrary—in any home worthy the name. Such homes and parents must have high ideals of character, and a desire to develop the traits of generosity and unselfishness. What better opportunity can be had than to teach an own child to "share and share alike" with other children less fortunate, in no patronizing way, but as a matter of course, all being practically on the same basis? This applies to externals, and in so far as may be possible, to the sharing of affection also. Yet, it is expecting too much of human nature to require the same degree of affection in the one case as in the other. This opens up a topic too comprehensive to be more than touched upon here, that of the place in the heart in which each child is held. Is it not, and must it not of necessity be a little corner for each one, differing in both kind and degree even as their natures differ? Surely every personality with which we come in contact means something entirely different to each one of us; then how can thought or feeling ever be exactly the same for any two children? Indeed it is better that it should not be. The question of justice or injustice will not enter into the situation with persons of right feeling and intentions. One can afford then to ignore suggestions and criticisms, secure in the belief that, as we may not expect to fit the same hat or coat to each child, neither do we hope to deal with all children in just the same way. In fact, one of the inherent rights of a child is that his or her distinct individuality be considered.

The *one* thing to be kept persistently in mind is that results are not in our hands. When one conscientiously cares for a child in what seems the right way, there should be no room for remorse, no matter what may be the outcome; for, in any given instance, or in all, no other action than the one taken would have been possible. "Train up a child in the way he should go; and when he is *old* he will not depart from it."

THE HOPE FARM WOMAN.

The Study Hour.

At seven p. m. or a little sooner, if outdoor chores and supper work are done in time, the bell is rung vigorously by Three-year-old to call the two older boys to the study hour. This is all the part the little fellow has in the work, as at seven sharp he is undressed and put to bed.

It is Seven-year-old's turn to read first to-night, and he gets the "Memory Gem" book and goes to work something after this fashion, in drawling monotone:

"Robert of Lincoln merrily s-w-i-n-g-i-n-g—"

"Swinging," prompts mother.

"Merrily swinging on brier and weed, near to the nest of his little dame, over the m-o-u-n-t-a-i-n- s-i-d-e. Mountainside."

"Over the mountainside and mead, Robert of Lincoln is telling his name, Bobolink, bobolink, Spink, spank, spink, Snug and safe is this nest of ours, Hidden among the Summer flowers. Chee, chee, chee!"

"Mamma, you read it over first," pleads the little boy.

So Mother reads it all and Father carries the littlest boy off to bed trilling happily an echo. "Bobolink bobolink, spink, spank, spink." After hearing the beautiful poem read understandingly, Seven-year-old wades through the rest of the verses very creditably and with evident enjoyment.

Now Big Brother takes his turn at the "Skeleton in Armor," which also has to be read to him before he can read it and get the "sense" of it. A short recitation in number-work for the younger lad comes next and then a bit of written geography work for the big boy. This only takes about half the hour usually, and if the work has all been done cheerfully and well, each has earned two pennies and besides the rest of the hour Mother reads aloud, which is counted a great treat.

Bedtime has always been at seven, until this year, and the reading has always been a part of the bedtime hour, but this Winter the school work has been added for the benefit principally of the older boy, who is backward in all but his number-work. It is easy to say in such a case "Why don't the parents help him at home?" But people generally do not realize that country children have a harder day than village children at school. They often walk a mile or two night and morning over bad roads in all sorts of weather, have only a cold lunch at noon, and besides help with the chores at home, being, when night comes, physically unfit for a strenuous hour or so of mental work, as indeed the parents are too. They are often dead tired with the long hours of hard labor which is the lot of most country folks. However a hot, hearty supper, soon after the children get home from school fits them for an hour of light mental work after the chores are done. After eight o'clock there still remains at least an hour for Father and Mother to enjoy, after the youngsters are safe in bed. If neighbors "drop in" or some social event calls the folks away from home, books are laid aside just for the evening. As for the reading matter there is always a book going; at present "John Halifax" just begun, and "Robinson Crusoe," just finished, while "David Copperfield," "The Little Lame Prince," "Heidi," "Dri and I" and others have had their turn. There is too, always a brief Bible reading, and the "Youth's Companion" and other papers and magazines furnish material for a varied program. F. J. F. F.

HAUNTED HOUSES.—Most people of middle age have heard stories of haunted houses. Many of them in fact have known buildings situated in lonely places which were thought to harbor ghosts. We have known several cases where ignorant or superstitious people absolutely refused to go by such houses at night, or to enter them and remain alone. A recent medical article gives an account of the investigation of such a haunted house. Reputable people who slept in it declared that they heard strange noises, and that they actually saw various shapes and shadows gliding about. A cold-blooded scientist who could not have possibly been frightened by a ghost, spent several nights in the house, both alone and in company with those who claimed it was haunted. He found that two or three stoves burning coal were not properly ventilated, and that the windows and doors had been kept shut tight. Thus there was an accumulation of coal gas in several of the rooms. The effect of this coal gas is peculiar upon some humans. Among other effects it disturbs the mental processes, makes them exceedingly nervous, and in a half-awake and half-asleep condition they frequently see visions and hear peculiar noises. The house was haunted by coal gas, and that was all. It was poorly ventilated, and poorly heated, and people of a naturally nervous temperament when sleeping in the house were affected by the gas and imagined a long series of vain things.

RAPID FIRE KITCHEN WORK.

Ham and!
Draw one in the dark!
Brown the wheats!
Sunny side up!
Put on two!
Two sinkers!

Every business will in time develop its own peculiar language. If you were in the habit of eating your dinner in one of the quick service restaurants in lower New York you would need no translation. Here is a crowded place where 1,000 people must be fed in an hour. They do not put their head in the door and ask if dinner is ready. They crowd right in and must be served at once or they go elsewhere. Walled into one little corner stands the cook. He can stand in his hot box and with scarcely moving reach a hot charcoal fire, an iron slab heated by gas, a great boiled ham, a chunk of boiled beef, and a great pan of hot baked beans. Now let us see what follows as a result of this clipped and condensed language.

"Ham and!" If you were in your kitchen at home you would say, "Mother, let me have some of those hot beans with a thick slice of boiled ham with plenty of the fat!" The cook makes a quick slash with his knife and off drops a slice of ham. The bone has been taken out. Another quick motion and he scrapes out a spoonful of beans and smears it on the plate. Almost before you could walk across your big kitchen to the stove and back the "ham and" has been eaten and paid for.

"Draw one in the dark!" Easy! That of course means a cup of coffee without any milk in it. There is a tank full of hot coffee always ready. A turn of the faucet and the cup is filled.

"Brown the wheats!" There is a pitcher of batter on a shelf. With a sweep the cook rubs a brush full of fat over the hot slab with the gas burning under it. Then he pours three 'round patches of batter on the slab. He knows just how much to pour. It is a wonder how quickly those patches brown on the under side and show bubbles on top. With a quick jerk of the broad knife they are flopped over and the wheat cakes are browned.

"Sunny side up!" The cook dives his hand into a dish of eggs. Another smear of fat on the hot slab and with a single quick smash each egg is broken and spread out to fry. Had he been ordered to "flop 'em" he would have turned them over for cooking, but "sunny side up" means that only one side is cooked. So he turns them out—little white rafts with the yolk red and natural on top.

"Put on two!" At the top of his shelf are a dozen or two wide-mouthed tin cans. Each holds perhaps a dozen small oysters, a quantity of milk, a lump of butter and salt and pepper. At his right are several metal dishes connected with steam pipes. Almost before you know it he has poured the contents of two cans into two of these dishes, turned a valve to let in the steam and two good oyster stews are nearly ready to serve piping hot.

"Two sinkers!" A sliding shelf comes out and there are 100 or more round pieces of flour dough slowly "rising." They are much like flour biscuit, only a quantity of yeast has been used with the baking powder. These when put on the hot slab grow thick and brown—more porous than biscuit—more like quick baked bread.

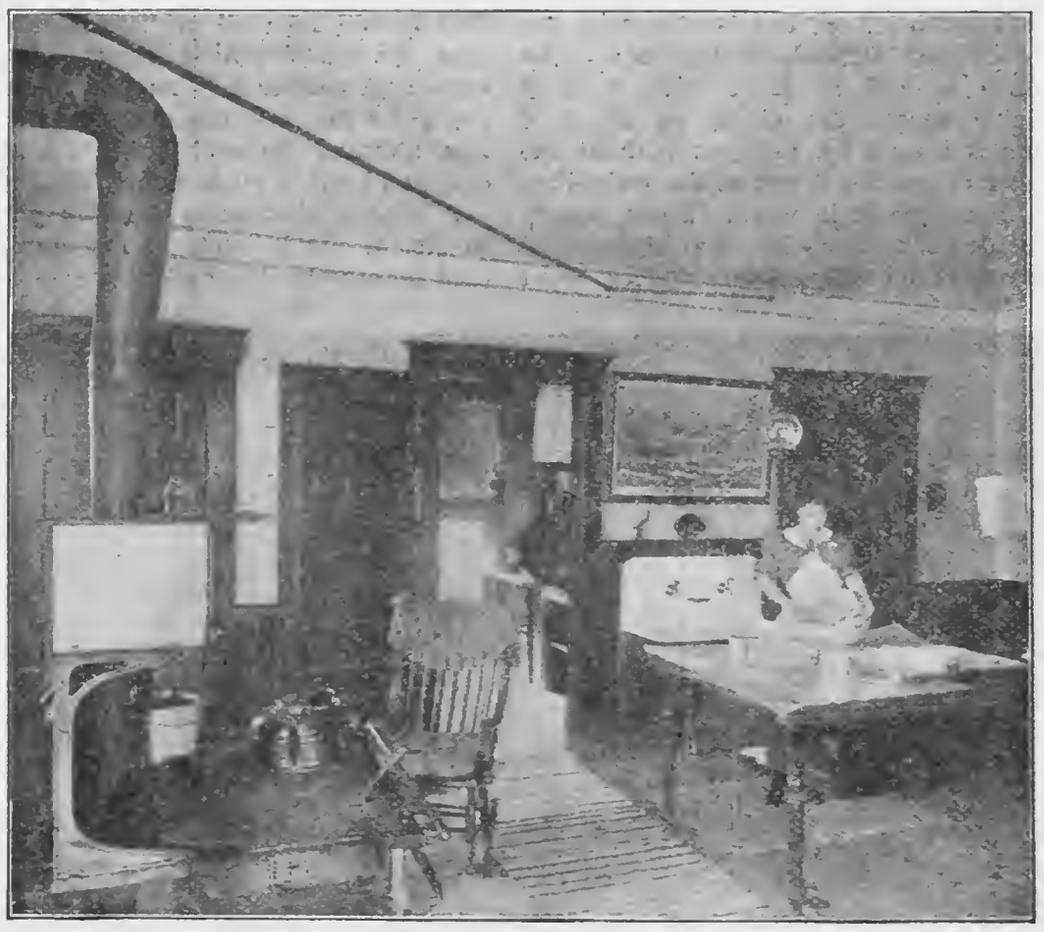
One who has never seen it done can hardly believe that good food can be turned out so rapidly. It *is* good, well cooked and clean and it is possible to do it because this cook has everything at his hand. The meats are cooked ahead in steam cookers, the "sinkers" and beans are prepared while trade is slack, and there is *always* a hot and constant fire. The pies are bought from a great wholesale pie baker.

Off in another obscure corner, close to the kitchen, stands a woman and boy washing dishes. What a job this is for a family of five. Think of washing for 2,500 people and not making such a disagreeable job of it either. The dishes are brought out in wooden trays. A boy rapidly scrapes off the "leavings" into a bucket. Then the dishes are put into a rack which fits down into a tank. A spray of kerosene or a dust of powder goes over them. A turn of the hand sets hot water and steam pouring upon them, and an electric motor sets the rack to churning up and down. Then the rack is lifted into another vat where clean water and steam are sprayed upon the dishes until they are more than sterilized. Then they go into a dry heat, a brief towel polish and they are ready for more "ham and" and "dark."

New York could not be fed at noon without this quick and efficient service which has developed this strange and picturesque language. No one wants the farm housewife to use this language and throw the food at father and the hired man, but she may well copy some of the time-savers which makes this cook efficient. The thing is to study out kitchen conveniences which are within reach and put them to use. Save kitchen time. You will have better food and more time for yourself.

FEWER KITCHEN MILES.

The average farm kitchen, in arrangement and in the number of conveniences for doing the work with the least effort, does not compare favorably with the average kitchen in town or city. Our contention is that there is no very good reason



ALL THE COMFORTS OF HOME.

why this should be true. On the average farm of the present day there is provided some way of watering the live stock without having to do the pumping by hand; but in the average farm kitchen, all water used has to be carried in by the pailful and all waste water carried out in the same manner. This does not seem to us a fair arrangement; and when we see a kitchen of this kind we cannot help wondering if a change would not soon be made if the farmer and his wife were to "change work" for a week or two.

From observation in a number of farm homes I am inclined to the belief that many kitchens are larger than they need be for the greatest comfort and convenience of the housewife. There is often too long a journey to be made between stove and work table or sink; and too many steps have to be taken between the sink where the dishes are washed and the cupboard where they are kept. Most housewives could learn a valuable lesson from the kitchen in a dining-car. In the old-fashioned kitchen which is used also as a dining-room a part of the year, there is some excuse for its being a large room; but the room which is to be used for a kitchen only, should be small enough so that the mistress may stand in the middle of it and reach range or sink or cupboard or flourbin without taking more than a step or two. Of course this means that there must be windows on at least two sides so that good ventilation may be provided in warm weather. This arrangement also means that there must be some place provided aside from the kitchen for the men to wash in and to keep their extra working clothes. This problem was nicely solved in one farm kitchen which the writer recently saw. The kitchen as originally built occupied the whole of a wing of the house, and was about 20 feet long by 18 feet wide. When it was decided to make a change, a partition was put through the whole length of the room so as to leave the kitchen a little less than 12 feet wide, and the other part was divided into two rooms, a washroom for the men and a bathroom. The washroom contains three porcelain-lined iron wash bowls and the bathroom the usual fixtures, tub, washbowl and seat. All these fixtures are connected with a sewer pipe which was laid below the frost line, and extends to the bank of a little stream nearly a quarter of a mile away. The supply of water for the washroom and bathroom is in a small tank in the attic over the kitchen. The water is pumped from the cistern to this tank by a little gasoline engine. I may add here that this same little engine also pumps all the water needed by the live stock on the place, runs the washing machine, wringer, ice cream freezer, fanning mill, feed grinder, wood saw and cement mixer. It is mounted on a little wagon, and a stout man can move it about easily. Every Monday morning it is taken to the house, where it is used to run the washing machine and wringer and to pump enough rain water from the cistern to the tank over the kitchen to last a week. The remainder of the week it is kept in the feed room, where it may be connected with the deep well pump or with feed mill or any of the other machinery.

In most farm homes an arrangement something like the one mentioned above could be provided, and nearly all of the work of installing such a system could be done by the farmer and his sons, provided they had some mechanical ability. Running water in the kitchen and a drain to carry off the waste water from the kitchen sink should at least be provided, and then the boiler for hot water, the bathtub and other fixtures could be added later. In many cases it may be difficult if not almost impossible to make a satisfactory rearrangement in an old house, as described above, but in the planning of a new farm home it seems to me that it would be a good plan to decide that the kitchen be used simply as a kitchen, and that the washroom, and if it can be afforded, the laundry, be entirely separate.

J. M. DREW.

MAPLE SUGAR A DESIRABLE SWEET.

To keep the body well adjusted and efficient, one needs to eat a certain amount of sugar, and there is no other manufactured that fills this want so completely, when taken with moderation and at the proper time, as maple sugar. Especially is this the case with growing children, when some sweet is absolutely necessary to keep the daily menus well balanced. The housekeeper, too, who must cater to the appetites of her household with the grocery store three or four miles away, or depend on the uncertain visits of the supply-man who calls at her door, is never at a loss for a substitute when her sugar runs low, if she has a goodly supply of maple sugar on hand; like her resourceful forebears she can turn, with equal satisfaction, to this pure wholesome home product for her sweetening. In fact, she finds the flavor of many of her desserts, as well as other dishes, greatly improved by its use. Among the recipes given here are some new preparations that are well worth testing.

Vermont maple waffles are delicious when served nicely buttered and piping hot. To make them, soften one cupful of finely shaved maple sugar in three cups of milk. Sift one quart of flour with three teaspoonfuls of baking-powder and one saltspoonful of salt, then rub in one tablespoonful of softened butter. Beat the yolks of four eggs until light, then add the milk and sugar, and stir gradually into the flour; beat thoroughly, fold in the whites of eggs beaten stiff and dry, and beat again. Bake in well-greased and heated waffle-irons.

Maple nut biscuits are especially nice served with fresh fruit, or for the children's school lunches. Chop one-half cupful of walnut meats, and mix with one cupful of finely shaved maple sugar; this will be more satisfactory if put through the meat chopper. Sift one quart of flour with four teaspoonfuls of baking-powder and a little salt three times, then add two tablespoonfuls of softened butter or lard, and sufficient sweet milk to make a soft dough. Turn out half the dough on a floured board; knead lightly and quickly; roll out in a thin sheet and cut with a small biscuit-cutter; brush over the top of each with a little milk or white of egg, and spread with a layer of the maple mixture. Roll out the remaining dough and cut out in the same manner; place one on each of the first, and stand the biscuit in a baking-pan, far enough apart that they do not touch during the baking. Brush the tops with white of egg, and bake twenty minutes in a quick oven. A small lump of maple sugar, or a perfect half of a nut meat may be added to the top of each if one likes.

Maple sugar rolls are tempting, particularly when served for breakfast with coffee. Make a biscuit dough in the same way as given above, and just before rolling out stir in one cupful of finely chopped maple sugar; roll out in a sheet about half an inch thick; cut out with the biscuit cutter and brush each with white of egg; make a crease through the center with the back of a knife, and fold one-half over the other. Brush the tops with the remaining white of egg, and bake in a quick oven. Serve warm or cold.

Baked apples are delicious served with currant jelly and maple sauce. Wipe and remove the cores from medium-sized tart apples, and fill the cavities with a spoonful of currant jelly. Put into a porcelain baking-dish, with one cupful of boiling water and bake in a quick oven, basting every few minutes. When perfectly tender remove from the oven, peel carefully and place on a serving dish. In the meantime, put one cupful of maple syrup and one-half cup of boiling water in a double boiler, and heat until boiling hot. Rub one tablespoonful of cornstarch with two of softened butter, and add to the syrup. Cook five minutes, cool, and pour over and around the apples.

Maple junket is a dainty wholesome dessert. Slightly sweeten and warm one quart of milk, using either maple sugar or syrup. Dissolve one junket tablet in one tablespoonful of cold water, then add to the warm milk. Pour into glass serving-dishes, and when firm, set in the ice-box and chill. Chop one-half cup of maple sugar and one-half cup of nut meats together, and when ready to serve the junket, spread a layer on top of each dish.

Most children love maple sandwiches, particularly if they are made in this way. Put one cupful of shaved maple sugar through the meat-chopper with one cupful of peanuts, then mix to a paste with thick sweet cream, and spread on slices of graham or brown bread.

Did you ever make a chocolate cake with maple sugar? If not, try this recipe: Put one-fourth cake of chocolate, the beaten yolk of one egg, one-half cupful of maple sugar, and one-half cup of milk into the double boiler, and cook until smooth, then cool. Cream one cup of crushed and sifted maple sugar with one-half cup of butter, then add two well beaten eggs, one-half cup of milk, with one teaspoonful of soda dissolved in it, one teaspoonful of vanilla, two cup-

(*Continued on page 89.*)

Transformation Garnitures.

The woman who always aspires to appear well-dressed, cannot have too many accessories, as the latter will conceal the deficiencies of an old frock and give it the stamp of a smart up-to-date garment. Personally I long ago decided that the

1. Chemisette guimpe of net, edged with Irish lace at the top. The lace collar is fastened to the waist.

best-dressed woman is not the one who possesses many gowns, but rather she who has one gown or so with numerous accessories to change its appearance for different occasions. This secret I learned from the most stylish woman I have ever known.

Although an American, "Mademoiselle" has lived in Paris for many years, making fashion drawings for one of New York's big papers. On her first trip home we all thought her recklessly extravagant, for apparently she wore a different frock at every appearance. But she really did nothing of the sort, for as a matter of fact, she had but one good black tailored broadcloth suit, with a smart cut-away coat, and a dinner gown or two, as I discovered when I was given a peep at her steamer trunk. To my amazement I saw nothing but accessories, pile upon pile, all of which I learned in due time had been fashioned by the deft fingers of Mademoiselle herself from bits of left-over laces and lingerie. It was a revelation to us really extravagant ones.

There were transformation tunics or over-dresses—a black silk one cut long on one side and short on the other, with two full frilly ruffles, one on the edge, and one set above it on the tunic itself, which had a crisp black silk blouse finished with a wide green silk sash and a butterfly bow in the back, with cuffs of the green also; there was a black and mauve plaid transformation, a separate affair also, cut on the bias straight all round the bottom, box plaited and with an upstanding frill; then there was the smartest straight gathered tunic of black satin, the bottom wired in order to give it a little flare, and edged with skunk fur banding. With the latter was worn the most fascinating little black satin bolero imaginable, edged with skunk banding also. It was sleeveless and was worn over a white net guimpe, edged with frilly net ruffles. Last, but not least among the tunics, there was a black lace one made from an old-fashioned Spanish scarf bequeathed to her by Great-aunt Mehitabel. It was not even necessary to cut the lace, for it was cleverly draped, so it hung straight in the front and back, with long points at the sides. A touch of black Spanish lace on a low cut crepe de chine blouse, gave her a handsome dinner gown.

While on the subject of tunics and overdress arrangements, I wish to emphasize the value of this particular accessory as an aid to bringing last year's gown up-to-date. While it may not be becoming to the very stout woman, the slender one will welcome it as a most convenient and attractive accessory. Pliable wire and a featherbone cord that comes especially for the purpose, and which are sold at the notion counters in all department stores, will be found useful in giving the not too extreme lampshade flare now considered fashionable.

An old silk gown that has seen its best days and which has too little good material left to remodel it, may be utilized for such a transformation. Patterns for the latter may be ordered through THE RURAL NEW-YORKER'S regular pattern service. No. 8087, shown on page 18, is particularly well adapted for the purpose, as this one pattern will serve for numerous variations of the tunic idea.

Even the most conservative woman must admit that she is delighted over the fashion which calls for an unconfined neck dressing in lieu of the former high-necked style. No one stops to consider whether the neck itself is thin or plump nowadays, as there is really but one style of neck garniture—the low with its many changes. The nearest approach to the high style is the net guimpe with its high collar, which is preferred by many women for street wear; for even though the net is transparent, there is a feeling that the neck is not so much exposed to the gaze of the public. This accessory must be as faultlessly fitted as a blouse, however, and have a high, snug collar edged with narrow Irish beading to give the correct finish. Any woman can easily make these guimpes (of which there should be a goodly supply for the sake of an immaculate appearance) cutting over an ordinary blouse pattern, hemming at the waistline and running elastic through the hem. The superiority of the elastic over the old-fashioned method, is apparent. The guimpe is held in place with never a wrinkle across the chest, as all good guimpes should be, and yet without the danger of pulling it out at the waist-line, the first time it is worn. Some women who do not care for the high-necked guimpe under any circumstances, omit the collar, and after the guimpe is fitted add as a finishing touch a smart upstanding frill of plaited net. When worn under the blouse only the front of the guimpe is permitted to show with its frill falling gracefully over the edge of the waist. In other words, it was formerly the custom to trim the blouse with net yokes, cuffs, etcetera. When new and fresh, the waist was certainly a joy, but the moment it began to soil and look dingy, the wearer appeared dowdy. To attempt to cleanse the lace usually played havoc with it unless it was entirely removed. This meant "making over." That is one reason why there is such a vogue for the separate neck garniture.

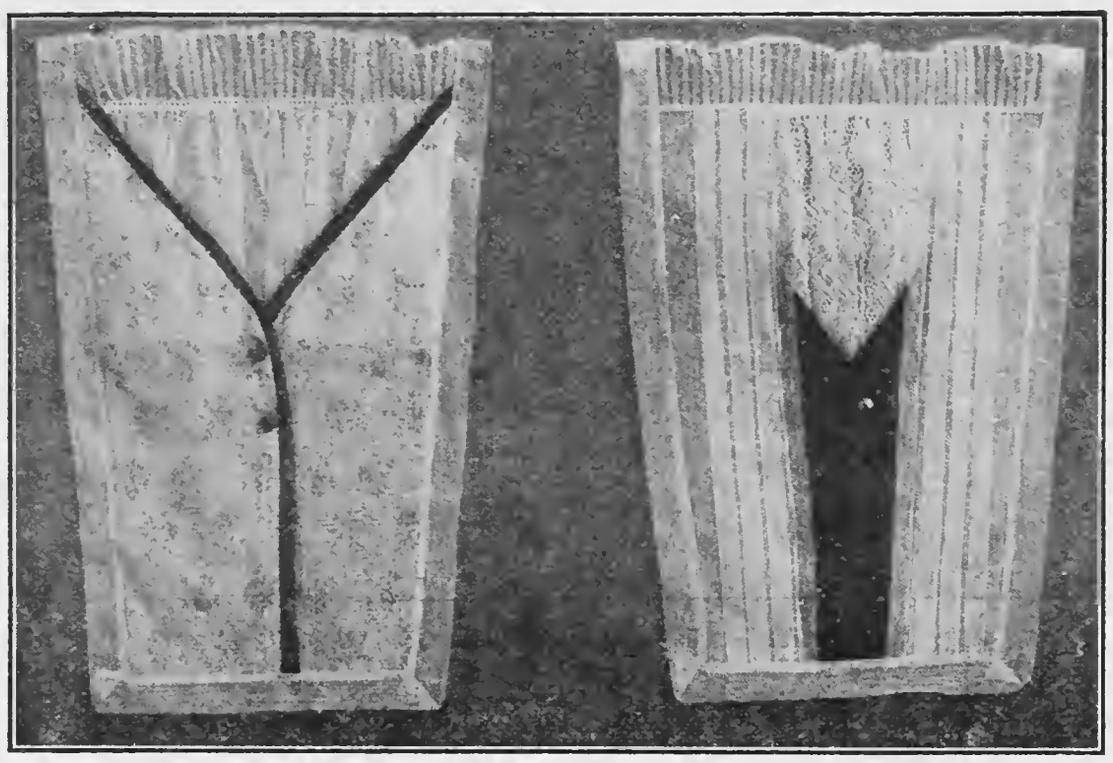
There is romance and history in the present-day accessory, particularly neck garniture. We may select neck fixings such as were worn by one or several of our favorite heroines in historical fiction, and have the serene satisfaction of being in the mode as well as reviving the memory of such personages as Marie Antoinette, Mary Stuart, Catherine de Medici, Charlotte Corday, Queen Elizabeth and others of the gallery of women of a past age. The rage for the dainty ruff, upstanding frills, fichus and surplices is due, no doubt, to the vogue of the semi-diaphanous blouse, and the fashion of the decolleté neck for day as well as evening wear.

The fashionable need is forecast in the sleeveless bolero mentioned in the foregoing, in the Eton jacket, the sleeve-finished waistcoat guimpes, and the Tuxedo outline of the smart frocks that require the soft "filling" offered by the chemisette-fichus such as are pictured. Many of the very newest gowns are so made that the wide deep front is left without any trimming in order to give an opportunity for these transformation vestees and chemisette-fichus, according to the personal taste and inclination of the wearer.

The lightly wired upstanding frill of lace, a la Medici, is the newest type of neck garniture. The back of the collar is wired, high and straight around, gradually sloping down toward the front where the throat is left bare above the crossed folds of fine net. A black velvet band is worn around the neck with this style of neck garniture, by the woman who would appear individual. Indeed, there is a quaint reminiscence of the old "Books of Beauty" and "Keepsakes," in the new neckbands of narrow velvet, with their prim back bow fastening, or with their side closing under clusters of silken or satin ribbon rosebud or forget-me-nots. There is something about them even more essentially feminine than can be claimed for any circlet of jewels. Little jewelled slides and buckles such as our grandmas used, may be utilized, but they are more appropriate for older women than the flower closing. One caution should be observed. A little scrap of the velvet should be tested and the wearer assured that it will not soil or "crock" the fair skin against which it clings. This is especially necessary where one perspires easily, as the moisture may cause a dark line, staining the neck under the accessory, and leaving an unsightly rim.

A simple chemisette fichu is pictured in No. 1. It is made of fine net, gathered across the top and bottom—the top finished with Irish lace. A frill of plaited lace is secured loosely to the blouse, so it may be removed easily for cleansing or renewing. Two yards of lace for plaiting, or one yard of plaited lace are required for this neck garniture. For the chemisette, one half yard of net will be sufficient for three or four guimpes. Another form of chemisette guimpe is pictured in No. 2. These may appear flat and uninteresting off the figure, but they are smart and modish when worn as on the figure in No. 1. One of these is made of flowered net—the latter white with a rosebud pattern, and edged with old rose satin binding and buttons. This gives the waistcoat effect, over the chemisette of plain white net, finished with a net ruffle inset with net beading. The other chemisette, with shirt-bosom plaiting has a black satin vest effect. A single baroque pearl button simulates a closing. The chemisette is of lace fulled in place. The net frill may be worn very high, if desired. These chemisettes may be varied to suit individual taste and requirements—incidentally to conform to the contents of the ever-resourceful scrap bag.

What "rag-bag" cannot yield enough left-over material to at least furnish a portion of the net, lace or satin bindings for such accessories? Even the smart little bow tie shown at the bottom of illustration No. 3 is made from left over bits. A coarse mesh white linen, a knot of blue velvet, and a little handiwork made the tie a beautiful possession. The tab ends were pointed and buttonholed with blue embroidery silk. The rose is pink a la Pompadour, which is nothing but simple stitchery, commencing in the center and working toward you, with three shades of mercerized cotton. The leaves and buds are in lazy-daisy stitch. Aside from the hour's time to embroider and buttonhole stitch the ends, the tie cost nothing.



2. Chemisette vestees of net—figured and plain, with satin garniture, and upstanding lace or net ruches.

The net fichu is made of a rather open-meshed net, so the buttonholed edges would not fray out before they were worked. Only cut one scallop at a time, in order to obviate this. Work with white mercerized floss. The dots are in satin stitch—over and over, filling the small circle. The floral design is worked in satin stitch also. This fichu is seamed on the shoulder in order to make it fit—French-seamed to insure a neat finish, of course. There is a shallow sailor collar effect in the back. A single frill of bought plaited net finishes the fichu proper. A double upstanding frill high in the back and sloping toward the front finishes the throat dressing. One of the daintiest fichus imaginable may be made exactly as pictured, buttonholing with pink mercerized floss, and embroidering tiny Pompadour roses and leaves in pink and green, the same as on the tie.

Little waistcoats of brocaded silk and satin are now classed among the indispensable fixings of the up-to-date wardrobe. They are worn with little wrinkles or creases across the waist, very like the masculine garment, to accentuate the lines of the uncorseted figure.

LOUISE E. DEW.

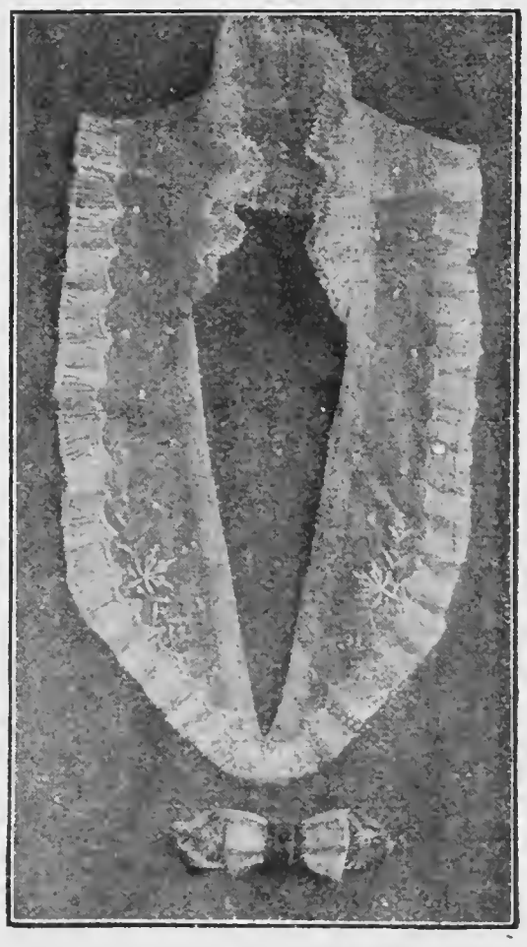
A Song in Exile.

O they that leave their father's land, new friends and homes to find them,
They turn their faces to the sea, but leave their hearts behind them.
Their hearts lie buried in the fields, along the blackthorn hedges,
Beside the brooks where rushes cool crowd close about the edges,
They're rooted in the holy soil, the green soil, of the sireland,
Who turn their faces to the West must leave their hearts in Ireland.

The West is wide and rich and free, a grand land—but a cold land.
I hunger for the warmth of love that's found but in the old land,
I hunger for the linnet's song across the sunlit spaces,
I want the sights and sounds of home, the dear familiar faces,
At twilight how the heart stirs—when the angelus is calling,
And on the misty Irish fields the silver dew is falling!

Asthore machree! The sea's between, and foreign skies are o'er me,
But in the night I feel my heart throb in the land that bore me,
I feel it beating strong beneath the shamrocks and the mosses,
It clings about my people's bones beneath the Irish crosses,
It calls and calls across the sea, to come home to the sireland,
The haunted hills, the singing winds, the smiling skies of Ireland.
—Marie Conway Oemler, in the Outlook.

LET us with caution indulge in the supposition that morality can be maintained without religion * * * Reason and



3. Net fichu edged with net frill, and embroidered with white or colored mercerized floss. Bow tie at the bottom made of a scrap of linen, embroidered with pink Pompadour roses. Knot of blue velvet.

experience doth forbid us to expect that National morality can prevail in exclusion of religious principles.—Washington's Farewell Address.

MAPLE SUGAR A DESIRABLE SWEET.

(*Continued from page 87.*)

fuls of sifted flour, and the chocolate mixture, and bake in layers. For the filling and top, cook two cups of maple syrup with a speck of cream of tartar, without stirring, until it spins a thread, then cool and pour slowing on the beaten whites of two eggs, and beat until stiff enough to spread.

For a delicious maple ice-cream, heat in the double boiler one quart of rich sweet milk until boiling hot. Mix one-half cup of maple sugar with two tablespoonfuls of cornstarch, a speck of salt, and one-half cup of milk, then add gradually to the hot milk, and cook ten minutes, stirring often. Beat three eggs until light, and pour the hot mixture over them, return to the fire and cook until the eggs are set; remove from the fire and cool. When cold add one pint of cream whipped stiff, and one cup of thick maple syrup. Turn into a freezer and freeze.

ROSAMOND LAMPMAN.

PIN MONEY FROM FLOWERS.

It is sometimes a bit of a problem for the woman and the children on the small farm to earn a little extra spending money. Of course there is the old standby, the chickens, but sometimes these do not do their full duty, or there is need for more money than the chickens yield. During one of the "hard times" periods of quite a number of years back, while I was a youngster, my mother and I went into partnership to earn a little extra money. I wanted to visit a friend in Madison, 40 miles away, but lacked the carfare, and mother always could find use for an extra dollar or so. A lady visitor suggested that we might be able to sell flowers at Devil's Lake, a Summer resort four miles away. We had quantities of pansies, sweet peas and Asters, as well as other flowers, so we decided to try the plan. Mother picked and bunched the flowers the afternoon before, and I would take them over and sell them to the guests at the hotel and those living in the cottages around the lake. Sweet peas sold the best, and 20 or 25 stems were tied in a bunch. Six or seven Asters made a nice-sized bunch and were popular also. Two or three leaves of rose-scented geraniums tied in with a dozen or 15 pansies sold quite readily. While we had other kinds of flowers these three sold the best. I received five cents each for the little bouquets. The Summer resort season is short, and we started rather late, but the first year we sold $12 worth. I made two trips a week and sold from 50 cents to $1.25 each trip. This does not seem so much now, but it was a good deal then, when money was scarce. I had enough to make my visit and some left over towards buying a new suit of clothes out of my half of the $12. The next two years we sold nearly $20 each year. After that I had grown large enough so that my time was worth more to work at home. I was always rather timid about offering my flowers, and I have no doubt I could have sold more if I had been more forward.

Of course there is not always a Summer resort available, but usually some market can be found if searched for. If near a fair-sized town, arrangements can probably be made to have them sold at a grocery store, allowing the grocer a commission of a cent a bunch for those that he sells. It may take two or three years before people buy very readily, but it will be surprising how much may be sold when people know fresh flowers are always to be had during the Summer months. The grocer may feel that the profits are not large enough to be worth bothering with, but he can be reminded that a chance customer, attracted by the flowers, may become a permanent buyer of groceries later. This argument, together with the fact that there is no risk of loss, will usually attract favorable attention. A 10-cent store or a popular drygoods store might also be good places to try. In a small town or village where there is no regular florist some business may be done furnishing flowers for funerals or other occasions if people are informed that flowers are for sale. In the smaller places people are so used to having flowers given to them it may be a little slow to get them into the notion of paying out good money for flowers, but if one has good taste in arranging the money will come in time.

For the Summer resort trade probably pansies, Asters and sweet peas, with possibly daisies and bachelor's buttons are enough to grow. For very early Spring flowers pansy seed should be sown in August and the young plants wintered over with a little protection of coarse hay. Quite early flowers may be had from young pansy plants that have been started in the house or hotbed the latter part of the Winter. For Summer and Fall flowers the best results will be had from seed sown outdoors as soon as the ground can be worked in the Spring. Pansies bloom best during the cooler weather of Spring and Fall.

For very early flowers, Asters should be sown in hotbeds, but for a general crop and for later flowers the seed can be sown during April and transplanted to their regular quarters as soon as large enough. The Queen of the Market is a very satisfactory variety of Aster for early cut flowers. The Giant Comet and Ostrich Feather varieties are later flowering and many like the long-petalled feather flowers of this class. These, as well as the Queen of the Market variety, may be had in a variety of colors. The Crego Pink is another very beautiful kind of the feathery class. The Branching varieties of Asters are very useful for cutting, as the stems are long and the flowers large, with beautiful incurving petals.

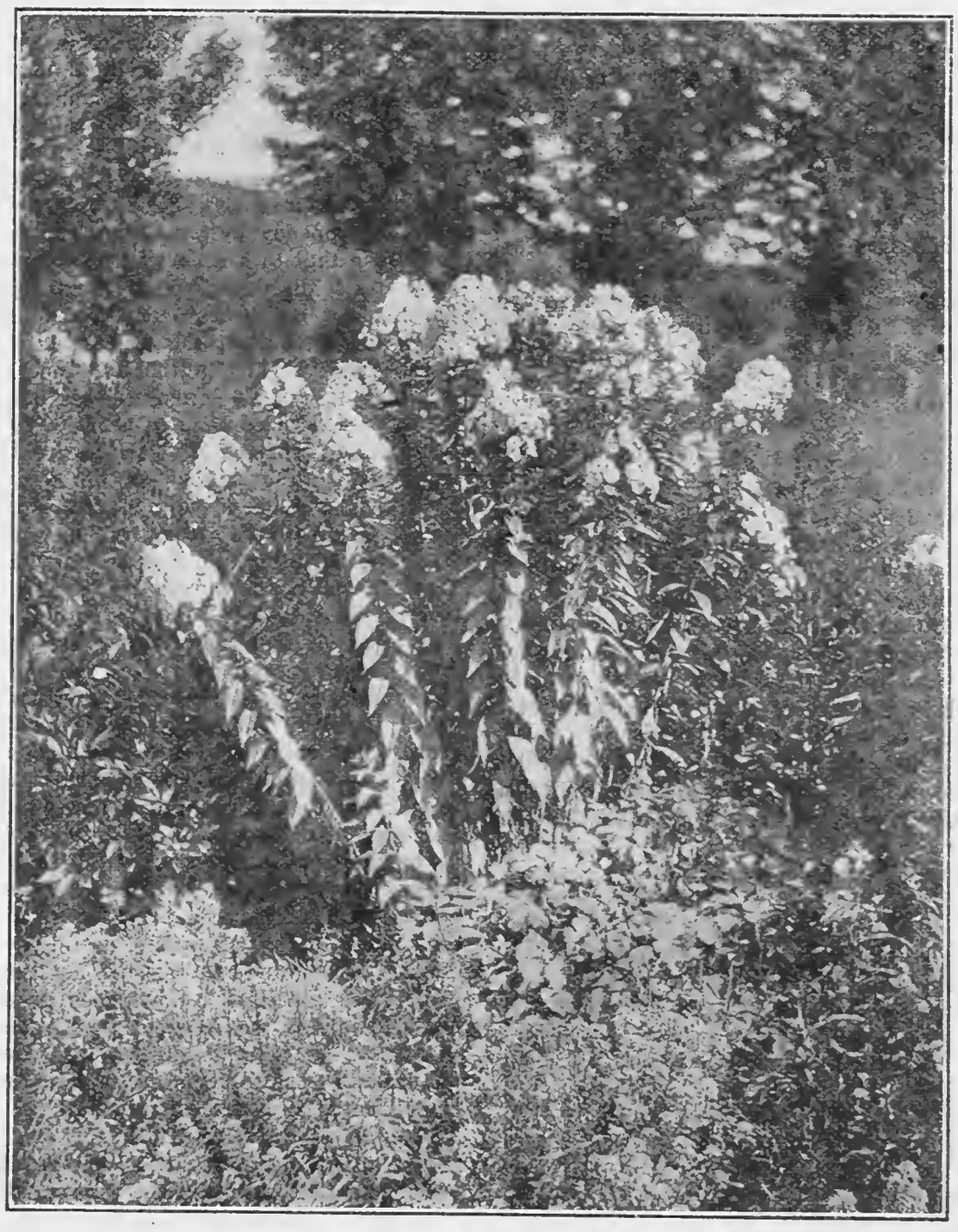
Sweet peas should be sown early to succeed best. More of the pink and white colors will be needed than any others. When bunching either sweet peas or Asters, a little taste must be used in combining the colors if bunches of mixed colors are made up. The pinks and purples mixed together are especially displeasing.

If the flowers are to be sold through grocery stores or direct from the garden a succession of flowers must be planned for from Spring to Fall. The heaviest sales will be made during Spring and early Summer and in the Fall. For early Spring the tulips, Narcissus, and Iris will give a variety and later will follow peonies, daisies, Iceland poppies, Canterbury bells, oriental poppies, roses, bachelor's buttons, larkspurs, Gaillardias, Coreopsis, Pyrethrums, Golden Glow and other varieties. Of course the bulbs will have to be bought, and also the roots for a start of Iris and peonies, and the roses, but almost all the others may be raised from seed. It is not necessary to have all of these the first year, but the collection may be added to from year to year as the demand for cut flowers grows.

The county fairs often offer a good opportunity to make money from flowers. At many of the fairs there is not much competition in the flower department, and a showing of well-grown flowers is almost sure to take several premiums. If possible, flowers should be cut the afternoon or evening before being used or sold and the stems placed well down into water and set overnight in the cellar or other cool place. During the night the flower stems fill up with water and they will keep much better after being sold than if put into a warm room as soon as picked.

W. A. TOOLE.

Wisconsin.



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IN BOOKLAND

I. Freedom, Dwell With Knowledge; I Abide With Men by Culture Trained and Fortified.

The best book-readers live in the country. During the long, quiet Winter evenings there is time to read a book without interruptions, and the reader may get the full spirit of the author. The really strong books are those which induce thought. The great author leaves the best of his message unprinted. It lies between the lines, and the reader must think it out in his own way. There are too many "skimmers" who dash through book after book for recreation, or merely to occupy the time. A woman once told us that she had nothing left to read—having run through every book in the neighborhood. It was found that she could give only the merest details regarding some of the strongest books she had "read." When she came to something which required thought she skipped it in order to "go on with the story." Country people as a rule have access to fewer books than town people can reach. That is why the good book in the country is studied and pondered over, while amid the distractions of the town it would be merely skimmed through.

For true thinking is hard work. It must be hard for through it the man must run the gauntlet to knowledge. No nation ever fought its way to permanent freedom with the sword alone. Men can be free only through knowledge. That is why we would discourage the reading of what we call fool or foul books. The fool book may tickle or please the mind for a moment, but it does not make the reader *think*—which is the true end of reading. The continued reading of fool and foul books leaves the mind incapable of clear thought or reasoning. We have a friend who considers Tolstoi's "Ivan The Fool" the most thoughtful satire on modern government that ever was written. Yet we gave that to another friend and he pronounced it the most stupid, childish thing he ever tried to read. "Nothing in it." One man got the vision and meaning which the author put between the lines. The other could not get back of the printed word. So when we ask our readers to name their useful books we mean the volumes which have given them a mental struggle and taken them away from themselves. To put it another way, a book should be a tool and not a plaything. There are all sorts of tools. Some of us have come to the point (or remained there) where we can only think of a tool as something we can take in the hand and use for manual labor. Does not everyone know that the mind directs the hand and the tool which it may handle? A mental tool therefore may mean better work and more work if it will make the mind broader and quicker. The value of a book all comes back to its ability to make the reader *think*. It may give him *facts*, but unless it can in some way make him think and reason from those facts they are dead. We know a practical man who says he reads the old "Confessions of St. Augustine" over every year! Here is a mental tool which 1,500 years cannot dull or discard. Yet our friend says he is a better farmer and a better citizen from the undying thought which this old book gives him. Friends tell him that a modern discussion, perhaps like "The Inside of the Cup," would be more "up-to-date," but he sticks to the old "Confessions."

A book which has made me think hard is "Newest England," by H. D. Lloyd. This is a new series of essays on the social and political conditions in Australia and New Zealand. It is evidently written by a man who started out to prove his theories if possible, yet the statements have never been controverted. Without question the individual which we call "the common man" has a fairer chance in New Zealand than in this country. It is easier to acquire land and work it, and harder to monopolize on a special privilege. I can easily see that our conditions are vastly different and that we could not put into practice some of the things which have become fixed in New Zealand. Yet I am sure that the present upset and turmoil in politics with us is caused by the plain instinct of the common people shaking itself to demand what "Newest England" has long enjoyed. If 50,000 farmers in New York State could read this book slowly until they understood every word of it, Albany would be shaken up from the bottom. J. H. J.

There are as many ways to tell about books as to introduce people; the most frequent is the short notice, like the hasty introduction of a waiting line at a public reception. Then there is the longer and more pompous "review,"

SPRING WILL SOON BE HERE.

which is the "We have with us this evening" of the toastmaster introducing the prominent citizen. But once in a while some friend of yours will say that he has a friend whom he would like to have you know, and he wants to tell you about him first, and that is the sort of talk about friends—or books—that is worth while.

The young people from nine to ninety among THE R. N.-Y. readers will be glad to know Dan and Una and Puck. The children didn't mean to call Puck out of his Hill, but he came, Mr. Kipling tells

FUN AT RECESS.

us, in "Puck of Pook's Hill," and "Rewards and Fairies," and took away their Doubt and Fear and gave them "seizen" of Old England. And then—out on the rolling Downs deep in the oak woods, and even in their own meadow there came to them the shadows of those who had lived. Of course the tales mean more to English children, but we are so near akin that if we can sing:

"Land of our Birth, our faith, our pride,
For whose dear sake our fathers died;
O Motherland, we pledge to thee,
Head, heart and hand through the years to be!"

we will be glad to know Dan and Una and the friends they met. And some older folks, city-bound for years, will think of the home town as it used to be on Summer evenings and find themselves softly saying:

"Oh hop vine yellow and wood smoke blue!
I reckon you'll keep me middling true."

F. D. C.

The home feeling carried out in an orchard—an immense orchard in Indiana, planted with apple trees, with two rows of peach trees around the sides, which in bloom make it look like a great soft, pinkish, white blanket, with a deep pink border, spread lightly on the green earth—would alone promise a book of more than ordinary interest, and offer an assurance that the man who would plan such an orchard, spending hours looking over that particular stretch of land, was more than an ordinary character. It would, too, assure you that his family of 11 children would not move and think in ordinary channels. In "Laddie," by Gene Stratton Porter, we have such a family. The story is told by Little Sister, and she relates the everyday home happenings and it is full of fairylike fancies and stirring interest, including two weddings in the same church at the same time, not to mention those which go before. Little Sister's unfailing love for Laddie and her belief in the fairies, helps in the happy denouement of his courtship of the "Princess," and the reconciliation of the respective fathers. The bright childish philosophy which Little Sister brings to bear on these homely everyday occurrences, with the apropos quotations from McGuffey's Sixth Reader, gives you the feeling that you are living the life with them—life with a clean, wholesome, interesting family. Their joys and sorrows are yours and the excitement rippling through will cause you to close the book longing for more. Their love for outdoors is so invigorating you wish to take your hat and go out too.

M. G. K.

The Left Hand.

On page 1350, in speaking of left-handed children, the Hope Farm man thinks this is caused by differences in the lobes of the brain. We know to a certainty that the muscles of the right side of the body are controlled by brain elements in the left side of the cranium, while the muscles of the left side of the body are controlled by brain elements in the right side of the cranium. So accurately have post mortems and surgical operations following attacks of paralysis disclosed the seat of the trouble causing the paralysis, that by studying the organs paralyzed we can tell with almost absolute certainty just where in the brain the blood clot may be found in any given case. If a man gets a blow directly on the top of the head of sufficient force, his legs will be for the time being at least paralyzed, so that if a man is stricken with paralysis of the legs we know that the blood clot will be found in the top region of the brain. By the same tests we know if an arm is paralyzed the blood clot lies farther down toward the region of the ear. Still farther down we find the areas that successively control the mouth, the lips, throat and tongue. If the paralysis is on the right side of the body we know that the blood clot is in the left brain, whatever the region may be. Conversely if the paralysis on the left side of the body the blood clot will be found in right brain.

From the foregoing facts it seems that the motor forces of the body are originated in either or both sides of the brain. But not so the intellectual faculties. Just below the region of the brain that controls the tongue we find what is known as Broca's convolution, which is not much larger than a pea. It has been demonstrated that this little body is the sole center of articulate speech. It seems to control directly the muscles of the tongue, mouth, throat and lips. Hence an injury to that little organ renders speech more or less impossible. Now there is a close relation existing between speech and gesture, and as that part of the brain which controls the arms and hands lies next to the brain that controls speech, there seems to be good reason for the use of gesture as an aid to speech. It is true at least that an effective use of gesture in a set speech helps greatly to impress an audience

Now note this fact, that in the right-handed the speech center is always in the left brain, and not in both, while in the left-handed it is always in the right brain. It is true there is a Broca's convolution in both the right and left brains, but only one is used. However, if the convolution on one side is damaged in youth it is possible for the individual slowly to learn to talk. But if the damage occurs in middle life or after that, speech is rarely regained, even though the individual seemingly recovers in other respects.

Now what has right-handedness to do with this nobody knows. I am inclined to believe that in some way it is a hereditary trait that most people are right-handed, but not because one lobe of the brain is larger than the other. I have never read in any authority that the left lobe of Broca's convolution is larger in the right-handed than in the left. Dr. W. Hanna Thomson of New York City, an eminent authority, has written a small book which he has very appropriately called "Brain and Personality" in which this whole thing is more completely thrashed out than in any other book, I believe, in existence. He sums up his discussion of right-handedness and left-handedness by saying, "as the right hand is the oftenest used for every purpose, it is of the two hands oftenest used for gesture, which means of course for language. As soon as other parts were sought for to coöperate with gesture in language, the appeal would necessarily be to the neighboring centers in the left brain. It would not be long therefore, before the habit became settled to use only parts in the left brain for this specialized work, until finally the habit became fixed for life." Why some people are left-handed we do not know. This discussion on right-handedness and left-handedness comes down to us from ancient times, and is ever renewed."

This book of Dr. Thomson's is, I think, an epoch-making book in the discussion of the brain and the person. He aims to show that there is an indwelling personality within every human body which uses the brain as an instrument. I do not see with his array of facts how his conclusions can be gainsaid. At any rate it is a book to be reckoned with, and should be read by every thinker, and it will make him realize that he "has another think coming." A. W. FOREMAN.

Illinois.

The Wail of the Well.

Johnny Jones has lost a leg,
Fanny's deaf and dumb,
Marie has epileptic fits,
Tom's eyes are on the bum.
Sadie stutters when she talks,
Mabel has T. B.,
Morris is a splendid case of imbecility.
Billy Brown's a truant,
And Harold is a thief,
Teddy's parents gave him dope
And so he came to grief.
Gwendolin's a millionaire,
Jerald is a fool,
So every one of these darned kids
Goes to a special school.
They've specially nice teachers,
And special things to wear,
And special time to play in,
And a special kind of air;
They've special lunches, right in school,
While I—it makes me wild!
I haven't any specialties,
I'm just a normal child.

—May Ayres, in The American School Board Journal.

Live Stock and Dairy

The Scrub Cow Problem.

I have read with interest the views expressed by your correspondents in relation to improvement of our dairy animals, but judged from the standpoint of my own limited experience none of these writers have fairly struck the keynote of success.

First let us note briefly existing conditions. A vast majority of our dairy cattle are scrubs. My definition of a scrub is an inferior dairy animal. If this definition is correct, a majority of our registered cattle are scrubs, for a majority of these cattle are certainly inferior dairy animals. I believe this lamentable fact is the result of bad treatment of these cattle; that they are living illustrations of how quickly men with no knowledge of the correct principles of breeding, feeding and care of dairy stock, can cause good dairy animals to degenerate into scrubs. Wherever a scrub herd is found, and they can be found very easily, a scrub dairyman is also usually found, for they go together as naturally as a deranged stomach and a headache.

A scrub herd cannot be improved until the dairyman is improved, and I know of no better way to do this than to excite his cupidity by convincing him of the greater profit which can be derived from good cows. If the "almighty dollar" will not cause him to sit up and take notice he is a hopeless case.

The improved dairyman can secure an improved herd in two ways. If he is wealthy he can buy one ready made, but this is expensive, for good dairy cattle do not have to go begging for a good price. If he is poor the best way is to improve his scrub herd by the use of purebred sires of the right sort. And now we come to what I regard as the most important thing in the business of cattle breeding, a thing which I have already alluded to as the keynote of success; the selection of the sire.

How shall we select this sire? Certainly not by buying a bull simply because he is a registered animal, for I have already noted the fact that most of these registered bulls which can be found so easily and bought so cheaply are scrubs, and the dairyman who places a bull of this sort at the head of his herd is doomed to failure from the start. I will give my method of selecting a bull. When I wish to buy a bull I look first of all for a cow, paradoxical as this may seem, and I look for just the sort of cow which I wish to breed from the bull which I buy, i. e., the very best cow I can find. Why? Because the dam gives her characteristics to her sons just as certainly as the sire gives his characteristics to his daughters. When I have found a cow that is individually satisfactory I examine her breeding. And here is where the value of the registered pedigree comes in, for it is a record of her ancestry. This pedigree must fairly bristle with great dairy preformances. If it lacks these I reject the cow as a "sport," an animal which, though good herself, will most likely lack prepotency, which is the power to transmit her good qualities to her offspring. If I find her pedigree crowded with great dairy animals I next examine critically what I will term the line of transmission in her pedigree. This line goes from the cow to her sire, and from this bull to his dam, and from this cow to her sire, and so on the further the better. If all the animals in this line are great dairy animals I look no further, for I have found the dam of the bull I wish to place at the head of my herd. Of course I want the sire of this bull to be good, but this is of secondary importance, for a cow bred like the dam of this bull will be so prepotent that she will have about the whole say as to what her sons shall be.

I buy the first individually good son of this cow which I find for sale. Of course I buy him as cheaply as I can, but I buy him, for he will be cheap at any price which I will have to pay.

And this leads us to consider what a dairyman can afford to pay for such a bull to grade up a herd of scrubs. Let us take a case in which this bull would be used to his full capacity. We will assume that he will be used on a herd of 50 scrub cows which average 200-pounds of butter each per year, for 10 years, and that he will sire 250 daughters which will average twice as much butter as their dams. And right here let me assure the doubting ones that there is nothing optimistic or visionary in this assumption, for such a bull can be depended upon to double the product of any scrub herd just as certainly as a good farmer can be depended upon to double the product from impoverished soil by a good system of fertilizing and culture. With butter at 35 cents per pound we will find the problem of this bull's actual value solved in this way: 250 daughters x 2,000 pounds butter x 35 cents per pound equals $175,000. It is impossible to say what such a bull can be bought for. One might be found in the hands of a small breeder which could be bought for $40 or $50. In the hands of a noted breeder he would probably be held at $1,000 or more. I have been lucky in finding two such bulls which cost me about $100 each.

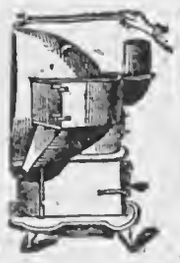
The question which every dairyman must answer for himself is, can anyone afford to do business with a scrub herd when bulls of this sort can be found at any price within the bounds of reason.

New York. J. W. SHURTER.

GUERNSEY CATTLE NOTES.—At the recent National Dairy Show eight cows were selected to found demonstration herd to illustrate the correct principles of following and handling a dairy herd. Each cow was charged with the cost of food and credited with the amount of butterfat produced. The cows varied, from showing a loss of 75 cents during the week up to showing a profit of $4.14 for the same period. The cow showing the greatest profit was a grade Guernsey. She showed a profit of $4.14 for the week, or $1.02 more than any other cow in the herd. She also showed a favorable profit for the amount which was expended in food. She returned $2.77, or 53 cents more than any other cow in the herd. There have been many instances in the past which show the great value of the Guernsey bull in the improvement of the scrub cow, and the above is a most emphatic one. Aside from the fact of the return of a profit, the natural color and fine flavor so characteristic of the Guernsey product are also prominent in cows resulting from this line of breeding.

RIVAL BREEDS.—I heard a story the other day which I never saw in print, and as it is rather better than anything I have ever read I thought you might like to use it. Two prominent breeders were extolling the merit of their pet breed of cattle when they were approached by a city cousin, who said to them: "All cows are alike to me. What's the difference between a Jersey and a Holstein?" The Jersey man replied: "You take a silver dollar and put it in the bottom of a milk pail, then after you have milked the cow and can see the dollar through the full pail of milk, you will know it is a Holstein you have milked." The Holstein man said: "Take that dollar and put it in the bottom of another pail and after milking another cow, you find just enough milk in the pail to cover the dollar you will know then, you have milked a Jersey."

Rhode Island. G. S. B.



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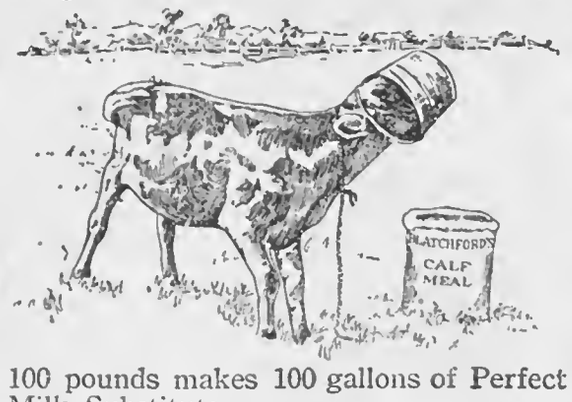

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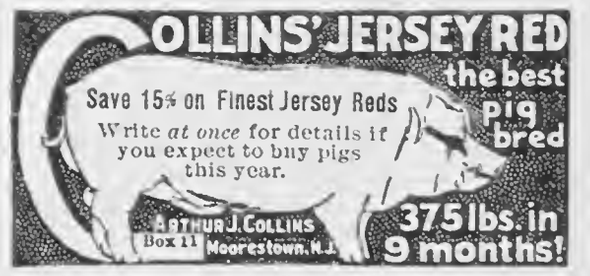

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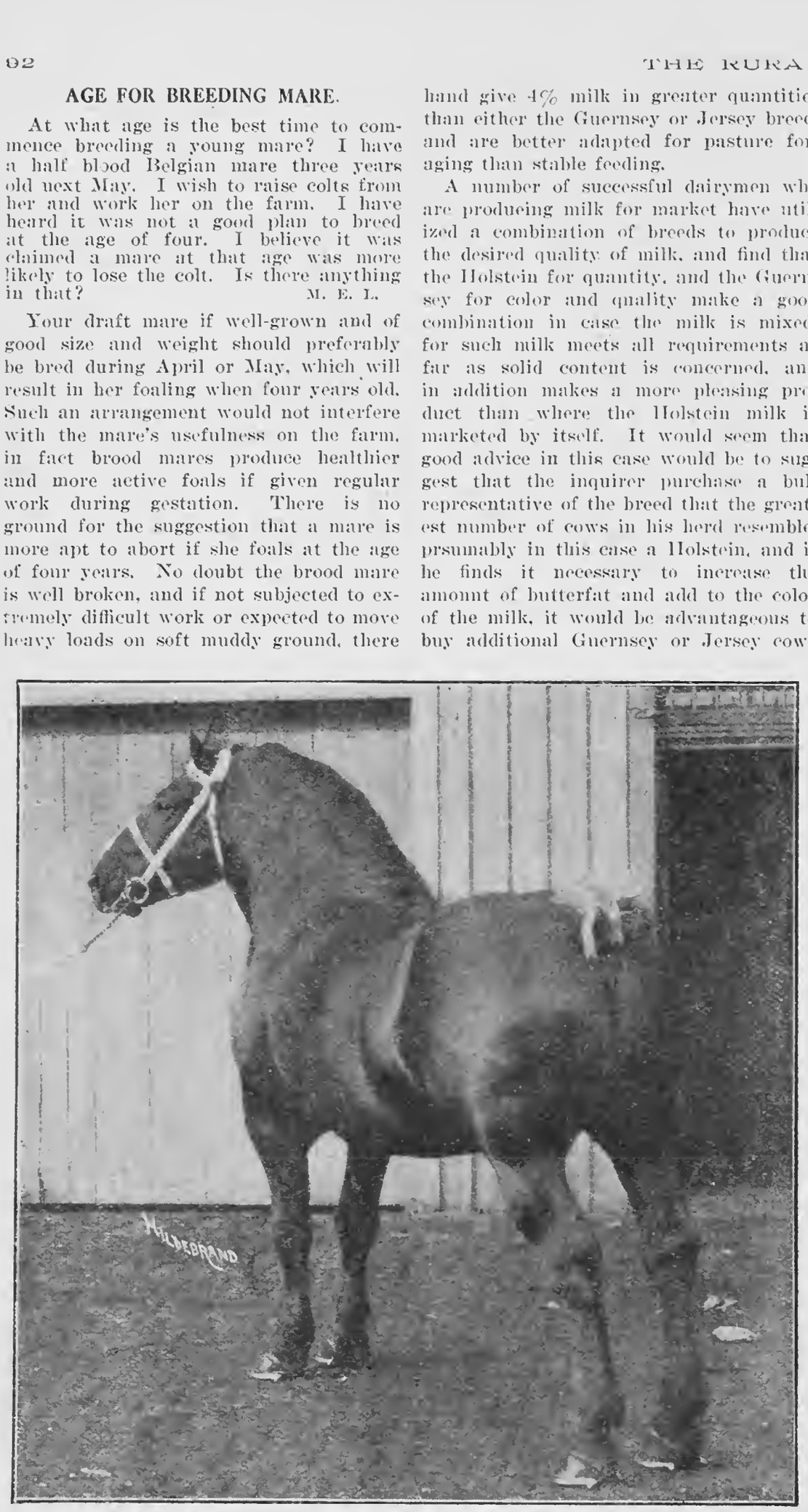
AGE FOR BREEDING MARE.

At what age is the best time to commence breeding a young mare? I have a half blood Belgian mare three years old next May. I wish to raise colts from her and work her on the farm. I have heard it was not a good plan to breed at the age of four. I believe it was claimed a mare at that age was more likely to lose the colt. Is there anything in that? M. E. L.

Your draft mare if well-grown and of good size and weight should preferably be bred during April or May, which will result in her foaling when four years old. Such an arrangement would not interfere with the mare's usefulness on the farm, in fact brood mares produce healthier and more active foals if given regular work during gestation. There is no ground for the suggestion that a mare is more apt to abort if she foals at the age of four years. No doubt the brood mare is well broken, and if not subjected to extremely difficult work or expected to move heavy loads on soft muddy ground, there



IMPORTED PERCHERON STALLION IDLEFONSE.

is no reason why she should not produce a strong, vigorous colt. In some instances, where a mare is heavy and well grown for her age, some breeders mate her so that she will produce a foal during the Fall when she is three years of age past, but it is much better under average conditions to grow the females well, and let them foal at the age of four years. F. C. MINKLER.

BREED FOR RETAIL MILK.

I am retailing milk, and have a good grade of milk with a good fat per cent. My cows are all good grade cows, but of different breeds. I have Holstein, Ayrshire, Guernsey and one Swiss cow, and I want to work up to purebreds. I am undecided as to which breed to give preference in purchasing a registered bull. I do not favor any one breed. I have seen big records for Holstein cows, bigger than any other breeds, but would the consumer like this milk as well as the Ayrshire milk? I keep my cows in barn Summer and Winter. Holstein being bigger cows, would they make as much profit deducting feed as the Ayrshire? Will you advise as to Holstein, Ayrshire and Guernsey, which to your opinion would be most economical and most satisfactory? P. J. C.

Danielson, Conn.

The important unit in milk production is the persistently high producing individual cow. We find such representatives in all breeds, and it is entirely a matter of selecting the individuals rather than relying on a breed's reputation to supply animals of the character desired. However, certain breeds have been developed for definite purposes, and it is conceded as far as quantity of milk is concerned that the Holsteins lead; as far as color is important, the Guernseys excel; while the butterfat can be obtained from representatives of the Jersey breed with great economy. The Ayrshires on the other hand give 4% milk in greater quantities than either the Guernsey or Jersey breed, and are better adapted for pasture foraging than stable feeding.

A number of successful dairymen who are produeing milk for market have utilized a combination of breeds to produce the desired quality of milk, and find that the Holstein for quantity, and the Guernsey for color and quality make a good combination in case the milk is mixed, for such milk meets all requirements as far as solid content is concerned, and in addition makes a more pleasing product than where the Holstein milk is marketed by itself. It would seem that good advice in this case would be to suggest that the inquirer purchase a bull representative of the breed that the greatest number of cows in his herd resemble, prsumably in this case a Holstein, and if he finds it necessary to increase the amount of butterfat and add to the color of the milk, it would be advantageous to buy additional Guernsey or Jersey cows rather than attempt producing them by cross breeding. The proportion of five Holstein grades to two Guernsey grades makes a nice product. Naturally a dairyman does not care to market 5% milk when 3% milk would serve the same purpose, for certainly it costs more to produce milk of a high testing quality than milk low in butterfat. The value, therefore, of a breed is to select individuals that produce the quality of product that is desired, and generally speaking selected individuals of the Holstein and Ayrshire breed would supply the quantity, while representatives of the Guernsey or Jersey breed would supply butterfat, color or quality at the least expense.

The important item to remember is that each individual in the herd should be there for a definite purpose, and that of furnishing a reasonable amount of milk or butterfat. It is the low-yielding, low-testing individual that takes the dollar from the dairyman's pocket, while it is the average high yielding individual that persistently from year to year milks in sufficient quantities to make her profit a positive fact rather than an indefinite presumption, that leaves the dollar in his pocket. The Holstein bull might be used to freshen the Guernsey cows, but the calves should not be raised. This arrangement would mean breeding the quantity cows and buying the color specimens. Ayrshires and Jerseys might also be used for the same purpose if preference suggests this combination.

F. M. C.

"Do you think that the new motor delivery business will ever displace the postman?" asked the conversational young man, when crossing the street, of his companion. "Certain to if it ever hits him."—Boston Globe.

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Our wonderfully low prices and high quality on all sizes and generous terms of trial will astonish you. Whether your dairy is large or small, or if you have *an old separator* of any make you wish *to exchange*, do not fail to get our great offer. Our richly illustrated catalog, *sent free of charge* on request, is the most complete, elaborate and expensive book on Cream Separators issued by any concern in the world. *Western orders filled from Western points.* Write today for our catalog and *see for yourself* what a big money saving proposition we will make you. Address,
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$65 Delivered
Complete Spreader in Michigan, Ohio, Indiana, Illinois, Iowa, Minnesota, Missouri, Wisconsin, West Virginia, Kentucky, and all Eastern States. Yes—I mean just what I say, and other states at a slight advance on account of higher freight.
Reliable Detroit American
It's the best you can buy at any price—lightest draft—fewer parts—true capacity—unlimited guarantee—30 days' Free Trial.
Tongueless Disc Harrows and Cultivators
At bargain prices and easy terms—same ironclad guarantee and 30 days' trial.
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FRED C. ANDREWS, General Manager American Harrow Co.
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This Big Book Free

You Can Lift a Half Ton!
No need to call the neighbors when you want to unload a gas engine or change your heaviest wagon box.
HALL Safety Hoist
enables one man to change wagon boxes, stretch fence, and handle heavy loads easily. It elevates, lowers, locks and unlocks with one rope only. Holds load at any point. Heavier the load—tighter the grip.
No. 3—Capacity one ton, $2.75. One of a dozen sizes, 400 pounds to 4 tons.
See your hardware dealer or write today for FREE BOOK.
HALL MFG. CO.
550 Cedar St., Monticello, Iowa
The only hoist with adjustable safety lock for various sizes of rope. Positively holds load, even if rope is worn, wet or greasy.
HALL HOIST LOCK SECTIONAL VIEW
No. 3

BIG HORSES POPULAR.

At the International Live Stock Show, 1913, there was one class of Percheron stallions in which there were entered and shown 149 head. It was one of the greatest equine spectacles ever witnessed in this country. In this class a single Indiana breeder showed eight animals. There were other big classes of the heavy draft types, and some of the finest exhibits were in drivers and saddle horses. The whole seems to show that not only is there not any falling off in horse breeding and raising, but it is fairly galloping along. The exhibits this year came, in many instances, from farmers who are not breeders in a business sense, but are raising horses for their own use, with the surplus to sell. Seemingly the use of the automobile and motor truck has had but little if any effect on this branch of stock raising.

The greatest showing of Shetland ponies ever seen at an international show was made at Chicago at the show just closed. There were more Welsh ponies than formerly, and an immense interest was stirred up. Little people, almost entirely, are the cause of the great demand for this tiny stock—at least the children who have well-to-do and indulgent parents.

Idlefonse, the fine Percheron stallion shown in the picture opposite page, has had an unusual record in winning high awards. In 1911 he was third in his class at the International; in 1912 he was given second place, and in 1913 he was declared to be the finest specimen in the four-year-old class and the grand champion Percheron stallion at the show. He was imported, owned and shown by the Crouch's of Indiana. Big classes at this show was a predominating feature; in fact, they were too large for the biggest arena in Chicago to hold them.

Chicago. J. L. GRAFF.

REGISTRY QUESTIONS.

Would you call a bull calf, A. R. O. De Kol dam, and sire Korndyke Segis, grandson of King Segis, a good strain for milking qualities? I have a good dairy of grade Holstein cows and heifers, with as good a grade bull as I could buy. I am now going to buy a registered bull calf and would like to know if I bought one what would I have to do? I do not know one thing about registered stock. Would I have to join a breeders' association or something of the kind to have the papers? J. C. W.

Unionville, Pa.

The letters A. R. O. simply mean Advanced Registry Official, and are appropriately applied to dairy cows of pure breeding that have by performance met the requirements of breeders' associations that have fixed definite standards of milk or butterfat that are required of a cow to be either re-entered or placed on record that signify that they have been officially tested, and are recognized officially by the association, and their names placed on the A. R. O. lists. With certain registry associations bulls are recognized in the Advanced Registry if they have sired a stipulated number of daughters that have been entered and have met the requirements of the Advanced Registry Record Association regarding performances. Breeders often state that a bull is an A. R. O. bull, basing their statements upon the fact that the bull's dam was an A. R. O. cow. This is a false and misleading claim. Whether or not the bull referred to is an A. R. O. bull would depend upon whether he has sired daughters that are in the Advanced Registry themselves, and provided he has met the other requirements of the Holstein-Friesian Association of America. Such information could be obtained by writing to the secretary of the Holstein-Friesian Association, F. L. Houghton, Brattleboro, Vt.

It is not necessary to join any breeders' association in order to register purebred animals regularly. If a man is the owner of a large herd, and registers annually a large number of animals, it would be to his advantage to be a member of the particular breeders' association. All associations have two rates of registration, one for members and the other for non-members. If the inquirer is desirous of registering animals with the Holstein-Friesian Association he should first send to the secretary, requesting application blanks and other information giving definite instructions as to the procedure for appropriately identifying animals, and supplying the necessary information to meet the requirements of said association. F. C. M.

MATERIAL FOR BARN.

I intend to build a new barn 36x80. The intended new barn will have concrete basement, large windows on south and small ones on north, on account building the barn to the north against a bank. The upper part or second-story is intended to be only for hay; hip roof. I give list which one of my neighbors made up for me. Will you give me your advice if same is correct, or what has to be changed? Do you think the size of the roof in right proportion with the barn?

24 basement post, 10 feet long, 8x8 inch.
4 endsills, 20 feet long, 10x10 inch.
8 sidesills, 22 feet long, 10x10 inch.
4 corner posts, 15 feet long, 10x10 inch.
8 plates, 22 feet long, 8x10 inch.
8 plates, 22 feet long, 6x10 inch.
Sidepost, 10 feet long, 10x10 inch.
116 rafters, 10 feet long, 2x4 inch, bass wood.
116 rafters, 9 feet long, 2x4 inch, bass wood.
82 studdings, 14 feet long, 2x8 inch.
18 post, 14 feet long, 8x8 inch.
6 cross timber, 19 feet long, 8x8 inch.
14 sleepers, 20 feet long, 10x10 inch.
77 sleepers, 12 feet long, 2x8 inch.
8 girths, 19 feet long, 4x6 inch.
2,400 feet flooring, 1 inch thick.
3,040 feet roofing, 1 inch thick. E. J.

It would be impossible to build a barn of the size you mention from the bill of lumber submitted. To mention one or two defects in the bill, 10 and nine-foot rafters are specified for one side of a gambrel roof which is to cover a barn 36 feet wide; four such rafters, laid end to end, would span 36 feet, with one foot overhang at the eaves, only if the roof were absolutely flat. One-inch flooring is also specified, but barn floors should not be less than two inches in thickness. In a bill of lumber, sticks are not specified in the exact lengths which are to be used, but in certain standard lengths in which they must be bought, even though this involves some waste in cutting. You should make, or have made, a floor plan and sketch of the barn as you wish it built, and submit this to any competent carpenter and builder, who will then be able to make out a bill of lumber for the structure. M. B. D.

BRIGGS: "What! Are you going to Mawkser's funeral? I thought you made it a rule to associate only with superlatively happy people?" Griggs: "That's why I am going. You see, Mawkser left a lot of money to his relatives."—Life.

ONE of the numerous land agents of California was enumerating to a nurseryman the wonderful qualities of the land he was trying to sell. "On this land," he explained, "you could raise every crop you want in your business!" "Why," replied the nurseryman, "I know that place. You couldn't even raise an umbrella on that land."—Florists' Review.

For ANY Barn

A New Carrier For Both Rigid and Rod Track

JAMES 2-in-1 Carrier

Rigid and Rod Track Combined

A combination that offers all the advantages of the rigid track inside the barn—all the advantages of the rod track outside.

It enables you to use, inside the barn, the celebrated JAMES I-beam track, bent to any curve without use of heat, with JAMES simple switches and a raising and lowering carrier.

"Button-on" hangers make the I-beam track easy to erect.

Tub lowers by its own weight; is kept under perfect control by JAMES friction brake and clutch.

While filling tub carrier "stays put"—moves only when you push it, because track cannot sag.

Outside the barn you use the rod track. Stand at the door, give carrier a shove; it runs out, dumps itself at proper point, and returns automatically to the barn. *Never fails to dump.*

Cannot jump either the rigid or rod track.

We make carriers for rigid track—carriers for rod track—also this combination; all backed by the proved national success of JAMES Sanitary Cow Stalls, Stanchions, Pens, Ventilators, etc.

Get the facts before you invest a dollar in carriers.

James Manufacturing Co.
AV30 Cane St., Ft. Atkinson, Wis.
"Originators of Sanitary Barn Equipment Ideas"

James Mfg. Co., AV30 Cane St., Ft. Atkinson, Wis.
Gentlemen:—Please send me complete information regarding your new JAMES 2-in-1 Carrier, Rigid and Rod Track Combination.
I have..... horses, ... cows; .....
Please send catalog No. 12—Stalls, Stanchions, Pens ☐ Catalog No. 14—Barn Ventilators ☐
Catalog No. 13—Rigid and Rod Track Carriers ☐
Name.....
P. O.....
State.....
R. F. D. .....

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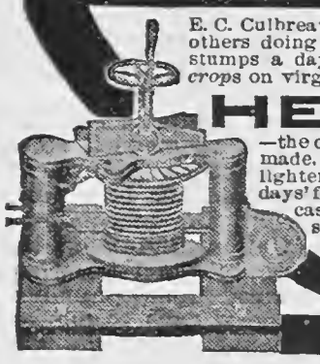
Carries off surplus water. Increases the value of your land. Acres of swampy land reclaimed and made fertile by using JACKSON'S DRAIN TILE. We are producers of Albany Blue Slip Clay, Hollow Brick and Blocks. Dealers in Sewer Pipe, Flue Lining, Fire Brick and Chimney Tops. Send for catalog and prices. John H. Jackson Tile Co., Inc., 89 Third Ave., Albany, N. Y.

Biggest Stumps Pulled For 4c Each—In 5 Minutes!



E. C. Culbreath, Johnston, S. C., does it. Thousands of others doing it. Why not you? Pull an acre of stumps a day. Double the land value—grow *big crops* on virgin soil! Get a

HERCULES

—the only all steel, triple power stump puller made. More power than a locomotive. 60% lighter, 400% stronger than cast iron puller. 30 days' free trial. 3 year guarantee to replace, free, castings that break from any cause. Double safety ratchets. Free book shows photos and letters from owners. Special price will interest you. Write now. Address

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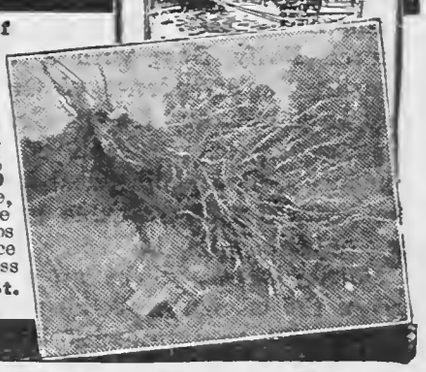


$1.00 Puts It On Your Farm

THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.

Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)

Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."

Takes Buckhorn from Clover.

Sorts Corn for Drop Planter.

Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.

Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grains. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

Manson Campbell

For $1.00, I Clean and Grade Your Seed Grain

You can't afford to plant common Seed (and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for one paltry dollar.

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar.

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

Manson Campbell Company
Dept. 43
Detroit Kansas City Minneapolis

FEEDING YOUNG FISH.

I have lately put in my fish pond a lot of young crappie. The pond contains a considerable amount of moss and other vegetable matter, but as I do not know what kind of food the young fish subsist on, I would like to know whether it would be necessary to feed them or not. If so, what kind of food should I give them? N. J.

Cuba, Mo.

In their natural state the food of crappie consists of crawfish, minnows, frogs, tadpoles, worms and mussels, while the young feed on insects and other minute forms of life found in the water. Ordinarily a pond one-half acre to one acre in area will furnish a sufficient amount of food for several thousand crappie. If there is an absence of natural food in the pond the fish can be fed on finely chopped beef liver, hog plucks and mush made of a low grade of flour. The mush should be given in a paste and the meat in its raw state in the proportion of one part of meat to three parts mush. E. LESTER JONES,

Acting United States Commissioner.

CONSTRUCTIVE GRANGE WORK.

The lecturer of the Massachusetts State Grange, Mrs. George S. Ladd, is planning some constructive work for the Subordinate Granges of the State for the present year. So important does this work seem to be that I would like to have Granges in all States consider the lines of work marked out by Mrs. Ladd, and of their own accord, adopt such of her suggestions as may be of local application.

First is the improvement of the farmers' homes. The lecturer argues that improvement in the home enhances our respect for it and for ourselves, and its attractiveness will have something to do with retaining the boys and girls. The State Grange offers a week's trip to Washington, D. C., to the farmer's wife who shall show in a written report to the executive committee of the State Grange, the most helpful way of managing the farm home as to comfort, convenience, economy and pleasure, with a statement as to the way the results were obtained.

Second, increasing the attendance and support of the church. This is a new idea to most Grange workers, but is an important consideration, nevertheless. The church and the Grange can and should work together. Massachusetts Granges will set apart one Sunday as Church Rally Day, with a view to increasing the attendance of Grange members at church, and for the Granges showing the largest per cent. of church attendance according to membership during the year, certain valuable prizes are to be awarded.

Third, there will be an effort to increase the efficiency of the rural schools. A bill will be introduced in the Legislature this Winter for State aid for the teaching of the practical arts in the public schools in the small towns of less than $1,000,000 valuation. There are 110 such towns in Massachusetts. The Granges of this State will be asked to support the bill.

Fourth, the local development of agriculture. One or two meetings will be held early in the year, which will be devoted to the discussion of the agriculture of the locality, as to best crops to raise, best seed, fertilizer, method of cultivation and the marketing of the crops. To stimulate an interest in this work among the young people the State Grange offers to the young man and the young woman, under 18 years of age, each a week's trip to Washington. The young man is to show by results, in a written report, what can be done taking into consideration location, cultivation and selection of crops from a half-acre of land. The work and management of operations must be done by the competitor, and he must keep an itemized account of all expenses and state results attained. The young woman must "do likewise" with poultry, fruit, flowers, bees, or any other line of farm work she may select.

The fifth endeavor must be to increase attendance on Grange meetings, for which two valuable prizes are offered, and the sixth is to make a study of the State's possibilities and resources with "Massachusetts Quality" as the motto and the standard by which every Grange endeavor is to be measured.

Here is an outline of some constructive work which, as said before, should bring results. The inactive Grange is likely soon to be in the dormant class. The Grange that serves its community best serves itself best, and proves that it has a reason for being. J. W. DARROW.

BLASTING FOR DRAINAGE.

On page 1375 "J. F. McF., Indiana," asks help in the matter of "two-thirds of a 20-acre field covered with muck." The cause is water held in suspension by a clay bottom; the depression is always bowl-shaped, holding the water as a bowl holds water, and the bottom is always clay. Surface cultivation, without drainage through this bottom, is simply a waste of time and material, and does not do the slightest good; the bottom of this bowl must first be broken through, and the water let off into the lower earth below. This can be done most effectively and at least cost with dynamite—exploding properly balanced charges of dynamite, at right depths; and if properly done, the conditions will never occur again. After drainage is secured, and proper elements now wanting in the soil supplied (potash, phosphate and lime) he will get results and have reclaimed a waste field. Bumper crops have been produced first season after reclamation, many times paying the cost. H. S. J. B.

R. N.-Y.—We understand that the field has been drained so that it can be plowed and worked. Lime and potash are certainly needed from the description.

MAINE POTATO SHIPMENTS.

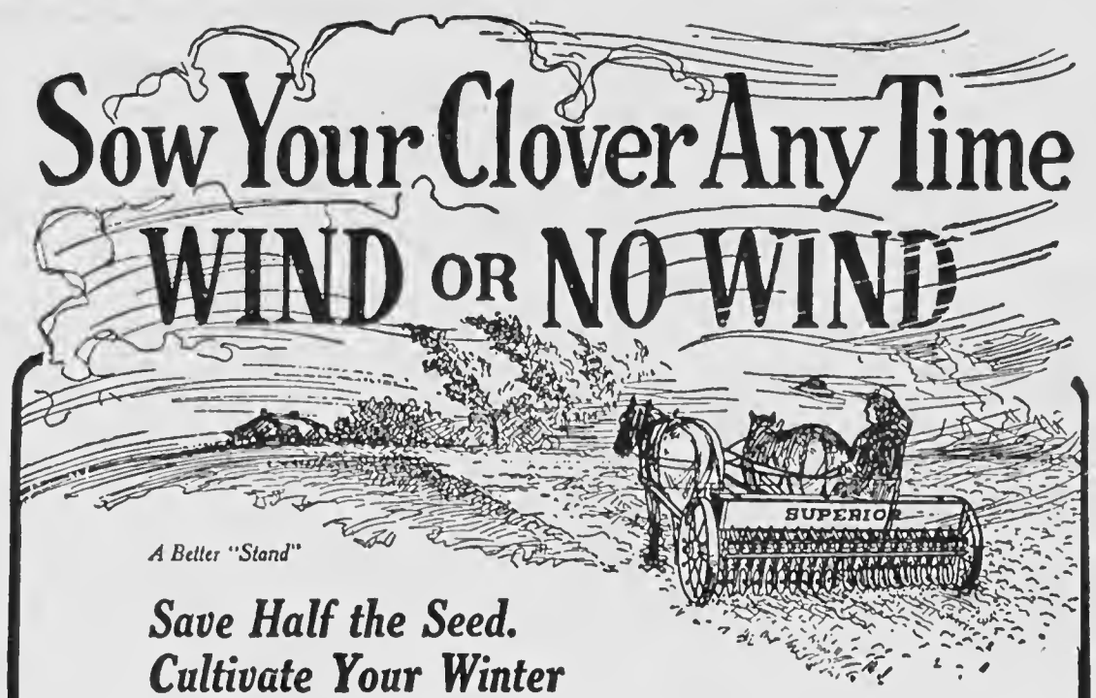
From July 1 to December 1 the Maine Central Railroad transported to the various markets from Central Maine 3,229 cars of potatoes, as compared with 2,850 cars for a corresponding period last season. During this same time the Bangor and Aroostook Railroad delivered to the Maine Central at Northern Maine Junction 9,722 cars, as compared with 5,984 cars in 1912. From the Canadian Pacific the Maine Central received 3,390 cars, as compared with 1,392 cars in 1912. This makes a grand total of 16,341 cars for the five months in 1913, as compared with a total of 10,228 cars in 1912. Figuring on a basis of 650 bushels for each car lot, the total number of bushels would be 10,621,650 for 1913 and 6,648,200 for 1912, a difference in favor of 1913 of 3,973,450 bushels. The transportations over the Maine Central lines are not yet available for December, but the reports from the B. & A. would indicate that this road has delivered to the Maine Central 1,600,000 during December, which makes the total shipments 12,225,650 bushels now reported.

There are no figures available showing the percentage of New Brunswick stock in the foregoing shipments. However, New Brunswick growers have been carting over the border all the season, and since the hearing in Washington on the 18th of December up to the time when the embargo was placed upon Canadian stock there was a general rush to market every barrel that could be sold. The shipments of Maine potatoes to the markets in 1913 will no doubt break all records and will probably be the largest for some years to come. While there is a feeling that the embargo on foreign stock will be permanent on all countries where the tubers are diseased, there is a feeling that countries where they can give a clean bill of health will be large shippers to the United States and for this reason the American grower will not increase his acreage.

One of the results of the most remarkable hearing in Washington on the 18th of December before the Federal Board of Horticulture was the bringing out of the fact that potato diseases have been increasing during the last 10 years. This has awakened the Maine grower to action, and steps are being taken to safeguard the potato industry, and so far as possible eliminate disease. On January 15 the various local organizations connected with the Farmers' Union of Maine will hold a meeting at Presque Isle for the purpose of discussing the potato situation. It is proposed to organize the farmers all over the country, and bring about a method of planting and general field inspection by experts that will reduce disease to the minimum. Relative to the seed situation, it is proposed that in addition to eliminating disease the same care be given to growing seed true to name, and a system of shipping that will assure the seed being kept pure and properly graded.

On January 28-29 there will be a State-wide potato meeting called "Maine's Potato Day," at City Hall, Bangor. There will be representatives from all over the State, and a large gathering is now assured. Speakers from out of the State, among them Prof. Orton of the Federal Horticultural Board, and many speakers from within the State will be on the program, and it is expected that the discussion will be of great value to all concerned. C. E. E.

Sow Your Clover Any Time
WIND OR NO WIND



A Better "Stand"

Save Half the Seed.
Cultivate Your Winter
Wheat and Increase the Yield
From Three to Eight Bushels per Acre

Many farmers report increased yields of Winter Wheat from 4 to 8 bushels per acre by the use of the Superior Alfalfa and Grass Seed Drill.

Not only did these farmers increase their yields of wheat AT NO COST WHATEVER, but THEY SAVED HALF THE CLOVER SEED and got better stands of clover than when broadcasting.

The Superior Alfalfa and Grass Seed Drill puts all the seed **in the ground** at an even depth. **Discs cultivate the wheat at the same time.** The angle of the discs is so slight that the wheat is not injured.

The Superior Force Feed Accurately Sows Crimson and Red Clover, White Clover, Alsike, Alfalfa, Clover and Timothy mixed, Timothy alone, Red Top Fancy, Blue Grass, Millet, Flax and all other Grasses in widest range of quantities.

If you are going to sow Clover in your Winter Wheat, the Superior Alfalfa and Grass Seed Drill will show you a gain of about FOUR DOLLARS PER ACRE.

This Drill is invaluable in rejuvenating old Alfalfa Fields, Pastures and Meadows.

SEND FOR THE SUPERIOR ALFALFA DRILL FOLDER

Go to your local dealer and ask to see the Superior Alfalfa and Grass Seed Drill. Sold under the strongest warranty. You run no risk in purchasing.

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Send for Catalog—FREE

Profitable for the large or small grower. Plants potatoes at lowest possible cost. *One* man operates it. Opens the furrow—drops the seed any distance or depth required—puts on fertilizer (if wanted)—covers up—marks the next row. Accurate, automatic and dependable. Sold with or without Fertilizer Attachment.

Here's why you should select the Eureka Potato Planter:—Furrow Opening Plow is directly under the axle—that means uniform depth at all times. The seed drops in sight of driver. Steel and malleable construction makes long life and few repairs. Made in three sizes—for one or two rows.

We also make the Eureka Mulcher and Seeder. Shipped from branch near you.

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Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

IRON AGE 100 Per Cent Planters

often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. New angle steel frame and steel seed hopper. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "*100 Per Cent Potato Planting*" and copy of Iron Age Farm and Garden News.

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APOLLO ROOFING

APOLLO Roofing and Siding Products are highest quality, full weight, easily applied, reasonable in cost and durable. Sold by weight. Made from the well known APOLLO Best Bloom Galvanized Sheets, and sold by leading dealers everywhere. Write to-day for our free booklet "Better Buildings," containing plans and full information.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

Forkner Orchard Cultivator

Does more work with less draft and leaves a better surface mulch than any other cultivator made.

It Works Right Up To Your Trees

Cultivating the entire surface beneath low branches without disturbing boughs or fruit. Write for catalogue and free book "Modern Orchard Tillage."

LIGHT DRAFT HARROW CO., 612 Nevada Street, Marshalltown, Iowa

This Engine Harrow Has Made Good

SEND FOR BOOK "The Soil and Intensive Tillage"

If you want an engine harrow that has repeatedly withstood abuse far greater than what you are likely ever to give it, and one which does unsurpassedly good work in every respect, then the

Cutaway (CLARK)

Double Action Engine Harrow

Is the one for you to buy. Ask the CUTAWAY dealer in your town to show you a CUTAWAY (CLARK) harrow. If we have no dealer there, write direct to us for catalog. Don't accept a substitute.

THE CUTAWAY HARROW COMPANY, 839 Main St., HIGGANUM, CONNECTICUT
Maker of the original CLARK *Disk harrows and plows*

EVENTS OF THE WEEK.

DOMESTIC.—Three hundred thousand dollars represents the estimated damage caused by a fire in St. Louis Square, which imperilled a fashionable French section of Montreal, Canada, January 1. Having no water available, the firemen were forced at first to use snow and chemicals, but the Montreal Water and Power Company, through shutting off private consumers, gave a supply of water sufficient to protect the adjoining property.

A tenement house fire on the lower East Side of New York January 1, caused the death of eight persons.

Fire that originated in the building of the E. O. Langen Cloak Company at Indianapolis, Ind., January 2, destroyed that building and burned out the W. K. Stewart Book Company's store and the L. S. Ayers & Company's stock rooms. The loss is estimated at about $300,000.

Flanked by State militia, Miss Fern Hobbs, private secretary to Governor West, closed up the saloons of Copperfield, Ore., January 2. The trouble followed investigations showing that the mayor is engaged in the saloon business; that his associate in such business is a member of the city council; that the proprietor of another saloon is likewise a member of said council and that his bartender is also a councilman; that a fourth member is a hanger-on around one of these resorts and in sympathy with their activities. This gives the saloon element absolute control of all city affairs.

Bart Dunn, Tammany leader of the Eighteenth Assembly district, Manhattan, and Joseph J. Fogarty, formerly an inspector for the State Highways Department, were sentenced in the Supreme Court at New City, N. Y., January 3, by Justice Tompkins to serve each 10 months on Blackwell's Island, New York, for conspiring to defraud the State of New York in the building of a Rockland county road. Dunn was fined $500, as was also the Dunbar Contracting Company, of which he is president. Justice Tompkins denied a motion to set aside the verdict and order a new trial. The execution of the sentence was stayed automatically, however, by the granting of a certificate of reasonable doubt pending an appeal. Dunn and Fogarty were released each in $5,000 bail.

Thirty-seven men lost their lives when the tank steamer Oklahoma sank about 50 miles southeast of Sandy Hook, January 5. Eight men, including the captain, Alfred Gunter, were saved by lifeboats from the Hamburg-American steamship Bavaria, in charge of Captain Graalfs. Five others were rescued by the Booth Line steamer Gregory. The Oklahoma was broken in two by the mountainous sea.

Fire January 6 destroyed the Paterson Opera House, Paterson, N. J. The loss is $100,000.

One of the biggest seizures of arms and ammunition ever taken from a steamship bound direct for a Mexican port was made January 4 on board the freighter Guantanamo, of the Ward Line, which sailed for Tampico. Under orders from the Treasury Department a squad of customs inspectors searched the Guantanamo for two hours before her scheduled departure. In their raid the inspectors found a dozen shotguns, ten thousand cartridges and a few dozen revolvers. It is believed that more munitions of war were on board hidden out of their reach. They arrested the boatswain and a seaman and brought them to the Custom House, where it is said they admitted having hidden the contraband articles.

Gales along the Atlantic coast did great damage January 3-5. The Jersey coast is again reported to have experienced a loss of $1,000,000, Seabright, which suffered so severely in the Christmas gale, being badly damaged.

Three hundred and two persons, of whom 149 were children under 16 years of age, were killed by automobiles in New York City in 1913, according to figures made public by the National Highways Protective Society. Twenty-five of these killings took place in December. The December fatalities were five more than the number for December, 1912, but at that they were 13 less than the number for November last, when 38 were killed. The decrease shown in December, as compared with November, is attributed by the society to the more stringent enforcement of the automobile laws. The number of persons killed by street cars in the city in 1913 was 108, as compared with 134 in 1912. The figures for December, 1913, were six persons killed; for December, 1912, 13 persons killed. Wagons killed 132 persons in the year just closed, as compared with 177 in 1912. Nine persons were killed by wagons last month. Outside of the city the figures for the State for December show nine persons killed by automobiles, 10 by street cars and three by wagons.

FARM AND GARDEN.—At the annual meeting of the Illinois State Horticultural Society, W. S. Perrine, of Centralia, was elected president to succeed J. Mack Tanner, of Springfield. The other officers, who are re-elected, are as follows: Vice-president, E. J. Baxter, of Nauvoo; secretary, A. M. Augustine, of Normal; treasurer, J. W. Stanton, of Richview; directors: H. G. Street, of Hebron; L. R. Bryant, of Princeton; Geo. J. Foster, of Normal; O. M. McElvain, of Bushnell, and W. W. Thomas, of Anna.

The sixteenth annual meeting of the Pennsylvania Dairy Union will be held at York, Penn., January 20th to 22nd, inclusive. The meeting will be divided into three sections, the milk dealers holding forth on the 20th, the milk producers on the 21st, and the butter and cheese makers on the 22nd. In connection with the meetings, there will be a show, as the combined efforts of the Dairy Union, the State Horticultural Association and the Live Stock and Plant Breeders. All of these associations will hold meetings in York during the same dates, as well as also will the American Berkshire Congress.

Secretary of Agriculture Houston approved, Jan. 5, the disposal of 1,000,000,000 feet of Western yellow pine timber from the Kaibab national forest in northern Arizona. In order to get this timber out it will be necessary to build a railroad 200 miles long, which will connect Colorado and Utah with the Grand Canyon of the Colorado, hitherto accessible only from the south. For several years the construction of such a railroad has been considered but it has been stated that the lack of assured immediate traffic was an effectual barrier. It is pointed out, however, that a contract for a billion feet of timber will overcome this difficulty by providing a commodity for transportation which, together with tourist and local traffic, will place the project on a paying basis practically from the outset. The necessary investment to construct the road will amount to more than $3,000,000. Bids for the timber will be received up to the middle of June, 1914, and three years will be allowed for the building of the railroads and mills and twenty-five years for the cutting of the timber.

After a delay of more than two years the so-called Chicken Trust cases came up Jan. 6, before the Appellate Division for argument on appeal. The defendants are Erving V. Dwyer, Arthur G. Dwyer, Charles Westerberg, William W. Smith, Charles R. Jewell, James N. Norris, William H. Norris, Charles T. Hawk, Charles Thatcher, Clenen Bishop, Samuel Werner, Charles Werner, and Solomon Frankel. On Aug. 15, 1911, they were convicted before Judge Rosalsky in the Court of General Sessions of conspiracy in restraint of trade. Sentence imposed in each case was a fine of $500 and three months in the penitentiary. Since their sentence the defendants have been out on bail. Between the time of their conviction and their sentence they served a few days in the Tombs.

We are market gardeners, and retail our truck on the street in Philadelphia, but manage to be through by Christmas. Prices during month of November were: Potatoes $1.10; half peck 18 cents; celery 15 cents bunch; beets three cents bunch; turnips 12 cents half peck; onions 20 cents half peck; salad five cents head; cabbage eight cents a head; spinach 15 cents half peck; carrots three cents bunch; cauliflower 15 cents each; orange pumpkins 10 cents each; young roasting chicken 25 cents a pound; stewing chickens 22. At the public sales fresh cows sell from $60 to $90; good horses $175 to $250. Hogs for killing, 11 cents a pound. Milk shipped to Philadelphia, five cents per quart; corn at the sales 72; fat calves 11; fat cows six cents per pound. G. H. S.

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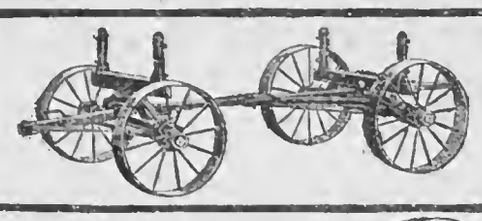

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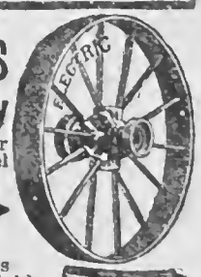

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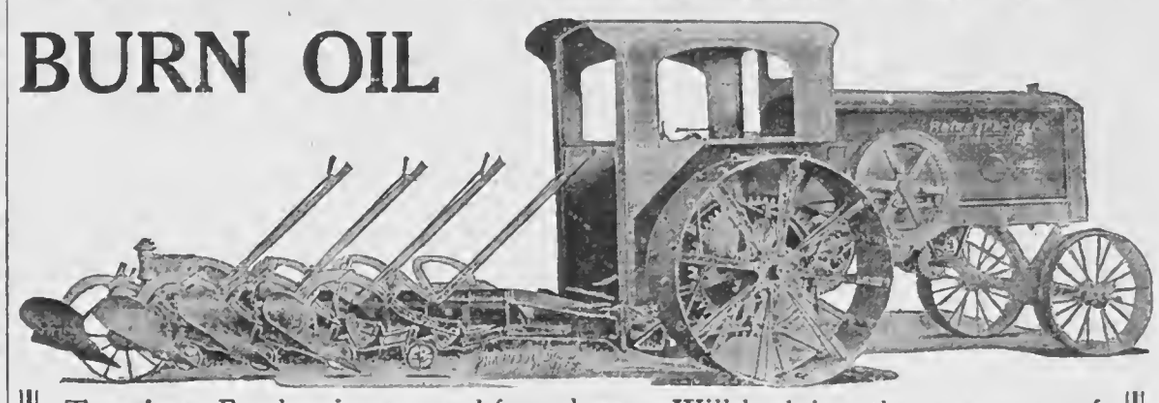

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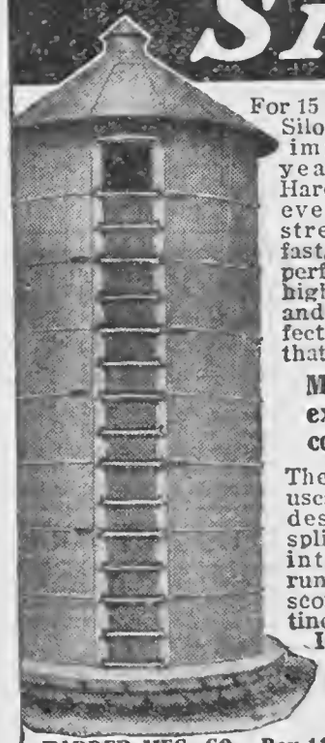

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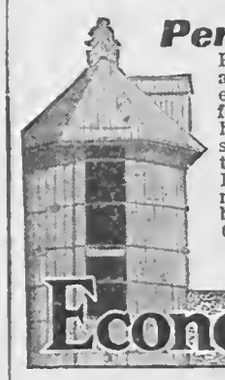

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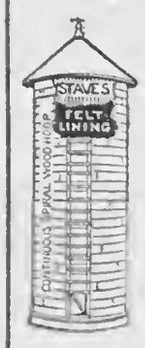

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Keeping a Pure Strain.

Do you advise using a cockerel with pullets of the same mating? I have 12 pullets and five cockerels from a trio of imported birds from Tom Barron's flock of English Leghorns. Can I keep them pure Barron, or should I cross them with American Leghorns for best results? The cockerels are finer ones. W. C. M.

Rupert, Vt.

By all means, keep the Barron strain pure. These Leghorns, with their superb laying qualities, are the product of many years of skillful breeding by an expert. There is, of course, no guarantee that their good qualities will be perpetuated in the hands of their American owners, but it would be the height of folly to unnecessarily introduce inferior blood. Select the best cockerel of the five and mate him with the pullets next year.

Chickens With Colds.

This is the time of year when the poultryman must keep a sharp lookout to detect trouble in his flock. About the first thing that appears to make him uneasy is a pullet with a swollen eye, and perhaps a running nose also. There are many remedies used, and I have at various times used different methods, but the one that gave me quickest results is as follows: I remove affected bird from flock, place same in a coop with a slatted front, placed upon a box off the floor, in some protected building. If the eye is closed and suppurated, take camphorated vaseline and coat all around the eye, taking care not to get any inside the eye. Should you have any two-grain quinine pills, give one morning and night for three days, or one-quarter teaspoonful epsom salts in a wineglass of water. Give this to the chicken half a spoonful at a time. One dose will do. Take one-eighth of a teaspoon of permanganate of potash and dissolve in a pint of water, to use as an antiseptic solution for the cleft, in the roof of the mouth. Pour some of the solution from the pint bottle in a small vessel about the size of a wineglass and keep it there a few seconds, and it will move its tongue about and force the liquid up in the cleft. This solution is not intended for drinking, as it is four times stronger than that given in the drinking water, but I find that this method used four or five times a day is quicker than using a weak solution in the drinking water.

After you have applied the camphorated vaseline for two or three days the eye will open, and then I make a solution of corrosive sublimate, one teaspoonful to one quart of water, and bathe the eye, pressing the lids apart and letting the water reach the eye. Boric acid, 15 grains to the ounce of water, is good, but the above gives me best results. I have cured my birds in five days. Now don't mistake this malady for roup, as it is not. W. E. BROWER.

This is good treatment with the exception of the use of corrosive sublimate. This substance is extremely irritating, and when used in strong solution in sensitive places like the eye, is very painful. Boiling water would not be more so. A teaspoonful to the quart is at least eight times as strong as should ever be used in the eye, and even this might better be replaced by the boric acid, which while not so powerful, is painless and soothing. M. B. D.

The Poultry "Systems."

I think M. B. D. in his reply to W. I. B. on page 1337 is decidedly unfair to the so-called systems for distinguishing the laying hens from the drones. Five or six years ago I paid one dollar for a book describing one of these systems, and I consider it the best dollar investment I ever made in the poultry line, as it has saved me many dollars every year. I have two special uses for the system. First, beginning in November or December, soon after the pullets commence laying, I handle every one of them every two weeks until February, keeping a record of their laying condition, and have thus been able to know, and save for breeders, my best Winter layers. And I find that the pullets getting a high mark in the Winter are generally the ones that are still shelling out the eggs late the following Autumn. Secondly, when the hens begin to slack up in egg production in August or September, I go over them every week, and ship to market those that I find have quit laying (unless they are to be saved as breeders). This latter plan alone has saved me many dollars. I have made many tests, and never yet got an egg from a hen I picked as a non-layer. In all my experience I have found but one hen whose pelvic bones did not close up to one finger's width or less when she quit laying and of course opens again when she again lays. I fear M. B. D. has never given these systems a thorough trial or he would not so utterly condemn them. I may say that in my opinion the originators of these systems go rather too far in their claims, but to the extent I have mentioned I consider them of great value. W. A. R.

Yarmouth, Me.

You are entirely right in saying that the promulgators of the various "systems" go too far with their claims; in fact, that is characteristic of systems in more than one branch of human thought and activity. Some one discovers or appropriates a small bit of truth and builds around it an elaborate structure of error. If there is any value in the method of selecting layers by noting the width of the opening between the pelvic bones, you will obtain it by a regular and systematic examination extending over a period of several months. Few would do this, however, but would depend upon one or two tests.

As a little test of this method, I went to my henhouse the other evening and examined 26 two-year old hens, none of which is laying. I was able to place one finger between the pelvic bones of six; two fingers between those of 14; and three fingers between those of six. Then catching 15 pullets, an unknown number of which are laying, the one finger test applied to five; the two finger test to eight; and the three finger test to two. Not much in that to help me select the layers. I understand, also, that the originator of this test has failed signally to pick out the layers from pens whose records were known and which were submitted to him for demonstration. M. B. D.

MR. CRABB: "A speaker in Syracuse said that the women of to-day are not using their brains." Mrs. Crabb: "She's right. If they were there wouldn't be so many getting married."—Buffalo Express.

UNFORTUNATE PEDESTRIAN (who has been knocked down and is a little dazed): "Where am I? Where am I?" Enterprising Hawker: "'Ere y' are, sir—map of London, one penny."—Punch.

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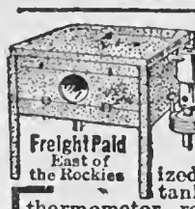

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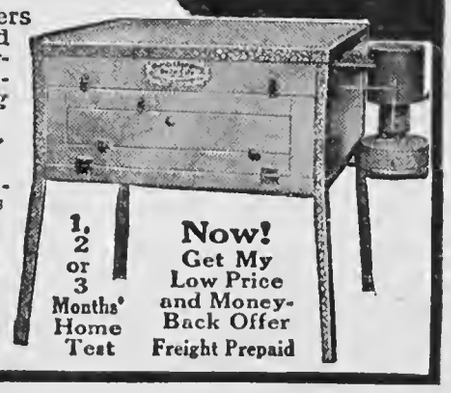

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The Henyard.

THE EGG-LAYING CONTEST.

The egg output still increases; the seventh week ending Dec. 19 shows a gain of 42 eggs over the previous week, and a total for the week of 1,004. Tom Barron's White Wyandottes lead again this week ,as they did last, the score being 47, last week it was 49. His total record to date is 246. Francis F. Lincoln's White Leghorns are still ahead, their total being 253, but Barron's Wyandottes reduced the lead last week from 14 to 7. Three pens of White Leghorns tie for second place with scores of 40 each. They are Francis F. Lincoln's, Cecil Guernsey's and pen No. 42 from Storrs Agricultural Station, the "sour milk" pen. Tom Barron's White Leghorns are third with a score of 34, and Jules F. Francais' pen of Barred Rocks are fourth with 32 to their credit.

I am asked "whether any of these eggs are for sale for hatching?" There may be others who do not know that no male birds are kept at the contest, and that the eggs are useless for hatching purposes.

I give below the records of some of the leading breeds:

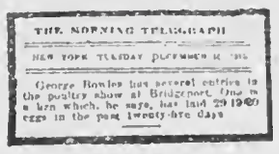
	Week	Total
BARRED P. ROCK.		
Jules F. Francais, Long Island	32	149
A. B. Hall, Connecticut	10	30
Frank L. Tuttle, Massachusetts	13	45
Waveny Farm, Connecticut...	8	17
WHITE P. ROCKS.		
F. H. Benton, Connecticut...	19	44
Storrs Agr. Sta., Connecticut	10	17
A. T Lentzen, Massachusetts	8	15
BUFF P. ROCKS.		
A. B. Hall, Connecticut.....	14	24
W. C. Morgan, Connecticut...	9	53
WHITE WYANDOTTES.		
Tom Barron, England	47	246
Neale Bros., Rhode Island...	31	226
Merrythought Farm, Connecticut	28	165
West Mt. Poultry Farm, Connecticut	24	116
D. J. Ryan & Son, Connecticut	12	33
BUFF WYANDOTTES.		
American Buff Wyandotte Club, New York	10	40
Dr. N. W. Sanborn, Massachusetts	5	31
S. C. R. I. REDS.		
Dr. J. A. Fritchey, Pennsylvania	27	128
Pinecrest Orchards, Massachusetts	16	123
Colonial Farm, New Hampshire	19	104
J. S. Gillespie, Connecticut...	25	70
Dearborn & Sharpe, New Jersey	21	61
Harry B. Cook, Connecticut..	20	57
R. C. R. I. REDS.		
C. S. Scoville, Connecticut....	10	86
Glenview Farm, Connecticut..	23	81
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	40	253
Agr. Exp. Station, Connecticut	40	195
Tom Barron, England	34	165
Cecil Guernsey, New York....	40	147
Storrs Agr. Sta., Connecticut	21	118
Marwood Pltry. Farm, Pennsylvania	28	107
F. M. Peasley, Connecticut..	21	107
P. G. Platt, Pennsylvania...	4	94
Storrs Agr. Sta., Connecticut	22	93
Storrs Agr. Sta., Connecticut	24	93
Chas. N. St. John, New York	1	93
L. E. Sands, Pennsylvania...	11	91
BUFF LEGHORNS.		
Wolverine Pltry. Farm, Michigan	9	26
WHITE ORPINGTONS.		
P. A. Demgar, New York....	3	15

There are several breeds which have not laid yet. The unusual number of birds which have stopped laying and commenced to moult, will probably cut down the year's record of eggs considerably. There are 19 pens among the White Leghorns that have from one to seven of the birds moulting. The total number of eggs laid to date is 4,941.

GEO. A. COSGROVE.

"MIRACLE MARY" GOT NO RIBBON

Your article on page 1380 concerning the pen of scrub hens now competing with the blue-bloods for egg-laying honors at Storrs is exceedingly interesting, and states some good solid facts. Last week I entered some of my Leghorns at the poultry show of the Consolidated Poultry Association of Bridgeport, Conn. I knew they were not show birds, but they were good, profitable layers, and I wanted to see what the judges thought of them. A pen containing a cockerel and four pullets got fourth prize, and I received second prize for an exhibit of eggs, but over in a corner all by herself was a sturdy little hen that has been laying steadily and consistently ever since she was six months old. She is a member of a flock that originally consisted of 97 birds, but now number 93. This flock laid 13,635 eggs in a year; an average of 143 10/19 eggs per capita. Of course this is nothing wonderful when compared with the records at Storrs or the mark made by Mr. Cosgrove's 55 pullets; but it is a pretty good flock average. One of these birds, whom we call "Miracle Mary," was the little hen at the Bridgeport show. "Mary" has no trap-nest record; but nearly every day during the year we have found her on her nest. She is a pet, and her leg band number, 810, is very familiar to us because she seems to like to wait on the nest and have some one lift her off after she has laid an egg. Mary didn't win a prize. The judge passed her by with a sniff, and when I asked him



what was the matter, he said, "Everything." I hung the enclosed card (see above) on "Mary's" cage, and she attracted as much attention as the blue ribbon winners. She didn't lay an egg for the first two days of the show, but on the third day she just laid one out of spite, and on the way home in the express car she laid another. She is back on the job again, laying almost daily, and I wouldn't sell her for a whole carload of the judge's favorites. GEORGE BOWLES.

Connecticut.

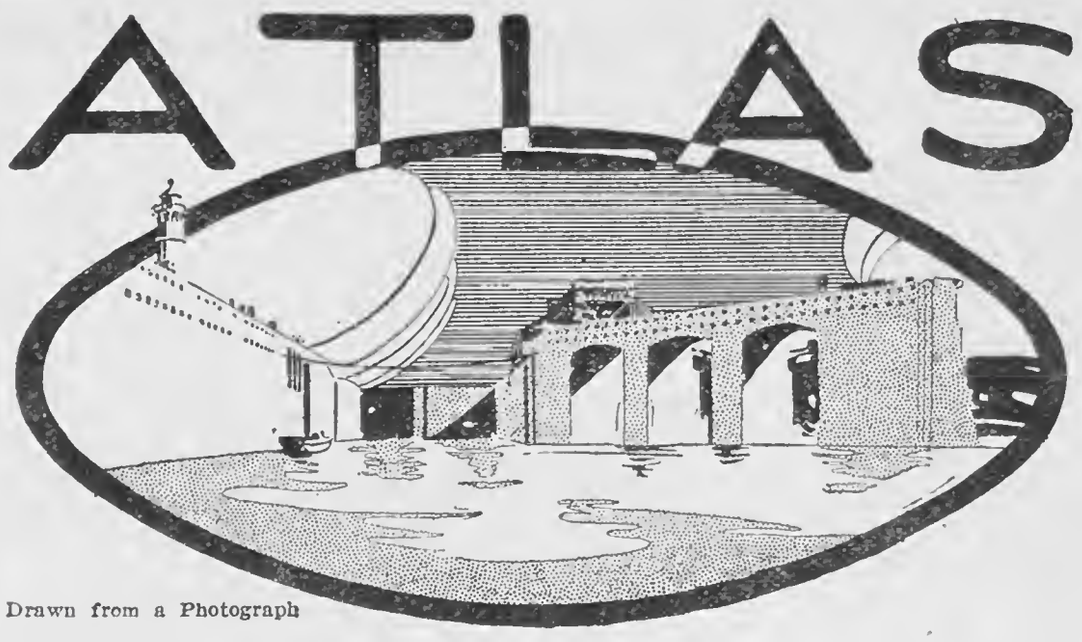
Laying Type of Pullets.

I have 30 White Rock pullets, some hatched February 8 and some March 8. I have been told that unless you can lay two or three fingers between the pelvic bones that pullets will lay late and poorly. The above have not laid yet, while others hatched the same time are laying and I can lay three fingers between the pelvic bones very easily. Of the lot not laying most have small combs and some have the pelvic bones so close together one can only put one finger between, while others I can put one easily but cannot get two between. I have another lot of 25 pullets six months old, and I can lay two fingers between pelvic bones easily. Will pullets as described in lot of 30 lay at all? If so at what age will they probably lay? Will they be poor layers if they lay at all? Are not the pelvic bones of lot of 25 pullets, six months old, proper distance apart for that age? W. B. W.

Massachusetts.

Replying to your questions in their order, your description of lot of 30 chicks leads me to believe that they were bred for exhibition instead of laying qualities, therefore they will probably lay a few eggs when they get ready, at the age of eight to 10 months, and will develop into rather poor layers at best. Your lot of 25 pullets appears perfectly normal and should develop into good layers. In testing layers by the system you use it is necessary to take into consideration the fact that the same hen appears very differently when in laying condition than from what she does when not laying; so it is necessary to take into consideration the condition which the birds are in, and as it becomes evident that some experience is quite necessary before dependable conclusions may be reached. C. S. G.

BLACK MINORCAS.—Referring to E. D. F.'s letter on page 1289 and noting his desire for large white eggs combined with "table qualities" would call his attention to S. C. Black Minorcas—a breed that should be better known. They lay big white eggs and plenty of them, breed true, are easy to hatch and raise, are hardy and do well in confinement. Hens weigh seven pounds. Cocks nine pounds. Cockerels seven pounds. Hens lay, up to four years old, equally well as pullets; a fine breed for a moderate flock. Their one fault is their black legs and bluish thighs, which makes it difficult to dispose of quantities of surplus flesh, but which detracts nothing for home use or private custom trade. F. H. W.



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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

ROOT CROPS AND LEGUME SILAGE.

How will root crops, such as beets, carrots, etc., compare with silage? Can one feed carrots to milk and butter cows without flavoring the milk? Can turnips be fed to milch cows, and how do they compare with silage? Could cow peas or Soy beans be put in a silo whole? Sometimes late in the season the weather is unfavorable for curing hay, such as cow peas and Soy beans, and how would it be to pack them whole in the silo?
Delaware. J. W. F.

The comparative feeding value of corn silage, sugar beets, carrots and turnips based upon analysis of constituents is as follows:

	Water	Ash	Crude protein	Fiber	Nitrogen Free Extract	Fat
Sugar beets ..	86.5	0.9	1.8	0.9	9.8	0.1
Corn Silage...	79.1	1.4	1.7	6.0	11.0	0.4
Carrots.....	88.6	1.0	1.1	1 3	7.6	0.2
Turnips.....	90.1	0.9	1.3	1.2	6.3	0.8

It will be noted that the sugar beets and carrots contain a larger percentage of water, but smaller amounts of other constituents. However, from a standpoint of analysis pound for pound, there is not a great variation in feeding units; the difference, however, comes when one calculates the cost of production. The labor cost for growing, thinning, weeding and harvesting root crops is greater than that involved in growing corn for silage, and under ordinary farm conditions it is much easier to store corn in a silo than to put the roots in a cellar or cave well adapted to their preservation. An average yield of sugar beets would be about 20 tons per acre, carrots under similar conditions might yield 12 tons, while corn silage well matured could be expected to yield as much as 12 tons to the acre. The question resolves itself into one of labor cost, and in case 12 or more cows are maintained in the herd, it is generally conceded that the average is decidedly in favor of the silage. Carrots and mangels can be safely fed to dairy cows in case they are fed just after milking. When considering the matter of growing turnips for feeding dairy cows, it is a practice in South Jersey to seed the ground intended for grass, with two ounces of turnip seed, at the time of making the seeding for grass, usually after potatoes in September, and pulling the turnips just previous to killing frosts. They are stored in heaps which are covered with hay, and this practice seemingly is in great favor with the dairymen. The turnips are fed during the late Fall or early Winter, and usually if a large number of cows are maintained they have silage for later as well as Summer feeding. The same precautions in reference to the time of feeding should be taken, and unless they are fed in very large quantities no undesirable evidences are noticed in the flavor of the milk. Cow peas and Soy beans can be safely put in the silo, but should be mixed with corn in the proportion of five tons of corn to one ton of either cow peas or Soy beans. When the latter materials are ensiled by themselves the fermentation is excessive, and often burning results. The mass comes out of the silo with a very bad color, but is surprisingly palatable in spite of this condition. It was the practice of the New Jersey Experiment Station for a number of years to ensile cow peas and Kaffir corn with the regular silage corn, and the silage was of a very high quality. F. C. M.

Dairy Ration.

How is this for milk and butter? Please give proportions wheat bran, molasses feed, oats, corn, clover hay and corn fodder. How much should I feed per pound of milk? F. F. R.
West Virginia.

None of the feeds you mention are very high in protein. The various brands of molasses feeds vary much in comparison, so it is difficult to tell the value of this kind of feed without the analysis. Assuming yours is a good brand, analyzing 16 per cent or better of protein, I would say that the following would be a good ration for a cow giving 20 pounds of milk daily: Clover hay, 12 pounds; corn fodder, 12 pounds; bran, two pounds; molasses feed, two pounds; ground oats, two pounds; cornmeal, one pound. This allows one pound of grain for about three pounds of milk. If you have to buy the cornmeal, I should omit it and feed proportionately more of the other grains. C. L. M.

Feeding a Heifer.

How should I feed our heifer, 3½ years old? She will come in for the first time about March 1. Has suffered very much from indigestion. We have black grass, cornstalks, mangels, carrots and turnips.
Island Heights, N. J. P. J.

Black grass should be all right to feed your heifer twice a day, with cornstalks cut into one inch lengths at noon. The roots should be cut up and fed liberally twice a day. If your heifer is in good condition she will not need any grain with this feed until after she freshens. If you are careful not to overfeed at any time you should have no trouble with indigestion. C. S. G.

Ration for Dry Cows.

Will you balance me a ration for Jerseys now dry, due to freshen in one to two months? For roughage I have corn silage, mixed hay, some clear clover hay and oat straw. Grain costs as follows: Cornmeal $1.60, bran $1.50, cotton-seed meal $2, oats 50, distillers' dry grains $1.80. I have oats. G. T. S.
Sinclairville, N. Y.

For the present give one feeding per day of straw, silage and mixed hay, with three to five pounds of ground oats and bran, equal parts by weight, scattered over the silage. Two or three weeks after the cows freshen the following grain ration will be better for milk production: Cotton-seed meal, three pounds; distillers' dried grains, three pounds, and cornmeal, two pounds. If you can get white or flour middlings at not very much more than cornmeal it will be better than the cornmeal. If you have plenty of silage it will be well to feed twice daily, about one half bushel per cow at a feed. I prefer not to feed straw to a fresh cow, or one giving a good flow of milk, but by giving a little more grain straw may be used for part of the roughage, when the quantity of hay is short. C. L. M.

Buckwheat for Milch Cows.

How much value, if any, is there in buckwheat for feeding for milk?
Loon Lake, N. Y. W. G. L.

Whole buckwheat, ground, would make an inferior grain ration for milk production, ranking with cornmeal in this respect. It is fattening rather than milk producing. Buckwheat middlings, however, are one of the very best of milk producing foods, and the farmer should exchange his whole buckwheat for middlings when he wishes to use buckwheat for dairy cows. Buckwheat middlings rank with brewers' dried grains and gluten feed in milk producing value, but as the middlings are a local product in this State, they can usually be purchased cheaper than the others mentioned, and full advantage of this should be taken by dairymen who are in position to get them at home. Some find it difficult to understand why a portion of the grain can be superior to the whole as a milk producer. The reason is that the flour which is taken out when middlings are produced has little milk-making value, and may better be exchanged for the middlings out of some one's else buckwheat. M. B. D.

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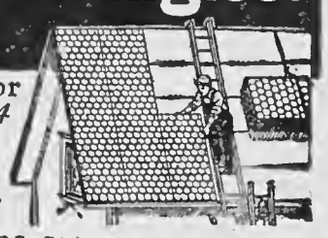
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No one shall pay a cent for Bickmore's Farm Account Book. Mr. Farmer, simply send us your name and address. Business farming puts money in the bank. This book is arranged to keep all accounts in simple form—more simple, and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborer's time record; and section for personal accounts. 64 pages; for ink or pencil. Not a cheap affair. Its quality is in keeping with
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has been the trusted remedy of horsemen everywhere. It has not only been saving untold time, work and worry but thousands of dollars' worth of valuable horseflesh and has many times saved horses from death.
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Never be without a bottle of Kendall's Spavin Cure. You can never tell when accidents will happen—when this remedy may be worth the price of your best horse. It is better to be *prepared.*
Don't call your case "hopeless" in the face of above testimony.
Next time you go to town get a couple bottles from your druggist. The price is uniform, only $1.00 per bottle, 6 bottles for $5.00. At the same time ask for our invaluable "Treatise on the Horse," or write to
Dr. B. J. Kendall Co., Enosburg Falls, Vt., U. S. A.

BUFFALO MARKETS.

Winter conditions appear to have affected no produce prices as yet unless it be cabbage, which is not plenty and promises to be decidedly high before the early Southern crop is in. It now sells at $6 to $8 per 100, and good-sized heads retail at 10 cents. The market feature is still the growing plentifulness of Citrus fruits, especially grape fruit and oranges. Grape fruit of fairly large size now retails at five cents, and the big California navel orange is not above 40 cents a dozen. It has just appeared. Lemons are not much plentier yet. Full-size bananas retail as low as 10 cents a dozen. Apples are rather plenty, but high, the cooking, windfall grades retailing at not less than $1.25 a bushel, often showing that they have fallen where the ground is plowed. Some of the smaller Western apples, like Wealthy, retail as low as 15 cents a dozen; the big ones at three cents or more each. As appearance sells almost anything in preference to quality, the Western apple generally leads the dull Eastern fruit, unless the price gets unreasonably high. Green apples are now about as high as red.

The cheap vegetable is still potatoes, which retail as low as 85 cents a bushel, and still the little red Bermudas come in at $6 up per barrel to the retailer. The sweet potato supply is still large and promises to remain so, unless the weather becomes more severe. Celery continues to come in burned by the warm weather, very little of it capable of restoration to really marketable appearance. It retails at 10 cents the small bunch. New Southern green onions are coming in, retailing at 10 cents a bunch. There is plenty of leeks and garlic. Parsnips and vegetable oyster are 5 to 10 cents a bunch or small measure. The squash season closed early and in bad shape, as it had been most of the open season. The crop was poor and rotting was early. There are a few good specimens offering yet at four to five cents a pound retail. Pumpkins are keeping better accordingly and should be plentier. Often the sale would be much larger if people saw them on sale. Farmers dislike to raise them with corn, as they clog the binder badly. The egg market has settled down to about a 10-cent range ,40 cents for best and 30 cents for long-storage stocks. Some farmers are laughing over the efforts of ignorant people to make the hens lay during the molting season. They say that until that is accomplished the cold-storage problem will be with us. Butter is still quoted at 38 cents maximum to retailers, and retailing at about 40 cents. The price has been very steady for a long time, spite of feed fluctuations and Summer drouths.

J. W. C.

THE BOSTON MILK MARKET.

It was stated by some anthorities that Boston milk receipts were normal during the months of July and August of 1913, yet a recent statement of Dr. Jordan's that Boston did not have enough milk in July to supply the city's wants, and that unless an increase in production is brought about the people will have to turn to milk substitutes, the situation being serious, bears out what we have been claiming was the true situation, and these facts cannot be kept quiet and hidden by the milk buyer, as has been the case much of the time in the past. The low price received by producers of Boston milk has done much to bring the supply to a very low level, and if the statement is true that 3.8 cents per quart is the average price received by producers for Boston milk it is no wonder the supply runs so low throughout the year, even with best producing months. The one thing that can stop a higher price in the near future is the fact that under the new tariff the Canadian supply can be drawn upon, and undoubtedly will be to some extent the coming Summer, as a recent statement by Dr. Davis implies that this will be done. He says, I believe, that the dairymen of New England are alive to the fact that they can, if they wish, supply Boston with milk, and that the dealers would prefer to get their supply from them. In my judgment it would be a serious mistake on their part to let foreign milk come into this market, as if it once comes it is likely to continue. We know that in past times, when shortage was acute, some contractors wished to reach out into territory farther from Boston than this Canadian territory would be, but were refused permission by the city health board. A readjustment of present freight rates would make the idea less tempting, as present rates are in its favor very much, as milk can be freighted from there cheaper than from some points right here in Massachusetts.

It would seem as though the passage of the Ellis milk bill would help keep this milk out, but it is doubtful if this will happen this Winter because of the prejudice and feeling against this bill, largely, I believe, because farmers do not understand the bill, and are suspicious that it is just a move to get them deeper into the mire. However, intelligent, progressive, go-ahead farmers are largely in favor of it, and I believe it would do no harm, and perhaps lots of good. It would certainly do away with half a dozen different inspections we have at present, and put it all under one. It would also look after the dealers more strictly, and keep them under control, and not put it all on the producer. Personally I am neither for nor against it, but I certainly am not afraid it will harm me, and think it will help others who need help. I further believe that it pays to improve and keep up, or, better still, keep a little ahead of the times. I notice those who do are never complaining about the poor returns or price they receive, as they usually have no trouble finding a buyer for their product at a better price than their keep-in-the-rut neighbors receive. Any time one has a superior article to sell some buyer soon finds it out, and is ready to take it off our hands at a fair price.

I still believe the health boards of Boston and Massachusetts are and mean to be reasonable, and will not cause anyone to go to unnecessary expense in making needed improvements. A case to prove this came to my view this Winter. A man in a neighboring town wished to market his milk to the company I sell to, so went to them, but was turned down because of previous bad record with the Boston Health Board. He then came to me and asked me to see them for him, and see if I could get them to take him. I told him what he would have to do, or, rather, my idea of it. He said he would do it if they didn't want too much. I saw the manager, who, after I explained the case, said if I could get the inspector to pass him he would try him. The inspector at first refused, because he knew it was a bad case, but finally agreed if this producer really wanted to get in shape to sell to our company he would see him and tell him what he must do. I again saw the producer, and he agreed to fix up, so I sent up the inspector to see him. The result was the inspector's demands were complied with, the improvements made, and the man is selling to-day to our company. Personally I should have made this party do more than the inspector did before I should have taken him in.

A. E. P.

Massachusetts.

Prices here are as follows: Hay, $10; corn 75 cents; wheat 80; oats 45; barley 50; milch cows $40 to $75 each; butter 35 cents a pound; eggs 35; apples 75 cents to $1.50 per box.

C. O. B.

Canyonville, Ore.

Poultry dealers are paying to farmers, 45 and 50 cents each for live chickens, old and young, small and large, taken together. Dry cows are selling from $20 up; fresh cows from $50 up. Dressed hogs are selling at 9½ to 10 cents per pound; shelled corn $1.50 the hundred; potatoes $1 per bushel; hay in barn from $15 to $18 the ton.

W.

Dover, N. J.

Dairy products and hay are the principal market crops. Hay, choice Timothy, $14 per ton; seller boards hands, pitches hay to press and delivers to car. Low grades $10 to $12; oats 48 to 50; no potatoes shipped; local trade only, 75 cents per bushel. Apple crop a failure. We pay 45 cents per peck, $3.75 to $4 per barrel. Butter retails at 36 to 38; cheese 18 to 20; eggs 40. Most of the milk produced is sold to shipping stations. Price for December $1.90 per hundred. Good cows, to freshen in Spring, bring $50 to $75. Choice Holstein grades, springers or nearby springers, $75 and up.

O. L. B.

Canton, N. Y.

We had a very fine December; it has seemed more like a Southern Winter so far until Christmas night, when we had a severe snowstorm, which came in drifts and has made poor sleighing. Stock has been at large most of the month, very little stock being fed. Some are feeding pigs. Water in limited supply for Winter. A large amount of farm-work done last month, plowing, getting out stones, and general repairing. Times are dull at present; farmers are taking things easy. No cabbage on the move as yet, and not much in farmers' hands, and not very many potatoes, either. Some farms have been sold this month at high figures, considering the kind of property. Wheat 92; oats 40; corn 85; barley 65; hay, mixed, $12; red kidney and marrow beans $2.75; potatoes 50; veal 10½, live; poultry 12; pork 7, dressed, 9 to 10; lambs 6½ to 7½, live; butter 30; eggs 32.

E. T. B.

Canadaigua, N. Y.

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High-Bred Nitrogen-Gathering Bacteria

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SLAUGHTERHOUSE FERTILIZERS

greatly increase Agents' sales, because they produce larger and better crops and enrich soils. Proofs furnished. Quality guaranteed. Prices right. Responsible Agents wanted at once.

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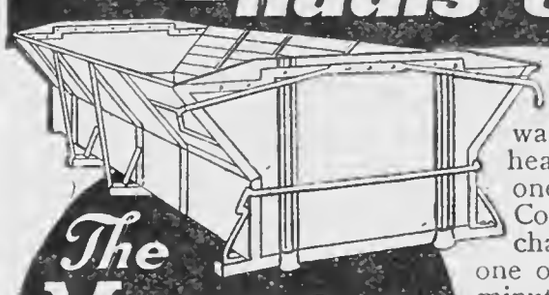
One Wagon Bed -hauls everything!



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All the word arguments in the world can't begin to convince you of the merit of this practical wagon idea. So we say, use this wonderful wagon on your own farm for 30 days—before you send us one cent. Try it out with your own work. Let it sell itself to you. Then after a month's good use decide whether you want to keep it or not. You'll be under no obligations to keep it. We won't urge you.

It is simplicity itself. There are no ratchet springs, complicated gears or intricate cogs to get out of order or cause trouble. Any farm boy old enough to handle a team can make the changes in no time.

Remember, now — we don't want you to send us a penny. Just write — tell us if you want complete wagon with geare or just the convertible wagon bed. The low price will astonish you. So don't hesitate.

Send today without delay for descriptive circular and details of offer. 16

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This No. 6 triple geared, double acting sweep mill has more capacity and will do better work than any other two-horse mill; it

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will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

No.6 Drill and Wheel Hoe

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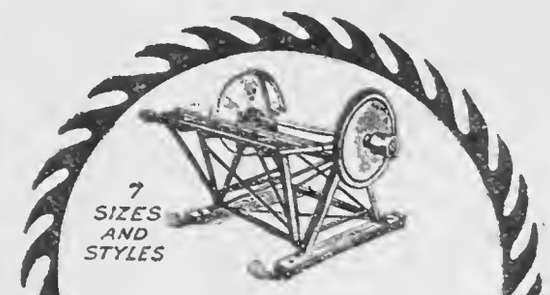

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tells you the money-making cows in your herd Pushing a button gives weight of milk. Saves feeding expense on small milkers. Suitable for any size herd. We are prepared to equip dairies throughout. *Send for our 500-page catalogue "D".*

DAIRYMENS SUPPLY COMPANY
Philadelphia and Lansdowne, Pa.

BUSINESS COWS.

Farmer A. (in auto): "Good morning neighbor! Fine day this!"

Farmer B. (in wagon): "Yes, tolerably. Going to quit milking?"

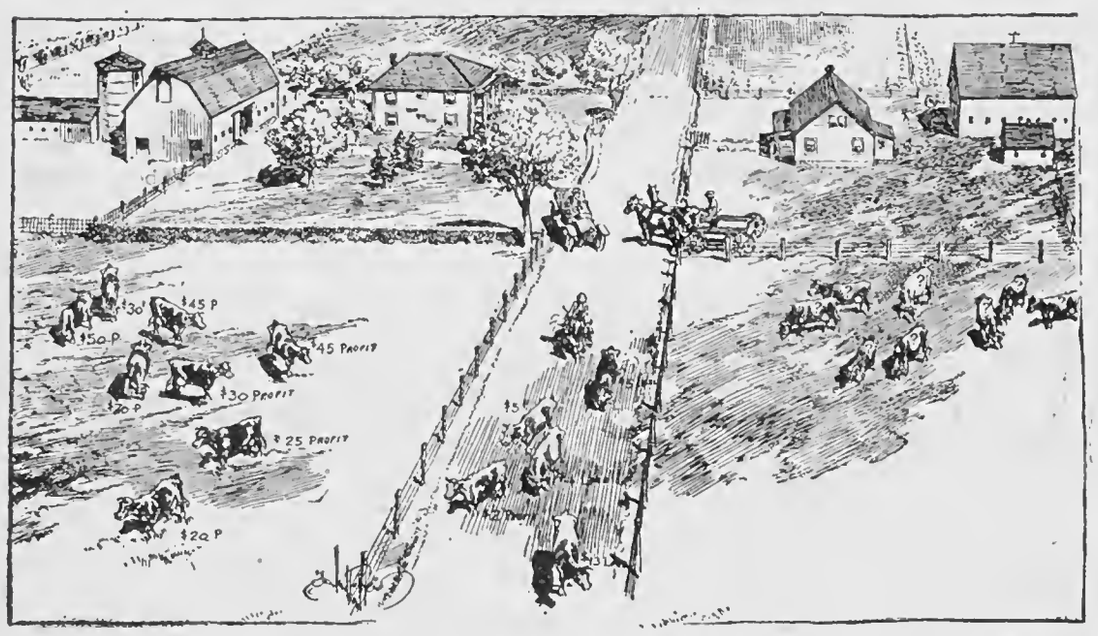
Farmer A.: "No, not exactly. I'm just going to quit milking for fun."

B.: "Well, how's that?"

A.: "These cows are eating their heads off."

B.: "They are, eh? But how do you know?"

A.: "I just weigh and test the milk from the herd and keep a record. Each



A MILK PRODUCERS' CONFERENCE.

cow gets credit for the milk she produces, also for the calf and the manure, then she is charged for the cost of maintenance."

B.: "But isn't that an awful lot of work?"

A.: "Well, it does take a few minutes a day, but I believe I get a dollar an hour for this work. You see it makes all the other work count. Before I kept records, I spent hours of labor on these cows and they didn't even pay for their feed. The labor was all wasted. It alone amounts to about $20 per year for each cow, to say nothing of the feed she consumes."

B.: "What is the matter with that brindle? She looks like a good one."

A.: "Yes, she made a profit of $5, but what is the use of keeping such a cow when you can just as well have one that nets $20 or more? These cows I'm selling averaged a loss of $2 each year, while those in the pasture averaged $39.37 profit. How much profit do your cows make?"

B.: "Well, let me see; really don't believe I know."

R. N.-Y.—The above dialogue with the picture printed above is taken from a bulletin issued from the North Dakota College. It was originally issued as a poster to be displayed in banks, stores and other public places. On the poster pictures are shown a dipper for taking cream samples, scales, Babcock tester and a statement of cow records. The following is also printed:

A Few Rules for Feeding.

GRAIN MIXTURE.

1. Feed one pound of grain mixture for each three or four pounds of milk produced daily, or—

2. Feed as many pounds of the grain mixture daily as the cow produces butterfat per week, or—

3. Feed all the grain mixture the cow will eat without gaining in weight.

ROUGHAGE.

1. Feed the average cow all the hay, fodder and straw she will consume without wasting it. If corn silage or roots are available, feed from 20 to 40 pounds daily in place of some of the roughage.

2. Alfalfa hay has a feeding value about equal to bran or oats. When it is fed, the quantity of grain mixture can be cut down.

All this may not seem very dignified to some of our scientists, but it is needed popular education.

SYMPTOMS OF TUBERCULOSIS.

Would you at some convenient time give a good article on tuberculosis, some of the first symptoms by which the farmer would have his suspicions aroused?

Lime Rock, Conn. W. B.

Assuming that you have reference to tuberculosis in animals, there are, unfortunately, no symptoms by which the disease in its earlier stages can be recognized, and ordinarily, there is nothing to arouse the suspicion of the owner until the disease is well advanced; frequently not then. It is often assumed that a tuberculous cow will cough, but unless the lungs are involved, cough is due to irritation of the respiratory tract from some other cause than tuberculosis. Enlarged glands about the neck, udder, or other portions of the body are frequently tubercular, and a general "out of condition" appearance which is obviously not due to care and feeding, should excite suspicion. The hair may be rough, pointing toward the head, the eyes dull, the hide tight, the appetite poor, and the general attitude one of deficient vigor.

Not only are the earlier stages of tuberculosis unrecognizable in cattle by unaided observation alone, but frequently the most advanced cases, as discovered by autopsy, are found in the sleekest, and apparently healthiest, members of the herd. It is not at all uncommon to kill a will become, dangerous and those which render the products of the animal unfit for use. M. B. D.

"ROBERT," asked the teacher, "did you throw any of those paper wads sticking on the blackboard?" "No," replied Robert, "Mine didn't stick."—Judge.

"WHERE'S your son, Hiram?" "Going to an agricultural college." "I've heard them colleges ain't practical." "You heard wrong. They put 'em right out in the field. My boy writes that next year they're going to let him take care of centre field."—Pittsburgh Post.

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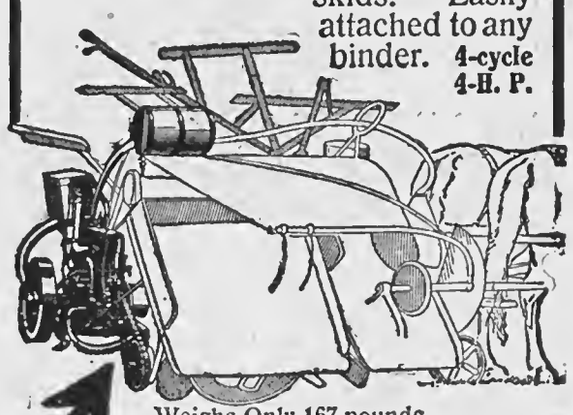
Better than 4 horses without the engine. Team simply draws machine. Engine does all operating. Sickle never stops when bull wheel skids. Easily attached to any binder. 4-cycle 4-H. P.



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The Original Binder Engine

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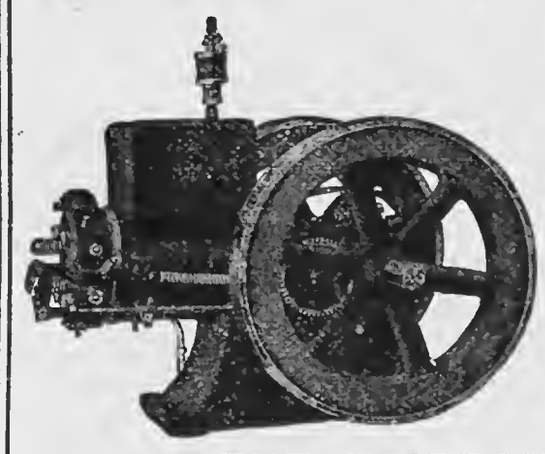

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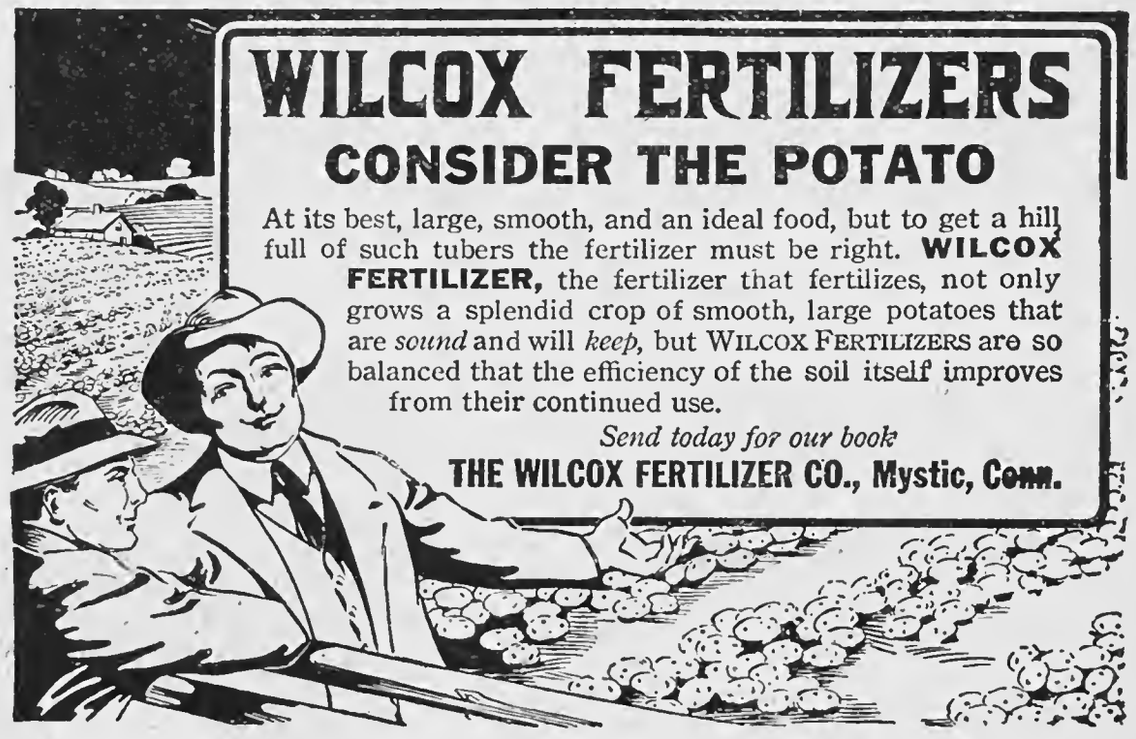
Rock Phosphate has been thoroughly investigated by the agricultural authorities and tested in the field by the leading Experiment Stations. It has proved to be the most profitable fertilizer on all soils deficent in Phosphorus, and the the soil surveys show this deficiency in 90% of the cultivated land in the Eastern and Central states. A review of these experiments and much valuable general information about fertilizers is given in "The Farm That Won't Wear Out," by Dr. Cyril G. Hopkins. This book will be sent free to the first 100 farmers who write to us for delivered prices on *Rock Phosphate*, and state where you saw this ad.

FEDERAL CHEMICAL COMPANY,
Ground Rock Deparment COLUMBIA, TENN.



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THE "CAST" HORSE.

A "cast" horse is one that gets down in the stall and is unable to rise. This is a common and often fatal accident, that might in many instances be prevented. Why does a horse become cast? That question is frequently asked, and cannot be answered in a word, for there are several causes of casting. It may happen from the halter rope or strap (shank) being so short that when the horse tries to rise he is held too close to the manger and his feet slide under it, keeping him down. Where the manger and hay rack do not come down flush with the floor a dangerous open space is left into which the feet are apt to slide and become caught, and we have known of at least one case where the horse got his head caught in the same way and broke his neck. The accident is also liable to happen in a stall that is too narrow or too wide. In the narrow stall the horse rolls up against the partition, and is unable to get up, or he turns partly around in a wide stall to scratch his tail and becomes caught and cast. When rolling in a wide stall, or box stall, the horse may get his shoes caught by the heels under a partition board that does not come down flush to the floor, and then finds he is unable to rise. Sometimes a horse manages to kick his foot through a thin partition board, or between two weak boards, and in struggling to free himself falls and stays down. Often the leg is fractured when such an accident occurs. Casting may also occur in another peculiar way. The standing horse, when scratching his ear or head with a hind foot, gets the foot over the halter rope or caught in halter, and goes down in a heap, kicking and struggling until he becomes exhausted. In one case on record a horse when scratching his head got a foot "impaled" upon one of his long, sharp tushes (canine teeth), severed an artery, went down and bled to death. The latter accident could not well be prevented, but the other causes mentioned above might well be removed.

The manger should always come down flush with the floor, leaving no space to trap the horse. This also prevents festering manure and trash from collecting at the head of the stall, and incidentally closes a favorite highway of rats. A stall should not be less than four feet six inches, or more than five feet two inches in width for ordinary horses. Very large draft horses need a trifle more space, but for them it should not be excessive. A brood mare should not stand in an ordinary stall when heavy in foal. So stalled she is afraid to lie down, hence suffers from dropsical swellings of the abdomen, or "stocking" of the legs; or she lies down and becomes cast. Many a mare has aborted as the result of this accident, and in more than one instance we remember of mares dying under such circumstances. Give the brood mare a roomy box stall when in the stable, and see that she is abundantly exercised every day. Stall partitions should be made of long, strong, thick planks braced at the center of the partition and at each end. Such planks "give" but do not break or splinter when they are kicked or rolled against by a horse. Partitions built of short planking put in perpendicularly are dangerous. The horse may kick an opening between two planks, catch his foot in it and go down or break his leg. In box stalls, which should never be less than 8x8 feet in size, and ought to be 12x12 feet, the partition walls should come flush to the floor, and better still, should be slightly sloped toward the center of the stall to lessen the likelihood of the horse's shoes becoming caught when he rolls. Box stall partitions sloped inward a foot also prevent a horse from rubbing his tail. Such walls are best used in box stalls over 12x12 feet in size. The partitions of a colic box stall in a veterinary hospital should be well padded. Halter ropes or straps should be sufficiently long, have "sinkers" of wood or metal attached to their free ends, and work freely through large metal rings. It is a mistake to fasten the halter directly to the manger.

When a horse is found cast in his stall do not become "rattled," as often occurs. Many a horse has been shot as paralyzed that would get up in time if sensibly treated. Remember that when a horse has been cast for a long time the hind leg on the under side tends to become numb or cramped from lack of circulation of blood. In this condition it is useless to the horse. Pull the horse out of the stall, if that is found possible. Never try to make him get up when it is seen that he is cast. He has tried his best to rise and failed. If he cannot be pulled into the runway at the rear of the stall, *pull down the partition against which he is cast;* then roll the horse over and examine the legs that he has been lying upon. One of them may be broken. That often is found to be the case, and usually necessitates the destruction of animal. If the legs are found intact proceed to move them thoroughly and massage the muscles to stimulate normal circulation of blood. A stimulating liniment rubbed upon the muscles will more quickly induce the circulation. After the extremities have become warm and sensitive encourage the horse to rise. If he cannot do so have several men assist him, if necessary helping to lift him by means of a folded canvas sheet or even a wide plank passed under his belly.

Before shooting a cast horse that is unable to rise, although his leg is not broken, have the veterinarian use the catheter to draw off the urine. Azoturia often is brought on by the struggles of a cast horse that has been standing idle in the stable. The urine in such a case will be found dark red-brown in color, or like strong coffee. The disease may prove curable by the intelligent treatment of a qualified veterinarian.

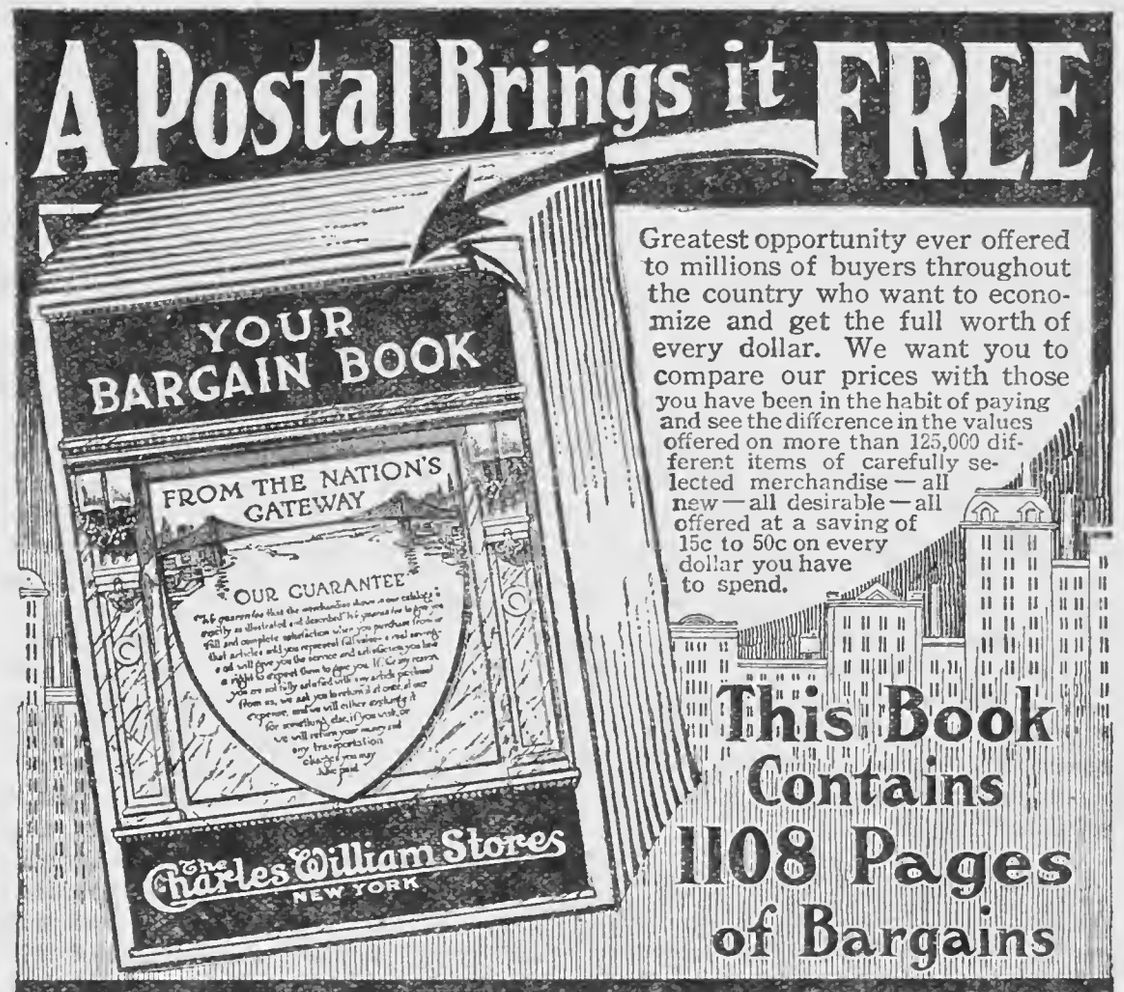
A. S. ALEXANDER, M.D. C.

Experience With Dairy Breeds.

I have been much interested in your discussion of breeds. I will give my experience on the subject, and perhaps some "back-to-the-lander" may profit by it. I have bred Holsteins, Jerseys and Guernseys, have sold milk, butter and cream. I have weighed the milk and kept its record. So the following information is nearly accurate as a busy farmer can have it. It might be well to note here that this is a very rough hilly farm, like thousands of our New England farms, and my experience has been altogether on rough rocky New England farms where cows cover miles in a day while in pasture to secure food.

The Holsteins I have had in the past have been great, large-boned cows that would eat in a day 10 pounds of silage and 25 pounds of hay, besides a large grain ration. As we are told by the experiment station that large cows are the only cows, therefore I was quite sure I was on the right track, for these great big sleepy cows gave more milk and cream than nearly two of the Guernseys or Jerseys in the same barn, and I was positive that a large, bony, big-feeding machine in the shape of a Holstein was the only cow to have. But in the Spring, when I turned out my cows in the large stony pasture in the hills with all those beautiful trickling springs, the would-be back-to-the-lander dreams of my Holsteins began to get poor in flesh, shrink in weight and milk. Not so however with the smaller rustlers, the Guernseys and Jerseys. They were scrabbling over rocks here and there, never tiring, and through the Summer months and early Fall I became positive that Jerseys or Guernseys were the only breed for a New England farmer to own. But at the same time I had a warm place in my heart for the Holstein cows and could not give them up. So after a year of careful search I found a breeder who had my New England type of a Holstein, which he had been working up for years. They have the energetic vigorous, active temperament of the smaller breeds. They have also the large muzzle and barrel of the big Holstein cow. But they have not the bones, their bodies are compact but not beefy, although they make better beef than the cow with so much bone. They have the milking qualities for which the Holstein is noted and at the same time will rustle for a living on my rough pasture with any of the smaller breeds.

I do not like small cows, but on our rugged, New England hills there is a limit to size, unless you can combine it with activity. This is a quality which does not exist to any great extent as a rule in a large big-boned cow. But it is not the breed that makes the success in dairying; it is the man. There are successes and failures in all breeds, due solely to the man and not the breed. H. G.



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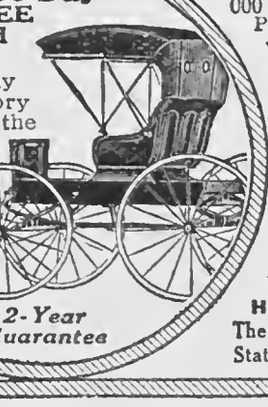

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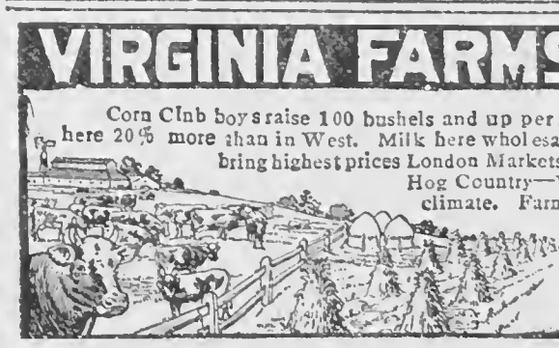

F. H. LaBAUME, Agrl. Agt.
Norfolk & Western Ry. Room 265
N. & W. Bldg., Roanoke, Va.

PUBLISHER'S DESK

We did not break our record for January 2nd, our first business day of the new year; but we did beat all records for the last month of the old year. We keep our records and compare results day by day. The first week or two of December we were a little behind, but towards the middle of the month the mails increased, and kept up right along to the last day of December. We are always anxious to have a good showing for the day after New Year's, as this begins a new annual record, but we are not disturbed when, as in this case, the returns are only a trifle under the records of the previous year. With the enlarged paper and the increased expense, it, of course, is necessary to have a regular increase, and we want subscribers who are interested in the paper and its progress to know just what is being done. All can help much by prompt renewals. It saves time and expense, and leaves us free and confident to pursue the work of making the paper useful and helpful.

A short time ago I shipped a case of eggs to Johnstone & Coughlan at 172 Duane street, New York, whose advertisement has recently appeared in your paper. At the time of the first shipment I wrote them mentioning THE R. N.-Y. They reported that the eggs sold for 50 cents and made proper returns. A week later I shipped another case of the same kind of eggs, equally fresh and at least a little larger, and they reported the sale at 40 cents. In the meantime the market had advanced seven cents per dozen. I wrote them a week ago asking the reason, but they do not reply. My eggs are pullet eggs, and probably will not bring the highest price, but I see no reason for a drop of 10 cents when the price is advancing. I am enclosing the account sales. R. A. W.

New York.

Johnstone & Coughlan's explanation of the above complaint is that the shipper was fortunate in getting so high a price for the first shipment of eggs, and state that the shipment complained about was sold at 42 cents per dozen and returned to the shipper 40 cents. The account sales shows that these eggs were received by Johnstone & Coughlan on their own account, and were not handled on a commission basis. The firm has given us the name of the purchaser of this consignment of eggs, and we believe the eggs were sold at 42 cents per dozen, as stated. We, however, are unable to understand the evident desire of Johnstone & Coughlan to evade the commission merchant's law by accepting farm products on their own account instead of selling on a commission basis, as formerly. We therefore wish to withdraw the implied endorsement of this firm by THE RURAL NEW-YORKER because of having previously accepted the advertising of the firm. We shall not do so in the future.

Some time ago you took up a claim for me with the Lake Shore and Michigan Southern Railway regarding a claim for the killing of six shotes. I am glad to say that your services have been availing and I have check for $50 for same. Furthermore they have, at my request, placed cattle guards at the crossing. I cannot thank you too much for your kindness and attention. The kindly spirit which is back of your paper is what is and has been winning you so many friends. That you prosper ever is my sincere wish. S. R. W.

Michigan.

The subscriber tried for some time to get attention, but could not get reply from railway, so that we are gratified to know that our little service brought such prompt and encouraging results.

I sent Mrs. Arthur Hawkins, Goshen, N. Y., $1 for 15 White Orpington eggs. I cannot get any reply, although the postmaster states the money order has been paid. She does not answer my letters. O. A. H.

New York.

Mrs. Hawkins failed to reply to our inquiries also. This, experience will have to be charged up to profit and loss, but our readers will be warned for another season.

The Federal Grand Jury that has been investigating Florida land companies ended its work to-night by returning indictments against two officers of the Miami Everglades Land Company, and four men connected with the Everglades Plantation Company. The men are Edward Van Asmus, Frank M. Perkins, S. J. Mattocks of Kansas City, and R. Ernest Perkins of Brookfield, Mo. The Government charges that the Miami company sold 17,000 acres of land west of Miami, Fla., on which it realized a profit of approximately $165,000. The other company, the Government alleges, sold 10,000 acres of land west of Fort Lauderdale, Fla., realizing a profit of $136,000. The Government charges that the land was underdrained and unfit for cultivation. It is charged in the indictment that these promoters represented that Everglade "muck," did not need to be fertilized in order to raise good crops and was shown by chemical analysis to be the richest natural soil known anywhere. Of course, some kind of crops would flourish better by being fertilized, but the best crops he had ever seen were grown on the Everglade lands without any fertilizing.—Kansas City Despatch.

Is it worth anything to the farmers of this country to be warned in advance against schemes of this kind? The profits on these two schemes alone would nearly pay for the entire subscription list of THE R. N.-Y. for three years; and for the last five years we have been warning northern farmers against the fake promoters in the Florida Everglade lands. While other papers—some of them very high-toned—have been accepting the advertising of Florida promoters, we have been telling the truth about them, and now the action of the Post Office Department has confirmed our information. Every individual subscriber has not profited by our advance showing up of this scheme, because they have not all had any thought of investing in Florida swamps, but it is evident that this $300,000 would have been saved to the deluded investors who enriched the swamp promoters, if our information could have reached them. This is a service, which as far as we know, no other paper attempts, and it seems to us to justify the suggestion that old friends of THE R. N.-Y. use their influence to increase its circulation among fellow farmers.

It was an unexpected pleasure to read the $10 voucher yesterday. It was a just claim long drawn out, and I am under many obligations to you and your valuable paper. W. G. D.

Massachusetts.

Household furniture shipped over the Central Railroad of New Jersey was damaged in transit so badly that it could not be repaired. The claim was entered at the lowest amount of value consistent with the damage, but the claim was declined on one basis or another, and it was only by persistent effort we were able to get it closed out in seven months.

The E. G. Lewis scheme up in San Luis Obispo County, California, is the most gigantic swindle of the age, and the marvelous part about the whole business is there are suckers who really believe the fellow, even after all the exposition and publicity THE R. N.-Y. gave him. I was up that way last Spring, and all the vegetation growing on a square mile of the country could have been put in a bushel basket, and no water developed to grow more. P. G.

California.

The above is from a man who probably knows more about the land schemes on the California coast than any other one man in that State. After collecting money from the people on something like 75 schemes, covering a period of 15 years, and collecting in all ten to twelve millions, all of which was lost to the dupes, he is now working the California scheme, and deluded women are still sending him their money.

I have been a subscriber to THE R. N.-Y. for many years, and have read the fakers with interest, and now I think I am faked myself. I judge the woods are full of this sort of fairies at this time. I am judging by the many circulars that come through the mail. I ordered some automobile tires from the Goodwear Rubber Company, of Cincinnati, Ohio, enclosing my check for $17.95 to pay for them. They acknowledged receipt of the order, and same would have prompt attention. A letter inquiring why the tires were not sent was returned unopened. I then looked up my check and found it had been deposited at Dayton, Ohio, but no tires have been received yet.

Tennessee. A. W. W.

Our letters were also returned with the information that the company had "gone and left no address." The history and papers in the transaction have been turned over to a post office inspector.

J. J. D.

"YOU eat very little, Mr. Smith," said the maiden coyly to the bashful lover who had been invited to share the family Christmas dinner. "Yes," replied he, and for once he saw a chance, and, grasping his courage, he said: "To sit next to you, Miss Grace, is to lose one's appetite."—Ladies' Home Journal.

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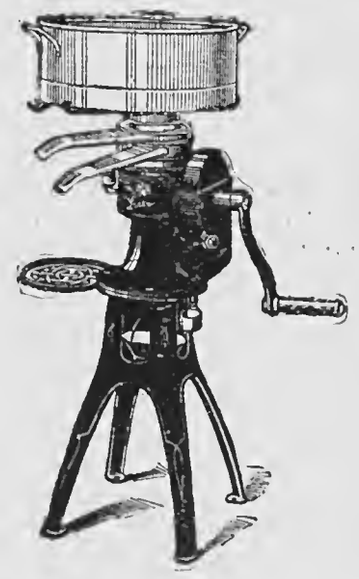

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PRODUCTS, PRICES AND TRADE.

BUTTER.

There has been a drop of two or three cents on the higher grades of creamery. Business has been dull and receipts increasing. Very few sales of best creamery are noted above 35 cents, 30 to 33 cents covering a large amount of trade. State dairy is practically unchanged, mainly because of light receipts. The top price quoted, 32 to 33 cents, is extreme. Trade in factory and packing stock butter is quite active at 18 to 21 cents. Storage creamery is selling at 25 to 30 cents, exceptional qualities one cent higher.

MILK.

A considerable surplus has been reported at New York for the past two or three weeks. Dealers usually magnify this surplus and make it a strong argument toward lower prices—for the farmers. It seems doubtful, however, whether recent contract prices will be cut unless weather conditions in January prove specially favorable for a heavy milk flow. The probabilities are against this as January usually runs. Prices during December, and now prevailing to a large extent, are 3¾ to 4 cents for B, and 3¼ to 3½ cents for C. These figures in the 26-cent zone make a gross of $1.81 to $1.91 for B, and $1.61 to $1.71 for C. Retail prices to restaurants and hotels run from 6 to 6½ cents for users of two to three cans per day.

EGGS.

The advance in price of fancy eggs at New York two weeks ago was apparently unwarranted, as trade at once slackened, and although there has been a drop of six to eight cents on other grades, business still remains quiet. From 38 to 42 cents covers a large range of this trade now. Holders of both fresh and storage stock are making urgent efforts to move their surplus, cutting prices when sales seem a probable result. Usable storage eggs can be had at 28 to 30 cents. Western fresh gathered are selling from 33 to 35 cents. Fresh eggs from China are reaching the Pacific Coast in commercial quantities. They are better than average grades of storage in spite of their 4,500-mile trip. Fair to choice eggs along the Coast are selling at 35 to 45 cents.

POULTRY.

The market is very dull on both live and dressed stock. The demand for turkeys is extremely light, so that dealers with supplies held from the holidays are having a hard job to get rid of them at anything over 18 cents. The only item in the whole list that shows any activity is roasting chickens, which sell at 23 cents or a trifle more if fancy. Choice fowls go mainly at 15 to 17 cents, and under grades 12 to 14 cents.

APPLES.

Prices remain about the same as for several weeks. An occasional lot of choice Baldwins brings $5, but $4.50 is the top for most varieties, and under grades go from 75 cents to $1 less. Western bushel boxes bring $1.50 to $2.50; exceptionally fine $3, which is well toward four cents each.

POTATOES.

An advance of 15 to 25 cents per barrel is noted in the better grades. Considerable of the foreign stock on hand is poor, rarely exceeding one cent per pound. Holders at country points are not anxious to sell, believing that a primary price of at least $1 per bushel may be had without materially lessening consumptive trade. There is considerable indication that this price, or even more, may prevail for best stock. The crop for the entire country is considered to be above the 10-year average, but this is not a safe basis on which to figure prices unless the great increase in population is taken into account.

Foreign beef to the amount of 9,000 tons arrived in this country during October and November. Canada sent nearly one-half, 4,000 tons, the remainder coming from South America and Australia. Argentina supplied 3,000 tons. The large concerns have quite thorough control of these importations, but in December there were independent shipments of about 1,700 tons from Argentina. These may increase sufficiently to make some price reduction. There is more hope of lower prices on foreign mutton than beef, however, as mutton is not so profitable for long storage, and there is less expensive hotel demand for mutton than beef. Every hotel that amounts to anything must have its choice cuts of beef for steaks and roasts, and its "spring" lamb; but mutton is in a different class, and the only thing necessary to increase home production of this excellent but cheaper meat is a curtailment of the dog crop.

A cargo of Australian wool, the largest ever received at San Francisco, arrived January 4. There were 1,800 bales, valued at $100,000.

New York harbor received 9,654 vessels from foreign countries last year, 2,664 being sailing craft. From our own coast there were 2,693 steamers and 2,195 sail, mainly schooners.

There were 16,000 failures in commercial business reported in this country during 1913, totaling $272,500,000, which is considerably above a normal year. New York State made the most disastrous showing, 2,728 failures, with liabilities of $72,800,000, or $22,000,000 in excess of 1912. Illinois came next, with 1,081 failures for $20,500,000.

Fall River, Mass., textile concerns have had an unusually prosperous year, dividends totaling $2,075,452 having been paid by 32 corporations reporting. This is an interest rate of 7.1 per cent on the capital, and 2.85 per cent more than in 1912. An increase of nearly 40,000 spindles is noted in these mills. W. W. H.

MARKETS

Wholesale Prices at New York,

Week Ending Jan. 9, 1914.

BUTTER.		
Creamery, extra, lb	34	@ 35
Good to Choice	28	@ 32
Lower Grades	22	@ 26
Storage	22	@ 33
State Dairy, best	31	@ 33
Common to Good	22	@ 30
Factory	18	@ 22
Packing Stock	17	@ 20
Elgin, Ill., butter market firm at 35 cents.		
Philadelphia, western creamery, 36 cents.		
CHEESE,		
Whole Milk, best	17	@ 17½
Common to Good	14	@ 16
Skims	05	@ 10
EGGS.		
White, choice to fancy, large	38	@ 40
Common to good	34	@ 37
Mixed colors, best	34	@ 35
Common to good	31	@ 33
Storage, best	29	@ 30
Medium and low grades	23	@ 26
European, fresh	25	@ 29
FRESH FRUITS.		
Apples—Spitzenburg, bbl.	3 50	@ 4 50
Spy	3 50	@ 4 50
King	3 00	@ 5 00
Hubbardston	3 00	@ 4 50
Greening	3 50	@ 4 75
York Imperial	3 50	@ 5 00
Baldwin	3 50	@ 5 25
Western, box	1 50	@ 2 75
Pears—Kieffer, bbl.	2 00	@ 3 75
Cranberries, Cape Cod, bbl.	10 50	@14 00
Long Island, bbl.	9 00	@13 00
Jersey, bbl.	12 00	@14 00
Jersey, crate	2 50	@ 3 00
Strawberries, Fla., qt.	35	@ 0 50
BEANS.		
Marrow, 100 lbs.	4 75	@ 5 30
Medium	3 60	@ 3 65
Pea	3 35	@ 3 65
Red Kidney	5 15	@ 5 25
White Kidney	5 75	@ 5 85
Yellow Eye	4 65	@ 4 70
Lima, California	5 85	@ 6 00
HOPS.		
Prime to choice	45	@ 48
Common to good	40	@ 44
Pacific Coast	23	@ 27
Old stock	15	@ 18
German crop	68	@ 72
VEGETABLES.		
Potatoes—Long Island, bbl.	2 25	@ 3 00
Maine, 180 lbs.	2 25	@ 2 60
State, bulk, 180 lbs.	2 25	@ 2 50
European, 168 lb. bag	1 65	@ 1 90
Bermuda, bbl.	3 00	@ 4 75
Sweet Potatoes, bbl	1 00	@ 1 50
Artichokes, doz.	2 00	@ 3 50
Beets, bbl.	1 50	@ 1 75
Brussel sprouts, qt.	4	@ 14
Carrots, bbl.	2 00	@ 2 25
Cucumbers, bu.	2 00	@ 3 50
Cabbage, Danish seed, ton	27 00	@30 00
Red	27 00	@31 00
Imported	23 00	@26 00
Celery, doz.	25	@ 75
Cauliflower, bbl.	2 00	@ 5 00
Kale, bbl.	50	@ 60
Lettuce, half-bbl. basket	75	@ 1 50
Onions—White bu.	1 50	@ 2 35
Red, 100 lb bag	1 75	@ 2 15
Okra, bu.	2 00	@ 2 50
Peppers, Southern, bu.	1 25	@ 3 50
Peas, Southern, bu.	2 00	@ 6 00
Radishes, 100 bunches	1 00	@ 1 50
Shallots, bbl.	2 00	@ 4 00
Salsify, 100 bunches	5 00	@ 6 00
Spinach, bbl.	75	@ 1 00
String Beans, bu.	1 50	@ 4 50
Squash, Marrow, bbl	2 00	@ 2 25
Hubbard, bbl.	2 00	@ 2 50
New, bu	1 00	@ 2 00
Egg Plants, Southern, bu.	2 50	@ 3 75
Tomatoes, Southern, 6 bkt. crate	2 00	@ 2 75
Turnips, white, bbl.	1 25	@ 1 50
Rutabaga	75	@ 1 15
HOTHOUSE PRODUCTS.		
Cucumbers, No. 1, doz.	1 00	@ 1 25
No. 2, box	4 00	@ 4 50
Mushrooms, lb.	10	@ 25
Radishes, 100 bunches	2 00	@ 3 00
Tomatoes, lb.	20	@ 25
LIVE POULTRY.		
Chickens, broilers lb	15	@ 16
Fowls	15	@ 15½
Roosters	11	@ 12
Ducks	16	@ 18
Geese	13	@ 15
Guineas, pair	60	@ 65
DRESSED POULTRY.		
Turkeys, fresh killed, best	23	@ 24
Common to good	16	@ 20
Chickens, choice broilers, lb	26	@ 28
Broilers, common to good	21	@ 24
Roasters, fancy	23	@ 24
Fowls	14	@ 18
Ducks	10	@ 17
Geese	14	@ 17
Squabs, doz.	1 00	@ 5 50
HAY AND STRAW.		
Hay, Timothy No. 1, ton	20 00	@21 00
Standard	19 50	@20 00
No. 2	18 00	@19 00
No. 3	15 00	@17 00
Clover mixed	13 00	@18 50
Straw, Rye	15 00	@17 00
Oat	10 00	@11 00
LIVE STOCK.		
Native Steers	6 25	@ 6 85
Bulls	5 00	@ 7 40
Cows	3 00	@ 6 60
Calves, prime veal, 100 lbs	9 00	@13 00
Culls	4 00	@ 8 00
Sheep, 100 lbs	3 50	@ 5 35
Lambs	7 00	@ 8 50
Hogs	8 00	@ 8 80

"PICK-WICK" Send for 1914 samples to the WALL-PAPER'S. **WELLER BROS., Scotch Plains, N. J.**

Farm Hands and Laborers Supplied Free
We have many men anxious to learn farm work.
C. K. Blatchly, United Charities Bldg., 105 E. 22d St., N.Y. City

What YOU Want
in a Sprayer is a machine that will Spray Fruit Trees, Shade Trees, Potatoes, Vegetables, Anything. Everything. **EVENLY, REGULARLY, THOROUGHLY** and at **MINIMUM TOTAL EXPENSE.**
That is just exactly what the
Deyo Power Sprayer
is, and we would like very much to send you right now a **"DEYO" SPRAYER BOOK** which is fully illustrated and tells all about the famous Deyo Power Sprayer and Engines.
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22 Washington St., BINGHAMTON, N. Y.
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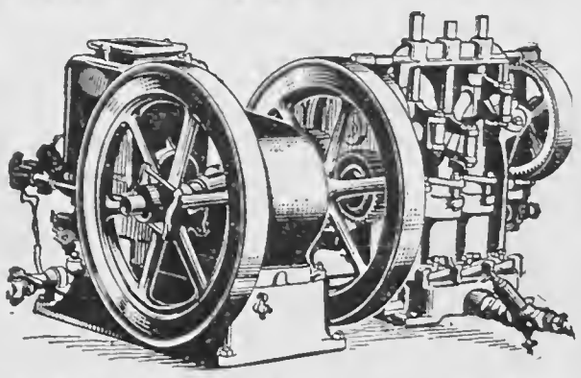
REAL SPRAYING MEANS MORE & BETTER FRUIT



EVERY FARMER AND FRUIT GROWER
Knows that he must spray to make money. That's been proved often. It is a settled **FACT.** But the sprayer to buy? That is the question. We have been selling our engines and spray pumps to others who put them together, add a tank and then sell them under their name. Now we are coming direct to you with the **EXCELSIOR.** To buy the **EXCELSIOR MEANS BUYING THE BEST.** Send your address for proof. State size farm you have or what you are going to spray. Power for the farm or factory 1½ to 600 H. P. Ask for the kind you are interested in.
R. CONSOLIDATED GASOLINE ENGINE CO.
202 FULTON STREET, NEW YORK CITY

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages.

WANTED—Position as manger of farm; American; married, age 28; temperate; references furnished. Address WM. BAIRD, Silver Creek, N. Y.

WANTED—A position on farm, care of horses preferred; understands painting; or would take a position in country store. BOX 197, Waldwick, N. J.

AMERICAN, 21, desires position on Single Comb White Leghorn farm as manager or assistant manager; former experience on large farm. Address A. B. C., Danbury, Conn.

YOUNG AMERICAN—Married, one child; strong, intelligent, wishes position on up-to-date farm or estate; some experience. Address A., care of R. N.-Y., 333 West 30th St., New York.

COMPETENT FARMER—Married, desires position as manger; understanding all about fruit culture, also poultry business; reference. Address W. FARMER, Catskill, N. Y.

WANTED—A position on poultry and fruit farm by young man; strictly temperate; agricultural college training and experienced; best of references. Apply RAYMOND G. PAINE, Delhi, N. Y.

POULTRY—Single man desires position of trust on poultry plant; 10 years' practical experience; agricultural college training; knowledge of apple growing; references; state wages. Address BOX M, care R. N.-Y. 333 West 30th St., New York.

POSITION WANTED as superintendent private estate; married; 35 years; sober, industrious; understands horses, game, etc.; well educated, versatile and good executive ability; highly recommended. Apply CAVANAGH, 270 West 43rd St., New York City.

WANTED—Position as farm manager, superintendent; married; 38 years; practical life experience; all branches of farming, gardening, fruit growing, dairying; first-class executive ability; strictly sober, honest, reliable; references; state salary. Address RELIABLE, care R. N.-Y., 333 West 30th St., New York.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

WANTED—Working manager for 100-acre farm, Dutchess County; fruit, vegetables, poultry; must be experienced; state terms expected; single man preferred. Address C. M., care of R. N.-Y., 333 West 30th St., New York.

FRUIT TREES trimmed by practical fruit grower and largest peach producer of Bergen County, N. J.; special rates for winter contracts. H. W. COBB, Glen Rock Fruit Farms, Ridgewood, N. J.

WANTED—Two good milch goats. Address A. S. TILMAN, 128 S. Cass St., Wabash, Ind.

WANTED—Responsible customers for strictly fresh white eggs. Write WILLIAM H. CRAFT, Northport, L. I.

HANDSOME STRING HAND-MADE BEADS—Lavender, red, pink and buff; $1.50. MARY A. FELTHOUSE, Elkhart, Ind.

HIGHEST MARKET PRICE PAID for Low's Champion Bush Bean Seed by F. H. HAYES, Dexter, Me.

OYSTERS IN THE SHELL—Fresh from the beds; will exchange for apples, early seed potatoes or beans, or sell at reasonable price; will treat you right. WILLIAM LORD, East New Market, Md.

FOR SALE—25-acre farm, good buildings, fertile Alfalfa soil, young fruit trees. Near railway town. JULIUS MILLS, Fillmore, N. Y.

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FARM FOR SALE—225 Acres. Apply to owner, BOX 337, Emporia, Virginia.

FOR SALE—80-Acre Farm, good buildings, large orchard, telephone, home markets, 80 miles from New York. FRANK FAULKNER, Mount Bethel, Pa.

WANTED FARM—About 25 acres; Connecticut; small house, barn; near town; good neighborhood; about $2,000. BOX 66, Milliugton, New Jersey.

WANTED—Small farm, adapted to fruit and poultry near good markets; state full particulars with lowest price. J. H. G., care R. N.-Y., 333 West 30th St., New York.

FARM FOR SALE—89 76/100 acres; good buildings; fruit of all kinds; situated within six miles of the great manufacturing city of Canton, Ohio. A. J. KEEHN, R. F. D. No. 6, Canton, Ohio.

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FERTILE FARMS—near Philadelphia—Mild climate, excellent markets, catalog. **W. M. Stevens, Perkasie, Pa.**

$11,765 BUYS 181 ACRES
30 miles from Buffalo, 1¾ from village; rolling, loam soil; no stones; 12 acres timber; abundance fruit; bldgs. worth $5,000. Including 27 choice Holsteins, 3 horses, 2 sows, 70 hens, all fodder, sugaring tools, farming tools, latest milking machine. Easy terms. Free list. **C. J. ELLIS, Springville, New York**

GOOD SALESMEN WANTED
To Sell Fruit Trees
Best terms known to the nursery world. Steady pay; cash weekly, *exclusive territory*, commission on mail orders. Big money made every day selling our exclusive specialty and all our other hardy fruit trees, vines, etc. Satisfaction and profit from every tree. All the year around profitable and pleasant work. We pay freight deliver, collect. You can be our county manager if you write today. Let us fully explain our New Idea.
FREE TREES FOR TRAVELING EXPENSES
MISSOURI NURSERY CO., Box 72, LOUISIANA, MO.

Save $300.00 to $1000.00 On Your New House!

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5000 BARGAIN OFFERS

In Sash and Doors, Lumber Roofing, Shingles, Paints, Builders' Hardware

and Everything Needed to Build, Remodel or Repair

Here are a few of the 5,000 separate and distinct Special Bargain Offers on Building Material in the Grand Free Millwork Catalog. Goods may be ordered direct from this advertisement, under our Guarantee of Satisfaction or Money Back.

Look Here!

More Bargains!

We do an immense business in Paints and Varnishes, Window Glass, Builders' Hardware and the thousand and one miscellaneous items used in modern homes. Here are a few samples:

PAINT

Gordon-Van Tine Ready Mixed Quality Paint is guaranteed pure paint.

Quality House Paint, per gallon can, $1.22. In barrels, price per gallon, $1.10. Furnished in all shades and colors. Quality Barn Paint, per gallon, 75c. Paint Brushes, eaeh, 12c. Paint Brushes, oval, each, 22c. Whitewash Brushes, eaeh, 21c.

WINDOWS and GLASS

Cheek rail windows, glazed, 74c up. Plain rail windows, glazed, 66e up. Transoms, glazed, 40c each.

Bargains in Window Glass

8x10 window glass, 3½c per light. Any size, large or small, at equally low prices.

Dealers eharge five to ten times our prices on glass.

Write for sensational offers. Safe delivery guaranteed.

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No. 1 Northern Lath, extra quality, clean, bright stoek, 4 ft. in length, priee per 1,000 laths, $4.40. No. 1 Northern lath, 32 inches, price per 1,000 laths, $2.50.

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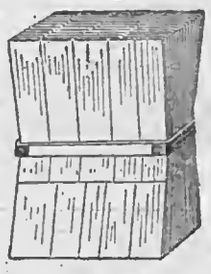
Extra Star A Star, 6 to 2 inch, priee per 1,000, $3.10. These are the very finest Washington Red Cedar Shingles, a better grade than you usually secure in most any local retail yard. We are making special prices on Bevel Siding or Clap Boards, Red Cedar Siding, White Pine Siding, etc.



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Screen Doors, 2-8x6-8, eaeh, $1.59. Sereen Doors, 2-10x6-10, eaeh, $1.77. Sereen Windows for 2-light windows, 53e and up. Sereen Windows for 4-light and 8-light windows, 66c and up.

We furnish material for sereen windows at eut priees; grooved stile and rail, per 100 lineal feet, 90e. Screen Wire Cloth, per roll of 100 running feet, $1.95.

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Most popular and fastest-selling brand of Roofing and Shingles on the market. Beautiful, durable. Surfaeed with genuine slate. Guaranteed highest quality.

Two Colors—Red and Grayish Green

$2.25 PER ROLL of 108 SQ. FEET

SHINGLES

Price per Square of 424 Shingles

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Send for special Roofing Deseriptive Cirenlar in actual colors, quoting bargain prices on every kind of roofing made.

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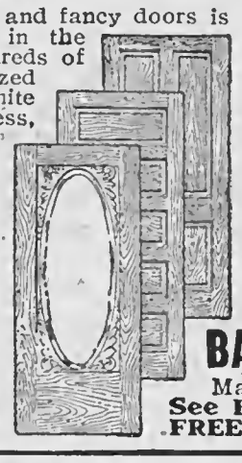
All Styles and Sizes Quality Guaranteed

Our stock of plain and fancy doors is the most complete in the United States. Hundreds of special designs, glazed and unglazed. Oak, White and Yellow Pine, Cypress, Fir, Oak Veneer, Solid Yellow Pine and Front Doors.



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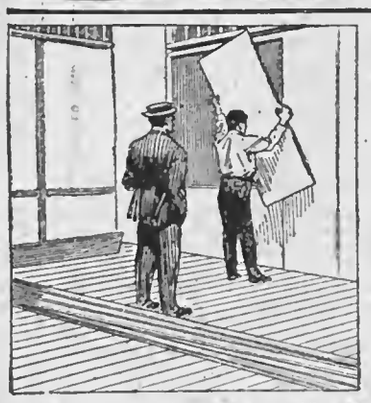
Estimates Furnished FREE

BARGAINS IN MOULDING AND FINISH

Many special designs. New stock.

See Big Reductions in GRAND FREE MILLWORK CATALOG.



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Beats Plaster—Costs Less

Wallboard costs 50 per eent less to lay. Lasts as long as the building.

QUALITY WALLBOARD

1,000 SQUARE FEET $21.00

See Speeial Wallboard Offers in Grand Free Catalog.

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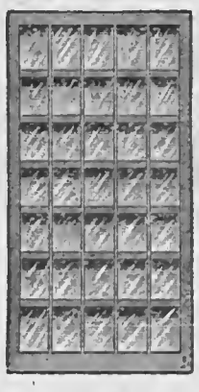
Costs Less Than Carpet!

Put down a beautiful hardwood floor; you ean lay it yourself, in double-quick time. We reeommend our speeial thin Oak Flooring.

Price Per 100 Lineal Feet 80c

HOT-BED SASH



No. E-440

$1.75

Glazed complete. Made of best cypress.

Hot-Beds Bring Big Profits

Our Hot-Bed Sash is the best in America. All sizes at bargain prices.

We Ship Promptly—We Guarantee Quality, Safe Delivery and Satisfaction

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Here within the pages of one great Catalog are 5,000 Bargain Offers on the highest quality of Building Material. The Gordon-Van Tine Catalog beats any Lumber Yard or Planing Mill. Place your order with us at once to insure getting these bargain prices. Whether you are going to build or repair, it is important to you to have this Catalog before placing your order anywhere, at any price. Three big banks, with the combined capital of $2,350,000.00, vouch for our responsibility. We refer you to satisfied customers in every community throughout the United States. Send for the Big Free Catalog today.

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Over 70 Splendid Designs for Houses and Bungalows

Whether you are going to build a modest Cottage, a fine Bungalow or a handsome Residence, you will find just what you want in this wonderful Book of Plans. Complete blue-print plans furnished free when you build from our materials. In ordering Book of Plans, enclose 10 cents to pay cost of postage and mailing. (274)

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Gordon-Van Tine Co.
5396 Case St., Davenport, Ia.

Gentlemen:—Please send the books checked below.

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In sending for Plan Book, enclose 10 cents for postage and mailing. You will receive the books by return mail.

GORDON-VAN TINE COMPANY

5396 Case Street **Davenport, Iowa**

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII., No. 4239. NEW YORK, JANUARY 24, 1914. WEEKLY $1.00 PER YEAR.

NOTES ON CORN-BELT FARMING.

The Curse of Tenant Farming.

GENERAL CONDITIONS.—During Thanksgiving week last Fall I had the opportunity of visiting for a day or two a locality in Illinois which is in the heart of the richest part of the corn belt, and where farm practices are typical in many ways of much of the north central United States. I had not been in this section before, and several features of farm conditions which I observed struck me with perhaps more force than would have been the case had I been thoroughly familiar with the neighborhood beforehand. It shall be my purpose here to give some of the impressions which I secured on that trip. The soil is for the most part black, and as productive naturally as almost any soil on the globe, although patches of lighter, less productive soil occur. The chief crops are corn, broom corn, and oats, with some clover and a very little wheat. Live stock is scarce. The roads are of the original soil of the region, and are very poor in Winter, but good in Summer. Much of the farming is done by transient tenants. All of these features have to do with the status of agriculture in the region. The current farm practice is a good example of the prevalent "mining" system of farming. The soil is looked on as a reservoir whose purpose is to produce corn or broom corn. Rotations are conspicuous chiefly by their absence, and when present are apt to be of the form corn, corn, oats; or corn, corn, oats, clover. The oats and clover crops are looked upon as a sort of soil medicine to prepare for another crop of corn. Soil which will not produce at least two good crops of corn in succession is looked upon as "pretty durned poor," to use the expression of one of the local farmers with whom I talked. Further light is thrown on the attitude of the people to the different crops by the remark of a farmer's boy, who said, in speaking of the rotation followed by one of the best farmers in the neighborhood, that he "farms" the land two years and then runs it in oats and clover. Most of the corn and oats and much of the clover are sold directly, a practice for which the prevailing tenant system and the lack of farm capital are at least partially responsible.

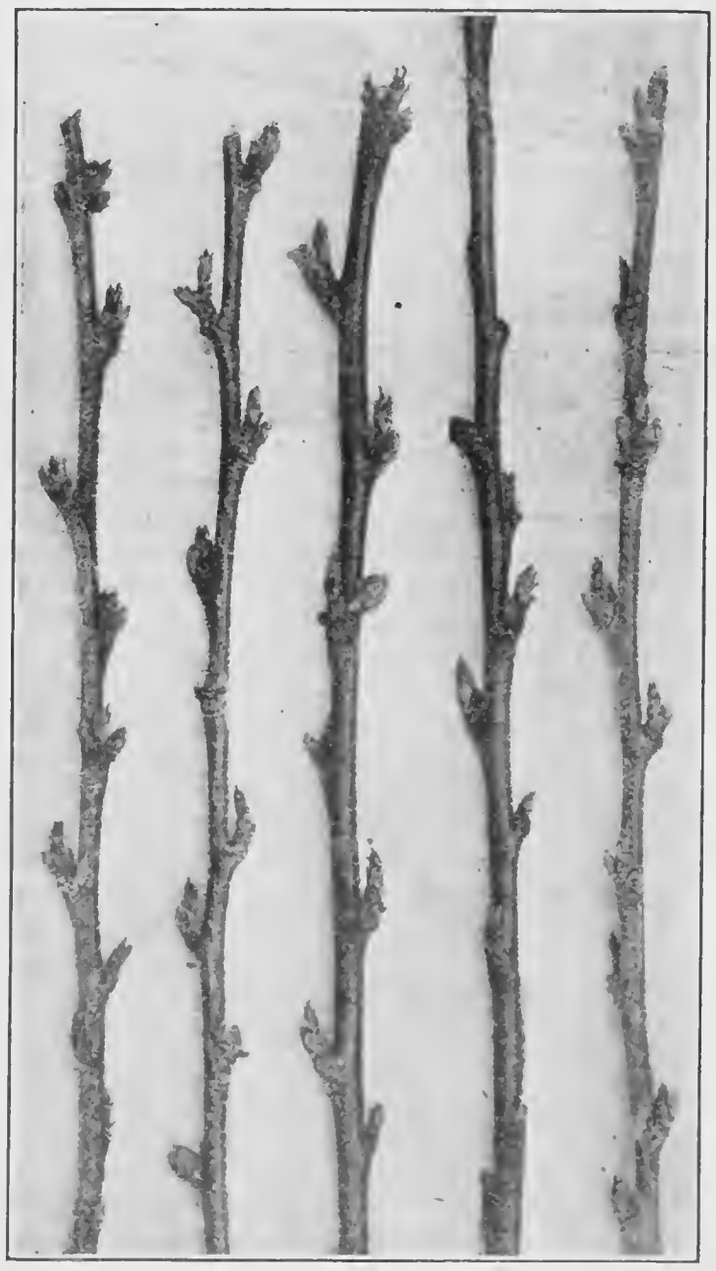
"COMRADES TRIED BY MARCHES MANY." FIG. 44.

ROADS AND MARKETING.—Not only are these products sold off the farm, but they are sold during the comparatively short time between harvest and the advent of bad weather in the Winter. One of the most significant facts in this neighborhood is the unimproved condition of the roads. These roads, as before mentioned, are of dirt, and often become impassable or nearly so in the Winter and Spring. As a consequence, crops must be marketed during the Fall, while the weather is comparatively dry. Profits are thereby lessened, and the working capital of the producers reduced. Improvements are discouraged and social intercourse is made difficult. This locality (and many more similarly conditioned) needs a system of hard, smooth, all-the-year-around roads. Such a system would be very expensive in many places, and it will probably be many years before it will come; but the future of agriculture depends on it, and the cost is almost negligible in view of the value it would have.

LACK OF CAPITAL.—Another cause of the immediate marketing of crops is the lack of farm capital. Mr. A. has 1,000 bushels of corn which will bring him at present 80 cents per bushel, or $800. If he can hold it a couple of months he can get 90 cents per bushel, or $900. He owes B. $800, however, which must be paid at once; and so the corn is sold. Such conditions occur repeatedly. They discourage good practice in farming, they prevent the acquirement of many comforts in the home, and they limit the intellectual development of the farmer and his family. If the bankers could only recognize the harvested corn as good security, a loan might be made on it, and the farmer could retain the profit due to the rise in price. Another way in which the lack of farm capital shows itself is in the lack of adequate improvements on most farms, especially where the farmer tills his own land—not that landlord-owned land is any the better improved, but that the motive for the failure to improve in this case must be something other than the lack of capital.

TENANT FARMING.—Intimately connected with the problems already mentioned is the American system, or lack of system, of tenancy, as practiced in this locality. Cases differ in a great many characteristics, but among most of them may be found: (1) An absent landlord, and (2) a transient tenant; that is, one who stays but a year or two and then moves to another place. This system seems to combine all the bad points of all the systems in vogue to-day and to embody none of the good points of any. It is hard to localize the blame for this condition. Probably it should be laid to the system, rather than to either landlord or tenant; and the system should be considered as the natural result of the conditions under which the country has been developed. It must be changed before long, however, or much harm will result. Just now we have a landlord who squeezes the tenant in order to make a good profit on a large

investment, and a tenant who impoverishes the soil in an attempt to pay a large rent and make a profit. The landlord in nearly every case gives the tenant a poor dwelling. In the words of a tenant, "Anything is good enough for a renter to live in." More often than not he does not furnish sufficient



Peach Leaves, Attacked by Leaf-Curl, as Soon as They Push Out Beyond Bud Scales. Fig. 45.

shed-room for the tenant's crops, live stock and tools. As a result, some of them, usually the tools, must be taken care of in the "big shed." What wonder is it, under such conditions, that the tenant is always looking for a better place to rent? And why should he adopt and follow any system of permanent agriculture on a farm which he expects to leave in a year or two? If conditions are such that we must have tenantry, then we need some system of tenantry by which, as in England, tenants will remain for a long time on the same farms. In England it is not uncommon for a tenant farmer to be born and die on the same farm, and many landlords would no more think of dispossessing a tenant than would anyone in America think of dispossessing an owner. It does not seem to be the proper thing to introduce into this country any such radical system, but a few steps toward longer terms of tenancy certainly would improve conditions. The attainment of this end may be brought about by a better understanding of farm problems and of each other by both landlord and tenant. Failing this, a doubtful alternative seems to be found in legislation.

RETARDING FACTORS.—The three factors, then, which, during my brief stay, impressed me as being those which are retarding progress most in this neighborhood are poor roads, lack of adequate agricultural capital or credit, and the prevailing system of transient tenancy. All three of these factors are more or less amenable to treatment by legislation, and they should be attacked by both the National Congress and the State legislatures. We should be careful, however, not to insist too strenuously on immediate legislation. "Half-baked" laws often prove distinct failures. Let us insist, then, not on having laws passed at once, but on an immediate constructive study of the situation by the law-making bodies, to be followed in due time by wise laws. H. E. MERN.

Indiana.

THE PREVENTION OF PEACH LEAF-CURL.

Peach leaf-curl is a common fungus disease of the peach which attacks the foliage in early Spring. The affected foliage becomes much distorted and curled, and later turns brown and falls from the trees. In severe cases the trees may lose a great part of their foliage and fruit, thus greatly reducing the vigor of the trees. Where only a few leaves are affected the damage amounts to very little. The leaf-curl fungus is greatly favored by cold, damp weather at the time the peach trees are developing leaves. If warm, dry weather occurs during this period the damage from the disease will be slight.

The leaf-curl fungus is one of the easiest to control, as it is very susceptible to the effects of fungicides, and yet many failures to control it are reported each year, because the fungicides are not applied at the proper time. The disease remains in the orchard over Winter in the form of spores. These spores begin to germinate as soon as leaf bud development starts in early Spring, as illustrated in Fig. 45. As soon as the tips of the new leaves show beyond the bud scales they are open to the attack of the fungus. The feeding, or what may be called the root portion of the fungus, develops inside of the leaves of the peach, and after it is once established in this manner there is no way of destroying it without destroying the leaves.

The only successful method which will completely control the disease is a treatment which will destroy the spores before they have a chance to germinate and enter the tips of the new leaves just emerging from the protection of the bud scales in early Spring. Fortunately the lime-sulphur mixture as applied for the scale is a perfect remedy for this disease. The requirements for success, however, are that the lime-sulphur be of a strength sufficient to control the scale, that it be thoroughly applied, and that it be applied before the leaf buds have opened. Many peach growers failed to control the leaf-curl with lime-sulphur last Spring, because they failed to spray early enough. The abnormally warm weather started the leaf buds into growth very early, and the fungus was able to establish itself inside the leaves before any spray was applied. After the leaves have become curled it is too late to control the disease in any way for that season. To prevent injury from this disease the coming season, spray your peach trees thoroughly with lime-sulphur at the standard Winter strength before the leaf buds make any growth in early Spring. M. A. BLAKE.

New Jersey Experimental Station.

RADIUM AND CANCER.

The attempt to cure cancer with radium may be said to be fighting a mysterious disease with a no less mysterious remedy. An ancient disease, and now apparently increasing in prevalence, cancer is the enigma of modern medicine. Its physical structure is known but its cause and essential nature yet baffle science. All of the various structures of the body, whether of bone or softer tissue, are made up of cells, as a wall is made up of bricks. Each cell, like each brick, is an independent bit of matter which must be united with thousands of its fellows to form a useful structure. These cells are of microscopic size, and as the bricks in a wall are separated from each other by mortar, so is each cell enclosed in its own membrane. The similarity ends here, however, for the brick is a dead, inert thing, while the cell is a living mass, capable of growth and reproduction. As a young tissue grows, or a mature one wears out and needs to be replaced, these living bricks of which it is made increase in number and thus add to the bulk of the tissue, or maintain it at its normal size, being governed in this by that mysterious principle which we call life.

Sometimes, however, the bricks in some part of the body walls refuse to obey the rules of nature, and commence to grow and multiply in an utterly lawless way. When they do this, they form an unnatural enlargement, or tumor, and this particular kind of tumor we call cancer. Just why any group of bricks should break away from all restraint and commence a vicious growth, we do not know, and until we do know, we cannot say what causes cancer. These new and unneeded bricks, whether in skin, muscle, or some internal tissue, have little vitality, and tend to break down and ulcerate, producing the open sores seen in external cancers.

It has been found that that wonderful substance known as radium gives off certain emanations, or rays, which may be used to destroy these new cells in a cancerous growth without injuring the law abiding ones of healthy tissue. Like X-rays, they also have the power to penetrate healthy tissues to reach diseased ones beneath. They thus not only offer hope for the destruction of cancerous tissue upon the surface but also of that in interior parts of the body. It is necessary that radium be used in proper amounts and for a limited length of time, for if too long exposed to its action, healthy tissues will be destroyed. While all this is true, and the discovery of this beneficent action of radium offers great hope to humanity, there are still limitations to its use which should be generally known to prevent disappointment on the part of sufferers. The total amount of radium in the world is exceedingly small, and the process of extracting it from its ores almost infinitely slow and expensive. It will be months, or possibly years, yet before a sufficient quantity can be obtained and used to show just how far it can displace the surgeon's knife in the treatment of cancer.

Those eminent surgeons whose work with radium has recently aroused so much interest and hope urge most strongly that the early use of the knife must yet be depended upon to save the lives of cancer sufferers. While radium promises a great deal, it is still a promise, so far as its practical application is concerned. A cancerous growth, wherever situated, is, for a time at least, a local disease, and if it can be removed before it has spread its contagion to surrounding structures, it may be cured. This time is limited, however, and the earlier the appeal to the blessed knife of the skilled surgeon, the greater the chances of complete and permanent removal. M. B. D.

CHARGE "ALL THE TRAFFIC WILL BEAR."

I have been reading of the closing work of the New York State Legislature, and it gives me a feeling of "righteous indignation," or something worse. I refer to their allowing Governor Sulzer's lawyers $40,000 for their services in trying to keep him from being impeached, etc.; that makes $5,714.29 for each one of them if divided equally. That is more than I ever made in one year in my business life. One of these men was a schoolmate of mine, and I don't know that he was any brighter than several of the other boys at that time. It makes me think of what Cassius said to Brutus:

> "Now in the name of all the gods at once,
> Upon what meat doth this our Cæsar feed
> That he hath grown so great?"

I never swam the Tiber with him, but I could throw a ball, or run as fast, or jump as far as he, and sometimes recite my lessons better. He chose the law and I agriculture and horticulture. I believe it takes as much brains to run a fruit farm as it does to prove that a Governor of New York is honest, if it does not pay as well. Thirty-five years ago I was settling up an estate, and some one had to appear for two minors who were heirs. The judge called in an attorney from across the hall, and he spent about five minutes doing up the job. The judge remarked that the law allowed him five dollars for it. I turned around and looked out of the window and saw a man working on the street, and when I went out I asked him how much he was getting a day, and he said one dollar. Now I know there was as much brains on the street as there was inside. These are some of the causes that have led to the "high cost of living." I wish that a commission could be appointed that would bring out the real facts in the case. T. H. KING.

We understand these lawyers demanded $60,000, but were cut down one-third. The lawyers on the other side were paid still more for about a month's work. Any man who does business involving the transfer of property or the protection of property rights will find himself held up as by a highwayman for legal fees. We have one piece of property that has been "searched" four times in 10 years. The lawyers merely looked over the records, which were on file, and charged $15 or $25, as suited them. Even the notorious and guilty Allds, who was tried for

Peach Twig with Leaf-Curl. Fig. 46.

bribery and convicted, had the nerve to ask the State to pay his lawyers some $25,000. For a wonder the Legislature refused! Mr. King is right. These outrageous and unjust legal fees are among the "high cost of living" causes.

CRITICISM OF CONCRETE MIXER.

I would like to offer a little criticism of that barrel concrete mixer which R. P. C. recommends to F. M. H. on page 43. From my experience in mixing concrete I should say that the whole thing was decidedly impractical. For convenience cement is handled almost wholly in bags, and experience has taught me that it does not pay to mix it at one time, less than a one-bag batch; cement being packed closely in bags and barrels, when we try to divide the original package we do not get the division very accurate. One-half or one-third means almost anything to the ordinary laborer. Take a one-bag batch of a standard 1-2-4 mixture, and it contains around 6.6 cubic feet before mixing, and around 4.5 cubic feet after mixing. This would fill the barrel up pretty well when first put in, and as mixing progressed would settle considerably. A batch of this size would weigh over 600 pounds when mixed. Now let us start at the bottom of this thing and work up. Is that hinged bottom going to be strong enough to hold 600 pounds, and fit snug enough to prevent the water from running out and taking much of the fine cement with it before mixing is completed? I hardly think so. Anything as heavy and dense as concrete is going to stir mighty hard in the bottom of a barrel, and I venture to predict that with a pulley of relative size, as shown in cut, and with one bearing only, as shown, there will be a balk. It seems to me that the pulley would be somewhat in the way when putting material in mixer. As near as I can figure it, the top of that barrel will be around five feet from the ground, and this would make filling a slow and tedious job, especially if the wind were blowing your way when putting in cement.

R. P. C. says: "After every batch is mixed and dumped, the whole machine should be washed out before the next batch is mixed." I agree with him that this would be necessary, and this very fact helps to make the whole thing impractical, as it would consume too much time and water. In the majority of cases where concreting is done around the farm water is not found on the job superabundantly, but has to be carted from a greater or less distance, and therefore costs money. Home-made mixers are not as a rule very satisfactory. They have to be made strong and braced much to stand the strain, and the final cost in time and money is much more than at first calculated. F. M. H. would better let his engine rest under the shed and make a mixing platform 10x12 feet, using either square edge or tongued and grooved stuff. Do not use ship-lap. Nail a 2x2 strip around edge to prevent waste, and set level. Get three or four iron wheelbarrows and some square-pointed shovels, and I will guarantee that the same gang of men will mix more concrete in a day, and do it easier, than they can with any home-made machine mixer, even if it does run with power. I have been "through the mill" both ways, and have paid for my experience.

Rhode Island. MAURICE E. KENT.

CONTRACT FOR PRODUCE.

Will you let me know whether the inclosed contract asking that party of first part sell tomatoes to party of second part only is a legal contract or not? The canners have drawn up similar contracts in years past, and I would like to know whether they can hold them or not. P.

The contract mentioned seems to be an agreement for marketing or handling crops. We print sections of it below, as many similar contracts are drawn up in this one-sided manner. In a cooperative society of farmers, where control was in the hands of trusted people, such a jug-handled agreement might perhaps be considered, but it gives all the advantage to the people who handle the goods and none to the producers:

For and in consideration of the promise and agreement of the party of the second part to act as agent for the party of the first part in a manner and under terms and conditions hereinafter stated, the said party of the first part hereby promises and agrees to plant or sow, raise to a marketable size or condition and deliver during the year 191...., at the proper season, at such time and place as the party of the second part may direct, all the produce of the following:

.....Acres Corn.
.....Acres Peas.
.....Acres Beans.
.....Acres Cherries
.....Acres Tomatoes.
.....Acres Table Beets.
.....Acres Strawberries
.....Acres Red Raspberries
.....Acres Black Raspberries.
.....Acres .....

The party of the first part further agrees that the party of the second part shall be his exclusive agent for the sale of the produce herein mentioned.

The party of the first part further agrees that he will not contract for the raising and sale, or sell or contract to sell any tomatoes with or to any canner or preserver during the term of this contract.

The party of the second part agrees to act as agent for the party of the first part and to receive and sell the said produce at the best obtainable price, either to a cannery or in the open market and to make returns to the first party of the full amount of the net price received for said produce, less the commission established by the by-laws of the said second party, within ten days after the receipt thereof by the party of the second part.

It is further agreed that all produce marketed at canneries shall conform to the standard and conditions as set forth in the contracts made between said canneries and the party of the second part, and that the party of the first part shall grade and pack all produce sold in the open market in such manner as shall be prescribed by the party of the second part.

This is probably a legal and an enforceable contract if both parties sign it, but it is such a one-sided affair that a farmer should think twice before binding himself to all the provisions of this contract and get in exchange merely some one to act as his commission merchant—with no provision on behalf of the farmer to discontinue sending produce where the company fails to remit or is unsatisfactory in other ways. An examination of the contract discloses that:

The company promises and agrees:

1. To act as agent.
2. To receive and sell produce at best obtainable price.
3. To make returns of net price less commissions to farmers within 10 days after receipt.

THE KING ROAD SCRAPER IN OPERATION. FIG. 47.

The farmer promises and agrees:

1. Plant and raise to marketable size and deliver the fruit, etc., named.
2. Deliver at proper season.
3. Deliver at time and place directed by company.
4. To deliver *all* the produce mentioned in contract.
5. Makes company exclusive agent of sale.
6. Not to contract to raise and sell tomatoes to any canner or preserver.
7. Not to sell any tomatoes to any canner or preserver.
8. To make his produce for canneries conform to requirements of a contract between third parties, to wit: company and canneries.
9. To grade and pack market produce as prescribed by the company.

Contract fails to state:

1. What company's commission will be. This is governed by its by-laws, and may be as high as 25 per cent. for all the farmer knows.
2. What is to be done with the produce raised by farmer and not acceptable to company as too small, etc. Farmer cannot sell this to anyone as contract calls for "all the produce."
3. What the advantage to the farmer is in promising all these things on his part for the privilege of merely having a company act as his commission agent.
4. What will happen if the company does not make returns within ten days. Farmer must still deliver the goods.
5. What will happen if the company does not seek nor obtain the highest market price. What remedy has the farmer?

MOST of the farm credit plans are rightly based on the proposition of enabling a man with some property to use it for credit. But where does the tenant farmer or man without property come in?

TUNING UP A DRY CELL BATTERY.

Will you tell me what is used and in what proportions in a dry battery to make it react? Also how much zinc, copper and vitriol or sulphuric acid shall I need in a 10-gallon gravity battery? What voltage would it give? How much could I expect from the reacting dry battery? I. A. B.

Pennellville, N. Y.

1. An old dry battery which has run down is not worth bothering with, for there is nothing that will give it a new life for long enough to pay for working on it. Frequently, however, if you are stuck wtih the old batteries and can't get any more, while you must have current, heating the batteries will make them work a short time. For example, if you are caught out in a motor boat and the batteries run out, heating them over the exhaust might liven them up enough to make the run in. The battery originally is made in any one of a dozen ways. There are a couple of hundred patents on dry batteries. One of the simplest constructions is to line a zinc cylinder with a thin layer of paste made of the following: Three parts plaster of paris; one part sal ammoniac; one part zinc chloride; one part flour; two parts water. The voltage of the dry battery will be about 1½ volts. Suspend a carbon free from the coating on all sides and fill the space around it and between it and this paste with the following mixture: one part sal ammoniac; three parts manganese peroxide; one-tenth part powdered charcoal; four parts powdered charcoal. Small amount of water.

2. I cannot imagine what you would use such a large gravity battery for. It would give the same voltage as one of the ordinary one-half gallon size. The voltage of any battery is entirely independent of its size. One the size of a thimble will give the same voltage as one the size of a barrel. The capacity of the larger one is greater, however. That is, you can draw the same current for a much longer time. If you want to get a higher voltage, it will be necessary to make a number of batteries. Each battery will give a voltage of about one volt (more exactly 1.08 volts), and if, say, six are connected "in series," that is, the zinc of one to the copper of the next, the voltage will be six times as great. If the six zincs are connected and the six coppers are connected, the voltage will be only one volt, but the effect will be the same as though there was but one battery six times as large as any one. This is known as "parallel" or "multiple" connection. The zincs and coppers may be any size. The copper keeps getting larger but the zinc is gradually eaten up. The copper is placed at the bottom and the zinc at the top. Copper sulphate crystals are placed in the bottom of the jar and water added to cover the zinc. The water is usually slightly acidified with a few drops of sulphuric acid. About a pound of crystals to a gallon of water will give a good solution. After allowing the battery to stand short-circuited for a time, it will be found that the top of the liquid is light colored. It has become zinc sulphate because the sulphuric acid has attacked the zinc. The dividing line between the zinc sulphate and the copper sulphate should be kept about half way between the copper and the zinc. If it falls lower add crystals and water, after taking out a little of the zinc sulphate. If it goes higher either short-circuit the battery for a little while or add a drop or two of sulphuric acid. R. P. C.

SILICATE OF SODA IN CISTERN.

In your issue of December 6 you recommend solution of silicate of soda wash to remedy leaks in a cistern. Will you inform me whether the silicate of soda affects the water for drinking purposes, or is likely to cause rusting of the inside of iron supply pipes conducting the water from the cistern to the house?

Smithtown Branch, N. Y. J. B. P.

Silicate of soda is not soluble in cold water, and will have no effect on drinking water nor on the iron supply pipes. It is readily dissolved by acidified water, however, and is quite frequently found in mineral waters used for drinking purposes. In moderate quantities it does no harm and, in fact, is prescribed for certain ailments. I find that the waterproofing of a cistern already built is a difficult one to solve. Nothing is permanently successful, but all of the waterproof coatings are of some value. The remedy, of course, is to make the job of a first-class, rich concrete mixture well worked over and carefully laid. Building a concrete cistern requires especial care in preparing and mixing material. R. P. C.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Young Man's Wages,

Please state what wages a young man of 18 expects, to work by month on a farm, board and washing included, and if he cares to work by month or year.
Canaadea, N. Y. J. K.

What is a horse worth? What would such a young man earn as a blacksmith or barber? It would depend upon his skill or experience. Is this man strong and big or small and slender? What does he know about farming? Can he plow and milk and does he know how to do all farm work? You see how impossible it is to answer such a question without knowing the man. We could not settle such a matter as between farmer and man. In our country such a man would receive all the way from $15 to $30 per month, depending on what he could do.

Apple Varieties for Michigan.

I am expecting to plant about 800 peaches, 200 apples and 100 cherries. The land I expect to use is a light sandy soil, has been run for several years and is exhausted of its humus. It lies on the west side of a lake covering about a section; has a very good elevation and is well drained. Will the trees above named do well on this soil? Will they need a fertilizer, and what kind? What varieties would you advise, with the idea of planting the same number of trees each year for the next three years? Would you advise using one or two-year-old trees, and what size would be best?
White Pigeon, Mich. E. R.

It would seem that the location and soil described ought to be suitable for growing the fruits named, but as it is in a rundown condition it will need to be brought up to a productive state. This can be done by using stimulating fertilizers to grow cow peas, Soy beans, vetch and other legumes which will add humus and nitrogen to the soil. All the stable manure that can be got and applied at a low price will pay to use in enriching the soil until the soil improving crops can be grown and worked into it. Almost any standard brand of mixed fertilizer will serve the purpose of invigorating these crops and the trees as well. Only first-class trees of any age should be planted. It is not essential whether one or two-year-old apple trees are bought, but one-year-old peach and cherry trees are the best. The varieties that succeed commercially on the best paying farms, these may be the best to plant, but some of the newer kinds may be equally good or better. Northern Spy is a standard for that region and although the trees do not bear early, there is profit in growing them. Baldwin and R. I. Greening are also standards and might be included. Among the newer kinds McIntosh, Akin and Delicious are excellent and I would suggest using all of them in considerable numbers. If the filler system is used there should be some of the very early bearers planted, to be cut out when their space is needed. Yellow Transparent, Oldenburg, Wealthy and Wagener are of this class. I would not plant peach trees as fillers, because of the damage they do to the apple trees by robbing them of moisture and fertility from their very greedy manner of growth. The permanent apple trees should be 50 feet apart, and the fillers would make the complete orchard stand 25x25 feet apart. This is about right for peach and cherry trees too. The peach trees will not really need that much room and they might be set as close as 18 feet apart. Cherry trees live much longer and grow to much larger size and will need half of them cut out within 15 to 20 years, whether they are of the sweet or sour class.

As to the varieties of the peach to plant, the Elberta should be included, because of its fine market qualities. The new J. H. Hale peach is a good one, as I know from careful tests for two years past. A variety known in Michigan as "Red Chili" is one of the very best of the yellow peaches for general use and yields well. Smock and Salway are good late varieties.

Of cherries the Montmorency is the most profitable of all the sour varieties. Richmond is good for a nearby market, but not for shipping. Both of them sell well at the canneries. Schmidt is the most profitable of the sweet and hard-fleshed varieties. Late Duke and Napoleon are also good. All the sweet varieties should be budded on Mazzard stocks, and the sour ones on Mahaleb.
H. E. VAN DEMAN.

Onions for Seed.

Which are the best onions to grow for seed, the sets or large onions grown from seed, say season of 1913? What is the usual method for shelling or thrashing the seed and grading? T. S. B.
Akron, O.

In the production of seed of any kind, if we wish to maintain and improve the type, and keep a variety pure, we must get seed from the best specimens of the plant. Onions are grown for the bulbs, and they vary with the shape, color and other characteristics of the varieties. Hence to get good and true seed, we must take the matured bulbs in order to find the typical ones. Sets of some kinds of onions might run to seed, but sets of other varieties would simply develop a bulb full grown and ripen. The time to make the selection of onions for seed is at the time of harvesting the crop. The pure types of the varieties can then be better seen than later. No thick-neck bulbs should be used. The bulbs may be planted in the Fall in localities where the climate is not too severe, and the California seed crop is always planted in the Fall. For seed production soil with an excess of nitrogen from animal manures should be avoided, and only commercial fertilizer used, and this mainly of phosphates and potash. The select bulbs should be set in furrows about 16 inches apart, and deep enough to cover the top of the bulbs about two inches. As the seed stalks develop they should have the soil worked to them as a support, but sometimes twine is stretched along the rows attached to short stakes, the twine passing on both sides of the line of stalks. There will be some inequality in the ripening of the heads, and they are gathered as the stalks turn yellow. They can be gathered up in cotton sheets to prevent loss, and spread out on a tight floor under cover to dry. The seed can be flailed out and run through a fanning mill to blow out the chaff. To secure the best seed only, put them a few at a time in a vessel of water, and stir it, and then save only those that sink, skimming off all that float, and then spreading out the good ones to dry in the shade. Where grown on a large scale doubtless more labor-saving implements are used, but I have simply told what anyone can do on a small scale. Certain varieties of onions mature best in certain climates. The seed of the so-called Bermuda onions is all grown on the Island of Teneriffe and nowhere else that I know of. The Spanish and Italian sorts are either imported or grown in California, and the New England varieties in New England, and probably would thrive and mature well all along the Lake region.
W. F. MASSEY.

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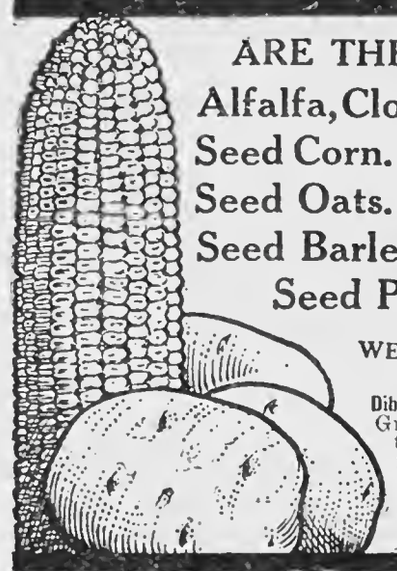

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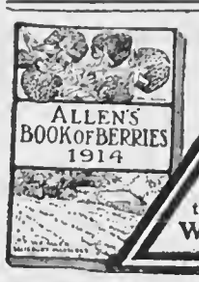

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The Home Acre.

Girdling Apple Trees.

Will you tell me the date to girdle apple trees that are about 15 years old? They set a large crop of fruit, but drop it later. These are old dry-land trees, that were placed under irrigation four years ago, and have grown remarkably well, but are not bearing as much fruit as they should. The varieties are Northern Spy and Bellflower. W. H. E.

Coeur d'Alene, Idaho.

The trees should be in the full flush of their growth to be in fit condition for peeling their trunks to induce bearing. The month of June is usually about right time. There is then forming between the bark and wood the annual layers or additions to both, which is made from the shiny matter that is then very abundant there and the reason there is no injury from taking off the bark is because of this fact. There is a slight checking of the growth, and this causes the formation of more fruit buds than would naturally occur. The quick formation of new coat of bark protects the delicate tissues from the drying influences of the air, and the natural functions of the tree go on almost undisturbed. The Northern Spy and Yellow Bellflower are varieties of the apple that do not always bear abundantly, but as fruit trees in Idaho usually bear too much rather than too little fruit it is scarcely necessary to use artificial means there to cause trees to bear better that are 15 years old. However, it will not hurt the trees to girdle them in June. H. E. V. D.

Fruits for the Home Acre.

I think it would be a great boon to suburbanites like myself with small garden of an acre or so, to publish a chart of the various fruit trees, dwarfs and standards, showing when they might be expected to bear fruit from the time of planting. I read of various kinds of apples, for instance, or cherries, that they are earlier bearers, but there is nothing to tell me whether I might expect a sample of fruit in two or six years from planting. I put in some dwarf pears two years ago, and the Duchess trees have given me two pears each year, the Wilder and Anjou I haven't heard from.

Dunellen, N. J. A. C.

The suburbanites who have small orchards or fruit gardens and who are interested in giving them personal attention deserve to be helped by information that will be of real use to them. They may get a great deal of health and pleasure and plants that can be grown on a small lot. There are books that will be of much assistance in this work, some of which give lists of varieties that are suited to certain climates and soils. Among these books there are many that are not up-to-date in the matter of varieties, but their advice and directions are generally good. The catalogues are not always edited with the intelligence and accuracy that they deserve, and sometimes there are exaggerations and overpraising of varieties, but there is much in them that is of real value to the planter.

To prepare lists of varieties that are in the habit of bearing early and are of high quality might be of much benefit to the amateur growers of fruits, but to cover the whole range of territory where these people live there would need to be different lists to suit the various conditions of climate and soil. As to the exact age at which the different varieties would begin to bear on both standard and dwarf stocks would be a most particular job and would probably lead to frequent disappointments. So much depends on the soils, diseases and insects to be contended with and the treatment the trees get that predictions as to results might be far from correct.

In regard to dwarf fruit trees there is much difference of opinion but they usually hasten the bearing of the varieties, and they certainly occupy less space than standard trees, and are, therefore, valuable for small places. Dwarf pear trees are usually quite practical and dwarf apple trees are so to a considerable degree, but there are very few other fruits that have been successfully dwarfed. The average suburban dwellers will learn more of a practical nature about fruit growing by visiting those of his neighbors who are succeeding and following their suggestions than by studying books and catalogues. It is all right to study them but not to let the other go undone.

FRUITS FOR HOME GARDENS.—Arranged, approximately, in order of ripening:

Apples.—Yellow Transparent, Red June, Williams, Fanny, Golden Sweet, Primate, Jefferis, Fall Pippin, Gravenstein, Melon, Grimes, Jonathan, Delicious, Hubbardston, Stayman, McIntosh, Akin, Stark.

Pears.—Wilder, Madeline, Tyson, Howell, Boussock, Bartlett, Seckel, Sheldon, Dana's Hovey, Lawrence, Easter.

Peaches.—Sneed, Red Bird, Greensboro, Mamie Ross, Carman, Alton, Early Elberta, Hiley, Elberta, Reeves, Illinois, Sea Eagle, Heath Cling, Salway, Krummel.

Plums.—America, Omaha, Abundance, Wickson, Gold, York State Prune, French Damson.

Cherries.—Richmond, Dyehouse, Purple Gean, Tartarian, Late Duke, Montmorency, English Morello.

Quinces.—Orange, Meech, Van Deman, Champion.

Grapes.—Campbell, Winchell, Delaware, Concord, Brighton, Lutie, Niagara, Eclipse.

Strawberries.—Climax, Warfield, Chesapeake, Aroma, Haverland, Dunlap, Gandy.

Raspberries.—King, Plum Farmer, Cuthbert, Cumberland.

Blackberries.—Early Harvest, Blowers, Eldorado, Agawam.

Gooseberries.—Downing, Pearl, Champion.

Currants.—Perfection, Diploma, Red Cross.

Dewberries.—Mayes (Austin), Lucretia. H. E. VAN DEMAN.

FLORAL NOTES.

If you have the space, now is the time to get geraniums from your florist for use on Decoration Day. The price now will be just about one-half. They will not be in bloom now and will be in small pots and if you get them they must be kept in a cool, light window, washed and turned frequently and along in March put into four-inch pots. On calm warm days in April get them out of doors a little to become hardened, as they will drop their leaves if put out from the house with no previous hardening.

If you want to take slips of any of your house plants, now is a good time to do it, but as most cuttings require a good temperature to throw out roots, a few expedients will have to be resorted to to induce growth. At this season I use either a glass of water or a saucer of slushy sand. Nearly any common house plant that will root at all from slips will root in a glass of water. Take slips that break from the old plant sharply; if they bend clear over without breaking the slip is not in the right condition to make growth. Place all your cuttings in tepid water and set high up in a sunny window. If possible, in each glass put a few slips of wandering Jew. These root in a very few days and their growth has a tendency to keep the water pure until the other cuttings are rooted. At night set the glasses out of the window to a place near the stove, preferably on a shelf, but not lower than a chair. In the morning pour out a little of the water and replace with warm. Cuttings from the rose and walnut geranium root very slowly, taking as much as two months often. Do not give them up unless you see signs of decay. In potting such cuttings, see that the earth is warm and kept warm until well established. It is best to use small pots first, as flowers are induced by limited root space. This applies especially to geraniums.

The single varieties of bedding Petunias make fine house plants. Seed can be planted now or any time in warm earth. It will germinate quickly and the plants make astonishing growth. When a few inches high pinch out the top so branches will start. Allow about three branches to a plant and train these on a neat trellis in the window. I have seen such Petunias in windows in bloom for months, one or two plants filling the entire space and bearing dozens of flowers at a time. The common morning-glory makes another novel and charming window plant, coming into bloom after the first few leaves have formed. In this respect its blooming habit is entirely different from outdoors, where the vine is many feet high before blooming. P. L. W.

Michigan.

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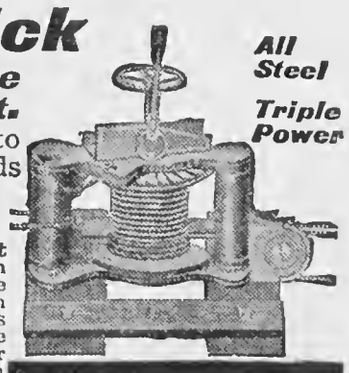

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From Michigan

Catalpa Tree Agents Lose.

There were lively times among the farmers around Batavia, N. Y., last week, over the lawsuit brought by Burt Walton of Indiana, against James Pettibone of Batavia. This was a case involving a tree agent transaction. Walton is an agent for the sale of Catalpa trees. He sold the trees grown by the Tippecanoe Nursery Co., and appears to have told all varieties of guff in his efforts to obtain contracts. A number of farmers bought the trees on the strength of what Walton told them, and then learned on good authority that his stories were greatly exaggerated, and that the trees are not suitable for planting in New York State. Mr. Pettibone, it is said, bought 2,000 trees, and when he learned the facts refused to pay for them, so Walton brought suit to recover $40. The farmers around Batavia became interested in the matter, and formed an organization of some 300 members. They joined together to resist payment for these Catalpa trees, engaged lawyers, and put up a defense fund. Their point was that Walton misrepresented trees, and got them to take a lot of stuff which was practically worthless for growing in New York State.

There was a big legal battle over this matter, for it means a lot both to the nursery agents who depend on guff for making their sales, and also to farmers who have been buncoed into buying worthless stuff. The case was brought before a justice of the peace and six jurymen, and was fought out through four days. Walton testified that he paid $3 to $3.50 a thousand for the trees, and sold them for $20 and $25, and he undertook to prove by his witnesses that the trees were suitable for planting in this State. The defense produced such witnesses as Prof. H. P. Baker, of the School of Forestry, and other well-known scientists, who showed clearly that this tree is not suitable for planting here. Many farmers testified to the quality of the guff which Walton had given them in trying to sell the trees. The jury was out 15 minutes, and returned a verdict for Mr. Pettibone, and it is rumored that Walton may be arrested and prosecuted for misrepresenting the trees when he tried to sell them. It is a singular thing, but the jurymen received only 50 cents apiece for their four day's work. It was suggested by some of the farmers that they raise a purse of money and give it to the jurymen, but this was very properly stopped by the officers of the farmers' organization, for it would have been a great mistake to establish any such precedent in a case of this sort. This legal battle was a timely one, and would seem to settle the question of responsibility when a tree agent misrepresents his goods and obtains his contract in any such way.

Sweet Clover in New York State.

Is Sweet clover grown as a cultivated crop in New York; if so, has it proved satisfactory? J. B.

I do not know of Sweet clover being grown in this county as a regular farm crop. I have observed a few lone plants by roadsides and in waste places, in which case the plants seem to thrive and to attain good size. There is a question in my mind, however, as to whether this plant would be good for fodder in the case of dairy cattle, because of its extremely woody structure due to its habit of growth. I am wondering if in buying Sweet clover seed one would not be apt to get Southern grown seed, or a seed which would not be adapted to our Northern climate. We find this objection extremely emphasized in the buying of Alfalfa seed, endeavoring to get a seed that is adapted to our Cattaraugus County farming. At present, as I stated above, Sweet clover is not being grown by the farmers in Cattaraugus County, nor have I heard the subject agitated to any extent.

HERMAN K. CROFOOT.
Cattaraugus Co. County Agent.

I do not know of any farmers in this county who have tried Sweet clover sufficiently to answer this question. Neither have I seen any indications as to the probable outcome of growing Sweet clover. G. P. SCOVILLE,
Onondaga County. S. A. MARTIN,

I do not know of a single instance where Sweet clover is being grown.
Oudaga County. S. A. MARTIN,
County Agent.

I do not know of a single field of Sweet clover growing in this county; there are certain sections of the county where it grows along the roadside very well, also in several places along the railroads. Several persons have said to me that they were going to try it out in a small way next year. The Farm Bureau has advised them to try it only experimentally at first, for we believe that Alfalfa is the better crop, and will grow in any place that Sweet clover will thrive.

W. L. MARKHAM,
Wyoming County. County Agent.

I have seen very little of it growing in Broome County during the last year. It is not generally adapted to the hill soils of this region, because these soils are more or less deficient in lime. In the river valleys there is more lime in the subsoil, owing to the deposits of glacial drift, but even on these soils we need lime to make Red clover and Alfalfa succeed. I have not encouraged anyone to grow Sweet clover here, and have seen it growing in only one or two favored places. In my judgment it needs lime fully as much as Alfalfa to make it succeed. I have been told by one man during the year that he obtained an excellent stand of Sweet clover one season, but that it was completely killed by the Winter. I do not know how to explain this statement. E. R. MINNS.
Broome County.

There is no Sweet clover grown in this county to my knowledge, except what was sown under the direction of our bureau during the past Summer. One farmer sowed five acres of Sweet clover with barley. The seeding seemed very satisfactory last Fall, and I will advise you in the Spring if it comes through the Winter all right. Sweet clover seems to do well in this section on the soils adapted to it, and I have observed that where it has been cut along the roadsides about the time of the first cutting of Alfalfa a large second growth has been obtained. The farmers tell me that their cows will not touch the clover in their pastures until the other feed gets short, but when they do commence to pasture on it, will graze it down very closely. In reference to the soils, upon which Sweet clover grows, will say that it seems in this section to be best adapted to gravelly soils. In fact, I do not know of any Sweet clover growing naturally on other than gravelly soils, and it is my opinion that the presence of lime is of more importance to fertility, as it seems to grow on what might almost be called gravel heaps along creeks which run over limestone ledges. I am very much interested in the growth of this plant, and expect to do more work in experimenting with it during the next Summer.

M. E. CHUBBUCK,
Herkimer Co. County Agent.

The growing of Sweet clover (Melilotus alba) in Jefferson County has not reached any importance as an agricultural crop as yet, although the plant grows wild along the roadsides, creek sides, and other rough places throughout the greater part of the county. To state the present condition more correctly, the farmers have always considered this plant a weed, and even though it is a hardy legume, steps have never been taken, to any extent, to utilize it as a forage plant. In a limited degree some of our farmers have sown Sweet clover seed on their rough, hawkweed-infested pastures, hoping to get the plant established there. In most instances this seed has been sown late in the Spring, although it is known that the natural time for self seeding of this plant is in the Fall. Hence we have nothing, at this time, to report in favor of the use of Sweet clover in connection with pasture improvement, although the plan would seem feasible. One of our farmers seeded several acres of Sweet clover with grain, as one would grass seed and clover, but owing to a very dry season and perhaps to seed of poor germinating power, the stand of Sweet clover on this field is not remarkable. We are planning to give this plant a thorough trial during the coming year. As mentioned above, as yet we have nothing remarkable to report in favor of Sweet clover, neither have we any evidence that it will not make a valuable crop for this county where the growing of Alfalfa is a gamble. F. E. ROBERTSON,
Jefferson County. County Agent.

Hungarian Grass.

Will Hungarian grass thrive in this section? How much should I sow to the acre? Is it true that it is only an eight-week crop? Would it be advisable to sow any other crop with it, if so, what kind? When is the best time to get it in?
Dutchess Co., N. Y. W. O. T.

The millets will thrive in your section. The Japanese Barnyard millet will most likely suit you better than Hungarian. We think it best of the millets. About 20 pounds of seed to the acre and you should allow 10 weeks for its development. Do not seed with millet, but use it to give a crop of fodder between a Spring and a Winter grain crop.

THE JUDGE: "What proof have you that this chauffeur was intoxicated?" The Country Policeman: "He stopped his car at a drinking-trough for horses."—Toronto Sun.

LITTLE Freddie reached the mature age of three, and discarded petticoats for knickerbockers. "Ah," cried the proud mother, "now you are a little man!" The fledgling was in ecstasies. Displaying his garments to their full advantage, he edged closer to his mother, and whispered, "Mummie, can I call pa Bill now?"—Bristol Times.

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Plainville, Conn.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: I have had one of your lighting systems for six years and if I could not get another like it I would not take ten times what I paid for it today. Yours very truly, Harry Tyler.

Fowlerville, Mich.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: We have purchased one of your systems and the people around this vicinity are greatly interested. We purchased our system in Howell and we also are greatly pleased with it. Please send me one of your catalogs. Yours truly.
Eugene Bell.

Fairbury, Neb.
Gentlemen: The system is O. K. and we use it every day. They are more than satisfactory. We also have a couple of systems here that are perfect. Yours truly, Fred Shannon.

Pitcher, N. Y.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: I wish to tell you about the system I bought of you. The same mantle is on one lamp that came with the lamp when I bought it, over a year ago, and if I had not had an accident the other one would be all right now. There are a number of systems in use in this section but I like yours the best of all. They give us so little trouble.
Yours very truly, H. D. Fairchild.

Bristolville, Ohio.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: I have used one of your systems for about seven years and it has given perfect satisfaction. Will you please send me your latest catalog and oblige. Yours truly, Mrs. Nettie Lewis.

Briggsville, Wis.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: Yours of November 8th at hand. I have been shouting at my neighbors all summer to light and not be 20 years behind times, and have a nice white light you can see to read with. Quite a few of them say they will put them in this winter. Please send me a new catalog.
Yours truly, W. Mylrea.

Ashby, Minn.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: Yours of November 1st at hand. Can say I have now had your system in my house for over half a year and it gives perfect satisfaction and would not lose it for twice the price. Have received many compliments from my neighbors on it.
Respectfully yours, Henry Thompson.

Midway, B. C.
Superior Mfg. Co., Ann Arbor, Mich.
Gentlemen: Received the catalog and fixtures O. K. Was what I wanted. I have the pressure system and have been using it for five years and would not be without it. I have six lamps.
Yours truly Sam'l A. Crowell.

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Think what it will mean to you to be able to say, *"I am never going to have a kerosene lamp in my house again."* You hate them—everybody does. There is not a single thing to say in their favor. They are dirty, messy, smelly—**dangerous!** You have put up with them the same as thousands of others have—just because there was no better substitute within your reach. The women folk have spent hours in cleaning, filling and trimming them—day in and day out—year in and year out. Possibly you have grown so familiar with the danger of fire and explosions that you scarcely think of it any more. ***But here is the way out—***

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Such wonderful light! Think of it—**daylight at night!** In its clear, brilliant—yet restful—radiance, you can see to read the finest print with ease, no matter how far you may sit from the light. The women folk can do the finest sewing. They can match colors perfectly. There is not a single thing that you can do by daylight that you can't do at night if you have an Ann Arbor system in your home. And here is the best part of the whole story. **The first cost of an Ann Arbor System is less than you would have to pay for an ordinary cow.** Its upkeep is so low—so very low that the actual figures seem almost beyond belief. Our big book explains just how and why even kerosene lighting is 15 times as expensive as Night Daylight.

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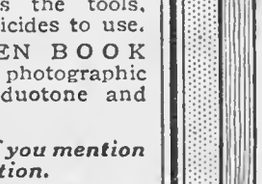

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EVENTS OF THE WEEK.

DOMESTIC.—Proceedings against all real estate companies transacting a banking business alleged to be in violation of the law will be instituted soon, said Attorney General Carmody of New York Jan. 8. The Monaton Realty Investing Company, of New York, will be made a defendant, the Attorney General said. The Appellate Court recently held that it was doing an unauthorized business. It had sold about $1,000,000 worth of certificates. Forfeiture of its charter and the appointment of a receiver will be asked. The company has offices in several cities. Two clergymen were among its salesmen.

Christian P. Christensen, formerly a Baptist minister, was arraigned in Hoboken, N. J., Jan. 8, on the charge of practising witchcraft and was held in $500 bail.

In the year just ended, according to statistics completed by William C. Moore, landing agent at Ellis Island, New York, 1,332,200 passengers arrived at this port, 952,834 coming in the steerage. The steamships of twenty-six lines brought here 148,956 first cabin passengers and 230,410 second cabin passengers.

Charles I. Greenfield, Meyer Rotman and Samuel Brown, under arrest at Philadelphia, Pa., charged with defrauding wholesale concerns throughout the country of $500,000 by a system of fake references, were held in $32,000 bail, Jan. 8, on charges of attempting to swindle by use of the United States mails.

Road repair work which a State inspector estimated would cost at the outside $3 a cubic yard was contracted for without bids by the New York State Highways Department at $4.50 a cubic yard, an unnecessary cost to the State of about $1,200 a mile. Another outside estimate of $3.75 a cubic yard was raised to $6.25 a cubic yard when let to contractors by State officials at Albany. This "graft" was at the rate of about $2,000 a mile. This testimony was given Jan. 9, by William G. Merritt, who was an inspector of highways in Ulster county from 1907 to 1912.

The capsizing of a motor cutter from the battleship Wyoming, flagship of the Atlantic fleet, in Hampton Roads, Jan. 9, resulted in the loss of the lives of four seamen of the Wyoming's crew. Twelve others were picked up by a tug sent to their rescue. The accident occurred near the spot where a launch from the battleship Minnesota went down in 1907 with 11 men, six of them young midshipmen returning from a ball at the Jamestown exposition grounds.

Twelve men, five whites and seven negroes, were killed in an explosion in the Rock Castle mine of the Davis Creek Coal Company, thirty-five miles south of Birmingham, Ala., Jan. 10. More than two hundred men were at work in the mine when the explosion occurred. All except 12 got out of the workings before the after damp affected them seriously. The explosion is believed to have been of gas origin, igniting dust in the mine.

An agreement between the Department of Justice and the New York, New Haven and Hartford Railroad that provides for a reorganization of the road in conformity with the Administration's interpretation of the Sherman anti-trust law was reached in a conference held at Washington, Jan. 10. As a result the Department of Justice will abandon the suit for a dissolution of the New Haven system that was prepared for filing in the courts in the event that those authorized to speak for the road found themselves unable or unwilling to comply with the demands of the Government. For the second time, therefore, the Administration has succeeded in settling a big anti-trust case without resort to the courts. The Administration's "peaceful" policy of adjusting disputes with corporations charged with violating or evading the anti-trust laws first found expression in the agreement perfected by Attorney-General McReynolds with the American Telephone and Telegraph Company whereby that concern pledged itself to dispose of its stock in the Western Union Telegraph Company. The New Haven road gives up the following: Boston and Maine control, all its trolley systems, Merchants and Miners Line, Eastern Steamship Corporation, Maine Steamship Company. It retains other steamship lines, including the Long Island Sound service, until Interstate Commerce Commission gives ruling.

Driven by a gale which piled up battering seas the Royal Mail Packet steamship Cobequid struck on the rocks that fringe the mouth of the Bay of Fundy, Jan. 13. Thirty-six hours later 94 of the 106 persons aboard the vessel were taken off by coast steamers and brought into Yarmouth. Capt. Howson and 11 men remained on board. No lives were lost, but all the crew suffered greatly in the intense cold, for the temperature was below zero and the steamer's decks were awash, and the seas, which froze where they fell, converted the wreck into a gigantic icicle. Passengers and crew were kept below decks during their terribly long vigil, which largely accounts for all lives being saved. Bridge, deckhouse and practically everything moveable were swept from the ship's decks by the seas, which continually broke over her. The wireless operator was able to get out one call for help before his aerials iced up, after which he was helpless. Her furnace fires were put out in a few minutes and the passengers and crew were forced by the rapidly rising waters to the boat deck, where they took refuge in the captain's quarters. For 24 hours in the midst of one of the worst storms, with Winter seas sweeping their vessel and breaking it up beneath them, these people had to huddle together. One of the men succeeded in getting a metal bucket, in which some holes were punched to make a draught. In this a small fire was started where some warm drinks were prepared for the women and children.

Fire which seriously threatened the business center of Montreal, P. Q., was subdued Jan. 13. The loss is estimated at $500,000. For a time the historic Notre Dame Cathedral was threatened. Flames broke out in a building adjacent to the cathedral, but were checked. Battling in a temperature 25 degrees below zero, firemen were not only hampered by the bitter cold, but by the fact that half a dozen other fires broke out almost simultaneously. At one time only seven pieces of apparatus were left with which to combat the central fire. Almost every fireman sustained frostbites, and so serious were the injuries and the effects of the frost that offices nearby were turned into a temporary hospital.

FARM AND GARDEN.—C. L. Marlatt, chairman of the Federal Horticultural Board, has asked for an appropriation of $35,000 to keep the Mediterranean fruit fly from coming to the United States from Hawaii and elsewhere.

The Garden City Producers' Association has been formed by truck farmers and market gardeners in the vicinity of Tampa, Fla., with the following officers: Horton C. Powell, president; —— Jordan, vice-president; J. L. Simmons, secretary; H. S. Wisner, manager.

The following officers were elected at the annual meeting of the Washington State Horticultural Association at Walla Walla: Michael Horan, Wenatchee, president; R. Edward Trumble, Wenatchee, secretary; H. C. Sampson, Spokane, first vice-president; J. H. Wright, Yakima, second vice-president; P. H. Weyrauch, Walla Walla, treasurer. The next meeting will be held at Wenatchee.

Two measures, one designed to improve the lot of the farmer and the other the lot of the housewife, will be pressed for consideration in the Senate soon after Congress reconvenes. Senator Smith, of Georgia, will ask the Senate to take up his bill providing for co-operative agricultural extension work, and Senator Smoot will ask to have considered his bill to provide for researches and experiments in the field of home economics. In the last Congress the House passed a bill to establish agricultural extension departments in connection with agricultural colleges. The Senate also passed the measure, but added to it a scheme for aiding vocational education. The House refused to accept the amendment, and the bill failed.

Leaders of the Poultry Workers' Union announced, Jan. 13, that more than 2,600,000 pounds (1,300 tons) of kosher poultry are tied up already as a result of the strike of the butchers, and that by the end of the week the amount of kosher poultry tied up will be almost 10,000,000 pounds. The announcement was also made that 1,000 kosher meat butchers would go out on strike. The butchers demand that their "bosses" employ only rabbis who are members of the union to kill poultry. Demands for a minimum wage of $14 a week, shorter hours and recognition of the union are also made.

The Sir William Vestey Company, of England, is the lessee of the sixteen acres of waterfront buildings in the New York Dock Company property in Brooklyn. Sir William Vestey is at the head of the corporation, which is largely interested in the meat industry in England. It plans to market here beef from Argentina, Australia and New Zealand.

VOLCANIC ACTION IN JAPAN.—The city of Kagoshima, with 64,000 inhabitants, was totally destroyed by a flood of fire from the Sakurashima volcano, which burst into activity on Jan. 11. The three villages on the island of Sakura were blotted out by the molten lava which poured from the crater, and 15,000 persons are believed to have perished there. Nearly 100,000 persons are feared to be dead in the greatest volcanic disaster since the destruction of St. Pierre by the eruption of Mont Pelee. The whole volcanic range of Kiushiu burst into dangerous activity with startling suddenness after having been quiescent for more than a century. Kagoshima was obliterated exactly as ancient Pompeii was engulfed by the flaming ashes pouring from Vesuvius. Hundreds of earthquake shocks were felt all through the islands. Railroads, telegraph lines and telephone lines were destroyed. Ashes from the volcano fell into the city of Nagasaki, 100 miles away. The earthquake shocks were felt principally throughout the Kiushiu area.

AMONG the members of a work gang on a certain railway was an Irishman, who claimed to be very good at figuring. The boss, thinking that he would get ahead of Pat, said: "Say, Pat, how many shirts can you get out of a yard?" "That depends," answered Pat, "on whose yard you get into."—Winnipeg Telegram.

COMING FARMERS' MEETINGS.

Ohio State Horticultural Society, annual meeting, Cleveland, O., January 20-23, in connection with the Fifth Annual Ohio State Apple Show.

Virginia State Horticultural Society, annual meeting, Richmond, Va., January 21-23.

New York State School of Agriculture, Alfred, N. Y., short course in agriculture beginning January 26; Farmers' Week, February 23-26.

Tennessee State Horticultural Society, State Nurserymen's Association, State Beekeepers' Association, Nashville, Tenn., January 28-30.

Forty-first annual meeting, New Jersey State Board of Agriculture, Trenton, N. J., January 29-30.

Farmers' Week, State School of Agriculture, Canton, N. Y., January 26-31.

Ohio Corn Improvement Association, Mansfield, O., January 27-30.

Western New York Horticultural Society, Rochester, N. Y., January 28-29-30.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6.

Sixth National Corn Exhibition, State Fair Ground, Dallas, Texas, February 10-24.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26.

CROPS AND PRICES.

I find the greatest need here, as in other localities, is how to get a bigger per cent. of the consumer's dollar rather than bigger crops for less money for the farmers and a bigger profit for the middleman. It looks a little as though, if we could raise twice as much as we do now, we would get more work and less money, and the consumer would not benefit in the least. Prices here to the farmer are: Wheat, 96; oats, 43; corn, shelled, 76; hay, Timothy, $16 to $17; clover, $13 to $15; eggs, 40 to 45; butter, country, 30; creamery, 34. C. R.
Lake, O.

Cattle on the hoof, three to six cents per pound, according to condition, etc. of animals; dressed, nine cents per pound fore quarter, 11 cents hind quarter. No sales in this township at present for calves. Hogs, 13 to 14 cents per pound dressed. Fresh milk, five cents per quart, private sales; cheese, 22; butter, 32; eggs, 32. Apples being the main fruit sold and it being a bad year around here for them, it seems to me that those who have them get whatever they can. I sold some recently at 60 cents per bushel, choice Baldwins, a very low price for the quality. C. E. H.
Dingman's Ferry, N. Y.

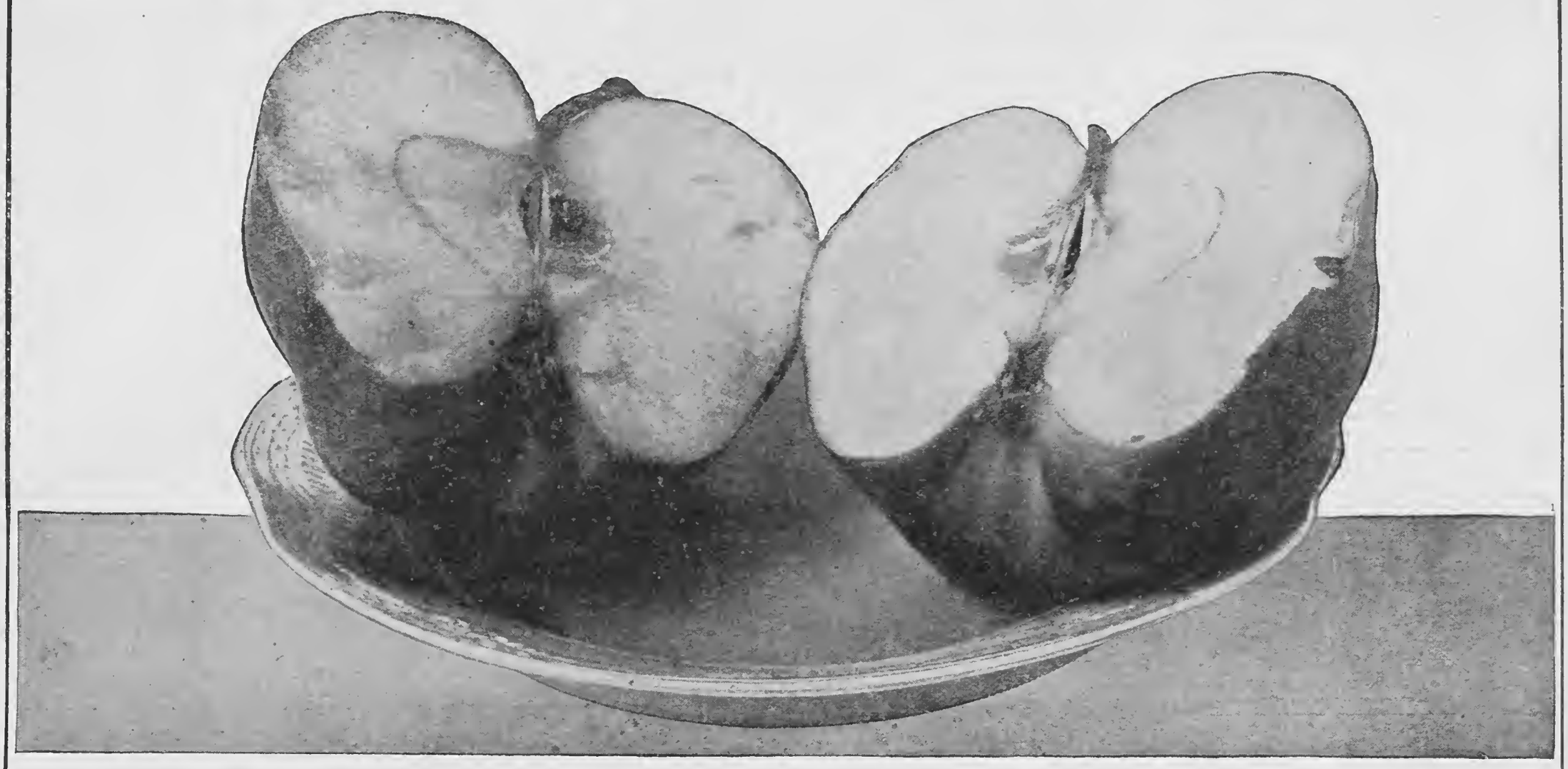
Wheat is selling at about $1 per bushel and corn at the same; hay $20 per ton. Potatoes are retailing at from 90 to $1.20 per bushel. Apples from $2 to $2.50 per bushel. There are not enough cattle sold here to establish a price. Hogs are selling at about eight cents per pound, pork from 11 to 14 cents per pound; butter, 40 to 45; eggs about all that one would ask for them. W. F. B.
Dawson, Pa.

Butter, 33 to 35; eggs, 35 to 38; fat cattle, 6½ to eight, dealer's price. Hogs, 10 to 11. Apples, Stayman and Limbertwig, $1.25; other varieties cheaper. Cabbage, 1½ cents per pound. G. M.
Dillsburg, Pa.

Hay, baled, Timothy, $16; clover, $13; corn, 60; potatoes, 70. Beef cattle, $7 to $8 per 100 pounds; creamery milk, delivered, $1.80 per 100 pounds; retail butter, 44. E. P. W.
Doe Run, Pa.

Dairymen are filling their icehouses with a fine quality of ice from private ponds and lakes. Ice is from nine to 14 inches thick; have had quite good sleighing since Christmas, which helps a whole lot with hauling loads. Some are getting out the next year's supply of wood and some lumber for repair work. Several new silos were built last Fall, but none entirely filled with corn, as the corn was a very poor crop. The Granges are alive and doing good work for their respective communities. They have recently elected new officers and are busy installing the same now; Past Masters usually serve as installing officers, after which refreshments are served by the sisters, while all have an enjoyable time. V. S. C.
Elk Creek, N. Y.

Veals, live, 10½; beef cattle, six to seven live weight. Eggs, 32; butter, 32 to 35; potatoes, 75 cents per 60 pounds; oats, 50; corn, $1.60 per 100 pounds; buckwheat, $1.60 per 100. Milk sold at cheese factory for December, 50; January, 47; for butter fat, which makes milk range from about $1.80 to $2 per 100 pounds. The milk sold at cheese factory is made into Swiss cheese by a native of Switzerland, except in time of shortage of milk at an adjacent shipping station, when it is contributed to New York shipments. Hay sells for $13 to $15 per ton at barn, price depending on quality. Prices here of general produce helped much by home markets of three mining towns located, one five miles distant and two about 10 miles distant.
Covington, Pa. S. P.



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William P. Stark trees are grown at Stark City, Missouri, in the heart of the finest nursery soil in the Ozark Mountains. They are propagated by experts; each tree is individually trained; they have tops which balance with the roots; and the root-system is the wonder of all who know good tree roots. *Every tree has the genuine William P. Stark quality.*

You who have wanted genuine Delicious trees can now get them direct from the grower and at grower's lowest prices. Write for new 120-page catalog.

Extract from

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THE RURAL NEW-YORKER,
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NORWAY SPRUCE.

I send some leaves or spikes of a tree which some call Norway spruce and some Norway pine. Can you tell me the true name. They had some seed spikes like our pine which I would like to plant and would like information how to plant and whether they grow in our locality?

Tylersville, Pa. J. S. R.

The twig sent is the Norway spruce, Picea excelsa. This is one of the most beautifnl standard evergreens, hardy, a rapid grower, adaptable to many soils and climates, and of elegant pointed form, often with drooping branchlets. It is propagated by seeds without difficnlty, seeds ripening in Fall. Conifer seeds call for a mellow seed-bed, the seed being nsnally sown in May, but where a small quantity is to be sown, it is a good plan to sow in boxes. The plan used in such cases at the Arnold Arboretum is to sow the seed (which is not covered more than one-fourth inch) in well-drained boxes as soon as ripe, pile boxes four or five deep in a sheltered place, cover with boards, and when weather becomes severe add a covering of hay. About the middle of April move boxes to where they get the morning sun, keep them weeded and watered, and shade through the Summer with lath screens. Winter the seedlings in the boxes, covered as before, and transplant into rows in good well-tilled soil the next Spring, when they are making the first or second set of rough leaves.

Hemp Cultivation in California.

I am engaged in raising hemp in California; am sowing, or going to sow, 200 acres in 1914. I have been engaged in that pursuit since 1874, and up to 1896 all in Illinois. In 1896 I came to California, and continued to raise hemp up to the present time. Just now I have found an ideal place here, for the business. Even although the rainfall is meager, we are in a situation where we can syphon water from the San Joaquin River, into our hemp field, over 20-feet levee, and irrigate the crop, all Snmmer, our "rainless Summers." With irrigation and a little nitrate of soda, 100 pounds every year, we can raise close to 2000 pounds on an acre of fibre on good land. We let the rains, and river or tule fog rot the hemp in the Winter. So when we take the rotted hemp stalks off the land all or nearly all fertility in the hemp has been washed back into the soil where the hemp grew. Thus we require very little rotation in crops. Our soil is all peat, rotten tule roots and stalks, etc. The peat is very porous so that a small ditch nine inches wide and a foot deep every 80 feet supplies water to the hemp; a little water runs in all the ditches all the time until nearly cutting time, which is about October 1. A crop 10 feet high takes a lot of water in a Summer.

We have a good market in Oakland, Cal. The California cotton mills could consume 4,000 tons if they could get it, so they say. I run the hemp stalks when dry, after being rotted, through a mill of my own invention at the rate of getting 2,500 pounds fibre per day. Hemp fibre is now worth $150 per 2,000 pounds fibre delivered at mill, or $165 delivered in New York. J. H.

"Jersey Red" Soil.

What is the composition of the soil which is so commonly met with in New Jersey, and referred to as "Jersey red?" I have been told that this soil is not the most desirable for agricultural purposes, and that crops such as roots and tubers, cannot be successfully grown in this red ground. A. A.

Jamaica, N. Y.

Soil commonly known as "Jersey red" is a red shale or heavy red clay soil which is underlaid with red shale. It is found in New Jersey in a part of Middlesex and Somerset counties. It is especially adapted to the growing of hay, corn and forage crops. Apples seem to do fairly well on it, and in fact many crops are raised on it with success on the College Farm in New Brunswick. Alfalfa has been raised for a number of years on well-drained fields of this type of soil. If some green manure, such as clover, rye and vetch, etc., are plowed under and the soil is given a liberal application of ground limestone, which will grow root crops, the texture of the soil can be improved to serve as a suitable environment for almost any crop.

A. L. C.

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Alfalfa Plant on left Inoculated with Ferguson's Bacteria, on the right not Inoculated. From Government Bulletin No. 159.

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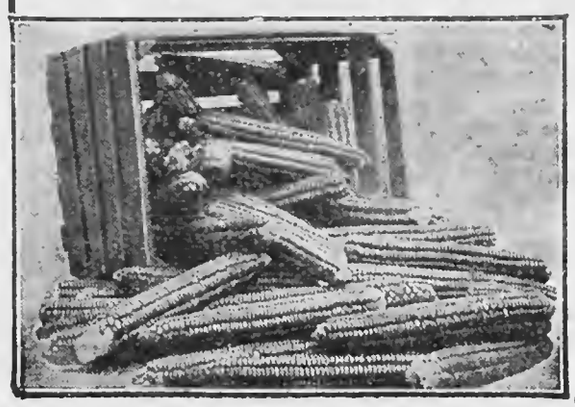

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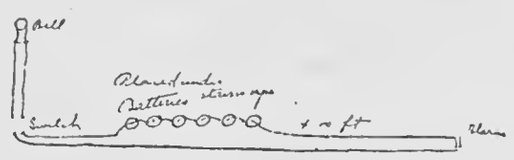
CONNECTING ELECTRIC ALARM.

I have installed an electric alarm on an outbuilding about 400 feet from the house. I have this connected with an electric bell in the house, and have the wires connected with six dry batteries. For some reason or other I am unable to get any connection beyond 150 feet. Do you think I have enough batteries for so great a distance? I am enclosing a diagram showing how I have the batteries, etc., connected. D. R.

Rockland, Mass.

With the batteries in reasonably good condition you should be able to do this easily. Disconnect one of the battery wires, and with the switches closed scrape the loose end against the corrugated part of the binding post. If there is a spark, the bell vibrator is not adjusted properly and there is no other trouble, provided the wires are insulated from each other and are not short circuited. If there is no spark, probably there is a break in the wire, a poor connection at one of the binding posts or the bell vibrator is not adjusted properly. The latter case is doubtful as that should result in a spark.



Go over every binding post carefully, cleaning and brightening the wire and tightening the post. Then look over the wire carefully for breaks hidden by the insulation. This can readily be done by scraping a bare place on each wire every 50 feet or so, and connecting the two wires together with a third piece at each bare place, beginning at the house. If the bell rings at one point and not at the next, probably there is a break between the two places. If the bell doesn't ring with the cross connection at the point nearest the house and you are sure the batteries are all right, leave the cross connection made, disconnect one wire from the bell, loosen up the vibrator adjustment and gradually tighten it, making connection with the loose wire to the binding post every half turn or so.

R. P. C.

The Question of House Heating.

On page 10 R. P. C. gives some interesting figures in reply to G. C. about the cost of heating systems for a six-room house. It seems to me that these are too high. Ten years ago I built two houses, after one and the same plan, each containing six rooms and bath. In the one I put a hot-water system at a cost of $225. This gave us heat in two rooms and hall on first floor, also in one bedroom and bathroom on second floor; in fact by leaving doors open all bedrooms are comfortable even in very cold weather. It has never required more than five tons of coal to run this heater from November 1 till middle of April, and some seasons considerably less. The other house was equipped with a hot-air furnace at a cost of $90, and in the same length of time gets away with seven tons of coal, and if Winter is severe slightly more. I personally take care of both fires.

The hot-air system has required no repairs in the 10 years except cleaning and replacing of smoke pipe. Last Fall my own hot-water boiler sprung a leak. My local plumber, on making an examination, said it would have to be renewed. On being asked the cost he thought about $100. When I insisted on a written estimate he made it $86, explaining that a boiler of 500 rating would cost him $69; in fact he gave me to understand that he was figuring on a very small profit. He did not receive the contract, and put in a bill of $5 for looking at my boiler. At this time I bought, through a friend, who happens to be a builder living in another State, a heater of the same rating right from the factory for $46, freight prepaid. This was dealer's price, and this same heater is listed in regular catalogue at $141. On the advice of this friend I bought a pipe wrench, and with the help of one of my sons and a few other tools disconnected the old boiler, and by procuring some fittings and having some threads cut at a local shop at a cost of $7 was able in two days after receiving boiler to have the system in working order. The fact that the new heater was of a different make, and also because unions had to be inserted in floor and return pipes, made these extra fittings necessary.

If I had a six-room house-heating proposition to solve to-day, rather than pay a contractor $450 or more, as R. P. C. says, I would buy the whole outfit and put it in myself, and expect to come out from $100 to $200 ahead. Of course there are some points on which I should first make sure that I was well posted and thoroughly understood, such as the gradual ascending and descending of flow and return pipes without any dips or sags, the proper location of expansion tank, with escape pipe, etc. I know of course that the price of everything in general has advanced in the last 10 years, but hardly think this particular work has gone up 100% or more, but the trend of the times is to soak you "all the traffic will bear," and in this plumbers as a class certainly are no exception. J. B.

New Jersey.

Septic Tanks.

Can you give me a description of a good successful septic tank or house cesspool? I have descriptions of several, but they are not all alike. One has the inlet higher than the outlet, which seems sensible, another has both on same level, while in 1911 Report of the Department of Agriculture of Pennsylvania, the inlet pipe is below the outlet pipe, which is near the top of the tank, which, to me looks impractical, and would keep the inlet pipe always with sewage in it, therefore in danger of forcing the sewage gas backward. I would like to know the size for 10 people, how to construct, what kind of pipe to use for inlet and outlet, and the fall and length for each. Does it requires any ventilation? W. W. L.

Rutledgedale, Pa.

If you have the September 13, 1913, issue of this paper at hand, you will find in it a full discussion of the principles of septic tank construction, and an illustration of one suitable for household use. As you say, no two builders construct them exactly alike, but if the essential principles are followed, you should be able to install one that will do its work satisfactorily. The inlet pipe should be carried well below the surface of the tank contents. This will seal that pipe and minimize the disturbance caused by the inrush of sewage. House fixtures should also be trapped against sewage gas. The tank itself should not be ventilated. A tank four feet six inches deep, three feet wide and seven feet long, inside measurements, is sufficiently large for 10 people. The outlet should be so placed as to give a space of about 12 inches above the water level in the tank. Any watertight material may be used in the construction of the tank, but reinforced concrete is, perhaps, the most practicable. Vitrified pipe is most suitable for inlet and outlet pipes, the former of four, and the latter of three-inch size. The inlet pipe may be of any needed length and fall, the outlet pipe should connect with the tile drain through which the tank contents are discharged, and these drain tiles should have a uniform fall of 1-16-inch to the foot. M. B. D.

Homemade Brick for the Stove.

As Winter approaches there is much to get in shape, and the kitchen range and the sitting-room heater will have to do heavy duty during the cold months. The back of the range may have suffered from fire, and there may be holes in it which need patching. There may be cracks in the heater which could be at least temporarily closed and the stove would be safe and efficient for a time. In such cases a very simple fire brick might be made and applied as plaster. We have used it and found it did good service. We took the old formula of our grandparents, wood ashes and salt, mixed them equal parts, and to that added one part of Portland cement to two or three parts of the combined mixture. We wet it as in preparing a cement mortar, placed it in the back of the stove and immediately built the fire. The mixture proved very satisfactory, withstood intense heat from coal and was as firm withstanding fire, as though it had been stone. This mixture is easily prepared and applied, is inexpensive as well. This will not take the place of a new back or part for the stove direct from the factory, but it will do temporary service very satisfactorily. MRS. GERTRUDE JACK.

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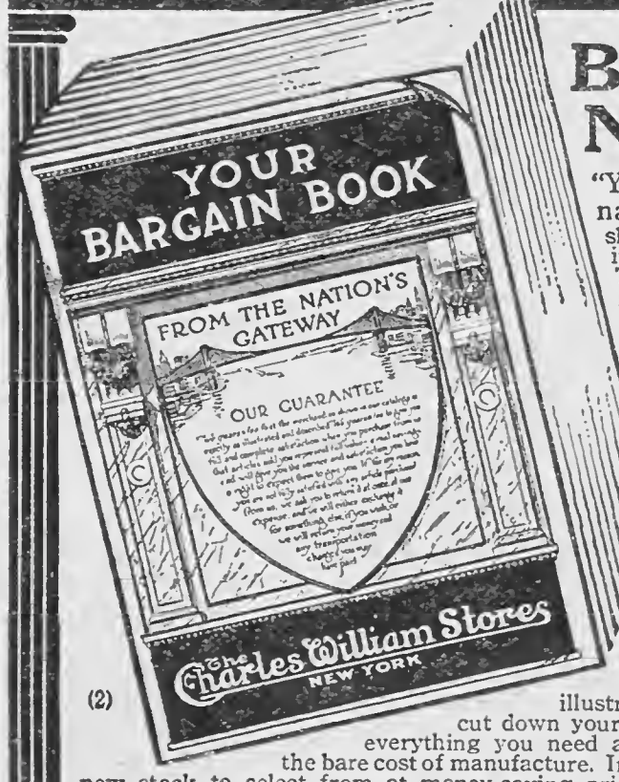

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Office and Works, PORTLAND, CONN.

DOUBLE HEADED RYE.

Inclosed find a rye head which my day-help cut out of my wheat field. He said there were a great number like this one he saved. I would like to know what you think about it. Would seed from such a head produce a field of double heads? J. C. R.

J. C. R. has here an interesting and perhaps valuable variation in rye. This type of variation occurs occasionally in grasses, and the condition is more or less transmissible by the seed. Thus, it is not to be expected that the seed from such heads would produce a crop of all double heads; but it is to be expected that it would produce a large number, say 25% or more; of such stalks. It should be possible then, to separate out a pure strain of double-headed rye. At any rate, the probability seems well worth the trial. I would suggest that the seed be saved and planted well away from all other rye. Then since rye, like corn, cross-fertilizes freely, cut out all single-headed stalks *before the blossoms open*. A few years of this procedure may separate the pure strain, although it is more likely that more refined methods involving hand pollination will have to be adopted for the final isolation. However, if the double-headed character should show up each season for a few years in a considerable number of plants, it would show the presence of the pure strain in the mixture, and the more refined methods could then be employed. C. A. LUDWIG.

NEW YORK STATE NEWS.

STATE FAIR COMMISSION.—At a meeting of the State Fair Commission held in Albany recently acting Lieut.-Gov. Robert F. Wagner was elected president, Commissioner Huson vice-president and A. E. Brown secretary and treasurer. Assignments were made of the various commissioners to their departments at the next annual fair. Commissioner Huson has farm horses, dairy, Grange and farm boys' camp. Commissioner Jones, concessions and machinery; Commissioner Wieting, cattle, sheep and swine; Commissioner Cummings, police, liberal arts building, domestic science and transportation; Commissioner Driscoll, poultry, State institutions exhibits, woman's building and fire department.

DAIRYMEN'S LEAGUE.—At the annual meeting of the Dairymen's League, held in Albany the first week in January, the following officers were elected: President, John Y. Gerow, Washingtonville; vice-president, F. H. Thompson, Holland Patent; secretary, Albert Manning, Otisville; treasurer, Louis M. Hardin, Sussex, N. J. A strong effort is being made to get as large an enrollment as possible by February 1, when it is proposed to close the books. The number of cows pledged is still below the needed number to make the organization as strong as it should be to carry out the plans made for it by its officers and directorate. Several organizers are now in the field.

NEW FARM BUREAU.—About 400 representative farmers met at Oneonta the second week of this month to consider the organization of a Farm Bureau. M. C. Burritt, State leader of the Farm Bureau movement, addressed the meeting and explained the operation of the Bureau. An organization was effected and officers elected. A. W. Brown of Plainfield was chosen president, O. C. Chamberlin of Richfield vice-president and D. W. McLaury of Portlandville secretary. The location of the proposed Bureau caused considerable discussion, Cooperstown and Oneonta both desiring it. The matter was finally left with the executive committee for decision.

STATE FORESTRY ASSOCIATION.—The second annual meeting of the State Forestry Association will be held in the Educational building, Albany, on January 22. National and State experts will discuss some of the pressing questions with which the association has to deal. A State-wide forest fire law will be one of these.

CENTRAL RURAL SCHOOLS.—A bill has been introduced in the Legislature by Senator Brown which provides for the organization of central rural schools. The commissioner of education is authorized to lay out in any territory, exclusive of city school districts, central school districts and provide for the establishment of schools wherein instruction, as given in the common and high schools, shall be given including instruction in agriculture. Fifteen resident taxpayers may call a meeting to determine the question of establishing such a school and if there are 15 qualified voters present at such meeting a majority of that number will be sufficient to establish the school. The meeting shall also elect a board of education which shall possess the same powers as similar boards in union free school districts. These rural schools are to receive State aid on the basis of attendance and additional aid where the school gives instruction in agriculture, as in the case of other schools.

HOLSTEIN BREEDERS MEET.—It was decided at a recent meeting of the State Holstein-Friesian club to make an exhibit this year, the first time, at the National Dairy show at Chicago next Fall. A big showing will be made if present plans carry. E. A. Powell of Syracuse is at the head of the committee having charge of the matter. It was stated that the management of the show will allow the club to make a group exhibit and also allow animals in the group to be shown as individuals. The National Holstein-Friesian association will meet in Chicago and arrangements are to be made to carry a large delegation of New York breeders. This meeting will be in June.

NEW YORK STATE GRANGE.—The forty-first annual meeting of the New York State Grange will be held at Poughkeepsie on February 3 to 6. Headquarters will be at the Nelson House, sessions at the Columbus Institute. The voting membership of this annual meeting will be about 600 if associate delegates accompany the elected delegates, there being about 325 of the latter. Jefferson county has the largest delegation which will number 21 elected delegates. The Grange membership of that county is about 2,800. The session will open on Tuesday morning with the master's address. Reports of officers and presentation of resolutions for reference to all committees will occupy the second day. In the evening there will be a public meeting under the direction of the Dutchess county Pomona.

FRUIT GROWERS OPPOSE BILL.—Fruit growers in the western part of the State are intensely opposed to the McKellar bills now before Congress. This opposition was voiced at the recent convention of the State Fruit Growers' Association in Rochester and the Rochester Chamber of Commerce and other organizations have been asked to lend their aid to prevent the passage of the bills. The McKellar bills provide that interstate shipments "of meats, fish, butter or eggs or other perishable edibles or food stuffs must not be kept in cold storage for a longer period than 90 days." They also make unlawful the restorage of food products including fruits, and two of them contain requirements as to tagging and branding which fruit men feel are unnecessary and would entail much expense. What the fruit growers want is to have fruit exempted from the provisions of the bills, and it looks as if the 1,200 members of the association would let the interstate commerce committee and Congress know what they think about these measures promptly. President Morrell of the association expressed himself as in favor of better and more honest packing of fruit. He thought the Wilson bill was about as satisfactory as any he had seen. This divides apples into three grades, provides that the names and addresses of growers be placed on the boxes and imposes a fine for deceptions. He said he would favor a bill to put plates on barrels and boxes to show just what was inside them.

FARM BUREAU EXCHANGE.—The Farm Bureau of St. Lawrence county has established a produce exchange with a view to bringing producers and buyers closer together. It is simple in its workings and is just a medium of exchange between them. Any farmer may list with the Bureau what he has to sell and may write to ascertain where he may procure the things he needs. The Bureau is in position to advise farmers where farm machinery, fertilizers, lime, improved seeds, etc., can be produced most advantageously. This is a practical plan for each county and would seem to help shorten the distance between producer and consumer, and in this case the farmer is both. One day a farmer (not in St. Lawrence county) discovered that he had a few more bushels of seed rye than he needed and he took some of it to town to sell. He was informed by the dealer that seed rye "wasn't in much demand" just then but he would give 80 cents a bushel for it. He got it. The same day in the afternoon another farmer came to the store in search of a little seed rye. The same dealer said he had a few bushels that he could let him have for $1.50 a bushel; it was very nice. The farmer took it. A little later the transaction got out and it was discovered that these two farmers lived only about one mile apart on the same road. This is no fairy story, either. It is such conditions that the Farm Bureau is intended to eliminate.

Chicken and Lime Refuse.

I haul manure eight miles from St. Louis. At some meat shops it is mixed with chicken entrails and chicken manure. Is that better than horse manure? My neighbors say lime is good; I can get at a limestone quarry the residue from rock crushed for the roads for nothing. Will it pay to haul eight miles?
Wallston, Mo. J. B.

The chicken manure and entrails will add to the value of the horse manure. Lime is good for sour land, but do not mix it with this manure. The crushed limestone is not as valuable as the burned lime and would hardly pay to haul eight miles unless you know your soil is very sour.

How to Supply Your Soil

Just the Plant-Food Needed for Certain Crops

SOIL FERTILITY is a subject that must be handled to meet individual soil conditions and particular crop requirements if you would avoid wasting money when buying fertilizers.

After you have decided what mineral elements your soil needs, your next question is how to purchase these elements in the most efficient and economical form to apply.

We offer high-grade fertilizers to meet every soil condition and special crop requirement. Our products are scientifically correct fertilizers, made from the highest-grade chemicals and materials, and are practically odorless. No cheap, worthless "filler" is used which only adds weight and makes more labor to apply.

CONSUMERS BRAND FERTILIZERS

are prepared from your own specifications made out to meet the actual plant food requirements of your soil for any particular crop. You eliminate all waste of expensive elements when you order your commercial fertilizer direct from us.

The same soil of any field needs different fertilizers for different crops. The different soils of different fields need different fertilizers for the same crop. We make high-grade fertilizer to meet the exact needs of any field for any particular crop.

Don't waste money buying more nitrogen or more potash or more phosphoric acid—or any other element of plant food—than your soil needs for any particular crop. Commercial fertilizers are too expensive to apply from "stock" formulas.

Write today for free circulars. We sell only direct to the farmer.

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When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : :

The Home Acre.

LAYING OUT A PLACE.

PART I.

Grass seed mixture can be procured from any seedsman, doing business in our seacoast cities. Along the margins of drive ways and walks a strip of sod eight or 10 inches wide should be laid to grade (with the exception of the walks in the vegetable and flower gardens, which should be sodded the entire width). This will hold the soil to grade and prevent washing out by heavy rains.

The driveway and walks should be excavated to a depth of six and four inches respectively and filled in with good gravel up to within one inch of the surface and rolled. Some people like an abundance of trees and shrubs on the lawn and its borders, while others prefer not so many. In the plan there is abundance specified. If too many to suit your taste, you can cut out as many of the plantings as will be necessary to conform with your ideas.

No estimate will be given on the cost of grading and laying out of the property, as that is a matter largely governed by local conditions and the cost of material. I cannot even guess what the cost of the work will be. The cost of planting the vegetable and annual flower garden is not included in this estimate, as that is also largely controlled by local conditions as to cost of labor, plants, etc.

PLANTING LIST WITH ESTIMATED COST.

1—12	Silver maples for driveway, 8 to 10 feet, at .75	$9.00
2—3	Silver maples for lawn	2.25
3—2	Oriental plane for lawn	2.50
4—1	Purple-leaved beech for lawn	4.00
5—1	European elm for lawn, 10 to 12 feet	1.00
6—1	European linden for lawn, 8 to 10 feet	1.00
7—1	Catalpa speciosa for lawn, 8 to 10 feet	1.00
8—13	Silver maple for street, 10 to 12 feet	13.00
9—1	Colorado blue spruce for lawn, 2 to 3 feet	1.50
10—1	Retinispora plumosa for lawn, 2 to 3 feet	1.50
11—1	R. plumosa aurea, 2 to 3 feet	1.50
12—1	R. squarrosa Veitchii, 2 to 3 feet	1.50
13—1	Douglas spruce, 2 to 3 feet	1.50
14—1	Norway spruce, 2 to 3 feet.	.75
15—2	Red Astrachau apple, 6 to 7 feet	1.20
16—3	Bartlett pear, 5 to 6 feet	3.00
17—2	Early Harvest apple, 6 to 7 feet	1.20
	SHRUB BORDER.	
18—6	Philadelphus grandiflorus, 2 to 3 feet	1.50
19—6	Syringa vulgaris, 2 to 3 feet	1.50
20—3	Althæa, assorted, 2 to 3 feet	.75
21—5	Lonicera Morrowi, 2 to 3 feet	1.25
22—11	Deutzia crenata fl. pl., 2 to 3 feet	2.75
23—8	Forsythia viridissima, 2 to 3 feet	1.50
24—4	Spiræa Billardi, 2 to 3 feet.	1.00
25—9	S. Van Houttei, 2 to 3 feet	2.25
26—9	Hydrangea paniculata grandiflora, 2 to 3 feet	2.25
27—8	Deutzia gracilis, 18 to 24 inches	2.80
28—9	Rosa rugosa rubra	2.70
29—8	Deutzia gracilis rosea	4.00
30—6	Spiræa Callosa alba	1.50
31—6	Spiræa Anthouy Waterer	1.50
32—9	Philadelphus nanus, 18 to 24 inches	2.25
33—7	Forsythia Suspensa, 2 to 3 feet	1.40
34—8	Deutzia Lemoinei, 2 to 3 feet	2.50
35—6	Weigela nana variegata, 2 to 3 feet	1.50
36—1	W. rosea, 2 to 3 feet	.25
37—1	Viburnum opulus-sterilis, 2 to 3 feet	.25
38—1	Deutzia candidissima, 2 to 3 feet	.25
39—1	Spiræa opulifolia, 2 to 3 feet	.25
40—1	Syringa vulgaris albus, 2 to 3 feet	.25
41—2	Spiræa Van Houttei, 2 to 3 feet	.50
42—1	Weigela amabilis, 2 to 3 feet	.20
43—1	Syringa Persica, 2 to 3 feet	.35
44—1	S. Persica alba, 2 to 3 feet	.35
45—1	Philadelphus aurea, 2 feet.	.35
46—3	Spiræa Van Houttei, 2 to 3 feet	.75
47—4	Spiræa Van Houttei, 2 to 3 feet	1.00
48—5	Deutzia candidissima, 2 to 3 feet	1.25
49—3	Syringa Villosa, 2 to 3 feet.	1.05
50—6	Hydrangea paniculata grandiflora, 2 to 3 feet	1.50
51—5	Spiræa Bumalda	1.25
52—5	Philadelphus Avalanche, 2 to 3 feet	2.50
53—16	Lonicera Halleana, Japan honeysuckle, to be trained on poultry wire attached to foundation and cornice of piazza, leaving openings resembling windows between the columns. If it is desired, every alternate plant may be Clematis paniculata	4.00
54—2	crescent shape flower beds in front of piazza for geraniums	
55—2	Spiræa Anthony Waterer	.50
56—3	Rhodotypos kerrioides, 2 to 3 feet	.75
57—2	Hypericum aureum	.70
58—2	Deutzia gracilis rosea	1.00
59—2	Thunberg's barberry, 2 feet	.60
60—3	Daphne Cneorum	1.50
61—2	Weigela nana foliis variegatis, 2 to 3 feet	.50
	FLOWER GARDEN, ETC.	
62—1	Climbing rose, Dr. Van Fleet, trained up to garage	.50
63—1	climbing rose Gardenia trained up to garage	.50
64—1	climbing Dorothy Perkins	.35
65—30	hardy bush roses two years old; 3 Gen. Jacqueminot, 3 Paul Neyron, 3 Coquette des Alpes, 3 Hugh Dickson, 3 Frau Karl Druschki, 3 Conrad F. Meyer, 3 Prince Camille de Rohan, 3 Clio, 3 Anna de Diesbach, 3 Ulrich Brunner	15.00
	HARDY HERBACEOUS PLANTS.	
66—7	Rudbeckia Golden Glow, at 15c.	1.05
67—7	Helenium autumnale, at 15c.	1.05
68—5	Eupatorium ageratoides, at 15c.	.75
69—6	Digitalis, assorted, at 15c.	.90
70—7	Heliopsis Pitcheriana, at 15c.	1.05
71—8	Hardy Phlox, mixed, at 15c.	1.25
72—8	Hardy Delphinium, mixed, at 15c.	1.20
73—5	German Iris, 5 Oriental poppy, at 15c.	1.50
74—4	Coreopsis lanceolata, 4 Asclepias tuberosa, at 15c.	1.20
75—7	Funkia cærulea, at 10c.	.70
76—7	assorted columbines, at 15c.	1.05
	VEGETABLE GARDEN.	
77—5	Currant bushes, 2-yr-old	1.00
78—4	Gooseberry, Downing	.60
79—8	Rhubarb	1.60
80—2	Sage, Holt's Mammoth	.30
81—2	Tarragon	.70
82—2	Spearmint	.20
84—100	strawberries, two rows, two feet apart, 18 inches apart in the row, rows full length of cultivated garden in fruit tree border; select such varieties that do well in the vicinity of Cape Cod	1.50
	Lawn grass seed, 3 bushels	15.00
		$152.60

A discount of 10 per cent. more may possibly be allowed, if all or nearly all the trees, shrubs, etc., is procured from one nursery.

85—85	assorted Althæa hedge on west and north sides of garden, planted 18 inches apart in the row	10.00
86—480	California privet hedge on west and north street lines, planted eight inches apart in the row, blocking ends of hedge at entrance to driveway by planting in squares of about 30 inches	10.00
	Total	$172.60

J. A. K.

English Walnuts for Ohio.

What about the English walnut? Is it hardy enough for latitude 41 deg. in Ohio? Would it be a profitable tree to plant? Can trees be raised from the nuts? Where could trees be procured? Is there any other thin-shelled nut that would do well in Ohio? T. F. Y.

As yet it is somewhat uncertain about the success of the Persian walnut in Ohio, but it would seem reasonable to think that the varieties that succeed in New York and Pennsylvania would be suitable there as well. But this tree is not so hardy as the native walnuts that grow all over Ohio, but needs a more equable climate. It seems to be the violent changes that injure the trees. Now that there are a very few nurseries propagating the hardy walnuts, pecans and some other nut trees by grafting them on native, hardy stocks, there ought to be a far more general trial of them and with much more success. Seedlings are uncertain as to variety, but they are far better than no trees at all. H. E. V. D.

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Five thick, tough Goodrich Rubber fingers—

They dig down through mud, slush and ooze; they clean and grip the road. They stop the skid before it starts. They give you lower-cost mileage because of the extra thickness of rubber at the point of contact.

Goodrich Safety Tread Tires

Best in the Long Run

Don't experiment. Don't take chances. Look for the five bars and the crosstie when you choose a non-skid tire.

Read the reduced prices below. Better still, tear out this price list and hand it to your dealer.

Don't pay more than the prices named here for the accepted *standard* non-skid and smooth tread tires:

Size	Smooth Tread Prices	Safety Tread Prices	Size	Smooth Tread Prices	Safety Tread Prices
30 x 3	$11.70	$12.65	34 x 4½	$33.00	$35.00
30 x 3½	15.75	17.00	35 x 4½	34.00	36.05
32 x 3½	16.75	18.10	36 x 4½	35.00	37.10
33 x 4	23.55	25.25	37 x 5	41.95	44.45
34 x 4	24.35	26.05	38 x 5½	54.00	57.30

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Hope Farm Notes

THE SCRUB HENS.—My bug-eaters are attracting some attention even though they do not lay eggs at the laying contest. One expert far up in the poultry world is kind enough to say:

"Entering these scrubs was a fool thing to do. Doesn't everyone know such hens are failures?"

Then comes a practical man who makes his hens pay.

"This is the brainiest thing ever attempted in the hen business, for I can see just what you are trying to get at."

Now the Hope Farm man naturally disclaims the last statement, and matches his scrubs against the expert to disprove the first one.

Up to January 2, after the contest had gone on for 63 days, the Hope Farm scrubs had not laid an egg. I was in hopes one of them would remember me with a little New Year's offering, but they all declined. At home some of the birds from the same lot are laying, but those out in the limelight are either bashful, or else they want to give a good imitation of the turtle at the start and then come sailing along later. On January 5 I got word that one scrub had died of some unknown disease. I had another one warming up to go into the box, and now we have sent another.

Now let's have a good laugh at the Hope Farm scrubs, and then analyze the situation a little. Three hens in other pens have died—two Reds and a Leghorn—since the contest opened. One pen of Reds, one of Silver Campines, and one of the new Cornish breed have not laid an egg, and are tied for the leather medal with my scrubs. In all 10 pens have laid less than a dozen eggs. In the week ending January 2 the 820 hens in the contest laid 876 eggs. I found that 574 hens never laid an egg. Three birds laid seven eggs, or one every day; 13 laid six each; 44 laid five each, and 75 laid four each. Thus 135 hens out of 820 laid about 64 per cent. of the egg yield. Of Tom Barron's 10 Wyandottes, two laid seven eggs each, three laid six, three laid five, one laid four, and one acted like my 10 scrubs. At 50 cents a dozen you will realize that this means a weekly income of $2.16, or nearly 22 cents per hen.

Now there is a fine chance for some wild man to preach to an audience of back-to-the-landers. The average income of a hen is 22 cents a week. There are 52 weeks in a year; therefore a hen will earn an income of $11.44 a year. Throw off $1.44 for cost of feed and make it an even $10. Various gentlemen say they can take care of 1,000 or more hens. Therefore we have a clean profit of $10,000 per year—if you will only buy my stock or my appliances! If I were to take this back-to-the-lander and lead him up to my pen of scrubs with their zero record, he wouldn't thank me. Yet, down where they live rather than in the rosy dreams is where he would find himself until the hens taught him the game.

What is the real meaning of this difference between Tom Barron's Wyandottes and my scrubs? That is the "fool thing" I started out to learn. I think my scrubs will eat more than the Wyandottes and make far more noise when they do lay. They have the same care and the same opportunity. What is there in the Wyandottes which spells and shells *eggs?* Men come to me with an air of superiority and say they have hens at home that are beating anything at this contest. Some of the sisters of birds in that scrub pen are laying at Hope Farm. If any man claims he has the birds to beat these Wyandottes I am enough of a sport to challenge him to enter them next year. We will each put up the entrance fee. If his birds win he gets the entrance fee back; if they lose I get it back. No use for a man standing back and saying there is "nothing to it." If you have the hens to win in this contest, and they actually do it, your fortune is made—in the present belief that the ability to lay many eggs or to lay Winter eggs is carried on from the mother through her son. As for the blue ribbon gentlemen who are having such fun with my scrubs let them put up a pen of high scorers and I will match them with another pen of scrubs.

We have one class of poultry-keepers who say there is little or nothing in pedigree when it comes to laying qualities. These men say that if a hen actually has eggs within her she will have to lay if you give her all she needs of the proper food. What have these men to say about my scrubs? So far as one can tell from exterior markings these birds certainly are shaped for business. They are having the best food available and are handled in a scientific way. Yet they have not laid an egg. I knew that breeders of the heavier breeds claim that the egg ration in this contest is made up to suit the Leghorns rather than other breeds. Why, then, are Barron's Wyandottes beating the lighter and more active breeds? Evidently it will take something more than scientific feeding to induce my scrubs to lay in Winter. I imagine that their ancestors for many generations have acted like wild birds, laying a small clutch of eggs during warm weather. Must a hen have the breeding impulse within her to make her lay?

That is one of the "fool things" the Hope Farm man wants to know. Another year I want to take several of these scrubs as breeders. I am willing to take the finest male bird I can find, as judged by his mother's pedigree, and cross him on these scrubs. When we get eggs enough from this cross to give us some good pullets my plan is to take out this fine male and substitute as true a "dunghill" rooster as we can find. We will get some pullets from this cross and I will enter a pen of each at the laying contest. I will also, if possible, breed to a "blue ribboner"—one that scores highest at a poultry show, and enter another pen from him. That ought to show the value of "blood" in a farm flock—if there is any such value as is claimed for it.

In the Fall I broadcast 10 loads of fresh manure on two-thirds of an acre of land. This I plowed under and sowed to rye and vetch for white potatoes in the Spring. If I plow this and scatter the fertilizer in every third row and drop the seed and cover them with the next furrow, will the green rye injure them in any way? If I can do this safely it will save considerable work at a very busy time. T. W. K.

This can be done if you make very straight furrows and plow to an even depth. We shall try this next Spring. We have plowed in cabbage and potatoes this way with success. The green rye will offset the effect of the manure at starting scab. We find it best to follow with the Acme after plowing in the potatoes. This levels the field and packs down the soil.

I have a piece of ground that has not been worked for 30 years, and moss is starting to grow on it. What can I do to kill this, to sow clover in the field? It is good pasture but it is almost too swampy to plow. F. G.

Mount Holly, N. J.

It is very doubtful if you can get a stand of clover in such a field without drainage and thorough culture. You ought to plow such a field and give it a good coat of lime, and then grow a crop like corn, giving thorough culture to kill out the old sod. Then you can sow rye, and in the Spring seed with a mixture of Red and Alsike clover. If the land is too wet for plowing it is not likely that clover will endure there.

What would be the feeding value of red kidney beans? I have 70 bushels that are about two-thirds musty, but cows seem to eat them after being ground reasonably fine. What other feeds would you advise using to balance the ration? Also, what would you think of using them as a fertilizer, having them thoroughly ground and use in a grain drill the same as any commercial fertilizer? Could you tell me the fertilizing value of beans? I spread some on an old meadow last Spring, and found the grass was one-third better and of a much better color all through the season.

New York. M. C. K.

I think the beans would be better for sheep, but fed half bean meal and half cornmeal, they will make a fair cow ration. As a fertilizer the bean meal will rank as follows:

	Pounds in 100. Nitrogen.	Phos. Acid.	Potash.
Good beans ...	4.	1.20	1.30
Dried blood ...	12		
Cottonseed meal	7.	3.	1.75
Bean pomace..	5.	2.	1.25

Thus you will see that nitrogen is the valuable element in the beans. Mixed with potash and phos. acid the bean meal would make a good fertilizer. H. W. C.

Do you raise early or late potatoes?

There's a difference between early and late varieties that should be considered in fertilizing.

For the early kind use 1,000 pounds per acre of a fertilizer containing 10%

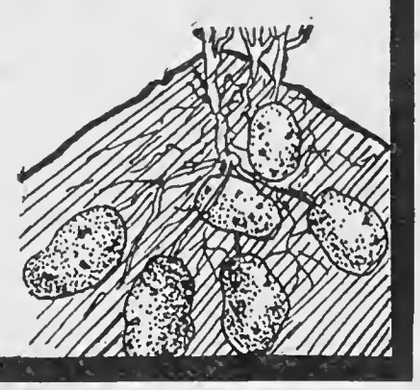
POTASH

5% ammonia and 8% phosphoric acid. Under average conditions, 800 pounds of 3-6-8 is the most profitable for late crops.

Some growers double these amounts, for they are convinced that Potash Pays.

Caution: Be sure your Potash for potatoes on heavy soil is in the form of Sulfate.

Write for Potash prices and for Free books with formulas and directions. We sell any amount of Potash from a 200-pound bag up.



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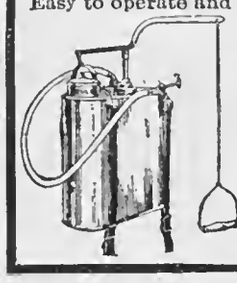

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Nine sprays—same nozzle—round or flat—coarse or fine—cover twice the foliage.

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Nozzle cleaned while working. Spray starts or stops instantly. 10 styles. Write now for special offer. Agents wanted.

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The ECLIPSE Spray Pump has been in service 20 years. Durable, efficient, economical. The U. S. Department of Agriculture uses it, and you can make it profitable in your orchard, vineyard or potato field. Catalog sent free, on request.

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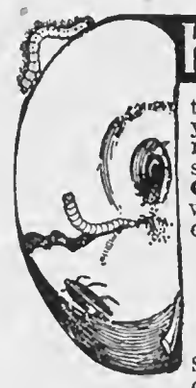

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that ruin your fruit and destroy your trees, vines and plants. Get rid of scale, fungi and worms by spraying. **Stahl's Treatise on Orchard Enemies** (sent free) will tell you how to do it with easy working—and efficient—

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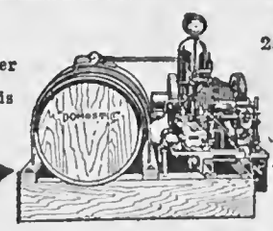

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Domestic Sprayers

Valves and all working parts can be easily removed, cleaned and replaced. Pump throws a uniform, fine, misty spray. Automatic agitator stirs the liquid, while a small brush passes over the strainer and prevents clogging. We can furnish you with sprayers for all purposes. Send for a copy of our free book, "Made Money by Spraying."

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Stone Crusher

Get one of these crushers for crushing trap rock or any other stone for concrete or road making. Big money makers for farmers having 4 to 12 H. P. Take on neighboring contracts and machine will soon pay for itself. Write for catalog, prices and trial offer.

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Spray Your Trees Early Any time this winter and early spring when the temperature is not below 40° F. you can spray with "SCALECIDE" and kill the scale, eggs and larvae of insects wintering on trees, as well as spores of fungi that can be reached by a winter spray. **Prepare now** for a good fruit crop next season.

"SCALECIDE"

TRADE MARK REG. U. S. PAT. OFFICE

will absolutely destroy **San Jose** and **Cottony Maple** Scale, **Pear Psylla, Leaf Roller,** etc., without injury to the trees. **It costs less** to spray an orchard with "Scalecide" than with Lime-Sulfur—and you secure better results. We back up this claim. Write today for free booklets—**"Proof of the Pudding"** and **"Spraying Simplified".**

Write to our **Service Department** for orchard supplies at money-saving prices.

We are World Distributors for Vreeland's "ELECTRO" Spray Chemicals

and **"Electro" Arsenate** of **Lead Powder** (33%) which, used wet or dry, has no equal in strength or texture. Avoid imitations. **B. G. PRATT CO., Dept. N 50 Church Street, New York City.**

Ruralisms

COMMERCIAL QUINCE GROWING.

Will you inform me on the growing (commercially) of quinces? What sort of soil is needed? What methods of cultivation? Do they need spraying and what kinds would you set for Western Michigan? G. E. W.

Hart, Mich.

There is nothing more difficult about growing quinces than other fruits. The trees need good soil and to be sprayed for insects and fungus diseases the same as apple trees, and well cultivated. They should have very low heads. No special kind of soil is required, but it should be fertile and not water-soaked. About 20 feet apart is the distance to set them. There are not many varieties of the quince, but they differ somewhat in size, shape and season of ripening. The Orange, Meech, Van Deman and Champion are among the best kinds known. There are not enough grown to really supply the demand.

H. E. VAN DEMAN.

THE GLADIOLUS HAS ARRIVED.

As a Summer cut flower the Gladiolus stands preëminently the best. Every flower expands in water, and a bouquet is good for two whole weeks. It is not well adapted to bedding purposes, and I believe it is a mistake to plant it alone in rows or beds for the effect it will produce as such, but everyone should grow it in the garden for cut flowers for the house. This flower has been the particular prize of the hybridizer. It never comes true from seed, and so often produces superior sorts from carefully crossed seed, that nearly every commercial grower has his bed, or patch, or acre of seedlings, from which he hopes some day to give to the world the best one yet. Primarily the aim was for a larger flower. That this has been attained in a remarkable degree such kinds as Princeps and Mrs. Francis King well prove. Secondly the matter of color demanded attention, and in selfs practically all colors are represented, though the pure white has almost defied the effort of man. Rochester White now claims to be pure white even to the anthers. Augusta, Europa and Peace are nearly white and very beautiful, Peace being a massive flower on five-foot spikes and foliage to match. Pure yellows and reds are plentiful, but blues still hold out, though there are a number of good parti-colored blues.

The power of rapid reproduction has always been kept in view, and many otherwise good varieties have to go to the

GLADIOLUS MRS. KING.

discard because they do not divide and produce bulblet offshoots rapidly enough to become commercially valuable. Likewise some new kinds are very difficult to keep through the Winter and must be thrown aside for that reason. The arrangement of flowers on the spike is still another important feature, as a haphazard, some down and some up, etc., form makes an exceedingly poor-looking spike, no matter how good the flower is.

Best of all, these glorious flowers are about as easy to grow and have as weeds, and multiply so rapidly that with a small start a private or commercial collection is but a matter of a few years. The long catalogue lists may be puzzling to you, so I give here a shorter one, comprising the whole range of color and with no poor ones. For red get Mrs. Francis King, a true giant and of great beauty. America, the most grown of any known sort, is a shell pink, large, exceedingly beautiful and is one of the three varieties that florists want in quantity. Early cut flowers of this kind for your city market would be worth your while. Later in the season there is a glut of even the best kinds. Early April planted bulbs

GLADIOLUS AMERICA.

in rich, sandy soil and in full sun will hit the high price season for Americas. Augusta, a lavender-tinted white, is another of the three mentioned. It is a rather small flower, but splendidly arranged on the spike and many open at a time, one of the best for design work. Mrs. King, first referred to is the third. Panama, in form like America, is a deeper pink, and is just being introduced. It is one of the extra good ones, and you may not be able to find it listed. Golden King, about the best of the yellows, is a giant in every way. Klondyke is a smaller, less expensive yellow, but good enough for anyone. Canary Bird is one of the best pure yellows. Get Peace for a giant white, Taconic for a fine pink, Blue Jay or Baron Hulot best blues. Cracker Jack and Mrs. Beecher are large reds, curiously marked with white, which should be in your list. Evaline is a large smoky lilac or purple, a beauty. Brenchleyensis, bright scarlet, opens nearly its entire quota of buds at once, and is fine for a tall edging of hardy perennials to come in ahead of tall Salvias. The above are by no means all the good ones, but if you are a beginner and get some of all the above, your delight at blooming time will be great. If an enthusiast, add a few new ones each year, but grow each kind separately rather than mix them all up.

If you grow a mixture, bear in mind the fact that red varieties have a tendency to multiply more rapidly than other colors, and your collection will show a constantly increasing proportion of the reds. Also remember that old bulbs soon stop multiplying at all and run out, so if you do not wish to have to buy all over again in a few years, keep a new lot coming on each year from the little bulblets found around the base of the old bulb at digging time. Their culture is very simple. Soak twenty-four hours in warm water and plant thickly as you would peas, one to two inches deep. They will appear in a few weeks looking like stiff grass. Keep cultivated and thoroughly weeded and dig soon after hard frosts. The bulblets in turn will be found to have made a lot of new bulblets in addition to their now being bulbs of about one-half inch in diameter. The small bulbs will bloom the second year and make more bulblets, and so on in a never-ending cycle. You may soon get too many bulblets, but they are commercially valuable, and your seedsman or florist will undoubtedly take your surplus at a good figure if true to name and of good sorts.

Plant large bulbs four inches deep, from one inch to any desired distance apart. Give thorough cultivation and water if possible at blooming time. Never let fresh manure come in contact with growing bulbs. Dig bulbs in Fall and treat as potatoes, but they must be kept a little drier than potatoes. When cutting flowers for the house, do not cut much leaf, as it will ruin the bulb. Cut when the first two flowers are well expanded. In conclusion, just a word about growing from seed. It is very interesting. Save seed only from finest named sorts and if you understand cross-pollenizing, it is advisable to keep a record of the parentage of your seed, for if you should get a valuable one, it could be much easier disposed of advantageously if you knew the cross that produced it. Treat the seed much the same as bulblets, only it may be the third year before you get the flowers. P. L. W.

Michigan.

Genuine Thomas Phosphate Powder

(BASIC SLAG MEAL)

KEY-TREE BRAND

A TRIBUTE TO QUALITY—AND A WARNING

PROBABLY the most remarkable tribute ever paid to the uniformly superior quality of any one fertilizer material is the present offering of numerous so-called "Basic Slags" and "Phosphate Powders" that are said to be "just as good" as Genuine Thomas Phosphate Powder, Key-Tree Brand.

¶Every progressive farmer in the Eastern United States is familiar with the wonderful record that Genuine Thomas Phosphate Powder, Key-Tree Brand has made for itself in the production of fruits, cereals, clover and alfalfa.

¶You probably are not surprised therefore, that imitations and "nearly-as-goods" are being offered you. We have occasional calls for low grade Thomas Phosphate Powder ourselves. We always refuse the orders. We sell only one grade—the highest.

¶The following warning is from Page 38 of the Report of the Connecticut Agricultural Experiment Station for 1911:—

"BASIC SLAG PHOSPHATE OR THOMAS SLAG."

¶"The highest grade on the market contains from 17 to 19 per cent of phosphoric acid and 35 to 50 per cent of lime in finely divided form. **There are, however, very inferior grades offered for sale at prices which the farmer cannot afford to pay, and against which he should be on his guard."**

¶We guarantee Genuine Thomas Phosphate Powder, Key-Tree Brand to contain:—17 to 19 per cent Total Phosphoric Acid; 15 to 16 per cent Available Phosphoric Acid—(Wagner).

¶Genuine Thomas Phosphate Powder, Key-Tree Brand not only meets our guarantee, but exceeds it. Note the following:

¶Bulletin 143, Massachusetts Experiment Station, reports average test of eight samples: Total Phosphoric Acid, 18.41%; Available Phosphoric Acid, 15.61%.

¶The Maryland State Chemist reports for 1913, Total Phosphoric Acid, 19.40%; Available Phosphoric Acid, 17.00%—(Wagner).

¶Connecticut State Report for 1913 shows, Total Phosphoric Acid, 19.14%; Available Phosphoric Acid, 17.05%.

¶**Take no chances—for your own protection avoid so-called "Basic Slags" of doubtful origin and of uncertain composition.**

¶Insist on having Genuine Thomas Phosphate Powder, Key-Tree Brand, bearing on every package our trade mark shown herewith.

Fertilizers with many imitations are the best to buy—Imitation is recommendation

The Coe-Mortimer Company :: 51 Chambers Street :: New York City

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

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JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

THE New York Experiment Station reports finding as high as four to six per cent of sand in samples of "screenings" used with wheat bran or middlings. Sometimes these screenings are sweetened and sold as molasses feeds. These screenings often carry seeds of the worst weeds which afflict our farms, and it has been shown that a fair proportion of such seeds live through the manure pile. Now sand may be a good thing to use as "grit" in a hen's gizzard, but why feed it to the good old cow? Perhaps they want to give her grit enough to face the screenings, splinters and trash in her feed!

*

IN a season such as the coming one promises to be, there will be much study of orchard heating. The year past was one of sudden and violent changes, with untimely frosts. Artificial means of creating heat in orchard or garden will be needed in many situations. In parts of the West the oil-burning orchard heaters have given fair satisfaction. They do best in protected situations, or where the night is still, so that the heated air is not blown rapidly away. In situations where the wind has a clear sweep, the heaters are not generally successful. They seem to do best in "pockets" or protected valleys where there is poor air drainage. We expect to have the experience of men who have tried those heaters under all sorts of conditions.

*

B. F. MASON, of Mercerville, Ind., is placing peach trees in Southern Ohio that he calls "Shipper's Late Red." He claims to have originated this variety, says that it is immune from yellows, brown rot, etc. He puts these trees in the hands of planters, and in a certain number of years is to receive 50 cents per tree for them.

We do not know Mr. Mason or his peach. If he is making these claims he is simply giving out a quantity of second-hand guff of naturally poor quality. There are no peach varieties "immune from yellows and brown rot." The plan of selling at 50 cents for future payment is part of a scheme used by many fakers. We warn our readers not to do business with any man who makes such claims for his trees. You will surely be disappointed if you are unwise enough to believe them.

*

THE prospects seem to be favorable now for starting some good farm coöperative work in the State of New York this year. Following a conference with Gov. Glynn, Geo. C. Van Tuyl, Jr., Superintendent of Banks, has appointed a Special Committee on Agricultural Credits to work in connection with the Banking Commission, which is charged with the duty of revising the banking laws of the State. Members of this committee are: Robert B. Van Cortlandt; Charles H. Sabin, vice-president of the Guarantee Trust Co.; Henry Burden, banker, Cazenovia, and John J. Dillon, publisher of THE RURAL NEW-YORKER. This committee is expected to perfect a bill to create a system of land bank credits and have it ready for the consideration of the New York State Agricultural Society's convention, January 20. In addition to the work of this committee, a conference was held at the Executive Chamber in Albany last week at which Governor Glynn presided, for the purpose of considering the agricultural needs of the State, with particular reference to credits and marketing. The sentiments of the conference were in favor of a bill to create a land bank on coöperative lines; to make some amendments to the Commission Bill; and to secure an appropriation to put coöperative instructors in the State to encourage and organize coöperative associations where there is a demand for them. Aside from the credit organizations, the principal object of this work is to obtain for the producer a larger share of the 35-cent dollar. Governor Glynn was emphatic in the position that the producer was not getting a square deal in the marketing and distribution of farm products, and he expressed a very decided interest in any measure that would promise better returns to the producer for the products of the farm. With his encouragement and influence, the measures will undoubtedly go through and an effort will at last be made to slice off some of the expense and waste in the transportation and sale of farm products, and to secure for the farmer a better share of the consumer's dollar.

*

ON the next page will be found a statement about the new income tax as it affects farmers. The Government estimates that 425,000 individuals will be taxable under this law. This means that about one family in 200 has an income in excess of $4,000. How will the farming class average with other workers? This will be a good thing to follow out. We have heard men solemnly argue that because few farmers are mentioned in "Who's Who In America" it follows that farming is not a leading profession. This is nonsense, because the standard for "Who's Who" is literary or professional. A man might be the best practical farmer in the country and still fail to be known as "Who." Another man might be able to write about the first man's success and be recognized. The income tax, however, will sort them out in another way.

*

WHILE the new tariff and imports of mutton from South America may have the effect of reducing the larger flocks of sheep we think thousands of new smaller flocks will appear. Many of our orchard and fruit farms can easily support a few sheep—in fact such flocks are needed. The sheep will clean up weeds better than any other animals, make good use of farm refuse, and prove better than hogs for use in orchards. They give meat, lambs and wool in return. Formerly the small lots of wool could not be sold to advantage, but now a system of direct dealing with manufacturers is developing. Under this the wool can be sent direct to the factory and traded for yarn or finished goods. This gives the owner of small flocks the chance to partly clothe his family without selling at a 35-cent dollar and buying with a 200-cent dollar.

*

THE Hope Farm man is something of a sport in this egg contest proposition. His scrubs seem to be birds that have gone back from "utility" close to nature. By "utility" we mean the ability to produce food—both meat and eggs—for we understand the chief design for poultry in the world's economy is to feed the human race. These scrubs, through hard usage and "natural" breeding seem to have gone back on the road to nature, or that condition in bird life which induces them to lay only about enough eggs to reproduce their kind. They were entered in this contest for several reasons—one a desire to see just how many eggs such a bird can be induced to lay under the most favorable conditions. Now we also believe that continued breeding for show room points or for fancy points also takes a bird away from what we consider "utility." The scrub goes back to nature while the "fancy" fowl goes further away from the strong egg producing bird which we call our egg-laying machine. Our own experience with prize winners has been limited, but we have bought a few, and they rarely laid over 60 eggs a year. We find that this belief is shared by a large proportion of the men who depend upon eggs and meat for all or part of their income. We think it is now up to the American Poultry Association to disprove it, as they can readily do by entering a pen of high scorers at one of the laying contests. No one questions the accuracy or fairness of the management of these contests. Let the A. P. A. enter a pen of high scoring birds, and, if they make a good record as layers they would silence the argument against "blue ribboners" and do the fancy breeders more good than anything else that could happen. If the A. P. A. will enter such a pen THE R. N.-Y. will agree to enter a pen of the same breed or of mongrels selected from a "utility" type. Come, gentlemen, here is your chance to prove that "fine feathers make fine birds."

MR. STEDMAN called Walton "a whitewashed sepulchre of mendacity, who used a razor dipped in oil to part farmers from their money" and spoke about "the angels weeping in Heaven to-night if you give Walton a verdict."

Now gentlemen, run over the list of characters you have ever met and see which one could fit properly into this description! This language was used at a recent court trial at Batavia, N. Y. Bert Walton of Indiana is a tree agent. He bought Catalpa trees at about $3.50 per 1000, wrapped them well in guff and sold them to New York farmers at $20! After learning how they had been treated the dupes refused to pay and Walton brought suit against James Pettibone to recover $40. A little story of the trial is told on page 110. The above remarks were made by lawyer Stedman, who represented the farmers. Can you beat his description of the guff-dispensing tree agent? Walton lost his case, and richly deserved to, and he may yet be prosecuted criminally for false statements in selling the trees! In this trial the lawyers for the agent tried to make much of the point that farmers who bought the trees knew just what they were doing. One farmer on the witness stand is said to have made this naive statement:

I just believe this much, that I was a darned fool when I signed the contract for trees, because any man who would believe fence posts could be grown in two years from seedlings don't know he's living.

A first-class guff-slinger can make a man believe black is white until he gets the black letters of his name upon the white paper. Those Batavia farmers who combined and fought this tree agent have set us all a good example in coöperation that has teeth in it.

*

I HAVE often read in the farm papers that before buying fertilizer one should submit a sample to his State Agricultural Department for analysis. I did so, and am informed that "this being a public institution we do not do analysing for private parties." That is all the State Department amounts to for me. I send sample of same stuff to you. Will you please tell me what it is? A. B. K.
West Pike, Pa.

The substance seems to be ground limestone. It would require a chemical analysis to determine whether it contains phosphoric acid. THE R. N.-Y. has not stated that the experiment stations will make free analysis. We think they ought to be required to do so, and furnished with money enough to enable them to carry out the work. At present the departments and the stations collect samples of fertilizer and have them analyzed. The figures are printed, but they are only of general use to a farmer. For example, a farmer is to buy fertilizer this year All he can get is the record of *last year's goods*. This of course indicates the general reputation of the manufacturer, but he cannot tell just what he is buying unless he pays for an analysis out of his own pocket. The same is true when he buys lime or ashes or waste substances. The fertilizer laws are designed to protect him, but under the present method it is an indirect protection. He must pay for any direct benefit. In Florida the State chemists are required to make analyses of commercial fertilizer or fertilizing substances sent by farmers. We think something of the same plan is followed in Massachusetts. It would be impossible for the stations in the States where fertilizers are heavily used to analyze everything which farmers sent them without a great increase of chemists and expenses. We think the States might well afford to spend the money needed to give farmers this direct protection.

BREVITIES.

RUNNING water saves walking mother.

AS the twig is bent by a bad example the tree becomes crooked.

A FEW years ago little if any corn was grown in Manchuria. Now there is a market for corn shellers.

A GOOD reading circle gives a country neighborhood a square deal at reading.

REMEMBER this Alsike clover can endure on an acid soil far better than Red clover or Alfalfa. The next article on acid soil will show how some plants get their food.

THE questions about handling muck are pouring in. There never were so many before. People who have been trying fertilizers which have been brought from many corners of the earth begin to realize what is in the old swamp.

MANY Northern farmers are fighting the meat trust with frost. Instead of selling a fat cow for what the buyers will give they slaughter, sell the hide and freeze the carcass, and keep it packed in snow—cutting from it as wanted. Usually neighbors will take one or more quarters.

WE have followed up that report of profit in raising Belgian hares. It is apparently correct as to special prices obtained for the hares, but we find that many of them were sold as breeders to foreigners, who keep them in city quarters. Few were actually sold as meat, and we doubt if the meat market alone would make the business profitable.

WORKMEN'S COMPENSATION IN CONNECTICUT.

If my hired man gets hurt, while he is actually working for me, I have to settle his doctor's bill, and pay him half wages for the time he is laid up. That is Connecticut's new Workmen's Compensation Law in a nutshell. Of course there are explanations and exceptions. The employer is not obliged to furnish a doctor after 30 days. The compensation payments actually begin with the third week of disability. The amount must be at least $5 per week, but cannot exceed $10. For total disability the weekly payments run 10 years; for lesser injuries and for death, in accordance with an elaborate schedule contained in the act.

To appreciate the status of the farmer under this law, it is necessary first to consider the influences that brought about its passage. Workmen's compensation is primarily a development of the ancient common law principle, that the master is bound to provide safe conditions under which the servant may work. Heretofore, however, the servant was never supposed to recover damages for injuries resulting from his own carelessness. In the olden days, when the common law was being formulated by the judges of England, workingmen could not vote, and therefore had little or no political influence. As a natural consequence, the obligation of the master to safeguard the life and limbs of his servants was reduced to a minimum by two famous decisions. One of these laid down the principle that any man who went to work on a dangerous job, thereby assumed the risk of injury. The other held that no man could recover from his employer for injuries caused by the act or negligence of a fellow servant. These English decisions were afterwards cited as precedents in American courts, and receiving judicial approval, promptly became the law of the land.

When these decisions were first made in England, it is not likely that hardship to more than a very few individuals was involved. The trouble came in with the evolution of industry and the development of the factory system. The advent of the corporation did away with the old personal relations between master and servant. At the same time, the protection afforded by the doctrine of assumed risk and the fellow servant rule, made many employers seemingly indifferent to the physical welfare of their employees.

The situation in Connecticut up to 1911, was aggravated by a system of legalized court procedure, which kept the injured party from getting his case tried before a jury. The defendant employer had only to make a technical default by admitting to the court his liability for damages. The amount payable was then fixed by the judge, after listening to the evidence on that point. In this way the element of sympathy, often a large factor in verdicts rendered by a jury, was pretty thoroughly eliminated. Agitation for radical changes in these Connecticut laws began in earnest about five years ago. Public opinion was thus developed to a point where the Compensation Law passed the Legislature almost unanimously. The act, when passed, was not supposed to affect ordinary farmers or householders. Exemption was provided for all those employing less than five hands. The Attorney General, however, has recently ruled that the small employers who desire exemption must claim it by filing papers with the Compensation Commissioner, and giving written notice to their employees. The blank forms for these notices may be obtained from the town clerks, who can also give the name and address for the Compensation Commissioner of his district. There are five of these Commissioners appointed by the Governor to administer the details of the Compensation Law, and see that the injured workmen get their just dues.

The farmer is, in theory, entitled to retain the old common law defenses (contributory negligence, assumed risk and the fellow servant rule) against personal injury suits. Whether that privilege is worth anything now is to say the least doubtful. The law has been changed so that any man can have his case tried before a jury. Meanwhile public opinion has so turned against the old common law defenses, that an ordinary jury would be apt to ignore them, at least to some extent. In doubtful cases, the chances would be mostly in favor of the injured man, which fact will make claimants under the old law the more ready to bring suit.

Fortunately for the Connecticut farmers, the insurance companies are offering them policies which cover all their obligations under the Compensation Law, for around $10 per year. The doctor's bills, weekly payments, funeral expenses and the costs of settling claims or defending suits, will all be taken care of for the sum named. I understand that the farmers of this vicinity are taking out these policies very generally. Personally I would not think of doing otherwise. I could not serve my hired man with a non-compensation notice without causing a feeling that would be more costly to my business than the policy. Also I am satisfied that the better class of farm hands will avoid the employer who is not prepared to allow them the benefits of the Compensation Law. C. M. G.

Hartford, Conn.

FARMERS AND THE INCOME TAX.

I want information as to how a farmer should figure out his income that comes under the new income tax law. I should like to know what should be done in regard to products grown in 1912 and still on hand March 1, 1913? I should also like to know what should be done in regard to crops grown in 1913 and on hand January 1, 1914, or shipped on commission and no account sales received on or before January 1 for goods shipped the latter part of December? I should also like to know whether the cost of setting out new orchard, laying tile drain, building fences, cleaning and putting under cultivation new land should be figured as expense or put under the head of permanent improvements? H.

Products grown in 1912 and still on hand March 1, 1913, may be inventoried as of March 1, 1913, at their supposed value, or they may be disregarded entirely. The latter is preferable. Crops grown in 1913 and still on hand January 1, 1914, or in hands of commission men or no account sales received should be inventoried at their supposed value. If disposed of before the "return" has gone to the Revenue Collector on or before March 1, the return may be corrected. The cost of setting out new orchard, laying new tile drain, clearing and putting under cultivation new land should be charged to permanent improvements. If the fence built is around the new land that should also be charged to permanent improvement. However, if the tile drain is work of taking up an old drain and replacing with new of same size, it should be charged to operating expenses. If a new fence is built in a new place anywhere (except for temporary purposes) charge it to permanent improvements. Repairs to old equipment or a structure of any kind, building, fence, drain, orchard, tool, etc., should be charged to operating expenses. A new structure of any kind in a new place should be charged to permanent improvements. When an old structure is replaced by a new one in the same place and the new structure is of the same size and character as the old, merely replacing it "in kind" it should be charged to operating expenses. But if the new structure replacing the old one is of a better character than the old one, the excess value of the new one over the old should be charged to improvements. For example, a woven wire fence may replace a board fence. The board fence may cost 20 cents per rod and the wire fence 30 cents per rod. Charge the 20 cents per rod to operating expenses and the 10 cents per rod to improvements.

A BRIEF REVIEW OF THE INCOME TAX.—The Federal income tax law is part of the new Underwood-Simmons tariff law passed October 3, 1913. This law reduced import rates on many articles and placed other articles on the free list. These reductions would lessen the revenue of the government, and the income tax is to offset the loss. The law reads: "That there shall be levied, assessed, collected and paid annually upon the entire net income arising and accruing from all sources in the preceding calendar year to every citizen of the United States, whether residing at home or abroad, and to every person residing in the United States, though not a citizen thereof, a tax of one per centum per annum upon such income, except as hereinafter provided; and a like tax shall be assessed, levied, collected and paid annually upon the entire net income from all property owned and of every business, trade or profession carried on in the United States by persons residing elsewhere." The "foreigner" helps us pay our National tax. This tax of one per cent. is called the "normal" tax and is paid by corporations as well as by individuals. It takes the place of the Corporation tax of the Payne-Aldrich law.

DEDUCTIONS FROM GROSS INCOME.—"In computing net income for the purpose of the normal tax there shall be allowed as deductions: First, the necessary expenses actually paid in carrying on any business, not including personal living or family expenses; second, all interest paid within the year by a taxable person on indebtedness; third, national, State, county, school, and municipal taxes paid within the year, not including those assessed against local benefits; fourth, losses actually sustained during the year, incurred in trade or arising from fire, storms, or shipwreck, and not compensated for by insurance or otherwise; fifth, debts due to the taxpayer actually ascertained to be worthless and charged off within the year; sixth, a reasonable allowance for the exhaustion, wear and tear of property arising out of its use or employment in the business, but no deduction shall be made for any amount of expense of restoring property or making good the exhaustion thereof for which an allowance is or has been made: Provided, that no deduction shall be allowed for any amount paid out for new buildings, permanent improvements, or betterments, made to increase the value of any property or estate; seventh, the amount received as dividends upon the stock or from the net earnings of any corporation, joint stock company, association, or insurance company which is taxable upon its net income; eighth, the amount of income, the tax upon which has been paid or withheld for payment at the source of the income." Money or other things of value, disposed of by gift, donation, or endowment shall not be deducted from the income. Also there shall be excluded from the income the interest on the obligations of the United States and its possessions and of any State or subdivision of a State. The above deductions apply to individuals and corporations.

EXEMPTIONS.—There is an exemption of $3,000 from the income of an individual making a "return," plus $1,000 additional if the return is that of a married man or woman. If the husband and wife each have an income exceeding $3,000 they can claim but one exemption, unless they are living apart permanently, and then each may claim the $3,000 exemption. Salaries paid by a State or any subdivision of a State are exempt also. Salaries paid by the United States are not exempt except that paid to the present President and the judges of the Supreme and Federal courts now in office. The Senators and Representatives and Vice-President pay the income tax.

ADDITIONAL INCOME TAX.—On incomes exceeding $20,000 a year the following "additional" income tax is levied and collected: $20,000 and not exceeding $50,000, 1%; $50,000 to $75,000, 2%; $75,000 to $100,000, 3%; $100,000 to $250,000, 4%; $250,000 to $500,000, 5%; above $500,000, 6%.

Who makes a "return" or statement of net income? Everyone with a net income of $3,000 or more, even when the exemption is $4,000 or more. The "return" is for the full calendar year except for 1913, it is for 10 months only from March 1st to December 31st inclusive. Five-sixths of the deductions and exemptions for a year are allowed. If part of one's income exceeding $3,000 is regular and paid in the form of salary or interest on bonds totaling over $3,000 a year it is to be withheld at the "source," and the one making the "return" must notify the "source" by February 1st that he claims his exemption. The "return" must be delivered to the Revenue Collector March 1st. He has until June 1st to verify and correct it and notify the taxpayer and the tax must be paid in June on penalty of 5% added and 1% a month till paid. The person paying must send the tax to the Collector instead of the Collector coming for it. The "return" must be made under oath.

Gains arising from the increased value of real estate are to be included in this tax. Take for illustration a purchase of a farm for $10,000 in 1913 after March 1st and sold three years later at $13,000. The gain of $3,000 is a gain to be returned in the year ending Dec. 31st, 1916, at 1% of tax, or it may be prorated over three years, $1,000 for each year if the taxpayer desires. If the property is purchased previous to March 1st, 1913, the increase may be prorated over the whole period and is taxable only on the prorate gain for the time the law has been in force.

This tax will call for some knowledge of bookkeeping. Every farmer should keep an accurate account of the farm operations. He should know what every crop costs to produce and market. He should know what every field is producing and the cost. He should know what every animal in his herd is making in profits (if he is a dairy farmer and is aiming at the best results). Some of our large factories know to the fraction of a cent what every article produced costs when finished. The income tax law may be worth all it costs to our farmers if it compels an accurate account of farm operations. The Sixteenth Amendment to the Constitution seems to indicate a purpose to gather a part of the Federal revenues from incomes. A fair trial of the law is now expected. There is a *penalty of from $20 to $1,000* for neglecting or refusing to make a return. Corporations are fineable $10,000.

F. N. C.

We find a big demand for seed potatoes which have been certified by the Department of Agriculture as true and clean. There is a good chance for careful men to enter the business of producing such seed.

Woman and the Home

From Day to Day

SOMETIME.

Sometime, when all life's lessons have
been learned,
And sun and stars forevermore have set,
The things which our weak judgments
here have spurned,
The things o'er which we grieved with
lashes wet.
Will flash before us out of life's dark
night
As stars shine most in deeper tints of
blue,
And we shall see how all God's plans
were right,
And how what seemed reproof was love
most true.

And we shall see how, while we frown
and sigh,
God's plans go on as best for you and
me;
How, when we called, He heeded not our
cry,
Because His wisdom to the end could see.
And e'en as prudent parents disallow
Too much sweet to craving babyhood,
So God, perhaps, is keeping from us now
Life's sweetest things because it seemeth
good.

And if, sometimes, commingled with life's
wine,
We find the wormwood, and rebel and
shrink,
Be sure a wiser hand than yours or mine
Pours out the potion for our lips to drink.
And if some friend we love is lying low,
Where human kisses can not reach his
face,
Oh, do not blame the loving Father so,
But bear your sorrow with obedient
grace!
And you shall shortly know that length-
ened breath
Is not the sweetest gift God sends his
friends,
And that, sometimes, the sable pall of
death
Conceals the fairest boon His love can
send.
If we could push ajar the gates of life,
And stand within, and all God's working
see,
We could interpret all this doubt and
strife,
And for each mystery could find a key.

But not to-day; then be content, poor
hearts,
God's plans like lilies pure and white un-
fold;
We must not tear the close-shut leaves
apart—
Time will reveal the calyxes of gold.
And if, through patient toil, we reach the
land
Where tired feet, with sandals loosed,
may rest,
When we shall know and clearly under-
stand,
I think that we shall say that "God knows
best." —Mrs. May Riley Smith.

*

WE were recently asked to reprint the following recipe for mincemeat, given in 1907 by a western reader who said it gave great satisfaction when canned and sold to private customers. Its peculiarity is that it has no spice: Chop fine separately three pounds of cooked lean beef, two pounds of suet, and one peck of tart apples. Add two pounds raisins, half pound of sliced citron, one-fourth pound of candied orange peel, one quart of canned cherries, pitted, one pint of apple butter, two cups of cider, two pounds of currants, one glass of orange marmalade, one quart of grape juice and two tablespoonfuls of salt. Scald, and store in fruit jars like canned fruit.

*

A RECENT press bulletin sent sent out by the Department of Agriculture refers to the use of suet in cooking, and deplores the fact that much of it, in this country, is thrown away or used in soap-making, instead of cookery. We think, however, that farm housewives at least are not in the habit of wasting good fat, nor have we met with cook-books that teach us suet is only good for soap-making. The circular gives the following recipe for making a mixture of lard and beef suet, which will be found useful:

Take two parts of suet and one of leaf lard, finely ground, and mix together. Render this with whole milk in the proportion of one-half pint milk to two pounds of the mixed suet and lard. (Render means to melt down or to clarify by melting). The suet and lard mixture may be finely divided by passing it through a meat grinder, and may then be heated in a double boiler, when the fat will be quickly released from the tissues, and when allowed to cool will form a cake on the surface of the liquid which may be easily removed. This fat has a good odor, color and texture, and is softer than the suet alone. It is useful for frying and the shortening of foods with high flavors and may be used with fair results in shortening such things as baking powder biscuits. It is useful for cooking vegetables either alone or with the addition of a little butter.

In our own locality, beef suet costs 12 cents a pound, and we have to beg the local butcher in advance to get it for us. If anyone is throwing suet away, it certainly is not the housewives, and we doubt whether the packers and oleo men are wasting much of it either.

*

NOTHING gives one a better introduction to a stranger than a well-written letter. The fine art of letter-writing is born in one, rather than acquired, but that is no reason why an ordinary communication should not be readable, neatly written, properly spelled and punctuated. And how few letters come up to this modest standard! The writing may be so indistinct that, as Aldrich said of Prof. Morse's caligraphy, "all the t's look like w's, and the i's have no eyebrows." Then the writer may have a taste for shiny paper, and a fondness for a purple lead pencil, which compels the unlucky recipient to slant the letter at a certain angle before it can be deciphered, because the gloss of the paper makes the pencil marks almost invisible. Persons who have been denied educational opportunities are not by any means the worst offenders; there are entirely too many cultivated people who forget that writing is speech made visible. So we put legibility first, and for this a letter demands dull finished paper and black ink. The writing should be distinct, not too small, and the lines should never be crowded together. If we add to this simple diction, which expresses the writer's meaning, we have a letter to gladden a busy reader, and one that conveys an excellent impression of the writer's intelligence. Where early education has been limited, it is quite possible to correct errors in speech or writing by the use of some little book designed for this purpose. "Mistakes in Writing English," by Marshall T. Bigelow (price 50 cents), is an excellent book for this purpose, and we might add to this. "A Handbook of Conversation," by Andrew P. Peabody (price 50 cents), which points out common errors in speech and pronounciation. As a final suggestion in desirable letter-writing, we might add a warning against fancy note paper. No one ever errs in using paper of convenient size, white, cream, gray or dull blue, absolutely without ornamentation, but when fancy colors or decoration are chosen there is always risk of some exaggerated absurdity. Good taste in correspondence, as in most other things, is based upon sincerity and simplicity.

Making Over a Boy.

To listen to most present-day mothers, the children they have known from the hour of their birth present so many complicated and varied problems that one would surely think the task of being a mother was almost too great to be worked out in these progressive times. Every woman has a theory, if not two or three, and the children are the victims on which she tries them. Everyone says this is the "age of the child," and it must be, for little else is talked about. But if a woman with no children ventures an opinion she is immediately "sat upon" by the up-to-date mothers.

I have been sat upon so often on the child question that one would suppose I had long since meekly given up all my theories, but not so. When a little child came into my heart and home last year, a little boy about whose ancestry I knew nothing, I determined to show some flesh and blood mothers a thing or two about my despised theories. The little orphan was so poorly nourished and badly fed that he could hardly walk across the room without falling down, and his sleep was so broken and he was so restless in the daytime that many mothers would have put him down as nervous on the spot. But one of my theories is not to talk to children about their nerves, so that subject was never mentioned in his hearing.

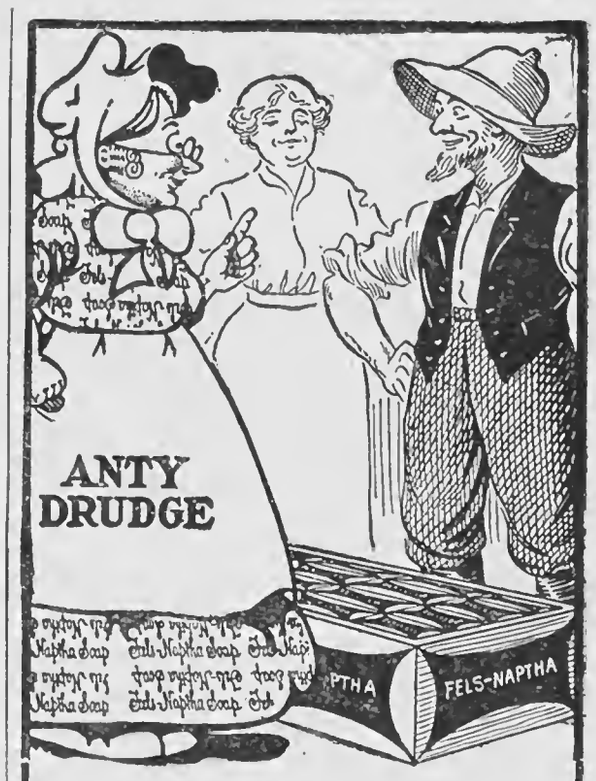
It isn't a long story, but to me it is an interesting one, and it may help the mothers of such children. No attempt was made to teach the boy anything at all at first, except that we loved him and wanted him to be happy. Every defect was ignored, and he was never corrected. He was treated much as farmers treat little animals that they want to grow up sturdy and healthy. At half past six each evening he went quietly to bed in a well-ventilated dark room, without the exciting game of romps that some people allow their children. He slept very fitfully at first and cried out a great deal but gradually he settled down into what looks like dreamless sleep. In the morning he was allowed to waken naturally and have his breakfast at eight. Generally he sleeps from half past six to half past seven next morning.

His food is quite simple and consists mostly of milk, eggs, fruit, chicken, soups, bread and butter and honey. He will not eat meat except chicken, but I do not try to force him. His meals are as regular as the clock, and so are his "pieces." He must have an apple or bread with thick butter or an orange for his lunch. If he refuses this he must wait till meal time. He was sallow, dyspeptic, hollow-eyed, thin and bloodless when we received him, so I determined to see what good feeding would do. He has three or four pieces of good candy every day right after dinner and that is all.

His clothes are never fussy, but warm and comfortable. His pleasures are simple. He ran wild on the farm all Summer in little rompers, and grew sunburned and happy. With his tin can containing his mid-morning luncheon he happily tagged the men during haying and harvesting. He has never seen a moving picture show, has never been kept up late so his parents could go to a party or social, has never lost an hour's sleep, except on Christmas Eve, when as a great treat he was allowed to be up till eight o'clock at a little Sunday school entertainment, and he certainly never has been allowed to go to bed excited and exhausted. Somebody holds him quietly and reads to him after supper, so he gets to bed happy. Only happy, gentle and soothing stories are told at bedtime.

In less than one year he had grown four inches, gained six pounds and has turned from a timid, scared, delicate, unhappy little boy to a noisy, shouting, romping healthy youngster. He has forgotten every one of the stories he used to tell of his old life, he doesn't know his name any more, and he knows to a certainty that we are his firm friends. He eats and sleeps and plays and grows and that is his short history. We think, and our friends tell us, that he is entirely made over. At first he would stand at the window gazing out at nothing with a frightened, pathetic look on his thin little face, but now he is engaged in coasting, kicking his football, playing marbles and everything boys love, so he has no time to be sad. His whole face has changed, as we know from his pictures, and we feel sure that our great trouble in the near future will be to keep enough food in the pantry for his appetite and enough trousers and stockings on hand that he may look presentable. His dyspepsia and nervousness and crying spells and peevishness are gone, never to come back, we think, but all the same we haven't relaxed our system a bit. He will continue to get 13 hours of sleep each night as long as he will take it, and his meals will receive care and thought as long as he is growing, if I live to look after him. I can see that wonders have been accomplished during the time we have had him, but there is more to be done. So far my "bodily" theories have worked beautifully, and time will tell what my intellectual theories will work out. It has been an interesting and profitable occupation, and promises to be more interesting as the days go by. Many of my friends pity me that I have to give up this or that, but I count it all joy to have a small share in the building up of a sound body, and seeing a little life expand in the sunshine and warmth of a home life that he never knew before. HILDA RICHMOND.

MEAT SOUFFLE.—Make a sauce of one teaspoonful butter, one tablespoonful flour, one cup milk or stock, dash of salt and pepper. Stir into sauce one cup chopped cooked meat (chicken is excellent); one-half cup bread or cracker crumbs. Remove from fire, add yolks of two eggs, beat light. Fold in whites beaten stiff. Put in greased baking dish, set dish in tin of water. Bake 40 minutes or until light brown. I find this recipe very useful; ham is not quite as good as fresh meats. MRS. R. T. H.



Farmer Medders: "Here's your box o' soap, Maria. Good morning, Anty. Maria keeps me buying her Fels-Naptha Soap now. Won't use anything else. Seems to me she's getting most too spry these days, with no work to do. That boarder rode to town with me today, and she asked me, 'Don't you ever come to the city to see the sights?' And I sez, 'Oh, no; we see 'em every summer.' Ha! ha! Well, seeing you don't need wood for a fire or anything, I'll go out to the barn and let you get your washin' done. I don't have to help any more, Anty, since Maria's using sense and Fels-Naptha Soap."

There is no need for women to be tired and sick from overwork. Fels-Naptha Soap will cut your work in half. It is the easy way of doing all the disagreeable parts of housework.

Use Fels-Naptha in cool or lukewarm water for your weekly washing, housecleaning—everything you have to do. Clothes washed with Fels-Naptha do not need to be rubbed hard, nor boiled and are on the line in half the time it used to take.

For making your work easy, use Fels-Naptha Soap and follow directions on the red and green wrapper.

Better buy it by the box or carton.

Fels & Co., Philadelphia.

FELS-NAPTHA

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired.

8093 Surplice blouse for misses and small women, 16 to 18 years. With long or three-quarter sleeves. 8126 Fancy blouse for misses and small women, 16 to 18 years. With long or three-quarter sleeves. 8113 Coat for misses and small women, 16 and 18 years. With Raglan

sleeves, with or without belt. Perforated for shorter length. 8123 Three-piece skirt, 22 to 32 waist. With or without circular ruffles, with high or natural waist line. 8098 Skirt in peg-top effect, 22 to 32 waist.

8111 Boy's blouse, 6 to 12 years. With separate collar. 8102 Child's outdoor sleeping bag, one size, 6 mos. or 1 year. 7885 Girl's one-piece dress, 8 to 12 years. With long or short sleeves, with or with-

out tabs. 7974 Girl's dress, 6 to 12 years. With four-piece skirt, long, three-quarter or short sleeves. 7604 Girl's double-breasted coat, 4 to 8 years. With fancy revers and collar. Price of each pattern 10 cents.

Safety First in the Home.

Various municipalities and great corporations are waging a strong campaign for "Safety First." In every hand they have placed placards bearing words of warning. As one goes from place to place he is cautioned against taking risks that might cause injury or death. Forceful speakers go from city to city lecturing on means of safety. People are instructed in safe and sane ways of boarding and leaving trains, trolley cars and autobusses, and are urged to heed the warning bell or gong at crossings. In foundries, mills and factories, the employees are assembled and instructed in safe ways of handling dangerous materials and machinery. Every one of these cautionary measures I heartily endorse. I believe that the result will be increased thoughtfulness on the part of many who have heretofore been thoughtless and careless of their own safety and that of others. While the campaign has so far been considered a public one, it would be well for us to consider the subject of safety first in relation to our home life. Every day we read of accidents which would not have happened, had some one considered safety rather than haste, or speed, or temporary convenience. Perhaps they didn't think. Perhaps they only did what they had often done before, and never realized the danger risk.

Undoubtedly the commonest source of danger to life and property in the home is from fire originating at the source of heat or light. Many homes are destroyed every year through sheer carelessness. A faulty chimney is allowed to go without repair long after its fault is known. An unused stovepipe-opening is left uncovered in a chimney receiving another pipe, which is used. The broken side or door of a stove is left unprotected. A slow fire is hastened with a dash of kerosene. A lighted lamp or lantern is filled without the blaze being extinguished. The result in any case is the same—loss of property or life. Little children are all too often the victims of their elder's carelessness. It sometimes seems that homes where little children are should be furnished with placards on which under the caption of "Safety Fi't" should be printed a few common sense rules which many do not now heed. Wash-day in an ordinary kitchen, is a day of danger to small children. Boilers, tubs, and pails of hot water are left in positions that seem to invite investigation. A little hand bent on such investigation is often strong enough to overturn the the scalding water with fearful results. One cannot be too careful about these things. When turning the boiler aside to place wood in the stove, do you move the boiler outward, so that only one side balances, uncertainly on the edge of the stove, or do you push it back, allowing it to rest securely on the stove-top? Do you let the spout of your teakettle protrude over the edge of the stove and send up little puffs of steam, to allure a child into grasping at them? Do you take hot covers and griddles from the stove-top and place them on the hearth directly in the reach of childish fingers?

Do you allow matches to be strewn promiscuously about in every room, to tempt a child into lighting them? Wouldn't it be safer and saner to give more thought to these apparent trifles? All matches should be kept high beyond the reach of little fingers. One or two match-safes kept well filled will meet the needs of an ordinary family. It may at first seem inconvenient to have to go from one room to another for a light, but a little forethought will save steps. Once the habit of care and safety is established it will be found well worth while. Here is another rule which ought never to be broken: Do not place a lighted lamp on a stand or table having an overhanging cover, which a child might grasp, overturning the lamp.

Danger is not always confined to stoves and lamps, however. The open stairs or open doors leading to them are a source of danger to little folks, who are ever bent on exploration, but have not acquired sufficient control over their limbs to make stair-climbing safe. No door at the head of a cellar stairway, should be without a bolt or hook, put in place *every time* the door is closed. I cannot in this space point out all that makes for danger or safety. It would be well for every man and woman to look about their own home and discover, for themselves, its danger spots; discover and abolish. In your everyday work about the home, especially where there are little children, learn to do things in the safest way. Sometimes you may have to sacrifice a little of ornamentation or convenience but strive for "Safety First."

E. D. M.

Success in industry, in art or in love is saved from bitterness and disappointment because we regard our achievements far more symbolically than we know, and rest far more than we are aware upon the backing of God.—Dr. Richard C. Cabot.

Spear's Room-Size Brussels Rug
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$1.50 Cash
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Beautiful high color Brussels Rug, size 9x12, red rose design, green leaves and tan ground. Guaranteed full 9-wire Tapestry Brussels with wool facing. This is the greatest genuine Brussels Rug value you ever saw. It is perfectly safe to order direct from this advertisement, as we positively will refund your money if on receipt you are not satisfied with your bargain.

Bed, Spring, Pillows, Mattress
Complete Only $9.45

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This handsome, complete Metal Bed Outfit, consisting of heavy, perfectly constructed Iron Bed, any color, 4 feet 6 inches wide; a good woven wire spring with all steel frame; 50-pound cotton top mattress; 2 feather pillows.

"I Will Trust You Gladly Wherever You Live" "I believe in every man who earns a living. I am for the average home lover—the man who wants home pleasures but hasn't a whole lot of money to spare all at once. My credit plan of buying is for him. I want to get acquainted with all those who desire to make their homes cheerful and comfortable. I can help them get what they want. Thousands are saying, 'Spear helped us to beautify our homes on his liberal credit plan.' I want many more friends like that. Send for my bargain book now and let me explain how I give 'Credit to the Nation.'"

Spear of Pittsburgh

"Let Spear Make Your Home Sweet Home"

Open *your* charge account with Spear of Pittsburgh. He will trust you—no matter where you are—and save you money at every turn on all kinds of household goods on the most liberal and easiest charge account credit plan. No need to scrape and save for months and years. By Spear's plan you pay as you can—a little each month. You'll find Spear fair and square. He has no iron-clad rules and will be pleased to give you

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of any article so you can examine and try it out, right at home. If you don't want to keep it, send it right back at Spear's expense. Spear has many thousands of happy, friendly families on his open credit books. It's his life work. His whole heart is in it.

A Man from Ohio

wrote Spear of Pittsburgh, saying, "I wish you could see my home today. We are plain working people, but there is not a millionaire who enjoys greater comforts than we do in our home." Spear wants *you* to beautify *your* home without any strain on *your* pocketbook. Spear asks no unreasonable questions, does not let *your* neighbors know *your* business.

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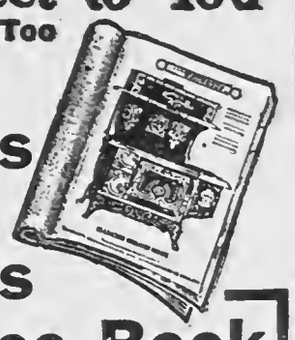

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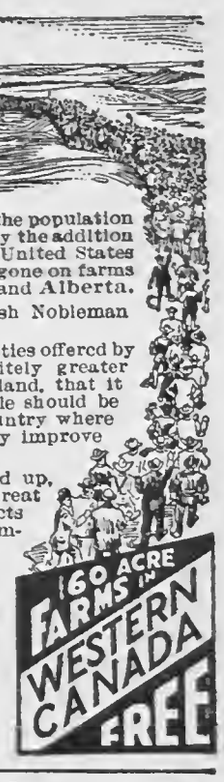

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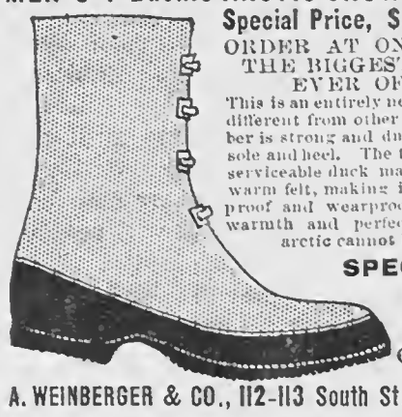

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Live Stock and Dairy

SUCCESS WITH WINTER LAMBS.

When we hear of a neighborhood where some crop is being grown out of its season and brings an unusual price, we think at once that some wonderful way of handling that crop has been discovered. We'll go right at once, we think, and find out how to get rich in a hurry. When we arrive, we usually find that common sense, patience, good care and a lot of other rather distant acquaintances of ours have been on the job. There may be ways of getting rich in a hurry by manipulating inanimate things, but the man who thinks he can make a fortune out of any line of farming without paying for it with hard work and much thought may as well quit the dream. Lately I visited a neighborhood in Chester County, Pa., where a few farmers were making an unusual success with Winter lambs. One of them had 64 lambs dropped this Fall, and by the last of November had sold 47 at $10 apiece. The remainder he expected to be rid of before Christmas. A tidy little sum to start the new year with, wasn't it? And what's more, he would not have to feed any grain all Winter, like the rest of us who

A NICE LITTLE BUNCH OF LAMB.

have our lambs coming in the dead of Winter or early Spring. Why shouldn't we do like him? What's his secret?

No secret at all! Anyone can do it—if they know how! The best I can do is tell how those ewes were fed, how they were bred, and one or two little things in their management that struck me. The country up about West Grove is somewhat rolling, just what I would call a natural sheep country. Plenty of broad fertile pastures, good water, and handy transportation. The stock originally used was native sheep bred to Dorset rams. This provided splendid mothers and milkers, that bred early and made the very finest of mutton. No sheep when dressed, so one of my friends there stated, could equal a Dorset for the quantity and quality of lean meat. No other mutton equals it in money value. But in the artificial early lamb we want more of a roly-poly than we get with the Dorset. Also, the Dorset does not always breed early enough. The early lamb people of West Grove began to look about for something to fill the bill. They found out about the Tunis sheep; heard they bred earlier and fattened easier, so they bought Tunis rams. They believed in good breeding, so they bought good ones; $25 for an animal was not too much to pay for insuring a crop that meant $500 or more to each one. That was one point where they differ from many of our sheep growers. There is no economy in a cheap ram. This cross, the Tunis on Dorset ewes proved just what they wanted. The Dorset furnished the frame and size and milking qualities, the Tunis the early breeding and the roly-poly lamb.

Now, they had their breed mixture right, the next proposition was to do the mixing at the right time. For Christmas lambs the ewes must be bred in April and May, before the hot Summer nights come. A curious fact was noted that a lot of lambs would be born say the last of September and no more until 10 days or two weeks later. Since a few days may mean dollars in the price of a 40-pound lamb, this is a point we need to know more about. Until some experiments can be accurately carried out along this line, and a temperature record kept, we will hardly know how important the weather conditions may be in stimulating breeding. In practice, the ewes are in good flesh before the breeding season, but not too fat. They are then turned on scant pasture for a couple of days to get good and hungry. Toward evening they are given a light feed of shelled corn. Then the ram is turned with them. He needs also to be brought into prime condition by individual feeding. Oats and clover or Alfalfa hay are a good combination. The ram is handled in a number of ways. He is usually kept up during the day to be turned with the ewes at night. When possible two rams are kept to be used alternately. Often a young ram lamb is turned with the ewes before the older animal, and is kept in the flock with him. One can only conclude that the breeding practice is largely guesswork, and until we have made more careful study of breeding conditions we'll have to try every expedient that may in any manner help.

It is hardly worth while to mention that the ewes are kept in prime condition during the months following breeding. The splendid clover pastures about Chatham and West Grove take care of that. How many ewes to the acre you ask? I asked that question too. I'll give you the answer I got. Just as many as will stay in good condition and not hurt the pasture. Being a sheep man myself, I knew that was the only answer that would fill the bill. All you can do is watch your ewes and see that they are doing well. Change pasture if they need it or give them a little extra feed if they seem likely to want it. Always have plenty of water on hand that is fit to drink.

The ewes stay on pasturage until the lambs come, and in some cases for some time afterward. The longer we can feed them that way the cheaper it will be, and our profits from the lamb greater. Also we can guarantee a real fat lamb. The only kind that pays is one that is born fat and does nothing but get fatter. A poor lamb is dead waste. Dressed it looks for all the world like a skinned cat, and is worth very little more. The lamb for this early Christmas market is straight hothouse goods. Like a hothouse plant it must be carefully handled. It should have little or no exercise. It should never miss a meal. It should have cracked corn and bran as soon as it will eat. Nothing should ex-

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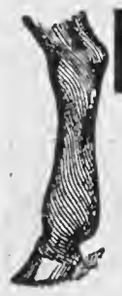

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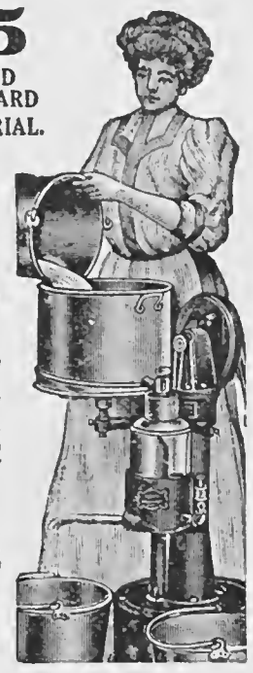

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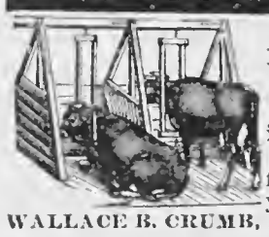

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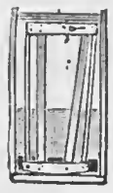

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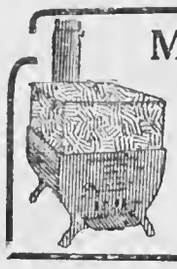

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LEWIS MFG. CO., Box C, Cortland, New York

Send for Catalog and Trial Offer Coupon

cite it or be allowed to interfere with its appetite. Even its death should be as swift and mild as possible after its removal from the ewe. We are working for a perfect, smooth, white meat that the slightest rough handling will spoil. Like a cut flower, unless handled with the utmost gentleness, the hothouse lamb hauled any distance or scared before killing will "wilt," ruining the fine texture of the meat.

After lambing the ewes were fed largely on Alfalfa hay. Indeed, all of the most progressive growers depended on Alfalfa to keep their ewes in flesh and milk. A mixture of oats, bran, and cracked or whole corn to both lambs and ewes was pretty generally used, special pens of course being made for the lambs to run into. Cornmeal was held in very low esteem. Several doubted if the corn should be even crushed or cracked before feeding. Salt was usually kept before the ewes constantly. Plenty of pure water was also provided. As one breeder expressed it, *taking care* was what counted; namely, clean feed, pure water, salt, plenty of fresh air, anything to keep the appetite on edge and the lambs growing. I do not think too much emphasis can be put on these points. The ewe going stale from being shut in, having too much grain, or drinking foul water or not enough ruins many a lamb crop, putting it in the skinned-cat class.

The best housing arrangements for the health of the sheep that I saw was an open front basement of a barn, divided into sizeable pens and with exercise yards of an equal size attached. Plenty of fresh air, all the exercise they needed; just the combination to keep both ewes and lambs in keen growing condition. The main lesson of that trip to my mind was the need of studying breeding conditions and the value of strict attention to details of feeding and housing. Truly, the eye of the master—both of them—should be on his sheep! R. B.

IRREGULAR FRESHENING OF MILCH COW.

Does it have a bad effect on a cow to keep her from breeding for any considerable length of time? The cow in question had a calf last June, but I find it inexpedient to breed her again this coming year unless it is necessary to keep the animal in good condition.

New Jersey. W. W. T.

There exist two dangers of allowing a milch cow to remain open for an indefinite period. In the first place she is less apt to conceive when mated, and in the second place she is apt to go dry for a long period after the mating is finally made in case she does settle. It is customary in large dairies where the calves are not an important item of value to permit the cows to freshen once in 15 or 16 months. Ordinarily, however, for dairy farm practices it is much more desirable to mate them so that they will freshen once each year. This practice stimulates the milk flow, and unless the animal is particularly a persistent milker she is less apt to give as much milk if irregularly bred and not permitted to freshen at frequent intervals. The animal will keep in good condition physically if not bred, in fact she is very apt to put on an excessive amount of flesh, and this is one of the reasons why she is less apt to conceive when mated. Instances are frequent where cows have been used for family purposes and not bred for intervals of two years or more, but it is the exception rather than the rule to have such animals give milk enough to appropriately pay for the care involved in their maintenance. If desired to carry a cow over from Spring freshening to Fall freshening, or if necessary to avoid calving during fly time, the practice is justified. F. C. M.

LIVE STOCK NOTES AND PRICES.

The year 1913 has been a very prosperous one to the Guernsey interests. The work of the office of the Guernsey Cattle Club shows a gain of 60% in the entries of bulls and also those of cows, and a gain of 50% in the number of transfers. The work of the Advanced Register shows an even greater gain. One of the most important changes made during the year has been the combination of the Herd Register with the monthly Guernsey Breeders' Journal, making the issues each month a complete compendium of information valuable to all interested in the Guernsey.

Fall grain is up and doing nicely; weather fine; only a few flakes of snow fell to date (Dec. 29). Tops of highest hills were gray with snow twice this year for a few hours only. Cabbage, carrots, parsnips, etc., still unharvested, are in good condition. Frost has not yet cut down the Dahlias and other flowers, although the tender flowers stopped blooming some time ago. Prunes were a good crop; prices good, best for some time past. Carload lots of prunes shipped from Drain (exclusive of less than carload lots) total $9,100 up to middle of December, with several more carloads yet to be shipped. Cattle good price and scarce; fat steers 6½ cents per pound on foot; cows, 5 and 5½ cents per pound; good Jersey cows, $50 to $100 per head. Potatoes retail at one cent per pound; apples 50 cents per box; celery 10 cents per bunch; sweet potatoes three cents per pound; onions three cents per pound; cranberries 15 cents per quart; Hubbard and other squashes 10 to 25 cents apiece, according to size; eggs 35; butter fat 37; creamery butter 40; rice, broken, eight cents; head rice 10 cents per pound. All prices quoted are at local retail stores. The local demand for turkeys was poor at the holiday season, but large numbers were shipped to the large cities. There was $21,680 worth of sheep, hogs, and cattle shipped from Drain in 1913. More attention is being paid to dairying, poultry raising, and fruit growing than ever before. A new creamery is being talked of here, also a cannery, both of which are needed. L. E. W.

Douglas Co., Ore.

Butter, 42 cents retail, 35 cents wholesale; eggs 38 to 40; potatoes 90 bus.; sweet potatoes 50 cents per ⅝ basket, $1.75 barrel; milk eight cents to family trade; chicken, live, 22, 17 to 18 cents wholesale; dressed 25, 20. C. R. P.

Da Costa, N. J.

Twenty-five farmers near Hartford, Conn., recently organized the first Connecticut Herd Improvement Association. They will start with an official cow tester and have their cows fully tested for "robbers." This work will be under the general supervision of the Connecticut Agricultural College.

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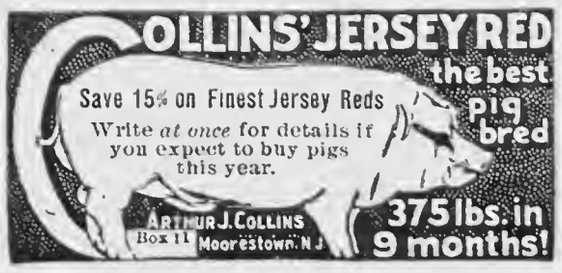

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THE HEN BUSINESS IN CALIFORNIA.

I reside in California. Our Winters are of course mild; no snow and little cold weather, in fact ice seldom forms and days following our cool nights are usually warmer than those following damp nights. To offset the lack of cold we have very rainy weather all Winter long as a rule; say three to four rainy days per week, and on level surfaces the water naturally accumulates in puddles until after two or three dry days in succession, when the ground which is a sandy loam in this section, again becomes reasonably dry. Hens running out in yards get damp feet and encounter foggy atmosphere until say 10 a. m. In my opinion this damp condition has a lowering effect upon the egg yield, and perhaps the system of continuous housing, which I have read much about during late years, might prove beneficial. What do you think of continuous housing system applied in California? I have never known of it being used here on any large scale. I refer to the Corning system of Bound Brook, N. J. How should coops be constructed in following out this idea? I favor this system if it has really proven satisfactory, but am inclined to divide up the flock in say 150 to the pen rather than say 1,500 together. E. W.

I do not favor the Corning system or any other large housing system for California, because, first, it is too expensive for houses; second, in California such a system is not necessary. In the mild climate of the Santa Rosa section, and in fact for all of central California, the most successful poultrymen handle their flocks in units of about 100 fowls in inexpensive houses, tight on three sides and open to the front, giving as large a yard as the grounds will permit. One of our most successful poultrymen, a man who has made a success of the business for 15 years, handles his 1,500 White Leghorns in 100 flock units, with an acre of ground to the flock; one-half of the acre is planted to peach trees; the other half is in Alfalfa; his inexpensive houses have no floors, all the droppings fall to the ground. His houses are built on runners, 6x6 scantling, and at intervals he hitches a horse or team to the house and moves it a short distance, and harrows the droppings into the soil, which is a sandy loam. In this way he gets banner crops of peaches and Alfalfa, while at the same time the trees furnish shade, and the Alfalfa green food to the fowls. In this manner he has made a great success, so much so that he rides in an auto, owns a brick business block in town, and 40 acres of a well-equipped poultry ranch, so it is reasonable to say this system is and has been a success. All the above paid for by the poultry. His house is an open front, gable roof, built very cheaply, and serves simply and inexpensively its purpose. The ideal poultry house for California is one 14x24, divided into two sections, a roosting pen and a scratching pen both open front for rainy days, with dirt floor raised high enough to avoid dampness, and with yard large enough to have something green growing in all the year around. The inquirer need not fear all the rain he gets at Santa Rosa; he should be grateful for the rain that will mature the next season's crops and his poultry will not suffer at all. Perhaps a modified house like the Tolman would suit Santa Rosa conditions; this is a house 14x24, open front and from a California viewpoint is altogether desirable.

W. H. PEARSON.

Ducks that Over-lay.

Can you tell me what I can do to stop my Pekin ducks from laying double-yolk and soft-shell eggs? They get plenty of shell and grit. I wish to use as many eggs as I can for hatching this Spring, but at this rate I shall only be able to use about half of them as one-third of them are double-yolk large eggs, about five ounces each, and then a few soft-shelled ones. H. G.

Parksville, B. C.

If you will change their feeding ration I am sure the ducks will go back to normal laying. I suspect you are either using some patented egg food which acts as a stimulant on the reproductive organs, or else feeding a large amount of too concentrated a food. If you are to use these ducks for breeding purposes in the Spring, I would recommend the following ration to be fed from now until two weeks before the hatching season: Two parts wheat middlings, one part cornmeal, one part ground oats, one-half part meat meal, fish scrap or meat scrap. Mix to a crumbly consistency, and about 10 per cent by weight each of grit and oyster shell added in the mash. Two weeks before the eggs are needed for hatching, change the former mash as follows: Two parts wheat middlings, one part ground oats, one part cornmeal, one part beef scrap, 10 per cent by weight of grit and oyster shell, and all the green food that they will consume. This green food may be steamed cut Alfalfa or clover hay, soaked beet pulp, finely chopped cabbages or beets. If the ducks are laying heavily now, it may be well to feed the first mentioned mash once a day, and equal parts of corn and wheat once a day, giving them only what they will clean up in about 10 minutes, but have the feed trough long enough so that all the birds can have access to the feed at the same time. For the present feed the second mash twice a day with green food once a day, giving the birds plenty of fresh water to drink at all times. If the food is not stimulating at the present time as I have suggested, then put the birds on a starvation ration, in other words, from one-half to one-third of what they are getting now, then bring them back gradually to laying, but be careful not to give them too much.

A. L. CLARK.

AILING ANIMALS.

Ringworm.

My calf, 10 weeks old, has a whitish eruption resembling a wart, beneath and very near one eye. A veterinarian pronounced it eczema, and ordered it treated with tincture of iodine. This has no effect and the spot is spreading. Will you recommend a remedy? G. A. M.

The disease is ringworm which is very common in calves at this time of the year. Scrub and scrape the spot perfectly free from scales and scabs and then rub in some iodine ointment. Repeat the application each other day and the trouble will soon subside. Isolate the calf as the disease is contagious. Clean up, disinfect, whitewash, perfectly ventilate and sun light the stable, as ringworm is due to a vegetable parasite (tricophyton tonsurans) which lives on damp walls and woodwork in unsanitary stables, as well as on animals. A. S. A.

Bog Spavin.

I have a horse with a bog spavin. Can you tell what will cure it? A. R. F.

New York.

A bog spavin is practically incurable, and if lameness is absent it would be better to let the part alone. In a colt under two years of age such synovial distensions of the hock joint tend to disappear without treatment, unless due to infection of the navel at birth, and to hasten disappearance we have found it well to daub the hock with pine tar now and then, and to allow the colt to run out-doors as much as possible. If tar is applied too often it will blister and remove the hair. This should be avoided. If lameness is present remove the hair and either blister repeatedly with cerate of cantharides or have the joint line-fired and blistered by a qualified veterinarian. Then give a six week's rest. A. S. A.

Staggers.

I have a very valuable horse that I bought six months ago; he had blind staggers lately and ran away. What can be done for it? P. R.

New York.

Never let the horse stand for a single day idle in the stable. If there is no work for him to do turn him out in the yard or paddock and stop feeding grain. In the stable let him occupy a roomy box stall and have the stable perfectly ventilated. Groom the horse once daily. Give the drinking water before feeding and allow free access to rock salt. Feed whole oats, wheat bran and mixed hay. In cold weather add a few ears of corn at noon. See that the collar fits properly. If the fits continue drive horse in a breast collar. A physic of one pint of raw linseed oil should be given each time the horse has an attack, but medicine other than this will not be likely to help.

A. S. A.

Stiff Joint.

What causes the hip joints of one of my cows to squeak? Sounds as if they were lacking oil. This cow is getting rather old now, but I also had a calf with the same thing which finally got so stiff it had to be killed. J. K.

Rheumatism is apt to stiffen a joint and make it give out a cracking or snapping sound during motion. This is most seen in horses and may also come from lack of exercise. In cattle tuberculosis of the bones and joints always is to be suspected in such a case as you describe, and we would therefore advise you to apply the tuberculin test. If tuberculosis is not present make the cow take lots of exercise everyday and allow her a roomy box stall in the stable. Feed roots or silage to keep the bowels active. Rub the affected joint with chloroform liniment twice daily. A. S. A.

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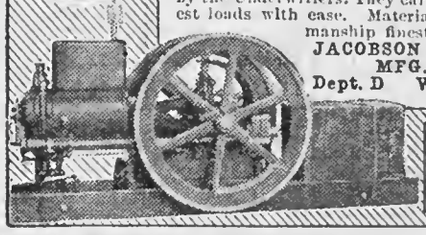

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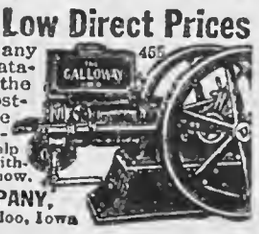

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..	16%	..	$12.80
..	10%	2	12.80
..	10%	5	15.55
..	10%	10	20.30
1	8	3	17.30
2	8	5	18.55
2	8	5	21.30
2	8	10	25.55
3	8	6	25.30
3	24 bone	..	26.25
1	8	4	18.30
1	8	2	16.40
19	Nitrate	..	55.75
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Ohio.

Ayrshire Breeders Convene.

With nearly 100 new members of the past year included, the Ayrshire Breeders' Association now has approximately 700 members. Of this number perhaps one-tenth met in New York on January 8 to attend to the business of the annual meeting. No papers were read nor addresses given. The president, Mr. John R. Valentine of Bryn Mawr, Pa., presented words of great encouragement to the members in view of the fact that for some time back there was little to encourage them. But a financial deficit has been wiped out and $7,500 denote the surplus of present funds. Four Ayrshire cows have added glory to the year, for they have made individual records of more than 20,000 pounds of milk each. So decidedly is the association "looking up" that it will probably send a string of 10 fine Ayrshire cows to the Panama Exposition. A committee was appointed to see about the necessary funds, and if they fail to raise the amount needed the association will invest not to exceed $2,000 in the proposition. Some changes were considered in the Advanced registry and the association expressed its desire to have Ayrshires judged at the fairs by men who breed them. The following officers were elected for 1914: President, John A. Ness, Auburn, Me.; Vice Presidents, W. T. Wells, Newington, Conn.; J. W. Clise, Seattle, Wash.; Geo. H. Converse, Woodville, N. Y.; John R. Valentine, Bryn Mawr, Pa.; secretary and treasurer, C. M. Winslow, Brandon, Vt.; auditor, Geo. H. Yeaton, Dover, N. H.; directors for three years: Chas. H. Hays, Portsmouth, N. H.; Geo. E. Pike, Gouverneur, N. Y.; C. J. Bell, Hollis, N. H.; Henry Fielden, Newton Square, Pa.; H. J. Chrisholm, Portchester, N. Y.; Mrs. F. D. Ehrhardt, West Berlin, Vt. The next annual meeting will be held in Philadelphia.

Cows $40 to $100 and more, mostly $50 to $75. Butter 35 to 40, and here the farmers sell a large part direct to the consumer. Eggs sell now for 30 to 34. They have been as high as 45 for several days. Potatoes 75; apples, retail, 10 to 30 cents per half peck. P. E. R.

Dover, Pa.

Over 1,300 carloads of produce was shipped from Barker last year, 447 cars peaches alone. Market for horses slow, selling from $100 to $250. Cows $50 to $125 for the very best; pork, dressed $8 to $9 per hundred pounds; beef $7 to $10 per hundred, dressed; cabbage $22 per ton; eggs 35; butter 28 to 30; chickens, alive, 12 cents per pound. No potatoes moving; what potatoes there are, are being held for the Spring market. Wheat and rye look very good. Logs for baskets are sold to the factories for $20 per thousand. Hay is slow at $10 to $12 per ton. M. H. L.

Barker, N. Y.

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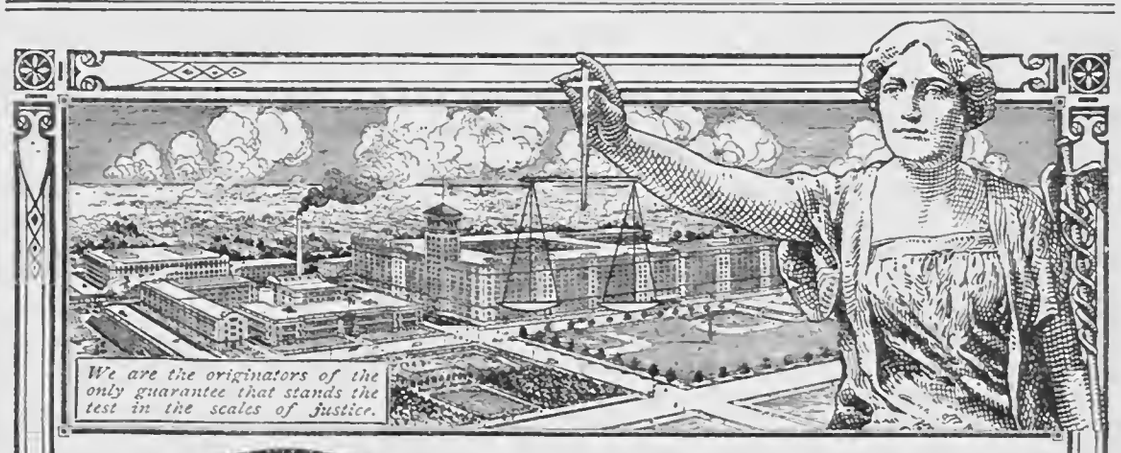

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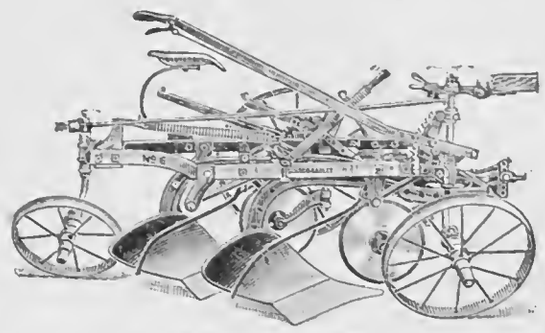

Sears, Roebuck and Co., Chicago

Farm Management.

UNLOADING HAY BY HORSE POWER.

I have a barn in which are two mows with a floor or driveway between them. I grow from 20 to 30 tons hay, mostly clover, in a season. Prime or best hay is put in one mow and anything inferior in the other, such as is weedy or damaged by rain, etc. I would like to have advice from some of your readers on the easiest and cheapest plan to get the hay into these mows. From floor on which wagon stands to the ridge pole or highest part of roof the distance is about 33 feet, and difficult to reach when barn is empty, therefore I intend putting in necessary machinery during this Winter when mows are full. Answers to the following questions would, I think, give me much information on the matter: Presuming that a carrier be used is a steel track preferable to the wooden? Will a reversible carrier drop hay in either mow as desired? How much time will be consumed in changing from one mow to the other? Can the change be made without going up to track? What is the best kind of fork for use in clover hay? Double harpoon is not satisfactory in my experience. Last season I used two single harpoon forks chained together, with better results. Is the sling more satisfactory? Could it be used on hay rick 18 feet in length? In case rick is too long for one sling, could not two shorter ones be used? Can grain in sheaf, corn fodder, etc., be successfully handled with sling? Could not gasoline engine be used instead of horse power in handling hay? If so what machinery would be necessary? J. F. T.

Pennsylvania.

R. N.-Y.—We want the experience of practical farmers on this. In our own barn we use a steel track and find it very satisfactory. A reversible carrier takes the hay to either side. It requires about 20 minutes to change from one to another, and it is necessary to go up to the track. We use a double harpoon, but would like a better fork. We have had no experience with slings and would like to hear from farmers who have used them. Several cases are reported where gasoline engines are used to hoist the hay. In these cases the hay fork ropes run on the drum of a windlass, which is run by the engine, and under control of a lever.

CO-OPERATION IN MANAGEMENT.

The much talked of question of farm labor and the hired man was satisfactorily settled by one farmer, by making the man in a certain sense a partner in the business, with a personal interest in the profits from the farm. They carried it out in this manner. The man had been on the place one year and proved very trustworthy and conscientious. When it came time for a bargain for the second year the owner offered an advance in the regular wage, which would have amounted to $40 in the year, or a bonus at the end of the year of 10% of the profits. The man accepted the latter plan, and it has worked out to the advantage of the owner and also to the advantage of the man. The only question was what was to be considered expense and what credit on the ledger. They worked out the following plan:

Everything sold off the place was a credit. Then on the expense account, first came all wages for labor (here your man sees you get your full work from any extra labor hired). Second, all feed that was not grown on the place. Third, all repairs of tools, horseshoeing, doctoring and incidentals to the daily running of the farm. Fourth, all stock which will be sold that same year. Fifth, purchased stock such as horses or cows that will remain on the farm and all implements which will last more than the one year, were charged at one tenth or one-fifth of cost, this amount being obtained by estimating the probable life of the animal or tool. There was no credit taken by the stuff eaten by the owner's family, nor any interest charged on the investment in the place, nor any charge made for the owner's own labor, and if some animal was sold at an advance price, the profit was credited. The whole plan is one that must be worked out to fit each and every place, but in this case it has worked not only to the benefit of the owner and of the man, but to the happiness and contentment of both.

If the man saves money for the owner, if by working a little harder or longer he can save the extra help on some special piece of work, or by extra care and foresight his tools last longer, it means money in his pocket, and anyone gets tired working for the other fellow, and enthusiasm lags. But if we are working, not only knowing that the work is going to be appreciated, but that we are going to receive a substantial reward for our effort, any man will work harder and longer and see no inducement to move to another place. As one man aptly put it, "It is more fun." S. R.

Utilizing Peat Spots.

In answer to J. F. McC., page 1375, I would say that I have had the same experience with a peat moss swamp, and have worked for years to solve the same problem, which I at last accomplished. This can be accomplished, after well draining, by putting on good manure. But to lessen expense, I found that by drawing on gravel, two loads to the square rod and some manure with it, I obtained the same results. The best crops to raise first on this reclaimed land are onions and potatoes. Later it will raise nearly any crop when well subdued and enriched. The only enrichment necessary after well subduing is commercial fertilizer but this will not do on the start. I have raised onions on the same ground for years in succession with only commercial fertilizer to enrich it.

If a quick method of seeding is desired, the land can be first plowed, then burned, the fire going only the depth of the furrow. Then sow Timothy seed and manure in the ashes and a good seeding is obtained. This will make the land somewhat lower and is not advisable if the other method can be executed. I have also a plot of swamp where I have cut (with a specially made shovel) dried in the sun and ground peat moss for horse bedding. I have sold hundreds of dollars worth at $10 a ton. The hole left by this also helps to drain the swamp. I consider my swamp ground as very valuable to me hope J. F. McC. will be as successful. H. E. P.

Broome Co., N. Y.

R. N.-Y.—A bulletin from the Vermont Experiment Station pictures a spade used for this purpose and tells how to dry the chunks of peat. Slaked lime helps such peat soils by breaking them up and starting ferments. They always need potash and phosphoric acid as fertilizers. It is good farm management to make use of these low and peaty spots for manure or bedding.

Piping Water to a Well.

Concerning the combined well and cistern on page 1342, I have three wells on my farm that were dug and stoned up many years ago. One is at the house, one at the barn and one half way between. They all come to rock at 10 feet and each one is pecked two feet in the rock, so each well is 12 feet deep. They all have an abundance of water, until we have had a long dry time; then they will go dry and stay dry long after we have had heavy rains. I turned the water from the eaves trough of the barn into the well there, and had plenty of water for my four horses ever since, though the other wells gave out long ago. Late in the Fall I had one of the other wells drilled 15 feet lower, and got an abundance of water, but the well that has not had anything done to it is still dry, so it may help some to turn the water into the well in spite of what your umpire thinks of it. M. F.

On page 1342 "Umpire" seems to be up a stump, as to the policy of putting surplus water into his well that has nearly run dry. About 1870 I dug a well in my barnyard for my stock; it went down about 20 feet through blue clay, then we struck a layer of sand and gravel, but no water came up into the well; then we dug about six feet further which filled promptly. The well was 10 feet across at the bottom, this was stoned up, but the well could not be depended upon in a dry time. Then we put eaves troughs onto the barn and ran them into the well, and it never absolutely failed after, although it was not sufficient for my full stock of cattle, 30 head. I should by all means try the extra water.

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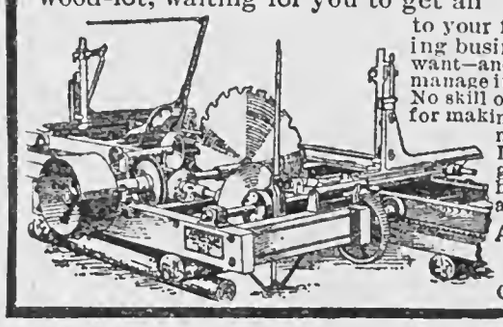

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FROM A VETERAN JERSEY BREEDER.

Your correspondent on page 1373 gives good advice, but I would advise local cow-testing associations such as Vermont has in both purebred and grade communities. Recently I talked to some Jersey breeders at Alliance, Ohio, who are organizing and found there a number of wide-awake farmers who are interested. The point I advise is, do not run your cows dry for months, heavy fed before calving, then force for every drop and call or believe it an advanced registry or register of merit test *honestly* made. It is a "make believe" to fool yourself or others. This may be considered a fool's advice; if you do not agree with me, read the remarks made at the dinner of one of the great cattle clubs, at the last Chicago Dairy Show, 1913. One of our good breeders said: "I am satisfied that the carrying of cows a period of 12 months in their tests is not in the best interests of the cow or her owner, it is a violation of a natural law, and we cannot violate Nature's laws without suffering for so doing. I think everyone will agree with me when I say many cows have been practically lost or ruined during these tests; and besides, we are misleading the man who is simply a general farmer, because it is misleading to hold up a tremendous record, which he would like to live up to but *cannot possibly* make. I would like to know how many men there are here today, if they told us what really occurred in their experience would tell us they have crowded through this long period, crowded to the extreme limit in order to make a great record." Another asked, "How many dare publish their cash accounts for tests?" He said: "Through the 'Breeders' Gazette' I have challenged my colleagues to render a statement. Our dairy cattle breeders, and I do not specify or except any breed, are publishing records that are fabulous, and can we believe them?"

My advice to the Alliance breeders was: "Get THE R. N.-Y. and Hoard's Dairyman." R. F. SHANNON.

Pennsylvania.

AILING ANIMALS.

Worms.

For the past three years I have fed my horses cornstalks during the Winter, with plenty of root vegetables such as potatoes and carrots, but I notice each year that they are bothered with intestinal worms. One of my neighbors told me to mix hard wood ashes with salt equal parts and keep this constantly before them. Are the ashes harmful? If so what are the effects upon the horse, as they will lick twice as much of this mixture as they will of salt alone? C. F. L.

It appears that corn fodder, like swale hay, tends to infest horses with worms. At any rate many farmers assure us that is the fact. It might be better to feed the horses mixed clover and Timothy hay, instead of corn fodder. Horses should have access to rock salt at all times; but there is no need of feeding wood ashes right along. The ashes supply alkaline matters, such as potash salts and lime salts, and may prove somewhat constipating. They are not especially hurtful. For worms give a tablespoonful night and morning of a mixture of equal parts of sulphur, dried sulphate of iron and salt. Continue for a week, then skip 10 days and repeat. Omit the iron for a mare in foal. A. S. A.

Indigestion.

I have a mare five years old; she keeps moving in stall most of the time, puts her front feet forward one at a time, bumping the manger, stands with her hind legs wide apart. When she works she is limber as a colt. She is thin, cannot get much flesh on her. When she stands in barn sweats easily; will be all wet if she is working or driving. F. H.

Reduce the grain ration one-half and feed not over one pound of hay per hundred pounds of body weight as a day's ration. Never let her stand for a single day idle in the stable. Allow her a roomy box stall in the stable. Clip the hair from her belly and from the legs above knees and hocks, and that will soon stop sweating in the stable, provided the stable is perfectly ventilated. The feed may be gradually increased in amount as soon as she is doing well. The trembling and position taken at some times indicates the presence of chorea (St. Vitus' dance), and that is incurable. A. S. A.

Eczema.

I have a mare, about 1,300, clean, clever and a handsome one; works well and eats well, but every so often—generally once a month or so, sometimes twice a month and sometimes once in two months—she has a water blister, sometimes on her neck, side and hind quarters. If treated immediately with hot applications the discharge flows slowly, and in time the skin peels off, not affecting the hair. If she gets to rubbing it before I can do anything for it she rubs all the hair off and the skin looks bloodshot, discharges foul-smelling water. The hair in time all grows out again the natural color, and she is all right again. Some say it is mallenders; if so, what can I do to stop it; also what is the proper cure for lampas in a horse? Her upper gums at the roof of her month have swollen and dropped almost even with the bottom of the teeth, and she continually chops and rubs her tail to pieces. M. A. C.

Massachusetts.

Mallenders is an eczematous disease affecting the back of the knee, and the corresponding disease known as sallenders affects in the same way the skin in front of the hocks. The condition you describe apparently is eczema, and it seems evident that indigestion is the cause, seeing that the mare rubs her tail and also has "lampas" or "lampers." The latter condition is not a disease, but merely a swollen state of the bars of the hard palate, just back of the upper incisor teeth. It generally is sympathetic and associated with like swelling of the entire buccal membrane and gums of the mouth. The cause is cutting of teeth, or irregularities of the teeth. These too commonly cause indigestion. Have the teeth attended to by a qualified veterinarian and at the same time clip the hair from her belly and from the legs above knees and hocks. The clipping alone often greatly benefits indigestion. Never let her stand for a single day idle in the stable. If there is no work for her to do, turn her out and cut the rations down materially. Allow her a box stall when in the stable, and to prevent tail rubbing put a wide plank on brackets around the inside of the box, shelfwise, just high enough to prevent tail rubbing. Treat tail by scrubbing clean, and when dry pour on and rub in a little mixture of equal parts of kerosene and machine oil. Repeat three days in succession, then apply every three days a creamy mixture of sulphur and sweet oil. Internally give half an ounce of Fowler's solution of arsenic night and morning until a quart has been given; then gradually discontinue the medicine, taking at least a week to the work. Feed whole oats, wheat bran, mixed clover, hay and carrots. If a sore is seen to be coming upon the body paint it daily with tincture of iodine, after removing the hair, and open it when soft; then swab daily with the iodine tincture until well. A. S. A.

Strained Tendons.

I purchased a stallion April 4, 1913. I owned him about two months when he went lame, seems to have a thoroughpin. I sent him to a hospital (at this time he was up on his toe) to be treated. They blistered his hock but seemed to do little good. He came down on his foot flat, although an ordinary drive of about eight or 10 miles will put him back on his toe for a day or two. I have done nothing for him lately. He gets neither better nor worse. He is about ten years old. I keep him in a box stall where he gets exercise. E. F. M.

Maryland.

The symptoms suggest strained tendons rather than thoroughpin and it would be well to have the veterinarian line-fire the back tendons and then blister them, after which the horse should rest for six weeks. If you do not care to have the horse fired, blister the tendons repeatedly with cerate of cantharides, applied at intervals of three or four weeks. Clip off the hair and brush the skin clean; then rub the blister in, a little at a time, for fifteen minutes, wash the blister off in two days and then apply a little lard daily. A. S. A.

Malanotic Tumor; Garget.

1. I have a gray mare with a growth of some kind on her cheek about where the throatlatch buckle comes. It is soft, black, about the size of a hickory nut and seems to contain considerable blood, and bleeds a little at times. What is it and how may it be removed? 2. I have a registered Guernsey cow that has garget in two diagonal quarters of her udder. She is naturally a heavy milker, and is due to freshen in March. What care should be taken to avoid trouble at that time? Would it be safer to milk her right up to freshening time? J. M.

Allegany Co., N. Y.

1. The growth is a malanotic or pigment tumor and it is malignant and incurable. Such cancers are peculiar to grey or white horses when they are aging, and generally come on the black skin under the tail and about the anus and vulva. They usually return when excised. Have that done, however, and then apply tincture of iodine each other day if you see that the growth is coming back. It is best not to breed from an affected mare. 2. Milk the cow right along; indeed it would be best to milk the affected quarters three times a day. At night rub in a mixture of equal parts of fluid extract of poke root and druggist's soap liniment. If pus forms in the affected quarters when the calf is born, or before and soon after calving, the quarters will be permanently ruined for milk production, and the best treatment then is to cut off the ends of the teats or split them open to allow the pus free vent; then feed off for the butcher. A. S. A.

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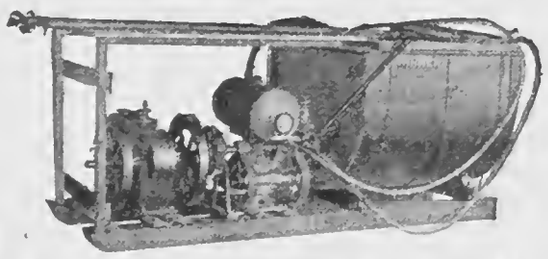

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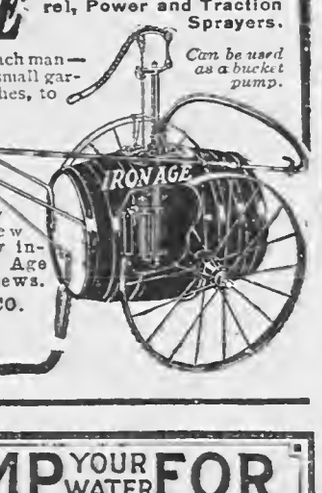

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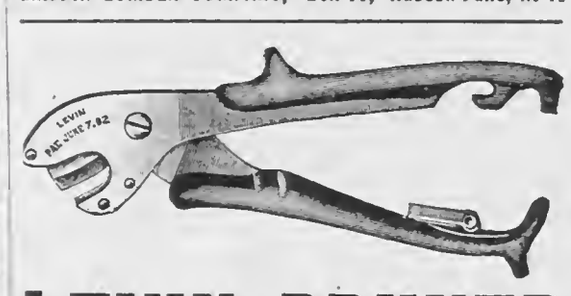

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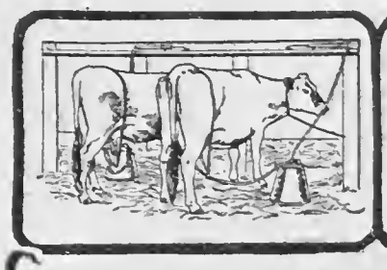

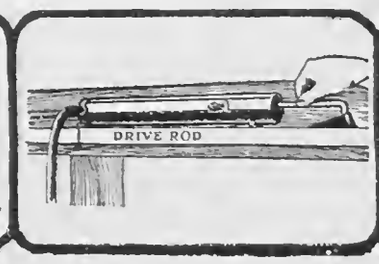

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Each Hinman Milker works separately. Each is complete within itself. Requires very little power to operate. Allows a record to be kept of each cow.

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More than 50,000 cows are milked daily with the HINMAN. These dairies are scattered all over the United States. All kinds of cows—all conditions—all classes of dairymen—all a success. The machine for 10 cow dairy.

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HINMAN MILKING MACHINE CO.
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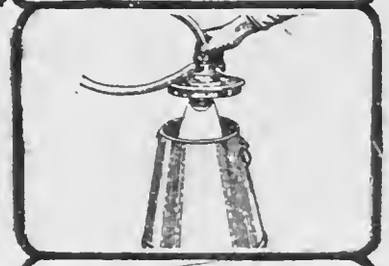
Hinman Trade Mark 6 years old

——TO BE CONTINUED —— WATCH THE ARROW



FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Lightening a Heavy Concentrate.

On page 1310 R. B. advises L. E. S. to feed a combination of ground corn and rye and cottonseed meal. This makes a very heavy concentrate, and unless fed with the silage will not be as satisfactory as its feeding value would warrant. R. B. would better mix the feed with the silage. J. D. P.

Ohio.

Dairy Ration.

Will you give me a grain ration for cows? I have cornstalks, mixed hay and ground oats. Can buy gluten feed at $32 per ton; cottonseed $36; wheat bran $29; brewers' grains $32; wheat middlings $32; buckwheat middlings $25.

Phelps, N. Y. C. W.

A mixture of three parts by weight of ground oats and two of each cottonseed meal and buckwheat mdidlings will be very good for milk production. Feed one pound of grain for three to four pounds of milk. For two or three weeks after the cows freshen, and for several weeks before, it will be better not to feed cottonseed meal, but give instead equal parts of ground oats, bran and buckwheat middlings. C. L. M.

Cut Hay for Horses and Cows.

I am feeding my horses cut feed (hay cut fine and feed mixed with it wet). I find it takes only two-thirds to keep them in better condition than when fed separate. I have a power cutter and plenty of time until Spring. Would the same process of feeding apply to milch cows with profit, or would it be injurious? C. S. F.

Lowell, Mass.

There will be no harm whatever in cutting the hay for cows, moistening and mixing with grain. Probably the results will be a little better, but whether enough better to pay for the trouble is a matter for you to decide. Cornstalks would undoubtedly be much more valuable treated as you say, than when fed whole.

C. L. M.

Thin Heifer.

I have a heifer that will be two years old in February next. She is due to freshen about February 5. She was in fine condition all Summer while out in pasture, but since putting her in the barn she seems to be getting somewhat thin. Will you tell me what you would advise feeding her? I can get all kinds of grain and feed here; have plenty of good Timothy hay. J. P.

Lanesboro, Pa.

In a case like this I know of nothing better than equal parts by weight of ground oats, wheat, bran and oil meal. Feed four or five pounds daily, according to the size of the heifer, in addition to what hay she wants. It is a very common mistake to let cattle grow thin during the Fall, and after bringing in from pasture. There seems to be a common impression that while a cow is giving milk, especially when fresh, she needs considerable grain, but when "dry," a little rough fodder is sufficient. During the last few weeks before parturition the calf is growing very rapidly, and the cow must furnish the material, even at the expense of her own flesh. Then too, the cow should have a good reserve of strength for the ordeal of maternity. Furthermore, if a cow is not accustomed to eating grain before calving, her digestive system is apt to be upset by heavy feeding afterward, and she is especially liable to attack of garget or indigestion. The time to feed for milk is before freshening, just as much as after. A cow that is in good condition and strong will give birth to a good lively calf, and come through the ordeal in fine shape to do her best at milk production. The way to secure this condition is by liberal feeding, with plenty of protein in the ration, and by giving a reasonable amount of exercise. A cow seems to store up capacity for milk-giving by liberal feeding before becoming fresh, just as the athlete stores up strength by weeks of exercise and practice. I cannot emphasize this point too much. Be liberal with the dry cow and she will repay you for it. Avoid cornmeal or cottonseed meal, but ground oats, bran and oil meal are excellent. C. L. M.

Balanced Rations.

Will you give me a balanced ration with the following grains? Gluten $30.50 a ton; beet pulp $28; bran $26; oil meal (old process) $2 a hundred, $40 a ton. I also have corn on the ear which sells at 75 cents a bushel. Grinding will cost me about nine cents a bushel, making corn 84 cents a bushel. This may be too high for a cheap balanced ration. For roughage I have corn fodder and some Timothy and meadow hay, mostly Blue grass.

Trexlers, Pa. W. K. T.

It is my opinion that it will pay you better to sell your corn and buy other concentrates. In that case a good combination would be gluten feed, two pounds, bran three pounds, and oil meal two pounds. If you prefer to have the corn ground, the following will be good. Cornmeal two pounds, bran two pounds, and oil meal three pounds. Feed five or six pounds to a cow, giving 20 pounds daily, and more or less in proportion to the amount of milk given. As you have no succulent feed it will probably pay to give one pound of beet pulp, once a day, moistened and mixed with the grain. C. L. M.

Ration for Jerseys.

Will you balance me a ration for my Jerseys weighing probably 850 or 900 pounds, giving 25 or 30 pounds milk per day? I have for roughage silage and mixed hay; following feeds available: Gluten $30 per ton, wheat feed $30, hominy $30, ground oats $30, bran $24, brewers' grains $29, cotton-seed $34, ground corn $32, which I do not care to use very much, molasses feeds $26.

Hamden, N. Y. W. L. T.

I have worked out the following ration as meeting the requirements:

			Dry Matter	Protein	Total Nutrient
Mixed hay,	10	pounds	8.710	.580	5.050
Silage,	35	"	7.920	.420	5.160
Cotton-seed meal,	3	"	2.790	1.128	2.418
Brewers' grs	2	"	1.826	.400	1.314
Ground oats	2	"	1.792	.176	1.350
Total			23.038	2.704	15,292

Nutritive ratio, 1:4.7.

If your milk tests much above four per cent butterfat, probably the grain ration should be increased somewhat, say to eight pounds per 25-pound cow, keeping the proportion the same. C. L. M.

Dairy Ration.

Can you suggest a balanced ration from the following: Wheat bran, $24.50; shorts, $26.50; linseed meal, $42; clover and Timothy hay, $15. In view of above prices what could I afford to pay for dried brewers' grain, or malt sprouts? I am not posted on the malt sprouts as to price. As I figure it the linseed meal furnishes the cheapest protein, wheat shorts next and bran the dearest of the three items. Cow is giving 16 pounds milk a day, seven pounds butter to the 100 pounds milk, old style of skimming and dash churn. She will weigh 1000 pounds, due to freshen Jan. 17. S. S. S.

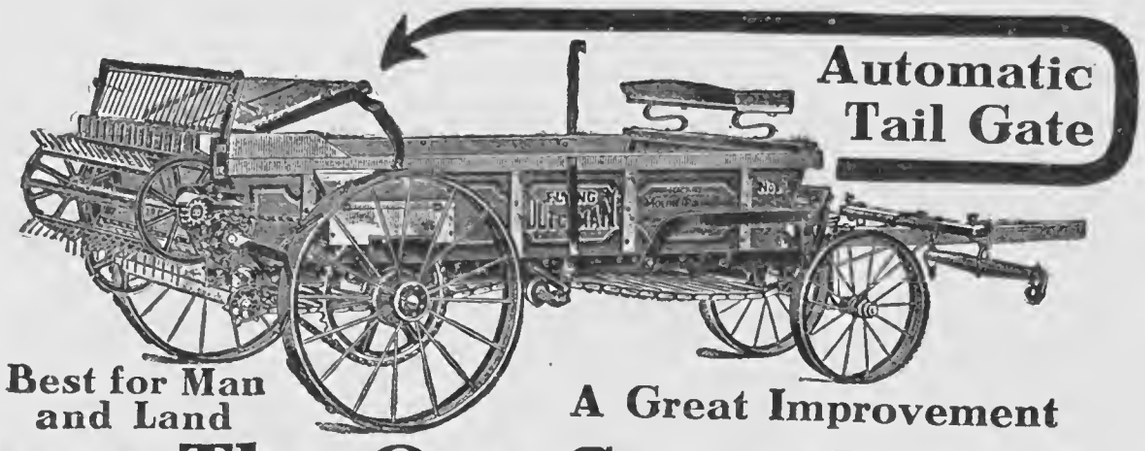
A sufficient ration for the above cow would be 20 to 25 pounds of mixed hay one pound wheat bran, two pounds wheat shorts and two pounds linseed oil meal. Or, if you wish to use brewers' dried grains or malt sprouts, two pounds malt sprouts, shorts and one pound oil meal. When the cow freshens the grain ration should be increased to one pound of grain to about three of milk. You have figured correctly as to the relative values of the several feeds, from the standpoint of protein. If you can obtain the brewers' grains for $1.60 to $1.75 per cwt., it will be cheaper than bran as far as protein is concerned. The shorts and oil meal need something coarse and bulky, like bran, brewers' grains or malt sprouts to lighten them up. The vlaue of the sprouts and brewers' grains is practically the same. C. L. M.

Trouble With Butter.

I have been making butter from a Jersey cow's milk and had no trouble with it coming till a few weeks ago. We have been giving her cottonseed meal with her other feed; since then I cannot get the butter to come. Do you think the feed has anything to do with it? Her milk is curdled and stringy. I would like to know what to do for it? C. G.

Boylston, Mass.

Cows that have been milking for a long time, and are due to freshen again in a few months, especially when on Winter feed, are quite apt to give "stringy" milk. If your cow is due to calve in two or three months, or less, you had better stop feeding cottonseed meal and dry her off at once. If she is not due to calve for four or five months, or longer, cut out the cottonseed meal for a time and feed more laxative foods, such as silage, roots and bran. When her milk becomes normal a small amount of cottonseed meal, from one to two pounds per day, fed with bran and other laxative foods, will help in the production of milk by supplying a cheap source of protein. Cream from "stringy" milk is very hard to churn. C. S. M.



The One Spreader Saves Strength of Manure

It is a well known fact that thin or liquid manure has the greatest fertilizing value—it is much more valuable to land than dry or rotten manure. The wetter it is, the better; every load of it is worth gold dollars to the farmer as soon as it is spread on his land.

There are many manure spreaders on the market today but they are so constructed that practically all of this valuable thin manure is wasted before it reaches the field.

The Flying Dutchman Spreader
NO. 14 NEW ENGLAND TYPE

is so constructed that it **saves** this material and enables the farmer to spread it just where he wants it.

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Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

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often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. New angle steel frame and steel seed hopper. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "*100 Per Cent Potato Planting*" and copy of Iron Age Farm and Garden News.

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Take your walking plow—any make, any style—and fit it with the **WINNER PLOW TRUCK** That makes a regular sulky that any boy, who can drive, can plow with as well as you ever could. Special Introductory Offer in New Territory. Write today. You may use the WINNER 10 DAYS before making up your mind. If you don't like it then, we'll return your money and pay freight both ways.

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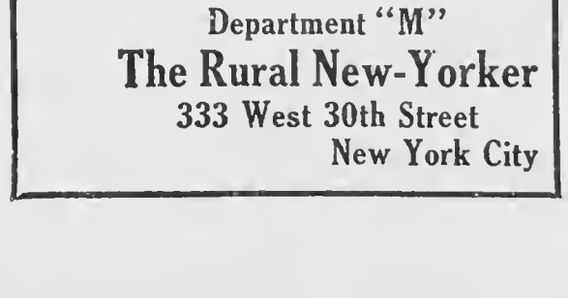


PRODUCTS, PRICES AND TRADE.

During 1913 the United States Steel Corporation turned out 16,800,000 tons of steel ingots, 14,000,000 tons of pig iron and 12,000,000 tons of rolled products.

Shipments of grain from Baltimore were unusually heavy the past year, 48,599,649 bushels, 15,000,000 more than the the previous year.

The potato market is in a very uncertain condition, dealers being inclined to hold for higher prices on the probability of considerable damage by frost to shipments now on the way.

The gold output in the Rand, South Africa, was 8,794,824 fine ounces, a decrease of 329,465 over the previous year. Its value was about $185,000,000.

The milk surplus has been somewhat reduced by the holding back of supplies by shippers with facilities for butter-making, but there is still considerable talk of a one-fourth cent reduction the last of this month. Gross prices of $1.81 to $1.91 for B and $1.61 to $1.71 for C cover a large part of the business.

Movements of corn from Argentina to this country are growing rapidly. Since October nearly 8,000,000 bushels have arrived at New York. Seven steamers are now on the way, bringing 42,000 tons, and six more are unloading here. In large lots this corn is bringing 70 cents at New York, underselling shipments from the West two cents per bushel.

A project is under way for building a concrete road from Fond du Lac to Green Bay, Wisconsin. The distance is 70 miles and the estimated cost $1,000,000. The method aimed at is to get at least 50,000 people along the Fox River valley as members of the road association.

A further decline of two to three cents per pound on butter is noted. There are very few sales of choice creamery above 33½ cents, 30 to 33 cents covering a large volume of the business. Trade in storage creamery is quiet, holders being unwilling to make a reduction proportionate to that on fresh stock. The drop in State dairy and factory is slight, as prices have held at a comparatively low level.

Eggs of the better grades advanced slightly during the week, but there is a general feeling that a lower level will soon be reached, and buyers are stocking up as lightly as consistent with current needs. There are few sales of whites above 40 cents, 35 to 38 covers most of the business in good to prime grades. Storage eggs of the better grades go mostly at 29 to 31 cents.

Along the Atlantic coast there are about 40 fish scrap factories, the greatest number being in the Chesapeake Bay region. The fish chiefly used is menhaden, nearly 900,000,000 being worked up into oil and fertilizer material annually. This is the oldest fertilizer industry in this country, as the Indians in Connecticut used the fish in their corn culture.

The H. B. Claflin Co., the largest dry goods concern of its class, reports net earnings for the year of $262,254.02, which gives a dividend of six per cent. on the common stock. The largest dividend on this stock since the company's organization was nine per cent., in 1893. Some of the assets are: Merchandise, $5,821,748.52; store property, $2,739,181.58; stables, wagons, autos, horses, etc., $96,884.73. The total capital stock is $9,000,000.

During the two zero days of the past week very little business was done in apples and tender vegetables. The water front on both the New York and Jersey sides is a cold spot, and the combination of low temperature and high wind made it necessary to cart freezable produce to the store or warehouse as soon as unloaded. Apple prices remain unchanged from last week, $3 to $4.50 covering most sales.

The outlook in the raw wool market is improving, and there is some prospect of slightly higher prices. Manufacturers are finding a better outlet for their goods and hence are more interested in the raw material. Recent sales in Boston, which is the great wool market of this country, have shown the following prices: Fine staple, greasy, 18 to 18½; half blood, 19 to 19½; Montana and Utah greasy, fine and medium, 16 to 17; Western, scoured, clothing grades, 45 to 47; New Zealand, crossbred, greasy, 24 to 28. Australian markets on the higher grades show an advance of about two per cent.

W. W. H.

—"And I suppose, like a brave soldier you followed your colors?" "Yes; whenever there was a battle I noticed that the colors were flying, so I fled, too."—Buffalo Express.

A teacher had lessons to an infants' class on the Ten Commandments. "Can any little child give me a commandment with only four words in it?" she asked. A hand was raised immediately. "Well," said the teacher. "Keep off the grass," was the reply.—Credit Lost.

Don't Feed the Soil — Feed the Plant

In the top eight inches of average soil there is enough plant food in the form of nitrogen to last for 90 years, in phosphoric acid for 500 years and in potash for 1000 years.

And yet that very spot may prove barren. Plants have to take up their food in solution, in the "sap of the soil." All this food may be locked up so tightly by nature that the plants can't get at it fast enough for the commercial farmer, and he has to put in the same food in the soluble form of fertilizer.

Just so, a fertilizer may, by analysis, have all the necestary elements and yet not give the plant full value because these elements are not ready soluble.

Put into your ground a fertilizer that will feed not your already overstocked soil but your hungry *crops* with food which is available and easily absorbed.

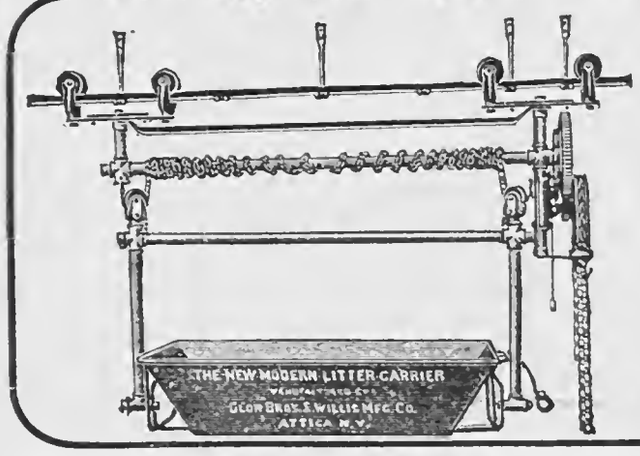
Bowker's Fertilizers

have chemically correct elements—there is a brand to fit every need. More than that, these chemicals are blended and mixed so that they are rendered water-soluble and go into your ground in the most available form. Most crops do most of their feeding in 60 days.

Write for our illustrated catalogue, based on forty years of experience. In writing, state what your crops are.

BOWKER FERTILIZER COMPANY
43 Chatham Street, Boston, Mass.

"New Modern" LITTER CARRIER



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Litter, Ensilage, Platform and Merchandise Carriers; Steel Stalls, Stanchions, Water Basins and covers; Feed Mangers, Stable Ventilators, Adjustable Steel Gates, Trolley Hoists, Hog Troughs and Galvanized Tanks.

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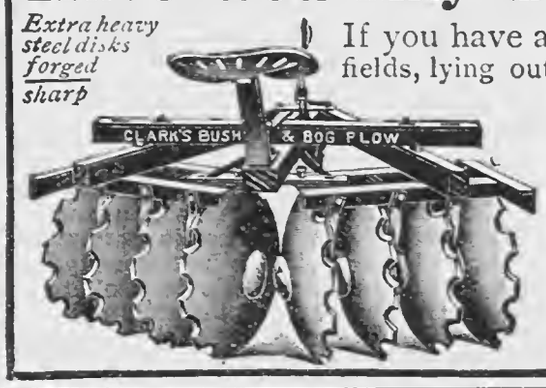
"EVERYTHING FOR THE BARN"

Have You Any Bush or Bog Land?

Extra heavy steel disks forged sharp



If you have any bush or bog fields, or parts of fields, lying out as waste land, or if you have any tough sod that you want to thoroughly chop up, or if you have any other disking that heretofore you considered impossible, put the *Cutaway* CLARK'S on the job. You will be astonished at what this big, strong, heavy plow or disk will do to it. Let us tell you more about this tool. Write today for catalog and B. & B. circular.

BUSH AND BOG PLOW

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Makers of the original CLARK double action harrows

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PAPEC ENSILAGE CUTTER

is easy to set up and take down. Simple in construction, not easy to get out of order. The entire frame is one solid piece of semi-steel. The bearings are always in line, run smoothly and will not heat. The feeding mechanism is geared to the main shaft—always gives you the desired length of cut. The *Papec Ensilage Cutter* is not chain driven, but has heavy gears which transmit *all* the power. It cuts ensilage perfectly and swiftly—as fast as you can bring the corn to the machine.

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NATCO IMPERISHABLE SILO

is built of hollow blocks of vitrified clay. Each layer reinforced with continuous steel bands. There are no staves to warp, shrink or split. No hoops to tighten. No repairs or painting. Any mason can erect a Natco Imperishable Silo and it lasts for generations. A monument to your good judgment and an asset to your permanent farm buildings.

Write for Free Silo Book Send today for this book and learn why the Natco Imperishable Silo is better and more economical in the long run. Ask for Catalog L

NATIONAL FIRE PROOFING COMPANY
Syracuse, N. Y.

The Henyard.

Chicken Figures Once More.

On page 25 you have an article, entitled "A Chicken Man's Arithmetic," which proves to me that you can prove anything with figures if you do not think too deeply. If B. H. C.'s figures were correct, there would be no breed in existence except the White Leghorn; but anyone who knows anything about poultry knows that it is pure theory, and not very good theory at that. If you want to prove this, simply put some heavy breed in with a pen of Leghorns, and you will find that though the Leghorn is more active, and so gets more than its share of the food, the heavier breed will soon be over-fat. I will take a pen of chicks of some of the heavier breeds, and the food that is used for an equal number of Leghorn chicks, and in 10 weeks I will develop them to three-quarters of a pound apiece more than the Leghorn.

Then in the case of the adult bird I will produce eggs on less food per egg than he can with Leghorns simply because of the Leghorns' food going to make muscle and sinew. His figuring is somewhat like the figures often used for heavy-laying hens: If a hen lays an egg a day for a week, and there are 52 weeks in the year, by jinks! that is a 365-egg hen. Tommy-rot! This is the kind of figuring that leads so many people into the chicken business, and through the chicken business to failure and disgust. Let us get away from such extravagant theories and we shall be on the road to business stability. J. F. C.

New Jersey.

Feed and Care of Winter Layers.

The following is the regular routine of work as practiced on a successful poultry farm: Their laying stock was mostly early-hatched S. C. White Leghorn pullets of a good-laying strain. Not only were they early hatched, but they were raised on free range and under natural conditions. They were kept growing every day in the year, so by the time they were put into Winter quarters they were fully matured.

The first thing in the morning was to raise the muslin curtains, unless the weather was exceptionally severe, or the wind, accompanied by rain, was blowing from the south. In that case they are left closed. They next fed each pen a scanty feeding of a mixture of equal parts of corn and wheat. This grain mixture they scattered well over the litter, and with the aid of a fork work it well down into the same. Next they replenish the drinking dishes with clean, fresh water, with the chill taken off. Then the roost platforms were cleaned and a little sand sprinkled on the same to facilitate cleaning the next day. The grit and oyster-shell hoppers were next inspected to make sure they were in working order. At about 10 o'clock the attendant fed a supply of Alfalfa hay, about an armful to a pen of 100 fowls. The eggs were also gathered at this time.

At noon the eggs were gathered, a supply of greed food, either cabbage or mangels, enough to last them until four o'clock, fed; the drinking dishes refilled, the dry mash hoppers opened, and a little green cut bone—about one ounce per fowl—fed. The dry mash hopper contains the following mixture: 100 pounds middlings, 50 pounds bran, 100 pounds cornmeal, 10 pounds oil meal, and 75 pounds beef scrap. At two o'clock the eggs are gathered again to prevent getting chilled and dirtied. At four o'clock the eggs are gathered again, the dry mash hoppers closed, a feeding of a grain mixture of equal parts of corn and wheat is fed. This feeding of grains is very liberal, so all get a chance to fill up and leave a little over for the next morning. The muslin curtains and all open windows are closed at this time excepting on very warm nights. Just before locking up at night the drinking dishes were emptied to prevent freezing. They renewed the litter often enough to keep it loose and dry. Each pen was equipped with a dust box, with the following dusting mixture: equal parts of road dust and fine sand.

Ithaca, N. Y. F. W. KAZMEIER.

Poor Laying.

Can you tell me why my hens and pullets do not lay better? They seem perfectly healthy, have practically unlimited range, have a dry mash—I think the Cornell formula, scratch feed at noon in litter, and corn on the cob at night; seem to be in good condition, neither fat nor thin, and not ragged. They have green feed, shells, of course water, occasionally milk, but still decline to lay any to speak of. The hens are mostly yearlings, and none more than two years old; the hens and most of the pullets R. I. Reds. E. S. B.

Torrington, Conn.

Perhaps hens can be made to lay, but I doubt it. They may be furnished with all the materials necessary for their bodily wants and the production of eggs, and given surroundings congenial to their tastes, and yet, until that mysterious vital force within them sets in motion the reproductive functions, eggs will not be forthcoming. That activity of the reproductive organs may be increased by selection in breeding, and by proper feeding, no one doubts, but outside of the comparatively narrow limits of this control, no one can "make" a hen lay. Your care and feeding of your hens seem good, assuming that they are comfortably sheltered, but their age is such as to make it improbable that they will lay much before Winter begins to merge into Spring. One and two-year-old hens are pretty apt to take a rest in early Winter, regardless of their care, and if eggs are wanted then, early pullets must be depended upon. M. B. D.

I have about 65 six and seven-months-old White Leghorn pullets in an open-front house, 7x15 feet, with a 7x18 scratching shed attached. I feed a quart of wheat in the litter in the morning, three quarts of milk thickened with bran, about 10 o'clock a half gallon of oats and eight or 10 heads of sorghum just after noon, and all the whole corn they will eat at night. They have access to milk, water and crushed oyster-shell at all times; have been cutting green sod and cabbage for them. I am getting very few eggs. Can you suggest the reason and make out a ration that will suit better. How much sprouted oats should be fed daily to a flock of that size? Should I feed meat scrap in addition to that ration or does the milk take the place satisfactorily? A.

Brookville, Ind.

I would suggest a more simple method of feeding as one that should give equally good results and save you labor. A dry mash kept constantly before your fowls, in hoppers, and mixed whole grains fed twice daily in the litter will supply the grain that they need, and green food, milk, etc., can be added according to their needs. With an unlimited supply of milk, I should not give them meat food in their mash, though a small percentage, say, one-eighth part by weight, would undoubtedly help. Sprouted oats, in layers from one to two inches deep, are usually fed in about the proportion of one square inch per fowl, daily. They are not needed where other green food is available. A good dry mash formula consists of 100 pounds each of corn meal, wheat bran, wheat middlings, gluten feed, and beef scrap. Where milk is fed, the meat scrap may be much reduced in quantity, or omitted. M. B. D.

Roup.

Recently I purchased 20 hens which I put in with other birds. The new ones now have swollen heads and mucus runs from eyes and nose. The first one taken sick made a rattling sound when breathing. I removed that hen to separate quarters, but each day since one or more hens have shown symptoms of cold or roup. They have been removed from the general pen. None of the stock which I had previous to buying this lot, has been affected. I have disinfected the drinking water with permanganate of potash, and sprayed the roosts with pine tar to try to break up the gathering in the head. What is the trouble and how can I stop it? L. L.

Worcester, N. Y.

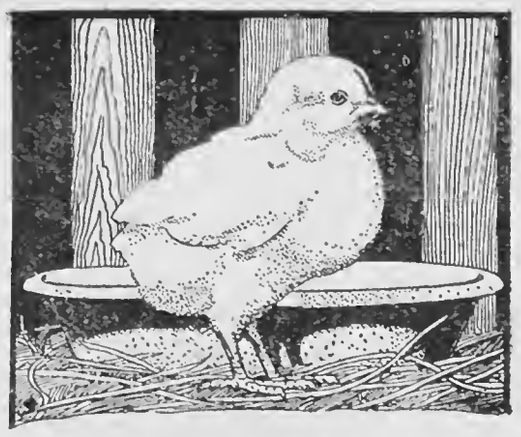
You have evidently had the misfortune to introduce the infection of roup into your flock, probably with the newly purchased fowls. Isolate at once all fowls showing evidence of "colds," and unless they are birds of more than ordinary value, you had better kill and bury all that are seriously sick. While they may recover, they will be more than likely to spread infection to your other flocks and be a source of continuous damage to you. As a disinfectant for internal use, dissolve an ounce of permanganate of potash in three pints of water and use a pint of this stock solution to every two quarts of water given the fowls for drink. You can also dip the heads of the affected fowls for a few seconds into the stock solution, causing them to snuff up a little of it into their nostrils. It will be well to give the permanganate solution to the healthy flock that has been exposed to infection for a while as a preventive, for, after all, prevention is better than cure, and the ax is the best remedy. Do not permit healthy fowls to use utensils that have been in the infected pen until these utensils have been disinfected with *boiling* water or chemical disinfectant. M. B. D.

Injured Foot.

I have a fine Buff Plymouth Rock cockerel which has lost his nails completely on one foot. Scales on lower part of leg and toes are somewhat distended and exposed toes where nails are off seem to have bled. Legs do not have appearance of usual scaly-leg, but it may have not become visible much on surface yet. I expected to show bird at exhibition but cannot on account of foot, and would be glad to receive any suggestion from you as to treatment. L. T. R.

Schenectady, N. Y.

As scaly-leg of sufficient degree to cause loss of toes would be very marked, I think that there must have been some injury or other cause for the trouble in this cockerel. Perhaps the foot was stepped upon by some larger animal; or the bird may have injured his foot in jumping from a high perch, or in scratching for food. Without more definite knowledge of the cause, the only treatment that I can recommend is to clean the foot thoroughly with soap and warm water, and if there is no pus formation or other evidence of a foreign body in the foot, to anoint the raw surfaces with some simple antiseptic ointment, like 5% carbolized vaseline, and place the fowl in a coop by itself with clean soft litter to walk upon. M. B. D.



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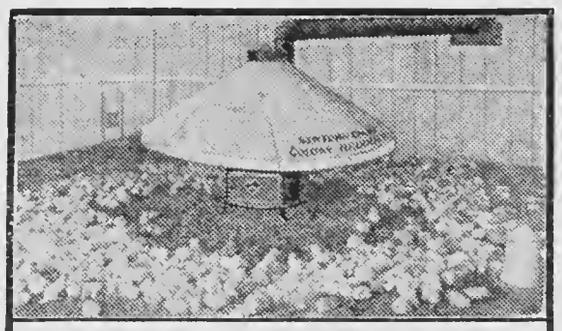

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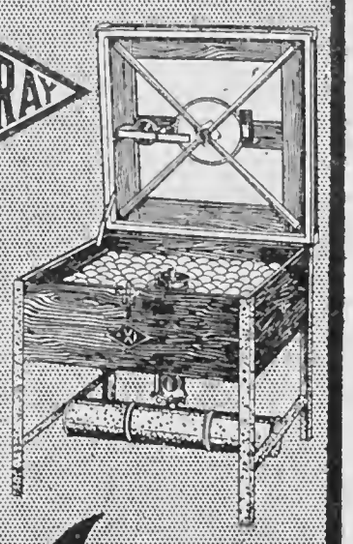

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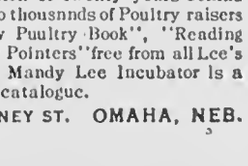

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THE EGG-LAYING CONTEST.

The eighth week of the contest ending December 26 shows a slight falling off in egg production. The number laid was 975, as against 1,004 the week previous. Tom Barron's White Wyandottes have become the leading pen; their total is now 293. Francis F. Lincoln's White Leghorns have held first place in the total score until this week; their total is now 287, giving them second place. Tom Barron's White Wyandottes are first in the weekly score with an output of 47 eggs. This is the third week in succession that they have outlaid all other pens. The next highest weekly score is by the pen of White Leghorns from Storrs Agricultural Station, the "sour milk" pen; they laid 40, and their total to date is 235. Cecil Guernsey's White Leghorns laid 39 and Merrythonght Farm's White Wyandottes laid 35. With the exception of one pen, there is an extra good lot of Wyandottes entered this year; their pen average including the lowest pen, is 187.6. Cutting out that lowest pen the average of the rest would be 221 eggs per pen. The two pens of R. C. Rhode Island Reds come next with a pen average of 101.5. The White Leghorns are third with a pen average of 89.5; the Barred Rocks are fourth with an average of 73; the S. C. R. I. Reds average 66.5; the Buff P. Roeks 47.5. The White P. Rocks 20.1; the Buff Wyandottes 23.2. The White Laced Red Cornish and the Silver Campines have not laid an egg yet. Below are some of the highest producers in the various breeds:

	Week	Total
BARRED P. ROCKS.		
Jules F. Franeais, Long Island	28	177
Frank L. Tuttle, Massachusetts	8	53
A. B. Hall, Connecticut.....	7	37
Waveny Farm, Conneeticut...	7	24
F. H. Benton, Connecticut...	17	61
Storrs Agr. Sta., Connectieut.	10	27
Storrs Agr. Sta.. Connecticut.	6	23
Storrs Agr. Sta., Conneetieut.	4	10
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	16	40
W. C. Morgan, Jr., Connecticut	2	55
WHITE WYANDOTTES.		
Tom Barron, England	47	293
Neale Bros., Rhode Island....	28	254
Merrythought Farm, Connecticut	35	200
West Mt. Pltry. Yards, Connecticut	21	137
D. J. Ryan & Son, Connecticut	21	54
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	10	41
Am. Buff Wyan. Club, New York	9	49
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	10	46
S. C. R. I. REDS.		
Dr. J. A. Fritchey, Pennsylvania	20	148
Pinecrest Orchards, Massachusetts	14	137
Colonial Farm, New Hampshire	21	125
J. S. Gillespie, Connecticut..	24	94
Dearborn & Sharpe, New Jersey	26	87
Harry B. Cook, Connecticut..	22	79
A. B. Brundage, Connecticut.	20	59
ROSE COMB R. I. REDS.		
Glenview Farm, Connecticut..	22	103
C. S. Scoville, Connecticut...	14	100
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	34	287
Storrs Agr. Sta., Connecticut	40	235
Tom Barron, England	21	186
Cecil Guernsey, New York....	39	186
Marwood Pltry. Farm, Pennsylvania	21	128
Storrs Agr. Sta., Conneeticut.	25	143
F. M. Peasley, Connecticut...	12	119
Storrs Agr. Sta.. Connecticut	23	116
Storrs Agr. Sta.. Connecticut	18	114
Bonnie Brook Farm, New York	19	107
L. E. Sands, Pennsylvania....	7	98
P. G. Platt, Pennsylvania....	4	98
Chas. N. St. John, New York	0	93
C. W. Sherwood, Conneeticut	9	93
BUFF LEGHORNS.		
Wolverine Pltry. Farm, Michigan	13	39
BUFF ORPINGTONS.		
O. Wilson, West Virginia....	4	13
WHITE ORPINGTONS.		
P. A. Demgar, New York....	7	22
DUNGHILLS.		
Daniel Hine, Connecticut.....	9	36
Daniel Hine, Conneetieut....	10	32

There are two pens of mixed breeds entered by "Profitable Poultry" Magazine. There record is 20 and 25 for the week, and total 110 and 87 respectively.

I noticed last week the unusual number of birds that were moulting. The same thing is true of the birds in the "North Americans" contest at Thorndale, Penn., and a correspondent in Alabama writes me that some of her birds have gone through two moults this year. Tom Barron has a pen of White Wyandottes, and a pen of White Leghorns in the Thorndale contest, and his Wyandottes are walking right up to the head of the procession; they are two eggs behind Chas. D. Bartholomew's White Leghorns now, but one more week will probably see them at the top, for Barron's five birds laid 25 eggs last week, and Bartholomew's laid but 16. Barron seems to have put his skill on White Wyandottes this year; I wonder if he is trying to show the American people that after beating them out of sight with White Leghorns, he can take an American breed and beat their Leghorns or any other breed with them. GEO. A. COSGROVE.

Keeping Flock Record.

Discussing the taking of a flock record of pullets, I claim that the record should begin from the time the first pullet laid in the flock, and not to wait till they were all laying. I have a flock of 30 Buff Leghorn pullets that commenced to lay Nov. 10, 1912, and average 152 eggs per bird to Nov. 10, 1913. In balancing up my accounts for the year 1913 I am puzzled how to credit the raising of 20 Partridge Rock pullets and cockerels, (12 pullets and eight cockerels). My feed bill for the whole flock, 32 Buff Leghorns, and raising the Rocks, is $57.18. About how much should I charge against the Rocks, and what valuation should I credit them with? They have laid about $4.40 worth of eggs.

South Bend, Ind. M. S.

A flock record, as you suggest, commence with the first egg laid by any member of the flock, as the whole flock, and not any individual hen, is the unit here. It would be fair to charge the young stock eight to ten cents each per month as the cost of raising, and they should be credited with the value of all eggs laid and their own market value at time of inventory.

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PUBLISHER'S DESK

Loss of $129,000,000 in two years by the unsuspecting public through swindling operations carried on by use of the United States mails has stirred the postal authorities to a drastic campaign against fraudulent schemers. Wholesale use of the Government's right to deny the mailing privilege to persons or firms whose operations may be tainted with "get-rich-quick" and other false promises is the weapon to be employed.—Daily Paper.

This is encouraging. Years back, under the intelligent and efficient direction of Judge Goodwin, fraud orders were issued against fraudulent schemers, and the swindling of the people then stopped as far as that particular scheme was concerned. Of course, all the crooks set up a howl as soon as one of them was denied the use of the mails to swindle. Some of the crooks had influence in politics, and a few of them actually had seats in Congress. The cancer cures, the medical fakes, the stock-jobbing swindles and fake mail-order publishers pooled their interests, and a general fight was put up against the fraud order. The cry went up that there was a czar in the Post Office Department, clothed with the authority to destroy business, to kill vested interests, and to deny the individual his personal rights and liberties. Charges of graft, and dishonesty, and partiality and prejudice were made freely against the Department. All this, of course, originated with the schemers, and largely in the fake publications that they controlled as a part of their swindling game. Much of it was repeated in the daily and weekly papers of the country. Some of the papers were, no doubt, innocently led to lend themselves to the rogues, and the help of others was secured through large advertising contracts. The accusations were so often repeated against the Department many people thought they must be true, and thus the swindlers by perseverance actually won over the support of honest men. So when the "fraud order" was issued against E. G. Lewis and his swindling schemes at St. Louis, the conditions were just right for his campaign of villification of the Department. Finally the Attorney-General gave orders that no more "fraud orders" be issued, but that evidence be gathered against the crooks, and criminal action brought against them in the courts. That suited the crooks to perfection. Astute lawyers were retained to word their schemes so as to keep within the law, and at best it would take years to make up a case against them, and then years before the case could be brought to trial. As a last resort there is always a chance of getting one or more crooks on a jury, and it is not always easy to convince twelve honest men that a schemer had deliberately set out to swindle. He would admit the failure, but set up the pretence that he expected it to succeed, and if a single juryman had doubts about his intent to defraud he went free. So it has gone on. An occasional crook has been convicted and sent to jail for a few months or years; but the swindling has gone right on. The climax was reached last year, when a Congressional committee took up an investigation of the E. G. Lewis case, including his hysterical accusations against Judge Goodwin and the Post Office Department. This committee was headed by Congressman Ashbrook of Ohio, and then Congressman Redfield, of Brooklyn, N. Y., now Secretary of Commerce in President Wilson's Cabinet, was an active member of the committee. The personnel of the committee had recently been changed from a Republican to a Democratic majority. Lewis was under indictment for alleged fraudulent use of the mails. For some reason that has never been accounted for Messrs. Ashbrook and Redfield took up the defense of Lewis. They defended him all through the lengthy investigation, and kept the Department on the defensive. They even went to St. Louis to give a hearing to those who would testify in favor of Lewis. When the record was complete Lewis had not substantiated a single one of the charges against Judge Goodwin or the Government, and the evidence was so overwhelming against Lewis that the case fell of its own weight. The Department was fully justified in its action, and the Democratic members of the committee made a perfunctory report denying that they believed Lewis guilty of fraud, but admitting that he had lost the money sent him by poor people, and advising him to go home and go to work. We do not know whether the investigation was conducted for the purpose of keeping Lewis out of jail or not; but if so, it seemed to be ably conducted for the object in view. The jury that tried Lewis did not agree, but we believe the indictment still stands; and he is now working a new scheme. Aside from the Lewis case, the Ashbrook committee showed great sympathy with cancer cures, and some other crooks of the kind which had grievances against the Post Office during the Roosevelt and Taft administrations.

Now the Attorney-General, a fellow member of the Wilson Cabinet with Mr. Redfield, reports that the criminal processes are too slow, and that "fraud orders" will again be issued against the swindling schemers. It is the strongest reproof that has yet been issued against the committee that put itself on record as apologists and defenders of crooks. This announcement of a saner policy comes none too soon. It will be remembered that at the beginning of this Administration the crooks took courage, and predicted that prosecutions would cease. They evidently got comfort from the Redfield appointment; but we reminded them at the time that no Administration could afford to permit a free use of the mails for swindling purposes, and least of all need they expect such a concession from President Wilson. By all means let us have the "fraud order" restored, and put a stop to the swindling before the people have lost their savings. It is little satisfaction to send a rogue to jail for a few months after his victims have lost their savings through him.

I have been so long in replying to your letter that I fear you will think I failed to appreciate your aid in securing a settlement, but that is not the fact. I was so rushed with work that I failed to realize how much time had slipped away. I do appreciate your help in this matter very much and should be glad to express it financially did I not know that you have a hard and fast rule to the contrary. As it is I shall endeavor to say a good word for THE RURAL NEW-YORKER when opportunity offers, and hope to send you some trial subscriptions later.

New York. N. M.

A case of eggs sent to a Newark commission house was lost in transit by the United States Express Company, and it took just eight months to get them to pass voucher in settlement.

I would like to purchase a good small farm near a good market. Would it be well for me to purchase such through the E. A. Strout Farm Agency? Would you consider them reliable people to do business with? J. H. L.

Massachusetts.

This man being a new subscriber, he is not familiar with all that has been said about the Strout record in selling farms. So we repeat. In the past this agency claimed that it could not afford to sell farms on the commission plan; that it did not conduct an agency, but a brokerage business; that its contract with the seller was an option; that they sold for profits, not commissions; and that they were entitled to all they could get above the seller's price. They gave prizes to the local agent who, during certain months, sold a farm at the highest price above the owner's price. The profits in these cases as reported by themselves ran from 50 to 72 per cent. Since THE R. N.-Y. called attention to these methods they have asserted that they are now selling on commissions running from 10 to 20 per cent. They previously stated that they could not sell on these terms to a man who knew that he was to pay this commission. If this be true, and we think it is, the buyer must be kept in the dark or deceived, in order to make a sale to him. But we have record of a recent transaction where the buyer paid 46 per cent above the seller's price, and gave up in exchange, besides an equity in another property equal in value to the price of the farm. Such is the record. A buyer is entitled to know all the facts concerning his purchase. If he knowingly wants to pay an agent 10 or 20, or 50 or 72 per cent for his services, he ought to have the privilege of doing so, but is entitled to the information. We do not think that you will get it from the Strout agency; and we doubt if you can get it straight from the farm papers that publish the Strout advertising. J. J. D.

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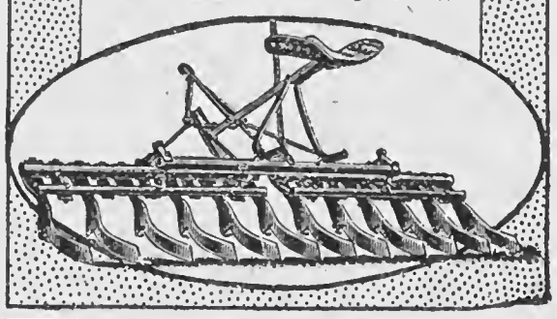

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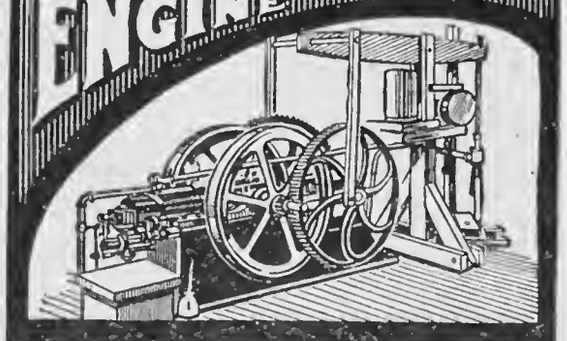

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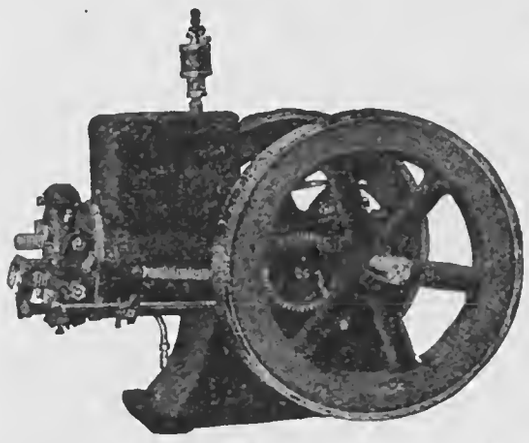

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MARKETS

Wholesale Prices at New York,

Week Ending Jan. 16, 1914.

BUTTER.			
Creamery, extra, lb	33	@	34
Good to Choice	28	@	32
Lower Grades	22	@	26
Storage	22	@	33
State Dairy, best	31	@	32
Common to Good	22	@	30
Factory	18	@	22
Packing Stock	17	@	20
Elgin, Ill., butter market firm at 33 cents.			
Philadelphia, western creamery, 34 cents.			
CHEESE.			
Whole Milk, best	17	@	17½
Common to Good	14	@	16
Skims	05	@	10
EGGS.			
White, choice to fancy, large	39	@	41
Common to good	34	@	38
Mixed colors, best	34	@	35
Common to good	31	@	33
Storage, best	30	@	32
Medium and low grades	23	@	26
European, fresh	25	@	30
FRESH FRUITS.			
Apples—Spitzenburg, bbl.	3 50	@	4 50
Spy	3 50	@	4 50
King	3 00	@	5 00
Hubbardston	3 00	@	4 50
Greening	3 50	@	4 75
York Imperial	3 50	@	5 25
Baldwin	3 50	@	5 00
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	2 00	@	3 75
Cranberries, Cape Cod, bbl.	10 00	@	14 00
Long Island, bbl.	10 00	@	14 00
Jersey, bbl.	12 00	@	14 00
Jersey, crate	2 50	@	3 00
Strawberries, Fla., qt.	40	@	0 75
BEANS.			
Marrow, 100 lbs.	4 75	@	5 25
Medium	3 60	@	3 65
Pea	3 35	@	3 65
Red Kidney	5 15	@	5 20
White Kidney	5 75	@	5 85
Yellow Eye	4 60	@	4 65
Lima, California	5 90	@	6 00
HOPS.			
Prime to choice	45	@	48
Common to good	40	@	44
Pacific Coast	23	@	27
Old stock	15	@	18
German crop	68	@	72
VEGETABLES.			
Potatoes—Long Island, bbl.	2 50	@	3 00
Maine, 180 lbs.	2 25	@	2 60
State, bulk, 180 lbs	2 25	@	2 50
European, 168 lb. bag	1 75	@	2 00
Bermuda, bbl.	3 00	@	5 00
Sweet Potatoes, bbl	1 50	@	2 00
Artichokes, doz.	2 00	@	3 00
Beets, bbl.	1 50	@	1 75
Carrots, bbl.	1 50	@	1 75
Cabbage, Danish seed, ton	27 00	@	30 00
Red	27 00	@	31 00
Imported	23 00	@	26 00
Celery, doz.	25	@	65
Kale, bbl.	40	@	75
Lettuce, half-bbl. basket	75	@	2 25
Onions—White bu.	1 50	@	2 25
Red, 100 lb bag	2 00	@	2 25
Okra, bu	2 00	@	2 50
Peppers, Southern, bu.	1 25	@	3 00
Peas, Southern, bu.	2 00	@	6 00
Shallots, bbl.	1 50	@	3 50
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 00	@	2 25
String Beans, bu.	1 00	@	4 00
Squash, Marrow, bbl	2 00	@	2 25
Hubbard, bbl.	2 00	@	2 50
New, bu.	1 00	@	2 00
Egg Plants, Southern, bu.	2 25	@	3 25
Tomatoes, Southern, 6 bkt. crate	1 75	@	2 50
Turnips, white, bbl.	1 25	@	1 50
Rutabaga	75	@	1 15
HOTHOUSE PRODUCTS.			
Cucumbers, No. 1, doz.	1 00	@	1 25
No. 2, box	3 00	@	3 50
Mushrooms, lb.	15	@	25
Radishes, 100 bunches	1 00	@	2 50
Tomatoes, lb.	20	@	25
LIVE POULTRY.			
Chickens, lb.	14	@	14½
Fowls	15	@	15½
Roosters	11	@	11½
Ducks	17	@	18
Geese	13	@	15
Guineas, pair	60	@	65
DRESSED POULTRY.			
Turkeys, fresh killed, best	24	@	25
Common to good	13	@	22
Chickens, choice broilers, lb.	28	@	30
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Ducks	10	@	17
Geese	14	@	16
Squabs, doz.	1 00	@	5 50
HAY AND STRAW.			
Hay, Timothy No. 1, ton	21 00	@	21 50
Standard	19 50	@	20 50
No. 2	18 00	@	19 00
No. 3	15 00	@	17 00
Clover mixed	13 00	@	19 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00
LIVE STOCK.			
Native Steers	7 25	@	8 10
Bulls	5 00	@	7 50
Cows	3 00	@	6 50
Calves, prime veal, 100 lbs.	9 00	@	13 00
Culls	4 00	@	8 00
Sheep, 100 lbs	3 50	@	5 35
Lambs	7 00	@	8 60
Hogs	8 00	@	8 75
MILLFEED.			
Wheat Bran, ton	24 50	@	25 75
Middlings	26 00	@	27 00
Red Dog	29 00	@	30 00
Corn Meal	29 00	@	30 00
Linseed Meal	31 00	@	31 50
COUNTRY-DRESSED MEATS.			
Calves, best	16	@	17
Fair to good	14	@	15
Buttermilks	08	@	11
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	9	@	11
Heavy	6	@	08
GRAIN.			
Wheat, No. 1, Northern Spring	1 01	@	..
No. 2, Red	1 02	@	..
No. 2, Hard Winter	99	@	..
Corn, as to quality, bush.	71	@	73
Oats, as to weight, bush.	43	@	46
Rye	65	@	67

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	45	@	50
Mixed colors, new laid	38	@	42
Ordinary grades	30	@	35
Butter, fancy prints, lb.	40	@	42
Tub, choice	32	@	34
Chickens, roasting, lb.	25	@	28
Fowls	22	@	25
Turkeys	26	@	30

BOSTON WHOLESALE PRICES.

Butter, nearby creamery	38	@	36
Western creamery	33	@	34
Eggs, nearby hennery	38	@	40
Gathered fresh	35	@	37
Dressed Poultry—Fowls	19	@	20
Roasters	20	@	22
Turkeys	23	@	25
Potatoes, 2 bu. bag	1 60	@	2 00
Apples—Baldwin, bbl.	3 50	@	5 00
Greening	3 00	@	4 75
Spy	3 00	@	4 50
Hay—No. 1	20 50	@	21 50
No. 2	19 50	@	20 00
No. 3	11 00	@	16 50
Stock Hay	15 00	@	15 50
Straw—Rye	18 00	@	19 00
Millfeed—Bran, ton	25 75	@	27 00
Middlings	26 00	@	29 00
Mixed Feed	27 00	@	29 00
Gluten	30 00	@	31 50
Live Stock—Milch Cows	60 00	@	125 00
Beef Cows, 100 lbs	4 00	@	5 00
Steers	7 25	@	8 50
Calves, 100 lbs.	5 00	@	9 50
Hogs, 100 lbs.	8 00	@	8 50

Hens on Old Run.

I have had some trouble with my hens and pullets this year in their laying. I would like to get your idea on keeping hens on the same piece of ground over three years at a time. I think the ground gets diseased and causes a fever in their feet. H. L. L.

East Greenwich, R. I.

The length of time that fowls can be kept upon the same piece of ground depends upon the number of fowls and size of the run. It is not wise to try to keep a large number of fowls upon a small piece of ground for many years in succession, unless the ground can be cultivated occasionally and the surface renewed. It is true that the soil of an old chicken run becomes inoculated with various disease germs and makes the rearing of healthy poultry upon it difficult. If the buildings cannot be moved, the ground should be plowed and cultivated as often as practicable.

Ration for Heavy Fowl.

Will you give me a balanced ration for the heavy type of fowls? I keep R. I. Reds, and if I fed the same as for the lighter and more active breeds they would be so fat they would not lay at all. B. B.

Oneida, N. Y.

The heavy breeds of fowls are fed the same grains and mashes as the lighter ones, but more care is needed to see that they do not become over-fat and sluggish. Their grain should be fed in deep litter to make them exercise while finding it, and it is probably better not to keep dry mash constantly before them. Their dry mash hoppers can be so arranged as allow the fowls access to them only part of the time, say afternoons, and corn and cornmeal should not be quite so literally fed as to the more active breeds. The following mash has been recommended by the Maine Experiment Station where Plymouth Rocks have been bred for many years. 100 pounds each of wheat bran, middlings, cornmeal, and gluten feed; 50 pounds of animal meal and one quart of salt. Wheat, corn and oats are used in the whole grain ration which at one time consisted of four quarts of shelled corn per hundred fowls scattered upon the litter early in the morning, and two quarts each of wheat and oats fed in the same way at 10 o'clock. At that time the dry mash was kept constantly before the fowls.

Feather Pulling.

My pullets are fine, but from the vent to the top of the tail are entirely bare, and they seem to pick each other there. What can I do to stop it? My dry feed consists of 150 pounds wheat bran, 100 mixed feed, 75 pounds beef scrap.

Washington, N. J. T. F. B.

Feather pulling is a vice that is often responsible for this loss of feathers, and is sometimes difficult to stop. If the worst offenders can be caught they should be removed from the flock for a time. As the irritation of lice and mites may start the trouble, pains should be taken to rid the fowls of these parasites, and the bare spots should be annointed with 5% carbolized vaseline. See that the fowls have plenty of grit, charcoal, and animal food like skim milk or meat scrap, and give them as much liberty as possible.

Ten Good Hens.

One year ago you published my results with 18 Leghorn pullets during the year ending November 1, 1912. In 1912 I raised 22 pullets, and on November 1 put them, with the 18 hens, in an open-front house eight by 12 feet, on a city lot. Three hens died and four were eaten. On hand November 1, 1913, 31 hens from 18 months to 30 months old. They were fed dry mash all the time, scratch feed twice a day, scraps from the table, and I kept a stick of sulphur in their drinking water. The financial result follows:

DEBIT.

Stock at inventory, Nov. 1, 1911	$53.00
House at inventory, Nov. 1, 1911	72.45
Int. on house investment, 1911-12	4.35
Feed, grits, etc.	40.38
Total	$170.18

CREDIT.

By house, less ten per cent. depreciation	$65.21
Stock raised one duck, one pullet, and eaten	4.05
Stock on hand, Nov. 1, 1912	27.10
Eggs, 344½ doz.	126.16
Total	$222.52
Balance to profit and loss, Nov. 1, 1913	$52.34
Balance to profit and loss, Nov. 1, 1912	61.92
Total profit, two years	$114.26

The pullets the first year averaged 134½ eggs each; the old hens averaged the past year 118 eggs each. I shall keep them the coming year. I got as high as 65 cents a dozen for eggs. The lowest price was 30 cents. E. Y. BRECK.

Pennsylvania.

Poultry Watchdog.

What is the best watchdog, i. e., making the most noise? The dog is wanted for chicken yards. A. C. B.

For noise one of the small terriers like a black and tan, will satisfy anyone. For real business an Airedale is hard to beat.

Chicken Cholera; Fish in Spring.

1. What can be done for chicken cholera? 2. Is it harmful to have trout in the spring water for drinking purposes? J. F. H.

True fowl cholera is a malignant disease which is difficult of control and requires the most thorough methods if it is to be eradicated from premises where it once gains foothold. There is no known cure for it, and prevention lies in promptly isolating all fowls showing evidence of the disease, burning or burying deeply all that die, and thoroughly disinfecting the quarters and utensils used by the flocks. This disinfection is accomplished by cleaning up and burning all litter and loose dirt, and spraying perches, walls, etc., with a 5% solution of carbolic acid, or other equally strong germicide. Utensils may be disinfected by free use of *boiling* water. Continuous work is necessary until the disease is conquered. "Cholera" is a term loosely used among poultrymen, and is frequently applied to any serious diarrhœal disease, even though the germ of true cholera is not present. 2. I do not know of any harm done by trout in spring water that is constantly flowing, though I should much prefer that they be kept in a pond supplied by the overflow, rather than in the spring itself. M. B. D.

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages.

GARDENER, married, thoroughly experienced, wishes position on gentleman's estate; 20 years with last employer. GARDENER, 881 Whalley Ave., Westville, Conn.

POULTRYMAN — Single, experienced, college trained, desires position as assistant to expert poultryman on large plant; references; state wages. Address S. E. K., care R. N.-Y., 333 West 30th St., New York.

WANTED experienced woman for housework on fruit farm; must understand butter making; two in family; modern house. H. W. COBB, Ridgewood, N. J.

MARRIED COUPLE wanted on country place; man to care for garden, one horse, and be generally useful; wife to cook for family of three; no laundry. Good home for sober, settled couple. Write wages wanted and give references. D. LEE, Benson, Md.

MAN AND WIFE—No children; working farmer, gardener, fruit pruning, all farm animals, incubator; no dairy; decent hours; good permanent home in Connecticut for honest, industrious, sober, capable man; wife for general housework; reference required. H. R. E., care R. N.-Y., 333 West 30th St., New York.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

MAPLE GROVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

WANTED—Horse-power tile ditching machine. WELLS LOGAN, Bowling Green, Ky.

FOR SALE—File of Rural New-Yorker for 25 years, with yearly indices; submit offers. J. F. ROSE, South Byron, N. Y.

HANDSOME STRING HAND-MADE BEADS—Lavender, red, pink and buff; $1.50. MARY A. FELTHOUSE, Elkhart, Ind.

WANTED—Weaned Ayrshire heifer calves or yearlings; carload if price and quality right. WILLIAM HART, Waukon, Iowa.

WANTED—Apple tree wood to make Self-setting Planes. GAGE TOOL COMPANY, Vineland, New Jersey.

NICE BRIGHT HAY FOR SALE—Clean Timothy, or Alsike and Timothy, mixed, $16.50 f.o.b. Addison; sample on application. U. SHUMWAY, Addison, N. Y.

WANTED LARGE FAMILIES—Just a few more to eat my fancy fresh Jersey dairy butter; in 5-lb. boxes; 40 cents per pound and postage added; better than creamery. D. A. KNEELAND, Mountain Home Farm, Waitsfield, Vermont.

WANTED—To communicate with party owning large estate or abandoned farms by a man thoroughly up to date in farming and gardening, reclaiming of land, and eventually putting same on self-supporting basis; Eastern States preferred; salary and percentage of profits. Address G. E. H., care of FRANK BRUNTON, Horticulturist, etc., R. F. D. 5, Norfolk, Va.

FARM FOR SALE—225 Acres. Apply to owner, BOX 337, Emporia, Virginia.

$500 CASH buys 54-acre farm, balance easy terms. W. L. HOFFMAN, 129 Herkimer St., Buffalo, N. Y.

$1,300 BUYS FINE 30-acre farm near Troy; sightly location. DEAN, Seventh St. and Seventh Ave., Troy, N. Y.

12-ACRE FRUIT FARM—7 acres grapes; other fruit, pasture; house, barn; $3,500. N. C. JACOBSEN, St. Joseph, Mich.

FOR SALE—80-Acre Farm, good buildings, large orchard, telephone, home markets, 80 miles from New York. FRANK FAULKNER, Mount Bethel, Pa.

FOR SALE—100-acre farm on Honeoye Lake; fruit of all kinds; well adapted to fruit or grain; extra good house (20 rooms); two barns; well of fine water; two miles from State road; high school in district. A. J. BRAY, Honeoye, N. Y.

WILL SELL my big ranch in Sunny, Colorado, entire or cut up into small farms to suit. A moneymaker; 2,500 acres; $10 up, according to choice; long time if desired. For particulars address owner, PERL T. BARNHOUSE, Gary, Colo.

VERY UNUSUAL OPPORTUNITY—118 acres good land with extra fine pasture, never failing water supply; extra good house, good barns and tenant house; finely located on State macadamized road between Utica and Oneida, only one mile from town and five minutes' walk from trolley station; $100 per acre, to close an estate. No exchanges; terms reasonable. J. H. FORT, Oneida, N. Y.

FOR SALE—Small poultry and fruit farm. Borders large pond with fine fishing. Edgewater Farm, Dover, Del.

RELIGIOUS FREE LITERATURE—Unitarian—Postoffice Mission. Address, Mrs. F. M. McGarry, Grafton, Mass.

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Now is the time to order Spring Pigs from large, growthy, prolific sows. A few Fall boar pigs left, also ten December pigs. All stock registered, either OIC or Chester White Record. VICTOR FARMS, Bellvale, N. Y.

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At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H
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You win! Yes, you get the benefit of this new free tariff. You save the high duty. This wonderful imported cream separator—the most efficient and scientific the world has ever seen—the incomparable Melotte—is now ready for you. Introduced a year ago, it swept the country even with the duty on. Those who knew cream separator values were glad to pay it. But now the tariff is off—you save all—the Chicago price is the same price as you would pay in Belgium—plus only $1.75 for water freight.

And it is now being offered on the most sweeping and sensational introductory offer—positively the first bona fide, no-money-down offer ever made on any cream separator—American or foreign. An amazing make-good or send it back offer.

Greatest Cream Separator Offer

No manufacturer of any cream separator—foreign or American—ever dared to make such a startling offer before. All others who have pretended to offer you a free trial have taken care to get something out of you first. ***But we don't want anything.*** A simple request brings the great Melotte—direct from Chicago to any responsible farmer—so it can positively prove its absolute superiority.

Read every word of this great offer. It proves our absolute faith in the great Melotte Cream Separator. You are given the opportunity of seeing just how much cream this marvelous separator will extract from your milk before we ask you to send us one cent. You never saw another manufacturer who was so open-handed in his offer. The reason is that no other manufacturer ever wanted you to know all about his machine before paying him anything. ***We do.***

The Melotte bowl hangs down from a single perfect bearing and spins like a top. It will continue spinning for half an hour after you stop turning crank unless you apply brake. Patented self-balancing bowl is entirely automatic. You can't get it out of balance and so perfect is the balance that it is impossible for it to vibrate and affect the skimming efficiency like other separators. The bowl chamber is made of special cast iron, porcelain lined with white bath tub enamel. The Melotte is easiest to clean, perfectly sanitary and will last a lifetime.

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Your simple word that you would like to see this cream separator in your own barn or dairy house brings it to you instantly. We send you the Melotte without a bit of quibbling or hesitancy. We neither ask nor want you to send a penny. We don't want a cent of your money. You set it up, give it a thorough test with the milk from your own cows. We give you a free trial that IS a free trial in every sense of the word. It is a free trial because we don't ask you to pay us any money down—there is no C. O. D.—no lease nor mortgage. You keep your money right in your own pocket.

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Monthly Payments

These monthly payments are so small that you will hardly notice them. You only pay out of your increased profits. You don't need to be without a cream separator when you can have the separator right in your dairy house while you are paying for it. In reality you do not pay for it at all. It pays for itself.

That is what we want to demonstrate to you. We want to demonstrate and prove beyond all peradventure that the Melotte Cream Separator *does* pay for itself. Only a few months' use of a Melotte Cream Separator and you will be satisfied that this statement is **absolutely correct.** A few months and the separator has paid for itself. It does not cost you a penny because the increased amount of cream has paid for the machine. We don't want to tire you here with a long discussion of how our cream separator is made. You can best understand this if you will let us send you our free catalog.

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JAN 31 1914

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A STUDY OF SOD MULCHED ORCHARDS.

The Famed "Hitchings" Method Compared.

During the past 10 years we have had much to say about the so-called sod method of handling an orchard. Much of this talk has centered around the orchard of Grant Hitchings, near Syracuse, N. Y. Mr. Hitchings was the pioneer in New York State for this method of growing apples, and he has persisted in his argument that cultivation was neither necessary nor wise for his orchard. Hitchings has been successful. He has developed a very profitable business in apple culture and has succeeded in winning more prizes at the State Fair during the last 15 years than have been awarded to any other orchard in the Empire State. The success of Mr. Hitchings induced many other growers to follow his method; some with success, and others with failure. The trouble was that some of these growers did not understand just what Mr. Hitchings advocated, and they did not follow out his plan carefully. In other cases the orchards were located on land that was not naturally adapted to grass, and sod culture under these conditions in many cases meant simply neglect. Prof. Hedrick of the Geneva Experiment Station has been conducting some careful experiments in the Hitchings orchard, and also in another orchard of Western New York, to test out this difference between thorough culture and sod. At the recent meeting of the New York State Fruit Growers' Association, Prof. Hedrick gave a very thorough report of the results in this Hitchings orchard, and laid down certain conclusions as the result of his investigation. He gives this description of what is known as the Hitchings seed mulch method:

What is the Hitchings method? The term has become the sound-symbol for a mixture of more or less vague practices connected with sod in orchards; sod pastured with sheep, hogs or cows; sod of Blue grass, Orchard grass, clover, Alfalfa or weeds; sod from which the grass is cut for hay, or cut and piled about the trees, or going uncut; sod supplemented by straw, manure or other by-products; sod the growth of years and sod turned under more or less frequently. This confusion has spread obscurity over much that has been said about the method. The description of his treatment, now to be described, must be kept in mind.

In the Hitchings method the ground is laid down to sod before or as soon as the trees are set, and the grass is cut for a mulch once or twice per season as conditions may demand. The orchard remains in sod indefinitely, since plowing is supposed to be detrimental to the conservation of the mulch which is the essential of the treatment. The cut grass is not removed from the land and until roots and branches utilize the space between plants, it is raked and piled about the trees.

Prof. Hedrick states that before starting the commercial orchard Mr. Hitchings had been a dairyman, and we understand that the most successful part of this orchard was formerly a pasture. The farm is on highly rolling bottom land on the hills of a deep valley. The land in the orchard is too steep for definite cultivation, and under constant tillage more or less washing would occur. Moist and springy land may be looked for at the foot of high elevations. This occurs in the Hitchings orchard. The soil at all seasons contains much water, although open ditches have been dug to carry this water away. This seepage down the hillside is one of the dangers which bring success in the peculiar sod mulch culture of this orchard.

"PEACHES" IN GOOD APPLE CULTURE. FIG. 54.

Scene in a Western New York Orchard Near Apple Picking Time.

In conducting the experiment various plots of ground were laid off, so as to give a fair comparison of soil and apple variety. Some of these plots were given thorough culture, while others were conducted on the sod-mulch plan, and as careful records as possible were kept of yields, quality, cost, and other factors. These reports are too long to give in full. In a general way it may be stated that four varieties of apples, 10 years set at the beginning of the experiment, and 20 years at the end, bore an average of a little less than four bushels per tree under sod, while those in tillage gave a little more than three bushels per tree. The difference in favor of sod was four-fifths of a bushel per tree. The percentage of poor fruit was much higher in the tillage section than in the sod. This was largely due to the fact that much of the fruit was harvested by permitting it to drop to the ground, and, of course, under this plan the sod provided a softer and cleaner place for falling. As to the size of the apples, year in and year out there was very little difference in the two sections. Of course the apples from the sodded plots were more highly colored than those from the tilled. It has been settled that sod increases the color of apples. Prof. Hedrick says that another rule generally holds good: that color is antagonistic to yield of fruit, and to growth of trees. In the address from which we are quoting, Prof. Hedrick makes this statement:

> The correlations between color and quantity and color and growth of tree need a further consideration. Every orchardist of experience in this region knows that girdled, wounded, diseased, decrepit, or poorly nourished trees bear more highly colored fruit than healthy, normal trees. Indeed, in this day of almost universal tillage in commercial apple orchards one of the common questions is: "How can I check growth and obtain more highly colored fruit?" High color in red apples is as dependable an indication of ill health in the tree as high pulse or high temperature is in the human being. In growing apples we can usually say at once that high color is purchased at the expense of health or vigor.

As for the size of trees, Prof. Hedrick concluded that those under tillage were rather better than the others, although it was hard to find any particular difference. The trees seem to thrive as well under one method as under the other. The foliage of the trees was on the whole darker and richer where these trees were cultivated, although in many cases there was practically no difference. It was found that the tilled trees usually bloomed and leafed out from one to several days in advance of the trees in sod. It was also found that the foliage of the sod trees was usually first to drop. One argument in favor of

adopting sod culture on steep hillsides is to prevent washing of the soil. One of these cultivated plots was on the hillside in the Hitchings orchard. Prof. Hedrick says that during the 10-year period little or no washing was done by this tillage. This was hardly fair, however, as the cultivated plots are very narrow, and the sod above them would hold the water back. Prof. Hedrick, however, gives the opinion that danger from surface washing on hilly land in New York is greatly exaggerated. Heavy rains are not frequent. Orchard lands are usually more or less stony, and the stones prevent washing to some extent. He says that a wide observation in the fruit-growing sections of New York has not shown many orchards which are badly damaged by wash. Prof. Hedrick even claims that proper cultivation may be made an efficient means of lessening the washing of land.

When it comes to a comparison of cost in handling such an orchard, there is nothing to it, for sod culture is so far ahead that cultivation is out of sight. It cost on the average 72 cents per acre to cut the grass in this Hitchings orchard, and this cultivation with a mowing machine was all that was done. On the other hand, the cultivation for the tilled plots cost $16.28 per acre. This is above the average of cost in the better orchards of New York State. In Monroe County, N. Y., the Auchter orchard also shows an experiment between culture and sod. While the Hitchings orchard is upon a steep hillside, the Auchter orchard is level, and consequently easier to cultivate. In this Auchter orchard the cost of cutting the grass on one acre was 80 cents and the cost of tillage $3.92, or about one-fifth of the cost of cultivation on this steep hillside of Mr. Hitchings. Put in another way, the cost of tillage in the Hitchings orchard was 12½ cents per bushel of fruit, while in the Auchter orchard this cost was one and one-fifth cent. The cost of the apples grown in sod was one-half cent per bushel for cutting the grass, and one-third of a cent per bushel in the Auchter orchard. Prof. Hedrick brings out the point that the cost of tillage is sure to vary greatly, depending upon the land and its location, the tools, the teams, and other conditions; while the cost of cutting grass for the sod-mulch culture will remain much the same everywhere. Giving these figures, Prof. Hedrick summed up the matter as follows, taking into consideration the various soils and economic conditions to be found in New York State. It seems to us that these statements are very fair. There are certainly conditions under which sod culture will pay. Upon our own farm we have two or three places where we believe it is far more economical to keep our apple trees in sod, while in adjoining fields under a little different condition it is clearly evident that some form of culture will pay better. The time has evidently gone by when any rigid or cast-iron rules can be laid down for either side of the argument. The individual grower must take one method or the other and adapt it to the peculiar condition of his own soil and farm. Here are Prof. Hedrick's conclusions:

1. *Orchards on steep hillsides where land would wash badly under tillage may be kept in sod.* We have tried to show, however, that cultivation may be so managed that there are but few commercial orchards in New York in which cultivation need be prevented by soil erosion.

2. *On land covered with rocks, trees may best stand in sod.* Such lands, whether steep or not, must often be kept in sod because of the impossibility of tillage. There are not a few such orchards in New York.

3. *The Hitchings method is adapted only to soils having suitable depth.* That is, soils in which grass roots and tree roots do not come into too intimate contact or too direct competition for food and moisture. The commercial apple orchards of New York are at present largely on lands the top soil of which averages less than a foot in depth. On these shallow soils the Hitchings method usually will prove a failure.

4. *Soils must be retentive of moisture.* To sustain trees at their best under the Hitchings method, soils must not only be deep but must be very retentive of moisture, or have the water table comparatively close to the root run of the trees, or, as in the case of the orchard under discussion, must be fed by seepage from higher ground nearby. On land that annually suffers from Summer droughts the sod mulch treatment will almost certainly prove less beneficial to trees than tillage.

5. *Economic conditions may decide the choice between tillage and some mulching treatment.* The cost of caring for an orchard is very much less under the Hitchings mode of mulching than by tillage. If, then, a man chooses to grow apples extensively rather than intensively, he may make larger acreage in sod counterbalance greater production under tillage thereby bringing the net income to the same level.

In conclusion, the chief lesson the Hitchings orchard teaches is that a man may break away from common practice, when circumstances render such practice difficult or impossible, and yet attain a high degree of success. The Hitchings orchard, then, is a splendid demonstration that new paths to success may be blazed, new practices devised to meet new conditions or old obstacles overcome in new ways. It is an encouraging example of resourceful pioneering and of persistent endeavor to attain the high success. The pith and the point of the work by the Geneva Experiment Station in this orchard is not so much the new method of growing apples, as that fruit growing is intensely individual. The prime factor is the man.

DECEPTIVE STATEMENTS ABOUT PHOSPHATES.

Will you explain to me the meaning of tri-calcium phosphorus, equivalent to bone ash? This is the guarantee printed on the bags containing chick feed, which a friend of mine bought some time ago, and he would like to know what he is feeding his chickens. C. H. W.
New York.

No one can tell what these chickens are eating except the man who put up this stuff. "Tri-calcium phosphorus" is one of these fool or deceptive terms which manufacturers use to confuse their patrons. Phosphorus makes three combinations with lime. The "tri-calcium phosphate" is composed of three parts of lime to one of phosphorus. It is insoluble in water. "Reverted" phosphate contains two parts of lime and "soluble" phosphate one part. The "tri-calcium" is also known as "bone phosphate." This form of phosphate is found in Florida rock, Tennessee rock, South Carolina rock, bones and tankage.

"THE BACKBONE OF THE NATION." FIG. 55.
(Cartoon from Chicago *Blade*.)

From this name you might be feeding any of these substances. "Bone ash" is supposed to be what is left when cattle bones are fully turned to ashes! The "equivalent" in this statement lets the manufacturer out by saying that there would be a certain amount of "bone ash" *if all of the stuff were obtained from bones and all were burned.*" It is an old story how Darwin tells of cattle herders in Patagonia who killed a steer and used the bones as fuel to roast the meat. A Patagonian, however, would be satisfied with meat served very rare, and he has no pressing engagement to hurry the cooking. This so-called "guaranteed statement" in this chicken feed is a good sample of the ridiculous statements made up to fool the public.

CONSERVATIVE FATHER AND PROGRESSIVE SON.

Bert Smith, a well-known dairyman and institute worker of Ohio, tells the following, which is an example of the conservative father and the progressive son:

"The young man, while taking his agricultural college course, told me of the old farm in northern Ohio. As the time of his graduation approached he was at the parting of the way. A position with an attractive salary was open for him. The old farm and the care of the parents demanded his return. I advised the boy that there was but one thing for him to do, and that to go home, care for the old farm, and make the father and mother happy.

"He relied on my advice. I had occasion later to be in the locality, and I looked up the young man. He told me the story of his experience during the months following his graduation. Every effort he made to get out of the old rut was vigorously blocked by his father and mother. The fences were in bad way, and his plan to re-establish new ones was bitterly opposed. The rehabilitating of the barn was denied, and just a few days before the young man had ordered a manure spreader on his own responsibility. The dealer had confidence in the boy, and extended him time, but the parents denounced the purchase. The boy was discouraged with his prospects. He was ashamed of himself and his surroundings. His nerve was broken. In view of conditions which that young man faced," Mr. Smith said, "I regretted the advice which sent him back to the farm.

"I say to the parents," added Mr. Smith, "if the boy is honest and deserving, faithful and hard working, when he comes home from college give him a chance. Stand back of him, bury your old prejudices and give the boy opportunity to apply his learning. A conservative parent can lag behind and exhaust all the boy's pull, and the boy can't get anywhere. Most of us should look forward to the boys, and if they make mistakes let them profit by them. We should sweep out some of the cobwebs from our mental garrets, and when the boy comes back with some good sensible money-making and saving ideas, let us help put them in operation. The policy will bind the boy to the farm with bands of steel, so give the boy his chance; if not, I then say to the boy, accept the salaried position," concluded Mr. Smith.

W. J.
Ohio.

INSECTS IN STORED GRAIN.

Would an application of hydrocyanic fumigation injure corn in any way? I have constructed a tight corn bin in the barn, and bought the necessary carbon bisulphide, but the stuff was no good, at least it did not kill the borers. From a clipping from your paper I learn how to handle the hydrocyanic. Millions of bushels of corn are yearly devoured here by the weevils, and the natives don't care a straw about any remedies—in fact they don't believe in disturbing nature in her own proper workings. J. D.
Dowling Park, Fla.

The injury by insects to stored grain all through the Gulf States amounts to hundreds of thousands of dollars each year. Those of us who live in the cooler regions of the Northern States, where the Summers are short and the Winters long, have no conception of the losses caused by stored grain insects in the South. In fact, this phase of injury constitutes one of the most serious troubles from insects with which the Southern farmer has to deal. All sorts of ideas and practices are common among the farmers of the Southern States in regard to the control of these pests; but many of the more progressive ones are beginning to build tight bins and granaries in which the grain may be stored and fumigated. This procedure seems to offer the only method of escape from these grain pests.

As to hydrocyanic acid gas for fumigating stored grain, we would be inclined to discourage its use. The gas, however, if generated in the proper way and in correct proportions to the space inclosed, will apparently not injure dry corn for food purposes or for planting. Dr. C. O. Townsend carried on a long series of experiments with hydrocyanic acid gas to determine its effect on dry and damp seeds. His conclusions, in brief, are as follows:

Stored grain and other seeds may be fumigated with hydrocyanic acid gas of required strength and for sufficient time to insure the destruction of insect pests without injury to the germinating quality of the seeds and without rendering them injurious as foods. Dry grains and other seeds may be fumigated with the usual strength of hydrocyanic acid gas for several days, without in any way interfering with the germinating property of the seeds. On the other hand, damp grains and seeds are much more sensitive to the influence of hydrocyanic acid gas than dry seeds. We should discourage the use of hydrocanic acid gas for fumigating grains, because it is such a virulent poison and so dangerous to handle; because it does not seem to be able to penetrate masses of closely piled grain in sufficient quantities to kill all of the insects; and because of its liability to injure the germinating power of the seeds if the grain is moist and damp as it is apt to be.

The usual proportions of ingredients for generating hydrocyanic acid gas are: One ounce of potassium cyanide 98 per cent. pure, one ounce of commercial sulphuric acid, and three ounces of water to 100 cubic feet of space. Apparently the best substance for fumigating stored grain is carbon bisulphide. It should be used somewhat stronger, however, than has been generally recommended. Not less than two to three pounds should be used for every one thousand cubic feet of space in a tight bin, and the fumigation should be continued at least 48 hours. Moreover, the temperature, at the time of fumigation should be from 65 to 75 degrees Fahrenheit. Probably most of the failures with carbon bisulphide may be attributed to low temperatures during the fumigation; to loose and open bins from which the gas escapes before doing its work; and to the use of too small quantities.

GLENN W. HERRICK.

NATIVE LIFE IN PANAMA.

Conditions and Customs of the Canal Zone.

I will try to give you an idea of Panama natives and their mode of farming, although I have never been back in the interior more than one or two miles, but have been across the Isthmus many times. The natives are very lazy and live a hand-to-mouth existence. The way they raise corn is to burn the land over, cutting the trees down with a machete, which is a large knife about two feet long and three or four inches wide, make holes in the ground with a stick, drop in the seeds, and do no cultivating at all, save cutting the jungle grass with a machete. The jungle grass is very coarse, and grows six feet high.

There are many kinds of fruits growing wild here, such as plantains, bananas, papayas, oranges, limes, alligator pears, cocoanuts, bread-fruit and pineapples. The natives have no horses at all. The way they go to market is to pack whatever they have in a basket that holds about two bushels and carry to the city of Panama on their backs, and one poor lene hen under their arm. Eggs are done up in corn husks, two in a bunch, and tied between, so the eggs do not strike together, but can be seen.

Some feed their poultry grated cocoanuts; their grain is ground on a flat stone by another smaller stone in the hands to crush the grain, which is corn or rice. Up the coast and from the many islands in Panama Bay the natives bring their produce to the city in sail boats. In place of potatoes they raise several kinds of yams, roots and coarse sweet potatoes. Sugar cane is raised here to some extent, mostly to make rum, although the West Indians on the canal work buy it to eat raw.

In the cities of Panama and Colon the Panaman merchants have the clothing and dry goods stores, banks, hardware, liquor stores and hotels, and this class as a rule has a good education. The shops and grocery stores are run mostly by the Chinese. Spanish is spoken here by all the natives, but it is claimed there are 72 different nationalities here, and some of them talk with their hands and feet as well as their mouth.

Law and justice in Panama is very funny. If one is arrested for a crime they put him in prison and forget him for a year or two, then give him a trial, sentence him for the time he has been in, and give him his freedom. On the Canal Zone we have a fine police force mostly of Americans. Every American working on the canal or Panama railroad gets room furnished free with electric light, if single; if his family is with him he gets house, electric light, wood and coal free; house is furnished except linen and dishes. The ships will be passing through the canal soon. The great work is drawing to a close, and the forces are being reduced slowly but surely, but there will always be work here for skilled workmen. A. H.

BACK TO THE LAND IN PANAMA. FIG. 56.

CAMP OF INDIANS IN PANAMA. FIG. 57.

THE LARGE AND SMALL FARM.

From time to time you print sketches that seem to boom the small places, and disparage the large farms, as if it was almost a crime to run a large farm. I take issue with that. I say let a man seek his own inclination; it depends on the man. Some men would not be suited to a large farm and others could not make a living off a small place. If a man wants to pay more for 10 acres of land, a small house and barn, and no timber, than he would for 160 acres of good land, fine large buildings and a fine timber lot, enough fuel to last a lifetime, I am willing; that is the way the small farms generally sell. In speaking of the little farm costing as much as the large farm, I refer to an actual fact. A little place of 10 acres 2½ miles from Cortland, sold for $3,800, and a fine farm of 160 acres five miles from Cortland, good buildings and timber, sold for $3,000. I could mention other instances. The man on the small place is handicapped at every turn: he has no fuel or building and fencing material; he has so few acres he can afford to buy hardly any machinery. He can of course raise truck crops; then they must be peddled out in small quantities, and I think most emphatically it is harder work to garden than it is to raise big fields of grain and potatoes on a large well-equipped farm. I had all the gardening I wanted when a boy; it was weed and thin and transplant, and every bit was back-breaking work. It had to be peddled from house to house, and all the sour looks I used to get. A trucker is no more welcome than an agent. If the trucker is so thrifty and diligent as to sell as much as some large farms, what of it? He paid as much for his little place: he hasn't any brag coming. Raising truck crops has been boomed so much I want to have my little say against it.

If a young man is ambitious, likes machinery and would rather do things on a large scale, by all means don't discourage him. The work isn't nearly as hard on a large farm, well equipped with big machines, as on a small farm without implements. I know a young man who farms 218 acres; not alone, but he does the brunt of it alone, only hiring in sugaring a month and again in haying a month. The rest of it he does practically alone. He cuts about 100 tons of hay and raises 60 acres of grain alone. I mean he does the plowing and putting in crops alone, and crops are put in better than some of his neighbors' who only have a small acreage. He is making good too, and does not hurt himself either. When he buys a machine it is the best, and takes a wide swath. Of course every man doesn't like machinery, and such ought not to handle it, but you don't want to talk small farm trucking and poultry to this man. We will take raising grain, for instance. My friend can either ride or walk on every tool he uses, from plowing till the grain is tossed from the self-binder, no hard work about it, and the big fields are an inspiration.

In raising onions, beets or turnips it is all back-breaking. My back used to ache till I could see stars. I might say a good deal more in favor of the large farm. There is the timber lot to work in when you cannot farm, also the sugar bush and the big pasture for stock. There seems to be quite a tendency to find fault with the big farm, but I say it depends on the man; the kind of work he likes is more than half. DAYTON L. PHELPS.

New York.

THE BACKBONE OF THE NATION.

The cartoon shown at Fig. 55, that occupied a goodly position of the front page sheet of a daily paper, appealed mightily to my sense of humor, and furnished me food for a little serious reflection.

Hasn't the American farmer a look of satisfied opulence? You would not imagine that a care or a worry ever disturbed the serenity of his mind. His occupation is the reaping of bountiful harvests. He simply sows the seed and sits down to wait while a benevolent Nature does the rest. No troublesome stocks to bother him. Failing banks affect him not; there is no rush and hurry to catch the elevated or the commuter's special. His life is one long dream of contentment and restful ease.

I see nothing in the picture to suggest in any manner the toil of long days in the field and vicissitudes of weather and storm. No sign of the tense strain to get the seeding done ahead of the season, nor of the anxious watching and praying for the rains that come not. Nothing to remind one of the scanning of crop reports that record as vital a meaning to many a farmer as the stock ticker does to the city man. Lastly, can you distinguish anything in the picture that would suggest he was pocketing just 35 per cent. of the value of his most bountiful harvests? The ten billion, I imagine, represents his 35 per cent. If so, there is just so much more that is rightfully his, for the other 30 per cent. ought to distribute his crop to consumer.

The picture portrays just about what is usually handed to the public by the average daily paper. It pictures the farmer as the one class of society on easy street, painting with glowing colors a pleasant and picturesque life close to Mother Nature's bosom; many times covering up or grossly misrepresenting facts, treating the farmer's claims with ridicule and sarcasm. When the farmer tries to bring about legislation to rectify or ameliorate some abuse or open favoritism, the papers as the mouthpieces of big business and politics, pat him kindly on the head and say, "Now you are a good chap and we are fond of you, but as to this making of laws, why you are a farmer and cannot expect to know much about it, and what is best for your interests and the country's. Trot along back to your seed time and harvest and we will attend to the running of this our glorious nation." And in the past the farmer trotted happily back, such was his faith in his brothers, and such has been the custom of the tillers of the soil since the beginning of the ages.

If we but look to our histories we will learn that in but few instances in the history of nations has the agricultural element had a voice to any great extent in the affairs of state. In the past and to a greater or less extent in the present in some countries, it is true that by reason of his isolation from the commercial and political centers, he has been ill fitted to take an intelligent or perhaps we will say an effective part in political activities. For all the picture aroused my mirth, the title, "The Backbone of the Nation" is a great and glorious truth. It is the farmers who make all other kinds of prosperity possible. It is because we as a nation have produced a riotious abundance of agricultural products that the accumulation of our nation's wealth has been so phenomenal. It was the farmer who was directly responsible for the building of our many New England factory towns. By his energy and pioneering ability the farmer blazed the trail and demonstrated the possibilities in the different sections of the country, to be followed by our railways and other means of transportation, and by the development of other sources of wealth.

Taking any of our big industries like the steel combination or our railroad systems, they are dependent for the greater part directly upon the farmer. With all of these facts so evident that any one can see them, if he but investigates a bit, is it not a shame that the farmer has to crawl and beg for, as privileges, what really are his rights? What is the reason for this state of affairs? It is because he does not realize strength and power as a class. He does not understand that all agricultural interests are related, and should each help the other.

You see I am a farmer, and believe in the natural strength of those of my class. In times of national stress and adversity it has been the farmer who has sturdily taken his stand by what he believed to be right. It is the farming population that has been the regulating governor by which the machinery of state has been in many cases kept from running wild and by being what he has been, and is, can rightfully be called "The Backbone of the Nation."

Vermont. LEE F. HATCH.

NEW YORK STATE AGRICULTURAL SOCIETY.

The convention of the New York State Agricultural Society was held in Albany last week. This convention represented the comprehensive needs of the farm interests of the State at this time more completely, we think, than the current needs were ever before represented by a convention of the State. The close of the convention coming so close to our time for going to press, our references to it this week are necessarily brief. We shall refer to it at more length later on.

At the close of the convention resolutions were adopted recommending a law to establish the grading of apples; to oppose the single tax on land; to oppose additional appropriations for State forestry schools and secondary agricultural schools until a comprehensive plan for this kind of education is adopted by the State; to revise the commission law; to restrain the commission merchants from dealing in consigned products, and requiring them to keep records of sales for the inspection of shippers; to favor the organization of a land mortgage bank as a revision of the saving and loan association laws of the State; to create a food and market commission; to conserve the food products of the farm; to establish grades and measures; to encourage and assist in the establishment of local markets, to preserve the wastes by cold storage and canning factories; to furnish information as to general markets; to direct shipments to markets where they would find the best demand and best prices.

A feature of the convention was the interest and enthusiasm manifested by Governor Glynn in farm needs and particularly in the subjects of his especial adoption—farm credits and farm markets. He delivered a stirring address on these subjects to the convention, and the day after the sessions closed, he threw wide open the doors of the Executive Chamber and invited the farmers to come in and discuss the agricultural needs of the State with him. They did so fully and without reserve. As Secretary Giles of the State Grange put it: "The farmers had reason on that occasion to congratulate themselves." Heretofore, he said, they had come knocking for admission at the door of the Executive Chamber. For the first time in the history of the State, farmers had found on that occasion the doors wide open and a ready welcome and sympathy within. The Governor did most of the listening and the farmers did the talking, but before departing they were assured of an executive recommendation to the Legislature for their needs, and an executive influence in an effort to get what they wanted from the Legislature.

One of the most important results of this executive conference, and indeed one of the most important results of the whole convention, was the appointment of a committee instanter by the Governor, at the suggestion of the interests affected, to begin at once an investigation of the sale and distribution of liquid milk in the city of New York. In this committee the producers, the consumers, the dealers, the State Department of Agriculture and the City Board of Health, will be represented. The object will be to determine a fair price for producing and a fair price for distributing milk, and the sum of the two will be a fair price for the consumer. For 30 years this subject has been agitated and discussed. Heretofore the dealers have refused to take any part in a disinterested effort to determine a fair price for this important and necessary article of food. They have now wisely expressed a willingness to do so, evidently conscious of the fact that it would be done with or without their aid.

The officers of the Society elected for the ensuing year are as follows:

President, John J. Dillon, New York; vice presidents, first district, Mrs. Julian Heath, New York; second district, Ezra Tuttle, Eastport; third district, Gilbert Tucker, Albany; fourth district, C. Fred Boshart, Lowville; fifth district, W. R. Smith, Syracuse; sixth district, Samuel Fraser, Geneseo; seventh district, James W. Wadsworth, Jr., Mt. Morris; eighth district, Senator Frank N. Godfrey, Olean; ninth district, Dr. G. H. Davison, Millbrook; secretary, A. E. Brown, Batavia; treasurer, Harry B. Winters, Albany; executive committee: A. Denniston, Washingtonville; J. A. D. S. Findlay, Salisbury Mills; William Church Osborn, Garrison; Dr. Thomas F. Finegan, Albany; Franklin D. Roosevelt, Hyde Park; E. A. Van Alstyne, Kinderhook; George W. Sisson, Potsdam; Senator T. B. Wilson, Hall; F. W. Sessions, Utica.

Poplar Near Well.

I have planted a small poplar about 25 feet away from my well. I am informed that in time the tree will be injurious to the well. We use the water for drinking purposes. Is there any danger? If so I will take up tree and plant elsewhere. Would an English walnut thrive there? It is gravelly soil, red shale. Would an English walnut be injurious? I judge it would make about as much shade as the poplar. J. F. F.

Ottsville, Pa.

In my opinion the danger of your well ever being injured by the roots of any tree standing at a distance of 25 feet away, is so remote it is hardly worth while considering. In my boyhood, a large yellow willow stood very much nearer my father's well, perhaps not over 10 or 12 feet away. I assisted in cleaning the well two or three times, and to the best of my recollection, no roots were ever inside the wall, which was constructed of boulders. The willow is naturally a moisture-loving tree, but for some reason, this particular tree seemed very well satisfied with its roots outside the well. If the feeding roots should in time (perhaps a long time) extend to, and through the wall of your well, they will be near the top, and will be nothing more than a bunch of fibres which cannot possibly do any injury to the well, and can easily be removed at any time. If the Winters are not too severe in your section for the English walnut, it is certainly much to be preferred to any poplar. I think your soil will be all right. As a rule the walnut will readily adapt itself to almost any kind of soil that is fairly good and not too wet. K.

Growing Early Tomatoes.

I have a seed catalogue in which the Earliana tomato is given as an 80-day and the June Pink as a 70-day tomato. If the claim as to the time required for these tomatoes to reach maturity is true, I presume it is only when the seed is sown in the open in their natural season. I know growers, who raise Earliana, who sow the seed in the greenhouse about February 20, and do not get tomatoes at the earliest before June 20. This is about 120 days after the seed is sown. Would they not come on almost as early and be much finer and more productive plants if they were started April 1 and kept growing vigoronsly from the start? Would not the addition of a fertilizer rich in phosphoric acid and potash to the soil (in the cold frame) to which the plants are first transplanted, hasten the blossoming and the setting of the fruit?

Cleveland, O. H. N.

Tomato plants started early in the greenhouse or hotbed always require a longer time for their development and ripening of fruit than those started later in the season when the days are longer and warmer. The tomato plant must have a certain high temperature to ripen its fruit, and when the heat that it requires is lacking, growth will be retarded, and the time of ripening the first fruits may be lengthened to many days beyond the time required under favorable conditions. Plants started early under glass, seldom ripen their first fruits under 120 days, and the time is more often extended to 130 to 140 days from the time of sowing seed, and the application of fertilizers will not do very much if anything toward hastening the time. As a rule the earliest hot-bed plants do not begin ripening their fruits much before the middle of July.

I am doubtful if any variety can be made to ripen fruit under 100 to 105 days, from the time of sowing seed even under the most favorable conditions, at least not in the northern section of the country. It may be accomplished in Florida in 70 to 80 days, under certain very favorable conditions, but surely not in any of the Northern States. Some growers make a practice of planting the seed in hills where the plants are to stand, for second or main crop. The hills are prepared same as for cucumbers; about the middle of May a dozen or so seed are planted in each hill. When the plants are four to six inches high, all but the most promising one is removed. K.

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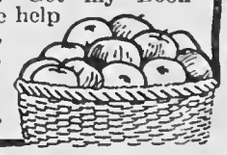

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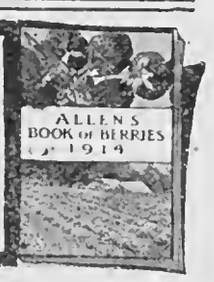

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The Home Acre.

Value of Lime.

On page 11, in answer to M. M. W. of Nyack, N. Y., you recommend using one ton of slaked lime per acre? Do you mean water-slaked or air-slaked? I am in about the same fix as M. M. W., with this difference. My top soil is sand from two to four feet deep, then clay, but it stands drought well. This field of 20 acres has been cropped for 25 years, and the soil is getting thin. I am quoted prices of pure lime at $5.60 per ton and hydrated lime at $7.30. The field is seeded to Winter rye now. Would it pay me to turn this rye under next Summer, and follow your directions to M. M. W. at the cost of lime as quoted above? It looks to me like a very expensive way to build up this field. As I figure, it will cost about $13 per acre. D. W. T.

Quaker Springs, N. Y.

We do not quite see how you figure the cost of $13 unless you count the value of the rye. How can you strengthen this soil at less cost? Figure the price of manure or fertilizer needed to make this soil productive. The rye will add humus and the lime will sweeten the soil and help its texture. If you will sow buckwheat and clover after the rye, let the buckwheat die down and the clover grow, you will improve still further. On the other soil mentioned the top soil had been taken off and we advised slaked lime. In your case on sandy soil the ground limestone will answer. We referred to air-slaked lime though there is no difference unless too much water is used.

Barren Plum Trees; Hog Manure for Apples.

1. I have some Quackenboss plum trees which fail to set fruit, although they blossom full every year. What is the best thing to do to make them produce a crop? These trees have been pruned and are making a good growth. 2. I had about 250 barrels of Baldwin and Northern Spy apples this Fall. They were light colored—the Baldwins were covered with bitter-rot, and the Northern Spy were covered with smut. I have been fertilizing with hog manure. These apples were poor keepers. W. B.

Weston, Mass.

1. It is quite probable that the plum trees do not set their fruit because of lack of pollination of their flowers, for there are some varieties that are noted for this fault, the Quackenboss being one of them. If this is the cause the remedy would be to graft a few of the highest branches with some other variety that will pollinate the bloom, and almost any two that bloom at the same time will cross-pollinate each other.

2. Stimulating the growth of fruit trees with very nitrogenous manures, like the hog manure mentioned, is apt to cause the fruit to be late in maturing and of poor color, and this is probably the trouble in this case. The keeping quality is also impaired by it. The smut and bitter-rot can be kept down by spraying intelligently and frequently.

H. E. VAN DEMAN.

Handling an Asparagus Bed.

In answer to J. B., Concord, Mass., page 4, I would like to give a little description of an asparagus bed I worked in during 1912 and 1913. When this asparagus bed was bought by the present owner the Fall of 1912, it had been cut for two years. It had had a coat of New York manure every year, which cost $2.15 per ton at the station three miles away. It also had a top-dressing of fertilizer. This bed did not improve as it should until this present owner took charge. Then there was a change in the fertilizer. We cultivated the bed until about August 15, then we sowed one-half bushel of Crimson clover seed to the acre, plowed early in the Spring and sowed 200 pounds of muriate of potash, and 800 pounds of acid phosphate to the acre. The second Spring after this way of fertilizing this bed it was fine. Some was cut that measured 6¾ inches around at the ground level. This method is increasing in Southern New Jersey, and is giving fine success. D. E. W. S.

Port Norris, N. J.

Budding a Persian Walnut Tree.

I have a young tree of Persian walnut which has been injured so that the limbs on one side are gone. Can I put in a bud on this injured side, so as to develop new limbs and thus even the top of the tree? H. M. W.

New York.

It is, of course, perfectly possible to bud the tree on the side where the branches have died off, but it is not a thing that a man usually succeeds with the first time he tries it. For methods see Bulletin 254, Bureau of Plant Industry, U. S. Department of Agriculture. But I should think that there might be a good deal of difficulty in getting such buds to start. It would certainly be necessary to cut back the tree severely to get the new buds to start and that cutting alone ought to start up dormant buds already present on the tree. My own idea as to getting such a tree into shape again would be to cut off everything except one vigorous shoot and then to cut this back to three or four buds so as to start a new head. It is desirable, probably, to have nut trees headed higher than fruit trees. I do not know the cause of the injury that H. M. W. refers to. It may be due to lack of vigor from various causes, or it might be due to what has injured many walnut trees in this part of the country, namely the walnut weevil, which bores into the new growth of the trees and kills it. It can readily be detected by examination, and the borer found in the injured stem during the growing season. W. C. D.

THE BOOKSHELF.

THE SUBURBAN GARDEN GUIDE, by Parker Thayer Barnes. This is a handy little book discussing both flowers and vegetables for the home garden, with planting tables and calendar, pruning and spraying table, fertilizers, etc. While described as a "suburban" book, it will be very helpful in the farm library, for there is often a tendency to ignore the small garden operations, because every effort must be devoted to field crops. Published by the Macmillan Company, New York; 147 pages, price 50 cents.

VILLAGE IMPROVEMENT, by Parris Thaxter Farwell. This is a useful book for the home, school or village library, and will be found especially helpful where a neighborhood is beginning to realize that beauty is a valuable asset. In addition to distinct and specific advice regarding the home and its surroundings, planting, streets and roads, schools, public buildings, clubs and improvement societies, there is an extensive list of publications dealing with such subjects, and a discussion of boys' and girls' clubs. The book is illustrated, and so interesting, as well as instructive, that it should be widely read. Published by Sturgis & Walton, New York; price $1.00.

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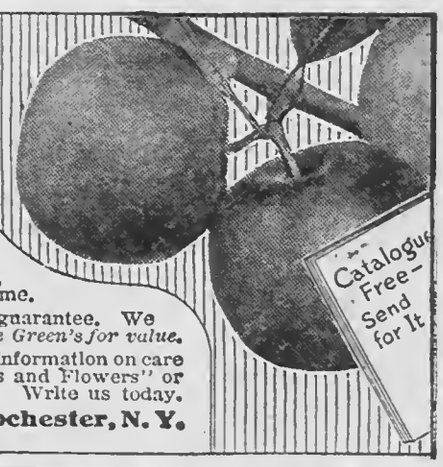

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EVENTS OF THE WEEK.

DOMESTIC.—The large new dam of the West Virginia Pulp and Paper Co., at Dobbin, W. Va., broke, Jan. 15, letting loose a body of water 50 feet deep, seven miles long and with an average width of more than two miles, which swept down the Stony Creek valley thirty feet high. Warnings of the approaching flood sent the residents of small towns along the river scurrying to safety in the hills. Officials estimated that property along the path of the flood had been damaged to the extent of $200,000. To this was added thousands of dollars' worth of logs carried away by the water.

After a preliminary hearing attended by many oil producers and refiners the Oklahoma State Corporation Commission has issued an order fixing the retail price of kerosene at eight cents a gallon in certain territory in western Oklahoma. The retail price formerly ranged from 15 to 20 cents a gallon. This is said to be the first time in the history of the oil business in the United States that State officials have ever fixed the price at which kerosene should be sold to the public. The penalty for the violation of the commission's orders is a fine of $500 and a jail sentence.

The four officers of the steamer Gregory, who risked their lives by jumping into the sea on January 4 to rescue six men adrift in a lifeboat from the sinking Oklahoma, were presented with gold medals Jan. 16, by the Life Saving Benevolent Association or New York. They are Captain William Trow Aspinwall, Richard Henry Buck, chief officer; John Sydney Williams, second officer, and Frederick David Roberts, third officer. The society also voted to present 238 medals to the officers and seamen on the 10 vessels that took part in the rescuing of passengers and crew of the Volturno, which burned at sea in October, when 115 lives were lost. The medals will be presented only to persons who took actual part in the rescue work. They will cost $4,300.

After hearing hundreds of personal appeals and reading letters and petitions bearing more than 2,600 names, Justice Davis in the Supreme Court, Criminal Term, New York, Jan. 21, sent to State prison for not less than one year and nine months and not more than three years and eight months David Kalhofer and Max Swersky, convicted of horse poisoning. Kalhofer was president of the Horse Owners' Protective Association and president of the Columbia D. K. Ice Cream Company. Swersky was his business partner. It was shown at the trial that the two hired for $150 Nigger Friedman's gang of horse poisoners to kill eight horses owned by a Brooklyn business rival.

The international convention in London called to provide regulations for greater security at sea has provided for the following precautions: Ice patrol of the Atlantic passage under control of the United States Government, better equipment of vessels with wireless telegraphy and a new code of signals, regulation of speed during thick weather, double bottoms for passenger steamships in addition to watertight compartments, stronger construction of all steamships, an improved system of lighting, the prevention of fire at sea, the best life saving apparatus available and the requirement of thorough and frequent inspections, with constant drilling of crews for emergencies. After the rules of the convention go into force every steamship of the fourteen signatory nations will be obliged to carry enough lifeboats, rafts or their equivalents, to accommodate all persons on board, including members of the crew. Elaborate as the new code is, it assumes that no ship is unsinkable. As Lord Mersey, the president of the convention, said in his closing address, no matter how vigilant commanders might be, there would always remain the possibility of "a serious and even totally destructive accident."

FARM AND GARDEN.—F. M. Jones of Clinton, N. Y., has purchased Spring Farm Pontiac Cornucopia, a Holstein Friesian bull, for which he will pay $15,000 to Colvin Deshane of Richland, N. Y. This is a new record price for a young bull. The purchaser of Spring Farm Pontiac Cornucopia recently sold to Stevens Brothers at Liverpool, N. Y., the cow Pontiac Lass for $10,000. Pontiac Lass is the mother of the bull for which Jones now pays $15,000.

The mid-winter meeting of the Michigan State Horticultural Society will be held in Benton Harbor, Mich., Thursday and Friday, February 5 and 6, in the auditorium of the First Baptist Church. The State society will be the guests of Berrien County Horticultural Society, which numbers over 200 members. For further information, address J. Pomeroy Munson, president, Grand Rapids, or Robert A. Smythe, secretary, Benton Harbor.

Midsummer weather for 10 days has brought out such numbers of grasshoppers in Hamilton county, central Texas, that the State Department of Agriculture was appealed to, Jan. 19, to assist in preventing the insects from destroying crops.

Indian Agent J. F. Smith, of Chase, British Columbia, reports that in his work the past year has been a most encouraging one. The first exhibit made by the Chase and Shuswap Indians at the New Westminster fair was eminently successful. In wheat and oats they won first prizes in competition, not against Indians merely, but against the whole province. The Spence's Bridge Indians won a similar success in certain classes of fruit. The wheat and oats from the Shuswap reserves were included in the exhibit sent by the Government to Chicago. In the quantity of produce raised the year shows returns that are not insignificant. On the local reserves there was baled for selling as much as 600 tons of hay, while the grain crop harvested amounted to 1,500 tons.

The annual convention of the Connecticut Vegetable Growers' Association will occur in Hartford, February 4, at Foot Guards Armory in connection with the second day's meeting of the State Pomological Society. The principal speakers will be Dean R. L. Watts of the Pennsylvania Agricultural College, and Stephen F. Willard, the veteran seedsman. For further information address David S. Kelsey, secretary, West Hartford, Conn.

PRESIDENT'S MESSAGE.—President Wilson read to Congress, Jan. 20, his promised address on the subject of legislation designed to curb the supposed monopolistic tendencies of modern industrial corporations. Nearly all of the members of the Senate and House were present. The address was well received and was indorsed in unusually candid terms by members, regardless of political affiliations. Following are President Wilson's recommendations for curing the trust evil:

1. Effective prohibition of interlocking directors of great corporations—banks, railroads, industrial, commercial and public service bodies.

2. Powers to be conferred on the Interstate Commerce Commission to superintend and regulate financial operations by which railroads in the future may get the necessary capital for development and improving transportation facilities.

3. Supplementary legislation to make the Sherman law more explicit.

4. Creation of a trade commission which shall be a clearing house of information to help business to conform to the law and at the same time investigate and report to the Attorney-General on violations.

5. A law prescribing penalties for individuals who are responsible for unlawful business practices.

6. To prohibit holding companies and to restrict the voting power of individuals who may hold shares in numerous corporations.

7. Allowing private claimants to found suits for redress against unlawful combinations under the Sherman law upon facts and judgments established by Government suits and providing that the statute of limitations against such claims shall begin to run from the date of the conclusion of the Government suit.

The message delighted the conservatives in Congress, irrespective of party, but brought some disappointment to the extreme radicals, who considered the address too temperate. In Wall Street and in financial circles generally the President's programme produced a reassuring effect, which was reflected in the stock market.

COMING FARMERS' MEETINGS.

Tennessee State Horticultural Society, State Nurserymen's Association, State Beekeepers' Association, Nashville, Tenn., January 28-30.

Forty-first annual meeting, New Jersey State Board of Agriculture, Trenton, N. J., January 29-30.

Farmers' Week, State School of Agriculture, Canton, N. Y., January 26-31.

Ohio Corn Improvement Association, Mansfield, O., January 27-30.

Western New York Horticultural Society, Rochester, N. Y., January 28-29-30.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6.

Connecticut Vegetable Growers' Association, Foot Guards Armory, Hartford, February, 4.

Midwinter meeting Michigan State Horticultural Society, Benton Harbor, Feb. 5-6.

Sixth National Corn Exhibition, State Fair Grounds, Dallas, Texas, February 10-21.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

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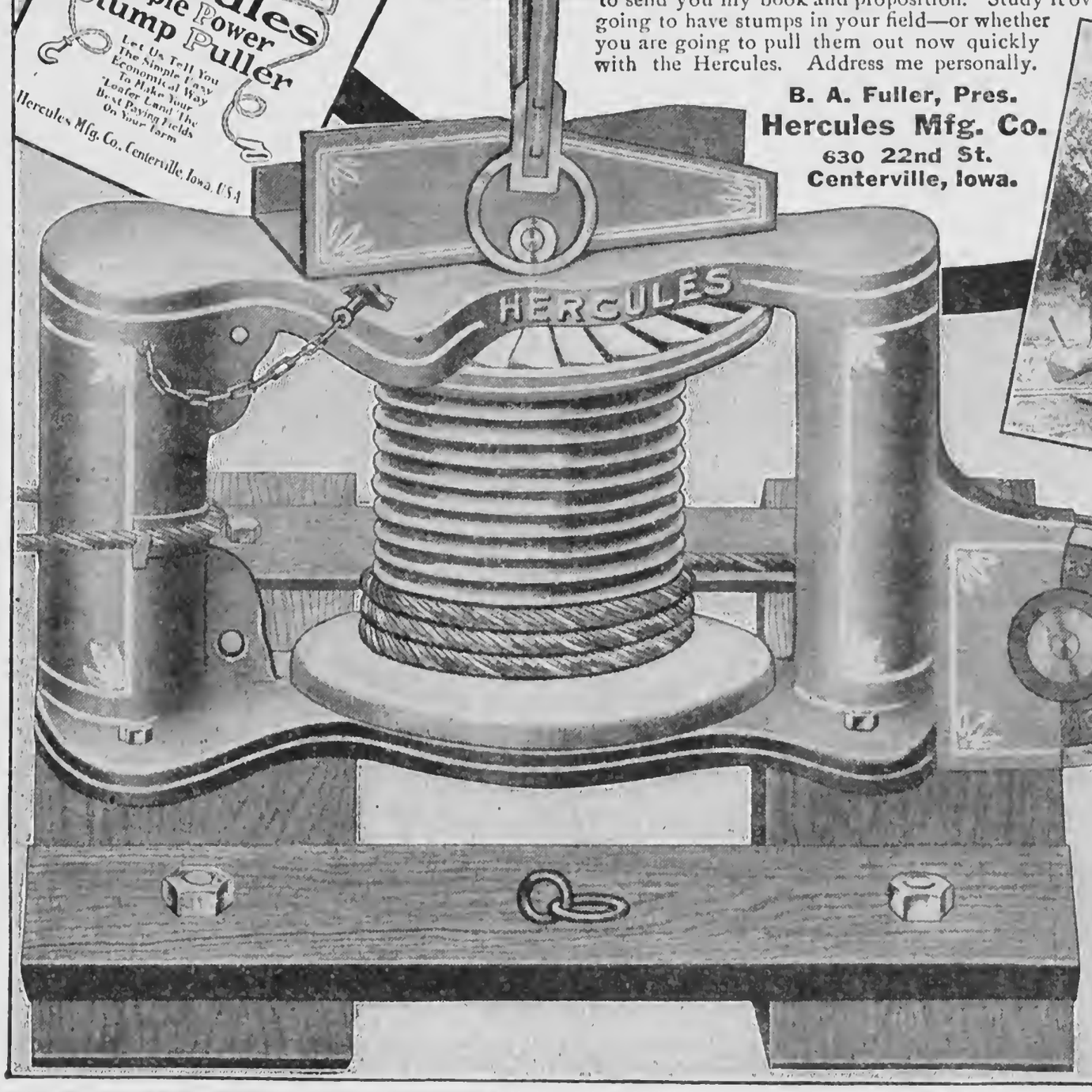

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It is this *Yellow* strand wire rope that won *first prize* at St. Louis Exposition *proving twice as good as next best cable.* It is this *Yellow* strand wire rope that is being used by the *U. S. Government at Panama on the real important work* of building the canal. And experts say this *Yellow* strand rope is one of the big helps that will enable Uncle Sam to complete the canal a whole year before expected.

Don't forget—it's the *Yellow* strand cable that is showing such wonderful strength—the *Yellow* strand rope that is beating *all others* on every test put to it, under *all* conditions all over the world. *And it is the Yellow* strand wire rope that is used exclusively on the Hercules Stump Puller—*not a green strand, blue strand, white strand or red strand*—but a YELLOW strand—don't forget that—and don't let any unscrupulous person or company confuse you.

Farm Management.

FIGURING THE PROFIT ON COWS.

Three years ago Banks invested $3,500 in the dairy business in a town of 3,000 population. He bought a small farm near the town for $2,000, and spent the balance for 20 head of cattle at an average cost of $60 each, and for wagon and horses for delivery, bottles, milk cooler, and other equipment necessary in his business. He gave his personal attention to the work, from about 3 a. m. to 9 p. m., and was assisted by his wife, an 18-year-old son, and a 16-year-old daughter when she was not in school. At the close of three years he found himself in debt to about every tradesman in the town who had trusted him, and "up against it" good and rocky. He wailed and railed at his lack of success, and condemned everyone who had advised or assisted him in his business.

A friend approached him and said: "Jim, how much does it cost you to produce a quart of milk?"

"I don't know."

"How much does it cost you to sell a quart of milk?"

"That's a fool question to ask."

"How much does it cost to keep a cow a day?"

"How can I tell?"

"What percentage of your sales do you fail to collect?"

"Oh bother! What are you driving at?"

"Just this; you don't deserve to succeed. You haven't learned your business yet. You are a business menace. You are the type of man who tears down the business of another without building one for yourself.

"Be just with yourself. Get your figure facts before you. Before you can succeed you must know all these things and more. You must keep before you the costs so that you know what your farm produces, and what it earns. And when you sell your farm produce to your dairy business, deal as if you were dealing with a stranger. Find what your overhead is—what the limit is where a cow ceases to be profitable—you have fine-looking cows—that gets you nothing—you're selling milk, not cows.

"Why Jim, when you pay $25 a ton for hay to feed a cow that eats two tons of hay a year, you can realize that your cow costs you a dollar a week for hay. And add to that 35 cents a week for grain. And add in her proportion of 'overhead' such as interest, taxes, insurance, depreciation—you realize that a dairy cow is a good cow for only four years, you have to charge off one-fifth her cost to depreciation every year—and the bottles and wear and tear on wagon, the keep of your delivery horse, the wages you pay to deliver must all find a unit value somewhere that you can charge against——"

"What is a unit value?"

"A basis for your fixed charges. You have 20 cows. Against these 20 units you have to charge all your expense and credit all your revenues.

"For instance, your interest on $3,600 at six per cent is $216. Your taxes are $40. Your insurance is $10. Your hay bill is $600 a year. Your grain bill is $200. Your wage bill for your son is $300; for your wife $300; for your daughter $150. You yourself should be put on a salary, say $600. Any one of you would earn more than this working as you do now, for some one else. Your depreciation of cattle is $240. Your breakage of bottles and depreciation of equipment is fully $50. Look a fact in the face, so it won't rise up later from a business shroud and look you in the face. Just off-hand, without counting tickets and bottle caps, and advertising, and sickness and the thousand and one leaks that you must consider, nor the loss from customers who don't pay, you can see that your cows have got to earn $2,706 a year, or $135 and better a year apiece. And that reduced to quarts of milk at six cents is 2,250 quarts per year, or between six and seven quarts of milk per day.

"And so by getting your figure facts right, Jim, you find that a cow that gives six quarts or less of milk per day is a financial loss besides the labor she causes. Now if while a cow is fresh and for two months she gives 12 or 14 quarts of milk a day, and then for two months more nine or 10, and then for two months seven or eight, you will see that for the two months that she gives five and six and the two she is dry she is a loss, and if you will get your figure facts right you will find that you can afford to keep her at $40 and buy a fresh one at $60.

"And you will know that your loss of collections is confined within certain families, and that by cutting off the trade of same, and going after others you will save yourself and your business.

"What you need, Jim, is a system, so that you can figure and reason and analyze without getting tired. You had better have 12 cows, fresh, and a system, than your 20 cows as you are now.

E. G. WHITMYRE.

Grow This Berry for big profits and sure yields. It is hardy and wonderfully productive, coal Black and very large; almost as thick through as long. In luscious flavor it surpasses by far all others I have ever grown. In my long experience with this berry its canes have never been affected, even slightly, by orange rust or other fungus disease, and I believe it immune to them.

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brings joy to all who grow, sell or eat it. It is immensely profitable to the market grower, and "a joy forever" to the amateur gardener. The canes are of ironclad hardihood, need no staking, and are literally loaded with fruit every year. I know this berry thoroughly, and willingly stake my reputation upon it. Illustrated catalog replete with cultural instructions, free to everybody. Established 1878. 200 acres. Quality unsurpassed, prices low.

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I have selected these Vegetable Seeds solely to show you how good Wilson's Seeds are:
Bountiful Green Pod Bush Bean, first in quality, earliness, yield. Detroit Dark Red Beet, for quick use or for winter. Improved Rubicon Carrot, medium-early, coreless, orange-red. Swiss Chard, used like Spinach, can cut all summer. Selected Big Boston Lettuce, crisp and tender. Early Scarlet Turnip Radish, quick grower, white, crisp flesh.
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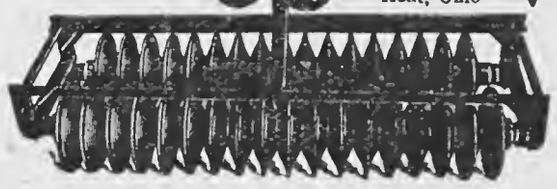

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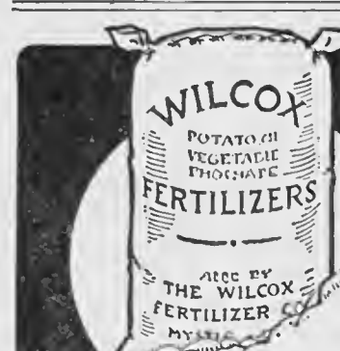

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Imported AUSTRIAN 2-ROW BARLEY. Weight 56 lbs. to measured bushel. Stiff straw. No lodging. Each kernel stools 3 to 6 stalks. Sow 1½ bushel to acre. 1913 an "off" year grew 55 meas. bushels to acre. Equal to nearly 65 bushels weight. Price $2.00 bushel.
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This "Sample Collection" includes packets of fine new Melon and Cucumber. All for 10c, which we return as a Duo Bill. Let's get acquainted! (1)
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TWO NEW YORK COUNTIES COMPARED

I was greatly interested in that letter of Mr. Lindberg on page 1348, in which he writes about farm conditions in an adjoining county, the high elevations of which are visible a few miles to the southwest of here. This is a rolling to hilly section. Northern Schoharie soils are glacial till, mostly from decomposed limestone, are as a rule dark brown in color, hillsides and all, and underlaid with a lighter colored, fairly porous subsoil, and belong to the Ontario series; do not lack lime, as Alfalfa succeeds if given any chance whatever, in fact it is beginning to appear as a volunteer plant; and naturally these are good wheat and corn soils. Southwestern Montgomery County lies lower, is moderately rolling and even more free from stone than northern Schoharie. Soils on uplands are glacial till, derived partly from limestone, partly from Catskill gray shale; are slightly lighter in color, and heavier texture than the Ontario soils. They belong to the Mohawk series, and are fairly well supplied with lime, as good stands of Red clover are obtained.

The greater part of the soils of Otsego County are glacial till, and residual soil, derived from Catskill red and gray shale, light in color, rough, stony, and as Mr. Lindeberg says, needs lime. They are poor corn and grass lands, have a hardpan underneath, that means wet, cold land in Spring, and a very dry one in Summer if season is dry, and equally too wet in a wet one; a soil in which even were climatic conditions favorable, corn as a grain crop would at least be a doubtful proposition, and for the same reason it is not a good clover or Alfalfa land, as both are apt largely, roots and all, to lie on the surface in the Spring. But the worst of these Volusia types of soil in Otsego County is their natural infertility. If all other conditions are met, viz., good culture, good drainage and sufficient rainfall, corn on an unfertilized sod would not yield more than 10 to 20 bushels per acre, and on much of that soil type no grain would be produced at all. In northern Schoharie on the other hand, soil is darker in color, very much warmer, better drained, and naturally fertile. The thick growth of Sweet clover and Kentucky Blue grass along roadsides attest this.

This type of soil, with good culture and sufficient rainfall, will produce 50 bushels of corn to the acre without fertilizing on sod, and all kinds of small grains do equally as well in proportion. But great as is the contrast in the quality and condition of soils, that of climate, in so far as it affects the agriculturist, is if anything greater still, in fact if all other conditions were equal, this factor alone would in a series of years, make all the difference between success or failure. Note what Mr. Lindberg writes, about what freezing his corn had to contend with, both in June and the beginning of September. But I think another factor, which he did not mention, was more detrimental than that, and that was the low average temperature and the relative great degree of cloudiness, as well as a soil so light in color that it does not absorb the sun's rays and warm up enough for corn, which is a tropical plant, and no amount of added fertility, or good culture can ever overcome this handicap. To show, however, what a difference of climate really exists between the two sections following is the record of mean and minimum temperatures, rainfall and number of clear days for the growing months of 1913, as appears in the monthly weather review of the United States Weather Bureau for Sharon Springs, as recorded by myself, as cooperative weather observer, 821 feet above tide in valley bottom of Sulphur Creek, and at New Lisbon 1,234 feet above tide in Butternut Creek Valley, about six or seven miles west of where Mr. Lindberg is located.

Mean monthly temperatures of 1913:

	May. Deg.	June. Deg.	July. Deg.	Aug. Deg.	Sept. Deg.
Sharon Sprgs.	55	64.7	70	68.3	59.5
New Lisbon..	50.7	59.7	65	63.5	55.8

Minimum temperatures, 1913:

	May. Deg.	June. Deg.	July. Deg.	Aug. Deg.	Sept. Deg.
Sharon Sprgs...	23	30	41	40	25
New Lisbon....	18	25	36	35	20

Rainfall, 1913:

	June. Inches.	July. Inches.	Aug. Inches.
Sharon Springs....	2.05	2.82	2.37
New Lisbon.....	2.05	2.31	2.10

Number of clear days:

	June.	July.	Aug
Sharon Springs.....	20	15	13
New Lisbon	17	9	9

The mean monthly temperatures of 1913 were almost exactly normal, although minimums for June and September were abnormally low. Following is the record of 1912 at New Lisbon: 25, 28, 32, 32 and 27 degrees for May, June, July, August and September, respectively. Here there was no damaging frost after April 21, 1912, till September 30, when it was general throughout the State. Note the low monthly average at New Lisbon and the greater degree of cloudiness, which is very retarding to vegetative growth. This may be "almost like Denmark," but I do not think frosts every month of the year any advantage in making a "good living" from a farm. Nor are such unfavorable climatic and soil conditions likely to be of much inducement to the younger generation to remain on the farm. Hence all the young people "have gone to town," as Mr. Lindberg says.

The average date of last killing frost from 11 years' record in the Spring, is May 7, and first killing frost in Fall, is October 6 in this valley, giving 153 days of frostless weather, or long enough to ripen Leaming corn usually. Farms sell from $20 to $75 per acre here according to location and improvements; good farms well located with good buildings can be bought from $30 to $50 per acre. An Otsego County farmer came here in 1909, selling his 50-acre farm there for $800, and commenced to work a nearby farm on shares, buying it four years later for $5,500, or $47 an acre, and had it all paid for in Autumn of 1911, besides adding during that time at least $1,000 worth of personal property. This man has had to pick very few stones, has spent no money for lime, although he has good stands of Alfalfa, and his fertilizer bill has not averaged $50 per year; his sales since 1906 will average more than $3,000 per year. Perhaps such as this is one of the reasons why Otsego County needs good farmers. The case just mentioned was general farming. To show what can be accomplished here with special crops I will mention another instance.

A farmer located on the hills on south side of Sharon Springs, but in the village limits, rented three acres of hillside, adjoining his land, sloping to the west, and set it all to Marlboro raspberries; third year after setting, it yielded over 4,000 quarts of berries per acre. Returns exceeded $1,900, and this without any manure whatever, and only 250 pounds of 2-8-10 fertilizer that year. He pays $22.50 rent for the three acres. In 1909 he purchased a four acre lot, abandoned to weeds and brush, lying about half a mile from the other mentioned, paid $50 per acre, cleared it up and set to fruit the next year. His sales in 1913 from this was more than $1,000, and the greater part was just coming into bearing, and every small fruit grower knows what kind of a season 1913 was in central New York. I am positive that since that land was originally cleared from forest it has never had two tons of fertilizer all together, and probably not 25 tons of manure. This grower now has in all stages of growth, 20 acres red raspberries, 6 acres currants, five acres blackberries, two acres black raspberries, three-quarter acre grapes, 10 acres apples, 2½ acres cherries, two acres pears and one acre plums. His soil is Ontario fine sandy loam, of which the United States Soil Survey says "is of high agricultural value," yet as in this case selling for $50 per acre within the corporate limits of a village that has nearly 4,000 people to feed in the Summer season. Farms on this same soil type within two miles of the village with fairly good buildings have been sold for $25 per acre. To those who are anxious to find a home where nature will richly reward energetic, intelligent effort, old Schoharie offers opportunities second to none, for here are together at our door, the great markets of the East, combined with the fertility of the West. WM. M. KLING.

Windswept Soil.

"In many instances," said Dean Jardine, "land has been plowed for years with a disk plow, to a depth not exceeding three to five inches. Sometimes the disk harrow was the only instrument used in preparing the seedbed for wheat. Straw has been burned annually. Such land, of course, is soon in very poor physical condition, and under such conditions windstorms of 20 miles an hour have been known to do a great deal of damage."

This report comes from Kansas, where windstorms often do great damage to soils by blowing the fine particles away before the seed is planted. This loss is heaviest in those level States where the wind has an unmolested range, but it is often troublesome in other localities. In some cases it seems better to leave the soil rough or ridged, to break the force of the wind somewhat. A cover crop like rye helps in trouble of this sort as its roots run all through the soil and hold it together. S. S.

GASOLINE POWER.—A recent issue of THE R. N.-Y. contains some opinions and advice as to horsepower for a gasoline engine for farm work. I believe six horse-power was the highest mentioned. It appears to me that a farmer should first determine what kind of work he wants to do with it. I have a 12 horsepower that runs 15 different machines. One of these is a mill that grinds corn on the cob with other grains, and I have to feed very carefully to avoid being stuck. Another is a large baling machine; still another that hoists a quarter ton of hay or grain to the mow. It should be known that gasoline horsepower is not to be depended upon to equal same rating of steam, and that a six power of one maker, might prove to be no better than four of another.

New York. FRANK HYDE.

Here is the Territory Where DAYBREAK ROCK PHOSPHATE Has Made Good

In each of the States shown on this map we have shipped "Daybreak" Rock Phosphate in car-load lots and a most persistent follow up of our customers has not found one who has not profited from his purchase.

Here are the crops which have been materially and profitably increased by the use of Rock Phosphate

Corn, Wheat, Oats, Clover, Potatoes, Silage

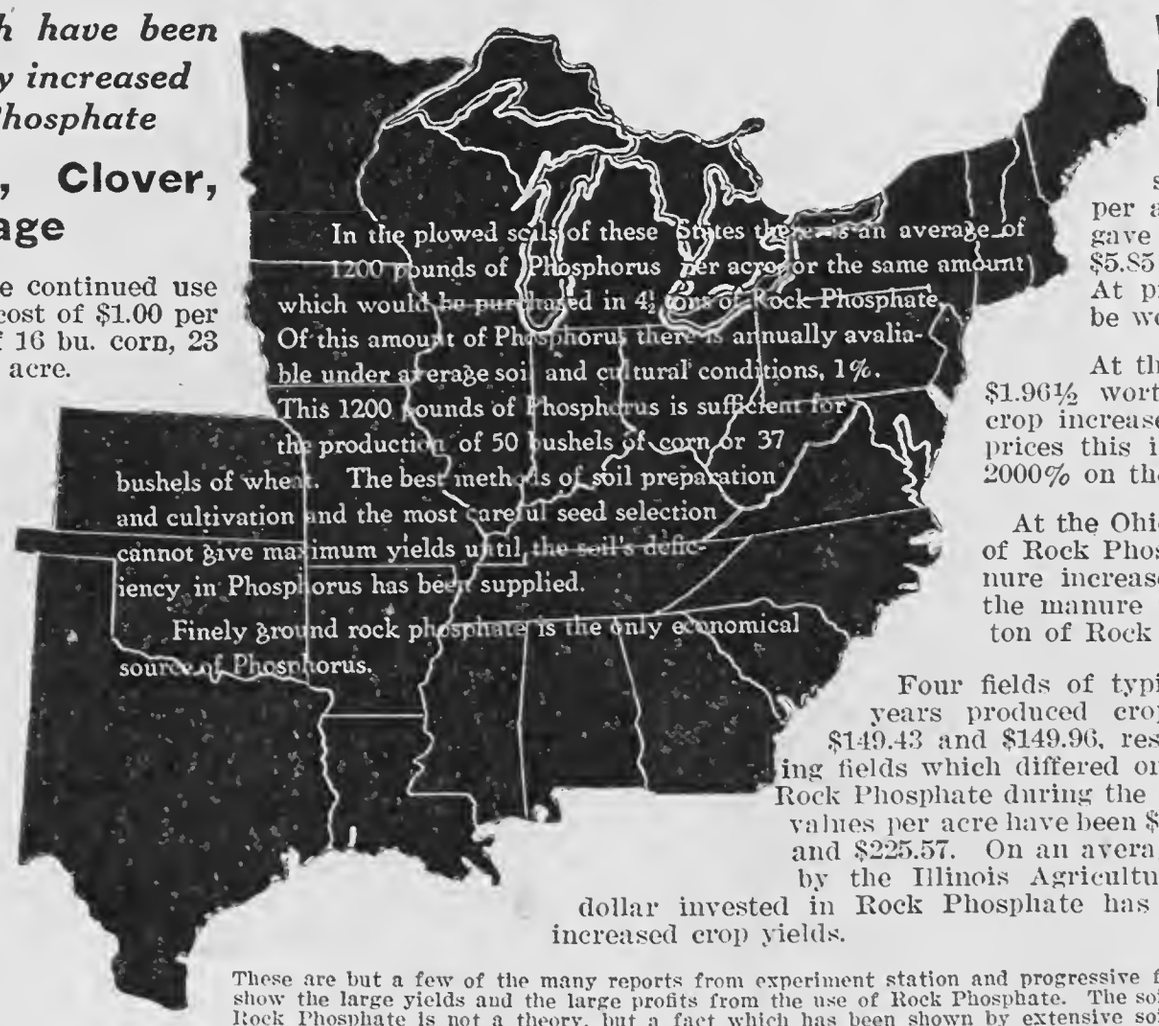
On a typical corn-belt farm the continued use of Rock Phosphate at an annual cost of $1.00 per acre has given increased yields of 16 bu. corn, 23 bu. oats and one ton of clover per acre.

In a recent issue of Breeder's Gazette there was reported an increase of 25 bushels of wheat per acre from an application of 600 pounds of Rock Phosphate.

Increased yield of 20 bushels of oats and one ton of clover per acre from 1,000 pounds of Rock Phosphate is reported in Prairie Farmer.

At the University of Wisconsin the use of Rock Phosphate gave an increase of 47 per cent in the potato yield.

The Ohio Farmer reports an increased clover yield of 2820 pounds per acre at the Ohio Experiment Station. The Rural New-Yorker reports 2652 pounds more of clover per acre from the use of lime and Rock Phosphate than from the use of lime alone. Prairie Farmer during 1913 gave reports from the use of Rock Phosphate on clover in five counties of Illinois. On an average Rock Phosphate doubled the clover yield. One of America's best known Jersey breeders reports an increase of 8 tons of silage per acre from the use of 500 pounds of Rock Phosphate.



What Rock Phosphate Has Done in Dollars and Cents

In a twelve year test at Pennsylvania Experiment Station $1.05 per acre invested in Rock Phosphate gave increased crop yields valued at $5.85 as an average of the 12 years. At present prices these crops would be worth $9.

At the Maryland Experiment Station $1.96½ worth of Rock Phosphate produced crop increases valued at $22.11. At present prices this increase would show a profit of 2000% on the Rock Phosphate investment.

At the Ohio Agricultural College 15c worth of Rock Phosphate added to each ton of manure increased the crop producing value of the manure 75c per ton. On this basis one ton of Rock Phosphate is worth $37.50.

Four fields of typical corn belt land have in ten years produced crops value at $148.75, $151.30, $149.43 and $149.96, respectively On four adjoining fields which differed only by two applications of Rock Phosphate during the ten year period the crop values per acre have been $229.37, $221.30, $229.20 and $225.57. On an average of all tests made by the Illinois Agricultural College, each dollar invested in Rock Phosphate has given $5.00 in increased crop yields.

These are but a few of the many reports from experiment station and progressive farmers which show the large yields and the large profits from the use of Rock Phosphate. The soil's need for Rock Phosphate is not a theory, but a fact which has been shown by extensive soil surveys and analyses by state and nation. The use of Rock Phosphate is not an experiment but a well established system of fertilization which is increasing the bank accounts of thousands of intelligent farmers and enabling them to make their soil permanently productive. Get the facts and you will get the profits. Fill out this coupon and mail it to us today.

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R. N.-Y.

What Helped the Pumpkin Seed?

Reading an artiele this morning on the "Survival of the Fittest," recalled the interesting experience I had last season with pumpkins. Two years ago, in a potato patch, where we had used stable manure, I noticed a volunteer squash or pumpkin vine which was so very vigorous I left it through the season, and it bore several of the finest pumpkins I had ever seen. From the largest of these I sowed the seed and last Spring planted 10 hills, which were highly manured and cultivated. The season was very unfavorable and not one of the many pumpkins compared with the one which bore the seed used, but of the seed from the others, which was thrown onto the manure pile as they were used, two plants came up in my Lima beans, and were allowed to grow, bearing 10 pumpkins, fully equal to the best of last years' crop. One of these vines, actual measurement extended 30 feet in each direction, and was a beautiful sight with its large and beautiful fruit. The question with me now is, how are we to find out which of these seeds is the best? One plan I have is to sow the seed in the Winter with fresh manure, and expose it to frost, planting the manure in a trench in the Spring, and then transplanting whatever may come up. I find no difficulty in transplanting either squash or pumpkins. Can any of your readers suggest a better plan? A. C. W.

New York.

I believe every tiller of the soil has at one time or another (and many of us many times) had similar experience as recorded in the above letter, and wondered why it was that these volunteer pumpkins grew so much better, and bore more and finer fruits than vines grown from seed saved and planted in the regular way. I have many times given the matter much thought, and have delved through many pages of gardening literature in quest of information on the subject, but have never been able to find anything in print that shed any light on it.

I have long believed that it is entirely due to the stratifying of the seeds in the manure. By reason of the protecting covering of manure, they were preserved in what might be termed the green state, the meats retaining all their original moisture, thus preventing any possible weakening of the germ that might result from drying out, thereby preserving every grain of vitality originally stored within the germ. I have planned for several years to prove or disprove the correctness of this theory, but always neglected it. I am now sorry I failed to carry out my plans for this experiment. If I had done so I might now be in a position to explain the matter fully. I am glad you intend to do some experimenting along that line. I shall probably do likewise this year, if opportunity affords, and I hope by next year we shall be able to give some light on the question. If the phenomenon is due to the stratifying of the seed, it is not likely the manure is of any benefit to the seed, other than to preserve the germ in its full vigor. If that is true, loam or sand used in the same manner as practiced for the stratification of tree seeds will answer quite as well or better, and be cleaner and more satisfactory to handle. Perhaps some other reader of THE R. N.-Y. can shed some light on this interesting question. K.

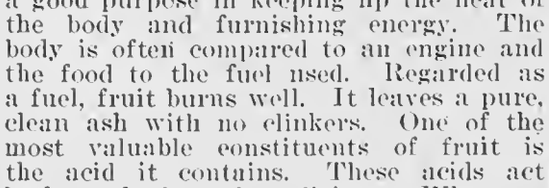
HORTICULTURISTS OF OHIO IN COUNCIL.

PART I.

The forty-seventh annual meeting of the Ohio State Horticultural Society, and the Fifth Annual Ohio Apple Show, were held in the City of Cleveland Jan. 20 to 25 inclusive. The first session was a sort of "get-together" gathering, planned in part by the Agricultural Commission and the officers of the society. All of the active members of the Commission were present, the president, Mr. A. C. Sandles, presiding. Dean H. C. Price of the State University, stated that nine-tenths of the apples consumed in the City of Cleveland came from outside the State of Ohio. There was no good excuse for this. Apples used in Ohio should be grown in Ohio. The conditions for their growth were as favorable as in any other State, and the quality was as good. There was enough good apple land in Eastern and Southern Ohio to raise apples not only for her own use but for the whole United States. The fact that apples were shipped into Ohio, often from great distances, made the retailers' price to the consumer in our cities so great that many were obliged to go without this wholesome fruit. The man in the city has much to learn from the thoroughly trained country horticulturist, while many an old fashioned country fruit grower can learn much from the city man who engages in orcharding. The average city man believes in thoroughness and does not hesitate at expense when he sees that one dollar invested will yield several fold. The city man is more teachable. He likes to be told what to do to increase the size, brighten the color and improve the quality of his apples. He knows the virtue of the really good, while the old-time fruit grower is satisfied with a mediocre product. The intensive orcharding of the city man on a large scale is doing the farmer orchadist a lot of good.

Dr. H. W. Wiley gave an eqnally interesting and instructive address on "Fruit as Food and Medicine." He said among other things that anything may be regarded as a food for man that builds up tissue, repairs waste, and supplies the body with heat and other forms of energy. Food should keep that complicated machine, the human body, in good working condition. Medicine is something for repairing the machine when out of order. Fruits are not especially rich in nutrients, but they serve a good purpose in keeping up the heat of the body and furnishing energy. The body is often compared to an engine and the food to the fuel used. Regarded as a fuel, fruit burns well. It leaves a pure, clean ash with no clinkers. One of the most valuable constituents of fruit is the acid it contains. These acids act both as foods and medicines. When we are well we eat fruit because we enjoy it—it tastes good and acts as a food. When we are ill fruits by their cooling quality help to correct a feverish condition. They are also useful as antiseptics, destroying injurious germs that may have found lodgment in the body. The apple is one of the best of fruits and should form a part of our everyday diet.

The annual address of President E. J. Riggs was short but inspiring. Ohio, in spite of flood and frost, is a great horticultural State. What is most needed is a spirit of mutual coöperation and helpfulness among all who raise fruit. Mr. R. A. Gill of Ottawa County gave a good account of the evolution of the mechanical fruit grader. As far a peaches are concerned the best grader now in use seems to be well nigh perfect. Apples, owing to their variation in shape, and the difference in their vertical and cross diameters, are more difficult to grade than peaches. Yet many of the larger growers are finding the best apple grader a great saving of time and expense. These graders or sizers do better work than can be done by hand and do not injure even tender-skinned fruit. Eggs may be graded by the best of these machines. Apples and peaches may be graded at the rate of one hundred barrels or more an hour. W. R. LAZENBY.



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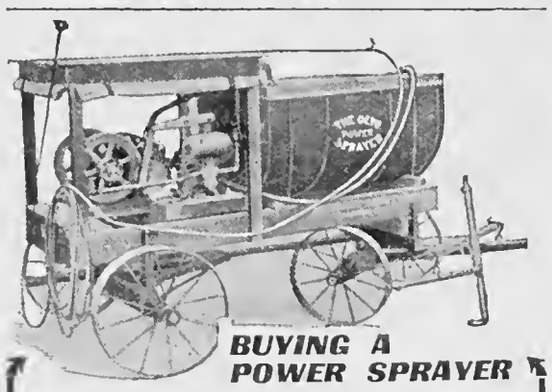

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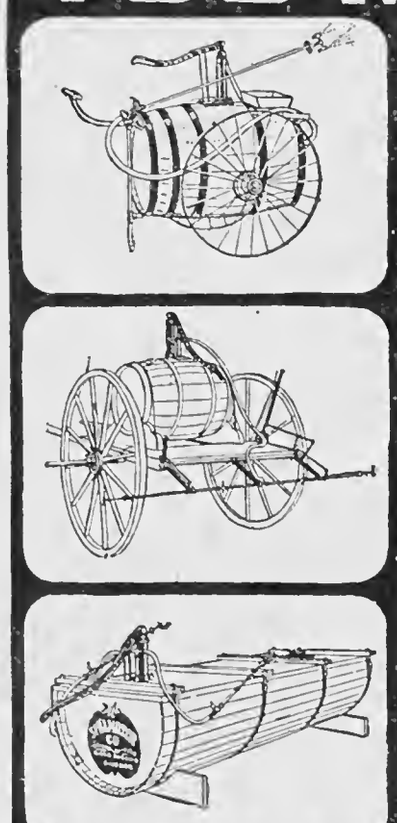

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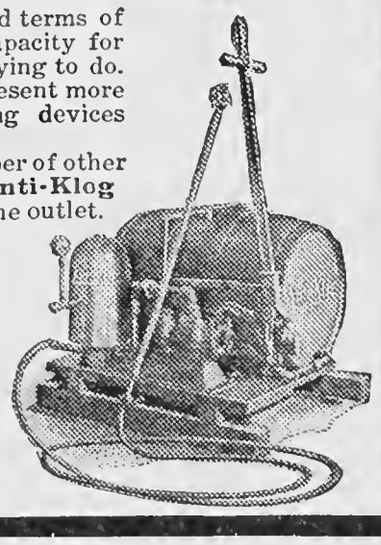

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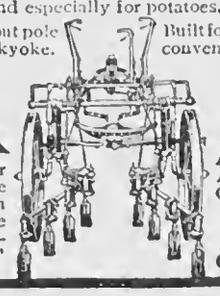

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The Home Acre.

Matured Crop in Orchard.

On page 1297 is a picture (Fig. 509) of a peach orchard, whose grain matured in it, also where the grain was turned under early before maturity. In 1912 I saw an apple orchard filled in with peaches. There were three rows in the center of this orchard that did not get plowed until the Crimson clover matured. This caused the two rows of trees in these places to stop growing and get very yellow. This orchard was in clay soil. The remainder of this orchard was moist, and where it was not plowed was nearly as hard and dry as a cement walk. It is a great drawback to young trees to let any cover crop such as rye or Crimson clover mature in it. D. S.
Port Norris, N. J.

Winter Pruning of Fruit Trees.

Is it wrong to prune young peach trees this time of the year? P. D. A.
Meriden, Conn.

It is not wrong, but hardly wise. Better wait until March. By that time the danger from killing of the wood will be over. Should you cut more there may be killing later and in such case you would have to prune again.

Sorrel in Lawn.

My lawn four years old, otherwise well seeded, is being overrun with sorrel. I suppose it needs lime. Will you advise me whether to use burnt or ground limestone and what quantity for about 75x 100 feet? M. M. A.
Bernardsville, N. J.

Evidently this soil needs lime, but we doubt if you will find that applying it to the surface will prove satisfactory. You should use 300 pounds of slaked lime on this area of lawn, but the only way to obtain best results is to work the lime *into the soil*. Of course this cannot be done without spading up and reseeding. The lime will kill out some of the sorrel, but not all of it.

Soil-binding Growth for Henyard.

My chicken pens are on quite a slope, the earth is sandy gravel. The fowls keep the vegetation all picked off. In the Spring, especially, it gullies badly. Can you advise me of any planting that the hens will leave alive and that will check that wash? I last Spring put out three filbert bushes as a feeler. The hens cannot reach the top branches and I am hoping the roots will hold the earth (though the pens would require a much larger number planted). What can you advise me regarding this or any planting? VILLAGER.

It is doubtful if you can get any crop securely started in these yards, unless you keep the hens out for at least six months. No crop can start while the hens are actually at work. We will turn this over to our readers for experience.

Seeding Timothy on Quack Grass.

I am a green hand at the farm business, and would like to know whether Timothy and clover seed sown over quack grass in early Spring, April or May, will come up in time to be cut in July or August? I am bothered a good deal with quack grass, and that grass by itself makes it hard to sell at a fair price. I thought by doing this it might help out until I get my farm in shape.
Buffalo, N. Y. R. K.

As we understand it, you think of seeding Timothy and clover on land that is foul with quack grass. You will be disappointed, for the chances are that the quack grass will come in and crowd out the Timothy. We would not seed down until the quack grass has been killed. Better sow fodder corn in drills and give thorough culture, or seed thickly to oats and Canada peas, and follow with a heavy seeding to buckwheat and rye.

Mixing Lye and Sulphur.

While making soap I accidently spilt some strong lye water on some powdered sulphur. In a short time the sulphur seemed to dissolve, so I then took equal parts of lye, sulphur and water and mixed them up and added a little heat. The mixture soon changed to a reddish transparent liquid that instantly mixes with water without separation. Diluted 50 to one it has a yellow appearance, and feels quite greasy to touch (very similar to soluble oil sprays). I sprayed a small apple tree with some 25 to one and two peach trees with 50 to one, and will wait for results. Do you think this mixture will make a good spray, and what tree ailments will it be good for?
Somerville, N. J. E. L. C.

The mixture which you obtained is a sodium sulphide, similar in some respects to the soluble sulphur now being manufactured. We cannot, of course, without having the mixture at hand, give any idea as to its strength. If good for anything it should affect San Jose scale and fungous disease organisms, but as you have no exact means of determining its strength you would better go slow with this until it has been well tested.

Homemade Oil Spray.

I have a few trees to spray and wish to use "soluble oil." Will you tell us how to prepare fish oil and others to make them soluble in small quantities? S. B. R.

A bulletin issued by the Connecticut Experiment Station, Storrs P. O., tells in detail how to do this. We do not advise you to try it on a small scale. It looks easy, but you will not know just how strong it is when the job is done, and you may have a mixture that will injure your trees. This is work for an experienced hand, and we would rather buy one of the guaranteed brands of oil than try to mix a small lot.

Tar for Tree Wounds.

Is tar as a covering for wounds made in pruning trees objectionable? It sticks and covers better than white lead. C. E. S.

We prefer to paint the tree wounds with a mixture of pure lead and oil. The tar varies somewhat in its composition, and we have known cases where it did considerable injury, and to be on the safe side we should prefer the pure paint.

Fight the Peach Borer.

Some of my peach trees are injured. The sap is running out through the bark at the base of the tree, what can I do?
New Jersey. F. L.

The substance you find at the bottom of the tree is not the sap running away, but a gum caused by the wounds made by peach borers. Scrape away this gum from the bark, and you will find that it contains little pieces of wood like sawdust. You will find a hole in the bark, with a tunnel running down between the bark and the wood toward the root. With a sharp knife cut down this tunnel, do not work across the trunk of the tree, and at the bottom you will find the borer. This is a white insect with a black head. Dig him out and kill him. You will probably find several borers in the same trunk. This insect in the form of moth lays its eggs in midsummer at the base of the tree. These eggs produce tiny borers, which work down toward the root of the tree, keeping up their work until very cold weather, and resuming it in the Spring. When they have completed their growth the following year, they spin a cocoon around themselves, from which later on a moth appears to lay the eggs and go through the same performance. The peach borer is a worse insect for us to handle than the scale. Various washes are proposed to paint over the trunk of the tree, but the most effective way is to dig them out with a sharp knife, or a crooked wire. This should be done in the early Fall, and once again in May.

Lantern in Hotbed.

On page 37 one of your correspondents requested information as to how to give warmth to a small hotbed, inasmuch as he could get no fresh manure for the purpose. In the answer you gave him an excellent method, but one which would require considerable expense. I had exactly the same difficulty last year as did your correspondent in getting the necessary warmth, and I purchased two large lanterns (for 75 cents each) and placed at each end of the hotbed, giving just a little space between two of the frames for air. The result was perfectly satisfactory. Seed was planted about the middle of February and was ready for transplanting at the usual time.
New York. WM. J. YOUNGS.

R. N.-Y.—Be careful to give enough air.

MOTHER: "Now, Willie, put away those drumsticks. Don't you know your father has a headache?" Willie: "But, ma, when I was going into the parlor with my drum, he told me to beat it."—Boston Transcript.

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Much valuable information about soils and fertilizers is interestingly written in our booklets, *Soil Fertility*," "*The Grass Crop*," "*The Apple*," and our *1914 Almanac.* They are yours for the asking.

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Office and Works, PORTLAND, CONN.

Hope Farm Notes

FROST.—We had one with white whiskers on January 6. Our thermometer registered five below zero, and the mercury hovered around the danger point for several days. This was mild compared with what others report. The boy at college in northern New Hampshire says the mercury gave a gasp and went to 32 below. Years ago I worked in a lumber camp in northern Michigan, and one morning the thermometer certainly registered 40. The boy wrote me that I would have been surprised to see how fast he could move in the frosty air. Where one is well fed and well clad this nipping cold is good. It is a bracer which only those who live in it can realize. That's all very well for human beings well protected in wool, but what about our fruit buds? They were quite open and tender when this icy hand reached out to touch them. The mild Fall had acted like a gay deceiver to fool them into thinking Spring was on her way. I cannot tell yet what damage was done. I think the peach buds are badly hurt; however, during the past 10 years my records show that we have thought that seven different years and yet we have always had at least a light crop. It is hard to see how our buds could stand this freeze, but we are good waiters and before we say "Good night" we shall wait for the bloom.

THE SCRUB HENS.—We are no longer at the tail end of that egg-laying contest. During the week ending January 9, one of our birds woke up and laid three eggs! We are no longer in the "also ran" class. The Silver Campines, the Cornish and one pen of Reds are still at the zero mark. Here we are tied for seventy-sixth place with a pen from the Connecticut College. Are we going to come sailing up near the head? Watch us! There is certainly room at the top. On January 15 my report was that one bird was laying, three showed "some development," and six "no evidence." During that week there were 851 eggs from 820 birds. These eggs were laid by 236 birds, for it is a fact that 584 birds never laid an egg. Nine of my scrubs were guilty, and I cheerfully admit it, but what about the other 575 blue bloods that went dry? For example, the Heneta Bone Co. have entered a pen—personally fed under their direction. These birds (Leghorns at that) never laid an egg during that week, and have laid only 13 in all. Out of the 236 birds which laid, 123 laid more than the Hope Farm scrubs, while 112 laid three or less. I am not prepared to match 'Hope Farm Lady" against one of Tom Barron's Wyandottes, but she may yet be the great-grandmother of a pen of winners. At any rate, win or lose, we stay by the Hope Farm scrubs.

CALLING NAMES.—One of our good friends wrote that he is very sorry to have me allude to some of our children as "redheads." This, he thinks, must be humiliating to the children, and to clinch his argument he says *"How would you like to be called old Redhead?"* The name would not fit me, for my head is as devoid of red hair as my scrub hens are of eggs. I care very little what people call me. If the name is appropriate I could not dodge it anyway, and if it does not fit it will soon drop off. Instead of feeling "humiliated," our three little people feel rather proud of their flaming tops. They know that this is an endearing title which fits them well. The color of their hair skipped two generations, but came originally from a very good man. As I write little Redhead sits by the fire reading a book about wild animals which keep warm and comfortable in the snow. I think the little fellow is rather proud of his title. They all know what we mean, and they take no offense. Out tumbling in the snow or sliding on the ice the red in their faces matches their hair, and while I cannot prove it scientifically, I think this red pigment is an indication of vigor and health.

WOMEN'S WORK.—This cold weather makes life a trouble to many farm women. Some of them are naturally delicate and cold and others have been overworked with trying to perform all their duties without conveniences. Our folks know what this means, for there were several years when all water was pumped from a well and brought to the kitchen stove. Then we piped it to the kitchen and finally arranged for a regular water system. Then there are cold and windy houses, inconvenient kitchens, and what is often worse, a lack of appreciation of what the mother tries to do. For "mother" is expected to be the hub of the household wheel, no matter how tired or sick she may be. It comes hard for her in such weather as we are now having. Great things for the benefit of the farm are being suggested. Many of them will be carried out and put in force. What about the farmer's women folks? Many years ago in a pioneer town out West there was a debate in the school house—on this remarkable subject:

"Resolved, that for a man on a backwoods farm a cow is of greater value than a woman."

The debate ran along about even until the affirmative speaker made this remarkable argument. He claimed that "value" meant money and nothing else, and that if the crops failed and the man could not pay interest he could sell the cow, while the woman would be an additional expense. This won the debate for the cow! The judge made his decision almost as follows:

"My sympathy is with the wimmin, but the money goes on the cow, for as we all know sympathy don't pay any mortgages or buy groceries."

A woman with her face shining with righteous indignation jumped up in the audience and told how she had with her own hands supported a lazy husband and fed a cow and five children, but the judge decided that her argument did not count, as she was not one of the selected debaters! Now I have had farmers tell me that the farm papers do not give them anything to think about. I suggest that there is some food for thought in that old debate, and the way the judge shut off the most effective speaker!

"EXCHANGE."—Some time ago a man in Florida thought he would like to exchange grape fruit or oranges for apples. As this was a new proposition his note was printed as an experiment. The letters began to pour in at once. This man wanted one or two barrels of apples, but at least 30 people wrote him wanting to exchange. Now I get this note from the Florida man:

That THE R. N.-Y. is effectives goes without saying. In this present case I am reminded of the Christian Science absent treatment for a man with one leg shorter than the other. The treatment worked fine for a while. Soon, however, the suffering patient appeared at the office of the doctor, who was out of town, with the request that the doctor be wired to "stop that treatment immediately; that the short leg was now longer than the other one."

There is no question about the fact that our readers are interested in an "exchange." Every person has wants and wastes. By the latter I mean things which he cannot use at home, yet which bring but little when sent to the wholesale market. There is always some one to buy these things at a direct trade if they can only learn how to get them.

RIGHTS IN A CHILD.—Here is a question which gets down to the root of trouble in many families:

Last Summer I took a little child to raise. The mother is dead, but the father came to see me and told me I could have her, but there are no witnesses to prove this except the child. Have I any hold on her, or can he take her any time he wants to? She is devoted to both my husband and myself, and the father never notices her or gives her a piece of clothing; will not even visit her. G. H.
Maryland.

This is one of the things we know something about. The safe thing for you is to take out guardianship papers or get the father to sign a paper to the effect that he gives up his right in the child. As a rule such men are very willing to have some one else provide for their little children. When such children grow large enough so that they can work and earn something such fellows usually show up with a demand for their "dear little ones." They want to put these "dear little ones" at work and pocket the income. You can of course present a bill for the care of the child, but the father will not pay it, and this would only make a bad feeling in which the child would join. H. W. C.

E. Frank Coe Fertilizers

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THREE hundred bushels per acre is not an unusual yield by any means, but did you get it this year?

¶If you were planning to raise 300 bushels of potatoes to the acre how far apart would you space your rows? How far apart would you drop the seed pieces in the row?

¶How much fertilizer would you use to grow 300 bushels of potatoes per acre? How would you apply it?

¶Are you sure that your seed potatoes are true to name and true to type?

¶What are you doing to prevent "scab" and early and late blight?

¶Did you have a short crop of potatoes because of dry weather? Have you decided how you will overcome this trouble in the future?

¶All these practical points, and many more, are fully covered in our new book

"Potatoes: A Money Crop"

which will be sent free to every potato grower who requests a copy, and mentions this paper.

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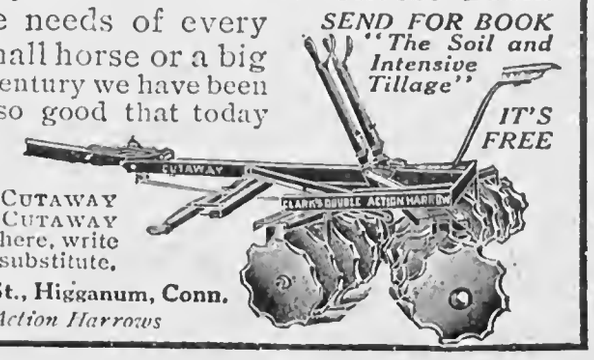

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Ruralisms

AMERICAN MEDICINAL FLOWERS, FRUITS AND SEEDS.

The above is the title of Bulletin No. 26, of the U. S. Department of Agriculture, contributed by the Bureau of Plant Industry. It is prepared by Miss Alice Henkel, whose previous bulletins on medicinal leaves, herbs and barks possess much interest and value.

In collecting medicinal material, the bulletin states that flowers bring the best price when, after drying, they retain as nearly as possible their natural color and odor. They should be gathered when they first open, and no faded flowers included. They should be carefully dried in the shade, and not allowed to become moist. Fruit or berries should be gathered when mature, and dried carefully, so that they do not stick together or become moldy. Seeds should be collected as they are ripening, just before the pods open; placed in trays, and dried carefully in the open air. They should be shaken frequently to insure even drying, bits of stem, leaf or shriveled seeds being removed.

Shipments should be carefully packed in sound burlap bags or clean boxes. It is advised that samples be sent before shipping, with full information as to the quantity the prospective seller has to dispose of.

Berries of the common juniper, Juniperus communis, sell for two to 2½ cents a pound; they are collected when ripe, usually about October. They are used for distillation of oil, for flavoring gin, and medicinally as a stimulant and diuretic.

The berries of the saw palmetto, Sabal serrulatum, are used officially in medicine, and sell for 25 to 27 cents a pound. The fruit ripens from October to December, but collection begins before it is fully ripe, in August, and extends into January.

Wormseed (Chenopodium anthelminticum) is a very common and exasperating weed, but its dry seed brings from eight to 10 cents a pound, while oil of wormseed is $2.25 to $2.50 a pound. We are told that in some parts of Maryland wormseed is cultivated to a considerable extent, for the distillation of this oil.

The berries of the familiar pokeweed (Phytolacca Americana) are gathered when fully mature, and carefully dried in the shade. They are poisonous, but of value in medicine, and sell for three to four cents a pound. Poke-root is also used medicinally.

Black mustard, Brassica nigra, and White mustard, Sinapis alba, are both troublesome weeds, and are both used in medicine. The fruiting tops are gathered before fully ripe, and placed on a clean shelf or floor to dry out and open the pods, when the seed is easily shaken out. It is quoted at two to four cents a pound.

Prickly ash (Zanthoxylum clava-herculis and Z. Americanum) furnish berries which, when dried, command 10 cents a pound. They are pungent and aromatic, and as found in commerce consist of the brownish seed capsule, sometimes still containing the black seed, but usually it has shattered out.

The handsome red berries of the smooth or upland sumac (Rhus glabra) should be gathered and dried while bearing the velvety covering, which gives them their acid taste. They bring about five cents a pound.

Linden or basswood flowers are collected in May or June and carefully dried in the shade. A tea made from the flowers is used for headache, indigestion or colds. In some European countries linden tea is regarded as very soothing to the nerves. The dried flowers are quoted at 35 cents a pound.

Seeds of the dangerous and deadly poison hemlock (Conium maculatum) are, while green but fully grown, carefully dried in a dark but well-ventilated place, and then stored in tight cans or boxes so that light and air are excluded. This seed brings eight to nine cents a pound. It has medicinal value, but the gatherer should always remember that it is a deadly poison.

Jimson weed (Datura stramonium) is another poisonous plant whose fruit and leaves are used in medicine. The seed capsules are cut when mature but still green and dried until they open. The seed is then shaken out, and spread to dry thoroughly. The seed is worth six to seven cents a pound.

Mullein flowers are collected when fully open, but not ready to drop, and carefully dried. They are listed at from 70 to 80 cents a pound. Elder flowers are dried quickly when fully opened, so that they are yellowish in color, not brownish or black; they are used as a home-remedy, and also officially, selling for 18 to 20 cents a pound. E. T. R.

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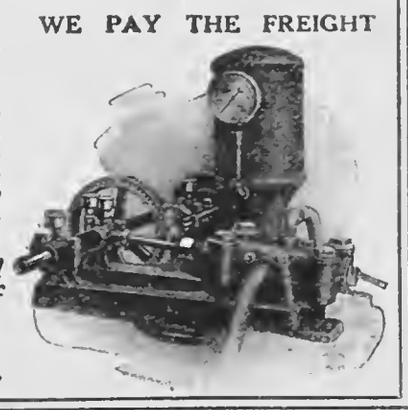

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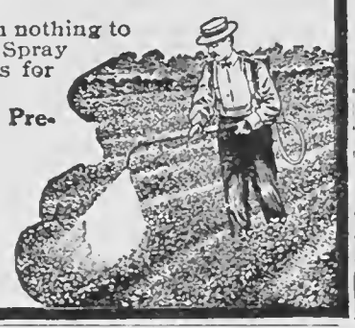

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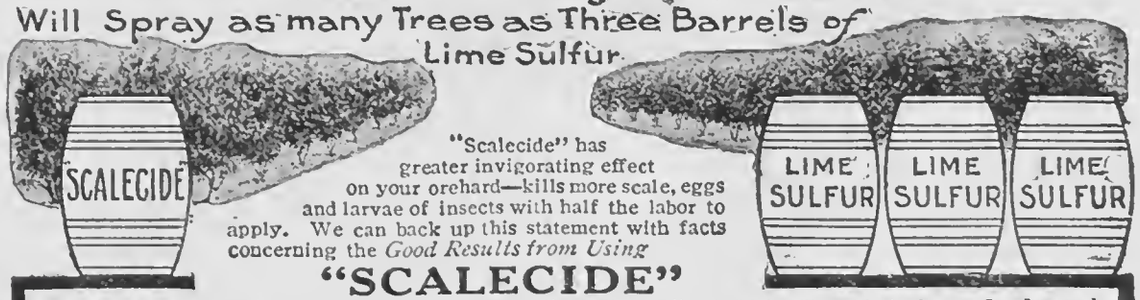

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WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

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DURING the past season we have had a dozen letters from farmers who have been led to believe that manure from cows which are fed on silage is too sour to use on ordinary land. As it is known that silage is sour these farmers argue that the manure must be. Some of this theory is due to agents of lime companies who are trying to sell lime. It is theory to think that manure ought to be sour because we know silage is. It is fact to examine the manure and find out. Such facts show there is no ground for the belief. The organic acids in silage are absorbed in the body of the animal. Such manure is not sour. At the same time the soil where this manure goes may need lime.

*

DID you ever teach a district school with very positive ideas about some proposition which you considered impossible or not practical? You advance these ideas with considerable force until some farmer came forward with the thing actually in operation. If you have been in this position you know how that article on skunk farming (page 158) hits us. We have seen many a skunk farm go back to failure. Yet here comes the great Conservation Commission of New York with five licensed skunk farms and a fragrant bill of health for the business. So they have "good skunks" de-scented with a pair of shears! A "good skunk" seems somewhat like a "good trust," denatured by force! However, we give the news and the facts—those gentlemen who wish to breed skunks may do so. Not any for us!

*

WISCONSIN seems to be carrying the idea of co-operative buying and selling nearer home than most other States. Now the scheme is to handle eggs through the cheese factory. The University Bulletin tells us:

> In one community near Milwaukee a group of farmers deliver their eggs at the same time that they deliver milk to the cheese factory. The eggs are then graded and packed, the operator being paid one cent per dozen for his service. The eggs are shipped twice a week from a nearby crossing on the interurban line and consigned to a Milwaukee grocer.

The grocer sells the eggs direct to his customers. Under this plan the farmers receive more for their eggs and have a steady market. Now this cheese factory was giving farmers a chance to bring their milk together and thus secure the benefits of manufacturing. Why not the same with another farm product—eggs? The cheese factory will make good headquarters for the sale of a dozen farm products.

*

YOU will admit that we have talked cover crops in school and out. When we had no better crop to sow we put in rye. We have kept up this talk because we know what these cover crops and lime are doing to our own soil. Some of the experts regard rye as a sort of despised crop by the side of clover and vetch. Give our old friend rye a chance and it will prove itself. Now we notice that the cover crop idea is spreading. A news note from the Ohio College states:

> In a locality where onions and celery are grown extensively, some of the truckers, late in December, were plowing their ground for next year's crop. They were turning under a good stand of rye that had been sown after the harvesting of the onion crop. This rye was of about three months standing and made a heavy growth which covered the ground with a thick mat of green vegetation. The roots had gone down deeper than the plow was running, and the entire furrow that was turned up was filled everywhere with a thick fibrous mass of roots. Two of the best results that follow such a treatment of soil are these: The decayed rye plant will go far toward keeping up the humus content of the soil and the great number of roots that everywhere permeate the soil will, after their decay, have left that ground porous and easy to work.

In this case, as we see, the rye followed onions and held the soil until Winter plowing. This rye during the 100 days of its growth had saved nitrates which would otherwise have been lost by drainage and filled the soil with its roots. It had not interfered with the usual culture, but had paid back three times the cost of seed and labor.

*

WE find much interest taken in those Oregon hens which laid 303 and 291 eggs inside of a year. In order to be sure about their breeding we wrote Prof. James Dryden, who had charge of their development. He says:

> The hen in question was bred from an original cross of Barred Plymouth Rock and White Leghorn. There was no White Plymouth Rock blood used. In the first cross the chickens were practically all white, and in breeding them back to Leghorns there is no trace of black or barring in them now. The hen which laid 303 eggs is not inbred or linebred, but the one which laid 291 eggs is the product of breeding a son to the mother. Though we got this one phenomenal layer the average results of our inbreeding are not good. J. DRYDEN.

It would be a mistake to encourage such close inbreeding. There might be a few great individual performers as the result of it, but the final result would be loss of vitality and disappointment.

*

> MASSACHUSETTS and New Jersey have nothing over New York State in misguided justice. Here is the New York case. The owner of a farm was annoyed by a prowler living in the vicinity who took advantage of every occasion when the owner and his wife were away and tried to get into the stable or the house. On the last occasion the owner came home and ordered this nuisance off the premises. He refused to go, and displayed a weapon, whereupon the owner relieved him of his weapon and then marched him off the premises by the coat collar. This man then procured a warrant for the arrest of the owner on a charge of assault and battery and obtained some village loafers, relatives of his, to perjure themselves in court, with the result that the owner was fined $10 by the justice *for putting a man off his own premises.* N. D. R.

We have no full record of this case, but in the facts here given the victim ought, as a public duty, to refuse to pay this fine and carry the case higher up. We have no doubt such things can be duplicated in every State where rascals take advantage of local courts and conditions. Personally, in such a case we should refuse to submit to such fool law, and thus compel the local "justice" to carry it up where the public could understand it.

*

IT is a pleasure for us to give Prof. Hedrick's admirable report on the "Hitchings" method of caring for an apple orchard. During the past 10 years there have been some hot arguments over this matter. When we get down past the fog and the prejudice we find that it is a matter of the man thinking out the plan best adapted to his own soil and location. We wrote Mr. Hitchings, asking him to discuss Prof. Hedrick's report if he cared to do so. We have received this letter:

> I did not hear Prof. Hedrick at Rochester. Raymond, my oldest boy, was there, and says he was fair in his report, admitting that at our place the mulch method was all right, and was a success in every way. That is just what we have claimed for the method. I also believe that at many points in the State the same success could be duplicated. After reading the report I may make a few comments, especially on condition of soil after 10 years of cultivation. The 25,000 trees under my care, all under mulch method, are the answer I give to those who want to know what I think of cultivation. GRANT G. HITCHINGS.

One of the best points Prof. Hedrick makes is that "*a man may break away from common practice * * * and yet attain a high degree of success.*" Hitchings is a pioneer who thought out his plan and then went at it regardless of laughter or abuse. We rejoice in his success for that reason.

*

THE Supreme Court of Washington has decided an important nursery tree case which will interest all who buy misfit trees. A nurseryman (A) sold 500 or more peach trees to a dealer (B), who in turn, sold them to a farmer (C). The trees proved to be misfits and C brought suit against B, winning a judgment. Then B sued A for the amount of this judgment with all costs and lawyer's fees added—all amounting to $2,306.45. On trial the lower court threw the case out on the plea that it was not brought within three years of the time of sale. The case was carried to the Supreme Court, which orders the case back for trial.

It is stated that the real intent of a guaranty in the case of fruit trees, though it may not be so stated, is that the tree will produce a certain variety of fruit, and this cannot be determined until the tree comes in bearing.

This is common sense and good law, for how can a buyer know that his trees are misfits until they actually bear fruit? He would be laughed out of court if he tried to prove his case from the leaves and type of a young tree. Some men wait too long after the trees bear fruit and prove to be "rogues." The safe rule is to get busy at once when the fruit gives the evidence. Send fair samples taken before competent witnesses to the Department of Agriculture at Washington, and be sure that you can prove beyond question that the trees which bear this misfit fruit are the identical ones you ordered and received. Unless you can do this you will have trouble to prove your claim.

*

THE secretary, E. C. Gillett, and the executive committee of the New York State Fruit Growers' Association were voted thanks in a formal resolution, but I doubt if they really ever knew of the real appreciation so often expressed and felt out in the audience among the members of the good work they had done, and of the general feeling of uplift.

This is taken from a private letter written by a farmer who attended the recent meeting at Rochester. There can be no doubt about the high regard which fruit growers have for Secretary Gillett and the other officers of the Association. These men have worked overtime to make the society a power. It has been a clean, honorable record, without graft or favoritism. We want these men to realize that fruit growers appreciate their work.

*

THERE has never been anything quite like the extensive use of muck as a fertilizer which will be started this Winter. On thousands of farms the muck is now being hauled out and mixed with lime or wood ashes. It will sweeten and ferment during the Winter, and in Spring give a fair supply of available nitrogen. Do not expect too much from this muck. You will be disappointed if you do. Hauling it out will provide a profitable job for a Winter day, but there is no great bonanza in it. The dried muck is good for absorbing the stable liquids or for mixing through the manure. When sweetened with lime it makes a good foundation for applying chemicals. By mixing bone or acid phosphate and potash with the muck you make a good substitute for manure. Here are the things to remember about muck. It is sour and must be sweetened with lime. It contains some nitrogen, a little phosphoric acid and less potash. It is not uniform; some samples have three times as much nitrogen as others.

*

THE Maryland newspapers report a legal case which should interest fruit growers. The facts as stated show that Walter E. Mueller worked under contract in a "unit orchard" controlled by J. H. Mertens. In 1910 Mueller began planting apple trees. He suggested that the pruning clippings be saved for use as scions. Mertens told Mueller to take the clippings, as he (Mertens) did not care for them. So Mueller packed a few bundles of these clippings and stored them in a basement. He later started an orchard company of his own and secured option on land, as these companies usually do. Trouble seems to have started and Mertens tried to secure these options. Finally he seems to have located the box of clippings which Mueller had stored. These boxes were seized and Mueller was arrested and jailed for theft. On trial he was acquitted, and then brought suit for malicious persecution. This case was decided for Mueller, but later the upper court reversed this verdict and ordered another trial. This second trial resulted in a verdict of $5,750 for Mueller, and this has been affirmed by the Court of Appeals. It looks as if this case represented a battle between "unit" or company orchards. We do not hear so much about these enterprises now, probably because there is little to say, and not much more money to be dug out of the public.

BREVITIES.

THERE is a genuine demand for a machine that will grate or scrape up beets or mangels for poultry food.

HERE is a sincere compliment to this genial season. In Quebec Province on November 27 farmers were still plowing and laying tile.

IN speaking of fine stock remember that *thoroughbred* refers to a race or breed of horses. Other animals are *purebred* if they are eligible to registry.

A NEW Wisconsin idea is a country cattle exchange where good cows and bulls may be listed for sale or exchange. Many good bulls are sacrificed because the men who really need them do not know the animals are for sale.

A GOOD open fire is one of the best fixtures for a farmhouse. It gives comfort and good cheer, and is also one of the best ways of ensuring plenty of fresh air. The draft up the chimney sucks away the foul air, and does it so there is no danger from colds.

AN actress recently crossed the ocean to this country carrying a Leghorn hen. Her object was to obtain a fresh egg every day. But the hen refused to lay! Someone says she did not have her sea legs on. A Plymouth Rock should have made a better working immigrant.

WHO can rightly find fault with Mr. Phelps for what he says on page 139. Some men are naturally fitted for work in managing a large farm. As a rule they are farmers by nature, and were trained by a good farmer. Most of our advice about small places is given to back-to-the-landers who never had much experience.

A READER whose farm is off the main road makes complaint about the rural mail delivery. This man has a box on the regular route, but must travel over a mile back and forth each day to obtain his mail. He wants to know how many country people are served by the rural delivery, how many of them are in his situation, and why the mail wagon cannot come to his door. We have received the following letter from Washington:

I beg to state that the latest estimates indicate that 5,040,129 families are receiving rural delivery service, or a total population of 23,184,593. There are no data available to show what proportion of these patrons reside at remote distances from the lines of the routes.

With reference to your statement that complaints are made by patrons who are obliged to travel half a mile or more in order to reach their boxes, it should be stated that the Department endeavors to operate rural delivery service upon public roads which are the more thickly settled. It is not practical to serve all patrons at their residences and many persons who do not reside on the roads traveled by the carrier receive service by erecting boxes along the lines of the routes.

W. J. SATTERFIELD,
Acting Fourth Assistant Postmaster General.

We see little hope in that for an extension of the route. The proper plan is to apply to the postmaster. If he refuses apply to Washington. If you can "apply" hard enough an investigation will be made, but usually the postmaster decides it.

*

I STARTED to take your paper last Fall, and while looking through it I notice you answer a lot of very important questions, which are a great benefit to the farmers, as well as many other people. Do you answer these questions free of charge? If so, what is the difference between burnt lime and ground rock lime? If any difference, what is it, and which one is the better?
New Jersey. S. J.

The questions from subscribers are answered freely. We appreciate plain and sincere questions, because they show better than anything else what our readers are thinking about, and what their problems are. Up to January 22 we had written 2,001 letters besides the hundreds which are answered in print. It is not always possible to answer all such questions off hand, as many of them require the opinion of an expert, and must be sent away for replies. In one case a reader sent 15 questions at one time, written in a small and not very clear hand on both sides of the paper. They ran all the way from a legal matter to the care of a sick cat. We were obliged to copy these questions and send eight of them away to different authorities. The instructions here are to answer such questions patiently and with good nature, no matter how often they have been covered in print. For example, take this lime matter. We must have stated 300 times that lime rock as it comes from the soil is called raw lime. When it is crushed or ground finely it is called ground limestone or carbonate of lime. When burned with wood or coal in a kiln the limestone loses its carbonic acid and is known as caustic, quick, lump or stone lime. When this burned lime is left exposed to air or water it "slakes" or takes up moisture, and is then known as slaked lime. This slaked lime is better for use on very sour or tough, hard soils, or where you want a quick action. The ground limestone is suitable for the lighter soils, or for soils well filled with organic matter. The rule is to use twice as much of the ground limestone as of the slaked lime for equal results.

*

IN spite of all we have stated about this potato quarantine, there seems to be some question about imports. We understand that potato buyers in some localities are still telling farmers that the markets are flooded with foreign potatoes, and that the price should be cut in two. This is absolute nonsense or worse, and farmers should not be frightened or bluffed by such talk into giving away their potato crop. The Secretary of Agriculture has ordered that the quarantine against foreign potatoes be extended so as to cover Great Britain, Germany, all the rest of continental Europe and Canada. This order was made effective on December 24. Shipments then started will be admitted up to January 15, after which no potatoes can be brought from these foreign countries until the quarantine is raised. No more potatoes can be brought into this country from abroad until the growers and shippers can satisfy the Department of Agriculture that their stock is free from disease. Such potatoes in order to be admitted must be certified by the government of the country where they were grown, to be free from dangerous disease and insect pest which are new to this country. It must also be proved that such potatoes were grown in a district free from the wart disease and powdery scab. It seems that Canada has absolutely prohibited imports of potatoes from Europe. This includes Great Britain and Ireland, and also the neighborhood island of Newfoundland. These diseases are widespread abroad, and it does not seem likely that they can be stamped out for some years. This year's crop is large enough to supply all the potatoes needed by our own people, if it is distributed fairly and sold at reasonable prices. The demand for large imports of potatoes from foreign countries was worked up largely by the importers and buyers, who desired to use these stories of enormous imports to keep down the price of what they could buy from our farmers. Pay no attention whatever to such stories from the middlemen and buyers. Our city markets are not flooded with foreign potatoes, and they cannot be so flooded now as long as this quarantine holds. The crop should bring a fair price to the farmer. It will not be wise to speculate and hold them for an excessive price, for the moment that the price of potatoes reaches a certain point, the public will stop buying them and eat cornmeal and rice instead. The situation has now been made clear, and the American crop ought to be regulated in price very largely by supply and demand.

*

AMENDMENTS TO THE COMMISSION LAW.

The New York Commission Man's Law has demonstrated both the need of such legislation, and also the fact that certain amendments are needed to make it fully effective. The principle of the law is right, but a year ago the commission men succeeded in striking out certain provisions, which have made it difficult in some cases to obtain the full rights of shippers. During the present Legislature amendments must be passed to strengthen this law so as to give full protection to the farmer. The amount of the bond should be increased from $3,000 to $5,000. The object of this is to prevent loss in case of failure or rascality on the part of the commission house. There have been cases in the past where commission merchants did a large business, and were able to obtain full credit from their shippers. After handling a large volume of trade, and working up large debts they failed or absconded, and their customers lost practically everything. By increasing the bond to $5,000 the creditors in such cases would have at least that amount of money to divide among them, and this would help. There have been a number of complaints where shippers felt they did not receive a fair price. Upon investigation it was found that the commission man had kept no record whatever, from which the sales could be traced by him. He simply had a little memorandum stating cash so much, or a similar statement. In such cases it was impossible to carry the investigation further. This made the investigation so limited and so hampered that there was really no way of telling what these goods sold for, or whether the shipper actually received what was due him. An amendment to the law is therefore absolutely necessary. The commission man must be compelled to keep accurate records of his sales, so that an investigation will show who bought the goods, and what was paid for them. In the original bill there was a provision of this kind. The commission men were able to cut it out, and experience has shown that such a provision is absolutely necessary to make the law effective. Again, a fair amendment is necessary to guard against the practice where commission men take goods on their own account. This is one way in which the shipper is often defrauded. Goods may be received by a commission man and sold to his own account, or to some relative, or to some other house in which the commission man is indirectly interested. It is possible to make such sales at a very low figure, and make returns on this low basis, no names being given. Then the goods are sold again to the dealer or retailer at a much higher price, the commission man sharing again in this rake-off. An amendment is needed to stop this practice. All these things will be brought up in the Legislature this year, and farmers throughout the State must get together once more, as they did back of the original bill, and put these amendments over.

*

PORK PRODUCTS DIRECT TO CONSUMER.

We have about 30 pigs that we wish to kill the last of the month. The thought has occurred to us that possibly we might dispose of them in the form of sausage, ham, and bacon, either fresh or cured. These pigs have been fattened on sweet condensed milk, and cornmeal, they are in fine condition, and the meat is specially good on account of the sugar in the milk. They will weigh dressed from 100 to near 150 pounds. We have killed a few for our own use, and we would have from the 30 about 600 pounds of sausage. We can get 18 cents per pound for the sausage here in limited quantities, 20 cents for the hams, and 18 for smoked shoulder. It would be our plan to put the sausage up in five and 10 pound pails or cartons, and deliver by parcel post in the second zone for 20 cents per pound. The ham we would deliver for 22 cents per pound. We would also ship fresh hams for 20 cents delivered. We wish you would write us your opinion of this scheme. Do you think the above prices would appeal to your city readers? The prices are the same as we can get in our home market, only the demand here is quite limited. The product will be pure pigs' meat, and delivered in good condition. F. S. MACKEY.
Schoharie Co., N. Y.

We follow the plan of giving publicity to new experiments in seeking a direct trade. The success of this business will depend entirely upon the quality of the goods. If your sausage and hams are superior, and put up in neat packages, they will sell after people sample them. You cannot expect to jump into a large trade at once. Remember if you were the buyer you would naturally order a small lot at first. If the goods were satisfactory you would order more—if not you would not touch them again. In a trade of this sort you will have to "follow up" your orders and keep after your customers. Do not expect them to come after you entirely. On general principles it will be better to go after trade in the towns and cities nearer home rather than to try general advertising in the larger cities. Within 100 miles of your farm you ought to find a satisfactory market for all this meat. Work the local market to the limit first. The prices you mention would be satisfactory for high-grade goods.

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THERE are many stories told of Horace Greeley and the wonderful hold he had upon his readers. At one time an agent in a country neighborhood found a farmer sitting on a fence too much troubled over something to go to work.

"You don't seem happy," said the agent.

"I'm not. I had an argument with my neighbor over south on the tariff, and he beat me. Raised a point I couldn't answer, and he crowed over it!"

"Can't answer him, eh?"

"You just wait till Horace Greeley's paper comes. I wrote him about it. He'll print the argument I need and then I'll go and wipe my neighbor off the earth!"

Those were the strong, golden days of personal journalism—days of stronger prejudice and passion than we now know. There were fewer books, and facts were given out by men who had keen instincts and shrewd knowledge of human nature. These farmers believed in Greeley because he seemed one of their kind, who had their interests at heart. When he said a thing in print they believed it, and were quite willing to fight for it. THE R. N.-Y. has no desire to be considered an authority on partisan politics, or appeals to prejudice. It is our ambition, however, to learn and express those truths about farming which may set farmers free. There will always be differences of opinion regarding the most simple proposition. We do not pretend to lay down the law in any dogmatic spirit, but we believe that a thorough discussion among our readers will sift any proposition down to the truth. Instead of waiting for someone else to settle the matter for him, we encourage a farmer to think it out for himself.

Potato Statistics.

The U. S. Department of Agriculture makes the following statement regarding commerce in potatoes:

The largest importation of potatoes in any single year occurred in 1912, when the total quantity imported was 13,750,000 bushels, the next largest being in 1909, 8,333,000 bushels, and in 1902, 7,666,000 bushels. The total quantity imported since 1900 is practically 37,000,000 bushels and the quantity exported in the same period, 16,000,000 bushels, the total production in the United States during that period having been over 4,000,000,000 bushels, or an average of approximately 300,000,000 bushels per annum, the figures of recent years averaging about 300,000,000 bushels per annum except in years of abnormally short crops.

The high importation of 1912 followed the short crop of 1911, when the total production was but 293,000,000 bushels, against 349,000,000 bushels in the year immediately preceding. That of 1909, 8,333,000 bushels, followed a short crop of 279,000,000 bushels in 1908, against 298,000,000 in the year immediately preceding; and that of 1902, 7,666,000 bushels, followed a crop of but 188,000,000 bushels in 1901, against 211,000,000 in 1900.

England, Scotland and Ireland are the chief sources of supply of the potatoes imported. Of the 13,750,000 bushels imported in 1912, 4,666,000 came from Scotland, 4,500,000 from Ireland, and 3,333,000 from England. The other principal countries from which potatoes were imported in 1912 were: Belgium, 336,000 bushels; France 243,000; Canada, 143,000; Bermuda, 132,000; and Netherlands, 122,000.

Potatoes exported go chiefly to Cuba, Canada, Panama, Mexico, Colombia and Venezuela. Of the 1,250,000 bushels exported in 1912, 659,000 went to Cuba; 256,000 to Canada; 114,000 to Panama, 97,000 to Mexico; 12,000 to Colombia; and 11,000 to Venezuela.

Potato production in the United States is small, compared with certain other countries having a smaller area and less population. The product of Germany in 1911 was 1,263,000,000 bushels; Austria, 426,000,000; France, 424,000,000, and the United States, in that year, 293,000,000 bushels. The production of the United Kingdom, from which our chief importations are drawn, is considerably less than that of the United States, having been 281,000,000 bushels in 1911, of which 138,000,000 were produced in Ireland, 100,000,000 in England, and 36,000,000 in Scotland.

The farm value of the potato crop of the United States in 1913 is estimated at $228,000,000, a larger total than that for any earlier year except 1911, which was $234,000,000.

Buy Delicious--Leader of All Orchard Money-Makers From Its Home and Headquarters

Stark Delicious, the crowning glory of the apple kingdom, originated on the farm of the late Jesse Hiatt, at Peru, Madison county, Iowa, in about 1870.

Mr. Hiatt was a man of sound judgment in matters pertaining to fruit, and when he saw the little tree which had found lodging in a corner of his orchard, he knew it was worth preserving.

There had never been a tree like it before. It was a sturdy specimen—well shaped. Mr. Hiatt believed that here was a discovery that would some day bless all mankind.

He nursed the tree carefully and gave it the most tender care. Finally it bore fruit—and all of Jesse Hiatt's confidence in the new variety was realized.

It bore fruit that looked different from everything else—more beautiful than any variety he had ever seen—and that *tasted* better than any other apple.

Mr. Hiatt looked about for a concern whose ability and reputation justified its propagation. He offered it to the Stark Bros. Nurseries and Orchards Company, of Louisiana, Mo., and samples of the fruit were sent to Clarence M. Stark, then president of the Company, for expert tests as to real apple quality.

After Mr. Stark's conviction as to the great posibilities of Delicious had been firmly formed—after experiments with it in various parts of the country had established it as the *greatest* of all apples and a *national* apple good for all climates, he paid a visit to the home of Jesse Hiatt, examined the original tree, purchased it with the exclusive, perpetual rights of introduction and propagation, and entered into a legal agreement with the man who had discovered and preserved it. The name "Delicious" was registered by Stark Bros. in the United States Patent Office as a trade-mark, and soon the great work of sending this matchless variety to all the civilized world was on in real earnest.

Since then 15 million Delicious trees have been propagated and shipped from the *home* and *headquarters* of Delicious at Louisiana, Mo.

Are *you* familiar with Delicions quality? Have you had the pleasant *profit* experiences of all who plant Stark Delicions trees?

If not, *this is your year to start.* Our Delicious stock is particularly good this year, and you can't go wrong in *ordering early.* We recommend that you get your order in without delay.

Read What Growers Say About Stark Delicious Profits

Mrs. E. A. Johnson, Hamilton, Mont., says: "On eight to ten-year-old apple trees I figure $500.00 to $600.00 per acre net profit. From our experience I think this conservative. We have received as high as $10.00 per box for Stark Delicious, while $5.00 is readily obtained."

J. S. Huey, Chicago, Ill.: "I asked in one of the high-grade fruit houses of Chicago if they handled Stark Delicious. They said they did, and that they paid $9.00 per bushel box for them, and would be glad to pay $12.00 per bushel box for them at that time."

F. S. Burgess, Chelan Co., Wash., realized net profit of $882.93 from thirty-six ten-year-old Stark Delicious apple trees. These trees occupy only one-third of an acre of ground. The preceding year the returns from the same trees amounted to $1,500.00, the crop of that year being considerably heavier.

"Last season I sold my orchard very satisfactorily, or to express it more truthfully, the Stark Delicious sold the orchard. I have some sixty varieties of apples, but if I were to do it over would plant at least half to Stark Delicious."—Adam Thompson, Buchanan County, Missouri.

"Stark Delicious brought $7.50 per per barrel. I have ten trees of this variety, bought seven years ago, which bore heavily this year. In fact, they produce more fruit than any twenty trees of other varieties planted at the same time."—J. S. Coleman, North Carolina.

"Stark Delicious have withstood 50 degrees below zero without injury. The same is true of Stark King David."—R. J. Wiggins, Province of Quebec.

STARK TREES AT LOUISIANA, MO. SINCE 1816

The Story of a Grand Old Tree

Below is a recent picture of the original Delicious tree (photographed Dec. 28, 1913), which Jesse Hiatt gave to the world when he sold exclusive right of propagation to Stark Bros. Nurseries and Orchards Co., of Louisiana, Mo.

The gentleman with the moustache is S. L. Hiatt, son of Jesse Hiatt, discoverer of the tree and the man who made the contract (still in force) with Stark Bros. The other man in the picture is the Official Photographer of the Stark Bros. Company.

This illustration shows the grand old tree in its present rotting condition—worn out, overgrown with watersprouts and worthless for propagating purposes.

But the splendid monarch of the orchard has done a great work. No other apple tree has such historical interest as this veteran—the wonderful gift of nature.

When Stark Bros. secured from Mr. Hiatt in 1894 the perpetual right of propagation from the original tree, and when Clarence M. Stark (then president of Stark Bros.) went to Iowa to inspect the first Delicious that ever grew, this tree was in its prime. Its strong, vigorous, upright limbs bore an enormous crop without breaking. Stark Bros. sent out many trees directly from cuttings from this old original Delicious tree up until late years.

The ravages of time, the bleak winters of nearly half a century, the various enemies of tree life were withstood for a long time, but in later years this grand old tree has rapidly given away. In face of these overwhelming odds, the old tree still battles despite the heavy *inroads* of *decay* which have eaten to its very heart, causing it to become overgrown with watersprouts and greatly weakened.

But the original Delicious tree has accomplished its purpose. From it have been taken, in the prime of life, scions which have been propagated by Stark Bros. and grown to thrifty, vigorous young trees. Stark Bros. have sold to the progressive orchardists in every section of the country these Delicious trees, and to-day these splendid orchards are bearing crops, bringing the growers profits hitherto thought impossible. In fact, these Delicious orchards have rivaled and even surpassed the wonderful record of the original tree.

So we—the *developers* and *introducers* of Delicious—thus pay tribute to this now useless servant of mankind, and to Jesse Hiatt, its noble discoverer, of whom S. J. Hiatt wrote when the veteran died in 1898 at the age of 70 years: "Although not well, he obtained great peace of mind and his countenance shone like one who confers a great blessing on the children of men when, through the energetic and reliable Stark Bros., he gave his apple to the world."

Original Delicious Tree in 1913—Stark Bros. representative at left, S. L. Hiatt at right

Stark Bros.--Introducers of This Greatest Apple, Offer You Its Profit Possibilities

GENUINE STARK TREES BEAR FRUIT FROM LOUISIANA, MO. SINCE 1816

Careful experiments were made with Delicious in all parts of the world. Some varieties succeed in one section, some in another. Some require a certain kind of soil. Some are adapted to a cold climate, others to a mild. Some are short season fruits.

But when the reports regarding Delicious began to come in, there was a revelation. For this apple appeared to be *perfectly* adapted to *any* conditions. From North, South, East and West came *one report,* and that was favorable to the Delicious as the *greatest* of all apples.

Stark Delicious is large, with a surface almost covered with brilliant dark red, blending to a golden yellow at the blossom end and over-flecked with small yellow dots. The blossom end is its characteristic feature—having five knob-like protuberances more or less pointed or rounded, depending on the section where it is grown. It is the one apple *trade-marked by nature.*

Stark Delicious is as hardy and sturdy as the oak. It is one of the strongest growing, most vigorous orchard trees, a strong pollenizer, a late bloomer; resists all tree enemies. The blossoms will stand several degrees more cold at blooming time than others.

In flavor, this apple is indeed *delicious.* Its flesh is of finest texture—smooth-grained, tender, juicy.

THE GREAT STARK SEAL.

Every package of Stark Bros. trees is carefully put up by experts and then sealed with the seal shown above. Stark Bros'. goods always reach you in good condition. *None are genuine without this seal.*

STARK BROS. GREAT SELECTIVE LIST.

Stark Bros. are the world's foremost tree growers. They grow all good varieties of apple and offer them in any quantity. Also all good varieties of peach, pear, plum, cherry, apricot, quince, nectarine, grape vines, blackberry, raspberry, gooseberry, dewberry, currant—everything the fruit grower wants. Shade and ornamental trees, ornamental shrubs, climbers, hedges, roses—everything to beautify your grounds.

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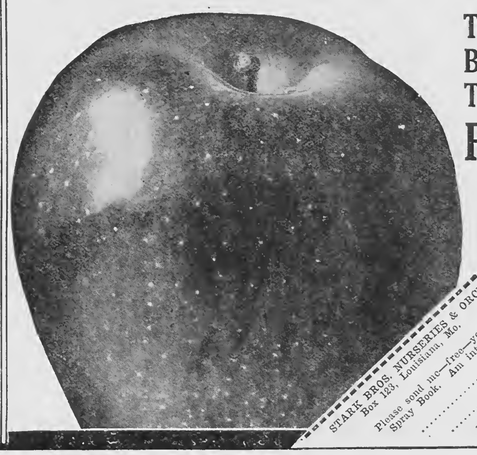

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Woman and the Home

From Day to Day

THE SLEEP.

"He giveth His beloved sleep."—Psalm cxxvii, 2.

Of all the thoughts of God that are
Borne inward unto souls afar
Along the Psalmist's music deep,
Now tell me if that any is,
For gift or grace, surpassing this:
"He giveth His beloved sleep?"

What would we give to our beloved?
The hero's heart, to be unmoved.
The poet's star-tuned harp to sweep,
The patriot's voice to teach and rouse,
The monarch's crown to light the brows?
He giveth His beloved sleep.

What do we give to our beloved?
A little faith, all undisproved,
A little dust to overweep,
And bitter memories to make
The whole earth blasted for our sake;
He giveth His beloved sleep.

His dews drop mutely on the hill;
His cloud above it saileth still,
Though on its slope men sow and reap;
More softly than the dew is shed,
Or cloud is floated overhead
He giveth His beloved sleep.

—Elizabeth Barrett Browning.

*

A RECENT census of the Balkan States shows that the war there has reduced the male population of Bulgarian Macedonia from 175,000 to 42,500, while in Mustapha Pasha only 4,000 men remain, out of 33,000 before the war; in Thrace the men have dwindled from 494,000 to 225,000. This means that women and children must take up the customary labors of the men, and struggle against foes no less cruel than enemies in battle, for poverty, starvation and disease call for as much heroism as sword and gun. This has been the woman's part since war came into the world, and when we eulogize the field of glory, and hang medals and gold lace upon its heroes, we may well think long upon the toil-worn women, the prematurely aged children, who present the other side of the war god's shield.

*

A RECENT query was regarding silos for women farmers—whether it would not be difficult, if not impossible, for them to get the silage out. Dr. Katherine B. Davis, Commissioner of Correction of this city, in discussing her work at the Bedford Reformatory recently, made a statement about her charges there that has some bearing on this question. She said:

"We turn out good farm laborers, too, for our girls built a splendid silo at Bedford, built concrete walks and root cellars. They take care of the pigs and make the garden. People said, 'Aren't you afraid the girls will fall from the ladders, building that silo?' Well, I never could see why a girl should fall off a ladder any more than a man. There's no sex in climbing ladders."

*

HERE is a recipe for rabbit loaf from a Western reader, which will be found very savory: Stew the rabbit with two good slices of fat pork, one bay leaf, a piece of onion cut fine, until it can be taken from the bones. Reduce the liquor to two cups and add one-quarter box of soaked gelatine. Lay a few slices of hard boiled egg on the bottom of a plain mold. Season liquor with salt, half teaspoon pepper, one of sage, one-third cup vinegar and mix well with rabbit cut into small pieces with knife or run through grinder; set in cold place to harden.

*

A WARNING that may be added to other "safety" suggestions is conveyed by a recent case in this city. A baby playing with a celluloid rattle touched a hot kitchen stove with the toy, which caught fire immediately, and the poor baby was fatally burned before the flames could be extinguished. The extreme inflammability of celluloid is not always considered, yet there is a long list of serious or fatal accidents resulting from combs or other small articles of celluloid touching stove, or candle, or gas jet. Children should be warned of this danger, and it should always be kept in mind in the household, where so many celluloid articles are in constant use.

*

MANY people look upon collecting postage stamps as a harmless but extremely juvenile hobby. That it may be a very costly one is shown by the recent sale, in London, of a collection of British stamps made by the late Earl of Crawford; it sold for $80,000. Lord Crawford was president of the British Philatelic Society, and his collection of stamps was said to be second only to that of King George, who has been collecting since boyhood. The Crawford collection of American stamps which has not yet been sold, is of very great value, some single specimens being held at $1,500 each.

The Country Church as a Social Center.

"Meeting," is an appropriate word for the country church service. Last Sunday was a typical day at the little church near a "corner" with a half a dozen houses, mostly Summer homes, now deserted, clustered about it. Before the appointed time, 2:30 p. m., the people began to gather, and kept coming until three o'clock, and still no minister in sight. This was a service held at the "out appointment"; that is, this little band of church-goers have no resident pastor, although so-called union services are held each Sabbath in the pretty little church. One week the Methodist minister from a charge four miles away comes and preaches, alternating Sundays with an Episcopal clergyman living at C., six miles away. To the credit of these two good faithful men it may be said that not many services during the year are missed, although often, especially in the Winter season, roads are well nigh impassable, and the cold winds off the river here like blasts from the North Pole. On this particular Sunday the roads were deep with mud and snowy slush, and the young minister's old horse slower than usual. As the people waited, the gathering in the little church took on the appearance of a social. Neighbors and friends laughed and visited, and children and older boys and girls were merry and gay as could be. Occasionally some one would go out and look for the minister. Finally t 3:30 his coming was announced.

One little three-year-old who had become tired waiting was sent home with an older brother, and the rest of the congregation settled back in their pews orderly and sedate. The young minister came in frankly pleased to see so many out on such a "bad roads" day, thanked us for waiting so patiently and apologized for being so late, saying he had been two hours on the way. Old familiar hymns were sung, and with the accompaniment of the organ made sweet music, so heartily and unaffected by the old tunes were rung out. The brief sermon was a simple and plain discussion of a Bible truth applied to every day life.

After the benediction the people still lingered and seemed loath to go, talking with the minister and with each other, until the light of the short December day was almost gone. F. J. F. F.

The Guest Book.

I hope each suburban or rural woman has a guest book. It does not have to be an expensive affair, but just buy a neat and pretty blank book. Mine has a red leather cover, and I have written these lines in the front. They are indeed a quieting bedroom motto.

"Sleep sweetly in this quiet room,
Oh thou, whoe'er thou art,
And let no mournful yesterdays
Disturb they peaceful heart.
Nor let tomorrow scare thy rest
With thoughts of coming ill;
Thy Maker is they changeless friend,
His love surrounds thee still;
Forget thyself and all the world,
Put out each feverish light,
The stars are watching overhead,
Sleep sweetly then. Good night.

My book contains the names of all the over-night guests for 10 years, and it is a great pleasure to turn the pages and read the names. It brings a flood of pleasant memories as the visits of far away friends are renewed in the mind. I hope this hint will be strong enough to place a guest book in every guest chamber. CORA JUNE SHEPPARD.

Smothered Meats.

Smothered Veal.—Cut the veal in pieces convenient for serving and season with salt and pepper. Roll in bread or cracker crumbs and put at once into a hot frying pan in which are two tablespoons of butter and drippings mixed. Brown quickly on both sides and then cover closely. Put in the oven and bake 30 or 40 minutes, or until the meat is well done, according to the kind of fire. A very hot fire will cook it sooner.

Smothered Pork.—Take nice pieces of fresh lean pork and season well. Fry brown on both sides and finish in the oven. May be rolled in crumbs if liked. Make a brown gravy when the meat is removed.

Smothered Chicken.—Clean and joint a young chicken. Season with salt and pepper and roll in flour. Have ready three tablespoons of butter very hot and brown the chicken all over quickly. Be careful not to burn it. Cover and place in the oven for one hour. Make a cream gravy after the chicken is taken up.

Smothered Beefsteak.—Cut the steak in thick pieces for serving and pound well if tough. Season and roll in flour. Brown quickly in a hot skillet in mixed butter and fryings and then cover closely and finish in the over.

Smothered Beefsteak With Onions.—Peel one onion for each piece of steak and cut rather fine in slices. Put in a granite pan one hour before dinner with a tablespoon of butter and salt and pepper. Half an hour before dinner prepare the beefsteak by the above recipe and when ready to put in oven spread the onions over the top. Cover closely and and finish in the oven.

Smothered Beefsteak With Tomatoes.—Proceed as by the first recipe and when ready for the oven pour over the steak two cups of boiling hot seasoned tomatoes. Cover and finish in the oven.

Smothered Duck.—Clean and joint a young duck. Season the pieces and roll them in flour. Fry brown in butter and drippings. Add one half pint of boiling water and cover closely. Cook in the oven until done.

Smothered Rabbit.—Soak the rabbit over night in salt water and in the morning wash and season. Roll the pieces in flour and fry brown very quickly in hot drippings. Cover and finish in oven watching that it does not get too hot.

HILDA RICHMOND.

THIS WASHER MUST PAY FOR ITSELF

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse. But, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse wasn't "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse although I wanted it badly. Now this set me thinking.

You see, I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see, I sell my Washing Machines by mail. I have sold over half a million that way.

So, thought I, it is only fair enough to let people try my Washing Machines for a month before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman and it don't wear the clothes, fray the edges nor break buttons the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight, too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months, in wear and tear on the clothes alone. And then it will save 50 cents to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

Address me this way—H. L. Barker, 200 Court Street, Binghamton, N. Y. If you live in Canada, address 1900 Washer Co., 357 Yonge St., Toronto, Ont.

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When ordering patterns always give number of pattern and measurement desired.

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Boy's suit, 2 to 6 years. With or without stock collar, with long or short sleeves. 8095 Child's dress, 2 to 6 years. With round or high neck, or long or short sleeves.

8130 Loose coat, small 34 or 36, medium 38 or 40, large 42 or 44 bust. 8112A Russian blouse coat, 34 to 40 bust. 8100 Coat with kimono sleeves for misses and small women, 16 and 18 years. 8427 Girl's coat in sports style, 10 to 14 years.

In three-quarter or full length. 7395 Child's double-breasted coat, 1, 2, 4 and 6 years. To be buttoned up closely or rolled over to form revers, with or without cuffs and pockets. Price of each pattern 10 cents.

Corn on the Table.

Corn is so rich in oil ("fat" in the scientific terminology) that it is a particularly good food for the Winter months, and especially so for those who are much out of doors. But it is well, at times, to introduce a variety into its uses, so that it will not pall upon the taste. The following are specially good recipes from my mother's cuisine, most of which I have never seen elsewhere:

Corn Bread.—Indian meal, yellow, one cup; flour, sifted, two cups; one-half yeast cake; shortening (lard or pork), one-half cup; salt, teaspoon. Scald the meal with two cups of boiling water, stir until thoroughly mixed, then cover. Put the one-half yeast cake into a cup of water, while you sift the flour into a mixing bowl with the salt. Add the yeast and water. Mix all into a sponge. When light, about four hours later, add the meal, stirring thoroughly. Melt the shortening and add that, mixing all. Cover, and let it rise. Pour into hot baking tins that have been well greased, and bake in a quick, but not too hot, oven, 30 to 40 minutes, more rather than less especially if the heat varies. Good cold or hot, for any meal.

Hulled Corn.—One quart cracked yellow corn; one teaspoon baking soda; plenty of water. Wash the corn several times. Put it in a kettle with the soda, and cover with water two or three inches above the corn. Bring to a boil, and stir often. Then cover, and let it simmer two hours—or longer. Drain off the water and rinse, rinse, rinse. Cover again with water, and with the kettle cover, and again bring it to a boil. Set it back, tightly covered, after salting to taste, and let it cook, cook, cook, four hours or more—when it is ready to dish up and eat with milk or cream as a cereal, or with pork fat or butter as a vegetable.

Johnny-Cake Crisps.—Two cups yellow meal, one cup sifted flour, one egg, one cup milk, two cups boiling water, one-half cup shortening, one tablespoon sugar, one teaspoon salt, three heaping teaspoons baking powder. Scald the meal with the boiling water; cover, and let it stand to swell. Sift the flour, salt, sugar and baking powder together, and mix thoroughly with the milk. Melt the shortening, and add it. Beat the egg, then heat the batter and add the scalded meal. Pour in thin layers on well greased tins, baking in a hot oven until it is a stiff brown crust, with but little "soft" middle part. Break into small pieces while hot, and serve in bowls of rich milk; or, in hot milk gravy on plates.

Parched Cornmeal.—Parch the corn, instead of popping it, by holding over a slow fire. When dried through, as it must be, to get just the right taste, cool it and grind moderately fine in the coffeet mill or the meat chopper. Salt it, and serve in milk as a cereal, with or without heating.

Corn Coffee.—Brown the corn in a hot oven, until a deep brown. While hot add a teaspoonful of butter to each pint of cornmeal, after grinding as above, but coarser. When cool, break an egg, shell and all, into each quart. Make and serve as you would ordinary coffee.

Cornmeal Mush "Butter Cakes."—Make the mush as usual, one cup meal to three of salted water, cooking slowly after it begins to boil, but stirring constantly to keep it smooth, until it is ready to "simmer." Then add an egg, a cup of sifted flour, and half a cup of butter, stirring all thoroughly. Cover and let it sit on the back of the stove half an hour. Turn on to buttered pie plates, filling each near to the top. Smooth off the surface and let it cool. When cold, cut with a small biscuit cutter into rounds, which fry on a well buttered griddle or in deep fat, according to taste, and purse, a light brown. Cut open while hot, to butter, or serve with syrup or honey without cutting. Daintier if baked on buttered tins, in a hot oven.

LUCY A. YENDES.

Dried Apple Pie.—There is no reason to be contemptuous of dried apple pie if it is made after this recipe: Stew enough dried apple to fill one pie until tender; it is well to soak the fruit first. Press through sieve, sweeten to taste, add a small lump of butter and one-fourth teaspoonful dried cinnamon. Line a pie tin with paste, bake lightly, then fill with apple, cover with a meringue made by beating the whites of two eggs with three tablespoonfuls of sugar, and brown in a moderate oven.

Oatmeal and Peanut Macaroons.—Mix two and one-half cupfuls of rolled oats, one cupful of sugar, two eggs, beaten separately; one tablespoonful of melted fat, two teaspoonfuls of baking powder, one saltspoonful of salt, one teaspoonful of vanilla and one cup of shelled peanuts, chopped fine. Flour the hands and make in small balls, place on buttered baking pans some distance apart (to allow room, as they spread out flat). Bake, taking care not to burn. These are very good.

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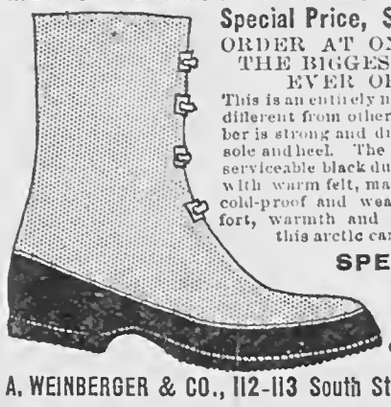

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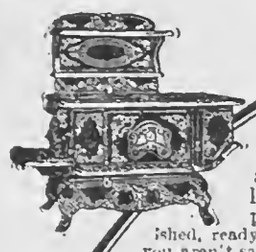

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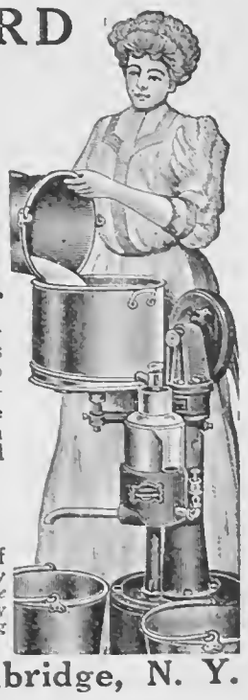

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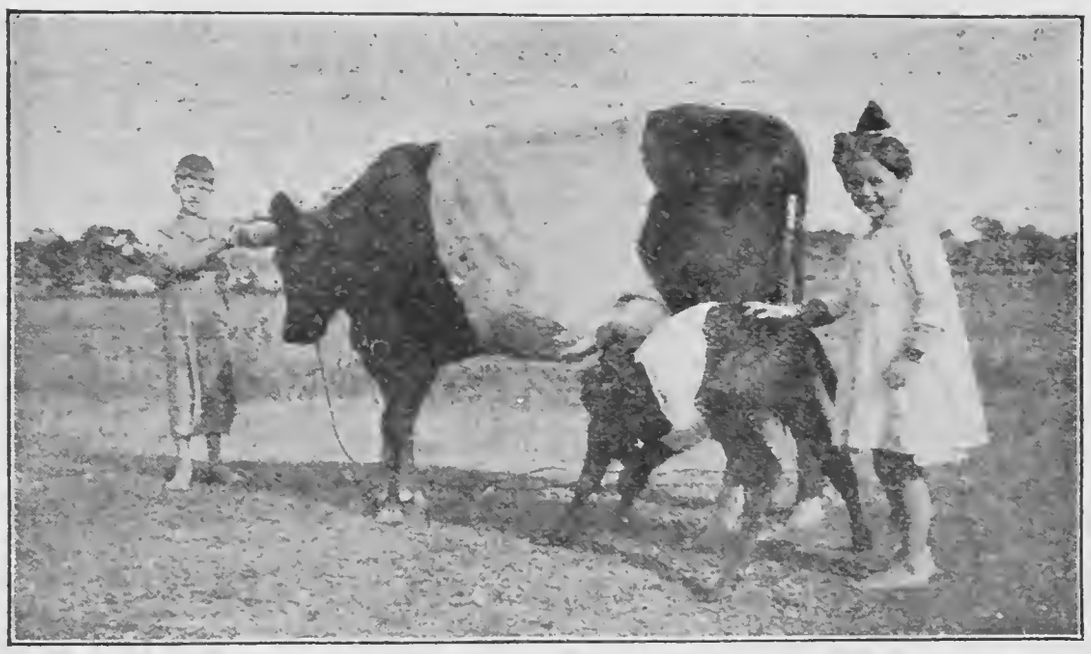
Live Stock and Dairy

BREEDING OUT DEFECTS.

It is an axiom of breeding, or heredity, that "like produces like," or tends to do so, and that is true; but it is not the case that nature tends to strike an average or effect a "happy compromise" between too markedly unlike items of conformation or temperament. This is not commonly understood by the stock-breeder who has not made a special study of this perplexing subject.

Poor feet and badly-formed hock joints are two most common faults of the horses we breed upon the farm. How shall we get rid of these objectionable features of our horses? Not by breeding to sires that have directly opposite features. That is the common plan of procedure, and it is erroneous. The common sense, logical and correct procedure is to employ sires as nearly perfect as possible in the points deficient in their mates. It is an even better plan to discard at once the mares that have the objectionable features and breed from those having the desired conformation, mating them with sires of like desirable conformation.

To make this more plain it may be stated that when a man finds that the horses he breeds have small, poor quality feet (hoofs) his plan of corrective action too often is to mate his mares with a stallion that has abnormally developed



BELTED COW AND CALF.

feet. Such feet are as objectionable as feet that are too small. Two objectionable types of feet, wholly dissimilar in type, will not in the foal be reproduced as an average between the two types. In other words, the too big and the too little hoofs will not blend and make correct size hoofs in the offspring. Two wrongs do not blend to make a right, but one right and one wrong may partially offset each other. If one right is stronger (by breeding) than the wrong the resultant blend of the two may, but does not surely, favor the right. The correct way to attempt righting of the wrong, i. e., improving the small weak feet, is to use a stallion that has the most perfect feet possible and that owns such feet because of ancestors that had like desirable feet. The best plan from the start is to select mares having the right sort of feet and mate them with stallions having the same sort of feet, or even better feet, if that is possible. In breeding horses we have found that it is a slow, uphill, disappointing matter to breed out faults by the use of sires not possessed of those faults. This applies to the breeding of better feet, but more especially to the improvement of badly formed hock joints.

A fine, large, pure-bred Percheron mare that was well-nigh ideal with the exception of having hocks that approached the sickle type, or curby formation, was mated each Spring with a purebred Percheron stallion. Each of these stallions had hocks of correct conformation and in one instance hocks of the somewhat too straight type. Each foal from this mare so mated grew up with hocks like those of the dam. Some of the offspring had hocks of more accentuated curby formation than those of the dam. All of them had objectionable hocks in this particular. We knew the sire of the mare in question. He was a noted Percheron stallion 20 years ago, but his hocks were objectionable, being weak in conformation, somewhat of the sickle order and one of them showing a small bone spavin. The mare inherited poor hocks from the sire. No doubt he in turn came by such hocks through heredity, and the wrong shaped hock in this family is so strongly bred in the "breed and bone" that life is too short, apparently, successfully to obliterate it by selective mating. We got rid of the mare and most of her female progeny, and other mares of better type have been installed in their place.

Based upon actual, extended practice and observation we have no hesitation whatever in advising readers of THE R. N.-Y. never to buy or employ a mare for breeding purposes that has a bad fault or conformation, with the hope that in time the offspring may be made free from that fault by use of sires of opposite type, not having the same fault, and even extraordinarily excellent in the opposite direction. This advice applies with equal force to the breeding of animals other than the horse. Faults of conformation cannot readily be bred out. In all instances, for quick results and satisfaction in breeding, decide upon an ideal animal to be produced, start with a female or two as nearly of that type as possible and continuously mate with sires of that chosen type. Discard every female that does not approximate the chosen type and, so far as possible, only retain as breeders the ones that are above average in the desired type. Do this also in the selection of sires and there will be good reason to expect that the progeny of such animals will retain the desired type and possibly improve in that respect, if improvement is possible.

Remember that quick results for the better cannot come solely from one side of the breeding equation. The nearer the two factors in the equation are alike at the start the more certainty will there be in obtaining the sort of stock desired. Gradually by continued grading-up, by the use of purebred sires, the type and character of the pure parents become dominant; but all the while the warring element from the dam's side and ancestry seeks ascendency and lessens permanency of improvement. For quick results never start with widely diverging types, or violent opposites of blood.

In conclusion, to clench the idea here advanced, let it be said that we have known many men to fail in horse breeding because they bought a lot of cheap, foot-sore mares in the city and used them as a breeding battery on the farm, hoping and trying, for a number of years, to attain improvement and success simply by the use of good sires and good feed. Better and quicker results would have been had by starting with one ideal well-developed brood mare of the type desired, and mating her and her female progeny in turn, year after year, with the same sort of purebred, rightly formed sires used with disappointing results upon the city mares of the wrong type.

A. S. ALEXANDER, M. D. C.

HE was an old-fashioned father, and he said to the young man: "Are you sure you're able to give my daughter the comforts and luxuries to which she is accustomed at home?" The young man promptly replied: "As your daughter's salary has paid the rent and bought most of the clothes and food for your family, I think we can worry along."—Cleveland Plain-Dealer.

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accomplish also the more difficult task of getting the right blending, the right solubility into a mixture which will run readily and freely from the farmer's planter, and which will remain dry and drillable as well as efficient until used in the field. We make a brand to fit every crop need.

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The Old Reliable Horse Remedy

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Read the letter of Dr. MacLagger, Parish, N.Y. We have hundreds of other letters to prove everything we say about Kendall's Spavin Cure. Let us send you some other letters. But in the meantime get a bottle from your druggist. Tear this advertisement out *now* to remind you to get Kendall's Spavin Cure.

Price $1.00 per bottle or 6 bottles for $5.00. Get our valuable book "Treatise on the Horse"—Free at your druggist or write to us.

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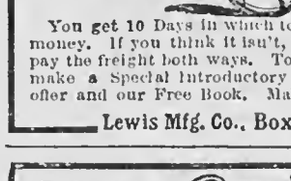

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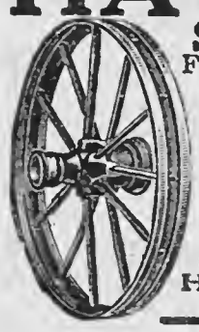

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SWINE IN TRANSIT.

Common sense and good judgment are commodities most of us are not overstocked with. This brief epistle is written as a reminder of a few facts that would save a pretty penny each year to the good farmers of this nation if heeded. A farmer reads the advertisements in his paper; he decides he is in want of a hog, it may be a boar ready for service, a bred sow or a young pig at weaning. The information in advertisement is usually limited; therefore he writes a letter of inquiry to the breeder, and in due time gets description and prices. Then he orders and sends his good money, and in a short time he goes to the express office and gets his swine, takes it home, uncrates it, and now is where the good advice and forethought comes in play.

A good breeder has a comfortable house for his swine. When he receives an order he selects the hog or hogs that are to be shipped, crates them, and if it is a Winter month he covers the crate with a heavy blanket, and transfers them to the shipping station, bills to the purchaser and sees them safe aboard the express car, which is warm and comfortable. Of course all roads do not lead direct to the destination; therefore the hog has to be transferred, and he is taken from the car and put on the truck and transferred to the other road. Here is an exposure. Again at the destination, is another exposure. The good farmer comes and takes the hog home; the distance may be short or several miles; again there is an exposure. When man or beast has periodical exposures to different temperatures he is liable to take cold, and that means a congested condition of the system. If a hog takes cold he is at once costive, refuses to eat, only a little if anything. Exposures have killed more good hogs than cholera.

Do not take a hog from the station home without covering the crate with good warm dry blankets. Don't turn the hogs in with strange hogs. When uncrated, give a hog the following: Take one quart of water with chill taken off, add one quart of milk, dissolve two ounces of epsom salts and a teaspoonful of common baking soda, and add to milk and water, and let the hog drink it. Give the hog a warm dry nest of straw and let alone, for, say 10 hours. In the meantime he will have consumed the above prepared drink this will cool the system and remove the congestion, regulate the bowels. By this time the hog has got over the car sickness, nervous system has become normal and he is ready to make his new habitation a pleasure. Now feed light for a few days, and the hog will come to his appetite.

New York. EUGENE I. BLACK.

A Good Bull.

"A bull is half the herd." It has been well settled in minds of breeders that the best bull is none too good to put at the head of a herd. There are still farmers trading around the neighborhood just to get a bull calf. The matter of family history receives no consideration, just so inbreeding is avoided. Now inbreeding has been found to emphasize dairy tendencies and the greatest breeders are practicing it to such extent that it would have made farmers a score years ago raise their hands in protest. If a herd is ordinary and a bull is secured from a herd of excellent performance, that bull will be far more than half the herd. He may go as far as to be 80% or 90% efficient. We had paid but little attention to bulls when a few years ago, a grade bull of remarkable prepotency was secured. He stamped his characteristics on the dairy to such a remarkable extent that he seemed to send our herd up grade on the high-speed gear.

Bulls are cheap. Bulls from the best families may be secured from breeders at low cost, while heifer calf prices are going after altitude records. There is no need dickering for a bull calf with no ancestry, when by consulting the advertising columns, one may get in touch with the best available stock in the various breeds. A dairyman will sooner or later be judged by the bull he keeps and the manner in which he keeps him. W. J.

PECKHAM: "Gee, what biscuits. I wish I was an ostrich." Mrs. P.: "So do I. Then I'd get some feathers for my hat."—Life.

Angora or Chinese Goats.

I have about 25 acres of land; the side hill is wooded and slopes off to low land with lots of wild grass. Most of it is fenced off with seven-foot fence. Do you think it would be advisable to put in Angora goats? Do you know where I could get any and are there any Chinese goats bred in this country?

Norfolk, Mass. G. W. D.

We doubt if Angora goats on this small field will pay. A flock of good grade sheep would clean up the field and give returns in meat and wool. We do not know about the Chinese goats.

Trouble With Silo.

What is the trouble with my silo? It is built of tile blocks 12x50, and the silage rots all around about six inches deep. At the doors where it touches the wood it does not rot, and it freezes about 2½ feet deep all around. I have lost three tons and more, but farther down it seems to be better. C. M. H.

Newtown Falls, O.

Your experience with a tile silo is, so far as I know, an unusual one, and I cannot account for the rotting of the silage where it touches the walls, unless you failed to tramp it well against the walls when filling. If this is not done silage is apt to lie up loose around the edge in any silo and spoil because of air obtaining access to it. The fact that the silage toward the bottom of your silo where it was packed by the weight of that above is in better shape than the upper layers would indicate that this might be the cause of your trouble. M. B. D.

Calf Feeding.

You have asked for milk substitutes or part substitutes for feeding calves, to which you have some good answers. We raise fruits and vegetables and do not profess to know much about stock, but like milk, butter and some good beef, therefore I am interested. My simple and maybe old-fashioned way worked well for us, and we killed a nine-months-old calf the other day that dressed 250 pounds. The calf fed itself in the natural way until the milk was good for humans. Then by the time it was hungry enough to drink readily it was given warmed milk which was gradually let stand a little longer and longer before skimming, until it was getting entirely skim-milk at about the end of the second week. Then white middlings were stirred into the warmed milk, only a very little at first. The middlings was increased slowly and finally water was often added when the family wanted more milk, but the calf grew right on, ate hay and in Summer was tied out to pasture at the end of a 30-foot chain, but always watered and fed regularly. This way of feeding was kept up till butchering time or almost, and the calf always seemed to prefer it to dry feed. Not over two quarts of middlings was given at a feed. We were careful to have the feeding vessel scalded out frequently, especially while the calf was small. The meat is solid, fat and tender, and as middlings is a feed that can always be readily bought at a medium price, is simple to prepare. This seems to fill the bill for our calf feeding. T. L. W.

On page 27 H. G. P. inquires the best way to rid hogs of lice. There is no better, easier or cheaper way than to take Persian insect powder and sprinkle along on their backs when the hogs are eating at the trough, and if you can rub it into the hair a little all the better. After two weeks go over them again, as some will have hatched since, and to make certain of a clean job, go over them again later. I have treated 200 head at a time and have never known it to fail. It will drive the vermin from calves in the same way. Dipping hogs in the Winter is not a desirable job. A. R. P.

Honeoye, N. Y.

"Blood Will Tell"

The youngest daughter of Sayda's Heir 3rd, 74817, to complete a year of authenticated work began at two years two months of age, and produced 8,365 lbs. milk, 360 lbs. butter.

His five-year-old daughter last year gave 10,682 lbs. milk 706 lbs. butter—her third consecutive authenticated yearly record.

His full sister at eleven years old gave 11,433 lbs. milk, 809 lbs. butter, her two daughters and herself averaging 740 lbs. butter each per year.

That dairy quality is born in Sayda cows is indicated by the fact that twenty-one of them have completed yearly tests at Meridale Farms with an average yield of 8,651 lbs. milk, 586 lbs. butter. They have an average official score in excess of 90 per cent. of perfect scale of points.

A recent purchaser of a son of Sayda's Heir 3rd writes: "The bull came at noon today in good condition. He is a fine little fellow, and we are *very much pleased* with him."

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Protection for sheep from Dogs. Will clean rough land. Hair valuable. For particulars address W. H. H. OSBORNE, - Le Roy, N. Y.

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COLLIE PUPS—Natural drivers. Also English Bloodhounds, Nelson's, Grove City, Pa.

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Sire, Gerald's Masher, 21741. Dam, Norma, 18782. A good milk producer. A Line Bred Bull. A. R. on both sides. Well grown. Very prettily marked. Dropped, Dec. 11, 1913. LAWRENCE HOWARD, Kinderhook, N. Y.

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50 Cows, just fresh, giving 40 to 50 lbs. per day.
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Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

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Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, New York

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BARGAINS. Fall pigs at $10 to $15. 3 extra good aged sows to farrow in Spring.
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All sold but two. May sows not bred. And a few more W. H. Turkeys. WAYSIDE FARM, Chatham, N. J. Address, A. L. PAGE (Owner), 62 Cortlandt St., New York City

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Registered Berkshire Fall Pigs—Both sex. Not akin. Super breeding. Priced to sell. J. I. HERETER, Gettysburg, Pa.

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BIG BERKSHIRES I have bred more high-class hogs than any breeder in Connecticut. Watson's Masterpiece No. 123931 at head of herd. Nothing for sale but March and April pigs at present.
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We have a number of very fine boar pigs for sale at attractive prices. They are the height of breeding, type and quality. It will pay you to get our prices on these choice pigs before you buy elsewhere. Now is the time to put a fine sire at the head of your herd. Prices and descriptions sent upon request.
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is a feed of great value in itself. It increases the assimilative and digestive powers, of your Farm Stock.

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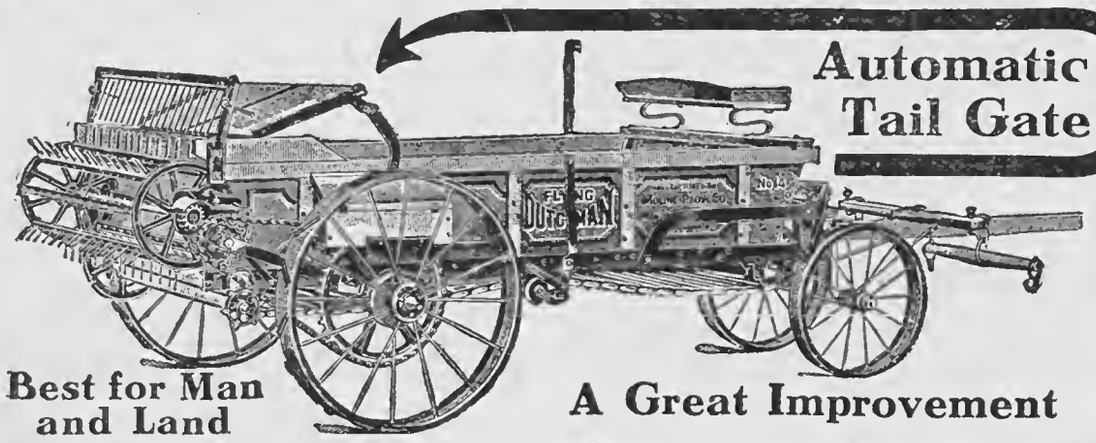

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There are many manure spreaders on the market today but they are so constructed that practically all of this valuable thin manure is wasted before it reaches the field.

The Flying Dutchman Spreader
NO. 14 NEW ENGLAND TYPE

is so constructed that it **saves** this material and enables the farmer to spread it just where he wants it.

It is a Low Down, Easy to Load, Endless Apron Spreader built with a **level** body and an **Automatic Tail Board** which prevent the thin manure from running out behind and wasting.

Load your spreader right from your barn, spread it while it is fresh and has its full liquid strength.

This spreader is unusually light draft, the rear wheels are **under the load** insuring perfect traction. It has steel frame, steel wheels, steel beater and the apron runs on three sets of hardened steel rollers.

It is very simple in construction—simple to operate—one lever does everything. A small boy can easily handle it.

Let us send our **Free Folder** and our 1914 Almanac. Write today.

Ask any **Flying Dutchman** Dealer about the **Flying Dutchman Spreader No. 14.**

NEW YORK MOLINE PLOW CO.
Dept. 119 POUGHKEEPSIE, N. Y.

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SKUNK FARMING IN NEW YORK.

[We have for years advised our readers to keep away from "skunk farming." It was recently reported that five skunk farms have been licensed in New York State. So we wrote the Conservation Commission about it, and this is the report. Mr. Legge makes it appear easy and fragrent of profit, but the business carries no temptation for us.]

This Department has issued five licenses allowing the possession of skunks for propagation purposes in the State of New York. Skunk raising is not well understood, and the people who are conducting skunk raising are not successful because of the fact that they are not familiar with the proper method of caring for the skunk and its young.

The question always asked when skunk farming is mentioned, is concerning the difficulty of conducting such a business in any reputable neighborhood on account of scenting. Contrary to popular expectation, the skunk appears to be least objectionable of all ranched animals, the fox being the most objectionable. One might pass alongside a hundred skunks and not observe any odor. They can be easily handled, and by cutting out the scent glands when they are about 10 days old they will be deodorized. The operation is unnecessary, and is not harmful to the animal.

Of course, the skunks are graded according to the proportion of white hair on the skin; as No. 1 with no stripes or very short ones; No. 2, with longer stripes, and No. 3 when the stripes extend the full length of the body. It is probable that the rapidly advancing prices in 1912 will be the means of stimulating the skunk-raising industry. No. 1 northern skunk brings $4.25 at present and, if this price continues, there is a large profit to be made in skunk-farming.

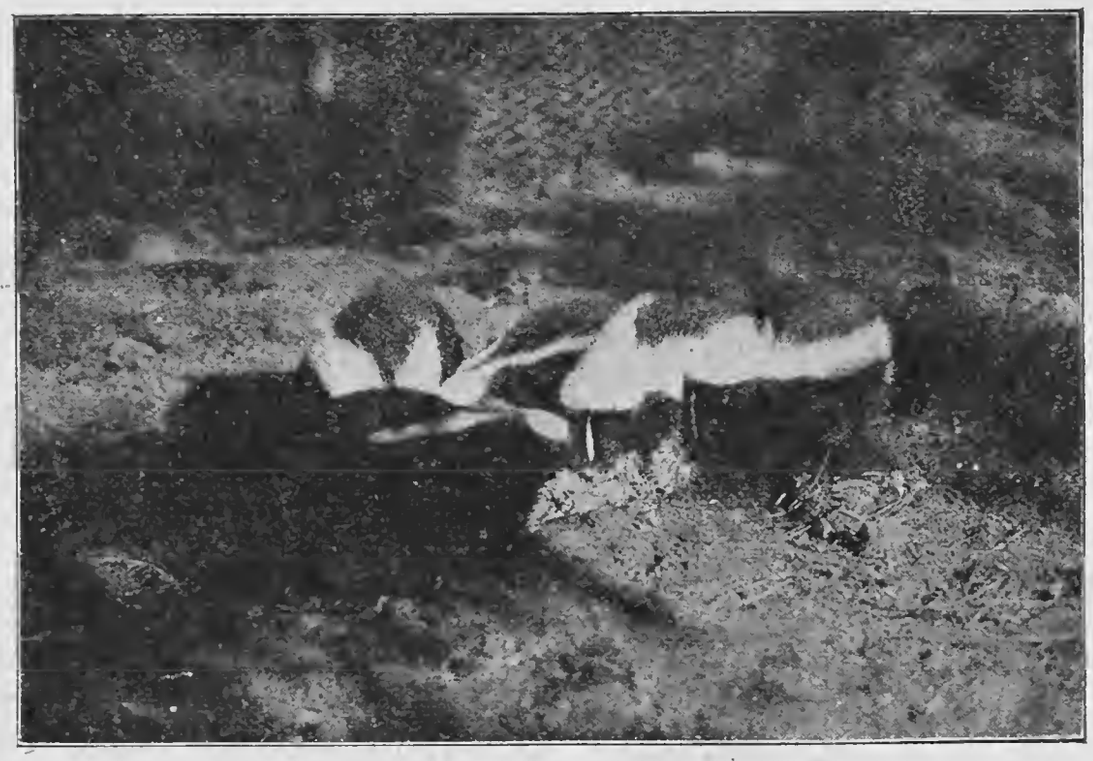
Skunks can be kept in captivity under conditions similar to those recommended for mink, i. e., in pens. The males will not injure the females, but the females will kill the males after mating if they are kept enclosed with them. The females might be kept in pens, after mating and while rearing the young. A wide range is necessary in order to permit of their securing a variety of natural food. Skunk raising will prove a failure if done on a small scale, while on a large scale, it would be a paying business. One of our correspondents writes that "the first season he had 12 females and three males, all black; the average litter of young was from three to six; the average grade, about 85 per cent. black, the balance being Nos. 2, 3 and 4."

Naturally, skunks live in holes in the ground, rocks, trees, stumps, etc. Their food consists of mice, birds, bugs, crickets, grasshoppers, bees, wasps, yellow-jackets, angleworms, seeds, berries, ground roots and bark. There is a great disadvantage on starting on a small scale. If you have a large number of skunks in a small place it will cause them to crowd and fight and kill one another, while to have a separate pen for each female is expensive. After the rutting season the female will kill the male, apparently to protect her young. Skunks are liable to fatal diseases, similar to sore throat or diphtheria. The female skunks which have had no young are known to take the young of other mothers to their boxes, and fight the real mothers away until the kidnapped young starve to death. Others that have had young would steal the young of two or three others and then, having more than they could care for, some would starve. Another disadvantage in a small enclosure is that they get so tame they come out in the daytime to feed and the exposure to sunlight fades the fur to a certain extent.

As it is almost impossible to supply a lot of skunks with the kind of food they get in the wild state, it becomes necessary to substitute some other kind of food, such as dead horses, cows, chickens, corn and various other things which a man with a small lot cannot always have. If not fed properly they become cannibalistic. Skunks can be raised as easily as house cats, provided you have an enclosure where they cannot dig out or climb over. For every hundred mature skunks, you should have an acre of ground enclosed.

I know where one man experimented for three years on a small scale. The first year he had one male and three females. They brought forth 15 young. One of the young died. Five of the young graded as No. 2, the balance star black.

The gestation of the skunk is about six weeks, and runs from four to nine in a litter. The young come out to eat when two months old, and can be admitted to the general run when four months old. A strict diet of meat will kill every skunk. They should be fed once a day in the evening. If the bodies of the skined animals are fed, they should be thoroughly boiled with vegetables. The oil rendered from the skunk fat is valuable.



A GATHERING OF FRIENDS IN FUR.

There are different methods of killing skunks. One way is by drowning. They can also be dispatched easily and painlessly in a poison box, using carbon bisulphide gas or hydrocyanic acid. The latter is a deadly poison and is very dangerous in the hands of an inexperienced person. They can also be killed by a blow over the back, which paralyzes the muscles and destroys the power to scent. They should be skinned by the case method. The skins should be carefully cleaned of fat to prevent heating and should be packed separately for shipping. LLEWELLYN LEGGE,

Chief Protector Conservation Commission.

Contagious Abortion.

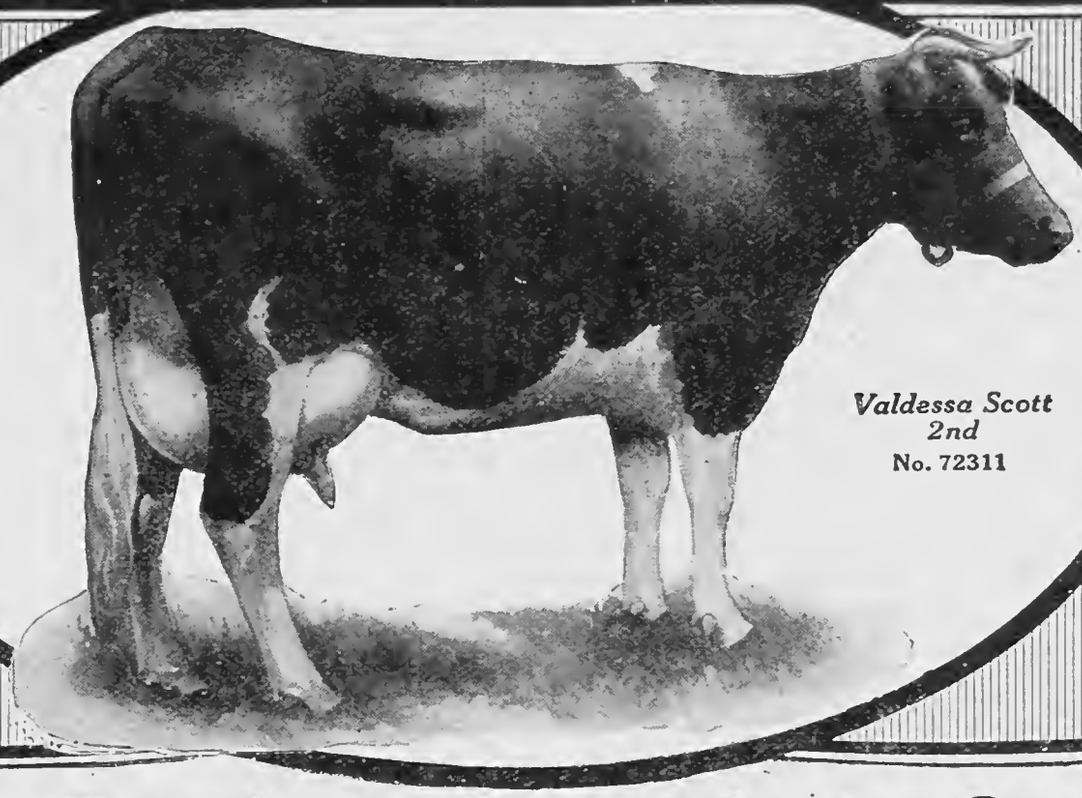
One of my cows and two young heifers have recently aborted. I fear for the rest of them. have bought no cows for two years, have fed silage almost exclusively for the last month to the heifers. It has a few moldy spots in it, presumably from being too ripe and not packing quickly. Could the silage cause it? P.

Pennsylvania.

Most silage will contain a few moldy spots where air has gained access to it, either from insufficient packing or leaky silo walls. Unless of considerable extent, I have never known these to do any harm and do not think it possible that the silage can be responsible for the abortion in your herd. It is more likely that the germs of contagious abortion have in some way gained access to your herd, possibly through the use of an infected bull. If you are within reach of a competent veterinarian, I would suggest that you have him prescribe the new methylene blue treatment for your cows as described on page 1168 of the October 25 issue of this paper. M. B. D.

Greatest Cows in the World

Valdessa Scott 2nd.
Beat All Ages All Breeds of The World



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Valdessa Scott 2nd.
The First 40 Pound Cow in The World

Smashed All Previous Records to Smithereens!

Take off your hat to Valdessa Scott 2nd—the *"Wonder Cow"* of the world. She certainly is entitled to such recognition. She has more than done herself proud and accomplished a feat **never before** attained by any cow in the world of any breed or age.

In thirty days' test she produced 2933.9 pounds of milk and 165½ pounds of butter. Her one day record is 108.6 pounds of milk and 6 pounds of butter.

Her one week record (7 days) is 695.1 pounds of milk and 41.875 pounds of butter. What do you think of that? Remarkable! Phenomenal! Unparalleled! Her milk tested 4.70 per cent butter fat.

All of the above tests were conducted by W. D. Golding and Prof. Alfred S. Cook, of the New Jersey Experiment Station. Naturally you wonder—what sort of ration was fed. Here are the words of her owner—he tells it in a letter just received.

Finderne Stock Farm, Finderne, N. J.

THE QUAKER OATS CO., Chicago Ill.
Gentlemen: During the past two or three years we have been feeding your SCHUMACHER FEED and have secured splendid results. SCHUMACHER was incorporated in the ration fed Valdessa Scott 2nd during her wonderful result-producing test. Used as a base with a good protein concentrate it is a winner. Yours truly, B. MEYER, Owner.

SCHUMACHER FEED

Now read what the owners of other World's Champion and World's Record Breaking cows have to say of this wonderful feed.

Springvale Stock Farm—Home of Colantha 4th's Johanna.

THE QUAKER OATS CO., Chicago, Ill.

Gentlemen:—Replying to yours of the 3rd we are making **Schumacher Feed** one-third part of our herd ration and we are getting results. Several of our cows are milking up to over 75 lbs. per day with this as part of our grain ration.

Yours very truly,
W. J. GILLETT.

Rosendale, Wis.

Brookline Farms—Home of Johanna DeKol Van Beers.

THE QUAKER OATS COMPANY, Chicago, Ill. Hampshire, Ill., Dec. 8, 1913.

Gentlemen:—Replying to yours of December 1st, regarding Schumacher Stock Feed, will say as a feed for dairy cows or young cattle I know of no feed equal to Schumacher. It certainly contains all the ingredients that are necessary to put the finish and gloss on an animal and more than that, the results obtained through the pail makes it the cheapest feed that I have ever fed. To any one feeding cattle for show, I would especially recommend Schumacher. Johanna DeKol Van Beers, the forty pound cow and her son Johanna McKinley Segis; Pontiac Korndyke Maid, A. R. O. 33.75; Belle Segis, A. R. O. 32 lbs.; in fact, all of my cows, and I have ten with records above 30 lbs. in 7 days, are fed every day a ration of Schumacher Stock Feed. My advice in a few words is, "Buy Schumacher and grow fat and slick."

Yours truly, T. E. GETZELMAN, Proprietor.

Colantha 4th's Johanna
Owned by W. J. Gillett, Rosendale, Wis.
is the champion long-distance cow of the world. Her official record for 365 days is 27432.5 pounds of milk, and 998.26 pounds of butter fat.

SCHUMACHER FEED is composed of finely ground, kiln-dried corn, oats, barley and wheat products, giving just the variety, balance and appetizing flavor which your cows relish so keenly. They will lick it up greedily, digest it easily and won't get "off feed" as they do on rations that do not have this necessary variety. For heavy, steady milk production without injury to the cow the following **Schumacher Feeding Plan** has no equal. A trial quickly proves our claims.

Try This Feeding Plan NOW

Mix three parts of Schumacher with one part of any good high protein concentrate you are now feeding, such as Gluten, Cottonseed Meal, Distillers' Grains, Oil Meal, Malt Sprouts, Blue Ribbon Dairy Feed—and note the results. You will be surprised at the increased yield—how eagerly your cows eat it and thrive on it—how their condition improves. It affords that much needed variety of grain products which you know are so essential and also that **Stamina** so necessary to withstand "forced" or heavy milk strain. There's nothing like it—nothing can touch it for results and condition.

JOHANNA DEKOL VAN BEERS
The Second 40-lb. Cow—and her smashing 60, 90 and 100 day tests

	MILK	BUTTER
60 days	5,552.00 lbs.	290 00 lbs.
90 days	8,147.90 lbs.	418 13 lbs.
100 days	8,987.40 lbs.	460 19 lbs.
120 days	10,490.00 lbs.	540.97 lbs.
7 day Record	663.00 lbs.	40.32 lbs.

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Never since you started in the dairy business have you had a better opportunity to make big money from your cows. Conditions are especially favorable right now. Crowd your dairy to the limit—coin money while you can. **Milk prices are good—feed prices are low,** especially if you follow the Schumacher Feeding Plan endorsed by the owner of Valdessa Scott 2nd and other successful dairymen. Try it now. See for yourself how it will increase your milk yield and cut down the cost of your feed. Order Schumacher at your dealers' today. Don't put it off.

Get it at Your Dealers

(24)

The Quaker Oats Company
CHICAGO, U.S.A.

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Criticism of Ration.

What is your idea of this feeding ration for Holstein cows? Small feeding of hay in the morning, a bushel of silage at noon, all the straw they can eat at night, and eight quarts a day of grain mixed as follows: 300 pounds bran, 200 pounds hominy, 100 pounds gluten, 50 pounds cottonseed meal. P. H. M.

Copenhagen, N. Y.

If you would use 200 or 300 pounds of cottonseed meal instead of 50 it would be an improvement; that is, if your cows are not soon to freshen; if they are, you are feeding enough cottonseed. Straw is not the best kind of roughage for milk production, but when hay is in short supply, and high in price, and milk bringing a low figure, it sometimes seems advisable to feed some straw. Your ration as it stands is good, and I can make only the above criticisms. C. L. M.

Specks in Buttermilk.

What is the cause of specks in the buttermilk that look like cream, and is there any remedy for it? H. L. J.

These specks are what are called "false butter," and are composed of hard curdled milk. You are likely to find some of them in the butter also. They are prevented by frequent stirring while the cream is souring so as to keep cream and milk mixed. It may also happen, especially where milk is set in shallow pans, that the top of the cream becomes quite dry, and small particles will continue to stick together during churning. In any case frequent stirring of the cream will prevent this to a great extent. C. L. M.

Poor Milk Yield.

A neighbor has a Jersey cow, fresh December 22, perfectly well but only gave one quart milk at first, now gives three quarts. Will the cow ever give a full flow of milk until fresh again? She fed the cow one quart bran and two quarts chops before the freshening, and thinks the chops might have caused the cow to fatten and may be the cause of the decrease in milk flow. The cow is seven years old and has always given 2½ to three gallons milk a day. Will you advise what is best to feed to increase milk flow? E. S.

Springfield, Mo.

I would not be able to give more than a guess as to what is the cause of this cow's small milk [illegible]. I should not expect that the grain given would cause any trouble. The term "chops" is a little indefinite, but I take it to mean corn and oats ground together. As the cow is gaining in milk flow I presume she will be all right soon. It is my experience that cows will occasionally fail to give as much milk as they ought at first, but after two or three weeks will come to their normal flow. A few years ago I had a heifer which as a two-year-old had given unusual promise, but on freshening the second time gave no milk at all for several days. However, I went through the process of milking several times daily, and soon the milk started. On being turned to pasture she gave a good amount of milk. In no such case have I been able to assign any definite cause. C. L. M.

Dairy Ration.

You advise a dairy ration of three pounds wheat bran, three pounds cottonseed meal, and one pound cornmeal. Is that for one cow or more and how often do you give it a day? How would you feed 10 milch cows? Do you feed that ration dry or wet? Where can I get feeding molasses? S. D. S.

Bethlehem, Pa.

The ration given is for one cow, and for one day. However, it is generally better to divide the grain ration into two parts and feed at two different times, say morning and night, or morning and noon. A convenient way is to mix, say, 300 pounds of bran, 300 pounds cottonseed meal and 100 pounds of cornmeal. Then weigh out into your feeding dish one, two, three or four pounds of the mixture, and notice about how full the dish is for each amount. Then you can feed accurately enough for practical purposes without bothering to weigh each time. I may say that the ration you mention is intended for a cow giving 25 to 30 pounds of milk daily. Feed each cow according to the amount of milk she gives, and this should be three to four pounds of milk for each pound of grain. The grain should be fed dry.

Probably your grocer or feed dealer can get the feeding molasses. If not it is advertised in THE R. N.-Y. It should not cost over 17 or 18 cents per gallon, by the barrel. The best way to feed it is to dissolve about a pint for each cow in hot water, and sprinkle over the fodder. Probably it will not pay to feed molasses to cows, unless you have some kind of fodder that the cows do not like very well, as straw or dry corn fodder. As to Alfalfa, most feed dealers keep it, cut or ground fine, but generally the price is too high to feed to cows. If you can raise Alfalfa it will be a fine thing, but buying it by the bag is too expensive.

Do not understand that the ration you mention is the very best that can be devised. Much depends on the price of different feed stuffs, and also on what one can get. I am at present feeding a very satisfactory ration, as follows: 125 pounds distillers' dried grains, 200 pounds oil meal and 200 pounds low-grade flour. This is scattered over corn silage. It would be rather sticky to feed alone, and in that case I would add 100 pounds of wheat bran, or else double the distillers' grains. This costs me $1.68 per hundred, and, quality considered, is about the cheapest ration I can buy. C. L. M.

Ration for Cows and Pigs.

1. Will you give me a paying ration for new milch and farrow cows (giving a small amount of very rich milk) from the following feeds: Bran $1.40 per 100 pounds; gluten $1.65; cottonseed $1.90; linseed $1.80; ground oats $2; cornmeal $1.65. I would rather not use cornmeal. Have for roughage early cut mixed hay, no roots or silage. I sell butter fat. 2. What is the best ration for 10-weeks-old pigs to be dressed in March? I have very little skim-milk. O. A. R.

Maine.

1. Two pounds each of bran, cottonseed meal and oil meal will be a good ration for a cow giving 18 to 25 pounds of milk daily. In the case of cows giving very rich milk it may be advisable to give a trifle more grain in proportion to the amount of milk. It will be better to feed grain two or three times daily, rather than all at one feeding. 2. A good grain ration for the pigs at present would be four parts, by weight of white or flour middlings, three parts cornmeal and one part oil meal. The cornmeal may be increased to two-thirds of the whole ration for a few weeks before butchering. C. L. M.

Radishes for Cattle.

I would like to know the feeding value of radishes for cattle. I think some of the Summer varieties will outyield mangels on the same ground with less care. I have been feeding them to milch cows, and they seem very fond of them.

Ohio. H. S. J.

By analysis the radish would be worth about two-thirds as much as mangels or carrots. We have no record of the yield of radish as a field crop. We do not think radishes would keep as well as the other roots, though they might pay for early Summer feeding where cattle are kept up.

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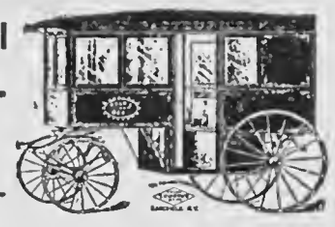

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It would be good sense to carry that farther. With a fair sized concrete mixer for instance, a silo, barn foundations and floors, ice-houses and troughs, or any small work can be built about as cheaply of concrete as of wood.

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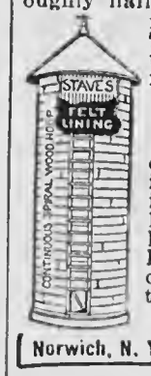

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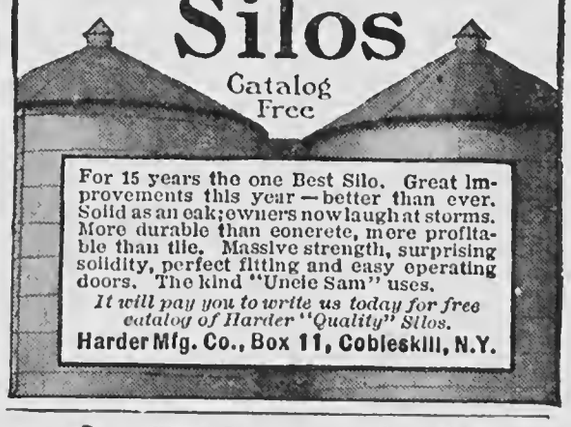

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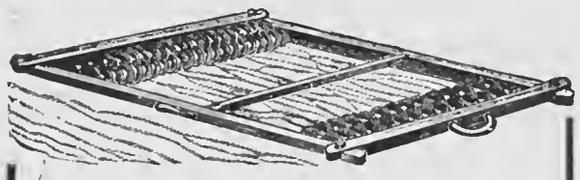

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AILING ANIMALS.

Urticaria in Pigs.

I had five May pigs. When about five months old they became sick, refused to eat. Pigs were fed whey, hominy meal and white middlings, with some corn in the ear. When first taken the pigs lay around and when roused would stagger about and soon lie down again. Finally their ears turned purple, also purple rash on hams and bellies. Later red blotches covered with deep seated scabs appeared on backs and sides. One pig finally died. The others seemed better and began to eat. In about three weeks they again began to stagger and fall, and were covered with red scabs and the purple rash appeared on two of them. Is there any cure for them and what was the matter? F. S. B.

Bethel, N. Y.

The disease is urticaria, also called nettlerash or surfeit, or "diamond disease," the spots on the skin having that shape. It is due to indigestion, from sudden changes of feed, or indigestible feed, or too much feed and too little exercise. It is somewhat akin to "hives" of children. One has to find and remove the cause, increase exercise, decrease feed and physic the affected animals with epsom salts in slops or water. In bad cases feed milk and middlings, made into a light slop, to which add limewater at the rate of one ounce to the quart of slop. Bathe affected parts of skin with a 1-100 solution of coal tar dip, as often as found necessary. Provide clean, dry beds. A. S. A.

Drying Off Cow.

I have a fine Jersey cow. I expect her to come in about February 10. I feed only hay, one quart of bran, and a small handful of oilmeal so that she drinks water. I milk her once a day, but she gives 2½ quarts of milk yet. I don't seem to be able to dry her up. Do you think this will harm her milk flow when she gets the calf? If I cannot dry her up, what feed and how much should I give her, so that I do not have to fear milk fever? This will be her fourth calf.

Tallmans, N. Y. C. R.

Turn the cow out for abundant exercise every day and stop feeding grain. Feed hay, straw and roots. Leave a little milk instead of milking her clean and after milking rub in a mixture of equal parts of camphorated oil and fluid extract of belladonna leaves. If the udder stays sound milk each other day, after a few days, and then every three days. Great care will have to be taken to milk out clean if the udder shows any sign of inflammation, and at such times bathe three times a day with hot water and then rub in the lotion just prescribed. Milk fever will not attack the cow if you make her take plenty of exercise, and do not feed her heavily, but after the milk flow ceases it would be well to feed bran to regulate the bowels and to add flaxseed meal toward calving time. If roots are fed it will be less necessary to feed bran. A. S. A.

Indigestion.

My horse weighs 1,150 pounds and does not do any hard work but a drive three miles to town every few days. He does not have as much life as I think he ought to, and does not keep fat. He is eight years old; he has some trouble with kidneys. Can you give me a ration and cure for him? C. W. C.

The horse is overfed and under-exercised. When there is no work for him to do either enforce ample exercise every day or turn him out. During idleness stop feeding grain and let him live on mixed hay, carrots and bright fodder. On work days feed not over one pound of whole oats per hundred pounds of body weight as a day's ration, and a like amount of hay. If the work is hard add one quarter pound of wheat bran, by weight, to the oats per hundred pounds of body weight, but do not increase the hay. The amount of hay may be increased in times of idleness. Add a few ears of corn at noon on cold days, in place of oats and bran. Have his teeth attended to by a veterinarian and if the hair of the body is long and coarse clip it from the belly and from the legs above knees and hocks. Allow free access to rock salt. Give the drinking water before feeding. Medicine should not prove necessary. The urine will clear up when you feed and exercise the horse properly. A. S. A.

Garget.

I have a heifer that is due to freshen in February. There is something wrong with the right side of her udder; it is caked and the front teat on that side gives yellow thick milk which has a bad smell. What can I do for her? What causes it? H. C. A.

New York.

Bruising may cause such a condition, but in your heifers it is more likely to have come from sucking of the udder by other calves. That bad habit should be prevented at once when noticed. It leads to much trouble when cows come in milk for the first time. Strip out the fluid three times a day and then rub with camphorated oil; but we fear that the quarter is permanently ruined. A. S. A.

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M. V. RICHARDS, Land and Industrial Agt.,
Room 87 SOUTHERN RAILWAY Washington, D. C.

HENS vs. COWS.

I give herewith a report of the contest between hens and cows as conducted at Maple Dale Farm for the year 1913 just closed. The cut is from a photograph of my farm buildings where the work was done. I keep 10 to 12 cows and 8 to 10 units of hens, raising my own young stock and buying all grain feed in both cases. I started the year with 1,800 hens. From the cows I have sold during the year less than $2,000 worth of milk, beef and veal; to be exact $1,867.29. From the hens have sold during the same period $4,500 worth of market eggs and poultry, besides increasing my stock by 800 birds, easily worth $500 more, making $5,000 in all from the hens. The feed bills were less than half of the total sales in both cases but the cows have also consumed a barnful of hay.

The cows make far more work than the hens. I hire one steady man. He milks and cares for the cows.

I care for the hens. The hens milk themselves. His day's work begins at 5 a. m. Mine often begins at 7.30. The net returns from the hens are greater than the gross sales from the cows. This in effect is equivalent to relieving the milk producer from the payment of all feed bills, besides giving him his hay

VIEW OF THE MAPES HEN AND COW BARNS.

crop to sell for cash, and no more labor involved. Put it another way. It is in effect equivalent to a new breed of cows not only giving twice as much milk as present breeds, but also giving it in sealed bottles all ready to be gathered up once a day.

Long live the business hen.

O. W. MAPES.

A SENSIBLE COLORADO DAIRYMAN.

We farmers must take our choice of the three kinds of farm papers published for our benefit. They are issued for the advantage of the advertiser, for the editor and printer, or possibly for the man who pays for it. The first kind does not cost much, and its value is equally as great; the second costs too much and tests about equal to some of the fancy stuff advertised in it. Once in a while we find one of the third kind, but are not apt to recognize it at first, because it is rather modest and conservative, but we find we kind of like to get together. The real test is the fact that we get mad if it does not come on time. One of this latter kind finds its way out to my little farm near Denver, where it is eagerly waited for. Each issue lately has had some fine articles by practical men on the subject of purebred dairy stock. And right here I want to say that the great charm of THE R. N.-Y. is the fact that I never have to read what some department editor has to say, but I always get the facts from a number of men who talk from experience.

A man who starts farming from choice, and even after a number of years, sticks to it from choice when offered other chances, usually looks forward to the time when he can own and breed some registered stock. Mind, I am not talking of the "farmer" who commences with prize winners and a "superintendent" and who very often fails to notice a really good animal until he happens to be told what it cost. These wealthy men often do a great deal for a breed by getting together a certain "family" and keeping it to a high standard, but unfortunately they also keep the price to such a high plane as to put really fine animals entirely beyond the small breeder, and there is one feature where the small breeder excels. He must cull more closely, because he has not the room or the help for any but a very gradual growth.

I have become rather in favor of the Guernsey, believing that the average Guernsey cow is a more profitable animal than the average Jersey, and that a certain sum invested in a Guernsey will buy a higher class animal than will the same amount spent for a Jersey. The Jerseys, owing to their beautiful appearance and the wonderful production of some cows, have been the victims of the "predatory rich," who have put a fancy value on some families. The average grade cow is increasing in dairy value faster than the average registered animal. The chief advantage of purebred stock is, I think, the good effect they have on us. We give them better quarters and care, we weigh and test their milk, and take a greater interest in their performance, and they return our care full value with interest. It amounts to the difference between going into business with some chance acquaintance who asks for a job and of forming a partnership with some friend who is an expert in his line. Of the first, we judge only by appearance, and know nothing of his "folks," or what to expect from him. Of the second we have some proof, and we generally know the stock he comes from. In fact, working with grades is a gamble, while working with "blood" is a game.

J. B. PLATO.

Colorado.

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M. H. TAYLOR.

Pensylvania.

LIVE STOCK NOTES.

THE Kansas Horse Breeders, by resolutions, declared that the stallion owner should be given more protection by law. He should hold a lien on the mare and offspring for 18 months from the time the mare is bred, they decided. It was suggested that there should be a $20 to $50 fine for anyone who should sell, or remove from the State, such mare or colt without the consent of the stallion owner. They also expressed themselves as being in favor of more colt shows. They decided to boost this work through farmers' institutions and fairs.

THE American Guernsey Cattle Club has endeavored to surround the breeders of Guernsey with all the safeguards possible, so that they may ever have at hand means of identification of their animals. The form of certificate which the club is now using shows not only the registration data on the one side, but on the reverse side gives a copy of the sketch of the animal as it was filed with the club at the time of registration. This insures every purchaser of Guernseys an opportunity to check up his purchase with the original description filed, and is a great help to breeders in keeping a careful record of their herds. During the first week in 1914 there were entered in the Herd Register 101 bulls and 206 cows, a total of 307; 243 transfers have also been recorded.

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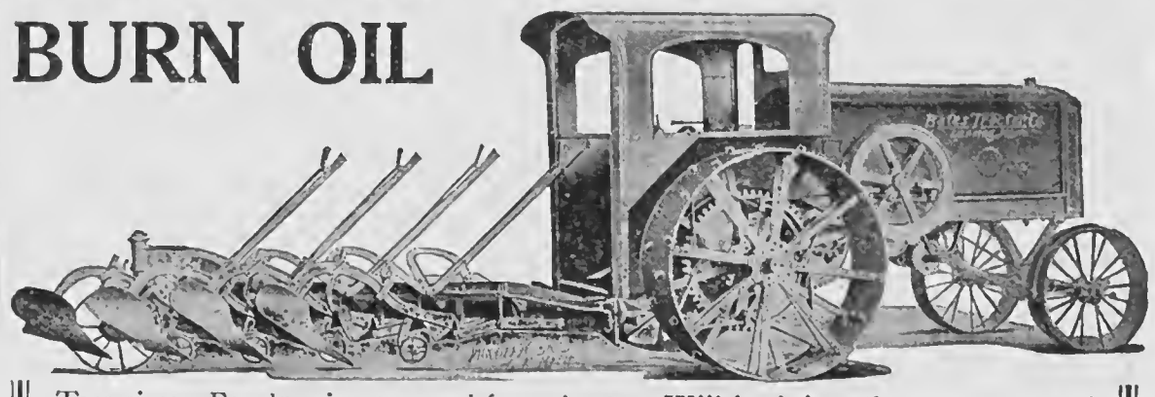

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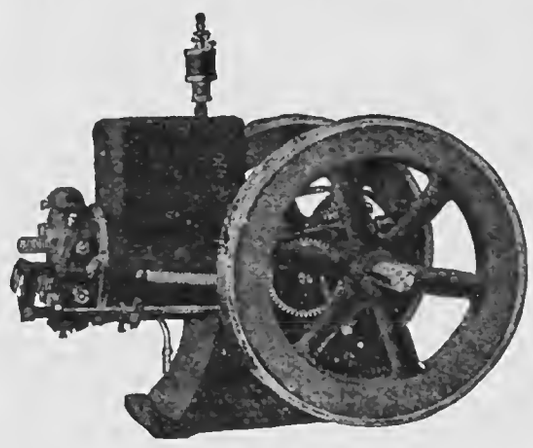

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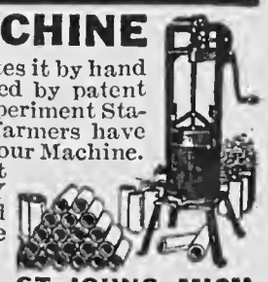

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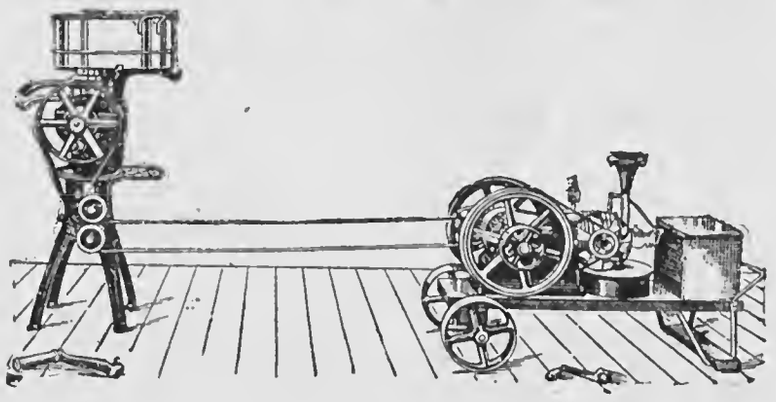

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NEW YORK STATE NEWS.

THE LEGISLATURE.—The Legislature reconvened for business on January 19, and before it adjourned for the day had introduced 40 bills. None of these was an agricultural measure so far as we know. Two or three were for the investigation of highway graft, and several were to amend the highway law. Governor Glynn sent a special message to the Legislature calling for a revision of the law relating to the control of the short loan business as operated by the loan sharks. The nomination of Dr. Herman M. Biggs to be State Commissioner of Health was confirmed by the Senate at once. Speaker Sweet announced his committees. The Republicans got about 250 places, the Democrats 135 and the Progressives 37. The chairmanship of the five most important committees went to Barnes men. The Senate committees hold over from last session.

PUBLIC SERVICE COMMISSION.—The annual report of both public service commissions were presented to the Legislature. Several amendments to the law are desired and $2,000,000 are asked for eliminating grade crossings. It appears that during the year 369 grade crossing accidents occurred outside Greater New York, in which 113 were killed and 311 injured. During the year 25 grade crossings have been eliminated. The total number removed to date is 312. Routes of auto bus lines, the automatic signal system on railroads, gas meters, the telephone service and many other minor matters had the attention of the commission. The expenses of the commission for the year were $373,068.21.

ANOTHER COMMISSION PROPOSED.—In his report to the State Agricultural Society meeting, ex-Assemblyman C. Fred Boshart of Lewis county, recommended the establishment of a non-partisan State milk price commission which should have power to fix prices. He would have that commission composed of the Commissioner of Agriculture, a representative of the State Grange, a representative of the New York city milk dealers and one from the New York City Board of Health. Mr. Boshart commended the work done by Commissioner Huson and had a good word for the new farm bureau movement. He opposed the Adamson bill now before Congress, which forbids the killing of heifers under seven years of age, and the Hamilton bill prohibiting the killing of calves under six weeks of age, as the State has fixed the age limit at four weeks.

GRAIN AND HAY BROKERS.—In a recent opinion handed down by Attorney-General Carmody it is held that grain and hay dealers must take out a license as commission merchants and give bond the same as provided for other commission men. The Attorney-General, however, adds that if these commodities are simply consigned to them and they do not take physical possession of them then they are not required to have a license.

FARM CREDIT BILL.—It looks as if Governor Glynn's farm credit bill as proposed or outlined at this writing would meet with Republican opposition in the Legislature. At least it will not have clear sailing. Speaker Sweet is credited with the statement, in an interview, that he sees no reason for the State's passing such a measure since the matter is now under consideration by Congress. There may be something in this and we hope that is the real reason for the Speaker's opposition, if it comes to that, rather than a desire to prevent Governor Glynn from taking the credit for such legislation if such legislation there be.

GRANGE ANNIVERSARY.—Clyde Grange has recently celebrated its fortieth anniversary. There were 400 members and their friends present on the occasion. This grange was organized in 1874 and Benjamin Weed was its first master. This Grange has one of the largest libraries of any Grange in the State, numbering 2,000 volumes. Out of this Grange has sprung the Fire Relief Association of Wayne county and the Farmers' Exchange, both prosperous institutions.

ONEIDA FARMERS TO COOPERATE.—A movement is under way to form a coöperative society among the farmers of Oneida county and incorporate under the new State law. Over 100 prominent farmers attended the meeting when the question was discussed and all were in favor of the idea. Marc W. Cole, superintendent of coöperation of New York State and M. C. Burritt, State leader of the farm bureau movement, were present to explain things and aid the farmers in coming to a decision in the matter. A committee was appointed to formulate plans and report to a later meeting.

NEW AGRICULTURAL SCHOOL.—The new agricultural building of the Worcester, N. Y., high school has been recently completed. There are 18 members of the agricultural class in the school in whom the people of the town and vicinity are taking a great interest. Prizes are offered by some of the leading farmers to the students for excellency in various lines of work. Worcester has a flourishing Grange with a membership of 285 and they have engaged the past year quite extensively in coöperative buying of farm supplies. Among the items were 253 tons of fertilizer costing $47,171.46; 849 tons of feed and 301 barrels of flour, $25,197.56; grass seed, seed corn and peas, $1,998.75; groceries, $4,874.73. Total, $36,688.50.

DAIRYMEN'S LEAGUE.—The Dairymen's League is extending itself over the State quite rapidly. Recent branches organized are at Delhi, Delaware county and at Canajoharie. The Dairymen's League, which is organized in five States, has enrolled farmers representing 175,000 cows. The purpose of the league is to have farmers fix the price for their milk instead of having middlemen do it for them.

SAN JOSE SCALE AGAIN.—The Genesee county fruit growers are much agitated over the reappearance of the San Jose scale, which fairly burned its way across the country a few years ago. The county fruit growers' association has had a meeting to devise means to check the plague. The 70 members of the association own about 700 acres of fruit trees and they are going to make a strong fight against the spread of the pest.

WINTER SCHOOLS OF AGRICULTURE.—An extension school of agriculture began a week's session at Holley high school on January 19, and there will be one instituted at Kinderhook January 26. The school at the latter place was so well attended last year that the local managers and the State Agricultural College will make this one something of a model in its way. Among the instructors are Jared Van Wagenen, Jr., A. C. King, A. E. Wilkinson, L. J. Cross and others. There will be courses in domestic economy also. The school is in session from 9 to 4 each day and the tuition is $1.25 for the week.

THE BOND SALE.—When Comptroller Sohmer opened the bids for $51,000,000 State 4½ per cent. non-taxable gold bonds, he found the issue several times oversubscribed. Of these bonds, $30,000,000 are for canal and $21,000,000 for highway purposes. More than 200 sealed proposals were received at the Comptroller's office up to the night prior to the opening of the bids. The number received exceeded that of any other bond sale of the State.

HEALTH COMMISSIONER'S REPORT.—From the report of Health Commissioner Porter it appears that the death rate for the past year is about the same as for 1912, it being for the latter year 14.8 and for 1913, 14.9 per thousand of population. The city death rate for the past five years has been 15.8, and the rural rate 15.6. A total of 145,056 deaths were reported last year, of which tuberculosis claimed 13,800, and Bright's disease 10,431. Pneumonia was third, with 9,431. A total of 228,460 births were recorded. There was only one death from smallpox.

The snowstorm which occurred January 12 was the coldest and most severe of any this season. The mercury lowered to 8 deg. in some places, while at others it went down to 20 below. The snow blocked the roads so that the rural mail did not come for two days. Cattle are still very high; milch cows or those that will be fresh this Spring, if they have enough Holstein blood to give them the color, bring $75 per head. Heavy work teams $500 a pair. A great many are improving their opportunity to haul logs and wood. Eggs 34; chickens, live, 12; butter 30. There is no call for hay at present.

S.

Mayville, N. Y.

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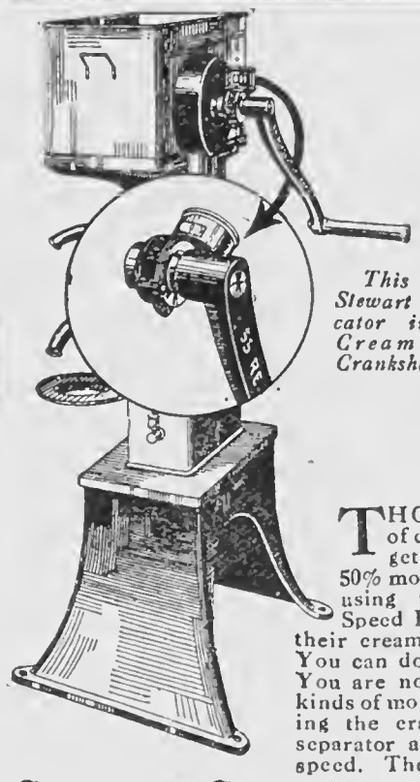

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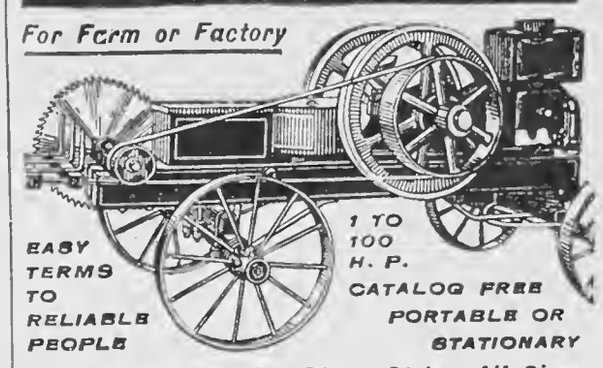

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Yes sir, I'll save you $35 to $50 in the first cost alone on the best, most modern, most sanitary and closest skimming cream separator ever built. When you buy the

New Galloway Sanitary

—you pay just one small profit above actual cost of materials and labor. Why pay any dealer $85 to $110 for an inferior machine. Buy direct and save one-half. Get my

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The new Galloway Sanitary skims to a trace, gears run in oil—easy to run—easy to clean. Sold direct. Backed by $25,000 bond. Write for new catalog and special 1914 offer that will help you get your machine partly or entirely without cost in the end. Write today.

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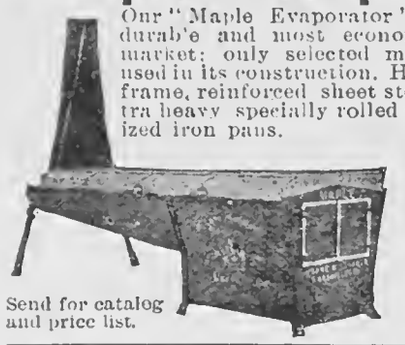

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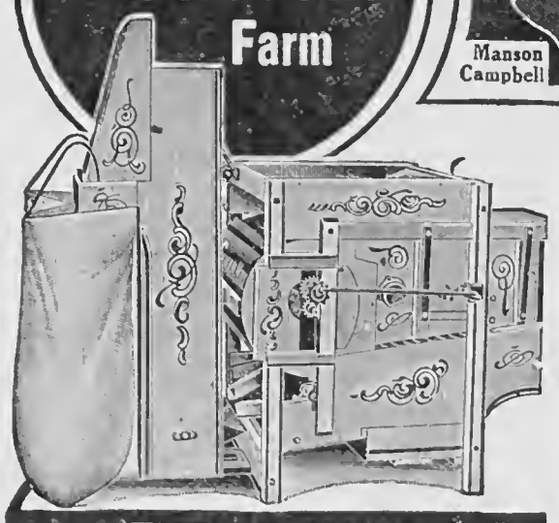

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Handles 70 Kinds of Seed Grain and Grass Seed

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Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)
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For $1.00, I Clean and Grade Your Seed Grain

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for **one paltry dollar.**

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

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I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar.

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience,

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this,

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

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My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

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The Henyard.

Crops for Poultry.

I have two acres of land in New Jersey which I intend to use in the following manner to make a living: One-quarter acre I intend to work intensively as a vegetable garden. One quarter I have put in berries, currants and grapes. The remainder I intend to use for poultry, fruit trees, and green food or grain for chickens. Will you tell me what chicken food it would be most profitable to raise on the acre and a half? I intend to have S. C. White Leghorns, and use the open-front poultry house as advised by the agricultural stations. I have worked this land for a year, and it is very fertile, and in good condition; last Summer I had as large a variety of vegetables as they had on Hope Farm.
Brooklyn, N. Y. W. A. M.

Corn, buckwheat, rape and mangels are probably the best crops for such a plan. All will respond well to the use of hen manure. The corn, after it gets a foot or more high, will make good shade or protection for the hens and chicks. Sow clover and rye at the last cultivation of the corn for a cover crop. This will make good pasture both Fall and Spring. You can sow oats or barley in Spring. This grows grain and straw for litter, and after harvest the grain stubble can be seeded to buckwheat and clover, the buckwheat for grain and the clover to remain. The mangels are always useful for feeding poultry. A piece of rape will give fine pasture.

A Hen Record.

In December, 1912, I had a pen of 29 pullets. I enclose the record of eggs laid by them during the year ending November, 1913. Dec., 260 eggs; 1913, Jan., 450 eggs; Feb., 569 eggs; March, 603, five hens now setting; April, 419; May, 305; June, 332; July, 382; Aug., 341; Sept., 342; Oct., 130; Nov., 152; No. of eggs laid during the year 4,285.

These hens also hatched me 250 chicks 1913, I had lost three of my 29 pullets, leaving me 26 hens, have added 49 pullets to these, making me a flock of 75. During December they have laid 756 eggs. To me it seems a big record for an ordinary farm flock of S. C. R. I. Reds, where there is no specialty made of poultry in egg-raising except to keep them as near purebred as possible.
Orange Co., N. Y. P. K. L.

Charcoal for Chickens.

How can I make charcoal for chickens, and what kind of wood do I need for it?
Old Bridge, N. Y. J. Z.

Willow is best but any wood will answer. Many stockmen use corncobs with success. Dig a hole in the ground, pack the cobs in firmly with a small quantity of light kindling. Cover the top over with soil so as to prevent a draft and set on fire. After the fire is well started, cover all openings so as to admit just enough air to enable the pile to smoulder without blazing.

Defects in Type.

Is it a natural defect in S. C. White Orpingtons to have yellow feet and legs, or is it caused by ill-mating? What is the cause of the pullets having grey feathers occasionally? Would it be advisable to breed hens to a cock with black feathers in his tail? Would you advise one to keep such stock and by careful selection in mating try to overcome the difficulties, or would you make a change in the breeding stock used? M. S. S.
Draper, Va.

The plumage of the White Orpingtons should be pure white throughout, and the feet of a white or pinkish white color. Like all "made breeds" they will occasionally show reversions to the markings of some one of their ancestors, these having not been entirely bred out. You will have to get rid of such defects by discarding from your breeding pens the fowls showing them, or, in other words, selecting for purity of type. This is a long, slow, process, but the only one by which a new breed can finally be made to always come true to type.

A Case of "Limberneck."

On page 1280 J. W. N. asks for remedy for limberneck. The only remedy is the ax after the fowls have taken it. Prevention is what you want; it is simply burn every fowl that dies, which only requires a few minutes and a little wood or oil in an old pot. Limberneck I find is caused by a maggot that gets into the carcass of a fowl that is left lying around. The other poultry eat these and they stick in their throats and windpipe and begin eating and of course soon eat through, and the fowl dies. Last Summer I found a hen dead, and began to look for the cause. By the time I discovered the hen that the maggots were on I had found half a dozen choice fowls dead or dying. Again, never bury a dead fowl, for these maggots will work up through the ground and before you know it you have one or more limberneck fowls. I saw this happen to a hen with a large brood; in 24 hours after eating all were dead. J. O. G.
Virginia.

Dry Mash Formula.

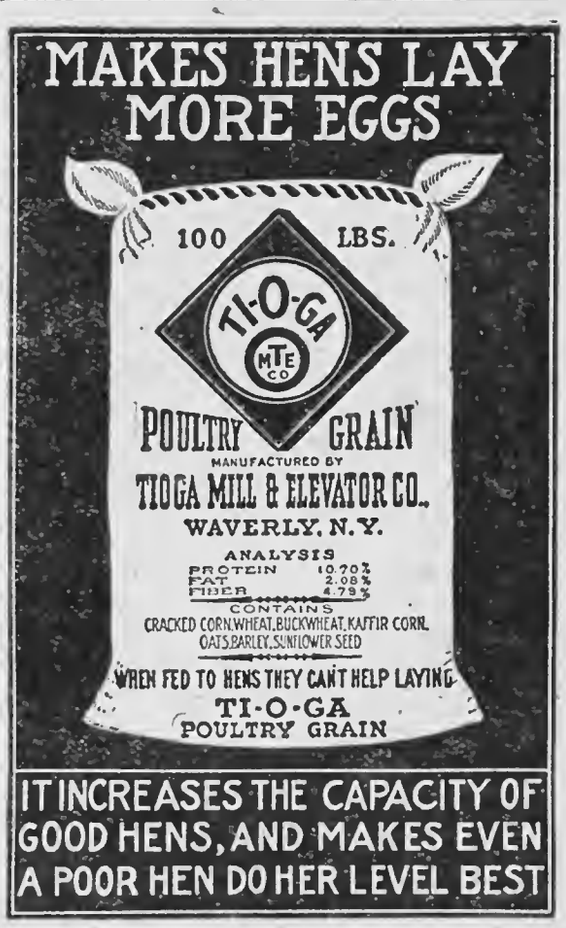
I have always fed wet mash, but wish to try hopper feeding dry mash. Which formula do you think is best to feed? The Maine mash is about one in eight of scraps, and the Cornell is one in five scraps. My hens are yearlings and two year olds, cross between W. Rock and Leghorn. My plan is to feed a light feed of grain in the litter in the morning, open dry mash at noon, open whole grain hopper two hours before dark. My whole grain is corn and wheat in Winter and wheat and oats in Summer, mixture equal parts by measure. The corn I grow, so it is whole corn. G. S.
Whitman, Mass.

Your proposed plan of feeding is good, and you will probably get good results with either the Maine or Cornell formula for a dry mash. Nothing but an extended test could determine which formula was best, and that would determine it only for the exact conditions under which the test was made. While I frequently recommend certain formulas for compounding dry mashes, this is done only to present a well-balanced combination of foods, and not because that particular formula is superior to all others. All domestic animals adapt themselves to a wide range in variety of foods, and it is not necessary, or even desirable, to limit them to any one definite combination. One who feeds domestic animals for profit should learn the general principles governing nutrition and feeding; he will then be able to make combinations with such feeds as are available to him, and to take advantage of the difference in market prices of these feeds. M. B. D.

Sulphured Oats.

A very large number of poultrymen would like to feed sprouted oats to their hens. Most of the oats obtainable now in the market will not sprout because the germ has been killed by the sulphur treatment. A grain dealer told me recently that not one carload in ten would sprout on account of that treatment. If the germs are dead are the oats first quality? Have they not been injured by the treatment? Would not a law forbidding such treatment be a good law? H. C. T.

Last Spring we gave the facts about these sulphured oats. They are usually grain that has been discolored in some way. When treated with sulphur fumes the oats are whitened and given a better appearance. The germ is usually destroyed and of course such oats will not sprout. Some of them taste so strongly of sulphur that horses will not eat them unless very hungry. Grain dealers tell us that plenty of natural oats can be obtained. They cost two cents or more per bushel extra, but they will sprout. The sulphured oat as sold at present is a fake—inferior stuff brightened up to look like the read goods. There ought to be a law compelling grain dealers to sell sulphured oats as such—marked and branded to distinguish them from the natural, live grain. It is a clear case of fraud to sell "dead" oats to a poultryman when he wants the grain for sprouting.



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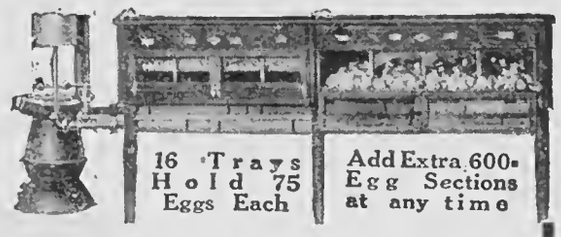

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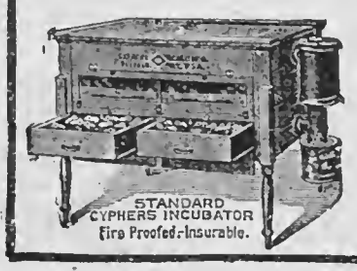

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For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844

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Not cripples or weaklings. They come big, strong and vigorous when hatched in the

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THE EGG-LAYING CONTEST.

The ninth week, ending January 2, shows a further drop in egg production of 99 eggs, the week's output being 876, as against 975 last week, and 1,004 the week before last. But Barron's White Wyandottes are not "dropping off;" one of his pullets, after laying splendidly up to two weeks ago—seven eggs a week part of the time—has gone broody, and has not laid in two weeks. But the other nine laid 52 eggs this week, 22 eggs more than any other pen of any breed. Here is their record, 7, 6, 4, 6, 5, 5, 6, 7, 5.

What does he do to them? Does he hypnotize them, and then by will power strong enough to reach aeross the ocean, will them to lay? I admit this solution is a trifle fanciful, so I "give it up." A well-known Connecticut poultryman said to me a few days ago, "That man Barron could take Buff Cochins and win with them." I doubt that, for a flock of Buff Cochins I knew—big eight-pound beauties—used to lay a smaller egg than a 2½-pound Leghorn and not half as many.

White Wyandottes also capture second place for the week, the pen from Merrythought Farm lay 34. Two pens tie for third place, with score of 30 each. They are Dearborn & Sharpes' S. C. Reds, and Cecil Guernsey's White Leghorns. "Pen 42," the "sour-milk" pen from Storrs Agricultural Station, are next, with a record of 29; 14 pens did not lay an egg this week. Below is the record for some of the best pens:

	Week	Total
BARRED P. ROCKS.		
J. J. Francis, Long Island...	27	204
F. L. Tuttle, Massachusetts..	6	59
A. B. Hall, Connecticut.....	7	44
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	17	57
W. C. Morgan, Jr., Connecticut	6	55
WHITE WYANDOTTES.		
Tom Barron, England.....	52	345
Neale Bros., Rhode Island...	18	272
Merrythought Farm, Connecticut	34	234
West Mt. Poultry Yards, Connecticut	17	154
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	10	51
Am. Buff Wyan. Club, New York	8	57
SINGLE COMB REDS.		
Dr. J. A. Fritchey, Pennsylvania	26	174
Pinecrest Orchards, Massachusetts	12	149
Colonial Farm, New Hampshire	13	138
J. S. Gillespie, Connecticut...	20	120
Dearborn & Sharpe, New Jersey	30	117
ROSE COMB REDS.		
Glenview Farm, Connecticut..	21	124
C. S. Scoville, Connecticut...	9	109
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	28	315
Storrs Agr. Sta., Connecticut	29	264
Cecil Guernsey, New York..	30	216
Tom Barron, England.....	11	197
Storrs Agr. Sta., Connecticut	23	166
Manwood Pltry. Farm, Pennsylvania	16	144
Storrs Agr. Sta., Connecticut	22	138
Storrs Agr. Sta., Connecticut	7	118
Bonnie Brook Farm, New York	15	122
F. M. Peasley, Connecticut..	1	120
L. E. Sands, Pennsylvania....	5	103
BUFF ORPINGTONS.		
O. Wilson, West Virginia....	4	17
WHITE ORPINGTONS.		
P. A. Demgar, New York....	6	28

The blue ribbon pen for the month of December was Tom Barron's White Wyandottes; this pen laid 213 eggs, and the best individual hen in this pen, and in the contest, has a score of 49 eggs in two months, or an average of 24½ eggs a month. If she continued at this rate for the year it would make her score 294. Francis F. Lincoln's White Leghorns laid 172 in December, winning the red ribbons, and Cecil Guernsey's White Leghorns won third place, with a score of 163.

The Connecticut State Poultry Association expects to have Mr. Barron deliver two or possibly three lectures on poultry keeping, at their three-day midsummer meeting at Storrs College next July. GEO. A. COSGROVE.

THE CALIFORNIA EGG-LAYING CONTEST.

The Napa Valley Poultry Association, which is conducting the Napa yearly egg laying contest at Napa, Cal., did not issue any official bulletin for the ninth month of the contest, giving as a reason that the hens had made such a poor showing they did not consider it wise to do so, or words to that effect, and had decided to issue a combined ninth and tenth month bulletin, which has just been received. Why it is thought necessary to issue bulletins when the showing is good and not when the reverse is the case, is not clear. My idea of these egg-laying contests is that the poor showings should be given out as well as the good ones, in order to be of any value to the public at large. The showing made by the 66 pens for the ninth and tenth months gives a very good reason for the unusually high price of eggs. When fowls as carefully cared for as these are fail to lay a single egg in a month (as 10 of these pens did) all the boycotting of all the housewives' leagues in America, will not make the hen do any better.

Although we are well into the Winter, the writer has hens so far along in the molt at the present writing, that they feel more like porcupines when handled than fowls, nothing but quills on their bodies, and they must suffer more or less from cold weather, and as a matter of course, do not lay eggs. This is the cause of the remarkably poor showing at the Napa contest. For example, the pen of White Leghorns or Blom & Son, which led the contest for months, only laid seven eggs the tenth month and nothing the ninth. Otten's White Leghorns, fourth in the contest, laid none the ninth, 10 the tenth month; Lubben's Barred Rocks, fifth in the contest, laid none the ninth, and none the tenth. Bunjes' White Leghorns laid three the ninth, five the tenth; Stice's Barred Rocks two the ninth, none the tenth. All these pens are among the first 10 in the contest.

Only two pens have laid over 700 in the 10 months, the writer's pen of Buff Wyandottes, with 796, and Bloms' White Leghorns, with 751, while 11 pens are below the 400 mark, which would emphasize the remark of Secretary Rutherford that "all Leghorns are not good layers." He might say the same of all breeds. The Buff Wyandotte pen entered by the writer still leads the contest with a total of 796; the nearest pen being Blom & Son's White Leghorns, with a total of 751.

It is a fact worth noting that of the first 10 high pens, five are American or English breeds, and these pens made their good showing mainly when eggs were high priced; for example the Buff Wyandottes made their best month's record, 121 eggs for the month, when eggs were selling at 55 and 60 cents retail.

Following are the 10 high pens to date, with their records for ninth and tenth month and totals:

1. Pearson, Buff Wyandottes, 9th month, 15; 10th month, 12; total, 796.
2. Blom & Son, White Leghorns, 9th month, 0; 10th month, 7; total, 751.
3. Rutherford, White Rocks, 9th month, 15; 10th month, 21; total, 699.
4. Otten, White Leghorns, 9th month, 0; 10th month, 10; total, 683.
5. Lubben, Barred Rocks, 9th month, 0; 10th month, 0; total, 654.
6. Slocum, White Leghorns, 9th month, 10; 10th month, 22; total, 654.
7. Clardy, Buff Orpingtons, 9th month, 6; 10th month, 7; total, 600.
8. Stice, Buff Leghorns, 9th month, 16; 10th month, 0; total, 577.
9. Bunjes, White Leghorns, 9th month, 3; 10th month, 5; total, 558.
10. Stice, Barred Rocks, 9th month, 2; 10th month, 0; total, 549.

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SELECTED, VIGOROUS BIRDS—$2 EACH.
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Beauty and Utility Strain S. C. R. I. Reds
30 large March hatched Cockerels, bred from high-producing trap-nested, standard-bred stock. $3 and $5. Eggs for Hatching. Mating list on application.
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COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds averaged each for the year, 194 eggs. Official record. A real bred-to-lay strain of Reds, single combs. We shipped to customers in 46 States last year. We offer for sale, splendid Cockerels that are from our best breeding lines, at reasonable prices. We have already booked orders for hatching eggs from Iowa, Pennsylvania, Texas, Michigan, and Mass. We are the breeders that furnish all the birds that the *Youth's Companion* send out as premiums. Honorable treatment is guaranteed. COLONIAL FARM, Box O, Temple, New Hampshire

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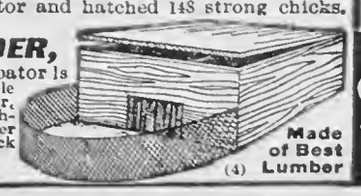

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PUBLISHER'S DESK

Friends of this Department will be interested to know that during the year 1913, 743 claims were collected through this department, aggregating $10,112.91. During 1912, 558 claims were collected aggregating $10,926.51; during 1911, 539 claims aggregating $12,110.63; during 1910, 400 claims aggregating $9,065.45. For the four years there was a total of 2,240 claims, amounting to $42,215.50. During 1913, 2,061 inquiries were answered through this department for ratings on business houses and other purely business matters. Inquiries should be, and often are, accompanied by postage for reply, but the service is entirely free to subscribers, and we are glad to have them make use of it whenever the service will be of benefit to them.

Several years ago we called attention to the nature of the business done by the Monaton Realty Investing Company of New York City, and other concerns of the same kind. These realty concerns speculate in city and suburban real estate. One or more mortgages are placed on the property; and then bonds are sold on the basis of the estimated value of the properties above the mortgage. The so-called bonds are mere promises of the company to pay. They also write an installment contract in which the company promises to pay six per cent interest and a part of the profits and also promise a return of the money. The Appellate Court has recently held that the companies have no authority to do this kind of a business; that it is in effect a banking business and could only be carried on legally by concerns organized under the banking laws. The attorney general has now announced that proceedings would be brought against these real estate companies to compel them to refrain from this class of business, which of course, would drive them out of business entirely. It is said that a receiver would be asked for the Monaton concern, and an application made to have its charter annulled.

These realty concerns have been a scandal to the State. Some of them have issued notes, called bonds, to the amount of twelve million dollars or more. These have been sold through advertising and house to house canvassers to inexperienced investors who were led to believe that "bonds" were liens on real estate and first-class security. During the last two years there have been several heavy failures, and the holders of the bonds have been heavy losers.

The business has also brought its scandal to the publishing business. Some high-class publications have carried the advertising and published editorials indorsing the business. This publicity has helped the companies sell the bonds, and has been responsible for the loss of many a hard-earned dollar.

We have referred to complaints of subscribers who sent orders and remittances to the Heffron Company of Syracuse, N. Y., for goods that were never delivered. The company is now in the hands of a receiver and the affairs of the concern are under investigation. As near as we can make it out there are over 1,200 such orders unfulfilled, aggregating on an estimate twelve to fifteen thousand dollars. Mortgage for $50,000 was placed on the property, and the proceeds do not seem to be satisfactorily accounted for in full. A Sterling Securities Company was organized, and apparently controlled by M. E. Heffron; and this company sold stock of the Heffron company. At this writing no one seems to know what became of the proceeds of these stock sales. It seems that the mortgage was given to D. H. Tolman. He is now in jail. Others may or may not accompany him later, but it is safe to say that the people who bought the stock have lost their money. We must teach our people to be more provident of their savings, and the State should also help protect them from investment swindles.

A few weeks back I answered a puzzle just to see what it was. Yesterday I received this answer I enclose. I think this is giving something for nothing. It sounds too good to be true, to me. What do you think about it? I. P.
Maryland.

The enclosure with the above letter was advice from a watch concern that he had won a $50 watch. Everybody answering one of these puzzle advertisements is sure to win a prize. All the person has to do to get this $50 watch is to send $3.48. This is an old fake. The puzzle is usually made easy so that everyone can solve it. The scheme is to make you think you are getting a prize for your cleverness. It is an appeal to one's vanity. Of course, in reality nothing is allowed for skill in solving the riddle. They have a watch that they want to sell for $3.48. If they advertise it as such, they would get few buyers. We ran down a similar proposition some years ago, and found the concern was sending out a watch that cost 49 cents each. It was sent by express and the receiver paid the express charges, and the concern got a rebate from the express companies. In a few months they cleared up $40,000. The complaints finally forced them out of business. Any scheme that offers something for nothing is a sure fake,

On September 22, 1913, I left at the store of Wyckoff & Dickinson in Gilboa one case (30 dozen) of eggs, which was noticed by both Mr. Wyckoff and Mr. Dickinson, to be taken to the National Express office at Grand Gorge, N. Y., for S. & W. Waldbaum, 175 Chambers street, New York. I have been shipping to Messrs. Waldbaum during the past Summer, and have received very prompt returns. Not hearing from them as promptly as usual, I wrote, asking if they received the case, to which they replied in the negative. I then sent to the express office at Grand Gorge and found they had no record of my shipping any eggs on that date, and I have no receipt. I am enclosing affidavit of the driver of the stage, saying he left the eggs at the express office or station, which is the same. I can get no further trace of the eggs. There seems no doubt the express company had the eggs. Eggs were quoted at the time 32 cents, stage charges and express 53 cents, leaving net $9.07. Can you do anything with this? D. W. S.
Gilboa, N. Y.

We are giving this history for the opportunity it affords to issue a word of caution. We have been unable to collect several claims lately because of similar circumstances. The shipment had been entrusted to some one else and no receipt procured. It is impossible to get an adjustment from an express or railway company unless the claim can be supported with the evidence to show that they handled it. When any of this evidence is lacking the transportation companies deny all responsibility. Even an affidavit, as in this case, had no weight with them, for their books showed no record of the shipment.

The following advertisers who have been refused space in THE R. N.-Y. are all found in a single issue of one of the most careful of the other farm papers:

Bradley Brothers, Makanda, Ill.
A. L. Rice, Adams, N. Y.
N. M. Ruthstein, Racine, Wis.
Ratekin's Seed House, Shenandoah, Ia.
J. J. Bell Seed Co., Deposit, N. Y.
H. W. Buckbee, Rockford, Il.
A. A. Berry Seed Co., Clarinda, Iowa.
Mills Seed House, Rose Hill, N. Y.
John Lewis Childs, Floral Park, N. Y.
The Temple Engine & Pump Co., Chicago, Ill.
Jesse Beery, Pleasant Hill, Ohio.
M. M. Johnson Company, Clay Center, Nebr.

The income from these advertisements in the paper referred to is in the neighborhood of $3,000 for a single issue and probably not less than $9,000 for the season. The cost of one insertion of these advertisements in THE R. N.-Y. would be about $500; and in refusing them space it sacrifices probably not less than $5,000 each season. No other paper that we know refuses all of them. Few if any other paper refuses any of them. This is, of course, by no means a full list of all the advertising we refuse. It is simply the number that we refused which appeared this month in a single issue of another farm paper. We are not referring to this to blow our own horn, nor to knock other publishers or any advertiser; but it is important that people who buy goods through the mail and send their money with the order should discriminate in their source of supplies. Our purpose first of all is the information and protection of our own subscribers, and after that to raise the standard and the efficiency of advertising—to make advertising dependable. In all human affairs the best efforts are faulty but as near as we can approach it we want it to be possible to send a remittance to an advertiser in this paper with as much safety as it could be handed over a counter, when the goods are in sight. J. J. D.

Dickelman "Cluster" METAL SHINGLES

Furnish a perfect roof at low cost. Made of 99.9% pure, open-hearth iron, properly galvanized for lasting service. Easily and quickly laid with hammer and nails. Special side and end-lock makes them absolutely water-proof. Investigate sure by writing today for catalog about

"The Roof of Quality"

Tells why we can sell all "Dex" quality products under 15 year guarantee. Gives reasons why "Dex" Roofing cannot rust, split, crack or blow off. Shows how to lay all kinds of metal roofing. Let us mail you this useful book FREE! Write for it today. A post card will do.

The Word "Dex" Stands for Highest Quality in corrugated, v-crimped, roll roofing, and many other Dickelman Metal Specialties. Write for catalog To-Day.

Dickelman Roofing Co.
Dept. 260
Forest, Ohio

SYKES ROOFING

Galvanized or Painted

FREE SAMPLE SYKES

Write to-day for free sample and mill prices--send size of buildings and we will furnish free complete estimate of cost---then make comparisons and see the big savings.

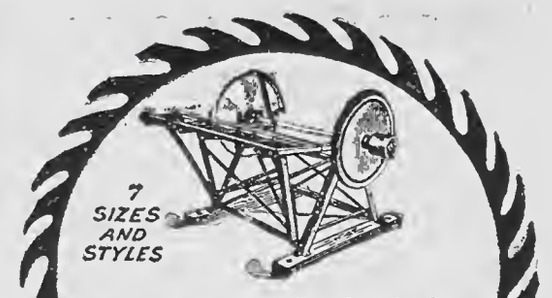
QUALITY GUARANTEED
BEST OPEN HEARTH PRODUCT

When you buy from us, you buy from the manufacturer. All galvanized Roofing and Siding have extra heavy tight coating of galvanize. Also makers of galvanized shingles for houses.

Established 1877
THE SYKES METAL LATH & ROOFING Co.
516 Walnut Street, Niles Ohio

DIRECT FROM MILL AT MILL PRICES

GALVANIZED ROOFING $2.90 Per Sq.
Write for Cat. "C" and price, Del. your station.
GRIFFIN LUMBER CO., Box 99, Hudson Falls, N. Y.



Shall we send you free book about
APPLETON
WOOD SAWS

It shows pictures of all our buzz, drag, circular log saws and portable wood sawing rigs, with or without Appleton Gasoline Engines, Tells you straight facts which we guarantee our saws to back up. Opens a way for you to make money this Winter sawing your own and your neighbors' wood. You want a saw to last—made strong—boxes that never heat—don't experiment with cheap saws then, buy an Appleton, 40 years the standard. Send for booklet to-day.

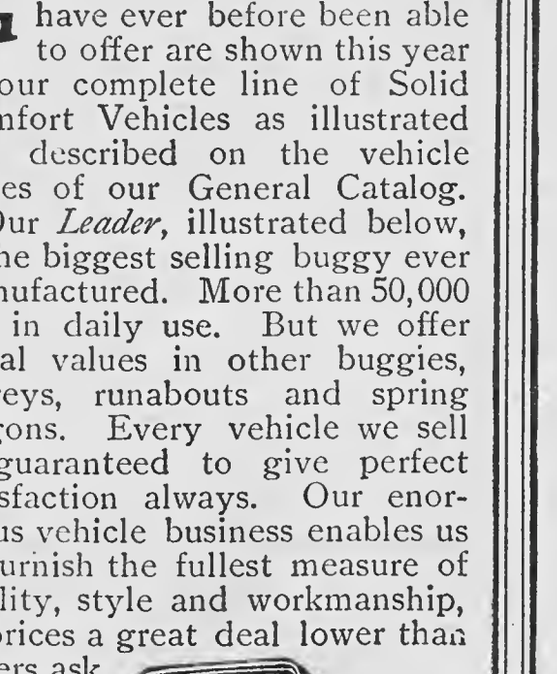
APPLETON MFG. CO. Batavia, Ill., U.S.A. 627 Fargo St.

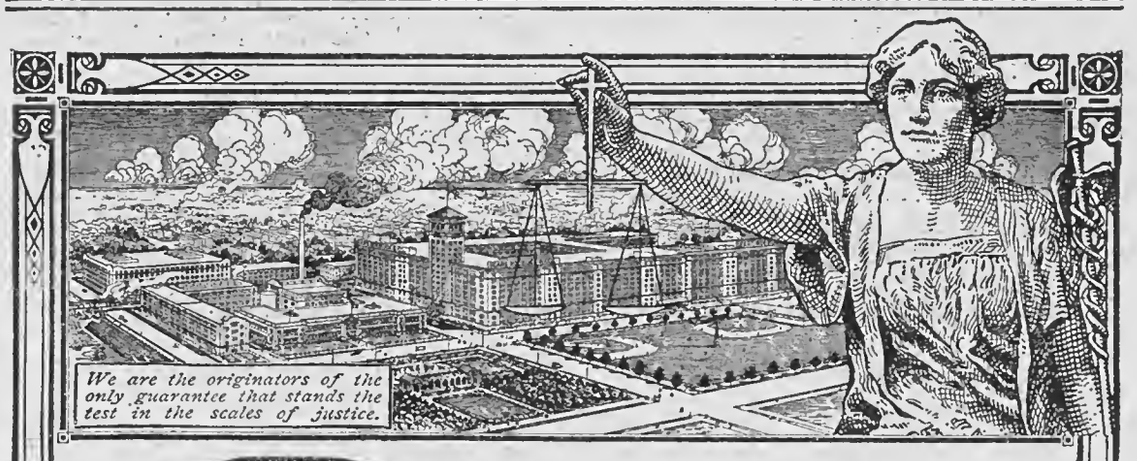
Jacobson Gasoline—Kerosene Engines

Send for Free Booklet

One of our types of engines is bound to be just what *you* need, Mr. Farmer. One of our newest operates on either gasoline *or* kerosene. You realize what an advantage that is, for kerosene's most always on hand. No matter what job you want to do, the Jacobson engine simply walks away with the work. Jacobson Portable Gasoline Engines are approved and labeled by the Underwriters. Material and workmanship faultless.

JACOBSON MACHINE MFG. CO.
Dept. D
Warren, Pa.





Solid Comfort Vehicles

GREATER values than we have ever before been able to offer are shown this year in our complete line of Solid Comfort Vehicles as illustrated and described on the vehicle pages of our General Catalog.

Our *Leader*, illustrated below, is the biggest selling buggy ever manufactured. More than 50,000 are in daily use. But we offer equal values in other buggies, surreys, runabouts and spring wagons. Every vehicle we sell is guaranteed to give perfect satisfaction always. Our enormous vehicle business enables us to furnish the fullest measure of quality, style and workmanship, at prices a great deal lower than others ask.

Our price for the splendid buggy illustrated below is **$61.90.** It has triple panel auto seat, genuine leather upholstering, highest type body construction, triple braced shafts, best wheels made, full wrought fifth wheel, real long distance self oiling axle. Shipped from a warehouse near you.

If you want to read the complete description of this and many other vehicle bargains, turn to the vehicle pages of our big General Catalog. Compare the quality and prices with others and remember the guarantee of satisfaction we give you.

If you haven't our big General Catalog, simply say "Vehicles—66R69" on a postal card and mail to

Sears, Roebuck and Co., Chicago

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : :

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MARKETS

Wholesale Prices at New York, Week Ending Jan. 23, 1914.

BUTTER.			
Creamery, extra, lb	30	@	31
Good to Choice	27	@	29
Lower Grades	22	@	26
Storage	22	@	31
State Dairy, best	2	@	30
Common to Good	22	@	27
Factory	18	@	22
Packing Stock	17	@	20
Elgin, Ill., butter market firm at 32 cents. Philadelphia, western creamery, 32 cents.			
CHEESE.			
Whole Milk, best	17	@	18
Common to Good	14	@	16
Skims	05	@	10
EGGS.			
White, choice to fancy, large	38	@	40
Common to good	34	@	37
Mixed colors, best	33	@	34
Common to good	30	@	32
Storage, best	28	@	30
Medium and low grades	23	@	26
European, fresh	25	@	30
FRESH FRUITS.			
Apples—Spitzenburg, bbl	3 50	@	4 50
Spy	3 50	@	5 50
King	3 00	@	5 00
Hubbardston	3 00	@	4 50
Greening	3 50	@	5 25
York Imperial	3 50	@	5 25
Baldwin	3 50	@	5 00
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	1 50	@	2 75
Cranberries, Cape Cod, bbl	10 00	@	13 00
Long Island, bbl	10 00	@	12 50
Jersey, bbl	12 00	@	13 00
Jersey, crate	2 50	@	3 00
Strawberries, Fla., qt	30	@	0 75
BEANS.			
Marrow, 100 lbs	4 70	@	5 25
Medium	3 60	@	3 65
Pea	3 55	@	3 65
Red Kidney	5 05	@	5 15
White Kidney	5 75	@	5 85
Yellow Eye	4 60	@	4 65
Lima, California	5 85	@	5 95
HOPS.			
Prime to choice	45	@	48
Common to good	40	@	44
Pacific Coast	23	@	27
Old stock	15	@	18
German crop	68	@	72
VEGETABLES.			
Potatoes—Long Island, bbl	2 25	@	2 75
Maine, 180 lbs	2 25	@	2 50
State, bulk, 180 lbs	2 25	@	2 50
European, 168 lb. bag	1 60	@	1 90
Bermuda, bbl	3 00	@	5 00
Sweet Potatoes, bbl	1 50	@	1 90
Artichokes, doz	2 00	@	3 00
Beets, bbl	1 50	@	1 75
Carrots, bbl	1 50	@	1 75
Cabbage, Danish seed, ton	27 00	@	32 0
Red	27 00	@	32 00
Imported	23 00	@	28 00
Celery, doz	25	@	65
Kale, bbl	60	@	70
Lettuce, half-bbl. basket	1 50	@	3 25
Onions—White bu	1 50	@	2 00
Red, 100 lb bag	2 00	@	2 35
Okra, bu	2 00	@	2 50
Peppers, Southern, bu	1 25	@	3 00
Peas, Southern, bu	2 00	@	6 00
Shallots, bbl	1 50	@	2 50
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl	75	@	1 25
String Beans, bu	1 00	@	3 50
Squash, Marrow, bbl	2 25	@	2 50
Hubbard, bbl	2 25	@	3 00
New, bu	1 00	@	2 00
Egg Plants, Southern, bu	2 25	@	2 75
Tomatoes, Southern, 6 bkt. crate	1 25	@	2 50
Turnips, white, bbl	1 25	@	1 50
Rutabaga	75	@	1 25
HOTHOUSE PRODUCTS.			
Cucumbers, No. 1, doz	1 00	@	1 50
No. 2, box	3 00	@	3 50
Mushrooms, lb	15	@	25
Radishes, 100 bunches	2 50	@	3 50
Tomatoes, lb	20	@	25
LIVE POULTRY.			
Chickens, lb	13	@	14
Fowls	15	@	15½
Roosters	11	@	11½
Ducks	17	@	18
Geese	13	@	15
Guineas, pair	60	@	65

PRODUCTS, PRICES AND TRADE.

Beginning with February the Board of Health rule regarding pasteurization will be in effect. This requires that all milk except grade A or certified must be pasteurized before it can be sold in the city. Heretofore the sale of raw milk for cooking has been permitted. There has been considerable surplus in this market during the past week, a 10-cent reduction to the producer in the near future being probable. The following gross prices cover most of the current business: Grade B, $1.91; C, $1.71 to $1.81.

*

Butter had an additional decline of two to three cents during the past week, 30 to 31 cents being now the top for creamery. Trade is very dull and receipts are larger. A shipment of about 200 cases fresh creamery from Argentina is in port but has not yet been sampled. The market on lower grades of packing stock and worked-over butter is in better condition. The demand is fair and prices have been on a proportionately lower level for these grades. Retailers are naturally pleased with the lower prices on creamery, as it means a material increase in their sales. A certain proportion of consumers use butter freely, no matter what the price, but the great bulk of "common people," as the uplifters call us, have to figure closely when butter wholesales above 30 cents.

*

The egg market is lower, mainly because of very dull trade. Receipts at New York are not large, but reports from the Southwest, which ships large quantities here, are that production is increasing. Very few grade storage eggs are offered at present; holders not being ready to take the reduced prices offered. The nearby white eggs arriving now have too large proportion of small sizes to bring within three or four cents of the top price quoted, 35 to 38 cents being extreme for most business of this class.

*

Argentine beef is being sold in New York several cents per pound under our home product. Many retailers are evidently selling it as domestic, thus making an additional profit. To offset this some of the large independent wholesalers are now arranging to do a retail business, selling at the reduced price possible considering its lower initial cost.

*

Wool trade in Boston is quite active, with weekly sales of nearly 5,000,000 pounds. Manufacturers using dress goods stock and carpet wools are showing considerable interest. Current prices of fleece wools follow: Ohio and Michigan unwashed delaine, 20 to 22 cents; half-blood combing, 23 to 24; fine unwashed, 19 to 20; delaine washed, 26 to 27.

*

Arrivals of grain at New York last year were as follows: Wheat, 52,979,500 bushels; corn, 10,704,275; oats, 20,382,300; rye, 739,175; barley, 6,194,725; flour, 9,451,447 barrels; corn meal, 725,417 barrels. Exports were: Wheat, 49,019,674 bushels; corn, 5,853,799; oats, 4,352,191; rye, 723,910; barley, 5,516,017; flour, 4,549,838 barrels; corn meal, 207,649 barrels. Argentina having complied with the reciprocal tariff requirements, wheat from that country can now be admitted here free of duty.

*

Barges built on the thermos bottle principle are being used successfully for river and harbor transportation of fruit. A temperature of about 40 degrees is kept, this being cool enough to ensure preservation, yet causing no injury to fruit of delicate texture.

*

California's oil production for 1913 was 98,000,000 barrels, valued at $50,000,000.

*

A cargo of 3,650,000 feet of lumber left Oregon for Shanghai, China, January 18.

*

The first East Texas strawberries of the season were marketed at Texarkana January 16. This is a month earlier than usual.

*

Automobiles brought New Jersey $661,000 in licenses and fines last year. $21,285.31 being fines, an excess of nearly $6,000 over the previous year.

Farm Hands and Laborers Supplied Free
We have many men anxious to learn farm work.
C. K. Blatchly, United Charities Bldg., 105 E. 22d St., N.Y. City

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Position as foreman on private estate; single, 28 years; experience in all branches farming, gardening, landscaping, etc. HENRY W. VALK, Mount Kisco, N. Y.

WANTED—A married man for a working foreman in herd of registered Jerseys and Ayrshires; some work with chickens; state experience and wages, including house. W. F. SHRUM, Jeannette, Pa.

WANTED BY A WIDOW—A position as housekeeper. Address B. E. C., care R. N.-Y., 333 West 30th St., N. Y.

WANTED—Farmer; married man; no children; man experienced in all branches of farm work and wife as cook and housekeeper, to board 8 to 10 men; good wages. Address C. H. W., care R. N.-Y., 333 West 30th St., New York.

WANTED—A family to board for summer. Particulars, BOX 17, Middletown, New York.

WANTED—To grow on contract carload Cobbler seed potatoes; guarantee pure, sound seed; northern Vermont grown. H. JOSLYN, East Hardwick, Vt.

WANTED—Position as working farm foreman; American; single; age 26; life experience; references. Address ROSCOE H. BACON, Silver Creek, N. Y.

WANTED—Man and wife on poultry plant; must be neat and good workers. Address E. L. T., care R. N.-Y., 333 West 30th St., New York.

MARRIED MAN—Farming, gardening and all horticultural work; first-class references from many noted gentlemen. BOX 62, Kings Park, Long Island.

HAVING HAD EIGHT YEARS' EXPERIENCE in poultry business, and desiring to enlarge plant, wants partner with capital, or position as manager on a poultry plant. H. RAVEN, Princeton, N. J.

$30 AND BOARD for strictly sober, industrious single man with knowledge of fruit growing, on small farm within 40 miles of New York City; chance for advance if satisfactory. BOX H. M. L., New Canaan, Conn.

ARE YOU INTERESTED in securing a practical, up-to-date farm manager? Twenty years' experience using practical, economical business methods. Not a theorist. One who knows how, why, and can produce results. References, bond. W. A. MAYOR, 332 Indiana Ave., Watertown, N. Y.

FARM HAND WANTED—Married man, no children; hard worker; sober; good dry-hand milker; experienced on all farm machinery; wife to board two men; wages $40; good house and usual privileges; give experience and references. OAKWOOD FARM, New Windsor, Newburgh, N. Y.

WANTED—On a fruit and market garden farm first-class man who understands growing small and large fruits, as well as market garden crops. Would prefer man with knowledge of growing vegetables under glass; splendid opportunity for a reliable man. W. W., care of R. N.-Y., 333 West 30th St., New York.

WANTED—Position as superintendent on gentleman's place or large estate; married, no children; 30 years' practical experience as market gardener and farmer on my farm, which is for sale; familiar with all machinery, fruit, stock, poultry, incubators and nationalities as help; state salary and privileges; references given and required. Address BOX 116, Center Moriches, N. Y.

AMERICAN, married, for the past four years in charge of one of the best herds of Channel Island cattle in the East; would like to change about April 1st; expert in A. R. feeding and every detail connected with modern dairy farm and herd management; life experience; excellent references; only a first-class proposition considered. Address COMPETENT, care R. N.-Y., 333 West 30th St., New York.

HERDSMAN desires position; American; single; age 27; temperate; seven years' experience with dairy stock; good reference; Philadelphia vicinity preferred. A. E. HAINES, Moorestown, N. J.

WANTED—Manager of one hundred-acre farm, located within forty miles of New York City; fruit, poultry, vegetables. In application write full particulars of experience, age, family, wages expected, references. BOX H. A. H., care R. N.-Y., 333 West 30th St., New York.

FARMER—Married; experienced with fruit, especially peaches and berries; 20-acre place; prefer man who has had some experience in machine shop, as we have gasoline engine, pump, piping, etc., on place. A reliable, go-ahead, non-cigarette or drinking man can make this place worth high wages, as owner is otherwise engaged; five miles from Philadelphia; at start $40 per month, house, etc. State age and size of family, experience, references and full detail in first letter. JAMES R. GWILLIAM, Merchantville, N. J.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

RELIGIOUS FREE LITERATURE—Unitarian—Postoffice Mission. Address Mrs. F. M. McGARRY, Grafton, Mass.

WANTED—Light clover mixed baled hay, carload lots. For Sale—Ground oyster shell, $10 a ton, f.o.b. S. SMEDLEY, Glassboro, N. J.

WANTED—Apple tree wood to make Self-setting Planes. GAGE TOOL COMPANY, Vineland, New Jersey.

WANTED—Horse-power tile ditching machine. WELLS LOGAN, Bowling Green, Ky.

IRON AGE POTATO PLANTER — Champion sorter; both used one season; for best exchange or offer. J. D. ENGEL, Middleburg, Md.

OLD TIME OPEN KETTLE NEW ORLEANS Molasses, fine as silk, full of sugar; one gallon up; stock molasses also. G. ROUTZAHN, Biglerville, Pa.

FRESH COUNTRY SAUSAGE—made entirely of pigs' meat, 5-10 lb. packages, 20c. lb; fresh spare ribs, 6 lbs., 18c. lb; smoked hams, 12 lbs., 22c. lb.; bacon, 7 lbs., 22c. lb.; product made in good old-fashioned way, and delivered postpaid in Second Zone; outside Second Zone add 1 cent per lb. THE MACKEY FARMS, Gilboa, N. Y.

CYPHERS BUFFALO INCUBATOR, 1913 Model. 350 eggs, perfect condition. What offers? MILL NECK CLUB, Oyster Bay, Long Island.

WE OFFER U. S. inspected Irish Cobblers; selected Number Nine; sweet clover; apple scions (bearing orchard), Bank's Gravenstein, McIntosh, Sutton and others; good Iron Age Orchard Cultivator. Wanted—Small gasoline engine. ISAAC C. ROGERS, Dansville, N. Y.

A GRADE MILK FARM FOR SALE—175 acres, 2½ miles from village and creamery; buildings good; spring water at house and barn; write for full description. OWNER, care R. N.-Y., 333 West 30th St., New York.

FARM FOR SALE—225 Acres. Apply to owner, BOX 337, Emporia, Virginia.

WANTED—160 acre farm in Neosha County, Kansas; $65; well improved. JAMES E. ABELL, Erie, Kans.

WANTED—A low-priced, small farm, suitable for fruit and poultry raising, close to town, railroad and school. E. J. BONDY, Conesus, N. Y.

POULTRY AND FRUIT FARM—15 acres; 24 miles from New York; station ¼ mile; seven-room house; improvements; fine view; poultry buildings, barns; artesian well; $7,500. ROSEMUND, Woodcliff Lake, N. J.

FOR SALE—Would you like to buy one of Washington County's good farms, 230 acres; 1¼ miles from station; good buildings; well watered, fenced and wooded. Correspond with owner for full particulars. LOCK BOX 30, Shushan, N. Y.

FOR SALE—Income Michigan fruit farm; 45 acres; 32 acres in apples, peaches and cherries; fine 10-room house; houses for 500 hens; just outside city limits; few hours from Chicago, boat or rail; will pay big interest on twice the purchase price. Am going West. J. E. HARRINGTON, Sycamore, Ill.

SMALL ABANDONED FARMS, near Troy, N. Y., $10 to $25 an acre; fruit, potatoes, poultry and wood; easy terms. AVERILL PARK, N. Y., Box 44 A, F. R. D. 2.

FOR SALE BY OWNER—100 acres, located in Central Ohio, in a good farming country; suitable for grain or dairy farming; good buildings, good roads, centralized schools; 4½ miles from county seat; write for particulars. R. T. LAIRD, Marysville, Ohio.

FARM FOR SALE—Near the thriving Pocono, 150 acres; nearly 100 acres timber land; abundant lot of fruit of all kind; good buildings; one mile north of Bartonsville, Pa.; W., B. & E. R.R. Address E. H. BEEHLER, Bartonsville, Pa.

FOR SALE—55-acre dairy and truck farm, on main road, near town; railroad and boat landing; good home market; a paying milk route; natural Alfalfa land; house suitable for boarders; two barns and outbuildings; sold on easy terms. For further particulars address PRATT HANER, Catskill, N. Y.

FOR SALE—Fine dairy farm of 107 acres, main traveled road; new 40x80 basement barn, good two-story painted dwelling; land lays fine; easily worked and very productive; 22 acres of good timber, mostly hemlock, $150; good farming tools goes with place; best of reasons for selling; a fine bargain for the man who wants a good home. Price, $2,900. Address OWNER, Lock Box No. 12, Oxford, N. Y.

105½-ACRE FRUIT AND DAIRY FARM, one mile to large manufacturing town; high school; on macadam road; good soil, large house, and barns in good repair; running water in house and barn; bath, inside toilet; 1½ acres strawberries, 250-quart milk route; sales 1913 over $4,900. On account of ill-health will take $65 an acre; $2,000 cash; balance on time. JOHN DATES, Groton, N. Y.

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TO RENT—Fifteen-acre farm, New York fruit belt; fruit on shares; poultry buildings furnished; fine soil, thousand trees; owner non-resident; good chance to break into farming; write for description. BOX 33, Bradford, Vt.

TO RENT—An Alfalfa farm of 120 acres, five miles from Manlius, Onondaga County, N. Y., in the prettiest country on earth; buildings, including tenant house, in excellent repair, with running water in all; macadam road, rural delivery; four miles from trolley; suitable for a gentleman and his family. W. W. CHENEY, Manlius, N. Y.

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Gentlemen: The Unito Invincible Incubator I bought of you is a little dandy. JOS. W. HARRINGTON.

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C. D. CRANDALL.

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Gentlemen: The Unito Perfect Poultry Fencing is the greatest and best fence I ever saw. Have used wire several times and it is as good as new. The plow is also the best I ever saw.

Yours,
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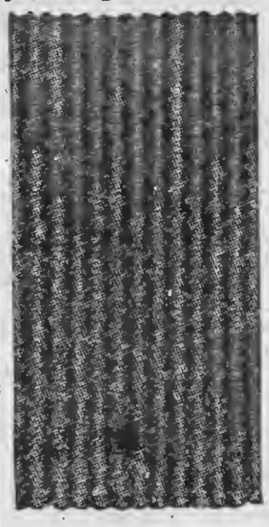

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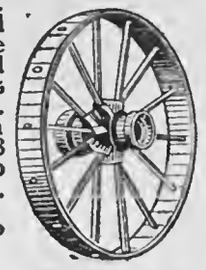

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII., No. 4241. NEW YORK, FEBRUARY 7, 1914. WEEKLY $1.00 PER YEAR.

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WHERE THE EGG MACHINES ARE KEPT.

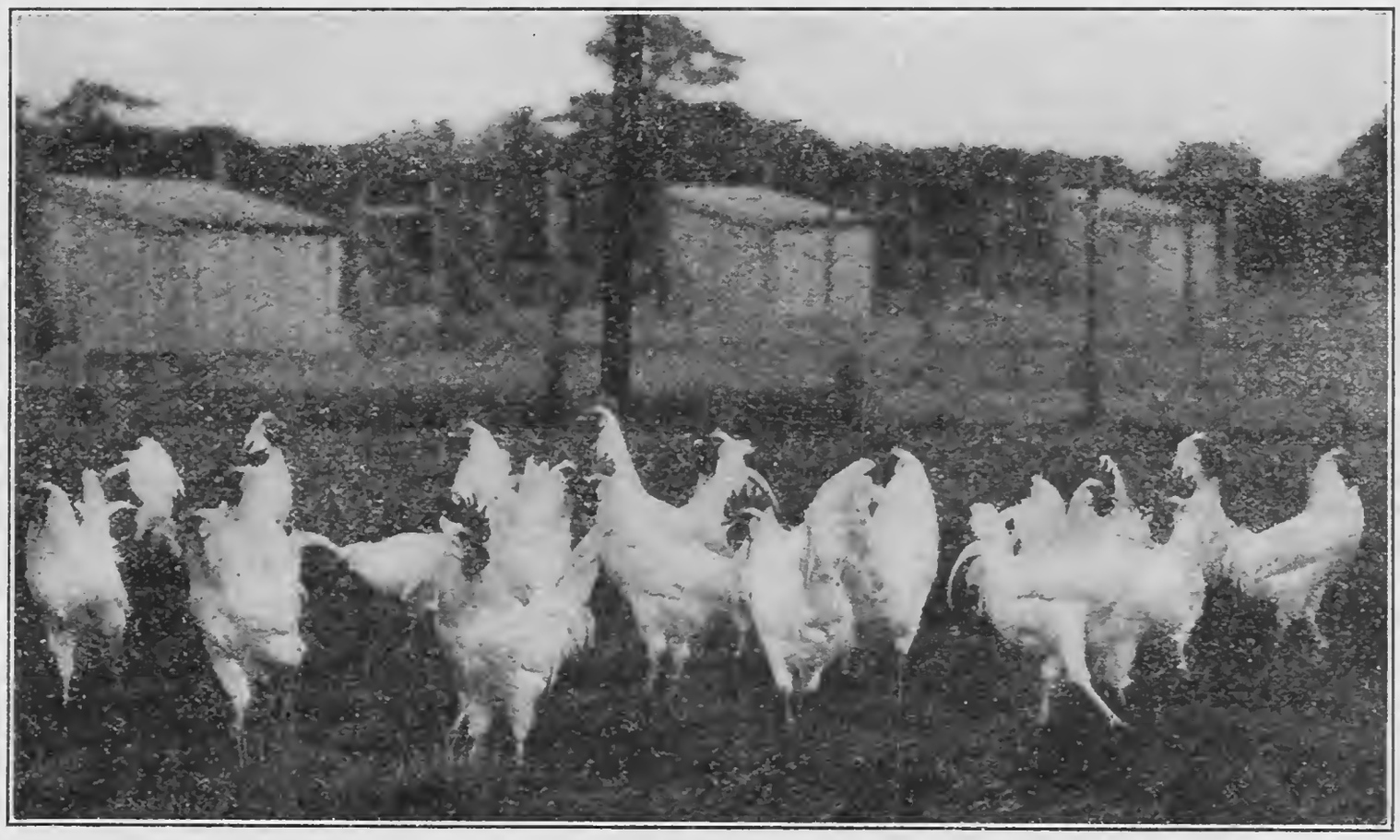
Barron's "Semi-Intensive" Poultry House.

This house is 72 feet long, 18 feet wide, and eight feet high to the eaves. It has a span-roof boarded underneath, and covered with corrugated iron on top. There are windows in the roof, which make it very light inside. There are also windows in the south wall which by ropes and pulleys and counter-balance weights, can be raised or lowered at will. This makes the south wall an open front the whole length. Under the windows 38 nests with a sloping top to keep hens from roosting on them are put. A storm screen three feet wide is put over the windows the whole length to keep out rain. This is very necessary in that part of England, where they expect it to rain at least four days in the week.

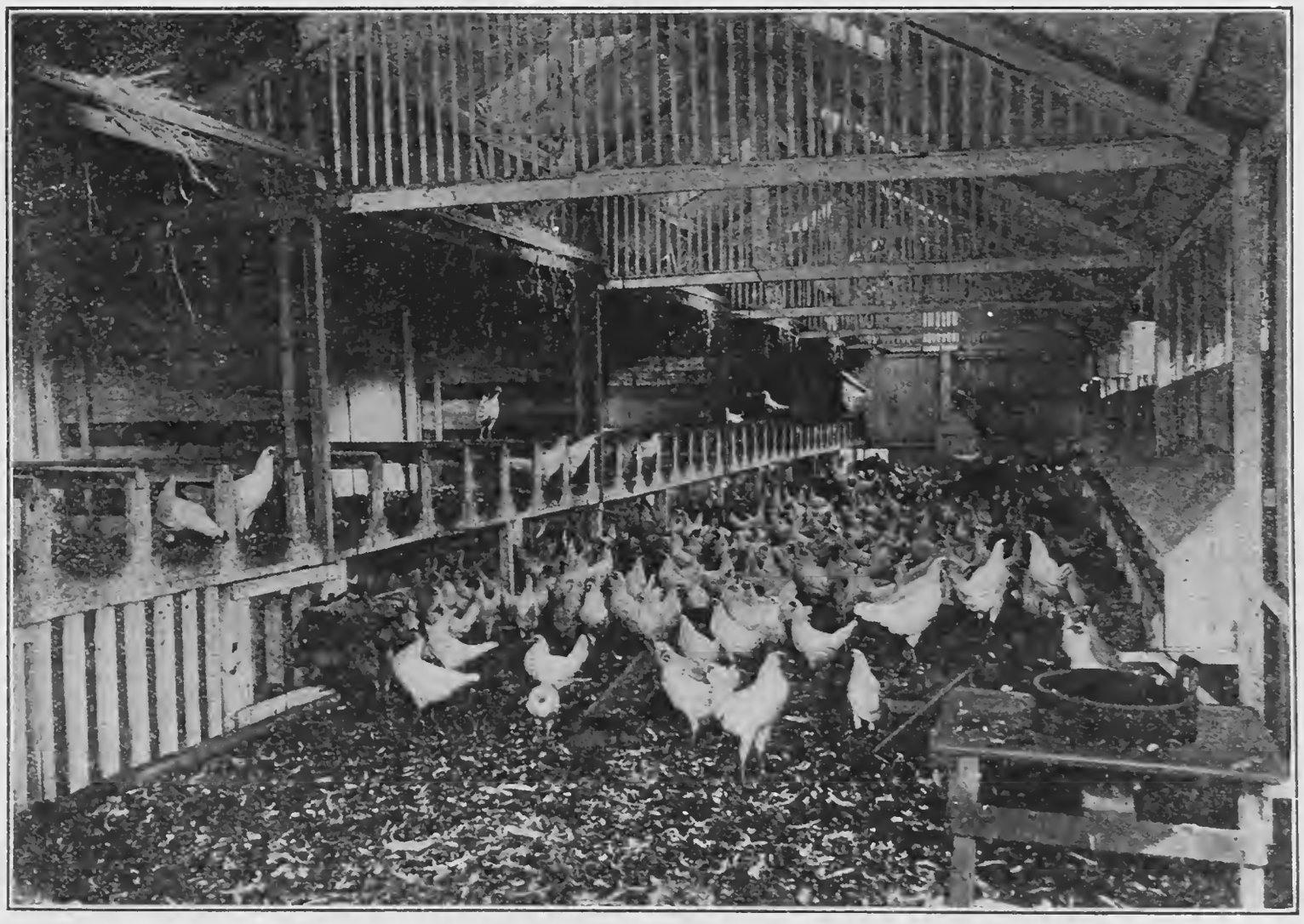
On the opposite side is the roost platform five feet wide, running the whole length of the building. It is 2½ feet from the floor. The 2x3-inch perches are put transversely, not lengthwise, and are 18 inches apart. Mr. Barron says that he finds the birds incline to crowd together, and get overheated on long perches, and then get chilled. Being split up as these are into 40 short perches, distributes the birds more, and the ample space between the perches keeps them from fighting; and being all on one level they settle down more quickly.

Every 12 feet this droppings board is divided up by partitions from the floor to the level of the eaves, where it is lathed over and straw is kept to absorb the moisture from the hens' breath, also to prevent side and down draughts of air in cold weather. There are 12 windows three feet by two feet in the roof, and 14 small windows under the droppings boards, these are 20 inches square, to make it light so that the birds can see to find the grain in the litter.

Water is contained in two large "piggins," mounted on platforms to keep the litter out. These are entirely emptied, scrubbed out, and refilled every day. The wet mash, given towards evening, is fed in troughs standing on the floor. Mangels, turnips and cabbage are put into specially made troughs, with a standing board on each side a few inches above the floor. They have shells and grit.



A GROUP OF TOM BARRON'S WHITE LEGHORN COCKERELS. FIG. 64.



INTERIOR OF THE BARRON ENGLISH HENHOUSE. FIG. 65.

The floor of this building was made by putting about 20 tons of cinder on the ground, ramming down hard and level, then four tons of asphalt was poured on this, and a fine layer of cement finished the surface. This is one of the best floors on the farm, Mr. Barron writes, dry and serviceable.

The runs, one on each side of the building, north and south, are reached by windows at each end of the building. The runs are the width of the building, and are used alternately, the birds being kept in one about a week and then changed to the other while the first is allowed to freshen. This it does much quicker than here, owing to the abundant rain. Mr. Barron writes that it is impossible to keep the grass down without mowing the yards. This housing large numbers with outside runs, Mr. Barron calls the semi-intensive system.

The menu for these layers is as follows: In the morning there is fed a mixture of wheat, oats, cracked corn and "a little coarse wheat—say a decent sample of cockle" (this means wheat screenings), a few split peas and perhaps a little "dari." (Kaffir corn.) The more kinds of grain the better; the birds hunt more to see what new thing they can find. The litter is cut straw, chaff, peat moss, etc. There is a dry mash composed of one part ground oats to three parts wheat bran, this is open to the fowls at all times. At noon a little more of this morning feed is given, not a "feed," but just enough to keep them busy. Towards night they feed in the troughs a mash composed as follows: "One-third bran, one-fourth middlings, one-fourth biscuit meal, one-eighth meat meal, fish or granulated meat, about one-eighth clover meal or Alfalfa meal, changing the middlings sometimes for ground oats. This we mix with water from a large boiler, in which we have already a few bucketfuls of whole oats. The whole is well mixed in a mixing trough, until a crumbly mash, not sloppy, is made, and this is taken in a wheelbarrow and fed in the troughs. We give the birds all they can eat of this mash, and if there is a little left over we do not mind."

Mr. Barron says that the profit from such a house ought to be $500 a year, allowing for de-

preciation of buildings and birds, but not allowing for labor. I have given the mash in Mr. Barron's own words, because the "parts" make more than a "whole." The reader can fix that to suit himself. I don't have to. GEO. A. COSGROVE.

A FARMER ON FOOL LAWS.

I cut the enclosed clipping out of a Rochester daily January 14. My little grandson tracked a rabbit into a hole in a large oak tree near the barn, and wanted me to go out and help him get it out. I went with him and about five feet from the tree scared up a pheasant so nearly frozen that it could only just fly. I looked where it had been and there up close to it was another frozen to death. I have written to the State Conservation Commission to know what I shall do with it. I have no question but that from one-third to one-half of the birds through the country have frozen to death during the late cold weather. Some of the farmers around here have drawn out straw and thrown grain out for them to eat, and many more would look after them only for the present game laws. I was talking with a physician the other day who had just been out examining some school children for a health certificate, and I asked him what he thought of it. His reply was: "With all the red tape connected with it it's another one of those fool laws that the lawyers have been passing up at Albany, and there are a good many of them." The people are beginning to wake up. T. H. KING.

Tompkins Co., N. Y.

R. N.-Y.—The clipping which Mr. King refers to follows:

Bath, Jan. 13.—Some days ago a Mongolian pheasant was discovered by two State game protectors in the poultry yard of a farmer named Stamp, near Savona. As the pheasant is strictly guarded under the game laws, its presence with the Stamp poultry was regarded by the officers as a violation of the law on Stamp's part. Before Justice Frank Gay, Mr. Stamp related that he had found the bird in the fields, wounded, and placed it in his poultry yard to afford the bird a chance to recover. The justice submitted Mr. Stamp's version of the case to the State Conservation Commission which now recommends that the proceedings against Mr. Stamp be dismissed

AFRICAN GEESE.

Goose raising is one of the undeveloped industries of this country that has possibilities far beyond anything yet attained. It is no get-rich-quick scheme. In lurid attractiveness it cannot compete with gold mines and ginseng culture, but as a means of substantially increasing the income of the farm it holds out inducements to those who are favorably situated and like geese. Those who do not like them should not attempt to keep them. Most geese are more or less noisy, and finicky neighbors are liable to object to their music. A pond or pool of water is more necessary during the breeding season than for ducks. Geese need more room than most fowls; they will hardly be profitable without it; but given a pool of water, at least during the breeding season, and plenty of pasture, they are the most cheaply kept birds one can raise on the farm.

The three breeds of geese that are mostly raised for the market are African, Embden and Toulouse. Each breed has its merits and its champions. In this article we will consider the Africans. In style and portliness of carriage no other breed can compete with the Africans except the Brown Chinese, and they lack size. For early maturity, making the goslings marketable at 10 or 12 weeks of age, the Africans probably stand at the head of all varieties. They can be grown to a weight of nine to 11 pounds in 12 weeks on less feed than is given to Pekin ducklings in the same time, with a weight in the latter case of six or seven pounds. Of the two birds I consider the green gosling the superior on the table. It is only fair to say, however, that there is not now the large market for green goslings that there is for ducks, for no pioneer has as yet worked one up. Here is abundant opportunity for some one to enter an unsupplied market.

The general color of the African goose is a brownish gray, shading to light gray and white below and to dark brown on the back of the head and neck. The bill and knob, which every standard African must have, are black. Any orange will disqualify for the show room, but not for the table. Down the back of the head and neck runs a dark brown, or grayish brown, stripe which is peculiar to this breed and to the Brown Chinas. An adult African should have a dewlap, or fold of the skin, under the throat, the larger the better. Absence of this is another cause for disqualification in the show room.

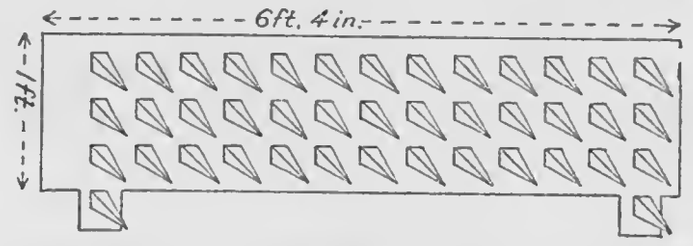
The African so closely resembles the Brown China geese in everything but size that it is probable that both breeds had the same origin, one being developed for size and the other for egg production. I have been informed that a prominent duck breeder, who always fed his birds heavily for marketing, purchased some Brown China geese and in a few generations had so increased their size that he exhibited them as Africans. The standard weight of an adult African gander is 20 pounds, of an adult goose 18; young gander 16 and young goose 14. These weights make the African a good medium sized table bird not so large as to be coarse. W. H. HUSE.

New Hampshire.

NUT NOTES FROM MARYLAND.

I have been greatly interested in several articles of late on the subject of nut culture, looking toward nuts as a source of profit. The article by J. Russell Smith brings it up fresh in my mind. I live about 20 miles north of Washington, D. C., elevation about 500 feet above tide or sea level, as taken from the bench marks made by U. S. Survey. Several times in the last 50 years our thermometers have marked 20 degrees or more below zero. I give this to show what our nut trees have been exposed to, and still flourish. On one farm, noted for the low temperature and very near running water, are several healthy pecan trees. I have no means of giving their ages; they are about 18 inches in diameter with fine spreading branches, an ideal shade tree. They bear a fair crop of nuts annually of moderate size; never saw one not well filled, or in any way inferior in quality to the average that we buy in the nut stores. I am raising some trees from these; do not expect to live to see them bear, but hope someone else will.

An old uncle had his life estate in the farm where the pecan trees are now flourishing; do not remember hearing from what source the seed or young trees came. He lived on the farm over 99 years. Two or three years since was a very cold Winter here. On the same farm 26 degrees below zero was the mark. With a much better crop of nuts than this season, last Spring a freeze when the young shoots on grapevines were grown over a foot in length, killing back many to the old wood, did not



Spotting Board for Transmitting to Cold Frames. Fig. 66.

injure the pecan trees, but no doubt reduced the crop of nuts.

We have two young trees of the English or Persian walnut near here on different farms. One came to the present owner in a flower pot, the other with a lot of apple trees from Maryland. The trees are about the same age, both planted with Southern exposure, on land of good quality. These trees have been producing nuts of about the same size and general appearance as those we got from California. There is one great difference in these trees in the time of blooming, and growth of the leaves. I think the difference amounts to at least two weeks. Such points of difference ought to be of use in starting an orchard. It takes time for such work; this being an auto age, so few young men are willing to start a slow job like growing walnuts from the nut.

I am nearly 76 years old; am making a very late start, nevertheless have planted nuts from each of the above trees, all carefully marked and hope someone will know more than I do. There is an old tree in Wilmington, Del., that has been producing regularly for many years. I think the nuts rather larger and perhaps somewhat thinner shell. I have a few nuts from this tree also planted. I am not trying to get up a corner in some special brand of Persian walnuts. I have seen one common black walnut tree produce 16 bushels. Most of the old trees planted by my great-grandfather have grown too valuable to be allowed to stand and bear nuts. When a walnut is three feet and over in diameter an offer of $100 to $150 on stump is too much for these times. In this locality the native black walnut usually bears freely some nuts larger and of much better quality than others. Men are much like sheep, all follow the leader. Would it not be far better if some would raise nuts instead of so many apples? I notice Persian walnuts seem to flourish near Rochester; suppose they are just seedlings. THOS. J. LEAR.

Montgomery Co., Md.

The final estimate of the Dominion Government shows that Canada's principal field crops in 1913 covered 35,375,000 acres, as against 35,575,000 acres in 1912, and their value at local market prices was $552,771,500, as compared with $557,344,100 in the preceding year. The principal crops were: Wheat, 231,717,000 bushels, value $156,462,000; oats, 401,669,000 bushels, value $128,893,000; flaxseed, 17,539,000 bushels, valued at $17,084,000. The wheat and oats crops for 1913 are the highest on record in Canada.

SOLUBLE CHEMICALS FOR IOWA.

Can you tell me without testing the soil what kind of chemical manure I should use on Fall or Winter wheat to increase the yield? Ground is rich enough to raise 50 bushels of corn or same of oats in any average year. I have sown 80 acres in wheat September last, and want to see how many bushels I can raise per acre. I think I should have a manure well up in phosphorus and potash. Will bone meal be the right kind, harrowed in as soon as ground is dry in Spring? This land is in Cerro Gordo Co., Ia., and was known as the quack grass farm; we have had only one crop on it; that was last year. Do you think it will pay to begin using commercial manure in Iowa, or would it be well enough to sow clover (as all our land raises good clover) and plow it in for manure? Does clover put in phosphorus and potash in soil, or only nitrogen? We intend to cultivate all this wheat in Spring, and would like to know the kind of manure (commercial) we should buy and how much to apply per acre. We have some land here in Dallas Co., Ia., that we have farmed 40 years; and begun on the original sod have made some tests in cultivation, but none with commercial manure. In 1913 we drilled 28 acres of Fall wheat, about 1½ bushels in last of September, and did nothing as to cultivation; in 1913 we put same piece in again and harrowed it and as ground was so hard that it hardly showed the mark of harrow we disked it with an eight-foot disk and hitched a harrow behind, which was all the cultivation it had. The result was that without cultivation the yield was 28 bushels per acre, but not as good quality. Last year with above work in cultivation on same piece we thrashed 39 bushels of 62-pound wheat per acre, and I wish to raise the yield to 50 bushels. This farm has always been manured with farm manure. We have enough to cover 30 acres per year. Will commercial manure help this farm? All wheat looks fine now, no snow here to amount to anything yet. H. L. L.

Waukee, Iowa.

No one can tell you without careful testing what such soils actually need, or whether chemicals will pay. General experiments and history indicate that phosphoric acid will prove profitable, probably potash and possibly nitrogen. Many experiments have been tried throughout the Central West, both in using chemicals and in testing and analyzing soils. As a rule these show that phosphoric acid is most likely to be found lacking, or most likely to increase the grain crops. This idea is corroborated by history. For many years these soils have exported grain and live stock—each ton of grain or live meat carrying a certain amount of phosphoric acid. These crops of course carried nitrogen also, but this has been in part restored by the clover and Alfalfa which has been grown and fed. The clover obtained some nitrogen from the air, and the greater part of what it contained was left behind in the manure. Here are figures to show what history teaches regarding the exports of plant food:

	Pounds to the Ton		
	Nitrogen	Phos. Acid	Potash
Live Stock	54	37	4
Wheat	38	11	16
Corn	33	12	8
Oats	37	13	9

While, as we see, it is possible to replace part of the nitrogen thus taken away, by growing clover or Alfalfa, the phosphoric acid and the potash thus removed cannot be supplied except in what we call fertilizing substances. Certain crops or certain forms of culture make plant food available to crops like corn or wheat. For example turnips appear to have some power to utilize potash which wheat could not use, and buckwheat or rye may do the same with phosphoric acid. Then when such crops were plowed under or fed to stock they might increase the available supply to some extent. Lime and land plaster, or perhaps salt, may also do something of this, but in general when potash and phosphoric acid become deficient in a soil fertilizer must be used to supply what is needed.

As we see, there is but little loss of potash in live stock farming, but when grain, and especially wheat, has been grown for some years. There is considerable loss of both potash and phosphoric acid. The chances are that soluble phosphoric acid will help your wheat at once and probably potash will be used at a profit. You can only tell by trying. Bone meal will supply phosphoric acid and a little nitrogen, but it contains no potash whatever. We do not know your price of bone meal, but probably acid phosphate will give you a cheaper form of phosphoric acid. The usual advice is to use three parts by weight of acid phosphate to one part of muriate of potash. You will obtain better results by drilling in this mixture at seeding rather than broadcasting and harrowing in Spring. The clover does not add potash or phosphoric acid to the soil. We should experiment with different quantities per acre—all the way from 250 pounds to 500. We do not consider ground rock phosphate in this discussion, as it seems that your soil may now be reasonably well supplied with unavailable phosphorus. In order to increase your large yield you need, if anything, a small quantity of *available* food. Finally, you are the only man who can answer your question and you can only do it by trying the chemicals.

DETAILS OF EARLY TOMATO GROWING.

PART I.

PRODUCING THE PLANTS.—Tomato growing is each year receiving more and more attention by South Jersey truckers. Practically every trucker grows this vegetable as one of the main money crops, few having less than 50 sash (enough for 8,000 to 10,000 plants) while many use 200 or more in producing plants for their own setting. An idea of the enormous output of tomatoes from this section can be gathered from the size of the shipments from the main shipping point at Swedesboro. From there daily shipments to distant points of 20,000 to 30,000 crates are not at all exceptional during the height of the season, while nearby markets are supplied in proportion.

ADVANTAGES OF EARLY CROP.—Growers specialize on the early crop and prices received are higher than for main crop tomatoes. Large profits depend on getting the bulk of the crop early; therefore all concentrate their energies toward getting early fruits. That they have succeeded is certain. Buyers have been attracted by the quantity and quality of tomatoes produced and each season they are on hand ready to buy tomatoes when delivered at the station. This avoids delays, loss in transit and the thousand and one troubles attendant upon shipping on commission and there is an absolute certainty as to the price received on each particular day. A good market of this kind is in part responsible for the extensive plantings but the success of the industry hinges mainly on the methods practiced by growers in getting tomatoes early.

WAGONS AT BRIDGEPORT, N. J., LOADED WITH EARLIANA TOMATOES. FIG. 67.

HOW GROWN.—It is the purpose of these articles to set forth as clearly as possible just how the crop is grown and how we get them early. It must be remembered that, although fairly profitable if late, the maximum profits are received only when an abundance of early fruits are secured. The variety grown is Earliana. This is used exclusively. Growers select and save their own seed in order to avoid loss from seed untrue to name and also to improve their own particular strain of that variety. The work for the season commences the last of January or the first of February when the soil is put in the hothouses in preparation for sowing the seed. These hothouses are cheap and simply constructed greenhouses built to utilize the ordinary hotbed sash, and heated by one or two large wood stoves with the stove-pipe running beneath the raised benches to give some bottom heat. The houses are 15 to 18 feet wide and long enough to furnish the necessary space for starting the seedlings. One thousand fine plants can be grown to the sash without crowding. About two inches of fine well-rotted horse manure is placed in benches, then covered with an equal amount of rich sandy loam. A fire is started and the house and soil thorough warmed before seeds are sown.

SOWING SEED.—The date of sowing seed varies with the season and the preference of growers, but February 15 to 20 is about an average. The seed are sown thinly in wide furrows about four inches apart, and covered lightly. After sowing more heat is given in order to germinate the seed quickly but after seedlings come up a more moderate heat is maintained with no attempt to force growth. Plants are allowed to remain in the seed bed until March 20 or 25, when if weather permits and plants are large enough to crowd, they are transplanted to cold frames. There has been little tendency on the part of growers to transplant more than once. Working on so large a scale they believe that the added stoutness and strength of the plant would not repay them for the extra work involved. That may or may not be true but nevertheless few practice it for by having plants growing thinly and without forcing, in the seed bed they are not at all spindling.

COLD FRAMES.—When it comes to handling plants in the cold frames our growers practice methods ahead of anything I know of as being used elsewhere; and therein lies the secret of intensive growing of early tomatoes on an extensive plan. Few truckers grow less than 8,000 to 10,000 plants, while many have 25,000 to 30,000; therefore paper pots, flats, etc., are out of the question and even if practical would not be used, because the methods practiced give not only cheaper plants, but also better-grown plants, with less labor and more perfect control of the moisture supply. Some of the cold frames are made double, most of them are similar to those used everywhere by gardeners, with slope to the south. The north side is boarded up to a height of 18 inches, and the south side is simply a 12-inch board stood on edge. Both sides are braced by posts set in the ground at distances of six to eight feet. The frames are made any desirable length, with the ends boarded up. The sash used here are 3½x7 feet, so the frames are made 6½ feet in width, which is wider than for those covered with the standard 3x6 sash.

PREPARING FRAMES.—Rafters are used between the sash, so they can be pulled down from the top for ventilation, or if need be pulled off altogether. Rafters are useful in saving labor, for by using them it is possible for one man unaided to give the necessary attention to beds, thus permitting the time of a second man or helper to be spent in other work at a season when help is hard to get and wages high. They also prevent sash from sagging in the middle. Neither sash or rafters, however, are placed on the frames until beds have been made to receive the tomato plants. In making the beds three inches of finely turned stable manure or stable and hog manure mixed is spread evenly over the bottom of the frame. A 3x3 inch piece of frame stuff six feet four inches long is a good aid in getting the manure on evenly. Commencing at one end of the frame measure off two feet and lay the three-inch gauge across the bed; fill this space with manure, using care to keep it level, and putting no more than will come to the top of the gauge. Then move the gauge two feet farther along and repeat. After repeating a few times the gauge can be moved for greater distances and finally, as one becomes accustomed to the work, will hardly be required at all. After the manure is in, the bed is ready for the soil. Growers use as good rich sandy loam as they can secure and place an even layer two inches deep immediately above the manure, using a gauge as for the manure. This completes the making of the cold-frame bed; sash and rafters are put on and everything is in readiness for the plants which are put in on the first nice day after March 20 or 25.

A HIGH CLASS AFRICAN GANDER. FIG. 68.

TRANSPLANTING.—When pulling plants from the hothouse they are first loosened at the roots by running a trowel below and lifting both soil and plants. Then by taking plants from the loosened soil, the whole root system is left intact and there is less wilting than if plants were pulled. Two to four hundred are pulled at a time and taken immediately to the cold frame, where everything should be ready to receive them. Transplanting is done by the aid of a "spotting board" operated by two men. The spotting board (see illustration) is simply a board one foot wide; long enough to reach across the bed, about six feet four inches, and fitted with three rows of pegs, four inches long, spaced as far apart as plants are desired to stand in the frame. At either end pegs extending beyond the sides serve as guides. The popular distance for setting in the cold frame is 4½ to five inches each way. Commencing at one end of the frame the spotting board is placed crosswise of the bed, pegs down. The men then step in on it, their weight pressing the pegs down in the soil. They then get off, lift the board carefully; shift it farther up the bed, with the two guide pegs in their corresponding holes on the outside row just made. They step on again, but before making a second shift, set plants in each of the holes made the first time. After plants are set the board is again moved and plants set in the holes just made. The spotting board not only serves to make the holes for the plants, keeping the rows straight, even and of uniform distance apart but also furnishes a place upon which the men can work when setting plants across the bed. If soil in the cold frame is dry it is best to moisten slightly a few hours ahead of transplanting, so that the peg holes made by the spotting board will not fill up. When moist enough to keep open the plants will not need water when set. Should plants be short the pegs need not be forced down their full length. The object is to set plants down to the seed leaves, and the depth of holes can be regulated accordingly. After dropping plants in the holes the soil is pressed about the roots with the fingers. Experienced men are selected if possible to do the transplanting, as it requires judgment in sorting the plants, so that only the stoutest and best will be set, and great care needs be exercised in pressing the soil firmly about the roots so that it really will be firm. However, if experienced hands are not available it is easy to learn, and rapid progress can be made with this method even by a beginner. The time required to set plants varies with the individual, but two men can easily set 10,000 a day and move their own sash.

CARE OF PLANTS.—Plants need considerable attention during their stay in the cold frame. They are kept watered and ventilated as seems proper in the judgment of the grower; sometimes hoed to hasten growth and finally well-hardened off by withholding water and ventilating freely. The sashes are covered with a thick layer of hay (salt hay is fine for this purpose) on every cold night, so as to retain the heat and avoid loss from frost.

New Jersey. TRUCKER JR.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Acid Soil for Potatoes.

Is a sandy soil that is acid suitable for potatoes without lime? It is a peach orchard planted in 1912; I wish to plant part with strawberries and part potatoes to be followed by berries. I. K.

Detroit, Mich.

An acid soil is suitable for potatoes, and we should plant them without the use of lime, as the lime will promote the growth of scab. The strawberries will also do better on the acid soil. If you are to grow strawberries in this peach orchard, the plan you speak of is better than that of using lime all over the soil.

Manure for Orchard and Potatoes.

To settle a dispute will you decide upon the following: 1. I have an orchard 15 years old which I intend to manure with strawy horse manure. Which is the better thing to do, and the more economical, to place the manure around the tree three feet from the trunk and as far out as the branches extend so thick as to prevent the growth of grass, or to spread the same amount of manure over the surface of the ground between the trees, cut the grass that grows and mulch the trees? 2. I usually fertilize my potatoes heavily. What effect would it have upon the fertilizer if I should apply several tons of barnyard manure per acre? A. P. M.

Pennsylvania.

1. We do not like to settle disputes, especially where we do not know all the particulars. How much manure to the acre will you use? Is the orchard in a strong sod, or is there just a growth of thin grass and weeds? It would make some difference. If there is a good sod we should put the manure out as far as the branches extend, cut the growth on the rest of the ground and pile it over the manure. 2. The manure on the potato ground will have little or no effect upon the fertilizer. It may help the soil to hold moisture, but on the other hand may increase the scab.

Mixing of Chemical Fertilizers.

What quantities of nitrate of soda, muriate of potash and acid phosphate respectively should I use in order to mix a 7-7-7-, a 2-8-10, a 6-8-10 and a 6-10-10 fertilizer from these chemicals without using filler? I should like to know how I can use them to mix any grade of fertilizer I wish. B. A.

Newman, N. Y.

The three chemicals you mention give average analyses about as follows, with others:

	Pounds in 100		
	Nitrogen	Phos. Acid	Potash
Nitrate of Soda....	16	..	..
Acid Phosphate	..	14	..
Muriate of Potash ...	..	..	50
Ground Bone	3	25	..
Sulphate of Ammonia.	20	..	..

Now if you want a 7-7-7 mixture this would mean in one ton 140 pounds each of the three elements. This would mean 875 pounds of nitrate of soda to supply the nitrogen, 1,000 of acid phosphate for the phosphoric acid, and 280 muriate of potash to provide the potash, or 2,155 pounds in all. If instead of 1,000 pounds acid phosphate you use 650 pounds, and 200 of ground bone, you will have your ton without filler. You can figure the 6-8-10 in the same way. Here you want 120 pounds nitrogen, 160 pounds phosphoric acid and 200 pounds potash in your ton. This would require 750 pounds nitrate of soda, 1,150 acid phosphate and 400 muriate, or 2,300 pounds in all. Yet this mixture would do it: 700 nitrate, 300 ground bone, 600 acid phosphate and 400 muriate.

Getting Ready for Grafting.

As the time approaches for top grafting it is well to be preparing for it. The materials for making the wax and proper tools for doing the work should all be got ready. The scions may be secured and stored safely, or at least the varieties to be used should be selected and the trees from which the scions are to be cut located, so that there may be no mistakes or delays about getting them at the right time.

There are different formulas for grafting wax, but a very common and suitable one is made from one pound of tallow or linseed oil, two pounds of beeswax and four pounds of rosin. There may be a little greater proportion of rosin if the climate or weather at time of grafting is quite warm. These materials should be melted together and while hot poured in a tub of cold water to harden sufficiently to handle with naked hands, and work into balls of convenient size. These should then be wrapped in greased paper and laid by for use.

A very good wax for applying with a brush while warm is made by melting together eight pounds of rosin, one pound of beeswax and one pint of linseed oil, adding a little common flour to stiffen it, and some put in a little lampblack to give it a dark color. Chunks of this preparation can be melted in a small can as needed, and kept warm by inserting in a larger can or bucket of hot water while being applied to the grafted stubs with a small brush. This prevents the grafter from daubing his hands with wax while at work, and the waxing can be done well and very neatly and quickly. The water may be kept warm by a lamp under the can.

A narrow-bladed pruning saw of the butcher saw style is the best kind to use. A stout pruning knife often comes handy for trimming and cutting off small branches. A well tempered and very sharp pocket knife is as good as any for trimming the scions ready for insertion. Instead of a common knife or the big, clumsy grafting knife that is often shown as one of the principal tools to be used, I use a very plain knife or splitting tool made from a narrow piece of the best spring steel about seven inches long, one-eighth-inch thick and three-quarter-inch wide. One-half the length of this piece should be drawn to an edge and carefully tempered and the end tapered as well, to be used in splitting the stock, and two or three holes are to be drilled or punched through the other end that a handle may be riveted on. The tapered end is used as a wedge and lever to pry open the split in setting the scion. A little club will serve as a mallet to drive in the knife in splitting the stumps. A light basket with a wire hook attached to carry the tools and scions will complete the outfit.

It is a great convenience to have the branches cut off and taken entirely out of the way before doing the grafting, and this can be done at any time from December until that time comes. But it would not be safe to cut down to where the scions are to be inserted for fear of some injury from severe cold on the fresh cut stubs. If a few inches are left so the grafter can cut them back to the proper place he can do the work faster and without the annoyance of the long branches and brush made in cutting them off. Good judgment is required in selecting the right branches to be grafted, and where the cuts should be made on them.

H. E. VAN DEMAN.

Hen Manure on Alfalfa.

We have a two-year-old Alfalfa patch, covered with the droppings from the henhouse last Fall. This year it grew up with a great superfluity of stalks. Was this due to some chemical in the manure, or what is the cause if known? Is there any remedy? W. H. M.

New York.

The hen manure was strong in nitrogen, and this forced the Alfalfa into a heavy growth. Nitrogen is the element which promotes the growth of stem and leaf, or that part of the plant which is above ground. It is not good practice to use too much nitrogen on Alfalfa or clover, for these crops are supposed to get most of their nitrogen supply from the air. The thing to do when too much nitrogen has been applied, is to balance it by adding phosphoric acid and potash. This you can do by using a mixture containing three parts of acid phosphate by weight, to one part of muriate of potash; 400 pounds of this scattered over an acre will give you good results.

Tankage for Fertilizer.

I have a lot of tankage from a slaughter house. Can you tell me in what form to use it? Would it be advisable to use it at the present time on rye, as it is in the raw state, or would it be better to mix with coal ashes, making a compost, and let stand until later?

Watervliet, N. Y. D. A. C.

You can mix the tankage in the manure pile and use all together later. A good way is to dry it out by dusting over it sifted coal ashes or dry dust or land plaster. The latter is best. Then the dry stuff can be broken up and spread like manure. Tankage contains nitrogen, but no potash.

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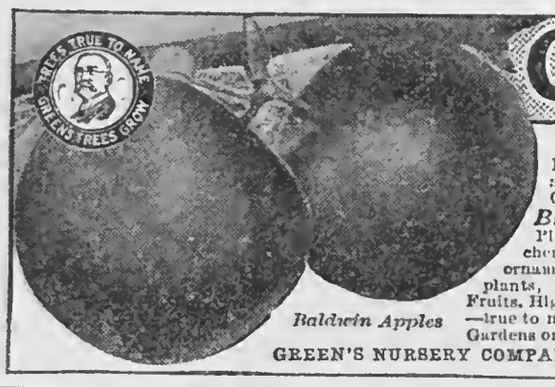

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WILT-RESISTANT TOMATOES.

In many parts of the country, a disease of the tomato known as the tomato wilt is doing considerable damage. This is a disease of the roots and stems, and it is caused by a fungus which lives over in the soil from season to season. The disease can readily be told in the field by cutting a suspected plant near the surface of the ground and examining the cut surface. If the stem is black on the inside, or has black streaks running up through it, the evidence is strong that the wilt disease is present. The disease kills the roots of the plants and plugs up the ducts in the stems in which the water is carried to the leaves from the roots, with the result that the plants wilt and finally die. The trouble generally is most conspicuous at about the time the first fruits are maturing.

As the fungus which causes the disease lives in the soil and within the tissues of the host plant, none of the ordinary methods of disease control, such as spraying, can be used to check it. Rotation of crops will help, as the fungus will gradually die out if tomatoes are kept out of an infected field for several years, but the results obtained by this method are often discouraging. The method of control that has given the best results is the growing of wilt-resistant varieties. In a recent bulletin of the Louisiana Experiment Station, the results with one such resident variety are given. That variety of plants can be selected that are resistant to wilt diseases has been known for some time. It is by the use of such varieties that the cotton industry has been saved in some of the sandy regions of the Southern States. Resistant varieties of tomatoes are perhaps more recent than are those of cotton, yet investigators at more than one experiment station have shown that such varieties can be selected.

To obtain a wilt-resistant strain of a tomato, it is necessary to grow the desired variety on a very badly infected piece of ground. If the plants are examined carefully during the season, it will be seen that the individual plants show a wide variation in regard to their susceptibility to the disease. Some will die very early, others succumb more slowly, and perhaps a few may be seen which remain healthy and show no signs of the disease. If seed is saved separately from several of these healthy plants and planted the following year on badly infected ground, it will be noticed that the progeny of some of these plants show a high degree of resistance to the disease, while the progeny of others wilt perhaps as badly as did the plants the previous year. If seed is again saved from the healthiest and best plants from the plots which show the greatest resistance, a higher degree of resistance will be seen in the third year from some of the plants. In a few years by this method of selection, a fairly resistant strain can be obtained.

Occasionally, also, the progeny of a single plant will show almost perfect resistance the first year. Such a plant as this was present in the tomato wilt plots on the Louisiana Experiment Station grounds in the season of 1910. In a plot that had grown tomatoes for several years and which was very badly infected with the wilt disease, a single plant out of several hundred was noticed that did not take the disease. Seed from this plant was saved and planted the following year on the same piece of ground with the result that only about 10 per cent. or less of the plants died with the disease, while check rows planted with seed of the same variety but not selected all died. Selections have been made each year from this strain, and at the present time, it shows almost perfect resistance. This strain is inferior in some ways, as it is from 10 days to two weeks later than ordinary plants of the same variety, and perhaps is not quite so prolific, but in localities where earliness is not essential and the wilt disease is very severe it should be satisfactory. C. W. EDGERTON.

Louisiana Experiment Station.

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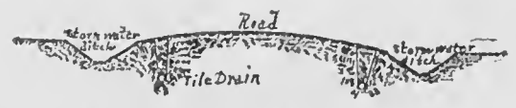
Draining a Swamp Road.

On the farm where I live, there is a private road leading from the main road to a tenant house. This road crosses a wet piece of ground, and for several rods is always muddy except perhaps for a short time in the middle of the Summer. It is a loamy soil, and dirt has been drawn on the road, but it soon settles down as bad as ever. What treatment is necessary to make this strip of road a good hard highway? E. GARDNER.

The road needs draining, but as it is a private road with perhaps only a limited amount of travel, simply draining the land of the field through which the



road passes might be all that is required. Possibly only one drain placed in the depression where the road is wet, and carried to the first available point of outlet would be effective in securing a good driveway. Where a road has any considerable amount of travel, so as to compact and puddle the surface it should be graded. Crowning in the center, with a storm-water ditch maintained on each side, and a tile drain three feet deep, under each side of driveway, as per diagram, will insure a roadbed free from soft springy places. A large part of the breaks which occur every Spring in our macadam and brick roads are due to a lack of drainage, for no wearing surface can be made to support heavy traffic on a soft springy foundation. The tile drains should be covered at least six inches with either gravel or crushed stone, as fine as can be used without passing into the joints. J. F. VAN SCHOONHOVEN.

Preparing for Grass.

I have several acres I want to turn into grass land; last Summer, part grew corn and potatoes, and part lay idle with plenty of weeds. I have just had it plowed and want to sow clover and Timothy in the Spring after harrowing, and then roll it down well. It is very fertile land. Can I do this with a good prospect of success, or what is the best method to pursue? W. W. T.

New Jersey.

This can be done, but in Northern New Jersey Spring is not the best time for seeding to grass. Fall is a better time, and if this land was very weedy it would be better to cultivate it fully before seeding. We should grow a crop of early potatoes or a crop of oats and peas for hay or fodder, then fit the soil well and seed.

Marl in Place of Lime.

What is the process employed in converting marl into lime, also the expense of such a plant? We have such marl, and years ago it made lime for most of the purposes for which lime was used.

Sardinia, N. Y. B. B.

A good shell marl is nearly as rich in carbonate of lime as a good limestone. We regard the marl as practically equivalent to finely pulverized limestone in the correction of soil acidity. It could be burned as limestone is burned, but we have never seen this done, and so have no practical information.

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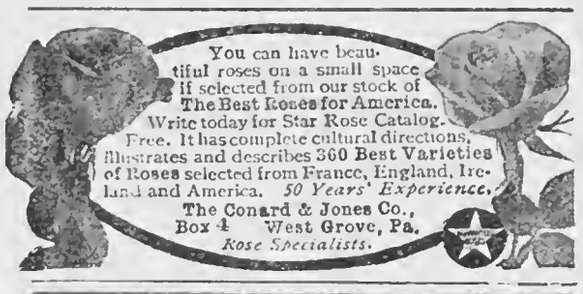

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NEW YORK STATE NEWS.

"Woodlet Forestry."—Every man who owns a farm in New York State should send for a copy of Bulletin 9, "Woodlot Forestry," Conservation Commission, Albany, N. Y. It is a manual of forestry for use on farms and country estates. It points ont the importance and value of our wooded areas, stimulates the owners to the practice of forestry in their woodlots, and points out the principles and methods of correct forest practice. There are over 7,500,000 acres in forest regions in this State and over 20 per cent of the farm area is in woodlots. The total woodland area in the State is abont 12,000,000 acres or about 37 per cent of the total land area. It has been found that practically one third of the farm lands of the State go without improvement.

Bi-partisan Highway Board.—A bill has been introduced in the Senate to restore the Hughes system of a bi-partisan highway commission. It is proposed to have the law go into effect in January 1915, and it calls for a considerable reduction in salaries from what such commissioners now receive. The chairman will get $6,000; the commissioners, $5,000; the deputies and secretary, $3,500, and traveling expenses; and the division engineers, $3,000.

Suggestion For Co-operation.—At the State Grange meeting this week a proposition is to be made by delegates from Long Island to establish a bureau of information and markets in all counties of the State where possible, similar to that proposed at the last meeting of the Suffolk County Grange. W. P. Hartman of Medford is in charge of the Suffolk County bureau. The subordinate Granges are to establish sub-bureaus and thus keep in touch with the county bureau.

Physical Examination of Dairy Cattle.—There is possibility of some legislation this Winter for the physical inspection of all dairy cattle along the lines favored by the Holstein-Friesian people at their meeting in Syracuse. The proposed bill has been under discussion at a conference with Gov. Glynn, and he expressed himself as being in favor of such legislation. The radical feature of the measure is that a physical examination is required for all dairy cattle, not only for tuberculosis but for other diseases, and certificates of health must be secured or the animals condemned. It was stated at the conference that thousands of head of cattle in the State were afflicted with tuberculosis and that there is practically no means of suppressing the disease. The proposed law provides a definite and effective means, it is said, for the eradication of the disease.

State Tax Conference.—The third annual session of the State tax conference was held recently in Syracuse. Some new tax bills will be placed before the legislature this Winter. The suggested changes have to do with the assessment of corporation property by a central body, with the granting of supervisory powers to the State board of tax commissioners, and with the simplification of forms of local assessment rolls. The Syracuse conference recommended the following changes in the tax laws.

Assessment of corporation property at its situs.

Taxation of tangible personal property in the district in which it is located.

Unification of assessment and collection of taxes in towns.

All corporation real estate to be assessed by the State tax commission instead of by the local assessors.

Each special class of corporations to be taxed only by some special and uniform rule.

Additional powers for the State tax commission to make and enforce rules for local assessors and to order re-assessments.

State tax commission to provide the form of assessment oath.

Barge Canal Suits.—There are now claims against the State, growing out of the barge canal construction, amounting to $64,000,000, and in addition there are several important cases in the courts. The board of claims disposed of 482 cases last year and 278 were dismissed. About 1,133 cases are still pending. There are 1,993 claims for permanent appropriation of land amounting to $31,258,063. Awards have been made in 650 claims of this kind and 190 have been dismissed. Nearly 80 claims involving water power have been filed which amount to $28,518,730.14.

Farm-bred Horses.—Some of the farmers who attended a farmers' Institute at Heuvelton, St. Lawrence County, are working to encourage the breeding and exhibition of draft and general purpose horses. They have addressed a series of resolutions to the agricultural society of the county asking that they devote one day of the annual fair to the exhibition of farm-bred horses. They feel that the farmers of the county are entitled to receive some of the money offered in premiums for horses but more than that they believe it will encourge the breeding of more horses for farm use.

Grange Insurance Profitable.—The Grange fire insurance company which covers the counties of Jefferson and Lewis is making a fine record for itself and its patrons. The amount of insurance in force Jan. 1, of this year was $16,666,157 in 7,255 policies. The cost for losses and expenses last year was only $1.47 per $1,000 of insurance. This is a saving of $3.53 per $1,000 as compared with the rates of old line companies or a total for the year to members of the association of $58,831.53. The savings to members for the past 20 years has been $668,360, or an annual average saving of $33,418. J. W. D.

THE OHIO HORTICULTURAL SOCIETY.

Part II.

Have we a practical apple grader or sizer? From all the facts presented by papers, brought out in discussion and shown by machines actually at work, the answer for the apple is that we have not. Oranges and peaches are graded satisfactorily by machines. Apples of the right shape may be graded, but when it comes to flat apples, or those whose stem diameter is greater than the cross diameter, there appears to be an unsolved difficulty. It would appear from the best data presented at the meeting and apple show that a combination cleaner and grader of Western make is the best now on the market, taking into account speed, accuracy and minimum injury. The interest evinced in this subject shows that it is one of the most important now before the commercial farmer. Not only as a matter of economy, but as a sure means of securing an honest pack, the machine grader is a necessity. The topic of the "Transplanting and Care of Young Trees" was opened by Prof. V. H. Davis. He criticized the haste shown by many planting trees on poorly prepared land. A year or two spent in preparation was not lost time. One or two-year-old trees were usually better than older ones, because the roots were less injured. The operation of planting is greatly facilitated and the work better done by setting the trees in furrows that have been well opened by the plow. In heavy soils this secures much better drainage than where the holes are dug for each tree. Digging holes by dynamite is too expensive, except in rocky ground. Dynamiting heavy or impervious soil is a poor substitute for drainage. Mulching trees after planting is the best kind of insurance against lack of moisture, and in case of too much rain against lack of soil aeration.

The old question of fire blight or pear blight was recalled by Mr. E. L. Nixon of the Ohio Experiment Station. He made some careful tests to demonstrate whether the removal and destruction of blighted twigs was practical. The conclusions were that it is not. Blight germs giving pure cultures were found from six to 10 inches below the cuts that had apparently removed all of the blight. Trees carefully pruned of all blight showed later infections as much as those unpruned. The fact brought out seemed to indicate that we really know very little more about fire blight than we did a third of a century ago. About that time Mr. Burrill of Illinois discovered the cause, and isolated the bacterium that causes the disease. Soon after Dr. J. C. Arthur made a most exhaustive study of the subject, and but little that is really new has developed since. Two things are established beyond question, viz., 1. We know that the blight rages worse in some seasons than it does in others. 2. We know that some varieties of the pear and apple are more susceptible than others. Many believe that as too vigorous growth is one of the predisposing causes, it is asserted unhesitatingly that trees in sod blight less than trees in tilth. This does not appear to be fully demonstrated. A test made on the grounds of the Ohio State University and extending over many years showed practically no difference whether the trees were in sod or under cultivation.

"Fillers in the Orchard," was treated in a very interesting way by W. N. Scarff of New Carlisle. He described various garden fillers, small fruit, small tree, and farm crop fillers. He cited his own experience in one hundred acres or more of various large fruits. By a careful use of "fillers" he had been able to meet all the expense of the maintenance of his orchards and did this with no detriment to the orchard trees. He thought his trees were better because he was careful to keep the whole soil in such a condition that these filler crops would pay.

The cultivation of the cherry has attained large proportions in Sandusky Co., O. Col. F. Hutchinson of Clyde discussed some of the more important points in the cherry culture of that region. The largest single grower is A. C. Pickett, who has an orchard of something over 75 acres. Only three varieties are grown commercially, Dyehouse, Early Richmond and Montmorency. Although the May frost did great damage, Mr. Pickett harvested something over 99 tons of cherries. These were all sold to a canning factory. Questions brought out the fact that there was no difficulty in securing pickers from the locality, and a more or less expected difficulty had not arisen. Mr. Hutchinson is trying the experiment of planting cherry trees on a hilly sheep pasture, and continuously using it as a pasture. He has to meet some difficulties, and is by no means sure how the plan will work. Every tree has to be guarded from too close an acquaintance of the sheep while they are young, and trained too high for easy care and picking of fruit when they are older. It is an interesting experiment.

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Flesh: Solid and meaty as a cling, yet perfect freestone. Firm, but delicate texture. Smooth, thick skin, tightly drawn. Does not "squash down" in the basket. Skin practically fuzzless.

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Canning: Firm, rich flesh; holds shape in can. Gives brilliant, clear syrup and does not "rag." Better flavor than famous California Lemon Cling.

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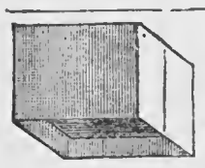

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brings joy to all who grow, sell or eat it. It is more luscious in flavor than any other Blackberry I have ever grown, and is very large, being almost as thick through as it is long. The canes are of iron-clad hardihood, so strong as to need no staking, and bear heavily *every* year. In the winter of 1911-12 every Blackberry in my trial grounds was damaged more or less *except the JOY*, which came through with every bud and terminal in perfect condition. In my long experience with this berry its canes have never been affected, even slightly, by orange rust or other disease.

Headquarters for St. Regis Everbearing, the best red Raspberry, and Caco, by far the choicest of all hardy Grapes. A full assortment of Strawberries, Raspberries, Blackberries, Grapes, Currants, Gooseberries, Garden Roots, Hardy Perennial Plants, Shrubs and Vines, Evergreen and Shade Trees, Roses, Hedge Plants, etc. Illustrated descriptive catalog, replete with cultural instructions, free to everybody. Established 1878. 200 acres. Quality unsurpassed. Prices low.

J. T. LOVETT
Box 162
LITTLE SILVER, N. J.

Transplanting Papaw Trees.

I have a dozen or more seedling papaw trees five to six feet tall that I wish to transplant early this Spring. Can you advise me as to the best soil and location to set them in? I have decided to plant them in a group, on rich, moist but well-drained ground, in a sunny slope, with open southern exposure near the brook, but am not certain how far apart to set them, nor whether the papaw would grow best in the clear or under shelter and partial shade of other trees. Are they difficult to transplant successfully?

Hatboro, Pa. C. S. M.

The papaw (Asimina triloba) is hard to transplant, particularly when taken from the woods. If such specimens are to be transplanted, the work will be more successful if small, rather than large specimens are moved. Large, spongy-rooted plants like the papaw and Magnolia, are best transplanted about the time they start in to grow, rather than very early in the season. As large a ball, and as many of the roots as possible, should be secured. The papaw prefers a deep, rich, moist, but well-drained soil. Such conditions should be given the trees in their new location. Dig the holes for these trees just as soon as possible, two feet wide and two feet deep, and mix with the soil taken out a very liberal supply of leaf mold, peat, or other thoroughly decayed vegetable matter, and the soil returned to the hole, having first put such stones as came out of the hole back into the bottom for drainage. Some well-rotted horse manure can be mixed with that part of the soil going into the bottom of the hole, but it must not come in contact with the roots of the newly-planted trees. Let the soil settle if possible before planting, but this is not absolutely essential.

If the trees fail to grow with this treatment, the next best way to get papaws growing on the home grounds is to grow them from seed. Collect the seed as soon as the fruits are ripe. Wash the pulp from the seeds, then plant them directly in pots, pans or flats, and store in a cool place over Winter where they will not dry out. Or, the seed can be stratified in sand—mixed with sand—the sand to be kept damp, but not wet, over Winter, either by burying the box in which the stratified seeds are kept in the ground, or in a cool cellar. In any event, it is important that the seeds do not become dry. B.

Propagating Shade Trees.

I wish to make an addition to the information given concerning hickory trees on page 8. The hickory and walnut are very hard to transplant, and I believe that very few people will successfully transplant them. Under normal conditions they will lose a large percentage of the young trees. Mr. Jackson Dawson, the superintendent of the Arnold Arboretum, Jamica Plain, Mass., is one of the most successful propagators that I know. He plants the seeds in "flats." These "flats" are shallow boxes made from soap boxes about four inches deep, with four or five holes in the bottom for drainage. They are filled with good, well-drained garden loam, and the seeds are planted about three inches apart. This is done in the Fall. They are piled up in the cellar, in the cold pit or frame over Winter, where they will not dry out. In the Spring they are put out of doors and watered frequently enough to keep the soil moist. It is a little more work to grow the plants in this way than to plant the seeds in the ground, but the yearling seedlings are very easily transplanted the following Spring to the places where they are to grow.

To remove the seedlings from the boxes the sides or bottoms are removed and the soil washed from the rocks. By this method the tap roots are not broken. Where the young trees are grown in nursery rows, the tap roots are broken when being lifted, which causes a high percentage of mortality. I would suggest that if "C. J. O." intends to plant elm trees along a driveway, or in a position where he wants them all of the same character, that he graft his elms instead of growing them from seed. There are six or seven different types of growth of our common American elm (Ulmus Americanus) and if he will select his scions from the type of tree that he desires and top-work some seedling trees, he can then reproduce that particular type of tree.

P. T. B.

Start Your Garden Early

In response to a special demand I have manufactured a sash frame 8 ft, 4 in. long and just wide enough for a 3 foot space with southern exposure. In place of many small lights there is one large light of extra-heavy glass which allows the maximum of life-giving sunlight to reach seeds and plants. It is so simple a child can ventilate it. If desired the sash can be hinged. Price complete, ready to put together, freight prepaid anywhere in the United States $10.50 (a remarkable low price, made possible only by the large volume of my business).

If you would enjoy home-grown produce in June, start your garden in February. Send your order and check today. Shipments made promptly.

Planting instructions sent with each frame. Write for Catalogue of LUTTON'S GREENHOUSES and glass garden equipment.

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including the BEST of the FALL-BEARERS. Also RASPBERRY, BLACKBERRY, CURRANT and GRAPE PLANTS in assortment. CATALOG FREE.

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Strawberry Plants—over Twenty Varieties at $2.50 per 1000. Descriptive Catalogue Free. BASIL PERRY, Georgetown, Delaware Headquarters for Fall-Bearing Strawberry Plants.

3,000,000 Strawberry Plants—Best Quality. Price, $1.90 to $2 per 1,000. A customer says: "I am well pleased. Never had nicer Strawberry Plants. Martin Nye, Hummelstown, Pa." All the best varieties. Satisfaction and safe delivery guaranteed. Wholesale and Retail Catalogue free. Write today and save money. O. S. PERDUE, Box 20, Showell, Md.

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STRAWBERRIES from August to November from Superb and other new seedlings. Plants for sale by the originator. Circulars free. SAMUEL COOPER, Delavan, N. Y.

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NONE BETTER

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Planted by those who appreciate quality and very moderate prices

ONION SEED. Yellow Danvers, Large Red Wethersfield, $1.10; Yellow Globe Danvers, $1.25 per pound postpaid.

ONION SETS. Choice Yellow, $2.50; Selected Yellow; Choice White, $2.75 per bushel (32 lbs.)

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Medium and Mammoth Clover—grown in the Miami Valley. Also Alfalfa, hardy Northern non-irrigated seed. All high in germination and purity tests. Prices and samples freely furnished. MACE & MANSFIELD, Greenville, Ohio

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Ward Blackberry plants, by mail, $1 per doz. Famous Black Diamond Blackberry plants, $1.50 per doz. Price list free. F. A. TOMKINSON, Blue Anchor, N. J.

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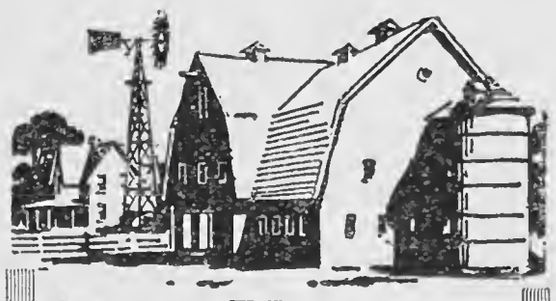

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and let the boys plow. The wheels carry the plow and hold it to the furrow. Easier on the team. Plows as good as you ever did holding the handles. Get a Winner, and let the boys use it 10 Days. If you are not tickled with the result, send the truck back to us. We'll return your money and pay all the freight. Special Offer in New Territories. Write today.

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Lime With Fertilizers.

Will lime mixed with fertilizer be as good for the land as fertilizer alone? And how should it be mixed? N. A.
Sprakers, N. Y.

No. We should use the lime separately after plowing and harrow in. Then drill the fertilizer by itself. Most fertilizers contain soluble phosphoric acid and organic forms of nitrogen. The lime will make this soluble phosphoric acid "revert" or become less available, and set some of the ammonia in the organic forms free. While this would not cause much loss after the mixture is put into the ground, there is nothing to be gained by the mixing.

Slag Cinders as Fertilizer.

Why don't some of our Experiment Stations say something about the use of slag cinders or granulated cinders from our blast furnaces? I have used them, four tons to the acre and secured as good clover as where I put 1,500 pounds burnt lime. The cinders cost 15 cents per ton, lime costs $6.25; the haul is the same distance. Others have used several carloads, they get better clover with cinders than with raw or burnt lime. A. M.
West Middlesex, Pa.

The only property in slag cinders that would be useful on the soil would be the lime contained, and at the price given, if the haul is not too far, they may be useful for that purpose. All depends upon the percentage of lime. The fact that the furnace slag resulting from the manufacture of steel by the "basic" or Thomas-Gilchrist process, is used as a carrier of phosphorus, leads to some confusion on this point. This basic slag was formerly made at the Pottstown Iron Works in Pennsylvania, but has not been made in this country for a number of years. There is some talk of reviving this process of manufacture, but at present our supply of basic slag comes from Europe. As a carrier of phosphorus the genuine basic slag has proved to be a very useful vehicle. CHAS. E. THORNE.
Ohio Experiment Station.

Sweet Clover in New York State.

No attempt has been made to grow Sweet clover in this county except by a few farmers who are mixing it with Alfalfa. The plant thrives naturally here, and persists in all kinds of soil, even the stiffest kinds of clay. Cattle eat it, when tender, and if it can be fed so as to lie in a palatable condition, ought to prove a valuable fodder. Efforts are being made in this north county to get it established in pastures where feed is scarce, and especially where "devil's paint brush" has crowded out the better grasses and clover. There are many reasons why Sweet clover ought to have a place in our agriculture, but we need to test out its adaptability before it can be generally considered. C. S. P.
St. Lawrence Co., N. Y.

So far as I can find out, there never has been much seed of Sweet clover sown in this county. Sweet clover has come in along the roadbed of the Cortland Traction Company in those places where the roadbed had to be filled, the fill being taken from gravel pits in the town of Preble, in the edge of the limestone district. The plants made a rank growth the first year or two along the banks of these fills, but are gradually diminishing, How the seeds came to be there, no one knows, probably scattered by birds. There seems to be less growth each year.
Cortland Co. E. H. FORRISTALL.

As to the growth of Sweet clover in Clinton County, this clover does quite well, but very little is grown. It is considered more of a weed here than it is a forage plant. Alfalfa seems to thrive well on soils that naturally grow Sweet clover, and for this reason sections that grow Sweet clover are usually seeded with Alfalfa. Farmers generally think that the Alfalfa is far superior in feeding qualities. Sweet clover is very common here in Clinton County along the roadsides and neglected places. As yet very little is grown for feeding purposes. I think that we may be able to make use of this Sweet clover in building up some of our light soil so that we can grow Alfalfa on it. Much to my astonishment, this last season, I found Alfalfa growing on very light soil, soil that would blow in fact. C. B. TILLSON.
Clinton County. County Agent.

A REAL negro "mammy" of the old type came up the walk through the old-fashioned garden to the side porch. She had a basket of "fresh aigs" on her arm and was offering them for sale. "Are you sure they are perfectly fresh, auntie?" asked the lady who came out of the house. "Yes'um, they sho is all right, Miss Bess. Ain't nary disorderly aig amongst 'em."—New York Evening Post.

The principle—Two layers of glass with a ⅝-inch layer of dry still air

Now's the time to gain on Spring

If you wait on the weather to start your Spring plants, the market will be gone before you have anything to offer. An equipment of **Sunlight Double-Glass Sash** should be ordered early. They provide growing conditions even in the worst weather. The ⅝-inch air space between the two layers of glass shuts out the cold and holds in the warmth, letting in the light and protecting better than mats or boards.

Ten years' use has proved their success. Made of the best cypress; glazed or repaired in half the usual time; eliminating all need of mats or shutters; making plants early without undue forcing—they are simply indispensable to obtain the best results.

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The Sunlight idea has been carried into an inexpensive greenhouse, 11x12, 11x24, 11x36 or 11x48 ft. in size. It is made of Sunlight Double Glass Sash, which are instantly removable when the greenhouse is idle for use on hot-beds or cold-frames. Thus they serve a double purpose. Sash ordered now for Spring work may be used on a greenhouse frame ordered at your convenience for next Fall or Winter.

Write for these two books today

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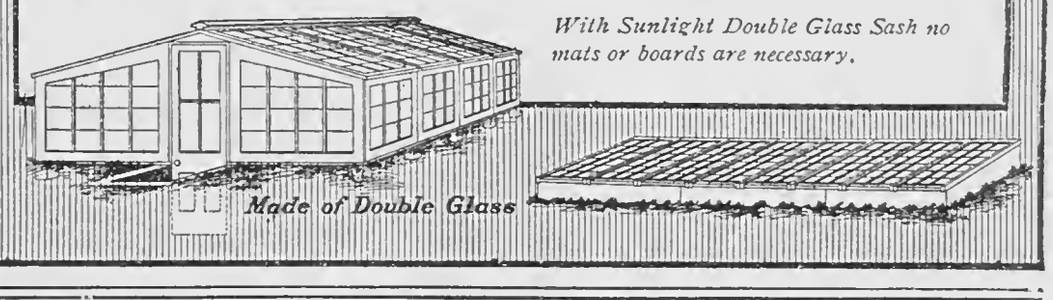

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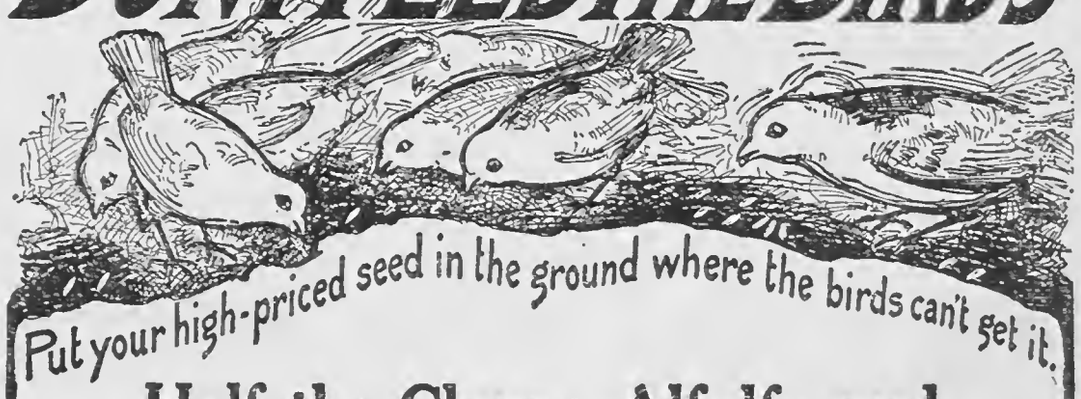
With Sunlight Double Glass Sash no mats or boards are necessary.

DON'T FEED THE BIRDS



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There never was a more sinful waste of seed than broadcasting

Broadcasted seed is scattered to the four winds of heaven; part is washed away by rain; another portion goes to feed the birds; much of it lies on top of the ground and never makes healthy plants.

In broadcasting, there is usually sown an average of 66 clover seeds on a square foot of ground. This is **more than twice too much,** and the results are doubtful, at that.

If you intend to sow clover in your winter wheat, the Superior Alfalfa and Grass Seed Drill will show you a gain of about FOUR DOLLARS per acre.

If the seeding is done in old pastures and meadows or run-down alfalfa fields, the discs open proper furrows, cultivate, let the air in and put the seed in the ground where it is sure to grow. This method increases the hay tonnage and forage. It also saves half the seed.

In sowing Hungarian Grass or Millet, half the seed is saved and the tonnage is greatly increased over other methods.

The Superior Force Feed accurately sows Crimson and Red Clover, White Clover, Alsike, Alfalfa, Clover and Timothy mixed, Timothy alone, Red Top Fancy, Red Top, Blue Grass, Millet, Flax, etc., in widest ranges of quantity.

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I'm told that I have the best quality of seed, give the largest packages and have the most common-sense Seed Book in the bunch. And I'm willing to admit it.

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All right. I live close to the Missouri line and I'll "show" you.

I'll send you the *Seed Book* and a *big package of garden seed*, and you can judge for yourself. NO CHARGE FOR EITHER, and you need not even send the postage unless you wish.

I also have guaranteed Clover and Alfalfa, and all kinds of farm seed at Farmer's Prices. Shall I send you free samples of these also?

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The best money can buy—
Clean and hardy—germination and purity guaranteed. Our choice home grown

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and all other grass and field seeds are the best it is possible to secure. We will send **Absolutely Free** samples and prices, also our new **Alfalfa Guide,** full of valuable information about this profitable plant. Don't buy until you have seen our samples. **Write to**

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25 Full-Sized Pkts. GARDEN SEEDS 50c

If our selection is not what you want, we will exchange for others. We want to get acquainted with you. Send order today and we will include our book, "How to Grow Vegetables," free.

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All as good as our vegetable seeds. Ford's Sound Seeds are noted for purity, productiveness and vitality. The *Ford Plan* guarantees to pay and please you. Get our catalogue today.

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SEED CORN

Highest yielding varieties. We welcome comparative tests between ours and others. *Wing's Improved Whitecap* has never been beaten in our fields. *Wing's 120-day Yellow* is earlier and was good enough to win the State Corn Contest in one-acre plots in 1912. Yield 139 bushels, 17 lbs. *Our Clarage* is maturing for us in about 100 days and yielding practically the same as later varieties. We have some very choice 1912 stock carried over and very moderate stocks of 1913 seed. All our corn is now being cured on the patent wire hangers which insure practically perfect germination. For many years all of our corn has been bred from ear-row test plots. Write for catalog and prices.

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SCARFF'S SEED CORN

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R. H. SHUMWAY, Rockford, Illinois

EVENTS OF THE WEEK.

DOMESTIC.—Thirty yachts, chiefly of the motor driven type, were destroyed at Port Washington, Long Island, Jan. 25, in a fire that wiped out the buildings and marine railway plant of the Manhasset Shipbuilding Company, formerly known as the Stationary Marine and Motor Supply Company. The estimated loss is $250,000.

Suits were filed at Little Rock, Ark., Jan. 24, by Attorney General William L. Moose against six cotton oil companies of that city asking that they be ousted from the State and that fines of $4,215,000 be assessed against each because of alleged membership in a trust formed to control the price of cottonseed. Defendants in the suit are the Buckeye Cotton Oil Company, the Arkansas Cotton Oil Company, the Little Rock Cotton Oil Company, the Southern Cotton Oil Company, the Dixie Cotton Oil Company and the Rose City Cotton Oil Company. The alleged trust has been in operation from September 1, 1911, it is charged.

Approximately 4,000 bales of cotton were destroyed or damaged at Memphis, Tenn., Jan. 22, by fire, which swept the warehouse of E. W. Trout & Company. The loss is estimated at between $200,000 and $300,000. Three firemen were slightly injured.

Indictments were returned at New York, Jan. 26, by the federal grand jury holding ex-Representative Lucius N. Littauer and his brother, William Littauer, under the charge of smuggling jewelry into the United States. The Littauers, members of the wealthy firm of Littauer Brothers, glovers, of Gloversville, N. Y., were indicted under Section 3082 of the Revised Statutes, which provides a fine of $10,000 or imprisonment of not more than two years, or both, for smuggling. The jewels, believed to be worth $40,000, are said to have been brought into the port last November by Lucius Littauer and were intended as a present for Mrs. William Littauer, the wife of his brother. The gems are said to have been concealed in a trunk.

Five lives here have been lost, thousands of head of live stock have been drowned, all steam and electric railroad traffic has been completely tied up by floods and property has been damaged to the extent of millions, as a result of the heaviest rainstorm in southern California in 18 years. From Tehachapi south to San Diego all cities and towns were suffering from floods Jan. 26. At Santa Barbara a cloudburst in the mountains sent a raging torrent down through that city and Montecito. Louis Jones, vice-president of the First National Bank, and his wife were drowned in the flood which swept through Santa Barbara. Many houses in the city were wrecked and washed away. Almost every bridge in the region was destroyed. Telephone and telegraph lines were completely out of commission. It is estimated that $750,000 damage has been done. Two were drowned and $100,000 damage done by floods throughout the San Joaquin Valley district.

One man was severely burned and property valued at $750,000 destroyed, Jan. 27, when fire swept the five-story brick building at Irving and Van Brunt streets, Brooklyn, N. Y., occupied by Hills Brothers Company, fruit packers.

Most of the New York bomb outrages of 1913 were explained in General Sessions before Judge Rosalsky, Jan. 27, by two men, each only 24 years old, who planted and set off between them about 130 packages of dynamite. Alfred Lehman, called Schmitty, and Rocco Picciarello, known to the gangs as Zump, were the men employed by blackmailers. They told their cold-blooded stories of arson, thievery, thuggery and bomb planting at the trial of Angelino Sylvesto, accused of helping in an attempt to explode a bomb at 170 East Houston street on the night of August 31 last. It was bomb No. 110 of the series of 1913. Schmitty and Zump averaged about $30 apiece on dynamite jobs. This money they were likely to spend "sporting around" and to eke out a living they practised all kinds of theft.

ADMINISTRATION.—The following bills are to be prepared for the supplementary anti-trust legislation recommended by the President: First, a bill creating the Interstate Trade Commission. Second, a bill to regulate directorates of corporations and to prohibit interlocking directorates. Third, a bill defining unlawful monopoly or restraint of trade. Fourth, the trade relations bill, which among other things forbids unfair trade practices, such as underselling in one locality to stifle competition and recouping the losses thus sustained by raising prices in localities where there is no competition. The bill forbidding interlocking directorates provides two years of leeway, during which the holding membership on the boards of directors of interstate coal, steel and iron, common carrier corporations, banks and trust companies may be relinquished. A second section of the bill specifically forbids the holding of directorships by one individual in two or more financial institutions enjoying the protection and provisions of the new currency law. A fine of $100 for every day during which the provisions of the foregoing section are violated is provided. A fourth section establishes the dictum that disobedience of the eliminating provisions of the measure shall be sufficient to constitute conclusive evidence of infringement of the Sherman anti-trust law itself by the corporations whose boards contain duplications of individual directorships. The bill to make clearer the definition of monopolies and restraints of trade specifically forbids the following: Combinations to create or carry out restrictions in trade or to acquire a monopoly in any interstate trade, business or commerce; to limit or reduce the production or increase the price of merchandise or of any commodity; to prevent competition in the manufacturing, making, transportin, selling or purchasing of merchandise, produce or any commodity; to make an agreement, arrangement or understanding, directly or indirectly, to prevent the free and unrestricted competition in the sale, production or transportation. The penalties for violating any of these provisions run against any person, firm or corporation, and the fine shall not exceed $5,000, with imprisonment for one year as an alternative, or both penalties, in the discretion of the court. A section of the bill makes the officers, directors and agents of the corporation equally guilty with the corporation for any act proved against the corporation. The trade relations bill proposes to add five sections to the Sherman law, defining what shall be classed as unlawful trade practices. Another section of this bill permits an injured party to take advantage of proofs established by the Government as to the character of any unlawful combination in the suit against such corporation to recover damages under the Sherman law. A section of the anti-trust programme specifically prohibiting holding companies is to be added later.

PANAMA.—An executive order outlining the permanent organization of the civil government of the Canal Zone was signed by the President, Jan. 27, and coincident with its promulgation the official announcement was made that Col. George W. Goethals had been appointed the first civil Governor of the Canal Zone. President Wilson's order creating the civil government becomes effective on April 1 next, from which date the Isthmian Commission, together with the present organization of the Panama Canal and the Canal Zone, will cease to exist. The President, however, will ask Congress to pass a resolution creating the retiring members of the commission a committee in charge of the arrangements for the celebration for the opening of the canal. Under the terms of the executive order the Canal Zone government will consist of a department of operation and maintenance, a purchasing department, a supply department, an accounting department and a health department. Provision is also made for an executive secretary. All the departments will be under the direction of the Governor, subject to the supervision of the Secretary of War.

FARM AND GARDEN.—The Phillip herd of buffalo, kept in a ten-thousand-acre pasture near Fort Pierre, S. D., has been placed on the market by Phillip Phillip and George Phillip, administrators of the estate of their father, James Phillip. This herd of buffalo, the largest in the United States, now includes seventy yearlings, fifty-five two-year-olds, and 275 older.

A white radish, three feet high, 36 inches in circumference and weighing 12 pounds, was forwarded from Los Angeles to William J. Bryan, Secretary of State. The radish is said to be the largest ever produced in Southern California. The vegetable was grown by Japanese truck gardeners.

The Ohio Percheron Horse Breeders' Association will meet February 4, in the Judging Pavilion, at the Ohio State University, Columbus, Ohio. Mr. A. P. Sandles, President of the Agricultural Commission of Ohio, has been asked to be present and talk to the breeders of Percheron horses. Mr. J. H. S. Johnstone of the Live Stock World, Chicago, Ill., has consented to come and talk to the members of the association upon the subject of "Draft Horse Futurities."

The first Missouri high school to incorporate poultry culture as a part of the regular school curriculum on a practical basis is at Oak Grove. Prof. J. F. Blyholder, the principal, and his class in poultry husbandry have begun operating a 150-egg incubator in the basement of the school building and have a Barred Plymouth Rock hen sitting on 15 eggs in the same room to test out both methods of incubation.

CONDITIONS IN RURAL NEW YORK.

Relating to the subject of abandoned farms, would say that while there are no such here, in the strict sense of the word, one can buy about any farm in this part of the country at prices ranging from $10 to $30 per acre, very few if any of them selling for anywhere near what it would cost to replace the buildings now on them. These are good farms, farms that are capable of making money under reasonably capable management, mostly used for dairying now, but capable of raising good crops of grain and hay. The great drawback is that we are about 20 miles from railroad, and it costs us $4 per ton for cartage now, although it will likely soon be done for less, as we shall probably soon have a State road. This matter of cartage is a benefit to the grain farmer, not nearly enough grain being raised to supply the demand, so the seller is able to add the $4 per ton to his prices. I have in mind one young man who bought one of these farms and stock for $3,600, ran in debt for the entire amount, and paid for it at the rate of $500 per year and interest, and now has a good bank account, and there is no reason why anyone of equal ability can not do the same on any equally good farm, and this one is a poor one, except for dairying. It is a good fruit country, apples, and in places peaches doing finely, and it costs but 25 cents per barrel to get apples to the river boats or railroads. The great trouble here seems to be want of help to work on the farm, the farmers themselves having very few or no children, and what few there are are leaving the farms; too dull for them here. We have a fine climate and a pleasant country to live in. A few miles north from us, farms can be bought for still less money, and in these days of high prices for meats of all kinds, it seems to me there are many good livings in this business. A farmer from Nebraska bought one of those hill farms a year or two ago, and says he would not give it for any section of land in western Nebraska, and he has since bought two other farms near him and now owns about 600 acres, making it look as if he meant what he said. SILAS DEAN.

Greene Co., N. Y.

COAL TAR ON TREES.

Last Spring I set out some Burbank plum, Montmorency cherry and Yellow Transparent apple trees, also some locust and nut trees. A neighbor told me to put coal tar around the base of those trees for eight or 10 inches above the ground to prevent borers working. I took a small paint brush and painted them as directed, beginning at ground and painting up eight to 10 inches. The other day I broke one of the White walnut (butternut) trees over in letting my team get advantage of me, and inside the outside bark where the tar was put on, it is dark brown. Have I ruined all my trees? J. F. H.

Spring will determine this surely, but we fear you have injured or ruined the trees by painting with tar. We found that coal tar varies. Some of it is surely dangerous to paint on young trees and we never advise its use. It is a much safer plan to dig the borers out with knife or wire. It may be possible to "bridge-graft" some of these if the bark is destroyed all around. This is done by inserting one end of the scion into live wood below the injury and bringing the other end up to live wood above the dead bark.

SETTING UP WIRE FENCE.

Having read the article "Putting Up Wire Fence" in THE R. N.-Y. of May 17, 1913, by W. E. Duckwall, of Ohio, I will say his way of bracing the end post and tying down fence at the foot of a hill was tried out here several years ago and found wanting, for the wire would rust off at the top of the ground in two to four years, and the fence soon lost its tension by the end posts pulling over. We have overcome the trouble by putting in an iron rod to come up above the top of the ground four or five inches, with a hook or loop in the end to put the wire through. Both posts at each end should be of the same size and durability, for what good is one post when the other has rotted off? E. F.

Alexander, O.

AIR PRESSURE AND SPRINGS.—The statements of R. L. C. on page 1342, under the title "Water Will Seek Its Own Level" were interesting to me because of an attempt to explain the same phenomenon in the case of natural springs, i. e., the rising of water in springs (or the appearing when the spring is dry) before a storm. The only explanation I have ever read was that probably the air was humid on account of the approaching storm that dew enough was absorbed to raise the springs. This has always seemed an improbability, if not an impossibility, and I had thought of the change of air pressure as the more probable cause before I ever saw R. L. C.'s statement. I am glad to have my conclusions confirmed. W. H. HUSE.

COMING FARMERS' MEETINGS.

Farmers' Week, Ohio State University, Columbus, Ohio, February 2-6.

Connecticut Vegetable Growers' Association, Foot Guard Armory, Hartford, February 4.

Ohio Percheron Horse Breeders' Association, Ohio State University, Columbus, February 4.

Midwinter meeting Michigan State Horticultural Society, Benton Harbor, February 5-6.

Sixth National Corn Exhibition, State Fair Grounds, Dallas, Texas, February 10-24.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., January 24-26.

STRANGER: "I should like to speak to Mr. Meyer, please. He asked me to meet him here to-day." Domestic (sadly): "Dear, dear, he must have forgotten all about it. I'm sorry, sir, but he went and died yesterday."—Credit Lost.

DIBBLE'S SEED FARMS

HEADQUARTERS FOR FARM SEEDS

If you want good crops, you must plant *good* seeds. Dibble's Seeds are not only good seeds but they are the *Best* Seeds money can buy. We are extensive Farmers and Seed Growers located in the Genesee Valley of Northwestern New York. Honeoye Falls is in Monroe County, the second county in the value of its agricultural products in the United States.

We are located where Farm Seeds are actually grown. Our 1,600 acre Seed Farms are well tilled, very fertile, productive and profitable. Our warehouses are 400 feet in length, and at this writing have over 100,000 bushels of Farm Seeds in store, and we sell direct *from our Farms to yours.*

We have but one grade, and that the best obtainable. Better seeds than ours cannot be had, nor can you get the same high quality elsewhere for so *little money.*

Dibble's D. B. Brand

Northern Grown Alfalfa, Clover and Timothy Seed 99.50 Pure

or better is the "Cream of the Crop," the same as we use on our own Farms growing 600-800 tons of hay yearly. We have about one hundred acres of Alfalfa producing around four hundred tons annually. Our experience is worth thousands of dollars to you. Alfalfa and clover seed is cheap this year and the quality was never better.

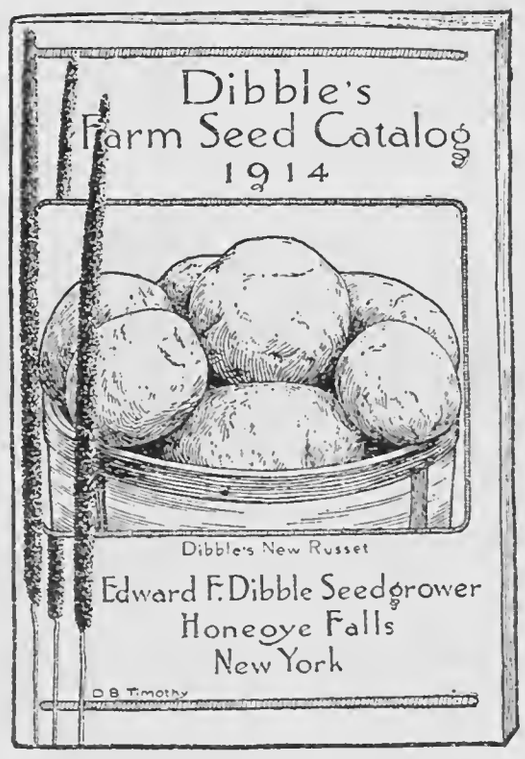
Dibble's Seed Corn

is in a class by itself. Our requirements are that it must be from hand-selected ears, thoroughly dry, screened and recleaned, and must show a germination of above 90%. Germination tests made to date average over 95%. In fact, real *Seed Corn.* If you are interested in Flint for husking, we can supply you with a variety that has made 230 bushels per acre and has produced 247 bushels from one peck of seed. In Dents for Crop or Ensilage, we have an extra early to use where seasons are short and a big grower maturing in 100-110 days, which we recommend for general use; also a Mammoth White, growing 15-20 feet high under favorable conditions, called by one of our customers "King of Ensilage Corn." We have five silos, grow 100 acres for ensilage annually, and have proven by field trials the best varieties for the Eastern States.

Dibble's Seed Oats

New Heavyweight originally from the cold Northwest, early, big stiff straw, enormously productive with thin hulled grain weighing 40-45 pounds per bushel. One field produced over 1,000 bushels last year, averaging 87 bushels by measure, weight 43½ pounds, or *118 bushels per acre* by weight.

Twentieth Century introduced by us several years ago. Scores of farmers have reported yields to us of from 80-110 bushels per acre, and on our own farms growing from 100-200 acres annually, they have produced over *twice* the average of the United States for the last dozen years. Owing to a bumper crop of oats in our section prices are very low.



Dibble's Seed Barley

New early Six Rowed from Wisconsin yielded 55 bushels per acre right here in Western New York last season, and Dibble's Canadian Six Rowed with a twenty-year record of from 40-54 bushels per acre on the Dibble Farms.

DIBBLE'S ALFALFA, CLOVER, TIMOTHY, CORN, OATS, BARLEY, etc., are sold on a ten days' approval your-money-back-if-you-want-it plan, subject to your test, the test of your Experiment Station, or that of the Department of Agriculture in Washington; the fairest, squarest deal ever given the American Farmer by any Seedsman.

Dibble's Seed Potatoes

are northern grown, from select stock seed, and are grown under climatic conditions and in suitable soil for the best development of each kind. After harvest they are carefully assorted and stored in our frost-proof storage cellars and reassorted into new barrels or sacks the very day orders are shipped to our customers, thereby assuring them of choice, properly selected stock that is free from frost, sure to grow and produce crops that pay big profits. We have full stocks of all the standard sorts—Cobblers, Six Weeks, Rose, Queens, Manistees, Moneymakers, Giants, Gold Coins, Green Mts., Rurals, Raleighs, and a score of others; also a *new main cropper* introduced by us two years ago, that should be grown by every farmer. Several hundreds of our customers who have tried it write that it has *outyielded all other varieties in the same field,* and over *one hundred* say that *it beat other kinds over two to one.* Try Dibble's new potato; grow *two* tubers where *one* grew before and *double your crops.*

60,000 bushels of Seed Potatoes awaiting your orders, and at a price you can afford to pay.

Dibble's Farm Seeds Free

Send us your name and address on a postal card, mentioning the number of acres you are farming, and we will send you free *ten liberal packages of Dibble's Farm Seeds* for testing on your own farm, and also *Dibble's Farm Seed Catalog,* the leading strictly Farm Seed Book of the year. *Dibble's Catalog* is written by a *Farmer* for *Farmers.* It tells the truth about the Farm seed situation. Illustrations are all from photographs. It is a safe guide for every Farmer as it gives the result of our own experience farming 1,600 acres. It contains a map showing how near Honeoye Falls is to *you.* Write for it *Now.*

Address EDWARD F. DIBBLE SEEDGROWER, Honeoye Falls, N. Y. Box B

Onions and Celery on Sandy Loam.

Can onions and celery be grown successfully on a light sandy loam? What kind of fertilizer and how much should I use on these crops? A MC.
Ohio.

For best results onions should have a rather moist, deep rich sandy loam. Bottom land is preferred, as it is more or less of alluvial formation, and is also more retentive of moisture than upland. However good marketable onions can be and are raised on the higher and drier soils, when properly fitted for the crop. If the land you speak of is ordinary farm land, such as is used for the production of cereals, you would do well to delay cropping it to onions for it least another year, as it is scarcely possible to get a paying crop without some advance preparation in the way of enriching the soil, etc., which can hardly be done sufficiently and properly under a year. I would therefore recommend that you apply broadcast not less than 50 tons of partially rotted manure to the acre (or at that rate) this Spring, turn it under, plowing as early and deeply as possible, then about the middle of May run over it two or three times with the disk harrow, about four inches deep. This will thoroughly incorporate the manure near the surface with the soil and put the soil in good tilth. Then plant the land to sweet or field corn, or if you can afford it, sow the land to cow peas, Canadian field peas or Soy beans to be turned under in the Fall. This will put an additional supply of nitrogen and humus in the soil that will tell on the crop of onions that is to follow. The following Spring plow deeply, disk the land well, then apply as a top-dressing pure bone meal and guano at the rate of one-half ton of each to the acre, or commercial fertilizer containing ammonia, 2%; available phosphoric acid, 8%, potash, 7%, at the rate of one and one-half tons to the acre, harrow in with the smoothing harrow. If stable manure is not available, sow the ground early to oats, turn under when in the stage of ripening, sow to cow peas and turn under in Fall, and the next Spring plow and fertilize as directed when manure is applied.

Celery is naturally a swamp plant, and thrives best in a moist rather cool soil, but such soils are not always available, and the higher and drier soils have to be used. For this crop you should apply old well-rotted manure to your land at the rate of not less than 30 tons to the acre, which may be supplemented with commercial fertilizer containing ammonia, 4% to 5%; available phosphoric acid, 8%; potash, 7%, applied broadcast after plowing at the rate of one-half ton to the acre. Plow the land as deeply as possible. Both these crops require good feeding to produce a good marketable crop, without it they will not be profitable to grow. K.

Property in Wild Bees.

1. If a man finds a tree on his own land marked as a bee tree with the initials thereon, has he a right to cut the tree without trying to find out or notify the man that marked the tree? 2. What would the penalty be if he did cut the tree? 3. Also is it lawful in New York State to poison jack rabbits that are destroying trees? J. H.
New York.

1. Marking a bee tree found on the land of another with the initials of the finder does not vest an exclusive right of property in him, and he cannot cut it without the owner's permission. Indeed, being on the land of another is technically a trespass.

2. If the owner of the land cut the tree there would be no penalty whatever. He has a right to do it; but there is a custom recognized throughout parts of New York State by which a finder of a bee tree who marks it with his initials has a qualified property right in the tree, but this is not recognized in law, and he has no property in it unless the owner of the land gives him the permission to go on and cut it.

3. The laws of New York regarding taking of rabbits are quite strict, but nothing in them shall prevent the owner or occupant of the enclosed or occupied farm lands, or their employees, from taking hares and rabbits on such owner's or occupant's premises at any time to prevent their injuring the property. The penal law of the State makes it a misdemeanor for anyone unjustifiably to administer any poisonous drug or substance to an animal, or unjustifiably expose any such drug or substance with intent that the same shall be taken by an animal, whether such property be the property of himself or another. But it is a question whether this does not apply to animals which are the property of another and not to wild animals. It would be safer, however, not to poison these rabbits. M. D.

Farm Bargains in the East.

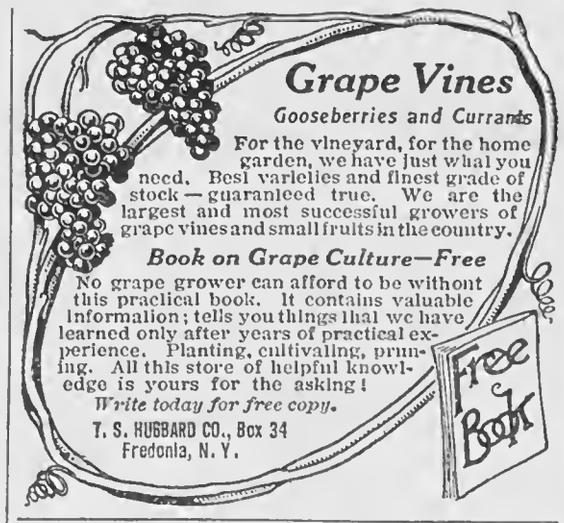
I have been interested in a series of articles on abandoned and neglected farms in the region between the Hudson and Connecticut rivers, appearing in one of the "popular" magazines, in which one is told all about "broad gauge" farming by men who are not farmers. In some of these articles the statement is made that lands as level and as black as the prairies of Manitoba lie in this region entirely neglected, and can be had at practically nominal prices. Is not this, in fact the whole series, rather misleading. I know something of the quality of the lands in Manitoba and what they could be worth if in New York State.
Rochester, N. Y. Q. W. B.

Within the past three years, an equal number of my New York friends have been smitten with "back-to-the-land" fever. Each of them in turn traversed the territory mentioned for weeks and even months. Advertisements and letters galore supplemented their personal observations. In due time one of them located in Windham County, another in the northwest corner of New London County, while the third has never been able to locate anything approximating a bargain. Their experience is sufficient comment on any and all magazine "stories" about "land as level and black as the prairies" which may be had at "nominal prices." The man who goes hunting for that kind of bargain is booked for a lot of disappointment.
Connecticut. C. M. G.

Fruit Buds.

Cold weather has hurt the peach buds pretty badly in the State, still with the exception of Elberta there are plenty left for a good crop, and even that variety will give some fruit all over the State, except possibly on the very highest hills which suffered the worst this year on account of high wind for 36 hours and temperature five to 10 below zero. No "smudge pots" for such a game.
Connecticut. J. H. HALE.

CEMENT OR CLAY TILES.—Our reports indicate that on the whole drain tiles of baked clay are more satisfactory than those made of cement. On some soils, and with certain kinds of water, the cement tile appear to give way sooner than the clay. We have some good reports from cement tiles, although, of course, they have not been long enough in use to show definite results. On the whole, the reports that come to us show that the clay tiles are more satisfactory.



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In order to reduce our large surplus of apple trees we will make the following special prices to those mentioning this paper:—

⅜ to ½ Inch Diameter, 4 to 5 feet,	$ 8.00 per C
½ to ¾ Inch Diameter, 5 to 7 feet,	12.00 " "
¾ to 1 Inch Diameter,	15.00 " "
1 to 1¼ Inch Diameter,	25.00 " "
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These trees are all true to name and guaranteed free from injurious insects, such as San Jose Scale, etc., which have never entered our Nurseries or surfounding country. Write for our free descriptive Catalog of Fruit, Shade, Ornamental and Evergreen Trees, Shrubs, Vines and Perennial Plants. Established 1856. In the Nursery Business over half a century.
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All best varieties grown in our own nursery, so we absolutely guarantee correct varieties; free from San Jose scale; healthy, strong roots; first-class in every way. APPLE, $12 per 100; PEACH, $8 per 100—also Pear, Quince, Cherry, Plum, Small Fruits and Ornamentals direct to you at wholesale prices. We employ no agents.
Write for finely illustrated CATALOG and our Special Prices, freight prepaid. DENTON, WILLIAMS & DENTON, Wholesale Nurserymen, 130 Elm St., Dansville, N.Y.

PEAS FOR SALE
Thomas Laxton, $5; Telephono, $4.50, and Heroine, $4 per bush., in lots of two or more bushels. Cash with order. Bags free. No better quality can be had at any price. Freight to Buffalo, N. Y., is twelve cents a bushel.
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Burning Fruit Trees
There is a large percentage of every block of Fruit Trees that is offered for a few cents per tree that does not pay the Nurserymen, and does not pay the Planter. To avoid disappointment and loss to both parties we—**burn them up!** We are offering only **first-class Trees**—send for our Free illustrated descriptive Catalog, 54 pages, and see if you can't get **Fresh dug Trees** as cheap as cold storage stuff—40th year of trees from our Nurseries direct to the planter.
G. C. STONE, Nurseryman
DANSVILLE -:- NEW YORK

HORSE HEAD
Pulverized raw phosphate builds fertile soils—maintains fertility. High test. Laboratory analysis with every car. WE WANT AGENTS. Successful experiments have paved the way. Price, your railroad station—liberal terms. THE HASEROT CANNERIES CO., Cleveland, Ohio

Does Your Farm NEED LIME?
Most farms do that have been cropped for a long term of years—a Dollar invested in lime to correct the acidity of the soil will result in $10 extra value of the crop. The best lime for all agricultural purposes is
R-R LAND LIME
sold under a *guaranteed analysis* and a reputation of more than a century standing back of the product. Write today for our free illustrated booklet, telling how, for what, and when to use lime. Address nearest office.
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46 Bushels Wheat
PER ACRE
grown by R. A. & E. A. Putney, Derby Line, Vt., with an application of 400 lbs. per acre of **BUFFALO TWO-NINE-FIVE** fertilizer. About three times the average yield in the U. S.
BUFFALO BRANDS not only increase the yield and weight of the grain, but improve the quality. They are soluble, available and in perfect drilling condition. Our book
"CONSERVATION OF SOIL FERTILITY"
mailed free, will help solve your soil problems. Also write for our pamphlets, **The Corn Crop, Hay, Forage Crops, Memorandum Book** and **Calendar.** Agents wanted.
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BUFFALO FERTILIZER WORKS
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FOR SALE—Agricultural Lime
selected forked lump lime, bulk, 95% to 98% pure lime $5.60; hydrated lime, paper sacks, $7.30 net ton car lots, delivered any point between Buffalo and New York on the main line of L. V., N. Y. C., W. S., O. & W., D., L. & W., and Erie R. R.
J. W. BALLARD CO., Binghamton, N. Y.

SPORICIDE SURE CURE FOR SMUT in oats. Guaranteed. Simple to treat. Sent direct by parcel post where we have no agent. Booklet Agents Wanted **Sporicide Chemical Co.,** ATLANTA N. Y.

FRUIT TREES Direct to the planter at wholesale prices. **We Pay The Freight and Guarantee Satisfaction.** 400,000 trees to select from. Apple, Peach, Pear, Plum, Cherry, Berry Plants and Ornamentals. Send for Catalogue.
L'AMOREAUX NURSERY CO., Schoharie, New York.

This Steel Forge Will Save Its Cost In 30 Days on Your Farm

Make blacksmith bills smaller by doing repair work at home. Our Forges are used by farmers in every State and foreign Countries. Blower is 11½ inches diameter. Hearth is 30½ inches high. Total height of Forge 43 inches.
Positively Guaranteed to be as large, durable, do as much work as any $10 forge made and to be as represented or money refunded.
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PENNSYLVANIA SPRAYING NOTES.

Like the general weather conditions of the past few seasons, the first heavy frost occurred quite late last Fall, and as a result the apple leaves were late in falling from the trees. However, a windstorm following a few such frosts finally stripped the apple trees of leaves. Then in December we had a few weeks of generally fair weather, during which time our spraying outfit was put in operation. We succeeded in spraying about 10 farm orchards, but should have sprayed twice this number in the time we were at it. A worn-out strainer on the end of the suction hose probably caused us more trouble than any one thing. As it is quite impossible to keep all the dirt out of the tank, the strainer should be in good shape. Bits of leaves, sticks, etc., will cause no end of trouble by clogging up the nozzles. Frequently a bit of dirt will get as far as the shutoff between hose and rod, and stop operations completely until the connection is taken apart and cleaned out. Keep an extra strainer on hand, as the fine brass wire soon rusts through when spraying with lime-sulphur.

Then several mornings when we were out spraying it was too cold to begin work for a few hours. One evening we failed to drain out the pump thoroughly and it took us several hours to thaw out things next morning. When there is danger of freezing the plugs should all be removed from the pump and then the engine wheel given several turns to get all the liquid out of the valves, air-chamber and pipes. The hose and extension rods should be taken apart and thoroughly drained. Then if you wish to thaw things out next morning, first put shutoffs, nozzles, etc., in hot water, and it may also be necessary to heat up the hose and rods. Then put the plugs in pump and place suction hose in a bucket or more hot water, start your engine and run this hot water through pump and hose, adding the parts till the water comes freely through the nozzles. Ice in the hose or any of the parts will cause no end of trouble till all is blown out.

There seems to be quite a difference of opinion among the farmers here as to which end of the dormant season is the better time to spray for San Jose scale. Some insist on having their spraying done in Fall, while others are just as certain that Spring spraying is more effective. As far as my practical experience has gone and comparing this with the scientific investigations of others, I am not able to perceive any difference, and I have advised the farmers accordingly. The important points are that the trees are thoroughly pruned and the leaves well off, the weather reasonably calm and not so cold that the liquid will freeze before drying on the trees, and that the liquid is thoroughly applied and of sufficient strength to kill the scale at any time during the dormant season. Advocates of Fall spraying fear that if the scale on their trees is not destroyed before Spring the insects will continue to feed on the sap during the Winter. However, it is not believed that the scale feed any in Winter at all. The various stages of the scale may be illustrated by stating that the "chicks," or those which have not reached maturity, freeze as Winter approaches, while the "pullets" remain dormant on the tree till Spring, unless they begin feeding on the sap again. Then about June the young scale, now fully matured, begin to give birth to their young; the old "hens," or those which have been active the previous season, die of old age sometime during the Winter. On the other hand there are those who believe that the scale are more easily destroyed in Spring when they begin to feed again. While this may or may not be the case I believe in making the liquid strong enough to destroy the scale at any and all times during the dormant season. My belief is that the lime-sulphur solution does its work in a few hours after it is applied. The principal reason why I advocate beginning to spray in Fall is for the reason that suitable days are generally few, and sometimes far between at any and all seasons, and when such days or parts of days occur at any time during Fall or Winter they should be taken advantage of. This applies especially to the commercial sprayer who has much spraying to do, and I may say that the man who makes a business of spraying farm orchards is becoming more popular with the farmers every year if he does good work at a reasonable charge. As a rule we have a few week's time in Spring after it gets warm enough and before the young apple leaves appear to spray almost steadily, but sometimes this season is more or less stormy, and not much spraying is accomplished after all. Hence the advice to take advantage of favorable days earlier in the season, and especially in Fall during "Indian Summer" days.

I have frequently remarked to farmers that spraying is only one requisite towards maintaining a profitable farm orchard. Pruning, fertilizing, cultivating (when needed), etc., are equally if not even more important, and if these are neglected the spraying cannot be expected to accomplish much good. But when these other things are properly attended to, then spraying may be said to be always beneficial (if properly done) while in many places spraying has become an absolute necessity if the farmer desires to have any fruit at all.

Pennsylvania. DAVID PLANK.

MASSACHUSETTS FRUIT GROWERS.

It was an enthusiastic and interested body of horticulturists that assembled in Springfield, Mass., on the occasion of the Fruit Growers' convention. The directors held a meeting before the regular sessions of the society began, at which Worcester was selected as the next place of meeting. They recommended that the association take membership in the American Pomological Society. The McKellar bill, now before Congress, was opposed in respect particularly to that section which forbids anything to remain in cold storage more than 90 days, and in so far as this had to do with fruits. President H. L. Frost of Arlington said that membership in the association had doubled the past year, and that it was now over 1,000. He emphasized the necessity of regaining the confidence of the purchasing public by giving them an honest pack which, he said, we are not doing at the present time.

Prof. M. A. Blake of New Jersey gave a practical talk on the requirements of successful peach culture, and named as the five best varieties for commercial purposes the Elberta, Carman, Belle of Georgia, Champion and Hiley, with Iola, Iron Mountain and Fox Seedling also in favor. The hardiest varieties were Greensboro, Waddell, Carman, Lola, Alton, Early Wheeler, Hiley, Bell of Georgia and others of this type. He said that the New Jersey Station gave out 30,000 buds last year that were free from disease, and they will be used to provide stock from which to propagate in the future.

Dr. N. B. Gates of Amherst discussed bees in relation to horticulture. Bees were essential, he said, to the setting of the cranberry crop, which was worth $1,000,000 to the State every year. In Ontario bees were used to get a good clover crop, and there are 100 colonies as a center every mile apart for this purpose. Fruit growers cannot depend on the wind to carry the pollen. W. M. Purrington of Haydenville spoke on the benefits of orchards to bee-keepers. He brought out the fact that it is difficult to get apple-blossom honey in the super boxes, as it all goes into the brood boxes. It comes when the Winter supply is running low and is used to stimulate the queen bees to greater activity. E. M. Nichols of Lyonsville and Prof. W. W. Chennoweth of Amherst also discussed different phases of the question as to the importance of bees to the fruit growers.

Secretary F. Howard took for his topic the necessity of coöperation between farmers and business men. The deer problem received due consideration, and that animal was found to have few friends in the convention. The deer is a trespasser and must be treated as such. Ingram I. Margeson of Westwood, described some of his experiences in fruit growing. Dr. E. Porter Felt, State entomologist of New York, gave some practical suggestions on spraying for insect pests and Dr. J. P. Stewart of State College, Pa., discussed cultural methods, cover crops and fertilization. The last day of the convention was devoted to trades people. The exhibition of horticultural appliances and of fruit attracted deserved attention and favorable comment. J. W. D.

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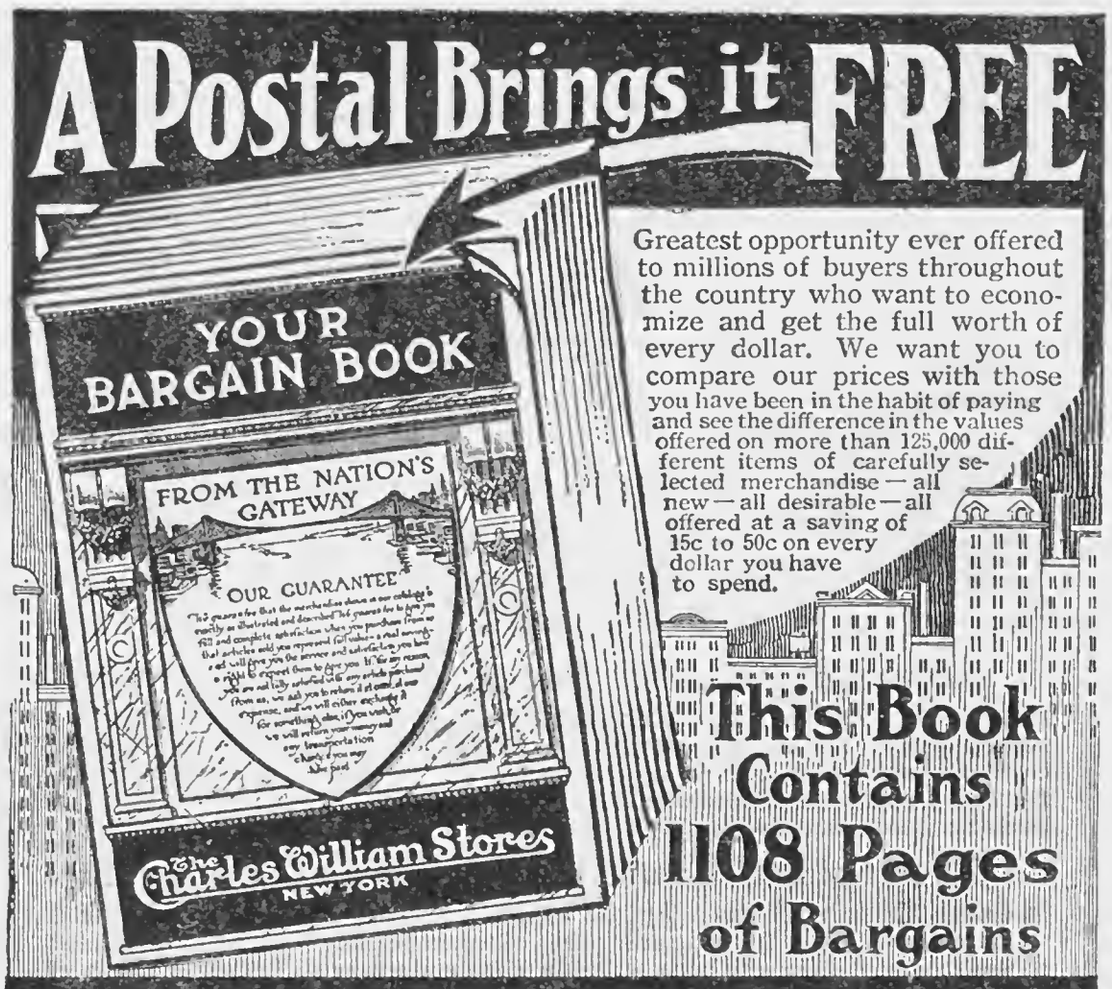

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EARLY PICKLES AND PEACHES.

1. I live in Southern New Jersey, where early pickles pay well if one can get them early enough. Part of my land lies to the south, and is a sandy loam now in Crimson clover. I have another piece, nearly level, protected on the north by woods. Which would you advise me to use? The soil is practically the same. Would you advise planting on soil not under cover crop? When should it be plowed? Would planting early peas be advisable, for instance four feet apart east and west, and afterward plant in the pickles, using peas as protection? Which would be the best fertilizer, horse manure or chicken droppings? The soil has not had any lime used on it for at least 10 years, although it grows a good crop of Crimson clover. Would you advise me to use any? I would like to know the best yielding varieties for early planting. 2. I am intending to plant 500 or 1,000 peach trees; what varieties would be the best to plant, and about how many of each? It would be necessary to ship them to Philadelphia or New York market. I would like the best for those markets. M. A. S.

Newfield, N. J.

1. I would advise the use of the land with the southern exposure for early cucumbers, as it no doubt is a warmer and earlier soil than the other plot, and by reason of the nitrogen deposited in it by the clover, and the organic matter made available for plant food by the decaying tops and roots, will be a great benefit to the cucumbers. The land should be plowed eight or 10 inches deep two or three weeks before planting time. Air-slaked lime applied broadcast at the rate of one-half or three-fourths of a ton to the acre, immediately after plowing, would no doubt prove very beneficial. On most soil devoted to the production of cucumbers, it is necessary to use manure of some kind, either broadcast or in the hill. Well-rotted barnyard manure or a good compost is considered the best, and if the supply is limited it can be made to go much further and give good results by using it in the hill. When it is so used, about two good shovelfuls to the hill should be applied and well mixed with the soil, and covered three or four inches deep. A compost of barnyard manure, hen manure, night soil, and barnyard scrapings mixed together with an equal bulk of good soil, will be found most excellent for use in the hills. This compost should be made up in the Fall and chopped and turned over two or three times during the Winter, but if through neglect or other causes it is not done, it may be made up early in the Spring, and, by cutting it down with a spade and thoroughly working it over a couple of times, it may be got into fairly good condition by the time it is needed.

I would not advise planting peas between the rows, as they will interfere to some extent with the timely and proper cultivation of the cucumbers, which should be done regularly every 10 days or so, until the spreading vines make it impossible to go through them without injury. The crop can be forwarded a week or 10 days, by either of the following methods: About the first week in May or earlier if weather conditions seem to warrant it, cut from an old pasture sods 12x12 inches and three inches thick; place these in a cold frame close together, grass side downward. With a spade cut each sod into nine squares or pieces, on each 4x4 inch piece plant three or four seeds and cover the whole one-half inch deep with some good sifted loam. Sprinkle well with a fine rose watering pot, after which put the sashes on and keep closed until the plants begin to show through the ground, which will be in three to five days. As soon as plants are up they must be supplied with air to prevent damage by over heating and damping off. The amount of air given at any given time must be governed entirely by the outside temperature. The temperature under the glass should not be much above 75 degrees at any time. The plants will have made three or four rough or true leaves in 20 to 25 days, when the small pieces of sods on which the plants are growing are to be lifted and transferred to the hills in the field, which should be prepared in advance for their reception. The plants will recuperate more quickly if the work is done in the afternoon.

The other method which is much preferred by some on account of its requiring less labor, is to plant the seed in the field in the usual way 10 or 12 days ahead of the usual time, using cheese cloth supported on wire arches as a means of excluding the cold and hastening the germination of the seed and affording protection to the young plants from the cold and insects for three weeks or so after they are up. For the arches use No. 10 galvanized wire, cut into three-foot lengths. Bend them in the shape of croquet arches, using two crossed over the center of each hill, pushing the ends of the arches about three inches into the ground, place a piece of cheese cloth over the arches large enough to lap over a couple of inches on the ground, put loose soil on the overlapping edges to hold it in place. If necessary this covering may be left over the hills until the plants reach the top of the arches. The following varieties are among the best for market: Arlington White Spine, Improved White Spine, Davis Perfect, and Cool and Crisp, all of which are about of equal value.

2. For an orchard of 1,000 peach trees the following list of varieties and number of each is recommended: 100 Mayflower, 200 Carman, 200 Elberta, 200 Mountain Rose, 200 Stump the World, 100 Wonderful. All the above are good market sorts, and should succeed well in southern New Jersey. K.

Will It Rain Again Soon?

"We'll have some more rain soon. It cleared off in the night."

"What's that got to do about it?"

"It has a lot to do about it. Didn't you ever notice that it always storms again very soon, usually within 48 hours, when it clears off in the night?"

"No, and I can't see any reason why it should."

"Well, you notice and you'll see that it does."

"All right. I'll keep a record long enough to find out if there is any difference."

That conversation took place October 22, 1913, when a rainfall had ceased and clear sky appeared in the night. I set down the date and the fact, and have kept a record for two months and a half. I was admonished by my friend to record every instance of precipitation, however small, and I learned that with the upholders of the theory in question there was no distinction between a storm and a shower that really was an aftermath of the same storm. This was not strictly scientific, but I didn't object. It was as fair one way as the other.

The first three rainfalls cleared at night and were followed by more rain in just two days in each instance. These were followed by two that cleared in the daytime. These were followed by more rain after five and four days respectively. If I had stopped then my neighbor's theory would have been sustained. The tables turned, however, and the days began to forge ahead. At the end of a month they were about even. In six weeks the days were ahead. Intervals of 13 and eight days after night clearings put the nights back almost to the distance flag, and after two months and a half, with records of 20 instances of precipitation, 12 of which cleared at night and eight in the daytime, I found the following result. The average time that elapsed after a night clearing was four days and a fraction; the average time after a day clearing was four days and a larger fraction. This does not necessarily prove that it will rain or snow again sooner after a clearing off in the daytime. It is, however, an indication that the time of clearing has nothing to do with the matter.

W. H. HUSE.

Orchard Grass for Hay.

I have been off the farm 15 years, no plowing done on it all that time. The meadows now grow a short wiry grass which the farmers call wild or Buffalo grass. I intend plowing up 20 acres this Spring, planting oats and seeding to Orchard grass, as it has a good root and stands the frost well. Does this Orchard grass make good salable hay?

Covington, Ky. F. R. M.

We would not advise you to sow Orchard grass in this field, if you expect to sell hay. The Orchard grass grows in bunchy shape and makes a light hay, which while of good quality, does not sell well in the ordinary market. The best commercial hay is a mixture of Timothy and Redtop, or with Red clover added, and our advice would be to follow the usual plan and sow Redtop and Timothy.

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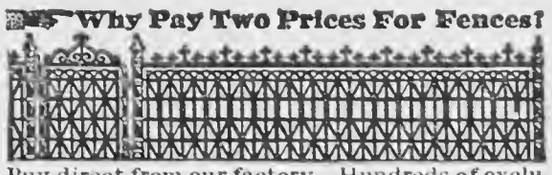

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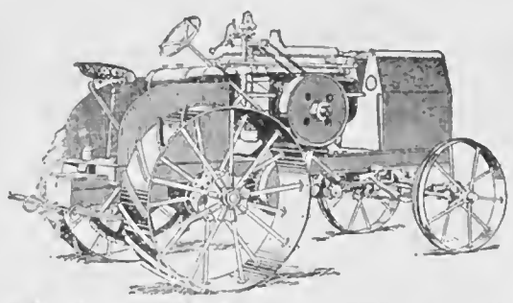

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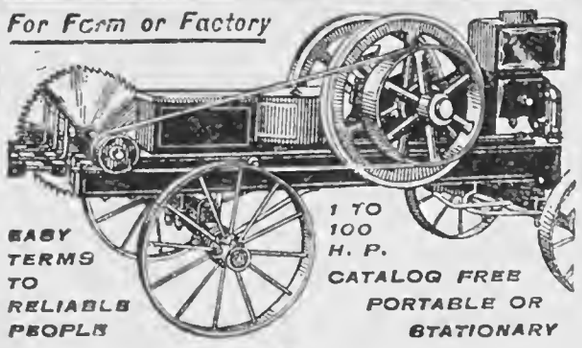

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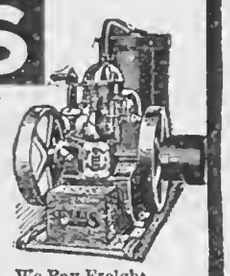

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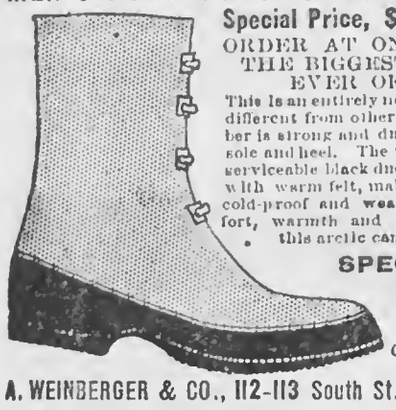

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The Home Acre.

Beautifying the Rural Home Grounds.

The beautifying of the rural home grounds, particularly those of the farm, has been sadly neglected by the great majority of the owners of country homes. Why so many of our rural residents have been so tardy in recognizing the natural charm and beauty that can be imparted to their home surroundings, by the appropriate use of a few ornamental trees, shrubs, vines and flowering plants, might possibly be explained in the lack of knowledge as to how to do the work properly or that, in the providing of the necessities and comforts of life, they have been too busy to think of the pleasures that would accrue to themselves and families, by the expenditure of a little time and money for that purpose.

The time has come when this important feature in country life should be no longer neglected by anyone residing in his own home. Wealthy owners of large and small country estates, by the proper development of their property, and beautifying the home grounds, have set an example that should at least in a measure be emulated by all owners of rural homes, no matter how small and unpretentious the grounds may be. There are but few owners of country places who cannot do in a limited way what their more fortunate neighbors have done on a large scale.

The enhanced value of the property, the pleasures to be attained, the refining influences surrounding the home life and the restfulness and beauty expressed in the trees, shrubs, etc., that adorn the home grounds, will many times repay the small cost of the improvement. Farm papers would do well to agitate this subject energetically and not only point out the desirable and satisfying features of beautiful home surroundings, but inform their country readers, farmers and others, how to easily and cheaply attain them. I am pleased to see THE R. N.-Y. has taken up this feature of country life, and let us hope its work along that line may result in the beautifying of many country home grounds that have too long been neglected. K.

Controlling Radish Maggot.

I have seen enquiries and preventives in regard to radish maggots, and think the surest and easiest way is to scatter wood ashes (unleached) along each side of the row when radish leaves are as large as peas. It get the little bugs every time. P. P. H.

Chickweed in Garden.

I have a black muck garden, and have had three-fourths-acre of onions, but last year it was terribly infested with chickweed. Is sour soil the cause of it growing so rank, and will a good application of burnt lime help to eradicate it?
Schenectady, N. Y. W. M.

Chickweed (Stellaria media) is the most persistent and troublesome weed in the garden, and when it once gets a good hold, it is very hard indeed to get rid of it. It is not a stickler for any particular kind of soil, although it will thrive best on a rich moist and cool land, whether sweet or sour, and will be less thrifty (but plenty troublesome enough) on a light dry soil. The plant is very hardy, and thrives best in the cool, moist days of Spring and Fall, and if the Winter is open and mild such as it was last Winter and this up to January, in many sections of the country, the plant will bloom and ripen seed right along. If your soil is sour, a good coat of lime will do it good, but will not destroy the chickweed, nothing but absolutely clean cultivation will eradicate it. None must be allowed to go to seed at any time. It is a great mistake to allow the land to grow up to weeds after the onion crop is off, as some growers do. If there is not time available for keeping the land clean, it should be plowed soon as the crop is out of the way, and sown to some kind of grain. If far enough south, sow to cow peas or Soy beans quite thickly. If too far north for them, then sow to wheat or rye, at the rate of three bushels to the acre, the growing grain will soon cover the ground and in a great measure hold the weed in subjection. Plow the green crop under later in the Fall or early Spring. K.

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Sullivan Co., N. Y. J. T.

The way to find out is to plant some of them. They may be frozen or only chilled. Cut a few fair sample potatoes about as you would for planting. Plant these pieces in boxes or pots, or expose them to the sun in a warm sunny room. You can tell from the way they sprout whether they will grow or not. That is the best way to find out.

Fruit Trees in Asparagus.

What would be the objection to planting a few pear and plum trees in an asparagus bed which I shall set in the Spring? Would they do much harm to the asparagus? I am limited for room, and have no other available place for trees. F. E. D.
Topsham, Me.

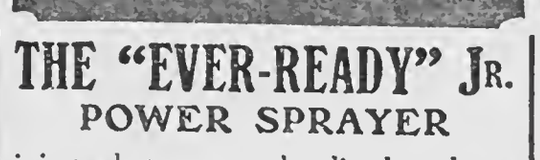
If the fruit trees were the chief consideration, and there was any other spot available for them, I would advise against planting them between asparagus, as it is rarely the trees get the proper cultivation and care when so planted. But as there is no other ground available for the trees, it is better that you plant them there than not at all. It will be quite a number of years before the trees are large enough to interfere with the asparagus, and when that time comes, the trees will (if properly treated) be so valuable you will not regret the sacrifice of any asparagus plants the trees may make necessary. Keep the asparagus far enough away from the trees, to admit of hoeing around them, so they may have an equal change with the asparagus. K.

Culture of Mushrooms.

I am growing mushrooms in boxes, in a house cellar with hot air furnace heat. The manure (without loam) was procured directly from a local florist who has successfully cultivated mushrooms in a hothouse. Of the several "successions" I have started, the following data cover the most typical of the lot and the most active boxes. These boxes measure approximately 2x2½ feet and are 10 inches high. Box 1 manure received at 120 degrees, spawned at 90 degrees; box 2 received at 101 degrees, spawned at 74 degrees. Both boxes were loamed or cased about four days after spawning, and have been watered at intervals to prevent drying out. Six weeks after spawning, white threads were running freely in one box and tiny brown heads are now coming up (interspersed with white and black toadstools), but they amount to nothing, for as they develop they show pointed tops and finally dwindle away at the base. Yet they emerge right from the spawn threads. Are the beds too moist, or not sufficiently nourished, or checked by some cause that you can bring to my attention? The average range of temperature for the cellar is 58 to 65 degrees and the last temperature taken of the beds was 55 degrees. The books warn one against too much water, while our florist urges plenty. Perhaps much water and low cellar temperature form a poor combination, though this florist in his greenhouse had a night temperature as low as 40 degrees, running up to 110 degrees in the day time. He thinks growing mushrooms in boxes is not likely to succeed and yet I have known them to come up all right in a bureau drawer!
Mount Vernon, N. Y. A. M. H.

The temperature of your cellar is all right, and mushrooms should do well there if other conditions are right, which they have not been. The French method of growing mushrooms is not altogether reliable, and should not be attempted by the inexperienced. You watered too much and covered the bed too soon with loam. The manure and loam mixture is more certain of producing, and if temperature and treatment is right there will be no question about the result being satisfactory. The manure should be procured fresh each day (it must be entirely free from litter) from a nearby stable, in quantity of about a good wheel-barrow load or more each day. To each barrow load add an equal weight of good loam preferably from old pasture field. Mix the droppings and soil each day as they are procured from the stable, turn the heap every day, until enough has been prepared to meet your requirements. The heap must be kept under cover and must not get wet. The bed should be at least three feet wide by four to six feet long, about 10 inches in depth. When all is ready, form the heap of soil and manure, cover the bottom of the box with a thin layer, and firm it well; a brick is well suited for this purpose. Then a second layer and firm as before, continuing in this wise until the box is filled to a depth of *exactly eight inches*, no more nor any less. Now plunge a thermometer into the bed to a depth of four inches; in two or three days the temperature will rise to about 100 degrees. When the temperature subsides to 90 degrees, take a sharp stick, a broom handle will do, and punch holes four inches deep, and about 12 inches apart all over the bed. Put a piece of spawn the size of an ordinary hen's egg into each of these holes, and fill the holes with the compost, so the bed will be even and firm as it was before spawning. Do nothing more with it for at least 10 days. The spawn will have run pretty well through the whole bed by that time. The bed may now be covered with about two inches of loam, which should be moderately firmed with the back of a spade. Then cover the bed to a depth of three or four inches with straw or hay. There is nothing more to be done but wait for the crop, and if the temperature and moisture is kept right, the mushrooms should begin to appear in six to seven weeks. Do not water at any time unless the top of the bed appears dry, when it should be gently sprinkled, the water being heated to a temperature of about 100 degrees.

To summarize briefly: Do not let the material heat in the making nor get wet. Fill the bed to exactly eight inches in depth. Do not spawn the bed until the temperature drops to 90 degrees. Do not put the two-inch covering of loam on the bed under 10 days after spawning. Be sure to cover them to four inches with straw or hay and lastly, do not water, unless the surface of the bed is dry, then sprinkle lightly with water heated to 100 degrees. Follow these simple rules and you will succeed. K.



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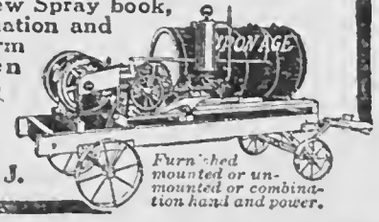

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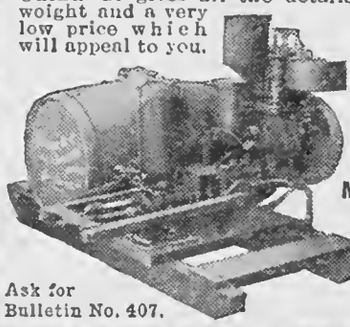

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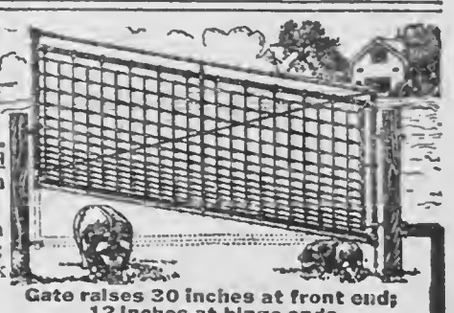

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Hope Farm Notes

Four years ago I bought from a certain nursery some Elberta peach and Baldwin apple trees. The peach trees proved true to name, while the apples are of a sweet variety. There were full-grown trees of sweet apples on the piece of land, for which I bought these trees, but as they were of no value to me except for pig or poultry food, I chopped them down to replant them with Baldwins; now after spending money, labor and time, I find that I have again sweet apples only of a different variety. The nursery to whom I send some of these apples pronounced them a Grimes Golden, while our agricultural college, to whom I also sent a package, name them as a Tolman Sweet. I have tried to dispose of the apples, but as I expected, could do nothing with them. These trees are on the best piece of land on my farm, as the ground is constantly heavily covered with poultry. It has been my intention to dig out these trees and try again for Baldwins, but a friend has advised me to graft them to Baldwins instead. What would you advise me on the matter? F. M. LINSLER.

Massachusetts.

From our experience here I would have these trees grafted to Baldwin. Unless you know how to do this work well you would far better employ some expert grafter. He will know how to shape these trees properly and he can make sure of his scions. This stock may not prove the best for Baldwin, but we should try it. You have a taste of the bitter pill which nurserymen hand out in a "misfit" tree. When you want standard apples like Baldwin the sweeter the fruit they do send you the worse the dose you must swallow. Personally we have had but few misfits. Many small orders that we have noticed turned out to be the most outrageous mixtures that the human mind could well consider.

Do you think it advisable for a man 65 years old to set out fruit trees next Spring, with the idea of getting any benefit for himself, say apples, peaches, plums, etc., where he obliged to hire them set out? I work in the shop now, but bought a small piece of land with the intention of living on it in two or three years. L. F. H.

Massachusetts.

This is the problem which comes up to many a man in late middle life. Personally I intend to keep on planting trees year after year—if I live to be 100. A man of 65 in reasonably good health may well expect to live to obtain fruit from peach and plum, and from such apples as Wealthy, McIntosh, Transparent or Black Ben. With such as Baldwin or Spy he might not live to see large crops, but there is another and better value for him than the sale of the fruit. If such a man can come to enjoy seeing the trees grow and to love them as the true fruit grower does he will find this the most beautiful part of life and his later years will pass gently on into a serene and hopeful old age. I have seen many old men who were never taught during their youth to love trees, and who had no time to learn during their busy life. When age took away the old forms of interest and enjoyment they had nothing to interest them. The care of a young orchard might have made their declining years the golden age of life. I would by all means plant the trees and spend as much time as possible in their care.

I have a small farm and am buying tools. I would like to make one harrow do all purposes. Considering a peg-tooth with tilting teeth, a spring tooth, an ordinary disk, a "cutaway" disk, which one of the above would you recommend, or should I need two kinds? F. E. W.

I think every farm should if possible carry two distinct types of harrow—one to rip up or dig, the other to level and smooth. A digging or turning harrow following the plow will loosen the soil and help fit it. Then the smoothing harrow should follow and prepare the seed bed. The peg-tooth harrow is good for fitting the surface. I have seen land well fitted by plowing and then smoothing down with peg-tooth, but even in such cases the soil would be better for a deep stirring before the smoothing harrow was used. For stony ground—especially where the stones are round—the spring-tooth is best. This digs and jerks through the soil, ripping and tearing the furrows apart and dodging around the stones. For smoothing land we like the cutaway better. It digs deeper and throws or tosses up the soil better than the spring-tooth. If limited to one harrow I would take the peg-tooth.

I have just bought a Jersey cow and calf about five weeks old. I shall have to buy all my feed for both cow and calf. Will you advise what you would buy, how much to feed, when feed and how feed to both? T. B. S.

Millington, N. J.

We are feeding two cows and a yearling heifer this Winter. For roughage they have dry cornstalks—a flint variety with slender stalks. They each have a peck or more of chopped mangels per day. For grain, we mix equal parts of wheat bran, middlings and cornmeal with a good handful of linseed or cottonseed meal. The general rule is to feed one pound of grain for each two pounds of milk. This is very cheap wintering, as the stalks are practically a waste product. If I were buying I should try to obtain some dry stalks of good quality and also hay containing as much clover or Alfalfa as possible. For best economy the stalks may be cut up and steamed by putting them in a barrel and pouring in hot water. For the grain of one cow I think our mixture would answer. For the calf I should buy one of the prepared milk substitutes and feed it according to directions with skim-milk, and keep a little box of bran and oats before the calf. Mind you, this is for one calf only—not for a large herd.

My land needs lime, potash and acid phosphate. Will it be all right if I mix all three together, spread on plowed ground and harrow it in? E. R. H.

Maine.

No, do not mix the lime with potash and phosphate. Far better spread the lime after plowing and harrow in, and then use the potash and phosphate separately. The action of the lime is much like a medicine for the soil, while the potash and phosphate represent food. There is no good reason for mixing them.

Will you ask the Hope Farm man what he knows about the following clipping, especially the mouse story?

"A mouse, as timid as the rest of his kind, went frisking around a cellar and came to a pool made by a leak from a whiskey barrel. He drank a little from the pool and went away. Then he came back and drank a little more. He came back and forth a half dozen times. The last time he reared up on his haunches, and said: "Now show me that cat."—Exchange." G. A. M.

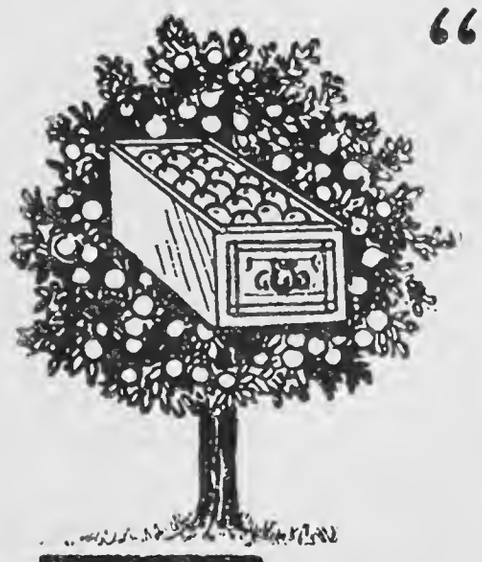
Michigan.

From actual experience I know nothing about the condition in which this mouse found himself. A whiskey exaltation may be a glorious thing while it lasts, but it is mighty humiliating when it passes and the victim realizes what a fool he has made of himself. I worked in a printing office once with a little sniff of a man who was jealous of a big fellow. One day this little man came to me in about the condition of this mouse. "Oh!" he said, "If I only had that big brute here I'd take him out and wipe the sidewalk with him!" There was a lot more to it, but the next day he came back and said, "Be careful not to let Frank know what I said—he might think I was talking instead of the whiskey!" I find the world well filled with blowhards who are like this mouse. It is not always whiskey, but often the gas of their own conceit which gets into their heads. While the spell is on they are going to do wonderful things. Sometimes it is a back-to-the-lander going to show "these old farmers" how to do it. Sometimes it is a fresh young hired man, or clerk or college graduate who has lapped at the spring of conceit and wants to see "that cat." The cat is named experience, and after she has put a few claws into the mouse—it is either a very much wiser and better mouse, or "there ain't no mouse." H. W. C.

Labels on Nursery Trees.

In my comments on desirable nursery tree legislation on page 47, inadvertantly I said we want these identifying labels on every nursery tree sold in the State of New York. I meant that every tree should bear means of such identification, for which the labeling of each bundle would be quite sufficient. I hasten to correct this because the original bill did provide for a label on every tree—an unnecessary burden eliminated at the suggestion of the legislative committee of N. Y. S. F. A. DATUS C. SMITH.

The label on each bundle is enough. That should be accepted as identifying the variety. We should not ask or expect impossible conditions. Yet the buyer and planter has certain rights, and there is no reason why he should suffer all the loss in case of a nurseryman's blunder.



"I'll Grow Apples Instead of Hay"

---You'll Say It If You Try to Buy Fruit Now in City Markets

For clean apples of good size you've got to pay 75 cents a dozen in city retail grocery stores. This has been the price since about the first of January. It is six and a half cents each, or about $4.50 a bushel box. Stayman, Baldwin and other standard varieties are all the same price.

If you are a farmer why not get some of this money? Ten acres of apples are good for a thousand dollars a year clear profit if you just give the trees modern care. A good ten-acre crop that had been sprayed right could be sold to-day at wholesale for three or four thousand dollars.

To plant ten acres of apples costs something like this: Land (highest), $1,000; trees and planting, $375; cultivation and care for five years, $600; total, less than $2,000. This included big wages for you. If you do the work the cash outlay need not be more than $300.

THE APPLE CROP IS THE PROFIT CROP. A woman who owns a half interest in a New York farm told the writer that the apple crop on their place gave them nearly all their profit. When the apple crop is good they have a dividend. When it is short that year's net income is slim. They do not use the best methods either. There are hundreds of farms where this is true. The apple crop is the money crop, the profit crop. No other crop that New England or New York or Pennsylvania farmers grow equals it in this respect.

THE APPLE GROWERS ARE THE PROSPEROUS FARMERS. Go where you will, this fact strikes the careful observer. A twenty-acre apple orchard that is handled properly nearly always brings more income han a 200-acre farm given to raising hay, grain and stock. Couldn't you get a bigger income with easier work by planting an apple orchard? What's the use of killing yourself farming a hundred acres for a bare living when you can become prosperous by caring for twenty acres of apples? Better let your surplus land lie idle and grow apples on the few acres.

PROPERLY GROWN APPLE TREES BEAR IN FIVE YEARS. It used to be that apple trees didn't begin to bear till they were ten or twelve years old. This is one more of the old and needless obstacles to orcharding that modern methods have overcome. Get good trees, plant and care for them as we tell you, and they will give you apples in five years or less time. The right kind of trees and care don't cost more than poor trees and inefficient care.

WHAT VARIETIES SHOULD YOU PLANT? The good old Baldwin never has been surpassed for most New York conditions. It sells splendidly when grown in the northern climate, because of its distinctive flavor and high color. Plant Baldwin—it never will lose its popularity. Other apples that ***Now Are Yielding High Profits*** in New York and New England are Stayman, Rome Beauty, Ben Davis, Gano, Wealthy, Yellow Transparent, McIntosh and Stark. An orchard made up of three or four of these varieties is sure to yield good profits if it receives good care. Rome Beauty, Stark and Gano are in great demand for baking in restaurants and homes. They hold their shape when baked. This use of apples has increased a thousand per cent. in three years, and it will continue to increase.

THE OVERPRODUCTION BUGABOO. "Apple planting is overdone." "There's too many new orchards planted." Expressions like these are heard now and then from pessimists. Right in the face of their predictions the prices of apples keep climbing higher and higher, and the demand gets greater. There never will be too many apples of good varieties when they are grown clean and flawless. Of course many young orchards planted during the last few years will fail to return profits expected—but that's just because they lacked proper care. *You* don't need to be one of the careless planters.

Few Other Apple Trees Equal Those We Grow Here At Berlin

Harrison's Berlin-grown trees are superior to those grown where climate, soil and methods are not so good. This can be proved by comparing our trees with other trees, and by comparing the growth and crops made by our trees with the growth and crops made by other trees. These Harrison trees are adapted perfectly for Northern sections.

HARRISON TREES ARE BIGGER THAN MOST OTHERS. Compare an average bunch of our trees with an average bunch of trees of same age from an inland nursery. Ten to one our trees will be a third taller and a fifth to a third thicker in trunks.

HARRISON TREES ARE SMOOTHER AND STRAIGHTER. Compare the trunks of our trees with the trunks of inland-grown trees, and with trees grown under other systems of culture and pruning. Our trees will be smoother and free from knots and bumps. They will be straight and true in trunks. The bark will be healthy and clean. Such trees make better-looking orchards and are not likely to split down or lean as crooked, knotty trees.

HARRISON TREES HAVE BIGGER ROOT SYSTEMS. Carefully dig out one of our trees and a tree from an inland nursery. Our tree will have a much larger bunch of roots, and roots that are finer and more fibrous. This is because of our loose, warm soil, and our special system of cultivation. Our trees will take hold quicker and stronger when transplanted, and will grow faster than most other trees.

HARRISON TREES ARE ABSOLUTELY HARDY IN THE NORTH. Tens of thousands of them are planted in New Brunswick, Ontario, Nova Scotia, New England and New York. They are entirely successful and hardy in those sections.

The reason is that Harrisons' Nurseries are located close to the Atlantic Ocean. Our trees are subjected to all the fury and cold of the Atlantic gales, and are tempered by the storms.

HARRISON TREES ARE BUDDED FROM BEARING ORCHARDS. A few years ago we began to bud our fruit trees from bearing orchards selected for superior growth and yielding. This gives our young trees inbred tendencies to bear earlier, more regularly and heavier than average trees. This parentage, plus our climate, soil and methods, gives the ability to bear bigger crops.

SPECIAL LOW-HEADED TWO-YEAR TREES. We have pruned and trained several thousand Baldwin and other apple trees to special low heads just as they should be in orchards. These trees now are two years old. They are big and straight and of the highest Harrison quality. They will make fine orchards quickly. If interested in them, write and ask about them.

WE GROW AT BERLIN ALL THE TREES WE SELL. Every fruit tree that leaves Berlin has been propagated and grown here. We buy no fruit trees at wholesale and sell them again at retail. We back our trees till they bear, because we know all about them from the seed and the bud.

PEACH AND PEAR TREES MUST NOT BE OVERLOOKED. You will find them here by the million, and just as fine ones as the apple trees. Kieffer Pear trees this year are especially fine, and Kieffer is as great a money maker as ever in New Jersey and New York. Ray, Crawford's Late, Elberta and other peach trees, the like of which you can't find elsewhere, await your order here.

THE HARRISON NURSERIES ARE THE BEST EQUIPPED IN THE COUNTRY. We employ more skilled men than any other nursery in America. Some of the greatest nursery and fruit experts in the country are on our payroll. Harrisons' Nurseries have more acres in young fruit trees and plants than any other nursery in the country. Here trees are grown with maximum efficiency and at lowest cost, quality considered.

Get the Harrison Books for 1914

This year's catalog is one of the best fruit books published. It gives the facts about varieties, tells how to plant, and quotes our famous low prices. It is sent on request. Write TO-DAY for your copy.

Our shade tree and evergreen book is sent free. If you are interested in home planting, write for a copy. Our complete guide book for orchardists, "How to Grow and Market Fruit," is sent for 50 cents, and that amount rebated when you send us a $5 order.

HARRISONS' NURSERIES, Box 494, Berlin, Md.

Why not come to Berlin this Spring and pick your trees from the nursery fields? Come and see our orchards. We will pay your hotel bill in Berlin.

USE THIS COUPON—IT'S AS GOOD AS A LETTER

HARRISONS' NURSERIES, BERLIN, MD.

Please send me your new Catalogue of Fruit and Ornamental Trees. I expect to plant

☐ Apples ☐ Cherries ☐ Shade Trees ☐ Roses

☐ Peaches ☐ Plums ☐ Evergreens ☐ Hedge Plants

☐ Pears ☐ Small Fruits ☐ Shrubs ☐ Vines

I shall need about.....of the plants marked.

My Name, ...

My Address, ...

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

IT seems that there are various things sold as "agricultural lime." It is generally understood to be ground limestone, but in some cases the dealers seem to scrape up the waste around the limekilns. This contains some ground limestone or lime dust, and also some burnt lime. Some of our readers are being told that this "agricultural lime" can be safely used in the stable or in the manure pile to hold the liquids and ammonia. As we have pointed out, the raw lime or marble dust will make a fair absorbent without any great chemical action to set free the ammonia. The burnt lime, on the other hand, acts to set free ammonia, so that it will be lost. Land plaster is a much safer material to use in the stables than "agricultural lime." We think it a safe rule not to use this lime for absorbing the liquids. Certainly not without making sure that it contains nothing besides ground limestone.

*

THE Supreme Court has decided in favor of the California fruit shippers in the famous refrigeration suits. These fruit shippers had a method of precooling or icing car loads of fruit. When thus cooled, the railroads moved them. On each car shipped across the continent, there was a saving of about $54. The railroads took this privilege away from the shippers and charged the extra money for the service which the fruit growers could do cheaper themselves. On complaint by the shippers, the Interstate Commerce Commission ordered the railroads to do this service at what it cost the fruit growers themselves; that is, the railroads were ordered to cut down their charges $54 a car or give the shipper the old privilege of doing his own icing. The railroads fought the order and carried it up to the Supreme Court, which has now sustained the Commission. It is stated that about 20,000 carloads of fruit a year will be covered by this order, and this means a saving of one million dollars to the California fruit growers.

*

LAST week "Mapes the hen man" came back with the figures showing his "contest" between an average of 11 cows and 1,800 hens. He makes a great showing in favor of the hens, but there are some other things to be considered. What about the capital invested? The 11 cows may be worth $1,000. We doubt if Mapes would sell his hens for $3,000. The hen houses are worth more than the barn in which these cows are kept. Probably four times as much money is invested in the hens as in the cows. Of course a cow investment includes far more land than the hens would require. In further explanation of his figures Mapes says:

> Egg production is a business for men of some capital, as well as milk production. A farmer's own two hands should be the unit from which to deduct his calculations.

But does Mapes claim that 11 cows cover the full "two hands" unit in the dairy business? Before he can do that he should have all his dairy arrangements as efficient as those he has provided for the hens. A milking machine, a silo and carriers run by gas or electric power—all these are in use on some dairies. We expect to hear from men who handle at least 20 cows and sell certified milk. But Mapes certainly gives us a chance to figure.

Corn from Argentina is apparently to be a regular feature in the markets of our Eastern States. Since last Fall something more than 9,000,000 bushels have arrived at New York. The distance shipped is about 4,700 miles, yet the importers were able to handle this Argentine corn profitably and meet or undersell our home-grown product at New York. As the season in Argentina is opposite ours, the new crop is just developing there, and, with the exception of some drought damage, indications are that the yield will be good. A decided improvement in the market quality of our corn is necessary for successful competition with the foreign crop. There must be less Nos. 4 and 5 and more Nos. 1 and 2. The dry kiln will prevent musty corn from rotting, but cannot undo previous damage. Many growers a· raising varieties attractive as yielders, but requiring too long season to be reasonably safe in their latitude. Sound corn is a scarce article in our markets.

*

IN one way this "back-to-the-land" proposition has proved a fine thing for farming. Many well-to-do and prominent men have bought farms and started to conduct them. When they began they were very strong for the "two blades of grass" theory. They expected to produce large crops and then make large sales. Some of them have been able to grow fair crops, but at a fearful cost of fertilizers and labor, so that the expense per pound or bushel is very heavy. When they came to sell these crops they learned their real lesson in agriculture. Living in the city these men know what consumers paid for food and a little figuring showed them that they were receiving a 35-cent dollar for what they paid ont 50 cents to produce! They would not believe this until they had to pay this 15 cents or more difference. "Once I was blind—now I see!" This practical demonstration of the 35-cent dollar is very largely responsible for the change of sentiment in many of our public men. Lawyers, merchants and manufacturers did not grasp the significance of this clipped farmers' dollar until they turned farmers and felt the shears on their own coin. Then they woke up and began to see how the 35-cent dollar not only affects their own personal farming business, but also their other business. For every five cents which is added to the farmer's dollar makes five cents more to buy some article or some service which these men have to offer. Many a university graduate is now going to school to the 35-cent dollar and adding to his education.

*

HERE are extracts from two letters which pleased us greatly. This season brings many pleasant words of encouragement from our readers—we never had so many before. These two letters somehow come to the top as the cream of good feeling and service:

> I have been a subscriber since 1869, 44 years, and although I have been blind for several years from cataract and have not been able to read or write a word for over three years, THE R. N.-Y. habit has become so fixed that I must continue it. I expect my sight will soon be restored by an operation and then I shall have a literary feast in looking over the numbers for the last three years. L. W. GOODELL.
> Massachusetts.

Our hope and prayer is that this patient and cheerful blind man may receive his sight. Such a thing makes us regret that we could not have put more of brightness and truth into the paper that it might be indeed a "literary feast" when the light once more breaks into the brain of our old friend.

Here is the other letter, which may well be read with the first one:

> I am very much interested in farming and would like very much to take a course in a first-class college, but as I have neither the time nor money I have discovered a very good substitute and it only costs $1 a car for tuition, pretty cheap isn't it? In fact it is too good to keep to myself so I am sending it to you so that it may be sown broadcast. My course of study is to read THE R. N.-Y. from beginning to end and whenever I come to a problem I always read the problem and then lay the paper aside and study the same and try to give a satisfactory answer, and then I compare my answer with the answer in THE R. N.-Y. to see how near right I am, and then I try to reason how THE R. N.-Y. secured its answer. I have found that by following the above course I am gaining a good practical knowledge of farming which I expect to put to use one of these days. A. J. Z.
> Pennsylvania.

This does us good, for it makes us realize how strong and serious minds are analyzing and weighing what our writers have to say. We cannot think of any mental exercise better than this idea of thinking out the problems given in THE R. N.-Y. proving or disproving the printed solutions. For during the course of a year such problems will cover a range of human thought as applied to country life and its future. Out of such study and thought will come the foundation of a deep and broad culture—the true essential of education.

SOME of our readers have heard that the U. S. Supreme Court has decided that it is unconstitutional for a State or city to collect a license fee for the sale of goods! We have had this carefully searched and find no such decision. Some of the reports of legal decisions which go floating through the papers turn out to be fancy tales. We have stated many times that farmers are free to sell the products of their farms on any public highway provided they do not interfere with travel. When they handle products which they do not grow they are classed as peddlers, and are subject to a license.

*

THE latest report is that the Agricultural Department is working with the postoffice to use parcel post to cut the cost of living. A number of containers for eggs, butter, and other farm products have been devised, so as to make it possible to ship these goods in satisfactory packages. Thus far, shipments of eggs have not been satisfactory. The breakage has been too heavy. There has also been much discontent regarding shipments of butter. It is now claimed that containers cheap and durable have been devised for handling these products. The Agricultural Department, after settling this matter of packages, will begin to find markets for standard farm products. For this purpose, the rural carriers and the machinery of the whole Post Office Department, will be employed. Both departments, as well as all who have studied the matter, know that the greatest trouble comes from a lack of standardizing farm products. Before anything like an effective service can be built up, there must be a uniform standard of goods sent from the farm. People in the cities and towns must know just what they are buying, and what they are to receive by parcel post. As soon as farm products can be bought and sold by a definite standard, the parcel post trade is sure to develop wonderfully, and will in time, without question, have a distinct effect upon cheapening the price of food, but no great progress can be made until the purchaser can be absolutely assured about the quality of goods he is to receive when he buys. One of the most important things therefore, connected with this enlarging of the 35-cent dollar, is to establish a definite standard, by which food may be bought and sold, and then to organize so that these standards may be definitely maintained.

*

A NEW era has been inaugurated at Albany. Last week, after the Agricultural Convention, Governor Glynn opened wide the doors of the Executive Chamber and invited representative farmers to enter and discuss with him the needs of agriculture. They did so fully and without reserve. The discussions were neither personal nor academic. They embraced comprehensive policies and fundamental principles. It was an effort to develop a system of organized self-help; a system of coöperation, by which the producers of wealth may control and retain for themselves the full value of the wealth they create. The significant thing about it was that the men were not speaking so much for themselves as for their neighbors. The men there did not need personal credit for themselves. They carry bank accounts and have ample bank credit. They do not need a land bank. Their farms are free from mortgages. They would profit by a modern market system but they have made the most of the market facilities they now have. They were successful, prosperous farmers, seeking means to better the conditions of farmers less fortunate than themselves. There may have been men there who came doubting, and others who left not realizing the full significance of the sentiment they had created, but few men could be there without catching something of the altruism of the hour, and no man could realize the spirit of the occasion and not go away a better man than he came. They gave of themselves and went away enriched by their own generosity. It was a day of encouragement and hope to humanity. There may be those who will say this conference was inspired by politics, but if this be politics, for pity's sake let us have more of it.

BREVITIES.

TIME to think about the Spring grafting.

THESE are, or ought to be, woodpile days.

PRICE Co., Wis., is said to be practically free from tuberculosis.

A TABLE-CLOTH worth $6,500 was the subject of a recent legal suit in New York.

DRAIN the concrete cellar if there is danger of wet in Spring. Let tile take the moisture away.

WE have never used a manure spreader to put the mulch on strawberries, but it has been done successfully in this way.

NOW Kansas intends to increase her yearly poultry value by $10,000,000. This means better blood and something besides corn.

CO-OPERATIVE STATE MARKETS.

[Report of marketing committee of the New York State Agricultural Society by John J. Dillon, Chairman.]

NEW YORK MARKETS.—Your committee has given much attention to the subject of market conditions in New York City. Conditions there could hardly be more extravagant or wasteful if they were maliciously designed. There is no provision there that could properly be called a market. The city owns some lots of land with antiquated buildings, in which it rents out stalls for the sale of food products, just as any other landlord might do, at a more profitable rental, but there is no regulation for the protecting of either producer or consumer who patronize them. Perishable food products are rushed to that centre by rail, steamer and boat, and now by auto express. It is left to the tender mercies of transportation employees; to truckmen; to commission men, to jobbers; to speculators, and to retailers. There is no provision to care for the damaged, the neglected, or the surplus shipments. As a result complaints from shippers are numerous. Total losses are frequent, and the producers who get a prompt return for 35% of the consumption price, are always fortunate and sometimes content. At the time of the organization of this committee a project was under way to spend twelve million dollars of city money to establish a large market structure near the present site of West Washington Market. This did not meet the needs of the city, and could only perpetuate and magnify the present unsatisfactory conditions. A protest was made against the project by this Committee and the Housewives' League and it has been since held in abeyance. A committee is now at work on a comprehensive plan for a series of markets to be under municipal control and regulation; and it is hoped that measures along these lines may be perfected and adopted.

THE FARMER'S PROBLEM.—The marketing of farm products is essentially the problem of the farmer. He cannot safely entrust it to others. So long as middlemen monopolize it, it will be at the expense of producer and consumer. If the municipalities should undertake it, it would naturally be conducted for the benefit of the consumer. So far in this State the middlemen have practically had a free hand. There has been little or no organized attempt even to supply local markets, and the individual farmer cannot give a satisfactory service to local dealers or local consumers. Hence we see fresh farm produce shipped from interior towns to large cities, there repacked and shipped back again in definite quantities to the country towns. The produce has deteriorated in value and the expense of two transportation charges and one or more dealers' profit must be paid by the local dealer, and the consumer pays an extra profit for the privilege of getting the exact quantity he demands.

POOR SALESMANSHIP.—But the products of the neighboring farms are not always returned from the metropolitan markets to local towns. In many lines this trade has been secured by the better systems of salesmanship adopted by other States. Go through the small towns of New York during the producing season and you will seldom find on the hotel tables or in the markets of the towns the fresh products of the neighboring farms, but you will almost invariably find California fruits and bananas. We grow in New York State some of the finest quality apples in the world, but we leave the packing and the sale of them to such an extent to speculators and jobbers that, as a distinct food, New York apples are unknown to the consuming public. This condition is so general that it is beyond the control or correction of the average individual grower. Last year a Columbia County, N. Y., grower went to the city with a shipment of finely sorted and graded Baldwin apples. He was unable to sell them at any better price to the jobbers than if he mixed the ordinary grades in his barrels. He was told that there was no recognition of his superior apples in the market, and that they would sell for no more than the ordinary pack. Go into the hotels and restaurants in New York City and into the dining cars of most of the railroads of the country and ask for baked apples and you will get a western product. Demand an explanation and you will be told that the steward was unable to get a uniform grade of New York apples. The organizations of the West have simply gone about the sale of their products in a business way, and by superior salesmanship have secured a preference for an inferior article in your own markets. Our flocks have vanished from our Eastern hillsides, and our fields and feed-stalls have given up their meat-producing animals to the pressure of the monopoly of our markets, and the coercion of our butchers by the meat packers of the West. With subtle irony these packers now complain that the Eastern farmer has abandoned the production of meat producing animals. The conditions are right now for the revival of this industry, but if we give ourselves exclusively to the production of it, the packers will again find a way to appropriate its profits to themselves.

WE MUST MAKE TRADITIONS.—We must begin at the beginning. We must establish marketable packages and brands that will specify in quality and quantity of weight or measure, the exact contents of the package, and that will be accepted without question at its face value in the markets of the world. Generally speaking local markets are the best markets. We are fortunate in having many of them in New York State. We should develop them and control them by the simple process of giving better service and better and cheaper food than can be secured elsewhere. The individual farmer cannot do this because he cannot furnish a steady supply. It must be done by assembling the food products of the neighboring farms in a common market or warehouse and supplying the local trade from this centre. To effect this the local growers should be organized in coöperative societies with packing and shipping facilities, and in some sections with cold storage and manufacturing plants to take care of surplus products. These local units or societies could be coördinated in one central agency with representatives in the large markets of the country to direct the shipment of food products not absorbed by local trade where they would find the most ready demand and the best prices.

FARMERS' ORGANIZATIONS.—In proposing this organized work we are invariably met with the assertion that it cannot be done because farmers will not, they assert, stand together. I meet this criticism with the answer that farmers are in this respect no different from any other class of business men. Gentlemen's agreements have never yet produced permanent results. I have seen it tried by farmers, by brickmakers, by clothiers, by grocers, by barbers and by publishers, but the gentlemen's agreements were never adhered to for long by all of the parties to it until the interests were bound together in a legal contract that none of them could violate except at his peril. The farmer cannot play hide and seek with a coöperative company and expect satisfactory results from it. He must enter into contractual relations with his own company just as he would with any other company, and he must bind himself to live up to that contract in all its details just as he would with any other contract. If a creamery company organizes to handle the milk of 400 cows and half of the members are led to withdraw because some milk dealer is interested in the destruction of the company and offers individual members an eighth of a cent premium for their milk, the creamery cannot be maintained at half its capacity, and unless the producer is willing to become a member and bind himself for a definite time in a definite contract, he does not become a member of the association and is not entitled to its privileges or benefits.

BUSINESS PRINCIPLES ESSENTIAL.—To be successful, coöperative organizations must have legal organization and be operated on strictly business lines. They must be independent and self-supporting. There is also danger in loose or careless organization. There is no magic in coöperation work. The associations will not produce miracles. They are not Aladdin lamps that will produce fabulous wealth by the friction of a chamois cloth. They offer opportunity for organized self-help. Through them producers may save waste and preserve for themselves the profits that now go to middlemen. Cooperation looks for no subsidy from the State; and would accept none. It does not expect something for nothing. Statutes, however, will not create coöperative organizations. The farmer does not have the time nor the experience, nor in all cases the information and the facilities for organization work. It is, however, important to the whole consuming population of the State that facilities be provided for the saving of products now going to waste, and for the economic distribution of all farm food products. Hence it is the proper function for the State to help organize food distributing associations as part of the agricultural educational work of the State. It will require men trained in the principles of coöperation and business to discuss the plans and purposes and benefits of the organization with producers throughout the State, and to organize these coöperative associations, and help direct and develop the business.

A STATE COMMISSION.—The opinions of producers and consumers are fast crystallizing into the conviction that we should have a State agency clothed with the authority and charged with the duty of organizing producers in local units; and of establishing and maintaining markets and slaughter houses; assembling food products, and prescribing packages, grades and measures, and of inspecting foods and regulating their sale and distribution; of preserving surplus, developing local markets and directing shipments to centres of greatest demand. I grant that a perfunctory commission would be worse than useless, but the possibilities of the work are vast and enduring enough to fire the ambition and to inspire the energy of genius; and the man or the administration that undertakes it and measures up to its opportunities, will merit the everlasting gratitude of future generations. This is a departure that is coming sometime. That thousands of people should go hungry in the city while food is rotting on the nearby farms, is a disgrace to our boasted civilization, and an insult to a bountiful Providence. It is impossible that we should be permitted to abuse the generosities of God indefinitely. The calamity howlers already capitalize our negligence to promote their own vague and sinister theories. They find willing listeners in homeless men, ill-clad women and hungry children. No one defends our present system of distribution, and nothing stands between us and ultimate chaos or anarchy but a fair distribution of wealth through the coöperative control of the men and women who produce it.

SAVING THE WASTE.—While food products were abnormally low the consumer was little concerned about the extravagance and waste in the distribution of farm food products. At worst the price to the consumer was no hardship. The farmer accepted the inevitable of his 35-cent dollar; the middleman took his 65 cents and all were happy, but when the cost of living began to advance the consumer began to feel the burden, and investigation has revealed the fact that of the estimated $500,000,000 worth of food products consumed in the city of New York alone, the people of that city are paying more than three hundred million dollars annually for distribution. This does not take into account the losses and waste of deterioration and condemned products in the city. Nor does it include in any way the waste through losses and expense of returning products to inland towns. Nor through the waste of products that rot on the farms because the producer is unable to secure enough for them in the markets to pay for packing and transportation.

Our concern is to save this waste. Economists have pointed out to us the possible shortage of food in this country if present ratios of production and increase shall continue for 25 years, and they have warned us that unless changes are effected it will become necessary in the next quarter of a century to import food to feed the people. They calculate on the basis of our present system of distribution. They have not guessed the possibility of the production of American farms under a system that would return the farmer a fair reward for his labor. The farms of this country produce three-fourths of the annual wealth of the country. The idlers and non-producers manage to get possession of the surplus savings. The workers produce; the idlers and non-producers save. This saving we call capital, and the producer must go hat in hand pleading to the non-producer for the use of it. We are trying to devise a system by which this saving or capital will remain in the hands of the men who produce. If we are successful the product of the American farm will be sufficient to feed the people of the world for generations to come. Our initiative to this end is the development of the coöperative measures to finance agriculture and to establish modern systems and skilled salesmanship in the marketing of farm products.

"EXPERIENCE" AND FARM EDUCATION.

In regard to Mr. Coleman's article "City Boy and Agriculture," page 67, at bottom of second paragraph he says: "I am sure I could not have had as thorough a foundation in agriculture if I had devoted some of my time at college to getting experience." At beginning of third paragraph: "As a city-bred boy I recognize my limitations," etc. This is very good proof of lack of "experience" from a farmer's point of view. Does a sailor consider it lost time before the mast? When we do a little thinking, the two professions, following the sea and farming, have problems that are similar. Two men pass an examination as to intelligence equally. One serves before the mast for three years, one serves three years in a school of navigation. There is a chance to command a ship. Which one will get it? The school navigation man may get his orietation—after that he is liable to come to grief. ROBERT JONES.

Woman and the Home

From Day to Day

I WANDERED LONELY AS A CLOUD

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.

Continuous as the stars that shine
And twinkle on the milky way,
They stretched in never-ending line
Along the margin of a bay;
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.

The waves beside them danced, but they
Outdid the sparkling waves in glee:—
A poet could not but be gay,
In such a jocund company;
I gazed—and gazed—but little thought
What wealth the show to me had brought:

For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the bliss of solitude,
And then my heart with pleasure fills
And dances with the daffodils.

—William Wordsworth.

*

FISH and potato salad is prepared as follows: Slice six medium sized boiled potatoes, and mix with one cup of cold boiled fish (cod, salmon, halibut, or canned tuna). Pour over the following dressing: Three tablespoonfuls melted butter, three tablespoonfuls cream, one-half teaspoonful salt, one-fourth teaspoonful pepper, one-fourth teaspoonful mustard. Stir in one cupful of vinegar, and bring to a boil, stirring well. Then add three eggs, beaten well, to the hot dressing, remove from the fire, and beat five minutes. Let it cool, then pour over the salad. Serve in a nest of lettuce leaves, garnished with rings of hard-boiled eggs.

*

HERE is a wonderful walnut cake. Its peculiarity is the absence of flour: Materials required are one pound of English walnuts, six eggs, one cup of sugar, one teaspoon flavoring, 1½ teaspoon baking powder. Grind the nuts in a meat chopper. Beat the whites of the eggs quite stiff, and add sugar. Beat yolks until creamy, add them, and then flavoring. Mix baking powder thoroughly into the walnuts, then carefully fold into the egg mixture. Bake in two layers and put together with a layer of whipped cream.

*

A MIXTURE used by professional cleaners to take milk and coffee stains out of woolen and mixed fabrics consists of one part glycerin, nine parts water and one-half part ammonia. This mixture is applied with a brush and allowed to remain for 12 hours, the moistening being occasionally renewed. After this the stained place is pressed between cloth and then rubbed with a clean rag. Drying, and if possible a little steaming, completes the cleansing process. The first-aid process for removing milk or coffee and milk stains from black garments, used in quick lunch restaurants, is an immediate application of hot black coffee, and this is very efficacious. Milk and coffee stains on delicate silks are quite hard to remove, but a mixture used quite successfully is five parts of glycerin, five parts of water, and one-fourth part of ammonia. Before using this mixture a little must be tried on some part of the garment where it will not be noticed, to see whether the color is changed by it; if so the ammonia must be omitted. If it does not change, or regains color after drying, the mixture is brushed on with a soft brush, allowed to remain for six or eight hours, and is then rubbed with a clean cloth, any remaining dry substance being carefully taken off with a knife. The spots are then brushed over with clean water, pressed between cloths, and dried. If some of the stain still persists, it may be removed by rubbing with dry bread. If the finish of the silk is affected it is usually restored by brushing with a thin solution of gum arabic, drying, and then ironing carefully.

Lard That Keeps.

I noticed recently one woman has trouble to keep her lard. When I began housekeeping, which was many years ago, I had a lot of trouble that way. I kept my lard in the cellar as a matter of course, to keep cool, but it would get green and unfit for use. I read in a paper, "Never keep your lard in the cellar, but in the upper part of the house." I have since done that way, and have no more trouble. Two years ago this Winter I put my lard in gallon and half-gallon jars, covering with waxed paper and placing them in the upstairs chamber, bringing a jar down when needed and kept in the pantry to be handy until each jar was nsed. I used the last in November of last year, and apparently it was as sweet and fresh as at first. Think it would keep over two years if one wished to keep it that long. It seems to need a dry place, and hot weather does not seem to hurt it at all. M. A. C.

The Rural Patterns.

When ordering patterns always give number of pattern and measurement desired.

7773 Blouse with vest, 34 to 50 bust. With or without peplum and chemisette. 8115 Fancy blouse, 34 to 42 bust. With long or three-quarter sleeves. 8106 Three

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8091 Fancy blouse, 34 to 42 bust. With long or three-quarter sleeves. 8105

Fancy blouse, 34 to 44 bust. With three-quarter or long sleeves. 8124 Empire negligee, 34 to 42 bust. With three-piece skirt, elbow or long sleeves. 8092 One-piece skirt, 22 to 30 waist. With high or natural waist line, with or without frill. 8120 Two-piece skirt, 22 to 32 waist. With high or natural waist line. Price of each pattern, 10 cents.

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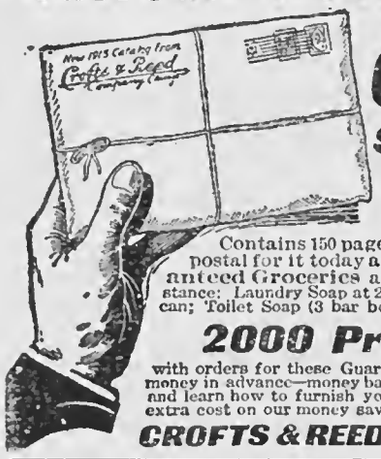

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That Pressing Need.

Aunt Martha and I were tired after a day of shopping, and we rode homeward in the electric car in silence. Without fully realizing what I did I gazed fixedly at a neatly darned three-cornered tear in the coat of a young man who sat in front of us. It was an unusually neat piece of work. The darning had been done with a thread of the goods, which had been raveled from some hidden seam, and the stitches had been set evenly, carefully following the warp and woof of the cloth. Only the roughened edges of the tear remained as witness to the disaster that caused the rent. So carefully had the darning been done that I wondered vaguely why the tear still showed. Suddenly Aunt Martha spoke. "That represents pressing need," she said. I looked at her quickly and saw that she too was looking at the tear. I must have looked my inquiry as to her meaning, for she reddened and said in a whisper, "O, I didn't mean to say that, I was thinking out loud. I will explain later."

That evening after we had rested a bit, I asked for her explanation, for there was nothing about the young man to suggest poverty. "No, the young man is not in need," said Aunt Martha. "It is only his coat. Did you notice how neatly it was mended and yet how visible the rent was?" I nodded in the affirmative. "Well, I was just thinking what a pity it was that the one who darned so beautifully had not learned the value of pressing." Now I understood, but Aunt Martha continued.

"If after having darned that coat she had dampened a piece of dark cheesecloth and laid it over her work and carefully pressed it until it was dry, it would have taken a magnifying glass to reveal that it had been mended."

"But isn't there danger that the iron will leave the goods shiny, or that there will be a mark of the flat iron on the goods?" I asked, for I had seen such evidences of pressing.

"Not the slightest danger if one uses common sense," she replied. "When you are pressing a darn, lay the damp cloth over the work, and with an iron comfortably hot press firmly down over the darn. Don't iron it, and don't leave your iron standing on the cloth a second. Just set it on firmly and lift it at once, then repeat, setting the iron on and lifting it until the cheesecloth is nearly dry; then you can iron over the whole, always keeping the cheesecloth between your iron and the cloth. If it is so you can get at the under side of the goods easily, it is a good idea to turn the goods over the last thing and press lightly on the wrong side. Even a poorly darned tear can be so pressed as to be scarcely noticed. Pressing is an art to be learned before embroidery or sewing, in my opinion. I have seen women wear dresses made of most expensive materials, with stitching and needlework which might well be the envy of queens, and yet the gowns looked commonplace and even botchy because the seamstress had not learned the art of pressing. And my heart has ached for the poor children who have to wear made-over clothes or have their clothes let down, not because the things had to be made over, for often the made-over garment is of nicer material than one would buy new for a child, but because creases and wrinkles had not been properly pressed out, and clothes which might look new and interesting have instead a stringy, made-over appearance which is humiliating to the child. The hem let down and the crease of the old hem left unpressed is a disgrace to the seamstress."

Aunt Martha had struck a hobby, and she always warms to the occasion when she gets to talking on her hobbies.

"Take your own clothes," she said, looking me over critically, "How would they look before you had worn them six months if you did not press them?"

"Not very presentable," I replied, and I guess my face reddened, for I do have to wear my clothes a long time, and in order to keep them from seeming shabby I have to attend strictly to the matter of keeping them brushed clean and the wrinkles smoothed out with an iron. Doubtless my aunt saw the red in my face, for she made haste to say, "Exactly, but as it is, you always look as if you had donned a brand new gown; but I did not mean to be personal, my dear. Only, one sees so many looking shabby and poor when all that they need to give them a smart up-to-date appearance is a good pressing, that sometimes it gets on my nerves, and that tear to-day started all my resentment. I truly believe a most pressing need of the times in many quarters is more pressing," she finished with a laugh. "Now let us forget the rough edges and talk of something pleasant."

The next time I went shopping I looked at the crowds about me with Aunt Martha's words in mind, and I had to admit that the difference between the well-dressed and the shabby was largely a matter of "pressing need" which the flat-iron could supply in many instances.

MARTHA'S NIECE.

Other Ways With Eggs.

"Boiled, fried and scrambled; scrambled, boiled or fried—and then begin all over again!" Is there one rural housewife who has not felt rebellious that appetites persist in the same old way, even when food materials are limited? Try the eggs scalloped.

Scalloped.—Butter a pudding dish freely. Break in a layer of eggs. Season to taste and cover with bread crumbs, over which put tiny dots of butter. Then add more eggs and do the same. Continue until you have enough for your family. Pour over it a cup of milk, and bake 20 minutes in a quick oven. Serve with baked potatoes.

Baked Eggs.—Butter a pie plate. Break the eggs and season to taste. Bake in a hot oven 10 minutes. Crisp some bacon on a separate plate, and serve both with freshly boiled potatoes.

Veiled Eggs.—Chop cold hard-boiled eggs, and turn them into a hot frying pan where you have crisped some bacon, but remove it and most of the fat. Stir constantly, and at the last moment pour on a cup of milk, stirring again and adding salt. Serve on thin slices of crisp toast, with creamed potatoes.

Creamed Eggs.—Make a white sauce with a tablespoonful of butter mixed into two of flour until smooth. Melt another spoonful of butter, or of bacon fat in the frying pan, adding a pint of milk that has been salted. Stir in the flour and butter paste, and when the mixture boils add half a dozen chopped eggs that have been boiled. Season to taste and pour over whole boiled potatoes, in a deep dish.

Egg and Tomato Toast.—Poach the eggs until hard, one for each slice of toast on a hot plate, separately. Stew tomatoes and season them, thickening them a little bit. Pour half a cupful on each egg, under which the toast has been put.

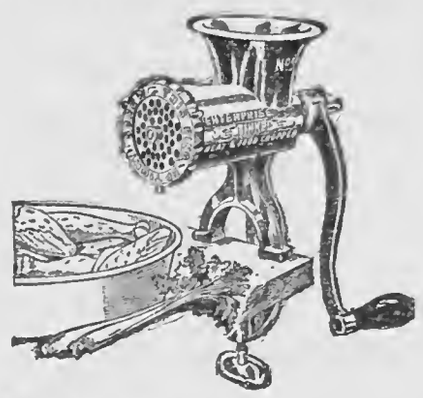
LUCY A. YENDES.

Apple Dumplings.

I see two others are ahead of me on the apple dumpling question. I asked my father how his mother used to make apple dumplings, and he went back nearly 70 years and told me almost word for word the same as Mrs. Lampman has written, even to the cornmeal pudding boiled in a bag with ham or a boiled dinner. He said those puddings used to melt away like dew before the sun. And I can imagine they did, for his mother had thirteen children. But what of the apple dumplings of to-day? I know of no one who makes them but myself. I know of several who like them, but they say their women folks cannot make them. I make them a little different from what my grandmother did. Pare and core apples to half fill a small, smooth-bottomed iron kettle, add a very little water, or enough to keep the apple from scorching. Make dough as for cream of tartar biscuit, and when the apple begins to boil lay the cut-out biscuits around on the apple. Cover closely and let steam. Twenty minutes or half an hour will be long enough. If too much water is added to the apple the dough will settle into it and the dumplings will be heavy. If the apple stops cooking before they are done they will be heavy. Uncover as soon as cooked. Serve with pudding sauce made of brown sugar.

ANNA D. LOVERING.

A GOOD book is the precious lifeblood of a master spirit, embalmed and treasured up on purpose to a life beyond a life—Milton.



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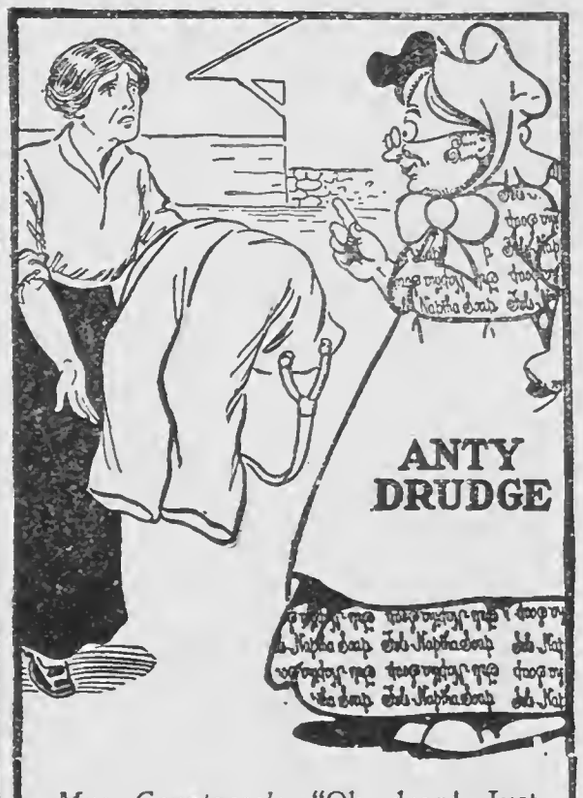

Mrs. Corntassel: "Oh, dear! Just look at this! And smell it! John caught a skunk in the hen house last night—and his shirt and trousers are ruined. He didn't know what it was in the dark. I'll *never* get the smell out."

Anty Drudge: "Well—I don't know. That's one thing I've never meddled with. But if anything will bring out both stain and smell, it's Fels-Naptha Soap. Let's try it, anyway. I see you have a box. That's right. I always tell everybody to keep plenty on hand."

Never be sure that a thing is ruined until you have tried washing it with Fels-Naptha Soap. If Fels-Naptha in cool or luke-warm water doesn't do the work, you might as well throw the article away.

Fels-Naptha dissolves grease, makes dirt disappear and takes out all kinds of stains. Clothes washed with Fels-Naptha do not have to be rubbed hard nor boiled and are cleaner, sweeter and whiter than ever before. It does all kinds of housework easily, thoroughly and in less than half the time it used to take.

Just follow the easy directions on the red and green wrapper.

Better buy it by the carton or box.

Fels & Co., Philadelphia.

FELS-NAPTHA

Live Stock and Dairy

THE ROUGH AND READY AYRSHIRE.

Being a farmer and reader of THE R. N.-Y. I take great interest in your reports giving reasons for certain breeds. Cut below gives a picture of my pure-bred Ayrshires grazing on the hillside, and I give few reasons for my breeding them. I have been farming seven years and I have been raising Ayrshires all the time. I find by having another cow

A BUNCH OF PRIZE AYRSHIRES.

occasionally, that my Ayrshires require less feed and produce more milk than the others and when in pasture they are always sleek, while the others become thin. I haul my milk to a milkman, where I get 18 cents per gallon. Following is my milk record from seven cows for 1913, which I consider very good, for I do not feed when I have my cows in pasture, which is from about June 1 to November 1. I am an exhibitor at the "Great Allentown Fair" and in these seven years have won six of the seven blue ribbons for my herd, which counts much for an ordinary farmer.

RECORD FOR 1913.

	Gallons.	
January,	450	$ 87.00
February,	319½	57.49
March,	206¼	37.19
April,	171¼	30.87
May,	241	43.38
June,	358½	64.52
July,	589¾	106.23
August,	600¼	108.08
September,	588	105.85
October,	708	127.44
November,	556¼	100.13
December,	505¾	91.03
Total	5,294½	$953.21

Pennsylvania. EDGAR T. FINK.

HOGS FOR PASTURE.

What kind of hogs is best for use in an apple orchard, an old rocky hillside with big trees? I am told Berkshires will not rustle as well or pasture as will some other breeds. Our sows are mostly Chester Whites, and the selection of the boar is the problem. E. P.

Windsor, Conn.

There is no breed of swine especially adapted for forage purposes. Any of the recognized fat breeds will thrive in pastured areas, provided they are given in addition sufficient grain to enable rapid and continuous growth. Representatives of the bacon breeds are not so well adapted for pasturing, as they are inclined to waste and utilize energy roaming about the field. If your inquirer has Chester White swine, I would say that the best male to use would be a Chester White male, for I believe in mating animals of the same breed rather than cross-breeding. The Duroc Jersey breed of swine is noteworthy for its foraging and adaptability for Eastern conditions, and if it is purely market animals that are desired, a Duroc Jersey male might be appropriately crossed with Chester White sows, and the result would be pigs that would fatten readily, and would be well adapted for use under these conditions. In this connection a mineral mixture should be used to keep the swine from doing injury to the roots of the trees, and we have used in our regular forage crop pasture a mixture composed of equal parts of air slaked lime, bone meal, ferrous sulphate, salt and charcoal. There is some difference of opinion as to the practicability of pasturing swine in orchards, and of course, the animals should not be permitted to injure the trees. F. C. M.

SLIMY MILK VESSELS.

What is the cause of a cloth milk strainer being slippery and slimy when put into water containing a little soap? This condition lasts only a few milkings, then disappears for sometimes weeks at a time. The same is true of the pans and pails. C. M. S.

Massachusetts.

This is probably caused by a germ which we have mentioned several times. This germ turns milk slimy or "ropy." It is usually bred and carried in the strainer or dishcloth, or under the rim or seams of the pans. It is also found in the stalls and on the cows. A thorough *boiling* of all milk utensils and their exposure to full sunlight kills out this germ.

ORNAMENTAL FENCE
40 designs—all steel. Handsome, costs less than wood, more durable. We can save you money. Write for free catalog and and special prices.
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NEW BARGAIN BOOK FREE
Send name on postal and get our book and sample to test. Compare our prices. See how much we save you. Our
Low Prices Start at 13c Per Rod
Direct from factory, we pay freight. We use hard, High Carbon, Basic Open Hearth Wire, Double Galvanized. Over 150 styles—hog, sheep, poultry, horse, cattle, rabbit fence—farm gates, self-raising gates, lawn fence and gates. Mail postal today for new, big, money saving catalog and free sample.
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Dept. 59 Cleveland, Ohio
DIRECT FROM FACTORY
WE PAY FREIGHT

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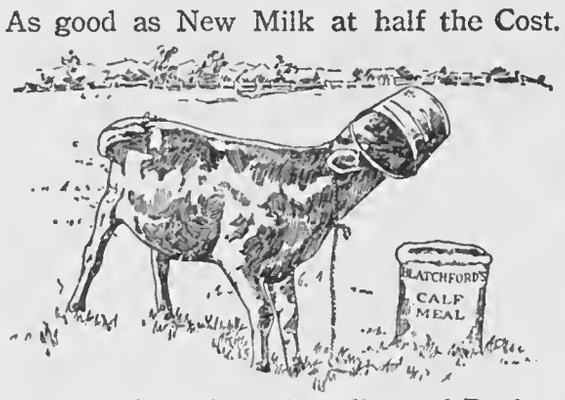
Blatchford's Calf Meal
As good as New Milk at half the Cost.



100 pounds makes 100 gallons of Perfect Milk Substitute.
Send for pamphlet, "How to Raise Calves Cheaply and Successfully Without Milk."
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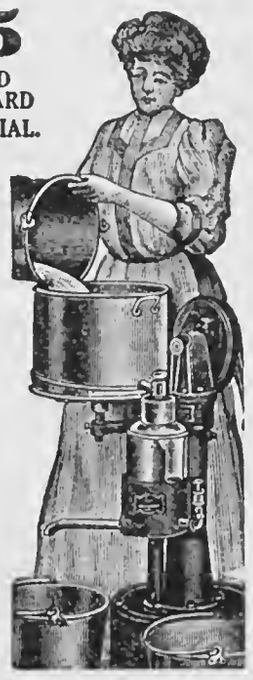

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Absolutely on Approval.
Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:
AMERICAN SEPARATOR CO. Box 1075 BAINBRIDGE, N. Y.

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Keep their shoulders free from galls—fit them with
Honest Wear Brand Gall Cure Collars
A curled-hair cushion is fastened under the working-surface; can't slip, bunch or wrinkle; keeps working-surface springy, smooth and cool; prevents sweaty shoulders and rotting collars; cures galls, prevents galls.
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Our Guarantee—we make defects good in harness or collars or give your "Money Back."
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Look for this label
HONEST WEAR
Sold by best dealers
THE OLMSTED CO., Inc., Syracuse, N. Y.
Successors to R. H. Olmsted & Son

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Why! Because Sugarota is a predigested, wholesome food. Calves eat it greedily and thrive on it, yet it costs considerably less than whole milk. If you want biggest profits—
Don't Kill the Calf—Feed It Sugarota CALF MEAL
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make any wagon a spring wagon. Prevent damage to eggs, fruit, etc., on road to market. Soon save cost—produce brings more—wagon lasts longer.
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Very resilient and durable. The standard springs of America since 1889. 40 sizes—fit any wagon—sustain load up to 5 tons. If not at dealer's, write us. Catalog and fistful of proof free.
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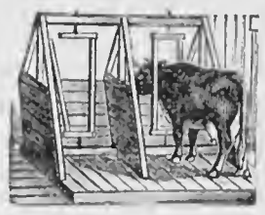
30 DAYS' TRIAL—STATIONARY WHEN OPEN
NOISELESS SIMPLE SANITARY DURABLE
The Wasson Stanchion Co., Box 60, Cuba, N. Y.



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Thirty days' trial on application
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Foster Steel and Wood STANCHIONS
Increase Your Dairy Profit
Makes cows comfortable. Save time in stabling and cleaning. Easy to operate; cow proof; sanitary; strong, and durable.
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IT HAS NO EQUAL
For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.
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REMOVES THE SORENESS--STRENGTHENS MUSCLES
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Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

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REGARDLESS of price or any other reason Save-the-Horse is the cheapest remedy known. It goes through and through both bone and tissue--it works inside, not outside. And Produces a Cure That Withstands Every Test. No Scar or Loss of Hair. Horse can work as usual.
Why We Can Make a Contract to Cure.
Greenwood, Ind., March 10, 1913
Troy Chemical Co., Binghampton, N. Y. I have cured the horse of bone spavin. I also recommended it to a neighbor who cured a bone spavin. Frank Stevens.
We Originated the plan of treating horses—Under Signed Contract to ReturnMoney if Remedy Fails. You risk nothing by writing; costs nothing for advice and there will be no string to it.
OUR LATEST Save-The-Horse BOOK is our 18 Years' Discoveries—Treating Every Kind of Ringbone—Thoropin—SPAVIN—and ALL—Shoulder, Knee, Ankle, Hoof and Tendon Disease—Tells How to Test for Spavin; how to locate and treat 58 forms of LAMENESS—Illustrated.
OUR CHARGES for Treatment ARE MODERATE. But write and we will send our—BOOK—Sample Contract and Advice—ALL FREE to (Horse Owners and Managers—Only). Address,
TROY CHEMICAL CO. 24 Commerce Ave., Binghamton, N.Y.
Druggists everywhere sell Save-the-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.

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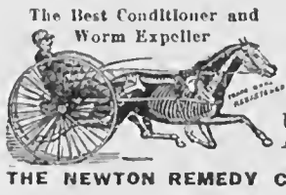
will remove them and leave no blemishes. Reduces any puff or swelling. Does not blister or remove the hair, and horse can be worked. $2 a bottle delivered. Book 6 K free.
ABSORBINE, JR., the antiseptic liniment for mankind. For Boils, Bruises, Old Sores, Swellings, Varicose Veins, Varicosities. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Will tell more if you write
W. F. YOUNG, P. D. F., 88 Temple St., Springfield, Mass.

The Best Conditioner and Worm Expeller



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Coughs, Distemper, Indigestion
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Use large size for Heaves. At Druggists or sent postpaid. Send for Booklet.
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In use over 50 years
CURES HEAVES
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HORSE LAME? Use KINDIG'S Famous OINTMENT. A sure cure for bone, bog, and blood spavin, ringbone, curb, soft bunches, splint, etc. 50 cents, postpaid. E. Kindig, Jr., Remedy Co., 4825 Woodland Ave., Phila.

CRUMB'S IMPROVED WARRINER STANCHION

Henry H. Albertson, Burlington, N. J., writes: "My new Stanchions add greatly to the comfort of my cows."
WHY TORTURE yours with rigid stanchions? Send for specifications of inexpensive yet sanitary cow stable to
WALLACE B. CRUMB, Box M8, Forestville, Conn.

DAIRY MATTERS IN S. W. NEW YORK.

I have read in THE R. N.-Y. articles on farmers joining themselves together in club work for purchasing purebred sires or stock. Perhaps the enclosed clipping will interest you, and by keeping in touch with these persons both you and the readers of THE R. N.-Y. may learn the success these farmers have. As you asked me some time ago to write on the condition of dairy matters in my section, I write the following to you: In this locality, we are favored by having a milk station and several cheese factories situated so that they are very convenient for the farmers to dispose of their milk. When the milk station decided to take milk seven years ago, a number of cheese factories were purchased at reasonable prices by the persons running the milk station, so that the milk from these factories would come to the milk station. The milk station has been a great benefit to the farmers in being situated so as to take milk the year round, and paying a better price than the farmers could realize from the factories.

The farmers are encouraged by the better price for their milk, the prompt payment each month and the receiving of clean milk cans for the milk. The farmers have bettered their dairies by breeding to the Holstein cattle to get larger quantities of milk and still have the required richness. They are only saving the calves from their best cows that produce well, which is shown at milking time both by the looks of the quantity in the pail, and by weighing the milk at each milking, and keeping records of the same, also those cows which give an even amount of milk the year round, which counts in the long run.

The farmers are gradually selling off the boarder, the dark colored, and the smaller sized cows, and are taking great interest in having their herds of uniform size, shape and color. Not many have purebred stock throughout their herds, yet many are working into the purebred Holsteins on a small scale, but nearly all are using purebred Holstein sires in the dairies, and have been for several years back, and getting good results by this method, weeding out and filling in with their calves from the best cows.

FRED W. TUCKER.

Allegany Co., N. Y.

R. N.-Y.—The clipping referred to follows:

One of the highest bred and most valuable bulls ever brought into this part of the State, was recently purchased by a party of well-known farmers of Jasper. It is a Holstein bull calf, purchased from the H. B. Davis Stock Farms of Orange County. The price paid is $1,200. The farmers who made the purchase are: J. R. Towsley, G. A. Murphy, S. F. Dartt, A. A. Button and Fitch H. Reynolds.

We shall be glad to watch the outcome of this coöperative investment.

PROLIFIC SOW.

We wish to report an unusual instance of prolificacy. One of our brood sows, Highwood Columbia 20th. 116241, farrowed February 5, 1907, produced a litter of 13 pigs early this week. This makes a total of 168 pigs she has farrowed in 13 litters. Even at her advanced age her last three litters have been 13, 12 and 13 pigs. This sow, of course, is a registered Berkshire. A full sister, three years younger, farrowed 15 pigs for her first litter, at 13 months of age. Then she farrowed 10 and then 18. We have four young sows that are half sisters of Highwood Columbia 20th, out of a common dam. They farrowed their third litters last Fall and produced respectively 10, 12, 14 and 17 pigs. Sows in our herd, of this Columbia family, have averaged now for several years, gilts and all, from 10.6 to 11.8 pigs per litter. H. C. & H. B. HARPENDING.

Proportion of Butter to Milk.

About how many quarts of milk on an average will make one pound of butter? What is the weight of a quart of milk? We retail milk at seven cents per quart. At that rate what is cream worth per quart, also skim-milk fed to calves or pigs? Our cows are grades, fed oat and pea hay, pea vines from canning factory, sowed corn, cull beans, cooked, ground feed, oats barley, wheat, about equal parts; cotton-seed meal and molasses.

Medina, N. Y. T. S. T.

The quantity of milk required for a pound of butter depends entirely upon the amount of butterfat which it contains. A pound of butter can be made from eight quarts of rich Jersey or Guernsey milk, while it requires as high as 12 to 15 quarts of the poorer grades of milk to produce the same amount of butter. The average weight of a quart of milk is a little over two pounds; 40 quarts should weigh 83 pounds. The worth or value of cream is also determined by the amount of butterfat which it contains, and milk at seven cents per quart is not a guide to determine the value of cream unless the butterfat contents is known. Theoretically if 5% milk sells for seven cents per quart 20% cream should sell for 28 cents per quart because it contains four times as much butterfat. At this rate the skim-milk would balance the cost of separating it. Skim-milk is usually figured at from 15 to 25 cents per 100 pounds. C. S. G.

Trouble With Milk Testing,

I am having some trouble with my milk at the creamery and I would like to send a sample of it to Albany to have it tested. Will you tell me where and how to send it? Nobody around here seems to know anything about it.

Orange Co., N. Y. J. F. H.

The thing to do in such a case is to notify Hon. Calvin J. Huson, Department of Agriculture, Albany, N. Y. Under the law the commission has the power to investigate such cases. He will, if needed, see that fair samples of the milk are taken and accurately tested. Do not send him samples unless he requests it. Let the deputy do the sampling. Make your complaint quietly. In order to be effective the Department must make its investigation without warning to the creamery, and visit it without warning or announcement.

VERY black, very small, and very much impressed with the importance of her mission, she stood before the kindly lady of the house. "Well, Ophelia?" "Ise de washerwoman's little girl and mommer she says please to len' her a dime. She got to pay some bills."—New Orleans Picayune.

Roper's Bread Meal—If you have animals to feed, send for free sample and Booklet. It will pay you. O. W. ROPER, - - - Vineland, N. J.

MILK TICKETS Latest Sanitary Style Express Paid Anywhere Samples Free. Dept. Y Travers Bros., Gardner, Mass.

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200 QUICK-GROWING MULEFOOT HOGS FOR SALE. JOHN DUNLAP, Williamsport, Ohio

O. I. C. Hogs—All ages. They Look, Feed, and Breed Right. Sows Bred, Males Ready. Address, H. H. JUMP, Munith, Michigan

Chester Whites—Booking Orders for Spring Quality Pigs. Fair Prices. It is not what you pay, but what you get, that counts. All Stock Registered. Address, EUGENE T. BLACK, Scio, New York

CHESTER WHITES OR O. I. C.'s
Now is the time to order Spring Pigs from large, growthy, prolific sows. A few Fall boar pigs left, also ten December pigs. All stock registered, either OIC or Chester White Record. VICTOR FARMS, Bellvale, N. Y.

DUROCS—The Big Deep Fellows
BARGAINS. Fall pigs at $10 to $15. 3 extra good aged sows to farrow in Spring.
SHENANGO RIVER FARMS, Transfer, Pa.

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa

Masterpiece Berkshires—$50.00 PIGS FOR $15.00
SUMMIT FARM, Blue Ridge, Summit, Pa.

Aug. Pigs for Sale—BERKSHIRE
Purebred. M. H. TAYLOR, West Alexander, Pa.

Registered Berkshire Fall Pigs—Both sex. Not akin. Super breeding. Priced to sell. J. I. HERETER, Gettysburg, Pa.

Springbank Berkshire Herd
BIG BERKSHIRES I have bred more high-class hogs than any breeder in Connecticut. Watson's Masterpiece No. 123931 at head of herd. Nothing for sale but March and April pigs at present. J. E. WATSON, Prop., Marbledale, Ct.

Large Berkshires at Highwood
A cordial invitation is extended to those interested in the care of swine to visit and inspect our herd and its surroundings. Over one hundred sows, bred and open, for sale. Service boars, and pigs all ages. H. C. & H. B. HARPENDING, Dundee, New York

If you want the best hog
Write us. Our farms are devoted exclusively to the production of Berkshires. Breeders in the following States have been supplied from our great herd: N.Y.; Penna.; Dist. Col.; Md.; Va.; N. C.; S. C.; Ga.; La.; Ala.; Miss.; Fla.; Tenn.; Ky.; Texas, and Porto Rico.
Berkshires for foundation and show purposes a specialty.
THE BLUE RIDGE BERKSHIRE FARMS, Asheville, N. C.

ELLENWOOD FARM
BERKSHIRES
Pigs of both sexes and unrelated trios for sale. Our pigs are rich in Masterpiece, Lee and Premier blood. Let us furnish you with a foundation herd. Only choice animals sold for breeders.
Write us, or better yet, pay us a visit.
ELLENWOOD FARM, R. D. 1., Hatboro, Pa.

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Jersey Bull Calves FOR SALE
Sired by one of best sons of Financial King 57788, and the dams are cows of exceptional merit. A special price will be made to farmers interested in the Jersey.
H. C. SHEARS, *Supt.*
HYDE PARK-ON-HUDSON, N. Y.

PUREBRED HOLSTEINS FOR ANY POCKETBOOK. $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. MOHEGAN FARM, Peekskill, N.Y. 1 hr. from Grand Cent. Sta.

Holstein Bull Calf—Registered; born Nov. 6; dam, 22 lb. heifer; sire, son of Sir Korndyke Manor De Kol and a 31.65 lb. cow. Price, for quick sale, $75. Send for details. CLOVERDALE FARM, Charlotte, N. Y.

THE TOMPKINS CO. BREEDERS' JOURNAL, with sale-list of pure-bred stock, 25cts. per year. Copy free. We have some very good offers in Holstein and Jersey cattle, German Coach Horses, Shetland Ponies, Southdown ewes and Cheshire gilts. A two-year Berkshire boar, registered, $25.00. TOMPKINS CO. BREEDERS' ASSOCIATION, Box B, Trumansburg, N. Y

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Reg. HOLSTEIN BULL
ready for service. Reg. Male Calves, $25 and upwards Choicely bred, fine individuals. Can also furnish a few cows. Satisfaction guaranteed. Write today.
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150 HIGH GRADE HOLSTEIN COWS
Large, fine individuals, nicely marked and heavy producers, due to freshen in August, September and October.
F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holsteins for Sale
50 Cows, just fresh, giving 40 to 50 lbs. per day.
20 Cows, due to calve this month and next.
25 Cows, served to come fresh in August and September.
If you are looking for dairy cows and large producers with good size and young, see these cows before buying elsewhere. WE TUBERCULINE TEST.
Registered and grade bulls always on hand.
JOHN B. WEBSTER
Bell Phone 14 F. 5. Dept. Y. CORTLAND, N. Y.

Buy a Bull on Easy Terms
Long Time and 4 Per Cent Interest
Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.
JUSTAMERE FARM, Middletown Springs, Vt.

GUERNSEY BULL CALF
Sire, Gerald's Masher, 21741. Dam, Norma, 18782. A good milk producer. A Line Bred Bull. A. R. on both sides. Well grown. Very prettily marked. Dropped Dec. 11, 1913. LAWRENCE HOWARD, Kinderhook, N. Y.

Chestnut Ridge Farms, GLENS FALLS NEW YORK
Offer the following excellent young Guernsey bulls for sale: One imported yearling; one 11 months old; three 9 months old. Registered and N. Y. State tuberculin tested. Write for pedigrees and prices.

90 HEAD
Purebred Holsteins
consisting of 50 Cows, 25 Heifers, 15 Calves and a few choice Bull Calves. Home of Ormsby Korndyke Lad. No. 102469. If you are in the market for Holsteins come to see me or write. My stock will please you. EZRA HOLBERT, Lake, Orange Co., New York

GRAYFIELDS FARMS, GREENWICH, NEW YORK offers the following:
HOLSTEIN BULL CALVES for Sale
$400 for a nicely-marked animal, sired by King Woodcrest Segis, a son of King Segis. Dam, a jr. 3-yr.-old that is just completed a 7-day record of 28.8 lbs. of butter, with over 4% fat. This heifer will surely make a 35-lb. cow.
$150 for calf sired as above. Dam has just finished a sr. 2-yr.-old record of 21.81 lbs.
$100 for calf sired as above. Dam has a record of 20.6 lb. butter, and is the dam of a 23-lb. 3-yr.-old.
$50 for calf sired as above. Dam, who is less than 2 yrs. old, has finished a record of over 16 lbs. butter.
$40 calf sired as above. Dam has a record of 18.75 lbs. butter from ¾ udder.
$25 calf sired as above. Dam has record of 16.51 butter.

Purebred Registered
HOLSTEIN CATTLE
If your cows produce only about 4,000 pounds of milk per year and 160 pounds of fat they are practically worthless; 350 pounds of fat per cow per year should be your minimum requirement.
No matter how poor your present herd is, you can easily raise it to this standard in a few years by the intelligent use of a well-selected purebred Holstein-Friesian bull.
Send for FREE Illustrated Descriptive Booklets
Holstein-Friesian Asso., F. L. Houghton, Sec'y Box 105 Brattleboro, Vt.

DOGS

COLLIE PUPS—Natural drivers. Also English Bloodhounds. Nelson's, Grove City, Pa

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WILL BE HELD AT
KITTANNING, PA., Wednesday, March 4th, 1914, at 10 A. M.
Rain or shine.
Forty head of the best Imported and American bred registered Percheron and Belgian Stallions and Mares will be offered in this sale. Write to
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207 Prizes Won
At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H.
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and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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YOUNG
Percheron and Belgian STALLIONS
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Guaranteed to be Sound and Sure Breeders
Will sell to two or more farmers as company horses. Prices reasonable.
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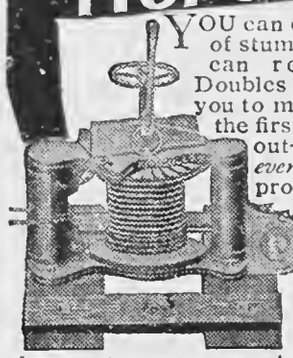

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SILO TALKS.

Black Ash for Silo.

I am planning to build a silo, and would like your advice on a few points before building it. I have the timber on my place for lumber to build. Would Black ash answer for this purpose, and will one-half-inch boards with a layer of tar paper between be as good as one inch matched boards to ceil inside of silo? W. F. S.

Jefferson, O.

From the inquiry, I am a little in doubt whether the silo, frame and all, is to be built from Black ash lumber, or just ash flooring for the inside lining to face against the silage. As to the use of ash for the frame, there can be no objection; but for the inside facing would ash be as good as to procure Georgia or pitch pine flooring, and be sure about it? If the ash were used, I would not double board it, with paper between, but matched; and be sure it is well seasoned, and when on, give it a thorough painting inside with gas tar and gasoline enough in it to spread freely, and penetrate the flooring, and fill into the matching. This will prevent the moisture of the silage penetrating the wood, and as the boards would then be kept free from moisture on the outside the lining should keep free from decay a long time. The usual plan about here, whatever kind of lumber goes into the frame, is to use Georgia pine for the inside work, and if free of sap, it lasts for years. One of my silos built 24 years ago, but lined up inside with common White pine, and thoroughly painted with gas tar and gasoline, is apparently as sound as ever. Where Georgia pine is used, no one paints them, as the pitch makes them moisture-proof. This you could do, put on the ash flooring, and if at the end of a few years it did show signs of decay, you could quickly ceil on over it and then you would be trouble-free for years.

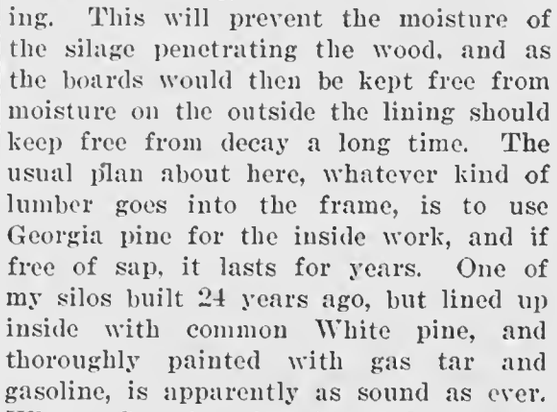
JOHN GOULD.

Best Wooden Form.

Which is the more advisable silo to build, a wooden one or one built of glazed or vitrified blocks? If of wood what style is the best? R. D. A.

Cayuga Co., N. Y.

It is an even toss-up which style of silo to build, wood or glazed blocks, which are I suppose hollow vitrified brick with interlocking joints. If one builds of



CORNER OF SQUARE SILO.

blocks, is sure of the foundation not settling, the bricks laid up in best cement, and well protected with plenty of reinforcing hoops laid in the bedding cement, he has a silo of great value, but the history of such silos about here is not wholly devoid of bad results of toppling, cracking, etc., and all because of bad foundations, and no use of reinforcing hoops. If you build of wood, the kinds from which you may select are without number. In this section of silos and much new silo building, it is to be noticed that for the past two years there has been about a total return to the square wooden silo with horizontal girths, and lined up inside with Georgia pine flooring, three-inch widths, finished up outside as the owner desires. Six of these—all very large ones—were built in sight of the writer's home last Summer; in fact, two-thirds of all have been built that way from the start. Asked why he built that way now the farmer replies: "They do not crack, or fall down, hoops do not loosen, and let the silo collapse; they are always ready to fill, they are durable and they keep silage with the best, and then, I can put in my own farm timber at first cost." Whatever plan settled upon, if of tile, be sure of foundation, and insist on reinforcing hoops in plenty. If a stave silo, be sure that it will hold as many tons as represented, and if a square one, have plenty of girths. If set on a self-drained foundation, do not cement the floor, save a strip a foot wide up against the inside wall. J. G.

TEN COWS AND A LIVING.

Can a living be made by keeping 10 cows, buying all grain and fodder, doing all the work myself, and selling the milk at eight cents per quart in Summer and nine cents in Winter? Or is it more profitable to buy a cheap farm and sell milk at a creamery at about 3½ cents per quart in Vermont? How many quarts of milk are there in a hundred pounds weight? C. J. L.

Massachusetts.

As a naked proposition, and without considering the thousand and one "ifs" concerned, I should say that a fair living might be made from 10 cows whose milk could be sold at eight and nine cents per quart, if the owner could do all the work connected with the business, even though all of the feed were purchased. The margin would not be large, however, and might easily be turned from profit to loss by a little "bad luck." In comparison with buying a cheap Vermont farm and selling milk at 3½ cents per quart, I should consider it a sure road to opulence. Your experiment station at Amherst, after a six-year study of their herd of grade Jerseys, giving better than 6,000 pounds of milk each, per year, has concluded that it costs practically 5½ cents per quart to produce milk in Massachusetts. You could hardly hope to produce it any cheaper and buy all your feed. This amount allows $35 per year for labor in caring for each cow, or $350 for 10 cows. Now this $350 is a nice little start toward the living expenses of a family, and is so much to the good. Granting that you can get together 10 cows, giving 60,000 pounds of milk yearly (and this means a herd above the average in quality), and that you can sell this milk (26,666 quarts) at an average price of 8½ cents per quart, you will have $800 to pay the cost of selling your product and furnish your profit. If it cost you nothing to sell your milk, you would have a yearly income from those cows of $1,150, but as it is, you will have to subtract from this sum the cost of delivering the milk to your customers, and the losses from poor accounts, etc. It seems to me that the cost of delivering could hardly be less than $1 per day, and this, with unavoidable losses, would probably amount to at least $500 per year. Deducting this from the $1,150, you would have $650 per year for your "living." This can hardly be considered an attractive proposition, and I should not care to be responsible for encouraging anyone to undertake it. Before doing it, at least you should talk with practical dairymen on the ground and get their estimate of its practicability.

A quart of milk weighs 2.15 pounds, though 2.25 pounds is often used to allow for shrinkage in handling. A hundred pounds of milk is equivalent, therefore, to 46½ quarts. M. B. D.

LIVE STOCK THAT PAYS NO DIVIDENDS

It is said that "a poor man will have one dog, a very poor man two and an almighty poor man three or more." This may not be literally true, but I have noticed that the thriftiest farmers keep the fewest dogs. An untrained dog on the farm, invariably makes more steps than he saves, and most dogs kept on the farm are untrained. Few farmers know how to train a dog, and not many have the time to devote to the work. Only the man who deals in stock and handles it continually can train a dog and keep him in training to the extent that makes him useful. There may be isolated cases of well-trained and useful farm dogs, but they are the exceptions that prove the rule, and even in these rare cases, if the cost of dog, cost of keep, taxes and cost of time spent in training were taken into account the dog would be found to be the debtor.

Some keep dogs as thief and burglar alarms. Their sagacity does not always enable them to distinguish friend from foe, and if savage, they are sometimes positively dangerous. Last Fall out in Jefferson Co., Kansas, a farmer was awakened at midnight by a great commotion among his hogs. He knew by the sound that a dog was making the disturbance and grabbing a 16-shot repeating rfle, he ran out to the rescue. He found a big white bulldog just dragging a hog out of the pen. He fired, and at the first shot happened to break the dog's spine. The dog instantly turned on him and dragging his hind parts, attacked him savagely. The man kept backing away from him, all the time pumping lead into him till he had fired the whole 16 shots. By this time his son got there with a shotgun and killed the dog. They found that nearly all the little bullets had hit the dog, but none reached a vital part. During the whole battle the dog never once yelped or whined, but at every shot he uttered a deep growl and lunged at the man to the full extent of his crippled condition. It was afterward learned that the owner lived five miles away, that the dog was a pedigreed bulldog that he had paid a big price for, and kept chained at the house because his wife was afraid to stay alone. The dog had broken his chain and as soon as the man found he was loose he telephoned to his neighbors to keep their children in the house for fear the dog would kill them. He said to the man who killed the dog, "He might have killed you too if you hadn't happened to have disabled him at the first shot."

We sometimes hear fairy tales about dogs saving people, especially children, from drowning. Within a few miles of where I now live, a big strong collie drowned a little two-year-old girl by pulling her into a swift running ditch, and right in our own town another dog that was such an intolerable nuisance in the neighborhood that his owner had to keep him shut up in the barn, crippled his master's wife for life. She had so much sympathy for the dog that she thought she'd lead him out and let him play at the end of a long rope. He soon tangled her up in the rope, threw her to the ground and fractured her knee and tore the ligaments loose, making her a bad cripple for life. She will never walk again, not even with the aid of crutches.

A few years ago, two bird dogs—probably strays—killed one-half my breeding ewes—32—in one night. We killed one of the dogs the same day, and the other was killed a few days afterward. The owners were never found. Three years later two purebred Shepherd dogs—the breed that are supposed never to kill sheep—raided my flock three nights in succession. The third night I heard them at two o'clock and got right after them with my shotgun, killed one just at daylight and followed the other home. They had that night killed 11 sheep for one of my neighbors, six for another and three for myself. The owners of these dogs paid $30 each for the work of their fine dogs, that one night. It is seldom such swift retribution overtakes the sheep-killing dogs. They are sneaks, and are seldom caught at their murderous work.

The foregoing are only a few of the many counts to be made against the dog. I would not for a moment count the value of all the dogs in the universe against the suffering and death of one member of the human family from hydrophobia. It is natural for people to be fond of pets. It is an admirable trait, but it would be well if we could content ourselves with more useful and less costly and dangerous pets. E. P. SNYDER.

COTTAGE CHEESE.

Will you give information about making cottage cheese, full directions if possible? D. F.

If you wish directions for making cottage cheese on a small scale for family use, the following method used by the cheese-maker on this farm will probably be satisfactory—her cottage cheese is, anyway. Place a pan of soured skim-milk of any desired size over a vessel of boiling water upon the kitchen stove. Stir occasionally so that it will heat uniformly, and when the whey and curd have separated so that the latter will sink to the bottom of the pan, drain off the whey, or strain through a thin cloth to remove it, and season the curd left by adding salt, pepper, butter, and sweet cream, to taste. The sweet cream may be omitted if not at hand, but you will miss it in the cheese. Mix the seasoning in by hand and form the cheese into convenient-sized balls. If you desire to make cottage cheese on a commercial scale, it will pay you to send to the Experiment Station at Geneva, N. Y., for Bulletin No. 245. This bulletin is devoted to that subject, and gives full directions for the making and use of "starter," and for the carrying out of the other necessary processes. M. B. D.

Why Dave stayed on his father's farm

OLD Man Hicks, the dairy farmer, had a herd of mighty fine cows. He also had a son named Dave who thought milking a pretty tough job, and who imagined he was getting weak-handed and on the way to milker's paralysis. So he laid down on the job and the old man had to milk all the kickers and fussy bovines.

Then one day Hicks, Sr., saw the light. He installed a

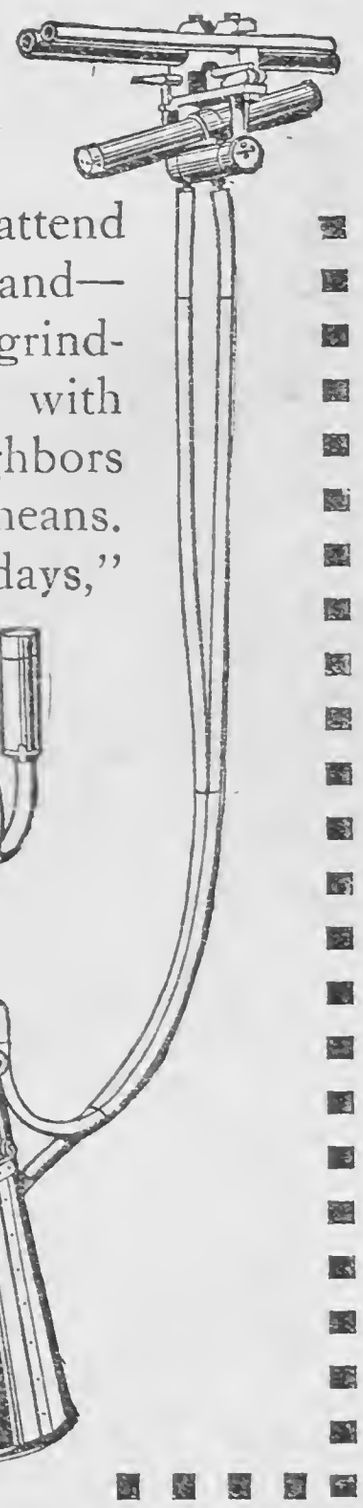
SHARPLES MILKER

That was four years ago and ever since, twice a day, the herd has been machine-milked, the kickers and fussy producers give down without being chained, and Dave's doing the work formerly done by Dad and two husky hired hands.

Long ago the son forgot paralysis in standing by and watching the teat cup with the upward squeeze get Bossy's milk. When she persists in yielding 30 pounds of fluid, the machine sticks to her and gets all of it. There are no finger nails gouging out a bit of teat or scratching her udder. She's not sworn at now—she's sworn by. She no longer holds up her milk, for the machine does what human hands can't do—draws the milk intermittently with a soothing massage motion, driving the blood up and the milk down. And Bossy knows that's how she ought to be milked.

Dave's now clamoring for a bigger dairy and another machine. The only way to use the hour or more saved at each end of the day is to put in more cows and increase the size of Dad's bank roll.

Ask Old Man Hicks what the SHARPLES MILKER is and does. He'll say it's a clean-milk getter and a hold-'em-on instead of drive-'em-off-the-farm proposition. He never has the least trouble in getting and keeping capable help. While Dave holds down the job, Hicks now has time to attend county fairs, conventions, socials, and—what he seldom did in the old grind-early-till-late days—go to meetin' with Mrs. Hicks and mix with the neighbors and discuss politics and ways and means. "The joke's on Bossy these days," declares Hicks.



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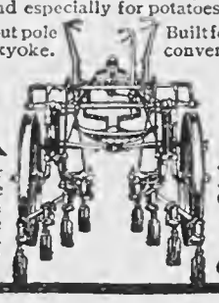

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Farm Management.

Farming on Shares.

A has about 15 acres of land plowed; he wishes us to work it next year. He would like to put in one acre of onions and three of potatoes, the remainder to mangel beets, sweet corn and field beans. He will furnish the onion sets and seed potatoes; will also furnish a potato digger if the crop is worth it; we furnish remainder of seed and do all the work. What share should A get? F. B.

Ft. Helen, Mich.

In all such cases of farm partnership the general rule is to let the real estate offset the labor—each one-third. The other third is represented by personal property, which will include capital or money paid out for labor, fertilizer, seed, etc., movable equipment, such as tools. In this case you provide labor and the other party the land, and each should take one-third share as a consequence. The other share should be divided in proportion to what you each put up in seed, fertilizer or capital. You should also have a legal written contract.

Landlord and Tenant.

I have been very much interested in the writings on landlord and tenant. The man in central Illinois, page 35, is giving some very good argument, and as I have seen the other side of that fruit business I will relate. My wife was clubbing the fruit from an apple tree, and when noticed by the boss, naturally she got no more fruit by the use of the club. I took up the argument from a point that the owner of the buildings should have at least enough ladder to reach top of any building on the farm. We all know that in case of fire clubs won't work. The landlord mentions the clubbing of peach and plum trees. I am a tree surgeon, and I would never allow a plum or peach tree to get from the reach of an ordinary step ladder. If this man would expect his tenants to trim trees, he cannot expect much fruit, as we have in this locality about one man in 20 who actually knows how to trim and care for a fruit tree. A. Z.

Ashland, Ohio.

Getting Hay Into Barn.

In reply to J. F. T., page 128, the one best horse hay-fork is a six-tine grapple fork which opens and closes like a clam-shell bucket. My father has used one for over 20 years and it cannot be excelled for its work. This one has a lever for dumping, but I believe the newer ones do not have this, which I should consider an improvement. This fork takes a large amount of material at a trip and dumps it in a looser condition to be mowed away by hand. With this fork he uses a 4x4-inch wood track which has proved entirely satisfactory. Track whether wood or steel, should be supported every six or eight feet to keep from sagging. I have seen rod tracks fastened at each end of building, but they strain the frame and sag badly. We have always used a horse for hay-fork, but am confident that a small gasoline engine would be a great economy in time as well as labor.

R. P. H.

Responding to your request for experience in use of hay hoisting apparatus, I have used a steel track for 10 years, and it appears as good as ever. I have to go up to the machine when changing sides, but they are now made that can be changed from the floor very quickly. I use slings, and I think they will pay their cost in saving of time, compared with forks. Besides, forks do not work very well with rye and oats. I use power, and make many other uses of the hoist. My grain is cleaned and bagged in the basement, and a sling-load of eight bags is taken up through a trap-door and deposited on the wagon in about the time it would take a man to bring one bag up on his back. My hay is all baled, and by using a pair of ice tongs, a bale of hay is landed on the wagon, or put away on a scaffold. In throwing down hay for baling, we use the hay fork and take a load out of the mow and drop it by the baling machine. The tracks can be made to run on a curve so you can hoist on the main floor and send around to the faraway mow, or even to an adjoining building. The slings can be made to fit any wagon; it is only a question of length of ropes. FRANK HYDE.

New York.

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It is the only two-way plow that has the Patent Auto Foot Frame Shift, which insures accurate and uniform width of cut. It will do the highest grade work for the longest time with the least possible effort and expense.

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2. **Patent Auto Foot Frame Shift:** Slight foot pressure swings frame and accurately locates plow bottom.
3. **Long Malleable Beam Clamps:** No collars or set screws. Beam bolted rigidly to bracket, which extends to each bail arm. Cut always uniform.
4. **Automatic Shifting Hitch:** Positive and Automatic. Clevis cannot fail to move to position.
5. **Automatic Horse Lift:** Operator's foot releases latch. Pull of team raises bottom. Hand lever also provided.
6. **Adjustable Jointers:** Jointers clamped to beam. May be set forward or back or tipped at varying angles.
7. **Wide Tread:** Prevents tipping on hillsides and permits use of wide or narrow bottoms.
8. **Chilled, Full Steel and Combination Bottoms:** All styles made expressly for Eastern conditions.
9. **Removable Shin Piece:** Insures keen cutting edge—easily renewed—prolongs life of moldboard.

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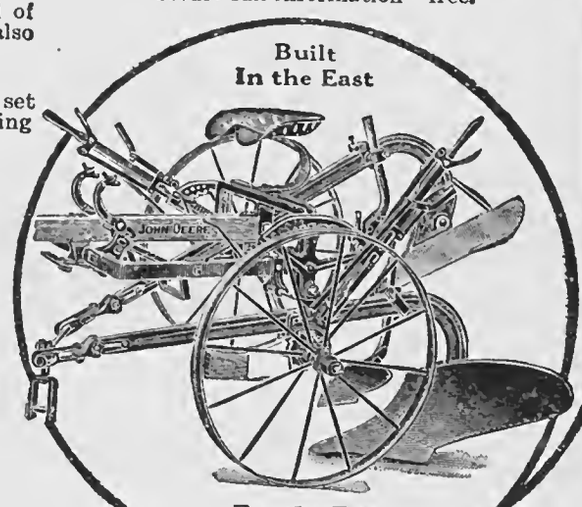

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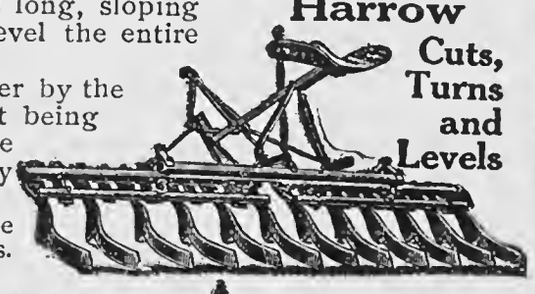

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Forage for Pigs.

I wish to raise 12 pigs, April farrow, next Summer, besides keeping three sows. What can I grow for green stuff (I have no pasture)? My land is very sandy and full of witch-grass, and I wish to fence in a bad spot to keep pigs on. Shall grow a lot of rape to cut and feed. How about Soy beans and cow peas to feed after and with rape, using corn fodder with poor ears (sweet corn) in Fall, then fattening with ear corn? I want to raise them without buying much grain.

So. Milford, Mass. C. J. D.

Undoubtedly the best forage crop to use for swine in the absence of Alfalfa is Dwarf Essex rape. It would yield a far greater amount of forage than would be the case where Soy beans or cow peas were used, and successive planting of rape may be appropriately made any time during the season up to August 1st. The amount of seed to use per acre varies with the method of planting, and in case the rape is drilled in rows it would require six pounds of the Dwarf Essex variety per acre. If it is not convenient to drill the seed in rows it can be broadcast, in which case it will require from six to 10 pounds of the seed per acre. A very good mixture to be seeded as early in the Spring as soil conditions will permit would be as follows: Oats, 20 pounds; Canada field peas, 30 pounds; Red clover, six pounds; Dwarf Essex rape, six pounds; the same mixed and drilled in with an ordinary eight-inch grain drill. The oats and Canada field peas will seemingly out-distance the rape and clover, but in case the animals are not turned into the field until the oats and peas are about 10 inches high, and care is exercised not to let the animals pasture the crop too closely, you will find that you will have a continuous green forage crop throughout the entire season.

It is advisable, however, in case forage crops are used for pasturing purposes, to have at least two yards to alternate during the season, and by this practice it would be possible to give the plants sufficient freedom to grow vigorously without serious interruption by tramping or cropping it down too closely. I would also suggest that the rape be seeded in the sweet corn just previous to the last cultivation of the corn, and after the marketable ears are taken away the small cull ears can be gathered and fed to the pigs. Rape and corn make an ideal and well-balanced fattening ration. It is sometimes suggested to feed a small amount of tankage in addition as an appetizer and a source of protein. Undoubtedly the inquirer is familiar with the usefulness of Alfalfa or clover hay for brood sows, as it can be fed in slat racks with very good profit and great convenience. F. C. M.

Rye for Mares.

I have 50 acres of nice rye, on a tobacco patch; would like to put some mares on it to graze, that are supposed to be in foal. Would you advise it? I had supposed there was no danger unless they grazed on rye which had headed out, and that it was the blasted grains, which did the mischief, but have been told it was not safe to graze at any stage for mares in foal. W. W. W.

Kentucky.

Sudden full pasturing on green rye often has caused mares to abort. If used at all the mares first should be fed plenty of hay and oat straw, and then should go on the rye for a very short time at first, gradually increasing the time daily. Frosted rye is unfit as feed for mares in foal, as is rye that contains ergot. It would be much safer to use the rye for the pasturing of cattle. A. S. A.

Buying Cow Feed.

One dairyman writing about profits from his cows says that the price of milk is so low that farmers through his section are hardly making a living. He says they don't begin to get 35 cents on the dollar. Yet he also gives some facts in connection with his own individual case that show there is another side to the question besides the consumer's end of it. This writer says that he has been all his life on a farm of 200 acres, yet admits that he buys 30 tons of feed to carry his cows through the Winter. This fact alone proves why his profits are small. If it is impossible to raise Winter feed on a farm, the farm cannot be adapted for dairying. If the 30 tons of feed is all grain, and the farmer has a silo and raises his hay, the farm operations surely are much more profitable than he states if the idle horses are put to good use, during part of the time they would otherwise be idle, raising a cash crop to be sold to pay part of the grain bill. With 6,000-pound cows as he states he possesses there would be undoubtedly a good profit at the end of the year. However, if no silo is being used, if part of that 30 tons of feed is roughage, evidently the land is not adapted for dairying, or not enough crops are raised.

Experience shows that silage fed to cows in connection with clover hay and grain will reduce materially the cost of keeping a cow, and if a farmer on 200 acres of land cannot find enough crop land to enable him to have three 15-acre fields in rotation of silage corn, some small grain and clover, either the land is high up in the hills or is too rocky to plow. While the producing farmer indeed does not get his fair share of what the consumer pays, still, if he must make the most of what he does get, he would better prepare to keep his cows as cheaply as possible if he cares for a profit on his year's work. H. B. COBB.

Jackson Co., O.

Balancing a Ration.

In what proportion must I mix the following feeds to make a good balanced ration? Corn and cob chop, wheat bran, gluten and cottonseed meal, with mixed hay (clover and Timothy) and shredded stover for roughage. A. H.

Elverson, Pa.

Two parts by weight each of corn and cob chop, wheat bran and gluten feed, and three parts cottonseed meal, will make a good ration for milk production. I think it will pay, if labor is not too important a consideration, to sprinkle the corn stover and scatter the grain over it. In this way the cows will relish the stover better, and digestion of both grain and stover will be aided. Of course one should not give more stover than the cows will eat up clean, or some of the grain will be wasted, as well as stover. C. L. M.

A Good Ration.

Will you criticise and improve the following ration for Guernsey cows giving from 30 to 20 pounds milk daily? 35 to 40 pounds silage; 10 pounds mixed hay, Timothy and Red-top; two pounds gluten; two pounds wheat feed; two pounds brewers' grains; one pound oil meal. I am feeding one pound grain for every three pounds milk, gluten costing $1.50, brewers' grains $1.80, meal $1.78, wheat feed $1.55 per hundred. M. A. P.

Milford, N. Y.

I can find no fault with your ration as far as nutrients are concerned, and it seems to be giving good results. The brewers' grains are higher in price than they ought to be. However, something light and bulky is desirable in the ration. If you could get distillers' dried grains at about the same price they would be preferable as they contain more protein and also furnish the desired bulk. C. L. M.

Dairy Judging Contest.

During Farmer's Week which will be held at the College of Agriculture, Ithaca, New York, February 9-14, the Department of Dairy Industry will hold a contest for judging butter, cheese and milk. The contest for judging butter will be held on Tuesday and the contest for judging cheese and milk will be held respectively on Thursday and Friday from 9 to 12. With the exception of the present Winter Dairy Class the contest is open to any resident of New York State. On any day of the contest from 11 to 12, anyone not taking part may review the work of the judges, and thereby gain information regarding dairy products. It is hoped that a number will take part in these contests as they are instructive to anyone who is manufacturing or in any way interested in dairy products. First and second prizes will be offered in each class.

The Milk Comes Out Of The FEED

You can't cut down the amount of your cow's feed or change to a cheaper feed without cutting down your profits. The cow is just a milk factory and she can only make milk according to what you feed her. Give her good rich, easily digested feed, something she relishes and that will keep her in good health and she will give you all the milk she possibly can. A ration to be the most productive must also be properly "balanced"; that is to say, must contain food elements in such proportions as they are found in milk. Don't lose anywhere from one to three quarts of milk daily per cow by attempting to mix your own ration — let an expert do it for you.

Larro-feed

is a thoroughly mixed, properly balanced ready-to-feed dairy ration, made from carefully selected and analyzed feeding stuffs, absolutely free from weed seeds, oat clippings or other fillers and adulterants; it is composed only of Dried Beet Pulp, Cotton-Seed Meal, Gluten Feed, Distillers' Dried Grains, Wheat Bran, Wheat Middlings, and a little salt.

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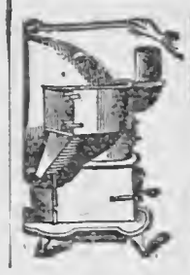

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All I ask you to do is to fill out the coupon at right. Tell me how many head of stock you have, and I'll ship you enough **Sal-Vet** to last all your stock 60 days. You simply pay the freight charges when it arrives and when the 60 days are up, report results. If the **Sal-Vet** I send you fails to do just what I claim, I'll cancel the charge—you won't owe me a single penny. Send the coupon now.

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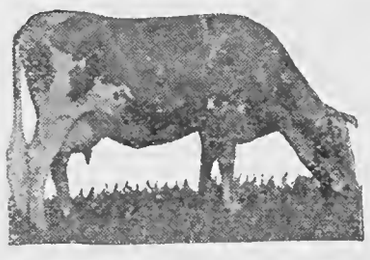

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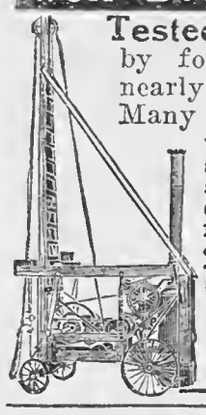

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LIVE STOCK REPORTS.

I have the honor of being vice-president of the only truly coöperative creamery in our State. We have been operating for the past 16 months very sueeessfully. We are growing some good corn here, and with our fine Alfalfa, good water and fine mild elimate, this is an ideal dairy country. We paid, at the creamery, 31 eents per pound for butterfat in the month of Deeember last. Alfalfa is selling at $5 per ton. I. B.

Nampa, Idaho.

We have had up to this date (Jan. 20) a very mild open Winter, and stoek is in fine condition. Priees about as follows: Hogs, $8 to $8.10; cattle, mileh cows with ealves, $40 to $70; feeding cattle from $6 up. There are no sales of sheep, as the lambing season is now on, and no horses or mules are offered for sale yet. The buyers get their stoek from Illinois and Iowa, and have them on sale through March and April. Wheat is about 92; corn, 65; hay, $12 to $15 as to quality. Clover seed from $7 to $8; veal ealves from $9 to $10.50 per 100. Turkeys, 15; chickens, 10 and 12; eggs, 25; butter, 25; creamery pays 32. Tobaeco has a splendid crop, and the price good; some have sold at 17 and 18 cents all around. Growing wheat looks fine. Lots of Fall plowing has been done.

Brookville, Ind. T. A. M.

Cows from $40 to $150 eaeh if new mileh. Oxen of about seven feet girth around $275 per pair. Hogs dressed 11 and 12 eents per pound. Butter 30; eggs 30; potatoes 60; eabbage 1½ eents per pound. Apples, No. 1 and No. 2, $2.50 per barrel, very scaree in this seetion. Sweet eorn to ean at the factory 2½ cents per pound. Very little young stock raised, calves too high. In the last 50 years fully one half of the farms have been abandoned (left to grow up) in this part of York county; others will soon follow (in spite of printer's ink of the back-to-the-landers). We have exeellent land for fruit and crops of all kinds, but hard to cultivate, rocky and hilly. It has raised lots of stalwart people, loeated from Portland, Maine, to Portland, Oregon, and would do it now if it only had some one to tickle it with plow and hoe.

Maine. S. W. B.

Wheat, 85; buckwheat, 85; rye, 70; oats, 45; eorn on cob, 75 cents per 100 pounds; shelled, 65; potatoes, 75 cents a bushel, 60 pounds; apples, $1 a bushel (good quality); beef, dressed, eareass, 12 to 14; same on hoof, eight to 10; at retail, 16 to 20; pork, live, eight; same dressed, 12; poultry, live, 14, dressed, 16; mileh eows, $60 to $100; ealves, live, 9½ to 10; milk delivered to ereamery by farmers, 4½ cents a quart; eggs, mixed eolors, brought in by farmers, fresh, 34; butter, dairy, 36; horses from $50 to $250; hay, No. 1 Timothy, $14 to $15; rye straw, long, $13 per ton, bearded, $1 extra; wheat bran, $28 per ton; mixed feed, $30; beet pulp, $27; dry brewers' grains, $27; molasses feed, $27. All the prices I have mentioned are in open market. Sheep and lambs are limited in numbers. All farm products are plentiful. E. D. M.

Delaware, N. J.

Weather warm and pleasant, no zero weather so far this Winter. Farmers busy dragging the roads, as it is the main topic being discussed everywhere. We may be able to produee a good artiele of any kind, and if no road to haul it to market, we are compelled to sell in the Fall, when the market is crowded, thereby receiving small prices. Sentiment in the rural districts now is much in favor of centralization of schools. Farmers having plenty of hay, and other roughage are not wishing to sell any stock; cattle, five to seven cents; hogs, eight; sheep, $3 to $4.50. Hay, $14 to $16 per ton; corn, 75; wheat, 90. Farmers are organizing farmers' elubs at the school house, and debating topics in relation to the soils and farm life in general, uniting in the buying of lime and fertilizer. Wheat looking fine, covering the ground nicely. Farmers are planning for next Summer's work and farming much better than a few years ago. W. P. E.

Athens, Ohio.

Conditions in Southern Nebraska are very favorable. We have had a very mild Winter, with no storm to speak of since November, when we had about six inches of rain in one week, which came down slowly and all went into the soil, thus giving wheat what it needed to go through the Winter. There is some complaint of wheat heaving out, by freezing and thawing. There is a large acreage of wheat and it is looking fine. The mild Winter is favorable to stock feeding, since there is a shortage of hay. There are fewer hogs than ever before. Hog cholera prevails to some extent, some farmers losing their entire herds. Milch cows, $60 to $100, occasionally one at the latter price; last Spring calves, $20 to $30; good horses, $200 down; hogs, live, $7 to $7.50 per hundred; butcher's cattle, $6 per 100. Hay, $12; corn, 70; oats, 40; wheat, 75; Alfalfa seed, $6; potatoes, 90; butter, 30; eggs, 32; chickens, nine. Real estate (farms) prices not changed, but sales at a standstill. Good farms held at $100 per acre and up. H. M. R.

Fairbury, Neb.

CORTLAND COUNTY FARM NEWS.

We have had the coldest weather for six years. As a result of weather favorable for the work, several creameries have already filled their icehouses with ice of unusually fine quality, clear as glass and 10 inches to one foot thick. The ice harvest at Little York Lake began this week. This work engages a large number of men, the first day's output being 60 carloads. The Little York Ice Co. has the contract for filling the Lackawanna icehouses on both the Syracuse and Utica divisions, the house at Chenango Forks being the largest. The work usually lasts four to six weeks. The equipment is most efficient and modern, the greatest difficulty benig to secure cars fast enough to handle the product.

About 50 of the most progressive potato growers of the county met at the office of the Cortland County Farm Bureau recently and organized a Potato Growers' Association. Prof. J. L. Stone, head of the farm corps department of Cornell University, was present and talked very interestingly and instructively on potato growing. Every farmer present was genuinely interested and it is hoped to make the organization a means of much improvement. Another meeting will be held this week.

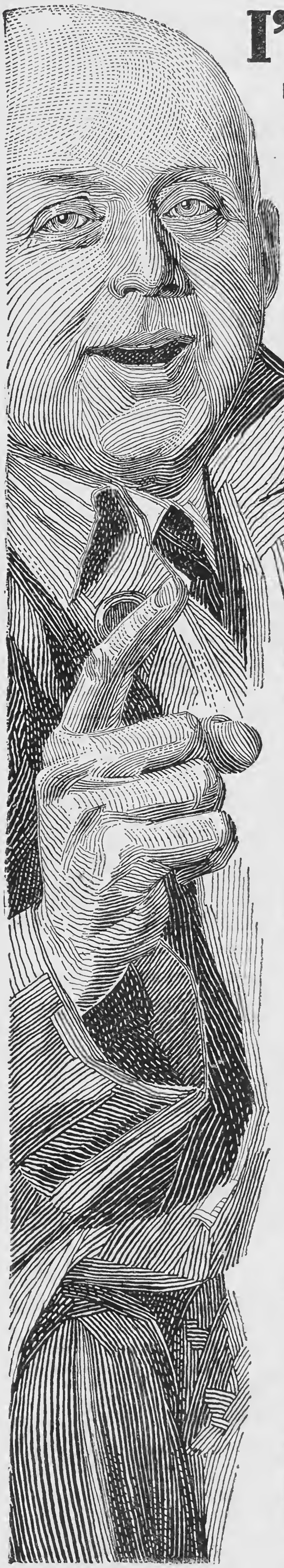
Our county sees many great auction sales of fine dairy cows. One of the greatest in number of cows to be sold will be held on the J. E. Crittenden farm near Willet, January 29, when 184 head of cattle will be sold. This is one of the largest farms in the country, and the sale will include a large equipment of fancy farm tools.

The stock on the well-known Peck dairy farm was moved into its new barn last week. This barn is a marvel of quick construction, having been built in 60 days from the burning of the great barn which required the whole of last Summer to build. The latter barn was only just completed, the workmen's tools, some of them, having not as yet been removed when it burned, with all its fodder for the year. The loss was estimated at $18,000, over and above a reasonable amount of insurance, which was carried on it, something like $40,000. A deplorable feature of the conflagation, which was supposed to be incendiary, was the destruction of 26 head of valuable cattle, including two bulls valued at $3,000 each. The new barn is entirely fireproof, or as nearly so as can be. The lower story is of cement construction, the next one of hollow tile, and the top of brick, with a roof of fireproof material. The new barn will furnish quarters for about 200 head, instead of the 300 housed by the one destroyed. E. G. F.

THE BUFFALO MARKETS.

The Winter season shows to the city authorities and the poor market people the good and bad points of the new Chippewa market, now just fairly finished. The good things in it are sufficiently apparent to decide the city to rebuild the Broadway market in a somewhat elaborate fashion also. At the same time the long east side, which is provided with roof only, is not habitable in severe weather, and must be provided with booths of some sort. The market has about 250 tenants, of whom about 50 are butchers and the others produce dealers. There is well towards a mile of booth frontage.

Potatoes are weak, sometimes being sold as low as 75 cents a bushel to the consumer, the price to retailers running to 85 cents for best grades. The quality is generally good. New red Bermudas are $6 a barrel down, to retailers, and sweet potatoes $1.25 a hamper down. This is the best season for Winter apples, some dealers selling nothing else at this time of the year, carrying both eastern and western fancy to common stock, including Palouse or Spitzenburg, Bellflower, Spy, Grimes Golden, Baldwin, Tallman, Wagner, at 12 to 15 cents a two-quart measure, sometimes selling to grocers at the same rate per bushel. The class of green stuff, except celery, that farmers keep in a pit and open every day when needed, is still pretty cheap. It includes vegetable oyster at five cents a bunch, carrots, leeks, about the same and parsnips, beets and onions in small measures at five to seven cents. Cabbage is not as plentiful accordingly as cauliflower, being 2½ cents a pound and cauliflower 12 cents a head up and in fine color. Celery improves very slowly, as it has been burned in storage or in transit. Bunches are small at five to 10 cents each, to consumers. Lettuce is more plentiful than usual, small heads retailing at five cents and large ones at 10. Endive is more plenty than formerly, but is not much known yet, cucumbers have about disappeared. There is an occasional egg plant at fancy prices. Winter squash has run low early, as the crop was poor and decayed much faster than if it had been more mature. It sells at about four cents a pound to consumers. There is a good showing of green beans at 20 cents a quart and spinach at 25 cents a peek, both in fine quality. Both butter and eggs are somewhat lower, butter not being quoted at more than 36 cents to the retailer and eggs, with offerings increasing, now differ not more than five cents a dozen between fresh and the better storage grades, the average to consumers being 34 to 39 cents. There is a storage grade that is enough lower to make it open to suspicion. J. W. C.



I'll Put Your Stock in a Thriving Condition—

Make the Ailing Ones Healthy and Expel the Worms

GILBERT HESS,
Doctor of Veterinary Science
Doctor of Medicine

U. S. Dispensatory Medical Colleges Noted Veterinarians

All certify the ingredients of Dr. Hess Stock Tonic to do just what I claim for them.

Nux Vomica. Digestive and Nerve Tonic.
Quassia. Digestive Tonic and Worm Expeller.
Sulphate of Iron. Blood Builder and Worm Expeller.
Sulphate of Soda. Laxative and Liver Tonic.
Common Salt. Appetizer and Expels Worms.
Epsom Salts. Laxative.
Nitrate of Potash. Stimulates Kidneys.
Charcoal. Prevents Noxious Gases.
Fenugreek. Tonic and Aromatic.

The above is carefully compounded by Dr. Hess (M. D., D. V. S.), with just enough cereal meal to make a perfect mixture.

I URGE every farmer to see to it right now that his work horses are put in condition for the hard work of spring and summer, so that when the sun shines your horses will be rid of their old coats, full of stamina and ready for business.

And don't overlook the spring pig crop—the mortgage lifters. Start them off free from disease—free from worms.

Be sure, also, that your milk cows are thoroughly conditioned for the long, heavy milking season, and that those with calf are vigorous and fit.

Remember, your stock have been cooped up for the last few months and have been on dry feed. As corn or oats, hay and fodder do not contain the laxatives and tonics so abundantly supplied in grass, your stock are pretty apt to be out of fix. Some of your animals are liable to be constipated, rough in hair, their legs may have become stocked, or they have dropsical swellings, but the most common disease of all, especially among hogs, is worms—worms.

Dr. Hess Stock Tonic

A Splendid Conditioner—A Sure Worm Expeller

Being both a doctor of medicine and a doctor of veterinary science, I know exactly what farm stock need to get them in condition for spring.

In my left hand I hold the formula of Dr. Hess Stock Tonic—showing every ingredient, what each ingredient is for, and you will notice that the U. S. Dispensatory—one of the world's greatest authorities—certifies these ingredients to do as I claim.

Look these ingredients over—*Tonics* to improve the appetite—*Blood Builders* to enrich and tone up the blood—*Laxatives* to regulate the bowels and *Vermifuges* to expel worms. I want to emphasize one fact as forcefully as I know how: Dr. Hess Stock Tonic will not only *rid your stock of worms,* but will put them in a condition *unfavorable to worm development.*

Remember, it's the cow in the pink of condition that fills the milk pail—the horse that digests his dinner that pulls on the bit—the steer with an appetite that lays on fat, and the hog that is well and free from worms that gets to be a 200-pounder in 6 months.

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel worms, that I have authorized your dealer to supply you with enough for all your stock, and if it does not do as I claim, return the empty packages and get your money back.

Now, listen, Dr. Hess Stock Tonic is never sold by peddlers, but only by reliable dealers whom you know. I save you the peddler's salary and wagon and team expenses, as these prices prove: 25-lb. pail $1.60; 100-lb. sack $5.00. Smaller packages as low as 50c. Except in Canada, the far West and the South.

Write for Free Stock Book—It's a Stunner

DR. HESS & CLARK, Ashland, Ohio

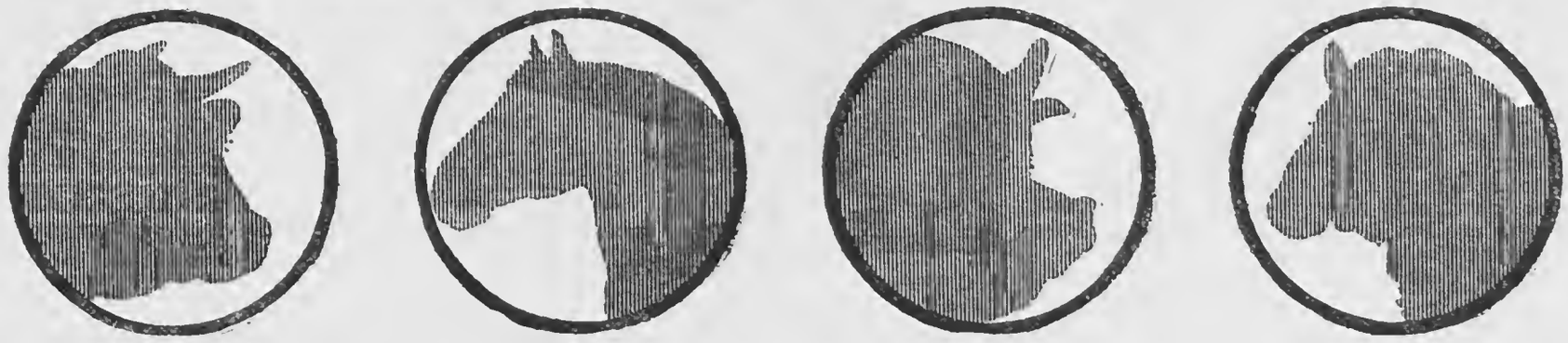
Dr. Hess Poultry Pan-a-ce-a

Makes Poultry Healthy *Makes Hens Lay*

This is a splendid tonic—it tones up the dormant egg organs and compels each hen to lay regularly. It also helps chicks grow and shortens the moulting period. It is a sure preventive against Roup, Gapes and Cholera. Costs but a penny a day to feed 30 fowls. Sold on my liberal Money-Back Guarantee. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks; or, if you will keep it in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc. Comes in handy sifting-top can. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. Guaranteed.



FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Dairy Ration With Buckwheat.

Will you give me a balanced ration for a milch cow when using buckwheat middlings? F. E. W.

If your cows are getting the ordinary mixed hay, corn fodder, and silage of most New York farms, as their roughage, a good grain ration to go with them might be composed of equal parts by weight of cornmeal, wheat feed, and buckwheat middlings. Ground oats might replace all or part of the cornmeal in this ration, and it would be made somewhat richer in protein if a portion of the buckwheat middlings was replaced by cottonseed meal. Such a combination as this, for instance, 50 pounds cornmeal; 50 pounds ground oats; 100 pounds mixed wheat feed; 75 pounds buckwheat middlings; and 25 pounds cottonseed meal. There is no end to the combinations that could be made, and those feeds which furnish the required food elements in cheapest form should, as a rule, be chosen. Buckwheat middlings is one of the best, and usually in this State, one of the cheapest of the high protein feeds. M. B. D.

Cottonseed and Wheat Bran.

Will you give a balanced ration for dairy cows from the following feedstuffs: Clover and Timothy hay, shredded fodder, corn silage, oil meal and cottonseed? How many pints of oil meal and cottonseed, testing 35 and 41% protein respectively, should be fed for cow? Which is the cheaper feed, wheat bran at $26 or cottonseed at $36? Is it necessary to feed bran to receive a big flow of milk?
Ohio. R. C. C.

You seem to have an abundant variety of roughage and a lack of variety for the grain ration. You will necessarily have to feed your cottonseed and oil meal mixed with silage, or you can purchase bran, dried brewers' grains or dried distillers' grains to lighten up the grain ration and furnish the required bulk. You will find it is more accurate to weigh your grain rations instead of measuring by the pint. A good-sized cow in full flow of milk should be able to eat one pound of oil meal, three pounds of cottonseed and five pounds of wheat bran or dried brewers' grains. Cottonseed meal is cheaper at $36 than wheat bran is at $26 per ton. It is certainly not necessary to feed wheat bran in order to get a large flow of milk. You can get just as good results or even better results with dried brewers' or distillers' grains, which furnish bulk to the ration as well. With this grain ration you should feed a liberal allowance of silage twice a day, with hay or corn fodder at noon, the grain ration to be divided into two feeds for morning and night. C. S. G.

Improving a Ration.

Will you please tell me if I am feeding the following feeds to best advantage? I mix 200 pounds wheat bran, 200 pounds dried grain, 200 pounds cob meal and oats ground. Should I add 100 pounds of linseed or cottonseed meal at $2 per 100? I feed oats on straw and corn fodder as roughage. Does it pay to feed oats on straw? Would beet pulp be good dry? Cows have water in manger all times. I feed about six to eight quarts per feed twice daily. Is that enough for cows in milk? H. A. D.
New Jersey.

You are feeding plenty of feed, but you could add 100 pounds each of cottonseed and oil meal to your mixture to good advantage. In order to get the full benefit from beet pulp it should be soaked, but it may be fed dry with fairly good results. Oats should be ground for cow feed in order to make them more digestible. You cannot expect a very large flow of milk when cows are fed straw and corn fodder for roughage. Cows require good early cut mixed or clover hay or Alfalfa or silage in order to produce a good flow of milk profitably. C. S. G.

Ration With Beet Pulp.

Will you give me a good feed with beet pulp and with malt sprouts for cows in all stages of lactation? Most of them have been coming fresh since the first part of September up to the present time. I sell my milk and would like to get as big a flow as possible. Beet pulp costs $1.50 per cwt.; sprouts $1.30; bran $1.30; middlings $1.50. I can get cottonseed meal, oil meal and gluten. At present I feed wheat bran, middlings and cornmeal to all of my cows; half of them I feed sprouts and the other half beet pulp. I give them clover and Timothy hay and cornstalks and Alfalfa hay once a day. Could you tell me where I could buy Alfalfa a little cheaper than $27 per ton, as that is what it costs me now, and I can get No. 1 cow hay, clover and Timothy at $18 per ton. M. T.
New Jersey.

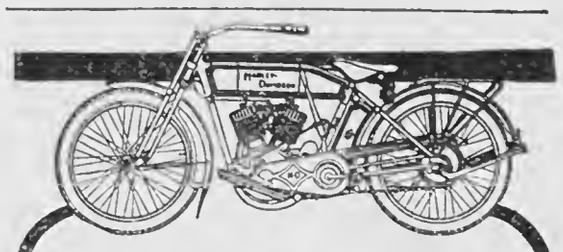
I would recommend four pounds beet pulp, two pounds cottonseed meal, four pounds dried brewers' grains, and two pounds cornmeal. Feed as much of this mixture as your cows require to produce the desired flow of milk. My experience with malt sprouts has not been very satisfactory, as they failed to produce the results which were obtained by feeding dried beet pulp and dried brewers' grains. I cannot see why you should feed oil meal with dried beet pulp, as it is too expensive to feed unless it is required as a laxative as a rule. Cows which have a good supply of soaked beet pulp do not require any other laxative feed, the greatest objection to the use of the oil meal being its cost. The ration given above will produce a good flow of milk, but no cottonseed or cornmeal should be fed to cows within two weeks after they freshen. The price you are paying for Alfalfa hay seems to be about the market price, and I do not know where you can buy it any cheaper. C. S. G.

Bean Pods for Cows.

I have a quantity of bean pods. Will it be safe to feed them to my cows that are due to freshen in March and April? I have never fed any. Some of my neighbors tell me they are good for cows.
Newfield, N. Y. R. W. B.

Bean pods may safely be fed to cows at any time. They are relished by cows, and contain considerable more nourishment than Timothy hay or corn fodder. If not fed in too large a quantity cattle will waste but a comparatively small amount of bean fodder, although it looks hard and unappetizing. C. L. M.

ROOTS FOR COWS.—On page 98 I saw an inquiry signed J. W. F., Delaware, asking whether beets and carrots can be fed to cows without making the milk taste. I worked for one man over 40 years, and fed all kinds of vegetables, and never had any trouble with milk being flavored. There is nothing better for cattle than good sugar beets and carrots. Carrots are good for horses, and why not for cows? If you want a large flow of milk, there is nothing that I ever found equal to cabbage, to be fed just as soon as milking is finished, never before. If given before it will spoil the milk. I have fed a bushel basketful to each cow at one feed, and never spoiled any milk.
Rhode Island. J. H. A.



Harley-Davidson Step-Starter

one of the many exclusive patented features of the 1914 Harley-Davidson permits the machine to be started with the rider in the saddle and both wheels on the ground. Other exclusive improvements are Selective Two-Speed--Double Brake Control--Double Control of Free Wheel--Folding Foot Boards--Full-Floteing Seat. Write for descriptive literature.

Harley-Davidson Motor Co.,
841 A Street MILWAUKEE, WIS.

Cutaway (CLARK)

Disk Tools for Intensive Tillage

There isn't a farmer in America but who should own at least one CUTAWAY (CLARK) disk harrow or plow.

Over 100 Styles and Sizes

Ask us about the DOUBLE ACTION ENGINE HARROW, the DOUBLE ACTION—REGULAR, the DOUBLE ACTION—EXTENSION HEAD—(for orchard work), the SINGLE ACTION—REGULAR, the SINGLE ACTION—EXTENSION HEAD—(for orchard work), the BUSH AND BOG PLOW, the CORN AND COTTON HARROW, the RIGHT LAP PLOW, the CALIFORNIA ORCHARD PLOW, or the one horse harrows and cultivators, whichever it may be that you need. Ask your dealer to show you a CUTAWAY (CLARK) machine. Do not accept a substitute. Write us for catalog

The Cutaway Harrow Company
Maker of the original CLARK disk harrows and plows
839 Main Street, Higganum, Conn.

BOOK FREE
"The Soil and Intensive Tillage"

The disks are forged sharp

DE LAVAL

Butter Triumphs as Usual At National Dairy Show

BUTTER made from cream separated by De Laval Separators made the usual clean sweep of all highest awards at the great 1913 Chicago National Dairy Show and Annual Convention of the National Butter-makers' Association, just as it has always done every year since the organization of the National Association in 1892.

Whole Milk Creamery Butter. The highest score in this class was awarded to O. N. Peterson, of Rapidan, Minn., a De Laval user, as were 187 out of the 200 whole milk creamery entries.

Gathered Cream Creamery Butter. The highest score in the gathered cream factory-made butter class was given R. O. Brye, of the Readstown Creamery Co., Readstown, Wis., this prize-winning butter being made from the cream of farm patrons all using De Laval Separators.

Farm Dairy Butter. The highest score in this class was awarded to Mrs. D. H. Turnbull, of Monmouth, Ill., whose family has been using De Laval Cream Separators for over twenty years.

De Laval Superiority Indisputable. The evidence of the superiority of De Laval cream and butter as demonstrated by the winning of all highest awards the world over for thirty years, is so overwhelming as to be indisputable and unanswerable. A De Laval catalog, to be had for the asking, will make plain the reasons for it.

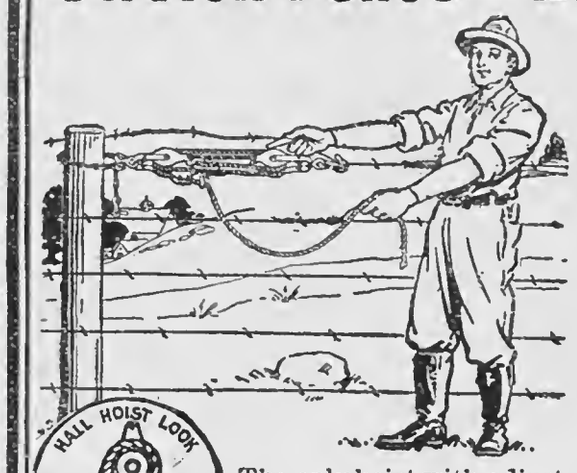
THE DE LAVAL SEPARATOR CO.
NEW YORK CHICAGO SAN FRANCISCO SEATTLE

For CULVERTS, TANKS, SILOS AND ROOFING Use

APOLLO
BEST BLOOM
GALVANIZED SHEETS

Careful manufacture and good galvanizing insure maximum service from APOLLO Sheets. APOLLO Roofing and Siding Products are sold by weight, by leading dealers. Send for "Better Buildings" booklet.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

Stretch Fence—Lift Wagon Boxes



The only hoist with adjustable safety lock for various sizes of rope. Positively holds load, even if rope is worn, wet or greasy.

Here is a powerful wire stretcher, which also comes in handy every day lifting heavy loads. Two practical tools in one.

HALL **Jumbo Safety Hoist and Wire Stretcher**

Enables one man to change wagon boxes, stretch wire and handle heavy loads easily.
It elevates, lowers, locks and unlocks with one rope only—holds the load at any point. Heavier the load, tighter the grip. Jumbo—Capacity, 1500 lbs. $2.00.
Other hoists 400 lbs. to 4 tons.
See your hardware dealer or
Write today for FREE BOOK.
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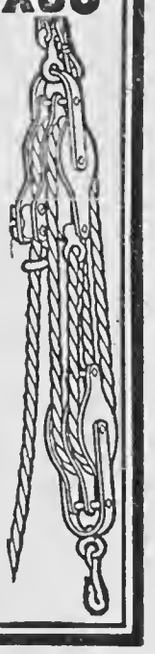


Phelps' Book Is Yours For The Asking

Every Buggy Sold on 30 Days' FREE Trial
Absolutely Guaranteed for 2 Full Years

H. C. Phelps, *President*

It Shows You How to Save $25.00 to $40.00

Don't doubt this! Send for this book *and prove* it to yourself! Do that today! It costs you nothing. 200,000 men know *by experience* that this is *so!* They saved at least $25.00 to $40.00 on every buggy they bought *after* they *got Phelps' book.* And they got the best buggies made—just as you will. Buggies made of the finest Second-Growth Hickory—*split*, not sawed. Phelps makes the famous—

SPLIT HICKORY BUGGY

Think of getting a fine buggy—*better* than others your friends pay $25.00 to $40.00 more for. A buggy that will make you the envy of all your fellows. Think of getting it to try out on the road free for 30 days and guaranteed for 2 years! Write for this book today.
And Phelps offers you the choice of an immense number of 1914 buggy styles to choose from. More than 40 local carriage shops "rolled into one" could ever show you. Address,
H. C. Phelps, *President*, The Ohio Carriage Mfg. Co., Station 290, Columbus, Ohio

The Farm Cat.

In these days when so much is being put forth by bird lovers against the cat, it is well to say something in favor of this animal. A good cat is practically the only effectual way to keep down mice in a barn, warehouse or any place where grains, hay, and other feed stuffs are stored. The good cat—that's the question! My own experience is that the only one is an emasculated male. He is always at home and with me is on his job, and woe betide the night serenader who comes up against him, for he is always sleek and fat, and weighs from 10 to 12 pounds. But this is not all. He should be trained. Much can be done along this line. If a cat is praised and petted when it catches a mouse or rat, and scolded when he catches a bird, and if possible has the bird taken away, he will soon learn to know the difference. He may also be taught to help in hunting about the barn. We have such a cat. He was about the most despicable-looking thing in the cat line I ever saw. He soon developed into as handsome a cat as one could wish. During the Summer he brings in from one to a half dozen field mice a day. Frequently he will not eat one until he has showed it to us and been praised for it. Only a few night ago he brought in one after we had retired, and kept up his "meous" until he had been told: "Good cat, Tip." A female cat makes a good mouser, but when she has a half dozen kittens to nurse is apt to catch chickens, and do other naughty things, besides; one's cat family is apt to increase too fast. The practice of dumping surplus cats on other people or out in the woods cannot be too strongly condemned on the ground of cruelty as well as making them a nuisance to the community. S.

Oregon

Struggle With a Florida Horse.

I am pleased with your advice about coming to Florida. I have been here four years, and like it very much, but I spent $100 and six weeks' time looking round before locating. As for poultry raising, feeds are higher and eggs and chickens cheaper than in the North.

The article on "The Cast Horse," on page 101, reminds me of how I have just saved my 12-year-old mare. She had been getting very thin, and finally caught a foot under a root in edge of lake and laid several hours. I got help and rolled her over and over a dozen times out to hard ground, and worked over her for near 24 hours, but could not get her up. Neighbors all said it was no use. Then I cut four small trees and made stout poles 11 feet long, bored hole in small ends and put a one-half-inch bolt 12 inches long through them; set this up over horse with the butts in a square of about six feet. I nailed two boards across six feet from ground, and laid two boards on these for a floor. I took three-inch belt off gasoline engine and nailed ends to each end of a 2x4 30 inches long; laid middle of belt over middle of 2x4, and passed the two bights of belt under horse and over ends of another 2x4. This gave four widths of belt to carry her weight. I used plow lines for breeching and breast strap, hitched one end of a long-linked trace chain to middle of each 2x4, driving nails so belt and chain could not slip out of place. Then I mounted the floor, and with a piece f tire iron for a lever through the links of the chains, passed up between the two floor boards, very easily raised her, one link at a time. When part the way up she began to struggle hard, but the bolt through top of poles held them firm, and she was soon on her feet, and after feeding and rubbing her legs, was able to walk to barn. I had her teeth filed, and she is getting strong again.

When I got her three years ago she would not plow; would do anything else, but when she found a plow behind her, would back, and if we didn't pull the plow back would tangle up in the chains and fall down. After much advice and many failures I cured her very easily. I tied a piece of cord to one hame, then back under her tail, crupper-like, then through ring in other hame, and tied the other end to plow handle. When she began to back I pulled on the cord. She stopped and looked back to see what the matter was, then she tried to back again with same result. In half an hour she was cured, and never backs now unless I ask her to. A small pulley would be better than the hame-ring, but I didn't find it neeessary. A. G. K.

Winter Haven, Fla.

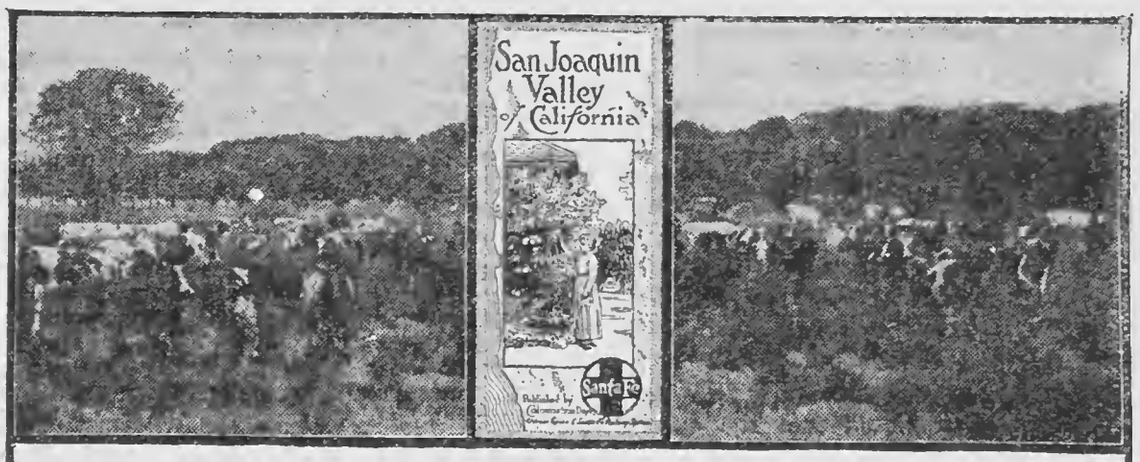
Farming in Tioga County, N. Y.

I would like your opinion regarding a Michigan farmer locating in Tioga Co., N. Y. My means are limited. Would you suggest investing in sheep, cows, or both? What would be one year's profit from 100 sheep, provided one raised all the feed? A. H. G.

Covert, Mich.

As a lifelong resident of Tioga County, N. Y., I should be glad to welcome you "into our midst." This county has many good farms that can be bought at very reasonable prices, and that will well repay any amount of energy, brains, and capital, that are likely to be invested in them. Incidentally, also, it has some farms that would compel a jack rabbit to take Summer boarders in order to support his family. If you have a reasonable amount of capacity; know how to farm, and possess the strength and energy which are absolutely essential to success anywhere. I know of no better opportunities in this State than are offered by Tioga County. On the other hand, if you have an idea that good land here is to be bought for a song, that crops will grow with little attention, and will market themselves, you will be disappointed if you come. Farms are undoubtedly sold here at prices much nearer their potential value than are those of the Middle West, but potential value is not realized value, and he who realizes upon these farms will do it by hard work, hard sense, and hard thinking.

Markets for the production from both cows and sheep are good here, and money is made from both; as well as lost in both. Despite the many glowing accounts of what should be, might be, and possibly, sometime, may be, the margin of profit in live-stock growing in this State is very small, and if it were not for the value of their by-products in maintaining soil fertility, cattle of all kinds would be much fewer in number than they are now. Whether sheep, or cows, or both, should be kept upon a farm depends upon the farm and the farmer; without knowing both, no definite advice of value could be given. A neighbor who is a good farmer, upon a good farm, and has always kept sheep, tells me that under present conditions they should net from $2 to $3 each per year. It has been a common custom to reckon 10 sheep as about equivalent to one cow in cost of keeping, and probably the profits now might be fairly reckoned upon the same basis. M. B. D.



100,000 Families will move to California

within two years.

That is a conservative estimate. Thousands of people are making their plans to go to California during the great Expositions, and many will remain. By the end of 1915 the price of a good farm in the fertile San Joaquin Valley will have greatly advanced.

This is the carefully considered conclusion of those having the greatest possible information on the subject.

Where is the man who does not want a California home? Now is the time to get it. You can buy choice land of proven fertility and proven adaptability for a price that will never be lower. You can get it on terms that will allow you to make most of the payments out of the land itself. By developing now you should earn big profits on the farm and a heavy dividend on the advanced value within a period of three years.

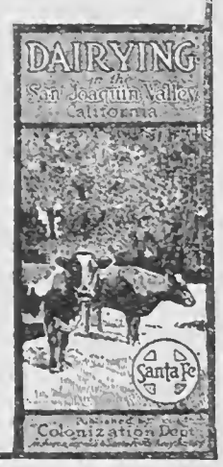
There is no space here to tell you of the wonders of the San Joaquin Valley. That is why we urge you to send to-day for our books describing in detail the valley as a whole and the special industries, "Dairying" and "Poultry-raising," which have proven so profitable as major crops or as quick money-getters until an orchard can be developed.

You are under no obligation to go further; but you will get much information that must be of value to you if you will write for these books to-day and read them carefully. Then, if you wish, I will be glad to give you first-hand information about the several sections of the valley, the value of the land, the crops best adapted to the various sections, and anything else that you care to know.

I also will tell you of the work of the Santa Fe Agricultural Department, which furnishes expert advice to those who are on the ground, and this without charge.

A post card will bring the books.

C. L. Seagraves,
General Colonization Agent, Atchison, Topeka & Santa Fe Railway, 2209 Railway Exchange, Chicago.



DAIRY FARMERS WANTED

THE Southeastern States need more milk, cream and butter producers. Each year $32,500,000 worth of Northern dairy products are shipped into the South. You can make money in this many crop, all the year-grazing country. Ample rain, (irrigation unnecessary) mild winters and pleasant summers make living enjoyable and highly profitable.

GOOD LAND $15 AN ACRE UP

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AILING ANIMALS.

Lameness.

I have bought a horse six years old. He is hurt in his front ankle. He stepped on a round stone and threw his ankle forward so that it stands out on his hoof in a big bunch. He did it a month ago. J. M.

A boot and brace should be made by the harness maker to keep the fetlock joint in place. Hand rub the part three times daily and then put on the boot. If that plan does not succeed it may be that a veterinarian would find the operation of tenotomy (cutting of the tendons) the right treatment in this condition. It perfectly succeeds in many cases of knuckling. A. S. A.

Indigestion.

I have a horse 15 or 16 years old, which was in good flesh last Spring, but after being on pasture for a couple of months, it went down considerably, notwithstanding the fact that it was fed four quarts of oats morning and evening. I have been feeding it commercial feeds, but it does not seem to pick up. When in good flesh it weighs about 1,100 pounds. It does not seem to digest oats properly, which is one reason I have been feeding it soft feed. F. J. K.
Pennsylvania.

Have the teeth attended to by a qualified veterinarian, as the old horse cannot properly masticate feed. Then feed whole oats and wheat bran along with the best of hay, and if possible add carrots. Allow one pound of oats for each hundred pounds of body weight, and a like amount of hay as a day's ration, and increase the feed slightly as improvement takes place. Make the horse work every day, or at least take abundant exercise every day. If the coat is long and coarse, either clip the horse or remove the hair from the belly and from the legs above knees and hocks. A. S. A.

Warm Water for Fresh Cow.

Is it necessary to give a cow that has just freshened warm water for drinking, for two or three days, or is cold water just as good? A. S.
New York.

It is not necessary; but it is thought best to at least take the chill off the drinking water. Certainly ice cold water should not be offered. It is usual to give the newly calved cow a drink of bran, and oatmeal in warm water well sweetened with molasses. This is good for her, strengthening and laxative. A. S. A.

Fistula.

I have a horse seven years old that has been treated by local physicians. He has a sore on his lower jaw which opens and runs every two weeks. The veterinarian told me to burn it with caustic. I burned it three times and it does no good. He has had this sore two years. It does not bother him in eating and his teeth are all solid. I cannot find any hole in jaw bone. What can be done for it? H. F.
Ohio.

Home treatment will not avail in such a case of fistula. The discharging pipe connects with the salivary duct (Steno's) or with a diseased molar tooth, or with diseased jawbone. Such a case should be placed in a veterinary hospital for surgical treatment. A. S. A.

Swollen Knee.

My horse has a swollen knee caused by hitting on the manger. What can be done for it? M. O.
New Jersey.

If the swelling has been there for some time, and has become hard and does not lessen in size when the horse takes plenty of exercise, it is unlikely that treatment will do much good. Make it impossible for the horse to further bruise the knee. Clip off the hair and each other day give the joint a thorough rubbing with oleate of mercury. A. S. A.

Malignant Œdema.

January 1 my filly had a swelling along the side of face from the angle of the mouth to about the second molar about two inches in diameter. January 2 swelling involved both sides and face, jaws partly open, tongue protruding and swollen. By night head was enormously swollen clear to the neck, sloughing of mucous membrane, very bad odor; January 3, morning, dead. She was with other colts in a covered yard; had hay, straw, corn fodder and grain in good condition. There was no other swelling, and she was apparently all right December 31. Can you tell me the disease and remedy?
New York. W. W. C.

A scratch or wound became invaded by the germs which cause malignant œdema and death resulted. The swellings should have been scarified at once, swabbed with disinfectant, especially tincture of iodine, and the tincture might also have been injected into the tissues. Quinine should have been given internally along with stimulant, but such cases generally prove fatal. A. S. A.

Supernumerary Teat.

I have a three-year-old heifer coming fresh, second calf, in March. She has a double teat with two openings, one one-half inch shorter than the other. It makes it disagreeable to milk. Will you advise me about this? How long should she go dry? F. J. S.
Ohio.

The heifer should go dry for six weeks before calving and during that time a qualified veterinarian might obliterate the duct in the small teat; but this cannot safely be done when the heifer is giving milk, nor should such an operation be attempted by the owner. A. S. A.

Lameness.

I have a horse that is in fine condition, about eight years old, but is lame in his left hind leg. There are hard lumps in joints. He has been this way for quite a while. He hitches or hops when made to trot, but does not go very lame when walking. What is best to do for him?
Long Island. H. S. L.

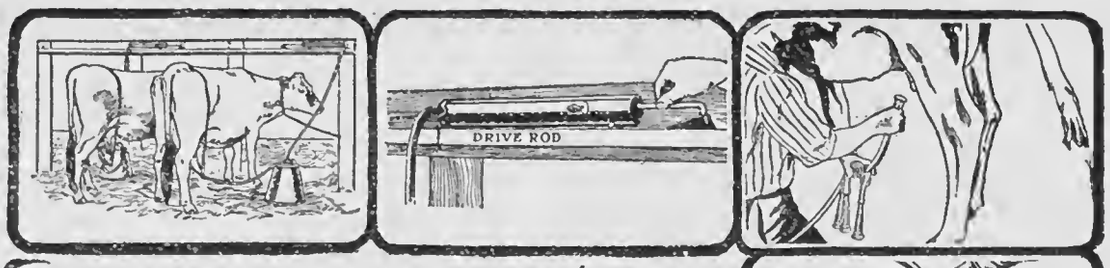
Bone spavin and ringbone appear to be present and a graduate veterinarian should be employed to fire and blister the parts. Then give the horse at least six weeks of absolute rest tied up in a narrow stall. A. S. A.

Training Dog to Harness.

I have a three-year-old Saint Bernard dog which I would like to train pulling a small wagon for the children, but have been told the dog is too old and must be altered, and should buy a billy goat. Do you think the dog could be trained? Could I use a milch goat for that purpose, or must it be a billy? E. G.
New Jersey.

The dog may be successfully trained and should not be altered. That operation will make him a fat, sluggish, good-for-nothing animated doormat. An altered goat makes a good harness animal for children, but don't use a billy or milch goat. A. S. A.

PAT and Mike had got half way around the menagerie tent when they came to an opening marked "exit." "Wonder what kind of a baste that is?" said Pat. "We'll go in and see, anyhow," said Mike, and next moment they found themselves out under the stars.—Boston Transcript.



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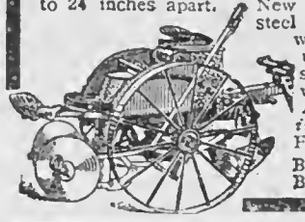

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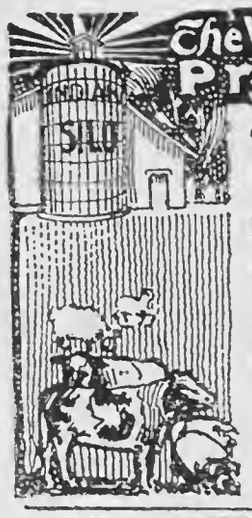

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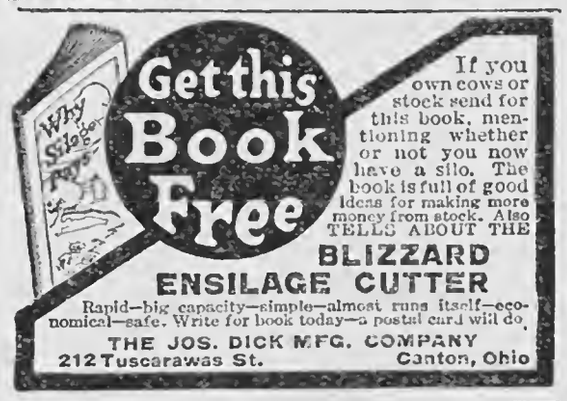

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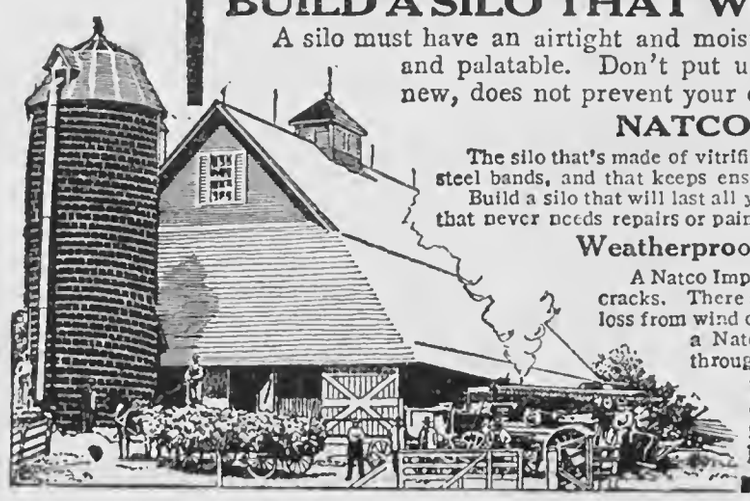

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The Henyard.

THE EGG-LAYING CONTEST.

The tenth week 851 eggs were laid, 25 less than last week. The White Leghorns are the ones responsible for these losses; 25 pens, 250 birds, produced only 66 eggs in a week; 10 of these pens did not produce an egg. The other eight pens of White Leghorns laid only 170 eggs, a fraction over two eggs each in the week. Leghorns are not living up to their reputation as Winter layers, obtained in previous contests, but they will be shelling out eggs later when the other breeds are broody.

In the home yards of White Leghorn breeders all about me, there has been a similar falling off. As housing and food are the same as before, it must be or at least it is reasonable to suppose, that weather conditions are more or less responsible for the poor showing. But here comes in the pertinent inquiry, why do not the same weather conditions also affect the egg output of the White Wyandottes, the R. I. Reds, etc.? If anyone can answer this I would be glad to have him, I confess that I cannot, except on the supposition that Leghorns are more susceptible to weather conditions than the larger breeds. Tom Barron's White Wyandottes outlaid all other pens again, as they have for six consecutive weeks. Their output for the week was 51, and their total to date 396.

Merrythought Farm White Wyandottes are second with a score of 37, and Dearborn & Sharpe's S. C. Reds are third with a record of 33. White Leghorns come in fourth, the pen from Storrs Agricultural Station laying 31. Below are some of the scores made during the week, and the totals:

	Week	Total
BARRED ROCKS.		
F. L. Tuttle, Massachusetts...	10	69
A. B. Hall, Connecticut.....	3	47
Waveny Farm, Connecticut....	1	27
J. F. Francais, Long Island...	24	228
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	10	73
W. C. Morgan, Connecticut....	0	55
WHITE WYANDOTTES.		
Tom Barron, England.....	51	396
Neale Bros., Rhode Island....	20	292
Merrythought Farm, Connecticut	37	271
West Mt. Poultry Yards, Con-Connecticut	17	171
D. J. Ryan & Son, Connecticut	28	103
BUFF WYANDOTTES.		
American Buff Wyandotte Club, New York	16	72
Dr. N. W. Sanhorn, Massachusetts	10	61
Dr. N. W. Sanborn, Massachusetts	12	22
H. E. Hamilton, Connecticut...	6	11
COLUMBIAN WYANDOTTES.		
Natl. Col. Wyan. Club, Massachusetts	14	72
SINGLE COMB REDS.		
Dr. J. A. Fritchey, Pennsylvania	29	203
Pinecrest Orchard, Massachusetts	11	160
Dearborn & Sharpe, New York.	33	150
Colonial Farm, New Hampshire	9	147
J. S. Gillespie, Connecticut....	24	144
Harry B. Cook, Connecticut...	15	113
A. B. Brundage, Connecticut..	19	100
ROSE COMB REDS.		
Glenview Farm, Connecticut...	25	140
C. S. Scoville, Connecticut.....	8	117
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut....	27	342
Storrs Agr. Sta., Connecticut..	31	295
Cecil Guernsey, New York.....	21	237
Tom Barron, England.....	9	206
Storrs Agr. Sta., Connecticut..	22	188
Marwood Plty. Farm, Pennsylvania	21	188
Storrs Agr. Sta., Connecticut..	17	155
Bonnie Brook Farm, New York	8	130
Storrs Agr. Sta., Connecticut..	4	122
F. M. Peasley, Connecticut....	1	121
P. G. Platt, Pennsylvania....	5	107
BUFF LEGHORNS.		
Wolverine Plty Farms, Michigan	11	60
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut.....	0	4
BUFF ORPINGTONS.		
O. Wilson, West Virginia.....	4	21
WHITE ORPINGTONS.		
P. A. Demgar, New York.....	4	32
DUNGHILLS.		
H. W. Collingwood, New Jersey	3	3
David Hine, Connecticut.....	13	58
David Hine, Connecticut.....	18	64
MIXED BREEDS.		
"Profitable Poultry," Massachsuetts	18	149
"Profitable Poultry," Massachusetts	19	129

The White Laced Red Cornish and the Silver Campines have not laid as yet

GEO. A. COSGROVE.

Hens on Strike.

Our hens seem to be on a strike so far this Winter. We received only a few eggs in October and none in November or December. We have about 55 hens and probably 70 pullets, the pullets hatched in March, April and May. All Fall and until the snow came the chickens ran to the stacks, getting barley, wheat, Alfalfa and small amount of millet. Since the snow came we have fed in the houses, cooked barley about eight in the morning. When it warms up we turn into the scratching pens and feed wheat in the straw, not thrashed. We also give them warm skim-milk each morning. At noon we feed sugar beets and at night we feed part corn and part barley. On going to roost at night chickens' crops are well filled. We live 30 miles from town and it is hard to get other feed. Is this feed all right?

Colorado. MRS. J. L. A.

I am afraid that 30 miles from a feed store would put most Eastern poultrymen out of business, and it is evidently a little handicap to you. Your grain rations are a little too wide for best results with poultry; that is, they contain too large a proportion of the fattening elements in food and too little of the egg, milk, and muscle-making elements. Barley, corn, wheat, and millet are all of a fattening nature, and need to be balanced by meat in some form, skim-milk, and the higher protein grain feeds like gluten, oil meal, buckwheat middlings, wheat bran and middlings, dried brewers' grains, etc. Your skim-milk and Alfalfa fall into the high protein class, but your hens eat too little of them in proportion to the other foods that they are getting. If you cannot feed a mash of ground grains containing those rich in protein, perhaps you can procure beef scrap at a reasonable price, or possibly fresh meat of some kind. I would feed all the skim-milk that the hens would eat and replace the sugar beets with Alfalfa leaves, either dry or steamed, as the hens would eat them best. You can in this way at least partially balance your grain ration. M. B. D.

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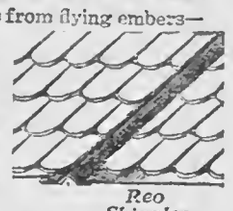

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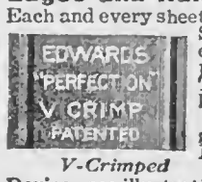

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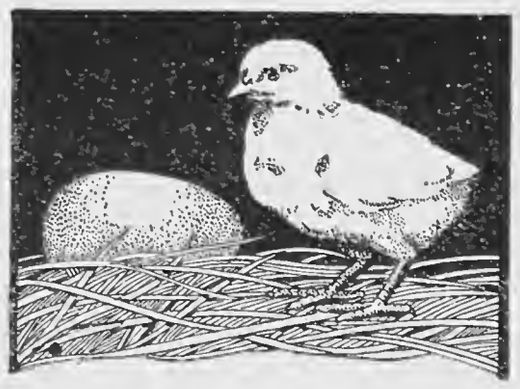

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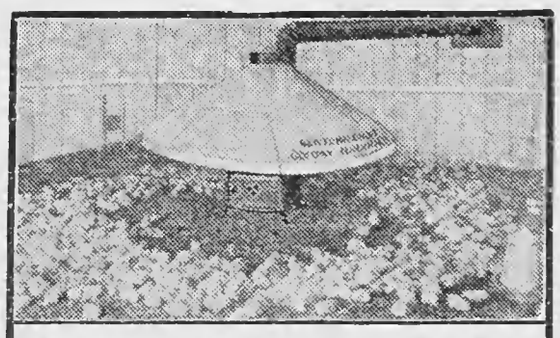

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The Henyard.

Type of White Wyandotte.

Will you give distinguishing marks of White Wyandottes? H. A. F.
Trenton, N. J.

The one distinguishing mark is the comb; this is of the Rose type. In other points they so closely resemble the White Plymouth Rocks as to be undistinguishable from them, save by an expert, and I doubt if any expert would care to risk his reputation in a mixed flock, if he could not see the combs. The plumage is entirely white, the beak, shanks, and toes yellow, and the weight about a pound less than that of the Plymouth Rocks. The contour of the typical Wyandotte differs from that of the typical Plymouth Rock, the latter fowl being more "rangy." This cannot be well shown, however, except by illustration or from life. M. B. D.

Grain Mixture for Hens.

Can you give me a good proportion for the following kind of grain? Bran, hominy, Alfalfa meal, and beef scraps. My hens are Barred P. Rocks. I keep the meal before them all the time and feed wheat in the morning and cracked corn at night. Would you advise feeding gluten with the meal? If so, how much?
H. P. H.

The feeds you mention, alone, would not make a well-balanced ration for hens. I would suggest, instead, 100 pounds each of corn meal (instead of hominy), wheat bran, wheat middlings, gluten feed, and beef scrap. To this, 50 pounds of Alfalfa meal might be added. The somewhat more elaborate Cornell formula is: 60 pounds cornmeal, 60 pounds wheat middlings, 30 pounds wheat bran, 10 pounds Alfalfa meal, 10 pounds oil meal, 50 pounds beef scrap, and one pound of salt. I like gluten as one of the constituents of a dry mash.
M. B. D.

Hens Do Not Lay.

Can you tell me why my hens do not lay? I have 60 White Wyandotte pullets in new house 12x24 feet. They were hatched in early May, grew well and were put into house in September. The house has four windows facing south, one being of muslin. The floor is of natural earth and dry. I feed wheat, corn and oats with grit, shells, charcoal and meat scraps constantly before them as well as fresh water. They are not lousy. They lay only three or four eggs a day. Last year at this time under the same conditions 36 hens laid 18 to 24 eggs per day. A. S. A.
Alstead, N. H.

It would be difficult to find an excuse for your pullets under the conditions you describe, though you do not mention giving them any ground grains in the shape of either dry or wet mash. This is needed for best results with poultry, and I presume that you are feeding such a mash. It is true that hens will sometimes lay well on whole grains alone, but, as a rule, they will do far better with some of their food in the shape of more easily digested and assimilated ground grain. Hens and pullets sometimes refuse to lay well even though conditions seem ideal. The defect is sometimes in the strain, they are not "bred to lay," and sometimes it is impossible to make a good guess as to why they are derelict.

Sweet Potatoes and Hens

I noted an inquiry as to sweet potatoes drying up cows, and Mr. Massey's opinion to the contrary. There is a widespread and ancient belief throughout this section that sweet potatoes will stop hens from laying, and doubtless the belief as to drying cows is derived from this. Sweet potatoes are excellent hog feed, and are readily sought by swine, but Irish potatoes are not. A hog will root up an Irish potato patch and bite a small piece out of every potato and then drop it. Sweet potatoes are wholesome and fattening to both man and beast, and are practically the bread of many poor people throughout the country districts, during Fall and Winter. The idea undoubtedly originated in the observation of people that soon after chickens getting cooked potatoes they quit or fell off in laying, which, as potatoes come in in the Fall, they would have done anyway, it being simply a coincidence that potatoes mature about the time of fowls going into the molt, and has about the same amount of influence on them as the moon has on the growth of crops. You can easily learn of this superstition by making the inquiry, and doubtless you will get answers from all over the South saying sweet potatoes will make hens stop laying, though, so far as I know, it has never been tried to see anything about it, and there is no reason to feed them, as they pay better in hogs or cows. Pumpkins are not popular in the South except for stock feed, as they are about as good a substitute for yellow yam as a mixture of corn and wheat is for buckwheat. M. A. P.
Alabama.

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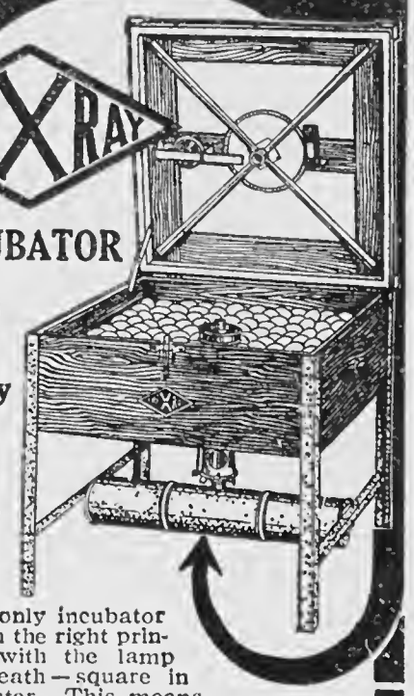

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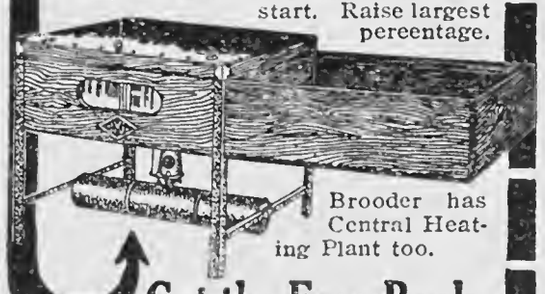

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THE MATING OF POULTRY.

At this season of each year the poultryman is interested in selecting and mating up his breeding pens, for all improvement must come that way. The first thing to consider is the purpose, just what are the definite results you are after. The beginner usually has some idea in his mind, either feathers for the showroom, or eggs and broilers for market. Also, the breeder who has been working for a dozen or more years recognizes certain tendencies in his flock which he wishes to correct or change, and this must be accomplished by careful selection and mating. Whatever you do breed for, utility or fancy points, never under any stress of circumstances breed from a weak male or female bird, for without constitutional vigor you have nothing. The only hope for success lies in rearing vigorous stock. It is a tremendous drain on a hen's vitality to lay 200 eggs in a year, and that is what we ask of her. Only one who has followed the shows for a few years realizes the strain it is on the birds to be cooped in the show room. So it comes to this; that we must breed vigorous stock, whether we are after eggs for market, early broilers or fancy feathers for the show room.

Inbreeding and line-breeding should be left to the expert and fanciers, and the ordinary poultryman should never breed closer than two generations; that is, use the male birds hatched in 1913 on the females of 1911 and 1912. Select big strong hens, the late Fall layers if possible. Never breed from pullets, not because of immaturity, but because a good pullet that has been bred and fed right should begin laying in September and lay right through Fall and Winter, and has been under this severe strain for six months when you first think of saving her eggs for hatching. The consequence of this is, her vitality is at a low ebb; the eggs test weak, and the chicks that hatch have not the strength to live and produce healthy birds. I have often been asked whether if one had to breed from pullets, would it be better to use an old male bird, but how can the use of an old male bird bring back or restore the vitality the pullets have lost by six months' heavy egg production? If a pullet does not lay well during those six months, then she is not the type of bird I want to breed from. Only a couple of years ago a breeder of a few years' experience said he was going to sell off all of his hens, only keeping his pullets, as he had found he was keeping his old hens for several months at a loss. He realized his mistake in a single year from the trouble in rearing young stock. The greatest obstacle to success in the poultry business is in rearing chicks, getting enough young stock each year to keep the flock where it ought to be.

Other things being equal, I would use a cockerel to breed from every time, provided he is an early hatched mature bird. At one year old he is just in the height of vigor, and if kept far enough away from the hens they can be kept by themselves without fighting, or they can be mated as early as prepared. The only good argument against using a cockerel is that sometimes some defect shows after the first month, which could not be seen earlier, but they are so much more virile and active than older birds that we have 30 pens this year mated with April-hatched cockerels.

I know it is not "according to Hoyle" to discard the males after one year's use, yet my experience has been that they as a rule are sluggish, and when you find many infertile eggs in your testing, you should look for the trouble in the pens where you are using old male birds. The exception to this rule is where we have occasionally such a perfect bird that we can afford to mate him with a few hens; then I would select a few of the very best hens, and keep the chicks separate or mark them. There are many signs whereby you can recognize a vigorous bird. A strong male carries himself proudly; he is "monarch of all he surveys." Crowing is another sign of vigor; "scrappiness" is another sign of a desirable male bird. There are other signs, but if a bird is otherwise what is wanted and shows these characteristics he may safely be used to breed from. The hen's actions show her vitality; the vigorous hens are the most active, first off the roost and last to go back at night. Also a happy hen singing while at work is a good one to breed from. The early and persistent layers are always the ones with the vitality to use the feed and turn it into eggs. FLOYD Z. WHITE.

Partridge Wyandottes.

Is the Partridge Wyandotte as good an egg producer as the White or Silver Laced Wyandotte? G. F. K.
Wells River, Vt.

Partridge Wyandottes have not yet demonstrated, so far as I know, their ability to equal in egg production, either the White or the Silver Wyandottes. In the egg-laying contest at Mountain Grove, Missouri, the 30 Partridge Wyandottes averaged in 1912 only 99 eggs. In 1913 their average was 110 eggs. The Silver Wyandottes in the same years averaged 160 and 172 eggs; being exceeded in 1913 by the White Leghorns, with an average of 173 eggs. In the contest at Storrs, no Partridge Wyandottes were entered. The one pen of five Silver Wyandottes laid 783 eggs; an average of 156.6 per bird. Of course these figures do not absolutely prove that Partridge Wyandottes are always inferior to the other breeds named as egg producers, but they give us all that we have to judge by; and herein lies one of the values of egg-laying contests. GEO. A. COSGROVE.

PASSENGER: "Do I have to change cars in Chicago?" Excessively Polite Conductor: "Not necessarily so, madam. You can go back to New York, if you want to."—Life.

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PUBLISHER'S DESK

Since I received a notice of renewal for your farm paper, I take time to reply as follows:

If you are going to continue the policy of assailing, and attacking the business of other business concerns, I don't want the paper. I have been reared a farmer, now own and operate one farm, and I know at least 100 of the Strout agents are farmers, and all have suffered financial loss on account of the articles you published in your paper the past year. In my case I spent three years trying to build up an agency here, spending money I earned farming and carpentering, and when I got to a point where there was beginning to be some reimbursement and prospects of profit your articles set me back at least one year. Now I am not going to quit; no, no; my credit is good, and I will win, but the fact is I have been damaged, and I was brought up to abhor anything approaching the small business of trying to throw my brother traveler down in order to lift myself up.

We have courts for the trying and convicting of offenders, and all those offended have access to them. Therefore it is not the business of a farm paper to weigh other business concerns and decide if they are found wanting or not, and if you are going to continue this policy, discontinue the paper. If you are going to abandon it, me and my friends will take and boost the paper. H. W. M.
Hammonton, N. J.

We are sorry to differ from any man who thinks he qualifies to speak for farmers and the proper functions of farm papers. But, from our experience, the courts do not always afford protection or redress to the offended; nor do they always convict and punish offenders. Some of the worst swindles of which we have knowledge were perpetrated under perfectly legal forms.

We also differ from you on the functions of a farm paper. We do not contend that a paper should take testimony, weigh evidence, and mete out punishment to offenders; but we do hold it is the privilege and the duty of a farm paper to know when and where its subscribers are in danger of being imposed upon; and to make such facts known as will enable the subscribers and the public generally to protect themselves That is our idea of service. Any other policy, and especially the carrying of dishonest advertising, is nothing short of a conspiracy with the dishonest advertiser to exploit the subscriber. We would be glad of your help and the help of your friends in the line of this service; but we could not pay your price for the boost you could give the paper. Indeed there are situations in which friendship can be regarded only as a menace. You cannot serve two masters.

You say you have lost business because of what we have published. We would regret causing loss to any honest business, but as a farm-bred man you will hardly deny that farmers have a right to expect information imparted to them through their farm paper. In at least some instances your company has charged farm buyers from 50 to 70 per cent, of the selling price for their services. You know their schedule charges are now from 10 to 20 per cent. at least, and a recent complaint seems to indicate that farmers sometimes pay more. You must know and your employers know they cannot induce a buyer to pay 10 or 20 per cent., if he knows that he is paying it. Hence to make the deal they must keep him in the dark or deceive him. They do not let the buyer know all the conditions of the sale. They could not make sales yielding such profits if they did. We think it our duty to tell the buyer what they keep from him. If you cannot do business where such facts are known, it is your fault, not our fault.

If you have unwisely invested your earnings we are sorry. If you had come to us in time we would have been glad to advise you and serve you. When you ally yourself against the interest of those we are bound to protect, we can be of no further service to you. Your subscription is discontinued.

Mr. J. F. Freeman came to my place during the Fall of 1911, representing the Allen Nursery Co. of Rochester, N. Y., and sold my wife a bill of trees, and agreed to come and set them out and to keep them pruned for three years. Also added $5 worth of apple trees to the order that she never bought. C. F. T.
West Virginia.

The above corroborates previous complaints which have come to us about this agent Freeman, and in fact is typical of the methods of the agents. Farmers must not confuse this class of agents with the upright men selling trees in their own community year after year. Those selling "gnff" trees seldom visit a neighborhood the second time and don't ever deliver in person the trees they do sell. The court decision in the Batavia case upholds the advice we have often given tree agent victims, that they can not be compelled to pay for trees sold on the strength of false statements and should not be bluffed into doing so..

Some weeks back we referred to a scheme that was being worked by an agent of D. B. Cornell Co. of Great Barrington, Mass., in New York State. It was a scheme for selling farms or more properly a scheme to induce owners to pay for selling them whether the sale was effected or not. We have had slight modifications of the same scheme from other sources from Ostrander up and down. Now the New England papers are full of complaints arising out of the Cornell Company scheme and practice. There are many real estate agents willing to sell farms on a fair commission for their services. Why listen to specialized schemers? If you touch a red-hot iron, you are pretty sure to get burned.

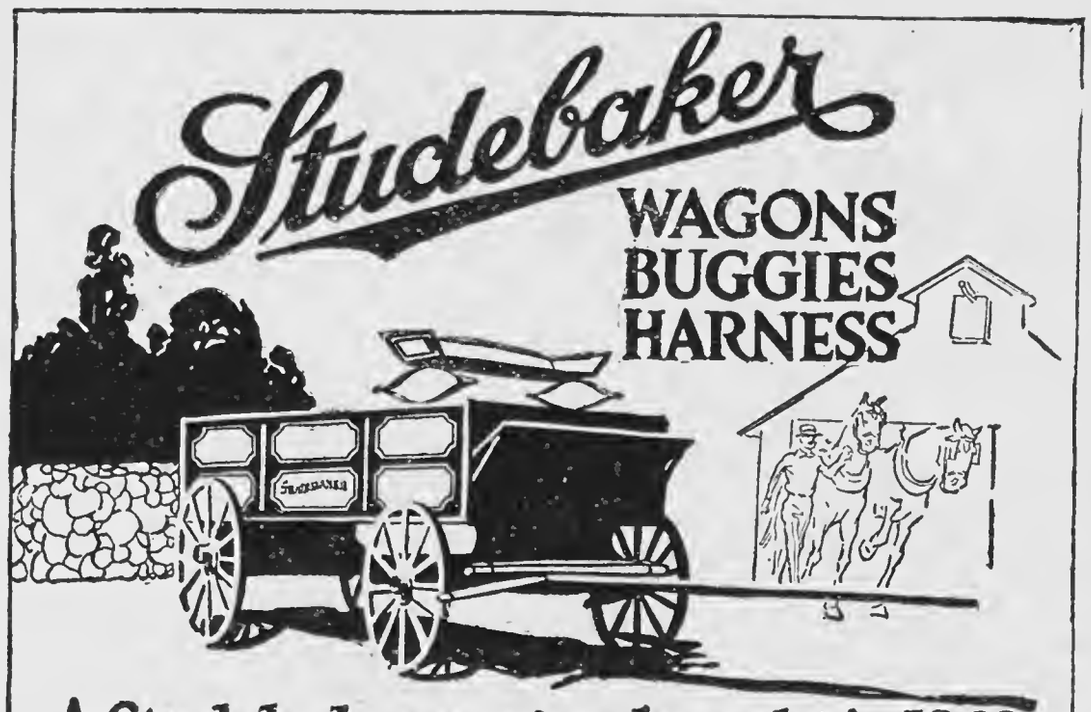
All over the country companies of capitalists and bankers are being formed with the alleged purpose of financing farm mortgages. In many instances they are called coöperative. Do not let any farmer be deceived by these representations. They are not coöperative. They are the direct opposite of coöperative principles. They are on the opposite side of the fence. In cooperative efforts the associations or companies are composed entirely of debtors. They sell their credit in land and get money to buy it or improve it. These companies are composed of and controlled by capitalists, large or small. It may be safe enough and well enough to negotiate with them for a mortgage, if the contract is definitely and carefully drawn to protect you by your own attorney, but such concerns have no right to masquerade under the pretense of coöperation.

Some time ago I received through the mail a package supposed to contain a razor from the Victor Razor Co., 412 Drexel Bldg., Chicago, Ill. There has been an epidemic of razors in our neighborhood. In the past two or three years I have received several such packages and returned them. I do not care to continue to open up such mail and take up my time re-addressing packages and returning them without pay and receive threatening letters from these people when they do not get the money promptly. Is there any way the practice can be stopped? I have not returned the last razor nor sent any money, as I do not intend to purchase the razor. Can the company compel payment or return of razor? J. R. V.
New Jersey.

We have numerous similar complaints. A surplus of this literature must be going out. A subscriber sent one of these razors to us some time ago, and we had it examined by an expert, who reported that it seemed about the quality which sold for 75 cents in retail stores. There doesn't seem to be any way to prevent them from sending out these razors and there is no obligation to return them. To do so may save some annoyance. Collection agencies will threaten to sue, but fake concerns of this sort never actually go into court. They only hope to bluff people into paying the money by threats. Our advice is to refuse to take the packages from the postoffice or complain to the Postoffice Department, Washington, D. C.

Is this a new scheme of the Thwing Co., or the Circle Magazine? Is it good or isn't it? H. D.
New York.

This inquiry is about lots at Demarest, New Jersey. It is away out in the country, where no trolleys run, and trains are not frequent. But Mr. Thwing says he has land there that he is to divide into lots. He attempts to tickle the vanity of his prospective dupes by distinguishing 100 of the first purchasers as founders; and promises them 100 per cent. profit. It is the old E. G. Lewis scheme, only Lewis promised 1,000 per cent. profit. In comparison Thwing is modest. A publisher should be tarred and feathered for exploiting the public in such a way through a paper and through the mails. J. J. D.



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AWAY back in 1868 Mitcheal Everman of Centerville, Ia. bought a Studebaker Farm Wagon for $110.00. The wagon has faithfully served *three generations* of farmers and C. H. Everman, grandson of the man who bought the wagon, writes "there is not a crack in the hubs." Perhaps you would like to read Mr. Everman's letter. It would be difficult to write a more convincing argument in favor of Studebaker Farm Wagons.

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Studebaker, South Bend, Ind.—I have a Studebaker Regular Farm Wagon that was bought in Centerville, Ia. by my Grandfather, Mitcheal Everman, in the year 1868—and has been in constant use in the family ever since. The wagon cost my grandfather $110.00 and has the same wheels, axles, skeins and bolsters on it today as when it was bought and there is not a crack in the hubs. The wagon is in reasonably good repair and I have recently been hauling 1½-yard loads of sand in it.
C. H. EVERMAN, Mystic, Ia.

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MARKETS

Wholesale Prices at New York,

Week Ending Jan. 30, 1914.

BUTTER.

Creamery, extra, lb	26	@	26¼
Good to Choice	24	@	25
Lower Grades	21	@	24
Storage	22	@	26
State Dairy, best	25	@	26
Common to Good	20	@	24
Factory	18	@	20
Packing Stock	17	@	19

Elgin, Ill., butter market firm at 28¼ cents.
Philadelphia, western creamery, 28 cents.

CHEESE.

Whole Milk, best	18	@	18¼
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	37	@	39
Common to good	34	@	36
Mixed colors, best	33	@	34
Common to good	30	@	32
Storage, best	28	@	30
Medium and low grades	23	@	26
European, fresh	25	@	30

FRESH FRUITS.

Apples—Spitzenburg, bbl	3 50	@	4 50
Spy	3 50	@	5 50
King	4 00	@	5 25
Hubbardston	3 00	@	4 50
Greening	3 50	@	5 25
Winesap	4 50	@	6 50
Newtown	5 00	@	6 25
York Imperial	3 50	@	5 50
Baldwin	3 50	@	5 25
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	2 00	@	3 75
Cranberries, Cape Cod, bbl	10 00	@	13 00
Long Island, bbl	10 00	@	12 50
Jersey, bbl	12 00	@	15 00
Jersey, crate	2 50	@	2 90
Strawberries, Fla., qt	30	@	0 75

BEANS.

Marrow, 100 lbs	4 70	@	5 25
Medium	3 60	@	3 65
Pea	3 60	@	3 65
Red Kidney	5 00	@	5 10
White Kidney	5 75	@	5 85
Yellow Eye	4 50	@	4 55
Lima, California	5 85	@	5 95

HOPS.

Prime to choice	45	@	48
Common to good	40	@	44
Pacific Coast	23	@	27
Old stock	15	@	18
German crop	63	@	72

VEGETABLES.

Potatoes—Long Island, bbl	2 50	@	2 75
Maine, 180 lbs	2 25	@	2 60
State, bulk, 180 lbs	2 25	@	2 50
European, 168 lb. bag	1 25	@	1 90
Bermuda, bbl	3 50	@	5 25
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl	1 50	@	1 75
Carrots, bbl	1 50	@	1 75
Cabbage, Danish seed, ton	24 00	@	28 00
Red	24 00	@	28 00
Imported	20 00	@	22 00
Kale, bbl	50	@	65
Lettuce, half-bbl, basket	1 50	@	3 50
Onions—White bu	1 50	@	2 25
Red, 100 lb bag	2 25	@	2 60
Okra, bu	2 00	@	2 50
Peppers, Southern, bu	1 25	@	3 00
Peas, Southern, bu	2 00	@	6 00
Shallots, bbl	1 50	@	2 50
Salsify, 100 bauches	5 00	@	6 00
Spinach, bbl	1 00	@	1 75
String Beans, bu	1 50	@	4 00
Squash, Marrow, bbl	2 25	@	2 50
Hubbard, bbl	2 25	@	3 00
New, bu	1 00	@	2 00
Egg Plants, Southern, bu	2 50	@	3 75
Tomatoes, Southern, 6 bkt. crate	1 50	@	3 50
Turnips, white, bbl	1 25	@	1 50
Rutabaga	75	@	1 25

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz	1 00	@	1 50
No. 2, box	3 00	@	3 50
Mushrooms, lb	15	@	25
Radishes, 100 bunches	2 50	@	3 50
Tomatoes, lb	20	@	25

LIVE POULTRY.

Chickens, lb	13	@	14
Fowls	15	@	16½
Roosters	11	@	11½
Ducks	17	@	18
Geese	13	@	15
Guineas, pair	60	@	65

DRESSED POULTRY.

Turkeys, fresh killed, best	24	@	25
Common to good	18	@	22
Chickens, choice broilers, lb	28	@	30
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	10	@	16
Geese	15	@	17
Squabs, doz	1 00	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	21 00	@	21 50
Standard	19 50	@	20 50
No. 2	18 00	@	19 00
No. 3	15 00	@	17 00
Clover mixed	13 00	@	19 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	8 00	@	8 50
Bulls	5 00	@	7 35
Cows	4 00	@	6 60
Calves, prime veal, 100 lbs	9 00	@	12 75
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	5 25
Lambs	7 00	@	8 25
Hogs	8 00	@	8 75

MILLFEED.

Wheat Bran, ton	24 50	@	26 00
Middlings	26 00	@	27 00
Red Dog	29 00	@	30 00
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	14	@	15
Fair to good	11	@	13
Buttermilks	08	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 05	@	..
No. 2, Red	1 01	@	..
No. 2, Hard Winter	101	@	..
Corn, as to quality, bush	70	@	71
Oats, as to weight, bush	43	@	46
Rye	65	@	69

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	42	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	30	@	35
Butter, fancy prints, lb	35	@	38
Tub, choice	27	@	30
Chickens, roasting, lb	25	@	28
Fowls	22	@	25
Turkeys	26	@	30

BOSTON WHOLESALE PRICES.

Butter, nearby creamery	30	@	32
Western creamery	28	@	29
Eggs, nearby hennery	38	@	40
Gathered fresh	35	@	37
Dressed Poultry—Fowls	19	@	20
Roasters	20	@	22
Turkeys	25	@	27
Potatoes, 2 bu. bag	1 55	@	1 70
Apples—Baldwin, bbl	3 50	@	6 00
Greening	3 00	@	5 00
Spy	3 00	@	5 50
Hay—No. 1	21 00	@	22 00
No. 2	19 50	@	20 00
No. 3	15 00	@	16 00
Stock Hay	15 00	@	15 50
Straw—Rye	18 00	@	19 00
Millfeed—Bran, ton	26 00	@	28 00
Middlings	27 00	@	29 00
Mixed Feed	27 00	@	29 00
Gluten	30 00	@	31 50
Live Stock—Milch Cows	75 00	@	125 00
Beef Cows, 100 lbs	4 50	@	5 50
Steers	7 25	@	8 75
Calves, 100 lbs	5 00	@	9 50
Hogs, 100 lbs	8 00	@	8 50

PRODUCTS, PRICES AND TRADE.

Receipts of milk at New York continue unusually large for the season. Where possible the buyers are squeezing a 10-cent reduction from the producers, but there is still considerable business on the same basis as reported previously, $1.91 for B and $1.71 to $1.81 for C.

*

It is said that 40 cheese factories in Eastern Canada have gone out of business during the past few months. The raw milk and cream are shipped to the United States duty free, while butter and cheese from Canada are subject to a tax.

*

Another drop of four cents is noted in the butter market. This makes a total decline of 10 cents on top grades and six to eight on ordinary stock since the first of this year. A range of 25½ to 26½ covers most business in choice creamery. The best storage is held nearly as high, as speculators hope for a temporary advance. Some newspapers are printing ridiculous stories of the immense losses suffered by dealers because of this drop in prices. They figure that because butter is 10 cents lower, on the possible 5,000,000 pounds now held in New York, $500,000 has been lost. But this is one of the contingencies of trade for which provision is made. An occasional dealer may be hit harder than he can stand, but the rule is that the losses are distributed widely, and merely offset a portion of the profits. Another fallacy is that the retailers are charging as much as before the wholesale price fell. Exceptional cases of this sort may be found, but the majority of retailers dropped their price as soon as there was any warrant for it in the wholesale trade.

*

The egg market is weak and unsettled. Receipts are only moderate, but buyers are holding off, taking only enough for quick current needs, evidently expecting lower prices. The movement of storage eggs is a little more free, holders making good concessions to attract business. The white eggs from nearby are running too small to bring the top figures in current quotations, few going above 35 cents wholesale.

*

The apple market is in a healthy condition, demand being steady, taking up current arrivals quite readily. Barrel stock of standard varieties wholesales from $3.50 to $4.50; fancy Winesaps about $2 above this top figure, and Newtowns about the same. This includes the Albemarle, from Virginia. This is the season when York Imperial makes the best showing at New York, and some fine specimens are seen, both from the West and Old Dominion sections.

*

What is known as the "balance of trade" with foreign countries was $629,127,531 in our favor for 1913. Our exports were valued at $2,484,311,176, and imports, $1,792,183,645. We exported food stuffs, cotton and oil to the value of $120,716,004. By far the largest item of value was cotton, 636,088,718 pounds, worth $81,953,499. Breadstuffs amounted to $11,149,494; meats and dairy products, $12,003,536; cottonseed oil, $1,913,518, and mineral oil.

*

A shipment of 200 tons of dressed beef and 500 tons of butter from New Zealand is on the way to Vancouver, B. C. The distance is about 6,500 miles.

*

Here is an incident showing the jug-handled workings of some of our laws for the alleged safeguarding of health. A package of poultry arrived at a produce house, and before it was opened an inspector came in. He demanded to see the poultry, and sorted out and condemned a liberal quantity, sprinkling it with chloride of lime. As usual he gave the dealer a certificate showing the amount condemned and this was sent to the shipper with returns for the remainder which was sold. The shipper felt that it was an outrage and accused the commission man of making a plot with the inspector to swindle him. In two or three weeks the commission man was served with a court summons to answer the charge of having putrid meat in his possession. The case was adjourned, but there is strong probability that the dealer will be fined anywhere from $50 to $500, the latter not being an unusual sum for such violations, where no "mitigating circumstances" are visible to the powers that be. In some cases the man is convicted, but the violation termed a "technical offense" and fine suspended, though just what makes the difference is not visible to the layman. W. W. H.

"For the Land's Sake, use Bowker's Fertilizers; they enrich the earth and those who till it."—*Adv.*

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5365 Beekman

Subscribers Exchange

585 ACRES—Dutchess County; choice dairy farm; two sets buildings; lake. Inquire, F. R. KEATOR, Attorney-at-Law, 22 Exchange Place, New York.

FARM FOR SALE—Near the thriving Poconos, 150 acres; nearly 100 acres timber land; abundant set of fruit of all kind; good buildings; one mile north of Bartonsville, Pa.; W., R. & E. R.R. Address E. H. BEEHLER, Bartonsville, Pa.

POULTRY AND FRUIT FARM—15 acres; 24 miles from New York; station ½ mile; seven-room house; improvements; fine view; poultry buildings, barns; artesian well; $7,500. ROSEMUND, Woodcliff Lake, N. J.

WILL EXCHANGE our cosy, modern one-family limestone house, hard-wood trim, parquette floors, all improvements, excellent condition, for farm within commuting distance of New York. Full particulars. Write MOTT, 821 East 15th St., Brooklyn, N. Y.

FINE POULTRY AND DAIRY FARM for Sale—116 acres, completely equipped with all machinery; 1,000 White Leghorn chickens; horses, cattle and hogs; 28 miles from Philadelphia, Pa. Call or write. L. R. McNEAL, Chester Springs, Pa.

FOR SALE—Fully equipped, well-paying poultry plant; 1,100 Leghorns; 80 miles from New York City; 50 acres nice land, one-eighth mile from depot and feed mill; 7-room house; hard-wood floor; hot water heat. $7,500. Address, POULTRY, care R. N.-Y., 333 West 30th St., New York.

FOR SALE—67-acre farm of extra good, dry land, suitable for dairying or gardening; good buildings, new barn; good water; extra good location, nearby market; one mile from three railroads and two street-car lines, with 5c. fare to Jamestown and Chautauqua Lake. Price, $10,000; easy terms. Also two black registered Percheron mares. JOHN M. CRANDALL, R. F. D. 83, Jamestown, N. Y.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN wishes position on commercial poultry plant. M. E. care R. N.-Y., 333 West 30th St., New York.

SINGLE MAN with experience to work on farm, must be good milker. D. C. NICHOLS, Patterson, N. Y.

WANTED—Position as manager on farm; married; temperate; best references. Address JOHN E. CLOSSEY, R. F. D. 1, Montpelier, Vt.

WANTED—Position as manager of a farm; fruit preferred; American; reliable, theoretical and experienced; immediate liberty. E. GODFREY, Jr., Tannersville, N. Y.

POSITION WANTED as farm manager or working foreman; experienced; college course; married; best references. Address J. H. C., care of C. I. F. S., Ballston Lake, N. Y., R. D. 1.

WANTED—A married man for a working foreman in herd of registered Jerseys and Ayrshires; some work with chickens; state experience and wages, including house. W. F. SHRUM, Jeannette, Pa.

WANTED—Position as superintendent or foreman of farm by mature man of experience, ability and high-class reference. BOX 100, White Lake, N. Y.

WANTED—Management of large dairy farm; five years' college training; ten years best experience; married; age 34; reliable references showing ability and character. C. A. B., care R. N.-Y., 333 West 30th St., New York.

WANTED—Man with some dairy experience for Holstein Dairy; good milker; have turbine separator, boiler and gas engine; also want general farm hand; good references required. L. E. PALMER, Manager, Richfield Springs, N. Y., R. D. 2.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

ARE YOU INTERESTED in securing a practical, up-to-date farm manager? Twenty years' experience using practical, economical business methods. Not a theorist. One who knows how, why, and can produce results. References, bond. W. A. MAYOR, 332 Indiana Ave., Watertown, N. Y.

AMERICAN, married, for the past four years in charge of one of the best herds of Channel Island cattle in the East; would like to change about April 1st; expert in A. R. feeding and every detail connected with modern dairy farm and herd management; life experience; excellent references; only a first-class proposition considered. Address COMPETENT, care R. N.-Y., 333 West 30th St., New York.

FARMER WANTED—Married man as working foreman on Long Island farm, where raising high-grade milk and general farming are done; only practical and experienced man wanted. Salary $50 month, house, garden, milk and fuel. State age, nationality, size of family, experience and references. BOX 171, SAINT JAMES, Long Island.

MAN AND WIFE—No small children; working farmer to take charge 250-acre dairy and general farm in Central New York. Must be honest, industrious and capable; education and experience in up-to-date methods preferred; unusual opportunity for right party. To receive attention answer must give full particulars regarding applicant and be in own handwriting. Address D. W., care R. N.-Y., 333 West 30th St., New York.

WANTED — Hens' feathers. A. LATHROP, Granby, Mass.

BUTTER BY PARCEL POST—5-lb. box, $2.15; 3 pounds, $1.35. GEORGE HOPKINS, Ballston Lake, N. Y.

IRON AGE POTATO PLANTER — Champion sorter; both used one season; for best exchange or offer. J. D. ENGEL, Middleburg, Md.

APPLE SCIONS from healthy trees; McIntosh and other varieties. J. H. BARCLAY, Cranbury, N. J.

CLARK'S A-5 Cutaway Disk Harrow and Reversible Sulky Disk Plow; good as new; bargain. Dr. MARK KERR, Cincinnati, Ohio.

FRUIT TREES TRIMMED by practical fruit grower and largest peach producer of Bergen County, N. J. Orchards planned and planted. Special rates for Winter contracts. H. W. COBB, Glen Rock Fruit Farms, Ridgewood, N. J.

LARGE, WHITE, STERILE EGGS shipped on day laid. Price delivered in New York and vicinity via Parcels Post, 2 dozen, $1.10; 3 dozen, $1.60; 4 dozen, $2.00. WELLS POULTRY FARM, Kittersville, Pa.

FRESH COUNTRY SAUSAGE—made entirely of pigs' meat, 5-10 lb. packages, 20c. lb; fresh spare ribs, 6 lbs., 18c. lb; smoked hams, 12 lbs., 22c. lb.; bacon, 7 lbs., 22c. lb.; product made in good old-fashioned way, and delivered postpaid in Second Zone; outside Second Zone add 1 cent per lb. THE MACKEY FARMS, Gilboa, N. Y.

FIFTEEN ACRES, finely situated on State road. LOCK BOX 7, Pine Bush, N. Y.

WANTED TO RENT—Well-equipped poultry farm; full particulars. P. SCHAUB, Ithaca, N. Y.

FOR SALE—30-acre farm, fertile land; good buildings; never-failing water supply; desirable home. H. C. ISHAM, Columbia, Conn.

FOR SALE—250-acre farm in Mohawk Valley, N. Y.; excellent twelve-room house; also tenant house; four large barns; large silo; fifteen acres pine; sixty-five acres plowed; great opportunity. For particulars address MRS. CHARLOTTE SHELP, Randall, N. Y.

FOR SALE, TO SETTLE ESTATE—Extra good 127-acre 20-cow dairy farm, situated in Milton; main road, fine buildings, silo; modern conveniences; never-failing running water in pasture and buildings; fruit, sugar orchard; equipped; telephone; mail delivered; very pleasant home; stock and tools if desired. CHAS. McNALL, Milton, Vt.

Sweet Peas

A Spray of Burpee's King Edward Spencer Sweet Pea

The Burpee Collections advertised below are the choicest yet offered. Such values would be impossible even with us, had we not increased our acreage in the Beautiful Lompoc ("Little Hills") Valley, California. Here, under the direct personal care of the Resident Manager at our FLORADALE FARM—"*The Home of Flowers*"—we had the past season *one hundred and eighty acres of* SWEET PEAS *alone!* We hold the largest stocks of SELECTED "SPENCERS" in the world.

Six "Superb Spencers"

For 25 Cts. we will mail one 15-cent packet of BURPEE'S ORCHID, the most beautiful helio-mauve, which alone sold last year at 12 seeds for 25c—one regular 10-cent packet (40 to 50 seeds) each of BEATRICE SPENCER, deep pink; GEORGE HERBERT, rosy carmine; MRS. C. W. BREADMORE, cream edged rose; STIRLING STENT, best glowing salmon-orange; also one large packet (90 to 100 seeds) of The New Burpee Blend of Surpassingly Superb Spencers for 1914, which is *absolutely unequaled*. With each collection we enclose our Leaflet on culture. Purchased separately, these 6 packets would cost 65 cents.

Six "Superfine Spencers"

For 25 Cts. we will mail one regular 10-cent packet (containing 40 to 50 seeds) each of APPLE BLOSSOM SPENCER, rosy-pink and white; DUPLEX SPENCER, cream-pink and apricot; ETHEL ROOSEVELT, primrose flaked rose; OTHELLO SPENCER, rich maroon; TENNANT SPENCER, beautiful mauve, and THOMAS STEVENSON, most glowing orange-scarlet.

For 50c we will mail both collections named above, and also a 15-cent packet of KING WHITE, our greatest novelty for 1914.

Eight "Elegant Spencers"

For 50 Cts. we will mail one regular packet (containing 40 to 50 seeds each and costing 10 and 15 cents per packet separately) of AURORA SPENCER, flaked orange-salmon on cream; DAINTY SPENCER, white edged rose-pink; FLORENCE NIGHTINGALE, clear soft lavender; IRISH BELLE, rich lilac flushed pink; KING EDWARD SPENCER (illustrated in this advertisement), magnificent crimson; MRS. ROUTZAHN, buff suffused light pink; QUEEN VICTORIA SPENCER, beautiful primrose, and VERMILION BRILLIANT, the best iridescent scarlet. These eight were all first named and introduced by us, and are shown painted from nature on the last cover page of Burpee's Annual for 1914.

For $1.00 we will mail all three collections as offered above, and also a 15-cent packet each of KING WHITE, our greatest novelty for 1914; and the new GIANT HERCULES, best of all warm pinks; TWENTY-TWO TESTED SPENCERS OF FINEST FLORADALE Stocks for a Dollar. This great offer could not be duplicated anywhere else in the world. When ordering it is sufficient to write for BURPEE'S SPECIAL DOLLAR BOX OF SPENCERS.

Burpee's "Seeds That Grow"

are supplied each season direct to many more planters than are the seeds of any other brand. BURPEE'S SEEDS are known the world over as the best it is possible to produce, and are acknowledged the American Standard of Excellence.

In thirty-seven years of successful seed selling we have introduced more Novelties that are now in general cultivation than have any three other firms. We produce Selected Stocks upon our own seed farms in Pennsylvania, New Jersey and California, while FORDHOOK FARMS are famous as the largest trial grounds in America. No Government Experimental Station attempts such complete trials each season, and the information here obtained is of incalculable benefit to planters everywhere. Simply send us your address plainly written and kindly name *Rural New-Yorker*. Then by first mail you will receive

The Burpee Annual for 1914

A BRIGHT NEW BOOK OF 182 PAGES—it is known as "THE SILENT SALESMAN" of the World's Largest Mail-Order Seed Trade. Bound with covers lithographed in nine colors, it shows Six Novelties and Specialties in unequaled Vegetables, and sixteen Beautiful New Flowers, including the most Superb "SPENCERS" as grown at BURPEE'S FLORADALE RANCH, the California "Home of Sweet Peas."

With hundreds of illustrations and carefully written descriptions it is a SAFE GUIDE to success in the garden, and should be consulted by every one who plants seeds, either for pleasure or profit. We are plased to mail it FREE to everyone who has a garden and asks for it. Shall we mail YOU a copy? If so, kindly mention *The Rural New-Yorker,* and write TO-DAY.

W. ATLEE BURPEE & CO., Burpee Buildings, Philadelphia

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII., No. 4242. NEW YORK, FEBRUARY 14, 1914. WEEKLY $1.00 PER YEAR.

AN EXPERIENCE WITH A TRACTOR.

Good Where It Can Pull.

Here is something about my experience with a tractor engine, plow and harrow outfit. A slick salesman who promised everything sold to me on his claims for the rig two years ago last Fall. The 25-horse engine would not pull four plows in Alfalfa sod, set eight inches deep, and at seller's expense I sent it back, and was shipped a 45-horse double cylinder oil-burning engine. It will pull provided —and here is the kernel in the nut—it has a good solid, footing, as a sod, but if it is sandy land, or wet land, or if only a cover crop on soft soil, it will *not* pull—not even its own weight at times. It is a splendid machine, and we have had very little trouble with it as a piece of machinery. We cleaned up an old apple orchard in two days by hitching the tractor in the crotch of the trees; the largest trees were first given a light charge of dynamite to loosen up the ground around the big roots.

We hitched the tractor to a heavy road grader, and two rounds in March did several miles of gravel roads more good than you would believe, thus proving that every county ought to have such an outfit to keep the roads high in the center and the ditches open.

On my farm in Monmouth County, N. J., I have demonstrated that Alfalfa is a wonderful crop, making four crops a year if it gets fair rainfall and the first crop is taken off early. But plowing up the Alfalfa sod with us is like breaking new ground, the roots being so thick and heavy. Farmers near me refuse to grow Alfalfa because they cannot break it with horses, but with the tractor I walk through it. However, I have to lift two plows and use only four bottoms, for I want to plow deep. And here is another almost fatal weakness of the rig I got—the plows will not go deep, and there are no power gang-plows made which will go over eight inches and work well, whereas I want to plow 12 and 15 inches deep, and that takes power and lots of it.

The tractor outfit did fine work the first Fall on our old sod, except in depth. In the Spring we could not use it as early as we could horses, for where ground is rather soft the wheels of the giant machine dig a grave for itself. We succeeded, however, in doing one good job, which we had failed before to do with horses. As soon as the Timothy hay was off the tractor plow and harrow turned the sod over and made it ready for a cover crop of Crimson clover. At that time of the season we could not have spared the horses even if they could have plowed it, but it was too dry and hard for that. That plowing and the cover crop was certainly worth a coating of stable manure on the succeeding crop. But when we started to turn under a crop of cow peas on a field of sand, our tractor outfit failed us utterly—the wheels had no footing.

Where a farmer or an association of farmers has enough work to keep a tractor outfit busy 20 hours a day during the breaking seasons it will undoubtedly pay in this age of high prices for horses' feed and labor. But get a powerful machine and put headlights on it and run night and day. If I had it to do over I would get the new small-size caterpillar type of engine, for it will walk over sand, soft cover crops or mud, and pull its load. In oil and fuel they will in actual use consume about double what is held out to be sufficient by the slick salesmen. Though I feel stung, and have paid dear for my experience, yet I believe in the power plow, but I would want the caterpillar type, and I would want a small association of neighbors to share the cost, for it will plow 10 times more land than most eastern farmers have to break each year. For silage and wood sawing the tractor is great power. T. R. F.

R. N.-Y.—Here again is another side of the cooperation question. It is not only in buying supplies, but in buying power with which to utilize them, that the farmer will aid his economic conditions.

LOOK PLEASANT, BOSSY. FIG. 74.

ANGORA CATS AND RHEUMATISM.

A newspaper clipping received from a reader states that the German Minister to Haiti, recently arriving in this country, brought with him a large Angora cat which he permitted to sleep in his bed to relieve his rheumatism. It was said that the cat would gradually contract the disease, taking it from its master, and would eventually die of it. The reader wishes to know if there is "anything to this." I hope not, though I can sympathize with the German Minister, who is doubtless an estimable gentleman, and I am far from wishing our turbulent sister republic the infliction of a foreign diplomat with rheumatism. But I have possessed, or been possessed of, both rheumatism and Angora cats; together and separately, and I have never known one to react upon the other. Our finest Angora cat, a most beautiful "tortoiseshell" creature, died of old age at 13, though he lived in a family members of which have been almost helpless at times from rheumatism. It is an old belief that animals may "take" disease from their masters, and it is a well recognized fact that some diseases are transmitted to man only through the agency of lower animals. Unfortunately, however, the donor of disease does not rid himself of it; he only passes on a little of the seed, retaining the ripened fruit. Moreover, it is only the infectious diseases, or those that are transmitted through the agency of germs or parasites, that can be thus passed from one animal to another, and rheumatism probably does not belong in this class. No; this story is probably the offspring of a true American reporter's pen. The staid and scientific German mind never trifles with fact in this way, though the genial Dr. Friedmann almost convinced us at one time that some Yankee ways are catching. M. B. D.

MIXING LIME WITH MANURE.

Has Prof. Thorne, page 36, in his reply missed the point that R. J. L. will immediately spread the lime and manure after loading, and in such case would the lime be likely to act chemically upon the manure? We should like to know about this, for we are making a practice of spreading on top of the spreader load of manure a layer of cob ash—10 or 12% potash, 30% carbonate lime—before driving to the field. We have also planned to spread ground limestone in this manner, on land we eventually will seed to Alfalfa. W. A. W.

If manure and lime are mixed and at once plowed under the earth will probably arrest most of the ammonia that may be formed; but if the mixture of manure and lime is exposed to the air there will be considerable escape of ammonia into the atmosphere.

In the case of ashes, the lime is first in the form of oxide or quicklime, which reverts to the carbonate form on exposure to the atmosphere, so that fresh ashes would have the same effect as quicklime in liberating ammonia. Ground limestone would have less tendency in this direction, but we think the safest plan is to apply all kinds of lime or limestone separately from manure or fertilizers. In our experiments on the three-year rotation of corn, oats and clover, which has now been running nine years, when 1,000 pounds of quicklime has been applied to the surface, after plowing under manure, the yield is slightly smaller than when an equivalent amount of ground limestone has been applied in the same manner, although when the quicklime and ground limestone are used as direct applications to unmanured land, the quicklime is producing a greater increase than the ground stone. We suspect, however, that this larger increase is due to the liberation of nitrogen by the quicklime from the organic matter of the soil. If this is what is taking place the time will come when the soil nitrogen must be replaced.

Ohio Experiment Station. CHAS. E. THORNE,

WHAT SHALL THE LANDLORDS DO?

[We have had something of a discussion over the question of conservative father and progressive son, and also over the relations between landlord and tenant. Here is a new phase of it—presented in the following letter. What should be done with these boys?]

I have been a reader of your paper some few years, and as such, I would like to present to you a problem for solving. If you think it worth while present it to your readers for discussion. A few years ago a friend and myself purchased a 160-acre farm in one of the Central States, near a large and growing city. The farm had been under a cash rent for 15 years or more, hence much run down. We secured an excellent man (with a large family) to run the farm on shares, we furnishing the land as our half; he the work for his half. All stock and grains were to be held and paid for on this basis, and profits divided accordingly. We decided on dairying, bought a herd of cows, taking our farmer's note for his half of the cost of the cows. We were well satisfied; our man was very able and a hard worker. All money received as our share was put back into the place in shape of a new barn, imperishable silo, fences, and a new house with bathroom and furnace. But before the house was finished our man sickened and died, leaving a family, wife and 10 children. The three boys, oldest about 19 years, took up the work, but we soon noticed the difference; dirty stables, tools left out to rust, and a milk check about one-third of its usual size.

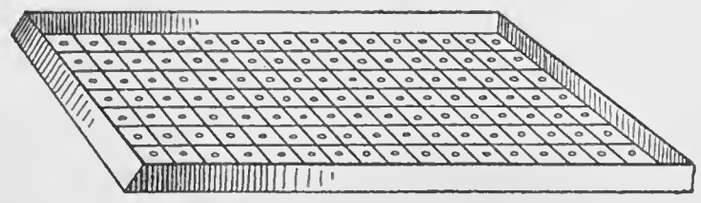
Now the question is what to do. A few more items may help in making up a decision. Neither my

Blocker—Hilling Hoe With Shank Straightened. Fig. 75.

partner nor myself need the income from the farm for our living. The farmers' note has been reduced by a few small payments (not by the boys, however). While the boys seem anxious to do the right thing, they do not seem to possess the right way. Our farm is rapidly being depleted, and the question is what to do. If you think this article with its question would interest your readers and cause some enlightenment I would be thankful to you for space in your paper. G. C. H.

CLOVER SEED IN 1913.

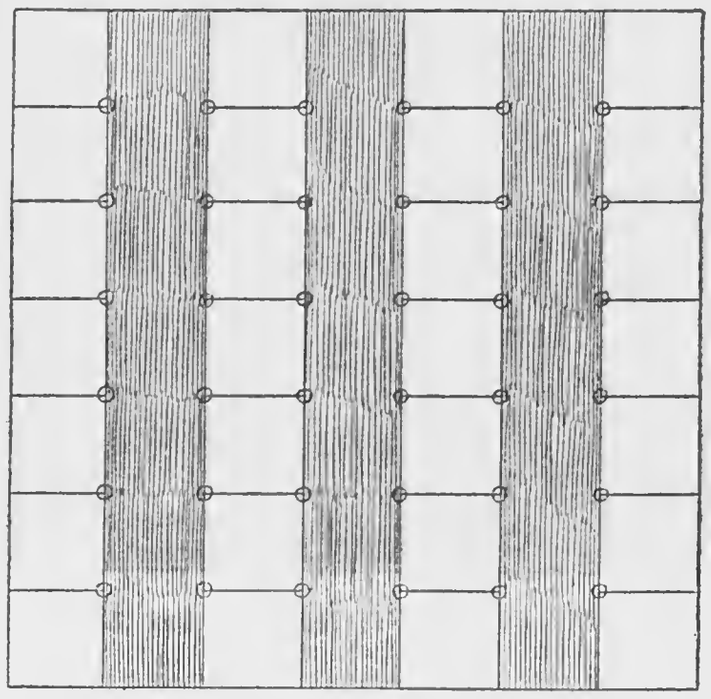
Mr. Edgerton, on page 35, wants to know "Why not tackle clover seed?" Why not, indeed? The writer, last season thrashed 25 acres of Medium clover, obtaining a fraction less than 45 bushels of prime seed. From a part of the field a crop of



How Soil and Manure Are Cut in Blocking. Fig. 76.

clover hay had been cut early, another portion had been cut 10 days later, while a third plot, owing to scarcity of labor was clipped, the hay being left as a mulch on the ground. The Summer being excessively dry and hot until a few days before seed cutting, the mulched part had far heavier bloom, and the seed was better filled than in either of the other sections. Several acres of thin land, top-dressed the Winter before with cattle manure, gave a better yield of both hay and seed than the lower fertile portions.

Before clipping we were told that the heavy top growth would certainly smother out the plants beneath, and in a wet season this might possibly occur, but we found only one or two little patches killed out. With clover selling at $3 to $4 an acre in the field, are we not better justified in clipping



Field With Plants Set at Circles. Fig. 77.

and returning to the soil rather than disposing of it and spending the Winter months in hauling manure a mile from town, and sometimes having to give straw in exchange for the manure? This clover would make two good loads per acre, and considering the humus added to the soil and the benefits to the following seed crop, we think we are justified in clipping.

Has anyone ever tried spring-toothing a light stand of Red clover to kill out weeds and grass—on the same plan as Alfalfa seedings? We had three or four acres that were partially killed out by a Winter overflow, and it grew up so thickly in grass we did not thrash it. Red clover, with a wider rooting system than Alfalfa, might not stand deep harrowing. We shall know about this before another year, as we have 10 acres of Mammoth clover that is about a two-thirds stand. The ground is thin on which it is growing, and we have planned to leave it for seed, using the light draft harrow with Alfalfa teeth to dig up the top two inches, after the clover plants start growing. If less than a two-thirds stand comes through the Winter we shall drill in a light seeding of oats early in Spring.

Montgomery Co., Ind. W. A. WITHROW.

FARMING IN NEW ENGLAND.

The case of "A. S. A.," as narrated on page 80, telling of a man of middle age, with an aged father, and no woman's counsel or help, seems to me to call first for a woman, either in the capacity of housekeeper or wife; and next, a modification of present management of the farm to meet existing conditions as to climate and markets. With a population for this New Hampshire town of 6,000 within seven miles distance, it is a fair presumption that the entire product of 10 acres of tillage land could find a ready home retail market if put into such crops as will withstand the conditions as to frost. If beans, cucumbers and tomatoes are too risky, these might still be hazarded as a catch-crop for favorable seasons, and other crops less susceptible to frost substituted for a dependence.

I believe that any New England town of 7,000 inhabitants would take care of a half acre of strawberries and a like area of asparagus, and these two crops are immune to destruction from frosts, although somewhat retarded to be sure; however, they are capable of producing large values on small areas. An acre in these two crops skilfully handled should be worth several times the area in such staples as corn and potatoes. When in Florida a few Winters ago, a freeze which destroyed the orange crop seemed to have merely a retarding effect upon the strawberry crop. This was on the last night of the year 1910, and strawberries were in full bloom, but much to my surprise, they were harvesting a good crop a few weeks later. This was the frost-proof Klondike variety, which is specially adapted to the far North as well as far South conditions.

As to asparagus, which requires one more year of waiting than strawberries for its first crop, the tender shoots are spoiled by freezing; but as the life of the plant is in the crowns, several inches below the surface, a few warm days suffice to bring on another lot of shoots.

Among annuals, lettuce, peas, beets and onions are semi-hardy and will go through cold weather which would utterly destroy the crops which "A. S. A." mentions. No mention was made of fruits. With 10 acres of tillable land, I should plant at least two acres to apple and plum trees, either using the plums as fillers between apple, or putting a solid block of plum and locating the poultry yards among them. Japan plums and their hybrids are adapted to our Eastern conditions. Immense crops of these are grown as far away as the Pacific States and sold in our New England towns. I believe that everything considered the plum is our most promising fruit for immediate consumption and canning. And as to apples, while planting our staple Baldwins, that call for a 10-year wait for cropping, we have plenty of early-bearing sorts for fillers, which begin to produce crops in one-half that time or less.

We have in populous New England one advantage which goes a long way to offset any defect of soil or climate, and that is the market that clamors at our doors. A location near a thriving village gives the producer a chance at the whole of the consumer's dollar, which no city market can rival. Our opportunities here are not yet half worked, although the fact that farm values here in the East have in many localities trebled within 15 years is significant. Probably the greatest of our lacks is the lack of farming capacity to grow and market crops to the limit of their possibilities. It is true of the town in which I live as well as of any locality with which I am acquainted, that the home market for fruits and vegetables is inadequately supplied, especially with that of the choicest quality. Such papers as THE R. N.-Y. are accomplishing more than any other agency to awaken among farmers a sense that only more skill is wanted to change many a comparative failure into a pronounced success.

Massachusetts. FRED W. PROCTOR.

"CO-OPERATIVE" silos are popular in Wisconsin. The name does not mean that several farmers feed out of one silo, but that several farmers combine and use the concrete forms furnished by the College of Agriculture. Such forms cost about $40 each, but through coöperative work farmers can obtain them for $10.

DETAILS OF EARLY TOMATO GROWING.

PART II.

BLOCKING.—About two weeks before plants are transferred to the field or after growth has well started they are "blocked." That is, the soil and manure in which the plants are set is cut clear through so as to have each plant in an individual cube of soil and manure 4½ inches square and five inches deep. The blocking or cutting is all done from above with a "blocker." The blocker (see illustration) is nothing more nor less than a large hilling hoe having a blade 10 inches wide, and straightened at the shank so the cutting edge is in a direct line with the handle. A nib is put on the handle about 18 inches from the top and when using is grasped by the right hand. When blocking, sashes are slipped off and the man doing the work stands on the rafters which usually support the sash, or if desired on a board placed across the frame. He cuts between the rows of plants, running crosswise of the bed first; then cuts as far as he can reach in the opposite direction (see diagram). He has the blocker sharp, and is careful that it cuts clear through the manure, thus leaving each individual plant in a square block of soil and manure all to itself. Two men working together do the blocking to best advantage, each taking one side of the bed. With experience this work is done rapidly; 15 to 20 thousand plants being considered a fair day's work for two men, although much more than that is often done by expert hands. Blocking is our substitute for paper pots or berry boxes. It eliminates that extra expense, and subsequent handling of plants is much easier than if pots are used.

SETTING OUT.—If growth in the cold frame has been regulated by judicious watering and careful attention by the fifth of May the plants will have a thick stout stem with little side branches starting at leaf joints, and the buds forming what is described as the crown setting will be partly opened. The night before plants are set in the field, the bed is given a good soaking. This permits the soil and manure to become settled over night. The next morning the plants are loaded in ordinary two-wheeled Jersey dump carts, or low wagons, and taken to the field. These carts hold from 80 to 100 plants. Some growers have extra large cart bodies that they put on for this purpose, holding 135 to 175 plants. Plants are lifted from the frame to the cart by forks or shovels. The whole block is taken with the plant standing upright and undisturbed in the middle of it. With a six-tined fork six to nine plants can be lifted at one time without crushing the blocks. After the cart is loaded it is driven to the field, plants taken out one at a time and placed where they are to stand. If everything has gone right there will be scarcely a crushed block in the cartload. All the plants will be standing up fresh and green, with their rootlets undisturbed, and ready to reach out for the abundance of plant food that has been supplied to stimulate the early growth which means so much in producing early tomatoes in quantity.

LATE PICKINGS OF EARLIANA TOMATOES FOR CAN HOUSE. WAGON HOLDS 180 BASKETS. FIG. 78.

PREPARING SOIL.—As earliness is the prime factor in determining profits, growers select the soil and location for their tomatoes with that in view. A rich, well-drained, sandy or gravelly loam with southern exposure and sheltered from heavy winds, makes an ideal location. However, such conditions are not always found, in which case growers select the best they have and make up in attention what they lack in location. That tomatoes can be made to succeed and produce early fruits on soil and under conditions not ideal has been fully demonstrated, but it requires more judgment on the part of the grower in the attention he bestows upon his plants. Tomatoes are grown in various truck-crop rotations, but the most popular is one covering four years, including first year clover, second year corn, melons or cantaloupes, third year sweet potatoes, fourth year tomatoes. Rye is sown as a cover crop after the potatoes. The rye has about 10 tons of manure to the acre spread on it in the Fall; the whole being turned under in the Spring before much growth is made. After plowing the ground is harrowed with an Acme to level the surface and conserve the moisture. This is repeated at intervals until the first of May, when the ground is marked.

MARKING.—When marking it is first decided which way the field is to be furrowed out for the plants. This determined, the marker, with hoes set 4½ feet apart, is run in that direction. Then it is run at right angles set at the same distance; leaving the field in checks 4½ feet each way, with the cross marks quite distinct. Plants are seldom given less than 4½ feet each way in the field, and recently there has been a tendency by some to increase this distance to five feet. Just before plants are set a two-horse plow set as deep as two horses can pull it, is run down the row just marked. This covers up the marks on one side of the row, but leaves the other side plain enough for setting plants, so they will be in line both ways of the field (see diagram). I will say in passing, however, that on some soils deep furrowing would be a disadvantage but on sandy soils that dry out quickly it is a distinct advantage; especially in a season of drought such as we have just been through. It is also advantageous to have rows furrowed out only a short while before setting plants, so that the soil will not become too dry. After furrowing a large handful of a quick-acting high grade fertilizer is thrown with a scattering motion "in" and "on" the side of the furrow opposite each cross or check where the plant is to stand, and all is ready for the plants. It will be seen from the above that extra heavy fertilization is not practiced. No plant food is used except that from the manure turned under with the rye and the fertilizer put in the hill. That placed in the hill gives the plant a quick start, and the manure maintains a steady healthy growth. Subsequent applications of fertilizer are seldom made, as a heavy vine growth would be stimulated, and tend to retard ripening and setting of early fruits. If the question of earliness were eliminated and a large crop the end in view, then heavier fertilization would pay.

SETTING.—Plants are set in the field with the first nice days after May 1. There is some danger from frost, but growers are willing to take chances with at least a portion of their crop, for a two day's start at time of setting often means a difference of as many weeks when picking time arrives. As stated in the previous article plants are brought from the cold frame to the field in carts. One man does the setting; he uses a small narrow spade to remove the plants from the cart and puts one in each cross, (point where the furrow and cross marks intersect) being careful to place them exact, so that they will be in line across the field. A second man follows the first, and covers the "block" with enough soil to make a good hill. Where several thousand plants are set, three carts are used to best advantage. One man loads at the bed, two men drive carts and set plants, and two men hill up.

INSECTS AND DISEASES.—Cutworms are often troublesome; if their presence is suspected growers use poisoned bran, placed about *four inches from the base of the plants* after each day's setting. If placed against the stem of the plant the poison will be as harmful, in effect, as the worms. Few growers spray thoroughly for blight, but from start to finish a continual fight must be put up against the potato beetle. Formerly Paris green was the poison used, but because of frequent damage by burning, growers are substituting arsenate of lead with better results. The first dose is given in the cold frame just before plants are taken to the field.

CULTIVATION begins as soon as plants are set, and a rapid thrifty growth depends upon it. It is practically all done with the ordinary five-tooth horse-drawn hoe-harrow. This harrow keeps the surface soil well stirred close to the plants and levels off the ridges. As harrowing is done both ways there is need of little work with the hand hoes, but in order to conserve moisture and have the tomato plants free from grass at picking time, harrowing is done regularly and often. As vines grow the harrow is not run so close to the plant and the teeth are set more shallow so that the small feeding roots will not be cut off.

PICKING.—This commences near the middle of June, and continues until August 10 or 15. Italians are employed for this work, and receive 2½ cents for a 20-quart basket. All early tomatoes are sent in baskets to Philadelphia and nearby markets, or packed in crates and sold to dealers who ship to New York, Boston and even to Canada. Last year thousands of crates of tomatoes were picked green and shipped to Canada. Two grades are made—primes and culls. Grading and packing is, in most cases, carefully done; but perfection along this line has not yet been reached. Each year's experience demonstrates anew the value and demand for better packing; and past experience of growers shows that it pays to put up tomatoes as the market demands. Last year many growers commenced picking before June 20, at which time they netted $3 and above a 26-quart crate. As tomatoes become more plentiful the price falls gradually, but usually remains above $1 a crate until after the middle of July. Canners usually commence buying the last of July and pay from 10 to 30 cents a basket. By August 15 the crop is practically all gathered, and in good time for plowing the fields and getting a good catch of clover. The picture shows a big load of tomatoes. These tomatoes were loaded on boats and shipped to Baltimore canners. The great and increasing demand for tomatoes in cans has created an outlet for even the last pickings of our early tomatoes. The Earliana makes an excellent canning tomato, and late in the season thousands of baskets are sold daily to agents buying for can factories. While they cannot pay the high prices received earlier in the season, still it all helps in making the crop a profitable one.

PROFITS from the system of tomato growing as outlined above are no more uniform from year to year than profits from other truck crops. But that they average high is clearly shown in the increasing interest taken in the crop by those who grow them each year: and in the care and attention they bestow upon the plants in their various stages of growth; and in the steadily increasing acreage. The past year witnessed some failures because of the exceptionally dry weather and the Southern wilt which struck this section for the first time. But those who had a crop did exceedingly well, with receipts in many instances above $200 an acre. In other years some have reported receipts as high as $400 an acre. The crop generally is both profitable and popular, and growers are continually putting forth their best efforts preparing for the next year's crop. It has been hinted that tomato growing may be overdone, but the many styles of serving and the wide distribution made possible by canning favors an enormous consumption. While the crop may not always be highly profitable, still present indications seem to justify growers in maintaining that the future production of first-class early tomatoes promises more in the way of possibilities and profits than ever before. TRUCKER, JR.

Refrigeration by Electricity.

I would like some practical information as regards refrigeration by electricity. I am a fruit grower and understand that there is a system of automatic refrigeration by using the electric current and ammonia. If you could give me any light on building such a plant—say 600 pound capacity—I would be pleased. I want only practical plans as regards construction, installation, cost of maintenance, etc. A. E.

So far as I know there is no system of refrigeration where the electric current plays any important part. Of course, the machinery is often driven by means of electric motors, in place of a steam or gas engine. The Automatic Refrigerating Company of Hartford, Conn., advertise that they are manufacturers of the only automatic refrigerating plants and the they are the only manufacturers who use electric power solely. They refer, however, to the use of electric power for operating the machinery in place of using steam power and the automatic feature refers only to the fact that the refrigerating plants are automatically shut down when the demand for electricity for the use of other customers is all that can be taken care of by the power house. This automatic feature is only of interest to central power stations making ice as a by-product. Their catalogues and booklets and those of Carbondale Machine Co., Carbondale, Pa., and United Ice Improvement Co., Marbridge Bldg., New York, may be of interest to you. R. P. C.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Pruning Plum and Cherry Trees.

We planted a few cherry and plum trees, last Fall. They were about six feet in height, each having between four and five branches. I would like to know how and when to prune them; would like to have them medium height. G. G.
Warren, R. I.

These trees should have been cut back severely when planted to prevent too much evaporation of the sap during the Winter. They may have been injured already from this cause, but it is not too late to help them by pruning. The new growth should be cut back half way or a little more if the trees are two years old and the branches are very long. If the trees are one year old they should be cut back to about 2½ feet from the ground. This will be the place to start the head, and care should be given when the new growth is starting to allow only such new branches to form as are needed.
H. E. VAN DEMAN.

More About the Apple Maggot.

I would like more information about several varieties of apples as to their susceptibility to the inroads of the maggot, the so-called "railroad worm." In a recent issue of THE R. N.-Y. we were told that, owing to being within the fruit from the time of the hatching of the eggs, spraying fails to reach them. The only available remedy for this pest in infected localities lies in the selection of varieties which are resistant to their ravages. Such fine old varieties as Porter, Sops of Wine, Garden Royal, in short the tender-fleshed, thin-skinned sorts are now a thing of the past because of this pest. Winter apples, generally speaking, are immune, their hardness up to the advent of cold weather protecting them from puncture by the egg-laying fly. Who can tell us the complete life history of this fly? Upon what form of vegetation does it feed as a mature insect, and is it a determined fact that spraying is positively without advantage in keeping it in check? In setting an acre to apples this coming Spring, I wish to plant a certain number of early varieties as fillers. I have in mind to try some comparatively new sorts for this purpose, as the Liveland Raspberry, Melon, Wilson, Red June, etc. Am I to know, short of expensive experimenting, whether these will eventually prove resistant to the maggot, or as complete a failure as the old varieties I mentioned? It would seem to me a very proper thing for nurserymen to do would be to publish such facts for the guidance of the buying public. Who can make us wise in this matter? I have found the Red Astrachan comparatively immune to the maggot. Is the Yellow Transparent as much so? The prevalence of this pest has well nigh destroyed the market for all early apples in this section. There are claims that spraying has proved beneficial in spite of our positive knowledge that the maggot does its work out of the reach of poisons sprayed.
Massachusetts. F. W. P.

There are few, if any, varieties of apples that are not infested by the apple maggot or railroad worm. Prof. Harvey compiled a list of apples in 1889 showing the relative infestation of varieties in Maine. Mr. Illingworth in his bulletin on the apple maggot has made some additions to this, either from his own observations or from the observations of Prof. Fletcher of Ottawa. The following varieties are sparingly infested: Alexander, Bailey's Sweet, Baldwin, Bullock, Calvert, Canada Baldwin, Catshead, Chenango, Danvers, Dayton, Derby, Detroit Red, Diana, Dyer, Golden Ball, Golden Sweet, Grimes, Haley, Irish Peach, Lady Sweet, Maiden Blush, Mexico, Munson, Ramsdell, Rhode Island, Ribston, Rolfe, Somerset, Swaar, Sweet Russel, Westfield, Williams. The following varieties are badly infested: Benoni, Bough, Early Harvest, Esopus, Fall Jenneting, Fall Pippin, Famense, Franklin Sweet, Garden Royal, Golden Russel, Gravenstein, Henderson, Hightop Sweet, Hurlburt, Jersey Sweet, Jewett Red, King Pippin, Mother, New York Sweet, Northern Spy, Oldenburg, Paradise Sweet, Porter, Pound Sweet, Primate, Pumpkin Sweet, Red Astrachan, Russel, Shiawassee, Sops of Wine, Tetofski, Tolman, Tompkins King, Twenty Ounce, Wagner, Wealthy, Winesap, Winthrop Greening, Yellow Bellflower. It would be an excellent idea for the readers of THE R. N.-Y. to make additions to this list of such varieties as have come under their observation. B.

Big Western Fruit Stories.

There are not quite so many fairy tales about fruit growing floating about this season, but there are still a few big ones from the Northwest. It is well enough to give the other side from our readers in Oregon:

In one of the leading fruit-growing sections of the West a man sold a small orchard. He said he sold so much fruit the year before (of course he raised it on his orchard) that the farm sold on the strength of the large yield. The next year the new owner had a larger crop and better apples, so the neighbors said, but he did not have near as many as the former owner said he sold. He went to the former owner and said: "How is this? I have a larger crop than you had last year, and yet I have not near as many as you said you sold." The other man said: "I sold the apples, and showed the books." He also said: "You buy your neighbor's crop and sell your farm." He sold two crops and it was supposed to be one crop only, and hence he received an extra price for the orchard.

A man bought a small tract. After the transfer he asked: "What can I raise on that land to pay interest on the investment?" The other man said: "I do not know, unless it is to raise the price." There is a man reported to have received $1,000 an acre for his pear crop. He is digging up his pear orchard and planting Alfalfa on the same land. Why would a man dig up an orchard that would bring in $1,000 an acre and sow Alfalfa on the same land, that will not bring $100 an acre?

Hedges and Windbreaks.

I wish to set out a hedgerow or something for a border between my garden and yard. I am thinking of Japanese barberry, or Althæa. Which do you think would be the better, and how far apart should they be set? I wish to set out a wind-break of evergreens west of the house. Which would be the better, Norway spruce or arbor vitæ (White cedar)? How far apart should they be set and how tall should they be for best results? Can you tell me where I can get them and about what they will cost?
Wurtsboro, N. Y. E. E. S.

Either Japanese barberry or Althæa would make an excellent hedge; choice must depend entirely on personal preference. The barberry is neat and compact at all times, needs very little trimming, and is beautiful when the foliage turns in Autumn, followed by cheerful red fruits on bare branches in Winter. It remains low, reaching with full growth a height of about four feet. It endures partial shade, and prefers a dry situation. The Althæa gives a blooming hedge at a time when other shrubs are not flowering, and is very handsome; it will grow taller and may be kept narrower than the barberry. You will find directions for setting a hedge in article on how to plant a place, page 70. You may set the Althæa 15 inches apart, the barberry 18 inches. Hedge plants are often set closer, but we must remember that we are planting a permanency. Cut the Althæa back as described on page 70.

We prefer hemlock spruce to all other trees for a wind-break. It is very hardy, beautiful in growth, and retains its rich green throughout the Winter. If desired it may be set in a hedge and clipped, or it may be grouped without hindering natural growth. The arbor-vitæ is handsome, but loses freshness of color during cold weather. The Norway spruce is good, but unless carefully pruned it becomes unsightly in a hedge. If this windbreak is to take the form of a hedge, avoid too close planting; Prof. Maynard advises setting a hemlock hedge five feet apart, and though such hedges are often set closer, there is no doubt that this gives good results. Any nurseryman will supply such shrubs; prices run about as follows: Althæa and Thunberg's barberry, 25 to 50 cents each (this does not include extra fine or new varieties of Althæa); hemlock spruce, 50 cents to $1. Let the wind-break grow as tall as it will, unless you fear shade damage to other plants.

Yellow Newtowns $1.25 to $1.40 per box; Spitzenburgs $1 to $1.25; Jonathans 75 to $1; Ben Davis 60 to 90; Comice pears $1.75 to $2; Bosc $1.40 to $1.75; Anjou $1.75 to $2; Winter Nelis $1.75 to $1.90. Strawberries in season brought $1.25 to $1.50 per crate 15 boxes (short); blackcaps $1.25 to $1.50; Phenomenal and Mammoth blackberries $1 to $1.25. Red raspberries $1 to $1.25. Loganberries 75 to $1. Dairy cows $60 to $90; butterfat at present time 30 cents. Alfalfa $10 to $12 per ton; grain hay $14; corn $20 per ton in the ear; wheat 90; barley $30 per ton; potatoes $1 per sack (about 100 pounds); tomatoes one cent to three per pound. F. E. U.
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The Home Acre.

BEHAVIOR OF JAPAN PLUMS.

On page 45 I notice answer from W. S., Beaver Falls, about Japanese plums. As this is only a short distance from the district in which I have spent the last two years, I venture to criticise the answer. In Allegheny county the Japanese plum is a failure. They bloom too early. About one-half of the time they will bloom the last week in March or the first week in April, being put out of business by the frosts, so that I would not advise planting them. Most growers about here use the German and Italian prunes, Lombard, Green or Blue Magnum and the Damson. P. T. B.

Pittsburgh, Pa.

R. N.-Y.—We want such suggestions. The behavior of varieties is often so peculiar that only personal experience can decide.

BROOM CORN FOR GARDEN BORDER.

Various suggestions are made from time to time relative to what I term commuters' gardens; small plots ranging from one-quarter to an acre of ground, on which after the labors of the day, the rural commuter can find profit, pleasure and relaxation from the care and turmoil of "trade," and enjoy healthful relaxation with a hoe. With the one exception of horseback riding, there is nothing which is equal to that same homely utensil, the hoe, as a health preserver, and physical recreator. The man who knows how to use it as it should be used, exercises every muscle of his body and, if corpulent, will find his waist measure reduced without the aid of patent nostrums or deleterious drugs. The real hoe man is an artist, he can shave the surface, digging deeper, loosen the soil, and deeper still, turn up three inches from darkness to sunlight. He can clip a weed within a quarter of an inch of a plant, or thin out a row with equal dexterity. I did not start out, however, to expatiate on the merits of the hoe, but rather to tell of a beautiful border for any garden, which I have never seen used by any other commuter than myself. Each year across the rear of my garden or along the footpaths I plant a row of broom corn, planting the seeds in drill, and thinning out (with the hoe) to four inches. In the Fall the stalk has reached the height of eight or 10 feet (last year some of my stalks were 12 feet) and its seeded tassel has a very picturesque effect. When fully ripened the top should be bent over about three feet, and allowed to hang down, so that the weight of the seed will straighten the splints. When fully ripened and hardened, cut off the seeded stalk, thrash out the seed, and make the splints into hearth brooms. For this purpose take eight stalks, fasten with small copper wire, cut off the stalk to within two inches of the broom and the thing is done. Last year I made 40 hearth brooms from my row 100 feet long, and gave one of the brooms to each of my neighbors. I found hearth brooms not so good as mine selling in the city for 25 cents apiece. Let some of your subscribers try this broom corn border and I think they will repeat the experiment.

Garden City, N. Y. W. J. Y.

Fertilizer for Garden Crop.

I have a small garden plot which has a clay soil. The top soil had been graded off several years ago when the house was built. I have manured it well, and it produced a splendid crop of vegetables the first year, but last year it was a little off, particularly the corn, which leads me to believe that it is deficient in either potash or phosphorus, or probably both. We had a good many beans, which did well, and these vines will be plowed along with the other remains of last year's crop. Half of the plot was spaded and sown in turnips last Fall. A good many are still there to be plowed under, along with a good layer of rotted horse manure. Beets have grown on the ground last year,

Memphis, Tenn. H. B.

If this soil is to have manure each year, and still fails to grow suitable vegetables the indications are that potash and phosphoric acid are lacking. The usual suggestion is to mix three parts of acid phosphate with one part muriate of potash, and apply 400 pounds or a little more per acre. In some places it is difficult to obtain these chemicals. In such cases a mixed fertilizer high in potash and phosphoric acid will answer.

Ashes and Strawberries.

I have a fertile acre that four years ago got four or five tons of hard wood ashes, and has grown Alfalfa and been heavily manured every year since. Is it safe to plant it with strawberries this Spring, because of the ashes? A. P.

Crosby, Pa.

There will be little trouble from the effect of the ashes on the strawberries after four years. The advice against using lime or ashes means that they should not be applied at the time of planting, or within a year before. After four years, however, there would be practically no danger.

Hen Manure for Fruit Trees.

As I clean my chicken house every week, I take the manure and spread about a bushel of it to the tree, around peach trees set out a year last Fall. If I use wood ashes with this when is the best time to use the ashes, now or early Spring, before plowing under? How much ashes per tree? Would you advise using anything else and what? Trees made just a fair growth, 18 inches to 2½ feet; soil sandy loam. It is out of the question to keep this chicken manure in a dry place till Spring, as I have no place to store it, so spread it on ground as hauled out. H. S. T.

Vineland, N. J.

Under the circumstances this practice will answer. Leave the manure around the trees until Spring and then plow it under. After plowing scatter five or six pounds of wood ashes and rake or harrow in. This ought to give them a good start on that kind of soil.

Bark Bursting.

Last November we set out about 20 two-year-old apple and pear trees. Many of these trees seem to have small slits in the bark, though none seem to be dead. We have scraped these slits and applied white lead. Can you tell us if this is a serious condition and if we have treated it correctly? W. F.

Valley Stream, N. Y.

The trouble with these trees is what is called "bark-bursting" and is caused by their being in a flush condition and not well ripened when there came one or more cold spells. The contraction and expansion of the bark caused it to crack open. The painting with white lead is all right, but a coating of wax, put on with a brush while hot, would be better. This is easily and quickly done. Melt together five pounds of rosin, one of beeswax and one of tallow or linseed oil, and apply while warm. This is good for wounds made in pruning or as grafting wax. M. E. VAN DEMAN.

Hen Manure on Sandy Land.

What would you advise to use on land that has a good deal of hen manure? I have about one acre and keep 600 hens. Is there any danger of using too much? The land is sandy. H. H. R.

Merchantville, N. J.

Hen manure is rich in nitrogen. This is the element which induces a quick, strong growth of leaf and stem. The best crops to grow where there is an abundance of nitrogen are those which make most of their growth above ground—like grass, corn, cabbage, etc. Too much nitrogen will drive the crops into such a quick growth that they will "lodge" or fall down through weakness of the stems. One way to overcome this is to use chemicals with the hen manure. Three parts by weight of acid phosphate to one part of muriate of potash is a good mixture to use with the hen manure.

Destroying Poison Sumach.

Will you advise me how I can dispose of a poison sumach tree, which I have growing on my place? A. B.

Mountainside, N. J.

The bad reputation of the poison sumach, (Rhus venenata) make it an object that is carefully avoided by everyone who is familiar with it. It is commonly supposed or believed that it contains so virulent a sap, that it will cause fever and severe inflamation in any one who cuts it down, or for any other purpose comes in close contact with it. It is probable its inoculating power is considerably over-estimated, for it is no common thing to hear of anyone being severely poisoned by it. All the sumach family have a habit of sending up sprouts from creeping roots, and to get effectually rid of them, they must be pretty thoroughly uprooted by the use of grub-hoe or plow. When there are only a few to be exterminated, it can be accomplished by heavy applications of salt to the roots.

K.

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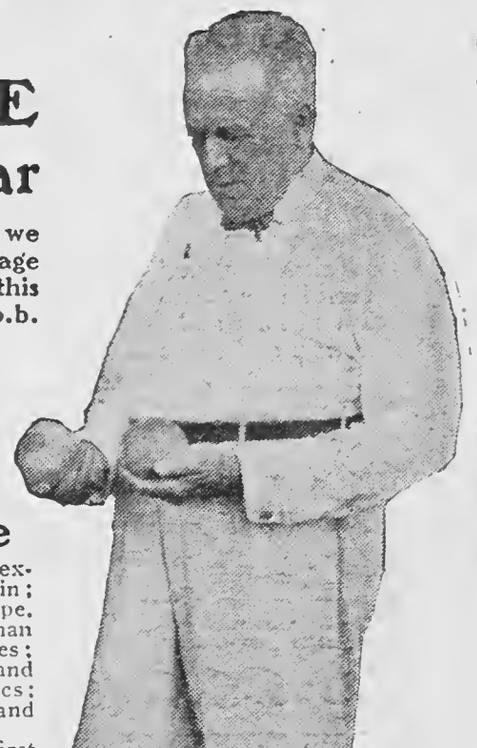

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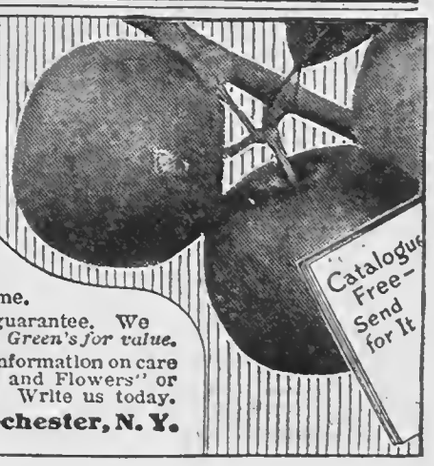

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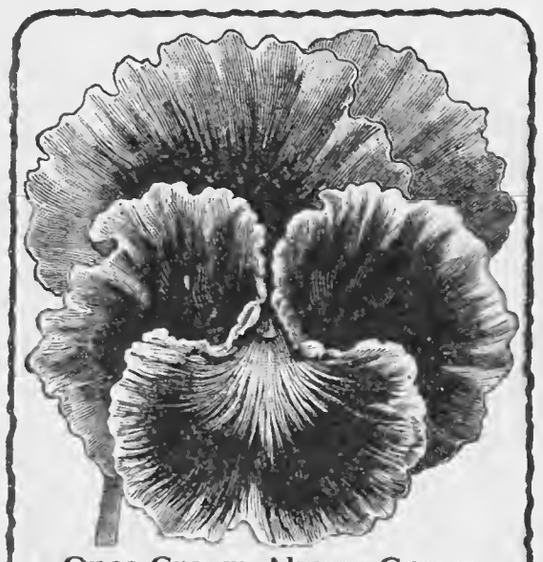

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EVENTS OF THE WEEK.

DOMESTIC.—Investment bankers were gratified Jan. 29, by the news that the "blue sky" law of Michigan had been held unconstitutional by the Federal Court for the Eastern District of Michigan, Judges Dennison, Sessions and Tuttle deciding unanimously. Three New York firms, N. W. Halsey & Co., Lee, Higginson & Co. and A. B. Leach & Co., were among the several plaintiffs who tested the law. Caldwell, Masslich & Reed, counsel for the Investment Bankers Association, which entered the suit, said that the decision held the law to be an unwarranted interference with the freedom of the individual and beyond the police power of the State.

Warren B. Hutchinson, a patent lawer, of 141 Broadway; William L. Tucker, a promoter, of 135 Broadway, and Morris San, an inventor, were indicted by the Federal Grand Jury in New York, Jan. 29, for nsing the mails to defraud in the promotion of a company for manufacturing childproof matches. The East Jersey Match Company of Garfield, N. J., in which the defendants are said to have sold $140,000 worth of bonds, according to the literature it sent out describing San's scheme was to make "non-sulphurous, non-poisonous matches that could not be lighted save by an adult."

Sylvestro, the Sicilian, was convicted in four minutes, Jan. 29, of attempting to dynamite a tenement house occupied by 25 families, in New York, on August 31, 1913. He was sentenced to imprisonment for three and a half to seven years, but a bill was introduced in the Legislature later making such crimes punishable by forty years imprisonment.

The Old Dominion steamship Monroe, northbound to this port from Norfolk, Va., was rammed and sunk in a thick fog off the Winter Quarter Shoals Lightship on the Virginia coast Jan. 30, by the Merchants and Miners' steamship Nantucket, bound to Baltimore from Boston. Forty-one persons on the Monroe lost their lives. There was no loss of life on the Nantucket. Many of those lost had no opportunity to save themselves, as the Monroe did not stand up more than 12 minutes after she was raked. The vessels came together in the mist. The Nantucket practically sliced the Monroe in two. The survivors say there was no confusion on board either steamship during the brief interval the Monroe remained afloat after the impact. Ferdinand J. Kuehn, the wireless operator on the sinking vessel, sacrificed his chances for life to save a woman passenger. The property loss exclusive of freight and baggage, is estimated at $225,000.

Several thousand barrels of oil and several large tanks of oils, with part of the plant of the Valvoline Oil Company, were destroyed in a spectacular fire at Edgewater, N. J., Feb. 1. The flames, which caused about $300,000 damage, started in the plant opposite 110th street.

The Panama-Pacific Exposition has invited the aviators of the world to circumnavigate the globe. Ninety days will be permitted them in which to make the flight, and the man who wins will get $100,000 for his pains. Then there will be $50,000 additional for other prizes, according to present plans, although it is expected that when the times comes for the start $150,000 more will be added to the prize money.

Joseph Cassidy, political "boss" of the Borough of Queens and Louis T. Walter, Jr., were convicted in the Brooklyn Supreme Court February 2. The charge is conspiracy in having sold to William Willett, Jr., his nomination to the Supreme Court bench in 1911. The maximum penalty is two years imprisonment and $3,000 fine. The case against Cassidy, Walter and Willett arises out of an editorial printed in October, 1911, in the Brooklyn *Standard Union*. Charges were made that one of the Democratic candidates for the Supreme Court bench had bought his nomination. William Berri, owner of the *Standard Union*, was accused of criminal libel, whereupon he set out to prove the allegations in the editorial. The libel suit was dropped, but John Doe proceedings were brought in Queens county before Justice Sendder, sitting as Magistrate, to determine the truth of the allegations. These proceedings resulted in no indictments, and District Attorney Whitman sent his assistant, William A. De Ford, to investigate the matter. Eventually indictments against Willett, Cassidy and Walter were handed down.

The New Jersey House passed, Feb. 3, 49 to 4, the resolution for a State constitutional amendment extending the right of suffrage to women. The resolution now goes to the Senate. If that body adopts it the resolution will have to be passed again by the next Legislature before it can be put to a referendum vote.

President Wilson issued a proclamation, Feb. 3, lifting the embargo on shipments of arms from the United States into Mexico. The President's order contains a word of encouragement for the Constitutionalists and the recognition of Carranza by the United States is expected to follow. The Executive order became effective at once. Arms and ammunition for 15,000 troops are in New Orleans warehouses ready to be shipped to the rebels.

FARM AND GARDEN.—A bill providing for the establishment of a national farm land bank system was introduced in Congress Jan. 29. This measure is tentatively the Administration bill for the establishment of a national rural credit system. It represents the result of the labors of a United States commission appointed by President Wilson last April to investigate the rural credit system in European countries and report thereon. The bill in the form introduced has not the unqualified indorsement of the House Banking and Currency Committee. It represents in the main the view of the committee and so far as the measure's general principles are concerned it has the approval of President Wilson. President Wilson has been positive upon one point in regard to a rural credit system for the United States. He is opposed to any scheme by which the United States Government would become directly the creditor of the farmer. This view is in entire accord with the views of the majority members of the House Committee on Banking and Currency.

Urging the necessity for a division of rural hygiene in the State Department of Health, Dr. Hermann M. Biggs, State Commissioner of Health, points out that the up-State death rate increased last year from 15.5 to 15.8 per 1,000 population, while the death rate in New York city fell from 14.1 to 13.7. The figures show that if the death rate in the rural districts had been as low as the New York city death rate there would have been 7,975 fewer deaths up-State. At Gov. Glynn's recent conference on agriculture and allied matters Dr. Biggs said that rural dwellers have as much right as city residents to the best health protection that modern science affords. He added that the country districts have received little attention from sanitary authorities.

Twenty-one horses, belonging to A. Henry Higginson, were lost in a fire which destroyed the big racing stable on the Higginson country estate at Lincoln, Mass., Jan. 31. Only four horses were saved. The loss is estimated at $60,000.

Prof. Walter Mulford, head of Cornell University forestry department, has accepted the appointment of chief of the new department of forestry in the University of California. His resignation at Cornell will take effect at the end of the present college year and he will begin his duties at Berkeley on August 1.

Prof. Mulford is a graduate of Cornell in both agriculture (1889) and forestry (1901). He was appointed to his professorship here in 1910, when he was a member of the faculty of the University of Michigan.

THE OHIO APPLE SHOW.

The fifth annual Ohio Apple Show, held in connection with the annual meeting of the State Horticultural Society, was the biggest and best ever seen in the Buckeye State. It was held in the commodious Central Armory of Cleveland—a building admirably adapted to the purpose. Apples were exhibited on plates, in baskets of various sizes, in cartons for shipping by parcel post, in trays, in boxes, and in barrels. They were all well colored and free from insect injury or blemish of any kind. There were booth exhibits where artistic effect in arrangement as well as variety and quality was taken into effect. There were also exhibits by countries. Altogether it was a great exhibition of a world-renowned fruit. It established beyond a doubt the continued capacity of Ohio to produce good apples, even in an unfavorable season, and could scarcely fail to invite to the planting of new orchards and the renovation of old ones. One feature that attracted much attention and left a lasting impression, was an immense apple map of Ohio. This map was about 25 feet square, and was a perfect outline of not only the State, but of each of the 88 counties into which it is divided. It took nearly 80 bushels, or about two tons of apples to make the map. It called attention in a new and novel way to the fact that Ohio as a whole is a good average apple producing State, and that good apples can be successfully grown in some parts of every county of the State. It said to those who saw it, "Use the Ohio apple." There is no doubt that the people of Ohio, like those of other States, eat apples too sparingly, and of the apples they buy too large a percentage are grown outside of the State. It said also that no one need apologize for the Ohio apple, except on the score of its rarity, or too often on the score of lack of grading, and to our shame be it said, dishonest packing. There is something wrong when good apples cost more than good oranges, as they do in many if not most of the markets of Ohio. It has been said that the farm orchards in Ohio have been disappearing at the rate of 10,000 acres a year. If this is true it is a deplorable situation. While the loss of farm orchards is being partially balanced by the establishment of large commercial orchards, is there any good reason why the farm orchard should go? There is urgent necessity of treating it better, of making very great improvements in its management. Too often we who have small orchards do little or nothing for them, and are disappointed if the orchard does not do much for us. We do not seem to have learned the lesson that as a rule it is only work thoroughly well done that is generously rewarded. Raising apples is no exception to this stern but salutary law. We may be lacking in the knowledge and skill necessary to good orchard management, but we cannot clear our eyes to the fact that the best orchard management is that which is morally sure to give us the largest and most certain reward. While we rejoice that the apple orchard is sometimes a profitable corner of the farm, the rapid decrease in farm orchards show that too often they are little more than waste land yielding neither satisfaction nor revenue.

In viewing the apple situation in Ohio I have been puzzled by this question: "Would more apples be eaten if more were raised, or would more be raised if more were eaten?" This relation of cause and effect may not be readily determined, but the fact remains that too few are raised and too few eaten. I believe the apple show will tend to correct both of these failures. In connection with the show there was an unusually complete exhibit of horticultural implements, tools and appliances of various kinds. To many this was quite as instructive as the apple show itself, and was a splendid opportunity for manufacturers, dealers and users to get together.

By far the larger part of the premiums awarded were captured by the growers of the northeastern and southwestern parts of the State. This seems to prove that as far as injury by late Spring frost is concerned the lake region in the north, and the higher hills in the south, are the most nearly exempt. The apples that came from other sections of the State were from orchards of unusually good location regarding cold air drainage, or those that were protected by artificial heat.

Among the resolutions adopted was one opposing the 90-day limit of cold storage on apples, and one asking for relief from the game laws that are protecting rabbits, so that they are becoming one of the worst pests in orchard and nursery.

WILLIAM R. LAZENBY.

NEW YORK STATE GRANGE.

The 41st annual session of the New York State Grange was held February 3-6, at Poughkeepsie. It was the largest in respect to voting delegates present ever held, 570. Visitors included, there were probably 1200 in attendance on Thursday when the sixth degree was conferred. State Master Vary's annual address was a clear presentation of the politics of the order as he has attempted to promulgate them during the past two years, and of the conditions and prospects as he views them. A large part of the address was devoted to the trade cooperative efforts of the Grange with specific reference to the State Grange Purchasing Agencies, which he said had done a business of $392,000 the past year, although considerably less than one half of the Granges of the State had patronized it. State legislation was reviewed, and the activities of the Grange as related to our agricultural institutions, the Department of Agriculture, the State Experiment Station, State fair, etc., were recounted. The Secretary's report showed that the total membership of the order in the State on Oct. 1, 1913, was 109,293 and at the present time it is about 110,000. On January 1, 1914, the total number of Subordinate Granges was 838. The receipts of the office were $31,441.49. The treasurer's report showed receipts for the year, including the balance on hand Jan. 1, 1913, to have been about $59,000. It appears from this report that the expenses of the State Grange session last year at Buffalo, were over $11,000. Among the strong Grange counties of the State, Jefferson leads with a membership of about 7,900, Chautauqua closely following with perhaps 100 less. The total net gain in membership for the fiscal year was 4,321.

The following officers were elected: Master, W. H. Vary, Watertown; overseer, S. J. Lowell, Fredonia; lecturer, F. E. Alexander, Pulaski; steward, F. J. Riley, Sennett; chaplain, S. L. Strivings, Castile; treasurer, W. S. Bean, McGraw; secretary, W. N. Giles, Skaneateles.

J. W. D.

COMING FARMERS' MEETINGS.

Sixth National Corn Exhibition, State Fair Grounds, Dallas, Texas, February 10-24.

Granite State Dairymen's Association, Concord, N. H., February 12.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., January 24-26.

A KINDERGARTEN teacher had been very strict in requiring written excuses from the mothers in cases of absence. Willie's mother was quite annoyed. It seemed to her that anyone with the slightest pretensions to gray matter ought to know the reason for his absence. The next morning he arrived all rosy with the cold and handed the teacher his excuse. It read: "Dear Miss C.——, —Little Willie's legs are fourteen inches long. The snow was two feet deep. Very truly your, Mrs. J——."—Credit Lost

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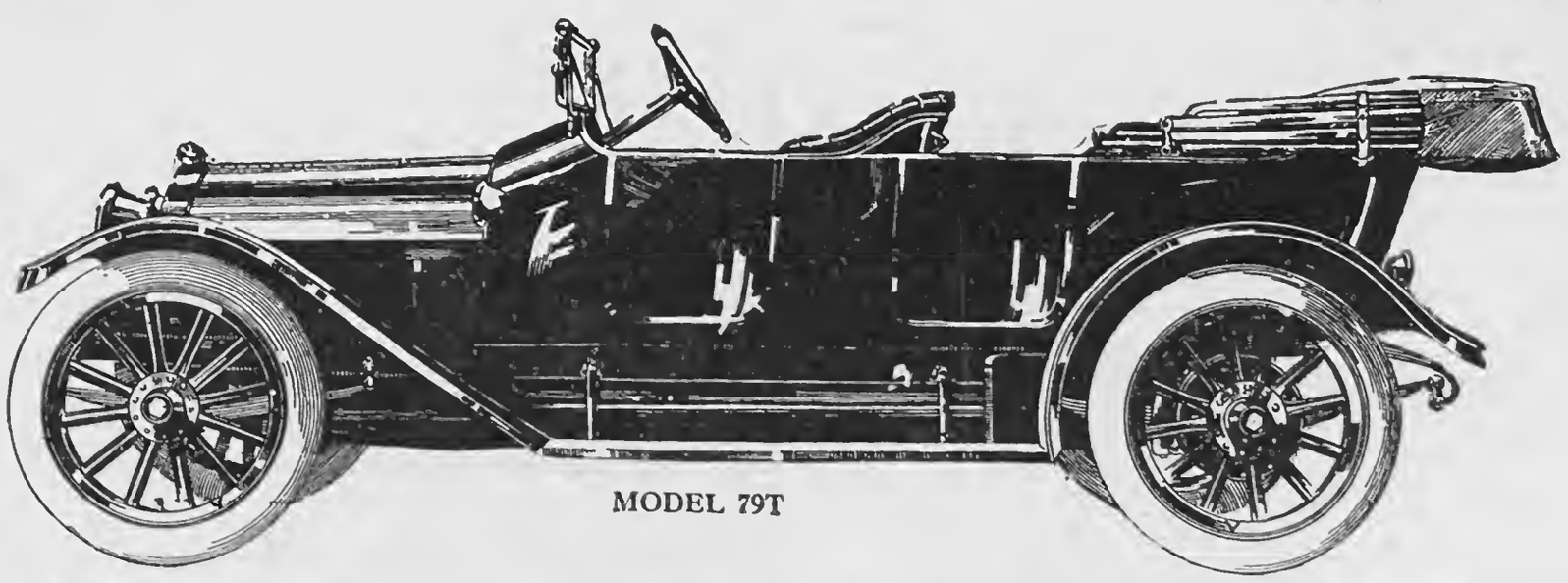

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NOTES FROM A MARYLAND GARDEN.

The garden has been heavily covered all over with old rotten manure, both on the vacant ground and between the rows of the Winter crops of onions, spinach and kale, and now this will be supplemented with an application of 1,000 pounds an acre of a mixture of eight per cent phosphoric acid and 10 per cent potash, for my sandy soil needs the potash. And right here is where a great many people fail with their gardens. I had two letters this week from people asking advice about their gardens. Both of them said that the garden was very rich, and they have been covering it with stable manure every Spring for years. But they said that Irish potatoes make tops of immense size and no potatoes; that Lima beans made wonderful vines and set full of pods which shrivelled and dropped, and onions all went to scallions. They had been dosing the garden with nitrogenous matter with very little of the seed-forming and bulb and tuber-making mineral matters. That is, they had got the soil rich in nitrogen, and had for years been using up the phosphorus and potassium.

I try to keep up a balance in the plant food, and have no such difficulty. My Irish potatoes make immense vines, and make potatoes too. My Lima beans grow wonderfully, and bear loads of well-filled pods, simply because the plant foods that are needed for the making of starch are there, and starch is an essential thing in making seed and potatoes. We are getting now lettuce from the frames on which I have the double-glazed sashes, which need no mats. Then outside we are getting salsify, spinach, leeks, kale and carrots, all of which I leave in the ground where they grew, and lift them as wanted. Leeks we are fond of, and they take the place of the green onions until we get the onions in March.

I have two varieties of onions planted last Fall. The earliest green onions we get from the Norfolk Queen. This is a flat white onion, larger than the Queen of the northern catalogues, and makes the earliest green onions. In mild Winters they are often large enough here to use in February and always in March. The other variety is the Yellow Potato onion. These make no seed, but increase by offsets. These can be pulled in April for green onions, and they make a fine succession to the Norfolk Queen, while the main bulbs will ripen into very large onions. The Norfolk kale is better than the green Curled Scotch in eating quality, and I now grow it only, though the Scotch will make the heaviest crop. Part of my spinach was sown in late August, and has been giving us fine cuttings all the Fall. The remainder was not sown till October, as we wanted it simply to get large enough to winter over and make growth in the Spring. I never sow spinach in the Spring, but sow chard as a Summer substitute. We can pull the leaves of the chard as soon as they are as large as ordinary spinach leaves, and it is hard to distinguish these young leaves from spinach when cooked. But I always sow plenty, in rows like beets, for the plants that are allowed to develop full-sized leaves make long leaf stalks, and these are pulled off like rhubarb and trimmed and cooked and dressed like asparagus, and make a very fine dish.

Down here the large White Lima bean is never very productive, and for a climbing bean we use the Small Lima or Sieva, which in fact I consider a better table bean than the large ones. But we have the largest of the large ones in the Fordhook Bush Lima, which bears the thick or potato Lima beans, and is very productive. But it will not do to crowd them in the rows like the string beans. They make stout plants, and productive ones only when given a foot in the row. The crop now being planted in the frames, or rather crops, are the Prize-taker onions, for transplanting in March. Then under the double-glazed sashes we sow radishes and beets in alternate rows six inches apart, and the radishes come out before the beets need the room, and in March the beets are hardened and the sashes removed to other frames, in which the tomato plants are spotted out from the greenhouse.

My rule for sowing early tomato seed anywhere is 10 weeks before it is usually safe to set them in the open ground, which means here from 15th to 20th of February. But last Spring we came near having a disaster with them, for we had a freeze May 11. It was Sunday night, and returning from church I found that there was sure to be frost, and with shovel and lantern I went to work and bent the tomato plants over carefully and shovelled the soil over them, and saved them, though the mercury in the morning stood at 28, a most unprecedented thing here in May. One row of string beans was saved also.

In the flower garden I find that Dahlias keep safer buried outside. I dig a shallow pit, cover the bottom with straw, and pack the roots in, and cover them thickly with old newspapers, and then mound the soil over them in a sharp heap to shed the rain. Last Spring when I removed the earth and the papers I found them all started with shoots five inches long. Cannas need a little more heat, and I keep these in the cellar in the farther corner from the hot-water boiler, and I keep thousands of Gladioli in the same cellar, as far away from the boiler as possible. My main crop of Fall-planted bulbs is the Candidum lily. These are planted in September, as it is necessary for them to make a rosette of green leaves for the Winter.

My first planting of Sweet peas was made on the 21st of January. A trench a spit deep was dug along a wire netting fence, and filled half full of old rotten manure, covered slightly, and the peas sown and covered about five inches deep. More are yet to be sown as soon as there is a favorable spell, for we must get these in early, so as to get them in bloom before the weather gets too hot.

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I see you advise frequently the use of Fowler's solution. What is Fowler's solution and how does it operate? Is it ever used for human ailments and which if any? M. N. G.

New York, N. Y.

Fowler's solution is a liquid preparation of arsenic; chemically it is a solution of the arsenite of potassium. It has the properties of arsenic, and is a convenient means of administration of that drug. It is a valuable drug, much used in medicine, but is a powerful irritant and depressant poison in overdose, and should never be taken or given except under the direction of a competent physician. Its chief field in human medicine is in certain skin diseases, in some nervous affections, and, combined with iron, as a tonic, or tissue builder. Given to horses with heaves, in proper dose, it relieves the symptoms of that disease.

M. B. D.

Bearing Age of Apples.

What are the relative ages at which the principal commercial varieties of apples come into bearing? Of course I understand that the actual ages at which they come into bearing depend a great deal on the locality, soil, care, etc., and perhaps this is true to some extent of the relative ages also, but generally speaking, I suppose it may be said that certain kinds are early bearers, other kinds medium, others late. Some of the varieties I should like specially to know about are Winesap, Stayman, Arkansas, Rome Beauty, York Imperial, Jonathan, Grimes, Newtown, Hoover, Bonum, Ben Davis, Delicious, King David, Senator, Paragon, Wealthy, McIntosh and Hubbardston. Will you arrange the above varieties approximately in the order of the ages at which they may be expected to come into bearing in this climate, under reasonably good care? R. P. J.

Almost any variety of apple or other fruit will vary in the time of coming into bearing according to the conditions under which it is grown, but, as R. P. J. states, there are well-established records of the behavior of most of the principal apples at least. It is very well proven by many years of testing that all varieties of the apple begin to bear earlier in the regions beyond the Rocky Mountains than anywhere east of them by about two or three years. In the prairie regions of the Central States the apple trees come into bearing a year or two earlier than in the regions from Ohio and Michigan eastward. The particular varieties mentioned in this list are nearly all about medium in point of time of bearing age. The Wealthy is the only very precocious one, and the Newtown the only really tardy one. Without consulting a recorded list from actual experience they will stand as follows in the Central States: Four years from planting, Wealthy; six years from planting, Winesap, Stayman, Arkansas, Paragon, Rome Beauty, Bonum, Delicious, King David, Senator, McIntosh, Grimes, Jonathan; eight years from planting, Ben Davis, Hubbardston, York Imperial; 10 years from planting, Newtown. From these figures anyone can calculate that they will bear two years earlier in the western regions and that much later to the eastward. By these estimates it must not be understood that there are not many minor variations and that there will be a few specimens borne at earlier dates. That there may be light commercial crops about at the times indicated is reasonable to be expected.

H. E. VAN DEMAN.

Diseased Cauliflower Plants.

Will you give the cause and remedy for cauliflower plants stopping growth, the edges of the leaf turning brown? I sow seed in a well-prepared ground outside from the 10th to the 25th of May, and usually have to sow more seed than is necessary, because the affected plants cannot be depended upon. Different parts of the bed are usually affected, while the rest of bed are as nice as could be wished for. L. W. J.

Solon, O.

From the description given of the diseased plants it appears they were attacked by stem-rot. This disease has been more or less destructive in Ohio and several other States for over 20 years. During that time it has become pretty well distributed throughout the State. The spores are usually distributed by crawling insects (slugs being the principal offender) carrying the spores on their bodies from the diseased plants to the nearby healthy plants, which accounts for the disease appearing in patches instead of rapidly spreading to all parts of the bed, as would be the case in the attacks of most fungus diseases in plants. So far no sure method of controlling this disease has been discovered; nothing but clean soil and manure should be used in the seed bed, and as an extra precautionary measure, either the seed or soil or both should be disinfected before sowing. The following method of soil sterilization in the seed bed, is recommended by the Ohio Agricultural Experiment Station, for the successful control of the disease. Treat the seed bed immediately after sowing the seed with a solution of Bordeaux mixture (4-4-50 mixture) at the rate of one gallon to 10 square feet of surface. In addition to this the beds should be sprayed with Bordeaux about two weeks before and again just preceding transplanting into the field. K.

Whole-root or Piece-root Trees.

I am intending to plant an apple orchard, and would like your opinion as to the best trees to plant, whether whole-root or piece-root. R. S.

Kevil, Ky.

There has not been much said lately about the whole and piece-root theories. It is true according to my own experience that the better trees are grown from grafts put on the upper six inches of good seedlings than from the ordinary piece-root grafts. I tried this out in Kansas many years ago, by making up a lot of root-grafts on pieces of roots from two inches to 12 inches long. The trees produced from the upper six inches were decidedly better than those from the lower six inches, or from any other length or part of the same grade of seedlings. The trees grown from the full-length roots or those a foot long were no better than those from the upper six inches of the same grade. Nurserymen do not grow trees from full-length roots, or at least not many do so commercially and I really doubt if any do. They usually call the trees they grow from the upper cuts of the seedlings about six inches long "whole-root trees" and those who really grow them in this way may justly claim that such trees are superior to ordinary piece-root trees. Trees grown by budding on seedlings in the nursery rows are whole-rooted, and are often considered superior to ordinary trees as sold by nurserymen. H. E. VAN DEMAN.

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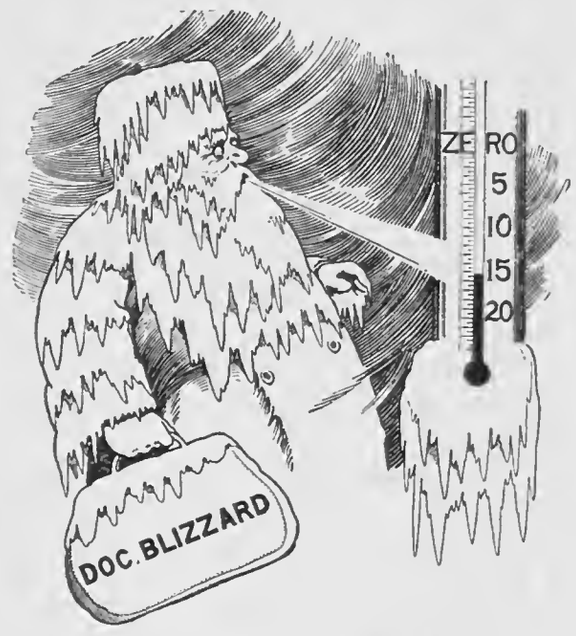

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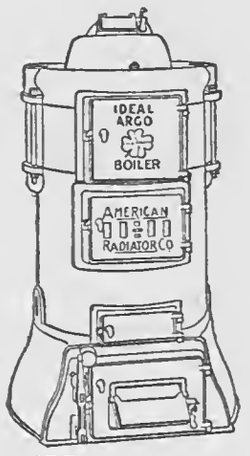

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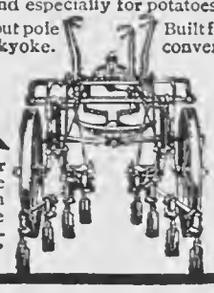

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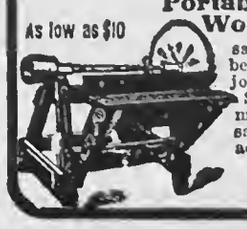

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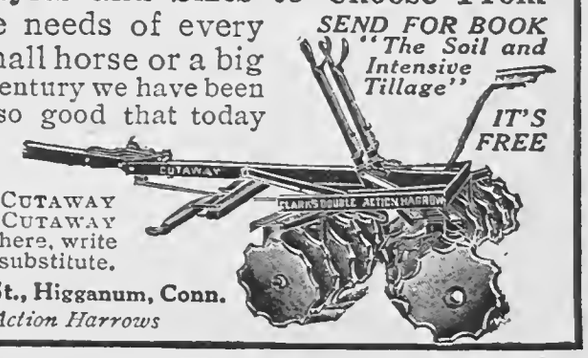

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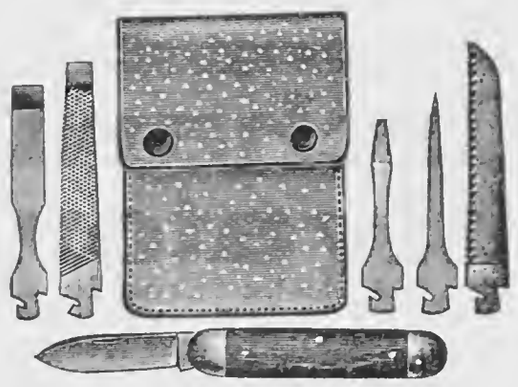

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THE RURAL NEW-YORKER,
333 West 30th Street, New York City.

The Home Acre.

BEAUTIFY THE RURAL HOME GROUNDS.

In the beautifying of the rural home grounds, the development should be conducted along lines that will produce a harmonious and pleasing effect. The style of development will depend much on the size of the area to be improved, the character of the soil, climate and the amount one can afford to expend for the purpose. Three styles of improvement are employed in landscape work, formal, informal or natural, and a combination of both. The size of the ground to be improved, together with the other important features mentioned, will in a great measure determine the style of improvement that can be most appropriately employed. For small places of less than an acre, particularly when situated among others of like dimensions, the formal style will in most cases be the more appropriate, whereas estates of larger dimensions should have the informal style of treatment, or a combination of both styles may be employed as seems best suited to the circumstances. When the home grounds are undergoing improvement, it should be the aim of those in charge of the work to arrange the planting of trees, shrubs, etc., as harmoniously as possible, making the contrast between the different species of trees, shrubs and flowering plants show to the best advantage, as it is the habit of growth, color of foliage or flowers, that serve in bringing out prominently the individual beauty of each, when grown together. Therefore they should be so arranged, whether planted in groups or singly, that a group or individual of any species of tree, shrub or flowering plant will not be out of harmony with its associates, or out of adjustment with the contour of the place.

Nature is our best teacher, and in the arrangement of the various plantings, etc., nature should be imitated as closely as possible, particularly when the area is large enough to admit of the informal style of improvement. Small places, on account of their limited area, will make the formal style of treatment necessary, in most cases, as the limited room will not admit of curved driveways, walks or irregular outline to the margins of the shrub and hardy herbaceous flowering plant borders. However, beautiful and pleasing effects can be produced, even on a town lot, though the lines of drive, walk and plantings are straight; therefore let not the smallness of the ground act as a deterrent to their improvement. The expense of improvement would be so small as to seem almost unworthy of consideration, when compared with the great pleasure that will be enjoyed by the owner, and the greatly enhanced value of the property, because of the improvement. Every rural home should be surrounded by as many trees, shrubs, vines and hardy plants as can be appropriately used in the adornment of the grounds. Harmonious and pleasing arrangement of the home surroundings will go far in maintaining harmony in the home. No home should be without either. K.

We have just had an old-fashioned January thaw, which has taken our sleighing, leaving wheatfields and meadows quite bare. A large number of logs have been hauled to mill during sleighing. Icemen have cut a good quality of ice. Stock is doing well. Cabbage has not been very renumerative when we consider the light yield per acre of Danish. Apples are not keeping very well. Hens are on strike, giving but few eggs on good feed. The most senseless and unjust law that has been introduced in the Senate is that in 1917 all sleighs shall be altered to four feet eight inches in width, just to accommodate the autos. Won't that be a blessing to the poor man? We have had to alter our wagons to wide tires, and they have taken the breakwaters off the hills, which should never have been done, as the heavy rains are washing the roads badly. We old hayseeds have always had to ride over them, why not the auto? What will they want next? We certainly have high taxes out of the operation and road graft put in for filler. When will the farmer have justice? E. F. B.

Canandaigua, N. Y.

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What to Do With "Hard" Water.

I would like to know what I can do to soften "hard" water. My artesian well has good drinking water, but for washing and bathing purposes it is too "hard." My wife uses soda, ammonia and numerous softening agents without much benefit, and the use of these agents has "cut" her hands and fingers considerably. This latter feature I am more desirous of eliminating than anything else. Can you help me? A. H. K.
Bound Brook, N. J.

The "hardness" of water is usually caused by the sulphates and carbonates of lime and magnesia. It is due, in the case of well water, almost entirely to the absorption from the limy or chalky strata through which the water flows. Deep well waters are more often affected than shallow wells, because the water of deep wells frequently flows for many miles through such a chalky layer, while the water of shallow wells has not, as a rule, flowed underground for any great distance. Much of the hardness—that called "temporary" hardness—may be removed by boiling and filtering or straining. It may also be removed by adding lime water and allowing to stand a while and then filtering or straining. If, however, the hardness is "permanent," there can be nothing done other than what you have already done. That is, carbonate of soda (washing soda), borax or ammonia must be added and the water then boiled and filtered. You may have stopped after adding these things, in which case not much benefit is found. The addition of soda, borax or ammonia merely changes the sulphates to carbonates and these carbonates must then be removed by boiling and filtering or by adding lime water and filtering. If large quantities of the water are used, instead of filtering, leave the water standing in a barrel or other container for 24 hours, allowing the precipitate to settle at the bottom. R. P. C.

Fire Extinguishers.

Can you give the formula for a fire extinguishing solution using carbon tetrachloride as a component part? Was this the solution (used in bottles) that was so much advertised a number of years ago? T. S. B.
Hammondsport, N. Y.

Although I am acquainted with the formulæ and construction of about 50 different fire extinguishers, I do not know of any containing carbon tetrachloride. Your inquiry concerning a much advertised solution of some years ago is too indefinite for a certain answer. The Babcock extinguisher was much advertised, but so were many others. Perhaps the Babcock was more spoken of and pushed than any other, so I will give its construction. There are two substances contained within the reservoir, an acid, usually sulphuric acid, and a second chemical, usually a solution of bicarbonate of soda in water. These are kept separate normally, but upon inverting the reservoir, the acid flows upon the bicarbonate and carbonic acid gas is generated, giving sufficient pressure to throw the whole contents from the nozzle of the little hose, with a great deal of force. Carbonated water is always a splendid substance for fire extinguishing purposes, because it has not only the effect of water in general, but it also liberates carbon dioxide which, of itself, is efficient. The idea back of almost all of the extinguishers, whether solutions or grenades, is to liberate gas which does not support combustion. That is, the supply of oxygen is choked off from the fire. That is really the only way of stopping a fire. It is the purpose of water, but when water is thrown on oil, for example, the oil floats on the water and still burns because it has access to the oxygen of the air, but if sand or earth is thrown upon the oil, air supply is cut off and the burning ceases. R. P. C.

How to Tan a Hide.

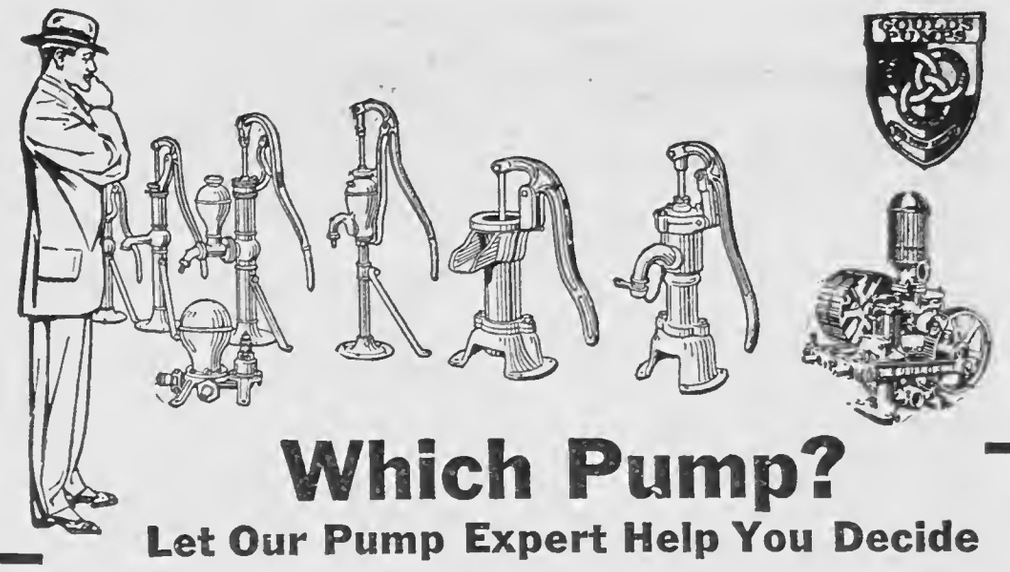
Will you give me the proper method in preparing muskrat skins and pelts of that nature for a coat lining? C. W. M.
Methuen, Mass.

The following method has given satisfaction to many of our readers: It is a method applicable to all skins with the fur on. First trim off all useless parts, then remove all fatty matter from the inside. (If the skin is dry, it must first be softened by soaking.) Next soak the skin for an hour in warm water. After this, spread over the inside of the skin, by means of a brush, a coating of the following mixture: One ounce borax, one ounce saltpetre, one ounce glauber salts (sulphate of soda). Water sufficient to make a thin paste. The coating should be heavier on the thicker parts of the skin; double the skin together, coated side inwards, and put it away in a cool place. At the end of 24 hours apply, in the same manner as before, a coating of a mixture consisting of one ounce sal soda, one half ounce borax, two ounces hard white soap. Melt these together slowly by heat, without allowing the mixture to boil. After coating the skin with the above, fold it together again as before, and put it in a warm place for another 24 hours. At the expiration of this time, take four ounces alum, eight ounces salt, two ounces saleratus. Dissolve these in hot water sufficient in quantity to saturate the skin; when cool enough not to scald the hands, soak the skin in it for 12 hours; then wring it out, and hang it up to dry. The soaking and drying must be repeated two or three times, until the skin is sufficiently soft. Lastly, smooth the inside with fine sand-paper and pumice stone.

Handling Crimson Clover.

Do you think it will pay us to sow Crimson clover with oats early in April? The oats are to be cut just as soon as fit for hay, the clover later, to be plowed in, so that we can grow turnips or other root crops. We would top-dress the oats lightly with stable manure. The land is fairly loaded with humus now. J. I. N.
New Jersey.

No, it will not pay to sow Crimson clover in the Spring. You would hardly get the value of your seed back. This is not a Spring clover. It should be seeded in late Summer if at all. When seeded in Spring it will stop growing, head up and die when hot weather comes. Sow Canada field peas with your oats, cut the combined crop for hay or green fodder, and plow under the stubble for your later crops.



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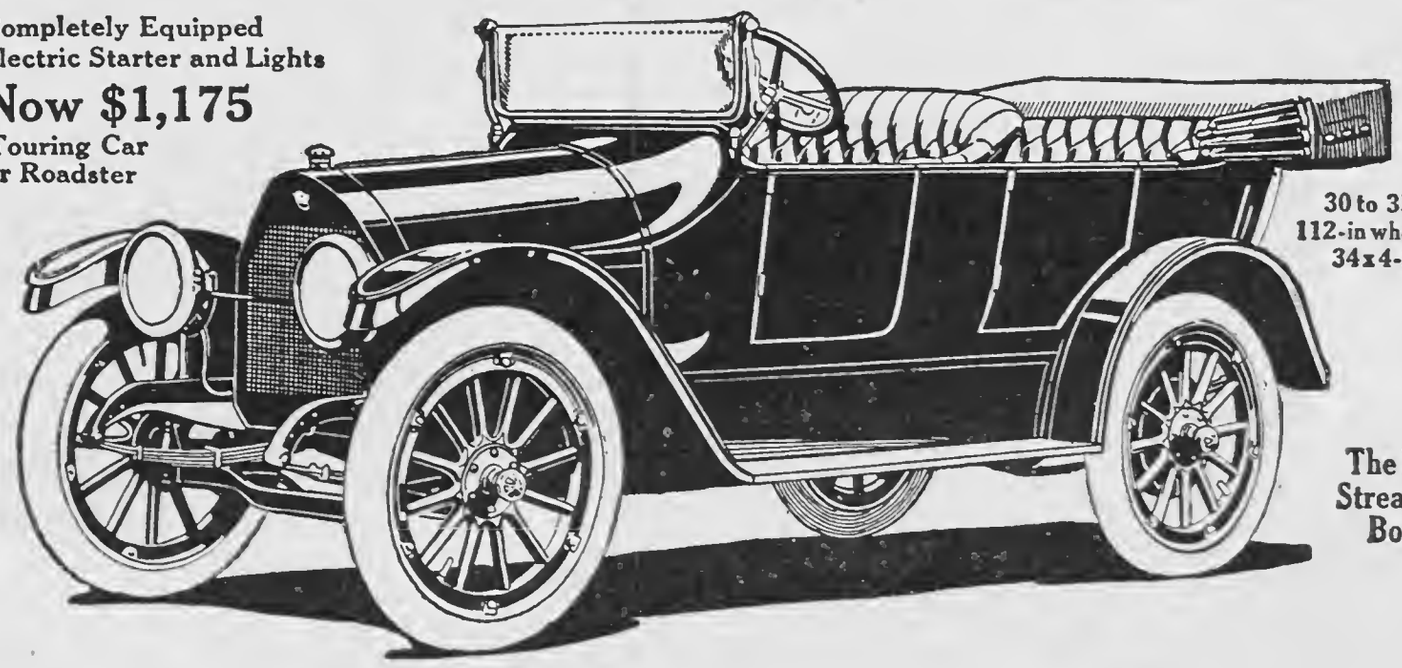

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Up to this season, Reo the Fifth sold for $1,395 completely equipped, with electric starter and electric lights. Now, with this new streamline body, with better equipment, with 36 improvements, the price is $1,175 equipped.

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(222)

LEGAL NOTES.

Specific Performance of Contract.

An aged man and wife, know as A, bought a tract of land from a party known as B. A paid for the land last July, but never received a deed, being put off from time to time. A has erected and paid for a house and home on said land, which is in New Jersey, and now resides there. A does not believe any wrong is intended by B. What, if any, action could A's sons take to secure their parents the deed, they having discovered the state of affairs? B. C.

It is not stated whether the contract for the purchase of this land was oral or in writing. If it was an oral contract for the purchase of property, it was not good in New Jersey, unless performance on the part of A has taken it outside the statute, and if A has taken possession and made payment and erected a house, he is then in a position to compel B to perform his part of the contract and deliver a deed, and this should be done by an action in which A is plaintiff and B is party defendant, to compel B to deliver a deed to A. Of course, if it is a family affair, it would be much better if it could be settled up without beginning an action, and this method should be tried first.

Telephone Rates.

Some time ago I read in some paper that the Bell Telephone Company had brought suit against a person who had a telephone in his office or residence, and had made an extension to the same for his own use, which the telephone company objected to. The matter was taken into court, and I believe was carried to the higher courts, and finally decided in favor of the subscriber, with the remarks that "the subscriber had paid for the use of the 'phone on his premises and he had the right to make extensions for his own use if he so desires." Can you give me any information along this line, and cite me to any case of the kind that has been decided in the courts? C. C. T.

Pennsylvania.

Careful search and inquiry does not reveal any case holding as this subscriber sets forth. It would seem hardly fair to the telephone company to allow a subscriber in reality to have two 'phones when he is only paying for one. Inquiry at the head office of the telephone trust in regard to decisions of this kind was made, and was met by the statement that no such decision had been given anywhere in the country, and that if such a decision had been made, it would be known by them immediately. They made the statement that if an extension of this character were put in, the contract of the subscriber would be violated and both 'phones would be taken out.

Claim of Judgment Creditor Under Foreclosure.

1. When a party sues another to recover a sum of money, and the court grants judgment to the plaintiff (a), is the judgment recorded, and who records the judgment? (b) Must the plaintiff who has secured judgment record it at his own expense. I understand that when there is a judgment against a property, if said property is sold, the party selling cannot give a clear title until the judgment against it is paid. I have a judgment against a party whose property is already encumbered with two mortgages. I have learned that one of the mortgagees has foreclosed, and bought the farm in, but I have received no information regarding the judgment, nor check to cover it from the court. 2. A property on which I have a judgment has been sold; what steps must I take to look after my own interests, and secure the cash granted me by the court? I also took out a lien on the property.

New Jersey. M. O. N.

1. (a) The judgment is recorded and it is done by the plaintiff. (b) He must record it at his own expense primarily, but the costs may be taxed against the defendant and will by that much increase the judgment. In the event that the property is sold under foreclosure of the first mortgage, of course the first mortgagee is entitled to his pay first because his lien is first and then the second mortgagee and the judgment creditors in the order of priority of their liens, and if there is sufficient money left after the sale to pay the second mortgage and the various judgment creditors, of which yours is one, you will receive your money, but if there is not and the other liens are ahead of yours, you of course will not receive any. If there are two mortgages on the property there is very little chance that the judgment creditors will receive anything from the property.

2. The above answers your second question. You must be made a party defendant and you would participate in the surplus money proceedings if there is any surplus after paying off the mortgages and the costs of the foreclosure proceedings. If there are two mortgages on the property there will probably not be anything left for the judgment creditors.

NEW YORK STATE NEWS.

THE TILDEN MEMORIAL CELEBRATION.—In accordance with the special act of the legislature the Tilden Memorial Commission prepared a fitting program for the occasion. The dates were February 8-10. Outline of program follows: Sunday, February 8, members of the commission visit the Tilden home in New Lebanon, N. Y. and place floral emblem on tomb, after which ceremonies in the Congregational church, with addresses by commissioners. On Monday, the date of Tilden's birth, joint session of the two branches of the legislature, presided over by Gov. Glynn, concluding ceremonies at Carnegie hall, New York city, on Tuesday evening with addresses by Herman Ridder, Gov. Baldwin of Connecticut and others. Unveiling a full length portrait of Samuel J. Tilden painted for the occasion by Franklin Barber Clark.

THE WHOLE THING.—That is what Thos. H. Bussey of Wyoming was when the senate convened on Jan. 30. He was the only senator present, consequently he presided, was majority and minority leader and the whole house. In calling himself to order he said: "It gives me infinite pleasure to see so many of the members of the senate present on this, the last legislative day of the week. It is an indication of their appreciation of the great honors which have been thrust upon them and an indication of their desire to uphold the honor and dignity of the Empire State." After the clerk had read the minutes, the lone senator moved their approval and carried the motion. He then recognized himself and introduced five bills affecting the New York city police department, referred them to committees, moved the senate "do now adjourn," carried it and walked out.

BULLETIN 54.—Again we call attention to a valuable bulletin just issued by the Department of Agriculture for the farmers of the State. It relates to the dairy industry and has nearly 400 pages, many illustrations. It treats of every phase of the industry in 34 articles written by men competent to speak on the subjects assigned them. It was compiled by Edw. Van Alstyne, Superintendent of Farmers' Institutes. Another bulletin which every farmer should possess is No. 51, relating to the duties of the Commissioner of Agriculture. In it we also learn that the agents of the department made, during the last three months of last year, inspections at 830 different places, and separate inspections as follows: Food, 10,735; milk, 11,978; veal, 3,188; sanitary, 772; feed, 1,624; oleo, 4,825; stables 427, and many others making a total of 34,317.

DAIRYMEN'S LEAGUE.—Secretary Manning of the Dairymen's League says it now has 10,200 stockholders representing 158,000 cows, in 300 local branches. John Y. Gerow is president.

EASTERN MEETING OF FRUIT GROWERS.—The annual meeting of the State Fruit Growers' Association will be held in Poughkeepsie on Feb. 19 and 20. There is a good list of speakers and many practical questions are on the program for discussion. One half day will be devoted to dscussions of blackberries, raspberries, currants, strawberries, etc. There will be a banquet on Thursday evening. The State Experiment Station will have a fine exhibit of apples grown at the station, many of them new varieties originated there. The College of Agriculture at Ithaca will have an interesting educational exhibit. Horticultural apparatus will also be shown.

TEACHERS' RETIREMENT FUND.—A bill has been introduced in the Assembly which requires that all cities and school districts of the State shall contribute to the fund for the teachers who are on the retired list. These districts shall pay an amount equal to the payments made by the teachers in the city or district. Under the present law the teachers have to pay one per cent of their annual salaries. This, it appears, is not adequate for the maintenance of the fund. It is the judgment of the Education Department that the teachers should not be required to increase their assessments.

HYDRO-ELECTRIC BILLS.—The Conservation Commission has prepared and had introduced in the Legislature, three hydro-electric bills, the first of a series the Commission is preparing for the development of hydro-electric power in the State. The first of these bills is a redraft of the Bayne bill of 1912 and its purpose is to conserve the natural resources of the State and institute a policy of progressive development of electrical energy from water power under State ownership, control and supervision. It is believed that this plan will bring large revenues to the State and harness these great hydraulic resources for the public use and benefit. The so-called Capital District bill has been redrafted and applies only to the utilization of surplus canal waters for hydraulic power. The bill carries an appropriation of $650,000 of which $282,000 is to be made available in 1914. The other bill authorizes the commission to construct a hydraulic-electric plant at any point along the canal the commission may select. For this purpose an appropriation of $700,000 is proposed of which $300,000 is to be made available this year. J. W. D.

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II. THE MAPES RECORD WITH THE EXPERIMENT STATIONS.

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III. SAME FAMILY MANAGEMENT FOR THREE GENERATIONS.

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The Mapes Manures have never stood still but have been constantly improving as the knowledge of scientific plant feeding broadened and progressed.

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Weedy Land for Potatoes.

I have an acre of ground, formerly producing good crops, but now covered with plantain and sorrel, which I am thinking of putting into potatoes this Spring. Is it advisable to do so and if so, what would be the best preparation of the ground for them? If not, what other crop would you suggest which could be kept under cultivation? E. S.

Honesdale, Pa.

It is doubtful if this piece of land will produce a successful potato crop. We should prefer to plant corn in hills the first year, and give thorough cultivation, so as to kill out as much of this foul growth as possible. We should plow early, and then if possible use a disk harrow to chop up the sod thoroughly. Then mark both ways and plant corn, using about 300 pounds of a corn fertilizer in the hill. Give the most careful cultivation, and hand hoeing, and at the last cultivation sow rye and Crimson clover in the corn. Another year by carrying out this plan the ground will be in much better shape for potato culture.

Cover Crop in Corn.

I wish to sow something between the corn at last cultivation which will make a rank growth to turn under in the Fall for green manure, and then seed to Timothy and Red clover. I had thought of cow peas and Cow-horn turnips. Would Dwarf Essex rape be of value? Would such crops have a tendency to lessen the corn crop? What could I sow on rye stubble to turn under in September and then seed down to grass? M. H.

Simsbury, Conn.

For such a crop as you require, you should sow in the corn at the last cultivation, three pecks of either cow peas or field beans, and in addition, one pound of Cow-horn turnip seed, and two pounds of Essex rape. All these crops will make a fair growth in the shape of corn. This can be plowed under in late September or early October, ready for grass seeding. You should use a dressing of lime when sowing the grass seed. The field beans will not give you as rank a growth of vine as the cow peas, but they are a surer crop. In a dry season, this cover crop will interfere somewhat with the corn, by taking moisture which belongs to the corn crop. With plenty of rainfall there will be moisture enough for both crops. For the rye stubble you should plow under after harvest and seed to each acre, six pecks of buckwheat and 12 pounds of Crimson clover. This will make a fair growth before late September, and add considerably more than the cost of seed and labor to the soil.

Earthworms in Well.

Do you think earth or angle-worms would contaminate the water in a well if, as in time of a drought, the worms fell into the water? If so, what would you recommend to prevent such an occurrence? I have sprinkled the earth in the carriage road with salted water to destroy weeds, and it has brought the worms to the surface in myriads. There are chemicals used on lawn and golf links that produce like results and kill the worms. Would these dead worms be dangerous in the water or to to poultry? There must be conditions of the earth favorable or vice versa to these worms, as you will probably have noticed when digging bait for fishing, when you could get a cupful of worms without changing your position, and then again, you might dig over an acre and not get a worm.

Litchfield, Conn. F.

While not an authority on earthworms, I can see no reason for considering their presence in wells deleterious unless they occur in such numbers as to cause appreciable pollution of the water through decay of their bodies. The food of earthworms is vegetable matter mixed with a certain amount of earth, which they swallow while burrowing their way through the soil. It is their habit to come to the surface at night to feed and discharge their excreta, but the flooding of their burrows with water will cause them to emerge at any time, and if this water has been charged with substances poisonous to them, they would naturally die at the surface. It would not seem probable that they would absorb enough of this poisonous material to render them injurious to chickens in the small numbers which would be eaten. The upper two or three feet of well curbing could easily be rendered imprevious to earthwarms by digging a narrow trench about it and filling that trench with cement grout, or by plastering the inner surface with the same material. M. B. D.

Scraping Bark Off Fruit Trees.

When is the best time to scrape the old bark off apple and pear trees? The trees are old but have borne fruit this last year, only it was small and knotty.

Robbinsville, N. J.

You can scrape the bark now or anytime before Spring. Scraping off and burning of this rough coating will destroy many eggs of insects which are buried under these rough scales. A good wash with a lime-sulphur mixture after scraping will help.

Cement Wall.

I wish to build a barn 30x35 feet, wish to put a cement wall about three feet deep and 10 inches wide. How much cement and gravel will it take to build this, and what proportion of cement?

Warren, O. W. E. S.

A foundation wall of the dimensions you give would contain 317½ cubic feet, and if built of cement, sand, and gravel, in the proportions of one part cement to 2½ parts of sand and five parts of gravel, it would require 15½ barrels of cement, 5½ cubic yards of sand, and 11 cubic yards of gravel. An ordinary team load of sand or gravel contains 1½ cubic yards. The gravel from some banks contains sufficient sand to make the natural mixture as it comes from the bank suitable for use in walls. Small rough stones bedded in the wall as the concrete is put into place in the forms save concrete. Do not let such stones rest against the forms where they will be exposed to view when the forms are removed. M. B. D.

Cement Slab.

Will you give directions for making a slab composed of cement, sand and marble dust? We have these things, and want to make a slab for the kitchen sink.

Torrington, Conn. C. E. R.

For such a slab make a wooden frame, or form, of the desired size and as high as the slab is to be thick. Place this upon a smooth surface where it can remain until the concrete has thoroughly set, and within it place a second form of the size of the space that the iron sink is to occupy. Fill the space between these two forms to about half its depth with a concrete mixture composed of one part cement to two parts of clean, sharp, sand. Upon this layer of concrete place the reinforcing wire mesh. This may be the heavy half-inch mesh wire netting, such as is used to protect cellar windows. Having covered the surface with this wire netting, continue the filling of the form with a mixture of Kean cement and marble dust, about half and half. If it is desired that the exposed edges of the slab shall have the marble finish, plaster the inside surface of the form with the marble-cement mixture before putting the sand-cement foundation in place. Make both mixtures of about the consistency of heavy mortar. The surface of the slab may be troweled smooth, and later, may be polished if desired. Wet the wooden forms thoroughly before filling. Make the slab under cover where neither wind nor sun can strike it so that it will set slowly. If to be supported upon brackets, you will probably want the slab about two inches thick; if it is to be thicker than this, fill the form to within about one inch of the top with the foundation mixture of cement and sand, and it might be well to embed more than one layer of reinforcing mesh. M. B. D.

"Mrs. Brown has the kleptomania." "Indeed; what is she taking for it?" "Anything that looks good to her."—New York Times.

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Will do the work right. They are easy on both man and team. They have the materials in them that insure years of hard work. The Buckeye Line is complete. You will find in it the Cultivator suited to your particular needs—a Cultivator that is sold under such a broad and liberal warranty that you run no risk in buying.

Send for the new Buckeye Cultivator Catalogue, read it and then go to your local dealer and insist on seeing a Buckeye Cultivator.

"The Buckeye—a Wise Buy."

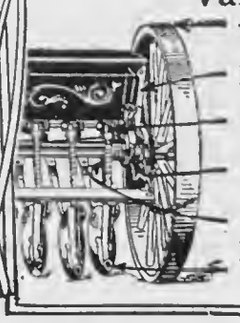
THE AMERICAN SEEDING MACHINE CO. INCORPORATED
SPRINGFIELD, OHIO. U S A.

Bigger Crops-Better Grain-Less Seed

VAN BRUNT DRILLS

Famous for accurate feed, correct covering, light draft, light weight and durability.

These features made Van Brunt famous



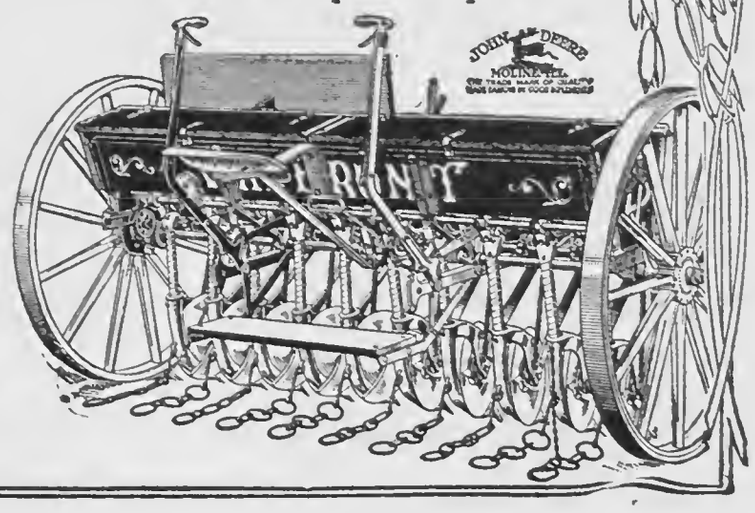
- Wheels always stand true.
- Hopper trussed—don't sag.
- Adjustable gate force feed.
- Bearings extend under frame.
- Adjustable spring pressure.
- Every seed at bottom of furrow.

Every grain grower should investigate the new and improved features of Van Brunt drills. The adjustable gate force feed, the successful fertilizer feed, the non-chokeable disc openers, the trussed hoppers, the light weight, the light draft,—all of these features combine to make the Van Brunt famous wherever introduced. Don't seed another crop with a poor drill.

Book Free

Every grain grower should have our new drill book. The improved features of Van Brunt drills make them most desirable. Write and ask for package No. VB 33

JOHN DEERE
MOLINE, ILLINOIS



AN INEXPENSIVE GREENHOUSE.

Part I.

Advantages of Greenhouse.—Do you have a few sash under which you grow vegetable plants for Spring sales, or possibly a few early vegetables for the home table? Did it ever occur to you while digging a trench a few feet deep to accommodate manure, or afterwards while wading through mud to ventilate, make and care for same, or repairing sash blown round by a sudden gust of wind, that it would be much more pleasant to work inside or under the sash on the outside?

Building With Sash.—Anyone having to 6 to 12 or more sash can easily and cheaply convert them into a small, though satisfactory greenhouse in which a much larger variety of plants can be grown, and grown in a better and more sturdy manner, as conditions are more under control of the operator and the work can be done at odd times when the other work is not pressing. With the hotbed you must work when the weather permits, and there are some seasons that have a few suitable days for sitting above a hotbed to transplant plants, etc. The greenhouse has one drawback, though. When the hotbed is covered with rye-straw mats, or shutters, it is usually safe for the night. The greenhouse on the other hand, must have a good heating arrangement, so that attention to same is not too binding, and of sufficient size to carry fairly uniform heat seven to eight hours without attention. Even considering this feature as an objection, I feel sure that after a few weeks' experience with heating, watering and ventilating the greenhouse, you would not of your own volition go back to the very much limited hotbed, especially when the wide range of utility of the former over the latter is considered. In using sash for greenhouse constructive purposes we set good-sized posts in the ground five feet four inches, centers of height wished, and nail rough hemlock boards inside of posts.

Frame Used.—Having a lot of sash, and becoming tired of the continuous and unpleasant attention they required, and their limitations as to usefulness, we constructed a house 10½ feet wide by 160 feet long of them. We find this much more practical, economical, and easily managed. Our conditions though, are different from the average small property owner with a small hotbed, as we had steam heat available, and run one two-inch flow pipe to far end and returned with five 1¼-inch returns. This gives us all the heat required for crops growing in carnation temperature, such as lettuce, radish, most vegetable plants, etc. Our posts are about two feet above ground level, and two hemlock boards are nailed inside, and earth banked up on outside near top edge. This allows sash supports placed directly in notches cut in top edge of board between each, as under each sash joint, and earth being banked up on outside holds entire weight of roof without spreading, and without posts inside. Under ridge we dug out a walk of sufficient depth to allow comfortable head room.

Ventilation.—We also had a lot of old ventilation sash 24 inches wide that had been used along ridge of a greenhouse, which we used for ventilation at top of this house. If you wish to transform a lot of sash into a sash house and do not care to purchase narrow sash (even a 12-inch opening would do) to place at top for ventilation, the house would then be about eight to 8½ feet wide, and every third or fourth sash would have to be hinged at bottom so as to allow raising at top to ventilate. At top edge in each side inside we nailed an ordinary roofing lath 1x2½ inch; on south side, for rafters every six feet we used a 2x4, and used two pieces 2x4 for ridge, one nailed flat on top of other. The top piece has a rabbet on each edge, under side, which allowed top of sash to project ¾-inch under same. It does not matter how hard it rains or blows, no water can enter at that point.

The sash in each side are hinged to this ridge cap. The rafters on north side are 1x3-inch under each sash joint. The narrow ventilation sashes close down on sash rest about two inches from top, and lower 3x6 sash are hinged to this leader. This arrangement allows a sash anywhere to be raised at lower edge, on warm days for additional ventilation, or removing plants, or renewing soil.

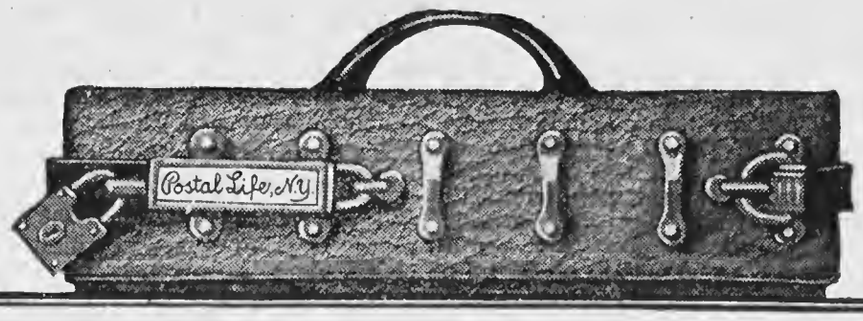
Heating.—Now I have said this house is satisfactory *but I do not wish it to appear that I advocate the purchase of sash with the construction of such a house in view.* The construction of a small house from new material will be treated separately. Next and more important than the construction is the heating of this small sash house. If in size it is less than 10x20 feet it can be heated safely and very satisfactory by a good-sized cheap stove. Dig out a pit several feet deep in north side of walk near center or a few feet farther toward end from which your cold prevailing winds blow. If house is built north and south put heater at north end. Around this stove place a piece of sheet iron without openings except a foot or more at bottom, and allowing it to extend well up toward roof top of stove. Allow 10 to 12 inches clear inside round stove. You will find this will make a remarkable difference in causing an air circulation, over the exposed stove in house. When heated you can test this circulation by burning tobacco stems, or making any other smoke over stove. You will find it go to far end of house and back at lowest point to base of stove in a short time. This shield also protects nearby plants from direct drying heat of stove, which is deleterious to healthy plant growth. As an additional help the above pipe can run from wherever stove is placed to far end of house overhead, or under bench if benches are used and stove is placed low enough. In a house 30 to 40 feet long a stove could be placed at, or near each end, preferably in the house, so all the heat would be available. Beyond these limits a hot-water system would be more desirable and reliable, and will be discussed later.

Preparing For Radishes.—A house of above description will lend itself to many uses and a wide variety of crops can be grown, especially plants, radishes, lettuce, and as a fallow crop, tomatoes. If your location is near a small town you could grow radishes and Grand Rapids lettuce, and in a very short time build up an excellent trade for same. Icicle is possibly the best white forcing radish and Cardinal Globe the best scarlet. Icicle should be sown in rows four to five inches apart and thinned to 1½ inch in rows. Cardinal Globe can be sown three inch rows and thinned 1½ inch. The latter matures earlier than Icicle, but in our market does not sell as well. Radishes require a very rich soil, one-fourth manure, and a high-grade fertilizer at rate of nearly one ton per acre is not too much of an application for this crop. The manure should be well rotted and thoroughly incorporated with the soil in preparation for seed. The fertilizer can be applied when plants are an inch or two high, and watered or cultivated in. A mixture of 100 pounds nitrate of soda, 300 pounds dissolved bone and 100 pounds sulphate of potash gives a good quick-acting manure. Water should be used freely as radish is nearly all water, chemically, and when beds are kept saturated toward finish of crop maturity is very rapid. A crop should mature in about six weeks; 48 deg. at night and 65 deg. on bright days is about right for temperature; 55 deg. is proper for cloudy days.

The Lettuce Crop.—Grand Rapids lettuce should be given same soil and temperature, but not quite as much water, and should be planted 6x8 to 8x8 inches each way. In growing lettuce it is necessary to have good strong plants ready to plant in beds as soon as a crop is off, as no time should be wasted after plants are set in beds. Great care must be exercised to keep lettuce clear of green fly or aphis. Many growers mulch heavily with fresh tobacco stems between plants for each crop, or use tobacco stems to fumigate. This can be done in an old galvanized iron bucket with large holes punched in bottom for draft, or by burning paper in walls and placing a pile of wet stems on same. Care must be taken not to make application too strong. A safer way would be to purchase some tobacco solution from your seedsman and spray according to directions.

Lancaster Co., Pa. ELMER J. WEAVER.

School Teacher: "What lesson do we learn from the busy bee?" Tommy Tuftnut: "Not to get stung."—Philadelphia Telegraph.



The Postal Life Insurance Company pays *you* the Commissions that other Companies pay their agents

THE POSTAL LIFE is the only Company that opens its doors to the public so that those desiring sound insurance-protection at low cost can deal **directly** for it, either **personally or by correspondence.**

Whether you call or write, you make a **guaranteed** saving corresponding to the agent's commission the **first year,** less a moderate advertising charge. This first-year **Commission Dividend** ranges up to

40% of the Premium on Whole-Life Policies

POSTAL LIFE BUILDING
35 Nassau St., New York

STRONG POSTAL POINTS
First: *Standard policy-reserves,* now nearly $10,000,000. *Insurance in force nearly* $50,000,000.
Second: *Old-line legal reserve insurance*—not fraternal or assessment.
Third: *Standard policy-provisions,* approved by the State Insurance Department.
Fourth: Operates under *strict State requirements* and subject to the United States postal authorities.
Fifth: *High medical standards* in the selection of risks.
Sixth: *Policyholders' Health Bureau* provides one free medical examination each year, if desired.

In **subsequent** years you get the **Renewal Commission** other companies pay their agents, namely 7½%, and you also receive an **Office-Expense Saving** of 2%, making up the

Annual Dividend of 9½% Guaranteed in the Policy

And after the first year the POSTAL pays **contingent dividends besides,** depending on earnings as in the case of other companies.

Such is the POSTAL way: it is open to **you.** Call at the Company's offices, if convenient, or **write now** and find out the exact sum it will pay **you** at **your** age—**the first year and every other.**

POSTAL LIFE INSURANCE COMPANY

The Only Non-Agency Company in America

WM. R. MALONE, President

35 Nassau Street, New York

See How Easy It Is
In writing simply say: *Mail me insurance-particulars for my age as per* Rural New-Yorker for Feb. 14.
In your letter be sure to give
1. *Your Full Name.*
2. *Your occupation.*
3. *The Exact Date of your Birth.*

No agent will be sent to visit you; the Postal Life employs no agents.

Assets: nearly $10,000,000

Insurance in force nearly: $50,000,000

To Maple Sugar Makers

One of the most successful of twenty-one Vermont Maple Sugar Makers' Conventions has been put on record, and with it, the Grimm Utensils were placed at the head of the list.

THE HIGHEST SCORE on Maple Syrup was 99 points, and the highest Score on Sugar, 98 1-2 points, and all were **Made with the GRIMM Apparatus**

This little pleasantry has been going on for twenty-one consecutive years. It is conceded by those who know that if all the Maple Syrup and Sugar produced in the United States were made with Grimm Utensils, the extra quality would **increase its value over $2,000,000,00** annually, and the saving in time and fuel would be an additional large item.

"ASK FOR CATALOG E"

Assuming that Grimm Sap Spouts were exclusively used for tapping next season, the increased production of sugar would amount to 25,000,000 pounds, one-fourth of the approximate total of 100,000,000 pounds. At a low estimate of 10c per lb., there would be a **net gain of $2,500,000.00.** This being a fact, can we afford to cling to the old methods, considering, too, that there is an unlimited demand for a pure maple product, and that no other farm crop pays a better dividend? Valuable information and **Sample Spout Free.**

CHAMPION EVAPORATOR CO., Hudson, Ohio **G. H. GRIMM, Rutland, Vermont**

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HUBBARD'S BONE BASE CONNECTICUT FERTILIZERS

1914 Crops

Every progressive farmer is planning *NOW* for this year's crops. No individual or farm can *stand still.* Your Farm will go *Forward,* and the lands become more and more productive—or they will deteriorate and produce less bountiful and less profitable crops. *Which will it be in YOUR case?*

Make This a FORWARD Year

Use Hubbard's BONE BASE Fertilizers

They are the result of *Scientific Research,* and contain a Maximum amount of *Plant Food* per dollar invested. Let us co-operate with you, to the end that the *Science of Fertilizers* may be applied to the *Business of Farming.*

Write today for our booklets **"Soil Fertility," "The Grass Crop," "The Apple"** and **Hubbard's Bone Base 1914 Almanac,** which contains much valuable information about soil, fertilizers and other farm subjects. Sent free to any address.

THE ROGERS & HUBBARD CO., Address Dept. A, **Middletown, Conn.**
Office and Works, PORTLAND, CONN.

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : :

Walnut Timber.

I have two walnut trees on my place measuring 18 feet before they branch. They measure 16 and 21 inches thick. I wrote to a mill near here asking what they paid for timber. They write saying they are paying $25 per 1,000 feet for logs of this sort. This would bring the price of each tree very low—it would almost be better to utilize it for firewood. But when I price walnut furniture I find it very costly and there is said to be an extreme scarcity of this wood. I am told the smallest pieces are utilized for veneering, etc. Is not the price quoted me entirely too low, and what would be a fair price? M. S.

Johnsville, Pa.

There is no standard price for such small lots of timber. In our own case we have been obliged to take what the buyers offer. Where you have a lot large enough to invite competition you can say something about the price, but with only a few trees the buyer has all the advantage. We have been all through this. Of course good Black walnut is worth more than $25, but you will have no way of dictating the price if you have only two trees.

Market for Maple Syrup.

I have a lot of maple trees on the farm, and before I waste my labor in tapping them, I would like to know if there is anybody who buys raw maple syrup and what is the market price per gallon? B. C.

New York.

If you don't find a ready market for good maple syrup in your neighborhood, there is something wrong with the people. It has sold readily in my section, for as many years as I can remember, at from $1 to $1.25 per gallon; standard legal weight of 11 pounds to the gallon. There is always a market for it in the cities, though what is done with it there is a mystery. I have frequently found it upon the bill of fare at good restaurants, but never on the table. Pure maple syrup is a luxury always in demand, and most farmers are able to dispose of all that they can make, selling directly to the consumer, and getting all of the dollar. If you can make the syrup, don't worry about the market. M. B. D.

Fertilizer Value of Coal Ashes.

Tell me what value, if any, coal ashes have mixed with nitrate of soda or potash, as a top-dressing for meadows? E. J. P.

There is no plant food value in coal ashes. Unlike wood ashes, they do not contain profitable quantities of lime, potash, or phosphoric acid. They have a value as absorbents, and for helping the mechanical condition of the soil. They make what is called a carrier of plant food. Sifted coal ashes can be used for distributing nitrate of soda and potash. Probably the best way to use them would be to dissolve the nitrate and potash and sprinkle the solution over a good sized pile of sifted coal ashes. Mix this solution thoroughly through the ashes. Then let it dry, and broadcast as you would any other fertilizer. As the pile dries, the water evaporates, and leaves the plant food in the nitrate and potash thoroughly distributed all through the ashes. Then if these are kept dry they make a good application for handling the plant food.

Pruning Apples in Idaho.

At what age can one expect an apple tree to bear, and how should a tree be pruned to bring it into bearing as early as possible? Should the new growth be cut back each year, or after, say the third year, would you simply thin out the branches and let the main limbs grow? I have in mind Jonathan and Rome Beauty. J. W. A.

Boise, Idaho.

1. Apple trees and all other kinds of fruit trees bear very early in Idaho, and all of the Western regions. It is very seldom that an apple tree there fails to produce some fruit at four years from planting and I have seen many at that age holding about a bushel of apples, or even more. While this is too early in the life of a tree to produce such heavy crops without some injury or the retarding of their normal growth it brings quick returns. There is a general tendency to precocity rather than tardiness in bearing in all of the Western country. Jonathan and Rome Beauty are not as early bearers as some few other varieties, but they usually bear soon enough. The trees are not likely to need any special pruning to bring them into bearing. If they are well shaped while in the first three or four years of their growth they will not need much more pruning for several years. It is not well to thin out the branches severely, for as they begin to bear loads of fruit they will be spread by its weight and the tops thus be made more open than might be thought at first. There should be no severe cutting back of the tops while the trees are very young, for the more this is done the more nature will try to replace the parts cut away and bushy tops are apt to result. Be moderate with the pruning tools and use plenty of common sense rather than to follow set notions about the supposed great need of a lot of pruning. H. E. VAN DEMAN.

Pickles on Sour Soil.

I have four acres of loam land; cut a small crop of hay last season. In the early Fall I plowed it, harrowed once. Immediately the sorrel started to grow and in about a month the field looked like a spinach patch from a distance. My intention is to spread this field with manure and plant to pickles about June 1. Do you think the conditions that cause this growth of sorrel will be injurious to the pickle crop, and if so can you suggest a remedy? R. F. S.

Deer Park, N. Y.

The sorrel indicates a sour soil. The pickles will not do their best in such a soil, but will be much better if you use lime. The usual remedy for land badly run to sorrel is to plow it and harrow in a ton of air-slaked lime to the acre. This will fit that soil better for the pickles.

WELLS IN FLORIDA.—The State Geological Survey of Florida has begun a very good thing in calling for records of drilled wells in that State. Many wells are being drilled, some of them to considerable depth, and the geologists asked the well drillers to keep accurate accounts of the depth of the well, and the character of the under soil through which the well goes. Thus this is the best way of learning about the underside of Florida soil, and such data would be of great importance in the conservation of water. This is a good thing for all well drillers to work out. We shall come to a time when the under soil, for the water there may be in it, will be almost as important as the surface soil.

TOMMY (explaining his late arrival at Sunday-school): "I wanted to go fishin', but father wouldn't let me." The Minister: "I'm delighted to hear you have a parent with such excellent principles regarding the Sabbath. Did your father explain his reasons?" Tommy: "Yessir. 'E said there wasn't enough bait for two."—London Sketch.

MRS. BRIGGS: "So there's not going to be a postal strike after all, Mrs. Johnson?" Mrs. Johnson (remembering the coal strike): "Well, you never can tell but what it may come at any moment; so I shall lay in a good stock of stamps now."—Punch.

An inquisitive young gentleman read this advertisement in a local paper—"Young man, some woman dearly loves you. Would you know who she is? Send postal order for ten shillings to Occult Diviner, address as below, and learn who she is." He sent the money and received this answer—"Your mother!"—Credit Lost.

"I'll Pay $1.00 for Every Knot"

That's My 1914 Challenge To Every Man Who Buys or Sells Lumber

"I'll pay $1.00 per knot for every knot any customer can find in our Red Cedar Siding shipped from Bay City. I stand ready to prove to you in this way that the lumber in Aladdin houses is higher grade throughout than is regularly carried by any seller of lumber in America. Clear Siding, Clear Flooring, Clear Interior Finish and Clear Shingles are furnished for every Aladdin dwelling house." O. E. SOVEREIGN, *Gen. Mgr.*

ALADDIN Quality Excels

Shrewd buyers quickly understand the great advantage of the Aladdin System. It cuts out the waste. You pay for only the lumber that goes into the house—not what goes into the waste pile. The lumber that's wasted costs just as much as the lumber that's used. The Aladdin system saves $18.00 on every $100.00 in material waste alone. Then, too, the price of lumber is 30% less than the average dealer's price. The Aladdin Readi-Cut System of construction—all lumber cut to fit—saves proportionately on labor. These facts make the below price possible—five room house complete $298.00.

Clear Siding—Clear Flooring—Clear Finish

We positively go on record and guarantee that the material in Aladdin houses, framing, siding, flooring, finish, doors, millwork, paints and hardware, are all of higher grade than any other manufacture of houses in America—we stand ready to prove it. And it's far better than the average grades carried by any lumber dealers anywhere.

Cut Out the Middlemen and Builder's Profits

The timber for Aladdin houses is cut from the logs, piled, dried and manufactured under one roof and shipped direct to you. No other manufacturer in America completes all these operations in one plant. No middlemen between the timber and the finished complete house when you own an Aladdin house. The Aladdin catalog tells the story.

Save $200.00 to $900.00 On Your House

Consider carefully the completeness of the following list of material which is furnished with each Aladdin house. All framing lumber cut to fit; siding cut to fit; sheathing cut to fit; flooring cut to fit; all inside and outside finish cut to fit; windows, frames, casings, stairways, glass, hardware, locks, nails, paint and varnish for the outside and inside, shingles, plasterboard for all the rooms, or lath and plaster, complete instructions and illustrations for erection, eliminating the necessity of skilled labor—a complete house.

Aladdin construction passes successfully the strictest regulations of the big cities. This means they are built according to the most approved building laws. Send today for catalog.

North American Construction Co.

342 Aladdin Ave., Bay City, Mich.

Mills in Michigan, Florida, Texas, Missouri and Oregon. Canadian Branch: Sovereign Construction Co., C. P. R. Bldg., Toronto, Ont.

5 Room House $298 This warm, snug winter home, with five cozy rooms only $298. Price includes all material cut to fit, all hardware, nails, paints—in short everything to complete the house. Can be shipped same day order is received.

Tear Off Here and Mail for Catalog Today

North American Construction Co., 342 Aladdin Ave., Bay City, Mich.
Send Catalog No. 340 to
Name .....
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Your Best Working Partners Are a Pair of Helpful

Hansen's Gloves

This "Glad Hand" Gauntlet is a fine example of how Hansen's Gloves are built to share your work and make it easy and fast.

Their perfect protection proves that rough work does *not* mean rough hands. It is also the truest economy—a saving in time, labor and *hand-health*. Price, $1.25 up.

The 500 styles include the right glove for driving, motoring, cycling and all sports. For lighter chores, heavy work, threshing, lumbering, etc.

Book Free

Specially tanned leather, cannot shrink or shrivel, harden, stiffen or peel. Easily cleaned in gasoline. Gloves for the boys, too. If your dealer is not a Hansen man, write us for book and full information.

O. C. Hansen Mfg. Co.
136 Detroit St., Milwaukee, Wis.

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WOOD SOLE
Shoes or Boots

PATENTED

Just the thing for farmers! Light, durable, sanitary, waterproof—way ahead of leather or metal soles for all farm and dairy work. Try a pair and be convinced. Send money and state size wanted. SHOES, $2.50 BOOTS, $2.75, Delivered by Parcel Post, free, direct to your door. Satisfaction or money back.

FREE! For a limited time we will give absolutely free a can of Riemer's "Shoe Life" with every pair of our wood sole shoes or boots. It's a perfect dressing for work shoes, boots or harness.

Illustrated booklet free.

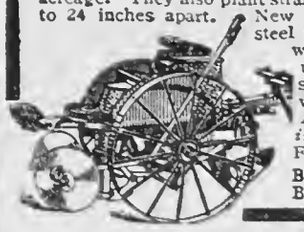
A. H. RIEMER SHOE CO. (Established 1887)
2911 Vliet St., MILWAUKEE, Wis.

Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

IRON AGE 100 Per Cent Planters

often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. New angle steel frame and steel seed hopper. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "*100 Per Cent Potato Planting*" and copy of Iron Age Farm and Garden News.



BATEMAN M'F'G CO.
Box 1025 Grenloch, N. J.

The General says:-

There are many *plausible* "tests" of roofing, but there is only one *true* test—the proof on the roof.

Therefore, roof your buildings—every building on the farm—with

Certain-teed
ROOFING

—the roofing with a 15-year-service-guarantee. The three biggest roofing mills in the world are behind it, to make that guarantee good.

Your dealer can furnish *Certain-teed* Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers*, East St. Louis, Ill., Marseilles, Ill., York, Pa.

PATENTS that PAY. $561,530 made by clients. Prizes offered. Patent Book—"What and How to Invent—Proof of Fortunes in Patents" FREE. Send Sketch for report. E. E. VROOMAN, Patent Attorney, 838 F St., Washington, D. C.

Handy Binder

JUST the thing for preserving files of The Rural New-Yorker. Durable and cheap. Sent postpaid for 25 cents.

The Rural New-Yorker, 333 W. 30th St., N. Y. City.

Injured Maple.

We have a nice maple tree in front of our house about 19 inches at butt. It is cracked or checked from base to first limb, which is about 12 feet and on the opposite side from top of trunk down nearly to bottom. Will you let us know what we can do to save tree, and what is the cause? A. S.
Oswego, N. Y.

It is not always possible to tell the exact cause of such injuries, but it is extremely probable that in this case it was caused by hard freezing and sudden thawing of the wood. Maples and other sap-producing trees are often injured in this manner, especially in latter part of Winter. I have seen good-sized trees split to the heart from this cause, and remember in my boyhood in the mountains of Western Pennsylvania when the Winter used to be of long duration and continuously severe, from November to March, that when a sudden warm spell came on while the trunks of the forest trees were full of frost, the sudden thawing would cause many of them to split with a report that often could be heard for a half mile. If the bark is dead near the edges of the cracks, it should be removed back to the live bark, cutting away every sign of decay, and all decayed wood, if any, should also be removed with a gouge and mallet, and all cavities filled to prevent the entering of moisture and insects. A three to one sand cement is mostly used for this purpose, but I prefer the following: Take coal tar and thoroughly mix with it by stirring about three or four times its weight of powdered slate, known as slate flour. This mixture is also known as plastic slate, and is used for roofing purposes. It is easily applied with a small trowel, and though it hardens on the surface it will remain soft and elastic underneath. The heat of the sun will not melt it. Nor do the coldest days of Winter cause it to crack, neither does it peel off. After the cavities have been neatly filled with the plastic slate, paint over with coal tar or asphalt all the surface from which the bark has been removed. K.

Is the Manure Sour?

My hog pen is on a slope; in the lower corner I scraped out a small reservoir two years ago. It has washed full of manure and decaying corn cobs, but is very sour. I wish to use the manure. THE R. N.-Y.'s theory would be to pile with lime or ashes and let rot awhile. Would it not be just as well to spread on ground and then spread ashes or lime on top of manure before plowing?
Jonesboro, Ark. E. W. C.

Are you sure this manure is sour? We should be inclined to doubt it without a test. We should get little strips of blue litmus paper, take fair samples of this decayed manure, and put the litmus paper down into it. If it turned red or pink it is sour, and needs lime. We believe, however, that this is not as sour as you think. Your plan of hauling the manure, spreading on top of the ground, and then putting lime or wood ashes over, it before plowing, is not a wise one. If you do this the lime or ashes will cause more or less of the ammonia to be set free in the form of gas, and on top of the ground this will be lost. If, however, you spread the manure, and plow it under, then spread the ashes or lime and harrow in, you will have the effect of breaking up the organic matter under ground. The ammonia thus set free will be held in the soil and not lost.

Growing Budding Stocks.

Tell us how to grow budding or grafting stocks of fruit trees from the seeds.
J. L.

Apple, pear and quince are grown from stratified seeds sown in early Spring. Seeds of these fruits should be placed in flat boxes about four inches deep, with an equal bulk of fine soil or sand well mixed together as soon as ripe, or gathered, and the boxes buried in the ground 12 to 18 inches deep, where drainage is good, to preserve moisture. The boxes are to remain so buried until Spring, when the seed must be sown in the seed bed as early as possible, in rows 12 inches apart, and about one inch apart in the row. Good cultivation should be given the young seedlings from the start. The following Spring the seedlings are lifted, graded, and planted in nursery rows 3½ or four feet apart, and six to eight inches apart in the row, each grade being planted together. Give good clean cultivation and quite all will be large enough to bud by latter part of July or first week in August.

Stone fruits, the seeds of peach and plum, should be buried in bulk in the ground where drainage is good, in the Fall. Mix soil through them to maintain even moisture, cover six or eight inches deep. The following Spring, as soon as the seeds begin to sprout, dig them out and plant in nursery rows 3½ feet apart, and four to six inches apart in the row. After the young seedlings attain a height of three or four inches cultivation should begin and be maintained until the budding season comes on, when cultivation may be discontinued for the season, but keep all strong growing weeds pulled out at all times. Budding may begin in July and be continued until September if necessary. Any seed the frost and moisture failed to open, may be carefully cracked with a hammer and planted with the sprouted ones in the nursery row. K.

Soil for Baldwin Apple.

Does the Baldwin apple do well on heavy soil? S. D.
Oak Hill, N. Y.

By nature the Baldwin does best on the lighter type of soils. On the heavier soils it makes too much wood growth, matures later and usually gives a lighter colored fruit.

Lime on Alfalfa.

I have one acre of Alfalfa, which looks well. Would it be good if I put some lime over it now, with well-rotted manure? F. K.

You would not obtain full value of the lime by spreading it on top of the Alfalfa. Lime ought to be worked into the soil at seeding time. This lime would help somewhat, but this is not the best way to use it.

Oats on Millet Sod.

The middle of July I turned over one acre of Timothy sod, which had been seeded three years. I fitted well and put on 600 pounds of fertilizer sown broadcast, seeded it to millet, but owing to the drought did not get millet over three inches high at frost. Could I, next Spring, sow this piece to oats for fodder without any more fertilizing? Soil is light sandy loam. B. P. H.

Yes. This soil should now be strong enough to produce a good crop of fodder. We should seed Canada field peas with the oats for fodder. This combination will make stronger feed and more of it than oats alone.

WORN-OUT BATTERY.—On page 107 I. A. B. asks, "Will you tell me what is used and in what proportions in a dry battery to make it react?" Whenever I had a worn-out dry battery, I dug the filling out, about half way down and filled it up with common table salt, and then poured enough water on to cover the salt. In this way the battery will last just as long again. When the water evaporates put more on. Keep the salt covered with water. H. V.
Hillsdale, N. J.

THE PROFESSOR'S WIFE (to the professor, who has just come in from a walk): "What have you done with your umbrella and Fido?" The Professor (trying to remember): "What—h'm—wait a minute—oh yes, precisely. You see, my hat blew off, and I didn't want to have the poor little beast run with me after it, so I stuck the umbrella in the ground somewhere and tied Fido to it I suppose they are still there."—Credit Lost.

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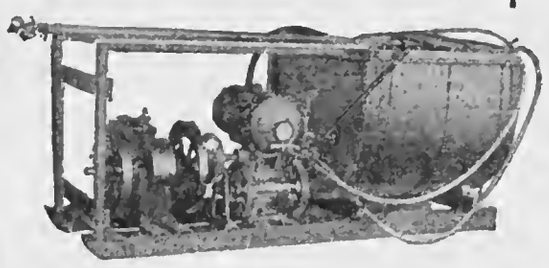

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Farm Management.

Tools for Small Farms.

Could you start some discussion as to what implements would be necessary for a small farm, 40 to 60 acres, where one intended keeping a few cows, 200 or 300 hens, some hogs and maybe a few sheep. The object would be to have an orchard of eight or 10 acres, and most of the land in Alfalfa and clover, and to seed a cover crop every time there was a possible chance. One could not afford to have all the implements one sees recommended; a sulky plow, because one can do better and deeper work, a weeder (an implement that I think has been overlooked), a spike-tooth harrow and a disk (and while on this subject, what advantage has a cutaway over a disk?) and several others. I would hire grain cut and rent a spreader as I don't believe $200 or $225 tied up in this would be a paying investment. I know you like to get at the root of things, and I do too, but I don't see how a small farmer working three horses (one of which he might rent) can afford to be buried under the mass of implements that some of them have. I would rather do without some of them and have water in the house, steam heat, a gasoline engine and some of the conveniences that go to make life pleasant and work easier (I mean the everyday work). H. H.

Indiana.

R. N.-Y.—Let us consider the discussion started. This is a good part of farm management, for an idle tool eaten up by rust is as bad as a useless horse standing still in the stable. Let us have a full discussion of this point.

Sewage Disposal.

By Col. Waring's system for the sanitary disposal of sewage by siphonage, it is claimed that the solids liquefy and pass freely through the distributing pipes, etc. How long a period does it require to dissolve the solids and can the result be hastened by the use of chemicals? Can I add a dissolvent solid sewage to hasten the fluid character, so it would run off through drainage? A. F.

Litchfield, Conn.

If, as I presume, you refer to the system of sewage disposal by means of a septic tank, this should be large enough to hold at least 24 hours' accumulation of sewage from the house which it serves, and preferably larger. The solids in such a tank are liquefied by bacterial action, the amount of time required being variable, and dependent upon the character of the solid matter; ordinarily, several days being required. As the solids become liquefied they flow away with the fluid contents of the tank. I know of no chemical which would hasten this action, and none is needed, as the very principle upon which the tank works is based upon liquefication of the solids in sewage by bacterial action. I judge that your vault is not constructed on the true septic tank principle. M. B. D.

Equipment for Unloading Hay.

With regard to the questions on page 128 by J. F. T. I would say that having used both, I prefer the steel track to the wooden. The cost differs but little, and both work equally well, but the steel track is practically indestructible, and should any breakage occur a section is easily replaced. A reversable combination car can be obtained that will carry the hay to either mow without removing the car from the track, and which can be used with either of the different types of forks, or with the slings. It is necessary to go up to the track to place the rope through the pulley at the end of barn whenever the direction is changed, and a ladder built permanently to the end of the barn is probably the safest way to reach the track. However, I offer the following suggestion: While the mow is full place through the end pulley a light rope or sash-cord long enough for both ends to reach nearly to the floor. When the mow is empty one end of the light rope or cord can be attached to the end of the hay-fork rope, and the latter pulled over through the pulley.

The best kind of fork to use with clover hay is the grapple fork. This fork has curved tines which come together like ice tongs, and hold the hay very firmly. These tines may be of various lengths, and run from four to eight in number, the latter handling the finest material, even manure.

The sling is about the most satisfactory way of unloading hay or grain that you can imagine, as the slingful is taken up clean and dropped in the mow as it lay on the wagon, making the labor of spreading around much easier. The sling can be adjusted for any length of rack, and will handle any kind of hay or grain, loose or in bundles. It may be locked to the car at any height from the rack to the track, and taken to the mow at that height, thus lessening the distance for the horses to travel, and the height for the hay to drop; quite an item, as a slingful often weighs from 800 to 1,000 pounds. The load is usually taken off in three slingfuls, and due to the heavy weight, it is advisable use a somewhat heavier track and car with the sling than with the various forks. The sling has the disadvantage of taking a little more time in loading, and in hanging lower from the track, so that the mow cannot be filled quite so full as with the forks. However, the first is more than balanced by the speed with which the load can be taken off, and by using the combination car a fork can be substituted to put in the last load.

Last season I put in 75 tons of Alfalfa with a gasoline engine and hoisting machine, and found it very satisfactory. The hoist has two drums on the same shaft, one hauling the hay up and along the track, and the other returning the car to the stop over the wagon. The hoist can be operated from the wagon, the whole operation of unloading being done by two men. It will probably require an engine of at least six horsepower. I used a two-cycle eight-horse engine, and at the moment when the forkful was pulling loose from the load the engine had just about all it could handle.

New Jersey. I. L. O.

CLARIFYING VINEGAR.—If you have some vinegar that is muddy or off color try putting about a teaspoonful of cream of tartar to each half gallon of vinegar. S. T. W.

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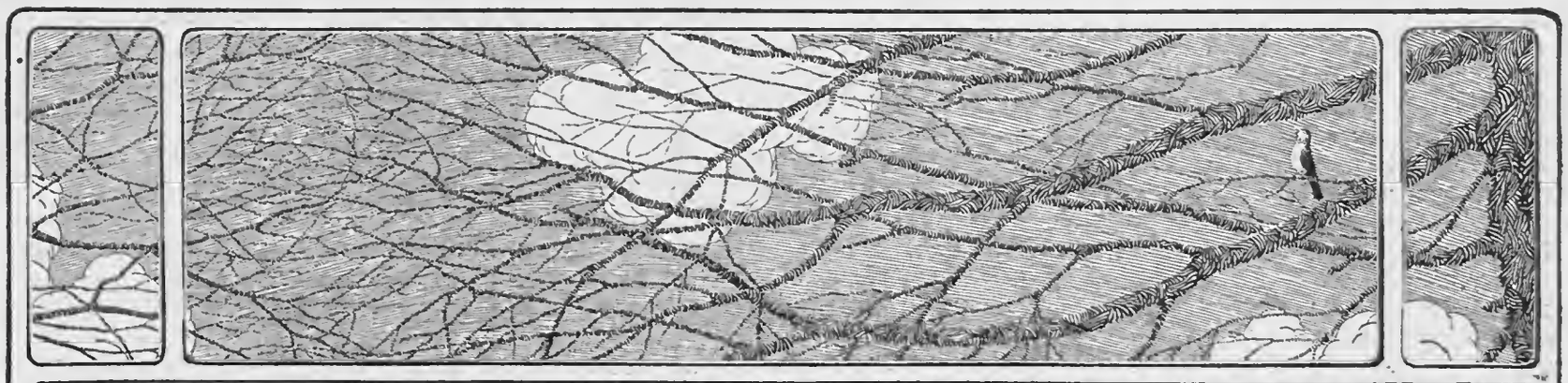

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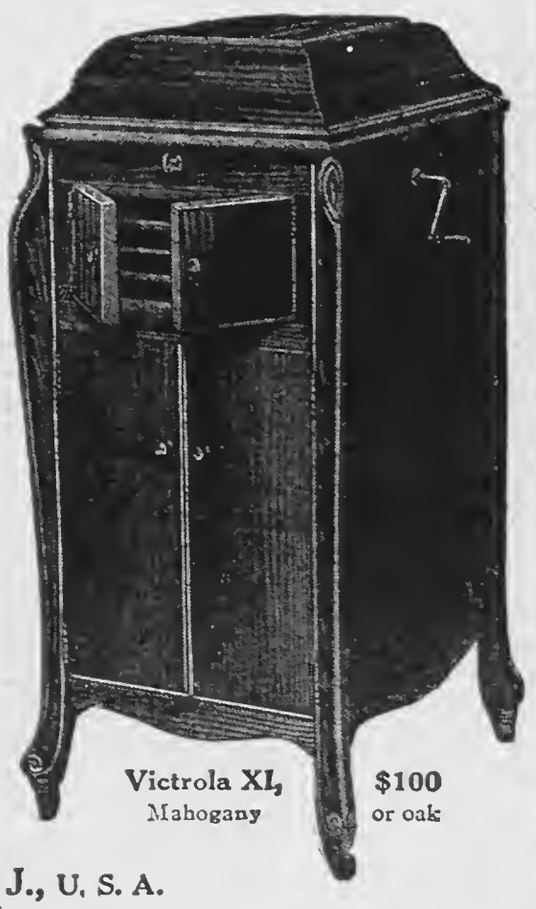

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Hope Farm Notes

I know two men, both close to the period of life when they may be said to live on "borrowed time." One of them is as sour as a pickle. I think this man had opportunities when he was younger, but he never seemed to grow into any of them. They tell me that he took up one thing after another, until it got a little hard and monotonous, and then dropped it and took something else. Thus when the bloom of youth had been rubbed off this man found himself only able to tinker at a few inferior jobs. He was master of nothing, because he had not dug down to fundamental principles, and could put no spirit into his work. You should hear this man complain about the condition into which life has crowded him.

The other man has, all his life, done what most of us call inferior work. Yet there is a curious thing about it. Does anyone in town want a garden spaded up, a front yard cleaned, a path dug through the snow or a cord of wood cut up, there is competition and demand for this man's services, as there would be for service from the leading lawyer or the expert doctor. For this man always does a clean, neat job, and is good-natured and accommodating. I never hear him growl about conditions. I have seen him walking about on Sunday afternoons looking with some show of pride at the work he has done in garden or yard. Ask him how he is able to be content with his humble lot, and how he can put pride and reputation into such "inferior" work, and he will tell you something like this:

"I know that I am better qualified (with my age and powers) to do this kind of work than any other. I made up my mind I would do it better than any other man in town. I have been able to do that because *I take joy in my job.*"

As I write this I glance at a book shelf on which I can see 50 volumes of Dr. Eliot's "Harvard Classies." Here we are supposed to have the wisdom of the ages—the words which should not die—sifted out through a mesh so large that only the gigantic thought would not pass through. For example, out of all the Bible Dr. Eliot has selected the Book of Job, the Book of Psalms, Ecclesiastes, the Acts, the Gospel of St. Luke and the two Epistles to the Corinthians! Yet, in all the nearly 2,000,000 words of this sifted classic wisdom I find no lesson of life truer to human nature than these seven words of the humble worker—"I take joy in my job."

There you have the whole story. The man who takes joy in his job puts spirit and love into it, and these are the unconscious things which make the job living and vital. I have seen a fisherman hauling up his nets and lobster traps—wet and tired, with torn and bleeding hands—looking off over the boiling ocean as the sun comes up out of the east with a look on his face which showed the "joy in the job"—for he was working for home and family. I have seen the same look on the face of a farmer who stopped the plow for a moment to look across the valley to the farmhouse among the trees or on the face of a workman on a high city building looking over the country where he hoped some day to have a home. It is the "joy in the job" which lifts the man and his work out of discontent and drudgery.

The man I spoke of who has grown sour and bitter as the years went by has made all his jobs joyless and dry because he has put no spirit or personality into them. Any one of half a dozen jobs which he has taken up offered him the chance for taking joy in it, but he couldn't find the joy. You cannot find any so-called "great" man or any fair approach to a happy man, who did not find his greatness or his happiness in "the joy in the job." I might go on for an hour with illustrations or arguments to prove this, but it is one of the things which men must think and work out for themselves. *Take joy in your job.*

FRUIT BUDS.—The mercury touched about eight degrees below at Hope Farm. Under ordinary conditions this would not put the peach buds over the danger line, but this year conditions are not ordinary. The warm Fall and early Winter induced some of our buds to take a little too much "joy in the job" and they were soft and tender. There may be some damage on the eastern slopes, but not much, I hope. On the western slopes the buds seem to be in better condition, and we still expect a fair crop. In some other localities much more damage has been done. In parts of New England Jack Frost certainly took "joy in the job" and rubbed the joy in. However, those Yankee peach growers can try the homeopathic cure on such troubles. They usually have such joy in their job that it will offset Jack Frost's mirth, and so they keep good natured. Except for this danger to peach buds the Winter has gone well at Hope Farm, and the time has actually come for developing the next season's campaign.

BELGIAN HARES.—A number of good friends seem to regard the Hope Farm man as a "back number" because he does not try to "boom" the Belgian hare business. My scrub hens require more "booming" than I can develop to make them lay. One thing at a time. These "back numbers" are not all candidates for the scrap heap. Not long ago a man was willing to pay $10 for a certain back number of THE R. N.-Y. I never could develop any "joy in the job" over Belgian hares. The children have kept rabbits from time to time, but beyond the pleasure of keeping pets there was nothing to it. Several people have told me about the great profits in these hares. To prove it they gave names of parties who bought the animals. I wrote these dealers and this is what I get from one of them:

The handling of these rabbits by us is not for market use, and there is very little demand for rabbits for market use, but they are used for experimental work with various laboratories throughout the country. However, just now the demand is on the decline, and the prices have very much declined on the same. While no doubt the demand will keep up for the coming year, I doubt whether they will bring over 15 cents a pound.

J. HOPE.

That is about what I expected. The meat markets here indicate no particular demand for rabbit meat. The "joy of the job" seems to come in selling these hares for breeding stock, with a limited demand at that. I shall stick to my scrub hens.

H. W. C.

Orchard Trees on Cleared Land.

I have a tract of land from which I have cut the timber. It is high and rolling, real hard-wood forest land. I am thinking of putting it out in fruit trees, such as apples, cherries, pears, plums and peaches. Do you think by keeping the brush cut down and grubbing the trees I can keep them growing until I have the small stuff killed out, and can plow and cultivate? How would sawdust do as a mulch the first year on the young trees? Would it be policy to plant apples 24 feet apart and keep them cut back? How would leaf mold do as a mulch? W. C.

Brunswick, O.

It is possible to follow a plan of this kind and obtain fair growth to the tree, but you cannot hope to make your trees grow as fast as you could if they were given thorough culture from the beginning. Our own plan is to cut off the timber and burn the brush. Then mark out lines 20 feet apart through the cleared field. Blow, or dig out the stumps on these lines, so as to leave a clear space four or five feet wide. Set the trees 20 feet apart on these lines, sighting, so as to have even rows each way. We plant "fillers," so that when they are finally cut out, there will be an orchard of standard apple trees, 40 feet apart each way. By clearing out these lines, you can give a little cultivation by plowing a couple of furrows on each side of the road, and keep at work with a cultivator. Do not use fresh sawdust, as a mulch around the trees, unless you add lime also. The sawdust and also the leaf mold are too sour to use when fresh. Clean up the middle between the rows of trees, as you get opportunity, keeping up the cultivator on these narrow strips each year, or hoeing around the tree. By the time the trees come in bearing, the ground will be reasonably clear, and you can handle it as you please. This plan, with modification to suit conditions, will work out fairly well. The great danger is from fire. In a dry time, such a fire would sweep through the woods and do a great damage to the young trees. This is not an ideal way to grow trees. It is a makeshift which may give fair satisfaction.

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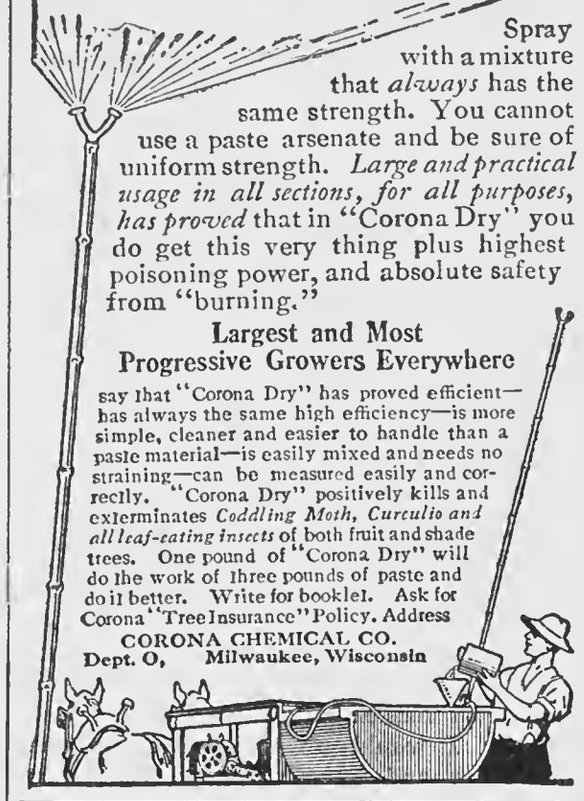

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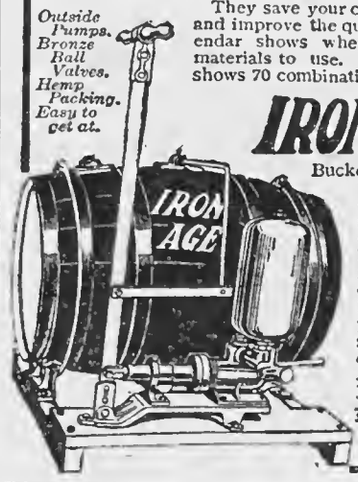

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The most practical Spray Pump ever made. Has all good features of others and many that others can't use. Greatest power per stroke. Adjustable for different uses. All parts coming in contact with solution are made of brass—not affected. All brass plunger—all brass ball valves. All parts adjustable. Furnished with or without hose or nozzle. See page 16 of our catalog for complete description. Also many other styles, one to suit you at a price that is *right.* Send postal for catalog *now*

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This Dump Cart Will Save Its Cost Every Year

Any horse, any harness—strong and substantial hardwood body. Carries 1400 lbs; full cart size 12x40x60 in.; iron-hub wheels, wide tires.

"Pennsy" Low Down Model $18.50

delivered any station east of Mississippi river. Order direct from this ad. FOR farmers, gardeners, fruit growers, every horse owner.

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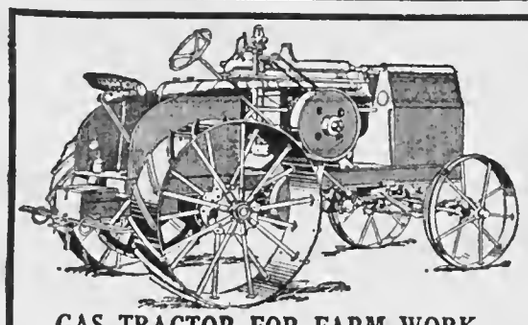


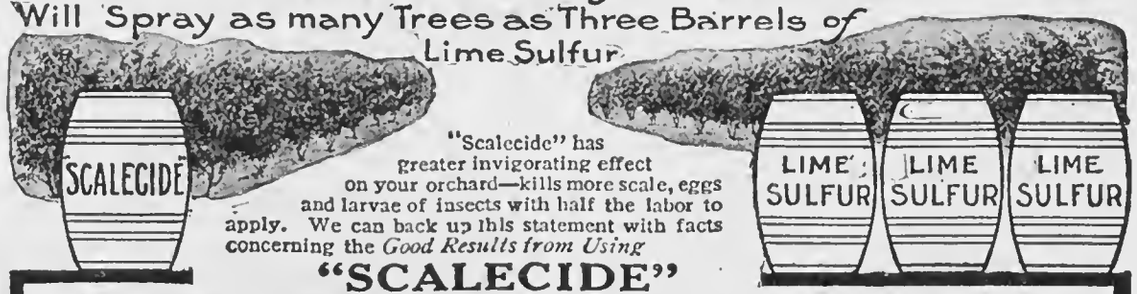
USERS OF THIS
TRACTOR
have found they can do their work at much less expense than they could with horses.
There is the added satisfaction of getting your work done on time, even in the hottest and dryest weather.
Use gasoline or kerosene for fuel.
Full details by asking the makers.

GAS TRACTOR FOR FARM WORK
HUBER "FIFTEEN-THIRTY"
THE HUBER MFG. CO.
646 Center Street MARION, OHIO

BEAN·SPRAYERS·BIG·PAYERS

ORIGINATED BY JOHN BEAN, 1884
THE BEAN LITTLE GIANT SPRAYER
The most powerful, easiest-running Barrel Spray Pump on the market. Can be fitted to top or side of barrel or mounted on skids
The Little Giant has all the Bean features: Ball valves, threadless valve seats, porcelain-lined cylinders—never wear out, teel air chamber, rotary agitator, long powerful lever, no stuffing box or gland.
We are exclusive manufacturers of Power and Hand Sprayers and Accessories. Write for new 1914 illustrated catalogue. Free.
THE BEAN SPRAY PUMP COMPANY
BEREA, OHIO, 30 First Ave. San Jose, Cal.

One Barrel of "Scalecide"
Will Spray as many Trees as Three Barrels of Lime Sulfur



"Scalecide" has greater invigorating effect on your orchard—kills more scale, eggs and larvae of insects with half the labor to apply. We can back up this statement with facts concerning the *Good Results from Using*
"SCALECIDE"
Send for our illustrated booklet—"Proof of The Pudding". Tells how "Scalecide" will positively destroy San Jose and Cottony Maple Scale, Pear Psylla, Leaf Roller, etc., without injury to the trees. Write today for this FREE book and also our booklet—"Spraying Simplified".
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We are World Distributors for VREELAND'S "ELECTRO" SPRAY CHEMICALS and Arsenate of Lead Powder (33 per cent), which, used wet or dry, has no equal in strength or texture. Avoid imitations.
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Ruralisms

THE SHALLOT.

I was interested in your reply to the query regarding the shallot, on page 75. In English and European gardens, small holdings, and allotments, the shallot is one of the crops that is never absent. The bulbs are so easy to manage; indeed it might be said with truth that they manage themselves. The ground is merely well dug and then somewhat firmed, and the little offsets or bulbils are pressed with the fingers into the surface of the soil to half their depth. This operation is done in the southern half of England in January, for the Winter there is rarely so severe that outdoor operations are altogether stopped even then. In any case the planting is done at the earliest opportunity after the second or third week in January. Ten or twelve degrees of frost (20 to 22 deg. above zero) will not injure them. In the Atlantic States the end of March would possibly be early enough to plant them, and they would mature faster than in England. July is the month for harvesting, by which time the one original bulb will have developed half a dozen others around it in a cluster. Quite a large crop can thus be got off a tiny plot of ground, as the rows are only one foot apart, and the bulbils 6 inches apart in the row. When nearly ripe they are lifted and spread on the soil to dry and are then roped or stored in a cool dry loft or cellar until wanted. Being no larger than walnuts, they are suitable for pickling or for flavoring. The common shallot and the Russian or Large Red are the sorts chiefly grown.

LONG ISLANDER.

APPLES ON LONG ISLAND.

I was much interested in what you had to say of apple growing on Long Island. Having been judging fruit on Long Island, at Mineola, for over 25 years, and at Riverhead for 15 years, I can fully agree with you that Long Island can and does grow the best of apples and peaches. The improvement of the apples has been very marked in the last four or five years and new exhibitors like Peter E. Nostrand have come in. His exhibits have been of the highest standard. They show at their best at the Mineola Fair, where they are entered as a collection. At Riverhead there are no collections shown, but single plates. His situation is peculiar, at the extreme end of the island, surrounded so by water, it may be said that it is not a fair expression of what Long Island can do. I would call your attention to an orchard near Roslyn, L. I., set some 12 years ago. This is owned by a daughter of the late Samuel Taber, and has been under her sole direction. I was asked by her to select trees to plant a certain space. This at 40 feet each way took 84 trees. They were to be selected not as a commercial plant, but for private use, early to latest. There were 24 varieties, as my judgment as to the quality, etc., dictated. I thought no more of trees for several years. The next I heard, the owner came to me at the Mineola Fair, in great spirits, saying that she had taken second prize in 20 varieties, first for best 10, first for best five varieties, first for each single plate variety exhibited—a pretty good show for a beginner.

"Now I want thee to come see the trees that thee got for me." I could not resist. I found the finest 12-year orchard it has been my privilege to visit. The lady said: "I have had the whole directing of them, from the planting. The first seven years they were tilled and well fertilized, then the grass was allowed to grow and all cut and used as mulch, none removed. The trees had been trained low. I could sit on a milking stool and pick a bushel of as fine Fall Pippins as is seldom seen these days, so with all. A six-foot step-ladder would reach the highest." This is near the center of the island, and there are hundreds of acres which with the same care will do as well. The scale seems to have met an enemy that has made it easy to control. The west end of the island has been so demoralized by the high cost of land that people have sold, and it is in the hands of speculators. Suffolk County has a great future in fruit growing if they will follow the example of Mr. Nostrand, or F. A. Sirrine, who has done fine missionary work there. May they be followed by others!

N. H.

Azaleas from Seed.

I would like to raise Azaleas from seed. Will you advise what is the best method to follow in the glass-house and then in the open when the seedlings are transplanted? I have reference to the Azalea mollis, which is considered fairly hardy, and choice varieties of A. Indica. L. K.

Stamford, Conn.

The hardy Azaleas are usually increased by seed sown as soon as ripe, or in early Spring, in boxes placed in greenhouse or frame. The soil is sandy peat; the seeds are scattered on the surface, and a little soil sifted over them, then well-watered. Seed may also be sown in live sphagnum moss where it germinates promptly, but the seedlings must be moved as soon as they can be handled. As soon as the little plants appear, they need plenty of air, and a daily syringing. In Fall they are transplanted into boxes or frames, the proper soil being sandy peat. The second year, in Spring, they are planted out in well-prepared beds, with space for two years' growth; long and ungainly shoots should be pinched back to form a compact plant. The tender Indian Azaleas are rarely grown from seed, the usual practice being to propagate from cuttings of half-ripened wood taken in August, and placed in sand with gentle bottom heat. Seed may be treated, however, like that of the hardy sorts, only of course the young seedlings would be given greenhouse treatment, instead of being planted out in beds.

Tariff on Gladiolus.

Will you let me know what the rate of duty on Gladiolus bulbs is under the new tariff schedule, also the rate on Gladiolus bulblets? E. P. W.

Ohio.

Here are the sections of the new tariff bill which relate to flowers and nursery stock:

215. Orchids, palms, Azalea indica, and cut flowers, preserved or fresh, 25 per centum ad valorem; lily of the valley pips, tulips, narcissus, begonia, and gloxinia bulbs, $1 per thousand; hyacinth bulbs, astilbe, dielytra, and lily of the valley clumps, $2.50 per thousand; lily bulbs and calla bulbs or corms, $5 per thousand; herbaceous peony, Iris Kaempferi or Germanica, canna, dahlia, and amaryllis bulbs, $10 per thousand; all other bulbs, roots, root stocks, corms and tubers which are cultivated for their flowers, or foliage, 50 cents per thousand: Provided that all mature mother flowering bulbs imported exclusively for propagating purposes shall be admitted free of duty.

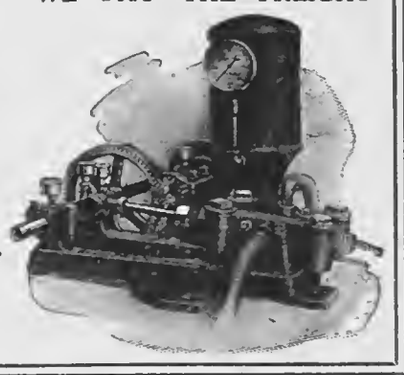
216. Stocks, cuttings, or seedlings of Myrobalan plum, Mahaleb or Mazzard cherry, Manetti, multiflora and briar rose, Rosa rugosa three years old or less, $1 per thousand plants; stocks, cuttings, or seedlings of pear, apple, quince, and the Saint Julien plum, three years old or less, $1 per thousand plants; rose plants, budded, grafted, or grown on their own roots, 4 cents each; stocks, cuttings and seedlings of all fruit and ornamental trees, deciduous and evergreen shrubs and vines and all trees, shrubs, plants and vines commonly known as nursery or greenhouse stock, not specially provided for in this section, 15 per centum ad valorem.

THE HARDIE SPRAYERS

are noted for their
HIGH PRESSURE
LARGE CAPACITY
SIMPLICITY OF CONSTRUCTION
ACCESSIBILITY OF ALL PARTS
FREEDOM FROM EXPERIMENTAL RISKS
Known by over 6000 growers as *"The Sprayer with the Trouble left out."*
Hardie Junior as shown here
PRICE $140.00
with complete equipment
TRUCK $25.00 EXTRA
WE PAY THE FREIGHT

The Hardie Junior is the biggest little sprayer ever made. It is big in everything except price. Never before have you been offered so much for such a small price.

Specifications: 150 gallon tank, 1¼ inch thick; heart cypress; rotary agitator running in brass bearings; 1½ horse power four-cycle water cooled engine; pump with cut gears, bronze bearings, bell metal ball valves, 4 gallons per minute, 200 lbs. pressure, machine fully cabbed, 25 feet high pressure hose, Hilo spray rod; large tank strainer; full kit of tools.



You should know more about this wonderful machine. Our catalogue shows twenty kinds of hand and power sprayers.

The HARDIE MFG. CO., Hudson, Mich.

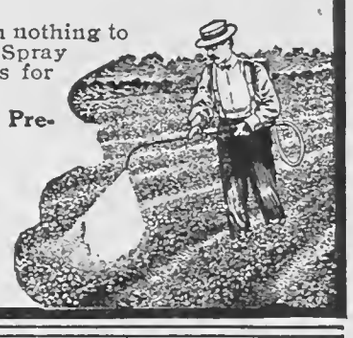
More than 100,000 Farmers and Fruit Growers Use the STANDARD SPRAY PUMP

With it they spray their tallest orchard trees *from the ground* in half the time required by others. The knapsack attachment enables them to spray their potatoes and low growing crops at the rate of an acre an hour or better. They whitewash their barns and chicken coops and spray "dip" on their live stock with the Standard Spray Pump.

Made throughout of brass, with nothing to wear out or break, the Standard Spray Pump lasts a lifetime and pays for itself over and over again.

Warranted 5 Years. Price $4 Prepaid. (West of Denver $5.) Money back if not satisfied.

Send no money but write today for our Special Offer and Catalog M.



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DEMING Farmers' Friend Sprayers

are just the thing for keeping field, vineyard and orchard clean. Powerful enough to do lots of good work quickly and light enough to be moved around easily. Pump is well constructed, with every important part of easy access. The 50-gallon barrel rests on a hardwood platform, which is supported by strong iron wheels.

Deming Nozzles Stand for Highest Pressure

The nozzle is the "business end" of every spraying outfit. Demming Nozzles lead because they do the work right. Nine different kinds—all carefully tested—fit any make of spray pump. Use "Deco" Hose for lasting service.

Spraying Guide FREE

Tells when and how to spray garden,— field—, and orchard crops. Catalog shows all styles and kinds of sprayers for every need and purpose. Gladly sent free on request, together with name of nearest Deming Dealer. Ask for both To-Day.

The Deming Co.
413 Depot St., Salem, O.

HURST SPRAYERS ON FREE TRIAL

NO MONEY IN ADVANCE—NO BANK DEPOSIT—PAY AFTER IT HAS PAID FOR ITSELF.

LET US SEND YOU ANY OF THESE SPRAYERS—to try for 10 days, then if you buy, you can pay us cash or we'll wait till next fall for our money.—The extra profit will more than pay for it. We pay freight LOWEST PRICES. HIGHEST QUALITY. 5 YEAR GUARANTEE.

Quality Sprayers for every purpose, Man Power and Horse Power for field and orchards. Barrel and Power Sprayers all give high pressure and produce vapor spray that kills scale, prevents blight and scab, and rids your crops of all fungus and insect pests. Hurst Sprayers have brass ball valves and all the working parts that come in contact with the solution are made of brass. Cyclone agitation insures an even distribution of the spraying materials and best results. These sprayers are made by practical men who know the needs of the fruit grower and farmer and know what a sprayer should do. Our 27 years' experience in the manufacture of sprayers, together with the capacity of our large factory, enable us to build the very best sprayers at the very lowest prices. We guarantee our sprayers for five full years and ship on free trial—no money in advance. That's evidence of quality. Get our big FREE BOOK—"Why, How and When To Spray"—Contains 74 illustrations of insect and fungus pests and gives remedy for each. Also shows 28 different styles of quality sprayers for every purpose. Write At Once

FREE You can get a Hurst Sprayer absolutely free if you are the first in your locality this season to send for one of our sprayers for trial. You need do no canvassing or soliciting. It will only take 15 minutes of your time. We do the work. When you get a sprayer from us you get the benefit of our 27 years' experience in manufacturing sprayers. Hurst Sprayers won the gold medal at the National Horticultural Congress spraying machine contest. Send us a postal or mark the attached conpon and mail it to us and we will send you our fine catalog, spraying guide, and will tell you how you can get a sprayer free. Don't delay, write us at once for our free sprayer proposition and save money.

H. L. HURST MFG. CO., 384 North St., Canton, Ohio.

Send me your Catalog, Spraying Guide and "special offer" on the sprayer marked with an X below.
.....Man-Power Potato and Orchard Sprayer.
.....Horse-Power Potato and Orchard Sprayer.
.....Fitz-All Barrel Sprayer.
.....Power Orchard Sprayer.

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

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JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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Advertising rates 60 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

FOR the past few years we have been talking of increased corn production in New England. As a result much more corn is now grown than formerly. Now comes Kansas preaching "a rival of corn growing." It seems that the boom in wheat and Alfalfa has actually reduced the production of corn!

*

THE most important house in this country is the farm home. The most important inmate is the farmer's wife. Her most important room is the farm kitchen. The most important asset for the equipment of that kitchen is an unlimited supply of dry fuel and pure water. Now gentlemen, you know how to touch the most important things of life with your own hands.

*

WHENEVER you sow clover seed in soil which you feel is likely to be acid we advise mixing seed of Alsike with Red. On our own soil the Alsike is a surer crop, as the land is naturally sour. The Alsike does not give as heavy a crop as the Red or the Mammoth, but it grows in well with the other sorts and adds to the feeding value. Mixing in Alsike in this way is much like adding Red-top to a seeding of Timothy. Both Alsike and Red-top are acid-soil plants.

*

WE may get this egg-laying contest into the line of sport yet. The Hope Farm man now hears of a breeder who says he will back a pen of his birds against any other pen in the country for $1,000. We will try to hunt him up and see what strings are tied to that offer. Another man offers to hatch 50 eggs from blue-ribbon, high-scoring stock and enter a pen of the pullets. Our object is to bring out pens of definite breeding and definite methods of handling, so that the results will teach us all definite things.

*

WE are experimenting in every possible way with parcel post—chiefly in buying farm-raised food. Thus far we have bought a great variety in this way. The quality has been excellent, and the price is such as to give an average saving of at least 20 per cent over retail prices. The farmers who ship the food claim to obtain more for it than from ordinary trade. Those who have sent us food thus far surely seem to have what the Hope Farm man calls "joy in the job." We believe that this direct trade in certain kinds of food is sure to grow into a tremendous volume as time goes on.

*

FOR a current topic Mr. Harry Demarest talked about the problem of the farmer, the two spears of grass, and the consumer's dollar. When a man pays a dollar for something produced on the farm it appears that only 35 cents of the amount gets into the pocket of the farmer. Where the other 65 cents goes to is not clear. It also appears that the farmer reaps no advantage from a large crop of anything; he gets just as much money for small crop; and the consumer pays a high price in any event. There was some discussion by Mr. J. H. Crissey, Mr. Henry Pelton, and others, but the hole in the skimmer was not discovered by all present.

That is taken from a local paper printed in the Warwick Valley, N. Y. It is part of the report of a meeting of a local club. We print it to show how this question of the 35-cent dollar is being torn apart and analyzed, while five years ago few people would pay any attention to it. Now you cannot find a gathering of country people at which the 35-cent dollar is not discussed. And in all this discussion no one is able to prove that this clipped dollar is not a real thing. This is what we have called making the 35-cent dollar "a part of popular thought." That is the only way to doctor this dollar, for when people really *think* about it they will find a way to change conditions.

*

MANY of our readers must be of an inventive turn of mind, for we have hundreds of questions about how to obtain patents. One man says he wants a manufacturer to make a model of the invention before it is patented, and he is afraid the manufacturer may rob him of the invention. An inventor should file with the U. S. Patent Office in Washington, a preliminary application before turning over to a manufacturer his plans for a model. The patent office only occasionally requires a model on final application. In any event the preliminary application protects the inventor.

*

On page 164 H. C. T. writes about sulphured oats. I wish to commend most sincerely your note. I came to this place to start my chicken business, and of course was not thinking that I would get handed such a lemon out in a country village 78 miles from New York city. I got four bushels of oats from the mill here, and they knew that I wanted them for sprouting. They never said a word about sulphur to me, knowing well, as they later admitted, that they were sulphured and would not sprout. I think that fake sulphured oats should be aired most thoroughly. H. W. P.
Dutchess Co., N. Y.

You will have to blow air through it to drive the sulphur out. These are little frauds, but the big ones rest upon them. The sulphur is used to make the blackened and damaged oats look like fresh new grain. Of course the dealers who sell them know the life has gone from such oats so they will not sprout. Of course they know what the poultrymen want them for. It is a mean, dirty little fraud. The man who does this ought to go where a double dose of his sulphur will be applied!

*

THE Department of Agriculture, in arguing for better household conveniences, and management relates the following incident:

One of the specialists of the Office of Farm Management learned from a woman in Pennsylvania, who had broken down from overwork, that she had been carrying coal from the barn for years. When the husband was asked if there was any reason why a coal bunker could not have been provided near the cookstove, and filled directly from the wagon, he answered there was none, but that no one had ever thought of it. This one detail has been found neglected in other cases where it could have been easily remedied, if only some one had thought of it.

It is probable that this same explanation would be given in many other similar cases. "Mother" is often patient and uncomplaining and the habit of doing hard and unnecessary things becomes fixed before she or the rest of the family realize it. It is human nature to think of the so-called "great" things in the world, while we forget the smaller yet more essential things. They are "more essential" because the great things grow from them and are flavored by them. Do you know of people who give time and money to missions, temperance and similar things while "mother" has to get her own fuel and draw water out of a distant well? Think a moment and you will see that every one of these "great" things would be advanced if the fuel and water problems were settled.

*

DURING the four years since January 1, 1910, there has been a decrease in this country of 7,305,000 meat animals. At the same time we increased in population nearly 7,000,000 people. To put it another way, the Department of Agriculture shows that as compared with 1910, we are short nine beef cattle, seven sheep and more than three hogs for each 100 persons. Year by year, therefore, the available supply of home-grown meat is growing shorter. There should be over eighteen million more meat animals in this country to make the same proportion to the number of inhabitants that we had in 1910. There is a slight increase of dairy cows, horses and mules in numbers, but the meat problem is now harder than it was ever before. Among the reasons given for this decrease probably the most important is the following:

The decline in stockraising on farms in the East and South because of poor marketing facilities, resulting from many local slaughtering establishments having been driven out of business by the competition of the great central slaughtering establishments of the West and Central West.

This is unquestionably true, for if it had been possible during the past 20 years to keep up the local slaughter-houses and meat markets which were found through the Eastern States, millions more of calves would have been kept and grown for market purposes. The increase of meat-production of our eastern farms will not be felt until better market facilities are worked up. We believe that this problem will be solved in the future, so that local meat producers will be able to turn off their stock at profitable prices. There will be direct trade more and more with consumers, and local markets either under Federal or municipal control, where stock can be slaughtered and distributed with some show of competition. When that is done the trouble will begin to correct itself. Until these marketing facilities are developed, it is idle to ask eastern farmers to increase their meat supply. Here is one of the most thoughtful situations ever known in American trade. Under the unrestricted law of supply and demand beef making should provide a profitable enterprise for thousands of Eastern farmers. The operations of the beef trust have upset this law, paralyzed the industry and left this nation in the way of depending upon foreigners for more of its meat.

*

SINCE we printed a statement of the Employer's Liability law in Connecticut there have been many requests for the facts about the New York law. Does it make farmers and housekeepers liable for injuries to servants or workmen? The attorney-general declines to make a ruling on this point, because the law is in charge of a commission whose duty it is to interpret the law. He points, however, to a paragraph in Section 3, which reads as follows:

4. "Employee" means a person who is engaged in a hazardous employment in the service of an employer carrying on or conducting the same upon the premises or at the plant, or in the course of his employment away from the plant of his employer; and shall not include farm laborers or domestic servants.

This makes it clear and there can be no question about it, for the law states that the word employee under the law *"shall not include farm laborers."* Thus farm laborers and domestic servants are expressly excluded, and farmers are not made liable. When the Connecticut law was passed it was thought that employers who had less than five hands were excluded and small farmers were told that they were exempt. When the law comes to be enforced the lawyers found a "joker" in it which made farmers liable the same as other employers. In Connecticut farmers are generally taking out insurance for protection in case of injury to hired men.

*

THE Attorney-General has given his opinion on two disputed points under the Commission Men's law. Various commission men claim that where they were subjected to the discipline of an association, a board or an exchange, they are relieved from the necessity of giving a bond and taking license under this law. The Attorney-General decides that this does not relieve them of the legal responsibility. These commission men claim that the shipper is amply protected when they belong to an exchange. The Attorney General rules as follows on this point, which would seem to settle it conclusively:

The fact that the consignor has in a measure protected himself by the use of a draft or because the commission man has subjected himself to the control of his exchange or association would not place the latter outside the purview of the statute. Such precautions and discipline may add greatly to the safety of the transaction and secure the credits of the merchant, but such private arrangements are not recognized as supplanting the law.

The same thing applies to a case where the shipper attaches a draft to the bill of lading and forwards it with the grain or other produce. In such a case the dealer must pay the draft before he can obtain possession.

The Attorney-General holds, as is seen in the above, that this does not place the commission man outside the law, and he will be obliged to subject himself to bond and license. In another case the claim is made by grain and hay brokers that they do not combine the business of the commission merchant, and therefore they claim that they should not be licensed or give a bond. The Attorney-General gives a long opinion to show the difference between a broker and a commission man, and he concludes that whenever such a broker combines with his business in any way that of the commission merchant, he must take out a license. When he does a grain brokerage without any commission whatsoever or without dealing in commissions, it seems doubtful if he could be made to give a bond and take out a license.

BREVITIES.

TIME to get out the knife and saw for pruning.

"I had thought I would have to do without THE R. N.-Y. for the first time in 35 years, but my scrub hens came to the rescue and laid me some three-cent eggs, so here is your dollar for another year. May the Hope Farm scrubs do as well," says E. M. C., of Kansas. The Hope Farm scrubs have not paid for many subscriptions yet, but they are young and so is the contest.

THE STORY OF A CO-OPERATIVE SUCCESS.

PART I.

[At the recent meeting of the New York State Agricultural Society, Mr. L. G. Tuckerman read a strong paper giving a history of the Hudson River Valley Exchange. We are very glad to give it here.]

THE BEGINNING.—In March, 1912, C. E. Thurston of New York and W. Y. Velie of Marlborough, called upon number of farmers in the district from Newburgh to Highland to discuss a plan for coöperation among the fruit growers of the Hudson River Valley with a view to improving our marketing conditions. The result of their efforts was a meeting of some 40 men in Milton, when the subject was discussed, and a committee of five appointed, of which I was one, to draft a constitution and by-laws for a coöperative association, and report at a meeting a fortnight later. The committee finally adopted the following preamble:

The object of this exchange shall be to encourage the coöperation of the fruit growers of the Hudson River Valley for the protection and advancement of their common interests.

1. By securing and disseminating such scientific and practical information as shall promote the general advancement of the fruit-growing interests in this district, and shall tend to the improvement of the quality and quantity of our products.
2. By securing such legislation as may be advantageous and preventing that which may be detrimental.
3. By securing such improved facilities in transportation as shall tend to give us more expeditious and economical distribution of our products.
4. By endeavoring to secure a better and more uniform system of packing and package.
5. By devising some system of marketing our products, as shall open up and develop markets, and to give the growers a fair and remunerative return.
6. By endeavoring to obtain such improved system of crop reports as shall furnish accurate information concerning production, thereby enabling the fruit growers to know the exact situation.
7. By coöperative purchase of such supplies as are needed by the members.

FORMING THE COMPANY.—We determined that it would be advisable to incorporate a company, venturing slowly, as this was a new deal to us all. We set the capital stock at $2,000, divided into 100 shares at $20 each, no member to own more than four shares. Stock does not carry voting power. Each registered member has one vote only in the Hudson River Fruit Exchange, Inc. The government is vested in an executive committee of five, who were chosen in 1912, one for three years, two for two years, and two for one year. As these terms expire members are elected for terms of three years. We thus always have three men familiar with the work. This committee annually, from its members, appoints the officers for the year. All are subject to recall by the exchange. Three articles of the by-laws should be read in full:

Art. VI. Members of this Exchange bind themselves when consigning fruit, to ship only to commission houses or auctions duly designated by the Exchange. They also agree to ship all fruit up to grade under the label of the Exchange, and fruit not up to grade without the label.

Art. VII. Fruit sold through the Exchange f. o. b. shipping point or on track shall pay to the Exchange a commission of 3 per cent. of the gross price. In such cases the Exchange stands behind such sales and guarantees the price to the grower. The members reserve the right to negotiate private sales on which no commission shall be due the Exchange.

Art. XIII. At the end of each fiscal year, after all the expenses of the Exchange shall have been paid, the executive committee shall from any surplus remaining, declare a dividend not exceeding five per cent. on the par value of shares issued. The entire balance of such surplus shall be distributed among the members who have shipped fruit through the Exchange during such year in proportion to the value of their respective shipments.

The last sentence of Art. VII caused much discussion, and many members feel that it should not be in, and we have made efforts to have it removed, but I regret to say that it still stands. I shall take up this matter later on.

STARTING THE WORK.—It was May before we were incorporated and ready to begin work. As secretary-treasurer, it devolved upon me to find a manager. Answers to advertisement were varied and curious, but a man in Minnesota seemed to fill the bill, though many members felt that anyone totally unacquainted with this region would never do. But this man's references were so good and his letters were so clean cut that I wired him to come on, and we hope he will never leave us. I tell you this because the manager is the heart and soul of any coöperative concern. It was June when he took hold, an utter stranger in the community, with 30 scattered members willing to try an experiment. That was about the size of it. But the manager hustled. Our commission men were chosen with a view to concentrating our shipments to prevent competition with ourselves and to let buyers know just where our fruit was to be found. The houses chosen were naturally men we were used to and had confidence in. The custom in our section has been for such houses to pay their agents three of the 10 per cent. charged the farmer for selling. We arranged with most of our houses that the Exchange be made agent and receive that three per cent. on all produce consigned by members of the Exchange. That was to be our source of revenue.

MARKET REPORTS.—Mr. Hilderbrand, our manager, arranged to supply complete market reports to our members each morning by 'phone. Until then few of us had been able to get any reliable reports, and the custom of the many local buyers had been to use this ignorance very much to their own advantage. For instance, those buyers receive from their houses in berry time 10 cents per crate for buying, and each morning receive word as to what they shall pay, let us say, for strawberries that day. Supposing the price given them be 10 cents per quart. Under the old system the buyer paid what he could make the grower accept, and pocketed the balance. The Exchange entered the field and paid the full daily price as well as giving complete market reports, with the result that for the first time in our section the local price of berries was kept on a par with the wholesale prices in the Eastern markets. This made men take notice, and in spite of the hardest kind of knocks from buyers and outside commission men we began to receive applications for membership.

THE NEW CURRENCY LAW.

PART I.

[We have had many requests for a synopsis of the new currency law. The following has, therefore, been prepared.]

"An Act to provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes." "The Federal Reserve Act," to use its short title, was approved by President Wilson, December 23, 1913, and was the Administration's Christmas gift to the American people. Within five weeks over 5,000 national banks have notified the Government of their desire to become a part of the new banking system. Only five banks in each of our two largest cities remain to be heard from in favor of becoming members. The largest bank in the United States, the National City Bank of New York City, having a capitalization of nearly $300,000,000, has asked for membership. To date only two national banks have declined to join. It now seems certain that the combined banking systems of the country will soon be members of a system of banks that will exceed that of the combined capital of the Bank of England, Bank of France, Bank of Germany, and Bank of Russia.

FEDERAL RESERVE BOARD.—The new banking system is to be controlled by a Federal Reserve Board of seven members, the Secretary of the Treasury and the Comptroller of the Currency of the United States to be members ex-officio. The five members are to be appointed by the President of the United States by and with the consent of the Senate. The salaries are to be $12,000 a year and necessary travelling expenses. The first board is to be appointed for terms of two, four, six, eight and 10 years, and thereafter for terms of 10 years. Their salaries and expenses are paid by the Federal Reserve banks. Each member is to devote his entire time to the duties of the office, and cannot hold office in any bank at the time nor for two years thereafter. The Federal Reserve Board is authorized to examine the accounts, books, and affairs of the Federal Reserve banks and the member banks; to publish a weekly statement of the condition of Federal Reserve banks; to permit or require Federal banks to rediscount paper of the member banks and fix the rates of interest; to supervise the issue and retirement of Federal reserve notes; to suspend or remove any officer or director of any Federal bank; to require the writing off of doubtful assets of Federal banks; to suspend the operations of any bank for violating the provisions of the currency law; and to exercise general supervision over the Federal Reserve system. This Reserve Board is similar to the Interstate Commerce Commission in several respects, but has a larger degree of control.

FEDERAL RESERVE DISTRICTS, CITIES AND BANKS.—The United States is to be divided into not less than eight nor more than 12 districts which are naturally the banking territories of from eight to 12 large cities. In each of these cities is to be established one Federal bank. The Federal Reserve districts are not made with any regard to State lines. No Federal Reserve bank can have less than $4,000,000 subscribed capital stock with which to begin business. The new system is being organized by an "Organization Committee," composed of the Secretary of the Treasury, the Comptroller of the Currency, and the Secretary of Agriculture." Every national bank in the United States and every eligible State bank or trust company must signify in writing before February 20 its acceptance of the terms and provisions of the new law. The National banks that fail to come into the system lose their national charter. Each bank coming into the system is called a "member" bank, and is required to subscribe to stock in the Federal Reserve bank of the district in which it is located. Each bank must take stock to an amount equal to 6% of its capital and surplus. Individuals and corporations may take stock not to exceed $25,000 in amount. If the amount subscribed by banks and individuals and corporations is not deemed sufficient by the Organization committee then the committee allots to the United States the balanced required. F. N. C.

ANOTHER FORM OF DIRECT TRADE.

I am not a farmer, but have taken your paper for some years to keep me good-natured after riding home in the Subway at 6 p. m. I have seen a great deal in THE R. N.-Y. about that 35-cent dollar the farmers are getting, or sometimes no dollar. Where I am employed there are 15 married men who are fond of good food and fair prices for the same. I have a crate of eggs sent to me every Monday, another man potatoes and butter. They are all taken at the farmer's price, plus the express or freight. The farmer gets his money right back, we save the middleman's profit, and what we get is A-1. I would say anyone can do the same. A church might help its congregation that way and make a little something. At first the concern found fault because as soon as a crate of eggs came everyone quit work to get his, but the manager soon fell in line, and now asks when the next crate is coming. I get my eggs from Vermont, and the express is only 53 cents on a crate. Farmers could combine and get all there is in it this way, and not write your paper to collect bad debts for them. G. H. MORSE.
New York.

We print this as showing another way to direct trade. In this case it is coöperative buying rather than selling. Workers in a city factory or store combine and buy in wholesale lots. The goods are distributed here—each man carrying home his own share. As Mr. Morse says, this gives the consumer fresh goods at a fair price, while the shipper has a sure trade with the middleman's tax added to what he could otherwise obtain. The suggestion that churches, clubs and other city societies could use their organization to increase such trade is a good one. The time is surely coming when such work will be recognized as one of the most important services which fraternal societies can work up. There will be no use writing to Mr. Morse for trade, for his society is well supplied, but we print this to show another way in which this direct trade can be developed.

POOR SAMPLES OF MIXED FEED.

We send you three samples of ground grain feed. Our grain dealer, who for years has sold us satisfactory feeds, agreed to furnish us five tons of sample No. 1, if after trial for a week it proved a good mixture for our herd of 20 cows. The cows did nicely on it, and we told him to bring along the remainder. The second batch, sample No. 2, arrived, and after feeding it a few days we noticed the cows fell off a little in milk, and when the third batch arrived and gave poorer results, than the other two, we began to worry and look for a cause. Sample No. 3, is from batch No. 3. We examined the three samples under a reading glass, and it only made us more sure that they are not the same mixture, or at least the same quality as No. 1, which is the best. He not only sent five tons but got eight tons unloaded before I knew it. If the feed is all the same quality I can use all he has sent, but I do not like the thought of paying for mill sweepings. I have not paid him yet, and wish to get your opinion of the deal before I do so. The grain dealer told me by telephone this morning that he would see us next week and would give us satisfaction if we would tell what we wanted. I asked the Director of our State Experiment Station to examine the samples, but he told me that as long as there was no guarantee on the bags he could do nothing. The price we were to pay for this mixture of equal parts oats, oil meal, bran, and two parts cornmeal, was $29 per ton. Is it worth it? Please give us your advice. J. F. C.
Rhode Island.

Under a microscope it is evident that samples 2 and 3 are inferior. Sample 1 appears to be what is claimed for it—oats, oil meal, bran and corn—though a closer examination would be needed to prove it. The other samples clearly contain trash like mill sweepings and oat hulls, and we do not wonder that the cows fell off in milk. In such a case we think the experiment station should act as umpire and state how much inferior these samples are. While the lack of guarantee may take this out of any legal consideration, it is clearly evident to anyone who can see that two of these samples are not worth as much as the other. We think the station can and should tell how much less and then help adjust the matter.

A PHILADELPHIA jury gave a verdict of $8,500 to a boy who lost the use of one eye through an explosion. In New Jersey some years ago a jury decided that a boy "killed by a car had no earning capacity and thus had no value."

Woman and the Home

From Day to Day

FAITH.

When the anchors that faith had cast
  Are dragging in the gale,
I am holding quietly fast
  To things that cannot fail.

I know that right is right;
  That it is not good to lie;
That love is better than spite,
  And a neighbor than a spy;

That the rulers must obey;
  That the givers shall increase;
That Duty lights the way
  For the beautiful feet of Peace.

And that somewhere beyond the stars
  Is a love that is better than fate.
When the night unlocks her bars
  I shall see Him, and I will wait.
—Washington Gladden.

*

OF course the fore-handed woman is now busy with her sewing. January being the season of white-goods sales, it is the time to buy materials for underwear and washing blouses. Colored wash goods, too, appear in these sales, and all these standard materials may be bought at a reduction. We prefer English longcloth for all muslin underwear, because of its smooth weave, soft finish and excellent wearing qualities; it may be secured in many different weights, though nainsook is preferred for finer garments. Where underwear cannot be made at home there is a wide range of choice in ready-made garments, but where economy must go hand in hand with refined taste one gets better value in the home-made article. At present most underwear is scant in cut, and very elaborately trimmed. It is quite instructive to find a plainly made garment of fine material, with no other trimming than a cross-bar muslin hem through which ribbon is run, more expensive to buy than one with a yoke of elaborate lace and embroidery. But then, the coarseness of the trimming is overlooked by the buyer, who wants something elaborate, and who has not learned to discriminate. By selecting good patterns and material, and following the style of the better goods, one secures something far superior at less cost. When neck and arms are finished by a three-quarters or one-half-inch fold of cross-bar through which ribbon may be run, the result is attractive, up-to-date and durable.

*

THE question of house dresses cannot be settled by all women on the same lines. The ideal dress for the working housekeeper is washing material, made in one piece, with convenient fastenings, so that it can be quickly adjusted. However, there are many country houses in the North where, during severe Winter weather, a woolen dress must be worn, and we can only suggest using a material that will wash, and making it on practical lines. Nothing is more slatternly than a once-stylish cloth dress, reduced to kitchen service because it is too shabby for other wear. Percale and chambray are about the most practical wash materials for house dresses, with preference given to the former because it shrinks so little and irons so nicely. And don't make all the house dresses alike in cut or color. We have heard of an economical woman who made all her working dresses and kitchen aprons of the same dark blue percale, which she bought by the piece, so that she could always cut patches out of the worn garments to mend the others. It was economy, no doubt, but it is not likely that she got much pleasure out of her clothes. Years ago, when we were all wearing separate waists and skirts, one energetic woman sent us a description of her working dress, which she wore while employed in the garden. It was made of denim, all in one piece, with patch pockets on both waist and skirt, and seemed at that time a very emancipated garment. Nowadays such dresses are made of khaki and other materials by fashionable outfitters, for hunting and camping trips. In spite of all the comments on extreme fashions, there never was a time when there was more opportunity for making clothes comfortably while at the same time keeping in touch with style, and there is no reason why the working dress should not be attractively made, without losing sight of its usefulness.

The Mother's Charge.

The housekeeper, the homemaker, the mother, who is the mainstay of the home is often sadly neglected, not appreciated, and I for one, was much pleased to find so many pages devoted to her in the December 20 R. N.-Y, only wish it could be a weekly occurrence. We all realize that many mothers are not appreciated by their own family. At whose door does the blame lie? I, having been a public school teacher for many years, had a fine opportunity to make quite a study of this neglect, and the conclusion I have reached from my observations is that it is more often the mother's own fault that she is not given the consideration, the appreciation, she so justly deserves. The mother should reign as queen in her household, but too often she is its slave. Her children should be taught from babyhood up to respect her, to work for her, to love her, and to give her the best.

I think I can illustrate my point in no better way than by giving an actual occurrence that come under my observation some years ago. I was teaching a large Sunday school class of boys just in their "teens." One Summer we went camping for a week. One day was set aside as visitor's day. The parents and friends were to spend the day and take dinner with us. How those boys did work to "fix up" the camp and make everything look fine! Two of the boys, Ed and Walter, were especially anxious that everything should be at its best. When their parents arrived Ed rushed to the carriage, helped his mother out, guided her to the coolest, prettiest spot in the camp, arraigned some cushions in a steamer chair, an' said, "Here, mamma, is a dandy place to rest." In the mean time, Walter had appropriated the best hammock on the grounds, and when his mother, waiting on herself, had removed her wraps and found a seat, nearly his first words to her were, "Mamma, did you bring me a clean shirt?" A homely illustration perhaps, and a seemingly trifling incident, but it gave me quite an insight into the home life of those two boys.

The mothers were both well educated, refined women, blessed with plenty of good common sense, but evidently Ed's mother understood more fully how to train her boy to respect and love her, to wait upon her, in fact how to instil in him habits of thoughtfulness, carefulness and unselfishness, that would make of him a man always ready to extend a helping hand and give a kind word to the needy and discouraged, wherever he found them. Walter's mother loved her boy and thought she was doing her best for him by waiting on him, by doing everything for him. She did not understand the effect of habit, especially on children. Mark Twain quaintly put it that, "Habit is habit, not to be flung out of the window carelessly by any man, but coaxed down stairs one step at a time." She did not realize that this "coaxing down stairs one step at a time," was much easier done in childhood, and would not only save herself and her boy a world of trouble as the years went by, but would be the making of a man of him in the true sense of the word.

It is the duty of every mother of future men and women, to make the most of what she has, to train those boys and girls to look beyond their own wants to the needs of others. The quicker she realizes that she is not doing this by making a slave of herself, the more easily will she be able to develop in her children the traits of patience, unselfishness, obedience, gratitude and appreciation.

Blessed indeed are the mothers who have a goodly supply of gumption—that is; those qualities which make strength of character, which give the power to see and do aright. The word "gumption" is strictly Hoosier and they say "Gumption is the ability to put the grease where the squeak is." May the mothers of our land leave no stone unturned until they realize fully just what and where the squeak is in their household, and then apply the grease with such a liberal hand, that all our boys and girls will soon have such well developed bumps of gumption they will be ever ready to lend a hand to help.

E. M. S.

Warmth and Ventilation.

Baby John, who is three and a half, has his own little bed, of course, and as he is a fresh air baby, he is used to sleeping with the temperature of his room the same as that out of doors. Last Fall he was promoted to a new crib, one of those little white iron beds whose sides let down and are put up at night, fastening baby in securely. He was very fond of his little new bed from the first and needed no coaxing to be undressed at seven o'clock. In fact he began at this time to make himself ready for bed. All went well until severely cold weather set in, when baby awoke in the early morning hours, shivering and whimpering. Mother had to take him into her bed, which was only a few steps from the little one. This happened every cold night for a week or more, and then mother began to think something must be done. Baby wore as warm night clothes as seemed necessary, and his bed covering was both light and warm. Then she examined the new bed thoroughly. It had a rather light ready-made mattress which came with the bed. Over that was a mattress pad of tufted cotton and then a small homemade mattress made of wool. It ought to be warm enough, but the fact remained that it wasn't.

Now upstairs in the storeroom was a big sack of downy duck feathers, just the very thing, thought mother, and that very day she made a sack of new ticking to fit the little bed and emptied the light, fluffy feathers into it. Baby John helping (?) and very much interested. Then it was made up in the little crib and no complaint since has been made of the cold.

In Switzerland, feathers are commonly used as a filling for comforts, making the lightest, warmest possible of bed coverings. Plenty of pillows help to keep one warm, not putting them all under the head of course; one tucked in at the back is a real comfort in zero weather as is also a hot water bottle or soapstone made up at the foot of the bed. Feather beds are out of fashion and justly so in warm weather, but they may be rendered sanitary by live steam, and for outdoor sleeping furnish warmth and comfort not to be despised.

F. J. F. F.

GREAT men are they who see that spiritual is stronger than any material force; that thoughts rule the world.—Emerson.

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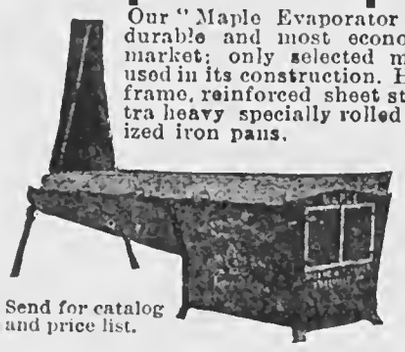

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This is certainly invaluable. Smooth off the floor, filling all the cracks with filler or putty and then paint it with a coat of sodium silicate (soluble glass), the same used to preserve eggs. It will also preserve floors and save the back of the woman who has to scrub and clean them. The water glass dries immediately and three coats should be put on one after the other. If you wish to change the color of your floor, add yellow ochre or vandyke brown (water colors, not oil). Try on a board until color desired is obtained. When paint is dry cover it with a coat of varnish comprised of three parts linseed oil and one part Japan drier, mixed. Any kind of floor or old furniture may be treated in this way. I. M. B.

Rare Northern Visitors.

One of the pleasures of the Winter season on the farm, is the watching of our bird visitors. The chickadees and nuthatches soon become very bold and familiar, and occasionally the eye is gladdened by the sight of some rare northern species, driven by the rigorous cold from the higher latitudes which are their home, to Central New York. Sometimes the snow buntings sojourn in our fields or the northern shrike pays us a visit, and once, a great snowy owl remained for several days in the vicinity, upsetting everyone's notions of owl habits by appearing boldly by daylight. We were much interested when, in December of the present season, the news spread that a rare water fowl had been captured alive by some boys of the neighborhood. It proved to be the white brant, or Arctic goose, a bird seldom seen in the Eastern United States, though common in the Middle West and on the Pacific coast. We went to see him and pitied his sad plight; he was confined in a small poultry house with a flock of cackling hens. He was a splendid fellow with a lordly bearing and long, powerful wings with which he could strike a staggering blow. Poor bird! We could not save him from being killed and eaten, but we indulged a hope that the new national laws for the protection of migratory birds may preserve his race from extinction.

In the first week of January, we had a fresh surprise. Some strange birds were found feeding on the seeds of the ash trees bordering the roadside. They lingered for several days and were seen by different members of the household, none of whom was able to identify them. One afternoon, I noted a flutter of wings in a tall ash tree near the corner of the orchard, and I knew that my chance had come. Then I, a middle-aged woman, and I feel no shame in the telling, dropped everything and went bird hunting. Approaching cautiously, I found a flock of 30 birds, about the size of robins, busily feeding in the branches. I knew at once that they were pine grosbeaks, for I had conned the description in Blanchan's "Bird Neighbors" until I had it by heart. They used their heavy bills with much cleverness, stripping off every seed, and littering the snow with the empty hulls and broken stems. All the while, they kept up a low-toned twittering that sounded at a little distance like the tinkle of distant sleigh bells. They were led by a fine male whose head and back were brilliant red in color, while the wings were marked with black and white. The rest were females and young males, the former in rich brown attire, while the latter had reddish tints on head and back. As I stood in the snowy road, watching them at a respectful distance through the glass, they suddenly swept down and alighted in a small apple tree barely 10 paces from the spot I occupied. Then, while some preened their feathers in the tree, others fluttered to the little spring near the roadside fence and drank their fill. The snow-covered landscape, and the group of handsome birds, hovering about the little pool, made a picture which will never be forgotten.

I have felt some resentment toward the woman writer who declared in one of her books that the things that country people do not know about objects in nature would fill not one, but several volumes. The statement was quite true at the time, but couldn't she have admitted that we had not a fair chance? We could not spend long hours watching bird housekeeping through an opera glass as she did. The books on bird life of 20 years ago were scientific works, full of long, hard names, intelligible only to the scientist. These conditions have changed in the last few years. We now have splendidly illustrated nature-study books, bulletins and trained teachers to help us. So, in most instances, we have only ourselves to blame, if, when approached by the person who wants to know, we are unable to answer his questions intelligently.

M. E. COLEGROVE.

The Rural Patterns.

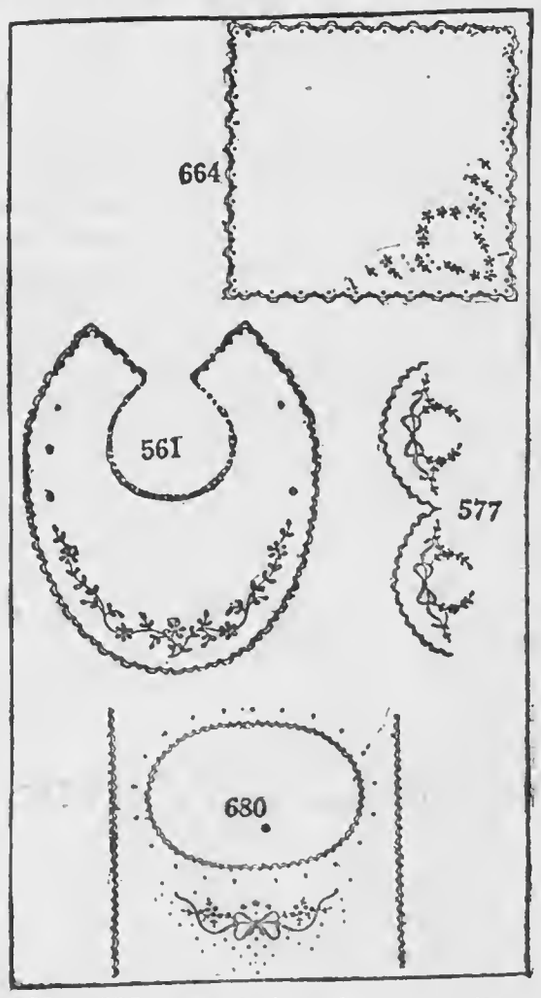
8151 Blouse with tunic for misses and small women, 16 and 18 years. With long or three-quarter sleeves, with or without chemisette. 8132 Fancy blouse, 34 to 44 bust. 8145 Semi-princess gown, 34 to 42 bust. With two-piece yoke skirt.

8146 One-piece yoke skirt for misses and small women, 16 to 18 years. 8133 One-piece peg-top skirt, 22 to 32 waist. With high or natural waist line. Price of each pattern 10 cents.

Prices quoted for embroidery designs are for stamped goods and material for working, but transfer patterns of any design will be furnished separately for 10 cents each.

No. 664. Design for embroidering a handkerchief ten inches square. Stamped on linen lawn with mercerized floss to work, 25 cents.

No. 561. Design for embroidering a baby's bib, having scalloped edges buttonholed. Stamped on best white pure linen, mercerized floss to work, 25 cents.



No. 577. A design for a scalloped border. Stamped on pure white linen, one yard long, 6 in. wide, with mercerized floss to work, 25 cents.

No. 680. A design for embroidering a girl's low-neck night gown with short sleeves. Stamped on best quality nainsook, sizes 6 to 12 years, with floss to work, 98 cents.

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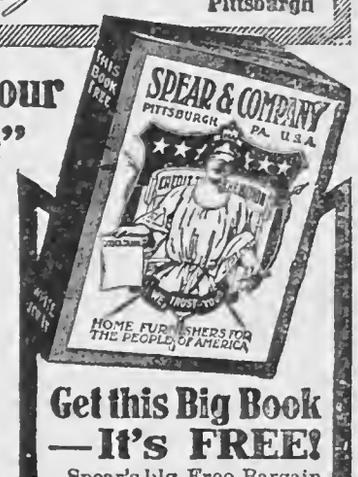

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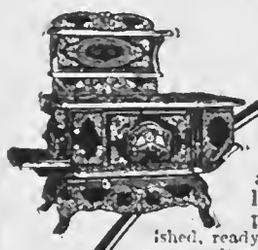

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Live Stock and Dairy

FINE INCOME FROM BUTTER COWS.

I am most interested in a subject which I don't see discussed in THE R. N.-Y. very much, viz., the amount of butter obtained from a cow per year; the average for the dairy, and of course how much I get of the "consumer's dollar." In the case of butter with me I get pretty nearly 100 per cent., as I sell most of it direct to the consumer, delivering each Saturday forenoon direct to customers in this thriving village of about 1,500 population. My list includes many of the best families, whom I supply Summer and Winter. For the year ending as given in the table below is given the average per cow, average number of cows and price:

November 1, 1911.—Pounds butter, 422; per pound, .3037; returns per cow, $128; grain purchased, $25; number of cows, 20.6.

November 1, 1912.—Pounds butter, 392; per pound, .346; returns per cow, $135.63; grain purchased, $25; number of cows, 21.6.

November 1, 1913.—Pounds butter, 404; per pound, .366; returns per cow, $147.80; grain purchased, $30; number of cows, 22.

After paying for the grain that certainly leaves a good market price for what is raised on the farm, and still some for us who do the work. My brother-in-law and myself buy our grain in car lots, a year's supply at a time, when price seems lowest, sometime in the Summer. We never have had any trouble to get what credit we wanted, which has not been much.

I try to have my cows freshen in the Fall, and have silage and grain and a good supply of Timothy hay for them, although now I am raising some Alfalfa and clover by a liberal application of lime. I sowed a two-acre piece of the former early last August and it was spoken of by several men as the best piece they had ever seen, in spite of the extremely dry weather. I had Summer-fallowed up to the time of sowing to kill out the weeds, and the dry weather helped do a good job at that. I got after the last of them with a hoe to make the work complete.

I have used slings for several years unloading hay, and find them far superior to either double or single harpoon fork. I unload a ton or more with three sling loads, and scarcely enough hay left on the wagon to make a hen's nest. J. T. T. could use them with his 18-foot rick if his barn is high enough, so the bottom of the sling-load would not hit something, and can handle some fodder or grain in sheaf, and use them with an engine instead of horses by using a windlass. All of those things are done in this vicinity with complete success. My track is of steel and very satisfactory

Cattaraugus Co., N. Y. E. N. RYTHER.

RAISING MULES; BREEDING EWES.

1. What do you think of the plan of raising two mules a year from a pair of young mares instead of horses? The time necessary is shorter, the mules hardier and more valuable, I am told. In order not to interfere with the mares' farm work, what would be the best month to have them foal in? 2. At what age can an ewe lamb be bred? B. M.

1. The raising of mules is a line of endeavor that is very popular and profitable in New Jersey. Notably in the region of Philadelphia they are using mules more extensively than horses for the delivering of market gardening crops, the point being that they are better adapted for use on stone roads, and are especially useful in cultivating market gardening crops. It is true that mule colts are possibly more hardy than horse colts, and can be worked at a little younger age. If there is a suitable jack in the neighborhood there is no doubt that the inquirer might find this practice very satisfactory, and would no doubt get good results. There is surely a ready market for mule colts at the present time, and mares suitable for breeding mules can be selected from a greater variety of types than is possible in the breeding of horses. The popular demand appears to be at the present time for a mule weighing from 900 to 1,100 pounds, and there is less demand for the big sugar-loaf mule that was very popular a few years ago. Our best mules come from various regions in Kentucky and Tennessee, where they use misfit saddle mares for breeding purposes.

2. A ewe lamb can be bred in her yearling form, and will thus drop her first lamb when she is two years old. Ordinarily ewes do not come in use until after the first spell of cold weather, sometimes during September or October, at which time they may be mated. In case of Dorsets the ewes mate twice a year, and flushing with the other breeds has the effect of bringing them in use earlier, and in much better condition for settling. The period of gestation is 147 days.

F. C. MINKLER.

SPAN OF MULE COLTS.

SUCCESS WITH WINTER LAMBS.

Several farmers in Ross County, Ohio, and neighboring counties, are producing hothouse lambs. Most of us are discouraged over the present state of the business and some intend to quit. It is rather hard, however, for those who have the equipment to go into some other line of work. I have now three barns with combined floor space of 2,850 square feet, all concreted for sheep. There is almost that much more floor space for stables, feed rooms, etc. I have a 130-ton concrete block silo.

I keep about 200 ewes and last year had six extra fine Tunis rams. My ewes are Dorset-Delaine. I have been told many times that no better lambs than ours go to the New York market. I have received $14 for a good lamb and have sold many for $12.50 or $13 per head, but the average is nothing like that. Here are some averages. These are net as to commission and expressage, but not as to the production of the lambs:

	Lambs	Average.
1906-07	112	$8.09
1907-08	136	7.13
1908-09	155	8.97
1909-10	161	9.07
1910-11	180	7.84
1911-12	197	6.80
1912-13	148	7.68
1913-14	71 to Feb. 1	6.27

You will notice that in 1912-13 there were 148 lambs. That Spring the weather conditions were such that we could not dress lambs and had about 40 left on hand, which would of course further reduce the average. Our best sales have always been from just before Christmas until the middle of February, but this year our best sale was $9 each (gross), and from that down to $5, with an average of $6.27 for what I have received returns for (71).

Among 200 ewes there are always some that will not breed early, no matter how they are treated. This season we had 126 lambs dropped in October and November, three in December and

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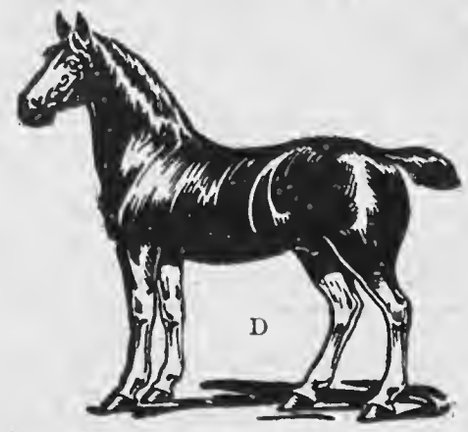

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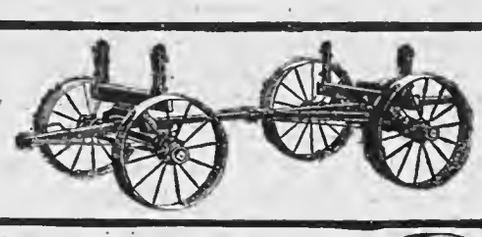

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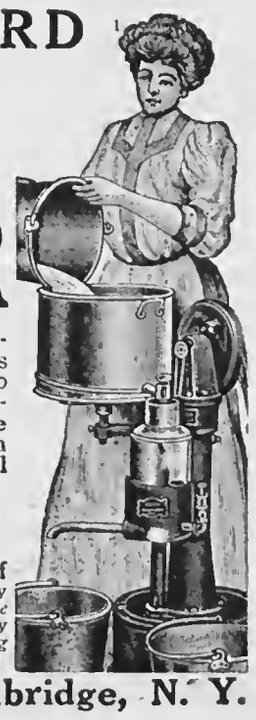

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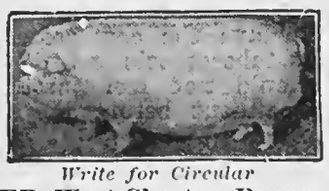
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40 in January. Of course these that are coming now are too late for best prices if there is any best this year. What is the trouble with prices? I do not know. It may be overproduction or lack of demand. It costs a good deal to produce these lambs. The ewes must be heavily fed and the lambs eat a surprising amount. My silo will hold 10 acres of corn, 75 bushels to the acre. We use all of it in a season. We feed Alfalfa, about an average of 35 tons, and the fodder from 15 acres of corn. This year I am feeding some dried brewers' grains, as our corn was poor. It would not make over 50 bushels per acre this year. We have added three tons, that I think will last us. Cost about $32.50 per ton delivered; one ton of oil meal, about $38.50 delivered, and probably a ton of bran at $26. The lambs also eat a good deal of shelled corn.

In this business and fed as the lambs are, one cannot afford to keep the ewe lambs, so we must in some way replenish our stock. Last Fall I bought 75 Western ewes at $4.60 per head and will let enough of the old ewes go to keep my 200. Some of the ewes are quite old. We have lost eight and one of our best rams had his neck broken fighting. It is an easy matter to give results of one good period that may seem very encouraging. It is another matter to get average results through a series of years. I do a large amount of work myself and I keep two men. We also grow hogs and market about 100 per year, but the hogs do not take the time the sheep do. If anyone has the equipment he may do very well in this business in a small way, but if one must build his barns and silo (and we feel the silo is almost indispensable) I would advise him to go very slow with the present very low prices.

There is much being said about the young men leaving the farm. One reason is because the farmer does not receive enough return for the cost of his equipment and his labor. Therefore he cannot afford to pay prices that will keep good farm labor on the farm. M. L. P.

Sweet Clover for Hog Pasture.

What do you think of sowing Sweet clover for hog pasture? I have one-half acre hog run, and am thinking of sowing it to oats and Sweet clover in the Spring, and then when the clover has a good start turn in some young shotes. The land is sand and gravel mixed. If the hogs keep it pastured down so it cannot go to seed will the clover remain there for next year, or must it be sown every year? W. T.

Elkhart, Ind.

You can hardly make a mistake in sowing Melilotus alba, the White Sweet clover, for hog pasture. We consider this plant one of the greatest pasture crops that we have ever seen. Last year we turned 56 head of 100-pound shotes on to an acre of Sweet clover, leaving them there six weeks, at which time they were ready for the market, and the Sweet clover had been eaten down only to within 12 or 15 inches of the ground. There is not much to tell about handling this crop. We use it just the same as Alfalfa, put it on the same kind of soil, which must be rich in lime and inoculated, although it need not be fertile. We prepare the same kind of seed bed and sow it the same time. We use hulled seed exclusively and whatever you do never cover Sweet clover seed deeply, just barely cover it at all, and you will get good results. Seeded April 1, you can expect some pasture or probably a hay crop the first year, the second year a very heavy hay crop, which must, however, be cut a foot high or it will kill the plants. Then following this, a seed crop of one or two bushels per acre and then the plant dies.

As a hay crop, Sweet clover compares favorably with Alfalfa, excepting that it is a good deal more woody. It must be cut when first coming into blossom. Let it lie in the swath for 24 to 48 hours, then shock it in small shocks, and leave it entirely alone for a week or 10 days. In that time it will probably be ready to go into the mow. The stock after once getting a taste for it, will eat it greedily. CHAS. B. WING.

Teacher: "Now, James, do you understand the meaning of the word 'extinct'?" James: "Yes'm." Teacher: "Then name one bird that is now extinct." James: "Chipper." Teacher: "Chipper? What kind of bird is that?" James: "My pet pigeon. The cat caught him this morning."—Judge.

A Vicar having advertised for an organist, received the following reply: "Dear Sir, I notice you have a vacancy for an organist and music teacher, either lady or gentleman. Having been both for several years I beg to offer you my services."—Credit Lost.

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Jersey BULL CALF—seven months, out of a splendid daughter of Oxford Lad. Sire, Gedney Farm Dore's Pogis. MARION MOORE, West Troy, New York

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Holstein Bull Calf—Registered; born Nov. 6; dam, 22 lb. heifer; sire, son of Sir Korndyke Manor De Kol and a 31.65 lb. cow. Price, for quick sale, $75. Send for details. CLOVERDALE FARM, Charlotte, N. Y.

THE TOMPKINS CO. BREEDERS' JOURNAL, with sale-list of pure-bred stock, 25cts. per year. Copy free. We have some very good offers in Holstein and Jersey cattle, German Coach Horses, Shetland Ponies, Southdown ewes and Cheshire gilts. A two-year Berkshire boar, registered, $25.00. TOMPKINS CO. BREEDERS' ASSOCIATION, Box B, Trumansburg, N. Y

HIGH GRADE HOLSTEINS
The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holsteins for Sale
50 Cows, just fresh, giving 40 to 50 lbs. per day.
20 Cows, due to calve this month and next.
25 Cows, served to come fresh in August and September.
If you are looking for dairy cows and large producers with good size and young, see these cows before buying elsewhere. WE TUBERCULINE TEST.
Registered and grade bulls always on hand.
JOHN B. WEBSTER
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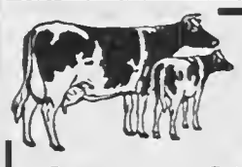
90 HEAD Purebred Holsteins
consisting of 50 Cows, 25 Heifers, 15 Calves and a few choice Bull Calves. Home of Ormsby Korndyke Lad. No. 102469. If you are in the market for Holsteins come to see me or write. My stock will please you. EZRA HOLBERT, Lake, Orange Co., New York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HOLSTEIN CATTLE
Last year a California Holstein made a yearly record of 784.13 pounds of fat from 25,981.8 pounds of milk.
After an interval of two months she began another yearly test which has just come to a close with a record of 868.1 pounds of butter fat from 28,826.4 pounds of milk.
These two successive yearly tests during which 54,800 pounds of milk were made are more evidence that great records are not spasmodic efforts, but represent capacity permanently developed.
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Holstein-Friesian Asso., F. L. Houghton, Sec'y
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A Family Foundation
Consistent line breeding has developed at Meridale Farms four definite families of strong dairy type and exceptional producing ability, as is attested by the authenticated records of 117 Meridale Jerseys who averaged 7894 lbs. milk, 509 lbs. butter each on yearly test.
One of these families is the Saydas, and one of the best Saydas is Sayda's Queen of Ventnor 168033, who averaged 540 lbs. butter a year for ten consecutive years, and produced 11,433 lbs. milk, 809 lbs. butter when eleven years old. The average authenticated record of herself and two daughters is 740 lbs. butter each per year.
To other dairymen who are working for heavy and persistent production we offer a special selection consisting of two granddaughters of Sayada's Queen of Ventnor with a son of her full brother, Sayda's Heir 3rd. They are good individuals, backed by production through every line, and comprise a family foundation which enables their purchaser to profit by our quarter-century of herd-building experience—he begins where we leave off. Pedigrees and particulars gladly furnished on request.
AYER & McKINNEY
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KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

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WILL BE HELD AT
KITTANNING, PA., Wednesday, March 4th, 1914, at 10 A. M.
Rain or shine.
Forty head of the best Imported and American bred registered Percheron and Belgian Stallions and Mares will be offered in this sale. Write to
O. N. WILSON, Prop., Kittanning, Pa.

207 Prizes Won
At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H.
ADIRONDACK FARMS, - Glens Falls, N. Y.

50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
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HEART'S DELIGHT FARM
Percheron and Belgian STALLIONS
Two to three years old; out of imported mares and by imported sires.
Guaranteed to be Sound and Sure Breeders
We will sell these stallions to two or more farmers as company horses.
Prices reasonable.
W. H. MINER, Chazy, N. Y.

FOR SALE—A REGISTERED JENNET—4 years old, in foal to registered Jack. 5 months old Jennet. A fine iron-gray Jack 8 yrs. old, sound and O. K. in every particular. ROBT. H. WALTER, Mgr., Kennett Sq., Pa.

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COLLIE PUPS—Natural drivers. Also English Bloodhonnds, Nelson's, Grove City, Pa.

A MAN'S DOG—English Bull Terrier Pups. Four mos. old. Imported, pedigreed prize-winning stock. Wonderfully intelligent. Fine watchdogs but extremely gentle. MIDFIELD KENNELS, Bound Brook, N. J.

Royally bred AIREDALES
whelped November 26, 1913. Price, $15. Send for pedigree.
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Purebred Holsteins for any Pocketbook—Cows, $200-$1,000, according to blood. 2 bull calves 3 mo., $50 and $50. Heifers sold out. Mohegan Farm, Hudson Valley Holstein Headquarters, Chas. H. Baker, Mohegan Lake, Peekskill, N. Y. 1 hr. from G.C.S.N.Y.C.

REGISTERED Guernsey Bull—fourteen months old. Ledyard Boy and Glenwood blood with advanced Registry ancestors. Price, $75. OGDEN FARMS, Kinderhook, N. Y.

INDIAN BRIDGE FARM
GUERNSEYS
BULL CALF FOR SALE
Born Dec. 11, 1913
Sire, Jethro Barras 21309
Dam, La Rose Pre-eminent of Linda Vista 27075
A fine, thrifty animal, with a breeding that fits him for any high-class herd.
WAYLAND, MASS.
Edmund H. Sears, Owner Walter Jauncey, Jr., Sp.

GUERNSEY FACTS
THE use of a Guernsey Sire not only increases the value of every animal in your herd, but produces the kind of stock that are in demand.
WRITE for literature
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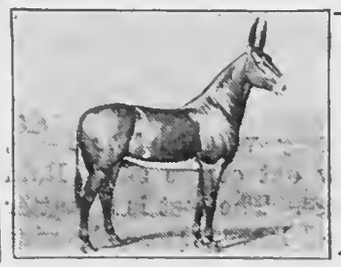
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My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400 lb. Stallions to be found in the United States.
The Cedar Rapids Jack Farm is the Jack Metropolis of the World. All nations buy Jacks here. The majority of the best mules in the United States are the results of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.
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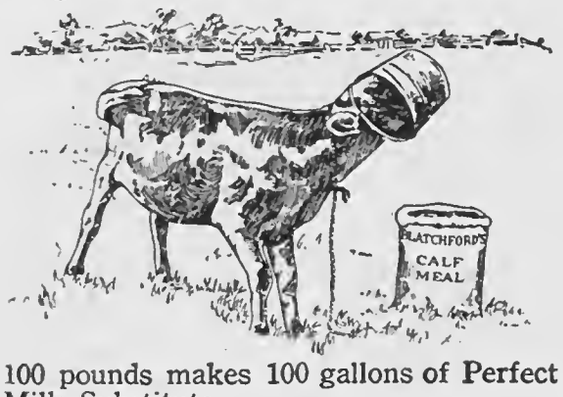

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Department "M"
The Rural New-Yorker
333 West 30th St.
New York City.

THE SQUARE SILO.

Northeastern Ohio is thickly dotted with square silos. In this section 90 to the 100 are square, and of all the silos erected here the past season all but one are the girthed, square silos, and some of them are in connection with very costly barns. My own silo, built in 1886, is a square one, built after a design of my own; for, so far as I know, there was no other to pattern after, and it is still in existence, ready to be counted in next year, and that too without a dollar for repairing. They are very durable, never blow over or collapse, and are more cheaply built than the market silos. Another consideration is that the farmer usually supplies the rough and heavy lumber from his own wood lot, and purchases only the inside lining of the silo made of strong timber like oak or beech; it never gives way, the manholes are easily fitted with doors, and if made double, as many are, space is economized and additional strength imparted, and it cannot be shown that any other form or pattern of silo keeps its contents in better condition than does the square one.

In building the square silo, three principal things are needed: timbers, 2x8 or 10 inches by 14 feet long for the girths, which need to be enough in number for a girth each 16 inches up to the seventh girth, when the spaces can be widened a little, each succeeding girth, until the top ones can be three feet apart. No framing is needed, just lapped corners, well fastened with 20's. The ends are lapped as usual and spiked, and the long end of each girth becomes the other corner. Across this corner is spiked a short piece to each girth and it not only strengthens the corners, but makes a cut-off in ceiling inside, to avoid acute angles, into which the silage does not pack well. This corner clip is sometimes made a little convex, which facilitates making a better curve with the lining lumber.

The foundation should be made substantial, cement floor, with broken stone, and should be about 16 feet square for a 12x12 foot silo. The sills of the silo would best be two layers of these girths spiked together and after placing on the foundation, should be well cemented in place. Then cut 12 pieces of 2x8 inch stuff, 14 inches in length, and nail them to this sill at equal distances apart; on them lay the first girth, and spike down through it, to these short pieces, and so on up to the top, 30 feet being none too high, making rather wider spaces between the girths as the half-way height is passed.

Line up the inside walls of the silo with the best Georgia pitch pine flooring, free of sap. Get the three-inch widths. Lay it as well as you would a house floor, draw the grooves very close, and go on round until within 18 inches of where you begin. Cut in pieces, and nail between the girths for the door jambs, setting them so as to have a bearing all round for the door to rest against. Make doors of flooring that will fit the apertures, and reach from the center of one girth, to the one above, opening into the silo, of course.

The inch thickness of flooring is all you need for the inside. The silo is then covered on the outside with any sort of siding, put on up and down, and a few cracks should be left, so air can get into and dry out these spaces between the girths. The pitch pine lining will not take up moisture, and as fast as the silage is fed out, dries off quickly. The lining boards of my old silo, built 27 years ago, are sound yet and should a board go wrong, it can be quickly patched by putting a new one in its place. A new idea suggested is that these inside boards be matched but not surfaced, and after being put in place are "whitewashed" twice over with best Portland cement and very fine clean sand, half and half, which makes almost a "granite ware" surface, and can be cheaply renewed at any time. Some instead of boarding up the outside of the silo, put on liberal coats of this same paint filling all joints of the frame as well as the boarding.

The roof can be as one may elect. A roof is at best only valuable for looks, and to keep snow out of the silo. Rain never injures silage. The cost is a matter of local prices, and labor. Here the pine flooring would cost about $30, and all told it would probably not be much out of the way to place the cost of this 85-ton silo at about $115; much less if the farmer furnished the rough lumber at actual labor cost. JOHN GOULD.

SHIPPING CREAM.

It is often stated that hill farmers cannot compete with the farmers on rich land keeping dairy cows. The cost of the cow's keep is supposed to be greater where feed is usually less plentiful, and the distance from market makes the freight charges so high that they eat up much of the profit. Without doubt if whole milk were sold and cows were kept on dry feed, the hill farmer could not compete with more favored competitors. However, since the advent of the cream separator and the coming of the silo into general use, dairying is being taken up more and more by farmers situated far from market, and who up until this time could not profitably keep more than three or four cows.

The separator enables the dairyman to keep so many more cows and handle so much more milk, and the cream as the product for sale is in such shape that the freight charges are small compared to the value of the product. Cream can be carried a distance of 85 miles and reach its destination inside of five hours at a charge of only 12 cents per five-gallon can. Selling to a creamery for cash is much better than selling butter to the country stores for trade, and more and more farmers are increasing their number of cows, specializing in dairying, and consequently receiving larger cream checks as they improve their feeding and breeding operations. For the cream cow must be looked after both as to the kind of calves she raises and the amount and quality of feed she receives.

While some dairymen are losing sight of the fact that they must get for their cream and skim-milk combined, a price at least as good as, if not better, than that obtained by dairymen close to big cities, that is from 3½ to four cents per quart, still some are figuring very closely, and actually realize more than 16 cents per gallon for their entire product. A cow to be a good "cream shipper" must test at least 5% and of course high-grade Jerseys or Guernseys are the best for this purpose. With a test of 5% in a gallon of eight pounds of milk there is four tenths of a pound of butterfat, and at an average price of 30 cents per pound is worth 12 cents. Then if the skim-milk is worth four cents per gallon the amount realized out of the gallon of milk is 16 cents. As the cost of marketing the cream is small, much less than would be the cost of marketing the whole milk, the work necessary to feed and care for young stock properly can be charged as marketing expenses, and the full value of the milk as represented in the calves, hogs or chickens can be credited with the amount realized for the butterfat as the selling price of the whole milk. Counting feeds other than skim-milk that the young stock receives at cost, the skim-milk realizes when fed to heifer calves six and even eight cents per gallon. Brood sows as well as stock hogs show a net profit that, being credited to the skim-milk, gives it a selling price of from four to six cents per gallon. With proper management, and also with the keeping of purebred stock, skim-milk can be made very valuable as a feed, and while the side lines carried on in connection with the cows are in a way independent of the dairy, the cow and her milk are important factors in the work, and should be given credit for their part in making the various side lines a success.

An important part of the work of the cream shipper is to provide enough feed to keep up the full milk flow of the cows throughout the entire year. And here is where the silo comes in for due consideration. It is plain to anyone that silos are more necessary on hill farms lacking in fertility than they are in, say, the corn belt, where much of the corn is never cut, but the stalks are practically allowed to go to waste. And the higher up among the hills one goes and the scarcer rough feed becomes the more necessary it is for the farmer to have a silo. It has been proved over and over again that a few acres can be improved in but a few years, until they will fill a good-sized silo with enough silage corn to feed quite a number of cows; and as more cows are added to a herd more manure is produced for use on pasture and crop land, thus adding to the value of farms that would otherwise remain infertile and unproductive. At the same time that fertility is being added to the soil, a price is being obtained for the whole milk the cow produces, provided the right breed is kept and the by-products properly handled, that is as good if not better than that obtained by dairymen selling whole milk direct to the middleman. H. B. COBB.

Jackson Co., O.

AILING ANIMALS.

Pining Cow.

I have a cow which came in last month; since then she has not done very well, gives very little milk, looks unhappy and does not chew her cud. She looks in good condition. What can be done for her? B. P. L.

Ohio.

Have the cow tested with tuberculin, as tuberculosis is to be suspected, and we should not feel justified in prescribing treatment before the test has been applied. A. S. A.

Tumor.

I bought a Holstein bull calf several weeks ago. It is now about six weeks old, and has a lump on its left jaw that looks just like the pictures I sometimes see in advertisements of lump jaw remedies. It is the size of a guinea egg. Is it possible to get rid of this lump in any way? F. C. L.

Virginia.

Have the lump cut out by a surgeon and then cauterize the wound. This is the right treatment and if done in time may altogether prevent the threatening case of lumpy jaw. A. S. A.

Injured Ankle.

A horse hurt his front ankle, supposed to have stepped on a stone. Now there is a big bunch over his front hoof. What would you advise? J. P. R.

New York.

If you mean that there is a large, raw growth or sore it should be treated by covering with a mixture of equal parts of powdered alum, tannic acid and boric acid, cotton batting and bandages. Put the bandages on so as to cause pressure upon the sore. Renew the dressing once daily. A. S. A.

Depraved Appetite.

I have a cow that eats her manure sometimes; her milk is thin, not fit for use. Could you tell me the cause, and a remedy for it? She does not do so in the Summer, but in Winter we keep her in a very small place. L. C.

Delaware.

Keeping the cow in a very small place is wrong. She needs abundant exercise every day and an abundance of mixed feeds, including roots or silage, clover or Alfalfa hay, bran, cornmeal and cottonseed meal. Allow free access to rock salt. She will not be likely to eat manure if so fed and managed, but it would be well, so far as possible, to keep her from places where manure may be eaten. A. S. A.

Indigestion.

I bought three pigs a short time ago, were about eight weeks old when I got them. They had not been weaned and when I brought them home I began feeding them slop made of bran, cornmeal and shorts. Two of them are growing but the third does not care for anything but corn. When I feed them this pig just sticks its nose in the slop and runs from one end of the trough to the other end and squeals. These pigs are about 12 weeks old now. Can you tell me what is wrong with this pig? C. H. W.

Virginia.

Physic the pig with castor oil shaken up in milk and afterwards feed it on new milk or sweet skim-milk thickened with middlings, and a little cornmeal. Allow the pigs plenty of exercise every day. A. S. A.

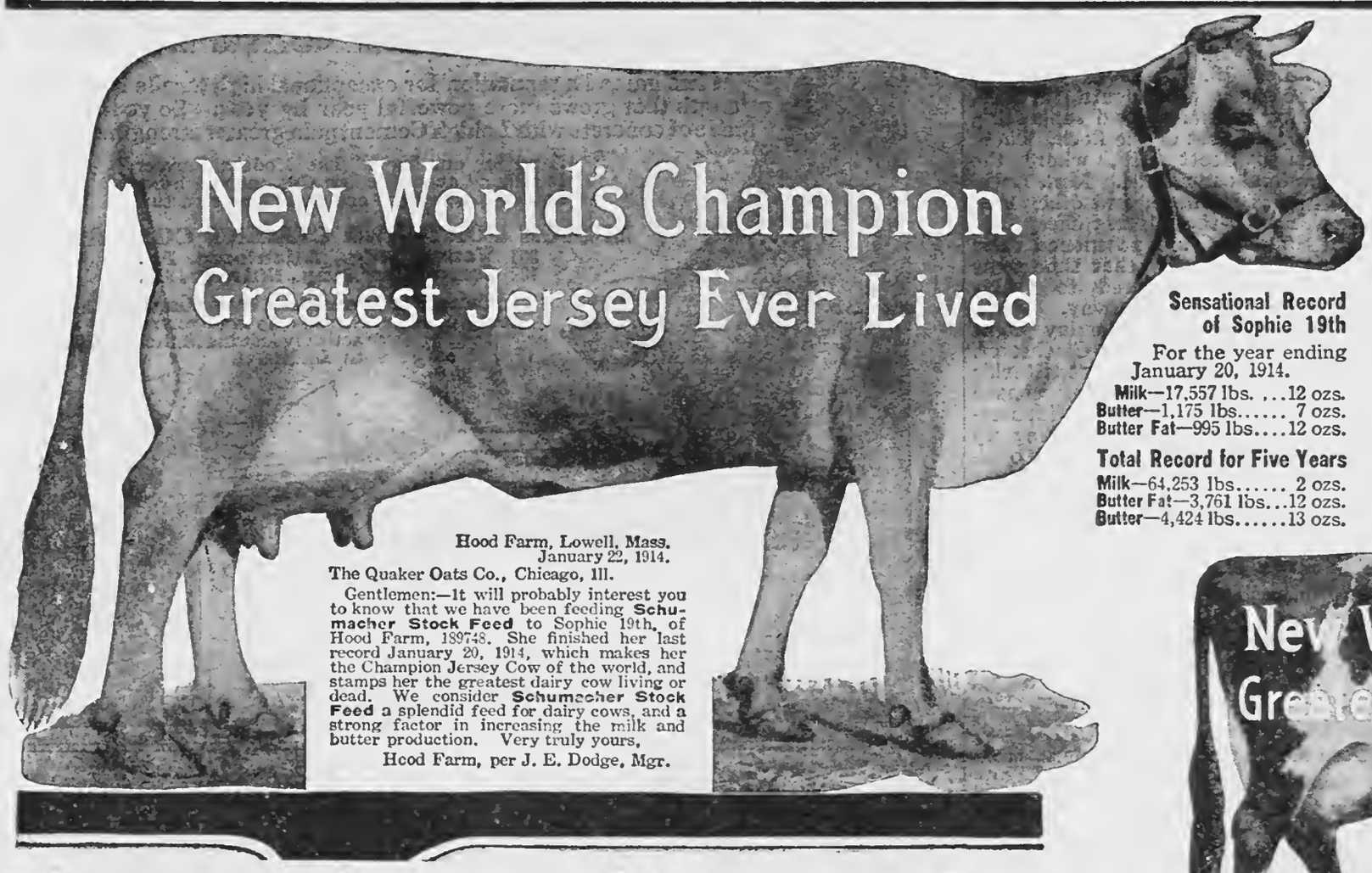
Chorea.

Would you please tell me how to treat a mare that has started with string-halt? A. Z.

Maryland.

The disease is chorea (St. Vitus' dance) rather than true string-halt, and it is incurable. It seems to be peculiar to nervous animals and the tendency to it is hereditary. String-halt, in which there is persistent jerking up of one or both hind legs during walking or trotting, most affects adult horses and is not associated with the nervousness of chorea. It may be brought on by accident, and often is curable by the operation known as peroneal tenotomy, for which an expert, graduate veterinarian has to be employed. The symptoms of chorea are best seen when an affected animal is made to stand over in the stall, or back out of the stall. At such times the leg is spasmodically jerked up and the tail is elevated and quivers and quivering also is seen in the muscles of the flanks. A. S. A.

Stop! Look! Read!



Hood Farm, Lowell, Mass.
January 22, 1914.

The Quaker Oats Co., Chicago, Ill.

Gentlemen:—It will probably interest you to know that we have been feeding **Schumacher Stock Feed** to Sophie 19th, of Hood Farm, 189748. She finished her last record January 20, 1914, which makes her the Champion Jersey Cow of the world, and stamps her the greatest dairy cow living or dead. We consider **Schumacher Stock Feed** a splendid feed for dairy cows, and a strong factor in increasing the milk and butter production. Very truly yours,

Hood Farm, per J. E. Dodge, Mgr.

Sensational Record of Sophie 19th

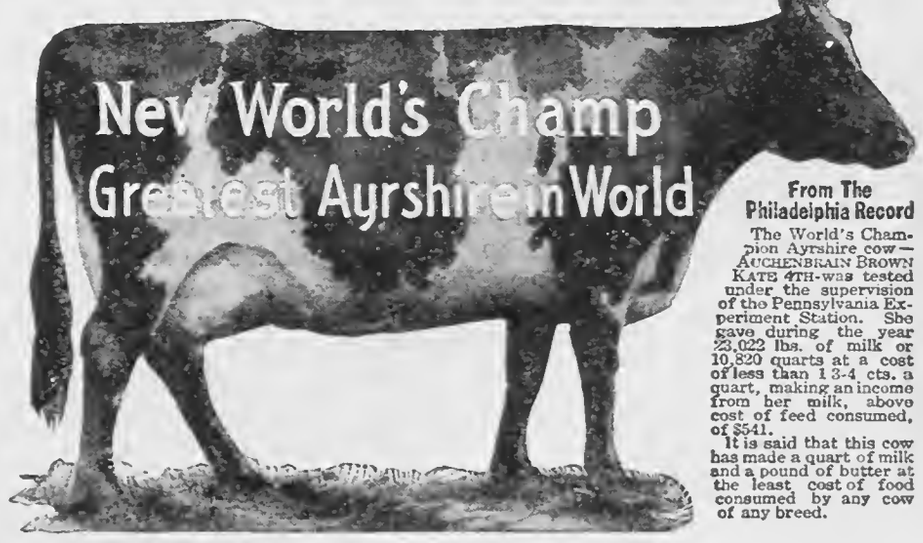
For the year ending January 20, 1914.

Milk—17,557 lbs. ...12 ozs.
Butter—1,175 lbs..... 7 ozs.
Butter Fat—995 lbs....12 ozs.

Total Record for Five Years

Milk—64,253 lbs..... 2 ozs.
Butter Fat—3,761 lbs...12 ozs.
Butter—4,424 lbs.....13 ozs.

FEED PROVES Greater Than BREED



From The Philadelphia Record

The World's Champion Ayrshire cow—AUCHENBRAIN BROWN KATE 4TH—was tested under the supervision of the Pennsylvania Experiment Station. She gave during the year 23,022 lbs. of milk or 10,820 quarts at a cost of less than 1 3-4 cts. a quart, making an income from her milk, above cost of feed consumed, of $541.

It is said that this cow has made a quart of milk and a pound of butter at the least cost of food consumed by any cow of any breed.

World's Records Smashed Again!

Many Breeds—BUT—All Fed One Feed!

Again and again, during the past year, the world has been astonished at the marvelous productions of milk and butter from single cows. Think of getting over 8¾ **tons** of milk and over ½ **ton** of butter from one cow **in one year.**

First one breed, then another, and still another have smashed all previous world's records, until in amazement we ask, "Is it possible," and "how can it be done?"

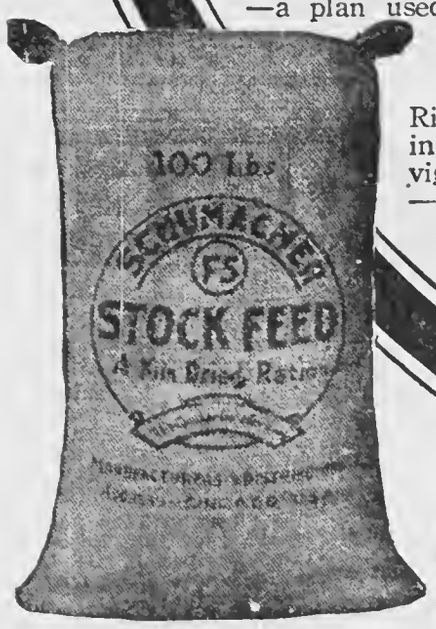
The answer no longer is "getting the right breed." Instead, "it's getting **the right feed**" and the right individual. Feed has **proved** greater than breed! This is **conclusively proved** by the fact, that regardless of the breed of these **"Queens of the Dairy World"**—be it Jersey, Holstein, or Ayrshire, which have "beaten" all records to date—they were all fed the same feed—the world famous, **record-making, record-breaking—**

Schumacher Feed

Therefore, we proudly—justly—proclaim that **"Feed—SCHUMACHER FEED—proves greater than breed."** Read the wonderful world's records just achieved by Sophie 19th of the Hood Jersey Farm, who finished her yearly test Jan. 20, 1914. Then read what Auchenbrain Brown Kate 4th, Queen of the Ayrshires accomplished—the cow which has the distinction of producing **more milk and butter at least cost of any cow in the world.** Then read the record of the first cow in the world to produce 40 pounds of butter in a week—Valdessa Scott 2nd. Then read the record of the second 40 lb. cow and note that all these remarkable, sensational performances were made with **SCHUMACHER FEED** as a base of their rations. Read their owners' letters. It needs no further evidence to convince anyone that **SCHUMACHER FEED** is the "best in the world." If it is "best" for the "best cows in the world" it certainly is **best** for your cows.

Try This Record-Breaking Feeding Plan

—a plan used by the World's Record makers, and you will be surprised at the results: Mix three parts **SCHUMACHER** with one part of any good high protein concentrate you are now feeding, such as Gluten, Cottonseed Meal, Distillers' Grains, Oil Meal, Malt Sprouts or Blue Ribbon Dairy Feed. Your cows will not only show a **splendid increase** in flow but in due time will show a **splendid improvement** in health, vigor and appearance. **SCHUMACHER** furnishes that stamina—vitality—ability—to stand up under heavy milk production, so necessary in profit-producing dairy cows.



FREE FEEDING FACTS If interested, write us for "Feeding Facts" and get some information worth hundreds of dollars to any dairyman or farmer.

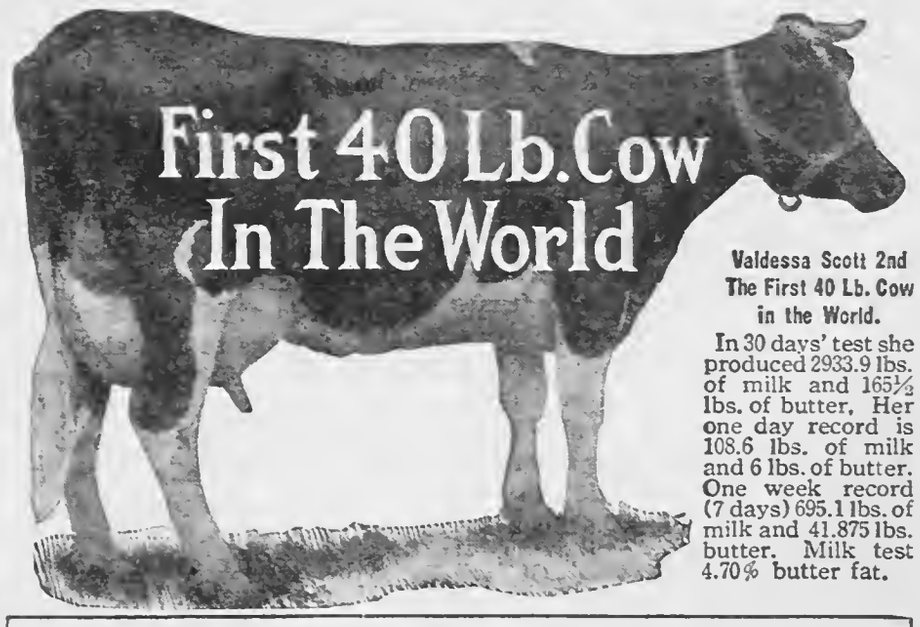
If your dealer does not sell SCHUMACHER write us.

Narberth, Pa., December 6, 1913

The Quaker Oats Company, Chicago, Ill.,

Gentlemen;---We have been feeding your **Schumacher Stock Feed** to our Ayrshire and Jersey cows which are on test for Official Records, and like it mixed with other grains. Our World's Champion Ayrshire Cow, AUCHENBRAIN BROWN KATE 4TH, who has just finished her year's work with a record of 23,022 lbs. milk and 1080 lbs. of butter, was fed **Schumacher Stock Feed** as part of her ration. We find that **Schumacher Stock Feed** is one of the best feeds we have ever used in our mixtures. Yours very truly,

(Signed) E. S. Deubler, Superintendent, PENSHURST FARM.



Valdessa Scott 2nd
The First 40 Lb. Cow in the World.

In 30 days' test she produced 2933.9 lbs. of milk and 165½ lbs. of butter. Her one day record is 108.6 lbs. of milk and 6 lbs. of butter. One week record (7 days) 695.1 lbs. of milk and 41.875 lbs. butter. Milk test 4.70% butter fat.

Finderne Stock Farm, Finderne, N. J.

The Quaker Oats Co., Chicago, Ill.

Gentlemen:—During the past two or three years we have been feeding your **Schumacher Feed** and have secured splendid results. **Schumacher** was incorporated in the ration of Valdessa Scott 2nd during her wonderful result producing test. Used as a base with a good protein concentrate it is a winner.

Yours truly, B. Meyer, Owner.

JOHANNA DEKOL VAN BEERS

The Second 40-lb. Cow—and her smashing 60, 90 and 100 day tests:

60 days, milk 5,552.00 lbs., butter, 290.00 lbs.; 90 days, milk 8,147.90 lbs., butter 418.13 lbs.; 100 days, milk 8,987.40 lbs., butter 460.19 lbs.; 120 days, milk 10,490.00 lbs., butter 540.97 lbs.; **7 day Record**, milk 663.00 lbs., butter 40.32 lbs.

THE QUAKER OATS COMPANY,

Dept. 12 CHICAGO, U. S. A.

[25]

Brookline Farm, Dec. 8, 1913.

The Quaker Oats Co. Chicago, Ill.

Regarding **Schumacher Stock Feed,** will say as a feed for dairy cows or young cattle, I know of no feed equal to **Schumacher.** It certainly contains all the ingredients necessary to put the finish and gloss on an animal and more than that, the results obtained through the pail makes it the cheapest feed that I have ever fed. Johanna, in fact all my cows are fed every day a ration of **Schumacher Feed.** To any one feeding cattle for show, I would especially recommend **Schumacher.**

Yours truly, T. E. Getzelman, Prop., Hampshire, Ill.

HOGS ON A SMALL FARM.

I will give you my experience keeping hogs on a small farm in a small way for the last two years. I would certainly keep more hogs on a large farm, but perhaps a small lot well cared for might make more profit than larger lots. On April 25, 1912, I bought a sow with eight pigs about three weeks old for $28. The sow and pigs were thin, as the owner was overstocked, and had to buy his feed at a high price. This was the reason he sold them. I kept this sow and pigs mostly on grass and slop during the Spring and Summer. I fed some corn but not much. I had to buy it, and it was high. It cost me $1 per 100 pounds ear corn. It paid to feed a little corn, as the pigs thrived well. From about August on we fed some early green sweet-corn, and later, when it got fit, field corn. I fattened the whole lot, as the old sow would not breed again. In the latter part of December we butchered the old sow and three of the pigs. We estimated their weight at between 1,000 to 1,100 pounds. On January 11, 1913, I sold the remaining five head for $86.14. Now if I figure that these last five paid the first cost of $28 and the corn and feed the bunch ate, we would have at least $75 worth of hogs for our meat. I do not believe that this lot ate $58.14 worth of feed, and if they did it was a good investment.

In January 17, 1913, we bought five pigs for $17. On April 11 we bought five more (shotes) for $35. These two lots made a pretty even bunch of about 80 pounds weight. We fed them along gradually corn on grass and slop twice a day. We never fed very heavily at any time. On August 11 we sold eight of them for $136.80. The other two we bred. If we figure these two at the same price the others brought the bunch would have yielded $171. Figuring the corn they ate at 70 cents per bushel (which was more than it was worth at the time, as we sold some corn the latter part of May at 56 cents per bushel) and the other feed they ate at market prices, they would have netted us $65 for our work; if we had sold the two sows at farrowing time at about the same price, $80, which my brother paid for two sows of about the same weight and same number of pigs, our income would have been $45 more. As it is we have the two sows bred again and 13 nice pigs and one runt. One pig of the lot we had to kill on account of an incurable ailmen.

These pigs we are now giving good care to turn off next Summer. They get corn twice a day and slop three times a day of a mixture of ear corn and oats ground together with tankage. Each mess is scalded with hot water. It is made fresh every meal. I am also boiling some small potatoes and overgrown turnips together, and adding it to the slop. Whether or not there is much food value in the potatoes and turnips, the pigs certainly relish them. When these pigs go on grass we shall only give them slop twice a day.

So far I have said nothing about the value of the grass eaten. Practically if not used by the hogs it would be valueless. The hog lot consists of about an acre or an acre and a half; one half of it is a pond, the remainder low land, unfit for cultivation. In this way we make use of the waste places. On August 16 we also bought a sow and three pigs for our pork. The sow has already been butchered and the three shotes will be butchered later. S. H.

Huron Co., Ohio.

Shot Guns and Thieves and Sheep.

There seems to be a difference of opinion on the subject of the treatment of thieves. I have a stray suspicion the Hope Farm man does not love or admire a hen as much as he does some things. Suppose now he should see a thief lugging off a barrel of his best apples, say the very best barrel; I mistrust he would feel like defending his property, perhaps not killing the thief, but if he refused to drop the apples a few shot might bring him to his senses. You see some of us do not keep dogs. Our experience with them has not been pleasant; in our own case, some years ago we had a nice flock of 28 sheep and lambs, and when my husband went out one morning, he saw two dogs making off over the fields, and the sheep scattered over the farm. One had gone a mile and a half to a neighbors. More than half were badly bitten; three killed outright, several so badly hurt they had to be killed to put them out of their misery. Trying to save some of the wounded ones who had to be treated for weeks was not an agreeable task, as I know from experience. Now note the enclosed clipping from the Connecticut Courant:

Bozrah, Dec. 15.—Elijah Lathrop, who has a farm near Garner Lake, is realizing how difficult it is to keep sheep. In the early Summer he had a fine flock, numbering about 70. Dogs got into the flock and killed 19. A week ago last Saturday the flock was again invaded, the dogs killing a number and separating about 17 from the rest of the flock. These they chased to Scott Hill, where the frightened animals remained. Mrs. Lathrop's son, James Lathrop, and other men were searching for the missing sheep, but because of Sunday's rain postponed their search until Monday. By that time some of the sheep had wandered to Cedar Swamp, a mile and a half away. When the search was resumed Monday eight were found at Parkham, near Colchester, one on Chestnut Hill, one at Stark's farm, Lebanon; two were being chased by two foxhounds near Oscar Winchester's in Bozrah, and five were missing up to Friday night. Of Mr. Lathrop's original flock only about 17 are left and not in good condition, as some of these rounded up were so badly bitten as to be useless.

I think some of us will depend upon a shotgun instead of dogs to defend our property. L. M.

The Value of a Dog.

Recently in Sauk County, Wisconsin, six big wagon-loads of two kinds of grain were stolen from five farmers, from one of them on two different occasions. I use this text to write a little dog story, because I agree with the editor in s estimate of the value of a well-bred and trained Airedale. No one would have shed any tears if either of the farmers had filled one or more of the thieves with buck-shot, but it is easier to keep a good dog than to get out of a shooting scrape, no matter how well the victim deserves all he gets.

Upon inquiry, H. W. Savage, one of the men who lost the grain, and whose farm was visited at the dead of night on two different occasions within 13 days, says that he kept no dogs, but is keeping them now. Only one of the other four grain-losers kept dogs, and he kept them too well by allowing them to stay in the house at night, so that all of these men who lost three loads of corn and as much rye were without canine sentinels day and night. The thief or thieves hooked up their team within 12 rods of Mr. Savage's barn and made, Mr. Savage thinks, about 40 trips between the corn crib and the wagon without creating an alarm. Does anyone imagine that such a thing could have been accomplished while there was a good Airedale about the place? J. L. GRAFF.

"WHY are you so angry with the doctor?" asked Mr. White of his wife. "Because," she replied, "when I told him I had a terribly tired feeling he told me to show my tongue."—Lippincott's.

THE Irishman in France had been challenged to a duel. "Sure," he cried, "we'll foight wid shillalahs." "That won't do," said his second. "As the challenged party, you have the right to choose the arms, but chivalry demands that you should decide upon a weapon with which Frenchmen are familiar." "Is that so, indade?" returned the generous Irishman. "Then we'll foight it out wid guillotines."—The Argonaut.

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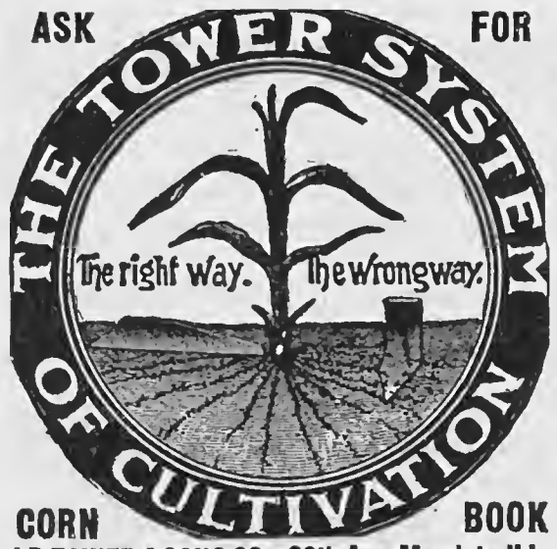

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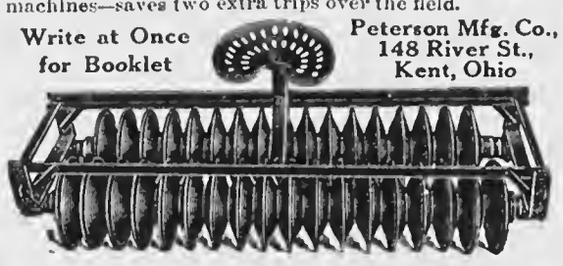

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Winter Dairying Pays.

"That check makes me feel cheap," a farmer remarked a few days ago, as he received his milk check. He passed it over to me. It didn't seem to feel as good as a check might in one's hands. I observed the amount, only $30. This farmer was receiving $1.70 for his December milk, had over 20 cows, and they had fizzled out when he ought to have been getting his good checks. This kind of business doesn't pay. Get a Winter dairy. It will pay in a great many sections. In this farmer's location, Summer milk this past season brought $1.05 net, while the Winter prices for five months have been established at $1.70 net. The quickest way to get the dairy out of the boarder class is to make them serve when milk brings the best price, and the cost of labor is lower than in any other season.

Had these cows been giving only 25 pounds the day each, the returns would have reached over $250 the month. At Summer prices the returns would have been about $157 the month. Now, good sensible business farmers declare that a cow which will yield only 3,000 pounds milk during the season following Spring freshening, will do 4,000 pounds by freshening in the Fall. Conditions must be right for her to do this. I know several dairymen who declare milk can be produced more economically in Winter than in Summer. Winter milk demands silage and concentrates, and a silo will pay whether you feed beef cattle or sheep or even horses or hogs. In the Winter the cow is not bothered by fighting flies, and in a comfortable well-ventilated barn she is more comfortable than rummaging about a dried-up pasture. When pressure is highest on the farm the Winter dairy lightens the Summer work. The farmer will have more time to give attention to his cows, more carefully feed, weigh and test the cows, and get on the way to better stock. I know a farm with large up-to-date bank barn, beautiful large house, good stock, equipment and fences, and these buildings have been established, the farm paid for by Winter dairying and the owner is still young. The Winter dairy pays. W. J.

Fresh Air Will Cut Down Feed Bills.

Ventilate the barn. That advice is easy to give, but mighty few give the matter consideration it deserves. I know we have not, and we are no better or worse than many others. Did you ever go in a barn and find the air hot and suffocating? All the oxygen is burned out, and the foul air is breathed over and over again. Did you ever notice how weak the cows are when they leave the barn? One believes more cows have been put on the lift through poor ventilation than through a one-sided ration. On the other hand there are barns that have too liberal ventilation. But in buying a cow a good dairyman told me he would rather buy from a barn with doors from their hinges, and boards from the sides than buy from an unventilated and unlighted barn.

Ventilation is more important than feed. Give the calves the benefit of good fresh air and they will thrive better. Regardless of your views of the tuberculosis proposition, take out an insurance policy against the danger by figuring out an outlet for the warm air above the cattle and an inlet, which will break the draft. If you have windows in the barn, the plan is to tip the window outward, leaving an opening of a few inches at the top. The V-shaped opening on the sides of the window should be closed by nailing boards at the sides to prevent inward draft, while warm air from the inside will pass up and out over the window. This advice is simple, then give the stock more air, and it will Winter better, and will produce enough more to pay for the installation of a good ventilating system next year. W. J.

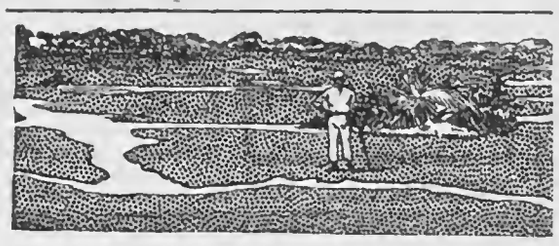
A Homemade Fireless Cooker.

The advantages and the profit of cooking feed for swine, calves and poultry are well-known, and it would be practiced much more extensively if it were not for the extra labor and expense involved. Both of these items can be very largely done away with by the use of a homemade fireless cooker, which can be easily made. It is in fact simply an adaptation of the "straw-stove" so long used in Northern Europe.

Procure a large packing box, three or four feet square and a galvanized iron garbage pail, holding from five to 20 gallons, as may be needed for the amount to be cooked. If necessary a box can be made from odd pieces of board. It should be large enough so that from eight to 12 inches of straw can be put beneath and around the can. Set the can in the box and pack soft straw or hay on all sides solidly; then fill two bags with the same to put over the can after it is filled. If roots, such as beets, carrots, turnips or potatoes are to be cooked they should be cut into small pieces. This can be easily done by putting them in a box and chopping them down with a spade or other convenient implement. Then back into the can or a kettle, and cover with hot water and bring to a boil either on a stove or in a feed cooker. Put into the fireless cooker at once, cover with the bags and let stand 12 to 24 hours. This will cook them thoroughly without any further use of fuel or any attention. Enough can be cooked at one time to last several days if the cooker is large enough.

For poultry, especially ducks and chickens, it is very desirable to cook the grain. It is easily done in this cooker, and should be practiced by all careful feeders. Oats, barley, wheat or corn can be used. Use one part of grain and five parts of water, bring to a boil on the stove and then put in the fireless for 12 to 24 hours. The grain will absorb the water and give a large bulk of most nourishing feed. For ducks feed the roots chopped fine and the grain in a large pan of water, and let them fish them out in their natural way of getting their food. This fireless method of cooking any food for stock or poultry is well worth a trial. S. J.

MISTRESS: "Bridget, the pie is awful. And you told me you could bake as good pies as any cook in Boston." Bridget: "So I can, mum. But all the ladies I ever worked for mixed the pies themselves before I baked 'em, mum."—Boston Transcript.



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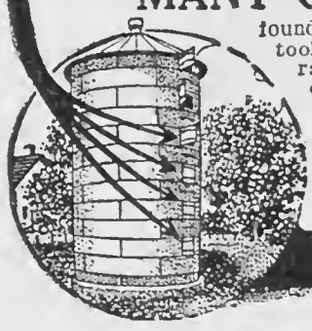

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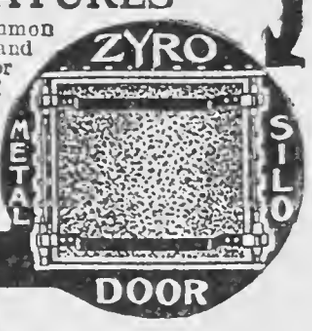

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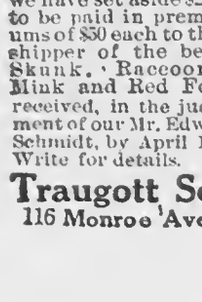

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates

Ration for Cows.

Give me a balaneed ration for my cows, am making butter; cows mostly Jerseys. How much to feed each cow? I have good eorn silage cut when about ready to shock, ear eorn and oats ground together; shredded dry fodder, elover and Timothy hay; can buy oil meal at $34; cotton-seed meal at $30; Alfalfa meal, $32. A. R.

Ohio.

If you have plenty of silage I would reeommend feeding 30 to 35 pounds per cow daily. If the supply is limited it will be well to decrease the amount, so as to make the silage last till Spring. The same rules will apply to the shredded fodder and hay. Dry fodder should be fed according to the eow's appetite rather than by weight, all she will eat without waste. If you mix equal parts by weight of your corn and oat feed and eottonseed meal you will have a very good mixture for milk produetion. A cow giving 20 pounds of milk daily should have about six pounds of this feed, and more or less according to the amount of milk. I think the best way to feed grain is scattered over the silage. If one has some rather unpalatable roughage, as straw, over-ripe hay, the eows will eat it mueh more readily if the silage is put on the hay, or straw, and the grain on the silage. I suppose this is on the plan of peaches with bread and butter. At any rate, the cows like it better that way. C. L. M.

Bean Meal for Cattle.

Will you give me formula for mixing the common bean ground to meal with corn, bran, oats or rye, or any part of this that would make up something like a balaneed ration for young cattle, also for mileh cows, and the best way of preparing for hogs? I have about 50 bushels table beans that are hardly fit for food, weevily old crop, that I wish to feed to my stoek. D. B. C.

Virginia.

Beans are very rich in protein, besides containing a fair amount of carbohydrates. However, they are not partieularly relished by stock, except sheep. If ground and mixed with other grain, however, they will readily be eaten. If the bean meal comprises about one-third of the ration with any of the grains you mention the proportion will be about right. For milch cows equal parts of bean meal, corn or rye meal and bran will be good, and this same mixture will do very well for young cattle. For pigs equal parts of beans, corn and rye, ground together and made into a slop will give good results. C. L. M.

Dairy Ration.

Would you give balaneed ration for mileh eows? I have Timothy hay and shredded fodder, have all mill feed to buy. I have an opportunity to buy 1½ tons rye flour at $1.40 a hundred. Would it pay to buy it and mix with other feed? Other feeds are middlings $1.50, oil meal $2, suerene $1.40, bran $1.30, mixed feed $1.70 and $1.60 per hundred. The rye flour is treated with palum (?) oil at the tin mill. Is this harmful? W. H. S.

West Virginia.

I would advise you not to touch the rye flour for the purpose of eow feed, as the ehanees are that you would not get satisfaetory results from its use. I have never used "palum" (palm?) oil so can not advise in regard to it. I would mueh prefer to use the mixed feed or you could make a home mixture of two parts eornmeal, two parts eottenseed meal, and four parts dried brewers' or distillers' grains. Your cows should also have some succulenee, such as mangels, dried beet pulp or silage. If you could get some Alfalfa or clover hay to substitute for the Timothy hay you are feeding you would get much better results. C. S. G.

Boiled Beans for Cows.

On page 118 M. C. K. asks about feeding beans to cows. I have had considerable experience in past years, feeding beans to dairy cows. I began feeding ground beans, but found that only a very limited quantity could be fed without injuriously overloading the bowels. I then experimented with boiled beans. I found boiled beans perfeetly safe to use in any quantity, and the best milk produeer I ever fed. When cooking the beans I used a boiler that would hold 50 gallons or more. I put a perforated plate in bottom of boiler to hold beans from direct contaet with bottom of boiler, as they are likely to stiek to bottom and burn. I cooked enough at one time to last several days, and if care is taken when using to remove beans only from surface each time and not dig down so as to allow air to get to those below they will not sour readily, and a bateh can be made to last several days. I found most practieal way to eook as follows: Put the quantity for a bateh into boiler (I used a round-bottom, cast iron kettle) and put in water, about what I thought the beans would absorb. Make a light fire, just enough to warm the water and let the beans soak two or more hours, then increase the fire to cook slowly several hours, watching the kettle and adding water if needed to keep from getting too dry. When done well the beans should not be stewed to pieces, nor have mueh water unabsorbed. About in same condition you would want them served on table for yourself. Salt may be used to season, but do not put it into kettle until beans are nearly eooked, as it makes beans harder to eook. I have used many hundred bushels of beans, damaged beans, bean piekings, etc., and when I could get a fairly good artiele, I considered it eeonomieal. I consider cooked beans the safest grain ration that can be fed eows, and the best for milk produetion. They may be fed in almost unlimited quantity if well cooked, without injurious effects. MONROE MORSE.

Massaehusetts.

A Horse Ration

I would like to know what to feed a 15-year-old horse. He travels about 10 miles every day half up hill and half down, also has to work on farm, though not often. I have wheat bran, oats, whole corn, cornmeal, gluten and oil meal on hand. W. S., JR.

New York.

For a young horse doing rather light work I would reeommend two parts oats and one part whole eorn. For an oldish horse ground feed is generally preferable, and in your ease probably a mixture of four parts ground oats, two parts cornmeal and one part oil meal would be about the proper thing. One quart of grain per hundred pounds of horse daily, should be suffieient, unless you are hauling very heavy loads. At any rate, feed enough to keep the horse in good condition. C. L. M.

Ration for Young Stock.

I have 12 grade Holstein heifers, coming two years old, all due to freshen in about three months, also some last Spring calves. They are nicely housed, have hay and eorn-stalks, no beets or Alfalfa. The eornstalks are shredded and given to them with hay for roughage. What would be a proper ration for them, how mixed and what quantity fed to each, so as to keep them in good growing condition, and benefieial, looking to their development? Q.

A very good grain ration would be two parts by weight of ground oats and wheat bran, and one part oil meal. Give the heifers four pounds daily of the mixture, and the ealves two to three pounds, according to size. If ground oats are not obtainable corn may be substituted, though oats are preferable. As to roughage, give all they will eat reasonably clean. C. L. M.

Clover Cutters.

Can you suggest a good reliable cutter for cutting grass, clover and beet tops, for young ehiekens? I want one that will cut, not mash the clover. H. W. R.

Oxford, N. Y.

Any fodder eutter that ean be set to cut into suffieiently short lengths may be used for this purpose. An inverted lawn mower with a crank fastened to one drive-wheel has been used satisfactorily, I believe. Clover cutters for poultrymen can be obtained through any hardware dealer. M. B. D.

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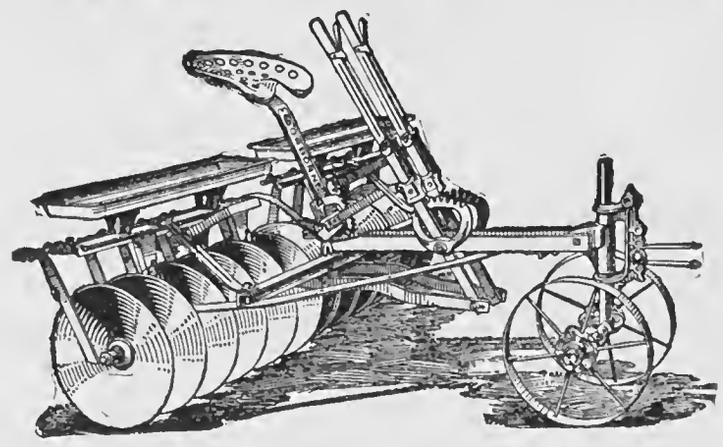

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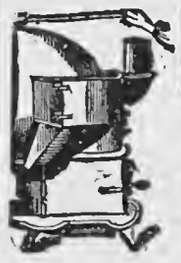

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Kitchen Waste for Poultry.

From June to November I can secure the waste from a large kitchen, enough to partially feed a large flock of poultry. This would consist of the usual leavings around a large house, and consist of bits of meat, bread, cereal, vegetables, fruit, etc. Would this be suitable to feed poultry? If so, how feed, and should I balance it with a grain ration? S. E. S.

Massachusetts.

Table refuse makes a very good feed for a flock of fowls when saved separately for that purpose, and when fed properly with other feed in order to make a complete ration. Of course it must always be fed fresh. Probably the best way to feed this refuse is to mix it into a moist mash with the addition of a small amount of dry mash to take up the extra moisture, which is usually used to soak the dry bread among the refuse. This mash mixture should then be fed either at noon or at night during the period of time you mention, and can be fed to advantage to both old and young fowls. Whole grain, such as cracked corn, wheat and oats should be fed twice a day besides this mash and grit, charcoal and oyster shell must be kept by them at all times. If there is not enough meat in the table refuse a sufficient quantity of ground beef scrap should be added to produce the desired results. C. S. G.

Concrete Henhouse Floors.

Our experience with concrete as a floor for chicken houses has been more satisfactory than that of Irving C. Lewis, page 22. We have two small houses floored with concrete slabs, which have been in use for two years, and instead of wearing out the chickens' toenails. I should say they are longer in Winter than in Summer, when they do more digging in the ground outside. We do not use an extraordinary amount of litter, usually about four inches deep and they reach the floor quite often. I can imagine but two possible causes for Mr. Lewis' trouble; either using an insufficient amount of cement and not troweling the surface smooth after spreading, or using a dry mixture, such as is commonly used for cement blocks. I have seen quite a few of them which would undoubtedly act as Mr. Lewis states, were such a material used for flooring.

The slabs which we use are 2½ inches thick, 2x2½ feet, of same mixture throughout, laid directly on the ground, and we have no trouble from moisture rising through the concrete, so we see no occasion for the six inches of cinders given in the original specifications. Portland cement concrete mixed with a sufficent amount of water is a very different material from that mixed with only enough water to moisten it, and possibly an insufficient amount of cement. The first will be waterproof, the second will be porous, and conduct moisture like sandstone or brick. In one of our houses we used some sandstone and brick to complete an odd-sized floor, and these are always moist on top, except in the driest time in Summer, so that dirt sticks to them, showing need for cinder base.

The first concrete floor we made we used natural cement, which never got harder than dry clay, and in Winter the litter on top of it became as wet as though it had lain in the rain, so we coated it with hot tar, which was effective and made a smooth floor, but we wouldn't do it again, as it must be spread from the outside, owing to the fumes given off, and it is easily chipped, as the tar does not stick to the concrete. Next time we would put on a two-inch layer of Portland cement concrete, mixed with enough water to work easily and troweled off smooth. W. J. M.

Elyria, O.

Reducing Fat Sow; Roup.

1. Will you tell me how I can reduce the fat on a sow which has been bred about two weeks? She is an O. I. C., and I do not want to lose her. 2. Also what kind of a roup cure can you tell me?

New York. F. H. S.

1. If the sow is over fat, reduce her rations gradually until she is getting only enough to keep her in good thrifty condition and provide for the needs of the growing pigs. Do not feed cornmeal, except, possibly, as a very small portion of the rations. Use instead, the bone and muscle forming foods, such as wheat bran, middlings, oats, beans, and barley. The food should be chiefly in the form of slops, and if needed to keep the bowels loose, add a little oil meal to the other grains fed. While a brood sow should not be fat, do not go to the other extreme and starve her. The developing pigs need nourishment. A brood sow should be made to take daily exercise, and a good-sized pasture field provides for this.

2. The best "cure" for roup is prevention by providing warm, comfortable quarters, free from drafts and dampness, and the addition of permanganate of potassium to their drinking water at the first signs of "colds." A stock solution of this may be made by dissolving an ounce of the crystals in three pints of water, and one pint of this solution may be added to each two quarts of the drinking water. M. B. D.

Scaly Leg.

Can you tell me the cause and how to cure scales on chickens' feet? I have just purchased 50 Leghorns just starting in to lay, and have just tried kerosene oil on a few of their feet, but it seems that after the kerosene had been applied to their feet the chickens became sick and stopped laying. Will you give me the necessary information to get rid of these thick scales; also if what you recomend would be good to apply to chickens' feet that have not got scales on, to prevent same from coming on? I have been told that scales are caused by lice. M. J. M.

New Jersey.

Scaly leg is not caused by lice, but by small mites which burrow beneath the scales upon a fowl's shanks and live there. They are usually easily destroyed by the thorough use of kerosene, either as a dip, or mixed with vaseline and used as an ointment to be thoroughly rubbed into the scaly parts. Repeated treatment may be needed to free the fowls from them, and in very severe cases, it is sometimes necessary to soak the fowl's legs in warm water until the worst of the scales can be removed. In your case, two or three good applications of kerosene, or kerosene ointment, will probably suffice. M. B. D.

Frozen Combs.

I have on hand 30 S. C. W. Leghorn males which had their combs and wattles frozen. Some are only slightly touched, while a few are pretty bad. What effect will it have on them as breeders? I want to put them with the hens in about three weeks. What is a good remedy for treating the combs? J. P. A.

Perkiomenville, Pa.

Slight frosting of combs and wattles will probably not interfere with the use of males in the breeding pens, but in severe cases the pain and soreness may make the birds unfit for use. There is little that can be done in the way of treatment; if discovered early, the frozen part should be thawed out with snow. Healing will be hastened if badly frozen portions of the comb are cut away, and the wound kept greased with carbolized vaseline in 5 per cent. strength. M. B. D.

Poultry Questions.

1. How often should deep litter on poultry house floor be replaced? 2. If poultry manure is spread on the surface of the garden in Winter is there likely to be loss of nitrogen? 3. How much yard room is required in the double yard plan for poultry? Where can a discussion of the double yard system be found? 4. Can more Leghorns than birds of the larger breeds be kept advantageously on a given floor area? How many? 5. Do sweet potatoes tend to stop hens laying? Do potatoes and other kitchen vegetable refuse not containing chlorophyll take the place of "green stuff" that is green, for poultry? F. W. B.

Winchester, Mass.

1. Litter should be changed as often as it becomes soiled and packed down by the hens. The time will vary with the number of hens kept and the kind of litter. Probably every four to six weeks would not be any too often in most poultry houses, though every six months would be nearer the interval usually intervening. 2. On fairly level surfaces which do not wash there would probably be little loss of nitrogen from poultry manure spread in the Winter. The best way to keep it, however, is to mix it with sufficient absorbent material and store it in a dry place until it is needed in the Spring. 3. Leghorns do not not require quite the floor space, and perch space, that the larger breeds do but, there is not enough difference so that needed areas have been calculated for each breed. From three to four square feet for each fowl should be provided, and it would be well to give the larger fowls the maximum area. 4. There is no fixed rule for calculating yard room; the more the better. Even with double yards, the largest available space is advisable as more time can then be given to allow fouled ground to recuperate. 5. Vegetables do not exactly take the place of "greens," or those plants made green by chlorophyll, but they frequently have to be substituted for them. There is a tonic effect in "yarbs" that vegetables lack; else why do we crave dandelion greens in the Spring? M. B. D.

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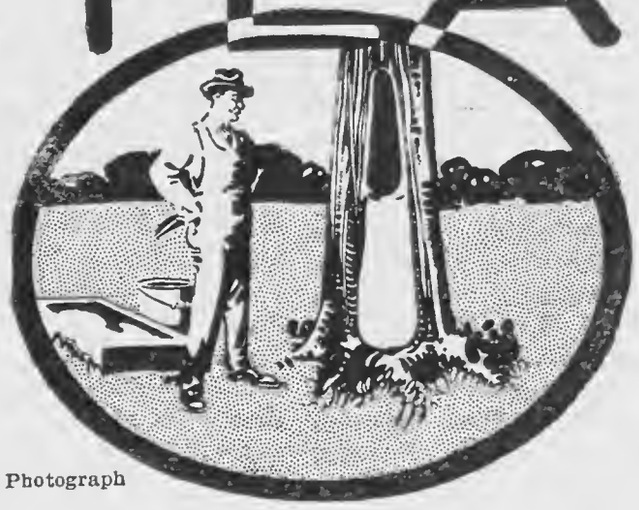

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Mr. Carr said he was formerly compelled to search for help, but now men came to the farm seeking employment. He declared the machine paid for itself the first year, and that the expert who installed the machine turned it over to him after the first milking. About six years ago, on the farm of Aaron Worthing, Hillsdale County, Mich., a milking machine was installed. Although much has been done to perfect the machine since that time, it was considered successful. The machine was later abandoned, and I am informed it was due to hired help neglecting the units and allowing them to remain on the cow sometimes a number of minutes after the cow had been milked. The plant is again in operation, and I am informed is doing very efficient service, although it is old style, with some improvements added.

W. J.

Care of Freshening Cow.

What is the treatment for a cow a month or three weeks before calving in respect to housing, feeding and milking?

Mass. L. A. E.

A cow should be dry for a month or six weeks before calving, and during this time she should be comfortably housed, if the weather is cold, or allowed to run in pasture during the natural pasture season. If on good pasture, no grain food is needed, but if she is being barn fed, her rations should not materially differ from those of a milch cow except that they may be somewhat lighter, say about six pounds of grain daily, and cornmeal or cottonseed meal should be sparingly fed, if at all. Ground oats, wheat bran, and wheat middlings are specially adapted to the cow's needs while dry. They furnish the elements needed for the growing calf, and are sufficiently laxative in their nature for the good of the cow. Corn silage, roots, or other laxative foods are specially useful at this time, in the absence of pasture. Aside from good care, reasonable feeding, and possibly, in some instances, a laxative dose of linseed oil or Epsom salts just previous to calving, no special treatment is needed for a cow in calf in good health.

M. B. D.

Wanted—A Dog Law.

Can you take up the problem of a good practical working dog law? I would like to keep sheep, but do not want to risk keeping them for dogs. Can you find the most practical working law now in use in any State or place? I think that if the same degree of good judgment was used in handling dogs that is used with other domestic animals the problem could be solved. In this State dog owners are taxed $1 for males and $3 for females; property holders generally pay, others not. Would not a license law be better than a tax law? Not many females are kept and I believe the males do much of the sheep-killing when away from home, and especially when gathered in packs. If all the dogs not kept especially for breeding were castrated as other animals are I believe they would stay at home much better, and there would be very little sheep killing. This would also stop much of the indiscriminate breeding of worthless dogs. I would suggest a $1 license for a castrated dog or a spayed female, and about $5 license for all others, country and city dogs to be handled under one law, as much of the sheep-killing is done by city and town dogs. I am writing to you for this as we get more practical results with THE R. N.-Y. than anywhere else I know of. E. S. A.

Michigan.

R. N.-Y.—When you strike dog legislation you will find it hard to obtain practical results anywhere. There are men who think more of their dogs than they do of children, and they oppose any effort to suppress their pet nuisances. We will stir up the subject for discussion, but the dogs seem to have more political power than the women.

"Bulgarian Culture" for Buttermilk.

1. What is Bulgarian culture and how can it be made? 2. How is the cultured buttermilk made? H. D. S.

McKee's Rocks, Pa.

The Bulgarian culture is a particular species or strain of the lactic-acid producing bacteria which was first brought into public notice in Bulgaria, where the people have used it for centuries in making a fermented milk similar to our buttermilk. The organism has the ability to produce much higher per cents of lactic acid than our native species, and in combination with certain other organisms produces a buttermilk of very high flavor.

2. In answer to his second question, let me say that by "cultured buttermilk" is usually meant skim-milk which is soured by the action of definite bacteria cultures, the one most commonly used being the Bulgarian organism. It is usually made from skim-milk (sometimes with the addition of 10 per cent whole milk) which is innoculated with the bacteria culture and allowed to sour. Sometimes the skim-milk is pasteurized before inoculation and sometimes used raw. For commercial purposes, the curdled milk is placed in a churn which is revolved a few times to break up the curd to give the fermented milk a smooth creamy texture. The Experiment Station of Urbana, Illinois, recently published a small circular on this subject. I believe it is Circular 166. The Dairy Division at Washington also put out a bulletin on this subject a year or two ago, but I do not know the number of it. It can be had by writing to the Dairy Division.

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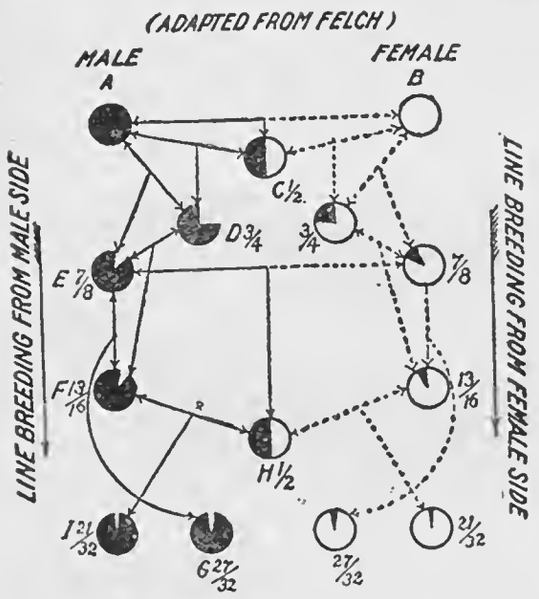
The Henyard.

A Discussion of Line Breeding.

There seems to be some difference of opinion as to what constitutes line breeding. I find that even those who stand high in live stock and agricultural circles differ in defining the terms. Going back about 30 years the term line-breeding, as used in this country, meant the production of animals strong in a certain line of inheritance, i. e., strong in the blood of some particular animal. It is a form of inbreeding. Once started it must be inbreeding. But it is so because of some definite aim. Line-breeding is practiced to perpetuate the blood and characteristics of some special individual of a breed or strain. Inbreeding is simply the mating of animals closely related. Line-breeding, after the first mating, is that kind of inbreeding that breeds an animal strong in the blood of an individual to another animal strong in the same blood. It may refer to the blood of a sire or the blood of a dam, but once it is started both sides of the mating must represent the blood of the individual to which we are line-breeding. To illustrate: I had a colt that I called "Big Ben." When he matured he suited me so well that I wanted more like him.



LINE-BREEDING CHART.

From him I got a fine mare colt. When she matured I bred her back to her sire. This was inbreeding and also line-breeding. It was the second step of line-breeding in the male line. From that time on every horse or mare of that breed that I bred was selected with reference to the blood of "Big Ben." Both sire and dam must have some of the blood of that horse. Had I reversed the process and kept in mind and in line the blood of the dam, then it would have been line-breeding from the dam. Maintaining and perpetuating the blood of a single individual in a flock or herd is line-breeding, but it must always be carried on with reference to the blood of one animal. One can breed as closely and yet not necessarily practice line-breeding. Had I been indifferent in the instance given and bred indiscriminately back to the original dam, and then brother and sister or almost any other form of close breeding, it would not have been line-breeding.

That excellent diagram once published by I. K. Felch, and here reproduced, does much to explain this matter. In conclusion I will say that line-breeding is one form of inbreeding, but inbreeding is not always line-breeding.

Michigan. RICHARD H. WOOD.

A PRIZE TURKEY.

We have a Bronze turkey here that laid 84 eggs last Summer. Can anyone beat that? Please let me hear from some of the turkey raisers. F. C. S.

This is an age of telling about large records and hunting for champions. Can anyone bring forward a turkey here to beat this one?

Two-story Henhouse.

I bought a place of about 2½ acres, on which I would like to keep about 200 chickens. There is a barn on it about 24x30 feet, which I would like to turn into a henhouse. My idea is to keep a place for breeders downstairs and then those just kept for laying upstairs. I have seen that in Europe; they generally keep chickens above the pigpen, as they like to go up high. Will you tell me, if practical, the best way to fix it?

Rochester, N. Y. E. D. V.

The idea of using the second story of a building for fowls seems never to have met with popular favor, though some years ago two-story henhouses were not uncommon. As we do not know of any poultry plants using such buildings today, we conclude that some serious objection must have developed to them in actual practice, even though in theory they would seem to be economical. If you can arrange your barn so as to give the hens on the upper floor access to the ground, it should be an inexpensive matter to fit up that floor for the use of the hens. It should have windows and open-front ventilation such as one-story buildings require, and it may be worth your while to make the experiment; should it prove unsatisfactory your outlay upon it will have been small at any rate. The same precautions should be taken to make the building windtight upon all sides except the one facing the south or southeast as are required in one-story houses, and all interior fittings and arrangements may be the same. A sloping runway will probably be required to induce the hens to go from the ground to their sleeping and laying quarters.

Condition Powders; Hurrying Pullets.

1. The following is a formula to mix with dry feed for laying hens. Will you advise if you would consider this safe to feed mixed in the following proportion? Take 10 pounds of bone meal, 10 pounds of beef scraps, five pounds of fenugreek, two pounds of sulphur, two pounds charcoal, one-half pound of cayenne pepper, one-half pound salt. Mix and keep. Put a half pint in the mash every morning for twenty hens.

2. What would you recommend to use to make pullets lay, and is cayenne pepper a safe tonic to use? G. K.

Trenton, N. J.

1. The use of strong condiments, like cayenne pepper, cannot be recommended, even though in small quantities they may do no harm. It is a mistake to suppose that a local irritant like mustard or pepper stimulates the activity of the egg-producing organs. In sufficient quantity, it would undoubtedly produce a sensation of warmth by drawing the blood to the part irritated by it, just as a mustard plaster upon your own skin would, but irritation is not stimulation, and too long continued, it becomes inflammation and positively deleterious.

2. Pullets can not be "made to lay" except as they are fed a sufficient quantity of food of the right kinds to more than supply the needs of their bodies. The surplus will go toward the formation of eggs if the age of the pullets and other conditions are such as to put in motion their reproductive functions. It should not be forgotten that egg laying upon the part of a fowl is simply nature's way of reproducing that fowl's organism, and is not primarily designed to supply the New York market. That latter function is a perverted one for which man, not nature, is responsible.

Poor Layers.

I have 45 hens and pullets in the same house and give them the same attention, but laying is very poor. I dusted them twice this Winter with Cornell lice powder and I see no lice on the perches, but I think they have worms. If they have what will destroy them? S. L. F.

West Virginia.

A personal inspection of your hens and their quarters might reveal some reason or reasons for the poor egg record that they are making, but without it, one could hardly venture a guess. There has been very frequent complaint this Winter that hens and pullets that started in with great promise have suddenly slacked up in egg production without apparent cause. One is tempted to lay it to weather conditions, but I am afraid that that is too easy an explanation to be scientific. A good general remedy for worms is oil of turpentine, in dosage of one to two teaspoonfuls, diluted with an equal amount of olive or other bland oil, and injected into the fowls crop through a soft rubber catheter. The catheter may easily be passed down the throat to the crop, but care must be taken to avoid entering the windpipe. Small glass syringes holding about the right amount may be purchased at drug stores. M. B. D.

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It doesn't require an expert operator to run the L. C. Smith & Bros. typewriter. It is simple, compact, complete, durable.
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The Henyard.

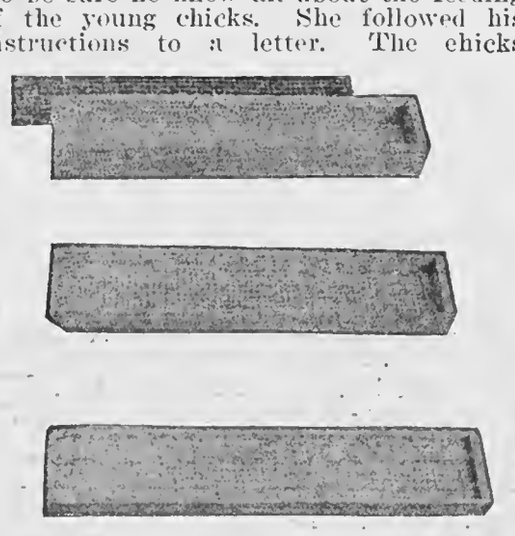
BROODING CHICKS IN LARGE FLOCKS.

Feeding: Mrs. Matthews Tells How.

Will you induce H. E. Matthews, who writes of "Brooding Chicks in Large Flocks," in your issue of Nov. 29, to tell us how he feeds and what he feeds these large flocks, so that each chick gets a plenty and none is run over? H. P. C.

Woman's sphere is talked about
As though it had a limit.
There's not a place in earth or heaven;
There's not a task to mankind given;
There's not a sorrow or a woe;
There's not a whispered "yes" or "no";
There's not a life, or death, or birth;
There's not a feather's weight of worth
Without a woman in it.

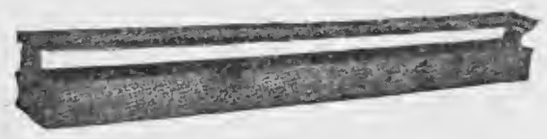
That is now my husband's opinion. A few years ago he started in the "hen business." He was very successful in the incubation, obtaining very fine hatches, but when it came to caring for the same chicks they would die. It was then that he began to think that woman's sphere was not for household duties only. He called on his wife to help him out. To be sure he knew all about the feeding of the young chicks. She followed his instructions to a letter. The chicks



TRAY FOR BABY CHICKS.

thrived and grew so rapidly he asked the reason why they would not grow the same for him. It was a mystery to me too. I could not see why they should grow for me when they would die for him. After going over the matter together we came to the conclusion that the average man does not pay enough attention to the little details which must not be overlooked in raising little chicks. But there is an excuse for our husbands. They have a lot on their minds and in their hearts that we know little about and would understand still less. So it behooves us to put our shoulder to the wheel and help where we are best fitted.

EDUCATING THE CHICK.—When the chicks are just out of the shell I make it a practice to tap on the glass of the incubator door. Chicks learn to come at this signal and at the same time the chicks become acquainted with you. When I have neglected this we notice the chicks are wild and harder to teach. I like to place the chicks under the hover



FEED HOPPER FOR LARGER CHICKS.

when 24 hours old. Care must be taken at this time to teach them the source of heat and how to get back to the heat. If not taught this at once it means trouble. We use boards 10 inches high, which we call educator boards. These are placed about one foot from the hover on all sides. At feeding time they are moved back another foot to give plenty of room that all may feed. Continue the use of the educator boards until the chicks all know where to go for heat. Teach a feeding call by tapping on the feeding board. The chick soon learns to know the attendant, and expects some little titbit every time you come in. Throw out some little scrap and see them run. We keep the temperature near 100 degrees under the hover at first. We like to have heat enough at night so that each chick will lie out flat, with heads just peeping out from the curtains. If little chicks learn to get their heat by bunching together you will have trouble with them to the end, and that end will come very quickly to some of them. An attendant must be constantly with the chick during these first hours of the chick's life. It means a saving of annoyance and labor when they are older. No matter what the size of the flock, whether 50, 100, 300 or 1,000, these same principles apply both in the education and feeding. It must be thoroughly understood that the success of raising the chicks lies not altogether in feeding; pure air, heat and clean water play an all important part. Until every chick learns to go under the hover we put up the educator boards every night, but not as close to the hover as when they were first placed in the brooder.

WHAT WE FEED.—We use the Cornell formula and also use the Cornell type of trays and feed troughs. Mixture No. 1: Eight pounds rolled oats, eight pounds bread crumbs or cracker waste, two pounds sifted beef scrap (best grade), one pound bone meal. Mixture No. 2: Three pounds wheat cracked, two pounds cracked corn (fine), one pound pin head oat meal. Mixture No. 3: Three pounds wheat bran, three pounds cornmeal, three pounds wheat middlings, three pounds beef scrap (best grade), one pound bone meal. Mixture No. 4: Three pounds wheat (whole), two pounds cracked corn, one pound hulled oats. Mixture No. 5: Three pounds wheat, three pounds cracked corn. Never feed a chick until it is at least 48 hours old or older. Do not be afraid they will starve. Nature has provided sufficient nourishment in the yolk of the egg that the chick assimilates. Often bowel trouble results from feeding too soon after they are hatched. It is more important to give them clean fresh water. Teach them to drink by the tapping call on the water cans. Feed five times a day until the chick is a week old, being careful not to feed too liberally. Let them clean up their feed board in 10 minutes, then remove any that is left and give to your hens. Do not give any but clean fresh food to baby chicks. The first feed is mixture No. 1, moistened with sour skim-milk or water to a crumbly consistency, never sloppy. Scatter this on the feeding boards. Grit and charcoal should also be scattered with this first feed. A little of mixture No. 2 should be fed on the boards until they learn to scratch in the litter for it. Place in shallow trays (see picture mixture No. 3, always keeping a supply before them. A piece of wire netting fitted loosely inside the trays prevents them from scratching out the mash. The main feed for about 10 days is mixture No. 1.

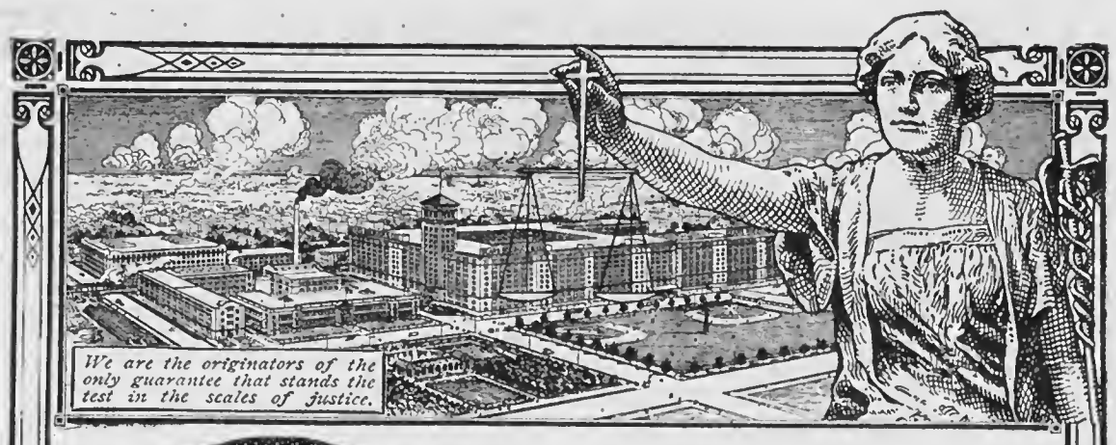
From the age of 10 days to four weeks we gradually substitute some of mixture No. 3 (moistened to a crumbly consistency), for mixture No. 1, always having mixture No. 3 dry before them. From the age of four weeks to six moist is given twice a day with grain in the litter. Dry mash No. 3, grit and charcoal always before them in trays. From the six weeks age there is but little to do beside giving them all they can eat at all times. Mixtures No. 3 and No. 5, are hopper fed. (See picture). A moist mash once a day will hurry them along. Pointers in feeding large flocks: Chicks should all be of the same age in large flocks. Some makers of brooder heaters say different ages can be brooded at one time. Don't try it. Cull out the weaker chicks and place in flock of smaller chicks. The weaker chick although older needs the stimulating food of the younger chick. Scald water cans often. Keep brooders clean. Feed small chicks over night with grain in litter so daylight finds them feeding. Avoid mouldy litter and mouldy grain. Feed plenty of green food—sprouted oats, beets or cabbage.

MRS. H. E. MATTHEWS.

Poor Laying.

For the past few years I have wintered over several hundred Leghorns, the feeding method being grain in the morning, then wheat middlings and bran (wet mash) before them until, say noon, then heavy grain feed about four o'clock. This method has been very successful and at this time of year, generally, I was getting a fine output of eggs. This year my pullets (about 200) laid well till a few days ago, when they "laid off," the output falling off one-half. The hens don't look right. My method this Winter varied only in the mash—where I have been feeding bran and middlings with big proportion of meat scrap and linseed meal. Could these last two ingredients have caused the slump from over nourishment? POULTRYMAN.

You do not say what proportion of your mash is made up of meat scrap and oil meal. It is quite possible to feed too much of these high protein foods. I would not recommend a larger proportion than 5% of oil meal and 20% of beef scrap in the same mixture. It is not a good plan to keep a moist mash before the hens; they will overeat if this is done. A dry mash is difficult to swallow and the hens will eat only a mouthful or two at a time; this makes it practicable and economical to keep dry ground grains before the fowls in an open hopper to which they can go at any time they please. This is not true of a moist mash, however, and if this is fed, it should be in limited quantity which will be quickly cleaned up. M. B. D.



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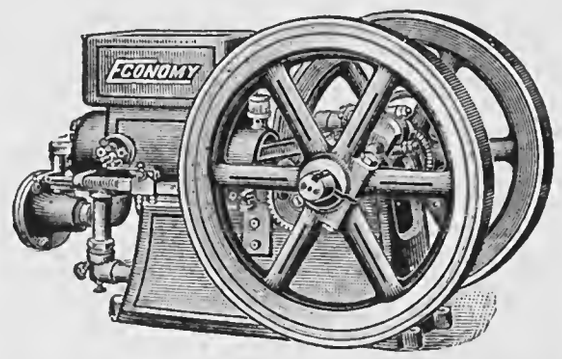

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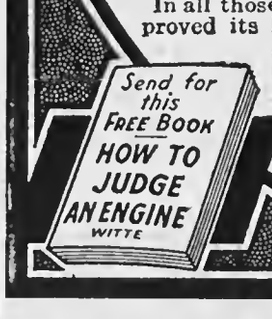

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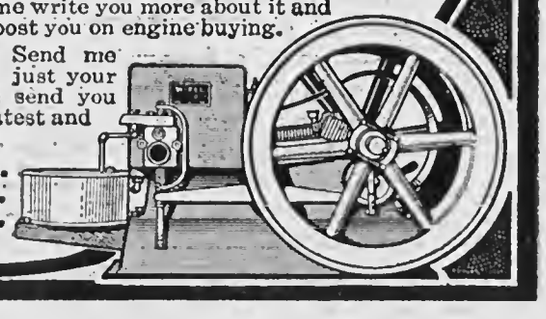

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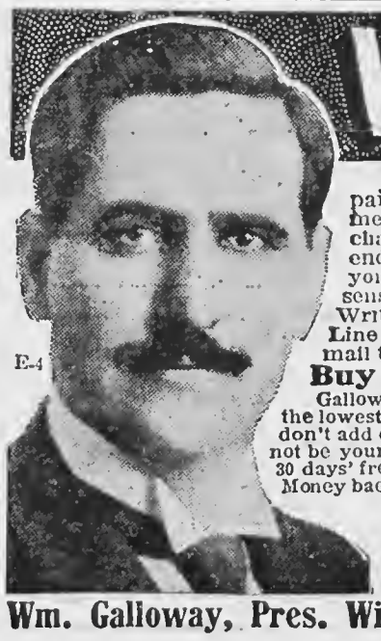

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AILING ANIMALS.

Constipation.

My collie dog is constipated, and has been so for a long time. He has table scraps to eat and is very fond of sour milk and buttermilk. What can we do for him? I. M. A.

Make the dog live out of doors as much as possible and feed one small meal each night. Do not feed potatoes. Twice a week feed parboiled liver and increase to three times a week, if found necessary to keep the bowels active. If this does not suffice give a dose of castor oil in milk. A. S. A.

Sick Hogs.

A hog that I was fattening all at once stopped eating, for two weeks, and then staggered around and died. Hog was fed water and corn. Since then I have lost another. R. P. D.

New Jersey.

Your description does not make a confident diagnosis possible, but hog cholera has been so prevalent that one must suspect that it was present here. Acute indigestion from irritating feed might cause somewhat similar symptoms. Stop feeding corn and feed light, laxative slop, adding roots and Alfalfa hay, and making the hogs take abundant exercise every day. If more are sick have a local, graduate veterinarian make an examination and vaccinate the remaining pigs, if cholera is found present. A. S. A.

Tumor.

I had a one-year-old hog that some time ago almost stopped eating, and did not seem to have much life about it. It lived on about six months barely eating enough to keep it alive. I killed it a few days ago and on examination found that one kidney had grown to an enormous size, weighing 51 pounds, and was filled with a watery substance. I would like your opinion as to what was the matter. S. W. Z.

West Virginia.

A cancerous tumor no doubt was present, and such a condition is uncommon and incurable. It may be set down as an accidental case, the like of which will never be seen again. No explanation can be given as to the cause of the tumor. A. S. A.

Nailprick.

Seven weeks ago my horse stepped on a nail, which entered the foot in the crease beside the frog. I did not discover it until next morning after having driven him six miles in that condition. I then drew the nail and filled the wound with balsam of myrrh. Next day had a veterinarian cleansed the foot, gave the usual treatment to prevent lockjaw. Later I applied poultices and after a little blistered the ankle, but the horse is as lame as ever, and I cannot use him. Can you tell me what to do? A. E. K.

The wound should have been freely opened to allow vent of pus. This may still be necessary. Clip the hair from the hoof-head and blister with cerate of cantharides several times at intervals of ten days. This will suffice if the flexor tendon or navicular bone was not injured or the joint opened by the nail. In bad cases a skilled surgeon has to operate. A. S. A.

Ringworm: Worms.

1. Will you tell me what to do for our cattle? The hair comes off in patches leaving a thick white dandruff. It starts around the eyes. They are well fed and sheltered, have salt and aside from this skin disease seem all right. 2. I would like to know what to do for our Llewellyn setter, now five years old. When six months old he had distemper, but owing to illness in the family was not properly cared for. His eyes have been bad since then, the haw nearly covering the ball at times. When he was a pup we gave him worm medicine, and he passed quantities of worms. Would he be likely to have worms yet? E. S. C.

Idaho.

1. Ringworm is present. Scrub each spot clean, and when dry rub in some iodine ointment, repeating the application each other day until recovery. 2. The dog no doubt has worms. Give him worm medicine to be bought ready for use at the drug store. Bathe the eyes twice daily with a ten per cent solution of boric acid. A. S. A.

Obstructed Teat.

One of my cows has one hind teat scabbed over; had to pick off the scab and milk with a tube. Seems to go up farther than just end of teat. That got better, then the other commenced; can get hardly any milk without a tube. What is it and what can I do for her? F. A. G.

Such sores come from infected floors, or from infected matters carried by the milker's hands. Often the sore starts from a scratch made with the finger nails, which are left too long. Do away with such causes. Treat by soaking the affected teats in a hot saturated solution of boric acid, night and morning, and then apply boracic Perm to the sores. If a sore is tardy in healing paint it with tincture of iodine each other day, in addition to the other treatment. Milking tubes tend to carry infection into the udder. They must be carefully sterilized by boiling before use, otherwise they are an abomination. Where a warty growth forms in the end of the teat it should be rimmed out with a small sharp scalpel, or cut through in four different directions by means of a sharp, clean teat bistoury. Such operations are best done by the expert veterinarian. A. S. A.

Obstructed Teat.

In the lower end of the right front teat on one of my cows is something which prevents the milking. We have drawn the milk twice by forcing a quill in the teat about one inch deep, which allowed the milk to flow. The obstacle felt like a pea. From outside nothing can be seen on the teat. She has pain as soon as we touch the lower end of the teat. R. G.

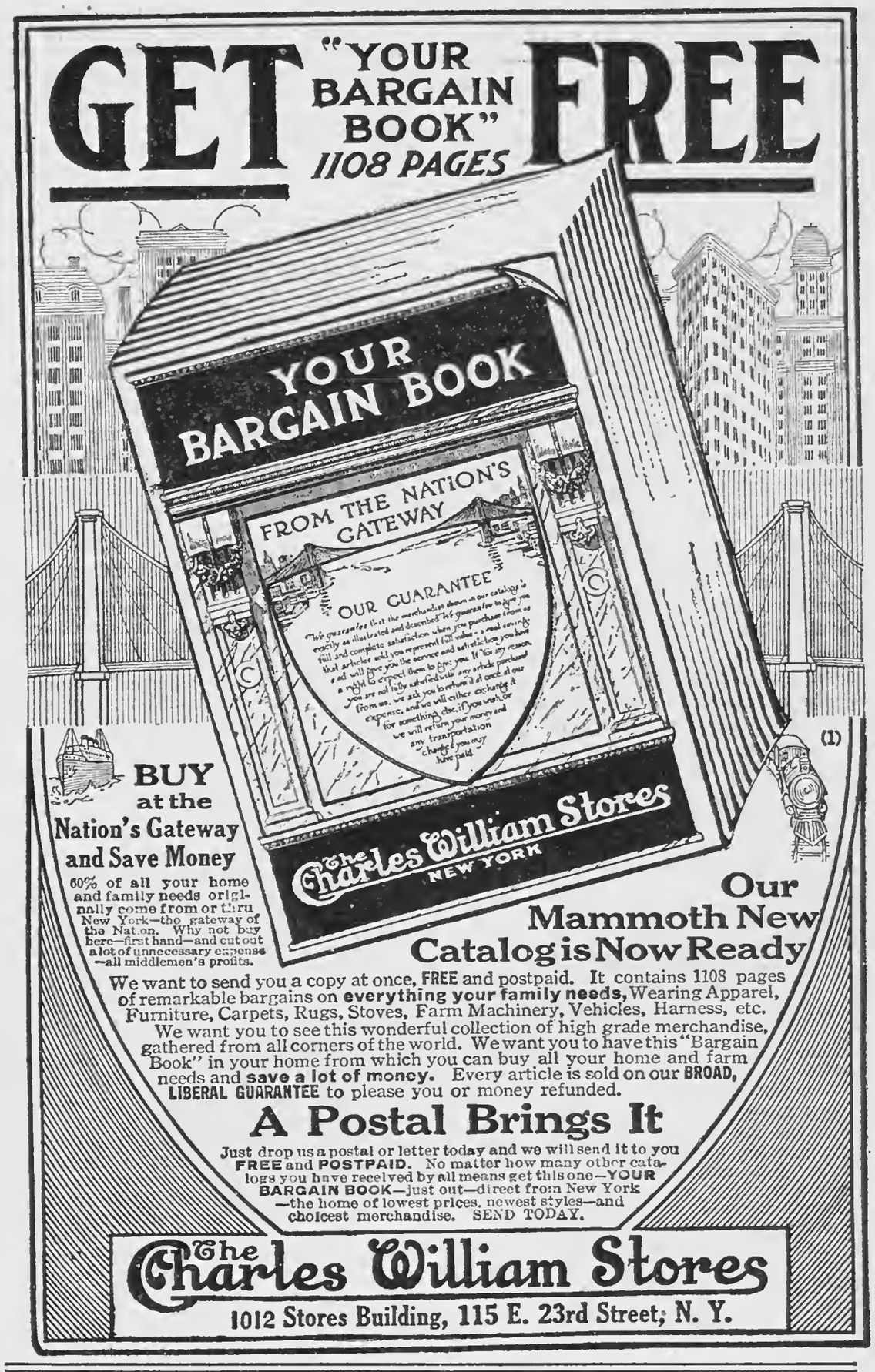
New York.

Infective matters have already been carried into the udder by the quill and it is likely that the function of that quarter will be lost from destructive garget. The right treatment would be to have a veterinarian rim out the growth with a small, sharp knife, then soak the teat twice daily in a hot, saturated solution of boric acid and each other day apply tincture of iodine if the sore is tardy in healing. If the veterinarian does not care to cut out the growth he no doubt will slit through the obstruction in four different directions, by means of a teat bistoury and then have a stream of milk stripped away several times a day while healing is proceeding. A. S. A.

Eye Ailments in Animals.

I notice on page 1334 two inquirers asking for advice in regard to eye ailments. May I take the liberty of criticizing the manner in which treatment is advised? In the first case of the injury to the ox a more definite statement should be asked for, viz., is there any circumcorneal injection, watering of the eye? These traumatic cases nine times out of ten result in an iritis, in which case the treatment would be the instillation of atropine, four grains to the ounce of water, in connection with the antiseptic application as suggested. In the case of the dog which is blind in both eyes we have a case of congenital cataract, or a case of corneal scar due to a recent ulcer. If the inquirer gives a history of watering of the eyes, a tendency to avoid the light and redness of the eye covering (conjunctiva) and above all that the dog did see when he was born, then your diagnosis is corneal scars. The treatment should then be a 1% yellow oxide of mercury ointment, applied locally, internal remedies help but little. If the case is cataract remedies will not help.

Massachusetts. JOS. E. STERNBERG.



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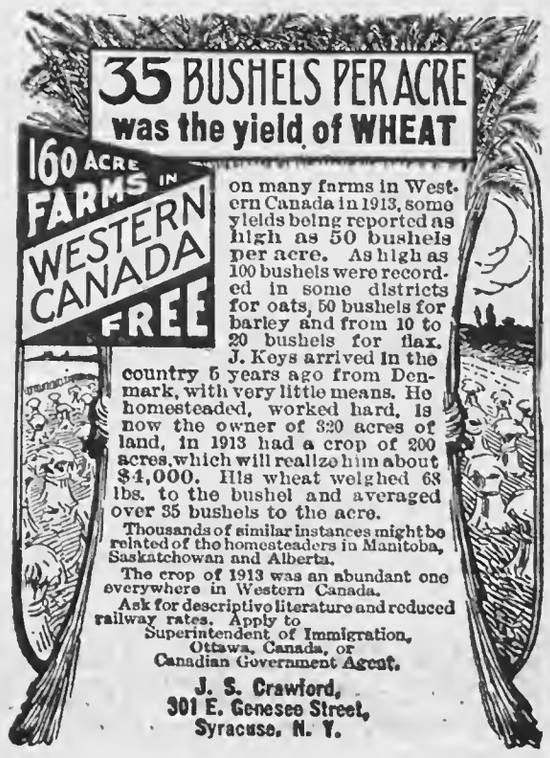

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The Henyard.

Skim-Milk For Hens.

Will skim-milk, soured, take the place of meat scrap in a ration for laying hens? If so, how much should be fed to a flock of 65 hens? Would the Philo system of brooders be a good one for an amateur to use to rear chickens? Will Alfalfa meal be sufficient green food for Winter layers? O. T. J.

I do not think that soured skim-milk will wholly take the place of meat in rations for laying hens, but it may replace the greater part of it if it can be had in sufficient quantity. Hens may be given all that they will eat of it, but they should also have fresh water before them and not be compelled to make the milk their sole drink. By the Philo system, I presume that you mean the use of fireless brooders; these are entirely practical, and while requiring more attention than heated brooders, give the best of results in careful hands. I would not recommend attempting to follow any "system" in their use, but would learn the principles of their operation and adapt them to my own system. I have raised hundreds of chickens with no other hover than an empty bran sack or two, and would ask nothing better after settled warm weather has arrived. Alfalfa meal does not replace succulent food like cabbage or beets, but if these are not available, steamed "short cut" Alfalfa is perhaps as good a substitute as any, and this or clover should be fed if it is practicable to obtain it, even though succulent foods are also at hand. M. B. D.

Pigeon Questions.

Will you give full information on raising pigeons? I have a couple of Homer pigeons, but I cannot tell the difference between the male and the hen. P. R. S.
Reading, Pa.

Old fanciers claim to be able to determine the sex of pigeons by feeling of the pelvic bones, but a beginner could hardly do it. The male usually struts about a female, ruffling his feathers and cooing. Consult some local pigeon fancier. If they do not breed soon try another pair if you wish to keep pigeons. Keep them supplied with plenty of fine mixed grain, grit and water. Provide boxes for nests. Tobacco stems, if available, will be used by them in nest-building and will help keep away lice. W. H. HUSE.

Mating Turkeys.

I have two hen turkeys, one not six months old and therefore not old enough to be the best type of breeder, and the other a year older and a good layer, sitter and brooder. I do not want a gobbler around, as he would molest my chickens. Would it be practicable to take my old hen to a gobbler at the beginning of the laying season, as I have read that a single impregnation is enough for a clutch of turkey eggs? G. S. H.
Ballston Lake, N. Y.

Yes, turkey hens are frequently permitted to run with the male of another flock for a short time previous to the natural laying season and then removed. If they have mated with the turkey cock, their eggs will be fertile for an indefinite length of time, probably for the season.
M. B. D.

Care of Young Ducks.

Will chickens and ducks hatched this Spring and Summer moult this Fall? My ducks are 14 weeks old, Indian Runners, and show no sign of curled sex feathers. I expected to sell the drakes as broiler ducks at 10 or 12 weeks old. When can I tell them apart? They are on range; should I put green food and sand in their ration, or will they now get it for themselves? They wander all around even by night; how can they be caught when necessary? They have outgrown the coop they were brooded in. I understand a low building is enough for them, but what about it being snowed under in Winter? Would it be feasible to enclose a small coop in a shed and have the top of same lift off so that I could get in to clean out the coop and get eggs without being exposed to the weather? I have several unused box stalls; would one of these make a good place to keep the ducks? How many square feet of floor space would you recommend for each duck and how high would you advise making their house?
Ballston Lake, N. Y. G. S. H.

Ducks usually begin to moult and grow a new crop of feathers soon after the age of 12 weeks. From then till cold weather there are usually some in every flock that will be found with pinfeathers. For the most profit ducks should be killed and sold between the ages of 10 and 12 weeks. Curled feathers in the tails of drakes sometimes fail to appear. They are usually later than the change in the voices of the ducks. These develop a quack, while the voices of the drakes remain at a higher pitch.

Young ducks should always have grit mixed with their mash. For older birds it may be kept in boxes. They will help themselves. If the old ducks have free range as long as the ground is bare they will not need much if any green feed. They should in any case be confined to a yard or house at night for protection, and to save any eggs that may be laid during the night or early morning. Coops are not advisable for ducks. A building with protection enough for all kinds of weather with good ventilation is best. Ducks can be "kept" in small quarters, but to do well they ought to have about 10 square feet for each bird. A few ducks might be kept in box stalls if they have a chance to get out into the sunlight and air during the day. A three-foot fence or partition will keep in most Indian Runner ducks.
W. H. HUSE.

Frozen Comb.

I have a valuable S. C. White Leghorn rooster that had his comb and wattles badly frozen during the late severe cold spell. I have heard that it will spoil his usefulness as a breeder. Does anyone know whether this is true? W. L.
New York.

The freezing of the comb will not interfere with the usefulness of a male bird after he has got over the pain and soreness in the frosted parts. It is well sometimes to cut the frozen portions away, and hasten healing by the application of carbolized vaseline in 5 per cent. strength, such as can be purchased at any drug-store. M. B. D.

Poor Egg Yield.

1. Is there anything missing in my poultry ration? I have 60 pullets, Leghorns; they started to lay in October and were laying 14-15 per day; then they dropped to about five per day, and I cannot get them above that. They had a dry mash before them all Summer. My dry mash is 100 pounds bran, 50 pounds cornmeal, 50 pounds middlings, 100 pounds short-Alfalfa, mixed oyster shell, beef scrap in separate hopper. Grain or corn and oats 1½ pounds each night and morning. I also give a moist mash in the middle of the day of stale bread, oats and dry mash. 2. Am I feeding my cow right? I feed 10 pounds per day of bran, cornmeal, and middlings mixed, and all the hay she will eat. J. J.
Sparkill, N. Y.

1. Your poultry ration is all right, though one of the formulas frequently recommended in these columns would be a little better balanced. These formulas vary because not all poultrymen have access to the same feeds, and it is not essential that all fowls be fed exactly alike, or that any fowls be fed exactly the same foods at all times. The essential thing is that there be a proper proportion between the fat-making and the egg-making foods. It seems to be a particularly frequent experience among poultrymen, this year, that pullets that begun well in the Fall slacked up with the advent of cold weather, and refuse to begin again. It is possible that the prolonged warm weather of the Fall, followed by sudden and severe cold, is responsible for this condition of things. Your henhouse (12x20) is amply large for the number of pullets that you mention.

2. Your grain ration for your cow would be improved by substituting either gluten feed, buckwheat middlings, dried brewers' or distillers' grains, or cottonseed meal, for the wheat middlings; though if the cottonseed meal is used, it would be best to use in the mixture a little less than one-third of this ingredient; say, 60 pounds of cottonseed meal to 100 pounds of bran and cornmeal.
M. B. D.

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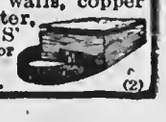
The Incubator is California Redwood, covered with asbestos and galvanized iron; has triple walls, copper tank, nursery, egg tester, thermometer, ready to use. 30 DAYS' TRIAL—money back if not O. K. Write for FREE Catalog today—NOW



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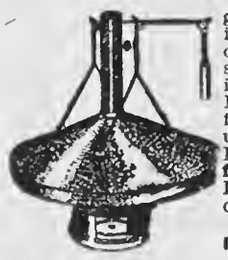

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The famous Vibert flock of beautiful, brilliant, glowing **cherry to mahogany red-to-the-skin** rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but **specially selected, long backed, low tailed,** certified trapnested record layers, scientifically **line bred along Government lines** for heaviest winter egg production, with **yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness,** and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant **absolutely free from roup and white diarrhoea.** Highly fertile, clean, well shaped, unblemished eggs, **gathered hourly, shipped daily, delivered when wanted,** guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding **cockerels from trapnested hens,** trios, mated breeding pens for sale, Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.

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COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat averagod each for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to dato. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. **COLONIAL FARM, Box O, Temple, New Hampshire**

50 ROSE COMB RED COCKERELS—Among them are those that won blue or red ribbons at Trenton, Mount Holly, Bridgeton or Camden this season. Price, $3 to $10 each. Can be returned if not as represented. A few hens and pullets for sale. Eggs for hatching. **ROANOKE POULTRY FARM, Sewell, N. J.**

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Hone's "Crescent Strain"—Winners wherever exhibited. My R. C. Reds won State cup at recent Albany show. High class exhibition or breeding birds; also tested layers Every bird sold on approval. **D. R. HONE, Crescent Hill Farm, Sharon Springs, New York**

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15) Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks.
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High-class stock for UTILITY, SHOW or EXPORT. Eggs for hatching. Mating list on request.
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Eggs, healthy range stock, $5, $6—100. $1, $1.25—15.
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MATURED COCKERELS, R. I. REDS, W. WYANDOTTES, Barred Rocks, Dk. Brahmas, $2.50: S. C. White and Brown **LEGHORNS,** $1.50. **R. I. RED,** laying hens, $2, Hatching eggs & Chix. Won 76 Ribbons this Fall. Catalog gratis. **RIVERDALE POULTRY FARM, Riverdale, N. J.**

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Pure Bred Bronze Turkeys—Large Boned and straight, with the best of Plumage. **Mrs. H. CHUMBLEY, Draper, Va.**

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White Holland Turkeys AND WHITE WYANDOTTES. Seven years' careful breeding. Hundreds of unsolicited testimonials. Satisfaction guaranteed. **H. W. Anderson, Stewartstown, Pa.**

M. B. Turkeys—Bred from large, healthy stock, and as fine as they grow.
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S. C. WHITE LEGHORN Eggs for hatching and day old chicks from heavy laying strain. Strong healthy stock. White and Fawn, and White Indian Runner Duck eggs for hatching. Write today for free circular to **Junita Poultry Yards, Mifflintown, Pa.**

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Rose Comb White Leghorns—Large chalk-white eggs. Circulars free. **E. M. HAMILTON, Otego, N. Y.**

The Orange County Poultry Yards [Patented]
A few of them will change any Eastern dairy farm into a highly profitable business proposition. Plenty of fertilizer, plenty of cash, and light work at reasonable hours. Catalogue on application.
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Single Comb White Leghorns
Hatching Eggs, $5 per 100. Day-old chicks—April, $12 per 100; May, $10 per 100. Delivery guaranteed.
GEO. FROST, Levanna, Cayuga Co., N. Y.

Barred Rocks

Fine Cockerels and Pullets. Reasonable. Write wants. **Geo. Greenwald, Hainesport, N. J.**

THE EGG-LAYING CONTEST.

To bring these reports more up to date, two weeks, doings are reported this week. The eleventh and twelfth will both be given.

In the eleventh week, ending January 16, 808 eggs were laid, 43 less than the previous week. The loss is due to the falling off in egg production of the White Leghorns. Nine pens did not lay an egg, two pens produced one each, two pens laid two eggs each, one pen three, etc. The pen of White Leghorns from Storrs Agricultural Station (the pen fed sour milk in place of beef scraps) laid 33 eggs; 11 more than any other pen of Leghorns. If this pen keeps on they will soon lead all the Leghorns, they are but 36 eggs behind the leading Leghorn pen now.

Tom Barron's White Wyandottes beat all other pens again for the eighth week in succession. His score for the week is 36; the total is 432, 68 eggs more than any other pen of any breed. Barron's White Leghorns "sympathized" with the other Leghorns to the extent of laying only three eggs during the week. Their total to date is 209; less than half the number laid by his Wyandottes. Collingwood's pen of "Dunghills" equalled Barron's Leghorns, for they laid three, last week and this week. But out in Missouri Barron's White Leghorns have led all other pens, and his Wyandottes lead all the Wyandottes. The Missouri contest has the largest number of birds, 1,040 competing. There are 820 at Storrs, and 500 at Thorndale, Pa.

The best records made at the Missouri contest for the month of December are as follows:

	Eggs
White Leghorns, England	206
Buff Orpingtons, United States	152
Anconas, Missouri	147
White Leghorns, British Columbia	133
White Leghorns, Vancouver Island	109
White Leghorns, South Africa	86
White Leghorns, New Zealand	82
White Wyandottes, Ontario Canada	66
White Leghorns, Australia	33

Only 739 eggs were laid at the Storrs contest, in the twelfth week. This is 112 less than the previous week. But this week, ending January 23, includes the bitter cold Tuesday, and the only slightly less cold days of the rest of the week. Egg production about here was cut down one-half by the discomfort of the intense cold. Nine pens of the Leghorns did not lay an egg, and the highest number laid by any Leghorn pen was 21, by the pen from Storrs Agricultural Station, the "sour milk" pen.

So far in this contest, White Wyandottes have far outlaid any other breed. Below are the figures for the twelfth week, and the totals of some of the best pens.

	Week.	Total
BARRED ROCKS.		
J. J. Francais, Long Island	14	260
F. L. Tuttle, Massachusetts	4	83
A. B. Hall, Connecticut	1	51
WHITE P. ROCKS.		
Fred H. Benton, Connecticut	13	120
Storrs Agr. Sta., Connecticut	22	107
Storrs Agr. Sta., Connecticut	11	70
Storrs Agr. Sta., Connecticut	14	36
BUFF P. ROCKS.		
A. A. Hall, Connecticut	14	97
W. C. Morgan, Jr., Connecticut	0	55
WHITE WYANDOTTES.		
Tom Barron, England	27	459
Neal Bros., Rhode Island	12	327
Merrythought Farm, Connecticut	13	308
West Mt. Poultry Yards, Connecticut	15	199
D. J. Ryan & Son, Connecticut	27	154
BUFF WYANDOTTES.		
Am. Buff Wyan. Club., New York	17	109
Dr. N. W. Sanborn, Massachusetts	9	79
Dr. N. W. Sanborn, Masschusetts	25	67
H. E. Hamilton, Connecticut	6	23
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	33	267
Dearborn & Sharpe, New Jersey	26	199
Pinecrest Orchards, Massachusetts	11	188
J. S. Gillespie, Connecticut	13	178
Colonial Farm, New Hampshire	11	169
R. C. REDS.		
Glenview Farm, Connecticut	21	193
C. S. Scoville, Connecticut	15	149
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	17	381
Storrs Agr. Sta., Connecticut	21	349
Cecil Guernsey, New York	18	276
Tom Barron, England	4	213
Storrs Agr. Station, Connecticut	14	220
Marwood Plty. Farm, Pennsylvania	3	182
Storrs Agr. Station, Connecticut	9	173
Bonnie Brook Farm, New York	13	154
Storrs Agr. Station, Connecticut	2	129
P. G. Platt, Pennsylvania	7	124
C. W. Sherwood, Connecticut	9	123
F. M. Peasley, Connecticut	0	121
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	11	81
BUFF ORPINGTONS.		
O. Wilson, West Virginia	11	38
WHITE ORPINGTONS.		
P. A. Demgar, New York	7	45
DUNGHILLS.		
H. W. Collingwood, New Jersey	3	9
Daniel Hine, Connecticut	14	83
Daniel Hine, Connecticut	17	105
MIXED BREEDS.		
Profitable Poultry, Massachusetts	13	178
Profitable Poultry, Massachusetts	3	142

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E. B. THOMPSON'S
IMPERIAL "RINGLET" Barred Rocks
ARE THE STANDARD BY WHICH ALL OTHER BARRED ROCKS ARE JUDGED

They have won more than double the number first prizes at Madison Square Garden, New York, than any other strain.

2000 Grand COCKERELS and PULLETS for sale

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Eggs, $10 per Setting; $60 per 100
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Barred Rock Cockerels

Nonpareil Strain. $2 each. Eggs in season.
B. H. HENION, Brockport, New York

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S. C. White and Buff Leghorns
WILBURTHA POULTRY FARMS
Box R, Trenton Junction, N. J.

EGGS FOR HATCHING
BABY CHICKS
BREEDING STOCK

Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks **NOW.**

Barron Leghorns 282 EGG STOCK **"Storr's" Buff Rocks**
PRIZE WINNING EXHIBITION BUFF ROCK MATINGS. Barron cockerels also head my American Leghorns, exclusively. Toulouse Geese, largest in America. S. C. Reds, Rouen Ducks, Fawn Runner Ducks, Prize Turkeys. Farm Prices. Cir. **MORRIS FARM, R. 4, Bridgeport, Conn.**

S. C. Buff ORPINGTONS

scientifically line-bred for 10 years to develop size, color and heavy egg-production, as well as prize-winning qualities. **Sunswick Orpingtons** are great **utility** fowls. Cockerels make fine, large broilers and capons. Hens are great layers, 1,000 yearling fowls now for sale at very reasonable prices. Eggs for Hatching and Day-Old Chicks. Book your order now. Write today for FREE catalog.
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Backed by a quarter of a Century experience in breeding and incubation. **S. C. WHITE LEGHORNS, RHODE ISLAND REDS, COLUMBIAN AND BARRED P. ROCKS. NOW** is the time to get your orders booked for Spring delivery. Be sure you get my chick booklet before you order chicks. Also Eggs for Hatching.
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BABY CHICKS AND EGGS—White Leghorns and Anconas, from 600 hens. Beauties. Write for booklet. **EWING POULTRY FARM, Berrien Springs, Mich.**

BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. **John A. Roth, Quakertown, Pa.**

CHICKS 10c.—S. C. W. Leghorns. Money back for dead ones. Pamphlet free. **C. M. Lanver, Box 73, Richfield, Pa**

FOR SALE—**Hatching Eggs**—S. C. White Leghorn. Dr. OLSA, Lake Mahopac, N. Y.

POULTRYMEN! ATTENTION—S. C. W. Leghorn and Pittsfield Barred Rock Baby Chicks for March delivery. CUSTOM HATCHING. Hall Mammoth Incubator; largest, best equipped hatching plant in Eastern Connecticut. Satisfaction guaranteed. Entries in Storrs' Laying Contests. Circular. **POPLAR HILL FARM, A. B. Hall, Poultry Mgr., Box A, Wallingford, Connecticut**

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, **HAMILTON FARM, Huntington, New York**

THE MATTITUCK WHITE LEGHORN FARM established a reputation last year for supplying strong, vigorous chicks, and for fair dealing. It is our purpose to live up to this standard, and you will profit by dealing with us. Send for circular. **A. H. PENNY, Mattituck, New York**

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Single Comb White Leghorns exclusively. Baby chix. Eggs for hatching. Send for circular. **MEADOW VIEW POULTRY FARM, Lock Box 106, Suffield, Connecticut**

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EGGS—COCKERELS—CHICKS
Send for a circular
It explains how to breed great layers.

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SINGLE COMB WHITE LEGHORNS
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They are the standard for all the Leghorns of all America, and the greatest layers of all varieties of domestic fowl. I have hundreds of yearling hens and cocks for sale. Mating list free. Address

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Book your order now for Eggs, Chicks and Ducklings. Our Ducks are winners at Allentown, Hagerstown, Philadelphia and Baltimore Shows.

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The Reliable Spring Water Strain
Single Comb White Leghorns
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Day old Chicks, Eggs for Hatching. No order is to large or to small. Our capacity is 20,000 eggs at one sitting. We guarantee safe delivery of chicks, and fertility of our eggs. We can and will please you. Send in your order and secure a positive delivery date.
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SINGLE COMB WHITE LEGHORNS Exclusively D. W. Young's Strain. The finest in the world. Bred for their great Winter laying qualities. Over 2,000 layers on free farm Range. Largest plant of high class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity at $6.00 per 100; no order too large. Baby chicks $12.00 per 100; capacity 6,000 weekly. Now booking orders for March and April delivery. My book, "Profits in Poultry Keeping Solved," 5th Edition, given free with all $10.00 orders. Satisfaction guaranteed. Descriptive circulars free.
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We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.

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TYWACANA FARMS POULTRY CO. A. E. Wright, Supt. **Box 68, Farmingdale, Long Island, N. Y.**

PUBLISHER'S DESK

The spirit moves me and I must obey, or shall I say that it was stirred into existence again by the comments made by you in answer to a delightfully appreciative letter of Charles T. Root in the January 10 issue?

About four years ago, just prior if I recall it rightly to your starting the Publisher's Desk Department, I sent you $5, same to go toward a fund to help pay for costs in smoking out swindlers, grafters, guffers, and the species parasitus ubiquitous. I did this wholly from a sense of justice, feeling as I did that the work you were doing along this line, and in which you were practically pioneering, quietly, unobtrusively yet persistingly, was and is of such incalculable value as makes one feel as though it were a privilege to "ask himself in on the job."

You, as ever, characterized your policy in crediting me with a five years' subscription, that your attitude in assuming that the proprietors of a newspaper occupy a position of public trust, and that, therefore, in assuming this work unaided and alone you were acting the part. That all this endears you to all who, disdaining to act for the glory of mankind (or their own soul) yet are heart and soul for the square deal, is answered in your every issue. Permit me if you will, however, once again to insist that as you tell us in the same issue that many offer to help whenever trouble presents itself for settlement, permit me again I say, to suggest that the policy of THE R. N.-Y. is of incalculable value to every man, woman and child. If in nowise associated with the mere making of the swindler to disgorge or of exposing them, how it has helped in the uplifting of the business ethics, how innumerable other magazines and newspapers have followed in line in this good work, the facts attest, and everyone knows of it, even if they are *not* aware of the fact of your having "started something" in your espousing of this great and good work.

Again I would suggest that a fund to help pay expenses to prosecute this work should be formed; possibly a society or a committee, if you like, to account for the moneys spent by you from said fund. This would relieve you of the extra expense needed to keep the paper up to the standard you so efficiently maintain and relieve you of the necessity of the "hustle, hustle" for new subs. Real champions of common old-fashioned decency and the square deal are also few enough. Let us help to make your trials less trying—your tasks less arduous. Let us have the pleasure in so doing since it were a real labor of love. IRA ULMAN, M. D.
New York.

This is an instance where the good intention of our friends to relieve us of one burden actually puts a new load on our backs. Think of the responsibility of administering a fund for the purpose suggested in the above letter. Of course the suggested committee to account for the fund of the public as all public funds should be accounted for would relieve the situation somewhat; but we will do better to go on as we have begun on the confidence and moral support, and such other assistance as those who sympathize in the work can give. Since we began the work, clubs and vigilance committees have sprung up in all parts of the country and many papers have cleared their advertising columns of frauds and swindles. The publishers demonstrate the situation. Dishonest advertising could not live a month without their help. Nor could the swindlers thus promoted otherwise be successful if the publishers generally would tell the truth about them. We are in sympathy with every honest and practical suggestion to curb dishonest traffic. A society or committee of citizens not allied with publishing or advertising would give the greatest impulse to the work of suppressing dishonesty and frauds. There need be no cash dues. Each member could simply furnish his or her own postage. The members would simply pledge themselves to refuse to read or admit to their homes any publication that carried dishonest advertising or that published tainted literature. They would charge themselves with the duty of protesting to publishers every time they saw cause of complaint and of reporting to the secretary of the society the number of protests made. The secretary would make an annual report. Such a society would drive fake advertisers and fake papers out of existence in short order. We will help organize it any time that we can start with 100 members; and will suggest Dr. Ulman as the first President.

Mr. Max Marx, attorney for the Consumers' Butter and Egg Company, has made small cash payments on the amount due our subscribers for shipments to the company, with advice that a two year note will be sent for the balance. There is no special provision made for the payment of the notes and at least they are of doubtful value. Houses offering better than the market price are usually to be avoided.

The victims of promotion schemes usually get impatient with the receivers and State officials and courts and processes of law generally into which the concerns ultimately gravitate. The victims seem to think, perhaps naturally, that the courts and officials ought to be able to straighten out the affairs of the concerns in short order; and return them their money in whole or in substantial part. Their ideas of the business, if business is was, had been very rosy when the investment was made, and they carry the optimistic view with them into bankruptcy. The courts, however, find that the promoters worked not one but maybe a dozen different schemes and one of these was so interwoven and interlocked with the other that it was impossible to tell where one left off and the other began. This intermixing is usually effected with a purpose of deception and when the accountants get to the bottom of it they discover that there is little or nothing left on which cash can be realized. Sometimes it is asked, "What then is the good of apprehending them? Why not let them alone since the victims can hope for little or nothing anyway?" First, it is worth while to get back what little may be left. Second, it saves many of the victims from putting in more and meeting additional losses. Third, it protects other innocent persons who would be influenced to put themselves in the position of the first victims. Fourth, it discourages promoters and keeps rogues in check. It warns innocent investors against get-rich-quick schemes, and emphasizes public protest against thieves.

The attached advertisement of the Globe Association, Chicago, shows that they are at it again, offering 100 pounds of sugar for $1.75. The advertisement was taken from a cheap paper published in the State of Maine. Please sound a new word of warning. P. J. B.
Connecticut.

Certainly no old reader of THE R. N.-Y. will get caught in this trap. The only condition on which anyone can get sugar at this price is by ordering something else that you do not want and paying for it more than it is worth. But the real object is to get you to take an agency to help the concern fake your neighbors.

I don't want any premiums. The pleasure to me that my neighbor took the paper is a premium of great value to me. J. S. R.
Pennsylvania.

While we are always glad to reward those who take the trouble to send new subscriptions, we cannot help appreciating the sentiment of letters like the above, which often reach us. Friendship and interest of this kind is without price. We could not pay for it if we would. It has been a great factor in building THE R. N.-Y. up to its present proportions. We also need those who are willing to devote a little time to the work for the rewards, and we welcome it all, and feel thankful for it all.

The Missouri Supreme Court recently issued a decree of ouster against 20 wholesale lumber companies, forbidding them to transact further business in the State. It also canceled the licenses of four companies not incorporated under the State law. The defendant companies were fined heavily, the total reaching to $436,000. The ouster decree then was suspended, but will be enforced against any of the defendant companies which violate the rules of conduct which were laid down by the court. The suit of the State was based on the theory that the wholesale dealers named were members of the Yellow Pine Manufacturers' Association. They were charged with price fixing, curtailing the supply of lumber, and with instituting boycotts against retail dealers who failed to obey their dictation.—Chicago Tribune.

The suits that resulted in the above finding were started in 1908 by the then Attorney-General, Herbert Hadley. The decree of the court sustained the contention that the companies in the combine entered into an illegal agreement to control the price of lumber and limit its production. J. J. D.

SHERWIN-WILLIAMS
PAINTS AND VARNISHES FOR FARM USE

Paint as an investment. Paint for what it saves you. Paint because it makes your buildings last longer. Paint because it makes your property worth more today and worth more five years hence.

SWP
(Sherwin-Williams Paint, Prepared)

does more than merely spread over the surface and look well. It goes down into the wood, takes hold and hangs on. It covers well—and lasts. It halts depreciation. Use it in all important outside painting. For every paint use, indoors and out, about your property, you need the helpful aid of our book, "Paints and Varnishes for the Farm." We'll send it without charge. Ask for it.

Best dealers everywhere
Address all inquiries to The Sherwin-Williams Company
635 Canal Road, N. W., Cleveland, Ohio

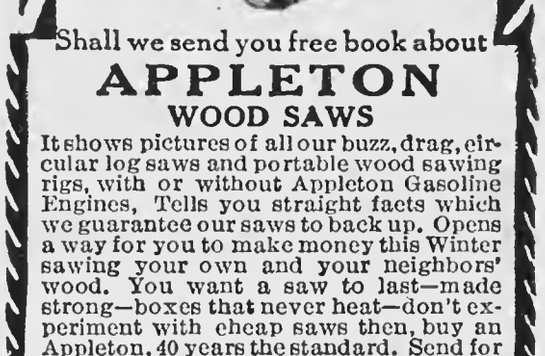
MAKE THE FARM PAY IN WINTER

You can make winter a harvest time, with money-making crops of lumber, if you have an "American" Portable Saw Mill. Your own wood lot, and your neighbors' await your axe and your saw and your mill, ready to yield a valuable crop of first-class lumber that will find a ready local sale at good prices. You have the team, the time and the engine. Buy an inexpensive "American" mill and you'll have all the outfit you need to do a profitable lumbering business. Start with your own wood lot, then work out into the country around you. Every wood lot has money in it for you. Show its owner how you can make lumber and money for him. Begin by sending to us for our new book No. 26 which tells the story. Write nearest office today.

In the largest mill or on the farm the American is recognized as STANDARD.

AMERICAN SAW MILL MACHINERY CO.
129 Hope Street, Hackettstown, New Jersey
1383 Terminal Building, New York

With 8 H. P. Cuts 2500 ft. Per Day



Shall we send you free book about
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WOOD SAWS
It shows pictures of all our buzz, drag, circular log saws and portable wood sawing rigs, with or without Appleton Gasoline Engines. Tells you straight facts which we guarantee our saws to back up. Opens a way for you to make money this Winter sawing your own and your neighbors' wood. You want a saw to last—made strong—boxes that never heat—don't experiment with cheap saws then, buy an Appleton, 40 years the standard. Send for booklet to-day. Batavia, Ill., U.S.A.
APPLETON MFG. CO. 627 Fargo St.

WE PAY THE FREIGHT
Brown Fence
Strongest, most durable made. Basic open hearth wire. *Double galvanized.* Compare our quality and prices with others.
Bargain Prices—Direct From Factory
150 Styles—13 Cents Per Rod Up
We pay freight anywhere. Write now for free fence book and sample to test.
BOOK FREE
THE BROWN FENCE & WIRE CO. Dept. 59 Cleveland, Ohio
WRITE NOW

Eureka Mulcher and Seeder
Write for Free Catalog

A mulcher, smoothing harrow, cultivator, weeder and seeder—all in one. Forms dust mulch—a blanket of loose soil—preventing soil hardening and moisture escaping. Increases yield of corn, potatoes, oats, wheat, etc. Kills weeds. Has *flat teeth*, especially adapted to form mulch. Lever and pressure spring control depth of teeth. Sold with or without seeding boxes for grass seed, alfalfa, oats, etc. Teeth cover the seed. Adapted for a large variety of work. Three sizes, 8, 10 and 12 ft. Shipment from branch near you.

Write us today.

EUREKA MOWER CO.
Box 842, Utica, N. Y.

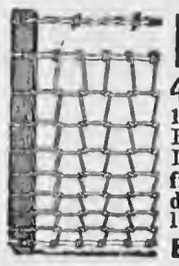
FARM FENCE FROM FACTORY TO FARM

26-inch Hog Fence,.....14c.
41-inch Farm Fence,....21c.
48-inch Poultry Fence...22½c.
80-rod spool Barb Wire, $1.40
Many styles and heights. Our large Free Catalog contains fence information you should have.
COILED SPRING FENCE CO. Box 263 Winchester, Ind.

THAT WIRE FENCE
Built quickly with the National Wrapper & Splicer. No change of grip necessary as wire is held by revolting ratchet head. (See cut). Workes in closest spaces. Fits any gauge wire. Send 75 cents money order and receive one parcel post. Money back if not satisfied. AGENTS WANTED. Quick Seller, one man sold eighteen first day out. Write today.
STA. A. NATIONAL IMPORTING CO.
Jackson, Mich.

LOW-DOWN FARM TRUCKS

We now make a full line of both Steel-Wheel and Wood-Wheel Farm Trucks, and shall be pleased to furnish you our free catalog of same. On account of the ease with which work can be done with these trucks, they are fast coming into general use. Let us have your inquiry for prices.
HAVANA METAL WHEEL CO., Box 17, HAVANA, ILL.



FARM FENCE
41 INCHES HIGH
100 other styles of Farm, Poultry and Lawn Fencing direct from factory at save-the-dealer's-profit-prices. Our large catalog is free.
21 CENTS A ROD
KITSELMAN BROS. Box 230 Muncie, Ind

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MARKETS

Wholesale Prices at New York, Week Ending Feb. 6, 1914.

BUTTER.

Creamery, extra, lb	27	@	27½
Good to Choice	24	@	26
Lower Grades	22	@	24
Storage	22	@	27
State Dairy, best	26	@	27
Common to Good	20	@	25
Factory	18	@	21
Packing Stock	17	@	19

Elgin, Ill., butter market firm at 26½ cents.
Philadelphia, western creamery, 28 cents.

CHEESE.

Whole Milk, best	18	@	18¼
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	36	@	38
Common to good	33	@	35
Mixed colors, best	30	@	31
Common to good	27	@	29
Storage, best	25	@	26
Medium and low grades	20	@	24
European, fresh	24	@	26

FRESH FRUITS.

Apples—Spitzenburg, bbl.	3 50	@	6 00
Spy	3 50	@	5 50
King	4 00	@	5 00
Hubbardston	3 00	@	4 50
Greening	3 50	@	4 75
Winesap	4 50	@	6 00
Newtown	5 00	@	6 50
York Imperial	3 50	@	5 25
Baldwin	3 50	@	5 00
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	2 00	@	3 75
Cranberries, Cape Cod, bbl	10 00	@	13 00
Long Island, bbl.	10 00	@	12 50
Jersey, bbl.	12 00	@	13 00
Jersey, crate	2 50	@	2 90
Strawberries, Fla., qt.	25	@	0 75

BEANS.

Marrow, 100 lbs	4 70	@	5 20
Medium	3 50	@	3 55
Pea	3 50	@	3 60
Red Kidney	5 00	@	5 05
White Kidney	5 75	@	5 85
Yellow Eye	4 50	@	4 55
Lima, California	5 85	@	5 95

HOPS.

Prime to choice	45	@	47
Common to good	40	@	44
Pacific Coast	23	@	27
Old stock	15	@	20
German crop	63	@	72

VEGETABLES.

Potatoes—Long Island, bbl.	2 50	@	2 75
Maine, 180 lbs	2 25	@	2 50
State, bulk, 180 lbs.	2 25	@	2 37
European, 168 lb. bag	1 00	@	1 85
Bermuda, bbl.	3 50	@	5 25
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl.	1 50	@	1 75
Carrots, bbl.	1 50	@	1 75
Cabbage, Danish seed, ton	23 00	@	26 00
Red	24 00	@	28 00
Imported	16 00	@	22 00
Chicory, bbl.	2 50	@	3 50
Kale, bbl.	50	@	65
Lettuce, half-bbl. basket	50	@	1 50
Onions—White bu.	1 50	@	2 00
Red, 100 lb bag	2 25	@	2 60
Okra, bu.	2 00	@	2 50
Peppers, Southern, bu.	1 25	@	3 00
Peas, Southern, bu.	2 00	@	5 00
Shallots, bbl.	2 00	@	3 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	75	@	1 25
String Beans, bu.	1 50	@	4 00
Squash, Marrow, bbl	2 25	@	2 50
Hubbard, bbl.	2 25	@	3 00
New, bu.	1 50	@	2 50
Egg Plants, Southern, bu,	2 50	@	3 50
Tomatoes, Southern, 6 bkt. crate	1 50	@	3 50
Turnips, white, bbl.	1 25	@	1 50
Rutabaga	75	@	1 25

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 50
No. 2, box	3 00	@	3 50
Mushrooms, lb.	15	@	25
Radishes, 100 bunches	2 50	@	3 50
Tomatoes, lb.	20	@	25

LIVE POULTRY.

Chickens, lb.	14	@	15
Fowls	16	@	17
Roosters	11½	@	12
Ducks	17	@	18
Geese	13	@	14
Guineas, pair	60	@	65

DRESSED POULTRY.

Turkeys, fresh killed, best	24	@	25
Common to good	18	@	22
Chickens, choice broilers, lb.	28	@	30
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	10	@	16
Geese	15	@	17
Squabs, doz.	1 00	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	19 00	@	20 00
No. 2	17 50	@	18 50
No. 3	15 00	@	16 50
Clover mixed	13 00	@	19 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	6 40	@	6 75
Bulls	5 00	@	7 00
Cows	4 00	@	6 25
Calves, prime veal, 100 lbs	9 00	@	12 00
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	5 25
Lambs	7 00	@	8 25
Hogs	8 00	@	9 00

MILLFEED.

Wheat Bran, ton	24 50	@	26 00
Middlings	27 00	@	28 50
Red Dog	29 00	@	30 00
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	32 00

COUNTRY-DRESSED MEATS.

Calves, best	15	@	16
Fair to good	11	@	13
Buttermilks	08	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 02	@	..
No. 2, Red	1 01	@	..
No. 2, Hard Winter	100	@	..
Corn, as to quality, bush.	70	@	71
Oats, as to weight, bush.	43	@	45
Rye	65	@	69

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	42	@	45
Mixed colors, new laid	35	@	38
Ordinary grades	30	@	32
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb,	25	@	28
Fowls	22	@	25
Turkeys	26	@	30

PRODUCTS, PRICES AND TRADE.

The one-fourth cent cut in wholesale milk referred to previously has been extended to cover more business during the week. There is still, however, considerable trade at prices previously reported, $1.71 to $1.81 for C, and $1.91 for B. The new N. Y. health director has declined to extend the date for compulsory pasteurization, which was in effect February 1. This means that all B and C milk must be pasteurized, even though sold for cooking purposes. The only exceptions to the order will be specially inspected grade A and certified milk.

*

Butter advanced one cent during the week over its last reported low record for this part of the year. Most of the wholesale business in fresh creamery is in the range of 26½ to 27½. Several hundred tubs of best storage creamery have sold at 27½. Trade in worked over and packing stock is dull, the receipts showing a heavy proportion of low quality. During January, 210,000 pounds of foreign butter was received at New York. Practically all of it was sold at once to consumptive trade, only 800 pounds being stored. According to the Custom House report the countries of import, quantities and values were as follows:

	Pounds	Values
Denmark	15,072	$3,932
Germany	16,398	2,682
England	44,523	11,149
Canada	25,213	4,790
Argentina	100,800	26,168
Turkey, Asia	6,158	1,364
France	726	243

*

Fancy white eggs are held at practically the same price as last week, 39 cents, but this refers only to large sizes. Those with but a slight mixture of small sizes go at 35 to 37 cents, and few colored eggs bring over 33. In western gathered eggs of high quality, sales at 28 to 33 cents are noted. Prices are weak on storage stock, 26 to 27 for good grades.

*

Up to January 16, cotton ginned in this country amounted to 13,589,171 bales. In an average of seven years it has been found that at least 95 per cent of the current crop is ginned at this date. The figures given include 76,182 bales of Sea Island cotton.

*

The Boston wool market has been firm during the past week, and decidedly in the seller's favor. Stocks in dealers warehouses are getting low, and contracts for several million pounds on the sheep's back are reported in the west at prices running from 12 to 15 cents. Sales of fine unwashed Ohio and Michigan have been noted at 22 to 23 cents, and washed Delaine 27 to 27½.

*

The Brooks weights and measures law is now in effect in N. Y. State. It provides that:

Bread must hereafter be sold by weight, marked on the loaf or wrapper in boldface type.

Candy in containers must be marked either with the net weight of the contents or with the gross weight and weight of container immediately thereunder, or with the number of pieces of candy.

Wood shingles for building must be sold by numerical count.

Salt must be marked with number of pounds in the package, a three per cent variation being allowed.

Canned goods must bear net weight of contents in pounds or ounces, or by the weight of the fruit or vegetable and the weight of the immersing fluid separately, or by the total contents in gallons, quarts, pints, half pints, gills or fluid or fluid ounces.

All meats, butter and cheese must be sold by weight, and packages containing these and poultry products must be plainly branded with the net quantity in terms of weight, measure or numerical count. Butter in prints must be marked in avoirdupois pounds or ounces in letters at least three-sixteenths inch high. An extreme variation of three-eighths ounce will be allowed on a one-pound print, but on a lot of 12 prints the shortage must not average more than one-fourth ounce per pound.

It has been a quite common practice with farmers to ship a case of eggs on a certain day, even though a dozen or two short of the full 30 dozen. This will apparently be against the law now unless the exact number is marked plainly on the case.

Violations of the law are finable at from $25 to $100 for first or second offense and $100 to $500 for third offense.

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

Subscribers Exchange

MUST SELL FARM—94 acres; boarding-house, 26 rooms; new buildings; bargain; $1,000 down. BOX 15, Accord, N. Y.

FOR SALE, TO SETTLE ESTATE—Extra good 127-acre 20-cow dairy farm, situated in Milton; main road, fine buildings, silo; modern conveniences; never-failing running water in pasture and buildings; fruit, sugar orchard; equipped; telephone; mail delivered; very pleasant home; stock and tools if desired. CHAS. McNALL, Milton, Vt.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Woman for general housework. Apply to N. M. KISTLER, Emporia, Va.

YOUNG MAN wishes position on commercial poultry plant. M. E. care R. N.-Y., 333 West 30th St., New York.

WANTED—Position as manager of a farm; fruit preferred; American; reliable, theoretical and experienced; immediate liberty. E. GODFREY, Jr., Tannersville, N. Y.

WANTED—Position as superintendent or foreman of farm by mature man of experience, ability and high-class reference. BOX 100, White Lake, N. Y.

POSITION WANTED BY AMERICAN, single, driving milk wagon by March 1st; peddled before; good references. R. W. DAVIES, Matamoras, Pa.

EXPERIENCED FARM MANAGER seeks position on country place or gentleman's farm. Address J. B., care R. N.-Y., 333 West 30th St., New York.

WANTED—A single man to do general farm work and teaming; must be sober and industrious. BERKSHIRE INDUSTRIAL FARM, Canaan, N. Y.

WANTED—Married barn man; 50 head; wife board two men; reliable parties only, who can furnish best of references; state fully wages, etc., first letter. D. N. COLT, Elmwood, Conn.

SINGLE experienced farmhand wanted on Western New York fruit farm; good teamster and willing worker; highest wages; no cigarette or drinking man wanted. Address SINGLE, care R. N.-Y., 333 West 30th St., New York.

WANTED—Position as working farm foreman or teamster on large farm; married; age 28; life experience; can handle all kinds of farm machinery; five years last position. LOCK BOX 16, High Bridge, N. J..

WANTED—An energetic married man to manage farm where another man is kept; must understand care of cows, pigs and chickens, incubators, brooders, etc.; wife for general housework. BOX 15, Stevensville, Sullivan Co., N. Y.

POSITION WANTED—To take charge of a poultry plant; single; 35 years; thoroughly experienced with utility and exhibition stock; also understands general farming; state wages. R. J., care R. N.-Y., 333 West 30th St., New York.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

ORCHARDIST OF EASTERN TRAINING and wide experience in East and Northwest solicits correspondence with orchard owners and fruit district officers that want results through a competent manager; modern business methods and economic efficiency; references. W. G. YEAGER, Sprankle Mills, Pa.

ARE YOU INTERESTED in securing a practical, up-to-date farm manager? Twenty years' experience using practical, economical business methods. Not a theorist. One who knows how, why, and can produce results. References, bond. W. A. MAYOR, 332 Indiana Ave., Watertown, N. Y.

WANTED—Position as Superintendent on gentleman's place or large estate; married, no children; 30 years' practical experience as market gardener and farmer on my farm, which is for sale; familiar with all machinery, fruit, stock, poultry, incubators and nationalities as help; state salary and privileges; references given and required. Address BOX 116, Center Moriches, N. Y.

MAN AND WIFE—No small children; working farmer to take charge 250-acre dairy and general farm in Central New York. Must be honest, industrious and capable; education and experience in up-to-date methods preferred; unusual opportunity for right party. To receive attention answer must give full particulars regarding applicant and be in own handwriting. Address D. W., care R. N.-Y., 333 West 30th St., New York.

WANTED — Hens' feathers. A. LATHROP, Granby, Mass.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

APPLE SCIONS from healthy trees; McIntosh and other varieties. J. H. BARCLAY, Cranbury, N. J.

SIFTED SWEET CLOVER SOIL (surface).—Plants "lousey" with nodules. Apple scions from bearing orchard. ISAAC C. ROGERS, Dansville, N. Y.

FRUIT TREES TRIMMED by practical fruit grower and largest peach producer of Bergen County, N. J. Orchards planned and planted. Special rates for Winter contracts. H. W. COBB, Glen Rock Fruit Farms, Ridgewood, N. J.

FARM FOR SALE—225 acres. Apply to OWNER, Box 337, Emporia, Va.

FOR SALE—63 acres, lake farm, good land and buildings; lots of fruit. J. F. WILSON, Hayts Corners, N. Y.

EXCHANGE—A choice residential property in Montclair, N. J., valued at $30,000; will exchange all or part for desirable, well-improved farm in northern New Jersey. OWNER, care R. N.-Y., 333 West 30th St., New York.

WANTED—Small farm near New York City; Orange County preferred; must be low priced; near school. G. F. MOLNAR, 119 Howe Street, Bridgeport, Conn.

320 ACRES at $20; virgin soil, in Western Nebraska; easy access to railroad and markets; best reasons for selling; terms and full particulars of HOYT L. JOHNSTON, Owner, Ballston, Virginia.

FINE POULTRY AND DAIRY FARM for Sale—116 acres, completely equipped with all machinery; 1,000 White Leghorn chickens; horses, cattle and hogs; 28 miles from Philadelphia, Pa. Call or write. L. R. McNEAL, Chester Springs, Pa.

ROOFING SALE

More than $500,000 worth of every make and kind of brand new, dependable roofing now being offered at such remarkably low prices, that we ask all in need or who contemplate buying to hesitate placing orders until they get these remarkable

Bankrupt

Prices. This lot consists of every known make of roofing—Galvanized, 2¾c per sq. ft.; Corrugated Steel, 1¼c per sq. ft.; Rubber Surfaced Ajax Roofing, 62c per square, etc.

DOWN GO ROOFING PRICES

Our World Wide Roofing Defy!

We challenge the world on roofing prices and quality. We positively guarantee to save you from 30% to 50% on any kind of roofing whether metal or ready roofing and we challenge any manufacturer, dealer or mail order house in this or any other country to sell our quality roofing at anywhere near the price that we are offering it. This challenge is open to all and we back it up with the entire strength of our $10,000,000 capital.

When we say that our roofing prices are "lower" than all others we do not mean that we have shaded our prices just a trifle in order to make it possible for us to issue this broad and sweeping challenge. It means that our prices are **way** below the prices quoted by all other concerns—that we do in fact, save you anywhere from ⅓ to ½ on all your purchases of either metal or prepared roofings and we give you a binding guarantee to that effect.

Make Us Prove Our Claims

When we make claims as strong and unqualified as the foregoing, you owe it to yourself to make us **prove** them. Because if we can actually save you from 30 to 50 cents on every dollar you spend for roofing and also guarantee the quality, you surely want to benefit yourself by this great saving.

We don't ask you to take our word for it nor the word of our thousands of customers all over the country who **know from experience** just how much they have saved by sending us their roofing orders. You can easily prove for yourself every claim we make without any expense or obligation on your part.

Get Free Samples And Freight Prepaid Prices

and it will take you less than five minutes to figure out just how **great** your saving will be on any amount or kind of roofing you buy. We will send you a liberal assortment of free samples of Galvanized Steel Roofing of different weights in corrugated, flat, V crimped and standing seam, Brick Siding and Beaded Ceiling and also samples of our famous Rawhide Ready Roofing, rubber surfaced, pebble, flint and marble coated in 1, 2 and 3 ply. By comparing these samples with other roofings you can judge the **qualities** for yourself. By comparing our **freight prepaid prices** with prices quoted by others you will know to a cent just how many dollars you can save if you place your order with us.

You positively cannot afford to buy a single foot of roofing material of any kind, whether it be for house, barn, granary, sheds or any other purpose until you first get this big lot of **free samples** and learn for yourself how much we can save you. Mail coupon for free samples and freight prepaid prices **today.**

Why Our World Challenging Low Prices Are Possible

We are known the world over as the **World's Greatest Price Wreckers.** Twenty years ago under the name of the Chicago House Wrecking Company, we started in the business of buying up and wrecking large buildings, expositions, etc. In the work of dismantling large buildings we encountered every kind of roofing material. We learned which kinds wore the best and longest and why—the advantages of metal roofings and the advantages of Ready Roofings. We made a study of their strong points and of their weak points. And we determined that if we ever sold roofing of any kind it would be only of a quality which could honestly be said to have **all** of the strongest points of the best roofing made and not a single one of the weak points.

Today we sell more roofing and building material of all kinds to the consumer than any other concern on earth. Most of our roofing is made by us. In making roofing our many long years of experience taught us what methods and materials should be adopted in order to get an absolutely storm-proof, water-tight, fire-resisting roof of the highest attainable quality and just what to avoid in order that our roofing might not have a weak point about it. Send for free samples and see how well we have succeeded by making a comparison of our roofing with others.

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Corrugated Steel Roofing At Per Square Foot Only 1 1/4¢

This is just one example of the amazing low-price roofing bargains we are now offering. All roofing in this lot is guaranteed clean, brand new stock. Steel Roofing of this grade and weight has never before been sold at anywhere near this price. Be sure to get free samples of this. It will pay you big to supply your roofing needs for years to come because you'll probably never have another chance to get high grade roofing at such a great saving.

Galvanized Steel Roofing Per Square Foot Only 2¾¢

Here is another wonderful bargain. Mind you this is genuine galvanized steel and comes in corrugated, V crimped, standing seam and brick siding, is practically rust-proof, makes an absolutely water-tight, fire-resisting roof—lasts a life time. Price smashed to smithereens on this lot—as low as 2¾c per square foot. Order in quantity lots and save money. Don't fail to mail coupon for free samples.

Rawhide Ready Roofing

As tough as its name. Nothing finer on the market at any price. It is simply impossible to make tougher, stronger, better appearing ready roofing than this. The body is finest quality tough fibred felt, saturated and re-saturated with genuine Trinidad Asphalt—the best, most durable water-proof substance known. The surface is coated with sand, gravel, pebbles, flint, or marble as you prefer. Comes in 1, 2 and 3 ply suitable for any purpose from roofing the finest residence to a hen house. All weights—makes an absolutely storm and water-proof roof—fire and lightning resistant to a high degree. Mail coupon for free samples and freight prepaid prices on this best of all ready roofings.

Get This Free Roofing Book First

Now, then, before you decide upon any particular kind of a roof you certainly owe it to yourself to let us lay our entire roofing proposition before you. Our free roofing book tells you the complete story. You need it. Gives lots of roofing information that you should know. Tells you about the different kinds of roofing materials—which kinds are best adapted for various purposes, their relative cost, etc. Proves conclusively that we can save you **big** money on every kind of roofing. But we will do more than merely save you money. We have the most complete roofing Department of any concern in America in which we employ a number of the best roofing experts in the country. The services of these experts are at your command absolutely free—they will tell you anything you wish to know about roofing and advise you impartially and intelligently. Just write us your roofing needs—tell us the kind of building you are figuring on roofing and about how many square feet of surface there are to cover and our experts will tell you what kind of roofing you should buy, how many squares you will need and will give estimate on total cost.

No Advance Deposit Required

Even if you have no immediate need of roofing, it will pay you to have us lay aside a supply for you to be delivered later—for we tell you frankly that the low prices we are now quoting have never before been equaled and probably never will be. Just state about when you will want your supply and we will hold it out for you without any deposit. Will make immediate shipment if you prefer.

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You may order any amount of roofing you need direct from this advertisement with absolute safety. Our reputation for dependable merchandise and honest dealings is known from one end of the country to the other. We guarantee our representations absolutely. When you deal with us you can do so with perfect confidence that you will be fairly treated and **always** receive exactly what you order.

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Send me free copy of your Roofing Book and free samples of Galvanized Steel and Ready Roofings together with freight prepaid prices on same.

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If you desire our roofing experts to give you an estimate and advice, tell us the kind of building—whether house, barn, etc., you are figuring on roofing—and send a diagram showing dimensions, location of rafters, etc. This expert service is absolutely free to you.

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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SOME NEW ENGLAND PROBLEMS.

Harder than Pioneer Work.

I learned to shear sheep before I learned to clip coupons, to break steers before I broke in clerks; I learned the farmer's tricks before I learned the city man's, to make tallow candles before I saw electric lights. And I know that the city man's tricks are quite as clever as the countryman's, are on a larger scale, and also that they are more difficult of legal proof, chiefly because those conversant with the operations are implicated therein and would incriminate themselves should they reveal them, or if immunized would lose not only their present position, but be unable to secure another in the same or allied lines. Self-preservation being the first law of nature, they naturally remain silent.

It is all very well to urge the Eastern farmer to keep more live stock, to raise more beef, mutton and pork, to turn his idle pastures and waste land to profit; but what will he do with the meat when he has raised it? Sell it, to be sure. Thank you, but where? Why, the "beef men" will take it. Certainly, but at their own price, pleasure and place, or not at all. Then sell it to the markets direct. Capital! But they *will not buy it!*

That is a strong statement and a bit difficult to prove until you try the selling. However, if you know intimately a few marketmen, and have their confidence so that they know you will not quote them by name, you may learn a lot. And here is what I learned from some of them.

I went to a man I know well, and asked him if I could make a three years' contract with him to furnish him all his beef for that time, for 10 per cent below the market, whatever that might be during that period, showing him that I and some associates stood ready to do that and guarantee it by a suitable bond; *provided* that he would sell his beef at five per cent below the current retail price. But not he. He hemmed and hawed, said it would not be as heavy or as mature as Western beef, etc., etc., and when assured that he would have the same or better beef, he backed and filled again. Finally, after much careful and deft questioning, he admitted that should he buy beef from me under such conditions, he could not buy pork and mutton and poultry and lard, etc., at any fair price, or bought, could not get such quality or service as would enable him to hold his trade or do business. And corroborative testimony was secured from others.

Under such conditions, is it at all surprising that the growing of live stock on Eastern farms has become unprofitable?

But such tricks are not confined to city meat interests. Listen to this from the banana trader.

A certain retailer, tired of the dictation (as he considered it) of a big fruit concern, began buying his bananas from a small independent importer. Ere long the latter's supply was exhausted, so the retailer went to the representative of the big concern. The price quoted was stiff, and the quality (number of "hands" on a bunch and size of fruit) below what he had been getting for less. He kicked, but was told to go back to his other source of supply or take what they offered at their price—and, as the narrator, who was the salesman for the big company, said to me, "he would get it when we got good and ready to send it to him."

Perhaps you are not interested in turning waste land into beef, and care not a bit about the banana trade, and are content to raise French turnips on

A FAMILIAR TYPE OF NEW ENGLAND COUNTRY HOME IN SUMMER.

your thin soil. Very well, but what can you sell them for?

One New England farmer did raise a lot of those turnips, and he scraped them and washed them and assorted them to uniform sizes to each sack and sent them to "the most reliable commission house in the city." They sold fast enough, in fact, so fast that the farmer's son—who chanced to have a city position, though living on the farm—was suspicious. So he did up a few turnips in a package, made a canvass of the commission houses, and could not get an offer of even as much as the first house had made returns at. Then he took his samples to a big retail store and talked to the buyer, showed him the samples, explained that all his crop was of equal quality, that it was put in sacks with turnips all of a size in a sack. The buyer was interested, but was well stocked just then; however, would like a price. "Seventy-five cents a bushel," said the farmer's son. "I only paid *seventy cents* a bushel for those hundred sacks there." And those sacks had that son's father's tags on them and he had received a return of *forty-five cents* a bushel, less 10 per cent commission!

Get that buyer to testify in court as to what he paid? Not much. His business was to keep the store supplied with vegetables, and he would not hazard that and his position by talking. And the farmer's son knew it.

Does it stop there? I am told not, but do not know from experience, and being a man with a family to care for, I am decidedly disinclined to learn by experiment. It is said to go as far as this: If you are alone, not a member of some "housewives' league" or similar body, and do a bit too much talking or kicking, you find yourself in a sense "boycotted" by the retailers. You get inferior goods, higher prices and poorer service until life becomes a burden. How can it be remedied? Do not ask me. I am not a doctor of political economy. I am merely a reporter. LAWRENCE COLBURN.

DEVELOPING AN OLD APPLE FARM.

We have in our possession an abandoned farm about 20 miles distant from our home. It contains about 80 acres, and not more than 20 acres could be cultivated with profit, though there is some low meadow land besides. The rest is pretty rough and broken, some woodland and some land that should have wood on it. There are a few scattering apple trees, and the fruit seems to be of better quality than we get here, being very highly colored. A good nine-room house and a barn (which needs repairs) comprise the buildings. It is six miles to a good market and about two miles to a railroad station. If we went there ourselves I should stock up with a team, two cows, a few pigs, etc.; would clean the rubbish out of the woodland, save the best young trees and sprouts, and reforest some rough land; plant fruit trees and keep hens or pigs among the trees, if the spraying did not interfere; also try out some small fruits and garden truck. Would it be practicable to find a tenant who would take any interest in building up the place working at permanent improvements instead of paying cash for rent. What arrangement could be made with such a one, and what inducements held out of future reward, etc. C. S.

Bridgeport, Conn.

It is doubtful if you can find a satisfactory tenant for such a place. From the statement given no man could hope to make more than a bare living on such a place until fruit came into bearing, and that would take several years and considerable expense. For at least five years the man on such a place would have to put much of his labor into "future"—that is with small hope of returns until orchards or small fruit were old enough to give returns. The ordinary tenant who would take such a place could not afford to work in this way and then perhaps lose the results of his labor. In order to develop such a place we think you will have to hire a good farmer to do the work and this will prove expensive—perhaps more so than the place is worth. We do not wish to discourage anyone but having been through something of this sort we know what it means.

FURTHER CRITICISM ON MIXING CONCRETE

From our experience I think Maurice E. Kent's criticism of R. P. C. on concrete mixer, on page 43, is justified, especially if cinders were used instead of stone in the mixture, as it is very doubtful if such a machine would keep the heavy part of mixture in suspension. Mr. Kent's suggestion that a mixer should be of sufficient size to use one bag of cement in each batch is a good one. His further suggestion that where a small job of concreting is to be done, the work can be done more economically by hand than to build a machine is a good one, but with the suggestion that a satisfactory home-made machine cannot be built at a moderate price I cannot agree with, as experience here has proven the contrary.

We procured a piece of double-strength 1½-inch pipe of sufficient length, went to a junk yard and found several old bearings and a pair of heavy gears from an old mower, reducing about six to one. The ends of pipe were trimmed off to fit the bearings at a local machine shop, and a plug fitted in one end. Several holes were drilled in pipe near centre for admitting water to machine while in operation, an old keg being used to gauge water for each batch. A short piece of pipe was screwed into lower edge of keg and a piece of ¾-inch pipe extended a short distance into end of pipe opposite plug. The drum was made of 2-inch oak plank, about two feet in diameter. These planks were fastened together and sawed round, then fastened to pipe shaft by an iron flange, which is set-screwed to shaft and bolted to end. No. 10 sheet iron is screwed to two-inch oak ends with lag screws, the drum being about 30 inches long. A portion of shell about one foot wide is left loose for filling and discharging mixer, this cover being held in place by several studs, with taper keys driven in outside.

AUTO HAULING SIDE DELIVERY RAKE.

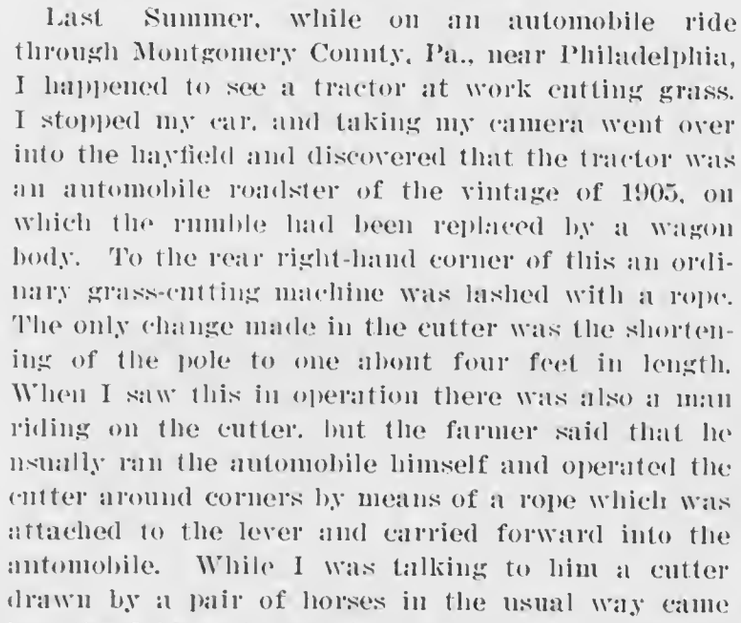
The frame is of oak and the old gear has bearing on frame.

Several such mixers are in use in this neighborhood by farmers who have a 2½ to three horsepower gasoline engine. They move from one farm to another, doing a good business in laying concrete. The expense of construction ranges from $15 to $30, according to the mechanical ability of person building same. From personal experience I know they are satisfactory. These men charge about $4 per day for their own time and machine and $2.50 for the help they employ, general laborers' wages being in this section 15 cents per hour and board themselves. ELMER J. WEAVER.

Lancaster Co., Pa.

HAYMAKERS IN MOTOR CARS.

Last Summer, while on an automobile ride through Montgomery County, Pa., near Philadelphia, I happened to see a tractor at work cutting grass. I stopped my car, and taking my camera went over into the hayfield and discovered that the tractor was an automobile roadster of the vintage of 1905, on which the rumble had been replaced by a wagon body. To the rear right-hand corner of this an ordinary grass-cutting machine was lashed with a rope. The only change made in the cutter was the shortening of the pole to one about four feet in length. When I saw this in operation there was also a man riding on the cutter, but the farmer said that he usually ran the automobile himself and operated the cutter around corners by means of a rope which was attached to the lever and carried forward into the automobile. While I was talking to him a cutter drawn by a pair of horses in the usual way came into the field, and started to work back of the automobile. Before the round of the field had been made once the automobile had come up behind the horse-drawn cutter, thus demonstrating that it was cutting twice as fast as the same size of machine drawn by horses. The operator told me that he used ordinary air-filled tires, and in fact the automobile was a regular pleasure vehicle, and on Sundays he removed the wagon body and put back the rear seat, and took the family out for a ride, while during the week he made daily trips to the station with milk and produce loaded in the wagon body.



MOWING BY AUTO POWER.

Passing along the same road about 10 days later I saw him in another field, and this time he had a side-delivery hayrake attached to the automobile in the same way, which he was operating by himself, and he told me that the day I had seen him with an extra man on the cutter was the only time he had used a man during the season. This might prove a valuable suggestion to those of your readers who own automobiles and find themselves short of help during the haymaking season. B. S. M.

New Jersey.

DOES CORN GROWING PAY?

Do you consider it more profitable to raise corn, or is it better to raise other crops and buy the corn? J. G.

Cheshire, Conn.

It depends upon the other crops which you grow, and the live stock which you intend to keep. It is doubtful if ordinary corn will pay to sell as grain in the Eastern States. Western corn is largely brought into the Eastern markets, and now corn from South America is being imported. We figure that we can raise grain in an ordinary year for just about what it costs to buy in the market, and that we have the stalks for feeding in addition. Formerly when corn was cheaper we found it better economy in our own locality to raise sweet corn, sell the green ears and feed the stalks. The cash return from an acre of sweet corn would usually buy more grain than we could raise on an acre of field corn. In addition to this many varieties of sweet corn enabled us to grow a double crop on the same land, or at least to have a longer period of growth for a cover crop following the corn. Where one is keeping cattle, the corn crop should not be given up, for there is probably nothing which can be grown on our Eastern farms that will give more cow food to the acre than a well-grown crop of Indian corn. If it can be put into the silo, so much the better.

In figuring this value you must consider a good many things. What will it cost you in cash to buy the grain and fodder which the acre of corn produces? That will show you what you must grow in potatoes, garden crops, or other products to offset the acre of corn. Then figure the cost in labor and in money to grow both crops. Find out how many acres of corn one man can care for as compared with the other crops when using improved machinery. Also consider another thing: the value of corn in its effect upon the ground. Where one is plowing a sod, or plowing under cover crops year by year, there is probably nothing quite equal to the corn crop for its mechanical effect upon such soil. Corn grown after a sod, and properly worked, fits the ground admirably for potatoes or other farm crops, which are not so well adapted to sod. Thus it appears that this is not a general question, but one which must be figured out by the individual farmer. We know a number of farmers who still continue to grow corn, largely because they have always done so, and because other farmers do, yet it would be easy to figure out from their returns that potatoes and similar crops would pay them far better. In our own case we gave up growing corn during the time of cheap prices, and have now come back to growing it because the figures proved that it paid to do so.

MORE ABOUT THAT "PROGRESSIVE SON."

On page 138, in an article by W. J., are some very peculiar statements if they are true. W. J. perhaps would be willing to give some further information. Who paid for the young man's education? Is there any mortgage now on the home farm? Did he spend his vacations at home helping with the farm work? What kind of a record did he make while at school? There must be some report cards giving his standing from time to time that would be very interesting. Is the young man efficient in anything? Can he make preparation to grow a crop of potatoes, and grow them according to any method that the authors of the method would recognize?

Has the young man a reasonable amount of plain farm sense? Is he dependable, or must some one else look after all of the many emergencies that happen upon the average farm from time to time? If W. J.'s picture of the father is correct and true he is an odd one among the fathers who have sons who are graduates of an agricultural college. The father may have reasonable doubt as to whether the young man has the necessary energy to keep a manure spreader greased and under cover when not in use. The young man surely made a mistake in not accepting the attractive salary, as taking care of his father is a job too large for him to hold down. If that young man was good for anything his father would be willing to be chore boy for him. UNCLE JOHN.

SOY BEANS AND VETCH FOR ORCHARDS.

About 15 men a day are writing in to us to learn how to handle Soy beans and Winter vetch. Perhaps half of them are orchardists who wish to use one or the other plant, sometimes both. The Soy beans are sown about May 20 to June 1, in drills 28 inches apart, and are cultivated all Summer. At the last cultivation vetch is sown broadcast, and covered by the cultivator. At least part of these orchardists expect to remove the beans themselves, either for grain or for seed, leaving the vines for mulch; that is, spreading them back on the ground. After thrashing, the vetch comes on as a cover crop, and by the 10th of May the ground would be simply a mass of vetch plants, when they will be plowed under giving their great store of nitrogen and humus to the trees, the ground being then fitted and again planted with the Soy beans.

About the only thing that would lack in this programme would be a proper application of phosphorus; then if the ideas of our orchardist friends amount to anything the orchard would be receiving just what it needed, cultivation during the Summer, the Winter cover crops, and the application of nitrogen and humus when the vetch is plowed under in May. If we were going on our estimate, the Soy beans would not remove more than 20 or 25 pounds of nitrogen, and the vetch would all probably add as high as 90 pounds per acre.

A few things have to be learned about growing these two crops. For the Soy beans prepare a real good seed bed; do not sow until the ground is warm, putting them in with a grain drill, stopping what holes you do not need. Apply inoculation with soil sown at the same time through the fertilizer box, using about 30 pounds of seed per acre, cover it very shallow, just barely covering it and no more. Cultivate them three or four times, but do not cultivate after the bloom appears. For New York State use Jet, Mongol, Ito San, or Medium Early Green varieties, our preference being in order named. Inoculation is decidedly important. The beans do not usually find their bacteria, and if they do find them, they will remove as high as 125 pounds of nitrogen from the soil.

Then for the vetches, simply sow in broadcast, or with a one-horse drill, the former being our own method, using 45 pounds seed per acre, sowing not earlier than July 1, and not later than August 20. We prefer to cover this seed half or three-fourths of an inch, and our experience has been that inoculation was very necessary. Some men tell us that they succeeded without inoculation, but we have failed two or three times, until we got the inoculation. Where you do not intend to use these plants in orcharding, the vetch works up nicely sown at the last cultivation of corn, and may be followed with Soy the next year, or may be plowed under in time to sow Alfalfa, or some catch crop, like Sorghum. Some few farmers contemplate growing corn after corn with the vetch plowed under each year. There is worse soil abuse going on than this, but we do not approve of the idea. CHAS. B. WING.

Ohio.

TREES AS "SCAVENGERS OF THE AIR."

The following clipping, cut from a newspaper, sounds to me a little strange. Will you state whether it is true or false?

"If we cross one of our avenues on a hot day when the temperature is 130 degrees Fahrenheit, and pass into the shade of a tree, we are refreshed by the cool air. What makes the change? Not in the shade alone, but chiefly because we are in the presence of a body that has a fixed temperature much cooler than the street. If on a cold Winter's day we pass from the temperature of the street, at zero, into a group of trees, we are surprised at the warmth. This is not only due to the shelter they afford, but more largely to the warmth of the tree, which at 54 degrees Fahrenheit, is 54 degrees warmer than the street. These facts suggest that if our streets are well supplied with vigorous trees we should have much cooler Summers and warmer Winters, as the temperature of the tree never varies from 54 degrees Fahrenheit in Summer's heat or Winter's cold. The tree has the power of absorbing and thus removing from the air the malarial emanations from the street, and from putrefying waste matter, so abundant in cities. In this respect they are the scavengers of the air and protect people from a large number of what are known by sanitarians as 'filth diseases'." C. D. C.

New York.

The clipping you enclose is largely false. Like almost all matter that appears on scientific and technical subjects in the daily press and in many journals, it has a basis of truth. In the first place, it is true that the trees absorb a vast quantity of carbon dioxide from the air during their growth, but, so far as I am aware, this does not prevent any disease, nor is there any disease directly traceable to carbon dioxide alone when taken into the body from the atmosphere as we are doing continually. In no other way are the trees "scavengers of the air." It is also true that when the life processes of the tree are going on during the Summer months, the tree gives off large quantities of water vapor, which possibly you may have noticed descending beneath the trees in the form of a slight mist. I think it is true that this makes the shade of the tree somewhat cooler than would be the shade of a house or an awning. Trees do not, however, warm up the space beneath them, nor is the temperature of a tree at all constant. Those who have had any experience in chopping down trees in the Winter will know that often they are frozen right through the heartwood. In the Winter they are dead to all intents and purposes, and even the absorption of carbon dioxide does not go on, while the Winter is, of course, the time of year when the air contains most of this gas. R. P. C.

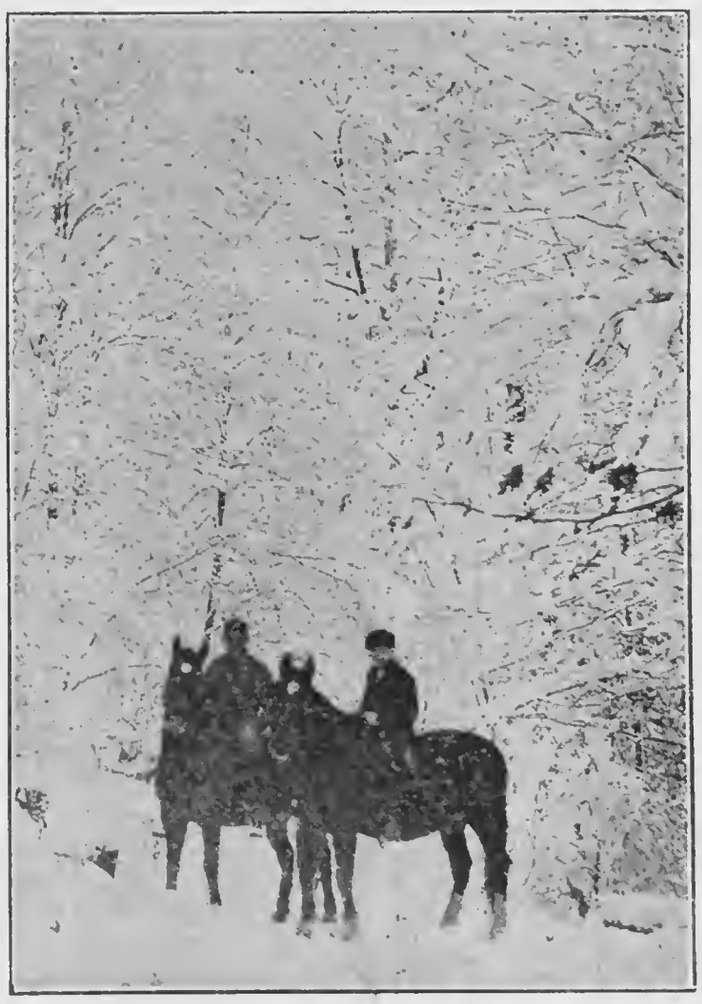
"FARMING ON SHARES"—THE OTHER SIDE.

The article on farming on shares on page 2, is an excellent one and very well written. The trouble with E. D.'s farming was not at all in the method, but in the kind and size of the business, and in the condition of the land and stock when he took the place. Owing to the condition of the farm, a large

ORANGE RIVER, FLORIDA, IN FEBRUARY.

part of his labor went toward bringing it up. For this he will receive no reward unless he stays a term of years. Even so, a farm carrying only 12 cows and having no other source of income; is not capable of supporting two families in any style. They could exist on the income, but they would not be buying many motor cars. In a case like that of E. D. one should not depend on 12 cull cows for an income. The labor income is not large in dairying, even where one has the whole of it. He put his finger on the sore spot when he said: "Lack of capital prevented my raising paying crops, such as potatoes."

In an agricultural survey of Tompkins County, N. Y., it was found that out of over 600 farms, every one of the large producers, had two or more main sources of income, and usually several minor ones. In almost every case, one of the main sources was dairying, and in addition one or more of the following—hay, potatoes, apples, truck, or purebred stock.



WINTER SCENE IN PENNSYLVANIA.

The minor sources included everything else raised in the county. Besides this diversity of products on the successful farms, it was found that these averaged much larger than the average of all the farms in the survey. From 200 to 400 acres was found to be the most efficient and profitable size for the class of farms found in that county. Where these conditions were complied with, the income was satisfactory. In a number of cases where they were not the net result of the farming operations was a loss. Of course more capital is needed to run these profitable farms than the ordinary ones. In the case of E. D. we have a tenant, lacking in capital, who would like to run a farm in an efficient up to date manner. I will now give two instances which show the other side.

Eight years ago I took this place, and from about the condition of the place E. D. was on, I have brought it to a state where it yielded an income of $2,800 and now, having rented more land, I expect to bring the income up to $4,000 or more. The stock, tools and crops, now inventory about $3,600. Besides this, there has been invested $1,000 or more in improving buildings and $500 in tiling. In bringing up the farm, I have had to use good methods of farming. The fact that they were good methods is proved by their working. Having now got the farm on a paying basis, I would like to get some man who could carry the farm on without me, either hiring him or letting it to him. That would leave me free to go to college. What I wanted was to have the man work for me a year or two, to learn my methods and to try him out. I also talked with some tenants, about letting them the farm. I gathered from what talks I had that the consensus of opinion was that it was too hard work to raise my money crop (potatoes) in any quantity, even with my improved machinery, and that it was too much trouble to weigh each cow's milk once a week and put it down for future reference, and also that there was too much red tape in graining cows according to the milk flow. I am still personally conducting the farm.

That this is not an isolated instance is proven by the other case mentioned. There is another farm near here, one of the best in the neighborhood, on which considerably over $1,000 has recently been spent in improvements. The owner would be glad to spend a great deal more if a tenant could be found who would be up to date. So far, however, he has not been found. ALBERT H. DE GRAFF.

Jefferson Co., N. Y.

OMIT THE 90 PER CENT CLAUSE.

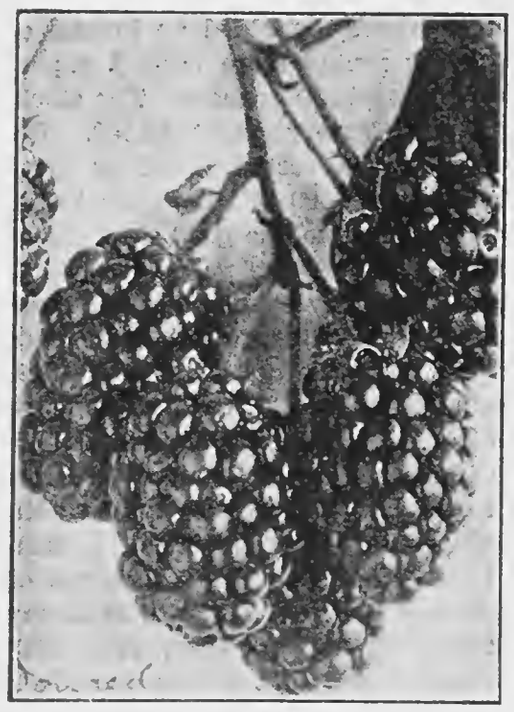
A resolution was passed by the Western New York Fruit Growers' Association at Rochester, January 30, advocating a law, to the effect that "in any barrel of apples packed for market in this State, 90 per cent of the contents shall be as good, in all respects, as those on the face end of the barrel." In other words it shall contain 90 quarts of apples like the face and 10 quarts of something else—it may be cider apples, or stones, or pumpkins. The act of Congress, approved August 3, 1912, and known as the Sulzer law, was a 90 per cent law, and the State act, known as the Wilson bill, was another. The 90 per cent clause makes them all ridiculous. It was probably intended to provide for unavoidable errors, but no apple packer ever put 10 quarts of unavoidable errors in a barrel, and no court would ever fine him for a reasonable amount of such errors, which would be much less than one per cent. We have already too many 90 per cent laws. If we are going to make all apple packers honest by law, let's aim a little higher and make them 100 per cent honest.

With our statute books full of 90 per cent laws, the Teators, the Morrells, the Kings and the Cases, who pack 100 per cent apples, would still be in a class by themselves, and the bulk of the crop would be more poorly packed than now. Small growers can only obtain the higher prices by combining, and having their apples packed and sold by the manager of a central packing house, uninfluenced by either the grower or the buyer, and unhampered by any 90 per cent. law. The proposed law would benefit both growers and consumers if the 90 per cent clause were omitted and the different qualities were packed separately, with the apples in any one barrel *all* alike from top to bottom. HARRY G. CHAPIN.

QUITE a remarkable development is going on in parts of Virginia along Chesapeake Bay. Here in old days many "first families" lived in memorial style. With the passing of slavery and the ruin of the Civil War sad days came to these farms. The land went back to nature or, what was worse, back to tenants, and the proud old houses became feeble and shabby. We hear of one such estate in Maryland which was held for 200 years by one of the proudest families, only to pass into the hands of a colony of Jewish farmers. Some of these estates are now being taken by wealthy Western men. They buy shiploads of lime and train loads of phosphate rock, use cover crops and will in time restore these old farms and make them productive. But those old Virginia houses! What stories could they tell from beneath their new paint and pictures.

FRUIT NOTES FROM MISSOURI.

Several years ago I procured a plant of the Himalaya blackberry. It had cut leaves, and proved not hardy here. Later I bought a plant of the round-leafed variety and last year both it and the cut-leafed endured 5% above zero, and set berries. The round-leafed plant had grown to a very large size, and shown itself hardier than the other. I am told



McDONALD BLACKBERRY.

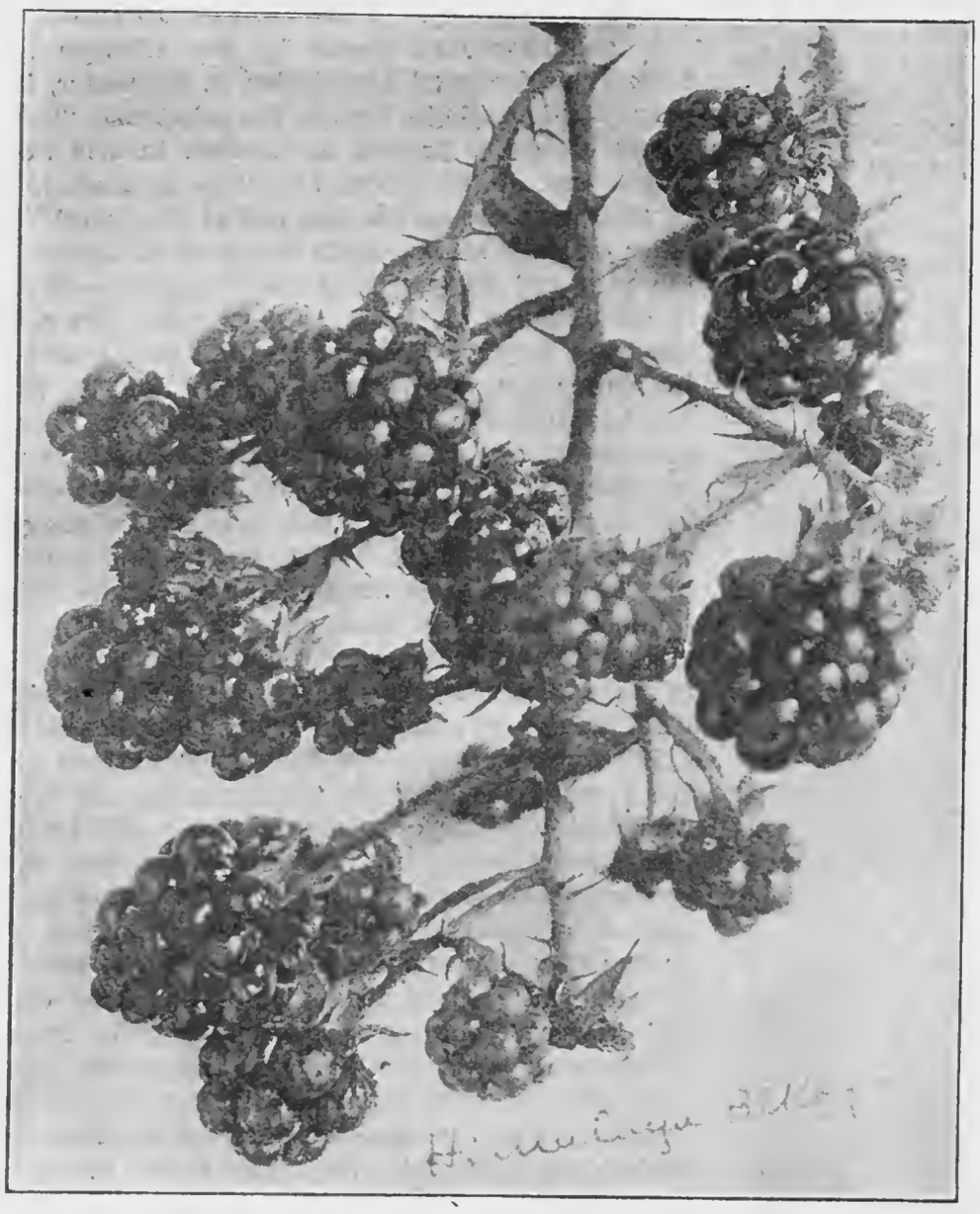
it is hardy in Michigan. It bloomed very late, later than any variety of the blackberry, and its flowers were quite distinct from the rest of its family. They were larger, and tinged with blue. The berries were borne on side shoots that branched out and set many clusters. Its capacity for bearing is obviously enormous. So far, all well and full of promise, but when the berries ripened, then came the disappointment. They were mostly nubbins. The picture shows one of the best clusters, natural size. The flavor of the berries was more acid than that of the standard sorts. Though a disappointment in results, the Himalaya was not a surprise in its fruit. It corresponded closely with reports that I knew were authentic, and they were all to the effect that this variety is not of any commercial profit, at least in the Northern and Central States east of the mountains. I understand that in California it is valuable, and one can easily believe this to be true of any region where this giant plant brings its berries to full perfection. There seem to be several members of the blackberry family whose flowers can be pollinated only under certain climatic conditions. No other member of its family blooms late enough here to act as cross-pollenizer. My plant is trained right and left on two wires, and has a total spread of 25 feet. If its

Another member of this family that I wish to report upon is the McDonald, a hybrid blackberry-dewberry from Texas, a State that leads all the Union in originating new fruits. I sent notes of this berry for 1912, and rated it as one of the most promising of its family. In season it is even a trifle earlier than the Early Harvest, our standard of earliness; in size of berry it exceeds that variety and equals our best mid-season kinds. In productiveness it is not excelled, if equaled. Its berries resemble those of the dewberry, and are of good quality. In growth it is very vigorous, creeping the first year, but afterwards sending up strong canes that will grow eight or 10 feet long. Off my one old vine, thinned to two main canes, I picked five quart boxes of large berries. The largest of these are as large as the biggest dewberries. In Texas I am told it is tremendously productive. So far it has shown only one weakness, and that is deficient pollination. The first year or so some of its berries were nubbiny but this year they were quite perfect. In explanation, the improvement is possibly due to the closer neighborhood of the Harvest and some of its home kindred that are supposed to act as pollenizers, such as the Dallas, Sorsby and Austin dewberry. Next year I shall have a complete test, for I shall have a number of the McDonald growing in rows next to these Texas varieties. If this new claimant proves reliable in bearing, it will at once take its place as the best of the early kinds, and probably the most profitable of all its family. Another hybrid acquired at the same time is the Hampt, but it is thorny beyond belief, and much more deficient in pollination. The Kenoyer is another variety that fails through imperfect pollination.

Why is it that the proximity of a tree is unfavorable to a grape in a dry Summer like the last one, while a blackcap will flourish within three or four feet of a tree whose shade and roots are dwarfing all other growth around it, do better even than if receiving full cultivation in the center of a field? That is the fact here; the blackcap must have shade for best results, and to prevent its canes dying back.

A long spell of warm dry weather is just drawing to an end during which the friable soil prompted a number of people to plant garden seed. This is almost unprecedented here, only 130 miles south of St. Louis. Fruit buds, however, have shown little advancement and are in no danger yet. L. R. JOHNSON.

Cape Girardeau Co., Mo.



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THE WESTERN N. Y. HORTICULTURAL SOCIETY.

With some of the most pressing problems of the fruit grower, especially the San José scale and other threatening clouds (which had brought the farmers of the State to these meetings for help and advice) disposed of, and none but the ordinary problems of the fruit industry to come up for discussion, no decline of interest in the proceedings, and surely none in attendance, was to be noticed at the fifty-ninth annual meeting. Every session was well attended, although many members were loth to leave the exhibition annex, which seemed to hold out a wonderful attraction for all. The exhibits were certainly larger and more varied, and the fruit displayed more imposing than ever, even without the fine show of all sorts of fruits which Ellwanger & Barry used to make on these occasions. The young men are coming more and more to the front, and they have taken hold with a will and vim. They have now got into the fixed habit of making their annual pilgrimages to this Mecca of the fruit grower, and have put the society on a safe basis, even financially, in spite of the low membership fee.

In earlier years, a feeble effort was made, now and then, to exhibit a few scattering vegetables. This year, for the first time that I remember, a regular exhibit of garden vegetables was to be seen, made by the Joseph Harris Seed Company. The late Joseph Harris, founder of this firm, was a member and very regular attendant. Pomological (especially apple growing) problems, have always been the chief topics of the discussions at these meetings, and the vegetable growing industry used to find but small and passing consideration. Even up to the last year the round table on vegetable gardening was attended by less than two score members. This attendance was nearly trebled this year, showing that with the elimination of very pressing fruit growing problems the vegetable branch is finding greater attention, and coming into its own.

Mr. Woodward, as chairman of the nominating committee, asserted that much of the wonderful success of the Western New York Horticultural Society was due to the fact that it had good officers, and that these officers were kept, so that the organization during its nearly three score years of existence has had only three presidents and two or three secretaries. The committee recommended the re-election of the entire staff of officers, from president to executive committee, with one or two exceptions, and this re-election was the final outcome. One of the suggestions in President Barry's annual address (and a good one) was that every member should hunt up his copies of the annual reports, for as far back as on hand, and have them bound in a volume that must be very valuable and helpful for reference. The best advice President Barry thinks he can give, is to take better care of the fruit trees, especially during the first five years, as good care during this period is most important. If the trees get a good start, they have the advantage right along. The society's mission, as he sees it, is to bring a bountiful supply of fruit to every family in the State.

Dr. Reddick (Cornell) names apple scab as one of the troublesome diseases which affected the fruit grower in 1913; but says it was the first year in five that the early or first spraying was of primary importance. Raspberry anthracnose was found mostly on black raspberries, and also on the purple Columbian. For this disease the application of sulphate of iron solution, one pound to the gallon of water, made a few days or a week before the buds actually push out, is most important. By one spraying on the dormant wood, and two Summer applications of Bordeaux, made when the new growth is about 10 inches high, and again when two feet high, the disease attacks have been reduced from 90 to 15 per cent.

The so-called Scott lime-sulphur mixture is recommended for peach diseases, but did not entirely prevent peach mildew. The mixture is made by slaking eight pounds of lime and adding, while in process of slaking, eight pounds of sulphur flour, mixing thoroughly, and adding water enough to make 50 gallons.

If any man should be able to give us reliable figures of the cost of an apple crop, I believe the man is Prof. Hedrick of the Geneva Station. On the basis of his experience in the Auchter Baldwin orchards, which he has managed during the past 10 years' period (the orchard then being in the prime of life), he figures the cost including interest at five per cent. on a $500 investment per acre, to be per barrel of fruit 93 cents, cost of barrel 36 cents, together $1.29. The selling prices averaged $2.60 for the firsts and seconds in barrels, and 63 cents for evaporator and cider stock (culls) per barrel without package, giving net returns of $93.74 average per acre per year, or a profit of 18¾ per cent. on the $500 investment. And he expects the orchard to do as well or better during the next 20 years. This, however, is probably above the average, as many are losing, and few are winning. He believes, however, that there is a bonanza close at hand for those who have eyes to see and brain to work.

At the round table talk on small fruits, Prof. Taylor (Geneva) named Snyder as the hardiest of the blackberries, and Ancient Briton and Agawam also quite hardy. Eldorado, although most promising and of large size, is not just yet recommended for commercial planting, only experimentally.

Dr. Wright warns against the use of lime on strawberry patches unless the land is very sour, and against its indiscriminate use for small fruits generally. No bad results have been observed from the use of wood ashes, and on light soils perhaps the effects of the potash offset the bad effects of the lime.

Mr. Hepworth claims to have "only" about 60,000 currant bushes in fruiting. He plants currants in every vacant spot, in his vineyards, young orchards, etc. He objects to Wilder for the reason that it grows all to wood on his land. Six tons per acre is a good crop, but the yield sometimes dwindles down to 1½ ton.

The report on grapes, at the round table talk on that subject, show that the 1913 crop was rather light, but prices high, so that the growers really fared better than in a season of heavy yield. This moved Prof. Taylor to say that a half crop at a high price is more profitable than a full crop at a low price. The cost of growing and marketing an acre of grapes was given as about $50. Some vineyards have yielded three to four tons of grapes. A profit of $100 to $150 per acre looks very attractive. The average price per ton, for the season, was $51.77. The reduced grape crop of 1913 is of advantage to the health and vigor of the vines, so that a good crop can be expected in 1914. Grapes are easily grown even by the amateur, and a succession can be had from August until mid-winter.

Dr. Lipman, director of the New Jersey Station, in his talk on soil fertility, stated that phosphoric acid is usually applied to soils more largely than it is removed by the crops, and this for the reason that it does not circulate in the soil as freely as potash. We can work with a smaller plant food capital in light soils than in heavier ones, because the plant foods move faster in the former. We put organic matter into the soil because we expect from it a contribution to the water-holding capacity of that soil. Usually we do not have rainfall enough to produce maximum crops. Ordinary farm rotation, even with manure returned to the soil, does not maintain the organic contents of the soil for getting maximum yields in quantity or quality. Nothing will stimulate soil bacteria more than soluble phosphoric acid, and nothing is more satisfactory if applied in conjunction with lime. For continued use alone, acid phosphate will make the land more acid. It is not uncommon to find 2½ per cent., and even up to five per cent. potash in some soils, and potash may be needed only because it does not become available fast enough. Soil deficient in available potash is more subject to fungous diseases. Usually the use of potash is more justified in our lighter soils. Acid phosphate applied in small quantities favors the germination of the seed and gives to the young plants a better root system. Land plaster although consisting largely of lime, has not the power to neutralize soil acid. T. G.

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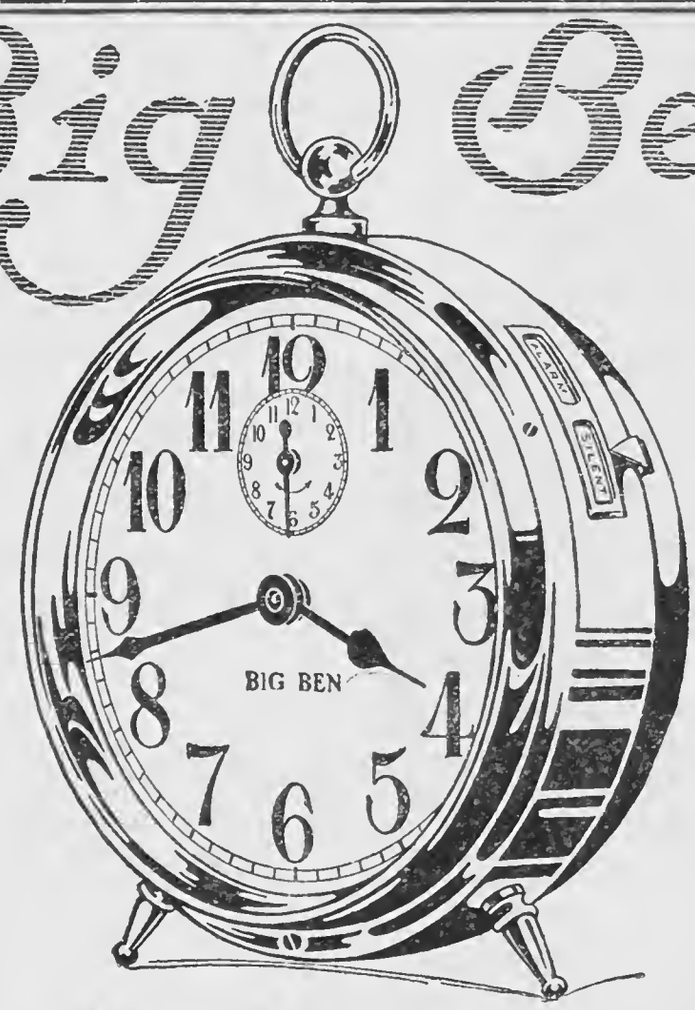

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The Home Acre.

Green Crops for Chicken Run.

Let Villager, page 147, try the common wild honeysuckle as a soil binder in his henyard. It is easy to plant, grows fast and nothing will eat it. If his land were moist and cool and fertile he might find the English ivy better. The former does well on poor, dry, warm soil. It stays green all Winter here in the mountains. Bunches of wild "creeping Charlie" or ground ivy thrown into those gullies with a few rocks over them would also be let alone by the average hen. During the hot weather he could grow the "Jack bean" and the "Sword bean" right in his henyard, and the hens would not bother them except to cultivate them. Nothing will eat them, not even a duck. The hens would not even destroy the cotyledons as they come through the ground—might possibly break off one or two in tramping them or testing them.

North Carolina. E. B. H.

Replying to Villager on soil binding growth for henyard, I would suggest trying horse-radish. This is one plant that hens do not seem to touch, and I think if the plants or roots were set out and protected for a time by small stakes driven close aronnd to keep the hens from scratching them out they would soon take care of themselves. Last year the writer had a yard 80x100 feet with about 100 hens in it. Every bit of green was entirely dug out and eaten up except four or five horse-radish plants and two wild Asters; these plants all were of extra strong large growth, and all during the molting season the birds seemed almost to live under the plants. There was plenty of pear and apple tree shade but the birds preferred the big broad leaf protecting shade of the horse-radish. The wild Asters also seemed to be liked by the birds, and filled with blue flowers, which they carried until late in the Fall. They added rather than detracted from the general appearance of the yard. I had intended trying out a full row of the horse-radish, also one of the Asters in the yards this coming season, but will not be able to do so on account of moving into the city. I realize of course that horse-radish grows best in damp places, and that swamp places are not best for henyards, but our place last year was all right for both hens and plants.

"TOWNER."

Irrigation on Sandy Land.

Charles W. Skinner, inventor of a popular system of overhead irrigation, is giving a practical demonstration of the value of irrigation on his South Jersey farm. He came to New Jersey from Ohio and purchased 30 acres of land in Gloucester County; cleared and cultivated and put 10 acres of it under irrigation the first year. It was said of this land that it was so poor that a turtle would starve to death going across it. This was the opinion of some of the natives, but Mr. Skinner had his own ideas, which he expected to work out on this land; and the first season showed that he was doing it.

One of the best streams in this section borders on the back part of this farm, and so there is an unlimited water supply. The power house is placed close to this stream. All the swamp land adjoining the stream is being cleared and tiled, and makes splendid celery ground.

The 10 acres which were first cleared had not been under cultivation for 34 years, so it was rested and ready to respond to the proper treatment. Land needs head work as well as hand work, and this man had an active brain as well as hands. He believes in giving the land plenty of food and water, and the acres in return give back wonderful crops. He started with a heavy application of manure from a nearby city. Celery seed was sown in February, and the plants put in the field the last of April and first of May. This celery was sent to market the last of June and first of July. It was grown in double rows, one foot apart, the double rows being 14 feet apart, with the space between the celery planted in another crop, such as radishes or lettuce.

Most of the 100,000 plants were mulched with manure direct from the car from a nearby station. The team and wagon could be driven astride of the double row of celery, the manure thrown off and placed between and around the plants by hand. Some of the celery was mulched with refuse from potato and tomato crops. The celery thus mulched, and with rain and plenty of irrigation, did well. The varieties grown were Winter Queen, Giant Pascal, Snow White and Golden Self Blanching. The main reason Mr. Skinner puts his double celery rows 14 feet apart is to get plenty of earth to pull up to the plants to blanch them with, and this works his top soil to a depth of 18 to 20 inches.

The one-half acre of Bonnie Best tomatoes were also mulched, as the soil was sandy and believed to be too poor to grow weeds. However, with the manure mulch and plenty of water, the tomatoes yielded almost 10 tons on the half acre, and a fine crop of radishes and good lettuce was raised after the tomatoes, the Big Boston lettuce and radishes were sown at the same time. Stowell's Evergreen corn was planted three and four feet apart, and mulched and irrigated; in fact everything on the cleared land is covered by the irrigation system. After the corn was cut, a fine crop of lettuce was raised on the ground.

There was one acre in potatoes, Irish Cobbler and Early Fortune, 28 inches apart in the rows. The yield was 400 bushels of prime potatoes. Two-thirds of an acre of red onion seed was sown in April and taken off in August. Celery plants were put between the rows in July. A crop of endive was also grown, which was banked and bleached and sold for 40 cents a pound. It averaged about one-fourth pound to a stalk. In a dry season the thrips often ruins an onion crop. This was overcome by the use of nitrate of soda in solution, put on through the irrigation system.

One of the prettiest crops was the cantaloupes, 48 hills in a row, and 48 rows and of as fine quality as Jersey ever grew; 2,800 baskets were sold. A good leaf growth is necessary for a sweet cantaloupe, and the effort was to produce this growth. The aim was for quality and not for quantity.

The future development of agriculture in the East lies in the utilization of every resource, in which irrigation is an important factor. We know what irrigation will do, and we need now to study the systems and apply them where suitable conditions can be found. Mr. Skinner has rebuilt his house and barn and the same water supply and power that waters his farm is used in the house and barn. C. J. S.

Controlling Potato Bugs.

I had an unusual but pleasant experience last season with my potatoes. I would like to know how to continue it? I haven't had a potato bug during the whole season. While the previous year on the same ground I had many quarts of them. I caught them in a pan containing kerosene and burned them. Can you tell me how to continue my good luck in the future? W. T.

We should look for good luck, as you call it, where you found it before. You cannot expect to be entirely free from the potato bugs except now and then in some season when the weather conditions will destroy the eggs. You must prepare to fight these bugs one year with another. On a small patch your plan of knocking them off into a pan of kerosene will answer. In larger farming, of course, such work will not do. The bugs must be killed in some way in a wholesale manner. This is usually done by spraying or dusting the vines with a carrier which contains arsenate in some form. The liquid spray is made by mixing or dissolving the poison with water, and spraying it over the vines, just as the potato bugs appear. In the dust method the poison is mixed with plaster, flour, lime, or even road dust, and sifted over the vines while they are wet with dew. The object in either case is to induce the potato bugs to eat the poison as they gnaw at the leaf of the plant. As these bugs are leaf eaters this method of killing them answers. With the suckers, or insects which bore into the leaf or stem, and suck out the juices, the poisons will not answer, but a spray of oil or some caustic substance is needed to kill them by contact from the outside.

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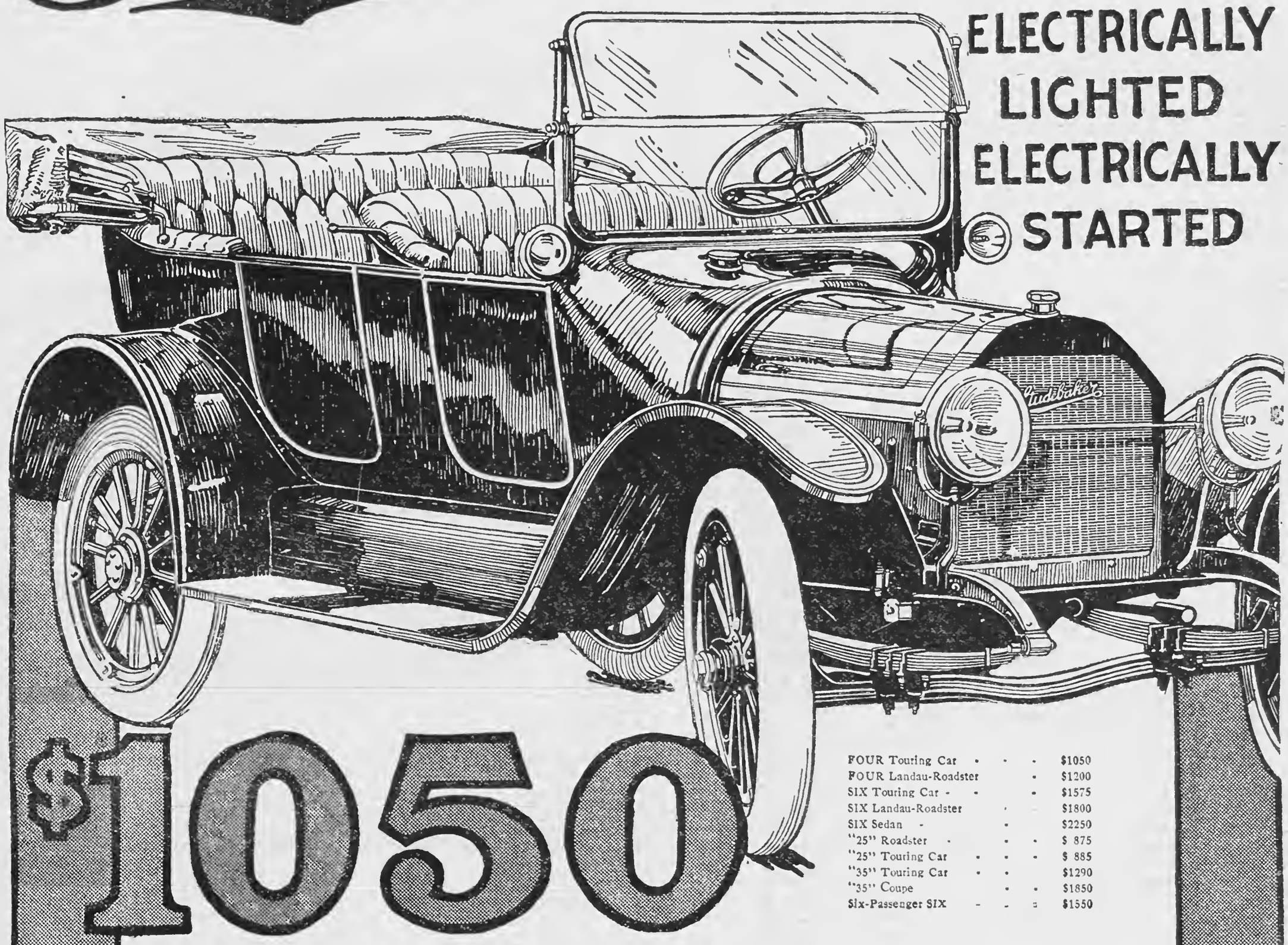

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PART II.

TOMATOES.—If a crop of either radishes or lettuce is about one-third grown about March 15, and you have good stocky tomato plants in three-inch pots, or three-inch square dirt bands, they can be planted in beds about 16x18 inches each way, and will make a slow sturdy growth while the former crop is maturing. For dirt bands we have a printer cut out strips 3x14 inches of about No. 12 manila paper, then take a block three inches square and fold round same, and pin together, this makes a band three inches each way and costs less labor of folding, about $1 per 1000, and is an excellent device to grow tomato plants in. The plants should have been transplanted once before being planted in these bands. Bonny Best, or Crackerjack, we have found the most desirable for forcing. They are both good size, (the former the larger), smooth, and heavy producers, each variety setting fruit easily indoors during April and May.

TEMPERATURE.—As soon as the radishes and lettuce are out of house and tomatoes are in bloom, do not water too heavily or frequently, allowing soil to dry out slightly between each watering. Keep temperature higher, 60 deg. to 65 deg. at night and 10 to 15 deg. warmer during bright days is about right. Do not fertilize with nitrogen during blooming period, rather use potash and acid phosphate in available forms.

POLLINATION AND TOP-DRESSING.—Each day pollinate blossoms by tapping plants lightly with a stick padded with cloth at end, so as not to bruise the plants. When fruit is set in four or more clusters some growers top their plants, so as to get into market ahead of the outdoor grown tomatoes. As soon as a good lot of fruit is set, increase the allowance of water and sprinkle a mulch of fertilizer over beds. We use the formula mentioned for radishes for this purpose, applying at rate of ton per acre *and water it into soil, never loosen up the soil on benches for this purpose as a lot of feeding roots will be destroyed.* This may seem contrary advice, but is borne out by experience that cost us many bushels of tomatoes, as every time we have tried cultivation we have invariably lost one to two entire clusters of bloom. When fruit is expanding rapidly water should be given daily, on every other day at least. If this is not attended to regularly, black rot at blossom end of fruit is almost sure to set in, a trouble that is caused by dry soil, or lack of potash or both, and possibly no other cause either indoors or outdoors. Tomato plants that are to be set in benches March 15 should be started January 1, or better December 15, and transplanted once; then on second transplanting into pots or dirt bands you will have fine, sturdy plants.

TYING UP.—As soon as growth commences when plants are placed in permanent bed, supporting should be resorted to. Fasten a binder twine or two-ply jute firmly to top of house, and fasten lower end very loosely to base of plant, and as plant grows simply twist it round the string. This is a simple and very satisfactory manner of support. Each plant should be trained to single stem, and all suckers removed as soon as they appear. If growth is too dense the ends of leaves may be removed so as to allow sunlight to reach fruit. Tomato plants should be sprayed with Bordeaux mixture every week or two, till fruit is large enough to be discolored; 4-6-50 formula is right. When fruit is large size we use fungine, purchased from seedsman.

MARKETING THE CROP.—You may think you have no market, either for radishes, lettuce, or tomatoes, but produce a good quality of each, or either, and take them to the storekeeper from whom you purchase groceries, etc., and you will be surprised how soon you will have a good demand for more stock than you can grow.

PLANT GROWING.—If growing vegetables does not appeal to anyone there are many other lines open, vegetable plants being sold in our community by tens of thousands each season, as many farmers and village residents regularly purchase their plants in preference to trying to grow them in warm rooms, a practice which makes, usually, crooked, anemic, yellow plants. Tomato plants are greatest in demand in this section followed by cabbage, lettuce, cauliflower, eggplant, pepper, celery, sweet potato, etc. Tomato, eggplant, pepper, require the warm parts of the house, and the other plants the cooler portions. Flats are usually used for this purpose, made by purchasing boxes about 12x18 inches or some size near those dimensions, and saving them in such manner that the finished boxes are about 2½ to three inches deep. A few holes or cracks should be in bottom of each flat for drainage. The plants should be transplanted into these flats about 1½ to two inches each way, and in this manner are easy to take to some store for sale, as they will easily stand a week or more if unsold. A good rich soil should be used but not too rich, and as soon as plants are making a nice sturdy growth, withhold water so as to harden them off. You want to avoid a long soft growth, which is not desirable, as a tomato plant six inches high and of a dark green color is much more desirable than a light green plant 12 inches high. Cabbage can easily be hardened off, and placed in a cold frame March 1, and lettuce can be sown in the Fall and given slight protection during Winter.

Flowering plants may appeal to some in preference to vegetables, and a good trade can undoubtedly be worked up along this line, but as my experience has been entirely with vegetables and cut flowers, I do not feel qualified to give information on this end of the business. A low narrow house, such as has been described is not very well adapted to growing cut flowers, though I have seen good quality grown in such houses. ELMER J. WEAVER.

Plowing Soil for an Orchard.

I have a number of acres of old meadow land and an acre or so of old land that I wish to set out to peaches in the Spring. It is a clay soil with a gentle western slope, and good drainage. It has not been plowed in a number of years, and has not had a great deal of manure. Will you advise me just how to go at this proposition, as I have never had any experience with peaches? I wish to know just when and how to plow this soil. Would you advise subsoil plowing in dead furrows for the trees? F. L. J.

If that soil is heavy clay loam, plow as deeply as possible without turning up too much subsoil; as early as bottom of furrow will crumble without packing when squeezed in the hand. Double disk to keep level, and finish with a smoothing harrow. Soil should be mellow and moist with all of the Fall and Winter rains stored in soil and subsoil. This is the most important factor of all, for if dry weather follows trees will not be stunted, which they certainly would be if dry weather followed setting in a dry poorly prepared soil. Your idea of plowing in narrow lands, subsoiling dead furrows and setting will perhaps make setting of trees easier, but care should be used to get furrows straight. On that type of soil I would set trees 20 feet each way; yearling trees cut back to two feet are best. I would drill or broadcast 500 pounds of 2-8-10 fertilizer when fitting land; beans or an early small variety of flint corn may be grown. I would not plant them till about June 1, using a harrow between tree rows till then, then planting five rows three feet apart, leaving a four-foot space next to tree row. Clover seed sown at last cultivation will make a good cover crop to plow under the next May. I would not double-crop after third year, but cultivate till about Augnst 1, then sow cover crop. Oats sown thickly about Augnst 10 make a good growth if you object to a crop that lives through the Winter. The New York Agricultural Experiment Station at Geneva has found that fertilization did not show any results on their clay loam apple orchards, therefore if your trees make good growth after trees occupy whole land probably cover cropping alone will be sufficient. Good yearling trees should be obtained for about 10 cents each and it would be well to go to a nearby nursery and personally select them, and be guided somewhat by their advice as to varieties. For in your location varieties tender in bud will often winter-kill, and espeeially if your soil is really heavy, as much of the soil in Seneca County is.

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Our section will be half a million dollars short this year by reason of prices on sweet potatoes. That means hardship for they use from $15 up per acre of fertilizer. Our Italian farmers, where father and the whole family works, have the advantage. Why is the price so low?

Vineland, N. J. G. H. M.

It is hard to say definitely just why sweet potatoes should be so low at this time, but I am inclined to attribute it to a combination of conditions rather than to any one thing. The final estimates of the Department of Agriculture place the production of sweets at 59,057,000 bushels in 1913 as against 55,479,000 bushels in 1912 and 54,538,000 in 1911, showing an increase over last year of three and one-half million bushels. This larger yield has undoubtedly had some effect on prices, but in all probability the effect on the market from that source is not nearly so great as from the fact (brought out in recent New York reports) that many sweets, especially from the South are arriving on the market poor in quality and in bad shape. This is demoralizing, and helps to bring the price of good stock to a lower level. From several local points reports have come saying sweets were not keeping well and that they were being marketed to avoid further loss and shrinkage. If this is quite general there is no doubt that the market is affected from this source also. Then too, there is again the question of unequal distribution, and the many others that enter into marketing produce of all kinds.

Just now everything seems to be conspiring against the sweet potato grower, but being a Jerseyman, I am inclined to look on the bright side of the matter. Sweets have been low before. My father tells of a time, some 25 or 30 years ago, when he carted sweet potatoes 2½ miles over a sandy road, taking only 12 barrels at a two-horse load, and received 80 cents a barrel for them. And the barrels held just as much then as they do now. There was also a period of low prices for sweets between 1892 and 1896. There was one season at that time when sweet potatoes sold in the Fall for 50 to 60 cents a barrel. A neighboring grower did not wish to sell for those figures at digging time, so stored a good portion of his crop in a vacant room in his dwelling. But prices did not go up, and he took them out later for 40 cents a barrel, and lost considerable through shrinkage. Sweet potato growing at that time was certainly no get-rich-quick scheme, and many said that the Jersey grower would no longer be able to compete with the South. But since then there have been many good years for the sweet potato grower, and the Jersey sweet potato has come to be a greater factor in the market than ever.

A recent New York report says "Sweet potatoes plentiful and the market gradually declining under a very dull trade; Jersey No. 1 were quoted at $1.50 to $1.90 per barrel and Southern at 75 to $1 a barrel." Such a report as that is certainly not very encouraging for the man with a large bin of stored sweets. But it does show that the consuming public is willing to pay almost 100% more for the Jersey sweets, and if the sweet potato growers are going to be driven out of business because of low prices, the Jerseymen will certainly not be the first to go. I believe the man who can grow a crop of sweet potatoes, and who has grit enough to hold on, will find that the law of averages will square things up for him in the long run no matter where he lives, but if he hails from Jersey the "long run" will be a "jiffy."

TRUCKER, JR.

Importance of Spraying.

I have an orchard of about 1,000 apple trees 15 years old. I cannot find any San Jose scale on them this Winter; have been spraying them with lime-sulphur, using a power sprayer. I wish to know if it is best to omit the dormant spray or will it pay to spray anyway for scab and fungi? E. T.

New Jersey.

We should spray on general principle, whether you can find scale or not. This is the safe way to be sure of good fruit. We skipped spraying one year when scale was not visible, and lost 10 times the cost of spraying.

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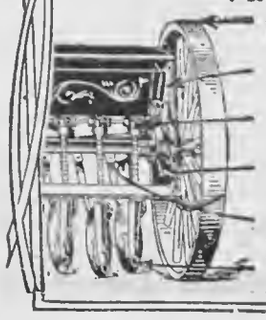

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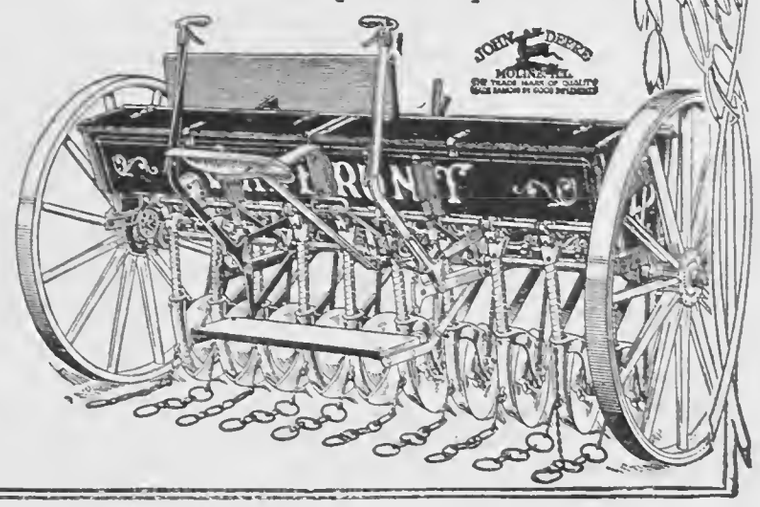
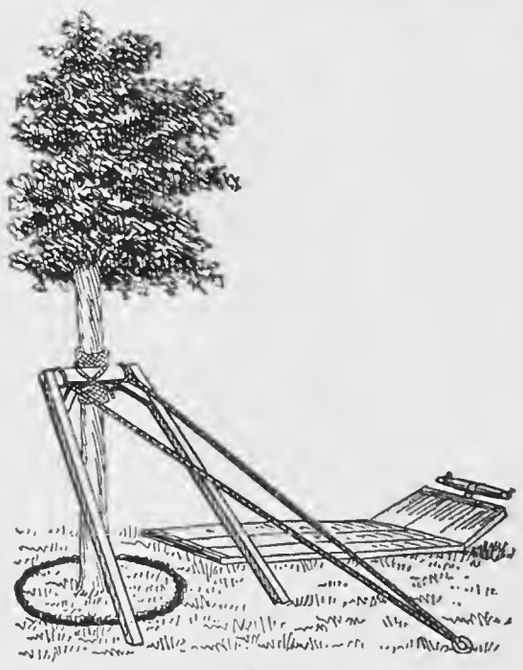


MOVING SHADE TREES.

Can large shade trees be moved, say six inches in diameter, such as elm, maple and basswood, and what is the best time to do such work? L. C. G.

Transplanting Large Trees.

There are many reasons for transplanting large trees, for new ornamenting or other purposes. Persons sometimes desire to remove from the forest or elsewhere to their own grounds, trees 20 feet or more in height. This is always a difficult task, particularly if the trees are taken from the forest, as there is nearly always a net-work of roots, large and small, of other trees to contend with, to make difficult the proper digging of the tree it is desired to transplant. All trees of four inches or more diameter, from whatever source procured, should be removed with a considerable ball of earth attached. Forest trees seldom have sufficient fibrous roots to hold the ball of earth intact, therefore to make the transplanting of them successful they should undergo a season's preparation before removal. This consists in digging around them, in Fall or Spring, a narrow trench three feet or so away from the tree, cutting off all horizontal roots, and with a sharp knife carefully pruning all bruised and mutilated roots, after which fill in the trench with soil and allow the tree to remain without further distrubance



Rig For Moving Tree.

until the Fall or Spring, when they can be safely removed to their new quarters. The root pruning will force thousands of fibers to push out all through the surrounding soil during the season preceding, which will not only supply the tree with a splendid system of feeding roots, but hold the ball of earth so firmly intact that it can be removed any distance almost, without shaking off.

Perhaps the simplest and easiest method of removal, in the absence of an apparatus especially designed for the purpose, is the scaffold and stone boat outfit, shown. Any farmer can construct this and use it. For trees 20 feet in height the scaffold should be at least 10 feet high, about seven feet wide, between the side pieces at the bottom, and may be narrowed to four feet at the top. It should be constructed of hard wood material, sufficiently heavy to carry half a ton or more. When the tree is loosened ready for removal, place the cross piece against the tree, with the standards or side pieces at sufficient angle that when the scaffold is brought to a perpendicular position the tree will be raised high enough to clear the stone boat or drag upon which it is loaded. A good padding of burlap or like material must be wound around the body of the treet at point of contact with scaffold, and securely tied in place, to prevent injury to the bark. The tree is lashed to the scaffold with strong rope of sufficient thickness to carry the weight. A strong horse, or team, as may be required, hitched to the ropes attached to the top of scaffold will easily raise the tree with the adhering ball of earth and deposit it on the drag. It may be unloaded by the same process. K.

Top Dressing Apple Trees.

What would be the best dressing to put around mature apple trees in sod land, and when? Have always used stable manure, but thought something in the chemical line would be better for a change. The soil is heavy and black, with a clay hardpan subsoil. J. E. W.

In this case we would keep on using the dressing of stable manure, put on the sod about as far out as the branches extend. Stable manure being rich in nitrogen should have something to balance it, the potash and phosphoric acid, and this can be done by using around each tree, scattered out freely, five or six pounds of a mixture of three pounds acid phosphate to one part of muriate of potash.

Trees for Fence Posts.

Could you inform me about planting locust trees for fence posts, etc? I would plant them along fence rows where land is used mostly for pasture, as it would make better pasture where other trees make less. Which is the better to plant, Honey or Black locust? S. J. M.

Grantsville, Md.

In your section of the State the Black locust grows well and is not attacked by the locust borer and the leaf miner as it it in other sections. The best plan would be to plant locust trees along the proposed fence row at a distance of 10 feet apart, and then as soon as they are large enough to carry the fence wires they could be used for live fence posts. When they have reached their maximum growth the trees could then be cut down and worked up into a large quantity of fence posts. R. B.

COST OF HEATING FIXTURES.

The recent articles giving experience of persons who tried different methods of house heating have interested me. Over 20 years ago my father built a home and installed the best hot-air furnace then obtainable; this was discarded shortly after and an up-to-date hot-water outfit put in its place. With that we were able to place the heat anywhere we desired, regardless of the direction of wind. That outfit cost about $750, and in later years the boiler being of the earlier type, was replaced by an up-to-date one (after the other had burned out). The plumbers at that time wanted about $250 for the new boiler. I had the "pull" of an architect friend and he found one for us at $175, and we thought we were lucky (this was all in a big city). A year ago I decided a hot-water system would be best for this farmhouse, so began to look them up. I found a house which seemed to carry good stuff, so from pointers I had gained I figured out just how much radiation I would want and the proper boiler. Then giving them a sketch of the house plans (but saying nothing of my estimate on radiation) I asked them for an estimate. Their plans called for practically the same as mine (within 10 feet of it). That convinced me that they knew what they were doing, and I ordered the outfit complete to cost me, as I remember it $273. The boiler itself was only $67, and almost as large as the one I had bought on the "pull" at $175. About that time a brother in town placed an outfit in his house, doing most of it himself and on account of his big "pull" he got off for about $450. Word reached me that he was very sorry I, a farmer, should have ordered such a thing in the way I did, fearing that I would be terribly "stung." I learned the name of his boiler, which was made by one of the best concerns in the country, and when my complete shipment was received, direct from the factory, what did I find in the box but a package of graphite manufactured at that town, where the boiler was made with the name of the big company which had built the outfit, which my brother had used showing to me that the same company had made my outfit complete and that I, a farmer, had won out with twice as much for my dollars as the city brother.

Pleasant Valley, N. Y. R. J. W.

Buliding an Apple House.

I would like to build a house to store apples in. We have good market here and it is inconvenient for us to ship to cold storage and then have the fruit returned again. I have in mind about what I want, but would like to hear from some one who may have something of this kind as to what success they have met with, stating construction, etc. I intend to build one of about 1,500 bushels capacity, cement floor, and side walls about three feet high of cement. On top of this I am thinking of building with 2x4, sheeting outside with inch boards and paper under weather boards. On inside of studding I expect to sheathe with one-half-inch boards and paper, then another one-half-inch board. In this I expect to place sufficient windows so as to be able to sort appres, etc., and also to supply cold air in the early Fall at night. Then I expect to place steam pipes in building to furnish heat in Winter to keep fruit from freezing.

Ringtown, Pa. C. L.

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Joint Meeting at York, Pa.

January 20, 21 and 22, the Pennsylvania Horticultural Association, the State Live Stock Breeders and the Dairy Union held joint meetings at York. The sessions of the different associations were unusually well attended and the programmes of all were excellent. There were fine exhibits of fruits, corn, dairy products, dairy and creamery supplies and orchard apparatus. Chester J. Tyson of Flora Dale, for a number of years secretary of the Horticultural Association, was elected president; Dr. J. H. Mayer, Willow Street, first vice-president, and J. A. Runk, Huntingdon, secretary. Drastic amendments to the constitution were made advancing annual dues to $2 and life membership to $20, both double the fees imposed heretofore, and closing all sessions of the association to all persons except speakers, delegates from other State societies, minor children and wives of members.

The Dairy Union reelected its former officers: E. M. Bailey, Pittsburgh, president; Prof. C. W. Larson, State College, secretary, and W. E. Perham, Verden, treasurer.

The Breeders advanced E. S. Bayard, Pittsburgh, to the presidency and retained J. F. Lantz, Harrisburg, as treasurer. A very interesting and popular feature of the Breeders' meeting was the meeting with them of the American Berkshire Congress, which brought to the association some of the most famous Berkshire breeders of America, notably among them being N. H. Gentry of Missouri; Prof. C. F. Curtiss, Iowa; W. S. Corsa and Lyman Lovejoy of Illinois, and Alexander Fulford, Maryland. The congress held its annual auction sale Thursday afternoon and it was pronounced the most successful it had ever held. There were 50 Berkshires in the sale, consigned by leading breeders from territory covered between Iowa and Massachusetts, and as far south as South Carolina. The top price of $650 was reached by a sow consigned by Prof. Curtiss, and was paid by Delchester Farm, Pennsylvania. The next highest price, $550, was paid by same purchaser for a contribution by Iowana Farms, Iowa, and $500 for another from Elmendorf Farm, Kentucky. Mr. Buckley of Broadax, Pa., paid $410, the next highest price, for another sow from Iowana Farms. One other sow was sold for $400; one for $350; four for $300 each; two for $275 each, and three for $200 each. As all this fine stock remains in the East, it is indicative of the substantial interest our farmers are taking in the best swine. Pennsylvania has the honor of having received more Berkshires last year than any other State.

Steps were taken to combine the three distinct organizations, meeting jointly at this time, into one united body for the purpose of more concentrated effort in the future. W. F. M'SPARRAN.

BUFFALO MARKETS.

Potatoes are still quoted at 75 cents a bushel to the retailer, and country dealers are paying farmers 65 cents for them, but the consumer has to pay $1 for good ones, on the plea that the retailer cannot make a living at anything less. The quality is fine for the most part. Vegetables generally are not advancing, as they are showing the effect of an open Fall and Winter. Not much but celery is showing the effects of too much warm weather.

On a trip to the Chippewa retail market last week I bought from one dealer a half peck of beets, 15 cents; a quart of string beans, 20 cents; a half peck of sweet potatoes, 15 cents; a head of cauliflower, 10 cents; a bunch of celery, five cents; a bunch of salsify, five cents; a big pineapple, 20 cents, and a dozen of lemons, 15 cents, all amounting to $1.05. This is not, possibly, the best selection for a showing, but I was able to reflect that the same amount laid out for meat would have procured only about four pounds of ordinary cuts, with no approach to porterhouse or veal. Much of this produce pays only one profit, as it is raised in the neighborhood and is kept in trench or cool cellar, to be brought into market by team. Sometimes the farmer or trucker owns his own market stall, but not usually.

Florida strawberries have appeared, retailing at 35 cents a quart. They are better ripened than usual and have not suffered badly in transit. They are much more plentiful in open market than they generally are in early February. All fruits from the South are plenty, Malaga grapes retail at 20 cents a pound, good lemons and oranges at 15 cents a dozen and big grape fruit at five cents each, with very large sizes 10 cents. The sale of bananas is heavy at 10 to 12 cents a dozen. Sweet potatoes are still plentiful.

The big decline in butter on account of the arrival of so much free product from abroad was nine cents, the best brands now offering at 29 cents to the retailer. Eggs remain about stationary, at 36 cents for fresh and 33 cents for storage to retailers. The consumer is seldom sure what he is getting till it comes to the table. Spinach, 20 cents peck; lettuce, five to 10 cents a head; cabbage, three cents per pound; Brussels sprouts, 20 cents a quart; rutabaga, 1½ cents a pound; white turnips, 10 cents per two quart measure; carrots, parsnips, eight cents a two-quart measure. J. W. C.

Milch cows, $60; cheese, 17½; butter, 37; potatoes, 60; eggs, 30; hay, $12 per ton; maple syrup, from 85 cents to $1 per gallon; maple sugar, eight to 12½ cents per pound. W. N. S.

Centerville, N. Y.

Good cattle are hard to get, bringing from $75 up. Dealers pay five cents a quart for milk, retails at 10; cream, 60 cents a quart at retail. Not much butter made to sell in this section. Timothy or mixed hay, $23; Alfalfa, 25; corn fodder, four cents a bundle; corn on ear, 95 to $1 at auctions; potatoes, $2.75 to $3 per barrel; sugar beets, 60 cents a barrel; carrots, $1.25 a barrel; turnips, $1. Apples did not keep well, and were mostly sold early in the Winter, bringing $2.50 to $3 a barrel. Hucksters pay 16 cents a pound for chickens. Eggs scarce and retail at 45 cents a dozen.

Everett, N. Y. J. E. M.

February 5. Fine Winter weather; January was exceptionally warm and good for farm work. No time for harvesting ice yet; plenty of water and feed for stock. Farmers plowing sod and building fence. Brick roads fever has reached this section; of course we all want good roads. A few cattle being fed for Spring market; most of the cream produced in this county is shipped. Hogs, 7 to 8; hay, $11; potatoes, $1; wheat looking well, selling at 90; corn, 80; butter, 22; eggs, 28; chickens, 12; apples scarce, 4½ cents per pound.

Chesterhill, O. W. B. H.

Good grade cows are selling for about $75; no limit to the price for purebred Holsteins. Milk shipped to Rochester, $2.30 cwt., dairyman to pay freight, which is 15 cents per 86-pound can. Butter not over 36 cents at wholesale; veals, nine to 10 cents live weight; potatoes, 70; hay, $12 to $16 per ton. B.

Cayuga, County, N. Y.

Wheat, 92; corn, 70; oats, 45; hay, $12 to $16; straw, $8 to $10; butter, 28 to 35; eggs, 28 to 30; lard, 12; potatoes, $1; hens, 12 cents per pound; apples, $1 to $1.50; dressed hogs, 10; live beef cattle, seven to 8½; cows, $40 to $100; calves, eight to 9½. No milk sold here. Peaches in season were 40 cents to $1.50 per basket. A. A.

East Berlin, Pa.

Fat cows, $6.25 per cwt., live weight; steers, $8 to $8.25; bulls, $6.50 to $7; hogs, $11.25 dressed. Our stock creamery paid for the first half of January 48 cents per pound for butter fat, but the butter came down in price, so that next pay will be only about 40. Farmers have to work for nothing in a dairy; we cannot produce butter for less than 50 cents per pound if we want to pay for our work. The poor people say they cannot afford to pay that price. I know a small dealer in a country village who sells 600 pounds of oleomargarine "Clover Leaf Butter;" he makes six cents per pound, or $36 in a week. Potatoes bring 85 to 90; apples all sold at 90 to $1.

No. 1 Timothy hay pressed f. o. b., $14 to $15; cows from $50 to $60; veal calves, live, nine to 10 cents per pound; pork, dressed, 10½ to 11; butter, creamery, best, 27 to 28; corn, $1.40 per 100 pounds; gluten, $1.50 per 100 pounds; oats, 58 to 60 per bushel; buckwheat, $1.75 per 100 pounds; eggs 28; potatoes, 60 to 70. F. M. G.

East Rush, Pa.

Mitchell Big Six
$2,350.00

An uneven road plays hob with an automobile that isn't properly constructed and *which lacks engineering balance.* It strains the frame, the axles, the springs and the motor of a cheaply built car and no amount of repairs can *ever* make it good.

The Mitchell car is built to *give* where the give is necessary—to resist the strain and sudden jolt—to surmount these and other difficulties *without the disastrous wear and tear* which makes other cars burdens after a year's use—*or less.*

Farmers need better cars than people who live on smooth boulevards and there are hundreds of modern farmers who will tell you that the Mitchell has lasted them—in constant use—*five, six, seven and eight years* and are still the splendid utilities today that they were when bought.

The Mitchell car is more car and better car for the money than any other car in existence and we commend it to the farmer who wants an *economical utility* rather than an *expensive luxury.*

The Mitchell Models for 1914:

The Mitchell Little Six—fifty horse-power—132-inch wheel base—36x4½ inch tires—two or five-passenger capacity - - -	$1,895
The Mitchell Big Six—sixty horse-power—144-inch wheel base—37x5 inch tires—seven-passenger capacity - - - - -	$2,350
The Mitchell Four—forty horse-power—four cylinders—120 inch wheel base—36x4½ inch tires—two or five-passenger capacity	$1,595

Equipment of all the Mitchell Models Included in the List Prices Here Given

Electric self-starter and generator—electric lights—electric horn—electric magnetic exploring lamp—speedometer—mohair top and dust cover—Jiffy quick-action side curtains—quick-action rain vision wind-shield—demountable rims with one extra—Tungsten valves—double extra tire carrier—Bair bow holders—license plate bracket—pump, jack and complete set of tools. Prices F. O. B. Racine.

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Racine, Wis, U.S.A.
Eighty Years of Faithful Service to the American Public

SAVE YOUR BACK
Stop lifting into wagon bed four feet from ground, as you do with high wooden wheels. Lift only two feet by equipping with low—
EMPIRE STEEL WHEELS
ONLY 2 FEET FROM THE GROUND
Lifting reduced 50 per cent. No repair bills. No breakdowns. Pull easier over soft roads and fields. Sizes to fit any axle. Write today for 30 Days' No Risk Free Trial Offer.
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PATENT YOUR IDEAS
$9,000 offered for certain inventions. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. Patents advertised for sale at our expense in Manufacturers' Journals.
CHANDLEE & CHANDLEE, Patent Att'ys
Established 16 Years
922 F. Street, Washington, D. C.

Planet Jr.

No. 16 Planet Jr Single Wheel Hoe, Cultivator, Rake and Plow

The highest type of Single Wheel Hoe made. It is light, handy, and adapted to use by man, woman, or child. Has leaf guard for close work, and a durable *steel* frame.

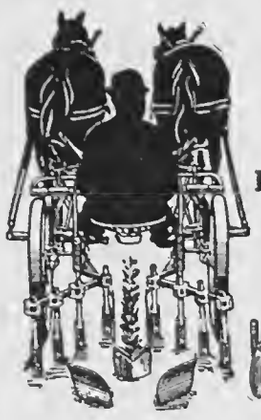
Nearly two million soil-tillers all over the world are saving time, lightening labor and getting better results by using Planet Jr guaranteed farm and garden tools. For all requirements, $2 to $100.

FREE Our new 72-page illustrated catalogue describes 60 tools for *all* kinds of horse and hand cultivation. Write for it today.

S L ALLEN & CO
Box 1107V Philadelphia

No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow

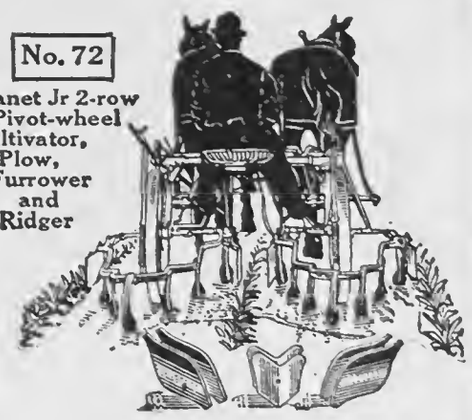
This is a practical every day time-, labor-, and money-saver. It combines in a single implement a capital seeder, an admirable single wheel hoe, furrower, wheel-cultivator, and a rapid and efficient wheel garden plow. Every owner of a vegetable garden can save the cost of this tool in a single season.


No. 76 Planet Jr Pivot-wheel Riding Cultivator, Plow, Furrower, and Ridger

A wonderful implement in extensive cultivation of corn, potatoes, etc. Light in draft, simple and strong in construction and comfortable to ride upon. Works rows 28 to 44 inches, and cultivates crops until 5 feet high.

No. 11 Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. It has steel frame. The plow opens furrows for manure, seed, etc., and can be reversed for covering. The cultivating teeth are adapted for deep or shallow work and for marking out. Crops can be worked both sides at once until 20 inches high.


No. 72 Planet Jr 2-row Pivot-wheel Cultivator, Plow, Furrower and Ridger

Cultivates at one time two rows of potatoes, corn, beans, etc. in rows 28 to 44 inches apart. Works like a charm in check rows, crooked rows, and rows of irregular width. Can be equipped with roller-bearings, spring-trip standards, and discs.

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Some automobile makers boast the hidden values of their cars—values invisible and impossible of laboratory analysis. "Under the Hood" is their summary. In the case of SEEDS, hidden values far greater lie dormant beneath the seed coats, qualities definite and potential, still not to be estimated in the laboratory or without; values to be seen in the maturing crop only, after a season's time and labor is spent—then what differences are manifest? The difference between pleasure and disappointment, and for the professional, success and failure.

The hidden qualities in **Vaughan's Special Strains of Seeds** are made plain in our **1914 CATALOG** mailed with sample Pansy packet **FREE** upon request. Send your name and address and that of your neighbor.

Send 10cts for our Hidden Value Collection of High Bred Seeds of earliest vegetables.

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Potatoes, Corn and Beets

A limited amount of Seed, all from a record ($400) Prize Stock, Won in the Bowker Contest.
For details send for descriptive circular.
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Let me tell you about the 150 acres I am growing for telephone poles. I sell the best tree pruner in the world.
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Are you in need of Fruit, Shade or Ornamental Trees; Shrubs, Roses, or Berry Plants; Spray Pumps, Lime-Sulphur, Arsenate of Lead, or Scalecide? Write *Calls' Nurseries, Perry Ohio*, for Price List. They deal direct with their customers and thousands of our best fruit growers are their customers.

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DWARF PEACH TREES
CATALOGUE FREE
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20 Elberta Peach Trees

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Pruned ready to plant; satisfaction guaranteed. Order at once and write for prices on full line of Nursery Stock, sold direct to planters, at less than half the usual prices.

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200 varieties. Also Grapes, Small Fruits, etc. Best rooted stock, Genuine, cheap. 2 sample currants—10c. Desc. price list free. LEWIS ROESCH, Box D, Fredonia, N. Y.

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We *grow* our trees *guarantee* them healthy, hardy and true; *sell* them at reasonable rates, direct from nursery; and *deliver* the size you pay for.

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St. Regis Raspberry. Prices Right—Stock Right.
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APPLE TREES $12.00 Per 100 All best varieties, highest quality, healthy, grown by us, guaranteed true to name. Write for special prices on all fruit trees, freight paid. Buy direct and get the best at lowest cost. Illustrated Catalog free. Denton, Williams & Denton, Wholesale Nurserymen, 132 Elm Street, Dansville, N. Y.

TREES, SHRUBS AND PLANTS by the millions, quality guaranteed, 1 and 2 year **APPLE**, also **PEACH** trees, **ASPARAGUS, DOWNING GOOSEBERRIES, PRIVET HEDGING**, etc. Ask for our new Catalogue with attractive prices. **THE WESTMINSTER NURSERY**, Box 129, Westminster, Md.

SEED OATS, BARLEY, WHEAT, POTATOES
All New varieties. Largest yielders known. Best quality. Prices low. New Catalog FREE.
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Hardy English Walnuts

My hardy PENNSYLVANIA GROWN TREES grafted on Black Walnut Stocks are perfectly hardy and bear very young. Also Hardy Pecan Trees. Write for Catalogue.
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Sweet Potato Seed—Sweet Potato plants; vegetable plants, and fruit plants. Price list free. MICHAEL N. BORGO, Vineland, New Jersey

Hoffman's Catalog of Farm Seeds

with samples—free. Grass Seeds, Seed Oats, Seed Potatoes, Seed Corn. Everything for the farm.
A. H. HOFFMAN, - Box 30, Landisville, Pa.

Feeding a Sod Mulch Orchard.

I read with interest Prof. Hedrick's remarks on page 137 on the Hitchings' method of orchard culture, but I fail to find any mention of the use of fertilizer of any kind. Can you advise me whether Mr. Hitchings uses no fertilizer, and feeds his trees hay only? C. F. H.
Massachusetts.

Thus far Mr. Hitchings has used no fertilizer for his general crop. We think a small quantity has been used as an experiment, but generally speaking the grass which grows in the orchard and decays there provides the plant food, except, of course, such as the natural soil provides. This orchard is located on very strong soil naturally, and it is doubtful if chemicals would pay. Possibly phosphoric acid might help, but Mr. Hitchings has secured good results from his present method, and has reason to be satisfied with it. Read the article by Prof. Coville on limestone and mulch. We think this is sound, and that the best results from mulching will likely be found where the soil is well supplied with lime.

Cover Crop and Sheep Manure.

1. I have recently bought a farm, poor and run down, and I notice that you recommend Cow-horn turnips for building up land. Do you think that I could take Cow-horn turnips and plow them under year after year and improve this land? Land is stiff and absolutely devoid of humus. Of course I would intend to subsoil the land and gradually get deeper—about an inch at a time. German (Crimson) clover makes a "hit" here every year, but my idea was to cut out such late plowing in the Spring as that is very often our driest season. 2. Can you advise me as to the reliability of pulverized sheep manure? Is it any better than some other brands that sell for the same price, $24 per ton, here? It is claimed that one bag is equal to a whole load of stable manure. H. E. M.
Prince George, Va.

1. No, you will not bring your farm up to high fertility by sowing Cow-horn turnips alone. These turnips grow on poor land and make a fair supply of organic matter, besides digging deep into the soil. They do not add as much organic matter as some other crops, and do not add any nitrogen as clover and vetch do. We doubt the great value of subsoiling such land. Far better sow rye, buckwheat, clover and vetch, plow under deep and use lime. We find a combination of rye, turnips and clover or vetch very effective. If you want crops that will not winter over, sow turnips and buckwheat. 2. The pulverized sheep manure will not pay to use on a farm. It is designed for garden or greenhouse work, or tobacco or intensive farming. Cover crops, lime and chemicals will pay you better.

Fertilizing Rye for Green Manuring.

I have a field of rye on rather poor land which I wish to plow under and plant to corn. Would it be advisable to give the rye an application of fertilizer this Spring? I would like to use about 500 pounds of acid phosphate per acre. Would this give a larger growth of rye, or would it be better to broadcast the fertilizer after rye is plowed under? Would the acid phosphate and rye have a tendency to sour the soil? G. R. C.
Cincinnati, O.

We doubt whether the acid phosphate will increase the growth of the rye to any extent. Nitrate of soda would do so, but we doubt whether there would be enough extra growth to pay. It is something of a question as to whether it pays to fertilize the cover crop. Where this crop contains clover, or vetch or beans we think it pays to use phosphate and potash where such crops are seeded. During the growing season these mineral fertilizers encourage a larger growth, and that means more nitrogen from the clover, beans or vetch. For rye it might pay to use the fertilizer at seeding, but hardly so in the Spring if the rye is to be put under for corn. We would rather put the fertilizer on the corn. If you pack the rye down hard with a roller or heavy drag after plowing it will not be likely to sour the ground.

"THEY told me to use a live frog for bait," said the stranger, "but I've been here all day and haven't had a bite yet." "I reckon not, suh," said the old Georgia darky. "De frog hez swimmed ter a log wid yo' hook an' line, an' is settin' cross-leg on de log a-lookin' at you!"—Atlanta Constitution.

Start Your Garden Early

In response to a special demand I have manufactured a sash frame 8 ft. 4 in. long and just wide enough for a 3 foot space with southern exposure. In place of many small lights there is one large light of extra-heavy glass which allows the maximum of life-giving sunlight to reach seeds and plants. It is so simple a child can ventilate it. If desired the sash can be hinged. Price complete, ready to put together, freight prepaid anywhere in the United States $10.50 (a remarkable low price, made possible only by the large volume of my business).

If you would enjoy home-grown produce in June, start your garden in February. Send your order and check today. Shipments made promptly.

Planting instructions sent with each frame. Write for Catalogue of LUTTON'S GREENHOUSES and glass garden equipment.

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223-5 Kearney Ave. Jersey City, N. J.

Medium and Mammoth Clover—grown in the Miami Valley. Also Alfalfa, hardy Northern non-irrigated seed. All high in germination and purity tests. Prices and samples freely furnished. MACE & MANSFIELD, Greenville, Ohio

SWEET CLOVER SEED for Winter sowing. Price and circular how to grow it, "Free." JOHN A. SHEEHAN, R. 4, Falmouth, Ky.

CLOVER SEED—Good crop of fine quality. If interested ask for samples and prices. Address WYSONG'S SEED HOUSE, Lebanon, Ind.

CLOVER SEED All varieties shipped. Direct Freight Prepaid. Glick's Seed Farms, Box 16, Smoketown, Pa.

SWEET CLOVER SEED—Pure white and biennial yellow. Prices and circular how to grow it, sent on request. E. Barton, Box 29, Falmouth, Ky.

ONION SEED—Best strains grown. Send for prices. J. B. QUIRK NORTH MADISON, OHIO

OATS Reg. Swedish Select. Also Early Leaming, Reid's and White Cap Seed Corn and Garden Seeds. Samples and Catalogue free. THEO. BURT & SONS, Melrose, Ohio.

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5000 bushel crop 1912 Tostod and sure to grow. Finest quality. 20 leading varieties. Also Seed Oats, Barley, Grass Seed, Potatoes, etc. Samples on application. 1100 acres. Be sure to get our new catalog. Write today
W. N. Scarff, Box 67, New Carlisle, O.

PEAS FOR SALE

Thomas Laxton, $5; Telephone, $4.50, and Heroine, $4 per bush., in lots of two or more bushels. Cash with order. Bags free. No better quality can be had at any price. Freight to Buffalo, N. Y., is twelve cents a bushel.
P. J. Wilkinson, Cambray, Ontario, Canada

ALFALFA FOR SALE—I have 50 tons of first cutting Alfalfa, bright color and fine. I can ship at once at reasonable price. JOHN McLENNAN, Fayetteville, N. Y.

St. Regis, Ranere AND EVERBEARING **Red Raspberry**
Ward Blackberry plants, by mail, $1 per doz. Famous Black Diamond Blackberry plants, $1.50 per doz. Price list free. F. A. TOMKINSON, Blue Anchor, N. J.

Guaranteed Fruit Plants
Healthy, northern grown Strawberry, Raspberry, Blackberry, Currant and Grape plants—all covered by the following liberal gusrantee:—All plants guaranteed to be first-class and true to name, packed to reach you in good growing condition (by express) and to please you, or your money back. You take no chances. Send for catalog today. O. A. D. Baldwin, R.R. 15, Bridgman, Mich.

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Clover, Timothy, Alsike, Alfalfa and all kinds of PURE FIELD Seeds direct from producer to consumer; free from noxious weeds. Ask for samples.
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For Sale
"Wilsons" Soy Beans, $2.75 Bushel
Cow Peas.....$2.25 to 2.50 "
Crimson Clover Seed... 4.00 "
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25 Full-Sized Pkts. GARDEN SEEDS 50c

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NONE BETTER

For over thirty years KNIGHT'S PLANTS have been making big money for our customers. This season we are offering a prize of
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for the most productive strawberry patch. This contest is fully explained in our KNIGHT'S BOOK ON SMALL FRUITS. It's FREE. Write for a copy today before supply is exhausted.
DAVID KNIGHT & SON, Box 310, Sawyer, Mich.

For Sale—SEED POTATOES
round, white, medium, late, of the Raleigh type but far superior in both yield and quality. Variety originated locally about twelve years ago. Grown from hill-selected seed. $3.25 bbl.; Seconds, $2.25.
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Lady Washington—Absolutely the best main crop potato in existence. Prime stock, bush., $1.50; 165 lbs., $3.50. Chester Ives, Schenevus, N. Y.

MEDIUM RED CLOVER SEED exceptionally choice—pure plump, clean, high test germination—$9.50 per bushel. DAOMUN BROS, Whitewater, Wisconsin

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Potatoes—Beauty, Bliss, Carman, Cobbler, Gold Coin, Queen, Wonder. 85 kinds. *C. W. FORD, Fishers, N. Y.*

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32 years experience, best plants at reasonable prices. Catalog free. SLAYMAKER & SON, Wyoming, Delaware

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STRAWBERRY PLANTS—Guaranteed true-to-name. Best varieties at reasonable prices. Catalogue Free. E. W. JOHNSON & BRO., Salisbury, Maryland

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Strawberry Plants—over Twenty Varieties at $2.50 per 1000. Descriptive Catalogue Free. BASIL PERRY, Georgetown, Delaware
Headquarters for Fall-Bearing Strawberry Plants.

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and other important new varieties.
Our 21st annual catalog now ready.
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3,000,000 Strawberry Plants—Best Quality. Price, $1.90 to $2 per 1,000. A customer says: "I am well pleased. Never had nicer Strawberry Plants. Martin Nye, Hummelstown, Pa." All the best varieties. Satisfaction and safe delivery guaranteed. Wholesale and Retail Catalogue free. Write today and save money. C. S. PEHDUE, Box 20, Showell, Md.

STRAWBERRIES from August to November from Superb and other new seedlings. Plants for sale by the originator. Circulars free. SAMUEL COOPER, Oelavan, N. Y.

STRAWBERRY PLANTS
We have eight that have been selected out of a hundred; eight that are TRUE BLUE. If you wish that kind send for our 1914 catalogue. Do not cost any more than common stock. ROMANCE SEED, PLANT AND TRUCK FARMS, Caleb Boggs & Son, Cheswold, Delaware

MILLIONS OF STRAWBERRY PLANTS
for sale, true to name. Asparagus roots, etc. Send for FREE catalogue.
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"Strawberry Plants That Grow"
including the BEST of the FALL-BEARERS. Also RASPBERRY, BLACKBERRY, CURRANT and GRAPE PLANTS in assortment. CATALOG FREE.
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Strawberry PLANTS, Big Producers New TESTED VARIETIES
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Strawberry Plants for $1 per 1,000
etc. Quality guaranteed the equal of any. All varieties and Everbearers. Catalogue free.
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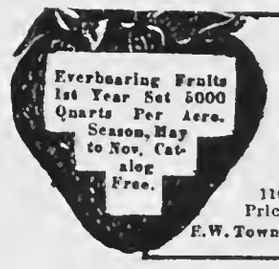

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110 varieties to select from. Prices low for quality Plants.
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Direct to the planter at wholesale prices. **We Pay The Freight and Guarantee Satisfaction.** 400,000 trees to select from. Apple, Peach, Pear, Plum, Cherry, Berry Plants and Ornamentals. Send for Catalogue.
L'AMOREAUX NURSERY CO., Schoharie, New York.

FRUIT TREES

Big profits from these practical, proved varieties. Over 150,000 peach, pear and apple trees in our stock. **Catalog free**—explains our unique money-saving **Sales Plan.** Describes finest trees, small fruits, berries, vegetable roots and decorative plants.
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Get today our new Sales Plan

SHEERINS' APPLES
900,000 four grades—12½c; 10c; 7c; 6c; 500,000 peach, 8c; 6c; 4½c; 3½c; 75,000 cherry, 50,000 pear, 25,000 plum, 25,000 Quince and thousands of roses, ornamentals, grapes and small fruits. **Secure Varieties now. Pay in Spring.** Place your order with the men who grow their own trees and save disappointment later. Catalog free to everybody. Write for yours today.
SHEERIN BROTHERS' NURSERIES, - 21 Main Street - Dansville, New York
The only persons by the name of Sheerin in the Nursery business in Dansville

PEACH TREES

500,000 Peaches, 5 to 6 feet, 9c; 4 to 5 feet, 7c; 3 to 4 feet, 5c; 2 to 3 feet, 4c. 200,000 Apples, 50,000 Pears, 50,000 Plums, 100,000 Cherry, and millions of Grapes, Roses and ornamentals. Small Fruits. **Secure varieties now, pay in Spring.** Buy from the man who has the goods and save disappointment. Catalogue FREE to everybody.
SHEERIN'S WHOLESALE NURSERIES, 48 Seward Street, Dansville, N. Y.

A NEW JERSEY TURNIP CROP.

On page 35 an Ohio farmer tells the readers of a catch crop of turnips which proved profitable to him. This prompts me to write of the method followed on this farm, where Swede turnips are a regular yearly crop with which we have been fairly successful, and for which there is a steady local demand. It was formerly believed here that no turnip quite equalled in quality those which were grown in the cooler climate of Canada, but for years this belief has been proved to be unfounded, until now the Canada product does not find a market so long as the home-grown can be had. Each Spring we take a piece of sod or a corn stubble if it is free from weed seed. Early in May we plow under 10 or 12 two-horse loads of stable manure to the acre, about eight inches deep. Then the work of the disk harrow begins, no other harrow is quite as good as a pulverizer and weed killer. Every two or three weeks until about the first of July, this ground is disked, until we have started and killed all grass and weeds and have a nice mellow seed bed for the turnips.

I will say here that the Spring droughts of each of the last four years made our soil so dry that weed seed lay in the soil without sufficient moisture to sprout them before the turnips were planted. After the rains came these dormant weed seeds sprang up and made expensive cultivation necessary. Before the last disking we broadcast from 400 to 500 bushels per acre of a good commercial fertilizer analyzing three per cent. ammonia, eight phosphoric acid and six potash, with 10 bushels of unleached wood ashes well disked into the soil. This soil is a naturally drained sandy loam running from one-third to one-half sand. We have found this fertilization on this soil produces a rapid growth from start to finish, which is essential if a good turnip is grown. We formerly made the drills 30 inches apart, but our customers complained that the turnips grew too large to be conveniently measured when retailed. We then drilled 15 inches apart and thinned the plants to six or eight inches in the rows. This reduced the roots to a more desirable size.

These narrow rows prevented the use of horse cultivation that we used on the 30-inch rows, and called the wheel hoe into use. We are careful to adjust the drill so that not too many seeds are sown, as too many plants make expensive thinning necessary. Our drill does not give us much of this work to do. We find that if the seed is good three-fourths of a pound is about the right quantity per acre. This seed question is a very important one to the turnip grower. A few select their best-shaped roots and grow their own seed, to be sure their stock is right. I have suspected some seed was grown from culls, and I am convinced that some seedsmen mix old and new seed. In my early experience I one year lost more than $100 by buying one pound of seed which proved untrue to name. On another occasion I introduced a disease, which it took some years to get rid of, by planting a trial one-quarter pound sent me by a well-known seedsman.

We find the Improved Purple Top Swede variety about fits our market and is almost invariably a symmetrical globe shape, and always tender and of the best flavor. If the soil is moist we run our drill about one inch deep, but if a drought is on two inches is better. With fresh seeds and a moist soil in a week after planting the rows will show and the earlier the wheel hoes put an end to stray weed or sprouting grass root the better for the crop. In droughty years we find it well to give two cultivations.

Some growers are troubled with the black flea beetle, thrips and the cabbage worms, but of late years we have had no trouble with these. If they did appear we would broadcast air-slaked lime when the dew was on the leaves. The turnips are pulled from the first to the twentieth of November. We choose a time when the soil is quite dry. We remove the tops and fibrous roots with a moderately heavy knife. We put in piles of eight or 10 bushels in the field until dry, and cover with the tops until we are ready to draw them from the field to protect them from the sun and frost. We bury them in permanently kept pits holding about 40 bushels each, and cover with forest leaves a foot thick, with a thin layer of dirt on top to prevent the leaves from blowing away. They keep more crisp in these pits than in a cellar, and are easy to get at any time during the Winter, but as a rule a large part of the crop is marketed directly from the field without pitting. One wholesale firm usually buys nearly the entire crop, doing their own cartage, and the price ranges from 30 to 35 cents per bushel. The yield is from 200 to 400 bushels per acre.

J. ANDREW CASTERLINE.

Lime and Phosphate or Mixed Fertilizer.

I am planning a five-year rotation, corn, oats, three years grass, using most of my manure on grass seeding. Which will give me the better results on my silo corn, 450 pounds commercial fertilizer per acre 4-8-7, or one ton lime, 300 pounds South Carolina rock, 14 per cent., and about five tons manure taken from cow dump and spread broadcast on Fall plowing? I am of the opinion that $100 invested in burned lime at $4.25 per ton and rock analyzing about 14 per cent. phosphoric acid will give me better results ultimately than to put same amount into commercial fertilizer. M. H. P.

Milford, N. Y.

Such a case needs both experience and discussion. Opinion is not worth much without studying the soil and the crops. For a few years on such a soil the lime and phosphate with a small amount of manure will be likely to give satisfactory crops. This will be specially true if some cover crop like rye and vetch is seeded in the corn to be plowed under later. That would most likely keep up the humus supply and provide some nitrogen. If on heavy land little potash would be needed, but on light soil the time would probably come when some potash must be used. You should not trust to opinion alone—though the plan seems reasonable—but you should test the matter. Use the mixed fertilizer on half an acre or more of this corn and watch results. We would like the experience of other farmers on this point. Will lime and phosphate and a small dressing of manure take the place of a mixed fertilizer? On our own farm, where the soil is naturally hard and sour, cover crops and the annual use of lime surely take the place of part of the chemicals. Fifteen tons of silage corn will take off 80 pounds of nitrogen, 30 of phosphoric acid and 105 of potash.

Mustard Seed in Manure.

We have a field of a few acres which has become infested with mustard. We seeded it to buckwheat, which was badly mixed with mustard. Some of this buckwheat was given to the hens to scratch over, and being forgotten later, was mixed with other manure when henhouse was cleaned. How can we use this manure, to avoid spreading the mustard further?

Sullivan County, N. Y. J. N.

Wild mustard is one of the most troublesome of weeds in fields not frequently given over to cultivated crops. The seeds will retain their viability for a long time, having been known to germinate after having lain dormant in the ground for 15 years. It is an annual, maturing its seed each year, and can, of course, be eradicated from a field devoted to some hoed crop, and kept clean. Grain fields have been cleared of it by spraying them while the mustard was in blossom with a solution of iron sulphate, 75 to 100 pounds to 52 gallons of water. This kills the mustard without injuring the grain. Probably your best plan now will be to use this manure upon corn, or some other hoed crop, and take pains to destroy all mustard plants that come up before they have gone to seed. Perhaps you can put that manure upon the same field from which the mustard seed came, and thus corner your enemy where you can concentrate your energies upon him. A short rotation of crops will enable you to subdue the mustard by giving frequent opportunities to destroy it with cultivator and hoe.

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I. THE RECORD OF MAPES IN THE FIELD.

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II. THE MAPES RECORD WITH THE EXPERIMENT STATIONS.

We are equally proud of our record with the Stations. There may at times have been an occasional chance analysis which was not quite what we would have liked, and not fairly representative of our goods, but on the grand average, year in and year out, our record has been something to be justly proud of.

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Not only have the Mapeses continued successively in the business for three generations—grandfather, father and son—but the Lanes, who have been associated with the Mapeses from the start, follow the same identical record in the business, grandfather, father and son, successively. Could there be a better guarantee than this family management, with the element of family pride deeply involved, that everything has been done and will continue to be done to make the Mapes Manures as good as the knowledge of fertilizer science permits for the crops for which they are intended.

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EVENTS OF THE WEEK.

DOMESTIC. — Ex-Representative Lucius N. Littauer and his brother, William Littauer, who pleaded guilty the day before to smuggling a tiara worth $9,000 into this country, apparently faced imprisonment for six months, Feb. 4, when Judge E. S. Thomas, in the United States District Court, thus sentenced each and also imposed a fine of $1,000. The sentence was mitigated the next instant, however, when Judge Thomas explained that because so many others had escaped with fines only he would suspend the prison sentence and place the prisoners on parole for five years. While the two smugglers, one of whom made the bulk of his fortune as the result of the enforcement of the customs laws on leather, will not go to prison unless their behavior within the five years sends them there, in the eyes of the law they are convicts and lose their citizenship.

The State Senate Codes Committee gave a hearing at Albany, Feb. 4, on the bill of Senator George A. Blauvelt of Rockland county, which is designed to prevent the sale of bichloride of mercury tablets except on a physician's prescription. Dr. Henry Gallant of New York predicted that the manufacture of the tablets will soon be prohibited by law. McDonald De Witt of New York, who led the fight for the bill, said that there had been 78 deaths in the past eight months from bichloride of mercury poisoning and that only 35 of these were suicides. The remainder, he said, took the poison by mistake, 22 of them thinking they were taking headache tablets. A dangerous feature of the drug is that any person can go to a drug store and get enough for 10 cents to kill a whole family, he declared. Wholesale druggists opposed the bill because they claimed that under it the distribution of bichloride by them is prohibited. It is believed this objection will be met by an amendment.

Lorenzo B. Adams, "an investment broker," of 1 Broadway, New York, said to be a nephew of the late Al Adams, the policy king, although he denies the relationship, was arrested Feb. 6 by the postal authorities, charged with using the mails to defraud. Lorenzo Adams became an investment broker five years ago, but the attention of the authorities did not become focussed on him until about three months ago, when complaints caused an investigation. For three months Post Office Inspectors Mayhew and Swain kept tabs on his business; then they drew up the complaint and arrested him. They assert that Adams used a cheap scheme to defraud, cheap but highly lucrative. It is charged that he represented to firms wishing to sell stocks or bonds that he had a large wealthy clientele and it would pay them to have him push the stock. He said he had a mailing list of 20,000 and numerous agents through the country. If a firm wanted him to push its stock he would say the first step was to circularize his mailing list. This would cost anywhere from $87.50 up, the maximum sum that has come to the attention of the authorities being $1,000. He would make the firm pay the cost of printing and mailing these circulars, according to his alleged system, and instead of sending out the circulars would keep the money. In the last three months, while his business has been under the eye of the authorities, he has obtained $6,000 in this manner, the postal inspectors say.

The British Court of Appeal, Feb. 4, sustained the decision of the King's Bench Court, which in a test case brought last June by an Irish farmer, claiming damages for the loss of his son in the Titanic disaster, declared illegal the clause printed on the steamship tickets exempting the company from liability for loss by a passenger even through negligence of the company's servants. The judgment of the Court of Appeals, in dismissing the appeal of the White Star Steamship Company from that decision, was delivered by Lord Justice Sir Roland Vaughan Williams, who declared that practice did not justify a vessel in maintaining her course and speed when the warnings of danger ahead were such as the Titanic received.

FARM AND GARDEN.—The sixth annual farmers' week will be held in Burlington at the College of Agriculture of the University of Vermont, Monday, Feb. 23 to Friday, Feb. 27, inclusive. Thirty-five different speakers, 55 addresses, more than a score of demonstrations are scheduled. The attendance in recent years has exceeded 400. A women's institute will be held coincidently, under the auspices of the Department of Home Economics of the University. The Greater Vermont Association also meets in Burlington on Feb. 24. All meetings are free to all comers. Programs can be secured on application addressed to Dean J. L. Hills, University of Vermont, Burlington, Vermont.

The annual meeting of the Jewish Agricultural and Industrial Aid Society, was held in New York, Feb. 7. Of the farm credit system, President Jaretzki says: "Our credit unions, of which we have seventeen, are exercising a potent influence upon Jewish farming in this country. They have been in operation for periods averaging a little over 13 months. They now have a total membership of 517 and a paid-up capital of $9,165. The loans made by them aggregate $73,624.66, and their net profits amount to $1,317.93. They are doing excellent work, and, as the pioneer coöperative agricultural credit banks in this country, have attracted general and favorable attention. During the year 1913 the aid society made 423 loans, aggregating $244,997.85, surpassing all previous records. The repayments from farmers amounted to $119,225. During the 14 years of its existence the society has lent a total of $1,739,415. The loans were made in 32 States and in Canada, to 2,600 farmers. There are now outstanding loans aggregating $902,649. Thirty-five scholarships to children of Jewish farmers were awarded during 1913, as against 20 in the preceding year. The credit unions established by the society are the outgrowth of the land credit system. The first one began business in May, 1911. Of the 17 existing, eight are in New York. The society also sends labor to farmers. The directors of the society are Eugene S. Benjamin, Francis D. Pollak, Percy S. Straus, Alfred Jaretzki, Solomon G. Rosenbaum and Cyrus L. Sulzberger.

The Idaho Seed Growers' Association elected the following officers at the annual convention at Pocatello: B. C. McWaters; president; J. Wyley Sessions, vice-president; R. B. Coglan, Pocatello, secretary, and W. L. Shattuck, treasurer.

The seventh annual convention of the Ohio Nurserymen's Association was held Jan. 21, at Cleveland, O. The officers were reelected and are as follows: President, W. N. Scarff, New Carlisle; secretary, W. B. Cole, Painesville; treasurer, A. R. Pickett, Clyde. Executive committee, Robert George, Painesville; A. R. Dinsmore, Troy; T. B. West, Perry; W. F. Bohlander, Tippecanoe City, and J. W. Gaines, Xenia.

The annual meeting of the Oregon-Washington Nurserymen's Association was held in the Hotel Kennewick, at Kennewick, Wash., Jan. 20, and the following officers were elected: President, C. F. Breithaupt, Richland, Wash.; vice-president for Washington, F. W. May, North Yakima, Wash.; vice-president for Oregon, H. A. Lewis, Portland; secretary and treasurer, C. A. Tonneson, Tacoma. Executive committee, A. Brownell, Portland, and J. McGhee, Orenco, Ore. It was decided to hold the next meeting of the association at Vancouver, B. C., in June. It will be held jointly with the Pacific Coast Association of Nurserymen.

The abolishment of the Board of Food and Drug Inspection of the Department of Agriculture, which was made prominent by Dr. Harvey W. Wiley, former head of the Bureau of Chemistry, was announced, Feb. 7. Hereafter all authority which was vested in the board will be in the hands of Dr. Carl Alsberg, successor of Dr. Wiley. Dr. A. S. Mitchell and Dr. H. N. Loomis, who were members of the board of food and drug inspection, have been given other duties in the bureau of chemistry. Dr. Alsberg will be assisted in the administration of the law by Dr. R. L. Emerson of Boston.

GOV. GLYNN'S MESSAGE.—Agricultural organization rather than legislation is needed in New York, Gov. Glynn told the Legislature, Feb. 10, in a special message. In keeping with this declaration he asked the legislators to appropriate not less than $25,000 nor more than $50,00 to be expended in a campaign of organization and education in the rural districts. By means of lectures he would enlighten farmers on the present State agricultural laws, and instruct them in the best methods for organizing coöperative societies for the sale of their products. The lecturers also would take an active part in the organization of coöperative societies. After pointing out that the few coöperative societies in the State had been successful in reducing the price of many farm supplies and raising the price of farm products, the Governor gave some suggestions on how the organizers should go about their work. "The Legislature," he said, "should secure for the State the services of men who will make it their sole duty to go through the State explaining these coöperative laws and assuming the responsibility for creating and organizing credit unions and coöperative marketing societies. These men should make it their business to organize markets and shipping stations under the control of local coöperative marketing associations. One large receiving center in cities and towns of medium size will answer all the purposes of a packing, grading, shipping, and marketing station. Here the produce will be delivered by the neighboring farmer and credited to his account. The goods will then be graded, packed, and labelled. Pains will be taken to supply first of all the demands of the local towns. The balance then can be shipped in carload lots to the centers of best demand. One central station equipped with cold-storage facilities can accommodate the surplus products of several smaller stations."

COMING FARMERS' MEETINGS.

Sixth National Corn Exhibition, State Fair Grounds, Dallas, Texas, February 10-24.

Annual farmers' week, Vermont College of Agriculture, Burlington, Vt., February 23 to 27.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26.

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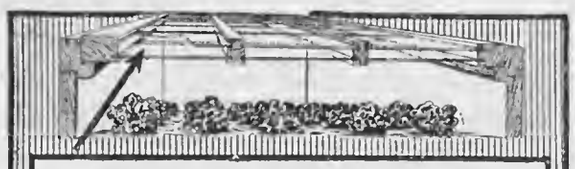

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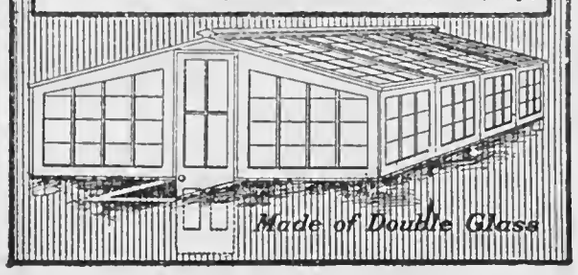

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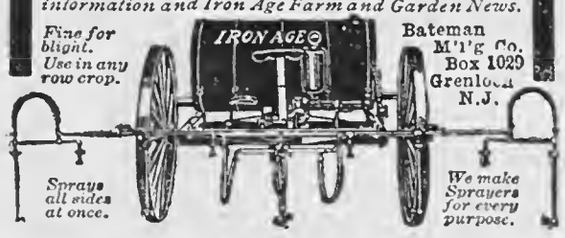

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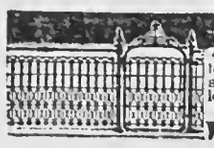

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A Fertilizer Mixture.

What would my fertilizer mixture grow best? Would it be advisable to use this mixture on corn and if so what amount, and would it be best to sow broadcast or in drill? I can buy these chemicals as follows: 600 pounds nitrate of soda, $16.68; 600 pounds dried blood, $15.48; 1,800 pounds bone, $25.29, and 900 pounds muriate of potash, $20.34. These prices are on time, or 5 per cent off for cash. I could get 1,800 of acid phosphate for $16. Would it make a better mixture to leave out the 1,800 pounds of bone and put in 1,800 pounds of acid phosphate instead? Could you give a better mixture for corn and cabbage?
Bonney, N. Y. F. P. B.

At average analyses you will have the following composition:

	Nitrogen	Phos. Acid	Potash
600 Nitrate	96	...	...
600 Blood	72	...	...
1,800 Bone	54	450	...
900 Muriate	..	...	450
3,900	222	450	450

This means a mixture containing 5.7 per cent. nitrogen, 11.8 phosphoric acid and 11.8 potash. The cost is $77.79 or $39.80 per ton. Such a fertilizer is best for such crops as potatoes, grass or garden crops, or field crops like cabbage. For our own use we would rather use 1,000 pounds of acid phosphate and 900 pounds of bone. This will make an even two tons a little lower in nitrogen and correspondingly lower in phosphoric acid.

Seeding a New York Pasture.

I wish to seed down to permanent pasture some damp land, some dry, and some intermediate. Orchard grass never fails here or has to be reseeded. How would one part Orchard grass, one part Meadow fescue, one part Tall Meadow oat-grass be for permanent pasture and how much each do I want per acre to have it seeded well? Can I cut it a few years for seed to seed other pieces? O. S. B.
Alpine, N. Y.

The mixture of seed one part Orchard grass, one part Meadow fescue, and one part Tall Meadow oat-grass, that you suggested will take several years before the field comes to maturity, and the cost of seed is greater than that of other good pasture seeds. The amount of lime present, the soil conditions themselves, and the amount of moisture vary in different parts of a field; thus a mixture of a greater number of seeds is more apt to give a good permanent stand than a mixture of two or three alone. Under the conditions you mentioned, with the soil and moisture varying in different parts of the field, the following mixture is perhaps the most successful: Timothy, seven pounds per acre; Red clover, four pounds, or Alsike clover, three pounds per acre; Kentucky Blue, seven pounds per acre; White clover, two pounds; Orchard grass, six pounds; Meadow fescue, four pounds; Tall Meadow oat-grass, four pounds per acre. The Timothy and Red and Alsike clovers are introduced so as to make a quick stand, so that a hay crop can be obtained while the meadow is becoming prepared for permanent pasture. In the damper or acid soils a greater proportion of Alsike clover could be used to advantage than shown in the above table. The Kentucky Blue grass makes a compact sod which stands a large amount of tramping and close grazing without injury. In New York State this and White clover form the basis of the seed mixtures in most of the permanent pastures. Fescue and Kentucky Blue will take three years to come into their prime as pasture land. Orchard grass seed should not exceed 15% of the total used, as it grows in tussocks or bunches, and should not all be added the same year. It would not seem advisable to attempt to raise for seed, for several reasons. The hay in the first few years will be worth more than the seed. The companies selling grass seeds obtain it from places where the hay is worth but little, but in New York, where hay sells for over $15 a ton, it would be cheaper to buy the seed outright. Flowers of all varieties will not set in certain localities, which is another factor against raising one's own seed. A small plat of average ground might be used for the perfection of certain varieties, but commercially this is not practical. There are certain counties in the Middle West which can produce better seeds than New York because the climatic conditions are more favorable. W. H. B.

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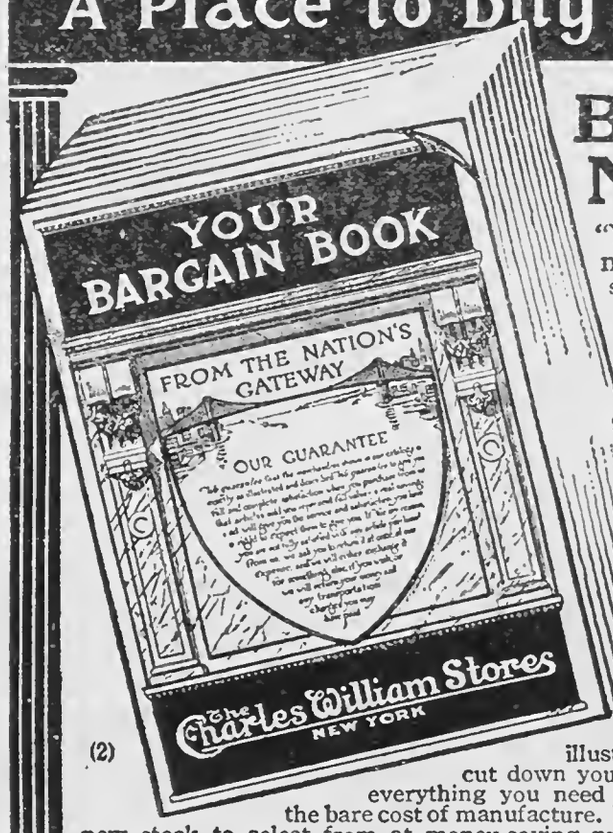

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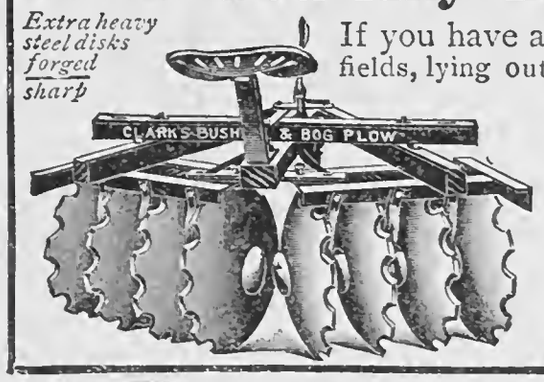

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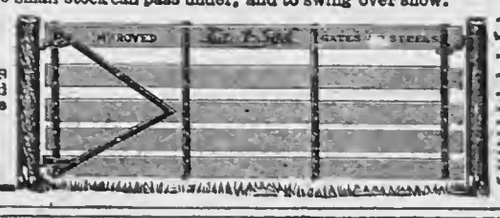

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Hope Farm Notes

Some of our people are telling us about the best or most satisfying meal they ever ate. This question of food seems to depend on habit, hunger and personal taste. I saw a man once in a lumber camp eat plate after plate of a stew made of meat, potatoes and carrots—cooked in a big iron kettle over an open fire. At home this man would have growled at turkey or terrapin but here he was passing back his plate again and again, asking the cook to put more carrots in. "Why," he said, "I thought carrots were made for horses to eat. I didn't know human beings ate them!" He never had been a real human before—not until hunger caught him and pulled him right up to that iron pot. At his club in the city he could not have eaten three mouthfuls of that stew.

It is different with sleep. The man with no appetite can get on after a fashion, but he who cannot sleep is a pitiable object. I met one once—a rich man who had worked too hard—starved himself of sleep in order to get hold of rather more than his share of money and power. He had passed the limit of nerves and was denied the power of sleeping. A few snatches of rest were all he could get, but through the long, still nights he lay awake, thinking, thinking with the constant terror that this would end in a disordered mind.

We sat before this man's fire late at night, and he told me about it. To you sleep seems like a very common and simple thing. The night finds you tired, and you shut your eyes and before you know it you are sailing off into a peaceful, unknown country. Here was a man who could not sleep. He must remain chained to the cares and terrors of his daily life, and the bitterness of it was that all the money he had slaved so hard to obtain could not buy him what comes to you and me with the mere closing of the eyes. It seemed to me the most despairing mockery to hear this man repeat Sir Philip Sidney's "Ode To Sleep":

Come sleep; O Sleep! the certain knot of peace,
The baiting-place of wit, the balm of woe,
The poor man's wealth the prisoner's release,
Th' indifferent judge between the high and low;
With shield of proof, shield me from out the prease
Of those fierce darts Despair at me doth throw;
O make in me these civil wars to cease
I will good tribute pay, if thou do so.
Make thou of me smooth pillows, sweetest bed,
A chamber deaf to noise and blind to light
A rosy garland and a weary head.

"That's it," said my friend. "*A weary head. A weary head.* Mine is weary but sleep will not come." He sat looking at the fire for a long time, and then he turned suddenly with a sort of haunted look in his eyes:

"I wish you would tell me about the *best sleep* you ever had. Men may tell of their best meal, but I want to know about *rest*—the best sleep."

It was a strange request, but as I sat there my mind went back to a hillside near the New England coast where the valley slopes away to a salt marsh with a sluggish stream running through it. A low, weather-beaten farmhouse crouches at the foot of the wind-swept hill. It is a lonely place. Few come that way in daylight, and at night there are no household lights to be seen.

It had rained through the night, and the morning brought a thick sticky fog. It was too wet to hoe corn, and Uncle Charles said we could all go gunning. He was an old soldier, a sharpshooter and a famous shot. So we tramped off along the marsh, following the creek until it reached the ocean. What a glorious day that was for a boy! I carried an old army musket that kicked my shoulder black and blue. We tramped along the shore and through the wet marsh, hunting for sand-pipers and other sea fowl. Now and then a flock of birds would seem to be lost in the fog, and Uncle Charles would whistle and call them up to where we lay in ambush. It all comes back—clear and distinct—the cries of the sea fowl and the dull roar of the ocean as it pounded upon the beach. Late in the afternoon we tramped home wet and tired but with a long string of birds. The ocean roared on behind us louder than ever as the wind rose.

It was not good New England thrift to eat those birds—the guests at the Parker House in Boston would pay good money for them. While we had been hunting, Aunt Eleanor and the girls in the lonely farmhouse had been busy with a "New England dinner." There was a big plate of salt codfish, first boiled and then fried crisp with little cubes of browned salt pork mixed with it. There were boiled potatoes which split open in a rich dry flour, boiled onions and carrots and great slices of brown bread and butter. Then the odor from the oven betrayed the crowning act of all—a monstrous pan-dowdy or apple grunt! Ever eat a genuine pan-dowdy in a New England kitchen as a wet dreary night is coming on after a tiresome day? No? I am both sorry and glad for you. You have missed one of the greatest joys of life, but you have much to look forward to. When Uncle Charles began to cut that pan-dowdy we boys realized that we could not do it full justice, so we went out and ran around the house and barn half a dozen times to make more room for the top of the feast.

After supper the dishes were washed, the house cleaned up and we washed out our guns. The old musket had kicked my shoulder so I could hardly raise the arm, but no human being could have made me admit it. We got Uncle Charles to tell us about the time he shot at the officer at Port Hudson during the war, and about the hump-backed man who carried the powder from Plymouth to Boston during the Revolution. Then through the gloom and fog came two young men to call on the girls. In those days it seemed to me very poor taste for one to listen to the conversation of girls rather than war stories. True, the war stories were time-worn, but the girl conversation was older yet. Soon the little melodeon was talking up and a quartette were singing the old songs of half a century ago. It may have been the day's tramping, the old musket or the last plate of pan-dowdy or the tap of the rain on the window, but sitting there by the warm kitchen stove I felt a delicious drowsiness stealing over me.

Bed is the place for sleep, and we boys climbed the stairs, past the great central chimney, and quickly tumbled into bed. In the room below that quartette had started an old favorite:

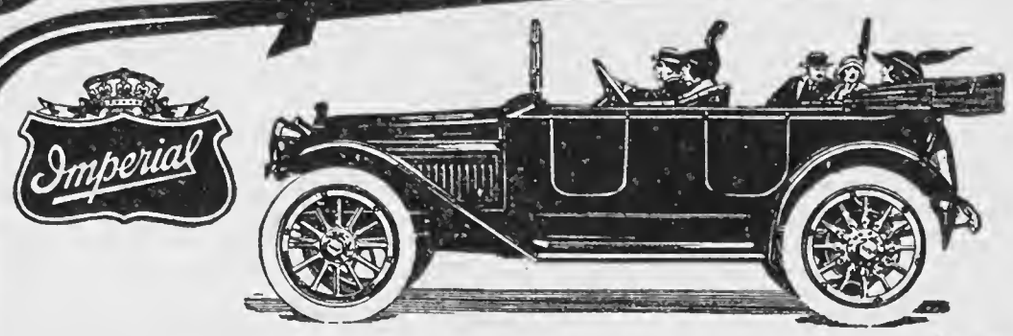
"Along the aisles of the dim old forest
I strayed in the dewy dawn
And heard far away in their silent branches
The echoes of the morn."

There was one great booming bass voice which had unconsciously fallen into the key of the dull roar which the distant ocean was making. The rain was gently tapping on the roof, and all the joys and pleasant memories of youth were whispering happy things in our ears as we sailed off on the most beautiful voyage to dreamland.

I told this as best I could before the fire while my weary friend listened leaning back in his easy chair with his hand shading his face. And when I stopped sleep had come to him at last—sweet and blessed sleep. There are very few of us who would stand for a photograph taken while we were sleeping, but this man's face was free from care. An orator might not think it a high tribute to his powers that he sent his audience to sleep, but I am not an orator, and I would like to be able to give my friends what they consider the blessed things of life!

H. W. C.

Imperial



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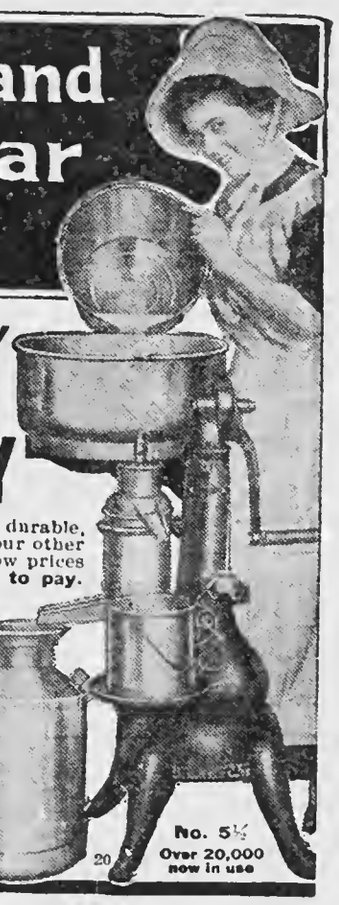

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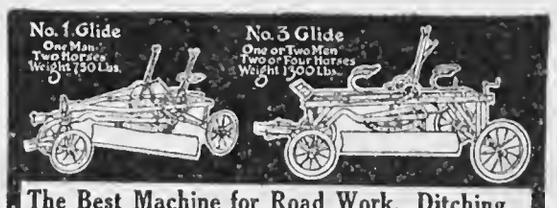

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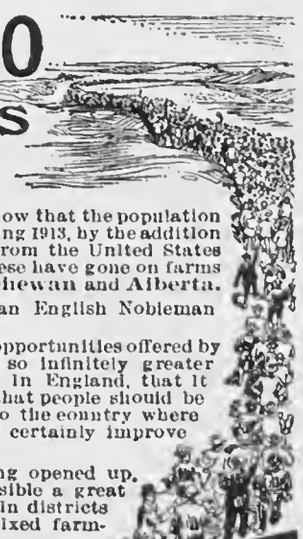

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

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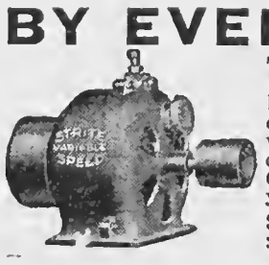

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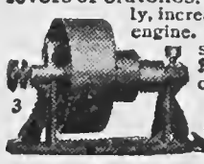

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Ruralisms

GINSENG CULTURE IN CHINA.

Bulletin No. 90 of the Office of Foreign Seed and Plant Introduction gives the following information about ginseng growing in China, furnished by Mr. N. Gist Gee, of Soochow University, Soochow, China:

The soil is prepared by mixing sand and loam in the proportion of 1:1. The sand is frequently obtained by sifting it from the bed of a nearby stream. In order to get as near as possible to the natural wild environments of the plant, the leaves of the oak or chestnut trees are collected, allowed to decay and then dried. When dry the leaves are crumbled very fine, and then mixed half and half with sand sifted from the hillside. This is obtained by first removing the top layer and getting the unexposed earth. The plants are cultivated on elevated beds about six or eight inches above the pathways between them. These are usually about wide enough for one to work them from one side (about two or 2½ feet). The length of the bed varies with the kind of field, short on hillside, quite long in the valley. Fertilizer one inch thick is spread upon the beds before the seeds are planted. The beds are covered over with sheds with top and one side stationary and a curtain which can roll up and down forming the other side. They seem to keep the plants sheltered throughout their entire period of growth, and regulate the amount of sunlight by the curtains. Before planting soak the seeds in water for four days until they swell and are nearly ready to burst. Then take them out and dry them. This should be done before Fall. In the Fall bury a vessel in the earth in a shady place and put the seeds as already prepared in it, leaving it uncovered. Allow them to freeze, leaving them in the vessel until Spring. Drive nails as large as ginseng seeds in a plank, making them about one inch apart. Use this to plant the seeds regularly about five-eighths of an inch in depth. Place a seed in each hole and cover lightly with the hand. The rows should be about six inches apart. Spray with a very fine stream of water twice a day. Allow the planted seeds to receive the sunlight until the sprouts appear. During all of this time the beds should be protected from rains, but sprayed regularly twice a day. The soil should be kept in good condition by hand cultivation after the young plants come up. This care must be constantly given to the plants. The plants are taken up at the time they are about one year old and only the best ones are saved for transplanting. Many planters do this each year for six years after the plant comes up. Others transplant and select for only the first two or three years. The plants are planted out about six inches apart and in rows about one foot apart. Care must be taken to give the two regular waterings each day during the growing seasons.

The Navel Orange in Brazil.

We referred recently to the expedition sent by the Department of Agriculture to Brazil, for the study of Bahia Navel oranges. Mr. A. D. Shamel, who is one of the members of this party, writes as follows to the Bureau of Plant Industry:

One of the most striking methods that we have found is the practice of orange growers renewing their orchards. They cut back old trees to within about a foot of the ground, allow them from one to three sprouts to grow, from which a new top is developed. A few trees in each orchard are treated in this way each year, renewing the grove as a whole gradually. No means of combating the numerous insects pests and fungus diseases are practised. In spite of the conditions the trees are fairly productive, bearing from 200 to 500 fruits each. Considering the planting, 12 by 12 feet, this means a heavy production per acre. Oranges sell for 10 cents apiece in Rio. Not enough are produced to supply the local demand even at this or higher prices. No fertilizer and usually no cultivation is used. Little pruning except to cut off the lower branches so that people can walk under the trees easily. All labor is hand labor. The fruits are pulled from the trees and handled just like we handle potatoes. The loss from decay in market is very heavy naturally. We have found about all the California Citrus types here, and many others besides.

Rome Beauty and Hudson Apples.

I note what you say regarding the Rome Beauty apple, page 46. I am sorry, for I have planted freely of this kind as a pollenizer of my new kind, "Hudson." At my place, however, no one of all the commercial varieties suffers enough from Winter-killing to put it out of commission. Hubbardston being most tender of any I have grown. Part of the one-year-old Rome Beauties which I received the Spring of 1912 were Winter-killed, but the remainder are growing finely, and I am confident in their future. I consider this particular case of Winter-killing in nursery the result of a most unusual Winter, when much stock was injured in certain locations. If these trees had been grown on my land they would not have been Winter-killed even when yearlings. Rome Beauty, where fruiting in Dutchess County, is very promising, as a very late-keeping apple of fine appearance.

I am sole owner so far as I know of a new apple, named Hudson, originated by S. W. Underhill of Croton on Hudson, and exhibited by him at American Institute Horticultural meeting the Winter of 1901. His tree has been destroyed, but I secured scions from him in 1901, and have four trees top-worked at that time, two of which have born five crops in succession, giving much promise as annual bearers. I have such confidence in the splendid promise of this apple commercially that I set 1,000 Spies in 1912 and top-worked with Hudson. The Hudson was grown from the seed of a fine Spy crossed naturally (supposedly) with Newtown Pippin. It is a red apple of medium size, an exceedingly smooth, finely-shaped, hard apple, a very late keeper and when finally in eating condition in the Spring most people will declare it to be better than Spy or any other kind, no matter how high its quality.

W. H. HART.

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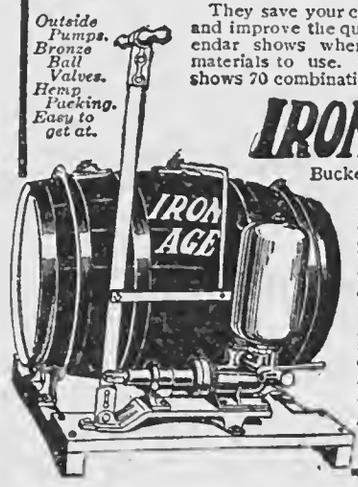

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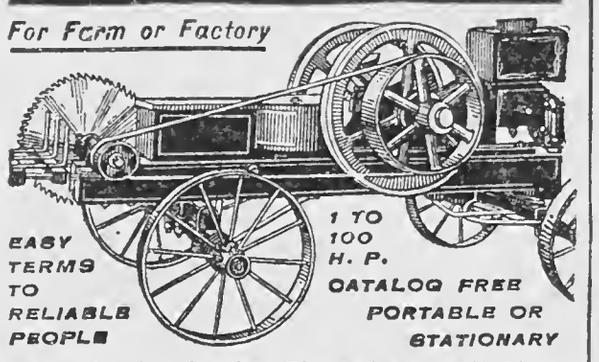

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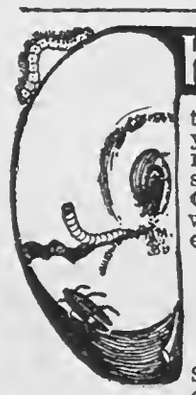


that ruin your fruit and destroy your trees, vines and plants. Get rid of scale, fungi and worms by spraying. Stahl's Treatise on Orchard Enemies (sent free) will tell you how to do it with easy working—and efficient—

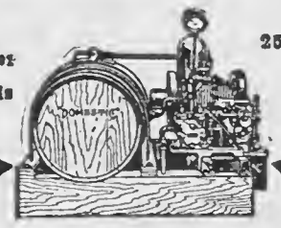
Stahl's Excelsior Spraying Outfits

Send $3 and we will ship outfit complete. Try 10 days and if found O. K. pay balance. If not return and we'll refund your money. Write today

WM. STAHL SPRAYER CO. Box 173, Quincy, Ill.

A new compact power sprayer for small orchards

250 lbs. pressure on 2 nozzles 150 lbs. on 4 nozzles



Valves are brass balls, each one in a separate, removable cage. One and one-half H. P. Junior Engine, water cooled. Strength, convenience of operation, light weight and reliable engine are features in all

Domestic Sprayers

Valves and all working parts can be easily removed, cleaned and replaced. Pump throws a uniform, fine, misty spray. Antomatic agitator stirs the liquid, while a small brush passes over the strainer and prevents clogging. We can furnish you with sprayers for all purposes. Send for a copy of our free book, "Made Money by Spraying."

Domestic Engine and Pump Co., Box 503, Shippensburg, Pa.

SWIFT'S ARSENATE OF LEAD

is sure death to all leaf-eating insects.

Save your apples, potatoes, truck gardens, berries, vegetables, fruit.

15 years' experience back of this pest destroyer which sets the Standard of Excellence. Not always lowest in price but absolutely cheapest in the end. Take no other brand but insist on receiving

SWIFT'S—THE HIGHEST QUALITY KNOWN

For sale by leading dealers. Write for our Apple Book.

MERRIMAC CHEMICAL CO., 34 Broad St., Boston, Mass.

Spray Your Trees Early Any time this winter and early spring when the temperature is not below 40° F. you can spray with "SCALECIDE" and kill the scale, eggs and larvae of insects wintering on trees, as well as spores of fungi that can be reached by a winter spray. Prepare now for a good fruit crop next season.

"SCALECIDE"

TRADE MARK REG. U. S. PAT. OFFICE

will absolutely destroy San Jose and Cottony Maple Scale, Pear Psylla, Leaf Roller, etc., without injury to the trees. It costs less to spray an orchard with "Scalecide" than with Lime-Sulfur—and you secure better results. We back up this claim. Write today for free booklets—"Proof of the Pudding" and "Spraying Simplified".

Write to our Service Department for orchard supplies at money-saving prices.

We are World Distributors for Vreeland's "ELECTRO" Spray Chemicals

and "Electro" Arsenate of Lead Powder (33%) which, used wet or dry, has no equal in strength or texture. Avoid imitations. B. G. PRATT CO., Dept. N 50 Church Street, New York City.

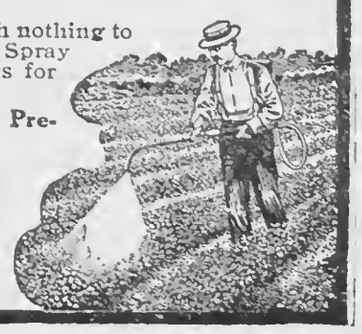
More than 100,000 Farmers and Fruit Growers Use the STANDARD SPRAY PUMP

With it they spray their tallest orchard trees *from the ground* in half the time required by others. The knapsack attachment enables them to spray their potatoes and low growing crops at the rate of an acre an hour or better. They whitewash their barns and chicken coops and spray "dip" on their live stock with the Standard Spray Pump.

Made throughout of brass, with nothing to wear out or break, the Standard Spray Pump lasts a lifetime and pays for itself over and over again.

Warranted 5 Years. Price $4 Prepaid. (West of Denver $5.) Money back if not satisfied.

Send no money but write today for our Special Offer and Catalog M.



The Standard Stamping Co.
948 Main St., Marysville, O.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

SUBSCRIPTION: ONE DOLLAR A YEAR

To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs. Remit in money order, express order, personal check or bank draft.

Entered at New York Post Office as Second Class Matter.

Advertising rates 60 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rognes, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

THERE seems to be a good opening for high-class canned goods put up on the farm. Direct trade is springing up everywhere, and thousands of people stand ready to buy reliable canned goods when they know where to obtain them at a fair price. We know several farmers who have tried the experiment of putting their surplus fruit and vegetables into cans whenever the regular market price goes down too far. This has worked well and gives a fair profit. There is opportunity in this.

*

THE movement of Danish settlers into Otsego Co., N. Y., is one of the remarkable features of this "back to the land" movement. It is said that no less than 100 more Danish families are planning to come during the year. Their pastor is already here—located on a farm. A brotherhood has been organized and a church will follow. Most of these settlers are below middle age, with good families of little boys and girls, who will be Americanized by the public schools. These Danish people are well educated, and are surely workers, and their coming is a good thing for Otsego County.

*

THE "Coöperative Egg Circle" is a new Canadian farm organization. It seems to have started on Prince Edward Island. From 40 to 80 farmers will organize to sell their eggs coöperatively. The membership fee for an "egg circle" is 30 cents, with 25 cents annual dues. Each member pledges himself to collect the eggs twice a day in warm weather and once daily in cool weather. He also guarantees not to send to the business manager any egg more than seven days from the hen. The manager collects, sorts and ships twice a week in warm weather and once in cool. He must use a covered wagon and is paid one cent a dozen in Spring and Summer and two cents a dozen during the rest of the year. This manager sells the eggs and makes returns to the members. Under this arrangement it is said that farmers receive from two to five cents a dozen more than when they sold to dealers or shipped without organization. And ont of these egg circles will hatch other and larger plans for square dealing.

*

AT the Albany farmers' convention in January a resolution recited that the Western packers drove Eastern farmers out of the business of raising meat animals by competition and discrimination against local butchers who, in years past, when native beef was plentiful, attempted to slaughter meat animals bought from neighboring farms. A representative of one of the railroads rose in the convention and questioned the assertion. As proof of the belief that was in him, he said, he had heard the same complaint some time back, and had written the secretary of one of the packers, whom he knew personally asking if the charges were true. He received a reply to the effect that it was not true.

That certainly is a simple and a confiding way of settling disputes. It ought to do away with all controversy in the future, and incidentally with all courts with their retinue of lawyers and contingent expenses. Ask the thief if he stole a chicken. If he says no, we can be sure that the bird is on the roost, and it is an optical illusion that the owner cannot see it.

WITHIN the past week we have had six cases of threatened lawsuits through failure to understand verbal contracts. One case involves two brothers, another father and son. The parties talked over their business relations and agreed to do certain things. After a few years conditions changed and one party found that he was not getting what he expected. Then they could not agree. One remembered a certain agreement, the other said it was different. There was nothing in writing, and neither party had kept accurate books. In some of these cases there will be a feeling of resentment as long as life lasts. There should always be a strong legal contract whenever people make an agreement to work together or to transfer property or perform some definite service. The expense of hiring a good lawyer to tie up the contract securely is a trifling matter compared with loss and annoyance which follows a loose and indefinite contract.

*

IN your article on page 47 entitled "Two Blades of Grass," you advocate short crops and high prices, because with large crops the farmer may not get all of the benefit of the increased quantity. I judge from this that you object to the use by the farmers, of anything that will produce larger crops. This principle, carried out consistently, will approve of restricting the production of coal to increase the price; the running of factories on short time, for the same purpose and generally retrograding in all matters of production. This is a very narrow minded view of the subject, and one which intelligent farmers will hardly approve of. You cannot deny that abundant crops at fair prices are best for the country at large, and general prosperity does favorably affect the farmer. R.

Your judgment is wrong. We do not object to "anything that will produce larger crops." We have done as much as any farm paper to encourage the use of such things. Our advice to a farmer is to grow his crops on smaller areas instead of scattering them all over the farm with inferior culture. We do not advise him to double his entire crop production until the price minus the cost warrants doing so. This principle has been and is carried out by the very interests you mention. If it is a narrow view suppose we broaden it out and advise all manufacturers to double their production of hardware, shoes, clothing, furniture, etc. They could do this quicker and easier than farmers can. Advise the railroads to double track all their lines and welcome all possible competition in trolleys and cross roads. One is just as fair as the other, but will the railroads and the manufacturers do it? Let them try the "abundant crops at fair prices" theory and see what would follow. From your theory the world would be far better off, since these necessities of life would be cheaper. Why do you ask farmers to do what these other interests refuse to do? We never have denied that abundant crops at fair prices "are best for the country at large." The 35-cent dollar does not mean a fair price. Give the farmer more than that and the abundant crops will follow.

*

ON page 166 we mentioned Bradley Bros. as one firm denied advertising space in THE R. N.-Y. Now we get a note from a Western business man:

We are getting lots of letters from our customers about those people; they put up a pretty coarse job of work. That is about the rawest game I ever saw an advertiser try to put across; it is worse than the wonderberry plant. I don't see how he can expect to put it across with any intelligent people.

The "raw deal" which our friend mentions is about as follows: An advertisement states 12 "Productive" everbearing strawberry plants will be sent "without charge." When the victim asks for the dozen plants he gets this:

The "Productives" being a female plant, will not fruit or bear a crop of perfect berries, unless planted with a male variety like the "Progressive." Now we are very anxious to have you succeed; our gift of 12 special plants of this wonderful new variety is very liberal. We would like to send you the "Progressive" without charge, but we cannot afford to do so. Plant the "Productive" strawberry that we send you free, with equal number of plants of the "Progressive" if you have that variety; if not order some "Progressive" from us; our special proposition is to send you by parcel post, at the same time that we send the 12 "Productive" for $1.25 the 12 "Progressive" and we can send you the 24 plants at the same time by mail postpaid.

That is about as slick a scheme as we have yet heard of. The Greeks were about the craftiest people of ancient times. When they wanted to entice their enemies into trouble they arranged for a number of young men to dress in women's clothing and dance on the shore or where the enemy would see them. Needless to say these dancers carried daggers ready for use and the gentlemen who "answered the advertisement" were most effectively "stung." Bradley Bros. must be great students of Greek literature. The "Productive" plants are used to sell "Progressives" at 10 cents each. It is a "raw deal" which well deserves roasting.

WE ask you to read every word of that story of coöperation by Mr. L. G. Tuckerman. Do not glance it over and let it go, but read it over and over as you would a personal letter. For in this story may be found the basis for a true coöperative organization. These Hudson River fruit growers have struck the real thing. See how their little organization has grown and branched out into great possibilities for selling, handling and financing the local crops. This is the way out for farmers in any community where the farm products are uniform so they can be handled together in large lots. It is coöperation with the CO in large type. This word coöperation is used to cover a multitude of schemes in which a few men get most of the profit and the rest get left. The first thing to understand is that coöperation means equal share of benefits based on labor or business, with no special privilege to anyone.

*

A CURIOUS cream situation is reported from Ohio. There seems to be no standard defining "cream" in the State laws, while milk is standardized and milkmen are held up to it. It seems that the ice-cream dealers froze up the Legislature and got this "joker" through. The trade in selling real cream to the people is growing and can be developed into one of the most profitable lines of the dairy business if a high standard is set for cream and dealers are compelled to face it. Selling pure high-grade cream compares with handling the higher class fruits or other fine products. It is the top notch of good dairying, but there will be nothing in it for the honest man unless a fair standard is made and all are forced to live up to it. Naturally the dealers and handlers have an advantage when the is no standard. They can buy cream and pay for it on a fat test and then sell it to their retail customers with no test at all. There is where the dairymen and farmers of Ohio should get after the Legislature. Work for a law calling for a standard definition of cream. This will not help dairymen alone, but all classes of farmers as well, for whatever helps one is sure to help another.

*

DURING the past year many of our readers have seen advertisements of "Black Fox Farms," some having been offered stock in such enterprises. We have warned our friends as best we could to let such speculations alone. They are gambles pure and simple. Prices for breeding stock of these foxes have been boomed past the bursting point. Last year promoters secured options on the unborn Spring progeny at $10,000 to $12,000 per pair—depositing 10 per cent. of the price. Then they used these options and contracts as assets for their companies and on the strength of such assets offered stock for sale—the money obtained to pay for the young foxes later—if they were born and lived! Thus the man who bought stock in a Black fox farm invested literally in *an unborn fox and a hole in the ground!* Speculative gambling could go no further than that, yet we actually have people argue that the risk is fair one and that the business is sure to be profitable. The argument is that wild fur-bearing animals are vanishing, while the demand for fur garments is increasing. That explains the present rush into skunk farming and similar enterprises, many of which are doomed to failure, since they are based upon the proposition of changing the life habits of naturally wild animals. One reason for the high price for furs is the five-year closed season for fur seals. This five-year term will expire at about the time pelts of these black foxes would come into the market. At present the foxes are sold for breeding purposes at a speculative figure. There is nothing in any such business for those who buy stock in these companies. The fox breeders and the promoters will get all there is in it. Keep out—no matter what big stories they tell you.

BREVITIES.

YOU can root-prune a tree to advantage, but it is hard to do the same to a horse, cow, or man.

THERE is every good reason why a farmer should keep an accurate set of books and not one good reason why he should not.

IT is claimed that Kansas farmers buy 50 per cent. of the vegetables they consume at home. There's a chance to cut out one "trust" with a hoe.

A HARD man to convince is he who will not believe anyone else can do a thing which he has never done. Tell something outside of this man's experience and it "isn't so" at once.

ORGANIZE a "tin-can club" and get the empty cans out of the way. During the Summer a tin can half filled with water will breed enough mosquitoes to make farm life a nightmare.

WEST Virginia is to have a brood of the 17-year locusts this year. We had them a few years since, and they did considerable damage to the soft, young wood. We advise doing no pruning until the locusts have gone.

THE STORY OF A CO-OPERATIVE SUCCESS.

PART II.

ONE WEAKNESS.—In this connection let me go back to Art. VII of our by-laws. The last sentence reads "The members reserve the right to negotiate private sales on which no commission shall be due to the Exchange." Members received the service of the Exchange in market reports and daily prices, and being fully posted would sell to outsiders at those prices to save the three per cent. which they would have paid if selling through the Exchange. They refused to consider that it was the Exchange which made those sales possible, stating that they were only in it for what they could get out of it. You can see how much fairer to all it would be if all sales f. o. b. paid the small commission to the Exchange, and how much stronger the union would be.

BUYING SUPPLIES.—In 1912 our Fall fruits were practically failures, and we took up the buying end. Oats were then selling locally at 66 cents per bushel. Mr. Hilderbrand landed the first carload at Milton direct from Minnesota at 38 cents. More applications for membership! Cheered by that success, he began on bran, middlings, scratch feed, flour, etc., and that first Winter sold 20 carloads at a saving of some $2,500 to our members. We now buy our flour at about $5.25 per barrel landed at our stations, of a grade that we cannot duplicate there for $7.50. We then turn to spray materials and fertilizers. Average prices for commercial lime-sulphur had been $9 to $10 per barrel. We cut it to $5. We also furnish sulphur and lime to those who cook their own stuff at about the same saving. The first year we bought some 250 tons of chemical fertilizer of all sorts at an average saving of $5 per ton. This included a goodly amount of ground rock (acid phosphate), which, as you know, sells around $12 to $14, and pulls down the saving average. On all these purchases the members paid three per cent. to the Exchange.

GROWTH OF BUSINESS.—This first season our actual paid-in cash capital was about $500, and on that we did a business of over $110,000. We ended our first year showing a small margin over and above all outlay in the treasury of the Exchange, but with savings profits to the members on purchases and sales of several thousand dollars. Our second year started with about $1,200 capital, with which we did a business of over $232,000. Of this some $30,000 was f. o. b. sales by the Exchange. Strawberry and pear buyers came to us, and stayed through the season. The ordinary commission house considers 500 crates of strawberries a day as large business. There were many days last season when the Exchange sold 800 to 900 crates a day for its members. About 3,000 barrels of pears were sold to England and a beginning made with apples. Sales covered a wide territory, as our fruits were shipped as far west as Wisconsin, and south into Florida.

FUTURE PROSPECTS.—We have bought to date some 25 carloads of feed, and 21 carloads of manure at a saving of about 25 per cent. The purchases have amounted to $11,000, which does not include this year's fertilizer, upon which we have even lower quotations than last year. We now have 84 members, and the executive committee has decided to recommend that our capital stock be increased, in order that there may be room for those who seem to want to join, also with a view to providing capital for greater work. It seems certain from the experience of this year that next Fall we shall hire cold storage in New York city, and keep our own man there to bill out our apples as wanted for our widening markets.

SOME DIFFICULTIES.—Now I don't want you to leave here with the impression that everything is rosy and plain sailing with such a proposition as I have been talking about. We began small, and we are still creeping along, for it takes time and patience and much work to raise a successful co-operative plan among people who are not used to the idea of working together. In our section I think we are, on the whole, slowly learning the lesson. We have taken up the easiest and most obvious needs. We have not yet reached the point where we can have an absolutely fixed grade and pack for each of our fruits, because we have been going it alone so long that we haven't yet been able to merge. But we are improving, and intend to keep on, though some do not take kindly to proper grading, with the inevitable exposure of their slack methods. This was particularly the case last year, when we had to turn down a hundred barrels of pears which our customer justly refused to accept. In fact, he behaved much more liberally in the matter than was to the best interests of the Exchange, for a very sharp object lesson would have been of great value.

THE NEW CURRENCY LAW.

PART II.

DIRECTORS OF FEDERAL BANKS.—Each Federal Reserve bank must have nine directors in three classes. Class A of three is selected by the member banks of the district to represent the banks. The banks of the district are to be divided into three groups according to size (capitalization), large, medium and small banks, and each group selects one director by ballot by mail, using the preferential ballot. Class B has three directors elected by the banks in the same manner as class A except that class B directors shall be engaged in commerce, agriculture or some other industrial pursuit. The three directors of class C are appointed by the Federal Reserve board. All directors hold office for three years, and one of class C is appointed the chairman of the board of directors. (The first board of directors elected or appointed for one, two and three years until the system is organized.) The board of directors performs the duties usually appertaining to the duties of the office of bank director and conducts the affairs of the Federal bank without discrimination between the member banks.

EARNINGS OF THE FEDERAL BANKS.—After all necessary expenses have been provided for, the stockholders are entitled to six per cent per year dividend on the paid-in capital stock. After the expenses and dividends are provided for the net earnings shall be paid to the United States as a franchise tax, except that one-half of the net earnings up to 40% of the capital stock of the bank shall be paid into a surplus fund. The profits derived by the government from the operation of the new system shall, in the discretion of the Secretary of the Treasury, be used to supplement the gold reserve against outstanding United States notes, or to the reduction of the National debt. The earnings of the Federal Reserve banks are derived from its transactions with the government and its member banks. "Any Federal Reserve bank may receive from any of its member banks, and from the United States, deposits of current funds, national bank notes, Federal reserve notes, or checks and drafts upon solvent member or other Federal reserve banks, payable upon presentation. Upon the indorsement of any of its member banks, with a waiver of demand, notice and protest, any Federal reserve bank may discount notes, drafts and bills of exchange arising out of actual commercial transactions; that is, notes, drafts and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Federal reserve board to have the right to determine or define the character of the paper thus eligible for discount, within the meaning of this Act. Nothing in this Act contained shall be construed to prohibit such notes, drafts, and bills of exchange secured by staple agricultural products, or other goods, wares, or merchandise from being eligible for such discount; but such definition shall not include notes, drafts, or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the United States Government. Notes, drafts, and bills admitted to discount must have a maturity at time of discount of not more than ninety days: Provided, that notes, drafts, and bills drawn or issued for *agricultural* purposes or based on live stock and having a maturity not exceeding *six* months may be discounted in an amount to be limited * * * by the Federal Reserve board." Federal banks also discount drafts and bills of exchange on imports and exports to a limited extent. Federal banks also may deal in gold coin and bullion and make loans thereon; may buy and sell, at home and abroad, bonds and notes of the United States, and bills, notes, revenue bonds, and warrants issued by State, county, districts, and cities in the United States, and may receive government deposits.

FEDERAL CURRENCY.—The new currency, Federal reserve notes, will gradually replace our present national bank notes. The new notes will be issued "at the discretion of the Federal Reserve board for the purpose of making advances to Federal banks" in exchange for collateral of the Federal banks. These Federal notes "shall be obligations of the United States and shall be receivable by all national and member banks and Federal reserve banks, and for all taxes, customs, and other public dues. They shall be redeemed in gold on demand at the Treasury of the United States, or in gold or lawful money at any Federal bank. The Federal banks make application for these notes in any amount that they require. They tender to the government an equal amount of commercial paper. "The collateral security offered shall be notes and bills," to which reference has been made. In other words a farmer may go to his local bank and secure a six months loan on his wheat. His local bank sends this to its district Federal reserve bank and the Federal bank tenders the note to the Government and gets the face value of the note in Federal notes. The Federal bank must hold a reserve of 40% in gold against the Federal notes, 5% of this reserve in the U. S. Treasury. It must also keep 35% in reserve in gold or lawful money to protect the deposits of member banks. F. N. C.

NEW YORK STATE GRANGE.

PART I.

The recent session of the New York State Grange at Poughkeepsie measured up well with any previous sessions with which the writer has been familiar. A large number of measures were brought before the convention for the delegates to consider and their action was sane and commendable. And nothing escaped their careful attention. If a committee's report on resolutions submitted to it were not to the liking of the delegates they did not hesitate to reverse the report, and this occurred in several instances. The report of the committee on assessment and taxation is worthy of notice here. Its declarations were as follows: "We favor uniform State tax laws throughout the Union. We favor a system of scientific assessment by assessors free from political influence. We favor an income tax collected at its source so far as possible. We favor an annual mortgage tax. We believe that the amount of a mortgage against a property should be deducted from its assessed valuation. We urge our legislative committee to use their utmost endeavor to defeat all legislation in the interest of the single tax system." The recommendations of the committee were adopted.

The committee on public schools favored the introduction of the study of agriculture in the public schools, but they believe that these studies should be adapted to the various sections where the schools are located. In other words, that the school divisions of the State should be given local option on the courses of study to be pursued in their respective localities so that it may be adapted to local conditions and requirements. This committee also recommended that a committee be appointed to represent the Grange to work with committees from other organizations in devising a better course of study and management for our common, union and high schools. The committee on parcel post had but little before it for consideration, possibly because everything is working so well along the postal routes. It was the expression of the Grange that the delivery of mail to all rural homes be accomplished as soon as practicable. In regard to postal savings the committee favored the distribution of treasury funds among rural banks rather than metropolitan, and the establishment of a system of farm credits to benefit the farmer. With these recommendations the Grange agreed.

The public health committee, as it will hereafter be known, informed the Grange that in its opinion a new day was dawning in health work. The new public health law, the new vital statistics law, the medical school and inspections law, have all been written on the statute books within a year. In the enactment of these laws the State Grange and Subordinate Granges as well, exerted a great influence, working through the tuberculosis committee of the State Grange. The Granges sold Red Cross Christmas seals to the amount of $1,950 this year, as against $1,271 last year. A large part of this money goes to the work which the standing public health committee is doing to advance the tuberculosis campaign in the rural districts. Much needs to be done. While the death rate in New York city last year was 13.7 per 1,000 of population, in the rural districts it was 15.4. More attention should be paid to rural health conditions. The Grange favored the recommendation of the committee that a division of rural hygiene should be established in the State Department of Health.

The following amendment to the commission merchants' law was suggested by the resolution offered by Senator Godfrey: That commission merchants be required to make, and keep for the period of one year, a record containing the name and address of the purchaser of produce shipped to them for sale on commission, the date of such sale, quantity of each lot of produce sold and the price paid therefor, and a copy be forwarded to the shipper when returns for such sales are made. The resolution was approved by the Grange. J. W. D.

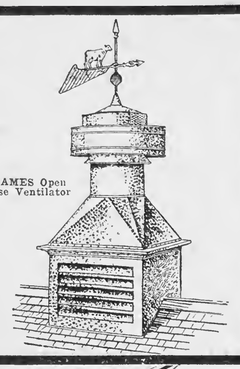
World Crops.

The Department of Agriculture reports that the world's wheat crop passed the four billion bushel point last year for the first time, reaching a total of 4,125,658,000. This is 298,571,000 bushels more than the previous year. Since 1902 the world's supply of wheat has run between three and four billions.

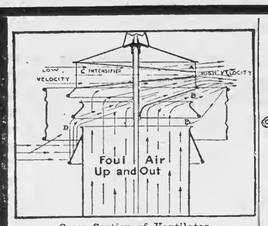
In value of farm crops Texas surpassed all other States producing more than $400,000,000. Then in order came Iowa, Illinois, Georgia, Ohio, Minnesota, Indiana, Missouri, Pennsylvania, Nebraska, Alabama, Wisconsin, North Carolina, New York, South Carolina, Mississippi, Kansas and Michigan.

Potatoes in First Hand.

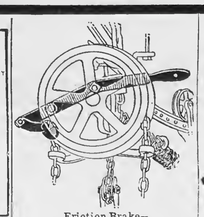
The Department of Agriculture estimates that 42.1 per cent of the 1913 potato crop remained in farmers' hands January 1, compared with 39.8 per cent the previous year. This would indicate a total available supply of 123,000,000 bushels in the chief producing States, against 150,000,000 the year previous. The estimated supply in grower's hands by States is as follows: New York, 14,630,000 bushels; New England States, 17,874,000; Pennsylvania, 8,854,000; Ohio, 2,652,000; Indiana, 1,200,000; Illinois, 1,218,000; Michigan, 16,964,000; Wisconsin, 17,066,000; Minnesota, 11,174,000; Iowa, 1,440,000; Nebraska, 1,539,000; Colorado, 5,060,000.



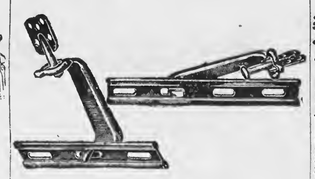
JAMES Open Base Ventilator



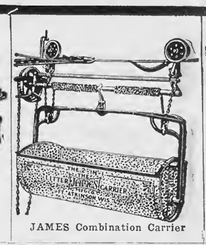
Cross Section of Ventilator



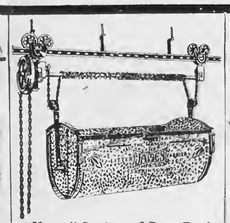
Friction Brake—Non-Slipping Clutch



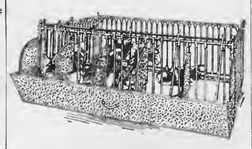
JAMES Button-On Hangers



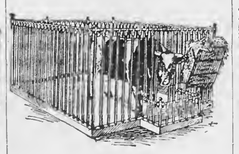
JAMES Combination Carrier



"Mascot" Carrier on I-Beam Track



JAMES Calf Pen



JAMES Bull Pen

JAMES Cow Pen

James Mfg. Co.,
BM30 Cane St., Ft. Atkinson, Wis.

Please send me full information regarding your new way of installing JAMES Sanitary Barn Equipment.

I have ..... cows. Expect to build .....or remodel .....about .....

Would like to have the free catalogs checked:
Stalls, stanchions, pens, etc. [ ]
Carriers [ ]
Ventilators [ ]
Watering Buckets [ ]

Name .....

.....

Post Office .....

R. F. D. .....

State .....

The Originators of Sanitary Barn Equipment Ideas Have Made JAMES Equipment *Easy to Erect*

PLEASE look at the pictures in the lower right-hand corner of this advertisement. They tell you the story of *the greatest plan in barn equipment* we have ever developed.

It is a plan that reduces the whole proposition of erection to absolute simplicity. It enables any man who is building or remodeling his barn to *begin at once* on the work of equipping it.

You Can Start Cementing Tomorrow

This new method is applied to the same JAMES standards now found in thousands of the best barns throughout the country. Mr. James and his associates are recognized as the *originators* of sanitary barn equipment ideas.

The barn principles—*proved right*—that we have been presenting to builders of barns year after year, remain as they were. All the fundamental ideas that have brought *success* and *profit* to barn owners everywhere are preserved.

We simply make James Sanitary Barn Equipment *better than ever* by providing a new and easy way of erecting—a way that makes it unnecessary for you to delay your cement work or any other building operation a single day.

When ready to begin, all you need do is to get the required number of JAMES Anchors.

You can get these *immediately*—by express if you want to begin cementing at once—from Ft. Atkinson or some nearby distributing point.

If your cement men are ready to go to work, *have them come ahead.* You will be ready for them, *the* JAMES *way,* because you need only the Anchors in order to begin work.

Set these Anchors—which later are to hold the stall posts—in your cement curb and go right on finishing up the floor of the barn. By the time you are ready for it, your JAMES equipment will be on the ground.

Please study the lower right-hand pictures for clear proof of why *you can start work tomorrow.*

Superior Service and Superior Quality

Besides easy and quick erection, you receive the benefit of all the skill, ingenuity and experience of recognized *barn authorities.* We are *inventors, discoverers* and *pioneers* in the work of making dairy barns efficient. We are thoroughly familiar with every phase of the dairy business, and know the needs of dairy farmers in the arrangement, designing, construction, equipping, ventilating and lighting of their barns.

No owner of a dairy barn—no barn builder—no architect—can afford to be without JAMES service. Our ideas have been *proved right* before being offered to the public, and in announcing this new, quick, easy way of installing JAMES Sanitary Barn Equipment we are putting the capsheaf on our record of accomplishment for barn owners everywhere.

Results of Our Work as Originators

Here are the main points upon which rest the claims of the JAMES Manufacturing Company as *creators* of better barn conditions, *inventors* of better methods in handling barn work, *master builders* of dairy barns.

Alignment Device

Stanchions are adjusted forward or backward, so that stall is lengthened or shortened to fit the cow. Long, medium and short cows are lined up at the rear—litter falls in gutter and not on standing platform. Cows are kept clean—less bedding is needed—your work is made easier—cows are kept healthier and give more milk.

Double Chain Hanger

Allows you to build a level curb six to eight inches high; prevents waste of feed. No complicated curb forms to cut out and build—no forms to be sent from factory. Stanchion hangs low—cow's head, when she is lying down, may be within ten or twelve inches of the floor; bottom of stanchion never interferes with cow's comfort. Double chain separates hanger from the hinge—throwing all the strain on side bars of stanchion.

Sure Stop Swinging Post

Insures *cow comfort*—gives cows the same freedom of movement as though in the open yard. Allows cow the same room at the head as at the rear.

When Sure Stop is in place and stanchion open, the cow when entering the stall must put her head in the open stanchion. When cow is locked in the stanchion, Sure Stop is swung back out of way; she can card herself freely on either flank and lie down naturally, with her nose on shoulder.

All Swinging Sure Stop Posts, for an entire row of stalls are opened or closed at the same time from any stall in the row.

Self-Cleaning Mangers

JAMES Mangers make possible feeding each cow individually—prevent abortion and other injuries caused by cows straining to get feed thrown out of reach—prevent feed waste—promote cleanliness and sanitation.

Manger has no bottom, a trough in the concrete floor serving that purpose; mangers easily lifted and trough quickly cleaned—may be flushed out and used for watering.

Manger-Lifting Springs

Weight of manger regulated by heavy flat springs—hold manger down so cow cannot lift it with horns; hold it up when manger is raised. Springs cold-drawn, oil-tempered—tested for severe use—same quality as automobile springs—tension easily adjusted.

Triple Curve Stall Partition

Protects both cow and milker; prevents injuries caused by a cow stepping on the udder of a neighbor lying down; keeps each cow in her own stall all the time.

Peculiar curve of partition permits cow to turn her head, and leave stall naturally instead of backing out over the gutter.

The James Anchor

Gives stanchion a firm fastening to concrete curb; is easily set and makes quick placing of stanchions possible. So designed that should a bolt break or threads strip, it may be quickly replaced. Anchor hot galvanized.

James "No Dust" Sanitary Fitting

Edges of the two parts of the fitting overlap so that when drawn together no openings are left to catch dust.

Calf Stanchions, Mangers, Pens

Save labor in caring for the calves; make feeding of milk easy; break calves of the sucking habit; provide calves with clean, dry, comfortable quarters with plenty of light and ventilation.

Of panel construction, easily erected; with JAMES tubular pen anchors; wrench only tool required.

Cow Pen and Tilting Feed Box

A roomy, dry, clean maternity pen or box stall, of panel construction, easily erected with JAMES tubular pen anchors; interferes least with ventilation and light.

JAMES Tilting Feed Box takes up but little room inside the pen. May be tilted out to put in the feed—tilted in while the cow is eating. May be dropped to alley floor for cleaning.

Bull Pen

The bull need be no longer tied by a ring in his nose, but can be turned loose to move about with freedom. Simplifies and makes safe the handling of the bull. When necessary to enter pen, bull can be fastened in the stanchion. Pen is of panel construction, easily erected with JAMES tubular pen anchors.

I-Beam Carrier Track

Patterned after railroad rails—very strong—can not sag or spread—quickly and easily bent to any curve without heat while it is being put up—saves cost of special curves. Easy to erect; can be hung high or low, wherever there is room for the tub to pass.

This deep track stands long years of wear; rounded wheel surface reduces friction to minimum—makes carrier easy running.

Button-On Hangers

To put up track, button of hanger is inserted in hole in the track, hanger is turned to position and fastened to joist or ceiling. Holds the I-Beam Track always firm. No bolts or nuts used in attaching hanger to track—nothing to rattle or work loose.

Friction Brake—Non-Slipping Clutch

Not necessary to pull the JAMES tub down; tub quickly lowers by its own weight—friction brake keeps speed of descent always under absolute control—saves time. A slight pull on the control lever slacks speed regardless of weight in tub, a stronger pull stops descent.

Friction Brake and Clutch are both controlled by one lever; when lever is pulled down it acts as a brake—when released entirely as a clutch—holding tub firmly at that exact point.

James Combination Carrier

Has all the advantages of I-Beam Track inside the barn and of Rod Track outside; stand at the barn door and give the carrier a shove—it runs out, dumps automatically and returns to the barn.

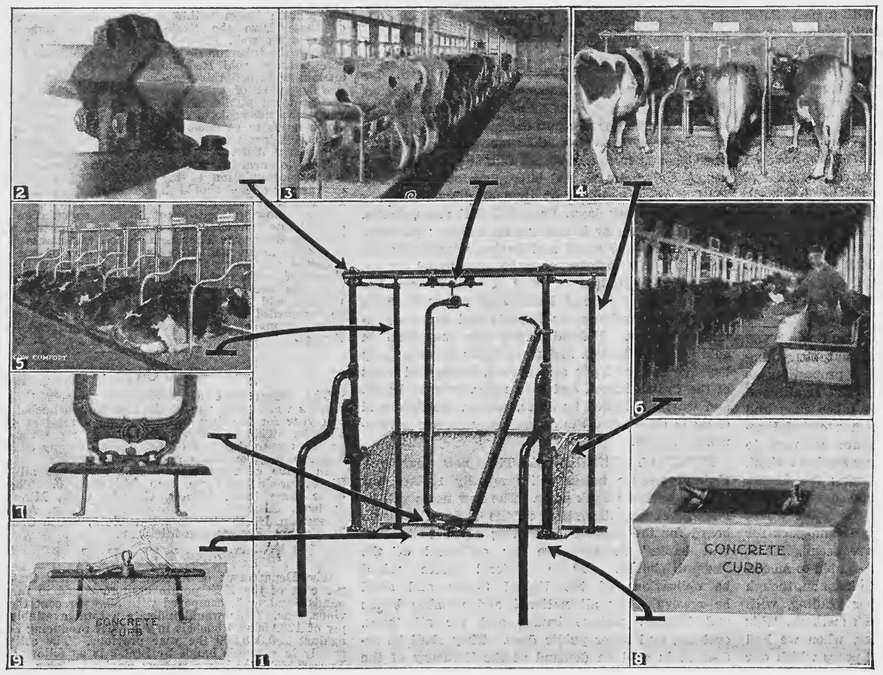
James Individual Watering Buckets

A bucket for each cow; prevents the spread of contagious diseases through the water supply. Each cow gets fresh, pure water direct from a protected tank. Float feed keeps clean water in every bucket.

James Ventilator

A wonderful suction ventilator, by means of which foul air is drawn out of the barn; ventilating efficiency of any system positively increased from 30% to 65% by the use of this right principle.

And now we have added the greatest feature of all to—



1—James 14A Stall complete; 2—James Sanitary Fitting; 3—Alignment device lines all cows evenly over the gutter; 4—Sure Stop permits perfect *cow freedom;* 5—Sure Stop makes *cow comfort* possible; 6—Self-cleaning Manger; 7—Double Chain Hanger; 8—Concrete Curb, arrow pointing to position of curb and anchor below stall post; 9—Detail picture of alignment device.

JAMES Sanitary Barn Equipment

It means quick action. If ready to equip your barn now, don't worry about delays. Just get JAMES Anchors and go ahead.

Please refer again to pictures to the right of this—in lower right-hand corner. Here is the complete story of quick, easy erection.

No. 1—Cement worker placing JAMES Anchors in soft cement of the curb. Anchors—which are the only things you need in order to begin work at once—are shown on the ground behind. After anchors are in, the work of cementing the barn floor proceeds without delay. Meanwhile your JAMES equipment is on its way to you.

No. 2—Placing stall posts on bolts inserted in anchor plate. Tightening of bolts then fastens post firmly to the curb.

No. 3—Attaching our new square horizontal pipe to upright posts. Note that all fittings are in their proper places on equipment when you receive it. Loosening and tightening of bolts all that is necessary in erection. No searching for the proper parts—no lost parts—everything simplified so that a boy can understand it all.

No. 4—Attaching stall partition—one end being bolted to upright, the other imbedded in the barn floor.

No. 5—Attaching stanchion alignment device to fittings—which are already in their right places on horizontal pipe when you receive shipment. Lower end of stanchion is held to the curb by special anchor shown in illustration at left.

No. 6—Placing Sure Stop Swinging Post on flanges of upright fittings. These flanges have strong pins or buttons on which the sure stop is hung in a second—insuring strength, easy action and quick removal when desired.

No. 7—Showing the connecting rod which moves all the sure stops at one time. Placing this rod in position, like all other parts of the job, is the easy work of one man.

No. 8—Attaching the manger division to fitting already in place on upright post.

These pictures show the erection of the JAMES 14C Stall.

Stall 14A is erected in exactly the same way, excepting that our 14A Stall has the complete manger, instead of the manger division.

Other New Features

Horizontal pipes are now square—or quadrangular—instead of round. This means that the fittings are so firmly held that they cannot twist on the pipes.

Built pens, cow pens and calf pens are just as easy to erect as the stalls; anchors are set in place when the concrete floor is being laid—the pens can be set up at any time later. The hard work of erecting the pens is done away with; the pens reach you all assembled in panels—you merely set the upright posts in place and bolt the panels to them. It is no longer necessary to set each upright pipe in the concrete floor.

Another big improvement in our method of manufacture is that we are baking all paint on the equipment. All piping is mechanically cleaned, removing scale, grease and foreign matter, thoroughly preparing the piping for painting. A primer is first applied and thoroughly baked. The enamel is then put on, and baked. That makes a lasting protection—one that will resist blows without flaking off. All JAMES piping is painted inside and outside, leaving no place for rust to attack.

Assembled Stalls—Knocked Down for Easy Handling

JAMES Equipment will reach you in five assembled groups—all nested and bundled. Fittings are in their proper places on the piping. No boxes filled with small parts—no long lists of little pieces—no complicated directions.

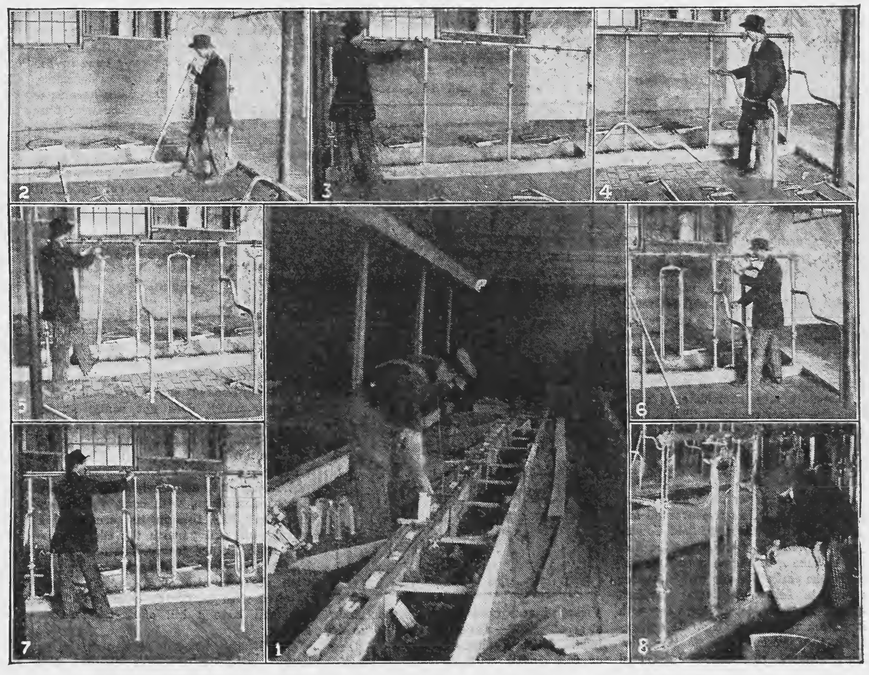
You can't go wrong in erecting JAMES Equipment. One man can do all the work.

Don't lose time. Get full information now about the equipment built by these *originators* of sanitary barn equipment ideas, and the new plan that means *immediate* and *easy* installation service.

James Manufacturing Company

BM30 Cane Street, Ft. Atkinson, Wis.

"Originators of Sanitary Barn Equipment Ideas"



1—Placing James Anchors in soft cement of the curb; 2—Placing Stall post on the anchor bolts; 3—Attaching new square horizontal pipe; 4—Attaching stall partition; 5—Attaching stanchion alignment device to the fittings; 6—Placing Sure Stop Swinging Post on flanges of the upright fittings; 7—Placing connecting rod in position; 8—Attaching the Manger Division.

Woman and the Home

From Day to Day

THE FLAG.

Your Flag and my Flag!
And how it flies to-day
In your land and my land
And half a world away!
Rose-red and blood-red
The stripes forever gleam;
Snow-white and soul-white—
The good forefather's dream:
Sky-blue and true blue, with stars to gleam aright—
The gloried guidon of the day; a shelter through the night.

Your Flag and my Flag!
And, oh, how much it holds—
Your land and my land—
Secure within its folds!
Your heart and my heart
Beat quicker at the sight;
Sun-kissed and wind-tossed,
Red and blue and white.
The one Flag—the great Flag—the Flag for me and you—
Glorifies all else beside—the red and white and blue!

Your Flag and my Flag!
To every star and stripe
The drums beat as hearts beat
And fifers shrilly pipe!
Your Flag and my Flag—
A blessing in the sky;
Your hope and my hope—
It never hid a lie!
Home land and far land and half the world around,
Old Glory hears our glad salute and ripples to the sound!

—Wilbur D. Nesbit.

*

MANY housekeepers keep lemons by putting them in a jar of cold water. A fruit-grower says that a better way is to wipe the lemons carefully with a soft woolen cloth, avoiding pinching or bruising, then wrap each lemon separately in paraffin paper. Store in a box, in a cool dark place.

*

IN considering some of the dark tragedies that involve young women, as depicted in the daily papers, one is often struck by their determination to secure personal happiness or gratification at any cost, regardless of the rights or sufferings of others. Putting aside the question of moral and religious principles, is there not something wrong in an educational system which seems to exaggerate the ego to such abnormal proportions? We are not referring here to those reared in poverty and deprivation, with no recreation ground but the street, but to young people reared in comfort, who have had all the advantages of ordinary education. Is it the school, the home, or the standards of social life that make them unable to withstand such temptations as are common to humanity?

*

MOURNING crape is expensive, perishable, and costly to restore, if a professional cleaner is employed. The following method is advised for home renovation: Carefully brush and shake the crape to remove all dust. Place a folded sheet on the table, pin the crape to it, keeping perfectly straight and flat, but without stretching it. Dissolve one teaspoonful of granulated sugar in a pint of boiling water, and moisten a clean cloth with this. Lay the damp cloth lightly on the crape, then go over the cloth with a very hot iron, without touching it. The operator should go over the damp cloth carefully, just as though ironing it, but never touching it; actual ironing would ruin the crape. This is continued until the cloth is nearly dry, when the cloth may be moistened again and the process repeated. This steaming carefully done, restores the crispness and deep crinkle of the crape, so that it looks new.

*

A RECENT newspaper note states that Miss Elizabeth M. Kilbourn, over 80 and recently lying ill in the Litchfield County Hospital in Winsted, Conn., was the first woman to take a stitch on a sewing machine. In the early '50s she was a teacher in a private school in New Hartford when Elias Howe was experimenting with his invention in a dingy shop in a basement on the present site of the New Hartford House. She became interested in his invention and was finally permitted to operate it.

"There, you are the first woman in this world who ever took a stitch on a sewing machine," Howe said to Miss Kilbourn when at his invitation she tried the machine.

At that time there was no pedal arrangement and the operator had to turn the wheel by hand. Two needles were inserted in the machine, as Miss Kilbourn remembers it. Elias Howe was very poor in those days and sharpened knives and did odd jobs for a living in his basement shop. When he had perfected his sewing machine he went to Bridgeport, and shortly afterward Wheeler and Wilson moved there from Watertown, Conn., and the three combined, and Howe died rich.

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired.

8147—Blouse coat for misses and small women, 16 and 18 years. With three-quarter or long sleeves. 8140—Cutaway

coat for misses and small women, 16 and 18 years. 8141—Short coat, 34 to 40 bust. With three-quarter or long sleeves. 8134—Loose coat, 34 to 44 bust. To be buttoned up closely at the throat or rolled open to form revers, with straight or curved fronts. Perforated for shorter length. 8170—Coat in Russian style for misses and small women, 16 and 18 years. With three-quarter or long sleeves.

8168—Fancy blouse for misses and small women, 16 and 18 years. With

V-shaped or square neck, short or elbow sleeves. 8142—Fancy blouse, 34 to 40 bust. With Japanese sleeves in elbow or full length, with or without chemisette. 8166—Semi-princess dress for misses and small women, 16 and 18 years. With one-piece skirt, V-shaped or round neck, with or without under sleeves. 8154—One-piece draped skirt, 22 to 32 waist. With high or natural waist line. 8143—Two-piece draped skirt, 22 to 32 waist. With or without tunic and train, with high or natural waist line. Price of each pattern, 10 cents.

A Salmagundi Party.

For the hostess who is not quite certain as to her ability to entertain a party of friends without cards or dancing, the salamagundi party is a happy solution. The very name will serve to arouse curiosity, and those not familiar with this form of entertainment will be eager to come and find out what it is like.

In sending out your invitations, write across the top of your notes or cards, "An evening with Salmagundi." Arrange your rooms tastefully, but remove all unnecessary pieces of furniture, to make room for six or eight small tables, according to the number of guests you have invited, these should be large enough to seat four, and can be placed in the corners and center of the room, or wherever there is space large enough. If one room happens to be too small for so many tables, two adjoining rooms can be used just as successfully.

In the center of each table arrange some simple game, each of a different character, of course. Cut white letter paper into long, narrow strips, four for each table, and mark the first set A1, A2, A3 and A4; the second B1, B2, B3 and B4, and so on until each table is provided with a set, then place the slips in a box, shake, and allow each guest to draw one; those drawing one and two will be partners, against those drawing three and four, and at every table the game is played for a specified time. When the time is up the scores are put down on the slips by the players, counting one for every win. Those winning move on to the next table, the losers remaining where they are for another trial. Those winning at the table marked A go on to table B, and those at the last table—say table F, if there are six tables, to table A, and in this way until all the games have been played, those winning all, or the most games, first, are awarded prizes.

Games that are easy and will create much merriment should be choosen. Picking up beans with toothpicks is great sport; the beans are piled in the center of the table, and the player with two toothpicks in his right hand sees how many beans he can pick up. The winners are those who have picked up the greatest number.

Building card houses is another; the one who is able to built the highest house without toppling over once in the attempt, wins. Fish pond is an old game, and very amusing. Threading needles is another; this table is supplied with four reels of cotton and four medium-sized needles, and whichever threads the most needles, is the winner. Table croquet, dominoes, ludo, tiddly-winks, and similar games are suitable for an entertainment of this kind.

After the prizes are awarded, which may be some fancy little articles, made by the hostess herself, for the ladies, and something simple and unique for the men, the refreshments are served.

On the bill of fare for a "salmagundi party" should be the old-fashioned dish, called salmagundi, meaning a miscellany, and from which the party really gets its name. This is, as every one knows that is familiar with it, a mixture of chopped meat, hard-boiled eggs, anchovies, and cabbage, which does not sound at all tempting for an evening affair, nevertheless, it can be modernized into a very attractive dish, in this way: Mix equal parts of cold cooked chicken meat, chopped rather fine, and finely chopped crisp uncooked cabbage, with some good salad dressing. Pile this in the center of a salad bowl, and garnish the edge of the dish with lettuce leaves, slices of hard-boiled eggs, and a few anchovies; served with plain bread and butter folds and followed with ice cream, cake and coffee, you will have a bill of fare fit for a king.

Or, if the hostess prefers to serve lighter refreshments, she might have simply the bread and butter folds, olives, chicken or cheese sandwiches, followed by cake and cocoa or coffee.

ROSAMOND LAMPMAN.

$2,000 Crop from a Small Tomato Patch

John DeBoer raised 2,000 plants from the seed of our new early variety of tomato to test its merits for commercial purposes. The plants received only the ordinary care and cultivation, yet Mr. DeBoer marketed—a few weeks later—$2,000 worth of tomatoes from the 2,000 plants!

Rowe's Grand Rapids Market Tomato

is large, fine shaped, and a beautiful deep rich pink in color. Its meat is solid—cutting this tomato is like cutting a rich, juicy beefsteak—and it has but very few seeds. The flavor is delicious. Rowe's Grand Rapids Market Tomato is the earliest ripening of any heavy yielding commercial variety. It is uniform in size—each full grown tomato averaging about a half-pound—nearly the entire crop will grade as fancy. It is a splendid shipping variety.

Our Special Free Seed Offer

We are the originators of this wonderful new variety and the seed cannot yet be secured from anyone but us. To introduce our publication—

The Fruit Belt

to readers of this paper, we will give a package—containing about 100 seeds—of Rowe's Tomato Seed free with each subscription to this progressive paper for fruit and vegetable growers. Price, one year, 50c; Canada, 75c. Coin or stamps.

Accept this offer today—the number of packages is limited—you will get much practical information from reading "The Fruit Belt" as well as enjoy the fine, luscious tomatoes you raise from this seed.

THE FRUIT BELT, Box GRAND RAPIDS, MICH.

Post's Improved Eureka Sap Spouts

FREE SAMPLES! See Them! Try Them!

They Give **More Sap** every day for **More Days** and make **More Money** for you than any other, and there is a scientific reason for it, explained in our Free Catalog.

The Air Trap does it.

Freezing and drying up prevented; free, constant flow. No injury to trees.

Samples and price list for the asking.

Write today

C. C. STELLE, 75 Fifth Ave., BROOKLYN, N. Y.

Maple Syrup Makers

THE FAMOUS EVAPORATOR used by principal syrup makers everywhere. Saving of time and fuel alone will pay for the outfit. Write for catalogue and state number of trees you tap.

GRIMM MFG. CO.

619-621 Champlain Ave., - - Cleveland, Ohio

More CIDER

from less apples can be produced with Original Mount Gilead Cider and Grape Juice Presses than any other. This press is a

BIG MONEY MAKER

We can show you how $1200 a year can be made in the cider business. Sizes 10 to 400 barrels daily. Hand or power. All power presses have steel beams and ellls. We make cider evaporators, apple-butter cookers, vinegar generators, filters, etc. Fully guaranteed. Write for Catalog,

HYDRAULIC PRESS MFG. CO.
137 Lincoln Ave., Mt. Gilead, Ohio.
Or Room 1191 39 Cortlandt St., New York, N. Y.

OUR READERS

make the best subscription workers.

BECAUSE

what they lack in canvassing experience is counter-balanced by genuine enthusiasm for the welfare of the paper and a familiarity with its many points of excellence. Won't you do a little missionary work for us? Experience unnecessary. A postal will bring particulars.

Department "M"
RURAL NEW-YORKER
333 West 30th St.
New York City

"Other Ways" With Potatoes.

"Old potatoes," between April and July, are the bane of many a rural housewife, who may be glad to try some of the ways in which our mother made them palatable for a large family. Here are some of the recipes, all of which presuppose that the potatoes have been kept from sprouting, and that they have been soaked in cold water several hours before paring:

Potato Soup (really "mock oyster).—A quart of boiled potatoes, mashed while hot, seasoned to taste, with plenty of butter, to be stirred into two quarts of milk and brought to the boiling point, but not allowed to boil. Put a cover on the kettle, and set it back on the stove, while preparing 12 slices of buttered toast, one half of which will be kept hot in the oven, and the rest distributed among the six hot soup plates, which this quantity will serve—and bountifully. Pour the soup over the toast, and serve at once. "Make more the next time," has always been enjoined, but the "enough" point was never reached!

Potato Balls.—Into a quart of mashed potatoes beat one egg and two cups of bread crumbs. (These are made by rolling with the rolling pin the pieces of bread which are left from nearly every meal, after they have been thoroughly dried in a hot oven). Add half a cup of flour, and a fourth of milk. Shape into "balls"—not disks—and fry in deep fat as you would doughnuts. Lift out with a skimmer (if made right they are too tender for a fork) to a hot plate and set in the open oven until ready to serve. Stewed tomatoes, or cabbage salad, are proper to serve with these delectables.

Another Kind.—To the same quantity of mashed potatoes, add half as much boiled rice and a cup of milk. Beat in an egg, whipping all until very light. Form into disks, over which sprinkle a light coat of flour on both sides. Fry to a light brown in a not too hot frying pan in which a generous supply of pork fat (ham, bacon or any pork fat) has been put to melt. Be careful in turning to fry on the opposite side not to break or make them look ragged.

Stuffed Potatoes.—Scrub with the vegetable brush, and cut off any specks from the skin, a dozen medium-sized potatoes, rather round in shape. Wipe dry, and grease with beef or pork fat or butter, and bake in a rather quick oven. Heat a frying pan and fry until crisp six thin slices of larding pork or of rather fat bacon. Take out on a warm dry plate, draining each slice free from all fat. Remove the rind, and cut the slices into tiny bits. Mix into a cup of bread crumbs or boiled rice, with two hard-boiled eggs cut into bits, moistening with half a cup of milk and add two tablespoonfuls of flour and half a teaspoonful of salt. As soon as the potatoes are done remove from the oven and, handling with a clean napkin or towel, cut each potato in half, crosswise, and dig out the inside, leaving the shells on a long shallow baking tin, ready for the filling. Mash the hot potato with a fork, being sure that no lumps are left. Add the above mixture, stirring all thoroughly, and fit each shell, rounding it up high and making it smooth. Set in a moderately hot oven to brown lightly.

Scalloped Potatoes.—Pare, then chop into not too fine pieces, potatoes enough to make two quarts. Butter a pudding dish; and butter several slices of bread, lightly. Put in a layer of potatoes, and sprinkle lightly with salt. Cover with the bread slices. Add more salted potato, topping with more bread, and continue until the dish is full—the last layer being bread, the buttered side up. Bake in a slow oven 45 to 60 minutes. Bacon and eggs, with cold slaw or cabbage salad are "good company" for this.

Creamed Potatoes.—Slice them thin, whether cold, boiled or raw. Heat a frying pan and put in enough fat of beef, pork or lamb to cover the bottom. Put the potatoes in, and cover scantily with water. Put on the cover, and cook until done. Drain off every bit of water, and shake the frying pan over the open fire for a few seconds, to let the steam dry out of the potatoes. Add salt to taste, and dredge flour freely over the potatoes, as they sit on the hot stove. Pour on milk or cream, and cover for a few seconds—after adding some more fat, of the sort used, a tablespoonful to a pint of potatoes. Turn over lightly, lifting from the bottom of the frying pan, so that none will stick. Put into a hot dish, and dot the top of the potatoes with butter, adding a dash of pepper and two dashes of powdered celery—the leaves dried for this purpose.

Potato Salad.—Wash a cup of rice, and put it over a hot fire to boil in three cups of cold water, to which a teaspoonful of salt has been added. Cover at first, but remove the cover when the rice "hops," and shake it, holding away from the fire, until sure that none sticks. Replace it and clean six large potatoes, cutting them in quarters. Boil, with three eggs in same kettle. By the time these are done the rice will be also, and can be set on the back of the stove while you peel and slice the potatoes very thin, shell the eggs, and cut into small pieces, adding salt, pepper, butter and mustard to taste. Add the rice and potatoes, mixing them then with the eggs, to sit while you prepare a "dressing" of one tablespoonful melted butter, two of sour cream (or olive oil), pouring it over the salad while the ingredients are yet warm. When thoroughly mixed add a tablespoonful of sharp vinegar, mixing all with a silver fork. (Taste, now and then, to get the seasoning proportioned right for family. Tastes vary so!) When done, sprinkle a tablespoonful of powdered celery over all, and set the big bowl of "luscious old potatoes" away to cool.

Hashed Brown Potatoes.—Pare, slice, and dice eight medium raw potatoes, and cover with cold water. Put a small half cup of fat into a hot frying pan. Drain off all the water, and put in the potatoes, with salt and pepper to taste—all under cover over a brisk fire for 10 minutes, a slow fire after that. When done remove the cover, and return to the fire for two minutes. Sprinkle with powdered celery, and turn out on a hot platter, the brown side up. Stewed tomatoes are good with both the above.

Potato Loaf.—Mash the potatoes in the usual way, but be rather more than usually generous with butter and milk. Beat with a fork until very light, then beat in an egg for every pint of potatoes, and three tablespoonfuls of flour. Turn the mixture into a buttered pudding dish, smooth off the top, and bake 20 minutes to half an hour. Serve from the dish, with cold ham or corned beef.

LUCY A. YENDES.

Grace Before Meat.

In response to a request for grace before meat, or "asking a blessing," for children, a correspondent of the London Spectator gives the following:

"Here is one by Herrick which my children say before their mid-day dinner:

What God gives, and what we take,
'Tis a gift for Christ His sake.
Be the meal of beans and pease,
God be thanked for those and these.
Have we flesh or have we fish,
All are fragments from His dish.
He His church save and the king,
And our peace here like a spring,
Make it ever flourishing.

"For a singing grace to the tune of the Old Hundredth we have:

Be present at our table, Lord,
Be here and everywhere adored.
These creatures bless, and grant that we
May feast in paradise with Thee.

"'Gratias,' graces or thanks for a child, I find rendered thus:

Thank you for the world so sweet,
Thank you for the food we eat,
Thank you for the birds that sing,
Thank you, God, for everything.

"For brief, reverent examples, I offer the following well-known graces: 'Bless, O Lord, this food to our use, and us to Thy service,' and 'For these and all His mercies God's holy name be blessed and praised.' Personally, the briefer Latin forms of 'Laus Deo,' 'Benedictus benedicat,' make the stronger appeal, the custom of 'saying grace' being of remote antiquity, and obtaining among the Jews, Greeks and Romans in pre-Christian times."

The second verse given, which is sung to the tune of "Old Hundredth," is a famous old grace, sung in many English orphan asylums and other institutions. While those who are not accustomed to liturgical forms of worship may prefer an extemporaneous grace, we think children gain much by learning these rhythmical blessings, which will remain with them through life, and bring back, in later years, the happiest memories of home and childhood.

The Child and His Belongings.

At a social a short time ago a group of mothers and grandmothers were talking upon the unending yet always interesting and vital subject to them, how to bring up the children? The question before the house was: "How may I teach my child to care for his own things?" Some children have more playthings than they need, perhaps they all do, except those who have none. I notice where there are only a few toys how well those few are cared for. Once, after being at a friend's house, and seeing bushels of playthings scattered about the room, I said if I ever had any children they would have only one toy a day to play with. I must admit I have changed my plans somewhat since my own children came, for then all the aunts and uncles and cousins came, with "gifts and gold," etc. The gold went into the savings bank; I think it nice for every child to have a bank account of his own. What if it is a small beginning? Perhaps the boy on the farm does not have as many pennies as his cousin in town, but he surely has no place to spend them as recklessly, three or five miles from the store. The playthings were loved and played with; each child has a drawer in an old bureau, each one is supposed to keep his own property in his own drawer, and not to touch the other's without his permission. How much trouble could be saved in a family if each member would learn to respect the property of others! "Hands off" would be a good motto.

When I see the children getting careless with a plaything or book, I hide it, then on some (cross) rainy day I bring out those old things and they are new again. In the front hall each child has a hook of his own for his coat and cap, also in the kitchen there are hooks for each, so whichever door they come in the hooks are looking at them. In the kitchen table there is a drawer where we put mittens; if the mittens are dry they are left in the coat pocket, if wet each hangs his own by the stove, unless he wishes to wear them wet the next time. I must confess, though, that I often take them off the stove when they are dry and put them in the mitten drawer. If they are not in their pockets the children go right to that old drawer without asking any questions. H. S.

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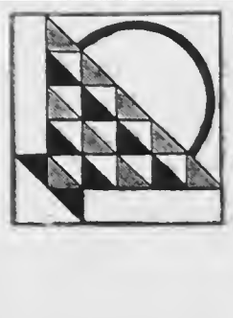

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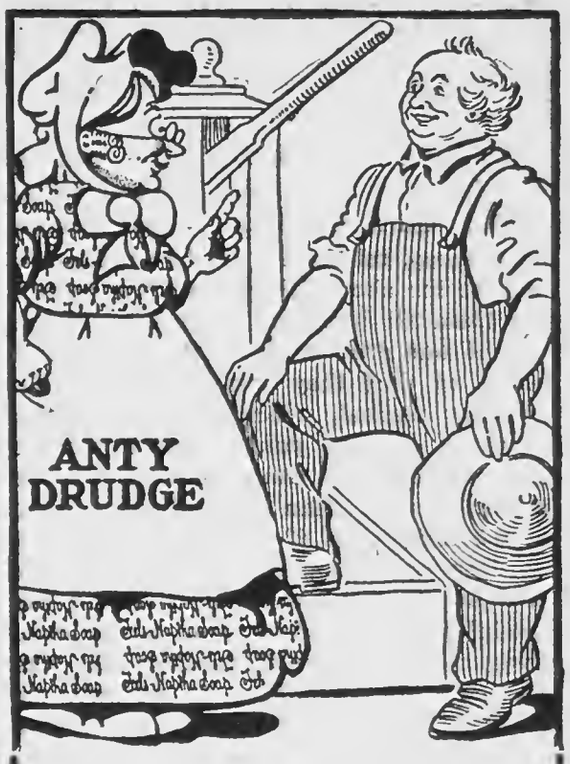

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A couple of years ago the lambs on one farm where Dorsets were kept were all dropped in November, the ewes having fattened largely on Fall pasturage. When the lambs were born, the ewes were in prime condition, requiring little grain feeding to bring the lambs to market size. The price received for 17 lambs was $187, or $11 apiece without the heavy expense of Winter grain feeding. The worry of caring for the lambs in cold weather was got rid of; all the ewes had to be fed was roughage to keep them in shape; everything was lovely. It looked like a gold mine.

A TROTTER IN WOOL.

The next year the lambs never came until the usual time, the last of December and into January, so it was a taste of chance, not a steady thing. I concluded that if it could be done once, it might be done again if we could get the right conditions. I began to inquire about sheep everywhere I went, or whenever I met anyone likely to know. At last I heard of a neighborhood just over into Chester County where they raised lambs for the Christmas market. That sounded like business. By and by I found time to take a little trip up there and visit friends. I had struck the right place. There were several farms that were growing Christmas lambs. At that time, the last of November, they were bringing $10 apiece alive. The ewes had been off the pasture only a little while. The grain feeding was not heavy, and would soon be done. How did they manage it? That I am not prepared to say. There were a number of things the growers did. Any one of them might have been the cause of their success. Until I can work some of them out in my own locality, the money the earlier lambs may bring is locked up as tight as ever. What I did find quite as interesting was how this industry had been worked up in the West Grove neighborhood.

My first visit was to the farm of Henry Palmer, who grew the first Winter lambs in his neighborhood, and found a market for them. He was typical of the progressive farmer of any generation. When he saw an opening, he followed it up. When he had a bunch of his lambs come early one year, instead of settling down to feed them all Winter and through the Summer, he began to study up what other people did when lambs came early. The result was that he went off to Philadelphia to hunt up a hotel trade for out-of-season lamb meat. He found it. The hardest condition to meet was keeping up a constant supply. When his own few lambs were sold he had no more in view. Anyway he went ahead.

Finally he had to tell his hotel buyer that he was sold out. That is where more than one new promising business stops. Too often the farmer has extra good stuff by snatches, but either hasn't the energy or the knowledge to follow his success up and make it lasting. When he was shipping his last lamb an order came from his buyer asking him to try to get more at any price, and to arrange to send him more than one or two at a time. So Henry Palmer started into the lamb business in earnest. He scoured the country for early lambs, getting one here and another there, often miles apart. Another year he had introduced more Dorset blood into his flock and had persuaded two or three of his neighbors to give a good deal of their time to helping him build up a supply of lambs that would last through the season. Improved methods of feeding and handling that he discovered he shared with them. When he found that a Tunis ram crossed on his Dorset grades consistently gave earlier and better finished lambs, he persuaded them to take up the practice also. He had developed a new industry for the neighborhood. Whether or not they took advantage of the object lesson lay with them.

Well, what happened? Here and there, a farmer more ambitious than the rest or more interested in sheep, joined in. Others were dairying or in some line of business they couldn't or wouldn't get out of, so they benefited only indirectly from the new business. In time Mr. Palmer, growing older, gave up the proposition of handling the neighborhood trade, and now contents himself with his own small flock. What is the status of it now? A few more growers than formerly have taken up the trade. Another farmer who can butcher gives up a large part of his time to handling the trade. He was paying for lambs on foot $10, which he dressed and supplied to the Philadelphia hotel trade. Although this neighborhood has a most prosperous look, and is one over which I could get easily enthusiastic as a livestock country, it has its troubles. Here as elsewhere, some farmers are doing poorly. Here too, we find the old folks with farms on their hands and no one to take their places. New elements are coming in that may or may not suit the [illegible] or two established lines or specialty farming would make a name for the whole countryside. Yet instead of several farmers close together raising Winter lambs and pooling their interests, each goes his own way. One marketer, instead of having all the lambs needed for his trade raised within four or five miles, travels the whole countryside to find lambs enough, and to get growers with enough patience and energy to supply a wonderfully well-paid business.

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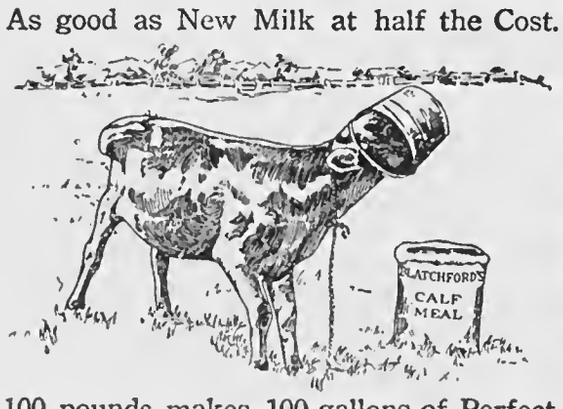

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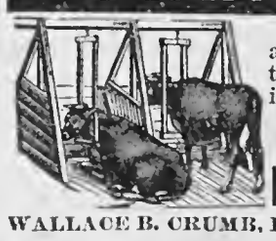

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lamb section of Pennsylvania? What is to prevent my home neighborhood from being an equally famous part of Maryland? Why should we send to New York for our Dorsets, and to Indiana for our Tunis rams? What is to prevent our being noted as breeders as well as growers? Why, between the two neighborhoods we could keep a line of purebred stock that would supply us forever with breeding stock, without any outside help. What's the reason? We have the right conditions. We know how to care for our sheep. We know how to turn out first-class breeding stock. We have the best markets for money sheep anyone could ask for. We haven't got together, that's all. What is more, we do not intend to get together. The opportunity can go hang before we'll give up our own little favorite lines of work or have anybody tell us what to do. Meanwhile we are not keeping our boys with us as we should. Meanwhile another people is coming into possession of our homes and farming lands, first as renters and later to buy from our heirs if not from us. We shall build up neighborhood industries when either we or our children are starved into it! I half wonder if it would not be better to start in now, and hold the land for us and ours by making it the foundation for the biggest success yet. Anyway, let's study over it a bit harder; possibly light will come.

Maryland. R. B.

THE LARGE STOCK FARM.

I note with interest the article of Mr. Phelps on page 139 and also your note in the "Brevities." I received your paper after I returned from a meeting of the Oneida County Farm Improvement Association, where we were addressed by Professors Livermore and Talbum of Cornell. Prof. Livermore gave an address on farms that had been under the supervision of Cornell, some two or three thousand, I believe, and had slips to show us that the farm of 160 to 350 acres or thereabouts were the farms that paid. He also proved that the farmer living on a farm of 30 to 50 acres made barely a hired man's wages. Of course you understand these farms had about the same number of cows, but the large farms could raise a variety of crops, and these offset the poor showing of the cows on the majority of farms. He showed that it took very little more machinery to run a large farm than a small one. He also proved that a large farm got more out of its horses, acres, etc; also that the large farmer had as good a home or better than the small one; better buildings, etc., in the three counties under their observation.

I have had this idea in my mind for a long time, as I have 80 acres now, with a man the year around. I can handle twice as many and crop the land more and buy commercial fertilizer instead of keeping more cows. I think, or rather know, it would pay, else why is it that the large farms always have the cash to buy, and good-looking buildings, etc., and the small ones don't, no matter how hard they work.

Of course I am not counting the apple farms or market gardening farms in on this; but the dairy farms. In the West the farms do not keep a lot of dairy cattle to eat their heads off at the present prices of milk and grain, but raise more cereals, hay, clover, etc., to sell.

The Farm Improvement Association has organized a coöperative association under the laws of New State State, and incorporated for $10,000 to buy grass seeds, clover, lime, phosphate, and also to sell better produce of farmers. It has started at $5 per share, and is trying to scatter the shares as thin as possible over the county, so that all the farmers desire may come in now and benefit themselves later. A. J. LAM.

Oneida Co., N. Y.

"CHILDREN," said the teacher to his pupils, "you should be able to do anything equally well with either hand. With a little practice you will find it just as easy to do anything with one hand as it is with the other." "Is it?" inquired the urchin at the foot of the class. "Let's see you put your left hand in the right-hand pocket of your trousers."—Ladies Home Journal.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Purebred Holsteins for any Pocketbook—Cows, $200-$1,000, according to blood. 2 bull calves 3 mo., $80 and $50. Heifers sold out. Mohegan Farm, Hudson Valley Holstein Headquarters, Chas. H. Baker, Mohegan Lake, Peekskill, N. Y. 1 hr. from G.C.S.N.Y.C.

THE TOMPKINS CO. BREEDERS' JOURNAL, with sale-list of pure-bred stock, 25cts per year. Copy free. We have some very good offers in Holstein and Jersey cattle, German Coach Horses, Shetland Ponies, Southdown ewes and Cheshire gilts. A two-year Berkshire boar, registered, $25.00. TOMPKINS CO. BREEDERS' ASSOCIATION, Box B, Tromansburg, N. Y

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The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.

F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holsteins for Sale

50 Cows, just fresh, giving 40 to 50 lbs. per day.
20 Cows, due to calve this month and next.
25 Cows, served to come fresh in August and September.

If you are looking for dairy cows and large producers with good size and young, see these cows before buying elsewhere. WE TUBERCULINE TEST.

Registered and grade bulls always on hand.

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90 HEAD Purebred Holsteins

consisting of 50 Cows, 25 Heifers, 15 Calves and a few choice Bull Calves. Home of Ormsby Korndyke Lad. No. 102469. If you are in the market for Holsteins come to see me or write. My stock will please you. EZRA HOLBERT, Lake, Orange Co., New York

Purebred Registered
HOLSTEIN CATTLE

According to figures compiled by the department of animal husbandry of Illinois University, a cow must produce 4,000 pounds of milk and 160 pounds of fat a year to pay for feed and labor. Every 1,000 pounds above this brings a yearly profit of $10. Thus a 5,000 pound cow earns $10 a year, an 8,000 pound cow earns $40, but when production reaches 10,000 pounds the profit is $63.

Systematic investigation confirms the wisdom of those who have taken up the Holstein-Friesian breed.

Send for FREE Illustrated Descriptive Booklets

Holstein-Friesian Asso., F. L. Houghton, Sec'y
Box 105 Brattleboro, Vt.

FOR SALE—Otterkill Farms Ayrshires

Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer. Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

GUERNSEY—

WHERE you see a GUERNSEY you know the owner is enjoying prosperity. WHY? Because for every dollar invested in feed, he is returned a profit.

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PERCHERON STALLIONS—Our hobby is quality. Come and see them. S. Schoonmaker, Gardiner, N. Y.

KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

HIGHLAND VIEW STOCK FARM DISPERSION SALE

WILL BE HELD AT
KITTANNING, PA., Wednesday, March 4th, 1914, at 10 A. M.
Rain or shine.

Forty head of the best Imported and American bred registered Percheron and Belgian Stallions and Mares will be offered in this sale. Write to

O. N. WILSON, Prop., Kittanning, Pa.

207 Prizes Won

At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H

ADIRONDACK FARMS, - Glens Falls, N. Y.

50 STALLIONS

and MARES, $250 to $1000 each

Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.

A. W. Green, Middlefield, O.

R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

HEART'S DELIGHT FARM

Percheron and Belgian STALLIONS

Two to three years old; out of imported mares and by imported sires.

Guaranteed to be Sound and Sure Breeders

We will sell these stallions to two or more farmers as company horses. Prices reasonable.

W. H. MINER, Chazy, N. Y.

FOR SALE—A REGISTERED JENNET—4 years old, in foal to registered Jack. 5 months old Jennet. A fine iron-gray Jack 8 yrs. old, sound and O. K. in every particular. ROBT. H. WALTER, Mgr., Kennett Sq., Pa.

DAIRY CATTLE

"CHENANGO FARMS" HOLSTEINS

Bull Calves good enough for the richest and cheap enough for the poorest. Both untested and A. R. O. dams. We have no cow in our barns that can't make good, so you can't go wrong. Following is the herd record for 1912:

10 Cows Averaged 12,000 lbs. per Cow
25 " " 10,000 " " "
47 " Inc. 2-yr. olds " 8,250 " " "

Calves of both sexes for sale; also mature stock. Prices include registry and transfer papers.

BULL CALVES—$25 untested, and $35 A. R. O. dams. F. O. B.
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References: Hamilton Bank or any business man.
S. B. JACKSON, Supt. - HAMILTON, NEW YORK

Buy a Bull on Easy Terms

Long Time and 4 Per Cent Interest

Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.

JUSTAMERE FARM, Middletown Springs, Vt.

Fosterfields Herd Registered Jerseys FOR SALE
Cows, yearlings and two-year-old heifers. Also heifer calves, young bulls. Charles G. Foster, P. O. Box 173, Morristown, Morris Co., N. J.

BETTER THAN EVER!

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180 --- HEAD --- 180

REGISTERED HOLSTEINS

SYRACUSE, NEW YORK, MARCH 10 and 11, 1914

None but good cattle will be offered. More good breeding than at any other sale. Send for catalogue. Mention this paper.

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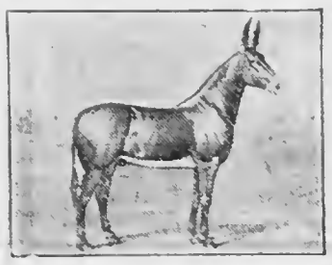
LIVERPOOL - - - - NEW YORK



80 Imported Percheron and Belgian STALLIONS and MARES ON SALE

My exhibit comprises the largest number of big, heavy-boned, 2000 to 2100 lb. Stallions to be found in the United States.

The Cedar Rapids Jack Farm is the Jack Metropolis of the World. All nations buy Jacks here. The majority of the best mules in the United States are the results of the past twenty years' improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.—W. L. DeCLOW

Stallion and Jack Importing Farm, Cedar Rapids, Ia.

Meat from Calves.

I have raised two calves for meat in a good deal the same manner as T. L. W., page 157, tells us about. My method is to take a June or July calf (after the prices have lowered on veals) and let it suck the cow till the milk can be saved. This regulates the calf's digestive organs. Then teach it to drink the new milk; decrease this and very gradually add scalded porridge made of middlings or shorts till you get the calf taking a quart of new milk and his porridge thinned with water. Now increase the porridge and give skim-milk. The calf will grow well if you feed only a quart or two of milk. Stake him out where he can get fresh grass every day. Then I gradually add cornmeal cooked thoroughly till I am feeding him a quart of mush thinned with a quart of milk and as much water as he needs to make a good mess; then when frost comes let him eat all the dry meal he will with good hay or fine corn fodder. Make changes gradually, and I will guarantee you will have some of the best meat you ever tasted. I can what we cannot keep fresh, cook it off the bones, press cans full of the hot meat, fill all cavities with the liquid, and seal hot; then can all the juices left for soups. I believe this is the cheapest and best beef a farmer can raise.

MRS. C. R.

Producing Clean Milk.

During the last five years there are few subjects which have demanded more consideration from the general public than that of producing sanitary and healthful milk for the market. When I was a youngster on the old farm, the task of milking was usually allotted to the hired men, but this condition does not exist to-day, and it is a good thing for all concerned. However, there are two reasons for this. In the first place, the hired man who will milk cows is a hard thing to find at present, and in the second place, the consuming public are more particular as to how their milk supply is produced.

While a great many farmers bewail the fact that hired men do not like to milk, I believe that it is the best thing for all concerned that they do dislike this work. In the case of the farmer, if he has to tend to the milking of the cows himself, he will quit his work early enough so that the cows may be milked in time, and he will see that this is done regularly. It stimulates a greater interest in the cattle and more pride in that he knows the purity of the milk supply. The average hired man has seen from experience that milking cows is a job which is usually to be done after regular working hours, and so is not in favor of it. Now under the old system of having hired help milk, I have seen many a man sit down and milk after he had been hauling manure all day without even changing his clothes. I doubt if there is a single reader of THE R. N.-Y. who has not also seen this same thing done. When one stops to think that of all possible substances under the sun, milk is the best feeding and breeding place for over 3,000 forms of bacteria, some of the ordinary ways of milking on the farm are not to be countenanced under any circumstances. There is another thing which comes under the same ban. A short time ago, a dairyman came to see me. He did not get up until I had the milking about done, and when he came out to the barn you should have heard him rave. The fact of the matter was that I had not cleaned the stables, and this man was of the opinion that stables should be cleaned before the milk is drawn. I am not of this opinion. I would far rather drink milk that has been drawn before the stables are cleaned than to drink that which has not been drawn until after the barn is cleaned. When the manure is thrown out, the stable looks clean, but it is not; that is so far as the air is concerned. The facts of the matter are that all sorts of bacteria and germs on the straw and litter are put in circulation and they are ready to get into the milk and cause objectionable growths. It is best to stir up as little dust as possible until after milking is done.

I remember once at home I was "dumping" around behind the stove in the Winter. I had been sick, and when it got to be about the usual milking time, my father asked me if I thought I would be able to milk that night. I thought I would. My father did not think what he was doing, but this shows the proper growth of this question from that day to this. Nowadays, we would not think of asking a sick man to milk. We think that only the most healthy of men are fitted for this important work. When a person is coming down with a disease, or when he is convalescing, the milking stool is not a fit object upon which to sit; neither is a pail of milk a fit object for him to be breathing across. The importance of this subject is growing daily, and the wise farmer will keep this part of his farming operations above reproach —this for the good of his family and society.

I. J. M.

Ingham County, Michigan.

Crumbly Butter.

What makes butter crumbly? I feed the cow one pound cottonseed meal, one pound cornmeal, one-half pound wheat, ground, one bushel corn silage to one feeding. For roughage I give clover hay and cornstalks.

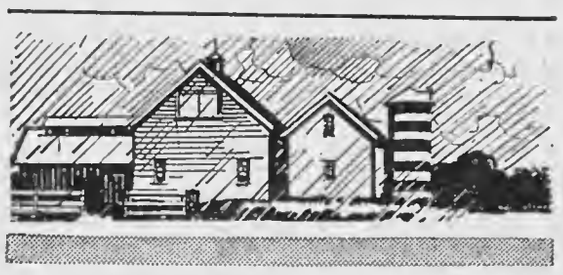
M. B.

Michigan.

The crumbly condition is caused by working the butter when too cold. If worked as soon as possible after churning the butter will generally be warm enough to work nicely, after washing with cold water. If worked too warm a salvy, sticky texture will be produced, so one must guard against this extreme also.

C. L. M.

Two old colored women were having dinner together in the cabin. The pot of boiled cabbage was on the floor and the dog walked into the room and started to drink out of it. Old Aunt Easter drove him out with the broom, and coming back she gave the other old woman a spoon. "'Liza," she said, "take dis spoon and dip dem dog-laps out o' de cabbage!"—Credit Lost.



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Dutch Boy White Lead

and Dutch Boy Linseed Oil is the standard, old-fashioned wearing paint that is elastic, penetrating, waterproof. Your painter will mix it, or you can. It can be tinted any color. It grips the surface like a nail.

You can now get red lead in paste form, same as white lead. Doesn't harden in the can. Fine for painting resinous wood; best by all odds for implements and metal work. Ask your dealer.

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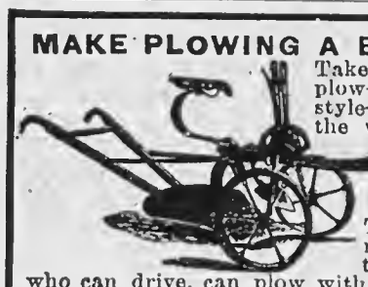

Take your walking plow—any make, any style—and fit it with the WINNER PLOW TRUCK That makes a regular sulky that any boy, who can drive, can plow with as well as you ever could. Special Introductory Offer in New Territory. Write today. You may use the WINNER 10 DAYS before making up your mind. If you don't like it then, we'll return your money and pay freight both ways.

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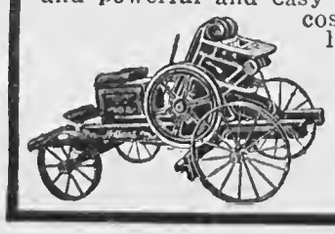
Stone Crusher

will crush trap rock or any kind of stone for road making, concrete work, cement sidewalks, fence posts, hog wallows, etc.

Make big money crushing stone for your neighbors. These crushers are strong and powerful and easy to operate. The cost is surprisingly low. Send today for interesting free trial offer.



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The Simplest CREAM SEPARATOR Ever Built —

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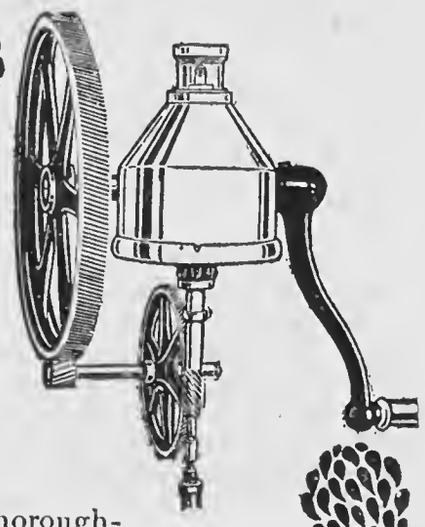
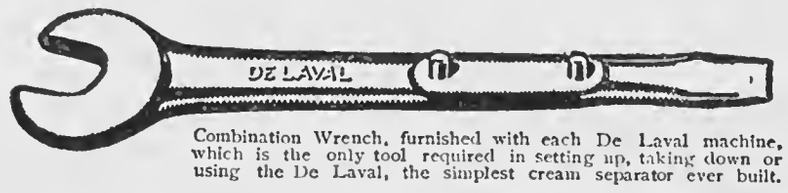


EXCELS ALL OTHERS not only in thoroughness of separation, sanitary cleanliness, ease of running and durability, but as well in its great simplicity.

THERE IS NOTHING ABOUT THE OPERATION, cleaning, adjustment or repair of a modern De Laval which requires expert knowledge or special tools.

NOR ARE THERE ANY PARTS WHICH REQUIRE frequent adjustment in order to maintain good running or to conform to varying conditions in the every day use of a cream separator.



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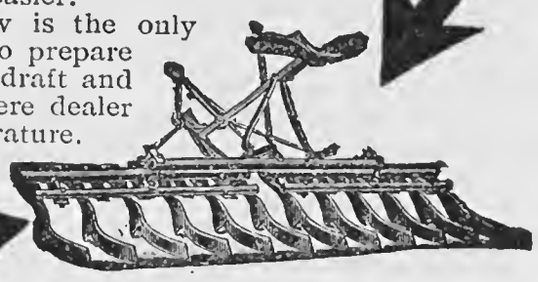
Makes the Seed Bed Perfect

It puts the soil in best condition to conserve the moisture for plant life. The sharp sloping knives work under to the plowed depth, pulverizing the entire bed; they crush the lumps and leave a fine surface mulch, embedding the plowed under manure in finely pulverized and compacted soil. This makes better yields, the plant roots finding nourishment easier.

The ACME Pulverizing Harrow is the only implement needed after your plow to prepare perfect seed beds. It is light in draft and low priced. Ask your John Deere dealer about it and write us for literature.



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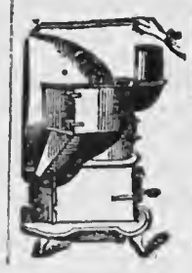

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With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for particulars and ask for circular J.
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Get facts *now* about these low-lift, handy wagons. Save man's work. Save all repair expense. Lighter draft, do not rut roads or fields *even on wet ground*. We also furnish wheels to fit ANY wagon. Climate *can't* affect our steel wheels. Spokes don't work loose from rim or hub. Let us prove it. Send postal *now* for *free* illustrated book.
Electric Wheel Co., 48 Elm St., Quincy, Ill.

ELECTRIC Steel Wheels and Handy Wagons

Get This FREE Book NOW!

PRODUCTS, PRICES AND TRADE.

The cut in milk prices to the producer has been more general—$1.81 for B, covering a large amount of business, and 10 cents less for C grade. This means 3¾ and 3½ to shippers who get the full price.

*

Egg prices are practically the same as last week, though nearer a decline, judging from the general tone of trade. Receipts have been heavier than were expected. Some fancy white eggs wholesale at 38 cents, but they must be large to do this; 35 is nearer the limit for most shipments, and 30 for brown.

*

The better grades of butter advanced two cents during the week. Business in medium and low quality is very dull. The dairy butter now arriving is showing a poor average quality, considerable going at 20 to 21 cents, while packing stock runs as low as 16. The best storage creamery brings 27, and best fresh 28½.

*

There were launched during 1913, 1,881 merchant vessels, with 2,651,000 tonnage, a net increased of 800,000 over previous years.

*

Norway ships large quantities of salt mackerel to this country, last year's output being 41,700 barrels, worth approximately $500,000.

*

Argentina is sending from 10,000 to 25,000 quarters of beef to the United States weekly, in addition to an average of 10,000 carcasses of mutton.

*

Textile mills at Fall River, Mass., capitalized at $30,600,000, and operating 3,200,000 spindles, show a net surplus for the year of $586,377. Of these 38 corporations, the stock has sold recently at from 100 to 175, the remainder running from 60 to par.

*

St. John, New Brunswick, has a large shipping business, and the Dominion Government is to spend $3,000,000 in dock and harbor improvements. This will use 14,500,000 feet of timber, in addition to concrete for surface of the wharves. The sub-structure of the wharves must be very deep, as they must extend 30 feet below low water and provide for a tide rise of at least 20 feet.

*

The wool market in the East continues very firm, with prices tending upward. Manufacturers are showing a decided interest especially in medium and fine domestic wools. Recent reported prices are: Ohio half blood combings, 23½ to 24; quarter blood, 22½ to 23; XX, 26 to 27. Canada's first large shipment of free wool (50,000 pounds) passed through the port of Ogdensburg, N. Y., February 6, bound for New York.

*

The practice of branding Ben Davis apples "Red Roman" or some other name than the right one appears to be increasing in the East, and with the sanction of experienced and reputable fruit growers. The excuse given is that the variety has been criticised so much that the apples will not sell for what they are worth unless labelled differently. This may be true in a small minority of cases, but they are exceptions. The rule is that the man who buys Ben Davis knows what it is as soon as he sees it and pays as much for it under one name as another. An attempt to dispose of it under a false name is sure to result in dissatisfaction to the buyer, and is really an injury to the business, although it may not appear so to those who see only part of the transaction. The Ben Davis is in a class by itself, profitable for late keeping and long distance shipment, fairly good when properly baked, but never a dessert variety, no matter what fancy name is hitched to it. W. W. H.

Western Reserve Holstein Breeders met February 2, 1914, at the pleasant home of E. L. Taylor and wife of Burton. The following officers were elected for the year: President, C. H. Ford, Burton, O.; first vice-president, L. G. Richards, Burton; second vice-president, George Hodges, Newbury; third vice-president, Howard Newcomb, Burton; fourth vice-president, N. E. Shanower, Burton; secretary, B. J. Shanower, Burton; corresponding secretary, Rev. George E. Merrill, Burton; treasurer, E. L. Taylor. Two new directors were elected, A. S. Boswell, Russell, and C. F. Harrison, Middlefield. Date of meeting, which has been first Monday of every other month, was changed to the first Friday, which would be more convenient for the ladies, who contribute no little enthusiasm to these helpful meetings. Then followed a talk on Holsteins, which would cause even the sheep man to want to own one of the black and white beauties that have placed Geauga County in the eyes of the world, owning as they do four out of six of the world's greatest cows, besides scores of fine cattle whtich find ready sale at owner's door.

MRS. JAMES LAMPMAN.

IMMIGRANT LABOR BUREAU.

This bureau, maintained by the German Society of the City of New York, and the Irish Emigrant Society, is a free market for immigrant labor open to all employers throughout the United States. Its headquarters have recently been moved from Pier 1, North River, to 15 Pearl street. Supt. W. W. Meara makes the following statement about the bureau's work:

1. While maintained by the societies named above, immigrants of all nationalities are equally privileged in the bureau; and due attention is given to an employer's preference in this respect.

2. This office charges no fees or commission of any sort to employer or immigrant.

3. Land speculators are excluded from the privilege of the bureau and all propositions looking to the sale or leasing of land to immigrants will be rejected.

4. Employers applying at this office must furnish satisfactory references. Agents must be duly authorized by their principals and be well recommended.

5. This office does not make contracts for immigrants with the employer; it does not fix the amount of wages nor the time of service, nor prescribe any other condition of the contract; it leaves all these matters to be settled by the voluntary agreement of the parties immediately interested, and asists them only by giving needful information and advice.

6. Employers must in all cases provide for the transportation of the employee to their respective places of destination.

If the means sufficient to pay travelling expenses are remitted to this office with the request to send hired help to the applicant, we shall see that the employee is properly started on his journey.

Due diligence will be used to execute such requests; but employers are made aware that delay may unavoidably occur—either through increased demand advancing wages beyond rate fixed by employer—the falling of supply—or difficulty of securing suitable persons with sufficient baggage to protect the employer against loss of travelling expenses.

In such application employers should state distinctly the description of labor required, the nationality preferred and the rate of wages proposed.

Remittance to this office should be made in national currency, Post Office order or checks on a New York city bank.

7. To secure the arrival of employees, we shall, where it is possible, have their baggage checked through to destination, and the checks sent by mail or express to the employer. When through checking of the baggage is not feasible it will be forwarded by express.

Pulping Beets for Hens.

I believe that poultry would eat more green feed in the form of mangel wurzel beets, if the beets were grated and fed to them in stone crocks, and with a desire to do this, I have been looking for information in the farm and poultry papers for some machine suitable for grating up beets, turnips, and other such vegetables for poultry feed. The only ones I have seen cut the vegetables in too large pieces. It seems to me they should be grated up about as fine as the dry beet pulp comes. Do you know whether any such machine is made? If so, I should be glad to learn of it. F. M. P.

Connecticut.

R. N.-Y.—Who can tell us where to find a "beet pulper" such as are made in Europe?

"Right there is the Spreader YOU want"

That's the quick answer every well-posted farmer gives to the man who inquires about "The Best Spreader Money Can Buy." Fifteen years ago we started building spreaders with a "New Idea" backed up by high ideals. We wanted more than a mere "manure dumper." Direct drive, easily adjusted feed, thorough pulverizing, wide and even spreading—those were some of the things we demanded of our machines, all of which we made come true in "New Idea" Spreaders. We now go a step further. *All* the good features that made "New Idea" Spreaders famous are retained and a few improvements are worked out which can be *Found Only* in the

NISCO WIDE SPREAD LOW DOWN SPREADER

Points of Superiority

"Nisco" Spreaders have a practical low-down top with sides only 41 inches from ground. There is 17½ inches clearance under bed, hence conveyor cannot drag over ground. The main side sills are heavy channel steel, bolted to sides and cross-pieces. Inside measurements of bed are 18½ inches deep—from three to five inches deeper than any other so-called "low-down" spreaders. *"Nisco"* Spreaders are built along simple and substantial lines. All parts subject to heavy strain are of steel or malleable iron. Of course it has *all* the really unique features of the "New Idea" Spreader, such as special, patented distributors, double cylinders, etc., etc.

Free Circular Shows

"Nisco" Spreaders just as they are—in full colors. There are two score reasons why the *"Nisco"* is the spreader for the man who values spreader perfection. Please give the circular a chance to tell you more about *"Nisco"* superiority. Write for it and for fully illustrated catalog which tells all about our machines, often termed "The Best Spreaders On Wheels."—both *FREE*.

Write today SURE!

New Idea Spreader Company,
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In spring, summer, fall or winter—against ice, snow or rain; nesting birds or trash—you can always depend upon the

Louden Bird-Proof Barn Door Hanger

Roller bearing trolleys are completely enclosed in heavy steel tube. Cannot be clogged or derailed.

Trolleys operate on level tread, reducing friction to the minimum and preventing wedging or binding. Light and heavy doors roll with equal ease when fitted with the Bird Proof.

Double flexibility permits the door to fit snugly without sticking or binding, and lessens the probability of its being broken by crowding stock.

The tubular form of the Bird Proof Track, and the special grade of steel used in its manufacture, combine to give it wonderful strength and rigidity. Will not sag with heavy doors.

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JOHN DEERE OBLIQUE Selection

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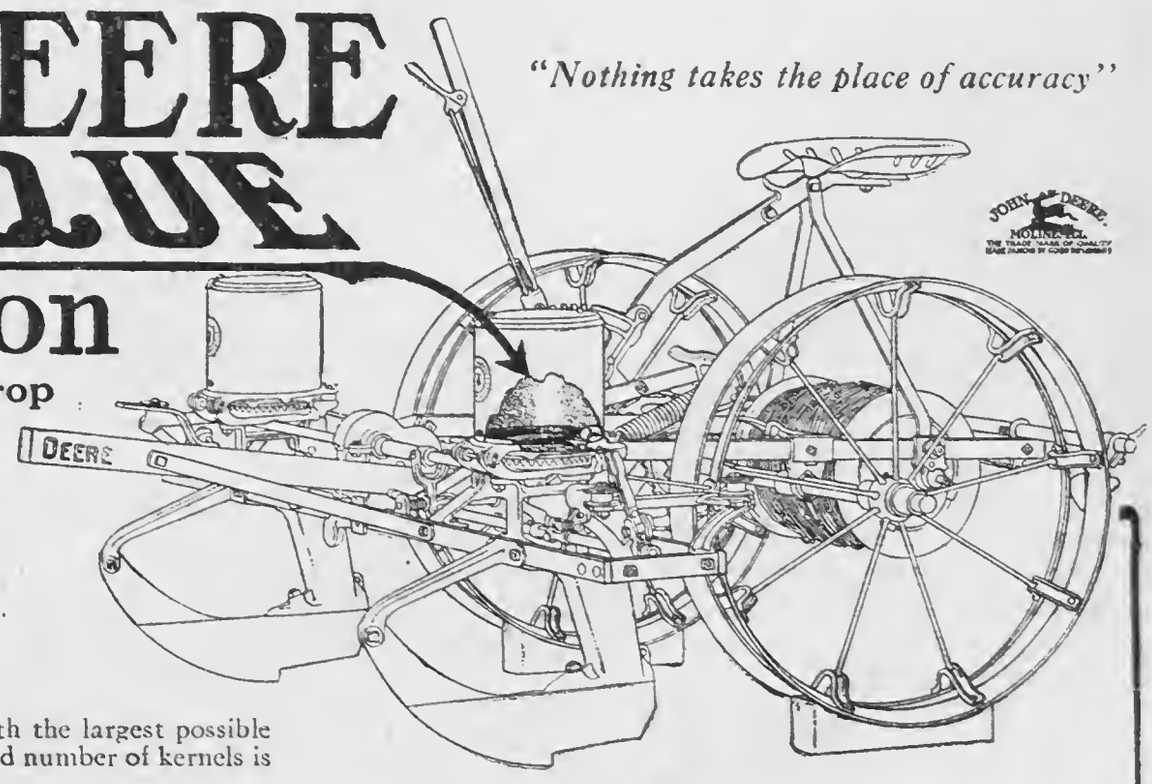
The "Natural" drop



This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.

Make your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere 'Oblique Selection" Corn Planter. The book to ask for is No. D 33.

John Deere, Moline, Illinois

John Deere Two Way Plow

The Sulky with the Steel Frame and Patent Auto Foot Frame Shift.

A Few Strong Features

1 **All Steel and Malleable Frame—Steel Arch:** Strong—Light—Durable, Alignments Permanent.

2 **Patent Auto Foot Frame Shift:** Perfect Control—accurate width of cut.

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4 **Automatic Shifting Hitch:** Clevis always in position. Correct line of draft.

5 **Automatic Horse Lift:** Pull of team raises bottoms.

6 **Adjustable Jointers:** Clamped to beam. Every adjustment.

7 **Wide Tread:** No tipping on hillsides.

8 **Chilled, Full Steel and Combination Bottoms:** Every style for Eastern conditions.

9 **Removable Shin Piece:** Keen cutting edge—easily renewed.

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"Better Farm Implements and How to Use Them" was written for you. It contains 169 pages of money making ideas. It cost us a large sum to produce. It is yours for the asking. Send for package No. T. W. 13 before they are all gone. A post card will bring you your book.

John Deere, Moline, Ill.

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MY machine has netted me about $15 a day and something like $300 a month. My expenses have been about $3 a day including everything and all my customers are satisfied.

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A perfect trench at one cut

The Buckeye is built in a number of sizes to meet conditions in various parts of the country. We sell you the machine best adapted to your territory.

No other farm machinery pays such big profits on the investment. There is steady demand for Buckeye Ditches and Buckeye owners are always busy.

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Yield 398 BUSHELS per acre

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nourish and strengthen the soil, but they save labor in plowing and preparation for crops.

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When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : :

An Experience With Vetch.

We have been growing vetches for a number of years, and find it pays to grow our protein instead of buying it all. In 1911 we sowed about six pounds of seed on six acres with clover to support it. We started to cut it June 25, and I pulled up one single root that weighed seven pounds green and it shrunk 75% in drying. It set me to thinking about what one such root would make if it were possible to grow one to the square foot on an acre. There are 43,560 square feet in an acre, and my theory is this seeding of vetch and letting it grow big, gives 21 3-25 tons to the acre. Then I counted the seed to the pound and found 11,800, 3.9 pound to acre, but we generally get on 10 or 15 pounds to the acre. The fourth of last July we had one single root that grew on light sandy soil and weighed five pounds green; the roots were so strong and deep that it broke off at the top of the ground. I took it down to the State Fair and it was exhibited. I went to Chicago to help them demonstrate the value of sowing vetches in corn, as we also sowed it in our corn the last cultivation for humus to plow down, and had a fair stand on the low ground, because of the drought.

The Delaware Experiment Station advocated using $6 worth of seed per acre, and they considered they got $15 to $20 worth green stuff for pasture on humus. I would not advocate more than 15 to 20 pounds to the acre in corn. Frosts do not affect it, and it grows till cold weather for those who plow their corn ground in the Fall. Spring vetch is the same value and costs about one-half the price of Winter vetch and Winter vetch about one-half the price of Alfalfa, usually.

Prof. P. G. Holden of Chicago, advocates Alfalfa on every farm, but for those who cannot make a success of Alfalfa I am confident that having abundance of vetch on the farm will help to double the value of the tillable land every 10 years, as I know they gather so much nitrogen from the air and store it in the soil.

LYMAN CRANE.

St. Lawrence Co., N. Y.

Nitrate on Rye Cover Crop.

Through carelessness my Florida rock was not turned under with clover last Summer. I have now planted rye thick; can I use the rock with it instead, as I am anxious to get it in the soil at once? Some of the rye is to grow tall; how can I apply the rock to it in order to plow under? Is this practicable for three different fields, the object being to improve the soil: 1. Turn rye under late, having top-dressed with nitrate of soda, harrow in lime and seed to Crimson clover July 20. 2. Top-dress rye with nitrate of soda, turn under when young, harrow in muriate of potash, plant corn May 10-20, after harvesting plow at once for wheat, harrow in lime and plant wheat September 20. 3. Top-dress rye with nitrate of soda, turn under young, harrow in muriate of potash, plant corn followed by rye in October. F. K.

Philadelphia, Pa.

We are not strong advocates of raw phosphate rock alone on our Eastern soils. With us the available phosphate has given better results. If, however, you intend to use the raw phosphate and have not turned it in with clover, we see no reason why you should not spread it on the young rye, say in April, or before the rye makes much growth. Then plow the rye under when you are ready, and fit the field as well as you can. We should not consider it good practice to use too much nitrate of soda this Spring, if the rye is to be turned under for Crimson clover. We doubt if the nitrate will give additional growth enough for a green manure crop to pay. We should spread the phosphate as suggested, plow under the rye, and use half a ton at least of air-slaked lime. Then fit the ground properly, keep it worked up, and sow your Crimson clover in July, making an application of potash at that time. For the second field, which is for corn, we would not use the nitrate of soda, but would plow under the rye and lime as before suggested; fit the land properly, and plant corn, using either a standard corn fertilizer, or a mixture of tankage, acid phosphate, and muriate of potash in the hill. We think the lime directly after plowing under the rye would be more effective than later on the wheat. For the third field we should also avoid the use of nitrate of soda, add the lime, and handle the corn as above.

The Rural Carrier's Side.

I was much interested in the complaint printed on page 151 by "A Reader" who resides at a remote distance from the line of travel of the rural delivery route, and must travel over a mile back and forth each day to obtain his mail. I am a rural carrier, have been one for 11 years, and to compare his ease, with others of the same nature, on different routes in this country, it would seem that "A Reader" is far more fortunate than a great many farmers whose residences are not on the public road traveled by the carrier.

Take my route for comparison, which is 25 miles in length, and serves 138 families. I can count 36 of them living from one-half to four miles from the line of travel by the carrier. In order to serve those 36 families at their residences, it would be necessary to drive about 45 miles in addition to the regular route, making a total distance of 70 miles. "A Reader" can console himself with the fact that he is not the only victim of such circumstances. The chances are that he had to drive four or five times farther before the route was in operation, and was perfectly satisfied to do so, but now that the Post Office Department has granted him rural delivery he wants the carrier to drive two miles so he can have his mail delivered at the door. "A Reader" should keep in mind that there may be other patrons on the route whose farms are situated off the main road, and also, that the Post Office Department could not give him such service as he desires, without giving it to his neighbor. The department tries to get as close to the door of the farmer as possible, but to deliver at each residence on every route in operation at the present time would require the employing of more than 50,000 rural carriers in addition to the 43,000 who are now serving the American farmers with daily mail.

You advise him to apply to the postmaster, and if he refuses apply to Washington, but the postmaster usually decides it. This last paragraph will no doubt lead many patrons of rural routes to believe that their postmaster has the authority to say where the carrier must or must not drive, but from my experience in the service, I am sure that the postmaster has far less to say than the patron himself. In fact, I believe there are very few postmasters who are qualified to pass on such an important matter as the length of a rural route, not having had experience in that line. If they did have such power it would be unnecessary for the Post Office Department to employ the hundreds of competent, and well-paid rural route inspectors for that purpose. Doubtless, if the postmasters had such authority some carriers would be driving 40 or 50 miles, while his brother carrier in the adjoining town would be driving 15 or 20 miles. It is more than likely that the carrier who serves "A Reader" is driving a standard route, possibly much more, and to compel him to drive one mile and return to his residence would be adding over 600 miles to his annual drive, without any compensation for such service. I do not wish to say that I am opposed to delivering mail to farmers residing at remote distances frome rural routes; on the contrary I regret that such service is not practical, because I believe he is entitled to the same service as his city brother. In the meantime the farmer can do much toward getting prompt and more efficient service from the carrier, by turning his attention to the building of better roads, and keeping them in good condition, also by seeing that his mail box is located at a convenient point, at a uniform height, and securely fastened to the post. There are a great many things that a farmer can do to induce the Post Office Department to come closer to the one residing at a remote distance from the lines of rural routes, the most important of which is the building of good roads. J. M.

New York.

Care of Geese.

I am interested in geese but so far have only one flock of four Toulouse. I wished to make this a good paying side line on my farm by adding 20 or 30 more breeders, but have been cautioned that I must have separate runs for each family and that they cannot be adjacent to each other; and that these runs must have running water through them. I have heard of people keeping 40 to 50 breeders, and I suppose they could be allowed to mate up while in one flock. G. J. S.

Canada.

Geese do not need running water, although they always enjoy it. A swimming pool is perhaps a help during the breeding season, but is not an absolute necessity. They should always have an abundance of drinking water. Most of them would probably mate if all ran together in one flock, but if you had any choice you should separate intended pairs or trios from the others in the Fall, and keep them by themselves till Spring. Even then a few individuals might take a notion to select their own mates. Geese cannot be profitably kept in small pens, or runs, like ducks. They need a larger range, and can get most of their living during the Summer from grass. If you have not had much experience with geese my advice would be to increase your flock slowly. W. H. HUSE.

More Hay per Acre

The acreage and price of hay are increasing, but the yield per acre, only about one and a quarter tons, is too small to be very profitable.

But with yields of 3 to 4 tons per acre the profits are much better. Such yields can be secured by top dressing with

POTASH

nitrogen and phosphoric acid in the right proportions.

The usual type of grain fertilizer is quite unsuitable for hay.

The *Rhode Island Experiment Station* has conducted investigations for many years on the top dressing of hay and proves that it is possible and profitable to produce large yields of hay year after year by the use of commercial fertilizers only.

The Station recommends (Bulletin No. 90) the annual application of

400 lbs. acid phosphate
200 to 250 lbs. muriate of potash
350 lbs. nitrate of soda

per acre, and if the land be acid (sour) it should receive a ton to a ton and one-half of air-slaked lime before seeding.

Under this treatment poor hay lands were made to yield over 4 tons per acre and to give a very handsome profit over the cost of the fertilizer. The quality of the hay was also greatly improved.

Potash Pays on hay. We sell potash in any amount from one 200-lb. bag up.

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and produced healthier, stronger, sleeker and fatter stock. That's the actual record of one man who fed a well-balanced ration by mixing with other feed
DeSOTO'S BRAND MOLASSES
It increases the palatibility and succulence-value of feed. Molasses is high in carbohydrates but low in cost. Animals like it—thrive on it. Horses have more "work-energy"; cows produce more milk. Feed molasses to your stock for a month and note the better results.
WRITE FOR FREE BOOKLET "Feeding Molasses." Tells how to properly mix rations for different stock.
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Make $2000.00 to $4000.00 a year selling the new improved
AUTOMATIC COMBINATION TOOL
Combining a lifting jack and eleven other much used tools. Breeger, Minn. sold 23 in two days. Profit $77.05. Double acting—automatic. General Agents—write quick for terms, territory offer, etc.
HARRAH MFG. CO. S. Bloomfield, Ind.

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates

Dairy Ration.

With the price on gluten $1.55; cottonseed meal $1.75, oil meal $1.80, wheat bran $1.35, cornmeal $1.50, give me the best and cheapest ration for cows in milk. For the past 10 days I used gluten 100 pounds, cottonseed meal 100, oil meal 10, and mixed it and fed from four to five quarts per cow, but I would like to know if that is a good feed. If not let me know. C. H.

Callicoon, N. Y.

This is a good ration as it stands, but would be a little better if you will add 50 pounds of bran. The ingredients you are using are very heavy, and if something light and bulky be added, like wheat bran, digestion and assimilation will be better. C. L. M.

Improving a Ration.

Will you advise me in regard to a balanced ration for cows? I have plenty of cob meal available, and am feeding four quarts of cob meal, one of cotton-seed a day. Could you make me a better balanced ration with cob meal in it? I have oat fodder, millet and plenty of good hay. H. P. B.

Barkhamsted, Conn.

I believe the following mixture will give slightly better results than the one you are using: Corn and cob meal, three pounds; cottonseed meal, two pounds; wheat bran, one pound; oil meal, one pound. C. L. M.

Succulence Needed.

Our heifer was two years old last month, and had her first calf at the same time. We are not going to raise the calf, and weaned it when about 10 days old, so that the loss of milk is now becoming more apparent every day, cannot be attributed to the calf. We feed about a half peck of feed and bran at a meal, also cut cornstalks and Timothy hay plentifully, but the milk supply is steadily diminishing and I am anxious to find out the reason. Would you approve of gluten meal and oil meal with the bran and if so, what is the proportion or what ration would you recommend to improve the milk supply? G. B. D.

Dunellen, N. J.

Your heifer is showing the effects of Winter conditions and a lack of succulent feed. If you could procure a good supply of silage, mangels or dried beet pulp you would prevent further shrinkage in milk from this cause, and your heifer would keep in better condition physically. If you cannot get any of the above mentioned succulent feeds you should feed at least three pounds of gluten or 2½ pounds of cottonseed meal and one pound of oil meal per day. The proportion of bran to these feeds would be about twice as much bran by weight. Timothy hay and cornstalks will dry cows up very fast, as a rule, unless special pains is taken to keep up the flow of milk with other feed. C. S. G.

Read the Feed Analysis.

The other day when I drove up to the station with a load of produce a farmer whom I knew stepped up to me, showing a sample of bran from a carload he and his neighbor farmer had bought from a dealer in Buffalo, and which they were just unloading. The sample appeared to be a fair grade of bran, and as it was $1.80 per ton cheaper than at my dealer's, I decided to take a load. I happened to meet my feed dealer and incidentally told him of my intention of loading from the car. He warned me by asking if I had seen the analysis. I told him I had not, but had seen the bran. He laughed and we parted.

When I drove up to the car the sacks were toppled into the sleigh loose and I occasionally noticed the print on them read "Blue Grass Feed," etc. I reckoned they were perhaps a lot of old mixed sacks, and relying on the integrity of the farmers handling the feed and thinking it was rather difficult to get a reliable analysis from the sacks I finished my load and drove away. On arriving home and unloading I found them to be all new sacks printed: "100 lbs. Blue Grass Feed. Guaranteed analysis: Protein 9-11; fat 2-3; fibre 16-17." This appeared to me as if I was stung, but when I compared the analysis with that of my $28 bran, I knew I was. Following is the analysis of the better bran, so one can draw his own conclusions: Protein 15.50; fat 4.50; fibre 8.50; carbohydrates, sugar and starch 33.00. What I wish to impress your readers with is that you cannot judge a feed from its appearance, and while I tasted and chewed this bran I could not distinguish, till I chewed the better bran, when the woodiness of the former became apparent. F. W. K.

Wyoming Co., N. Y.

R. N.-Y.—Yes, and be sure to read *all* the analysis. You may find this "including mill run of screenings" which means that sweepings, screenings and weed seeds may have been run into the bran.

Results of Balanced Ration.

I was called upon to attend to the feeding of six cows for a farmer during a part of the Winter season. The cows were going dry, the best one giving only about 12 pound a day, though they should have been giving good messes. They were fed silage and hay in reasonable proportions but their grain ration was completely out of balance. It consisted of bran, cornmeal and hominy, and was fed by measure regardless of weight, though the full weight was sufficient, but lacking in protein content. When that grain was gone, I replaced it with linseed meal (old process), cornmeal and cottonseed meal. I should have used gluten instead of cornmeal but it was not in stock. I proportioned these feeds to form a balanced ration and fed the same amount by weight which the farmer had fed. Each of those six cows doubled her milk production in a few days and the expense of the feed was actually lessened.

New York. C. M.

Another Dairy Ration.

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Candia, N. H.

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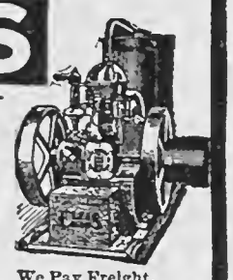
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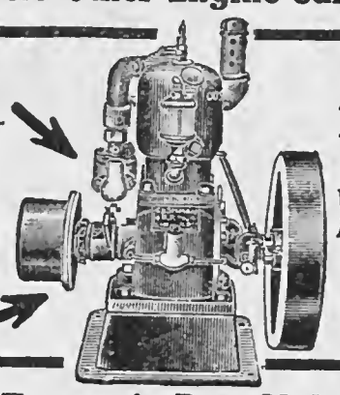
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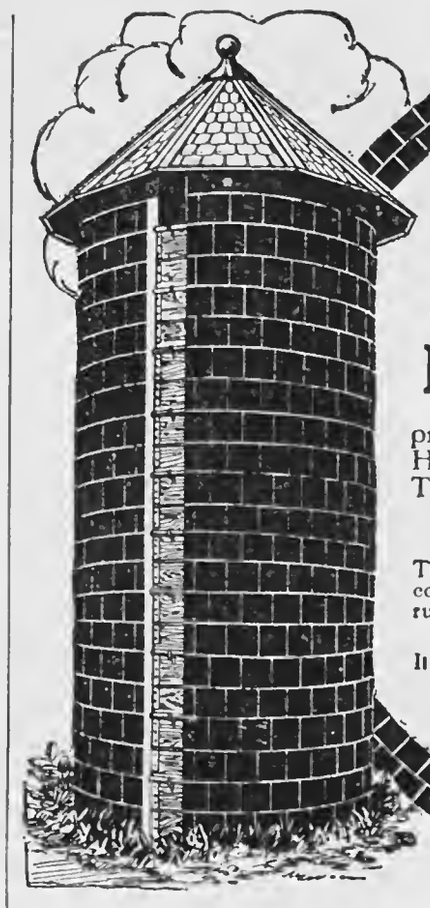
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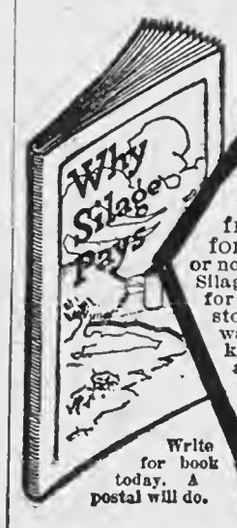

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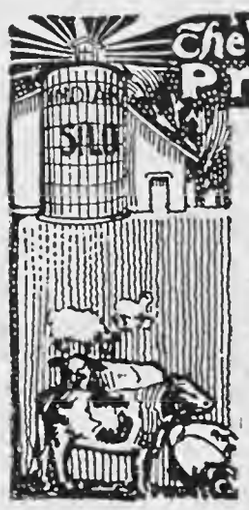
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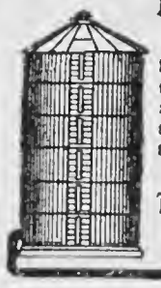
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THE NEW YORK STATE BREEDERS' ASSOCIATION.

PART I.

In opening the convention of the association President Calvin J. Huson, State Commisioner of Agriculture, pointed out the need of plans for promoting the live stock industry of this State, and gave figures from census reports showing the decadence in some branches of live stock growing, and unsatisfactory increase in others. In the 20 years previous to 1910, dairy cows have increased in number in this State by 69,000, with a still greater proportionate increase in valuation. Swine have barely held their own in numbers, while sheep have fallen off 50 per cent. in numbers and value during the last census period. Horses, also, have shown a consistent decrease since 1890, losing 36,000 in the first 10-year period, and 37,000 in the next, though their valuation has increased by $32,000 in the last 10 years. Census figures show that to each farm in the State there are seven dairy cows, three pigs, four sheep and 2½ horses, including colts. The West and Northwest are now making heavy drains upon New York's supply of dairy cows, and the demand thus created adds to the profit of producing those of the right type. According to Commissioner Huson, New York does not produce enough pork in one year to feed its people one month. The rapid decrease in the number of sheep kept calls for legislation against one of the chief causes of this condition, the ravages of dogs, and further legislation is needed in the matter of State regulation of horse breeding. Only one in seven of the stallions registered in the State are purebred, and while the owners of the present generation of stallions should be protected, scrubs should be gradually eliminated.

Following President Huson, H. H. Wing, Professor of Animal Husbandry at the State College of Agriculture, Ithaca, N. Y., discussed "The Present and Prospective Status of the Purebred." The breeding of pedigreed animals was shown to be a very modern industry, its history extending over only about 75 years. Purebreds do not now exceed two to five per cent. of the total animal population of this country, and the present generation, at least, need have no fear of glutting the market by over production of this class of animals. The public is just beginning to appreciate the value of purebred stock, and the market for this has never been better than during the last 10 years. Grades are not to be condemned, many having been developed to rival in production and efficiency the purebred; some, even, have shown ability to transmit their desirable characteristics, but the aristocracy of the herd book is an exclusive one into which a grade may never break, and while a grade may equal a purebred in productive value, it can never possess the country-wide market open to the latter animal. The value of purebreds will be measured, in the future, by their efficiency in doing the work required of them, and this efficiency will be the means of determining the progress of the breed. If it is worth while to breed any animal, it is only worth while to breed within herd book registration; and all should do this. If, in the course of time, all animals should become purebred, they would still divide into classes based upon merit, and thus an aristocracy within an aristocracy would be formed.

Mr. Leander F. Herrick of Worcester, Mass., pointed out the advantages accruing to the individual breeder through coöperation with others in selling his product. No one breeder could present the number and variety of purebred animals for sale that several acting together could; nor could he with his comparatively small offering attract the buyers that a large, well-managed sale would.

In the absence of Mr. H. A. Moyer, who was expected to speak of the development of the dairy cow, Prof. V. A. Moore of Ithaca, took the floor and gave an interesting talk upon contagious abortion in cattle, which disease he considered an even greater menace to dairymen than tuberculosis because of our lack of knowledge concerning its detection and control. While a serum has been devised that will show the presence in the blood of the organism causing this disease, it does not show whether the cow has aborted and become immune, or whether she is in condition to abort at some future time. Dr. Moore does not believe that the germs of contagious abortion are eliminated from the cow until shortly previous to abortion, and subsequently. They are then eliminated in the milk and the uterine discharges and may be conveyed to other cows by food or litter which has become soiled by these. The contagion may remain in the milk for an aborting cow for months, having been demonsarated in one case four years after the occurrence of the original trouble. It may also be transmitted from one cow to another by the male in the herd. No fully satisfactory treatment has yet been devised, though the methylene blue treatment now being studied at the Vermont Station holds out considerable promise. Disinfection and cleanliness of stables and their surroundings are still essential to the prevention of this disorder.

Lieut. N. C. Shiverick of Avon, gave a practical address upon horse breeding in which he urged the necessity for State aid to this industry. Laws preventing the registration of unsound stallions as well as of those not purebred are needed, and the offering of prizes at the State Fair for the best brood mares would encourage the keeping of these in the State. New York should produce at least part of the 80,000 horses now brought into the State annually, and it should also receive its share of attention from the Federal government in the matter of the distribution of stallions for the production of army remounts. Lieut. Shiverick was followed by Dr. J. F. Devine, of the State Department of Agriculture, who gave an informal and very instructive talk about many of the common ailments of horses and colts which might be treated, or at least given intelligent attention by the owners of the animals. M. B. D.

REMOVING ROOSTER'S SPURS.—Take your rooster by the feet, head down, clap your fine saw flat against leg, drop spur, and you soon will find leg smooth and rooster not lose a feed. To dishorn sheep, cut smooth to head the same as cattle. I drop horns any time in the year, and never lost a case, nor any trouble yet. L. D. A.

THE ROOSTER QUESTION.—Page 25, R. P. worries about his roosters fighting. Last Spring I put 20 cockerels in my breeding pen with 200 hens. The finest cockerel in the bunch I took down town and put in exhibition for two or three days. When I brought him back he was a stranger, and they all jumped him. He spent the afternoon licking the whole bunch, and the rest of the breeding season he amused himself knocking the others. The consequence was my eggs only ran 97% fertile at the first test out. Tell R. P. to go off somewhere and crack hickorynuts, and let the roosters fight if they want to. G. H. S.

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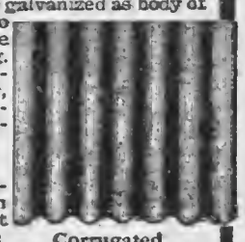

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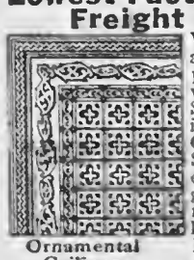

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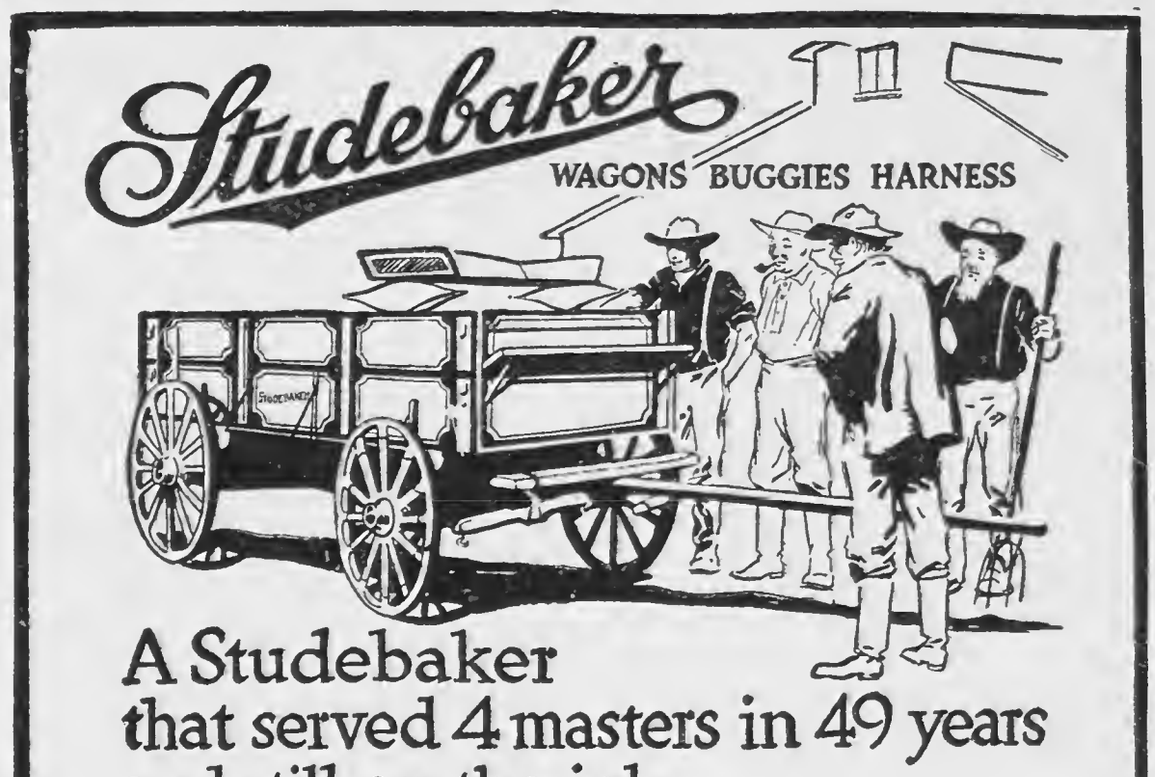

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Studebaker has been building wagons for over sixty years and there are thousands and thousands of farmers all over the country who are using Studebaker Wagons today that were purchased anywhere from 35 to 50 years ago.

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"Everything for the Barn."

The Henyard.

Care of Laying Fowls.

What would be reasonable to expect from a pen of 75 pullets at this season? I divide four quarts of grain, one buckwheat, one cracked corn, one wheat, one quart oats, equally between three pens of 75 each; at noon they are given four quarts Alfalfa, having had boiling water turned on and let stand two or three hours, four quarts bran, four quarts mildlings, four quarts meal, two quarts beef scraps, one-half pint oil meal, and handful salt mixed together and divided. They are given cabbage, apples, small beets and sometimes sprouted oats, to work at besides the dry mash. At night they are given a good handful apiece of eight quarts cracked corn, four wheat, two quarts oats, two quarts buckwheat mixed. Fresh water is given three times a day, oystershell and grit are kept in hoppers. Dropping boards are cleaned each morning and clean chaff is scattered over them; each pen is given a dust box of sifted coal ashes. W. E. D.

I think that you can reasonably expect a 30% to 40% egg yield from your pullets in January if they were hatched in April or before. Your method of care and feeding is good, though if you are not giving the fowls access to dry mash in addition to the food that you mention, you are feeding very lightly, it seems to me. Four quarts of grain is a very light breakfast for 225 pullets, 18 quarts of mash for dinner and a handful of grain apiece for supper is also a long way from overfeeding; I presume, however, that you are giving dry mash in addition, as you mention it. While it is impossible to judge accurately as to your feeding, at this distance, I suspect that it is more food rather than a tonic that your pullets need. M. B. D.

Substitute for Trap Nests.

I wonder whether there has been any way devised by which a woman who is too busy to watch trap-nests as carefully as possible, could arrange her chicken house so that the hens would sort themselves into layers and drones each day? The trip or two could be managed, but I have tried the regular traps that one has to remove the hens from, and find I cannot devote so much time to it, although I am most anxious to breed and cull along egg lines. If anyone has devised a satisfactory way, I sincerely wish that he would pass it on. MRS. R. B.

Niles, Mich.

I know of no satisfactory device that will take the place of the trap-nest in picking out the layers from the drones. I am reminded, however, of a device, a description of which was sent me by a friend in Washington, D. C., who frequently has business in the U. S. Patent Office. This device was to be attached to a hen at the vent in such a manner that the egg when being laid came in contact with a self-inking attachment, that marked the egg. One of these devices had to be attached to each hen. A copy of the "claims" as filed in the patent office was sent me, and is probably somewhere among my papers now. On paper it looked quite plausible—in practice I doubt if it would work. I have heard of other devices, but have never seen them. Perhaps some of THE R. N.-Y. readers know of them. Most trap-nests are not made deep enough from front to rear. They should be 24 inches deep, so that the nest part would be far enough back to allow of room for the hen to stand comfortably when entirely outside of the nest proper. This prevents the breaking of the egg by the hen's attempt to escape, also prevents or lessens the liability of the nest becoming soiled by the droppings, where the hen is not promptly removed. With such nests no great harm is done if the hen has to be confined an hour or two. But plenty of nests must be provided.

GEO. A. COSGROVE.

Alfalfa Hay for Fowls.

How shall I prepare and feed Alfalfa as a separate feed to take the place of green stuff like cabbage, beets, etc? What is your opinion of its value? S. F. H.

Alfalfa meal is usually mixed with the ground grains as a mash, fed either wet or dry. If you have short cut Alfalfa, either home-grown or purchased, you can steam it by turning boiling water upon it in a covered pail, or it may be fed dry, though this is more wasteful. If the hens do not readily eat the steamed Alfalfa, mix a little ground feed with it. It is not to be expected that they will eat the coarse stems, but they should clean up the leaves and finer parts. Alfalfa does not exactly take the place of succulent food, like cabbage; it is a food of a different class, still it is a fair substitute if roots are not to be had, and it or clover should be fed anyway when available, as it is one of the best poultry foods. M. B. D.

Poultry Questions.

1. For Leghorns, would you prefer one-half buckwheat and half scratch feed in the morning? 2. I want to set 1000 eggs by April 15, one batch after another. Would you advise a hot water or dry air incubator? 3. I have two roosters, good birds, and 25 hens, two years old. The roosters are one year old. Is this mating desirable, and does it tend to produce pullets? 4. Can I save the eggs from now (early January) until the first of February? 5. Does an early pullet moult before it lays? 6. How many quarts of feed would you suggest to 100 Leghorns, mash feed morning and night, damp mash for dinner?

New York. C. H.

1. Buckwheat is one of the standard grain foods for poultry, but may be fed more heavily in the Winter than in the Summer, being of a fattening, or heating, nature, like corn. I would not recommend making the grain ration one-half buckwheat; one-fourth to one-sixth would be a better proportion. 2. There is no difference in the chicks hatched in hot-water and in hot-air incubators, the source of the heat being utterly immaterial, as far as the chicks are concerned. The hot-air machines are the most popular, however, and in the larger sizes, especially, are probably to be recommended. 3. Two-year-old hens, mated with yearling roosters, should give good results as breeders if all are of sufficient vigor to insure fertility. There is no tendency toward either pullets or cockerels in the progeny of this, or any other, mating, so far as known. 4. Eggs for hatching should not be kept longer than two weeks, if possible to avoid it. After this length of time, their hatchability decreases rapidly. They should be stored in as cool a place as is available while being kept, but the temperature should not, of course, reach freezing. 5. If hatched too early, before the latter part of March in this latitude, a pullet is apt to lay a few eggs in the Fall and then molt. Pullets or hens will lay as well when there are no males in the flock, and except during the breeding season, males should be kept out of all flocks from which eggs are sold. 6. One hundred Leghorn hens should have from four to six quarts of whole grain, fed twice daily in the litter, when they have a mash also at noon. These amounts cannot be definitely fixed, however, but should be varied according to the appetites of the hens. M. B. D.

Late Molting.

I have a flock of B. P. Rocks 1½ years old; were heavy layers all last Winter and last Summer, but as yet they have have not shed a feather, and have about stopped laying. What is the trouble with them, and are they worth keeping?

Thomaston, Me. R. P. C.

Hens that are very late in molting have been given a certificate of good character by recent investigations which seem to show that the hens that continue to lay through the late Summer and begin molting late are the hens that make the best yearly egg record. Early molters are under suspicion, nowadays, and are excluded from the breeding pens; so the fact that your hens have laid well, and haven't stopped to molt, should be a matter of satisfaction to you. M. B. D.

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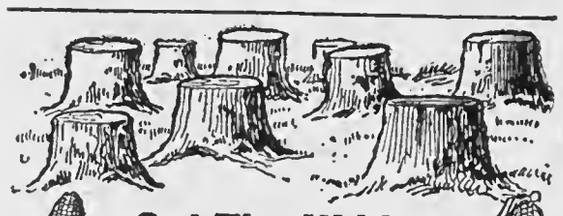

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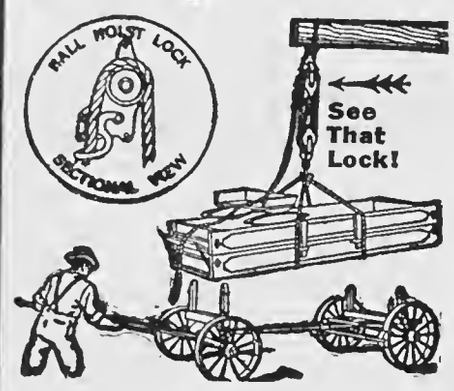

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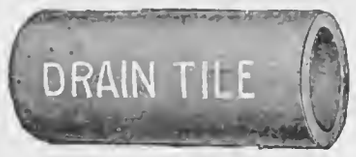

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Hard Bought Experience.

"If you have a scrub cow don't sell her to your neighbor," says Bert Smith, a prominent Ohio dairyman. "Send her to the block. If a man goes out to buy a horse, if he deals with a horse jockey, he knows what he will be up against, and will expect to be stung. When a man goes to buy a cow, even his best friend may sting him the worst. I believe I have had as many worthless cows saddled on me by honest and well-meaning men, as any man in the dairy business. I have fallen down, faced discouragement and financial loss 10 times to the average farmer's once, but I got up and went ahead. If I could not face a business proposition on the farm, I would back up to it, and try to get at it that way.

"I started nine years ago on my farm in Delaware county, Ohio. It was so poor it would not grow pennyroyal, only in the fence corners. Mullein would grow but a foot high, become discouraged and die. I thought I would go in the dairy business, and I would build up the soil in two or three years, and become rich in a short time. Well, I started buying cows. I secured 11 from around the country. Some were red, some black and some brindles. Anything and everything that was a cow, I bought. I cared for these cows, milked them, kept accurate figures on my expenses and at the end of a month, I balanced up. I'll tell you it was a mighty hard blow when I saw that I only had 10 cents to my credit. I didn't offer these cows to my neighbors, but I called up the butcher that night, told him to come to the farm and look over my herd for there would be something doing.

"The butcher came out early the next morning. I took him through the stable; he placed a price on this cow, and that one, until he had established figures on the entire herd. I hung my head; it would make any man hang his head, when he has hoped for easy dollars and cents. I asked him how much the entire herd would bring, and he figured again on the cows, and made me a price for the entire bunch.

"'They're yours.' I told him. I then visited an old friend who had taken a heavily mortgaged farm, and paid for it with Jerseys. I talked with him nearly a full day. I came away filled with enthusiasm believing the Jersey, regardless of ancestry or efficiency, would put profit in my purse. Every one in our whole county who had an old scrub Jersey for sale, wrote or 'phoned me, and I was chasing everywhere for Jerseys. They said I was Jersey mad. Here is where I failed again. I bought regardless of certain characteristics which are so strong they will give the wise buyer a stunning blow. I just bought Jerseys; I didn't know anything about distance between the eyes to denote intelligence, large capacity in the barrel to denote magnificent storage capacity for food, a capacious pelvic region or commodious arch for the udder. I paid little attention to the wandering milk vein, and the deep milk well. I knew nothing of the characteristic wedge-shape appearance of the cow. I bought Jerseys, and looked for big udders. I was lucky once; one farmer told me he had a Jersey he would sell me, and I hurried to his farm before daylight. I was mighty afraid that someone would get there and buy first. The cow was eating around a straw stack. I saw a nice heifer in another part of the barnyard. I asked to buy that heifer. The farmer refused but pointed to the old cow. I asked him to answer honestly two questions: one whether the dairy business paid him, and the other whether he intended to remain in it? He swore he would answer me truthfully, and declared there was no more paying business, and that he intended to remain in it. Then I said, 'You need her in your business and by all means keep her.' I visited another farm. One cow with a magnificent udder attracted my atten- The owner said the cow was his wife's private property and he could hardly think of selling her. I got anxious and finally he said if we could slip the cow from the barn down through the lot without his wife seeing her, he would consider a price. This was made, and it was a good one. When I got the cow home, I called my family to the barn. The udder was wonderful in proportion, and I expected I would have to milk her in a wash tub. I milked about two quarts and the udder was as large as before. I found that there were characteristics associated with dairy production, and only after years, the cost of dollars and cents, hard work, and no profit, I learned the lesson of selecting a dairy cow. I have bought cows for $50 when cows are lower than they are now, and turned around and sold them for $10. It cost me what the young man cannot afford to spend, and that is valuable years of my life.

"After learning characteristics of a good dairy cow, I applied the scales and Babcock test to my herd. If you have a $200 cow, she is worth keeping, but if you have a $60 cow, she is not worth $25, and I wouldn't have her on the farm. I had something to learn about difference in butter fat in cows. I thought that butter fat could be fed into a cow in the form of grain and commercial feeds. It cost me dollars and cents to learn this lesson. Our local creamery man tested by the gravity method, and invariably our herd stood at 4%. I thought he knew his business, because the test remained constant month after month. When a new man came, used the Babcock test and I found my test running above and below, I thought he gave me a good test to offset the low test of the preceding month. I finally took a sample of my milk down to the Ohio State University for test. I handed the sample to the laboratory assistant. He told me he could not test that for I had churned it by carrying it. He told me to take another sample, which I did. I took that down, and it tested between eight and 10%. That astonished me. The assistant asked me if I secured a good composite sample. I told him I secured it from the middle. I milked the cow half out, then milked the sample from that before completing the milking. He then told me how to secure a proper sample by pouring from one pail to the next, and how that the test varied from a fraction of one per cent in early milking to 12% in the strippings.

"I found the only way to put profit in dairying was to use the tester and scales. I had a good many hard lessons to learn, I was discouraged, but I got up and went ahead. I spent considerable money, a large amount of time, and I have many things yet to acquire. The young man cannot afford to learn them in the way that I did, he has his farm paper, has the benefit of the experiment station, the agricultural college, and the experience of the older men who have made the grade, all as a foundation on which to establish his farm practice."

W. J.

Purebred Strains; Sawdust Packing.

In making up a stock of purebred hens, could they be built up of different strains? Mine are purebred S. C. Brown Leghorns. Could I mix some other strain with them if the strain was purebred S. C. Brown Leghorns and their combs were high like the hens I have now? Could I put them on the market as purebreds for utility breeding purposes, or would the flock not be purebred on account of being made up of different strain? Is sawdust all right to pack eggs in for hatching purposes, to ship by express? Would the sawdust have to be from dry wood or would it do from green wood if the sawdust was dried? If not is there anything on the market I could buy? As I have no chaff from a hay mow to pack them in? I. E. B.

Franklinville, N. Y.

Fowls that are purebred are those whose ancestors for an indefinite number of generations have not been crossed with any other variety, while the much-abused term "strain" should be used to designate fowls which have been bred for a considerable length of time by some one who has had a definite object in view, and who has bred to that end. Thus we have in Mr. Barron's purebred Leghorns a strain that has been developed as layers. In practice, however, any poultry breeder of several years standing seems to consider himself entitled to designate his fowls as a "strain" of his own breeding. Thus you will see that your S. C. Brown Leghorns are purebred, no matter how many "strains" are represented in the flock. Thoroughly dry sawdust should be satisfactory as a packing for shipping eggs, though if wet, it will stain them. The best material for this purpose that I know of is buckwheat hulls, which may be obtained at any grist mill where they grind buckwheat.

M. B. D.

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Please tell how lime water is prepared?
Pennsylvania. P. C. H.

Pour a quart of water on a lump of quicklime the size of a walnut. After the lime is slaked and powdered strain off the clear liquid for use as lime water.
A. S. A.

Splints.

Please advise me how to treat splint on a horse's legs if it is curable. A. N.
New York.

Organized splints remain as permanent blemishes despite treatment. Lameness may be remedied and a splint somewhat reduced in size by early blistering with a mixture of one dram of biniodide of mercury and one ounce of lard. Rub it in for 15 minutes after smearing lard under the affected part. Tie the horse up short so that he will be unable to lie down or rub the part. In three days apply lard, but do not wash the part. Then apply lard daily and allow the horse liberty in a box stall. Blister repeatedly at intervals of three or four weeks if found necessary. A. S. A.

Pig-eating Sows.

I would like advice about what to do with sows that eat their pigs when they are a few weeks old. We have several that before they have pigs we put in a small pen to get them away from the rest of the hogs and when they farrow they sometimes eat them the same night, we keep salt before them at all times.
Colorado. B. T.

Allow sows abundant exercise and mixed laxative rations, get them accustomed to the presence of man and they will not be likely to eat their pigs. It is the soft, pampered, fat, sluggish, cross, nervous, constipated sow that eats her pigs. Adding 10 per cent of digester tankage to the feed of brood sows also tends to prevent the vice. A. S. A.

Cribbing.

What causes a horse to catch the front teeth of the upper jaw on manger, open the mouth and make the noise usually called cribbing? Is there any way of stopping it and what is the effect on the animal if it is left to indulge in the habit? M. H.
New York.

Cribbing and windsucking is an incurable vice learned by colts when cutting teeth, or idle in the stable or by imitation from a confirmed cribber. It causes chronic indigestion and ill thrift. It may be temporarily stopped or greatly relieved by buckling a strap around the neck just back of the throat-latch. Keep the horse in a box stall from which has been removed everything upon which the teeth or chin could be set to practice the habit. Feed from the floor level. A. S. A.

Indigestion.

I have a mare eight years old, goes to station two miles each way morning and night; no work Sunday or Monday or Thursday night, or Tuesday or Friday morning; is in box stall. I feed 12 quarts oats a day; every three months her hind foot swells from hock down, different foot each time. If let stand while in harness she will lie down. She eats all the wood about the stall, and is very thin. J. C.

Such treatment well might cause chronic indigestion. Have the teeth attended to by a veterinarian; then make the mare work or abundantly exercise out of doors every day. If her coat is long and coarse clip it from belly and from legs above knees and hocks. Bed with planing mill shavings or sawdust. Feed whole oats, wheat bran, carrots and mixed clover or Timothy hay. Medicine is unnecessary, but allow free access to rock salt. If her legs incline to stock, as they have in the past, from lymphangitis and poor circulation, rub them dry each time she comes into the stable and then bandage from feet to knees and hocks. A. S. A.

Depraved Appetite.

I have a Jersey heifer that has not done well in the last five months. She is 18 months old. She eats, assimilates and feels well and is bright and sprightly. Temperature, pulse and respiration are normal. Was tuberculin tested, with the rest of the herd, last January, with negative results for all. In September she, with others, got at a pot of paint and one died as the result. Gave antidote, no bad effects observed in this one at that time. She has not grown like her mates and is very thin in flesh. I have not bred her because she is so thin. She craves soiled rags and straw, eats dirt and beach sand, tries to lap your hand and clothes, has an abnormal appetite for salt and drinks about a third more water than others of her size. What is the trouble and what the remedy? Would you advise breeding her? R. F.

Do not have her bred while she is in an unhealthy condition. Foreign bodies in the stomach, or an abscess or tumor often cause such symptoms of chronic indigestion, or a needle or pin or nail may be lodged in the wall of the heart. If a foreign body, abscess or tumor is the cause treatment will not avail; but it may be a case of chronic indigestion from more ordinary causes and if so treatment may do some good. Acidulate her drinking water with hydrochloric acid. Use just enough acid at first to slightly sour the water, but gradually increase the acid, taking care of course not to make it strong enough to cause discomfort. Make the heifer live out of doors as much as possible, but where she cannot pick up foreign bodies. Feed Alfalfa or clover hay and mixed grain ration, including wheat bran, flaxseed meal and silage or roots. Write later if necessary.
A. S. A.

Indigestion.

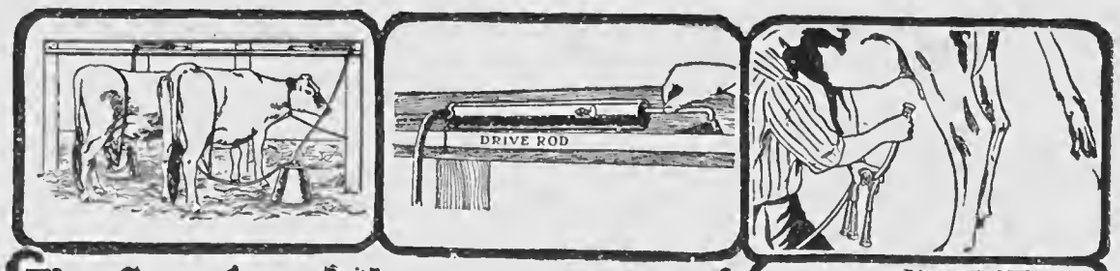
Will you inform me what it means when cattle will lick sand. I have a herd of Holsteins (17 head) in good milking condition averaging 35 pounds of milk per day and fed on the following ration. They get all the corn fodder they care for, fed to them in the barnyard. I make up a mixture of 500 pounds dried brewer's grains (moistened), 300 pounds hominy feed, and 200 pounds of cottonseed meal (42 per cent protein). I feed about 15 pounds of this mixture to a cow per day and in addition to this each cow gets all the black grass hay they care for and 50 pounds of mangels. I have salt bricks attached in the manger. My cows have been licking sand some time. I think that something must be wrong with the feed ration. K. G.

You are overfeeding and wasting feed and besides that causing indigestion. Add one part corn meal, and one part wheat bran to the ration and of the mixture allow one pound for each four pounds of milk given daily by the cow. If possible allow good clover hay in addition to the corn fodder and roots. We are not posted regarding black grass hay, but take it to be some form of marsh hay. Give the cows outdoor exercise every day.
A. S. A.

Scours in Calves.

I would like to know what to do for scours in calves six weeks old or under. When skim-milk and oil meal is fed, how much should be fed each week after the first till they are six weeks old? If calf meal is fed, should less oil meal be fed? At what age should young calves be treated to keep their horns from growing and what is best for that purpose? What is the best remedy for colic in a horse? Are pumpkin stems good for colic in either man or beast? The stems should be grated in order to use, and then steeped. R.
Oregon.

Mix together half an ounce of formaldehyde and 15½ ounces of freshly boiled water and keep it in an amber colored bottle; of this mixture add one teaspoonful to each pint or pound of skim-milk fed to a calf that has shown signs of scouring. If scouring has started give a dose of castor oil in milk before giving the drugged milk. In bad cases give one tablespoonful of alum in a pint of warm water at one dose 12 hours after feeding milk and repeat when seen to be necessary. Do not give alum when milk is being fed. We have also had good results from giving one or two tablespoonfuls of sulphur in milk or water as a drench to scouring calves. Give it every two or three hours, according to severity of case. Kill horns on calves thoroughly by rubbing the dampened skin over the horn buttons with caustic potash stick before the calf is a week old. There are many different forms of colic and no one remedy is suitable for all. Give us the symptoms of the form of colic you have in mind and we will be glad to prescribe. On general principles it always is safe to give a pint of raw linseed oil and half to one ounce of laudanum may be added for pain. We cannot answer relative to pumpkin stems for colic. We have never heard such a claim made. A. S. A.



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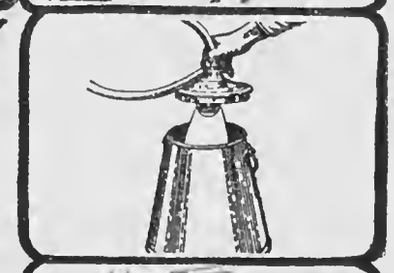
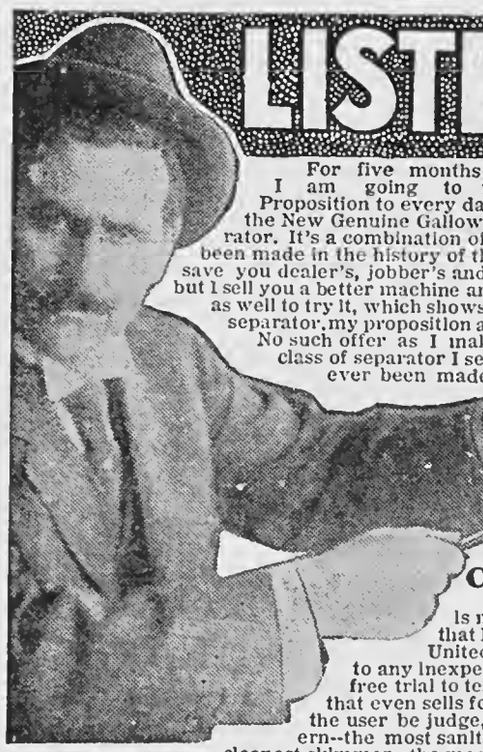


LISTEN! Read This Twice



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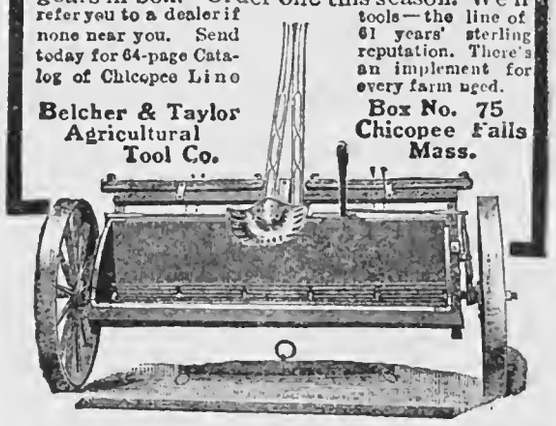

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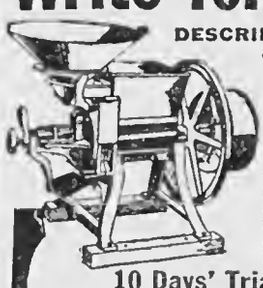

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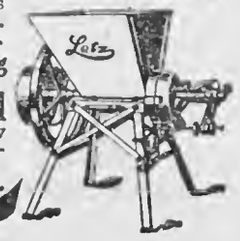

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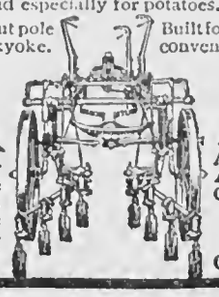

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Farm Management.

The Location of Farm Buildings.

There is a phase of farm management to which I would like to call attention as one of a great deal of importance, and that is the locating of farm buildings. To very few of the present generation here in the East comes the chance to locate an entire new set of farm buildings but to many come the repairing or building or rebuilding of one or more, and all of us are affected by our own or some one's else success or failure in that line. It seems sometimes as if some of our ancestors did not use much judgment in the location of their farmstead, but perhaps it is because times have changed, and what was most convenient in those days is not so now. I do not think that locating the barn or barns across the road from the house is an ideal arrangement for two reasons: First, because the front of the house generally faces the road, and as a back door is generally used when going to and from the barn it necessitates too much travel in doing the daily chores. Second, if the barn is directly in front of the house the view is obscured and if it is far enough to one side to remedy that, more travel is caused. Yet in traveling through the country one sees very many farms with the house one side of the road and the barn on the other side.

I call to mind one instance of a very inconvenient location of buildings. The horse barn is on the east side of the road, the house on the west side and a little south of being directly opposite the barn. The cow stable and other barns are a little way back of the house. Every time the farmer has occasion to go to the horse barn he comes out of a door in the back of the house, goes around the south end of it and diagonally across the road. When he draws his milk to the station he has to go to the horse barn, hitch up his horse and drive across the road past the house to the cow stable after the milk. When he comes back from the station he has to drive over to the cow stable again with the empty cans, or else carry them over. The cow pasture is back of the horse barn, so he has to drive the cows past the house and across the road four times every day through the Summer. Figure if you can how many miles that man or some of his family travel every year in just doing chores. And the present owner of the farm is getting the benefit of some one's lack of judgment.

In locating a set of farm buildings there are several things to be considered. First, contour of the land. The buildings should be on a slightly higher elevation than the road, with the house on rather higher ground than the barns. They should not be in a place too much exposed to wind, neither should they be in a hollow where all the damp, foul air settles. If a hilly farm they should be where the bulk of the hauling would not be uphill. Second, ease of access to the highway and different parts of the farm. The buildings should not be very far from the road, neither should they be too close to it. They should be as near the center of the farm as possible; one corner is not usually satisfactory. The location of the permanent pasture (if there is one) should be borne in mind, also the water supply for the stock, as well as the house. The barns should be so located in relation to the house as to require as little travel in reaching them as is consistent with sanitation. They would be better not to be in a direction from the house from which the prevailing wind blows.

The barns (if more than one are built) should be conveniently located in regard to each other so that the most work can be accomplished with the fewest steps. In these days of high-priced labor (and scarce at that) every move must be made to count. It is a good plan when one is contemplating erecting new buildings or remodeling old ones to visit as many up-to-date farms as possible, where everything is arranged conveniently, and study their methods. Get all the information you can before you begin. Make a plan of what you consider an ideal farmstead for your location and do all your building and remodeling with that plan in mind. Combine utility, capacity and convenience. A. S. M.

A Drainage Question.

I tile-drained a piece of very wet land last Fall; that is, I put in the laterals, leaving the main ditch open. For about 200 feet up from creek land is nearly level; from there up to head of laterals there is about four feet rise. There will always be water in drains, as they are fed by springs that never dry. In order to get tile down at a safe depth, say 2½ feet, I shall have to begin at creek and put them down at nearly the creek bottom, with very little rise for 200 feet. Mouth of tile, or outlet, will be free for three or four months during Summer, as creek is then low; but how about high water? During high water creek often overflows its banks. I shall have to use six-inch tile at least, and there is water enough in ditch now to fill it. I do not wish to leave it as an open ditch. Is it practicable to lay tile under such conditions? This piece of land contains about five acres, was very wet; water always stood on it, nothing growing but cat-tails. It dried out very soon after ditch was dug. I drew several loads of tile over it. I wish to plant Eureka corn next Spring. Would you advise liming it? Would you try it one year without phosphoric acid or potash? Soil is muck from three to five feet deep.

Watertown, N. Y. L. W. S.

There is some danger of silting in a pipe laid under these conditions, but if care is taken to make the joints close, and no silty material is placed directly on the tile, one should be able to make a lasting job of it, and as the laterals have been in for a time the ground will be settled around them so they will not be running silt into the main. Muck of that depth with living water that can be controlled for sub-irrigation is pretty good property, with the right "man behind the plow." All such soils are deficient in potash and phosphoric acid, and too sour for the nitrifying organisms to convert the inert nitrogen into nitrates sufficient to meet the needs of growing plants; hence after draining, lime is used to promote bacterial action, and some celery and spinach growers find profit on their muck in the continued use of fertilizers containing four or five per cent. of nitrogen. J. F. V.

Know What They Cost.

Those articles on page 144 by E. G. Whitmyre and on page 162 by O. W. Mapes should make more farmers realize the importance of keeping track of costs. It would be a revelation to many to know what trouble and expense manufacturing plants take in keeping account of costs. I do not know of a better way to use some of the days in Winter for a good many than figuring up costs to find out the results of the past year's work. It would be the most profitable work done. Very little time is required each day in the working season to keep such records which can be gone over and worked up later on. Farm bookkeeping is not the panacea that is going to overcome all the troubles or make an assured success of the unfitted, but the man who keeps such records carefully and can compare the results from year to year is much more certain to get his business on a paying basis than the man who believes he can tell from his general knowledge what a particular line is paying him. It is the exception when you find a man who knows what his crops are costing; for instance, how much it is costing per day for his horse work, or what his horse work on the corn crop amounted to last year. Those who think they could not take the time to keep complete records should at least on one crop keep a careful account and it is very likely the result would be surprising enough to lead to keeping complete accounts.

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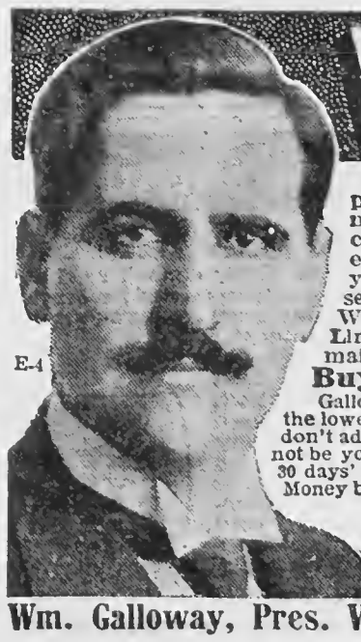

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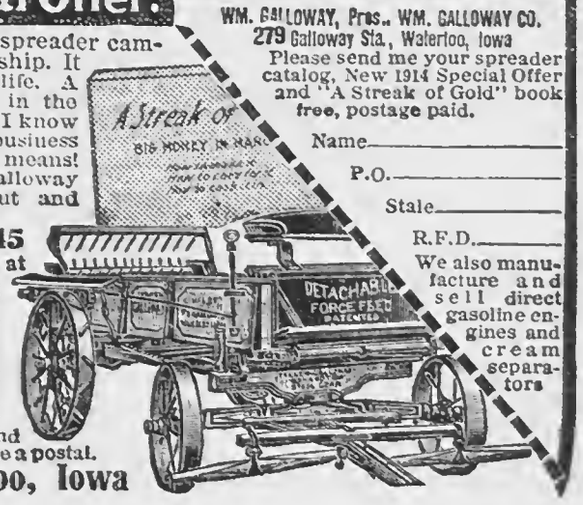

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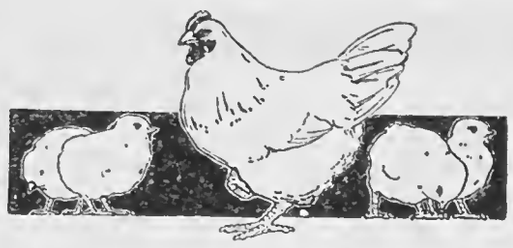

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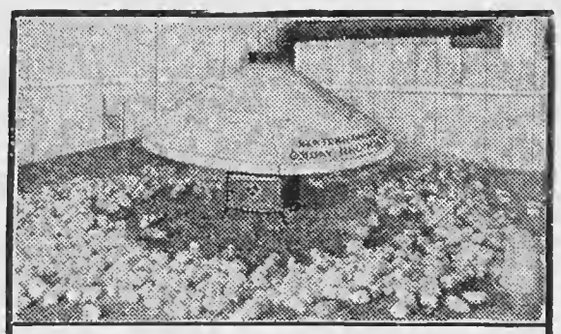

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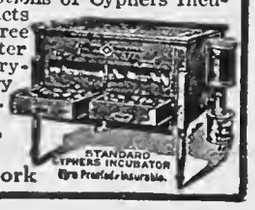

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PFILE'S 65 Varieties

LAND and Water Fowls. Farm-raised stock, with eggs in season. Send 2c for my valuable illustrated descriptive Poultry Book for 1914 Write Henry Pfile, Box 674 Freeport, Ill.

The Henyard.

Laying Ration.

What is a good ration to make hens lay more eggs? Which is better for hens in Winter, a dry mash or a warm wet mash? H. A.

Cazenovia, N. Y.

I think that the largest majority of poultrymen now use dry mash, Winter and Summer, though I have little doubt that for a limited time, at least, a properly made moist mash would produce slightly better results in eggs. The greater danger of overfeeding where hens are being forced to large egg production, together with the greater cost in labor, more than counterbalance the slight advantage which a moist mash has over a dry one, and the latter is, I believe, coming into practically universal use on large plants in this country. The Cornell formula for dry mash is: 60 pounds cornmeal 60 pounds wheat middlings, 30 pounds bran, 10 pounds Alfalfa meal, 10 pounds oil meal, 50 pounds beef scrap, and one pound salt. A mixture of 60 pounds corn, 60 pounds wheat, 30 pounds oats and 30 pounds buckwheat, is used for whole grain, fed in the litter night and morning. M. B. D.

Forcing Egg Yield.

Is there any difference between the nutritive values of an egg laid by a hen that is forced, and an egg that is laid by a hen not forced, if both eggs weigh the same? Does a light yolk indicate less nutrition in an egg than a dark yolk? What are the causes of very light yolks, also very dark yolks? I keep S. C. W. Leghorns and Barred Rocks, feed the New Jersey Experiment Station ration, with some green food at noon, but a customer says the yolks are much lighter than those in eggs he had sent him from up-State, (New York); also claims that I am forcing my hens, therefore the eggs are not so nutritious. What is your opinion, and opinion of experts in this matter? W. E. M.

New Jersey.

I know of no reason for believing that the composition or nutritive value of an egg can be materially changed by feeding. The color of the yolk can be altered, it is true, and this indicates some change in the egg's chemical composition. This change is probably very slight, however, and due simply to the fact that some foods, as clover, contain a coloring matter which is transmitted to the fat of which the yolk is composed. If you will add clover or Alfalfa in sufficient quantity to your rations, I think that you will find that the yolks will become sufficiently dark to suit your customers. Forcing hens certainly cannot cause a deterioration in the quality of their eggs; for forcing is simply feeding a large quantity of easily assimilable egg producing food, and if it made any change, it would be to increase the nutritive value of the egg. Analogy, however, if not actual experiment, would suggest that feeding could no more alter the composition of an egg than it can of cow's milk. M. B. D.

Conerete Floor for Henhouse.

On page 22 the New Jersey Experiment Station, replying to Irving C. Lewis, states, that concrete floors do not, so far as they have observed, wear off hens' toes, but they do not explain that there is a difference in cement floors. Evidently Irving C. Lewis has floors made of sharp sand or gravel and left unglazed. This kind of cement floor is torture to hens. The method of glazing is simple. When making the floor obtain enough very fine sand to make the last half-inch of two-parts sand, one-part cement and puddling, or if fine sand is not procurable finish the floors off as smoothly as possible by puddling; that is, rubbing with trowel till water comes to the top, and then when set wash all over with clear cement, wetted to consistency of thick cream. If Mr. Lewis has an old rough floor it can be smoothed by washing thoroughly and skimming with clear cement, that is, coating as thin as possible. F. E. PARSONS.

Massachusetts.

A concrete floor that is laid wet, material below it containing a great deal of water, which will have a chance to pass downward before the cement has set, will have the cement nearly all pulled down from the surface, by the water, leaving the surface pretty much like the surface of a piece of sand paper. A concrete floor that is laid under conditions that allow the cement to set well without any perceptible amount of water passing down through the concrete, will have a fairly smooth cement surface if trowelled before it has set. The floor that has been left with a rough sandy surface by the action of water in pulling the cement and smaller particles of sand downward from the surface, may be given a hard smooth surface by coating it with pure cement mixed very thin with water, so that it may be spread over like a coat of paint. It takes very little cement to put on a coat this way. In case it is put on so soon that it settles partly into the body of the concrete, leaving a slightly rough surface, a second coat, after the first coat has set well, will give a very hard, smooth surface, so polished that the hens can hardly stand up alone on it.

Connecticut. GEORGE PHILLIPS.

Jim Rohan Will Tell You How You Can Make Big Poultry Money—Send for New Book of "Hatching Facts." Just out. A postal brings it.

I will send you my low price—direct to you—no middlemen's profits—my 10-year personal money-back guaranty—my 1, 2, 3 months' home test offer.

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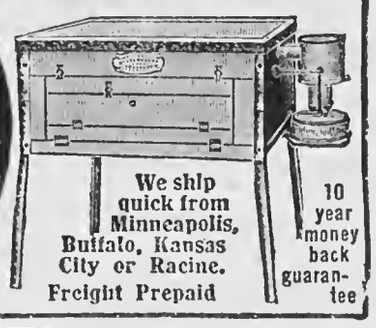

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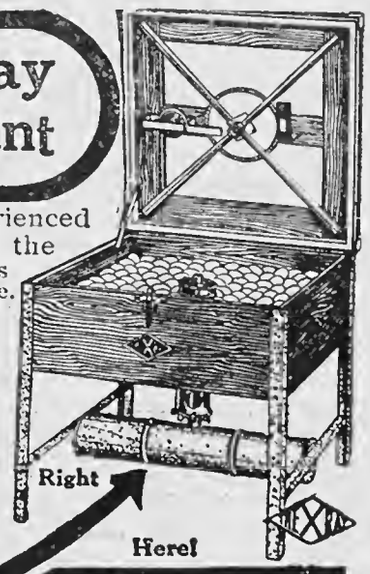

That's the reason it is winning the big experienced hatchers. Why not? The X-Ray way is the practical, common sense way. And because the lamp is in the center we can put a big oil tank below the machine.

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We want you to know all about the construction of this machine and then you decide for yourself.

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Send for the Big Free Book No.32. Find out about the big improvements in this machine.

Remember—we pay the freight.

X-RAY INCUBATOR COMPANY
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Send for Great X-Ray Book

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Wins in the Two BIGGEST HATCHING Contests Ever Held

140-EGG Ironclad Incubator

Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines. Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the natural color—you can see exactly what you are getting. Don't buy any incubator until you know what it is made of. Note these Ironclad specifications. Genuin California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tycos Thermometer, glass in door and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

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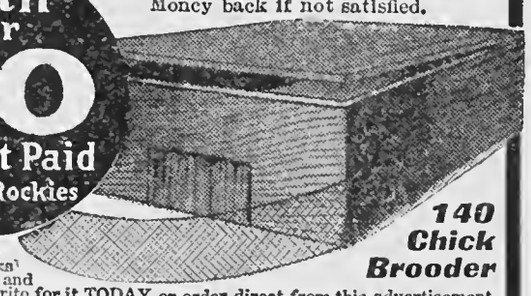
Both for $10 Freight Paid East of Rockies

30 DAYS' FREE TRIAL
Money back if not satisfied.



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Give Your Chickens Teeth

Feed Grit—give the chicken something that grinds the grain in the crop and prepares food for proper assimilation. Oyster shells and bone are too soft and won't do what Maka-Shel Grit will do. Maka-Shel Grit will increase weight and egg-laying, by helping the chicken digest all she is fed. 200 lbs. for $1.00 f. o. b. cars. One ton at $7.00 f. o. b. cars.

Edge Hill Silica Rock Co., Box J, New Brunswick, N. J.

MAKE HENS LAY

more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.

MANN'S LATEST MODEL BONE CUTTER

cuts fast, easy, fine; never clogs.

10 Days' Free Trial. No money in advance. Book free.

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Ship Eggs in this Box by Parcel Post

The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Wright boxes are shipped to you flat and are easily set up and packed for shipment to your customers. *Write today for Free Booklet* describing The Wright Boxes for shipping chicks and eggs.

TYWACANA White Leghorns, Barred and White Rocks

Book your order *now* for *eggs* or *day-old chicks.* Send today for our free, big, beautiful catalog, describing **Tywacana Farms Leghorns and Rocks** and giving prices on chicks, eggs and breeding stock. Satisfaction guaranteed.

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Deposit of Seed at Axle Center Does the Work

All Emerson Grain Drills deposit seed at axle center. An exclusive patented Emerson feature. Seed comes down concave side of disc, passes through center of hub, and goes into ground before soil rolls in. Seed always planted at bottom of furrow. Insures even germination. Unnecessary to run Emerson discs as deep as others. Light Draft. Drills deposit evenly regardless of ground conditions. All machines equipped with independent spring lift. 10 or 12 discs or hoes raised with least effort. Emerson Feed combines best features of both fluted and double run.

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The famous Vibert flock of beautiful, brilliant, glowing **cherry to mahogany red-to-the-skin** rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but **specially selected, long backed, low tailed,** certified trapnested record layers, scientifically **line bred along Government lines** for heaviest winter egg production, with **yearly trapnest laying rates of 211 to 257 eggs; bred away from broodiness,** and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant **absolutely free from roup and white diarrhoea.** Highly fertile, clean, well shaped, unblemished eggs, **gathered hourly, shipped daily, delivered when wanted,** guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding **cockerels from trapnested hens,** trios, mated breeding pens for sale. Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.

VIBERT RED FARM, Box 1, Weston, New Jersey

50 ROSE COMB RED COCKERELS—Among them are those that won blue or red ribbons at Trenton, Mount Holly, Bridgetou or Camden this season. Price, $3 to $10 each. Can be returned if not as represented. A few hens and pullets for sale. Eggs for hatching. **ROANOKE POULTRY FARM, Sewell, N. J.**

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Hone's "Crescent Strain"—Winners wherever exhibited. My R. C. Reds won State cup at recent Albany show. High class exhibition or breeding birds; also tested layers Every bird sold on approval. **O. R. HONE, Crescent Hill Farm, Sharon Springs, New York**

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15) Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks.
AUSTIN'S POULTRY FARM, Box 17, Center Harbor, N. H.

R. I. Reds, Houdans, Indian Runner Ducks
High-class stock for UTILITY, SHOW or EXPORT. Eggs for hatching. Mating list on request. SINCLAIR SMITH, 602 Fifth St., Brooklyn, N. Y.

MATURED COCKERELS, R. I. REDS, W. WYANDOTTES, Barred Rocks, Dk. Brahmas, $2.50: S. C. White and Brown **LEGHORNS, $1.50. R. I. RED,** laying hens, $2, Hatching eggs & Chix. Won 76 Ribbons this Fall. Catalog gratis. **RIVERDALE POULTRY FARM, Riverdale, N. J.**

ROSE COMB BROWN LEGHORN COCKERELS, $1.50 each. R. V. Strever, Pine Plains, N. Y.

Rose Comb White Leghorns—Large chalk-white eggs. Circulars free. **E. M. HAMILTON, Otego, N. Y.**

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COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat averaged each for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. **COLONIAL FARM, Box O, Temple, New Hampshire**

The Celebrated Hungarian and English PARTRIDGES and PHEASANTS
Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. **WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.**

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Pure Bred Bronze Turkeys—Large Boned and straight, with the best of Plumage. **Mrs. H. CHUMBLEY, Draper, Va.**

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The Orange County Poultry Yards [Patented]
A few of them will change any Eastern dairy farm into a highly profitable business proposition' Plenty of fertilizer, plenty of cash, and light work at reasonable hours. Catalogue on application.
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INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

WHITE HOLLAND TURKEYS AND WHITE WYANDOTTES. Pekin Duck Eggs. Seven years' careful breeding. Hundreds of unsolicited testimonials. Satisfaction guaranteed. **H. W. Anderson, Stewartstown, Pa.**

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Giant Bronze Toms for sale at reduced prices. **C. D. Kane, Brasie Corners, N. Y.**

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The Henyard.

THE EGG-LAYING CONTEST.

The thirteenth week of the contest shows a decided gain in egg production; 987 eggs were laid, which is 248 more than were laid in the previous week. Of this gain the White Leghorns contributed 126, or more than half. Two pens tie for first place in this week's record, and both pens are Wyandottes. The high score is 33, made by D. J. Ryan & Son's White Wyandottes, and Dr. N. W. Sanborn's Buff Wyandottes. The second place is taken by pen No. 42, the "sour milk" pen of White Leghorns from Storrs Agricultural Station, with a score of 29; Cecil Guernsey's White Leghorns take third place with a record of 28, and three pens laid 27 each. They are Tom Barron's White Wyandottes, and the S. C. Reds of Dr. J. A. Fritchie, and Dearborn & Sharpe. Tom Barron's White Wyandottes still lead in the total score with 486 eggs to their credit. This is 84 eggs ahead of any other pen. Two pullets laid every day in the week, and both were S. C. Reds. Two of the S. C. Reds have died and one of the Leghorns.

Below is the score of some of the leading pens:

	Week	Total
BARRED ROCKS.		
J. J. Francais, Long Island...	18	278
Frank L. Tuttle, Massachusetts	13	96
A. B. Hall, Connecticut.....	4	55
Waveny Farm, Connecticut...	10	47
WHITE ROCKS.		
Fred H. Benton, Connecticut..	9	129
Storrs Agr. Sta., Connecticut..	25	132
Storrs Agr. Sta., Connecticut..	12	82
Storrs Agr. Sta., Connecticut..	15	51
Storrs Agr. Sta., Connecticut..	9	32
BUFF ROCKS.		
A. A. Hall, Connecticut.....	13	110
W. C. Morgan, Connecticut..	0	55
WHITE WYANDOTTES.		
Tom Barron, England.....	27	486
Neale Bros., Rhode Island....	16	343
Merrythought Farm, Connecticut	20	328
West Mt. Plty. Yards, Connecticut	16	215
D. J. Ryan & Son, Connecticut..	33	187
BUFF WYANDOTTES.		
Am. Buff Wyan. Club, New York	18	127
Dr. N. W. Sanborn, Massachusetts	33	100
Dr. N. W. Sanborn, Massachusetts	14	93
H. E. Hamilton, Connecticut..	5	28
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan Club, Massachusetts	13	102
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	27	294
Dearborn & Sharpe, New Jersey	27	226
Pinecrest Orchards, Massachusetts	17	205
J. S. Gillespie, Connecticut...	21	199
Colonial Farm, New Hampshire	21	190
A. B. Brundage, Connecticut.	26	164
Harry B. Cook, Connecticut..	23	161
R. C. REDS.		
Glenview Farm, Connecticut.	21	214
C. S. Scoville, Connecticut...	8	157
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut...	21	402
Storrs Agr. Sta., Connecticut..	29	378
Cecil Guernsey, N. Y.....	28	304
Storrs Agr. Sta., Connecticut..	20	240
Tom Barron, England	7	220
Marwood Plty. Farm, Pennsylvania	5	187
Storrs Agr. Sta., Connecticut..	11	184
Bonnie Brook Farm, New York	19	173
Storrs Agr. Sta., Connecticut..	14	143
P. G. Platt, Pennsylvania....	14	138
C. W. Sherwood, Connecticut	6	129
F. M. Peasley, Connecticut...	1	122

Skipping the six pens where but one pen of a breed is entered, we come to the

DUNGHILLS.		
H. W. Collingwood, New Jersey	5	14
Daniel Hine, Connecticut.....	10	93
Daniel Hine, Connecticut.....	12	117

Profitable Poultry of Boston enters two pens of selected birds of different breeds.

Their record is.....	10	152
	16	194

I have written Mr. Barron to learn how he explains the poor performance of his pen of Leghorns in this contest. At Thorndale, Pa., and at Mt. Grove, Missouri, they are following their usual practice of leading all others. Perhaps he allowed his students to try their hand at picking out winners for this contest. Students pay Mr. Barron $500 a year for instruction, besides working on the plant. GEO. A. COSGROVE.

Roupy Fowls.

I have several fowls that have been affected with roup but are now free from all symptoms, after proper treatment. Would you let me know how long they should be kept before it would be well to kill them for eating? J. B. P.

New York.

If these fowls are in good flesh and free from all symptoms of disease, I know of no reason why they should not be eaten at any time, though one's natural "finickyness" would lead him to prefer that several weeks should elapse from the time of their recovery before they appeared upon the table. M. B. D.

E. B. THOMPSON'S
IMPERIAL "RINGLET" Barred Rocks
ARE THE STANDARD BY WHICH ALL OTHER BARRED ROCKS ARE JUDGED

They have won more than double the number first prizes at Madison Square Garden, New York, than any other strain.

2000 Grand COCKERELS and PULLETS for sale

Catalog upon application

Eggs, $10 per Setting; $60 per 100
Address E. B. THOMPSON, Lock Box 22, AMENIA, N. Y.

Barred Rock Cockerels
Nonpareil Strain. $2 each. Eggs in season.
B. H. HENION, Brockport, New York

Columbian Wyandottes
Columbian Plymouth Rocks
Partridge Plymouth Rocks
S. C. White and Buff Leghorns
WILBURTHA POULTRY FARMS
Box R, Trenton Junction, N. J.

EGGS FOR HATCHING
BABY CHICKS
BREEDING STOCK
Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks **NOW.**

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scientifically line-bred for 10 years to develop size, color and heavy egg-production, as well as prize-winning qualities. **Sunswick Orpingtons** are great utility fowls. Cockerels make fine, large broilers and capons. Hens are great layers. 1,000 yearling fowls now for sale at very reasonable prices. Eggs for Hatching and Day-Old Chicks. Book your order now. Write today for FREE catalog.
SUNSWICK POULTRY FARM
Rufus Delafield, Owner Box N SOUTH PLAINFIELD, N. J.

BUFF ORPINGTON EGGS, thoroughbred stock, 15 for $1, $6 for 100. **SYL BEIDELMAN, Bingen, Pa.**

FREE CIRCULAR Comes by Return Mail
Burnett's S. C. Black Minorcas
14 years popular. White Turkeys—famous in America and England. Rhode Reds stand without a fear. Pekin Ducks second to none, save with us.
COLDENHAM POULTRY YARDS
W. L. BURNETT, Prop., Montgomery, New York

MAPLE COVE POULTRY YARDS
R. No. 24, Athens, Pa. We have 14 varieties Cockerels, pullets, breeders and a few cock birds for sale at living prices. Pekin ducks, bred from 9 and 10 lb. stock. White Emden geese, bred from 18 to 24 lb. stock. Indian Runner Ducks—highest quality. Write your wants.

BARRON LEGHORNS *282-Egg Stock* Prize-Winning Exhibition Buff Rock Matings. Barron cockerels also head my American Leghorns, exclusively.
"STORR'S" BUFF ROCKS Toulouse Geese, largest in America. S. C. Reds, Rouen Ducks, Fawn Runner Ducks, Prize Turkeys. Farm Prices. Circular. **MORRIS FARM, R. 4, Bridgeport, Conn**

HOFF'S VITALITY DAY-OLD CHICKS OF QUALITY
Backed by a quarter of a Century experience in breeding and incubation. **S. C. WHITE LEGHORNS, RHODE ISLAND REDS, COLUMBIAN AND BARRED P. ROCKS. NOW** is the time to get your orders booked for Spring delivery. Be sure you get my chick booklet before you order chicks. Also Eggs for Hatching.
O. C. R. HOFF, Lock Box No. 115, Neshanic Sta., New Jersey

CHICKS THAT LIVE—A limited number of day-old chicks for sale during April. Write to **MAPLEWOOD FARM, Cheshire, Connecticut**

BABY CHICKS AND EGGS—White Leghorns and Anconas, from 600 hens. Beauties. Write for booklet. **EWING POULTRY FARM, Berrien Springs, Mich.**

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45 ACRES
Eggs for hatching. Day old chicks and ducklings. You cannot buy stronger vitality.
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N. A. Contest 282 Eggs
TOM BARRON'S
—ENGLISH 200-EGG STRAIN—
Mo. Contest 258 Eggs

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PUBLISHER'S DESK

We would like to have you give us a digest of the enclosed circular in THE R. N.-Y. An agent of this Farmer's Society of Equity was here, and I understand he got 23 members at $2.50 each. It is claimed that they can buy tools and other supplies cheaper and sell products higher by being members of the society. I held reserved comments until I saw the name of Jas. A. Everitt, and I did not then hesitate to tell my neighbors that it was the old game under a new name. I remembered that THE R. N.-Y. had published something about the Everitt schemes some time back. A. L. G.
Idaho.

We know little of this particular scheme, but we have known Jas. A. Everitt long enough to believe that he will profit personally by any scheme that he originates. Some years back he got some good, sincere men interested in the so-called American Society of Equity. Everitt's plan is to raise a calamity howl about things as they exist, and to promise a complete Utopia, if his scheme is adopted. The sincere men who went into the society soon conceived that Everitt was in it for his own profit, and, yet thinking the things he promised possible, they dropped Mr. Everitt. Now he is trying to work the scheme all over again with a new organization, or probably the old scheme under a new name. Our understanding of the situation is this: Mr. Everitt cannot afford to pay agents to solicit subscriptions for his cheap paper alone. In order to pay the agents he must have some other scheme on which to collect fees. The society scheme affords the opportunity. In the old scheme, Everitt too the subscription price of his paper out of the fee paid by the farmer. How much of the balance went to expense of agents and other organization expense we do not know; but we have never heard of any dividends to the man who put up the cash. There are varying degrees of schemes and schemers, but to the victim they all look alike.

Elmer E. Burlingame and James Dunlop Smith, who were found guilty New Year's Day of conspiracy to swindle investors in the stock of the Radio Wireless Telephone Company, were sentenced by Judge Hunt, in the Criminal Branch of the Federal District Court. Both were found guilty on two counts of the indictment. Smith, who had been president of the company, was sentenced to twenty-one months in the federal penitentiary at Atlanta and to pay a fine of $5,001, and Burlingame got two years and six months in the same institution and was fined $10,100. The Ellsworth Company, the stock selling concern was fined $10,500. The frauds ran into the millions and the prosecution of the defendants cost the government a large amount of money.

This is good as far as it goes; but we like the plan of issuing "fraud orders" better. The fraud order stops the mail of the schemers, and the fraud goes no further. By the criminal court plan the Government must let the rogues go on until they make a record, and then cause their arrest. By this plan the people lose their money, and at best have only the empty satisfaction of seeing the rogues go to jail. By all means let us have the "fraud orders" and stop the robbery of the people and the cost of litigation to the Government.

Aaron Kasofsky, proprietor of the Hudson Bay Fur Company, of 449 Washington Street, Boston, Mass., was recently found guilty of making untrue and misleading statements in his advertisements. He was placed on probation on the promise that he would change his style of advertising. The Hudson Bay Company is an old and well-known concern; and the Advertising Vigilance Association contended that the Hudson Bay Fur Company advertising gave the impression that it was the historic concern. The court took this view. Massachusetts has a law against fraudulent advertising, and this is one of the first convictions under this new law. A similar committee is at work in New York, and one conviction of a fur house has been already secured.

As you act in the role of detective for your unfortunate subscribers, I wish to ask you concerning the standing of E. F. McAvoy of Cambridge, N. Y., who claims to have a great stock-breeding farm there, and advertises an extra fine strain of Houdan fowls. "Faultless," he calls them, and trap-nested up to a record of 300 eggs a year and over. Is he a reliable man to deal with, and to be trusted in a business way? I have over $100 involved with him. J. E. M. G.
Dade Co., Fla.

E. F. McAvoy is regarded as the "horse gyp" of the poultry industry—he also represents himself as a breeder of Jersey cattle. Our reports on him show that he has no property in his own name, and judgments against him are uncollectable. He has been indicted in this State for fraudulent use of the mails, pleaded guilty before the Federal court at Utica, N. Y., on December 16 last, and was fined $750. Further detail of his record would seem to be superfluous.

I ordered a half dozen pairs of "guaranteed" hose from the Arrow Knit and Silk Works, 400 West 23rd street, New York. They sent the "guarantee" along with the hose. These hose went to the bad in a month's time. The material was very inferior, indeed. I returned three pairs of hose that were the worst worn along with nine cents postage for hose to be sent in return. I also enclosed the guarantee. I have never received my hose nor the money I sent for postage, although I have written them three times. Please tell me if they are considered reliable. Such firms should be exposed. No doubt they have treated others as they have treated me. MRS. L. W. A.
Ohio.

We were unable to get any redress from this firm. The amount is small, but the experience shows how worthless a guarantee may be if the house making it is not responsible or trustworthy.

Just for variety: Last August a case of eggs sent by express reached New York City in bad condition owing to breakage. There was some delay in getting details from consignee, and complaint was not sent until September. It was promptly acknowledged, and after about eight weeks a draft arrived for the full amount asked.
If you wish proof, here's a dollar of it for my subscription. J. A. H.
New Jersey.

The proof is entirely satisfactory. This is certainly a record for the express company. We only hope that they will make this record a rule of practice for the future.

I wish to inform you that I got a new bicycle from Adams Express Company in return for the one they lost in transit. I am perfectly satisfied with the manner in which they settled my claim. I am very grateful to you for your kind attentions to the matter. I am sending you a few new subscribers and intend to get you some more in the near future.
Connecticut. B. K.

Subscriber put in claim promptly for $36.40, the value of the bicycle which was lost in transit, but was unable to get any satisfaction and sent the claim to us. Settlement was finally made as above.

About the 14th of last April I very foolishly, and in the goodness of my easy heart, sold $61 worth of registered Berkshires to N. R. B. Goodman, Richland, Lebanon County, Pa., on his 60-day note. The note was due June 15, and was not paid. Now Goodman will not answer my letters. Do you know anything about him? Can you do anything for me?
Pennsylvania. W. F. M.

We were as unsuccessful in getting any reply from Mr. Goodman, and our attorney was unable to collect the account. Report is that Mr. Goodman has no property that can be attached, so that a judgment could not be collected. What property he has is in the name of his wife. Our attorney reports a judgment against him which he has had some time and is still unable to collect.

I have just received two issues of your paper on the the 10 weeks for 10 cents plan and would like to say don't discontinue when the 10 weeks are up. Keep it coming, sending me the bill before the last issue so I can get it continuously, as I like it. E. C. B.
Rhode Island.

This is the encouragement offered by our friends who send in the short term subscriptions. They renew and become friends of the paper. Most publishers who have tried short-term subscriptions, say they do not pay and give the plan up. A big selling organization with agents all over the country can sell any kind of a paper; but when a publisher depends largely on voluntary subscriptions, and the influence of old subscribers, the paper itself must appeal to the reader. We are glad to have the 10-weeks subscription for 10 cents, because while it costs more than 10 cents to fill the order the large percentage of renewals makes the first order profitable.

J. J. D.

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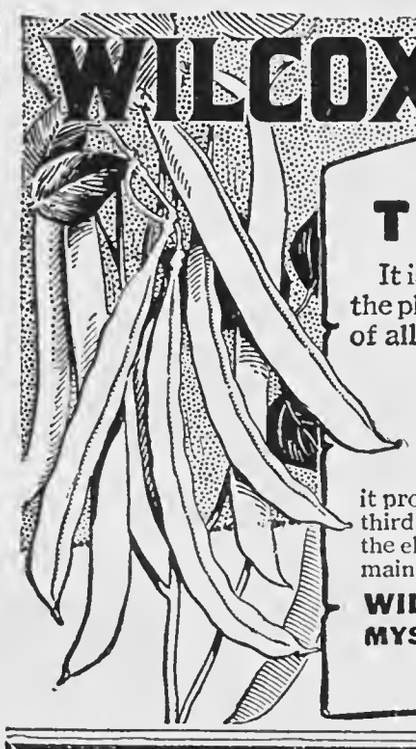

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It is easy to compound a fertilizer that will push the plants rapidly out of the ground, and sap the earth of all those elements vital to future fertility.

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are rich in all those elements that—first, promptly push the young shoot to the surface—second, sustain it properly till it matures, a perfect specimen of plant life—third, that leaves a margin of fertilizing materials to replace the elements drawn from the soil by the harvested crop, thus maintaining a yearly balance. Send today for our book.

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GEORGE STEVENS, Peterborough, Ont.

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MARKETS

Wholesale Prices at New York,

Week Ending Feb. 13, 1914.

BUTTER.

Creamery, extra, lb	28	@	28¼
Good to Choice	24	@	27
Lower Grades	22	@	23
Storage	22	@	27
State Dairy, best	26	@	27
Common to Good	20	@	25
Factory	18	@	20
Packing Stock	15	@	19

Elgin, Ill., butter market firm at 26½ cents. Philadelphia, western creamery, 29 cents.

CHEESE.

Whole Milk, best	18	@	18¼
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	35	@	37
Common to good	32	@	34
Mixed colors, best	29	@	30
Common to good	27	@	28
Storage, best	24	@	25
Medium and low grades	20	@	23
European, fresh	23	@	25

FRESH FRUITS.

Apples—Spitzenburg, bbl.	3 50	@	6 00
Spy	3 50	@	5 50
King	4 00	@	5 00
Hubbardston	3 00	@	4 50
Greening	3 50	@	4 75
Winesap	4 50	@	6 00
Newtown	5 00	@	6 50
York Imperial	3 50	@	5 50
Baldwin	3 50	@	5 00
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	2 00	@	3 50
Cranberries, Cape Cod, bbl.	10 00	@	13 00
Long Island, bbl.	10 00	@	12 50
Jersey, bbl.	9 00	@	13 00
Jersey, crate	2 50	@	2 90
Strawberries, Fla., qt.	15	@	0 60

BEANS.

Marrow, 100 lbs.	4 60	@	5 25
Medium	3 50	@	3 55
Pea	4 95	@	5 00
Red Kidney	5 00	@	5 05
White Kidney	5 75	@	5 85
Yellow Eye	4 50	@	4 55
Lima, California	5 90	@	6 00

HOPS.

Prime to choice	44	@	46
Common to good	40	@	43
Pacific Coast	21	@	25
Old stock	15	@	17
German crop	68	@	72

VEGETABLES.

Potatoes—Long Island, bbl.	2 50	@	2 75
Maine, 180 lbs.	2 25	@	2 60
State, bulk, 180 lbs.	2 25	@	2 40
European, 168 lb. bag	1 00	@	1 75
Bermuda, bbl.	3 50	@	5 50
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl.	1 50	@	1 75
Carrots, bbl.	1 50	@	2 00
Cabbage, Danish seed, ton	22 00	@	25 00
Red	22 00	@	25 00
Imported	16 00	@	22 00
New, bbl. crate	1 25	@	1 75
Chicory, bbl.	2 25	@	3 25
Kale, bbl.	80	@	90
Lettuce, half-bbl. basket	75	@	2 25
Onions—White bu.	1 50	@	2 25
Red, 100 lb bag	2 25	@	2 75
Okra, bu.	2 00	@	2 50
Peppers, Southern, bu.	2 50	@	3 50
Peas, Southern, bu.	2 00	@	4 50
Shallots, bbl.	1 50	@	2 50
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 25	@	1 75
String Beans, bu.	1 00	@	3 75
Squash, Marrow, bbl	2 25	@	2 50
Hubbard, bbl.	2 25	@	3 00
New, bu.	1 50	@	2 50
Egg Plants, Southern, bu.	2 50	@	3 50
Tomatoes, Southern, 6 bkt. crate	1 50	@	3 50
Turnips, white bbl.	1 25	@	1 50
Rutabaga	75	@	1 12

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 37
No. 2, box	3 00	@	3 50
Mushrooms, lb.	15	@	25
Radishes, 100 bunches	2 50	@	3 00
Tomatoes, lb.	25	@	30

LIVE POULTRY.

Chickens, for friecassee, lb	15	@	16
Squab Broilers, pair, fancy	50	@	75
Broilers, fair to good, pair	35	@	45
Roasting chickens, lb.	16	@	19
Fowls	17	@	18
Roosters	11½	@	12
Ducks	14	@	15
Geese	13	@	14
Guineas, pair	60	@	65

DRESSED POULTRY.

Turkeys, fresh killed, best	25	@	27
Common to good	18	@	23
Chickens, choice broilers, lb.	28	@	30
Squab broilers, pair	75	@	90
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	10	@	16
Geese	12	@	16
Squabs, doz.	1 00	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	18 50	@	20 00
No. 2	17 50	@	18 50
No. 3	14 00	@	16 50
Clover mixed	13 00	@	19 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	7 75	@	9 05
Bulls	5 00	@	7 75
Cows	4 00	@	7 00
Calves, prime veal, 100 lbs.	9 00	@	12 00
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	7 00	@	8 75
Hogs	8 00	@	9 00

MILLFEED.

Wheat Bran, ton	24 50	@	26 00
Middlings	27 00	@	30 00
Red Dog	29 00	@	30 50
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	32 00

COUNTRY-DRESSED MEATS.

Calves, best	16	@	17
Fair to good	12	@	14
Buttermilks	09	@	11
Lambs, Hothouse, each	6 00	@	8 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 04	@	..
No. 2, Red	1 01	@	..
No. 2, Hard Winter	100	@	..
Corn, as to quality, bush.	70	@	71
Oats, as to weight, bush.	43	@	45
Rye	65	@	69

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	42	@	45
Mixed colors, new laid	35	@	38
Ordinary grades	30	@	32
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	25	@	28
Fowls	22	@	25
Turkeys	28	@	32

THE CALIFORNIA EGG CONTEST.

The eleventh month of the Napa (Cal.) egg-laying contests just ending shows no marked changes in the relative positions of the leading pens. The pen of Buff Wyandottes, entered by the writer, still holds first place, with a total of 800 eggs; their nearest competitor being Blom & Son's White Leghorns, with a total of 758 eggs. Both of these pens made a poor showing for the past month, the Wyandottes laying only four eggs and the White Leghorns seven. All the other pens are so far behind that, barring accidents, they will finish as they now stand. Rutherford's White Rocks are fourth with a total of 704 eggs, having laid five the eleventh month. Lubben's Barred Rocks did well, laying 64 eggs, with a total of 718. Otten's White Leghorns laid nine, with a total of 692; Slocum's White Leghorns laid 32, with a total of 686; Clardy's Buff Orpingtons (from Missouri) laid 13, with a total of 613. These are the only pens that have laid over 600 eggs. Nine pens fell below the 400 mark. Two pens, both White Leghorns, laid no eggs the eleventh month.

There are several very good reasons for the comparatively poor showing being made in this contest; the principal one is that it was started fully three months too late. Nearly all of the fowls are past two years old; the leading pen of Buff Wyandottes are just passed two years, and been laying heavily before they ever saw Napa. In fact I picked one of them off the nest to put her in the shipping coop. If it is true that the first year of a hen's laying is her best, it would appear that this contest should have started in October instead the last of February, in order to give the test a fair one. The second reason is that the fowls have been moulting heavily and have not yet finished. Another reason is that this has been a most unfavorable year for egg production since the rains began. We have had heavy rains continuously weeks at a time, with heavy cold winds, and at the present writing the whole State is tied up for lack of railway transportation; every road in the State is suffering from washouts and landslides. All these unfavorable conditions has mitigated against any very high records. I understand the next Napa contest will not begin until next Fall; about the time the next Missouri contest starts.

Following are the 10 highest pens with their record to date:

1.—Pearson, Buff Wyandottes, 11th month 4; total 800.
2.—Blom & Son, White Leghorns, 11th month 7; total 758.
3.—Lubben, Barred Rocks, 11th month 64; total 718.
4.—Rutherford, White Rocks, 11th month 5; total 704.
5.—Otten, White Leghorns, 11th month 9; total 692.
6.—Slocum, White Leghorns, 11th month 32; total 686.
7.—Clardy, Buff Orpingtons, 11th month 13; total 613.
8.—Stice, Buff Leghorns, 11th month 16; total 593.
9.—Straun, White Leghorns, 11th month 24; total 580.
10.—Bunjes, White Leghorns, 11th month 4; total 562.

W. H. PEARSON.

Poor Laying.

Could you tell me what ails my chickens? I have 45 S. C. White Leghorns which will be two years old next April. All last Summer they averaged about two dozen eggs a day, then in the latter part of August they started to moult and of course stopped laying, but they are still moulting. Some of the hens have bright red combs, while others are pale and shrunken. I am only getting three and four eggs a day now. I keep them in A-shaped house with a cement floor. The house is 10 feet long and 10 feet wide. I am feeding according to the Cornell method. I should like to add ground oats and gluten to the mash. How much would it be advisable to put in of each?

Newfield, N. J. G. B. J.

Some of your hens are evidently a little slow in completing their moult, but this is no evidence of anything wrong; on the contrary, the late moulters are usually the best layers. You will not improve the Cornell ration by adding ground oats and gluten, though these are both good feeds. I would suggest, instead, feeding the oats whole if the hens will eat them readily. If you desire to use gluten feed, the following formula containing it has been recommended by the Maine Experiment Station, and is a good one: 100 pounds each of wheat bran, middlings, gluten feed, and cornmeal, to which is added 50 pounds of meat meal and one quart of fine salt. This formula contains one-ninth part of animal food, in the form of meat meal, while the Cornell formula contains one-fifth part of beef scrap, making the latter a more expensive ration, though possibly a somewhat superior one. M. B. D.

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

Subscribers Exchange

POSITION WANTED—General farming or dairying; married; age 35. W. R. CAMPBELL, Elizabethtown, Ky., Route 2.

POULTRYMAN desires position on poultry farm; experienced college trained; references. L. PETERSON, Linwood, N. Y.

YOUNG MAN, 19, with some experience, wishes position on farm. Address I. F., care Rural N.-Y., 333 West 30th St., New York.

MARRIED MAN to work on farm; general farming; fair horseman; must be strictly sober. WILFORD WOOD, 142 Court St., Brooklyn, N. Y.

WANTED—Single man, under 35, as herdsman; first-class dry-hand milker; conscientiously industrious; no cigarettes or booze; $35 a month and board. R. F. SHANNON, Sewickley, Pa.

WANTED—Single woman, general houseworker on farm; no outside work; reference given and required. 3 adults; five dollars a week. SIGNAL FARM, Camp Meeting Road, Sewickley, Pa.

TWO YOUNG MEN open for employment; life experience all branches of farming; would prefer working West; age 23 and 26; references furnished; state particulars first letter; business. J. H. F., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED as manager or farm superintendent of a gentleman's estate by a married man, 40 years of age; American; small family; thoroughly understands all branches of farming, handling and caring of stock, crop and soil, farm machinery, gas and kerosene engines, separators, butter making, incubators and brooders, caponizing and castrating, and a good knowledge of veterinary science; also fruits, vegetables, hardy shrubs, plants, road building, grading, etc. Best of reference as to character and ability. Address FARM SUPERINTENDENT, Box 35, Huntington, Long Island.

12-ACRE FRUIT FARM—7 acres grapes; other fruit, pasture; house, barn; $3,500. N. C. JACOBSEN, St. Joseph, Mich.

SALE OR RENT—25 acres, very productive; fruit garden; poultry farm; tools; furniture; on river, South Haven, Mich. CHILSON, 642 West 58th St., Chicago, Ill.

200-ACRE FARM FOR SALE OR RENT—Basement barns; 12-room house; 10 minutes walk to trolley; 30 minutes drive to Cortland; for full particulars address owner. OTIS TRIPP, Union St., Cortland, N. Y.

NEW ENGLAND DAIRYMEN—Buy of the producer. We have 200 tons Hay, Coarse Timothy, Fine Stock Hay and Swale. CHANDLER BROS., New Gloucester, Me.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Woman for general housework. Apply to N. M. KISTLER, Emporia, Va.

WANTED—Position as superintendent or foreman of farm by mature man of experience, ability and high-class reference. BOX 100, White Lake, N. Y.

1912 GRADUATE of New York State College of Agriculture desires responsible position; good references. W. N. J., care R. N.-Y., 333 West 30th St., New York.

YOUNG MAN—graduate of agricultural school, wishes a position on up-to-date poultry farm; previous experience; excellent references. Address F. S. W., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED—To take charge of a poultry plant; single; 35 years; thoroughly experienced with utility and exhibition stock; also understands general farming; state wages. B. J., care R. N.-Y., 333 West 30th St., New York.

ENGLISHWOMAN (31), 1½ years' experience on farm, seeks position to help in cooking, dairy work, or sewing, where she can learn gardening, care of poultry, etc.; clean home essential; references. Address MISS K. ANDREWS, Ap. 34, 507 West 111th St., New York City.

FARMER—A gentleman wishes to engage an experienced, married farmer for his place in Westchester County, N. Y. Apply by mail or personally, ROOM No. 1202, No. 82 Wall St., New York City, on Thursday, February 26, after 2 P. M.

WANTED—Married man by year for general farm work; wages $50 per month with house, natural gas, ice and water free; wife to board one or two men winter; several in summer. SUPERINTENDENT, care R. N.-Y., 333 West 30th St., New York.

EXPERIENCED AMERICAN desires position as working manager of fruit farm; mechanical ability and technical training; age 27; strictly temperate and honest; references; immediate liberty. PRACTICAL, care R. N.-Y., 333 West 30th St., New York.

ARE YOU INTERESTED in securing a practical, up-to-date farm manager? Twenty years' experience using practical, economical business methods. Not a theorist. One who knows how, why, and can produce results. References, bond. W. A. MAYOR, 332 Indiana Ave., Watertown, N. Y.

OUR GRADUATES will be ready to accept positions as dairymen, poultrymen, horticulturists and general farm help on March 1st, 1914. Applications will be considered in the order received. Address BARON DE HIRSCH AGRICULTURAL SCHOOL, Woodbine, N. J., Dept. B.

WANTED AT ONCE HERDSMAN—For a good, reliable married man will pay $50 a month with house; must be a good dry-hand milker; also kind to stock, and thoroughly understand dairying. State age, nationality, experience, habits and reference first letter. GEO. O. SEDGWICK, Foxburg, Pa.

EXPERT POULTRYMAN desires position as manager; scientific training and thoroughly practical; experience covers all lines, particularly commercial egg farming; young American, well educated; capable, energetic and honest; no tobacco or intoxicants; best of references; only first-class propositions considered. POULTRYMAN, Box H, Cazenovia, N. Y.

WANTED—Working foreman on truck farm; live man to help push the business; no cigarettes; married man preferred; board one or two men during busy season; ten acres strawberries and garden; poultry; reclaiming plot swamp land; market two miles; wages $300 per year plus 20 per cent. of net income; house, etc. RANSOM'S BERRY FARM, Carboudale, Pa.

WHO WANTS FRESH EGGS?—Quality guaranteed. Postal brings information. HOME FARM, Roxbury, N. Y.

HAY FOR SALE—A car of Timothy hay, baled, direct from grower; write for price. M. E. HINTON, Woodstock, Ohio.

FRUIT TREES TRIMMED by practical fruit grower and largest peach producer of Bergen County, N. J. Orchards planned and planted. Special rates for Winter contracts. H. W. COBB, Glen Rock Fruit Farms, Ridgewood, N. J.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

FARM FOR SALE—225 acres. Apply to OWNER, Box 337, Emporia, Va.

FOR SALE—Forty acres; ten acres in orchard; seven-room house, worth $2,500. Price, $3,000. HENRY VON HOLDT, Old Mission, Mich.

FOR SALE—100 acres with buildings on Cayuga Lake; station and switch on farm. E. G. BRADLEY, Aurora, N. Y.

FOR SALE—70 acres, rich land; town of 12,000 3½ miles; orchard 20 acres; good buildings and water. FRANK DIEHL, R 1, Staunton, Pa.

FARM FOR SALE—240 Acres; 60 in cultivation, balance in pasture and wood, some timber; good for 35 cows and team; fine place for Summer boarders; inquire of owners. PINKHAM & VARNEY, So. Strafford, Vt.

FOR SALE—Good 95-acre farm; mill and ice business combined; great cider and sawmill run by excellent waterpower privilege; 1¼ miles to cars, schools, etc.; nice town; good neighbors; 12 miles State road to Worcester; 5 miles Webster; $6,500; includes everything—farmhouse, barn, mill and machinery, waterpower; about 800 tons ice; $2,500 required. ERNEST HOWE, R.F.D., Oxford, Mass.

ONE OF THE BEST WESTERN NEW YORK Farms for Sale—80 acres under cultivation; 20 acres in timber; all level; rich loam suitable for all crops; living spring in pasture, and fine, never-failing well at house; 10-room house and large barn; both in good condition; near railway and Rochester-Geneva interurban line; 3½ miles from Clifton Springs; half mile from village of Orleans; owner unable to give proper care and will sell at attractive price; terms to suit purchaser. Address Rev. S. M. NEWLAND, Clifton Springs, N. Y.

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The firm of Peter Henderson & Co. was founded in 1847 and the 67 years of successful seed-raising and selling that is behind every package of Henderson's seeds must and does make them the best that it is possible to buy. In your grandfather's day, Henderson's was the standard by which other seeds were judged, and the same condition exists in 1914. Our methods of seed-testing, which were the best three generations ago, have been improved upon from year to year and are today still the best.

The unknown quantity in your garden is the quality of the seeds you plant, and you cannot be too careful in seeing that you obtain the best procurable. The most critical of all planters in the choice of their seeds are market-gardeners or truck-farmers. Perhaps the best endorsement of the quality of Henderson's seeds is the fact that Peter Henderson & Co. supply a larger number of professional growers than any two seed-houses in the world. The very existence of these men depends upon their receiving the best quality of seeds. That Peter Henderson & Co. are easily pre-eminent in the professional growing field is the best endorsement of Henderson's seeds that can be given. Henderson's seeds are tested seeds.

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THE JOY OF YOUTH IS KEPT ALIVE BY THE ROSES.

LET FARMERS GET TOGETHER.

A recent editorial in THE R. N.-Y., speaking of Secretary of Agriculture Houston's recent comments on prices received for large versus small crops, has appealed to me strongly. There is no use disputing Secretary Houston's statements. He has the figures, and they are conclusive, neither is there any use of denying the position taken by the editor of THE R. N.-Y., but just what are we going to do about the whole matter? I have little sympathy for men who simply carry a grudge without making effort to correct existing evils, and really isn't the former method more characteristic of us farmers than the latter? Are we not more likely to grumble because everything is wrong than to make any particular effort to correct the wrong? It is true that the Granges by attempting coöperative buying have tried to benefit matters for farmers. For years there has been talk about coöperation in selling farm produce, but how much has the talk about this latter matter ever amounted to? I notice that Armour made 30 percent on his invested capital for the last year's business. Part of this certainly comes out of the producers, and 30 percent net is surely a good margin. The entire subject is a large one, and worthy of years of study by competent men. But is anybody really giving the matter any study at all?

What I would like to have the farmers think about a little is the enormous difference that there would be between the effort such as is being made by the Grange to buy things as cheap as possible, and a corresponding systematized effort to sell their farm produce as high as possible. Supposing, just for comparison's sake, that the average farm consists of 150 acres. Such a farm in our country will probably buy an average of $50 worth of seeds; $200 worth of clothing; $200 worth of groceries and $200 worth of hardware, machinery and so forth, a year, making a total of $650. Supposing that by using Grange methods a saving of seven percent is made on these purchases; this would amount to $45.50. Now this same farm will rent at cash for $1,125 today, and as we always figure labor to equal the cash rental value, the tenant would be compelled to get $2,250 out of the place in the way of crops sold before he could pay his labor and rental, while, as a matter of fact, he will do this much and lay aside a moderate amount in addition, so that we are probably not very far out of the way in saying that this farm will sell products worth very close to $3,000. If we are able by coöperative methods to add seven percent to the selling price of this produce, it would amount to $210 for the year, about four and one-half times as great a result as is possible to accomplish by purchasing at a discount. As a matter of fact, in my opinion, the difference would be much greater than this, because we have figured a uniform reduction of 7% on everything purchased, while we question if the most successful Granges have ever been able to accomplish this much or apply their methods to the entire list of commodities used, including the hardware, clothing and groceries. On the other hand, we believe, the cooperative selling might very easily bring in 10% more if properly handled, than we are likely to get without it. My idea of coöperative selling would be in the first place, to organize societies that handled just one article, say fruit, milk or any one of our farm crops. This sort of thing has already been done successfully where the producers are enough in earnest about it. Witness the great results accomplished in certain sections of the country by handling fruit coöperatively. My idea would be twofold, to have the association handling this produce not always try to figure the highest possible prices, but constantly to study the features and advise its members of best possible methods to be used in handling the produce and getting fancy prices; in other words, to teach the producers the necessary methods of producing the highest quality, marketing it in the most attractive packages possible and thus stimulating the market to the highest point. It is true that it would be necessary for many farms to coöperate in order to make this movement the most successful. On that account, it would be easier to have one association handle one thing, starting, say with milk and fruit, which are commodities very easily capable of being handled by association methods and in a successful manner. Then if such a movement were started, get a thoroughly capable man at the head of it and pay him a real good salary. It would be necessary to do this in order to make the project successful and would be one of the vital factors. The manager would need to have thorough training in business matters, as well as to be thoroughly conversant with the farmer's end. But such men could readily be found and it would be only taking a small amount from each member to pay him a sufficient salary to secure his service.

Ohio. CHAS. B. WING.

R. N.-Y.—We call Mr. Wing's attention to the paper by Mr. Tuckerman now being printed in THE R. N.-Y. See what was done in the Hudson Valley through coöperation! We shall report dozens of other societies. They are springing up everywhere.

FARMERS' WEEK AT CORNELL.

PART I.

"This is a fine afternoon; I am so glad that it is only three o'clock." I thought that it was a fearfully cold afternoon, for the mercury had tucked itself away under the cipher and was hiding there while icy winds swept the hill and drove all but the reddest-blooded indoors. There was evidently an enthusiasm abroad that defied the cold, however, and I looked around at the crowd pouring out of the new auditorium to see who it was that found the afternoon "fine," and was glad that it was only half over. It was one of a number of young women hurrying to reach another building and get seats before the speaker began. That talk wouldn't be given again, and if you were not there, you missed it, that's all. To be sure there were a score of other things that you wanted to hear, and see, all at the same hour, but having fixed upon this, there was nothing to do but to run for it. And, best of all the women were there, and they were all having such a good time, and they came very near to demonstrating that the foundation of the farm home is equally essential to the success of a farmers' meeting. Maybe it was a mistake; putting that new building devoted to the teaching of home economics so near to the agricultural building, and making a good walk between; still, the agricultural building was crowded too, and no one, whether he talked about raising buckwheat or spraying fruit trees, had any need to complain of the lack of an attentive and interested audience.

The experience meetings were not all held in the lecture rooms, either. Whenever you went, through corridors or into exhibit rooms, you would see groups of men, perhaps by themselves, or maybe gathered about some agricultural teacher whom they had recognized and "nailed" on the spot; and if you stopped to listen a moment, you would hear the jargon of agriculture. When men get together at times like this to discuss those things in which all are interested, all are neighbors; and no one hesitates to break into any group talking about something in which he is interested to contribute his mite, or draw a little more out of some one already there.

They make pleasant discoveries in this way, too. That quiet spoken, pleasant-appearing man, looking at that exhibit of potatoes and chatting with those about him, is Martin, the drainage expert. You have read about some of the things that he has done, and it does you a lot of good to get next to him and absorb a little of his personality. When you read about any of his work again, you will feel acquainted with him. That man over there explaining some things about bee keeping to an interested group is House; and that man hurrying through the corridor, stopping only to greet an acquaintance with a smile and impart a little of his contagious enthusiasm, is Rice; you have read about Rice; he invented hens. A lot of these men whom you have read about, or heard about, for years, and who have sort of grown to the proportions of giants in your mind, prove to be just common, whole-souled, neighborly men when you get next to them at a place like this. A college professor has always been a rather awe-inspiring thing to most of us, but when you get close enough to one to look him in the eye and listen to his voice, you find that he is only a pretty good quality of clay, after all, and when you get a little better acquainted with him, you don't mind calling him brother.

M. B. D.

THE STORY OF A CO-OPERATIVE SUCCESS.

PART III.

FUTURE POSSIBILITIES.—And we are looking ahead to the time when we can use our Exchange for much wider purposes than now. We see no reason why we should not have our own fertilizer plants, as the Monmouth County Exchange in New Jersey has; our own package factories, canning factories, cold storage, etc. We would have our own fruit trains to New York now if there were room in the Weehawken yards to unload. But there we are up against the milk trains of the West Shore, O. & W. and Ulster & Delaware roads on one side and the trackage of the National Express Company on the other. But we shall work that out in time. Now we are obliged to ship by express unless we want to risk the delays of boats at about the same rates.

FIGHTING OPPOSITION.—At the meeting of this society last year, reference was made to a cement deal where a concern, after selling direct to farmers, found a combination of dealers against it in that district, and the claim was made that much business was lost thereby. That is purely an economic matter. If that concern was selling satisfactory cement direct to one group of men, it is more than likely that others in the same neighborhood would quickly avail themselves of the opportunity, and the company would find that its business tended to grow, in spite of opposition by the dealers. Opposition to our Exchange has stopped at nothing so far in the effort to put us out of business, but we notice that concerns having fertilizer, feed, etc., to sell seem very anxious to deal with us, and now even outside commission men are applying for appointment by us, where at the start they scoffed.

IMPROVING CREDIT.—But further still than this: We all know that the farmer has had to pay seven and eight per cent. and more for money in the past. Each of you doubtless know of men in your community who have made fortunes lending money to farmers on mortgages, usually at the highest rate that they were able to squeeze, and you all know of good, industrious neighbors who have been forced out because they could not meet short term notes. No other business in the world has better security than we have, and none other has so much trouble getting money on terms to enable us to make permanent advance. Now, we suddenly found when our Exchange wanted to buy stuff by the carload, that our notes were welcome at the banks. As one banker, who knew all about our little $500, said to me, when I wanted $1,500 for the Exchange: "Why sure, and as much more as you need." It was our joint credit he was sure of. And it is that joint credit that has made possible the really tremendous business we have done. Why not go a step further in coöperation, and use that joint credit which hitherto has lain idle and gone to waste?

NEW YORK STATE GRANGE.

PART II.

The matter of the use of traction engines on highways came up for consideration, and action favorable to the contention of the Brotherhood of Thrashermen that traction engines used by thrashermen should virtually be exempt from the rules and regulations recently made by the Highways Department, was taken. They asked that traction engines of the same style as those now in use "may be used for thrashing and other agricultural purposes" on the highways. It was stated that the amount of money invested in traction engines used in the State is more than $5,000,000, and that other machinery such as thrashing machines, separators, clover hullers, etc., to the value of $5,000,000 more would be rendered useless while the engines were being remodeled to conform to the rules of the department.

Two or three resolutions concerning plans for coöperative buying and selling came before the committee on coöperation, but did not find favor with the Grange when the delegates were called upon to act on them. One of these provided for the creation of a State Patrons' Produce Association, the members thereof to come from the Pomona Granges of the State. Another asked for the appointment of a supervisor of coöperative societies who should also give instruction in any matters pertaining to coöperation, and whose salary should be not more than $4,000. Neither met with favor. The idea of establishing a Bureau of Markets in connection with the Pomona Granges of the State also failed to carry.

The best method to deal with some propositions is to ridicule them, and this was neatly done regarding the so-called veal law now before Congress, which declares that no veal calf under seven years of age shall be killed, etc. The committee on trusts hadn't much to do this year, so it produced a resolution "making it a misdemeanor for any person to offer for sale any chicken less than eight, any fowl less than 15, any goose less than 25, any beef cattle less than 20, any hog less than 18, any sheep less than 15 and any eggs less than three years old." The Grange "adopted" the report with all the dignity at command at the time, which wasn't much.

To probibit the manufacture and sale of all malt and spirituous liquors by a constitutional amendment in 1916; opposing the Congressional free seed distribution; recommending the continuation of Grange scholarships; amending the drainage laws so that the owner of low, wet land, capable of improvement by draining through adjacent lands may have the right to do so without long and expensive proceedings; favoring a constitutional amendment permitting women to vote; favoring the use of school houses as social centres for the community; favoring the loaning by the Federal government of the deposits of the postal savings banks directly to farmers at the same rate of interest as to National banks; opposing the resolution to establish a permanent home for the State Grange as headquarters and place for annual meeting; favoring a system of unification of agricultural education; asking legislation to preclude brokers in farm lands from accepting a commission on sales unless there is a written contract with the owners; asking for an increase of jurors' fees in justices' courts from 25 cents to $2 per day; asking for a censorship of popular songs offered for sale to cut out those immoral or suggestive; favoring a county option bill to control the liquor traffic by counties; approving a fine of $25 for Sunday hunters; advocating the appropriation of moneys by the State for new buildings at the Geneva Experiment Station; commending Gov. Glynn for his interest in agricultural legislation and the farmer's behalf; demanding that the State pay for all cattle killed by its agents; better market roads.

J. M. DARROW.

HOMEMADE LIME-SULPHUR.

Many readers are asking us how to make the concentrated lime-sulphur at home. So much has been said about this in times past, and the experiment stations have also printed so much on the subject, that the great majority of fruit growers understand the subject well. There are others, however, who evidently have not studied it out thoroughly.

The demand is for a small apparatus for cooking the lime-sulphur with steam. One of the best bulletins on the subject is No. 201 from the Virginia Station at Blacksburg. From that bulletin we take the picture shown at Fig. 95. This shows a small steam boiler or feed cooker, costing about $40. The pipes are arranged as shown in the picture, admitting the steam into two barrels. With this outfit the bulletin states that one man could make five barrels of the concentrated solution in a day. Scraps and odds and ends of wood may be used as fuel.

Another arrangement for cooking is shown at Fig. 94. There is a small steam boiler about the price of the other. A platform strong enough to hold up the barrels is made as shown. In this case two barrels of the mixture are kept boiling while two barrels are being prepared. The pump shown in the corner is used for pumping water from the spring or well. The bulletin states that one man can use this outfit to prepare 250 gallons of the concentrated solution in ten hours. The barrels are fitted with a faucet so that when the lime-sulphur is used, it may be turned out into the trough directly into the tank from the wagon. This apparatus is within the reach of those fruit growers who have a large amount of spraying to do, and would probably fill the bill.

A good description of the method of making the lime-sulphur is given in Bulletin No. 330 of the Geneva, New York Station. The following statement being taken from that bulletin:

In making lime-sulphur wash, whatever the formula, only fresh, lump-lime should be used that is free from dust, grit, air-slaked material and magnesium oxide. It should not contain less than 90 per cent pure calcium oxide. The Station has a list, which will be sent on application, of those dealers who will furnish guaranteed lime of satisfactory quality. Local lime is sometimes satisfactory, but orchardists should be sure of the quality of the lime before attempting to make large quantities of the wash. For sulphur, light and heavy sulphur flour, flowers of sulphur, "ground brimstone" or "commercial sulphur flour" if finely ground and bolted, will do equally well. Before adding to the mixtures the sulphur must be thoroughly moistened and made into an even, fluid paste without lumps.

In making, slake the lime in about 10 gallons of hot water, adding the lumps of lime gradually to avoid too violent boiling and spilling over. Pour in the sulphur paste gradually during the slaking, stirring constantly to prevent the formation of lumps, and when the slaking has finished add the full amount of water and boil gently for one hour. If kettles and fire are used, more than the required amount of water may be used at first, to compensate for evaporation, or the volume may be kept constant by adding successive small quantities to hold the mixture at the original level as shown by a notch on a stick resting on the bottom of the kettle and marked when the mixture first begins to boil. When boiling with live steam the mixture will be more likely to increase in volume than to decrease, so that no water need be added. This concentrate will keep with little change, unless the weather is below 5 deg. Fahr., if stored in filled, stoppered barrels. Even in open receptacles there will be no loss if the surface be covered by a layer of oil to prevent access of air. Each boiling should be tested with a Beaumé hydrometer and its density marked on the barrels or other containers.

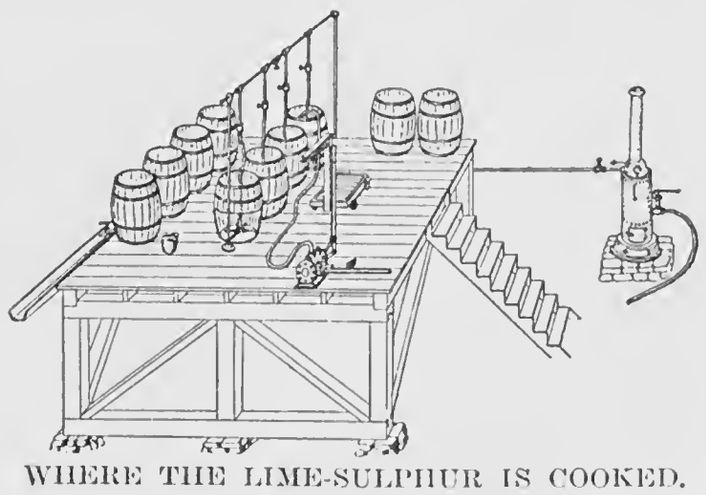
Of course care and skill are required to do the work properly. This can only be acquired by experience. As to whether it pays to manufacture the lime-sulphur or buy it is largely a matter of individual figuring. It is not unlike the problem of mixing fertilizers or buying the ready mixed goods. One man will demonstrate clearly both by his figures and his test of the material that the home making and home boiling pay him well, while another man almost in the same neighborhood would give up the home manufacturing after one or two trials, convinced that it pays him better to buy the mixed goods.

GROWING PEAS FOR THE CANNERY.

Experience of a Practical Farmer.

If conditions are favorable, growing peas for the cannery is one of the most profitable operations for the farm—as the returns are large for the amount of labor expended and the operation is an economical one. The roots of the pea vines contain a large amount of nitrogen, which is confined in small nodules on the roots of the plant, and after the crop has been harvested, these are plowed under, adding humus as well as nitrogen to the soil, thereby bringing up the land in a remarkable degree and at a minimum of expense. Pea growing can be conducted advantageously only where the conditions are favorable—one of the most important factors is that the cannery is nearby, the distance not to exceed four miles—other essential factors are latitude, altitude, climate, contour of the land, soil and amount of rainfall.

My farm located in Madison Co., N. Y., is situated on a ridge, with a gradual slope to the east; elevation is 1,400 feet above sea level; the seasons are short and the nights cool; often having hard frost in early June. In season of drought we do not suffer as much as other sections further east, and judge that this is partly due to the quality of the soil, and also that we are blessed with more rain at certain seasons. The soil is a good clay and readily worked under favorable conditions, so that

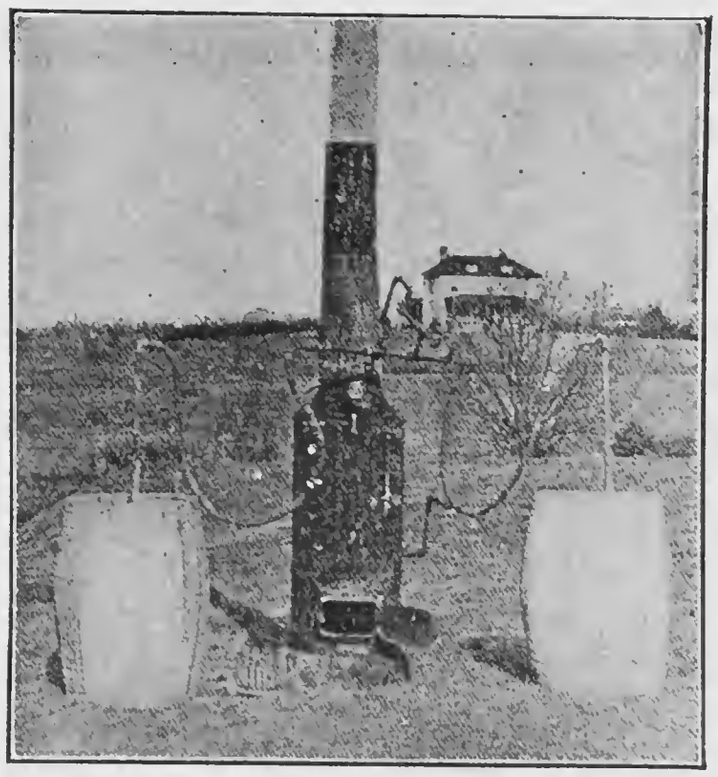


WHERE THE LIME-SULPHUR IS COOKED.
Fig. 94.

it is pliable and mellow. My contract with the cannery in 1913 was for 12 acres of peas, five acres Alaskas, two Advancers, five Market Garden, early, medium and late. The ground we took had been used as pasture for two years. It was plowed in April; then disked and harrowed so the soil was fine and mellow; and as far as possible all stones removed, these points being most essential for a successful pea crop. The peas were drilled in the latter part of April and the first of May, using four bushels to the acre, and 250 pounds fertilizer (1-10-5) to the acre.

There is no further work until it comes time to harvest, that is if the ground is free from weeds; if one is unfortunate there may be mustard to contend with, which is about the only enemy the pea has. This can be easily eradicated by spraying with copper sulphate or iron sulphate.

The Alaskas (early) take from 50 to 60 days to come to maturity. We are kept advised by the foreman of the cannery when to cut the crop, and this is done by mowing machines. The vines are put on the hay wagons and delivered to the factory. The labor required for this was three teams and five men; one man to a team and two men in the field, this takes care of the situation nicely. It is not advisable to cut the peas too long in advance, so one man cuts with the mowing machine while the other two teams load and haul to the factory. If the man with the mowing machine has a fair start, the teams will be kept busy and there is no waste of labor. Special guards are obtainable for use on the mowing machine, which lift the vines while being cut, which facilitates cutting and is economical. If the farmer so desires he can take



PLANT FOR FEED OR SPRAY COOKING.
Fig. 95.

his pea vines back with him after they have been thrashed, this making excellent feed for the cows. However, the teamster is generally rushed and does not care to do this. The pea vines are run on conveyors to the silos nearby, which are filled, making splendid silage, which is sold later in the Winter by the cannery at a retail price of $3 per ton. Pea vine silage, which is high in protein, will nearly double the yield of milk. The farmers are beginning to learn its value and each year the demand for it is increasing.

The peas are graded at the cannery into five sizes, and if the largest shall be tender and juicy and not inclined to split, are paid for at the rate of three cents per pound. Should there be hard peas in the largest size the grading is reduced to medium quality, which brings two cents per pound.

Below is actual cost of crop and receipts:

RECEIPTS.

5 acres Alaska (early) 20 loads averaging 788 lbs., about ½ medium, 2½c, fancy 3c	$399.61
2 acres Advancers (medium) 5 loads averaging 463 lbs., fancy 3c	69.39
5 acres Market Garden (late) 20 loads averaging 861 lbs., fancy	517.02
	$986.02

COST.

8 days team plowing 4.50	$ 36.00
8 days team harrowing	36.00
Hired team	31.50
Hired man	11.84
Farmer's time	24.00
Farm team hauling	34.00
Cost of pea seed	172.80
3100 lbs. fertilizer, 1-10-5	41.85
	$387.99

Receipts	$986.02
Total cost	387.99
Balance	$598.03

MRS. HENRY BURDEN.

THE NEW CURRENCY LAW.

PART III.

ELASTIC CURRENCY.—When there is a call for a large amount of money to move the crops the large volume of loans to the farmers and buyers of produce will be used to increase the volume of money in circulation. When these loans are paid the Federal notes will be retired. The new system embodies some of the views of the extreme radicals of the past. What was considered radical a few years ago is considered very conservative now. The present national banking law has been in force for 50 years. It was enacted at the close of the Civil War. The basis of the national bank notes is the National debt. The national banks purchase government bonds and deposit them with the government and receive national bank notes for circulation. That system limits our money supply to the amount of our national debt. The national debt is now about $2,000,000,000 and has remained nearly constant for 20 years because it was thought necessary as a basis of our money. Under the new Federal law we are not limited to government bonds as a basis for our money in circulation and we can proceed to reduce our national debt and stop paying useless interest charges. That would seem to have been the sensible plan for years, but some one or some element of our body politic has pursuaded us to the contrary all these years. During these 50 years we have had no less than five panics with their great loss of property.

LOANS ON FARM LANDS.—Any member bank may make a limited amount of loans on improved and unencumbered farms at half their actual value on five years time. This provision of the law together with the six months' provision for short time loans on farm products, or on proposed farm operations, ought to benefit farmers. In some sections of the country as high as 15% is charged farmers for these accommodations. The law will tend to lower interest rates.

BANK RESERVES.—The vital feature of the law is the provision regarding reserves. Under the national banking law the money of the country is drained to the cities, and in turn goes to New York City for Wall Street speculation, and when needed for legitimate business it cannot be had; $240,000,000 of bank reserves were in the maelstrom of Wall Street on November 24, 1912. The last panic was a bank panic. When the Federal Reserve Bank is established in any district each member bank is required to maintain reserves. A bank in a reserve city must have reserves of 15% of its demand deposits and 5% of its time deposits; a bank in a central reserve city shall maintain a reserve of 18% on demand deposits and 5% on time deposits; a bank not in a reserve nor a central reserve city shall hold reserves of 12% for demand deposits and 5% for time deposits. About half of these reserves must be in the bank's own vaults, and the balance in the district Federal reserve bank. *It cannot be drained off to the Wall Street banks. It must be retained in its own district.* This provision is perhaps the best provision of the law. Other provisions also are aimed to put an end to speculative gambling in stocks. The legitimate business of the country is to be provided with the means of exchange. The business interests of the country are optimistic and hopeful for prosperity for the many instead of the few.

F. N. C.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Spring Seeding of Clover.

In replying to F. G., Mount Holly, N. J., in Hope Farm Notes, page 118, you speak of Spring seeding with Red and Alsike clover land sown to Winter rye. At what time in the Spring would you advise such seeding in Maine and how would you work in the clover seed, or would you leave it for the frost to work in? We have a piece of land sown to rye for Summer silage, and if practicable would like to seed it in the Spring rather than plow it again after the rye is taken off. I am planning to top-dress the rye with commercial fertilizer as soon as the snow goes off, so the land ought to be in good condition for clover and grass.

Manchester, Me. C. S. P.

We should sow the seed after the frost is out of the ground, but when the weather is still cold enough to freeze the upper surface of the soil at night. Our plan is to scatter the seed on this frozen ground in the early morning at such seasons. The ground is then full of little cracks. The clover seed will drop and roll into these cracks, and as the ground thaws the cracks will be filled, and the seed covered. Freezing and thawing in this plan for a few times will put the seed where it ought to be. Some farmers prefer to run over the ground with a light harrow or weeder, covering the seed in this way, and also cultivating the grain. In our own case this method of seeding on frozen ground has given a good stand, when the soil is right, and contains a reasonable amount of lime.

Saving Liquid Manure.

What is the best way to obtain the full fertilizing value of chamber slops for a small garden? S. R.

Use some "carrier" that will hold the liquids until wanted, or pour directly upon garden or lawn. In some cases these liquids are collected, diluted with equal parts of water and sprinkled over the lawn, or poured along the garden rows, during growth. For Winter use or while crops are not growing the liquids may be poured on sawdust, dry peat or muck, dry horse manure, or sifted coal ashes. The object is to have these liquids absorbed by some material which will hold them. If kept in a dry place the water of these liquids will mostly evaporate while the actual plant food will be held by the absorbent. This is called a "carrier," for when it is broadcast over the soil in Spring it carries the plant food with it. These liquids contain about 12 pounds of nitrogen in a ton, with small quantities of potash and phosphoric acid. A 50-gallon barrel of the liquid will carry about 2½ pounds of nitrogen, or about the same as 15 pounds of nitrate of soda dissolved in a barrel of water.

2. There are special mixtures of grass for light sandy soils, put up by nearly all the large seed houses. This mixture has proven quite successful in the seashore districts and will no doubt do quite well on your soil. Old well-rotted manure is the best fertilizing material for newly-made lawns; it should be quite firm and worked into the soil two or three inches deep. Fine bone meal applied as a top-dressing comes next. Use about five pounds to the square rod. Of this grass seed mixture, sow one quart to every 100 square feet (10x10). Rake in lightly and roll with a hand roller. K.

Soluble Chemicals in Illinois.

I have a piece of bottom land that is overflowed nearly every year. It is very fertile, but makes more stalk than corn. It should produce at least 80 to 90 bushels of corn in a favorable season. I want to see just what I can raise per acre on that land this season. It is clear of trash, stalks, and was plowed last Fall. It has been in corn for 30 years, no other crop. What fertilizer would you use, and how would you go to work to get 100 bushels of corn on that land per acre? I believe it can be done and am willing to do the work, but wish to use every means possible to secure that number of bushels, if the season is favorable. What do you suggest? E. T. F.

Belleville, Ill.

On the Atlantic coast the handling of such a piece of ground would be about as follows: We should assume that the heavy growth of stalk indicated a large quantity of available nitrogen in the soil. Such a condition would naturally induce a rank, heavy growth of stalk and late maturity, so that the ear and grain might not reach full development through the ordinary season. To remedy this we should use chemicals—available forms of phosphoric acid and potash. We should fit the land as well as possible, according to the needs of that soil and locality. Drill into each acre at the time of planting 300 pounds of acid phosphate, and 100 pounds of muriate of potash. This supply of available mineral plant food will make a "balance" for the extra nitrogen, and induce the ear and the grain to make a quicker and more solid maturity. The handling of the crop will depend upon the conditions, which Western farmers fully understand, but the adding of this available plant food is the proper treatment for increasing and developing the growth of the ear.

Reseeding Grass in Spring.

In August and early September, 1913, I turned under 10 acres of sod. I applied one ton stone lime per acre, which, when slaked with water, made three loads. This I harrowed in. The delay in procuring lime brought the seeding somewhat late. The last day of September I sowed one-half bushel of Timothy and a small quantity of Alsike clover per acre. It showed very little top. It is my intention to go over the ground in March with half that quantity of seed, and a little later apply 100 pounds of nitrate of soda per acre. Will the nitrate be injurious to the seed sown in Spring? What should I add to the nitrate for my grass crop? This field has been kept in meadow for 20 years. Of late I have been obliged to reseed every three years.

Ulster Co., N. Y. J. D.

Probably the grass seed will make a better showing when Spring opens. We have frequently had this experience. The seed was scattering in the Fall, but in the Spring it thickened up and made a good stand. Your plan of reseeding in Spring will answer, but we should work the ground thoroughly after the seeding with a very light harrow or a weeder, so as to scratch over the ground lightly. We should use 100 pounds of nitrate of soda, which will help to start the grass. We should mix this amount of nitrate with three or four times its bulk of sifted coal ashes or dry black soil. Mix it thoroughly, and by sowing the larger amount you will get a more even distribution of nitrate. A combination of chemicals frequently used by hay farmers near the large cities is of equal parts nitrate of soda, finely ground bone and muriate of potash, 400 or more pounds per acre. This is an expensive mixture but will surely make the grass grow. We could hardly advise in large quantities except when hay sells at $16 a ton or more.

AN attorney was cross-examining a witness. "You say you left Boston on the sixteenth?" queried the lawyer. "Yes, sir," replied the witness. "And returned on the twenty-eighth?" "Yes, sir." "What were you doing in the interim?" "I never was in such a place," she replied indignantly, with heightened color. —Credit Lost.

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WESTERN NEW YORK HORTICULTURAL SOCIETY.

PART II.

Dr. Jordan, the director of the New York Experiment Station, who after looking the big audience over, said he "wondered that farmers could stand so much science," confined his talk mostly to the high cost of living and its causes. Evidently he is not very sanguine about the efficacy of the many cures suggested, especially that of increasing the yields of our products. It is true that there is a chance to increase the yields per acre, which are often low; true that the home supply has not been keeping up with the increased demand; true that the aggregate increase of farm products has been only very slight during the past decade, and that in some cases there has been a decrease; true that the figures representing production are entirely out of harmony with our increased population. It is also true that an immense acreage of tillable land remains unused, only 27 per cent of the potentially tillable land in the country at large, and about 40 per cent of such land in New York State, now being kept under cultivation. Our vast potential resources will only be developed, however, when it can be done with a profit to the producer. Our life habits have become expensive. The producer must secure a profit on his labor and investments. The profits in farming are not too large, and at present do not warrant an increase of production. Other conditions must change to stimulate greater production. No use in making two blades of grass grow where only one grew before unless the extra blade of grass can be marketed at a profit. The consumer pays enough, but the distribution of his money is on an entirely wrong basis. The price received by the producer grows about from 100 to 400 when it gets to the consumer. Only about 40 per cent. of the returns go to the producer. Farmers are not in control of their business. The goods, fruits included, are not standardized. Farmers compete with one another, and are always ready to break loose from a common understanding as to prices and sales. Fertilizers are mostly secured on credit at large increase of cost. Dr. Jordan seems to see little promise in State help, and in legislation, and is not clamoring for having the farmer made the pet of the State, and for supplying him with artificial and more favorable conditions than are the lot of other classes of our people. Self-help is the keynote of his suggestions as to the proper cure. Farmers must acquire the spirit of coöperation. If the State supplies instructors to farmers to help them organize for such purposes, these instructors should be well-trained men, and men of practical experience. The reorganization of the distribution of products and that of returns is sorely needed. Mr. George T. Powell also offered some suggestions along coöperative lines. Mr. Bush of Morton, speaking on the same question, remarked that high prices do not help the farmer because he does not get them. Higher prices therefore will not stimulate production unless part of the profits go to the producer. The elimination of needless expenses in distribution is the first necessity. When the farmer and fruit grower are happy and prosperous, this condition is reflected in every other business, and the whole people are prosperous. With all the great advantages in favor of the New York fruit growers, the latter have been asleep, with dormant courage and effort. The consumer is obliged to pay for his fruit with a standard dollar. He is entitled to a standard package. Speculators are usually around when not needed, and absent when market conditions are unfavorable. They are not to be depended on, nor to be waited for. New York offers the finest field for coöperation of any State in the Union.

Mr. A. J. Warren, an Irondequoit market gardener, speaking about growing vegetables under glass, remarked that the greenhouse is now an essential asset of the market gardener. Vegetables the year around are now considered a necessity, not any more, like formerly, a luxury. Among vegetables grown under glass we have principally lettuce, radishes, parsley, tomatoes, rhubarb, also green onions, cauliflowers, string beans, etc. The houses should be well glazed and protected. Many troubles are due to much exposed houses.

The question box always elicits lively and general discussions, but the "professors" are called on in most cases to give the final answer, or to "clinch the nail."

"What is the remedy for yellow leaf on sour cherries in June?" The expert answer gave the cause as being a fungus that enters three weeks before the trouble appears in the yellowing of the leaf. The first spray, Bordeaux mixture, must be applied before there is any sign of yellowing, and followed by two later applications.

"What to do with Early Richmond, Montmorency and English Morello cherries planted 16 by 16, and commencing to crowd?" Prof. Hedrick says the only thing that can be done is to cut some of the trees out.

According to Prof. Parrott digging out is yet the best remedy for the peach borer. Go after the borer with a chisel or sharp knife.

"Any danger of planting too many sour cherries in this part of the State?" Growers of experience seem to think there is some danger. Schmidt's Bigarreau cherry was pronounced a great and promising cherry by Mr. McKay, and as doing well on stony soil, by Prof. Hedrick.

"Will a few colonies of bees placed in a twenty-acre orchard help fertilize the bloom?" Yes, says Prof. Beach, the practise is on safe lines. It may do a good deal of good in some seasons.

Spraying with black-leaf tobacco extract for aphis when here, is all right, says Prof. Parrott, but kerosene emulsion, soap emulsion, etc., are cheaper. No dust spray can be used effectively for San José scale, says Prof. Parrott.

Prof. Hedrick does not think we are using enough cover crops in our peach orchards. Might safely use cover crops much more freely to advantage. Among best crops to be planted in a young peach orchard are named strawberries, tomatoes, cabbage, sweet corn, beans, peas, cantaloupes, squash, etc. The general opinion of fruit growers is that we now have enough crab apples in the State.

When fruit is wanted rather than wood growth on Bartlett pear trees, Prof. Beach recommends pruning after the leaves are well developed or are nearing the mature stage. The tree's energy will then be expended in developing fruit buds.

The fruit-tree leaf-roller is a new pest in this State, as stated by Prof. Parrott. He recommends the use of miscible oils to the swelling buds, and says he has destroyed by this means 93 to 97 per cent of the insects.

The old much-maligned Kieffer pear seems to be still thought worth planting by the majority of the members.

For putting in boxes rather than barrels, all apples of high flavor are recommended, such as Jonathan, McIntosh, Spy, Winter Banana, Canada Red. Prof. Beach says that some growers would even make money by packing good Rhode Island Greenings, or any other good apple. Lots of people would buy a box, when they could not buy a barrel. The majority of the members are also in favor of interplanting a young vineyard for the first two years with a cultivated crop, such as tomatoes or potatoes, but Prof. Hedrick qualifies this by adding "unless one has lots of land."

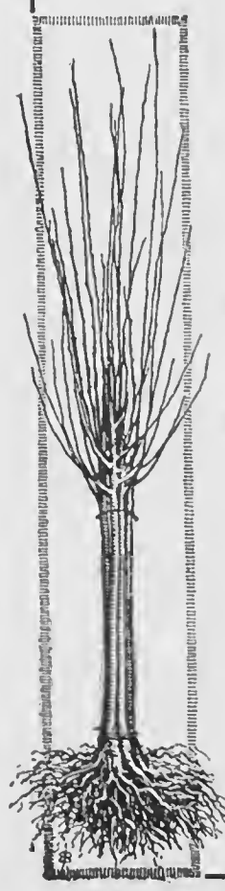
Black-leaf tobacco-extract if brought in contact with the human flesh may cause sickness. In the factories where employees sometimes become affected by nausea, drinking hot water is found to be the best remedy.

President Barry complained that while prizes had been offered for the best package of Baldwin and Spy apples (one, the first, of $25, and a second for $12.50) there were only two entries. There should have been at least 25. This does not show well for the enterprise of the members of the society. T. G.

EXPLOSIONS BY WIRELESS.

Experiments have been reported from Italy where mines have been exploded under the water by a wireless apparatus. It appears that the explosives were put down under water at a distance of about half a mile from the apparatus. There was a hill covered with trees, some stone and buildings between the two. Yet it was possible at this distance to explode the mine. It is a great thought as to what this may lead to in war. It is not at all improbable that a future development of this system would enable an apparatus on shore to explode the magazines in warships or destroy them with their own ammunition. That ought to be a fearful argument against war.

The GOOD Apple Trees For Northern Planting



are not grown in the north or west. They are grown on the "Eastern Shore" of Maryland, near the Atlantic Ocean, at Berlin.

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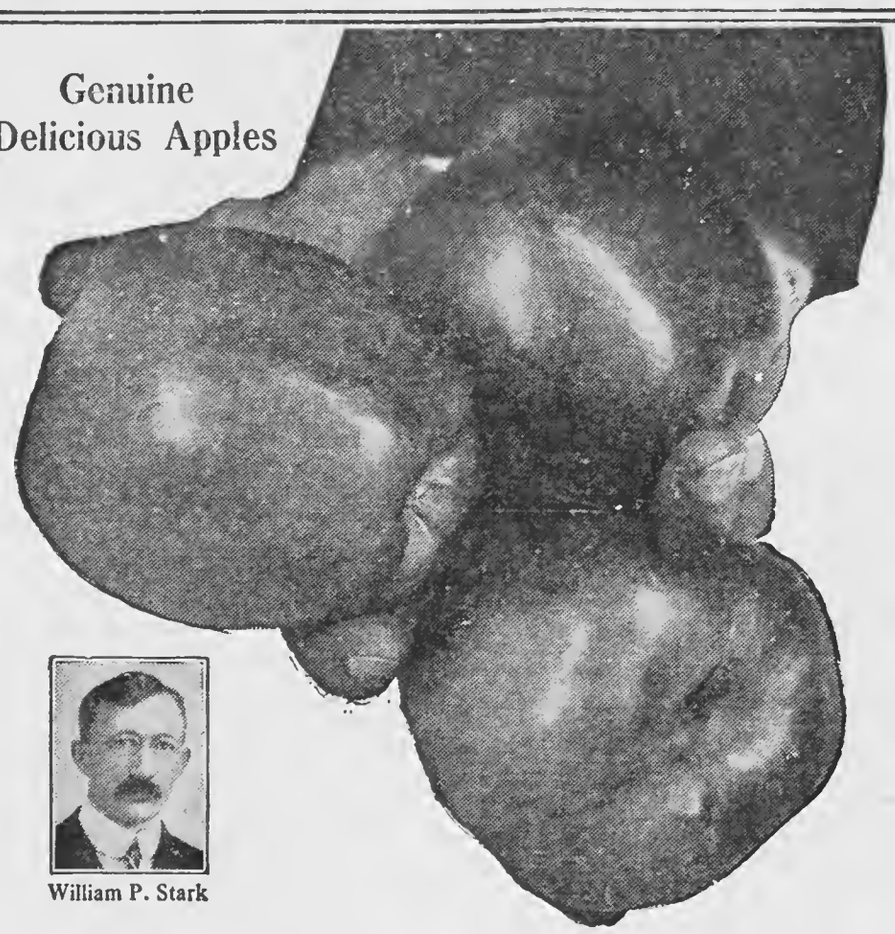

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The Home Acre.

Blistered Currant Leaves.

In 1911 I set in my garden 100 currants. They all grew well. Last year, 1913, after blossoming, the leaves began to curl, or more like blisters all over the leaf, and as the season advanced they turned a reddish brown. What is the cause and what can I do for them? I sprayed repeatedly with white hellebore.
Cambridge, N. Y. W. E. R.

Blotting or blister-like appearance of currant leaves is most usually due to an excess of nitrogen in the soil. This condition of the leaves is rarely present when the bushes are given a balanced ration. The following kinds of farm manure will affect currant leaves in the manner described: Fresh or partially rotted horse manure, sheep, poultry and pigeon manure; cattle and well-rotted hog manure are best suited for currants. If these are not available, use commercial fertilizer compounded from pure raw bone and muriate of potash, proportioned to contain, total phosphoric acid 15 per cent., equivalent to ammonia 3 per cent., potash soluble in water 5 per cent. This is a well balanced ration for currants and gooseberries, and should be applied at the rate of 600 to 800 pounds to the acre. K.

Protecting Trees From Rabbits.

What will best protect young fruit trees against the work of rabbits? I have had several dwarf trees, five years old, destroyed during the past few weeks, besides considerable damage done to young standard trees. The latter were wrapped for a distance of about a foot from the bottom with tar paper. On these they have worked on the lower branches; on the dwarfs they have girdled the trunks. Will a thick coat of whitewash, scented with carbolic acid, and applied in the Fall to the trunk and lower branches, avail anything? Would a strong solution of lime-sulphur, applied in the same way, offer any resistance? Or is wrapping and fencing in the only protection? W. W. L.

We have found nothing better than mechanical protectors, such as tarred paper, thin strips of veneer, or even heavy corn stalks tied around the trunks of trees. These should be put on two feet at least, or better, three feet from the bottom of the trunk, and tied securely. We doubt if lime-sulphur even when treated with carbolic acid would give permanent protection. It might for a time, but sooner or later it would be wiped or washed off. Some form of grease or blood smeared on the trees is said to help, but the surest protective is a mechanical one properly put on.

Inter-cropping Asparagus; Grass for Lawn.

1. I am going to put out five acres of asparagus this Spring; have put eight tons of manure to the acre. Can I put this in corn without hurting the asparagus? I would like to get something for the manure and labor. 2. I have a light sandy loam; is there any grass that I can sow on it that will stand the drought? What kind of top-dressing should I put on to get grass to grow?
Pedricktown, N. J. J. C.

1. There are two or three important essentials necessary to the successful culture of asparagus that cannot be overlooked, and to deprive the plants of any one of them, will result in "grass" of inferior quality, and consequent loss to the producer. It should be the aim of every grower to produce nothing but a No. 1 grade for in these days of close competition, no other kind can find a profitable market, therefore nothing should be overlooked or neglected in the handling of the crop. As earliness is greatly to be desired, a warm well-drained sandy soil with a southern exposure and well protected from the direction of the prevailing cold winds of Spring is the best for this crop, and as asparagus should have the full sunlight the entire day, it must not be planted in the shade of trees nor anything else. The plants are gross feeders, and the soil can scarcely be too rich for them, and if the plants are not well supplied with food, at all times, they will not produce this maximum weight of first-class sprouts. Eight tons of manure to the acre is only half as much as should be applied, and to plant corn among the asparagus would not only deprive the plants of the necessary sunlight and air, but being an annual of rapid succulent growth, it will rob the asparagus plants of quite all the fertilizer and moisture in the soil, and so weaken the plants that it will take at least a year longer for them to produce marketable sprouts. If asparagus is to be made profitable, it must be well fed and properly cultivated. I would suggest that in addition to the manure, you apply one-half ton of coarse bone meal to the acre, or 35 to 40 pounds of muriate of potash, and 95 to 100 pounds of finely ground natural phosphate rock, to each ton of manure.

Clearing Ground for Raspberries.

We have just cleared several acres of scrub oak running from two to six inches in diameter, growing from old stumps, 14 to 30 inches in diameter, besides a network of "catgut," bayberry, etc. We wish to set this land out to berries this Spring. Can you advise us as to treatment of the land to remove stumps and get ready for raspberries? Do you think it necessary to lime the land?
Eatontown, N. J. E. A. B.

If I had several acres of this ground I would follow one of two methods. If I had several men employed on the farm and could work at these stumps at odd times I would try to get them out by grubbing, and with the aid of horses and stump pullers, doing it all when the men could not be profitably employed at other work. But if I wanted them out at once, and did not have a number of men already employed, I would by all means try dynamite. From reports that I have heard at different times I believe the ground can be cleared of large stumps by dynamite much more economically than by any other method. In almost every section there are men who have had experience and follow up this kind of work and will be only too glad to make an estimate as to cost. After stumps are out one or two hoed crops like corn or potatoes would kill out the weeds and put the ground in much better shape for raspberries than if they were planted at once. But since they are to be planted this Spring the best plan will be to get as many of the wild roots out as possible. This can be accomplished by thorough plowing, preferably with a new ground plow, and successive harrowings with a harrow that will bring the roots to the surface. As to lime, I would be governed by the kind of raspberry planted. The red raspberry is a lime-loving plant and thrives in a sweet soil. But the black raspberry is the reverse and does best on land that is a trifle sour or acid. TRUCKER, JR.

Heating a Hotbed.

Asking for advice on the subject of using an oil stove for heating a hotbed underneath, with a sheet iron bottom for the bed, H. S. H., on page 37, is advised against the idea. In my judgment that advice is sound. But the authority who gives the advice against the oil lamp idea of "H. S. H." submits a plan which also, it seems to me, has objectionable features. The construction of the hotbed as proposed by "K," involves so much that one might better go on and build a hothouse and be done with it. The tile pipe, for heat radiation, being simply a continuance of the stove pipe, cemented together as proposed, would doubtless be satisfactory for a short time, but stove pipes have to be cleaned frequently and every time this was done, it would, I should suppose, mean breaking up the whole piping, buying new tile and doing the work all over again under difficulties. Another fault I believe is in the use of a small heating stove. The small stove, without much regard to the character of the fuel is a snare and a delusion for such purpose. They require a vast amount of attention.

Why might not H. S. H. use his oil stove, but in a different way from his original suggestion? Why not put together a few lengths of galvanized pipe for a hot-water circulating system, to run under his beds? Use almost anything that would serve the purpose for a very small boiler under which to put his oil stove. Build a little box of a coop over a pit dug outside one end of his hotbed in which to set his diminutive heating plant. There would be even heat, about as little danger from fire as possible and once in 24 hours, or at the most twice, would be as often as it would require attention. I have seen a very considerable chick brooder house and system heated in a similar manner.
ROBERT S. DOUBLEDAY.

Cadillac

Standard of the World

The Cadillac has twice received the highest honor ever conferred upon a motor car

The Dewar Trophy is the World's Blue Ribbon award

You will be interested in this story because it is a story which no other American automobile maker can tell about his own car.

About seven years ago, Sir Thomas Dewar, member of the British Parliament, and an enthusiastic motorist, presented an elaborate silver cup called the "Dewar Trophy." This trophy was to be awarded each year by the Royal Automobile Club of Great Britain, to the motor car which should during the year, accomplish the greatest achievement demonstrating the advancement of the automobile industry.

The first award was made to one of the high-priced English motor cars.

The second award was to the Cadillac in the early part of 1909. This award was in recognition of the successful completion of the remarkable "Standardization Test."

In this test, which was conducted by the Royal Automobile Club of Great Britain, three Cadillac cars were completely dismantled and the parts thereof thoroughly mixed so that identification was impossible. Eighty-nine parts were withdrawn from the heap and duplicates taken from the stock of spares. Three cars were then rebuilt from the haphazard heap. Wrenches and screw-drivers were the only tools employed. Neither files nor emery cloth were permitted—nor were they necessary; yet every piece fitted as perfectly as in the car from which it was taken.

It is part of automobile history that the Cadillac is the only car in the world which has ever successfully met a real standardization test.

When you realize that in many of the parts, a variation of the one one-thousandth fraction of an inch would have meant failure, then you can realize the wonderful significance of this test.

Standardization, according to its true meaning and as it is applied to the Cadillac, means that every part of a kind is exactly like every other part of its kind. It does not mean nearly like it or almost like it.

In the Cadillac car there are more than 400 mechanical operations which are not permitted to deviate to exceed the one one-thousandth part of an inch (which is about one-third to one-half the thickness of a hair from a person's head) from prescribed limits of measurements.

There are some operations in which the limits of permissible variation are reduced to the half of one one-thousandth of an inch.

Cadillac standardization—with every essentially accurate part exactly like every other part of its kind—insures thorough interchangeability and that when for any reason it becomes necessary to replace a part, the new one will fit and fit correctly without the slightest alteration.

The Cadillac Company is prepared to replace any part of any car it ever built. No Cadillac user was ever obliged to discard his car because of inability to obtain some needed part. No Cadillac user was ever obliged to undergo the annoyance and expense of having some needed part made to order because the maker had gone out of business, or because he had discontinued making parts for old models, or because he has to depend upon some outside parts maker to supply it.

Standardization according to its true meaning and as it applies in the Cadillac, further means the correct alignment of parts and units so that they will operate in harmony with each other.

THE DEWAR TROPHY

Cadillac standardization precludes the possibility of ill-fitting joints and bearings. It decreases the great power absorbent—friction. It reduces wear and automobile troubles to a minimum. It brings operating and maintenance cost down to the lowest notch.

For several years following the award of the Dewar Trophy to the Cadillac, this trophy was awarded to high-priced European cars, the Cadillac making no effort to win it.

However, in October last, the 1914 model Cadillac entered into the contest and again it came out victorious.

In this test the car was driven 1000 miles over give-and-take roads. The object was to test out its reliability and dependability for all-around every-day service in the hands of the every-day user.

The car was compelled to maintain a certain average speed. It had to stop and start frequently to test its self-cranking device. It had to prove out all the electrical system in starting, lighting and ignition, including their dependability and durability.

The two-speed direct drive axle was given special attention, including its efficiency in promoting luxurious riding qualities together with gasoline and oil economy.

The Cadillac made the remarkable record of more than 17 miles per gallon of gasoline in spite of the frequent stops and starts in testing the cranking device. It made the remarkable record of 1000 miles on less than a single gallon of lubricating oil.

It is a most significant fact that the Cadillac is the only American car that has ever been awarded this great prize—the most coveted prize for automobile excellence in the world. It is also most significant that the Cadillac is the only car in the world to receive the award the second time.

The buyer of a motor car,—in justice to himself,—cannot ignore the significance of these Dewar Trophy awards.

The first award to the Cadillac proved it to be the most accurately and the most scientifically constructed car in the world.

The second award to the Cadillac proved it to be the car of all around super-excellence as a whole. It proved it to be the car whose dominant features are the ones which contribute most to all around dependability, for day-in-and-day-out and year-in-and-year-out constancy and satisfactory service in the hands of the every-day user.

And these are the things which the wise buyer seeks in his motor car.

If there is any class of men today who are entitled to the best there is and who do not need to be satisfied with anything short of the best, it is the farmers of America.

When you buy a Cadillac, you have the satisfaction of knowing that nobody can criticize your judgment. You know that less money can buy only less value. But you know that more money cannot buy greater real value. You know that in the Cadillac you have obtained the greatest value obtainable in any car. You know that you have a car in which you can take the utmost pride.

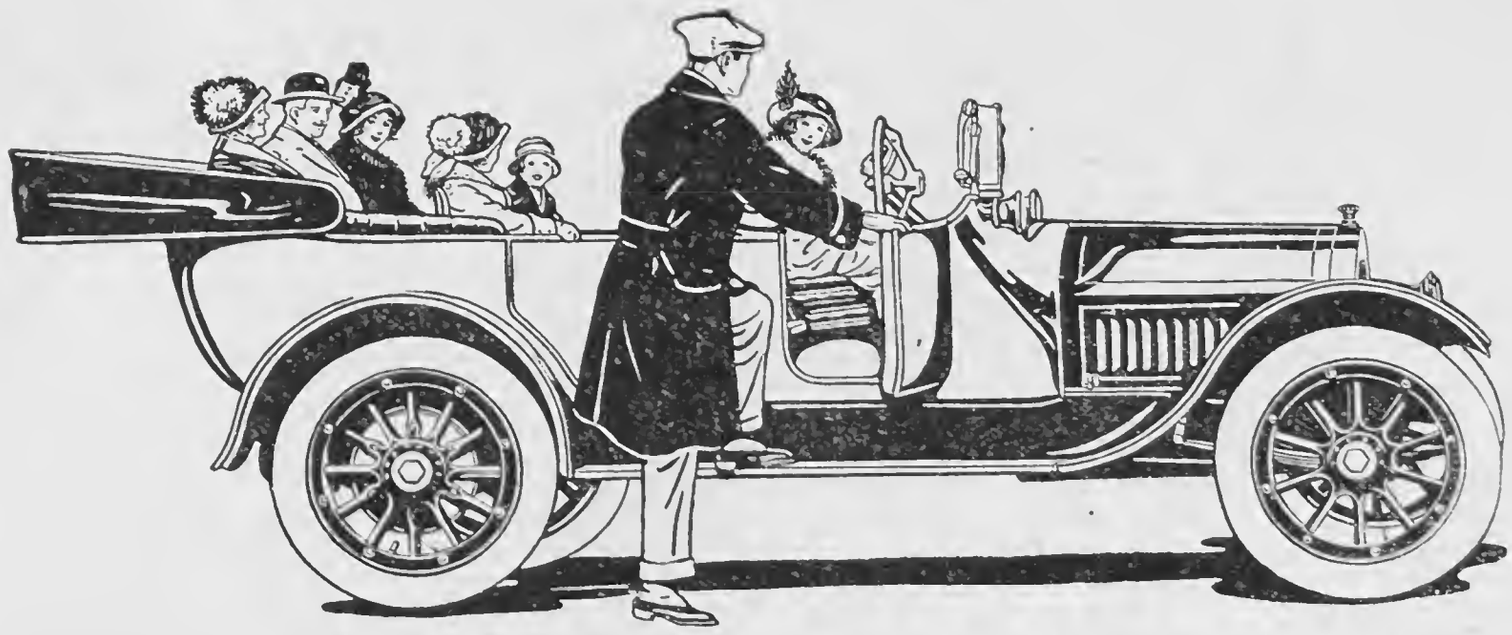
You know that you have obtained the car which the highest motor tribunal in the world has twice crowned as the car of superior excellence.

Seven passenger Car, $2075
(Illustrated)

Five passenger Car, $1975

Four passenger Phaeton, $1975

Two passenger Roadster, $1975



All prices F. O. B. Detroit, including Standard equipment.

STANDARD EQUIPMENT

Cadillac top, windshield, Electric Self-Cranking device, full electric lamp equipment, gasoline gauge, electric horn, power tire pump, foot rail and cocoa mat in tonneau of open cars, robe rail, tire holders, set of tools, tire repair kit, Warner Autometer.

If you are not acquainted with the Cadillac dealer in your locality, write to us for his name and address.

Cadillac Motor Car Co., Detroit, Mich.

Chimney Cleaning.

The kitchen stove and the furnace were both smoking badly, so the good man decided the pipes and chimneys would better be cleaned. Armed with pans, scraper, shovel and wing, and accompanied by the hired man, he attacked the job. The pipes were duly taken down, and rapped out, the soot was shoveled from the chimneys, then the question arose, how to remove the heavy coating of soot that encrusted the whole inside of the chimney. Finally a handful of straw was placed in the chimney and ignited. It blazed up quickly, setting fire to the soot. In a few minutes the chimney was as clean as though newly built. This method of chimney cleaning was new to me; it may be a useful suggestion to someone lese. N. C. R.

Heating Upstairs Room.

I notice in a recent issue a query as to some convenient way of heating upstairs rooms. As I have until recently lived in western New York I have had experience in that line. We have found the best and most economical way to be this: With the stove on the first floor we place a drum or radiator of sheet iron in the room above so the pipe passes through this drum. We find that the room with the drum will heat as quickly and as well as the room below containing the stove. If wood is used the upper room will get the better heat, with coal not quite as good, yet very satisfactory. By this plan we save much of the heat which under other circumstances is wasted. In fact it gives us about twice the heat for the same expense.

Collins, Miss. F. M. S.

A Simple Towel Roller.

A great many housewives prefer the continuous towel mounted on a towel roller. It is easy to make a towel roller, and the material is at hand in practically every home. The articles required are two hooks of the kind used to suspend a window-shade roller, an old broom handle and two nails. Saw the broom handle the desired length of the roller. Drive a nail in the center of each end. One of the hooks may be closed, and the head of the nail should be removed either by a cold chisel or by clipping it with wire pliers. The other roller holder should be open and this will not be necessary. Select a place for the towel, and mount the roller the same as one would the window shade. A window-shade roller might be used in place of the broom handle. The end in which the spring is placed should be removed. One end might be left and a nail driven in the freshly cut end. WALTER JACK.

Ashtabula Co., O.

Burning Zinc to Clear Soot.

On page 1253, November 22 last "Inquirer" asks regarding the use of zinc scraps to remove soot from stove pipe, when burnt in stove. Some years ago, I worked the night turn at a telegraph office which was heated by a small stove, burning bituminous coal, with a five-inch smoke-pipe running horizontally for about 12 feet with a right angle turn about midway, with a rise of six inches to the chimney. Steam coal, which is the smokiest of the soft coals, was the fuel supplied, with the result that the pipe soon showed indications of being filled with soot. We had heard of burning zinc to remove soot, and as there were a lot of old crowfeet from the battery cells on hand, the day man burnt zinc and I burnt, too, with the drafts open and drafts shut; made no difference. The zinc burned with a blue-white flame and white smoke but the draft was just as poor after burning as before. So we took the pipe down and dumped out the soot, which had filled the pipe so only a 2½ inch hole remained for the smoke, in spite of all the zinc we burned. After further experiment we found the only way to clean the pipe was to put paper and dry wood in the stove until the soot ignited, and then tap the pipe with a light rod, loosening the soot and ashes so the draft carried them into the chimney. Of course such a procedure would be rather dangerous with a shingle roof.

I know of one instanee where the smoke flue from a steam boiler was run up from the basement through a radiator on the first floor and into the chimney, which was taken out after a short time because the radiator filled up and spoiled the draft. This radiator had a number of small tubes running across the path of the smoke. W. J. M.

Laying Oilcloth.

I read a suggestion on handling oilcloth or other similar covering for kitchen floor, and laying same. I have found the strip that runs around the room at bottom of base board, to be just the thing to hold the covering down at edges. Nothing can get under and you need no nails; see sketch. Pry the molding up and slip oilcloth under, then drive down again.

J. DOOLAN.

Boarding Elderly People.

Can you do an old subscriber an odd favor? Could you put me in touch with an elderly couple or old person with means to pay their way who would like to make their home at a country farmhouse with all home comforts included; warm room with fire, washing, plenty of milk and eggs and are willing to pay me for doing for them? I will board them reasonably. I am willing to take an invalid and do for them as I have no better way to earn money. There are only three of us in family; it is a quiet place. There must be some people who would appreciate such a home as I can give them, and are willing to pay me for it. I will do all I can to make it pleasant for them. I can send them the best of reference. Can you help me in this? I thought you might know of some such people. MRS. G. B.

Troy, N. Y.

R. N.-Y.—We have had several applications of this nature before. It is a strange thing that only a few days before this letter came we had another from a farmer and his wife, who had been left with an elderly woman on their hands. Her sons, after contracting to pay for her board, have failed to provide for her. We give this as one of the sides of life which are to be met in the country. The plan as suggested by Mrs. B. is a worthy one.

Old Rags as Labor Savers in Kindling

Our rag carpet days are over, and as far as selling rags to the tin peddler, we have never realized any satisfaction from such transactions. We use our rags to build fires. To do this one may take a quart or two quart fruit jar, tear any old garment in strips or squares two thirds yard in size. Pack in several of these rags in the can and saturate with kerosene. A rag may be drawn from the can, lighted, and it will require but little kindling to start a fire. We have a soft coal stove and frequently have used no kindling only the rags in starting the fire. Many people have the kerosene oil practice well fixed in their fire kindling system, and rather than dash on a cup of oil on kindling, try a rag. Less oil will do more efficient service. When fires are low yet there are coals, some people take a chance pouring in a quantity of kerosene. This is dangerous, but by taking a saturated rag and crowding it below the kindling in the fire box or below the lumps of coal, by the use of the stove poker, there is no danger.

MRS. GERTRUDE JACK.

REMOVING WASTE-PIPE STOPPAGE.—While washing out some bottles at my sink, I accidentally dropped one of the stoppers down the waste pipe. It lodged in the pipe some way, making it a very difficult job to remove it with a piece of wire. The water would run through very slowly, so I decided upon a plan in the following manner: I first placed a wooden plug in the outlet of the drain. In the meantime I turned the water on, allowing the pipe to fill, when I soon discovered the stopper floating on the top. The plug was then removed from the drain and the sink was clear as ever. S R.

"BLIGGINS has a very orderly desk." "Yes. He is one of these men who won't leave a paper lying around. He promptly puts it in a pigeon hole and loses it forever."—Washington Star.

"Do any of the good things you hope for come to pass?" "They all come to pass, but they come and pass so dogoned swift I can't grab 'em."—Credit Lost.

OATS Reg. Swedish Select. Also Early Leaming, Reid's and White Cap Seed Corn and Garden Seeds. Samples and Catalogue free. THEO. BURT & SONS, Melrose, Ohio.

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VEGETABLE PLANTS Millions of them. All kinds. Also forty varieties of Strawberry Plants, including Fall Bearers. Prices Right. Catalogue Free. S. C. ATHERTON, Greenwood, Del.

For Sale "Wilsons" Soy Beans, $2.75 Bushel; Cow Peas.....$2.25 to 2.50 "; Crimson Clover Seed... 4.00 "; Red Clover Seed $8.50 to 9.50 "
JOSEPH E. HOLLAND, Milford, Del.

Seed Potatoes—I have for sale the Livingston's Banner potato, grown especially for seed from my pure, select strain. $1.25 per bu.; 10 bu. or more, $1.20 per bu. F. O. B. in sacks. CHARLES L. TODD, Hartwick Seminary, Otsego Co., N.Y.

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HIGH BRED SEED CORN
We have a limited amount of selected ears of corn, that has been bred by the ear-to-row method for EARLINESS and YIELD for the past six years in co-operation with the Plant Breeding Department of Cornell University. It is a yellow dent corn and last year yielded 103 bushels of dry shelled corn per acre, and this year over 100 bushels; tho the season was very dry. Price, per bushel of 70 lbs. of ears or 56 lbs. of shelled corn, $4. BROAD BROOK FARM, Bedford Hills, N.Y.

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ALFALFA FOR SALE—I have 50 tons of first cutting Alfalfa, bright color and fine. I can ship at once at reasonable price. JOHN McLENNAN, Fayetteville, N.Y.

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CLOVER SEED All varieties shipped, Direct Freight Prepaid. Glick's Seed Farms, Box 16, Smoketown, Pa.

We are among the largest growers of **ALSIKE CLOVER** in this country and offer good clean seed. Bushel, $11; half bushel, $5.75; peck, $3. C. J. BALDRIOGE, HOMESTEAD FARM, KENDAIA, NEW YORK

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For fruit by planting an orchard this spring. You can't start earlier—you can't afford to start later. You have the brains and soil, we have the trees and plants. *Our Catalogue tells you how you may have an orchard without cost after first year.*
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Ward Blackberry plants, by mail, $1 per doz. Famous Black Diamond Blackberry plants, $1.50 per doz. Price list free. F. A. TOMKINSON, Blue Anchor, N. J.

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To offer for Spring—While they last, will sell
First-class, 2-yr..... 5-7 ft., 20c. each, 100 for $11.00
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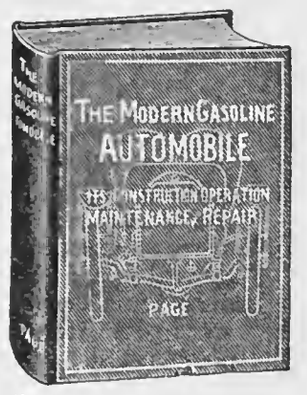
Its construction, operation, maintenance and repairs. By Victor W. Page. 6 x 9. Cl. 693 pp. Over 400 ills.



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The Sweetest Sweet Corn
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can be raised by planting Harris' Pocahontas and Buttercup (Yellow) Sweet Corn and Harris' New Extra Early Earliana Tomato.
These are only two of the many superior varieties of vegetables we have developed on our seed farm. Our Catalogue tells all about them.

Harris' Farm and Vegetable Seeds
raised at Moreton Farm are bred as carefully as pure bred live stock and therefore produce crops of uniform type and high quality.
We are Seed Growers and Sell Direct to the Planters at Wholesale
That makes our prices low considering the high quality of the seeds. Ask for our catalog, and if you grow for market, our market gardeners price list also.
JOSEPH HARRIS CO., Box 93, Coldwater, N. Y. HARRIS SEEDS

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at the great Cornell Potato Show held at Ithaca, N. Y., during Farmers' week, Feb. 9-13, 1914, were entered in but six of the nine classes and won 34 Ribbons and two special First Prizes, thereby winning more prizes than all other exhibitors combined. Competition was open to all Potato Growers and to all Seedsmen.
Dibble's Blue Ribbon Seed Potato also make good on the farms of our customers, hundreds of whom have written us that Dibble's Seed Potatoes have doubled their crops. We are

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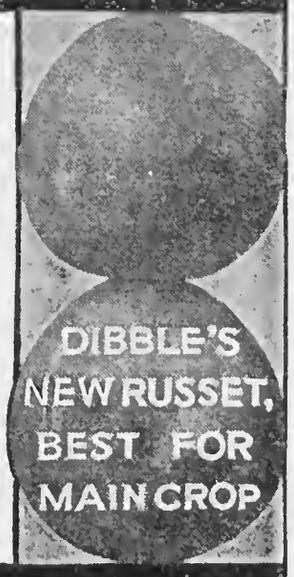
32 varieties, best early, intermediate and late. 60,000 bushels in our own frost proof storage, northern grown, from selected stock seed, in any quantity from barrels to carloads and prices as low as $3.00 per barrel with special quotations for large quantities.
ALSO FULL STOCKS OF
Alfalfa, Clover, Timothy, Corn, Oats, Barley, Etc.
Dibble's Farm Seed Catalog and ten sample packages Dibble's Farm Seeds Free to every farmer.
Address, Edward F. Dibble Seedgrower, Honeoye Falls, N.Y. Box B



FROM OUR FARMS TO YOURS

Farm Management.

KEEPING FARM ACCOUNTS.

If observation and investigation conducted over a period of 30 years are worth much it will indicate that not over one farmer in one hundred has any systematic method of keeping his accounts. Occasionally I have found one who keeps account of his receipts. He may possibly keep a record of the amount he pays his hired man, or the contractor on his new barn, but the chances are that he does not. When the day of final settlement comes there is argument and disagreement, and sometimes a lawsuit. I was recently called to help settle a dispute between a farmer and a contractor over the building of a barn. A contract had been written in which wages by the day at $1.75 to $2.50 were mentioned, but no classification of the workmen was made, and the contract price of $345 for the building of the barn, which is 44x70 feet with nine-foot basement and 18-foot superstructure and a curb roof was also mentioned; possibly with the idea of making it optional with one of the parties to make a choice, but no choice was mentioned, and neither party had signed the contract. A set of blue prints were made and the work was done very nearly as indicated by the prints. The carpenters did some extra work and the farmer and his sons assisted the carpenters to some extent. Some changes were made in the original verbal agreement. The farmer advanced money to the contractor until he considered that with the work he had done he had paid fully enough, but the contractor considered that he had done much extra work that had not yet been recompensed, so he threatened suit. Neither one had kept any book accounts. Each depended on his memory for necessary data. The case was so complicated that the attorneys consulted felt that a compromise would be the best method of settlement, and three carpenters of wide experience were called in to assist. After a careful examination of the building and without any consultation each placed his estimate on a slip of paper and the three estimates were within $21 of variation. A settlement was soon effected. Had each kept an account a settlement might have been effected with less trouble.

Now that each person must present the details of his income for the inspection of the Internal Revenue collector for the purpose of satisfying the income tax law it is absolutely necessary that everyone should be prepared to give exact figures, and these can be obtained in no other way except by the careful keeping of accounts. The Internal Revenue agent who will accept mere guesswork in this matter more than one year is absolutely unfitted for the office he holds. The man who does not have complete records on which to base his report will be found making oath to a falsehood. Let no farmer, or for that matter let no man who desires to be classed among honest and patriotic citizens, be without a perfect set of account books carefully posted for the year 1914.

The writer has been keeping careful accounts for more than 40 years and it was the work of only a few hours for him to fill out his statement to the revenue agent, for the exact figures were available for the purpose.

I know two brothers who lived on adjoining farms and exchanged work more or less for several years. Finally they decided to setle up the accounts, which were recorded on the tablets of the memory only, and each accused the other of dishonesty. It lead to an estrangement that has never been healed. This should not have occurred if each had made it a rule to record the date of each transaction with the character and value. My books have saved the necessity of paying a number of bills the second time. One merchant sent me a statement of several purchases which he alleged I had made, and it became necessary for me to show him from my books that I was not in the city on the dates he gave. Neither was any member of the family in the city on those dates. Another sent a statement of account and I had to show him his receipt for payment of the identical bill. A carefully kept set of accounts will save any man money every year of his life.

JOHN L. SHAWVER.

Saving You $220

On Reo the Fifth

This year we offer you a saving of $220—of 16 per cent.

The 1913 Reo the Fifth sold for $1,395, completely equipped, including electric starter. This years' car, even better equipped, sells for $1,175.

Tires and electric starters both cost less this year. But most of this saving comes through factory policy.

Three years ago Mr. R. E. Olds built this great chassis as his final car. And he said that it marked his limit. Many thousands of these cars have been sold since then, and against each car we made a charge to cover all the machinery we bought to build this car.

Now that investment has been all wiped out. We now figure only factory cost, and the saving goes to our buyers. That is one result of building one perfect car and confining our output to it.

Streamline Body Electric Starter

This year we adopt the streamline body, which is now European vogue. This beautiful body is the coming type. The angle dash is going.

We use the best equipment made for electric starting and lighting. In every way the car's equipment is modern and complete The finish is perfect. The upholstery deep and rich.

And this car alone has the one-rod control. No levers in the driver's way.

A Costly Car

Reo the Fifth is famous as an honest car. It is built throughout in a careful, costly way. We add in these ways to the necessary cost about $200 per car.

The steel is twice analyzed. Our materials are made to formula. Our gears are tested in a mammoth crushing machine. Each driving part, as a margin of safety, is given 50 per cent over-capacity.

Each engine gets five long and radical tests. Close-fitting parts are ground over and over to give utter exactness. Nothing is ever hurried

We use 15 roller bearings. We use 190 drops forgings to avoid risk of flaws.

Cars of this model are kept running night and day, covering thousands of miles, to reveal any possible weakness.

The result is the utmost in a well-built car. An almost trouble-proof car. Small cost of up-keep. A car built to run for years and years as well as it runs when new.

No car in this class compares with Reo the Fifth for a man who buys a car to keep. Thousands of men now know this.

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Reo Motor Car Company, Lansing, Mich.

Canadian Factory, St. Catharines, Ont. Canadian Price, $1,575.

Reo the Fifth

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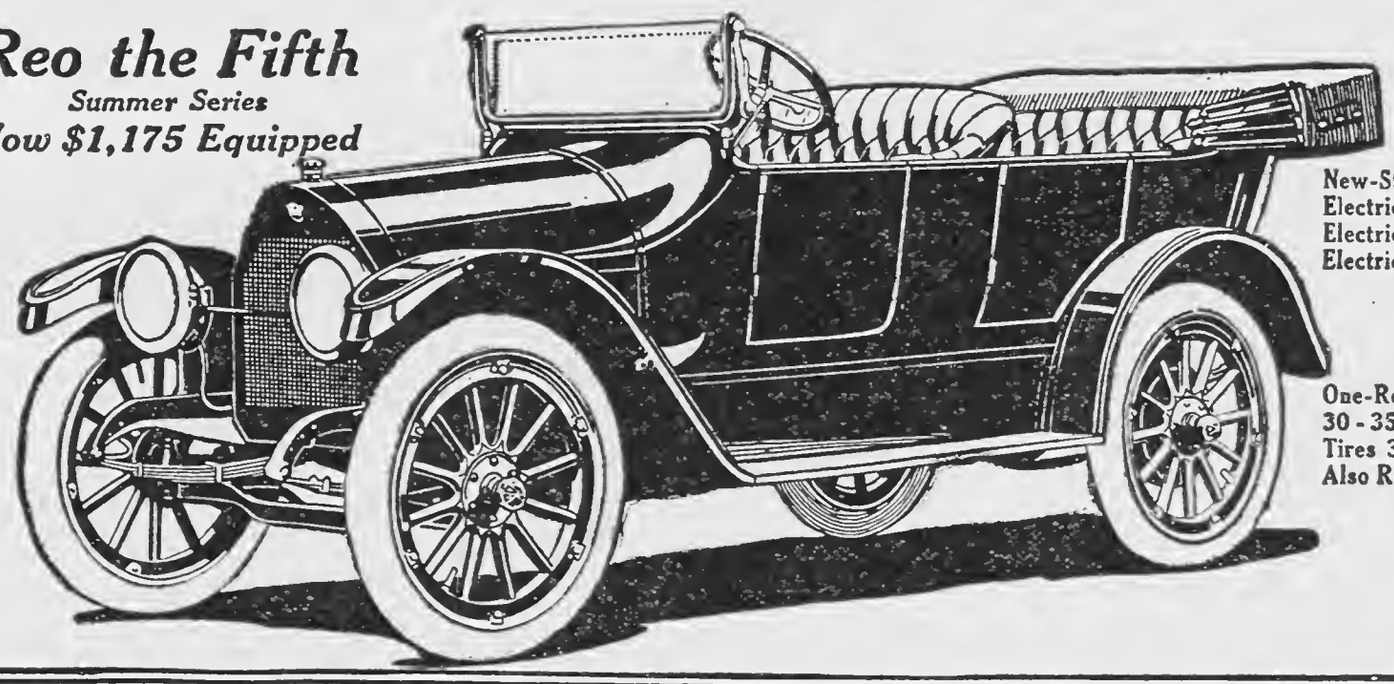
Now $1,175 Equipped



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Electric Lights
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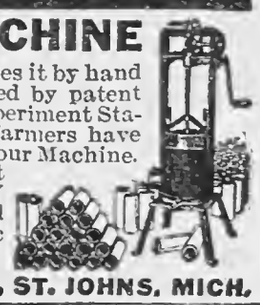
THE FARMERS' CEMENT TILE MACHINE



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A riding plow looks good to a farm hand and you can turn any walking plow into a sulky with a

WINNER PLOW TRUCK

Write today for our special introductory price in new territory. Get the truck. Give it 10 Days' Use. If you are not satisfied return the truck. We will return your money and pay all the freight. Put it up to us to please you. Do it today.

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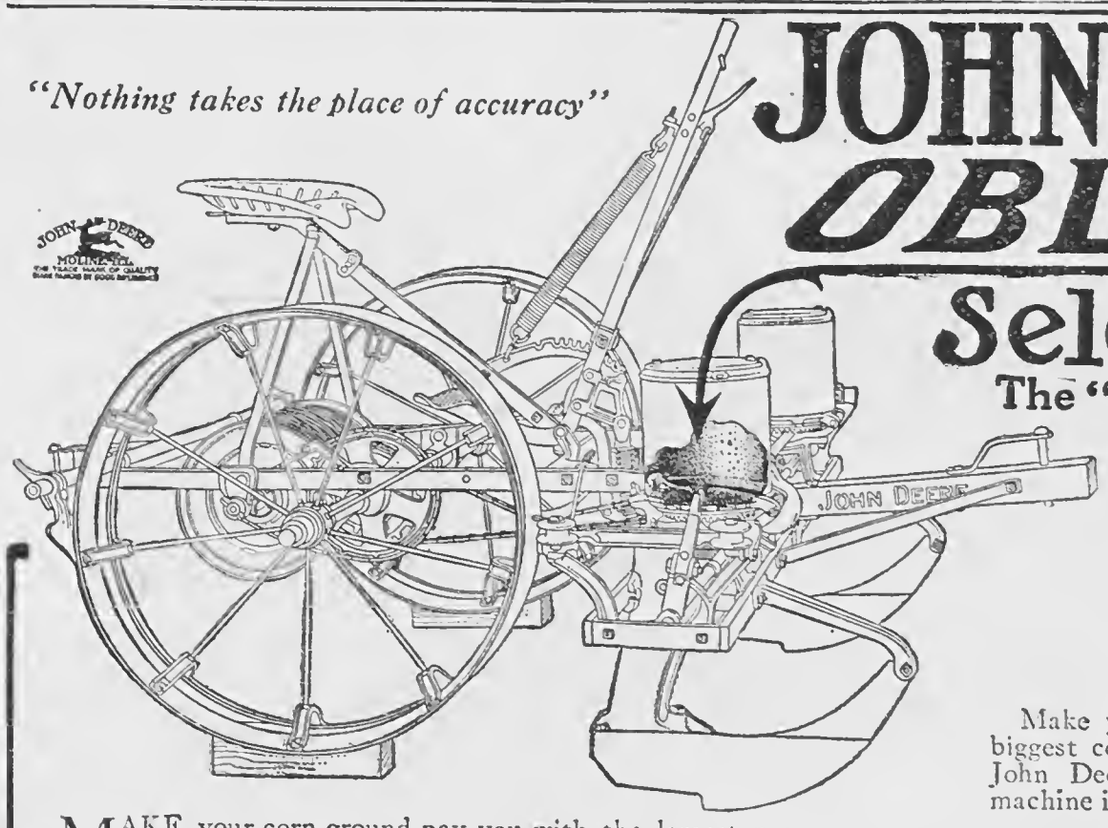

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The "Natural" drop

This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

MAKE your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D 33

John Deere, Moline, Illinois

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The kind of plant food required in your soil depends on the kind of a crop you are to raise. In order to make your garden produce its maximum yield at the lowest cost for fertilizer you should supply only those elements which are immediately available and which will be absorbed by the plant.

Consumers Brands

For Gardeners, Fruit Growers, Florists and General Use

Comprise special distinct compositions of plant food elements for vegetables, small fruits, root crops, flowers, greenhouses, lawns and tree-crops. They supply only the constituents your particular soil needs for some special crop. For example our

Early-Crop Odorless Fertilizer

supplies your soil with the four plant food elements in immediately available form needed by vegetables and small fruits for quick growth and early maturity. It is the most effective and convenient fertilizer you can apply for such crops and in the end—the most economical.

Write today for prices on any quantity and for our *free* Fertilizer Booklet—it is full of valuable information and is as valuable as a text-book on soil fertility.

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Our Mak-Gro Odorless Plant Food is a clean, high grade granular fertilizer for indoor and outdoor use on potted plants, flower beds, small fruits, lawns and small gardens. It is *made especially for the amateur* and is pleasant to apply. We will mail a five-pound bag to any address for $1.00 or quote prices on larger quantity. Write today for special circular.

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BETTER FERTILIZER--LESS MONEY--NO USELESS FILLER

If you can mix Cement you can mix Fertilizer

1100 Bushels Potatoes per acre yearly, Guernsey, Channel Islands
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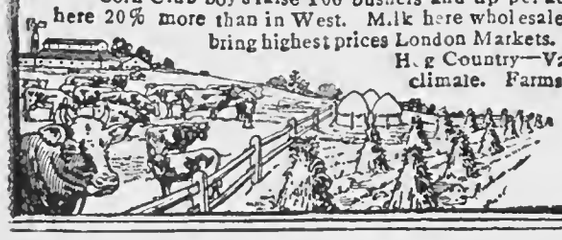

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Farm Management.

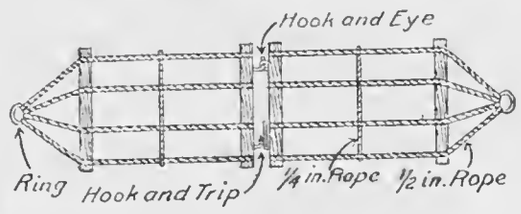
Unloading Hay.

Regarding hay unloading by horse power I find slings the finest of all unloaders for all kinds of hay and grain. For unbound oats they are perfect, as it is almost impossible to use anything else in unloading loose oats which are of short straw.

I purchased one double sling of the largest size, six feet wide and long enough for 18-foot rack, and from this

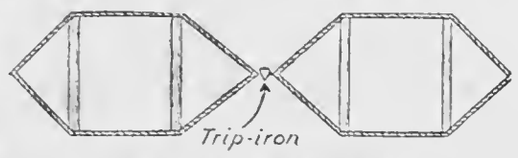
ARRANGEMENT OF BOLTS AND STICKS.

pattern I made three more, buying three sets of trip irons to put on those I made. This makes four sets of slings which are enough to unload any load two horses can draw to barn. In buying slings one must also buy a sling car but if he has a car and does not care to buy a new one, a special sling pulley can be bought that will work on any car, but these pulleys cost $3 and are very unhandy.



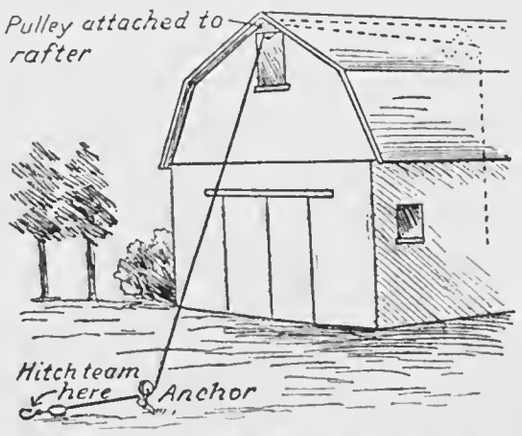
SLING THAT WORKS WELL.

Slings not only leave the hay-rack clean but put hay, etc., into bay in such a manner that it is much easier to handle and mow away than from a hay fork of any kind. By getting one set of slings any handy man can from this pattern make any number of slings for less money and have a better sling, as the ropes in ready-made slings are not as good as ropes you can get at any hardware store. You must remember of



WRONG KIND OF SLING.

course to buy the desired number of trip irons. My slings for my 16-foot rack take about 80 feet of one-half inch rope and 20 feet of one-quarter inch; for the wood parts four sticks six feet long and 2x2 inches square of sound straight-grained basswood. Get two half-inch iron rings about three inches in diameter (one at each end of slings). The above is for one sling, for three slings three times the above would be needed. Each sling takes 16 quarter-inch bolts, about four and one-half inches long to bolt ropes to sticks, staples are not satisfactory. Take these bolts, cut off heads and bend over into a square hook which



HOW THE DEVICE WORKS.

will hold ropes very secure. Here is a rough sketch of slings. Hook and eye and hook and trip are the set of trip irons mentioned and cost about $1 per set. Do not get the second sling as shown above, as they will not handle loose short oats very well.

My barn is 40x50 and 38 feet from floor to peak, and has a window in peak at each end through which I pull instead of having hay rope come back down to barn floor. This method takes less hay rope and you get a more direct pull, as shown in the cut. As said before it takes less rope and you have a more direct pull, but it also does away with flying pulleys which have been known to kill men, for if your pulley should break in peak of barn the window sill would catch it immediately. F. J. H.

Farming on Shares.

Can you give me some plan of how to work a farm of 140 acres on shares? The owner wants a married man, either on salary or shares. The owner has two or three horses, wagons and harness. The farm has been worked by a man who furnished his own tools, and got half, but the owner is not satisfied with his work. As he bought this farm but a year ago, he has no tools and stock, but would like to furnish tools, horses and cattle. I have no tools nor stock; have been working by the year. I would take one-third of all raised and sold on farm. He thought of putting on some feeders, but I said I preferred milch cows, as there are about 30 acres of pasture, with flowing water, and can send milk to cities (car stop about three-quarters mile). I thought about eight or 10 cows could be kept and we both could realize some cash every month. Myself and boy, 15 years old, can do good part of the work until harvest; then I would have to hire some help. I said I would take $600 and work it for him, but he would like to have me take it on shares and I would too. What kind of contract should be made as to shares, and who is to pay thrashing and pressing hay if any is sold? Would I have to feed my share of corn and fodder to the cows, also hay and oats? C. S.
Ohio.

Where owner furnishes all the equipment and live stock, seeds and fertilizers, one-third is usually given for the tenant's share, varying somewhat according to the value of the equipment and the condition and state of cultivation the farm is in, as the owner of a run-down farm, poorly stocked, would have to give more than one-third for the labor. As to the thrashing and baling hay it would seem in this case that the owner should pay those bills, but the tenant should board the thrashers and pressers, and of course pay all the extra help. The stock should be fed from the undivided fodder and grain, and at the expiration of the lease as much should be left on the place as owner furnished before crops are harvested. The surplus may then be sold. In this case as the prospective tenant knows the place, he can estimate what he can reasonably expect to realize from it and the terms he considers necessary may become a part of the lease. A written lease should be drawn for the protection of both the contracting parties.

W. M. K.

Septic Tank Again.

Can a closet be made in a farmhouse to empty in a septic tank and work well? Can all the connections be done by home-labor? This place is in Northern Putnam County on the outlet of two lakes with water controlled by the city of New York. The outlet from these harbors run right through our farm, and is about 250 feet from the farm building. The city has taken the land about 200 feet wide on each side of this outlet, and the house is within 75 feet of the city land which the highway divides from us. No descent in any way but to the city's lands. The outlet from the kitchen sink went under the highway and emptied in the city land, and last year we had orders to build a cesspool for that outlet on our own side of the road, and did it. Can we build a septic tank on the other side of house and can that be allowed to discharge across or into the road? As I understand the overflow from a septic tank is not injurious. I. L. B.
Mahopac Falls, N. Y.

Any water closet may be connected with a septic tank, but the latter cannot, of course, be operated in connection with ordinary dry closets. The best method of disposal of the effluent from a septic tank is through a system of tiling laid beneath the surface of the ground, and it would seem probable from your description that such a system might be installed between your house and the city's land. It is preferable that the lines of tile should not greatly exceed 50 feet in length and they should have a fall of one-sixteenth inch to the foot; if given much greater fall than this, the discharge from the tank would at once rush to the ends of the lines of tile instead of seeping out throughout their length. The grade between your house and the road may be such as to make it impossible to secure this moderate fall. The tank itself may be placed as close to the house as is necessary. If a filter bed is constructed to purify the effluent from the septic tank, discharge from that may be safely disposed of in any running stream, or upon the surface of the ground, though the city might not permit this upon their land. The discharge from a septic tank is not innocuous until it has been passed through a filter bed, or purified in the surface layers of the soil.

M. B. D.

NEW YORK STATE NEWS.

INSPECTION WORK.—The inspection work of the Department of Agriculture is one of the chief activities of that department, and it is highly important. In its relation to "pure foods," of which so much is said these days, these inspections are of vital concern to all. To illustrate something of the work done by the department it may be interesting to know that during the first two months of the present fiscal year, October and November, agents of the Department made food and sanitary inspections in 716 cities and villages outside Greater New York, which included 1,971 of food, 9,000 of milk, 360 of veals, 307 of oleo, etc. The total inspections numbered 4,676. During the same period in Greater New York 2,426 food inspections were made, 3,500 of milk, 1,459 of veals and 2,855 of oleo, making a total for the entire State of 10,545 inspections.

APPLES IN STORAGE.—Not all the apples of the United States are grown in the Hood River country. Western New York districts, the apple belt of the Empire State, at this writing have in storage about 517,000 barrels and 25,000 boxes of apples. It is to be remembered that the bulk of the crop has been marketed several months prior to this. There are 78,000 barrels at Albion, 67,000 at Lockport, 64,000 at Medina, 46,000 at Leroy, 45,000 at Gasport, 41,500 at Holley, 34,000 at Brighton, and so on. The 25,000 boxes are at Canandaigua.

ANOTHER HOLSTEIN CLUB.—The Holstein breeders of Allegany and Steuben counties have organized a local Holstein-Friesian association with 60 charter members. They represent about 3,000 head of the black and white cattle. E. E. Poole of Alfred, is president; A. L. Spencer of South Canisteo, secretary and H. L. Stephens of Greenwood, treasurer.

LARGE APPLE SALES.—Barreled fruit has been in demand in Wayne county this month. Addison Weed of Rose sold 2,000 barrels for $10,000 and W. H. Cole 10,000 barrels for $45,000. Williamson and East Williamson are great shipping centers. From the former place there have been shipped this season 1,535 carloads of fruit and vegetables and from the latter place 797 cars, making a total of 2,332 cars from one township. Of these shipments about 800 carloads were apples.

MILK COMMITTEE MEETS.—The committee recently appointed by Gov. Glynn to inquire as to the desirability of new legislation regarding the production and distribution of milk and its proper inspection, held its first meeting February 16. A majority of the committee was present and elected Commissioner Huson chairman and W. N. Giles secretary. It was decided that public meetings should be held by sub-committees on the questions of production, distribution and marketing of milk and at the following places: Buffalo Chamber of Commerce Feb. 24; Rochester Chamber of Commerce Feb. 25; Middletown Grange hall, Feb. 26; Sidney town hall, Feb. 27; Syracuse Court House, Feb. 27; Watertown Chamber of Commerce, Feb. 28; and at Albany at a date to be announced later.

THAT TRACTION ENGINE BILL.—Commissioner Carlisle talked to representatives of the Brotherhood of Threshermen the other evening at Rochester and advised them to bring their complaints and wishes to Albany. His opinion seems to be that a weight limit for engines should be established that would permit the use of the old cleats on the lighter engines and make flat cleats compulsory on the heavy machines that really do the damage.

STATE RURAL CREDITS.—Another step has been taken to give the farmer the benefit of easier loans. Assemblymen Fish introdueed a resolution that laws should be enacted which would provide ample funds in banks in rural communities for loans to farmers; facilitate the "procuring of proper securities by any person engaged in agriculture who is found to be thrifty and honest "though of scanty means"; provide for a low rate of interest on such loans, and provide for postponing to the utmost possible limit the forced sale of property pledged or mortgaged by a farmer to secure a loan which he has failed to repay through circumstances beyond his control.

GRANGE TO INCORPORATE.—Gouverneur Grange is agitating the question of incorporating and building a new hall. The Grange has a membership of about 420 and it is increasing monthly.

HIRED HELP FOR THE FARM.—Commissioner Huson states that there are a large number of men familiar with farm work who are making application to the Department for employment. Many of these men have drifted to the cities from farms but as work is slack with the manufactories just now they have been thrown out of employment. Farmers who will be in need of help in a few weeks are advised by the Department to take advantgae of the present opportunity to secure help as later it is likely to be scarce. While wages are only nominal just now, in March and April the usual prices will doubtless prevail, and good men can be had at about $20 or $25 per month. The Department is receiving applications from men with families who want to work on farms and among them are many good immigrant farm laborers. It would seem to be a wise thing for farmers who know that they will require help by the month ere long, to avail themselves of the present opportunity to get it. J. W. D.

HABITS OF GEESE.

Geese are naturally monogamous, but association with man has blunted their moral sensibilities and they are easily persuaded to adopt polygamy, but if one wishes for the best fertility of the eggs, not more than two geese should be allowed with one gander. The mating by separation from the other geese should be done in the Fall and they should be kept apart till Spring. After they have become thoroughly mated they may be allowed to run with the rest of the flock, unless one wishes to remate one of them, or an unmated gander attempts to alienate the affections of some matron.

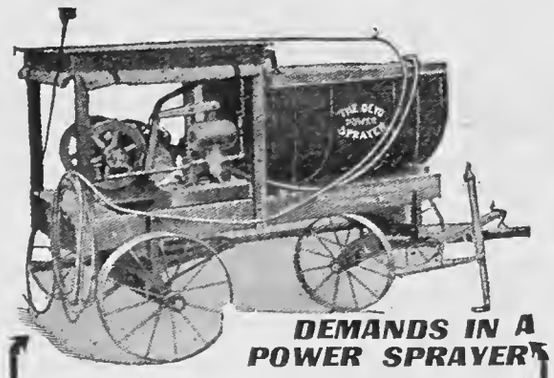
Geese will choose some quiet nook or corner for a nest, and if a low box or other receptacle be provided in the pen it will usually be occupied and, once used, will be the nest for the season. The eggs should be collected as laid, kept in a cool (not cold) place and turned daily. The first clutch of from 12 to 20 eggs should be set under hens, or in an incubator. When the goose becomes broody she should be placed in a small, dark enclosure and given water but no food for two or three days. Upon release from solitary confinement she will soon get busy and lay a second clutch of eggs. A goose can frequently be induced to lay three sets of eggs. She should be allowed to sit on the last clutch. Incubation requires 30 days. It is recommended by some that the eggs be placed for about one minute in water heated to a temperature of 104 degrees Farenheit, when they have been incubating 25 days. Upon hatching the young ducks should not be fed for 24 hours. Their first food would consist of mash, slightly moistened, and plenty of grass on the sod, which they will pick for themselves. Some feed a mash of cornmeal, some rolled oats. Later bran, middlings, cooked vegetables and meat scraps may be added. A little fine grit and a pinch of salt should be put in all mash. A handful of ground charcoal added to the mash occasionally will help keep the goslings well.

By the time they are a week old goslings need no hovering by a hen in ordinary weather, and may be allowed to run as they please during the day. Of course at night they should be penned up. At all times they should have access to growing grass, and they will feed on it till their necks are stuffed almost to their heads. This will be digested during the night, and turned into meat that will compare favorably with any that is put upon the table for dainty digestions. If any are to be killed at 10 weeks of age they should be confined in small pens when eight weeks old, and fed on mash that contains more cornmeal than their ordinary food. Great care should be taken not in any way to scare the fattening birds. Every fright means a loss of weight, fat and profit.

The birds that are to be kept for breeders, or at least till cold weather, need little feed but grass. A feeding of corn at night will attract them to their house or pen, where they will be safer than in the open. If one is breeding birds for exhibition, or wishes them to attain the maximum size, he will of course see that the growing geese get an abundance of feed. Young Toulouse geese from standard weight parents may be fed to a weight of 20 pounds by Christmas. As cold weather approaches geese should be fed more corn than is needed earlier in the season. As the breeding season comes on the amount of corn should be decreased to prevent an overfat condition that would interfere with egg-laying and fertility.

Geese should have a dry pen at night, especially in cold weather, with protection from storms, but will prosper in less elaborate quarters than almost any other domestic bird. They are remarkably indifferent to atmospheric conditions, spending the day out of doors in the severest weather. The small amount of feed that suffices to keep geese in good condition and contented, makes them the most cheaply kept birds on the farm.

W. H. HUSE.



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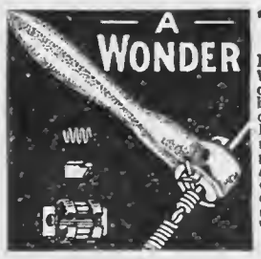

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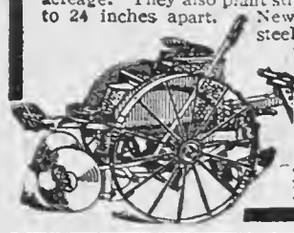

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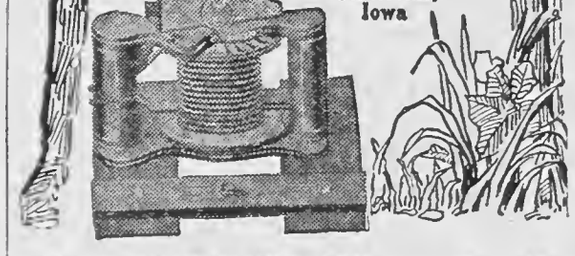

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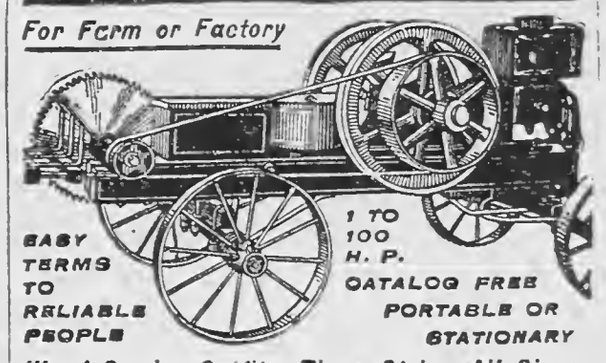

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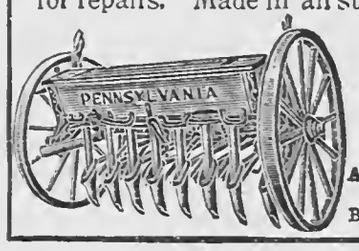

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PUT a 1914 Harvester side by side with any Hay Carrier you've ever considered—you'll buy the Harvester. It's twice as big and two times as heavy as ordinary fork carriers. It handles with ease loads that would soon put the ordinary type of carrier out of commission. Don't buy *any* Carrier until you know ALL about

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CROPS AND PRICES.

The Winter has been very changeable in this section, temperature as high as 75 degrees and down to four below zero. There are many sales of farm stock. Farmers are still well supplied with corn and hay. Not many of the best breeds of cows are kept. What they call good cows bring from $50 to $75. Hay, Timothy, $15 to $17 per ton; potatoes, 70; dressed chickens, 17; live, 14; eggs, 30; milk, $1.80 per 100 pounds; calves, 10; hogs, 11. This is quite a tobacco country, and the acreage is nearly that of wheat. Prices good, 8½ cents. Many silos; some are raising good stock of calves. Good farm horses, $95 to $225. Not many raising Alfalfa, but are talking and inquiring about it; beginning to use lime, and are asking about the burned lime and the ground limestone. Some very good roads, but many very bad. Not many farms for sale. Farmers are talking and seem to be interested in up-to-date agricultural matters.
Honey Brook, Pa. T. H. G.

At a sale recently, young horses brought $150 to $193, western horses $150 to $250 or more. Fresh cows bring $60 to $125; pigs $7 a pair. Corn 65 to 71; oats 45 to 57 for 32 pounds; wheat 95; potatoes 80; butter 31 cents wholesale, 34 retail; eggs 35. Chickens, live, wholesale, 14 to 16½, wholesale dressed 16 to 18; retail 20 to 22 dressed. Hogs dressed $11 cwt; fat good cows, $6; bulls $7; steers $8 cwt. Loose hay $10 to $15, bale $12 to $17. Bran $29, gluten $32; wheat middlings $31; oil meal $36. Apples have been nearly a failure the last two years. W. H. H. S.
Doylestown, Pa.

Butter 32; milk 16 cents per gallon. Milk seven cents to family trade. Cows from $60 to $120; calves 10½ cents per pound live weight; heifers $40 to $50, yearlings; fat beef 8 to 8½ cents, live weight; grade stock bulls, yearlings, from $25 to $40. Pork 10 cents dressed. Good draft horses from $250 to $275. Apples 50 cents per basket; cranberries 20 cents a quart; celery three to eight cents a stalk. Celery hearts 25 cents a bunch. White potatoes 80; eggs 34, strictly fresh. Onions $1.25 per bushel; lettuce 10 cents per head; cabbage five to seven cents per head; sweet peppers two for five cents; carrots five cents per box; turnips 60 cents per peck; chickens 18 cents, live weight. Wheat 90 to 93; rye 75; corn 70; corn ears, per ton $17; oats 45; bran $1.35 per cwt.; middlings $1.50; rye middlings $1.30; mixed feed $1.40 to $1.70; corn chop $1.40; gluten feed $1.55; oil meal $1.90; cottonseed meal $1.80; flour, best patent, $2.60 per cwt.; pastry flour $2.30 per cwt. Hay, (Timothy and clover), mixed $18 per ton. The prospects for the coming harvest are not very good, as the ground is bare and the temperature some days is very warm and then cold again. The ground had all the frost out a few days ago, but at this writing it is frozen all over again. We had very little snow this Winter so far.
Northampton Co., Pa. E. J. C.

Horses will range from $150 to $225 as to quality; cows $80 to $100; veal calves 9½ cents per pound; fat cattle seven cents; heifer 800 to 1000 pounds, about 6½; hogs from seven to 8½, as to size; sheep, Spring lambs, $6.85 per hundred; western, about $5; ewes, about $4.50. Wheat 92; oats, about 36; corn 65; rye 80; Timothy seed $2.50 per bushel; clover $7.50; hay, No. 1 Timothy $13 No. 2, $11; No. 2, clover, $12.50; rye straw $7; wheat straw $6; butter 26; eggs 25; chickens 14; geese 13; turkeys 18. Potatoes 80; apples $1.25; onions $2 to $2.25. E. C. B.
Danville, O.

The peach and apple buds are quite some size, another week as moderate as the past two weeks and lots of the buds would have opened. But at this writing, February 8, the thermometer registers 32 and last night 24. The cold snap started February 6, with a cold rain and snowed through the night and part of the morning, then rained and cleared off cold. There is quite a lot of speculation regarding the crop of peaches and apples among the growers. J. W. K.
Magnolia, Del.

New corn has sold as high as 63 cents here, and as low as 53 cents since husking. Oats, 33 to 37 since thrashing. We in Iowa are short of an average crop of corn; 30% oats; about an average crop. Winter wheat better than average, but not as large as 1912, when some wheat went higher than 50 bushels per acre. Land here sells from $175 to $225 per acre, so you see we have to raise some crop to pay any dividends on investments.
Waukee, Iowa. H. S. S.

We have had genuine Winter weather for the week past; mercury has been at zero most of the time, but reached 20 deg. below one night. Snow is about six inches in depth where the wind has not moved it. A few are hauling logs and wood to town. Considerable hay remains unsold. Stack hay brings $8 and barn hay $10 per ton at the farm. Cows coming fresh bring $50 to $75 each. The ice companies around Chautauqua Lake are conducting the ice harvesting at the full limit. P. S. S.
Mayville, N. Y.

FARM ENGINEERING.

Kinks in a Rope

Will someone tell me how to treat a new hay-carrier rope so it will not kink and will give the best service? C. M. W.
Winterton, N. Y.

This was discussed two years ago at some length in THE R. N.-Y. Several persons advised boiling the rope hard for half an hour, which they said would prevent the kinking. Others suggested coiling the rope to the left, then putting the end down through the coil and coiling again to the right. In other cases the advice was to pull the rope out first on the carrier with the horses turning to the left, and then to change them a few times with a turn to the right. In this way it is said the kinks will be straightened out.

Dissolving Pitch; Freezing Pipes

1. I have two barrels of pine pitch; I would like to use it as a shingle dip. Can you tell me of anything that would make it in a liquid form, so that it would not get hard when cold? I tried coal tar. I could not keep it mixed, the pitch would get hard in a few minutes and sink to the bottom. 2. I have cold and hot water in my house. In a very cold night the hot water pipes freeze, the cold water never freezes. Both pipes are protected from the cold alike. Can you explain the reason? A. S.
Nova Scotia.

1. Spirits of turpentine, coal tar naphtha or benzine should act as a solvent for pitch. I would recommend trying the benzine. 2. We have never seen this explained. There may be several explanations. In the first place the hot water is under less direct pressure than the cold, as will be seen by comparing the force of the streams when the taps are opened. This would allow it to freeze sooner. Secondly, the hot water is constantly in gentle motion due to convection currents, while the cold water is practically quiet. Hence the hot water would freeze sooner. Thirdly, much of the air in the hot water has escaped, thus facilitating the freezing process. R. P. C.

Preventing Frost on Glass.

What can I put on glass in a covered wagon to keep the frost off? On cold mornings the frost gets so thick that it is almost impossible to see out. I scrape it off and then it freezes over again. I carry a lantern inside, but it does not help much. C. P.
Geneva, Ohio.

Heat inside will not help much unless it is sufficient to keep the glass dry. Ventilation below the window, allowing cold air from the outside to rise over the surface of the window on the inside, will help, but better than that, a mixture made in the proportion of one ounce of glycerine to one pint of alcohol when smeared over the glass will prevent both steaming and freezing or sweating either. If desired, a little oil of amber can be added to improve the odor. R. P. C.

Pumping Problems.

I have a couple of problems to solve, and would like a little help with them. 1. How large should I make an open V-shaped trough to convey water to my garden, at the maximum rate of 90 gallons per minute on a grade of three-sixteenths-inch to the rod? 2. How high is it practicable to lift water with a pitcher pump, at this altitude? Surface of water in well is 3,649 feet above sea level, according to U. S. Geological Survey. C. H. J.
Helena, Mont.

1. If the angle between the boards forming the V-shaped trough is a right angle, a trough with inside length of each side of the V equal to 10¼ inches will supply 90 gallons per minute when running full under the conditions you mention, provided plank is used for the trough. If planed wood is used, the sides need be but 10 inches. 2. A pitcher pump in good condition ought to lift water 20 feet up there. R. P. C.

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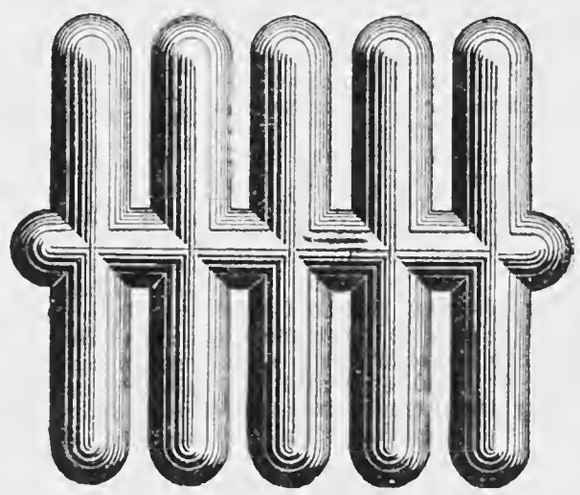

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32 x 3½	16.75	18.10	3.70	36 x 4½	35.00	37.10	6.45
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THE LAND OF FULFILLMENT

A STORY OF HOMESTEADING

By ROSE SEELYE-MILLER

CHAPTER III.

The Lure of the Land.

Still coughing harshly, Nate bent over his prostrate friend, striving to find his heart, his breath, and to roll that great recumbent body over to an easier position.

"Stop that coughing! Haven't I told you a thousand times you'd better give it away?" Norm's voice was fretful, irritable, but the voice of an angel could not have sounded more satisfactory to Nate.

"Glory!" cried Nate, "Glory, I'll do anything on earth to please you—but that. I can't quite-quit this habit yet—to please even you." Nate managed to gasp out. "Are you sure you're alive?"

"I guess so. Where are we anyway—I can't seem to quite remember," and Norm raised himself on his elbow, and looked down on his long length of limb lying by the splintered tree. "Oh, I know—the lightning struck the tree. I guess I couldn't have been struck much, just knocked silly for a few minutes. Where's the gun? Is it all blown to flinders?"

"I hope so!" Nate declared emphatically, if you haven't any more sense than to hunt in a storm like the one just passed over. Can you move?" Nate was prying at Norm's impassive form, for he had not yet tried to get up. "If you have any idea where we are and can get back to camp, we'd better do it. The oxen pulled up stakes and went away, and the grub came mighty near getting a washout. I'm no woodsman, and no good at anything." Nate's voice trailed away into tremulousness. Some way the shock of his fall, the wound on his head, and more than all, his terror for Norm, had about unnerved him.

"Whew!" said Norm. "We do seem to be up against it, I haven't any sense of direction left, if we find the camp it will be an accident, but we may as well sally forth and mosey on," Norm finished whimsically, for the tenseness of the situation needed relaxing.

"How did it happen?" Nate asked, following close on Norm's heels.

"I don't know. I had been walking along hunting for squirrels, and I had just aimed at my last one, when there came a terrific shock, that tree went crashing down, my gun flew into space, and I just toppled over too, I 'spose. I hadn't noticed that it had been clouding, I thought it was getting dark, and I was just about ready to start for camp."

"I wish you had started, and got there," Nate said warmly. "If we can't have better luck than this we'd better wait till the clouds roll by."

"If we can't find the camp, we'll have to find a sheltered place and make a fire; I guess I've got some matches."

"I don't know where you'll find a dry place," Nate replied, pessimistically, and even as he spoke, he lost his footing and sank down, down, down.

Norm, who was a little ahead and to the right of Nate, failed to hear the crackling of Nate's footsteps behind him and turned to see what the matter could be. "Nate, Nate, Where are you?" he called, "NATE!"

"I'm here," came a muffled voice, that sounded faint and far off.

"Where?" Norm's voice was incisive.

"Here, here, here!" Nate kept calling." "I've fallen through into some kind of a hole. Watch out that you don't fall too."

"Hurt any?" Norm asked, cautiously approaching the place from whence issued Nate's guiding voice.

"No, not hurt. Here, I'll strike a match, so you can see where you are." The match flared up feebly, but the little spot of light showed Norm the opening through which Nate had fallen. He stretched himself carefully on the ground and crept to the brink of the hole. Nate struck another match, which revealed to Norm's woodsman's eye a small cave, and apparently not inhabited by wild animals. He let himself down into it.

"Talk about luck. If this isn't the best piece of luck that could have happened to us. All we have to do is to express a wish, and lo, the thing is done!" Norm spoke gaily, and he lit another match, caught up a piece of light wood, and finding it resinous, he touched the match flame to it. "A torch, of the most approved style!" he cried. "Now we'll see what's come to us!"

"Solid rock below," Nate approved.

"And a lot of dry leaves and litter for a fire." added Norm. "It's a good while since anything has been in here, for the leaves and litter had entirely covered the open space."

"Let's explore a little further," and Norm's torch flickered along the passage, showing an opening at one end, through which they passed; this revealed a larger space. The torchlight drew back toward the opening through which they had come, proving there was a draught, which would carry the smoke of their fire upward and out of the orifice.

Going back satisfied, Norm gathered leaves and litter into the middle compartment. "We can make a fire here, and have our whole bed warm, for the stones will heat up and keep us as warm and dry as can be."

"That'll be a comfort, for we're both pretty damp," Nate assented.

Norm touched a match to the dry stuff, and in a few minutes a grateful warmth stole over the cave. Norm threw off his game bag. "We may as well eat a little to pass the time away," he said cheerfully, and he drew out two squirrels and a grouse. "Which shall it be, quail on toast or squirrel on stick?"

"That which will cook quicker," Nate cried, catching up one of the squirrels and stripping off the skin, for he had learned to do that deftly. Both boys were feeling peculiarly gay, for the relief from tension and the sense of escape from death and separation made them by turns both gay and grave.

"If we miss your heart's desire in the West, we can come back here and start a stone quarry," Norm said looking around at the granite walls.

"Sure," Nate agreed. "All we have to do is to lift our hands or stamp our feet and the earth yawns beneath us, and spreads her bounty for the taking."

After the joyous feast was over, the boys lying near the genial warmth of the fire, talked long and gravely.

"Do you know," Norm said, "I believe if a fellow wants a thing long enough, and works hard enough for it, that it eventually comes to him?"

"If that's the case, I'm going to begin to want things hard."

"Oh, but you've not only got to want them, but work for them. You've got to keep yourself dry, and breathe deep, if you expect to get—what you want—and you've got to breathe deep, and eat decent, if you want to get to be the Strong Man," Norm counseled.

"I hate to be a 'sissy,'" stormed Nate, "always looking out for myself. I'd rather have a hand like a ham, and a skin like leather, than to be the finest pink dude in New York," he declared vehemently.

"Want it hard enough then," Norm advised. "Folks mostly always think their own troubles are the worst in the world. Before you came, I used sometimes to think life hard and bitter and lonesome. I had never really asked for a pal, or hoped for one, but I had wanted one, and wanted him fierce, and then—you came——" Norm paused.

"Do—do you think that—God had anything to do with it?"

"I hadn't thought—but if He's good—why not?"

"Maybe good things will keep right on happening," Nate said tentatively.

"If you get into the sunshine, you're bound to feel it—and if you get out of it, why that's one's own lookout," Norm was voicing his most sacred belief. "If we get into the mud—we're bound to be dirty—but if we keep out of the dirty things—of life—we're bound to get into clean ones."

"Well," Nate ejaculated slowly, "Well, then it's surely up to us—I wonder if I can hop to it."

If anything could have knit closer to the hearts of these two comrades, that night in the heart of the earth would have done it. Boys seldom speak of the deep things of life, but both Nate and Norm had been brought face to face with some of them, and the simple confession of Norm's faith, impressed Nate strongly, and Nate, quite unconsciously caught hold of it, and was lifted up and helped by it.

They woke to a dismal morning of gray clouds and a raw wind, gave promise of a steady rain. The ashen sun showing feebly through the sodden sky, gave them a hint of direction, and it was not more than half an hour after leaving the cave, before the camp was sighted, and at a little distance the oxen were grazing, dragging their picket ropes as they moved from one succulent bunch of grass to another. Norm tethered the oxen, and then they had coffee which Nate had made, partaking hurriedly of their breakfast.

"We're in for a rainy spell, and if we are to make any progress at all we'll have to fix some sort of shelter on the wagon. We'll take the lumber and build a little shanty, and nail it to the wagon, then we can eat or sleep, or live right on the wagon if necessary, and it will keep our provisions and supplies dry."

"I wouldn't wonder if I could hit a nail," volunteered Nate. "But I couldn't construct a pig pen to save my life." Norm went about unloading the lumber and cutting it into suitable lengths. It was not long before a very creditable, ark-like little structure loomed over the wagon, and the supplies were placed safely beneath its shelter. The oxen, fresh from their long rest, and rich feeding, and refreshed by the rain and the cool

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weather started off briskly, down the road that led to the Golden West, the Eldorado of many dreams.

A sodden, dismal, three-days' rain ensued, making the roads almost impassable, and not adding to the hilariousness of the journey. Beneath the shelter of the "coop," as they called it, the boys spent many happy hours talking of their past, their present, and most of all their future, making many plans, few of which would ever materialize, but all of which lent zest and interest to that hour, and left the mind better and braver for the antieipatory joy.

The country changed its aspeet. The trees became more and more scarce, and the hills less and less rugged, and as they progressed, finally merging into an even, billowing, splendid plain. At the beginning of the fourth day, the elouds lifted, and the sun shone out gloriously. A breath of bracing air as clear as crystal smote Nate's nostrils. He drew in long draughts of it, expanding his thin chest to its full capaeity.

"We've reached the heights," he exulted. "We'e got to the tall timber—the tall timber for muh!" he chanted ecstatically. And Nate jumped from the wagon, and knelt upon the sod, lifting his hat.

Norm was beside him, walking about briskly. "I believe we have crossed the line. Why, this is good, this is great, this is grand!" and Norm too knelt and began digging into the rieh earth. "Why, it's as blaek as mud and as rich as fruit cake. And to have it for the taking—to have it for the taking!"

"There's no end to it. See it stretching away, away into eternity!" exulted Nate, less drilled in the knowledge of the value of soil, was thrilled through and through with the vastness, the wonder, the glory of the plains.

"Ilo, ho, the lure of the land is striking into your soul. I knew it would—I knew it. No one can help loving the soil, if they are on it and with it, and for it, for a little."

"It unrolls like a great seroll of plenty," put in Nate. "Think of that land covered with grain, with cattle, with every kind of produce. I ean't get my share too quick! Sueh land! Let's hurry!"

"It's a hundred miles yet, before we ean file on land. I'd like to ship these oxen and stuff, and fly," growled Norm. "Some one'll get all the good land before we get there," pessimistically.

"It looks as though there were quite a lot of land left for settlement," Nate eomforted. "And the trail is as solid as macadam, no mud here, we can travel right along now."

Three days on the open prairie, three days on the windswept plains, with flowers blooming around them, with blue skies rising above them, with joy encompassing them, the boys went forward, and at the end of the third day they came in sight of a little city lying white and green upon the plains.

"Wetasket, the City of my Dreams," crite Nate.

"But not the Country of Heart's Desire, for there are no stones. It's all like a cleared field, with never a stump or a stone, a shrub or a tree, a hill or a ravine. If God had planned to make farming easy for man, He could not have made anything bettev than this—better than the Dakota plains."

That was Norm's verdiet, and while his years did not tend to give weight to his judgment, the experienee erowded into his 21 years did. He had seen life at its hardest, where tillable land must be wrested from old forests, where hardly a foot of free soil could be found, unhampered by stumps and tree roots, and often if free soil could be found it was dead with sand, it could hardly be eoaxed to produce a crop of grass.

On the outskirts of the city, canvas-covered wagons were in great evidence, lumber wagon, under which rested tired men; smart buggies, where, perhaps some pink-cheeked bride awaited the eoming of her new husband, who had gone to file upon land for their homestead. Deciding that this was the general camping ground, Norm halted and pieketed his oxen, then the two boys went into the city, where the bustle of life and motion bespoke a very vital current flowing in from the great arteries of the world. Men of all nationalities were there, and men apparently of nearly every elass and condition in life, men in rough clothes, men in foreign apparel, men in dress suits and men in heavy tweed, in jeans and jumpers, in overalls and checked shirts, and all seemed comrades together, for all were bound on the same great quest, the quest of land. Many wanted land for speculation; some, like Nate, wanted it for their restoration to health; some wanted it for bona-fide homes, and some wanted it just because others did, all swept along in the great flood tide of emigration that swept into Dakota in the eighties.

Norm and Nate found the Land Offiee easily enough, for there were a hundred ready to direct them, but they also learned that it was closed, but would be open on the following morning. After walking about for sometime, enjoying every breath of life about them, they went back to the open field, for had they wished it there was not room in the city to accommodate half the would-be stayers, and the price of lodging, food and hostelry were prohibitive to the two homesteaders.

The next morning Norm and Nate took a stand upon the steps leading into the Land Offiee, but they were quiekly followed by others, and long before the offiee opened the steps were not only filled but a line crowded out into the street. All were good-natured, eager, talkative.

"Wheat went forty bushels to the acre, in this county last year," a voice close to Norm was saying. "I've got a letter here to prove it," and he drew forth a many-paged letter, and an eager erowd pressed near to see. "Oats ninety," the voice read, "and sueh vegetables never seen before—potatoes came out of the ground clean enough to cook—"

"Huh!" scouted another voice.

"Raised on sod," a quieter voice pacified. "There isn't any mud here, roads clean and smooth as bricks. No struggling with mud hub deep here, like there is in ——."

"Nor sand hills, nor sawdust," volunteerd another.

"And no washing land; why down in the plaee I come from, land just all washes down to the foot of the hills."

"I guess we've got to Paradise," Nate whispered to Norm.

"Folks are always disgruntled with the things they know; they all want to try something new. It maybe, that this country has its drawbacks too, but they're not visible on the outside." What other aphorisms of wisdom Norm might have bestowed upon the erowd will never be known, for the key elieked in the office door, and the boys entered to their destiny.

"Land?" queried the dapper land agent, Mr. Stamford.

"Yes," Norm put in quiekly. "We want to get land in this county, and as near this town as possible." Norm was burning with land fever and he did not purpose that Nate should ruin his prospects by asking for a plaee to pick stones.

"Land in this county is selling for—"

"We don't want to buy, we want to take up homesteads."

"Oh, you said you wanted land in this county and near town—"

"Yes, but we want to file on it," Norm reiterated.

"All the land in this country was taken up long ago, and all near the towns. Men have been pouring in here like a flood for many months."

Many faces turned pale and many ears listened to the next query. "Isn't there any vacant land then?"

"Here's a plat of vacant lands," the agent said, pointing to a curious map on the wall. This map was all divided up into small square plats, numbered, and the boys learned that the squares indieated counties, townships, sections and quarter seetions of land aecording to their size.

"Would you wish to seleet your plat and file at onee, or would you wish to inspect the land."

Norm looked dubiously at Nate. This filing upon land was not quite such a simple thing as he had at first thought it to be.

"I reekon, we'd better look at it first."

"There is no doubt that is the best way, but you'll lose much valuable time, and maybe by the time you get baek with your plat selected, someone else will be out there building his house."

"I reckon we'll spend one day looking at the land, anyway," and Norm turned away disappointed.

"It all looks about the same to me. Why not just file and have it done with!" protested Nate. But the agent was busy with the next in line, and Norm thrust a platted card into his pocket, which had been given him for his guidance.

They drove along for many miles, but the land apparently had broken out into an eruption of small shanties; there seemed no vancant plats.

"It looks as though all the country were given up to poultry raising," Nate remarked drily. "See the ehicken coops!"

"I imagine," Norm responded gravely, "that those are the 'frame dwellings' referred to in the improvements required of settlers. All we'll have to do will be to pull the nails out of this ark, and lift it on our seleeted plat. Our house is built."

After some 20 miles of driving the land became more rolling, and a grassy creek bed was sighted, the ereek itself soon came into view, and while the trail seemed to lead down its preeipitous banks, there was no sign of a bridge, and a considerable stream of water went rolling over the stony bottom. The shanties were upon both sides of the creek, but none very elose to its banks, although just beyond, they were still found, and a little farther on, men and boys were constructing more shanties with lightning-like speed.

"Did you ever see so many bones? Why four miles we've ver travelled through a sheet of dry bones!" eclaimed Nate as his eyes swept the country.

"Must be buffalo bones," Norm conjectured.

"Who could ever believe there'd be so many! Must have been collecting here for centuries."

They rode along silently, until they came to a plaee where no shanties were erected. "Bones, bones everywhere, I've got a bone to pick," paraphrased Nate. "Let's talk with this last land-holder.

"This land beyond here vacant?" inquired Nate pleasantly.

"It is vacant all right, but it isn't surveyed, and isn't in the market. My land runs up to the end of the surveyed land."

"All the land taken in between here and the creek?" asked Norm aghast.

(To be continued.)

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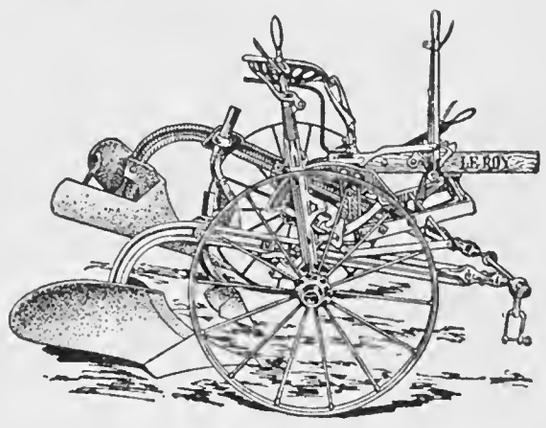

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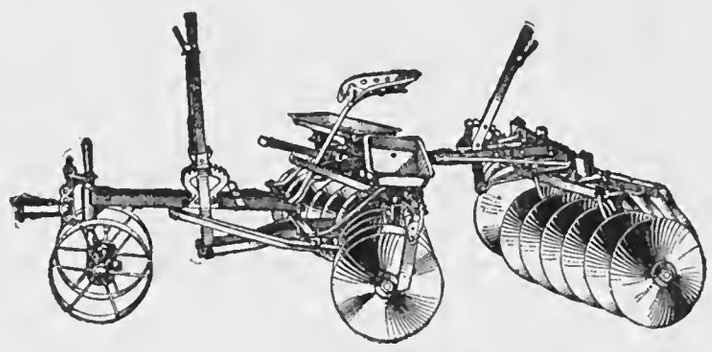

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NOTES FROM A MARYLAND FARM.

We are having our annual February cold snap. It always comes with the full moon in February. I do not know that the moon has anything to do with it, except that the atmosphere is apt to be very clear at that time and radiation rapid. But we always look for this spell to break the Winter, for we rarely have any real Winter after it passes.

The sweet peas sown in January are not yet up, but the Fall planted ones are thriving and promise an early bloom, and I shall sow some more after the cold snap to see what the difference will be with these and the usual January planting. It is necessary, however, to get these started early if we are to have any bloom at all, for they soon succumb to the hot weather in late May.

Owing to the mild Winter the leeks and the green onions are lapping. Leeks are still in the garden, and the onions planted from sets in September are already large enough to use. For early green onions I plant sets of the Norfolk Queen, a larger onion than the Queen of the Northern catalogues, but still a very early one. These are followed by the potato onions, the offsets of which furnish green onions and the large bulbs are left to ripen.

My first sowing of tomato seed was made February 10, in a flat in the greenhouse. They will be transplanted to other flats as soon as large enough to handle, and from these will be set in the cold frame, giving room to make short stout plants. As I use on the frames the double glazed sashes which keep out all ordinary frost, I can set the plants in the frames early in March, and by exposing them to the air at every opportunity, can keep them short and make strong plants that are not long and weak-kneed, and they grow off without much of a check as they lift from the frame with quite a mass of soil.

Eggplant seed is not sown till March, and potted and shifted from small pots to fours, and kept in the greenhouse till the leaves are as large as my hand, for it is useless to try to harden an eggplant, and they are not set till the soil is quite warm if that takes till June. I have discarded all but the Black Beauty, as it gives me more fruit than any other variety.

Just at this time friends are sending me sundry seeds for trial. To-day I had from a correspondent in Southern Colorado a pod and seed of what he calls Pueblo Chili, a sweet pepper of a shiny coal black color. This will add to the trial plants in my collection. Then from Arizona comes a lot of seed of Frijole Colorado, a pinkish bean, which I shall also try in a small way. Several years ago I had from Mexico fruits of Physalis purpurea, a very large variety of the husk tomato, so-called; these I put in the hands of a Philadelphia seedsman, who now lists it. It is as large as a medium-sized tomato, and immensely larger than the old Physalis Alkekengi. Another friend sent me a few of the Tapary bean of New Mexico. Perhaps this may thrive in our sandy soil, as it is said to be very drought resistant.

Last Summer I planted some dasheens sent by the Department of Agriculture. The crop was not large owing to the very dry Summer, but I have quite a lot to plant this Spring, and will put them where the hose can reach them and hope for better success.

Last Summer, too, I had wonderful success with the Spotted-leaf calla as a bedding plant. A mass of these was very pretty and bloomed finely. This plant is perfectly hardy here, but I lifted the roots to divide and replant like potatoes. Massed where they can get plenty of water they make a very pretty bed, and increase wonderfully. The white-spathed flowers have a purple base, and are not as large as the calla grown in the greenhouses, but being Summer-bloomers are useful.

W. F. MASSEY.

"FARM products cost more than they used to." "Yes," replied Mr. Corntossel. "When a farmer is supposed to know the botanical name of what he's raisin' an' the soölogical name of the insect that eats it and the chemical name of what will kill it, somebody's got to pay."—Washington Star.

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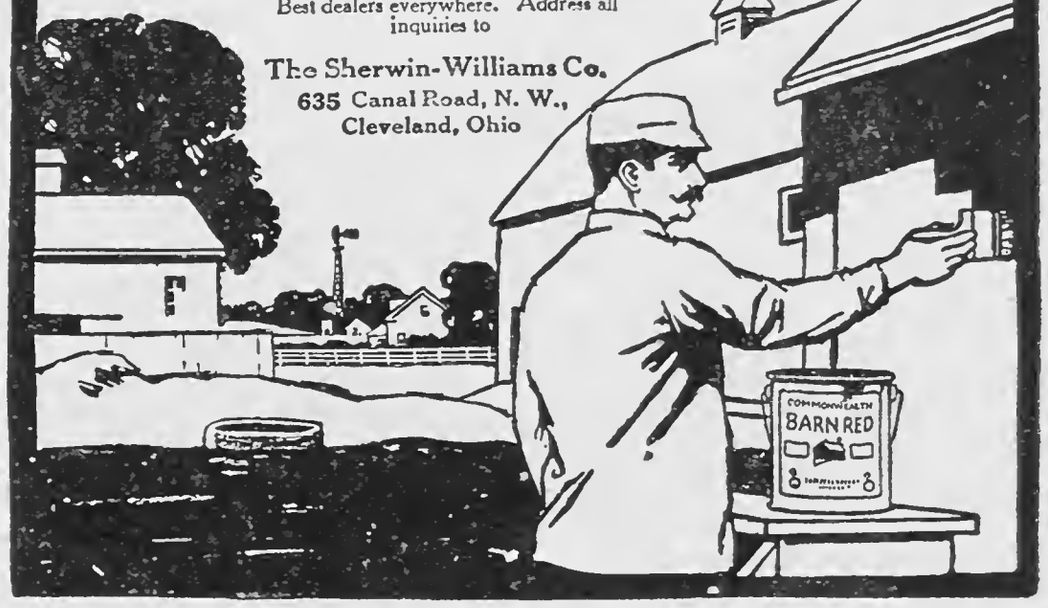

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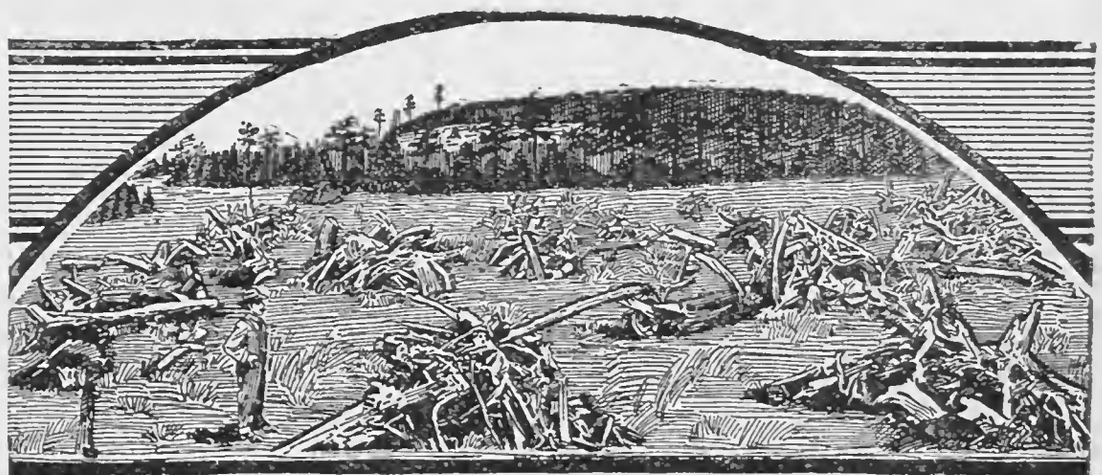

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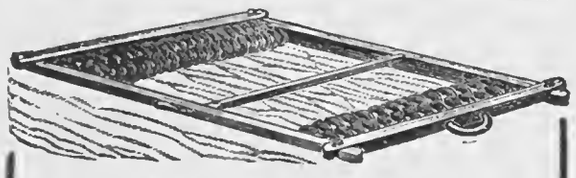

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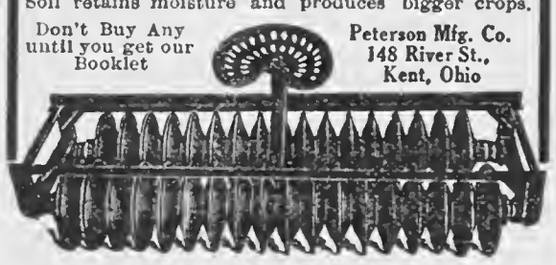

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Sweet Clover in Maryland.

Will you inform me about Sweet clover on the Eastern Shore, Caroline County, for cattle and hog pasture, also for hay and when to sow? J. W. S.
Goldsboro, Md.

Why anyone on the Eastern Shore of Maryland should want Sweet clover, where we can grow Soy beans, cow peas and Crimson clover in the greatest abundance, is hard to understand. Sweet clover smells sweet, but is really so bitter that no animal I ever tried would eat it unless starved into it. You can make better hog pasture with rape and Crimson clover and cow peas and Soy beans than you can with Sweet clover, and by sowing it here you will only add another weed that after a while you will be glad to get rid of. The plant will grow in Caroline County, but thrives best in a soil rich with lime. Better leave the Sweet clover to the cold Northwest, where they cannot do so well with better legumes as we can.

W. F. MASSEY.

Fruits for Michigan.

I have a small farm in Berrien County, Mich., and this Spring intend setting out some apples, sour cherries and also some quince trees. I already have an orchard of Northern Spy and Baldwin, but with to set other varieties. The soil is a clay loam. What varieties would you advise for commercial purposes in that section of the fruits mentioned below. Can the Wolf River, Wealthy and the Delicious be grown in this district with any degree of success? What sour cherry would you suggest, and what age of trees would be recommended? How many quince trees would be advised on a small farm and what variety would do best in this section? T. S.
South Bend, Ind.

The climate and soil of Northern Michigan are well adapted to the growth of all the fruits mentioned. In fact it is a very good region for general fruit growing, although peaches are rather tender there. The Delicious apple originated in Iowa where the temperature goes down to 30 below zero at times. The Wolf River and Wealthy are still hardier and are among the safest to plant in Wisconsin and Minnesota where they originated. Northwestern Greening is another good one. The Montmorency is the best sour cherry to grow there for market. Trees two years old are the limit as to age and one-year-olds are as good but either will be all right. About five or six quince trees are enough for home use on a small farm. Orange is the best variety to plant there.

H. E. VAN DEMAN.

Saving the Soil.

A few years ago Mr. B. F. Viquesney, of West Virginia, wrote us about a farm proposition. The soil he had in mind was wet, sour and very poor for most crops. There was a supply of wood ashes which could be obtained at a low figure, but to most men the outlook did not seem brilliant except perhaps to the untried imagination of a back-to-the-lander. We advised draining this poor land as far as possible and building up the soil by means of cover crops with the wood ashes to start them. Now we have the following letter to show what has happened:

I have about 15 acres, of which I planted three acres in potatoes. They produced about 1,400 bushels; half an acre entered in a contest produced 325 bushels; 1½ acres of cabbage 60,000 pounds, at 1½ cents per pound. Potatoes are selling around $1 per bushel. I had about two acres of sweet corn, and produced about 2,000 dozen, and same plot in the sweet corn had green beans, turnips, rutabagas, parsnips, peas and a general garden crop. When all is sold I shall have over $3,000 worth of goods; beside this had pasture for two cows and two horses, and cut hay, etc. So much for under drainage, wood ashes and cover crops. I don't use much stable manure because I cannot get it, and the crops that I am plowing down every year are cheaper made than buying manure.

There are many places throughout the country where soil of this kind can be made to "come back" and go into production. It should be deep soil with fair quality to start with. Drainage will take out the water, lime will sweeten it, and cover crops will fill it with organic matter, and in time make it "productive soil." Sometimes it is possible to buy ashes or other wastes at a very low price, to take the place of lime or fertilizer. A man must have capital and courage and great patience to carry such a job through, but it can be done.

363.1 Bushels Potatoes

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A. Webster Butler of Brockton, Mass., won the first southern zone prize offered by the Bowker Fertilizer Company for the largest yield of best quality potatoes grown exclusively on Stockbridge Potato Manure. His acre was a "rocky loam" producing about 2 1-2 tons of hay per acre in 1912 on manure. Rows were 36 in. apart and Green Mountains cut to two eyes were planted 14 inches apart. The piece was cultivated five times. The acre was sprayed with Pyrox.

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was applied 2100 lbs. broadcast and 700 lbs. in the drill. No other fertilizer or dressing of any kind was used. The entire crop weighed 21,783 lbs. or 363.1 bushels. His total score including quality points was 589 points, the highest in the southern zone.

Other Winners secured yields ranging from 311.1 bushels to 502.6 bushels in the northern zone, (Me., N. H., Vt.,) and from 183.8 bushels to 363.1 bushels in the southern zone, (Mass., R. I., Conn.)

Send us your name for complete and intructive statement concerning the results of the contest and how these great yields of potatoes were obtained. No other fertilizer than the Stockbridge Potato Manure was used.

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Rock Phosphate has been thoroughly investigated by the agricultural authorities and tested in the field by the leading Experiment Stations. It has proved to be the most profitable fertilizer on all soils deficient in Phosphorus, and the the soil surveys show this deficiency in 90% of the cultivated land in the Eastern and Central states. A review of these experiments and much valuable general information about fertilizers is given in "The Farm That Won't Wear Out," by Dr. Cyril G. Hopkins. This book will be sent free to the first 100 farmers who write to us for delivered prices on *Rock Phosphate,* and state where you saw this ad.

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Cover Crops on the Turning Row.

We expect to put in 15 or more acres of corn for silo, will have to rely on the horse and two-row cultivator. We drill in the corn, so can go but one way to cultivate. We expect to leave about two or three rods at the ends of corn rows to turn the team on each side of the field. We wish to sow this strip of ground to oats, millet or Hungarian to cut and cure for Winter feed. Which do you think would stand the hard usage best by the time the corn was too large to cultivate? S. S.

Little Falls, N. Y.

This is a new proposition to us; we have never seen it tried. If the corn is properly cultivated, the crops at the end of the field would be so badly trampled down that it would be hard to cut them. The best crop for such a purpose would be a late one, which could make its best growth after the corn was laid by. For such a crop we should prefer Japanese barnyard millet. Seeded early in July on good soil and with a fair amount of moisture, this crop would make a fair quantity of cow feed by September. You might sow oats earlier, cut what was left after the tramping, then work up the ground and follow with Japanese millet. But if the corn was well tended these oats would not amount to much. At the last cultivation of this corn, we should seed a combination of barley, Crimson clover, and Cow-horn turnips. These turnips will be a fair amount of feed; the Crimson clover will provide pasturage, and the barley will give a fair amount of hay late in the season after the corn has been taken off. Another plan would be to wait until the cultivation was ended and then sow barley and Canada peas.

Life in Sunny Florida.

The two pictures shown on page 251 came to us at about the same date, and were apparently taken just about the same season of the year. We print them to show in a striking way what a big country this is, and how wonderfully conditions vary as the seasons go on. The boat landing shown is built near Fort Myers, in Florida, and is a typical scene in that country. All through the Winter the ground is open, and there are very few frosts to trouble vegetation. Considerable of the travel, and a good deal of the recreation is taken in a boat, for by stepping into this boat an oarsman can quickly get himself over to the neighbors, or can fish, or enjoy himself upon the water. It is truly life in the open air under Southern Florida skies during this season.

The other picture, taken at about the same time, shows what was happening in Northern Pennsylvania, even in this Winter of light snowfall. If a man was situated so that he could spend three or four of the colder months near this Florida boathouse, and then go back to the cooler North for the rest of the year, he would have in theory at least an ideal way of passing through the seasons. Some of our readers do this, but it requires considerable capital to carry out such a plan, and is really more of a play than work.

Florida is certainly a beautiful place, or at least parts of the State may be called so for spending the colder months of the Winter; provided, as we have said, a man has the price and doesn't much care whether the Florida farm pays or not. As for giving up the Northern home entirely, and going to Florida for the purpose of making a living and building a home, it is an old story that no definite advice can ever be given a man who has never lived in the Southern States. The conditions are so utterly different that we have found it practically impossible to get our Northern readers to clearly understand what they will find south of Jacksonville. We have letters from readers who say they are entirely satisfied with Florida and the conditions there, and that they could not be induced to return. On the other hand, people write us the most bitter letters, saying that they have been deceived, and that they would gladly sell out if they could find anyone to buy their property. These two extreme views are always presented whenever we say anything about Florida, so that it becomes more and more evident each year that the personality of the man who goes to the South must be considered in giving any advice, and, as of course a stranger cannot know about this personality, it is a foolish thing to undertake to tell such a man just what he ought to do. The only advice worth giving is, never, under any circumstances whatever, buy land in Florida from an agent, or anyone else, without going there and looking the land carefully over. Personally, from our own experience, we never would buy such land until we had lived at least one full year in the neighborhood, and thus had a good chance to study the seasons all through.

As for trading Northern property for a Florida farm, without seeing the property, it is just about five times as much of a gamble as swopping horses in the night, or trading jacknives "sight unseen."

Otsego County, New York.—A Sensible Statement.

I was interested in the comparison of Schoharie and Otsego Counties as drawn by Mr. Kling on page 145. I think he is certainly one who believes in giving the first honor to his native home. Mr. Kling is correct in thinking that Otsego County is not in the front in corn growing, and in fact it is not much on any crop requiring hot weather, but the high elevation of any part of the county has it advantages as well as lower sections have. Mr. Kling seems to think Otsego County is not much on grass or grain, but I should take it he has never traveled in this county. I have been around in New York State some, and I think the hay and grain crop here will compare well with any other county, and if Schoharie County can beat Otsego in its big up-to-date purebred cattle farms it is certainly well to the front. The State Agricultural Department reports that around Richfield Springs in the northern part of the county seems to be the most favorable place for the chicken and hen business in the State, or at least that is the conclusion they seemed to draw by the flourishing business there. I think it would be a good thing if THE R. N.-Y. could print more articles along this line, comparing locations, etc., for it would tend to show farmers that they should fit their farming to the location. As for Otsego County, while we cannot compete in growing a certain line of crops like corn, tomatoes, beans, etc., yet besides the dairy or hen business the climate and soil is, I think, well adapted to potatoes, especially in growing high vitality seed potatoes. From my experience I feel sure I can raise just as good potatoes here for planting purposes as they can in Aroostook County, Maine or in northern Michigan. I have bought potatoes from both these sections, planting them by the side of my home-grown stock here, and have never yet seen enough difference to pay for changing seed; in fact I have decided that I would prefer my own seed stock even if it cost me more. One trial, especially, I made with Aroostook County seed planted by the side of my own seed stock, I could plainly see the difference in favor of the home-grown stock, and the comparison was made with common stock and not with special select strains.

I mention this to show that one should find out what his section is best adapted for, and not waste his energies on some crop not adapted to his soil and climate. While traveling about I have repeatedly noticed potato fields in lower sections of the State dead with blight, while getting back to the high altitude of Otsego County I would see potato tops in a green healthy condition. The northern part of Otsego County is especially noted as a health resort; the dry cool air and absence of much fog or damp weather making it far better for many people than lower sections. While the Winters are cold and long, with usually deep snow, the Summers are ideal, and about as perfectly adapted to certain crops, like potatoes, some varieties of fruits, etc., as can be found anywhere, and I think about as good average soil and rainfall. CHARLES L. TODD.

Otsego Co., N. N.

JUDGE: "What is your age, madam?" Witness: "Twenty-seven and some months." Judge: "I want your exact age, please. How many months?" Witness: "One hundred and twenty."—Boston transcript.

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Mr. L. S. Bean, of Aroostook County, Maine, specializes in Potatoes of Quality.

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The photograph shows Mr. Bean's men digging a field of Irish Cobblers that yielded 418 bushels per acre. On another field Mr. Bean's yield was 566½ bushels per acre, all raised with E. Frank Coe Fertilizers.

Mr. Bean's record with E. Frank Coe Fertilizers is as follows: In 1911, 10 tons; in 1912, 90 tons; in 1913, 150 tons. He expects to use more in 1914. Is there a thought here for you? If so, write us.

THE COE-MORTIMER COMPANY, 51 Chambers St., NEW YORK CITY

Hope Farm Notes

Here is a new one along the line of "The best meal I ever ate." The following statement was made in the daily papers last week:

John Quinn, who weights 250 pounds, recently took dinner at a restaurant with his friend Robert Harris. Quinn made an excellent meal, and after it was finished leaned back in his chair with a deep sigh of satisfaction, all ready for a pleasant conversation with his friend. He did not realize, however, the expansive power of a sigh in a man of his weight. The sigh broke a horn button on his vest. The pieces flew with such power that they struck Harris in the face, probably destroying the sight of one of his eyes, and cutting a deep gash on his cheek, so that the blood ran freely down his face.

I was not there to see this, but it is not impossible, for some of the forces of nature have remarkable power. I am told that a skull may be split or burst open by filling it with beans and pouring in warm water. The expansive power of the beans splits the skull. No doubt there are New England people who will read this and then clear their throats and make certain remarks concerning the close connection between brains and the baked bean habit. At any rate the expansive power of a fat man in giving a sigh of satisfaction is something to remember. And it is the meal back of the sigh which provides the power! Ten to one this man had finished off with a nice baked Baldwin apple, well covered with cream. There may have been in that sigh a bit of the dynamite of disappointment that he could not eat another apple. The Mexicans might organize a regiment of fat men, put bullets instead of buttons on their vests, feed them well and put them in the front rank! Our cooks and housewives will have to be careful how they feed these fleshy veterans. Gentlemen—*have another apple*—but please do not face me.

Will you read the inclosed clipping from a Washington paper and tell your readers what you think about the truth of the statement? It would require a yield of nearly 41 bushels of apples to a tree, and 40 trees to the acre, to produce 1,617½ bushels of apples, which would have to sell at $2 a bushel to bring the amount of money mentioned. I have been raising apples more or less for the past 33 years, and I am guessing how he managed to do it. Can THE R. N.-Y. give me and others a pointer?

Connecticut. Z. C. B.

"Wenatchee, Wash., Jan. 9.—An average of $3,235 per acre annually for seven years is the record made by L. W. Smith on the gross receipts from sales of fruit grown on his five-acre apple orchard on North Wenatchee avenue."

No. I am out of "pointers" on such matters. The experience of one of my boys has rather blunted the point to such a story. This boy wanted to see the world, so he went West—where he is now. He packed apples for a time at this place, but could not earn enough money to carry him over Winter. There seems to be nothing to do in that country. How this man raised 41 bushels of high-class fruit to a tree beats me. He may be like the man recently mentioned who bought four crops besides his own, packed them all in his orchard and then claimed the fruit all came out of his own farm!

BLIZZARD AND BLUFF.—Hope Farm lay right in the track of the blizzard of February 15, and the wind made tracks all over us. It whirled the snow into great drifts, and blew the frosty air into every crack. There was a surplus of buckwheat flour and sausage and fuel, and the joy of the children was unbounded, as they wallowed in the snow. We broke our way to the railroad, but getting back at night was something of a struggle. Mother met me with old Jennie and the sleigh. Flat in the freezing snow lay a man who had tried to warm up with the wrong kind of spirits. He had no overcoat or mittens and a basket full of groceries lay beside him. While Mother held the lines on the old black horse I bundled this unfortunate friend into the sleigh, got the horse blanket over him, and held him in until we got him to his home. There seem to me some unanswerable arguments for Prohibition. The house was warm and bright when we finally reached it, with a pot of smoking hot baked beans on tap. Then before the roaring wood fire, with the children playing about, I was well content to let the wind howl and play with the drifting snow.

It is a glorious place before an open fire to read over your letters. There you get the full spirit of them, and the shy sentiment which often hides between the lines gathers courage to crawl out and show its head. There might be unbounded chances for "making a hit" in the following note:

In looking over the files of THE R. N.-Y. we were much interested to learn that you had known Emerson. I am going to travel all the way to New York to ask you to tell me more about it some time. I read him every day; indeed should find it hard to live without his unfailing inspiration. To have seen and spoken to him seems to us of the younger generation, a rich allowance from fate.

J. D. F.

Now it is something of a temptation to come forward as an old friend of Ralph Waldo Emerson. Who would be likely to disprove it? With a little spur to the imagination I might perhaps give a new color to the "Sage of Concord." Before we start, however, let's open Emerson's Essays at random and see what we get. Here it is on page 243 of the essay on "Intellect."

"God offers to every mind its choice between truth and repose. Take which you please—you can never have both. Between these, as a pendulum, man oscillates ever. He in whom the love of repose predominates will accept the first creed, the first philosophy, the first political party he meets—most likely his father's. He gets rest, commodity and reputation; but he shuts the door of truth."

After that there is nothing for me to say except that when I spoke to Emerson he was the great philosopher, and I was a chunky little errand boy in a book store, homesick in the great city. The great Emerson, with other great authors, sent me out to buy a bag of peanuts. When I got back they wanted me to eat peanuts with them, and in a half bantering way led me on to tell how I had caught fish through the ice. I know that philosophers eat peanuts like other men, and throw the shucks on the floor. When they are not writing for publication they can, on occasion, produce some very ordinary "guff." About the most human description of Emerson I have read is found in "My Own Story," by J. T. Trowbridge—another man who used to keep the Hope Farm man running on errands—once at least in just such a blizzard as the one that has recently stung us. I remember too that some of these great and kindly men "chipped in" and bought me a pair of rubber boots and a coat one hard Winter, when there was no one else to do it. Who could help picking up the reading habit from their books after that?

In your issue of December 6 you say, "Remember that the parents of next year's mosquito crop are probably wintering in your cellar!" What can one do about it? I for one would like to know, for we have to fight them here sometimes for months. E. W. C.

Jonesboro, Ark.

It does not look much like mosquito weather as we look out to the snow drifts and see the wind whirling them, but it may be time to get ready. Some of the mosquitoes winter over in the cellars of farmhouses, tucked away in cracks and corners. Leave them alone, and when Spring opens these pests will come out very ready for business. Brush down all the cobwebs and dirt and burn. Then fumigate the cellar or lower warm rooms. The following "stuff" is suggested for killing those wintering mosquitoes:

Jimson weed (Datura Stramonium) is used for fumigation. Eight ounces of the powdered weed, burned in a close room, will fumigate 1,000 cubic feet. Another material is made by using equal parts by weight of carbolic acid crystals and gum camphor. Put one pound of carbolic acid crystals in a bottle and liquefy by placing the bottle in hot water. Put a pound of gum camphor broken in small pieces in a one-quart jar. As the acid liquefies pour it over the gum camphor. When all has dissolved there will be one quart of a slightly reddish heavy liquid, which will keep indefinitely if covered. Three ounces of this evaporated by burning in a metal pan over an alcohol stove will kill flies and mosquitoes in 1,000 cubic feet of space and not injure carpets or furniture. H. W. C.

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Yours truly, FRED. GROVER.

Write today for our booklets, **"Soil Fertility," "The Grass Crop," "The Apple"** and **Hubbard's Bone Base 1914 Almanac,** which contains much valuable information about soil, fertilizers and other farm subjects. Sent free to any address.

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Ruralisms

Caring for the Easter Plants.

Every Spring we see an increasing number of flowering plants grown for the Easter season; they are no longer a luxury of the rich, and the big cities absorb enormous quantities of such stock. A woman who receives some blooming plant as an Easter gift usually wishes to preserve it for another season, but this is not always practicable. Some forced plants are quite hopeless under domestic conditions; others will give a rather shabby growth, while a few offer abundant reward. We would never advise keeping worn-out or crippled house plants; window space is too valuable, and only those likely to do well should be retained.

The beautiful greenhouse Azalea, always a leader in Easter plants, is simple of culture, and entirely suitable to grow on for another season. Regular watering is very necessary, but not a soddened soil; an Azalea in full bloom uses much moisture, and will suddenly flag if neglected. As the flowers begin to fade they should be carefully picked off, no seed formation being permitted. As soon as danger of frost is over, the plant should be put outdoors, in a place partially shaded, where it is well to plunge the pot in the ground, first putting in the hole an inch or two of coal ashes, to prevent earthworms from entering the pot. Here the Azalea remains until September, when it is brought inside. During the Summer it should be watered abundantly, and also the foliage frequently syringed, which will prevent attacks of thrips and red spider. Abundant new shoots form during the growing season. If, another year, it has grown enough to demand a larger pot, the proper time for shifting is after flowering, when the new growth commences, the soil being a well-rotted compost of leaf mold, peat and fibrous loam. Potting must be done very firmly, the soil being well rammed down the sides of the pot.

What to do with the Easter lilies is very promptly answered by the florist; he deposits the spent bulbs after forcing on the rubbish heap. The window gardener, however is moved both by thrift and sentiment to try keeping over such bulbs for another season. Supposing the plant to be considered the regular Easter lily (Lilium longiflorum) the bulb should be left in the pot in which it has been forced, and watered as though it was still in bloom, keeping it in a light sunny place. As soon as danger of frost is over the pot may be plunged outside like the Azalea. An occasional watering with very weak liquid manure will help its growth. This care should continue until about August, when the leaves will gradually wither and die. At this time water should be gradually withheld until ripening is complete, when the bulb, still in the pot, should be stored in a dry cellar. In October shake the dry soil from the bulb, and replant in a clean pot, using abundant drainage material in the bottom, and a compost consisting of two-thirds loam and one-third well-rotted manure. Set the bulb in the center of the pot, with two inches of space above it; barely cover with soil. More soil is added as growth starts, to furnish a growing medium for stem roots. Keep the pot in a cool cellar or plunged in a frame outside until plenty of roots are formed, when it may be put in the greenhouse or window.

Small Spring bulbs, such as hyacinths and tulips, that have been forced for Easter, may be ripened in the pots until frost is over, and then planted outside, along the edges of shrubberies, or in perennial borders. They are unlikely to flower the following Spring but are quite satisfactory afterwards. Some may be too much weakened to survive, but most of them give fair results. This applies to Dutch hyacinths, only; the tender little Romans do not survive with us in the latitude of New York. The Paper White Narcissus and Chinese Sacred Lily are not hardy here either, and we think it wasted effort to try forcing them a second season, nor have we had any success with forced lily of the valley afterwards.

The Cytisus or yellow broom, with its mass of golden pea-shaped flowers, is a handsome Easter plant, but we have not found it satisfactory in the living room. If it is desired to keep a plant over, it should be cut back after flowering, and then be kept near the window while it makes new growth, with moderate watering and frequent syringing to keep down red spider. During the Summer it may be plunged out of doors in a sunny place, and brought in before frost.

We do not recommend keeping over Cyclamens from one season to the next, as the plants freshly grown from seed are superior to those from old corms. Cyclamen culture was discussed in our issue of December 20 last.

Hardy roses forced in pots for Easter should have the faded flowers cut off, and may be treated like greenhouse stock; that is, carefully planted out in May, when danger of frost is over. The climbing rose Dorothy Perkins is forced in enormous qualities for Easter sales, and does well in the garden afterwards. We do not advise roses as window plants, though sometimes Teas and Hybrid Teas are seen under these conditions doing fairly well. As a rule, however, foliage troubles and scanty bloom result in shabby and discontented specimens, and it is wiser to give window space to other plants, and be content with garden roses.

The Rhododendrons forced for Easter are usually tender sorts, not suitable for outside planting; they may be handled like Azaleas, but are not very suitable for house culture. The tender Hydrangeas of the Hortensis class are quite manageable, but they take up so much room that it is wiser to flower them at their natural blooming time in the Summer, with protection during Winter here in the North. They are especially desirable in large jardinieres for porch decoration.

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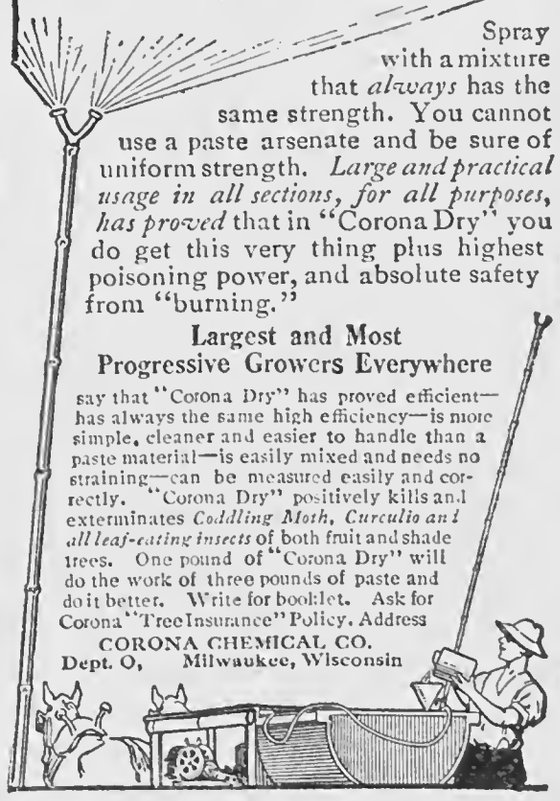

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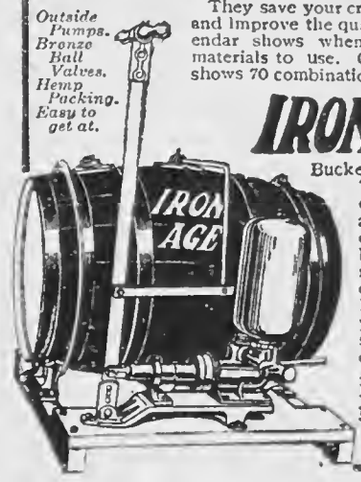

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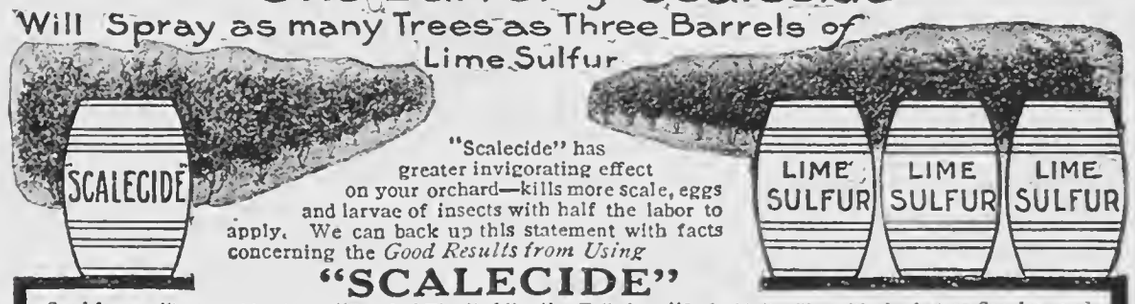

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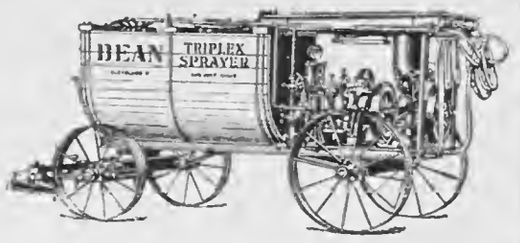

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THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

A GOOD suggestion from Mr. Todd on page 305 Each county of New York State can show soils and conditions which make it specifically desirable for certain definite lines of farming. For example, Wayne County and the Hudson Valley are superior for fruit growing, central New York for dairying and so on. Instead of claiming that every product of the temperate zone can be successfully grown in each county it would be far better to state the few particular things which each county can produce in superior quality. This is an age of specialties. A man should know what he wants to produce, and then go where the conditions are right for his crop.

*

THIS education in the 35-cent dollar school goes merrily on. Collier's Weekly has got up into fractions after the following example in division:

> Mr. J. M. is foreman of the composing room which prints *Collier's*. Several weeks ago he bought a barrel of Greening apples in Ulster County, New York, for $1.50. He had them shipped to a suburb of New York City, about one hundred miles away. The express bill was $1.67. These apples cost the consumer $3.17, but the farmer got less than 50 per cent of it. During all this time there were more apples in Ulster County than could be used there, and there were more people in New York who wanted apples than could afford to pay for them. The best of farming papers, THE R. N.-Y., talks a great deal about the 35-cent dollar—meaning thereby that 35 cents is the portion of the consumer's dollar which the farmer actually gets. Isn't this something we can improve upon?

That farmer paid at least 35 cents for the barrel, which left him $1.15 out of $3.17 with which to settle his bills and pay himself a profit. If the apples had gone through the regular trade of commission man, dealer and retailer they would have cost about $4.50 and the farmer might have received $1.25 net! It is a great thing to have these concrete examples crawl into city printer's ink. Many of the better class of magazines have presumed that the blind stupidity and malignant hatred of farmers which the city daily papers show were evidences of wisdom. Thus the farmer has been pictured as responsible for high food prices, and growing rich through his extortions. The medicine needed to correct this bilous view of business is just such experience as Collier's relates.

*

THE supply of limestone in Ohio is practically inexhaustible; its manufacture is simple and inexpensive; and freight rates for carload lots are often less than one dollar a ton. When a high-grade limestone is finely ground, it is as good as the best carbonate of lime on the market, and can usually be secured with freight paid for less than $2.50 a ton. However, it is not uncommon to find farmers who are paying as much as $7 a ton for another form of carbonate of lime sold under a fancy trade name.

That statement from the Ohio Agricultural College is correct, and the trouble is not confined to Ohio or to lime either. Give us the money which farmers have paid for "fancy trade names" and many a wealthy citizen would go to work, while the National debt would look small. There was a man named Jacob G. Brown who tried to do business with his neighbors. "Nothing doing," they all knew "Jake Brown." He went to another county and had a card printed J. Granville Browne, and business came to him on the jump. The fancy trade name is usually a fake and a bluff.

THE express companies are controlled by what one of our readers calls "a smart bunch of men." They are smart enough to work out of a hard situation, but were not wise enough to avoid it. Had they been able to judge public opinion they would have given the public such rates and service that parcel post could not have been obtained for 20 years! Now they are preparing to give parcel post a hard jolt. The new express rates are much lower for weights over 10 pounds and beyond 150 miles. Thus the express companies are preparing to carry the long hauls and then use the parcel post to deliver the goods at the end of the journey! In this way they expect to underbid the parcel post by making the government work for them on the short delivery. It is a very smart scheme and there is only one way to meet it. That is lower the parcel post rate so that the government can meet the express companies on all hauls. This is what we must work for now.

*

MY husband passed on last July, and I was obliged to give up my little country home and remove to the city, therefore did not expect to have any use for an agricultural paper. I am fortunate in being able to retain a flock of fine fowls, and recently found myself in a puzzling situation in regard to disposing of the refuse from the pen. While discussing the matter with the family the carrier left THE R. N.-Y., and I opened it remarking that "I must stop this paper." At the same time, glancing over the pages, I came upon the very subject that was troubling me, and my problem was solved. Thus it is with every copy. I always find something that I am interested in, so have come to the conclusion that I cannot get along without THE R. N.-Y. MRS. S. M. F.
New York.

Every day brings just such evidence as is found in this letter that readers of farm papers consider the subscription as a plain business matter. When they spend a dollar for food or fuel or clothing they expect a full dollar in value. It is right to extend the same principle to the farm paper. The editor and publisher have no right to expect any man to pay his money unless he feels that he receives a full equivalent in value. Now and then we are criticized for giving space to common things—"which everybody ought to know!" Such critics say we should discuss only the newer and "larger problems" of agriculture. Probably one of the best assets we have is a thorough and confidential knowledge of what our readers want and need to help them in their daily problems. We try to fill this need first of all without neglecting the "larger problems" as they arise.

*

YOU are the best scrapper I ever knew that claimed he didn't like war. W. A. S.
Montana.

There is quite a difference between war and "scrapping." Carlyle's essay suits us well as a statement of what war means to the common people. He pictures 30 stout farmers and laborers taken from their families and occupations in an English village and carried to Southern Europe. There they are matched against 30 Frenchmen taken out of productive life in the same way. These 60 men take guns and shoot at one another. They have absolutely no personal quarrel. As poor men, the under dogs of society, they have interests in common and ought to get together as men and make their labor freer and their lives happier. But no—they shoot and kill until half are dead. They do not know what it is all about, or why they should fight, and their lives are made harder and more miserable because they fought. A few big men pull the strings—out of danger—and the common men face the bullets. That is war. It is always "a rich man's war and a poor man's fight." You cannot name a war which did not finally assume that character. Various ideas or emotions prompt men to leave home and fight, but the ultimate benefit goes to a few strong and far-seeing men. Again and again, in history "war" has been used as a scare to take the mind of the common people away from real thought about their wrongs and conditions. In a war the individual soldier can have no personal influence upon the question at issue. He has no more influence than a card or a checker in the game. The "scrapper" has personal and individual influence. It requires more of moral character to "scrap" against powerful interests when the cause may be right, but for the moment unpopular. Such a "scrapper" risks all he has, and years may be required to prove that he was right and that his vision was clear. He does not try to kill men, but attempts the harder task of trying to make them think. Again and again in history the "scrapper" has brought people to the point of clear thinking, only to lose it all in the bloodthirsty demand for war. These are a few of the reasons why we are glad to "scrap," but have no use for war.

As usual at this season there is some confusion regarding cow peas and Canada field peas. Some readers write us that they will sow cow peas with oats early in April. This is just the thing they ought not to do. The cow pea is a hot weather plant and makes its best growth in the hot weather of Summer. It is really a bean and very tender. To sow it in the Spring when one usually sows oats would mean ruin to the cow pea. The Canada field pea, on the other hand, is a hardy plant and will sprout and grow in cool weather. This Canada pea is the one to sow with oats for fodder or hay. Remember that the Canada pea is a cool weather plant which will not endure hot weather, while the cow pea is a hot weather plant which cannot stand the cold weather.

*

It is announced that Prof. W. A. Henry of Wisconsin offered a check for $300 to the manager of the first coöperative laundry in Wisconsin. This offer was made by Prof. Henry 18 years ago, and is now renewed by him. In order to meet the requirements this laundry will have to be owned and managed by Wisconsin farmers or their wives. It may be run alone or in connection with a coöperative creamery. It will have to be generally patronized by farmers, and the prize will not become available until the plant has been in operation at least one year. That sounds good. In the next magazine number of our "Woman and Home Department" we shall tell of a coöperative laundry conducted by farmers in Minnesota. It is the real thing. It cleans up the clothing, puts life into the neighborhood and starch into the backbone of many another coöperative enterprise.

*

WE have stated several times that some of the so-called "molasses feeds" contain what we call sweetened trash. This means that mill sweepings, which contain weed seeds, oat hulls, dirt and screenings are mixed with grain and smeared with molasses. This mixture of grain and trash is used as a carrier, so that the molasses can be fed in dry form. Manufacturers have criticized us for saying this—they say that no such stuff is used. Suppose we get past the manufacturer and the farmer and ask the feed. We have with us today Prof. F. C. Minkler of the New Jersey Station for a few remarks:

> I would say that by actual count 25% of the material found in one of the so-called molasses feeds contained nothing but weed seeds of the very worst sort. This analysis was made two years ago, and since that time those dealing extensively in the production of molasses feeds have taken the precaution of grinding their weed seed products, and thus make it harder to detect their presence. There is no doubt that screenings are used extensively in the production of the so-called molasses feeds. There is no doubt that molasses makes it possible to market a larger amount of wheat screenings, weeds and such products that could not be used at all in their present form, and certainly you are perfectly safe in making such assertions.

Now we think the honest molasses feed has a legitimate place in the dairy business. When we want to feed molasses we buy it by the barrel, dilute it in water and pour it over the fodder and grain. That is the cheapest way, and you obtain the full benefit. There are many farmers who do not care to do this. They prefer the dry form of molasses, and when they can obtain the genuine article at a fair price they are well justified in using it. When, however, they pay their money for sweetened dirt, weed seeds and trash labelled with some fancy name they are victims of a bunco game. There is no reason that we can see why the manufacturer of a molasses feed should not put a label like the following on his bags:

$1000 REWARD WILL BE GIVEN
For any weed seed, mill sweepings or indigestible matter found in this feed.

There would be nothing illegal about that, and they could not make the feed fast enough to supply the demand for it.

BREVITIES.

THIS is the season when good well-drained walks about house and dooryard would be appreciated. If cement or flagging is too costly, good results are obtained by drainage, a foundation of stones and surface of cinders.

HAS your system of vegetable storage proved satisfactory during this changeable Winter? House-cellar storage which permeates the living rooms with a charnel-house smell of dead cabbage and turnips is always to be avoided.

THE Philadelphia Quartz Company has offered a 10 per cent increase in wages to all employees who sign a pledge to abstain from intoxicants. The firm considers that the improved quality of work resulting, will fully make up the increase in wage.

THE death rate in New York City decreased last year, while it increased in the remainder of the State. The State Health Commissioner urges establishment of a Bureau of Rural Hygiene, which would be helpful, not only in controlling epidemic disease, but also in preventive measures.

WOMAN AND HOME

Social Needs and Possibilities of Country Women

By Dr. Kenyon L. Butterfield.

A response to the editor's request for a few words on this subject has been made with considerable hesitation. So much is now being written about country life, and especially about the farmer's wife, that is unwelcome, often unsympathetic, and not seldom uninformed, that one may well be cautious about adding words of unwisdom or vainly multiplying counsel. And especially if one be a mere man! Moreover, the life of rural women in many individual homes, and indeed in many farming areas, is so satisfying that any word of suggestion would be not only superfluous but ungracious.

My only reason for consenting to write on this topic is found in the unquestioned fact that not alone in multitudes of country homes, but even in wide stretches of country, the status of the farm homemaker is far from satisfying, her lot far from a happy one, and her life far from the ideal. I recall reading scores of replies to a question sheet sent out by the Country Life Commission, to country women, seeking light on woman's work, position, and ideas, in American farm life. Doubtless the discontented were the ones who might have been expected to reply; but the answers indicated the existence of many grievances, varying from inexcusable lack of sheer necessities for labor-saving, to pathetic isolation of life and meagreness of opportunity really to live—in all those realms that a human soul needs for growth. I believe, moreover, that the best single test of an adequate rural civilization is the farm woman's part and condition.

First of all, what are the chief social needs of country women? They are legion, but may be summarized in two brief statements: (1) Social contacts that are at once pleasurable and cultural; (2) leadership in securing these contacts. Just what is meant by this somewhat professorial phrasing? Well, we must admit that farm life is relatively isolated. The contact or association of person with person is less frequent than in the city. In extreme cases this becomes a serious deprivation, and brings in its train not only loneliness but a stunted mental and moral development. The need then in such cases is just plain sociability, friendliness, neighborliness—"contacts." The pleasures that arise from human association are both moral and necessary. In fact unless these associations are pleasurable they are of little value.

But there are all varieties of enjoyment. The pleasure that brings relief to loneliness, or gladness to sorrow, or substitutes laughter for tears, is good. But it is not all. We need the breadth of sympathy that comes from meeting people who live in other spheres than our own, who know more than we do, who have read and traveled more widely—people at least who have had different if not superior experiences. We must learn the pleasures of mutual expansion as well as of humor. Hence our "contracts" must be "cultural," or productive of mental and spiritual growth, as well as "pleasurable" or enjoyable.

Illustrations of this philosophy can be supplied indefinitely by Grange lectures and farmers' institute lectures. The lonely country woman awakened to her true life by institute speech, trained to growth and self-expression in the Grange—these are everyday occurrences. And they are precisely the sort of thing needed in thousands of farming communities and in tens of thousands of humble farm homes. Just the opportunity to gain a new life and a new joy by freer human association.

This process is often accomplished by the woman herself. But more often it comes because some other woman, stronger and freer, leads the thirsty one to the waters of life. This need for leadership is then the second great need among multitudes of country women, and is moreover the arena of largest possibilities for country women. This leadership may find its opportunity in at least four ways.

1. In making a "homey" farm home. There is no home in America superior to the best of our farm homes, in all that goes to make for dignity, simplicity, "sweetness and light." Nevertheless the absence of the things that count for most in home-making, is one of our rural deficiencies. The woman who can appreciate the type of furniture and pictures, the setting of house and its environment, most suitable for the rural life and attitude, avoiding both undue simplicity and poor city imitation, can render an immense service in country life leadership.

AN OLD FASHIONED GRANDMOTHER.

2. In establishing the "culture" point of view. The moment the word culture is mentioned, the feeling arises that something is suggested that can be the portion of the few, and something not quite consonant with kitchen work and other household duties. But true culture is appreciation of environment—mental and spiritual. There are degrees and kinds of culture. Every person has some culture of some kind or another. Think of the possibilities of culture in the open country. Nature and all her secrets, the processes of a great industry, the presence of problems that lie at the root of civilization and progress—all this is the material of culture, the rural environment. What shall be the country woman's attitude toward this environment? Shall there be intellectual curiosity and interest concerning the problems of field and market and community? Shall there be a spiritual response to the wealth of plant and animal life, the voice of the forest, the music of the winds? It is chiefly a matter of point of view, attitude—not primarily of capacity. The alert country woman can help create this point of view—that of culture or appreciation.

3. She can also assist in relating the home to the community. We are coming to cherish the idea of community welfare and development as the core of rural progress. The home may minister to the community need and betterment. The home-maker may find the walls of the home widening to take in the good of all the neighborhood. Leadership of a high order is needed here.

4. She may be active in those organized efforts that seek to crystallize with action, ideals such as we have been discussing—church, Grange, school, women's club, Sunday school, study club. In this way ideals will become realistic, personal influence find its widest outlet.

And through and beyond all activities, the country woman may learn that both personal growth and helpful service are not measured in terms of multitudes of people, nor bigness of institution. The farming neighborhood is rich to repletion with opportunities for personal culture and Christian service—and for what else is life anywhere worth the living?

"BACK TO THE FARM."

The students of the Minnesota School of Agriculture have always taken a lively interest in debating and other literary society work. There are at the present time something like a dozen literary societies maintained by the 800 students of the school. These societies hold weekly meetings during the school year, and once each year each society has a chance to show its talent on the stage before the whole school. Formerly each society was allowed to give a play in chapel each year; but since the societies have grown so numerous, it has been necessary for two of them to combine in giving each play, for the reason that there were not enough available evenings during the year to accommodate all. This kind of work has developed the fact that many of the students have real talent for the stage, and also that some are capable of writing really interesting and worthy plays. One of the members of the present junior class has written two or three plays that have real merit. One of these has been played by a group of school and college students at many of the county fairs and towns throughout the State where the extension department has held short courses and other farmers' meetings. So well have this play and the players been received, that the cast is in constant demand, and has been obliged to appear at some place nearly every Saturday evening during the year.

The play is called "Back to the Farm," and is a three-act drama intended to show the advantage of scientific farming over the old-fashioned rule-of-thumb methods. The hero of the play is a young farmer's son who believes that the farm might be made to pay if it could be managed according to modern methods. He does not receive any encouragement from his father, who is satisfied that he knows about all that needs to be known about farming. The young man finally decides that he will go where he can get an agricultural education. This he decides to do after an interview with the heroine of the story, a young lady from the city who is teaching the district school. In this interview she tells the hero that she could not endure the thought of being a farmer's wife because of the drudgery

The hero goes to an agricultural college, where he works his way and saves a little above expenses by work during vacations. During the years he is away from home the farm is constantly running down and the holder of the mortgage threatens to foreclose. The mother finally hunts up the son and begs him to come back to the farm. This he gladly does, for he thinks he sees a chance for working out the theories he has learned and making the old farm "the best in the State." He takes charge of the farm, borrows a little capital of a man who has faith in modern farm methods, and proceeds to put his theories into practice.

The third act shows the farm after two or three years of good management. The dairy herd has been improved by weeding out the undesirable cows and introducing new blood. The whole farm has been improved and made profitable by a system of rotation of crops, and the house made more comfortable and convenient by modern improvements. In the meantime the heroine has taken a course in domestic science at college and is teaching her specialty in a neighboring consolidated high school. The hero seems to have no particular trouble in convincing her that life on a modern farm may be made very enjoyable, and she agrees to join the partnership.

The necessary touch of humor to enliven the play is furnished by a young Swedish hired man and a maid of the same nationality who have some difficulty in absorbing enough knowledge of germs and other mysterious matters to enable them to understand the reasons for care in following sanitary rules. The father in the third act takes great pleasure in telling an old crony neighbor how prosperous the farm has become under the new order of things, and he gives the young man so much credit that the audience is quite willing to forgive the too frequent use of the word "we."

J. M. DREW.

Woman and the Home

From Day to Day

The Mother-look.

You take the finest woman with the roses in her cheeks,
An' all th' birds a singin' in her voice each time she speaks;
Her hair all black an' gleamin', or a glowin' mass o' gold—
An' still th' tale o' beauty isn't more th'n half way told.
There ain't a word that tells it; all description it defies—
Th' motherlook that lingers in a happy woman's eyes.

A woman's eyes will sparkle in her innocence an' fun,
Or snap a warnin' message to the ones she wants to shun.
In pleasure or in anger there is always handsomeness,
But still there is a beauty that was surely made to bless—
A beauty that grows sweeter an' that all but glorifies—
The motherlook that sometimes comes into a woman's eyes.

It ain't a smile exactly—yet it's brimmin' full o' joy,
An' meltin' into sunshine when she bends above her boy
Or girl when it's sleepin' with its dreams told in its face;
She smooths its hair an' pets it as she lifts it to its place.
It leads all the expressions, whether grave or gay or wise—
Th' motherlook that glimmers in a lovin' woman's eyes.

There ain't a picture of it. If there was they'd have to paint
A picture of a woman mostly angel an' some saint,
An' make it still be human—an' they'd have to blend th' whole—
There ain't a picture of it, for no one can paint a soul.
No one can paint the glory comin' straight from paradise—
Th' motherlook that lingers in a happy woman's eyes.

—W. D. Nesbit in The Chicago Tribune.

Thawing Out the Bit.

Women's work is frequently done in the background, unobserved and unrewarded; yet it is of the character which keeps the world sane and good natured.

THAWING THE BIT.

This picture shows how one woman helps take care of the live stock. Many a hurried farmer on a frosty morning forgets how the horse must feel when the frosty bit is jerked into his mouth without warning. The farmer doesn't mean to be cruel, or to injure the horse, but he is in a hurry, and does not stop to realize what effect this frozen steel will have upon the tongue of the horse. The woman of the household never would do that, and the one here shown makes sure that Old Gray or Charlie doesn't go through the Winter with a frosted tongue. She either has the bridle brought into the house over night, or else she gets hold of it before the men folks harness up, and pours a little hot water over the bit. This takes the frost out and saves a sore and burning mouth. Women often think of these little things, where the comfort of the live stock is concerned, and a little care of this sort just at the right time may make all the difference between profit and loss in the service of the horse.

The Barnyard Trolley.

The little picture shown herewith is sent us by Mr. Horace Markley of New Jersey. It represents a barn trolley, which saves many a step or aching back. The wire is hung between the barnyard and the kitchen door, with a little trolley or runner, and a hook fastened below it. As seen in the picture, the woman hangs the loaded pail of kitchen leavings or of warm feed, and away it goes rolling down

THE BARNYARD TROLLEY.

to the barnyard to be cared for by the men folks. By an adjustment on the post at each end of the line this trolley may be made to work both ways, so that the empty pail may be sent rolling back or filled with something to go to the house, and thus returned loaded. At any rate, this device of Mr. Markley's is a good thing, and an excellent way of saving many useless steps, and much use of muscle for the women folks in the kitchen. It is a homemade device too, which any ingenious man could put up, with a light expense for wire, trolley and hook. It is much better for the women to hook her pail on to this trolley, and see it travel off to the barn, than for her to carry it along herself, or spend time in trying to get the men folks to do it. They will take care of it at the other end of the line, but they frequently forget it at the kitchen end.

THE Chinese have begun to eat ice cream as a regular food and the demand for American freezers is enormous.

*

The Virginia "Farmer's Wife" on page 83 says that she moved heaven and earth to obtain a convenient kitchen. This is no figure of speech. Thousands of farmer's wives would know that Heaven had moved far in their direction if they had such a kitchen. They will have to move many "things of earth" animate and inanimate before they reach their desire. This idea of "efficiency" is working booth indoors and out. Here is one of our men correspondents proposing to put the price of the least useful tools in household fixtures!

*

A WOMAN 81 years old is said to have gone on horseback to attend an extension school in Ohio. The roads were too bad to permit carriage travel. This woman had kept house all her life, but went to see how housekeeping could be taught at a school like reading or arithmetic. Another Ohio report is that a father and his son are studying together at the Ohio Agricultural College. We told last year of a New York man who went to college with his boy. This man wanted to be a friend and companion of his son as long as possible, so when the boy was old enough to enter college the man went along too, entering the same classes and working out the same problems. Both son and father were the better for it.

*

IT is often suggested that a coöperative laundry could be started at the local creamery or cheese factory. The dirty clothes are to be brought to the laundry, washed and ironed and sent back. Steam from the creamery boiler could be used for the laundry. This is a good thing in theory, but it is seldom seen in practice. In hunting for the reason, we are told seven times out of 10 that the men folks say there would be no money in it. The milk carried to the creamery gives a profit in money. The laundry would not mean an income but more or less expense. If the women continue to do the washing this expense will be saved! Now then, we would like to have the women's side of it. Is that argument strong enough in your neighborhood to settle it?

*

THERE is a good story of a helpful man who wrote an article telling how he helped his wife in the kitchen. He kept the wood box filled, brought in coal, churned and helped at the washing, and did a dozen other things to help his wife. This man told the story, and it was printed without his name. His daughter read it and thought it a very fine statement of what a man ought to do. She took pains to give this opinion to a young man who was beginning to call quite frequently. Then this girl learned that father was the man described in the article. That seemed to take the romance out of it, for it did not seem so remarkable that plain and patient father should be glorified for doing the things which seemed so natural for him to do! Nobody looks upon father as much of a hero. When he is good natured and willing to help in the house he rarely gets full credit for it.

*

So far as we can remember of all the thousands of questions we have asked our readers only three have been given up. One is how women farmers can get the silage out of a tall silo. The question was asked by a woman in Illinois. She is 60 years old, and has held her family together on a little farm by feeding stock. Her boy wants her to build a silo, but as she wrote: "In my mind's eye I see myself 40 feet in the air, digging out silage." Here was a question apparently for the suffragists who show us that there are women mayors, sheriffs, jury "men" and police women. Is the tall silo reserved for man alone? Will not some women farmers give their experience?

*

ALL sorts of stories are told of the sacrifices mothers will make to educate their children. Here is a new one. A widow in Kansas City, Mo., offered to pawn her wedding ring and this is what she told the pawnbroker:

"My husband died two years ago. My only son wants to complete his education at the University of Illinois. He has been working since school let out and has saved $100. I want to leave my ring here and give him the money to go to school. If I could get $125 on my wedding ring he will be able to go back to college." The ring brought the $125. That boy's education ought to carry a blessing with it.

*

IT is said that a woman who is a grandmother, has entered the freshman class of Washington University. She is taking a course in English, studying composition and the art of expression. Why should not a grandmother take advantage of a college course as well as her granddaughter? Washington University is the place where a novel scheme was tried for getting the young men to work at pulling weeds. The lawn was filled with weeds, and in order to get them out the college authorities started a voting contest for the most popular girl students in the college. The only way to vote was to dig weeds on the lawn, each weed representing a ballot. Thus the most popular girl was the one who had the greatest number of weeds dug out of that lawn and voted for her. It is said that many a young man who would not have exerted himself under any other conditions, made a tremendous record at weed digging.

*

WITH medical inspection of pupils in the country schools New York is far removed from Afghanistan in medical treatment. In a book by J. A. Gray who was medical adviser to the Amir we are told:

The tooth extracting of the village is usually intrusted to the village blacksmith, who has a ponderous pair of forceps, a foot and a half to two feet long, hung up in his shop for the purpose. When an Afghan comes to negotiate about the price of an eligible girl for marrying to his son, one of the first questions asked is, "Has she had the smallpox?" and if not, either the settlement may be postponed until she is older or else some deduction is made for her possible disfigurement if attacked by the disease. Many times fathers have brought their daughters to the hospital with the scars left by smallpox in their face, begging me to remove them, not so much for the sake of the patient as because the market value of the daughter will be so much enhanced thereby."

*

IT would seem as if Miss Ethel Vanderwilt, of Solomon, Kansas, ought to be a wise woman. She is. She won a gold medal worth $100 in an agricultural essay contest. She competed with young men in agricultural colleges all over the country. This girl did not depend upon the name of her home town for her supply of wisdom. She spent four years studying scientific farming, and is now employed at the State Experiment Station. It is said that Miss Vanderwilt can go into the stock ring and judge stock as well as any young man in her class. Here in New York City the young man of only a crage attainments, coming to find a job, finds himself in competition with women and girls, who are as a rule more reliable, neater, and more accurate than the average man. It would seem too that scientific education is giving the new woman a chance to make the educated men step lively in their chosen field.

*

THE writer once took part in a debate, with the following topic for discussion: "Resolved, that the dishrag is a greater agent of civilization than the broom." The dishrag won. But now comes the College of Agriculture of Ohio, taking up the dishrag and describing its dangers. It seems that the dirty dishrag breeds disease, as it distributes germs from one plate to another. The sanitary dishrag is the proper thing, and more attention should be paid to it than to almost any other household necessity. The cloth should be washed in hot soapy water, hung in the sun to dry, and boiled thoroughly twice a week. We would amend this by having it boiled every day, as this takes but little time, and is a sure precaution. There is one particular germ which causes milk to become sticky or slimy. We have had a number of cases where farmers were absolutely unable to learn how this germ ever got into their milk. They boiled and sunned their utensils thoroughly, only to learn finally that the germ was carried in the innocent-looking dishrag, and conveyed to the pans and pails through the washing. When the dishrag was boiled, this germ disappeared. Evidently no one can win the debate in favor of the dishrag in practical work, without getting it into hot water.

*

"GOOD HOUSEKEEPERS."—At a "mother's meeting" several women talked long and learnedly about the proper training of children. One woman never had any children of her own, nor had she ever raised any. Yet she had a perfect system, and was full of advice. Another maiden lady, a school teacher, also told just how it should be done. In the discussion a gentle little woman on a back seat ventured to make a suggestion which was not according to the rule:

"What, may I ask, do you know about the science of children," asked the president.

"Very little," was the humble answer. "I have only raised six of my own, but I cannot give you any rules for doing it."

The best cook in town was a woman of 60 who in her inconvenient kitchen turned out the most wonderful cake and doughnuts and pies. The young woman from the domestic economy class took pencil and paper and went to get the recipe.

"Now, Aunt Mary, tell me just how you make those doughnuts and I will write it down."

"Well," said Aunt Mary, "I take a handful of flour, a pinch of salt, a lump of butter and as much milk and sugar as I think I need and just make them."

You see mother and Aunt Mary could not tell others how to raise great, healthy boys and girls, or how to make doughnuts and pies by rule. They put their personality into their work, and that gave them almost a patent. If the average man could have his future wife trained by one of these natural housekeepers, or a college of domestic economy, which would he choose?

First Christmas Tree by Parcel Post.

The picture is of a Christmas tree my wife and I sent my younger cousin on Long Island by way of parcel post, all trimmed and finished as picture shows. The tree measured 32 inches in height, with a spread of branches 20 inches in diameter. After trimming we carefully drew the branches up and tied them the same as you would fruit trees for shipment, and packed in box. After packing the bundle measured length, 33 inches, girth 37 inches, weight five pounds, cost insured 14 cents parcel post. It was received in excellent condition. We sent it partly as an experiment and partly as a lark, but since we sent it the thought has occurred to us how happy it would have made some of the poor children of the city, who hardly know what a Christmas tree is, to receive one like it on Christmas morning WM. A. CASE.

CHRISTMAS TREE SENT BY PARCEL POST.

Farm Manufactured Food.

MEAT PRODUCTS.—I have had abundant opportunity to observe the many things sold and called for every day in the average grocery, that could be manufactured or produced on the average farm. First come the meats. Sugar-cured or otherwise, hams and bacon would find a ready sale. I know of no farmer making a business of this for our market, but there is a man located about eight miles from Ft. Wayne, who makes a business of country sausage, and twice a week he brings a wagonload of sausage and lard to town, which sells to the grocers at about 15 cents for the sausage and 10 to 12 for the lard. Sometimes the demand for sausage is so great that he cuts up the hams and tenderloin into sausage. This sausage is all put up in the casings, and these are coiled in bushel and half-bushel baskets. The lard is put up in 50-pound cans with his name on them. These cans when empty are replaced with full cans. The sausage retails for 20 cents and the lard for 15; 10-pound lard pails could be used for private or family trade.

BUTTERMILK.—One of the best sellers I know of is fresh buttermilk. The average city never gets enough; it can be used for so many things in cooking, and as a beverage is unexcelled. Buttermilk naturally calls to mind cottage cheese. Any woman who could make good cottage cheese would find a number of people who would take a supply each week or twice a week. This could be put up in one and two-quart butter crocks and these exchanged when empty for others.

CANDIES.—Home-made candies would find a ready sale over the doctored, adulterated glucose kinds now sold. I would suggest a person making a specialty of some one kind, preferably one of the old-fashioned kinds, like butterscotch, molasses taffy or peanut candy. Where anything is made that must be sold in small quantities, an arrangement with some storekeeper to handle the goods on commission should be made, even to paying for a few lines of advertising inserted in his regular "ad."

A WOMAN'S EXCHANGE.—One merchant here who is in the tea and coffee business has a department called "The Ladies' Exchange," which occupies one section of his store. It costs $1 for membership and 10 per cent. commission on sales. Regular members of this exchange make certain things. Formerly this exchange sold anything from embroidery to doughnuts, but now it handles baked goods almost exclusively. One of my friends makes a white layer cake with frosting, nothing else. She has developed quite a business, buys eggs by the case, sugar by the 100 pounds, and other supplies in proportion. I asked her what she did with the yolks of the eggs. "Oh! give them to the neighbors." Now suppose some one making a yellow cake or something that would use those yolks, could coöperate with her; think of the saving! These cakes sell for $1 each, 50 cents for a half, and this woman has regular customers for these cakes, besides many extra orders. She supports her home (her husband being in poor health) with her baking. All the jams, jellies, preserves, pickles, etc., would find some one clamoring for them, but in all this remember you must have a clean, neat, attractive package, and a bright tasty label would enhance the chance of sale. We found that we could put up a nine-ounce glass of jelly for five cents. Many of the stores retail a seven-ounce glass for 10 cents, and it isn't to be compared with a good homemade product. Dill pickles retail 15 cents per dozen, others one cent each. Another thing that is in demand is apple butter. I talked with one woman who sold all she could make at $1 per gallon. Homemade sauerkraut is retailed in large quantities every year. This year it sells for 10 cents per quart, cabbage being scarce, but usually at eight cents per quart. The stores sell this in ordinary oyster pails, pints and quarts.

HUGH HARTMAN.

"I Will Trust You Gladly Wherever You Live" "I believe in every man who earns a living. I am for the average home lover—the man who wants home pleasures but hasn't a whole lot of money to spare all at once. My credit plan of buying is for him. I want to get acquainted with all those who desire to make their homes cheerful and comfortable. I can help them get what they want. Thousands are saying, 'Spear helped us to beautify our homes on his liberal credit plan.' I want many more friends like that. Send for my bargain book now and let me explain how I give 'Credit to the Nation.'" Spear, Pittsburgh

Spear's Room-Size Brussels Rug Only $11.95

$1.50 Cash Balance, 75c a Month Order No. D 4736

Beautiful high color Brussels Rug, size 9x12, red rose design, green leaves and tan ground. Guaranteed full 9-wire Tapestry Brussels with wool facing. This is the greatest genuine Brussels Rug value you ever saw. It is perfectly safe to order direct from this advertisement, as we positively will refund your money if on receipt you are not satisfied with your bargain.

Bed, Spring, Pillows, Mattress Complete Only $9.45

Order No. D 312 $1.50 Cash Balance, 75c Monthly

This handsome, complete Metal Bed Outfit, consisting of heavy, perfectly constructed Iron Bed, any color, 4 feet 6 inches wide; a good woven wire spring with all steel frame; 50-pound cotton top mattress; 2 feather pillows.

"Let Spear Make Your Home Sweet Home"

Open *your* charge account with Spear of Pittsburgh. He will trust you—no matter where you are—and save you money at every turn on all kinds of household goods on the most liberal and easiest charge account credit plan. No need to scrape and save for months and years. By Spear's plan you pay as you can—a little each month. You'll find Spear fair and square. He has no iron-clad rules and will be pleased to give you

30 Days' Home Trial

of any article so you can examine and try it out, right at home. If you don't want to keep it, send it right back at Spear's expense. Spear has many thousands of happy, friendly families on his open credit books. It's his life work. His whole heart is in it.

A Man from Ohio

wrote Spear of Pittsburgh, saying, "I wish you could see my home today. We are plain working people, but there is not a millionaire who enjoys greater comforts than we do in our home." Spear wants *you* to beautify *your* home without any strain on *your* pocketbook. Spear asks no unreasonable questions, does not let *your* neighbors know *your* business.

Try out Spear's plan by ordering any article shown here, enclosing first payment by Draft, Money Order or Registered Mail—or send for Spear's Free Book of Home Bargains now.

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Spear's big Free Bargain Book is just like bringing the choicest, handsomest stock of Home Furnishings—many times the size of even the greatest city store—right *to you*—to study over and choose from.

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Mail this "Home Sweet Home" Coupon Now

Price, only $3.85

Order No. D 423

Spear's Big Rocker Bargain

75c Cash—Balance, 50c Monthly

30 Days' Free Trial

Large, roomy, comfortable, well made rocker with high, wide back, fully tufted and buttoned. It is very roomy and upholstered with high-grade black Sylvan leather. Seat is made over full steel springs with beautiful ruffled edge. Has high gloss "Kenwood" quartered golden oak finish.

SPEAR & CO.
Dept. H Pittsburgh, Pa.
"Let Spear Make Your Home SWEET Home"

Spear's "HOME SWEET HOME" Coupon

Spear & Co., Dept. H Pittsburgh, Pa.

Please send me, free, your complete Bargain Catalogue with Prices, Terms and Information, without the slightest obligation on my part.

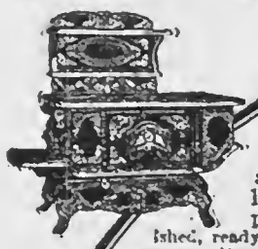
Name .....

Street .....

Town ..... State .....

Save $5 to $23

Factory Prices—Freight Paid—One Year's Trial



Gold Coin Stoves and Ranges

Buy direct from factory and get a better stove for less money. Freight prepaid—stove comes all polished, ready to set up. Use it one year—if you aren't satisfied we refund your money.

Write for Catalog and Prices. Big Free Catalog shows why improved features of Gold Coin Stoves make them fuel-savers and splendid bakers—why they have given satisfaction for 53 years.

Gold Coin Stove Co., 3 Oak St., Troy, N.Y.

BETTER LIGHT from KEROSENE Than Electric or Gasoline

TEN DAYS FREE SEND NO MONEY

Without sending a cent you can use this wonderful, economical oil light 10 days Free, then return at our expense if not satisfied. Gives powerful white incandescent light, burns over 50 hours on one gallon Kerosene (coal oil). No odor, smoke or noise, simple, clean, won't explode. Guaranteed. *We want one person in each locality* to refer customers to. Write for 10-DAY FREE TRIAL OFFER—agents' wholesale prices and learn how to get ONE FREE. AGENTS WANTED

Make money evenings and spare time. One farmer cleared over $500 in 6 weeks. Exclusive territory given.

MANTLE LAMP CO., 521 Aladdin Bldg., Chicago, Illinois

WELL DRILLING MACHINES

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

CASH FOR OLD BAGS

Turn your old bags into money. We buy them in any quantity, sound or torn, at a liberal price and pay the freight. Write for particulars and state number you have. Reference: Citizen's Bank. Iroquois Bag Co., 450 Howard St., Buffalo, N. Y.

New York's Latest MEN'S STYLE BOOK *Send for It* It's FREE

Men everywhere like to know exactly what the best dressed business men of New York are wearing. The Glen Rock Style Book tells you—tells you as well as a visit to New York. Page after page of men's fashion ideas. But this will interest you most—this booklet contains handsome Fashion Plates and 40 sample pieces of the very woolens which New York men consider "the thing" this very minute.

So much for style. Have you ever worn a Glen Rock suit or overcoat? If you have, you know that the fit is perfect. You know that every detail of tailoring is most expertly done. You must know that every Glen Rock garment is made from good material, for garments which give you such long wear as "Glen Rocks" do are made only of good materials. Prices all the way from $10 to $22.

Here's the "Glen Rock" plan. Every garment guaranteed a perfect fit and stylishly made. Because we sell to you direct (from the mill) we save you at least $8.00 on every suit or overcoat. You see you save the retailer's profit. Get in on this plan. We save you money! We want to make you a friend of ours.

Send for FREE Book of Styles and 40 Samples of Cloth TODAY

GLEN ROCK WOOLEN CO.
203 Main Street Somerville, N. J.

WE PAY THE FREIGHT

Brown Fence

Strongest, most durable made. Basic open hearth wire. *Double galvanized.* Compare our quality and prices with others.

Bargain Prices—Direct From Factory
150 Styles—13 Cents Per Rod Up

We pay freight anywhere. Write now for free fence book and sample to test.

BOOK FREE THE BROWN FENCE & WIRE CO. Dept. 59 Cleveland, Ohio WRITE NOW

FARM FENCE 41 INCHES HIGH

100 other styles of Farm, Poultry and Lawn Fencing direct from factory at save-the-dealer's-profit-prices. Our large catalog is free.

20 CENTS A ROD

KITSELMAN BROS. Box 230 Muncie, Ind.

FARM FENCE FROM FACTORY TO FARM

26-inch Hog Fence,....14c.
41-inch Farm Fence,....21c.
48-inch Poultry Fence...22½c.
80-rod spool Barb Wire, $1.40

Many styles and heights. Our large Free Catalog contains fence information you should have.

COILED SPRING FENCE CO. Box 263 Winchester, Ind.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards their property and their children. There will be direct answers to actual questions and general statements of law.]

Will for Charitable Purposes.

If I should make my will and leave all my estate to charity except $1 each to my brothers and sisters after all of my just debts are paid, such as doctor bills, nurse bills and funeral expenses, including all grocery bills and any other debt I may have contracted during my sickness, can my brothers and sisters break this will and take all my estate, which they are not entitled to, as they have never done anything for me and never came to see me until the doctor said I would soon die? I have known several cases of this kind, and I am only writing it this way for example.

You may leave any part or all of your estate to charitable uses, and your relatives cannot break your will, provided your will is attested by two credible and disinterested witnesses, and made at least one calendar month before your death, for the laws of Pennsylvania provide that no devise of property may be made for charitable uses by a will executed within one month of the death of the giver.

Married Woman's Property in Cows.

If a woman buys a cow with her own earnings, outside of the home work, can she hold the increase from that cow, or does it belong to the husband and heirs if the husband dies?

You may own in your own right all the cows you pay for out of your separate money, or all the cows which you may have acquired by agreement with your husband. You are not limited to one cow or to any other number. You would naturally own the increase also, but if your cow was fed on your husband's feed you should make some agreement with him as to the calves. If he would feed the cow for all the bull calves, you to have the heifers, that is a lawful and enforceable agreement, and you would then own all the heifer calves as against him or his heirs or all the world.

Woman's Right to Property.

I would like to know if I have a legal right to my home. My mother died in 1900, leaving a house and lot with a mortgage of $750 on it. There were two daughters, myself and Mrs. S. Mrs. S. had died, and left two sons over 21 years of age and married. They and their wives signed deeds to me for a consideration, and I hold the same now. There were no personal debts, and it never went through the surrogate's court. If I should die without a will would my property go to my husband and daughter? E. J. L.

If you have not already done so, it would be well to have the deed from your sister's sons and their wives to you recorded and then there could be no question of your title to this property. If you should die without a will your real property would go as follows: First, your husband would have a life interest in it, and then it would all go to the daughter in fee. If you own real property, it would be well for you to make a will in a short form, such as appeared in this paper some time ago.

Rights of Guardian.

What is the legal difference between the rights and duties of a parent, and of a guardian? Suppose a woman is appointed for a child, with no estate to pay for it. What actual control or right does the guardian have over the child as compared with her own son or daughter, and is she obliged to protect and care for the child as a guardian? What right has she, if any, to the labor of the child until it becomes of age?

There is no practical difference between the rights and duties of a parent and those of a general guardian who has charge of both the person and the estate of an infant. In the case given where the guardian of a child is appointed without any estate out of which to pay for the care and tuition of the child, the guardian may do one of two things: care for and support the child out of the guardian's own estate, or the guardian may with the approval of the court or officer which appointed the guardian, send the child to an incorporated orphan asylum. The guardian is not, of course, bound to pay for the care of the ward out of the guardian's funds. The guardian exerts the same control over the ward as she would over her own child, and she is obliged to protect and care for the ward practically the same as for one of her own children. She has, however, not the right to the fruits of the labor of the child except that where the child has no estate of its own, its labor may be used toward defraying the expenses of its support.

It is well to note that a married woman is a joint guardian of her children with her husband with equal powers, rights and duties in regard to them as has the husband, and the surviving parent may, upon the death of the other, by a deed or by a will duly executed, appoint as guardian for an infant child during its minority or for any less time, any person or persons they deem suitable, always having in mind that the paramount issue is the welfare of the child, and, as above stated, the guardian so appointed, or one appointed by the court has practically the same rights, duties and liabilities as a parent.

The Youngest Grange Lecturer.

Miss Winnifred Whitcomb, whose picture is shown below, is said to be the

THE YOUNGEST GRANGE LECTURER.

youngest Grange lecturer in the United States. She was installed as lecturer of Everett Grange in Massachusetts when only 15 years of age; and what is better, did the work effectively. The office

A CHAMPION CORN GROWER.

of lecturer is really the most difficult of any in the Grange. It is the duty of the lecturer to think out and provide programs which must be educational as well as entertaining. It is no small job in a country neighborhood to provide these programs for a full year, so as to keep up interest in the organization. The Grange is not only a fraternal organization, but it is educational as well, and that is why it has always had such a strong hold upon country people. The efficient lecturers who spend so much time and thought in preparing good programs, are largely responsible for the fact that the true Subordinate Grange in this country represents the very cream of our rural people. The National Grange may be subject to fair criticism, but the Subordinate Grange back in the country towns and among the hills, is the strong part of the organization, and has had much to do in the development of rural life. The lecturers of these local Granges who in their quiet way supervise or direct the thought of the members, rarely receive proper credit, yet to them is largely due the great strength of the order. Perhaps we may be able to print later a picture of the oldest lecturer in the country. This month, however, it is the youngest one, Miss Winnifred Whitcomb.

A Girl Corn Grower.

The picture printed below shows the 11-year-old girl of Mercer County, Pennsylvania, who won first prize in a corn contest. Our space is too short this week to tell all her story. Later, in the corn-growing season, we shall tell how her crop was grown. Miss Aleen Fell belongs to a family which in its turn has belonged to the soil for at least 200 years. Her father had no boys to enter this contest, and so Miss Aleen entered under her nickname of "Pete." She grew 98.65 bushels of shelled corn on one acre, doing practically all the work herself, except the plowing. She ought to be able to raise good corn, if there is anything in pedigree, for her grandparents moved into the county where she lives in 1788. About their first duty was to clear off a piece of land and plant corn, and every year since then corn planting has been a similar duty. This girl performed that inherited duty so well that she won in competition with 80 boys, and the citizens of her home town put up the money and sent her to the State College for the entire "Farmers' Week," where she made a speech to 600 farmers, and told them how to raise a prize corn crop. She also won $10 as a prize for the best 10 ears of corn, and received a letter from Justice Fell of the Supreme Court of Pennsylvania. The story of how this girl came into the contest as father's boy and won this prize, is one of the best things brought out in agricultural literature this year. We would much rather print, as we do, the picture of this plucky farmer's girl, than to print pictures of a dozen society women, or people who so frequently get into the public eye without deserving a place there.

Mention THE RURAL when answering ads.

THIS WASHER MUST PAY FOR ITSELF

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse. But, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse wasn't "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse although I wanted it badly. Now this set me thinking.

You see, I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see, I sell my Washing Machines by mail. I have sold over half a million that way.

So, thought I, it is only fair enough to let people try my Washing Machines for a month before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman and it don't wear the clothes, fray the edges nor break buttons the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight, too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months, in wear and tear on the clothes alone. And then it will save 50 cents to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

Address me this way—H. L. Barker, 1201 Court Street, Binghamton, N. Y. If you live in Canada, address 1900 Washer Co., 357 Yonge St., Toronto, Ont.

BETWEEN SEASONS ACCESSORIES

Show windows and shop counters are already gay with new Spring furbelows. Such an alluring array as there is! It positively makes one feel shabby to behold them, for even the best of Winter wardrobes have a way of appearing dingy at this between season, when it is still too early to discard old plumage for new. Forehanded women are, therefore, refurnishing their costumes and giving them the smart little touches that will make them appear up-to-date these last Winter days.

First of all the very newest thing is the cutaway jacket. It is not a difficult matter to perform the feat of shortening the front of an old one, thus making it conform to the new style. The very latest cut is that which is long behind and extremely short in front, extending just below the bust. With this idea was born the waistcoat girdle as an accompanying accessory. I mentioned this transforming waistcoat girdle last month, but in this paper I am able to illustrate the very newest thing, with a hope that it may serve as a suggestion for numerous variations. Of course it may be worn with any jacket, but to appear really smart it will be wise to abbreviate the length of your coat in front. All that is necessary is a pair of shears and a little confidence in yourself. Perhaps it would be better to mark the front of the coat with white chalk, just where you wish to make it a "cutaway," then try it on before the shears have done their work. It will be easier to change your mind about the length before you have cut into the coat than afterwards. The fronts may be left loose, or they may be gathered blouse-fashion. If the latter, a belt will be required. If the former, the fronts should be lined with silk or satin. I know one clever girl who always makes the most of materials at hand, who lined the loose fronts of her box coat with a flowered rose silk she emancipated from an old pair of rose velour portieres. She then proceeded to make just such a waistcoat girdle as I have pictured from a piece of the plain rose velour curtain, the latter having seen its best days. Another section was used to make a handbag, mention of which will be made later.

No pattern is required for the girdle, as it is cut even all around with the exception of a slight curve in front. Fold a seven-inch width of material together, allowing about five inches longer than the actual waist size, for the lapping which simulates the vest. In any event, the girdle must be loose when finished, otherwise it will wrinkle. After the girdle is cut, pass it around the waist, and pin the ends just as you wish the diagonal slashing to appear when it is finished. Then cut, and proceed to line and stitch tailor fashion. In fact, it will be better to stitch the girdle before lining, as the latter should be blind-stitched by hand.

Chamois, suede, plain and figured velour or a piece of broadcloth to match the skirt with which it is to be worn may be used for the waistcoat girdle. It may be boned before lining or left to wear crush fashion. Figured cotton eponge, with a sprawling rose, or any other floral design, will make a smart waistcoat girdle, and give a little "Springy" touch to a suit. These eponges are inexpensive, and are quite the newest thing in fabrics. L.. season we called eponge "ratine," but the new material is practically the same coarse, Turkish towelling weave with the exception that formal effects and Bulgarian colorings are seen on the plain backgrounds. These are exceptionally adapted to waistcoats, and cuffs and collars for wear with a tailored suit, as they launder and may be kept immaculate.

So long as the fingers and hand-seams of long suede and kid gloves persist in wearing out before the arm sections, just so long will uses be contrived for the pieces of soft smooth suede, and delicately tinted kid that only a reckless needlewoman would ever dream of throwing away. Perhaps they will be just the thing to utilize in fashioning a waistcoat girdle (as they are easily seamed on the machine) or one of the new bags for which an old frame may be used.

From the uppers of a pair of brown suede gloves, with a couple of yards of gold braid a half-inch wide, a fascinating hand-bag was made. The two pieces of suede were opened along the seam with as little sacrifice of material as possible, and were then laid together and trimmed exactly the same size, the upper edges being left straight, and the lower ones curved to a middle point. A lining of gold satin was cut a trifle larger, even when seams were allowed for; possibly a quarter of an inch on all sides except the top, where plenty for turning in and finishing was allowed. The lining was made first, then the two sections of suede were laid on it and stitched neatly down, without the edges being turned in at all. This left the little space between them, all around the sides and bottom, open, showing the raw seam of the lining. Over this was then stitched the gold braid, joining the two suede sections. The upper ends of the braid were turned down and were covered by the lining satin, which was turned in at the top and stitched to the suede just below a row of eyelets, through which ran a heavy gold silk cord, with brown and gold tassels. The gold braid would have worn too harshly against the suede. Of a narrower gold braid a handle was plaited, each end of which was attached to the center of a suede panel. The ends of the braid were sufficiently long to be curved and sewed on to the suede in a pattern resembling the Celtic interwoven designs. Another combination well worth trying would be black suede with violet moire for lining, using a black cord and tassel for carrying and finishing.

Simple but Frenchy mode of trimming a last year's straw hat to wear the "between season."

There is no article of apparel which begins to look quite so passé as the hat one has been wearing every day for the past few months. The woman who would discard her Winter chapeau and freshen up her last year's shape for wear until she is ready to replace it with a new Spring creation, may do so with excellent results. Remove the trimming, if you have not already done so, brush the straw until every particle of dust has disappeared, then give it a coat of shoe polish of the liquid variety. Set in the sunshine to dry. Almost any scrap-bag has a roll of black moire, satin or velvet ribbon which may be used in some such form of trimming as that pictured, or even ordinary velvet, cut on the bias, will answer every purpose. First, there should be a straight fold across the front of the crown with a "fan" trimming on either side well toward the back. To make such a rosette, side-plait the ribbon or velvet, one plait on top of the other until it has the required fulness; then secure the entire mass of plaits at one edge with coarse thread. When there is no danger of the plaits falling apart, they will drop naturally into a flare as pictured, fan-fashioned. Each end of the ribbon fold may be secured to the rosette on either side, leaving the puffy center free. It is a simple, Frenchy mode, and easy of achievement.

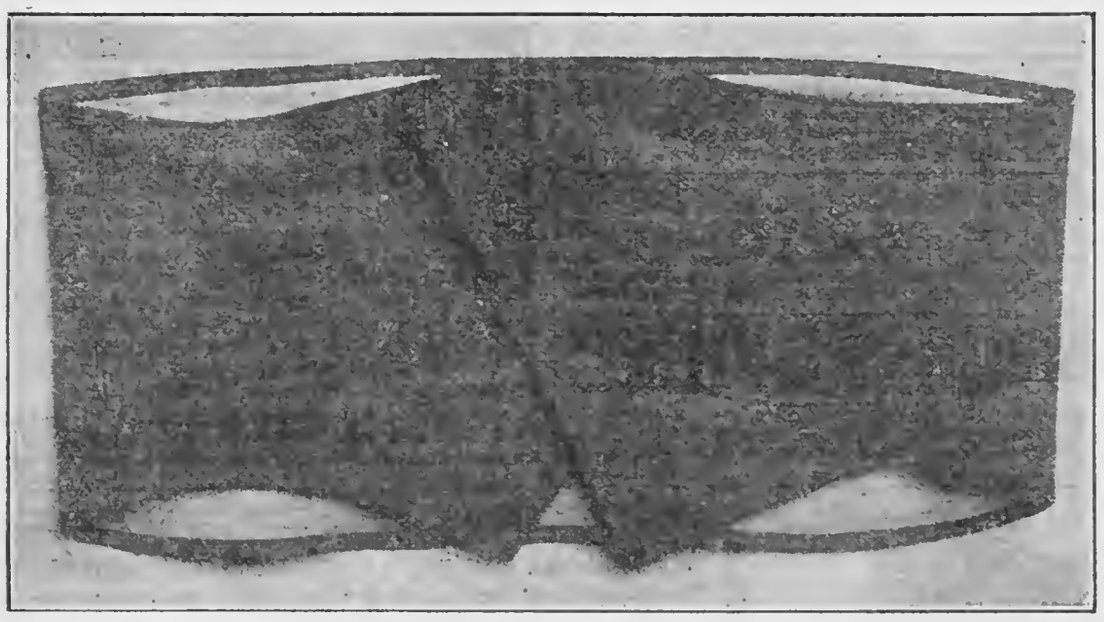
Either a soft lace collar with a frilled edge of net, or one of the high-at-the-back crepe de chine or crepe meteor collars with the wide flare hem-stitched, may be worn with such a costume. The newest of these Medici collars rolls in graduated points over a simulated vest. Speaking of collars, I saw a costume on Fifth Avenue the other day the most noticeable feature of which was the high upstanding starched collar. Not the old-fashioned circumspect stand-up kind, but a picturesque flaring accessory with high points in front, such as our great-great-grandfathers used to wear, with a skirt of linen that lies flat on the outside of the bodice. A black satin fold passes around the neck to disguise the joining of the collar and its linen skirt. The collars look exactly as I have described them, and any woman who wishes to cut one after her own fancy is safe in doing so. The more picturesque and flaring it is fashioned, the better style it will be. It requires a half yard of linen to make a collar and its "skirt."

And remember, while you have your hat box of materials out to make one of the little boutonnieres of the different flowers at hand, to add an attractive touch of color to your costume—a pink rose, a gardenia, a few violets, a spray of lily-of-the-valley, and forget-me-nots make as charming a boutonniere as one would wish for, and which to purchase would cost a small fortune.

If you have a party gown you wish to refurnish, why not make a minaret girdle? They cost $4 in the shops, and may be fashioned at home for but little, and perhaps at no expense. There is a wide band of material at the waist—satin or silk, supporting a quaint flounce of the same fabric. In the front is a "tablier" of satin finished with a silk tassel. This can be worn with any skirt and has the effect of a tunic.

Should you wish a pretty scarf to wear over your shoulders for an evening affair, there is nothing more attractive than black or white tulle. A two-yard length will be required. As it is wide, one width is sufficient. Turn a hem in each end and gather with silk thread. Draw in a knot and secure with a silk tassel. The latter cost but 10 or 15 cents apiece, and they come with a little hooded top that fits in the "frill" of the tulle. There is an elegance about tulle that sets off a costume as nothing else can do.

LOUISE E. DEW.



Waistcoat girdle made from the uppers of an old pair of evening gloves. Lined with white satin.

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"VOTES FOR WOMEN."

I am glad you have taken up the "votes for women" subject, and as usual, in a perfectly fair way. It is very true that many, perhaps a majority, of our eastern farmers' wives do not care for the ballot, because they have given but little thought to the matter. Those of us who have tried to do something along moral reform lines have found that education without legislation is slow work. We would like to sit at home election day and let our husbands and brothers "protect" us at the polls, but we see that the odds are against them singlehanded, and so, like good wives and sisters, we want the chance to go out and help them. Our brothers need us, not only in the family housekeeping but in the town, State and National housekeeping as well. It works well where it has been tried. Some say it would only double the number of votes without changing results. The brewers and liquor dealers' associations do not seem to think this, as everywhere they are among the bitterest opponents to votes for women. They are wiser and far more experienced in political matters than we and I bow to their judgment and believe the liquor men have reason to fear the women's vote.

HATTIE E. MILLER.

Ever since you started out to get the opinion of the women, in regard to this question, I have wanted to criticise your method, and the wording of your questions. It is not a question of "whether we would vote if we had a chance." It is whether the women of New York State *should have the privilege of voting*, whether they wanted to or not. I for one want to vote; if for no other reason, because I brought a daughter into this world and taught her the duties of citizenship. She is now living in Illinois, having the privileges which I am denied. I never have heard of, or seen anyone through this part of the country who was trying to find out what percent of the women wanted this privilege given to their sex, so how was the result obtained when the conclusion was reached that "only 10 percent of the women wanted equal franchise?" They didn't ask me or any of my neighbors and I can tell you right now, this country is just throbbing with eagerness to cast a mighty ballot, to help right some of the wrongs existing everywhere throughout this broad land. At all the former elections, the op-State counties have been factors to be reckoned with, so don't say again that "only 10 percent of New York State women want to vote," until you hear from little Warren, for there are many hundreds of women who have for many years been anxiously praying, wishing, and working, for this end.

EMMA B. WILKIE.

We have had long experience in learning the sentiments of our readers, and naturally we will follow our own plan in this case. There have been several very long and bitter articles sent us by the anti-suffragists. We cannot print such long documents. It seems a remarkable thing to us that women should indulge in such fierce denunciations as these "antis" do. Their favorite argument seems to be that immoral women in town and city would be most likely to vote and control elections. At the recent registration in Chicago over 153,000 women registered. Our private reports from Western States do not show any such conditions as these "antis" claim. As one on the other side puts it, "Anyway, it is no worse for such women to vote than for the men who profit by them!" What we make out of it thus far is that "votes for women" is at present in the East, largely an industrial movement of city working women. Country women are not yet specially interested so far as we can learn, except here and there where some strong workers are to be found. The Democrats in Congress have decided to consider this a *State* question. This means that under the present Administration there is not likely to be any National legislation on the subject.

Our Suffragette.

Last Spring, when we began feeding our new calf, she was so very militant that we named her for that leader of militantism in England, who has so recently visited our own land.

It was not long before our two-year-old daughter was entertaining all visitors by saying: "My bossy—name En'line Pankhurst—say Ma-a-a—Votes for Women!" As the Summer passed she said it more and more seldom, till we supposed it was forgotten. In November we took her home to New England to exhibit her to her grandparents. While waiting in the Canadian Pacific Station in Montreal, the young miss, now 2½, discovered the lovely echo in the waiting room and amused herself for some time by shouting "Oh" and "Ah." Suddenly the room rang with, "Votes for Women" vociferated with all the force capable from a tiny pair of lungs, till to our embarrassment so many eyes sought our direction that we hastened to the platform thus diverting our young suffragette.

A. G. I.

"THE MAID WAS IN THE GARDEN HANGING OUT THE CLOTHES."

Little Brown Baby.

Little brown baby wif spa'klin' eyes,
Come to yo' pappy an' set on his knee,
What you been doin', suh—makin' san' pies?
Look at dat bib—you's ez dirty ez me.
Look at dat mouf—dat's merlasses, I bet;
Come hyeah, Maria, an' wipe off his han's.
Bees gine to ketch you an' eat you up yit,
Bein' so sticky an' sweet—goodness lan's!

Little brown baby wif spa'klin' eyes,
Who's pappy's darlin' an' who's pappy's chile?
Who is it all de day nevah onces tries
Fu' to be cross, er once loses dat smile?
Whah did you get dem teef? My, you's a scamp!
Whah did dat dimple come f'om in yo' chin?
Pappy do' know you—I b'lieves you's a tramp;
Mammy, dis hyeah's some ol' straggler got in!

Let's th'ow him outen de do' in the san';
We do' want stragglers a-layin' 'roun' hyeah;
Let's gin him 'way to de big buggah-man,
I know he's hidin' erroun' hyeah right neah.
Buggah-man, buggah-man, come in de do',
Hyeah's a bad boy you kin have fu' to eat.
Mammy an' pappy do' want him no mo',
Swaller him down f'om his haid to his feet.

Dah, now, I t'ought dat you'd hug me up close.
Go back, ol' buggah, you sha'n't have dis boy.
He ain't no tramp, ner no straggler, of co'se;
He's pappy's pa'dner, an' playmate, an' joy.
Come to you' pallet now—go to yo' res';
Wisht you could allus know ease an' cleah skies;
Wisht you could stay jes' a chile on my breas'—
Little brown baby wif spa'klin' eyes!

—Paul Laurence Dunbar.

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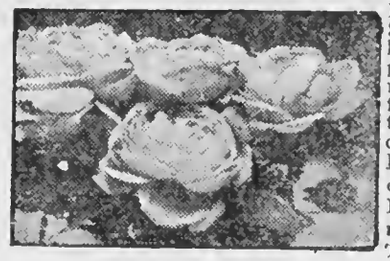

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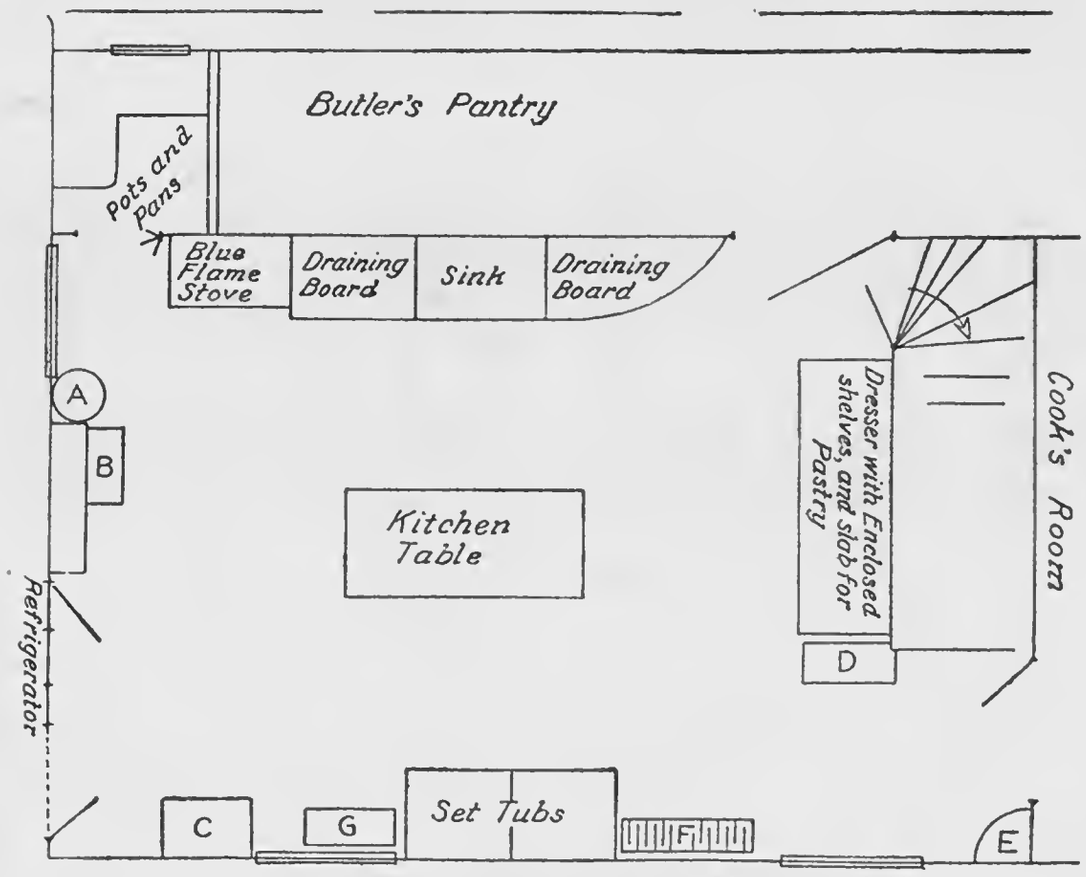
brings joy to all who grow, sell or eat it. It is immensely profitable to the market grower, and "a joy forever" to the amateur gardener. The canes are of iron-clad hardihood, need no staking, and are literally loaded with fruit every year. I know this berry thoroughly and willingly stake my reputation upon it. Illustrated catalog replete with cultural instructions, free to everybody. Established 1878. 200 acres. Quality unsurpassed, prices low.
LOVETT J. T. LOVETT Box 162 LITTLE SILVER, N. J.

A Model Virginia Kitchen.

The description of a farm kitchen on page 87 made me wonder whether any one would be interested in what my friends jokingly call "a model kitchen?" We live on a farm in the Virginia mountains, and when we bought the place, the farmhouse was provided with a kitchen that was a triumph of inconvenience. It was everything a kitchen should not be, down a flight of stairs from the dining room, dark, cold in Winter and hot in Summer, with very little storage room, and that so scattered that one walked miles getting one's materials together. I stood it for two years, and then built a kitchen.

It is on the same floor with the dining room, from which it is separated by a long narrow butler's pantry, provided with a pantry sink and shelves for the dining-room dishes behind sliding glass doors. The kitchen is 18x11 feet, with an additional jog that goes to the door of the cook's room. The set tubs are covered so that when not in use they can be used as a table. The lower part of the dresser is divided into two compartments. In one is the flour barrel on a contrivance which allows it to swing in and out; in the other, I hope some day to have a little dumb waiter for carrying fruit jars and so on down to the jelly room. Over the sink is a cabinet with glass doors and shelves for the spices and all the odds and ends that are constantly needed in cooking, such as baking powder, starch, soda, cream of tartar, measuring cups and so on. The radiator really is not necessary, but we did not know surely and thought it wisest to put it in, but now we know that the blue flame oven and burners are ample for keeping a kitchen warm in this climate. We have hot and cold water in the sink, and no dirty coal to carry in and no dirty ashes to carry out, so that compared to the old kitchen, it is heaven to get dinner, and all the work can be done with half the strength, especially as I now have a patent dishwasher.

FARMER'S WIFE.



A MODEL VIRGINIA FARM KITCHEN.

A. 40 gal. boiler. B. Blue flame heater for boiler. C. Separator and stand. D. Blue flame oven. E. Shelves for bread boxes. F. Radiator. G. Fireless cooker.

Just Honest Fresh Air.

I have been doing a good deal of thinking lately, as well as too long ago to be called lately, about the lack of fresh air, and the total disregard of the necessity of such a thing as ventilation in most of our farmhouses. My life as a district school teacher before my marriage gave me an intimate knowledge of many farm homes which I could have obtained in no other way. I have one case in mind. One of my pupils, a little girl in a certain family, was very thin and white, positively starved looking, but I knew she was not starving for food in that home. Her mother smilingly replied to my inquiry: "O, Maggie will be all right when it comes Spring so she can get out of doors. She always looks just like that in the Winter."

Soon after Maggie was taken sick. I found her in a little seven by nine bedroom opening from the kitchen. Its one window was muffled in old quilts and blankets tacked firmly down, excluding every possible breath of air or ray of sunlight. I inquired the reason for such precautions. The mother assured me that the wind came in around the window which was old and loose, so badly that Maggie would get "her death of cold" if it were not for the corking and bundling up of the window. No amount of argument would convince her to the contrary, although she admitted that when Summer came and Maggie was out of doors days and slept up in the unfinished chamber nights she was all right. "The others," she added "were just the same when they were small." The others I found were old enough so they were allowed to sleep up there now the year round, which to my mind accounted for the improved state of their health. However Maggie lived and grew up.

NEW USE FOR THE COW.

Later I visited her in her own home. I found two happy-faced, robust youngsters playing in the snow in the door yard, and as I climbed the steps to the veranda I noticed a baby carriage standing in the corner. Later investigations revealed a plump rosy boy of two months, sound asleep with a smile dimpling his little face, such a smile as his mother's babyhood never knew, in her stuffy bedroom with a blanket spread over her face for fear she would take cold. Maggie herself was the picture of health and happiness. The air in her kitchen as well as the rest of her house was pure and sweet. To my inquiring look she answered: "They're not going to die for a breath of air anyhow, and they never have a cold." Last Summer I visited her again, and the children, well the accompanying photograph speaks for itself of their attitude toward life.

JENNIE STICKNEY LAMSON.

S. C. Buff ORPINGTONS
scientifically line-bred for 10 years to develop size, color and heavy egg-production, as well as prize-winning qualities. **Sunswick Orpingtons** are great **utility** fowls. Cockerels make fine, large broilers and capons. Hens are great layers, 1,000 yearling fowls now for sale at very reasonable prices. Eggs for Hatching and Day-Old Chicks. Book your order now. Write today for FREE catalog.
SUNSWICK POULTRY FARM
Rufus Delafield, Owner Box N SOUTH PLAINFIELD, N. J.

Gibson Strain Day-Old Chicks
We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.
Write For Free Catalog—It gives full description of our 1914 matings and prices of Baby Chicks, Eggs for Hatching, breeding stock and Indian Runner Ducklings.
GALEN FARMS, G. F. Gibson, Owner, Drawer G, CLYDE, N.Y.

The Orange County Poultry Yards [Patented]
A few of them will change any Eastern dairy farm into a highly profitable business proposition. Plenty of fertilizer, plenty of cash, and light work at reasonable hours. Catalogue on application.
O. W. MAPES, - Middletown, N. Y.

RHODE ISLAND REDS
The famous Vibert flock of beautiful, brilliant, glowing cherry to mahogany red-to-the-skin rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but specially selected, long backed, low tailed, certified trapnested record layers, scientifically line bred along Government lines for heaviest winter egg production, with yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness, and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant absolutely free from roup and white diarrhoea. Highly fertile, clean, well shaped, unblemished eggs, gathered hourly, shipped daily, delivered when wanted, guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding cockerels from trapnested hens, trios, mated breeding pens for sale. Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.
VIBERT RED FARM, Box 1, Weston, New Jersey

Single Comb White Leghorn
EGGS
FOR HATCHING
From LAURELTON Layers. Bred for superior egg production and combining the finest strains of English and American blood.
$10.00 per hundred; $80.00 per thousand
Write for complete price list.
LAURELTON FARMS
Box A Lakewood, New Jersey

Day Old Chicks
Kirkup's Strain S. C. White Leghorns, bred for vigor, size and large white market eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.
FREE BOOKLET—"Better Chickens"—describing day old chicks, pullets, cockerels, eggs, etc. Send for it today.
CHESTNUT POULTRY FARM, KIRKUP BROS., Props.
MATTITUCK, L. I., N. Y.

INT'L EGG-LAYING CONTEST
COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, 194 EGGS. Official record. We offer EGGS FOR HATCHING, from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

SINGLE COMB WHITE LEGHORNS Exclusively D. W. Young's Strain. The finest in the world. Bred for their great Winter laying qualities. Over 2,000 layers on free farm Range. Largest plant of high class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity at $6.00 per 100; no order too large. Baby chicks $12.00 per 100; capacity 6,000 weekly. Now booking orders for March and April delivery. My book, "Profits in Poultry Keeping Solved," 5th Edition, given free with all $10.00 orders. Satisfaction guaranteed. Descriptive circulars free.
Box 141. EDGAR BRIGGS
Pleasant Valley, N. Y.

MacKellar's Charcoal
For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
R. MacKELLAR'S SONS CO., Peekskill, N. Y.

Cyphers Free Service
Means More Poultry Money
Wise men and women are making tremendous profits from poultry. Shortage of beef, pork and mutton means top prices for *poultry* and *eggs*. Are you prepared to get your share?
Cyphers Incubators and Brooders

are World's Standard equipment. Self-regulating, self-ventilating. Fireproof, insurable. Our big 241 page catalog and poultry guide is full of *money* making and *time saving* poultry facts. Write for it today. Address
CYPHERS INCUBATOR CO.
Dept. 38 Buffalo, N. Y.
Write For Big Free Book

112-PAGE POULTRY BOOK FREE
If you are thinking of buying an incubator or brooder you should send for our big 1914 catalog at once. Describes many new, *exclusive improvements* in this year's
PRAIRIE STATE Incubators and Brooders
Also contains about 60 pages of valuable poultry information—how to feed, rear and breed; treat diseases, poultry buildings, home grown winter feed, etc. Just out—a postal brings it FREE. Write today—now. [1]
Prairie State Incubator Co., 126 Main St., Homer City, Pa.

MAKE HENS LAY
more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.
MANN'S LATEST MODEL BONE CUTTER
cuts fast, easy, fine; never clogs.
10 Days' Free Trial. No money in advance. Book free.
F. W. MANN CO., Box 16, MILFORD, MASS.

Get the Whole Story of Belle City's World's Championship Hatches

Write for My Great Book, "Hatching Facts." Satisfy Yourself.
In my great Free Book **"Hatching Facts"** the winners of the Belle City's Eight World's Championship Hatches tell the story of their *money-making, prize-winning* success with the Belle City in their own words. More than a quarter of a million poultry raisers use my
8 Times World's Champion Belle City
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Write for "Hatching Facts" Today. A Postal Brings It
It tells everything. It illustrates the Belle City Incubator and Brooder in actual colors—shows what makes the Belle City the 8-Times World's Champion—gives facts about hatching success, bigger and better than you have ever heard of before. It is the story of thousands of users of my Belle City hatching outfit—told in their own words. Thousands not in contests get 100% perfect hatches. Just say—send me "Hatching Facts." My low price will come with it.
Write me personally,
Jim Rohan, Pres.

Belle City Incubator Co., Box 48, Racine, Wis.

The Reliable Spring Water Strain
Single Comb White Leghorns
are layers and payers. Write for Booklet.
Day old Chicks, Eggs for Hatching. No order is to large or to small. Our capacity is 20,000 eggs at one sitting. We guarantee safe delivery of chicks, and fertility of our eggs. We can and will please you. Send in your order and secure a positive delivery date.
SPRING WATER POULTRY FARM, STOCKTON, N. J.

PEN-Y-BRYN FARM
AMBLER BREEDERS OF PENNA.
S. C. W. Leghorns, White Wyandottes, Imperial Pekin and White Indian Runner Ducks, Eggs, Chicks, Ducklings and White Leghorn Pullets for sale.
F. A. TIFFANY, Supt., Box 36R, Ambler, Pa.

140 EGG INCUBATOR CHICK BROODER
Both For $10
The incubator is California Redwood, covered with asbestos and galvanized iron; has triple walls, copper tank, nursery, egg tester, thermometer, ready to use. 30 DAYS' TRIAL—money back if not O. K. Write for FREE Catalog today—NOW
Ironclad Incubator Co., Dept 121 Racine, Wis. (2)

Ship Eggs in this Box by Parcel Post
The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Wright boxes are shipped to you flat and are easily set up and packed for shipment to your customers. *Write today for Free Booklet* describing The Wright Boxes for shipping chicks and eggs.
TYWACANA White Leghorns, Barred and White Rocks
Book your order *now* for *eggs* or *day-old chicks*. Send today for our free, big, beautiful catalog, describing **Tywacana Farms Leghorns and Rocks** and giving prices on chicks, eggs and breeding stock. Satisfaction guaranteed.
TYWACANA FARMS POULTRY CO.
TYWACANA FARMS POULTRY CO. A. F. Wright, Supt. Box 68, Farmingdale, Long Island, N. Y.

Wisconsin Wins In Big Hatching Contests Every Year
Mrs. J. McMahon, Veedersburg, Ind., in 1910 won in Missouri Valley Farmer Hatching contest, hatching 125 chicks from 126 eggs.
Mr. C. B. Armitage, Atwater, Ohio, in 1911 won in Successful Farming contest, getting 181 chicks from 181 eggs in two hatches.
Mrs. J. W. Mize, Vaughns Mill, Ky., in 1912 won in Successful Farming contest getting 203 chicks from 209 eggs in two settings.
Mrs. F. H. Lewis, Montrose, Pa., in 1913 won in Successful Farming contest getting 96 chicks from 96 eggs in one setting.
130-EGG Incubator & 130-CHICK Brooder, both $10
180-Egg Incubator—180-Chick Brooder, both for $11.50
Freight paid East of Rockies—Incubators have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set up ready to use when you get them. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others we will feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Send for FREE catalog today, or send in your order and save time.
WISCONSIN INCUBATOR CO., Box 138, RACINE, WISC.
Why Take Chances
Write for FREE CATALOG and we will send a sample of the Redwood our Incubators are made of

Live Stock and Dairy

EXPERT CARE OF DAIRY COWS.

You ask for more in detail about handling my cows, in addition to what appeared on page 232. My cows are all grade Jerseys or Guernseys, mostly the latter now, but a number of them do not seem very good ones, and I hardly understand how they average for the year as well as they do, but it must be because I keep them at it pretty steadily. They are usually dry only from four to six weeks. I feed them grain twice a day, all of the year except when they are dry in the Summer, but I feed a very small amount when pastures are good in early Summer, and I have quite a large pasture, but increase as grass gets short. After corn is in the silo I turn them on the meadow, where they get pretty good grass usually. Perhaps this is not good policy, but part of this land overflows in times of high water, and enriches it, and on the rest I practice a short rotation of crops; corn, oats and clover and Timothy, cutting hay only one year. I do not think much of the oats, as there is not much money in a good crop of them, but I need the straw for bedding, and have to sow something as a nurse crop for the grass seed. Fall being my shortest season for milk I can sacrifice something in order to get butter enough to keep my customers supplied until I have more fresh cows in the Winter.

I have a hired man all of the time, unless it is for a short time that I cannot find one, but I always feed the grain myself, and am around usually to see that the other things are fed right. There are not many milkings in the year but what I am on hand to help and supervise; my cows have water in buckets where they can get it any time they want it, and I am sure that is a great help in producing Winter milk. They nearly always drink after eating; just when it would be very inconvenient to turn them out of doors to get water, and they drink so much less at a time. I get the water from an excellent spring by using 1,500 feet of ¾-inch pipe, with an elevation of about 60 feet, so I have a good pressure to wash buggies, spray the garden, lawn, etc., as the pipe is always full no matter how dry the weather.

I milk at regular hours, run the milk through the separator and feed it to the pigs and calves and sometimes cows while it is warm, using a small gasoline engine at the barn for the separator and grindstone, and another one at the house to operate the churn and washing machine with wringer. I do the heaviest part of the butter-making, but am well assisted by my wife in that as well as many other things. She helps milk occasionally when one of the other milkers is away. We also have an automobile, which helps break the monotony of farm life, and we can see considerable extra country and other things with that, as it is so much quicker and does not sweat and get tired like horses. E. N. RYTHER.

Cattaraugus Co., N. Y.

THE HUMBUG OF THE HEN.

Forty years ago, my father told me to get something "bigger" than a chicken. The reason of this was because at that time the great profits from chickens, or hens, was heralded broadcast as at the present time. On page 162 Mr. Mapes comes forth with a report on "Hens vs. Cows." The comparative report in his case I believe to be true. The product from the cow sold from the farm is sold all over this land at a small loss to the producer. The great profit from the cow is made when the product is sold the second time to the consumer. The particular point I wish to bring out in this report, is the "$4,500 worth of market eggs from 1,800 hens, and $500 more on increase of 800 young birds." I know that a good laying hen will consume eight ounces of food of some kind per day of 24 hours if she can get it. If she cannot get it she will not lay in proportion. If it takes eight ounces of feed per day, how many pounds per year? Answer, 182 pounds; 1,800 hens would consume 327,600 pounds. Now what is the cost of chicken feed where Mr. Mapes buys? At $30 per ton it would cost nearly $4,900 to feed his 1,800 hens one year.

He has an increase of 800 birds. These birds will consume at least two ounces per day for six months. Their bill for feed at $30 per ton will increase the feed bill $270 more, or a total cost for feed $5,170.

The income from each hen is $2.50. If the eggs sold for 60 cents per dozen, they averaged a trifle over four dozen per hen. If 50 cents per dozen they averaged five dozen per hen. If sold for 40 cents per dozen they averaged a little over six dozen per hen. If sold for 30 cents per dozen they averaged a little over eight dozen per hen. If sold for 20 cents per dozen they averaged a little over 12 dozen per hen.

I am a dairyman. If Mr. Mapes will turn his 10 to 12 cows over to me for one year with 100 little pigs, and half the feed it will take to feed his 1,800 hens, with the increase of calves, I will take my wages out of the profits, and give him 10 per cent on the investment. I will make a plaything of the venture besides; I will not work over five hours per day, and play the rest of the time.

Washington. V. W. CLOUGH.

R. N.-Y.—We fear this sort of figuring will hardly go. Mapes says his hen feed for the year cost him $2,366. It will not do to say that a hen ought to eat half a pound of food per day and then multiply by that whether these hens consume that amount or not! We figure about five ounces of grain per day for our own hens.

SOME FACTS ABOUT GOATS.

I note an inquiry by G. W. D., Norfolk, Mass., for information in regard to clearing land with goats. Will you advise him that if he will communicate with this association we can probably assist him in securing goats? I say probably, for the reason that the demand is in advance of the supply. This association maintains a sales bureau which lists stock offered for sale, and supplies inquirers with copies.

I have personally tried sheep (Michigan half bloods and Shropshires) Angoras and common milch goats in clearing land, and prefer the milch goats, although all do good work. All the shelter that is required is a roof to get under when it rains. If there are many stiff high-bush blackberry canes or bull-briers in the pasture by all means select milch goats. Both breeds of goats like a large proportion of brush and a small portion of grass in their rations, and the sheep a large amount of grass and a small amount of brush. This is especially true of the English breeds.

The increase with milch goats is greater than with sheep or Angoras, and the kids will bring a better price and can be more readily sold. For instance, the prevailing price of a goat kid in the Spring for eating purposes is $4, at other times of the year 50 cents to $1 less, but never below $3. The kids are salable when but a few weeks old, and sell by the piece and not by the pound. Goats commonly have twins after the first kidding, and if the owner does not care to milk a goat one of the kids can be sold and the other left to nurse the mother.

It is advisable, of course, to sell the male kids. Goats which are not kept for milking purposes can be bred twice a year; that is some of them will breed twice a year. I have been told that users of goat meat never become tired of it, while they do tire of mutton. I have never tried it myself, as I do not use meat of any kind. If G. W. D. could secure a few purebred Swiss goats he would find a ready sale for the young stock at from $50 to $100 each. To secure quick results in clearing a pasture all the larger trees should be cut down, and the stock will kill the stumps by eating off the young shoots as fast as they appear. ELMER F. DWYER, Pres.

Standard Milch Goat Breeders Club, Lynn, Mass.

"I DESPISE a hypocrite." "So do I." "Now, take Jackson, for example. He's the biggest hypocrite on earth." "But you appear to be his best friend." "Oh, yes; I try to appear friendly towards him. It pays better in the end."—Boston Transcript.

These Seven Cows

May All Be Kept For One Year On

the product of one acre of land. It's hardly believable. And keeping seven cows for a whole year on one acre goes a long way towards reducing the cost of milk. Eureka Corn produced in one year on one acre 70 tons and 800 pounds. Figuring at the rate of 50 pounds of ensilage per day, which is a very liberal allowance, this amount will feed seven cows for one year, with enough left over for 261 feeds. This enormous crop won us our $50.00 gold prize for the heaviest yield. We believe this record cannot be broken by any other corn, but Eureka can still beat it.

We believe our crop of Eureka Corn for 1914 planting will germinate better than 98%. Eureka Corn was introduced by us about 25 years ago. It is a white, smooth dent corn, grows the tallest, usually from 16 to 20 feet, has the most leaves and is short jointed. If planted thin, it will yield two and three ears to the stalk. Planting Eureka Corn is as good as an insurance policy to any farmer. It grows where other kinds fail and the yield is tremendous.

EUREKA CORN

Grows Tallest—Has Most Leaves—Greatest Number of Ears

You do not need to plant your whole farm when you can fill a 200-ton silo from 4 or 6 acres with Eureka. We're selling Eureka at last year's prices. Good seed is going to be very scarce and much higher before the planting season is over. Ask yourself what corn is worth per bushel that will produce 70 tons and 800 pounds. We are not asking you to experiment, we are only asking you to buy seed corn that has been proven by thousands of successful farmers to be the best that money can buy. Read what some of our customers say.

New Hamburg, N. Y.

Ross Bros. Co.,
Worcester, Mass.

Gentlemen:—In reply to your inquiry about the Eureka Seed Corn, will say that there is nothing else like it for fodder. It grows a larger and better stalk and will grow anywhere. The party who filled our silo thought that our corn beat anything that he had seen and wanted me to get him some of the seed for next year.

Yours truly,
(Signed) J. W. CROWELL.

Mannsville, N. Y., Nov. 18, 1913.

Ross Bros. Co.,
Worcester, Mass.

Gentlemen:—The seed I purchased from you last Spring proved to be the best silo corn I ever raised. Most corn in this section was very poor owing to the long, dry spell we had. Most of my corn was 14 feet high. I want you to book me for 4 bushels of the best you have. I want it on the cob shipped same as last year. Several of my neighbors want to buy some, perhaps later will send you an order for them. Yours truly,
(Signed) W. E. WILLARD.

Greenwich, N. Y.,
Nov. 10, 1914.

Ross Bros. Co.,
Worcester, Mass.

Gentlemen:—I have been planting the Eureka Corn for three years, and as long as I fill my silo I shall continue to do so if I can get it. I have sent you each year an order for corn for my neighbors and have always been asked to send again. Quite a few have spoken to me now for next year. I hope to send in a larger order than last year.

Very respectfully yours,
(Signed) THOS. A. HARRINGTON.

REFERENCES: Bedford Farmers' Co-op. Assn., Bedford Hills, N. Y. High Lawn Farm, Red Hook, N. Y. Brooklands Farm, Poughkeepsie, N. Y. G. A. Leach, Prop., Imperial Stock Farm, Cortland, N. Y.

SHEFFIELD WORLD'S PRIZE FLINT CORN

still holds the record for the heaviest yield of flint corn, 123.8 bushels, of crib dry corn from one acre. If you grow corn for grain, plant Sheffield. No other flint corn equals it. It can be planted later and will mature earlier than any other kind. It will produce more good ears, well filled out, than any other variety. Look out for your stock of flint corn before it is too late. There is a lot of poor corn on the market. Our stock of Sheffield has been tested and will germinate nearly 100%.

Eureka corn shelled is always shipped in our trade-marked burlap bags, and ear corn is shipped in rat-proof crates holding 70 pounds. Either buy direct of us or some of our agents who have the genuine. Write at once for catalogue and quotations.

ROSS BROS. COMPANY, 67 Front Street, WORCESTER, MASS.

PURE FEEDING MOLASSES
We are first hands and can quote you absolutely bottom prices, delivered your station, in lots of anywhere from one barrel to a trainload.
THE MEADER-ATLAS CO.
N. Y. Office, 107 Hudson Street, New York City

Horses and Mules

SHETLAND PONIES—Have twelve pure blooded Shetland Ponies, ten mares and two stallions for sale. Good money maker for man with cheap pasture. Address, J. H. JOHNSON, 1301 New England Building, Cleveland, Ohio

HEART'S DELIGHT FARM
Percheron and Belgian STALLIONS
Two to three years old; out of imported mares and by imported sires.
Guaranteed to be Sound and Sure Breeders
We will sell these stallions to two or more farmers as company horses.
Prices reasonable.
W. H. MINER, Chazy, N. Y.

Belgian Stallions for Sale
coming six years old March 15th, 1914. Rich blood bay with black points, white stripe in face, little white on both forefeet; weight, 2,000 lbs.; 16¾ hands high. Standard and Registered in the book of Belgium, as well as of this country. Broken to work in all harness; works with mare; perfectly sound, and sure foal getter. Selling for lack of business. Apply to FRANK C. BYRAM, Red Bank, N. J

PERCHERON STALLIONS—Our hobby is quality. Come and see them. S. Schoonmaker, Gardiner, N. Y.

KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

French Coach Stallion
"Poron" (3483) by "Perfection" 1902, chestnut. Sure foal getter. No blemish. $300. Address, ERNEST PICK, Mt. Lebanon, New York

HIGHLAND VIEW STOCK FARM
DISPERSION SALE
WILL BE HELD AT
KITTANNING, PA., Wednesday, March 4th, 1914, at 10 A. M.
Rain or shine.
Forty head of the best Imported and American bred registered Percheron and Belgian Stallions and Mares will be offered in this sale. Write to
O. N. WILSON, Prop., Kittanning, Pa.

207 Prizes Won
At the large Eastern State Fairs last Fall tells the quality of our drafters. 80 Percherons, Belgian and Suffolk stallions and mares priced right. Registered Percheron foals of 1912 and 1913 at $200.00 to $500.00 each. For actual photographs and interesting information ask for Bulletin H.
ADIRONDACK FARMS, - Glens Falls, N. Y.

50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

DOGS

COLLIE PUPS—Natural drivers. Also English Bloodhounds. Nelson's, Grove City, Pa

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Treat Your Sow Right.

"Keep on good terms with your brood sows." That is a suggestion that Jay Snyder of Hillsdale County, Michigan, declares will pay the farmer dividends whether he has but one sow or many.

"I fondle my sows as much as many would a pet. They are not afraid, it is mighty handy when they have pigs. The sows are not afraid of my harming them or their offspring, and I fondle the little pigs as I do the mother. It pays not only in two ways to be on good terms with the sow; in one way in handling the pigs, and the other is that the sow will be a better mother if she is not continually frightened. A sow is, in my opinion, as sensitive as a dairy cow, and should be treated as kindly. This treatment should be extended to every animal on the farm, and it will pay the owner in dollars and cents." W. J.

Chester White Breeders.

I have just received notice from Secretary Moore, of the Chester White Record Association, that the movement looking to the amalgamation of the National Chester White Record Association with the Chester White Record, has progressed so far that the ballot is being distributed to national members for action thereon. I wish you would state for the benefit of Chester White breeders in general and the national members in particular, the present association known as the Chester White Record was formed a year ago by joining the American and Standard Associations. We now have 800 members against 80 in the National, with $2,500 in the treasury, and year book printed up to date. For the good of the breed and to clear the field for our large, strong organization, we offer to accept the National certificates and give in exchange a certificate of membership in the Chester White Record free of cost, also to register the produce of animals registered in National. Without question the good to be derived should make the vote solid for annexation. It is also in order for the New York State members of the Chester White Record to suggest the name of a strong breeder for my place on the National committee for New York State. GEO. E. HOWELL.

Colorado Dairy Cattle.

For the first time in nine years a dairy department was added to the Western National Stock Show held at Denver last week. This Western show is the leading one of the United States in the beef classes, but the dairy interests of the West are growing fast. Last month another condensing plant was opened in this State at Lamar, by the Helvetia Company. This station is built to take care of 8,000 cows.

Holsteins naturally lead in numbers at the dairy show, with some very fine dairy animals. The Jerseys came next with a very complete exhibit from a fine son of San Aloi to little Maggie Dainty's first born, which she added to the show without the usual entrance fees. This little fawn-like calf was a decided attraction. Guernseys made a fine showing and attracted the most attention. Their perfect condition and uniformity made a beautiful picture. A carload of grade Guernseys were gobbled up by practical farmers to whom they looked good from a dairy standpoint.

The Holstein breeders had 36 animals from four herds. The Jerseys represented seven herds, with 30 animals and the Guernseys surprised every one with three herds represented by 18 "yellow and whites." The Ayrshires were represented by one very lively little bull. This breed should make a good record on some of our mountain pastures and should be better known out here. I was asked a number of times if there were any Brown Swiss on exhibition and this breed certainly has some warm friends out here.

Prof. A. L. Haecker judged the dairy animals. Since "Colorado expects every cow to do her duty" the fact that a good cow has on her winter working clothes should not handicap her when she is clean and in good condition under her overcoat. Judges should remember that the last of January is not early Fall.

J. B. P.

A FUTURITY TEST.—The New York State Jersey Cattle Club at its recent meeting in Rochester adopted a futurity contest, open to breeders in the United States and Canada, for heifers beginning under 30 months of age and finishing year tests during 1917, and each succeeding year thereafter. Heifers born after July 1, 1913, will be eligible for the 1917 futurity, and while supposed to be nominated before birth will probably be admitted any time prior to July 1, 1914. To the committee delegated to put the test in force was left some of the details of the test rules. These have not yet been definitely determined upon, and will be announced later. This notice is given that breeders may plan ahead, and begin the early development of any heifers they already have that will be eligible to this most interesting contest. HARRY S. GAIL.

SOCIALIST ORATOR: "Tell me why it is you have to work from morning until night." Auditor: "It is the only time we got. We sleep from night till morning." —Judge.

DAIRY CATTLE

If You Want Guernseys send for the Official Sales List of the NEW YORK GUERNSEY BREEDERS' ASSOCIATION, Box 96, Peekskill, N. Y.

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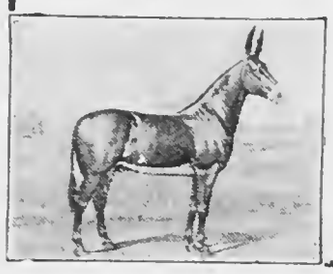

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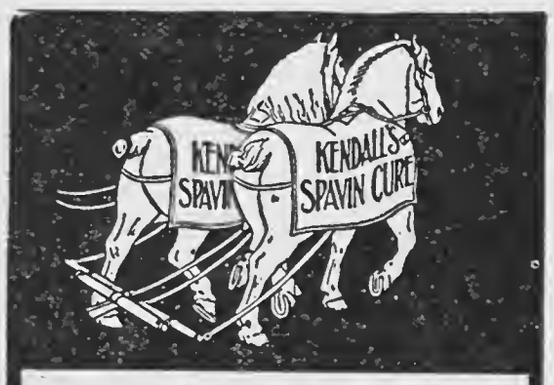

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WILL SILAGE SOUR THE SOIL?

Your article page 1, "Why the Land is Sour," brings a question to my mind that I would like to see discussed. I have been planning to build a silo, but a friend from Orange County, who lives in a section where shipping milk is main feature of farming, and where silos have been extensively used, says the farmers there complain about the fertilizing value of cow manure when silage forms a large part of the feeding rations. My friend admits that silage is a good milk-producing food, but says there seems to be very little if any fertilizing value in manure when silage is fed, and that the growing of corn takes a large area of land and seems to impoverish the soil, notwithstanding that all manure is returned to the land every day. The question in mind is whether, when silage is a large portion of roughage fed, the manure may not be acid, considering the fact that silage creates a large amount of acid in the process of fermentation? Is there any difference in values of manure when silage is fed, or when dry roughage alone is fed? J. J. C.

Stillwater, N. Y.

This question has been asked many times. There seems to be a general belief that manure made from feeding silage is sour. The natural way to find the truth of this is to "ask the manure." This has been done by the scientists who answer below:

There is no ground for the belief that manure made when a reasonable amount of silage is fed has an acid character. The acidity of the soil is due to other causes. I have fed acetic acid to sheep and also acetate of lime, and failed to get any pronounced acid reaction in the manure. J. B. LINDSEY.

Mass. Exp. Station.

I would state that manure made from silage should not be more acid than that made from any other forage, provided, of course, that large quantities of waste silage are not mixed with the manure. The organic acids present in silage are assimilated in the body of the animal, and the manure produced by such animals should not contain any marked quantity of free organic acid.

New Jersey Station. J. G. LIPMAN.

Organic acids in passing through the process of digestion and assimilation are changed into carbonates, which are alkaline. For illustration, potassium acetate is given to persons suffering from an acid condition of the blood to neutralize the acid. The potassium acetate so given is changed into potassium carbonate. There is, therefore, good reason to believe that the acetic acid or other related organic acids present in silage are converted into carbonate and bring about a condition the reverse of acid.

L. L. VAN SLYKE, Chemist.

Geneva, N. Y. Station.

There is no reason why the dung from animals receiving silage would be sour. In the digestive processes in the intestines of the animal the acids are largely neutralized by the alkalies of the bile. The remnants of uneaten silage would be sour, and if swept from the manger and mixed with manure the latter would be in an acid condition if hauled directly to the field. However, if the silage rotted before being placed on the land, its acid properties would be destroyed. A recent bulletin of the Ames, Iowa, Station, which has been conducting investigations concerning lactic acid in corn silage makes the following statement:

"To determine the influence of aerobic fermentation upon the lactic acid, a sample of spoiled silage from the top of the wooden silo was examined. The result for volatile acids on this sample was reported in our previous bulletin. The residue after distilling off the volatile acids was extracted with ether and treated with zinc sulphate in the usual way, but no crystals of zinc lactate could be obtained. In the rotting of silage by molds, the lactic acid evidently meets the same fate as the volatile acids. These acids are not simply neutralized by basic products resulting from the breaking down of protein, but are actually destroyed."

It is therefore evident that the acidity of manure from silage would not be high enough to have any decided effect on the soil when the manure is placed upon the field. A. A. BORLAND.

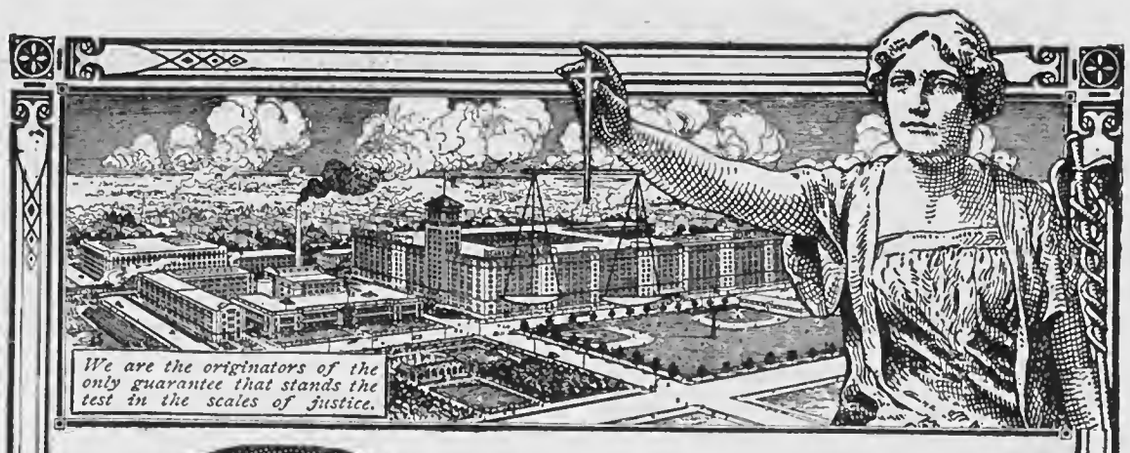
Vermont Exp. Station.

Cows Eating Boards.

My cows are fed silage twice a day and Timothy hay at noon, oat chop for grain fed on the silage. They want to chew old boards, even tear the battens off the barn. What do they require in their food to stop this, and what is the cause? E. B. G.

Castile, N. Y.

These symptoms usually indicate a depraved condition of the system caused by a lack of bone-forming matter in the feed. This is seldom found where cattle are fed wheat, bran or similar feed. Probably the best remedy is to give each cow a good handful of finely ground bone at least once a day in their grain. This usually removes the trouble, although a cow may be sick from other causes.



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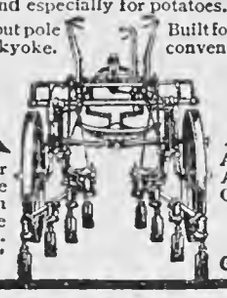

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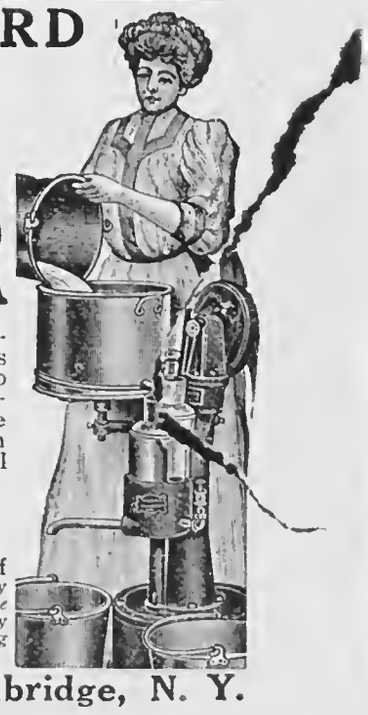

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CHURNING TROUBLES.

Is there any known reason why butter takes so long to churn at times, and again in only a few minutes, even when it registers 62 degrees? How hot does the cream have to be to be sterilized? If it is heated up and then cooled to churning temperature will the butter show signs of being melted? If the cream has been frozen, does it affect the churning once it is heated up to 62 degrees?
West Vienna, N. Y. J. C. G.

With all the conditions uniform there should be no variation in the time required for churning. However, there are many conditions affecting the churnability of cream, and in home butter making it is not always easy to control these conditions. In fact, the temperature of the cream will vary more than one would suppose. If the temperature of the cream is taken after churning a while it will frequently be found to be higher or lower than when the cream was put in. This may be due to the temperature of the churn, or air outside, or to the fact that the butter particles change their temperature more slowly than the milk in which they float.

I cannot say how hot cream would have to be to insure complete sterilization, probably close to boiling, and it would be necessary to maintain the high temperature for at least 30 minutes. Pasteurization, which kills about all living germs in the vegetative stale, occurs at 140 to 160 deg. Fahr. This will not affect the quality or texture of the butter, if no portion of the cream has been heated to so high a temperature as to cause some of the butterfat to melt and collect.

I have never had experience with frozen cream nor can I find anything about it in the authorities I have at hand. It is my opinion that it would not affect the churnability of the cream, if the cream be warmed slowly and held at the churning temperature for at least half an hour before putting in the churn. C. L. M.

GREEN FEED FOR SWINE.

I have about 14 acres of land that I want to rotate in crops that will furnish the best green feed for my hogs and pigs. At present only about two acres are occupied with a growing crop, Blue grass sod; the remainder is ground that grew oats and rape, cornstalks, and some parts of lots that will be taken off present feed and barn lots. All of it is good rich corn land. I had thought of putting a light seeding of oats with four quarts of clover, and two quarts of Alsike per acre, on the ground that grew oats and rape last year, rape on the stalk ground, and pasture the Blue grass until the rape is ready to turn into. Then fit lot number three, which contains the Blue grass, and plant an early variety of corn, sow rape at the last cultivation, and hog down as soon as the corn is fit. About the middle of August I will fit the rape field for rye, sow not later than September 1, if the weather conditions are right. My plan is to have the grass for early pasture for sows and pigs until the rape is ready; after that the rape and the oats and clover, then the corn and rape, with the early sown rye for late Fall pasture. After the first year, I will drop the oats, as it is used this year, only because I have to have a Spring crop to get started. After that the rotation would be: Winter rye, last year's seeding of clover and Alsike, until rape, sown on last year's corn lot, was ready; then plant clover lot to corn, to be fed off; rape furnishing feed until plowed for rye, the clover following the rye, until corn is ready. Is this rotation practical? If not can you give me one that is? Which would be better, sow clover with the rye in the Fall, or wait till Spring? While the prime object is to have some green feed through all the growing season, I especially desire to have green feed early for the suckling sows and little pigs.
Woodford Co., Ill. E.

The ration you mention is practical, but may be improved upon. You say nothing about sowing Canada field peas, which is one of the best crops to grow to furnish pasture for hogs. A mixture of early oats and Canada peas will afford the earliest grain feed to be obtained from Spring sowing. The peas can be plowed under three inches deep as early as the land is in fit condition, and the oats should be drilled in or broadcast a few days after the peas are sown. In the latitude of central Illinois these will be in the dough stage about the 20th of June, and can be pastured off or mowed and fed to the hogs, furnishing the earliest grain feed of which I have any knowledge.

If peas are not sown perhaps the next best thing is succotash, which can be made of a mixture of Manshury barley, or the Success or some other beardless variety, and Early Champion or Sixty Day oats. These will be in the dough stage at about the same time as the peas, possibly a little later, and will furnish feed as long as it lasts.

A mixture of Kherson or Silver Mine oats and Early Java wheat will furnish later feed, say about the 10th of July. A later variety of oats and the latest Spring wheat would carry the feed on until the first of August. This, of course, involves a separation of the field of grazing grain into different lots. If the hogs taking their grain feed from the succotash can have the use of good clover pasture they can be carried on fairly well until an early variety of corn can be grown. Be sure to plant the earliest variety of corn, either the early types of sweet corn or Pride of the North, or any other of the early Northern varieties—varieties that have been forced from necessity to make their growth in a short time. Pigs that come in March can in this way be pushed along to make weights of 160, 175 and 180 pounds at little expense and will bring a good price in the market. With regard to sowing clover with rye in Spring or Fall; in my experience I have always obtained a better stand by sowing clover in the Spring. Fairly good results, however, may be secured by sowing the rye in the Fall and the clover immediately after, in a seed bed that is well prepared. H. U. W.
Illinois.

THE NEW YORK STATE BREEDERS' ASSOCIATION.

PART II.

The closing session was marked by an original presentation of the theme "Community Interest in Live Stock" by Dr. Eugene Davenport, Dean of the Illinois College of Agriculture. Prof. Davenport's address mingled the philosophy of a great teacher with the discussion of practical details of community effort, and was listened to with appreciative attention. Dr. Davenport believes that individual preferences should be subordinated to community choice in the breeding of animals, and that in making such choice the natural advantages of any locality should be carefully studied and have first consideration. Coöperation is in the air, and in no way can people begin to get together in common effort better than through live stock breeding. The average farmer is, of necessity, conservative; he has no capital for experiments; the steps which lead from pure individualism to coöperation must be short, and each operation must show a profit; otherwise the farm will be lost. Coöperative buying is comparatively easy, and coöperation in selling by small breeders of live stock is absolutely essential. The small breeder cannot afford to find his own buyers. The improvement of breeds, also, is beyond the efforts, or lifetime, of any one man; knowledge must be obtained by consultation and discussion together, and must be handed down from one generation to another. We are not yet ready for community ownership, save in a small way, but a beginning may be made by common ownership of valuable sires.

The closing address was made by Dr. Carl Gay of the University of Pennsylvania, who spoke of "Market Horses." Dr. Gray believes that the commereial draft horse is an important a proposition as he ever was, and that the motor has not displaced him. A large Phildelphia firm found that in delivering sugar, horses saved 50 per cent. in cost as compared with motor trucks. The demand for saddle horses and hunters was never greater, and the profits in breeding them are large. The harness horse in the cities is also "coming back," though his breeding now is probably less profitable than that of draft horses and saddlers. Breeding is only one factor in the production of fine horses; environment must equal ancestry if a standard is to be kept up.

Before closing its final session the Association adopted resolutions favoring the holding of a Winter fair at Syracuse; the adoption of an amendment to the tuberculosis law calling for physical examination of all dairy herds in the State and the elimination of diseased cattle; the compulsory pasteurizing of all skimmilk before distributing it from creameries or cheese factories; the elimination of all unsound and scrub stallions standing for service in the State, and the adoption of a law requiring State registration of all dogs, with a license fee, one half of which should go to the county. M. B. DEAN.

THE stage drivers in Yellowstone Park are bothered considerably by the foolish questions asked by their passengers and often resort to satirical answers. Once a woman tourist who seemed deeply interested in the hot springs inquired: "Driver, do these springs freeze over in Winter?" "Oh, yes, yes; a lady was skating here last Winter and broke through and got her foot scalded."—Everybody's Magazine.

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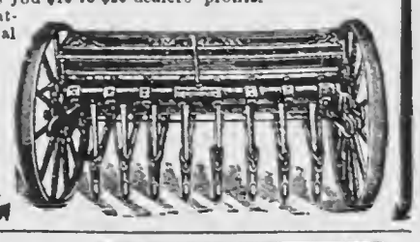

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AILING ANIMALS.

Rough Skin.

What can I do for my Chester White brood sow that has some sort of skin eruption? Back of her ears and in the wrinkles below and around her eyes there is a dark colored wax or filth. She has clean quarters and bedding at all times. This substance in places around her head hangs in bunches and the skin looks irritated. I have examined for lice but cannot find any. C. W. A.

Cleanse the affected parts and then apply an ointment of one dram each of sulphur and boric acid and one ounce of lard. Repeat the application as often as found necessary. Castor oil well rubbed in will also remove such patches of warty skin. A. S. A.

Lice; Stiff Knees.

1. I have two colts that have lice. What is there will kill them that can be put on the colts in cold weather? 2. I also have a horse that is about 18 years old; was driven on a delivery wagon before I bought him and his knees are quite stiff. Is there anything that can be done to help his knees? E. L. B.

1. Try pyrethrum powder brushed into the hair. If powder does not suffice wash affected parts with a tea made by steeping four ounces of larkspur (stavesacre) seeds in a gallon of boiling water for 12 hours; then strain. This will kill lice quickly and colts should not catch cold if you do the washing in a warm place and blanket them until dry. Then do not let them out in the cold for a few days, but gradually accustom them to cold in the stable, without causing drafts. 2. Such cases are chronic and incurable. A. S. A.

Mud Fever.

I have a work horse that has some trouble with one hind leg. On the inside between the gambrel and ankle the skin has cracked three or four inches every half inch or so. Can you tell the cause and a remedy? I do not work her much this Winter. It has been this way for about two months. G. C. H.

This condition usually is caused by wet and slush and not drying the leg thoroughly when the horse comes into the stable. It is most likely to affect a white leg and if the horse is allowed to stand in a draft in the stable. Poultice the leg with hot flaxseed meal for three days; then wash and dry thoroughly. Do not afterward wash the leg, but twice daily wet it with a solution of four ounces of Goulard's extract, two ounces of glycerine and water to make one pint; shake. If this does not suffice keep the parts well daubed with a mixture of four ounces of sulphur, half an ounce of coal tar disinfectant and a pint of sweet oil, well shaken together. A. S. A.

Scratches.

I have a horse six years old, have driven her nearly every day for over two years. She has been troubled with scratches nearly all of the time—the only time I have nearly healed them is in the Summer. I have tried nearly everything. I think it is in her blood. Have been giving her sulphur this Winter in her grain. Her ankles swell a little at night and sometimes she limps a little when she first starts out. Will you advise me what to do for her as she is worse in the Winter and Spring. E. M.

Do not wash a horse's legs from November to May in any northern climate. Washing induces scratches, as the skin rarely is perfectly dried after the washing. Washing also aggravates scratches. If the parts are not filled with old cracks and hairless, calloused skin, but are simply sore, poultice with hot flaxseed meal for three days, then wash once, dry thoroughly and twice daily afterward apply an ointment of two drams of sulphur, and one dram each of spirits of camphor and compound tincture of benzoin to each ounce of lard. If an old case of calloused, cracked skin blister the parts with cerate of cantharides, wash the blister off in two days and then apply the above ointment twice daily. A. S. A.

Diseased Joints.

I have a three-year-old colt that was kicked a month ago in her hind leg in the gambrel joint. Have tried several remedies, also have had veterinary, three different ones. The last one has helped her some by binding her leg up in lime. It is a bad sore, though, yet I have to help her get up, and she holds her leg up as though in pain. It has also run. I also have a large black horse that got his hind leg over a plank and scratched his gambrel joint and his leg is getting the same as the colt's. It is all swollen. Has broken and is running. He holds it up all the time and acts as though in pain. Can you tell me of anything that will help them? J. B.

Such cases are most unpromising and should have had correct treatment from the first. Do not use lime. Clip off the hair and wash the parts perfectly clean. When dry paint the joint and swelling with tincture of iodine and repeat the painting each other day. Use the tincture freely, but stop for a few days when it blisters. Twice daily inject into the discharging places a little of a mixture of one dram of iodoform in two ounces of sulphuric ether. Keep the mixture tightly corked and do not open it where there is an exposed light. If improvement is not speedy discontinue this treatment and once daily cover the sores and hock with a mixture of one part each of tannic acid and powdered starch and six parts of boric acid; then with cotton batting and a clean bandage. A. S. A.

Overheated Horse.

Would you advise me what to do about a horse? He is about 12 years old, and is in good condition, works and feeds well, but I cannot get him to sweat, and he pants when at work. He has been that way for about six months. I have had him under veterinary care, but he does not seem to improve any. Long Island. J. G.

Heat exhaustion is the usual cause of such symptoms, and the horse rarely recovers. Such horses often are "dummies" with affected brains, and have little sense or vigor. Have him clipped at once. Feed flaxseed meal and carrots freely. Black strap molasses also would be good for him. The veterinarian can cause sweating by administering drugs, if it does not come on when you gallop the horse when warmly blanketed. A. S. A.

Tumors.

I have a cow which is developing small hard lumps on her left shoulder, between the skin and flesh. They are of slow growth, and at present range in size from one-quarter of an inch to one inch in diameter. They can be moved from side to side with the fingers. The cow seems in excellent health otherwise. Will you advise me? E. A. C.

These may be cancerous metastatic tumors, and if so will return worse than ever if removed. Better not cut them out, but once daily swab each of them with tincture of iodine, and if they soften open them for evacuation of matter, after which go on using the tincture until the wounds have healed. A. S. A.

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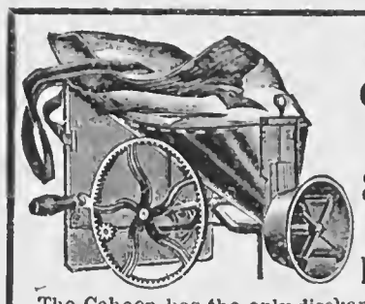

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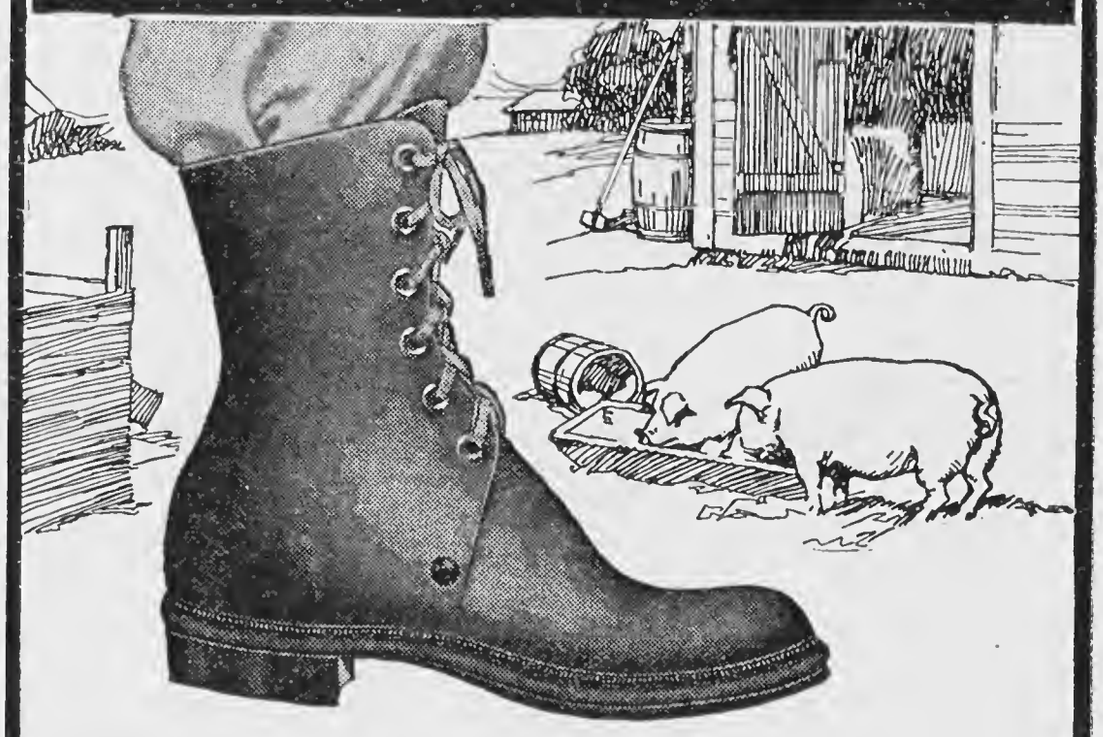

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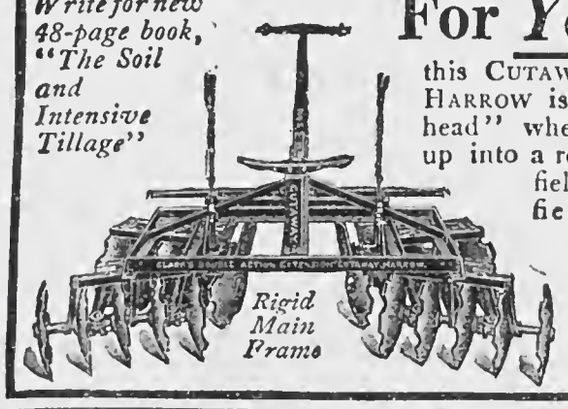

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Are the best for corn cultivation
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WORK WITH HOG CHOLERA IN IOWA.

Noting in a recent issue the lament of an Ohio farmer over losses from hog cholera, I offer the brief statement of facts to show what has been done in this, Dallas County, Iowa, toward stamping out the disease. About one year ago this county was selected by the United States Department of Agriculture as one of the three counties in the United States wherein the Federal Government, in coöperation with our State Agricultural College and State Veterinarian, would attempt to eradicate the dread disease, and arrangements were made to begin work on July 1. At that time many herds were infected with cholera, and some farmers had lost heavily from its ravages.

During the first six months Dr. O. B. Hess and his two assistants treated a total of 15,650 hogs, with a loss of only 14 per cent. Some idea of the magnitude of this work will be gained when we state that each hog is caught separately and held while its temperature is taken, and then serum is administered by the temperature, weight and condition.

The total number of hogs treated during the first six months is subdivided as follows: Those with high temperature, 5,773, loss 37 per cent. Well hogs in *infected herds*, 6,815, loss 3 per cent. Exposed hogs in clean herds, 3,149, with no loss. Total loss in six months, 2,222. On January 1, 1912 there were 84,618 hogs in Dallas County. Loss from cholera that year, 19,821, or 23 per cent. On January 1, 1913, there were 118,550 hogs in the county. Loss during 1913, not to exceed 11,000, or about 11 per cent.

In view of the fact that no herds were treated during the first six months of 1913, and that the supply of serum was inadequate during the first two months after treatment was begun, the results are most gratifying. In counties adjoining Dallas losses during 1913 range from 26 to 43 per cent., and in some counties as high as 70 per cent., thus showing that systematic effort will bring the disease under control. In all cases where Government serum is used the treatment is absolutely free to the farmer. The county furnishes the United States Inspectors with office rooms in our court house, with telephone connections with practically every farmhouse in the county, while Uncle Sam has provided an automobile whereby the doctors can respond quickly to the C. Q. D. messages as they come in.

If a probable loss of a half million dollars per year in a single county can be averted by the expenditure of $25,000, or possibly much less than this sum, it would appear to be a good business proposition. These free demonstrations have also been conducted during the past year in Montgomery County, Indiana, and Pettis County, Missouri, with equally satisfactory results, and some preliminary work has been carried on in Nebraska. The recent liberal appropriation by Congress of $500,000, for the control of hog cholera, will enable the Department to carry the good work into other hog producing States. M. J. GRAHAM.

Loud Hired Man and Cows.

A loud boisterous hired man is the most expensive man about a dairy herd. Should he give his services free, then he would be expensive about half a dozen cows. Better hire a good quiet man, even if he is a little slow. See that his disposition is kind toward a cow. If he has children and is good to them, and is kind to his wife, the dairyman can feel sure that he will treat his cows kindly. A good dairy cow is a nervous creature. She is intelligent, and a prominent dairyman declares that she is as susceptible as a person of fine sentimentality. A rude, uncouth bumpkin is out of place in a parlor, and he should be equally so in a dairy barn. One dairyman who occasionally uses an oath, told me that he would not have a man about who swore. When a cow is worried, she loses her appetite as a person does. It stops the functions which maintain the cow, digest her food, and convert it into milk. An abused cow is a hard keeper, and a little kindness will return the owner dollars and cents. W. J.

PRODUCTS, PRICES AND TRADE.

Milk prices remain practically the same as last week—$1.81 for B and 10 cents less for C. The "surplus," purposely manipulated to all appearances, is heavy, making a strong argument against the producers.

*

The higher grades of creamery and dairy butter advanced two cents during the week. Under grades and packing stock remain practically the same. A very wide range is noted in storage—from 20 to 29 cents.

*

The bad weather and snowed-in streets have unsettled the market for eggs, as well as fruits and vegetables. Good eggs, more or less frosted, have been working out at 28 cents and under. Some fancy white sell at 38, and brown, 30 to 31. Trade in European eggs is very dull. 25 to 26 cents being the top for fresh and 19 to 20 for preserved.

*

We imported 52,783,675 pounds of wool in 1913, valued at $12,589,862, and wool manufactured goods worth $13,783,800.

*

The popularity of the five and ten cent idea is shown by the years profits of the leading corporation handling this line of goods, $6,461,118, providing a dividend of 10.82 per cent on the $50,000,000 of common stock.

*

Our imports of raw silk during 1913 were 27,978,805 pounds, valued at $89,770,070; in manufactured goods $31,776,210. Japan sent the largest quantity of raw silk, $63,316,257; China, $15,523,856; France, $9,535,326. In manufactured goods, France led all others, $5,450,372; Japan, $5,450,372.

*

Fig culture in Texas is increasing. Parts of the State appear well adapted to this fruit. Plantings this Spring will make a block of 500 acres of trees in one section. The fruit sells fairly well raw, but is hard to ship and mainly handled preserved or dried.

*

In a case regarding the grading of fruit, the Pennsylvania Supreme Court has ruled that "fancy" and "strictly fancy" are synonomous, and that a buyer who specifies that goods shall be "strictly fancy" can demand no better quality than what by common consent in the trade passes as "fancy." "Extra fancy" is considered to have a different meaning, carrying a higher quality idea.

*

The port of Halifax, Nova Scotia, handled a total shipping tonnage last year of 3,182,923. Customs receipts were $2,198,464. Imports were valued at $12,404,055, and exports, $15,173,230. The Dominion is planning extensive harbor improvements to cost $30,000,000.

*

Can you give the name and address of a reliable commission man in New York who will handle my eggs and make the honest returns at market prices? I will give a guarantee on every egg being strictly fresh gathered from my own nests. Nothing over one week down to one day old. I have from two to three crates a week. W.
New Jersey.

If by market prices is meant the quotations appearing in newspapers and price currents we know of no honest dealer who will make such a guarantee. All he can do is to sell at the best price he can get, and the quoted figures are not always representative of a large volume of the day's business.

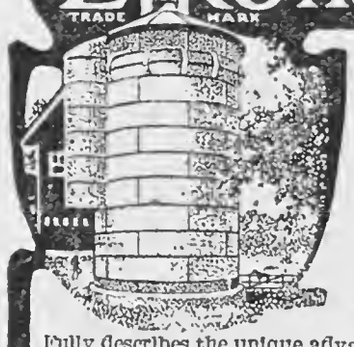
Buyers may be divided into two general classes, those who want certain grades of goods and are not limited as to price, and those who must consider price every time. The latter class is far in the majority. There may be, for instance, on a certain day, 25 customers who will pay 45 cents per dozen for choice white eggs by the case, and perhaps 100 whose limit is 40 cents, because their retail trade will not stand a higher price. It is evident that when the 45 cent buyers are supplied, those eggs must sell at the lower price if sales are to be made. Thus two neighbors may send eggs of the same grade to New York at the same time, one getting 45 cents and the other 40 and yet both lots handled honestly by different dealers, or the same dealer, for that matter, because he may have had only one high-priced egg customer that day. We are glad to give the names of commission men who are considered honest and capable in their special lines, but cannot guarantee the price the goods will bring. W. W. H.

VISITOR: "How does the land lie out this way?" Native: "It isn't the land—it's the land agent." — Philadelphia Record.

"A WIFE gets a third of her husband's property, doesn't she?" "No." "Why, I thought the law gave that to a man's wife." "No; only to his widow."—Baltimore American.

MRS. NEWRICHE: "I believe our next-door neighbors on the right are as poor as church mice, Hiram." Mr. Newriche: "What makes you think so?" Mrs. Newriche: "Why, they can't afford one of them mechanical piano-players; the daughter is taking lessons by hand."—Puck.

Molassine Meal
MADE IN ENGLAND
A Perfect Feed for Your Team and Farm Horses
It is not only the value of Molassine Meal in itself but its digestive and antiseptic properties that lend great additional value to the rest of the ration used.
Feed three quarts per day to each horse in place of the same quantity of other fodder. In a few weeks you see improved results in increased strength and glossy coats.
AMERICAN ICE COMPANY
WASHINGTON, D. C.
When your salesman called on me, some months ago, I very reluctantly agreed to try out Molassine Meal on five horses from four of our stables—20 HORSES IN ALL. These were young, green horses, NOT IN GOOD CONDITION.
In less than four weeks they showed most surprising improvement, gained from 40 to 65 lbs. each, and are now working regularly every day.
I cannot say anything too good about Molassine Meal.
Yours very truly,
GEO. A. LOVELESS,
Supt. of Stables.
January 5, 1914.
FOR YOUR HORSES, COWS, PIGS, SHEEP AND POULTRY.
Write us for our latest book on Feeding.
MOLASSINE COMPANY OF AMERICA 326 Board of Trade, BOSTON, MASS.
St. John. Montreal. Toronto. Winnipeg.

ZYRO Metal Silos have come to stay

They are guaranteed not to crack or collapse, are storm- and fire-proof. Keep ensilage in most wholesome condition. Many prominent farmers praise the "ZYRO" Silo—pronouncing it
"THE MOST PRACTICAL SILO MADE"
Made of exceptionally pure, rust-resisting galvanized iron. Easily erected with most common tools. Sections are of convenient size for easy handling. Doors cannot shrink or swell, hence are absolutely air-tight. For other exclusive "ZYRO" points get
Book of Metal Silo Facts FREE
Fully describes the unique advantages of "ZYRO" Metal Silos and shows them at work on many fine farms. Gladly sent on request. Write a post card today.
The Canton Culvert Co., Box 240 Canton, Ohio
ZYRO METAL ANTI-CORROSIVE

Costs $10 Earns $10 a day
Hertzler & Zook Portable Wood SAW

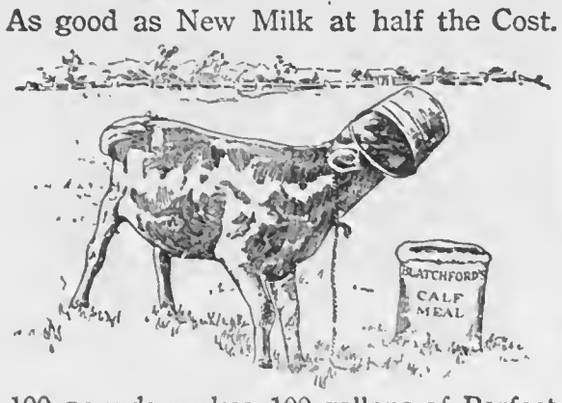
$10
$10 Investment with a $10. a day capacity. Guaranteed one year—backed by a $10,000 Bond. If not satisfactory money refunded and freight paid both ways. Saws lumber, lath, fence posts, etc. Operates easily. Only $10. saw to which ripping table can be added. Catalog free.
HERTZLER & ZOOK CO., Box 3, Belleville, Pa.

Unadilla Silos Are Trustworthy

They preserve silage perfectly. Combine best construction, greatest durability and convenience. Easy to erect and keep air-tight. Write today for catalogue. Agents wanted. Address
UNADILLA SILO CO., Box C, Unadilla, N. Y.

Perfectly Air-tight

Perfect-fitting doors make the silo absolutely air-tight. That keeps the ensilage sweet and fresh down to last forkful. Quick, easy adjustment—no hammer or wrench needed. Strong steel hoops form easy ladder. Built to last a lifetime—of White or Yellow Pine, Oregon Fir or Cypress. You may pay more money, but you can't buy a better silo. Our motto is Quality. *Write today for free catalog.*
ECONOMY SILO & MFG. CO.
Box 38-J, Frederick, Md.
Economy Silos

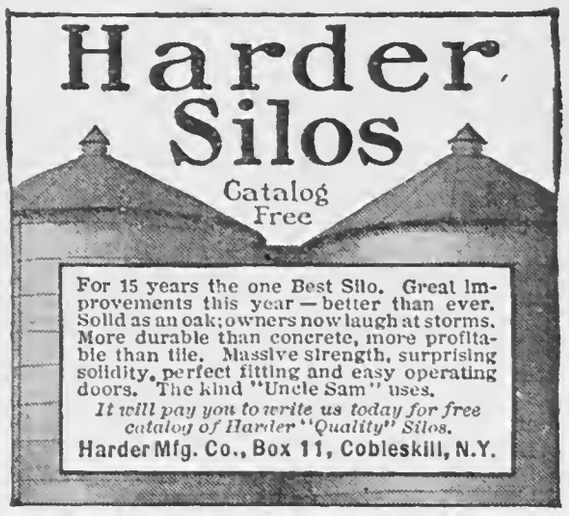
"Licks the Bucket Clean"
Blatchford's Calf Meal
As good as New Milk at half the Cost.


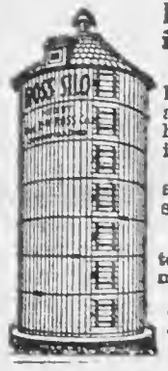
100 pounds makes 100 gallons of Perfect Milk Substitute.
Send for pamphlet, "How to Raise Calves Cheaply and Successfully Without Milk."
At your Dealers or
BLATCHFORD'S CALF MEAL FACTORY
WAUKEGAN - - - ILLINOIS

CRAINE SILO
IT CAN'T COLLAPSE
The Craine Patent Triple Wall Silo has thick vertical wooden staves, inside; horizontal patent wooden covering thoroughly nailed, outside; and water-proof felt-like rubber roofing between. This makes a perfect non-conductor of heat. SCIENTIFIC in every feature of its construction.

IT'S FROST-PROOF
AIR-TIGHT PERMANENT
No silage spoiled by contact with concrete, tile or any mineral. Craine silage is sweet, clean and perfectly preserved—it is "drawn from the wood." No troublesome iron hoops requiring annual overhauling. The first cost is low and is the last. The Craine is, therefore, the cheapest on the market. Ask for illustrated booklet.
W. L. Scott Lumber Co.
Norwich, N. Y Milwaukee, Wis. Kansas City, Mo.

SILOS
AT BARGAIN PRICES
We have a big stock of dry silo staves and all silo parts. We will make close prices for Winter orders to keep our help busy. Can ship with silos, shingles, lumber, etc.
Write now and save money.
Enterprise Lumber & Silo Co.
NORTH TONAWANDA, N. Y.

Harder Silos

Catalog Free
For 15 years the one Best Silo. Great improvements this year—better than ever. Solid as an oak; owners now laugh at storms. More durable than concrete, more profitable than tile. Massive strength, surprising solidity, perfect fitting and easy operating doors. The kind "Uncle Sam" uses.
It will pay you to write us today for free catalog of Harder "Quality" Silos.
Harder Mfg. Co., Box 11, Cobleskill, N.Y.



REASONS why the is the BEST ROSS SILO
We use Guaranteed Long Leaf Yellow Pine that will last longer than any other wood, except cypress. The highest possible grade of Oregon Fir is used.
The Ross Silo has features that are exclusive, and absolutely necessary to make a good silo.
FULLY GUARANTEED
to be as represented. Our 63 years of manufacturing experience is valuable to you. FREE catalog explains all. Write for it today. Agents Wanted.
The E. W. Ross Co., Box 13 Springfield, O.

EVENTS OF THE WEEK.

DOMESTIC.—During the Federal investigation into the loss of the steamship Monroe, it was brought out Feb. 12, that the captain, E. E. Johnson, left his vessel in the first boat that got away. It was brought out that under the rules governing sea traffic under "ordinary conditions" the Nantucket had the right of way. The first officer declared that he had never seen on the Monroe any boat drills in which the boats were lowered far enough to allow their keels to touch the water. There was no chronometer on the Monroe. The ship's clock in the pilot house was set by a time ball at Norfolk at the beginning of each voyage. The first officer said the captain never used the bridge except when the ship was making dock.

The Hazard canning factory at Shrewsbury, N. J., was burned Feb. 14. It was the largest factory of the kind in New Jersey and was built by the late E. C. Hazard. The loss is $100,000.

Five men were killed Feb. 12 by an explosion in the packing house of the Hercules Powder Works at Kenvil, N. J., owned by the Du Pont Powder Company. How the explosion occurred will never be known, as all the men who were in the packing house at the time were killed.

An earthquake shock was felt all over the city and district of Quebec, Canada, Feb. 14. The shock was violent enough to wake hundreds of people.

With nearly half the population of Laytonville, Mendocino County, Cal., suffering from smallpox, and the disease epidemic among the Indians of the Round Valley reservation and throughout the mountainous sections of Mendocino and Lake Counties, the Board of Health has declared a quarantine covering a wide area. Orders have been issued to prohibit the attendance at the schools of any child not vaccinated.

Tides even higher than those which caused so much destruction in the storms of December and January shut off Seabright, N. J., Feb. 14, from all transportation connection with other towns. Tracks were washed out, and in other places are piled high with debris.

A smaller percentage of fatalities in the metal mines of the country in 1912 than in the year preceding is noted in a statement made Feb. 14 by the Federal Bureau of Mines. It shows that in 1912 the percentage was 3.91 per thousand employed, while in 1911 it was 4.19. For coal mines the figures were 3.27 and 3.73 respectively in 1912 and 1911. Fatalities in the metal mines of foreign countries, with a few exceptions, are lower than here, Italy being 1.18, Portugal 1.34, Spain 1.49, Germany 1.51, Great Britain 1.53, Japan 1.76, France 3.16, Transvaal 4.14.

State's Attorney Judson of Connecticut, Feb. 16, quashed the manslaughter indictments against five officials of the New York, New Haven & Hartford Railroad, but refused to annul the indictment against former President Charles S. Mellen. The indictments grew out of the wreck at Westport, Conn., on Oct. 3, 1912, in which seven persons were killed.

Lieutenant J. McC. Murray, attached to the Pensacola Naval Aeronautical Station, fell 800 feet into Pensacola Bay, Fla., Feb. 16, and was killed. His body was recovered floating about 100 yards from the wrecked aeroplane. The death of Lieutenant Murray makes the total number of aviation fatalities 265. Since January 1, 11 aviators have been killed.

J. B. Smith, vice-president and general manager; F. C. Mills, superintendent, and E. H. Mayer, chief weigher of the Western Fuel Company, were found guilty at San Francisco, Feb. 18, of defrauding the United States Government by obtaining illegal tariff rebates through false weights. E. L. Smith, a checker, the other defendant, was acquitted. The specific charge against the directors of the Western Fuel Company was conspiracy to defraud the Government by making false returns on the weights of cargoes of coal incoming into San Francisco. The alleged frauds were said to aggregate between a half million and a million dollars.

FARM AND GARDEN.—The Federation of Jewish Farmers held a Farmers' Week, Feb. 23 to Feb. 26, at the Baron de Hirsch School, Woodbine, N. J. The programme was arranged so that the first two hours in the morning were divided into three kinds of lectures, one devoted to poultry, another to dairy and field crops, and the third to horticulture. The last two hours in the morning were devoted to the general lectures. In the afternoon, the laboratory and demonstration work was divided into three various groups, so that every farmer could attend only those periods in which he was most interested.

The Governor of Utah, William Spry, and other leading officials of that State met in Philadelphia, Feb. 14, with leading Jews of that city and made arrangements to send 85 Philadelphia families to the Clarion colony of Jewish farmers in San Pedro county, 200 miles south of Salt Lake City. The Utah officials came as guests of the Jewish Agricultural and Colonial Association. The association sent 50 families to Utah three years ago, and Gov. Spry said that they have became excellent farmers and are winning prosperity. The association plans to send 100 families to the colony within a short time. They will be taken from the ghetto districts of New York and Philadelphia.

The 27 suits brought by the State Fish and Game Commission to recover penalties aggregating $80,000 from the Franco-American Poultry Company, which has farms at Little Falls, N. J., and Goshen, N. Y., were discontinued Feb. 17, on the payment of a fine of $5,500 by John V. Snyder, one of the officials of the company. The complaint charged that black and mallard ducks trapped in Virginia and brought to Little Falls for breeding purposes were recrated and shipped to Goshen, where they were reshipped to hotels and restaurants. August Silz and other officials of the Franco-American Poultry Company were fined $20,000 in New York State recently for importing the game birds from Little Falls to Goshen.

COMING FARMERS' MEETINGS.

Sixth National Corn Exhibition, State Fair Grounds, Dallas, Texas, February 10-24.

Annual farmers' week, Vermont College of Agriculture, Burlington, Vt., February 23 to 27.

Massachusetts Agricultural College, Amherst, ten-weeks' Winter course, January 6 to March 13.

Thirty-ninth annual meeting of the American Association of Nurserymen, Cleveland, O., June 24-26.

Hay, $15; corn, 70 to 80; oats, 50; potatoes, 90 to $1; apples, $1.25 to $1.50; Oregon apples, 30 to 40 cents per dozen; celery, home-grown, 40 cents per dozen; cabbage, 3½ to four cents retail; turnips, 80; butter, retail, 35, further up the road, 26 to 28; eggs, 35, have been 40 and 45 until quite recently. Poultry about holidays ruled at 28 and 30. This is a mining and railroad town and the merchants seem to deal more with Pittsburgh houses than with farmers. I. A. D.

East Brady, Pa.

Steers, seven to eight; veal, 10 to 11; lambs, six to seven; hogs, 8½; potatoes, 80; eggs, 25; butter, 28; Timothy, $11 in mow; clover, $8.50; mixed hay, $9 to $10; oats, 36; wheat, 90; corn, 80 cents per cwt. Apples not as good as I fed my horse last Fall, retail at 60 to 75 cents a peck; at 60 cents, a barrel would bring $6.60. The apples exposed for sale at five cents each and three for 10 are from all appearances Western apples. Spitzenburg, Rome Beauty and Jonathan seem to be the favorite and why this should be so I cannot see, when much better apples are grown all through this section, Southern Michigan, Ohio, New York and Pennsylvania. H. H.

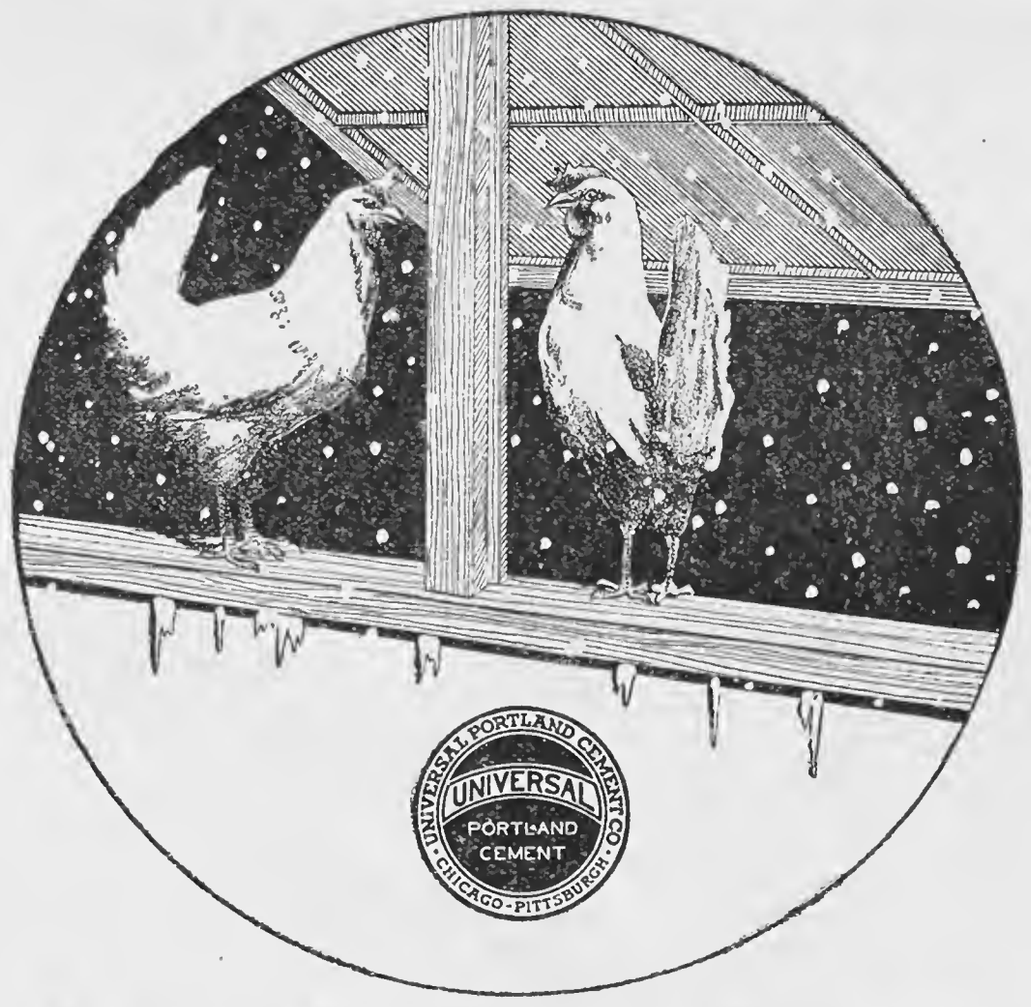
Fort Wayne, Ind.

Corn, 75 cents per 100 pounds; clover seed, $7.50; wheat, 91 cents a bushel; oats, 35; Timothy, $12.65, baled; clover, $10.15; mixed, $10.50; potatoes, 75; apples, $1; eggs, 32; butter, 27 to 30; chickens, 11; steers, six to seven; hogs, eight, dressed 10; lamb, six; veal, 10.

New Haven, Ind. H. H.

WILSON BROS. BONE CUTTERS, CLOVER CUTTERS & GRINDING MILLS

DON'T KEEP HENS UNLESS YOU CAN OWN THESE THREE WONDERFUL MACHINES. Hens cannot pay unless you feed plenty of fresh, sweet cut green bone, and clover, with grit, shell and cracked grains. Doesn't pay to buy them—you must own the WILSON MILL, $5. "Crown" BONE CUTTER, $6.50, "Gem" CLOVER CUTTER, $9. Dealers or direct. *Every Machine guaranteed.* Write today for complete Free Ills. Book and prices. WILSON BROS., · · Dept. E-6, EASTON, PA.



House Your Hens in Comfort

Give them plenty of sunlight and fresh air. Feed them well. Keep them in a warm, dry, clean concrete henhouse built of

UNIVERSAL PORTLAND CEMENT

Wooden poultry houses are the breeding place of germs; frequently cold and damp; never clean. A concrete henhouse is easily disinfected, fireproof, free from rats and mice. You can build such a structure yourself at a very moderate cost. Send for our free book "Small Farm Buildings of Concrete".

Universal Portland Cement Co.

CHICAGO, 72 West Adams Street — PITTSBURGH, Frick Building — MINNEAPOLIS, Security Bank Building

Plants at Chicago and Pittsburgh. Annual Output 12,000,000 Barrels

The Cambridge No. 29 Steel Plow

A reversible plow for hillside and level land that is remarkable for its strength and lightness as well as its ease of adjustment and operation. New adjustable foot latch, automatic steel jointer, automatic coulter, shifting clevis and wheel and other improvements. Steel and malleable iron throughout—guaranteed for five years. Will last a lifetime. Fully described in our big new catalog of famous Cambridge Plows. Send for copy today. Every farmer should have it.

Cambridge Plows are made throughout of carefully tested material.

Write for our new catalog. It is free.

69 YEARS EXPERIENCE BACK OF THEM

CAMBRIDGE STEEL PLOW CO. 700 Foundry St. Cambridge, N. Y.

$1.00 Puts It On Your Farm

THE CHATHAM Grain Grader and Cleaner

Handles 70 Kinds of Seed Grain and Grass Seed

From Wheat, it takes Wild Oats, Tame Oats, Cockle, Rye and Smut.

Cleans the dirtiest Flax. Has special knocker and skimmer which prevents clogging. (Other machines choke up.)

Takes Dodder, Barn Yard Grass and Foxtail out of Alfalfa and Millet "slick as a whistle."

Takes Buckhorn from Clover.

Sorts Corn for Drop Planter.

Famous BEAN MILL. Handles all varieties, takes out the SPLITS, Clay, Straw, etc.

Handles Peas as well as any Grain or Grass Seed. Removes foul weed seed and all shrunken, cracked and sickly grains. Takes out all dirt, dust and chaff. It is also a bully chaffer. Handles 60 bushels per hour. Gas power or hand power. Easiest running mill.

Manson Campbell

For $1.00, I Clean and Grade Your Seed Grain

You can't afford to plant common Seed and take chances on a poor crop, when I am offering to scientifically clean and grade every bushel of your Seed Grain for this spring's planting for one paltry dollar.

Here's my proposition, and if you are a smart man you will write me before sunrise tomorrow:

Send me one dollar and I will ship you, FREIGHT PAID by MYSELF, this improved 1914 Chatham Grain Grader and Cleaner, with all equipment. Clean your Seed Wheat, Oats, Flax, Barley, Peas, Beans, Corn, Grass Seed, etc. Then PLANT those fine seed. AFTER you have harvested a bumper crop, pay me the balance of my low price. Not one penny need you pay, except the $1, until next October. And by October YOUR CHATHAM WILL HAVE MORE THAN PAID ITS ENTIRE COST IN INCREASED CROPS. Then you'll have it to work FREE for you the rest of your life.

Your Dollar Returned

I only want the dollar as evidence of good faith—to protect myself from mischievous boys. If after 30 days' hard test, you don't want my "Chatham," send it back at my expense and I will return the dollar.

A "Made-to-Order" Machine

Every "Chatham" is practically a *made-to-order* machine, for I send you the exact and proper Screens, Riddles, Hurdles and Sieves to grade and clean every *Grain and Grass Seed grown in your locality.* That's the secret of my success. I would not be the leading maker of Graders and Cleaners if I had tried to make my equipment fit ten million farms. What would you think of a clothing maker whose suits were all one size? Wouldn't it be a *miracle* if he gave you a fit. Yet all makers of Graders and Cleaners, except me, send the same equipment, whether you live in Maine, Ohio or Oregon. They wouldn't do that, if they had my 41 years' experience.

Extra Screens Free

I use, all together, 81 Screens and Sieves. It usually requires 15 to 17 for the average farm. These I select from the 81. After 41 years in the business, I am pretty sure to pick the exact equipment needed on your farm. If I shouldn't, just drop me a line and I'll send your additional requirements. There will be no charge for this.

Samples Graded Free

Maybe you have some Seed Grain that you can't clean or grade or separate. Send me a sample. I will purify it and tell you how you can do it cheaply. No charge for this.

Seed Corn Sorted

My big Corn Sorting Attachment, invented 2 years ago, is a great success. Twelve thousand farmers and many leading Agricultural Colleges are using it. It is the only machine I know of which scientifically sorts seed corn for drop planters.

New Book Ready

Send me no money now—just a Postal, for the finest, most complete Book on Seed Selection I've ever written. After the Book comes, write me what size machine you want and I'll ship it, freight prepaid, on receipt of $1.00. Then clean and grade all your Seed Grain. If you write today, you get my Book by return mail. Address nearest office.

Manson Campbell Company

Dept. 43

Detroit Kansas City Minneapolis

WANTED—1,000 Farmers to repair any leak in roofs, silos, etc., with **WONDER CEMENT.** Convenient—easily applied. Permanent results. Send $4.00 for 25 lbs. Freight prepaid. Covers 100 square feet. **THE GARLAND CO., Dept. A, Cleveland, Ohio**

REDUCTIONS
in rates permit profitable
SHIPPING
BY PARCEL POST.
Containers for all
FARM PRODUCTS.
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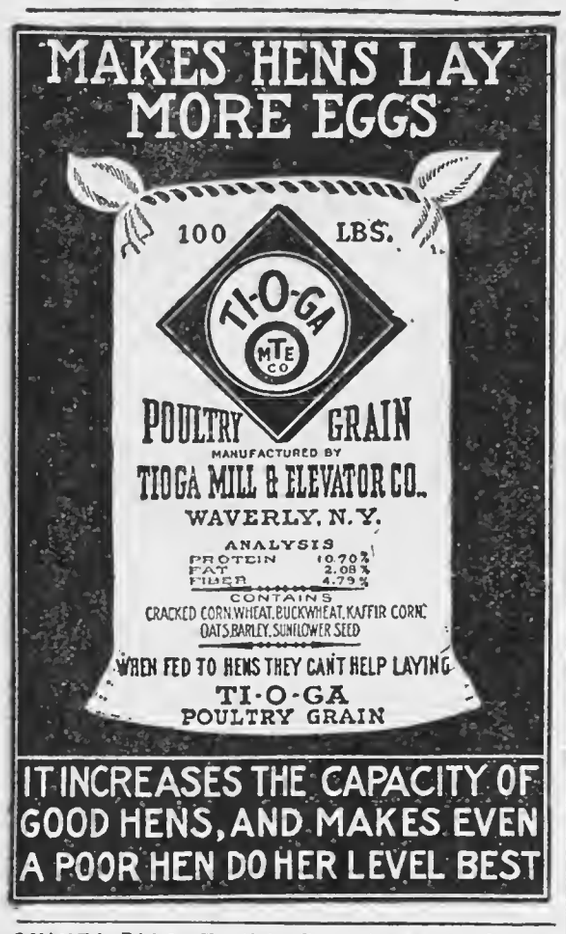
507 5th Ave., · N. Y. City.

MAKES HENS LAY MORE EGGS



IT INCREASES THE CAPACITY OF GOOD HENS, AND MAKES EVEN A POOR HEN DO HER LEVEL BEST

GUINEA PIGS—English Smooth-haired. Solid Colors. $2 a Pair. 3 to 4 months old. Booklet on how to raise and care for them. Post. paid, 25 cts. **H. A. REGEL, 311 North 42nd St., Camden, N. J.**

Parcel Post Egg Boxes—NEW FLATS AND FILLERS. **H. K. BRUNNER, 45 Harrison St., New York**

TRAP-NESTED S. C. R. I. REDS—All breeding Cockerels from over 200-egg hens. Eggs and ducks for sale. **A. ALLAN, JR., Newport, Rhode Island**

Rose Comb White Leghorns—Large chalk-white eggs. Circulars free. **E. M. HAMILTON, Otego, N. Y.**

PURE ROSE C. BROWN LEGHORN COCKERELS for breeders. **I. C. HAWKINS, R. 3, Middletown, New York**

BUFF ORPINGTON EGGS, thoroughbred stock, 15 for $1, $6 for 100. **SYL BEIDELMAN, Bingen, Pa.**

BABY CHICKS—Campines, Silver-Golden, S. C. W. Leghorns. Range raised consistent egg producers. Catalogue free. **S. O. HALL, Box N, Seville, Ohio**

THOROUGHBRED POULTRY—Best 20 varieties. Healthy, vigorous stock. Good layers. Eggs, 15, $1: 40, $2. Catalog. **H. K. Mohr, R. No. 3, Quakertown, Pa.**

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. **EAST OONEGAL POULTRY YARDS, MARIETTA, PA.**

MATURED COCKERELS, R. I. REDS, W. WYANDOTTES Barred Rocks, Dk. Brahmas, $2.50; S. C. White and Brown **LEGHORNS,** $1.50. **R. I. REDS,** laying hens, $2. Hatching eggs & Chix. Won 76 Ribbons this Fall. Catalog gratis. **RIVERDALE POULTRY FARM, Riverdale, N. J**

GIANT BRONZE TURKEY EGGS, $4.00 per 10
RHODE ISLAND RED EGGS, $1.00 per 15
INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

MAMMOTH TOULOUSE GEESE EGGS—35c. EACH. DELIVERED **CRANOALL FARMS, Albion, N. Y.**

MAMMOTH TOULOUSE GEESE EGGS from heavy Dewlap strain. Winners at Boston, Brockton and Providence. Prices right. **O. O. Tuttle, Box 74, Londonderry, N. H.**

W. H. TURKEYS
MRS. B. WRIGHT, Ransomville, N. Y.

White Holland Turkeys FOR SALE | Mrs. ROBERT DAVIS Cumberland, Virginia

White Holland Toms—Also EGGS IN SEASON Mrs. E. J. Ryder, Rodman, N. Y

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS
Square Deal Guaranteed. Catalogue free.
W. R. STEVENS, Culver Road, Lyons, N. Y.

HATCHING EGGS—$10.00 HUNDRED
from 200 of the finest specimens of 2-year-old White Leghorns you ever saw. Mated to 20 Cockerels, sons of last year's trap-nesters. 5 birds laid 1048 eggs 12 months. Per average 189. Fertility Guaranteed 92%. Write, **Mouticello Egg Farm, Monticello, N. Y.**

Hatching Eggs from S. C. W. Leghorns
bred for heavy egg production for 20 years. Headed by grandson of Lady Cornell. Official record was 257 eggs. $4—100; 75c. setting. Chicks, $10—100.
S. L. PURDIE, - Genoa, New York

"Perfection" Barred Rocks—Every pen headed by prize winners. Mated and fed-to-produce chicks of high quality, and the kind that live. Eggs—$2 per 15; 3 settings for $5. Few fine cockerels, $3 and up. Complete price-list, containing valuable information, on request. **Dr. HAYMAN, Box R. 48, Doylestown, Pa.**

Handy Binder

JUST the thing for preserving files of THE RURAL NEW-YORKER. Durable and cheap. Sent postpaid for 25 cents.

The Rural New-Yorker
333 W. 30th St., New York City

The Henyard.

THE EGG-LAYING CONTEST.

The fourteenth week of the contest shows a tremendous gain in egg production. Last week the number laid was 987, this week it is 1,669; a gain of 682 eggs in one week. The White Leghorns alone made a gain of 375 eggs over the previous week. But the gain is general all along the line. The highest score for the week was made by Dr. N. W. Sanborn's pen of Buff Wyandottes, their score being 39.

Tom Barron's White Wyandottes, Pinecrest Orchard's S. C. Reds and the "sour milk" pen of White Leghorns from Storrs Agricultural Station, all three pens laid 38 eggs each.

Another pen of White Leghorns from Storrs Agricultural Station laid 37, and Dearborn & Sharpe's pen of S. C. Reds also laid 37. Cecil Guernsey's White Leghorns laid 36, and a pen of White P. Rocks from Storrs Agricultural Station laid the same number. Barron's White Wyandottes have laid 524 altogether; the nearest score to this is by Francis F. Lincoln's White Leghorns, 429. Barron's White Wyandotte pullet No. 1, that was broody for several weeks started in to make up for lost time by laying every day. Homer P. Deming's S. C. Red pullet No. 7 also laid every day last week.

The White Laced Red Cornish commenced this week, one pullet laying one egg. The Silver Campines have the distinction of being the only pen that has not yet prodnced an egg. Below are some of the week's scores, and the totals of the leading pens:

BARRED ROCKS.	WK.	TL.
Jules F. Francais, New York..	21	299
Frank L. Tuttle, Massachusetts	33	129
Waveny Farm, Connecticut..	17	64
A. B. Hall, Connecticut.....	2	57
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut.	36	168
Fred H. Benton, Connecticut..	20	149
Storrs Agr. Sta., Connecticut.	36	168
Storrs Agr. Sta., Connecticut.	17	99
Storrs Agr. Sta., Connecticut.	23	74
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	26	136
W. C. Morgan, Connecticut...	0	55
WHITE WYANDOTTES.		
Tom Barron, England.....	38	524
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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Sunflowers and Corn for Silage.

Can you tell me what I can plant with my corn for silage that will make a heavy growth to be cut and bound with corn harvester? The seasons are short, and corn does not get ripe very often here. O. S.

Clinton Co., N. Y.

I believe that the inquirer will get the most fodder for a silo by adding a few sunflower seeds to his corn sown for silage. Apparently he does not have good conditions for corn culture. Therefore, I cannot advise using Soy beans. The thing to be guarded against is the possibility of getting too many sunflowers in the mixture. If he used a pint of sunflower seeds mixed with the corn planted on one acre I think he will have plenty of sunflowers in the mixture. These sunflowers should be of the kind that has many small heads rather than a single large one per stalk. Sunflowers will make more growth on poor land in a dry season that will corn. It is true that they will rob the adjoining cornstalks of moisture and food. To some extent the result will be an increase in the total amount of fodder produced, and some decrease in its feeding value. It will surprise anyone not familiar with ensiling sunflowers to see how the cattle eat the stalk when it is cut up and softened in the silo. I have known cattle to reject the sunflower leaves and some of the head, but to clean up the pieces of stalk. E. R. M.

Bakery Refuse for Pigs.

I have three shotes, weigh 140 pounds each, and am feeding them corn, also corn and oat chop, half oats, half corn, ground with the cob. I can get the scrapings of the bread troughs and sweepings of the floor of a bakery; would it be wise to mix it with the above? Sweepings, etc., are flour, a little lard and dough, about 20 barrels a week. K. H. J.

Bethlehem, Pa.

No doubt the scrapings from the bread troughs would be all right and add to the value of the ration you are feeding your shotes, but floor sweepings are not desirable at any price, unless they are carefully saved for feeding purposes, and all rubbish and unclean material kept separate. The common practice in such places is to dump everything from sour bread to match boxes and tin cans into the garbage can, and expect the pigs to fatten up quickly. C. S. G.

Green Bone and Mash.

Is green cut bone good for hens as well as beef scrap? I also wish to grind up whole corn, wheat and oats for dry mash, adding to it oil meal and beef scrap. How much by weight should I grind of the corn, wheat and oats. Would I need bran and middlings? The hens are White Leghorns. How much green bone would you feed daily to 100 hens?

New Jersey. E. F.

Green cut bone is a very good feed for the purpose of forcing egg production; but should never be fed to breeders previous to or during the breeding season, as it impairs the strength of the egg and its chances of producing a lively chicken. A good dry mash can be made by grinding up your corn, oats and wheat using equal parts by weight and adding an equal part of bran and middlings mixed. About three pounds per day of green cut bone would be sufficient for 100 hens. While it would be possible to feed heavier than this we do not think it would pay unless you were going to get rid of your hens very shortly. C. S. G.

A Dairy Ration.

Will you balance me a ration for my dairy from the following feeds? I have corn silage and mixed hay, being Timothy, June grass, clover and swamp grass mixed. I can buy the following feeds: Mixed wheat feed, $26; gluten, $32; cotton-seed meal, $34; cornmeal, $29. Give as cheap a ration as you can. My cows weigh from 600 or 700 to 1,000 pounds. I have one registered Ayrshire, two grades and rest are grade Jerseys. I am now feeding four pounds mixed feed, four pounds gluten per day per cow. My fresh cows are giving 24 to 29 pounds per day; one small two-year-old gives 20 pounds. F. T.

Charlotteville, N. Y.

You are feeding a fairly well-balanced ration at the present time and if you are getting the desired results there is no reason why you should change. It would be advisable to watch the condition of your cows closely and if they show any signs of falling off in flesh you can add a little cornmeal to the ration. C. S. G.

Whey and Tankage.

Is there any nourishment in cheese whey for young pigs or any stock? I am using it now for my chickens, to make mash. An article in THE R. N.-Y. regarding young pigs says we can use tankage in the place of oilmeal. I would like to know what tankage is. C. P. R.

Whey has some feeding value for pigs or calves. It contains a little protein, some fat, unless this has been removed by a separator, and most of the carbohydrates of the milk. Experiments in pig feeding show that 785 pounds of whey saved 100 pounds of grain. I have heard of a farmer who, on being asked how he raised such good hogs, said he fed nothing but whey, but admitted, on close questioning, that he "ried it up a little with Injun meal." I should prefer flour middlings to "Injun" or cornmeal. When fed to calves in too large quantities or very sour it is apt to cause scouring. Fed judiciously, and with some other feed, calves do fairly well on it.

Tankage is made from packing-house scraps cooked under pressure, the fat being removed. This is entirely different from fertilizer tankage, to which chemicals are added, and which cannot be used for stock. The tankage is dried and ground. C. L. M.

Feeding Rye.

1. I have a registered Holstein bull, coming year old in Spring. Not very large. What is the best feed I can feed to make him grow and get ready for service in the Spring? 2. What proportion of rye is it safe to feed mixed with oats to a mare with foal? Is rye hurtful to feed cows that are coming fresh in Spring? A. G.

1. Feed him plenty of clover or Alfalfa hay and add roots or silage. As concentrate feed oats, bran and flaxseed meal. Make him take plenty of outdoor exercise every day. 2. Do not feed any rye to horses. Keep it for the hogs, in the form of meal, as a part ration. Rye and wheat are not suitable feeds for horses, tend to cause indigestion and skin irritation and incidentally, therefore, may cause abortion. Mix wheat bran with the oats. Do not give rye to the cows. A. S. A.

Cow Holding Up Milk.

I have a Jersey cow which freshened on January 29. Since her seventh milking we cannot and she will not allow us to take all the milk from her, the udder apparently containing more milk. Her flow is decreasing. The calf was taken from the cow after fourth day—calf being fed artificially. S.

Put the calf near the cow at milking time and gently massage the udder for a time before milking. If she then lets down her milk gradually increase the distance between calf and cow at each milking time and the cow may in time stop holding up her milk. Feed her some relished feed at milking time. If trouble continues rub udder with warm melted lard at night and feed warm sloppy mashes of bran, oatmeal, flaxseed meal and molasses to stimulate a flow of milk. A. S. A.

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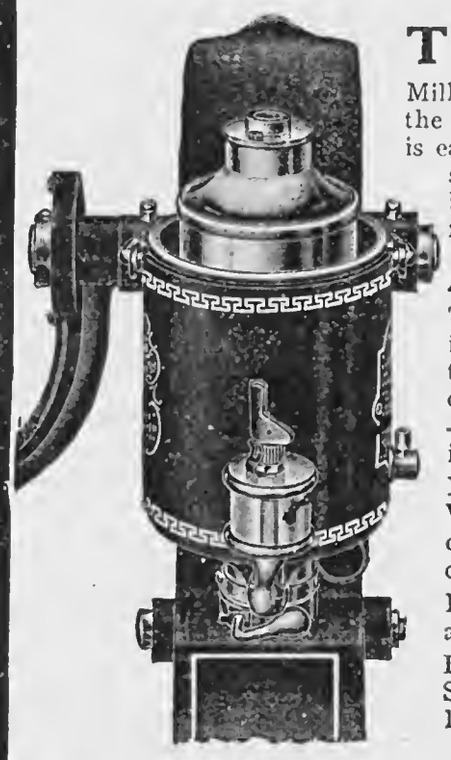

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The Henyard.

The Daily or Alternate Layer.

I should like to learn from some of your men who know, why it is that in the heavy breeds of chickens, some hens lay every day and others only on alternate days, where both are yarded together and receive same treatment. Does the daily layer produce any more eggs in a year than the alternate, or does she lay off longer between spells of production? It would appear at first sight that the daily bird was the better, but is she?

Mobile, Ala. M. A. P.

We have here, of course, a great many individual records. I will give you a few isolated instances, but not enough, I believe, to warrant conclusions. I think I would like to add that the hen that lays every day of course is in a position to rest longer when she needs to.

I find that in our first laying contest we had a Buff Orpington from West Virginia that laid for 25 consecutive days, beginning March 20, which same individual laid 24 eggs in December, 28 in January, etc., and finished the year with a total production of 210. This is of course, not a despicable record by any means.

Coming to the second egg-laying contest, I find a Barred Rock from Pennsylvania that laid for 61 consecutive days beginning February 22. This bird laid only three eggs during the first three months, and yet finished the year with 206 to her credit. A Rhode Island Red from New Hampshire laid for 33 consecutive days, giving us 31 eggs in the month of August, and yielded 245 for the entire period. Another Red in this same pen produced 248 eggs for the year and her longer consecutive laying was over a period of 41 days.

The best individual production in the second contest as you know, of course, was a White Leghorn of Mr. Barron's that yielded 282 eggs. Her largest consecutive number according to our records is 17. To take some other examples: I find a Canadian White Wyandotte that laid regularly each alternate day through January and February and then followed very closely a schedule of laying two days and skipping one for the next three months and finished the year with 174. A White Wyandotte from Pennsylvania laid an average of 15 eggs each month from December to May, both included, yet this bird seemed to have no regular schedule. She would have brenks of anywhere from three days to a week without any production at all and at one time during this period laid no eggs for 16 days. She laid 188 eggs during the year.

A Rhode Island Red from this State followed very closely for about two months the program of producing two eggs and then skipping a day, yet she laid only 138 eggs and produced none at all in the last three months. A White Leghorn from Pennsylvania laid 178 eggs in 10 months, following very closely the rule of two days and skip one for about four months, two of these were at the beginning of the laying period and two months or a little more at the end. For the intervening time she followed very closely the program of laying three eggs and skipping a day, although this would vary a little, as for instance, in the month of June she laid five consecutive days before missing, and twice she laid four consecutive days without missing. During the month of July she laid four consecutive days and made up for this later in the month by laying only two consecutive days so that her average right through the month was three days and skip one. These are all actual facts, but just what they mean I am sure I don't know. They seem to indicate that the longest consecutive layers are not necessarily the heaviest producers at the end of the year, and yet if a bird is going to lay 300 eggs she has got to stay pretty close on the job.

W. F. KIRKPATRICK.

Poor Hatch of Ducks.

I had 500 dneks and 70 drakes, all running together. They hatched well till March; then the eggs began to rot. They tested fairly good, but the second and third week they began to rot badly. Do you consider the fault was in the feeding? I fed twice a day 1½ bushels bran, one-half bushel scrap with a few fish when we could get them; boil 10 to 20 minutes, add one bag cornmeal, which make a nice stiff mash. I use half in the morning, mixing thoroughly, one-half bushel whole corn, one-half bushel wheat and one bushel of green stuff, the same in the afternoon. I would like to know what ration you advise for baby ducks.

S. S.

It is a common thing among duck raisers to have poor hatches in their eggs under many conditions. It is sometimes found that certain makes of beef scrap produce much stronger germs than do other makes. Fresh meat and bone, cooked and ground, seem to give the best results. The very best grade of beef scrap should be used where this is not obtainable. The kind of green food has considerable to do with the strength of the germ, and nothing has been found better than clover or Alfalfa steamed. Of course the fault of the eggs rotting during the second and third weeks might very likely have been with the incubator, but it might be due to the fact that your ducks laid over 100 eggs each in nine months, and were probably somewhat lower in vitality (they could hardly help it) after several months of such continuous laying. The best hatching and brooding occurs when the breeding ducks have not been induced to lay much during the Fall and Winter, and are given water to swim in. A. L. C.

Poor Laying.

How could I make my hens lay more eggs? They have free access to a large rye field, and as they get to pick up silage, etc., at the barn (we keep a dairy) I also feed cane seed. I have about 175 hens. How much ought I feed and what? I get but about a dozen eggs per day and my chickens are healthy. How many roosters ought I keep? R. S. G.

One would infer from your letter that you are letting your hens run at large, and are feeding but one kind of grain to supplement what they pick up. Sorghum seed, which I take to be the cane seed to which you refer, has an analysis which would indicate a feeding value practically equivalent to corn. An exclusive diet of this would not supply the protein necessary for the production of eggs and you could hardly expect good Winter egg production without the addition of other grains and meat food in some form to the cane seed and green stuff which your hens are getting. If you can add such other grains as oats and wheat to their whole grain rations, and provide, in addition, a mash of ground grain to which beef scrap or meat meal is added, or give plenty of skim-milk, you may reasonably anticipate a better egg yield. Six vigorous males should be an ample supply for such a flock running on free range.

M. B. D.

Black on Duck's Bill.

Does the black on bills of White Pekin ducks disqualify them for show stock?

Newburgh, N. Y. J. T. F.

Black on the bill of a Pekin duck does not disqualify, but will cause a cut of one point if on the bean, or from one to one and a half if elsewhere on the bill. Black on the bill of a Pekin drake disqualifies. W. H. H.

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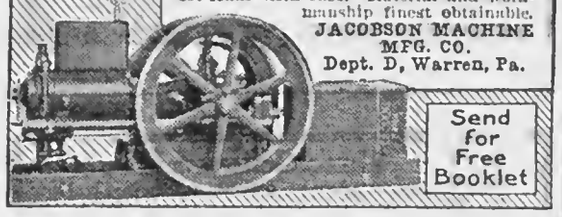

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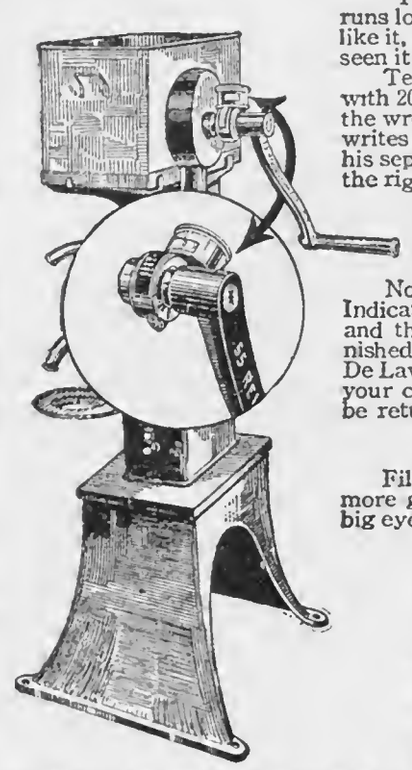

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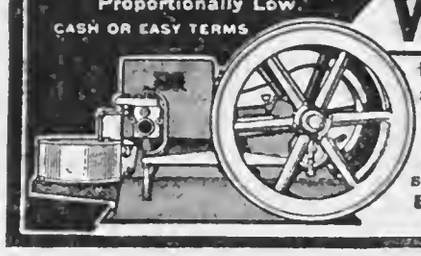

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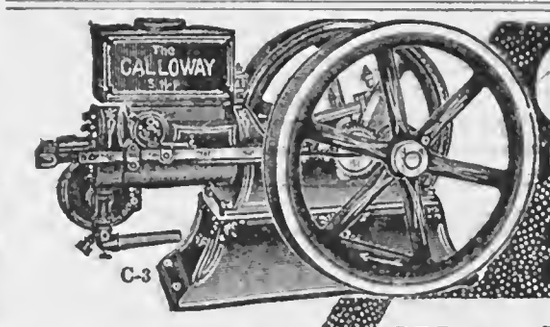

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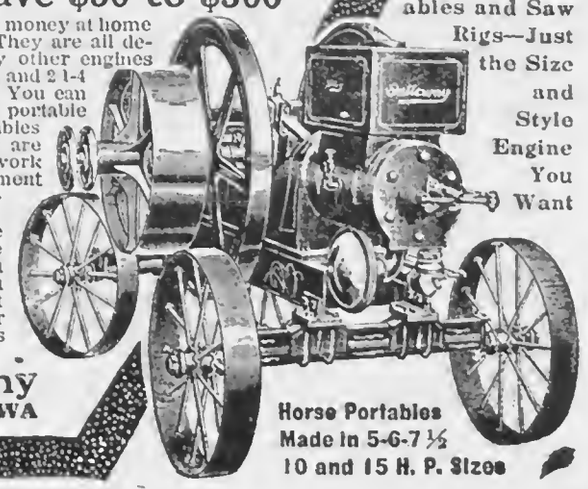

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PUBLISHER'S DESK

Will you give information regarding the Coal Lands Securities Company, of Scranton, Pa? F. H. P.

Massachusetts.

We have long tried to reach some intelligent understanding of the affairs of the bunch of Scranton financiers who dominate this and other concerns, issuing securities to the public, but we about give it up in despair. This coterie of financiers is headed by one T. J. Foster, whose son acquired some newspaper notoriety recently through an elopement with the young daughter of a New Jersey family. The girl finally returned to her home, and Foster was held by the authorities and if we remember rightly serious criminal allegations were pending against him.

In addition to the Coal Lands Securities Company the promoters referred to are the International Text Book Company; the Colliery Engineer Co.; the International Correspondence Schools; the Technical Supply Co.; the International Educational Publishing Co.; the International Correspondence Schools of London; the International Poultry Co.; Hoover Incubator Manufacturing Co.; and the International Poultry Sales Company. There may be others, but this is sufficient for the present. These financiers always deal in millions, and all of them are so intermixed and interwoven that we have not been able to tell where one begins or where the other leaves off.

Take the Poultry Company. A New Jersey farm of 241 acres was the foundation, and our information is that the price was around $15,000. It was put into the company for $100,000, and a financial structure of $500,000 in stock and $300,000 of bonds raised on the premises. Some chickens and equipment were added, and the assets figured at nearly a million. If we understand the complicated report, this whole business has now been taken over by the Hoover Incubator Mfg. Co., with a capital stock of $1,500,000; but whether there has been a new writing of securities since or another coming we know not. This 241-acre farm may or may not be worth a million and a half. The other concerns may be worth all the securities that are out against them, but we have not been able to satisfy ourselves that they are; and consequently we would not put our own money into them.

But we go a little further; we would not directly or even indirectly endorse them. Recently we refused a large order for advertising the Scranton Correspondence Schools, because if we advertised them we would give direct endorsement of their methods of securing scholarship contracts, which we could not and do not approve. Besides this, we would indirectly endorse these financial propositions, and as seen above we have been unable to do that. The representative of the company asserted that THE R. N.-Y. was the only paper that refused the advertising, and it is a fact that many, if not all the others, do carry the advertising at one time or another.

What is the commercial rating, reliability, etc., of the Exchange Corporation of Lackawanna, N. Y., a firm selling silos, seeds, etc.? E. C. C.

The Exchange Corporation, Lackawanna, N. Y., is no doubt the same concern that R. N.-Y. readers have known as Equitable Audit Co. of that place, promoted by J. W. Woodruff of American Farms Co., formerly of Buffalo, N. Y. More recently Mr. Woodruff has been operating from Columbus, Ohio, under the title of Universal Exchange Corporation. Last season he promoted a scheme to build a silo factory at Hampton, N. J. A number of people in that community subscribed to stock before learning the history of Mr. Woodruff's previous promotion schemes. A trail of complaints and trouble have followed Mr. Woodruff and his silos wherever we have heard of them.

Referring to your correspondent who has had goods mailed to him which were neither ordered nor wanted, it is useless to write to the Postoffice Department about this variety of fraud, as it advises you to refuse to receive the mail, which is obviously impossible as one does not know what it is until he opens the package. So the remedy is to rewrap the article, address it to the sender, take it to the express office when convenient and ship by express, collect, taking and preserving the express company's receipt for it. Pay no attention to threatening letters. If litigation is started the express receipt ends it, and the schemers must pay the express. H. F.

This is a good suggestion. The practice of sending cheap goods by mail to country people, without order or suggestion, and then demanding pay, has got to be a nuisance. Of course, the threat to sue on such accounts is pure bluff, but the experience is annoying to say the least. No one wants threatening letters fired at them by a collection agency, even when there is no legitimate account to collect. The practice is followed by purveyors of cheap razors, cheap perfumery concerns, and I am sorry to say by cheap farm papers. The papers send a bunch of cards or other premiums, and then place the account for collection with a browbeating collection agency. The suggestion in the above letter is the best we have yet seen for the treatment of such cases. Return the stuff promptly by express, marked collect, and pay no attention to threatening letters.

Last Spring I purchased an incubator from Charles Cyphers, known as the Buffalo Big 4, capacity 1,260 eggs. He sent his printed matter to me recommending this machine. I purchased a machine, paid him $60 for same in advance. This machine is not worth a lead dollar as a hatcher. We cannot regulate it at all, and he could not himself. Now I wrote him a number of times and cannot get a reply from him. Last Summer he wrote he would exchange other machines for it and take it back at his leisure, but since has refused to answer. Please take the matter up and let me hear through your paper. G. W. B.

Mr. C. A. Cyphers has been conspicuous as an incubator manufacturer for a good many years, and more lately as a promoter of various enterprises at Buffalo, N. Y., including a poultry establishment in which he sold stock to the public. The poultry project has since gone out of existence. It is Mr. Cyphers' contention that these incubators were sold without any guarantee expressed or implied, and therefore he is under no obligation to the purchaser to take the machine back and refund the purchase price. He admits, however, that as many as 10 purchasers of the incubator did not get what might be considered fair results, so that poultrymen can draw their own conclusions as to their prospects for success with machines put out by Mr. Cyphers under the name of the Buffalo Incubator Company.

December 24 we received check for $64.50 from Adams Express Company, the full value of the corn shipped to New York last July. We thank you very much for the part you have taken in it and enclose a year's subscription to your valuable paper. H. D. W.

Through some carelessness the car containing this corn was run off the regular track and left standing on the siding so that the shipment did not reach New York until it was spoiled and also too late for the market. The claim as entered by the subscriber was allowed to drag, and he could get no advice as to why it was not adjusted. Some smaller claims were settled, but the larger ones were overlooked. Five weeks after we took it up settlement was made. J. J. D.

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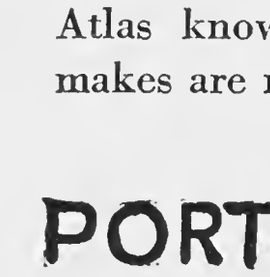

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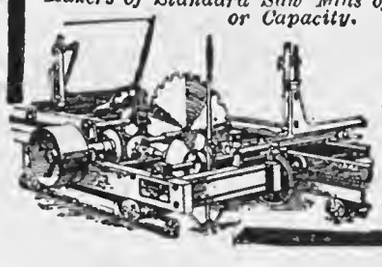

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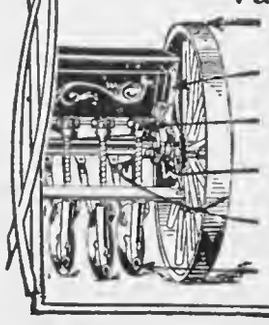

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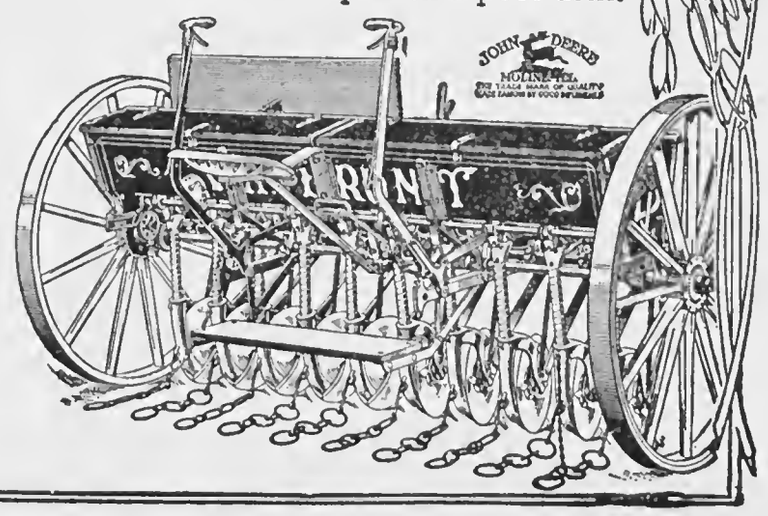

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MARKETS

Wholesale Prices at New York,

Week Ending Feb. 20, 1914.

BUTTER.

Creamery, extra, lb	30	@	30½
Good to Choice	25	@	29
Lower Grades	22	@	23
Storage	22	@	27
State Dairy, best	29	@	29½
Common to Good	20	@	25
Factory	18	@	21
Packing Stock	15	@	19

Elgin, Ill., butter market firm at 26½ cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

Whole Milk, best	18	@	18¼
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	34	@	36
Common to good	30	@	33
Mixed colors, best	29	@	30
Common to good	27	@	28
Storage, best	24	@	25
Medium and low grades	20	@	23
European, fresh	23	@	25

FRESH FRUITS.

Apples—Spitzenburg, bbl	3 50	@	6 00
Spy	3 50	@	5 50
King	4 00	@	5 25
Hubbardston	3 00	@	4 50
Greening	3 50	@	5 00
Winesap	4 50	@	6 00
Newtown	5 00	@	6 50
York Imperial	3 50	@	5 50
Baldwin	3 50	@	5 25
Western, box	1 50	@	2 75
Pears—Kieffer, bbl	2 00	@	2 75
Cranberries, Cape Cod, bbl	10 00	@	13 00
Long Island, bbl	10 00	@	13 50
Jersey, bbl	9 00	@	13 00
Jersey, crate	2 50	@	3 25
Strawberries, Fla., qt	25	@	0 65

BEANS.

Marrow, 100 lbs	4 55	@	5 25
Medium	3 50	@	3 55
Pea	3 25	@	3 55
Red Kidney	4 55	@	5 00
White Kidney	5 75	@	5 80
Yellow Eye	4 50	@	4 55
Lima, California	5 90	@	6 00

HOPS.

Prime to choice	43	@	45
Common to good	40	@	42
Pacific Coast	20	@	24
Old stock	15	@	18
German crop	68	@	73

VEGETABLES.

Potatoes—Long Island, bbl	2 50	@	2 75
Maine, 180 lbs	2 25	@	2 60
State, bulk, 150 lbs	2 25	@	2 50
European, 165 lb. bag	1 90	@	2 00
Bermuda, bbl	3 50	@	6 00
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl	1 50	@	1 75
Carrots, bbl	1 50	@	2 25
Cabbage, Danish seed, ton	24 00	@	28 00
Red	25 00	@	30 00
Imported	20 00	@	25 00
New, bbl. crate	1 25	@	2 00
Chicory, bbl	2 00	@	3 00
Kale, bbl	50	@	75
Lettuce, half-bbl. basket	1 00	@	4 00
Onions—White bu	1 50	@	2 25
Red, 100 lb bag	2 75	@	3 25
Okra, bu	2 00	@	2 50
Peppers, Southern, bu	1 50	@	3 50
Peas, Southern, bu	2 00	@	4 00
Shallots, bbl	4 00	@	6 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl	1 00	@	1 50
String Beans, bu	1 50	@	3 50
Squash, Marrow, bbl	2 25	@	3 00
Hubbard, bbl	2 25	@	3 00
New, bu	1 50	@	2 50
Egg Plants, Southern, bu	2 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	1 50	@	3 00
Turnips, white, bbl	1 25	@	1 50
Rutabaga	75	@	1 15

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz	1 00	@	1 50
No. 2, box	3 00	@	3 50
Mushrooms, lb	15	@	30
Radishes, 100 bunches	1 00	@	2 00
Tomatoes, lb	25	@	30

LIVE POULTRY.

Chickens, for fricassee, lb	17	@	18
Squab Broilers, pair, fancy	60	@	75
Broilers, fair to good, pair	40	@	45
Roasting chickens, lb	18	@	20
Fowls	19	@	20
Roosters	13	@	14
Ducks	17	@	18
Geese	13	@	14
Guineas, pair	60	@	65

DRESSED POULTRY.

Turkeys, fresh killed, best	25	@	27
Common to good	18	@	24
Chickens, choice broilers, lb	28	@	30
Squab broilers, pair	75	@	90
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	10	@	16
Geese	12	@	16
Squabs, doz	1 00	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	18 50	@	19 50
No. 2	17 00	@	18 00
No. 3	13 00	@	15 00
Clover mixed	13 00	@	18 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	7 60	@	8 80
Bulls	6 00	@	8 35
Cows	4 00	@	7 15
Calves, prime veal, 100 lbs	9 00	@	14 00
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	6 00
Lambs	7 00	@	8 50
Hogs	8 00	@	9 25

MILLFEED.

Wheat Bran, ton	25 00	@	26 00
Middlings	27 00	@	28 50
Red Dog	29 00	@	30 50
Corn Meal	29 00	@	30 00
Linseed Meal	31 00	@	32 00

COUNTRY-DRESSED MEATS.

Calves, best	16	@	17
Fair to good	12	@	14
Buttermilks	09	@	11
Lambs, Hothouse, each	6 00	@	8 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 05	@	..
No. 2, Red	1 02	@	..
No. 2, Hard Winter	1 02	@	..
Corn, as to quality, bush	70	@	71
Oats, as to weight, bush	43	@	46
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	40	@	42
Mixed colors, new laid	32	@	35
Ordinary grades	25	@	30
Butter, fancy prints, lb	34	@	36
Tub, choice	30	@	32
Chickens, roasting, lb	25	@	29
Fowls	22	@	25
Turkeys	28	@	32

Breaking Up a Broody Hen.

Can you tell me the most approved method of "breaking up" a broody hen—a Rhode Island Red for instance? Scientific poultrymen must have improved over the old method of imprisonment or a cold ducking. Should the patient be well fed or starved? L. J. S.
Connecticut.

There are probably few things that could more quickly put a crimp into "science" than the attempt to break up broodiness in some hens. My own method is to remove the broody hen to roomy and comfortable quarters where there are no nests or places to make them. A small, open-front shed guarded by poultry netting and fitted with perches serves my purpose. Here the broody ones stay, with plenty of water and food until they stop clucking, when they are put back into the poultry house. The signal to return them is frequently given by an egg upon the floor. In their new quarters my Leghorns do not attempt to sit, and it is usually only a matter of a few days before they can be trusted to go back to their jobs. Many poultry houses are provided with boxes having slatted fronts and bottoms nailed up against the wall in some convenient place. Here the broody hen is confined until her dreams of raising a family are forgotten, or at least, foregone. Starving isn't necessary, and the cold ducking should be administered, if at all, to the owner. He is usually the one who needs cooling off when he finds his layers sitting. A complete change of environment, with humane care, will probably accomplish the desired end as quickly as it can be done, and the more promptly this is brought about when signs of broodiness supervene the more satisfactory will be the results. M. B. D.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Position as superintendent or foreman of farm by mature man of experience, ability and high-class reference. BOX 100, White Lake, N. Y.

WANTED—Position to care for poultry by woman of experience; poultry graduate. Address POULTRY WOMAN, care R. N.-Y., 333 West 30th St., New York.

WANTED—Reliable farmer for one-man farm. In first letter state nationality, family, terms expected, and give references. Address L. M., care R. N.-Y., 333 West 30th St. New York.

FARM MANAGER WANTS POSITION—Understands all machinery, crops and farm stock; agricultural college course; married, no children; best of references. Address T., 408 Putnam Ave., Brooklyn, N. Y.

WANTED—Single woman, general houseworker on farm; no outside work; reference given and required. 3 adults; five dollars a week. SIGNAL FARM, Camp Meeting Road, Sewickley, Pa.

EXPERIENCED POULTRYMAN, single, wants position, private place; Cornell poultry course; understands all branches; references in answering; state wages. B. S. M., care R. N.-Y., 333 West 30th St., New York.

YOUNG MAN wishes position on gentleman's place; knows of good garden and machinery; sober, willing and obliging; good references. R. J. S., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED—To take charge of a poultry plant; single; 35 years; thoroughly experienced with utility and exhibition stock; also understands general farming; state wages. R. J., care R. N.-Y., 333 West 30th St., New York.

EXPERIENCED AMERICAN desires position as working manager of fruit farm; mechanical ability and technical training; age 27; strictly temperate and honest; references; immediate liberty. PRACTICAL, care R. N.-Y., 333 West 30th St., New York.

GERMAN-AMERICAN, 19, wishes position on up-to-date farm; little experience, but ambitious, intelligent and willing to work for a chance to learn the present methods of farming; New York State preferred. Address JOHN W. RONNER, 366 East 160th St., New York City.

WANTED—Married man that understands dairy and poultry on a private place. Mr. ARTHUR BENNETT, Supt., Siegfried, Pa.

WANTED—March 15th, reliable married farmer, total abstainer; principal crops sweet corn and garden peas; wages $30 a month; house, garden, pasture and 10 per cent. of crop value. CANNING CO., Gowanda, N. Y.

HERDSMAN WANTED—A thoroughly experienced, competent man, to care for high-class herd of Holstein-Friesians. Must be qualified by a good record and proven ability. Also require an assistant herdsman. Buildings, stock and equipment are new and equalled by few. Apply by letter or in person to JENNINGSHURST STOCK FARMS, Towanda, Pa.

HEAD TEAMSTER WANTED — A first-class man, capable of operating modern farm machinery, experienced in details of planting, harvesting, and having reasonable appreciation of responsibility. Also man to care for poultry and garden. Apply by letter or in person to JENNINGSHURST STOCK FARMS, Towanda, Pa.

WANTED—Working foreman; young, married; competent to take charge of 60-acre place; seven A. R. Guernseys; chickens; vegetable and flower gardens, lawn and shrubbery; 100 apple trees; wife must be a good plain cook, willing to board help—two or three men—throughout the year; none but fully competent, earnest young man need apply. Write giving references and stating salary to W. W. K., care R. N.-Y., 333 West 30th St., New York.

HAY AND STRAW FOR SALE, or exchange for young Holsteins. A. T. BAIRD, Lock Haven, Pa.

WHO WANTS FRESH EGGS?—Quality guaranteed. Postal brings information. HOME FARM, Roxbury, N. Y.

BUY our good old-time Orleans Molasses; fine as silk; pure; gal. 70 cents; 5 gals. $3; guaranteed. G. ROUTZAHN, Biglerville, Pa.

WANTED—A pair of farm horses for farm in Williamstown, Mass. WILLIAM S. WHITEHEAD, 1 Madison Ave., New York City, N. Y.

NEW ENGLAND DAIRYMEN—Buy of the producer. We have 200 tons Hay, Coarse Timothy, Fine Stock Hay and Swale. CHANDLER BROS., New Gloucester, Me.

FRUIT TREES TRIMMED by practical fruit grower and largest peach producer of Bergen County, N. J. Orchards planned and planted. Special rates for Winter contracts. H. W. COBB, Glen Rock Fruit Farms, Ridgewood, N. J.

FOR SALE—150-acre dairy and poultry farm. FRANK WHITBECK, Summit, N. Y.

FARM FOR SALE—225 acres. Apply to OWNER, Box 337, Emporia, Va.

160 ACRES—Good building and water; tread power; suitable for bull or stallion, to exchange. STEPHEN KELLOGG, Burdette, N. Y.

WANTED POULTRY FARM—Capacity buildings, about 700 layers; small cottage; not over $2,500. P. L. M., care R. N.-Y., 333 West 30th St., New York.

585 ACRES—Dutchess County; choice dairy farm; two sets buildings; lake. Inquire, F. R. KEATOR, Attorney-at-Law, 22 Exchange Place, New York.

BUYER WANTS good 60-acre fruit and general farm, with water, productive soil; state price; full particulars; no agents. J. CALT, 405 4th St., Brooklyn, N. Y.

$12,600 BUYS 20-ACRE VINEYARD and 64-acre farm; splendid soil fertility; fine buildings; good implements; no stock; $2,000 down payment. HARRY STANSBURY, Forestville, N. Y.

Chapped hands and faces soothed, sensitive skins strengthened by using Dr. Crane's Dermal Cream. By mail, 25c. Dr. F. D. CRANE, Chemist, Montclair, N. J.

I pay highest prices for SKUNKS and Other FURS. Samuel Lewis, 115 W. 25th St., New York City

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

Subscribers Exchange

WANTED—Married man with small family to work on poultry farm. BOX 267, Carmel, N. Y.

WANTED—Position by experienced farm superintendent in charge of dairy or general farm; college trained; reference present employer. R. L., care R. N.-Y., 333 West 30th St. New York.

FARM MANAGER would like position to manage large farm, gentleman's estate, club grounds or any kind of land or stock, and can give best of reference. J. A. SMITH, 160 Russell Ave., Buffalo, N. Y.

WANTED—Position as superintendent of farm or small estate, or chauffeur, by American; married man, age 33; best reference; no liquor or tobacco; life experience and best success with general farming, garden, cows, horses, poultry, etc. BOX 200, Nassau, N. Y.

PORTABLE GASOLINE ENGINE, 25 horsepower, for sale; used only a few times. Price $500. J. A. DeMAR, Snow Hill, Md.

WANTED—7 doz. eggs, 7 pounds butter weekly by parcels post. Write 1729 Chestnut Street, Philadelphia, Pa.

EXCHANGE for offer 220 Prairie State 1906 Incubator; fair condition. E. J. NICHOLAS, Mt. Bethel, Pa.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

FOR SALE—A suburban fruit and poultry farm. Address I. OWEN, P. O., Paterson, N. J.

FOR SALE—62-acre dairy and tobacco farm; five miles from Hartford; near trolley and railroad. S. REINER, Bloomfield, Conn.

FOR SALE—Small poultry farm near two large cities; house and poultry houses new; gas, trolley and telephone; acreage to suit purchaser. Address A. S. L., care R. N.-Y., 333 West 30th St., New York.

171 ACRES—Farm and orchard, bearing 1,250 five-year-old peach trees; 500 two-year-old apple trees; 40 acres cleared; balance in timber. Price, $2,000. W. E. BEATY, Romney, W. Va.

EXCHANGE—A choice residential property in Montclair, N. J., valued at $30,000; will exchange all or part for desirable, well-improved farm in northern New Jersey. OWNER, care R. N.-Y., 333 West 30th St., New York.

WILL DIVIDE MY FARM OF 250 ACRES—150 acres with three barns, house, hog house, 250 bearing apple trees, 30 acres woods, at $45; or 100 acres without buildings at $35. Enquire T. S. PAGE, Cohocton, R. 3, New York.

FOR SALE—90 acres Dairy and Truck Farm, with dairy and equipment; located 2¼ miles from city limits and Ohio State University, Columbus, Ohio. Posession to suit buyer; a rare opportunity. Address OWNER, BROCK-CREST FARM, Station A, Route 5, Columbus, Ohio.

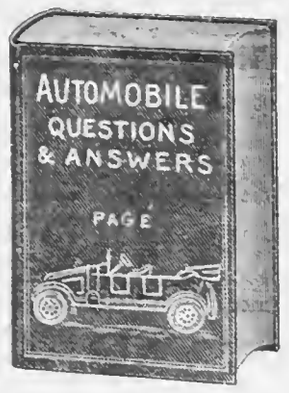
FINE OLD HOMESTEAD FARM of a hundred acres, in high state of cultivation, for sale to close estate; first-class land, never abused; nearly level; fine house in perfect condition; good barns; big silo; plenty water and fruit. Well located between cities of Rome and Ouelda, N. Y.; less than three miles to good town with high school and main line N. Y. Central R.R. Price $7,500. Only half cash required. J. H. FORT, Stone Building Oneida, N. Y.

Some Useful Farm Books

THE MODERN GAS TRACTOR. Its construction, utility, operation and repair. By Victor W. Page. 5¼ x 7½. Cl. 475 pp. 204 ills. 3 folding plates.

The latest and most complete work published on farm tractors and tractor power plants; treating exhaustively on their design and construction, and giving complete instructions on their care, operation and repair. It describes all ignition systems, all types of vaporizers and carburetors, latest forms of power plants and installations, clutches, speed changing and reversing gears, all frame parts and their functions, and every recent improvement in tractor and auxiliary appliances. All types and sizes of gasoline, kerosene and oil tractors are fully described. Every phase of traction engineering practice is fully covered.

QUESTIONS AND ANSWERS RELATING TO MODERN AUTOMOBILE DESIGN, CONSTRUCTION AND REPAIR. By Victor W. Page.



This practical treatise consists of a series of thirty-six lessons, covering with nearly 2,000 questions and their answers—the automobile, its construction, operation and repair. The subject matter is absolutely correct and explained in simple language. A popular work at a popular price. Answers every question you may ask relating to the modern automobile. 622 pages. 350 illustrations.

Either of the above two books will be sent postpaid for
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The Rural New-Yorker, 333 West 30th St., N. Y.

Stottville, N. Y., May 28, 1913.

Dear Sirs:

I received my Unito Handy Garden Plow today, and I am well pleased with the same.

Mr. SAMUEL KNOTT.

Norwich, N. Y., March 24, 1913.

Gentlemen:

Last season I painted my house, and before ordering my paint, I looked up prices here at home, consulting three or four dealers, and found their prices to range from 50 to 75 cents higher than yours; therefore, I ordered from you the Unito Paint with which I am much pleased.

I have watched closely through the winter, and I find it stands the weather good, neither chalks nor scales like some other paints. Should order from you again if I needed more paint.

MOTT W. STANTON.

N. Duxbury, Mass., Oct. 11, 1913.

Gentlemen:

Have used quite a little of your goods and find they prove perfectly satisfactory. Will give you an order later of 5 ft. fencing, as I intend rearding my poultry with your wire, of which I have used already one 20-rod roll, and which I find ahead of other wires I have used.

Yours,

WM. F. SCHOLPP.

Dekalb Jct., N. Y., June 17, 1913.

Gentlemen:

The engine you shipped me is O. K. in every respect; will do more than you claim for it. If I hear of any one that is in need of an engine I will notify you. WM. CASSAW.

Brookfield, N. Y., July 16, 1913.

Gentlemen:

My painter was well pleased with your House Paints, so much so that he asked me to send in an order for him.

Fraternally yours,

J. D. CAMENGA.

Berkely Springs, W. Va., Feb. 6, 1913.

Gentlemen:

Your catalog is all right and nicely arranged; good paper; the plan is O. K.

J. W. BUZZARD.

THE NEW WAY To Buy By Mail

SEE The Goods Before You Pay

GEO. A. BOTTGER
President of The United Factories Company and originator of the plan to let you SEE and TRY the goods BEFORE YOU PAY.

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I want to send you this big Free catalog—postpaid. It explains how you can buy Ready Roofing, Metal Roofing, Barn Paint, House Paint, Fencing, Cream Separators, Incubators, Garden and Farm Implements, Sprayers, Harness, Buggies, Wagons, Gasoline Engines, Furniture, Pianos, Sewing Machines, Ranges, Wallboard, Shingles, all of which are sent direct from our factories company at a big saving. You don't have to pay one penny until you have seen the goods, examined them, and are satisfied with your purchase. I will positively ship any article listed in our big factories catalog, to any responsible person anywhere in the United States.

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90c Per Roll

Each Roll Covers 100 Sq. Feet

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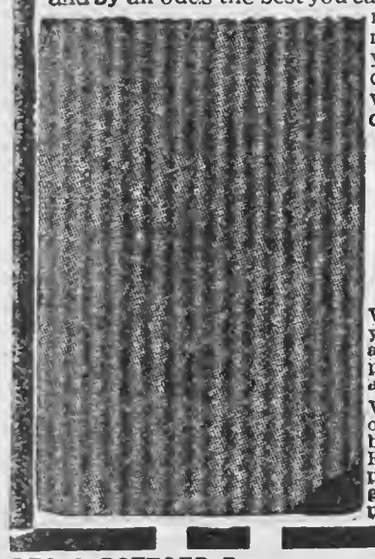
NO RUST—NO ROT—NO LEAK

Excell Galvanized Roofing is the highest grade and by all odds the best you can buy. Easy to lay, requires no tools, no experience. If you want a roof you can depend upon, what you need is a quantity of our



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Write for color cards and our Paint Book free. Find out about the now way to buy paint by mail.

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Barn Paint 70c Per Gallon

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Both Incubator and Brooder

135 Egg Incubator

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Incubator has hot water heat, big chick nursery, Tycos thermometer. Made of Select California Redwood covered with galvanized iron. Write for catalog and get full description.

Try the UNITO Cream Separator 30 Days

See the Cream Separator before you pay—use it 30 days. Compare the work it will do with any separator made. Our factory prices

$19.85 and up

Full description of this great labor-saving device will be found in our Factories catalog—sent free—postpaid. Fill out the coupon and mail it to us. We guarantee Unito Separators to get all the cream; easy to run and well made.

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$2.75

This Unito Cultivator at $2.75 is a big bargain. We have many others just as good. Write for catalog and find out about them.

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We quote only dependable fencing of best quality. Fully guaranteed.

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Stay wires are strong, top and bottom wires extra heavy. Double galvanized—cannot rust. We can supply just the kind of fencing or gates you need. Write for the catalog.

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See Before You Buy — Try It 30 Days

Give it all the tests we recommend. Look it over, ride in it. You will find that we can save you a lot of money. Write for the big catalog for description and prices.

$4.80 See Before You Pay

Try It 30 Days

This beautiful Oak Rocker upholstered in leatherette sent on 30 days trial to show you a sample of our furniture line. If satisfied after 30 days pay us only $4.80. Write for catalog showing complete line.

SEE THE UNITO HARNESS

$10.98

Don't buy a harness till you have tried the famous Unito make. If satisfied only $10.98 for this single strap, breast collar buggy harness. It is a wonder for the money. See catalog for complete description.

Write for Free Book To-day

Find out about our plan. Mark in the coupon the articles you want to know about and send it to us. We will tell you how to order them, let you see the goods you order and try them 30 days. We will not ask you to sign any papers or make any deposits. All we ask is an opportunity to show you that we can save you money and that you do not have to risk one cent or keep the articles you order unless satisfactory in every respect. Fill out the coupon today.

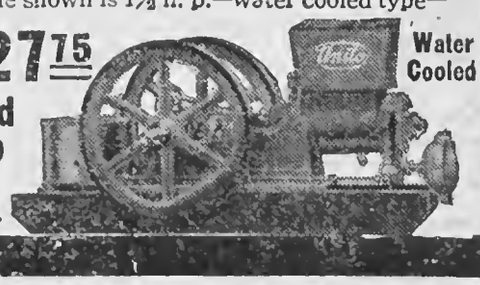
GEO. A. BOTTGER, President

THE UNITED FACTORIES CO., 515 Factories Bldg. CLEVELAND, OHIO

UNITO GASOLINE ENGINES

Let the Unito engine do your work for 30 days. Then, if satisfied pay our low factory price. Style shown is 1½ h. p.—water cooled type—

$27.75 and up 1½ H. P.



Water Cooled

GEO. A. BOTTGER, Pres.
The United Factories Co.,
515 United Factories Bldg., Cleveland, Ohio.

Dear Sir: — Please send me without cost, your big combined catalogues, which explain your money saving selling plan and your liberal offer to let me "see and try the goods before I pay." I have placed an X before the articles that I am interested in.

- ☐ **UNITO** Paints
- ☐ **UNITO** Ready Roofing
- ☐ **UNITO** Wall Board
- ☐ **UNITO** Excell Metal Roofing
- ☐ **UNITO** Gasoline Engines
- ☐ **UNITO** Incubators
- ☐ **UNITO** Farm Implements
- ☐ **UNITO** Cream Separators
- ☐ **UNITO** Fence
- ☐ **UNITO** Stoves
- ☐ **UNITO** Vehicles
- ☐ **UNITO** Harness
- ☐ **UNITO** Sewing Machines
- ☐ **UNITO** Furniture
- ☐ **UNITO** Pianos

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The Rural New-Yorker

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FRUIT GROWERS ARE PROSPEROUS AND INDEPENDENT

Is there a paying orchard on your farm? If not, let these facts sink in: **Fruit growers have more money than general farmers. They don't have to work so hard.** We can prove to your entire satisfaction that these statements are true.

A one-acre apple orchard should yield 100 bushels when the trees are four years old, 200 bushels when five years old, 1,000 bushels when ten years old. The average cost of apples in properly handled commercial orchards, including marketing in boxes, is less than 70 cents a bushel. The selling price of good apples is $1.25 to $2 a bushel box.

The net profit on two good crops from one acre of apple orchard will buy an automobile. Three apple trees give more profit than an acre of potatoes. Two apple trees give more profit than an acre of corn. One apple tree gives more profit than an acre of hay. Is there any reason why you should raise hay and grain and potatoes, and no apples?

Don't Waste Your Time on Your Grandfather's Trees

The president of a big corporation said that their scrapheap was the most valuable department they had—it contained dozens of good machines that were thrown away because they were not so good as the ones that replaced them.

If you have an old apple orchard, you may profit by acting upon the scrap pile idea. But you don't need to throw away your old trees. Let them do their poor best for a few years yet, and plant a new and better apple orchard this Spring.

Old apple orchards seldom yield half what properly grown and cared for ten-year-old trees will. They usually contain a medley of varieties—odd sorts not in demand today. Your grandfather's best apples are not best now. Plant the varieties that will be popular when your trees bear. If you give such trees good care, $100 an acre each year is the smallest net return you may expect.

Grow Apples That Sell Direct to Consumers

City people have learned that they can buy apples by the bushel box direct from orchardists. By doing this they get finer apples, in better condition. The cost, delivered by express, is less than retail grocers charge for inferior fruit, even when $2 to $3.50 is paid for apples in the orchards.

You can net $2 or more a bushel for all the flawless apples you grow if you will pack them right and if you **grow the right varieties.** For this purpose grow Stayman, McIntosh, Baldwin, Jonathan, M. B. Twig, Rome Beauty and Winesap. This is a look ahead for your benefit. If you are prepared to give your orchard and fruit first-class care, you can make a lot of money by planting an orchard to grow fruit for this demand.

Grow Apples That Are Good for Baking

The custom of baking apples has increased during the past few years fully ten times over. Restaurants and hotels cannot get enough of the apples **that bake well.** This demand will continue to increase because the baking of apples is based on a sound and wholesome idea.

Only a few varieties do bake **well.** The best are Baldwin, York Imperial, Stark, Gano, Ben Davis and Rome Beauty. These sorts bear heavily and regularly. They succeed with ordinary care, and some or all of them are at home from New England to Missouri and Georgia. The trees should begin to bear at six or seven years old, and if sprayed properly should net more than $100 an acre after the tenth year.

USE THIS COUPON—IT'S AS GOOD AS A LETTER

HARRISONS' NURSERIES, Berlin, Md.

Please send me your new Catalog of Fruit and Ornamental Trees. I expect to plant

☐ Apples	☐ Cherries	☐ Shade Trees	☐ Roses
☐ Peaches	☐ Plums	☐ Evergreens	☐ Hedge Plants
☐ Pears	☐ Small Fruits	☐ Shrubs	☐ Vines

I shall need about ..... of the plants marked.

My name .....

My address .....

Plant Only Trees That Are RIGHT

If you give your orchard good varieties, good soil, water and air drainage, and proper care, it will produce surely and promptly the fruit and the profit you expect—unless the trees fail you.

But what about the trees? How do you know they are true to name and will bear heavily? What if they should not prove to be Stayman or Baldwin or York Imperial as planned, but worthless varieties or even worthless seedlings? What if they should turn out to be apple trees that refuse to bear well, no matter what attention they get?

Your only protection against this source of failure is to buy trees from a nursery that has its trees bear RIGHT. This nursery must be square enough to stand back of its trees till they bear. It must do a business big enough, and must be worth enough financially, to make its guarantee as good as a well endorsed note. With anything less than this, you take a needless, useless risk, and it is you who lose if the trees are wrong.

J. G. Harrison

Orlando Harrison

G. A. Harrison

G. Hale Harrison

The way to be safe and to have a successful orchard is to plant Harrison trees. These trees are larger, straighter and smoother than most others. They are absolutely hardy in all apple sections. They are budded from bearing orchards. We sell only trees we grow ourselves, and to grow them well we employ more practical orchard men than any other firm in America. The Harrison Nurseries are the largest in the world. The Harrison trees are absolutely guaranteed, and are RIGHT. Few other trees equal them in looks, in growing or in bearing.

Ask Our Orchard Men What to Plant

If you are puzzled about varieties or any other orchard matter, put it up to our experts. The North requires one set of varieties, the Middle States another set, the South another; and low-land sorts are not the same as thrive in mountain sections. Tell us where you live and what your land is like. We will tell you what to plant.

We have men whom we sometimes send to oversee or manage the planting of large orchards for our customers. If you would like to consult with one of these men, please take the matter up with us and it likely can be arranged. Our twenty years of experience in orcharding is behind the services you will get in this way.

Make Your Home Beautiful With Harrison Shade Trees and Evergreens

Next to planting an orchard on your place, nothing will raise its value so much or increase its desirability as a home more than planting shade trees, evergreen and other handsome plants. We tell how to plant about your home in our landscape book, "*The Why and How of Shade Trees and Evergreens.*" This book is sent on request.

Our 1914 Catalog is One of the Most Valuable Ever Issued

It tells how we grow trees and fruit so well, describes good varieties, and gives planting plans and directions. Read the story of how we saved a crop of peaches and got $35,000.00 worth of fruit from about a hundred acres of our orchards here at Berlin. The net profit was more than $25,000.00, or about $250 an acre. This is one of the best examples we ever saw of how the enemies of peaches can be controlled absolutely by spraying. It shows also how much peach trees can be made yield, and how much profit peaches will make. You should read the full details of spraying, cultivating, fertilizing and marketing. No other nursery book published is more valuable. It is sent on request. Our complete fruit grower's guide book, "*How to Grow and Market Fruit,*" is sent postpaid for 50 cents, and that amount rebated when you send us a $5 order.

Come to Berlin—See Our Nurseries and Orchards

In no other way can you become acquainted with the largest nurseries in the world, or with our advanced methods of growing fruit. Come and pick out your own trees in the Nursery blocks. Without obligating you in the least, we will pay your hotel bill in Berlin.

WRITE TODAY, ASK QUESTIONS OF OUR EXPERTS, and tell us about your planting plans and aims

HARRISONS' NURSERIES, Box 494, BERLIN, MD.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII., No. 4245. NEW YORK, MARCH 7, 1914. WEEKLY $1.00 PER YEAR.

UNCLE SAM AS A FRUIT JUDGE.

Identifying Unknown Varieties.

Many readers have asked us about the work at the Department of Agriculture, in identifying fruit varieties. The U. S. Pomologist has become much like the Supreme Court in his decisions in matters of this kind. There are many disputes about varieties, both between buyer and seller of the fruit, and also with nurserymen when the trees come into bearing. There is so much interest in this, that we asked Prof. Close, the Pomologist, to give us an informal statement about his work. What follows is standard, and should be kept by all those who are interested in the matter.

I take pleasure in telling you something about the fruit identification work in the United States Department of Agriculture. We receive fruits of all kinds for identification, testing, etc., from nearly all sections of the United States where fruit is grown, and the work of identification is increasing year by year as people learn that our office is really a fruit-naming clearing house, and we identify fruits free of charge. Apples are received every week in the year, and form the bulk of the identification work. October is the month of heaviest receipts, and often more than one hundred mailing boxes of fruit are received per day during the rush season.

EQUIPMENT FOR IDENTIFYING VARIETIES.—This office contains a vast amount of water-color paintings, variety descriptions, records, reference books and fruit models to aid in this work. Back of all this equipment must be a wide knowledge of varieties throughout the country, and a discerning eye to detect the most minute characteristics of difference or similarity in the specimens at hand. Allowance must be made for varietal variations caused by sectional environment, such as range in temperature, amount of rainfall and sunshine, elevation, etc. It is seldom safe to depend upon the external appearance only, for this varies more than the internal structure, as can be shown by our water-color paintings of cross sections of fruits.

THE GOVERNMENT'S SHARE.—Mailing boxes and postal franks are sent to anyone who desires to forward fruits to us for any purpose whatsoever; thus the fruit grower is at no expense in this respect. After the fruits have been critically examined, inside and outside, the fruit grower is given the names of the varieties recognized. We are unable to name all varieties sent in, but a large portion of these we believe to be seedlings.

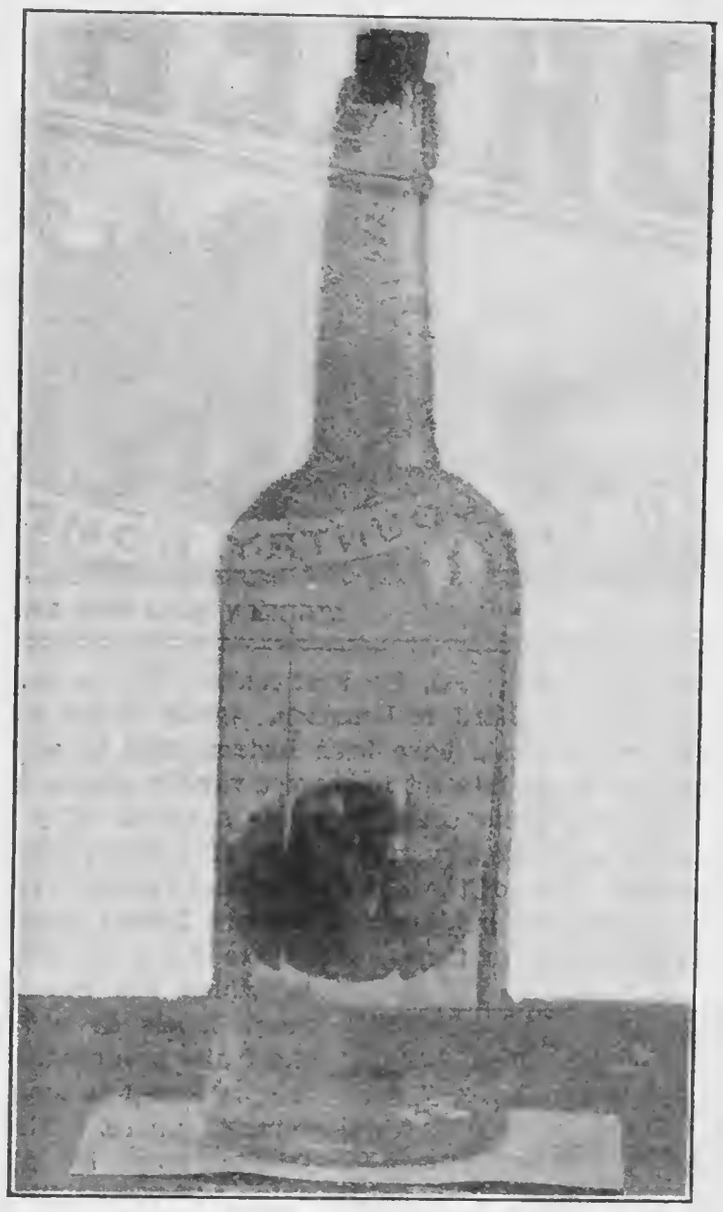
WHO SENDS THE FRUIT AND WHY.—The general spread of agricultural education throughout the land, the great activity in land sales, the recognition of a vast fruit-growing industry, the recent apple craze, and the desire for a more intimate knowledge of what the farm is growing, seem to have caused both the old owners and the new owners to wish for true variety names, especially where neglected orchards are being reclaimed. The bulk of fruit for identification undoubtedly comes from these once neglected orchards. When the old orchards were planted, nearly every variety available was included, and as time passed the names became forgotten or lost. The correct naming of varieties now goes hand-in-hand with the rejuvenating of old orchards, and with middle-aged and young orchards, too, for that matter, and is really a part of orchard reclamation. Some of the agricultural journals have been instrumental in awakening a lively interest in correct variety names, and many specimens come to us as a result of press notices that the Government identifies fruits free of charge. Most of the State Experiment stations send in their fruit puzzles, and we are indeed glad to be of service to them. There are not a few cases in which the nurserymen's labels do not fit the fruits produced, and we are asked to supply correct names. These misfits may be anything within or without the long list of varieties offered for sale. The so-called Sulzer law establishing the Federal standard barrel and standard grades for apples when packed in barrels, makes it absolutely necessary for fruit growers to *know* their varieties if they wish to conform to this law in packing for interstate shipment. A few varieties have already been identified for this purpose.

IN BLOSSOM TIME.

AMOUNT OF FRUIT FOR IDENTIFICATION.—During the year 1913 nearly 4,000 lots of fruit, representing perhaps 18,000 specimens, were received for identification. Each of these lots is a distinct variety, but this does not mean that there were 4,000 different varieties, because many of the varieties were received two or more times. There were, however, more than 300 varieties of peaches for identification and verification. Besides all of this material we received hundreds of specimens for examination, testing, etc., a good many of these being seedlings.

VARIETIES OF APPLES RECEIVED OFTENEST.—It is interesting to know that during the last four months of 1913 there were 280 different varieties of apples received. Among these were some of the very old kinds like Water, Michael Henry Pippin, Cornish Gillyflower, Herefordshire and others whose names are seldom heard now. Strange as it may seem, the most common varieties are apparently least well known: at any rate, they are received here oftener than the others, but this is because they are more widely planted. The varieties received oftenest and number of times received during September, October, November and Decem-

ber, in 1913, are as follows: Rhode Island Greening, 57; Baldwin, 55; Tompkins King, 50; Ben Davis, 40; Hubbardston, 38; Stark, 37; Jonathan, Wagener and Wealthy, each 32; Rome Beauty, 31;



APPLE IN CAPTIVITY.

Pewaukee and York Imperial, each 29; Northern Spy, 26; Gravenstein, 24; Dominie, Sutton and Walbridge, each 23; Grimes, Tolman and Willow, each 18; Shiawassee and Smith Cider, each 17; Fallawater and Winesap, each 16; Milam, Northwestern and Pennock, each 15; Alexander, Esopus, Gano, Lankford, Longfield, Paragon, Winter Paradise and Yellow Newton, each 14; Akin, Bailey, Famense, Missouri, Rambo, Swaar and Wolf River, each 13; Cooper Market, Fall Pippin, McAfee, Mann and Salome, each 12. The list of varieties received less than a dozen times is too long to be given here.

WHAT PEOPLE SEND.—From the specimens some people send they must think we are wizards able to name any fruit, no matter how much disguised, misshapen, rotten, wormy, or runty. Not much time is wasted on such poor material, for it might be anything, and isn't worth risking even a guess on. Sometimes only a part of a fruit is sent, or an incomplete description, and in one instance recently *four* apple leaves and *two* seeds—what a chance for a guessing contest! We appreciate this confidence placed in our ability, but even a Government official has his limitations. Most of the fruits, however, are of typical size, shape, and color, and this we appreciate fully.

FREAK FRUITS.—Only a few freaks have been received in the past two years, but occasionally someone makes a remarkable discovery of a wonderful new seedless apple and sends it to us. These are as worthless as the 57 other seedless kinds which have gone to their rest.

WHAT IS A SEEDLING?—A good many statements like this reach us: "I am sending specimens of a seedling apple; what is the name of it?" or, "I am sending samples of a seedling apple from a wild tree which father dug in the woods a few years ago. What is the name of this variety? Please place description of this over our signature in your year book." Sometimes the good old varieties are sent in as seedlings; this is done in good faith in the belief that the tree was never grafted or budded. Much of this confusion doubtless arises from a misunderstanding of what a seedling is, and from the fact that nearly all named varieties were once seedlings. Our understanding of a seedling apple tree is that it is one grown from an apple seed. It remains a seedling until it is given a variety name, and it really should be propagated and offered to the trade before it graduates from the seedling class into the named variety class. This holds good with all kinds of fruit.

LESSONS LEARNED.—The two most important lessons to us from this work are the variations of the same variety in different sections of the country, and the adaptability of varieties to the various fruit-producing areas. These subjects are too big to discuss here except to give a couple of examples of the first one. In general the apple varieties of the Pacific Coast States are large in size, elongated in shape, ribbed at the blossom end, very brilliant in color, and of a fine polishable finish. Those of the Rocky Mountain region are not as large nor long, but have the same color and finish. In the Great Plains States and eastward they are still shorter, usually not so brilliant in color and not quite so fine in finish. The Elberta peach is a good example of sectional variation. In the Southern peach districts it is flattened with considerable tip. In the central, northern and eastern sections it loses most of its tip, is oval in outline with sides compressed. In the Rocky Mountain region and westward it is larger and globular in shape.

Some one is wondering what we learn about the quality of apples as grown over this great country. We know that *good* apples, *splendid* apples, come from every apple section, and that there are twenty million opinions as to where the *very best* ones are grown. Not one of the twenty million opinions wants to be changed; they are probably all correct anyway, and, furthermore, an opinion changed against its will remains of the same opinion still.

CONCLUSION.—I hope this long letter covers some of the points you wish for your readers. We are always ready to identify fruits for anyone, and will furnish horticultural information whenever it is desired. We send mailing boxes and franks upon request so that fruits may be forwarded without the payment of postage. We desire three or four typical fruits or clusters of each variety, together with a statement of the age, size, and habits of the tree, bush or vine, and also the local name, if one is known. An important point is that the sender's name and address should be either inside or outside the mailing box. A few mailing boxes reach us without a mark of any kind to indicate who sent them, or at what post office they were mailed.

C. P. CLOSE,
Pomologist.

SIZE OF PEACHES AFFECTED BY WEATHER

The Winter and early Spring of 1912-1913 was remarkable because of the abnormal weather conditions which prevailed. Unusually warm weather occurred during the Winter months, which caused the flower buds of fruit trees to swell and commence growth. No extremely low temperatures prevailed in New Jersey at any time during the Winter. As a result of the high temperatures all fruit trees bloomed many days earlier than is the case following a normal Winter.

Upon May 11, at New Brunswick, N. J., sour cherries had developed to the size of green peas; peaches were as large as small walnuts, and apples were a half-inch or more in diameter. During the night of May 11-12 the temperature reached a minimum of 31 degrees and remained at this point for two hours. None of the fruits above mentioned was injured seriously as far as could be determined by observations, at that time. Low temperatures also prevailed at other times which were certainly unfavorable to fruit development. As the various varieties of peaches began to ripen, it was quite generally noted that some specimens were unusually large in size; much larger than other specimens upon the same tree in fact, which were really the normal specimens. A close examination of the unusually large specimens at ripening time showed that the dots or lenticels were much enlarged.

Artificial girdling of a branch will result in an increased size of the fruit due to the check to the wood growth of the treated branch, and the cutting o of the downward flow of sap toward the roots. Winter injury to a branch at a certain point may interfere with the downward flow of sap in such a way as to cause an enlargement of the fruit similar to that introduced by artificial girdling. Injury to twigs of peach undoubtedly occurred early last Spring during the cold weather, which affected the downward flow of sap in such a manner as to result in abnormally large specimens of fruit in numerous instances. Small and sometimes more or less shriveled specimens were also numerous, even in the late Summer, and often occurred upon trees which also bore abnormally large specimens, as illustrated in next column.

It was a puzzle at first to account for such fruits. Imperfectly pollinated peaches commonly fall from the trees in June, instead of persisting upon the branches, as did these fruits. A study of the matter finally revealed the fact, however, that the stem of the peach itself which connects it with the branch had been injured by the cold sufficiently to prevent a good circulation of sap into the fruit. The injury was not sufficient to completely shut off the circulation, however, which would have caused the fruit to fall from the twig. Some of these smaller specimens remained upon the trees several weeks after the normal fruits had ripened. The only difference in the condition which caused the very small peaches and the abnormally large ones was the point at which the injury occurred in each case; or in other words, whether it occurred to the stem of the peach itself or to the twig upon which the peach was borne.

M. A. BLAKE.
New Jersey Experiment Station.

THE APPLE IN THE BOTTLE.

We have no doubt many of our readers have seen at fairs and fruit expositions the remarkable spectacle of a big apple growing inside of a comparatively small bottle. Usually these bottles have a very small neck, but a larger body, so that an object of some size can stay therein. It is usually a great puzzle to those who have never seen the trick done to know how this big fruit could ever be pushed through the narrow neck. Like everything else, however, this is easy when you know how. The picture opposite shows one of these specimens, and the following note will tell how it is done.

One of my boys placed the apple inside the bottle last Spring, when small, and tied the bottle fast to the limb of the tree. It is a Spice apple. The bottle is a short quart. After having it photographed he sold it to a druggist for 50 cents, who placed it in his show window where many who saw it said: "How did it get inside the bottle?" That is the highest price we ever received for one apple.

S. E. RHINE.
Ohio.

This is a good experiment for some of our boys to try this coming season. We would from choice take a bottle with a small neck, and with a body large enough to permit the growth of good-sized fruit within it. Take some Winter apple, one that will keep for a long time. Be careful to introduce the limb and small fruit so as not to bruise it, and watch it carefully through the season. The boy who can do this will find himself something of a wizard or horticultural hero when he goes to the county fair.

Another well known trick is to put pieces of paper over the apple before it colors, with the letters cut out so as to do a little sun-printing upon the fruit. Where the paper covers the fruit there will be a light shade of color, but through the holes where the sun has access to the fruit, the letters or figures will be sun-printed. Here is a good chance for some young man to please his sweetheart or his wife, by printing her initials upon some of his finest fruit.

Big pumpkins or fruit often make a great showing at exhibitions. The Alexander apple shown on page 335 would be sure to draw a crowd, although the apple itself, while a fair market variety, has little to commend it for quality. By removing all the fruit and buds except one or two from a vigorous stem, and carefully watching the fruit, it is often possible to

PEACHES AFTER FROST INJURY.

produce these monsters. In a peach orchard a twig may sometimes be found abnormally loaded with peaches, like the bunch of Elbertas shown on page 334. By finding these twigs early in the season, and giving them steady care, it is possible to produce a wonderful cluster, which as an advertisement or a novelty would prove very effective in the market or exhibition.

A WELL-KEPT STRAWBERRY CROP.

We are sending a picture of an acre strawberry bed about to go into Winter quarters (see picture). Last year this acre was manured and planted to sweet corn and at last cultivation Crimson clover was sown, getting a fine stand of clover. In the Fall the clover was manured and this Spring, when the clover was a foot high, it was plowed. After putting same in shape we mixed one ton of fertilizer, consisting of 1,600 pounds of raw bone and 400 pounds of muriate of potash and applied 1,600 pounds of this mixture on the acre. We then planted the bed in rows five feet apart and three feet apart in the row. As the runners came we spaced them nine inches apart each way, which made the beds have five rows each and a two-foot walk between. We want to know if a good heavy covering of wheat straw will produce as good a crop as a covering of manure. Our reason for covering with straw is to do away with weed seed which we are sure to get with bought manure, and the fact of having plenty of straw on hand and we also think there is sufficient nitrogen in the ground. Could you suggest any better fertilizer formula than the one we used?

The variety of berry shown in the picture is Gandy, which is our best market berry. Do you know of a better market variety? The approximate cost of growing to date would be about $200, including plants, interest on land, fertilizer and labor. I would also like to know whether 200 pounds of sulphate of potash applied in Spring would be any benefit to flavor and color of berries, as you advised sulphate mixture against muriate. We have another acre where the plants are a good deal larger, planted the same way. Do you think it would be advantageous to space them one foot apart instead of nine inches, which could be done by planting the rows six feet apart and still have the two-foot walks? Some of our practical neighbors claim this bed is too thick. What is your opinion? Let us know the greatest amount of fertilizer that can be used to the acre to produce the largest crop of berries profitably on good farm land. EUGENE F. GENTHER.

Pennsylvania.

The picture certainly shows a well nigh ideal stand of plants in the Fall. We have rarely seen a better one. Gandy is an excellent market variety on soil which suits it. Usually this is a rather low situation, a soil containing a good deal of organic matter; yet we have known cases where the Gandy did remarkably well on higher soil, without much humus. In Florida, for example, we understand that the Gandy is still a very popular variety, although it does not rank as a heavy yielder. It requires good culture and strong manuring. It is well known in the market both by appearance and flavor, and as it comes late in the strawberry season, it is well liked by most growers, and is probably, all things considered, the best late market variety where the soil is suitable. As for a fertilizer on such soils where manure is not used as a mulch, we should use some dried blood, or other organic nitrogen, along with the bone and potash; 200 pounds of dried blood added to the mixture you mention would help the berries, by giving them a little more nitrogen to be used later in the season. We doubt the wisdom of using much nitrate of soda on the strawberry crop. An organic form like dried blood or cotton-seed meal will usually pay better on this crop. Where stable manure is used heavily for mulching, little if any extra nitrogen is needed, but this amount of dried blood will we believe help out the bone. I should also recommend the use of sulphate of potash in the place of muriate. The sulphate will be likely to give a little better quality and a trifle higher color, and where you are trying to raise the finest berries the sulphate is well worth the extra price. Where one can produce such a field as is shown in your picture, he ought to do everything possible to give those berries the finest possible chance. The use of sulphate in the Spring will not make great difference with the crop, as you now have it. We prefer one foot apart to nine inches. Where the plants are so crowded the berries do not color well and in a damp season there is danger from rot. About one ton of your fertilizer mixture would be the limit of economical fertilizing.

A WELL-KEPT PENNSYLVANIA STRAWBERRY FIELD.

CHERRY CULTURE IN WISCONSIN.

Sour cherries thrive in many parts of Wisconsin, and this State boasts the largest cherry orchard in the world, 700 acres in one solid block. Door County, where this monster pie factory is located, now has over 3,000 acres of cherry trees, and more to be planted this Spring. Bayfield, at the very northern tip, also has several hundred acres. These two northern points are particularly favored on account of proximity to large bodies of water, lakes Michigan and Superior, soils light in texture but fertile, which are underlaid with limestone. Cherries thrive in many of the southern counties and the Lake Michigan shore belt, but are entirely out of the question in north central Wisconsin on account of late Spring frosts.

No cherry trees whatever are propagated by Wisconsin nurserymen, as our climatic conditions are unfavorable to the budding of any kind of fruit trees. Most of the stock planted comes from southern Indiana and Ohio. The well-grown one-year-old tree is the favorite with the big planters. Some two-year stock is used, but nothing over that is ever handled by the nurseries, except to gratify the wish of some city farmer who insists on plenty of wood and brush for his money.

The cherry is no different in its requirements in Wisconsin than elsewhere; it will not thrive except on well-drained land, and is profitable only on light soils. In the big cherry districts of Wisconsin the trees bear surprisingly early. A tree two years planted often bears a quart of cherries, and at four years six to eight quarts. The one-year trees are well branched, and when set are cut back severely, leaving but three or four branches and each branch cept the leader, cut back to two or three buds. The Door County cherry growers have brought pruning to a very high degree of perfection, and on account of this a cherry orchard here at eight to 10 years is a sight to behold. The trees are loaded with fruit literally from "center to circumference." This is done by careful, systematic and heavy pruning every year, and the system practiced is contrary to all the precepts laid down in books. The heavy pruning at planting time is something, we are told, that must be avoided, but it is as essential in training the cherry tree as in the apple. We are also told that heavy pruning of the bearing cherry is bad, but the Door County growers take out more wood from their cherry trees than from their apple trees. Large branches as well as small ones are removed, and no rules are laid down. Each succeeding tree presents a new problem, or rather two problems; to admit light and air to the center of the tree so that fruit buds may thereby be developed clear back to the main axis of the tree, and to reduce the fruit bearing surface to correspond to the strength and vigor of the tree. "Quality first," is slogan of these growers.

Cultivation of these orchards is not different from that practiced in the best apple, peach or cherry orchards elsewhere. Catch crops are grown for the first three or four years, sometimes longer, peas, beans or potatoes, rarely any other crop. Neither strawberries, raspberries nor any other than an annual crop is ever found in these orchards. In the older orchards clean culture is the universal practice, and it is clean culture. The pony gang plow, two or three light plows in one gang, is most popular for the first Spring cultivation. This is followed by either an extension disk or spring-tooth harrow many, many, times during the season. A cover crop is always planted, where no catch crop is grown, and buckwheat is now the popular crop. This is planted so as to yield a crop of grain and cut to leave the bulk of the straw on the ground. The larger growers are now using buckwheat as a combined crop, giving clean culture until August.

The spray pumps are rarely idle, first a dormant lime-sulphur spray followed by Bordeaux three or four times before the picking season, and at least once after. Slugs, shot-hole fungus and all the other cherry ills are present, but none is feared. It is just simply spraying and cultivate, cultivate and spray without ceasing. That all this is essential to any kind of success is proven by occasional orchards whose owners have depended on Door County soil, climate and Divine Providence to produce a crop.

FREDERIC CRANEFIELD.

THERE are always three great honest words to fall back upon—"I don't know." Some wise men seem to think there are pins in this seat.

BREEDING IMMUNE CHESTNUTS.

For centuries the native chestnut has flourished in many parts of the North American continent, and as far as known suffered no attack of serious disease until the closing of the last century, when the terribly destructive bark disease (Endothis parasitica) made its appearance on Long Island, N. Y. The seriousness of the disease was first recognized by Merkel in 1904; since then it has spread over many hundred square miles of territory, destroying practically every native and European chestnut tree with the infected areas. The financial loss cannot be accurately estimated but is very extensive.

HYBRID CHESTNUTS.

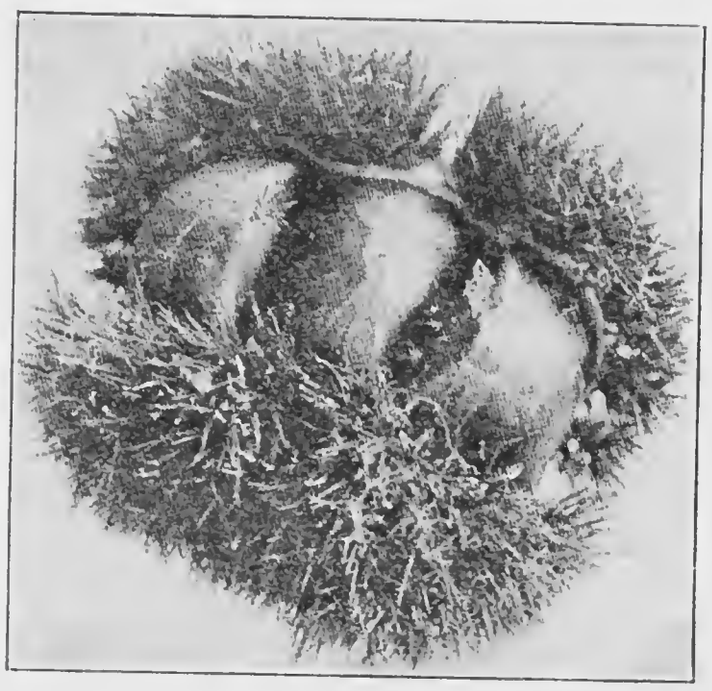
NUTS OF VIRGINIA CHINQUAPIN.

Much labor and large sums of money have been expended in an effort to bring the disease under control, but thus far without success, and on account of the virulent nature of the disease and its tenacity of life, being able not only to live, but to thrive and multiply its ascospores for a long time after its victim succumbs, and the various and comparatively easy means by which the ascospores may be transported into adjoining new territory, makes it extremely doubtful if this valuable native tree can be saved from complete destruction. The outlook at the present time is not at all encouraging.

Nearly everyone who has an intimate knowledge of the disease, believes that if the chestnut is saved to the nation at all, it must be done through the procuring of species or varieties immune from the disease. With this in view, the Division of Forestry, U. S. Department of Agriculture, has in the last few years done considerable experimental and research work along that line, with very encouraging results. The Dr. Van Fleet hybrids, a number of which have been on trial for the last four years at the Government Farm, Arlington, Va., are very promising and give much encouragement of being highly successful. In an article entitled "Chestnut Breeding Experience" by Dr. Van Fleet, published in the Journal of Heredity for January, the history and progress of his chestnut breeding work and the attendant results are interestingly told, and from which we take (by permission) the following extracts:

The breeding work was commenced in 1894, 10 years before the discovery of the destructive bark disease, and continued through the succeeding years up to 1907. All the species of the germs available, including the Virginia chinquapin, were used in the work. The latter year the disease appeared and summarily terminated the experiments with Castanea Americana and its derivations, but selective work has since been continued with self and chance-pollinated individuals of chinquapin and Asiatic types.

HYBRIDS PRECOCIOUS.—From the controlled pollinations over 200 seedlings were grown. Practically all showed unmistakable evidence of hybridity; nearly all have fruited. The combinations of Asiatic and European chestnuts with our native species rarely set burs until five to 12 years of age, while the chinquapin-Asiatic crosses frequently bloom and occasionally ripen nuts the second year



HYBRID CHINQUAPIN.

after germination ,and in some instances produced several pounds of nuts the third year after planting the seeds. The bark disease has been allowed to work its will among the hybrids, with the results that trees having C. Americana, also the European in any combination, have all succumbed to the ravages of the disease. The crosses of Asiatic and native showed greater resistance, but all have been seriously affected. The chinquapin-European hybrids are readily affected, but have greater recuperative powers. The Asiatic chestnuts and the chinquapin-Asiatic hybrids are plainly highly resistant. Few have shown any appearance of the infection and when noticeable the injury is quite local in character. Second generation seedlings of chinquapin-Asiatic crosses show no disease at all, though always exposed to infection.

QUALITIES OF HYBRIDS.—The material results of this breeding work, other than the disease resisting features, are shown in the various illustrations accompanying this article. Hybrid chinquapin having varieties of Castanea crenata (Asiatic) for pollen parent form vigorous, small, much branched trees, rarely shrubs, and come into bearing at three to five years from the seed. The burs are borne like chinquapins in clusters of three to five, rarely solitary, and contain from one to three chestnut-like nuts four to six times larger than chinquapins. The nuts begin to ripen late in August, the crop being wholly mature by October, thus preceding all other chestnuts of marketable size.

CHINQUAPIN-ASIATIC CHESTNUT HYBRID.

TREES ARE VALUABLE.—The trees are vigorous growers, decorative from their compact form at all times, but especially when in fruit and flower. They should prove highly desirable for lawn planting as well as for nut growing. The size they will attain is problematical. Their precocity and profusion in fruiting would indicate that they are not likely to attain large dimensions, and that it would be safe to plant them for orchard purposes 12 to 15 feet apart. In conclusion Dr. Van Fleet writes: "Chestnut breeding, though greatly hampered by the advent of the new disease, thus makes its appeal as a highly promising occupation. It appears probable that the chestnut in its most desirable form can be saved to horticulture as a nut producer, if not to forestry as a profitable timber tree, and there is even a chance that the latter highly important feature may in the end be spared."

K.

BUNCH OF ELBERTA PEACHES.

MONSTROSITIES IN PLANT LIFE.

Monstrosities of whatever kind are always objects of more or less interest to most people, especially if the object is a product of nature. This is particularly noticeable at the agricultural fairs or other shows where the products of the soil are on exhibition. It is there where the very largest and perfect specimens are expected to be seen. It matters not how fine the rest of the exhibit may be, the monstrous or phenomenally large things are, as a rule, the objects of greatest interest. The largest pumpkin, melons, eggplant, apples, potatoes, cabbage, ears of corn, plants and flowers, are the centers of attraction, and invariably take the attention away from the more common things that really make the big things, monstrous by reason of the contrast. That it requires knowledge and skill to grow these big things, goes without saying. Nothing is left to chance, but from the beginning and up until the end, the thoughtful, painstaking and intelligent care of the producer has been given them. Cut opposite shows a tomato plant that has attained to monstrous size. This plant was grown under glass and received intelligent care in the way of feeding, training, etc., from infancy to old age. The plant is evidently nearing the end of its usefulness, as apparently but a few fruits remain to be gathered. Many of THE R. N.-Y. readers will no doubt be interested in how some of these big things are grown and while we do not know the life history of this particular plant, which has been grown in a box about 16 inches square by 12 inches deep,

the same general method of culture and training is applied to the production of all such monstrosities.

SOIL.—The soil should be a rich compost made from sods cut from an old pasture field, the soil of which should be a rather heavy sandy loam, mixed with an equal bulk of well-rotted cattle manure. This compost should be made up at least six months before wanted for use, and should be cut down with the spade and turned over two or three times during that period, in order that it may become thoroughly mixed and finely pulverized.

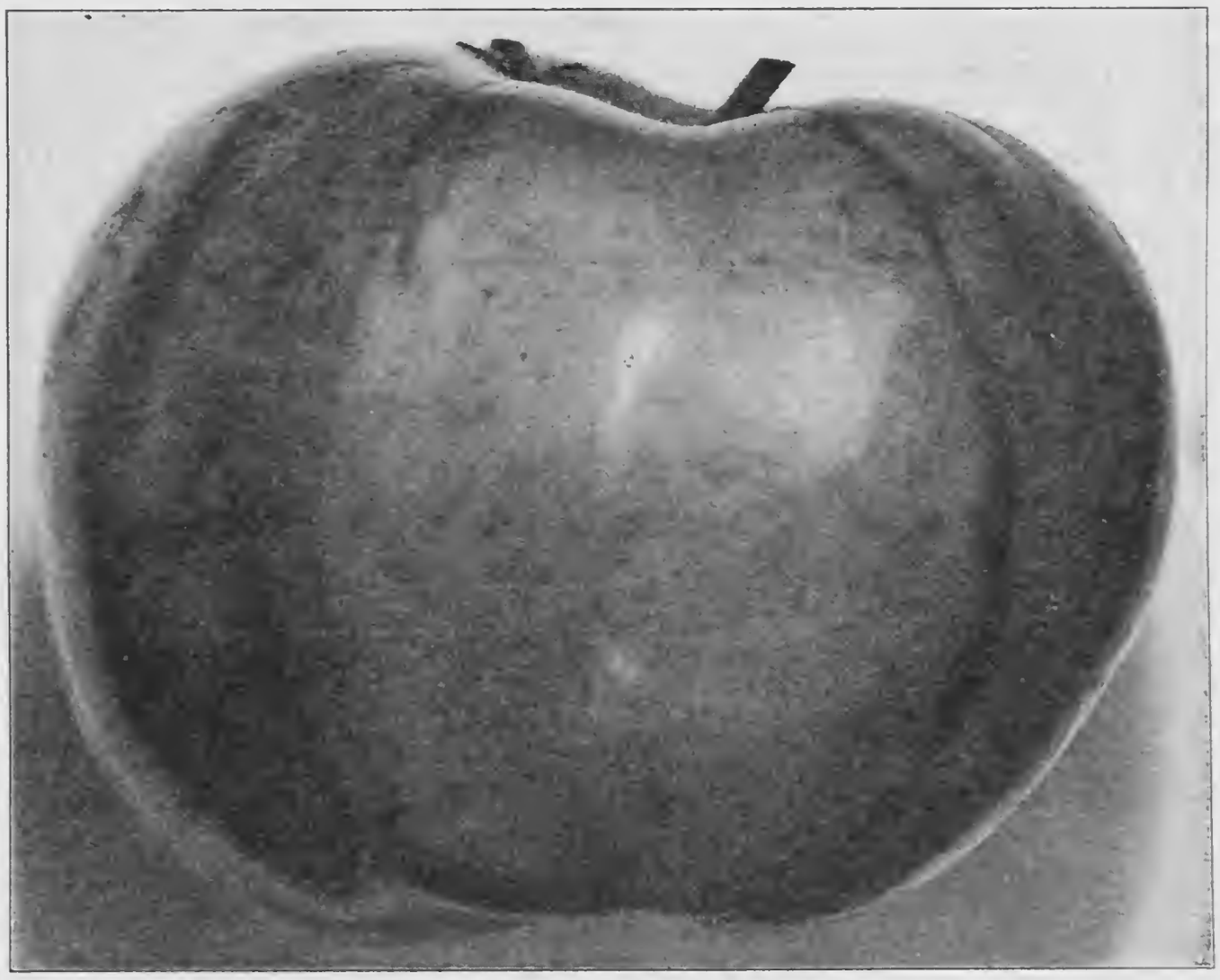
SOWING.—In the latitude of Philadelphia and northward, the seed should be sown August 10 to 15. As soon as the seedlings develop their first set of twin leaves, they should be transplanted deeply in 2½ or three-inch pots, and are kept growing rapidly as possible without producing a tender succulent growth. As soon as the small pots are filled with roots the plants are shifted into pots one inch larger, and when the plants have reached a height of 14 to 16 inches, or when they have developed their first blooms, they are shifted into their permanent quarters, which may be the benches, large pots or boxes, but for the production of large plants the boxes are to be preferred rather than pots, as they are much more economical in cost and are safer to handle. The boxes should be 16 or 18 inches square by 12 inches deep. Three one-inch augur holes should be bored in the bottom to provide for drainage, and an inch or so of coarse coal ashes or broken pots be put in the bottom of the box, to facilitate the carrying off of the surplus water. Soil to a depth of one inch will be sufficient covering over the drainage material. Set the plants in the center of the box and fill in with soil to a height of one inch above the ball of earth surrounding the roots of the plant, leaving the remainder of the space to be gradually filled in as the plant increases in size and demands more food. As the tomato requires bottom heat for proper development, the boxes should be placed on a bench that is not over 12 or 14 inches above the heating pipes.

TRAINING.—It is a common practice in bench culture to train the plants to a single stem, but when handled in boxes, two or three stems may be utilized to good advantage. In either method of training all side shoots must be pinched off soon as they appear, so that all the strength of the plant may go to the development of the main stems and fruits. As the plants will become top-heavy and fall over they will require support of some kind. In box culture a bamboo cane may be used for each stem, to which they are tied with ratlia or other soft material. The temperature should be kept at 60 to 70 degrees at night, and about 10 degrees higher during greater portion of the day.

WATERING.—Care must be exercised not to keep the soil too wet nor to allow it to become dried out, or the plants cannot be kept in a healthy condition. After the boxes have been filled with soil and become pretty well filled with roots the plants may require additional food to keep them moving. This is best supplied in the form of liquid cattle manure, to each bushel of which may be added a shovelful of fresh hen manure. It is placed in a coarse gunny-sack and suspended in a barrel of water. Apply once or twice a week, or as often as the plants may seem to require it in place of clear water.

As the life of the plant under glass is from six to 10 months, by intelligent care and proper feeding, many plants of the robust tall-growing varieties of tomatoes used for forcing, may be grown to gigantic size, but at no time should undue forcing of plant growth be made at the sacrifice of the fruits. The compost may be used with equally satisfactory results, for crops in the open, as pumpkins, melons, cucumbers, cabbage, eggplant, etc. A judicious quantity of fine ground bone or hen manure may be added to the compost with benefit. For pumpkin or squash use a good wheelbarrow load in each hill, and for the less rampant growing things use proportionately less. If monstrosities are desired, allow but one or two fruits to each plant, removing all the others as soon as noticed. In dry weather soak well once or twice a week with liquid cattle manure; chemicals in liquid form applied judiciously will also prove helpful. In the production of these big things, the whole secret lies in the intelligent culture given them, and that is really no secret at all. Just good common sense properly applied. K.

MONSTROUS TOMATO PLANT.



WESTERN NEW YORK ALEXANDER APPLE. ACTUAL SIZE.

SPRAY MIXTURES FOR ORCHARD AND GARDEN.

Spraying Against San Jose Scale.

The writer still believes in using lime-sulphur on all young and smooth-barked trees and always on peach trees. For this work a good commercial brand or similar homemade mixture diluted at the rate of one part to nine parts of water, is the best spray that we can recommend at the present time. On old apple trees badly infested, an oil mixture may be used. That the latter has greater penetrating power is unquestioned. It is often difficult to eradicate the scale entirely or even to hold it down to unnoticeable numbers without using oil, which should be diluted at the rate of one part to 15 parts of water.

Three years ago the station purchased a small farm at Mt. Carmel, Conn., upon which were 50 medium-sized apple trees, which though still sound, had been starved and otherwise neglected, and a few were badly infested with San José scale. We have never used oil on these trees, and have attempted to control the scale entirely by spraying with lime-sulphur. After two treatments very little infestation could be found on the twigs, but enough scale survived each treatment so that their progeny considerably disfigured the fruit, and also crawled upon the new growth. In order to prevent this, two sprayings were given last year, once in December and again about April 1st. The subsequent crop of fruit, rarely showed any scale marks. The young scales will not readily set upon bark which has been previously coated with lime-sulphur.

There are now several lime-sulphur powders on the market. Some of these, if not all, contain large proportions of sodium sulphide, this being an inexpensive product. They are not, therefore, lime-sulphur but soda-sulphur powders. These powders will probably be efficient and satisfactory as dormant sprays to destroy the San José scale. For Summer treatment of the foliage and fruit, however, there is danger, especially where arsenate of lead is used. The presence of sodium causes a chemical reaction in which sulphide of lead and arsenate of soda are formed: the latter is readily soluble and is extremely destructive to plant tissues, being used to destroy poison ivy. Manufacturers claim that because the mixture as used in Summer is so dilute, that the injury is negligible.

Ten years ago in our efforts to obtain a lime-sulphur mixture without boiling, we employed at this station the fused sodium sulphide, purchasing it in 110-pound drums for the purpose. This material is hard as a rock, contains 60 per cent of sulphur, and when broken shows a reddish color and resembles the mineral cinnabar. On exposure to the air it blackens and gives off an odor of sulphureted hydrogen. By breaking it into small pieces—no larger than a hen's egg—it readily dissolves in water. We thus added it to the slaking lime, the heat of which helped it dissolve. The caustic solution of sodium sulphide thus formed proved to be an excellent solvent for the sulphur. Several formulas were used, but one containing 14 pounds lime, 11 pounds sulphur, 11 pounds sodium sulphide per barrel of water, gave the best results, and compared favorably with the boiled lime-sulphur mixture as a scale destroyer. It was, however, more caustic to handle. An account of these experiments may be found in the Report of the Connecticut Agricultural Experiment Station for 1904, page 221, and so far as the writer is aware, this was the first attempt to use sodium sulphide to destroy the San José scale. The manufacturers of these soluble sulphur powders claim that the sodium has been through a new and original process, which subjects it to great heat, which destroys all its burning qualities. Be this as it may, the real danger lies, not on account of the direct caustic action of the sodium sulphide when used in so great a dilution, but on account of the chemical action with the arsenate of lead, causing local injury which may not be at all uniform in effect.

SPRAYS TO KILL APHIDS.—During the past year we have tested the merits of the nicotine preparation "Black Leaf 40," which contains 40 per cent of nicotine sulphate. This is said to be more uniform than most of the other tobacco preparations on the market, and as it is highly concentrated, will bear a heavy dilution. For most kinds of aphids, one teaspoonful to a gallon of water makes an effective spray, killing all aphids which it hits. It can be used at double strength safely. In some instances, as in spraying peas or cabbages the liquid does not moisten the leaves, but rolls off in drops as from an oiled surface, or like water from a duck's back. By the addition of soap (say one pint of soft soap to the barrel) the spreading power of the spray and consequently its effectiveness is greatly increased. "Black Leaf 40" can be mixed

(*Concluded on page 336.*)

with the lime-sulphur and lead arsenate spray and thus makes it more effective in destroying aphids. It is not safe, however, to add the soaps to such a mixture. But "Black Leaf 40" has its limitations. Apparently it is of little use in killing the cottony maple scale, which is rather abundant in some localities on soft maples. For this purpose the oils are promising.

ARSENICAL SPRAYS.—Lead arsenate is still the standard poison for orchard spraying. Three pounds of the paste, or half as much of the powder, should be used for a barrel of the mixture. In our experience at the Connecticut Station, dry powdered lead arsenate has given just about as good results as the paste. Both have been used alone and in combination with lime-sulphur and with Bordeaux mixture. This agrees with the experience of Dr. W. E. Hinds of the Alabama Station, who has used large quantities of the poison, especially against cotton insects. For destroying the adults of the apple and cherry maggots, Mr. Illingworth, formerly of the Cornell Station, found that a sweetened arsenical mixture consisting of 2½ pounds lead arsenate, 1½ gallon of cheap syrup to 50 gallons of water, sprayed upon the lower branches by hand, June 10th and again June 24th, was effective. The flies were attracted by the syrup, ate the mixture and were killed by the poison.

For treating the foliage and the fruit of the apple orchard, nothing is more effective than freshly-made Bordeaux mixture and lead arsenate. Unfortunately

SPRAYING 12-YEAR TREES, HEADED LOW.

certain varieties are russeted by the Bordeaux, and this is the chief reason for using a dilute lime-sulphur instead. We may overcome this tendency in part, by using in the second and third treatments a weak Bordeaux, i. e., one pound of copper sulphate instead of four pounds, to four pounds of lime. In tests at the Virginia Station, a combination of two pounds of copper sulphate to a barrel of diluted lime-sulphur gave an effective spray which caused no injury.

None of the prepared Bordeaux powders seems to be as effective as the freshly-made Bordeaux mixture.

Commercial lime-sulphur diluted at the rate of one gallon to 40 gallons of water, is now used largely as a fungicide on apple foliage and fruit, especially on those varieties which are russeted by Bordeaux. To this lime-sulphur, the lead arsenate should be added to kill the chewing insects. W. E. BRITTON.

Conn. State Entomologist.

Injured Cherry Trees.

In the Spring, I planted an Early Richmond cherry tree. It seemed to thrive all right during the season. In 1912 I ran a wheelbarrow against the base of the tree, thereby loosening a patch of bark an inch long, I should judge. This seemed to heal over, and last year the bark seemed to burst open along the whole length of the trunk, and a new growth of bark came in this long slit. Now the new growth is well formed and still it comes in contact with the old bark. This tree was reset in the Spring of 1912, and part of the top died after resetting which was carefully trimmed away; the tree did not make much growth last year, although it seems to have caught up with its lost vitality. I have another cherry tree set in Spring of 1912 which is doing well, but in the Fall of 1912 I accidentally ran a wheel against the base of the trunk, thereby peeling the outside bark a little, and this seemed to heal with a peculiar hump with a hole in the center, although otherwise all right. What causes this? Is the bark of cherry trees so tender that one must be very careful with the handling of them?

Colfax, Iowa. W. A. H.

Probably the bursting of this tree was caused by the extreme cold weather. If these cuts started from the old wound, that may have caused part of the trouble. We seldom find this splitting in the sour varieties. Other kinds are sometimes split from the ground to the lower limbs. In most cases the tree recovers when the injury is not too deep. Resetting your tree probably caused part of the top to die. Perhaps you did not trim it enough when replanting. If it has recovered its vitality you could let it go; otherwise, we would plant a new tree. In the second case the wound should not be serious unless it refuses to heal. In that case, there is probably a spot of dead wood underneath. If not too large, and the tree remains healthy, the bark will grow in from the outer edges and cover the whole. This tree is likely to live and bear for many years. It will probably not be a perfect tree, but may give a fair yield of fruit. These questions emphasize the necessity of care against bark injury. Wounds from a tool, unless cared for promptly, will often seriously injure the growth of the tree. Many of our best fruit growers no longer try to work the cultivators up close to the tree, but prefer to leave a strip about two feet wide to be worked down low by hand tools.

Mixing Spray Materials.

We have seen people who have a mania for experimenting with a sure thing. Some of them mix soft soap or lye with soluble oil or lime sulphur, put lime with oil, or try all sorts of combinations with standard materials. The result is usually a mixture which does not combine, and which causes considerable injury to the foliage or buds. The Colorado Experiment Station puts the case well as follows:

Many persons are likely to believe that because certain sprays are good separately they are even better when combined. In our work we find quite a large number of men doing a great deal of mixing of their own. Investigations at various experiment stations has shown that this is often foolish and wasteful, that the mixtures they make may be absolutely worthless and that certain elements which are good when used separately may be made worthless when combined.

The experiment stations and agricultural colleges have done a great deal of work on the different methods and materials for the control of our common insect pests and diseases, and they are constantly writing bulletins recommending certain sprays that have been found best for each pest or disease and only in rare cases do they recommend a mixture of materials. These cases are where two insect pests or diseases are present that demand different treatment, as for instance, tobacco and arsenate of lead may often be used together to good advantage for two such insects as codling-moth and plant lice, the arsenate of lead to destroy the chewing insect, the codling-moth, and tobacco as a contact spray for the sucking plant lice. In this case, neither the tobacco nor the lead is injured or benefited by the presence of the other, and each must be used at full strength.

Whole crops have been known to be lost by the grower deciding that a little lye would be a benefit to his spray.

Before deciding not to follow the recommendations that has been worked out by years of investigation, it would be well to ask advice from some one of experience what results might come from some of your own mixtures.

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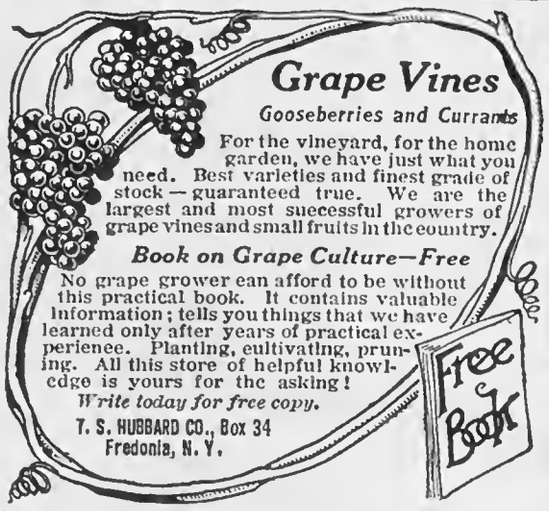

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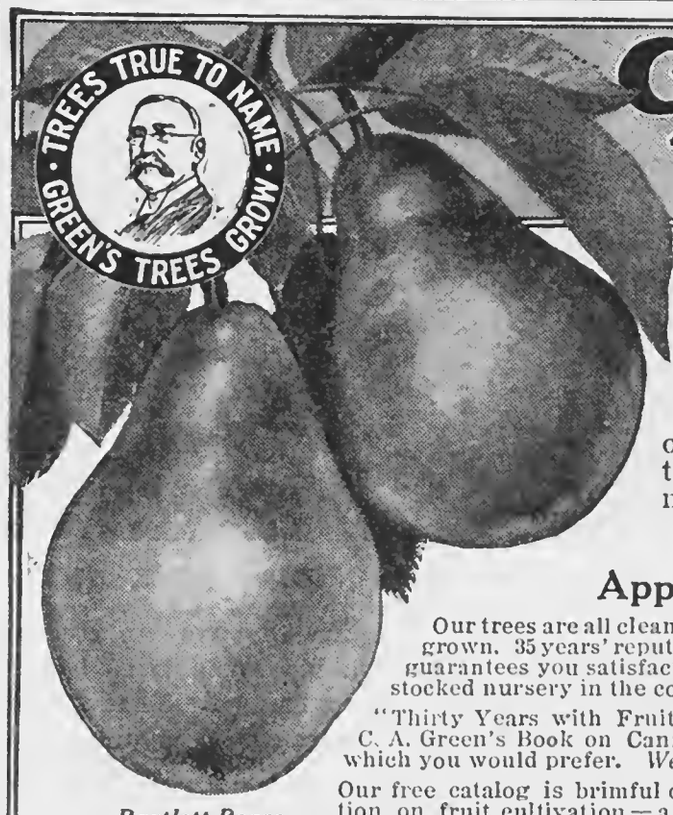

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Cover Crops in Orchard.

We have a few acres of rye in a young apple orchard, that we would like to sow in Red clover this Spring. If we cut the rye, before it seeds, will it be best after cut to rake it off, or will it smother the clover if we leave it on the ground?

We have another apple orchard where we would like to sow Canada field peas and oats. Will the peas and oats injure orchard if left and cut for hay? Can I sow Red clover when I sow the peas? B. H. B.

Hightstown, N. J.

It is never good practice to grow rye or other grain crops in a young orchard. Unless the season is very wet this practice is sure to dry out the soil and hurt the trees. In the case you mention we should cut the rye early, rake it and pile it around the trees. This would probably overcome the effect of growing the rye, and would give the clover a fair chance. We have never succeeded in obtaining a good catch of clover when seeded with oats and peas. This crop grows thick and rank, and is apt to smother out a seeding. We assume this second orchard is older than the first one. Otherwise we would not advise you to sow the oats and peas, or any other grain crop in it. Barley makes a better seeding or "nurse" crop.

Fertilizer for Fruit Trees.

What fertilizer will take the place of unleached hard wood ashes for fruit trees? Apples and pears more particularly. W. J. B.

Unleached ashes of good quality contain in one ton about 100 pounds of potash, 35 of phosphoric acid, and over 600 pounds of lime. This amount of plant food will be obtained in 200 pounds of either sulphate or muriate of potash, in 250 pounds of basic slag and 1000 pounds of air-slaked lime. This combination will give you the actual plant food contained in the ton of ashes, yet this mixture might not give as good results in the orchard as the unleached ashes would. Our experience goes to show that the natural ash of good quality gives better results than any mixture of chemicals, offering an equal analysis. There are, however, some adulterated samples of ashes on the market, but the pure ash will give good results.

Broadcast Phosphate and Potash.

Will it be advisable to go to the expense of broadcasting 100 pounds of muriate of potash and 500 pounds of Thomas slag to the acre, or would it be better to withhold the fertilizer for the crop, probably clover, to be sown when the rye is turned under the following Spring?

New York. J. M. C.

We would by all means use the fertilizer on the cow peas or clover, especially in case this crop is to be plowed under for corn or some similar crop. The cow peas, clover and similar crops are useful for taking nitrogen from the air, and on general principles the more we feed them, the larger they will grow, and the more they will thus add as green manure or fodder. Many wise farmers follow the practice of applying their phosphate and potash to the cover or sod crop. They get a larger growth in this way, and the chemicals are not lost, but are made use of by the cover crop, and thus carried on to the crop which follows them. At the same time there is usually more nitrogen gathered by the cover crop. The combination of slag and muriate of potash is not the best one. Sulphate of potash would be better for this combination. The action of the salt in the muriate would be to form a combination with lime, which is easily washed out of the soil, while most of our efforts now in the East at least are with a view to retaining lime and not wasting it.

The Strawberry Weevil.

What is a good remedy for weevil in strawberries? We are living in South Jersey now, and our friends say strawberries do not fruit well on account of weevil. M. E. S.

Ormond, N. J.

There is evidence to show that plants sprayed with Bordeaux mixture and Paris green are decidedly less troubled than those not sprayed. Of course, this may be due to the Bordeaux mixture, which is objectionable to many insects and serves to protect treated plants, even when it does not kill the insects. When the strawberry weevils are very abundant it is surely worth a trial. The Bordeaux should be made of four pounds of copper sulphate and four pounds of lime to 50 gallons of water, and one-half pound of Paris green or two pounds of arsenate of lead should be added to each 50 gallons of the mixture. The application should be made just before blossoming begins and should be very thorough. Spraying while in bloom is objectionable, because of the danger of preventing pollination by bees and other insects.

It has been demonstrated that the plants can be kept free by covering the rows with muslin or other light fabric, put in place a week before the first buds are ready to open, and that the covering promotes early ripening and better fruit. The cloth must be a little wider than the rows, and must be kept above the plants by fastening to lines of pegs set near enough together to hold the covering taut. The covering need remain only until the first berries begin to color, because by that time the plants would be no longer attractive to the beetles. This method is practicable only on small patches. The most promising measure of all is, however, to be found in the selection of varieties. Pistillate varieties are not subject to attack by the beetle, and it should be possible to secure a good pistillate variety to form the main bulk of the crop. This will need, as a pollenizer, a profusely flowering staminate variety, which may form every fifth row in the field, and the crop from which may be sacrificed to the beetles if they furnish flowers enough to pollenize the others. This staminate variety should be a little earlier in blooming than the pistillate variety, so that there may be an abundance of pollen as soon as the pistillate varieties open. T. S. HEADLEE.

A Fruit-growing Township.

Clover Leaf Grange recently, through a committee, made a fruit census of North East township, Pa., with the following statement: We have no doubt these acres will average $200 each in value of output.

We the undersigned committee, appointed by Clover Leaf Grange, No. 1265, P. of H. to ascertain the acreage of fruit grown in North East township beg to submit the following report, which we believe to be comparatively accurate:

	Acres.
Grapes	6,986
Apples	437½
Peaches	444
Plums	122
Prunes	212¼
Cherries	326¼
Pears	36½
Strawberries	28
Red raspberries	84¼
Black raspberries	34
Currants	57
Gooseberries	19
Blackberries	6¼
Total	8,793

Long Island Apple Culture.

On page 46 you say for years the experts taught that Long Island is out of the apple belt. I am sending you by parcel post, two Greenings and two Baldwins from two of my 50-year-old trees, standing in sod, on high rolling land about eight miles from salt water on the north and south. The orchard includes such varieties as Porter, Fall Pippin, Yellow Bellflower, Northern Spy, Seek-No-Further, Greening and Baldwin. Some of the trees are very large, spreading 40 to 48 feet, and a 20-foot ladder does not reach near the top of a few. Fifteen years ago, when apples were low in price, these trees were badly neglected. Then about the time THE R. N.-Y. started Apple Consumer's League, and prices improved, I began scattering wood ashes around some of them, spreading stable manure over the ashes and coarse litter over all to prevent washing. This caused the trees to bear freely, but in a few years the apples rotted badly after picking. Believing that the manure caused this I discontinued its use, and my present practice is this: As early in Summer as my other work will permit I sow around each of my best trees a half bushel of sifted hard wood ashes, 25 pounds of a 3.29-8-7 fertilizer, and the past season I added a waterpail full of agricultural lime to a few trees; then cover with whatever coarse litter I have. These trees have never been sprayed and only partly pruned, and I have considerable defective and decayed fruit, but so far as production is concerned I think Long Island is "in" the "apple belt." On October 6 I picked 12 bushels of Greenings from the tree from which I send you two, and one bushel from the ground, as there had been a high wind.

Suffolk Co., N. Y. W. V. H.

R. N.-Y.—The apples came in good condition and were well colored and flavored and of good size. When Long Island produces such fruit there is no question about the "apple belt."

The principle—Two layers of glass with a ⅝-inch layer of dry still air

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Sunlight Double-Glass Sash

While you are thinking about growing early plants so as to have early vegetables to eat or to sell, write today for the catalogue or booklet telling all about the

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The time to get ready is now.

These sashes are in use by hundreds in every State in the Union and are paying for themselves every season in extra profits. They are a model of efficiency. The extra layer of glass with the air space between conserves the warmth in the bed and does away with the need to buy or use mats or shutters. Here is a saving of 50% in labor and worry. The plants are earlier and stronger; here is a gain in money returns.

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The Sunlight idea has been carried into an inexpensive greenhouse, 11x12, 11x24, 11x36 or 11x48 ft. in size. It is made of Sunlight Double Glass Sash, which are instantly removable when the greenhouse is idle for use on hot-beds or cold-frames. Thus they serve a double purpose. Sash ordered now for Spring work may be used on a greenhouse frame ordered at your convenience for next Fall or Winter.

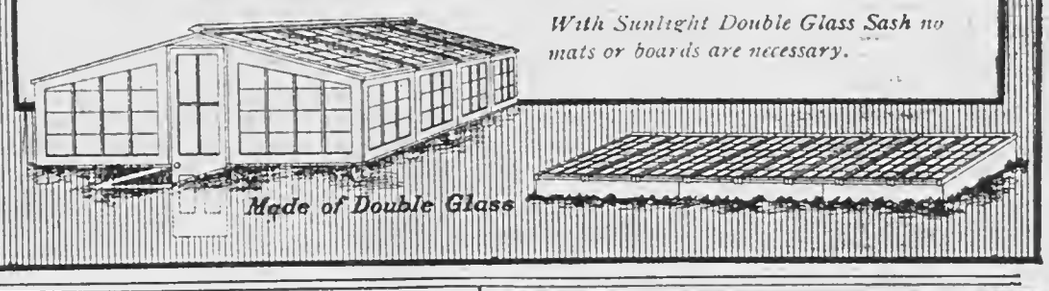
Write for these two books today

One is a book by Prof. Massey, an authority on hot-bed and cold-frame gardening, and the other is our FREE catalog. If you want Prof. Massey's book, enclose 4 cents in stamps.

Sunlight Double-Glass Sash Company

924 East Broadway — Louisville, Kentucky

With Sunlight Double Glass Sash no mats or boards are necessary.



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STRAWBERRIES

AND HOW TO GROW THEM

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Whether you have a small garden only or a big farm, you should grow your own strawberries. Kellogg's Big Red Strawberry Garden will produce all the delicious strawberries your entire family can eat, summer and winter. You can have shortcake, strawberries and cream, preserves, jam and canned berries, the year 'round for less than one cent per gallon. Our Book gives full information.

Strawberries yield more dollars per acre and give quicker returns than any other crop. Set one acre to Kellogg's Pedigree plants this year, and put from $500 to $800 in the bank next year. Our Book tells you how. IT IS FREE.

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110 varieties to select from. Prices low for quality Plants.

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NEW STRAWBERRIES

Nearly 100 varieties to select from. We guarantee our plants to be high-grade and equal to any. Our 18th annual catalogue is ready. Write for one.

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NONE BETTER

For over thirty years KNIGHT'S PLANTS have been making big money for our customers. This season we are offering a prize of

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for the most productive strawberry patch. This contest is fully explained in our KNIGHT'S BOOK ON SMALL FRUITS. It's FREE. Write for a copy today before supply is exhausted.

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For over half a century we have supplied Honest Seeds. They have made good for planters everywhere, whenever properly handled. The name Gregory stands for crop insurance.
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I'm told that I have the best quality of seed, give the largest packages and have the most common-sense Seed Book in the bunch. And I'm willing to admit it.
Do you have to be shown?
All right. I live close to the Missouri line and I'll "show" you.
I'll send you the *Seed Book* and a *big package of garden seed*, and you can judge for yourself. NO CHARGE FOR EITHER, and you need not even send the postage unless you wish.
I also have guaranteed Clover and Alfalfa, and all kinds of farm seed at Farmer's Prices. Shall I send you free samples of these also?
HENRY FIELD, Pres.
HENRY FIELD SEED CO., Box 26, Shenandoah, Iowa.

SEED CORN
Highest yielding varieties. We welcome comparative tests between ours and others. *Wing's Improved Whitecap* has never been beaten in our fields. *Wing's 120-day Yellow* is earlier and was good enough to win the State Corn Contest in one-acre plots in 1912. Yield 139 bushels, 17 lbs. *Our Clarage* is maturing for us in about 100 days and yielding practically the same as later varieties. We have some very choice 1912 stock carried over and very moderate stocks of 1913 seed. All our corn is now being cured on the patent wire hangers which insure practically perfect germination. For many years all of our corn has been bred from ear-row test plots. Write for catalog and prices.
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BLUE MOUNTAIN ENSILAGE CORN
Grows mammoth stalks with big ears and full of leaves. Its early maturity always insures a full crop of ideal forage before frost. A very vigorous sort, often growing 14 to 16 feet tall. Our extra selected seed gives highest satisfaction.
GREAT DANE OATS
A heavy yielder of highest quality. Berries golden yellow, with thin hulls and heavy meat.
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Let us tell you more about O. & M. pedigreed farm seeds. Shows through pictures what results others score with them. Send a postcard request Today.
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FORD'S OLD VIRGINIA ENSILAGE CORN
Solves the feeding problem—one of our customers filled a 70-ton silo from 2½ acres. Stalks grow 12 to 15 feet, often weigh 6 lbs. or over, and produce two ears each. Matures well, and is the greatest milk-producer of all corns.
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THE amateur will find just the information needed to make his garden a success—over one hundred clear, concise, dependable cultural instructions for growing almost every flower and vegetable worth bothering with.
The list of worthy novelties and old favorites is complete and dependable. Especially important are the sections devoted to Roses and Dahlias. The collection of Hardy Perennials is the largest in America. Selected strains of standard vegetables and flowers.
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Dreer's Superb Asters.—The finest strain, either for garden decoration or cutting. Packets contain enough seed to produce more than one hundred plants. Made up of eight beautiful colors. Ten cents per pkt. DREER'S GARDEN BOOK with each order.
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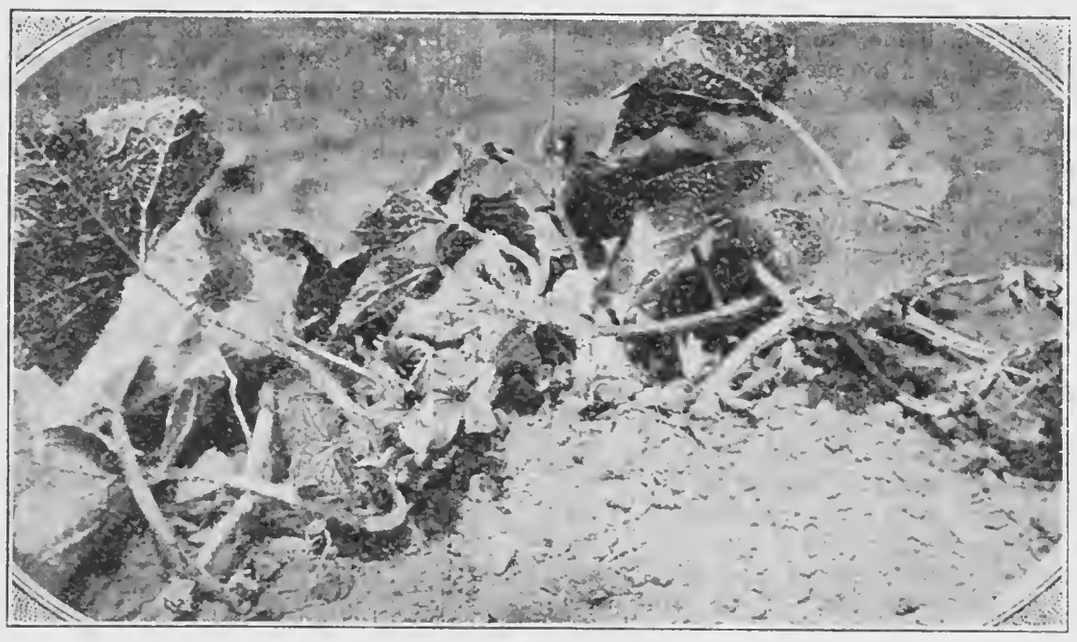
SWEETENED POISONS KILL RAILROAD WORMS.

The apple maggot, or railroad worm, is a serious pest in the northeastern United States and Canada. The principally infested districts extend from New Brunswick, Quebec and Ontario south to Pennsylvania and west to Iowa and Wisconsin, and occasionally in other States. It is an American insect, and originally lived on the hawthorne and wild crab, but has found our cultivated fruits far more palatable, so that now it is seldom, if ever, found on the wild fruit. So generally is this insect distributed that in New Hampshire 95 per cent. of the orchards are infested, and in other States there have been reports of from 50 to 100 per cent. of the orchards being infested.

The apple maggot is the larva or worm of a small fly about three-eighths of an inch long, with its wings mottled or striped with black. The larva eats its way through the flesh, filling it full of small needle-like tunnels, which cause the apple to rot prematurely. In the Summer, in apples yellow in color, like the Sweet Bough, the flesh about the point where the egg was deposited becomes a dark brown in a few days, and when the apple gets near maturity each



CUCUMBER SPRAYED FOR BLIGHT WITH BORDEAUX.

of the tunnels is easily followed by the dark brown flesh encircling it.

The flies appear in New York State according to Mr. James F. Illingworth, who has made a very complete study of this pest, from about the middle of June onward. The insects seem to adapt themselves to the variety on which they are growing, appearing early or late according to whether they are infesting Summer or Winter apples. The first to appear, those infesting the early Summer apples, usually are responsible for a second brood. Not all the pupæ from these first larvæ come out the same Summer, however. But at least about 30 per cent. do, so there is a continual infestation from the early Summer onward in the neglected orchards.

In the past the standard method of holding the apple maggot in check has been to pick up the fruit and destroy it, but nobody has ever been nearly successful with this method for some reason, probably because it has never been thorough enough. Even having stock in the orchard—which I do not advise—to eat the fallen fruit has not proved successful, as the animals seem to get a surfeit of fruit, leaving some on the ground. If you do not believe in spraying, to be successful the Summer apples like the Sweet Bough, or Red Astrachan, should be picked up twice a week; Autumn varieties, like Maiden Blush and Duchess of Oldenburg, once a week; and the Winter sorts need to have their drops picked only once a fortnight. These drops must be destroyed.

The picking up of the drops is a great deal of work and expensive. Spraying is easier and cheaper. In a well-cared-for orchard where the trees are sprayed for the second brood of Codling moth, sometime in June, there should be little or no damage from the apple maggot. But should there be, then make two or three subsequent sprayings, using sweetened arsenate of lead. All flies like sweets and this fly is no exception. Mix it as follows: 25 pounds of cheap molasses or confectioners' glucose, five pounds arsenic of lead (paste) in 100 gallons of water. This may be washed off by rain, in which case it should be renewed. The sweetening may be added to the Codling moth spray if desired. How the fly feeds may be interesting. When feeding the head is occasionally raised, the mouth parts are extended and a large drop of saliva is foreed out and applied to the surface of the fruit. This is evidently used as a solvent of its food, and is soon licked up again. So if the fruit is covered with a sweetened poison, it is taken up in the saliva and the insect dies. But they die slowly; for it takes them hours or even days to succumb. However, as it is two or three weeks after the adults emerge from the ground before they commence egg-laying, one need not worry about [illegible] dying by inches, so long as the poison is put on in time. An individual fly is capable of laying from three to four hundred eggs.

Cultivation will, no doubt, go a long way to hold this pest in shape. They usually pupate in the top inch or so of soil, but you cannot destroy them by plowing under, for they will not die. But if there is maintained on the surface of the soil an inch or two of dust mulch it may kill them for they do not seem to be able to exist in dry soil, even when they are in the pupa or chrysalis stage. Any reader who wants to learn in detail of the experiments which were conducted to prove that spraying will hold the apple maggot in check, should apply to the Cornell Experiment Station, Ithaca, N. Y., for bulletin 329. P. T. B.

Gathering Medicinal Roots.

Can you give me any information on drying and care of roots, such as burdock, etc., or can you direct me to buyers of such? I understand the U. S. Department of Agriculture issues a pamphlet bearing on care of such roots. H. C. M.
Goshen, N. Y.

Medicinal roots, such as burdock, yellow dock, poke and dandelion, when collected for the drug market, are best dug in late Fall or early Spring before growth has started. They should be freed from all earth and foreign matter, such as stones, sticks and bits of other vegetation, and especially with the dock and dandelion, from the necks or tops, which turn black in drying. Curing is effected by drying on racks or lath screens, or in thin layers on clean, well-ventilated barn floors or lofts. The large pieces should be split or sliced to facilitate drying, which requires from three to six weeks, according to the weather and character of the roots. They should be turned once or twice daily until thoroughly cured, when they should readily snap if bent. If dried out of doors they should be exposed to light and air, but as a rule shielded from direct sunlight, and be well covered at night and during moist, rainy weather. Artificial heat from stove or steam piping in a well ventilated room is very effective in finishing the curing process. Moderate temperatures, rarely exceeding 85 degrees, are safest for this process. Cured root should be stored in a dry, airy place, free from vermin, until ready for shipment, which may be made in clean bags or dry, clean barrels. The market is with the crude drug dealers found in most large cities. The price paid to collectors or growers of drug plants vary according to the abundance or scarcity of the species and the labor involved in getting the material ready for market, and are often distressingly small. Dock root ranges from three to five cents the pound, according to quality, dandelion from nine to 12 cents, and poke root, well sliced and cured, from four to six cents. Crude drug roots are usually bought by sample, which should be submitted to the buyer before making shipments. V.

Compact Lettuce Wanted.

In setting out lettuce, is there anything that can be done to make it come to a more compact head? J. B.

The above question is rather vague as to its exact meaning, as there are two classes of lettuce grown, the head varieties and the non-heading or loose varieties. For the first class, or head varieties, good soil, proper care and seasonable weather are required to make good solid heads. This second class or non-heading varieties, will not produce good heads under any conditions. To grow good head lettuce the ground should be heavily dressed with well-rotted manure, spaded or plowed in, and if available apply a good wheelbarrow load of hen manure to each 250 square feet of surface, and work well into the soil. Set out this first batch of plants as early as it can be safely done. A second planting may be made 10 days or two weeks later. For several years I have made it a practice to make not over two plantings of plants raised in the hotbed, but sow the seed thinly in drills in the open ground where the plants are to stand. The first sowing is usually made about the middle of May. When the plants are about two inches high, they are thinned out to stand six to eight inches apart in the row. The plants removed are fed to the chickens or thrown away. By this method of planting, the plant's growth is not checked, and they will make more good heads and in much shorter time than by any other method of handling. The May King and New York lettuce handled in this way will make a goodly percentage of fair-sized heads, during the hot weather of Summer, if not allowed to suffer for water and properly cultivated. Lettuce should be cultivated every seven to 10 days if good solid heads are expected. The following sorts of head lettuce are standards for productiveness and excellence of quality: May King (first early), Big Boston and Salamander (second early), New York (main crop). K.

Spring Seeding to Grass.

I have a piece of land with a southern exposure that I limed well last Spring. Then I plowed and harrowed it, and sowed it with corn and planted one-third with potatoes. It has a sandy loam soil. I would like to sow it with grass, so I can get a good crop of hay next Summer. It is now just as I left it with the corn stubble. J. H. A.
Danbury, Conn.

This Connecticut inquirer can hardly expect a good hay crop by seeding in the Spring with the ordinary grasses and clovers alone. If the land is manured after plowing and the seeding can be done quite early this method might give good results in wet seasons, but generally it is better to seed with a grain crop grown for hay. I would advise seeding with oats, two bushels per acre, and Spring vetch seed one-half bushel per acre, and add to these one peck of Timothy, two quarts of Red-top, and 10 pounds of a mixture of six or seven pounds Red clover, four quarts, and four or three pounds Alsike clover, two quarts. Of course if a grain drill is used the oats and vetch seed should be sown in the grain seeds and the clover and grasses in the grass seeds. The oats and vetch will make excellent hay for cattle or horses, and the crop can be got off the land by the 10th to the 15th of July in Southern Connecticut, then giving the clovers and grasses a good chance to make a heavy growth before Winter. With the chances of dry season during May and June a Spring-sown crop of meadow grasses and clovers is quite an uncertainty, so that it is usually safer to grow a cereal crop as hay, and to depend on the balance of the season to develop the hay crop. C. S. PHELPS.

"ROAD building requires a great deal of study." "Yes," replied Farmer Corntossel; "out our way everybody got to studyin' how he could get a salary out of the fund before anybody was paid to get out an' work. The trouble with the study of road building is that too much of it is mental arithmetic."—Washington Star.

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If you want good crops, you must plant *good* seeds. Dibble's Seeds are not ouly good seeds but they are the *Best* Seeds money can buy. We are extensive Farmers and Seed Growers located in the Genesee Valley of Northwestern New York. Honeoye Falls is in Monroe County, the second county in the value of its agricultural products in the United States.

We are located where Farm Seeds are actually grown. Our 1,600 acre Seed Farms are well tilled, very fertile, productive and profitable. Our warehouses are 400 feet in length, and at this writing have over 100,000 bushels of Farm Seeds in store, and we sell direct *from our Farms to yours.*

We have but one grade, and that the best obtainable. Better seeds than ours cannot be had, nor can you get the same high quality elsewhere for so *little money.*

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Northern Grown Alfalfa, Clover and Timothy Seed 99.50 Pure

or better is the "Cream of the Crop," the same as we use on our own Farms growing 600-800 tons of hay yearly. We have about one hundred acres of Alfalfa producing around four hundred tons annually. Our experience is worth thousands of dollars to you. Alfalfa and clover seed is cheap this year and the quality was never better.

Dibble's Seed Corn

is in a class by itself. Our requirements are that it must be from hand-selected ears, thoronghly dry, screened and recleaned, and must show a germination of above 90%. Germination tests made to date average over 95%. In fact, real *Seed Corn.* If you are interested in Flint for husking, we can supply you with a variety that has made 230 bushels per acre and has produced 247 bushels from one peck of seed. In Dents for Crop or Ensilage, we have an extra early to use where seasons are short and a big grower maturing in 100-110 days, which we recommend for general use; also a Mammoth White, growing 15-20 feet high under favorable conditions, called by one of our customers "King of Ensilage Corn." We have five silos, grow 100 acres for ensilage annually, and have proven by field trials the best varieties for the Eastern States.

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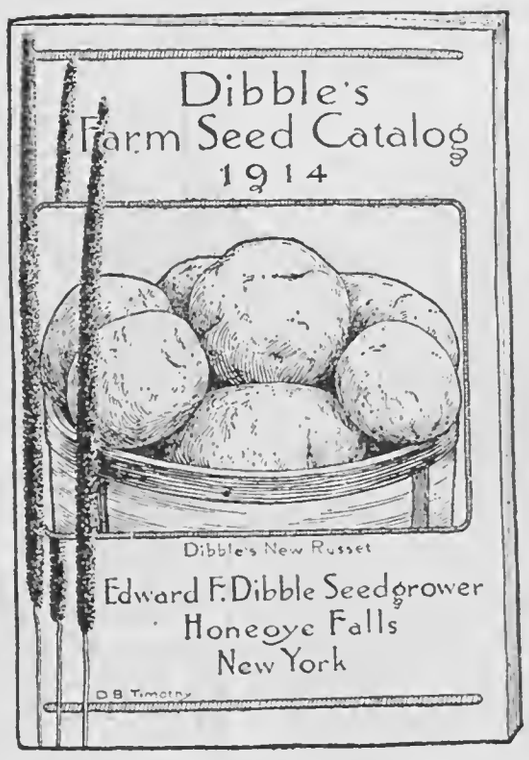
New Heavyweight originally from the cold Northwest, early, big stiff straw, enormonsly productive with thin hulled grain weighing 40-45 pounds per bushel. One field produced over 1,000 bushels last year, averaging 87 bushels by measnre, weight 43½ pounds, or *118 bushels per acre* by weight.

Twentieth Century introduced by us several years ago. Scores of farmers have reported yields to us of from 80-110 bushels per acre, and on our own farms growing from 100-200 acres annually, they have produced over *twice* the average of the United States for the last dozen years. Owing to a bumper crop of oats in our section prices are very low.



Dibble's Seed Barley

New early Six Rowed from Wisconsin yielded 55 bushels per acre right here in Western New York last season, and Dibble's Canadian Six Rowed with a twenty-year record of from 40-54 bushels per acre on the Dibble Farms.

DIBBLE'S ALFALFA, CLOVER, TIMOTHY, CORN, OATS, BARLEY, etc., are sold on a ten days' approval your-money-back-if-you-want-it plan, subject to your test, the test of your Experiment Station, or that of the Department of Agriculture in Washington; the fairest, squarest deal ever given the American Farmer by any Seedsman.

Dibble's Seed Potatoes

are northern grown, from select stock seed, and are grown under climatic conditions and in suitable soil for the best development of each kind. After harvest they are carefully assorted and stored in our frost-proof storage cellars and reassorted into new barrels or sacks the very day orders are shipped to our customers, thereby assuring them of choice, properly selected stock that is free from frost, sure to grow and produce crops that pay big profits. We have full stocks of all the standard sorts—Cobblers, Six Weeks, Rose, Queens, Manistees, Moneymakers, Giants, Gold Coins, Green Mts., Rurals, Raleighs, and a score of others; also a *new main cropper* introduced by us two years ago, that should be grown by every farmer. Several hundreds of our customers who have tried it write that it has *outyielded all other varieties in the same field,* and over *one hundred* say that *it beat other kinds over two to one.* Try Dibble's new potato; grow *two* tubers where *one* grew before and *double your crops.*

60,000 bushels of Seed Potatoes awaiting your orders, and at a price you can afford to pay.

Dibble's Farm Seeds Free

Send us your name and address on a postal card, mentioning the number of acres you are farming, and we will send you free *ten liberal packages of Dibble's Farm Seeds* for testing on your own farm, and also *Dibble's Farm Seed Catalog,* the leading strictly Farm Seed Book of the year. *Dibble's Catalog* is written by a *Farmer* for *Farmers.* It tells the truth about the Farm seed situation. Illustrations are all from photographs. It is a safe guide for every Farmer as it gives the result of our own experience farming 1,600 acres. It contains a map showing how near Honeoye Falls is to *you.* Write for it *Now.*

Address EDWARD F. DIBBLE SEEDGROWER, Honeoye Falls, N. Y. Box B

Summer Bedding Plants.

For a showy display in the flower garden, nothing else gives such quick returns as Summer bedding plants. The picture shows such a bed, the central group of Cannas attaining noble proportions. Few other plants suited to this latitude give such a striking tropical effect. The roots may be kept over year after year, in a frost-proof cellar. In raising Cannas from seed remember that a little nick should be filed in the horny covering, or the seed soaked in hot water long enough to soften, otherwise there may be a failure in germination. Sow in hotbed, or in pots in the window.

Raising Show Chrysanthemums.

Would you give me instructions how to raise those big Chrysanthemum *trees* we see in the shows, and which are the best varieties for this purpose? To produce large Chrysanthemum flowers, does it make any difference whether they are grown in pots or planted in the open ground and later potted? W.

Central Islip, N. Y.

For large bush plants of Chrysanthemums, cuttings are taken early in February. They need a cool airy greenhouse, where they may be grown without any check, so as to make vigorous plants. They are repotted as often as required, the final potting, usually in June, being into 10-inch or 12-inch pots. When shifted, pot moderately firm and water moderately until the plant is making good root growth. The preferred soil is a compost formed by piling up, the previous Fall, freshly cut sod in layers with half its bulk of partially rotted manure. This is cut down and well mixed, forming a fibrous loam excellent for greenhouse use. The Chrysanthemum is a gross feeder, requiring a rich soil, and in bench culture both top-dressing and liquid applications are resorted to, but over-feeding results in malformed foliage or defective buds, and the grower must study his plants carefully, for all varieties cannot be treated alike.

A SHOWY FLOWER BED.

As soon as the young plants are five or six inches high, the top must be pinched out, to induce branching, and as growth continues some pinching out may be needed almost daily, to induce as many breaks as possible, and to insure symmetry. The desired shape must be kept in mind, and the plant gradually staked out; by the middle of August this is very important and work must be done every day, as the shoots must be tied in place before they harden. Plants of moderate size may be spread out on stakes, but the monsters of the flower shows are trained over umbrella-like wire frames. Varieties that have been shown in magnificent form at our flower shows are Wells' Late Pink, Lady Lydia, white and R. T. Felton, deep yellow. From the frequency with which these varieties are grown for large specimens it is evident that they are dependable under such treatment. Merza is another white that makes a fine bush or standard. Standards receive the same treatment as the bush plants, except that they are not stopped to form the head until from three to five feet high; they are then pinched and tied to secure a symmetrical head, with the same care as bush plants.

The large exhibition flowers are grown on single-stem plants kept in pots. They are restricted to one stem and flower; whether crown or terminal bud, and the time of taking it, depends on the variety. Many growers plunge the pots outside in Summer, as the sun and air induce a short vigorous growth, but conditions are not always favorable to this. Little bush plants of some varieties may be planted out all Summer, and potted about the first of September. Every grower has some little individual "kinks" in Chrysanthemum growing; you will find the general practice discussed very practically, week by week, in the florist trade papers.

Bud Variations in Carnations.

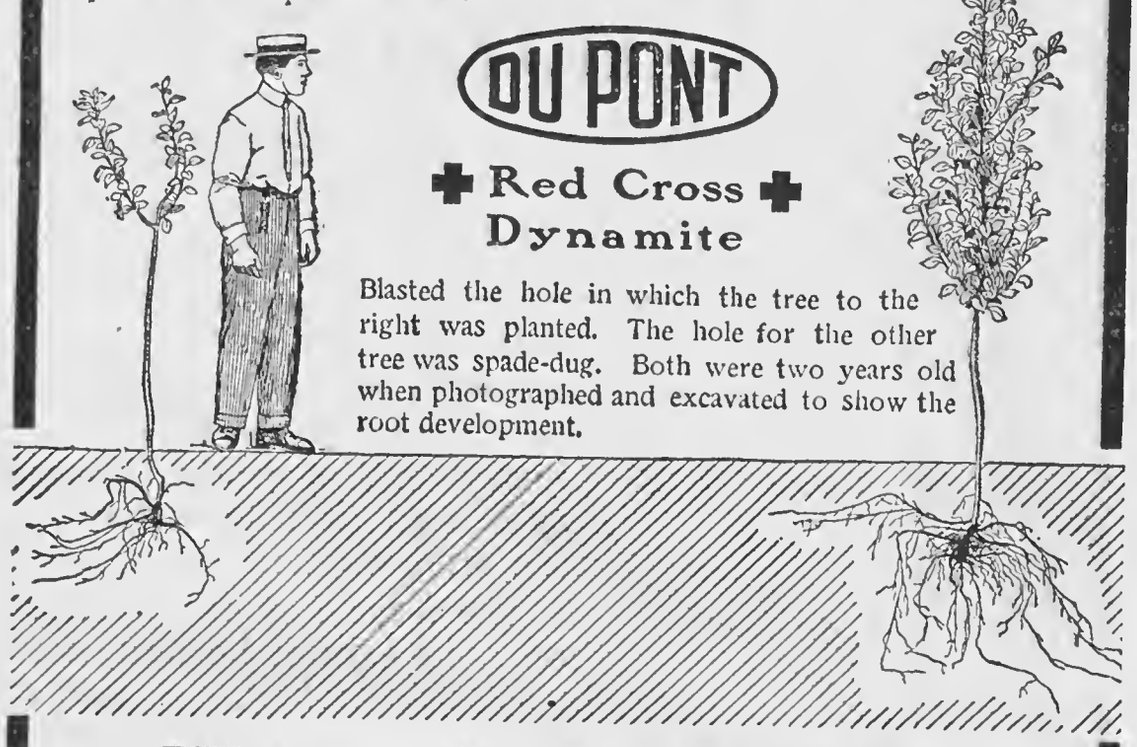
Florists' flowers offer an especially interesting field for the study of "sports" or bud variations, because the plants are under constant close inspection. Any change is quickly noticed, while rapid propagation and flower production permit a prompt estimate of the value or permanence of the mutation. On page 1066 of last year's columns we referred to the history of the Bride rose; it will be interesting to trace these variations among carnations. As an example, Enchantress is a leading commercial sort, widely grown under different conditions. Enchantress itself was a seedling, its parents being Mrs. G. M. Bradt, white striped with scarlet, and Mrs. Lawson, clear pink. The original Enchantress was a light pink, similar to Daybreak, a famous old sort now retired for lack of size. Apparently Enchantress is addicted to bud variations, for we hear of sports in many different localities. Those already prominent commercially are White Enchantress, Rose Pink Enchantress, Washington (a deep rose pink), Salmon Beauty and Enchantress Supreme. The two last named are both clear salmon, quite distinct from the Daybreak pink, or the deeper rose of the earlier sports. We are told that occasionally Enchantress Supreme shows a red-flecked flower, which would suggest that the character of Mrs. Bradt, recessive in Enchantress, is asserting itself in the salmon mutation. Here we have the progeny of two very distinct carnations, differing from either parent, suddenly sporting into several varying forms, all of which are fixed under extensive commercial propagation. Surely the fruit grower has as much reason to study these mutations as the florist: not for scientific interest alone, but because his normal profit may be eliminated by a sub-normal variation in quality of product. That this idea is not exaggerated is shown by recent investigations referred to in THE R. N.-Y.

A GENTLEMAN, going into his stable one day, found his little son astride one of the horses, with a slate and pencil in his hand. "Why, Harry!" he exclaimed, "what are you doing?" "Writing a composition," was the reply. "Well, why don't you write it in the library?" "Because the teacher told me to write a composition on a horse."—London Farm and Home.

LITTLE Grace, six years old, is the eldest of a family of four children. Not long ago she was admiring a new arrival at a neighbor's house. "You seem to like my baby," said the mother of the n. a. "Don't you want to take her home with you?" "No thank you," answered the little girl, soberly. "We born our own babies."—Cleveland Plain Dealer.

Which Tree Do You Want?

The slow-grower, with few and shallow roots and fruit of poor quality, or the vigorous, quick and steady producer of prime fruit?



DU PONT

Red Cross Dynamite

Blasted the hole in which the tree to the right was planted. The hole for the other tree was spade-dug. Both were two years old when photographed and excavated to show the root development.

THE ROOTS TELL THE REASON WHY

Dynamite set trees bear fruit one year earlier. Write for Farmer's Handbook No. 249 F, and learn how to stop first year losses and get quick profits.

BLASTERS WANTED

Many farmers prefer to hire blasters. Demand exceeds supply. Reliable men taught free and helped to get work. $200 capital needed Write for free booklet No. 249 B.

DU PONT POWDER CO., Wilmington, Del, Established 1802

The "JOY" BLACKBERRY

brings joy to all who grow, sell, or eat it. It is immensely profitable to the market grower, and "a joy forever" to the amateur gardener. The canes are of ironclad hardihood and need no staking. They yield heavily, *all* the canes being literally loaded with fruit every year.. I have tested this berry for several years, and am willing to stake my reputation upon it. In the winter of 1911-12 every Blackberry in my trial grounds was damaged more or less *except the Joy*, which came through with every bud and terminal in *perfect* condition.

Grow This Berry. It is Hardy and Wonderfully Productive

JOY Blackberries are coal black, and large, almost as thick through as they are long. In luscious flavor they surpass by far all other Blackberries I have ever grown. In my long experience with this berry its canes have never been affected, even slightly, by orange rust or other fungus disease, and I believe it is immune to them.

A full assortment of Strawberries, Raspberries, Blackberries, Grapes, Currants, Gooseberries, Garden Roots, Hardy Perennial Plants, Shrubs and Vines, Evergreen and Shade Trees, Roses, Hedge Plants, etc. Illustrated descriptive catalog replete with cultural instructions, free to everybody. Established 1878. 200 acres. Quality unsurpassed. Prices low.

LOVETT **J. T. LOVETT, Box 162, Little Silver, N. J.**

For Sale "Wilsons" Soy Beans, $2.75 Bushel; Cow Peas.....$2.25 to 2.50 "; Crimson Clover Seed... 4.00 "; Red Clover Seed $8.50 to 9.50 "

JOSEPH E. HOLLAND, Milford, Del.

PURE FIELD SEEDS

Clover, Timothy, Alsike, Alfalfa and all kinds of PURE FIELD Seeds direct from producer to consumer; free from noxious weeds. Ask for samples.

A. C. HOYT & CO., - Fostoria, Ohio

Hoffman's Catalog of Farm Seeds

with samples—free. Grass Seeds, Seed Oats, Seed Potatoes, Seed Corn. Everything for the farm.

A. H. HOFFMAN, - Box 30, Landisville, Pa.

Disco REGISTERED ALFALFAS

Seed Guaranteed as to Purity, Germination and Quality.

None but Hardy Tested Northern Grown Seed offered. Send for FREE copy of DISCO ALFALFA BOOK, telling all about Disco Alfalfas and how to grow alfalfa profitably.

DAKOTA IMPROVED SEED CO., 9 Main St., Mitchell, S.D.

GOOD SEEDS

BEST IN THE WORLD

Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois

Medium and Mammoth Clover—grown in the Mi-ami Valley. Also Alfalfa, hardy Northern non-irrigated seed. All high in germination and purity tests. Prices and samples freely furnished. MACE & MANSFIELD, Greenville, Ohio

Sweet Potato Seed—Sweet Potato plants; vegetable plants, and fruit plants. Price list free. MICHAEL N. BORGO, Vineland, New Jersey

OATS Reg. Swedish Select. Also Early Leaming, Reid's and White Cap Seed Corn and Garden Seeds. Samples and Catalogue free. THEO. BURT & SONS, Melrose, Ohio.

SWEET CLOVER SEED—Pure white and biennial yellow. Prices and circular how to grow it, sent on request. E. Barton, Box 29, Falmouth, Ky.

CLOVER SEED All varieties shipped. Direct Freight Prepaid. Glick's Seed Farms, Box 16, Smoketown, Pa.

SPORICIDE SURE CURE FOR SMUT in oats. Guaranteed. Simple to treat. Sent direct by parcel post where we have no agent. Booklet. Agents Wanted Sporicide Chemical Co., ATLANTA N. Y.

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

No. 6 Drill and Wheel Hoe

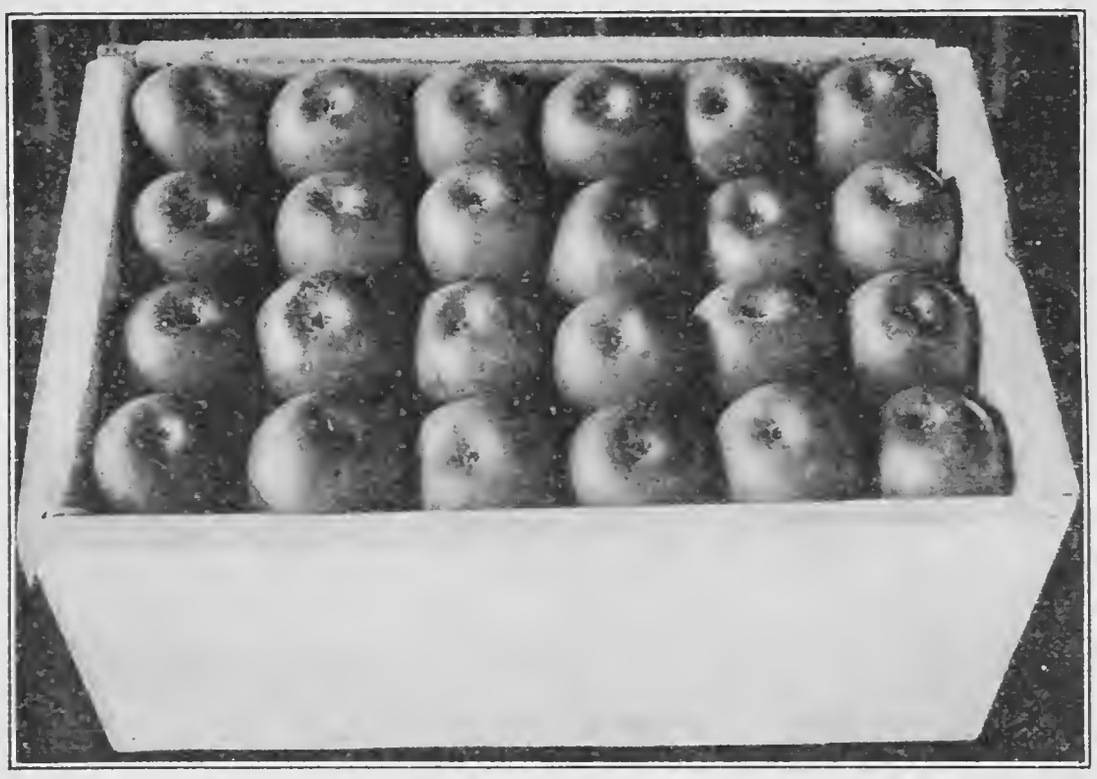
BATEMAN M'F'G CO. Box 1022 Grenloch, N. J.

APPLES FROM A VETERAN TREE.

By parcel post I am sending you a small box of Albemarle Pippins from a tree in Nelson County, Virginia, said to be 131 years old. It occurred to me that you would be interested in seeing and perhaps tasting apples from a tree of such an age. The apples were grown by Mr. W. H. Goodwin, at Avon, Virginia, and the tree is located in Nelson County, about 15 miles west of the main line of the Southern Railway. Mr. Goodwin states that there are about five of the old trees, all about the same age. They had been neglected for a great many years. A few years ago he trimmed them up and put them in pretty good shape. The crop last year on the particular tree from which these apples were picked amounted to eight barrels.

You have, of course, seen Albemarle Pippins which are much finer than these, but they were grown on trees which had been cared for from their infancy, and I doubt if your attention has been called to apples of good commercial variety and character grown on a tree of such age. This tree, if reports are correct, is evidently several years older than the famous Handy tree in Patrick County, and also older than the Hall tree in Patrick County, which have been written about a great deal. The Handy tree is reported to have produced 132 bushels of apples in one season and the Hall tree 165 bushels. I understand that the Hall tree grows what may be termed a commercial apple; the Handy does not. This old Nelson County tree, however, produces one of the best selling apples grown in the United States. Good Albemarle Pippins, at this time in Virginia, are bringing from $3 to $5 per fancy box. At $3 a box the crop of this old tree in 1913 would be valued at $72. In cut above is shown a picture of the box from which these apples were taken.

M. O. RICHARDS.



APPLES FROM A 131-YEAR-OLD TREE.

APPLES ON LONG ISLAND.

PART I.

Because of the prizes that have been awarded my fruit at the New York State Fairs of 1912 and 1913, THE R. N.-Y. has asked me to write my experience with and opinion of such apples as I grow.

DESCRIPTION OF ORCHARD.—As now planned the orchard consists of 105 acres, of which 77 acres are in apples, 15 acres in peaches, five acres in pears and eight acres in cherries, plums and other fruits and nut trees. The apples were planted 31 acres in 1902, a few of which were planted in Fall of 1901, 13 acres in 1903, eight acres in 1906 and 25 acres in 1907. Soil varies from a good sandy loam to a light sandy soil; of the 25 acres planted in 1907, 12 acres were on a light sandy soil, and have not made a satisfactory growth.

LOCATION.—This is on the eastern end of Long Island on the west portion of Shelter Island, surrounded by and close to salt water with natural woods as wind-breaks protecting the orchard trees on west, south and east; the prevailing wind is southwest. Land is rolling and well surface drained. Temperature is influenced considerably by the large bodies of water surrounding the orchard; the Summer temperature being lower and the Winter temperature higher on this account. Nothwithstanding the water surroundings the air is dry and we are favored with many clear sunlit days, the sunshine coloring our fruit well, as evidenced by the prizes taken at the State Fairs.

PREPARATION OF GROUND for planting: I find that when the plantings were made in ground well cultivated previously, better results are obtained, my only poor planting being in light sandy soil which had been cleared of brush, plowed, harrowed and planted at once. Planting was done in holes dug about two feet square and 16 to 18 inches deep, top soil used in filling and well firmed by shaking and tramping around and on the roots. After planting, manure or fertilizer was put on to give the tree a start.

PLANTING PLAN.—The orchard is planted on the hexagonal system, each tree being equally distant from six other trees surrounding it. In planting again I would not use this system, but plant in squares. In the system I used more trees can be planted per acre, but that is its only advantage. Cultivation is not so easy and when fillers are used, as I have done, the advantage is very much in favor of planting in squares. From my experience I say plant in squares.

DISTANCE APART TO PLANT.—My trees are all planted 17½ feet apart. When apples are planted apples are used as fillers. Mine are too close. I recommend 20 feet apart in squares for this section when fillers are used. In two or three years I shall have to take out three-quarters of my oldest apple trees to make room for those left; that is, my fillers must come out and come out all at once, as my trees are planted in the hexagonal system. Now if I had planted in squares only one-half of the trees would have to be removed then and the others taken out several years later after getting that many more crops to pay for their planting and care. Do not plant fillers on the hexagonal system. On the square system if fillers are planted and trees 20 feet apart, removing every other line of fillers (one-half of the trees) the trees are left 28 feet three inches apart in squares. A few years later the remainder of the fillers may be removed and the main trees left 40 feet apart in squares. When it is intended to grow crops in the orchard when the trees are young and until they come into bearing, no fillers should be planted, as with fillers there is no room for crops.

LOW OR HIGH HEADS to orchard trees: Mine are all low heads, Western style, branching from 18 inches to three feet from the ground. Some of mine are too low and interfere in cultivating. From my experience I would plant now with branches from 2½ to four feet above the ground; that is the lowest branches about 2½ feet from the ground and the highest four feet above the ground. The advantages of low-headed trees are many; easier sprayed, thinned, picked and trimmed, less exposed to wind and fewer apples blown off in storms.

PETER ELBERT NOSTRAND.

CALLER: "But you said you wouldn't charge me anything for the little legal question I asked you." Lawyer: "I haven't. What I've charged you for is the answer."—Boston Transcript.

FRUIT TREES

1847 : CAYUGA NURSERIES : 1914

For Thirty-five Years Under Their Present Management

H. S. WILEY—the man who stands behind Wiley's dependable trees

Reader You must know that healthy trees, true to label and up to grade specified are the only kind a man can deliver and stay long in the nursery business.

Read "I began planting your trees in 1899. To me it is a rare and remarkable circumstance that your trees have always been found true to label, healthy and free from disease. From a 10-year-old Wolf River orchard I picked this season as high as thirteen bushels from some of the trees. I want to make it emphatic that your trees do not travel under an assumed name.
HARRY W. LITTLEFIELD, Waldo Co., Maine.

Growth of our business has been such that we now have large plantings at Cayuga, Lyons, Rochester and Dansville, N. Y. While we give every care and detail necessary to the filling of small orders, our business is more largely confined to supplying commercial planters.

One example of growth. Some thirty years ago we filled an order for 300 Baldwin trees for a planter in Kennebec Co., Maine; we now send annually trees in carload lots to that county.

VALUES.—Our free CATALOG will advise you of our values without any extravagant promises. WE HAVE NO FAKE WHOLESALE PRICES. Our purpose is not primarily to grow a cheap tree, but the best tree that can be grown and placed in the hands of the planter in a fresh condition.

Our stock of FRUIT TREES never was more complete or better in any respect. A complete line of ***fruit trees*** for the ***orchard, bush plants*** and ***roots for the garden*** and ***ornamentals*** for the ***lawn.***

ENDORSEMENTS.—The character of our endorsements are unlike many others. Why? Because they come from planters who have been fruiting our trees for a quarter of a century more or less. They deal with WILEY'S TESTED TREES that have made good and are making good all over the country.

Read the following, and we can multiply this many times:

"I have been planting trees for twenty-five years and want to say that when it comes to grading up fruit trees and labeling them correctly, I can depend on you. My trees never disappoint me in the variety ordered from you. The last 1,400 peach trees planted came into fruiting this past summer and were all true."
F. D. GARDNER, Niagara Co., N. Y.

PARCEL POST.—A full page of our catalog is devoted to parcel post values.

Our pamphlet on Suggestions, Pruning, Spraying, Selection of Varieties for various localities will be mailed with catalog on request.

Fellemburg Prune

SEND FOR CATALOG NOW

H. S. WILEY & SON, Beach St., Cayuga, N. Y.

10 Extra Quality Baldwin 2-Yr. Trees $1

We want every fruit grower and farmer to become acquainted with our nursery stock by sending for and planting these apple trees this spring. The above offer is exceptional. It is made possible because we grow these trees ourselves and sell them

DIRECT TO THE PLANTER WITHOUT PAYING AGENTS' PROFITS.

Every fall we import inspected French Seedlings that must come up to our standards for straight trunks and strong roots. They are stored in our stock cellars until spring, when they are planted. Careful cultivation and grubbing makes them grow strong in our soil. About July first these seedlings are budded with scions taken from trees of known merit. This important work is under the personal supervision and has the entire attention of Mr. Denton, a nurseryman of 25 years' experience, who also directs the cultivation through the year and directs the "heading" the second spring. This care on our part insures nursery stock that we

Guarantee True to Name, Free from Diseases or San Jose Scale

and as sturdy, well-rooted and branched as trees can be made to grow.

You take no chances in buying such stock; you lose surely if you do not take advantage of this special offer. Baldwins bring top market prices, keep well, have the color and flavor. You can't make better use of a quarter acre, especially if you interplant these 10 Baldwins with some of our Peaches, Plums, Pears, Cherries, Quinces or Small Fruits, of which we have over 700,000 to sell this year.

The 10-for-$1 offer for selected 2-year Baldwins holds good only as long as they last. Only 10 to each individual. Send $1 at once and trees will be held for you. Write for special prices on your list, FREIGHT PAID.

Send for Free Catalog at once and order early.

DENTON, WILLIAMS & DENTON, 225 Elm St., Dansville, N. Y.

STARK TREES AT LOUISIANA, MO. SINCE 1816

Grand New Year Book

1914—just printed; shows fruits in actual colors and size. Full of valuable orchard information. Tells what, when and how to plant. *Mailed Free.*

STARK DELICIOUS

The Most Amazing Apple Production in Two Centuries

(Trade Mark)

is fully described—its glorious record of twenty years in the American orchard is accurately given. No one with room for a single tree can afford to be without this marvelous fruit. Of exquisite flavor—large, brilliant, waxy red. The book is *free.* Write for it.

Stark Bros. Nurseries and Orchards Co., Box 123, Louisiana, Mo.

Special Rose-Bush Offer

To readers of *The Rural New-Yorker* who love beautiful roses, we offer to send 10 CHOICE EVERBLOOMING ROSE-BUSHES, POSTPAID, FOR $1.00

These 10 bushes are each a different variety selected to combine in a bed the most charming colors and fragrance. They are strong and vigorous, grown on their own roots and especially adapted to the soils and climates of America. **Every Conard & Jones rosebush is guaranteed to grow and bloom. You run no risk when dealing with us.** Send a dollar bill today at our risk for these 10 fine rosebushes and have plenty of roses in your garden next season.

WRITE FOR FREE 1914 ROSE GUIDE

Contains The Rose Lovers' Calendar of Operations. Tells how and where to grow roses, how to plant, cultivate, prune, etc. Lists 360 varieties of the choicest roses for America. Send today for this free book.

Rose Specialists. Over 50 Years of Experience

THE CONARD & JONES CO., Box 4, West Grove, Pa.

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

How Much Wood Growth Desirable?

It is about as hard to determine how much a tree should grow in a season, as to fix the proper increase of weight for an animal. One tree may make a growth of six feet in a season and remain vigorous and healthy, while another alongside may not make half as much growth and not be as healthy. I aim to secure a rapid growth early in the season, and by means of a cover crop, check the growth in time to ripen properly before Winter sets in. I have a young peach orchard which has been planted two seasons, which the past season made growths of five or six feet in many instances. This is probably excessive, and two-thirds as much would have been safer.

Contrary to my usual custom, I grew strawberries in it last season, and the late cultivation allowed the growth to continue longer than usual, and if conditions had not been favorable for ripening, there would have been considerable danger of winter-killing. I like to secure in the young trees as rapid growth as is consistent with health in order to secure a large bearing surface, and the capacity for large crops, as soon as possible. After a few years' growth, however, I try in the case of apples, to induce fruitfulness by a slower growth and less pruning for a few years, until the energies of the tree are diverted into that channel, when I again resume pruning and feeding. I have old bearing peach orchards that do not make over a foot of new growth annually, but that is usually caused by a very heavy crop the previous year, and is below normal. If I have a pear or apple tree which has not attained its full size, I am not satisfied if it does not make more than a foot of growth, unless it have borne a heavy load of fruit. If it has borne nothing and is under 15 years old it should make from one to two feet at least, depending on varieties.

Of course a tree 25 or 30 years old, and bearing crops, will not make much growth, perhaps often not more than six inches. Some trees concentrate their energies on a few limbs of long growth, while others form a multitude of small branches of shorter growth. I believe a greater annual growth can be safely produced where the tree is fed a properly balanced ration, than where there is a deficiency of any element of plant food, or of moisture. We expect the peach to mature earlier than other trees, and also to begin bearing younger, hence we expect more rapid growth, and I find no trouble with growths of three or four feet annually, provided it is secured early in the season, and from properly balanced rations. Once a tree "gets the habit" of bearing heavily, there is not much danger of excessive growth.

Ohio. W. W. FARNSWORTH.

Girdling Trees.

You speak of girdling trees. How do you do it, and at what time of the year? Is it just applied to apple trees?

Lamar, Mo. K. B. D.

Girdling trees to make them bear can be done successfully and safely if the proper precautions are observed. There is almost no danger whatever in girdling apple, pear and quince trees, but peach, plum and cherry trees would die from the same operation at the same time. This is because they do not heal over the wounds as the pome fruit trees do. The time to do the girdling is when the trees are in their most vigorous state of growth, which is usually in June, and that is when I have always done it. A ring of bark from one to four inches wide should be taken out entirely around the trunk of the tree, but care should be used that the slimy cambium layer under the bark is not mutilated. From this soft matter the new wood and bark is formed. The interruption of the circulation is what checks the growth and causes the formation of fruit buds much more abundantly than would naturally occur. To run a knife simply through the bark, making a ring around the tree in one or two places will have considerable effect. So will binding a wire very tightly around the trunk or a branch and removing it after the season of growth is over. It chokes off the circulation in some measure, and causes fruit bud formation. But the removal is necessary, or there might be permanent injury. H. E. VAN DEMAN.

Importing Fruit Trees from Europe.

On page 38 I note an inquiry about importing fruit trees from Europe and as I happen to be well posted on the subject by practical experience, I am led to reply. After passing my three-fourth century milestone (seventy-fifth birthday) I determined to make a change in my occupation, and having been familiar with dwarf fruit tree culture in my young days in the "Old Country," I decided on taking up that subject for further experimentation and established a dwarf fruit tree nursery, and sent to Europe for a stock for propagating dwarf trees on Puget Sound (a country admirably adapted to the purpose). My first shipment consisted of Doucin and Paradise apple stock, Myrobalan plum, Angers quince, Mahaleb cherry. These I procured from France, and had them shipped to New York by steamer, where I had a consignee who received them and instructed him to pay custom duties and all other expenses. I had him ship the stock to me at this place, which altogether made a journey of over 6,000 miles. Then I procured a shipment of stock of one and two-year-old dwarf apple, pear, plum, cherry, peach, nectarine and apricots, with small fruits consisting of currants and gooseberries, etc. These were shipped to me from Southampton via. New York, and then across the continent to Puget Sound. Both these shipments arrived in good order, arriving in 30 days from Southampton at a cost of over 100 per cent. advance over prices of stock at the nursery in Europe.

My next and most of my future orders I had sent by "parcel post," which I then began to exploit. It must be remembered here that this was four years before parcel post was introduced in this country, never thought I could at that time procure an unlimited number of packages from Europe provided none weighed over 11 pounds. I found the parcel post admirably adapted to my requirement as dwarf fruit tree nurseryman with the advantage of requiring only 15 days for transportation of over 6,000 miles and all the importation charges, such as freight, brokerage, transportation, docking, wharfage, were eliminated and covered by the postal charges on each parcel, while the duty was collected by the local postmaster at this end, which reduced the importation charges over and above the nursery price less than 50 per cent. advance on shipment. Thus I continued my work until 1913, with the fullest satisfaction, when I had to send for a shipment (to fill up shortages of certain dwarf stock) to my correspondent in Europe, instead of receiving which I received a notice that the United States Board of Horticulture had issued new instructions as to importation of fruit trees from Europe; that importer should first procure a permit from the Board of Horticulture in Washington, D. C., naming a list of the varieties required, and address of the grower in Europe where they were to be purchased. This permit was issued in triplicate, one copy of which was to be filed with the Board at Washington, D. C., one to be forwarded to the custom house at port of shipment, and one retained by importer. Then the U. S. agent resident in London would appoint an expert to examine the stock at the nursery provided a fee of $10 and probably $10 or $15 more for traveling expenses, etc.

But that was not all, for in their bureaucratic wisdom and high mightiness they prohibited in toto the privilege of parcel post being allowed any nursery stock whatever! And this I called the death blow to my nursery! Having now reached my eighty-first year the only thing I could do and avoid unnecessary worry at my time of life was to close my nursery, which I have already done. While the foregoing is the present state of matters, were I a younger man I would still hold on until the Panama Canal is open, when nursery stock may be shipped by passenger steamer from Southampton via New York in bond, to forward on the Pacific coast or via Panama Canal, eliminating the overland charges by rail as well as all liability to snow blockades and at much less cost than the overland rates from New York to the Pacific coast at present.

Whatcom Co., Wash. A. W.

You Can Depend Upon

Allen's Strawberry Plants

Strawberry growers must set out plants that will thrive and bear fruit true to name. You cannot afford to take chances with carelessly grown plants.

Buy Allen's True-to-Name Plants

and you are more certain of large crops of big, delicious strawberries. Allen's plants are hardy, vigorous and heavy yielders of luscious fruit because they are carefully grown from healthy stock.

All Standard Varieties—Any Quantity
Prompt Shipment

All the early and late strains of standard varieties of strawberries for every soil and climate requirement. Over 120 acres are devoted to strawberry culture alone at the **Allen Nurseries.** Over 29 years' successful experience growing berry plants of the best quality. Allen's plants are carefully selected and packed **fresh** for shipment and **guaranteed true to name.**

Here's What Customers Say:

From California—Plants arrived today in fine shape. The growers in this locality as well as myself are delighted with them. D. R. DUNCAN, Los Angeles County.

From Missouri—Received plants O. K. They surprised me. So fine, packed nicely in bunches, with roots all straight down, one plant like the other and no scrubs in them. JOSEPH VOGEL, Jefferson County.

From Montana—The plants came through quickly and in fine condition. MATT W. ANDERSON, Lewis and Clark County.

From New York—Wish to acknowledge for the Station receipt of strawberry plants. Arrived in good condition. A. M. TAYLOR, Geneva, N. Y.

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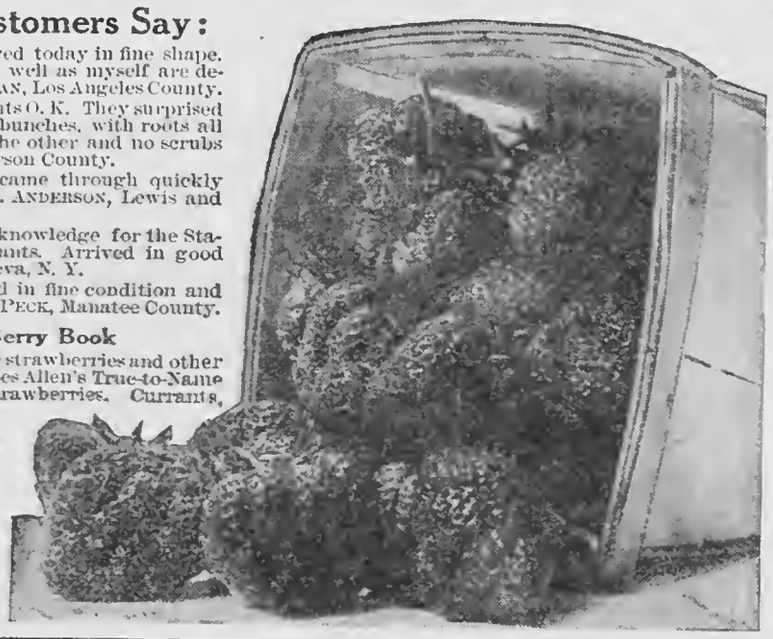

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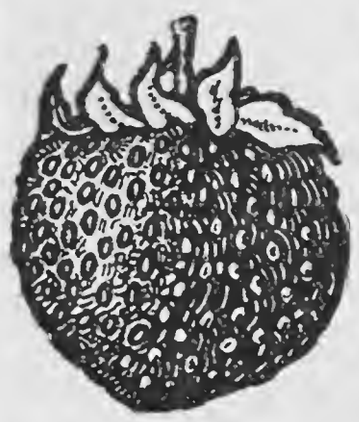

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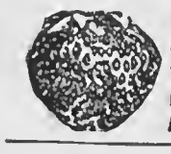

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Pruning the Grapevine.

I should like very much to read an article on how to prune grapevines and blackberries. I should like to know more about pruning in general. H. O. J.
Toledo, O.

In answering this question I assume that some system of training has been decided upon, and that the vines are but recently set. It is the usual practice to cut back all the growth of the first year back to two or three buds. This gives the root opportunity to become well established. The canes that develop from these two buds, if the vine is vigorous, are tied up the following year, which is the third growing season. These may be tied along the lower wire, obliquely to the upper wire, one cane to the lower wire and one to the upper, or one cane only to the upper wire, which is about 4½ feet from the ground. The second year after it is carried to this wire two canes are laid down along it, one extending to the right, the other to the left. Each

TRAINING THE GRAPE IN SOUTHERN NEW JERSEY.

year but two canes are kept for fruiting wood, along with sufficient spurs to provide for these canes the following year. For the amateur the high-renewal system offers a very satisfactory plan. A trunk or stem is carried to just below the lower wire, which is 18 or 20 inches from the ground. Two or three canes may be retained for the fruiting wood along with spurs of two or three buds, that are to furnish these canes the following year. Two of these canes may be tied along the lower wire, while the third is carried to the second and tied along it. The trellis consists of three wires. One cane may be tied along the lower wire and the two carried to the second, and there laid down. As soon as the shoots from these canes have made growth that reaches the wire they are tied to it by string, raffia or rye straw. Thus all the current year's growth is kept off the ground.

The pruning the following year consists of cutting back the previous year's growth to two or three canes and a like number of spurs. The only wood that is left each year, older than one year, is the short trunk reaching to the lower wire or just below. Whether one cane or two are laid down on the lower wire is governed largely by the location of the canes; some are so placed that they can be readily tied in one wire while others accommodate themselves to the other. Thus individual judgment will have to determine the matter. In cases of excessive wood growth four canes may be left, then two canes are tied to each wire. Often when canes are laid down on the second wire the trunk is extended to a point just below it, and the canes are taken from this level. However, this is a matter of choice with the grower. F. E. G.

Dishorning and Pruning Old Apple Trees.

Let me say at once that we do not advocate any dishorning which would be taken to mean a cutting back of large trees to the bare pole-like branches. For the best commercial orchard practice, trees should not be over 20 to 22 feet in height, so it is often an advantage to take eight to 10 feet out of the top of the highest trees. In doing this the plan is to select some wide spreading branch to continue the growth and to cut the top just above this, thus increasing the spread and the bearing surface

We, of course, understand that all dead limbs and branches and all badly cankered branches should be removed and burned at once, to get rid of insects and disease spores which they usually contain. Then we look for branches which cross one another and usually remove the weaker and poorer. If the tree is still too thick at the center we may remove one or more additional live branches. One should always bear in mind some of the fundamental reasons for pruning, viz.:

1. To keep the trees within bounds so as to facilitate spraying and harvesting.

2. To preserve symmetry or form of the tree.

3. To keep the top reasonably open, so as to allow sunlight to pass between the branches and leaves, thus tending to cause the fruit to color well.

In all of the work of pruning one must be careful not to over-prune, for in order to have maximum crops it is self-evident the trees must carry a maximum amount of well-placed bearing wood. This, in the case of the apple, is the younger wood, two, three, four and five years old.

Stubs or shoulders should never be left, as they usually do not heal over but dry out, decay and fall away giving rise to holes in the trees. In removing a branch remove it entirely, cutting close up to and flush with the bark of the trunk or the parent branch from which it sprang. Also a good plan in removing large limbs is to cut one-quarter to one-third way through on the under side first, so as to prevent stripping the bark and splitting the wood as the branch falls. One should take care to paint all cut surfaces over an inch in diameter and thus preserve the wood until nature heals it over with bark. For paint one should use raw linseed oil, white lead and enough lamp black to tone it down to a slate color. A small amount, say five to 10 per cent. of crude creosote oil the same as is used to kill egg clusters of the Gypsy moth, may be added as an additional disinfectant and wood preserver. Turpentine should not be used in paints for covering tree wounds, as it is likely to injure the bark.

PROF. WOLFF.

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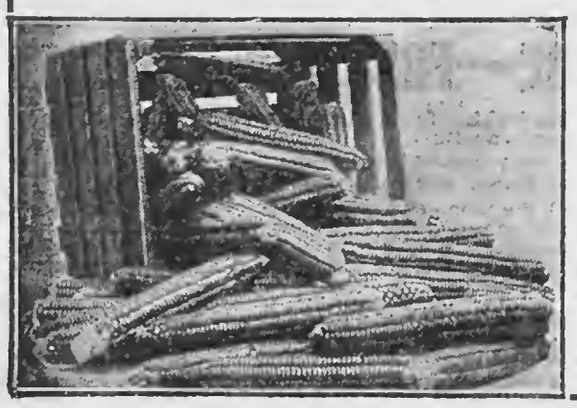

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COST OF AN APPLE ORCHARD TO BEARING AGE.

PART I.

There are two principal factors which enter into all costs of production, namely, labor costs and capital or cash costs. Labor costs are principally two, man and horse. The costs of man labor are made up of cash wages, board, lodging and privileges. The costs of horse labor include feed, care, shoeing, stabling, interest and depreciation. Man labor costs us on an average, including board, etc., 20 cents an hour or $2 a day. Horse labor costs 15 cents an hour or $3 a day for a team not including driver. Cash costs are made up of seed (or in the case of orchard trees) fertilizers, including manure, equipment charges, overhead charges, such as taxes, insurance and interest and miscellaneous costs such as packages, spraying materials and the like.

ESSENTIALS IN RECORD KEEPING.—There are two absolutely essential things to do in securing an accurate cost of production, and only two. The first is to make a complete record of all cash expenditures. The second is to make a complete record of man and horse labor. These records must, of course, be so kept that the various costs can be separated and charged to the particular enterprise, area, or crop to which they belong. At Beechwood Farm the cash accounts have been kept in a cash book which differs not at all from the ordinary cash book except that it has a column in which to designate by letter or number, the field or crop to which the item entered is chargeable or to be credited. The labor records are made by the tenant. They are kept in the form of a diary, not unlike the ordinary diary except that it has in three right-hand columns places in which to record in a definite and easily readable form, the field on which the labor was done, and the number of man and horse hours expended. If desired the hours of the day may be written at the left of the page and a line drawn across the page to separate the different items. In other words it is an organized diary—one in which facts can easily be found. The original records are brought together and tabulated once a month so that they can be charged against the crop to which they belong.

With this brief outline of our method of collecting costs in mind, let us examine the costs of growing to bearing age two particular apple orchards, one 11 years old, filled one way with plums and the other six years old filled both ways with peaches. Orchard A was set in the Spring of 1903, 36 feet apart each way. In the Fall of the same year it was filled in the long way of the rows with plums. These plums have never paid as well as they should, and I should not use them again, although they have cost very little. The orchard is about 7¼ acres in extent and contains 475 trees. The varieties of apples are Duchess of Oldenburg and Twenty Ounce, and Tompkins County King worked on Ben Davis stock in the seventh and eighth years. This of course, has delayed bearing. The plum varieties are Burbank, Abundance, Bradshaw and Reine Claude.

Cost of apple orchard filled one way with plums, to ten years:

ITEMS.	Total for the 10 Yrs. Cost an Acre	Cost a 100 Trees
Labor costs (man hr. 20c) (horse hr. 15c), setting trees (inc. staking out, hauling and replacing)	$5.38	$8.54
Grafting	*.34	*1.36
Spraying (once)	1.55	2.46
Pruning and hauling brush	5.69	9.03
Fertilizing and manuring	9.42	14.50
Hoeing	4.03	6.40
Plowing	9.13	14.50
Cultivating	11.13	17.66
Picking (last four years only)	2.93	4.65
Marketing	1.09	1.73
Miscellaneous	1.26	2.00
Total Labor	$51.95	$82.46
Cash Costs—		
Apple Trees inc. replacing 33 at 16c..	$5.28	$16.00
Plum Trees inc. replacing 30 at 16c..	6.46	21.53
Grafts	3.10	12.40
Fertilizer and Manure	9.42	15.00
Cover Crop (1)	1.19	1.88
Spray Material	1.19	1.88
Packages	2.49	3.95
Equipment	6.42	10.19
Taxes	11.03	17.51
Interest 5%	89.50	142.06
Buildings	7.50	11.90
Overhead (9% other cash costs)	16.60	26.35
Management	50.00	79.36
Total Cash	$210.18	$333.62
Grand Total Cost	$262.13	$416.08
Grand total per tree		$4.16

*about 5A 175 trees.

Summary statement of the costs of growing an apple orchard filled one way with plums to ten years of age:

33 Apple and 30 Plum Trees an Acre Set 1903, 18 x 36 feet

	Acre	100 Trees
Total Cost of Orchard at 10 Yrs.	$262.13	$416.08
Net Income of 10 Crops between tree rows	42.20	67.00
Income from Filler	16.87	26.77
Income from Apples	2.82	4.47
Total Income from Land	$61.89	$98.24
Actual Net Cost of Orchard	$200.24	$317.84
Net Income from Apples 11th Yr.	$12.75	$20.24
Net Income from Filler 11th Yr.	18.25	28.97
Total Income from Orchard 11th Yr.	31.00	49.21
Total Cost of the Orchard 11th Yr.	14.27	22.65
Net Income of Orchard 11th Yr.	$16.73	$26.56
Net Income from Crop 11th Yr.	25.78	40.92
Total Net Income from Field 11th Yr.	42.51	67.48
Net cost of Orchard at 11th Yr.	157.73	250.36
Net Cost of Orchard per Year	14.34	22.76

M. C. BURRITT.

Taxation of Apple Orchards.

Will you give me a little information relative to the taxation of apple orchards? 1. Are the trees taxable or only the land they grow upon? 2. If taxable, how much per tree for trees in a thrifty 10-year-old orchard? About 15 years ago we purchased a badly rundown stony piece of land for about $25 per acre. This we set out to peach trees, and secured three good crops, when the orchard had to be cut down owing to yellows. In 1904 we set out an apple orchard, and 1913 was the first year we have had a paying crop. All this time we have been to great expense clearing off stone, making fences, etc. This past year all property in the town has been re-assessed. This orchard has been assessed for $125 per acre, while just over the fence one of our neighbors pays taxes on the same kind of land, although not improved as much, at a valuation of $30 to $35 per acre. All new manufacturing concerns coming into town have all taxes abated for three years, to encourage them, while we are spending all these years improving our land and still paying taxes.

We have been forced to pay for all city improvements such as water, lights, sidewalks, etc., while in other towns similarly situated they have fire lines or borough systems. We have tried to have this matter adjusted, but the village inhabitants have outvoted us. We are facing a situation of paying taxes on about $15,000 while the average village dweller pays taxes on about $2,500 or $3,000 on a tax rate of 13 mills for his home and gets all the benefits referred to. Our taxes this past year have been forced up about $7,000. I should like opinions as to the merits of this case.

New Haven County, Conn. F. Y. Y.

R. N.-Y.—This seems to be a local matter without any uniform system of assessing property. In our own locality in New Jersey our farm, including orchard and wood land, is assessed at $61 per acre. The farms on either side without much fruit carry an assessment of $60. On the same ridge and within half a mile values are $50. The best orchard in town—far back from the railroad—is assessed at $40 or less. Most of this land is held for sale at $250 to $300 per acre. There seems to be no uniformity in taxing improvements in trees or lawns. Nothing except comparative figures can give any data for answering the question. We would like to have statements showing what increase in valuation has been made to real estate as the result of tree planting.

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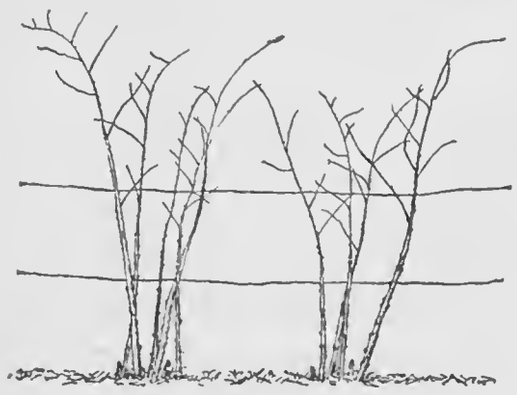
THE NEW BERRY CULTURE.

PART I.

Since my article on "A Year's Bush Fruit Record" appeared in THE R. N.-Y. of October 25, I have received some letters which indicate that some have slightly misunderstood one part of it. I made the statement that, after spending about three weeks on 2¼ acres, removing old canes, thinning and tying the others, the work of caring for the berries was not much more than for other well-cultivated crops. I had in mind the truck crops rather than field crops, and by well-cultivated I mean where the dust mulch is maintained and the crops kept clean throughout the season. I do not wish to be understood that maximum yields may be grown by our system, without a goodly amount of hand work, for, important as I consider this system

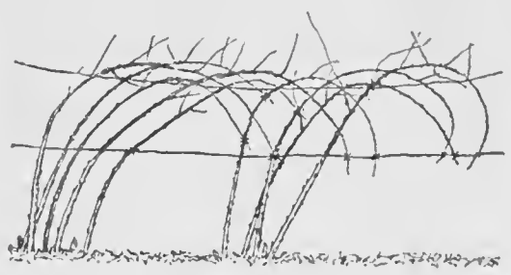


TRAINING THE FIRST YEAR.

of more importance than any system, and we cannot produce the best yields of this or any other crop until we have studied the crop as well as the best methods of growing it.

My attention was first drawn to this system by seeing a wonderful crop of red raspberries in another State, that produced more than 200 bushels per acre. This was on very rich deep soil, and in a climate well suited to the crop. After studying the crop and the system for two years, my conclusion was that more than anything else those immense crops were the result of the plants being able to get all the moisture needed throughout the entire season. I thought then, and do still, after several years' experience in western Pennsylvania that in many of the Eastern States where we have the advantage of good local market, these large yields could be nearly or quite equaled, provided we could handle the moisture problem so that the plants would have all the water needed all season without an excess at any time.

The red raspberries, blackcaps, and blackberries, are handled by the same system, with slight modifications. They may be grown on a wide variety of soils. Good drainage, and ability to hold moisture during the hot Summer months are the important requirements. We found after some losses, that good tile drainage was not suffieient for the red raspberries



CANES BENT OVER IN LATER TRAINING.

on our heavy clay; that after repeated freezing and thawing, the soil became so compact that the water would not sink into the ditches quickly, and that the red raspberries cannot stand a water-logged soil even while in the dormant state. While our drains worked perfectly in Summer we could not hold the berries over Winter without damaged roots, until we ridged the rows slightly and left an open furrow midway between the rows, for surface drainage until we began cultivating again in the Spring. We should avoid frosty locations, and select one sheltered from the worst winds when practical. The plants should be the best to be had from reliable sources.

We have an acre of blackberries now six years old which is a mixture of seven or eight varieties. I would be willing to give one hundred dollars to have them all replaced just as they are, with the variety I bought. We have found that with both red raspberries and blackberries, the green shoots that come up early in the Spring will make as good plants, as any where they can be taken up nearby and set immediately. It is necessary to get a piece of the old root, and, of course these tender green shoots will not stand rough handling, or shipping. When last year's plants are used they will often send out one or more fruit spurs from the old stub. These should be carefully removed, as a handful of berries allowed to mature interferes seriously with the development of the young plant.

All cane berries are set eight by three feet. However rich the soil, we would not set them any closer. In fact our last acre of blackberries were set four feet apart in the row, but it is too soon to report results.

When convenient the rows should be run north and south, as the sun can then shine on both sides. Care should be taken to have the rows as straight as possible, for we expect to cultivate them for several years, and it does not take a very great crook to make narrow places that prevent the use of the spring-tooth harrow, as well as making the use of other tools more difficult. Some low-growing crop is grown between the rows the first year, and on rich soil cabbage or beans may be planted between hills in the berry row. The following Spring a row of seven-foot posts is set in each berry row, about 20 feet apart. Then two wires are fastened to these posts, one three and the other five feet from the ground. We use No. 12 fence wire, and drive all staples tight. The sprawling growth of the first year is then tied up to the wire. We use carpet warp for this work, as it is much stronger than the cotton twine. This is quite a job for the beginner but it can be done early in the Spring, before the rush of other work comes on. Then the cultivator may be run close to the row, reducing the hand work to a minimum. If cultivation is kept up as it should be the second year's growth will be very vigorous, and if these new canes hang out across the row they are tied back to the wire, loosely, never drawing a string tight around a growing cane.

B. V. EGBERT.

Reseeding Cattle Lot.

What can I do with a five-acre grass field which has been used as an exercise yard for 50 cows since September? The turf is badly cut and tramped. Will clover sowed early and harrowed in unite with the remaining grass to make a crop this season?

H. R. W.

New London, Conn.

In our experience we have never been able to get a good catch of clover under such circumstances. That ground must be beaten down hard and cut up. We doubt if you can hope to get a proper seeding without plowing or disking and fitting the soil well. We should prefer to plow and plant corn on such a field, seeding rye or wheat and clover at the last cultivation.

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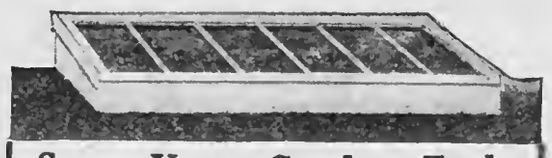

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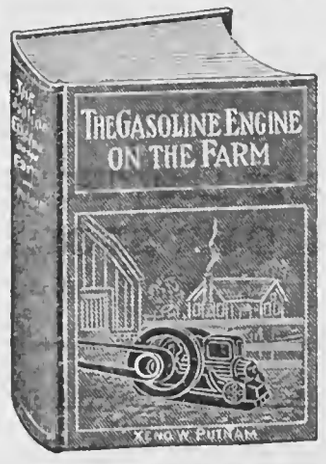

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THE PRUNING OF APPLE TREES.

PART I.

We have definite information and figures to back it up, when the question of selecting, planting, fertilizing, or marketing arises, but no one can give more than general information as to how to prune, unless he has seen the tree, knows the variety and something of the previous history of the tree. One also needs a pretty good imagination, which will help him see the effect the pruning will have on the future growth of the tree.

What is pruning? Is it a mere forming of the top of the tree into some symmetrical or grotesque shape, or is it a process in the development of the tree in which the grower considers the previous life, present condition as to surroundings, vitality and value, and the effect of the treatment on the future of the tree? One's success depends largely upon his conception of what pruning is. The writer has, in the four years spent at commercial pruning, discovered many curious ideas concerning tree pruning. One man said that he left long stubs on his trees because someone had told him it would take longer for them to rot into the tree. Another with the same idea, in talking about some trees that had just been pruned, said that they were spoiled just as his neighbor had spoiled some.

This neighbor had made all cuts close and decay set in and destroyed the trees. When asked if paint and other means of protection had been applied to the cuts, he said there had not. That is only one of many cases of jobs half or carelessly done, followed by failure and the prejudice of many against modern orchard practice. Another man claims that little or no pruning should be done, but that the trees should "get the bearing habit." That man's trees are a sad sight as far as appearance goes, and though he had a fair crop of fruit this year it was not of high quality.

PEAR TREES HEADED HIGH.

The cut shows one man's idea of the proper height to head pear trees. He said he wanted to get under the limbs with a horse. These trees are about six years old, and are headed over 4½ feet high; this makes a tree that has little chance when a high wind comes and finds it full of fruit. This man will also have a difficult job when he starts picking his fruit. Such trees as these are more apt to be injured by tools and harness than trees headed lower. The picture shows how the trees lean, caused by high winds and no protection. Some trees in this orchard, which have been headed much lower, are not affected by the wind. These trees were cut back so severely during the second and third years that the tops are nearly all one to three-year wood. This man thought that cutting the trees back, leaving little or no wood of the current year's growth, would force the growth into the trunks and make them stronger. He would have had much better results if he had taken one-quarter or one-third of each year's growth off, or better yet, have gone over the trees during the growing season and clipped the tips of the shoots when they had attained the proper length, or about 16 to 18 inches. This would check the lateral growth of the twigs and have a tendency to increase their diameter. The writer has followed this plan and finds that it gives a strong and well-shaped tree, with the minimum expense for pruning.

Most of the pruning in the past has been done in the Winter season, but the growers here in South Jersey are gradually taking up Summer pruning for apples and pears, as they find it tends to check the excessive growth of wood, and induces the development of the fruit buds. If the trees are young and vigorous they should be pruned in Summer, but if they are old or weak, the Winter pruning will start stronger growth, provided the trees are not too weak and too severely pruned. In pruning one must remember that the tree must depend on the leaves to elaborate the crude sap before it is available for forming new wood or fruit, and if too much of the leaf surface is removed from the weak tree there will be a very slow recovery and in some cases the tree will even become weaker. Judicious pruning will, as a rule, induce a strong healthy growth of wood which produces more and better fruit.

Many people have a mistaken idea regarding the real value and reasons for the "heading in" or cutting back of young growth in fruit trees. The case of the pear trees shown in the picture illustrates the effect of heading in too short during the early life of the tree. Some growers go to the other extreme and do not cut back at all. They just thin out intersecting branches and let the trees make all the lateral growth they can. This usually produces a tree with weak slender main limbs, which are not able to hold up the heavy load of wood and fruit they might have held, had they been pruned to a length more in proportion with the diameter.

R. B. GILMAN.

Manure for Fruit Trees.

I set several acres last Spring to apple and peach trees. I was told not to manure the trees when I set them out but wait until this Spring to manure them. I obeyed my instructions, excepting two rows of peach trees, about 40 trees long, which trees were set down a row already manured with horse manure for cantaloupes, (in order to get the rows the same distance apart this was necessary). I find that the trees set in the rows where the manure was, have made four times the growth of the others where there was no manure in the rows. I wish to know what is best to manure these trees with this Spring, and also if it is best to spray these young trees? If so at what time, and what mixture to spray with? E. W. T.

The advice not to manure those trees was good. When the trees are set in a field where the other crop is heavily manured, you will in the end do the trees more harm than good by piling on more manure. While they may make a quick and active growth of wood, this is not an indication of the best tree. This tender wood is far more subject to disease and danger from frost than a shorter growth of hard, solid development. When the tree is forced so hard from the first, fruiting is often delayed, for the tree is started into wood rather than fruit production. We should spray those trees, by all means, with lime-sulphur, but not use manure when planting. It would be far better to use a mixture of three parts fine bone, and one part muriate of potash, about two pounds of the mixture scattered around each young tree, and well worked into the soil.

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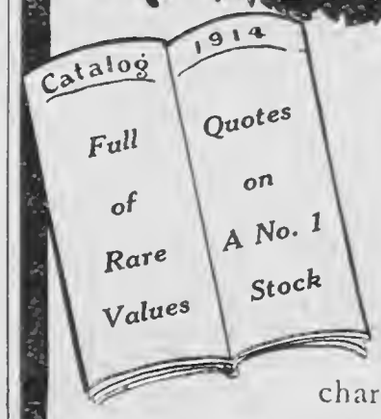

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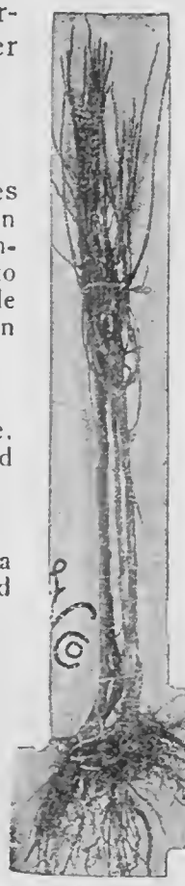
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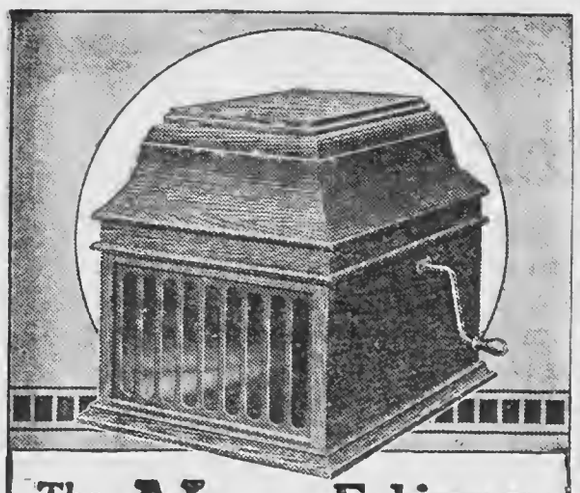

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REGULATION OF NURSERY TRADE.

A bill before the New York Legislature is endorsed by the fruit growers and horticultural societies. It is designed to regulate the sale of nursery trees—the vital points being given below:

263. Sale of fruit-bearing trees. Every person, firm or corporation who shall sell any fruit-bearing trees shipped from any point in the State of New York, must have attached to each car, box, bale or package, a copy of a certificate of inspection issued by the State Department of Agriculture, signed by the Commissioner of Agriculture, and valid to the first day of September next following the date of the issuance thereof. There shall be attached to each bundle or package of such fruit-bearing trees a label specifying the name or variety of the trees contained therein. In case such bundle or package shall contain trees of different kinds or varieties, there must be attached to each tree therein a like label.

264. Nothing contained in section two hundred and sixty-three, or in any other section of this act, shall be construed to deprive a purchaser of any fruit-bearing trees of his remedy at law in a civil action to recover damages sustained by reason of such trees proving untrue to name as specified on the label. Such damages may be recovered in a civil action by the purchaser of such fruit-bearing trees, or by his personal representative or assignee, at any time prior to the third bearing year, the purchaser to notify the seller as soon as discovery is made that such trees are not true to name. In any action to recover damages suffered by the purchaser by reason of any fruit tree or trees not being of the name and variety for which they were tagged and sold, the seller shall have the burden of proof in establishing that any contract, or any provision of contract, exempting the seller from liability, or limiting his liability, was fully understood and agreed to by the purchaser. In every case of a sale of fruit-bearing trees, in lots of twenty-five or more, the seller must leave with the purchaser a copy of the contract, upon the face of which shall be plainly printed the foregoing clause of section two hundred and sixty-four, beginning with the words: "In any action to recover damages" and ending with the words: "and agreed to by the purchaser." The seller must also accompany the shipment of said trees by an itemized list of the same; such list shall also give the name of the county and State where the trees covered by it were grown, the age of the trees, and the name and address of the person for whom the trees were grown, if requested by the purchaser at the time of purchase.

Within five days after the receipt by the purchaser of the trees purchased and the list thereof the purchaser shall compare and notify the seller of any discrepancy between the list and the label on said trees.

265. Any person, firm or corporation acting as agent for another in the sale of fruit-bearing trees in this State shall carry with him, at all times when engaged in selling trees, a certificate in writing, signed by his principal and properly acknowledged, showing his authority to act as such agent, and upon request shall exhibit the same to and leave a copy of the contract, bearing on its face the clause above referred to in section two hundred and sixty-four with the purchaser.

§2. This act shall take effect September first, nineteen hundred and fourteen.

AN ACT TO REGULATE THE PACKING, GRADING AND SELLING OF APPLES AND PEARS.

The Legislative Committee of the New York State Fruit Growers' Association respectfully recommends that a law be enacted to take effect September first, nineteen hundred and fourteen which shall provide as follows:

"All apples and pears grown in the State of New York, packed, sold or offered for sale in barrels shall contain 90 per cent. of the fruit equal in all respects to the face of the barrel."

That "Every barrel of apples and pears grown or packed in the State of New York shall have marked plainly on the outside face head of the barrel the name and address of the packer and such name and address shall not be removed or obliterated, except when such barrel of apples or pears is repacked, in which case the name and address of the repacker shall be substituted for that of the original packer."

The said Legislative Committee also respectfully requests that the grades provided for in the Wilson bill be changed to three grades as follows: "From two inches to two and one-half inches," "from two and one-half inches to three inches," and "from three inches up."

"FARM products cost more than they used to." "Yes," replied Mr. Corntossel. "When a farmer is supposed to know the botanical name of what he's raisin' an' the zoological name of the insect that eats it and the chemical name of what will kill the insect, somebody's got to pay."—Washington Star.

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offered by dealers and supply houses. They may save you a little on first cost, but no more labor is required to paint your buildings with INGERSOLL PAINT than with inferior store paint. Poor paint always makes a building look shabby in six months or a year, and is sure to make you regret the little saving in the first cost of the material. INGERSOLL PAINTS will give you long years of satisfactory service and LOOK WELL ALL THE TIME.

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THE TRACTOR ON A FRUIT FARM.

Three years ago we lost two horses by overfeeding and the other through sickness within six days after purchase from a horse dealer who had worked off a sickening horse on us. His guarantee was worthless. These experiences, together with the difficulty of obtaining reliable teamsters, made me look more fully into the tractor. I determined that if it were possible to get something to relieve the teams of the hardest work in the Summer it would mean a lot of saving in horseflesh.

After considerable correspondence a manufacturing firm agreed to put one of their machines at work on 30 days' trial, provided we would pay the freight. It is a one-man plowing outfit, and we tried it at plowing first. There were so many defects in that particular machine that it was always in trouble of some kind, and even at that it did about as much work as four horses and two men would have done. The 30 days' trial went into six months, with considerable loss of patience. The makers were always fair. After doing all they could for us on the old machine they sent us a new one with many improvements on it, which overcame a large proportion of our previous troubles. They sent an experienced man to start it and stay with us until the machine was satisfactory.

The plowing was not perfect, as the bottoms were fashioned for the West, and are not the best for us. However it did better work than four-fifths of our teamsters do, and it will plow any depth you desire. It is kept so busy doing other work that it is seldom used for plowing. We find it very valuable as a tractor pulling machines that four horses could not start and eight horses could not work steadily in hot weather. For level cultivation in orchards and preparation of seed beds for grain and grass we use an eight-foot double-cutaway engine disk harrow with 20-inch disk. It pulls this as fast as my driving horse will walk for eight hours per day, week after week in the hottest weather.

The time spent on repairing will not amount to any more than horseshoeing would have totalled for equal amount of work. The upkeep will not exceed the feed bill of the extra horses, and pay for the extra men to work and care for the horses would more than pay for the running expenses of the tractor. It costs us about $3.25 per 10-hour day for oil, grease and gasoline. This particular machine has very high wheels, which makes it less desirable for orchard work than a low-wheel tractor, but it has so many uses on our farm that really we would not know how to get along without it now. We do a lot of deep work with a deep tiller, we found this a horse-killer, but for our tractor it is child's play to plow 12 inches wide and 16 inches deep. During the past Fall in digging fruit trees in the nursery we were able to dig several inches deeper by using the tractor than we could have possibly done with horses. We had less damaged trees and did the work in about one-third the time usually required for this work.

I can readily understand why the tractor has been condemned, as has been every new farm machine yet introduced. It takes time, patience and some mechanical knowledge to find the best use for these innovations, and to condemn without trial is a very common practice. We have seen many machines, and never saw a perfect one yet, but our tractor gives us no more trouble for service rendered than does our binder or mower. Is it true that, to the average farmer and fruit grower, these troubles seem more difficult to overcome, yet after two years' experience we find them no more annoying. In conclusion, let me advise the man who has neither patience nor mechanical ability to leave the tractor out of his equipment.

New Jersey. WALTER C. BLACK.

PREPARING FOR STRAWBERRIES.

I have a field now in rye that I wish to set to strawberries one year from this Spring. This field was in a sparse clover sod in the Spring of 1911. The sod was plowed under and buckwheat sown and plowed under, followed by rye. The rye was manured the next Spring and the field set to strawberries. By the Fall of 1912, the white grubs had practically taken the whole field. The field was picked and plowed up, and sowed to buckwheat, followed by rye. We expect to manure the rye and plant corn next Spring, manure again in the Fall, and use about 500 pounds of 2-8-10 fertilizer in the Spring. The land is a gravel loam, that "throws" lots of sorrel and gives other evidence of being pretty sour. Do you think I can depend on the cultivation of the corn to get rid of the grubs? Would I better plow in the Fall at the proper time as a further safeguard against the grubs? H. T.

Michigan.

But for the grubs, this plan properly carried out would seem to be first-rate preparation for a strawberry crop. From choice we should keep the manure off the rye, and not use manure at all before the strawberries. We should plow under the rye as you suggest, and use more fertilizer if need be, rather than put on the manure. You cannot entirely depend on killing out the last of the white grubs this year, but with the most thorough cultivation possible there will be few of them left. They may still cause some trouble, as their life history shows that they carry over a number of years, but the work you suggest doing is probably the best plan that you can take up for killing out the grubs. At the last cultivation of corn we should sow buckwheat and Cow-horn turnips, in order to add as much humus as possible to the soil. Then late in the Fall we should plow these crops under, leaving the furrows rough through the Winter. Fall plowing does help to clean out the grubs, and if it is possible to have a flock of poultry, or a drove of active young pigs follow the plow, these helpers will get many a grub that would otherwise be left over. The plan is a good one, but for its full success the most thorough cultivation should be given up to the time of seeding the cover crop.

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Consumers Brands for General Farm Use are made-to-order to meet the individual requirements of the different soil types on your farm and the crops you are to grow. They comprise special distinct compositions of plant food elements for forage crops, for cereals, for root crops and for fruits. No expensive elements not needed in your soil for any particular crop are wasted. This means economy in buying fertilizer and efficiency in applying. Consumers Brands are sold only direct to the user. This means another saving and also that you get just what your individual soil requires.

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Whether you are a commercial farmer, a country estate or suburban home owner, or merely "doing your farming" in a city yard, you should send for our free circular giving valuable suggestions for the use of Early Crop Odorless Fertilizer.

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These fertilizers are prepared by men who have made a life study of greenhouse fertilization in such a manner as to furnish just the plant food elements which your compost lacks. For this reason you save the cost of such plant food elements as your particular soil or crop may not require.

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Apples, peaches, pears, plums, grapes, etc., require careful and intelligent fertilization. We prepare special fertilizers with all the necessary plant food elements mixed in the right proportion to meet the needs of your fruit trees and according to the requirements of the soil in your individual orchards. Send us your specifications for efficient fertilizers.

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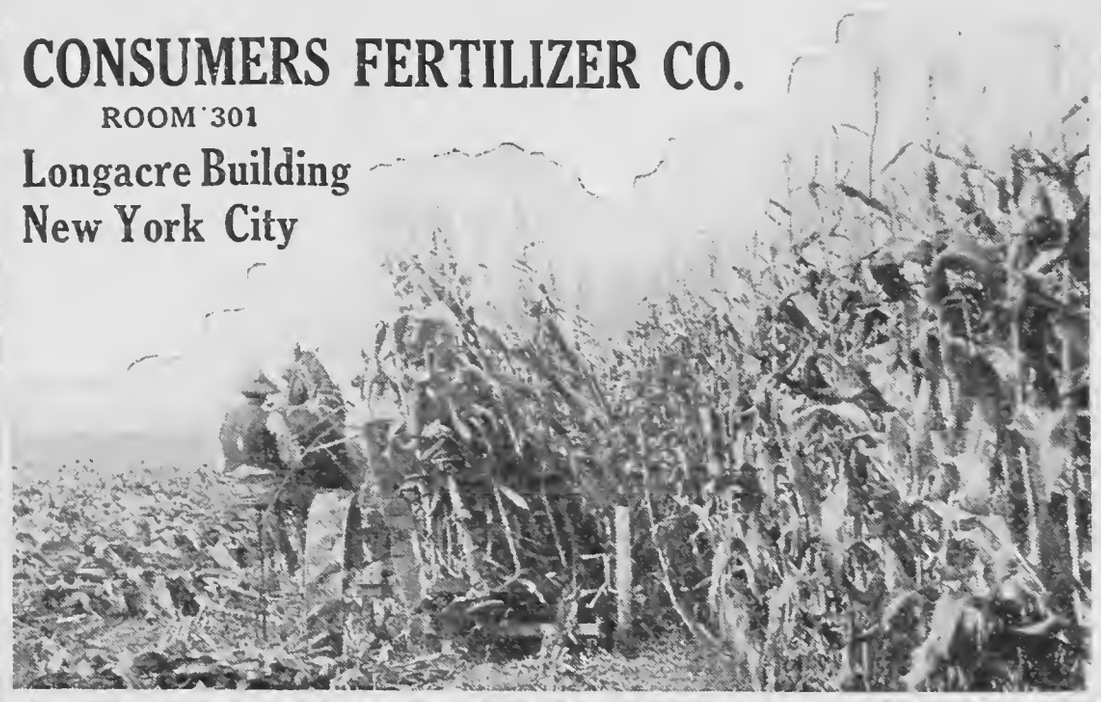

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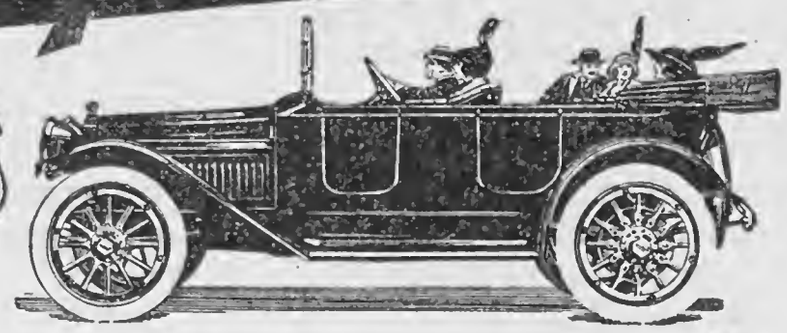

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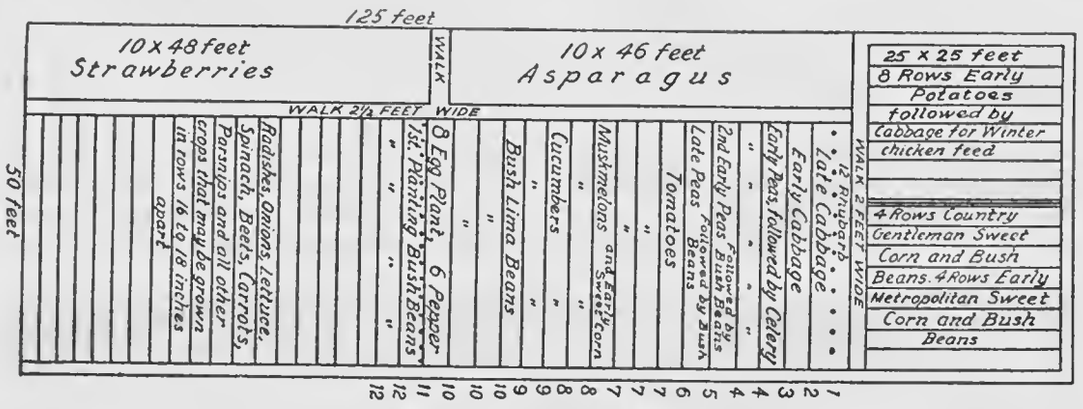
HOME VEGETABLE GARDEN.

I wish to grow vegetables on piece of ground 50x125 feet, in grass a good many years, producing a fair crop of Timothy and some clover. How about manuring? I have a sugar barrel full of almost pure poultry droppings packed in hard and covered from the weather. How can I use it to best advantage? I could secure a load or two of stable manure. Will it be necessary? How can I work into shape to the best advantage and lay out this plot? I wish to grow corn, potatoes and the ordinary garden vegetables, and if possible raise some Winter feed for a few chickens. W. M. W.

This piece of ground contains nearly one-seventh of an acre, and should have an application of five tons of well-rotted stable manure at least, spread broadcast and plowed in, and 300 pounds of air-slaked lime, spread evenly after plowing and harrowed in. Plow eight to 10 inches deep. It is seldom that good garden crops can be raised on ordinary farm land the first season, especially fresh sod land. Usually two to three years of heavy manuring and good tillage is required to bring the average farm land up to the high state of fertility and tilth required for the production of maximum crops of first-class vegetables. Fresh sod land, as a rule, is very difficult to cultivate to small vegetables, and unless patience and diligence are a pretty large asset of the man undertaking the job, the enterprise is likely to prove disconragingly disappointing. Such land would be much better cropped to corn the first year. With good cultivation the grass and weeds wonld be pretty well subdued and the land be in a very much better condition of fertility and tilth for the growing of vegetables by the second year.



VEGETABLE GARDEN PLAN.

The hen manure may be used as a top-dressing on the ground where the small vegetables are grown; also sparingly in the hills of sweet corn, in both cases to be well mixed with soil. The diagram shows a very good plan for the laying out of a home vegetable garden, on a piece of gronnd this shape and size, whether for temporary or permanent use. If for temporary use, then of course the rhubarb, asparagus and strawberries are to be omitted, and the ground cropped to an annual. The spaces allotted to asparagus and strawberries can be planted to sweet corn, sweet potatoes, melons, or anything most desired. If strawberries are planted, the space allotted to them should not be limed. The plot allotted to radishes, onions, etc., should not be all planted at once; part of the space should be reserved for a succession of such crops as grow rapidly, and of which two or more crops can be grown during the season.

The potatoes and corn rows are intended to be a fraction over three feet apart; cabbage and pea rows three feet apart; tomato, cucumber and muskmelon rows four feet apart; bush, lima, green and wax bean rows 30 inches apart; all the small vegetables, such as onions, radishes, lettuce, etc., rows 16 to 18 inches apart. The melons and cucumbers are to be planted in hills four feet apart, with a hill of early Metropolitan sweet corn planted between the hills in the row same day as the melons and cncumber seed is planted. This should be for the first crop of corn. Plant the plot allotted to sweet corn abont two weeks later, four rows to Early Metropolitan and four rows to Country Gentlemen; both sorts may be planted the same day. Between the hills of corn, plant green and wax-podded bush beans. If early potatoes are planted, the crop can be cleared off in time to plant to cabbage, of some large-headed early sort, for Winter chicken feed.

It should be the aim all through the season to have the ground occupied with growing and matured crops. As quick as one kind is cleared off, get the ground ready and sow or plant to some other kind. It is keeping the ground constantly occupied with crops in some stage of growth that makes gardening profitable. The plan submitted is only intended as a guide to the laying out of the garden, which may be improved upon under certain conditions, and such changes as to the kinds of vegetables grown, and the quantities of each, will have to be regnlated to suit the requirements of the consumer. If more vegetables can be produced on the ground than are required, a few currant and gooseberry bushes, also a few grapevines, may be planted where they will least interfere with the cultivated portions. The wheel hoe and small hand tools are the implements to be used in the cultivation of a garden of this size as there is too limited an area to admit of horse cultivation. K.

Dynamite for Planting Trees.

We are intending to set out 1,000 trees, both peach and apple, next Spring, and were thinking of blowing holes with dynamite. We understand that some professor of Geneva Experiment Station, stated at the Connecticut Pomological meeting this week that they had tried it and could not recommend it on account of trees settling six to eight inches the second year. Do you know if this is right? R. B. O.

Cheshire, Conn.

In reply to an inqniry at a meeting of the Connecticut Pomological Society in regard to the valne of dynamite in preparing holes for trees, the following is the snbstance of the answer given:

Under certain conditions it appears that dynamite may be used to advantage in preparing ground for trees. On strong, rocky land where it is difficult properly to dig holes the work may be done more qnickly, more cheaply and more thoroughly than with spade or shovel. Thin subsoils impervious to water, underlaid by soil of a more porous natnre, may be shattered to such an extent as to permit of more thorough drainage and thns greatly improve conditions. More evidence must be available, however, before the use of dynamite may be recommended for ordinary soils in which holes may be readily opened with the spade. It is true that trees set after the use of dynamite on snch soils will often make a splendid growth, and it is also true that they may make an equally good growth without its use.

Statements have been made by some fruit growers using dynamite that under certain soil conditions the trees may settle three or more inches during the first Summer, and the writer has seen long rows of trees leaning at a decided angle from heavy west winds, conditions brought about by the looseness of the soil due to the use of dynamite. The adjoining rows, set in the ordinary way, showed no tendency to lean from the perpendicular. Two years ago a line of work was started at the Experiment Station, Geneva, N. Y., comparing the use of dynamite with subsoil, and the ordinary plowing methods. It is too early to begin to draw any conclusions, but it may be of interest to note that after two seasons' growth no advantage could be detected in any way in the caliper of the tree trunks, in the length of annual growth of branches or in the Summer foliage from the use of the dynamite. Differences may, however, develop later. It would appear then, that dynamite may be used to great advantage under some conditions and that under other conditions it might be used in an experimental way until its value has been fully determined. O. M. TAYLOR.

ENGLISH GUIDE (showing places of interest): "It was in this very room, sir, that Wellington received his first commission." American Tourist: "Indeed! And how much commission did he get?" —Boston Transcript.

A MISSOURI SUNFLOWER CROP.

A year ago the writer made inquiry through the columns of the THE R. N.-Y. for information regarding the culture of the sunflower as a commercial crop. Very little information was available, so we put in a crop as an experiment, with the result that for a money crop they are far better than corn (or at least they proved so this season with us). The securing of good seed we found to be the most important and most difficult thing in the making of a profitable crop. We bought our seed from a prominent western seedsman for the Giant Russian. This is a large single-headed type with large striped light-colored seed. Often individual heads grow 15 inches in diameter. The seed we planted was grown, evidently, in close proximity to some other sort as probably one-fourth of the seed was of the old-fashioned variety which produces from five to 20 small heads to a stalk. This greatly reduced our yield. We prepared our ground the same as for corn and planted May 2, using the two-row corn-planter and drilling them three feet eight inches by 15 inches. In the future we shall plant them three feet six inches by 18 inches, as 15 inches is too close. Perhaps 20 inches would be even better. A mistake we made this season was not running our seed through a corn grader to even them up so the planter would do a better job. The seeds as they came to us were of all sizes. Sometimes there would be two or three drop in a hill, and then the large seed would cause the planter to miss two or three hills.

During a wet season we replanted the missing hills with plants taken where they were too thick, but this does not pay as they do not start off soon enough after transplanting and the weeds get the best of them. Another year we shall grade our seed so they will drop evenly and will use an edge drop planter. The cultivation given was the same as for corn, three plowings with two-horse cultivator.

Our method of harvesting was a bit more expensive than the method employed by farmers some 15 miles south of us where the sunflower is coming to be a leading money crop. With them the heads are cut off as soon as ripe and hauled in and put in large cribs to thoroughly dry before thrashing, which is done in a common pea-huller run at a slower speed with part of the concaves removed. These growers often follow their wheat crop with sunflowers, planting as late as the first of July, and realize $20 to $30 to the acre. Harvesting was not as expensive as we thought it would be. We drove along the rows with a two-horse wagon with 40 bushel bed. One man walked and with a sharp pruning knife cut off the heads with a few inches of stem attached. He took three rows at a time, throwing the heads into the wagon and with two men beating the seeds out against the sides of the wagon, they harvested an acre in half a day. By running through a seed cleaner all the broken heads, light seeds and trash were winnowed out. We found that the seeds beat out of the heads more readily in the morning or on damp days. From the 11 acres we harvested over 4½ tons and, had it not been for the poor stand, (owing to uneven and spurious seed and a severe drought) we believe that we would have had six tons at least.

From conversation with a grower south of us we learn that the past season some men have sold their crop at figures right around $50 per acre. We leave it to the readers if it is a profitable crop, as the following are our figures taken from our books:

To breaking 11 acres at $1 per acre	$11.00
To preparing 11 acres at 50c per acre	5.50
To 50 lbs. seed at 8c lb.	4.00
To planting—team and man $2.50 per day	1.87
To 3 cultivations 1¼ day each at $2.50 per day	9.37
To harvesting (3 men, 1 team) 7½ days at $5 per day	37.50
To cleaning seed, 3 men 2 days at $3.75 per day	7.50
	$76.74
By 9300 lbs. seed at $3.75 per cwt.	$348.75
Expense	76.74
Profit on 11 acres	$272.01

The St. Louis market quotations early this year were $4 per 100 pounds, but we sold to our local dealer at $3.75 per 100 pounds. Market prices on sunflower seed fluctuate considerably; this season prices ranged from $5 to $2.50. We had no trouble with our seed spoiling, as it was left in the field until pretty well cured in the head. W. K. M.

Sikeston, Mo.

WEATHER AND CROPS.

February is giving us the Winter weather of the season. I have become local weather observer for the Weather Bureau, which adds another reason for being weather-wise. Stock is wintering well and feed seems in good supply. A coöperative creamery has just started here with strong competition. W. E. D.

Hillsboro, O.

We have just come through another cold snap; registering thermometer showed 11 deg. below zero at one time last night, 7 deg. below last week, with high wind. Nothing has thawed out since, so we cannot tell what may have happened to our peach buds. My opinion is that not a great deal of harm has been done. The great damage was done by the January freeze. C. E. L.

Middleford, Conn.

We have had up to this date a very mild open Winter, the coldest weather up to date being 12 degrees above zero. A great deal of plowing was done during the early part of Winter for this year's corn crop. We have had several rainfalls during the last three weeks. Wheat is looking fine, with prospects of a better crop than usually. The past season was very dry here, and made crops short, but the mild warm Winter is making them feed further. Hay $10 a ton; corn 85 cents; wheat $1; oats 70; potatoes $1. Clay peas $2.50 per bushel; peanuts $1.60. Good cows $50 to $75; good mares $150 to $225; horses $75 to $150; stock hogs $6 to $7 per 100 pounds. Hens 10 cents pound; eggs 20; butter 20. Real estate is not selling much now, but high when a sale is made. W. H.

Washburn, Tenn.

Here in West Central Pennsylvania we are on the roof of the Alleghanies. The latitude is that of New York City, but we are from 1,400 to 2,000 feet above sea level. On one side our county drains into the Gulf of Mexico, on the other into Chesapeake Bay. The soil is generally fertile, but not so deep, nor the season so long as in the grain growing sections. It is, however, quite well adapted to horticulture. Wild fruits and berries spring up quickly in the slashings or neglected fields and pastures. All the hardy vegetables and fruits grow well under good care and cultivation. Even peaches and Japan plums bear delicious fruit, but must be planted on the hilltops, and then do not always escape frost damage to buds or bloom. Thousands of dollars worth of farm products, especially horticultural products, are shipped into our towns from other sections 200 to 500 or more miles away. Aside from tropical fruits and early fruits and vegetables from the South, these can all be raised here, with the market at our very doors. But our old-time farmer raised grain to feed his horses while he worked at timbering all Winter and as much of the Summer as possible. As the old fields failed to bring crops, new ones were cleared. Finally it became necessary to farm all of them to make a living. So the large farm became the rule, which is generally adhered to even now, though efforts are made for better farming. This has led to isolation, bad roads, poor schools, lack of social centers; to discouragement reflected in the desire of the more intelligent young people to leave the farm often aided and abetted by their parents, who are forced to recognize the better financial opportunities in other callings to be secured by educating their children in the towns. Mining, manufacturing, and railroad towns, such as we have, call for labor, and at a wage that the farmer cannot afford.

Thus, to my mind, our future success here lies in the smaller farm whose labor can mostly be performed by the owner and his family, and whose market products will be fruits and vegetables and poultry. These can be supplemented by some grain and hay to feed the necessary animals. Such a rearrangement of farm practice would put us closer together and the increase in value of property and in numbers of workers to the square mile would mean increased ability to support better schools and to improve the fewer miles of roads needed. I have learned that it pays to sell directly to the consumer whenever possible. But to be successful in so doing it is necessary always to have something to sell that is wanted; to be prompt, regular, courteous and honest in marketing. We raise the earliest fruits and vegetables that are hardy and otherwise adapted to soil and climate to be followed in succession to the end of the season by others that experience has taught me are readily salable. This we aim to do by every economy of time, and labor possible, in order to enlarge that 35-cent dollar without such hard and continuous exertion as to make life not worth the living. T. L. W.

Clearfield, Pa.

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There is more leather needed today than ever before. The makers of automobiles are worried about the decrease in the supply. They are paying fancy prices, and are taking the large share of the leather supply. That's why leather shoe manufacturers have been steadily raising the price of their products, and why men who work hard for their money are wearing comfortable **Hub-Mark Bootees.** Every pair represents a decided saving because they last longer and giver better service. They keep the feet warm, dry, and comfortable.

Hub-Mark Bootees are made from pure Gum Rubber and A1 Duck, with leather insoles. They are reinforced at every point where the wear and the strain comes. They have no seams that can rip. Their soles and uppers cannot split nor crack.

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have an easy but powerful compound lever action which results in quick, clean cuts. Do not tire the hands even in cutting the toughest shrubbery. Especially adapted for rapid, efficient work in cutting water sprouts and suckers, heading back young trees, trimming hedges, berry bushes, etc. Write today for free descriptive circular and prices.
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LITTLE THINGS ABOUT SPRAYING.

Busy times will soon be at hand for the fruit men. Spraying will be at hand before we are aware of it. The time for doing the work properly is not long. If it is done, and it must it must be of we have that beautiful, delicious fruit for which we all crave, we must be prepared to push the work along when the time comes, and not be compelled to hasten it along by slighting the work. Slack spraying is time and money thrown away. Too late is as bad as being lax in applying, for if the larva of the Codling moth makes its entrance into the apple, or the fungus has pushed itself in the tissue of the plant, all the spraying in creation is of no avail. We must use all the time we have at our disposal now to prepare the outfit for the work. The pump may have been improperly cleaned when put away. Get it out and take it down. Look over all parts. Examine for a weakness that may cause a break, just as we are nicely at work and thus cause a day or two of delay. Look over the hose and spray rods. New hose may be necessary; we cannot afford to have a break when we suffer delay. Extra couplings and hose-menders should be secured and placed in the tool box to be taken to the orchard with the outfit when we begin. Has the pump shut-offs where hose and pump unite? Much time and annoyance will be saved by putting them there if you do not have them. Our pump did not have them when purchased, but on a rainy day they were put on.

A PENNSYLVANIA SPRAYING JOB.

By the way, is the pump of sufficient size to supply two lines of hose working all the time? Better have it large enough for three, than not large enough for two. We cannot at this time afford to use time of outfit for one-man spraying, would much rather have three if the surface of the ground is such that a tower can be used, so that one man may mount the tower and spray from the top of the tree while the other two from the ground spray the under limbs and sides.

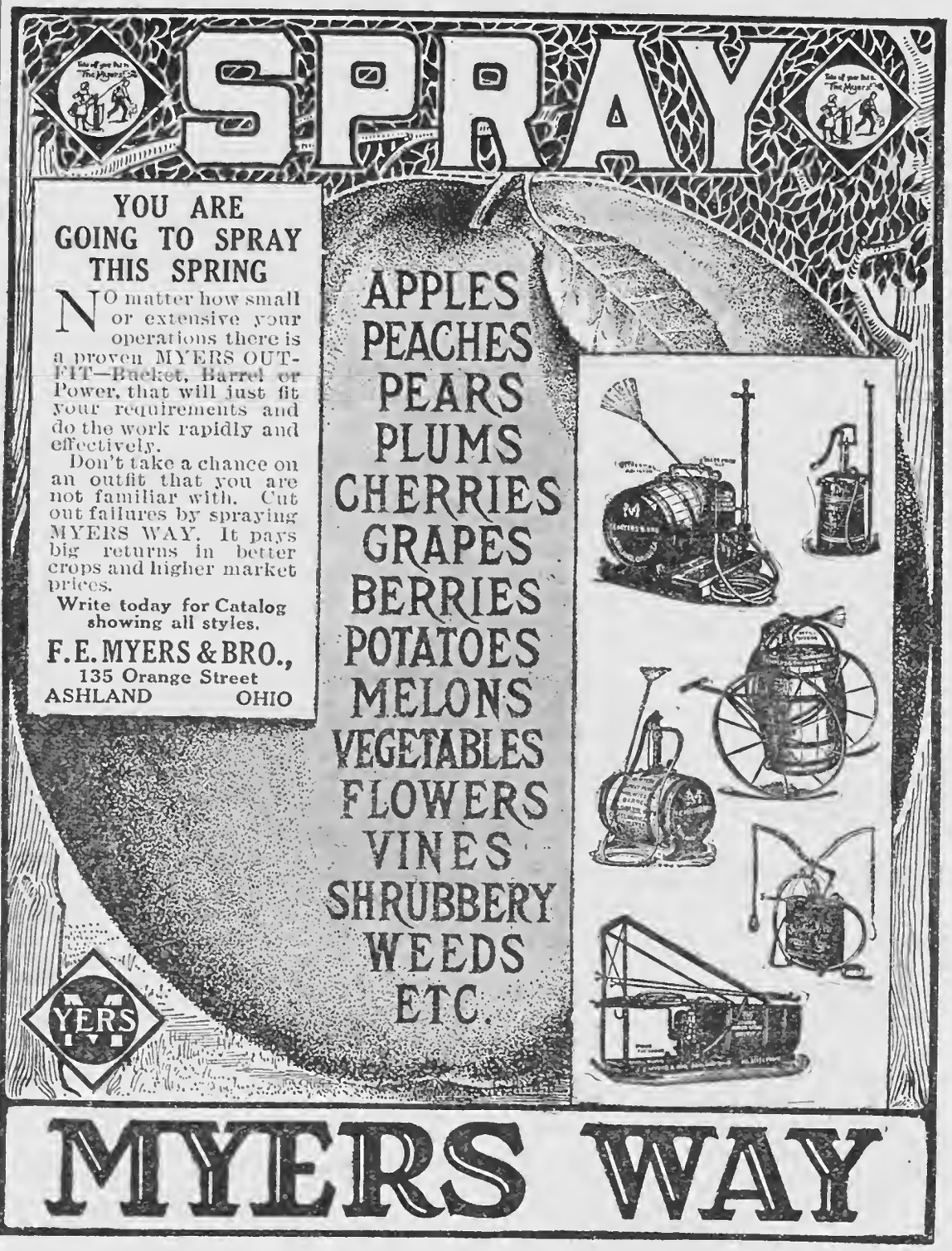
If the orchard is far from the house or water supply, the tank or carrying outfit should be large enough to take at least 200 or 250 gallons of material afield at one time. Going back and forth so frequently costs too much time. The few extra dollars invested in the larger tank will soon be repaid when we count the cost of labor lost in waiting for the refilling of the small tanks.

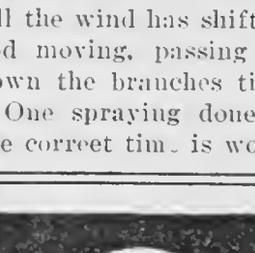
Equip the spray-rod with nozzles that spread the spray well, so as to cover the trees rapidly and well. The time for using nozzles of small capacity, or nozzles that are constantly catching in every little branch, has gone by. The angle nozzles seem to do the best work in all condtiions and under varying positions of spraying.

Gain time in every way possible save by slighting the work. Here we must be careful. There are many failures in spraying, and it is wonderful that there are not more, when we see some people spray. No work on the farm should be done more systematically than that of spraying. We cannot afford to guess where we have worked on a tree. Here is where we need the very best of help. Help with energy enough that they will not be slow in the free use of feet, hands and eyes. Standing in close proximity to a tree and pointing a spray rod at the tree, as the pump throws the liquid through the hose is not spraying. It is wasting. To do a thorough job of spraying, one should begin on some particular branch of some one side of the tree, and cover it thoroughly, branch after branch, twig after twig, till every inch of the tree has been thoroughly covered. Let us remember that none of these enemies we are seeking to destroy, are wandering around as if pleasure seeking, to get hold of our death trap. They have a purpose to perform. That purpose is the reproduction of their kind, through their natural agency. This natural agency they are there to leave. If we do not do the work carefully and fill each blossom end, cover every leaf or branch completely, we have left a place of escape and we may expect the continuation of the species.

Spraying against the wind is wasteful. We cannot throw these fine sprays to any certain spot desired against hard winds. Spraying in the rain is in the same category. Spray on the side with the wind and then wait for the other side till the wind has shifted. Keep the spray rod moving, passing the nozzle up and down the branches till all is covered.

One spraying done thoroughly and at the correct time is worth more than three





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EVERY farmer, fruit-grower and truck-gardener needs this book. It is not merely a catalog. Over 30 pages are given entirely to description and photographic illustrations of insects and plant diseases that rob you every year of a large share of your profits. It gives you in condensed form and in simple language all the information and instructions you need to combat these pests; enumerates the various remedies which experiment has proven successful and gives detailed directions as to how and when to apply them. I know that if you will send for this book and follow its instructions carefully you will make more than enough EXTRA PROFIT from your acres or your orchard this year to more than pay for the cost of the outfit and the slight labor involved in using it.

This book also contains illustrations, some in colors, of our 28 different styles and sizes of sprayers from small hand-power outfits to large gasoline engine sprayers for field and orchard. It explains in detail our liberal selling policy under which you can buy

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I will ship you any HURST SPRAYER, without one cent in advance, without any bank deposit, and without any agreement to keep and pay for it unless you are thoroughly satisfied. I want you to try it for 10 days and then if it proves to be all I claim for it, you can pay for it on terms to suit your own convenience. You can take my word for it, that in reality it will not cost you a cent because it will give you more than enough extra profit the first year to pay for itself twice over. We pay the freight.

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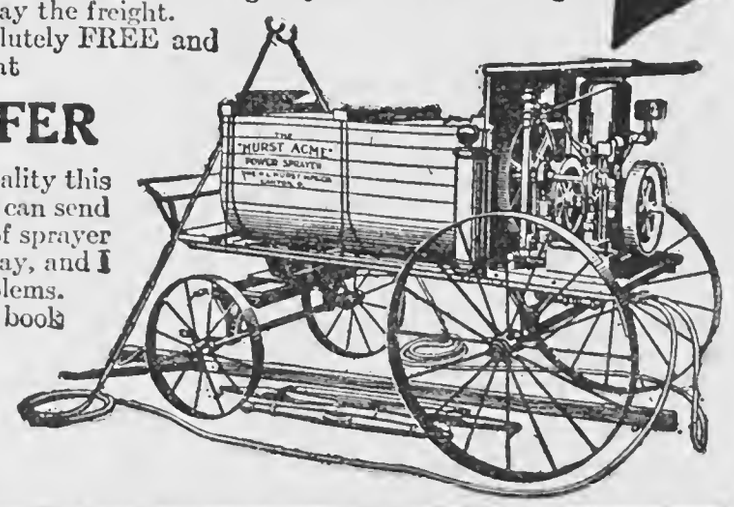

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Brown's Auto Spray does its work *thoroughly*. Actually does banish blight, disease, insects in less time, with less work and less solution. Keeps vines, trees, plants in perfect condition; 40 different sizes aud styles.

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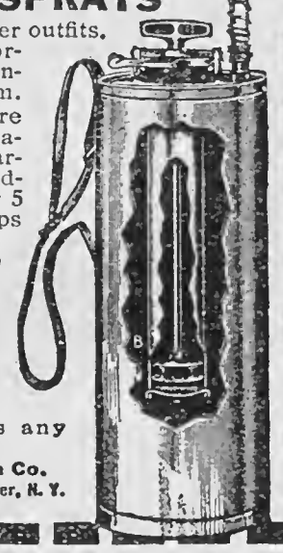
Hand and power outfits. 300,000 farmers, orchardists, gardeners now use them.

Spray No. 1, here shown—4 gal. capacity—easily carried over shoulders—suitable for 5 acres of field crops or 1 acre of trees—has Auto Pop Non-clogging nozzle--all kinds of sprays.

Larger sprayers use *Brown's Non Clog Atomic Nozzle*. Cannot clog—sprays *any* solution equally well. Fits any sprayer.



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They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

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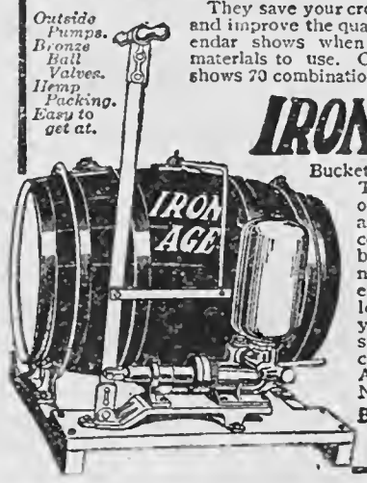

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The Leader Sprayer for up-to-date orchardists keeps 10 nozzles going with 200 lbs. pressure. Most satisfactory of all orchard spray rigs. Engine suited to generating power for all farm work. **Bucket, Barrel, Mounted 4-Row Potato Sprayers, etc.** Free catalogue describes entire line. Write for it. Also spraying formula, calendar and complete spraying directions. Address

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Domestic Sprayers are not ordinary sprayers. They embody the experience of the largest and most successful orchardists. Pumps, valves, engine and all other parts are made in our factory under the supervision of experts.

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An automatic agitator keeps the liquid in motion, while a small brush passes over the strainer at each revolution of the agitator and keeps the strainer from clogging. We can furnish you with a sprayer for every purpose and in all sizes and shapes. Get book for particulars.

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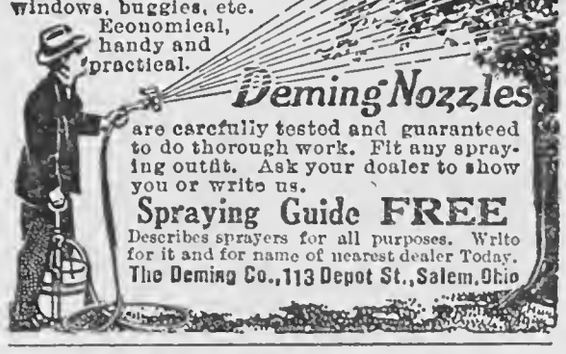
are the standby in thousands of gardens, small orchards and greenhouses. Also popular for white-washing, washing windows, buggies, etc.

Economical, handy and practical.



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are carefully tested and guaranteed to do thorough work. Fit any spraying outfit. Ask your dealer to show you or write us.

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Describes sprayers for all purposes. Write for it and for name of nearest dealer Today.

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The Best Sulphur for Lime Sulphur Solution. Combines easily and quickly with Lime.

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or four sprayings done otherwise. In saying thoroughly we should include the use of mixtures sufficiently strong to do the work for which they are intended, under the most adverse circumstances. If some mannfacturing company tell us their brand of lime-snlphur will do the work rdeuced one to 10 we may not go amiss at one to eight. It is not necessary to reduce dormant sprays to the very last limit of efficiency under the most favorable conditions.

If a rainstorm arises before the spray has had time to become thoroughly fixed to the tree or plant, then we must of necessity repeat or in the application of the fungicides the application must be f sufficient frequency to keep the new expanding leaf covered with the material. By careful watchfulness, good judgment, and thoroughness of work, practically all our enemies to sucessful fruit production can be controlled. A. T. S.

Spraying for Profits.

My experience in spraying cucumbers, melons and all truck crops dates back some three or four years. I purchased a knapsack sprayer made of copper, and consider it one of the most profitable investments I ever made. Bugs and blight cannot stand arsenate of lead and Bordeaux mixture at the rate of 5-5-50, and they seek business elsewhere. Begin just as soon as the plants come up, for an ounce of prevention is better than a pound of cure. Spray often every week or 10 days, depending on the weather; if rainy and wet oftener because the plants grow fast, and to stamp out the blight and bugs you want to be there first.

Cucumbers properly sprayed will bear from one week to 10 days longer than those not sprayed, to say nothing of the quality of the crop. The illustration on page 338 shows a vine sprayed for the last time and this patch netted the owner at the rate of $100 per acre, besides it being an off year on account of rain.

Washington, Ind. A. M.

Preparing for Strawberries.

I have a half-acre, old strawberry patch plowed under with all the mulch and manure in 1912; planted to cabbage and sweet corn and sown to rye for Winter covering, in 1913; plowed rye in and coat of manure, then planted to melons and potatoes and other truck. Sowed to rye again. Wish to plant this patch to strawberries this coming Spring. What commercial fertilizer would you recommend for best results? The ground is a sandy loam and full of humus. D. W. P.

Howard, Ohio.

This is a good preparation for a strawberry crop. We should plow the rye under in the Spring and be sure to roll or drag the ground down solid and firm. Unless you do this and firm the soil the air will work into the rye and dry out the ground badly. Pack it hard and then work up the upper surface into a fine bed. For fertilizer a good combination would be three parts by weight of fine ground bone and one part by weight of muriate of potash. We would use 500 pounds of this mixture to the acre, scatter it in a strip about two feet wide where the rows of berries are to be planted. Work it in with a cultivator, then set the plant and give thorough cultivation.

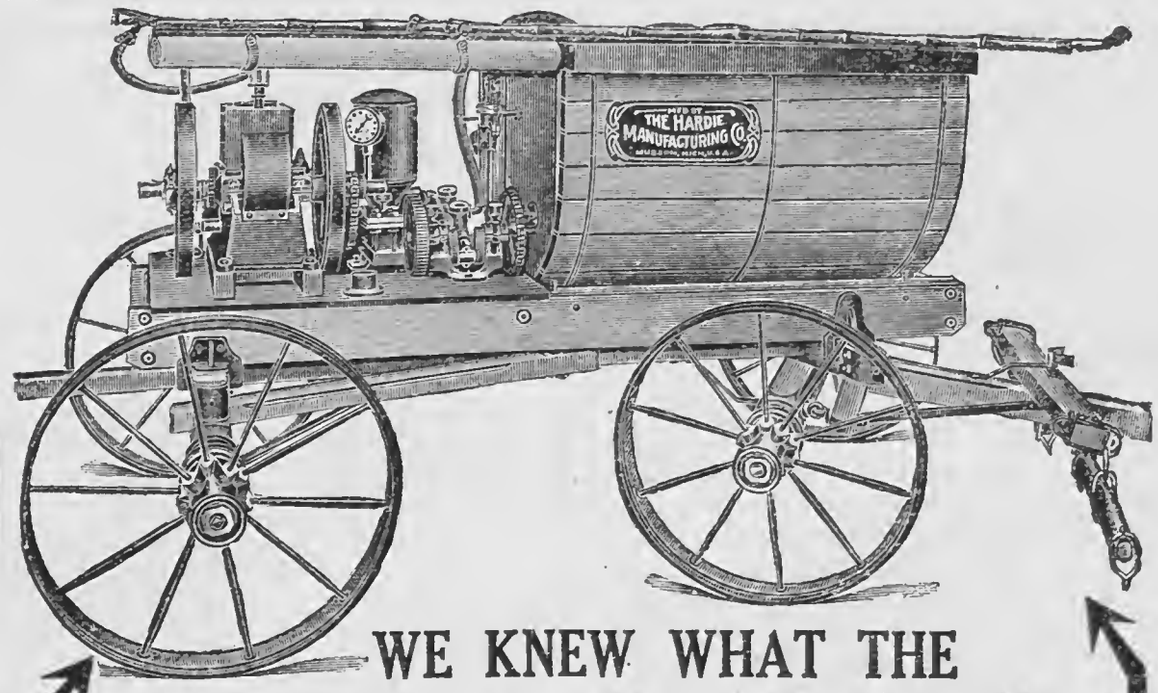
Killing Insects With Electric Current.

Do you think an electric machine could be attached to a weeder or some similar tool, and discharge a strong enough current at the ground end of the teeth to kill chinch bugs and other insects?

Stuart, Okla. T. F.

We think it very doubtful if an electric machine of reasonable cost would have any particular effect in destroying the insects in the soil as you describe. Such a machine might be devised to pull the weeder across the field, but it is very doubtful if the current distributed in this way would have any particular effect upon the insects. For some years past there have been stories in the papers of a scheme for distributing electrified water for irrigation. It was claimed that this water had power to destroy many insects, but we have never been able to verify the statement, and entomologists have little faith in any such method.

"You use different horns for different dances, I suppose?" asked the sweet young thing. "Oh, yes," replied the musician. "What horn do you think best for a quickstep?" "Oh, the auto-horn, by all means."—Yonkers Statesman.



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A small, light-weight, efficient power sprayer, of high pressure, adapted to all kinds of spraying and at one-half the usual price. These requirements we have met, and are pleased to present them in

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IT MEETS THE GENERAL DEMAND

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The name of Hardie stands for sprayer efficiency from coast to coast. The Hardie machines are noted among more than 6,000 users for their High Pressure, Large Capacity, Simplicity of Construction, Accessibility of All Parts and Freedom From Experimental Risks.

The introduction of the Hardie Junior makes it possible for every farmer to own a high-pressure sprayer. It's "The Biggest Little Sprayer Ever Made." Never before has there been offered so much at such a small price.

Price, $140.00 COMPLETELY EQUIPPED TRUCK $25.00 EXTRA

Freight Prepaid to any Point East of the Mississippi River

Only the very best materials are used; it is of high-class construction and mechanically perfect in every detail. Read the specifications and convince yourself that this is the most advantageous and economical sprayer offer you ever saw.

SPECIFICATIONS

150-gallon all-cypress tank, 1½-inch cypress, 1½ horse-power, 4 cycle water-cooled engine, rotary agitator running in bronze bearings, pump with capacity of 4 gallons per minute, with cut gears and bell metal ball valves. Machine fully cabbed with curtains, both sides. 25 feet of high-pressure hose, our famous Hilo Spray Rod, large tank stralner and a full kit of tools. Shipping weight 550 lbs.

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We also manufacture all sizes and styles of hand and power sprayers.

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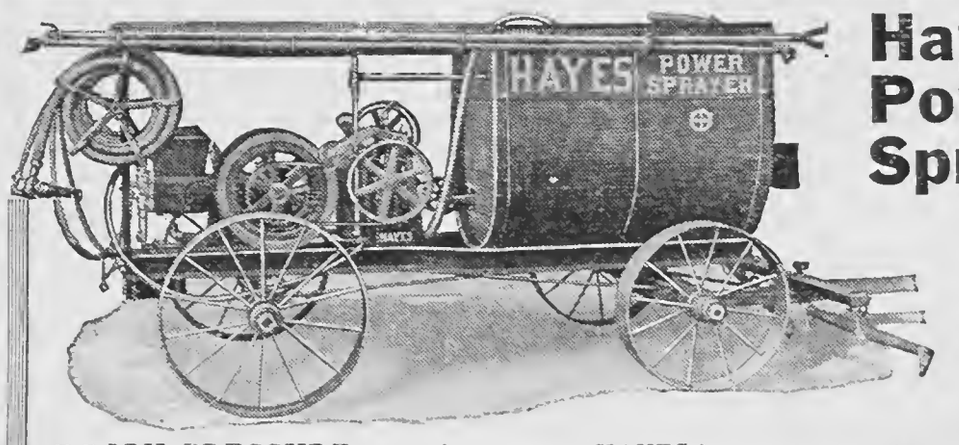

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HAYES large capacity, high pressure triplex pump, special design engine and improved agitator are built for high pressure work. Strong, steel frame, cross braced and hot riveted. All steel, non-tip-over, *cross reach* orchard truck that turns in 14 ft. *Cannot strike trees in turning.* Large capacity, light weight, light draft. The HAYES is sure, reliable and easy in operation and *guaranteed* in efficiency.

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Hand Barrel Sprayer

We manufacture 25 styles of large and small Hand and Power Sprayers for orchards, field crops, shade trees, hops, poultry, painting, home and garden use. Complete outfits or separate pumps, hose, nozzles, fittings, bamboo rod, etc.

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HAYES PUMP & PLANTER CO., Galva, Illinois

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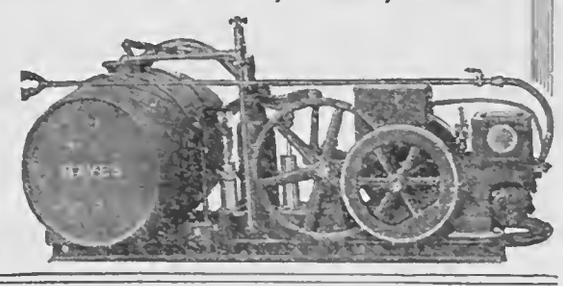

Kill These Pests

If you allow them to ruin your fruit trees, plants and vines, it is your own fault as they are easily killed by spraying.

Stahl's Excelsior Spraying Outfits

make the work easy and the results sure. Endorsed by successful growers. Shipped for 10 days trial upon receipt of $3. Your money refunded if not O. K. Write today for particulars and Treatise on Orchard Enemies (mailed free).

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The New GREENWOOD LIME and FERTILIZER DISTRIBUTER

TOP FEED—NO RUSTING—NO CLOGGING

Accurate indicator for 100 to 3,500 lbs. per acre, whether material be wet, dry, stieky, lumpy, heavy or light. Write for booklet R to

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TO DESTROY APHIS, THRIPS, ETC.

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(SULPHATE OF NICOTINE)

"Black Leaf 40" is highly recommended by experiment stations and spraying experts throughout the entire United States. Owing to the large dilution, neither foliage nor fruit is stained. Also, "Black Leaf 40" is perfectly soluble in water; no clogging of nozzles.

PRICES:

10-Pound Can $12.50

Makes about 1,500 to 2,000 gallons for Pear Thrips, with addition of 3 per cent. distillate of oil emulsion; or about 1,000 gallons for Green Aphis, Pear Psylla, Melon Aphis, etc., or about 800 gallons for Black Aphis and Woolly Aphis—with addition of 3 or 4 pounds of any good laundry soap to each 100 gallons of water.

2-Pound Can, $3.00 ½-Pound Can, $0.85

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If you cannot obtain "Black Leaf 40" from a local dealer, send us P. O. Money Order and we will ship you by express at the above prices, prepaying the expressage to your nearest railroad town in the United States.

THE KENTUCKY TOBACCO PRODUCT COMPANY
INCORPORATED
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The Morrill & Morley Way
Use an Eclipse Spray Pump. Used by the U. S. Department of Agriculture. Its construction is perfect. Illustrated catalogue free.
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Eclipse Spray Pump

DOUBLE SPRAYING RESULTS
by saving half the solution and labor with the
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Nine different sprays from same nozzle—round or flat—coarse or fine—starts and stops instantly. Ten different styles. Mail postal for special offer. Agents wanted.
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BEAN MIDGET ONE-MAN SPRAYER

Why depend on trifling help to spray your orchard or crops when you can do it alone, and get the best results, with a one-man Sprayer that has the majority of the Bean Features, found on our large Triplex and Duplex Outfits? High grade, high pressure, medium capacity. 1 H. P. Engine, Porcelain lined cylinders; ball valves; threadless valve seats; all at a cost slightly greater than a good Hand Sprayer. Our Midget is a boon to small orchardists and truck growers. Investigate the Midget before buying. Thirty years of experience back of this Sprayer.

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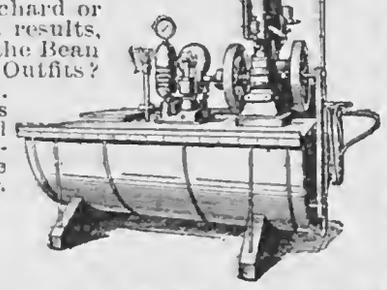

More than 100,000 Farmers and Fruit Growers Use the STANDARD SPRAY PUMP

With it they spray their tallest orchard trees *from the ground* in half the time required by others. The knapsack attachment enables them to spray their potatoes and low growing crops at the rate of an acre an hour or better. They whitewash their barns and chicken coops and spray "dip" on their live stock with the Standard Spray Pump.

Made throughout of brass, with nothing to wear out or break, the Standard Spray Pump lasts a lifetime and pays for itself over and over again.

Warranted 5 Years. Price $4 Prepaid. (West of Denver $5.) Money back if not satisfied.

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SPRAY with an ANTI-KLOG

They give the highest efficiency through long hard terms of service. There is an **Anti-Klog** of the right capacity for those who have much and those who have little spraying to do.

They spray better—spray better longer—and represent more downright sprayer value—than any other spraying devices manufactured.

Ease of operation, simplicity, strength and a number of other individual features appeal to every user. The **Anti-Klog** nozzels make it very difficult for any mixture to clog the outlet.

Guaranteed for 5 Years

You are absolutely protected when you buy an Anti-Klog, as each one is sold under an unqualified guarantee of 5 years' service.

Send for our new free catalog. You should now make preparations for spring spraying.

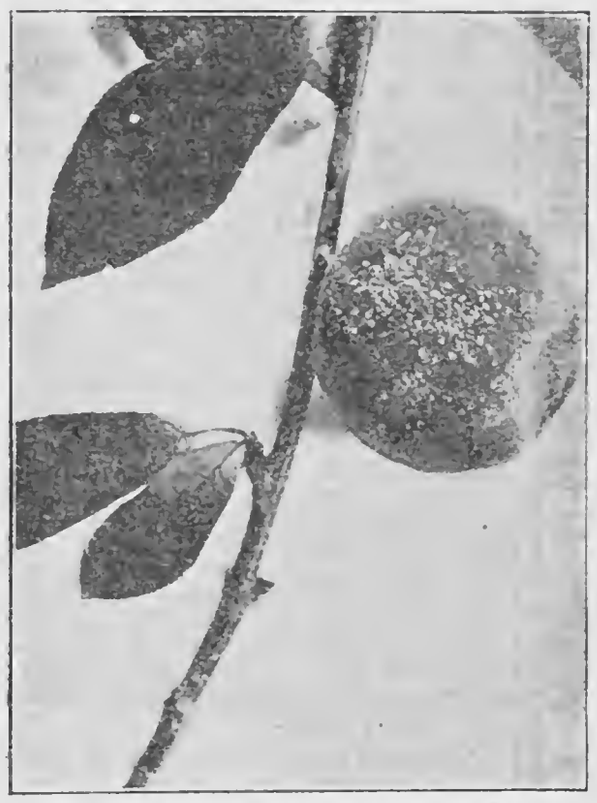
ILLINOIS METALS COMPANY
2412 West 22nd Street CHICAGO, ILL.

SPRAYING FOR FANCY PEACHES.

The successful production of fancy peaches is dependent on many factors, not the least of which is the practice of systematic spraying, to control the many insect pests and fungus diseases which attack this most profitable crop. Also, systematic spraying is determined by three factors; knowing when to spray, knowing with what to spray, and spraying thoroughly, all of which are of equal importance.

The first spraying should be made with a mixture of eight or nine parts water to one part of concentrated lime-sulphur. This spraying is for the control of the insect pest San José scale and the fungus disease, peach leaf-curl. It must be applied while the trees are in the dormant state and it is well to delay this spray until well into the Spring, but care should be taken not to delay it too long. If the fruit buds have begun to show color when this spray is applied there is great danger of burning them, and if the leaves have started to show the least bit beyond the buds, it is too late to control the leaf-curl, as the spores of this disease have then had an opportunity to lodge thereon. As the functions of the leaves cannot be carried on when infested with leaf-curl, it is evident that the spray should be applied before the leaves have made their first appearance and the disease obtained a foothold. However, if the peach tree is infested with leaf-curl, it will shed these leaves and then send out a second crop. This is a great drain on the vitality of the tree and every effort should be made to control peach leaf-curl.

CURCULIO AT PEACH PIT.



TYPICAL SPECIMEN OF BROWN ROT.

The second spray should be made with an arsenical poison, perferably arsenate of lead, using three pounds to 50 gallons of water, and should be applied just after the petals have fallen from the tree. This is for the control of curculio which bores a small hole in the peach into which she deposits an egg. With proper conditions this egg hatches into a small white larva which eats its way through to the pit; most peaches infested with this larva fall to the ground as "June drops." The curculio not only deposits eggs in the peach but also feeds upon it. The injuries caused by this feeding afford a fine opportunity for brown rot to enter. By thorough spraying with an arsenical spray, just after the petals have fallen, a great many peaches can be saved from the attack of this insect.

Just after the husks have fallen from the little peaches, the first application of self-boiled lime and sulphur should be made. This spray is for the control of the two fungus diseases, brown rot and peach scale, which are only too well known to most peach growers. This spray should be followed by another application of the same mixture in from two to three weeks. This is the last spraying necessary, except for the very late varieties, which might be helped by a third application of self-boiled lime and sulphur in two or three weeks. However, the last spraying should never be made less than four weeks before picking time. If it is made later than this the fruit is quite likely to have a whitewashed appearance, which is very undesirable. So much for the first two factors which determines systematic spraying. The third factor speaks for itself. Spray thoroughly.

HOWARD L. EARL.

Fruit Planting at Three-score.

The question put by L. F. H., page 186, interested me greatly, as it no doubt did many others situated as he is. I, too, am past the 60-mile post, and have but recently put the same question, and answered it, to my full satisfaction. Of course, in solving this problem much depends on the foundation, or starting point. The first and important question undoubtedly is, what is the condition of the ground which he proposes to plant? Under the most favorable conditions the laying out and caring for a young orchard involves considerable labor; and, where the ground planted is unsuitable to begin with, we can hardly expect satisfactory results within the period allotted to us. But, on ground which has previously been in cultivation, and can be maintained in good condition without too great an outlay of labor, results could be made highly satisfactory. You reply to him that peaches and plums and some few varieties of apples will give early returns, I have found by experience that not only peaches and plums, but apples and pears have given me prompt returns, and have been highly satisfactory. But, and here is the solution, I have planted *all dwarf trees*. These gave me almost immediate returns. Apple and pear trees planted in the Spring of 1913 are now full of fruit spurs, and give promise of a crop of from five to 20 fruits each this Summer. Peach trees planted at the same time show an abundance of double and triple fruit buds.

"SPRAY WHEN THE SHUCKS FALL."

However, it is not alone the prospect of the fruit which has proven so satisfactory; it has been that great pleasure, which you so aptly point to, of seeing the trees prosper and beautify your surroundings, that continual care and attention bestowed, labor which is not drudgery, but a recreation. I never before in all my recollection slept as soundly as I have since I laid out my home orchard! Yes, say to L. F. H., and to all others who have advanced to where they can say "I am 65 years young," go ahead, plant fruit tress but plant *dwarf* trees, and your reward is not far off. L. K.

SPRAY WITH IN-SECT-INE

SPRAYING TABLE

IN-SECT-INE is the only Compound ever mixed that Kills BOTH SCALE AND INSECTS

What to Spray and What to Spray For	What to Spray With	Time of First Spraying
Apples—		
Bitter Rot		First appearance of rot.
Canker Worm	Spray with In-sect-ine	On first appearance of worms.
San Jose Scale	Spray with In-sect-ine	Spray in fall.
Scab	Spray with In-sect-ine	As the buds are swelling.
Asparagus—		
Beetle	Spray with In-sect-ine	Early spring.
Rust		After cutting crop.
Blackberry		
Cabbage and Cauliflower	Spray with In-sect-ine	On first appearance of worms.
Celery	Spray with In-sect-ine	On young seedlings.
Cherry—		
Aphis	Spray with In-sect-ine	At first appearance.
San Jose Scale		Before buds open.
Leaf-spot		Just before blossoms open.
Cucumbers—		
Anthracnose	Spray with In-sect-ine	When plants begin to run.
Downy Mildew		When plants begin to run.
Currant—		
Leaf-spot	Spray with In-sect-ine	As leaves are unfolding.
Worm		When they first appear.
Gooseberry—		
Leaf-spot	Spray with In-sect-ine	Before leaves start.
Worm		
Mildew		When buds are breaking.
Grape—		
Anthracnose	Spray with In-sect-ine	Just before buds open.
Berry Moth		Before blossoms are ready to open.
Downy or Powdery Mildew		Just before blossoming.
Rot		Just before blossoming.
Muskmelon—		
Anthracnose	Spray with In-sect-ine	When plants begin to vine.
Downy Mildew		July 25 to Aug. 1.
Leaf-blight		When plants begin to vine.
Peach—		
Leaf-curl	Spray with In-sect-ine	In March or April, or both, to make doubly sure.
Brown Rot		About time shucks are shedding from young fruit or on first appearance.
Scab	Spray with In-sect-ine	Just as buds begin to swell.
San Jose Scale	Spray with In-sect-ine	In late fall or early spring, or both, if bad.
Pear—		
Leaf-blight	Spray with In-sect-ine	Cut out the branches on first appearance on twigs.
Psylla		In winter, use commercial lime-sulphur for eggs.
Plum—		
Curculio	Spray with In-sect-ine	With starting of buds.
Aphis		On appearance of aphis.
Shot-hole Fungus		When leaves are half grown.
Rot		As buds are swelling or on appearance.
Potato—		
Early Blight	Spray with In-sect-ine	When plants are 6 inches high.
Late Blight		As for early blight to July.
Potato Beetle		When pest appears.
Raspberry—		
Anthracnose	Spray with In-sect-ine	Before leaves open.
Saw-fly		When pest first appears.
Leaf-spot		When leaves are half grown.
Rose—		
Leaf-spot	Spray with In-sect-ine	On first appearance of fungus.
Slug		On appearance of slugs.
Strawberry—		
Leaf-spot	Spray with In-sect-ine	Soon after growth begins.
Squash—		
Aphis	Spray with In-sect-ine	Spray underside of leaves.
Lady Beetle		As soon as pest appears.
Tomato—		
Anthracnose	Spray with In-sect-ine	Soon after fruit begins to set.
Leaf-blight		Three weeks after transplanting.
White Fly		Spray underside of leaves thoroughly.
For Codling Moth.	Spray with In-sect-ine	Spray thoroughly soon as leaves are out.
For Tussock Moth.	Spray with In-sect-ine	Spray thoroughly soon as leaves are out.

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

WASHINGTON, D. C,

December 11, 1913

Dear Sirs:

Referring to sample of In-sect-ine submitted to this office by Mr. J. E. Keating in company with Mr. J. B. Porter, under date of October 9th, I have pleasure in advising you that this preparation has been analyzed in the Bureau of Chemistry and found to consist of a mixture of calcium and lead arsenates, Bordeaux mixture and some crude form of tar oil. It also contains small amounts of sulphates, chlorides, magnesium carbonate and a trace of ammonia.

The various ingredients which enter into the sample of In-sect-ine, as analyzed, are not present in large enough quantities, in the light of our present knowledge, to be injurious to plant life when used for spraying if applied in the usual manner and at proper dilutions. The compound is very similar to a Bordeaux mixture containing arsenate of lead and a little sulphur.

Very truly yours,

L. O. HOWARD.
Chief of Bureau.

Spray Chemical Compounding Co.,
Buffalo, N. Y.

IN-SECT-INE

Contains 21 Ingredients and Is Compounded With Bordeaux Mixture

Write us for Catalogue

Spray Chemical Compounding Co.

1202 General Electric Building

Buffalo, N. Y.

A Florida Yam.

The big Florida yam shown herewith weighed 18 pounds—length 27 inches and circumference 21 inches. The amount of food that can be produced on an acre of this vegetable is astonishing. Probably

A Good-Sized Yam.

the banana is the only plant which can surpass it. How thin light soil can produce such crops is a marvel.

Apple Orchard on Side Hill.

Five years ago I brushed a 3½ acre side hill and put in apple trees and plums for a filler. The land was rough. I kept it brushed until last Summer, when I took the above off and plowed the land, sowed rye, in which condition the plot is now. I am advised to sow clover in the rye in March, let the rye mature preparatory to clover for permanency. Would you advise to plow the rye under in the Spring? I have no team of my own to do the work; help of that kind is very scarce, especially so at that time of the year. The former course would suit me better, as the clover would be less work for a team, only I do not know whether the ripening of the rye would deplete the land more than the grain. The land is not sour, had plenty of wood ashes from burning brush and also considerable decayed leaf-mold. J. S.

Port Jervis, N. Y.

You can sow clover on the rye this Spring. From choice we should like to run over the rye with a weeder, just after the clover seed was put in. Let the rye grow until it begins to form seeds. Then cut it promptly and pile the whole of it around these young trees, over a space five or six feet out. Before you pile the rye put on about two pounds of good fertilizer around each tree. Then let the clover come on, clipping it from time to time, so that it will not make seed. This is the cheapest way of handling the orchard. The trees will not make as good a growth on this plan as they would if the rye was plowed under, thorough culture given up to August, and then rye seeded again, but the plan of piling the rye around the trees saves labor and plowing, and is a method within reach of your own labor without hiring, except for cutting the rye. If the trees are of fair size, we should follow the plan of cutting and piling the rye and leaving the clover.

Coloring the Lime-sulphur Spray.

The time is approaching when the fruit grower will have to go into the orchard to battle against insects and tree diseases. I suppose a large majority of the fruit growers use the lime-sulphur spray, and no doubt all of those who use it have studied the formula for making it and the manner of applying it. I have read a number of experiment station bulletins, nursery catalogues, and circulars issued by the makers of lime-sulphur solution. In none of these that give the formula for making the lime-sulphur spray, is any mention made of the addition of a coloring substance to the spray mixture which will enable the operators of the spraying machine to know positively which trees have been sprayed. It has been my practice to mark the first and last tree sprayed with a given tankful, by using a brush with whitewash. Sometimes the men forget to mark the trees, then we have to depend on the driver or some one of the operators, and again the track of the sprayer is used as a guide, which is not satisfactory, and leads to disputes. It has occurred to me that something could be added to the lime-sulphur spray to color it so that it could be easily seen after it is on the trees. Of course whatever substance is used to color the spray, it must be something which will not lessen the efficiency of the spray. The naming of this coloring matter and the amount used to the gallon of spray, it seems to me, should be the work of the chemist.

Illinois. CHARLES HEAD.

R. N.-Y.—There have been several similar suggestions before. We would like a discussion of the subject.

Rome Beauty Apple in New York.

I have not yet had much experience with Rome Beauty. I am planting them only as fillers in a Northern Spy orchard. The general impression is that this apple does not do well in New York State. However, I have seen some very handsome specimens grown here by the lake. I am using them as a filler with Spy, because the blossoming season comes at the same time and so does not interfere with the spraying. I am planting extensively good old Rhode Island Greening, Northern Spy, Tompkins King and Esopus Spitzenburg, using as a filler in Greenings, the Wagener; in King Twenty Ounce; in Spitzenburg McIntosh, and in Spy, Rome Beauty. I consider the Spy as grown here on the lake one of our best commercial apples, an annual bearer, although requiring a great deal of care in pruning, cultivating, especially in spraying, and in handling and packing. Simply the prices it brings in comparison with other varieties, this year $7 per barrel for No. 1 and $4.25 for No. 2, make it one of our best money-makers.

Wayne Co. F. W. CORNWALL

On advice of S. D. Willard about 10 years ago I planted 30 Rome Beauty. They came into bearing five years after planting and have done well since; no Winter injury at all. Since these trees have come into bearing I have planted a good many Rome Beauty. Part of these have come along all right and part have shown a good deal of Winter injury, especially one-year old trees and trees planted in Fall. We are planting now only two-year-old trees and planting them in the Spring.

GRANT G. HITCHINGS.

Onondaga Co., N. Y.

I have no trees in fruiting, but have observed it at the New York State Experiment Station at Geneva, and upon fruit forms in both Western New York and the Hudson Valley. In all three instances it was proving a first-class commercial apple. The tree may not be hardy enough for the colder sections of the East, and it is not a very vigorous grower. It has qualities such as hanging on late, good color, fair quality, tough skin, etc., that make it very hard to find a substitute. I know of none.

New York. B. D. V. B.

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ARSENATE of LEAD

Is death to all leaf-eating insects.
By its use you can
Save your fruit, vegetables, potatoes, berries, truck gardens.
HIGHEST QUALITY
Not always lowest in price but **cheapest in the end.** 15 years' experience back of this pest destroyer. Take no other brand but insist on receiving

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FOR SALE BY LEADING DEALERS
Write for our Apple Book.

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34 BROAD ST., BOSTON, MASS.

Don't Pay Freight on Water
Spray with
NIAGARA BRAND Soluble Sulphur Compound
(in Powder Form)

Dissolves instantly in Cold or Hot Water. Takes the place of and is superior to Lime and Sulphur Solution for Controlling—

San José Scale and Fungus Diseases
Also has Controlled Aphis at the same time

THE BEST ALL-AROUND SPRAY FOR APPLES, PEACHES AND PEARS

For nine years we have manufactured Lime and Sulphur Solution. Three years ago we succeeded in putting out this material in dry form which has met with the universal approval of fruit growers because it has the following—

Advantages over Lime and Sulphur Solution

A 100 lb. Drum Soluble Sulphur Compound equals a 600 lb. bbl. of L. & S. Solution. ⅙ the freight. No leakage. Does not crystallize. Will keep indefinitely in any climate. No barrels to break or return. No water to pay freight on. Controls San San José Scale in four days, sticks like paint, etc. Reports from the Government, Fruit Growers and experimental Stations covering a period of three years substantiate the above.

Order Now while you can get it

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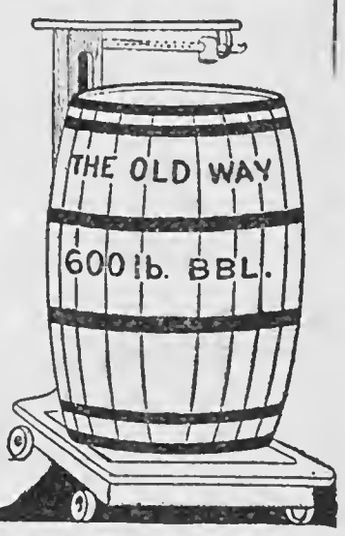
It will pay you to ask us to send our catalog on
Spraying Machinery and Accessories

We make quality machines with the power to put Spray Materials on properly, easy to handle and economical to operate.

When you write tell us just what catalogs you want.



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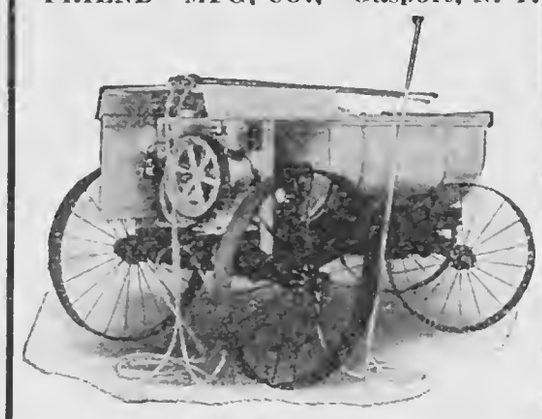
"FRIEND" MFG. CO., Gasport, N. Y.



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SIMPLY because they GET THERE. An IMITATION indicates that somewhere there is an ORIGINAL. Look on the NOZZLE you use and see if you can find the MAKER'S NAME and the word "PATENTED." The "FRIEND" is the ORIGINAL large Nozzle doing away with the cluster "FRIEND" Nozzles have no HORNS, no HOOKS, nothing to catch, drip or clog. They make the finest MIST-LIKE Spray, driving it farther into the trees than the cluster.

The "ANGLE" sprays up under the leaves and down into the CALYX. The "REGULAR" is for ordinary work. State which is wanted. Satisfaction guaranteed or money refunded. Price, $1.00 each, postpaid

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Gasport, Niagara County . . . New York

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But order now, there is no time to lose. The great thing in spraying is to have a machine you can load with Lime-Sulphur, Bordeaux or Arsenate, and go right to work without stopping every few minutes to adjust this, tighten that, replace a part here, and spray every tree, every branch, completely, without waste, quickly and while weather conditions are right.

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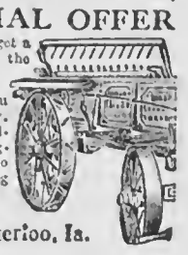

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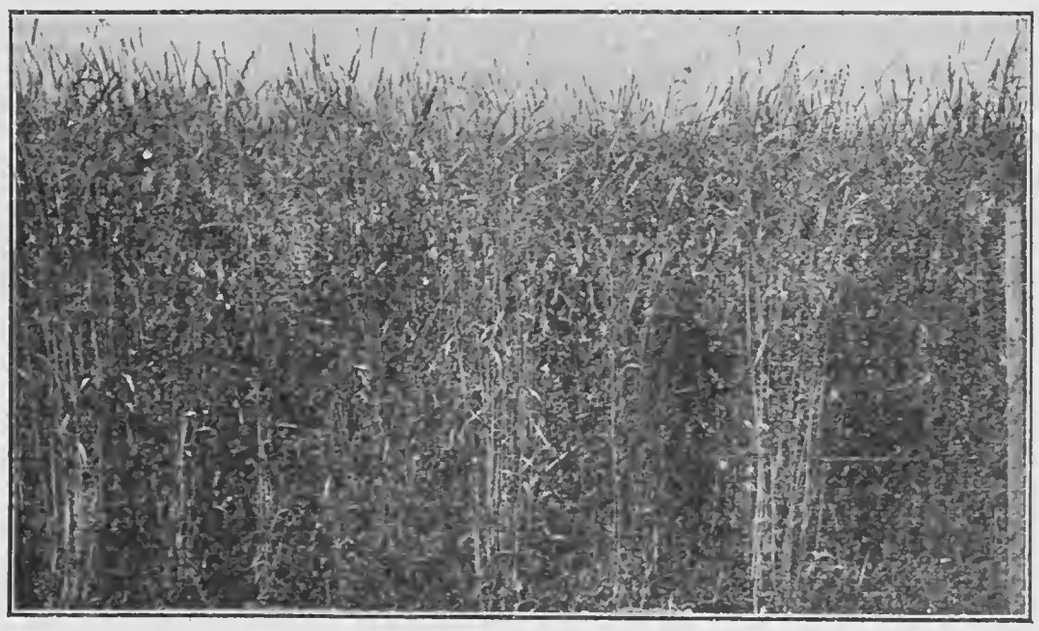
COVER CROPS IN EASTERN STATES.

The interest in this method of improving the farm continues unabated, and with good reason, for many owners of poor sandy land have been enabled to grow profitable crops with the aid of Crimson clover, vetch, cow peas, Soy beans, Alfalfa, etc. Many farmers no doubt use some of the legumes noted above with good results, but there are countless thousands who need a little encouragement of a practical nature. The county agent, by public demonstrating, is working on the right line, and gives the farmer something definite to think about. But cover crops are not always a success and some thrive in one part of the country, while they are a failure in others. This being so, this article will deal only with conditions in New England, Long Island and Delaware and vicinity. In New England the cover crop question has not been taken up in a general way until lately. The boom in Alfalfa has only been with us since 1910. Hairy vetch has been grown in the Connecticut Valley for several years, but outside of that locality you rarely see it growing. Crimson clover grown as a cover crop is almost unknown. Probably the most valuable cover crop for New England will be Hairy or Winter vetch.

The high cost of seed has prevented many from trying out the various legumes for green manure or cover crops. It is not necessary for the average farmer to pay out a lot of money for expensive seed, for he can grow it on the farm and thus make a great saving. The writer has been growing Hairy vetch for seven years, and has never bought a pound of seed. Anyone can do the same. A small quantity was presented for trial purpose, and one cupful of excellent seed was saved for Fall planting. Three seeds were planted by hand at the base of asparagus plants, the cupful planting three rows 300 feet long. The vetch plants used the asparagus plants for support and the next year in June over 30 pounds of seed was harvested. That year in August the seed was planted in rows and the plants were bushed with small birches. The next year after harvest the land was wheel-harrowed and smoothed, enough seed escaping to self-seed the whole area. Rye is now sown with the vetch to support it enough to ripen a fine lot of both kinds, these being harvested together for future plantings. For obtaining the above crop of seed sandy land was used, but no manure or fertilizers, inoculation or lime have been applied, the land getting richer each year. Vetch and rye make a good Summer fodder cut early to feed green and later makes a good hay. This crop should be sown broadcast in July or early August and covers the ground completely during the Winter. Vetch and rye start very early in the Spring, thus giving a lot of green material to plow under or to feed the cows.



COVER CROP OF RYE AND VETCH.

Crimson clover sown with vetch in July or August makes a wonderful cover crop. In New England the vetch is sown with it to help it through the severe Winters. The open changeable weather of March is likely to kill Crimson clover alone, hence the value of vetch planted with it. Crimson clover in New England is used to protect the barn soil in Winter and to hold the snow. The soluble nitrogen in the soil during the Fall is also taken up by the clover plants is used mostly to protect the bare soil and stored for use by future crops. In Delaware a great many crops are planted to Crimson clover after the last cultivation. It is refreshing to learn in these days of lime and inoculation that neither lime nor inoculation are deemed necessary by many farmers in Delaware and New Jersey. In this section Crimson clover furnishes the crop with about half of its nitrogen. Asparagus is greatly helped by Crimson clover and vetch, keeping the ground well covered and storing great quantities of the costly nitrogen. For asparagus beds the sowing should be made in late July or August 1 to 10. The Fall growth of Crimson clover in New England will pay for the trouble of planting even if you are sure it will winter-kill in March or April. The writer has knowledge of Crimson clover being grown for 22 years in Massachusetts with very slight winter-killing. Give it a chance, grow your own seed and in time you will make the word failure in Crimson clover look very small.

On Long Island, N. Y., cover crops of numerous kinds have been very successfully grown at the Long Island Railroad's experimental farms. Farmers will be well paid to take the trip out to Medford, L. I., to see what is being done to demonstrate the possibilities in sandy land. Most of the legumes are planted there and have made good. Alfalfa makes wonderful crops. Cow peas, Soy beans, Crimson clover and vetch give good account of themselves when intelligently cared for. Velvet beans planted on sandy soil has made a growth of 30 feet in one year. The foliage is profuse and causes a great improvement in fertility. It should be planted about May 10. For orchard planting Soy beans should be sown middle of June and in asparagus every four rows in between two rows. Ito Soy bean makes a wonderful lot of foliage and carries enormous quantities of nodules on the roots. The Volunteer, a cross between Ito and Nuttall, is a big yielder and carries quantities of nodules. Crimson clover should be sown June 1 and Hairy vetch in August. Alfalfa is sown there in April. Soy beans mature seed at Medford and it should be saved by all means. Crops grown on Crimson clover sod are three to four times as large as those grown elsewhere.

Cow peas do well here and can be sown broadcast in asparagus to stay through the Winter as a cover crop thus improving the soil. This cover crop question is so large and so much should be said that one hardly knows where to stop, however if demonstration plots can be arranged for and farmers will show up, great progress will surely be made. With inoculation and lime where necessary and an honest desire to learn on the farmers' part, great results may be expected in the near future.

Massachusetts. C. W. PRESCOTT.

"You think the American people lack a sense of humor?" "Yes," replied the frank visitor from abroad; "otherwise you wouldn't find so many people weighing over two hundred pounds who dance the tango."—Washington Star.

"DEATH, TAXES AND The Mapes Manures

Are the Only Three Things in This World I Am Sure of"

WROTE AN OLD CUSTOMER OF OURS

Passing by the first two, he and every other farmer certainly has every right to be sure of THE MAPES MANURES. They have been used for fifty years by the most intelligent, the solidest and most successful farmers, who have banked absolutely on

I. THE RECORD OF MAPES IN THE FIELD.

Our record in the field for the past fifty years is too well-known to require more than a mere reference. In this connection, "lest we forget," in the American Agriculturist's Prize Contest, open to the entire United States, the largest crops of Potatoes and Corn grown on commercial fertilizer alone were grown with Mapes; 669 bushels of Potatoes on one measured acre with the Mapes Potato Manure, and 213 bushels Shelled Corn on one measured acre with the Mapes Corn Manure.

II. THE MAPES RECORD WITH THE EXPERIMENT STATIONS.

We are equally proud of our record with the Stations. There may at times have been an occasional chance analysis which was not quite what we would have liked, and not fairly representative of our goods, but on the grand average, year in and year out, our record has been something to be justly proud of.

III. SAME FAMILY MANAGEMENT FOR THREE GENERATIONS.

Not only have the Mapeses continued successively in the business for three generations—grandfather, father and son—but the Lanes, who have been associated with the Mapeses from the start, follow the same identical record in the business, grandfather, father and son, successively. Could there be a better guarantee than this family management, with the element of family pride deeply involved, that everything has been done and will continue to be done to make the Mapes Manures as good as the knowledge of fertilizer science permits for the crops for which they are intended.

The Mapes Manures have never stood still but have been constantly improving as the knowledge of scientific plant feeding broadened and progressed.

"The Mapes business had its inception in the scientific research and experiments of Professor James Jay Mapes, and scientific research and experiment, coupled with the most exact practical experience, have been the dominating factors in the Mapes business to the present day."—The Florida Grower.

SEND FOR OUR PAMPHLET

The Mapes Formula & Peruvian Guano Co., 143 Liberty St., New York

Hope Farm Notes

The Real and the Ideal.

We have them both in horticulture or rather we have much of one and great need of the other.

THE REAL THING.—Here are a few actual questions which have come in recently:

1. Do you think my peach buds are damaged?
2. There has been frost in my cellar where the seed potatoes are kept. Do you think they will sprout?
3. I have a field quite low and wet. Do you think it is sour?
4. Do you think I can graft tame cherries on the wild choke-cherries growing on my farm?
5. I hear much about peach borers. Do you think my trees are likely to be affected?
6. I thought you said wood ashes will injure hen manure. I mix the two and can smell the ammonia—therefore I know it is very good!
7. I am tired of working for others. Do you think it would pay me to buy a horse and wagon and peddle fruit and vegetables?

These are actual questions, and we have many like them. The most suitable text I can think of for answer is:

"He is of age—ask him!"

I should ask the peach buds by cutting a few and bringing them to a warm room and putting the twigs in water. Ask them and they will tell whether they are able to put out bloom or not. The same with the seed potatoes. Take a few fair samples, cut as you would for the field and leave them in a sunny window or plant in boxes or pots. They can beat the Hope Farm man in telling how much life they have left. Also the field. Why not test it with litmus paper? Take a cupful of the soil—a fair sample—make a knife hole in it and put in a strip of blue litmus paper. Press the soil around it. If it turns red the soil needs lime. As for grafting tame cherries on wild stock I doubt it, nor can I see why it should be done, but here is another case of "ask him." Try a few and see how it comes out. You will also have to ask the borers. Usually, these insects work into all peach trees where any number of them are grown. Dig away the soil at the foot of the tree and hunt for the gum and the little burrows which the borers make. If they are there cut or dig them out. We did say that wood ashes will injure manure and here we repeat it. The fact that you smell ammonia is sure evidence of this injury, for the ammonia which you smell is passing off into the air as a gas. When once mixed with the air you have lost it. If a careless child opened the bird cage and let the canary fly away you would hardly claim that the child was a great help in making canaries. Yet the gas and the bird are both lost when they get into the air. You may catch the bird but the ammonia is lost. When you mix in wood ashes you *ask the hen manure*—but somehow you got the wrong answer. As for peddling you will have to ask the job. You will find it still more tiresome working for yourself when the bills are to be paid. Good peddlers are like poets in one way—they are born, not made.

You would be surprised to know how many of such questions we receive. No stranger can possibly answer them. One might make a bluff or a guess but the best advice is "ask him." The mental exercise required to experiment and observe and take accurate records is the best thing for a farmer or gardener, for it is along these lines that men learn to think for themselves and this makes progress.

THE IDEAL.—The real thing is all right—a necessity in life—yet the ideal is greater, for without it no lasting success is possible. As another text for this I would take one used by President Thomas of Middlebury College in a sermon to his graduating class:

"Is not this the carpenter, the son of Mary, the brother of James and Joses and Judas and Simon? Are not his sisters here with us? And they were offended in him."

The people of that little village in Judea could not realize that a man of this plain, common stock could do the wonderful things which were reported to them. How could an ideal come out of the dust? Ever since the world began to take notice of ideals men have gone hunting for them in the sky or over the hill in the next county. We have got into the habit of looking at the stars rather than at our feet. Yet we live and move and work *on the earth.* The far-away places and the inhabitants of the stars do not need our ideals half as much as those who live right in our own valley—neighbors and friends. Many of us have come to regard the ideals of life much as we do the black suit of clothes or the silk dress tucked away in cedar or moth-balls and taken out now and then for some fine occasion. We need to dress these ideals up in overalls and boots, so they can go with us right out into daily work. I have seen old soldiers with a rusty sword and a flag hanging on the wall. There was their ideal of devotion to country. They might have served their country better by carrying that ideal out with the hoe and scythe instead of leaving it with the sword. I am talking in this way because I want you to think out the meaning yourself—without having it all explained. We must put our ideal right into our own work—not lock it up for special occasions. An ideal represents the cleanest, strongest, most satisfying thing in a man's life. It is the one priceless thing which he would take most pleasure and confidence in laying right upon the altar for all to see. And here is what I mean by carrying this into everyday life—dressing it up in overalls and boots. Let every nurseryman put a piece of that priceless thing into every box of trees he sends from his nursery. Let every fruit grower and gardener put it into every package that leaves his farm for sale. Let them plant it in the soil as treatment for their farms, and let them put it into every contract or argument they make with their fellowmen. That is the way to idealize the humble things of life—put that part of yourself which you are not ashamed of right into them. H. W. C.

A Fertilizer for Corn.

I have an upland field, sandy loam soil, rather thin, on which was grown a crop of silage corn last year. I wish to raise silage corn on it again the coming season, and would like to know what fertilizer to use. The field was given a heavy coat of barnyard manure last season; I do not wish to use any manure this year, but nitrate of soda alone, or with muriate of potash, if the nitrate would not be sufficient. How much of the nitrate, or of the nitrate and potash together, should I use, and how would it be best applied? To my knowledge lime has never been used on this soil; would it probably be of benefit to the corn crop to apply lime also? F. S. F.

Griffin Corners, N. Y.

You cannot expect to raise a good corn crop by the use of nitrate of soda alone, or nitrate mixed with muriate of potash. Phosphoric acid must also be used on that kind of soil to make a complete fertilizer. The nitrate is not the best form of nitrogen for the growing crop. In fact, many good farmers would not use nitrate on corn under such conditions. The nitrate gives the most available form of nitrogen, and is thus the best form to use for the early growing crops of oats or grass, which must make their start and grow in the cool part of the Spring, when the ground is cold and nitrates are not formed in it. The corn plant makes its heavy growth late in the Summer, when the ground is warm and nitrates are readily developed in it, from organic forms. Thus the best fertilizer for the corn crop carries this nitrogen in organic form, which will be broken up and made available late in the Summer.

Dried blood and tankage are, therefore, better for the corn crop than nitrate of soda. On such soil as you mention, a mixture containing two parts of tankage by weight, five parts acid phosphate and two parts muriate of potash ought to give results on the corn. If you have had no experience in the use of fertilizers it would probably pay you better to buy one of the ready-mixed brands for corn. On such a soil an application of ground limestone would probably pay well.

"WHAT is a hobby, mother?" asked Freddie. "Something people are very fond of," replied mother. "Oh, is it?" exclaimed Freddie, very much surprised, "I thought it was a husband!"—Melbourne Australasian.

Who Loses the Money

When the critical moment of the spraying season is at hand and the sprayer breaks down?

Surely Not the People Who Made the Sprayer or the Dealer Who Sold It To You

You know very well that you are the biggest loser when the greater part of your fruit goes to waste because your sprayer did not work properly.

Make sure of getting full crop from your trees by buying *The "NEW-WAY" Rapid High Pressure Power Sprayer.*

Made complete in our factory. Large ball valves. Free passage of solution.

The spraying season is close at hand so write for our S-5 catalog *now.*

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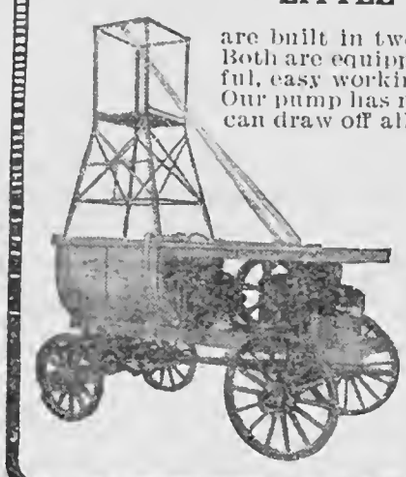
LIGHT RIGS WITH LOTS OF POWER

We make a complete line of Sprayers for Orchard, Field and Vineyard, both Hand and Power Types, designed and built under the personal supervision of a practical man who has learned what to build into his machine and what to leave out by operating machines in the orchard and field. Little Giants are built to stand up under hard work, and so constructed that they put the spray where you want it. They combine maximum power and strength with minimum draft weight, so that they won't kill horses on rough, heavy ground.

LITTLE GIANT ORCHARD POWER SPRAYERS



are built in two sizes with tanks of 200 gallons, and 100 gallons capacity. Both are equipped with a special pump of our own make, especially powerful, easy working, and so simply constructed that every part is accessible. Our pump has many practical features like pet cocks through which you can draw off all the water and prevent freezing.

THE PUMP WITH THE CLUTCH

is a little Giant feature. By throwing out the clutch the pump may be stopped without stopping the engine or interfering with agitator. It's a great advantage to be able to crank the engine without having the pump attached. You can also mix your solution thoroughly before starting spraying. Little Giants are giving extra satisfactory service to many growers. It will be worth your while to write for our catalog and prices.

W. C. AKINS MACHINE COMPANY

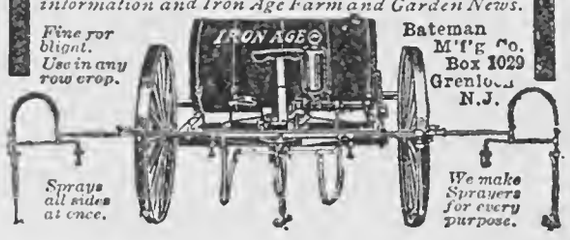
976 INSURANCE BLDG., ROCHESTER, N.Y.

Something New In Traction Sprayers

Sprays 4 rows with 12 nozzles, 3 on each. 8 are low-down nozzles for still more thorough spraying of sides and underside of vines. Spraying saves your crop and *increases the yield.* One of a dozen

IRON AGE FOUR and SIX-ROW

Traction Sprayers, 55 or 100 gallon wood tanks, double or single acting pumps, wind shift, nozzles, strainers, thorough mixing, no corrosion. Ask your dealer about them and write us now for *new "Spray" book, spray information and Iron Age Farm and Garden News.*



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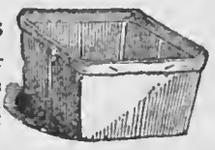

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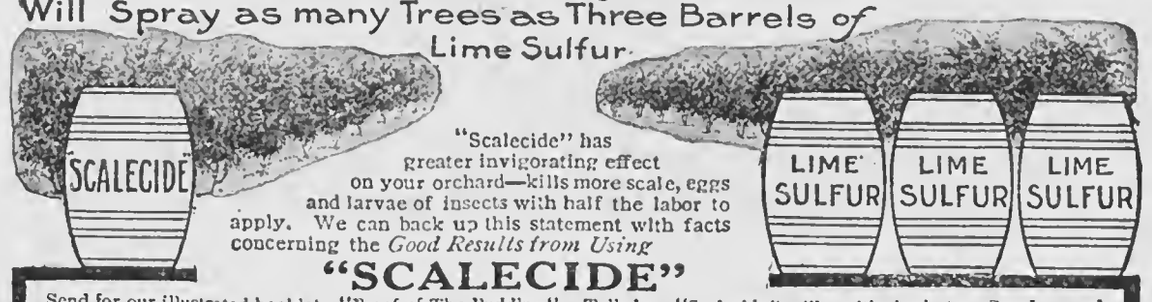
COMPRESSED AIR SPRAYERS

The foremost orchardists of the country are installing our system rapidly, recognizing superiority, durability, economy in initial cost, weight, time and labor with **no machinery taken into orchards, therefore nothing to get out of order.**

"One engine will run any number of tank outfits"

W. H. OWEN SPRAYER COMPANY
Sandusky, Ohio

One Barrel of "Scalecide" Will Spray as many Trees as Three Barrels of Lime Sulfur



"Scalecide" has greater invigorating effect on your orchard—kills more scale, eggs and larvae of insects with half the labor to apply. We can back up this statement with facts concerning the *Good Results from Using*

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Send for our illustrated booklet—"Proof of The Pudding". Tells how "Scalecide" will positively destroy San Jose and Cottony Maple Scale, Pear Psylla, Leaf Roller, etc., without injury to the trees. Write today for this FREE book and also our booklet—"Spraying Simplified".

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We are World Distributors for VREELAND'S "ELECTRO" SPRAY CHEMICALS and Arsenate of Lead Powder (33 per cent), which, used wet or dry, has no equal in strength or texture. Avoid imitations.

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Two Generations of Black's Trees

EXPERIENCE GIVES OPPORTUNITY TO LEARN. A determination to excel, a love for the work together with experience is a powerful combination destined to give the very best results.

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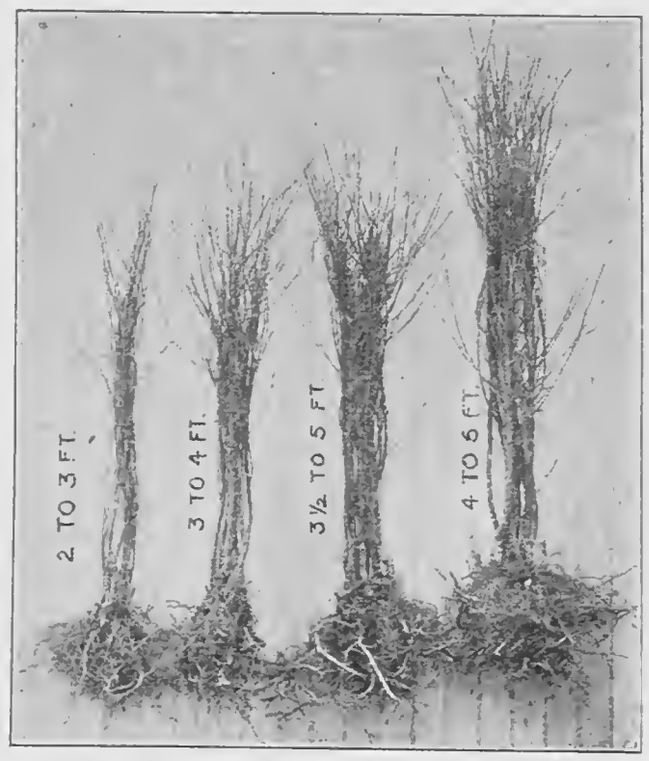
When the VILLAGE NURSERIES send you nursery stock it is backed up by two generations of experienced nurserymen and fruit growers. Jos. H. Black, with his fifty-five years of active participation in his chosen life work, who as a mere lad showed his love for and devotion to its greatest advancement by inventing the first tree digger ever used in a nursery and by budding twice the number of trees of the average workman of that time. His son's first memories were of trees and plants, discussions of varieties and best methods of growing, budding, grafting, digging, grading and packing. He was the first to beat his father budding, doing it at the age of sixteen, his record of 820 trees in one hour and 3,500 for five hours has never been equalled.



NOTICE THE ROOT GROWTH

Peach Trees graded and tied in tens ready for shipment

These men have always been trying to grow the very best possible trees, giving nothing in varieties or stock but such as they positively know would be best suited to the planter. These men now stand back of every tree shipped

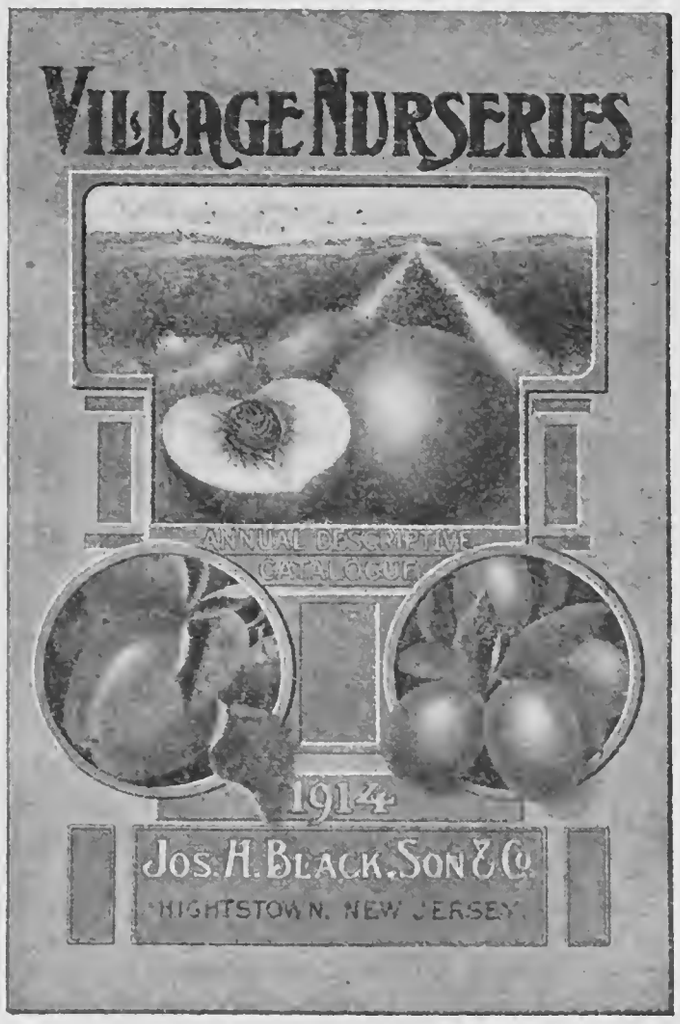
From Black's Nursery

Every variety offered has been fully tested out for hardiness, sturdiness and adaptability to your needs. The fruits are propagated exclusively from stock that we know to be true to name. Buds and grafts are selected from healthy trees and cut under the direct personal supervision of our Walter C. Black.

Not a tree or shrub is shipped from these grounds that has not been personally inspected by him at sometime and all fruit trees are under his constant supervision during growing, digging and packing seasons. We have been urged repeatedly to increase our output and devote more time to the selling end but seven years ago we determined that we would grow only such quantities as could be grown under this direct supervision.

Our idea is to grow trees and sell direct to the planter. These trees, to be offered at only a fair margin above cost of production, will be appreciated to such an extent that they will sell themselves at our prices regardless of the prices others are quoting.

You plant fruit and ornamentals for the home expecting good fruit and a good appearance or you plant fruit for profit expecting good crops and good returns. To get these results you must have good trees and plants. To be sure that which you are getting



A reproduction in black and white of the Catalog which gives but a poor idea of its appearance in its beautiful colorings

Is What You Want

you should never consider a few cents in the purchase price but buy of the man whose experience ensures a thorough knowledge of his work and whose personality is evident in every individual article you receive.

We shall never make a big fuss over any new fruit until we *know* it is a BIG thing for *YOU*. We are always in intimate personal communication with the highest authorities in our Experimental Station and would rather *burn a hundred trees* than send out *one* which would not meet with their approval.

We advertise very little because our trees are selling themselves but we do know that readers of that best of all farm publications, The Rural New-Yorker, know and want the best things going and we want that class of customers because they can appreciate what we are doing.

OUR CATALOGUE

We have ready for free distribution a catalogue that tells you what you want to know in as few words as possible and is fully illustrated. The four-color cover is suggestive and beautiful.

ADDRESS

JOS. H. BLACK, SON & CO., HIGHTSTOWN NEW JERSEY

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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Entered at New York Post Office as Second Class Matter.

Advertising rates 60 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

WHAT *does an apple orchard cost?*

That question is repeatedly asked by men who are considering fruit growing as a business investment. They can get figures regarding nearly every other line of business. What about an orchard? We think Mr. Burritt's figures are accurate. Some of the "boomers" will say they know men who have done much better and established orchards for less money. We are content to let the "boomers" blow themselves elsewhere. We want fair and honest statements, and Mr. Burritt's figures may be accepted as such. We would like to have them compared by men who have kept books, and can tell just what has happened in the orchard.

*

AT the State Fruit Growers' meeting at Poughkeepsie, the president, L. L. Morrell, made this statement:

We have two classes of men within our ranks who have been serious drawbacks to us in our work in getting bills through the Legislature. These are the timid man who will not stand up for what he really ought to have, and the man who is continually asking for what he ought not to have.

Mr. Morrell is right. The timid man and the man who wants everything are to be found in every effort to obtain legislation. The politicians know how to make capital out of both of them. They bluff the timid man, so he does not dare to say a word, and they point to the extremist to prove "that those farmers want the earth." Both classes of men should get together for what is fair and fall in behind their leaders with whole-hearted support.

*

I READ with amazement on page 257 of THE R. N.-Y. that "it is hard to say definitely just why sweet potatoes should be so low at this time." We are only a hundred miles from Vineland, and our town borders on New Jersey. A local grocer charged me 10 cents a quart for sweet potatoes to-day, and he would have fainted had I asked for a peck or a bushel. I pay $1.25 a bushel for Irish potatoes. You will have to lower your 35-cent dollar, I think. ALBERT C. MAYHAM.
Orange Co., N. Y.

Still there are people who say there is no such thing as a 35-cent dollar. Here at one end of the line sweet potatoes are so cheap that farmers are seriously considering giving up their culture. At the same time, 100 miles away this man is paying 10 cents a quart! It is true that in some individual cases the margin between producer's and consumer's price is small. For example, we are told that many gallons of milk are sold here at five cents or less per quart. True, but this is not the price to the final consumer. A restaurant may pay five cents for a quart of milk and sell it in three glasses to consumers at five cents a glass. This 15 cents is the consumer's price. When we talk about the 35-cent dollar we give the *average*. When one man shows that he gets 95 cents of the dollar we can match him with another who had to pay the commission man, since his produce did not bring enough to pay for freight and cartage.

*

THIS seems to be one of those years when certain fruit growers think they can get along without spraying. These seasons come periodically. This year it seems to be the parasite which is to clean out the scale. In other years it was reported that the scale was "dying out" or "weakening." We must confess with some shame that a few years ago we listened to the tempter and did little spraying. It was an expensive play with temptation. The scale woke up in June and did great damage to the crop. Never again! We cannot possibly impress upon our friends too strongly the folly of giving up spraying. Do not under any circumstances whatever listen to the false prophets who tell you the scale will take care of itself or be destroyed without careful work on your part. Take it from us that if you do you will be sure to regret it. We do not tell you what to use or what outfit to buy—leave that to your business judgment—but be sure to fit yourself out with strong power and fixtures and plenty of material, and then "go to it!"

*

UNDER "The Home Acre" this week you will find plans for beautifying a small place. Next week there will be similar plans for arranging yard and flowers around a farmhouse. Such work will be made a prominent feature of THE R. N.-Y. in the future. We are prepared to suggest plans, give estimates and name suitable shrubs and trees for any location. This idea of "fixing up" and beautifying the home grounds at moderate cost is a fine thing for farmers to consider. A good lawn and garden will make the farm home brighter and better, and also add to the value of the farm. There is no question about the latter proposition. Arranging the home grounds in good taste is like grading up the herd with pure blood. We can give you the practical advice of a skilled landscape gardener, and it will be a pleasure to help beautify that yard. In years past we have given thousands of climbing rose bushes to our readers. You ought to see them now in blooming time, giving a great dash of color to many a farmhouse. Now we want to help beautify the yard.

*

THE Supreme Court has struck the Pure Food laws a hard blow in a recent decision. A question of vital importance came before the Court in the "bleached flour" case. In this case the Government sued the Lexington Mill Co. because it used nitrogen peroxide for bleaching flour. The mill company admitted using this poisonous gas, and also admitted that the flour contained a small quantity of the poison. The defence was that there was not enough of this poison to be injurious. On this evidence the lower court decided for the Government. Now the Supreme Court has reversed this ruling. This court claims, in effect, that before a food manufacturer can be punished for poisoning food it must be shown that there is enough of the poison in the food to actually prove dangerous to health! Thus hereafter the Government will be at the disadvantage of being compelled to satisfy the court that there is enough poison present to kill a human being. Think of the difficulty of doing this while the food poisoners are able to buy and control the testimony of doctors and scientists from great universities with their poisoned dollars. It may be necessary to kill an army of men with this poisoned food before the court will be convinced that it is "injurious." Even then the poisoners can hire "experts" to show that the dead men died "from want of breath" or some other "obscure" cause. This decision is a hard blow at a useful law. No use blaming the Supreme Court. Congress is the place for our fight. Let us get after Congress to change and strengthen the pure food law, so as *to prohibit the use of all poisons in food.*

*

WE find that some fruit growers are quietly starting what they call a lightning Babcock test for nursery trees. These men cut scions from the trees as they came from the nursery—taking pains to preserve the labels and keep the records straight. These scions are used for grafting on strong, well-matured trees. A careful "map" is made of this testing tree, and when this grafting wood produces fruit they can tell about the "misfits" several years ahead of the old plan of waiting for the young trees to bear. Of course it is necessary to use the best of judgment in doing this work, but it gives a good line on the quality of the nursery stock.

*

PARCEL POST is in real danger. Its success thus far has sent the old bloodhounds after it. The Senate Committee on Post Offices has adopted the following proposed amendment:

And provided futher that there shall be no changes in the existing weight limits, rates of postage or zones of fourth-class mail matter until authorized by law.

The object of this is to cripple the parcel post system. Under the present law the Postmaster General need not go to Congress and ask for every little change on rates, weight or service. Within certain limits he may go ahead and improve the service when he finds it necessary. The present Postmaster General is in favor of rapidly extending the system—increasing the weight limit and decreasing rates. Let him alone and he will compete with the express companies and improve the service. The proposed amendment would absolutely destroy the power of parcel post to compete with the express companies. These companies would succeed in capturing all the profitable traffic. We all remember what a struggle we had in obtaining the present parcel post. Let this amendment be carried and the fight will be harder than ever, because Congress will refuse to change rates and thus play right into the hands of the express companies. The same old "careful consideration" Congressmen are working this scheme. There is nothing to do but bring out the inkstand and *lick a stamp for parcel post.* Get right after your Congressman and Senators at once and ask them to help kill that amendment.

*

IT is true enough, as the Governor says, that there is already sufficient law to authorize co-operation in the marketing of farm products. The only question remaining is whether the State should spend anywhere from $25,000 to $50,000 in paying organizers to help the farmers do what they ought to be able to do for themselves. No one will doubt the value to the farmer and the consumer alike of co-operation in rural districts for the shipment of agricultural products to cities and towns; but this educational process might very well be made the business of organizations in which farmers are already interested, rather than the business of the State.

This is taken from the Brooklyn *Eagle*, referring to Governor Glynn's call for legislation to provide for organizing farmers into coöperative marketing groups. It represents the feeling held by many city people regarding farm education. They do not object when the nation or State spends money in telling farmers how to *produce more food.* That may mean cheaper food for them, and they favor it regardless of its effect upon the producers. Such people think the farmers ought to be satisfied with the education in production as their share and let manufacturers, railroads and other interests take tariffs, subsidies and special privilege. Thus when an effort is made to give the farmers needed business training such people as we have mentioned object though they must admit the need of such education. The fact is, that every civilized nation of Europe has recognized the necessity of organizing its farmers for business purposes. New York State is not attempting a new thing, but is making a belated start at a necessary reform.

BREVITIES.

YOU are right—when the head of the house gets into trouble it is a case of parboiled.

HONEST, now, do you think a farm without any garden a good place to hold a child to farm life?

IT has been found that the same germ which causes a disease on the leaves of nasturtiums also causes a disease on sugar beet.

"WOOD-PILE DAY" is in order. No one can compute the sickness and trouble found in country homes—due to a lack of dry fuel.

THE great test of character is not so much what we say about people as what we would like to say and yet keep ourselves from saying it.

THE Department of Agriculture reports that many horses have died of blind staggers, caused by eating moldy baled hay. When this hay was opened up to the sun there was no further bad effect.

A BILL has been introduced in the New York Legislature to compel baking-powder manufacturers to mark on each can "a statement of all of the ingredients contained in the powder and the amount of available leavening gas in cubic inches."

THE demand for information about lime continues. The New York Experiment Station at Geneva has issued Circular No. 27 on "Ground Limestone for Soil Improvement." It is an excellent pamphlet, which will answer many of your questions.

REFERENCE is made in the report of the Western N. Y. Horticultural Society to the fact that contact with strong tobacco extract used in spraying may cause nausea, being in fact slight nicotine poisoning. The florists' remedy for this is hot black coffee.

WILLIAM ROBINSON, the famous English horticultural authority, writing to the London Times, says that the best apples in the world are American apples, and the best variety of all is the Newtown Pippin, which he uses six months of the year.

THE chestnut bark blight is referred to on page 334 as Endothia parasitica. We have previously referred to it as Diaporthe parasitica, while a still later authority calls it Valsonectria. It remains equally destructive under all these impressive names.

WITHIN the past few days at least a dozen people write that they are mixing the hen manure with wood ashes and think they are doing a fine thing. So they are—putting a fine upon themselves by losing the ammonia in the hen manure. We did think we had made that one point clear.

THE Department of Agriculture suggests a course at an agricultural college as a better prize for boys and girls' contests than trips to Washington. A sensible suggestion. We question the value of carrying a crowd of boys about on a junket trip.

FARMERS' WEEK AT CORNELL.

PART II.

It is useless to try to describe all the things that you saw, or repeat all the things that you heard, at Farmers' Week. If all of the hours of the day, of all the days of the week, that you could spend there, didn't suffice to give you even a glimpse at everything on the programe in which you were interested, how could they be described in a column or two of print? But there were some things which must be mentioned. We can take it for granted that the scientific side of agriculture was well displayed; that is what an agricultural college is for. If one went there to learn, knowledge was spread before him in the most attractive manner; he could have no one but himself to blame if he went away empty. But there is another side to agriculture that is even more important than the scientific side; and that is the home side. Without the development of this, agricultural science is the sorriest kind of failure.

When our farms become merely work shops, and laboratories—but they must never be allowed to become merely these. The women see this; and it is to the women that Farmers' Week owes much of its value and attractiveness. The new building for home economics afforded space for some of the finest things of the week; and when audiences overflowed that, the splendid new auditorium, seating several thousand, was close at hand. In the basement of the first building was the cafeteria, and family groups about the small tables, and the long "bread line" doubling through the corridor, and stretching up the stairway to the floor above, showed the appreciation in which it was held. The deliciously prepared food, at extremely moderate prices, made one wonder who was standing the loss at the financial end.

Women understand the uselessness of trying to uplift the man with an empty stomach; so while the necessary foundation was laid in the basement, the work of developing the spirit was carried on in the auditorium overhead. Not only were the practical details of housekeeping discussed, but the no less practical value of art, literature, and music, in home making was demonstrated by experts. Miss Hazard showed how valuable and interesting historical novels really are; Miss McCloskey made art in child rearing, in literature, and in environment, a really tangible thing; while Mrs. Morgan performed the miracle of opening the ears of some, musically deaf, to the sublimity of music. Not classical music, beyond the reach of most of us, but the music of the heart and of the home. To few is it given to combine such technical knowledge and skill with an appreciation of the true mission of music and fervent desire to make it minister to all that is best in life.

But to mention a few names is only to seem to discriminate where no discrimination is called for; one can only tell, however, about those things which he himself was fortunate enough to hear. One of the finest of these, in the writer's case, was the recital upon the great organ in Sage Chapel. Here was music which many can hear but rarely in a lifetime. It is to the credit of Cornell University that departments other than the agricultural offer some of their best things to visitors on Farmers' Week. M. B. DEAN.

THE STORY OF A CO-OPERATIVE SUCCESS.

PART IV.

A LAND BANK.—To-day, in New York State, we have to borrow money from men who must have it repaid in a lump, and who either cannot or will not grant, as the case may be, any but the shortest terms. Their money must come back to them ready for reinvestment, which precludes payments spread over a term of years. In France and Germany they have systems of land bonds guaranteed by that same joint credit that has helped our Exchange. These bonds bear a certain interest, in addition to which those for whom they are issued pay yearly an additional one or two per cent toward their redemption, which is charged off the debt. In brief, the system is a central land bank whose members are associations in many communities. Any member of an association may apply to it for a loan. The application is passed upon by the association to which the applicant belongs, men thoroughly familiar with local conditions. It is then passed to the central organization, which offers the bond for sale. Guaranteed by the joint credit of the whole system, such bonds rank with the best government bonds as investment securities and are in steady demand. Those bonds run for long terms of years—40 years being common.

PROPOSED LEGISLATION.—Last year a bill was passed by the Assembly, and reached its third reading in the Senate, to enable us to do that very thing. This year a similar bill will be introduced under the auspices of the new Banking Commission, with every chance in its favor, and it will pass if each and all of us does his share toward pushing it. And this bill is based on proven coöperative principles, proven not only in France and Germany by a hundred years of experience, but proven right here in New York by the many flourishing savings and loan associations. These have devoted themselves to local city and suburban needs. The proposed bill will unite them all and open the door for rural associations to come into a tremendously strong joint credit plan, whose bonds will be as steady, reliable, investment securities as any government bond, because backed by that form of security which cannot run away and can only increase in value as time goes on. When once the land bank is established there is no reason why our growing Exchange should not look forward to membership in it, and our members be freed from the tyranny of private money lenders or the short term note which is all our banks can give us. We look forward to that end as one form of future activity, and we have learned that it is possible by actual experience in our Exchange work. But first of all each community must make its little start as we are doing and take its lessons in working together, giving and taking, living and letting live, for that is what coöperation means. Some will never learn the lesson (we have some) and they will have to be weeded out or left out

Now, I haven't read this paper to preach an ideal, nor have I read it to advertise our Exchange. I have read it to show how we are trying to make more money than before by cutting out the middleman where we are consumers, and to find better ways of marketing, that we may get more than a 35-cent dollar. It seems to us that there is a big field for work between Exchanges. Many here must produce things that we need to buy. We produce things you want to buy. By dealing direct I am inclined to think we could do much business to mutual advantage, and our Exchange would be more than glad to hear from others or individuals along these lines.

NEW YORK STATE NEWS.

GRAPE GROWERS MEET.—At a recent meeting of the Chautauqua and Lake Erie Fruit Growers' Association at Ripley, the proposition was endorsed to organize the owners of a majority acreage of the grape-bearing land of the belt into a coöperative association. Addresses were made by Prof. J. F. Barker of Geneva, F. Z. Hartzell and F. E. Gladwin of Fredonia, S. J. Cook and H. B. Rogers. Dr. Jordan of the Experiment Station was thanked for his interest in the growers of the belt.

ABOLISHING COUNTY FINANCIAL GOVERNMENT.—Lewis K. Rockfeller, chief of the Bureau of Municipal Accounts of the Comptroller's office, advocated the abolishment of the present system of county financial government, since it permits of so many irregular and illegal practices. He is reported as saying that either the boards of supervisors should be abolished or that they should be permitted to exercise only legislative functions. He says that when the present bureau was organized they found about as many systems, or lack of systems, as there were counties. Out of 57 counties visited there were about 57 varieties of bookkeeping, and in only four were there found methods worthy favorable comment.

VIOLATIONS OF THE CONSERVATION LAW.—A bill has been introduced in the Asesmbly by Mr. Mackey which would amend the conservation law by providing that an action for penalties for violation of the law must be brought in the town where the penalty is incurred or in which the defendant resides, or in a town adjoining that in which he resides. At present the action may be brought in any town in the county in which the penalty is incurred, or if the defendant resides in another county then in any town in the county in which he resides.

ONONDAGA FARM BUREAU.—About 100 farmers and others interested in the work of the Farm Bureau met in annual session at Syracuse, February 21. Much enthusiasm was manifested in the work and 24 new members were added. E. A. Powell was elected president of the association; W. C. Hunt of Fayetteville, vice-president; W. W. Porter, secretary, and J. T. Roberts treasurer; S. A. Martin, agriculturist. M. C. Burritt was present and addressed the meeting. An advisory council was formed, one member being from each town in the county. Plans for the work for the present season were discussed, and it was decided to ask the board of supervisors to increase their appropriation this year over that of last year, which was $1,000.

PEACH BUDS HIT.—It seems beyond question from all reports that the peach buds in Western New York, and possibly in other sections, for the cold has been general, have been badly injured by the cold weather. In sections where buds are usually immune they are found to be injured.

FACTORY MANAGERS' COURSE.—The department of dairy industry at Cornell will offer a week's course for the managers of dairy plants, where they may become familiar with the latest methods. Each person attending will be allowed to specialize in that branch of the work in which he is most interested. The requirement for admission is that the applicant must have had at least one year's experience as manager of a factory or creamery. The fee for the course is $5, and the course begins March 11.

EFFICIENCY IN FARM MANAGEMENT.—This was the theme of County Agent Robertson at the farm extension school at Adams. He showed that the average farm in Jefferson County comprised 143 acres, and the number tilled as 70. The average income of the farmers was $609. Of the 670 farmers visited by the agent, 74 made less than $1 for the year's labor or lost money; 247 made between $1 and $500; 204 made between $500 and $1,000; 99 made between $1,000 and $1,500; 29 between $1,500 and $2,000; and only 17 made over $2,000. The large farms made more money than the small ones.

AGRICULTURAL SOCIETIES' BILL.—A bill has been introduced in the Legislature by Assemblyman Chase of Greene County which provides that any agricultural or horticultural society which has been incoroprated under the laws of the State for a period of 25 years or more, and which has during that time held 24 or more exhibitions of farm produce of all nature, upon which cash premiums have been paid, shall be entitled to a share of the money which the State gives to agricultural and horticultural societies. J. W. D.

FRUIT GROWERS AT POUGHKEEPSIE.

The Eastern Meeting of The N. Y. State Fruit Growers Association has become an index that accurately records the progress made by the fruit growers of the Hudson Valley. Despite the bad roads and stormy weather the hall was crowded and the interest is such that it was voted to hold a three day meeting next year.

Professor Morrell's address referred mainly to grading and packing fruit, and before the close of the meeting a resolution endorsing the grading and packing bill now before the State Legislature was adopted.

Prof. Hedrick, of Geneva, spoke on "Ten Years Profit from an Apple Orchard," which gave an accurate account of all expenses and income for a 10-year period.

Dr. E. P. Felt, State Entomologist, speaker on "Insects in the Hudson Valley," said a San José scale parasite had been found quite abundant in the Hudson Valley and while it was doing much to check the scale, fruit growers were not warranted in neglecting their usual fight against this pest and should be as vigilant as ever

J. R. Cornell, of Newburg, spoke on "Pear Growing." He practices intensive culture and is constantly on the lookout for the appearance of blight, cutting it out at the earliest possible moment its appearance can be discovered.

Orlando Harrison, of Berlin, Maryland, told how they saved their peach crop from brown rot by thorough and timely spraying and during his talk told of their experience with college boys as help. Many condemn this class of help because some of the boys are practically worthless or worse but it they would only stop to consider they would find other classes of help as a whole no better.

In spite of the fact that the menu cards were lost in the storm by the express company and that most of the scheduled speakers were unable to attend, the banquet was as usual a great success. The Hope Farm man in a short talk tried to impress his hearers with the fact that the fruit grower who won honor for his section by growing prize winning fruit should be honored by the home folk as the victorious athlete or warrior is unusually welcomed home. The key to his talk was that the fruit grower or farmer to win happiness and contentment with success must have "joy in his job." That he struck a sympathetic chord in this was shown by reference to this point by all the following speakers

The surprise of the evening was given by Mr. Schule, the grape juice manufaeturer and he kept the audience in a continual state of merriment. Dr. Butler of Poughkeepsie kept up this merriment and the banquet broke up without that tired feling that often follows long dry talks after a hearty meal.

In point of average quality it is doubtful if the fruit exhibit has ever been equaled in New York State and the fruit growers of the Hudson Valley ean feel justly proud not only of the plate exhibit but of the box exhibit as well. Baldwin, Greening, Northern Spy, King, Yellow Newtown, McIntosh and Lady Sweet were especially strong among the older varieties, while the most prominent among the newer varieties were Jonathan, Wagener, Stark, Rome, and Winter Banana. The Geneva Station made a handsome exhibit of many varieties in box faees and Messrs. Howe and Tubergen of that station judged the closely contested plate exhibits in a way that did credit to themselves and satisfied most of the exhibitors. Mr. W. S. Teator judged the box exhibits and most of the boxes scored very high both in packing and in fruit. New York fruit graded and packed as were the boxes at Poughkeepsie would drive the Western fruit out of the market as it has quality as well as appearance. Will *you* do *your* part to help New York gain a packing reputation? G. R. S.

NEW YORK STATE GRANGE.

PART III.

The trespassing by hunters on farm lands without the permission of the owner came up in a resolution for discussion, and while there was general unanimity on the point that hunters should obtain permission the question as to whether that permission should be in writing or verbal, caused lively debate by several delegates. Vote being taken those favoring a written consent were found to be in a majority. In the matter of kindness to dumb animals, a resolution emanating from Jefferson County asked that the time limit for confinement of stock in course of transportation on railroads be extended from 24 to 28 hours, which is the regulation in interstate transportation, without unloading for rest or feeding, exeept under certain unavoidable conditions. It was argued that stock was more comfortable on the cars than when unloaded (is the argument a good one?) and that the additional four hours would land the stock in New York city without unloading.

The McKellar bills now before Congress relative to the cold storage of food products were opposed in so far as they relate to fruit, which it was asked that the bill exempt, and that the limits for other farm products should be fixed on a reasonable and healthful basis, allowing restorage at any time or place within such time limits, but forbidding restorage for the purpose of extending or evading the time limit|" A large number of other resolutions were aeted upon during the last two days of the session and we attempt mention of a few only at this time.

Almost the last discussion of the session related to the State's appropriating money for other colleges or schools of forestry than that at Cornell, and the friends of Cornell were in the majority, thus adopting the resolution under discussion. Invitations were received from four cities for the next annual meeting of the Grange, these being Oneonta, Oswego, Binghamton and Malone. The executive committee will decide on place later. J. W. D.

Woman and the Home

From Day to Day

THE WEST WIND.

It's a warm wind, the west wind, full of birds' cries;
I never hear the west wind but tears are in my eyes.
For it comes from the west lands, the old brown hills,
And April's in the west wind, and daffodils.

It's a fine land, the west land, for hearts as tired as mine;
Apple orchards blossom there, and the air's like wine.
There is cool green grass there, where men may lie at rest,
And the thrushes are in song there, fluting from the nest.

"Will ye not come home, brother? ye have been long away,
It's April, and blossom time, and white is the may;
And bright is the sun, brother, and warm is the rain—
Will ye not come home, brother, home to us again?

"The young corn is green, brother, where the rabbits run,
It's blue sky and white clouds, and warm rain and sun.
It's song to a man's soul, brother, fire to a man's brain,
To hear the wild bees and see the merry Spring again.

"Larks are singing in the west, brother, above the green wheat,
So will ye not come home, brother, and rest your tired feet?
I've a balm for bruised hearts, brother, sleep for aching eyes,"
Says the warm wind, the west wind, full of birds' cries.

It's the white road westward is the road I must tread.
To the green grass, the cool grass, and rest for heart and head,
To the violets and the warm hearts and the thrushes' song,
In the fine land, the west land, the land where I belong.

—John Masefield.

*

SOME of our readers may be puzzled by one little phrase in the poem given above:

"It's April, and blossom time, and white is the may."

The reference here made is to the blossoming hawthorn of English hedges, which is commonly called "may" in many districts.

*

Two flower seeds you should not omit to order this year are dwarf snapdragons and dwarf single Dahlias. You may start seeds of both indoors about the middle of March, and also sow them outside after danger of frost is past. The snapdragons will demand moisture, and will endure slight shade. Both will give abundant flowers for cutting during a long period.

*

As we write our garden in Northern New Jersey is piled high with snowdrifts, but the house is gay with flowers—Dutch hyacinths and Parrot tulips. These were potted last October, kept in a cool part of the cellar until they made plenty of roots, and then brought into the living room as desired. If one's experience of tulips is confined to the more ordinary types, by all means get the Parrot or Dragon forms, and learn how wonderful these flowers are, with their slashed and frilled petals splashed with gorgeous color. According to our experience they are the very easiest of all tulips to bloom in the house in Winter.

*

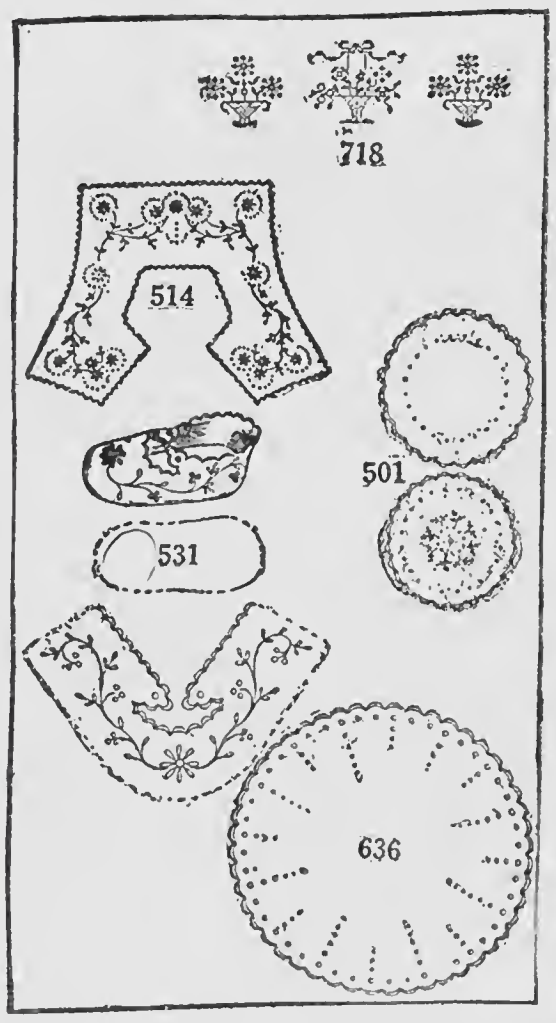
WHEN modern plumbing is a recent addition to an old house, it sometimes appears rather a mystery to the housekeeper unaccustomed to it. It should be studied by the women of the house as well as the men, so that they understand the location of the system, and are prepared for any emergency arising from it. It is very necessary that there should be a shut-off not merely where the water enters the house, but also so that separate sections of the supply may be cut off individually. For example, the laundry tubs are usually more exposed than the kitchen sink, and there should be a separate cut-off for them, so that their supply pipes may be free from water in freezing weather, without interfering with the main supply. Unless a frozen water pipe is in very bad condition, it can usually be thawed out quickly with hot water. Stand a pail of hot water under the stoppage if possible, and keep applying hot cloths, fished right out of the boiling water, and dropped in again as quickly as they cool off, keeping the water very hot. Of course a bad freeze means a leaky pipe. Trying to thaw out a pipe with a lamp or candle is not only futile, but may damage a lead pipe seriously—hot water is the plumber's first aid to the injured.

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired.

8169—Fancy waist with tunic, 34 to 42 bust. 8157—Surplice blouse for

misses and small women, 16 and 18 years. 8150—Semi-princess dress for misses and small women, 16 and 18 years. With two-piece skirt, with or without sleeves in full or three-quarter length, with or without tunic and chemisette. 8163—Semi-princess gown, 34 to 42 bust. With two-piece skirt, long or three-quarter sleeves. 8160 — Semi-princesse dress for misses and small



women. 16 and 18 years. With one-piece skirt, long or three-quarter sleeves, with or without revers, collar and cuffs. Price of each pattern, 10 cents.

The embroidery designs at prices given include materials for working; separate transfer patterns alone may be obtained for 10 cents each.

No. 718—Design for embroidering baskets of flowers in cross stitch style on guest towels, 24x15 inches. Stamped on superfine pure linen, with mercerized floss to work, 55 cents.

No. 514—Design for embroidering a square collar. Stamped on pure Irish linen with mercerized floss to work, 25 cents.

No. 501—Design for embroidering the covers for a circular pincushion five inches in diameter. Stamped on white linen lawn, with mercerized floss to work, 25 cents.

No. 531—Design for embroidering infant's shoes. Two complete shoes are given. Stamped on best round thread linen with mercerized floss to work, 25 cents.

No. 636—Design for embroidering a centerpiece, 22 inches in diameter. Stamped on best round thread linen with mercerized floss to work, 55 cents.

Light Bread Doughnuts.

If you have never made yeast doughnuts, be sure to try this recipe. One cup liquid yeast, one cup mashed potato, two-thirds cup sugar, one egg, one tablespoon shortening, flour to make a stiff batter, flavoring to suit taste. Beat the egg, add yeast, potato, sugar, shortening and enough flour to beat well. Beat long and hard. Add flour until the batter is stiff as you can stir it Let stand over night. Knead well in the morning. Let rise to about twice its own bulk. Roll to about one-half inch in thickness, cut out, stand on or in the warming oven until very light. Fry in hot fat. (I prefer part lard and suet or lard and cottolene). Roll in powdered or fine granulated sugar. This can best be done by putting some sugar in a paper bag, place in three or four warm doughnuts and shake. E. M. C.

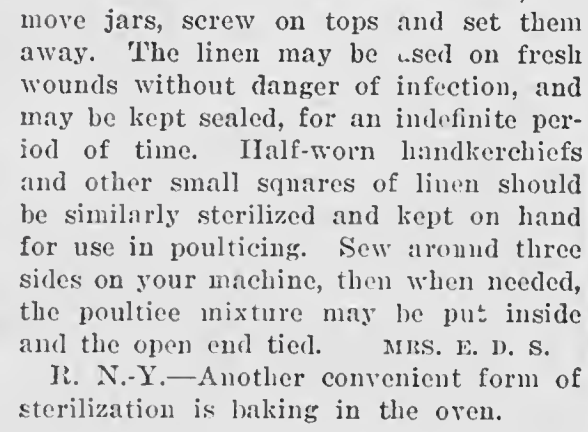
A Necessity in the Home.

Sterilized linen is a very necessary thing in the sick-room, especially in surgical cases. This may be impossible to obtain in emergencies, hence it is well to know how to prepare it at home.

Cut pieces of soft old linen into strips two to three inches wide, lap one end over another and sew across twice. Cut off all ravelings, then roll into a tight, smooth roll just large enough to slip into the mouth of a fruit jar. Fill jars full of these rolls and stuff the tops with absorbent cotton. Set the jars on a flatiron stand in a deep kettle, and fill with cold water up to the necks. Bring almost to a boil, keeping the water at about 180 degrees Fahr. for three to four hours. The water should not enter the jars, the steam being sufficient for sterilization. Let stand until cool, remove jars, screw on tops and set them away. The linen may be used on fresh wounds without danger of infection, and may be kept sealed, for an indefinite period of time. Half-worn handkerchiefs and other small squares of linen should be similarly sterilized and kept on hand for use in poulticing. Sew around three sides on your machine, then when needed, the poultice mixture may be put inside and the open end tied. MRS. E. D. S.

R. N.-Y.—Another convenient form of sterilization is baking in the oven.

EGGS FOR INVALIDS.—Drop an egg in a cup, and set the cup in a small vessel of boiling water, allowing it to cook "rare." This can be digested by the weakest stomach. No seasoning nor butter should be added while the egg is cooking. C. C. H. G.



Plaster walls and ceilings are only one step ahead of the mud hut. They bring damp, dust, disease, expense. Bishopric Wall Board costs far less, goes on dry, and takes any scheme of decoration that plaster will take. One man can apply it just as it comes—in strong, handy sheets.
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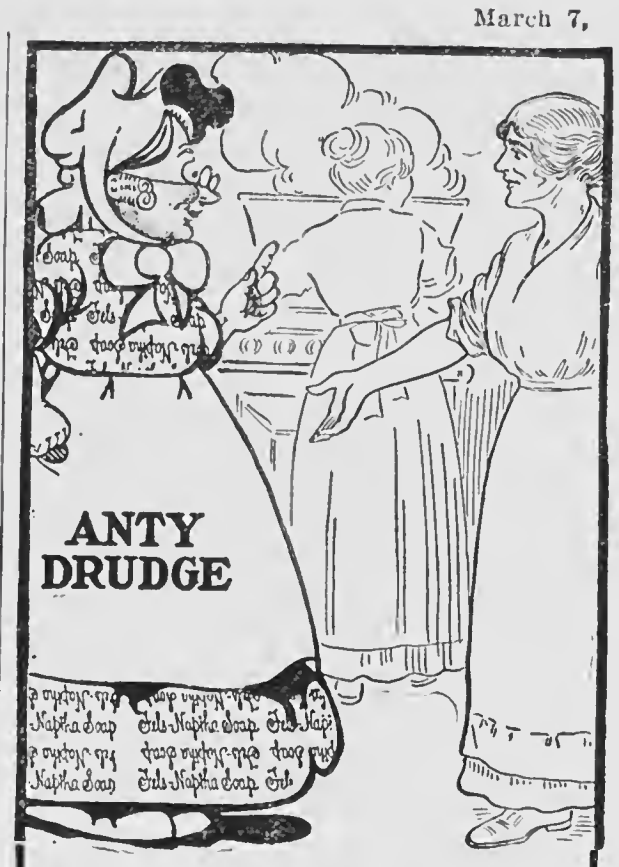

Mrs. Disagree—"Anty Drudge, what's this nonsense you told Mary about not boiling clothes? The idea of these young things telling their mothers how to wash! I settled her!"

Anty Drudge—"Well, you can't settle *me*, because I'm old enough to have some sense—so's Mary, for that matter. She's a sight more sensible than her mother about some things! I told her about Fels-Naptha Soap and how easy it makes work."

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FELS-NAPTHA

In My Neighbors' Gardens.—Dahlias.

One much-enjoyed forenoon in September was spent seeing what the Dahlia growers for several miles about were producing in the way of exhibition specimens. It was the boast of the Horticultural Society that 15,000 individual flowers were shown, so of course my "neighborhood" was a wide one and included well-known Dahlia specialists, local professional florists and many exhibitors classed as amateurs. This grand Autumn flower has been brought to a state of development which makes one with any gardening enthusiasm almost unable to decide which is loveliest, the fantastically twisted, tubular-petaled cactus sorts, the quilled and ball-like "show" types, or the "decoratives" with petals broad and flat, and individual flowers often measuring six inches across. Indeed one prize-taker, a clear, lovely pink named Bertha Von Suttner, was a full eight inches in diameter. And just when one has settled it that one of these shall have the heart, the eye falls upon an array of singles, and immediately every sort of double flower seems outdone by the satiny picturesqueness of this airy and wholly delightful and artless variety. The degree to which the petals of a Dahlia flower can be bred to grow rolled up and twisted, or flat and wide is astonishing. The grand "decoratives" spread their petals in rosette arrangement so little pleated as to suggest some other flower than a Dahlia, though it is hard to think of any other blossom to which they may be compared. This gives their beauty of heavy satin texture and depth of color striking effect.

Whether or not the velvety richness of the new types outdoes our old-fashioned garden sorts, certainly colors have made gorgeous improvements. Scarcely a crimson or dull pink was shown, I think, but the range from clear rose pink to deepest maroon, through all sorts of scarlet, Jacqueminot and carmine was a revelation. The heavy satin of the whites made them sumptuous, but most attractive of all, to me, were the yellows, running into apricot and burnt orange. Here and there was a deep amber which made all the reds and pinks seem outdone.

Of many odd and interesting types it is enough to mention the green Dahlia, Viridiflora, looking in size, form and shape of petals more like an Aster, but having Dahlia leaves. It was as clear a green as if made of sepals, but they were not Dahlia sepals. As but one flower was shown I concluded that it is a shy bloomer and not worth while for any except those who have means for testing it without neglect of more rewarding varieties.

And did I go home from this flower exhibition resolved to let all my own Dahlias, commonplace, unimproved old sorts, freeze and perish? No. At the show I had also seen the men who grew grand Dahlias, a practical, business-looking type of men, evidently capable of spending almost any amount of pains and resources. I realized that thousands of the blossoms shown had been each the only flower allowed to grow upon a plant, and that thousands more had been produced in the same exclusive fashion that these, the best of the output, might go to the exhibitor's tables.

A few days after the exhibition I chanced to visit the garden of an ordinary Dahlia amateur. It was a city lot with stable in the rear, and I know that the owner had time, enthusiasm and, keeping one horse and a few fowls, had also plenty of fertilizer to spread upon his borders. He had perhaps 40 Dahlias, scarcely two alike. Many were seedlings, a few were named sorts. All were interesting, but none near exhibition standards. The singles ran to doubles, and the doubles failed of reaching the "decorative" type. The "show" varieties held their characteristics better, but were merely ordinary. One or two plants were well filled with flowers, but on the whole, blossoms were scattering, yet he had picked none.

While I felt no wish to disparage this man's Dahlias it will be seen how much there was in his garden to make me willing to leave the growing of grand Dahlias to experts. Another lesson learned of this garden was to nip off side shoots and keep the plants to one stalk.

PRUDENCE PRIMROSE.

Flowers After Frost.

As the sun mounts northward and the days lengthen, our desire for a garden and the pleasures of gardening are reawakened. During the short days of Winter this desire has been hibernating, but as the sunshine lingers, bringing forth the snowdrops and the robin, we find it has put off its Winter sleep and is fully awake. Here are the catalogues, replete with all that goes to make a Summer, but it remains to us to plant with a memory of past denuded gardens, when the first frost took all of the glory, leaving to us only blackened beds and empty vases. With a little forethought at the planting time we may select varieties whose season is long, and also of sufficient hardihood to withstand our earliest frosts, coming like a benediction at the end of a full Summer and a plentiful harvest. When the tender flowers are gone how pleased we are to prolong the season still further with some less delicate, but still beautiful blooms.

First we would choose Verbenas. The seed is slow of germination, but will come very soon, when it is possible to supply bottom heat. If planted only for Fall blooming it will do very well scattered in the open ground. They transplant easily, and started early, will bloom through the hottest weather, and on into the cool days of Autumn. Never gather Verbena blooms in the heat of the day, or you will only have a mass of withered leaves and flowers. Gathered early in the morning, still wet with dew, or after the sun has dipped below the western hills, they will not disappoint you. Their habit of rooting from the procumbent stems gives them a much longer blooming season. Petunias stand high in the list of frost resistants. A killing frost may take the open flowers, but the buds will open in the bright sunny days that always follow in the wake of a frost. The bedding varieties are perhaps the most satisfactory for the purpose.

Annual Phlox is another that blooms over a long period, and if kept from seeding will give plenty of bouquets after sweet peas and Dahlias have yielded up their lives to King Frost. These will repay a liberal mulch, as the beating Autumn storms cover the delicate blossoms with sand. The rain and the cooler weather seems to lighten their colors and also to increase the size of individual blooms, giving a better and brighter spray of bloom with a sweet and delicate perfume.

Pansies will join hands with the snow storms of December, defying Winter, and blooming again in early Spring to cheer the days before the tender annuals develope. Sweet Alyssum, that old favorite of the garden, is bravely blooming while we are setting out the bulbs for Spring blooming. We are loth to destroy it, so lift it to a pot and place it in a sunny window. If not kept too warm it makes a very satisfactory window plant. Then there is mignonette, like a true friend, constant till the last. You will find it beloved of the bees on sunny afternoons. Calendula, as its name implies, shines out on nearly all of our calendar months. At the north, when actual Winter comes it must succumb, but its golden and paler yellow hold their place long after severe freezing. Shakespeare called it "Marygold" but the marigold of our catalogues is one of the first to fall a victim to the frost.

Annual Chrysanthemums also give yellow blooms till Winter is here to stay. These come also in white with finely-cut foliage and densely double. Perhaps the best of Fall bloomers is the hardy Chrysanthemum which will endure, year after year, in the open ground, but always blooms late, while the above mentioned annuals bloom from early Summer on into the melancholy days.

Among plants seldom seen is the larkspur. This is a beautiful, late bloomer being entirely frost-proof. The foliage is lacy, the blossoms of the double class being very like hyacinths. In habit, either tall or dwarf, as your fancy dictates, coming in colors best represented by our flag—red, white and blue. One feature of these frost-resisting beauties is their habit of self sowing. The vitality that carries the blossoms so late, is transmitted to the seed, and will gladden your eyes the second season, with no effort or expense on your part.

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The Coming of the Seed Catalogues.

"I'm not going to have much of a garden this year."

"You are not?" This last with surprise and some dismay.

"No, I am not." At the note of decision in these words the husbandman looked alarmed—and with reason. That I should thus deliver myself—most enthusiastic and indefatigable of gardeners—was indeed alarming, even to myself. In more senses than one, what would we do for a living? For besides being the mainstay of our table, the garden work was a recreation too, and sometimes a door of escape that I could hardly afford to have closed.

"Oh, you'll feel better about it before long," was the hopeful suggestion finally. But I thought not. The last Summer had been a hard one, and I had overdone the gardening. It was too much—with the housework, the little children and all—I couldn't afford to wear myself out in that way another Summer. Thus I reasoned gloomily. And here it was January, whose forward looking face had hitherto been the one it turned to us and in other years with the garden zest awakening fresh and ready for the Spring. And here was I remembering chiefly the weariness of the Summer that was past, and shrinking from all thought of a garden. Even the appearance of the seed catalogues—usually received with acclamations and accorded the place of honor in the living room—aroused no interest. It looked as though there would not be, this year, that delightful evening with paper, pencil and "list." You know the sort of evening—no matter if you order identically the same things one year as the year before and the year before that, you do it with the same eager study and comparison of the new varieties and the old, the same earnest "Would you get two packets of this?" and "Won't we need another pint of that?" Just as when we greet the blossoming of the apple trees it is with ever fresh wonder, as though the same thing did not occur every Spring of our lives.

One day we received the catalogue which had always been the one at my old home. I had not seen it for several years, and it brought to mind now the little flower-gardens of many Summers and, above all, my very first one. I can see it yet, a narrow strip by the front fence of a city yard. Phlox, Petunias, candytuft, sweet Alyssum—these were the flowers my mother planted in that little garden for me, and though they are not my favorites to-day, by any means, there is about them, even in the very sound of their names, an indescribable charm, the magic that lingers about the memory of so many "first" things. Perhaps there is some of that same magic in the old-time catalogue, dressed in modern fashion though it is—the "odorous" echo of a score of dead Summers" evoked by the familiar name of it. At any rate, something stirred in me and wakened at the touch, the doubts and fears which had been clouding my horizon vanished as by magic, and there was, after all, that annual event, the evening when we made out our seed order!

"When Winter seems most like to Death,
So cold it is, so still and bare,
There comes under the sky a breath,
Winter grows wistful, life grows fair:
A perfume from the quickening earth,
A balmy waft in snowy air,
A thought, a hope of greening birth,
New life—and Spring is there!"

Apropos of the "greening birth" it might be well to remark here, that the next Summer's garden was the best we have ever had, though probably the smallest in amount of space included. By being planted more judiciously, with less at one time but with greater regard for an unbroken succession through the season of vegetables that we knew we should want to use constantly, the garden reached a high degree of efficiency with a minimum of time and strength bestowed upon it.

In spite of the necessity for economy in these ways, one of our gardening rules is to try every year in both the vegetable and flower gardens at least one thing that is new to us. Last year it was English marrow in place of our usual Summer squash, and Japanese Iris, and in both cases we were paid a high rate of interest. One year it was lavender, and for two Christmases now the sewing into little bags of the Summer's crop of lavender flowers has been among the most enjoyable of my holiday preparations, while the friends who received them were delighted with the old-fashioned fragrance.

This trying of new things we find adds immeasurably to the interest and enjoyment of our work. The ability to wonder, to have in our daily lives an eager interest in something that is new in them, though a special prerogative of youth, is not impossible to any of us, and is an invaluable help in lightening the burdens and brightening the aspect of those same daily lives. H. B. T.

Pot-pourri for Rose Jar.

Can you give me a recipe for making an old-fashioned rose jar? In these days of awakened interest in gardens, I note also a revival and the disposition to preserve the sweet odors. A. B. P.

The following directions were given by an Oregon correspondent last year:

Gather the petals in the morning after the sun has dried the dew; for rose petals absorb rain and dew like so many silken sponges. Pull the petals from the calyx and scatter them over a piece of thin cheesecloth or mosquito net that has been tacked to a frame so it hangs loosely. Suspend the frame on a porch or in a dry room, where the air can reach the petals from all sides. If you wish to get best results do not let the sun get to them. Keep spread out as much as possible and stir quite often. When the petals curl they are dry. The next step is to "salt down" the petals. Get the driest salt you can. Bay salt is best and Liverpool table-salt next, but if these are not convenient, dry the best table-salt you have in the oven, roll or grind it fine and put in a coarse shaker. Put a layer of petals in a glass fruit or candy jar or a covered stone jar and sprinkle quite liberally with the salt, another layer of petals and more salt, keep adding layers of petals as you dry them and the salt. The salt is to absorb any moisture which may not have been dried out. Stir the mass well each time before adding more petals. The petals after a week or so in the salt, may be taken from the jar, the loose salt well shaken out and be used to fill rose pillows or may be packed in a permanent rose jar and kept covered for a month or more, then, when the lid is removed, it will emit a delicate rose perfume. But if you wish to make potpourri, the preparations are somewhat more elaborate. Besides the petals of the roses, dry pinks, carnations, leaves of rose geranium, lemon verbena, rosemary, lavender, in fact any spicy or sweet-smelling plant that retains its fragrance when dried. The ordinary potpourri smells too strongly of spices, so have a care as to how you use them. To six quarts of the dried petals and leaves use one-fourth of an ounce each of mace, cloves, cinnamon and allspice ground very coarse, so the oil will not all evaporate so quickly. To these add one ounce each of gum benzoin pounded coarse and of orris root chipped, a little dried and pulverized orange and lemon peel, also some sandalwood sawdust, if you can get it, and some powdered gum myrrh. Mix all these ingredients well and the mass is ready to be packed into the rose jar. In the bottom of the jar put a few drops of oil of roses and a grain of musk and shake well, then pack in and press down the fragrant mixture. About every four inches pour in some of the best bay rum, scented with wild orange, just enough to moisten the mass a little but not wet it. When you can crowd no more into the jar cover closely and leave for three months without opening, so the perfumes may blend and work upon each other."

Some directions advise salting the petals as soon as they are gathered, without the preliminary drying, but this has always caused molding in our experience. The quantity and variety of spices may be varied to suit personal taste.

We have not wings, we can not soar;
But we have feet to scale and climb
By slow degrees, by more and more,
The cloudy summits of our time.
The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night.
—Longfellow.

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My Garden Plans and How they Worked Out.

I had planned for a bit of a garden for my very own, near the house, so I could work there any time I wanted to, even if I had no more than five minutes to spare. It was to be about 20 by 30 feet and I had laid it out in my mind half in sweet peas and pansies, and half in early vegetables. Then I thought I would put in some hills of Brandywine strawberries three feet apart each way, planting these between rows, so that next year my garden would be my strawberry patch. Besides I wanted a dozen of the the Columbian blue-red raspberry plants started here, which I hoped by the third year would be bearing and I would have near at hand, the material for making the delicious raspberry jam which this fruit seems to be especially fitted for. It isn't a good market berry, for its purplish dull color is not attractive, but it is a wonderfully prolific bearer and makes a fragrant jam, superior to the red fruit. These "three-story" plans might have worked out well under favorable conditions. How they did work out was a little discouraging. However, I got a good deal of pleasure out of the work and have enthusiasm enough left to try again this year.

The first work I did in my garden was on April 10, three days after plowing. I set out a row of big sprouted onions left over in the cellar. These were "hoed" by three-year-old Baby John when I didn't know it, evidently, but enough were left in the ground to give us several messes of "green onions." About the fifteenth I had spaded up for me a bit of ground which joined my garden spot, where a good deal of waste water was thrown out. The plowing and spading were all the work which I did not do myself. Here I planted sunflowers which made an amazing growth. In a short time they were like a miniature forest. I kept the earth loose about their roots, and later, in the hot dry Summer, took pains to empty all the wash water there. They performed their mission well of keeping this bit of waste ground sweet, wholesome and sightly.

I paid out but 45 cents for seeds and planted as follows: Sweet peas, 10 cents; lettuce, five cents; American Wonder peas, 10 cents, and 20 cents for 40 strawberry plants. The sunflower seed, some pansy plants and geranium slips were given to me, shared by neighbors. I found I had planted my sunflower seeds too thick and had to weed out more than half. These plants I gave away and they were transplanted and grew nearly equal to my own.

The sweet peas I soaked over night and carefully planted, three in a place, a foot apart in rows about 18 inches wide. It seemed as if every seed grew. I put brush for them to run over and some wire netting, the simplest and easiest way, for I had little time to spend. Soon they were a mass of glowing color, a pretty sight. They covered nearly one half the garden space and with the pansies and geraniums, which, however, on account of the hot dry season, yielded only a few blooms in late Summer, made a pleasant outlook from the dining room window, and on beyond was a field of grain, then the cedar-bordered shore, the river and Long Island. These peas seemed to be in all gradations of color, and the first blossoms were of large size. Such shadings of lavender and pink through the brightest carmine red and on to deepest wine, almost black, and fairy white ones and "painted ladies" and parti-colored blooms in bewildering profusion! I had "enough and to share." It really was a task, although a pleasant one, to pick them every other day.

The Summer was hot and dry. My strawberry plants, not too thrifty to start with, failed to make good. On account of the season I decided to wait until Fall to put in my Columbian berry plants, and ordered them to be delivered in October. We had some fine green peas several times and lettuce too, until one unlucky day the lambs discovered my garden, and very soon finished that half of it off. Fortunately the sweet peas were not to their taste. I threatened to have lamb chops for dinner, but as that would not restore my garden and was a good bit of work for me, I gave it up. There was no fence on the place that would keep in these lambs, who wandered around at will. However, we could fence in their mothers, and fortunately the lambs would not wander far away from them.

The Columbian raspberry plants arrived by parcel post in November in a snowstorm, and the ground here was frozen hard. I do not know why the plants were delayed. I wrote them I could not use them, and in reply received advice to set them out; if they did not live the nursery would replace the plants in the Spring. As I did not care to set the plants out in the hard frozen ground, I sent them back to the firm and agreed to take a dozen in place of them in the Spring.

Well, so much for my plans and the way they worked out. Farming plans often work out the same way; we do our work as well as we can, but the results are not often what we expect. Sometimes our plans work out better than we had hoped for. We learn by experience and can calculate pretty well on everything but the weather. I know one thing—I shall not allow any lambs to dine off my garden this year. The weather I'll try to put up with cheerfully. F. J. F. F.

Holiday Cake.

This cake is nice for parties or luncheons. It requires but two eggs, and will almost melt in your mouth if you follow directions carefully: Put one cup milk in a double boiler, heat to boiling point. Put one cup flour (no more), into a cake bowl; add one cup sugar, three teaspoonfuls baking powder; pinch of salt. Sift together four times. Have whites of two eggs beaten stiff and dry. Pour the cup of hot milk into the flour, sugar and baking powder and stir smooth. Add the eggs, but do not beat or stir hard, fold in by drawing the spoon through the mixture towards you, then shoving it back with the spoon. Next stir from right to left in the same way. Repeat this until the whites are evenly folded in. Put into a pan greased with fresh butter and bake. Have the oven cool at first, increasing the heat until the cake is well done. This fills a pan five by nine inches and three inches deep. A good icing for this cake is made as follows: White of one large egg beaten stiff; three tablespoonfuls granulated sugar; one teaspoonful cornstarch. Flavor with vanilla and put on the cake.

MRS. C. E. G.

Lard that Keeps.

H. M. B. will find this method of trying out lard satisfactory. Cut up the leaf in the old-fashioned way, or with the meat grinder. When it is put into the kettle (preferably an iron kettle) add a small quantity of water, also a little salt. Cook until the water has evaporated and the scraps are a golden brown. Stir frequently to prevent sticking and burning. Store in tin pails. Adding the small amount of salt when the water is put in, it distributes it through the lard. If the salt were added without the water it would settle at the bottom of the kettle and not season it. Cooking until the scraps are brown gives lard a fine fresh odor that is retained through the year. This rule has been used by one housekeeper in her farm home for more than 60 years. Often she has been asked "just how" she does it. The rough lard can be made almost as good as the leaf. It should be cut into small pieces, washed, then soaked over night in cold water, which should be changed once or twice. Then try it ont the same as leaf lard, but separate from the leaf, and always use the "rough lard" first. G. M. L.

We cut lard in small pieces, and I start rendering without the use of water at all. I take about one gallon of lard and render and keep adding till kettle is full. I never had any lard to spoil yet, doing that way. C. F. M.

THERE is no talent so useful towards rising in the world, or which puts men more out of the reach of fortune, than the quality generally possessed by the dullest sort of men, and in common speech called discretion; a species of lower prudence, by the assistance of which people of the meanest intellects, without any other qualification, pass through the world in great tranquillity and with universal good treatment, neither giving nor taking offense.—Swift.

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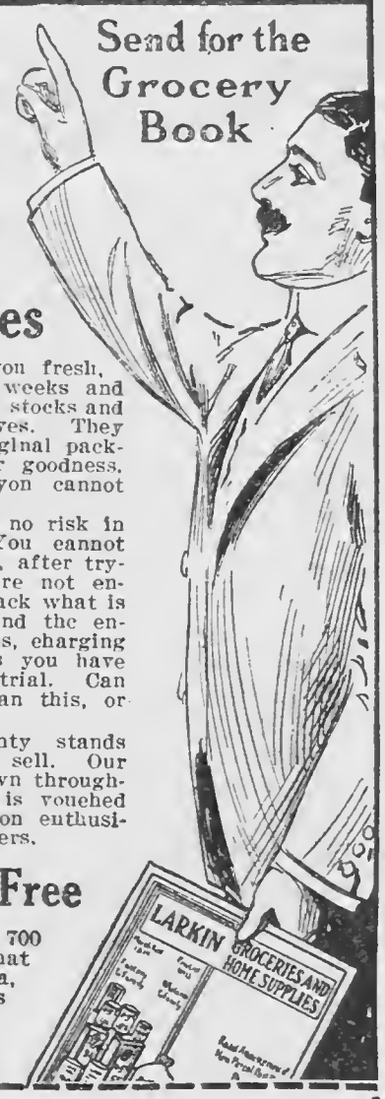
No matter where you live you can save an average of one-third of your grocery expense! You can get fresh, pure groceries for 35 cents less on the dollar than you now pay! And you can do it easily, conveniently—with absolute certainty of satisfaction—by the popular Larkin Wholesale-to-Family Plan.



Groceries at Wholesale Prices

When the retailer buys groceries he pays wholesale prices, but to these prices he must add enough to pay his expenses and make a profit. This increased price is what you pay when you buy at retail. We save you this difference by selling you groceries at the prices the retailer pays. In other words, you save the middleman expense.

Just think what this saving will mean to you. The average family spends from $3 to $4 a week on such groceries as we offer. If we save you one-third of $3 each week it will mean a saving for you of $50 a year. Think of what $50 will buy! Is it not well worth saving? And if your family is a big one you will save even more.

The quality of our goods is the very best. They are made in clean, light, wholesome factories and are shipped to you fresh, without lingering weeks and months in wholesalers' stocks and on grocery-store shelves. They are shipped in the original packages to preserve their goodness. Better, purer foods you cannot buy.

You take absolutely no risk in ordering from us. You cannot lose even a penny. If, after trying our goods, you are not entirely satisfied, send back what is left and we will refund the entire amount you sent us, charging nothing for the goods you have used in making the trial. Can anything be fairer than this, or safer?

The Larkin Guaranty stands behind everything we sell. Our reputation is well known throughout this country and is vouched for by over two million enthusiastic, satisfied customers.

Book of Grocery Bargains—Sent Free

This valuable Book contains over 200 groceries and over 700 other articles of everyday household use—all at prices that will save you from 15 cts. to 50 cts. on every dollar. Tea, coffee, canned vegetables and fruits, baking powder, spices flavoring extracts, soaps, starch, hardware—these and hundreds of others are described and illustrated.

Send for this Book. It can save you hundreds of dollars. Send for it today. Begin your saving right NOW. Just fill in and mail the coupon or write a postal and we'll send the Book by return mail.

Larkin Co.

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This Brings the Book.

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Please send me free your Grocery Book No. 17.

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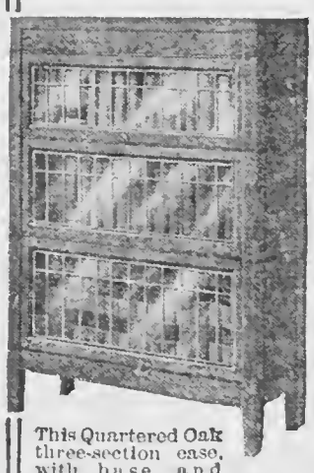
Mastercraft Sectional

Bookcases



This Quartered Oak three-section case, with base and crown, plain glass doors, $16.55

With leaded glass doors as illustrated, $19.55

Upon receipt of remittance, we will ship, prepaid, and refund your money in full if not absolutely satisfactory.

This is one of our finest styles. Other styles as low as $9.25 for three sections, crown and base. Prices of Mastercraft Sectional Bookcases range from $1 to $1 per section.

The Doors Can't Stick

The patented equalizer of Mastercraft Sectional Bookcases absolutely prevents the dust-proof doors from sticking or binding. This is only one of a number of exclusive Mastercraft features.

EXCLUSIVE FEATURES

Mastercraft Cases have the massive appearance and sturdy strength of solid bookcase. Beautifully finished *inside* as well as outside. Perfect alignment without complicated interlocking devices or metal bands. Latest, most artistic designs.

Write for Catalog. Illustrates and describes wide variety of styles and finishes to match any furniture in home or office. Explains how we sell direct from our factory at a saving to you; we ship on approval under money-back guarantee and pay freight.

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137 Southern Avenue Little Falls, N. Y.

Roughened and tender skins welcome treatment with Dr. Crane's Almond Cream, a scientific emulsion for the face and hands. By mail, 25c. Dr. F. D. CRANE, Chemist, Montclair, N. J.

The Marks Legs and Arms

are being worn in preference to other makes by men employed in the construction of the

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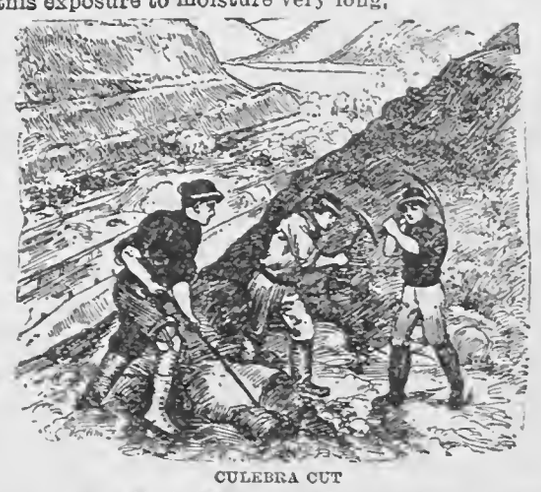
where, during the rainy season, they are exposed to drenching downpours. Even in the dry season the employees stand in water some of the time. Artificial limbs of usual construction will not endure this exposure to moisture very long.



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None but Marks Waterproof Legs and Arms will last long in wet places.

Farmers, Railroad men Miners, Builders, Woodsmen, Hunters, Fishermen, Coachmen, Chauffeurs and all who occasionally have to be in the wet will find the Marks the only limb that will stand the test.

Write for a Manual of Artificial Limbs. It will be sent free and postpaid.

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LARGE BUNDLE of REMNANTS, $1

Lawns, Percales, Soisette, etc., in lengths for dresses and waists. Also SILK REMNANTS for fancy work. A generous bundle of mill-ends worth $2.00 or more, for only $1.00. We guarantee satisfaction or refund money.

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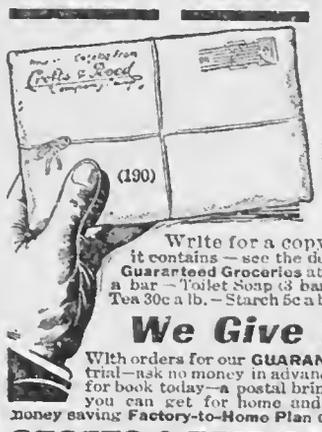

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Book on Groceries, Clothing, Furniture, Shoes, Carpets, Dishes, Silverware, Jewelery—Everything Used in the Home.

Write for a copy today—see the wonderful Bargains it contains—see the dollars it will save you—see how you can get Guaranteed Groceries at about half usual prices: Laundry Soap 2 1-2c a bar—Toilet Soap (3 bar box) 12 1-2c—Baking Powder 7 1-2c a can—Tea 30c a lb.—Starch 5c a box—Extracts 10c a bottle—etc. Learn how

We Give 2000 Premiums

With orders for our GUARANTEED GROCERY PRODUCTS—allow 30 days trial—ask no money in advance—let you be the judge of the quality. Send for book today—a postal brings it. See the hundreds of beautiful things you can get for home and family without a cent of extra cost on our money saving Factory-to-Home Plan of buying. Ask about our Club of Ten plan.

CROFTS & REED CO., Dept. A268 Chicago

No. 90174 This handsome Easy Rocker given with a $10 Grocery order.

Live Stock and Dairy

Care of Young Bull.

I have purchased a young purebred bull. Now I want your advice as to the care of this bull. Should you advise having him dishorned at once? Is he young enough to be broken in harness, so that he will get proper exercise in that way? He will be a year old April 23.

G. G. H.

I would not advise the dishorning of this bull calf until he is about a year and a half old. It is important in the rearing of a dairy bull that he be given such a quantity of feed as will enable him to grow vigorously and regularly, and that care be exercised in the selection of the feed so that he may be able to get the proper nourishment without padding his body with undue flesh. The common practice of feeding the bull in the dairy herd the discarded or left-over feed that is cleaned up or swept out of the manger of the dairy herd is faulty inasmuch as there is bound to be irregularity in the amount and kind of food fed. A very useful grain mixture for a dairy bull

HANDLING THE COLT.

would be as follows: Crushed oats, five parts; wheat bran, five parts; distillery grains, five parts; buckwheat middlings, five parts; oil meal, one part; fed in such quantities as will keep the bull gaining steadily in weight and vigor without permitting him to put on flesh or surplus fat. If he gains 1½ pounds per day in weight, and at the same time evidences the thrift desired, he will develop into a well grown and useful bull.

He might be appropriately broken at one year of age and subjected to light work, or he may be used on a tread power if one is in use at the farm. If this is not practical he might receive his exercise by means of utilizing a trolley wire, which should be attached to two strong posts from which is extended a rope that could be fastened to the bull's halter. He must not under any circumstances be confined to a stall in the stable, as exercise and activity are absolutely essential if he is to develop into a useful and active bull. He may be safely used for service with a few cows when he is a year old, but excessive service while he is young surely limits his usefulness as he grows older, and is not a safe practice to follow. F. C. M.

Training a Saddle Horse.

I have a little mare of native stock, but sired by a well-bred horse of the carriage type; she is coming five, trimly built, and weighs, in good condition, 950 pounds. She has just been broken to drive and shows a very pleasant disposition, with a fair amount of life and nerve. Having no use for her on the farm, and not wishing to dispose of her at the price such horses bring, I would like to make a saddle and driving pony of her, for my own pleasure and that of my wife. I have handled horses and colts, from my youth up, but know nothing about training a horse to the proper gaits under the saddle. If practicable to give them in reasonable compass, I would like a few simple directions for breaking this mare to saddle in one or two of the essential gaits. She trots, but shows a tendency to pace, and canters with a very easy motion. Will using such a horse under the saddle materially interfere with her value as a driver?

B. D.

R. N.-Y.—We shall be glad to have our horsemen try their hand at this.

Why I Breed Jerseys.

Because they will produce more profit for the feed consumed than any other breed in the world. They are persistent milkers, giving a good flow of rich milk, and holding out well for 10 or 11 months of the year. The breed as a whole I think will compare very well as to the production of milk for a year with their distant cousin, the black and white. Because they are the handsomest cow on earth; some people say that the Jersey is delicate and their milk is too rich for their calves. Let me say that in my 25 years' experience in breeding Jerseys I have never lost a calf with scours, and I always leave the calf with the cow for four or five days after birth. The old chestnut that our black and white friends tell us, that the Jersey milk is too rich for babies and children, is all bosh. If any of them will send me a nice baby boy or girl, I will guarantee to raise it on Jersey milk right from the cow, testing from five to six percent butterfat.

New York. F. S. DELANO.

The Brown Swiss Cattle.

I have a chance to buy a young Brown Swiss heifer advantageously. Can you tell me whether that stock are good milk producers? J. A.

Middletown, N. J.

The Brown Swiss breed of dairy cattle is recognized as more of a dual-purpose breed than one strictly for milk production. Certain selected individuals of the breed have made noteworthy milk records, but if this inquirer is desirous of purchasing a dairy cow for the production of milk alone, it is very probable that representatives of the Holstein, Ayrshire, Guernsey or Jersey breed would serve his purpose to a better advantage. Representatives of the Brown Swiss breed are sturdy hardy and vigorous, yet they are deficient in udder development, and are not strictly intensive milk producers. F. C. M.

Appraising Sheep.

When sheep have been bitten and killed by dogs, should purebreds be appraised higher than grades? J. J. A.

New Jersey.

Appraisement should be based upon the actual value of the sheep killed, and if the purebred animal referred to was a high-class individual the only correct appraisement would be based upon the actual value of the individual. In most cases, however, where appropriations are made to repay damages resulting from such accidents, there is a maximum and minimum value fixed, and ordinarily a certain percentage is allowed for each individual. Naturally a purebred animal is worth more than a grade, and it would be only just to fix value upon a basis of individual merit. F. C. M.

Thick Cream

The advantages of thick cream over thin cream are many and very important.

Thick cream contains less milk, consequently, less souring elements and therefore will keep sweet longer.

Thick cream is less in bulk and therefore more easily and cheaply transported.

Thick cream causes less loss of butter fat in churning.

Thick cream leaves a greater quantity of the skim milk at home to feed to calves and pigs.

Thick cream brings a higher price—many creameries give from **two to five cents more** per pound for butter fat from thick cream than from thin cream.

At a demonstration of cream separators at the Iowa Agricultural College, January 8th, 1914, the

UNITED STATES CREAM SEPARATOR

separated cream that tested **47 per cent.** butter fat. The next nearest competitor tested **33 per cent.** butter fat and the second nearest tested **26 per cent.** butter fat.

The United States is the only separator that can separate thick cream and separate clean. Others, in attempting to equal it, clog or leave cream in the skim milk.

The United States Separator has a record of **65 per cent.** butter fat and made perfect separation, as shown by the skim milk test and holds

The World's Record for Close Skimming

in 50 consecutive tests run for 30 days with 10 different breeds of cows.

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Vermont Farm Machine Co.

Chicago, Salt Lake City — Bellows Falls, Vt. — Portland, Ore., Los Angeles

15.95 AND UPWARD ON TRIAL.

AMERICAN CREAM SEPARATOR

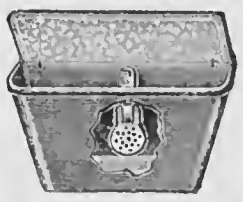
A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

AMERICAN SEPARATOR CO. Box 1075 BAINBRIDGE, N. Y.

"New Modern" Watering Basin

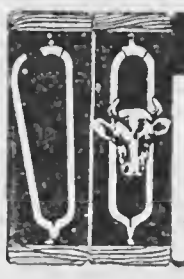


All dairymen say that cows supplied with fresh water give 5 to 10 per cent more milk. Therefore our watering device (Basins, Pipe Line and Float Tank) **Is a Profitable Investment.** Made of cast iron, with round corners and smoothed bottom. Galvanized Iron Cover. Thoroughly coated. Our "New Modern" Swing Stanchion, with our watering device is the most up-to-date outfit on the market. **Write for Free Catalog.**

GLOR BROS. & WILLIS MFG. CO.,

55 Main St., Attica, New York

"Everything for the Barn."



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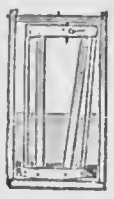
Increase Your Dairy Profit

Makes cows comfortable. Saves time in stabling and cleaning. Easy to operate; cow proof; sanitary; strong, and durable.

Write for our prices and illustrated catalogue before buying.

FOSTER STEEL STANCHION CO. 906 Insurance Bldg., Rochester, N. Y.



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30 DAYS' TRIAL—STATIONARY WHEN OPEN

NOISELESS SIMPLE SANITARY DURABLE

The Wasson Stanchion Co., Box 60, Cuba, N. Y.

BY EVERY TEST

The Strite Governor and Variable Speed Pulleys have proved the best for driving cream separators, washing machines and churns. Our Bierman Clutch talks for itself. Ask your dealer or write us direct.

STRITE GOVERNOR PULLEY CO.

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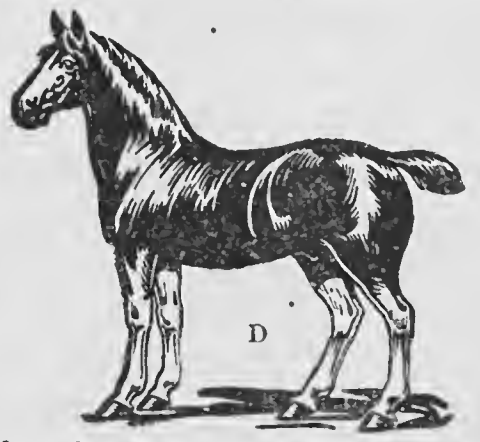
Make Your Lame Horse Sound, Like This

You Can Do It While He Works.

We want to show you that there isn't any affection that causes lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 8.



It describes all. And with the book we want to send you an expert's diagnosis of your horse's lameness. All this is absolutely free. Simply mark the spot where swelling or lameness occurs on picture of horse, clip out and send to us telling how it affects the gait, how long animal has been lame and its age.

We absolutely guarantee Mack's $1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Boil, Wind Puff, Weak, Sprained and Ruptured Tendons, Sweeny, Shoulder or Hip Lameness and every form of lameness affecting the horse. We have deposited One Thousand Dollars in the bank to back up our guarantee. Cures while he works. No scars, no blemish, no loss of hair.

Your druggist will furnish you with Mack's $1,000 Spavin Remedy. If he hasn't it in stock, write us.

Price $5 per bottle, and worth it. Address McKallor Drug Co., Binghamton, N. Y.

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Removes **Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain;** Stops Spavin Lameness. Allays pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. **Book 1 K free.**

ABSORBINE, JR., the antiseptic liniment for mankind. For **Synovitis, Strains, Gouty** or **Rheumatic deposits, Swollen, Painful Varicose Veins.** Will tell you more if you write. $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P. D. F., 38 Temple St., Springfield, Mass.

When you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

LONG-BODIED SWINE,

I wish to get a long-bodied type of hogs, either grade or registered. I understand these are the Yorkshire, Cheshire and Tamworth. Will you state how the different breeds are shaped? Which type would you recommend?

F. M.

Southport, Conn.

F. M. evidently refers to the bacon type of swine, the chief representative breeds being the large Yorkshire and Tamworth. The Yorkshire is characterized by what is known as the bulldog nose, the light jowl, the exceedingly long body with characteristic trimness throughout. They are particularly popular and useful in districts where by-products from the dairy are available for swine feeding, and where there is a market justifying the keeping of the bacon type of hog. They grow somewhat slower than representatives or the fat breeds, and have a carcass that possesses extensively marbled and prime meat. The Yorkshire are further noted for their prolificacy, producing large litters, as it is not unusual for a well-grown and carefully selected brood sow of this type to farrow from 14 to 16 pigs. They are not particularly adapted to pen feeding, neither do they respond to extensive grazing facilities.

The Tamworth breed is slightly larger than the Yorkshire, and vary in color from a cherry red to a dark, sandy, brownish color. They are inclined to be rather coarse about the head, with long nose and rather rough ears and coarse shoulders. They are unusually hardy, however, having great constitutions and consequently are very heavy feeders. They also produce large litters and are unusually quiet and attentive mothers. It is generally conceded, however, that the bacon hog is more exacting in his demands, and considerably slower in growth and maturity than representatives of such fat breeds as the Duroc Jersey, Chester White, Berkshire or Poland China, and unless there is a special market for cured meats in his section it is very probable that F. M. will have better results if he selects representatives of the fat breeds for his use. We have representatives of all types at the New Jersey Experiment Station, or they may be seen at any of the county or districts fairs. F. C. M.

Reindeer in Alaska.

Alaska is having a remarkable breeding problem with the reindeer. There are about 30,000 domesticated reindeer in the territory. This is the largest agricultural proposition the Alaskans have. The reindeer provides meat, milk, labor and clothing for the people, and there is every reason why the deer should be kept up to a high standard. There is even greater reason for this in Alaska than there would be in developing beef cattle in Illinois, or dairy cattle in New England, because the reindeer mean more to those who breed and handle them than our domestic cattle ever could. It is said that the domesticated deer are likely to decrease in size, and otherwise degenerate under ordinary conditions, and it is proposed to cross-breed them with the native wild caribu. The blood of the latter might be used to advantage in building up reindeer herds. These caribu are larger in size, and more vigorous, and are not so wild by nature. There are possibilities in this breeding, which reach beyond the limits of Alaska. The Arctic regions provide a white reindeer moss which really gives a form of pasture for these deer. It is not at all impossible that in the future these cross-breed deer may actually supply furs, and even meat for the people on the lower Pacific coast. Personally we have no doubt that time will see in lower Alaska a city as large and powerful as Pittsburg, through which the great traffic from the Alaska mines will be carried. Nature has provided this Arctic pasture for the reindeer, and it is not at all improbable that in years to come these animals will provide a fair share of our nation's meat supply.

Warning to West Virginia Stock Breeders.

As the horse breeding season approaches many horse dealers of the Middle West are shipping into the State of West Virginia, stallions and jacks to be used for breeding purposes. Wherever these animals are sold at reasonable prices there can, of course, be no objection to this practice. Many promoters, however, are organizing companies in the various farming communities for the purpose of selling to these companies, stallions and jacks at exorbitant prices. In many cases $2,000 to $3,000 is asked for a stallion and $1,200 to $1,800 for a jack. It is seldom that an animal is worth that much to the farmers composing these companies. First-class imported stallions may be purchased readily at from $1,200 to $1,800 and home bred animals are always available at from $800 to $1,200. Jacks should sell at from $600 to $1,200. Organizing a company and purchasing a high class sire is certainly a commendable step for any community to take but there is no reason why the stockholders of these companies should pay exorbitant prices when excellent animals may be secured for much less money. Before paying $2,500 to $3,000 for a stallion, look around and see if a better animal can not be purchased for less money.

Ailing Cow.

I have a young cow with second calf; gives rich milk. When the cream is made into butter the butter has a very strong smell; always the same Summer or Winter. The cow is hidebound and slackens on her milk very often for a couple of days at a time; then gives normal amount again. S.

The cow is in an unhealthy condition and apparently is affected with tuberculosis, or with chronic indigestion. Have her tested with tuberculin. If not found to be tuberculous, dry off milk flow and feed her carefully, with laxative feeds. She may be all right at next calving. If you do not care to do this sell her to the butcher if known to be free from tuberculosis. A. S. A.

SILO EXPERIENCE WANTED.—I am planning to build a silo the coming Summer, and would like to get the experience of those who have used square or octagonal silos. Can some of your readers give directions for building a silo large enough to feed six head of stock twice a day for nine months in the year? I have plenty of timber standing, that I can use. White pine and chestnut.

Ashby, Mass. J. W. R.

"You admit, then," inquired the magistrate, severely, "that you stole the pig?" "Yes," said the defendant. "Very well," returned the magistrate, with decision. "There has been a lot of pig-stealing going on around here lately, and I am going to make an example of you, or none of us will be safe."—Credit Lost.

SWINE

200 QUICK-GROWING MULEFOOT HOGS FOR SALE. JOHN DUNLAP, Williamsport, Ohio

Chester Boars, Brood Sows, Pigs—PAYNE Bethel, Vt.

O. I. C. Hogs—All ages. They Look, Feed, and Breed Right. Sows Bred, Males Ready. Address, H. H. JUMP, Munith, Michigan

DUROCS—The Big Deep Fellows

BARGAINS. Fall pigs at $10 to $15. 3 extra good aged sows to farrow in Spring.
SHENANGO RIVER FARMS, Transfer, Pa.

LARGE BERKSHIRES AT HIGHWOOD

Sold out of Service Boars and Bred Sows. Will have over a hundred young sows for sale, bred for early Fall farrow. Booking orders for Jan'y, Feb'y and March pigs. H. C. & H. B. HARPENDING, Dundee, N. Y.

Springbank Berkshire Herd

BIG BERKSHIRES I have bred more high-class hogs than any breeder in Connecticut. Watson's Masterpiece No. 123931 at head of herd. Nothing for sale but March and April pigs at present. J. E. WATSON, Prop., Marbledale, Ct.

Reg. P. Chinas Berkshires, C. Whites,

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa.

O. I. C.'s OR CHESTER WHITES

All stock bred from large, healthy, prolific parents. Quality and breeding guaranteed. A few fine Fall Boars. Plenty of Spring Pigs coming. Order ahead and get early choice. All stock registered free in either Chester White Record or O. I. C. Swine Brs. Assn., and pedigrees recognized everywhere. VICTOR FARMS, Bellvale, Orange Co., N. Y.

ELLENWOOD FARM
BERKSHIRES

Pigs of both sexes and unrelated trios for sale. Our pigs are rich in Masterpiece, Lee and Premier blood. Let us furnish you with a foundation herd. Only choice animals sold for breeders.

Write us, or better yet, pay us a visit.

ELLENWOOD FARM, R. D. 1., Hatboro, Pa.

If you want the best hog

Write us. Our farms are devoted exclusively to the production of Berkshires. Breeders in the following States have been supplied from our great herd: N. Y.; Penna.; Dist. Col.; Md.; Va.; N. C.; S. C.; Ga.; La.; Ala.; Miss.; Fla.; Tenn.; Ky.; Texas, and Porto Rico.

Berkshires for foundation and show purposes a specialty.

THE BLUE RIDGE BERKSHIRE FARMS, Asheville, N. C.

DAIRY CATTLE

DAIRYMEN—

CUT down your feed bill and increase your cream check by keeping GUERNSEYS. A dairy of grade Guernseys will give you fine flavored yellow milk, cream, and butter.

Write for free literature

GUERNSEY CATTLE CLUB
Box Y, -:- Peterboro, N. H.

FOR SALE—Otterkill Farms Ayrshires

Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer. Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

Fosterfields Herd Registered Jerseys FOR SALE

Cows, yearlings and two-year-old heifers. Also heifer calves, young bulls. Charles G. Foster, P. O. Box 173, Morristown, Morris Co., N. J

Jersey Bull Calf and Yearling

Eligible to registry. WM. McWHORTER, Argyle, New York

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Maple Row Stock Farm—Registered Ayrshire Cattle

Choice Bull Calves from first-class milkers. Also a few cows and heifers. White Beantys, Nox-em-all, 14671, and O'Carston of Finlayston, 14678, at head of herd. F. H. Cookingham, Cherry Creek, N. Y.

Holsteins $15 Each—⅛ Holstein Heifer calves, 1 week, crated F. O. B. cars, and express paid if ordered in lots of 5 or more. Also 40 Registered females, 40 high-grade cows, 10 registered bulls at farmer's prices. REAGAN BROS., Tully, N. Y.

Purebred Holsteins for any Pocketbook—Cows, $200-$1,000, according to blood. 2 bull calves 3 mo., $80 and $50. Heifers sold out. Mohegan Farm, Hudson Valley Holstein Headquarters. Chas. H. Baker, Mohegan Lake, Peekskill, N. Y. 1 hr. from G.C.S.N.Y.C.

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FOR SALE—**Twenty-Five (25) Reg. Hampshire Ewes** with fine lambs by their side.
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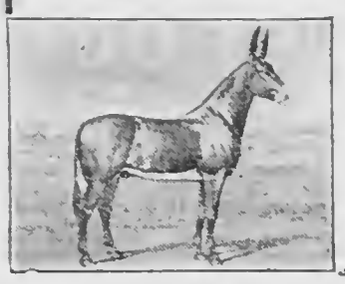

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Studebaker

WAGONS BUGGIES HARNESS

Tires that did not require setting in thirty years—on a Studebaker

AFTER thirty-six years of constant use Mr. William H. Horton, of Nineveh, N. Y., writes that his Studebaker farm wagon is as good as ever.

The wheels of Mr. Horton's wagon were run for thirty years without setting a tire. Mr. Horton writes:

"I have a Studebaker wagon purchased in 1877. The wagon now bears the original number and name of dealer; No. 33,435. Sold by Daniel Mann, Cobleskill. This wagon has had constant use since date of purchase and the wheels were run 30 years without setting a tire. The wagon is in good condition today."

WHAT IS THE REASON FOR THIS?

The fact that Mr. Horton used his Studebaker wagon for thirty years without setting a tire means that the wheels were properly built. Its hubs, spokes and felloes were all made of the best materials.

Anyone could have bought them and built them into a wheel, but Studebaker not only build of the best, but they season their materials properly, and then combine these materials in a scientific manner so as to distribute the strain over the entire wheel and therein lies the reason why the Studebaker wagons run so easily and last so long.

The fact that the wheel material is properly seasoned, dipped in oil and built in the Studebaker way is the reason why Studebaker's tires stay on for thirty years and often times longer.

You will be making a good investment when you buy a Studebaker wagon, a Studebaker Buggy—or Studebaker Harness. They are the best you can buy—and outlast others.

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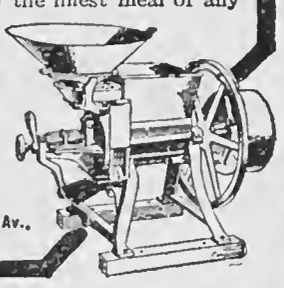
Pays for itself in fuel saved

Quaker City Mills

Grind Feed the Fastest and Finest

Any of our 23 styles—hand power to 20 h. p.—shipped on 10 days' free trial. We pay the freight. Prove to your own satisfaction that Quaker City Mills will satisfactorily grind *anything*—grind grain, separate or mixed, ear or shelled corn, husks, and from the coarsest to the finest meal of any grade. And our prices are the very lowest.



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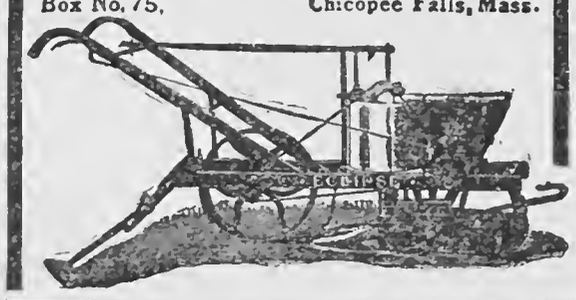

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AUTOMATIC COMBINATION TOOL
Combining a lifting jack and eleven other much used tools. Breeger, Minn. sold 23 in two days. Profit $77.05. Double acting—automatic. General Agents—write quick for terms, territory offer, etc.
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IMMUNITY IN HORTICULTURE.

PART I.

RESISTANT TYPES.—As horticulture advances the scope of species and varieties under cultivation increases wonderfully. Nature has been making selections on the basis of her laws, which is the survival of the fittest. The weaker have to give place to the strong and more disease resistant, for the vegetable world is alive with parasitic forms which seem to multiply as time goes on. This is especially noticeable in the cultivated forms of the things that are desirable for the use of man. It often occurs that the species or varieties that are most desirable for their fruit, foliage or bloom are more susceptible to the attacks of their enemies than those that are less desirable, but this is not always so. This is one of the points that deserves the closest observation and study and the most skilful attention of the plant breeder as well. Everyone should be on the lookout for the most disease resistant forms, for one slight variation in this direction may lead to something far more important than the original discovery.

HERDITY is one of the facts of life that figures very largely in the progress of both animal and vegetable improvement, while its laws are fixed they are violated occasionally by nature herself. The law is, that like produces like and this is constantly used and depended upon in large measure by plant breeders and practical growers also. However, it is a fortunate fact that violations do occur. It is the occasional production of the unlike that is of intense interest to the scientific experimenter, and often of great practical benefit to the grower. Instead of the seedlings reverting towards the old type they may be farther from it than the parental variations. Thus we may be able to step forward instead of backward. The entire field of modern horticulture is thickly spread with these fortunate variations. They make up the bulk of our orchards, vineyards, berry and vegetable gardens, our shade trees, ornamental shrubs and flowers. Nature has surpassed herself or has been led to violate her own laws for the benefit of man. And among all these almost countless variations those that show resistance to injurious influences are among the most useful as well as the most interesting.

VARYING RESISTANCE.—Everyone who has extended experience with the ordinary orchard fruits of North America knows that there are certain varieties that are more exempt from disease than others. The Seckel pear has long been known to be less affected by blight than most varieties and that the Bartlett is one of the worst to take this disease. One of the main points in favor of the Kieffer pear is that it rarely blights, while the LeConte, which is also a hybrid having the Oriental type in its breeding, is one of the most susceptible. Theoretically we do not know why there is this great difference in these two closely related varieties, yet we know from experience that it exists. All we can do is to take advantage of the fact in growing the trees of one in preference to the other. If nature's suggestion is not heeded the risk of failure must be taken. There are certain kinds of apple trees that are affected by blight and canker more than the average. The Transcendant crabapple is a very notable example of this fact, while the Hyslop is the reverse. Many of the Russian apple trees are so subject to the blight that they are almost worthless on this account. That aristocrat of the apple family the Grimes, has the serious fault of often being diseased at the base, and this to such a degree that many of the trees are short-lived. On the other hand the Delicious, which is another pomological aristocrat, is remarkably healthy in tree. The Baldwin apple trees are far more apt to have the canker than those of Ben Davis. The reason can scarcely be said to be because of difference in vigor, but to some constitutional peculiarity that enables the germs of the disease to find lodgment in one case and not in the other. There are peach trees that are severely troubled with curl-leaf and others that it seldom affects.

SUSCEPTIBILITY OF NUTS.—Among the nut trees there are marked differences in immunity from disease. The fatal chestnut blight that is devastating the native forest trees of the northeastern part of this country and the cultivated trees as well, does not badly affect the Asiatic species nor some of the hybrids. The germs of this dreadful scourge were imported from China in trees that were brought here many years ago, and not until the disease had made considerable headway was it even known by the scientists that it existed. It is not a virulent disease in Asia, because the species of Castanea (chestnut) growing there are practically immune to it. Our main hope of continuing the culture of this nut tree here is that varieties may be grown by cross-breeding the Asiatic and American species that will be immune to this disease and yet have the good flavor of our native nuts, which is far superior to that of any foreign ones. Already there are some such varieties on trial with good prospect of success. In due time these and others of similar character will be brought forward.

H. E. VAN DEMAN.

WESTERN NEW YORK HORTICULTURAL SOCIETY.

PART III.

Some solid nuggets of peach wisdom came from George Friday of Coloma, Mich. "If your location is not frost-proof," he says, "don't consider peach growing." He has come to the conclusion that it will be the part of wisdom for the large peach growers to raise his own trees, as nursery-grown trees are exposed to many mishaps and substitutions of varieties. Trees are often dug and left on the ground for a day or two; or they are left to dry out in Winter storage; or boxed after leaves have started in Spring; or the roots have been kept so wet that they mildew. A sun-dried, sour-dried, mildewed, or leaf-boxed tree is no good. We don't want to reset trees in place of those that have died. Better try to get a good start the first time, and that is easier to do with home-grown than with nursery-grown trees. The safest way to get the trees started is to set them (as also raspberries and strawberries) soon after they are dug. For Spring setting, holes may be dug in the Fall and filled with manure. Take the manure out in early Spring, let the holes dry out, and set the trees. Prune very little for two or three years. After that prune a little where needed, but leave the young sprouts all through the center of the trees. The fruit grows there. Spray early in Spring. You have only a few days when spraying for curl-leaf can be done. Cultivate to August; then plant cover crops, such as rye and vetch. The land is bound to be short of humus before the trees die of old age. To thin, go over the trees soon after the June drop once, and leave the specimens six to seven inches apart. The average life of the peach tree in Michigan is 12 years. For the first two years, corn, tomatoes or other vegetables may be grown in the peach orchard. Mr. Friday has made $200 in early tomatoes in a young peach orchard per acre.

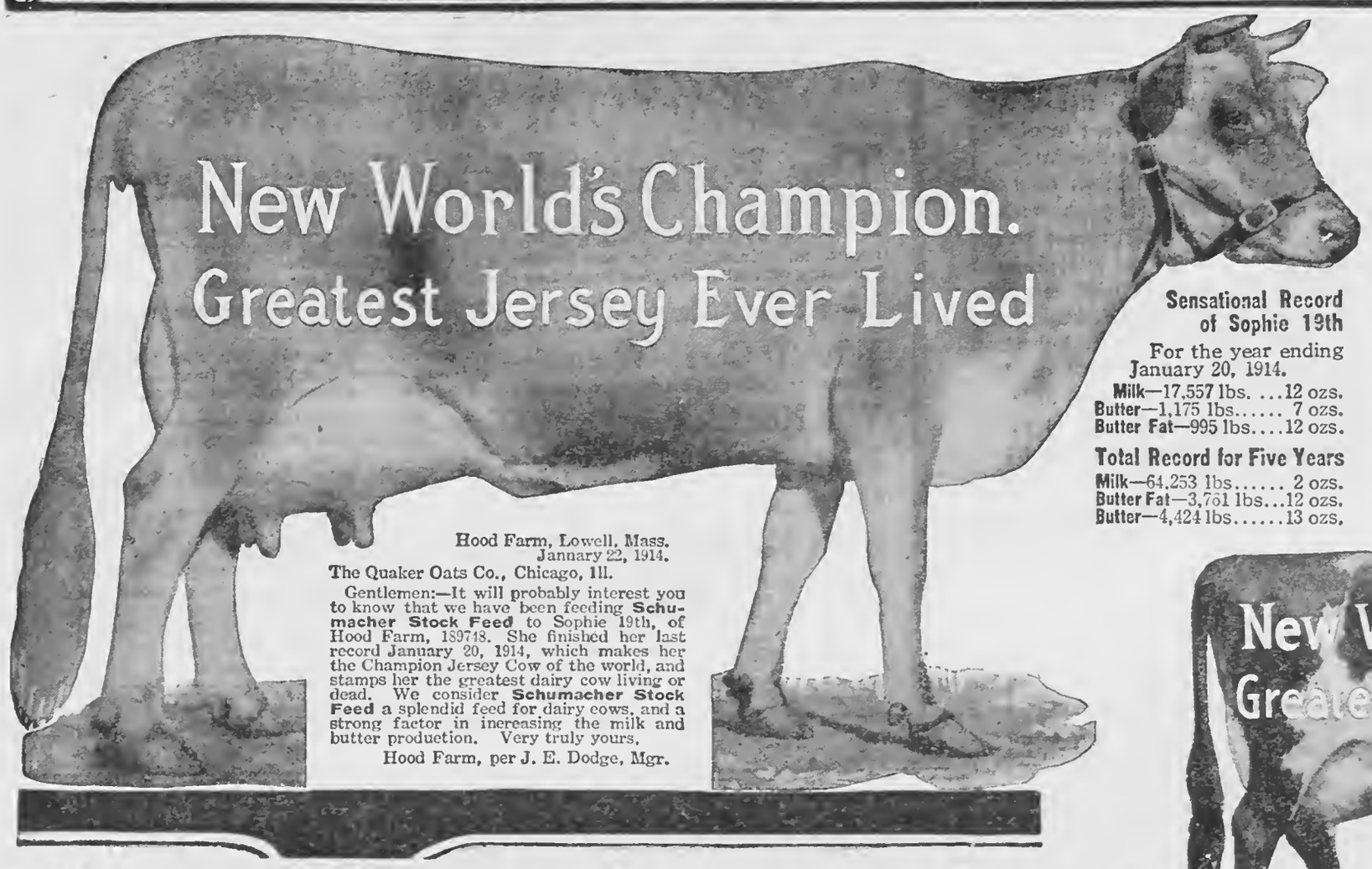
From Dr. James A. Bizzel's talk on our nitrogen supplies, it appears that at present no great increase in that output can be looked for except by manufacture from the atmosphere of such compounds as calcium nitrate and cyanamid, and by the greater utilization of legumes. The manufacture of the artificial commercial nitrate compounds has not yet reached imposing proportions. Cyanamid comes in two forms, powdered and granulated, and contains 15 to 17 per cent of nitrogen, and about 25 per cent slaked lime. There are about a dozen factories now in existence, of which four are in Germany, four in Italy, one each in France, Norway, Switzerland, and one in Niagara Falls, Ont. The latter produces about 31,000 tons a year. The output of the Niagara Falls factory is mostly sold to southern fertilizer dealers. Loss of ammonia in home mixing can be prevented by addition of 80 pounds of acid phosphate to 100 pounds of cyanamid, although this may revert the phosphoric acid.

Dr. Reddick of Cornell looks with considerable favor upon the use of dust instead of liquid sprays, especially for apple scab and Codling moth, possibly other insects. Of course, the dust spray is no remedy for scale. But in a year of mild infestation, the dust has given as good results in insect control as liquid spraying. He has worked on this problem for three Summers, using finely divided sulphur and 20 per cent of arsenate of lead, and finds that he can cover four times as many trees with dust as with liquid. The time for making applications for the Codling worm is very limited. He thinks that 10 per cent of arsenate in the mixture would have been sufficient. As to the danger in breathing the dangerous dust, he says, the men went through three seasons of using the dust, and it did not appear to hurt them.

Prof. Parrott tells of the fruit tree leaf-roller as a new pest in New York orchards. Unlike the psylla, its eggs are very susceptible to oil sprays. Miscible oils, in 1 to 15 solution, applied when buds are swelling, will destroy 80 to 98 per cent of the eggs. The leaf-roller is often very destructive to the buds.

T. G.

Stop! Look! Read!



Hood Farm, Lowell, Mass.
Jannary 22, 1914.

The Quaker Oats Co., Chicago, Ill.

Gentlemen:—It will probably interest you to know that we have been feeding **Schumacher Stock Feed** to Sophie 19th, of Hood Farm, 189748. She finished her last record January 20, 1914, which makes her the Champion Jersey Cow of the world, and stamps her the greatest dairy cow living or dead. We consider **Schumacher Stock Feed** a splendid feed for dairy cows, and a strong factor in increasing the milk and butter production. Very truly yours,

Hood Farm, per J. E. Dodge, Mgr.

Sensational Record of Sophie 19th

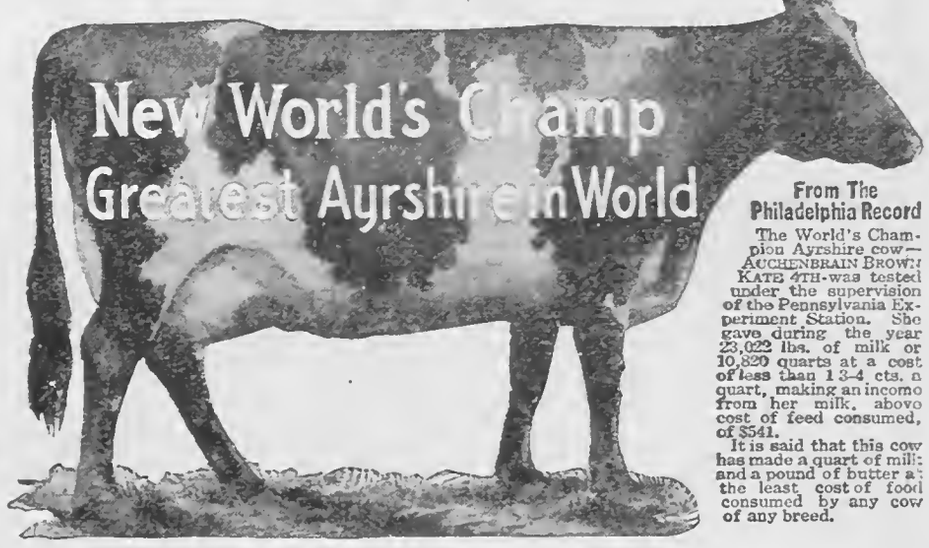
For the year ending January 20, 1914.

Milk—17,557 lbs. ...12 ozs.
Butter—1,175 lbs..... 7 ozs.
Butter Fat—995 lbs....12 ozs.

Total Record for Five Years

Milk—64,253 lbs..... 2 ozs.
Butter Fat—3,761 lbs...12 ozs.
Butter—4,424 lbs.....13 ozs.

FEED PROVES Greater Than BREED



From The Philadelphia Record

The World's Champion Ayrshire cow—AUCHENBRAIN BROWN KATE 4TH—was tested under the supervision of the Pennsylvania Experiment Station. She gave during the year 23,022 lbs. of milk or 10,820 quarts at a cost of less than 1 3-4 cts. a quart, making an income from her milk, above cost of feed consumed, of $541.

It is said that this cow has made a quart of milk and a pound of butter at the least cost of food consumed by any cow of any breed.

World's Records Smashed Again!

Many Breeds—BUT—All Fed One Feed!

Again and again, during the past year, the world has been astonished at the marvelous productions of milk and butter from single cows. Think of getting over 8¾ **tons** of milk and over ½ **ton** of butter from one cow **in one year.**

First one breed, then another, and still another have smashed all previous world's records, until in amazement we ask, "Is it possible," and "how can it be done?"

The answer no longer is "getting the right breed." Instead, "it's getting **the right feed**" and the right individual. Feed has **proved** greater than breed! This is **conclusively proved** by the fact, that regardless of the breed of these **"Queens of the Dairy World"**—be it Jersey, Holstein, or Ayrshire, which have "beaten" all records to date—they were all fed the same feed—the world famous, **record-making, record-breaking—**

Schumacher Feed

Therefore, we proudly—justly—proclaim that **"Feed—SCHUMACHER FEED—proves greater than breed."** Read the wonderful world's records just achieved by Sophie 19th of the Hood Jersey Farm, who finished her yearly test Jan. 20, 1914. Then read what Auchenbrain Brown Kate 4th, Queen of the Ayrshires accomplished—the cow which has the distinction of producing **more milk and butter at least cost of any cow in the world.** Then read the record of the first cow in the world to produce 40 pounds of butter in a week—Valdessa Scott 2nd. Then read the record of the second 40 lb. cow and note that all these remarkable, sensational performances were made with **SCHUMACHER FEED** as a base of their rations. Read their owners' letters. It needs no further evidence to convince anyone that **SCHUMACHER FEED** is the "best in the world." If it is "best" for the "best cows in the world" it certainly is best for your cows.

Try This Record-Breaking Feeding Plan

—a plan used by the World's Record makers, and you will be surprised at the results: Mix three parts **SCHUMACHER** with one part of any good high protein concentrate you are now feeding, such as Gluten, Cottonseed Meal, Distillers' Grains, Oil Meal, Malt Sprouts or Blue Ribbon Dairy Feed. Your cows will not only show a **splendid increase** in flow but in due time will show a **splendid improvement** in health, vigor and appearance. **SCHUMACHER** furnishes that stamina—vitality—ability—to stand up under heavy milk production, so necessary in profit-producing dairy cows.

If your dealer does not sell SCHUMACHER write us.

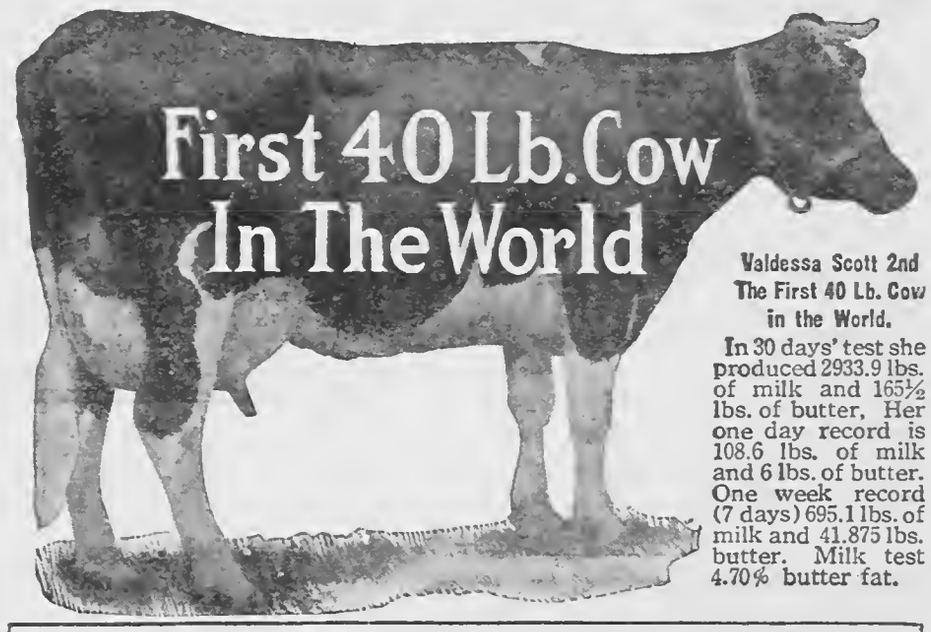
FREE FEEDING FACTS If interested, write us for "Feeding Facts" and get some information worth hundreds of dollars to any dairyman or farmer.

Narberth, Pa., December 6, 1913

The Quaker Oats Company, Chicago, Ill.,

Gentlemen;---We have been feeding your **Schumacher Stock Feed** to our Ayrshire and Jersey cows which are on test for Official Records, and like it mixed with other grains. Our World's Champion Ayrshire Cow, AUCHENBRAIN BROWN KATE 4TH, who has just finished her year's work with a record of 23,022 lbs. milk and 1080 lbs. of butter, was fed **Schumacher Stock Feed** as part of her ration. We find that **Schumacher Stock Feed** is one of the best feeds we have ever used in our mixtures. Yours very truly,

(Signed) E. S. Denbler, Superintendent, PENSHURST FARM.



Valdessa Scott 2nd
The First 40 Lb. Cow in the World.

In 30 days' test she produced 2933.9 lbs. of milk and 165½ lbs. of butter, Her one day record is 108.6 lbs. of milk and 6 lbs. of butter. One week record (7 days) 695.1 lbs. of milk and 41.875 lbs. butter. Milk test 4.70% butter fat.

Finderne Stock Farm, Finderne, N. J.

The Quaker Oats Co., Chicago, Ill.

Gentlemen:—During the past two or three years we have been feeding your **Schumacher Feed** and have secured splendid results. **Schumacher** was incorporated in the ration of Valdessa Scott 2nd during her wonderful result producing test. Used as a base with a good protein concentrate it is a winner.

Yours truly, B. Meyer, Owner.

JOHANNA DEKOL VAN BEERS

The Second 40-lb. Cow—and her smashing 60, 90 and 100 day tests:

60 days, milk 5,552.00 lbs., butter, 290.00 lbs.; 90 days, milk 8,147.90 lbs., butter 418.13 lbs.; 100 days, milk 8,987.40 lbs., butter 460.19 lbs.; 120 days, milk 10,490.00 lbs., butter 540.97 lbs.; **7 day Record**, milk 663.00 lbs., butter 40.32 lbs.

Brookline Farm, Dec. 8, 1913.

The Quaker Oats Co. Chicago, Ill.

Regarding **Schumacher Stock Feed,** will say as a feed for dairy cows or young cattle, I know of no feed equal to **Schumacher.** It certainly contains all the ingredients necessary to put the finish and gloss on an animal and more than that, the results obtained through the pail makes it the cheapest feed that I have ever fed. Johanna, in fact all my cows are fed every day a ration of **Schumacher Feed.** To any one feeding cattle for show, I would especially recommend **Schumacher.**

Yours truly, T. E. Getzelman, Prop., Hampshire, Ill.

THE QUAKER OATS COMPANY,
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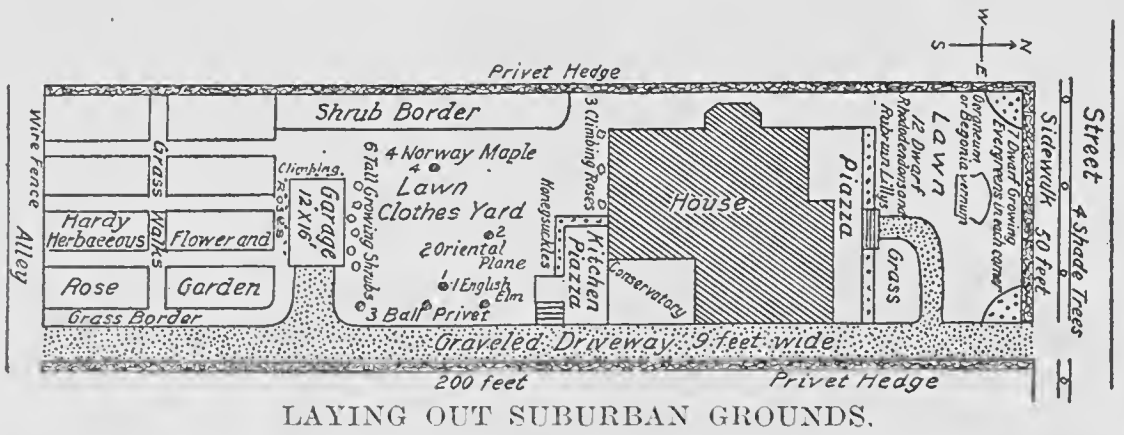
[25]

BEAUTIFYING THE HOME GROUNDS.

PART III.

The cut shows a small suburban home, the grounds of which were improved at the time the buildings were put up. The lot is 50 by 200 feet, and is enclosed in front and both sides by a privet hedge, and by a neat wire fence with gates in the rear. The drive-way is nine feet wide and extends the full length of the lot. The house stands 25 feet back from the front hedge, the front yard is about 25x40 feet in size. In each corner next to the front hedge is a small triangular shaped bed, in each of which is planted seven dwarf-growing evergreens. In a narrow bed on each side of the stoop, next to the piazza are 12 hybrid Rhododendrons, interspersed with Lilium rubrum.

In the center of the yard is a keystone-shaped flower bed, to be used for either geraniums or Begonia Vernon. The garage is situated about 36 feet away from the house; on the north side of the garage are planted six tall-growing shrubs partially to screen it from view. Between the garage and the house is an open court, with lawn, which is used for a clothes-drying yard. Along the drive-way are three ball privets about three feet high. Along the west hedge, starting near the southwest corner of the house and extending to the flower garden, is a hardy flowering shrub border containing 50 small shrubs. In this court are planted the only large trees on the lot, one English elm, one oriental plane, and one Norway maple. The kitchen piazza is planted on two sides with honeysuckle trained up to the cornice on poultry wire. Three climbing roses are trained up to the south end of the house, and six to the garage.



LAYING OUT SUBURBAN GROUNDS.

The flower garden lies between the garage and alley, and is planted with hardy roses and hardy herbaceous plants, the whole forming a neat and exceedingly pleasing arrangement. The approximate cost of plants and shrubs was about $120 at the nursery.

It will be seen by the plans given, the possibilities that can be achieved in the way of beautifying small home grounds at a very small outlay of money for trees, shrubs, plants, etc. Plans for such improvements may be made at trifling cost.

K.

To Prevent Souring from Green Crops.

I wish to plant a field to Cuthbert raspberries one year from this next Spring. I expect to give the field a good stuffing with humus next year. I had planned to use field peas, buckwheat and rye. What are the usual precautions to be taken to prevent these crops from souring? Ought this field to be limed? Would subsoiling be advisable? H. T.

Michigan.

Several plans are followed to prevent excessive souring of the ground when cover crops are plowed under. In some cases the crop is cut with a mower before plowing. After cutting, the crop lies on the ground for a few days until it is thoroughly wilted, and is then plowed under, taking pains to rake or work ahead of the plow so as to get the crop into the furrow. This does not usually pay, as it takes too much time to turn the stuff under properly. The plan which we follow on our own farm is to plow under the cover crop when it has made full growth, and immediately follow with an application of 600 pounds or more per acre of slaked lime, well harrowed in. Then we follow with a roller, or heavy drag, and pack the soil firmly. The object of this is to crush down the green vines underground into a compact mass, so that the air will not work in too freely and cause a rapid fermentation. As a rule, raspberries do not respond freely to the use of lime, and we should not use lime for such a crop, except as above stated to prevent souring very variable in form and size, showing many apparently transition forms between it and Sieboldiana. Selected types will undoubtedly be grown in the future. Both these trees are said to make good stocks on which to grow the Persian (or "English") walnut on account of their rapid growth, but there has not been time yet to demonstrate this. W. C. D.

Walnuts from Iowa.

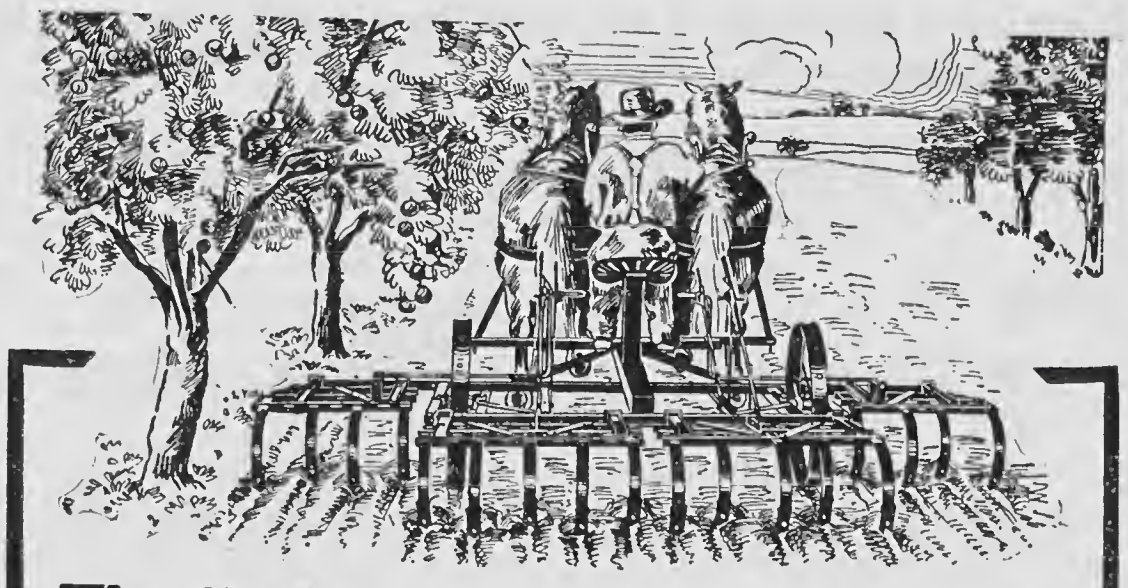
I am sending a box containing a couple of walnuts. I think they are Japanese walnuts, but am not sure. They were raised near here and procured from the nursery as English walnuts. I would like to know what they are, and if they would be profitable grown commercially. They killed back, I am informed, the first two Winters; since they have been perfectly hardy. I know of Cordiformis walnuts growing further north than this.

Danville, Iowa. W. P. W.

The nuts are Juglans Sieboldiana, one of the Japanese walnuts. Other instances have been reported where nurserymen have sold this nut for the "English" walnut. There is no excuse for this, as the trees are as different as apple and pears. It grows very rapidly and makes a beautiful tree, but unfortunately the nut is almost worthless on account of the difficulty of getting the meat out of the shell. The other Japanese walnut, Juglans cordiformis, so called because of its heart shape, cannot be told in the nursery from Sieboldiana, and makes an equally beautiful tree, but the nut is very superior. It comes easily from the shell and has a good flavor, somewhat like the butternut. It is said that if it is boiled for five minutes and then cracked while hot the meat will come out whole. Good authorities consider it a valuable nut for planting. It is a very hardy tree and is said to grow in the mountains of Japan, where snow falls every month in the year. It is

---

WILKINS was near the exploding point when his neighbor met him in the street. "That man Tompkins," he burst out, "has more cheek than anyone I ever met!" "Why?" asked his neighbor curiously. "He came over to my house last evening and borrowed my gun to kill a dog that kept him awake at night." "Well, what of that?" "Why," shouted Wilkins, "it was my dog he killed!"—



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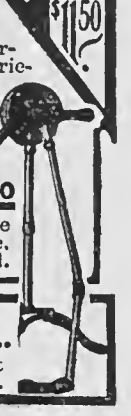

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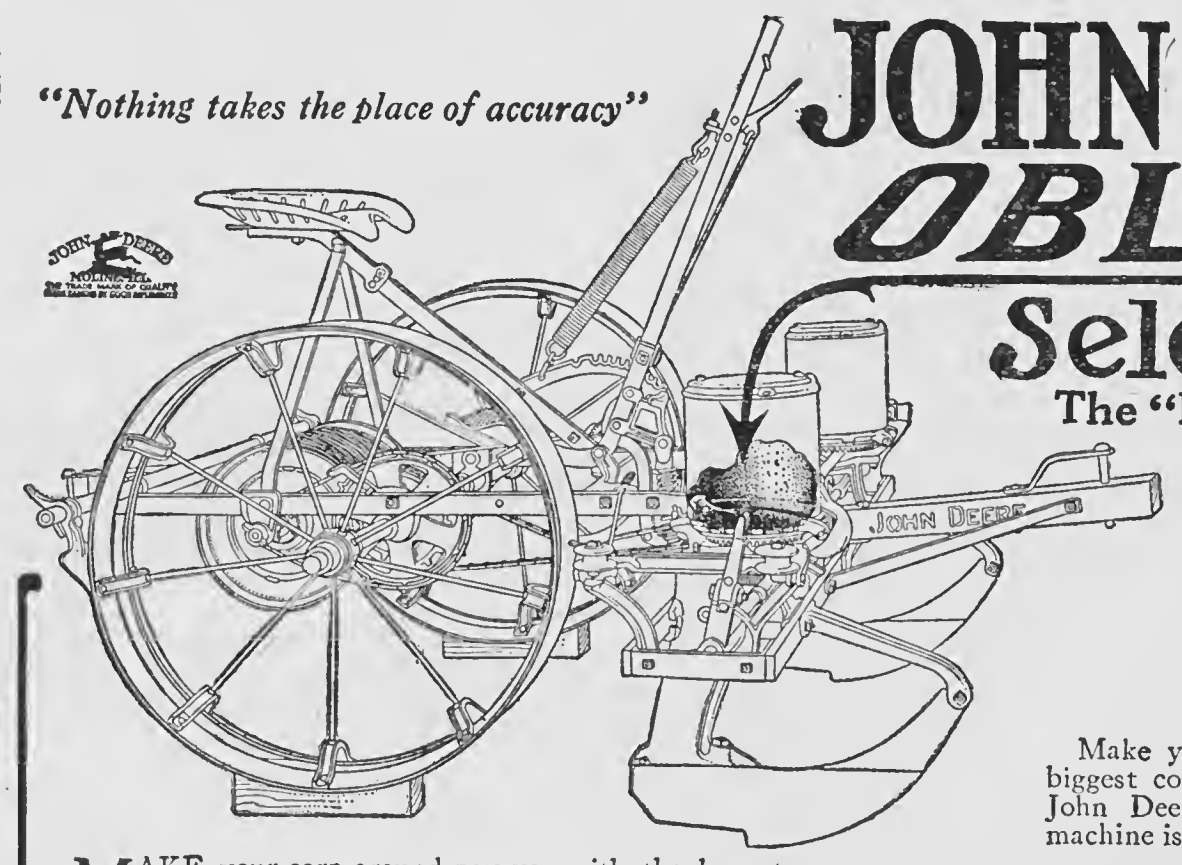

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The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

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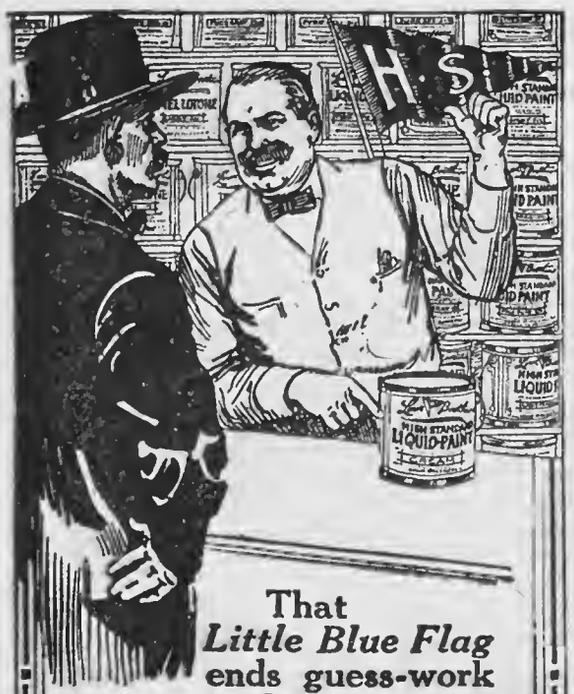

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EVENTS OF THE WEEK.

Henry M. Teller, United States Senator from Colorado for 30 years and Secretary of the Interior in the Cabinet of President Arthur from March, 1882, until March, 1885, died Feb. 23, in his eighty-fourth year. He had been in poor health nearly two years. Death was ascribed to heart disease and infirmities incident to old age. Ex-Senator Henry M. Teller, long one of the most striking political figures of his adopted West, began his service at the national capital on March 4, 1876, when Colorado was admitted into the Union. One of the early members of the Republican party, he took a conspicuous part in its councils until the national convention of 1896, when he bolted because of the adoption of the gold standard plank and walked out of the hall with a score of others who believed with him in the Bryan doctrine of the free coinage of silver at the ratio of 16 to 1.

Secretary Bryan has instituted negotiations with Great Britain with a view to the protection of migratory game birds which pass between Canada and the United States. He is acting under authority of a law of Congress. The proposed treaty applies also to birds that visit the British colonies in Central and South America. It is understood that this treaty will be followed by others to be negotiated between the United States and France, Denmark and Holland, which have colonies in the Western Hemisphere, and also with the Latin American countries and possibly with still other countries of Europe or Asia.

The storm which swept southern California Feb. 18-21, resulted in a loss of seven lives and property damage of $4,500,000. The rainfall was from 10 to 12 inches and this flood was increased by high winds which made the water much more destructive. City engineers estimate that Los Angeles suffered a damage loss of at least $1,500,000. One hundred and fifty thousand dollars represented the damage to city streets alone. The balance was made up of losses to railroads and to citizens whose homes were swept away with all their household effects. Except in the vicinity of Pomona, where young groves suffered severely, orange growers reported little damage. Ranches and small farms in the lowlands were inundated. The torrents washed away hundreds of feet of the Los Angeles River bank in the heart of this city. Buildings were undermined and toppled over and many homes were washed away.

The United States Supreme Court handed down about 40 decisions in Washington, Feb. 24. One of them is of far reaching effect on the enforcement of the Federal pure food and drug act, and similar State laws. Under this decision, the Government in order to libel foods that have been "treated" or adulterated will have to prove that the added substance is present in sufficient quantity to injure health. The mere fact that the deleterious substance is present will not be sufficient. Government authorities fear this decision will greatly hamper them in the enforcement of the law. Another important decision sustained the validity of the section of the Payne-Aldrich tariff law which imposed a tax on foreign built yachts owned and used by citizens of the United States.

By a vote of six to one the New York Court of Appeals ordered, Feb. 24, a new trial for Charles Becker, the former police lieutenant, convicted of the murder of Herman Rosenthal, the gambler, out of whose "squeal" against the police graft system of New York, for which it was charged he was shot to death, grew probably the greatest series of investigations, exposures and convictions for murder and lesser crimes that ever occurred in the United States. The court based its reversal upon the errors it held Justice Goff, the presiding judge, made in many of his rulings during the trial. The court did not pass on the question whether the weight of evidence against Becker was sufficient to warrant his conviction. A dissenting opinion was written by Justice Werner. The court refused unanimously the application for a new trial of the four gunmen who were convicted with him for the Rosenthal murder. In the prevailing opinion in Becker's favor, written by Justice Hiscock, 15 errors by Justice Goff were cited, some of which, it was held, "passed beyond the limits of discretion and were erroneous as matters of law," while others had the tendency unwarrantably and unnecessarily to embarrass and hamper the defendant's counsel.

Representative Hinebaugh has introduced a bill into Congress which has had a reading and has been referred to the Ways and Means Committee, having as its object the taxation of any person, firm or corporation conducting a mail order business interstate direct to the consumer. The bill proposes to levy a tax of one per cent. on the total cash value of goods so sold. Further, the person, firm or corporation conducting a mail order business must provide proper books of account showing every sale so made and render a statement thereof, as of Dec. 31, to the secretary of the Treasury, the tax to be paid the following March 1. The Federal Courts are given power to enforce payment and the money so collected is to be apportioned to the various States of the Union in the ratio of the actual amount of goods sold in each State.

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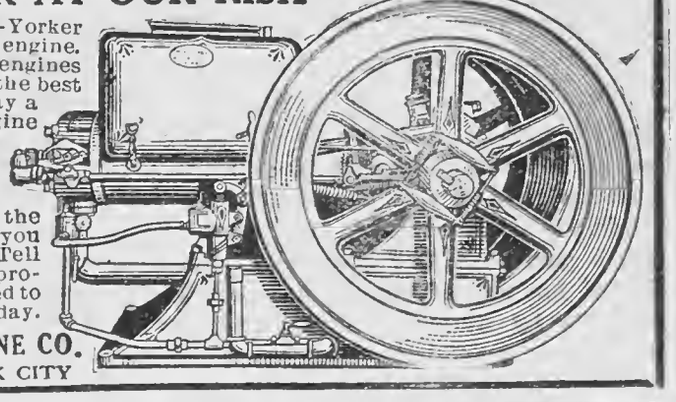

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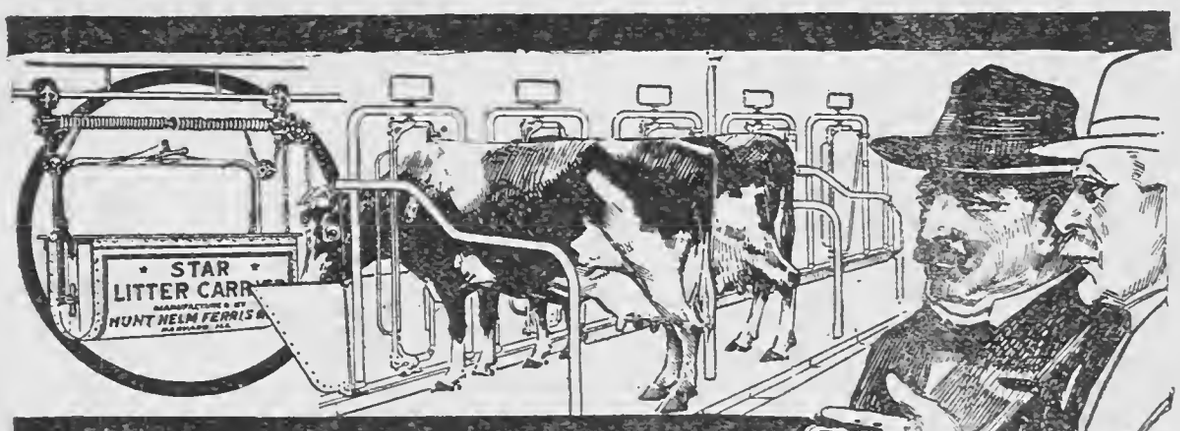

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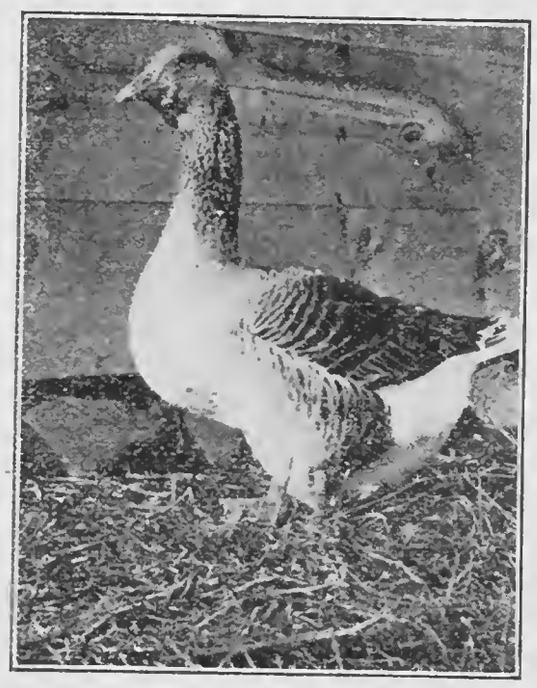
The Henyard.

Toulouse Geese.

The Toulouse is the largest of our domestic geese. Massive is the most descriptive term that can be applied to a mature specimen of the standard weight, which is 25 pounds for a gander and 20 for a goose. A few breeders of stock selected for size have birds that exceed these weights by several pounds, and one intending to start with Toulouse geese will find it profitable in tne end to purehase eggs or birds from large stoek. The first cost may be high, but the ultimate profit will more than make up for this. The average weight of geese found on farms is hardly more than half the standard. The name of these geese comes from the city of Toulouse in France, near which many of these geese are reared. The prevailing color is gray, shading to dark brownish gray above and to white below. Occasionally dark feathers appear in the white, and white feathers in the primaries and secondaries of the wings. These disqualify for the show room. The bill should be of a pale orange



A Well-Formed Toulouse.

color and the shanks and feet of a deep reddish-orange. The body should be of moderate length and broad. A dewlap under the throat should develop with age, and is a desirable feature in the show room. Toulouse geese of both sexes usnally acquire a keel as they increase in age. Frequently the keel of an old goose will drag on the ground as she walks.

Toulouse geese do not mature so fast as some other breeds and consequently are not so profitable for selling at 10 or 12 weeks of age, but are the best for Christmas sales. In December they attain their greatest weight for the season. On account of their predominance in the markets at this season they are sometimes termed the Christmas goose. The size of Toulouse geese makes them quiet and docile. They are contented to remain near home, and less inclined to wander than some of the smaller breeds. While they have well developed voices they are ordinarily rather quiet. In egg-laying they compare well with the other large breeds. The Government bulletin on geese gives 40 as the average number of eggs laid by Toulouse geese. Another report based on a two years test gives 26 as the average. Individual reports give larger numbers. Doubtless, as with hens, much depends upon the individual, and geese raised principally for eating, have been bred mainly for size, and less attention has been paid to egg-laying than with other domestic birds. Here is a field for work and a chance for improvement with all breeds of geese that have hardly been entered upon or begun. The goose, the largest of our domestic birds, with the exception of the turkey, one of the most easily reared and by far the most intelligent, is worthy of a much larger place in our farm economy than it has ever yet filled.

W. H. HUSE.

Value of the White Leghorn.

In a short article on page 132, signed J. F. C., a heavy cloud is cast over the Leghorn as an economical converter of food into eggs. J. F. C. even says that he will produce eggs on less food per egg with heavy birds than he can with Leghorns. If so he cannot have a good strain of Leghorns. My own personal experience has been the other way decidedly. 50 Leghorns laying better per hen on less food than 40 heavy birds when both flocks were laying well. Of course J. F. C.'s and mine are only isolated instanees, and as sueh of little value, but very interesting data on this point eomes from the Australian egg-laying contests where 10 years' work with accurate records kept should do away with some of the nncertainty that comes from conflieting statements by different men here. In those 10 contests the only breeds represented by over 500 hens are the S. C. White Leghorn, Black Orpington and Silver Wyandotte. While the color of the feathers of the heavier breeds is different from that most frequently fonnd in America, the fundamentals remain unchanged. The following table is taken from one on page 60 of Farmers' Bulletin 66, issued by the Department of Agricultnre, New South Wales, with the money valne changed from shillings to dollars and cents:

Breed	No. of hens Represented	Av. laying per hen	Av. Valne of eggs	Av. Profit over feed
Leghorns	1212	183.4	$4.36½	$2.87
Orpingtons	786	166.6	3.88	2.44
Wyandottes	684	160.5	3.71½	2.35

The above is for the first year's laying, two year tests have been conducted on a somewhat smaller scale; they show the most important item, the profit over feed, for Leghorns, $5.45½; Orpingtons, $3.94½; Wyandottes, $4.37½. Three year tests have not progressed far enough to give any reliable data. The bulletin does not consider these results to give an exact index to the relative merits of different breeds, but does afford a pretty accurate guide for the poultryman to work on; and, judging from the general feeling towards Leghorns in America, Australian views as to the relative merits of different breeds are shared here.

Connecticut. FRANCIS F. LINCOLN.

Meat and Mash for Hens.

We have 60 hens which we feed three quarts scratch feed and boiled vegetables at six o'clock in the morning; at 11 o'clock 1½ quarts feed and at four o'clock three quarts cracked corn. I would like you to tell me of a mash that I could feed in the morning, also if the way they are being fed is right. They also have meat, grit, eharcoal and a pan of bran in front of them at all times. How can I prevent some of them from eating too much meat? C. G. G.

Perhaps the best way to feed meat, either in the form of meat meal or beef scraps, is to mix it with the mash that is given the hens, making this mash from one-sixth to one-eighth meat, by weight. A good mash for your use might be composed of 50 pounds each of cornmeal, wheat bran, wheat middlings, gluten feed and meat meal, to which one pint of fine salt is added. This mash may be fed dry in an open hopper kept constantly before the hens, or moistened with skim milk or water, and fed once daily. The feeding of a dry mash of mixed ground grains, as you are now feeding bran, is considered preferable to moist mashes by most poultrymen. M. B. D.

N.A. Contest 282 Eggs

TOM BARRON'S

Mo. Contest 258 Eggs

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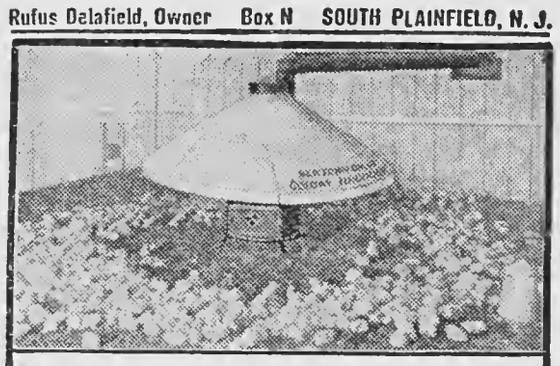

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Mrs. Laura J. Clark, Illinois Winner 1911

Mrs. Alta Hamlyn, Ind. Winner 1913

Mr. F. E. Bennett, Ohio Winner 1912

Mrs. F. H. Osman, Ohio Winner 1910

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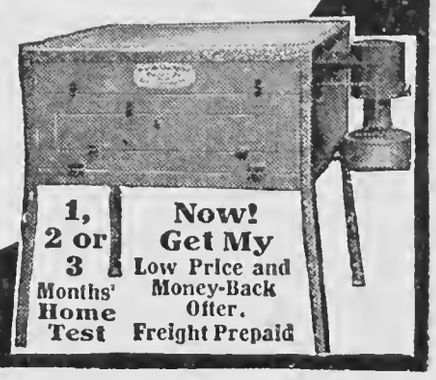

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THE EGG-LAYING CONTEST.

The fifteenth week of the contest shows a gain of 397 eggs over the previous week, and the fourteenth week showed a gain of 682, so in the two weeks the egg production has increased 1,079. The production of this fifteenth week was 2,066. Tom Barron's White Wyandottes have resumed their lead in the weekly egg production, after skipping one week. Their output for this week is 49; Dr. J. A. Fritchey's S. C. Reds take second place with a score of 40; and Dearborn & Sharpe's S. C. Reds take third place with a record of 39. Pen No. 9 White P. Rocks from Storrs Agricultural Station laid 38; Dr. N. W. Sanborn's Buff Wyandottes, 38; A. B. Brundage's S. C. Reds, 38, and L. E. Sand's White Leghorns, 38. Tom Barron's White Wyandotte pullet No. 1 laid Sunday and every other day, as did Homer P. Deming's S. C. Red No. 7. Barron's pullet is the one that went broody and did not lay for several weeks; she is trying to make up for lost time now.

Barron's White Wyandottes have a total now of 573; the next highest is Francis F. Lincoln's White Leghorns, their total is 457. This shows Barron to be 116 eggs ahead of any other breeder. His pen of White Leghorns have a total of only 282 at this contest, but at Mountain Grove, Mo., they lead all the other pens of any breed, and at Thorndale, Pa., they lead all the Leghorns, as his Wyandottes lead all the breeds. The Silver Campines have commenced laying, starting off with a score of 13. Every pen in the contest is laying now. The total production to February 13, is 13,922. Below are some of the scores made to date:

	WK.	TL.
BARRED ROCKS.		
Jules J. Francais, New York.	25	324
Frank L. Tuttle, Massachusetts	30	159
Waveny Farm, Connecticut...	18	82
A. B. Hall, Connecticut.....	11	68
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut.	38	206
Storrs Agr. Sta., Connecticut.	29	128
Storrs Agr. Sta., Connecticut.	28	61
Storrs Agr. Sta., Connecticut.	27	101
Storrs Agr. Sta., Connecticut.	22	73
F. H. Benton, Connecticut...	25	174
A. T. Lenzen, Massachusetts.	25	55
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	37	173
W. C. Morgan, Connecticut...	4	59
WHITE WYANDOTTES.		
Tom Barron, England.....	49	573
Neale Bros., Rhode Island...	37	406
Merrythought Farm, Connecticut	36	395
West Mt. Plty. Yards, Connecticut	31	272
D. J. Ryan & Son, Connecticut	35	257
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	38	177
Am. Buff Wyan. Club, New York	27	174
Dr. N. W. Sanborn, Massachusetts	26	144
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	21	144
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	40	368
Dearborn & Sharp, New Jersey	39	302
Pinecrest Orchard, Massachusetts	36	274
J. S. Gillespie, Connecticut...	34	256
Colonial Farm, New Hampshire	34	252
A. B. Brundage, Connecticut..	38	237
Harry B. Cook, Connecticut..	33	229
ROSECOMB REDS.		
Glenview Farm, Connecticut..	34	263
C. S. Scoville, Connecticut....	17	180
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	28	457
Storrs Agr. Sta., Connecticut.	35	451
Cecil Guernsey, New York..	34	374
Tom Barron, England.....	32	282
Storrs Agr. Sta., Connecticut.	31	303
Storrs Agr. Sta., Connecticut.	28	238
Marwood Plty. Farm, Pennsylvania	33	235
Storrs Agr. Sta., Connecticut.	26	206
Bonnie Brook Farm, New York	31	229
L. E. Sands, Pennsylvania...	38	198
P. G. Platt, Pennsylvania....	36	204
Branford Farm, Connecticut.	34	193
F. M. Peasley, Connecticut...	27	162
C. H. Savage, Connecticut....	24	160
BUFF LEGHORNS.		
Wolverine Plty Farm, Michigan	20	127
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut.....	19	63
BUFF ORPINGTONS.		
O. Wilson, Virginia.....	28	112
WHITE ORPINGTONS.		
P. A. Deingar, New York....	13	78
WHITE-LACED RED CORNISH.		
Massachusetts	6	7
SILVER CAMPINES.		
W. J. H. Lobel, New York....	13	13
DUNGHILLS.		
W. H. Collingwood, New Jersey	10	26
Daniel Hine, Connecticut.....	12	126
Daniel Hine, Connecticut.....	28	168
MIXED BREEDS.		
Profitable Poultry, Massachusetts	24	237
Profitable Poultry, Massachusetts	24	196

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High-class stock for UTILITY, SHOW or EXPORT. Eggs for hatching. Mating list on request.
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Kirkup's Strain S. C. White Leghorns, bred for vigor, size and large white market eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.

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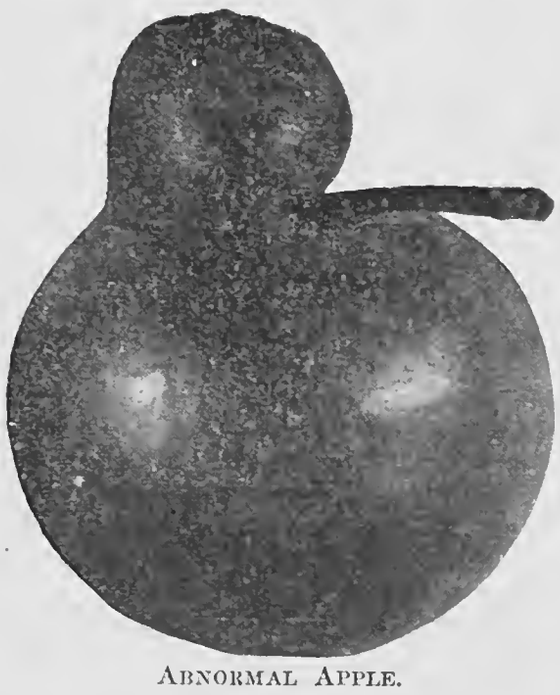
S. C. Brown Leghorn Eggs for hatching, from a good utility strain, at farmer's prices. J. E. WEAVER, Greensboro, Maryland

Abnormal Apple Growth

Fasciation or the lateral growing together of buds or tissues that normally are separate is not an uncommon phenomenon in rapidly growing plants. It is seen most frequently in the stems and fast growing sprouts of the sweet potato, the black raspberry, asparagus and certain lilies when stimulated by intensive fertilization and ample supplies of moisture, but may be found in a wide variety of cultivated plants, though rare in nature. Fasciated stems form wide ribbon-like growths, often with a multitude of small leaves and buds or growing points, which blend together at the edges as

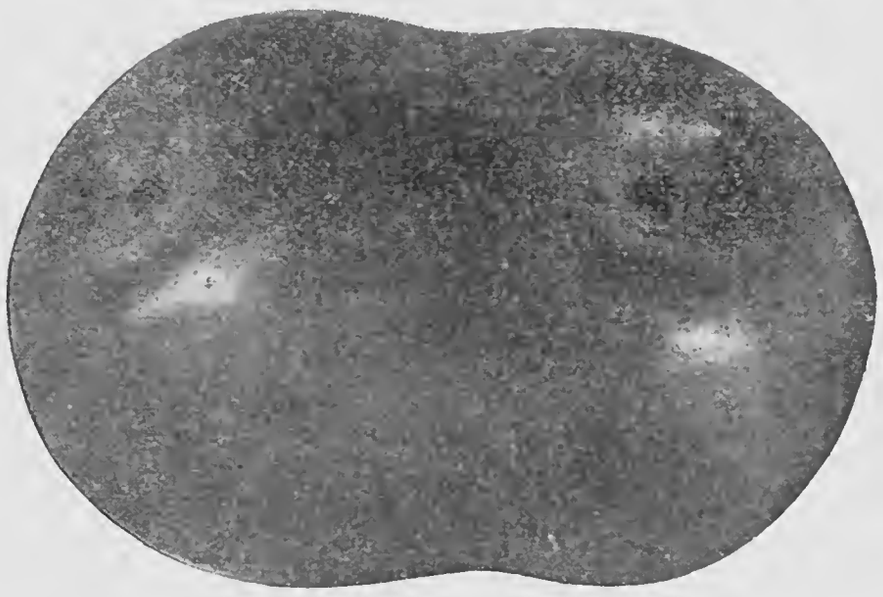


ABNORMAL APPLE.

growth progresses. Such abnormalities are plainly the result of over-nutrition, and contribute nothing to the welfare of the plant.

Presumably every bud, branch, leaf and flower arises from a single growth—all which normally takes the lead in development and its associated cells fall methodically into the proper order to form the new growth. Sometimes it appears as if two or more cells get an even start under special stimulus, which we cannot readily understand, and grow side by side, forming twin or fasciated growths. Thus in lower cut the twin apples have possibly developed from multiple blooms on single stems or pedicels, though close examination might show the fusing or fasciation of two pedicels, each with a single fertile bloom, as in the normal flower. Such monstrosities have no value, but are interesting as showing what may happen when nature is off guard.

The apple or typical pome is a very symmetrical and highly developed fruit,



TWIN APPLES.

with its five-loculed ovary developing into the star-shaped core surrounded with mellow flesh, and is far less given to twinning than the drupes or plum-formed fruits, in some varieties of which it is quite common. Thus the ovary or incipient fruit of the plum, cherry, peach, apricot and almond contains but two ovules, only one of which, as a rule, develops into a seed. Occasionally we find two kernels or two seeds in a pit, as a result of the development of both ovules, and less often a twin fruit with one or two normal pits each with single kernels. Twin cherries and plums are very common in California, where these fruits are grown to great perfection and does not greatly affect the value of the fruits owing to the compact form of the combined growth. In the apple or pear twinning or fasciation if at all common, would prove a great nuisance. V.

SMITH: "Do you believe in the sympathetic influence of music?" Brown: "Sure; whenever I hear an automobile siren I always start into a quickstep."—

Little Points With Big Profits in Potato Growing.

Big profits in potato growing come from attention to little details which the average grower overlooks. To this matter of thoroughness E. P. Smith of Oswego County, N. Y., a recent lecturer at Cornell during Farmer's Week, attributed his success. Mr. Smith ought to know, for he has had to learn the potato game from seed to market.

Ten years ago he came into possession of a farm known as the poorest in the township. His farm experience was very little, the crops for the first year were failures and to cap the climax, his house was destroyed by fire early in the Winter. In the face of all these discouragements and in spite of advice to quit, Smith determined to stick it out and make good or go down fighting.

His first potato lesson was in the matter of deep plowing. The only plow left from the fire was minus a clevis and in his inexperience, Smith turned over the first field knee deep. All his friends told him the land was ruined, but to everyone's surprise, this land gave the biggest yield in the vicinity at digging time. From that time since the land has been plowed 10 inches deep or more. This deep plowing is followed by thorough harrowing. Even after the soil is apparently worked into ideal shape it is harrowed over a few times extra for luck. Sometimes Smith has kept up this harrowing until his neighbors were suspicious of his sanity, but the extra working has always paid.

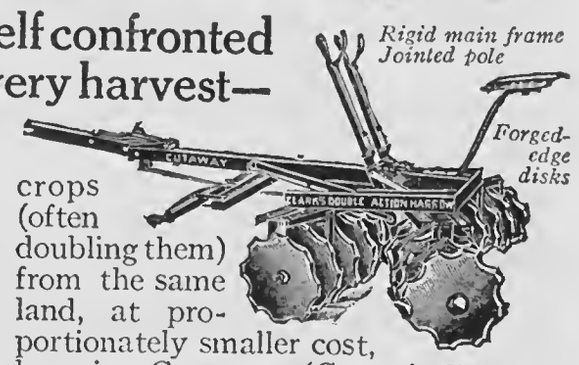
Another detail which receives careful attention is that of securing a perfect stand. Most potato patches have five to 10 per cent. of the hills missing. This means that in a field of 20 acres, from one to two acres are worked and cared for at a dead loss. A perfect stand means attention to the two operations of cutting and planting the seed. Here, the seed is cut so that every portion consists of a good sound chunky piece with one or more eyes, and every poor or questionable piece is thrown out. In planting, every hill is seeded. If the machine skips, it is stopped and the hill planted by hand. Smith claims that it pays well to keep every hill working.

A little detail which many potato raisers overlook is the care of the outside rows. If these are neglected or carelessly trampled in turning there is a loss which amounts to a considerable sum in a large field. Mr. Smith uses just as much care with the boundary hills and rows as with the rest and it is hard to find an injured hill on his whole patch. Another factor which has shown up on the profit sheet is that of seed selection. By choosing the best yielding plants and growing these for seed in a separate plot a high yielding strain adapted to local conditions has been produced. Last season this selected seed gave a crop 30 per cent. larger than that obtained from the ordinary seed.

On this farm spraying, harvesting and every other step in the work receives the same careful attention. If genius is defined as a capacity for taking infinite pains then Mr. Smith has earned the right to be called a genius in potato growing. This thoroughness in little points has brought success, and the determination to make good has been rewarded. Last season's crop from 20 acres sold for over $4,000, with an average yield around 300 bushels to the acre. E. D. V.

How About Your Harvest?

A certain farmer found himself confronted with the same problem at every harvest—



his yields seldom reached the mark they should. His profits were disappointing and, sometimes, distressingly small. He sought for the cause without success—until one day he read a

Cutaway (CLARK)

advertisement about Jim, the farmer whose land produced double that of his neighbor's, simply because he took a look ahead to the harvest when making the first preparation for planting. He followed the advice Jim gave his 50%-farmer neighbor and that very day wrote to us for a copy of "*The Soil and Intensive Tillage.*" In it he read about the chemical and physical properties of the soil, about how plants feed, and about intensive tillage. He learned that he could make much larger crops (often doubling them) from the same land, at proportionately smaller cost, by using CUTAWAY (CLARK) disk harrows. He got an entirely new idea about disk harrows and disk harrowing.

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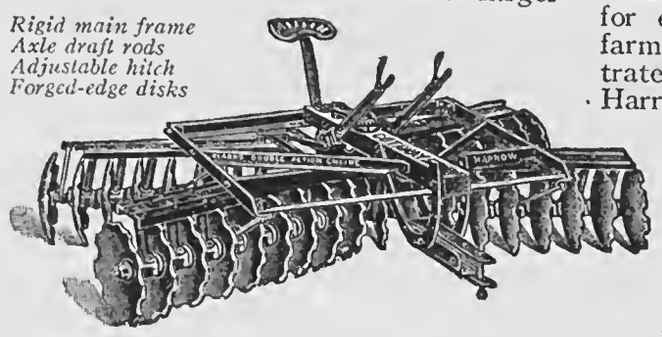

Do you know how much you lose where there are little hard ridges between the surface and the subsoil in your fields? Often the surface looks mellow and fine, and you are deceived. Do you know how much you lose every year because there is a clumpy strata between the seed-bed and the subsoil? You can stop these losses. CUTAWAY (CLARK) disk harrows pulverize all the soil to the full depth to which they run, and they are lighter draft than other harrows, size for size. There is a style and size for every farmer. In our catalog you will find illustrated and described Double Action Engine Harrows; Double Actions for horse power for both orchard and field work; Corn and Cotton Harrows; one-horse harrows for field, grove and garden; Bush and Bog Plows; Right Lap Plows; California Orchard Plows—in fact, the tool *you* need. Remember, our catalog "*The Soil and Intensive Tillage,*" is free for the asking. Write for it today.

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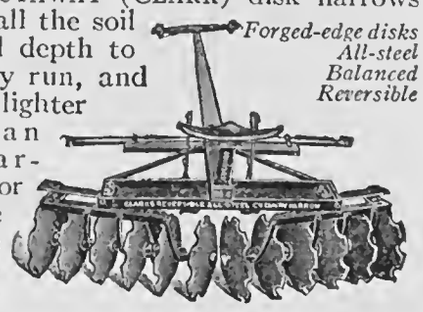

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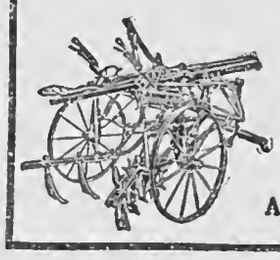

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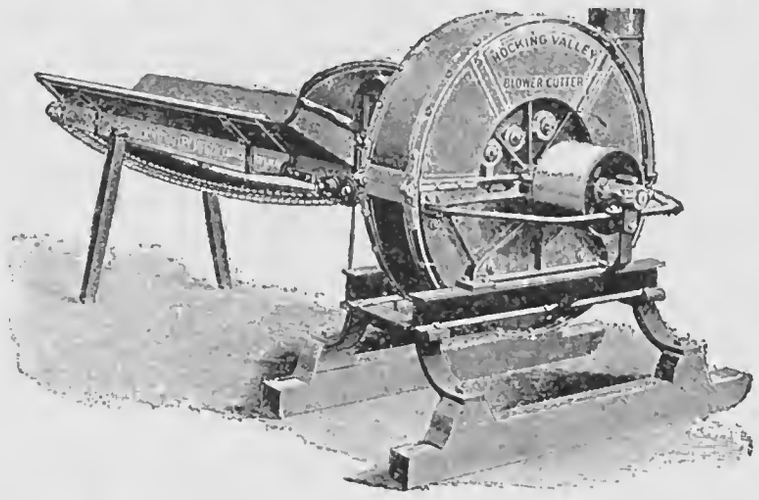

The Hocking Valley Blower Ensilage Cutter is equal, in every respect, to any Silo Filler made, and superior to any other in many ways. It is strong, durable, free from breakage, guaranteed against "blowing up," is light of draft and has unusual capacity. Write for illustrated circular and name and address of nearest general agent.

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HEN MANURE AND CHEMICALS.

What should be added to hen manure, dried with coal ashes, to make a fertilizer for fruit and garden truck, such as tomatoes and melons? H. H.

That is the substance of more than 50 questions about hen manure. This manure varies in quality more than any other, depending on the way it is kept and the sand, ashes, feathers or litter mixed with it. We answer the question therefore in a general way. The litter and coarse part of the manure should be kept separated from the solid parts found under the roosts. We put this litter around trees or shrubs as a mulch, or mix it with the stable manure.

There are many ways of handling the solid portions. The quickest and easiest way is to scrape it up at intervals and spread it at once on the grass or grain or on the ground for the garden. There is not much loss in this, but it is not the most economical way. The following plan suits us best. Keep the droppings under the roosts well dusted with some drying material like land plaster, ground phosphate rock, sifted coal ashes or dry road dust. We consider land plaster best. *Never use wood ashes.*

The object in using these dusty materials is to dry and harden the manure for safe keeping. Fermentation will not go on unless there be moisture and heat. This dried manure is scraped from under the roosts frequently and stored in barrels or boxes in a dry shed. In the Spring the manure will be in the form of hard dry chunks. The object now is to make a fertilizer using this dry manure for what the fertilizer dealers call a "basic" mixture. Grind or crush these chunks as hard as possible. This may be done by beating them with a mallet or heavy spade or grinding in a machine. Sift this through a fine sieve and crush the larger pieces. As with all fertilizers, the finer the manure the better distribution you can make.

Generally speaking, hen manure is from three to four times as rich in plant food as ordinary stable manure. It is strong in nitrogen, but comparatively weak in potash and phosphoric acid. You have doubtless noticed that hen manure used alone gives a very rank and green growth of leaf and stem. The economical use of hen manure means the addition of the mineral elements to "balance" the nitrogen. By drying and grinding the manure we are able to make an even mixture with the chemicals. The most common mixture of chemicals to go with manure is 300 pounds of acid phosphate and 100 pounds muriate of potash. This is mixed with 800 pounds of crushed hen manure and makes a good mixture for drilling with small grain or for using in the hill with corn. When used on grass more available nitrogen will be needed than the hen manure alone will furnish. This we should use for grass as a Spring dressing. 100 pounds nitrate of soda, 1,200 pounds sifted hen manure, 500 pounds acid phosphate and 200 pounds muriate of potash. For garden crops and potatoes we should use 150 pounds each of nitrate of soda and dried blood, 1,000 pounds fine hen manure, 500 pounds acid phosphate and 200 pounds muriate of potash. These mixtures will suit the needs of the various crops and will provide an economical use for the hen manure. There is a chance in this for some of the larger hen men to develop a choice little business of mixing a high-grade garden fertilizer from the manure and chemicals.

Seeding to Cow Peas.

What is the proper method of seeding a field to cow peas? I have a field measuring 25 acres, which I plowed in the late Fall. The soil is of several varieties, ranging from a light sand to a yellow sandy loam, and has not been cultivated in the last four years, being somewhat sour. I expect to use phosphate powder and muriate of potash for fertilizing. Would a three-section tooth harrow be satisfactory for harrowing in the seed, or would they have to be disked in lightly to assure proper covering? K. G.

It would be better to disk the cow pea seed under about three inches or a little deeper, and then smooth the surface with a light harrow. The spring-tooth, however, if set to run deeply will cover the seed well, but we should smooth the surface with a tool like the weeder or a plank drag. When broadcasting cow peas we plan to use five pecks to the acre.

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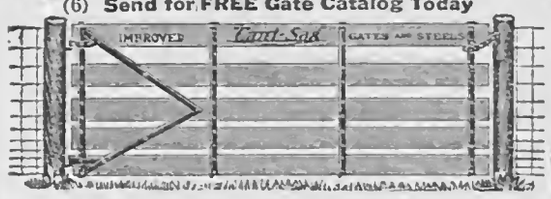

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150 FARMS FOR SALE—Near Phila. and Trenton markets; good R.R. and trolley facilities. New catalogue. Established 25 years. **HORACE G. REEDER, Newtown, Pa.**

A Melon and a Peach.

The picture shown here was sent us by Mr. Cecil W. Davis of West Virginia. Last Summer he sent us a sample of the Delmar melon. It certainly was a melon to those who ate it and to the handlers who stand between the grower and the consumer. The shipper, however, got very little out of it except the rind. Our friend, however, sends us this picture to show the comparative size of his melon and also to show what he called "another melon," which he thinks is the real thing. The melon in the picture is all

A MELON AND A PEACH.

right, but as for the other character, we think that is more in the line of a "peach," and a good one at that. Probably this peach is able to make an effective cross between himself and the melon. That is more than Burbank ever claimed to be able to do, and when this crossing has been completed, the melon will be inside of the peach.

Scab on Potatoes.

I enclose sample of the skin of two potatoes grown at different ends of a small plot of ground. The smooth one was at the south end of the plot, and the warted one on the north end; betwen the two ends were 150 hills of corn. What makes the warty condition? I have been told that it was the sting of the earthworm. Why should the trouble be confined to one end of the plot? Is there a remedy? W. W.
Connecticut.

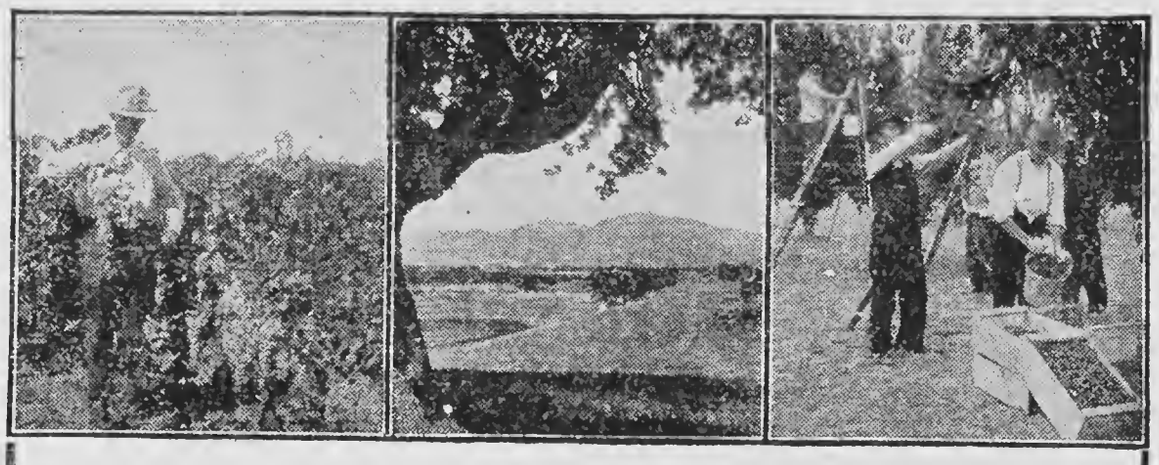
Your potatoes showed the effects of the scab disease. Earthworms do not and cannot "bite" potatoes. The scab is a skin disease spread by a germ which may be found on the seed potatoes or in the soil. Where the tubers are badly marked potatoes should not be planted year after year in the same ground, for these germs will be found there. Growing other crops for a few years will help work out these germs. Planting scabby potatoes for seed will spread the disease. The remedy for this is to soak the seed potatoes in a solution which will kill the germs, but not injure the potato buds or eyes for sprouting. A solution of one pint of formalin in 30 gallons of water will do this. The seed potatoes are put into this liquid for two hours and then dried and cut. For a small lot a tub or barrel will answer. For large lots a tank is used or a barrel of liquid. The potatoes are put into sacks which are let down into the liquid and then hauled out. Powdered sulphur is also good to prevent scab. We would soak in the formalin solution and then use sulphur when cutting the seed, scattered over as the tubers are cut up. This sulphur helps kill the scab germs and also preserves the seed pieces from rotting.

Apple Pomace Around Trees.

I have a large amount of apple pomace, and wish to know if mixed with lime, whether it would be good to put around apple or cherry trees? E. W. W.
Ypsilanti, Mich.

If this pomace is sweetened by the use of slaked lime, it will make a fair mulch for the trees. Do not put it on without liming. There will be trouble if you do. Do not pile the pomace up against the trunk of the tree, but spread it out on the grass or ground about as far out as the limbs extend.

THE clerk of the court addressed the jury: "Well, gentlemen of the jury, have you agreed upon a verdict?" "We have," replied the foreman. "What say you? Do you find the prisoner at the bar guilty or not guilty of the crime?" "We do." "You do? Do what?" "We find the prisoner at the bar guilty or not guilty." "But, gentlemen, you must explain." "You see, six of us finds him guilty, and six finds him not guilty."—Melbourne Leader.



Your Great Chance to get a California Farm is NOW

In the great San Joaquin Valley, California, are chances to-day for money-making in fruit-growing, in dairying, in poultry-raising, that appeal to the man who wants to make his effort count for most.

Your markets are unlimited. There are the hungry big cities of the Pacific Coast, two of which are to have great expositions next year. Thousands of mines and lumber camps never get enough farm products. The rest of the world is glad to pay good prices for California fruit.

You will find a well developed country. You will find good roads and rural delivery. A neighborly, get-together and work-for-the-benefit-of-all spirit makes a success of co-operative effort in getting the profit for the grower.

Ambitious, progressive farmers are wanted to settle this wonderful valley. I know where the opportunities are, and I will gladly point them out. I can save you time and travel, because you need not duplicate the investigations my staff has made.

Our books, "San Joaquin Valley," "Dairying" and "Poultry," will give you a great deal of information. Then if you will write me what more you would like to know, I will tell you. The books are free. So is all the assistance and information which I can give you.

Santa Fe agricultural demonstrators will assist new settlers in selecting the right crops to get best results. One of these men will help you if you wish.

Just say "Send California books."

C. L. Seagraves, General Colonization Agent
Atchison, Topeka & Santa Fe Railway
2209 Railway Exchange, Chicago

A Large Profit Yielding Apple Region

IN Virginia, North Carolina, Georgia and Tennessee, thousands of acres of unexcelled apple lands, capable of returning enormous profits, can now be purchased at extremely low prices. These mountain cove lands of disintegrated rock, mineral and decayed plant formation (the greatest requisites for the production of the finest fruit) can be purchased

From $15 An Acre Up

The large assortment of varieties, extremely low cost for land, the especially favored climate, the abundant rainfall, ample sunshine, excellent air drainage and the fact that 6 to 12 cents per box puts Southeastern fruit on the New York City market, is convincing evidence that this section excels all others as an apple and general fruit growing country. Virginia alone in 1912 produced over 1,200,000 barrels of apples.

OBTAIN FURTHER PARTICULARS

Lists of fruit lands for sale, our magazine, the "Southern Field", or booklets on the States of Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee or Kentucky sent free on request.

M. V. RICHARDS, Land and Industrial Agent
Room 87 Southern Railway Washington, D. C.

False Advertisements by Rogues Make many Suffer

We guarantee honest service to truthful buyers.
Farmers Realty Co. Quakertown, Pa.
"Have the Property you want."

Farm for Sale—One of the best grain and dairy farms of 127 acres in Central New York. Price, $6,000—terms easy. Address, **Frank Givens, Dryden, New York**

FERTILE FARMS—near Philadelphia—Mild climate, excellent markets, catalog. **W. M. Stevens, Perkasie, Pa.**

FARMS of all Sizes FOR ALL PURPOSES
Cheap enough. Mild climate. For information write **State Board of Agriculture, Dover, Delaware**

WIDOW MUST SELL 487 ACRES
35 miles from Buffalo; nearly all level; 100 acres valuable timber; no stones; 3 complete sets buildings. Well watered. 300 good apple trees. Including 41 head cattle, 7 horses, fodder, tools. Price $18,000. Easy terms. Free list. **Ellis Bros., Springville, N. Y.**

Susquehanna River Farm—Stock and tools included. 80 acres; fine 12-room house, painted; green blinds; 2 barns, 25x80, 24x30; 22 cow stalls; hen house; hog house; granary; 7 cows; 2 horses; mower; rake; hay tedder; wagons; buggy; harness; buzz saw; potato digger; all small tools; hay and straw. $5,500; $1,500 cash; balance, 5% interest. **HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.**

WANTED—1,000 Farmers to repair any leak in roofs, silos, etc., with **WONDER CEMENT.** Convenient—easily applied. Permanent results. Send $4.00 for 25 lbs. Freight prepaid. Covers 100 square feet. **THE GARLAND CO., Dept. A, Cleveland, Ohio**

FARMS | ALL SIZES | ALL PURPOSES | LIST FREE
A. W. DRESSER, Burlington, New Jersey

WILL SELL as a whole or separately, frame store and dwelling building, store fixtures, Stock of Boot & Shoe and Gents' Furnishings & Fire Insurance Business; town, south-central New York State; population, 700; to close an estate. Address, Walter J. Chase, 435 Walnut St., Phila., Pa.

C. D. Rose Farm Agcy. SELLS FARMS. Send for list. State & Warren Sts., Trenton, N. J.

Use NATCO Tile—They Last Forever

Farm drainage needs durable tile. Our drain tile are made of best Ohio clay, **thoroughly hard burned.** Don't have to dig 'em up to be replaced every few years. Write for prices. Sold in carload lots. Also manufacturers of the famous NATCO IMPERISHABLE SILO, Building Blocks and Sewer Pipe.

NATIONAL FIRE PROOFING COMPANY, Fulton Building, PITTSBURGH, PA.

PRODUCTS, PRICES AND TRADE.

Wholesale milk prices remain unchanged, $1.81 for B and 10 cents per can less for C. A slight reduction is expected in early March, though this is not certain, depending on the weather and prices for manufactured milk products. The railroads reaching New York brought 17,947,000 cans of milk and 944,000 cans cream during 1913, a daily average of about 2,480,000 quarts.

*

The butter market is well sustained at an advance of one cent over last week's figures. This is partly the result of the snow blockade, which held up considerable stock on the way and made trucking very slow in the city. Choice creamery is now selling at 31 cents, and best dairy, 29 to 30. Imports from Siberia, Argentina, New Zealand and Australia continue at New York, the stock from the two last named countries coming by way of London. The best of this costs about 27 cents delivered here.

*

Receipts of eggs are large and prices on most grades lower. Few fancy white exceed 33 cents, those mixed with small sizes running at 30 to 31, and brown mainly at 29 to 30. Eggs from China are reaching the middle west in commercial quantities. A recent shipment of 36,000 dozen received at St. Louis wholesale at a trifle above 20 cents. These eggs were said to cost not more than one cent each in China.

*

Potatoes may now be imported from Denmark and Belgium, subject to inspection. The Department of Agriculture finds that those countries are now free from the diseases against which the quarantine was made.

*

A cargo of silk from China and Japan, which recently arrived at San Francisco, is on its way to New York. Thirteen cars were required, and its value is $2,500,000.

*

Travellers on sleeping cars who have been annoyed by the revelry of drunken passengers will be glad to know that the custom of making travelling saloons of railroad trains is gradually going out of existence. The New Haven states that after March 1 no liquor will be sold on any of its trains.

*

Returns for several barrels of poultry and a lot of roasting pigs are being held by a New York commission house because the shipper cannot be located. Checks have been made out and forwarded to the only address given, but returned unclaimed. Any shipper whose case this seems to fit may get in touch with his returns by writing us particulars.

*

British spinners who are raising cotton in Africa report a crop of at least 16,000,000 pounds. This is 2½ times last year's yield, and seven times the amount in 1910, when the industry first began to attract attention. The section referred to is Lagos and Nigeria, on the southern coast of the Sudan.

*

I enclose a letter from a New York commission house. They have been selling eggs for five per cent, but have increased the charge to 10 per cent. Have they any right to do this? R.

New York.

The letter states that owing to increased expenses they will in future charge 10 per cent for selling eggs. There is apparently nothing to prevent them from doing this, as 10 per cent is the amount now charged for selling many lines of produce. It is true that rents, taxes and hired help now cost more in this, as well as other lines of business, and from one to two months credit has to be given to many customers, while cash returns are made to the shipper.

W. W. H.

BUFFALO MARKETS.

This is the season when produce commonly begins to become scarce, if at all, but there is a fine supply of it in the Buffalo markets. Not only is there plenty of trenched stuff from near home, but the Rochester district has a surplus, and is also sending in hothouse tomatoes, cucumbers and the like. There is also new stuff from Florida coming in now. As a rule it is all pretty cheap for Winter; spinach retails for 25 cents a peck and string beans, as good as in Summer, for 20 cents a quart (pound). Sweet potatoes, which have retailed at $1.50 a hamper (bushel), have come down to $1.25. Potatoes are again retailing at 85 cents. Farmers are begining to despair of big prices for potatoes and began to sell them before the heavy Winter weather set in. The cold spell ought soon to raise the price if it lasts.

Butter and eggs are again about on a par as to pound or dozen, the retail price being 31 cents for choice, though five cents more is occasionally asked. One difficulty with eggs is that many dealers sell good-looking storage eggs for fresh laid. Poultry is rather high, fowls retailing for 22 cents dressed; turkey, 26 cents; capon, 27 cents, and squab, 65 cents a pair. Rabbits have been quite plenty all Winter at 40 cents a pair.

Apple venders complain that the fruit is hard to get, but they do not sell the western fancy varieties as high as they used to, retailing them at two to three cents apiece in small measures. By the bushel Kings retail at $2 and Greenings at $1.60. They are keeping fairly well. All southern fruits are cheap, which appears to have a depressing effect on apples. Grape fruit is five cents up, and lemons and oranges, 15 cents up. Bananas are very plenty for the season at 10 cents a dozen up, mostly selling at 12 cents. Big pineapples retail for 25 cents. Malaga grapes are 15 to 20 cents a pound. Among new southern vegetables are Florida beets at five cents a bunch; celery at 75 cents a dozen, tomatoes from Texas at 20 cents a pound, Bermuda potatoes at 50 cents a peck. Stuff from Texas is not coming in very good condition. Florida lettuce is 10 cents a fine head; others five cents. Imported Belgian endive retails for 25 cents a pound, but is out just now. It is not much understood here and need not be till it is cheaper. Home-grown vegetables, beets, carrots and parsnips, retail at eight cents a two-quart measure and vegetable oyster at five cents, being very large roots and well kept. Greenhouse radishes retail at two bunches for five cents.

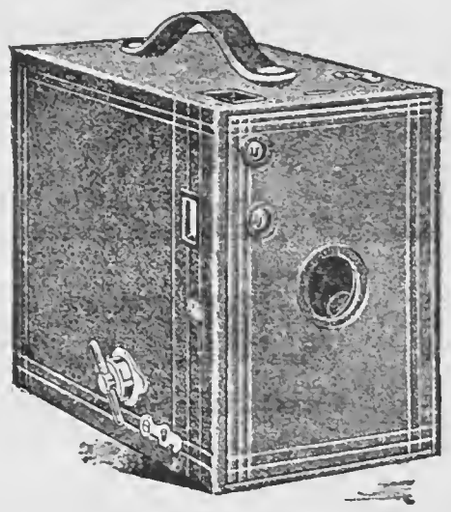
J. W. C.

The country roads are badly blocked—not by innumerable hordes of farmers rushing in their limousines and "sixes" to pay their income tax, as many urbanites and one great New York daily would seem to think—but by the greatest fall of snow that we have had since the big blizzard. The "bear" sign, hereafter, will hold high place in the minds of those who are "weather-wise," for from the very day that he saw his shadow we have had steadily such severe Winter weather as we are wont to associate with our boyhood days. We hope it may also presage one of our old-time early Springs with a fair amount of Summer rain. The past Summer and latter part of the Spring was absolutely rainless in this section, and it was really marvelous that the farmers were able to harvest the 40 or 50 per cent crops that they did. The consumers' dollar problem does not affect us as seriously as it does many, for the consumer at our door takes readily all the general farm products we have to share, which is a very fortunate thing for us, because, with the exception of fruit, during these past dry seasons, it has cost nearly a dollar, and sometimes more, to produce a dollar's worth.

Dutchess Co., N. Y. H. L.

2A BROWNIE

Price, $3.00



JUST the thing you need on the farm to take pictures of stock, crops, etc.—you can use it to advantage in *your* business. It is very simple to operate and works like it's big brother the Kodak. The film cartridge of six or twelve exposures can be put in or taken out by daylight, and you can do the developing and printing yourself without a dark-room, or send it to your dealer. Takes pictures 2½ x 4¼ and you can make as many prints as you want.

Ask your dealer for catalogue or write us and we will mail it free.

EASTMAN KODAK COMPANY,
387 State St., Rochester, N. Y.

For Everlasting Concrete Work

You must have Portland Cement that is pure, live, active and great in binding power. When you build of concrete you build for permanence, and you cannot afford to skimp on the quality of the material you use.

Specify ALPHA and be sure. ALPHA on a bag means something more than 94 pounds of Portland Cement. It stands for exact proportioning of superior raw materials, exceptionally fine grinding, thorough burning, and correct ageing. As a result of this extra care in manufacture, and hourly tests by chemists

ALPHA THE GUARANTEED PORTLAND CEMENT

is stronger, goes further and is cheaper in actual use than ordinary Portland Cements. ALPHA is warranted in composition, fineness and tensile strength to more than meet the U. S. Government requirements and all other standard tests. Be careful, the Government advises in Farmers' Bulletin 481, "to select some well known make *guaranteed* by the local dealer to meet the standard specifications for cement of the U. S. Government."

ALPHA is used by the U. S. Government in important forts, piers, and sea walls, by the greatest railroads (250,000 barrels used in the Pennsylvania Terminal, New York City), and is specified by engineers and architects for important work where cement has to meet the most exacting tests.

Ask the ALPHA Dealer

The ALPHA dealer in every community is a good man to know. He sells ALPHA Portland Cement because he can guarantee it—because he knows it never fails to give satisfactory results. He will tell you how to make *everlasting* ALPHA concrete work. Ask us for the name of the dealer nearest you.

25 Cent Farm Book Sent Free

Our illustrated book, "Concrete in the Country," 112 pages, shows how easy and economical it is to make concrete walks, barn floors, posts, steps, foundations, and 100 other farm improvements with ALPHA, the Guaranteed Portland Cement. Regularly 25 cents; free for the coupon.

ALPHA PORTLAND CEMENT CO.
General Offices: Easton, Pa.
Sales Offices: New York, Chicago, Philadelphia, Boston, Pittsburgh, Buffalo, Baltimore, Savannah.

Fill Out and Mail This Coupon

Alpha Portland Cement Co., Easton, Pa. Send me your 112-page illustrated book, "Concrete in the Country," telling how to use ALPHA, the Guaranteed Portland Cement, for all kinds of permanent improvements.

RNY-M7

Name _____

Address _____

I may build a concrete _____

The MOST USEFUL MACHINE ON THE FARM

MODERN TRANSPLANTER for CABBAGE, TOMATO, TOBACCO, STRAWBERRY & OTHER PLANTS

Wm. FETZER CO.
Springfield, Dept. A-14, Ill.

$39.00 BUYS THIS SIMPLEX WATER WORKS SYSTEM System

guaranteed to do your work. Sixty days free trial. Other sizes as cheap. Pumps, motors and engines. Write for our New Way Selling Plan No. 25
Do It Now

The Baltimore Co., Baltimore, Md.

PUBLISHER'S DESK

In spite of previous caution, many inquiries are received in this department which fail to bear the name and address of the writer. We make it a rule never to print the name or address of our correspondents without asking their consent, but we cannot reply to anonymous communications in this column. Those who have made inquiry on any subject, signing only their initials, "A Reader," etc., and who are disappointed in not seeing their letter and answer printed will get prompt attention if they will repeat the inquiry, giving full name and address.

A number of manufacturers have told me personally of the merits of the automatic cigar-making machine. In Baltimore a number of the banks and business men there gave me their word for the honesty and ability of those back of the machine. If this cigar machine is what I believe it is, it will be one of the few great producers like the cigarette machine, the linotype, the shoe machine and the crown cork seal company. However, I would be glad to hear your report on it. W. C. D.

Pennsylvania.

This machine may and may not make cigars. We have not looked it up. We assume it does make cigars, and that it effects a great saving like the other innovations in other fields. From the illustration of it we should assume it could be built for $200 or $300. But we are considering the matter of an investment in the stock of the company.

The company was organized in 1911, with authority to issue $5,000,000 stock in shares of $10 each. This seems to have been a reorganization. Anyway, $2,000,000 of the stock was issued in exchange for patents and stock of another company, and $1,000,000 of the stock was issued for the right of selling in Cuba and Mexico. A Baltimore concern seems to have had a contract to sell the balance of the stock for about 22 cents on the dollar. The assets of the company consist of about $2,500 in cash and about $1,700 in cigars and tobacco, besides the patent rights, sales rights and a few machines. It must be plain that no one can put money into such stock and call it an investment. Some people would call it a speculation, others call it a bet or a gamble. At best you pay your money on the chance that the machine will be successful, and that the business will be honestly conducted, and the profits equitably divided. What happens in most cases is that the money comes easy. The promoters spend liberally, and the company fails, with total loss to all investors. If the machine is worthless that ends it unless the promoters think they can work the scheme all over again. If the machine is a great success, and there are enough small investors to make it worth while, they are frozen out, and afterwards the business is re-incorporated free of the old investors, and the promoters become the sole owners. You may point to one case in a million where this has not happened; but we give you the rule. If any man wants to speculate or gamble for that matter and takes his own risk, we have no right or disposition to dispute his privilege. We give the information and draw the distinctions; you exercise your good judgment.

We have received several inquiries about the Colonial Motion Picture Company. It seemed to us that the promises of quick wealth found in their literature were so romantic that they would defeat their own purposes with a people used to dealing with practical material things. As one practical correspondent puts it, while the row of official names is imposing, and the information rather general that there is money in the picture business, he cannot understand why men who are running the business, and making the money, should go out into the country hunting up perfect strangers to share the promised wealth. But in all such cases you will observe that you make the first remittance of real cash, and in most cases that it is the last exchange of cash, unless you are indiscreet enough to make another.

I have a claim for two cases of eggs shipped to a New York house which were in a damaged condition, and as the Adams Express Company refused to let him examine them he refused to take them. The eggs were worth 35 cents per dozen. The express company say his place of business was closed when they went to deliver them, so they sold the eggs and realized only $15.44, which they offer us. Please see what you can do with them.

New York. S. T. S.

The Adams Express Company made the same report to us and the same offer, which we refused. We called their attention to the discrepancy in the report originally made the subscriber and the actual condition as stated by the commission house, and finally their offer was increased to $18.89, the value of the eggs less commission and expressage.

Phocian M. Daniel, Jr., once President of the Le Roy Realty Corporation, which had an office in Nassau street, was convicted Feb. 16, by a jury before Judge Crain in General Sessions of grand larceny in the second degree. Daniel sold land, representing that it was 15 minutes' walk from the Port Jefferson, L. I., railroad station. Purchasers found it was from five to eight miles away. Daniel bought his land for about $16 an acre and sold it for $19.50 a city lot, employing numerous agents. He had 25 acres, which he divided into 3,000 lots, about two thousand of which were sold, mostly to purchasers who had never seen the property. The complaint which resulted in conviction was made by George W. Cole, an automobile dealer of No. 100 West One Hundred and Sixty-second street, who said that after a talk with Palmer he bought 12 lots and paid $36 down, under an agreement to pay the balance at $1 a month. When he got his deed he decided to see the property. He met Daniel at a roadhouse near Port Jefferson. "Then," Mr. Cole testified, "he drove me in the direction of the Port Jefferson station until we came to some lots. We drove right in, and Daniel pointed and said, 'There are your lots.'"

It developed that the lots which were pointed out were not those on Mr. Cole's deed, and that his property was four miles further from the station. Before he discovered that, he had paid down $178.20.

The above is a fair instance of the Long Island land promoting schemes which people at a distance are asked to put their savings into. If a few such promoters get jail sentences for robbing the public in this way the effect will be wholesome. The above case should serve as a warning to all who may be approached on any such land scheme regardless of whether they hail from Long Island, Florida or elsewhere.

What is your opinion of the "Family Butter Merger?" If you think they should be exposed, I wish you would please do so. I. P.

Maryland.

These butter mergers have been exposed in THE R. N.-Y. a number of times. All work on the egg-beater principle, and by breaking up the globules of the butter they mix milk with it in such a way as to make a greasy product which cannot rightly be called butter at all. Anyone selling it for such in the general market might be subject to prosecution under the Pure Food laws.

I received a catalogue of commercial fertilizer materials from Farmers' United Bone Fertilizer Co. of Reading, Pa., and would suppose from the appearance that it is another name for "Farmers' United Chemical Co." of the same place. It is about the same literature, price per ton; they "pay the freight," etc. The company still owes me about $5 freight on fertilizer purchased two years ago. Last Spring they sent me quotations, order blanks, etc., and I sent them a letter in return stating that I was a "trout" instead of a "sucker." That means when one gets caught the others are a little shy about biting at the same bait. I also told them that about one "sucker" in a neighborhood would be all they could catch without getting a new kind of bait. So I think they changed part of the bait by substituting the words "bone fertilizer" for the word "chemical." I would advise all readers of THE R. N.-Y. to be aware of the above-named company. I. P.

The above letter speaks for itself. It is a matter for comment the number of houses our subscribers complain about that change the name under which they do business—some of these houses complained about have a way of operating under two or three different titles permanently. But we are unable to name a single concern, whose business relations with our readers are satisfactory, who has adopted this policy. The reason is obvious. J. J. D.

SHE wanted to call up the shoe store and ask if a certain style of shoe had been received. She took down the receiver: "What number?" said exchange. "Narrow twos," she promptly replied.—Cleveland Plain-Dealer.

502.6 Bushels Potatoes

From One Acre of Ground

TWENTY DIFFERENT FARMERS in 20 different parts of New England competed the past year in growing potatoes. The crops were widely separated as to climatic and weather conditions. Each one planted, cultivated and took care of his crop in his own way; *but all used*

Bowker's Fertilizers

And No Other Dressing

The winning crop was 502.6 bushels. The average of the twenty crops was 322.8 bushels. The average yield in New England is 131.6 bushels, and for the United States 89 bushels. Our crop-growing contests of the past four years have been so fairly and accurately conducted that they have been accepted everywhere as authentic. Henry Wallace, Editor of Wallace's Farmer, writes: "There is no guesswork about them."

Send for our Book of the Contest. Also tell us what your crops are, and your fertilizer requirements and we will send you our helpful book on Plant Food and our new Illustrated Catalogue.

BOWKER FERTILIZER COMPANY
43 Chatham St., Boston.
Also New York, Buffalo, Philadelphia and Baltimore

STONE BOAT

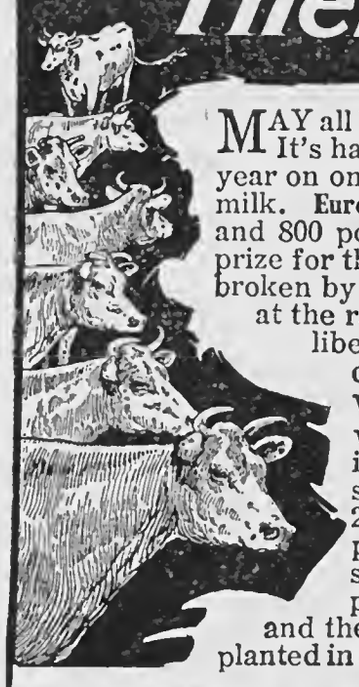
ALWAYS HANDY ON THE FARM

Fronts of Steel

Buy the Head and Bolts and make the Drag yourself. Write for full information. We deliver anywhere in the U. S.

HUSSEY PLOW CO., Box R North Berwick, Maine.

These Seven Cows



MAY all be kept for one year on the product of one acre of land. It's hardly believable. And keeping seven cows for a whole year on one acre goes a long way towards reducing the cost of milk. **Eureka Corn** produced in one year on one acre 70 tons and 800 pounds. This enormous crop won our $50.00 gold prize for the heaviest yield. We believe this record cannot be broken by any other corn, but **Eureka** can still beat it. Figuring at the rate of 50 pounds of ensilage per day, which is a very liberal allowance, this amount will feed seven cows for one year, with enough left over for 261 feeds.

We believe our crop of **Eureka Corn** for 1914 planting will germinate better than 98%. **Eureka Corn** was introduced by us about 25 years ago. It is a white, smooth dent corn, grows the tallest, usually from 16 to 20 feet, has the most leaves and is short jointed. If planted thin, it will yield two and three ears to the stalk. Planting **Eureka Corn** is as good as an insurance policy to any farmer. It grows where other kinds fail and the yield is tremendous. Last season **Eureka Corn** was planted in 45 states and the returns were exceedingly gratifying.

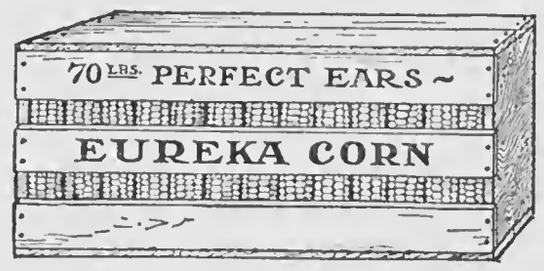
Eureka Corn

Grows Tallest—Has Most Leaves—Greatest Number of Ears

You do not need to plant your whole farm when you can fill a 200-ton silo from 4 or 6 acres with **Eureka.**

The best money you can spend on the farm is for good seed. Poor seed is dear at any price. Good seed is always worth what you pay for it. We're selling **Eureka** at last year's prices. Good seed is going to be very scarce and much higher before the planting season is over. Ask yourself what corn is worth per bushel that will produce 70 tons and 800 pounds. We are not asking you to experiment; we are only asking you to buy seed corn that has been proven by thousands of successful farmers to be the best that money can buy.

CAUTION. Don't accept of any yellow dent or white horsetooth corn as **Eureka.** We received several letters last year from parties who were unable to get their **Eureka** from us and claimed that they had received from other dealers corn marked **Eureka,** which was entirely different from the genuine. **Eureka Corn** shelled is always shipped in our trade-marked burlap bags and ear corn is shipped in rat-proof crates holding 70 pounds. Either buy direct of us or some of our agents who have the genuine. Write at once for catalogue and quotations.



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MARKETS

Wholesale Prices at New York, Week Ending Feb. 27, 1914.

BUTTER.

Creamery, extra, lb	31	@	31¼
Good to Choice	28	@	30
Lower Grades	22	@	25
Storage	22	@	29
State Dairy, best	29	@	30
Common to Good	20	@	26
Factory	18	@	21
Packing Stock	15	@	19

Elgin, Ill., butter market firm at 30 cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

Whole Milk, best	18	@	18¼
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	30	@	32
Common to good	27	@	29
Mixed colors, best	29	@	30
Common to good	27	@	28
Storage, best	25	@	26
Medium and low grades	20	@	23
European, fresh	21	@	25

FRESH FRUITS.

Apples—Spitzenburg, bbl.	4 00	@	6 50
Spy	4 00	@	6 00
King	4 00	@	5 50
Hubbardston	3 00	@	4 00
Greening	4 00	@	600
Winesap	4 50	@	6 50
Newtown	6 00	@	7 00
York Imperial	4 00	@	6 00
Baldwin	4 00	@	5 50
Western, box	1 50	@	3 00
Pears—Kieffer, bbl	2 00	@	2 75
Cranberries, Cape Cod, bbl.	10 00	@	13 50
Long Island, bbl.	10 00	@	13 50
Jersey, bbl.	12 00	@	13 50
Jersey, crate	2 50	@	3 25
Strawberries, Fla., qt.	18	@	0 65

BEANS.

Marrow, 100 lbs.	4 55	@	5 30
Medium	3 50	@	3 55
Pea	3 25	@	3 55
Red Kidney	5 00	@	5 10
White Kidney	5 75	@	5 80
Yellow Eye	4 50	@	4 55
Lima, California	6 00	@	6 10

HOPS.

Prime to choice	43	@	45
Common to good	40	@	42
Pacific Coast	20	@	24
Old stock	15	@	18
German crop	68	@	72

VEGETABLES.

Potatoes—Long Island, bbl.	3 00	@	2 25
Maine, 180 lbs.	2 75	@	3 00
State, bulk, 180 lbs.	2 25	@	2 75
Europeau, 168 lb. bag	1 00	@	2 00
Bermuda, bbl.	3 50	@	6 00
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl.	1 50	@	2 00
Carrots, bbl.	1 50	@	2 25
Cabbage, Danish seed, ton	28 00	@	32 00
Red	25 00	@	32 00
Imported	20 00	@	25 00
New, bbl. crate	1 25	@	1 75
Chicory, bbl.	2 00	@	3 00
Kale, bbl.	85	@	90
Lettuce, half-bbl. basket	1 00	@	4 00
Onions—White bu.	1 50	@	2 25
Red, 100 lb bag	3 00	@	3 50
Okra, bu.	2 00	@	3 00
Peppers, Southern, bu.	1 50	@	3 50
Peas, Southern, bu.	2 00	@	4 00
Shallots, bbl.	3 00	@	4 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 25	@	1 75
String Beans, bu.	1 50	@	3 50
Squash, Marrow, bbl	2 25	@	3 00
Hubbard, bbl.	2 25	@	3 00
New, bu.	1 50	@	2 50
Egg Plants, Southern, bu.	2 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	1 25	@	3 00
Turnips, white, bbl.	1 25	@	1 50
Rutabaga	75	@	1 15

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	2 00
No. 2, box	3 00	@	3 50
Mushrooms, lb.	15	@	30
Radishes, 100 bunches	50	@	2 00
Tomatoes, lb.	25	@	30

LIVE POULTRY.

Chickens, for friecassee, lb	15	@	16
Squab Broilers, pair, fancy	75	@	85
Broilers, fair to good, pair	45	@	50
Roasting chickens, lb.	18	@	20
Fowls	17	@	18
Roosters	12	@	12½
Ducks	17	@	18
Geese	13	@	14

DRESSED POULTRY.

Turkeys, fresh killed, best	25	@	26
Common to good	18	@	24
Chickens, choice broilers, lb.	28	@	35
Squab broilers, pair	75	@	90
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	18	@	19
Geese	13	@	17
Squabs, doz.	2 50	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	18 50	@	19 50
No. 2	17 00	@	18 00
No. 3	13 00	@	16 00
Clover mixed	13 00	@	18 00
Straw, Rye	16 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	8 00	@	8 90
Bulls	6 00	@	7 75
Cows	4 00	@	7 15
Calves, prime veal, 100 lbs.	9 00	@	13 50
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	6 00
Lambs	8 00	@	8 75
Hogs	8 00	@	9 25

MILLFEED.

Wheat Bran, ton	25 00	@	26 00
Middlings	27 00	@	28 50
Red Dog	29 00	@	30 50
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	16	@	17
Fair to good	12	@	14
Buttermilks	09	@	11
Lambs, Hothouse, each	6 00	@	7 50
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 05	@	..
No. 2, Red	1 03	@	..
No. 2, Hard Winter	1 05	@	..
Corn, as to quality, bush.	71	@	73
Oats, as to weight, bush.	43	@	46
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

Theso are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	38	@	40
Mixed colors, new laid	32	@	35
Ordinary grades	25	@	28
Butter, fancy prints, lb.	35	@	37
Tub, choice	31	@	33
Chickens, roasting, lb.	..	@	30
Fowls	22	@	25
Turkeys	28	@	32

Worms.

1. I have a four-year-old horse that is slightly lame in the right foreleg. The right breast is smaller than the left; when he trots the leg twists between the knee and hoof, throwing the hoof out at the rear. If he stands in stable a couple of days can not notice it till driving about 10 miles. 2. I also think he has worms. What will cure this? J. M. H.

Pennsylvania.

1. Without an examination we are unable to say what is causing the lameness; but you should have the smith so shoe the horse that the hoof will be prevented from twisting. This may be managed by use of sharp calkins and a trailer on the shoe. 2. For worms give one tablespoonful of a mixture of equal parts of salt, sulphur and sulphate of iron night and morning for a week; then skip 10 days and repeat. Mix it in the feed. Do not give iron to a mare in foal. The other ingredients may be safely given. A. S. A.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Farmer with family; particulars first letter. GEO. W. LEONARD, Barberton, Ohio.

WANTED—Married man that understands dairy and poultry on a private place. Mr. ARTHUR BENNETT, Supt., Siegfried, Pa.

GARDENER SEEKS SITUATION—Age 29; good references. S. STEVENSON, R. D. No. 5, Simcoe, Ontario.

WANTED—Widow without children for general housework on farm. SETH M. HIGBY, Wayland, N. Y.

WANTED—Farmer, age immaterial; good home, life job; $20. MORRIS FARM, Bridgeport, Conn., R 4.

WANTED FARM HAND—Married; wages $30; cottage, garden. Connecticut. E. C. W., care R. N.-Y., 333 West 30th St., New York.

WANTED—Reliable farmer for one-man farm. In first letter state nationality, family, terms expected, and give references. Address L. M., care R. N.-Y., 333 West 30th St. New York.

WANTED in vegetable raising and canning business working partner, unmarried; $1,000 capital. STONECROFT FARM, Route 3, Mt. Kisco, N. Y.

WANTED—Reliable man to care for stock on Connecticut farm; must be good milker and have a liking for animals. Give references. C. S., care R. N.-Y., 333 West 30th St. N. Y.

WANTED—A position managing Berkshire hogs. I have just resigned from managing the Swine Department at Anna Dean Farm, Barberton, Ohio. Immediate service. H. D. HARLAN, P. O. Box 114, New Castle, Pa.

PRACTICAL FARMER—Hollander, life experience on general farming, cattle and hog raising, sanitary dairying, machines; college training; small family; wants position. Address A. PAS, 196 George St., New Brunswick, N. J.

WANTED—Married man by year for general farm work; wages $50 per month with house, natural gas, ice and water free; wife to board one or two men winter; several in summer. SUPERINTENDENT, care R. N.-Y., 333 West 30th St., New York.

WANTED—An energetic, married man to manage farm, where another man is kept. Must understand care of horses, colts, cows and chickens; wife for general housework; give references, full particulars and wages expected. CLAYTON, 207 West 55th St., New York City.

FOR SALE—78 acres two miles from Amsterdam, N. Y.; good house, land, water and market; half mile from State road and electric station; telephone connection and rural mail delivery; $150 per acre. O DeGRAFF, Route 5, Amsterdam, N. Y.

PRACTICAL FARMER (American), middle-aged, wants position as superintendent and head farmer; well up in all branches of scientific and practical farming, with life experience; also thoroughly up in construction work, building roads, etc; best references. Address FARMER, care of Siebrecht & Son, 619 Fifth Ave., New York City.

WANTED—Working foreman; young, married; competent to take charge of 60-acre place; seven A. R. Guernseys; chickens; vegetable and flower gardens, lawn and shrubbery; 100 apple trees; wife must be a good plain cook, willing to board help—two or three men—throughout the year; none but fully competent, earnest young man need apply. Write giving references and stating salary to W. W. K., care R. N.-Y., 333 West 30th St., New York.

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FARM FOR SALE—For particulars address Mrs. N. M. KISTLER, Emporia, Virginia.

FOR SALE—150-acre dairy and poultry farm. FRANK WHITBECK, Summit, N. Y.

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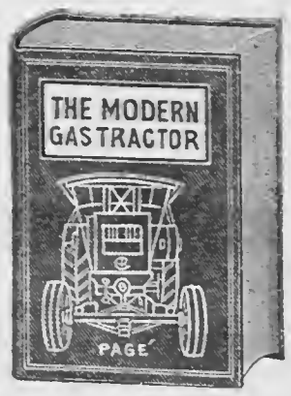

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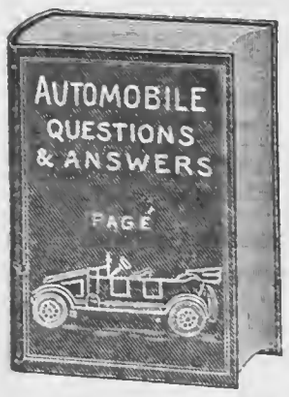

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What shall I sow for hog pasture? I have 12 acres for hogs next season, four-acre wood lot in which is a good never-failing spring; adjoining is a four-acre field enclosed with hog fence in which is one acre Alfalfa, the rest of field is in peach trees, in which I will seed some early crop, but what is the best here? The other four acres I have manured and am plowing now. It was in pasture for the last six years, and the sod is very poor and light. The soil is shale and rolling, and not in good shape, but I think the manure does a lot of good. What shall I sow in this field for the hogs? How many hogs can I raise profitably if I buy plenty of mill feed?

Berks Co., Pa. C. R. B.

Forage crops useful for swine may be listed in the following order on a basis of their feeding value: Alfalfa, rape, clover, oats and Canada field peas, mixed grasses. I would suggest that C. R. B. rely largely on rape and clover as a source of green forage with swine during the first year, as it will probably give him the largest yield per acre. A mixture of six pounds of Dwarf Essex rape, and 10 pounds of Sweet clover per acre, might be seeded in the four-acre field early in the Spring, and the animals could be turned in when the rape is about 10 inches high, and it would supply green forage throughout the season. The four acres of sod in my judgment would best be planted with corn, and just previous to the last cultivation of the corn a mixture of eight pounds of rape and 12 pounds of Crimson clover should be seeded per acre, which will make a green forage crop that the hogs can harvest, provided they are permitted to hog down the corn, which is a useful and profitable practice. An acre of rape planted early in the Spring and not pastured until it is 10 inches high will pasture throughout the season from 1,200 to 1,500 pounds of pork live weight per acre.

A grain ration of corn and digester tankage in the proportion of 100 pounds corn to 10 pounds of tankage should be fed to the pigs while foraging, the tankage being best and most economically fed in a thin slop twice daily. From one and one half to two pounds of grain daily for each 100 pounds weight is sufficien to enable shotes and growing gilts to gain rapidly and economically. If C. R. B. has still another area that he wishes to utilize for swine, the following mixture per acre is a very useful one: Oats, 25 pounds, Canada field peas, 25 pounds; Dwarf Essex rape, six pounds; Red clover, 10 pounds; seeded as early in the Spring as weather and soil conditions will permit, the same to be followed in the Fall with a cover crop mixture of wheat 60 pounds and Winter vetch 25 pounds per acre. It is not well to pasture such area until the oats and peas are about nine inches high. This mixture will make a continuous feed until frost destroys the rape plants in the Fall. F. C. M.

A Progressive Cattle Breeder.

The Ohio Agricultural College is responsible for the following:

"Fulton county, Ohio, has a reputation for progress in matters pertaining to dairying. Its many good barns and numerous silos are often the occasion of favorable mention. Good cows with progressive owners are responsible for the well earned reputation. One striking instance of dairy improvement is found in the herd of W. H. Standish. Twenty-eight years ago Mr. Standish decided to cast his lot with the breeders of Holstein-Friesian cattle. Due to the lack of cattle, early operations were necessarily slow and modest, but sound. Mr. Standish developed a rare ability as a judge of dairy animals. Since his start with a few foundation animals, he has purchased some herd sires but few females. The present herd of a dozen cows has in it some wonderful individuals and no common ones. So good has been Mr. Standish's breeding practices and selection that $500 is not an unusual price for a calf from his herd. Every cow in the herd has real dairy conformation, good constitution, phenomenal udder development and the milk production is unusually high. One hundred pounds of milk a day and 30 pounds of butter a week are not uncommon. One individual has produced more than 6,000 pounds of milk in 60 days. Luck has had but a small part to play in the development of this extraordinary herd; rather it has been the outcome of careful selection of breeding stock, elimination of all poor individuals, scientific care, management and feeding."

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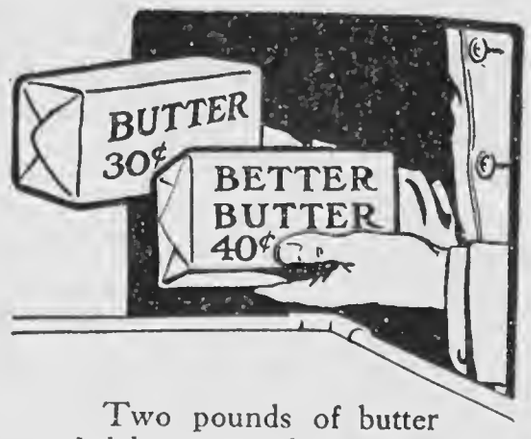

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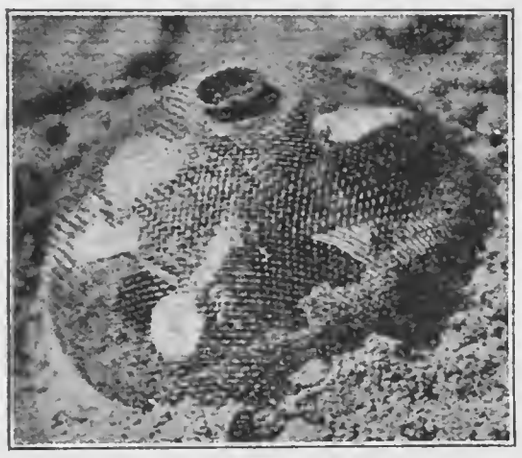
Screen Dome for Melons.

The cut shows a screen dome which I use in growing melons with good success. They are of great advantage in several ways, as they protect the young plants from strong cold winds, also the seed from field mice when planted. They can be purchased from any retailer in hardware for about three cents apiece, if bought in thousand lots. Dip them in white paint and they will last with ordinary care about 10 years. The advantage of white paint over other colors is that you can see the plant very much plainer, as the green foliage and white make a contrast easily seen for quite a distance. For bugs as a preventive they are all one could expect, as they keep all bugs out if ordered with small mesh wire. Those I have are made of common screen wire, and dipped in paint to help close the pores as well as to prevent rust.

They should be placed on the hills just as soon as the seeds are planted, and left there till the plant gets so large they cannot be left any longer. Then they can be placed one on top of another and gathered up, placed under cover for future use. In ordering be sure to get them large enough so they will accommo-



MELON UNDER SCREEN.

date the plants without crowding, they run in all sizes, but I prefer the six and eight-inch sizes.

In the Spring of 1912 I had half an acre of cucumbers covered with them, during a very severe cold wind and hail; I would have lost all without them. After the storm was over they were unhurt and grew finely, netting $50 for being the first on the market. ARTHUR MILES.

A Talk About Pruning.

How will trimming apple trees now affect the coming apple crop? I have been told by a neighbor that the best time to trim is while the trees are in blossom. He claims that if trimmed while in blossom it will not affect the coming crop on an orchard which has not been regularly taken care of. A. R. S.

Binghamton, N. Y.

The effect of pruning depends on the severity of the pruning, the time of the year, the vigor of the tree and the cultivation and fertilization. I judge that the trees are old ones that need considerable pruning. If the trees need it, open up the top or center and remove the intersecting branches and dead wood. Do not remove any more than is necessary to admit the sunlight, as the more bearing surface there is, the less will be the wood growth. It is best to extend a severe pruning over two or more years, so as not to disturb the bearing habit any more than can be helped. If the trees bear in alternate years and the coming season is the crop year, the tree will stand more pruning, if it is the off year very little pruning should be done aside from opening the heads. The crop is easily influenced during the flowering period and for two or three weeks afterwards. Heavy applications of fertilizers or severe pruning, during the dormant season and until the fruit has made some growth, will induce wood growth at the expense of the fruit crop and may cause the young fruit to drop. It would be best to remove all dead wood now, or as soon as possible, and defer further pruning until about the first of July. The wounds will heal more rapidly than if pruned in Winter, and there will be a greater tendency to produce fruit buds for the following year. If any water sprouts are formed after the pruning is done, they should be left until the following Summer, when their removal will help to check the too rapid growth of wood. All cuts should be made close and painted with white lead and linseed oil.

R. B. GILMAN.

Lambert Cherry; Girdling Apple Trees.

1. What about the failure of the Lambert cherry to ripen satisfactorily in Paul Rose's Michigan orchard? We planted 75 Lambert cherries, 100 Schmidt and 100 Black Tartarian at Crystal Lake, Mich. The Tartarians did not do well and I shall have to replace 30 of them. Would you suggest filling in with Schmidt or Tartarian? 2. Can you give details of the girdling process to make trees bear? We have about 30 great Baldwins that have borne little or nothing of late. They are in good shape and I believe have had too much growth. They must be 30 years old or perhaps more. We do not want to damage the trees and have been told it is rather a delicate process.

Ben Avon, Pa. F. B.

1. The Lambert cherry has proved to crack so terribly, in all the eastern sections that I have had reports from, that it is practically worthless there. I positively know from several years' observation that it has been worthless in Northern Michigan. The Tartarian is a good cherry, but the Schmidt is more profitable and from a mere money standpoint I would say to replant with it. The Lambert trees I would rebud to Schmidt. This may require that they be cut back this Spring and the sprouts that will grow out can be budded from Schmidt trees bearing in the Paul Rose orchard, which is not far from the Crystal Lake or even the Glen Lake orchard properties. I am familiar with all that country, having spent two years there when the country was about all wild woods, more than 40 years ago, and I have been returning in the Summers almost ever since.

2. The old Baldwin apple trees would probably bear next year if girdled properly this coming June. There is no danger of doing them harm if a band of bark a few inches wide is taken off entirely around the trunks of each tree. Cut rings with a sharp knife through to the wood and make a vertical slit so as to get the bark started to peel. Strip it off carefully and do nothing else whatever. Nature will soon lay on a new bark and the tree will probably form fruit buds and bear good crops from next year on. H. E. VAN DEMAN.

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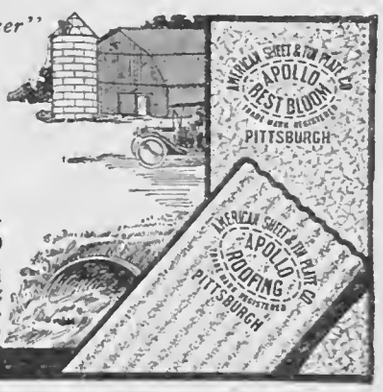

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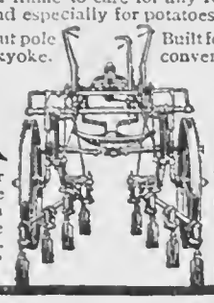

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160 ACRE FARMS IN WESTERN CANADA FREE

Sifting Compost.

The picture given here shows an operation quite common with many good gardeners. This is sifting garden soil or compost, so as to have a fine material for plant boxes, and for use in starting small seed. A screen is used with a mesh suitable for the fineness of soil desired. The soil or compost is thrown upon the screen, and slightly tapped with the fork as it runs slowly down. In this way soil of the desired fineness is obtained, and this may be used in any way that such fine soil is needed. We find too that some farmers are also making use of screens of this kind for use in seeding. This very fine soil after being screened is thoroughly mixed with a small quantity of lime, or with such material as

PREPARING THE COMPOST.

basic slag. Then Alfalfa or grass seed is mixed all through this fine soil, and the whole thing run through the drill in seeding, or it may be broadcast as needed. In this way a perfect distribution can be obtained, and the seed is put in in just about ideal shape.

Horticultural Needs of Southern Ohio.

Conservation of natural resources is or was one of the most important needs of this part of the country, but our fathers were too near-sighted to see it and cultivated our fields too long, so that much of the soil washed away and we have lifeless soil in many of the fields that are left. If cover crops and grasses and clovers had been used in proper rotations and care given to the land in keeping it supplied with humus and something growing to save the fertility all the year round, our lands would now be in far better condition, many fields being practically worthless now that cannot be reclaimed on a paying basis except near a city or some place where high values make it worth while. To keep more fields from becoming worthless, we need to have the soil filled with humus, so as to retain as much water as possible for the feeding crops and to be prepared in case of drouth to prevent serious damage due to lack of moisture in the soil. By so doing there is more growth on the land to decay and make humus and more roots in the ground to prevent washing. With plenty of humus and moisture in the soil the plant food in the soil becomes available or if fertilizers are used one can get better results on soil full of humus and moisture. I do not think the hillsides were intended for cultivation year after year, but to be covered with something to prevent washing and make fertility available. Rotation of crops as practiced on level land is out of the question here. Permanent grass sod seems to be the best thing for our hills and we can grow orchards in in sod, or pasture the land or make hay, or it can go back to woods to be rebuilt for the next generation. If one thinks he must plow and grow a crop, he should get it back in grass or clover or some such crop as soon as possible, or grow a Winter cover crop of Crimsen clover or other clover or Winter hairy vetch or rye, or something to cover the ground and make use of the available plant food in the soil, and to fill the soil with roots to prevent washing. With the decomposition of the plant more humus is made and more plant food is set free and the nature of the soil is improved so as to hold more moisture.

Probably your readers have noticed at the foot of hills or even on the hillside where a good sod is holding the wash as it comes down from above and raises the ground perceptibly, even covering up fences or filling up several feet around trees. It pays to save all you have and hold all you can get as it is washing away. On hillsides one can often get considerable land of another without a deed and hold it too. The thrifty neighbor profits from the careless one when the former is located below him and has a sod to catch the wash. To him that hath shall be given and from him that hath not, even that which he hath shall be taken away. Another case of the admonition given to be thrifty and multiply the talents.

It has been proven by our experiment station officials that the orchards can be improved by using nitrate of soda and acid phosphate to feed the trees, and also that the grass can be made to yield twice as much or more and even bring in kinds that did not thrive before the application. Land that has not been gullied so it can't be used, can be brought back to its former state and made to yield profitable crops and keep up its fertility if rightly managed. Under the wrong kind of management it will go down, it being much easier and quicker to depreciate than it is to appreciate when at the low ebb. U. T. COX.

The Grimes Golden Apple.

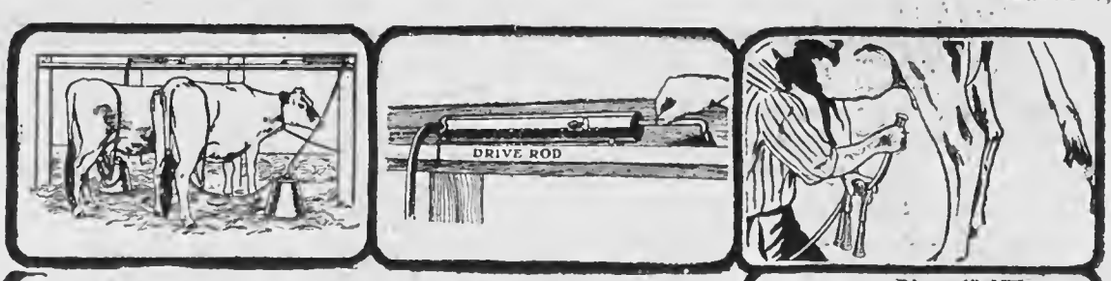
As an industrious member of your Apple Consumer's League I am also joining the ranks of apple producers, and within a short distance of the National Capital am raising many kinds of Grimes Golden apple trees, but that hope is now tinged with sadness. Col. G. B. Brackett, pomologist of the Department of Agriculture, tells me my trees are probably doomed to an early death, as are most trees of that variety that are grafted on ordinary stocks in the eastern section of the country. There is something uncanny about this. Here is a fruit in which nearly all the good qualities exist; pleasing to the eye and the taste alike; just tart enough, and not too sour, nor too sweet; a golden globe of delicate richness, its crisp, juicy flesh dashed with just the right flavor. An intelligent and discriminating friend of mine, who is a great admirer of your paper, says he desired nothing better than to be able to have a Grimes Golden apple on his table nine months in the year.

What is the matter with Grimes trees here? Col. Brackett says that after a few years of bearing period the trunk gets scabby, the bark dies and the tree goes into a general decline. No one knows the cause.

The remedy? Col. Brackett says that for the past two years he has been advising nurserymen to double-work all Grimes trees. Northern Spy on its own root is a good stock, he says. If I had but known that eight years ago, when I was putting out my Grimes orchard.

LINDSAY S. PERKINS.

R. N.-Y.—What is the fact about this? Our own trees of Grimes are worked on wild seedling stocks or on bearing trees. The apples are rather small but fine in quality.



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cuts under and pulverizes the soil to the plowed depth. Thoroughly works the whole seed bed, leaving plowed down manure under the surface.

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ELYRIA, O. Station 16 MIDDLETOWN, OHIO

Treating Decay in Squash.

My Hubbard and Boston marrow squashes are packed in straw upstairs in the barn, and are keeping nicely, but when I put them away several were starting to rot, some having rotten spots in them as large as a silver dollar. This condition may have been due to bruising. Anyway the thought occurred to experiment and try to check that rotting. So I cut out with my pocket knife all the rotten flesh, making as smooth a cut as possible, and rubbed in well a dry powder composed of equal parts of air-slaked lime and sulphur. Then I packed these squashes away with the rest, and after two weeks there is no sign of a continuance of the rotting process in the treated spots, while other squashes, purposely left untreated, have continued to rot. While I may be a little premature with my report, I make it at this time to give others a chance to use the process while the "going is good."

Washington. J. G. P.

Cider Vinegar.

One year ago last Fall, I manufactured from hand-picked apples about 40 casks of cider, and put it in storage in the basement of a building in a village, so that it could be near the shipping facilities, thinking perhaps while it was stored, it would make good vinegar. It has been there a year and three or four months, still it is not good vinegar. I cannot conceive why it has not turned to vinegar long before this time. I wish you would tell me what I shall do to make it into vinegar quickly? J. S.

Detroit, Mich.

Cider kept in a cool cellar is likely to be very slow in making vinegar. A little heat, 70 degrees or upwards and aeration are needed to hurry it along. If you can get some of the ferment found in natural vinegar, commonly called "mother of vinegar" a little added to each barrel will hasten the process still more. In commercial operations the cider is sometimes allowed to run slowly from one vessel to another through a series of wood troughs, thus giving it extensive exposure to the air. Under the circumstances you name it will undoubtedly be inconvenient to handle the cider as suggested, and the simplest plan may be to test a gallon or two by putting it in a stone jar, set in a moderately warm place, and stirring frequently with a stick. This will give some idea of the amount of heat needed to complete the work.

Right of Tenant to Yearly Crop.

A rents a cottage and two acres of land from B, on a lease of three years, and pays six months' rent in advance; the lease runs out and B. agrees with A to pay six months' rent in advance just the same as A has been paying all the way along. If B sells this farm will they have to give A six months' notice to leave? A has strawberries and all kinds of fruit planted on this two acres of land and A is a nurseryman buying and selling these goods. Can the purchaser of this farm take possession of these goods without paying for them? P.

New York.

Your tenancy seems to be one from year to year, with payment of rental in half yearly instalments, and no notice to quit need be given you at the expiration of the year by your landlord.

"When a tenant for a year or for one or more years holds over after the expiration of his term, without any express agreement, but with the assent of his landlord, the law implies that he holds the premises upon the former terms for another year; hence he may be turned out of possession summarily without any previous notice at the end of any year he so holds over, because his term, which the law fixes for him, then expires and he knows without notice that he cannot continue in possession longer unless he has permission from his landlord. No notice to quit is necessary in such a case. The rights and duties between landlord and tenant are correlative and reciprocal, and the rule which dispenses with the landlord's notice to quit where with the landlord's notice to quit where the tenancy expires at a fixed period because either so limited by the agreement of the parties in the lease or by law, also makes unnecessary any notice by the tenant of his intention to terminate the relation."

As to your right to remove your nursery stock, which in this case are termed "emblements," you know when your lease is to expire (that is, at the end of the year) and you must remove all of your trees, bushes, etc., before you quit possession on the termination of your lease or the title will vest in the owner of the property. The right to take away what is termed "emblements" (that is, growing yearly crops) is only given to a tenant of an estate of uncertain duration. It would be well for you to come to some agreement with your present landlord, that in case he disposes of the property you may have time to get away your plants.

Prolific Grain.

The Colorado Experiment Station does some mighty figuring on grain production—as follows:

Suppose all the wheat in the world were to be suddenly destroyed with the exception of one grain. If all the wheat produced each year were planted, how long would it take starting with this one grain to again equal the present world's production. The world's production of wheat is at present about 4,000,000,000 bushels a year. The following table shows that with only an average grain to start from it would take only fifteen years to again supply the world with wheat.

.....	0.0012 oz.
1 yr.....	0.0132 oz.
2 yr.....	0.1452 oz.
3 yr.....	1.5972 oz.
4 yr.....	1 lb., 1.6 oz.
5 yr.....	12 lb., 1.3 oz.
6 yr.....	132 lb., 13.8 oz.
7 yr.....	24 bu., 53 lb.
8 yr.....	273 bu., 43 lb.
9 yr.....	3,014 bu.
10 yr.....	33,154 bu.
11 yr.....	364,694 bu.
12 yr.....	4,011,634 bu.
13 yr.....	44,127,974 bu.
14 yr.....	485,407,714 bu.
15 yr.....	5,339,484,854 bu.

The initial weight of 0.0012 ounces for a single grain is the average of 10,000 grains; 1,000 grains were selected at random from each of 10 common varieties of wheat.

THERE was recently haled into an Alabama court a little Irishman to whom the thing was a new experience. He was, however, unabashed, and wore an air of a man determined not to "get the worst of it." "Prisoner at the bar," called out the clerk, "do you wish to challenge any of the jury?" Whereupon the Celt looked the men in the box over very carefully and with a skilled eye. "Well, I tell you," he finally replied. "Oi'm not exactly in trainin', but Oi think Oi could pull off a round or two with that fat old boy in th' corner."—Lippincott's

H. C. PHELPS

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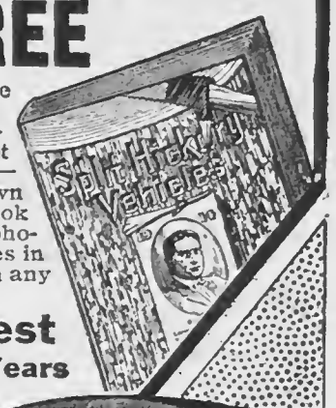

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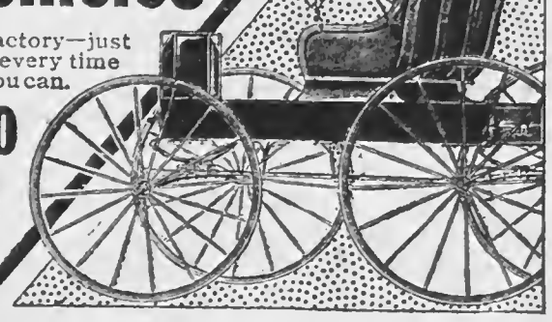

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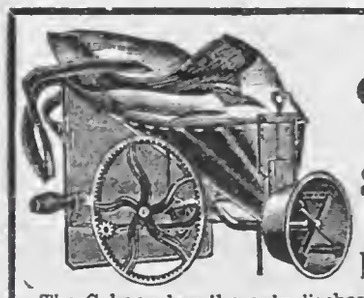

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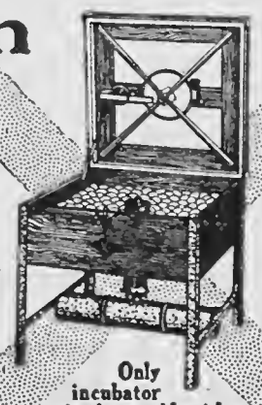
THE X RAY

Outhatches any other because it is the only one with lamp rightly placed. Distributes heat evenly to every part of egg chamber. This great improvement patented. We pay the freight.



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Send for FREE Book No. 32. It tells about the X-Ray, which is bringing success to thousands. X-Ray brooders give chicks best start. Write today.

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is a scientific mixture of Corn, Cut-Oatmeal, Cracked Wheat, Kaffir Corn, Peas and Millet — *steam-cooked* by a special process in our mill.

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POULTRY PAPER 44-124 PAGE periodical up-to-date; tells all you want to know about care and management of poultry for pleasure or profit. Four months for 10 cents.

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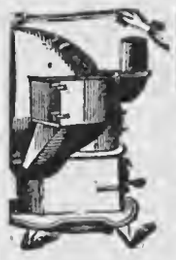

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TYWACANA FARMS POULTRY CO. A. E. Wright, Supt. **Box 68, Farmingdale, Long Island, N. Y.**

The Henyard.

Carbon Dioxide in Brooder.

I claim that in brooding chicks in a lamp heated brooder the lamp fumes cause a gas which is called carbon dioxide. My friend says I am wrong; it is not carbon dioxide, it is monoxide. He further says that carbon dioxide is a gas formed from the breath from man or chicks. Who is right? J. A. M.

New York.

Both carbon monoxide and carbon dioxide may be found in air vitiated by products of combustion, though the latter appears in much the larger quantity. The amount of carbon monoxide present is largely dependent upon the perfectness of combustion. It is a much more poisonous gas than carbon dioxide, and is fatal in any considerable amount. It is given off in considerable quantities in the fumes of burning charcoal; in such quantities, in fact, that a favorite method of committing suicide in France has been to build an open fire of charcoal in the room and inhale the gas. Gas escaping from a coal-burning stove contains 6.75 per cent. of carbon dioxide and 1.34 per cent. of carbon monoxide. Carbon dioxide is also, as your friend says, a product of respiration given off in the breath of animals. M. B. D.

Age of Hens.

Is there any way I can tell the age of my hens by their appearance? I wish to thin out my flock by disposing of the old birds. How can I tell which they are?

Bedford, Mass. G. P. D.

There is no way of telling the age of fowls, though pullets may usually be distinguished from old fowls by the brighter color and greater smoothness of their shanks, the slight development of their spurs, their smaller combs, their somewhat smaller size and weight, and their general appearance of freshness as compared with old hens. An old hen usually has pale and more or less rough shanks, and frequently well developed spurs, they are usually considerably heavier also than young fowls, having a tendency to take on fat as age increases. There is also a general appearance of age evident to one accustomed to handling fowls, but difficult to describe. M. B. D.

Infertile Eggs.

Is there any way to tell an infertile egg before you put it in the incubator? Is there any way to tell the sex of an egg? M. S.

Florida.

There is no way of detecting infertile eggs before opportunity has been given for development of the germ by incubation; nor can the sex be distinguished. Ability to do these two things would be worth thousands of dollars annually to poultrymen, but the very nature of embryonic development makes it impossible. M. B. D.

Hen's Control of Laying.

Judging from his picture and the tone of his answers to queries, Geo. A. Cosgrove is a fine fellow and I'd like to know him. He's human, however, and does not seem to have learned the difference between a *conclusion* and a *fact*. He arrives at conclusions and states them in his letters as facts. He states that the hen at times has the power to arrest the development of an egg, and she need not lay another until she desires to. Desire pre-supposes will power. I'd give considerable to know the process which was followed in arriving at the *fact* that the hen does just as she likes about laying eggs. Tom Barron's hens must think a lot of him, and they must have found out that he wants to come out first at every contest. G. H. S.

Thanks to G. H. S. for his complimentary remarks about myself. He seems to be somewhat mixed about "conclusions and facts," or rather about my statement of them. I have tried the experiment many, many, times, of taking a laying hen out of my flock and shutting her up in an exhibition coop in my feed house. Usually she would lay one egg, sometimes two, then not another egg in a week or more. That was the "fact." Now, from this "fact," many times repeated, I came to the "conclusion" that the hen had the power to cease producing eggs at will. I never stated that the "conclusion" was a "fact;" only that it was my belief. Everyone who has transferred a flock of poultry to a different house, knows that the *usual* effect is a *loss in egg production*, for a week or so, until they get used to the house and it feels like home to them. But occasionally the new house is so much pleasanter that the effect is an almost immedite *increase* in the output of eggs. What does G. H. S. think is the reason for this difference, if the will, caprice, or pleasure of the hen, has nothing to do with it? Is it the *shock to the nerves* of being separated from its mates, and transferred to unwonted surroundings, that causes the cessation of egg production? Why is it that part of the pullets at the contest at Storrs, stop laying after the first day or two, while others keep right on laying?

Does a hen stop laying because she has become broody; or does she become broody because she has stopped laying? Does the hen's *will* have anything to do with it? Hasn't G. H. S. seen hens whose "will" in the matter of broodiness was mighty hard to overcome? Well, we'll call it "instinct" instead of "will" and let it go at that. But I hope Mr. G. H. S. will learn to separate my "conclusions" from my "facts."

GEO. A. COSGROVE.

Facts About the Laying Contest.

I have been reading from time to time of the egg-laying contest, but lack information as to its methods. Will you tell how it is governed. Are the hens cared for at one place, and given some kind of food? When you speak of Tom Barron's Leghorns, does it mean they were raised in England? How do you account for the strain being larger than the average U. S. Leghorns? J. D. M.

Oregon.

Replying to J. D. M., I would say that there are 50 houses 12x12 feet strung along in five rows. The houses are about 25 feet apart in the row, and the rows about 50 feet apart. Each house is divided in the middle by a partition running from front to rear; part of the partition being made of wire netting, so as not to hinder free circulation of light and air. The houses are about 7½ feet high in front and 4½ feet in back. There is a door at each end of the front, and the space between the doors is boarded up from the ground for about three feet. The rest of the front is open, covered with wire netting only, except that there is a muslin curtain to drop inside when driving storms or extreme cold make it advisable.

For the first two contests, five hens or pullets were put in each part, this year 10 are housed in each part, 20 birds to a house. All the birds are fed the same kinds of food, but the quantity fed is governed somewhat by the judgment of the attendant. If, on kicking over the litter, feed is seen in plenty on the floor, the feed hopper will be kept closed until that is consumed.

When we speak of Tom Barron's birds—Leghorns or Wyandottes—we mean birds that were hatched and raised in England and shipped over here to the contest plant. As to the "strain" being larger, too much emphasis has been laid on that point; more than the facts warrant. There are plenty of other Leghorns in the contest fully as large as Barron's. Barron's Leghorns average about four pounds in weight. The English poultry fanciers have bred for larger birds, so that show birds are often one pound or more heavier than the average American-bred Leghorns; at least that is what I have been informed. Mr. Barron thinks this increase of size is an error; he says that his best layers are nearly always the smaller birds. I have noticed the same thing in Wyandottes in my own yards. And in this connection it is interesting to note that the best layer in the contest just closed at Mountain Grove, Mo., was a Rose Comb White Leghorn pullet that weighed only 2¾ pounds. She laid 12 times her own weight, in eggs. The eggs had to be of marketable size, or they were not counted. When chicks from vigorous stock are hatched early and fed all they can eat, and have proper surroundings and good care, the tendency is to increase of size. I raised a White Wyandotte hen that weighed just 10 pounds; three pounds above the proper weight, but in the same flock was a "bum" looking Wyandotte—speaking from a fancier's standpoint—less than five pounds in weight, that would outlay the big one two to one; in fact was about the best layer I ever owned. GEO. A. COSGROVE.

Corncobs for Litter.

1. I intend breaking up corncobs into pieces about an inch long and then scattering them about two or three inches deep for litter for the chickens to scratch in. Is there any fault to be found with my idea? Would it hurt the chickens' feet or be unsatisfactory in any way to your mind? 2. I keep the Cornell mash before my chickens all the time, and feed them cracked corn and wheat nights and mornings. How much would you feed to each 100 birds, night and morning, and how much of each, cracked corn and wheat would you use? I have about 250 S. C. W. Leghorns and feed them six quarts (three corn and three wheat) mornings, and 10 quarts (four wheat and six cracked corn) evenings, also scatter about three quarts of buckwheat to them at noon to keep them busy. Can you suggest any improvements with my grain feeding, as to quantity fed or quantity of each used? W. J. L.

Middletown, N. Y.

1. Corncobs do not make an altogether satisfactory litter, though broken up as you suggest, they might answer the purpose in the absence of anything better. They are not good absorbents and soon become filthy and are very disagreeable under foot. Straw, leaves, cut corn fodder, or similar soft, absorbent materials are superior. 2. The only improvement in your rations for hens that I would suggest is the addition of oats, if they are available. Your method of feeding is good, and you have probably adapted the quantities to the needs of your fowls. The Cornell Station suggests that the fowls should eat about half as much dry mash as whole grain, by weight, and that the amount of mash eaten be regulated by limiting or increasing the amount of whole grain given. M. B. D.

I Will Tell You How to

Make Poultry Healthy
Make Hens Lay
Make Chicks Grow

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to do just what I claim for them.

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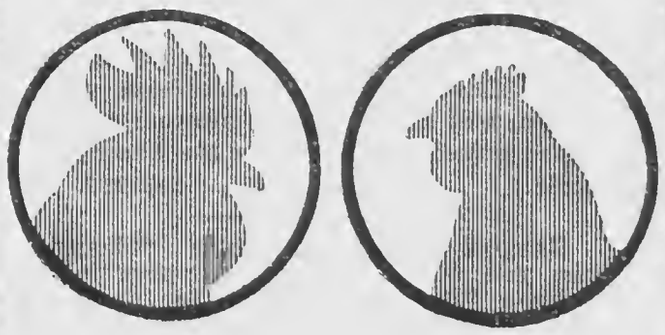

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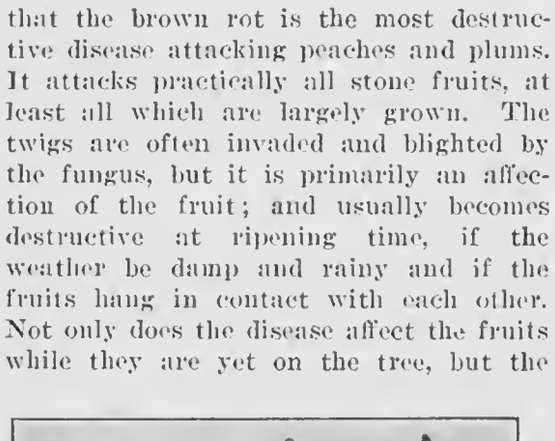
FUNGOUS DISEASES OF STONE FRUITS IN THE MIDDLE WEST.

PART I.

It is hardly to be claimed that the relative importance of the stone fruits as orchard crops is as great in the Middle West as in the more thickly settled East; but it is not, therefore, to be concluded that it is inconsiderable. In fact, the opposite is the case. These crops assume a large place as a source of revenue on many farms, and this is especially true in the vicinity of large towns and cities. The success of these crops, however—peach, plum and cherry—is very often greatly curtailed by one or other of some four or five diseases which are prevalent in this section. It will be the aim here to discuss rather briefly the appearance, mode of attack, etc., of each important disease, and to indicate what seems to be the most effective control measures.

BROWN ROT.—There is no doubt that the brown rot is the most destructive disease attacking peaches and plums. It attacks practically all stone fruits, at least all which are largely grown. The twigs are often invaded and blighted by the fungus, but it is primarily an affection of the fruit; and usually becomes destructive at ripening time, if the weather be damp and rainy and if the fruits hang in contact with each other. Not only does the disease affect the fruits while they are yet on the tree, but the



MUMMIED PLUMS HARBORING BROWN ROT.

rotting of an infected specimen progresses after picking, and the decay is thereby induced in sound fruit which may be in contact with it in the basket. The disease first shows up as a brownish and softened area, usually circular in shape, which increases steadily in size until the whole fruit is involved. Soon after this, or even before, small gray mold-like tufts appear on the older infected portion; and if these be rubbed or touched, a gray powder comes off. This dust is composed of the Summer spores of the fungus, Sclerotinia fructigena, which causes the trouble. These spores germinate readily and spread the disease with extreme rapidity.

The fungus winters in these same infected fruits. Many of them fall to the ground, others dry up and cling to the tree. The picture here given shows a number of such plums which were picked from the tree and photographed in January. When Spring comes, the fungus threads in these "mummied" fruits produce another crop of spores, and the disease gets started for another season. Then beginning with the cherries, following with the plums, and ending with the late peaches, it works steadily at destroying the crop when just ready to be picked. Estimates of the damage range from practically nothing to 90 per cent. or even 100 per cent. in different seasons and localities. It is customary to take such high estimates as the latter with a grain of salt, but as the writer has himself seen 50 per cent. or more of a crop destroyed in a few days of warm, wet weather, he is not inclined to make the grain of salt unduly large. The trouble is almost impossible to stop if it gets a good start.

Fortunately, though, it can be prevented to some extent, if taken in time. One measure for this is to destroy affected fruits, since as has already been mentioned, it is by these that the disease passes the Winter. They should be cleaned from the trees and ground and buried deeply, or burned. The severity of the disease can be lessened by thinning until peaches are about six inches apart and until plums do not touch. This should be supplemented by picking and destroying affected fruits as they appear, so that nearby fruits may escape. This would not involve as much extra labor as might at first seem, because most of these diseased specimens must be handled at picking time anyway. Furthermore, the thinning of peaches is a highly profitable practice quite aside from any consideration of the brown rot, because of the increased size and quality of the fruit resulting.

The second measure for the control of this condition is spraying. The first spray should be boiled lime-sulphur diluted to test 45 to 50 deg. Beaume, applied before the buds open, preferably in March. This is to prevent twigs and blossom infection, and to destroy any hibernating San José scale. For plums and cherries, but not for peaches, follow with 4-6-50 Bordeaux and arsenate of lead, two pounds of the arsenate to 50 gallons of Bordeaux just after the buds burst, again just after the petals fall, and again four or five weeks before the fruit ripens. The last two applications of Bordeaux should contain only half the standard quantity of bluestone in order to avoid leaf injury. For peaches use 8-8-50 self-boiled lime-sulphur with two pounds of arsenate of lead to 50 gallons of the spray, the same as mentioned above, four or five weeks after petals fall, and again three or four weeks later, except for early sorts. For late varieties, a final application should be made four or five weeks before ripening. The use of the arsenate of lead is for the control of curculio. The control of the curculio is doubly important, because it causes a two-fold damage. There is a direct damage, due to the fruit actually destroyed by the insect; and there is an indirect damage due to the method of spread of the brown rot fungus. It has been found that brown rot attacks usually originate at curculio injuries, and that spraying for brown rot alone will not control the disease, whereas if the curculio be controlled, the treatment for brown rot can be made successful. The inclusion of the arsenate of lead in the spray is important, therefore, as a measure for the control of the fungus as well as for the prevention of insect injury.

PEACH LEAF-CURL.—The peach leaf-curl, like the black knot of plums, is a disease which is exceptionally well named, because of the accuracy with which the name suggests the peculiar curled, wrinkled leaf deformations which are the most typical symptoms of the trouble. The affection, however, is more than a leaf trouble; it is also a twig, flower, and fruit disease, and as such is more important than many suppose. The effect in such cases is to blight the structures affected, although many of the twigs often recover eventually. The cause is a fungus, Exoascus deformans, which grows among the tender young tissues. It passes the Winter as spores. Some of these spores are lodged on and among the scales of the dormant buds. When the buds germinate the young leaves and other structures become infected and the characteristic symptoms follow. Later in the season the curled leaves turn brown and fall from the tree. A cold damp Spring is conducive to a severe attack. After such a Spring, neglected peach trees often become defoliated to a very serious degree. If the buds open and the leaves develop during warm and comparatively dry weather, however, the attack will be much lighter and perhaps negligible. The remedy is prevention, and consists in preventing the spores on the bud scales from infecting the young parts. The disease cannot be controlled after it gets a good start. Spray while the buds are yet dormant with Winter strength of Bordeaux, or boiled lime-sulphur—and be sure not to put off the job until the buds are opening. This spraying, as has been suggested, will also help with brown rot and prove exceedingly rough on the San José scale.

C. A. LUDWIG.

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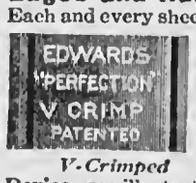

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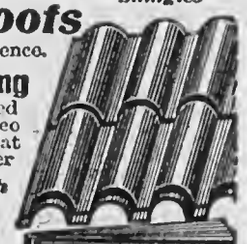

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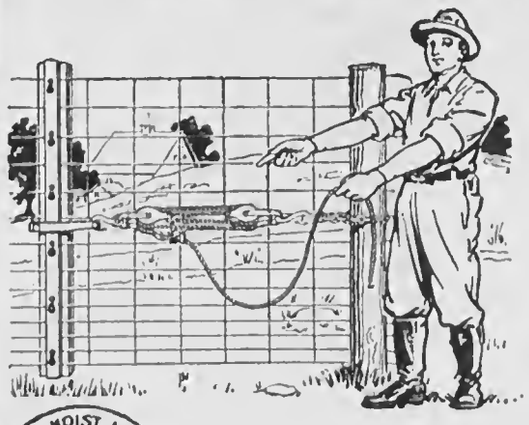

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Lime-Sulphur and Peach-Tree Borers.

THE INSECT AND ITS WORK.—The adult of the borer is a wasp-shaped moth, and these moths are daylight flyers. It is easy to learn whether or not a tree is infested by looking for the gum. Peach trees, when injured, exude a gum at the injured place as a protection. If a borer is causing the injury, this gum will be filled with frass—fine sawdust-like bits of wood and bark. The borer winters over in the worm stage. Those full grown or nearly full grown hibernate in the burrows under the bark, while the younger ones construct a cell on the bark outside. They do not feed during the Winter except, possibly, in the Southern States, and then only during the warm spells. When the borer is full grown it makes a cocoon at or near the surface of the ground, usually on the trunk of the tree. Those that I have seen had a large amount of frass worked into them. Inside the cocoon the borer transforms into a pupa and later into an adult. It takes about three or four weeks for this, then they come out and the female commences laying eggs.

HOW THE INJURY IS DONE.—These adults commence to emerge in southern Pennsylvania about June 15. A few may come out before that time, but not in considerable numbers. They continue to appear until about the middle of September. A few may come out after that. Each female will lay anywhere from 200 to 300 eggs. These are laid any old place—on the trunk of the tree, on grass and weeds nearby or even on the ground. The eggs hatch in nine or 10 days, and the little borers immediately hunt for weak places in the bark by which to enter the trunk. These little fellows grow rapidly and feed until cool weather forces them to hibernate. When full grown the borer is about three-fourths of an inch long. The damage they do consists of eating the softer fibres under the bark. They tunnel about when doing this in the cambium layer, the growing point of the tree. As it is not uncommon to pick a dozen from a single tree, a season's work of such a number is sufficient to put that tree out of business.

TREATMENT.—There is but one cure for peach trees already infested. Cut the borers out with a knife, always cutting with the grain of the wood. The method used by Thomas Greenfield of Oakdale is the best I know. He cuts out all he can find, having removed the soil for a depth of two or three inches, and he scrapes the bark smooth. The entire orchard is gone over before the soil is replaced. Having wormed the orchard he starts over it again two or three days later to replace the soil. But before the soil is put in place each trunk is carefully examined for borers. He is thus enabled to find many small borers which would otherwise have been missed—their presence is indicated by the frass. The injection of liquid is sometimes recommended, but it is not successful because the gum so closes the burrows that the liquids cannot reach the borers.

CONTROL MEASURES.—The best way to control the peach tree borer is by preventive measures; "an ounce of prevention is worth a pound of cure" in this case. The most successful method, I believe, is first to remove the borers—no matter what the size of the tree, whether it is just from the nursery or a 12-year old tree. Examine it carefully and remove the borers. Then paint the trunk from a couple of inches below the surface of the ground to 12 or 18 inches above the ground with strong lime-sulphur wash, to which has been added one ounce of arsenate of lead (paste) to each gallon of liquid. This can be applied with a brush or with a spraying outfit. One man to each row—two men to an outfit—can apply the solution as fast as a man can walk. The first application should be made late in May so as to be there when the first moths fly, and two or three subsequent sprayings or enough to protect the trunk, should be made. The moths will not lay their eggs on the tree with this material there, and if any young borers do get on they will be killed by the arsenic, so that there is little danger of trees so protected becoming infested. At the recent meeting of the Pennsylvania State Horticultural Association at York this method came up for discussion. Prof. H. A. Surface, stated that he found it very effective and that the cost was only one-tenth as much as digging out the borers by hand. Others who have followed Prof. Surface's advice stated that they had found the "worming" of the trees unnecessary when the trunks had been well protected during the season when the moths fly. Even if the trees are protected I would still advise looking them over once a year for stray borers.

OTHER PREVENTIVES.—Other substances for protecting the trunks have been tried with varying results. White paint, printers' ink, and a couple of brands of insect lime, are, according to the late Prof. Slingerland of Cornell, either injurious or fatal to the trees. Gas tar has been used with varying results, both beneficial and detrimental, so that it is not wise to recommend it. Tar or heavy manila paper, if sunk in the ground a couple of inches and tied tightly about the trunk of the tree 12 to 18 inches from the ground has proved very effective, and while expensive, it is more economical than digging out the borers by hand. Banking with earth or ashes during the period when the moths fly has also been very effective. Dry earth or the ashes are mounted about the trunk up to eight or 10 inches in height during the egg-laying season—June to September. This induces the moth to lay the eggs higher up and the resulting larvæ will enter near the top of the dust pile. When the mound is removed in the Fall, these can easily be detected and removed. But I believe from Prof. Surface's experience in his own orchard of about one hundred acres that the spraying with lime-sulphur wash is the most economical and effective preventive for the peach tree borer.

P. T. B.

Wheat in Schuyler Co., N. Y.

Do you know of anyone who has made a success of raising Spring wheat in Schuyler or Seneca Co., N. Y., as we understand it has not been raised in our vicinity for years? When should it be sown and how much to the acre?

Schuyler Co., N. Y. M. M. C.

I do not know of any Spring wheat being grown here in several years. A neighbor of mine about 20 years ago got some Spring wheat from a friend in Wisconsin and grew it for a few years; it yielded about 20 bushels per acre, was sown the same time as oats and about the same quantity per acre. As Winter wheat has always done well here there have been but few attempts made to grow the Spring wheat. A. H. PRINCE.

MISTRESS (who has just drunk a glass of water in the hall): "That water had a queer taste, Jane." "There ain't a live germ in it, mum. I ran it through the meat-chopper before I brought it to you."—Tit-Bits.

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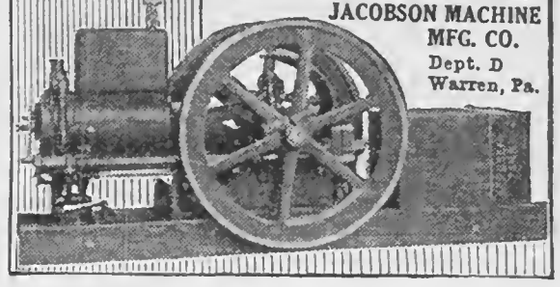

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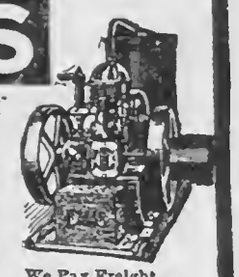

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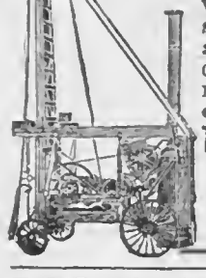

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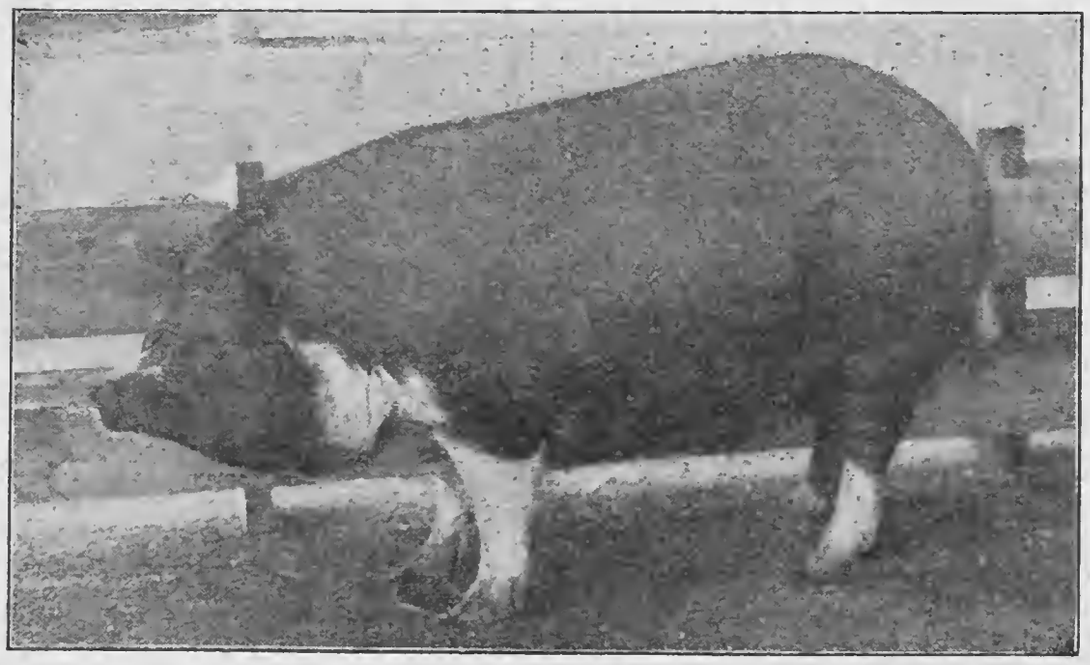
CLEANLINESS IN HOG FEEDING.

The hog responds as readily to cleanliness and care as any other animal on the farm. Not long since I was greatly impressed with the lack of sanitary conditions around the hogyards and houses of a man who has been growing hogs more or less successfully for a period of 10 years. His feeding troughs were foul with decayed food, and floors were damp and ill-smelling, and the yards were wet and full of mud holes that good drainage would have prevented. All fixtures in a hoghouse should be movable. It is advantageous to have the troughs where they may be washed out or scalded twice a week at least. It is well to bear in mind that foul troughs are good breeding places for parasites that may be taken into the stomach of the hog and cause sickness or death. Damp floors can be overcome if the house is well aired, and with windows enough to let the sunshine in on the floors. Sunshine is our greatest and cheapest disinfectant, and during cold weather its use should be more generally employed.

At feeding time care should be taken that no swill is slopped into the bedding or on the floors. It is also injurious to the health of the hogs to allow dust to accumulate on the partitions and in feeding pens. Maintaining cleanliness in all feeding places is a matter of extreme importance. If any are in the habit of feeding their hogs corn scattered in the mud or dust of a dry yard they should by all means build a feeding floor and use it. Go into any herd that is fed in the dust from thrown-down corn, and much wheezing and coughing will be heard. This is injurious to all hogs and especially those kept for breeding purposes. I have used a feeding floor for several years, and certainly would not be without one. It is built solidly of good material, and set about six inches above the surface of the ground. Around the edges a 2x4 piece is nailed which prevents lots of shelled or ear corn being pushed off into the dirt and dust. It is swept off each time before feeding. The cost of such a floor is very small, and if built of concrete it will last for an indefinite period. During the Winter my hogs are fed a good deal of Alfalfa and clover hay, and on this feeding floor is an ideal place to feed it. I cut the Alfalfa into four-inch lengths and soak it a few minutes in a tank of hot water. This does not boil the Alfalfa, but just heats it enough to make coarse stems tender and tender ones more toothsome. The hay is lifted from the tank on a fork, and allowed to drain well when it is thrown upon the feeding floor. Pigs never leave much of it, and for breeding animals it makes an excellent feed.

Watering hogs in Winter is a more important matter than is generally realized. Everyone realizes that the physiological functions of an animal require water just as certainly in cold weather as in warm. But a hog will drink very little water in zero weather if it has to go out in the cold, stick its snout into an icy bath, and fill its stomach with something which will give it the shivers for the next 30 minutes. It will not drink until it really has to, and as a consequence does not partake of sufficient water to keep its system in proper condition. We should consider water more as a food. It is just as necessary as solid food, and it requires just so much of it to keep the animals in good condition, just as it requires so much feed, although the hog may drink much more in the Summer simply to keep the body temperature down. Then why should not the water be weighed out to the hogs just the same as their feed? In Winter it is simply a question of getting the hogs to drink enough water and this is best accomplished by feeding it in a slop. The amount of water required will of course depend on the size and age of the hogs. Prof. Wm. Dietrich says this amount runs from 12 pounds per day for each 100 pounds of live weight at two months old down to about seven pounds at six months and four pounds at eight months. Weighing the water may sound like a lot of extra work to some readers of THE R. N.-Y., but when it is remembered that a gallon of water weighs approximately eight pounds it is very easy to take a couple of buckets and dip out the proper amount from the tank where the heater is. This should be mixed with other feeds to form a rather thin slop. In getting the solid feed the hogs will at the same time get the proper quantity of water. The bulk of the feed should be given dry after this is cleaned up. I find that the best way of feeding the slop is to have swinging doors above the troughs. I shut the hogs away from the troughs, place the dry feed along in them pour the water in on top of this and then let the hogs in to the troughs. This saves mixing the slop by hand and the hogs mix it thoroughly in about half a minute. By this arrangement there is no spilling of the slop while putting it into the troughs because of the hogs bumping around. Since the animals are waiting for the gates to be let down they will all have an equal chance and line up in a row and eat like well behaved hogs should.



A CLEAN HOG WITH A CLEAN HOME.

Hogs are generally looked upon as being natural scavengers who should be fed on little else than garbage and filth. Vegetables and fruit parings and refuse food from the table is good for the hog if he is allowed to consume it while fresh but after it stands a while it becomes full of disease germs and is then injurious to the health of the animal. In some cases cholera and other swine diseases have been known to be developed because of the hogs being compelled or permitted to partake of improper food and drink. As the hog furnishes so large a part of the human food it is of the greatest importance that his health be kept good. Hogs roaming at large always supply themselves with pure food and water, and do not suffer from disease as do those which are confined and heavily fed. They get plenty of exercise, and are therefore in good health, and their meat is always sweet and wholesome. They feed on nuts, fruits and roots dug out of the ground. In his wild state the hog showed himself to be somewhat of a doctor. If he killed and ate poisonous snakes he knew what plant to eat to overcome the effects of the poison. The early settlers of the West used to notice that hogs would peel the red or slippery elm tree and eat the bark, those having recourse to this treatment never becoming affected with cholera. Cleanliness in the feeding and management of swine is a very important factor in obtaining best results in this branch of animal husbandry. H. U. W.

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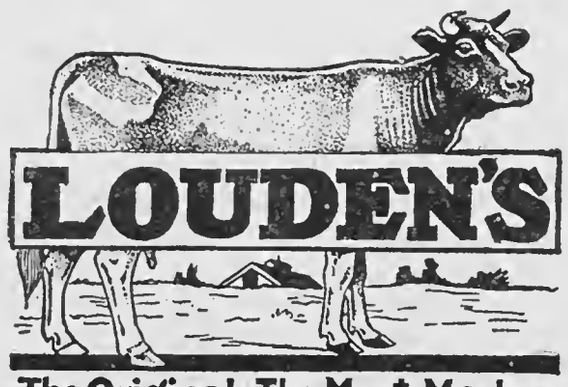

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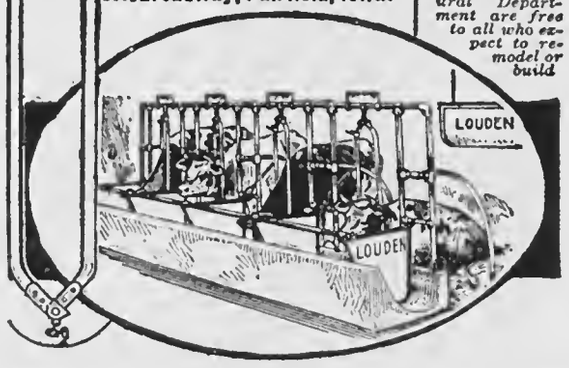

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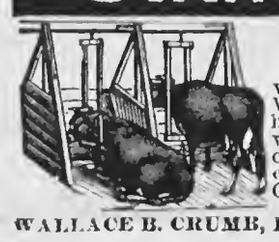

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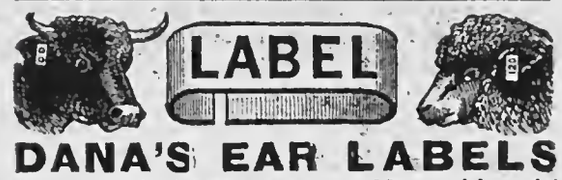

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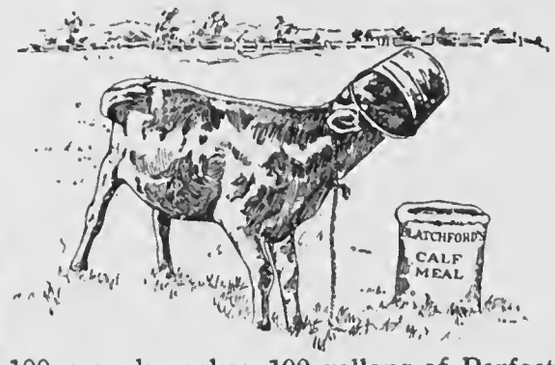

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Treatment of Ducklings.

I would like to learn most successful system of raising young chickens and ducks for market from shell to market age. I have a pen 12 feet wide, 30 feet long, that I could fix. Can young chickens and ducks be raised successfully in one house? As young ducks slop water about I thought perhaps it would be too damp for young chicks. I have fairly good luck hatching with hot-water incubators; my drawback is in brooding, which I think was in crowding. R. W.
So. Bethlehem, Pa.

Ducklings and chickens should not be raised together. If raised in a brooder follow directions that come with all good brooders regarding temperature. Give to chickens the mixed, cracked grains known as chick feed in litter where they must scratch for it, beginning when they are 48 hours old. Mix chicken grit with the chaff and supply water in a fountain that they cannot get into. Give them a chance to get onto the ground for exercise when the weather is suitable.

Ducklings should be given rolled oats and bread crumbs, with a little grit, slightly moistened for the first two days. Then begin to add bran and cornmeal. When a week old stop feeding oats and bread crumbs and begin to add green stuff and beef scraps. An ideal feed for adult ducks is vegetables one part, green stuff or cut dried clover one part, beef scraps one part, low grade flour two parts, bran two parts, cornmeal three parts. Put a pinch of salt in each mot. Fine grit should always be mixed with the mash of the young ducks, and coarse grit for the adults, may either be mixed with the feed or placed in boxes where they can get to it. Once a week mix a little ground charcoal with the feed. Drinking fountains should be arranged to prevent their entering the water, from which they should be kept till the feathers begin to grow. W. H. H.

Lame Ducks.

Can you tell me what makes ducks weak in the legs and unable to eat?
Freehold, N. J. J. B.

It would be difficult to tell, without more data, what is the cause of your trouble. Ducks may lose appetite from overfeeding, but that alone would not cause leg weakness. Rheumatism from being kept in a damp place sometimes causes trouble. I would advise putting them in a dry pen, as warm as possible, and keep a variety of fresh food before them, removing uneaten food daily. Ducks, like hens, sometimes succumb to wasting diseases that cannot be diagnosed. W. H. H.

Hatching and Rearing Ducks.

I would like information on handling duck eggs before setting. How long can they be held before setting, how to start off the young ducklings? How to feed the laying ducks and how should the young ducks be fed when 15 or 20 days old, in order to bring them to maturity as early as possible and keep them in good health? Can ducks be raised without ponds or running water? I have seven acres in town, one acre orchard, one acre garden and yard and five acres Blue grass. Eventually I wish to handle White Leghorns, White Wyandottes and Buff Orpingtons and ducks. I have some idea of raising chickens and can handle 50 to 80 hens, mongrels. They lay fairly well and keep healthy, but ducks are new to me. P. E. B.
Trenton, Ky.

Handle ducks' eggs just as you would any eggs. As ducks usually drop their eggs anywhere they are often soiled. Unless they are very dirty it is better not to wash them. They may be kept two weeks if necessary, and will often hatch well when kept longer, but the sooner they are set the better. If kept many days they should be turned every day. Begin feeding ducklings with rolled oats and bread crumbs, with a little grit and a pinch of salt, slightly moistened. After two days add bran and cornmeal. When a week old drop the oats and crumbs and begin to add green stuff and beef scraps. Gradually work up to the following for adult feed: Vegetable one part, green stuff one part, beef scraps one part, low grade flour two parts, bran two parts, cornmeal three parts. A little salt in all mash adds to its value. Ground charcoal once a week will help keep them well. Give fine grit in every feed to young ducks and coarse grit and oyster shells to the old ones, either in the mash or in boxes where they can get to it. Use drinking fountains into which the young ducks cannot get. They should not be allowed to go into water until they are pretty well feathered. If being fattened for the market they should at no time be allowed swimming privileges. They would have a delightful time, but would not fatten. The common breeds that have been domesticated the longest can be successfully reared with no water for swimming. W. H. H.

When is Milk Richest?

Could you tell me at what time a cow's milk is the richest, just after calving or when she is drying up? J. B. J.

As a general proposition the richness of milk increases as the period of lactation advances. I cannot quote any authority on the subject, but in the case of my own dairy, and also as secretary for a local cheese factory, I have noticed a gradual increase in the percentage of butter fat as the season advances, with a more rapid increase toward the end of the season. I believe this increase is especially rapid in the case of cows rather poorly fed, where the milk flow falls off rapidly after the flush of feeding pastures. The amount of milk required for one pound of cheese changes inversely, beginning with 11 to 12, and ending the season in the Fall or early Winter with about nine pounds. C. L. M.

Ration for Cows.

Will you give me a good ration for my two cows—Jersey and Guernsey—about five years old? I have on hand mangels, Alfalfa, corn and cob meal, cornmeal, bran, ground oats, wheat and rye, mixed hay, and will purchase almost anything else desirable. The Jersey, due to freshen in April, lost her calf a month ago. The Guernsey will freshen in March. The Jersey is giving only half the milk she did beforehand. I have been feeding some rye in my ground grain mixture.
New Jersey. C. T. M.

A good grain ration would be equal parts by weight of corn and cob meal, bran, ground oats and oil meal. Feed of the Alfalfa and mixed hay as much as the cows will eat up clean. Feed chopped mangels once or twice daily; a half-bushel per cow will do no harm, if you have them, but begin with a small quantity. The Jersey will probably not regain her normal flow until she freshens again. Give her about one pound of grain per three pounds of milk. The Guernsey should not have over three pounds daily of grain until a week after she freshens, then increase as above, according to the milk flow. C. L. M.

LICENSED TESTERS IN INDIANA.—In accordance with the Creamery and Testers' License Law of Indiana, Act of 1913, Chapter 340, the testing of milk and cream in Indiana creameries, milk factories, shipping stations, ice cream factories, cheese factories and milk condenseries must be done or supervised by licensed testers. This law takes effect April 1, 1914. Testers' licenses may be secured upon presentation by the applicant of a certificate of proficiency, properly filled out and signed by the chairman of the examining board, and upon payment to the chief of the Dairy Department of Purdue University Agricultural Experiment Station of the annual license fee of $2.

CLEANING BUTTER PRINTS.—I noticed someone wants to know how to keep butter from sticking to the print. Scour it with one of the cleansing materials; let it remain till you want to use it; then take some warm water and wash; then do the same again. I don't think there will be any more trouble. Just scald with butter bowl and paddle all together; then cold water; it seems to cut the grease, or something that prevents it from sticking. I think this is better than to keep utensils soaked in brine.
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MISTAH CLAUDE: "What is dat you done gwine to cook, Miss Coopah?" Miss Coopah: "Welsh rabbit, Mistah Claude." Mistah Claude: "So? Ah'll be 'bliged to you if yo' gib me de lef' hin' foot ob him."
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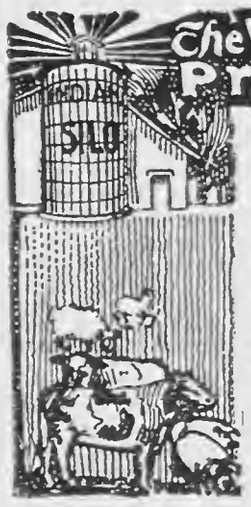

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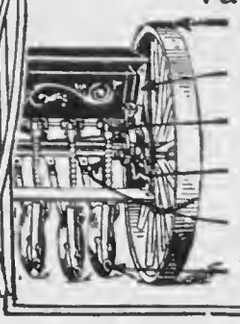
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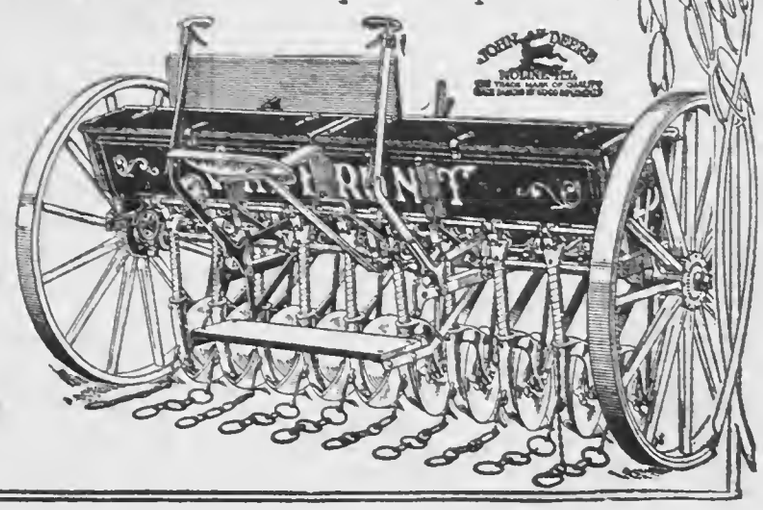

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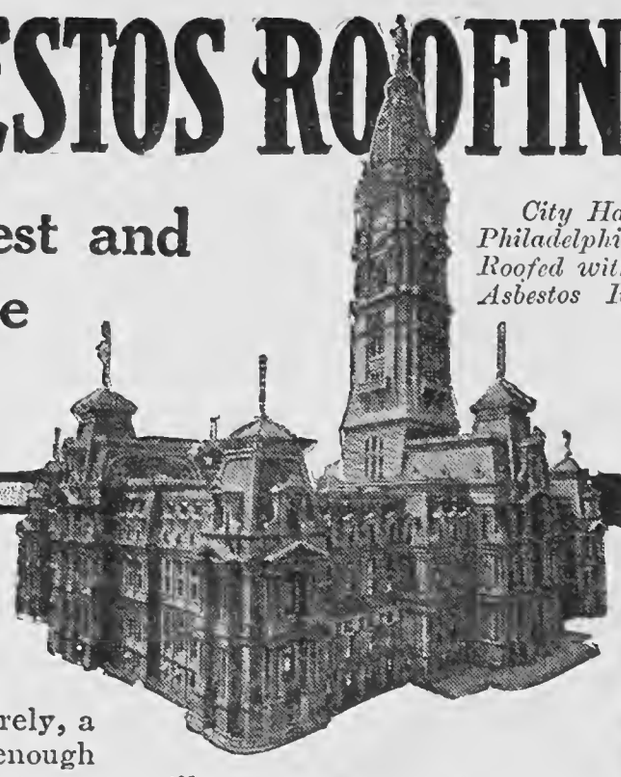

City Hall, Philadelphia, Pa. Roofed with J-M Asbestos Roofing

This great building, erected at a cost of $25,000,000.00, is covered with J-M Asbestos Roofing. Surely, a roofing that is good enough for this monumental structure will answer your requirements.

Hundreds of the largest and finest buildings of all types are covered with J-M Asbestos Roofing—because it is the roofing of *proven permanence.*

J-M Asbestos Roofing is *all-mineral.* It is composed of several layers of Asbestos (rock) felt cemented together with Trinidad Lake Asphalt—the greatest waterproofing substance known.

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Furnished in flat sheets or in rolls. It can be applied by any handy man. J-M Roofing Cleats, packed in each roll, make absolutely watertight laps and give the entire roof a handsome white appearance. Suitable for any type of building.

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YOU can clear an acre or more of stumps a day. No stumps can resist the Hercules. Doubles land value—enables you to make $1200.00 on 40 acres the first year after stumps are out—and $750.00 in crops *every* year after. Get the proof. Why not

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Book tells all the facts—shows many photos and letters from owners—tells all about the many Hercules features. We'll also quote you a special money-saving price proposition that *will interest you.* Address

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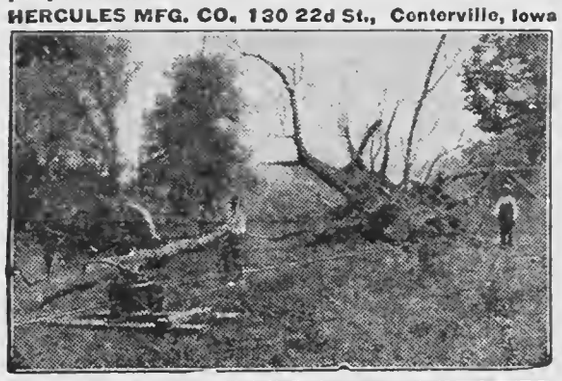

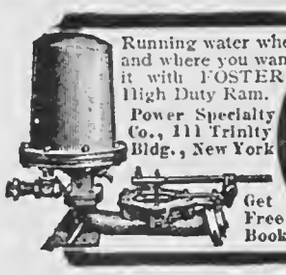

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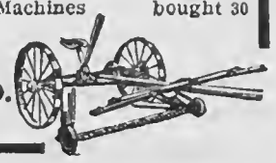
Get Free Book

You Can Have Running Water

Eureka Mower

Write for free Catalog

This machine has the one right cutting principle—center draft. Cutter bar is directly in front of wheels—mows back and forth on one side of field in any direction. No side draft. Cut crop is left in standing position and cures rapidly. One-third saving in time and labor. The Eureka Mower abolishes tedding and trampling of cut crop. It's the ideal mower for orchard and working between rows. Will cut weeds in pastures and brush that no other mower will handle. 5 sizes for one or two horses. 46 years on the market. Machines bought 30 years ago, and used every year, still in use. Prompt shipments. Write to-day.



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Honest Value in Rubber Footwear

"BALL (Red) BAND"

The name "Ball-Band" stands for dry, comfortable feet. It's the trade mark of rubber footwear that eight million men recognize as the best they can buy. It gives them more days' wear for dollars invested.

Making good rubber footwear is no job for a careless man. The goods we make are going to get terrific hard wear, and we know it. We build "Ball-Band" Footwear to stand that wear.

Forty-five thousand dealers sell "Ball-Band" Rubber and Woolen Footwear. Look for the Red Ball on the goods and in the store windows. Your dealer will probably say as much for our boots as we do. If he can't supply you, write us and we'll tell you who can. Write anyway for Free Illustrated Booklet describing "Ball-Band" Footwear.

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"The House That Pays Millions for Quality"

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The Original Mt. Gilead Hydraulic Press produces more cider from less apples than any other and is a **BIG MONEY MAKER.** Sizes 10 to 400 barrels daily. Also cider evaporators, apple-butter cookers, vinegar generators, filters, etc. Fully guaranteed. Write for catalog.

HYDRAULIC PRESS MFG. CO.
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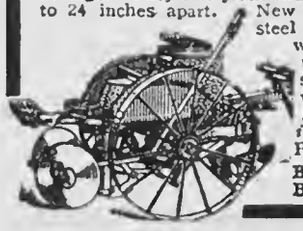
Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

IRON AGE *100 Per Cent Planters*

often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. New angle steel frame and steel seed hopper. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "*100 Per Cent Potato Planting*" and copy of Iron Age Farm and Garden News.



BATEMAN M'F'G CO.
Box 1025 Grenloch, N. J.

SELLING OAK TWIGS.

The picture shown gives an idea of a new industry which is being developed in southern New Jersey. This is the gathering of oak twigs containing the leaves. These twigs are gathered and tied into bales as shown in the picture, and in this way the oak twigs are handled and transported. There is a large trade in this material, the twigs being exported to Europe, where they bring a fair price. They are used for brewing into a tea, used as a medicine for the treatment of colds. It is said that the use of this tea is quite common in Europe, not only among the Hebrews and the Poles, but many other inhabitants use this decoction, thinking that it makes a valuable medicine or tonic. At any rate the gathering of these leaves makes a new horticultural industry, and is the means of giving fairly profitable work to a number of people.

LOADING OAK TWIGS.

LIME AND THE MULCH PROBLEM.

Our readers remember the article on formation of acid solids, given on page 1. This was the first part of a review of some remarkable experiments by Prof. Frederick V. Coville, who has given a most thorough study to this subject. The article described the formation of acids in the soil, and the formation of leaf mold. We shall give soon a further discussion of this matter. In the meantime Prof. Coville gives the following suggestion regarding the effect of a mulch in an orchard. This will be a new thought to many of our readers, who have not considered the true effects of lime upon the soil. This is well worth considering, as Prof. Coville is our highest authority in matters of this kind.

For several years I have been much interested in your articles on the successful mulch system of handling apple trees practiced by Mr. Grant Hitchings near Syracuse. Your article on this subject, published on page 137, leads me to make a comment which I have long had in mind.

Five reasons are assigned in your review of Prof. Hedrick's conclusions, for the success of the mulching system on Mr. Hitchings' own place. The question arises in my mind whether there is not a sixth reason perhaps more fundamental than any of the other five. My question is: "Is not the soil of Mr. Hitchings' orchard a limestone soil, and if so, is not his success due largely to the fact that the underlying soil carries the decomposition of his mulch through the acid stage into the alkaline stage, with all the consequent stimulation of nitrification and increase in fertility, and are not some of the failures of the same mulch system in other localities due to the natural acidity of the underlying soil and the suspension of decomposition in the mulch before it has passed from the acid to the alkaline stage?"

You will remember the change from acidity to alkalinity in the progress of the decomposition of leaves which I described in my paper on "The Formation of Leafmold," and from your reading of that paper you will readily appreciate that in the absence of an alkaline soil underneath the decomposing mulch there may easily be produced a permanent acid condition of the rotting mulch itself, resulting in a practical failure of the system.

It seems to me that one of the direct lessons to be drawn from my observations on the formation of leafmold is that a mulch system on a limestone or alkaline soil is likely to produce results almost the opposite of that produced on a naturally acid soil. If this view of the matter proves to be correct, the use of liberal applications of lime to apple tree mulch in orchards growing upon a soil with acid tendencies is likely to be necessary in the development of an efficient mulch system on such soils. When practicable the addition of a little manure is also suggested as a means of supplying the mulch with a vigorous inoculation of the beneficial organisms of decomposition. Under this plan the mulch is treated essentially as a compost and that is the way in which we really ought to regard it.

FREDERICK V. COVILLE.

HEATERS TO PROTECT CUCUMBERS.

Can you give me any information in regard to fighting the early frost in Fall? Is the smoke smudge a success, and would it be a good way to save expense to lay a layer of bricks about two feet square with an air space and a rim to hold the smoldered coals in place a good way? Would it be enough if I only used sawdust, which I can get for nothing, or mix it with something else, and what? How far apart should each fireplace be from another? Do you think ready-built field hearths would be better? I want to try them in a field of late cucumbers.

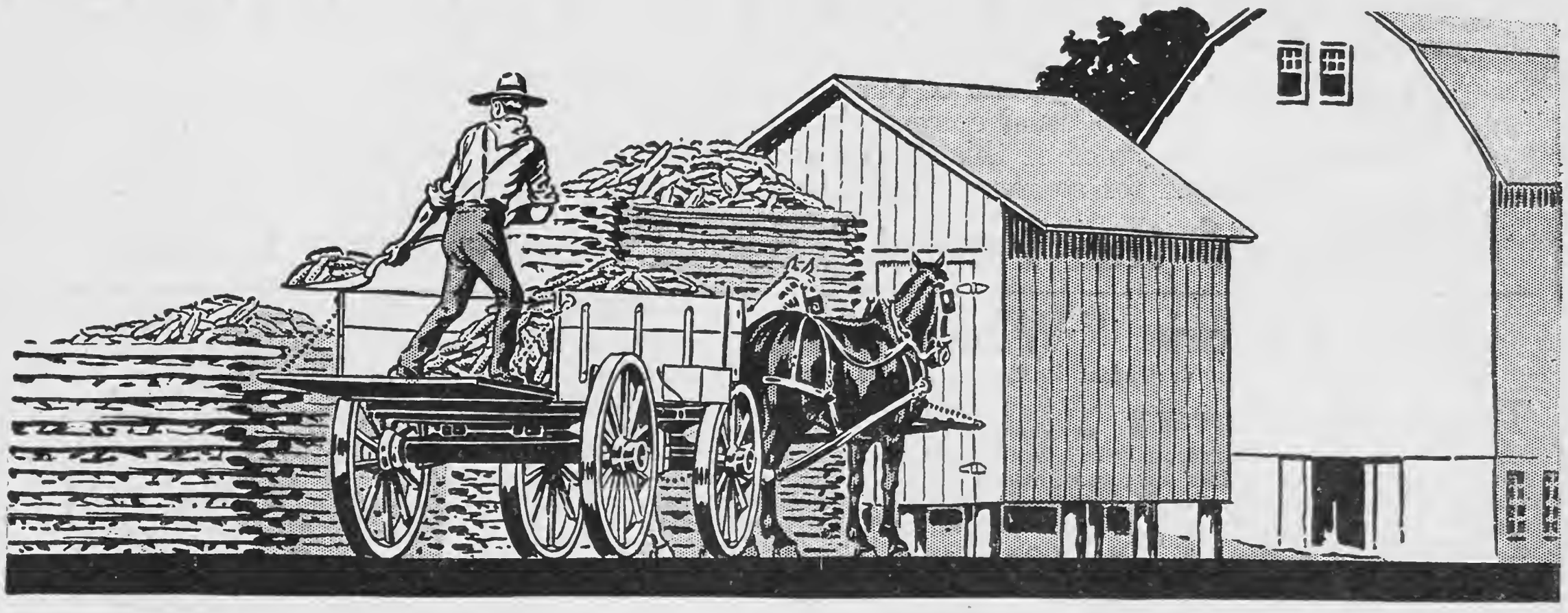
Ramsey, N. J. V. P.

I think that one of the types of orchard heaters would be greatly superior to any attempt at smudging by burning such material as sawdust. It is an open question, however, whether the practice of using heaters would be profitable in the growing of late cucumbers.

Our experience in the use of orchard heaters in our peach orchard at Vineland, for the past two years, has not given us results that would warrant us in recommending them for eastern conditions. This does not mean, however, that we were not able to keep up the temperatures. The story is too long to give in a brief reply. I can say, however, that I believe that it would be necessary to use about 125 heaters, of two to three gallons capacity, to be certain of preventing injury by cold in the late Fall. These heaters would cost from 20 to 40 cents each, according to the type, and one would consume 200 to 300 gallons of oil per acre in a single night if the cold extended over a number of hours.

Fuel oil, which is recommended for these heaters, cost us six cents per gallon, last Spring, by the barrel. These facts may serve in a general way to give one some idea of what the expense might be. In our experiments a heater of the three-gallon Hamilton type showed to advantage, especially with respect to the cover, which did not blow off when there was considerable wind. The covers of the lard-pail type were always blown off to a greater or less degree and scattered about the orchard, so that some water got into the oil during rainstorms.

One could undoubtedly raise the temperature several degrees over an acre of cucumbers by the use of orchard heaters, but to my mind the real question is whether enough extra money could be secured for the late crop of cucumbers to pay for the trouble. It might be a fact also that the cucumbers would not grow and develop as they should because of cool temperatures during the day at that season of the year, even though no actual frost occurred. M. A. BLAKE.



Corn is our greatest Crop

It is <u>worth</u> more than any other crop
It <u>costs</u> more than any other crop

A big item in this cost is over one hundred million dollars' worth of actual potash, which the corn crop takes from American soils every year—more than eight times the total importations of

POTASH

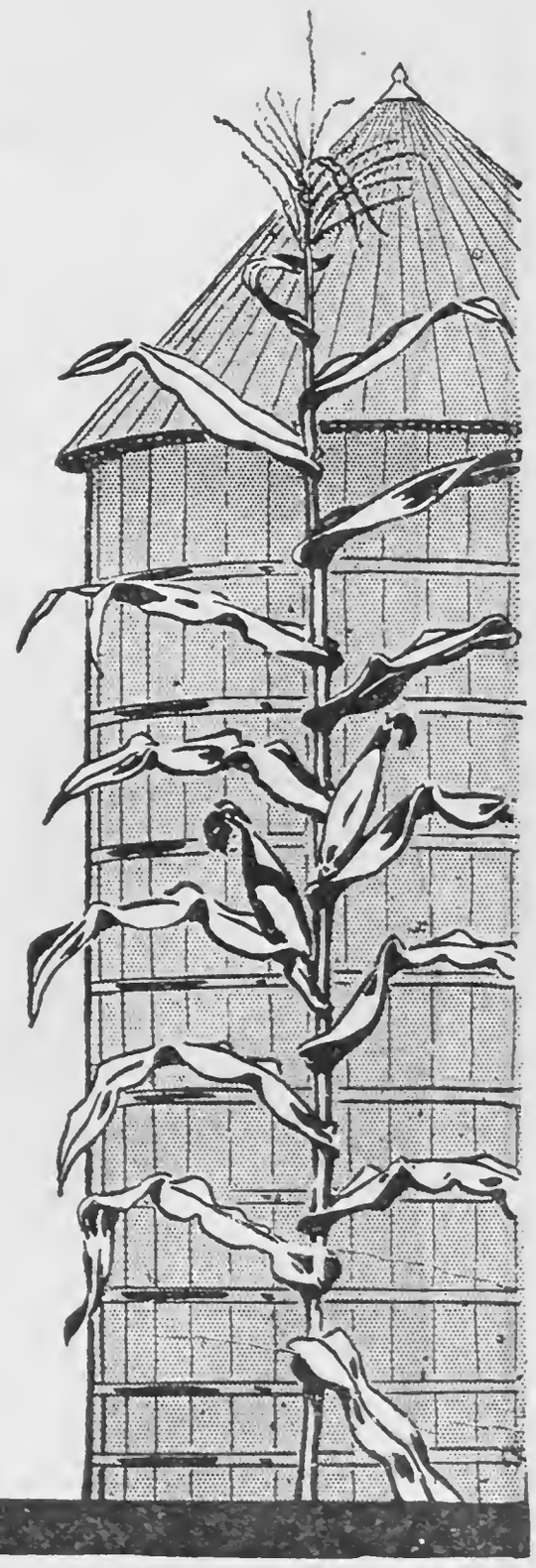
The corn plant uses over a pound and a quarter of potash for every bushel of ears produced.

It uses more than twice as much potash as phosphoric acid.

Supplement the manure or clover sod by 400 to 600 lbs. per acre of a fertilizer containing at least as much potash as phosphoric acid—0-8-8 or 0-8-10—or broadcast 300 lbs. acid phosphate and 100 lbs. muriate of potash per acre after plowing and before harrowing, and drill in with the seed 100 lbs. per acre 2-8-8 goods. On muck lands broadcast 100 to 200 lbs. muriate of potash per acre.

To drive away cut worms and root lice, drill in 100 lbs. Kainit per acre with the seed. Potash makes more sound ears in proportion to the stalks. It makes much more and much better corn for either crib or silo. **Potash Pays.**

We sell potash in any amount from one 200-lb. bag up.



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GERMAN KALI WORKS, Inc., 42 Broadway, New York

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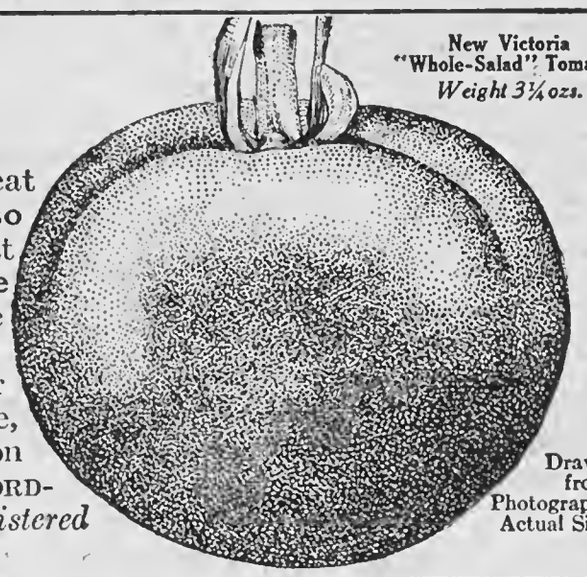
Burpee - Quality Vegetables

Quality is the **Keystone** of our success. Burpee's Seeds cost more to produce than do usual commercial grades, but are worth much more than the difference in cost. Proof of this statement is the acknowledged fact that we have built up and maintained for so many years the largest mail-order seed trade in the world.

"Five of the Finest" for Twenty-Five Cents

New Victoria "Whole-Salad" Tomato

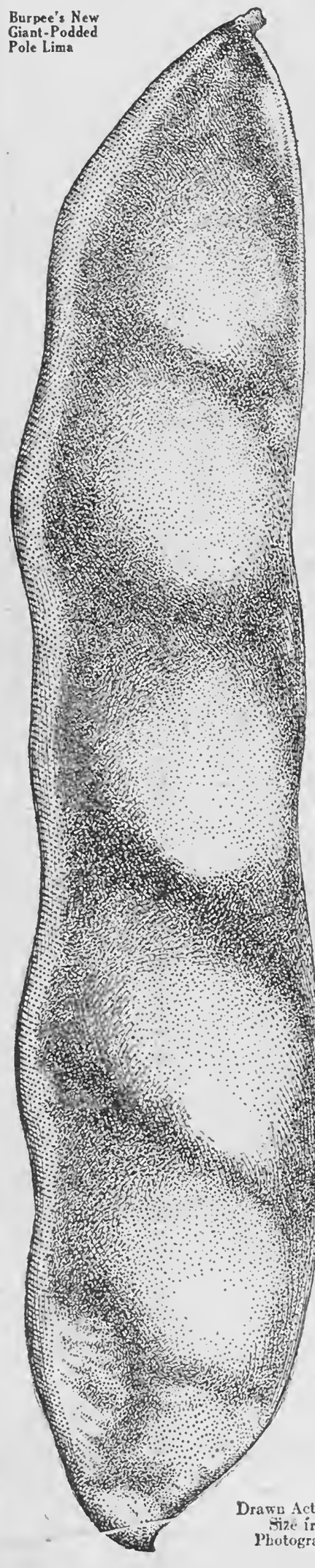
Most Delicious and Most Prolific of All "Individual" Tomatoes



New Victoria "Whole-Salad" Tomato
Weight 3¼ ozs.

Drawn from Photograph, Actual Size

This Unique Novelty will be welcomed by thousands of planters because of its great superiority both in quality and productiveness. **It bears so tremendously and so continuously** that twenty plants should yield more than one family could eat in a season. The vigorous vines are covered with fruits borne closely in clusters,—as many as **three hundred and seventy-three well-developed fruits on a single plant at one time.** The tomatoes measure two and a half inches in diameter and weigh three to four ounces each. They are of a rich bright scarlet color right up to the stem, and so solid that they remain in fine condition for a long time. The firm fruits are just the right size for serving whole, either alone or with lettuce, while the flavor is the best we have ever found in a "whole-salad" tomato. ☞ For full description and illustration of a cluster from a photograph,—*see page 25* of BURPEE'S ANNUAL FOR 1914. FORDHOOK-GROWN SEED *is sold only in small sealed packets each containing forty seeds and bearing our Registered Trade Mark.* **Per pkt. 15 cts.; 2 pkts. for 25 cts.**



Burpee's New Giant-Podded Pole Lima

Drawn Actual Size from Photograph

For 25 Cents we will mail a fifteen-cent packet of the unique new VICTORIA "WHOLE-SALAD" TOMATO advertised above, and **also** a special ten-cent packet (nearly two ounces) of—

Burpee's New Giant-Podded Pole Lima Bean.

The largest and most delicious Lima bean the world has ever seen. A few poles even in a city "back yard" will keep the family supplied with such quality-beans as will be a *revelation* compared with the best that can be bought on market. For illustration and description,—*see pages 9 and 35 of* BURPEE'S ANNUAL FOR 1914.

☞ **Also**—(all for twenty-five cents!)—a Regular Packet each of—

Burpee's Earliest Black-Red Ball Beet

Extremely early, of intensely rich color and superb delicacy. See illustration and description on *page 10* of BURPEE'S ANNUAL FOR 1914.

Naumburger or "Tenderheart" Lettuce

An extra early, large-heading, hardy lettuce that stands summer heat and is of fine quality, sweet and buttery,—*see page 57 of the B. A.*

New "Lucullus" Swiss Chard.

A useful, "double-purpose" vegetable that yields enormously all summer long. Serve the thick green leaves like spinach and use the broad white ribs as cooked celery. Both are of fine flavor and wholesome. For illustration and description,—*see page 37 of* BURPEE'S ANNUAL FOR 1914.

25 Cents **buys all the above "Five of the Finest" New Vegetables** which, purchased separately, *would cost fifty cents;* **five collections mailed for one dollar,**—and mailed to five separate addresses if so ordered.

☞ In each collection we enclose **free** a copy of an Interesting New Booklet on THE FOOD VALUE OF FRESH VEGETABLES, specially prepared for us by a recognized authority of National Reputation and illustrated with thumb-nail caricatures, and **also** a liberal packet of a charming MORNING GLORY as announced below. This is the most attractive offer in Vegetable Seeds yet prepared and should induce thousands to plant vegetables (even in city back yards) who have never done so before.

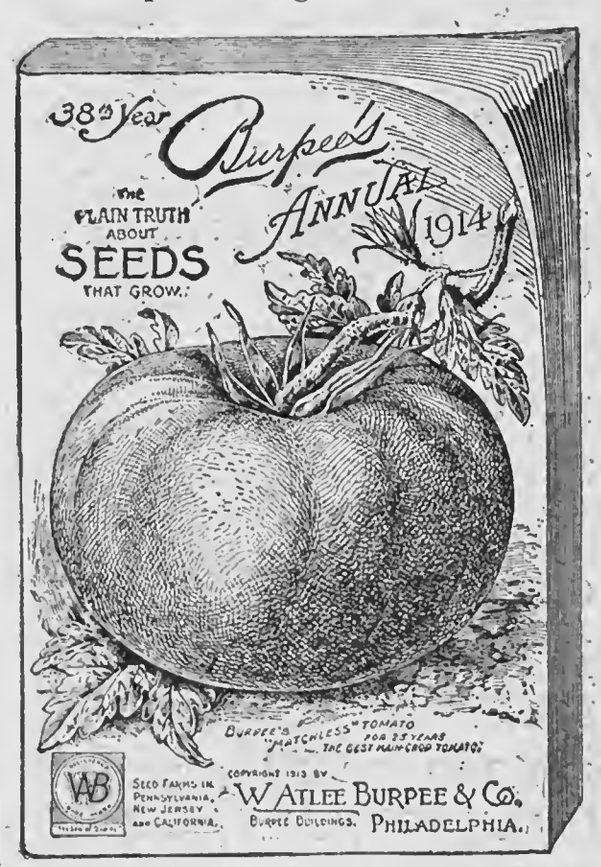
As a Compliment to the Ladies we shall include in each collection of **"Five of the Finest,"**—ordered AT ONCE at the Introductory Price of 25 cents—one packet (such as sold for ten cents last year) of *either* BURPEE'S AIRY-FAIRY or BURBANK'S CRIMSON-FLOWERING—the most beautiful **"Two Mistakes in Morning Glories."** For accurate descriptions and explanation of the two mistakes,—one made by BURBANK, the other by BURPEE,—*see Illustrated Circular sent with each collection.*

☞ Everything on this page for 25 Cents ☜

Five Complete Collections Mailed for One Dollar.

The House of Burpee

has introduced more distinct New Vegetables and Flowers that are now in cultivation than have any three other American firms. Selected Stocks are produced upon our own seven seed farms in Pennsylvania, New Jersey, and California, while FORDHOOK FARMS are famous as the largest and most complete trial grounds in America.



Burpee's New Annual for 1914

Long Known as "The Leading American Seed Catalog"

"THE SEAL OF QUALITY"

Our SILENT SALESMAN tells **the plain truth** about The Best Seeds That Can Be Grown. With colored plates of Burpee-Specialties, this bright book of 182 pages shows hundreds of the choicest vegetables and most beautiful flowers, illustrated from photographs or painted from nature. It is almost indispensable to all who garden for pleasure or profit, and is mailed **Free to all** who can appreciate the value of **QUALITY IN SEEDS.** It will be surely worth your while to read THE BURPEE ANNUAL. It costs you only one cent for a post card to send us your address, and you are under no obligation to buy. We never annoy applicants with "follow-up" letters. Shall we mail *you* a copy? If so, kindly **write to-day.**

W. Atlee Burpee & Co., Philadelphia

UNIVERSITY
MAR 16 1914

THE
RURAL NEW-YORKER
A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Cornell University
26-14

VOL. LXXIII, No. 4246. NEW YORK, MARCH 14, 1914. WEEKLY $1.00 PER YEAR.

SOME LOCKPORT GRANGE ACTIVITIES.

What "Getting Together" Means.

Director L. H. Goddard of United States Department of Agriculture wrote in December: "Much has been said regarding coöperative organizations in Ireland, Denmark, Germany, and other European countries, but we hear very little of what has been done along that line in this country. Indeed, many talk as though scarcely anything whatever had been accomplished here. So far as we can judge, however, from the scraps of information which are coming to us from all sides, the amount of organization work which has been done in this country is very much under-estimated. It is probable that a summary of it all will show that instead of standing still as many have supposed, we have as a matter of fact, been advancing very fast indeed."

Coöperation is one of the greatest things in life for farmers and fruit growers, getting together and exchanging experiences and methods, buying in quantity at wholesale and acting in harmony and cutting out petty wranglings—that is coöperation, and a short account of what our Grange has done may help other organizations.

Lockport Grange, No. 1262, was organized two years ago on the 30th of January, 1912, with 57 charter members, and when one year old had but 90 members. Then we initiated a contest for new members, with the prize to the one obtaining the most new members of a trip to Ithaca with expenses paid for Farmers' Week. This created much interest and brought in many new members, so that we now have 200, with large classes being taken in on every day assigned for the purpose, and consider this a good showing for a two-year infant Grange. The first master was E. E. Crosby, then Earl Gregory and the present incumbent is G. W. Haines. The past year there has been much coöperative buying, Daniel N. Pomeroy having been appointed purchasing agent. We have used several carloads of tile this past Fall, and a large part of this tile-draining would not have been done, at least not right away, had it not been for the Grange and the cheaper prices (40% discount) obtained through coöperation. Although the first tile put down in America was laid in 1835 on the Johnson farm at Geneva, New York, there are a great many parts of the State that would be greatly enhanced in productiveness and value by using tile draining.

We used several cars of fertilizers, grape posts, lumber and lime and have done considerable other wholesale buying, but very little as yet in coöperative selling, though there are plans under way for the growing of seed oats, corn and potatoes and selling through this joint action and advertising.

The Lockport Grange has won the first prize at the Niagara County Fair the two years of its entry, with keen competition from other Granges. The get-together spirit of these exhibits has been extremely good, the members taking active part and interest and now intend entering exhibit at this year's State Fair. We have beaten the rest of the State in a race on fruit growing, as Niagara County is admitted the banner fruit county of the Union, and so it is with all assurance of success that we plan on our State Grange competition.

It is very easy to understand the social and busi-

LOCKPORT, N. Y., GRANGE TAKES THE ROAD. A LOAD OF HUMAN FRUIT FOR THE MOTOR TRUCK. FIG. 155.

less advantages of a Grange composed of members of a farming community with so many similar problems and interests getting together and obtaining mutual help. It is also easy to understand the financial advantages in buying wholesale and saving 20 to 50% on the many things needed in running the houses and farms; bought several hundred pounds of best coffee at less than the price of common grades, and many other savings in groceries, and also a good saving in binding twine. I attend many fruit growers' and other conventions where there are displays of all kinds of things requisite on the farms, and by being constantly on the watch and talking it over obtain many desirable bargain prices for the Grange. I have just made arrangements whereby this Grange will save $10 per thousand on the average on the different styles and sizes of fruit baskets needed, and for which settlement will not be needed before Fall, where desired, by giving notes payable after fruit is marketed.

Last Spring the Lockport manager of the New York Telephone Company, in effort to make larger dividends by curtailing the number of operators in the exchange and in the repair work, made a distinction between the city and country users of telephones, and in spite of much opposition changed all the rural telephones out of the exchange to the obsolete crank type in vogue 20 years ago. The country users strongly objected to the nuisance of hearing the ring of every subscriber on the same line, the necessity to crank the pesky thing for considerable time to get the operator, or if some one on the same line was wanted, to do the ringing personally without help of central. It cost the telephone company $9,000 to make the change, but it would take days to tell of all the inconveniences of the system to the users. Individuals were powerless to obtain satisfaction of any kind, and many in disgust ordered their telephones taken out. The Lockport Grange, a concerted unit of outraged farmers, through committee, forced the telephone company to reinstate their former satisfactory service as it was before the change, and the same as the city users had through the same exchange all the time. This shows what coöperation can do. While we numbered less than two hundred then we had thousands and thousands of other Grangers back of us and the fear of the Public Service Commission in the telephone company, and we accomplished what would have been otherwise impossible without organization.

The editor of THE R. N.-Y. has asked for a description of a coöperative pleasure and improvement trip made last August by 25 members of our Grange in a large automobile fruit truck, covering two days and many miles through the fruit belt of the county, along the historical Niagara Frontier and over the new Niagara Boulevard into Buffalo, and then over State roads home. While we have more than a dozen auto trucks in the immediate neighborhood, we went in the largest of these marketing trucks, and it comfortably seated the 25 members of the party. The occasion was the annual Summer meeting of the New York State Fruit Growers' Association held at Olcott Beach, where 1,500 gathered to hear State Commissioner of Agriculture Calvin J. Huson, and other prominent speakers. One of the local papers said, "A feature of the entry of delegates this afternoon was the arrival of the big red motor truck of Albert Eighme loaded to the gunwales with well-known Grangers from the towns of Lockport and Cambria who started shortly before noon and came to show Commissioner Huson how progressive Niagara farmers are in the matter of using gasoline."

On this outing we heard some very valuable lectures on fruit growing conditions and transportation problems. We made a side trip and inspected apple and peach orchards. All along the Lake Road are found extremely valuable farms, and their orchards, loaded with fruit, were of much interest to the party. There are always worth-while ideas obtainable in carefully noticing how others are handling similar problems to your own.

After short stops at Wilson and Youngstown we arrived at Lewiston and staid at the Frontier House, which was built nearly a century ago, and quite in harmony with the historical village. A heavy rain early the next morning delayed the start away, but sight-seeing along the river and across into Canada, by some, and singing and dancing in the large parlor whiled away the morning hours pleasantly and immediately after dinner the trip was resumed to Niagara Falls, and after a couple of hours there, on into Buffalo and theatre. It was late, very late, when the party of tired Grangers reached home, and there was not so much singing on the home trip, as everyone was tired, but each and all considered it a very successful, enjoyable outing. It was not expensive, dividing the cost of oil and gasoline between the men, and the wives supplying large baskets of good things, it made the individual cost very low.

If farmers ever could band together and coöperate in the best ideal of organization what right farm products prices could be obtained and what a power in the land and in better government. But admitting the fact that farmers cannot, or will not, ever act entirely together as a harmonious unit to any great extent, it is sure that the trend of the work of the Grange in coöperation is well worthy of emulation, and it would be interesting and instructive to hear from others what they are doing or have done along similar lines. It has been said that the ones who know the most about farming are the ones who have the least time to write out their valuable lessons for others, but in the Winter months time could be found, it would seem, for mutual help.

DANIEL N. POMEROY.

CHICKEN THIEVES AND RURAL POLICE.

Having considerable experience, let me say a few things about shooting at chicken thieves. We have been so pestered by these vermin, in addition to those that are winged, furred, clawed and four-legged, that I have for years kept young and old chicks surrounded by an electric alarm; which I am sure has saved us much further loss. But it is a perennial nuisance! By chance, I discovered the very last attempt (out of a dozen) before my alarm was completed. I fired, they ran, dropping the chicks. Another time, I fired to accelerate the progress of one who sprung the alarm. I intended only to "pink 'em" enough with bird shot at say 200 or more feet, to make them sit standing for a time, and conclude thieving is a dangerous business. I believe I now have a pretty fierce reputation. Well, the blacker they paint me the better I like it; the less probability I shall needs have occasion to "make good."

What, shall we try to capture a thief barehanded? Several men have lost their lives so. Common knowledge teaches us that the thief is both armed and unscrupulous about killing when cornered. We have the right to more than equal footing when meeting outlaws! Moreover, being unknown, he runs very small risk of capture even if he murders you. This brings me to my main point, which is, that what this country needs is a trained rural mounted police, with dogs. The present political constabulary is about as efficient as a "busted" musket at catching criminals, let alone preventing crime. They are 100 per cent. efficient when it comes to haling honest, peaceable and busy citizens to court on jury duty, to waste their time listening to quibbling lawyers wrangling over technicalities and other irrelevances that haven't the least bearing on substantial justice! This will continue, I suppose, until the people become sufficiently wrathy to boot the whole crew out and put in men actuated by common sense. Our laws are administered far too much for the protection of criminals and far too little to protect and encourage law-abiding people.

I suggest that part of our military be assigned to police duty, instead of loafing in barracks. Why, there has been an awful series of the most atrocious crimes committed recently in rural districts, and a trained rural police ought to have some deterrent effect on such, as well as being ready to pursue criminals before they get half a day's start, as at present. The Aqueduct police have reached here in four minutes from Cornwall, 1½ miles away, when telephoned for.

Keep a dog, eh? Fine—if they'll let you *keep* him! But a dog is only good when backed by a man—with a gun. I've been told chickens were stolen in Cornwall under the noses of a bunch of bulldogs so savage they nearly killed an honest man in the daytime. There are several ways of getting 'round a dog!

LEO A. MAPES.

Orange Co., N. Y.

"CHICKEN BUSINESS" IN SWITZERLAND.

The chicken boom is on in this country, and the hen fever has a high temperature. Some of the gentlemen who are responsible for this, ought to move over to Switzerland and give the Swiss a run for their money, and then get the money. Consul Phillip Holland, Basel, Switzerland, makes a curious report of poultry conditions in his district. He says the average Swiss farmer considers his land too valuable for raising chickens. In the Spring and Fall the birds run in the field, but when the crop starts, the hens are shut up. The result is that cooking eggs are imported from Italy. Fresh eggs appear to be worth 40 to 60 cents a dozen the year round. There would seem to be a wonderful opportunity for our friend Philo, (better than in Florida), or some of the other poultry system-makers. Why should they waste their energy in a country like this, when the Swiss do not keep chickens, because there is only room enough in the backyard for the pet dog? These gentlemen ought to be able to tell the Swiss people how to convert that dog kennel into an egg factory, which would turn out several hundred eggs a week. Mr. Holland says that after a careful search he found only one incubator in Basel, and that was a baby incubator. Certainly here is an opportunity for a poultry contest to see which manufacturer can strike the Swiss market in the quickest time. Mr. Holland makes the following statements about the poultry market. He says that young roosters are called by what he terms a polite fallacy, "pullets," and that the Swiss have no way of telling the difference except by hunting for the spurs.

Search as one will, it is not likely that a hen, fat or lean, young or old, will be found in the local markets. The only chickens prepared for the market are the young cocks, the surplus of which are killed, their body feathers picked off, and the chicken, including head, feet, and entrails, retailed at 50 to 60 cents a pound. The pullets and hens are kept for brood purposes. If a hen, through age of service, should cease to be prolific she, too, might be killed, after being fattened, and offered for sale. There is an instance of this which has been ascertained by diligent inquiry. However, when an offer was made to purchase, the would-be buyer was told that the hen was good only for soup, as it would be a useless waste of fuel to render the fowl tender enough for eating. The hen appeared fat and eatable, but the market man demonstrated that he was telling the truth by showing that it was impossible for a strong man to break the breastbone, which is the usual pre-cooking method of ascertaining whether a chicken is tender.

The average farmer usually keeps 12 to 20 hens, and no one seems to think of raising chickens for profit. Such a practice as killing hens after their first season is unknown. The Swiss seem to believe that hens improve with age, perhaps something after the manner of old wine. Thus, old Spot, or Speckle, will be kept until she drops dead, and is as much a member of the family as the veteran old horse or cow.

FITTING SOIL FOR VIOLETS.

I am in the greenhouse business, growing violets. I have a dark, heavy loamy soil. For my next year's soil I have put on one ton of ground lime to the acre; I have plowed a crop of rye and a crop of clover. My soil seems to go down hard after it has been in the greenhouse a while, and it gets a green moss on it. It seems to get a crust on it, and I do not get good root action. What do you advise? B. B.

Red Hook, N. Y.

The soil here described is evidently very similar to our own, and judging from our experience would suggest that it is deficient both in humus and lime. It was a great mistake to plow the rye or clover and leave the soil bare during the Winter, and the best thing that can be done now would be to procure 50 to 75 tons of horse manure and spread over the acre you wish to remove to your violet houses during the Summer. If you do not use an acre of soil, manure what proportion you do use at rate of 75 tons per acre. Even more will not do any harm, as the best crop of violets we ever grew was in a house built over a piece of land plowed in Spring, containing a heavy stand of clover, and having a coat of manure so heavy plowed under that each furrow was filled before the next one was turned on it.

Plow the manure you put on early in Spring and sow a heavy crop of turnips or any quick-growing crop that will add humus, to be disked and worked in soil before removing to house. This green crop should be disked and turned under several weeks before soil is to be used. After soil is in house, and is being prepared for planting crop, apply half ton per acre of hydrated or thoroughly air-slaked lime. If the green mold appears apply more lime after plants are set, and work soil up lightly between plants, then water at once. Do not be afraid to use lime, as high fertilization and a large amount of humus require plenty of lime to correct accidity.

If you can spare the land, take a plot the size you generally use this Spring and sow a heavy crop of cow peas in May. Plow these under about August 15. Apply lime, a ton or more per acre (I do not mean ground limestone, but burned lime, finely slaked); then sow at least one bushel Hairy vetch seed per acre, which plow the following Spring when 12 to 18 inches high; then apply good coat of manure and disk it in and keep stirring up every few weeks till wanted. This treatment will have to be supplemented with chemical fertilizers according to crop requirements. We have never yet found anything better than vetch to cover the ground during Winter and make it in fine planting condition in Spring.

ELMER J. WEAVER.

Pennsylvania.

BREEDING STOCK IN RICE.

We hear about the importation of purebred stock from foreign countries for the purpose of improving our flocks and herds. Tom Barron's Leghorns are coming, and cattle from the Channel Islands, and Scotland, horses from France and Belgium and even sheep from Asia to improve the fleece of our native sheep and make it pass as fur. This "pure blood" is not confined to living animals. There is, also, "pure blood" in plants. Agents of the Agricultural Department go all over the world hunting for valuable new plants—all the way from Alfalfa to water-cress. You might not think it, but some of

WEST AFRICAN RED RICE FOR BREEDING. FIG. 156.

this pure blood is shown in the picture at Fig. 156. This is West African red rice. Two plants are growing at Crowley, La., as shown in the picture. The plant shown has spread to a diameter of nine feet. This red rice in its present form may not have commercial value in this country, but it may be used in hybridizing experiments with our domestic rice. It is possible that by such crossing a new type of rice may be developed which will prove stronger and hardier. Thus this rice plant may be called imported stock for breeding.

HILL STRAWBERRIES AND FERTILIZER.

We have frequently been asked to tell how strawberry plants grow in the hill system. The picture at Fig. 157, taken from Bulletin 113 of the Missouri Experiment Station, gives a very good idea of the matter. Our plants grown in hills present just about this appearance when they are dug up. Under this system the plants are set equal distances apart. Formerly we set such plants three feet each way, but 2½ feet seems a more practical distance. They are well cultivated, working both ways with the horse, and also hand-hoed. The runners are chopped off as they appear, unless it may be that four or five strong plants are put down at equal distances from the parent plant, and well hoed around it. When runners are kept chopped off the plant grows about as shown in the picture, with a large number of crowns grouped or bunched to-

HILL OF STRAWBERRIES. FIG. 157.

gether. When such a plant is fruited it will make a spread on the ground as large or larger than a peck measure, and on good soil, and with fair culture, the yield is frequently enormous. There is a good deal of labor about this system, and certain varieties are better for hill growing than others. Most growers prefer to let the runners grow, and thus make a matted row of plants.

In the bulletin mentioned experiments were made and it seems clear that this removing the fruit stems early in the season. The result of this cutting out was an increase in the number of runners, and it seems clear that this removing the fruits stems on young plants, certainly hastened the beginning of runner formation, which, of course, with the plant grower would be an advantage. As for the use of fertilizer, where nitrogen was used in the Spring, the plant was forced into a very vigorous growth. Runner formation was increased, and there were fewer plants set. This has been our own experience in applying nitrate of soda in the Spring. The plants are forced into a larger growth, and the berries are of good size. But this nitrogen seems to stimulate the plants so that the crop is really smaller than it would be without the nitrogen. In Missouri the experiment showed that acid phosphate gave a profitable increase with strawberries. There was little return from potash, either in crop or in quality. Nitrogen applied one year before the crop is harvested gave fair results, dried blood seeming to be better than nitrate of soda. When the nitrogen was applied in the Spring of bearing, it did not give satisfactory results.

"A FARM IN VERMONT."

We are seriously considering the purchase of a 240-acre farm in Vermont—100 acres tillable, 50 acres pasture. The farm is on the southern slope of a mountain, and has an elevation of 1,000 feet. Our idea is to set out an apple orchard of several thousand trees, and while the orchard is "making good" to go into the poultry business, as we have had quite a lot of experience with raising chickens. We would also have either beef cattle or milch cows and probably a flock of sheep. Do you consider the location a good one for a commercial apple orchard and for poultry? As we shall want to do some general farming and are perfect greenhorns, we would greatly appreciate it if you would make out a list of just what machinery we ought to have to get our crops in and out of the ground with the least expenditure of time and effort. As there will be only two men on the farm we want the implements that do things in the latest style, and we want to start in with the proper equipment, but no frills. We all love to work and fancy we shall be satisfied in that respect on this farm. Do you think we can make a "go" of it?

New Jersey. E. D. A.

Given a 240-acre farm in Vermont, 100 acres tillable, 50 acres pasture and the remainder assumed to be woodland, what advice may be given by letter to the prospective purchasers of such a farm (who are self-nominated perfect greenhorns) as to how to proceed to develop an orchard on this farm and make a living in the meantime, what machinery to buy to do the work efficiently, etc.? Since the prospective buyers of this farm live outside of Vermont I would advise them, first of all, to visit this farm in the Spring, when the ground is bare of snow, and satisfy themselves that the farm is as represented. I would advise them to talk with disinterested persons in the neighborhood about the farm, and get all the information possible concerning it. I would advise a person never to buy a farm at a distance, which he has never seen, on the word of a party unknown to him, unless information is obtained from disinterested parties of known responsibility. Many cases that have come to my notice of disappointment and failure would have been avoided had these precautions been followed.

This question is also hard to answer, because no information is given as to the financial ability of the purchasers. If sufficient capital can be commanded it would, of course, be best for an experienced person to at once plant out an orchard of the size desired. But for an inexperienced person with capital to do this would be to invite a chance of failure and for an inexperienced person with short capital to do it would be to invite disaster. I would advise the planting of a few acres for the first year in order that experience might be gained.

I would pick out some of the land best suited to orcharding and set out the trees, after having plowed the land deeply and having thoroughly harrowed the soil. Not, however, being an orchardist, I do not feel competent to give specific advice in this connection. I would raise between trees some crops in order to pay the expense of cultivation. Potatoes, beans or a low-growing flint corn might be used for this purpose. That portion of the meadow land which was well seeded with clover or grasses I would top-dress with chemicals. A dressing of 250 pounds per acre applied in the early Spring, about the time the grass begins to start, of a fertilizer made up of 1,000 pounds of nitrate of soda, 700 pounds of acid phosphate, 300 pounds of muriate of potash, would give a great stimulus to the grass crop. The portions of the meadow which did not give promise of a good crop of grass I would plow and sow a part to oats or barley and plant corn on the rest.

These are simply suggestions as to how the land may be handled in order to raise crops which may be used in feeding stock and poultry, although this may not be the best way of handling it. I dislike nothing so much as to give advice of this nature at long range, without knowing the farm or the circumstances of the owners, because I feel that such advice is not likely to result in all cases in benefit to the recipients. Apply to the Extension Department of the University of Vermont for advice regarding the handling of the farm after possession is taken. E. S. BRIGHAM.

"MY FRIEND, THE DOG."

Every time we print the word "dog" in THE R. N.-Y. we seem to start up a combat. Evidently there are a large number of people in this world who have absolutely no use whatever for a dog. These dog haters, for such they may clearly be called, believe that a dog has no redeeming quality whatever; that he conveys the disease of rabies, that he is an untamed, ungrateful and thoroughly useless animal, liable to bite and destroy his playmates at any time. Others go so far as to say that those who keep dogs and make so much of them do so because the ignoble nature of the dog prompts him to fawn upon such people and give them a sort of devotion which they could not possibly command

AIREDALE TERRIERS AT PLAY. FIG. 158.

from human beings. They also refer to what they call the senseless folly of women who lavish their affection and their money upon these useless and pampered dogs when there are children lacking proper food within gunshot of them. That is one side of the story.

On the other hand, whenever the dog is up, we have numberless letters from people who claim that the dog in general, their dog in particular, is next to the human being in intelligence, devotion and power of affection. These people give instances which they think prove the position they take. We have letters from people who tell how faithful old Dick or Shep saved the lives of their children or lost their own lives trying to protect their master's property. Right in the same mail will come letters from the dog haters who tell of friends stricken with hydrophobia which came from the mouth of some useless dog.

There seems to be no way of reconciling the dog lovers and the dog haters and bringing them together into any fair compromise. It is a fight to the death on the part of the dog haters and a defensive fight on the part of the dog lovers. We should say that the latter are gaining ground, as dogs are bred more carefully and trained with greater system.

As a contribution from the dog lover's side we show the pictures which are given at Figs. 158 and 159. The owner of these dogs, Mr. Lowder, gives the following note about them. Surely here is a case where the dog is useful, yet the dog haters will have their arguments ready to show the folly of keeping these animals around.

"WORKING LIKE A DOG." FIG. 159.

"I thought perhaps it might be of some interest to the readers of THE R. N.-Y. to know the usefulness of the Airedale on the farm. The enclosed pictures show my dogs at work. My place is entirely free from vermin, they haul my kindling wood, and make themselves very useful in general. They are the best watch dogs, as I have a poultry plant and have never lost a bird from night prowlers, etc. They are an all-around dog, and the most teachable I have ever owned." WM. A. LOWDER.

New Jersey.

THE PRUNING OF APPLE TREES.

PART II.

The orchard tree is an artificial tree in every way. The object in cutting back the young growth is to balance the tops and remove weak or diseased wood, also to remove the terminal fruit bud from the leading shoots of varieties such as Yellow Transparent apples. Where trees are properly fertilized and cultivated there should be little call for cutting back, aside from occasional pinching back of the stronger tips during the growing season so that the tree will not be one sided. This work need not be expensive and the writer has found that removing these growing tips when the twig has reached a length of from 14 to 18 inches will produce better shaped trees, with stronger limbs than trees gone over once a year after growth has stopped.

By going over the trees twice during the growing season the trees can be kept in the best shape, and it also gives one the opportunity to remove young watersprouts and suckers before they have used much of the food needed to produce good limbs. That old adage, "an ounce of prevention is worth a pound of cure," is just as true in the pruning work as in any other. The chief difficulty lies in the finding out what to prevent. The question of disease is an easy one so far as pruning goes. It is only a matter of thoroughness and getting at it in time. It is the determining and producing the ideal shape for a practical tree that puzzles the average man who attempts the pruning of young trees, as there is much discussion between various growers as to the proper shape for a fruit tree. Some claim that a central stem should be retained and series of side branches be trained from this at various heights. This will do very well for the first 20 years or so of the tree's life, but after that the top will grow so much faster than the lower set of side limbs that these lower limbs will be crowded and become worthless unless an expensive system of pruning is practiced to restrain the growth of the upper limbs.

There are many reasons why the modified vase form is the ideal tree. It gives a round head with an open center, which at once is the most economical to prune, spray, and to harvest fruit from. The open head admits sunlight to the center of the tree, which increases the general health of the tree as well as the quantity and quality of the fruit. If a main limb is partly or wholly lost, one can fill the gap more easily than he could if the tree had a central stem.

We cannot do efficient work if we do not have the proper tools. An ax is about the worst tool that could be used to prune a tree with. It cannot be used with any degree of accuracy or safety, and it is almost impossible to do a neat job. In spite of this we find many people hacking at their trees with an ax and thinking they are doing a good job. On the other hand we find people spending much money on tools they cannot use to advantage on a practical job. There is almost as much money wasted on needless and unpractical pruning tools as has been wasted on the worthless iron spray outfits found on nearly every farm. It is amusing if not at times pathetic to see someone climbing around an old apple tree, cumbered with an assortment of saws, shears, and numerous hindrances to rapid and efficient work. A good narrow bladed saw, with teeth on only *one* edge is the best tool to use for the most of the work in the older trees. For very large limbs or stubs, an ordinary carpenter's hand saw with about seven teeth to the inch should be used. This makes a clean smooth cut and does the work with a fair degree of rapidity. A pair of the best quality hand shears is the most efficient tool for work on young trees. Cheap ones are worse than useless on a practical job. A pair of long-handled clippers are useful where suckers are to be removed from around the roots of the tree.

Pole pruners with a 12-foot pole are useful to help remove brush as well as to cut small twigs and branches that cannot be reached easily from the inside of the tree. A ladder and paint outfit will be needed for work on larger trees. Experience has taught that these tools are all that will be required on any job one might be asked to do, excepting the treating of decayed places in limbs or trunk. When young trees are being pruned only the hand shears and small saw are used; while in old trees each one of the whole outfit will come in play at sometime or other. Above all things get the *best* tool of its kind that can be bought. The buying of proper tools is not a hard task; it is the using of these tools properly that taxes mind, body, and last but not least, patience. Patience and lots of it is an important factor in all lines of fruit growing. The tools should be kept sharp if one expects results.

R. B. GILMAN.

New Jersey.

Spring Rye and Clover.

I am thinking of sowing a small field with Spring rye, seeding with clover, in the hope of getting some grain for feeding and a crop of clover to turn under the next Spring. What would you advise? Can we expect a fair crop of grain from the Spring rye? H. C.

Our advice would be to sow beardless barley in place of the spring rye. This barley will give you more grain to the acre and feed of a higher quality. It gives also a better crop to seed the clover. Spring rye will do very well in some localities. It grows through a longer season than the beardless barley, and makes such a rank heavy growth that the clover does not have a fair chance.

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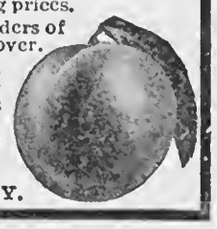

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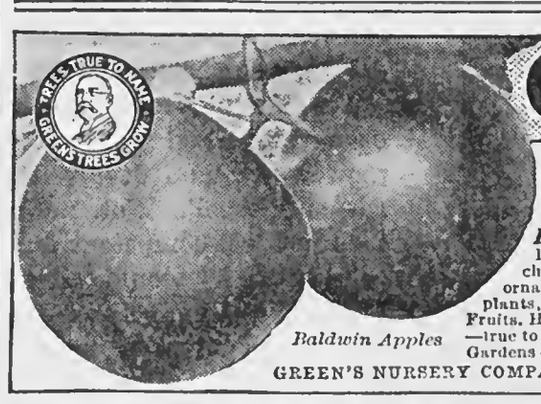

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Deal direct with us, the growers—not with agents. You save half and get better trees. There's no nursery like Green's for value. Our 35 years' reputation for square dealing is your guarantee.
Big Supply of Apple and Peach Trees.
Plum, pear, quince, cherry, grape vines, ornamental trees, roses, plants, etc. Best New Fruits. Highest Grade Stock—true to name. For Fruit Gardens or Orchard.
"Thirty Years with Fruits and Flowers" or C. A. Green's Book on Canning Fruits sent free. Finely illustrated tree catalog gives valuable information on care of fruit trees. Write today.
Catalog Free—Send for It
GREEN'S NURSERY COMPANY, 22 Wall Street, Rochester, New York

STARK TREES AT LOUISIANA, MO. SINCE 1816
Grand New Year Book
1914—just printed; shows fruits in actual colors and size. Full of valuable orchard information. Tells what, when and how to plant. *Mailed Free.*
STARK DELICIOUS The Most Amazing Apple Production in Two Centuries
(Trade Mark)
is fully described—its glorious record of twenty years in the American orchard is accurately given. No one with room for a single tree can afford to be without this marvelous fruit. Of exquisite flavor—large, brilliant, waxy red. The book is *free*. Write for it.
Stark Bros. Nurseries and Orchards Co., Box 123, Louisiana, Mo.

THE NEW BERRY CULTURE.

PART II.

The most important point in all this system is thorough cultivation, which means cultivation right through the picking season. With the new canes nearly full grown and the bearing canes maturing a crop of berries in the hottest and driest time of the year, it is of the greatest importance that we save every drop of water possible. The pickers tramp the surface until the sun has the best possible chance to get the water. For best results the patch should be cultivated after each picking. Any lack of moisture at this time will quickly, and surely reduce the crop and under the common system, where cultivation is discontinued when picking begins, this lack becomes so serious as to bring an excessive strain on the vitality of the plant, which shortens its lifetime. This is one reason why cane berry plantings are exhausted and useless at four, five, or six years, when they should be vigorous and profitable at twice the age.

We allow not more than six canes of red raspberries in one hill, and four or five of blackberries are plenty. All new canes are carefully removed between hills. It is worse than useless to allow more canes to grow than are needed, as we are certain that we get more fruit from this number of canes than we could from twice as many. It is very important that the row be kept narrow. All canes that come up outside the row are taken out, no matter how vigorous they may be. The canes are allowed to grow to their full height without any cutting or pinching back.

The red raspberries are spread out fan-shape and tied, spacing them so that they are an equal distance apart all along the upper wire. Then the tops are cut off, leaving them 5½ or six feet high. Were we sure of plenty of moisture we would not trim at all. With the blackberries there is an important difference in pruning, because they positively will not produce berries on the part of the canes that was much shaded last year. The first year there is no shade; the second not much, as the new growth is much higher than that of the first year, but after the canes reach their full size, the new shoots must push their way up through a mass of bearing canes, and the first four or five feet is so shaded as to be almost useless as far as the fruit it bears is concerned. This may be the reason some say the second crop is the best they ever get. After the second year we bend the canes down over the upper wire, tying the tip to the lower wire onto another cane when more convenient. If they have branched freely we cut out part of the branches, or take out entire canes, always remembering the top is the best part of the cane. Then our new canes grow up from three to five feet above the old growth, and have the full benefit of the sunshine, while the bearing canes ripen their crops just as nicely while partly shaded.

This tying takes time and patience, but we must have the canes all snug in a space which should not be more than a foot wide at the bottom so that the cultivator may be run close. We have a cultivator four feet wide with adjustable handles which may be set to one side, so that after the fruit spurs grow and the rows spread out above, the cultivator may be held close to the row without scratching the hands. It also has a set of V-shaped sweeps, which are used to cut off all the suckers that come up between the rows. Two horses and a spring-tooth harrow may be used for awhile in the Spring, but after the berries form and the rows have widened out we use the single cultivator.

The soil should be good, but the berries do not seem to require heavy fertilization. We use commercial fertilizer rather than manure, as we have been getting all the cane growth we want, except when our red raspberry canes were damaged by June freezes the last two years. I consider the moisture problem far more important, and difficult than the fertility, for, with berries selling at from $2.50 to $5.10 per bushel, we can easily afford to buy all the fertilizer needed.

Few growers realize how sensitive the red berries are to any lack of moisture, or that they almost never get the entire crop to mature. The crop may be reduced one-third to one-half without the grower having noticed that, unlike the other berries, the red raspberry, when the moisture runs short, will concentrate its energy on the berries that are fairly well formed, maturing them nicely, while the small ones and thousands of blossoms which should have made berries die. The cultivation should be just deep enough to maintain a good dust mulch, as deep plowing breaks up the roots and does more harm than good.

This system requires about 275 posts per acre and 320 pounds of wire. We use posts somewhat higher than average fence posts, and if set with a digger many posts may be used that could not be driven. This seems like a heavy expense to begin with, but it is done once for several years, and when the crop returns are from $200 to $400 per acre we can well afford it. We claim for this system that it produces very much larger yields, that the berries are more easily picked, and that the profitable lifetime of the planting is doubled, compared with berries allowed to grow too thick and not well cultivated. The writer saw in one day one patch of blackberries, one of red raspberries and one that contained both which were 14, 15 and 17 years old respectively, and all were still vigorous, and profitable. These berries were growing on a very deep soil which, while the surface was well drained, had a permanent supply of water only a few feet below. It was on this soil that the large yield mentioned was grown. Within a mile was another field of red raspberries on a different type of soil which produced very well for the first few pickings, then stopped short, while those with plenty of moisture were just about in the middle of their harvest. We need a fertile soil, but fertility is of little value when the water is exhausted, for plants can take their food only in a liquid form, and we cannot make soup without water B. V. EGBERT.

"Mand's Wonder" Forage Plant.

I have just seen in a 1914 catalogue a picture and a description of Mand's "Wonder Forage Plant." The statement is made that the seed is unequalled for poultry food. Inasmuch as we are beginners in the poultry business, we would like to know if you are acquainted with its merits, especially as a food for chickens? P. P. M.

Connecticut.

"Mand's Wonder' forage plant appears to be simply Pearl millet, Pennisetum typhoideum or P. spicata, of different botanists, a very rank-growing millet of unknown origin, long cultivated in Asia and Southern Europe for forage and to a less extent for its seeds, as food both for stock and humans. It was introduced to this country with considerable flourish by mail-order seed houses about 20 years ago under the names of Pearl millet and Penicillaria as a wonderful new plant for forage and chicken feeding purposes, though it had probably long been grown in the South in a small way. Although possessing much merit Pearl millet cannot endure competition with corn and the sorghums where these invaluable economic crops can be grown, and little is heard of it now, except as a novelty crop on the trial-packet basis.

Pearl millet grows well under ordinary cover crop conditions, and if sown in rich soil with a long season and sufficient rain will grow many feet high and produce quite a lot of excellent chick-feed, but as good or better results with less labor may be had with any suitable variety of field corn or maize, or in drier localities the sorghums known as Kaffir or Egyptian corn.

As a forage plant Pearl millet will produce under favorable conditions an extraordinary amount of green fodder if frequently cut during the growing season, but if left too long the stalks soon become woody and are not relished by cattle. As a soiling crop for small areas of rich land in most warm localities Pearl millet is worth attention, but must inevitably retire before corn where the latter can be well grown. V.

MACKENZIE was having his first experience of life in American forests. Borrowing a gun, he set off one day in search of game. Not long afterwards his companion saw Mackenzie in the distance running at full speed, a big bear behind him. "Quick! Quick! Jock," Mackenzie cried. "Open the door! I'm bringing him home alive!"—London Farm and Home.

Change houses into homes!

"The farm house that's so often untenanted."

The original owner had liberal ideas—big, airy rooms; plenty of big windows to let in the light and wholesome sunshine; and big, arched openings between the rooms instead of cumbersome doors. But he made the one big mistake—he put in old-fashioned heating—and he and every succeeding owner and tenant has found the place "big and barny"—so full of chill corners, drafty passageways and cold floors. In thousands of such farm houses formerly handicapped by old-fashioned heating it has since been proved that the one unfailing way to cure houses of cold and lack of tenants is to put in an outfit of

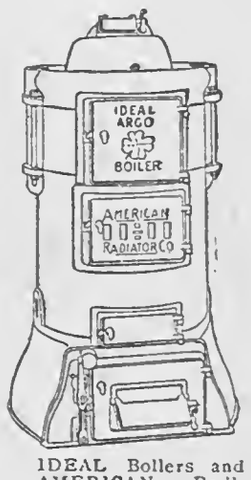
AMERICAN RADIATORS & IDEAL BOILERS

For the 3-room cottage up to the largest public building, we make IDEAL Boilers and AMERICAN Radiators in every size and kind exactly suited to the needs and incomes of farmer, wage-earner or salaried man.

IDEAL Boilers are made in different forms to burn to highest heating advantage hard or soft coals, screenings, run-of-mine, coke, wood, oil, gas, etc. Their heating capacities and economies are figured from scientific standards—fuel-holding capacity; fire and flue heating surfaces and their position (around and over the fire); time each fuel charge will last; draft and check-damper heat regulation, etc. These things are absolutely *known*, so that he who pays the fuel bills can be sure to get the highest possible heating results and economies from every pound of fuel—*and with the simplest care-taking.* Need not be connected to water supply pipes; the same water is used over and over, for many years.

A No. 4-22-W IDEAL Boiler and 400 ft of 38-in. AMERICAN Radiators, costing the owner $200, were used to heat this cottage
At this price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which are extra and vary according to climatic and other conditions.

If you have a farm or town home, store, church, school, bank, hotel, etc., that is lacking in cozy warmth, let us send you our full story of cleanly, healthful IDEAL Boilers and AMERICAN Radiators that will last for scores of years. Ask for book (free): "Ideal Heating."



IDEAL Boilers and AMERICAN Radiators keep a NEW house new and cause an OLD house to have its life and value prolonged

Showrooms in all large cities

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ORIGINAL EMERSON
Gearless Hay Loader

The one that draws the easiest; no part of the Emerson Gearless drags; the rear of the machine is carried on wheels; needs fewest repairs as it has no gears, no chains, no sprockets, no drums, no webs, no springs, not a single complicated part to break down during the rush of the hay season; the loader that is easiest on the man; having the longest stroke of any loader, it will push the hay further forward on the wagon; it will not tear up the stems and leaves.

Emerson Haymaking Tools

Send for Free Book "Making Hay the Emerson Way." Illustrates and describes Gearless Hay Loaders and Emerson Standard Mowers, Hay Rakes, Alfalfa Self Dump, Side Delivery Rake and Tedder, Sweep Rakes, Hay Stackers, etc. Line backed by 60 years' reputation. Address

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Buy custom-made, oak-tanned harness direct from factory at wholesale prices. We can save you money on any harness. All harness guaranteed—money back if you are not satisfied.

KING HARNESS
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All leather tested by experts. Over 31 years on market. Our big free catalogue illustrates over 75 styles for all purposes—sure to show the harness you need Send for it today. We also sell Horse Clothing and Fur Coats. Ask for Catalogue " ."

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CAN YOUR BOY DRIVE A TEAM?

Then turn your walking plow into a sulky with a

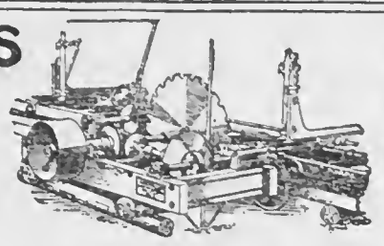
WINNER PLOW TRUCK

and let him plow while you do work too heavy for him.

You get 10 Days in which to see whether it's worth the money. If you think it isn't, we return your money and pay the freight both ways. To buyers in new territory we make a Special Introductory Offer. Write today for this offer and our Free Book. Make your boy a full man.

Lewis Mfg. Co., Box C, Cortland, N. Y.

SAW 10 LOGS WITH AN AMERICAN SAW MILL



AND GET LUMBER WORTH $25 TO $40

Ten 16 foot logs averaging 14 inches thick make 1000 feet of lumber worth $25 to $40 in your local market. Costs you only $4 to $5 to saw 1000 feet with an "American" Portable Saw Mill. Think of the profits! Why, that timber on your wood-lot is just like wheat. Reap it with an axe. Harvest it with an inexpensive, light running "American" Portable Saw Mill you can operate yourself. No experience needed. An 8 H.P. gas engine and an "American" mill saws up to 2500 feet per day. Get an "American" because it saws more and better lumber with less help and power than any other. Make big money every winter when the farm doesn't need you. Hundreds of farmers are doing a paying lumbering business with "American" mills. You can do the same, for there are wood-lots around you if you have none yourself. Read enthusiastic letters from farmers in our free Book No. 26 that tells all about farm lumbering.

Write our nearest office today for Free Book No 26

AMERICAN SAW MILL MACHINERY CO. 129 Hope Street, Hackettstown, N. J.
Chicago Savannah New Orleans Seattle 1383 Terminal Building, New York

If the average Farmer is as shrewd a merchant as he is said to be—and we *know* he is—the fact explains why so many Mitchell cars are in *daily use on the farm.*

It is because the Mitchell is a sturdy and lasting proposition and may be maintained with maximum economy that the farmer finds it suited to his needs. When he buys it he realizes that he has made an investment which *pays big dividends in efficiency.*

The car that does the most work, lasts the longest and can be kept up with the least expense for repairs, is *the car that the Business Farmer needs* and this we declare to be the Mitchell because years of experience have *proved* it definitely.

The purpose of this advertisement is to request you Business Farmers to go at once to the nearest Mitchell dealer, examine the car carefully, take a ride in it and *drive it yourself* so as to get the *personal feel* and the *personal touch.* If it proves its merit it is the car you want. That's the *only way* to *buy* an automobile and the only real way to *sell* one.

Equipment of All the Mitchell Models That is Included in the List Prices:

Electric self-starter and generator—electric lights—electric horn—electric magnetic exploring lamp—speedometer—Tungsten valves—mohair top and dust cover—Jiffy quick-action side curtains—quick-action rain vision wind-shield—demountable rims with one extra—double extra tire carriers—Bair bow holders—license plate bracket—pump, jack and complete set of tools.

Prices F. O. B. Racine

Mitchell-Lewis Motor Co.

Racine, Wis, U.S.A.

850,000 GRAPE VINES

69 varieties. Also Small Fruits, Trees, etc. Best rooted stock. Genuine, cheap. 2 sample vines—10c. Descriptive price list free. Lewis Roesch, Box D, Fredonia, N.Y.

STRAWBERRY, RASPBERRY, BLACKBERRY, ASPARAGUS, VEGETABLE PLANTS

All leading varieties. Catalogue free. HARRY L. SQUIRES, REMSENBURG, N. Y.

Hubbard's BONE BASE Fertilizers

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GOOD SEED

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EQUALS

BIGGER BETTER CROPS

Trade Mark Registered in U. S. Patent Office

HUBBARD'S BONE BASE CONNECTICUT FERTILIZERS

Why not let us help *You* to have Bigger, Better Crops for 1914? The *Science of Fertilizers*, applied in a simple, practical way, will make the *Business of Farming* a great success.

Write today for our booklets, "**Soil Fertility,**" "**The Grass Crop,**" "**The Apple**" and **Hubbard's Bone Base 1914 Almanac,** which contains much valuable information about soil, fertilizers and other farm subjects. Sent free to any address.

THE ROGERS & HUBBARD CO., Address Dept. A, Middletown, Conn.

Office and Works, Portland, Conn.

EXPERIENCE WITH NURSERYMEN.

MAKING UP AN ORDER.—Two years ago, having decided to plant four acres to fruit trees, I sent for more than a dozen catalogues. This plan proved to be a good one, as some nurserymen seemed to be short on some sorts, and the prices seemed too high on such; while another's price might be reasonable he might not have all the varieties or size wanted. When it came to quality and freedom from disease, I only had their word for it. Besides, not having dealt with a majority of the firms I decided to divide my order. This plan also proved a good one, as some of the stock was unsatisfactory; in other cases there was delay in shipment or no shipment at all. Having spent considerable time trying to find out what few commercial varieties would probably prove most profitable under my conditions I was not inclined to want some nurseryman to substitute something "just as good" in place of varieties ordered, so I sent my orders in February with instructions to ship April 15. I was especially anxious to get just the varieties of apples ordered, as these were to be the real orchard, with the peaches, cherries, plums and dwarf pears for borders and fillers. This method of planting is open to criticism, but I am also raising poultry, and want plenty of shade. By taking good care of the trees, I hope to get several crops of fruit before it will be necessary to cut out the smaller fruits.

VARYING VARIETIES.—In reading over the average catalogue one is led to believe that each variety of peaches, for instance, is at least good, better or best. This may be true under varying conditions. Some of the most profitable varieties in favored locations are almost worthless in others. Why cannot a nurseryman state under what conditions a certain variety is at its best and tell prospective buyers what conditions to avoid? Of course this advice would of necessity be general. Of the dozen or more catalogues received just one did this. A tree may bear excellent fruit, but the tree itself may be such a poor grower or so subject to disease, or such a shy bearer, or the fruit may have some fault or defect that may make it almost worthless from a commercial standpoint, but we seldom find anything about it in the average catalogue. A long list of varieties seems very impressive to the novice, and is the means undoubtedly of making many sales as well as disappointed customers. Would there not be more profit in growing and shipping 100,000 trees of 10 varieties than of 50?

MORE INFORMATION WANTED.—There may be an excuse for so many varieties, because where one lives in a favored location he likes to grow the better sorts which might not succeed under other conditions. Why not give some hint as to the conditions necessary for a certain variety to do its best? Some varieties are described as medium to large. To his disgust the grower finds the tree bears undersized and almost worthless fruit. If the catalogue had stated that this particular variety *when properly thinned* would produce good-sized fruit the nurseryman would probably have retained a valued customer, while the latter would have got profitable returns for time and money spent, while otherwise he grubs out valuable trees in disgust, thinking the nurseryman had willfully misrepresented this particular variety or had sent him a worthless substitute.

A CASE OF CROWN-GALL.—About the middle of April the trees began to arrive. Among the first lot were some Sutton trees. After setting a few trees I became suspicious of crown-gall. Never having had any experience with this before I wanted to go a little slow. I took a three-inch section of one of the supposedly affected trees and sent it to the experiment station for examination and heeled in the rest of the "suspects" and waited for a reply. This came in due time advising me to destroy every affected tree. I destroyed just one-half of the lot. A number of Grimes were added to the Sutton's discards. I wrote the firm from whom I bought the trees. They acknowledged they had some crown-gall in their nursery, but insisted that this was of little or no damage to a tree, citing as evidence that they had been offered a price for all their diseased stock by an experienced grower. At the same time they seemed anxious to replace the trees the following Fall or Spring as I might wish. As I had set one-year-old trees I asked them to furnish me their best two-year-old trees, I to pay the difference, if there were any, so that all my trees might be as uniform in size as possible. Last Spring the new trees came and they were as fine a lot of trees as I ever saw. The bunch of Suttons had just *two and one half* tags on, one marked "Sutton," one "Wagener," the other half "Wag"—the name of the employee, I suppose who forget to remove the original labels.

LATE STRAWBERRIES.—My original order included several hundred strawberry plants. I waited till nearly the first of June and wrote them about the matter. They replied saying it was too late to ship the plants, returned the money and expressed the hope that I would see fit to order again. Neither their hopes nor mine produced many fancy berries the following season.

MORE TRIALS.—Another lot of trees from a different source contained 10 diseased trees. These were replaced as in the former case. Three out of these 10 were diseased. I am looking daily for that nurseryman's 1914 catalogue, as I am still much interested in fruit and I do enjoy looking at the beautiful products of the lithographer's art. During the last week in May I received 400 out of a thousand strawberry plants ordered from still another grower. Money was returned for plants not shipped. The weather was dry and hot and the plants, evidently, had been in cold storage. One variety especially was entirely brown except for a spindling little white sprout in the center. I wrote them about this shipment and they replied that they could not supply the other varieties, and that if I had not specified no substitution in my order they would have been able to furnish me the whole thousand plants of varieties that would do me as much good as those ordered. They did not explain why it took them three months from the time the order was received till it was shipped to discover that they were short on those particular varieties. Neither did they explain how I was to get a crop the following year from the 400 worthless plants and the 600 they didn't ship.

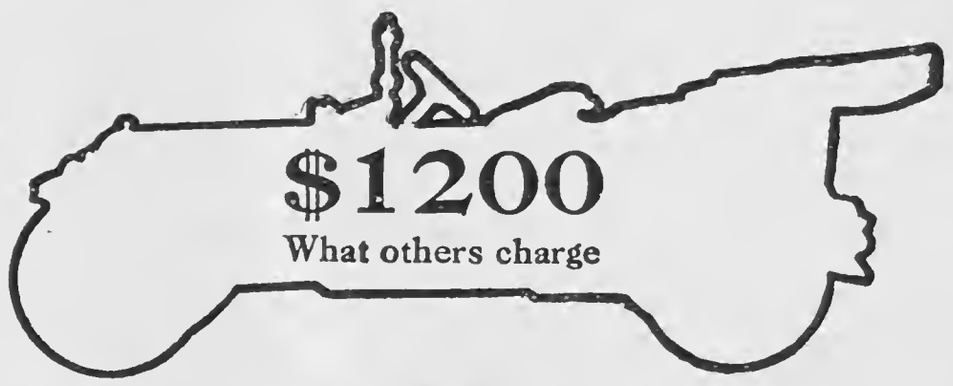
DELAYED TRAVEL.—I ordered nearly 3,000 raspberry and blackberry bushes from a nursery company less than 150 miles distant. This shipment was 19 days on the road. My father had a shipment billed out from the same place on the same day which reached here 10 days ahead of mine. Of course many of the plants died, due to no fault of the company shipping them. Out of 2,500 strawberry plants ordered that Spring, 450, all from one firm, lived and did well. In this case the plants were vigorous, fresh-dug and shipment prompt.

VALUABLE EXPERIENCE.—My experience has been of value to me. I have learned that those who toot their horn the loudest, frequently do so through necessity, and that those who make the greatest claims for honesty, square-dealing, superior stock, unusual facilities for handling orders, long years of experience, etc., do not always measure up to those who devote their catalogues to fair descriptions of their stock. I learned also that while a nurseryman's pear or apple trees, for instance may be exceptionally fine, his peach trees may be very inferior. It certainly pays, where one is to plant a considerable number of trees, to visit a few reliable nurseries, and compare quality and prices, especially the former, for, while the highest priced tree is not necessarily the best, the cheaper ones are frequently dear at any price. I have not had in mind in writing my experience in dealing with nurserymen creating the impression that, as a class, they are dishonest because this is not the case, as I found it, for I bought many lots of trees which proved highly satisfactory, and I realize that my experience taken as a whole was a little unusual. I am convinced of one fact, that is, one cannot make a fortune at once sitting beside the stove with a catalogue in one hand and a lead pencil in the other.

Ohio. J. D. PRICKETT.

HE: "I shall never marry until I meet a woman who is my direct opposite." She (encouragingly): "Well, my friend, there are numbers of bright, intelligent girls in this neighborhood."—Credit Lost.

Overland



You Think They Are Different—But Are They?

TOO many people are fooled or mislead by taking bare automobile prices as a positive indication of the intrinsic value of a car. This is exactly the wrong way to go about it. Because one article is priced higher than another it does not follow that that article has a greater value.

The picture above illustrates this point. Here are two cars practically identical. The one on the left is the $950 Overland. The one on the right is the average similar car—priced at $1200—which offers no greater value.

As a matter of fact there are any number of $1200 cars which are not, in value, the equal of the $950 Overland.

But how are we to know this?—you ask.

That's simple. Ask some real questions; find out some actual facts; make some specification comparisons—and then it is the easiest thing in the world to sum up the intrinsic value of any car made.

For instance:

The $950 Overland has a wheel base of 114 inches.

The wheel base of the average $1200 car is no longer than this—often shorter. So in this respect you get more for $950 than you do for $1200.

The $950 Overland has a powerful 35 horsepower motor.

No $1200 car has a larger motor than this. Here is equal value and, in most cases, more value for less money.

The $950 Overland tires are 33 inches x 4 inches—all around.

No $1200 car has larger tires. Again—equal value—our price $250 less.

The $950 Overland has a complete set of electric lights—throughout—the same as on most $1200 cars. Some out-of-date cars still cling to the obsolete gas lamps. In the first instance the $950 electrically lighted Overland is the value equal of the $1200 car, and in the second instance has more value than the $1200 (gas lamp) car. In either case our price is $250 less.

Next comes the matter of equipment. The $950 Overland is complete—a jeweled speedometer, top, curtains, boot, windshield, electric horn—everything complete. No $1200 car made has more complete or better equipment.

And so on throughout the car. Point for point—specification for specification, the $950 Overland is, in every essential respect, the equal of any $1200 car on the market.

So we warn you. Ignore the prices. Compare the actual facts first. Then compare the facts with the prices and you get the intrinsic value.

We are making 50,000 cars this year—the largest production of its kind in the world. And every Overland purchaser will save at least 30% and get a superior car.

See the Overland dealer in your town today. Then see any competing car. Make the comparisons we suggest. Then you will better realize how hard a comparison of this kind is, on any other car costing in the neighborhood of $1200.

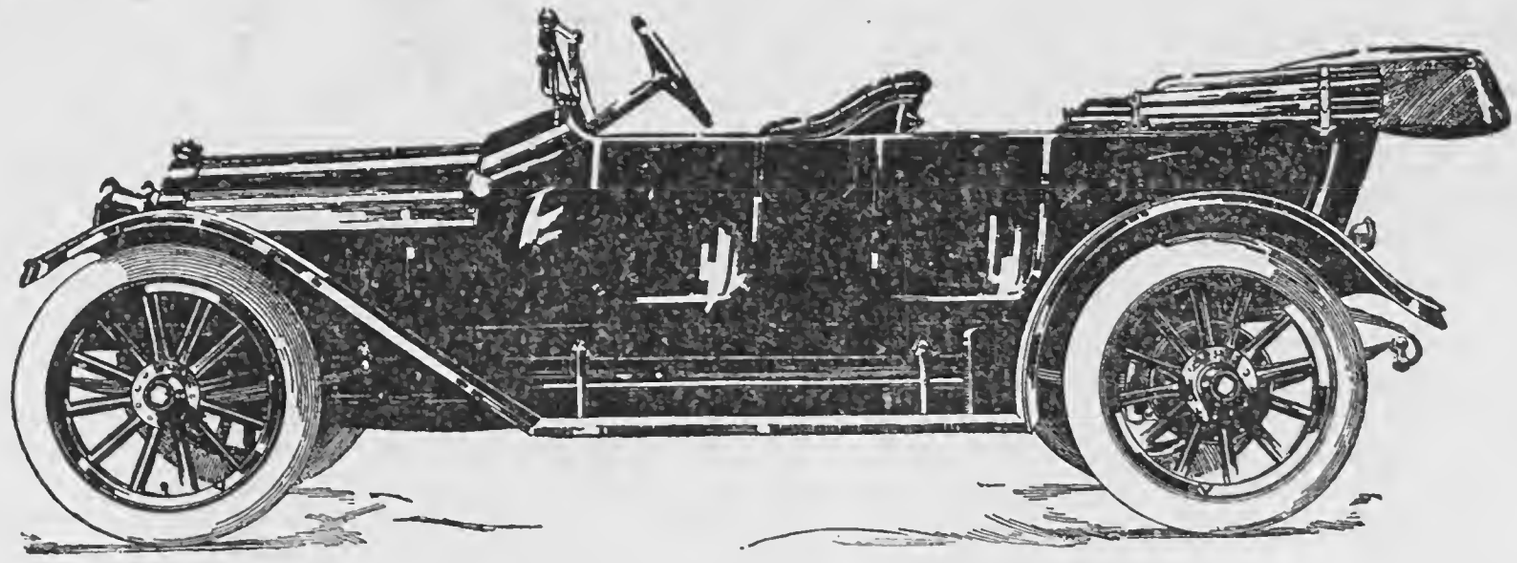
Handsome 1914 catalogue, complete information and dealers name on request.

The Willys-Overland Company, Dept. 127, Toledo, Ohio

SPECIFICATIONS OF MODEL 79T

Electric head, side, tail and dash lights
Storage battery
35 Horsepower motor
114-inch wheelbase
33 x 4 Q. D. tires
Three-quarter floating rear axle
Timken and Hyatt bearings
Deep upholstery
Brewster green body
nickel and aluminum trimmings
Mohair top, curtains and boot
Clear-vision, rain-vision windshield
Stewart speedometer
Cowl dash
Electric horn
Flush U doors with concealed hinges

With electric starter and generator—$1075 f. o. b. Toledo



Manufacturers of the famous Overland Delivery Wagons, Garford and Willys-Utility Trucks. Full information on request.

Chlorosis of Grape.

I have about three acres of grapes in one piece. Some of them turn yellow and in a course of time the leaves come back to their green color again. What is the cause of this? The vines are 10 years old, have fruit but shell off badly in picking. I would like to know what makes this, and a cure for them. Not only mine but the neighbors' grapes do the same. W. C. V.

Albion, Iowa.

Apparently, similar examples of the trouble here referred to have been quite numerous during the past three years in the Chautauqua grape belt. There is of course the possibility that they may not be the same. For want of a better name we have called the trouble chlorosis, although this should not be confused with the disease of that name quite common in France, and less so in California. In the beginning the two have many symptoms that are very similar. Again, this disease resembles the California vine disease in some particulars, but at the present they are not thought to be of similar origin. This so-called chlorosis appeared first with us on vines from four to six years set; the older vines in some cases developed the trouble, but it was largely confined to the younger plantings. In most instances the worst affected vines were located on rather thin soil, the subsoil being of a silty nature, and apparently very deficient in organic or humic matter, such a soil retaining but little soil moisture. In our experiences such conditions of soil are more commonly met on the knolls and slopes.

Many of the elements known to be necessary for the growth of plants were tried as possible soil correctives, but these did not affect favorably the control of disease. The belief now is that the trouble is directly due to a lack of soil moisture at the time the demand is the greatest, and that the conserving of the Spring supply by early plowing and frequent cultivation till midsummer is very necessary. The plowing under of green manures is especially to be recommended. Vines that show the symptoms should be marked the first year and short pruning should be practiced in the Fall and Winter following. When attention to these details is given the trouble has been considerably lessened. F. E. GLADWIN.

The Ben Davis Apple a Menace.

I have come to the conclusion that the Ben Davis apple is a menace to apple trade. It does more to reduce the consumption and price of apples than anything else, and the better-looking they are the more they injure trade. You see them on the fruit stands, all polished up three for 10 cents, Rome Beauty and Paragon the same price, a novice buys a Ben Davis and takes a bite, and in the gutter it goes and he buys no more apples for six months. The Ben Davis is a worse substitute for an apple than oleo is for butter, and the Government collects a tax on oleo. A Princeton grocer told me the other day he could always tell when Ben Davis came in the market; you can find them all along the street with one bite taken out of them. I well know there are a lot of orchards of them all through the country; they should be top-worked or cut down. The first loss is always the least.

It is against the law to pass counterfeit money. Why not make it unlawful to pass counterfeit apples? Growers ought at least to be made to label them Ben Davis when they are offered for sale, and then the people who raise edible apples, with a little advertising, could sell them, and then the consumption of apples would increase 50%. Apples all look alike to the average city buyer. The grocer and the fruit stand man buy the punky Ben cheap, sell a few at high price, and there you are—the use and sale of apples cut in half. P. B. D.

Hopewell, N. J.

Eastern or Western Onion Seed.

Is there any difference between the onion seed raised in the Eastern States, say in Connecticut or Massachusetts, as to size and quality of market bulbs compared with that raised in the West, in Illinois, Michigan or California? There is a difference in price of from one-quarter to one-half. I have always used Eastern seed. W. O. S.

Practically speaking, there are three grades of onion seed grown, and sold in the open market. The first grade is produced from bulbs selected to ideal type, the second grade from bulbs as they run, without any attention being given as to their shape or type; the third grade from large or overgrown sets. Northern-grown seed is considered somewhat superior to the Southern grown, and that produced in the Northern tier of States. If fresh and equally well cleaned, etc., the respective grades are of almost equal quality, whether produced in the Eastern, Middle or Western sections. It is believed, however, by some of the largest and most progressive growers, that seed that has been carefully grown, planted in the same general locality, will give much greater percentage of marketable stock than seed brought from a distance. The first grade of seed, produced from specially selected bulbs of desirable types, frequently sells for more than double the price of the second grade seed, and four to five times as much as the third grade. The first grade of seed will produce 10 to 20 per cent. more marketable bulbs than the second grade seed, and therefore is the cheapest to plant, even though it cost more than twice as much as the second grade seed. The third grade should never be planted for the production of standard market onions; it is only suitable for the production of sets. K.

Barn of Cement Blocks.

I am contemplating building a barn of cement blocks. Is there any objection to blocks for stable for cows or horses? We have some severe weather Winters, and we do not know whether the stables would be damp. C. D.

Cement blocks and hollow tile are used extensively in constructing farm buildings, and there is very little complaint from their use after the materials have been thoroughly ripened or dried out after the structure is completed. Concrete blocks do hold the moisture longer than the vitrified blocks, and the majority seem to favor the use of the hollow tile as compared with the cement blocks. If the building, however, is located on relatively high ground so that free circulation of the air exists, and provided further that a complete system of ventilation is installed, concrete blocks may be safely used. The hollow tile blocks, however, are more durable, and in most cases less expensive, and furthermore, permit the use of the stucco finish, which has more of a finish and makes a better looking job than in case the cement blocks are used. In case of a long and continuous spell of wet weather, the cement blocks are very apt to evidence a moist condition, and dampness may prevail in the stable. The King system of ventilation should be installed in every case where cement blocks are used.

F. C. M.

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Says Mr. H. W. Collingwood, the able and experienced editor of *The Rural New-Yorker:* "Do not believe those who tell you that you must have manure in order to grow corn. Some of the largest yields on record have been grown with chemical fertilizers and sod."

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THE COE-MORTIMER COMPANY, 51 Chambers St., NEW YORK CITY

IMMUNITY IN HORTICULTURE.

PART II.

THE PECAN is subject to a few fungus diseases and insect pests, and there are different degrees of immunity to both among the varieties. There are a few varieties that are so subject to the "scab" fungus on the hulls of the nuts that they cannot be grown with success in certain regions, while other varieties are not affected in any degree. There is a phylloxera that infects certain kinds and a "shuck worm" in the hulls of others that makes them about worthless. Pecan growers take much care to know these facts when selecting the varieties to plant in their different sections, for they may be affected in some places and not in others, and largely owing to climatic conditions.

WALNUTS AND HAZELS.—The walnut growers of California are much troubled with a disease they call blight, which affects the young bark and the hulls of the nuts, causing them to die outright in many cases. Yet there are varieties that are not so affected and to these they are looking for relief, mainly, instead of to remedies or preventive sprays, which seem to be quite inefficient. The European hazels or filberts are affected with a fungus in the Eastern States that causes the branches to gradually die, and there seems to be no way to prevent or cure the disease. Our native species of hazel are not so affected in any way, and it may be possible to cross-pollinate the foreign and domestic species and thus produce hybrids that may have the good qualities and size of the foreign nuts and the health of our own bushes. On the Pacific coast there is no such trouble, indicating that the fungus is dependent on certain climatic conditions for propagation.

SMALL FRUITS.—Our native species of Rubus have considerable differences in immunity to the attacks of the fungus diseases that prey on that germ. Most of them are not seriously affected in this way, but some of them are, the Kittatinny blackberry being one of them. The Orange rust, so called because of its color, often troubles this variety so badly that its culture has to be abandoned. Certain varieties of the raspberry are subject to violent attacks of anthracnose that render their culture very difficult or at least uncertain of success. The strawberries are subject to several fungus diseases called rust, leaf spot and other suggestive or descriptive names. Some of the varieties are so badly checked by the injury to their foliage that their other good points are overcome and it will not pay to grow them. The Van Deman is a variety that was introduced about 25 years ago and was most highly endorsed by many of the State experiment stations and private growers, but time proved it to be very easily affected by leaf rust. This one fault has practically eliminated it from the list of approved varieties. The degree of immunity from disease of the foliage has much to do with the value of any variety of strawberry.

GRAPES.—The grapes are attacked by various forms of fungi, some on the leaves, some on the bark of the vines, and some on the fruit. The black rot of the fruit having been taken to Europe, the famous discovery of the Bordeaux mixture occurred in France as a remedy for this evil. Incidentally this discovery has been a great blessing to the horticultural world. The grape phylloxera having been taken from America to France, where it finally devastated the vineyards, it became necessary to look for resistant or immune stocks on which to graft the vines. They were found in the native grapes of Texas, mainly, and by their use the vineyards were re-established. It has also been learned that the same varieties grown there could be grown here on resistant roots and they would be successfully grown were it not for the mildew fungus on the fruit in our humid air. On the Pacific coast the arid conditions are unfavorable to this fungus and there is no such trouble in growing all classes of grapes.

VEGETABLE BLIGHTS.—Immunity growing vegetables is something greatly to be desired, but unfortunately there is very little of an encouraging character among the kinds affected by disease. Many things are naturally exempt, but others are badly affected. Breeding with the purpose of obtaining immune varieties has been done quite extensively and with some slight success. In some of the leading melon growing sections blight has become a serious menace to the industry. The citron or "pie" melon being resistant to the blight, crosses have been made with it on the leading varieties of watermelons and immune varieties produced. Some of these have been thought to be good enough in quality to be worthy of general planting and at least one has been named and sent out by the U. S. Department of Agriculture. But the verdict of the public has been against its quality, which partakes too much of the male or citron melon parent. A blight-proof variety of cantaloupe was discovered in one of the Northern States and it was thought that it would be a boon to the Southern growers. But it proved a disappointment, for it was not immune to blight there. Tomato blight is another very serious disease. Long-continued efforts have been made to produce resistant varieties, with but very poor results. With beans there has been considerable success. There are a few varieties that will resist the diseases to a considerable extent. One variety of asparagus has been developed that is largely immune to the blight that makes its culture difficult in some sections.

In taking a view of the whole subject of immunity of vegetable life to disease there are some encouraging facts, but not so many nor so clear cut ones as we would wish for. The fortunate advances that have been made by accident mainly or by nature herself, are suggestive of what may, possibly, be accomplished. There is a wide-awake force of experimenters at work on the problem and we hope for more success than has as yet been attained. H. E. VAN DEMAN.

Potash for Oats.

Can anyone who has had experience in using potash with drill for oats tell me whether it will prevent oats from lodging? Which is the best for oats, sulphate of potash, kainit or muriate of potash, and how many pounds to the acre? My soil is a rich clay. G. H. D.

Massillon, Ohio.

Write to the Ohio Experiment Station at Wooster, Ohio, for a copy of their fertilizer experiment. There you will find some reference to the use of potash, long used upon most Ohio soils. Potash as a separate element does not give very profitable results except upon the lighter sandy soils. It is not likely to be needed on your soil. Probably on heavy soil to prevent the lodging of the grain, the kainit would be the best form of potash. It contains a large amount of salt, and this has the effect of stiffening the grain to some extent, and holding back rapid nitrification, and thus preventing a too rapid growth of the oat. Use 250 pounds per acre. This is not a sure preventive of lodging. This only takes place usually on very rich soil, or where a large amount of soluble nitrogen has been used. The use of kainit, however, for this purpose has proved satisfactory in a number of cases. It is also thought by some that the use of potash in this way helps to overcome certain plant diseases which are found on rich soil and in a damp season.

Roses on Sandy Land.

Can I make rose bushes grow on poor sandy land? Some say it cannot be done.

Franklin, N. H. O. E. K.

Roses succeed in any garden soil that is free from standing water and properly drained; if it is very light it may be modified by adding clay and leaf mold. These should be very thoroughly spaded in. If, in addition to this, you give a good mulch of manure every Fall, forking it in in Spring, you will, in a few seasons, greatly improve the soil. Every effort should be made to add humus. We have seen roses growing well on a sandy soil, where this practice was carried out.

"DID your watch stop when you dropped it on the floor?" asked a small boy of his friend. "Of course," was the answer. "Did you think it would go through?"—Credit Lost.

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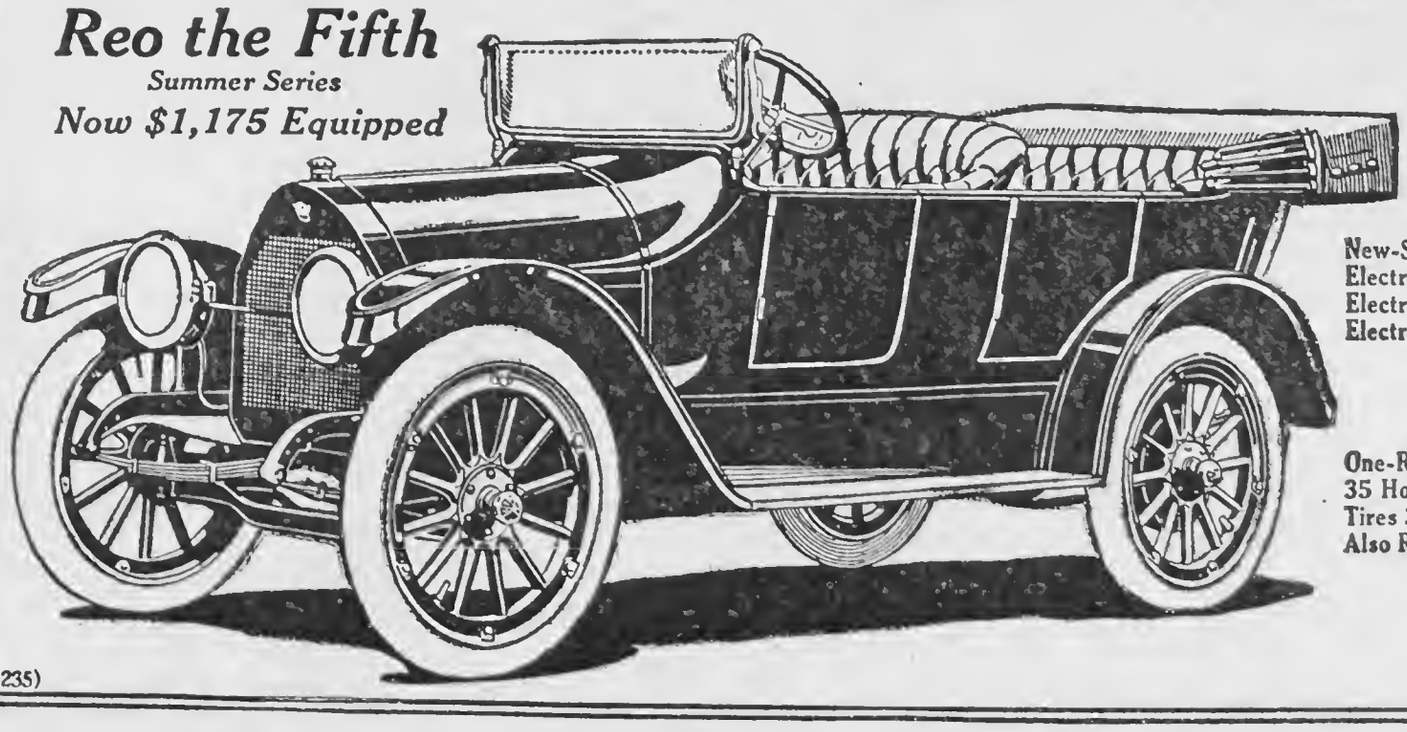

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Oak Sawdust and Mulch

I can get all the oak sawdust, about three years old, I can haul. Would this do to put on a one-year asparagus patch and one-year-old rhubarb? Would it be of any value in way of manure?

Terra Cotta, D. C. J. Q. B.

Oak sawdust at three years of age would be too raw to apply to growing crops, as the large per cent. of tannic acid contained in the wood and bark of the oak cannot be entirely dissipated until the wood is pretty thoroughly decomposed. The decomposition of the sawdust can be hastened by composting it with equal weight of horse manure for three or four months. The heating of the manure will in a great measure neutralize the tannic acid, and convert the sawdust into manure with a fertilizing value equal to about four-ninths that of mixed barnyard manure. K.

Trouble With Rambler Rose.

I have a Crimson Rambler rose that every year, as soon as the buds form, is infested with some kind of an insect that causes the leaves to curl and fall off. I have sprayed it, but it does not seem to do any good. Could you tell me what to do for it? J. S. N.

Millington, Md.

You do not describe the appearance of the leaves, but we suspect the trouble is powdery mildew, rather than an insect, as this is a common trouble, and often a severe one, with Rambler roses. It is very likely to appear where a plant is placed against a house or porch, or in any place where there is insufficient air drainage; it also follows a sudden chill. Cold nights following warm and humid days commonly result in mildew; in the greenhouse a cold draught often causes it. Grayish spots, spreading into a film of flowery white, gradually cover the affected foliage. When the trouble is uninterrupted, young shoots and even flower buds become curled, distorted and reddish, foliage withers and falls, and the whole plant is affected. The trouble may be controlled by the use of sulphur. When first noticed dust dry flowers of sulphur over the leaves in early morning, while the foliage is damp, so that the sulphur will stick. Spraying with potassium sulphide, one ounce to two gallons of water, is more effective, though the dry sulphur is satisfactory if the trouble is not too far advanced. Bordeaux spray is also used. In greenhouses sulphur compounds are evaporated, commonly on the heating pipes, to control mildew, which affects many other plants besides roses.

Country Stores and "Drummers."

In these days of cheaper transportation the question is often asked "Will the mail-order business drive out the small dealer?" To me it seems that the question is not "Can we afford to do without the country store?" but rather "Shall we be compelled to do without it?" A few facts which I have observed convince me that if they do continue to exist, the merchants will have to make some changes in their methods of buying goods. I live on a cross-country road midway between two stores whose owners try in a modest way to carry stock of all the staple articles used by farmers in these localities. The number of traveling salesmen who visit these stores would seem incredible. There are three hardware, two grocery, two dry goods, two harness, two shoe and one or two hat drummers, who come more or less regularly, besides an occasional tobacco, soda, fruit and numerous medicine men. These men have teams and driver, and their respective salaries range all the way from $900 to $1,800 per year. Of course this expense must be added to what the farmer is expected to pay for his goods. These merchants are our neighbors, fellow citizens, and we want to see them prosper. Their stores are a convenience to us, but the temptation to order some things will always be great while they can be bought cheaper from the mail-order houses. I think most of the wholesale houses send out catalogues anyway, but cannot understand why then a man must be sent to sell the articles catalogued. The time is doubtless near at hand when some stirring changes will be made in the manner of buying. F. A. C.

Missouri.

More About Broom Corn.

I saw an article written by W. J. W., Garden City, N. Y., about broom corn. He says when fully ripened to bend it down so as to straighten the splints. He will find it will be much better not to break it down, and to cut it as soon as the blossom will shake off the least bit. Cut it and clean it, put in the shade to dry, do not wait for the seed to get ripe, but cut it while the seed is in the milk. It is the old way to break it down and let it hang until ripe; that makes it brittle and colors. If cut as above it will be tough and have a nice green color. I am a broom maker, and have raised some broom corn. I have a hard time getting the people here to cut their broom corn when green. All who cut it according to directions will not let it get ripe. Plant in rows 3½ feet apart, four inches apart in rows, or if in hills 18 inches apart, and leave five to seven stalks in a hill.

Clarington, O. C. M. M.

"Your name?" asked the teacher, registering a new pupil. "Arthur." "And what's your first name?" "Brown." "Oh, haven't you got them wrong? I think Arthur must be your first name, and Brown your family name. Isn't that right?" But the small pupil was not persuaded. A day or two later he announced: "Teacher, mother says Brown *is* my first name. She says I got that name when I was born and she didn't name me Arthur till three months later!" —Everybody's.

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W. F. ALLEN 72 Market Street, Salisbury, Md.

APPLES ON LONG ISLAND.

PART II.

TREES TO PLANT.—For low-head trees special orders must be given the nurseries, as in this section they trim trees high in the nurseries. Rub off all buds below the point limbs are desired, say 2½ feet, and cut off top at desired height, say four feet, cut out all limbs except three to five at desired points and cut limbs left back to about six inches long. Trim and cut off injured roots and plant. I recommend trees for planting one-half to five-eighths inch in diameter, four to five feet high.

SOD MULCH OR CULTIVATION.—I have tried both and have concluded that cultivation with cover crop is the best for my conditions here. I have lost several hundred trees from mice under sod mulch. The mice eat the bark from the roots for several feet from the trunk in all directions.

MANURE OR FERTILIZERS.—Manure is good when trees are young, but when bearing age approaches for this section fertilizers give best results in connection with cover crops or cultivation.

SPRAYING.—This is a necessity here. I use two power sprayers and when possible keep them both at work, but have one for use in case the other breaks down, as they often do. Diseases here are mostly scab and orange rust. Insects are scale, canker worm, Codling moth and aphis, the latter occasionally is the most persistent.

TRIMMING.—Trees are trimmed somewhat open to air and light, by removal of whole branches as much as possible; do not trim too much. Mounding as a protection against mice is much recommended; if you mound up around trees remove in Spring and then next Fall mound up new again. If not do not mound up, as the wind causes the tree to make an opening in the top of the mound in which the mice get at the tree above and below the ground and the mound protects the mice and not the tree.

COVER CROPS.—I have tried cow peas, Soy beans, clover, vetch and turnips. All are good; this last year I planted Crimson clover and turnips, which will be turned under with the natural growth of grass and weeds in the Spring.

VARIETIES.—My list of varieties tested is very long, 10 times as many as there should be. When I began planting 12 years ago there were many varieties recommended, and this was a comparatively new apple section, so I planted many varieties, though comparatively few for main trees. The newer varieties were mostly planted as fillers, so even if many or most of them are comparatively worthless, some few are very good, and in the long run we gain from the knowledge obtained. I will go through my list as planted and give my opinion based upon my experience with the varieties on Long Island. Of these varieties several were supplied by the nurseries in place of varieties ordered without my consent or knowledge. My comments apply to this section and class of soils; in other localities different results on some varieties would be obtained. In most cases 20 or more trees of a variety were planted.

Alexander: trees make fair growth, fruit red, large, showy, but not abundant, not desirable.

Akin: trees make good growth, fruit red, small, bear well, not desirable because of small size.

Arkansas Black: trees make good growth, fruit dark red, medium in size, bear well, poor quality, not desirable.

Baldwin: trees make good growth, fruit red, medium to large, good quality, keep well. Trees slow to bear; from between 300 to 400 Baldwin trees planted as main trees only about three barrels of fruit were obtained. They are not yet ready to bear. From trees in the neighborhood and my own fruit as obtained so far the Baldwin is one of the best trees to plant here.

Ben Davis: trees make good growth, fruit medium to large, red, fair quality, good bearer annually; one of the best apples for commercial use either as main trees or fillers.

Black Ben Davis: trees make good growth, fruit dark red, fair quality, similar to but not as good a keeper as Ben Davis. Fruit medium, not as desirable as Ben Davis.

Benoni: tree good grower, upright, fruit red, good quality small, season Summer, production every other year, sells fairly well, but too small; not desirable.

Bismarck: trees moderate growers, fruit red, large to medium; poor to fair quality; season October to November. Good Fall apple for fillers, but not desirable for main trees.

Beach (Apple of Commerce): trees good growers, apple small to medium, red, fair quality, not desirable.

Boiken: trees fair growers, fruit yellow, medium to large, good quality, season Fall, not desirable commercially.

Coffelt: trees moderate growers, fruit red, small to medium, poor quality, not desirable.

Chicago: trees moderately vigorous, fruit red, medium size, poor quality, not productive; not desirable.

Champion: trees moderate growers, fruit red, medium size, fair quality, productive, good keeper; good for filler as it bears young. Not desirable for main trees.

Red Canada: trees moderately vigorous, fruit red, small to medium, fair quality; not productive, not desirable.

Charlamoff: tree poor grower, Summer apple, poor quality, not desirable.

Duchess of Oldenburg: tree poor grower, fruit striped red, medium good quality, suitable for filler; bears well and young, not desirable for main trees; season late Summer.

Detroit Red: trees good growers, fruit red, large, good quality, early Fall; fairly productive, not desirable.

Delicious: trees good growers, apples red, small to medium, high quality, good keepers, bears biennually; fruit subject to scab; one of the best Winter apples for family use, but not desirable commercially in this section.

Esopus Spitzenburg: trees good growers, fruit red, fine quality, beginning to bear 1913, very good for this section.

Early Harvest: trees good growers, fruit small to medium, sweet, yellow, not desirable.

Early Melon: trees fair growers, not productive, fruit large, yellow, fair quality, not desirable.

Fameuse: trees good growers, fruit red, small to medium, fine quality, season late Fall; good bearers, desirable.

Fallawater: tree fair grower, fruit yellow, large, not good bearers, not desirable.

Fall Pippin: trees fair growers, fruit yellow, large, fine quality, Season Fall, poor bearers when young; a desirable Fall apple.

Florence Crab: trees fair growers, fruit red, medium to large, for a crab, bears abundantly, a good crab apple, season Fall, desirable for a crab.

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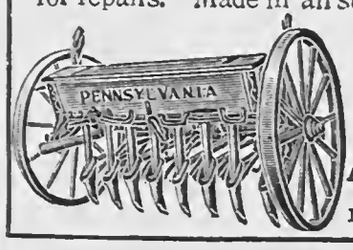

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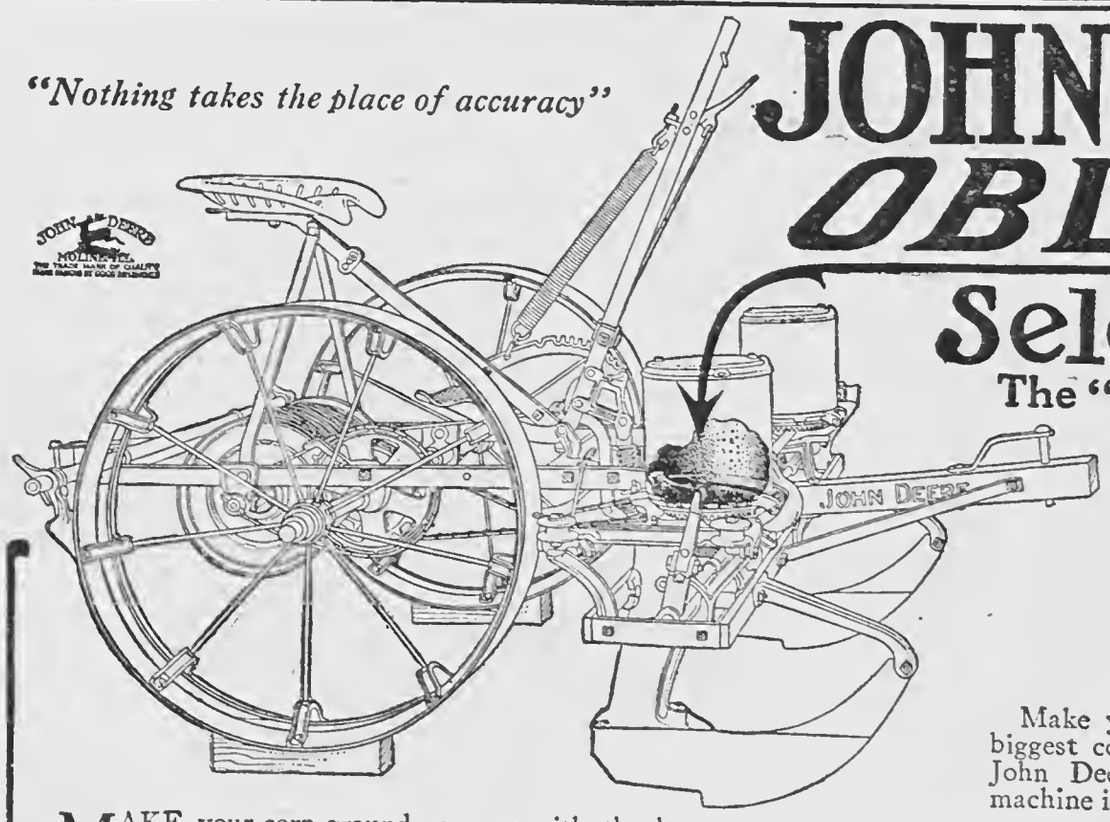

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RANDOM FRUIT NOTES,

ORCHARD OWNER AND TENANT SYSTEM.—The orchard tenant system is not developed to the extent in Ohio, that it is in Michigan and in other States. Contrary to the declaration of W. S. Pullen of Hillsdale County, Michigan, who has concluded that the tenant system has not paid him as it should, Mr. Hutchison, of Elyria, Ohio, who is engaged in the tenant system in a smaller way, declares it pays. He states he leases the trees for three years, returns the owner one-third the crop, and in one case the owner is to furnish him barnyard manure for fertilizing the orchard. He has five sons, and has reduced the tenant system to a family affair, and divides the profits with the sons that participate. Mr. Pullen was compelled to hire all labor, figured on paying himself a salary, wear and tear on equipment and maintaining a large force in harvesting. Mr. Pullen gave one-half the apples on the trees for a five-year period. Mr. Pullen declared to the writer on several occasions that the farmer could better afford to handle his orchard than could a tenant. The farmer is convenient to the field, has his family to assist in the work of the orchard in the rush season, and the cost and keep of outside labor is less for the farmer than for the tenant. G. B. Stone and S. A. Green, Hillsdale County, Michigan, tenants, who own orchards, declare that the grower who already owns a well-developed orchard may branch out in the tenant business with greater profit and assurance of success than the man who owns no orchard and relies solely on the tenant system as his source of income and profit. Mr. Hutchison is an owner as well as tenant.

RETURNING TO BARNYARD MANURE.—The grape growers in the Lake Erie fruit belt are realizing more than ever before the value of barnyard manure as a fertilizer for their vineyards. One of the smaller growers having a score of acres in vineyard, declares that barnyard manure is his most efficient fertilizer. He has restricted his vineyard to 20 acres, keeps about 20 or 30 more acres for his dairy, and supplies from his half dozen cows a good quantity of manure for the vineyard. The vines so treated showed vigor equal to the best in the North East section, while those which did not receive the manure appeared only average. Another grower of 80 acres considers barnyard manure so essential in producing high quality of grapes, that he established a large barn for the purpose of feeding steers during the present Winter. He planned on feeding one for each acre, and should he do no better than secure gain sufficient to reimburse him for feed purchased, the manure he believed would pay for labor, interest on money, and possible loss. It is necessary for this grower to buy all hay and grain for his stock, and pay good prices. The growers generally agree that every grower should have his cow, and for the soil to hold its own, live stock will find a place in case a rearrangement should occur in the agricultural system of the belt. W. J.

MARYLAND PECANS AND PERSIAN WALNUTS.

Mr. Thomas J. Lea, in his article on page 170, entitled "Nut Notes from Maryland" shows us two things about the progress of agriculture, particularly along the lines of trees; first, the great value of seedlings to get new varieties; second, their great uselessness to propagate the new variety when it is obtained.

Mr. Lea loves trees and is planting seeds of various kinds and carefully nursing them. It is through such love that we have had developed nearly all our good kinds of trees. Let us hope that it will be continued by many other such tree lovers, but that it may also go on systematically in the agricultural experiment stations, which are in a position to do it systematically and continuously from generation to generation, once they can get their minds turned in that very practical but unfortunately slow-yielding direction.

Mr. Lea's point about his two Persian walnut trees blooming two weeks apart opens up the real point of the whole field. Every nut tree is a law unto itself. We never can tell when some wonderful quality is going to pop out, but when it does appear, we must stop the suicidal policy of trying to propagate it by seedlings. Planting seeds is fine if you are after the development of new varieties, but when you have got a new variety, you can plant 100 seeds from it, wait 20 years, and discover that 99 are relatively worthless, while one may be good. So the work of variety creation and the work of propagation are entirely different.

We should long ago have had a good Persian walnut industry here in the East if we had known how to propagate walnuts as we do apples. We now know how to propagate them, due largely to the skill and patience of W. N. Roper, of Petersburg, Va. I have found a Persian walnut tree of merit enough to try out, and am getting scions from it and having him graft me some trees which I expect to be giving me nuts in from seven to 10 years from the time I send him the scions. That is much faster than any seedling is likely to do, and then, too, I know what kind of nuts they will be, for they will be like the parent, and the tree being on Black walnut roots, will grow much more rapidly than the parent Persian walnut did on its own roots.

In conclusion, I want to urge the tree lovers to go on with their planting of seeds for the discovery of new varieties and to stop it for propagation. They must turn to the grafting knife or the budding knife either of themselves or of the expert. In the meantime, all persons having trees of even suspected merit, of pecan, or Persian walnut, or of good hickories, should communicate the important facts, along with samples of nuts, to Dr. W. C. Deming, Secretary of the Northern Nut Growers' Association, Georgetown, Conn., who is giving much valuable time to the propagation of this exceedingly constructive piece of work, which will undoubtedly give us several new industries in a few decades.

We need particularly to know how far north the pecan tree actually grows. Dr. Deming found a great big one, nine feet in circumference, in Connecticut the other day, and I think it is quite likely we shall find some pecan trees in Canada yet, if THE R. N.-Y. people just talk about it to their neighbors. Tree crops are to be the agriculture of the future. They beat the puny little grasses to a frazzle. J. RUSSELL SMITH.

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Greenhouse Construction for Small Place.

PART I.

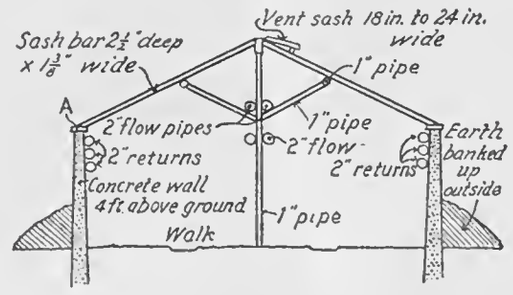
In planning the construction of a greenhouse on a small place from new material, there are several features worthy of careful consideration, the most important being location, relative to as uninterrupted exposure to the sun as possible during the entire day. If possible a location protected from either north or west winds should be chosen. Whether the house shall be built north and south, or east and west, depends somewhat on the use to which it is to be put. For cut flowers a house running north of east and south of west, so as to receive first rays of sun in morning, is possibly preferable. For plants a house could run north and south and more of the space could be utilized. In the north-south house narrow supports could be placed near roof and several rows of flats containing plants could easily be handled without interfering to any great extent with the crop underneath, as the line of shade cast by the boxes would be constantly shifting. If benches are used in the house, many plants can be temporarily stored underneath each along the walks, like old stock plants of geraniums, etc., and at some period of the day the sun will reach them, for a short, though welcome stay.

Water is another item that must be considered. If the house is quite small, and help is more plentiful than means, to install a power pumping outfit, a good hand pump connected in such manner that one could pump and another manipulate the hose, would answer, though you would soon look upon this as an arduous occupation. The better course would be a small gasoline engine and a good pump. The tank could either be on the pneumatic storage principle and placed in the basement, or an open tank located in attic of house or barn. The former would be desirable as by that means damage of freezing would be obviated and any desired pressure could be maintained to combat red spider, and you will find red spider one of the worst pests with which you have to contend. It is so small that the plants of the amateur may be badly infested before he is aware of its existence in his place.

When eggplants, tomato, etc. plants begin to turn a light gray color instead of a dark healthy green it is time to inspect the under side of the leaves closely. The chances are you will find a mass of exceedingly small reddish insects, that can only be killed by a contact application or by being dislodged by a strong spray of water. Ivory soap dissolved in hot water, five-cent size to four gallons water, and sprayed *on the insects* will do it, but pure water applied with force is best, as several applications of the soap weakens the constitution of the plants. The soap spray will help hold white fly in check on tomatoes, though on large commercial places hydrocyanic acid gas is used, but is of doubtful recomendation to the amateur on account of the extreme danger connected with its use.

There may be situations where it may appear desirable to construct a lean-to house on the south side of a building already constructed. A structure of this nature would answer fairly well for vegetable plants, though everything grown in it would have a tendency to draw toward the sun. If a house is constructed 16 feet square or even 20 feet square, it could be heated with a large cylinder stove encased at a distance of 12 to 18 inches with a piece of sheet iron as formerly explained in article on transforming a cold frame into a greenhouse. Hot water is the most desirable method of heating, but in a short house is expensive to install on account of the many fittings and work of cutting pipe required, as this expense is no greater for the 100-foot house than one 20 feet long. There are doubtless many who have an exaggerated idea of the profits that may be made from a greenhouse. You can get some idea from following suggestions as to limitations in this respect. During the Winter months we put five and six radishes in a bunch and wholesale at 3½ cents. If you can sell direct five cents is the price. These occupy bench space about six weeks and stand 2x4½ inches in the beds. Grand Rapids lettuce will occupy bench near two months and should net five cents each, planting 6x7 or 8x8, and tomatoes planted in beds February 1 to March 15 should average four to five pounds fruit per plant, plants being set 16x18 inches in beds and fruit should sell at 10 cents per pound and possibly a few cents more if well grown and sold direct. Vegetable plants in this section sell at 10 cents per dozen generally, with eggplant at possibly 15 and cauliflower same price or higher. They should have a space 2x2 inches or better 2x3 inches; even this distance is too close for eggplant. That is gross income, and is greatly increased or decreased by the amount of attention and application given. Labor, coal, water, insecticides, manure, fertilizers, etc., make a fairly formidable array of expense, which as a general thing keeps the net income from becoming burdensome. Many will, however attain so much satisfaction from growing plants out of season, and being with this small area of Summer verdure while the wind is howling outside, that even though the care be constant, and the net returns not over burdensome, they will feel amply repaid, as the love of growing plants and flowers can scarce be gratified during Winter in any other manner.

We will describe a house about 15 to 16 feet wide containing a bed on each side, two walks and a center bed five to six feet wide. The sides can be made



SECTIONAL VIEW OF GREENHOUSE.

either of posts, and boarded up or concrete. We have a house of this size in use that I will describe. The side walls are about 3½ inches thick at top and six inches at bottom, about four feet high, made of concrete, using ashes of bituminous coal just as they come from the shaking grate under the boilers, eight parts, and Portland cement one part, no sand added. This makes a tough job and is possibly warmer than stone as the cinder allows more air spaces in the construction. On the top edge every four feet a half-inch bolt six inches long is embedded, enough projecting to fasten a cypress plate on wall four inches wide and 1¼ inch thick. This plate is given a slight slope outward so as to allow condensation to pass out of the house.

The sash bars are 2½ inches deep by 1⅜ inch thick, and beveled so as to fit snugly to ridge at top and nail flat on plate at eaves, A, see cut. Before nailing on plate the end of bar is painted thoroughly and allowed to dry and then given a coat of thick white lead and oil just previous to nailing down.

In nailing cypress always use *cut finishing* nails. The wire nails split the wood and will rust out long before the wood will rot out. It is best to use cut nails everywhere on exposed work, as they last much longer than the ordinary wire nail. We use a ridge 2x6 inches and a one-inch pipe under same every eight feet, the ridge being four feet six inches above the eaves, which gives a good pitch to the roof. There are two purlines in house to which bars are screwed with pipe straps, one-inch pipe being used for purlines. A brace pipe should run from each purline to the center upright post, and can be fastened thereto by a piece of iron, bent at each end to conform to angle of braces and then be bolted to upright post with an axle slip. This makes a solid and substantial fastening. The same method could be used with wooden posts and siding, and by using posts greater height of sides could be obtained if desired.

Ventilation could also be had by putting a row of narrow sash below eave plate. A row of narrow sash must be placed at ridge of house, and where house is not long, sash can be raised by having a stick hinged under each sash, and holes bored in at intervals of every few inches. In raising sash when desired height is obtained a corresponding hole is slipped over a peg fastened near ridge. There are machines on the market for this purpose.

If the house is much higher at one end than the other it would be best to carry the flow pipes for hot water up hill to far end of house, and give returns same fall to heater, locating heater at low end of house. If the house is level, or nearly so, have high point of system over boiler or heater, and run down hill to far end of house and return same way, being careful to have all pipes perfectly straight in line. By using this method, and locating one air cock at highest point no trouble will be experienced with air in system, and circulation should be very satisfactory.

Assuming a house 16 feet wide by 100 feet long, two-inch pipe would be preferable, and 10 lines would be required, four flows and six returns. If house is only 50 feet long 1¼ inch pipe would be very satisfactory,

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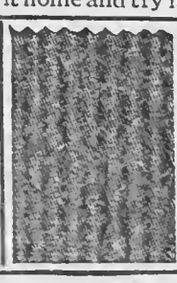

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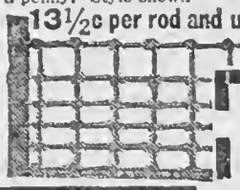

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Farm Management.

COST OF AN APPLE ORCHARD TO BEARING AGE.

PART II.

Orchard C is six years of age, having been set in the Spring of 1908. It is an apple orchard 10.22 acres in extent, containing 275 apple trees, varieties Baldwin, Northern Spy and Wealthy, set 36 by 40 feet and filled in the rows both ways with 817 peach trees, mostly Elbertas. The trees thus stand 18 by 20 feet apart.

Cost of growing an apple and peach orchard to four years of age. 27 apple and 80 peach trees per acre set in 1908, 18x20 feet apart:

ITEMS	TOTAL FOR THE 4 YRS. Cost an Acre	Cost a 100 Trees
Labor Cost (man 20c, horse 15c an hr.) setting trees (inc. hauling, staking out, replacing, etc.)	$5.36	$5.00
Spraying (once a year)	.64	.60
Pruning and hauling brnsh	1.21	1.10
Fertilizing and manuring	1.95	1.80
Hoeing and grubbing	2.06	2.00
Plowing (tree rows only)	3.56	3.30
Cultivating	2.87	2.70
Picking (4th year)	.66	.60
Marketing (4th year)	.50	.50
Misc.	.55	.50
Total Labor	$19.36	$18.10
Cash Costs:		
Apple trees, 27 at 15c (inc. replacements)	$4.98	
Peach trees, 80 at 10c (inc. replacements)	10.49	$14.40
Fertilizer	4.14	3.80
Cover crop	3.31	3.10
Spray material	.60	.60
Equipment	2.45	2.30
Taxes	3.95	3.70
Interest (5% on $120 to $175)	29.75	27.80
Buildings (15% crops costs)	2.90	2.70
Overhead (9% other costs)	4.42	4.10
Management	20.00	18.70
Total cash	$86.99	$81.20
Grand total cost	$106.35	$99.30

Summary statement of cost to four years of age.	Acre	100 Trees
Total cost of orchard at 4 yrs.	$106.35	$1.00
Net income from 4 crops, beans between tree rows	53.41	.50
Net income from 1 crop peaches 4th yr.	9.21	.09
Total net income from land in 4 yrs.	62.62	.59
Actual net cost of orchard	$43.73	$0.41
Net income from orchard 5th yr.	46.32	.43
Net income from orchard 6th yr.	53.60	.50
Net gain on orchard in 6 yrs.	59.19	.52
Net gain on orchard per year	9.36	.087

LABOR COSTS.—All labor costs are given in dollars and cents an acre for each operation for the whole 10-year and four-year periods, the ages at which the two orchards came to bearing or at which they reached a point where the annnal income from the trees exceeded the outgo. That this was the eleventh year in the case of Orchard A and the fifth year in the case of Orchard C was due entirely to the original plan and to the management of the two orchards. A brief explanation of some of these labor costs should be made. The item of setting trees includes hauling from the station, staking ont the land and the labor of replacing dead trees as well as the actual setting of the trees. The grafting charges covers the labor of a helper, the actual setting of the scions being paid for at so much per scion and is included in the cash charges. The orchards were sprayed but once a year and in the case of Orchard A, only for the last four years. Pruning was done as necessary, but not systematically every year. No commercial fertilizer has been used except one year in Orchard C. Manure has been applied to the apple trees at least every other year. The peach trees have had no manure. Manure applied to the land between the trees has been charged to the crop. A cover crop of rye, sown in the Fall was sown once in each orchard.

CULTIVATION.—The trees were hoed at least once a year to loosen the surface soil, to form a mnlch and to destroy weeds. The peach trees were "grubbed" for borers in June each year. The orchards were plowed annually, bnt when crops were grown only the plowing of the uncropped land was charged to the trees. The same was true of cultivation which was frequent enough to conserve moistnre and to control weeds. The crops bore all costs of handling the land they occnpied, except when they were grown for the sake of the orchards, as in the case of the rye. In Orchard A, four crops of beans, two crops of corn, two crops of hay, and one crop each of wheat and oats have been grown. Each year the area of crops grown in the orchard was lessened, and the strips of land on either side of the "tree rows," which were cultivated, widened. Four crops of beans were grown in Orchard C. No crop was grown between the trees in this orchard after the fourth year. The charges for picking and marketing all occurred in the last four years in Orchard A, and in the fourth year in C. Miscellaneous costs include banking trees in the Fall, ditching land, etc.

CASH COSTS.—The purchase price of apple trees was 15 and 16 cents each, of plum trees 16 cents and of peach trees 10 cents. The cost of replaced trees has been added to this in the table. The grafting cost five cents for each scion which lived a year. Manure was charged at $1.50 a two-horse wagonload, and spray materials, packages, etc., at current prices. The cost of equipment was arrived at by determining the entire cost of equipment for the farm, which is made np of interest, depreciation and repairs, dividing this by the total nnmber of honrs used to get a rate per hour, and then multiplying the total hours which it was used on the orchard by this rate. The taxes have ranged from .00438 to .009 on a dollar. Interest is charged at five per cent. the enrrent rate on farm mortgages, and has been compounded once a year. Building charges which are composed of interest, depreciation and repairs, have been distributed on the basis of nse by the productive enterprises of the farm. Overhead costs inclnde fence repairs, telephone rents, Grange dnes and similar miscellaneous charges which cannot be assigned directly to any farm enterprise. These have been found to average one year with another about nine per cent. of all other cash costs. The management cost is assumed and nominal. The manager has usually worked 10 honrs at manual labor every day, as well as managing the farm. The owner's management has been confined to working np the orchard records and to occasional visits. He has, however, laid out the plan of management and directed the policy of handling the orchard.

RESULTS.—The results are both poor and good. They are not remarkable in any way, but probably represent fairly well average conditions as they exist in Western New York. Orchard A. is found to have cost $262.13 an acre or $4.16 per tree to grow to 10 years of age. Not counting the plum trees, the apple trees have cost $8 apiece at 10 years of age. Of this total cost, about $52 an acre or 82½ cents a tree is labor, or about 20 per cent. Cultivation is the largest single labor item. Of the cash cost of $210 an acre or $3.33 1-3 per tree, which includes everything except labor, interest amounts to 42 per cent., and management to 24 per cent. These are by far the largest single items, the next in amount being overhead charges which are eight per cent. of the total cash costs and six per cent. of the entire costs. A part of this cost has been offset by growing crops between the tree rows. These have averaged an annual net profit of $4.20 an acre, not counting interest on the land which is charged to the orchard, and have reduced the total cost by one-fifth. The plum fillers have reduced the net cost eight per cent. more and the apples themselves have returned nearly $3 an acre by the tenth year. These factors have reduced the net cost to $200.24 an acre or $3.18 a tree, or to a little more than $6 an apple tree. The crops of apples, plums and canning peas (between the rows) in the eleventh year returned a net sum of $42.51 an acre, or 68 cents a tree of this amount.

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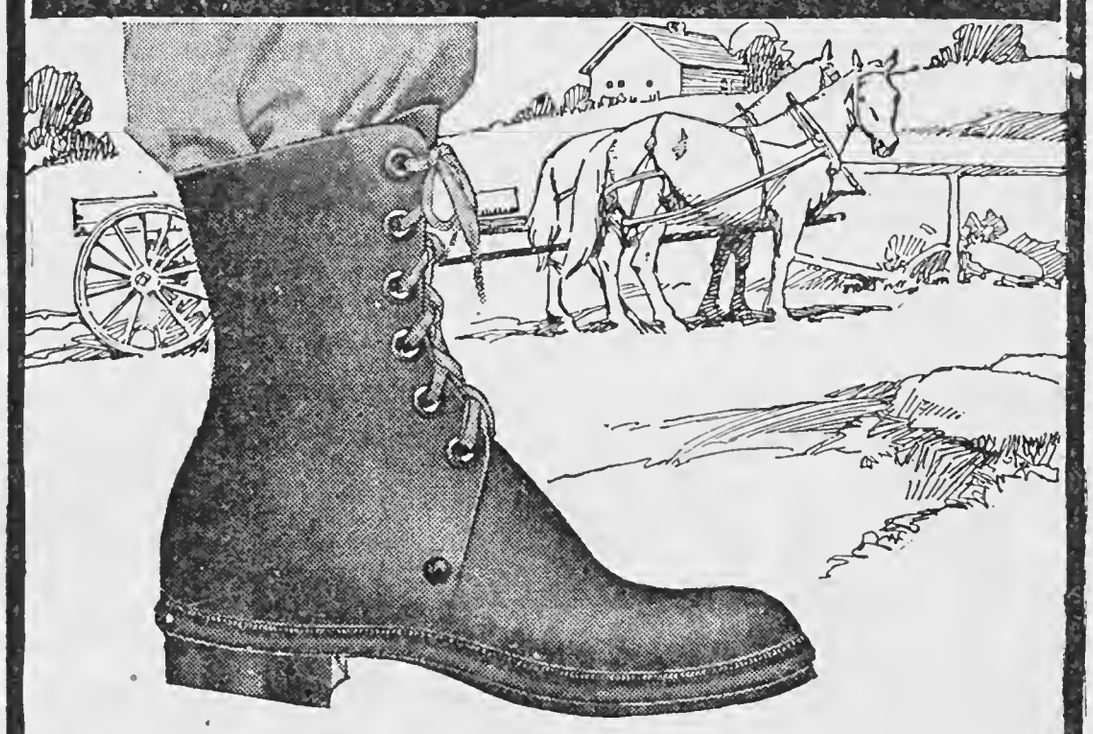

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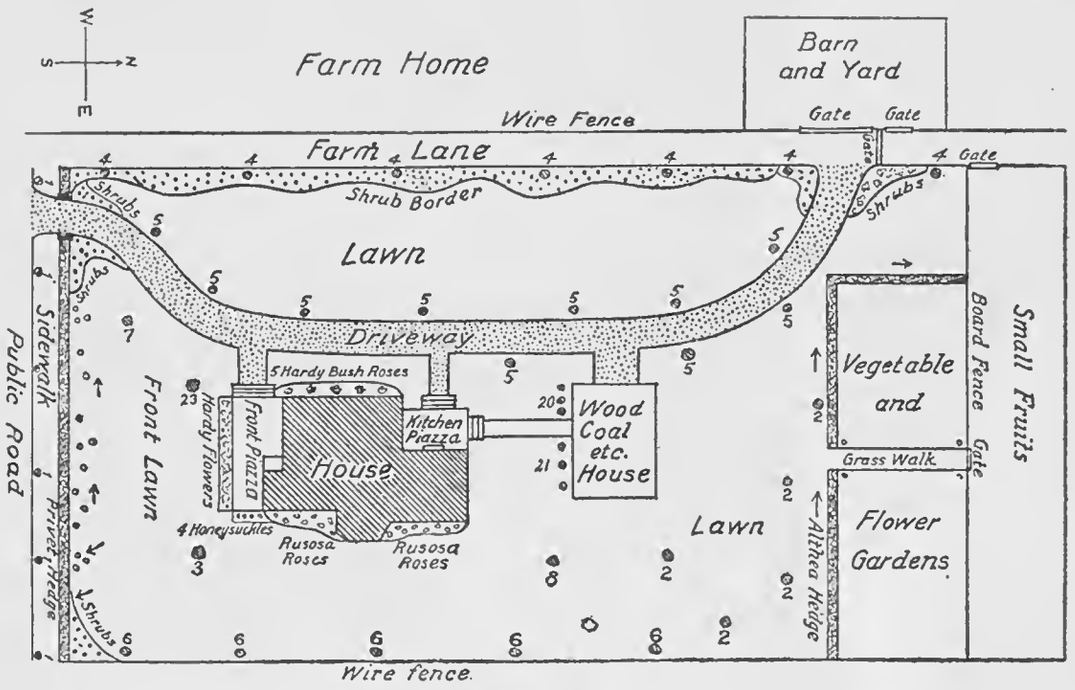
The Home Acre.

BEAUTIFYING THE HOME GROUNDS.

PART III.

There should be no permanent improvements to the home grounds attempted until a suitable working plan of the area to be treated is made, upon which all existing buildings, trees, etc., should be accurately located, and numbered on the plan; also all the desired improvements, including driveway, walks and all new plantings of trees, vines, shrubs and plants should be accurately located on the plan and numbered. In locating the various plantings careful attention should be given to the contour of the grounds, so that all the plantings may be so situated that the most pleasing and harmonious effect may be obtained. In the making of the plans they should be drawn to scale; otherwise it will not be possible accurately to locate the existing structures, nor to locate properly the new things to be added to the grounds. The cut shows a farm-home grounds that have recently undergone remodeling and improvement. The grounds contain about three-fourths of an acre, and are comparatively level. Formerly the driveway ran straight in from the front, past the house, and turned toward the barns at almost an acute angle. The only trees on the grounds were an old Silver maple near the southeast corner of the house, and a few old fruit trees scattered here and there in the rear of the house. A few old lilacs and other shrubs were also on the place, but were all dug up and thrown away.

The front, west and north fences were of post and board construction, without a tree or shrub near them to hide their unsightliness. In the remodeling the front fence has been removed and a privet hedge substituted, along which has been planted at irregular intervals just inside, a number of low-growing shrubs. Silver maples are planted aong the sidewalk in front, and a row of Norway maples along the fence on the west side, and English elms along the east fence. The driveway was changed from a straight line to a graceful curve, entering the grounds near the southwest corner with a reverse curve, leading up to and by the house with an easy curve to the left, and intersecting the farm lane opposite the barnyard gate. Along the drive a number of European lindens are planted, which in a few years will grow into beautiful speciments. Other deciduous trees and evergreens are planted at various points where they will show to the best advantage, and at the same time not obstruct the outlying views from the house.



PLANS FOR FARM GROUNDS.

The front lawn is comparatively unobstructed, so that the view of the house is not obscured from the public road. The west lawn is entirely void of trees except along the driveway and the border along the board fence, which contains the Norway maples and a border of 88 mixed shrubs, in considerable variety, so arranged that the effect is extremely harmonious and pleasing. At the north side of the end of driveway where it intersects with the farm lane is also a bed of choice shrubs. On the east end of the piazza are four honeysuckle vines trained up to the roof of the piazza, and on each side of the bay window are beds of Rugosa roses, each bed containing eight.

In front of the front piazza is a narrow bed planted to low-growing hardy herbaceous flowering plants in variety. On the west side of the house five strong-growing hardy bush roses are planted. The wood and coal house north of the dwelling is screened by six large California privets. The vegetable and flower gardens are in the rear of the grounds, as is also the small fruit garden, which directly adjoins the other gardens on the north, with a board fence separating them. The whole grounds have been so transformed by the improvements as to make it hardly recognizable as the same place, and at a cost for trees, shrubs, vines and plants approximateing about $150 at the nursery. The work of improving was performed by the owner.

Planting specifications of trees for farm home: No. 1, six Silver maple; 4, seven Norway maples; 5, 11 European lindens, 6, five English elms; 7, one Pin oak; 8, Sugar maple; 9, Norway spruce; 10, Douglas spruce; 11, Blue spruce; 12, Retinispora plumosa aurea; 13, Retinispora squarrosa Veitchi; 14, Retinispora filifera; 15, Retinispora plumosa; 16, Retinispora pisifera aurea; 17, Abies Nordmanniana; 18, Retinispora argentea; 19, Abies concolor; 20 and 21 tall privet to screen the wood house; 22, old cherry tree; 23, Colorado Blue spruce; No. 2, old fruit trees; 3, old maple.

CHEMICALS FOR A GARDEN.

Our soils in central Illinois are wanting in phosphorus, and the rock phosphate is hard to get here; at least I know of no firm handling it; I am living in town and only want 100 or 200 pounds a season for my garden. Would ground bone do in place of it? I can get bone meal in Chicago for $2.55 per hundred, dried blood for $3.60, also tankage of two grades. Why not a mixture of them in place of stable manure, which here is very coarse and full of straw and baling wire, which is so nice to sharpen a hoe on? If I could get good wood ashes I would give it a good covering of that. I am in my ninetieth year, and don't like to hoe without growing something.

Tallula, Ill. L. B.

The bone meal will certainly take the place of the phosphate rock. It is much better for garden use. We would use 250 pounds of the bone meal to 100 pounds of dried blood. This would not equal the manure, however, as neither the bone nor the blood contain any potash. This must be supplied in some form. If you can get 600 pounds of good wood ashes, this would go with the quantity of bone and blood we have mentioned. Do not try to mix the ashes with the blood and bone. Scatter the ashes after spading or plowing, and work or harrow in. Use the blood or bone in the hill or drill. If you cannot get the ashes, 100 pounds of muriate of potash can be used with the blood and bone. You are right about the advantages of chemicals over stable manure, so far as filling the ground with weed seeds is concerned. Manure is a nuisance for doing this in a garden.

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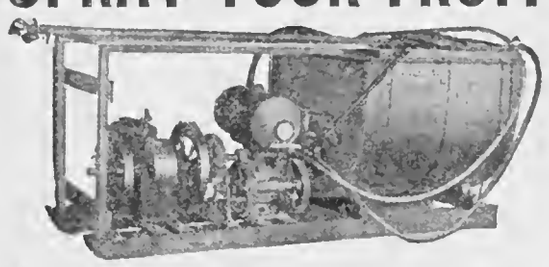

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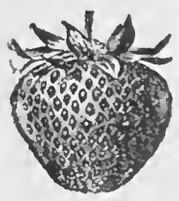

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The Home Acre.

Rhododendrons on Uncongenial Soil.

Can you tell me whether Rhododendrons and Azaleas (hardy sorts) can be successfully grown on our soil? We are located in the peach belt of Ottawa Co., Ohio, where the soil varies from a yellow clay loam to black loam underlaid with what is here called "blue mud." I have never seen any Rhododendrons either wild or cultivated growing here, and would like to know if a small plot could be treated in such a way as to make the culture of a few specimens possible. I understand that the limestone formation of our soil is not favorable to this class of plants, but I should like to plant a few if there is any way of overcoming this handicap. P. L. V.
Port Clinton, O.

Your soil does not sound at all promising for Rhododendrons, for both limestone and heavy clay are inimical to them. Under such conditions a bed must be specially prepared for them. Dig a place four feet deep; put in one foot of gravel and small stones to provide drainage, which is hindered by the clay subsoil. Fill in with a friable mixture of leaf mold and sandy loam. In the Fall mulch the bed with forest leaves, pine needles or hay. It will be well to leave a light mulch on all Summer, until the plants are large enough to shade the ground. Set the plants firmly, and water thoroughly after planting. Some Winter protection would be advisable, just enough to prevent drying out when bright sunshine is accompanied by low temperature and sweeping winds.

Vines for House and Porch.

I have dwelling house 50 feet long and nine feet to eaves, bungalow style and wish to plant vines to cover it to eaves. Clinging roses are beautiful but must plant other things too, because here in Spring we are quite likely to find them winter-killed. House has shingle sides, three concrete pillars support porch roof. L. C. N.
Winterport, Me.

For a living porch screen, there is nothing more satisfactory than the Japanese honeysuckle (Lonicera Halleana) and Clematis paniculata. Hall's honeysuckle is a native of Japan, as is also the Clematis named. While the honeysuckle is not as showy as the Clematis it is nevertheless an admirable and very useful vine for porch screening, covering fences, trees, etc., and should be in every collection. It is a strong and rapid grower, and perfectly healthy, and might be termed entirely insect proof. Its flowers are pure white when first opening, changing to yellow as they grow older, very free blooming and delightfully fragrant.

Clematis paniculata is considered by many the finest hardy vine in cultivation, and one of the most valuable ever brought from Japan. It blooms in late Summer or early Fall, and completely covers itself with fleecy white sweet-scented flowers in clusters, which are succeeded by myriads of silken seed pods, that are almost as ornamental as the blooms. This grand vine is well worthy of a place on any dwelling, no matter how pretentious or humble it may be. Both these vines will need some kind of support. The two-inch mesh poultry wire netting is admirably suited for the purpose, and for porch screening it may be used continuously or in panel sections as may suit the fancy of the owner of the house.

For covering buildings, walls and dead trees there is nothing among the self-clinging vines quite so well suited as the Boston ivy, Ampelopsis Veitchi. No other climber in cultivation has been so extensively used for this purpose. It is entirely hardy even in the most exposed places, a rapid grower when once well established, and will cover the walls of a building in a very few years, with a mass of overlapping leaves, that is almost impenetrable by the sun or rain. It readily adapts itself to almost any kind of soil or condition. It lends an air of elegance and refinement to any building, and enhances the beauty of the most intricate architectural outlines. No buildings are considered too fine to cover with this vine, while the most unpretentious and unsightly are made picturesque by its use. Set the plants close to the foundation of the buildings, three or four feet apart. K.

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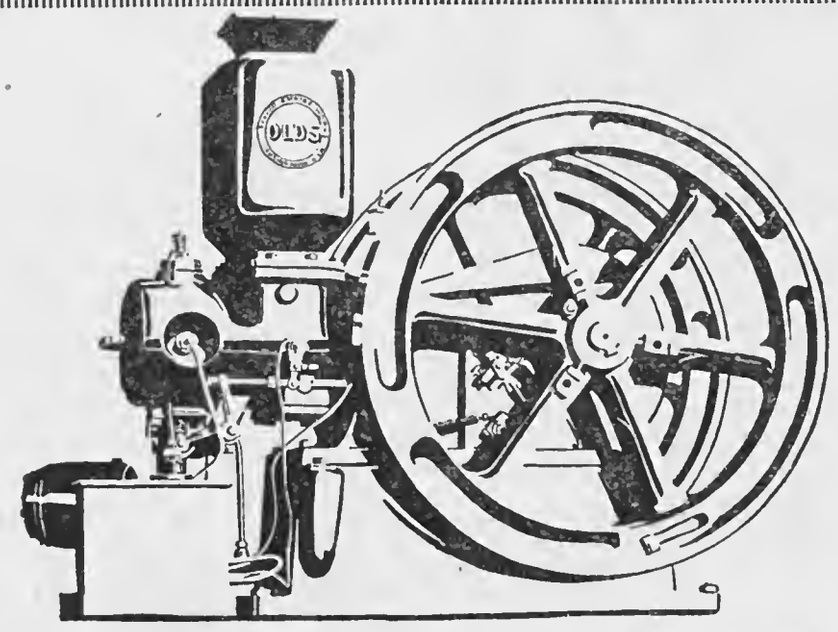

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FUNGUS DISEASES OF STONE FRUITS IN THE MIDDLE WEST.

PART II.

BLACK KNOT.—Black knot is a disease of plum trees and cherry trees. It is scarcely necessary to attempt a description of it, as the dark colored galls on the twigs and smaller branches are so aptly described by the name itself that anyone not familiar with it could nevertheless hardly fail to recognize it at sight. the cut gives a good idea of its appearance. The severest attacks of this fungus are made on the Damson variety of plums, although cherries and other varieties of plums are susceptible to a smaller degree. In some localities, Damson trees have to be cut down after they reach eight or 10 years of age because of the great number of knots which develop on them.

The diseased condition is caused by a fungus, technically known as Plowrightia morbosa, which lives in the cambium, inner bark, and often in the woody part of the stem. The knot usually makes its appearance as a slight swelling in the Spring, and develops gradually until by the end of the Summer, it has the black carbonaceous appearance so characteristic of the disease. During the late Spring and early Summer, the knot may be observed to have a greenish tint. This is

BLACK KNOT ON PLUM.

caused by a velvety outgrowth of fungus threads, which produce spores in abundance. These spores germinate on the twigs when moist and spread the disease. Later in the history of the knots, during the following Winter, to be exact, more spores are produced. These are of a different type from the Summer spores, but are no less capable of infecting the host.

The habit of the fungus, as just described, suggests one means of control. The knots should be trimmed out of the trees and burned, before the spore producing period in the Spring—some time before March—and again in the Fall before the Winter spore production has occurred. When affected wild trees or affected neighbors' trees occur, this may not be sufficient. In such cases, it will be necessary to resort to spraying; and in any case it will be advisable to do so. For this purpose use boiled lime-sulphur diluted to test 5 deg. Beaume, and apply in March to prevent infection by air borne spores.

Right here it seems in order to urge the importance of coöperation in stamping out this disease. There are men in the Middle West who have had to give up the culture of Damson plums because their neighbors made no attempt to control the disease, and they who did make the attempt found it impossible to cope with the condition when new infections were constantly occurring from the outside. A whole neighborhood, or township, or county must work together if success is to be assured.

SCAB.—Scab is a disease of peaches and plums, causing a gray or brown thickened condition of the skin of the fruit. This condition, if severe, is usually accompanied by more or less extensive cracking of the skin and underlying tissues. It is not as troublesome in this section as the other diseases here discussed, but it is very common, and important enough to be amply worthy of preventive precautions. It is not especially destructive to the crop, but does render fruit unsalable or of second or third grade. The organism, Cladosporium carpophilum, which does the damage, is propagated by spores which are produced over the diseased areas. The remedy is self-boiled lime-sulphur every two or three weeks after the foliage appears.

YELLOWS.—Yellows is a disease of peach trees which is not well understood, although it is generally considered not to be caused by any fungus. It is included here because it was long thought to be a fungus trouble and has many points of resemblance to such diseases. It is characterized by a yellowing of the leaves, the growth of many spindling branches, and the early death of the tree. The cause seems to be due to the production of a destructive enzyme in the tissues. The remedy is to cut down and burn all affected plants, burning them, if possible, just where they stood, as the disease is very easily transmitted to other trees.

SPRAYING.—The fungous diseases which we have considered are all alike in that they can be controlled, wholly or in part, by spraying. It seems well, therefore, to summarize this in a suggested scheme of spraying. This, of course, should be varied to suit the special disease conditions which the orchardist has to meet. Spray first in March or earlier with boiled lime-sulphur diluted to 4.5-5 deg. Beaume. For peaches, spray again about 10 days after the petals fall, or at the time the shucks are falling, with arsenate of lead and lime—two pounds of the arsenate and two pounds of lime to every 50 gallons of water. This is for curculio. Make a third spraying four or five weeks after the petals fall, using self-boiled lime-sulphur and arsenate of lead. This should be repeated three or four weeks later, and for late ripening sorts, again four or five weeks before ripening. For plums and cherries, the Summer sprayings should consist of Summer Bordeaux and arsenate of lead, (1) just after the buds burst, (2) just after the petals fall, and (3) three weeks later. C. A. LUDWIG.

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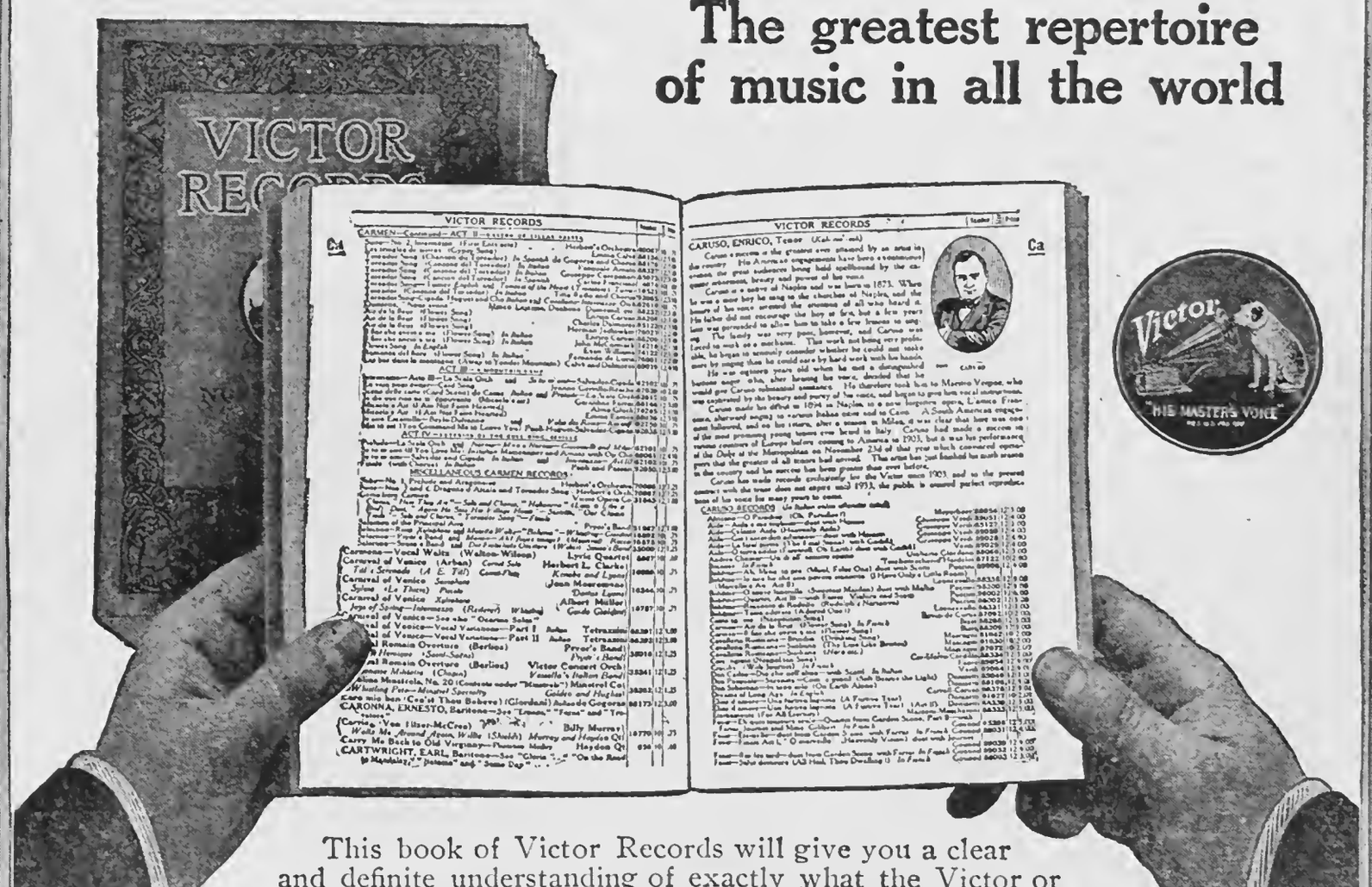

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Hope Farm Notes

"What does the Hope Farm man think of this conservative father and progressive son discussion?"

I do not know whether I would rank as a "conservative father" or not. What do you mean by "conservative"? Few words have been so abused in promoting a convenient meaning. It has been used to describe one who tries to conserve or save property or rights. At the other extreme, when people want to describe a "skinflint"—a narrow, hard, mean "standpat" character, they call him "conservative" because he has lost the power to grow. Benjamin Disraeli said this about a political party: "A conservative government is an organized hypocrisy." He had it about right, for such a government in a nation or the head of a family may be ranked with a moral dead man—without growth or ideals—standing still in the graveyard of the past, while everything else that is worth while is moving on. I would rather be a "conservative" who saves rather than one who scolds.

As answer to the question I want to give a brief sketch of what seems to me the ideal relations between the two farm characters you name. There has recently been published a book, entitled "From the Letter Files of S. W. Johnson," by his daughter, Elizabeth A. Osborne. In this book, chiefly between the lines, I can read the story of about the finest "conservative father" that an American farm has yet produced. I shall tell more of Prof. S. W. Johnson's work later. He may be called, without question, as Mrs. Osborne says, "one of that small group of great men of genius who are known as 'father of their particular field'." Prof. Johnson was clearly the father of experiment station work in America. He brought from Germany and Europe the knowledge of scientific agriculture, which these foreign nations had been forced to develop, and planted it here at a time when there was little demand or even interest in the subject.

I think it a somewhat unfortunate circumstance that in most histories people are satisfied to rest with the "father" of an event or institution. This does not satisfy me, nor will it satisfy our farmers, and I wish to show that one of their own class, a plain New York farmer, may rightly be considered the grandfather of American agricultural science. Abner A. Johnson may be called one of the original "back-to-the-landers." In 1834 he gave up his business in town and bought farm lands in Lewis County, N. Y. Here he became a farmer. Our "back-to-the-land" friends may claim that his early business training gave him the vision and patience which were later to enable him to play the part of "grandfather."

As a boy Prof. S. W. Johnson was small and delicate, with defective eyes. As his daughter says, these eyes "gave him little information about objects more than a few feet away." This boy read every book he could find. We have all made mental pictures of Abraham Lincoln scouring the country for books and reading them over and over at every spare moment. Here it was again in the case of Prof. Johnson—the reading habit—one of the most blessed things which a country boy can acquire. His daughter tells us that this "indifference to matters outside of books was the despair of his family." This is entirely true to human nature, for who has not seen cases where some child seems to be born with a book in his hand, and with a mind which craves reading as his stomach craves food? I have known cases where such children were whipped or given harder work to "cure" them of the privilege or genius which God sent into the world with them. I have known the books they loved to be hidden, and dull, useless volumes put in their hands to break up the habit, just as the old housewives put aloes and pepper on the child's thumb to break the habit of sucking it.

We may all be thankful that there was nothing of this in the Johnson family. Abner Johnson could not understand the untried land into which this reading and study would lead. A plain farmer, living on the frontier, he could think of only three safe and profitable things for a man to engage in—law, medicine and farming. These three, and the ministry, were all he could comprehend as possibilities in which to find opportunity for education. If farmers of to-day, with all the knowledge of what science has done for farming, take a "conservative" view of education, what must we think of Abner Johnson, at a time when millions of acres of rich new land were so cheap that they could not be given away? With all this in mind we are lost in admiration for the broadmindedness and clear vision which prompted Abner Johnson to have faith in his boy, and to support him in what must have seemed the wildest of "progressive" ideas.

Nor shall the "grandfather" have all the praise, for the "aunt" and the "grandmother" must be remembered. In looking back over his life every self-made man must gratefully remember how mother and sister were true and loyal to him—quicker than the others to see where his ideals led. Prof. Johnson's elder sister saw what he needed, as many another sister has comprehended, and her love and sympathy sustained him. Then there was the invalid mother who helped. In 1848 Abner Johnson gave his boy a building for a farm laboratory and $50 with which to buy chemicals. The mother gave him her wedding spoons, "old and thin and dented by the hard usage of many children." These were to be melted up to be used as chemical reagents for laboratory work. I like to mention these details, because they show the real, vital power of what I may call the true "conservative" family These plain farming people believed in their boy. They knew he was true, and while they could not see into the future as he did, they meant that he should carry with him the best they had to give—not only money, but that greater thing, faith and confidence in him. As you read this you will be able to tell me of a dozen cases where, in farm homes, mother as well as father and the girls have given up the best they had in order that John or Henry might have a chance.

While Abner Johnson provided this laboratory for his own son, he could not believe that chemistry could provide a profitable life work. I imagine he regarded chemistry as a sort of play or mental exercise—not grasping the importance of getting down to fundamental principles. This is probably the chief reason for the differences between most conservative fathers and their educated sons. The older man has made his success through plain common-sense and shrewd observation of surface indication. The boy has been taught to get down under the surface and dig out the fundamental principles. He does not know how to apply them yet, while father does not understand the fundamentals, but does know how to apply such facts as he has learned. The older man's standard of success is profitable *application*, which the boy has not learned. Abner Johnson could not conceive of the profitable application of chemistry to farming, therefore he wanted his boy to become a lawyer or a doctor. That has ever been the trouble about farming—too many men have assumed that one must go into one of the so-called professions, or into manufacturing, in order to find opportunity for the best thought and brain development.

Prof. Johnson became a teacher and finally a chemist at Yale College. The more he studied the more he saw the need of thorough training before he could give his students, and in a larger way his countrymen, what he clearly saw they needed. So he told his father of his desire to go to Europe and spend some years in study with the great chemists in Germany; and the boy asked the father to lend him the needed money. Here was the true, biting test for your "conservative" father. Abner Johnson could not, from his own experience or training, see the need of this expensive European study. How could he realize what the future had in store for agricultural science? Yet, somehow, he had gained through watching his boy something of the young man's faith and enthusiasm. The fact is that Abner Johnson *believed in his own boy.* As the other sons came of age Abner Johnson gave each of them a farm—out of his tract of northern land. He now gave an amount of money equal to the value of such a farm to Samuel. Thus while the other boys received their value in land, Samuel received his share in education! When we consider that Abner Johnson knew the value of *land,* but speculated in education on the sole security of faith in his own boy, you will agree with me that this wise and kindly man may well be called the grandfather of experiment station work.

Later I hope to tell you something of what Prof. Samuel Johnson did with his education—how it spread and developed through American agriculture—like leaven through the lump. What I write to-day is to try to make some of these conservative fathers think kindly of their progressive sons. The boy often wants to do things which seem foolish to the old man. Abner Johnson must have thought the same thing. But he had faith in his boy, and banked on that faith. Have *you* the same faith in your boy? If not, why not? He is your boy, and it may be a sort of reflection upon *you* if you cannot back him up in worthy enterprises. Right in this connection, if you have a chance, read the "Introduction" to Joe Wing's book on "Alfalfa Farming in America." There you have the "conservative father and progressive son" again.

And, by the way, before we leave the subject here is another type of the "conservative father."

The I ope Farm Notes on the subject of "Sleep" prompt me to suggest that there are other causes than insomnia that interfere with sleep. All five of our children have whooping cough, and we find that it not only seriously breaks up the quiet hours of the night, but also disturbs in other ways the customary regime of domestic life. C. L. M.

We know all about this from experience. When the small son is progressing with whooping cough it is a wise father who gets up to conserve his wife's health and sleep. That would have been a good job for my weary friend.

H. W. C.

Winter Vetch Sown in Spring.

If Winter vetch is sown in the Spring, will it make a crop of seed this season? If it will, how would it do to sow oats with it for support? G. B. S.

Keesville, N. Y.

No, you will not be satisfied to sow Winter vetch in the Spring. The Spring veteh will do better, but we think Canada field peas with the oats will give a more satisfactory crop.

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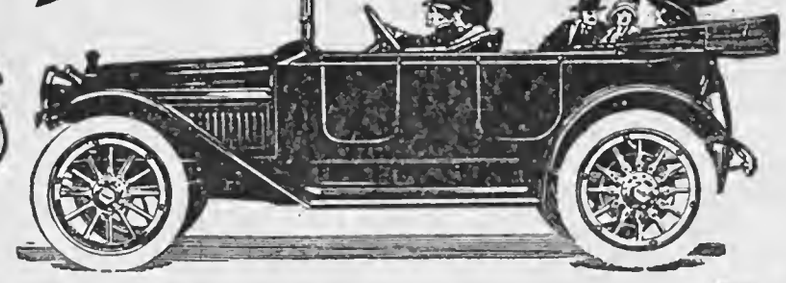

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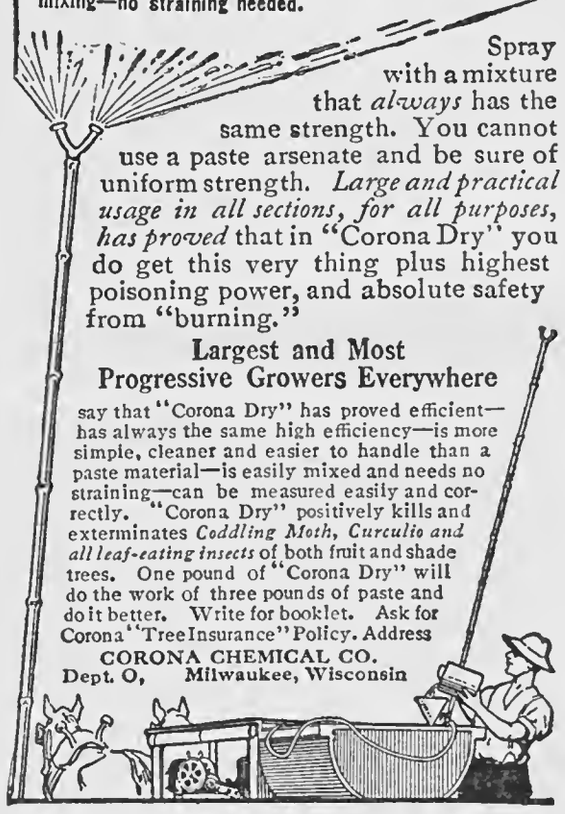
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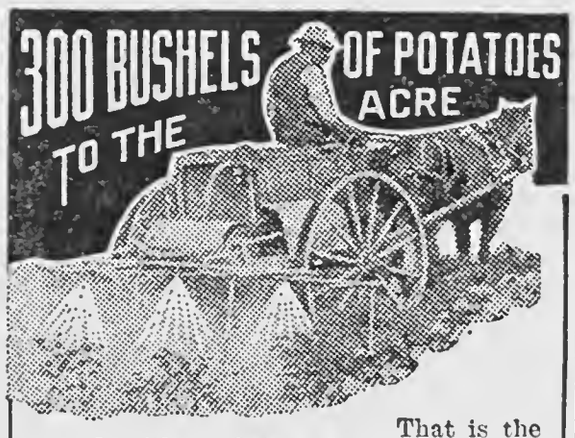

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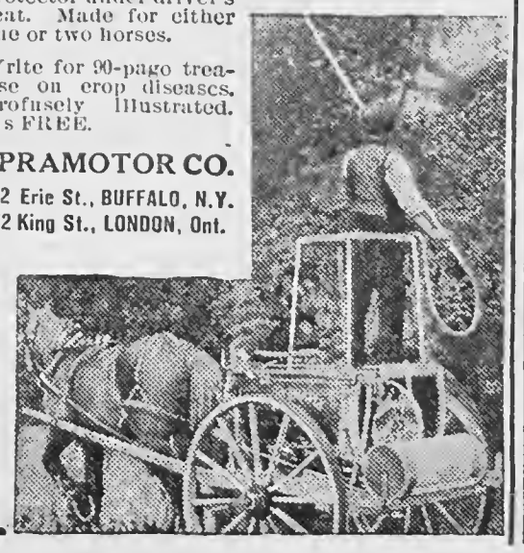
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Ruralisms

Roses; Lilacs; Pecans.

1. How can I get rose cuttings to take root? I have tried many ways but failed every time. 2. I have some single purple lilac about seven years old, good size; look like healthy nice plants, but have never bloomed. I have been told they get eight or 10 years old before they bloom; is this true? 3. We have a pecan tree about seven or eight years old, 12 feet high; it never bears any nuts. How long will it be before it bears? I have heard they will bear when they get about 18 or 20 years old. A. B.
Saltillo, Miss.

1. Southern conditions vary from those of the North, but you could doubtless take cuttings of ripe wood, in the Summer, insert in a well-prepared, half-shaded spot in the open ground, and then cover with a fruit jar, or other glass of sufficient size, leaving undisturbed until the following season. A correspondent in Louisiana writes us that she is very successful there propagating roses in this way, which is also satisfactory here. The surrounding earth may be moistened without raising the covering.

2. We infer that the lilac named is a natural seedling, and one cannot make an accurate guess as to its time of coming into bloom, as this varies with individual plants. We have dug out one lusty seedling that showed no signs of bloom after 10 years' growth; in another case a seedling bloomed the sixth year.

3. Seedling pecans are of very uncertain bearing age. Grafted trees may bear a few nuts three years after planting, but nut growers find it advisable to prevent commercial bearing until the trees are eight or 10 years old. Some varieties are naturally shy or tardy bearers. Without fuller data, it is impossible to say when you may expect a crop from your tree.

Transplanting Hemlock Spruce.

In answer to E. E. S., page 212, you speak of Hemlock spruce for wind-break. What is a hemlock spruce? Last Spring I transplanted 30 York State hemlocks along the highway in front of my house for wind-break as well as improving the looks of the place. The sets were taken from the woods on my farm, from very thick groves, of which I have a large number, as they need to be thinned out. The sets run from six feet to 16 feet high. The soil from which they were taken is sandy, and they were reset in sand with the leaf mold from which they were taken placed around each tree. All set the last of April to the last of May began to die and continued to die until the first week in July, when there were five of the largest and tallest left and looking good, and while writing this I am looking out of the window at these trees with their nice green tops and they look good to me. The second week in July I transplanted five more when in full flower; these are now looking as though they would live. Can you give me any information in regard to the transplanting of our native hemlock, as I suppose there is a difference between them and the hemlock spruce.?
Schuylerville, N. Y. D. W. T.

The hemlock spruce, Tsuga Canadensis of the botanists, is of course the "York State hemlock" you refer to. The term "hemlock spruce" is preferred to hemlock alone, because the name hemlock also belongs to the highly poisonous Conium (spotted parsley, herb bennet or wode-whistle) which was used by the Greeks to execute obnoxious persons. The hemlock spruce is not difficult to transplant, but specimens six to 16 feet high would require more care than smaller ones, although much larger trees than these are moved with success under nursery conditions. It is evident that you did the work carefully, but where digging trees from the woods you would have better results if they were not over three feet high. The end of April was rather early, too, especially if followed by cold windy weather; conifers are usually transplanted later than deciduous trees. The most important thing is care of the roots, which should never be allowed to dry out. It is well to puddle them in wet earth as soon as dug, and keep them thus protected until they are in the ground again. In replacing the dead trees, try planting a little later than the first lot, preferably in May, select rather smaller specimens, and protect the roots when dug. You cannot have a more desirable wind-break than this beautiful native tree.

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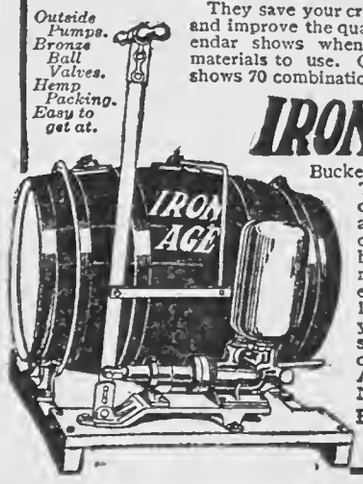

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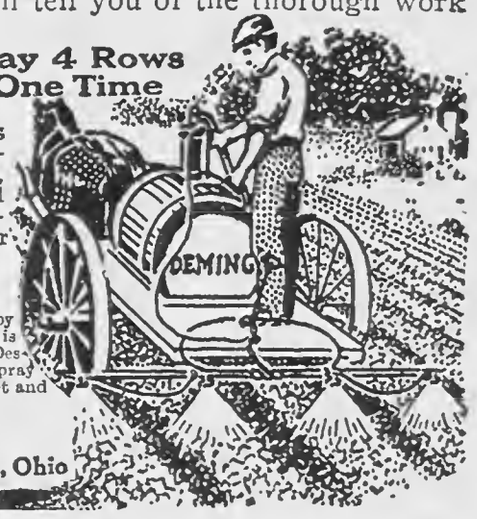

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In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

DID you feel the recent earthquake? Can you give any actual facts about it? If so a government official wants to hear from you. Charles Otis Smith of the Geological Survey, Washington, D. C., is after all posible data regarding this "quake." If you have any real information to report Mr. Smith will gladly hear from you.

*

AMONG famous old yew trees in the British Isles is one in Gresford Churchyard, North Wales, which is supposed to be 1,500 years old. The bole at the ground is 23 feet in circumference; five feet up it is 31 feet; height 60 feet, and spread of branches about 660 yards. The trunk has increased nine inches in the past 50 years.

*

HERE is a strange thing. Not long ago we printed an article, and in due time there came two letters about it. One man said: "That is *punk*. I have never been able to raise that crop; therefore I know it can't be done." The other man said: "It is exactly right, as I know by experience." We find a number of people who seem to measure the possibilities of a thing by their own performance. There may be a big difference between the two, but it is hard to realize it.

*

I LIKE your paper, but sometimes I read therein things that are contrary to my experience and which do not seem practical. M. E. K.

Perhaps that is one chief reason why you like the paper, for the quality you mention is one of human nature. We recognize the fact that life has many angles, and experience many sides. No man can view them all. Our people try to give us what they see from their standpoint. You or someone else see it from another side and find it different. We try to get our people to believe that this difference is not a thing to fight about, but a chance to learn wider experience.

*

THE dog who once begins at sucking eggs will keep it up as long as he has legs. Likewise the cat who gets a taste of chicken will hunt for prey until she comes to sicken. Yet these dumb brutes who chase their nature through are not so bad as that mean, hateful crew of fakes and grafters who would rather live on "other people's money" than to give clean, honest service for their daily bread. They can't reform; the poison in their head and in their heart makes them a gilt-edged thief. Like dog or cat, look only for relief to honest printer's ink and steel-barred jail. Put them behind the bars, give them no bail.

*

BOTH sides of the dog question are up again. No use trying to bring the extreme dog haters and the dog lovers into any "brotherhood," for they do not care to be brothers. The great majority of us recognize a good dog when we see one, and have no wish to exterminate all dogs. At the same time we recognize the damage done by curs and homeless mongrels. These constitute a genuine "dog curse." That does not mean that all dogs should be destroyed, for the men behind these curs are more responsible than the dogs which each year kill over 600,000 sheep. That Maine dog law, analyzed on page 420, seems to be satisfactory—the only one we have known which can be said to be.

THERE has not been so much about free seeds in the papers this season, but none the less the subject has not been forgotten. Secretary Houston is opposed to this free seed humbug; but what can he do, while Congress is dominated by five-cent men who think farmers can be bought by a paper of seeds? He may not do much, but you can do more, because your Congressman has a vote on this silly graft. Mr. Charles F. Crane, of Clear Lake, Iowa, has a very clear view of this subject, and he shows us all what to do. He received a package of these free seeds from his Congressman, G. H. Haugen. Mr. Crane did not waste time or words in settling the free seed question. Here is an extract from his letter to Mr. Haugen:

We consigned this package to the waste paper basket, where previous consignments have gone. We are short of waste basket room and do not care to have this space encumbered with more of such trash. The first two years we received your seed we planted it, but found it so inferior to the varieties that we could buy at the store (undoubtedly not suitable for this climate), two packages for five cents, that we have discontinued the use of it.

It is nauseating to us to see the government spending millions of good dollars for a worthless article, and is surely disgusting to see a Member of Congress trying to perpetuate himself in office by handing out such worthless sops to his constituents. A match or a toothpick might contain some real value, wouldn't cost the government as much, and we have no doubt would be used by a majority of the recipients where not one-tenth of the seeds ever get into the ground, and when they do are a detriment to the planter.

Mr. Crane hopes that some day we may have a Congress that will not go to seed. Not until the real owners of Congress clean it up and make it work. Who are the owners? What these Congressmen call "*the common people!*" "We, us, and our neighbors."

*

"*Which may be harmful to health.*"

These six words are responsible for the deadly thrust which the Supreme Court has given the pure food law. This phrase is "not as wide as a church door—but it is enough."

The Supreme Court held that this "joker" in the law makes it necessary for the Government to prove in each case that there is enough of the poison present in the food to produce actual harm. Under this ruling a manufacturer is apparently left free to use poisons up to a point where a jury will decide that there is enough to be "harmful." Children or invalids or persons peculiarly susceptible to a certain poison, might, under this ruling, be killed by the hundred until some jury decided that the food ought not to injure a strong man. Also consider how hard it will be for the Government to prove such cases. The poisoners can employ the greatest scientific "authorities" in the country to confuse the issue and raise doubts in the minds of the jury. Men from the great universities are for sale in an effort to break down the pure food laws while this phrase of six words remains as a loophole. These eminent scientific gentlemen will not relish the suggestion that their opinions are for sale. Let them tell what they call it. We waste no time criticising them or the Supreme Court. The direct thing to do is to take these words right out of the law and thus prevent the use of poisonous substances in food. Congress can do that—no other power is capable of it. Let us therefore get right after Congress *until that poisonous knothole is plugged up.*

*

THE U. S. Department of Agriculture makes this statement:

The unscrupulous seedsmen are now reaping large profits in supplying the demand for acclimatized and improved varieties of seed with substituted seed, which are in many cases unsuitable to the local growing conditions, and which cost as a rule much less. It is difficult even for a seed expert to determine the origin or purity of type of these seeds, especially if it is well cleaned, so that at the present time practically all the surety of protection the farmer has against misrepresentation is the word or reputation of the dealer of whom he is buying his seed.

This charge does not include all seedsmen, for there are many honorable dealers who would never adulterate their seed. It refers to the frauds who rank with the grocer who put sand in brown sugar and plaster into flour, or beef fat into "butter." The fraud is done in inducing farmers to pay a high price for "improved" Alfalfa seed and then delivering an inferior grade. The scheme is to advestise during the season for "Grimm," "Montana," or other superior strains. This leads people to think that such frauds have the seed for sale. What they really do is to mix in with the small amount of superior seed a large amount of inferior stuff and sell it all at the higher price. In this way these smart mixers can make a profit of from $1,000 to $3,000 on a carload of imported seed. This is even worse than mixing lard or suet and cotton oil and selling it as pure butter. The end of the "oleo" comes when you eat it, but the damage of the Alfalfa fraud may go on for years. The Department calls for a Federal law to stop this work. This might be an amendment to the pure food bill guaranteeing protection to the farmer in interstate commerce. It would mean sampling and inspection, publicity and heavy penalty. Such a law would be just and fair. We think the Government might well mix up with the mixers.

*

CAN we fight Jack Frost with artificial heaters? More than 50 Eastern fruit growers ask that question. They have heard of successful frost fighting in the West. Can we do it here? Next week we shall print an article giving actual experience in a Western apple orchard. Later there will be further notes on frost fighting in gardens and small fruit plantations. The theory of this fight is that small and smoky fires, 50 or more to the acre, kept constantly burning while the temperature is low, will hold warm air and a thick smudge around the trees or plants until danger is past. Oil-burning pots which give a steady blaze and a thick smoke are mostly used. The best results are obtained in protected pockets of land where the cold air rolls down hill, and where the wind is light. In the face of a strong wind the oil pots are not satisfactory. Many growers now plant wind-breaks for the purpose of breaking these high winds and thus giving the oil pots a chance to warm up the air in the orchards. Most of the success with oil heaters thus far has been in the West, largely in small valleys which are naturally cold. Not much of this work has thus far been done in the East, but our experiment stations should take it up and test the plan thoroughly.

*

COULD you give me any information on the following question, or direct me where to get it? How does the intelligence of the country people compare with that of the city? G. S. S.
Vermont.

We find that this year as never before topics relating to farm subjects are being selected by debating societies. The above named subject was, we understand, debated between students of a good country school and a town high school. The classes at an agricultural college recently debated the back-to-the-land question. This movement to discuss publicly these questions of farm life is a good one. Such subjects are far more desirable than the old, worn-out things which have nothing to do with farming or farm life. Nothing can be better than to have young people open these subjects and analyze them fearlessly and to the bottom.

As to the question regarding "intelligence," we would from choice argue for the country side. Intelligence is "the faculty of understanding." The town or city people live within gunshot of great libraries and all means of acquiring knowledge. Yet the greater number of them rarely look into a solid book or do anything that may be called real thinking. We told one of them once about a canning plant, and he wanted to buy seeds of it. Another was sure that potatoes grow on trees. When the price of beef went up several city men that we know said farmers were fools because they did not at once raise cattle and have them ready to sell while beef was high. These men seemed to think that a steer grows to full weight in about 100 days. The average city man seems to believe that the high cost of living is entirely due to farmers, who are all getting rich through holding up the public. The best reading and thinking and the broadest and most charitable and hopeful views of life are to be found in the better class of country homes.

BREVITIES.

MANY a hen has been doctored for all sorts of ailments when the real trouble with her was vermin.

THE tractors are showing us the value of deep plowing. Good judgment is required in this, but without turning up too much subsoil we should go as deep as the strength of the team will permit.

"WELL, the 12 cords of wood are cut and at the door with a few cords sold, icehouse filled and now we must prepare for the Spring and Summer campaign. That is the way a Maine man puts it, and his condition is hard to beat for February.

PINE needles will not make good manure as they come from the woods. They contain too much acid, and should be soaked with stable liquids or mixed in horse manure before using. In their raw state such "needles" will sew up the plant food in the soil.

WE have never known a season with so many reports of poor grass stand and bare spots in meadows. Drought, white grubs and freezing seem to have damaged the meadows severely. Many readers ask if they cannot scatter grass and clover seed over these meadows, and expect in this way to cover the bare spots and obtain a good stand of grass. The chances are against it. We have never been able in our own experience to reseed in this way with any satisfaction. By scattering the grass thickly and scratching over with a light harrow or weeder when the conditions are right, it may be possible to thicken up the stand somewhat, but breaking the land and reseeding is the only sure way to recover the meadow.

AGRICULTURAL CREDITS IN NEW YORK.

On March 2 Governor Martin H. Glynn of New York sent a very strong message on agricultural credits to the New York Legislature. Governor Glynn's arguments are unanswerable, and the Legislature can have no reason for refusing promptly to pass the two bills which have been introduced. These measures are in no way political, but it happens that all three of the large political parties have demanded this legislation. In their National conventions the Republican, the Democratic and the Progressive parties all called for an improved system of agricultural credits. In New York State the Democrats and the Progressives definitely urged a better system on such credit for New York, while the Republicans stood for a general improvement. This is evidence that all the people through their political parties desire such legislation. Governor Glynn proposes to save the farmers of New York millions of dollars by a scheme for converting the present mortgages into what are known as amortization loans. Under this form of loan the debt is paid back in installments on the principle employed by the building and loan associations. This means that each year, or every six months, as desired, the interest and a certain portion of the principal are grouped in one payment, so that at the end of a certain time the entire debt with its interest is wiped out. For example, on a loan for $1,000 at 6 per cent. for 10 years, an American farmer pays each year $60, or $600 for the 10 years. He still owes the original $1,000. This means that should he ever pay the mortgage at the end of 10 years, it will have cost him $1,600 all told.

If this farmer could avail himself of the European system, he would pay each year $135.86, or during the 10 years $1,358.60, and would have his debt paid, both principal and interest. Thus he would save $241.32 over our present system, and the farm would belong to him. Governor Glynn states that the mortgage indebtedness of New York farmers is $100,000,000. A system of agricultural credits which would change our present form of mortgages into amortization loans for 10 years will save our New York farmers $24,000,000. If they could be changed into 50-year amortization loans the total saving on these New York mortgages would be $82,000,000. Governor Glynn shows what this form of loan has done for France, Germany and Ireland. It has encouraged many a man to obtain a piece of land, which he otherwise could not buy. It has also enabled many a farmer to obtain the needed capital with which to operate his farm, and has turned thousands of tenant farmers into freeholders, giving the man the right to call a piece of land his own. As Governor Glynn says, with great force:

"The way to make a people collectively the masters of the world is to make them individually masters of a few feet of earth."

To bring about this result Governor Glynn proposes two plans, which will work together in harmony. One is the establishment of a large central bank issuing debentures, to be secured by mortgages placed by saving and loan associations acting as feeders for the central bank.

In this system existing associations together with savings and loan associations to be organized among farmers would be stockholders in the central bank. The members of these associations would be allowed the privilege of borrowing money on the long time amortization plan.

The other plan authorizes the formation of land banks as stock institutions by the subscription of private capital. This system is advocated by many leading agriculturists and financial experts who have devoted much time to the study of agricultural credit abroad and to our need for it at home.

The two bills have already been introduced in the Legislature. We shall analyze them fully, and give a thorough explanation. This is the most important financial legislation that has yet been attempted for the farmers in New York State. Made into law these suggestions will have a far-reaching effect upon New York agriculture, and every farmer, not only those who are in need of capital, but those who are well provided with it as well, should work together to have these bills promptly passed and made into laws.

FAKE FIRE IMPROVERS.

I inclose an advertisement. I bought a small package of the stuff, and inclose you a sample. The directions say: Dissolve a heaping teaspoonful in one-half pint of water, and sprinkle over one hod of coal. I can't make the stuff dissolve. What do you know about it? C. W. C.

Boston, Mass.

The advertisement offered "Leskole," which is said to save one-third to one-half coal and money.

"Stop Burning Up Money."

It is claimed that the stuff will eliminate *all waste,* beside doing other wonderful things. We had the sample analyzed—with the following report:

"The substance which you send is common salt covered with a coating of carbon of some kind, apparently wood charcoal. When placed in water the salt does dissolve, and the carbon remains insoluble, of course, making it appear not to have dissolved at all. If you will place a small amount in the palm of the hand and rub it back and forth with your finger, the black will all rub off, leaving the white cubic crystals of sodium chloride. Taste this white stuff and you will recognize the flavor. These white crystals will dissolve in water readily. The analysis was made by an expert chemist, and you can rest assured it is correct.

"There is something to be said in favor of the various fakes which have been and are fooling the market at the present time. None of them will save coal, although there are substances which mixed with coal would give more complete combustion. These materials, however, are more expensive than coal, so cannot be used with economy. The value in the substances which are sold lies entirely in the directions accompanying the package. These directions alone are worth as much as the directions and the substance put together. They always say, "Use less coal," and that advice is good for there is no doubt whatever but that poor regulation of drafts and poor stoking result in a consumption of fuel in most households, at least twice as great as is needed. With the use of this particular substance which you say is labelled "Leskole," the effect would be to put out the fire rather than to make it burn up, if any effect whatever was observed." R. P. C.

Amendments to the Commission Men's Law.

A bill has been introduced in the New York Legislature amending the agricultural law in relation to the sale of farm produce on commission. The present law, enacted by the last Legislature, compels commission men to obtain a license and to give a bond of $3,000 in order to carry on the commission business. One year's operation of the law has shown the need of strengthening it in various ways. This year's amendments are designed to cover what was shown to be the weakness of the law as passed last year. The present law states that no person, firm, exchange, association or corporation shall receive, sell or offer for sale on commission within this State any kind of farm produce without a license. The amendment takes out the word "receive" and substitutes "or receive for sale," which it is thought will cover a point brought out by this last year's experience. The bond remains the same in amount. The present bill states that its aim is to secure an honest accounting. The amendment adds the words "and payment to the consignor for goods consigned to such person for sale." The amendment also adds the words "due and owing such consignor" in the place of "or received and not honestly accounted for" in the present bill. In the amendment, also, the power of the Commissioner of Agriculture is enlarged. The power to investigate is given to the Commissioner of Agriculture and also to his deputy, counsel or other person duly designated by the Commissioner. The old bill gave the investigator the power to examine the accounts of the commission man at his place of business. Evidently some of the commission men got around that by having so-called accounts kept by outsiders. In order to cover this the amendment adds that "such investigation or examination may be made not only at the place of business of the commission men "or any other person believed to be engaged in the solicitation, receipt for sale or attempt at sale of farm produce on a commission basis." Under the present law, when a shipper wishes to file a complaint, he is obliged to have it certified. The amendment changes that to "verified." Under the present law the Commissioner is given certain powers in granting and revoking licenses. It was found that this gave the Commissioner a narrow latitude in handling several classes of commission dealers. The amendment, therefore, adds the following to his powers in this regard:

"Where the applicant or commission merchant has been adjudicated a bankrupt.

"Where the applicant or commission merchant is insolvent.

"Where there has been a continued course of dealing of such nature as to satisfy the Commissioner of the inability of the applicant or licensee properly to conduct the business of commission merchant or of an intent to deceive or defraud shippers.

"Where the licensee has been guilty of fraud or deception in obtaining his license.

"Where the licensee neglects or refuses to file a bond with additional or other sureties upon due notice being given him to do so by the Commissioner of Agriculture when the financial responsibility of the sureties upon the bond filed pursuant to Section 284 of this Chapter is impaired or doubtful."

One trouble with the present law is the fact that the commission merchant is not required to keep complete records of his sale, and there has been no way of investigating a number of cases which were brought before the Commissioner. The amendment to the law seeks to overcome this trouble by compelling the commission man to keep the following records of sales: He is required to keep the date of sale and the name and address of the person to whom he sold the goods. This will be the keynote of the whole proposition. Instead of keeping the *selling* price as the present law requires, this amendment demands that he keep a record of the price which he receives, and, of course, the name and address of the buyer, and he is required to preserve this record for the period of one year, and a copy of it shall be mailed to the shipper together with payment in settlement within 48 hours, unless otherwise agreed. The amendment also makes it an offense for any person, firm or exchange not only to receive, sell, or offer for sale on commission farm produce without a license, but also definitely classes, the dealer who advertises or holds himself out to sell on commission. These amendments, if they pass the Legislature and are signed by the Governor, will strengthen the present law. They are just and fair, and what we need. Every farmer and shipper in the State should at once get after his Assemblyman and Senator and tell them in no uncertain words that he expects them to vote for these amendments. Do it at once.

New York State News.

ROAD REFORMS PROPOSED.—The Assembly graft committee it is expected will ask the Legislature to prohibit highway contractors from making campaign contributions, put all highway department employees under civil service and make supplementary agreements in highway contracts impossible except on approval of the State Comptroller. If such recommendations are adopted they will go far toward solving the graft problem as affecting the highways. An interesting fact came out in the testimony before this committee the other day. It is interesting only as showing to what lengths some contractors went in gouging the State. It was stated that asphalt was sold to the State in uncleaned molasses barrels, and in vinegar and whiskey barrels, which often contained sugar, burlap, bolts, nuts and other rubbish, all of which was thrown into the melting pot and charged up to the State at clear asphalt prices. This company had contracts for highway work in Herkimer County, one of which was obtained by paying $2,500 to another construction company. The 6.84 miles of road cost the State $74,000.

FINE FRUIT, LOTS OF IT.—It is stated that a carload of Greenings was shipped from Williamson, Wayne County, a short time ago which topped the market at $7 per barrel. It appears that not all the fine fruit comes from the Hood River valley. The total shipments from Sodus, same county, the past year were 3,000 carloads, this including fruit, produce, etc. Cold storage fruit is bringing high prices now.

PEACH BUDS FROZEN.—One thing is certain, the peach growers of Western New York will not have to thin their peaches this season. They will be thin enough even if there are any at all. Prof. King and Mr. Seth Bush are authority for the statement that the crop has been badly injured by zero weather, and both agree that from 75 to 90 per cent. of the buds have not survived the freeze. Some believe that the late warm Fall has had something to do with the trouble as the wood did not ripen so that the buds could better withstand the extreme cold. While the peach crop has not failed, it is said, in thirty years not more than once, it is this fact th t still gives some encouragement to peach growers.

CONDEMNED MILK SOLD AGAIN.—The astonishing fact was brought out at the hearing of the milk commission in New York last week that milk that had been condemned by the city authorities because typhoid fever had been traced to it, had been reshipped up-State and sold, sometimes to butter and cheese factories. This statement was made, if he is correctly reported, by Dr. M. B. McMillan, of the City Health Board.

GIVING AWAY COLORING FOR OLEO.—On March 3 the Court of Appeals handed down a decision sustaining the right of the State to prohibit the selling or giving away any coloring matter with the sale of oleomargarine. An appeal had been made from a lower court by Peter H. Van Kampen, a grocer of Brooklyn, which court had awarded the State a penalty of $100 against him. He was charged with giving a customer some coloring matter with the sale of a pound of oleo. It was claimed that the giving of a customer such coloring matter at the time of the purchase of the oleo was really an inducement, or at least a suggestion to him, to so color it, or in other words it was an invitation to him to violate the law. All judges of the court concurred in the opinion, which was written by Judge J. W. Hogan.

DUTCHESS FARM BUREAU.—At the monthly meeting of the Dutchess County Farm Bureau, held the last day of February, it was decided to formulate a plan for co-operative buying and selling, and a committee was named to carry out the plan. A gift of $400 was reported for the work of the bureau from a resident of the county whose name was not given. Prof. Wilkinson of Cornell will be in the county from March 9 to 12, and will take up any problems the farmers have to suggest to him and help them to solve them. The Bureau now has 162 members.

CO-OPERATIVE MARKET ASSOCIATION.—There has been organized at Unadilla the first farmers' market association in the State, under the recommendation of Governor Glynn. It is framed along the lines of a corporate company, with shares at $100 each. Samuel L. Halbert has been appointed as sales agent. The officers of the association are: C. O. Potter, president; S. A. Fisher, secretary; Arthur Rowell, treasurer. The territory covered by the association takes in parts of Otsego, Delaware and Chenango counties.

DAIRYMAN'S LEAGUE.—President Gerow of the Dairyman's League says that while agreements are coming in very satisfactorily they yet lacked, the last week in February, about 60,000 cows. There are at present 11,000 stockholders, with 315 branches in the five S... Last September a resolution was adopted by the Board of Directors that if the League received the endorsement of 75 per cent. of the stockholders by February 1, the League would ask for recognition in making the price of milk.

AWARDS FOR CATTLE KILLED.—Senator Godfrey's bill asking the State to pay interest on money due to farmers and others owning diseased cattle which were condemned and killed by the State, has passed the Senate. It was almost unanimous, the vote being 40 to 1, Senator Carswell of Brooklyn being the one.

WEEDING OUT POOR COWS.—The Onondaga Farm Bureau is making a determined effort to weed out unprofitable cows from the herds in that county. Last year about 1,000 cows were placed under test, and it is planned to add 2,500 more cows to the list this year.

OTHER BILLS.—A bill introduced in the Assembly would amend the labor law to exempt employees in dairies, creameries, milk shipping stations, butter and cheese factories, etc. The bill relating to trespassing by hunters and fishermen, and forbidding them to let down bars, open gates or fences upon the lands of another, is also before the Assembly, and still another refers to several appropriations for the School of Agriculture at Morrisville. J. W. D.

THE Department of Agriculture has analyzed what is called "egg powder" or "egg substitute," which is said to have all the effect of eggs in baking. This libel on the hen is nothing but baking powder, filled up with ground rice, and colored yellow with powdered turmeric. That's a clear libel on the hen. Even the Hope Farm man's scrubs would be ashamed to lay baking powder and rice, even though that were counted to help out their record.

Woman and the Home

From Day to Day

REST.

I lay me down to sleep,
With little care
Whether the waking find
Me here or there.

A bowing, burdened head,
That only asks to rest,
Unquestioning, upon
A loving breast.

My good right hand forgets
Its cunning now;
To march the weary march
I know not how.

I am not eager, bold,
Nor strong—all that is past;
I am ready not to do,
At last, at last.

My half-day's work is done,
And this is all my part;
I give a patient God
My patient heart.

And grasp His banner still,
Though all the blue be dim;
These stripes, as well as stars,
Lead after Him.

—Author Unknown.

*

ONE of our readers on the Pacific coast wrote us that violets and Crocuses were in bloom, just at the time another reader wrote us of the fields of ice surrounding her island home in one of the Great Lakes. From our office windows at that time THE RURAL NEW-YORKER looked out on mountains of snow, awaiting the pleasure of New York's Street Cleaning Department, and those Oregon violets, and the bluebirds who were there setting up housekeeping, seemed many months, as well as many miles away. Indeed, with our readers so widely scattered, not only in this country, but also abroad, "seasonable" advice has to be scattered all over the year, for the housekeeper in one district may be canning berries when her distant sister is looking forward to the first dish of rhubarb.

*

WE think our recipe for corn chowder is extra good. Cut four slices of bacon into dice, and fry brown; remove from frying pan, put into a deep kettle, and put into the fat a small onion, or piece of one, about the size of a walnut, shredded fine. Brown the onion, then add that and the remaining fat to the bacon in the kettle. Then add one pint of potato, peeled and cut into dice, pepper and salt to taste, and one quart of boiling water. A stalk of celery, chopped, or some green pepper shredded may be added if available. Let the chowder simmer for two to three hours, stirring frequently, so that it does not stick or burn. About an hour before serving add one can of corn; when it comes to a boil add one cup of hot milk, four crackers rolled fine, and a piece of butter the size of a walnut. Let it come to a boil again and serve very hot.

*

MISS Julia C. Lathrop, Chief of the Federal Children's Bureau, in her first annual report, refers again to the lack of a general system of birth registration in the United States, which hampers the collection of statistics regarding infant mortality. She estimates, however, that last year 300,000 babies died in the United States under one year old. Of these 42 per cent. died before they reached the age of one month and seven-tenths of this 42 per cent. died from the result of prenatal conditions, or of injury or accident at birth. That means that a great proportion of these hapless infants are martyrs to preventable conditions. Setting aside all questions of personal feeling, of pain and sorrow, what an economic waste is here involved! No plan for conserving National resources can be considered complete without a fuller effort to amend the conditions responsible for this appalling loss of human life.

*

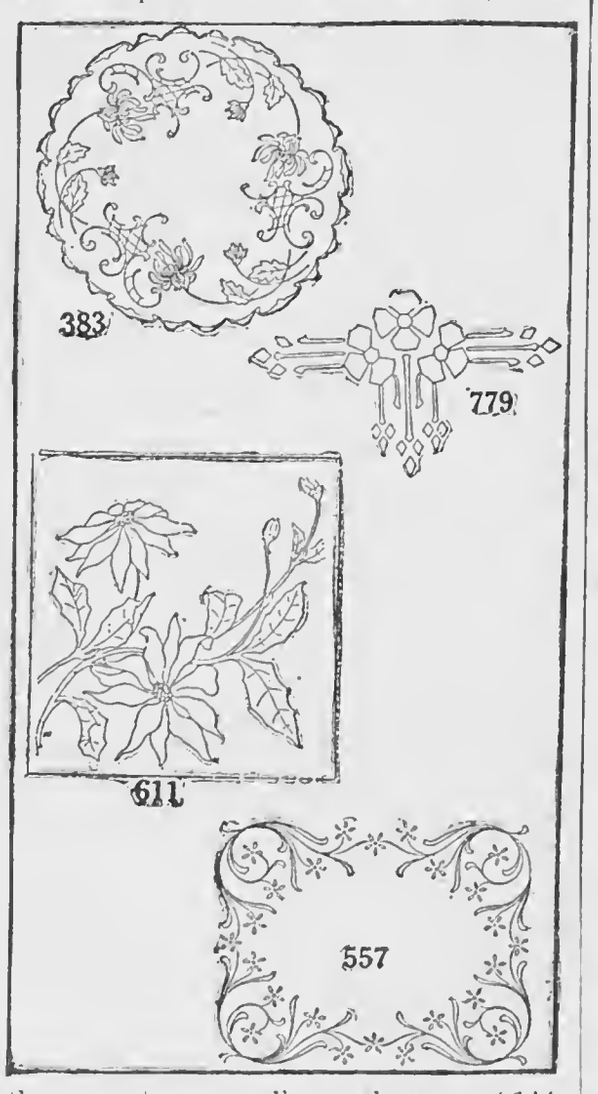
WHEN struggling with the minor miseries of chapped hands and cracked finger nails, which usually accompany a severe cold spell, it must be remembered that all constitutions are not alike, and a remedy that suits one will not help another. Many find vaseline entirely useless, if not actually detrimental; others get no alleviation from cold cream. Glycerine is often useless unless mixed with rose water, but we find the mixture very helpful; the glycerine alone is often very irritating. Clarified mutton tallow is really very useful; if a little almond oil is beaten into it while it is still warm it does not become so hard, and is very soothing to the skin. It is also comforting to rub the hands with almond or olive oil before washing them with soap and water; this seems to soothe the inflamed surface, and prevent further chapping. An old-fashioned ointment, very soothing to chapped hands, used to be made with elder flowers. Hard mutton tallow was clarified by melting in water, then skimming off when cold. This was

then melted in an earthen vessel stood in a saucepan of water, and a qunatity of elder blossoms, free from stems, added to the hot fat. They were steeped for about 12 hours, the vessel being left on the back of the stove, after which the flowers were strained out and the ointment poured into small jars. Some added a little almond oil, beaten in while the ointment was warm. It had a pleasant faint fragrance, and was soothing to sore or inflamed skin.

The Rural Patterns.

When ordering patterns always give number of patterns and measurements desired.

8171 Girl's French blouse dress, 8 to 14. Adapted to bordered material, with



three-quarter or elbow sleeves. 8144 Child's French blouse dress, 4 to 8 years. With skirt consisting of two circular flounces, with short or long sleeves. 8136 Girl's dress, 10 to 14 years. With two-piece skirt, tunic and blouse having straight edges, square or high neck, elbow or three-quarter sleeves. 8167 boy's box coat or reefer, 4 to 8 years. 8149 Child's coat, 4 to 8 years. With back and sleeves in one, Raglan effect at front. Price of each pattern 10 cents.

No. 383 is a center piece, measuring 22x22 inches, in chrysanthemum design. Stamped on best round thread linen, 36 inches in diameter, one dozen of 12-yard skeins mercerized floss in two sizes, 98c.

No. 779. Design for a stencil to be used for sofa pillows, scarf ends or any decorative object and which can be repeated to form a border. Stamped and tinted on crash with green duck back, 30c. Stamped on crash 1½ yds. both ends tinted, with floss to work, 35c.

No. 611. A design of the poinsettia flower and leaves suitable for embroidering a sofa cushion or which may be used for curtain decoration. Tinted in fast colors on tan art ticking, 22x22 inches, with green duck back and mercerized floss to work, 40c.

No. 557. A design for embroidering a baby pillow, a sofa cushion or a centerpiece. The pattern measures thirteen and one-half by seventeen and one-half inches. Stamped on 21x16 inch White Pure Irish Linen, with mercerized floss to work, 60c.

Transfer patterns of the above, without materials, 10 cents each.

Cooking for Diabetics.

Could you give some recipes for cooking for diabetic patients? It seems difficult to find many dishes without starch or sugar. I should like to hear from other readers who have had experience in this respect. A. W. G.

Diabetics must avoid sugar and starch, hence potatoes, cereals, dried beans, peas, and fruits are prohibited. For beverages, buttermilk and skim-milk are given; tea and coffee are avoided. Fish, meat, green vegetables and gluten bread are the staples. Perhaps some of our readers may be able to help the perplexed housekeeper with recipes developed from personal experienc.

To give a book is to enrich the receiver permanently; to put into his or her possession something which leaves a residuum of pleasure long after the particular day on which it was received has been forgotten.—Hamilton W. Mabie.

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Rawhide Strength
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Buckskin Gloves
built to fit and "give" with every motion. No extra bulk; no cramped fingers or hindered muscles. Never mind bad weather and rough chores when you wear this comfortable, *lasting* Hansen.
This buckskin is soft, pliable and strong. "Protector" and "Glad Hand" Gauntlets, as also "Dan Patch" for driving, are made of this perfect leather. Prices $1.50 to $2.00, stamped Hansen's Genuine Buckskin. Leather protects against heat and steam. Will not shrink in water and cleanable with gasoline.
500 styles for motoring, railroading, sport, etc. At your Dealer's, or we will tell you where to buy.
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White Bronze is more enduring than granite and is less expensive. Does not chip, crumble or become moss-grown. Has stood every test for over forty years. Work delivered anywhere. Write for handsome Booklet—free.
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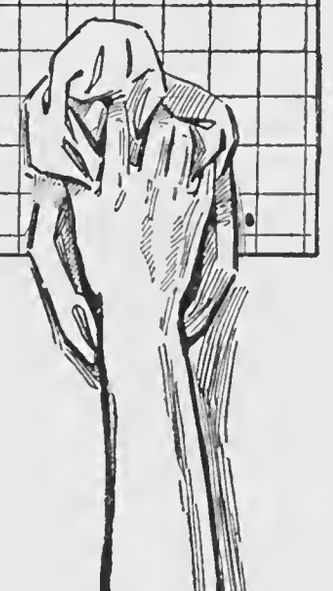

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Other Ways With Salt Pork.

That salt pork leads in "energy producing foods," was news to hosts of people who attended the Children's Welfare Exhibit in New York two or three years ago. Most of us had been faithfully taught, by our books and "past masters" in things physiological, that this was the one meat that was to be avoided as one would shun the plague. Some of us had turned our backs on pure theory, and tried to be practical (when teaching in pork-raising localities) by showing proper combinations of nitrogenous foods with the fat, and how so to cook the pork that it would not only assimilate readily with other foods, but also make them more palatable. Robbed of all technical terms, the following recipes will be found well-balanced as to food elements and attractive to the palate.

Roast Salt Pork.—For a family of six select a "slab" of larding pork that weighs about three or four pounds—long and narrow, rather than square in shape. Dip it in a pan of boiling hot water, and lay it on a plate for one minute to drain before wiping dry with a soft cloth. Cut, with the rind side uppermost, to within an inch of the base, into thin slices, which will be held together by this inch-piece. Place in a small dripping pan rind up, and put in a hot oven, to roast, allowing 20 minutes to the pound. The slices should lean over from the center toward each end, naturally; and if the oven is hot enough, each slice will get rid of its fat and will be a crisp, golden brown, breaking at the touch of a fork. If too hot, open the oven door, or lift a stove-lid a bit, to prevent even a sign of "scorch." Take up on a hot platter. Drain nearly all the hot fat out of the dripping pan—saving for future use, of course—and make a milk gravy with what is left in the pan. Serve with johnny cake, corn bread, graham or rye bread, mashed potatoes; stewed tomatoes and baked beans; with baked apples and coffee for dessert.

Boiled Pork Balls.—Select a piece of "fat and lean," wash as above; plunge it into a kettle of boiling water, and keep it boiling under cover until tender enough to let a fork pierce it with ease. Remove the skin, or rind (saving it to grease the baking tins for bread, or the griddle for cakes) and chop the meat fine with twice its bulk of dry bread. Add half this bulk of mashed potatoes, and "bind" all with a well beaten egg. Shape into disks, dredging the tops with flour, and fry on that side. When a light brown, flour the other side and turn, to fry on that side Serve on a hot platter, with potato salad, milk gravy toast, and boiled onions.

Baked Pork and Eggs.—In a shallow enamel pie-plate, lay as many very thin slices of salt pork as you have people to serve. Put in a hot oven; and when the slices are browned slightly turn them the other side up, arranging them with a space between. Break an egg into each space; place a tiny bit of salt on each egg and return the plate to the oven. If your people like their eggs "hard," turn them, letting them brown on both sides, slightly. Have ready a hot platter with slices of well-browned toast that have been dipped in salted hot water. Lay the eggs on the toast, and take up the pork on a separate hot platter, draining each slice dry of all fat. As this is a particularly good dish for breakfast, it can be served with creamed potatoes, or with those that have been freshly boiled "in their skins" and milk gravy.

Fried Pork.—Cut the slices thin, and fry slowly, turning to fry both sides. When done until crisp enough to break at touch, lift to a dry hot platter. Make a smooth milk gravy with part of the fat, and dip slices of dry bread in it, piling on a platter. Serve with baked potatoes, egg salad, apple sauce, and coffee.

Pork and Rice Mound.—Chop raw pork into moderately fine bits, or put it through the meat chopper. Fry until brown. Drain off the fat, and add three times the bulk of dry boiled rice. Mix thoroughly, and fry some more, stirring occasionally. Empty to hot platter, and shape into mound, garnishing sides of platter with wreath of thin slices of sour cucumber pickles. Serve with stewed tomatoes, hot corn muffins, and coffee, cocoa, or tea.

Pork Loaf.—Boil until tender. Remove the rind. Chop fine with double bulk of stale bread. Bind with well beaten egg, season to taste, and shape into loaf for baking in large tin, or pack in smaller one. Cut into thin slices as wanted, hot or cold, hot, with potato salad, and boiled spinach; cold, with creamed potatoes and stewed tomatoes.

When taking pork from the water in which it has been boiled, add chopped onions, rice (or pearl barley) to the liquid, and boil slowly for next day's soup or stew.

Pork Salad.—Boil lean salt pork until very tender. Separate all the fat, and save that for a "loaf" or some other concoction above mentioned. Cut the lean meat into moderately coarse pieces, in a cool bowl with an equal bulk of dry bread crusts, cut somewhat smaller; add the same bulk of celery stalks and of cabbage cut rather coarse, after crisping each in cold water. If you had a bowl of meat, you will now have four bowls of salad, to be thoroughly mixed, over which pour a thick mayonnaise dressing—and your salad will be "fit for a king." Serve with stewed beans; cheese sandwiches, or hot biscuits.

Pork and Onion Omelet.—Fry, to a brown, dry crisp, without a hint of scorch, as many thin slices of fat pork, as you have people to serve. Chop it into an equal number of slices of dry bread, and add half this bulk of onions, chopped very fine. Mix thoroughly, beat as many eggs as you have bread slices, adding two tablespoons of milk and one of cream for each, and beat well. Drain off nearly all the fat that is in the frying pan, and put in the bread, pork and onion mixture, stirring lightly. Sprinkle a little salt, but very little, and stir again. Pour over all the beaten eggs and milk, and set in a slow oven to bake. When done to a fair—but not dark—brown, slide it off on a hot platter for immediate service. An excellent supper dish. Serve with baked potatoes, and stewed tomatoes.

Pork Chowder.—Fry, until crisp, as many thin slices of pork as you wish to serve dishes of chowder. Lift out, and break them into bits on a hot plate, setting it aside on the back of the range, while you fry, in the fat and until well browned, as many thick slices of onion as you had of pork. Cover and set them back while you wash and chop fine as many small, or half as many, each, carrots, celery and potatoes as you had slices of pork. Add these, with farina, boiled rice or pearl barley in the proportions of a cup of these to two cups of the chopped vegetables—to the browned onion. Put all, including the pork, into a big kettle, and add (canned or raw) tomatoes to taste; with water in proportion. Cover, bring to a boil, and add salt, and pepper if wanted. Set it back to simmer for six hours, stirring occasionally, to prevent sticking. Serve in hot dishes, with hot crackers or bread sticks. If water is added at any time, stir thoroughly and again bring to a boil, letting it simmer again before serving.

LUCY A. YENDES.

Two Tested Recipes.

Cream Muffins.—Two level tablespoonfuls of soft butter, two level tablespoonfuls sugar. Beat the whites of two eggs to a stiff froth, add the unbeaten yolks to the butter and sugar and cream together, then add one cup of sweet milk, one-half teaspoonful salt, two cups sifted flour and two large teaspoonfuls of baking powder. Beat well, then add the beaten whites of the eggs. Carefully fill muffin pans two-thirds full and bake 20 minutes in a hot oven. Substitute one cup of graham, cornmeal, rye, or entire wheat flour for one cup of wheat flour and you will have different meal muffins.

Mother's Fried Cakes.—Two eggs, one cup of sugar, one cup of sweet milk, two tablespoonfuls of melted butter (or lard), one teaspoonful soda, two teaspoonfuls cream tartar sifted with the flour, just flour enough to roll out and cut. Flavor with nutmeg or to taste. As I remove them from the hot fat I place them on paper and that absorbs the fat from them.

A. W. G.

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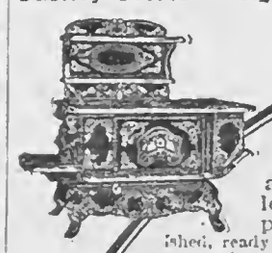

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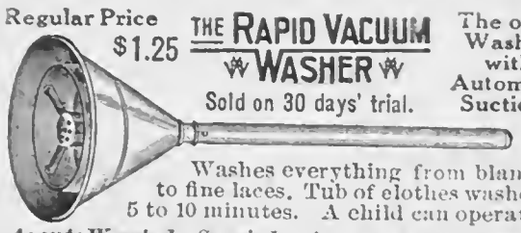

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THE HEAVY FEEDING COW.

On page 1365, "Why is the Purebred Better Than the Scrub?" H. E. Mern, in discussing, compares cow No. 27 with cow No. 62, an experiment conducted at the Missouri Experiment Station. In his conclusions he says: "If No. 27 had been limited in feed to amount eaten by No. 62, her production would have been reduced practically to that of No. 62." Do I understand him to say that if both cows were fed same amount of grain they would practically have produced alike? The point I am desirous of having explained is, did the amount more produced by No. 27 over No. 62 pay a profit on the more feed consumed? Cow No. 27 produced more than cow No. 62, but she also consumed more. Did the value of the extra production leave any balance after the value of extra feed consumed was paid? If I have two cows fed alike they will produce alike. Now one cow has a greater capacity for consuming feed. I give her more feed and get a greater product. The product is sold. I use the extra money to pay the extra feed. Who is benefited? It looks to me as if the feed man is. What benefit is that to me? The voidings of the cow may be worth more, but more labor was required, which will naturally offset the gain there. If I get an extra $5 for the extra production by feeding an extra $5 worth of wealth all the pleasure I have is passing the $5 from creamery man to mill man. That is doing business, but who can raise a family on such business, let alone the paying of interest, depreciation and taxes? The more concrete examples we have the clearer will be the horizon. J. F. F.

Ohio.

In answer to J. F. F., I will say that he is right in understanding me to say that the two cows would have produced practically alike if they had been given the same amount of feed. I will say further that in keeping cows which can consume and utilize a large amount of feed he is not only passing money from the creamery to the mill man, but he is also taking out a toll which will get the piano and pay for the music lessons for his girls and send his boys to college. I think a little more exhaustive examination of the figures from that Missouri experiment than I could put in the article will make this clear, and will also make it clear that this extra feed is the feed which produces the gain. To do this I shall introduce here some figures which because of the space they would take and the tediousness they would introduce, I could not put in the article.

First let me show that the cow, No. 27, which ate the most feed really made the most profit for her owner:

POUNDS OF FEED EATEN AND BUTTER FAT PRODUCED.

		Grain	Hay	Silage	Green Feed
No. 27.	Feed	3424	2904	8778	4325
	Lbs. butter fat	469			
	Feed per lb. butter fat	7.3	6.2	18.7	9.2
No. 62.	Feed	1907	1698	5088	2102
	Lbs. butter fat	169			
	Feed per lb. butter fat	11.3	10	30.1	12.4

It is evident from this that the cow which ate the more feed during the year actually ate less per pound of butterfat which she produced. The same comparison would be made, using the milk production to measure by, and it would tell the same story. From this it should be plain that the heavy eating cow produces more than enough extra to pay for the extra feed, although at the same time it may not seem reasonable. I think, however, that a careful examination of the facts will make it seem not only reasonable but almost inevitable.

The food of warm-blooded animals may be divided into two portions, according to the ultimate use made of it, a maintenance portion, and a portion with which growth is made, fat laid on, products elaborated, or work done. An animal's temperature must be kept at approximately 98 deg. Fahr., and it must do a certain amount of muscular exercise—walking about the lots, masticating food, etc. It takes a certain amount of food to furnish the energy for these things. This is the maintenance portion. If now, we feed a maintenance ration, the animal can live comfortably, but cannot lay on fat, and cannot do work or elaborate products, such as milk, except at the expense of its own body tissue. If, instead, we feed one pound more than a maintenance ration, there is one pound which can be used for production—be it wool, milk, growth, fat, or work. If we feed two pounds extra, there are two pounds which can be used for production. Now, note that we have doubled the productive portion of the feed, *but we have not doubled the entire ration.* The maintenance requirement remains practically constant. The following tables and diagram show how this worked out in the Missouri experiment:

PORTION OF RATION AVAILABLE FOR MILK PRODUCTION.

		Grain	Hay	Silage	Green Feed
No. 27.	Consumed during year	3424	2904	8778	4325
	Maintenance for year	1201	1204.5	4818	
	Available for milk production	2223	1699.5	3960	4325
No. 62.	Consumed during year	1907	1698	5088	2102
	Maintenance for year	1066	1066	4292	
	Available for milk production	841	632	796	2102

RATIOS BETWEEN FAT PRODUCED AND AVAILABLE FEED.

	No. 62	No. 27
Available feed	1	2.64
Fat production	1	2.77

	No. 62	No. 27
Maintenance 35% of ration	Used for Milk production 65% of ration	
		No. 27.
Maintenance 55.8% of ration	Used for milk production 44.2% of ration	
	No. 62.	

Thus we see that while the maintenance rations were nearly the same (somewhat in favor of No. 62, to be exact) and while No. 62 really produced a little more butterfat per pound of feed available for milk production, she ate so little feed that this amount was very much less than in the case of No. 27. She ate something more than half as much as No. 27, but the amount which she had available for production was considerably less than half what 27 had. It is reasonable, therefore to expect a production in proportion. In other words, we should expect production not in proportion to the total amount fed, but in proportion to the amount eaten and assimilated *after* the maintenance requirement is met; and we should expect the last pound so disposed of to make the largest profit.

There are one or two things that this experiment does not show, however. (1) It does not show that we should feed liberally and then select the animals that eat the most, because some animals have poor digestive and assimilative powers, and much of what they eat is voided. What we should do is to feed liberally and then select those animals which produce valuable commodities at the least cost. They will almost always be the highest producers and the heaviest feeders. (2) Neither does it show that under ordinary circumstances it is good practice to pamper the appetites of animals in order to induce large consumption of feed, because then the extra care and high price of feed will often be so great as to render the returns inadequate to produce a profit. In fitting animals for show or in making a record of some kind this practice is necessary, but such conditions are unusual.

The experiment does show, though, and I should like to repeat it, that in general, the greater the ration the greater the production; and that you don't know what a good animal can do until you have fed a heavy ration. As long as you feed but little more than a maintenance ration you cannot tell the good animals from the poor ones.

H. E. MERN.

Value of Silage.

What is the value of green corn per ton when cut and delivered to the silo ready to cut, when Alfalfa hay is worth from $12 to $14 per ton and carrots $5 to $6 per ton? Oats $1 to $1.25 per hundred, bran $1 per hundred, straw $2 per load. As a rule our corn does not mature sufficiently to make a good crop of ear corn. G. M. B.

Silage in the silo is usually figured at about one third the value of good hay, or, ordinarily, at from $3 to $4 per ton. The expense of operating the cutter would have to be deducted from this in order to calculate the value of the corn delivered to the silo. By dividing the cost of the cutter and its operator per hour by the number of tons that it will elevate into the silo in that time, working under normal conditions, you will get the amount to be deducted from the ton price of silage to find the value of the green corn. It might be calculated in other ways, as by adding a fair profit to the cost of production of the corn, if that were known. Where such transactions are common, values become fixed by common consent and are worked out to a fair basis, but it is difficult sometimes in unusual transactions to arrive at a just basis for compensation. M. B. D.

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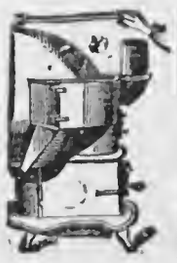

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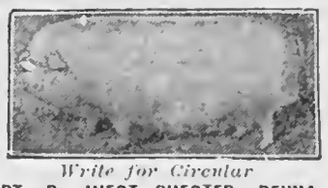

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All stock bred from large, healthy, prolific parents. Quality and breeding guaranteed. A few fine Fall Boars. Plenty of Spring Pigs coming. Order ahead and get early choice. All stock registered free in either Chester White Record or O. I. C. Swine Brs. Assn., and pedigrees recognized everywhere. VICTOR FARMS, Bellvale, Orange Co., N. Y.

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O. I. C. WHITES—Have a litter of 11, farrowed Jan. 23d, out of A1 matured stock. Price, $10, at 8 to 10 weeks. Registered. A few W. H. Turkeys left. WAYSIDE FARM, Chatham, N. J. Address, A. L. Page, (Owner), 62 Cortlandt St., N. Y. City

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BARGAINS. Fall pigs at $10 to $15. 3 extra good aged sows to farrow in Spring.
SHENANGO RIVER FARMS, Transfer, Pa.

LARGE BERKSHIRES AT HIGHWOOD
Sold out of Service Boars and Bred Sows. Will have over a hundred young sows for sale, bred for early Fall farrow. Booking orders for Jan'y, Feb'y and March pigs. H. C. & H. B. HARPENDING, Dundee, N. Y.

Springbank Herd—Big Berkshires
I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
J. E. WATSON, Proprietor, Marbledale, Ct.

FOR PURE BRED TAMWORTH SWINE
write or visit WESTVIEW STOCK FARM, R. F. D. No. 1, Winston-Salem, North Carolina

Large English Yorkshire Pigs eight weeks old, $10; three for $27. Crated and registered, f. o. b. Hamilton.
MORNEYLIGHT FARM, Hamilton, New York. FRANK TOOKE

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ereildoun, Pa.

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BERKSHIRES
Pigs of both sexes and unrelated trios for sale. Our pigs are rich in Masterpiece, Lee and Premier blood. Let us furnish you with a foundation herd. Only choice animals sold for breeders.
Write us, or better yet, pay us a visit.
ELLENWOOD FARM, R. D. I., Hatboro, Pa.

If you want the best hog
Write us. Our farms are devoted exclusively to the production of Berkshires. Breeders in the following States have been supplied from our great herd: N. Y.; Penna., Dist. Col.; Md., Va.; N. C., S. C.; Ga.; La., Ala.; Miss.; Fla.; Tenn.; Ky.; Texas, and Porto Rico.
Berkshires for foundation and show purposes a specialty.
THE BLUE RIDGE BERKSHIRE FARMS, Asheville, N. C.

BERKSHIRES
We have a number of very fine boar pigs for sale at attractive prices. They are the height of breeding, type and quality. It will pay you to get our prices on these choice pigs before you buy elsewhere. Now is the time to put a fine sire at the head of your herd. Prices and descriptions sent upon request
TOMPKINS FARM, - Lansdale, Pa.

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COLLIE PUPS—Natural drivers. Also English Bloodhounds. Nelson's, Grove City, Pa

Why Own an Airedale?—Because he fills the human craving for an all-around Dog. Pedigreed Pups for sale.
W. A. LOWBER, Burlington, New Jersey

DAIRY CATTLE

GUERNSEYS—BULL CALVES. May Rose breeding and some from A. R. cows. One old enough for service. His dam made over 600 lbs. fat. A. R. Buff Leghorn Eggs for hatching, $1.50 per 13. W. R. DUNLAP, Fayetteville, N.Y.

THE TOMPKINS CO. BREEDERS' JOURNAL, with sale-list of pure-bred stock, 25cts per year. Copy free. We have some very good offers in Holstein and Jersey cattle, German Coach Horses, Shetland Ponies, Southdown ewes and Cheshire gilts. A two-year Berkshire boar, registered, $25.00. TOMPKINS CO. BREEDERS' ASSOCIATION, Box B, Trumansburg, N. Y

HIGH GRADE HOLSTEINS
The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
F. P. SAUNDERS & SON, Cortland, N. Y.

A Good Animal Should Never Possess a Scrub Owner.

"I am very careful to whom I sell my calves," remarked a successful Ohio breeder a few days ago. "I have been laboring for a number of years to build up a purebred herd of efficient producers. The cows evidence their breeding in their performance at the pail. My herd has a good reputation, and I want to keep it good. It would be unbusinesslike for me to sell a bull calf from one of my best cows to some scrub farmer who would rear the calf on whey, keep him all Winter on poor hay in an airtight stable, and turn him out in the Spring with his herd looking like a scarecrow. The calf would be stunted, he would fail to make good, and then the farmer and his nearest neighbors would point to this bull as coming from my herd. That is the reason why I am careful about the man to whom I sell my stock. I want them to return him a profit and I look to it that he is mentally equipped and his farm is sufficiently equipped to insure the best results from my stock.

"This is only a business proposition," he added, "in building up and maintaining of your herd. See the right man gets your stock." WALTER JACK.

Building a Milk House.

I wish to build a milk-house in which to separate milk by hand separator, and will build it by side of water trough, into which water comes from pipe 200 feet from spring. I shall let the water flow into milk-house and use ice to keep cream a few days. Which is the better way, to put ice in water trough where cans stand or put ice only above cans? I thought of putting trough below level of floors in milk-house, let water flow in and put ice in water if necessary, as I have a houseful of ice. Will build house of boards with concrete foundation and floor. I intend to sell cream to ice cream factory. C. R. B.

Pennsylvania.

Your plan of building a house of wood with concrete foundation and floor is a good one, and I would suggest making a tank of the desired size in the floor of the milk-house, but enough higher than the water trough outside so that the water from the spring will ordinarily flow through the tank to the trough. In this way you will get cold water direct from the spring for use in cooling the milk, but I should also arrange for a by-pass for the water directly to the outside trough, so that when ice was used in the cooling tank the water from the spring need not be allowed to constantly run over it and waste it. The ice will be used most economically by putting it into the tank with the cream cans.

M. B. D.

Grade Calf.

I have bought a Guernsey bull calf whose sire was a registered bull and whose dam was three-quarters purebred. What part Guernsey may I call the calf?
A. J. T.

The calf takes half its breeding from each parent. From the bull it takes half Guernsey blood and from the dam three-eighths. It is therefore seven-eighths Guernsey.

PROFITABLE PIGS.—These figures on the loss and profit of three pigs born April 1, 1913, and sold Nov. 11, 1913, may interest, and show there is a profit in pigs even if all feed that is given them is purchased: Born April 1, 1913; were with mother until June 11, when she was sold for $45, live, the butcher taking her at the barn. Grain and feed purchased January 1 to November 1, $39.82; sold November 11, 1913, weight alive 960 pounds, $100; profit, $60.18. They had the run of a small orchard back of the barn during the Summer, and after the first of May. There are less than two acres in the orchard, which is in grass. They could not begin to keep grass down, and it was cut by machine in July and left on the ground as a mulch. They could root and dig all they wanted, but after the drought came in June they did not dig much, as the earth was too hard. They were fed twice a day, a warm slop of two parts red dog middlings and one part cornmeal, what they could eat up clean at time of feeding. To each 12-quart pail of the slop was added a small handful of bone flour, ditto of charcoal and salt. Those last items I consider very important, the bone meal helps make bone, the charcoal keeps the stomach sweet, the salt is a mineral and helps also. HORACE B. PARKER.

Massachusetts.

DAIRY CATTLE

GUERNSEY—THE UTILITY COW
WHO makes every pound of feed into dairy products. Yellow milk rich in butter fat. Yellow cream and butter. Let us tell you about her.
GUERNSEY CATTLE CLUB
BOX Y, PETERBORO, N. H.

Maple Row Stock Farm—Registered Ayrshire Cattle
Choice Bull Calves from first-class milkers. Also a few cows and heifers. White Beautys, Nox-em-all, 14671, and O'Carston of Finlayston, 14678, at head of herd. F. H. Cookingham, Cherry Creek, N. Y.

FOR SALE—Otterkill Farms Ayrshires
Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer.
Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

Purebred Registered
HOLSTEIN CATTLE

The Wisconsin Farmer notes that fewer and fewer of the Wisconsin farmers are content to milk and care for cows that are able to produce only about 150 pounds of butter. During two weeks last Spring 145 Wisconsin dairymen purchased registered purebred Holstein sires in order to improve their herds.

Everywhere the more progressive dairymen are alive to the necessity of using **bred-for-production** sires in order to bring up the butter-fat yield of their cows to a profitable figure,

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With our system of helping you with attractive advertising matter you can easily prove to your neighbors the advantages of breeding to a good horse. Our prices for colts are very low for we must keep 'em moving. They'll double in weight and value. And there's big profit in breeding big drafters. Get into the game. We'll help you. Write today. Dept. No. 2.

Best Investment on the Farm.

Over 200 head all ages—Percheron, Belgian, Suffolk Clydesdale.
Largest breeding establishment in the East—1700 acres.
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50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

FOR SALE—TWO FRENCH COACH STALLIONS. Price, pair, $275. Pure-bred. Two Percheron stud yearlings. W. W. NIECE, Chagrin Falls, Ohio

KENTUCKY JACK AND PERCHERON FARMS—200 head of big bone Kentucky Mammoth jacks, Percherons and saddle horses. Special prices in half-car and car load lots. Write your wants or visit our farms. 2,500 bushels of bluegrass seed. COOK & BROWN, Props., Lexington, Ky.

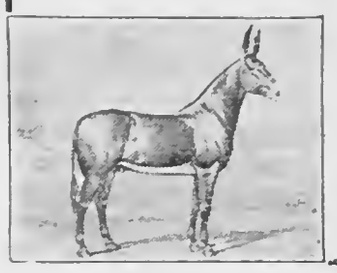
SHEEP

FOR SALE—Twenty-Five (25) **Reg. Hampshire Ewes** with fine lambs by their side.
HASLETT BROS., - Seneca, New York

DORSET RAM—Thoroughbred. For sale or exchange. To prevent inbreeding. 2 years old. J. B. BROWN, Bridgehampton, L. I., N. Y.

FOR SALE—FIFTY REGISTERED **Hampshire Down Yearling Ewes** born in Jan. & Feb., 1913. Wm. C. Whipple, Purchase, N Y.

80—Imported—80
Percheron and Belgian Stallions and Mares
on sale. My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400 lb. stallions to be found in the United States. The Cedar Rapids Jack Farm is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.



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BREEDERS' CONSIGNMENT SALE
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TUBERCULIN TESTED

THE offerings will include sons and daughters of such great bulls as King of the Pontiacs, Gordon Glenn Pontiac, Sir Prilly Walker, Sir Korndyke Pontiac Pleione, King Hengerveld Homestead Fayne, King Segis Pontiac, King Hengerveld Aaggie Fayne, Pearl of the Dairy's Joe De Kol, Changeling Butter Boy, Pledge Spofford Calamity Paul, Lord Netherland De Kol, Dutchland Colantha Contest Boy, Prince Hengerveld Fayne, Sir Lilith Posch, Viscount De Kol, Oakland Mutual Friend, King of the Hengervelds, Sir Waldorf Lad, Woodcrest Nig De Kol, and others equally as good.

Many of these have large official records, in fact there will be more large record animals than were ever offered in a public sale.

Also Johanna King Segis, son of the 40 lb. cow Johanna De Kol Van Beers, as well as several other very choice ones. Bulls that are fit to head any herd in the World.

Sale Held in New Sale Pavilion
Auctioneers Kelley, Haeger & Mack

FOR CATALOGUE ADDRESS

LIVERPOOL SALE & PEDIGREE CO., Sale Managers
LIVERPOOL, N. Y.

MILKING MACHINES THAT DO MILK.

Milking machines that actually milk have not been much in evidence in northeastern Ohio until recently. In some way the cow and the machine did not get on very familiar terms, and the former never mistook the other to the extent of adopting it as her calf, and that is the relation that must exist between the cow and milker, whether a combination pump, or a human. Many kinds of machines were introduced, but their days were few and not to be desired. Still the call for a simple, effectual milking machine was not lessened, for the labor drought increased, and good milkers became less and less in number. Many dairies were cut down in numbers until the actual farm family could perform the labor. The trouble seemed to be with all of the machines, too much mechanism, tubing, failure to get the regular pulsating pull in extracting the milk, and in some way not milking out the cow anywhere "clean," necessitating much hand milking to complete the operation, which meant cows getting "finicky," half giving down their milk, and later disgust with the whole thing, and returning to hand milking.

With the advent into public view of the Geauga County, O., Breeding Community, with its cows that were actually giving from 10 to 14 tons each of milk per year, came the introduction of a yet later milking machine, so simple in construction and dispensing with so much mechanism, that they have become very common hereabouts with both large and small dairies, regardless of "community" ownership, and on much inquiry I find they are giving satisfaction, and none has been given up or returned. As said by a neighbor the other day, with his 50 big Holstein cows, after six months' trial: "I shall not go back to hand milking. It milks better than we can! The little engine broke a part two weeks ago, and we had to hand-milk three days, and the cows shrank 90 pounds, and when machine milking was started again, the cows came back to the old notch in five milkings!"

The other afternoon I went across to see neighbor Cooley milk his 30 head of Holsteins. He has had this machine nearly a year, and one man now does the milking, instead of three milkers. It so happened that all were gone away except an 18-year-old boy, who said "They won't be home till late, but I do the milking," and soon he had the cows in their stalls, and the meal sprinkled. Then he got out four milking machines, started the engine, set the pails, attached the machines each just four milking cups, with eight inches of tubing to reach the pail, then a connection that worked the little pump at the base of the teat cups, and instantly the milk began to flow into the open cup in regular pulsations, then hand-like reaching up onto the udder for another stream. This boy was now milking four cows at a time. As fast as a cow was milked he put the machine at work on the next cow, took the milk to the cooler, and so on until the two long stables of cows were milked. No hand stripping was done. Not a cow resented the innovation or lifted a foot, only to "hist" over to have the machine attached. When he came to a hard milking cow, the boy put a smaller-orificed ring into the cup, and the operation of milk drawing was perfect. One big cow that gives about 60 pounds of milk a day, and milks so hard that it takes 20 minutes of hand milking to get it, was as cleanly milked in seven with the machine. "You see," said the boy, "if you milk a hard cow with the common-sized ring, it pulls the teat down into the cup so far that it cuts off the flow. It can't do that with the smaller ring." Some young heifers were milked without show of uneasiness, and an old "kicker," bought cheap because she did kick hard and much, has never raised her foot when milked with the machine, and that from the start. The boy had now milked the herd in less than 50 minutes, and cooled the milk ready to bottle.

"How much milk have you left in the udders, do you suppose?" Well, stripping the herd, the first cows now having been milked over 50 minutes, showed about nine pounds, a result that would have followed hand milking. "Oh yes," continued the boy, "now and then a cow gets balky, but she will be all right the next time, and gives down as well as ever."

Then the engine was stopped, and the milking cups and short connecting tubes taken to the pump and water forced through them, and then well rinsed, then thrown, cups and all, into a small bucket of weak brine for the night. Next day they would be given a more thorough washing, and then returned to the brine bath. "You see," said the boy, "we have a six horse-power gas engine. It wants a steady motion, one that does not vary, and the little engine would run fast and slow. That's part of the secret in machine milking, a steady pull. Then this engine runs the farm water works pump, the silage cutter and farm machinery, besides the generator and milking machines, and we don't have to crowd it to get power." Then he disconnected the long milking shaft rod from the engine, and touched a switch, and instantly the barn was ablaze with 15 electric light bulbs.

"Didn't you notice this generator?" said the boy. "When I was milking, the engine was turning this generator, sending 'juice' up into the storage battery, and we light up the whole place, house and all."

Well, what had we to say? Here was a boy milking 30 cows alone, and doing it week after week, and not a complaint. We went home, and began to call up the others, who had like machines. Everyone was satisfied and would not have them taken out under any consideration.

"How does your milk stand in the market as to germs, and such like jeopardizers of the public health?"

"No complaints from the health board."

"What criticism have you got to enter against the milker?"

"None, only that I ought to have had it 10 years ago. It needs to be rightly managed and kept in working order, the same as any mechanism, but it is rare to have a working part go wrong."

Ohio. JOHN GOULD.

"WHEN I was once in danger from a lion," said an old African explorer, "I tried sitting down and staring at him, as I had no weapons." "How did it work?" asked his companion. "Perfectly! The lion did not offer to touch me." "Strange! How do you account for it?" "Well, sometimes I have thought it was because I sat down on a high branch of a very tall tree."—Melbourne Australasian.

New Idea Manure Spreader

Does More and Better Work

It makes a better day's work easier. Besides thoroughly pulverizing all kinds of manure, it spreads it wider and more evenly. Because of their simple construction and durability New Idea Spreaders are the

Business Farmer's Choice

Here are a few of the many points wherein New Idea Spreaders surpass: 2 pulverizing cylinders, besides a special distributor; its simplest of all feeding mechanisms never jorks; the gearless drive transmits power direct from rear axle to cylinders. Strongly built, yet light, this ideal spreador is almost trouble-proof.

Large, Illustrated Catalog FREE

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Sows Fertilizers QUICKLY EVENLY

Sows broadcast or in rows all kinds of commercial fertilizers—nitrate, phosphate, guano, lime, ashes, etc. Distributes it fast and evenly in amounts from one hundred to several thousand pounds per acre. Simple and strong. Gauge is easily and quickly set.

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STEVENS Fertilizer Sower

Has only force feed which will sow successfully all kinds of commercial fertilizers in large or small quantities. No springs or gears in box. Order one this season. We'll refer you to a dealer if none near you. Send today for 64-page Catalog of Chicopee Line tools—the line of 61 years' sterling reputation. There's an implement for every farm need.

Belcher & Taylor Agricultural Tool Co.

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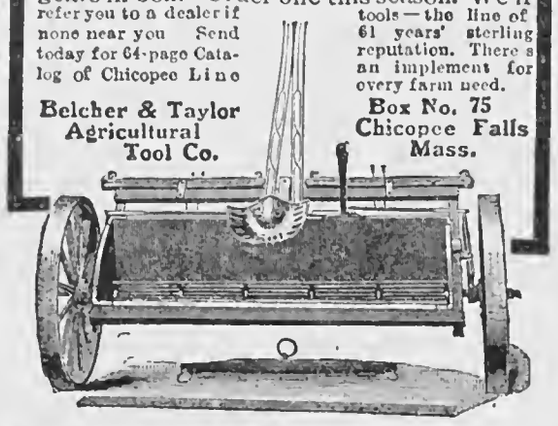

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KILLS LICE

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CLEANSES.
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DRIVES AWAY FLIES

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DEPARTMENT OF ANIMAL INDUSTRY

DETROIT, - - MICHIGAN

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They preserve silage perfectly. Combine best construction, greatest durability and convenience. Easy to erect and keep air-tight. Write today for catalogue. Agents wanted. Address

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Perfect-fitting doors make the silo absolutely air-tight. That keeps the ensilage sweet and fresh down to last forkful. Quick, easy adjustment—no hammer or wrench needed. Strong steel hoops form easy ladder. Built to last a lifetime—of White or Yellow Pine, Oregon Fir or Cypress. You may pay more money, but you can't buy a better silo. Our motto is Quality. *Write today for free catalog.*

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GALVANIZED ANTI CORROSIVE No-Co-Ro METAL

SILOS

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Their practical construction stands for lasting service. Made of NO-CO-RO Metal—an exceptionally pure galvanized iron. Perfectly fitting doors make the "ZYRO" Silo

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It cannot crack, shrink or collapse—is practically trouble-proof. Many unique and exclusive features put the "ZYRO" Silo in a class of its own. Write today for

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AT BARGAIN PRICES

We have a big stock of dry silo staves and all silo parts. We will make close prices for Winter orders to keep our help busy. Can ship with silos, shingles, lumber, etc.

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REASONS why the **ROSS-SILO** is the BEST

We use Guaranteed Long Leaf Yellow Pine that will last longer than any other wood, except cypress. The highest possible grade of Oregon Fir is used.

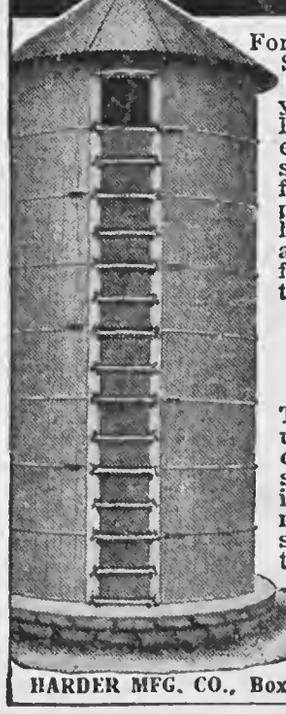
The Ross Silo has features that are exclusive, and absolutely necessary to make a good silo.

FULLY GUARANTEED

to be as represented. Our 63 years of manufacturing experience is valuable to you. FREE catalog explains all. Write for it today. Agents Wanted.

The E. W. Ross Co., Box 13 Springfield, O.

Harder Silos



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More durable, less expensive, than concrete and tile.

The kind "Uncle Sam" uses. Big free catalog describes the new spline-dowel, the new intermediate ladder rung, the anchor, and scores of other distinctive features. It tells why *you* need a Harder Silo. Write today.

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IT'S full of valuable information on ensilage and describes the silo that preserves it in a fresh, sweet and succulent condition right down to the last forkful. The

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is built of hollow blocks of vitrified clay. Each layer reinforced with continuous steel bands. There are no staves to warp, shrink or split. No hoops to tighten. No repairs or painting. Any mason can erect a Natco Imperishable Silo and it lasts for generations. A monument to your good judgment and an asset to your permanent farm buildings.

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NATIONAL FIRE PROOFING COMPANY
Syracuse, N. Y.

AILING ANIMALS.

Garget.

Will you inform me what you would rub on fresh cow whose udder is caked?
New York. H. H. W.

Foment with hot water three times a day, massage perfectly at the same time and then rub with a mixture of one part each of fluid extracts of poke root and belledonna leaves and six parts of warm sweet oil or melted lard. Feed light, laxative rations. Dissolve two teaspoonfuls of saltpeter in the drinking water twice daily for three or four consecutive days a week, until the udder is normal.
A. S. A.

Cholera.

I had a drove of 27 hogs. They all had the cholera and all died but two sows. I expect both sows to farrow in March. The bear died with the cholera and both sows had it, but got well and are now in good condition. Would the pigs from those sows, be immune? Would it be necessary to build a new hog pen, or do you think it is all right to leave them where they are? C. F.

Pigs of immune sows have a slight degree of immunity for a few weeks, but it is not worth counting upon as protection. The pigs should be vaccinated with serum alone and when 50 pounds or so in weight should be vaccinated with serum alone and in one week with serum and virus simultaneously. They will then be immune for life. Clean up, disinfect and whitewash the hog house and pens, including the floors; then use nothing but immunized hogs. A. S. A.

Greaseheel.

Will you give me a cure for greaseheel on horses? I have one that the veterinary gave me medicine for. While I use the treatment it seems to dry up and be all right and when I stop using, it breaks out again. P. S. O.

The disease is constitutional, so that local treatment alone is insufficient. Make the horse run out daily or work every day and live on corn fodder, hay, straw and roots in Winter and grass alone in Summer. Groom him every day. Poultice the affected parts for a few days with hot flaxseed meal, mixing in each poultice two ounces of powdered wood charcoal and two teaspoonfuls of coal tar disinfectant. Wash clean and dry perfectly on discontinuing the poultices; then apply several times a day a lotion composed of one ounce each of sugar of lead and sulphate of zinc to the quart of soft water. Write again later, if this does not suffice. It may be added that in bad, chronic cases it is well to give the horse a tablespoonful of Fowler's solution of arsenic right along until well; then gradually discontinue the medicine, taking at least a week to the work. A. S. A.

Lice.

I have about 60 hogs and pigs that are lousy. How can I get rid of the lice? Can I spray them at night when they lie down? Will kerosene, not diluted, injure the hogs? What is the best thing to use and how? P. F.

Spray and scrub with a solution of coal tar dip made and used according to the directions given by the makers, or apply a mixture of equal parts of kerosene and machine oil along the backbone by means of an oil can. Do not use full strength kerosene and do not use kerosene or a mixture of it on a sow with pig, as it will be likely to cause abortion.
A. S. A.

Indigestion.

1. A 1,500-pound brood mare has what the doctor calls anæmia, and now and then gets indigestion. We feed one quart oats, one quart bran, one pint linseed meal, four ears corn, mixed hay and corn fodder. Advise me what to do. 2. A cow is down in flesh; eats well but does not seem to thrive. They seem to have lice. 3. How best get rid of lice on cattle and horses? 4. I raised twin colts; I would like to have a formula to mix feed for them of right proportions to be a good economical feed, and how much of same a day? C. A. G.
Massachusetts.

1. Have mare's teeth attended to by the veterinarian; also have the hair clipped from her belly and from her legs above knees and hocks. Allow free access to rock salt, give the drinking water before feeding and work or exercise her every day. Feed whole oats and one-sixth part of wheat bran, by weight, allowing 1¼ pounds per hundred pounds of body weight of mare as a day's ration. Also allow a few ears of corn at noon, while weather is cold. Give a like amount of good mixed clover hay per hundred pounds of body weight. Carrots would form a beneficial adjunct to the rations. Give her half an ounce of Fowler's solution of arsenic night and morning for a week, then three times a day until she is doing well when the medicine may be gradually discontinued, taking 10 days or more to the work. 2. Have the cow tested with tuberculin, as tuberculosis is to be suspected. 3. Lice may be killed by using a solution of coal tar dip at intervals, as advised by the manufacturers. The stables also should be cleansed, disinfected and whitewashed. 4. The colts will do well if fed equal parts of whole oats and bran, by weight, allowing one pound per hundred pounds of body weight as a day's ration, along with all the good mixed hay they will clean up. Roots may be added with benefit and if you wish to obtain maximum growth and weight sweet skim-milk may be fed. A. S. A.

Pining Cow.

I have a cow five years old, whose appetite has been failing for the last year; have had to change grain often to get her to eat any. Now she will eat no grain of any kind; will eat about one-third as much hay as she should. She appears bright and active but is growing thinner every day. I have noticed during the last week or two that her manure is becoming hard. I think that she was grained too heavily before I got her, which is nearly a year ago. What can I do for her? W. G. B.
New Hampshire.

Have her tested with tuberculin, and if she has not tuberculosis she may do better if you give her a physic and follow with half ounce doses of Fowler's solution of arsenic and dram doses of fluid extract of nux vomica twice daily right along. Feed plenty of nutritious feed; but she may not improve before she can run on grass in Spring. A. S. A.

Warts.

I have a two-year-old heifer which has a large wart on her nose and a dozen or more the size of buttons, coming. The large one is ragged and as large as a teacup. What can I do to take it off and stop the others growing larger?
F. H. L.

Twist off the large wart, or ligate its neck tightly with a fine cord. If it is not a cancer it will not be likely to return; but also lightly cauterize its base with lunar caustic pencil. If it is a cancer it will return worse than ever and is incurable. Masses of small warts may be removed in time, by rubbing daily with best caster oil or fresh goose grease. A. S. A.

Paralysis.

I have some pigs that can hardly get up; they have been fed warm water meal and white middlings. They are in good order. They have rather a cold place. They squeal and act helpless; eat a very little whole corn. The place they have been in is just cold enough so it froze the top part of the hens' combs which were next to their pen. They weigh from 100 to 150 pounds live weight. Do you know any help for them? C. W. K.
New York.

Overfeeding and lack of exercise bring on this condition, which usually is associated with rickets. Worms may be a complication. Add limewater freely to the slop, and make digester tankage a 10 per cent. addition to the ration. Make the pigs work for any corn or whole oats they get, by rooting for it on a big barn floor covered deeply with litter. Exercise is imperative. Allow free access to slaked lime, wood ashes and charcoal. Feed roots to regulate the bowels. A. S. A.

MR. CYRUS GREEN: "Molly, what is that picture called in the catalogue?" Mrs. Green (reading): "Cows, after Rosa Bonheur." Mr. Green: "By gosh! I see the cows, but where is Rosa Bonheur!"—Credit Lost.

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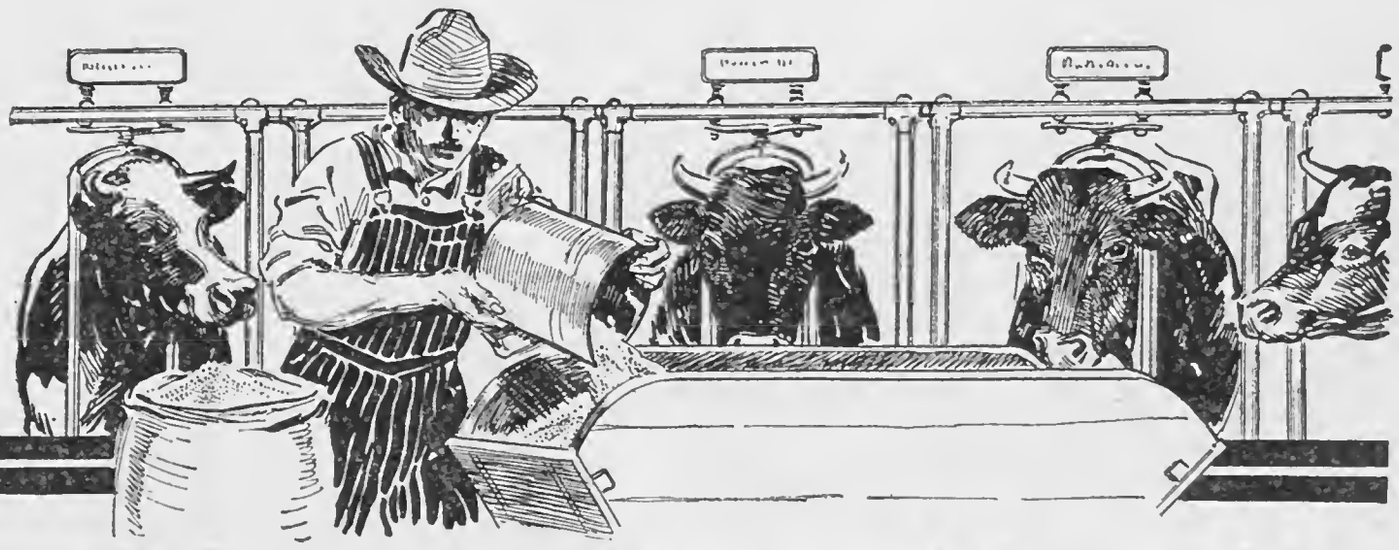

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A Word for the Cats.

I submit that a good cat has as valid a claim to be included among the live stock of the farm as the dog. We hear a great deal in the columns of the farm press of the faithful and intelligent collie, and rightly so, but the virtues of the feline tribe are suffered to remain unsung. I protest against this manifest injustice. Statistics tell us that the annual damage to farm products by rats and mice mounts up into the millions of dollars. Any agency capable of conserving this lost wealth is certainly deserving of publicity and fame. I maintain that a well-kept cat is a valuable farm asset, and fully worthy of record in the inventory of the live stock. Poison is effective against the rodents only in an intermittent and hazardous way. Sometimes it succeeds, sometimes it fails, and between times the cornerib suffers. Well-kept cats will keep the sly marauders in perpetual subjection, and never permit them to become destructive.

What is a well-kept cat—for I always qualify the name? I reply one that is kindly treated but not made a children's plaything; one also that is well and regularly fed. But, you exclaim, they should live on rats and mice, and other prey. Not at all, no more than the hound should subsist on the fox or the pointer on the quail. My experience is that the best cat hunters are those best fed and quartered. My four cats are fed as regularly and as well as are the horses and other stock. Nor are the casual table scraps to be considered a ration, but prepared messes of meat, raw or cooked, with gravy-soaked bread, potatoes and other substantial things, and all fed warm in cold weather. Meat should be the main food, no matter how many rats they may be catching, and I do not approve of much milk for grown cats. You cannot dull their hunting propensities by overfeeding. My cats, all nenters but one, were treated when kittens and grew prodigiously fast into big, fat, sleek animals, as handsome as their wild congeners of the woods, and with fur as shiny as my lady's muff. Such cats are peaceable, do not rove, and maintain steady warfare on the rodent family. I estimate the work of my cats at a greater cash value than that of my dog. They are as quick to recognize my voice and follow me about with equal affection and pleasure in human companionship. Their suppleness, grace, agility, playfulness and tigerish stealth and beauty delight the eye. But however regarded, they should never be enervated in warm rooms or fed on other than plain, wholesome food.

L. R. JOHNSON.

Cape Girardeau Co., Mo.

A Good Dog Law.

I note your correspondent's inquiry for a law that shall be effective in protecting sheep from dogs, and desire to review briefly the Maine law which was enacted 20 years ago. It has remained practically without change ever since, and has proved as effective as I believe it is possible for any law.

This law provides that assessors of taxes shall include in their inventories lists of all dogs owned by or in possession of any inhabitant on the first day of April, each year. These lists are returned to the Treasurer of State, and towns are required to return to the same Treasurer of State on or before September first of each year a sum of money equal to the license required. This money is credited, by the State Treasurer to a fund called "Dog Licenses." All dogs shall wear collars showing name of owner and the license number. The amount of the license is $1.15 for each male dog and each female dog incapable of producing young and $5.15 for each female capable of producing young. The 15 cents is retained by the town clerk who issues the license. Kennel licenses are granted to owners or keepers of dogs for breeding purposes, if said dogs are kept within proper enclosures. Dogs covered by kennel licenses are exempt from the provisions requiring registration, numbering and collaring. Ample provisions are made for destroying all dogs whose owners or keepers have not complied with the law, and my observation is that very few escape.

This law is also peculiar in that it provides for the paying of losses of sheep or other domestic animals by wild animals as well as by dogs. Whenever sheep or other domestic animals are killed or injured by dogs or wild animals, the owner notifies the municipal officers of such damage and under proper regulations, the loss is ascertained. Then the town may bring action against the owner or owners of the dogs, if it is ascertained that the damage was done by dogs and their owners can be found, or it may pay the owner of the animals their full value and 50 per cent additional. When such damages are paid by any city or town, the municipal officers thereof forward to the State Auditor a full statement of the amount and of the facts in the case, and the State immediately reimburses the town from its "Dog License" fund.

At the close of the fiscal year such a part of this "Dog License" fund as remains in the State Treasury is credited to the several cities and towns on their State tax in proportion to the amount each has paid into the State Treasury under the provisions of the law.

The State being the unit for distribution it equalizes the burdens and makes the dog licenses collected in cities help pay for the damages in the rural towns. This is particularly salutary, as probably in a majority of cases the damage is done by roaming dogs from the cities. The law recognizes the property value of dogs, and provides that whoever injuries or kills any dog whose owner or keeper has complied with the law, except that it shall be justifiable in the protection of venison, property or game, shall be liable to the owner in a civil action for the full value of the dog.

Maine, for some years previous to the passage of this law went through a period of fierce conflict led by extreme dog haters, who sought laws that would reward the shooting of any dog at any time by anybody, if the dog was caught off the owner's premises, on the one hand, and the keepers of hunting dogs and members of gun clubs, who wanted the freedom of the fields for their sport and a close time on all fur-bearing animals, even including the fox, on the other; but temperate councils prevailed and this law is the result. It has proved by its many years of life and its effectiveness that it can with safety be recommended to other States.

Maine. B. WALKER McKEEN.

Dog for Poultry Protection.

I notice a picture on page 35 of a dog which I take to be a bull, and which you say is better than a shot gun for thieves. I presume you mean in guarding the poultry. How can he do this when tied up, and if running loose will he not molest the birds? D. J. M.

The dog is turned loose at night and has the run of the yards. He has been trained to know the hens and lets them alone, seeming to know he is their protector.

"WHY do you call that pig of yours 'Ink'?" asked the visitor. "He isn't black." "No," replied the farmer. "I call him Ink because he is always running from the pen."—Credit Lost.

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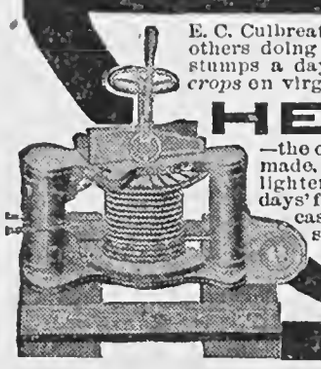

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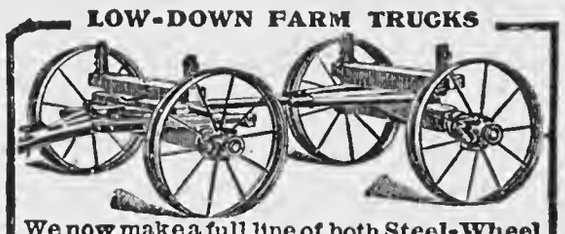

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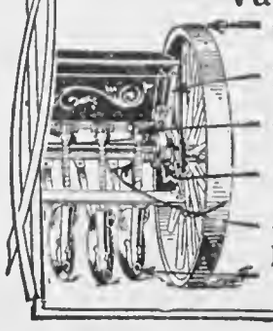

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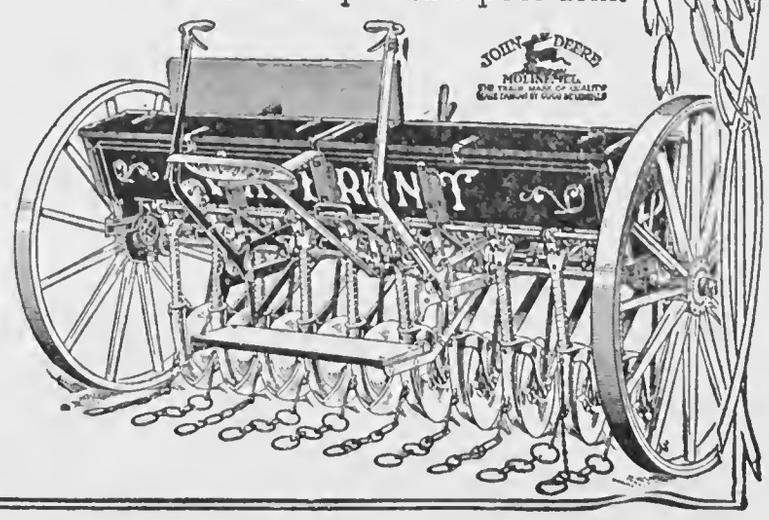

EVENTS OF THE WEEK.

DOMESTIC — Sealed indictments against six stock brokers were returned Feb. 27. to United States District Court by Judge Hollister in connection with alleged stock selling frauds of Franklin's, Inc., candy manufacturers, whose president, Floyd N. Franklin, has already been indicted with Nova Adolphus Brown, broker, by the Federal Grand Jury. It is alleged that the six defendants continued to sell the company's stock to the public notwithstanding the first arrests. Before the first indictments, it is said, $500,000 in stock had been unloaded, and now the public has nearly $500,000 more. The Government contends that the company promised a profit of 1,000 per cent. on the sale of its stock. At the time the concern's stock was put on the market, it is alleged, the company's plant at Long Island City had not been completed. The names of the indicted brokers have been witheld.

The great storm of March 1-2 did great damage in and around New York, especially to transportation service of all sorts. Miles of telegraph and telephone wires were useless, having broken or sagged under the weight of snow and ice. The only direct service to Washington and the West from New York March 2 for newspaper or commercial use was by means of one underground system of wires. The Postal Telegraph Company, in order to reach the capital, flashed along this remarkable route: To Albany, to Montreal, to Detroit, to Chicago, to St. Louis, to Birmingham, to Augusta, to Atlanta, to Richmond, to Washington. New York was actually threatened by a famine in milk. Only 400,000 quarts of a daily normal supply of 2,000,000 quarts were delivered by the distressed railroads. Sixteen persons met death as a result of the storm.

March 2 Texas celebrated its Independence Day, and at Galveston, Broadway, Galveston's new street, was formally opened by the Board of City Commissioners, which closed the celebration of that event with the world's largest tango party. Broadway, which is 300 feet wide and 2½ miles long, was used for the dancing floor, the music being supplied by 15 military bands borrowed from the regimental detachments of the United States army mobilized there.

A modification of an act known as the "bar and bottle" bill, which forbids the sale of liquor in bottles over a bar, was urged by several liquor associations before a legislative committee at Boston, March 2, on the ground that the original measure, passed three years ago, had proved a failure. It was asserted that drunkenness had increased since the bill was passed. The liquor interests asked that the law be modified so that each city and town might decide whether such a measure was necessary. Any revision of the present law was opposed by representatives of the Anti-Saloon League.

The Supreme Court refused March 2 to review the decision of the Federal courts at New York holding the Waltham Watch Company could not fix the resale prices of watches by retailers. The Waltham Watch Company brought suit in January, 1913, against Charles A. Keene, a New York jeweler, to compel him to sell watches made by the company at prices fixed by the Waltham concern. The defendant's attorneys replied that Keene had bought his watches in England and was at liberty to sell at reduced prices. The United States Circuit Court of Appeals affirmed, in December, the decree of Judge Ray in District Court dismissing the suit, and in January the case was taken to the United States Supreme Court.

Fred Ayer finished first in the Solomon Derby dog race that was run from Nome, Alaska, over the snow trail to Solomon and return March 2. His time for the 64 miles was 6 hours 30 minutes 4 seconds. John Johnson, winner of last year's Derby, was a close second with his team of Siberian wolves, and finished two minutes after Ayer.

Twenty-five hundred miles by ox wagon is the journey that Charles Wasman is undertaking, and which he began March 2 at Regina, Sask., bound to Belleville, Ill., where he will attend a centenary celebration next September. With the idea of surprising his many friends and relatives back home, Wasman has bought a team of oxen, together with a prairie schooner on sleighs. He expects to make not more than 12 miles a day for the first few weeks, but after the oxen have become seasoned he plans to travel 20 miles a day, in order to reach Belleville on September 8. Wasman is a Saskatchewan homesteader.

Attorney-General Carmody of New York filed suit in the Supreme Court March 3 against the Mutual Profit Realty Company of New York to revoke the company's charter and for the appointment of a receiver to liquidate the company's business. The suit is a direct result of the recent decision of the Appellate Division that many real estate concerns which sell profit-sharing bonds or certificates to investors and use the money realized on the securities to speculate in real estate are doing a banking business in violation of the law. In October last the company was denied a renewal of its license to do business in Connecticut, where it had sold $700,000 of bonds. The Connecticut Building and Loan Commissioner declined to state the grounds on which he has refused to renew the company's license. An action was begun, but there has been no decision. The Mutual Profit Realty Company's last report, dated June, 1913, represented that it owned real estate worth $975,750, of which $590,500 is in vacant property, $326,000 is in vacant improved real estate, and $59,250 in improved real estate and buildings. The company owns only one parcel in Manhattan, a vacant lot appraised at $50,000.

Some idea of the enormous profits made by the Sterling Debenture Corporation through the sale of the alleged worthless stock of the Oxford Linen Mills, Inc., of Brookfield, Mass., was given in the United States District Court March 4 during the trial in this city before Judge Anderson of the eight men indicted with the Sterling Debenture Company for using the mails to defraud in the sale of the Oxford stock. According to a copy of the contract between the two companies, introduced by Assistant United States Attorney Kenneth M. Spence, the Sterling people agreed to take over the entire 200,000 shares of Oxford stock at prices ranging from $2.50 per share to $10 a share. An aggressive selling campaign, in which alluring circulars played a prominent part, enabled the Sterling company, according to Mr. Spence, to dispose of the same stock at from $12 to $15 per share.

John F. Linton, president of the Manhattan Mutual Realty Company and other concerns, of New York, who promised a 42,200 per cent return on his $1 a week "Home Coupons," was convicted March 4 of petty larceny before Justices Forker, Moss and Fleming, in Special Sessions, at St. George, Staten Island. The charge arose out of his "Home Coupons." On five of them he had collected $195 from Robert Shields, on the understanding that when Shields had paid $100 he could choose a lot wherever he would, and the Manhattan Mutual would build him a $3,500 or $4,000 house. Linton was paroled in the custody of his attorney to be brought up for sentence on March 25. Linton's scheme was of the "snowball" variety. At the time of his indictment last year, it was said that about six hundred of the "home" contracts had been entered into. Under the "endless chain" system each of these contracts would bring in $8,420, and Linton would have had 5,052,000 persons paying him $1 a week, and would have needed a capital of about $16,000,000,000 at least to erect the houses he had undertaken to build. It was shown that he owned then no real estate and had about $100 in the bank.

PARCEL POST CHANGES.—Efforts of both Democratic and Republican members of the Postoffice Committee to safeguard the postal service from the demoralization which is said to threaten it as a result of the increase of the weight limit of parcel post packages were defeated by the Senate Feb. 27. The committee amendment limiting the weight of packages which may be carried by parcel post to 50 pounds was rejected by a vote of 33 to 24. A similar amendment providing that no part of the funds appropriated should be used for carrying packages above 50 pounds in weight, which was designed to escape the parliamentary pitfall of a point of order, was rejected by a vote of 28 to 27. The fight then narrowed down to an amendment to limit the weight of packages that may be carried on star or rural delivery routes to 50 pounds, but this failed by a vote of 18 to 31.

FARM LOANS IN NEW YORK.—Facilities for financing small farmers are sought to be provided in two bills introduced by Senator Murtaugh, of Elmira, March 2, following the reading of Governor Glynn's message on rural credits. One follows the recommendation in the Van Tuyl Banking Commission report and the other the plan mapped out by the Governor's advisers. The second bill, which includes all the provisions of the Van Tuyl measure, calls for the incorporation of land banks, capitalized at not less than $1,000,000 each. The banks are to raise money by the issuance of bonds on first mortgages on agricultural land not to exceed 60 per cent. of the value of the land. The amount of bonds which can be issued is limited to twenty times the capitalization of the banks. A system of yearly payments on the principal, in addition to the interest, which will more than satisfy the mortgage, is provided. Governor Glynn approved a system of amortization loans, which would be issued by a large central bank. The Governor would have the central bank issue debentures, to be secured by mortgages placed by savings and loan associations, acting as feeders for a central bank. Existing associations, as well as those to be organized among farmers, would be stockholders in the central bank. Members of all these associations would be allowed the privilege of borrowing money on the long-time amortization plan.

STRANGER: "Did a pedestrian pass this way a few minutes ago?" The Hired Man: "No, sor. I've been right outer this tater patch mor'n a nower, and notter blamed thing has passed, 'cept one solitary man, 'an he was trampin' 'erlong on foot.—Credit Lost.

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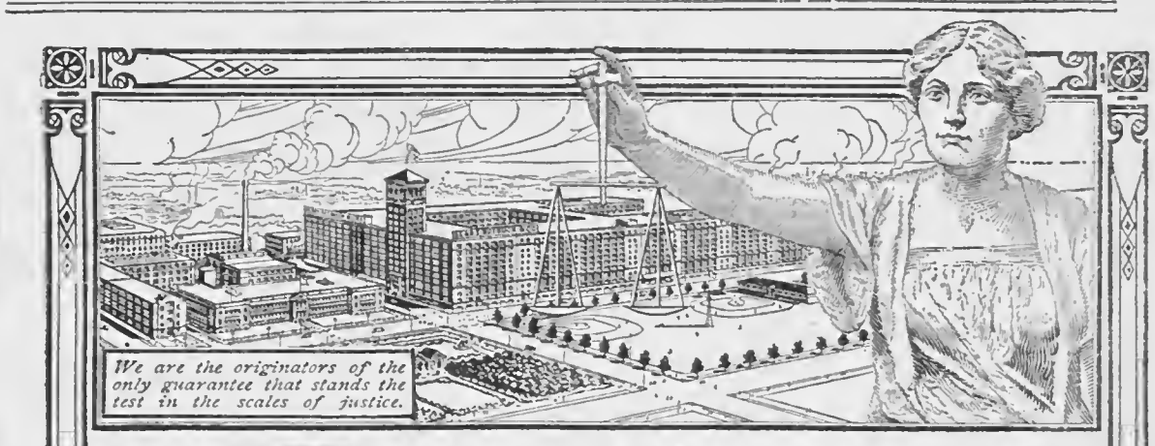

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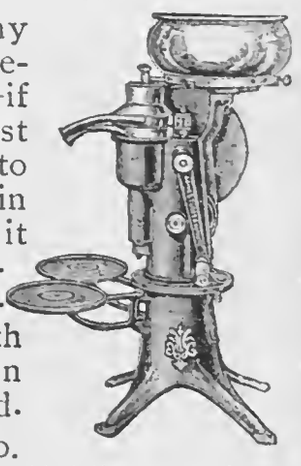

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Sears, Roebuck and Co., Chicago

Continuous Hatching.

I read M. B. D.'s answer to P. O. B., page 59. The only part I find right is the number of eggs in the machine, which might exceed 200 and might not. As far as the hatching at different periods in one machine, I know it can be done, as I followed that scheme for two seasons in a 600-egg machine. The hatchings were just as large and birds just as healthy as by the other method, although the trouble was in keeping the eggs clean that were not hatching. The different temperatures M. B. D. talks of amount to less than incubator makers wish us to believe. That idea is no experiment with me. W. J. DOUGAN.

The success which Mr. Dougan reports in continuous hatching in one incubator, using a smaller one to supply it with tested eggs at regular intervals, seemed to me so unusual that I have asked the Poultry Department at Cornell University to give me their opinion of its practicability; and I quote the following from their reply:

"In regard to the question of the continued hatching of eggs in the same machine that have been in incubators in various stages, I may say that we should not, in any case, advocate the doing of this. Primarily, the reason would be that embryos at different stages require different amounts of heat, and also different atmospheric conditions. It is unpractical to maintain the temperature that would be required at all times, as when a few eggs are hatching the temperature will necessarily go a little higher, and might go too high to obtain the desired results from the younger eggs. It certainly is not practical, even in the case of experienced poultrymen, to mix the eggs in various stages of development together. We have occasionally in our cellar put a few batches of eggs in various stages together, but have had considerable difficulty, also, with regard to the moisture needed. In cases where we had two different stages of eggs in the same machine we would have to strike about a fair average. In most cases this would not be satisfactory, or give good results. To inexperienced poultrymen we should not advocate the mixing of eggs; there should be eggs of only one stage of development in the same machine."

An Alabama correspondent, referring to the same matter, says: "When I first ran foul of the incubator I thought it would be a good idea to put in what eggs I had about a week apart and have them come off that way, and I tried it some half dozen times. The first lot put in always gave a satisfactory hatch, but the later additions which were in the machine while the first lot were hatching were failures. They developed perfectly up to a certain point and stopped. On breaking the unhatched eggs, the majority of them had fully developed and nice looking birds in them, but it appears that they lacked the ability to break the shells. The result was invariably the same."

In spite of Mr. Dougan's success, I think that the amateur will do well to go slowly with this method and not risk any very valuable eggs until he has demonstrated his ability to overcome the difficulties which he will be sure to meet.

M. B. D.

Rye for Poultry.

Is there any way that rye can be treated that will make it a safe feed for chickens? I have found that feeding the whole grain is injurious. Will ground rye be a safe feed, or if cooked, or soaked? S. R.

Rye is a suitable food for poultry if prepared so that they will eat it. The hard whole grain does not appear to be palatable to most hens and it would probably be better to grind it and make it a part of their mash. If they will eat it cooked or soaked, I know of no reason why it should not be fed in either of these ways. Rye is very similar to oats in nutritive value, and while I have never had occasion to feed it, I should not hesitate to do so if I had it on hand.

M. B. D.

Blood Spots in Eggs.

Will you tell me what makes blood spots in the eggs? My hens seem perfectly healthy. I use the Corning system of feeding. W. J. E.

Blood spots in eggs are caused by hemorrhages into the oviduct from some of the small blood vessels supplying that organ. These hemorrhages cause small blood clots, which are included within the shell as the egg is formed. These hemorrhages are supposed to be caused by over-feeding on stimulating food, over-fatness, or a weakness in the blood vessel walls. They will appear occasionally under any care, but if they become numerous it will be well to reduce the amount of meat or other stimulating food and give more green stuff. The fowls should be made to exercise as much as possible and not be allowed to become over fat.

M. B. D.

Feeding Poultry Offal.

Some time ago I noticed the advice to feed the waste from dressing fowls to the live poultry. I believe this is poor advice to give anyone, for two reasons: If there is any trace of disease, as roup or colds in the slaughtered fowls, the feeding of these wastes will tend to spread such trouble all through the flock. Second, I believe it has a tendency to create a cannibalistic craving among the live stock. A few years ago I had charge of a flock, and it seemed impossible to keep them free from roupy colds. All this time they were being fed green bone, and the chicken wastes were ground up with this. At last I cut out the chicken offal, burning it up clean, heads, legs and entrails, and within a month a decided improvement was noted and eventually we were able to have a flock apparently all clear. C. J. B.

It is true that there would be a certain amount of danger in feeding poultry offal to hens, unless great pains were taken to see that only offal from healthy fowls was used. Roup, tuberculosis, and various intestinal diseases might be so spread. This danger might be avoided by cooking the offal, but it is probably a better disposition of this waste to burn or bury it. M. B. D.

Securing Profits in Poultry.

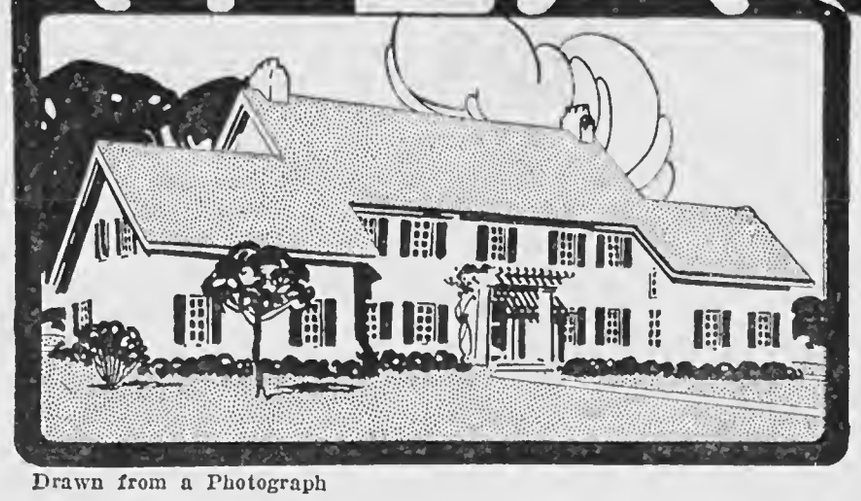
I wish to learn how to make more money out of my poultry. I should like to know about feeding and care of flocks in 400 lots, also about mating.

Newburg, N. Y. W. W. M.

The feeding and care of large flocks of poultry, and the principles of mating, are subjects which could not be adequately treated in less space than a good sized volume would afford. With the exception of rearing, in fact, they cover the whole ground of poultry culture. It could hardly be expected that we could cover that amount of ground in the limited space which these columns afford, but we shall be very glad to discuss any particular points in the care of poultry, or any problems which confront our readers. There are many books published which attempt to cover the ground of poultry culture, and of these, "The Business Hen," published by The Rural Publishing Co., offers as practical and helpful discussions of the subject as any single volume with which I am acquainted.

M. B. D.

ATLAS



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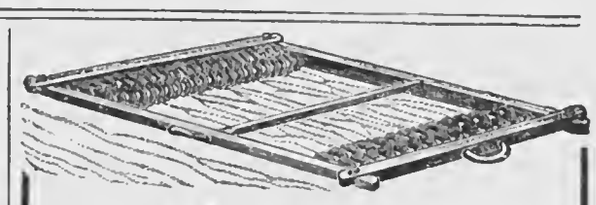

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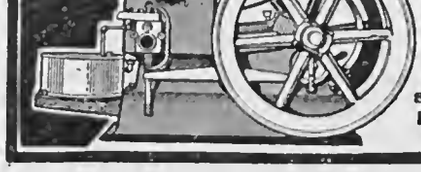

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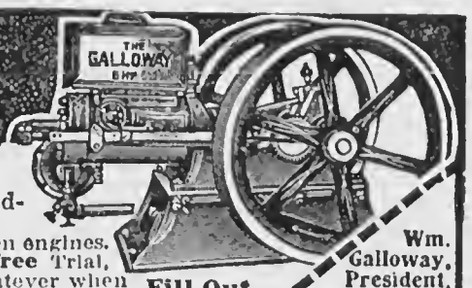

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PRODUCTS, PRICES AND TRADE.

Wholesale milk prices are unchanged, the storm having held up supplies so that the expected one-fourth cent drop has not taken place. A large amount of business is covered by $1.81 to $1.71. Restaurants using one to two cans pay five cents per quart.

*

The slight advance noted in butter prices is the result of the snow blockade rather than brisk trade. Business is dull except in the top grades of fresh and storage creamery, the latter going mainly at 29 to 30 cents, and current receipts about two cents more. Very little State dairy good enough to bring the top price, 31 cents.

*

The egg market is very unsettled. There are plenty of eggs on the way, and it is probable that prices will drop too or three cents within a short time, settling at 30 to 32 for fair to choice white and under 30 for brown. Duck eggs are unusually high, whites bringing 40 to 42 cents. Buyers formerly prejudiced against duck eggs because of their more or less strong, fishy taste, find that the eggs produced under present conditions, where the birds are not allowed access to ponds and mudholes, have no disagreeable flavor.

*

The value of the 1913 California grape crop was $26,875,000, divided as follows: Raisins, $4,875,000; table grapes, $7,000,000; wine, $15,000,000.

*

The cut of logs in Maine will be one-third larger than last year. It is expected that the cut on Moose River will be 58,650,000 feet; Dead River, 30,295,000; East Branch and Main Kennebec, 40,945,000.

*

Last year Arizona produced about 2,000 bales of long staple cotton. Part of it has been sold in London at 23½ cents, spinners finding it equal in quality to the Egyptian cotton of this type.

*

Business was active at the London wool sales, opening March 3, many American buyers being present. Some of the prices were: New England, scoured, 24 to 28; greasy, 16 to 24; South and West Australia, greasy, 16 to 25; Cape of Good Hope, greasy, 15 to 21. Montana leads all wool-producing States in this country, having 4,500,000 sheep, yielding 31,500,000 pounds, worth about $5,477,850.

BUFFALO MARKETS.

Butter is again the cheap article. It retails at 30 to 35 cents for good grades, the highest quotation to the retailer being 33 cents. It is crowding oleomargarine pretty hard of late, as that comes out into the open when it has to and retails in packages at 25 cents. Eggs are a trifle cheaper than butter, dozen for pound, not usually getting up to 35 cents, the retail price running all the way up from 29 cents. The farmer is selling potatoes for 60 cents a bushel. They are worth about 70 cents when they reach the city; the retailer pays 80 cents for them and the consumer 90 cents. The city markets are overcrowded with bananas and the citrus fruits. This trade was formerly left almost entirely to the Italians, but they seldom deliver their sales, so the buyer had a way of turning such fruits over to the other dealers to deliver with home produce bought. At last the home dealer grew tired of this plan and put in the Southern fruits also. The prices asked are generally a little higher than at the Italian stands. Bananas continue to go down, good sound ones now being offered at 8 cents a dozen, with the maximum price 12 cents. Grape fruit is a little higher, three for 25 cents, commonly, with extra large 10 cents each. There is no change in country produce prices, so that when Florida stuff gets here in volume there may even be a small decline. Beets are plenty at eight cents a bunch; carrots and vegetable oyster, five cents; parsnips, 10 cents a two-quart measure; string beans, 25 cents a quart (pound). Spanish onions are five cents each; big yellow turnips same. Celery is in better condition than during the mild weather, and sells at five cents a large stalk or 10 cents for three small ones. Cabbage is high, 8 to 10 cents for small heads. Rochester is sending us hothouse tomatoes at 25 cents a pound and lettuce at five cents a head. Apples are high, running to $6 for best red and $5 for green to the retailer, who seldom sells any good grade for less than $2 a bushel. There are a good many Western apples on sale by the small measure, but prices are not so high accordingly as our own.

JOHN W. CHAMBERLIN.

Good horses and mules, from $75 to $150; milch cows, $40 to $75; year-old steers and heifers, $25 to $30; veal calves, $10 to $15; hogs, per cwt., $8 to $9; butter 25 to 30; butter fat 30; eggs 25; poultry, from 6 to 7 cents; hay, from $10 to $25 per ton; ear corn 75c. to $1 per bushel; wheat 90c. to $1; oats 50 to 60 cents; mill feed $1.50 per hundred. Apples $1.50 per bushel; potatoes $1; clover seed $8 to $10 per bushel; straw $8 to $10 per ton. Feed getting mighty scarce and hard to get, and prices still advancing. A. H.

Dixon, Mo.

Calves $10 to $15; one-year-old, $15 to $20; two-year-old and over, $20 to $30; Milch cows (grade) ($50 to $75; butter, dairy, 28 to 30 cents; creamery, 32; potatoes, 50; wheat 90; oats 45; rye 70; barley 65; hay, loose, $13; baled hay, $16; eggs 30. E. R. H.

Ellsworth, Mich.

Snow came on a few days before Christmas, and it has been good sleighing ever since; a fine Winter for business. There are many portable sawmills running in the country towns, the lumber being shipped by rail to Boston mostly, although some is used in the State. Dairying is booming; a new creamery has just been opened at Wiscasset, and another receiving station will begin operations soon at Freedom village. Many cow-testing associations are being formed. Price paid by creameries is 38 to 40 cents per pound for butter fat, and 45 cents per hundred for skim-milk. Most farmers are now selling their milk. Howard L. Hurd, of Thorndike, received $76.99 for the milk of three Holstein cows for the month of December. Milk was sold to D. Whiting & Co.'s local creamery. Cows range in price from $35 to $125. Potatoes 60 cents; butter 30; eggs 30; corn $1.65; bran $1.40; cottonseed meal $1.75 at local stores. Cattle are wintering well; the hay is of very nice quality. Grass was about two weeks later than common years last Summer. Most farmers begun about the same time as ever, consequently they secured the hay in a greener condition than usual. There are complaints that hens are not laying many eggs. Veal calves are in good demand; some skim-milk calves 10 weeks old have been sold to local dealers at from $12 to $15. There seems to be a great decrease in the number of swine on the farms, although pork brings nearly twice as much as it did in those years when every farmer had hogs to sell. Very few cattle are being raised for beef. Farmers are keeping all the cattle they can feed, but they are mostly cows and heifers. Beef is very high in price, but still farmers think that dairying pays best. Large quantities of Western grain are being bought and consumed on the farms. Porter & Cooper are running a portable sawmill in the town of Montville. For teaming, hauling logs, supplies, etc., they use oxen, having 10 pairs of large Whitefaces. They say they beat horses in cost of operations.

Thorndike, Me. R. W. H.

Live cattle, five to 6 cents per pound; choice, seven cents. Dairy cows, choice, $50 to $70; live hogs, $8.25 per 100, fat; lowest price cost, Fall $7; sheep three to six cents per pound. Clover seed, $8 per bushel. Apples last Fall 40 to 60 cents; $2 to $2.50 per barrel; pears $2 to $2.50 per barrel; peaches $1.50 to $2 and scarce. Average price last Summer for butter, about 25; eggs, 20 cents. J. W. B.

Eau Claire, Mich.

Wheat 89; rye 57; oats 37; beans, white, $1.60; red, $2.25; barley $1.25 per cwt.; peas $1 bushel buckwheat $1.25 per cwt.; corn 30 cents basket of 35 ears. Hogs $8.10; cattle $5 to $6. Hay $10 to $11.50 per ton. Butter, f. o. b., 28; milk at cheese factory $1.80. Fruit was all shipped out last Fall. Potatoes 45 cents and quite liberal supply in storage. E. F. B.

Evart, Mich.

Breeding for Egg Laying.

Last Spring I bought seven hens and a male, the result of 32 years breeding of barnyard fowls. They are bred to lay and remain true to their type. How can I breed them and keep them up to their standard? L. H. K.

Connecticut.

You seem to have a flock of purebred mongrels that are making good and furnishing considerable evidence that inbreeding is not as destructive of physical vigor as most people think. So long as these fowls have not been consistently bred to any particular type, you can hardly claim the honor of a new variety for them. They started as mongrels and are still mongrels. If you wish to improve them without introducing any new blood, you can do so by a process of continuous selection, breeding only from those that most nearly approach the type you have in mind. Breed from the largest to increase size, and from the best layers to increase egg production. To find the best layers you will have to trapnest. Never use a weak, defective, fowl of either sex in your breeding pens; by so doing you will obtain the deleterious effects of inbreeding. Prolificacy is now supposed to be transmitted through the male sex; so use sons of your best layers to head your pens.

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Name.....

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

An Average Ration.

Will you give me a balanced ration with clover hay for roughage and with no silage (have good straw and mixed hay)? Also would like a balanced ration for a three-year-old heifer (just freshened), with the same roughage. She has never had grain feed, but has been eating roots, clover hay and silage.
Maine. M. H.

Not knowing what kinds of feed are available to you the best I can do is to give an average ration. I would suggest two pounds distillers' dried grains, two pounds cornmeal and one pound oil meal. In case you cannot get the distillers' grains you may substitute brewers' grains or bran. Cotton-seed meal may be substituted for oil meal, if your cows are fresh, or not soon due to freshen. The above ration will also be good for the heifer, but if she has not had grain begin with less than the usual amount, and increase gradually for a week. In ordinary cases give one pound of grain to 3½ to four pounds of milk.
C. L. M.

Dairy Rations.

Will you give me a grain ration for milch cows? I am feeding cornstalks and clover hay. I can purchase cornmeal at $30 per ton, union and distillers' grain, $33; bran, $26; oil and cotton-seed meal, $34; corn and oats, $30. Will you tell me what sort of a grain ration to give a cow due to freshen the middle of April, that is now giving from 18 to 20 pounds of milk a day? I wish to have her go dry about six weeks. S. W. M.
New York.

A ration composed of two pounds distillers' dried grains, two pounds corn and oats, one pound linseed oil meal and one pound cotton-seed meal is a good one for milch cows. Omit the cotton-seed meal for cows soon to freshen. Feed one pound of grain to 3½ or four pounds of milk. In case you wish to dry off this cow give no grain at all for a few days. After the milk has mostly stopped give two pounds bran and one pound corn and oats daily, or if you wish her to improve more rapidly in flesh increase the amount of grain. C. L. M.

Feeding a Brood Sow.

Will you give me a ration for a sow under the following conditions? Chester White, 12 months old, bred January 22, kept in barn cellar, pen 6x10, dirt floor, raised platform at one end for dry bed. She was raised in woods last Summer and fed "farm slops" with about four quarts a day bran mash. She looks well, and promises a good breeder. I want to bring her and possible family in good shape. Will you suggest a good ration?
Massachusetts. C. H. C.

Breeding sows require a good nourishing ration without too much fattening feed, and should be given a fair amount of exercise every day. Any ration that will accomplish the desired results at a moderate cost would be called a good one. If you can get skim-milk or table refuse you will find either one a great help. In the absence of both of these waste products you could feed a mixture of four parts wheat bran, four parts wheat middlings and one part ground barley made into a thin slop with warm water in Winter and cold water in Summer and fed three times a day. Care should be taken not to over-feed to such an extent as to produce an over-fat condition of sow. C. S. G.

Rations for Cows and Pigs.

1. Will you give me a good ration for milch cows? I have Alfalfa hay and corn silage, but have to buy grain. 2. I would also like a good ration for growing pigs; I have lots of mangels and Winter wheat. A. G. W.

1. A mixture of two pounds wheat bran, one pound cornmeal and one pound cottonseed meal, together with Alfalfa hay and silage, should make an excellent ration for milk production; one pound of the grain mixture to four or five pounds of milk produced should be fed. 2. For the pigs three pounds of wheat meal to one pound of oil meal, with what mangels they will eat, should give a good growth. Wheat meal and cornmeal are similar in value in pig feeding, wheat being somewhat richer in protein than corn. C. L. M.

Wart; Ration for Dainty Calf.

I have a calf that is nine months old and it has a wart under its eye; it is about the size of a small chestnut. Advise me what to do to take it off. 2. I have a calf that is nearly a year old, and it has always been dainty. I have been feeding it straw and hay and three quarts of grain a day composed as follows: Two parts mixed feed, two parts ground oats, 1½ part cornmeal and a little linseed meal. Will you advise me how to feed calf and also to improve its appetite? M. F. S.

1. If you will rub this wart daily with castor oil it will in all probability disappear in a short time.

2. The ration you are feeding ought, on general principles, to give good results. If you find some kind of grain which the calf particularly relishes increase that kind of grain. Stock molasses, thinned with hot water and sprinkled over the roughage, would probably help some. A few roots or succulent feed will improve her appetite.
C. L. M.

Dairy Ration.

Will you give your opinion of the ration I am feeding? My cows are grade Holsteins, giving from 10 to 15 quarts of milk per day. For roughage I have cornstalks, hay, mostly Timothy and oats on the straw. I feed each cow daily eight quarts mixed grain consisting of two quarts gluten and the remainder bran and middlings and in addition to this one quart of cornmeal. Bran and middlings cost $1.45 per cwt.; cornmeal $1.55; gluten $1.60; can obtain cotton-seed meal for $1.80. A. B. R.

You are feeding a very good ration except that it contains no succulence. If you cannot get dried beet pulp or silage you should feed at least one pound of old process oil meal per day to each cow in full flow of milk. This should take the place of an equal amount of middlings by weight. C. S. G.

Shrink in Milk.

I commenced feeding silage the first day of February, not having enough to begin feeding earlier to feed out to grass. Since beginning cows have been giving less milk every day, and up to the present time they have fallen off a can. I am feeding the following: one ton brewer's grains, one-half ton bran, one-half ton No. 2 middlings, one-half ton cotton-seed meal. They are getting four quarts of the above mixture to the cow and a bushel of silage, also one pint of cotton-seed meal on the silage. A. B. C.

A large part of the decreased quantity of milk which your cows are giving is due to the sudden change of feed which you made. Any change in feeding should be made very gradually, extending over a period of at least two weeks for such a radical change as you made. After your cows become accustomed to the new ration they will gradually resume nearly their normal flow but this may take a month or more. The middlings you are feeding should be gradually discontinued and cornmeal substituted. If you will make this change during the next week or two and then be very careful not to make any other changes, but feed steadily according to the requirements of each cow, you will have no further trouble.
C. S. G.

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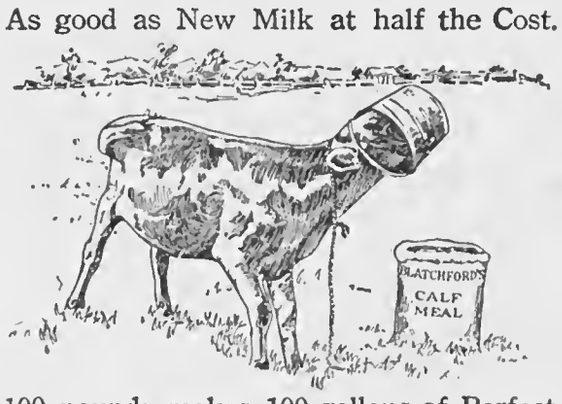

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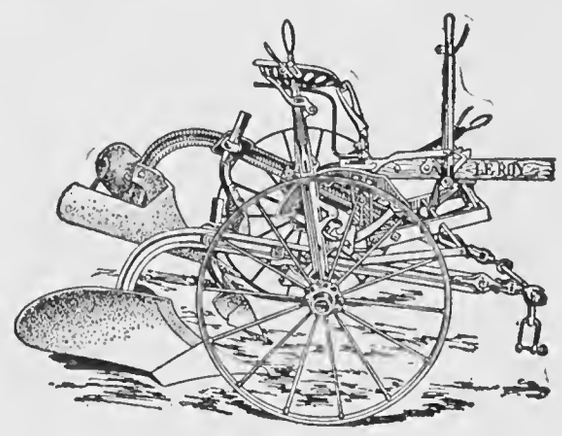

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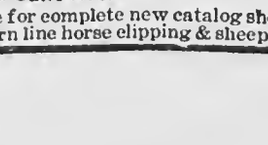
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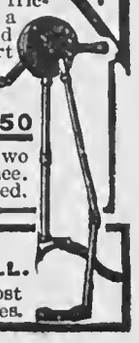
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Tanning With the Fur On.

Nearly every year some one asks how to tan skins with fur on and a number of recipes have been printed. I have tried all of them from tanning with acid to salt and alum. I find the following recipe superior to all. Dissolve in hot water separately one-half pound alum, one pound saltpeter, five pounds common salt, two ounces corrosive sublimate. Pour together and add enough water to make two gallons. If the skins are dry they must be soaked in water until quite soft and all the flesh and fat scraped off. Put them in the tanning mixture and leave three weeks where it will not freeze. Take them out, rinse several times in clear water, hang up, beat them with a stick, and when nearly dry work them well by pulling over the edge of a board. There is lots of work in tanning skins in small lots, and your success depends on how much you are willing to do. The amount of materials given will tan 12 or 15 muskrat hides and can be kept from one year to another. Care must be taken so children or animals do not drink it; also be careful that you do not have any cuts on your hands as it is poison. H. B.

Colts With Eruptions.

On page 54 J. H. W., New York, asks what is the matter with his colts. I had the same trouble with some of mine last year, and with others this year. One of Albany's leading veterinarians told me later that the pimples and scabs were caused by a parasite that passes one stage of its existence as a fly, and is liable to attack horses anywhere in pasture, and that spraying during the Summer months would prevent the depositing of eggs, but that either spraying or simply washing would not kill the parasite after it is hatched. In applying the coal tar dip it is necessary to work it well into the hair with a stiff brush, as the parasite burrows into the surface of the skin. Blanketing heavily after the application of the coal tar dip is considered important for the effect of the steam thus generated. Last year the trouble appeared among colts in my home pasture and when the parasites became active in February and the colts began to rub themselves I tried a solution of coal tar dip, simply sponging them, but as I did not then know of the necessity of rubbing it in and blanketing, did not get desired results, and next tried olive oil and sulphur, which gave greater relief from the intense itching from which they were suffering at that time, possibly because it was more thoroughly applied. If I remember aright the trouble came to an end, for that season, during the early part of May. Of the colts and mares kept at home last Summer, but two are infected this year, and those but very slightly, while about a dozen in pasture a few miles away came home in bad shape, two of them literally encrusted from nose and ears to hoofs. I applied cotton seed oil and kerosene, equal parts, in four of the worst cases, and evidently killed the parasites—certainly killed the hair—but I think saved the mares and colts by not repeating the application. Work horses running in pasture and weaning colts that were curried have been free from the pest, probably because the currying and brushing removed the eggs of the fly before they had time to become hatched. J. S. ALBRIGHT.

Otsego County, N. Y., Conditions.

A recent letter by William Kling, from rock-ribbed Schoharie County, speaks well for that county, and Otsego County farmers concede that Mr. Kling has the facts so far as his own county is concerned to warrant his fulsome praise. At the same time Otsego farmers rather resent that part of his letter which criticises Otsego County. The writer who opened up the opportunity which Mr. Kling took advantage of was a Dane who had been in the county less than a year. He spoke of conditions as he found them and probably told the truth, and he wasn't complaining either; but this Dane had bought and wrote of a farm conceded by all who knew, to be about the poorest piece of land in all that region. All counties have once in awhile such a piece of land, and he owns the piece in Otsego County. Somewhat establishing his premises on these two facts, Mr. Kling proceeds very ably to parallel Otsego and Schoharie counties, quite a bit detrimental to Otsego and quite flattering to Schoharie. Now, we are not going to say a word against Schoharie. In some things it stands unique among the rival counties of the Empire State. But we must speak up in defense of Otsego when its front-line position is assailed or called in question; Otsego, with its beautiful valleys traced with water courses and sparkling spring brooks, its sloping hills and its broad level acres of responsive soils, its healthful climate, its great dairies, its County Farm Bureau, its many Granges, its five successful agricultural fairs, its excellent schools and its promising future.

Last year was one clipped at both ends by a hard freeze, late in the Spring and early in the Fall, sufficient to kill growing crops at their beginning and at their end. This experience comes not oftener than once in a generation. It came last year. However, under such unfavorable conditions as existed last year there was grown on a hill farm less than a mile from the farmer who gave Mr. Kling his argument against us and in plain sight of his new home, 267 bushels of potatoes per acre. Within half a mile of the man who furnishes the Government the weather reports from the Butternut Valley, which Mr. Kling cites, a young farmer harvested last year 56 bushels of oats per acre, others went 50 and 55 bushels, and the good corn yields in the Butternut Valley are 50 bushels shelled to the acre; and the corn yield seldom fails. In fact Otsego is called a good corn county. Otsego is one of the best dairying counties in the State, and its farms are selling so low that immigration is coming in here at an astonishing rate. Something like 25 or more Danish families have settled in the towns of Morris and Laurens within a year. They all like it, are satisfied, and say nothing has yet appeared to make them homesick. They are a thrifty class. We invite them to come. Otsego County lands can support them and give them back a good reward for the labor of their hands and brains; and it takes both to farm successfully here, just the same as it does anywhere else, even in rock-ribbed old Schoharie. E. E. C.

"PROFESSOR," inquired Farmer Jimp, "what are you digging for in my backyard?" "I'll pay you well!" shouted the archeologist. "Great discovery! I've found the bones of a prehistoric mammal hitherto unknown!" "Sorry professor; but that's an old wire bustle that I buried over 20 years ago, along with some other junk."—Winnipeg Telegram.

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134 acres, 20 wood and timber, balance tillable; 8-room house; basement barn, 40x50; silo; granary, hog house, hen house, fruit. If sold at once owner includes 8 cows, heifer, pair horses, brood sow, boar, 150 hens, mower, rake, wagon, buggy, spring wagon, sulky plow, harrow, potato digger, 3 sets harness, sleighs, manure, wagon, lot hay and straw. All, $3,900. $2,500 cash. HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.

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35 BUSHELS PER ACRE was the yield of WHEAT

160 ACRE FARMS IN WESTERN CANADA FREE

on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land, in 1913 had a crop of 200 acres, which will realize him about $4,000. His wheat weighed 68 lbs. to the bushel and averaged over 35 bushels to the acre.

Thousands of similar instances might be related of the homesteaders in Manitoba, Saskatchewan and Alberta.

The crop of 1913 was an abundant one everywhere in Western Canada.

Ask for descriptive literature and reduced railway rates. Apply to Superintendent of Immigration, Ottawa, Canada, or Canadian Government Agent,

J. S. Crawford, 301 E. Genesee Street, Syracuse, N. Y.

The Henyard.

TURKEY RAISING.

One great trouble with the turkey industry is that so many would-be turkey raisers will persist in keeping undersized hens for breeding stock, market all the yearlings because they are heavier, and each year breed from pullets. Small, late toms are also kept, and often inbreeding practiced for years in succession. A pair of such turkeys wandered to our place one Spring and they were not larger nor heavier than our Barred Plymouth Rocks. The big white tom promptly drove them off the place. The old rule, "like begets like," holds good with turkeys, and if they are to be improved or even kept as good as at present the breeding stock must be carefully selected.

Old hens, that is, past the first laying season, are best. They lay larger eggs, which hatch stronger poults. Seven such hens mated with a young tom, not akin, and pure blood of whatever breed kept, make ideal breeding stock. All must be of good size and shape and perfect health. Find out the standard weights and select, for breeders those birds which come the nearest to it. By doing this for a few years, one can attain the standard and perhaps above. They must not be allowed to put on fat through the Winter, or the eggs will not hatch, and overfeeding turkeys of any size brings on liver trouble. A mixture of good sound grains, such as barley, oats, wheat and buckwheat, with some corn in cold weather, should be fed twice a day, feeding each time just what they will clean up with a good appetite. They also relish a mash occasionally, made up of wheat bran mixed with cooked vegetables. Clean water and grit are essential.

In warmer climates, turkeys may be left to seek their natural roost, the tree tops, all the year round, but in the long cold Winters of Central New York it seems inhuman to ask them to sleep without shelter from storm and wind. They should have the run of a shed or old hay barn. Roosts should be made of poles about three inches in diameter, placed not too high, and a good bed of straw for them to light on, to save them from injury. A heavy tom is afraid to fly down from a high perch. Give them liberty to go and come at will, but drive them all in at night and shut the door. If the thermometer goes 30 below, or the snow piles up several feet deep, they will sleep better and so will you. Such a building serves the purpose well; it is not too close or warm, gives them plenty of good air, and keeps them dry and protected from the wind. Given this care they will come out in the Spring in fine condition, and begin laying early. In our climate they seldom lay before March, but that is too early to set the eggs. We cannot depend on favorable weather to grow the baby poults before May.

Hen turkeys are very shy about their nesting, and will go quite a distance to hide their nests in the woods or brushy fence corners. This can be prevented by providing them with nests near the buildings. Barrels, turned down on the side, make good ones, each nest furnished with a china nest egg and bed of dry leaves or straw. The eggs will be found there neatly covered with the nest material, and can be carried in for safe keeping. Eggs for hatching should be turned every day and not be allowed to chill; cooling to 40 degrees spoils them for hatching. A hen will lay from 15 to 30 eggs before becoming broody, and can then be "broken up" and made to lay again. Confine her for a day or two in a roomy coop, feed her well and give plenty of water and shells, and she will be laying again in a week.

Turkey hens make the best mothers for the poults; they take them farther afield in search of their natural food, and seem to understand their needs better than a common hen. A turkey will cover 18 or more eggs. There should be plenty of good nest material and both nest and turkey dusted well with a good insect powder. It takes about 28 days for the eggs to incubate. Visit the sitting turkeys often and talk to them so they will become used to their keeper and the sound of her voice before hatching time; then when taken from the nest they will not be frightened and kill or injure the baby poults. The mother turkey must have a coop about three feet square and high enough to permit her to straighten up, the top and back of coop covered with roofing paper to keep it dry and the front slatted and hinged at top. The entire front can be thrown over on top of coop when the hen is given her liberty. In early Spring or wet weather, removable floors are good; they can be taken out and cleaned or discarded entirely when the ground is dry and warm. If floors are not used, sprinkle coal ashes under coop; no moisture will come up through them. The coop should be whitewashed every year and always kept clean and free from lice. The mother turkeys and poults should be dusted with insect powder at least once a week, and carefully watched for any signs of lice, as even one large white louse on the head is almost sure death to a little poult.

Every turkey raiser has his individual method of feeding. My own is the following: Take the poults from the nest as soon as all are hatched and dry, and give them clean water and grit or sifted oyster shells. After a few hours give them a very little wheat bran mixed rather dry with sour milk, sprinkle with a very little red pepper if weather is cold or damp.

Feed this four or five times a day for the first four days, on a clean board, taking it away after they have eaten. On the fifth day begin feeding whole grain, either rolled oats or a good chick feed, at first once a day, gradually working them on to these and later cracked wheat and then whole wheat, buckwheat and oats and some corn. But we keep up the bran feed once every day, mixing it with sour milk if possible. Those who have plenty of sour milk for their turkeys are fortunate; it is an excellent feed and should be kept before them in clean dishes to go to at will.

When the poults are three days old begin cutting onion tops and green dandelions for them. They are very fond of these, and will soon eat more than one cares to cut. Turkeys must never be overfed or pampered; give the hen her liberty when poults are two weeks old. She is wise in turkey lore and will take good care of the little ones. They need lots of exercise and just the kind of food she will find for them. If a sudden shower catches them out in the fields, gather them up in a basket and dry them by the kitchen fire; not one need be lost if they are attended to promptly.

Turkeys, up to the size of pigeons, need constant and thoughtful care, but after they reach that size they are as hardy as one could wish. Plenty of range and one feeding of grain to call them home at night is all they require. This is the method used at Silver Maple Farm for the past six years, with good results. We chose the White Hollands as the breed best suited to our needs. They grow to the size best suited for market birds, 10 to 12 pounds dressed, and of course, show no dark pin-feathers on the carcass. The White Hollands are excellent layers and good mothers, being more domestic in their habits than other breeds of turkeys.

The market has never been overstocked with Thanksgiving turkeys and there is never enough purebred breeding stock and eggs for hatching to supply the demand. The white turkey feathers are very valuable; the quills bring a good price and the fluffs of which there is only a handful on each bird, should every one be treasured. They are much used in millinery and bring a fabulous price. Turkeys are an interesting study, a benefit to the farm and good sure money-makers. All in all, it seems to me they are the best worth while of any poultry raised.

MRS. NILES GROVER.

New York.

The 1914 year-book and catalogue of the American S. C. White Minorca Club is now ready for distribution. The club is in a growing and prosperous condition, having more than doubled in membership, and S. C. White Minorcas are making big strides in gaining public favor. Vastly more S. C. White Minorcas have been exhibited this past Winter than ever before. At the "Palace," Coliseum, Kansas City, Pittsburgh, Washington and many other big shows large classes were exhibited.

C. A. R.

Kingston, N. Y.

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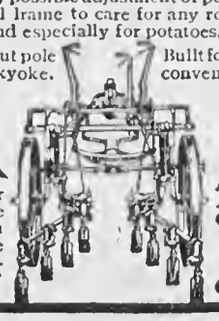

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363.1 Bushels Potatoes

From One Acre of Massachusetts Land

A. Webster Butler of Brockton, Mass., won the first southern zone prize offered by the Bowker Fertilizer Company for the largest yield of best quality potatoes grown exclusively on Stockbridge Potato Manure. His acre was a "rocky loam" producing about 2 1-2 tons of hay per acre in 1912 on manure. Rows were 36 in. apart and Green Mountains cut to two eyes were planted 14 inches apart. The piece was cultivated five times. The acre was sprayed with Pyrox.

STOCKBRIDGE POTATO MANURE

was applied 2100 lbs. broadcast and 700 lbs. in the drill. No other fertilizer or dressing of any kind was used. The entire crop weighed 21,783 lbs. or 363.1 bushels. His total score including quality points was 589 points, the highest in the southern zone.

Other Winners secured yields ranging from 311.1 bushels to 502.6 bushels in the northern zone, (Me., N. H., Vt.,) and from 183.8 bushels to 363.1 bushels in the southern zone, (Mass., R. I., Conn.)

Send us your name for complete and intructive statement concerning the results of the contest and how these great yields of potatoes were obtained. No other fertilizer than the Stockbridge Potato Manure was used.

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INCREASE YOUR EGG YIELD

I HAVE imported direct from Tom Barron, of Catforth, Eng., a pen of S. C. White Leghorn pullets, mated to a Tom Barron imported English cockerel from a 260-egg hen. They are from the same stock as his famous 282-egg pullet, which record was made in America in the International Laying Contest. No better breeding stock can be procured. Settings from this pen will produce bloodlines that will breed layers. PRICES: $8 for 15 eggs; $15 for 30 eggs.

My 1914 importation of Tom Barron English birds includes a number of S. C. White Leghorn cockerels. I have mated them with my best pedigreed laying birds. Hatching eggs from these matings: $3 for 15 eggs, $7.50 for 50, $13 for 100.

Rose-Comb White Leghorns—These birds are raised on my own plant and bred for high egg production. They are mated to strong, vigorous, extra-white, egg-type cockerels. PRICES: $1.50 for 15 eggs, $3.50 for 50, $6 for 100, $50 for 1,000. Rose-Comb day-old chicks from these pens, $7 for 50, $12.50 for 100. Safe arrival guaranteed.

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Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.

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Best General Purpose Fowl in the World
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At Boston show won all first prizes on both live and dressed UTILITY WYANDOTTES—all varieties competing. First cock, fifth cockerel, special for best White Wyandotte, Palace show, New York; fifth cock, Garden show. Big, husky, healthy birds, great layers and table fowl. Eggs for hatching—reasonable prices. Send for circular

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Single Comb Reds—Selected Fall and Winter layers. Eggs for hatching a specialty. $1 per 15; $6 per 100; Five dollars the 100 in 500 lots. Fertility guarantee. Laying pullets, $1.50; Cockerels, $2.50 each. A. Quackenbush, Box 192, Darien, Conn.

Single Comb Rhode Island Reds—Large, vigorous very dark red birds and great layers. Eggs and chicks. Mating list on request. A. E. ADAMS, Stony Creek, N.Y.

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BLUE RIBBON STRAIN WHITE WYANDOTTE HATCHING EGGS. $1 per dozen by mail. Send check, money or money-order. HESSIAN HILL FARM, Croton-on-Hudson, N. Y.

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PURE BLOOD BUFF ROCKS and S. C. WHITE LEGHORNS—Tom Barron strain, both excellent laying strains. Eggs for hatching, $1 per 15. Stock for sale. J. L. MEEKER, Nutwood, Ohio

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heavy-laying, pure white egg strains. Circular giving description, record, winnings, and guarantee, sent free. PATTERSON POULTRY FARM, Clayton, New York

EGGS FOR HATCHING

FROM S. C. WHITE LEGHORNS
Cornell strain, Winter layers, $1 per setting. Also Rose Comb White Wyandotte eggs.
E. SOHMER, - Port Byron, New York

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Young & Ferris strain—Eggs, $1 per 15; $5 per hundred; Chicks, $12 hundred. Single Comb Reds—Blood Red—Standard Bred—Eggs, $2 per 15; $8 per hundred. Chicks, $15 per hundred. Satisfaction guaranteed. DENISON FARM, R. F. D. 80. Essex, Conn.

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S.C. WHITE LEGHORN EGGS for hatching and day old chicks from heavy-laying strain. Strong, healthy stock. Fawn and White and pure White Indian Runner Duck eggs for hatching. Write today for free circular to Juniata Poultry Yards, Mifflintown, Pa.

Eggs from S. C. W. Leghorns headed by ⅓ Barron cockerel. Also S. C. Reds, B. Rocks and W. Wyandottes. Harry M. Hall, R. No. 2, Chester Depot, Vt.

R. C. R. I. REDS—Best Winter layers on earth. Eggs for hatching—$1.50 for 15; $2.50 for 30. A few choice pullets to spare GEO. L. GILLINGHAM, Moorestown, N. J.

A Bargain in Hatching Eggs—UTILITY S. C. WHITE LEGHORNS. 75c.—15; $2.50—50; $4—100; $35—1000. Also a limited number of B. P. Rocks at $1—15; $5—100.
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Eggs—selected—$5—100. Chicks—selected—$12—100. Mating list.
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Eggs for Setting from Cornell Strain of S. C. White Leghorns. Guaranteed layers. $1 per 15 eggs; 100 eggs, $5. Also White Holland Turkeys and imported Pekin ducks for sale. JAMES H. OWEN, R. F. D. 4, Newburgh, N. Y.

Co-operation in Selling Heifers.

"It is a good proposition for the farmer who lives away from a city market to raise heifers," Prof. Anderson of the Michigan Agricultural College told the writer not long ago. "The near-city dairyman cannot afford to raise them since he receives high prices for his dairy products." Professor Anderson urged the raising of heifers until they calved, breeding to good bulls, and keeping the heifer calves. He advises rearing the heifer calves and buying more to maintain the number to be sold each year. If good quality stock is produced, the city dairyman will return year after year to replenish his herd. It costs no more to raise a good heifer than a poor one, and possibly less. In the past 15 years the number of cows has decreased while the population has greatly increased, and the city dairyman is searching for good stock, since he cannot afford to raise calves to maturity on his high priced land and intensive methods.

In the Middle West good cows bring better than $100 each, and some well-marked high-grade Holsteins have brought as high as $150 and $175. A near-city dairyman told the writer that he would be willing to pay from $100 to $125 for good young grade stock, and had travelled through the dairy sections of several States, and was able to secure only very ordinary farm stock at $125 the head. He suggested that where farmers secured low prices for their milk each farmer in the neighborhood should raise a half dozen good calves or more each year, so that several carloads could be secured in the community. The high class of buyers go where cattle in carloads may be secured, and are willing to pay good prices. A buyer cannot afford to spend days chasing over a half dozen townships for ordinary stock, when he can go to a dairy section and pick out a carload in much less time. In Ohio, Geauga County is an excellent example of a dairy section attracting buyers for their particular breed. One dairyman told the writer that he had as many as a half a dozen buyers come to his farm in a single day, and that it was almost impossible for him to keep a cow in the barn, the buyers pressed him so vigorously and their prices were so attractive.

"The live stock sale is a success," declared a dairyman, "and I do not see why farmers do not associate in the production of young stock, advertise the sale well, and it will prove a profitable proposition." He is right. Coöperation in the production and sale of live stock is an easy matter, breed from good stock, stick to one breed and then when they are ready to be sold, secure good auctioneering service, advertise well, for advertising is the means of securing buyers, and in view of the demand for dairy cattle there is no question about the venture being an assured success.

An Ohio breeder during the past Summer spent fully a day each week endeavoring to get his neighbors interested in purebred and good grade stock with the view of having later a community stock sale, and advertising it well. He says there will be more money for the community, and he can afford to give his time and leadership to the proposition, for it will mean good money for him later.

WALTER JACK.

Sale of German Hares.

I have been told that a few years ago a number of German hares were brought into New York State and liberated. I would like to get some of these hares to set free here. Could I arrange with some one in New York State to catch the hares and ship them to me? J. V.

Section 177 of the Conservation Law provides that game protected by law shall only be taken in the daytime with a gun fired at arm's length, without rest, unless otherwise specifically permitted. There is no special provision permitting the taking of rabbits except that ferrets may be used when authorized by resolution of the Commission in particular counties, except also that the owners of enclosed lands may cause rabbits to be taken, except by the use of ferrets, in any manner and at any time when such rabbits are injuring property. Under Section 196 the sale of rabbits during the open season is permitted, and rabbits lawfully taken may be transported during the open season in any manner.

J. J. CONNOR,
Counsel to the Conservation Commission.

All The Water You Want

Fresh From the Well Without Storage

You can now have fresh running water in any part of your house, barn or feed lot without a water storage tank. All you need to do is to turn a faucet anywhere and the wonderful Perry FreshWater Pump automatically starts working in well or cistern—giving you fresh, pure water, hot or cold, hard or soft, for kitchen, laundry, toilet, bath and watering stock.

Over 6 Years Old — Perry FRESH WATER System — Over 6000 Sold

This marvelous system brings the greatest of all city comforts—fresh running water—to farm homes. It is easily installed, simple and inexpensive to operate, very durable and requires no special building or change in location of well. See what users say.

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THE UNITED PUMP & POWER CO. 473 Old Colony Bldg. CHICAGO

3

These Seven Cows

may all be kept for one year on the product of one acre of land. Think of it! Keeping seven head of cattle for a year from one acre goes a long way towards reducing the cost of milk. *70 tons and 800 pounds of EUREKA CORN* was raised on one acre in 1911, and we believe Eureka Corn can still beat this, but no other kind ever has and we believe never can equal it. Figuring at the rate of 50 pounds of ensilage per day, which is a liberal allowance, this amount will feed seven cows for one year and enough left over for 261 feeds.

EUREKA CORN was introduced by us over 20 years ago. It is a white, smooth dent corn and grows the tallest of any known variety, has the most leaf, and if planted thin will produce ears. It was grown successfully last year in 43 different states. Planting Eureka Corn is as good as an insurance policy; it grows where other kinds fail.

EUREKA CORN
Grows Tallest, Has Most Leaves, Greatest Number of Ears

This corn was planted last year by more successful farmers than any other variety, and it will produce more tons and more dollars worth of good milk-producing feed per acre than any other kind of corn. This has been proven many times over. Why plant corn that will only produce 15 to 25 tons per acre, when you can just as well grow 50 or 60 tons per acre?

Either buy direct of us or some of our agents who have the genuine. Write at once for 1914 catalogue of our wonderful varieties of big yielding corn and seeds.

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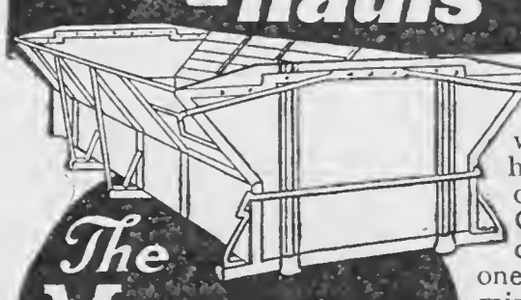
One Wagon Bed -hauls everything!



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Send No Money

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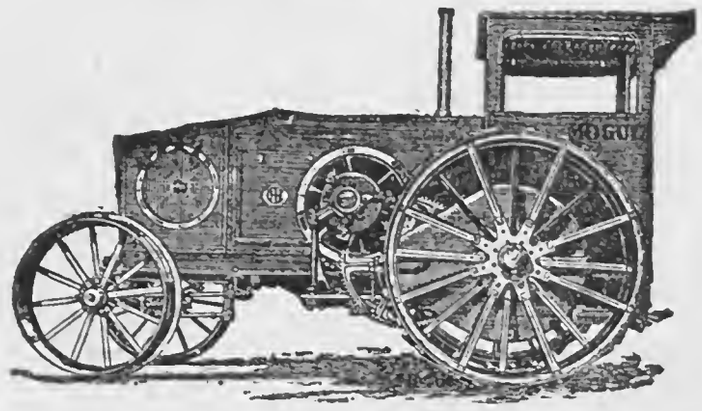
It is simplicity itself. There are no ratchet springs, complicated gears or intricate cogs to get out of order or cause trouble. Any farm boy old enough to handle a team can make the changes in no time.

Remember, now — we don't want you to send us a penny. Just write — tell us if you want complete wagon with gears or just the convertible wagon bed. The low price will astonish you. So don't hesitate.

Send today without delay for descriptive circular and details of offer. 16

The American Wagon Company, 2023 Lincoln Avenue, Dixon, Ill.

International Harvester Oil Tractors



The I H C Line

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International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

The Henyard.

Importing Poultry.

I am going to import some poultry from England and several persons tell me that there is some sort of go-between from the steamship to the express company who charges his own price for delivering the stock to the express company. One man had to pay $12 to get a pair of bantams off the ship, another had to pay $4 to get a setting of eggs, another $5 to get some hens. Is this duty that has to be paid to the government or is it a scheme of the steamship company to "soak" the importer? How much would I have to pay on six birds valued at $36 in England?

New York. D. M. H.

The duty on live poultry is one cent per pound, and this in addition to transportation and a small custom house fee is all the expense necessary. Most of the large express companies have foreign departments, handling such shipments from start to finish, and for a person at some distance from the port where the shipment is received it is far better to deal with them than some individual broker, who is likely to add a large slice of extras.

Brooding Chicks in Large Flocks.

Will H. E. Matthews, who writes on page 1288, tell how he constructs his ventilator flue for intake, and flue for ventilator through roof, position of radiators and any details that would enable me to change over house 20x10 for brooding? T. H. M.

Our intake comes from the east and the west ends of the building, and is carried under the hover floor. The radiators are set near the back of the hover, directly over this air pipe. An eight-inch pipe comes up between the two radiators to within four inches of the top. In this way the air is delivered at the warmest part of the hover, and passes out near the floor into the room. This is according to the King system of ventilation. After the air passes from under the hover it rises to the top of the room leaving the heavier carbon dioxide near the floor. The ventilator shaft to remove this foul air should be placed near the south side of the room, beginning within three inches of the floor, and extending three or four feet above the roof. The pipe should be eight inches square. In making use of an old building the heater should be in an adjoining room and on a lower level, so the water will flow to the radiators. An oil heater or the coal heaters designed for 1,000-chick flocks would be cheaper for a single room. The same principles of ventilation will apply, always being careful to take the air in through a pipe coming from a low point, and delivering the air two feet or more above the floor. H. E. MATTHEWS.

Leg Weakness.

I have a pullet that seems weak in the legs; whenever she walks, it is with uncertainty, and after a few steps she squats down, in which position she remains most of the time. Her droppings are mostly white, soft and pasty. I feed the Maine Experiment Station mash, with one part cut Alfalfa added. I am treating her for cholera; am also feeding very scantily with grain. Can you give me any information as to her ailments? C. L. K.

The chief causes of leg weakness in fowls are believed to be rheumatism, from housing in damp, ill-ventilated houses, and overfeeding upon rich, stimulating food, combined with lack of sufficient exercise. The remedy would obviously be the correction of whatever conditions led to the trouble in any given case; with pullets, I should be inclined to think of rheumatism first. M. B. D.

Why Don't the Hens Lay?

"The melancholy days have come, the saddest of the year." Grain is expensive, and eggs are scarce. My neighbor, who has 300 White Leghorns of good breeding, about half of which are pullets, told me yesterday that he was considering whether it would not be best to sell them. He takes good care of his hens, and has a fine-looking flock. They had reached a daily egg production of 57 when the very cold snap of January struck us; they dropped down to 14, and have now, January 28, got back to 31. There has been no lull in the price of feed during this time.

Another neighbor left a salaried position about three years ago and, having some means, purchased a desirable place, with a few acres of land, in town. He is a man of good business judgment, great energy, and a tireless worker. Not wishing to retire from the active labor to which he has been accustomed for a lifetime, he started a poultry plant; 200 Leghorns did exceedingly well for him, so he increased his capacity and now has 200 yearlings and 300 fine pullets. He gives them all his time, cuts green bone, sprouts oats, and works "Harder than I I ever did in my life before—and that's going some"—and as a reward for his labor, and a very considerable investment, is getting 60 to 70 eggs per day. There is no fault to be found with the care; his hens are being intelligently and painstakingly looked after; they are beautiful to look at, and chatter persistently about what they are going to do—in the Spring. They will; but the owner would like to sell his plant. I think of these men, and others, when I read the optimistic ebullitions of a well-known poultryman who is urging his fellow farmers to discard cows and keep hens, and who seductively intimates to tired town workers that a few "units" of poultry, kept upon a back lot, after his plan, will afford a delightful income and take but a few minutes of time.

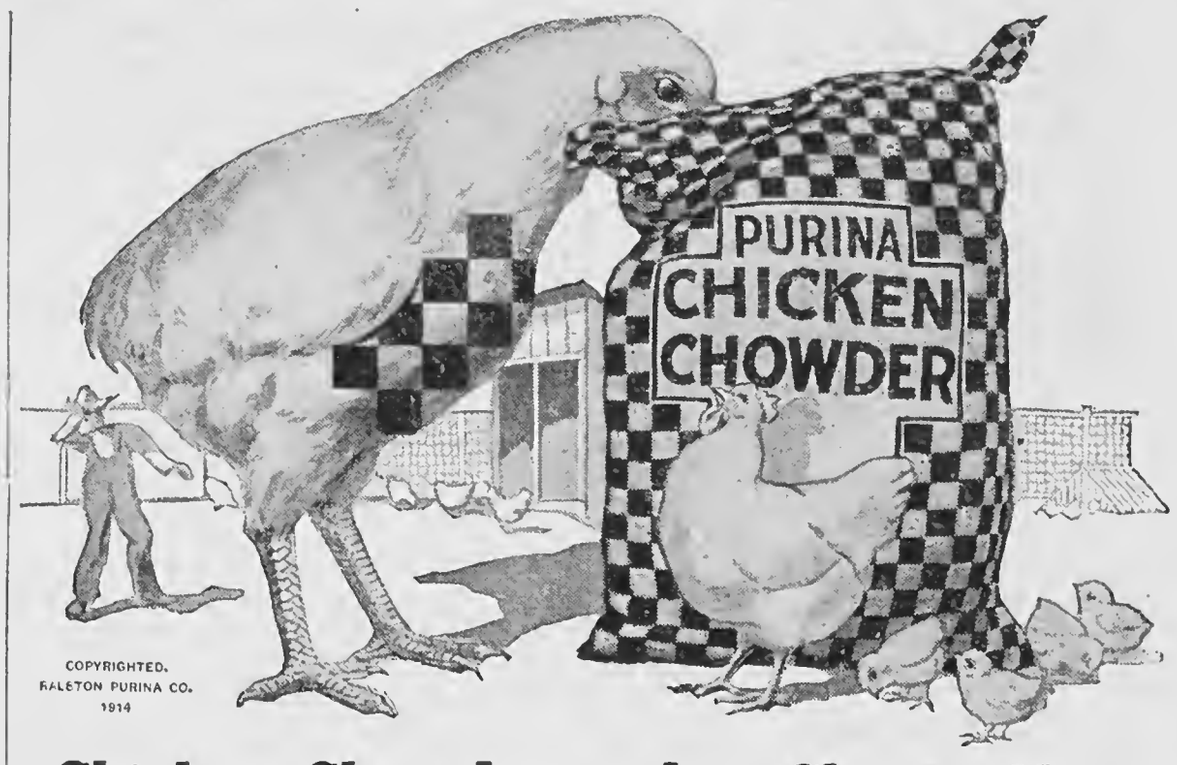
It may be that there is a difference in seasons; the complaint that hens don't lay seems more insistent this year than usual. A late warm Fall gave the pullets a good start, but the sudden onset and persistent zero weather put a crimp into the fair prospects of many a flock. They will recover their stride, but the grain bills mount and egg prices decline while they are recovering. Faith is the foundation of all business, but it must enter into the superstructure as well if one is to stay in the poultry business. There is no need for discouragement in those who have not "plunged." If they have invested wisely, kept their feet upon the ground, declined to put their all into an egg basket and have made the filling of one only a part of their work, the skies will blue again, and with the coming of Spring the hens will seem very fountains of eggs. The downy chicks will twitter their way into our hearts, we shall again believe their fair promises and all our mid-winter gloom will be dispelled. M. B. D.

Vertigo.

What is the matter with one of my hens? It is a Spring chicken and it turns its head around so the bill will point to the roof, eats pretty well when I hold her but will turn round and round when put on the floor and does not try to walk much. Head seems hot and she tries to rub it on floor; head keeps turned and neck also all the time. A. D. W.

These symptoms of vertigo, or dizziness, are supposed to be caused by some brain disturbance, probably often due to intestinal irritation from the presence of worms, or from indigestion. A rational treatment would be a good dose of physic, such as a teaspoonful or two of castor oil, or a couple of grains of calomel, and the subsequent feeding for a few days of soft easily digested food. If the presence of worms is suspected, a teaspoonful of turpentine, mixed with an equal quantity of some bland oil, is indicated.

M. B. D.



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It makes them grow twice as fast. This means large profits, heavy egg production and vigorous chicks that withstand disease. You can't afford to be without this *growing feed* now, any more than you could afford to be without it last winter when you proved that "if Chicken Chowder won't make your hens lay they must be roosters." Feed Chicken Chowder in addition to Purina Chick Feed and double your profits. For sale by leading dealers. Order from your dealer today.

Checkerboard Poultry Book FREE!

For your dealer's name we will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care of baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and more details about his Automatic Chicken Chowder Feeder (50c). Write today.

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The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Wright boxes are shipped to you flat and are easily set up and packed for shipment to your customers. *Write today for Free Booklet* describing The Wright Boxes for shipping chicks and eggs.

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Keep your hens happy, get more eggs, bigger profits, by keeping them free from lice and mites with **KNUDSON Galvanized Steel Lice Proof Nests**

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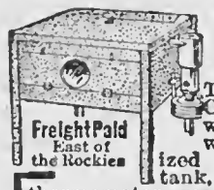

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The incubator is California Redwood, covered with asbestos and galvanized iron; has triple walls, copper tank, nursery, egg tester, thermometer, ready to use. 30 DAYS' TRIAL—money back if not O. K. Write for FREE Catalog today—NOW

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112-PAGE POULTRY BOOK FREE

If you are thinking of buying an incubator or brooder you should send for our big 1914 catalog at once. Describes many new, *exclusive improvements* in this year's

PRAIRIE STATE Incubators and Brooders

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S. C. Reds, Dark Brahma cockerels, $2.50; S. C. B. Leghorn cockerels, $1.50; R. C. and S. C. RED laying hens, $2.00. Won 76 ribbons this season, including New York and Philadelphia. Eggs and chix. Mating list free. Riverdale Poultry Farm, Riverdale, N. J.

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Write me personally, Jim Rohan, Pres.

Belle City Incubator Co., Box 48, Racine, Wis.

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IMPERIAL "RINGLET" Barred Rocks

ARE THE STANDARD BY WHICH ALL OTHER BARRED ROCKS ARE JUDGED

They have won more than double the number first prizes at Madison Square Garden, New York, than any other strain.

2000 Grand COCKERELS and PULLETS for sale

Catalog upon application

Eggs, $10 per Setting; $60 per 100

Address E. B. THOMPSON, Lock Box 22, AMENIA, N. Y.

207 Eggs a Year

AVERAGE from a flock of 21 "Royal Blue" Barred Rocks, the champions at New York, Boston, Chicago. Big illustrated catalogue with valuable poultry information free.

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Barred Rock Cockerels

Nonpareil Strain. $2 each. Eggs in season.

B. H. HENION, Brockport, New York

"Perfection" Barred Rocks—Every pen headed by prize winners. Mated and fed-to-produce chicks of high quality, and the kind that live. Eggs—$2 per 15; 3 settings for $5. Few fine cockerels, $3 and up. Complete price-list, containing valuable information, on request. Dr. HAYMAN, Box R. 48, Doylestown, Pa.

WHITE AND BARRED ROCKS

Eggs for hatching from superb matings; birds grand in color, type and size; healthy, vigorous specimens and mated with care to produce results. Nothing but the finest selected stock in these pens. Eggs—$3 per 15; $5 per 30. Several big, husky cockerels that would make splendid breeders, at $3 each. I also have a grand pen of S. C. Buff Orpingtons, birds of immense size with exceptional type and color. Eggs—$5 per 15. Fertility guaranteed. Address, W. H. MOORE, R. 2, Rome, New York

Parcel Post Egg Boxes—NEW FLATS AND FILLERS. H. K. BRUNNER, 45 Harrison St., New York

BOWSHER MILLS

(Sold with or without Elevator.)

For Every Variety of Work.

Have conical shaped grinders. *Different from all others.* Handiest to operate and LIGHTEST RUNNING.

7 sizes—2 to 25 horse power. One style for windwheel use. (Also make Sweep Grinders—Geared and Plain.

P. R. BOWSHER CO., South Bend, Ind.

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Wisconsin Wins In Big Hatching Contests

Mrs. J. McMahon, Veedersburg, Ind., in 1910 won in Missouri Valley Farmer Hatching contest, hatching 125 chicks from 126 eggs.

Mr. C. B. Armitage, Atwater, Ohio, in 1911 won in Successful Farming contest, getting 181 chicks from 181 eggs in two hatches.

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Mrs. F. H. Lewis, Montrose, Pa., in 1913 won in Successful Farming contest getting 96 chicks from 96 eggs in one setting.

130-EGG Incubator & 130-CHICK Brooder, both $10

180-Egg Incubator—180-Chick Brooder, both for $11.50

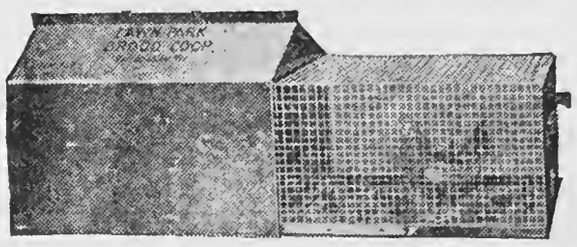
Freight paid East of Rockies—Incubators have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set up ready to use when you get them. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others we will feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Send for FREE catalog today, or send in your order and save time.

WISCONSIN INCUBATOR CO., Box 138, RACINE, WISC.

Every Year Write for FREE CATALOG and we will send a sample of the Redwood our Incubators are made of Why Take Chances

"Lawn Park" Coop

is the ideal device for raising chickens—gives them sunshine, fresh air, grass, and at the same time protects them from rats, cats, dogs, and all enemies.



Can be closed up when desired, and can be used in a dozen different ways. Once used no poultryman will be without them. **Price, $2.50 each**—freight paid on orders for 6 or more. Agents can make good money selling these coops. Write at once for circular giving full information. **THE CYCLONE SEEDER COMPANY, Urbana, Indiana**

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Indian Runners—Fawn and White. Prize winners. White egg strain. Eggs, $1.25 and $2 per 13. Catalog free. Geo. F. Williamson, Box 160, Flanders, N.J.

Indian Runner Duck Eggs—$1.50 per 13, delivered anywhere in U. S. **CRANDALL FARMS, Albion, New York**

White Indian Runner Duck Eggs—Guaranteed white egg strain. $1.50 per 13. **FRED S. OEYOE, Hunter, Greene Co., N. Y.**

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Winners at both N. Y. shows. White Cornish fowls, the ideal breed for broilers. R. C. Reds—Winter layers. White Guineas and Bronze Turkeys. Fertile eggs that hatch. **RIDGELEIGH F. & P. FARM, Huntington, L. I., N.Y.**

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A few of them will change any Eastern dairy farm into a highly profitable business proposition. Plenty of fertilizer, plenty of cash, and light work at reasonable hours. Catalogue on application.
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The famous Vibert flock of beautiful, brilliant, glowing cherry to mahogany red-to-the-skin rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but **specially selected, long backed, low tailed,** certified trapnested record layers, scientifically **line bred along Government lines** for heaviest winter egg production, with **yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness,** and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant **absolutely free from roup and white diarrhoea.** Highly fertile, clean, well shaped, unblemished eggs, **gathered hourly, shipped daily, delivered when wanted,** guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding **cockerels from trapnested hens,** trios, mated breeding pens for sale. Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.

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DEMING'S S. C. R. I. REDS—Win 1st Pullet and 6th Pen at last Madison Square Garden show. They also won over all Reds in 1912 contest. Average, 186 eggs each. Circular, giving prices of fancy and utility eggs for hatching, on request. **H P. Deming, Robertsville, Conn.**

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15) Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks.
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R. I. Reds, Houdans, Indian Runner Ducks
High-class stock for UTILITY, SHOW or EXPORT. Eggs for hatching. Mating list on request. SINCLAIR SMITH, 602 Fifth St., Brooklyn, N. Y.

R. I. Red Chicks—Strong, Easy-to-Raise chaps from choice "Bred-to-Lay" free range stock. Also chicks from heavy-producing S. C. W. Leghorns. Circular free. Place order NOW. **WM. W. KETCH, R. R. No. 10, Cohocton, N. Y.**

DINGMAN'S BEAUTY AND UTILITY **S. C. R. I. REDS**
Eggs for hatching from 60 yearling hens with average of 149 eggs in pullet year. Mated to large March hatched, dark red cockerels, sons of high-producing, trap-nested hens. $8 per 100; $1.50 per 15. Special matings of pedigreed, trap-nested breeders mated to prize-winning males, $5 and $3 per 15. A few choice cockerels left. Send for mating list.
Dr. J. C. DINMAN, Spring Valley, N. Y.

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. **COLONIAL FARM, Box O, Temple, New Hampshire**

THE EGG-LAYING CONTEST.

S. C. R. I. Reds come to the front this week, Dr. J. A. Fritchey's pen laying 44. This pen leads all the Reds in the total score also, they having laid 455. The next best S. C. Red record is by Geo. P. Dearborn's pen, 376. White Leghorns take second place for the week, Branford Farm's pen laying 42. F. H. Benton's White P. Rocks, and Merrythought Farm's White Wyandottes tie for third place with scores of 41 each.

Tom Barron's White Wyandottes are 'way behind this week, their score being 31; but their total, 648, is 126 eggs ahead of any other pen. The pen averages show the White Wyandottes far in the lead. Their five pens have laid 2,204, an average per pen of 440.8. The next best average is that of the two pens of R. C. Reds, their average is 274.

Profitable Poultry's pens average 268 per pen. S. C. Reds average 235 per pen. White Leghorns average 221 per pen. This shows that the Wyandottes have laid since this contest began, just about two eggs for every one egg laid by the Leghorns. But wait until next Summer and Fall, and then compare averages.

The Barred Rocks have averaged 194; the Buff Wyandottes 180.75. Daniel Hines' two pens of Dunghills averaged 180. White P. Rocks averaged 170. Buff P. Rocks averaged 154. Below are some of the records:

	WK.	TL.
BARRED ROCKS.		
J. J. Francis, New York	31	378
Frank L. Tuttle, Massachusetts	15	190
Waveny Farm, Connecticut	12	107
A. B. Hall, Connecticut	18	102
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut.	27	265
F. H. Benton, Connecticut	41	249
Storrs Agr. Sta., Connecticut.	25	182
Storrs Agr. Sta., Connecticut.	23	152
Storrs Agr. Sta., Connecticut.	28	127
Storrs Agr. Sta., Connecticut.	7	93
Albert T. Lentzen, Massachusetts	34	122
BUFF P. ROCKS.		
A. A. Hall, Connecticut	26	231
W. C. Morgan, Connecticut	10	77
WHITE WYANDOTTES.		
Tom Barron, England	31	648
Neale Bros., Rhode Island	35	475
Merrythought Farm, Connecticut	41	465
D. J. Ryan & Son, Connecticut	25	314
West Mt. Plty. Yards, Connecticut	20	302
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	36	250
Dr. N. W. Sanborn, Massachusetts	29	200
Am. Buff Wyan. Club, New York	23	223
H. E. Hamilton, Connecticut	11	50
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	44	455
Geo. P. Dearborn, Florida	32	376
Pinecrest Orchards, Massachusetts	30	343
Colonial Farm, New Hampshire	20	303
A. B. Brundage, Connecticut	39	310
J. S. Gillespie, Connecticut	18	299
Harry B. Cook, Connecticut	25	284
R. C. REDS.		
Glenview Plty. Farm, Connecticut	33	323
C. S. Scoville, Connecticut	24	225
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut	38	522
Storrs Agr. Sta., Connecticut.	26	509
Cecil Guernsey, New York	29	425
Storrs Agr. Sta., Connecticut.	30	360
Tom Barron, England	27	331
Storrs Agr. Sta., Connecticut.	26	291
Bonnie Brook Farm, New York	27	289
Marwood Plty Farm, Pennsylvania	32	296
Branford Farm, Connecticut	42	268
F. M. Peasley, Connecticut	24	213
P. G. Platt, Pennsylvania	20	248
L. E. Sands, Pennsylvania	30	254
C. W. Sherwood, Connecticut	24	224
J. S. Gillespie, Connecticut	18	299
BUFF LEGHORNS.		
Wolverine Plty. Farms, Michigan	29	175
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	19	102
BUFF ORPINGTONS.		
O. Wilson, West Virginia	24	157
WHITE ORPINGTONS.		
P. A. Demgar, New York	23	114
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	10	28
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	29	63
DUNGHILLS.		
H. W. Collingwood, New Jersey	19	61
Daniel Hine, Connecticut	18	143
Daniel Hine, Connecticut	35	218
MIXED PUREBREDS.		
Profitable Plty., Massachusetts	30	291
Profitable Plty., Massachusetts	21	246

This week 2,042 eggs were laid. The total to date 17,889. GEO. A. COSGROVE.

Pulping Roots for Hens.

The best thing to make turnips, potatoes and beets into a pulp is to run them through an apple grater run about one-half speed, with the knives set rather coarse. The apple grater is the implement used in cider making plan. I bought a second-hand one for $1. My man claims he has put 15 bushels of turnips through in 10 minutes. Cattle do not get tired of turnips if they are made into a coarse pulp. J. M.

New Holland, Pa.

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SINGLE COMB WHITE LEGHORNS
I HAVE NO OTHER BREEDS

They are the standard for all the Leghorns of all America, and the greatest layers of all varieties of domestic fowl. I have hundreds of yearling hens and cocks for sale. Mating list free. Address

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BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. **John A. Roth, Quakertown, Pa.**

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Rufus Oelafield, Owner Box N SOUTH PLAINFIELD, N. J.

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Elizabeth Poultry Farm—Custom Hatching. Eggs for Hatching, and day-old baby chicks, from 1,500 selected breeding stock. S. C. W. Leghorns, Barred Rocks and Buff Orpingtons. Write for **PRICES.** Visitors are welcome to inspect our stock any day except Sunday. **JOHN H. WARFEL AND SON, Rohrerstown, Pa.**

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Columbian Plymouth Rocks
Partridge Plymouth Rocks
S. C. White and Buff Leghorns
WILBURTHA POULTRY FARMS
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BABY CHICKS
BREEDING STOCK
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PRIZE WINNING EXHIBITION BUFF ROCK MATINGS. Barron cockerels also head my American Leghorns, exclusively. Toulouse Geese, largest in America. S. C. Reds, Rouen Ducks, Eng. Penciled Runner Ducks, Turkey Eggs. Farm Prices. Cir. **Morris Farm R. 4, Bridgeport, Conn.**

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O. C. R. HOFF, Lock Box No. 115, Neshanic Sta., New Jersey

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Write For Free Catalog—It gives full description of our 1914 matings and prices of Baby Chicks, Eggs for Hatching, breeding stock and Indian Runner Ducklings.
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EZRA C. CARTER, Marathon, N. Y.
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bred for heavy egg production for 20 years. Headed by grandson of Lady Coruell. Official record was 257 eggs. $4—100; 75c. setting. Chicks, $10—100.
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PUBLISHER'S DESK

As Spring approaches the "horse gyp" will be on the lookout for his usual harvest—his advertisements are in some of the daily papers. It is to the credit of a few of the New York city dailies that this class of dealers cannot buy advertising space in their columns. You will recognize these "horse gyps" by the earmarks on their advertisements. To allay suspicion they advertise as "Express Company's Stables," "Brewery Stable," "Railroad Stables," "Ice Company Stables," etc. The advertisements give the impression that good horses are almost given away in New York city and a 30-day trial allowed. The more liberal the offers the greater need there is to beware of the advertiser. We have exposed their methods often and we hope no reader of THE R. N.-Y. will become a victim of the "horse gyps" or "automobiles gyps" this season.

There is a man travelling through here claiming to represent, or rather own, David Rising Seed Co., Easton, Pa., selling potatoes at $3 per bushel, seed corn $6 per bushel, etc. He wants the money at once, or before he sends the goods. Is there such a firm, and reliable, or is it a humbug? I did not bite, and do not intend to; but some of my neighbors ordered goods for $50 to $100. He claims to own farms in different States, and raised 4,000 bushels of potatoes.
Pennsylvania. O. F. B.

We do not know the David Rising Seed Co., and we fail to find any such concern listed in the reference books open to us. It is a pretty safe rule to avoid agents going about the country telling big stories about seeds, plants, or trees, and selling them at fabulous prices. You have no assurance that the seeds offered by such agents are reliable, and there is no question that you can buy better seeds from the most reliable houses in the business at less than half the cost. Our contention is that farmers cannot afford to take chances on planting such seeds if they cost nothing.

Can you advise me as to the reliability of Robert J. Gunson & Co., seed growers and importers, Rochester, N. Y.?
New York. N. H. B.

These agency houses invariably have some new and wonderful variety of oats, corn, etc., which no one ever heard of before, We know of no variety of seed introduced by these agency seed houses that is being generally grown at the present time. But from year to year farmers are asked to pay extravagant prices for unknown varieties by these agents. It is important in the purchasing of seeds to entrust your order only to houses with an established reputation for reliability and fair dealing. This is one of the several concerns in Rochester selling seeds on the agency system. From the reports that come to us of the stories told by these seed agents, they have the nursery agents beat a mile when it comes to handing out the pure unadulterated variety of "guff."

Claude J. Van Slyke, president of the New York Central Realty Company, and James A. Robinson, treasurer of that concern, pleaded guilty before Judge Hollister in the United States District Court to-day of using the mails to defraud in the sale of $500,000 of the company's worthless bonds. William Cooper, organizer of the concern and its first president, was indicted with Van Slyke and Robinson in August, 1912, by the Federal Grand Jury. The company sold $470,000 worth of 6 per cent. gold bonds to 800 investors.

It was further revealed that the property owned by the company was worth $35,000 and that it was mortgaged to the Windsor Trust Company for $498,000. The running expenses of the concern, it is alleged, amounted to $92,000, chiefly because of the high salaries paid to its officers. Cooper, it is said, got $12,000 per annum and Van Slyke $4,500 a year as secretary and $10,000 as president of the company. Robinson got $7,500 as treasurer and $6,000 in commissions. A loan of $67,000 was contracted at one time from Bloomingdale Brothers and of this it is alleged that $8,000 went in the payment of commissions. In 1909, it is alleged, it bought a tract of land near Providence, R. I., and another near Rye, N. Y., for $5,000 cash and $10,000 in the bonds of the company. The title to this property was taken in the name of the Tuckahoe Lime & Lumber Company, another subsidiary, and later entered on the New York Central Company's books as worth $1,000,000. Cooper was voted a bonus of $200,000 for the acquisition of this land. The company also acquired title to a tract in the Hackensack meadows for $1,500 and mortgaged it for $350,000 in 1910. All these transactions were duly embodied in the company's reports to its stockholders, purporting to show that the concern's assets amounted to $1,856,988.—Local Paper.

I wonder whether readers see the points of similarity in all these schemes? Note an original company and two subsidiary companies; land mortgaged for 25 times its value in one case and 233 times its value in another case; big salaries and commissions to the promoters, and a responsible trust company willing to lend its name by certifying to the mortgages without knowing or caring about the value of the mortgages. Some of the promoters will probably go to jail for a few months, but precious little good that will do the people who have lost their money. This is a very small edition of the E. G. Lewis scheme at St. Louis, but except as to size and details the schemes were similar. In that case William Redfield, now Secretary of Commerce, regretted, so he said, that he was not in on the deal. He did not say whether he would have preferred to be in as a promoter or as a sucker. But if the latter, he certainly missed another opportunity here at home. Mr. Redfield and Representatives Ashbrook of Ohio and McCoy of New Jersey, gave more encouragement to crooks than any other three men that we have known in public life. They kept Lewis out of jail, which seemed to be their object at the time, but the courts go on convicting an occasional Lewis imitator. We regret to see Mr. Redfield lose so many similar opportunities. If he has no preference for the promoter end of the game, he certainly ought to be able to get on some of the sucker lists.

On June 21, 1913, we sent money order for $3.05 to the Fruitman and Gardener of Mt. Vernon, Iowa, for one year's subscription, 1913-1914, to "The Outlook" and "Fruitman and Gardener," at the latter's club rates. In August we received a letter from The Outlook requesting our subscription. We wrote them both explaining the matter, but received no reply from the Fruitman and Gardener. The postmaster traced and advised us the check was cashed by the F. & G. at Mt. Vernon, June 26, 1913. We wrote them to that effect, but no reply. The Outlook has no subscription credited to us on the books, and the question is who has the money. The F. & G. is evidently still on earth, for we receive it. W. F. J.
Michigan.

We wrote The Outlook people and received the following letter:

We have your letter of January 27 in which you ask us if we received an order last June from the "Fruitman and Gardener" for a subscription to "The Outlook" in the name of W. F. J. We have not received this remittance.

After writing four letters to the "Fruitman and Gardener" we received the following reply on January 30:

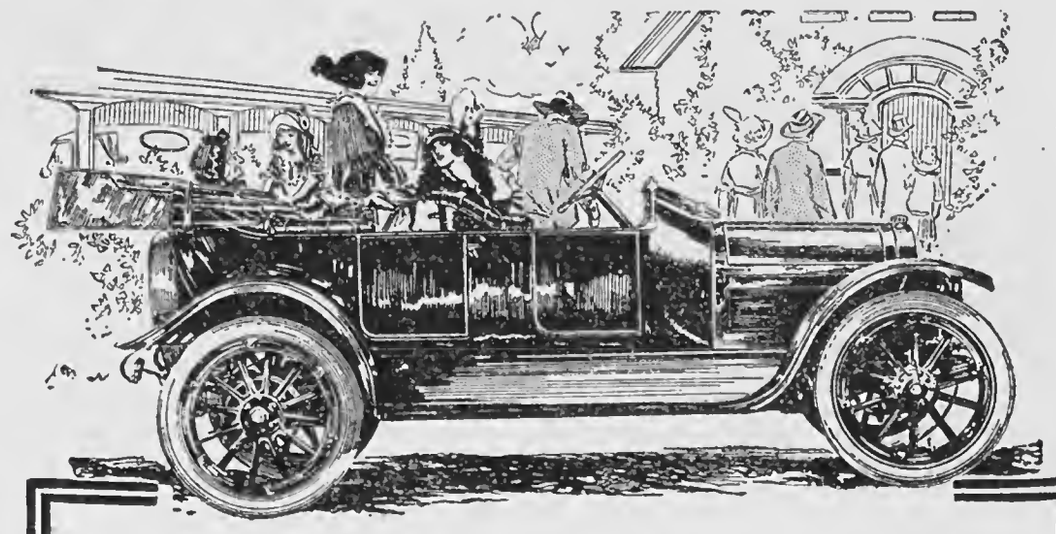
Your letters to us go in the waste basket. Consequently they are wholly and entirely a waste of stamps. If anyone had any complaint in regard to treatment received by us this is the place for them to leave it. LLOYD MCCUTCHEON.

The publisher of Fruitman and Gardener ignores the fact that W. F. J. did write him and could get no reply. This treatment of a customer may be very gratifying to a self-complacent publisher, but if our observation is worth anything it is not a promise of success in the field of periodical journalism. J. J. D.

Mustard for Hens.

Of what use is French mustard, dry, for hens? In what quantity would you use it and with what? C. H. B.
Cold Spring Harbor, N. H.

I would not use mustard, or other condiments, in any quantity, as a poultry food or tonic. It is a common practice to add mustard or pepper to foods with the idea that they "stimulate" the digestive organs of fowls. These condiments contain essential oils which are irritating to the mucous surfaces with which they come in contact and produce a sensation of warmth, and if too long continued, of pain; but irritation is not stimulation, and does not promote the digestion and assimilation of food, without which eggs cannot be made or body warmth promoted. As condiments to stimulate the jaded palates of humans who have so dulled their organs of taste by long continued use of highly seasoned foods that they cannot appreciate a mild flavor, they are all right, but don't inflict them upon hens whose simple tastes do not call for French dressings. M. B. D.



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Our overhead expense is low. Every officer in the company holds an active position. There is no "deadwood." No fancy salaries paid to do-nothing officers and dummy directors.

Our production is relatively small. Never will we permit it to reach the point where quantity interferes with quality. The efforts of a know-how organization are concentrated on a *limited* number of cars—all most important factors in the right manufacture of a service-giving car at this within-reach-and-reason price of $1785.00.

The illustration above gives but a faint idea of the car's graceful beauty. Get in touch with our distributor nearest you and *see* it. Prove for yourself by actual road work its power, speed, and smooth running qualities—that in it there are units of value to the *full amount of the purchase price.* Or write us direct for Complete Art Catalog showing as well the Light Four Forty-five at $1600.00; the Six Forty-five-fifty-eight at $2200.00.

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322 Main Street, Kokomo, Indiana

APPERSON DISTRIBUTORS IN NEW YORK

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Elmira, J. F. Rhodes & Son
New York City, Shepherd Auto Co., Inc.
Rochester, F. Porschet

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Landscape Gardening, Maynard	1.50
Clovers, Shaw	1.00

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This tensile strength in Lehigh increases with age. It gives to the structure greater power as time goes on and forestalls deterioration.

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Build concrete foundations for house, barn or corncribs. They last forever, withstand greatest strain and are fireproof and ratproof.

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MARKETS

Wholesale Prices at New York,

Week Ending Mar. 7, 1914.

BUTTER.

Creamery, extra, lb	31	@	31½
Good to Choice	28	@	30
Lower Grades	22	@	25
Storage	22	@	29
State Dairy, best	29	@	30
Common to Good	20	@	26
Factory	18	@	21
Packing Stock	15	@	19

Elgin, Ill., butter market firm at 30 cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

Whole Milk, best	18	@	18½
Common to Good	14	@	17
Skims	06	@	12

EGGS.

White, choice to fancy, large	32	@	34
Common to good	29	@	30
Mixed colors, best	29	@	30
Common to good	27	@	28
Storage, best	25	@	26
Medium and low grades	20	@	23
European, fresh	22	@	23

FRESH FRUITS.

Apples—Spitzenburg, bbl.	4 00	@	6 50
Spy	4 00	@	6 00
King	4 00	@	5 50
Greening	4 00	@	5 75
Winesap	4 50	@	6 00
Newtown	6 00	@	7 00
York Imperial	4 00	@	6 00
Baldwin	4 00	@	5 50
Western, box	1 50	@	3 00
Pears—Kieffer, bbl	2 00	@	2 75
Strawberries, Fla., qt.	20	@	60

BEANS.

Marrow, 100 lbs.	4 55	@	5 30
Medium	3 50	@	3 55
Pea	3 25	@	3 55
Red Kidney	5 10	@	5 20
White Kidney	5 75	@	5 80
Yellow Eye	4 60	@	4 70
Lima, California	6 00	@	6 10

HOPS.

Primo to choice	43	@	45
Common to good	40	@	42
Pacific Coast	20	@	24
Old stock	15	@	18
German crop	68	@	72

VEGETABLES.

Potatoes—Long Island, bbl.	3 00	@	3 25
Maine, 180 lbs.	2 75	@	3 00
State, bulk, 180 lbs.	2 62	@	2 87
European, 168 lb. bag	1 00	@	2 00
Bermuda, bbl.	4 00	@	6 00
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl.	1 50	@	2 00
Carrots, bbl.	1 50	@	2 25
Cabbage, Danish seed, ton	24 00	@	28 00
Red	24 00	@	28 00
Imported	20 00	@	25 00
New, bbl. crate	1 00	@	1 75
Chicory, bbl.	2 00	@	3 00
Kale, bbl.	75	@	1 00
Lettuce, half-bbl. basket	2 00	@	5 00
Onions—White bu.	1 75	@	2 50
Red, 100 lb bag	3 00	@	3 25
Okra, bu.	2 00	@	3 00
Peppers, Southern, bu.	1 50	@	2 25
Peas, Southern, bu.	2 00	@	4 00
Shallots, bbl.	3 00	@	3 50
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	2 00	@	3 00
String Beans, bu.	2 00	@	4 50
Squash, Marrow, bbl	2 25	@	3 00
Hubbard, bbl.	2 25	@	3 00
New, bu.	1 50	@	2 50
Egg Plants, Southern, bu.	2 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	1 25	@	3 00
Turnips, white, bbl.	1 25	@	1 50
Rutabaga	75	@	1 15

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 50
No. 2, box	2 00	@	2 50
Mushrooms, lb.	15	@	40
Radishes, 100 bunches	1 00	@	2 00
Tomatoes, lb.	20	@	30

LIVE POULTRY.

Chickens, for fricassee, lb	15	@	15½
Squab Broilers, pair, fancy	75	@	85
Broilers, fair to good, pair	45	@	50
Roasting chickens, lb.	18	@	20
Fowls	16	@	17
Roosters	12	@	12½
Ducks	17	@	18
Geese	13	@	14

DRESSED POULTRY.

Turkeys, fresh killed, best	24	@	25
Common to good	18	@	24
Chickens, choice broilers, lb.	30	@	35
Squab broilers, pair	75	@	90
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	28	@	30
Ducks	18	@	19
Geese	13	@	17
Squabs, doz.	2 50	@	5 50

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	18 50	@	19 50
No. 2	17 00	@	18 00
No. 3	13 00	@	16 00
Clover mixed	13 00	@	17 50
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00

LIVE STOCK.

Native Steers	8 15	@	8 35
Bulls	6 00	@	7 15
Cows	4 00	@	7 00
Calves, prime veal, 100 lbs.	8 50	@	12 75
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	8 00	@	8 75
Hogs	8 00	@	9 25

MILLFEED.

Wheat Bran, ton	25 00	@	26 00
Middlings	27 00	@	29 00
Red Dog	29 00	@	30 50
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	15½	@	16½
Fair to good	12	@	14
Buttermilks	09	@	11
Lambs, Hothouse, each	4 00	@	6 50
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	1 03	@	..
No. 2, Hard Winter	1 01	@	..
Corn, as to quality, bush.	71	@	73
Oats, as to weight, bush.	43	@	46
Rye	65	@	66

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	38	@	40
Mixed colors, new laid	32	@	35
Ordinary grades	25	@	28
Butter, fancy prints, lb.	35	@	37
Tub, choice	30	@	33
Chickens, roasting, lb.	27	@	30
Fowls	22	@	25
Turkeys	28	@	32

Limberneck.

On page 164 J. O. G. gives as a remedy for limber-neck the ax. This is not necessary. In August of last year I found three fine Leghorns with this peculiar trouble. One was so bad she lay with eyes shut and neck stretched out, and paid no attention to me. I carried them all to the barn and gave with an oil can such as is used for oiling machinery, a tablespoonful of castor oil to each bird. They all lived and in spite of husband's assertion that the remedy would make anything want to die, were lively and ready to eat the following morning. MRS. JAMES LAMPMAN.

White Wyandotte Shape.

In looking for a cockerel to head one of my yards, asking for a "utility" bird with an egg record back of him, two of the five present said they found it hard to keep their egg laying strains to standard requirements as to shape of body and size of comb. Mrs. Flora A. Haynes of Idaho, whose record we greatly admire, also writes "My flock has the faults (?) you speak of. They are too long-bodied (large combs too), as are all heavy laying White Wyandottes that I have seen pictures of. The English White Wyandottes that laid heavier than mine at Storrs show in their pictures a more pronounced long body than mine * * * Therefore I believe it is useless to look for extra heavy layers and show birds in the same individual." What say Cosgrove and others?

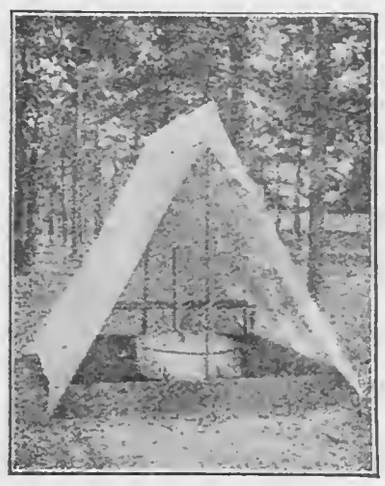
S. T. W.

I long ago made up my mind that the fanciers were ruining the White Wyandotte from a utility standpoint, by their fad of breeding for a short body. While it was true that some of the short-bodied birds laid very well, it would be wonderful if none did, yet it was true that the longer-bodied birds as a rule were the better layers. Several years ago Prof. C. K. Graham, then at head of the poultry department at Storrs College, gave some lectures illustrated with lantern slides of 200-egg hens of different breeds. In every instance the picture showed a very long-bodied bird, no matter what the breed was. I know a man who had bred his Wyandottes until they just suited the poultry show judges; he won at Springfield show in a large class of Wyandottes. I met him a year or two afterward in Hartford and inquired if he was still breeding Wyandottes? "No," he said, "I got them so they would suit the judges, but they wouldn't lay eggs, and what few they did lay wouldn't hatch, so I got rid of all of them." I like to see a hen with a long body, legs wide apart and plenty of abdomen; in short I want hens to have plenty of room in their egg factory.

GEO. A. COSGROVE.

Brooding Chicks in a Tent.

We placed a portable hover in an eight-ounce canvas tent (See Fig. 165) and after warming it up to 95 degrees put under it 100 S. C. White Leghorn chicks about 60 hours old. On the feeding board we sprinkled some fine grit and gave the chicks warmed water in a two-piece drinking fountain. Around the hover we made a circle of one-inch mesh wire netting one foot high. This was to keep the babies from wandering too far away until they got better acquainted with "mother." Next morning they were given their first feed of rolled oats and the fountain was refilled with warmed water after they had eaten. Two and a half hours later they were given some commercial chick food on the feeding board with more grit. We continued feeding alternately every two and a half hours oatmeal and chick food. Second day after the tent was warmed up the wire was removed and chick food was sprinkled in the clover chaff, which had been spread about two inches over all the



TENT FOR CHICKS. Fig. 165.

floor and under the hover. The third day at noon and every day following, they were fed from a dry mash composed as follows: 15 pounds bran, 10 pounds middlings, 10 pounds cornmeal, six pounds sifted meat scraps, two pounds fine granulated charcoal, two pounds bone meal. This they ate from shallow pans.

When one week old they were allowed the run of a portable yard 6x16.

After two weeks this yard was removed, and they had a yard in the orchard 40 feet square. We carried an average temperature of 92 to 95 degrees the first week, reducing gradually to from 88 to 90 the second week, and from 80 to 85 the next two weeks. During the warm part of the day, when the chicks were two weeks old, the lamp was put out. The temperature outside was as low as 32 degrees. On the tenth day one chick died, and also one on the twenty-first day, apparently from eating dried grass in the yard. This left us 98 chicks, which when 28 days old required no more heat. We like the tent for several reasons. The light is so even—no dark corners nor bright sunshine spots for chicks to huddle in instead of going under the hover to warm up. Then there is plenty of fresh air and a tent is easy to change to fresh ground. Also the cost of a tent and hover combined is less than that of a colony house of wood.

New York. F. M. VAN SYCKLE.

Subscribers Exchange

WANTED for Connecticut Agricultural College, Instructor of Poultry Husbandry. Graduate of Agricultural College, with teaching and practical experience. Salary, $125 per month. Also Manager of Poultry Plant, college course required; $75 per month. Tests will be held March 25 at Hartford, Conn., or elsewhere to suit convenience. Send for application to State Civil Service Commission, Capitol, Hartford, Conn.

35-LB. COLT ACETYLENE GAS MACHINE for sale or exchange in good condition; full equipment, including pipes, brackets, etc. Price $50. J. B. BROWN, Bridgehampton, L. I., N. Y.

SPRAYING OUTFIT FOR SALE — 200-gallon tank; spiral agitator; Gould's triplex pump; Fairbanks engine, 3 horse-power; mounted on steel trucks with brakes; nearly new $150. F. ROSSMAN, Valatie, N. Y.

FARM—168 acres, best corn land, $100 per acre. Address owner, D. E. CHILD, Findlay, Ohio.

FOR SALE—182-acre farm; particulars, photo. W. L. HANNAH, Freeport, Me.

SOUTH FLORIDA lake front fruit land to exchange for fruit land in New England or New York. E. PUTNEY, Avon Park, Florida.

585 ACRES—Dutchess County; choice dairy farm; two sets buildings; lake. Inquire, F. R. KEATOR, Attorney-at-Law, 22 Exchange Place, New York.

50 ACRES FOR SALE—7-room house, barn, granary, hog pen, hen coop, milk house; all in good condition; 125 maple trees, 100 apple trees; half mile from town; spring water at house. Price $1,500; $500 down. FRED DRAKE, Shingle House, Pa.

SPECIAL FARM FOR SALE—91-acre farm, 1½ miles from Quakertown, near trolley line; bank barn for 30 head, and other outbuildings; plenty of fruit, good water; six acres of woods; all fields machine worked for quick sale. $6,500. IRWIN NEIL, Quakertown, R. D. No. 2, Bucks County, Pa.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Married man that understands dairy and poultry on a private place. Mr. ARTHUR BENNETT, Supt., Siegfried, Pa.

GARDENER SEEKS SITUATION—Age 29; good references. S. STEVENSON, R. D. No. 5, Simcoe, Ontario.

WANTED FARM HAND—Married; wages $30; cottage, garden. Connecticut. E. C. W., care R. N.-Y., 333 West. 30th St., New York.

WANTED AT ONCE—Two men to work in dairy barn. Address WOODCREST FARM, Rifton, N. Y.

WANTED—Single man to work on fruit and dairy farm; must be good milker; no cigarettes or booze. BOX 279, Wilson, N. Y.

WANTED—Position as foreman of farm by young married man of experience and ability; best references. R. D. 50, BOX 72, Rhinebeck, N. Y.

WANTED AT ONCE—A reliable married man for farm work; give age, family and wages in first letter. J. B. BRIGGS, Great Barrington, Mass.

1912 GRADUATE of New York State College of Agriculture desires responsible position; good references. W. N. J., care R. N.-Y., 333 West 30th St., New York.

WANTED—a single man as poultryman; state experience and wages expected in first letter; references required. GRASSLAND FARMS, Chapinville, Conn.

WANTED—Sober, industrious man to assist with orchard, greenhouse, poultry; some experience necessary; $50; single preferred; references required. C. R. WILLIAMSON, Lancaster, N. Y.

FARM FOREMAN; married, one child; understands the care of horses, cows and poultry; also first-class gardener; wages $60 and found. G. McNALLY, 266 West 21st St., New York City.

FARMER—Wanted married man as working farmer; house, fuel and farm produce supplied; give references and wages desired; Westchester County. Address W. A. F., care R. N.-Y., 333 West 30th St., New York.

WANTED—Cheerful, willing and efficient woman for general housework in farm home, 16 miles from Boston; no washing; permanent position; good home for right party. DR. STELLA CRANE, 224 Huntington Ave., Boston.

WANTED—A man, either single or married, with no children, as working foreman on a small farm; wages and a commission will be paid. W. P., care R. N.-Y., 333 West 30th St., New York.

FARM MANAGER wants position; married; 38 years; practical life experience, all branches; first-class executive ability; sober, honest, reliable; reference; state salary. Address TRUSTWORTHY, care R. N.-Y., 333 West 30th St., New York.

WANTED—Position on farm by capable, experienced young man; single; Cornell winter course graduate; good milker, good teamster; understands care of poultry and stock; best references. B. C., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED BY AMERICAN, age 42, as working farm manager or superintendent on or before April 1st; 20 years' practical experience; stock raising, modern dairying, raising crops and Alfalfa, soiling, farm machinery, gasoline engines, poultry, etc.; best references; please give particulars and wages. Address P. O. BOX 16, Dummerston Station, Vermont.

FARM FOR SALE—For particulars address Mrs. N. M. KISTLER, Emporia, Virginia.

FOR SALE—A suburban fruit and poultry farm. Address I. OWEN, P. O., Paterson, N. J.

600 ACRES South Jersey farm, best climate, markets; location; $20 an acre. PURVIS, Roseuhayn, N. J.

WANTED TO RENT, with the option to purchase, a small equipped poultry farm. J. V. T., care R. N.-Y., 333 West 30th St., New York.

The General says:-

The only *test* of roofing is the *test of time.* This label on

Certain-teed

ROOFING

says that ***Certain-teed*** *must* give you 15 years guaranteed service at *least.* And the biggest roofing manufacturers in the world are back of that statement. The ***Certain-teed*** label protects the dealer who sells, as well as the farmer who buys.

Your dealer can furnish ***Certain-teed*** Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers.* East St. Louis, Ill., Marseilles, Ill., York, Pa.

"'Sal-Vet' results are entirely satisfactory. I bought it to rid my sheep of worms, and it certainly did the business. Also fed it to horses, colts and cows, and they are all doing finely."
L. J. ALLEN,
Willseyville, N. Y.

"Some of our neighbors have lost all of their pigs, and some of ours were not doing well, either; but since feeding 'Sal-Vet' to them they are doing fine." ISENBARGER BROS.,
Rt. No. 2, Battle Creek, Mich.

"I had two lots of hogs. To one lot I fed 'Sal-Vet'; was pleased with results, as they went to market in fine condition. To the other lot I fed no 'Sal-Vet.' These hogs did not fatten nearly so well, and at killing time we found many worms in them, while those that had the 'Sal-Vet' had no worms.
I have good faith in my hogs. They look well; but I also have faith enough in 'Sal-Vet' from my experience to believe that it will make them look better." ELWOOD CROSSLEY,
Rt. No. 1, Bloomsburg, Pa.

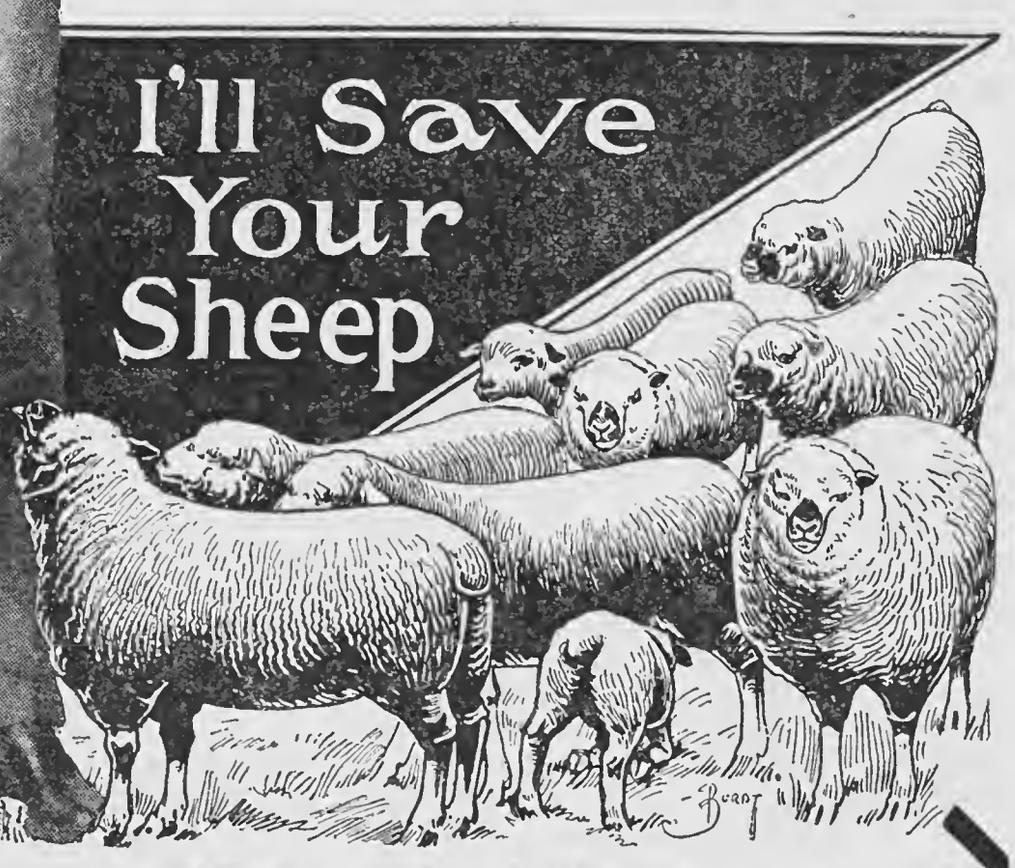
"I lost fifty dollars' worth of lambs from worms. Am sure that if I had had your 'Sal-Vet' sooner it would have saved me this fifty dollars, as I have not lost one since I began feeding it. Have also been feeding 'Sal-Vet' to a bunch of shoats; they are now the finest in town.
W. A. TOBY,
Lindley, N. Y.

"I lost a number of hogs, and more were dying; then I sent for your 'Sal-Vet.' Fed it to them immediately upon its arrival, and they at once picked up and are flourishing and thriving like the biblical 'green bay tree.' We have been killing some of these hogs and selling them for more than the market prices. If it had not been for the 'Sal-Vet' fed them, I am sure that we would not have one left to sell."
EDWARD F. DIBBLE (Seedgrower),
Honeoye Falls, N. Y.

"I have kept hogs all my life, and have fed lots of grain to make them grow. I sold one lot of hogs before I got the shipment of 'Sal-Vet,' but kept an equal number. I fed 'Sal-Vet' to the latter for two weeks, and while they were not as old as the first lot, I sold them and they weighed 250 pounds more than the oldest which had not had 'Sal-Vet'."
JOHN E. SEVERENCE,
Savannah, N. Y.

I'll Feed Your Stock 60 Days Before You Pay

I'll Stop Your Losses From Worms Or No Pay



I'll Prove It On Your Own Stock

I don't ask you to pay me one single cent until you have fed SAL-VET for 60 days and seen with your own eyes it's wonderful merit. I don't ask you to send me a penny **until I prove to you, on your own stock,** the great value of SAL-VET as a worm destroyer and conditioner. I have shipped tons and tons of SAL-VET to readers of this paper who have accepted my "no money down" offer. I want an opportunity **to show you** who have not yet accepted it, that it pays, and **pays big** to feed SAL-VET regularly to all your farm stock — Hogs, Horses, Sheep or Cattle. You have nothing to risk — everything to gain.

The Great Worm Destroyer

TRADE MARK

SAL-VET

REG. U.S. PAT. OFF.

The Great Live Stock Conditioner

makes all animals **thrive better, look better,** destroys and expels intestinal and stomach worms which prey on the digestive tract, **robbing** your animals of vitality and strength and keeping them in an unthrifty, unprofitable condition. SAL-VET will put them in condition to get more good out of their feed—makes them thrive faster — stops your losses from worms, makes stock sleek in coat, vigorous in action, and far better able to resist diseases. Millions of dollars are lost every year by stock raisers who do not keep their animals worm-free, healthy, and in a condition to get all the benefits of the rations fed.

My Best Advertisement Is A Pleased Customer

"I am as strong for SAL-VET as ever. Almost every one, in these parts, has lost hogs, but mine are still doing finely, thanks to SAL-VET." Dick Crookham, Lacey, Ia.

"SAL-VET has been a great help to my hogs as none have died since I fed it, although previous to its use, I had a number of losses. T. J. Reed,
Rt. No. 1, Hutton Valley, Mo.

"Hog cholera has swept this part of the country, but for the first time in years, my own hogs escaped. I have been feeding SAL-VET and now I would not be without it for double the price."
Thomas Fitzgerald,
Rt. No. 2, Connersville, Ind.

"I took some of my poorest and weakest pigs, shut them up in a lot by themselves, and fed them SAL-VET in order to make a test. I found SAL-VET all you claim. These pigs are now good, strong, healthy shotes, weighing 125 to 150 pounds. I shall always feed SAL-VET the year 'round."
W. A. Kearn, Rt. No. 1, Tampico, Ills.

"Your SAL-VET is certainly all to the good, and you may always count on me to be a booster.
When the SAL-VET arrived, our hogs were either all sold or dead with cholera. There were five little runts alive, which were considered as good as dead, but, thanks to SAL-VET they are the best looking hogs of their age in the neighborhood.
My one regret is that we did not get SAL-VET sooner, as I feel that we could have saved the whole bunch."
LeRoy A. Barrett, Oswego, Ills.

"When the SAL-VET arrived my hogs were sick, and up to that time, I had lost sixteen pigs, all under twenty pounds. After the balance of the pigs had access to SAL-VET, they came through all right, and some of them now weigh 525 pounds, which I consider pretty good. I am talking SAL-VET to every man I meet, as I honestly believe it is the one conditioner and preventitive to feed to hogs the year 'round." Ben E. Woitte,
Prop. North Grove Farm,
Rt. No. 1, Milbank, S. D.

"When we butchered our hogs, we found them entirely free from worms, although before we began feeding SAL-VET, one hog in particular seemed badly out of condition and was coarse and rough. When we butchered him, he was the smoothest and fattest hog in the bunch."
F. H. Durflinger,
Rt. No. 8, Van Wert, Ohio.

Look For This Label on all SAL-VET packages. Don't be deceived by imitations.

Don't buy "Sal" this or "Sal" that; get the original genuine SAL-VET.

PRICES 40 lbs., $2.25; 100 lbs., $5; 200 lbs., $9; 300 lbs., $13; 500 lbs., $21.12. No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold in bulk; only in Trade-Marked Sal-Vet packages. Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

Don't Send a Cent—Just the Coupon

Tell me how many head of stock you have and I'll ship you enough SAL-VET to feed them 60 days. You simply pay the freight on arrival—feed it as directed. At the end of two months report results. If SAL-VET has not done all I claim, I'll cancel the charge — you won't owe me a single penny. Send the coupon today and begin action against worm pests—the greatest enemy you have to contend with in raising stock.

(167)

SIDNEY R. FEIL, Pres.
The S. R. Feil Co., Mfg. Chemists
Dept. RNY CLEVELAND, OHIO

SIDNEY R. FEIL, Pres.
THE S. R. FEIL COMPANY
Dept. RNY 3-14-14 Cleveland, O.

Ship me enough **Sal-Vet** to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days, and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name.....

P.O.....

Shipping Sta.....*State*.....

No of Sheep.....*Hogs*.....*Cattle*.....*Horses*.....

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Cornell University 2011

REGISTRATION OF LAND TITLES.

The Torrens System in Ohio.

When John Jones sells his farm to William Smith they first agree upon the price, and then Jones begins the long, tedious and expensive procedure of transferring the title of his farm to Smith. The first step is to employ a lawyer to prepare an abstract of the title of the property which shall go back to the original grant of the land from the government to a private owner. Every transfer of title of the property that has ever been made, all liens that have been recorded against the property, must be shown in the abstract, and before a clear title can be given the abstract must show all claims against the property on the part of heirs, satisfied. After the abstract has been prepared with all possible care and by the best legal talent Jones presents it to Smith, who in turn must employ a lawyer to examine the abstract and render an opinion as to whether the evidence of title as shown in the abstract is satisfactory.

Suppose Smith sells the farm again within a year, what happens? The same thing over again. Smith may use his abstract as he received it from Jones and have his lawyer continue the abstract on down to date. The third party to whom the farm is sold must have his lawyer examine the abstract of title just as has been previously done. Why all this machinery for the transfer of real estate? Personal property may be bought and sold and exchange owner within a few minutes or hours at most, but not so with real estate, its exchange is hedged about with so many requirements that its value as security for credit is materially lessened.

TORRENS SYSTEM OF REGISTRY.—In recent years a new system of the registration of land titles and transfer of real estate has been adopted in some of the States, known as the Torrens system of land registration. This system takes its name from Sir Robert Torrens, an English Colonial statesman, who introduced the system into South Australia in 1857. It rapidly spread into other colonies, and has now come into general use in Canada, and has been adopted by nine or ten American States. The Torrens system is based on the principle that the Government guarantees the title to real estate each time it is transferred, making abstracts of title and ancient history of the transfers and encumbrances that have concerned the property of no avail. The Ohio Legislature adopted the system last year, and it will go into effect July 1st, 1914. A similar law was passed by the Ohio Legislature in 1896, but was declared unconstitutional in a suit that was brought the following year. In the revision of the State Constitution in 1912 an amendment was adopted making specific provision for registering land titles.

HOW THE SYSTEM WORKS.—Under the Torrens system a registrar of titles is established in the county, and an owner may have his title examined by this officer and if found to be good a certificate of title is issued to him by the State, certifying that he is the owner of the land in fee simple and the title is incontestable. After the title is once registered there is no further need of abstracts of title, continuation of abstracts or opinions of attorneys. The certificate of registration is the absolute and conclusive evidence of the title.

A MILK-MAKING HOLSTEIN. SHE CAN GIVE 36 FAMILIES ONE QUART EACH PER DAY. Fig. 166 (See Page 456).

In order to provide for any error that may arise in the registration of land titles a small percentage fee based on the selling price of the property is charged for registering the title. This fee goes into a guarantee fund that is held to indemnify owners of property of which the title is registered if at any time in the future it should be proven that the title is not good. In Illinois, where the system has probably been used more extensively than any place in the United States, there has been no case thus far in which the State has been called upon to make good a defective title that has been registered. An estimate of the value of the system is given in an editorial in one of the leading Chicago daily papers as follows:

The Torrens system is a cheap, simple and easily accessible way of securing an absolutely and permanently secure title to real estate. Under it the owner of a given piece of real estate can go to a public official, file an application and in about 30 days secure a decree from court certifying his title to his land. The whole proceeding will cost him about $24. If within two years of the time when he gets his certificate no one comes forward to make a claim that his title is defective it becomes incontestable for all time. Once registered in this way the possessor of the certificate need trouble himself no further with costly abstracts and examinations and continuances. If he desires to mortgage or sell his land he can do so within a few hours' time, and the entire cost will be but $3, where a sale or mortgage under the present system involves an expense of from $15 to $50 for attorney's fees and from $5 to $35 for the continuance of the abstract.

The Torrens system is as safe for the owner of a downtown corner as for the owner of a little home on the outskirts of the city, but it is the latter who can least afford to pay the heavy fees now charged for abstracts and examinations. The owners of such property will study their own interest and protect their own pocketbooks if they take time to investigate the advantages of the system, particularly if on the point of making a sale or a loan involving an examination of title. If they have no such transaction in view it will still be to their advantage to ascertain whether it is wise to register their land under the Torrens system. By doing so they will make sure that should they in some time of financial trouble be forced to mortgage or sell they can do so inexpensively and without delay. Above all, they will be assured that at the expiration of two years their titles are clear beyond dispute.

CAUSE OF OPPOSITION.—The opposition to the adoption of a system of registration of land titles by the State comes principally from the large guarantee companies that make a business of guaranteeing titles to real estate. It means taking away their business. But the private citizen who has no selfish interest in the matter cannot understand why an officer of the State Government should not be authorized to examine titles and guarantee them for the State instead of leaving it to wealthy corporations that levy exorbitant charges for their services. Why should not owners of real estate be able to have their titles examined, and if found good have that fact recorded, so that at no time in the future will it be necessary to go back of the finding?

Under a system of registration of land title, the transfer of real estate is simplified, the cost is only a fraction of what it is under the present system, the value of real estate as security for credit is increased and bad titles disappear. It is a system that is of vital importance to farmers, and they should demand that their respective States provide for it. H. C. PRICE.

Ohio Agricultural College.

CONTROLLING THE ELEMENTS SUCCESSFULLY.

Fighting Frost in Ohio.

We installed the orchard-heating system in the Spring of 1911. We constructed a cistern of 20,000 gallons capacity on top of a bluff, about centrally located in the orchard; a pipe from the bottom of the cistern extends through the bank, with a faucet on the end; the tank wagon is driven under it and filled in a few minutes. The oil used is principally refined, bought in tank carloads. Much the greater part of our trees are 26 years old. Our heaters hold three gallons; have a sliding cover that protects the oil from the elements, distributed one per tree, placed on the northwest side, eight to 10 feet from the trunk of the tree.

The heaters should be filled with oil by the first of May; earlier will do no harm, as they *must be ready on time*. In the Spring of 1911 we were all ready to apply the torch; the thermometers were watched several nights very carefully, but the danger line in temperature did not come. After the danger period for frost had passed, the oil was returned to the cistern and the heaters stored in the dry.

I am glad to know that the beautiful Spring time will come again. A little before the first of the following May we were all ready again to battle with the elements, if necessary, but the weather was favorable; no need of firing the heaters. Again the oil was returned to the cistern and the heaters housed in the dry. While this work was being done I had my partner—a son of mine—bring one of the heaters to the yard. We had never seen one lighted up, so he applied the torch, and it blazed up fine, about three feet high. The day was a little raw, and he pulled up an old chair and I sat down. He said I could warm my "shins."

We talked matters over a little; I made some remarks concerning the seeming unnecessary expense we were to with the heaters. "Well, Daddy," he said, "if we have scared the enemy away by having a weapon ready it is much our cheapest way out. If we were obliged to fire up it would cost us probably $150 a night." I said: "My son, you are all right; I believe in arbitration, if it can be done honorably; if not, then apply the torch." This same doctrine applies to our country: "In time of peace prepare for war." No doubt we will always have plenty of steel for all the pruning hooks and plowshares and all the cannons this country will ever need. I am not in favor of war except to save our honor. No doubt a thorough readiness for any emergency is a great factor to promote arbitration and peace and observance of the Monroe doctrine. No doubt our navy is doing good floating about on the Gulf of Mexico.

Well, the beautiful Spring time came again and all were ready on time to apply the torch if need be. After having quite favorable weather for some time, by the 9th of May the orchard was in full bloom, except a few of the late bloomers; the orchard never looked more beautiful. The weather was perfectly clear, as it had been for some time. The following morning, which was the 10th of May, 1913, it was much cooler, with a breeze from the northwest, growing colder rapidly. I told the boys a blizzard was on, to be sure to be ready for the battle to-night. They said "All right, Daddy; we will be on hand." The Chief of the Weather Bureau at Columbus, Mr. Smith, telephoned us that day in regard to the frost that night, but we were on to our job before we got word:

Everything indicated frost that evening—clear, perfectly still and cold. By seven o'clock the men were out with torches and buckets containing a little gasoline to facilitate igniting the oil, first firing in the valleys and depressions, where it freezes first. We have lost crops in the valleys when the tableland escaped. The work was rapidly done: and the orchard all lit up with blazing fires, the trees in full bloom beneath a firmament decked with stars, made a night picture so unique and of such marvelous beauty. I shall not undertake to describe it. During the night everything was looked after, temperature and heaters, to see if the latter had burned dry, which they did not during that night. In the morning I was up a little early for me; the registering thermometer indicated 23 degrees. A basin of water set in an opening, two feet up from the ground, had ice on it one-fourth of an inch thick—solid, as the boys say, which made things look a little dubious; but a look over the orchard made me more hopeful. Not a leaf was in motion, the horizon perfectly clear, a dark mist of smoke, heat, etc., covered the whole orchard like a canopy; the environment around the orchard was clear. This indicated that the benefit of the heaters remained in the orchard and saved the crop.

Am I right? There can be no doubt that this system saved the crop. There were no apples in this section of central Ohio. It is a question if the night had been windy, with a temperature of 23 degrees as we had that night, what would have been the result. The following day the heaters were replenished with oil and fired late in the evening, but the blizzard had subsided and the frost was not severe enough to scare anybody. The weather warmed up at once and in a little while the tiny apples could be seen growing just fine. Certain now that our efforts were crowned with victory. The final result was a very fine crop of apples, almost a bumper crop.

Much the greater part of our trees are 26 years old, planted in Blue-grass soil. The "grass mulch system," of which I am called the "Daddy," was adhered to from the start. The orchard run per tree was 35 to 40 bushels. The old yellow Bellflower, and a few others, won't produce as they did 50 to 60 years ago, yet we had quite a crop of Bellflowers; the price they bring helps make up the deficiency—$7 a barrel, and the other varieties $6.50 to $5. It does a man good to get his money back.

Some people tell me "You are a lucky fellow." I hardly need say that it's the man that makes his luck, but no doubt kind Providence will smile most on people that are trying to help themselves. Our apples are keeping fine in our own cold storage. I am in my eighty-fifth year, and have lived among the trees on this hill-top, in a loop of our beautiful Olentangy River, overlooking the classic city of Delaware, since 1834. F. P. VERGON.

SOY BEANS, COW PEAS AND RYE.

I note in recent issues that Soy beans are recommended to be sown in drills and cultivated, which no doubt is best when team work is not too expensive. I have a young orchard, but must hire all team work done; for several years I have sown a mixture of Wonderful cow peas and Mammoth Yellow Soy beans about June 10. These are strong-growing kinds and make a heavy crop but do not ripen seed. Then without plowing again the last of September I sow rye broadcast. The Fall rains sprout this rye, and perhaps two-thirds of it roots well; the frost kills the Soy beans and cow peas. This rye seems to do well, and in May this has made a good growth and is plowed under, the ground tilled a few times and again in June the same mixture sown. The trees are making a good growth with minimum cost for team work. Part of the orchard is now bearing and with three sprayings has yielded excellent crops, especially apples, and sold locally at $1 to $1.25 per bushel; soil gravelly clay.

Ohio. W. C. BAIRD.

R. N.-Y.—This plan is first rate, where the soil is naturally strong and well watered. It saves a vast amount of labor, keeps the ground well covered and supplied with humus. We should use annual applications of lime when plowing this stuff under. We doubt if the plan can be fully recommended for light soils which are naturally lacking in moisture. This is another illustration of the fact that the owner of the farm must adapt his plan to the soil needs, and not depend on general advice without figuring out carefully his own conditions.

USE OF FIRE EXTINGUISHERS.

T. B. S. asks for information concerning the solution used in bottles for fire-extinguishing purposes. I can help him in that part, although I cannot give any information about the use of carbon tetrachloride. Twenty years ago the bottles he mentions were to be seen everywhere, usually three bottles in a wire basket hanging from the wall. They were much advertised under the name of "hand grenades," and demonstrations of their use were given in most of the large towns. For these demonstrations miniature buildings were usually erected on a vacant lot, and after a crowd had collected, the structure was drenched with kerosene and fired. Then the fire was extinguished by breaking two or three grenades over the blazing surface.

The fire was never allowed to char the wood deeply, and no part of the burning surface was out of reach of the falling liquid. There was nothing marvelous about the performance, unless we consider the skill of the demonstrator in spreading the contents of the bottles where it did the most good. This knack was not acquired by the purchaser, as many found to their sorrow. The solution used in the bottles was simply brine. Common salt, alum, sal-ammoniac, or any soluble salt, or a combination of salts, can be used. Alum is probably the best for efficiency; its cost makes it prohibitive in large quantities. A mixture of alum and common salt is good, say one part of alum to 10 parts or 15 parts of salt. Common salt alone is good enough. Such a solution quenches fire readily; more so than water. On evaporation a crust of salt is left on the burned surface, which prevents, or hinders, further burning. That is the secret of the bottles. They were but one of the many fire-quenching devices that come and go as regularly as the seasons. Many a fine building has been destroyed because of too great a faith in the efficacy of worthless contrivances.

The one type of fire extinguisher that has been in use for years, and practically the only type adopted by the municipal fire departments, is the type described by R. P. C., using bicarbonate of sodium solution and sulphuric acid. This is the solution used in the chemical engines. The patents expired long ago, and there are some good designs on the market, also a great many cheap, flimsy, dangerous affairs.

For farm use a few barrels of brine, scattered around, with a pail near each barrel, gives better fire protection than as many extinguishers. The action of the carbonic acid gas in quenching fire is much exaggerated. It does smother flame, but only where it is confined. In an ordinary sized room it is carried away too quickly to be of use. The acid-soda extinguisher can be made more effective by the addition of some heavy salt, as is often done to prevent freezing of the chemicals. F. R. L.

Connecticut.

OVERRATED PROFESSIONS.

I read with much interest Mr. T. H. King's pertinent comments on the excessive charges of lawyers. Members of the legal profession certainly have a high estimate of the value of their services. There is in fact no justice in their claim. The average lawyer studies less and knows less than men in several other professions. He has less capital invested than most professional men. Why, then, is he so overrated? He makes and bedevils the law so that an ordinary man cannot understand it, the lawyers themselves differ as to its meaning, and the judges guess at it or make it over to suit their own ideas. Lawyers reap their harvest out of the ignorance of the people and their misfortunes. They also draw the large fees for protecting law-breakers against the penalties of their crimes.

There is a remedy that the people will employ later on. Is it not strange that society as a whole employs lawyers and pays them to prosecute individuals, while the individual must employ his own lawyer and pay the bills in order to get a hearing in court? The district attorney works for one side only, whereas he should work in the interests of justice for the individual as well as for society. Things are now organized to give the strong an advantage over the weak, amounting in many cases to tyranny. There should be a change, and one will be made when the common man is fully in power. In fact, every man should be his own lawyer. The laws should be made fewer and simpler, and put in form to be easily read by men of ordinary intelligence. Too much mystery is thrown about the laws that everyone must obey. Our laws are still in primitive form, almost barbaric.

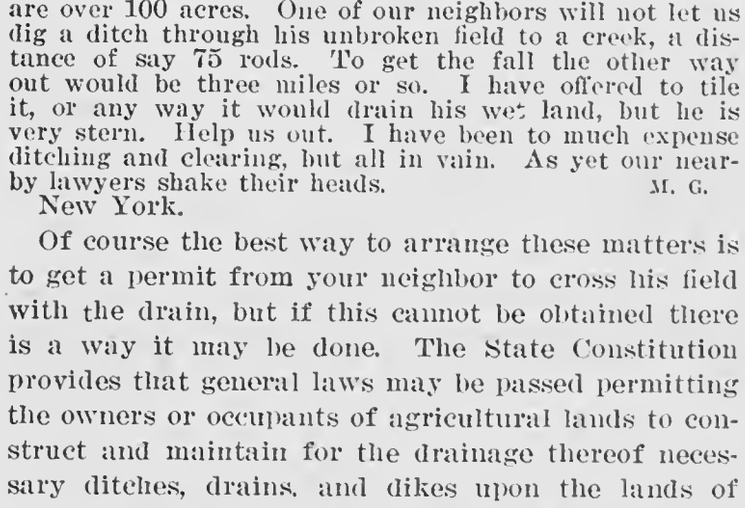
The farmer suffers as much as anyone from ignorance of law and consequent fear of it. He dares not employ a lawyer and face the cost. He therefore submits to injustice and allows his dishonest neighbor to infringe upon his rights. The way to avoid war is to be prepared for it, and the way to keep out of the hands of lawyers is to know the law.

A. C. HILL.

DRAINAGE OF ONE FARM THROUGH ANOTHER.

We have on our farms some muck lands that the Ithaca Experiment Station pronounces first class. There are over 100 acres. One of our neighbors will not let us dig a ditch through his unbroken field to a creek, a distance of say 75 rods. To get the fall the other way out would be three miles or so. I have offered to tile it, or any way it would drain his wet land, but he is very stern. Help us out. I have been to much expense ditching and clearing, but all in vain. As yet our nearby lawyers shake their heads. M. G.
New York.

Of course the best way to arrange these matters is to get a permit from your neighbor to cross his field with the drain, but if this cannot be obtained there is a way it may be done. The State Constitution provides that general laws may be passed permitting the owners or occupants of agricultural lands to construct and maintain for the drainage thereof necessary ditches, drains, and dikes upon the lands of others, under proper restrictions and with just compensation. Laws have been passed allowing any person owning or possessing any swamp, bog, meadow or other low or wet lands within the State who wishes to drain the same in the interest of public health or for their improvement for agricultural purposes and who shall deem it necessary in order that a ditch or ditches, or other channels for the free passage of water should be opened through lands belonging to another person, may present a duly verified petition to the county court setting forth the



STRIPED CUCUMBER BEETLE AT WORK ON YOUNG SQUASH. FIG. 167. (See page 444.)

facts and the names of the owners of all lands to be affected by the proceedings, and praying for the appointment of three commissioners for the purpose. The court, if satisfied that such drainage is necessary, shall appoint a commission of three persons, one of whom must be a civil engineer or drainage expert, if one can be found in the county, who after due notice to all parties shall hear and determine the matter; first, whether it is reasonably necessary or practicable in order to drain such land that a ditch or ditches, or other channels, for the free passage of water should be opened through the lands belonging to others; second, whether it is necessary either for the public health or for the improvement for agricultural purposes, or for both, that such lands should be drained; third, the probable cost of such drainage and the result that such drainage

CABBAGE WORM ADULT AND CATERPILLAR ON CABBAGE LEAF. FIG. 168. (See page 444.)

would produce. The law then provides that the commission shall give notice to the parties, view the lands and take whatever proceedings they deem necessary to come to a conclusion in the matter. They shall then file their determination in the office of the county clerk and give notice of the filing thereof to the parties interested. Then if the commissioners determine that the improvement of agricultural purposes demands that ditches, drains or channels should be opened or that lands should be drained, it shall be their duty, unless the petitioner or the owner of the property can do it to their satisfaction, or can agree that a map and survey are not necessary to do the work, and to employ a competent civil engineer or surveyor to make an accurate survey of the premises and of the ditch, drain or channel found necessary. The commission

F. P. VERGON, A VETERAN FRUIT GROWER. FIG. 169.

may then take all the steps necessary for the construction and completion of the ditches or drains they may deem sufficient for the complete drainage of the low lands. If the commissioners cannot agree with the owner of the land across which the ditch or drain is to be placed in regard to the compensation for the damage done him, they shall proceed to acquire title to whatever easement may be necessary upon and across the land of such person in the manner, so far as applicable, prescribed by the condemnation law. But the proceedings above outlined shall not be taken while a valid contract is in force between the owners of adjoining properties in regard to draining their wet lands. The commissioners are paid $5 each per day for every full day employed, and their expenses, and after they have finished their work they assess damages against the land owners benefited, or against the village or town, if it has been benefited, and apportion the assessment among those benefited.

Of course, from these proceedings an appeal may be taken. These are quite lengthy and somewhat costly proceedings, but it was only by amending the Constitution that one person was given the right to condemn the land of another, or to obtain without the consent of the other, the right to cross or to use the latter's lands. If you cannot get the consent of your neighbor, you must take this proceeding. If you can get a permit from your neighbor, it is easily drawn and should be acknowledged by him and filed the same as a deed in the county clerk's office.

M. D.

GREAT NEW YORK APPLE RESULTS.

Do we realize the value of our Eastern orchards? It is brought home to us by incidents of which the following is only one of many: Last week a car of apples was sold in New York City, and not five or ten barrels, but all the Greenings in the car brought $7 per barrel. This sale was the result of several years' hard work, careful study and invested capital. It meant that the greatest care had been taken with this particular crop from the pruning last Winter, the several sprayings during Spring and Summer, the constant cultivation, to careful handling, during the picking and packing season.

No small credit is due the workers on the farm. Their thoroughness in the orchard work, painstaking care not to bruise the fruit in picking, and accuracy and good judgment in sorting and packing showed a personal interest in the work.

It meant the coöperation of the chemical storage company, for eternal vigilance on the part of the storage is the price of safety, and the fruit received good care. It meant that the commission man, much abused and often unjustly so, had done his part at the other end, making the growers' interests his own and taking pride in having fruit to sell which called for no apology. It meant that with his aid a brand had been established on the market so that the buyer knew what he was getting without emptying every barrel, and a demand had been created for this particular mark.

And the resulting feeling of satisfaction comes from a knowledge that one's produce is bringing what it is worth, and is possible to everyone, whose aim is not to do the consumer, but to bring his product up to the highest possible standard. It is again demonstrated by these prices that, compared with Oregon orchards at $12 and $15 an acre, there are orchards in the East worth at least $3,000 an acre. In fact, we know that some years they pay 10 per cent on a valuation of $5,000. F. W. C.

THE SOIL ALONG FENCE ROWS.

I have owned four farms, and I have noticed that as a rule, a fine crop of locusts grows along fence lines and brooks when permitted. The land where fences have stood for many years is practically virgin soil from not having been cultivated. I have also noticed that trees always thrive along the borders of a brook, presumably because they never have to go thirsty.

F. E. H.

It is true that trees grow well along streams for the reason you give. On the uplands such locations are good for apple and sometimes for peach. On the lower lands the banks of streams are too wet for peach. Such varieties of apples as Northern Spy, Greening or Russet do fairly well on wet land, but it would be no place for a variety like Baldwin. The land along fence rows is usually rich. It has not been exhausted by cropping, and year after year large quantities of leaves as blown by the wind are caught and held by the fence rows. These decay there, as do the grass and weeds, briers or

WORK OF WIREWORM IN POTATO. FIG. 170. (See page 444.)

brush which grow and are cut down or left to decay. The fence row is also a place to throw stones. These accumulate, keep the soil moist, and attract thousands of insects or mice and other vermin. These die and enrich the soil still further, so that these fence rows become the richest strips on the farm, and fruit trees always do well there.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Lime and Phosphoric Acid.

Does land that needs lime to correct the acid in it need phosphoric acid as a fertilizer? J. J. J.
Willards, Md.

Not always. Land may be very sour, so that lime is needed, and yet contain plenty of phosphoric acid. When soil is lacking in available phosphoric acid, grain crops are slow to mature, and the seed or grain is apt to be light or shrunken. Where there is plenty of this element the grain crops mature early and give plump, heavy grain. Why not test the soil? Try acid phosphate on strips through the corn or other grain, and watch the growth on these strips as compared with the rest of the feed.

Sowing Asparagus in Permanent Bed.

How will it do to plant asparagus seed where plants are to grow permanently, thin out to a foot, then soon as the female plants show, cut out these and only leave the males so as to do away with volunteer plants? Are males as prodnctive as females? Our market demands green "grass." Is there objections to having plants so close to surface?
University Park, Col. G. W. H.

It does not pay to sow asparagus seed in its permanent place. Why? Because asparagus roots must be set seven or eight inches below the level of the ground, also the beetles and larvæ are more difficult to control (weeds also). Sowing the seed in drills is cheaper because all cultivation is easier and more effective. We use a hand cultivator more than a horse-hoe, because we can use it faster. Then again when we spray it is easier, cheaper and better in drills than when so spread out two or three feet apart. The seed drills should be planted about one inch deep and four or five to the foot. It may pay to try to select the male plants, but most growers will not venture. The male plants are not distinguishable the first year as a general thing, but they produce larger stalks and thus are more profitable. It hardly pays to bother with them, however. Female plants produce more stalks than males but on the whole the large stalks from male plants are easier cut and packed, and of course sell for more money. Good one-year-old roots are selected better when grown in seed bed, and thus selected grow in fine shape. C. W. P.

Shall We Plant Fancy Varieties?

Does your experience show that it really pays to grow and sell finer varieties of apples? As a rule such fruits are not the heaviest yielders, and are often less hardy than the so-called "commercial" sorts. The finer fruit ought to bring more, but does not always do so in the general market. For the average grower of fruit, knowing the market as you do, would you advise planting the fine dessert varieties or the standard old sorts which fill the general requirements?

I have never tried to grow the fancy kinds of apples; for me, the standard varieties. Had I the location near a large city, and had the time and inclination to "peddle" I might try the fancy fruits. E. C. GILLETT.
New York.

I should advise planting the standard old sorts, for the reason that they are known on the market and sell readily. Unknown or uncommon sorts, no matter how fine, do not sell well. The dessert varieties should be grown by the amateur, and incidentally I might say that many, if not most, of the finest varieties are being overlooked, and very soon will be lost entirely. A good garden should include a variety of the choicest ripening in succession. What is there better to eat than a good apple, and we can have them without much trouble, so very fine. I suggest dwarf trees for small gardens.
New York. W. C. BARRY.

For the average grower, I would advise, by all means, to use largely of the standard sorts. But for myself, and handling largely in a local market, I should, and have planted much wider not omitting the standards, but adding others that grow and do well and have quality; not necessarily new kinds, as one, Fall Pippin, a very old kind, is being much overlooked. However with it all, I think the care in preparing for market is the important thing. At the present time this will sell any kind. In any case one must have the crop to sell, and that means those that yield well.
Connecticut. A. G. GULLEY.

Some of the finest varieties of apples are the most profitable. Among these in the upper Hudson Valley district I would place Baldwin, Northern Spy, R. I. Greening and McIntosh Red. These would certainly be among the best commercial sorts. The Baldwin being always with us, few appreciate the fact that in its season it should rank among the best as to quality. Some of the so-called very fine dessert varieties have serious faults that really bar them from being planted by the average commercial fruit grower. They may require special soil and markets or such care in handling or storing as to make them a precarious proposition. Such varieties can only be profitably grown by the specialist who has made a special study of them. Newtown Pippin, Grimes Golden, Yellow Transparent and Jonathan as grown in upper Hudson Valley in this class. Growers who in their plantings have tied up to tried commercial sorts like Duchess, Wealthy, McIntosh, Greening, Baldwin, Northern Spy, King and Ben Davis have been the most successful, and the average grower would best not go very far away from the beaten path and chase catalogue rainbows. Some additional sorts that give promise of being good commercial varieties for this section are Alexander and Fall Pippin.
New York. B. D. V. B.

For the average grower, who has not a special market for the fine dessert varieties of apples, I should say grow the standard old varieties. But if the right man, who can look up the market for fine fruit, and has a joy in growing the finer varieties, such an one would do better to grow them, but not the average grower. DELOS TENNY.
New York.

Tree Growth.

After the first year I like to have the trees make from 18 inches to three feet yearly till they come to bearing age. One foot is a satisfactory growth for the first year. On an old bearing apple orchard if I get one foot of average growth I am satisfied. DELOS TENNY.
New York.

On young trees a growth of three or four feet per year is safe, or all they can put on and not winter-kill. On older trees that ought to come in to full bearing we notice that if trees grow more than a foot or 14 inches at tips they are quite likely to go to wood and give us little or no fruit. C. B. COOK.
Michigan.

Regarding the growth of apple trees, I would say this will depend largely upon the season, variety and amount of fruit upon the trees. I expect my young trees to make from 15 to 18 inches growth under almost any conditions and very often some vigorous growers will make from three feet upward. Of course large bearing trees which are very heavily loaded with fruit will not make as much wood growth. I would say from eight to 12 inches would be a fair growth in such trees.
New Jersey. J. H. BARCLAY.

Miss Wilkins, the primary teacher, was instructing her small charges. "Name one thing of importance that did not exist a hundred years ago," said the teacher. Ralph Franklin, an only child, who was seated in the front row, promptly arose and answered—"Me."—Credit Lost.

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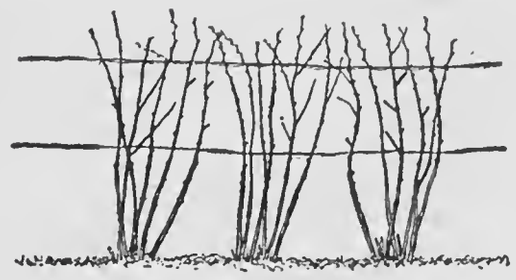
THE NEW BERRY CULTURE.

PART III.

For the busy farmer who wants a home supply of berries, and yet knows that he is likely to neglect them in the rush of other work, I would recommend that he plant one row each 100 feet long of the three kinds of cane berries, cultivate a crop of something between them the first year, then fix them up nicely early in the Spring, before the busy season, and mulch heavily with straw, marsh hay or any rough material, putting it on heavily enough to smother down the weeds. The cultivating would then be done for the year, and some one could surely find time to take out the

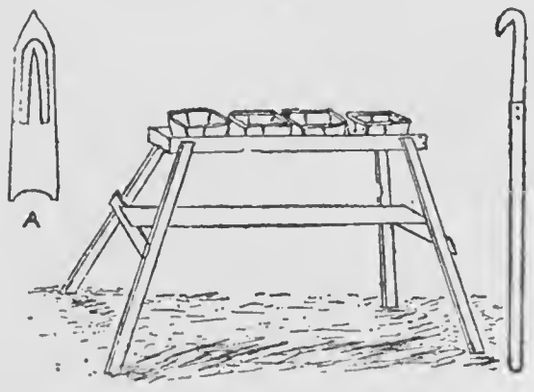


BLACKBERRIES TIED TO CANES. Fig. 171.

surplus canes. A patch of this size should produce fresh ripe berries for the family table every day for two months, and an abundant supply for canning.

It is a different thing to try to recommend varieties as those which prove best in one locality may take second or third place in another. The Cuthbert red raspberry is an exception to the rule; unlike others it seems to succeed well almost anywhere that red raspberries may be grown, and I consider it the best for general purposes. The Snyder blackberry is considered the hardiest of all, and is an upright grower, being more easily handled than most varieties. It ripens the entire crop in a few days, which is sometimes objectionable. Most writers recommend taking out the old canes as soon as the crop is harvested. If disease is present this may be best, but we do not take them out until Winter or Spring because it is very difficult to find time until our marketing is done. The new growth whips around worse in the wind where the old canes are removed, and we consider that thorough cultivation is of more importance to the vigor of the new growth than the removal of the old canes at this time. We also think that our berries are less liable to disease than those weakened by lack of cultivation, even when the bearing canes are promptly removed because the more vigorous a plant the more resistant to disease. Another objection we meet in our method of pruning or rather of not pruning but we have tested several ways of pruning and the result has invariably been a diminished yield.

I have met a number of men who refuse to believe the statement that red raspberries will produce more berries from one hill of six straight canes five or six feet high without any branches than the same hill would produce if the canes had been pinched back at three feet and made to branch. But not one of them had ever tested it. The fewer branches we get on any of the cane berries the better and yet we must not cut them all off. There is a vast difference between a cane that has grown without branches



CARRIER FOR BERRY BASKETS. Fig. 172.

and one with the branches removed. Page 346 shows the blackberries as they grew with the proper number of canes left in the hills. Fig. 171 the same hills after being tied. The cross shows where they were tied. Very little trimming was needed here, just a few branches clipped out where too thick after they were tied. Some varieties branch more and consequently require more thinning. Page 346 shows the red raspberries as they should be, when ready for the next crop. Here the tying is done by looping the string around the cane and the wire, in a half hitch, going from one cane to the next, sometimes for rods, without breaking the string. A hard knot should be made about every two feet, so that, should the string be broken, only a few canes will be loosened.

When the canes are irregular in size the short strings are used the same as in the blackberries. Fig. 172 shows one of our carriers, made of two pieces of half-inch boards and some plastering lath. The pickers set the baskets in double, then when full the top ones are lifted out and placed on the lower board so they can bring in eight quarts each time. Some of the larger pickers like to have the lower board wide enough to hold two rows of baskets. The pruning hook shown is one of the best tools I use. It is made from an eight-inch file and a broom handle, and cost 10 cents. The hook to cut easily must be V-shape, not round and the blade should be sharp nearly to the handle. The shuttle A can be cut from a thin piece of wood in a few minutes with a keen penknife and we can work much faster with it. It is about eight inches long by 1½ inch wide. The string is thrown over the center pin, brought through the notch at the bottom, then over the pin from the opposite side, alternating from side to side, and with a little practice may be wound full of string very quickly. One of the great difficulties in following this system is that many allow too much bush to grow and then cannot bear to cut out the big strong canes. In that case I would cut out all I could, and then hire a man to cut out half of what was left while I went to call on my neighbors.

Pennsylvania. B. V. EGBERT.

SUCCESS WITH AN OIL TRACTOR.

I have used tractors for plowing for three years. The soil is semi-gumbo, much covered with "rip-gut" and swamp smartweed. Roots of the latter were three-quarters inch through and as many as 13 to the foot. It was killing on four horses weighing 2,050 pounds each, to pull a 14-inch bottom. I first tried steam tractors. They did not pay. They required a man to steer, one to fire and one on plows (three 16-inch bottoms) and a man and team to haul water, which was required every mile and took time to get aboard. Then a gasoline tractor which was an improvement and made better time, but finally bought an oil tractor, 27 horse-power and find it the thing to do the work. We use it to plow, disk, reap, mow, thrash, bale, run silage machine and saw. Plowing, two men are necessary for perfect work. When it is filled with 20 gallons coal oil at eight and one-third cents per gallon, and 20 gallons water and one gallon lubricating oil we are ready for a steady go till 6 p. m., when two more men come out, having had their supper, with team, wagon and one barrel water and one barrel oil and a lunch for midnight; light an acetylene headlight and plow until 6 a. m., when the day crew comes on. Thus we plow 23 out of a possible 24 hours when the land is just in right condition, and get crops in at seasonable times. Three plows in wild grass and six in stubble, plow about 12 to 24 acres daily. For seeding oats on corn ground it pulls three disks heavily loaded and two loaded tooth harrows on fast gear. It lessens number of horses kept one-half.

The steering apparatus has no chains to tighten, then loosen and tighten the other one, but is a simple screw that the front wheels obey instantly. Two tablespoonfuls of gasoline starts you. Pull the levers and your feed bill stops until you want to work again. It eats only when at work. It plows better than any horses can and at a more regular gait, forms furrows 10 inches deep, 16 inches wide. Wait until ground is in condition, thus securing better seed bed and better crop. J. E. M.

Elmer, Mo.

MARCELLA, who had been gazing out of the window, suddenly began to laugh hysterically. 'What in the world is the matter, child?" asked her mother. "When I finished my carpet rug," Marcella explained, "I folded it across my lap and carried it that way down the street to show it to Rosemary." "Well, what of it?" "That was only three days ago," gasped Marcella, with a renewed outburst of merriment, "and now nearly every girl in the block is wearing a carpet rug muff."—Judge.

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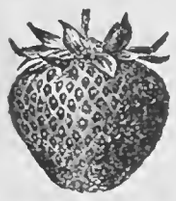

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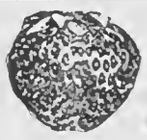

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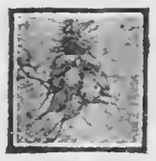

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THE PRUNING OF APPLE TREES.

PART III.

When using the shears keep the blades next to the tree or limb you are removing growth from and you will do a clean job. Always cut close. If you wish to know the reason for this just go to the tree itself for your answer. Now for a few hints that will help you interpret the plain English the trees have been shouting for ages.

There are six sections or parts to a limb or twig. Starting from the center we find first the pith, second the xylem or wood as we call it, which forms the bulk of the limb and carries the crude sap from the roots to the twigs and leaves; third, the cambium layer which contains the growing cells; fourth, the phloem, which conveys elaborate sap from the leaves to any part of the tree needing the food; fifth, the cortex, which contains the green substance called chlorophyl, which is one of the factors in the elaboration of the crude sap; sixth, the epidermis, which covers and protects the inner cells. You will readily see that when a cut is made on the side of a limb the material to cover it must come from the leaves above the cut. The tree in growing tends to form direct passages for sap from leaves to roots, thus making the lines of growth flow around such obstacles as side limbs or stubs. When the side limb is removed close to the main limb or trunk, there will be a tendency to bridge over this cut so as to straighten the course of the sap. Hence you will find that most of the healing of a cut is done from the sides and very little at the top or bottom.

By studying a few old cuts one can see the importance of careful and close cutting. When pruning young trees it pays to use a little extra care and cut just above a bud pointing in the direction the future limb should grow. It will take very little, if any, more time and gives a much better shaped tree. It is not difficult to induce some trees to form open spreading heads, while others have such poor habits of growth that it is almost impossible to produce a well formed head. Golden Sweet and Williams Red are typical of the first class, while Duchess of Oldenburg and Yellow Transparent are among the worst of the latter. The Red Astrachan comes in as a happy medium and it is a real pleasure to prune such naturally well balanced trees. They need little pruning aside from heading in an occasional leading branch and keeping the center from getting too crowded.

The Williams Red gives an open though not a naturally well formed head, but owing to its tendency to continue growth in the direction the bud pointed, is not a difficult tree to train. The growth is moderate and stocky in South Jersey, giving a tree that is strong and able to hold a load of fruit with less breakage than some of the more upright growing trees. The Golden Sweet tree is also a spreading tree, and has a tendency to throw outside branches at right angles to the parent branch. The growth is apt to be slender if not pinched back once or twice during the growing season. It is easily trained into a very desirable tree. It has a habit of sending out water-sprouts on the trunk and main limbs. If these sprouts are not cut close to the tree from the start, more sprouts will start from the same place, and soon an unsightly and bothersome lump is formed, which will start a new crop of sprouts every time the old ones are cut off. This applies to sprouts on all varieties of trees.

The Yellow Transparent apple, while one of the most profitable to plant, will require some special treatment in pruning, as it is an upright grower, and is troubled with most of the diseases, owing to its weaker vitality. The writer has pruned a block of 1,500 of this variety for the past three years. These trees had had four years' growth without pruning, and when planted, had been pruned with four or five side branches and many with a center stem. These trees had also received much fertilizer and manure, owing to the fact that they were interplanted with rhubarb, and had made a rapid growth. These conditions were favorable to the spread of disease, and pear blight had secured a strong foothold. The trees in many cases had lost from one-quarter to one-half of the tops from this disease, and after pruning out all diseased wood, the remainder of the tree was pruned to leave the tree as symmetrical as possible. Where a central stem was found it was removed and all the larger cuts were painted. This work was done in July of 1911. The trees made some late growth, owing to the severe pruning, and were gone over twice more that season to remove blight, although little was found after the first pruning. The blight seems to do most of its work early in the growing season, or when the trees are making the most rapid growth, and if diseased wood is removed and burned as soon as it appears there will be little trouble from late infection, although if allowed to remain in the tree, it will spread rapidly. The disease seemed to be worse in thick trees, and on the north and east sides. This is another good reason for an open, spreading tree. Sunlight is a great factor in the prevention of disease.

The trees made a strong rapid growth in 1912, and were cut back during July of that year. From 12 to 14 inches of growth was left, and there was some late growth added to that. Very little fruit was set, owing to the rapid growth and lack of fruit buds. The severe pruning in 1911, late cultivation and an abundance of food forced many of the spurs into rapid growth, and prevented the development of fruit buds. The trees were pruned in July of 1913, and some trees were well loaded with fruit, requiring thinning in some cases, as this variety often sets five or six apples in a cluster. Very little cutting back was done this time, as the growth was nearer normal. One should be careful in cutting back the growth of this variety, as it generally sets fruit buds terminally on the branches as well as on fruit spurs. This terminal fruit not only helps to check the growth, but also helps to spread the tree. When rapid growth is desired the terminal bud is removed during the dormant season. These trees were also damaged and many were lost by the blight attacking the bark at the surface of the ground on the trunk. In most instances only patches of the outer layers of the bark were killed, but in some cases the disease had not only penetrated to the wood but had nearly, or entirely girdled the tree. Several trees were lost in this way. During the Summer of 1913, the trees were gone over and the diseased bark was removed, and the injuries treated with corrosive sublimate 1-1,000 strength. Where it was possible and the cambium layer was not dead, only the dead outer layers of bark were removed. The trees are not being stimulated so much now, and it is hoped that the treatment will check the disease. On some trees the disease seemed to have been checked naturally and the dead bark was being shed. It is too soon yet to tell whether the work was a success from a commercial point of view or not.

The Duchess of Oldenburg is also an upright grower, and has a habit of throwing out two shoots from the terminal bud in many cases, and nearly always forms a weak crotch. This makes it a difficult tree to keep in good form, but by careful work and study may be developed into a fairly strong tree. It has given more trouble in forming a strong framework than any other variety, owing to the weak crotches and its somewhat slender growth. R. B. GILMAN.

Boy Farmers.

On page 210, G. C. H. presents a problem for solving, and states that the oldest boy of the family, now running a farm, is 19 years of age. While I sincerely regret making any statement that might lead to this boy and the family losing their place, the facts seem plain that the solution of the problem according to my idea, is securing an experienced foreman. I have never seen a boy of that age who had had sufficient experience to take sole charge of a herd of cattle or a farm, and make it a paying investment. It would be unnatural for a boy's mind to comprehend sufficiently the importance of such a task. If there were expert farmers and expert stock men in the vicinity of whom he could ask and obtain information regarding every detail, partial success might be obtained. So much depends every day, however, upon "the hand that throws the grain," and practical experience, that the prospects would be much brighter with a competent foreman to help the boys along. J. HENRY RINES.

Maine.

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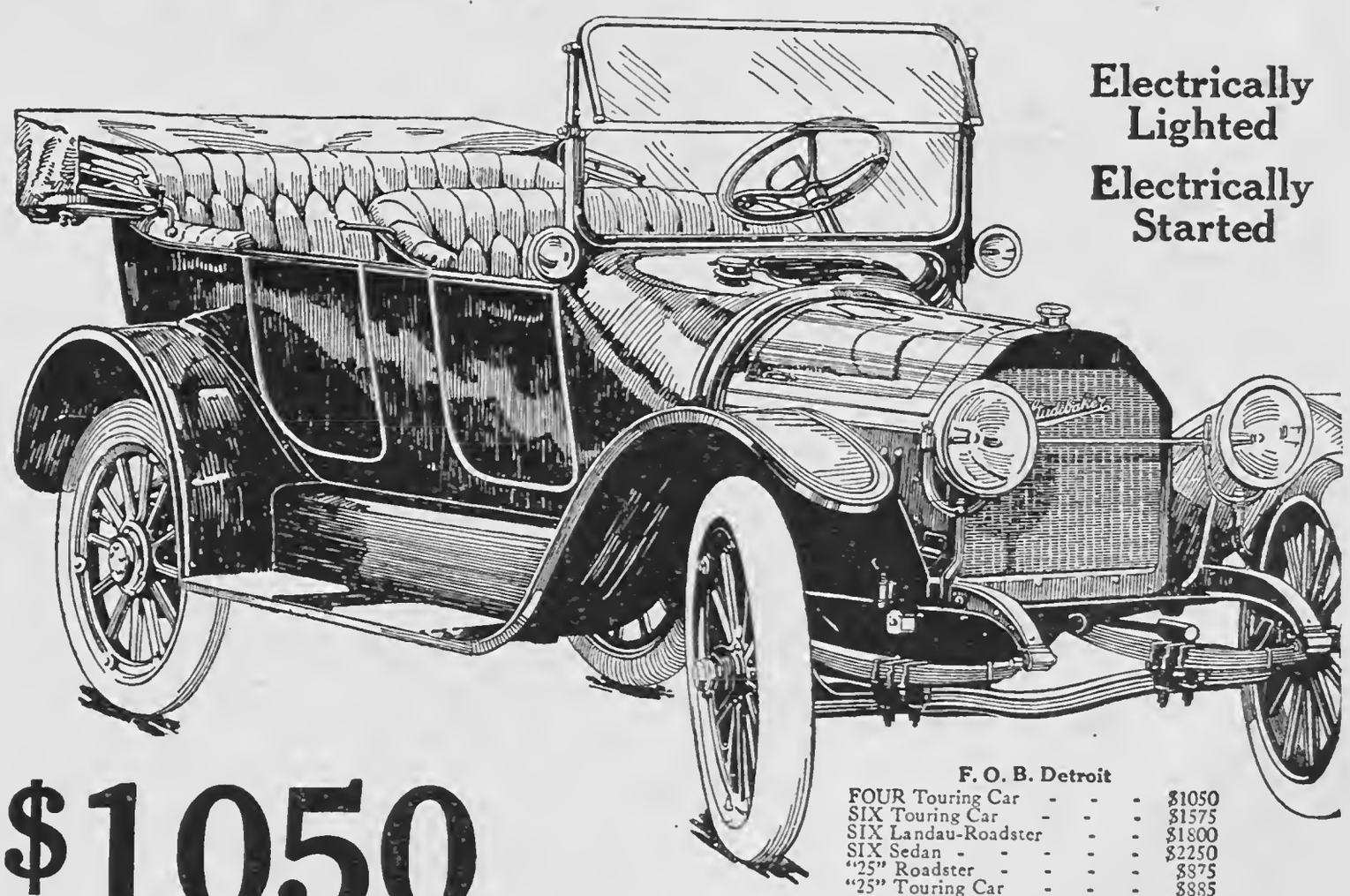

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ARE THE PEACHES FROZEN?

About every Spring you can find people who will answer this question in the affirmative, whether the Winter season has been favorable to the life of the peach buds or not. Yet when the ripening season comes there are nearly always some peaches at least in places, and I have seen bumper crops after predictions of this kind. In fact I have made the same erroneous predictions myself, believing that most of the buds were Winter-killed, but was surprised later when enough live buds remained to produce a full crop. Truth is, it takes carefnl investigation to determine the exact conditions of the fruit buds on a tree before they begin to push forth in Spring, while to predict the extent of the fruit crop at this time is the merest guesswork, considering the injuries that may follow, such as Spring frosts, hailstorms, the June drop, Summer droughts, and the brown rot at ripening time. Counting chickens before they are hatched is no more uncertain than counting the peach dollars before the fruit is marketed.

It is of course quite possible to learn the life or death of an individual peach bud, even in mid-Winter, by simply cutting the bud crosswise about the middle with a sharp knife. If the entire cross section shows a healthy green the bud may be counted good. But if the extreme centre is brown or presents a "cooked" appearance, you can depend upon it that the bud is frozen. The buds probably turn brown after a thaw and warm sunshine. But even if you examine a dozen buds on a tree and three-fourths appear frozen, the next dozen may show a reversed condition. This especially if you simply cut a twig and examine all the buds upon it. In general the buds will be found in better condition on the higher branches than those on the lower ones. To get a fair estimate of the condition of a tree, select buds from every part of the tree.

Peach buds are not nearly so liable to be either Winter-killed or frozen by Spring frosts if the trees are located on a hillside rather than on bottom lands. Our orchards are up against the mountainside, where there is plenty of air drainage, and the woods above the orchards afford some added protection. The lowest temperature noted here this Winter was 10 degrees below zero. Farther down in the valley it was 18 below in places. Some buds are frozen here, but not enough perhaps to affect the crop seriously. Two years ago we had 14 below. Many buds were frozen, but still we had a splendid crop of peaches. The danger line is from 12 to 18 degrees below zero. Below this temperature one can scarcely expect many peach buds to come through alive. The difference in temperature because of elevation is not exceptional; it is a common occurence here. As a result it must be a very favorable season if our neighbors in the valley have any peaches.

While some peaches are grown almost all over the country except in the extreme North, there are indeed few places where peaches are entirly immune from freezing temperatures. Of course they are safe below the frost line, but this is far down in the State of Florida. Even in Northern Florida where we once resided, the peaches froze one year when about the size of hickory nuts. The peaches bloom there about February, and frosts sometimes, though rarely, occur later, so I think I should try a few peach trees, no matter where my residence might be, but would try to choose the most favorable location and the most hardy varieties. There is some difference in the hardiness of peach varieties. Among those I have tried I have found Belle of Georgia about the most hardy and Late Crawford the least hardy.

The peach is somewhat less hardy than other fruits except the apricot. It also blooms earlier than the apple, and generally a little earlier than the pear and plum; it blooms about with the sweet cherry, but later than the apricot. Thus it may be said that the peach is more liable to freezing than any other of the tree fruits except the apricot. Our losses here have not been as great from Winter-killing of buds as from Spring frosts, especially about blooming time. Last Spring when the peaches were in full bloom they were subjected to a temperature of 26 above one bright frosty morning. Something like four-fifths of the flowers were frozen. Trees produced about half a crop on the average. One year before the opening flowers stood 28 degrees with little injury, and 27 degrees one morning after the blooming period. They are believed to be the most tender while the nectar is in the open flower.

DAVID PLANK.

Pennsylvania.

Sowing Winter Rye in Spring.

Can I sow Winter rye in the Spring and cut it for hay later in the season? Some of my neighbors say that rye must remain in the soil all Winter in order to make a crop. S. J.

It is not the nature of Winter rye to produce its full crop when seeded in the Spring. It will make some growth, but not at all equal to the Fall-sown grain. There is a variety of rye specially adapted to Spring sowing. We have used an imported German variety, which when seeded at the time of oat seeding gave a very good crop, somewhat later than the Winter variety. But why sow any kind of rye for a hay crop? Rye makes poorer hay than any of the other small grains. Barley seeded in the Spring will give better feed than rye, and so will oats. Your best plan is to seed Canada peas and oats, as we have often described; cut them at the proper time and cure as hay.

Wood Ashes for Fruit; Reseeding Alfalfa.

1. Should I apply wood ashes around young pear trees, or would it be better to apply ashes around raspberry bushes and strawberries for best results? Is hen manure good for same berry bushes? 2. Will you advise me in regard to some Alfalfa I sowed with wheat last Fall. The Alfalfa came up but seemed all to shrivel up and die. Can I go over wheat with a weeder and sow more Alfalfa, about half amount I used first time, I mean sow the same as Timothy and seed clover is sowed? I do not like to plow wheat under. A. M.

LeRoy, N. Y.

1. The wood ashes will give you better results around the fruit trees. Do not use ashes on strawberries, though they give fair results on raspberries. Hen manure will be good for all kinds of fruit. 2. You will not obtain a good seeding of Alfalfa by scattering on the wheat. You can do this with Red clover, but Alfalfa will not "catch" so well. As the Alfalfa has failed it is most likely that the soil is not fit for it.

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EVENTS OF THE WEEK.

DOMESTIC.—The Interstate Commerce Commission handed down a report March 6 containing serious charges against the management of the Chicago, Milwaukee and St. Paul Railroad. The report contains the following statements: That the income of the St. Paul road for 1910 was overstated by more than $5,000,000. That the St. Paul had misrepresented the cost of labor for the fiscal year ended June 30, 1911. That the income of the Puget Sound line was greatly overstated by means of "a variety of expedients." That the Puget Sound line included in its operating expenses no charges for depreciation of equipment. That the "fictitious showing" of income was used by officers of the Puget Sound company to aid in the sale of its bonds. That the Puget Sound company's report of property investment was $100,000,000 in excess of the cash investment.

Capt. H. C. Simmons and 16 of the crew of the coal steamer Charlemagne Tower, Jr., which sank off Barnegat, N. J., March 6, were landed at Norfolk, Va., March 7 by the steamer Bayport. The men were picked up from a lifeboat off the New Jersey coast five hours after they left their sinking steamer. Four other members of the crew, who put off in another lifeboat, were rescued by New Jersey life savers. All of the crew were saved.

Probably for the first time since the parcel post has been put in operation a coffin, for an infant, was sent through the mail, from New York to Englewood, N. J., March 8. The undertaker telephoned for the coffin and as the postage was only 18 cents found the new service much cheaper than by express or by sending a wagon to New York for it.

A four-foot water main running north and south under Fifth Avenue, New York, broke at the intersection of Broadway, Twenty-third Street and Fifth Avenue, March 8. The water tore away the earth to the west of the break without disturbing the pavement and broke into the sewer running through Twenty-third Street. Next the tremendous back pressure of the underground flood tore into the new Broadway subway excavation and filled the subway. Finally electric sparks caused gas explosions. Thousands of dollars worth of plate glass was blown out of buildings. A trolley car was banged so badly that eight passengers had to be treated by an ambulance surgeon. A column of flame fifteen feet through mounted high in the street for three hours. Great holes were torn in asphalt and block pavements and it was necessary to rip up much more good pavement before the flow of flaming gas could be shut off.

St. Luke's Protestant Episcopal Church, Clinton Avenue, Brooklyn, N. Y., one of the finest edifices in the borough, was destroyed by fire March 9. The flames also gutted the parish house and burned out two floors in the rectory. The damage was given as $400,000.

March 9 the U. S. Supreme Court refused to review the penitentiary sentences imposed upon Frank M. Ryan, president of the International Association of Bridge and Structural Iron Workers, and twenty-three of the association's members. The labor men were convicted technically of conspiracy to carry dynamite and nitro-glycerine on interstate passenger trains. In furtherance of this conspiracy it was charged that Ortie McManigal carried these explosives on such trains to Chicago, Tiffin, Ohio, Los Angeles and scores of other cities from coast to coast.

Fire in the building occupied by the Missouri Athletic Club, St. Louis, March 9, caused the death of 48 persons. A number of persons among these were transient guests who were not registered, and identification is difficult. It is said that warning had been given of unsafe conditions in the building.

The United States Circuit Court of Appeals handed down, March 9, a sweeping affirmation of the decision of Circuit Court Judge Hazel of Buffalo, sustaining the application and force of the so-called "Goodwin patent" to all the common types of films manufactured by the Eastman Kodak Company. Unless it is possible for the Eastman Kodak Company to carry the case up to the United States Supreme Court, the decision of the Court of Appeals means that the Eastman Kodak Company will have to account to the Ansco company for all cartridge films, film packs and cinematograph films made by it in the last fifteen years. The amount of money involved is enormous. The Ansco company controls the patent by virtue of controlling the Goodwin Film and Camera Company, which owns the patent. The original inventor of the pliable film, Rev. Hannibal Goodwin, a clergyman, who was experimenting to improve stereopticon views for his Sunday school, is survived by a widow of 86 and one daughter, who are in modest circumstances.

MESSAGE ON CANAL TOLLS.—March 5 President Wilson appeared before Congress and read a short message asking for the repeal of the provision in the Panama Canal act exempting coastwise American shipping from the payment of tolls. Mr. Wilson asserted that his reason for asking the repeal was that everywhere except in the United States the tolls exemption was regarded as a violation of the Hay-Pauncefote treaty, and he further asked it in support of the administration's general foreign policy. Because of the wide diversity of opinion, even among members of his own party, on the tolls question, Mr. Wilson's reception was not so flattering as that accorded him upon former occasions. Sharper criticism among members of Congress also followed the delivery of the message.

WEATHER AND CROPS.

Niagara Co. peach growers of this section claim that peach buds were killed by the cold weather in February. In different years past just as cold weather has been experienced and followed by a large crop, but this year the few live buds are found on the young tres. Many auctions owing to Spring changes. Horses are selling at $350 to $550 per pair; cows, canners $20 to $30; fresh $60 to $125, according to quality. Veal 10 cents pound; butter 20; eggs 30; pork 8½. No market for potatoes until the weather is warmer, as what few potatoes there are, are stored, usually in pits during the Winter. The trimming of fruit trees is well under way and farmers here anxiously await Spring weather. M. H. L.

Barker, N. Y.

We have had good Winter weather nearly all the month. The latter part has been extremely cold, the mercury going to 24 deg. below zero. Some have fears about the peach buds. I have examined a few and find them all right. Some have been trimming apple trees during the few warm days we have had. Not much else is being done but chores and attending auctions of which there are a large number. Cows are selling very high, also western horses which are being shipped in. Hopewell Grange has appointed several committees to purchase its supplies of fertilizers, spraying material, binding twine, etc. Stock of all kinds is doing well. It takes lots of grain and fodder. Wheat and meadow lands are well protected with snow. It has been hard work to get eggs during the cold weather. I see that many of the Granges are taking action against the Wilson bill in regard to widening sleighs. E. T. B.

Canandaigua, N. Y.

No fruit or gardening crops offered by farmers here. Potatoes sell for 32 to 38 cents now, according to variety. Triumph (seed stock) 30 to 35 cents here. Cows (milch) sell for from $50 to $70, and good pork brings 7¾ cents. Good veal nine cents, live weight. Oats 40 to 45; corn $14 to $18 a ton. Dairy butter 26. H. G. F.

Almond, Wis.

Oats 32; corn 50; rye 48. Choice Timothy hay $10 per ton baled (little or no demand). Butterfat 30 cents per pound. Milch cows, fresh or just coming, $50 to $75. Stock and feeding cattle $5 to $6.25 per cwt.; fat cows and heifers $5 to $7; corn fed steers $6.50 to $7.75; hogs $7.50 to $7.90. Fruits and garden truck are not enough raised for home consumption. This is mainly a live stock section, gradually turning to dairying, to which it is well adapted. Clover and other legumes adapted to this latitude grow here to perfection, while the nondescript type of cows are rapidly changing to good dairy type, through the use of purebred sires. M. B. C.

Amery, Wis.

Wheat 70; barley 50; rye 50; Scotch peas 80. Hay from $5 to $9 per ton, according to quality. Straw $4 per ton. Clover seed $7; oats 32; flaxseed $1.15. Eggs 24; butter, creamery, 30, dairy 22. Cheese from 17 to 17⅞. Horses from $100 to $250 and even $300 per head. Cows $50 to $90. Calves, live weight, eight cents; hogs, live weight, seven cents. J. N. G.

Algoma, Wis.

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

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TAKE ORDERS for our CELEBRATED Custom Clothes, made in our own mill at Lawrence, Mass., LEADING TEXTILE CENTER OF AMERICA. Bigger Profits for YOU by dealing DIRECT with the MILL. 4 MIDDLEMEN'S PROFITS go into YOUR POCKETS. Agents earn

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Learn how to get WHACKING REDUCTIONS on your own clothes. Suits, $11.60 up. We furnish handsome samples, measurement blanks, tapes and style book FREE. Business established in 1892. Send now, TODAY, for special money making proposition FREE.

COLONIAL WOOLEN MILLS
Dept. 121. Lawrence, Mass.

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Self-Setting PLANE ON TRIAL. GAGE TOOL CO., Vineland, N. J.

$15.25 Delivered at any Station East of Mississippi River. "Lucky Low Down" Dump Cart, Strong, substantial hard wood body. Steel wheels, wide tires, steel axle. Body 12x40x60 ins. Capacity 1400 lbs. Hundreds of pleased customers all over the country. Saves its cost every year.
HOBSON & CO., Box 47, Easton, Pa.

Studebaker wagon in five runaways—and still working

Mr. Andrew Kittleson, of Litchfield, Minn., bought a Studebaker Wagon in 1869. He is proud of his Studebaker, and his letter describing its long life of usefulness is so interesting that it would be difficult to write a better advertisement. Here is Mr. Kittleson's letter:

"I bought my Studebaker in November, 1869, at Litchfield from Flynn Brothers, and it has been continually used on my farm ever since. This wagon has given me perfect satisfaction. Never was there a lighter running wagon and it has been of no expense to me. It has hauled thousands of bushels of grain to market, over mighty poor roads.

"My Studebaker has been through five runaways. On one occasion the team ran half a mile and into some oak trees where horses and wagon hung until help came. Another time my team ran into a stone pile. One horse was killed but the wagon was uninjured. It seems to stand all it can get.

"When I built my home I loaded 5000 pounds of sand into my Studebaker. The carpenters were surprised that the wagon could stand such a big load. I am using this wagon at the present time and expect to use it for many years to come."

A 45 YEAR TEST IS PROOF ENOUGH

Don't let anyone sell you a farm wagon, at any price, with the claim that it is just as good as a Studebaker.

You can buy Studebaker Buggies and Harness that will give the same satisfaction.

STUDEBAKER South Bend, Ind.

NEW YORK CHICAGO DALLAS KANSAS CITY DENVER
MINNEAPOLIS SALT LAKE CITY SAN FRANCISCO PORTLAND, ORE.

Adv. 2005

Studebakers last a lifetime

502.6 Bushels Potatoes

From One Acre of Ground

TWENTY DIFFERENT FARMERS in 20 different parts of New England competed the past year in growing potatoes. The crops were widely separated as to climatic and weather conditions. Each one planted, cultivated and took care of his crop in his own way; *but all used*

Bowker's Fertilizers

And No Other Dressing

The winning crop was 502.6 bushels. The average of the twenty crops was 322.8 bushels. The average yield in New England is 131.6 bushels, and for the United States 89 bushels. Our crop-growing contests of the past four years have been so fairly and accurately conducted that they have been accepted everywhere as authentic. Henry Wallace, Editor of Wallace's Farmer, writes: "There is no guesswork about them."

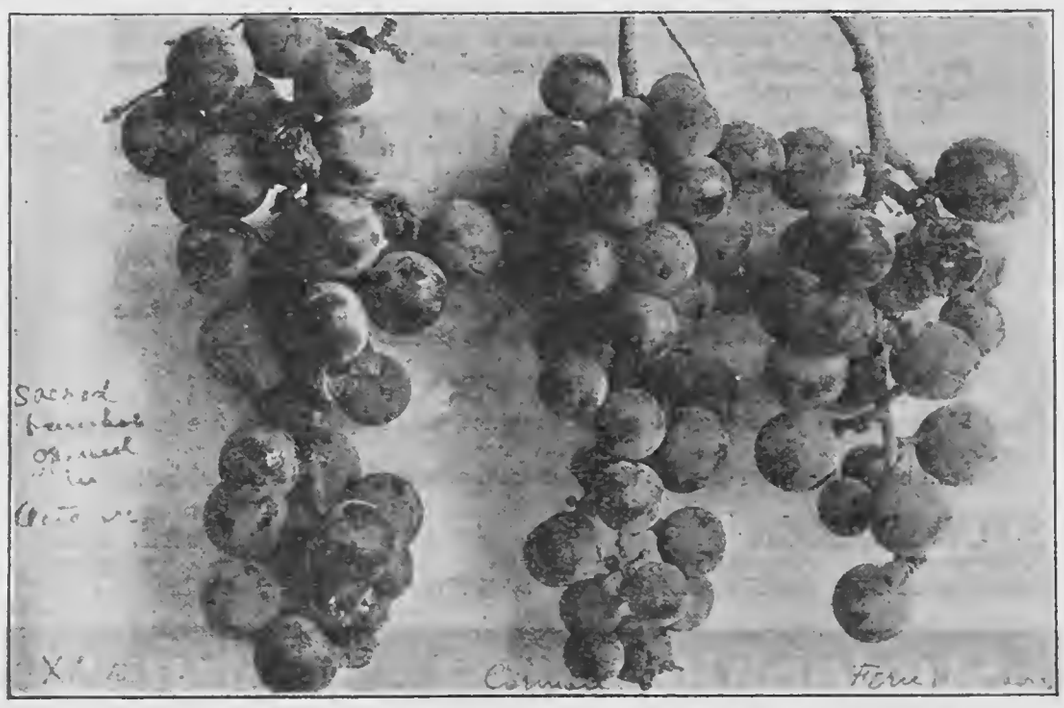
Send for our Book of the Contest. Also tell us what your crops are, and your fertilizer requirements and we will send you our helpful book on Plant Food and our new Illustrated Catalogue.

BOWKER FERTILIZER COMPANY
43 Chatham St., Boston.
Also New York, Buffalo, Philadelphia and Baltimore

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

FRUIT FARM NOTES.

I have become greatly interested in the varieties of grapes originated by the late T. V. Munson of Texas, the greatest viticulturist of our time. There are a large number of these grapes, and while some of them are too tender for this latitude of southern Missouri, the majority of them are hardy not only here but much further North. While I regret that I am far from having a full collection of these new creations, I am fortunate in having a few of them that have borne one or two seasons. Last year I commented on the Wapanuka, estimating it as the best white grape in my large collection. It is decidedly superior to Niagara or Diamond. In size of cluster it is not equal (as few grapes are) to that well-known pair, but in size of berry and delicate coloring it excels them. While of honeyed sweetness it is not cloying to the taste, but has a subtle spiciness hard to describe. It is too tender for a long distance shipper, but can be carried over a good radius and of course is a great seller on local markets as a fancy table grape. The vine is of strong growth and quite productive. Although very thin-skinned I find this grape a good keeper. Another seedling I think highly of is the Mericadel, a cross (as name indicates) of the



SACKED GRAPES, OPENED IN OCTOBER. FIG. 173.

Munson wine grape America and the Delaware. This variety is unique in bunch and berry. The color is purple, the bunch long and slender and the berry a grade larger than Delaware. The vine is very vigorous and very productive (qualities of the America), but the quality of the fruit is its greatest asset, being high enough to put it in the class of choice table grapes. Its strong growth and heavy fruiting ought to make this variety of value for commercial planting. The skin is thin but tough, and it ripens a little after the Concord.

Another kind that gives promise of value is the Xinta, a cross of the America and R. W. Munson, both strong in the blood of the wild grape. I found this grape to succeed here much better than Mr. Munson's description would indicate. It is a fine black grape, fully as large in bunch and berry as Concord if not larger, while it is described as medium to large in the catalogue. It is not medium here, certainly, whatever it may be in Texas.

Its parentage assures it a high degree of vigor and prolificacy and its strain of wild blood gives it a piquancy not found in the Concord. It also has value as a late black, coming in a trifle behind Concord and hanging on persistently, a splendid keeper both on and off the vine. Mr. Munson calls it an excellent wine and market grape. To me it has a special value as a supplement to the Concord, furnishing a welcome variation in flavor and extending the season by its superior keeping qualities.

Still another variety, but one that has been extensively tested because of its early introduction, is the Carman. Despite its wide range of trial it has never, to my knowledge, gained any popularity in the North. This grape bore its first crop for me last Summer. I found its season quite late, carrying it on into the company of the very latest. Bunches are long with berries medium in size. When its fruit was finally ripe, I found it sweet and fairly good, but the seeds, for some reason, were unduly pronounced in the mouth, although they were no larger nor more numerous than ordinarily. The chief value I see in the Carman is in its late season, coming after all the usual standards. It is a fine keeper, and bunches that were sacked kept till long after frost. There is generally a good demand for any kind of fruits that come on late and prolong the season. That this grape has a much greater value in the Gulf States is proved by the statement of W. B. Munson that the demand in that region is so great as to absorb the entire nursery supply, and that it is increasing. In his original description Mr. T. V. Munson, the originator, says of it that it has a pure, rich quality, much superior to the Concord, and that the clusters are large to very large, occasionally reaching a weight of two pounds. That would not hold true here, judging from the first crop of a specimen vine.

Another of my Munson grapes is the Xenia, a large late white grape with very large cluster, equalling those of Niagara. The berries are large and very firm and meaty; quality peculiar but hardly equal to that of Niagara. Its value lies in its late season and showy clusters; it is the latest white in my collection.

The last of my list is the Fern Munson, a Post Oak-Catawba cross, and the latest variety to ripen on the grounds, ripening in September after Norton's Virginia. I think well of this grape as being the latest and largest of the season. It is a shade smaller than Concord and in color a very dark purplish red. It is of excellent quality and piquant in its wild blood. Its berries are nearly twice the size of Norton's, and are so very tenacious to the stem that it takes a good strong pull to get them off. Mr. Munson says it is free from the black rot and has endured 27 degrees below zero without injury. While this grape might ripen too late for the more Northern States, it and the Carman fill a real vacancy in the grape season of Missouri and the region south. A worthy companion to the Fern, and excelling it in size of cluster, is the Muench, a grape I have seen but once described to me in private correspondence by reliable growers. All in all, the Munson creations are the greatest contribution to grape culture ever made by the labor and genius of any one man. Every one I have so far tested has a definite place and value. The wild blood with which so many of them are crossed gives a most agreeable piquancy of flavor as well as superior vigor and productiveness. Of especial value are they in supplying the absence of good black grapes after the season of the Concord, an absence that was keenly felt. I feel that the command of the local market is greatly strengthened by the addition of these grapes.

L. R. JOHNSON.

Cape Girardeau Co., Mo.

A FEW weeks since a man called on a poultry keeper and inquired respecting a sitting of eggs. "Have you got your broody hen yet, Thomas?" asked the poultry keeper. "No," he answered; "but our old hen has broke her leg, and I thought she might as well hatch out some chicks as lay about in the run doing nothing!"—London Farm and Home.

"For the Land's Sake, use Bowker's Fertilizers; they enrich the earth and those who till it."—*Adv.*

DIBBLE'S SEED FARMS 1600 ACRES

IS THE PLACE TO BUY FARM SEEDS

SEED POTATOES 60,000 bushels, 32 kinds, best early, intermediate and late Northern grown, full of vitality in any quantities from barrels to car loads and at a price you can afford to pay.

SEED CORN Best varieties, both Flint and Dent, either for crop or silo. Average germination tests to date over 95% and as low in price as $1.50 per bushel. Send for samples. Test them yourself.

SEED OATS Dibble's Heavyweight enormously productive with heavy grain. One customer reports 117 bushels per acre. Another—"Grain weighs 44-46 pounds per bushel."

Twentieth Century, a good standard extra early. Oats are cheap this year a bumper crop in our section. Samples free,

Also full stocks of Alfalfa, Clover and Grass Seeds, Field Peas, Barley, etc., at bed rock prices as we sell direct from our farms to yours.

DIBBLE'S FARM SEED CATALOG FREE

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Honeoye Falls, N. Y. Box B

Over 100,000 Bushels in Store

HEADQUARTERS FOR FARM SEEDS

Drake's "Satisfactory Seeds" Planted by those who appreciate quality and very moderate prices

ONION SEED. Yellow Danvers, Large Red Wethersfield, $1.10; Yellow Globe Danvers, $1.25 per pound postpaid.

ONION SETS. Choice Yellow, $2.50; Selected Yellow; Choice White, $2.75 per bushel (32 lbs.)

Write for Seed Catalog and Free Trial Pkts. of New Enkhuizen Glory Cabbage and New Triumph Radish

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SEEDS

"AS SURE AS SUNSHINE"

Market Gardeners Specialties

Send at once for catalogue

O. H. DICKINSON

243 Worthington St., Springfield, Mass.

Farm Garden Clover SEEDS Grass Seeds Pure Reliable Potatoes

If not satisfactory may be returned at our expense. Samples free on request. Write today for Catalogue.

EIKENBERRY BROS., CAMDEN, OHIO

Bellmath Farms' Seed Potatoes

Let Us Have Your Order at Once

Pure stock of the SIR WALTER RALEIGH variety, grown from hill-selected seed, and free from scab or any other disease. This is finest quality stock, round and smooth, size uniform—about 3 and ½ tubers to the pound. The Sir Walter Raleigh is a heavy yielder and an excellent table variety. It has more good qualities than any other variety we have found. Price, $1.25 bushel. H. C. CROCKER & SON, Sennett, N. Y.

CARFF'S SEED CORN 5000 bushel crop 1912 Tested and sure to grow. Finest quality. 20 leading varieties. Also Seed Oats, Barley, Grass Seed, Potatoes, etc. Samples on application. 1100 acres. Be sure to get our new catalog. Write today

W. N. Scarff, Box 67, New Carlisle, O.

SEEDS

Wing's Quality Seeds produce the choicest vegetables and flowers. Grown with great care for those who appreciate quality. No matter what you need, *Garden, Field* or *Flower Seeds*, we have them and offer only the best varieties grown. Fully described in our free catalog. Write for it to-day.

WING SEED CO., BOX 123 MECHANICSBURG, O.

WEEDLESS FIELD SEEDS

We are trying with all our might to furnish absolutely pure, Red, Alsike, Mammoth, Alfalfa, Timothy, Sweet Clover, and all other field seeds, with all *blasted* and *immature* grains removed. Write today for free samples and instructions "*How to Know Good Seed.*"

O. M. SCOTT & SON, 60 Main St., Marysville, Ohio

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Clover, Timothy, Alsike, Alfalfa and all kinds of PURE FIELD Seeds direct from producer to consumer; free from noxious weeds. Ask for samples.

A. C. HOYT & CO., - Fostoria, Ohio

Tested Seed Corn—Improved Golden Dent variety. Have reports from 1912-13 crop, showing 99 to 110 bus. per acre. Have bred this corn for the past thirty years. Write for circular. EDWARD WALTER, Dept. R. Eureka Stock Farm, West Chester, Penna.

BEARDLESS BARLEY—WHITE TARTAR OATS, EARLY MICHIGAN CORN, a white cap yellow dent, for seed. Write for sample and prices to J. N. McPHERSON, Pine View Farm, Scottsville, New York

Central Maine Seed Potatoes

Main crop and early varieties. Send for description and prices. I. L. WARE, Gardiner, Maine

POTATOES—Bliss, Rovee, Carman, Fortune, Hustler, Norther, Ohio Gold Coin, Mountain Rose. 80 kinds. C. W. Ford, Fishers, N. Y.

WEEDLESS SWEET CLOVER

The white biennial. Also Alfalfa, Red, Timothy etc. *Sample and booklet telling* "How to Know Good Seed" FREE. O. M. Scott & Son, 180 Main St., Marysville, O.

Hoffman's Catalog of Farm Seeds

with samples—free. Grass Seeds, Seed Oats, Seed Potatoes, Seed Corn. Everything for the farm.

A. H. HOFFMAN, - Box 30, Landisville, Pa.

ASPARAGUS AND RHUBARB ROOTS and SEED

Varieties and prices in 160 page seed catalog, free.

VAUGHAN'S SEED STORE, 31-33 W. Randolph St., CHICAGO

20th Century Potatoes—The best potato for our clay soil. 300 bu. per acre for three years out of four. We did it in 1913. Write us. MAPLE SPRING FARM, Burbank, Ohio.

ONION SEED—Best strains grown Send for prices. J. B. QUIRK NORTH MADISON, OHIO

Disco REGISTERED ALFALFAS

Seed Guaranteed as to Purity, Germination and Quality.

None but Hardy Tested Northern Grown Seed offered. Send for FREE copy of DISCO ALFALFA BOOK, telling all about Disco Alfalfas and how to grow alfalfa profitably.

DAKOTA IMPROVED SEED CO., 9 Main St., Mitchell, S. D.

GOOD SEEDS

BEST IN THE WORLD

Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O K.—money refunded.

Big Catalog FREE

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

R. H. SHUMWAY, Rockford, Illinois

WERTHEIMER'S SEEDS

The best money can buy—

Clean and hardy—germination and purity guaranteed. Our choice home grown

CLOVER, TIMOTHY and ALFALFA

and all other grass and field seeds are the best it is possible to secure. We will send Absolutely Free samples and prices, also our new Alfalfa Guide, full of valuable information about this profitable plant. Don't buy until you have seen our samples. Write to

N. WERTHEIMER & SONS

Dept. K Ligonier, Indiana.

WE PAY THE FREIGHT

DREER'S 1914 Garden Book

THE amateur will find just the information needed to make his garden a success—over one hundred clear, concise, dependable cultural instructions for growing almost every flower and vegetable worth bothering with.

The list of worthy novelties and old favorites is complete and dependable. Especially important are the sections devoted to Roses and Dahlias. The collection of Hardy Perennials is the largest in America. Selected strains of standard vegetables and flowers.

Mailed free to anyone mentioning this magazine.

Dreer's Superb Asters.—The finest strain, either for garden decoration or cutting. Packets contain enough seed to produce more than one hundred plants. Made up of eight beautiful colors. Ten cents per pkt. DREER'S GARDEN BOOK with each order.

HENRY A. DREER 714 Chestnut St. Phila.

APPLES ON LONG ISLAND.

PART III.

Fanny: trees good growers, fruit red, medium good quality, season late Summer, bears well biennially, not desirable.

Gravenstein: trees fair growers, fruit striped red, fine quality, good bearer, season Summer; desirable.

Gano: trees good growers, fruit red, similar to Black Ben Davis, quality fair, productive; not as desirable as Ben Davis.

Grimes Golden: trees fair to poor growers, fruit large, yellow, quality fine, season late Fall, productive biennially, recommended for a yellow apple, especially for home orchards, desirable for commercial use.

Rhode Island Greening: trees good growers, fruit yellow, large, fine quality, productive on older trees, one of the best apples for main trees, though it comes in bearing late.

Northwestern Greening: trees good growers, fruit yellow, large, bears well biennially, not near as desirable as Rhode Island Greening.

Newtown Spitzenburg: trees good growers, fruit small, red, season Winter, produces well but not desirable; sometimes planted for Esopus Spitzenburg; beware of this.

Hubbardston: trees good growers, fruit red, large, good quality, productive, desirable for either main trees or filler.

Ingram: trees fair growers, fruit red, medium to small, fair quality, productive, season Winter, desirable as filler only, as it bears young.

Jefferis: trees good growers, fruit red, medium size, good quality, productive, season Fall, desirable as filler only.

Jonathan: trees good growers, fruit red, medium to small, best quality, productive, season early Winter, very desirable as main trees or fillers, as it bears young.

King: trees good growers, fruit large, red, fine quality, poor bearers when young, but promises well as trees grow older; desirable as main trees only.

Longfield: trees fair growers, fruit yellow, small, season Fall, very productive; not desirable.

Long Stem: trees fair growers, fruit yellow, small, not desirable.

Lawver: trees good growers, fruit red, size medium, fair quality, not desirable.

Lord Suffield: tree poor grower, fruit yellow, large to very large, fair quality, season Fall, not desirable.

Maiden Blush: trees good growers, fruit yellow, medium to small, good quality, season Fall, desirable as filler as bears young.

McIntosh: trees good growers, fruit red, medium to large, fine quality, productive, desirable as main trees and as fillers.

Mammoth Blacktwig: trees good growers, fruit red, medium, poor quality, not desirable.

Missouri Pippin: trees good growers, fruit red, small to medium, very productive, bears young, desirable as filler only; quality fair, late keeper.

Monmouth Pippin: trees good growers, fruit yellow, not productive, medium to large size, not desirable.

Martha Crab: trees fair growers, fruit red, large for crab, good quality, desirable as crab apple.

Mann: trees good growers, fruit green, poor quality, small, not desirable.

Newtown Pippin: 30 trees planted Fall of 1902, no apples yet; poor grower, some good trees in neighborhood but not large or productive; not desirable.

Northern Spy: trees fairly good growers, but practically no fruit yet; fruit red, large, fine quality; trees have no appearance of setting fruit yet; desirable only for main trees.

Oliver: trees good growers, fruit red, medium to small, irregular, poor quality, shy bearer, not desirable.

Ohio Nonpareil: trees good growers, fruit yellow with red, large, season Fall, shy bearers; not desirable.

Pewaukee: trees good growers, fruit red, medium to large, fair quality, not heavy bearer, good but not desirable.

Porter: trees fruit growers, fruit yellow, fair quality, medium to small, productive, late Summer apple, tender; not desirable.

Primate: trees fair growers, fruit medium to large, fair quality, productive, season late Summer, sweet; not desirable.

PETER ELBERT NOSTRAND.

The Cadillac Company has no intention of marketing a six cylinder car

THE Cadillac Motor Car Company has always believed that there are so many good features in the Cadillac Car, that its advertising space could be best utilized exclusively in acquainting the public with those advantages.

We regret, however, that the occasion arises which makes it appear desirable for us to depart, temporarily, from that policy.

Inasmuch as it is not possible for us to control the "mouth to mouth" advertising with which we are favored, and inasmuch as that gratuitous publicity may sometimes contain elements of inaccuracy, unintentionally perhaps, on the part of the authors, we feel that we would not perform the duty which we owe to the public and the duty which we owe to ourselves, if we did not correct any misunderstandings or misconceptions which may exist concerning the methods, policies and plans of this company.

The pre-eminent position of the Cadillac Car as the "Standard of the World," its recognition as the criterion of excellence in practical construction, are not matters of mere chance.

For eleven years the Cadillac has been manufactured and marketed upon well defined principles. Adherence to those principles has been the dominant factor in Cadillac success.

The Cadillac has never aspired to ideals set by others; it makes its own ideals and raises them higher and higher.

The Cadillac has never striven after the achievements of other plants; it is a school and a model unto itself.

The Cadillac has never been obliged to make apologies for its product. It has never been obliged to smother its past, nor to discredit it by wiping the slate clean and beginning all over again.

The immaterial and the impractical, the fad and the fallacy, the delusion and the shallow "talking point" have no chapter in the "Story of the Cadillac."

The "Story of the Cadillac" is the story of that mechanical and commercial advancement which makes for permanency. The Cadillac product has been only that which its makers knew to be right; that which its makers know would satisfy and give to the purchaser "value received" in abundant measure.

The policy of the Cadillac Company has ever been to avoid exaggeration and overdrawn statements. Its policy has ever been to under-claim rather than to over-claim.

The Cadillac Company is gratified that the public feels secure in accepting Cadillac representations at their full worth. These representations are so accepted because the Cadillac Company has never misled and because the public could always expect and has always received more than was offered.

The Cadillac Car of to-day has behind it the experience gleaned in the successful production of the seventy-five thousand Cadillacs which have preceded it—by far the greatest number of high grade motor cars produced by any one manufacturer in the world.

The Cadillac Company is ever alert—its ear is ever to the ground; it feels the throb of the public pulse. Yet never has it yielded to clamor by giving endorsement to principles which would take advantage of the uninitiated or the uninformed, even though temporary benefits might accrue.

The experimental division of the Cadillac Company is not excelled in the motor car industry. We do not believe it is even equalled.

Every design, every appliance, every idea, every principle offered which has a semblance of merit, is subjected to the most gruelling tests.

For every idea or feature adopted or considered worthy of the Cadillac seal of approval, scores are discarded.

One reason why most of the new ideas of inventors and manufacturers are first offered to the Cadillac Company is because these inventors and manufacturers realize that with the Cadillac seal of approval their future is practically certain.

As an example, take the electrical system of automatic cranking, lighting and ignition, first introduced by the Cadillac Company and now used almost universally.

Take also the two-speed axle introduced into the present Cadillac, and which engineering authorities on both sides of the Atlantic are predicting will soon come into general use.

Witness this from "The Automobile Engineer" published in London, England. In commenting upon Cadillac engineering progress and Cadillac initiative, it says:—

> "Already there is a very decided movement among other makers to try and provide some type of two-speed rear axle similar to the Cadillac, for 1914 or 1915."

In our experimental division we have built automobile engines of almost every conceivable type and size, and have tested scores which we did not make ourselves.

We have built them with one, with two, with three, with four and with six cylinders. We have never tried five.

We have cast them en bloc, we have cast them in pairs and we have cast them singly. We have made them with water jackets cast integral and with copper water jackets. We found the latter method most expensive ,but the most efficient—hence we use it.

We built cars with one cylinder engines, more than 15,000 of them, and they were good ones. "One-lungers" they were called, and they are practically all going yet, after eight to eleven years of service, hundreds of them having passed the 100,000 mile mark.

We built a few cars with two cylinder engines and they were as good as that type could possibly be made. But we never marketed any of them although the rumor was current that we intended doing so.

Yes, and we built cars with three cylinder engines, as good of that type as could be made. Probably few readers ever heard of such a car. Some people thought they wanted that kind and they bought them. But not from us. Rumor had it, however, that we intended to market them.

Cars with four cylinder engines! We have built and distributed more than sixty thousand (60,000) of them. That was something more substantial than a rumor.

Cars with six cylinder engines! We have built a number of them in the last four years. We have tested them to the utmost, and they proved to be good ones—by comparison. In fact, by comparing them point for point with a number of the most highly regarded "sixes," which we bought for the purpose of making comparisons for our own enlightenment, we failed to find a single car which, in our opinion, outpointed our own, and our own outpointed most of them.

These experiments may have given rise to the rumor that the Cadillac Company contemplates marketing a six cylinder car. But—as in the cases of the two and three cylinder cars—such rumor is entirely wtihout foundation. This Company has no such intention.

And we made other comparisons as well; in fact, nothing worth while was overlooked or omitted.

Our tests, investigations, experiments and comparisons demonstrated conclusively to us, that a four cylinder engine, designed with the skill and executed with the precision which characterizes the Cadillac engine—and scientifically balanced, affords the highest degree of all 'round efficiency possible to obtain.

These tests further demonstrated that with such an engine, in conjunction with a properly designed two-speed axle, there is obtained an extraordinary range of operating flexibility, an extraordinary reduction of friction, an extraordinary degree of operation and maintenance economy, an extraordinary degree of luxurious riding qualities, and a reduction of vibration, particularly at high speeds, almost to the vanishing point.

We have cited the foregoing facts because we believe that the public is entitled to know them, because we believe that we owe it to the public to make the facts known and because we want the public to know that the Cadillac Company leaves no stone unturned, that it spares no expense in its efforts to discover and to provide that which it knows to be right, that which it knows will satisfy, and that which will give to the buyer "value received" in abundant measure.

And above all, the Cadillac Company has no intention of departing from that policy.

There can be no better evidence of the appreciation of the Cadillac policy than the fact that there have already been manufactured and distributed more than 9,000 of the 1914 Model Cadillacs, amounting in selling value to more than eighteen millions ($18,000,000) of dollars—a volume of cars which nearly equals, if it does not exceed, that of all other 1914 high grade American cars combined, selling at or more than the Cadillac price, regardless of their number of cylinders.

CADILLAC MOTOR CAR CO.
Detroit, Michigan.

HOME-MIX YOUR FERTILIZER!

Better Fertilizer *Save 30%* *No Useless Filler*

If you can mix cement you can mix fertilizer, and if anyone tells you you cannot Home-Mix, the profit on his "Brand" is more important to him than the truth.

COMPARE PRICES

POUNDS OF MATERIALS Required to Make Approximate Mixtures

Formula	ANALYSIS Per cent Ammonia	Phosphoric Acid	Potash	Nitrate of Soda	Animal 7-15 Tankage	Acid Phosphate 14% Available	Potash Muriate	Unnecessary Filler	COST PER TON OF PLANT FOOD Prices F.O.B. New York or Boston	Prices F.O.B. Baltimore
A		10	5			1450	200	350	$13.16	$12.08
B	1	8	5	50	150	1100	200	500	14.18	13.98
C	2	8	5	100	300	1000	200	400	18.00	17.25
D	3	8	5	200	300	1000	200	200	20.55	19.80
E	2	8	10	100	300	1000	400	200	22.10	21.35
F	3	8	10	200	300	1000	400	100	24.65	23.90
G	3	6	10	200	300	700	400	400	22.78	22.25
H	4	6	10	300	300	700	400	300	25.33	24.80
I	4	7	8	300	300	850	350	200	25.24	24.60
J	5	7	5	300	600	700	200	200	26.33	25.80
K	7	5	7	500	700	300	300	200	32.60	32.45

FORMULAS { A. B. C. D. Grain crops and seeding down. C. Good corn special. D. E. F. All fruit crops. F. Special for young trees and small fruits. F. G. H. Potatoes, onions and general truck. H. Special for potatoes. I. J. Market garden specials. K. Special rich top dressing.

Lower Prices on Car Lots

The above formulas are computed on the basis of division of even weight bags to eliminate weighing. Sulphate of Potash can be used at extra cost.

BASIC SLAG (Genuine Thomas Phosphate Powder) has been substituted to advantage for Acid Phosphate except in potato mixtures.

Our standardized fertilizer materials are all in good drillable condition, and when purchased from us lack the possibility of adulteration.

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TERMS: Cash with order or sight draft with bill of lading attached. Prices on any special formula upon request.

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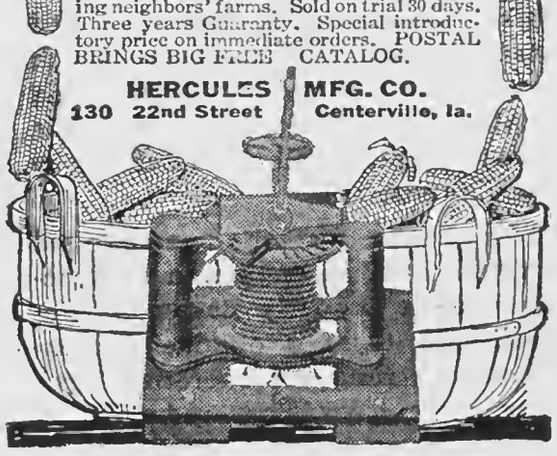

How To Make Your Garden Thrive and Mature Early

The kind of plant-food required in your soil depends on the kind of a crop you are to raise. In order to make your garden produce its maximum yield at the lowest cost for fertilizer you should supply only those elements which are immediately available and which will be absorbed by the plant.

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Comprise special distinct compositions of plant-food elements for vegetables, small fruits, root-crops, flowers, greenhouses, lawns and tree-crops. They supply only the constituents your particular soil needs for some special crop. For example our

Early-Crop Odorless Fertilizer

supplies your soil with the four plant-food elements in immediately available form needed by vegetables and small fruits for quick growth and early maturity. It is the most effective and convenient fertilizer you can apply for such crops and in the end the most economical.

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Our Mak-Gro Odorless Plant Food is a clean high grade granular fertilizer for indoor and outdoor use on potted plants, flowerbeds, small fruits, lawns and small gardens. It is *made especially for the amateur* and is pleasant to apply. We will mail a five-pound bag to any address for $1.00. Write today for special circular.

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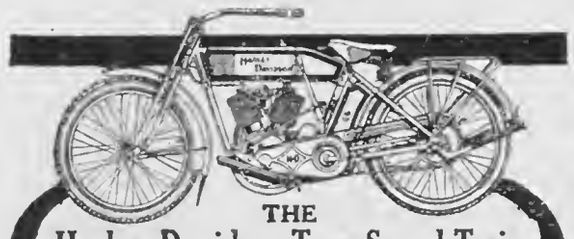

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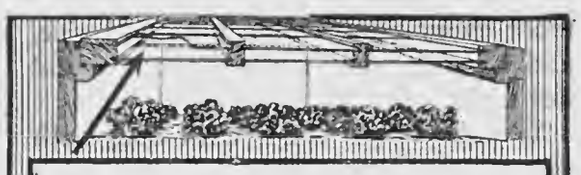

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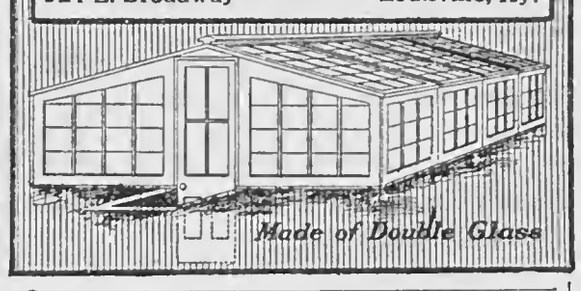

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WHITE PLAINS -:- NEW YORK

Some Common Garden Pests.

Every year we have several "bugs" show up in the garden with about the same regularity as the Fourth of July (and incidentally about the same time), and each time they do appear, we are sure to have occasion later on to regret their appearance.

WIREWORMS.—For some years now it seems as though wireworms were more than usually abundant. They are, as are also white grubs, strictly an underground pest. There are several species of them, but unfortunately for us, the most common are those which attack our crops. The insect's common name is quite appropriate, as it has a distinct wirelike appearance and feel. It is from one-half to an inch long, hard, smooth, shiny, and yellowish in color. The parent is the so-called "click beetle" or "snap bug," that little fellow which jumps up in the air with a distinct click when you turn him over onto his back. From two to three years are required for full growth from the egg to the mature insect, and most of this time is spent underground. Potatoes seem to suffer more from the attacks of wireworms than other crops. Possibly this is because potatoes are more generally grown than other vegetables and the injury is therefore more noticeable. However that may be, such vegetables as turnips, carrots, beets, onions and lettuce are also subject to attack. The worms usually eat the smaller tubers, frequently boring holes through the underground part of the stalk.

Many remedies have been suggested, but none has been found to be entirely satisfactory. The fact that they ordinarily breed in sod ground suggests a remedy, or rather a preventive, in rotation of crops. It has been found that wireworms do not attack clover and related plants. Therefore they may be starved out by planting clover on ground that has been infested heretofore. Vegetables can follow clover with comparatively little danger of attack. Fields which have been in grass for a time and are plowed and planted to some vegetable are especially apt to be troubled with wireworms. Fall plowing is also of some value. By this means the over-Wintering adults and "pupæ," or immature insects, are exposed to the action of the weather and the attacks of birds. It is always a good scheme to allow chickens to follow along after the plow, as they will pick up quantities of insects such as white grubs, wireworms, and cutworms. Because of the hardness of their skins, the worms cannot be killed by insecticides. Any application strong enough to penetrate through them would also kill the plants and render the ground unfit for use for some time to come.

CABBAGE WORMS.—The cabbage worm has always been and still is one of the worst pests of cabbages. There are few gardeners who have not had some experience with it. The worm itself is velvety green in color with a faint white line down its back, and about an inch and a quarter long when full grown. Hatching early in the Spring, it attacks the young cabbage plants, eating the outer leaves. As the head of the cabbage forms, it is also attacked, the worms hiding in it and disfiguring it with their excrement. Their parent is the familiar cabbage butterfly, white with two black spots on its wing. It may be seen hovering about from early Spring to late Fall. Soon after they appear the adult butterflies mate and the females lay their eggs, generally, on the undersides of the leaves; these eggs hatch within a few days and so the process goes on. Since there may be several broods or generations per season, depending on the locality, it is easy to see why they are such a pest. It is quite possible to get rid of them by the use of a poison such as Paris green or lead arsenate, to which a "sticker" has been added. A sticker is necessary because of the waxy surface of the cabbage leaf, to which the ordinary spray will not adhere. A pound of resin dissolved in 50 gallons of spray material will make it stick. The poison should be applied as soon as the worms appear, and as often afterward as appears necessary. But the careful man will say he doesn't want to put on poison a few days before he expects to eat that cabbage. He would rather take what the worms leave. If it is necessary to put on poison a short time before the cabbage is to be used, try hellebore. That will lose its poisonous qualities after a few days' exposure to the air, and there will then be no danger from it. Poisoned bran mash, as is used for cutworms, may also be used to advantage for the cabbage worm. Small quantities may be made by mixing a quart of ordinary bran with a teaspoonful of Paris green, and moistening it with half a cup of water to which has been added a tablespoonful of molasses. The poisoned bran should then be scattered over the affected plants.

CUCUMBER BEETLES.—Early in the season cucumber, squash and melon plants are often attacked by black and yellow striped beetles, known as the striped cucumber beetles or "melon bugs." Although the roots are damaged to some extent by the "larvæ" or grubs, slender white worm-like creatures, the greatest damage is done by the bugs themselves. They devour the tender plants almost before they are well started. The older plants also suffer from their attacks, the beetles eating the leaves and gnawing the rind of the stem and fruit. They are also said to carry a harmful bacterial disease, known as the "cucubit wilt." The beetles usually appear early in April or May, feeding on all kinds of vegetation until the squashes and melons are set out, when they injure them in the manner already described. Eggs are laid on the leaves and in the ground, just under the surface. The grubs hatch and spend that period of their existence in the stems and under the surface of the ground. When the nights begin to get cool, the beetles have a habit of collecting under the stems and wilted leaves wherever they can be sheltered, sometimes as many as 50 under a single plant. They spend the Winter hidden away under leaves and any kind of rubbish.

Another beetle similar in many respects to the striped cucumber beetle is the twelve-spotted cucumber beetle, so called because of the 12 black spots on its back. It injures the plants in the same way, and although commonly found associated with the ordinary cucumber beetle, is generally less abundant. Both of these bugs are handled in the same way. Coverings are often used on young plants to protect them from injury. A barrel hoop is cut in half and the two pieces fastened together at right angles to each other with the ends stuck in the ground, forming an arch each way over the plant. The frame thus made is covered with cloth or wire, preventing the bugs from getting at the plants. Another way is to plant an excess of seed, so that when the bugs get what they want there will still be a little left for the owner. But that is not a way that will appeal to the man who has any respect for himself. Spraying with arsenate of lead at the rate of four or five pounds to 50 gallons of water gives considerable protection, but it will not get all the beetles; some will hunt out places not covered by the poison, such as under leaves or inside the flowers. Repellants have often been advised, but when the beetles are at all numerous they are of little avail. The best of these is dry or air-slaked lime mixed with flowers of sulphur and dusted on the plants. The planting of early beans or squashes will help, as traps. But one of the best ways is to destroy all old vines, dead leaves, and anything else that will serve as a hiding place for the bugs during the Winter. This will help to be rid of them during the following season.

New Hampshire. C. H. HADLEY, JR.

Oat Hay.

We planted only corn last season, and we have no hay. Would it be wise to plant oats for an early cutting, or is there some other method by which we can get early hay? We have about a ton of chicken manure. Would it be best to put it on cabbage or on pickles?

M. B.

We should sow oats and Canada field peas, as we have so often described, to cut for hay. Plow the peas under and harrow in the oats. The chicken manure is well suited to fertilize the pickles.

"EVERYBODY has some secret sorrow," says a philosophising friend. "Even the fattest and jolliest of us has a skeleton in his midst."—Credit Lost.

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Over 500 big manufacturers have been hard hit by bad trade conditions this year. They made too many goods. They needed money badly. We bought their surplus goods at less than cost to manufacture. We paid them just about the cost of the material alone, and we offer you these brand new up-to-date goods at a good deal less than cost to manufacture! Sure, we make a profit. Just 4 cents on every dollar you spend. But other catalog houses have to pay a good deal *more* than *our actual selling price* to buy such goods, under ordinary conditions. Bankrupt concerns sell *cheap* and many of our manufacturers would have gone bankrupt if we had not traded them *cash* for *goods*.

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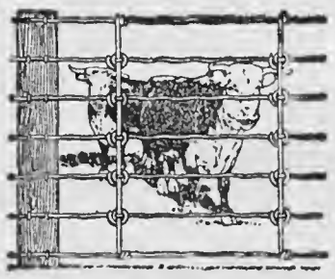
If our prices are not lower on the same quality, we take back the goods and refund your money.

Get the Fencing that Lasts



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Every piece of wire in these fences goes through a patented process which leaves a perfectly smooth surface for our heavy galvanizing.

Our big fencing sheet will tell you the best fence to use and give you a price per rod laid down at your railroad station. Our list of heavy all No. 9 fences will last a lifetime if stretched properly.

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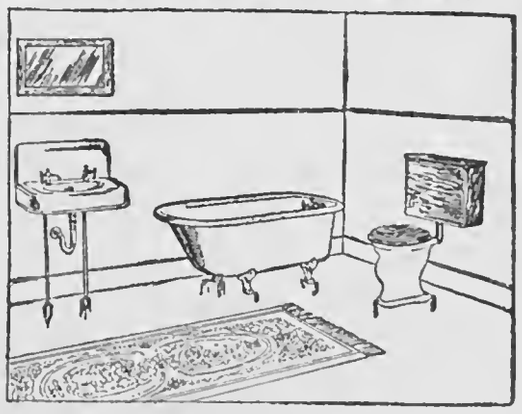
Reports from 176 of our customers show that Buffalo Farm Paint will cover 525 sq. ft. of wall or floor. Other paints of equal service cover only 400 sq. ft.

Our paint department is one of the largest in the country, and includes brushes, stains, varnishes—in fact, all painters' supplies, at bargain prices.

House Paint, $1.06 Per Gallon, in 5-Gallon Cans; Barn Paint, 78c Per Gallon; Cold Water Paint, inside, 6c Per Pound—outside, 9c Per Pound. SEND FOR LARGE COLOR CARD.

Bath Room Outfits



Sanitary plumbing today is a vital question all over the country. For years we have been installing complete outfits everywhere. Every piece, from enameled ware to pipe, that leaves our warehouses is guaranteed perfect. You don't get chipped or seconds when you buy of us. No mechanic is needed to install our outfits, as we can furnish all iron pipe connections and full instructions.

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Chiffoniers	Baby Carriages	Iron Wheels
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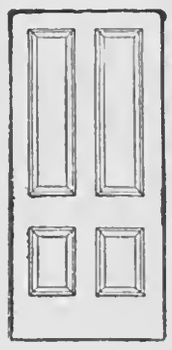

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Everything in the building lines can be found in our BARGAIN BOOK. We will sell you material for an entire building, freight paid to your town, and give you a saving big enough to pay the entire labor cost of building. All A-1 new stuff and all guaranteed.

In this book all the material is listed at prices your wholesale dealer would have to pay. Don't be misled about freight charges, as we will give you delivered prices to your station on everything and show you where you can save big money.

Our building department includes nails, shingles, lath, siding, hardware, doors, windows and all inside and outside trim. (44)

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We take the entire output of remnants from four large factories. Just think of it—a rubber roofing at 59c a roll, the lowest price ever quoted for this quality roofing. Guaranteed to resist heat, fire, water, snow, hail and acids. No painting is needed; easy to lay as a carpet; no tools required but hammer. This roofing in the 2-ply comes at 83c per roll.

Queen City Rubber Roofing

This is the best rubber roofing made. Only pure asphalt and wool felt is used, which are acknowledged the best water and weather proof roofing materials on the market today.

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Other grades on our big delivered price sheets.

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Owing to slack business this year several large steel mills are heavily overstocked. We have taken the surplus of four of them, and our prices on steel roofings are the lowest in years. Don't think of buying any of this material until you have seen our delivered prices. For quality and prices we beat the world on steel roofing.

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Send me your new Book of 5,000 Bargains and keep me posted from time to time as you get more goods at Bargain Prices.

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The Manufacturers' Outlet Co. Dept. 283 Buffalo, N. Y.

AN APPLE CELLAR.

I notice that C. L., Ringtown, Pa., wishes to build an apple house. I have an apple cellar or storage with a packing house and storage room above for boxes which I built about 10 years ago; it has given good service so far. Size of cellar, width outside, 22 feet; length, 34 feet; depth in ground six feet, three feet above level of ground, which gives me nine feet in the clear as depth of cellar. It is built long way, north and south; walls are of cement, on top of the walls. I have a two-story building, side walls 14 feet, first story eight feet. I store boxes, barrels and baskets in the upper story when not in use. If water is not too near the surface to come into the cellar, go down in the ground deep; the cellar will not freeze as quickly as when shallow. I have four windows in my cellar walls, two on each side.

Olinda, Ontario. M. G. B.

A BOY'S FARM PROBLEM.

I am 15 years old and wish to be a farmer. We own 175 acres of land. There is one pasture that has not been used for years. It is sandy, parts are dry and others swampy or lumber; lot of spruce, pine, hemlock, etc., is to be removed soon. It is all run out and bushy. Here is where I am to get my education in farming. I have neither time nor money to go to an agricultural college. I wish to keep pigs, cows, sheep and animals of all kinds as well as poultry. I like nothing better than machinery and I can make myself happy any time studying engines or machines of some kind. I do not know where to begin in the pasture. I like to study plants too, and do not know but what I will raise oats and other grain that will grow in this country or hay and grain, and raise a calf, but I cannot have milk. Could you help me solve this problem? A. H. W.

Massachusetts.

I expect you are going up against a harder proposition than you realize. A poor or rundown farm is not the easiest thing to tackle. Just the same I would not discourage you from trying it. Since you have little or no money to invest, you will have to start in a very small way. Let us begin on that sandy pasture, and see what can be done. Unless it is really too poor, I would plow it under and grow it to corn this Summer. Corn always comes in handy as a stock feed as well as the fodder. I suspect this field has very little "life" or humus in it. You must find some way of getting humus into it. This you can do by either manuring it or turning a green crop under and liming it. In the South we would use something like cow peas or Crimson clover to turn under. Following the corn you would probably better seed the field to rye. This rye you can either plow under the Spring following or have your cows or a flock of sheep pasture on it. If you cannot afford to lime it, you would better pasture it. Again, if you decide the land to be too poor for corn this year, sow a mixture of Canada field peas and oats. This will make fine hay if cut early for either sheep or cows. Either turning crops under or manuring the field will get rid of the bare spots. The wet spots you may have to drain. You probably will have to dig a ditch to do this, and leave it open or build a stone drain.

You want to have all kinds of stock. On a place like yours I would not want more than one or two kinds. Better make one pay first. If you like them, you can make your best start with chickens. You must make them your main business, though, and not neglect them because some other farm work is pressing. Then maybe you can get a half dozen or a dozen sheep to start with. After you have learned how to care for them you can get more or save all your lambs. Remember that you can buy 10 sheep or 60 chickens when you can buy only one cow. If that cow should die, you have nothing left. If one or two sheep die you have eight or nine left. You would better have only 20 sheep and 200 hens that pay than twice that many on a poor farm with a good chance of not having enough to keep them.

I see you would like to raise a calf without giving it its mother's milk. It can be done, but you must remember that you have become that calf's mother and must take good care of it accordingly. I happen to know of a very thorough test that was carried on with various calf meals and can recommend their use where you must either use them or lose your calf. Using calf meals reduced the cost of feeding the calf one-half or more, according to the method followed. Of course, you could make up a homemade feed of oatmeal gruel, hay tea, and linseed or blood meal, but I think you had best at least start with something already prepared for the purpose. R. B.

SEEDING TO ALFALFA—CENTRAL N. Y.

I have a field I am planning to seed to Alfalfa, and intend to use lime on it, also have a quantity of wood ashes I would like to use. Would it be advisable to use with the lime or would phosphate be better? State proportions to use. It was plowed last Fall. I have a piece of Alfalfa that does not do as well as it ought; seeded it two years ago, and when it was in blossom cut the first year; cut twice last year, but it grows short and not as well as I would like. Manured part with cow manure and that was not any better than that I did not manure. Do you think cutting the first year is all right in as cold a climate as this State? E. D.

Oneida Co., N. Y.

As early in the Spring as the ground is dry enough to work perfectly, this field should be thoroughly worked and made fine and compact as deep as it was plowed. The cutaway harrow, spring-tooth, smoothing harrow and roller or plank drag, by repeated application, will accomplish this. Towards the last of this fitting apply the lime and 500 pounds per acre of acid phosphate. The wood ashes would be of no especial benefit. They contain about 1½% phosphoric acid, which is not available, and about 4% of potash which is of no benefit on soil in your locality. They contain about one-third as much calcium oxide as the land lime, and are worth about one-third as much per ton as the lime, in cases where the land needs liming. In ordinary years this field could be fitted about May 1 and should be left fine and smooth on the surface. Keep out of the field for 10 or 12 days, so that all the weed seeds that have been brought near enough the surface to germinate will do so. Then wait for a rain and after the rain, when the ground is dry enough to drag, sow the seed, 30 pounds per acre, one-half in each direction, and drag both ways with some tool that cannot go more than one inch deep, the object being to cover the seed to kill the weeds already started and to avoid bringing up any fresh weed seed from below to grow with the Alfalfa. That is, raise the weeds first and then raise the Alfalfa. Finish the field with a roller if dry enough, or with a plank drag if not perfectly dry. When the Alfalfa is two inches high, sow broadcast, on a dry day, 100 to 200 pounds per acre of finely pulverized nitrate of soda. If pure northwestern grown seed, from Idaho or Montana, is used, in 10 weeks after sowing it ought to cut 1¼ tons per acre, and seven weeks later another crop of about the same size, both of clean Alfalfa free from weeds, and it will stand 12 to 15 inches high when Winter sets in.

My experience has been that a top-dressing of stable manure, six or eight loads per acre, when the ground is frozen in the early Winter of any year, and especially the first, both decreases the danger of Winter-killing and greatly increases the growth of Alfalfa the following year. After a couple of years, when the Alfalfa is firmly rooted, it should be dragged occasionally to keep out grass and weeds and stimulate the Alfalfa. This may be done in the early Spring, when the ground is dry and before growth begins or after mowing. Almost any kind of a tool will do, but there is an Alfalfa cultivator made for this purpose, which is a spring-tooth drag with narrow diamond-shaped points.

I should advise the application of at least 500 pounds per acre of acid phosphate sown broadcast and dragging the ground with a spring-tooth or smoothing harrow (teeth set nearly straight) early in the Spring when the ground is dry and before growth starts very much. Then soon after the growth starts, sow on a dry day 200 pounds of finely pulverized nitrate of soda. I am surprised that the application of cow manure to a part of the field did not improve it, as I have always found a light top-dressing of manure in the Winter greatly beneficial. It should be cut once or twice the first year. I am located in New York State about 100 miles exactly west from the inquirer and I have frequently cut 2½ tons per acre in two cuttings the first year, and four to six tons each succeeding year. HARRY G. CHAPIN.

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Farm Engineering.

Questions About Radium.

Can you give me any information concerning radium, where it is found, how produced, and what are the characteristics by which one recognizes it? Could it be found here among our Connecticut rocks? We have a variety of stone, plenty of silica, also garnets, etc.

Bethel, Conn. F. H.

Your question was referred to an expert who is thoroughly acquainted with recent developments in Connecticut. His reply is that radium has been found in the State, and probably will be found in greater quantities. There are some peculiar rock formations there, as you say. Radium could not possibly be detected by any but the most expert chemist or geologist. It is usually found in pitchblende or in carnotite. The carnotite deposits of Colorado and Utah are among the most important in the world. Carnotite is either a yellow or brown ore found frequently in sandy shale or in the cracks in sandstone. Pitchblende, you probably know, is a jet black, shiny mineral. A ton of the pitchblende contains only a very small fraction of an ounce of pure radium. It would take about 300 tons to produce an ounce. Yet this mineral has a greater radium content than any other. The radium is separated by multitudinous chemical processes. Solutions are repeatedly formed and crystallized in order to separate the barium and radium. It requires extreme care, patience and skill, and the process is a very long one. At present there is only about oneninth of an ounce of radium in the United States. It will probably be a great many years before there is an ounce of pure radium in existence. R. P. C.

Pumping from Well.

I have a dug well at my home 34 feet deep about four feet in diameter; it is a very strong well, and always plenty of water, averaging from 10 to 15 feet; could not be pumped dry unless you would attach a fire engine and larger hose. I would like to work out a plan to have running water without using an engine or motor. L. A. H.

Harrisburg, Pa.

Get a branch pipe force pump. It will have to be set over the well in order to get the cylinder down within 15 or 20 feet of the water surface. The best plan is to put it right in the water. The branch pipe opening is connected to a supply pipe which leads up by the kitchen sink to a storage reservoir of any kind in the attic, or even in the pantry or kitchen, so long as it is above the sink level so that a faucet may be placed in the pipe at the sink. Below the faucet place a check valve so that no water can run back from the storage, but the pipe below can empty out. Then, each morning, or as frequently as need be, you can pump the tank full and it will run out at the sink faucet as you need it. The pump may also be used to deliver water at the well, if wished, by turning the three-way cock to close the branch pipe and connect with the spout. If you desire a hot-water front in your stove, you can supply hot water tank from the storage reservoir, tapping on to the pipe anywhere above the sink faucet. R. P. C.

Freezing Water Supply.

During the cold snap around the first of the year our water pipe on the farm froze, and we had to disconnect the entire system from the spring so as to save as much of the pipe as possible. The water main has a length of about 1,600 feet, the first 200 feet being ¾-inch, then about 1,000 feet of one-inch and then about 400 feet of ¾-inch; have one branch of ¾-inch to feed home, one ¾-inch to milk-house, one ¾-inch to horse barn, and the main (¾-inch) home. We kept the four faucets open about their full capacity, and at 10 p. m. everything was all right, but at seven a. m., frozen up tight, as the water from some unknown cause must have either stopped or slackened. My farm is situated in Ulster Co., N. Y., and often the temperature is as low as 28 to 30 deg. below zero. I would like to have an expression of your views as to the cause of freezing. I think that perhaps there were too many outlets, thereby drawing off the water faster than the ¾-inch main at head of spring could supply it, thereby probably creating a vacuum somewhere in the one-inch pipe, and the frost then had a chance to freeze some part where exposed. The main is not buried the entire length. As we shall have to put in a new main, would you advise a small or large one, provided there is sufficient water to fill the main at all times. W. C. H.

New York.

It is pretty hard to guess what happened without having seen conditions. The water probably flowed pretty slowly in some of the branches. Probably the faucets froze first, if they were exposed. If not, there may have been a gradual freezing through the half full pipe on the house end. Running water will freeze, you know, if exposed long enough to a low temperature, unless it runs very swiftly. I would bury the whole pipe, and where it is exposed elsewhere, encase it in a box of sawdust or wrap it with wool, etc. Don't trust just to the fact that it is running. If you have shut-offs in the ground near the outlets, you can shut the water off nights, drain out the pipe between the shut-off and faucets, and sleep sound. You can also, if you wish, shut off the whole thing at the spring and drain the pipe every night. You will need an air inlet at the spring in this case. If you don't like the walk up to the spring each night and morning, arrange two alarm clocks, one to release a drop weight automatically which closes the valve, at night and then in the morning the other releases a larger weight which opens the valve. If none of these remedies is to your liking, the one-inch pipe all the way would be preferable to the ¾-inch. R. P. C.

Construction of Wet Battery.

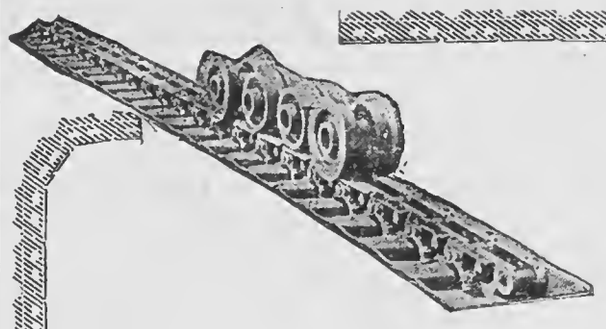
I understand that there is an open circuit wet battery made with the use of sal-ammoniac. Can you tell me how they are made and how they compare in strength with a dry battery? L. H.

Illinois.

The liquid in a dry battery is sal-ammoniac, but it is soaked up in sawdust or blotting paper so that it will not spill. A wet battery of the same kind can be made by immersing a strip of zinc and a piece of carbon in a solution of sal-ammoniac. Usually the zinc is rubbed with mercury until coated with a mercury surface. This is called amalgamation, and it prevents rapid local deterioration of the zinc. The top of the carbon (where the binding post is) and the top of the glass jar in which the liquid is, should be dipped in paraffin, or be greased so that the sal-ammoniac will not creep up and form a coating. The strength, that is, the voltage of the dry and of the wet cell is about the same. When the dry cell has run out it must be thrown away. The wet cell can always be renewed by a new zinc or by fresh sal-ammoniac. The carbon from an old dry battery makes a good carbon for a wet cell. It needs cleaning, but does not need waxing usually. A new zinc battery pencil, as they are called, all amalgamated and ready for use, costs only about seven cents, while a package of sal-ammoniac sufficient for one battery costs only five cents. R. P. C.

WATERPROOFING A CELLAR.—Can any of your readers tell how to prevent water from coming up through a six-inch concrete cellar bottom, or how to make a cellar water-proof? I am troubled with water coming in my cellar up from the bottom. How do they keep water out in the Subway? There must be some way to make a cellar water-proof. A. S.

LEAKY TANK.—I wish some of the readers would tell me what to do with my water tank to make it hold water. It is made of 2x4 pine planks, 10 feet diameter, four feet deep. The staves not matched. Could it be lined with cement, say one inch thick? Perhaps some of your readers have had experience with leaky tanks and can give some practical information. The water is pumped by windmill to tank and supplies barn and house, also henhouse. The tank is located over the barn floor and keeps the floor wet. W. H. M.



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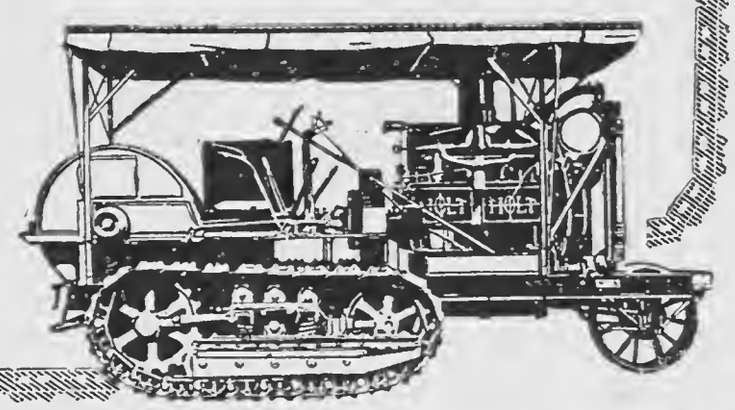

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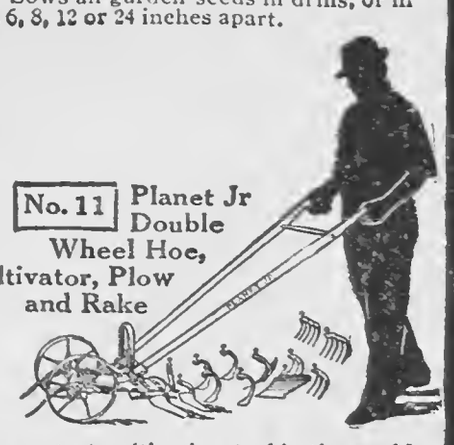

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The Home Acre.

Cucumbers on New Land.

Can I grow cucumbers profitably, other conditions being favorable, on ground just cleared of oaks, chestnuts, locusts and wild cherries, after giving a heavy coat of lime and fertilizing liberally?
New Monmouth, N. J. S. E. G.

I have seen good crops of cucumbers grown on new land, and have also seen some complete failures. The proposition is a game of chance, and whatever success is attained will depend upon how well the land is prepared for the crop, and the rainfall during the growing season. New land (unless naturally moist) never retains the moisture as well as it will after it has been farmed a couple of years. I would not advise you to put too much dependence on this land as a cucumber producer. I believe you will be better off financially if you crop it to corn this year. It will then be in a fair condition for cucumbers the following year. If you decide to risk cropping this land to cucumbers this year, you should break it up as deeply as possible, after which apply one-half ton of air-slaked lime and harrow in, and if available, use two shovelfuls of well-rotted stable manure to each hill, incorporating it well with this soil, which may be supplemented with benefit, by a small handful of pure bone meal to each hill, giving good clean cultivation. If the season should prove favorable it is possible the undertaking may return you a profit. K.

Keeping Accounts.

How many of us are making the same mistakes year after year, putting the corn in too early, doing something too late, just because we forgot when that same thing was done last year with the same poor results. Every farmer, gardener, florist or grower of plants for house and yard should keep a more or less detailed account of work done. Each row of plants, box of seeds, flower pot, etc., should bear a label. On the label should be, first, the name of plant. It is educational if both the common and botanical name are put down, thus, "Castor bean, Ricinus." Also put on the label the date of seed planting, and in case of transplanted things, the date of putting in permanent quarters. Later, the date of first fruit, harvesting, etc., can be added. These labels at the close of the season should be gathered and packed away, or the records thereon copied into a book. The coming Spring these records should be all read over when the planting is to be again taken up and the lessons shown should be heeded.

The labels will show some interesting facts. They will set the times for planting such vegetables as are to be used in succession, or if you planted at the wrong times will indicate that fact and enable you to make due correction of planting time. They will show how long it took the seedling tomatoes to grow from seed to setting, and thereby indicate when to get cold frames and hot beds ready. Many other valuable conclusions will suggest themselves from these records.

The above is about the simplest means of keeping track of things, but if you want to go into details, keeping account of soil, weather conditions, cultivation, insect pests, as well as the facts noted in the first method, a card index or book record can be kept. Use the labels as before, but all that need be put on them is the name and a number. Carry the same number in your book or on the cards and you can make as many entries as you desire. A fact not found in seed catalogues is the length of the germination periods of various seeds. These periods for a given kind of seed will vary from four to 28 days according to moisture and temperature conditions, but you can determine these periods for yourself. For instance, when planting indoors a seed you know will come up in four days, you do not need to worry about watering until growth commences, but if you happen to be planting parsley it is well to know that the seed should be soaked some hours before sowing, and that it takes about two weeks to come up. These facts can all be ascertained by dating the labels with time of sowing and time of coming up. Then the following year this information will result in more intelligent preparation of the seed bed and care of it till plants appear.

The information of years of record-keeping is what will reduce your work to a system, make far better farming, better gardens, more beautiful home, save days and weeks of lost motion. Every business is now being or has been reduced to system and haphazard methods have had to go. The written record of acts done is the key to system, and the arranging of these facts and records is the perfecting of the system. Just a word about labels. In the first method use a six-inch label, in the second a four. For indoor and cold frame work the labels may be used alone, but where used in the garden or field tie the label to a stout stick, driving the stick into the ground at the marking point, at an angle of 40 degrees, with the label on the under side. In this way storms will not affect the writing. P. L. W.

Watering Fine Seeds.

In starting early seeds, especially seeds that are very small, great care must be exercised in watering. There are several methods of keeping the earth in proper condition of moisture for good germination. For seeds of quick germination, such as cabbage, cauliflower and Aster, a thorough watering of the seed box before planting will generally be sufficient. The seed should be planted across the box in rows about an inch apart so that after the plants appear watering can be done without knocking over or washing out the tiny plants. Do this watering between the rows with a can having a nail hole at one side of the bottom; fill it with water and carry it back and forth between the rows across the box giving splendid results.

For seeds requiring a longer period of time to germinate such as peppers, tomatoes, parsley, pansies, and nearly all perennial seeds, a different method must be used. Water thoroughly as in the first method, and plant in rows also, but the seed box should then be covered with a glass and placed in good heat and strong light, but during the brightest part of the day a single thickness of paper should be placed over the glass. When watering finally becomes necessary (as the soil must never be allowed to become thoroughly dry) a whisk broom dipped in lukewarm water and shaken over the surface will provide moisture without washing out the seed. In case of very fine seed, such as primrose, Lobelia, Begonia, etc., the water should nearly all be shaken off the broom before using it on the box, which is done by drawing the hand across the bristles, causing a very fine spray to be thrown on the dirt.

Still another method is to so construct the seed box that the bottom is quite full of holes, then by setting it in a larger vessel containing water, moisture can be applied from below. Care should be taken, however, that the holes in the bottom of the seed box are not large or the dirt will wash through, dropping the surface of the seed bed. This is probably the best method of all, when rightly used. I do not allow the water to come to the surface of the seed bed before taking out of the water in which it is standing. A plant label stuck in the side of the box is used as a gauge to show how high the water is in the box and when it is within a half inch of the surface of the seed box, take it out of the water as plenty of moisture will later come to the top. Permitting the water to come to the top before removing from the vessel of water, is apt to make the soil soggy and cause seed to rot, or green mold to form on the surface. Still another method is the use of a good atomizer, which throws a fine, concentrated spray and will never wash out any seeds. P. L. W.
Michigan.

HARRY: "I understand Gertrude Gadalotte married a man who made a big fortune by a lucky speculation in soap. Grace: "Yes; and he disgraced her while they were on their honeymoon." Harry: "How did he do it?" Grace: "Gertrude wanted the other passengers to think an ocean voyage was an old story to them, when her husband, the first crack out of the box, pointed to a row of life preservers and asked the captain what was the idea of all the extra tires."—Life.

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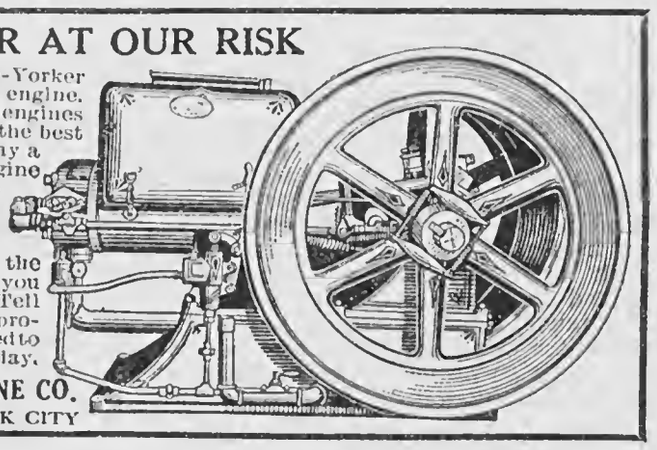

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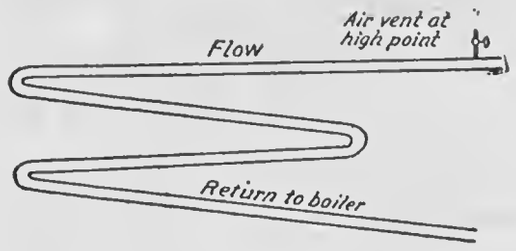
Greenhouse Construction for Small Place.

PART II.

Seven flow and seven return pipes would give ample heat for latitude of New York City, except for plants requiring high temperature. If the house is quite short, say 20 feet, two-inch pipe could be used, and each pipe could have a return bend on end and be carried back and forth several times through house, provided the fall was graduated at all points to return into boiler, as shown below. This method could be adopted in house 30 to 40 feet long also, as using return bends is much less work and expense than connecting three or four lines of pipe in a short house to headers, at flow and return end.

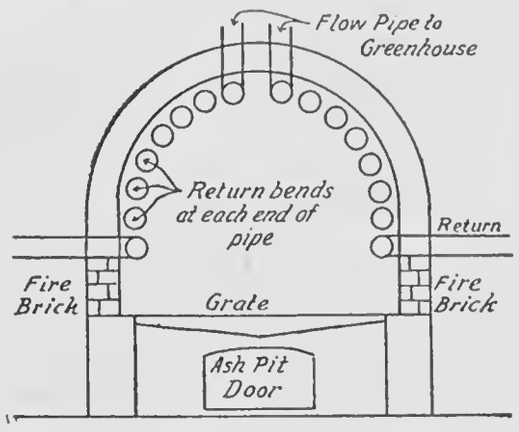
A number of different methods may be adapted for heating the water, depending on taste and desire of person building house. There are many different makes



FLOW AND RETURN PIPES.

of cast-iron heaters on the market that have unduly advertised virtues. We have had considerable direct experience with cast-iron boiler and have been observing performance of same for others for some years. The makers all claim many advantages, among which may be mentioned cost of handling in installing and making repairs; also economy is claimed. Regarding the latter the less said the better, as one of the best makes in the market recently heated a brick chimney so hot that the boiler shed of one of my neighbors burned down. In our own case the smoke pipe would get red hot. Others have told me of similar experiences. This, however, is under hard firing and if a cast-iron heater is much larger than actually required a fair degree of satisfaction may be attained. Another serious objection is the liability of sections to crack and put the heater out of business.

We heated two houses 24 feet wide by 256 feet long for several years by using a heater made of pipe coiled back and forth over a grate walled in with brick. This makes possibly the cheapest heater that it is possible to install, and if care is used in construction it will last a number of years and give satisfactory service. No particular method need be employed in installing the pipe, as I have known them to be used in many different ways. If it is possible to get a coil of 1¼ or 1½-inch pipe, 18 inches in diameter or larger, and of good length,

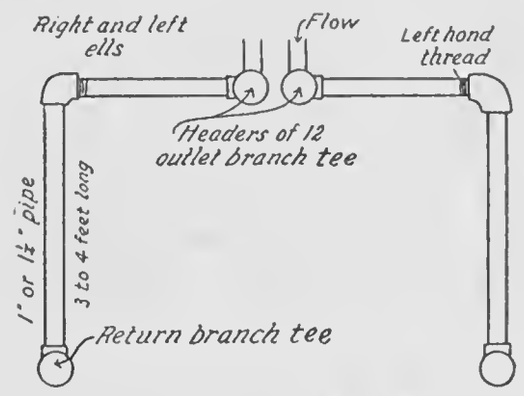


FURNACE ARRANGEMENTS.

that will be found as effective as any method. We have cut 1½-inch pipe 24 inches long and built up a square box coil, using malleable ells on same. We have also used pipe (two inches) eight feet long running back and forth over the fire (see above) on the inside of a brick arch having the lower pipe about 12 inches from grate, and top of arch 30 or more inches from grate, using 20 pieces of two-inch pipe in heater in four separate coils of five pipes each. A heater of this size would heat a house 30 x125 to 150 feet long.

Another method in use here, and possibly the most durable of this type heater is to use a long branch tee at bottom and top, each having 12 or more outlets from one-inch or 1¼-inch pipe, as shown at right. The center space of this heater contains a square box coil made up of short pieces of pipe and ells. In constructing these heaters care must be exercised to have only *guaranteed wrought iron pipe. Do not accept merchant or steel pipe under any circumstances.* Use only malleable fittings, and after you enter brick work at bottom *be sure the pipes are constantly ascending, as any pocket to retain air will prove fatal to success.*

A safe guide to go by is to use one foot of pipe in heater to about 15 in the greenhouse, using same size pipe in each place. Do not think that the closer you get the pipe to the fire the better, as by this method no combustion space is allowed, and this is a very important



ANOTHER PIPE ARRANGEMENT.

item in economical fuel consumption, as the gases of combustion give off nearly as much heat as the radiant heat of the fire, provided they are ignited. A temperature of practically 1700 deg. is necessary to accomplish this ignition, and where the cold water surfaces are too close to the fire, the gases are chilled and pass out of chimney in this manner, causing the loss of nearly one-half the heat value of the coal. The most economical boiler tested to this date has a distance of 35 feet from grate to top of fireplace, so don't be afraid to make an arch three or four feet high. These suggestions are merely for the person who does not care to spend much money on a heater. The man who can afford it would best buy a small tubular boiler or a special greenhouse boiler of wrought iron construction, of which there are several in the market.

If a pipe-constructed heater is used additional economy could be obtained by running the chimney a short distance through the house in the form of an iron or terra cotta pipe, as it will throw out nearly as much heat as the cast-iron boiler. Small second-hand tubular boilers can be quite often obtained at low prices, that will give excellent service as greenhouse heaters, and wherever such boilers can be had better try to get one rather than use a cast-iron boiler or a pipe heater. ELMER J. WEAVER.

Intensive Hayfield.

I am anxious to make a good crop of some good hay suitable for Winter feeding of our Jersey cow, and would prefer it to be clover hay with possibly a little Timothy if necessary, so we can also feed our horse the same. Would you advise me the best course to pursue as to preparation, fertilizing and variety and amount of seed to use in an acre to get the best result? Our land is light and sandy, leachy and feels a drought very severely, so much so that Timothy is very hard to raise. E. J. W.
Barrington, R. I.

We should start with the clover this Spring. Fit the land as early as possible, and sow either one bushel of beardless barley per acre, or about half the usual seeding of Canada peas and oats. In either event seed on each acre six quarts of Red and Alsike clover. Cut the barley or the oats and peas when they are fit for hay, and let the clover seed come on. A thick seeding of oats and peas will not be likely to give you a good clover stand. The thin seeding of oats and peas will give you more forage, but the beardless barley will make a better nurse crop for the clover.

"CONDUCTOR, can you tell me how that brakeman lost his finger?" asked the inquisitive woman. "He seems to be a very nice fellow. It is a pity he should be crippled." "That's just it, mum. He is a good fellow. He is so obliging that he wore his finger off pointing out the scenery along the line."—Chicago News.

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Hope Farm Notes

HOPE FARM SCRUBS.—Our scrub hens are still in the ring at the Storrs laying contest. I cannot say that they are laying any rings around the world's record, but they are not tail-enders yet. Here we have a word from a chicken man:

"I hope the Hope Farm man will not let them bluff him out of that egg contest." L. F. G.
Ohio.

Well, gentlemen, I know what is promised to the boaster and the haughty spirit, yet I feel disposed to say that when they bluff the Hope Farm man out of a contest there will not be any contest left. For some reason my scrubs have aroused the ire of many otherwise good-natured hen men. As one good friend puts it:

"The entire country is laughing at you."

Well, sir, I never did expect to become a national character, as this statement would indicate. These 66-cent scrubs seem to be putting me up into the hall of fame. I do not deserve the honor. For it is an honor to provide amusement for the nation. This has been a hard and tedious Winter—full of trouble and gloom to many. If we could only gather the statistics of "grouches" we should find that there is a larger crop this Winter than ever before. Good, honest laughter kills off a "grouch" faster than lime-sulphur destroys the scale. If the entire nation is laughing at my scrubs they have done far more for the world than Tom Barron's Wyandottes. True, those Wyandottes have laid more eggs, but my scrubs have laid out more "grouches" by making more people laugh—while eggs would only increase the "grouch." Oh, no; if you want to laugh some man out of a contest you would better try it on some other character. The Hope Farm man has been laughed at for 40 years or more. He has become immune, and the scrubs will not mind so long as they have plenty of food and a nest. These early laughs are something like a tomato plant which has been fed on too much nitrogen. It makes a fine growth but it has a hard time when drought comes. The time to laugh in this laying contest will be on the second day of next November when the contest ends. That will be the time to let out a fine, long ha, ha, ha!

In this contest there are 82 pens, or 820 birds in all. I understand that 790 of these birds are purebred specimens, probably averaging at least $5 each in value. My scrubs cost 66 cents each. If any of these happy gentlemen who are laughing so merrily at my scrubs feel that my pen will end No. 82 in the final count, or that my 10 birds will be last of all in individual records, they can have a chance to make some charitable organization richer for their laughter. I have a lot of men tell me their hens are doing far better than the birds in this contest. My own hens at home are outlaying the scrubs at Storrs. But why do not these gentlemen with such wonderful hens get out into the limelight and show Tom Barron how to do it? When a man goes to buy a superior cow he wants to know what that cow's mother has done—not what the owner says she has done, but a certified, cold-blooded trial by some official who knows his business. In much the same way a record at one of the laying contests is worth far more than any private record, no matter how carefully made. Some of these gentlemen who are growing fat and good-natured laughing at my scrubs could not be driven at the mouth of a cannon to put 10 of their birds right up against the real thing at a poultry contest. Their wives and children might well contribute a purse to erect a monument to the Hope Farm scrubs, for father's laughter at this scrub performance has probably made him too good-natured to scold and find fault.

Then comes another man, a first-class breeder, who tells me my birds are not scrubs at all. He says most of them look like culls—the poorest specimens of purebred stock rejected for their evident defects. He cannot see what good can ever come from entering such poor culls. "Good" is only a result—often not to be observed until years have passed. There would be mighty little "good" in the world if it did not mean something which must be worked out through struggle and opposition and ridicule. Only those with clear, long-sighted vision can see the good which may follow humble things. If these birds of mine are not "scrubs" I do not know where to get true specimens. The dictionary tells us that a scrub is "a small, mean, inferior or worthless thing. * * * an inferior, worthless or worn-out animal * * * a runt," etc. If these birds are culls so much the better, for they are then purebred "scrubs," and their records will show that something besides "pure blood" is needed in a hen. I am ready to pay some good judge to "score" these birds, both for the show ring and for the "utility" standard. In fact, I will do anything to show that the Hope Farm scrubs represent a serious effort to learn something about poultry which the experts have not yet told us.

You will see by this time that the Hope Farm man will stand by his friends. The Lord loveth a cheerful loser. I consider that the "bulldog" element is one of the most important factors in human life. The dog haters may curse all dogs as useless pests and worthless nuisances, and I would walk a long distance with them, yet I think one great moral lesson of human life was framed in the ugly jaw and teeth of a bulldog. The unrelenting, unreasoning, undaunted ability of the bulldog to hang on with his fearful grip is the one thing which has made most of the human success that I know of. The yellow quality which takes the starch or spring out of those jaws under pain or pressure is the thing which spells failure. Perhaps not all the Hope Farm defenders are bulldogs. The four little boys built a big snow fort on the lawn near the road. Then they played that the "enemy" was coming, and that they must defend the home. The "enemy" turned out to be the nearest neighbor, and as he passed on the road he received a volley from the fort. Then the enemy charged. There was no bulldog behind the breastworks, but one redhead and three towheads ran in four different directions, while the neighbor very properly kicked the fort over and trampled on the ruins. These boys will pick up the bulldog later on. In the meantime, if anyone expects to kick those scrubs or "culls" out of the ring he must prepare for some sore feet.

Just what have my scrubs done to be laughed at? At the end of the eighteenth week there were four pens of pure bloods below them. During that week the scrubs laid 26 eggs, with 16 pens of pure bloods trailing behind. Why not laugh at these pure bloods? During the month of February they beat out eight pens of pure bloods. My Red scrub laid 14 eggs in February. There are 820 hens in the contest. Of these 576 birds laid fewer eggs than my Red scrub, and 32 tied her score. She beat four and tied one of Tom Barron's Wyandottes, and beat seven and tied one of his Leghorns for the month. During that month 125 birds never laid a single egg. There are 150 purebred Reds in this contest, and 98 of them failed to beat my Red scrub for February. Let's have a good laugh while we can. H. W. C.

Second-Crop Turnips.

Corn is not the only crop that we can grow, and I was a bit amused at your comment some months ago in regard to the growing of turnips as a second crop, being a new thing in Kansas. It is in truth a very old practice here in the Kaw Valley. I remember well having hauled many a 40 or 50-bushel load to the Kansas City market when I was but a boy and in the Fall and Winter of 1889 another young man and I, sold on the same market 13 carloads, about 450 bushels to the car. These turnips were grown by Edwin Taylor, and were all second crop, being grown after the early potatoes had been dug. W. E. K.
Lawrence, Kans.

Value of Ashes.

How valuable are ashes from beech and maple on land? I expect to seed to grass in the Spring. A. J. J.

A ton of such ashes should contain 100 pounds of potash, 35 of phosphoric acid and 600 of lime. There is no nitrogen. Three parts of ashes to one part fine bone should give a fair fertilizer.

OLD FRIEND: "What! Another marriage? I thought you told me the light of your life had gone out." Widower: "Yes; but I'm going to strike another match."—Melbourne Australasian.

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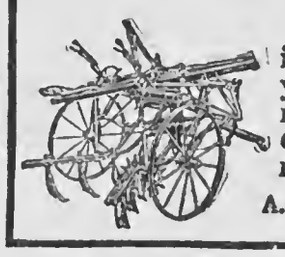

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Ruralisms

Transplanting Holly.

Will you advise me as to the best method to pursue in transplanting the holly? Which is the better time to move the small wild trees, Spring or Fall?
Nokesville, Va. J. M.

Holly may be transplanted either in the early Fall, when the young wood has almost ripened, or in Spring, just before the plant starts into new growth. Small shrubs always stand a better chance than large ones, especially in the hands of inexperienced planters, but hollies of the larger size mentioned are moved satisfactorily if carefully done. When transplanted the leaves should be stripped off; this is imperative if there is any exposure, and the plant should be well cut back. Keep the roots well covered by a ball of earth so that they do not dry out.

Hardy Phlox; Japanese Iris; Shrub Propagation.

1. Will you give me a list of 20 of the very best varieties of hardy Phlox and 20 best varieties Japanese Iris? I want in each case very largest, finest flowers in greatest possible range of colors. 2. Can the hardy shrubs such as Philadelphus, Hydrangea, Diervilla, Spiræ, Viburnum and lilac be propagated by hardwood cuttings similar to the currant? If not, how best and easiest? M. S. P.
Massachusetts.

The following are all fine varieties of Phlox, standard sorts. Of course the list could be greatly amplified: Caran d' Ache, bright rosy carmine; Coquelicot, flaming red; Henri Murger, pure white, carmine eye; Jeanne d' Arc, pure white, dwarf; Albion, pure white, red eye; Le Vengeur, bright carmine; Mrs. Jenkins, pure white, early; Belvidere, salmon pink; Richard Wallace, white with violet eye; Pacha, vivid pink, dwarf; Siebold, vermilion with crimson eye; Vesuvius, red with purplish eye; Asia, mauve with carmine eye; Europa, white, carmine eye; Frau Anton Buchner, white, very fine, dwarf; Gefion, pale pink, carmine eye; Rheinlander, salmon pink, claret eye; W. C. Egan, lilac, red eye, very fine; Wanadis, white mottled violet, purple eye; Widar, reddish violet, white center. All these are good, but there are many more equally desirable.

It is not easy to give an accurate list of Japanese Iris under name. Many have been imported under Japanese names and renamed here; others have appeared under more than one Japanese name in the original importations. All the dealers who handle them carry worthy sorts. The list is given under Japanese names, we believe, of original importation: Six-petalled or double sorts, Yosimo, white veined with violet; Samidare, white veined with deep blue; Tokyo, pure white; Koki-no-iro, deep purple veined with white; Renjo-no-toma, light violet veined white; Uchiu, vivid reddish purple; Kagaribi, white, marbled with vivid blue; Rish-no-tomi, white veined with violet; Hosokawa, purple veined white; Sano-watashi, white with yellow center. Single three-petalled sorts—Shippo, lilac with purple veins; Ariake, violet marbled with white; Sakata, lavender and blue, with deeper veins; Kigan-no-misao, pure white, late; Yedo-Kagami, mauve veined with white; Shino-maki, deep royal purple; Sherataki, silvery white edged pale violet; See-o-bo, white, slightly marked with purple; Meiran, white, densely margined purple; Shuchinkwa, reddish purple, veined white.

2. Diervilla, Philadelphus and Spiræa may be grown from cuttings of mature wood, also lilac. The Diervilla is quite easily grown from these cuttings, made in Winter, and planted in Spring. Layers are often used for Philadelphus. It is generally considered that green cuttings of Spiræa give better plants, taken in Summer and started in a frame, but hard wood or layers may be used. Hydrangea paniculata grandiflora is usually propagated by green cuttings taken in June and started under glass; layers are also employed. Layers give best results with Viburnums, or green cuttings taken in Summer and handled under glass. Layers, suckers and root-cuttings of lilac are employed, as well as hard wood, and green cuttings in Summer, set in frames. Layers are very satisfactory and manageable where indicated in cases where glass is not at hand.

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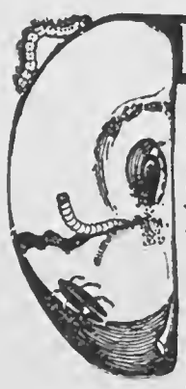
You should know more about this wonderful machine. Our catalogue shows twenty kinds of hand and power sprayers.

The HARDIE MFG. CO., Hudson, Mich.



Kill These Pests

that ruin your fruit and destroy your trees, vines and plants. Get rid of scale, fungi and worms by spraying. **Stahl's Treatise on Orchard Enemies** (sent free) will tell you how to do it with easy working—and efficient—

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Send $3 and we will ship outfit complete. Try 10 days and if found O. K. pay balance. If not return and we'll refund your money. Write today

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SPRAYERS Are a Necessity and a Benefit.

Outside Pumps. Bronze Ball Valves. Hemp Packing. Easy to get at.

They save your crop, increase the yield and improve the quality. Our Spray Calendar shows when to spray and what materials to use. Our "Spray" booklet shows 70 combinations of

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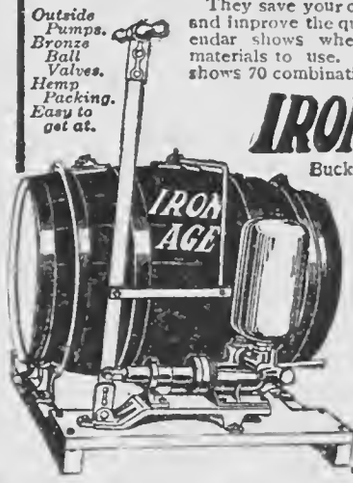

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Nozzle cleaned while working. Spray starts or stops instantly. 10 styles. Write now for special offer. Agents wanted.

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The Morrill & Morley Way

The ECLIPSE Spray Pump has been in service 20 years. Durable, efficient, economical. The U. S. Department of Agriculture uses it, and you can make it profitable in your orchard, vineyard or potato field. Catalog sent free, on request.

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Brown's Auto Spray

300,000 use these wonderful sprayers to rid fields, fruit trees, gardens of blight, disease and insects—to make all produce big. Auto Spray No. 1—Capacity 4 Gallons. Auto Pop Nozzle throws from fine mist to drenching stream. Does not clog. 40 styles and sizes of Hand and Power Outfits. Large sprayers fitted with

Non-Clog Atomic Nozzle

only nozzle that will spray **any** solution for days without clogging. Fits any make of sprayer. Write for valuable **Spraying Guide Free.**

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SPRAY We Make Sprayers For Everybody

Bucket, Barrel, 4-Row Potato Sprayers, Power Orchard Rigs, etc. World's best line. All latest devices. Mechanical liquid agitation and strainer cleaning. Tell us your needs—let us advise you. Catalog with spray formulas and directions free. Address

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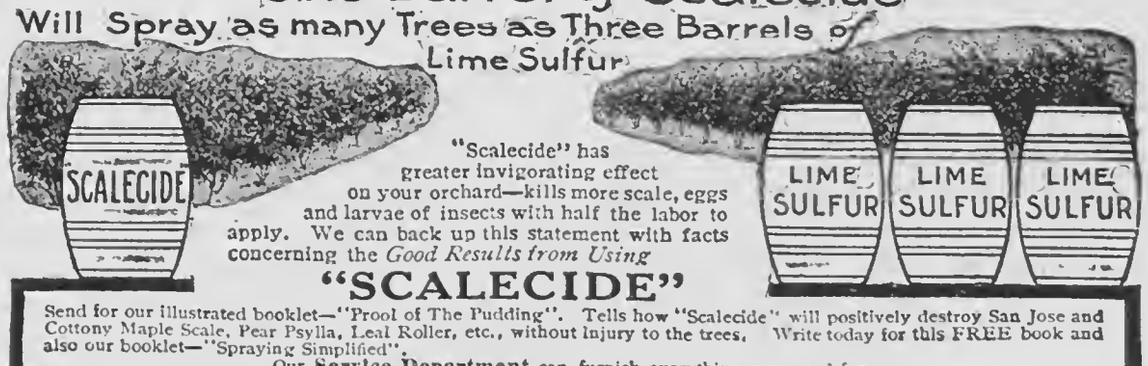
One Barrel of "Scalecide" Will Spray as many Trees as Three Barrels of Lime Sulfur



"Scalecide" has greater invigorating effect on your orchard—kills more scale, eggs and larvae of insects with half the labor to apply. We can back up this statement with facts concerning the *Good Results from Using*

"SCALECIDE"

Send for our illustrated booklet—"Proof of The Pudding". Tells how "Scalecide" will positively destroy San Jose and Cottony Maple Scale, Pear Psylla, Leaf Roller, etc., without injury to the trees. Write today for this FREE book and also our booklet—"Spraying Simplified".

Our **Service Department** can furnish everything you need for the orchard at prices which save you money. Tell us your needs.

We are World Distributors for **VREELAND'S "ELECTRO" SPRAY CHEMICALS** and **Arsenate of Lead Powder** (33 per cent), which, used wet or dry, has no equal in strength or texture. Avoid Imitations.

B. G. PRATT CO., M'f'g Chemists Dept. N 50 Church Street, New York City

PERFECT FRUIT IS ASSURED
If you Spray with
SWIFT'S
ARSENATE OF LEAD
Highest Quality—the Pioneer Brand.
Not always lowest in price but cheapest in the end;—used the world over.
FOR SALE BY LEADING DEALERS EVERYWHERE
MERRIMAC CHEMICAL CO.
Send for Apple Book. 34 Broad Street, Boston, Mass.

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
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WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

IF you live in New York State take your pen in hand this minute and write a note to your member of the Assembly and to Hon. Thaddeus C. Sweet, Speaker of the Assembly, Albany, N. Y., and tell them you are in favor of the Food and Market bill introduced by Hon. A. E. Smith. Tell them you regard it the most important piece of legislation proposed in your lifetime, and request them to help secure its passage at this session of the Legislature. You have not a minute to spare. The Legislature adjourns March 27. Write these notes or telegraph at once.

*

SOME of the worst hold-ups in the fertilizer trade seem to be started by the dealers in "patent" limes. Farmers are told all sorts of stories about the potash and phosphoric acid which such lime contains—the object being to make them think a tremendous bargain is offered. In one case $9 per ton was charged for a "phosphate lime." A farmer who received this "literature" found that he could obtain good limestone of high quality close at home for about $2.50 per ton, and could buy for one dollar more all the phosphoric acid found in a ton of the remarkable stuff which the dealers wanted to sell him.

*

HERE is the latest news from our old friend Luther Burbank:

Perhaps the most remarkable cradle ever provided for a new plant species is the armored bank vault in which the latest creation of Luther Burbank, the plant wizard, are being guarded against loss or theft until Spring planting time. Accounted more precious than diamonds, these seeds—less than a peck—are watched with all the care of priceless gems. They represent the scientific investigation and experimenting of a quarter of a century by Burbank, holding out promise of great commercial value.

We doubt if Mr. Burbank will take honest or well-meant advice from us—but here it is. Take that group of hot-air producers who made the atmosphere tremble over the Wonderberry and lock them in with those "priceless seeds." Shut off the air and fumigate with bisulphide of carbon. This will destroy any bugs on the seeds.

*

IN the February 14th issue reference was made to the employers' liability law in Connecticut and New York. I would like to know about the Massachusetts law in regard to farm labor. I have been informed farmers were liable employing five or more laborers, and others have told me farmers were exempt. R. B. H.
Massachusetts.

In Masachusetts this law exempts farm help and domestic servants from its provisions. This is specifically done as follows:

"The provisions of the eight preceding sections shall not apply to injuries caused to domestic servants or farm laborers by fellow employees."

We can find nothing in the law that would indicate the number of laborers employed by a farmer would have anything to do with the degree of his liability.

*

FARM MANAGEMENT.—It is said that during the past few years there has been developed a science of managing the farm on true business principles. Let this not be confined to outdoor farm operations, but let it take in the household work. In the next magazine number of Woman and Home we shall begin the publication of the best study of a farmhouse interior—arranged for the business of housekeeping—that has ever been printed. We say this advisedly, and all know how careful we are to refrain from making rash promises. The article is not by any sanitary expert or theorist, but by a farmer's wife, who took a poorly arranged and rather rambling farmhouse and slowly made it over, so that a day's inside work is a pleasant task rather than a long, hard journey.

THE New York State Agricultural Department is trying to find places on farms for worthy men now out of work in town and city. The Department is going at this work in a sensible way. Only a part of these city men could ever give satisfaction as farm hands. They are the ones who at some time of their lives have done farm work, but who do not fit into city conditions. They would not prove expert farm helpers at once, but if the farmer who hires them will be patient and fair some of these men will make good. The genuine tramp or "bum" should not be sent to the farm at all. He will prove a menace and a disappointment, and the city man who knows nothing of farming would be of no particular value until he learned how to work. The department is coöperating with priests, ministers and church organizations seeking to find useful and honest men for this farm work. It is a good movement, but a farmer should not expect too much from these helpers. Give them a fair chance. While they cannot expect large wages to begin with, they are entitled to good treatment and patient training. It will be better for the Department to send out a few good helpers rather than a crowd of worthless fellows, who would only drift back to the city.

*

IF you have ever tried to transfer a piece of real estate you will appreciate the article by Dr. Price on the first page. Of all the various forms of legal graft none is more galling or unnecessary than the fees for "searching" the ownership records of real estate. We have paid $25 for such a "search" of a small property when all the lawyers had to do was to go to their safe and look at a paper which they drew up two years before. In some States the "title guarantee" companies have made life a nightmare to the ordinary owner of real estate. These companies pick flaws in titles on the merest technicalities, and frighten the buyer into holding up the sale until the owner "satisfies" the company—which means paying a legal bonus to the lawyers. We know of cases where these companies have interfered with a sale on childish reasons, and caused trouble and loss to people not accustomed to doing business. The Ohio law will enable the real estate owner to obtain a certificate from the State which will go with the title upon a transfer of the property. When such a title is once registered the so-called "search" will be unnecessary. Thus the law cuts out a useless and expensive legal process which modern society has long outgrown and which should have been given up long ago.

*

ON the next page will be found a statement of the bill to create a Food and Market Commission for New York State. Of all the suggestions for helpful agricultural legislation thus far advanced none has been so vital and far-sighted as this. The suggestion gets down to the heart of the trouble which our farmers have endured for years. The 35-cent dollar issue dwarfs all others in importance. This question of the division of the consumer's dollar into 65 cents for the handlers and 35 cents for the consumers is the greatest financial issue of the age. It is also the great moral issue of American agriculture, for the present system of division is unjust and wicked. The longer it goes on the worse it becomes, for the 65 cents which represent the handler's share rarely if ever come back to the farm. This unjust share accumulates in the towns and cities, leaving the nation in the condition of a man constantly threatened with heart trouble. The greatest need of our national life to-day is some fair and honest system which will bring about a fairer distribution of the consumer's dollar. Give the producer a fairer share (for example, 50 cents instead of 35), and the extra money flows back to the country. There it will be spent to satisfy legitimate demands or to purchase necessities, giving the most wonderful impetus to trade that America has ever known. The country will take on new industrial life. Men and women, feeling that they receive a fairer recompense for their toil, will take new interest and independence and view life with broader and happier eyes. If you need confirmation of this statement go into the sections here and there where farmers have been able to standardize their products, and thus grow and sell them to the best advantage. For example, the fruit-growing districts in Western New York. These growers obtain their 50-cent dollar and more largely because they have taken advantage of natural conditions, but partly because their increase of prosperity has enabled them to combine and standardize their products. The result is that in these sections we find a class of free, intelligent, thinking, prosperous farmers, who are changing the history of their sections in the most hopeful way. Let any man think what would follow if farmers in all sections of the State could feel this same hopeful spirit. There is just one thing that will give it—the feeling that they receive a fairer share of the final price of their products. Thus this 35-cent dollar issue lies at the root of the matter. We may talk "two blades of grass" until we are green in the face, but one strong man in the market place showing how to get a fair price for one blade of hay will do us more good than 1,000 men teaching the "two blades of grass" theory. As this question directly and indirectly affects every person in the State it is a matter for the State to take up. It will require the brains and the energy of a great business man—as large a man in his way as any who ever governed the State. The principle of the proposed law is sound and the time is ripe to put it into practice. The time is short, for the Legislature will adjourn soon; therefore we must act at once. THE R. N.-Y. never asks its friends to get busy with the Legislature unless there is some supreme need for it. *That need has now come. Write your Senator and Assemblyman at once and urge them to push this Market Commission bill through!*

*

ALL this talk about lime means largely that farmers are trying to fit their land for crops not naturally suited to them. It is now well known that Alfalfa, Red clover, Timothy and similar crops demand a "sweet" or alkaline soil in order to grow properly. On many of our Eastern soils the lime supply has been greatly reduced. Such soils were not limestone to begin with, and many years of cultivation have removed much of the original lime. Thus only poor crops of clover or Alfalfa can be obtained from these acid soils without heavy applications of lime. The great advertisement which Alfalfa has received in late years is greatly responsible for the lime craze. We call it a "craze" because that is the proper name for a practice or a theory, useful within reasonable limits, when it is carried to unreasonable extremes. Attempting to grow clover or Alfalfa on very acid soils is an unnatural process at best. We may easily come to a point where the large amount of lime required to sweeten and maintain these lime-loving plants may cost more than it brings in. We know of cases where in their efforts to grow wheat, Alfalfa and Red clover farmers have used so much lime that these crops cost too much. These are cases where there is a long haul by railroad from the limekiln, and which makes the lime cost too much for practical purposes. In such cases reason would show us that it is not good policy to try to naturalize these crops on an acid soil. It is far better business to grow those crops which do not need so much lime, but which will grow and give a good yield where the ground is sour. Rye, buckwheat and corn grains will thrive on sour soils. Soy beans, cow peas and Alsike clover are legumes which gain nitrogen from the air, yet make a fair crop under acid soil conditions. Red-top will make a good growth where Timothy fails. There are thousands of localities in the East where these acid-enduring plants are far better adapted to our soils than the lime-loving wheat, Alfalfa or clover. We believe in lime, and use it on our farm yearly, but it should be bought and used with judgment, and in many cases the acid-soil plants will pay best.

BREVITIES.

RAISE the weeds first, and then raze them with a fine-toothed or dragging tool—while the weeds are small.

IT is claimed that English sparrows are good to eat—they make a good "pie." No, thank you; others may have o r share.

NEW YORK'S big snowstorm, February 14, cost the city $480,000 for snow removal, employing 16,000 men and 5,000 horses.

THE best late Summer garden peas we have had are the dwarf varieties. Let the early crop ripen and use this ripened seed for August planting.

THERE seems to be great interest in the sunflower crop. Without question there is a demand for the dry seed. We have had several good articles about it.

IN these days of autos and rapid travel there is no better advertisement for the farm than a good lawn and well-kept flower garden. This pays now that direct dealing with consumers is on.

MANY people write about seeding pasture crops in old orchards for hogs or sheep. Among other things they should plant several good fences. By dividing such orchards, they may have one crop growing while the stock eat up another.

SOME of our readers say that the eggs come out of the water-glass solution in bad condition—stale or even rotten! Before you blame the water-glass be sure the eggs were clean and fresh when they went in. The "glass" cannot cure a bad egg. It can only hold a perfectly fresh egg in fair condition.

PACKING 100 PER CENT. APPLES.

"FACING" THE BARRELS.—The article by Harry G. Chapin on page 251 should be read carefully by every fruit grower, especially those who are now trying to put up a first-class pack in a commercial way. It is evident that Mr. Chapin has never packed apples, if he really means what he says. The resolution passed by the Western New York Horticultural Society was bad enough, and the apple men who voted for it surely could not have stopped to consider what effect it would have on their business. If the law proposed by Mr. Chapin were to go into effect the only way we could comply with it would be to face every barrel with the poorest and smallest apples in that grade. If we wanted to keep in the apple business we should have to pack all our fancy apples in boxes, and sell the rest in bulk to the canneries and evaporators. There would be thousands of bushels of perfect apples which were of poor color which could not be sold to the people who want to buy them, because it would be too much trouble to pack them in so many grades. In our own case it would be necessary to put up at least six grades of perfect apples instead of the three we pack at present. Professor Wilson made similar suggestions at the meeting of the New York State Fruit Growers' Association, but it seems to me that both he and Mr. Chapin are laboring under a misapprehension. Prof. Wilson made the point that it is dishonest to face a barrel with apples better in any way than the average of those in the rest of the barrel. There are in the world varying opinions in regard to honesty and dishonesty, and each one thinks he is right, but it seems to me, as a fruit grower, that it is no more dishonest to face a barrel of apples with a single layer of well-colored apples not larger than some others in the barrel, if the size variation in the grade is not too great, than to face a box of dried peaches with a single layer of perfect pieces. Personally I should buy the well-faced barrel in preference to the unfaced one or the poorly faced one, and pay a premium for the facing even if I knew that the other barrels contained just as many perfect apples. I think most persons would do the same, just as one would buy the most attractive package of any other food material.

UNIFORM SIZING.—In our packing house we are trying to make as nearly perfect a pack of apples as possible, *but we are not packing 100 per cent apples*, and I do not believe there is a grower in New York State who is. Our apples are graded to size by the best machine we could get, and under such conditions that practically all the imperfect fruit is removed and sold as culls, and there is practically no variation in average size and quality from end to end of the barrel. The smallest apples are as likely to be directly under the face as anywhere in the barrel, but we face with well-colored fruit picked out as the apples are being run. We sort into three size grades, 2¼-2½ inches, 2½-3 inches, and over three inches in diameter. In 1912 we faced the small apples with a single layer of 2½-inch apples. That is, we made three rings around the face and put one apple in the center. The next size we faced with two rings around and four in the center, or apples just under three inches. The largest grade was faced with the largest apples we could get, provided they were not too large to make two rings around and one apple in the center. In some cases we had to put two or three apples in the center of the face of this grade. Theoretically, this the best way to face, but in 1913, at the earnest solicitation of the men to whom we sell our crop, we increased the size of the apples in the face, putting two rings and four on the smallest, and two rings and three on the intermediate grade. This pleases the buyers better, although we feel that there is too much discrepancy between barrel and face in the smallest grade. If the law proposed by the resolution adopted at Rochester should be put in force it would be necessary to face our smallest apples with 2¼ inch, our main crop with 2½ inch, and the largest with three-inch apples. If, in addition, Mr. Chapin's suggestion were followed it would be necessary to use also the poorest colored apples we could get. In other words, Mr. Chapin's idea is to make our package as unattractive as possible. This would be to the advantage of the city man for a short time, for the price of apples would go down to such an extent that many growers would become discouraged, but when the acreage had become sufficiently reduced the price would soar. In the long run, it will benefit no one to prevent apple packers from putting on their barrels a face of attractive apples not larger than the largest in the rest of the barrel. There should not be more than a single layer of this face, and the apples immediately behind it or those at the tail of the barrel should be a fair sample of all the package contains.

PACKING FROM SORTER.—In our packing house, the apples as they come from the grader spouts are run directly into the faced barrels with no further sorting except that the barrelers are required to watch for imperfect apples that have escaped the sorters. The man who is putting the apples into the machine is required to mix up crates of large and small, green and bright apples as much as possible, and the machine mixes them up still more, so that the grades run very uniformly through the barrels and from barrel to barrel. Of course, occasions will arise where a group of trees will be loaded with small apples. If such a run is followed by the picking of some trees which have very few small fruits there will be some variation in the average size of the apples in different barrels of the same grade, but the variation will be less than might be expected, and would be very much less than would be the case if the grading were done by hand over an ordinary table, even by the most experienced men. This is the great value of a grading machine. A good man can grade apples as exactly or more exactly than the best machine, but he cannot do it as rapidly, and his No. 2 grade in large apples is very likely to be about as large as his No. 1 in small apples of the same variety. Moreover, a man who must bend all his energies to the task of sizing his apples cannot do so well at picking out imperfect ones.

We are trying to put up such a pack as we should like to buy, and for the good of the business we wish all our neighbors (that is, every apple grower in Western New York) were compelled to do the same, but we feel that such a law as is proposed by Mr. Chapin would be very unjust, and would be an especial burden on those of us who are trying to raise the quality of the Western New York pack.

ALFRED C. WEED.

Wayne County, N. Y.

A FOOD AND MARKET COMMISSION.

Far-sighted Legislation for New York.

OUTLINE OF THE PLAN.—The most comprehensive, and to our mind the most beneficial piece of farm legislation ever proposed in this State is embraced in a bill introduced in the Legislature last week for the creation of a Food and Market Commission for the State. The benefits of this measure are comprehensive because the work must help every person who consumes farm food products, as well as every person engaged in the production of them. The bill proposes to create a single-headed commission. The Commission is charged with the duty of helping to organize cooperative societies of producers and consumers, and to help establish and supervise local coöperative warehouses and markets for the assembling and grading of farm products, the supply of local trade and the shipping of the surplus to general markets. In addition the Commissioner is required to establish an auction market at points in the State deemed advisable and for this purpose he may acquire premises by lease, purchase or condemnation as required. When the market is so established he will publish a notice for the benefit of shippers and producers of farm food products. The products shipped to these auction markets will be sold by licensed auctioneers, bonded and licensed by the Commissioner. There is a provision that none but responsible and high-class men would be selected for this service. The auctioneers will be entitled to charge a small commission for the sale of the produce, and this commission will be regulated by the Commissioner on schedules previously published by the Commissioner. It is expected that ultimately the markets will be self-sustaining, but the bill carries an appropriation for initial expenses of the proposed department.

GRADING AND SELLING.—The Commissioner will also provide trained experts to inspect and determine the grade and condition of the produce as it is received. The commissioner is charged with the duty of providing a proper place and proper safeguards for the care and distribution of goods consigned to these auction markets, and if for any reason the auctioneer is unable to sell any portion of the product at public auction, or if he is unable to sell it at auction at satisfactory prices, he is authorized to so sell and distribute the unsold portion at private sale at the best prices obtainable, and in all cases a prompt return must be made to the shipper after deducting the auctioneer's commission and transportation charges. The Commissioner is also required to publish a daily bulletin giving the price of the preceding day's sales in all the Department markets of the State, and also giving advice as to the available supply for the farm products, and the demand for same in local as well as in foreign markets. The Department is also required to prepare bulletins from time to time on the best methods of sanitization, packing and transportation of farm products, and distribute such bulletins to consumers.

TRANSPORTATION.—The Department is also charged with the duty of investigating delays in transportation and to negotiate proceedings to prevent restraint of trade or unlawful combinations to fix prices. It shall, when notified by producers that food products produced within the State seem likely to spoil for a ready market, make such suggestions to such producers, and take such steps as may seem advisable to facilitate the distribution and sale of such products. There are penalties provided for violation of the law or for neglect of duty on the part of auctioneers, inspectors, or other employees of the department.

THE GOVERNOR'S MESSAGE.—Governor Glynn called the attention of the Legislature to this bill in a strong and vigorous special message, from which we quote the following extracts:

"Complaints have reached me from time to time that under present conditions consignees of farm goods frequently speculate in such goods to the disadvantage of both producer and consumer. That they misstate the condition of the goods when received, and that they return inadequate prices for the quality and grade of goods consigned to them. At present the farmer has no adequate means for redress.

"No honest consignee of farm produce has anything to fear from the measure I propose. Twenty years ago France established auction markets and provided for publicly licensed auctioneers. Although only a comparatively small percentage of produce sold by farmers throughout France now passes through the hands of these auctioneers, the fact that this method of selling is open to all producers and is comparatively free from all abuses and establishes prices in definite grades and measures, compels all produce dealers to treat their shippers with fairness. The system also eliminates the abuses of the present system where dishonest and unscrupulous dealers practice methods detrimental to the honest dealer. It avoids the temptation of an honest dealer to meet competition by following the questionable methods of an unscrupulous competitor as a means of self defense. Under the auction system if the commission man or dealer treats a shipper unfairly their business automatically passes into the hands of the licensed auctioneer.

A constant complaint from both producer and consumer is that dealers and many handlers of farm food products, prevent the regulation of price through the natural channel of supply and demand. A shortage of supply is invariably followed by an advance of prices to the consumer, but an increased supply does not result in so prompt a reduction of the price established in the time of scarcity, and frequently no reduction whatever is made. As a result of this policy the finest of food products often rot on the farms because the producer is not able to obtain enough for it in the wholesale markets to pay the cost of transportation and marketing, to say nothing of the cost of production, while the city consumer is obliged to pay for this identical kind of produce the high price demanded in season of such productions. Both producer and consumer are denied the benefit of the bountiful crop. Under the French system of auction markets this condition cannot exist and does not exist because the low price of a flush market stimulates the demand and increases consumption of the production and automatically increases the price given as the surplus disappears.

"I propose to give the farmers of New York the same measure of protection which licensed auctioneers afford the French markets. After much consideration and consultation with farmers and consumers, I have reached the conclusion that this can be best effected through a single-headed Food and Market Commission.

"What New York needs is a reliable meeting ground for the man who has produce to sell and the one who wants to buy; a place where they can make their exchanges through a reliable intermediary with a fair charge for the service, and a place where prices must follow the natural law of supply and demand. Such a market system can be provided by the measure I suggest, and I urge it upon the earnest consideration of the Legislature."

New York State News.

AYRSHIRE BREEDERS ORGANIZE.—The Northern New York Federation of Ayrshire Breeders is the name of a new organization of stockmen, formed at Camden, N. Y., on March 6. About 50 breeders were present from the four counties of Northern New York and an enthusiastic interest was manifested. The officers of the Federation are Geo. H. Converse of Woodville, president; A. F. Spooner of Richville, secretary-treasurer and a vice-president from each county. A representative breeder from about a dozen localities was appointed to look after the work of organization of local clubs. The Federation will meet annually in connection with the farmers' week, at Canton. A field meeting will be held some time in June.

BOOMING THE HOG.—And now the hog is to receive his due. Or to put it differently, an interest is to be stimulated in pork growing by the operation of a hog demonstration train on the New York Central which will run through some of the counties of the western part of the State beginning at Buffalo on March 16. H. P. Harpending of Dundee, will accompany the train and give talks and demonstrations on breeds, feeding, housing, etc. He will have assistants from the agricultural department. The train will consist of two coaches which will be fitted up for the purpose, one to be arranged for lantern slide talks and the other will carry the hogs used in the demonstrations. Two hour stops will be made at each point on the schedule.

WILL IT WORK?—Something decidedly new in the line of help for the farmer is proposed by Gov. Glynn and Commissioner Huson. They propose to help him to secure help. And in this way: A large number of the unemployed men and their families will be transported from New York City to points in the Mohawk Valley where the farmers of that section will have opportunity to hire them to work on their farms. The labor bureau of the Department of Agriculture is to bear the expenses of the transportation, as this expense has always been a deterring factor in inducing the farmer to secure his help through the bureau. If the plan works out as anticipated it is expected that at least two cars of laborers will be taken into the country every week during the Spring and as soon as the cars arrive at their destination farmers will be advised and can come and make their own arrangements with the men. The first carload will leave New York this week.

GOV. GLYNN AND THE COAL BILLS.—We think the Governor is on the right track in trying to get the coal supply of the various State institutions at a lower price. Up to this time each institution under control of the State has bought its own coal and at such prices as it could obtain, with the probability that no very close attention was paid to the said prices. It appears that the coal bill for the State institutions amounts to somewhere about $1,000,000 a year. The Governor is informed by an engineer who has had much experience in the purchase of coal in large quantities, that the State can save $200,000 a year on its coal bill. It is proposed to purchase the entire supply of one company and so eliminate all dealers' commissions and get the benefit of wholesale rates, which the Governor claims the State is not getting under the present methods. It is proposed to buy the coal at so much per heat unit, or on the British thermal heat unit basis. If a standard ton of coal contains or develops 14,000 heat units and the price per standard ton is $4, then whatever the coal develops, under sample test, will be paid for on the basis above named. If less than 14,000 units then the purchaser can claim an indemnity from the coal company for each thousand units less than the standard, and if it develops more than the 14,000 then the State shall pay for the extra thousands of heat units.

Woman and the Home

From Day to Day

THE PROMISE OF BREAD.

Out on the frozen uplands, underneath the snow and sleet,
In the bosom of the plowland sleeps the Promise of the Wheat;
With the ice for head and footstone, and a snowy shroud outspread
In the frost-locked tomb of Winter sleeps the Miracle of Bread!
With its hundred thousand reapers and its hundred thousand men,
And the click of guard and sickle and the flails that turn again,
And drover's shout, and snap of whips and creak of horses' tugs.
And a thin red line o' gingham girls that carry water jugs;
And yellow stalks and dagger beards that stab thro' cotton clothes,
And farmer boys a-shocking wheat in long and crooked rows,
And dust-veiled men on mountain stacks, whose pitchforks flash and gleam;
And thrashing engines shricking songs in syllables of steam,
And elevators painted red that lift their giant arms
And beckon to the Harvest God above the brooding farms.
And loaded trains that hasten forth, a hungry world to fill—
All sleeping just beneath the snow, out yonder on the hill!

—C. L. Edson in American Magazine.

*

A SIMPLE but very nourishing dish to take the place of meat is macaroni alla Campagnola. Partly cook in boiling salted water six ounces of macaroni; partly drain, and replace in the pan with four ounces of melted butter, four ounces of grated cheese, and four well-beaten eggs. Mix well, and stir over a slow fire for 15 minutes. Serve with grated cheese.

*

ONE of our readers recently asked for recipes for cooking Swiss chard, a useful vegetable which always finds a place in our own garden. We were somewhat surprised, on examining four standard cook books, and a fifth devoted entirely to vegetables, to find no mention of chard in any one of the five; so we gave the inquirer our own methods of using it, without any added wisdom from others. Chard is so easily grown and productive, that it ought always to find a place in the home garden. If any of our readers have further recipes for preparing it, we should like to hear of them. Indeed, we should like any new or little-known recipes for cooking vegetables. Such recipes are always useful to rural housekeepers, and anything that aids the consumption of garden products must result in ultimate benefit to the farm.

*

THE Youth's Companion tells how a young girl in Mississippi asked her brother for money to go to college. He said he could not afford it, and tossing her a nickel, added, "Unless you can go on that!"

The plucky little girl took the five-cent piece and bought some calico from which she made a bonnet that she sold for 25 cents. With this money she bought more calico and made more bonnets. After she had made several dollars in this way she determined to raise potatoes. She did all the work in the field except the plowing. The venture was a success and she had enough money to start to school. She did not stop work, however, and it is not surprising that a girl of so much determination was able to borrow enough money to supplement what she made. She was graduated with honor from the State College for Women, attended a medical school, still earning all her expenses, got her degree and is now a successful practicing physician in a large town in the South, and it all began with a nickel.

*

THE cable despatches reported a desperate fight between a cormorant and a lobster was watched by a crowd at Dollymount, near Dublin, Ireland, March 3. The cormorant dived into the water and rose with the lobster in its beak. The bird then descended rapidly and vigorously battered the lobster against a rock. The cormorant rose again and shook the lobster as a dog does a rat. Suddenly the cormorant began flapping its wings violently and struggled with the lobster until it became exhausted and fell dead on the beach. It was found that the lobster had gripped the cormorant's tongue and the bird died of suffocation. This recalls a similar battle which we witnessed, some years ago, between a fish-hawk or osprey and a large fish, the scene being a large tidal river near the New Jersey coast. The osprey, after its natural habit, made a sudden descent to strike a fish, but instead of rising at once with its prey, was seen to struggle violently at the surface of the water. There was a brief but terrific battle, amid clouds of spray and a boiling mass of foam, as the great wings of the osprey lashed the water. Viewed through a telescope, it could be seen that the bird had struck a fish too large for it to master, yet so securely that it could not release its talons. After a time the unlucky bird was seen floating with outstretched wings, evidently drowned by the struggles of its anticipated victim, which had apparently escaped, though it must have been severely lacerated by the osprey.

An Easter Dinner Party.

Soft greens and yellows are suggestive of Spring, and they make a charming color scheme for an Easter dinner table. One simple arrangement, in which these colors prevail, is gained in this way: Make a simple basket of white birch bark, and fill it with ferns, and as many blown egg-shells, tinted a pretty yellow, as there are to be members of the party. Fill each shell with small bonbons, and use them as favors at the close of the meal. In the middle of the table arrange a mat of the ferns, and place the basket in the centre. The ferns one finds in the woods in Winter are still fresh and green in April, and will do very nicely for this decoration.

If the dinner is to be at night, have the candle or lampshades of yellow and green crepe paper, and one long-stemmed yellow flower (jonquils are very appropriate) placed across each plate will make a very effective finish to the scheme. The flowers can be either of paper or the real blossoms, as the case may be, and, if one likes, they might take the place of the tinted egg-shells, especially if they can be the real jonquils. The lovely shades of these flowers would harmonize beautifully with the green of the ferns.

A menu for a dinner in Spring should be, like the decorations simple and dainty:

Cream of Corn Soup, Crackers
Olives, Pickles
Roast Loin of Lamb, Mint Jelly
Mashed Potatoes, Peas, Rolls
Easter Salad
Easter Custard, Maple Syrup Cake
Coffee

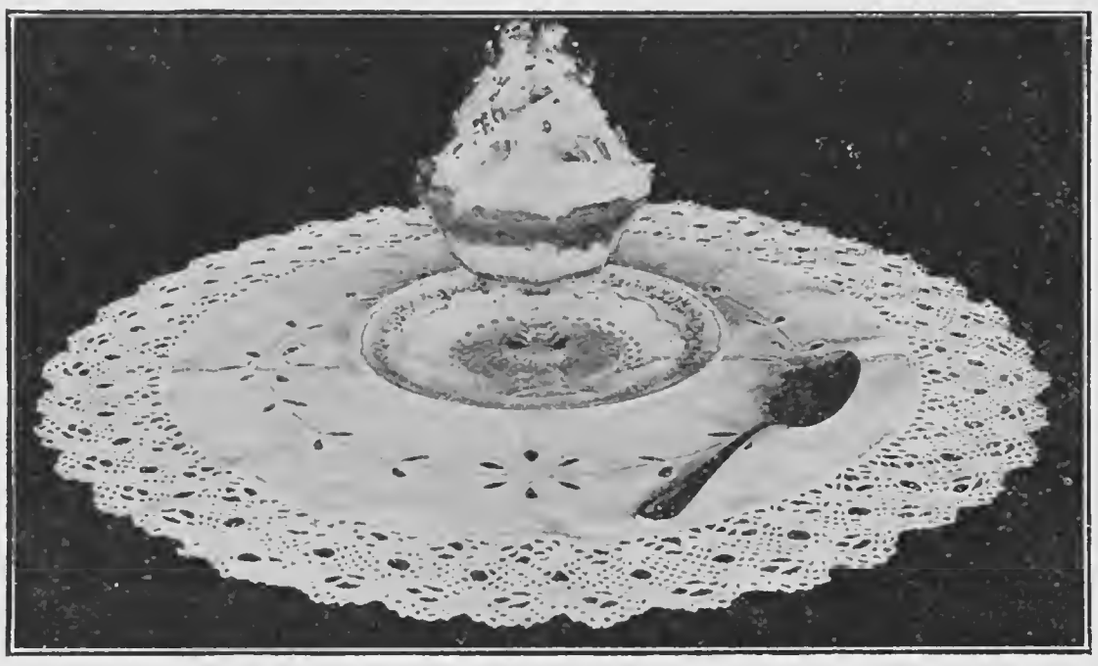
Make the soup in the usual way, using one quart of milk to one can of corn, then just before sending it to the table add a sprinkle of the yolk of a hard boiled egg, pressed through a potato ricer, and have the crackers toasted a delicate brown.

For the meat course select parts from two loins, scrape the bones between the ribs, as far as the lean meat, and trim off the backbone. Shape each piece in a semi-circle, having the ribs outside, and fasten the pieces together to form a crown. Trim the ends of bones uniformly, but do not leave them too long, then wrap a thin slice of salt pork around each, to prevent burning. Sprinkle the meat with salt and pepper, cover with buttered paper, and roast one and one-half hours. Before serving remove the pork from the bones, and fill the centre of the crown with hot, well seasoned peas, drained dry. For the mint jelly, make a plain unsweetened lemon jelly, and add enough mint infusion to flavor, and tint it.

By many an Easter meal is not considered complete without eggs in some form, so we will have ours served in a salad. Separate yolks and whites of six hard-boiled eggs. Chop the whites very fine, and mix with French salad dressing, then arrange on lettuce leaves; if lettuce is not easy to get, as is often the case in the country at this time of the year, the inner leaves of a crisp head of cabbage will answer the purpose very well. Force the yolks of eggs through the ricer, or a sieve, and pile on the centre of the whites, and moisten with the dressing. If you can get a green pepper, cut it in narrow strips, round and round, and garnish the top of the salad with it, this will carry out the color scheme used in the decorations admirably.

To make the maple syrup cake, beat two-thirds of a cup of butter to a cream, then add one cup of granulated sugar, and gradually four tablespoonfuls of maple syrup, and the beaten yolks of three eggs. Sift three cups of flour with four teaspoonfuls of baking powder and a little salt, and add to the first mixture, alternately, with two-thirds of a cup of water, then fold in the beaten whites of the eggs. Bake in two layers.

For the frosting and filling boil two cups of maple syrup until it spins a thread, then pour in a fine stream over the beaten whites of two eggs, beating constantly meanwhile. Return to the fire over hot water, and beat until the egg stiffens, then add one cup of finely chopped walnut meats.



EASTER CUSTARD WITH WHIPPED CREAM.

The dessert is simply an ordinary custard, flavored with almond extract, and baked in individual molds, chilled, and turned out in glass serving dishes, then piled high with sweetened whipped cream, and sprinkled with powdered macaroons. If the cream could be tinted a delicate green with vegetable coloring, which is quite harmless, it would give this simple dessert a still more festive appearance. ROSAMOND LAMPMAN.

Swiss Chard.

Will you give some recipes for cooking Swiss chard? MRS. S. P.

The first tender young leaves are boiled, drained dry and chopped, then served like spinach, seasoned with pepper, salt and butter. As the chard grows larger, the leaf is stripped from the stout mid-rib, and this only is cooked. It may be treated like asparagus, boiled in salted water and then dressed with cream sauce, or melted butter, pepper and salt. We prefer to cut it into inch lengths for boiling. The stalks may also be boiled and dressed with plain French salad dressing. Chard is very desirable in the home garden, as it is very productive, and any excess is greedily devoured by the hens.

PREVENTING BUTTER STICKING.—Pour boiling water over prints and then drop them into fresh buttermilk and let stand until butter has been washed. Then put prints into good clean cold water to wash off buttermilk then put into cold water and they are ready for use, and you will have no trouble from butter sticking to prints. A. C.

Mrs. Grumble—"I see by this paper that most of the States are passing laws to prevent women from working over eight hours a day. That applies to everybody except us, I guess. We country women can work all day and half the night and nobody cares."

Anty Drudge—"The way *you* work is enough to make anybody gloomy. But you can make your own eight-hour law if you want to. Just use Fels-Naptha Soap. It will get your work done for you in even less than eight hours every day, *even washday*."

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When ordering patterns always give number of pattern and measurement desired.

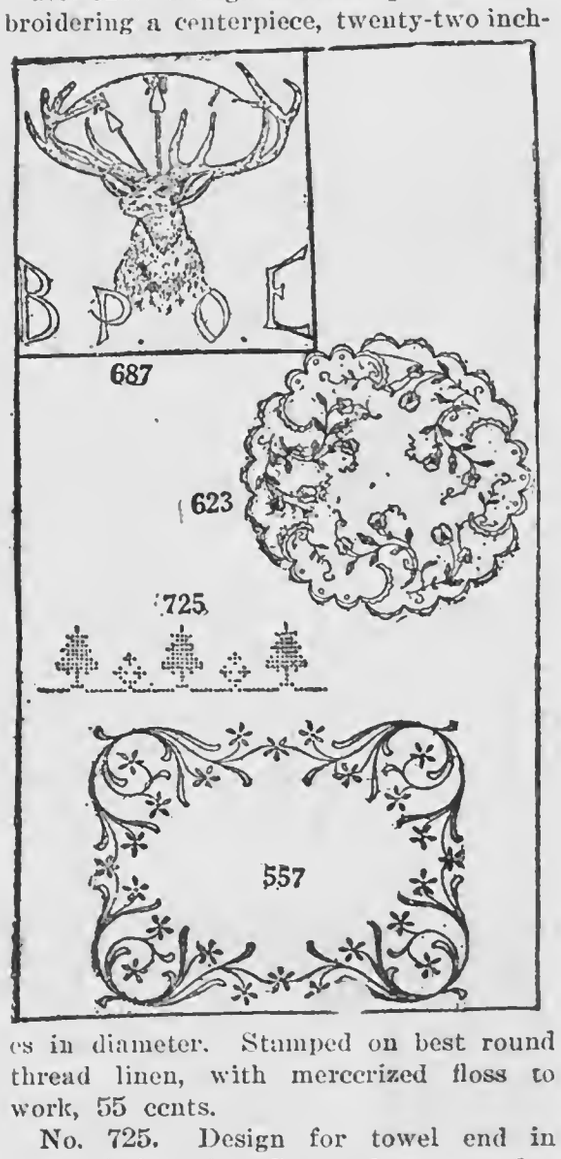
8184 Fancy blouse, 34 to 42 bust. 8192 Fancy blouse, 34 to 40 bust. 8176 Semi-princesse dress, 34 to 40 bust. 8183 One-piece peg top skirt, 22 to 32 waist.

8201 Two-piece skirt for misses and small women, 16 and 18 years. Price of each pattern 10 cents.

The embroidery designs include materials for working. Separate transfer patterns, without materials, may be obtained for 10 cents each.

No. 687. Design representing the emblems of the Order of Elks, suitable for embroidering a cushion or pillow cover. Tinted in fast colors on tan ticking, 22x22 inch. Duck back and mercerized floss to work, 40 cents.

No. 623. Design in sweet peas for embroidering a centerpiece, twenty-two inch-



es in diameter. Stamped on best round thread linen, with mercerized floss to work, 55 cents.

No. 725. Design for towel end in cross-stitch style. Stamped on superfine 24x15 inch pure linen, with mercerized floss to work, 55 cents.

No. 557. Design for embroidering a baby pillow, a sofa cushion or a centerpiece. Stamped on white pure Irish linen, with mercerized floss to work, 60 cents.

"Small Stuff."

"Small stuff" is the term used by night bakers to designate the small products made by them, and includes the various kinds of rolls, raised biscuits, and in fact anything in that line, smaller than a five-cent loaf of bread. My husband, who was a baker before becoming a back-to-the-lander, has given me much valuable information and instruction along this line, which I never was able to gain from the standard cook books. The recipes for making the various doughs are given quite understandingly, but when it comes to the manipulation of this dough, and shaping the rolls, buns or whatever it may be, the book gracefully subsides in a "of-course-you-know-how" manner, and you feel that the author has paid you a decided compliment in assuming that you do know how. Take for instance the ordinary breakfast roll, known by the bakers as the "turn-over" roll. The shaping of this roll in its perfection is in itself an art that requires months if not years of practice, and it must be remembered that this practice consists of making perhaps one hundred dozen or more each night.

If you should try to make a perfect turn-over roll, and fail, do not be discouraged, but remember that it is part of a trade, and cannot be learned by a correspondence course. One point to be remembered is that bread dough is the base of all raised stuff; rolls, buns, raised biscuit, doughnuts, etc. I have been making turn-over rolls for some time with the instruction and aid of my husband, and feel that I have become quite proficient. The method employed by me is the same as is employed in all bakeries where the work is done by hand. The dough is made just the same as an ordinary bread dough; it may be made richer by the use of more shortening. I usually take a part of my bread sponge to which I add milk instead of water as for bread, and rather more lard and sugar. When the dough has risen and has been kneaded (punched as my husband says) and becomes light the second time, I take it out of the pan and roll it out into a long roll about as thick as my wrist. This roll I cut into pieces of equal size about as long as a hen's egg, which I roll into balls. This rolling process requires considerable practice; it is done by placing the palm of the hand on the piece of dough with the fingers curved downward and slightly inward around the dough. With the nails of the fingers touching the board, the thumb, which is allowed to rest on the board is curved around the dough, forming a sort of inverted pocket. With the dough held in this position, the hand is given a few quick rotations allowing the dough to turn in the hand. Some flour must be used on the board to prevent the dough from sticking, but not too much, or the dough will slide and not turn in the hand as it should. These little balls of dough should be rolled until they are smooth on top and round. As they are rolled I lay them aside, smooth side upward until they become somewhat soft. Then taking a ball in each hand I roll them on the board until they are about four inches long.

I now take each piece and with a small rolling pin (about the size of a broom handle) roll from the center toward each end several times, stopping each time just before reaching the end, which leaves a little ball on each end of the strip. The middle should be rolled to about twice the thickness of pie-crust. I now grease each piece with melted butter or lard, using a small flat paint brush kept for the purpose, and fold over. At this point care should be taken that the large ends are perfectly even, otherwise they will upset while rising. Place on pans as fast as folded. In bakeries this is known as "pairing" and also requires some practice. They must be placed on the pans evenly and the proper distance apart; otherwise in raising they will touch on one side before they do on the other, which would draw them out of shape, or cause upsetting.

A roll dough should be made somewhat stiffer than a bread dough, for unless the flour is extra strong a thin dough will make flat rolls. "BAKER'S WIFE."

Protecting the Table.

Tables are often spoiled by water seeping through the earthenware pots which hold ferns or other plants. These earthenware plates which are unglazed, may be made waterproof by putting a piece of paraffin in the plate and setting in warm oven. Let the paraffin melt and sink into the pores of the earthenware; turn dish so that sides will be paraffined also. Let cool and you will have no more trouble.

I. M. B.

Paint Questions.

Some time ago I read that a fine paint for floors was old Dutch green paint. It said to use common crude "blind green" paint, mixing into it black paint and burnt sienna paint. So far I have failed to find anyone, painter of paint dealers, who know what "Dutch green" or "blind green" paint or "burnt sienna" are. Can you tell me?

I notice the directions for all glue paint use yellow ochre. Why is this? Will not other dry paints do as well? If so, what ones? I have tried all sorts of paints for my porch floors but as yet have found nothing that will not peel and wear off easily. Can some one give me a good one? E. M. S.

Cornmeal Boiled Pudding.

This is a dish our forefathers used to have for dessert when they had an old-fashioned boiled dinner. I never have made it myself, but am going to try it next Fall when the supply of home-grown corn comes from the mill, as they tell me the meal must be good in order to have a good pudding. My grandmother used to make it 70 years ago. She would sift some meal into a pan, make a hollow in the center and put in salt enough to season it, then poured on boiling water and stirred it (as you would a hoe cake). It should be thick like hasty pudding when put into the bag. Put into a cotton bag and tie up but leave room enough for it to swell, as it will swell a little (there could be a little saleratus put in, but she put in nothing but salt). Drop it in the kettle of boiled dinner or meat and boil two hours. The liquid must be boiling when the pudding is put in, and kept boiling all the time. The pudding has a flavor of the liquid it is cooked in. When turned out onto a plate it is a round yellow ball. Serve with molasses or sugar and cream.

I wonder how many of THE R. N.-Y. readers can apple. I know of no one who does it, but I do not think anyone who ever had some home-canned apple to use the latter part of Winter or early Spring would ever allow herself to be without it. We had a rather light yield of Winter apples last Fall, but lots of early Fall apples, so I canned Astrachan, Wealthy and Porter apples, have some two years old that are just as good as the day they were canned. A Winter like this when they are scarce and high-priced, they are coming in very handy, both to use and to sell.

ANNA D. LOVERING.

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Live Stock and Dairy

"Some Cow" in Black and White.

After having bred them for about 20 years, I decided last Spring to let the Jerseys go. I still firmly believe that they will produce more butter, and of a higher quality, than any other breed, in proportion to the value of food consumed. But this is a market-milk section, and the cow that produces the greatest amount of market milk at the least cost, is the popular animal, and the animal that the buyers come expecting to find. Of course this cow is the Holstein—the old-fashioned Holstein that gives an enormous flow of milk testing around three per cent butter fat. Why should she produce any richer milk? The legislature says that three per cent is rich enough, and three per cent is all that the dealer pays for. Then why should our good Dutch cow waste her time and her owner's high-priced grain in putting a lot of fat into milk for which he gets no pay?

After the Jerseys were gone, I stocked up the pasture with grade Holsteins; that is, the rough part of the pasture that could not be plowed. But I was not satisfied with just grades, so I began looking around for a registered Holstein cow for the foundation of a herd. A purebred cow is no better than any old cow unless she *is* better. I shall be glad when the time comes when purebred cows will be plenty enough so that all of them shall be stricken from the register books that cannot qualify for the "A. R. O." degree by the time they are five years old. I finally found a heifer that satisfied me pretty well at $250. She was thin in flesh, and she was largely black (I wonder why most of the good ones are black?). She had an official record of 449.1 pounds of milk and 14.66 of fat in seven days, made at two years and a month old. Sixty-five pounds of milk a day is pretty good for a two-year-old, especially when one considers that she kept up her flow to such an extent that she was not dried off at all, and was still milking when she dropped her second calf.

She had just been bred for her third calf when I bought her, and was milking 30 pounds a day when I forced her dry, and began to fit her for her next lactation period. She dropped a fine heifer calf on February 4, before she was four years old, and I loaded her on the sleigh and took her to a neighbor who was putting some through an official test. February 10 he started her on test, and in seven days she gave 515.8 pounds of milk, which tested 17.61 pounds of fat, or 3.414 per cent. She gave 77.5 pounds of milk the best day of the test, and 77 pounds the second day after I brought her home. She is registered as "Lady Nanuet Pietertje" No. 151855 and weighs 1090 pounds.

Madison Co., N. Y. J. GRANT MORSE.

Are Silos Going Out?

I am thinking of building a concrete silo, as I have a good bed of sand and gravel suitable for concrete work. One of my neighbors, however, says that silage is going out of use; that the farmers in New York State are giving up their silos, as the milk condenseries and the butter factories, as he claims, will not accept milk from cows that are fed on silage. Please tell me what there is to this. J. B.

The reports which reached you regarding the use of silage are exaggerated. It is true that Bordens have refused to accept milk made from feeding the average grade of silage. Our understanding is that they would be willing to accept silage made from inspected or approved silos. Most of the other condenseries seem willing to use milk made from silage, and there can be no question about the great economy in this kind of feed. It is the cheapest and best dairy food for Winter feeding now known, and instead of falling off, its use is certainly increasing through the dairy districts. Of course, you will understand that there is both good and poor silage. The quality depends upon the character of the corn, whether full, rich, immature or frosted, and also upon the way it is put into the silo, and the character of the silo itself, but as a general proposition, the use of silage as a dairy food is growing rather than falling off.

There are arguments for all kinds of silos of wood, concrete, brick, hollow tile or concrete blocks. The arguments which come to us for these various kinds are not unlike the arguments put up for different breeds of stock. One farmer will insist that his silo is better than any other, while within a few miles a man with a silo of very different type will argue very strongly for another kind. In northern Ohio, for example, the reports are that the old-fashioned square wooden silo is preferred. We hear from other dairy districts where farmers put up concrete silos entirely, and it is evident that all the other forms are in use and are being erected every year. The majority of dairymen who have used silage for a term of years would say that they would go out of business rather than attempt to make milk without a fair amount of silage.

Raising Veal Calves.

The Farm Management Monthly of the Agricultural Department gives a report from M. O. Cooper which will interest dairymen. This question of calf raising is a big one just now, with the high cost of meat. Some dairymen say that a good-sized calf will pay more for their milk than the dealers offer, but this experiment does not show great profit from small Jersey calves:

Some men hold that it pays to raise the male calves for veal, while others kill them at birth. There are here presented the actual figures on the cost of raising four Jersey calves on a dairy farm in Wisconsin, and although the number is small the figures are suggestive.

COST PER HEAD FOR FOUR VEAL CALVES.

	Total	Per Hd.	Cost
Whole milk...	804 lbs.	201 lbs.	$3.40
Skim-milk	2791 lbs.	698 lbs.	1.66
Grain	224 lbs.	56 lbs.	.86
Hay	120 lbs.	30 lbs.	.15
Eggs	22	5.5	.07
Labor	46 hrs.	11.5 hrs.	1.84
Total			$7.98

The four calves when sold were 12 to 16 weeks old, which is a little older than skim-milk veal is commonly marketed. During this period the quantity of feed consumed and hours of labor required and their value are presented in the above table. The prices used in computing feed and labor value were: whole milk, $1.70 per cwt.; skim-milk, 25 cents per cwt.; grain, $1.50 per cwt.; and man labor, 16 cents per hour.

By examining the figures it is seen that almost half the total cost is made up of new milk, although a comparatively small quantity of this feed was used. On this same farm the previous year the young calves that were being raised received 342 pounds of new milk. Had these calves received a like quantity the cost per head would have been increased $2.40, making the total $10.38. The major part of the feed used was skim-milk, but as this is a comparatively cheap feed its cost is not high. The other important item making up the total cost was labor, which amounted to $1.84. The total of $7.98 as shown by the table does not include some items which must be included in making up the complete cost of raising the veal. These items are building charges, equipment charges, interest, and general overhead expense. However, the total of these would amount to only a few cents, and for all practical purposes can be omitted without affecting the final results. The four calves were sold on the market for $42, which is an average of $10.50 per head. This is a profit of $2.52 over the cost of feed and labor. As these calves were the Jersey breed, they were not especially adapted to making into veal. The breed is small and the calves at birth weigh much less than the calves of the Holstein breed. At the same time, their feed cost is comparatively lower. It is probable that the profit from Holstein veal would be larger.

THE second annual meeting of the New York State Breeders' Club was held at the Powers Hotel, Rochester, N. Y., February 5, in connection with the annual convention of the New York State Breeders' Association. The purposes and objects of the club are to promote and stimulate purebred draft horse breeding with the assistance and promise of such State laws for the protection of owners and purebred draft stallions by method of inspection and license to govern service. The following were elected officers for the ensuing year: President, E. S. Akin, Glens Falls; secretary, E. E. Horton, Binghamton. A large increased membership was enrolled showing renewed strength and prosperity and with the promised State assistance a better condition of draft horse breeding for the State of New York may be assured.

"THE men will have to rainbow their whiskers and hair," said the fashion leader. "But how about me?" replied the smoothshaven, baldheaded man. "I can't rainbow; I'll have to Easter egg."—Washington Star.

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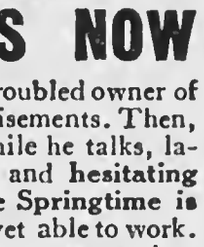

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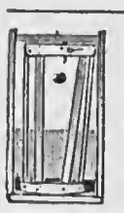

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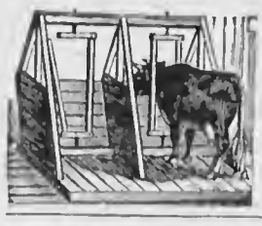

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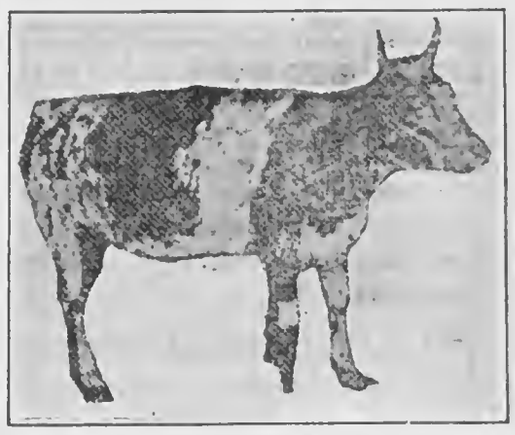
Heifer With Wooden Leg.

This heifer was found in the pasture with her right foreleg broken below the knee. The leg was first set by a veterinary surgeon, but it did not knit properly. The heifer was then etherized, the bone amputated, leaving enough below the knee to be fitted into a leather socket. Iron splints were attached, the lower ends of which were fitted into a wooden peg having an iron shoe at the



HEIFER WITH WOODEN LEG.

end. This operation was a success, and the animal is now able to walk about as well as usual. W. D. G.

New York.

Practical Dairying Advice.

Pasture is the most expensive way to keep a cow. This is the opinion of a prominent Ohio dairyman. He states that pasture is only at its best six weeks out of the year. On the other hand an acre of good silage should keep a cow 500 days. It would require three acres of pasture, and many farmers are using more for each cow. Two to three acres of exceptionally good pasture are required for each cow, and if that two acres were placed in a silo, it would not only provide succulent feed for a few weeks, but would supply the cow with good succulent feed upwards of three or four years. "There are many farms," he said, "with an acreage of hilly or wooded ground which affords pasture, but there are thousands of farms in Ohio and many other States which have open pastures, free from stumps and stones, which would pay the farmer dollars and cents to tear away the old fence rows, build new fences and put this acreage into silage."

"It don't pay to jump from one breed to another, or to try to cross breeds," is the opinion of a prominent corn belt farmer. "I have paid dearly for my rattling around in a box as far as breeding is concerned. Stick to your breed, and if you think that you are going to get what you want by cross-breeding, have your mind made up to live two centuries to win out."

A sow may be in the scrub class as well as a cow, and neither should be tolerated, is the opinion of one successful breeder. He figured from the dollar and cents point of view on three sows. Strange to say the sow that produced the largest number of pigs produced those which made the greatest gains during the six months, and the sow producing the smallest number, also produced the pigs which made the poorest showing at the end of six months. His first sow produced eight pigs, his second seven and his third sow six, same sire used. Each of the second sow's pigs returned him $1.81 less than the first sow's pigs. Each of the poorest sow's pigs returned $3.09 less than the first sow's average pig. He sat down and figured further. Why not have all sows measure up to the best one on the farm? He found he was out of pocket on the third sow a little over $25, and on the second sow a little over $37, compared with the best. He says the best is not too good, and why not put in a good sow in place of the "charity patient" which will clip the year's balance from $20 to $40? "Swat the scrub sow." W. J.

Many farmers utilize their clover fields for hog pasture early and later in the season, but in the middle of the Summer there is a time when hogs are short of pasture. Mr. Nicodemus of Van Wert County, Ohio, in his institute work advises the following: Sow half bushel each of rye and barley, then sow about four pounds of Essex rape to the acre. This should be started early in the Spring, and the pasture will care for 20 to 30 Spring pigs to the acre nicely. The pigs will not wallow nor tramp it down, but will make paths through the pasture. About the time the oats come in head is the proper time to turn in on the pasture.

SHE was a little girl and very polite. It was the first time she had been on a visit alone, and she had been carefully instructed how to behave. "If they ask you to dine with them," papa had said, "you must say, 'No, thank you; I have already dined.'" It turned out just as papa had anticipated. "Come along, Marjorie," said her little friend's father, "you must have a bite with us." "No, thank you," said the little girl, with dignity; "I have already bitten."—Tit-Bits.

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Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer. Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

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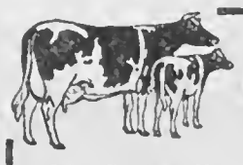

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Registered Percherons—Stallion, foaled 1905, harness, cart, etc., $600. Mare, in foal, $450. Sure breeders. Sound and kind. MEADOWCREST FARM, Ovid, New York

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One black Percheron coming four years; one gray Percheron coming three years; one bay Belgian coming four years. All properly recorded, sound and clean and guaranteed to be breeders. If your neighborhood needs a good stallion at a reasonable price, write me for description and prices.
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FOR SALE—FIFTY REGISTERED **Hampshire Down Yearling Ewes** born in Jan. & Feb., 1913. Wm. C. Whipple, Purchase, N. Y.

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MR. STEPHEN CHASE will sell on TUESDAY, APRIL 7, 1914, his superior herd of 80 JERSEY CATTLE, at CHASE FARM, HANOVER, N. H.

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5 Daughters of Golden Maid's Prince; one, now on test, produced 172 lbs. 4 ozs. in four months; two due to freshen in March.
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8 Daughters of Imported Bosnian.
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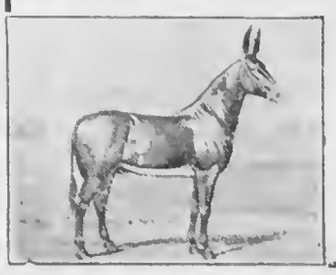


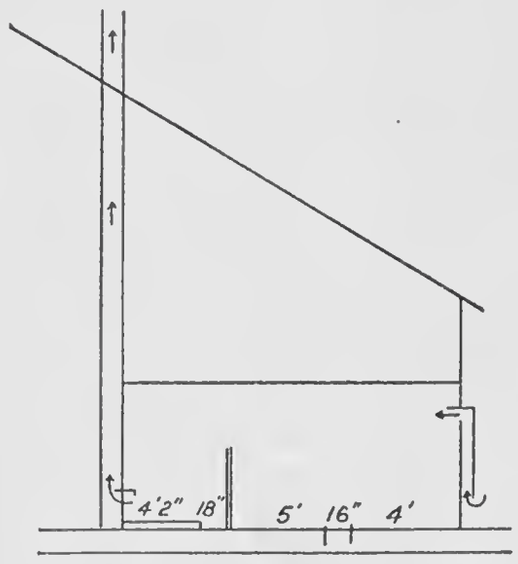
W. L. DeCLOW, Stallion and Jack Importing Farm, Cedar Rapids, Iowa

Making a Sanitary Stable.

I am working into a herd of registered Holstein cattle, and am going to build a shed on to the side of my barn, 16x36. Building in this way is cheap for the amount of room one gets, also handy for feeding out of barn. I would like to have proper height of stable below, also good plan for inside arrangement, width of feeding alley in front of cattle, length of stall, etc., with general directions for finishing interior of stable. If mangers and floor space for cows to gutter is made of cement to fit present stock, would there not be likely to be trouble later with young stock and new cows being too short or too long? Could the King system of ventilation be installed successfully in such a stable? If so, please describe method of installing. I wish to make a good sanitary stable, one that will be warm and comfortable. The barn is 60 feet long, and I shall continue the shed the whole length, using 36 feet for stable, the remainder an open shed for manure. C. H. W.

Michigan.

The greatest objection to the shed stable with manure shed at one end, is that it shuts off light from one side and end. In planning a stable for milch cows three things must be kept in mind, comfort of the cow, sanitation and convenience. For convenience in the shed stable the cows must head towards main barn. Probably as good a division of the available room in the 16-foot stable would be four feet two inches for feed



SHED STABLE WITH KING SYSTEM OF VENTILATION.

ways, 18 inches manger, five feet platform, 16 inches gutter, and four feet behind cows. A few inches might be taken from the space behind cows and added to feedway if desired. The platform on which cows stand should slope slightly toward gutter. The floor, manger and all, should be of cement.

The distance between standards and gutter may be five feet at one end of the stable and four feet six inches at the other end. This will accommodate large and small cows or heifers. Cows can be taught to take their places in that part of the stable most suited to their length. The King system of ventilation is perfectly feasible in the shed stable and should be installed. To make it operative the entire stable walls, doors, windows, etc., must be tight. The ventilating flues would better be on the inside of the main barn, and should project through the roof above the highest point, or it can follow the rafters to the peak and project a foot or two above. The flue must be tight. See cut above.

The 36-foot stable will accommodate nine or 10 good-sized cows, and for this number one ventilating flue 10x20 inches will be sufficient. Several intakes should be constructed, so that direct draft will not blow on or over cows. Their combined capacity should be equal to that of the ventilating flue. Provision should be made for the control of ventilation. Secure all the light possible. If it could be arranged so that sunlight would fall on all the floor space at some time during the day it would be ideal. Provide water of moderate temperature either by drinking cup in the stable or trough in covered barnyard and manure shed. A dairyman of my acquaintance recently put water in his stable and testifies that the same cows (18 of them) with the same feed and care, after eight days were giving 31 quarts of milk per day more than before making the improvement; big interest on the investment.

The cow on pasture in the early Summer months, makes the largest and cheapest production. The conditions which make possible the heavy production at this time are, aside from succulent nutritious food, freedom in pure warm air, sunshine and an abundance of pure fresh water at desirable temperature. We should as nearly as possible approximate these conditions in the stable. F. L. ALLEN.

Garget.

A cow is due to freshen in about four weeks. As yet I have been unable to dry her up, although I stopped milking her regularly over a month ago. Every few days two quarters of her udder become caked and swollen, and what milk I get is thick and lumpy. I am afraid she will lose that half when she freshens. What can I do? H. D. S.

Do not attempt to dry off milk flow. Treatment to that end has caused garget and it will ruin the udder unless successfully remedied. Milk her out clean three times a day and then rub in a mixture of one part each of fluid extract of belladonna leaves and poke root and six ounces of camphorated oil. The mixture will tend to check milk flow, but all fluid that forms should be cleanly removed from the udder. A. S. A.

Ringbones.

I have a mare with bunches on her hind feet resembling ringbone. They have been growing for two years, and have never been doctored. Is there any cure or help for them? Z. F. W.

If the enlargements do not cause lameness let them alone; if lameness is present clip off the hair and repeatedly blister the ringbones one at a time, at intervals of three or four weeks, while the mare is kept in her stall. Use cerate of cantharides for the blistering. It would be better, however, if you could have the ringbones puncture-fired and blistered by a graduate veterinarian. Do not breed from a mare or stallion afflicted with ringbone. A. S. A.

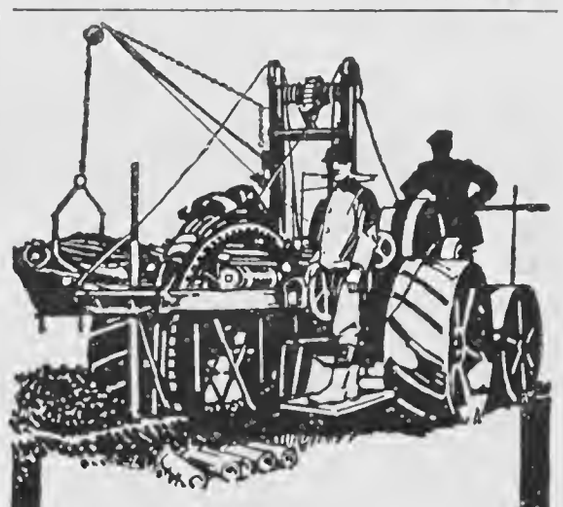
Ringworm.

I have a pen of five yearlings in good condition. They have what I call barnyard itch; it first appears over the eyes, hair comes off and looks like warts. One the hair is all off along the back. I feed corn fodder and hay and let them out to exercise every day, they have good clean water to drink. What is the cause of this itch and what can I do to stop it?

New York. W. R.

Ringworm is due to the vegetable parasite, tricophyton tonsurans, which lives on damp walls, woodwork, fences and feed racks as well as on animals. To get rid of the pest it is necessary to clean up, disinfect, whitewash, sunlight and perfectly ventilate the stables. Treat spots about the eyes and face by scrubbing clean with soap and hot water and when dry rub in a little iodine ointment each other day until well. Treat spots on body by scrubbing clean and then applying, as often as found to be necessary, a solution of two pounds of sulphate of copper to the gallon of water, used as hot as the hand will bear.

A. S. A.



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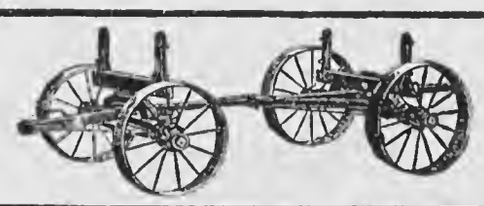

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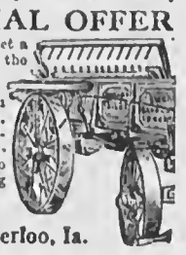

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HANDLE THE COW'S UDDER.

Many men are fine judges of cows, so far as pedigree or breeding and points of conformation are concerned, but they forget a most important matter when examining a cow. They neglect to make a critical, manual examination of the udder. This is all-important, and never should be forgotten. Beginners should bear that in mind, for the udder decides in great measure how profitable the cow will be for dairying. When the writer was a student at a veterinary college in Scotland 'way back in 1886, he visited a dairy farm with his brother students for the purpose of examining and studying types of dairy cows. He had learned a lot about such things as bone spavins and ringbones, and so stopped and said, "My, my! It's too bad that cow has such a big bone spavin!" when he noticed an animal so affected. Then the old, experienced dairyman exclaimed: "Hoot, toots! Never mind the spavie; she has a grand mou' and poke!" meaning that she had a good mouth and udder. Buy a cow that has a capacious abdomen and strong wide, muzzle, but don't forget a big, sound udder is the chief desideratum.

Standing behind a cow see that there is no enlargement of the udder, high up at the back of the vessel. If an enlargement is there handling will find it to be hard and extending into the udder tissue. It is a tumor, and in all probability tuberculosis of the udder. We simply would not for a moment think of buying a cow with such a tumor, and noticing one would save testing her with tuberculin. See that each quarter of the udder balances its mate, and, so far as possible, prefer an udder that has the four quarters of about like capacity. Such cows are comparatively scarce, but they are the good ones. The forequarters commonly are poorly developed and the teats often are too close together. They should not fit into a tin cup, but be six inches apart, or thereabout, in each direction. That means a well-formed capacious udder.

But the handling is necessary. *Sit down and milk the cow.* Milk into the hand, from each teat and carefully examine, taste and smell the milk unless it is seen to be abnormal in consistency or appearance. If this is not done one may fail to learn that one quarter is giving poor quality milk, or pus, or stringy, or clotted, or bad smelling milk. If one does not milk the cow he will be unable to tell how much each quarter gives in comparison. If he milks he may find that one quarter gives good milk, but deficient in quantity, or that the foreteats do not give nearly so much as the rear quarters. By milking he will learn whether or not the cow is a confirmed kicker, or switcher, or one that voids her urine each time milking starts, or one that holds up her milk. He will also learn whether the teats are of such size as to make milking a comfortable and easy matter, and whether or not she is an easy milker, or a stripper or a "sprayer." Then too one finds out about supernumerary teats, fistulæ or false openings of the teats, warts, sores, chaps, cracks, cow-pox, pimples and all sorts of things of that type.

But this is not enough. One should massage every portion of the udder after milking. Hard lumps and masses mean that the cow has had one or more attacks of garget and that being the case such a cow will be certain, sooner or later, to have a recurrence of the disease and lose the function of her udder. The cow may be for sale for the reason that her udder is unsound, and one wants to know that before he becomes the purchaser and has no recourse. It is perfectly possible to detect the trace of even a slight attack of garget. If one has practice his hands will detect the slightest departure from normal feel and consistency of true milk gland tissue, compared with tumor or scar tissue resulting from disease. The big, fleshy udder that does not shrink and hang in folds after milking is the wrong sort of vessel for milk production. It is too meaty, and not made up of true gland tissue which makes milk. Milk-making gland tissue is beautifully soft, elastic, mellow and pliant, and is covered with satiny, soft, fine-haired, elastic skin. Such gland tissue forms the "dishrag udder" which is of large size when distended with blood and milk and perfectly collapsed after milking.

It is poor policy to buy a cow that has a lump or hard mass in her udder, or one that has abnormal milk in one quarter or more. The "three-teater" cow is a nuisance. The cow that has abnormal milk is a source of dire danger in the stable; for udder troubles, in their worst form, are terribly contagious and the contagion is carried by the milker's hands and is contracted from contaminated floors and gutters. Never buy a cow that has any unsoundness of the udder and make it the invariable rule *instantly to isolate any cow that has anything the matter with her udder* and keep her away from other cows until she is perfectly well. If this were done udder troubles would become comparatively rare. At least do not be foolish enough to buy an unsound udder. Even with the best of care udders are liable to go wrong and we know of nothing more vexatious and unprofitable to the dairyman. A. S. ALEXANDER.

WHY DOESN'T THE BUTTER COME?

J. C. G., on page 319, is in trouble because it takes so long to churn. A minister's wife once wrote to a dairy editor, saying their cow was expected to calve in three months, but still gave a large mess of good milk which was very hard to churn. She treated her cream exactly as she always had done, and churned at the usual temperature, but the butter would not come. The editor replied that it was a common complaint that the cream of cows that had been a long time in milk, was hard to churn, and that there were several remedies, which dairymen believed to be more or less effectual; but her best plan would be to trade her cow to one of the deacons for a fresh cow; that if the deacons would not trade, then try some of the world's people. The story ends right there, but if the woman succeeded in trading for a fresh cow, she probably churned in 15 minutes.

In our dairy we have never had any difficulty in churning even when we had no more than one fresh cow in a herd of 14. The one fresh cow supplied "the leaven that leavened the whole lump"; or more properly speaking, furnished the globules of butter that were sticky enough to make all the others adhere in a solid mass. In our experience with difficult churnings, the butter "comes" or separates from the buttermilk, but will not "gather." The little particles will not stick to each other, but remain floating in the froth. We have had cases where butter globules, nearly as large as birdshot, and as round, would not adhere to each other, and I skimmed them out into a clean muslin sack, squeezed out the butter-milk, emptied the mass into the butter bowl, and with the ladle worked it into as fine a roll, as was ever placed on table.

Keeping the cream until it was loppert, as well as sour, and then churning at 70 degrees, we have found to be an advantage. The butter will be whiter for churning so warm, but a little color put with the cream before churning will make it yellow enough. The old remedy for a hard churning (when witches were believed in) was to throw into the churn a red-hot horseshoe, to exorcise the witch. A neighbor says that a quart of boiling water will answer the purpose just as well as a horseshoe, for he has tried it.

Some dairymen say that the feed of the cows is responsible for the hard churning—that the trouble is caused by unbalanced rations. Moldy cornstalks, turnips, half-rotted cabbage, or garlic when eaten by the cows might give the butter a bad taste, but I think would not make it come any harder. One writer thinks that too much ripening of the cream, or keeping it too long before churning, is the cause of hard churning. Our experience is that if the cream is kept in a cool place, it can be held a week without ripening any too much for easy churning, and in the Winter it must be brought into a warm room for a day before churning, in order to get it sour enough.

Pennsylvania. J. W. INGHAM.

MRS. BREZEY (with hammer): "There, I've hit the nail on the head at last." Mr. Brezey: "Why do you put your finger in your mouth?" Mrs. Brezey: "That was the nail I hit."—New York Sun.

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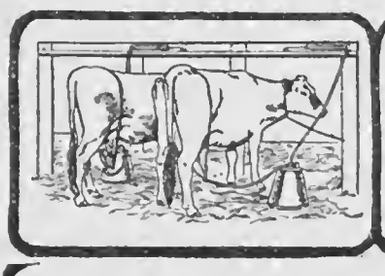

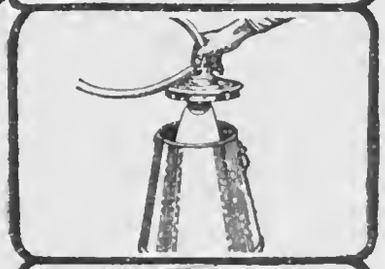

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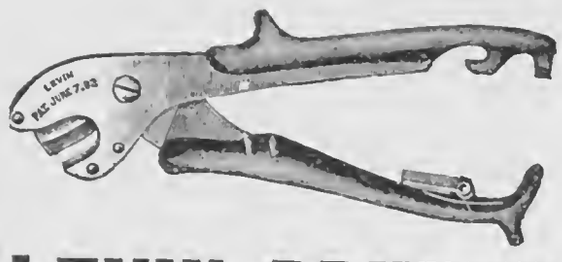

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MAPES THE HEN-MAN GIVES FIGURES.

PART I.

Having put a good deal of good money and work into hens, and not having been able to get a balance on the right side thus far, I have been much interested in the reports of those who have succeeded in making poultry raising pay, notably Mr. Mapes. On page 162 I note "Hens vs. Cows." I should have been glad to have a more definite statement as to the net profit; $5,000 gross from 1,800 birds seems very moderate, but expenses (including interest on investment and depreciation) would on many plants eat most of that up, and leave very little for labor of the owner. I note that the stock has been increased by 800 birds, valued at $500; again a very moderate estimate. But I should like to know the ages of the birds, i. e., how many pullets, how many yearling hens, and how many two years old? The limit usually placed on profit for hens is two years—the pullet year, and the so-called yearling year. If Mr. Mapes runs his plant on that system he would have to replace 900 birds (or else allow a heavy depreciation per capita on the value of his fowls) besides the 800 increase. That would mean that unless he is more successful than most poultrymen in raising birds he would have to hatch 5,000 chicks or more to get the required number of pullets good enough to keep for layers. Again, unless he does better than the average, that would mean incubating about 10,000 eggs.

But granting that he had phenomenal success, incubated 5,000 eggs, hatched 4,000 chicks, and brought 1,700 pullets to maturity. I would like to know how one man could do this and care for 1,800 hens—even having this so systematized that it all could be done with the least possible effort. I should also like to know how much capital (including all labor in erecting houses, fencing, etc.) has been invested in land, houses and all the equipment required for hatching and raising chickens. Then we can estimate more correctly what Mr. Mapes receives for his labor; and what is vastly more important to those of us in the business, we can see where we can improve our own methods, and have one balance on the right side of the sheet. C. G.

Southboro, Mass.

Having roused the curiosity of readers I suppose they are entitled to the rest of the story even if it does make "the cow look like 30 cents beside the hen." The above correspondent is evidently traveling along the beaten path so thickly strewn with failures that never arrived at the terminus for which they started. A glance at the picture accompanying the article in question will show that I have left the beaten path at many points, and blazed a new trail. In no other way could I have accomplished what to many doubters seems as incredible as a trip by water from New York to San Francisco in the time that will be necessary after the completion of the Panama Canal as compared with those following the course around the Horn 20 years ago.

Note first that not a dollar is invested in poultry runs or fences. These are always a source of annoyance and expense. Note that the roofs are all of the steep type, and less liable to decay and loss than the ordinary flat-roofed poultry house. There is only one small window (rear view) to each flock of 250 hens, to be kept glazed, making four to each 1,000 hens. Poultry-house windows, like fences, are always a source of expense. There are only 150 feet of siding per unit, or 600 feet per 1,000 hens to be painted. The low inside walls are of concrete and practically permanent. Other departures from the beaten path are not shown in the picture.

I do not dispose of my layers at the end of the second year's work. A six-year-old cow will raise as many calves in a year as a three-year-old. Only fools or millionaires would sacrifice their milkers at the end of the second year's work. Aside from the time required to moult, a five-year-old hen should lay as many eggs as a pullet, and larger ones.

Other requirements of the beaten path call for frequent visits to the henhouse to throw them a little of this or a little of that, in deep litter, in order to make them exercise. Some recent mechanical devices try to accomplish the same result. The exercise fad is largely "bosh." I throw what I think is a proper allowance of mixed grains for the day to them in the morning, not being very particular whether the litter is deep or not, then go about my business and let the hens do the same. The dry mash hopper is always open to them.

We have a local feed dealer who has a feed mixer and one of the best formulas I know for both dry mash and mixed grains, so I buy all my feeds ready mixed and delivered in my feed room. His heavy trucks can haul it four miles cheaper than I can do it with a light team. Much time is often consumed on many poultry plants mixing or hauling grains, mashes, etc. When my supply begins to get low all I have to do is to lift the telephone receiver and that sets in motion the machinery that replenishes it.

In most of the "failures that strew the beaten path" an expensive house devoted exclusively to brooding is found in the foreground. Notice the entire absence of such buildings in the picture.

Now for the "facts and figures." I have 10 buildings, including the original "hen barn," devoted exclusively to poultry. These have cost me, including labor and watering system, about $2,600. Four incubators purchased second-hand more than 10 years ago cost me $90. They are still doing good work, and the only expense for repairs thus far has been for one new burner and a few pieces of felt. Two brooding outfits that cost $58 each completes the outlay for equipment. Add another $100 for say two acres of land (without buildings) and we have $2,916. Make it $3,000 for good measure. O. W. MAPES.

A DARKY employed as an office-boy in Kentucky came to work one morning with a face that looked as though it had been run through a meat-grinder. "Henry," demanded his surprised employer, "what in the world happened to you?" "Well, suh, boss," explained Henry, "I got into a li'le argument las' night wif another nigger, and one thing led to another twell I up and hit at him. Well, suh, it seemed lak dat irritated him. He took and blackened both of mah eyes and bit both of mah years mighty nigh off, and split mah lip and knocked two of mah teef loose; and den he th'owed me down and stamped me in de stomach. Honest, boss, I never did get so sick of a nigger in mah life!"—New Orleans Picayune.

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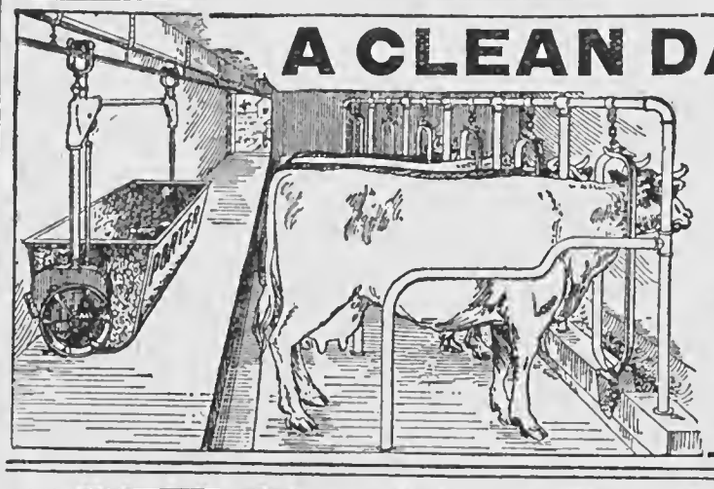

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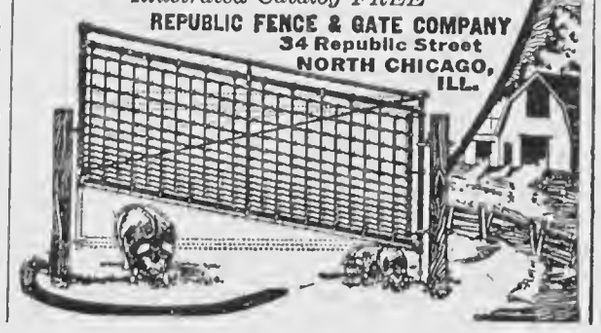

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Do you go at the spring work with your overcoat on? Of course you don't—

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They will get all the nourishment from their feed—be healthier and look better. They will dry off quickly, be more easily cleaned and feel better generally—that means work better. The Stewart Machine is not an expense—but a highly profitable investment. It turns easily, does more and closer work than any other machine—can't get out of order. Gears all file hard and cut from solid steel bar—protected and run in oil. Includes 6 feet new style easy running flexible shaft and celebrated Stewart's Single-Tension Clipping Head. The only machine that can be used without change for horses, mules and cows. You can make money clipping your neighbors' horses while yours will do better work. Each machine guaranteed. If it doesn't give perfect satisfaction, return it and get your money back.

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Chicken Pox.

Among my flock of White Leghorns, I have had some break out about the head and eyes and on the wattles with dark colored blotches. It appears to be a contagious disease, as one follows another with it. They eat and drink all right, and I know one infected hen to be laying regularly. So far only one of those infected has died, and I found her where she had apparently fallen from the perch. I have five or six other breeds, but the Leghorns seem to be the only ones infected. I have the diseased birds separated. Could you tell me name and remedy of the disease? E. Q. G.

This eruption may be that of chicken pox, though you do not describe a typical chicken pox eruption. In any case, anointing the sore spots with 5 per cent. carbolized vaseline will be good treatment, as the disease is evidently contagious, and the germ is very likely to have its origin in the eruption. You should continue to keep all affected birds isolated until the disease has run its course, and should, in addition, disinfect all utensils used by the ailing flock.

M. B. D.

Conditions in Egg-Laying Contest.

Will you give size of runs the hens have in the egg-laying contest? I would like a detailed account of how they do it. Perhaps they issue a bulletin; if so where can I get it? D. H. W.
Macksville, Kan.

Replying to D. H. W. would say that the runs are about 15x30 feet, and are sown with oats, barley, etc., and the hens kept out of them until the grains get a good start in the Spring. The fowls are fed whole grain in the litter in the morning, to induce exercise, the grain hopper being closed when the last round is made at night. This scanty feed in the morning also tends toward their eating more of the dry mash, which is always accessible. At noon the whole grain feed hoppers are opened, and the hens can go to roost at night with full crops if they wish to. The feed hopper used has a cam on the bottom which can be opened to let out a handful with each turn of the feed-bar, or so graduated as to let out only two or three grains. This "feed-bar" is a tube of wire netting about 1½ inches in diameter and six inches long. It is filled with cracked corn, wheat, oats, etc., and as the hens pick at the grain, it moves the bar, and that lets fall a few grains from the grain holder above. It is interesting to note how quickly the hens learn that it is *the movement of the bar, that lets down the grain;* they don't pick at the grain visible in the wire tube, but put their beaks on top of the tube and give it a whirl, just as well as a man could. I have the same kind of hoppers in daily use in my henhouses, and like them very much.

The bulletins of the first and second egg-laying contest are to be published together. These will give all the data one can ask for, the weight of each hen's eggs, the amount of food consumed in each pen, food cost per egg, total number of eggs laid by each hen, etc. I will notify readers of THE R. N.-Y. when the bulletin is ready. GEO. A. COSGROVE.

Crowded Hens.

I have 23 R. I. Red pullets, 25 Plymouth Rock pullets, seven old hens and three cockerels in a coop 8x12 feet. The coop faces the east and has two windows and a door. One window has muslin over it and the other has been open all the time when not too stormy. I keep gravel, oyster shell and charcoal in the coop at all times. I throw their feed in a deep litter of straw and chaff in the forenoon; feed two quarts of wheat; at 2 o'clock in the afternoon a wet mash of three quarts of bran and one tablespoon of oil meal; at 4 o'clock 1½ quarts scalded oats and a pint of corn. I put two quarts dry bran in the dry mash dish; for green food I give raw beets or cabbage, all they will eat, and I give them from two to four gallons of thick sour milk per day and occasionally butter milk. I have not given them any water for about two weeks. I have had the chickens shut in the coop for about four weeks and they have been and are having a bad diarrhœa and are only laying about half the amount of eggs they were when I shut them up. If I am not feeding right I should like to have you tell me what to feed and what is wrong.
Buckley, Mich. R. M.

If, as I understand, you are keeping 58 fowls in a coop 8x12 feet in size, you are overcrowding them badly, and with all the sour milk and cabbage that they will eat, it is not strange that they have diarrhœa. I can only advise that you manage in some way to give them more room, as that number of fowls should have at least 180 square feet of floor space, if they are confined to their coop. Then, do not feed all the beets and cabbage that they will eat, but limit the amount, giving them perhaps one head of cabbage, or an equivalent amount of beets, every other day. I think that you will get better results, also, by feeding less often, and the labor will certainly be less. Two to three quarts of mixed grains in the litter in the morning, and about the same amount at night should suffice for the whole grain ration, and a dry mash of ground grains kept before them in a hopper will supply their needs in this line. If you prefer to feed a moist mash mixed with sour milk, this may be given at noon, in such quantity as they will quickly clean up without evidently "stuffing" themselves. Sour milk may also be kept before them, but it should not replace water; that is needed also. Corn, oats, wheat, and buckwheat, may all be used for whole grain, and you will frequently find formulas for mash mixtures in these columns. It is well to follow these as closely as possible as they are made up to properly balance the different kinds of food. Finally, if you cannot give the fowls more floor space, open the doors and let them go out and in at will, regardless of snow. M. B. D.

Two More Prize Turkeys.

I note on page 241 that F. C. S. has a Bronze turkey that laid 84 eggs last Summer. I have a purebred White Holland turkey that beat that record by far. She began laying early in April, and did not offer to sit until August, when I gave her a sitting of eggs which she hatched September 3, rather late in this locality; but we have had two of the young birds on the table and I have two more of the young hens that are doing well. The above mentioned turkey laid over 100 eggs in the season mentioned, the exact number was 102 or 103.
New York. WM. J. BERNHOFT.

In February, 1913, I bought two turkey hens and a gobbler, purebred Bourbon Reds. The hens commenced laying the second day of April on the bank of the spring run very near the house. They laid together in the same nest, a mother turkey and her daughter. The older hen laid 49 eggs and wanted to sit. I divided the nest, putting a large box open on one side over her, and the younger turkey continued to lay every day until she had laid 96 eggs. She then stayed on her nest two nights and skipped four days without laying. I decided to set her that evening, and she had decided to roost in a tree. The next day she laid again and continued until she laid 128 eggs. She then wanted to sit; I put 11 eggs under her, and she hatched nine turkeys and raised seven of them. I could easily tell the eggs apart, as the old turkey's eggs were a third larger and much darker in color. I sold several sittings of eggs to my neighbors, and raised 42 young ones out of a large number hatched. Last Fall I sold them for $92.27. I still have four hens and a gobbler for this year's turkey raising. This is my first experience with turkeys. I am in love with the work, and like F. C. S., with the Bronze breed, I surely think the Bourbon Reds are all right. FLONA HOENING.
Pennsylvania.

Pullets With Twisted Necks.

What can I do for a couple of pullets that have developed a very strange ailment in the shape of twisted neck? The neck is so twisted that the head a good part of the time is exactly upside down, and they seem too weak to hold it up, but have to sit a good part of the time with head resting on the floor. They eat well and at times can straighten up to walk around and eat, but if disturbed a little, they seem to get a spasm and lose all control of themselves, and often struggling and tumbling around awhile again drop their heads upside down on the floor.
New Jersey. H. Z.

This trouble is probably vertigo due to disturbance of the circulation in the brain; this, in turn, being due to intestinal irritation, as from the presence of worms in large numbers, or from indigestion. Blows upon the head, and exposure to the hot sun are also said to be exciting causes. Giddiness, a staggering gait, and peculiar movements of the head an neck, are evidences of this trouble. Treatment should be directed to any known cause. If the presence of worms is suspected, give a teaspoonful of turpentine mixed with twice its quantity of sweet, or olive oil. Repeat if necessary. Place the affected birds by themselves and feed upon soft easily digested food for a few days. In any case, a physic of one to two teaspoonfuls of castor oil, or two grains of calomel, will do no harm and may remove irritating matter from the digestive tract. M. B. D.

BEETS FOR HENS.—A few weeks ago I saw the question asked as to a machine for cutting up sugar beets for hens. Now I think that a machine is unnecessary as I am feeding some at the present time and I believe with good results and I simply drive a finishing nail into the wall of the henhouse about 18 inches from the floor and then taking a beet in my hand drive it onto the nail. The hens do the rest, and after a short time it is impossible to find anything left of the beet.
Madrid, N. Y. W. H. B.

Here is the Territory Where DAYBREAK ROCK PHOSPHATE Has Made Good

In each of the States shown on this map we have shipped "Daybreak" Rock Phosphate in car-load lots and a most persistent follow up of our customers has not found one who has not profited from his purchase.

Here are the crops which have been materially and profitably increased by the use of Rock Phosphate

Corn, Wheat, Oats, Clover, Potatoes, Silage

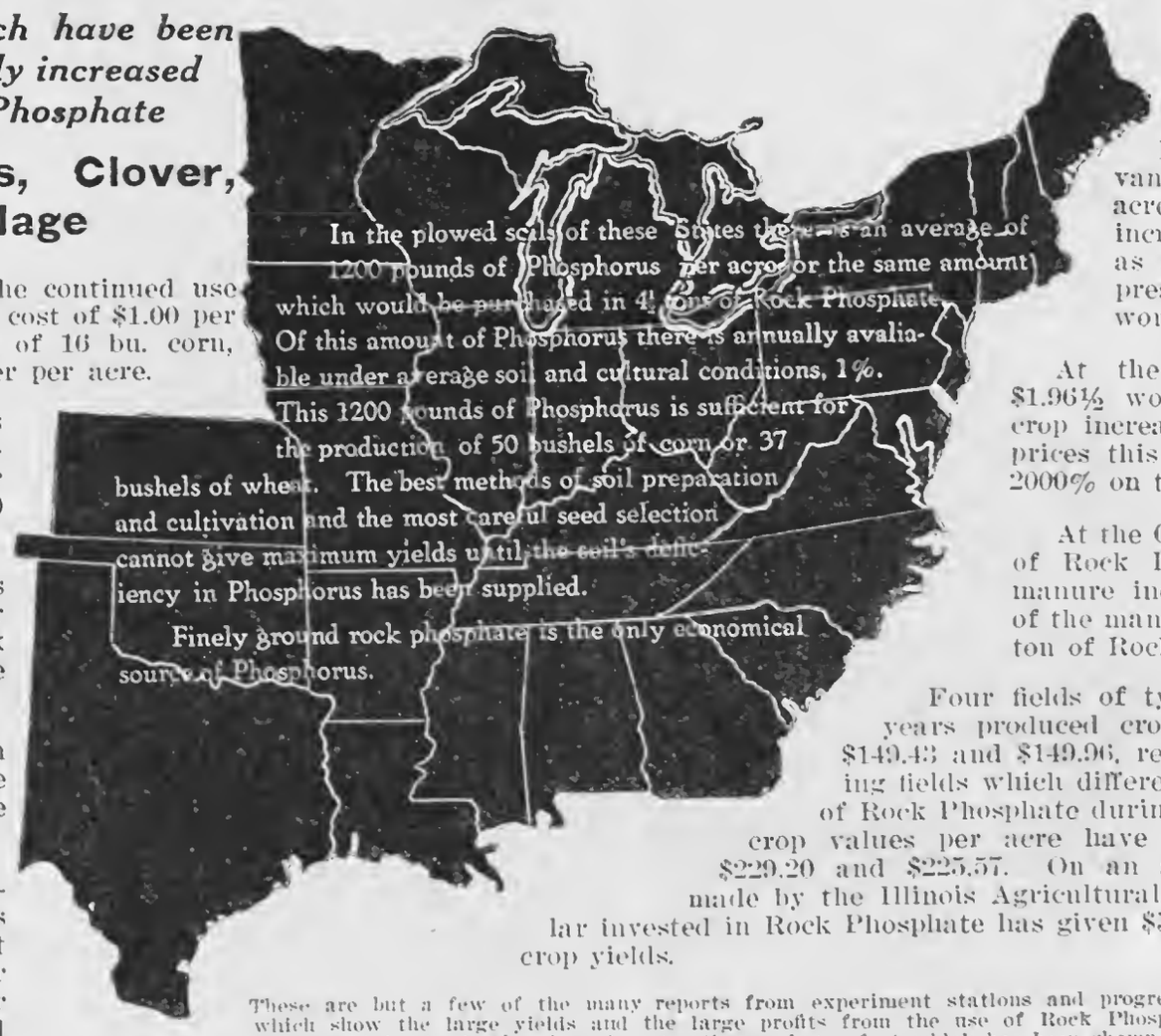
On a typical corn-belt farm the continued use of Rock Phosphate at an annual cost of $1.00 per acre has given increased yields of 16 bu. corn, 23 bu. oats and one ton of clover per acre.

In a recent issue of Breeder's Gazette there was reported an increase of 25 bushels of wheat per acre from an application of 600 pounds of Rock Phosphate.

Increased yield of 20 bushels of oats and one ton of clover per acre from 1,000 pounds of Rock Phosphate is reported in Prairie Farmer.

At the University of Wisconsin the use of Rock Phosphate gave an increase of 47 per cent in the potato yield.

The Ohio Farmer reports an increased clover yield of 2820 pounds per acre at the Ohio Experiment Station. The Rural New-Yorker reports 2652 pounds more of clover per acre from the use of lime and Rock Phosphate than from the use of lime alone. Prairie Farmer during 1913 gave reports from the use of Rock Phosphate on clover in five counties of Illinois. On an average Rock Phosphate doubled the clover yield. One of America's best known Jersey breeders reports an increase of 8 tons of silage per acre from the use of 500 pounds of Rock Phosphate.



What Rock Phosphate Has Done in Dollars and Cents

In a twelve year test at Pennsylvania Experiment Station $1.05 per acre invested in Rock Phosphate gave increased crop yields valued at $5.85 as an average of the 12 years. At present prices these crops would be worth $9.

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At the Ohio Agricultural College 15c worth of Rock Phosphate added to each ton of manure increased the crop producing value of the manure 75c per ton. On this basis one ton of Rock Phosphate is worth $37.50.

Four fields of typical corn belt land have in ten years produced crops valued at $148.75, $151.30, $149.43 and $149.96, respectively. On four adjoining fields which differed only by two applications of Rock Phosphate during the ten year period the crop values per acre have been $229.37, $221.30, $229.20 and $225.57. On an average of all tests made by the Illinois Agricultural College, each dollar invested in Rock Phosphate has given $5.00 in increased crop yields.

These are but a few of the many reports from experiment stations and progressive farmers which show the large yields and the large profits from the use of Rock Phosphate. The soil's need for Rock Phosphate is not a theory, but a fact which has been shown by extensive soil surveys and analyses by state and nation. The use of Rock Phosphate is not an experiment, but a well established system of fertilization which is increasing the bank accounts of thousands of intelligent farmers and enabling them to make their soil permanently productive. Get the facts and you will get the profits. Fill out this coupon and mail it to us today.

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LEGUMES IN THE SILO.

Two years ago we decided that by putting cow peas and Soy beans in the silo along with the corn we could make a feed richer in protein, and not so much concentrated feed would have to be bought to balance the cows' rations. So in June several acres of cow peas were planted, and one acre of Soy beans, so that the two legumes would mature well enough and could be mixed with the corn going through the cutter. The Soy beans were planted in rows and cultivated so that they attained a growth of nearly four feet, and possessed a heavy supply of green pods filled with seed at the time of cutting. The cow peas too, possessed plenty of seed when put into the silo.

After filling the silo with a mixture of corn and cow peas the Soy beans were added near the top after the first night's settling, and consequently the first silage fed was a mixture of one-half corn, one-fourth cow peas, and one-fourth Soy beans, and possessed according to the feeding table a higher percentage of protein, but a lower amount of fat than does straight corn silage. The test at the manger however, was not as satisfactory as one could wish after going to the extra expense of growing the legume crops for silage. The cows did not give any more milk than when given a ration of corn silage, and it was necessary to feed as much cottonseed meal, apparently, with this mixed silage as with that entirely of corn. The mixed silage was more sour than ripe corn silage would have been, though the cows found it as palatable and ate it as greedily as they did ripe corn. However, there were a great many woody stems of the Soy beans that were left in the mangers.

The conclusions that we have drawn from our experience with legumes fed in this way, and other dairymen have reached the same conclusion, is that it is much better to feed all the legumes dry as hay and fill the silo with ripe silage corn. Wherever corn can be well matured on a few acres that have been fertilized until they will produce heavy yields of corn, the actual tonnage of silage per acre is much greater than can be obtained from the same land planted to any of the legume crops. The yield is enough greater to more than pay for the extra work of cultivating the corn crop, and the work of gathering the one crop of corn for the silo is much less expensive. One writer giving his experience with Alfalfa as a silage crop, states that it took from 10 to 12 acres of Alfalfa to fill a silo 12 by 30, the time necessary to fill it was four days, and the cost of filling, $2 per ton. Experience shows that to fill the same sized silo with corn silage requires only from six to eight acres of corn and the cost is never over $1 a ton.

Without doubt the expense of filling a silo with either Soy beans, cow peas or Red clover would be about the same as for Alfalfa and mixing them with corn undoubtedly raised the cost of filling from $1 to $1.50 per ton, to say nothing of the expense of seeding and the decreased yield per acre.

Last year we filled the silo with ripe corn silage alone, and are feeding the legume crops as hay. The grain bill is no more than formerly, the silage being well matured is much better feed for the hogs, and the pigs find more grain in the litter, in fact nearly enough together with their skim-milk to make them a balanced ration.

Legume crops, with their power to draw nitrogen from the air and deposit it in nodules on their roots, are valuable crops for the farm, and several of them should be grown if the fertility of the soil is to be maintained. However, for feeding purposes, farmers generally have found that the extra expense of putting them in the silo does not warrant their being used in this way to raise the protein content of the silage. For practical purposes it seems to be impossible for man to manufacture one single substitute for Blue-grass which during the early Summer is termed "nature's balanced ration." H. B. COBB.

Jackson Co., Ohio.

"WHERE'S your engagement ring, Margie?" "I've hid it. As long as George ain't sure he can get the ring back, he won't break the engagement."—Cleveland Plain Dealer.

Contagious Abortion.

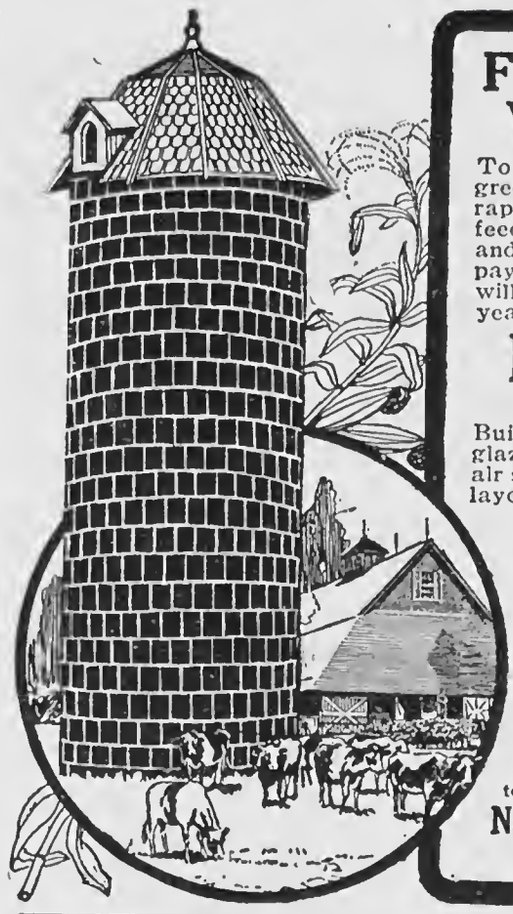
What will prevent further abortion among a herd of cows? These cows are in good condition and the owner is at a loss to account for three successive abortions. Can you explain the cause of abortion and remedy for the future prevention? N. R.

New York.

Where abortions frequently follow each other in dairy herds the cause may usually be traced to an infectious disease, known as contagious abortion. This disease is caused by a specific germ which obtains entrance to the circulatory system of the cow through the digestive tract or the reproductive organs. It causes the death and expulsion of the fœtus, and carries the contagion to other cows through the medium of the discharges and the milk. The disease is also carried from one cow to another by the herd bull. No certain cure for this disease has yet been discovered, though the use of methylene blue has recently been advocated, and good results have been reported from its use. Isolation of infected cows with disinfection of stables is necessary, and a competent veterinarian should be consulted when the disease has obtained entrance into a herd.

M. B. D.

"Do you understand what you are to swear to?" asked the court as a not over-intelligent looking negro took the witness stand. "Yessah, Ah does. Ah'm to swear to tell de truf." "Yes," said the judge; "and what will happen if you do not tell the truth?" "Well, sah," was the hesitating answer, "Ah expects ouah side'll win de case, sah."—Ladies Home Journal.



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To secure the maximum results, stock should be fed green feed all the year round. Its succulence produces rapid growth and a heavy flow of milk. No other feed equals ensilage in succulence. It is as valuable and economical to feed in summer as in winter. It pays, then, to fill a silo for summer feeding. You will keep ensilage succulent and palatable all-the-year-round as the day the corn was cut, if you have a

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You can operate this machine with a 4 h. p. gasoline engine. It's the lightest running blower type of ensilage cutter made—The *throwing, blowing, lifting force* carries the ensilage in a steady full stream rapidly up into the highest silo without waste of power The ensilage packs perfectly and keeps sweet and succulent. The

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Is easy to set up and take down. Simple in construction not easy to get out of order. The entire frame is one solid piece of semi-steel. The bearings are always in line, run smoothly and will not heat. The feeding mechanism is geared to the main shaft—always gives you the desired length of cut. The *Papec Ensilage Cutter* is not chain driven, but has heavy gears which transmit *all* the power. It cuts ensilage perfectly and swiftly—as fast as you can bring the corn to the machine

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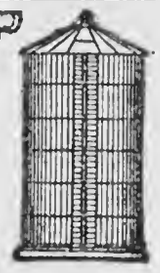

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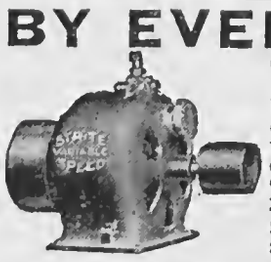

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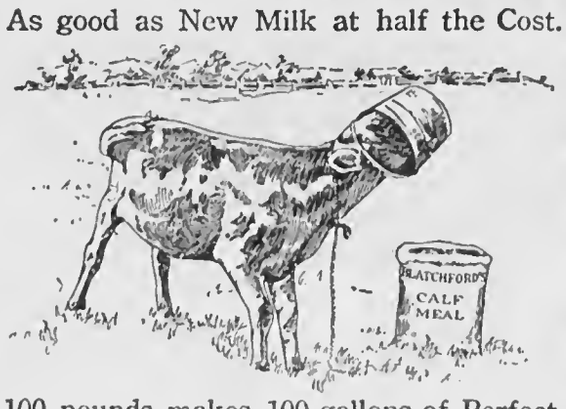

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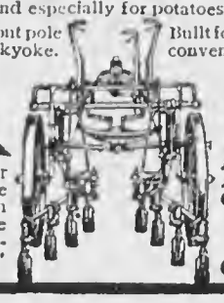

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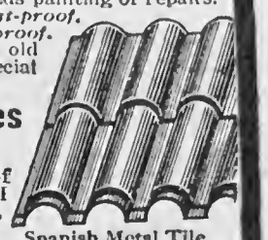

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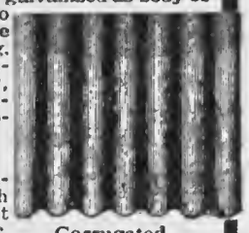
Side and edges are as heavily galvanized as body of sheet. Means no weak spots to rust and corrode. Don't confuse with ordinary galvanized roofing.

By Edwards Patent Interlocking Device, see illustration below, all nails are driven through underlayer of metal only—no exposure—no leaks.



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Take any other piece of galvanized metal, bend it back and forth three or four times, hammer it down flat each time—then take your finger nail and flake off the loosened galvanizing. Make this same test with a piece of Edwards TIGHTCOTE Galvanized Steel Roofing—then note that the galvanizing is solid to the very edges—not a bit will flake off. Proves that not the space of a pin point can possiby be exposed to the weather and cannot wear out.

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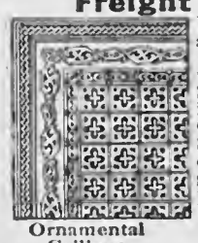

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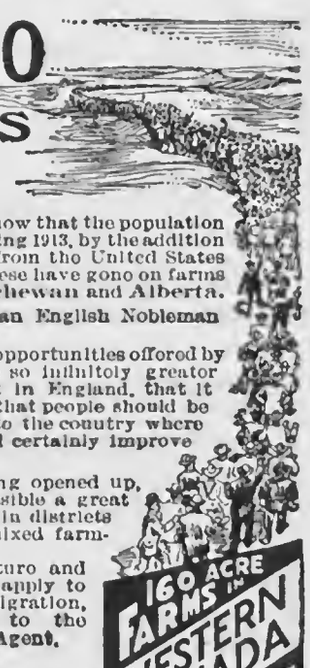

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in **Manitoba, Saskatchewan and Alberta.**

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"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

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CROSS-BRED HOGS AS BREEDERS.

Among a great number of farmers crossbred hogs are very popular. It is claimed that they are better feeders, and the men who always feed that kind are ever ready to enter into a controversy with breeders of purebred swine over the relative merits of the two classes of hogs.

There are so many things that enter into the breeding problem as applied to hogs that a man must be able to see the matter from a great many different angles. For instance, not only are the different breeds to be studied, but the strains of breeds as well. Perhaps a breed like the Poland-China is condemned because the breeder happened to start with small-boned hogs when he should have selected a big-boned strain of the breed. The results he obtained prove to him that back somewhere the hogs have been too closely interbred, when without doubt inbreeding has had very little to do with the fact that his small-boned Polands do not mature quickly into marketable butcher hogs. Then again, purebreds are often condemned because of some fault they develop that is plainly due to their lack of care and feed, and usually the man who thus condemns purebreds is the one who is a strong advocate of the crossbred hog.

The strongest argument for the crossbred hog is that cross breeding is the surest way to eliminate any chance of inbreeding interfering with the growth of the animal. From experience it is plain that cross breeding does produce pigs that mature quickly, at a minimum of feed cost, into well-matured hogs, producing excellent meat. Where the breeder is raising pigs to be sold at weaning time for feeding purposes in a neighborhood where crossbred hogs are popular, the practice of cross breeding is a paying proposition. However, the one cross from purebred sows and boars is all that is practicable.

One of the reasons why purebred swine are often condemned is because their environment, after they are bought by some new breeder on trial, is not what it should be. If purebred hogs are not given a ration well enough balanced with protein, they cannot show the best that is in them. Often this very lack of protein is the cause of some good strain of purebred hogs being condemned. Observation shows that where a herd of hogs is given every chance to produce bone and attain a vigorous growth, it is not to be compared with another herd, perhaps very closely related, but being fed a ration of corn with very little middlings, skim-milk or tankage to balance the ration.

Those who lay down the law of inheritance for us contend that environment plays a very small part in the breeding of live stock; that no matter whether an animal has the proper feed and care or not, if it is mated properly with other animals in its class it will pass on its inheritance from its ancestors to its offspring unchanged. It is hard to accept that theory, though it is no doubt true. However, as applied to swine, if a herd of big-boned hogs are kept for several generations by a poor feeder who keeps mature stock averaging less than 300 pounds, and I have seen purebred hogs matured at that weight due to lack of protein feed, it is quite possible that inheritance can be in this way indirectly influenced at least to the herd's disadvantage. For, if the breeder possessing such hogs, continually sees before him such low-grade purebreds, even though the hogs have the power to pass on a vigorous inheritance, the man's standards are lowered and he becomes less careful in selection of breeding stock, and eventually possesses a poor strain of purebred hogs. And then, sows that have not the proper feed cannot produce thrifty pigs, and if a purchaser, who is skeptical about the value of purebreds, eventually buys a poorly nourished pig, his trial with his first purebreds is started under a handicap. It is the poor specimens of purebred hogs and those fed improper rations that help on the argument in favor of crossbred hogs. Vigorous, growing purebred hogs, given proper feed and care are in a class much above crossbreds as money-makers, though for pork production the crossbreds often produce meat in every way as good as that from purebred stock. H. B. COBB.

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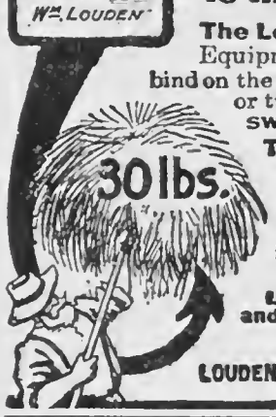

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$13,000 BUYS 267 ACRES—1½ miles from depot, ½ from school, cheese factory. All tillable, dark loam soil. 40 acres valuable timber. 2 set good buildings. Well watered. Fruit. Including 36 head cattle, 3 horses, 7 hogs, 40 hens, fodder and tools. $2,000 cash, $300 yearly, 5% interest. Write for directions. ELLIS BROS., SPRINGVILLE, N. Y.

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WE have just issued a new Reward List, showing articles given for securing new or renewal subscriptions. Send postal card for it.

Department "M"
The Rural New-Yorker
333 West 30th St.
New York

Sweet Clover and Sweet Soil.

We have a newspaper clipping from an Oregon reader which states a new experienee with Sweet clover. A farmer lived in what is known as "alkali" land. He bought what he supposed was Alfalfa seed. It grew and made a fine crop, but instead of being Alfalfa it proved to be Sweet clover. This substitution proved to be a good thing for this farmer, for the Alfalfa would not grow on that kind of soil.

We have never tested Sweet clover on the Western alkaline soils but probably this newspaper elipping is more or less accurate. These alkaline soils simply contain an excess of what most Eastern soils are deficient in, that is lime, different forms of sodium, magnesia and so forth. When they get sufficiently saturated with this alkali, ordinary plants refuse to grow in them. We would expect Melilotus to grow if any plant would, because we have no plant that relishes lime more than this one does. The gist of the matter is that these Western soils, owing to very scanty rainfall, and praetieally no leaching whatever, retain their mineral salts, ineluding the lime, magnesia, different forms of soda, ete., until they become actually too sweet and are ealled alkaline.

The clipping as far as it relates to alkaline conditions, is of no value to farmers living east of the Missouri River, because with our liberal rainfall and eonstant leaehing, we are defieient in these same mineral salts. We would expeet somewhat similar experience to what is related in this clipping, although we would have to be shown that dairy eows would produee more milk on Melilotus hay than they would on Alfalfa hay. We think they might produee as much, but question their doing more. It is not accurate, in our opinion, to expect quite as mueh hay or at least as many cuttings as these farmers expect from Melilotus, at least in the corn belt. We figure that we are lucky to get a light cutting the first year, one heavy cutting which must be mown a foot high in June the second year, and then a moderate seed erop to follow. After this the plant dies. CHAS. B. WING.

Ohio.

County Fairs Without Racing.

A number of years ago you published an aceount of a county fair, I think it was in Maine, where no horse raeing nor any snide game or booth where a person would be cheated was allowed on the ground. We had a very suceessful fair here last Fall, but the racing and bilking games were there, and I want to start missionary work here to eliminate all but square deals. The raeing may be on the square, but I want that stopped also, not on moral grounds, but because I think the people's money eould better be spent in paying additional premiums on useful products. If you could dig up that old aceount of that raeeless fair and send it to me I think I could make good use of it. Here is a summary of the financial aecount of our county fair.

RECEIPTS.

Racing entries	$280.00
Poultry entries	52.45
Livestock entries	41.50
Concessions	266.13

EXPENDITURES.

Paid for racing horses	$1,052.87
Paid for all other prizes and premiums	834.33

You will see that the horses got more than all other produets combined. I think that if that racing money was used to pay premiums on useful products that it would draw a larger crowd than the way it is used. Have you heard lately how that fair is getting along without the raees? C. B. S.

Forest Grove, Ore.

R. N.-Y.—We have had no reeent reports about that fair. There must be others, however, with a similar experienee. Let us hear from anyone who can give us the faets.

A Pennsylvania Storage House.

I read on page 258 a query for cold storage house from C. L., Ringtown, Pa. Two years ago we had to eonsider the same problem. After investigating some of the different types we deeided on the underground cellar. We have a bank barn, and built the storage so that one end projeeted past the end of barn far enough to allow an entranee through stable for convenienee in Winter. There is also an outside entrance in end which we close up in Winter. The house is eoncrete side walls five feet high, eight inehes thiek. The roof is arched. We used building blocks for roof thinking that dead air space would keep frost out, but would not do it again, as we covered it over with dirt, so the solid conerete would have answered and not been so expensive. The house is 30 feet long, 12 wide and eight high. We have never had more than 1,200 bushels in at onee, but think it would hold 1,500. We have one ehimney in end. In Fall we open at night and can cool to within two degrees of outside temperature, and close up in daytime. From October 20 to April 20 we have held the temperature at 33 to 36 degrees and there would be nearly a week at a time without a frost at night.

We prefer the dirt floor, as it is better eonductor of moisture, and to keep fruit in good shape requires lots of it. We have had a little trouble with frost coming through the roof, but that can be remedied by adding more dirt. A lantern has been all that is required to keep it warm enough in Winter, and it was only needed a few days. We kept Northern Spy apples until July last year, and they were as crisp as when put in. I do not think this could be done with the two-story house, as the building above is too good a conduetor of heat.

Butler Co., Pa. C. R. OLIVER.

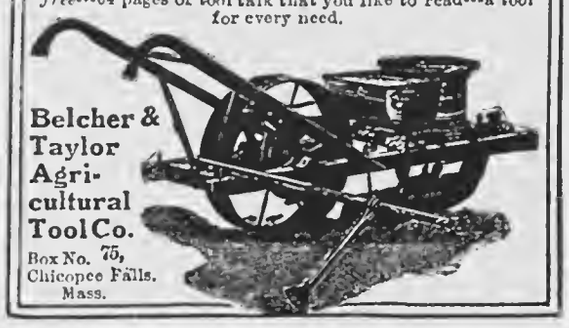
PATERFAMILIAS was admiring a new electrie motor-car recently purchased by a friend, but deplored the faet that as he lived in a small town he would have diffieulty in getting it charged were he to purchase one like it. Suddenly his small son piped out: "Have it charged on the grocery bill; that's what mamma does when she wants anything."—Harper's Magazine.

Plant 7 to 10 Acres daily. One horse enough. Acts automatically, regularly dropping seed and fertilizer at just the distance you set it. *Important!* None of the working parts move while drive wheel revolves except at the time of planting. It's accurate and positive every time. Rightly is this great machine named

The Chicopee Line "KING OF THE CORNFIELD"

CORN PLANTER
And Fertilizer Sower

Will stand the rough, continuous service which such tools get. Nothing complicated. Simple, strong, reliable. Our sixty years are behind it.
Dealers sell it. If none near you, write us. *Catalog free*---64 pages of tool talk that you like to read---a tool for every need.



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Recommended by successful onion growers in all parts of the country.

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Potato Profits

depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and sell. Every double wastes valuable seed. It means $5 to $50 per acre extra profit If all hills are planted, one piece in each. That is why

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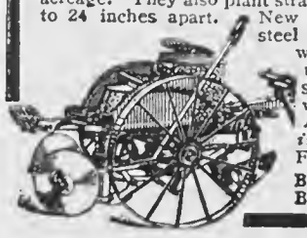
often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. New angle steel frame and steel seed hopper. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "*100 Per Cent Potato Planting*" and copy of IronAge Farm and Garden News.



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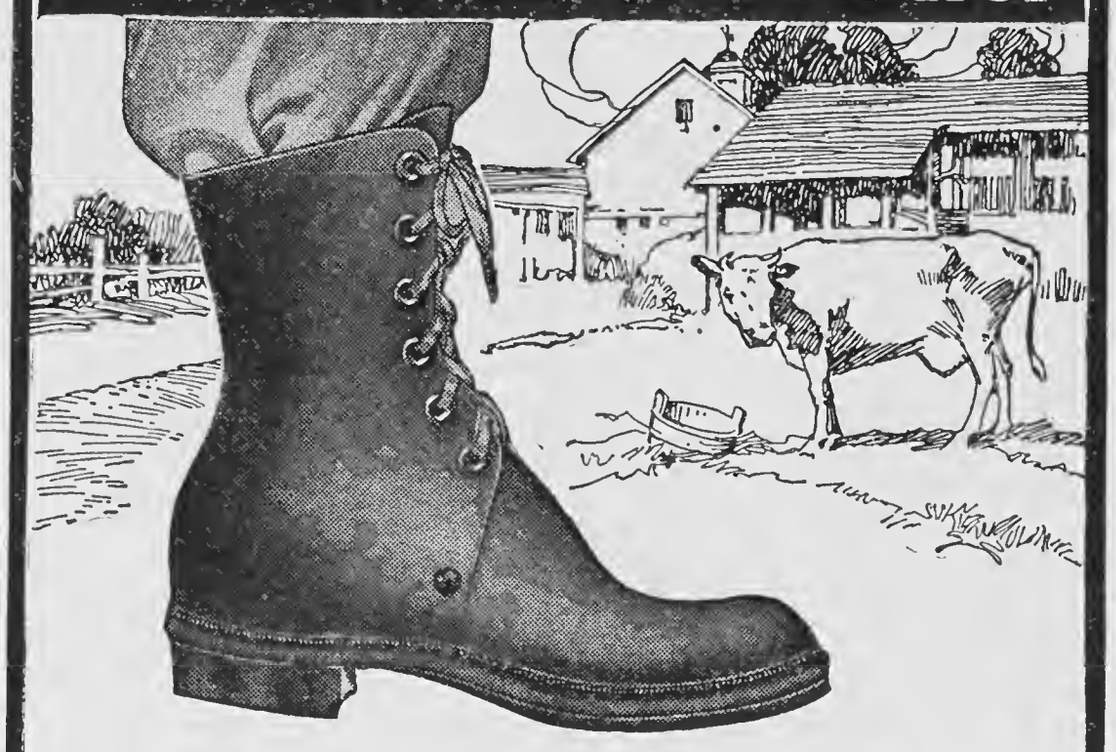

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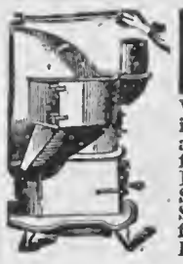

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Kirkup's Strain S. C. White Leghorns, bred for vigor, size and Large White Market Eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.

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White Wyandottes—Top-notch Layers. Winners. Pure White. Red Eyes. Big Boned. Husky. Eggs, $2 per fifteen; $6 hundred. E. D. MONTROSE, R. F. D., Ellenville, N. Y.

White Indian Runners
Eggs from selected birds of the original strain; good enough to show anywhere.
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ROSE COMB BROWN LEGHORN EGGS for hatching. One dollar for thirteen. Also could procure R. I. Reds and White Leghorns. LEON L. SAGE, Crown Point, N.Y.

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BARRON'S BEST BRITISH BIRDS LEGHORNS AND WYANDOTTES Contest winners. Eggs from imported birds for sale. F. PALMER, Cos Cob, Conn.

EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of J. M. CASE, Gilboa, New York. $1 per 15; $5 per 100

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write. HAMILTON FARM, Huntington, New York

BABY CHICKS AND EGGS—White Leghorns and Anconas, from 600 hens. Beauties. Write for booklet. EWING POULTRY FARM, Berrien Springs, Mich.

CHICKS 10c.—S. C. W. Leghorns. Money back for dead ones Pamphlet free. C. M. Lauver, Box 73, Richfield, Pa.

Baby Chicks, Eggs AND CUSTOM HATCHING—Our S. C. W. Leghorns are bred for production and vigor; not for feathers and show type. White Orpingtons from Cooks' best. Pekin ducks. M. B. turkeys. Peaceful Valley Farm, Oxford Depot, N. Y.

S. C. W. LEGHORN **Baby Chicks** in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

FOR SALE—**Indian Runners—Fawn and White Strain** $1.50 each. Eggs for hatching, 75c. doz.; $4 per 100. Also Pittsfield Barred Rocks at $1.25 per doz. Mrs. GEORGE DAVIDSON, R. F. D. 1, Annapolis, Maryland

Indian Runners—Fawn and White. Prize winners. White egg strain. Eggs, $1.25 and $2 per 13. Catalog free. Geo. F. Williamson, Box 160, Flanders, N.J.

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Indian Runner Duck Eggs—$1.50 per 13, delivered anywhere in U. S. CRANDALL FARMS, Albion, New York

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BLUE RIBBON STRAIN WHITE WYANDOTTE HATCHING EGGS. $1 per dozen by mail. Send check, money or money-order. HESSIAN HILL FARM, Croton-on-Hudson, N. Y.

White Wyandottes THAT LAY. Eggs from two pens, headed by cockerels imported direct from Tom Barron. Also eggs from other pens. Circular. WM. J. THOMSON, Delhi, N. Y.

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Blue ribbons from 15 shows—Madison Square Garden, etc. 14 years our Minorcas pleased the public. They will build a fancy egg trade in any city. One man claims—he trusts them to pay any mortgage off. We sell Rhode Island Reds, bred from record stock. No better White Turkeys bred. Have you our bulletin? Write COLDENHAM POULTRY YARDS W. L. BURNETT, Prop., - Montgomery, New York

"Perfection" Barred Rocks—Every pen headed by prize winners. Mated and fed-to-produce chicks of high quality, and the kind that live. Eggs—$2 per 15; 3 settings for $5. Few fine cockerels, $3 and up. Complete price-list, containing valuable information, on request. Dr. HAYMAN, Box R. 48, Doylestown, Pa.

BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. John A. Roth, Quakertown, Pa.

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed. Catalogue free. W. R. STEVENS, Culver Road, Lyons, N.Y.

The Henyard.

THE EGG-LAYING CONTEST.

The eighteenth week of the contest shows the remarkable gain of 615 eggs over the previous week; 19 pens laid 40 eggs or more during the week. Frederick H. Benton's pen of White P. Rocks made the highest score, 48; and the Dunghills, Daniel Hine's pen, came second with a score of 46. Tom Barron's White Leghorns laid 45; they tie with Glenview Poultry Farm, their White Leghorns also laying 45. Harry B. Cook's S. C. Reds laid 44. Tom Barron's White Wyandottes laid 43, and one of Storr's Agricultural Station's pens of White P. Rocks also laid 43. Barron's White Wyandottes are 127 eggs ahead of the next best pen. The total number of eggs laid this week was 2,657. In this extremely cold month of February, with deep snows and blustering blizzards, 7,860 eggs were laid.

The pen producing the largest number was Dr. J. A. Fritchey's S. C. Reds. They laid 161 eggs, Tom Barron's White Wyandottes being a close second, with 159. Below is given the record of the leading pens for the eighteenth week, and the totals:

	WK.	TL.
BARRED P. ROCKS.		
Jules J. Francis, New York	39	417
Frank L. Tuttle, Massachusetts	35	225
A. B. Hall, Connecticut	25	127
Waveny Farm, Connecticut	17	124
WHITE P. ROCKS.		
Storrs Agr. Station, Connecticut	43	308
Storrs Agr. Station, Connecticut	26	208
Storrs Agr. Station, Connecticut	41	168
Storrs Agr. Station, Connecticut	19	112
Storrs Agr. Station, Connecticut	29	181
F. H. Benton, Connecticut	48	297
A. T. Lentzen, Massachusetts	40	162
BUFF P. ROCKS.		
A. A. Hall, Connecticut	35	266
W. C. Morgan, Connecticut	24	101
WHITE WYANDOTTES.		
Tom Barron, England	43	691
Neale Bros., Rhode Island	37	512
Merrythought Farm, Connecticut	42	507
West Mt. Poultry Yards, Connecticut	27	329
D. J. Ryan & Son, Connecticut.	25	339
BUFF WYANDOTTES		
Dr. N. W. Sanborn, Massachusetts	35	285
Am. Buff Wyan. Club, New York	33	256
Dr. N. W. Sanborn, Massachusetts	42	242
H. E. Hamilton, Conn.	24	74
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	17	183
S. C. REDS		
Dr. J. A. Fritchey, Pennsylvania	40	495
Geo. P. Dearborn, Pennsylvania	37	413
Pinecrest Orchards, Massachusetts	38	381
A. B. Brundage, Connecticut	37	347
J. S. Gillespie, Connecticut	35	334
Colonial Farm, New Hampshire	25	328
Harry B. Cook, Connecticut	44	328
H. P. Deming, Connecticut	42	204
E. Underhill, New Jersey	29	183
R. C. REDS.		
Glenview Poultry Farm, Connecticut	40	393
C. S. Scoville, Connecticut	20	245
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut	42	564
Storrs Agr. Station, Connecticut	35	544
Cecil Guernsey, New York	31	456
Storrs Agr. Station, Connecticut	36	396
Tom Barron, England	45	376
Storrs Agr. Station, Connecticut	35	326
Marwood Plty. Farm, Pennsylvania	40	336
Bonnie Brook Farm, New York.	36	325
Branford Farm, Connecticut	40	308
Storrs Agr. Station, Connecticut	33	291
P. G. Platt, Pennsylvania	24	272
L. E. Sands, Pennsylvania	33	287
Manor Plty. Farm, New York	36	262
F. M. Peasley, Connecticut	31	244
A. B. Hall, Connecticut	39	247
Glenview Farm, Connecticut	45	241
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	42	217
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	27	129
BUFF ORPINGTONS.		
O. Wilson, West Virginia	29	196
WHITE ORPINGTONS.		
P. A. Demgar, New York	33	147
WHITE LACED RED CORNISH.		
W. L. R. Cornish Club, Massachusetts	17	45
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	37	100
DUNGHILLS.		
H. W. Collingwood, New Jersey	26	87
Daniel Hine, Connecticut	33	176
Daniel Hine, Connecticut	46	264
MIXED BREEDS.		
Profitable Pltry., Massachusetts.	35	326
Profitable Pltry., Massachusetts.	28	274

Mr Barron writes me that his surplus stock of White Leghorns are all sold. He can take no more orders for Leghorns until next Fall. He has over 1,000 chicks hatched out now, February 1. Many readers of THE R. N.-Y. write me to know if eggs can be safely imported from England—that is, eggs for hatching. In reply I would say that it depends almost wholly on the weather encountered coming over. If it is a smooth passage they will hatch very well; if it is rough, there is liable to be a poor hatch. GEO. A. COSGROVE.

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UNITED STATES CREAM SEPARATOR

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The tests definitely established the fact that **even minute particles of iron (rust) caused certain undesirable flavors** and that in every instance when butter was scored a few days after the making, **the samples in which iron (rust) was present scored lower than the butter made from cream which contained no iron (rust).**

In using the United States Cream Separator with non-rusting skimming sections of **nickel silver** you avoid all risk of having "metallic" butter. **The U. S. sections are positively guaranteed never to rust.** No other separator manufacturer gives you a printed non-rusting guarantee.

Yet, United States Cream Separators with this big exclusive improvement are sold at **no higher prices** than other separators without it.

It is time well spent to learn from your U. S. dealer or us more about the exclusive U. S. non-rusting feature.

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RHODE ISLAND REDS The famous Vibert flock of beautiful, brilliant, glowing cherry to mahogany red-to-the-skin rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but specially selected, long backed, low tailed, certified trapnested record layers, scientifically line bred along Government lines for heaviest winter egg production, with yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness, and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range. In wide-open front colony houses, on a scientific plant absolutely free from roup and white diarrhoea. Highly fertile, clean, well shaped, unblemished eggs, gathered hourly, shipped daily, delivered when wanted, guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding cockerels from trapnested hens, trios, mated breeding pens for sale, Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.
VIBERT RED FARM, Box 1, Weston, New Jersey

R. C. R. I. REDS—Best Winter layers on earth. Eggs for hatching—$1.50 for 15; $2.50 for 30. A few choice pullets to spare. GEO. L. GILLINGHAM, Moorestown, N. J.

DEMING'S S. C. R. I. REDS—Win 1st Pullet and 6th Pen at last Madison Square Garden show. They also won over all Reds in 1912 contest. Average, 186 eggs each. Circular, giving prices of fancy and utility eggs for hatching, on request. H. P. Deming, Robertsville, Conn.

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15) Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks.
AUSTIN'S POULTRY FARM, Box 17, Center Harbor, N. H.

S. & R. Comb R. I. Reds WHITE WYANDOTTES and BARRED ROCKS: Healthy Vigorous Stock. Eggs for hatching, $1.00 (13). A few utility birds—Cockerels, $3.00, Hens, $2.50. Somioh Farm, Greenwich, Conn.

R. I. Reds, Houdans, Indian Runner Ducks
High-class stock for UTILITY, SHOW or EXPORT. Eggs for hatching. Mating list on request.
SINCLAIR SMITH, 602 Fifth St., Brooklyn, N. Y.

Single Comb Reds—Selected Fall and Winter layers. Eggs for hatching a specialty. $1 per 15; $6 per 100; Five dollars the 100 in 500 lots. Fertility guarantee. Laying pullets, $1.50; Cockerels, $2.50 each. A. Quackenbush, Box 192, Darien, Conn.

Single Comb Rhode Island Reds—Large, vigorous very dark red birds and great layers. Eggs and chicks. Mating list on request. A. E. ADAMS, Stony Creek, N.Y.

INT'L EGG-LAYING CONTEST
COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, 194 EGGS. Official record. We offer EGGS FOR HATCHING, from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

R.I.REDS
Rose and Single Comb. D. & F. Strain. Heavy layers, and show record of 87 first in 12 years. Eggs, $2 per 15; $5 per 50 eggs; $9 per 100 eggs; $80 per 1,000 eggs. Cockerels, $3 and $5 each. Order direct from this ad. or send for mating list.
DOTY & FREESE, - R. F. D. 9, Geneseo, N. Y.

Eggs for Hatching—BARRED ROCKS. GOOD LAYERS. Pens are headed with Cockerels from Pittsfield Heavy-Laying strain. 80c. per 15; $4 per 100. S. H. MILLER, Hague, N. Y.

MAKA-SHEL FOR ME **MAKA-SHEL GRIT** If you want plenty of eggs and strong chicks, feed a rough grit; feed a grit that grinds; feed "Maka-Shel." Used by the largest poultrymen. Ask your dealer or send $1.00 for two 100 lb. bags, f. o. b. cars; Middle and New England States, other points at $10.00, freight paid. Agents wanted.
EDGE HILL SILICA ROCK CO.
Box J New Brunswick, N. J.

WRITE US FOR PRICES ON
OYSTER SHELL LIME BONE MEAL
CANADA AND COW PEAS
CHICK FEED, BEEF SCRAP and CHARCOAL
Lawn Seed, Timothy, Clover, Rape, Vetch, etc.
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Poultry Netting—Write for bargain prices. EXCELSIOR WIRE MFG. CO., 5 Cortlandt St., N.Y.

GIANT BRONZE TURKEY EGGS, $4.00 per 10
RHODE ISLAND RED EGGS, $1.00 per 15
INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

Wild & Bronze Turkey Eggs—CHICKEN EGGS. Handsome catalog 2c. stamp, showing pure wild gobbler from the mountain. VALLEY VIEW POULTRY FARM, Belleville, Pa.

WHITE HOLLAND TURKEYS AND WHITE WYANDOTTES. Pekin Duck Eggs. Seven years' careful breeding. Hundreds of unsolicited testimonials. Satisfaction guaranteed. H.W. Anderson, Stewartstown, Pa.

White Holland Turkeys FOR SALE | Mrs. ROBERT DAVIS Cumberland, Virginia

BABY CHICKS—Campines, Silver-Golden. S. C. W. Leghorns. Range raised consistent egg producers. Catalogue free. S. D. HALL, Box N, Seville, Ohio

CHICKS THAT LIVE—A limited number of day-old chicks for sale during April. Write to MAPLEWOOD FARM, Cheshire, Connecticut

Write for Circular **EIGHT BREEDS 45 ACRES** Eggs for hatching. Day old chicks and ducklings. You cannot buy stronger vitality. SHOHOLA FRUIT & POULTRY FARM, Shohola, - - Pennsylvania

THE ORANGE COUNTY POULTRY HOUSE
(Patented)
Revolutionizes the business of egg production. You can make $2,000 a year on your small Eastern farm and not half try. I have blazed the path for you. Write for particulars and prices. O. W. Mapes, Middletown, N. Y.

DON'T KILL YOUR BABY CHICKS WITH POOR FEED
Our SPECIAL CHICK FEED
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The Henyard.

Patent on Hovers.

Can you tell me if I have or have not the right to make a homemade chick brooder or hover using the hot air for heat, or do the patents on them prevent me? O.

New York.

There can be no valid patent upon the prineiple of using hot water or air in brooders. All poultrymen have been doing it for years, and one of the chief joys in the amateur's life is to devise some new scheme for keeping the chicks warm. Standing upon the head in the rain, trying to light a smoky lamp, is the joyous prerogative of all poultrymen, and none need make them afraid. M. B. D.

Day-old Chicks.

Are day-old chickens as full of vitality if not shipped too long distances, as those raised under hens and reared where hatched? In other words, can I safely buy day-old chicks up North, have them shipped here and expect to have them mature into as vigorous adults as those hatched right here on the plaee?

Salem, Va. J. E. W.

There is no doubt that a chicken, hatched and reared without being shipped to a distance, has some slight advantage over one that has been subjected to the vicissitudes of a railroad journey; but it must be remembered that there is a difference in "day-old chicks." Chickens well hatched from vigorous stock, free from disease or other conditions that tend to lowered vitality, will live and thrive, whether shipped or not, when weaklings would either die or mature into inferior fowls. Perhaps the greatest advantage in home hatching is in the opportunity it affords to know the conditions under which the chicks were produced. So far as the shipping alone is concerned, day-old chicks are successfully sent to very considerable distances without obvious detriment. M. B. D.

Deformed Pullets.

A day or two ago I culled from my White Leghorn pullets all deformed ones, and put them in a pen by themselves. Later on giving them a pan of feed, I had the sensation of one when dizzy, and his head begins to swim. However, I knew that I felt all right, and on observing more closely I noticed that the tails of these crooked-backed pullets all turned to the left, and as they circled around the pen, the slant of their tails carried the eye round and round the feeding group. I now wondered if this was a coincidence that these dozen or more tails all turned to the left. I then went to a pen of R. I. Red cockerels where there were several deformed, here I found all tails turned to the left. My interest now well aroused, I went over all my flocks, and found only one exception in twisted tails. This was a White Orpington which carried her tail with a very slight tendency to the right.

Massachusetts. F. E. P.

I confess that I do not know whether the majority of twisted tails veer to the right or left; your own observations are the only ones that I have ever noted upon the subject. It may be more than coincidence. I suppose that deformities are not strictly hereditary, but are due to improper development of the embryo, and this, in turn, to various conditions, such as lack of vitality in breeding stock, improper temperatures during the hatching, and possibly, also, to hereditary transmission of tendency to certain malformations. M. B. D.

Colds or Roup.

Explain the difference between colds and roup in fowls. Two of my P. Rocks had a bad odor in the head and I used the ax to be on the safe side. A. S.

Woodbury Falls, N. Y.

Ordinary "colds" in fowls are marked by about the same symptoms that humans display under the same circumstances. The fowls sneeze, their eyes and nostrils run, the breathing is more or less obstructed, they act dull and generally uncomfortable. Now if these symptoms all become aggravated, the discharge from eyes and nostrils instead of remaining thin and watery become thick and purulent, cheesy masses form about the eyes, sometimes displacing the eyeball, the discharges take on a fœtid color, the fowl loses appetite and becomes droopy, the feathers ruffled, and marked weakness supervenes, it is fair to conclude that the germs of true roup are present, either developing the original trouble or being added to it because of the favorable ground which the catarrhal cold afforded them. As a practical precaution, fowls showing evidences of a cold should be removed from the flock, and permanganate of potassium should be given in the drinking water of both sick and healthy fowls. If instead of recovering, the symptoms become aggravated, as described above, particularly if a markedly fœtid odor appears, the affected fowls should be killed and buried. Technically, the difference between colds and roup is probably that in the latter disease there is a specific germ present that is not present in the former, or at least if it be present, the resistance of the fowl's tissues is such that it cannot develop its malignancy. M. B. D.

Poor Laying.

I have a flock of 60 one and two-year-old Barred Rocks; am getting about 17 eggs a day now, January average nine. What changes would you make in the following method of feeding? I have only small space to use as scratch pen with deep litter; feed as follows: Morning three quarts whole oats in litter, five quarts wet mash. Noon feed four quarts wet mash, with beets or turnips every other day. Four o'clock six quarts wet mash and just before dark all the cracked corn they will eat. Mash mixture 200 pounds ground oats, 200 pounds wheat bran, 100 pounds each cornmeal, gluten, middlings, best grade dried meat scrap. Also feed plenty of grit, shells and charcoal. L. E. H.

Pennsylvania.

Your plan is all right if you wish to go to the trouble of mixing wet mash for your hens three times per day, and are careful not to overfeed of it so that the hens do not have a proper proportion of whole grain. Most poultrymen do not care to mix mash for the fowls more than once a day, and this usually either in the morning or at noon, preferably the latter. I would not use a wet mash at all, but would give this to them dry, in a hopper, open to them all day. I should then mix the corn and oats, add some wheat and buckwheat, and feed the mixed grain in the litter, morning and night. This is the approved method of feeding used by the majority of poultrymen, but it is not the only method that will bring good results, and yours may be satisfactory to you. M. B. D.

Feeding Sour Milk.

Tell us how the so-called "sour-milk pen" of Leghorns at Storrs is fed. That is, how do they feed the sour milk? Is it fed by itself or in a mash? If it is fed alone is it allowed to become very thick before feeding? I have found in feeding milk that the birds get it all over their feathers. To avoid this I have fed sour milk in a mash or porridge. I want to feed it to baby chicks this coming Spring, but I should like to know what sort of a utensil to put it in, so they won't get it all over themselves. G. B.

Westport, Conn.

The feeding of sour milk to little chicks does result in sticky feathers, for they do get themselves daubed up with it unless prevented from doing so. At Storrs College they accomplished this by feeding the milk in circular granite ware cake pans about two inches deep, then on top of this a piece of wire netting was placed and the edges bent down at the corners so the chicks could not get it off. Then the chicks could dip their heads through the wire and get the milk without wetting themselves. If sweet milk was put in the pans, it soon became thick—"loppered"—and in this condition was eaten much more readily by the chicks. They preferred to eat it rather than to drink it. For hens they are using "over-all" feeders; these are heavy porcelain, very easily cleaned, and are heavy enough to stand without tipping over if a hen gets on the edge of it. The hens do not get the milk on their feathers, or not enough to do any harm.

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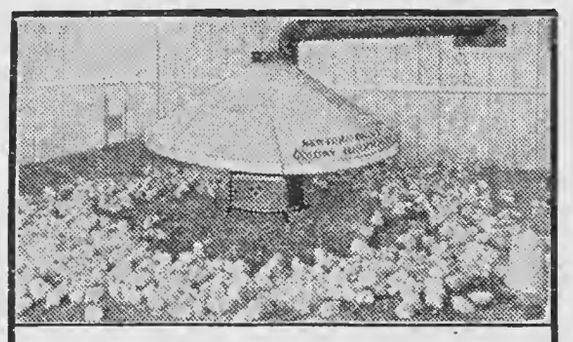

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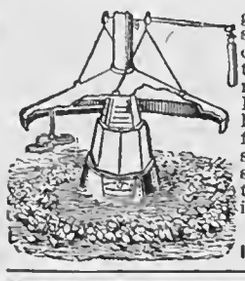

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The Henyard.

Leghorns in the Gulf States.

I note Mr. Cosgrove states the Leghorns had laid off, and asks if anyone can answer. I cannot say that I can answer, but may help. Some years ago when figuring on the proposition of breeding chickens for fancy trade and on getting into egg production for market, I wrote one of the best known and most successful poultry men in this section of Mississippi. He was breeding Leghorns for utility and show, also Wyandottes. I told him what I wanted to know, and asked about the Leghorn as an egg producer. He supplied the information asked for, and advised against the Leghorn, recommending the Wyandotte, which he had and the Barred Rock, which he did not breed, as better egg breeds, for the reason that they produced in Winter, while Leghorns did not with any certainty, which fact the contests have proven correct. He further said that aside from poor Winter laying, the Leghorn was unfavorably influenced by any extremely hot, sultry, or foggy weather and by rainy spells of several days or more duration; that such weather had an almost immediate effect on them, and he could only recommend them for situations where such conditions did not exist often. He did not look on them as reliable egg producers near the Gulf.

Without knowing what the weather conditions were during the time spoken of, I venture to say there was much humidity in the air, and it was probably that which did the work in knocking down the record. I have had Leghorns, and found them an unsatisfactory chicken for egg production as compared with Rocks in this locality, and subject to weather conditions. I am not prejudiced against the Leghorn as a breed, but found them an unprofitable proposition and got rid of them, for the old saying of "Fair weather friends are not worth much" about expresses them. M. A. P.

Alabama.

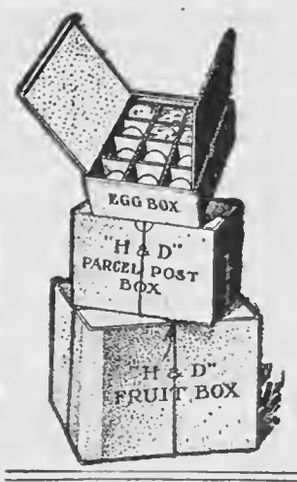
R. N.-Y.—We welcome any good natured discussion of breeds. There can be nothing to fight about if some other breeder honestly thinks he has something better than you have. Last year's contest certainly showed the Leghorns to be fine Winter layers. Most of the birds sent up from the South seem to be of the larger breeds.

Late Molting.

I put up in the Fall 1,380 pullets in one house and 440 in another; the large bunch were all combed up nicely and went to laying very soon after they were housed November 6, and laid 30% during December, but have steadily gone into a molt and decreased to a 15 percent lay now. The small bunch were the small and late-developed pullets, but were not a bad lot by any means. They began to lay about three weeks after the other bunch started and laid 25 per cent during December and January. These pullets were all fed alike, wheat in the litter in the morning and up to December 10 they were given turnips and the tops, cabbage, or rape for their green feed and then I had to fall back on ground Alfalfa scalded. Corn was fed in the evening in the litter. Beef was boiled and fed in very rich mash made by thickening the soup which was almost half meat, to a very stiff dough with cornmeal, bran and Alfalfa meal, this was liberally sprinkled with cayenne pepper. This mash was fed warm in the evening in place of the corn. They were all fed about all that they would clean up in about 10 minutes. I have been feeding this way for years with good results with the exception of the meat mash. I believe that had my pullets been put up earlier they would have laid well all through the last of October and November, but was unable to do this

West Virginia. A. F. M.

It is a fact well known by poultrymen that early pullets that are meat fed and pushed to quick maturity are liable to begin laying early, and after having laid out a clutch of eggs, to molt. The remedy for this is to refrain from quite so early hatching or to keep stimulating meat food from them when they begin to show signs of premature development. You do not say when your pullets were hatched or how they were fed, but from the fact that they began to lay early, I take it that they were early hatched and pushed rapidly along to maturity, thus predisposing them to a premature molt. The addition of a rich meat ration in December probably finished the job of overstimulating them, and molting followed. This is liable to occur any year, but from the reports I get from poultrymen in different parts of the country, I judge that this unfortunate condition has been more than ordinarily prevalent this season. Some of the pens of pullets entered in the Storrs laying contest have gone into molt and nearly, or quite, stopped laying. I know of nothing that can be done now except to grin and bear it; you can have whatever satisfaction there may be in knowing that others are having the same trouble, and another season, you will guard against premature "ripening" of your pullets by feeding less meat and more corn if you see by the rapidity of their development that they are becoming hens too early. M. B. D.



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Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.
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Single Comb White Leghorn EGGS FOR HATCHING
From LAURELTON Layers. Bred for superior egg production and combining the finest strains of English and American blood.
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Eggs from limited flock of yearling and two-year hens. (No pullets mated.) $5 per 100.
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Farm Management.

COST OF AN APPLE ORCHARD TO BEARING AGE.

PART III.

SUMMARY.—To summarize briefly, this orchard has still at the end of the eleventh year to return $157 an acre or $2.50 per tree before it can begin to show a profit. But it should be remembered that five per cent. interest on the investment and all labor has been paid each year. The showing in Orchard C is much more favorable. This is due to a better plan and to better methods of management. Four continuous crops of beans, one of our best cash crops, were grown in the orchard. The fillers were peaches instead of plums (the soil did not permit of peaches being grown in Orchard A, but pears could have been grown and these would doubtless have proved more profitable). As the apple trees have not yet come to the bearing age, we will consider the cost of the orchard from the standpoint of the peach trees. Approximately there are three peach trees to each apple tree. The total cost of growing to four years of age when the peach trees began to make a net return over the current cost of operation, was $106.35 an acre or $1 a tree. Nineteen dollars and thirty-six cents an acre or 18 cents a tree—18 per cent.—of this amount was labor. Interest amounted to 28 per cent. of the total cost, and management to 18 per cent. The four crops of beans grown between the tree rows reduced this total cost just one-half. A small crop of peaches in the fourth season took off $9.21 an acre or nine cents a tree more, bringing the net total cost at four years of age down to $43.73 an acre or 41 cents a tree. The crop of peaches in the fifth year netted enough to a little more than pay up the entire cost of the orchard. To summarize briefly the results in Orchard C at six years of age, enough has been obtained from the land not only to pay the entire cost of the orchard for the period but to give an average annual net return of $9.36 an acre (this is nearly twice the average net return from field crops) or 8½ cents a tree. And with this total net profit of $59.19 an acre, the peach trees are just at their prime, and the apple trees half through the non-bearing period.

CONCLUSIONS.—The costs of growing orchards to bearing ages are almost entirely a question of plan and management. With a wise plan well executed costs may be kept down to nominal figures. Plans which do not fit conditions and poor management may result in such excessive costs that profits will be long delayed, if not made impossible. My own experience teaches me that under my own conditions, enough products may be obtained in an apple orchard, both from tree fillers and from crops between the tree rows, to pay the entire cost of the orchard at 10 years of age, except perhaps the profit lost from crops which might have been grown in place of the orchard. In my own case this has amounted to about $5 an acre annually or about $50 for the period. But lack of experience and none too good management has made one apple orchard cost me $8 a tree at 10 years of age, besides losing the use of the land for this period. Experience has also taught me that under my own conditions a peach orchard should be made to pay for itself at the end of the fifth or sixth year, leaving the net return above the cost of operation as a profit to be distributed over the life period of the orchard. This should easily amount to $10 an acre a year for about 12 to 15 years or twice the average annual net return for field crops on my own farm.

While the cost of growing trees varies directly with the conditions of soil, typography, markets, management, etc., every grower is competing with every other grower and every region with every other region. The man who can grow his trees the cheapest and produce his fruit at the lowest cost has the advantage. Most of us do not know what our trees or our fruit costs us. If we did, we could see how we might reduce our costs and we would be likely to become more conservative in our business. Speculation would be reduced to a minimum. Hence the great need of keeping records. Competition will in the end eliminate the orchardist who does not know his business and his costs of production and the man whose costs are too high.

In determining the costs of growing orchards, we should be careful to include every item of expense. Labor, though important, is often a comparatively small part of the expense. In my own case it amounted to only 18 and 20 per cent. Interest on the other hand, made up 42 per cent. of the cost of one orchard and 28 per cent. on another. The cost of management amounted to 18 and 24 per cent. The costs of equipment, of the use of buildings, of taxes, interest, overhead and management costs, all or some of which are usually omitted in calculating costs, amounted to 69 per cent. of the total in one of my orchards and to 60 per cent. in the other.

My experience leads me to believe that on an average, the net profits from orchards during their entire lifetime do not greatly exceed the net returns from ordinary field crops. The net returns from an orchard in any one year are misleading. Accurate records on orchards for their entire lifetime are very much needed, in order to avoid false ideas of profits and to steady land values.

Under good management, however, my experience has also shown that orchards may be made to pay double the profits which can be obtained from field crops over a period equal to the lifetime of the orchard. As in all other lines of business, the profitableness of orcharding depends upon a wise plan formed from experience, properly interpreted, and upon good judgment in the execution of the plan. Careful records check up and make definite loose experiences and tend to make ones judgment sound.

M. C. BURRITT.

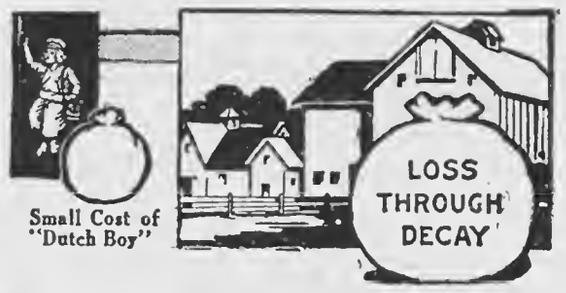
Stocking a Fish Pond.

What kind of fish is best to put in a pond fed by a spring brook? It has some small minnows, was once a trout brook, but is minus trout now. I have dammed the brook and it covers an acre or more, is from four to eight feet deep. I was thinking of stocking it with Wall-eyed pike, or would crappies or bullheads be better suited to a place of this kind?

North End, Pa. A. L. E.

I would suggest bullheads, Yellow perch or crappie. The pond is not deep or large enough for Wall-eyed pike. The bullhead is the best for a food fish.

J. A.



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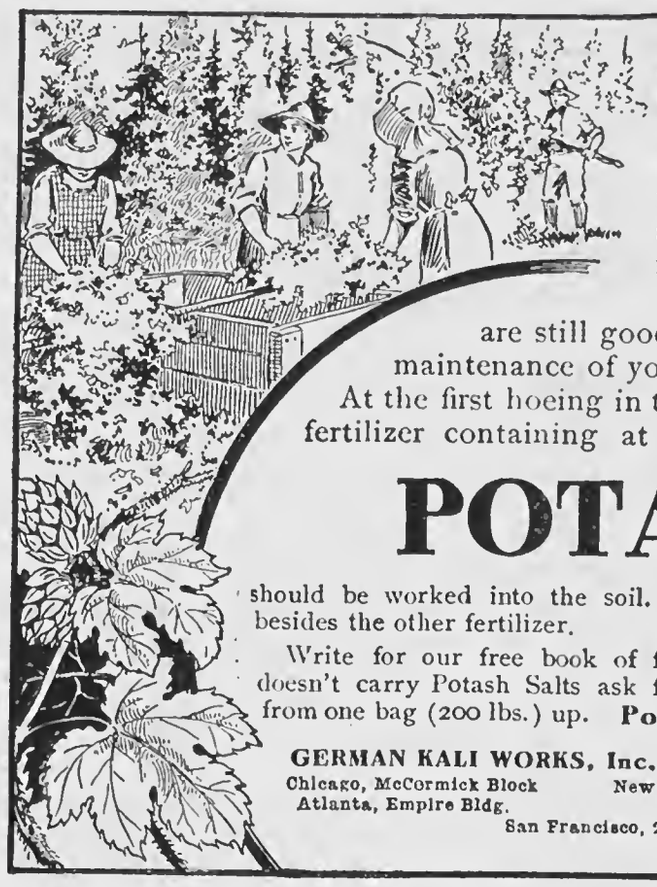

ON new ground hop growers pay too little attention to fertilizers. This is soil robbery for which they afterwards suffer—mining, not agriculture.

When yield and quality are still good is the time to begin the maintenance of your soil fertility.

At the first hoeing in the spring, 1000 pounds of fertilizer containing at least 10% of available

POTASH

should be worked into the soil. Lime, too, is often needed besides the other fertilizer.

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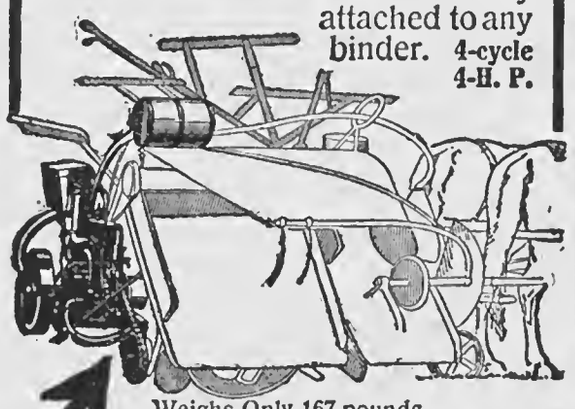

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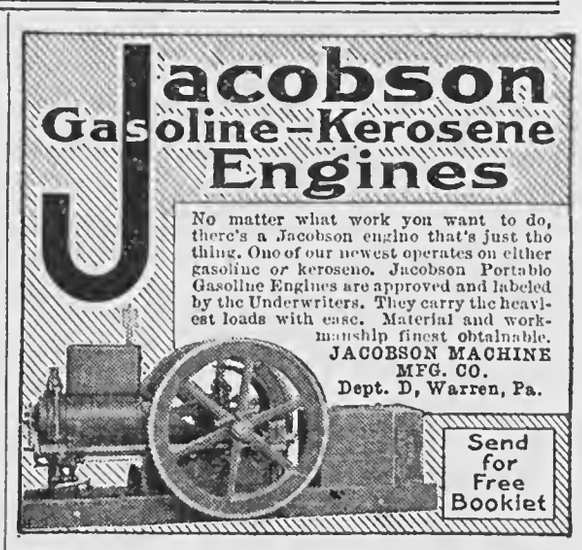

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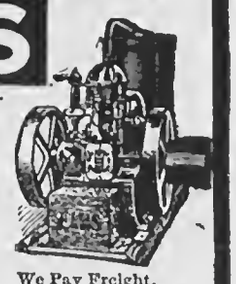

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MARKETS

Wholesale Prices at New York,

Week Ending Mar. 13, 1914.

BUTTER.			
Creamery, extra, lb	27	@	28
Good to Choice	25	@	26
Lower Grades	20	@	24
Storage	20	@	27
State Dairy, best	26	@	27
Common to Good	19	@	24
Factory	16	@	20
Packing Stock	14	@	18
Elgin, Ill., butter market firm at 27 cents.			
Philadelphia, western creamery, 31 cents.			
CHEESE.			
Whole Milk, best	18	@	19
Common to Good	14	@	17
Skims	06	@	12
EGGS.			
White, choice to fancy, large	31	@	32
Common to good	29	@	30
Mixed colors, best	29	@	30
Common to good	26	@	28
FRESH FRUITS.			
Apples—Spitzenburg, bbl	5 00	@	6 50
Spy	5 00	@	7 00
King	5 00	@	6 00
Greening	4 00	@	6 00
Newtown	6 00	@	7 50
Baldwin	5 00	@	6 00
Western, box	1 50	@	3 00
Pears—Kieffer, bbl	2 00	@	2 75
Strawberries, Fla., qt	20	@	50
BEANS.			
Marrow, 100 lbs	4 20	@	5 35
Medium	3 45	@	3 50
Pea	3 25	@	3 55
Red Kidney	5 15	@	5 25
White Kidney	5 75	@	5 80
Yellow Eye	4 90	@	5 00
Lima, California	6 10	@	6 20
HOPS.			
Prime to choice	43	@	45
Common to good	39	@	42
Pacific Coast	20	@	23
Old stock	15	@	18
German crop	68	@	72
VEGETABLES.			
Potatoes—Maine, 180 lbs	2 25	@	2 37
State, bulk, 180 lbs	2 12	@	2 25
European, 108 lb. bag	1 00	@	1 90
Bermuda, bbl	4 00	@	6 50
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl	1 50	@	2 00
Carrots, bbl	2 25	@	2 50
Asparagus, California, doz	3 50	@	18 00
Cabbage, Danish seed, ton	20 00	@	25 00
Red	22 00	@	25 00
Imported	20 00	@	25 00
New, bbl. crate	1 50	@	2 10
Chicory, bbl	2 00	@	3 75
Kale, bbl	75	@	90
Lettuce, half-bbl. basket	1 50	@	5 00
Onions—White bu	2 00	@	3 00
Red, 100 lb bag	2 25	@	3 00
Okra, bu	2 00	@	3 00
Peppers, Southern, bu	1 50	@	3 00
Peas, Southern, bu	2 00	@	5 00
Shallots, bbl	3 00	@	4 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl	2 00	@	4 00
String Beans, bu	2 00	@	4 25
Squash, Marrow, bbl	3 00	@	3 50
Hubbard, bbl	3 00	@	3 50
New, bu	1 50	@	2 50
Egg Plants, Southern, bu	2 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	1 25	@	3 00
Turnips, white, new, bu	1 25	@	1 50
Rutabaga, bbl	1 00	@	1 25
HOTHOUSE PRODUCTS.			
Cucumbers, No. 1, doz	1 00	@	1 50
No. 2, box	2 00	@	3 00
Mushrooms, lb	15	@	40
Radishes, 100 bunches	1 01	@	2 00
Tomatoes, lb	20	@	35
LIVE POULTRY.			
Chickens, for fricassee, lb	15	@	15½
Squab Broilers, pair, fancy	85	@	90
Broilers, fair to good, pair	45	@	55
Roasting chickens, lb	18	@	20
Fowls	15	@	16
Roosters	12	@	12½
Ducks	17	@	18
Geese	13	@	14
DRESSED POULTRY.			
Turkeys, fresh killed, best	24	@	25
Common to good	18	@	24
Chickens, choice broilers, lb	30	@	35
Squab broilers, pair	90	@	1 00
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	26	@	28
Ducks	18	@	19
Geese	13	@	17
Squabs, doz	2 50	@	5 50
HAY AND STRAW.			
Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	19 50	@	20 00
No. 2	18 00	@	19 00
No. 3	15 00	@	17 00
Clover mixed	12 00	@	18 00
Straw, Rye	15 00	@	17 00
Oat	10 00	@	11 00
LIVE STOCK.			
Native Steers	6 50	@	8 60
Bulls	6 00	@	7 75
Cows	4 00	@	7 00
Calves, prime veal, 100 lbs	8 50	@	12 50
Culls	4 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	7 50	@	8 15
Hogs	8 00	@	9 25
MILLFEED.			
Wheat Bran, ton	25 00	@	26 00
Middlings	27 00	@	29 00
Red Dog	29 00	@	30 50
Corn Meal	28 00	@	29 00
Linseed Meal	31 00	@	31 50
COUNTRY-DRESSED MEATS.			
Calves, best	14	@	15
Fair to good	11	@	13
Buttermilks	09	@	10
Lambs, Hothouse, each	3 00	@	5 00
Pork, light	11	@	12
Heavy	08	@	09
GRAIN.			
Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	1 06	@	..
No. 2, Hard Winter	1 02	@	..
Corn, as to quality, bush	71	@	73
Oats, as to weight, bush	43	@	46
Rye	65	@	68
RETAIL PRICES AT NEW YORK.			
These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:			
Eggs, fancy white, doz	35	@	38
Mixed colors, new laid	30	@	32
Ordinary grades	25	@	28
Butter, fancy prints, lb	32	@	35
Tub, choice	27	@	30
Chickens, roasting, lb	27	@	30
Fowls	22	@	25
Turkeys	28	@	32

IT was Robert's first visit to the Zoo. "What do you think of the animals?" inquired Uncle Ben. After a critical inspection of the exhibit the boy replied: "I should think the kangaroo and the elephant should change tails."—Youngstown Telegram.

PRODUCTS, PRICES AND TRADE.

Wholesale milk prices at New York remain as previously reported, $1.81 and $1.71, covering considerable of the business.

*

The New York butter market is dull and two cents lower than last week. At this writing 28 cents is the top for creamery, with the probability of a further drop. Storage is being offered urgently at 25 to 27 cents for good grades, and State dairy, 24 to 26.

*

Egg receipts are running heavy, but trade is good. Prices run about the same as last week on most grades, but fancy whites are a cent lower, 32 cents being an extreme price. Some brown and mixed bring 30 to 31 cents, but a large amount of business is covered by a range of 27 to 29 cents.

*

The potato market at New York is weak and 25 to 35 cents per barrel lower, prices ranging from $1.75 to $2.50. A great many of the offerings run poor either in size or from frost damage. Idaho potatoes are selling well in the Central West. St. Louis alone expects to handle 30,000 bushels of the Idaho stock, which are of excellent quality. The wholesale price is about $1 per bushel now.

*

In a single week recently we shipped 375 tons of dressed chickens to England. They were grown and packed in the Middle West, and graded carefully, as to size and quality. Some of the standard sizes of boxes used for packing are: 12 roasters, running 4 to 4½ pounds each, 8x16x19, inside measurement; 12 frying chickens, 2 to 2½ pounds each, 4¾x19x21; 12 small fowls, 3 to 3½ pounds each, 7x12½x14.

*

Iowa leads all States in value of live stock, $470,272,000, the horse industry being the most valuable item. The total number of horses is 1,584,000, and hogs, 6,976,000 head.

*

The Long Island Cauliflower Association has been one of the most successful selling organizations in the East. Its report for the past year shows net returns of $500,000 on 400,000 packages sold. After deducting all expenses the association has made a 10 per cent. dividend to the stockholders.

*

The 48 States of this country are now in debt $342,251,000, an increase of 50 per cent. in 10 years, according to the census report. New York and Massachusetts have the largest items. New York's debt amounting to 25 per cent of the total for all States, and Massachusetts 23.2. The per capita debt in Iowa is only three cents.

*

There have recently been several round-ups of Jack rabbits in Eastern Oregon and Washington, the result being shipment of 80,000 skins to Paris to be used in making fur hats. These rabbits are a great pest to agriculture in the Northwest. W. W. H.

"I HAVE been expecting her for some time," declared Mr. Dubbe, "and there she is." "There is who?" asked his wife. "The woman tramp," answered Dubbe. "Anybody could tell that she is a hobo. Observe how she slouches along with her shoulders humped, her stomach projecting, and her hands thrust into the pockets of some man's discarded overcoat. Yes, and look at her shoes! The heels worn clear off!" "Silly," giggled Mrs. Dubbe. "She is one of our swellest society girls, in the latest figure, gait and garb."—Lippincott's Magazine.

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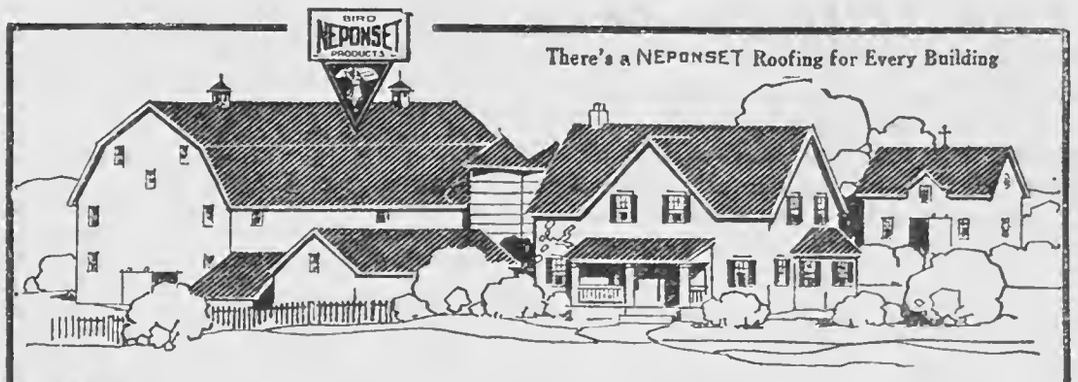

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PUBLISHER'S DESK

There is some intimation in Albany that the Assembly will defeat the Land Bank bill and the Market bill on the ground that the Democratic administration would get too much credit for putting it through. I do not believe it. I think the suggestion comes from misinformed people. My belief is founded on the conviction that leaders of the Assembly are neither knaves nor fools. Farmers have been trying to develop a system of credits and markets for many years. The systems we had, or more correctly speaking, the lack of any system at all, has been a constant source of discussion and dissatisfaction. To be frank about it, none of us knew just what kind of system we could propose to give relief. What we propose now has been a development of years. It is the crystallized judgment of the best producers and altruistic thinkers of the State. It happens to materialize at a time when the Assembly is controlled by the Republicans and the Senate by the Democrats with quite an important element of Bull Moose representatives in both branches. But all three of the parties have indorsed the principles of these measures both in National and State platforms. The farmers want these measures now. They have waited long enough, and in the words of a distinguished naval officer, there will be glory enough for all concerned. If the measures should fail, those responsible for the failure would have trouble in making a satisfactory explanation. But I do not think they will fail. The intimations of opposition in the Assembly are persistent; but I had the pleasure of an interview with Speaker Sweet on the subject, and after due consideration he approved and recommended the coöperative Land Bank bill. I have seldom had a more satisfactory interview on legislative matters, and I have never been treated with greater consideration and courtesy in any committee room anywhere. Chairman Adler of the Banking Committee also gave us every assurance of sympathy for the measure as we explained it, and every assurance that he would give it fair consideration. There is absolutely no expense to the State in the Land Bank measure, and none worth considering in the Food and Market measure, and there is no good reason why they should not pass at this session. The time is now short and lest there should be any oversight or doubt as to the demand for these bills we would suggest that farmers write a brief note at once to Hon. Thaddeus C. Sweet, Chairman of the Assembly, Albany, N. Y., simply saying you are in favor of the Savings and Loan Land Bank bill and the Food and Markets bill and requesting him to use his good offices to secure their passage at this session of the Legislature.

Members of the Andrews Methodist Episcopal Church, Brooklyn, who invested about $12,000 in the hope of receiving dividends of at least twelve per cent. do not mistrust Frank T. Harrison, their fellow communicant and pillar of the church, but they would like to get their money back. Mr. Harrison, a trustee of the church, alleged in his voluntary petition in bankruptcy that he had been deceived by R. A. Silk and E. E. Ford. They told him that they could assure him a return of twenty-four per cent. a month, on every cent he could invest in a certain speculation they were managing. It looked so good to Mr. Harrison that he mortgaged his home at No. 479 Chestnut street, Cypress Hills, for $3,500 and gave that money to Silk and Ford, he states. But they suggested that more was required, and if he could get his fellow church members to subscribe it would be fine. Mr. Harrison, whose probity was never doubted, and is not doubted now, interested the other men in the church with the result that he says nearly $12,000 was turned over to Silk and Ford. This interest was paid for several months, according to the bankruptcy petition and then nothing more was heard of Silk and Ford.—Local Paper.

Men who want to see their money returned had better not invest it in any scheme that promises two per cent. a month.

Frank E. Winchell, who was at one time President of the Oxford Linen Mills and has pleaded guilty to using the mails to defraud in the Sterling Debenture Corporation, took the stand yesterday in the Federal District Court before Judge Anderson at the trial of Benjamin C. Mudge and six others connected with the corporation. The Oxford Linen Mills were supposed to have been using the method of preparing flax invented by Mudge.

Winchell said that in 1907 he was employed in the Sterling Debenture Corporation at $25 a week to receive visitors. Then he was made President of the Oxford Linen Mills at a salary of $5,000 a year and received a bonus of $5,000 of that concern's stock. He attributed this promotion to the fact that his brother, B. H. Winchell, was then on the board of the Rock Island system, and he had suggested that he might become a director of the Linen Mills.

From the Fall of 1907, the witness said, the literature sent out by the Sterling Debenture Corporation told of the use by the Linen Mills of the Mudge flax process, but as a matter of fact in April of the following year there was still no machinery in the mills except that which was there when the factory had been bought, and there was absolutely nothing by which the secret process could have been carried on.

At this time the Sterling Debenture Corporation, said the witness, was representing to investors that the Mudge process was a success commercially, and that the Oxford Linen Mills had $1,880,000 of stock in its treasury.—City Paper.

This about closes our chapter on the Oxford Linen Mills. We have now followed it for some years. From the very first inquiry we branded it as a promotion scheme and the stock as a gold brick. We doubt if any of our people contributed to the $30,000,000 said to be invested in it by the susceptible members of the Sterling Debenture "sucker list" of a million names.

I received a letter and my returns from the commission house to whom I sent my turkeys. I guess he sold part for 21 and part for 25 cents per pound—beat me out of several pounds, but it is all right. He has his last from me. I would not ship him a dead cat, so let me know how much I owe you. I am many times obliged to you for your kindness until you are paid. S. J. W.

Maryland.

This is a letter from a subscriber who did not get what he felt he should have had for a shipment of turkeys. The market conditions are so varied we do not know whether the commission house secured as much for the turkeys as they were worth; but the dissatisfaction of the shipper was increased by the fact that he made three inquiries as to whether the goods had been received and why he did not get his check without eliciting any response whatever from the house. It seemed the check had been misdirected, but a better feeling would have been engendered if the situation had been explained and the letters acknowledged.

Five years ago I purchased 100 shares of Old Dominion Copper Company stock on the Boston curb. Later this company reorganized. My first knowledge of this was reading it in the Boston papers. I wrote the secretary asking him to exchange my old stock, but he replied that I was too late. I still hold certificate of old stock. Can a company close its books in this way and defraud me out of my stock in the new company? This is a good dividend paying stock, and is sold on Boston Exchange under name of Old Dominion. W. L. S.

Vermont.

Our advice is that this stock was Dominion Copper Co., Ltd., which was worth 10 cents a share at time of purchase, and is an altogether different stock from the Old Dominion Company. Regarding the Dominion Company, Ltd., we learn that it was thrown into receivership in 1908 and property sold under foreclosure. It was reorganized as the New Dominion Copper Company, Ltd. The old shareholders fared badly in the reorganization. Efforts were made by dissenting shareholders to discharge the liquidator, setting aside the sale and bring suit in the State of New York, but all these attempts were unsuccessful. This is evidently a case of an irresponsible company trading on the name of a responsible company if our information is correct. J. J. D.

It was a country village, and Pat Casey was making preparations for a "flitting"—the fourth removal in about 12 months. The parish priest happened to be passing, and remarked: "What! Moving again, Pat?" "Yes, your reverence," replied Pat. "You are taking your poultry, too, I see. I think they will be getting tired of being moved about." "Getting tired?" said Pat, "why, sir, they're that used to it that every time they see a furniture van they run into the yard and lie on their backs with their legs in the air waitin' to have 'em tied.—Pittsburgh Chronicle-Telegraph.

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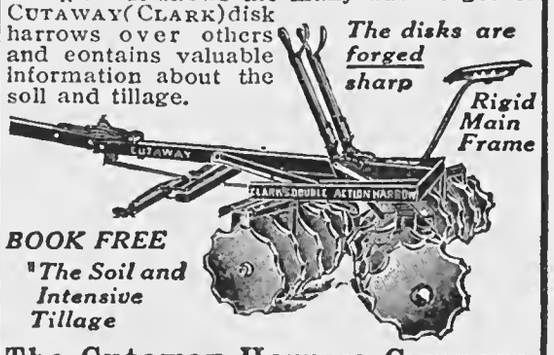

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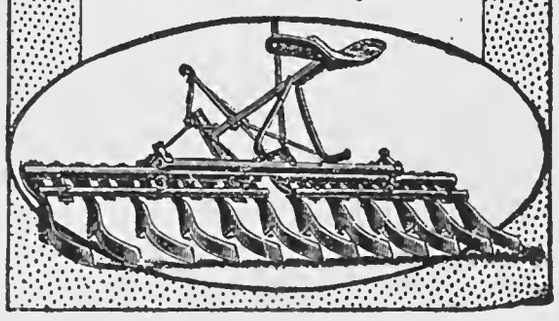

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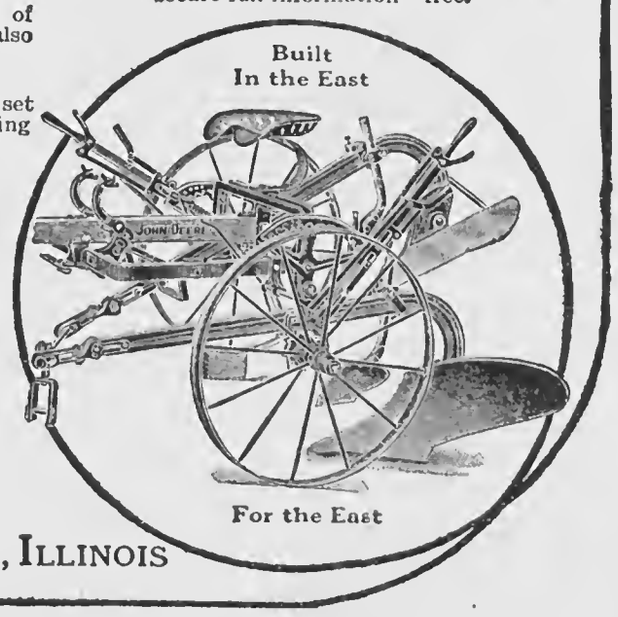

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CHICKEN TALK AT "FARMERS' WEEK."

"How would you keep the chicks free from lice?"

By cleaning and disinfecting the house, brooder and fixtures thoroughly once a week, exercising great care to get it into all cracks and crevices. Allow no mature fowls to run with the chicks; brood only chicks of the same age in one brooder. In natural brooding by dusting the mother thoroughly once a week with a good lice powder and occasionally applying lard to her head and body in limited quantities. Disinfecting the nest once a week, and renewing the nesting material oftener. A few tobacco leaves in the nest would materially aid in keeping all kinds of vermin from intruding in the same.

"How would you kill lice on chicks?"

By applying either melted lard, or melted lard and sulphur, mixed to a thin paste, to each chick twice a week, being careful not to apply too much, because it might injure the chicks. This is certain to kill the lice, whatever kind they are. Apply the grease to chick's head and body. In artificial rearing of chicks, I would also grease the hover curtains a little and, in natural brooding, do the same to the mother or broody. Another good way is to give each chick a thorough dusting with a good lice powder.

"How would you use air-slaked lime in the rearing of chicks?"

I would sprinkle the floor of the brooder, brooder-house, chick exit, and the ground immediately next to the building, once a week with air-slaked lime. It acts as a drier and disease germ destroyer, as well as deodorant.

"Chicks can get a certain mineral matter from fresh ground; how would you provide this to confined brooder chicks?"

By, with the aid of a spade, cutting out a piece of fresh sod ground, on which chicks have never been grown before, and placing it in the brooder. A piece about six inches square every other day would be sufficient for a flock of 30 chicks.

"How would you make the chicks exercise?"

By having a deep litter of cut straw on the floor of the exercising room, feed all grains in this litter. After the first two weeks, or sooner, allow them to run outside part, if not all of each day. In the Winter time, oblige them to go outside for a few hours about noon time.

"What kind of material do you like best for litter?"

My first choice would be cut clover, next cut straw, barn litter or chaff, sweet and free from mold and decayed particles. We like cut wheat straw better than cut oats or barley straw. We do not like sand for litter, especially the first few days, because we have found that they eat too much of it; in fact, some literally fill up on it. In such cases, of course, indigestion develops and the chick dies. Excelsior or shavings are not good material for litter in a brooder. Cut wheat straw about 1½ inch lengths is as good material for litter as we have yet found.

"Would you raise your chicks on the same ground each year?"

Most certainly, I would not. I would, under no condition do anything of the kind, unless I could in the Fall, move the house and fence and plow the entire yard. The best way would be to have at least three fields on which to raise your chicks, so that you could practice a three-year rotation in the rearing of your chicks. Where it is absolutely necessary to raise the chicks on the same ground year after year, it is good practice to spade or plow the ground each year and use lime freely, and try to grow something on the soil.

"Do you consider shade necessary in the rearing of chicks during late Spring and Summer?"

Yes, shade is very important during hot weather for the successful rearing of chicks. It is a fact that during a hot period chicks, even when very small, suffer as much as or more than in very cold weather. One way to keep the brooder cool would be to place it under a tree or in the shade of some other object. Open all windows on rear, and darken the south windows as much as possible. Probably placing the brooder house under a tree is the best way of providing the necessary shade and still allow a circulation of air.

"Would you give drinking water to chicks?"

Yes, would leave it before them all the time from the start. Would aim to have it fresh and cool in preference to warm and standing. Would renew it often, the oftener the better; do not believe in withholding it entirely or in part as advised by some. The idea that bowel trouble and diarrhœa are caused to a great extent by allowing the chicks access to water from the start, is not well founded.

"What would you do to guard against tuberculosis in chicks?"

I would give the interior of the brooders all the sun and air possible on pleasant days. On warm days, would remove hovers, turn the lower side up, so the sun could do its disinfecting. I believe in airing a brooder each day just as much as I do in airing my bedroom daily.

F. W. KAZMEIER.

Moderation in the Poultry Business.

I have never raised White Leghorns, and I presume that when a person is ignorant on a certain subject he should not venture to express an opinion. The wisest thing for him to do is keep silence. But having successfully raised Barred Plymouth Rocks for over six years, I can indorse the sentiments expressed in J. F. C.'s article on page 132, entitled "Chicken Figures Once More." It may or may not cost more to keep some heavy breed than it does to keep Leghorns, but under good conditions Barred Rocks are just as profitable as Leghorns, and sometimes even more profitable. A neighbor of mine, an intelligent and well-informed man, keeps White Leghorns. He tried Barred Rocks, but asserted that he did not understand the nature of the fowls and was not able to raise them successfully. But while a number of my Barred Rocks commence laying at the age of four and a half months and most of them lay abundantly all Fall and Winter, his Leghorns seldom begin to lay before they are six months old, and he gets very few eggs in the Winter.

J. F. C. is right when he says: "Let us get away from such extravagant theories and we shall be on the right road to business stability." Let us keep our feet on terra firma, and not try to accomplish miracles. It is said that figures never lie, but they are often misleading and likely to do more harm than good. For instance, it is well enough to read Mr. Cosgrove's reports of the Storrs egg-laying contest and to admire Tom Barron and his wonderful White Leghorns and White Wyandottes. But let us not for a moment think that in order to become successful poultry raisers all we have to do is to import Mr. Barron's stock. Mr. Barron has received a great deal of advertising for the past two years, and he deserves it. But not many of us are Barrons, and we may not be more successful with Mr. Barron's fowls than we are with our own.

The same is true of many other persons and poultry plants. Take Mr. Mapes, who not long ago described his plant in THE R. N.-Y. and showed how easy it is to get rich by keeping two or three thousand chickens. We may admire Mr. Mapes and congratulate him upon his success, but at the same time we cannot accept his advice to farmers to follow his example, as most farmers would surely fail.

The desire to excel in everything one undertakes to do is natural and praisworthy, but it does not always lead to good results. Only a few years ago a hen with a 200-egg record was considered a wonder. To-day we have records of 280 and even 300 eggs a year; but very few of us can keep such hens. The average poultryman may not be more successful with record-breaking hens than the average farmer would be with record-breaking cows. If occasionally we are the proud possessors of such fowls, we may find that the expense and trouble are in the end worth more than the chickens.

CLEMENS P. BERYLSON.

Sullivan Co., N. Y.

Hens With Sore Eyes.

Last September I put 250 pullets in an open-front laying house, and shortly after I noticed one with a sore eye. The eye became inflamed, mattery, then a large lump formed over the eye. I took this bird out and in about three weeks was better. Then one after another became afflicted in the same way until nearly every bird in the house has suffered. I have taken the birds away as afflicted, but all are well and apparently healthy now. What was the eye trouble, and has that affected the laying propensities of the birds, as they do not lay? Will they lay at all or shall I dispose of them? They are White Leghorns, well developed, red combs, and singing and happy, but don't lay. Is it wise to breed from four-year-old White Plymouth Rocks which have been good layers?

Allendale, N. J. F. M. W. H.

Your hens were suffering from a catarrhal inflammation of the mucous membrane lining the socket of the eyeball, and extending to the nasal passages. When this inflammation is complicated by one due to a certain specific germ, the disease is known as roup, and becomes much more severe. The prompt recovery made by the fowls indicates that only simple catarrhal conjunctivitis was present, but this was sufficient to check laying for a time. The effect should not be permanent, and there is no occasion for disposing of the fowls on this account. Yes; I should breed from four-year-old hens if, when mated with a cockerel, their eggs showed good fertility. Old hens lay large eggs, and large eggs produce large chicks, which we want.

M. B. D.

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philauthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. **THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.**

Subscribers' Exchange

FARM FOR SALE—For particulars address Mrs. N. M. KISTLER, Emporia, Virginia.

OWING TO other business interests must sell 809 acre farm, fertile loam land, mild climate. Chance for dairy, hay, grain and stock. Good buildings. No stones. Price $20,000, including stock and equipment. Part on mortgage. DONAH LANDING FARM, Dover, Del.

SPECIAL FARM FOR SALE—91-acre farm, 1½ miles from Quakertown, near trolley line; bank barn for 30 head, and other outbuildings; plenty of fruit, good water; six acres of woods; all fields machine worked for quick sale, $6,500. IRWIN NEIL, Quakertown, R. D. No. 2, Bucks County, Pa.

FOR SALE—20-acre fruit and poultry farm, 7 miles from Paterson, N. J. New 8-room stone house; good water supply; large brooder house; other outbuildings. 5 acres woodland; over 200 fruit trees; quarter mile from Wyckoff Sta. V. N. C., care R. N.-Y., 333 West 30th St., New York.

ONE of the finest old homestead farms in the State, beautifully located close to good town with high school, churches, stores and the best of society, and near trolley and railroad. 112 acres first class land with thirty acres Alfalfa, abundance of fruit and spring water. Magnificent brick mansion with stone pillars; good barns with new cement stables. A rare bargain at $100 per acre. J. H. FORT, Oneida, N. Y.

FARM 150 ACRES—Nearly all tillable, excellent soil, all level; grain and grass seeded, some timber, nice meadow, fine large house and 6 room tenement house, plenty barns and out-buildings. Monmouth County, 12 miles from Trenton, N. J. Macadamized road, 10 minutes walk railroad station. Price $10,000, buildings alone almost worth it. Very good terms to responsible party, possession now or year hence. E. B. NAYLOR, 805 Summit Ave., Jersey City, N. J.

FOR SALE—Best farm in Hartford County, Conn. 225 acres. Dairy, fruit and poultry farm. 80 acres of Alfalfa. Over 300 apple trees. 4 good houses. Ample barn room for cows, sheep and pigs. Equipment for 5,000 head of poultry. Land in fertile condition. Buildings in good repair. Best markets in the world—250,000 people within a radius of ten miles. Good schools. Good roads. Yale University at New Haven, 30 miles away; Wesleyan University at Middletown, 6 miles away; Trinity College at Hartford, 10 miles away. CHARLES M. JARVIS, Berlin, Conn.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED AT ONCE—Two men to work in dairy barn. Address WOODCREST FARM, Rifton, N. Y.

WANTED—Single man to work on fruit and dairy farm; must be good milker; no cigarettes or booze. BOX 279, Wilson, N. Y.

COMPETENT married man desires position managing small estate or farm. NORRIS, Box 43, Pocantico Hills, N. Y.

BOY 17 wants work on chicken farm, vicinity of New York. E. F. HANKS, Ridgewood, N. J.

WANTED—Reliable married man, work truck, poultry farm on shares; fertile soil, good home market. W. M. STEVENS, Perkasie, Pa.

WANTED—A good creamery man with some capital; married; to go in partnership in an established business. Address C. J. ANDREWS, Clearwater, Wash.

PRACTICAL carpenter, mason, painter, paperhanger (43) temperate, wants position where extensive repairs are needed. Address, B. Box 700, Hartford, Conn.

YOUNG MAN, 18, Christian, wants a job on a farm. Finished short course in State college of agriculture. W. S., 10 Zabriskie St., Jersey City, N. J.

WANTED—Position to care for poultry by woman of experience. Poultry graduate. Address POULTRY WOMAN, care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED—As manager or farmer on gentleman's estate or farm. American 37, married, one child. Thoroughly experienced. Prefer place on Long Island or New Jersey. Modest wages with privileges, will board help. Address, JOHN J. WRIGHT, Bayside, L. I., N. Y.

WILL superintend or work your farm or country place. General farming, animal husbandry. Expert fruit, poultry, bees. Where intelligence, industry, integrity are demanded and paid for. Salary or shares. Best references. Married, children, colored-American. MAPLES, Mosgrove, Pa.

POSITION WANTED BY AMERICAN, age 42, as working farm manager or superintendent on or before April 1st; 20 years' practical experience: stock raising, modern dairying, raising crops and Alfalfa, soiling, farm machinery, gasoline engines, poultry, etc.; best references; please give particulars and wages. Address P. O. BOX 16, Dummerston Station, Vermont.

WANTED—April 1, position on farm by sober, industrious, single man of 30, capable of taking charge of farm and dairy or would accept any position of trust where stock is concerned. 6 years on last farm. State full particulars and wages in first letter; best references given and required. J. H. SHARP, B 5, Little York, N. Y.

WANTED AT ONCE—Experienced herdsman for Holstein dairy. Have steam boiler turbine separator and gasoline engine. Must be good milker, feeder. Understand butter making. Only men who have made good need apply with references. Wages $35 and board. L. E. PALMER, Supt., Richfield Springs, R. R. 2, N. Y.

WANTED—Cyphers incubator. A. O. CHAPIN, Sharon Springs, N. Y.

PURCHASE ALFALFA HAY direct of the producer and save money. F. P. ERKENBECK, Fayetteville, N. Y.

FOR SALE—14 Prairie State Universal hovers with regulators, 1913 model, $4.25 each. Just half price. H. BACON, Berwyn, Maryland.

TRY Shamrock brand pure home-made candies and pop-corn confections. (MRS.) M. O. P. KEOWN, Deposit, N. Y.

PURE HOME-MADE CONFECTIONERY by parcel post. Send for price list. H. I. WHITE, Ballston Spa, N. Y., R. 3.

PIANO PLAYER with fifty rolls music, cost $200. Will sell for $60, good as new. LOCK BOX 313, Marlborough, N. Y.

FOR SALE—25 tons Alfalfa hay, 30 tons one-third Alfalfa two-thirds Timothy. $18 per ton. F. O. B. BRIDGE BROS., Canastota, N. Y.

SPRAYING OUTFIT FOR SALE — 200-gallon tank; spiral agitator; Gould's triplex pump; Fairbanks engine, 3 horse-power; mounted on steel trucks with brakes; nearly new $150. F. ROSSMAN, Valatie, N. Y.

FOR SALE OR EXCHANGE—One-horse power, also two-horse Ironage walking cultivator for clover hay; chickens, etc. DEWITT C. GILBERT, North St., Danbury, Conn.

FARM—168 acres, best corn land, $100 per acre. Address owner, D. E. CHILD, Findlay, Ohio.

FOR SALE—A suburban fruit and poultry farm. Address I. OWEN, P. O., Paterson, N. J.

FARM, 25 acres, $600. Old style house, barn; 10 miles from R. R. F. G. SEARS, West Cummington, Mass.

FOR SALE—Fine farm, 100 acres river flat, 65 pasture, good buildings, well watered, State road. D. M. SATTERLEE, Franklin, N. Y.

FRUIT FARM and boarding house in the Catskills, 49 acres, price $2,000. THOMAS WILLSON, Crlton, N. Y.

FOR SALE—Dairy farm with milk route. Modern sixteen-room house, good barns; 500 acres of land. Write Box 586, Saranac Lake, N. Y.

FARM WANTED in New Jersey, 20 to 30 acres, within 60 miles of New York. Must be cheap. What have you to offer? F. S. W., care R. N.-Y., 333 West 30th St., New York.

TO RENT—Village farm, 100 acres, new buildings; silo; all improvements; all tools; four miles of city over hundred thousand; stone road; must furnish stock. J. B. NICHOLS, R. F. D. 4, Bridgeport, Conn.

I'll Send You This Big Can of CORONA WOOL FAT Post Paid

SIMPLY mail me the coupon below and I'll send you this big can of *Corona Wool Fat*—the greatest preparation ever put on the market for Cracked and Split Hoofs, Contracted Feet, Corns, Grease Heel, Thrush, Barb Wire Cuts, Sore Shoulders, Sore Teats on Cows, etc. I want to prove to you ***before you pay me a single cent,*** that here is a preparation you can't afford to be without. I want to send you, postpaid, this big can on

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I want to show you that you can keep your horse's hoofs in the finest condition—take out all foot soreness, cure all flesh wounds, etc. and do it quickly.

I want you to try this wonderful healing ointment at my risk—not yours. Try it on any case you have—apply part or all of it. At the end of 20 days if you are perfectly satisfied, send me only 50c for the big trial can. If you are not satisfied, tell me so and you won't owe me a penny.

CORONA WOOL FAT

The Wonderful Healing Ointment

is extracted from the skin and wool of the sheep and is the only remedy that will penetrate the shell of a horse's hoof—take out the soreness and grow new hoof. ***Corona Wool Fat*** does not burn, blister or cause suffering. It is a cooling, healing, penetrating ointment, quick in action, ***heals without leaving a scar.*** Read these letters—we have thousands more like them:

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—Corona Wool Fat is the best thing I have ever used for hard and contracted feet of horses. I have used about all kinds.

Yours truly,
P. D. Jamison,
Bridgewater, Maine.

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Gentlemen:—I like Corona Wool Fat. I think it is fine to heal sores and cuts, and can truly recommend it to any one needing a good healing salve.

Yours truly,
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Send No Money—Simply Mail Coupon

Fill out the coupon and mail it today. When you receive the ***Corona Wool Fat*** —try it—watch results—then if satisfied send me only 50c—if not satisfied, just write and tell me so and I'll charge you nothing. Write for the big trial can ***now.*** Remember, I send it ***postpaid.*** You risk nothing in testing it. ***Will keep your horses in working condition and put them in selling condition.*** I take all the risk—send today.

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IT WILL CURE

Hard and Contracted Feet, Mud Fever, Split Hoofs, Corns, Grease Heel, Thrush, Quarter Crack, Cuts, Barb Wire Wounds, Sore Teats of Cows, Ulcer, etc.

Our Guarantee is on the Lid of Every Can.

I have sent out over 100,000 cans the past eight months, and now have more than that number of satisfied customers. You need it; I have it for you, and you can try it out on the "before you pay" plan. Now, all I ask is a fair, square trial on its merits. *C. G. Phillips.*

Proof!

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Dear Sirs:—I received the Corona Wool Fat all right and have tried it and it works just as you recommend and even better. My horse was sore in the front feet and she could hardly get out of the barn, and in two weeks time she improved so much that she was as limber as ever, and our blacksmith stated that he never saw anything as good as Corona Wool Fat.

Sincerely, T. J. Tishell,
North Rush, N. Y.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I have had several cans of your Corona Wool Fat and it has given good satisfaction, and as I was unable to get any in this section I wrote to you. Please send me price list of your Corona Wool Fat Ointment. I used it on a horse that had a very bad quarter crack, and by spring it was grown down and clear out, and I never let him stand a day with it. I think it is the best preparation I ever used for all kinds of sores.

Fred Stout, Monroe, N. J.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I am very well pleased with Corona Wool Fat, and am enclosing you remittance for more of this wonderful product. It is great stuff. Yours truly,

Louis J. Dumont,
R. F. D. 1, Wolverine, Mich.

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—Corona Wool Fat is just the stuff for my bank mules feet as it keeps the bank water from cracking their feet and getting sore. Enclosed find remittance for $3 for which send me a ten pound pail. Yours truly,

W. F. Williams,
New Sharon, Iowa.

(6)

20 Day's Free Trial COUPON

CORONA MFG. CO., 3806 **Corona Block, Kenton, Ohio**

Gentlemen:—Please send me the trial can of your Corona Wool Fat. It is understood that I am to use this for 20 days in accordance with directions, and if I am satisfied with the results I will send you 50 cents to pay for it. If it does not do as you claim I will owe you nothing.

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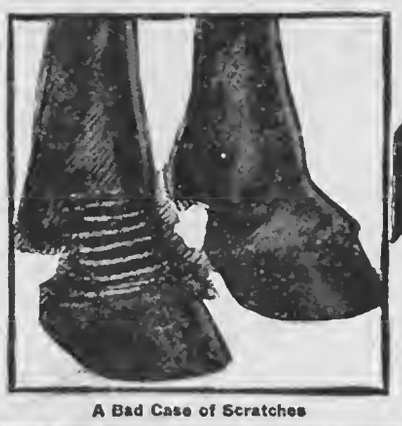
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MAR 27 1914

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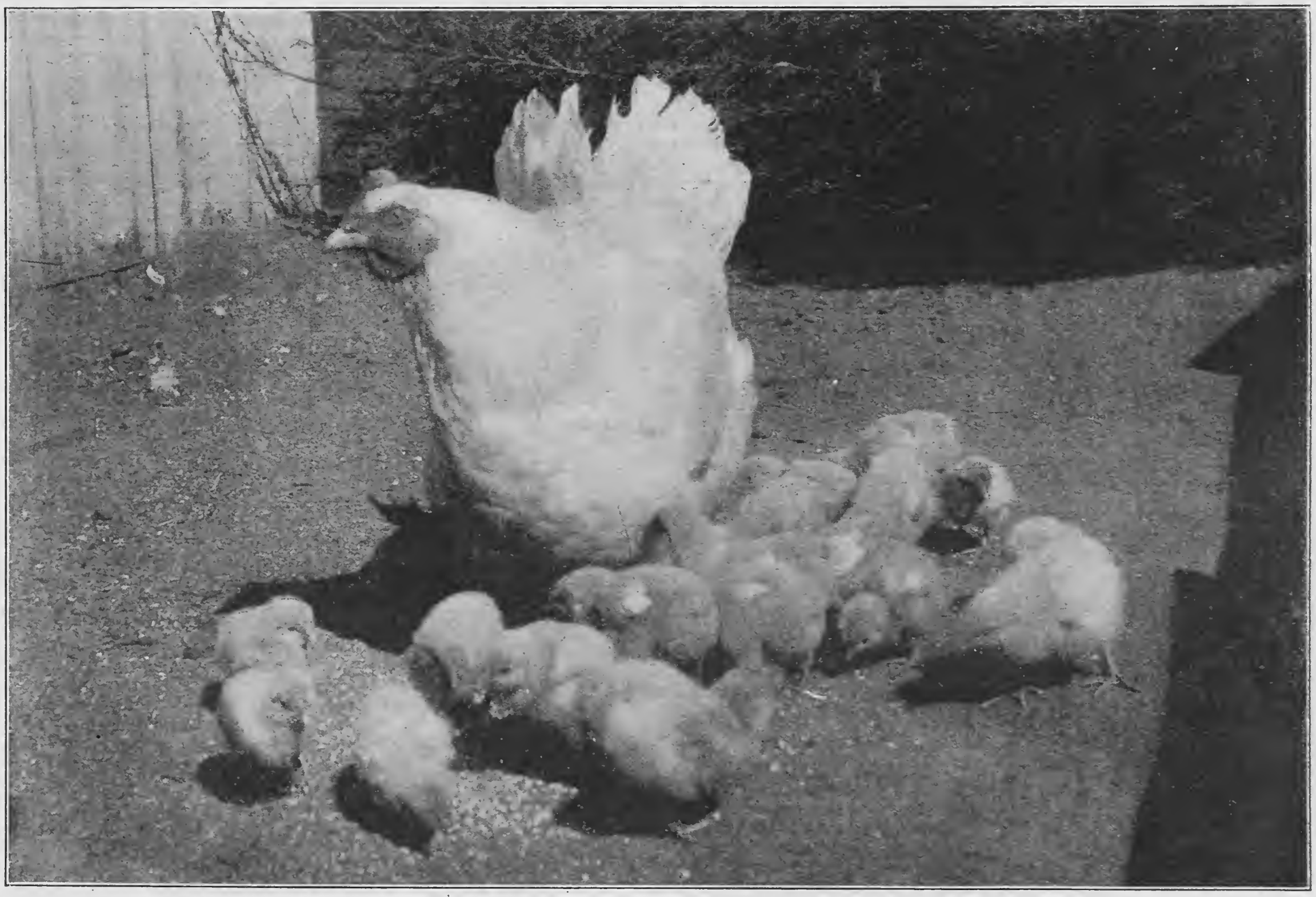
ECONOMY IN RAISING CHICKENS.

Pastured in the Cornfield.

CHICKS IN GROWING CROPS.—Economy, meaning a wise adaptation, rather than the limiting of cost merely, I have in mind in arguing for the rearing of chicks among growing crops. The experiment station up at Guelph, Ontario, has demonstrated that chickens may be grown at less cost in cornfields than upon sod. However, this is but one part of the story, for the relative worth of chicken variously grown as well as the attendant advantage to the crop are features well worth considering. In my personal experience I have found the cornfield an unrivalled place for the young broods. I have listened to argument favoring the close yarding of chicks, based upon the claim of more rapid growth. Within certain limitations this may be, as compared with underfed chicks at large. But we must not confuse mere bodily growth with proper development looking to the conserving of vigor, upon which egg production depends. And the test of the scales does not show this. Confinement in yards and forcing for growth is all right for cockerels destined for the market; but flesh is not synonymous with the full egg-basket later on. This matter of environment is a more serious matter than the novice would think. The most approved house with its open front calls for the three remaining walls to be airtight, to ensure against draughts, and this for mature fowls amply protected by feathers; for their plumage naturally adapts them to withstand cold, but not winds. But how often we see the tender, unfledged chicks thoughtlessly exposed to winds.

NEEDS OF CHICKS.—To understand why a field of corn is so suitable a harbor for chicks, we must bear in mind their varied needs for shelter from winds, a moderate degree of both sun and shade, and inducement to much active exercise with the rich reward it brings in the form of insect food. The fullest possible amount of exposure to the sun's life-giving rays is indispensable for the greatest vigor, but this must be tempered at the seasons of greatest heat. An orchard gives too much shade and generally little protection from winds. In the cornfield the various extremes are corrected. From the time the stalks are a foot high the chicks begin to find protection. The yarded chick is generally a lazy one; but not so those in fields often cultivated. No field is so effectually tilled as that one where a flock of active scratchers have their home. The cultivator is an active factor one moment in a week or more. If its beneficent work is so well proved by its influence upon the crop, how can we ignore the benefits resulting from the constant sniffing of the chickens' feet?

CROPS SUITABLE FOR RUNS.—The range of crops the chicks may be domiciled among with mutual benefit is a long one, embracing most vegetables usually to be found in gardens. I am aware that current opinion is not favorable to chickens in the garden, but that is founded upon theory and poor management, not skilled practice. Not in its broad Western meaning, domestic fowls of any age,



MOTHER AND HOME. THE OLD ORIGINAL FIRELESS BROODER—WITH BRAINS TO IT. Fig. 182.

do I use this word "chicken," but in its proper sense of their innocent young, nor would I be understood as advocating an indiscriminate mixing of chickens and all garden crops. A chick's natural appetite for greens must be allowed for, and economical feeding calls for as large a proportion of vegetable food as possible. This appetite is readily kept within a narrow range so long as that form of green food they have become accustomed to is abundant within their reach. The early broods which are eventually to range in the garden will have been put out on a piece of sod adjoining. From the time of planting no mature fowl is to be allowed to range, and so to teach the young the edible quality of any of the germinating plants. The habit of picking the young, tender blades of

grass seems to satisfy them, provided this is kept in a fresh condition by frequent mowing. The few vegetables especially tempting to chicks, such as lettuce, spinach, beets, are to be planted within some enclosure. Corn, beans, peas, squash and turnips do not tempt them. Tomatoes suffer in no way until the fruits begin to ripen. However, I must not omit the indispensable condition that the chickens are to be fed regularly and have an unfailing supply of drinking water close at hand. I once returned from a day's absence and found the chickens picking into the ripe tomatoes, and soon traced the cause to empty water fountains. In case they get the habit of eating this fruit it is easy to save the crop by picking at first turning color and putting away in some warm place to ripen.

FEEDING THE CHICKS.—It is my custom to keep whole wheat constantly before growing chickens; and in addition to feed a moist—but not wet—mash each morning. This mash is composed of ground oats in large part and wheat by-products, and contains a varying proportion of fine sifted beef scrap, is mixed with milk when procurable, and is fed as nearly dry as a wet mash may be made. A sloppy mash is a good fattening ration, but not a proper one to secure growth. Regular feeding is just as important to get well developed chicks as to prevent their experimenting among the garden crops to appease their hunger. With proper management I have grown a flock of 200 chickens in a two-acre garden, and at the close of harvesting the sweet corn for market, both early and late, I have had the satisfaction of teaching the chicks to clean up the refuse ears. Systematic management is the keynote of successful chicken gardening. A single mature fowl would queer the whole system in an hour's time if allowed freedom in the garden.

POULTRY ECONOMICS.—It cannot be gainsaid that the New England farmer has unmatched advantages when it comes to real economical growth and upkeep of poultry. Neither corn nor chickens display so much thrift as when grown together, and at the close of the season the one will begin to feed the other. It has been shown repeatedly that in connection with farming corn may be grown at no actual expense, the feeding and manurial value of the stalks paying for the crop of ears. Again, a properly managed flock of chickens gives us pullets at maturity clear of cost, the marketed cockerels paying the bill. With both the flock and its feed at zero as regards cost, and our market clamoring for fresh nearby poultry products, the question forces itself upon us: Why does New England bring the bulk of supply from outside? The answer is easy. The boy in the story went to mill with the stone in one end of the bag to balance the grain in the other, "because father did." The money that should represent profit pays for both Western-grown grain and the transportation of it, in order to make milk to sell at starvation prices; and the farm's fertility thus depleted, they give transportation another lift by purchasing chemical manures. Opportunities have developed which the farmer has not yet opened his eyes to.

The good old corn-crib, which has become almost a mere tradition with us, is bound to return. In feeding value for poultry our flint corn is superior to the dent varieties, approaching nearly to that of wheat, when well seasoned. I know a farmer who uses two corn-cribs and keeps a crop over one year before feeding, with remarkable results in the production of Winter eggs. This plan was adopted after experience had demonstrated the new corn to be a comparatively poor egg-producing food.

HENS AND DAIRY.—It is unnecessary to supplant the dairy in order properly to develop the poultry interest, for poultry may be most economically handled only in connection with cattle. Where convenient to a demand for cream, this or the butter can be economically marketed together; and the skim-milk or buttermilk is a most valuable food for the poultry. Where the corn-crib displaces the silo, the dried fodder is still an approved ration for the cows. I am getting more milk this Winter from my family cow (now two years farrow), feeding hay and stalks alternately, than she was giving last Winter upon a ration of hay and shorts. Red clover should regain its former place as a farm crop, both as a soil improver and to help out the hens' bill-of-fare. When properly harvested, retaining the leaf and blossom and finely chopped, they simply revel in it. With mangels or rutabagas raised in abundance to eke out the corn and clover, a good share of the food for poultry is produced on the farm.

Considering the need for poultry especially in the growing period to get to the tilled soil and enjoy the benefits of shelter among growing vegetation in order to thrive at their best, also the need to turn their manure to practical account, the farm has a manifest advantage in the economical production of poultry and eggs. Permanent runs soon grow foul and the effect is soon apparent upon the fowls. But the rotation possible upon the farm, with new and wholesome quarters for the young broods, is essential to best results. The farmer who consistently works into poultry, establishing a corn and chicken partnership, so to speak, has a lead upon the poultry specialist in constricted quarters in every economic sense. FRED W. PROCTOR.

Massachusetts.

PROPER GROWTH FOR TREE.

It seems to me a correct course to take, during the first few years of the orchard, to attempt to get the tree quickly from the nursery size, as planted in the orchard, to a well-balanced, well-grown tree, ready for its business of fruit production. After this purpose is attained, so to handle or control conditions as to get these returns from the tree as regularly, and of as good character and large volume, as consistent with regular bearing. In handling the peach, the tree formation period may be expected to cover three growing seasons, and I would not object to any large growth obtained during this period, provided the trees finished their growth by end of Summer, say September 1, for this locality, (Southern Connecticut), so the new wood growth would ripen up well before freezing weather might be expected to set in.

In a well-drained soil, and with the use of a well-balanced fertilizer, so made up and applied as to give the push to the trees early in the season, I should be glad of the large wood growth that would be reasonable to expect, especially when accompanied with good tillage. With different conditions of soil and a fertilizer treatment and tillage conditions that would tend to late growth, I would want but a moderate growth on account of danger of weakening the tree from freezing the immature or soft wood that might result from a vigorous late growth.

To a certain extent the handling of the apple might be along similar lines as the peach. When the size of the tree is such as to make the fruit yield worth while, as to quantity, I would want to slacken down the growth of the tree somewhat, especially the apple, and be satisfied with a moderate new wood growth each season.

In a middle-aged peach or apple orchard, I should be satisfied with a new wood growth of 12 inches, provided it was accompanied by the foliage color indicating vigor and the setting of fruit buds and spurs in abundance. In a young orchard, in the (permissive) strong-growing period, I would not object to the growth of three or four feet or more provided, as said, the growth was made early in season. J. NORRIS BARNES.

Connecticut.

A STUDY OF SOIL WATER.

The Literary Digest, January 10, 1914, reports an interview by the Wilmington (Del.) Morning News with Samuel Wesley Long, in which Mr. Long predicts that within a comparatively short time—50 years or less—if the present rate of deforestation and careless methods of cultivation are continued the United States will become a desert.

Commenting on the above the Literary Digest says: "That the ground-water level of the United States has lowered nearly to the danger point is shown by data collected by the late Dr. W. J. McGee for the Department of Agriculture. Reports from 30,000 sources covering practically every county in the country show that the rate of change varies from region to region and State to State ranging from a slight rise in irrigated districts to a lowering of about 3.5 feet per decade. In the 31 States covering the half of the country best adapted by natural conditions to feeding and clothing a great people, the average lowering since settlement would appear to be no less than nine feet, i. e., from well within to about the limit of capillary reach from the surface. Will THE R. N.-Y. explain just what is meant by the ground-water level? What determines the "limit of capillary reach from the surface?" Travelers tell us that the land in China has been tilled for 2,000 years and it is still very productive. How have they succeeded in maintaining the fertility and soil moisture for so long a period? Do they retain much land in forests and do they plant trees to keep up the acreage? Europe is also a much older country than this, yet their land is much more productive, their average wheat yield per acre is, I believe, more than twice that of the United States. How have they succeeded so well? What portion of their lands are in forests? A few years ago we heard much of the benefits to be derived from subsoiling. Why do we hear so little about it nowadays? Has it proved beneficial to any kinds of soils and if so, what kinds? What is a "plow soil?" Is it reasonable to expect any possible benefit from subsoiling sandy soil with its already too porous subsoil? R. J. E.

Berrien Co., Michigan.

The ground water level is the depth below the surface at which the ground is saturated. This is shown by the height of water in ponds and wells. Statistics of the changes of level in the latter through the country were used by the late Dr. W. J. McGee as a basis of his study of the relative amount of soil water to-day and at the time of the settlement of the country.

The capillary reach from the surface is determined by the character of the subsoil and ranges usually from 10 to 30 feet. The finer the soil particles the greater distance will capillarity be effective in bringing ground water to the surface. As to the productivity of China, it is the result of most thorough tillage and conservation of every source of humus and plant food, the cheapness of labor being favorable to this intensive farming. Forestation is not a feature there, but a beginning is being made in tree planting of recent years, and as their production is mostly in the river valleys, the supply and level of ground water must be maintained by these streams. Irrigation, hand watering, and their extensive use of rice, which is grown in wet lands, may also help to explain how their millions are fed in a land that has had 40 centuries of farming. In Central Europe, forests are maintained in the interest of conservation, Germany not allowing the cutting of trees except under regulation of law that requires replacement of those removed. The larger crop yields abroad are again owing to hand labor and intensive cultivation. About one-fourth of Central Europe, we are told, is in forests; and no report has come to hand of any lowering of level in the ground water there.

The plow sole (a condition that is more common in the South) is a product mostly of poor plowing and can be remedied by use of a better type of plow. This, an official of the Agricultural Department informs us, is now being worked up by the department. Crops with long tap roots, like clover, penetrate and break up this under crust, too, and it is a condition easily remedied by good farming. Subsoiling is less practiced than formerly by the best farmers, probably owing to more tile drainage and the greater use of deep-rooted plants in their rotations. These plant roots, I believe, are the best subsoilers for most soils; certainly for those that have a gravelly bottom.

To return to the subject of diminution of soil water in the country; this is true. Dr. McGee states that this loss approximates 10 per cent. of the original store, and has viewed the result of this loss already realized, and of its continuation, with serious concern; yet not as an alarmist, as his associate Dr. Newell of the Reclamation Service, tells me. The loss though continuing, is becoming less in recent decades, and were serious consequences to our national productiveness to follow, they would appear not in 50 and perhaps not in 150 years. Meanwhile these remedial measures are suggested by him: The forestation of a proper portion of the country; the tillage of the farm area with a view to the absorption into the soil of all rainfall possible to secure, and generally to avoid all surface waste of storm water. This whole matter is treated at length in Bulletin No. 92, Bureau of Soils, United States Department of Agriculture.

E. F. DICKINSON.

SAVING THE CITY SEWAGE.

In European cities the question of the proper disposal of sewage from the large towns has become a big one, not only because of the menace to health, which this sewage presents. It also contains large quantities of fertilizing and building material which ought to be utilized. Millions of dollars worth of plant food are flowing on to the ocean through the rivers of this country, and too little effort has been made thus far to put a stop to this flood. Without question, the future must see a change in this matter of handling sewage. We must make use of the plant food rushing away in this manner, and the question of health demands some radical action.

German and French cities have taken hold of the subject, and have made much progress. Reports from our foreign consuls give interesting statements about the way the work is done. In some cases, the sewage is filtered and the liquid part used to irrigate farms and gardens at some distance from the cities. Certain parts of the sewage, such as the bones, are boiled or steamed, and this appears in the form of tankage, which is ground up to be used as a fertilizer. In other cases, the sewage is burned, the heat thus produced being utilized for the production of electric power. The ashes and cinders mixed with concrete are pressed into building blocks, which are said to be of a very high quality for certain uses. All sorts of devices are being made on the other side to handle this sewage in an economical manner. In fact the time has come in Europe when wastes of this kind must be prevented under the greatest economy of social life. We have not quite reached that point in this country yet, but must consider saving these wastes.

GROWING THE OSAGE MELON FOR PROFIT.

PART I.

In order to grow and market the muskmelon profitably there are a few essentials that enter into the work that are important, and first is a fertile soil. In the growing of the Osage this is necessary, and perhaps a good many of the failures are due to neglecting this important factor. Unlike the smaller melons of the Netted Gem or cantaloupe type, which will develop and reach its size on a comparatively light soil, the Osage, in order to mature and develop its size must have a richer soil. As it is desired to ripen the melon early, a deep rich fertile sandy loam, which lies up high and dry and is naturally well-drained, makes an ideal place for the growing of this melon. A good clover sod plowed under in the Fall and then covered with barnyard manure in the Winter will put this soil in good physical condition for growing the crop.

PUTTING IN THE COMPOST. Fig. 183.

The preparation of the soil has much to do with the future of this crop. Since melons delight in a high state of cultivation it is important that we put all the work we possibly can on this field before the melons are planted. Hence, in order to conserve all the moisture possible it is well to fit this field early in the Spring. If the soil has been top-dressed with manure it can be thoroughly disked and harrowed and several crops of weeds killed before the melons are transplanted to the field, and will cut down the expense of caring for the crop later on.

As it is the early melons which usually prove most profitable, the plants are started in hothouses or cold frames, and can be grown in flower pots or plant boxes, which are made in three sizes for that purpose. These boxes are made 4x4x5, 4½x4½x5, and 5x5x5 inches deep, the 4½x4½x5 deep being the size most commonly used. A compost is made for these boxes of about two parts rotted horse manure to one part rich sandy soil, new soil from the woods being preferred. In our experience we have found that the poultry droppings from the henhouse added to this compost, and thoroughly mixed proves to be very beneficial.

The plant boxes being placed in the bed are packed close together by laying 2x4 down and with an ax driven up close together, as shown in Fig. 183. The compost, after being worked over thoroughly several times (this is important, as in order to grow plants all alike, the soil should be alike) is hauled to the cold frames and thrown into the boxes, levelled off, and punched down firm with a block of wood, or something that will fit the box. Some people prefer using their fist for this purpose, as shown in Fig. 184. After the soil is made firm in the box, more woods dirt or leaf mold is used to fill up the box, this being worked through a wire screen to take out all the roots, leaves, twigs and trash, which renders the planting of the seeds less troublesome. The dirt is then levelled off, and two seeds are sown in each box, and if these seeds can be sown immediately after the boxes are refilled the dirt will be found to be in a fine condition for seed, neither too wet nor too dry. The boxes are kept moist but not too wet, and after the plants are a week or 10 days old we usually thin to one plant, leaving the strongest, healthiest plant. As it is desirable to grow a rather short, stocky plant, the beds should have as much air as the weather conditions will permit. Right here is where melon growers sometimes encounter serious trouble by plants damping off. This is caused by a fungus attacking the plants on the stalk where drops of water have collected. To overcome this trouble it is necessary to air or ventilate the beds after watering the plants so as to dry off the stalks of the plants and to keep the water drops from collecting on the plant stem.

When plants are about five or six weeks old, or when the danger of frost is over, they should be transplanted to the field. The field should be marked both ways, setting them about five feet each way. A single shovel plow is about as good a tool as we have found for making the furrows for the plants, plowing the furrows one way and setting the plants on the cross marks.

Plants should be well watered before taking from the hotbed, and if flower pots are used a slight tap with one hand on the bottom of the pot will bring the plants out intact, but if boxes are used the opposite corners of the boxes should be cut with a knife, which will make it possible for the plant to be taken out without disturbing the plant or roots. Soil should be pressed firmly around the plant, taking care not to press the box dirt or break the roots of the plants any more than is necessary.

H. B. BLANDFORD.

"CO-OPERATION."

Farmers are a very patient class of people. They have endured the 35-cent dollar for many years. They are slow to demand justice. For 35 years the Patrons' Mutual Insurance Association of Logan County, Ohio, has given to its members insurance on their property against loss or damage by fire or lightning at a cost of $1.40 per $1,000, while stock insurance companies continued to charge an average of $3.35 per $1,000, but there are still some farmers who are willing to use their hard-earned 35-cent dollars to pay these high rates for insurance.

Last Spring we organized for the purchase of supplies and found that we could get a saving of five to 25 cents on fence posts by buying in carload lots. Agricultural lime has been selling at $5 to $6 per ton. Buying directly in car lots enabled us to get fine ground lime at 90 cents per ton, freight included. We purchased fertilizers at a saving of about $6 per ton on the different brands; 16% phosphate cost $11.90, including freight, when agents were selling this grade at $18. Our executive committee has just closed a contract for 1,000 tons for March delivery, and this means a saving to the purchasers of about $6,000.

Cottonseed meal, coal and spraying materials are among the other goods that have been purchased in this way. On cottonseed meal the saving was about $9 per ton. On coal the saving is only $1.

It is true there are some who find fault and say the farmers should buy at home. If the goods were produced at home this argument would have some effect but when we know the dealers must send out of the community the same amount of money that we do, to purchase the goods from the producer and pockets a nice profit from every sale, the argument of buying at home has little logic in it. The dealer never hesitates to buy apples, potatoes, wheat, corn, etc., outside the home markets whenever he thinks he can do so to advantage. The farmer has the same right. We have no fight against the home dealer who is willing to sell us his goods at a reasonable margin of profit, but when he seeks to compel us to buy at home and pay unnecessary profits on goods produced in other localities, we reserve the right to buy elsewhere.

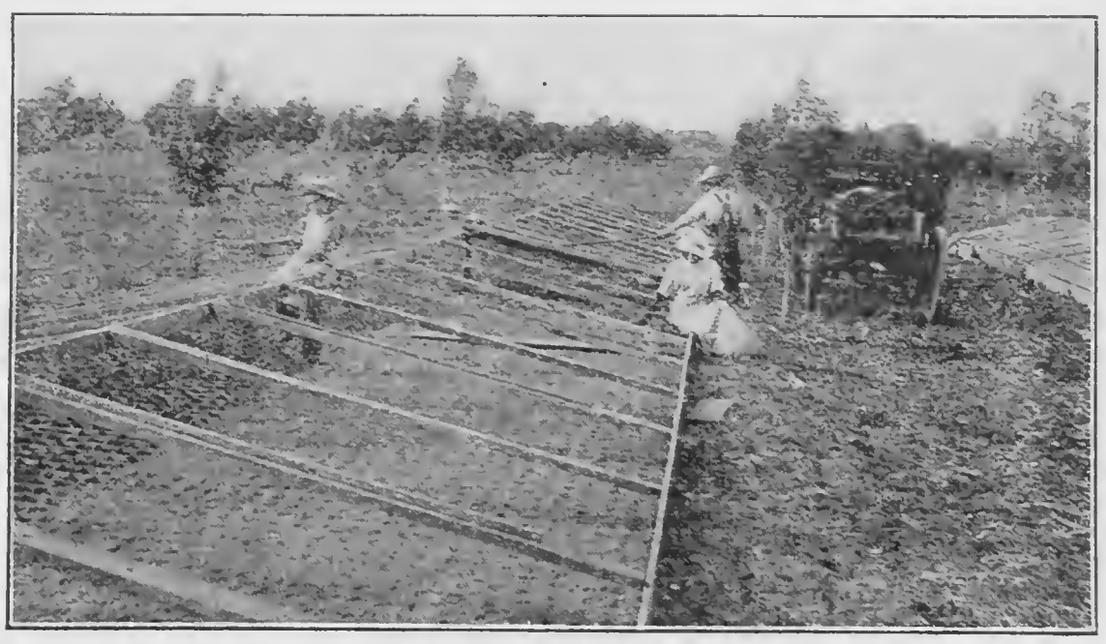
SECTION OF OSAGE MELON. Fig. 185.

Dealers were asking 75 cents per gallon for lime and sulphur solution when the wholesale price was 20 cents. Their price for arsenate of lead was 30 cents when the wholesale price was 12 cents. Thus far no effort has been made to sell products through the coöperative organization, but if it becomes necessary to do so in order to get fair prices this step will come in time.

In addition to the money saving effected through this organization it is teaching farmers the advantage of paying cash for goods. One of the most disagreeable of all bad habits is to run bills at all the stores. Merchants lose much money through the bad and uncollectable accounts. They must make profits enough off the cash buyers to make up for the loss sustained on the credit buyers. For this reason the man who pays cash cannot afford to deal with the merchant who sells on credit. The entire credit system so far as it applies to provisions, dry goods, clothing and farm supplies is at fault. It is better to borrow money at 6% to pay for such supplies than to buy on time. The easiest time to pay for an article is when you receive it. If one waits till the article has been eaten or worn out he does not fully realize its value.

Ohio. JOHN L. SHAWVER.

PUTTING PLANT BOXES IN THE BEDS. Fig. 184.



LEVELLING OFF THE FRAMES. Fig. 186.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Arbor-Vitæ Hedge.

How far apart should American arbor-vitæ be planted to make a close permanent hedge? When should they be planted? Are Americ .n Arbor-Vitæ breeders of Cedar rust? N. H. S.

Grape Island, W. Va.

Set the arbor-vitæ two feet apart; even 2½ to three feet will result in a close hedge in the course of time. Set in Spring, a little later than deciduous trees, observing the precautions, so often advised for keeping the roots moist. Prepare the trench well for planting, and after setting mulch the surface. We have no knowledge of cedar rust occurring on arbor-vitæ. This disease appears on the Red cedar, Juniperus, which is botanically distinct from the White cedar or arbor-vitæ, which is a Thuya.

Grafting Pear on Thorn; Wild Grapes.

1. If you have had experience in grafting pear on the thorn tree (or thorn apple tree) will you give the result of it? Which is the more profitable to graft, the stock or root of same? 2. Do you know of anyone grafting the tame grape on the wild stock, or roots? If so with what result? A. J. S.

W. Fort Avon, N. Y.

1. I have long known that the wild "thorn" trees may be grafted with both apple and pear and have done it myself, but the union is not very satisfactory. The stock does not grow as fast as the grafts, and although they will bear fruit they often break off in course of time. The common practice is to top-graft, but it is possible to root-graft also. 2. Wild grape vines may be grafted with the cultivated varieties with good success, for they are very close akin, in fact many are of the same species.

H. E. VAN DEMAN.

Smut on Corn.

Can you tell me why my corn was so affected with smut last year? I had in about 10 acres, half of which was on new ground, which did not seem to be affected, while that on ground I had raised corn on for three or four years without change was badly affected.

Chester, N. J. J. C. C.

The new ground was free from spores of the smut fungus, hence the immunity. On the other hand, land on which this crop had been grown without intervening rotation for several years would be very likely to carry the fungus. The smut spores live and even increase in manure, thus may spread the disease in fields to which such manure is applied. The fermentation of silage, however, destroys smut spores. Corn smut can be greatly reduced by the use of Bordeaux mixture, but it is not believed that results warrant the expense. The most practical plan is to go through the fields, cutting out infected stalks or ears, which should be burned, not thrown on a rubbish heap. If this practice is continued yearly smut will be greatly reduced, especially if the work is done on adjoining farms also. Unlike other grain smuts, the fungus is not conveyed by the seed, so seed treatment is entirely useless. Infection is conveyed by the smut spores falling upon tender parts of the growing plant. Moisture, rich soil and close planting all predispose the plant to smut infection, because of soft texture induced. Continue to cut out and destroy the smut masses, and do not plant the infected fields to corn this season.

Educating Peach Buyers.

To the grower who can work up a special market there is no doubt in my mind that his rewards will be in proportion to the high quality of his fruit. I have found it so in peaches, for by allowing them to ripen on the tree instead of picking them as solid as rocks, I have been able to convince people that Massachusetts can grow as good a peach—they call them better—as any other section of the country, and my customers are willing to pay for them. In spite of the glut in the market last year I kept my prices as usual at $1.50 for firsts and $1.25 for seconds, with extras at $2, and found that my customers preferred to pay my prices and know they were getting as fine an article as I could produce rather than pay half of it and get an inferior article. I called my Ferncroft (our farm name) peaches, the peach that "tastes like more," while the others many times were of the quality described as "one taste is enough."

I think we have "queered" the market for the green picked peaches shipped in from outside as our fruit stores do not seem to be able to sell them at "give-away" prices. Our consumers are educated to the fact that there is such a thing as a peach that melts in your mouth and really tastes like more, and they will take nothing else. We say "eat what you can and can what you can't," and we find often there is a rush for "canners" at the end, as all previous baskets have been eaten up. We advertised our large Elbertas as "company peaches" for canning and we trust our folks are well stocked, for the peach crop is wiped out in Massachusetts and I believe in Connecticut so far as a commercial crop is concerned. If one can stand the strain of edueating his customers he will win out, but it cannot be done in a season. F. HOWARD BROWN.

Massachusetts.

"FAMILY" USE OF DRUGS.

On page 217 I notice that M. B. D., in answering a query as to the use of Fowler's solution in human ailments, says: "It is a valuable drug, much used in medicine, but is a powerful irritant and depressant poison in overdose, *and should never be taken or given except under the direction of a competent physician.*" I have noticed that M. B. D. has answered a number of other queries relative to human ailments in much the same words as I have underlined above, to secure the services of a competent physician. What is one to do when this advice cannot be followed? For instance we lived here for 11 years before we had a doctor nearer than 30 miles. Don't you think that under those circumstances we would be justified in studying the diseases the human body is subject to, and, so far as we are able to do so, apply the necessary remedies, including arsenic if necessary? E. J. T.

Cokeville, Wyo.

After years of experience in applying drugs to the relief of human ailments, the writer is convinced that no better advice, or no other safe advice, can be given the layman than to take or give drugs only under the supervision of a competent physician. If exception could be made to this rule, it would be in the case of those who may live "30 miles from a doctor," but even then, the drugs used should be few and simple; certainly never such active poisons as arsenic. It would be a splendid thing if all people so situated could know what to do in the emergencies that arise, particularly how to safely relieve severe pain, but for an untrained person to attempt to treat disease with such drugs as aconite, laudanum, etc., would be folly equal to giving a child a stick of dynamite to play with; of course, in either case, no harm might be done.

If it were generally understood, as it should be, that with so few exceptions that they can probably be numbered on the fingers of one hand, drugs do not cure disease, there would be less temptation to experiment with them. Nature cures the disease; drugs can only help nature, and they cannot even do that unless administered by one who understands their action and their limitations. On the other hand, ignorantly administered, they are capable of doing infinite harm. The universal human desire to take something when feeling ill, and the very natural tendency to attribute any subsequent relief to whatever may have been taken, are very largely responsible for the "patent medicine" habit and explain why testimonials to the marvelous virtues of some advertised remedy are sometimes signed by men of exceptional attainments in lines of work that have not taught them anything about drugs. As to the drug in question, arsenic, while valuable in trained hands, it is never an emergency drug, and the only reason for its mention in a journal not devoted to medicine is that it is often given to horses for the relief of heaves; even here, the horse owner should understand that he is administering a drug as potent for harm as for good. M. B. D.

TEACHER: "What is a pedestrian?" Country Pupil: "A feller what gets run over by an automobile."—Boston Transcript.

Plant Apple Trees That Bring Profits

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STAYMAN :: :: R. I. GREENING
YELLOW TRANSPARENT :: GANO

are money makers in that territory. Plant the kinds that pay best.

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Medium Grade.....	4-5 "	15c. "	100 " 8.00
Third Grade.....	3-4 "	10c. "	100 " 5.00

50 at 100 rate. Early Richmond, Late Montmorency and English Morello Cherries, 2 years, 2½ to 4 feet, 10 cents each, 10 for 80 cents, 100 for $7.00. Send for my free catalogue of all kinds of Nursery stock.

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1 York Imperial, 1 Baldwin, 1 Winter Banana, 1 Wealthy, 1 Northern Spy, 1 King, 1 Wolf River, 1 R. I. Greening, 1 Pewaukee, 1 Stark. First class, all 4 to 5 feet.

10 PEACH TREES, $.85
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Ox-power for Spraying.

Talk about your gasoline, compressed air, or hot-air outfits in spraying, if you like. "There are others." It's always desirable to have good power behind the nozzle, and in front of the spraying machine, but it rarely pays to go in debt for the outfit. There are all sorts of contrivances for doing the work. We saw a case once where a woman was hauling a hand cart. On this hand cart was a tub containing the spray liquid. The head of the family was working the pump, and one of the boys, a lad of 12 or more, was holding the nozzle, with

AN OX-POWER SPRAY RIG. FIG. 188.

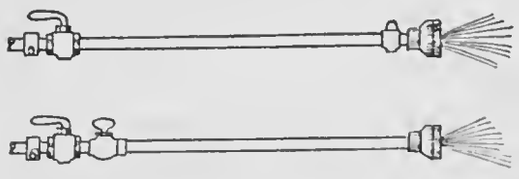
both father and mother telling him what to do.

In another case we have seen a man with a half barrel on a wheelbarrow, pushing it along as well as he could; and when he came to a small tree, working the pump with his right hand and trying to hold the nozzle with his left hand. While he was doing this, his wife and daughter sat on the piazza telling him what to do, and reminding him that he was not putting power enough into that pump. These ladies even failed to have the grace to bring father a cup of hot coffee and a plate of doughnuts as his back gave out. We could give 50 illustrations of the strange applications of power for the spraying machine.

One not so strange, but still effective, is pictured at Fig. 188. Here the patient ox has got into the game, and he is hauling the spray wagon through the orchard. The boy works the pump, and the man does the final job of aiming the spray. This job of spraying is well done, and produces good fruit. Let no man say that he cannot put spray on his trees in the face of this picture, and the illustrations we have given. The time is now ready to roust out the man of the house, the ox and the power sprayer, and give the trees their dose.

Valves in the Spray Rod.

I enclose sketch of spray rod attachment which I intend to use this Spring. Everyone who has had spraying to do knows that unless extreme care is used in straining the spray mixture, some particles will get into the spray tank that are too large to pass through the nozzles. Then the nozzle has to be taken off and cleaned. After closing the hose valve, when the nozzle is clogged, the pressure remains in the full length of the spray rod and there is enough spray mixture in it to soak the clothing and hands of the operator when he unscrews the cap of the nozzle. If the hose valve leaks a little, as many of them do after some service, the spray keeps coming while the nozzle is being cleaned and put on again, giving the operator a second wetting. To enable the operator to do this work without getting wet with the spray, I will place a valve next to the nozzle on the spray rod. This valve is closed after closing the hose valve, the nozzle may then be cleaned with dry hands.



VALVE IN SPRAY ROD. FIG. 189.

If I find that the added weight of this auxiliary valve makes the rod too heavy, I shall place this valve next to the hose valve, as shown in lower sketch. When the valve is placed here and closed, the plug is turned so that the rod is drained through the hole in the side of the valve body. There will be no wear on this valve, as it remains open all the time except when the nozzle is being cleaned. I know that the hose valve could be made to do this work, but the constant use would cause it to leak, and besides a stop would have to be arranged for the lever, to prevent the operator moving the valve too far or in the wrong direction, for you know he does not look at the valve when opening and closing it when spraying.

Illinois. CHARLES HEAD.

"FATHER," exclaimed John, vigorously, "why don't Quakers take off their hats?" "Because, my son, it is their belief that to remove their hat is a mark of respect that they think they should pay to no man." "Well," remarked the boy, after a moment's silence, "how do they manage when they have to have their hair cut?" —Melbourne Leader.

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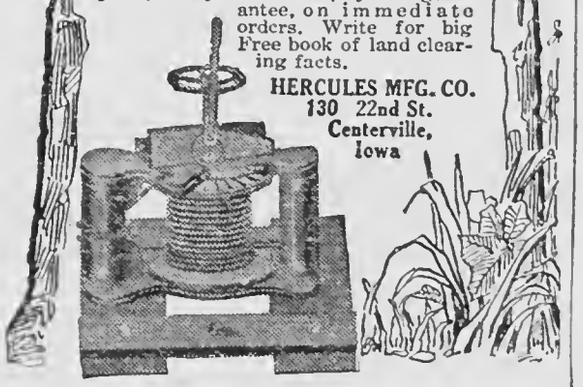

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depend largely on how the crop is planted. Every skipped hill is a loss in time, fertilizer and soil. Every double wastes valuable seed. It means $5 to $50 per acre extra profit if all hills are planted, one piece in each. That is why

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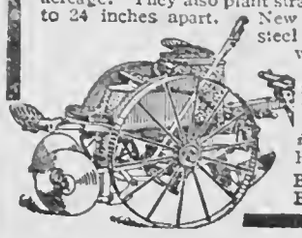

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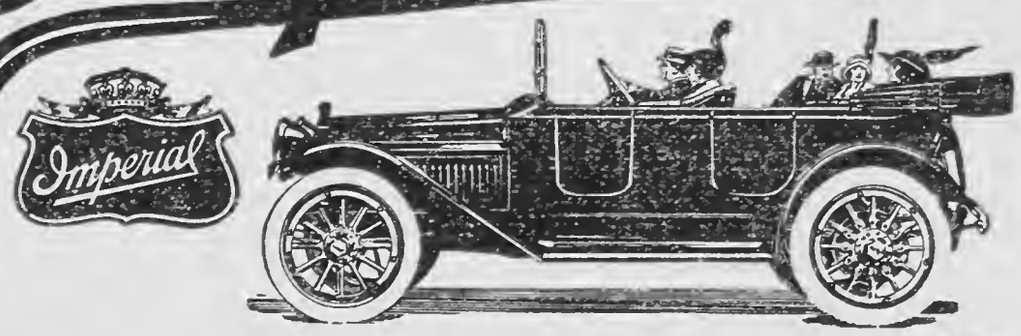

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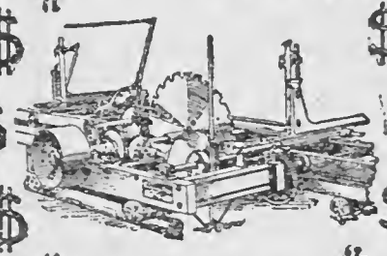

Go over to the wood lot and size up your trees. Every 16-foot log averaging 14 inches thick will make 100 feet of good lumber. Ten such logs make 1000 feet of lumber worth from $25 to $40 (our book tells.) An "American" Saw Mill will saw them at a cost of $4 to $5 per 1000 feet. You have the teams, the time and the engine. It will pay to get the dollars out of those trees. You can do it for your neighbors, too—more profit for you. All you need is an "American" Mill—so simple anyone can run it, so strong it lasts for years. An 8 H. P. engine will cut up to 2500 feet per day. Farm lumbering is explained in our new book No. 26 Sent free. Ask our nearest office.

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Best and cheapest way to get phosphorus—buy pulverized raw phosphate. It will put strength in your soil. It will put money in your pocket. Write for price, your R. R. station.
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What One Farmer Says About
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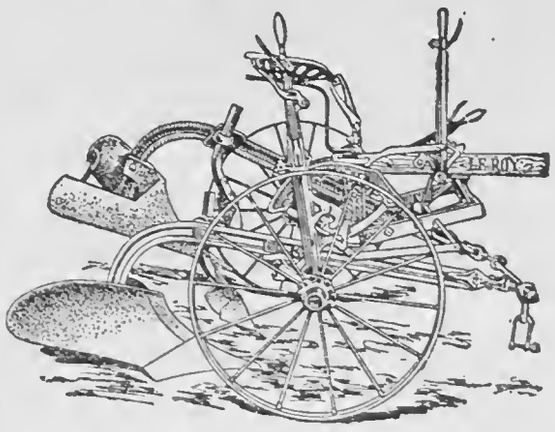
Gentlemen:—When looking for a sulky plow I watched my neighbors as they had different kinds and I made up my mind the Le Roy was the kind for small horses and as I have used your walking plows and found them all right, I bought one and am well pleased with it. I broke up four acres that never was plowed before and it worked fine.

Yours truly, William Redmore,
Cameron Mills, N. Y.



The Le Roy handles just as easily in small fields as large and will turn the same size furrow as any other with much less horse power.

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Every Farmer likes the LIGHT DRAFT LE ROY because it works so easily, does such good work in a large variety of soil, is easy on the horses, pays for itself so quickly and saves waking 7 miles to the acre.

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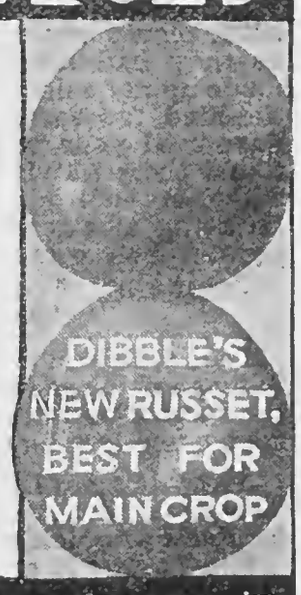

FROM OUR FARMS TO YOURS

UNEMPLOYED WORKERS FOR FARM HELP.

On March 16, 80 unemployed men and women left New York City for Fonda, in search of employment as farm helpers. This was the first experiment on the part of the State in trying to locate the city unemployed in the country. Several nationalities were represented in this party, as well as people from all over this country. Most of them were persons who had drifted to New York in search of work, and either failed to obtain employment, or lost the jobs which they had secured. They were generally of good character, healthy and strong, and honestly in search of work. They all seemed to understand what they were doing, and that there was no "picnic" ahead of them, for the managers of this movement seemed to have shown good judgment in selecting the helpers. The journey from New York up the river was enlivened in various ways. A quartet of singers from New Jersey, South Dakota, Sweden and Brazil gave an impromptu concert, and other singers from Holland, Norway, England, Scotland and France joined in. These songs and stories whiled away the time. There was practically no drinking or carousing, for this first carload of workers realized what they were doing, and were honestly searching for work. On arrival at Fonda they were taken to the court house, where they were fed and cared for by the town.

On the 17th, farmers from the surrounding country came in to look these workers over, and engage them if found desirable. It was a bad season for the farmers. The roads are badly drifted in spots, and bare in others, and it was very difficult for the farmers at any distance away to get into town. It was also rather early for hiring farm hands, as the season is backward and regular work for the Spring has not been started. Most of the men were engaged, however, promptly. A few who failed to find places were taken elsewhere, so that in the end they all found work. Our reports from farmers thus far indicate that these workers were quite satisfactory. Naturally at the beginning of such an enterprise some farmers would be suspicious of city help, and would hesitate to employ them, but this first lot of workmen seems to have impressed the farmers around Fonda favorably, and the experiment may certainly be called a success. Other lots of men will be sent away from time to time to various parts of the State. It is a new enterprise, and a worthy one, and the State is well justified in taking hold of the matter, and trying to bring the laborers to the farm, rather than to leave individual farmers at the expense of time and money of going to the city, one by one, to pick out their helpers.

It would be quite remarkable if such an enterprise as this were to start off from the very beginning as a complete success. There are many things to be adjusted and understood by both sides. We want to hear from farmers who have employed these men. We would like to have them tell us frankly just what satisfaction these workmen are giving, and anything else about the matter which other farmers ought to know. This is the best way to get the desired information before the public. In theory the scheme is an excellent one, and the first experience with it at Fonda was very satisfactory. It will be a great blessing both to honest workmen in the city, and farmers who need help, if this plan can be developed and made fully practical, and the best way to make it so is to obtain the experience and advice from practical farmers who have employed this help.

NEW YORK STATE NEWS.

A LAW NEEDED.—It would seem that there should be a law to prevent diseased cows from being sold and slaughtered for food. The other day 325 cattle were unloaded in the Albany stockyards, which were examined by Dr. O'Leary, of the Federal Bureau of Animal Industry, and six were found to be infected with tuberculosis and were ordered to be kept within the State. These animals were thin, bony and emaciated, with sores on udder and about the head. In response to a query of the man in charge of the cattle, Dr. O'Leary told him he could do anything he wished with them but ship them out of the State, that he had no further jurisdiction. There is no law, he said, to prevent anybody from purchasing these animals, butchering them and offering the meat for sale in the markets. The Federal Government has no authority beyond detaining such stock where it is found, but where the power of the government ceases there the authority of the State and city ought to begin. It is a serious and alarming condition, he is reported to have said, to which the city and State should wake up. There are some slaughter houses inspected by the government, but such inspection is not compulsory. Commissioner Huson's agents soon got onto their job and killed two of the six cattle, "embalmed" them in oil and sent them to the "crematory" for fertilizer.

FARM HIGH SCHOOL.—A project is on foot to establish an agricultural high school at Wyoming, about 40 miles from Rochester. The people there are said to be willing to donate a site and a suitable building for the purpose. Dr. W. H. Dexter of the Agricultural Department at Washington has been there to look over the situation, and is reported as being favorably impressed with the proposition.

STATE FAIR PREMIUMS.—It has been announced that the State Fair Commission will have $4,000 more at its disposal for agricultural premiums this year than last. The principal beneficiaries of the increased premium money will be the cattle, sheep and poultry departments. The appropriation for the racing features this year is $5,000 more than last.

CAYUGA FARM BUREAU.—Plans are under way for the organization of a Farm Bureau in Cayuga County. J. R. Teale of Lysander has been engaged as manager at a salry of $1,800 a year. The County Grange is co-operating and the matter was discussed at the recent meeting of the Grange. A scheme of co-operative farming was outlined by Marc W. Cole of the Department of Agriculture. A meeting will be held soon at the courthouse in Auburn for further consideration of the Bureau.

COMPENSATION COMMISSION. — The Workmen's Compensation Commission recently established includes the following members: Robert E. Dowling, New York, chairman, salary $10,000 a year; John Mitchell, Mt. Vernon; Dr. Thomas Darlington, New York; J. Mayhew Wainright, of Rye. The salaries of the three latter are $7,500 each. There is still one other commissioner to be appointed. The nominations were promptly confirmed by the Senate.

MUNICIPAL MARKET. — While others have been talking the Syracuse Chamber of Commerce has been acting in the matter of municipal market. At a recent meeting of that body a plan was outlined for a city market, to cost not more than $300,000, or if the city was not ready to go into the market business, then a private plant under municipal control was suggested as the next best thing. A report submitted to the Chamber of Commerce by a committee appointed last December provides that the market shall have ample inside sanitary stalls, with cold storage and refrigerator equipment, also accommodations for producers.

WAYNE COUNTY FRUIT.—Reports from Sodus and other sections in Wayne County are to the effect that the moderating weather is assisting in moving of cold storage apples. Choice Baldwins are commanding $5 a barrel on track, and many sales have been made at a higher figure. Some fancy Greenings have been sold at $5, and one car of gilt-edged fruit went at $7. Estimates on the damage to fruit, especially peaches, are as discouraging as ever, and the total estimated loss is placed by some at $1,000,000. Last year more than 4,000 cars of peaches were shipped from the belt, valued at $2,000,000. Up near the lake the buds are in better condition than further inland.

ARKPORT PRODUCE EXCHANGE.—Another coöperative association under the new law has been organized at Arkport with Frank H. Latimer as president and Clayton H. Rollers as secretary and treasurer. This is intended to be principally a buying exchange where farmers may combine their orders for farm supplies and machinery. The principal produce which this exchange expects to sell is potatoes, and they hope to effect some sort of a connection with the Long Island potato growers to their mutual advantage.

CONVICT LABOR ON ROADS.—The Assembly has passed the bill permitting the use of convict labor on State highways. The bill has already passed the Senate, and it will probably become a law in a few days. It is said that the bill has the approval of the Superintendent of State Prisons.

CATALPA CASE APPEAL.—The appeal of Bert Walton of Indianapolis, Ind., the Catalpa tree salesman, was heard in the county court at Batavia on March 16. It will be remembered that a verdict was found against him in justices' court in his suit to recover for Catalpa trees sold to James A. Pettibone, a farmer of Alexander. Decision was reserved. On the outcome of this appeal will depend whether many similar suits against other Genesee County farmers will be dropped or not. The attorney for Walton, Mr. Webster, is said to have made the statement that the gathering of 300 or 400 farmers throughout the three days' trial of the case in the justices' court was calculated to unjustly influence the jury, and that the farmers composed "an angry mob, which had threatened to endanger our lives." Attorney Webster should carry a gun.

J. W. D.

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Here's good news for mail order buyers! **No More Freight to Pay.** Think of the money that will save you! **Nothing to Pay When Goods Arrive.** Now you can tell to a cent just what anything you buy will cost laid down at your R. R. Station. No other Mail Order House gives you this great advantage. No other Big Mail Order House **Pays the Freight.** You can order direct from this advertisement or—fill out the coupon below and we will send **Free and Postpaid,** one of our Big New Spring Catalogs containing over 1100 pages of merchandise covering almost everything you need for home, farm or shop. Everything guaranteed to please you or money refunded.

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If you live anywhere outside the States named above, **we will pay a liberal part of the freight charges** for you. So no matter where you live you can enjoy this new Freight Paid advantage in part, if not all. This big saving will be a clear gain to you. Be sure to write today for Big Free Catalog from the only Mail Order House that Pays the Freight.

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Ladies' Hat $2.75 Prepaid

Ladies' Dress $6.98 Prepaid

Men's Blue Serge Silk Lined Suit $10 Prepaid

Men's all worsted Blue Serge Suit. Guaranteed fast color. Coat made in popular single breasted three button style with guaranteed **silk lining.** High cut collarless vest. Choice of plain or cuff bottom trousers. Coat sizes 34 to 44 inches. Trouser sizes 32 to 42 inches waist measure and 30 to 34 inches inseam measure. Be sure to give chest, waist and inseam measures, and state whether trousers are wanted with plain or fancy cuffs.

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A very stunning dress of satin charmeuse. The waist is kimono style with fashionable long plaited tunic. Short sleeves, with turnback white embroidery cuffs edged with fine ecru embroidery. Same trimming on collar and long revers. Vest front is of net trimmed with frills of plaited net and tiny pearl buttons. Waist is lined with fine soft finished cambric. Soft girdle of self material. Colors: Black, Navy, Copenhagen Blue and Mahogany. Sizes 34 to 44 in. bust State size and color.

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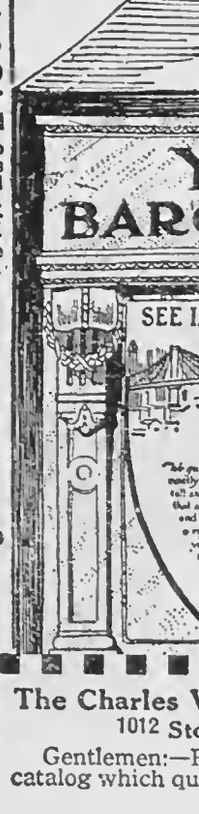

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Window Flowers for Easter.

Would you tell me how I can raise flowers for the Easter markets? I have plenty of time to work at them, I have a nice sunny room I can raise them in, as I do not want to spend much money to get a start. Tell me where I can get a market for them, and if you think it would pay. M. G.
New Jersey.

M. G. would very likely meet with disappointment in trying to grow Easter flowers in a sunny room. To grow tulips, hyacinths and other bulbous stock to sell in competition with the florists' stock would require a hotbed or preferably greenhouse. Is there no demand in your home town for cabbage, tomato, pepper, eggplant, and similar vegetable plants? Vegetable plants could be grown much more satisfactorily than flowers, by planting in shallow boxes containing about two inches of soil and transplanting about two inches apart each way. Cabbage seed could be sown January 1 to 15, transplanted soon as large enough, and put under a sash outside March 1 to 15, when tomato, eggplant, and pepper could be ready to transplant. The cabbage in frames should be protected at night for first week to 10 days if weather should be cold. To grow flowers try to build a small greenhouse, but the room to start them and a few sash to harden and hold for sale would make a good combination for vegetable plants. Boxes would have to be turned every few days, or plants would draw crooked and spindling. Keep temperature 50 nights, 60 to 65, days. ELMER J. WEAVER.

Mixing Lime and Fertilizer.

I have a large lawn here and am going to lime and fertilize it with pulverized sheep manure as soon as I can. Would it be right to mix the fertilizer and lime together and apply, and when is the best time to do it? The lime is the regular agricultural lime. W. J. K.
Pittsford, N. Y.

On general principles we would not advise mixing the lime with any form of organic manure, like sheep manure or hen manure. It is true that ground limestone would not be likely to cause any loss of ammonia through such a mixing, but we do not know just what form of lime you have. It may contain a quantity of burnt lime, and if it does mixing with the sheep manure would cause the loss of some of the ammonia. You will gain nothing by mixing except the time spent in applying the lime, and we would rather put them on separately. An application of lime to a lawn, without working it into the ground in some way, is not usually very effective, for lime to give its best results should be worked thoroughly into the soil. We would use the lime and manure as soon as the ground is thawed out.

Ground Limestone or Burned Lime.

I expect to sow seven acres of oats on corn stubble. Before it was plowed for corn it was old meadow land. Which would you prefer to sow, ground limestone or burnt lime? If the ground lime is used in a drill with the grain, how much would you sow to the acre so as not to injure the grain? If the burnt lime is used, how much of that to the acre? A. E. M.

It depends largely upon the soil. A stiff, hard clay soil will do better on slaked lime—one ton to the acre. A lighter and more open soil will generally be better suited with ground limestone—two tons to the acre. The usual rule is to apply twice as much of the limestone as of the burned or slaked lime.

Greening Trees and "Pollenizers."

I am planting orchards of Greening apple trees 20 feet apart each way. In order to make sure that the flowers are properly fertilized I think of planting Baldwins every fifth row, which would give four rows of Greenings to one of Baldwins. Would this be enough, and will this interplanting be necessary? B.

It is our judgment that in some sections R. I. Greening is assisted by having another variety with it to act as a pollenizer. For this reason we have planted four rows of Greening, four of Baldwin, alternately. I do not like single rows of any variety, because there is too much work attending picking in single rows. Also, if there is any difference in spraying developments it involves extra work. I should make the block of Baldwins at least three rows wide. The Greening block may be left five or even six rows wide. SAMUEL FRASER.
Livingston Co., N. Y.

In my experience I have found that weather conditions during blooming time, late frosts, rain and continued cold have more to do with the setting of fruit than cross-pollination. Yet in order to take advantage of possible cross-pollinating I have planted the permanent varieties in blocks of four to six acres. This is more convenient in picking time than alternate rows. I would not advise planting Greenings 25 feet apart, as they are large-growing trees and in a few years would be too close together to admit sunlight. My plan has been to use a filler with the permanent trees, this filler to be a smaller-growing, early-bearing variety, blossoming at the same time. The permanent trees are 56 feet apart, with one in the center of the square; the fillers make the rows 28 feet apart. The rows run north and south and after taking out fillers, each tree gets the same amount of sunlight. F. W. CORNWALL.
Wayne Co., N. Y.

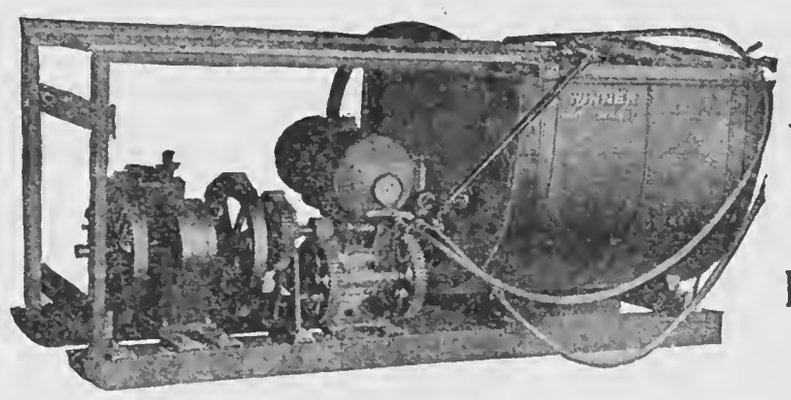
Greening orchards of considerable size, so far as my knowledge goes, have not shown the need of cross-pollination. It is possible, however, that in years when the pollination is poor anyway the Greenings would set a better crop with some other varieties adjacent to furnish pollination. I have reason to think that some years at least this is true with Ben Davis. I am sure that I am safe in saying, however, that every fifth row would be enough Baldwins to pollinate the Greenings. Unless the soil is very different from any with which I am acquainted, I would suggest that the inquirer is planting his Greenings much too close. It would be better to have his Greenings 40 feet apart or more with some early-bearing varieties like Rome Beauty as fillers. W. H. CHANDLER.
Cornell Agricultural College.

My experience with the Greening apple for 30 years past is that it is practically self-fertile. That is to say that it needs no other variety to fertilize its bloom. We have a solid block of five acres of Greenings, and joining these on the south are some mixed varieties, including Baldwin and King. The Greenings on the extreme north side of the orchard seem to bear just as well as those on the south side. Our prevailing winds are northwest and south-east, so I think there are portions of these Greenings that are never fertilized by any other variety, and all seem to bear equally well. I should not set an orchard in the way mentioned by your reader. I should leave out the Baldwins entirely if cross-pollination were the only reason for setting them. But if I wanted the Baldwins for the Baldwins' sake I should set them all together say in the center of the orchard with the Greenings on either side. Our Greenings are set 30 by 32 feet and they began to crowd when 20 years old. I would never set them again less than 40 feet. W. A. BASSETT.
Seneca Co., N. Y.

Ashes With Fertilizer.

I have a quantity of tie-wood ashes, which I wish to use for fertilizer. What quantity of nitrate of soda, and phosphoric acid should I add to make a fertilizer for general use, such as potato, corn and garden truck? C. A. H.
Derby, N. Y.

These ashes from railroad ties will vary considerably, as they are usually exposed more or less to rain and snow. As a general rule, however, for one ton of the ashes you can use for garden truck 300 pounds of nitrate of soda, and 500 pounds of acid phosphate. For corn we should use 200 pounds of nitrate, and 500 of the phosphate. Ashes do not make a good fertilizer for potato, owing to the lime which they contain. Do not try to mix the chemicals with the ashes.



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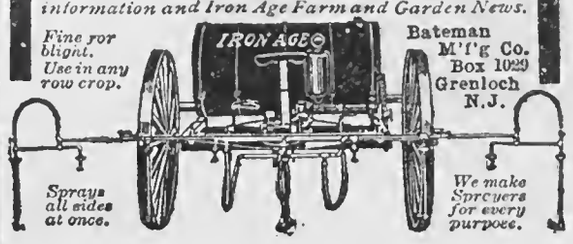

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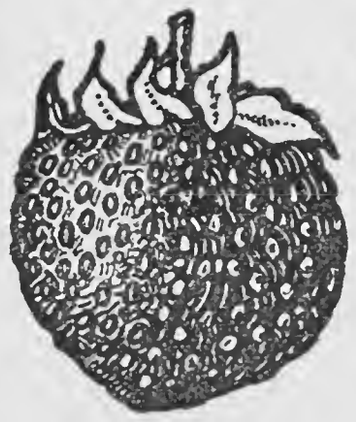

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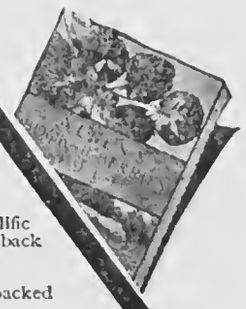

THE PRUNING OF APPLE TREES.

PART IV.

The Grimes apple gives very little trouble, as it is not a rapid grower and is spreading in its habits of growth. Care must be exercised in keeping the center open and preventing the crowding of the branches.

There is much discussion as to the height to start the head. Some say one to two feet high; others say take off the lower limbs, as they interfere with cultivation. If the orchard is a small one and there are no regular orchard tools with which to do the work, it would be best to head not higher than three feet. This will permit the use of any ordinary farm tool needed in the cultivation, and still would not be too high for profitable pruning, spraying and gathering of fruit. Where the size of the orchard makes it profitable to buy special orchard tools, the trees will be better in every way if headed as low as 12 to 18 inches. The lower the head, the less damage there will be from wind, and the cost of spraying, pruning and picking of fruit will be less.

There are several diseases which have to be considered in the pruning of the apple trees. The pear blight, both on twigs and in the bark, has already been mentioned, with the treatment given; pruning is the only effective method of combating this disease. Great care should be exercised in preventing spreading the disease with the tools. Corrosive sublimate is a dependable disinfectant. Black knot and bitter rot cankers are best controlled by the same methods. There has been little trouble from these two diseases except in Red Astrachan and a local variety known as the Democrat.

There are several reasons for pruning or disbudding: First, to modify the vigor of the tree. Second, to produce larger or better fruit. Third, to keep tree within manageable shape and limit. Fourth, to change the habit of the plant to more or less fruit or wood production. Fifth, to remove superfluous or injurious parts. Sixth, to facilitate spraying and harvesting. Seventh, to facilitate tillage, and to train to some desired form. After reading over all the information obtainable, then go ahead and consult the tree. Study its needs carefully, then select the best grade of tools possible to get, and then go slow. It is sometimes easier to bring a limb back to health and vigor than to produce a new limb. The lower limbs will bear fruit if they can get sunlight and air. Above all things avoid extremes and advice without reason. If a man can't "tell why" then be careful how you follow the advice. R. B. GILMAN.

New Jersey.

Canada Peas Before Tomatoes.

Would it be a good plan to fertilize and sow Canada peas in March to turn under first of June, on ground where I intend to set tomatoes for canning factory use? Would the tomatoes make use of the nitrogen gathered and fixed by the peas? F. L. M.

Portland, N. Y.

In this case we should use a moderate amount of fertilizer on the Canada field peas, and also use oats in the combination. The oats will not add any nitrogen, but they will add humus, which most soils need. At the right time plow these oats and peas under, and use a dressing of lime. Your tomatoes will then have the benefit of the fertilizer which was added to the peas, and also of the nitrogen gathered by them. This plan of using the fertilizer upon a manurial crop is usually a good one, as it produces an extra yield of the crop, and, of course, that means more nitrogen taken from the soil, and more humus at the same time.

Seeding Alfalfa With Oats.

I have a couple of acres I wish to seed to Alfalfa. I sowed some last August and it is doing very well, had a good stand. I sowed oats in the Spring, cut the oats in July and cultivated vigorously, liming, inoculating and sowing. It came up well, but mixed with a vast amount of weeds, wild radish. This will doubtless disappear in the Spring. I have found it to be an annual weed and will be crowded out. I should like your views regarding the two acres I propose sowing. Half of it I seeded with rye and half with clover. The clover will probably be Winter-killed. The two acres have been in grass about four years, with no fertilizer put on in that time. I thought to fertilize a little with the rye and clover. I propose to do as follows and would like your advice: Turn under the soil in the Spring, lime it pretty thoroughly, inoculate it with Alfalfa soil and sow oats and Alfalfa together; cut the oats in July. If the Alfalfa comes up could probably get a cutting of that in August, and it would be up high enough to be ready for Winter. Would this, in event of success, be saving the great work of cultivating for a month and the growth of our vast quantities of weeds? Am I proposing something practical? Should I fertilize after plowing under the rye and such clover as may not be killed? If so with what? Manure is very high priced. Do you suggest anything better than oats to sow with the Alfalfa? W.

New Canaan, Conn.

We think it doubtful if in your latitude Spring seeding of Alfalfa with oats will be best. We have found August seeding with no nurse crop with the Alfalfa better. We should seed the oats alone, or with Canada peas, and cut this crop in early July. Then work the soil thoroughly and seed the Alfalfa alone, using the inoculating soil and also 350 pounds fine bone and 150 pounds muriate of potash per acre. While this will mean more labor and expense than the Spring seeding with oats, we believe it will pay.

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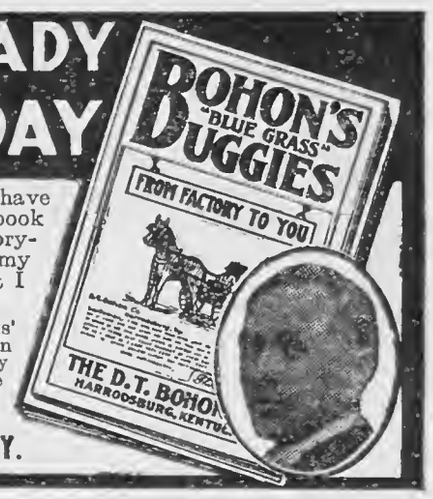

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We never made tires as good as we are now making them.

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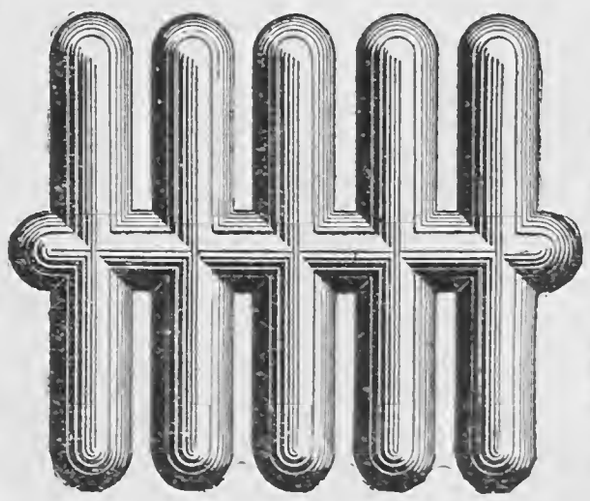

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Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices	Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices
30 x 3	$11.70	$12.65	$2.80	34 x 4½	$33.00	$35.00	$6.15
30 x 3½	15.75	17.00	3.50	35 x 4½	34.00	36.05	6.30
32 x 3½	16.75	18.10	3.70	36 x 4½	35.00	37.10	6.45
33 x 4	23.55	25.25	4.75	37 x 5	41.95	44.45	7.70
34 x 4	24.35	26.05	4.90	38 x 5½	54.00	57.30	8.35

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EVENTS OF THE WEEK.

DOMESTIC.—Six blocks of the water-front were destroyed at Portland, Ore., March 12, by a fire of unknown origin, the loss being estimated at $1,000,000. Columbia Dock No. 2, Montgomery Dock No. 1, the steamships Cricket and Glenroy and much other property were destroyed. The Cricket, which was laden with asphalt, burned fiercely. Firemen cut her loose, but the big ship instead of going to the centre of the stream, floated along the docks, spreading the flames. The Glenroy caught fire nearly as soon as the Cricket. It was with diffieulty that the Chinese crew was rescued and a number of them jumped overboard to escape the flames. They were herded by the Federal authorities to prevent their escape.

Leading dry-goods merchants of New York have united to find employment for 2,300 persons thrown out of work by the failure of the two Henry Siegel department stores. In addition to the loss of employment, Siegel's financial operations, conducted through his private bank have caused 800 of these people to lose all their savings, and also absorbed the sick benefit fund of these workers. It is said that the bank accepted a deposit of $4 on account of the fund on the day the receiver was appointed—the dimes of 40 girls who were getting $7 to $8 a week.

Directors of the United States Express Company voted, March 13, to wind up the company's affairs and go out of business. The first direct result of the Government's parcel post competition and the resulting reduction of 16 per cent. in express rates will be the throwing out of work of 15,000 employees of the United States Express Company when its liquidation is completed. There are about 2,000 employes of the company in New York city. The United States Express Company has no pension system. Its yearly payroll is about $6,000,000.

The Kentucky lower house of the General Assembly put itself on record, March 13, as being absolutely opposed to granting the voting privilege to women by voting 51 to 29 to defeat an amendment to the State Constitution allowing women to vote. The Senate will now get the measure, but its defeat is certain there and women have given up the fight for the present.

The United States Circuit Court of Appeals suspended, March 16, the injunction restraining the Eastman Kodak Company from selling films manufactured according to the Goodwin process until the court determines the right of the Eastman company to sell all the films it now has on hand before making an accounting to the Goodwin Film Company. The Circuit Court of Appeals recently sustained the decision of Judge Hazel in the Federal District Court of Buffalo that the Eastman film was an infringement of the Goodwin process, invented by the late Hannibal Goodwin, an Episcopal minister. J. J. Kennedy, attorney for the Eastman company, asked the court to allow his clients to sell all the films they had on hand. This, he said, would be to the benefit of both parties to the litigation, since the films, if not sold within a month or two, would be unmarketable.

College Hall, the main building of Wellesley College and one of the oldest of the group, was destroyed by fire, March 17, early in the morning. Two hundred and fifty students, 50 instructors and 50 servants, who roomed in the building, were roused from their sleep and all marched out safely. That none of the 350 occupants was killed or injured is attributed to the perfect working of the many times rehearsed fire drill. The girls lost nearly all their belongings. The loss to building and contents is estimated at $900,000. President Ellen S. Pendleton announced that college would be closed until after the Easter recess.

After the summing up by attorneys in the trial, at Philadelphia, of Capt Osmyn Berry of the steamship Nantucket, in connection with the Monroe disaster, Capt. R. A. Sargent, chairman of the local board of steamboat inspectors, said in a report that Capt. Berry should be exonerated and that charges of negligence and incompetence should be made against Capt. Johnson of the Monroe. D. H. Howard, the other member of the board, declined to concur in the report, which will be submitted to the Department of Commerce for review.

Three men were crushed to death and five were injured in a daylight collision between the Lackawanna Railroad ferryboat Ithac, and a Jersey Central freight car float in the Hudson River 600 feet off the foot of Chambers street, Manhattan, March 17. All the dead and injured were commuters in the men's cabin on the main deck of the ferryboat—eight of 700 who were crossing to Hoboken at the end of a day's work in New York. The float, towed by the tug Freehold, hit the Ithaca amidships. A protruding freight car bored into the men's cabin, wrecked it and then, when the tug backed away, dived to the bottom of the river. The accident occurred because neither the captain of the ferry nor the captain of the tugboat saw the other's craft in time, as an Erie ferryboat, bound for Jersey City, was crossing between them.

A complaint by Mrs. John Larson, Oregon's only woman Mayor, has resulted in the arrest of her own husband, a saloon keeper, on the charge of selling liquor to a minor at Troutdale.

The west wall of the Missouri Athletic Club building, towering high above the ruins of the recent fatal St. Louis fire, tumbled over in a high wind, March 17. It crashed down through the roof of the four-story building occupied by the St. Louis Seed Company, killing three persons there and burying a score or more who were in that building or working in the ruins to the rear of it. The wall was 17 inches thick and had been regarded with apprehension since the fire.

The Red Cross Line steamship City of Sydney went aground on the rocky ledges near Sambro Head, just outside the entrance to Halifax harbor, N. S., March 17. Her 13 passengers and part of the crew were taken off by tugs and finally Capt. David McDonald and the rest of the crew of 40 men were rescued. It is believed the steamer will be lost. She carried a cargo valued at $300,000, fully insured.

A suit to break the Lehigh Valley Railroad's alleged anthracite monopoly was begun by the Government in the United States District Court at New York, March 18. In a petition filed by Frederic R. Coudert, Special Assistant Attorney-General, the Lehigh, its directors and subsidiary companies are accused of violating the interstate commence act and the Sherman anti-trust law. An injunction to prevent them "from further restraining, monopolizing or attempting to monopolize trade and commerce in anthracite coal" is sought. The Government also asks that the railroad company be enjoined from carrying coal in which it has an interest. It is a dissolution suit which if won by the Government will compel the Lehigh Valley Railroad Company to dissociate itself from the coal companies which, according to the petition, it controls.

The New Jersey Assembly passed, March 18, a resolution asking the Federal Government to build the proposed $40,000,000 bridge between New York and New Jersey.

POSTAL CHANGES.—A change has been made in the rules governing the parcel post that is expected to result in a much larger use of the mails by farmers. Postmaster-General Burleson has announced that hereafter butter, eggs, fruits, berries, vegetables, dressed poultry and other articles entering the parcel post running fron. 20 to 50 pounds in weight may be packed in boxes and crates similar to those used when shipment is made by express. Heretofore such parcels had to be in such form that they could be placed in mail bags. Under the new rule farm products such as those enumerated will not be put in mail bags. Packages of these articles weighing 20 pounds or less are required as heretofore to be packed in such manner as to be safely handled in bags with other mail matter. March 16 the Postmaster-General signed an order providing that the sender of a parcel post package on which postage at the fourth class, or parcel post rate, is fully prepaid may place a communication in an envelope prepaid at the first class, or letter rate, and attach it to the parcel, the envelope being addressed to correspond with the address on the parcel. The envelope must be tied or otherwise securely fastened to the outside of the parcel in such a manner as to prevent its separation from the parcel.

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NATURE'S CROP PRODUCER
Made from the purest Crystalline White Limestone obtainable.
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We can tell you if your soil is acid. If acid we may aid you to correct it without lime. All these things we have done for others and can do for you. Write us for free booklet No. 82.
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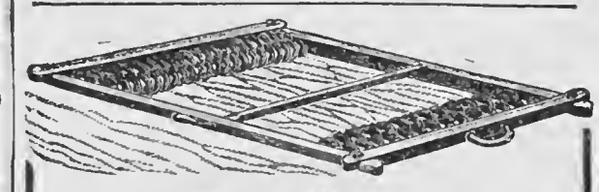
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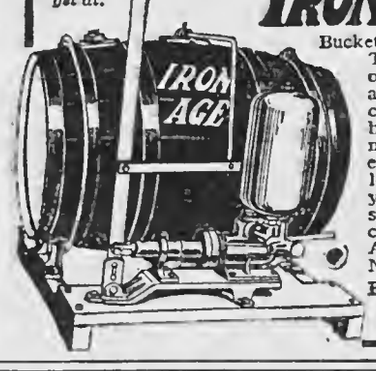

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No. 16
Planet Jr Single Wheel Hoe, Cultivator, Rake and Plow
The highest type of Single Wheel Hoe made. It is light, handy, and adapted to use by man, woman, or child. Has leaf guard for close work, and a durable *steel* frame.

Nearly two million soil-tillers all over the world are saving time, lightening labor and getting better results by using Planet Jr guaranteed farm and garden tools. For all requirements, $2 to $100.
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No. 4
Planet Jr Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow
This is a practical every day time-, labor-, and money-saver. It combines in a single implement a capital seeder, an admirable single wheel hoe, furrower, wheel-cultivator, and a rapid and efficient wheel garden plow. Every owner of a vegetable garden can save the cost of this tool in a single season.

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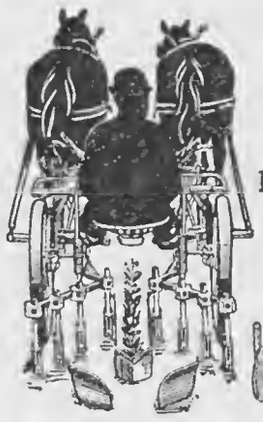

No. 76
Planet Jr Pivot-wheel Riding Cultivator, Plow, Furrower, and Ridger
A wonderful implement in extensive cultivation of corn, potatoes, etc. Light in draft, simple and strong in construction and comfortable to ride upon. Works rows 28 to 44 inches, and cultivates crops until 5 feet high.

No. 11
Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake
The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. It has steel frame. The plow opens furrows for manure, seed, etc., and can be reversed for covering. The cultivating teeth are adapted for deep or shallow work and for marking out. Crops can be worked both sides at once until 20 inches high.

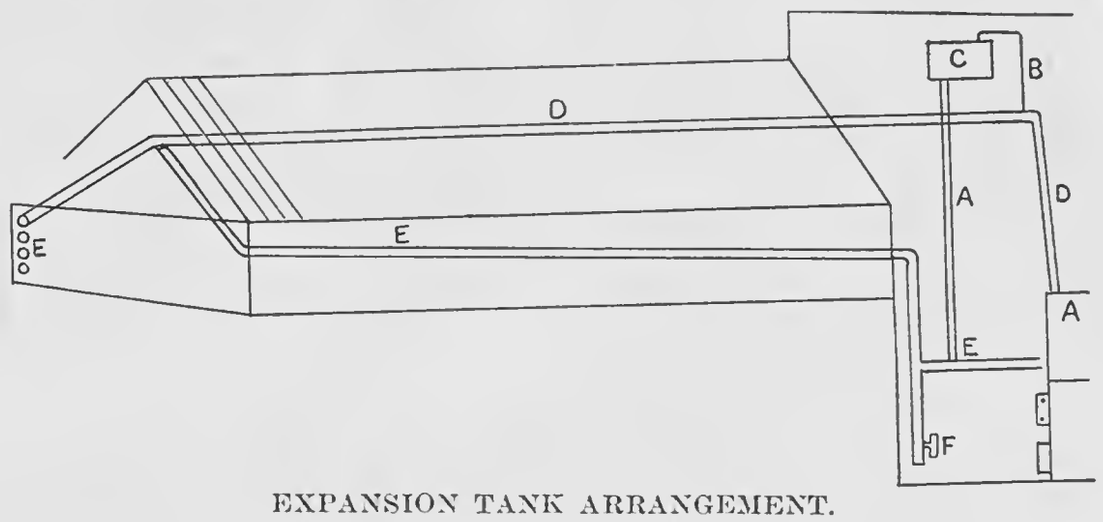
No. 72
Planet Jr 2-row Pivot-wheel Cultivator, Plow, Furrower and Ridger
Cultivates at one time two rows of potatoes, corn, beans, etc. in rows 28 to 44 inches apart. Works like a charm in check rows, crooked rows, and rows of irregular width. Can be equipped with roller-bearings, spring-trip standards, and discs.

Greenhouse Construction for Small Place.

PART III.

The trouble likely to be encountered in using a pipe heater is scale and sediments collecting in lower pipe, and eventually weakening the pipe at that point. This in a measure can be overcome by having the return pipes drop to bottom of cellar and have a blow-off cock at low point, which should be opened occasionally to allow sediment to be washed out of system. The flow and return pipes should be carried as direct as possible from heater to greenhouse and with as few bends as is consistent with the location of heater to house. As explained before, if house is nearly level carry the flow pipe directly from boiler to near top of house and place an air-cock at that point; then gradually descend to far end of house, at which point drop either to side walls or under benches, and continue the down hill method to boiler. Each system must have an expansion tank connected to a point on the return near the boiler placed higher than top of flow as outlined in Fig. 5. In the cut A represents heater; D flow pipe to high point of house; C expansion tank, which must hold one-twentieth amount of water in entire system and be connected as shown by small pipe A1 to return pipe E close to boiler. Return pipe E should be continued below entrance to boiler as shown and have a blow-off cock as shown at F, which should be opened quite often to blow sediment out, which will collect at that point. The air vent shown at B is a one-eighth inch pipe tapped into flow and extended over expansion tank and always left open, and will always keep the system free of air and will never require any attention. If only one house is built no valves will be necessary, but if two or more are connected together the flow or return pipes should have valves placed in them so as to have heat in houses under control.

In figuring amount of pipe to use for a temperature of 55 degrees with thermometer at zero outside, a house having 1,000 square feet of glass on roof, ends and sides should have about 275 square feet of pipe. If sides are exposed three or four feet 300 would be best, this would mean nearly 600 feet of 1½-inch pipe, 500 feet two-inch or 700 feet 1¼-inch. The flow and return pipe from boiler to greenhouse, if only one is used, would have to be 2½ inches in diameter to carry this amount of radiation. A house containing 3000 square feet of exposure would require three times amount of pipe mentioned above, and a 3½-inch pipe for flow and return to boiler; 4,000 feet a four-inch flow and return; 5,000 to 5,500 a five-inch flow and return.



EXPANSION TANK ARRANGEMENT.

For a house of 3,000 feet exposure using a pipe constructed heater of Fig. 3 style the grate should be at least 18x30 inches and heater should contain 12 pieces of two-inch pipe about eight feet long; six pieces of pipe on each side made up in two coils, with two returns entering heater at bottom and two flows leaving at top. If desired to leave fire six hours or more without attention 18x36 would not be too large for grate. Smoke flue should be 10 inches diameter.

Allow plenty of depth for ashpit, 18 inches not being too much, and place fire brick 12 inches or so high at side of grate up to lower pipe. Make ends of heater arch shape and allow return bends to extend slightly over each end for support, then place old boards on pipe and turn a brick arch over all. The boards eventually will burn out. In figure 4 the coil is constructed by using right and left ells on end of upright pipe, and using a right and left pipe from ell to top heater. This method is much more troublesome to make than Fig. 3 and no more efficient, but would last longer, as danger of sediment collecting in horizontal pipe would be obviated.

All lumber used in greenhouse construction should be cypress, and if posts are used red cedar sawed four inches square and set four feet centers or five feet four-inch centers will be satisfactory. All lumber entering roof construction should be painted with a guaranteed white paint, two coats, and a third applied after frame is erected. The best size glass to use is 16x24 A or B, double strength.

The sash bars to be placed 16 inches apart, and the rabbet on which glass rests to be filled with the best putty you can buy, *not the cheapest, but the best.* Start at lower edge and drive two nails in plate or sill, so they will slope lower edge of first light of glass; press first light into putty till most of it is forced out underneath. The second light is to lap over the first about one-eighth to three-sixteenths inch and upper end forced down in putty till nearly resting on wood, and so on till row is finished. Either a glazing point, sold by all seedsmen, is forced into the bar at lower edge of each light or zinc brads similar to shoe nails may be used. The point referred to is galvanized and will last quite a while, but the zinc nail or point will possibly last longer. If plenty of putty is used you will have a practically watertight job. An examination of all glass will show each light having a concave and convex plane. *Always* place the convex side up, as placing the convex side down will cause drip of condensation into house from center of light.

ELMER J. WEAVER.

Lancaster Co., Pa.

HANDLING SUNFLOWER SEED.—I have noticed at different times in farm papers articles on the raising and curing of sunflower seeds. Our way may be of use to someone. When drilling the corn, the last four rows across the field are reserved for sunflowers; this seed is substituted in place of the corn in the drill. It is then planted, worked and thinned, just as the corn. Late in September or early in October we go to the field in our one-horse farm wagon; one person walks down the rows cutting the heavy heads and throwing them in the wagon to the second person, who attends to the driving and cleaning, which is easily done. As the heads are thrown in the wagon they are cleaned with a curry-comb. It is surprising how readily the seeds drop out as the comb is passed to and fro over the heads. The empty heads are thrown in piles as we drive down the rows. Coming back the stalks are heaped up and burned if dry enough. The seeds are spread out in the wagon bed and stirred frequently during the rest of the day; toward evening they are put into large loose sacks and hung up in a dry cool place. They are ready for use in a very short time; in this way we do not have trouble with mold as some do. We find the seed very beneficial for our poultry, mixed with the scratch food.

Pocopson, Pa. C. B. T.

"WHAT'S the discussion?" "The boys had assembled to lynch a horse thief." "Well?" "But now a knotty point of jurisprudence has come up. Seems he stole an automobile."—Louisville Courier Journal.

"DEATH, TAXES AND The Mapes Manures Are the Only Three Things in This World I Am Sure of"

WROTE AN OLD CUSTOMER OF OURS

Passing by the first two, he and every other farmer certainly has every right to be sure of THE MAPES MANURES. They have been used for fifty years by the most intelligent, the solidest and most successful farmers, who have banked absolutely on

I. THE RECORD OF MAPES IN THE FIELD.

Our record in the field for the past fifty years is too well-known to require more than a mere reference. In this connection, "lest we forget," in the American Agriculturist's Prize Contest, open to the entire United States, the largest crops of Potatoes and Corn grown on commercial fertilizer alone were grown with Mapes; 669 bushels of Potatoes on one measured acre with the Mapes Potato Manure, and 213 bushels Shelled Corn on one measured acre with the Mapes Corn Manure.

II. THE MAPES RECORD WITH THE EXPERIMENT STATIONS.

We are equally proud of our record with the Stations. There may at times have been an occasional chance analysis which was not quite what we would have liked, and not fairly representative of our goods, but on the grand average, year in and year out, our record has been something to be justly proud of.

III. SAME FAMILY MANAGEMENT FOR THREE GENERATIONS.

Not only have the Mapeses continued successively in the business for three generations—grandfather, father and son—but the Lanes, who have been associated with the Mapeses from the start, follow the same identical record in the business, grandfather, father and son, successively. Could there be a better guarantee than this family management, with the element of family pride deeply involved, that everything has been done and will continue to be done to make the Mapes Manures as good as the knowledge of fertilizer science permits for the crops for which they are intended.

The Mapes Manures have never stood still but have been constantly improving as the knowledge of scientific plant feeding broadened and progressed.

"The Mapes business had its inception in the scientific research and experiments of Professor James Jay Mapes, and scientific research and experiment, coupled with the most exact practical experience, have been the dominating factors in the Mapes business to the present day."—The Florida Grower.

SEND FOR OUR PAMPHLET

The Mapes Formula & Peruvian Guano Co., 143 Liberty St., New York

The Home Acre.

GARDEN PLANTING.

Will you tell me the earliest dates when I can plant a garden safely in Orange Co., N. Y.? I desire to plant the following vegetables: Spinach, lettuce, radishes, eggplant, tomatoes, carrots, beets, parsley, pepper plants (green), muskmelons, Summer squash, pole limas, string beans, corn (Golden Bantam, Country Gentleman). Of course I understand that a cold or very wet Spring would postpone the date just as reverse conditions might advance it.

The accompanying diagram represents things as fairly as I can, and it is drawn pretty close to scale. The garden is only for private needs, and I hope in time to bring it all into good fertility. It has a warm exposure, but afternoon shadows are thrown by the church, but not till the latter afternoon. I have on it two loads horse manure, a large quantity of decayed forest leaves, and will use about two bushels lime. The grapes are closely pruned and run north and south. Weeds are luxuriant in the arbor. Can I put any vegetables in the arbor? I had clover on the clay last Summer and I am loosening it with coal ashes. M. S. P.

Newburgh, N. Y.

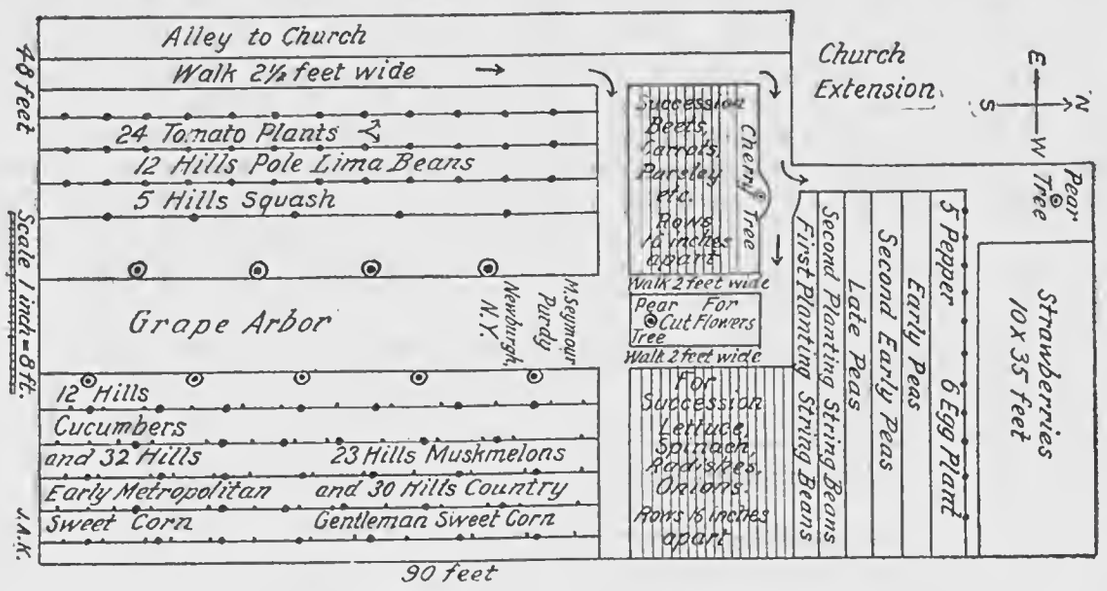
The hardier vegetables, such as spinach, carrots, beets, radishes, onions, etc., may be safely planted as early as the ground is in good workable condition, while beans, melons, squash, cucumbers and corn, should not be planted until the soil becomes warm, and the temperature at night does not go much below 55 degrees. Tomatoes may be set out at this time, but egg plant and pepper should be delayed until the temperature remains at 60-65 degrees at night. Early lettuce should be sown in the hotbed, greenhouse, or window garden about March first, and if the plants are properly hardened beforehand they may be safely planted to the garden as soon as they attain a height of two inches. Make a second sowing as soon as first plants are ready to set out, likewise a third sowing when second lot of plants are ready for setting out, and so on until the season becomes too far advanced and weather too warm for the lettuce to head.

Spinach may be sown every two weeks or so from the time the ground is fit to work until about the 25th of May, when the sowings must be discontinued until the middle of September, when one or two sowings may be made for Fall and early Winter use. Radishes may be sown as soon as ground can be worked, and successive sowings can be made every 14 to 18 days until about August 25. The Early Scarlet Turnip White Tip is the most satisfactory radish to grow for home use.

The round smooth peas may be sown as soon as the ground can be worked; they will bear considerable cold without being injured, both before and after they are up, but if there is no object in having them come on very early, it would perhaps be better to delay planting until the ground becomes somewhat warm, when the early, midseason and late varieties may be sown the same day. A pint of seed will sow about 36 feet of row. After the peas are cleared off, the ground may be planted to string beans, early sweet corn, cabbage or celery.

Of carrots and beets, make two sowings, about two months apart. Muskmelons, cucumbers and early and late sweet corn, may be planted in the same ground all on the same day. The hills for melons and cucumbers should have at least two shovelfuls of well-rotted stable manure well mixed with the soil. In the plan the rows are represented at 3½ feet apart, and the hills of melons and cucumbers six feet apart in the rows, which are represented by the large dots. The hills of corn are represented by the small dots which clearly illustrate the manner of planting. The tomatoes, pole limas, squash, peppers and eggplant should also be manured in the hill with old well-rotted stable manure. One shovelful to each hill of lima beans will be sufficient, while the tomatoes, etc., should have two good shovelfuls to each hill. In all cases, mix well with the soil.

The soil for lettuce, spinach, radishes, carrots and beets should be well enriched with heavy applications of well-rotted stable manure applied broadcast and spaded in and well incorporated with the soil. Five to six tons of well-rotted manure used broadcast and in the hills for such things as indicated, will not be too much for a piece of ground of this size. In all cases of vegetable production the ground should be quite rich, that the growth may be forced as rapidly as possible, particularly the succulents, as tenderness and flavor cannot be secured when the growth is tardy because of insufficient nourishment. Avoid manures containing shavings or sawdust, as they will quickly sour the soil and very materially reduce its productiveness. K.



PLAN FOR A HOME GARDEN.

Black Streaks in Potatoes.

I have some potatoes that appear perfectly sound on outside, but about 50% are black streaked inside, and unfit for cooking. Would these be satisfactory for planting, or would the crop be likely to be similarly affected? The variety is Irish Cobbler. I find that they are worse affected from one patch than another. Is it caused by fertilizing, or is it a disease? C. R. S.

Madisonville, Tenn.

Dark streaks and spots in the flesh of potato tubers, if scattered through the tissues and not confined to the vascular ring near the stem end, are usually an expression of a physiological trouble caused by unsuitable soil or by a lack of water at some period during growth, but if in well defined circles near the stem it is likely to be the result of infection with the Fusarium wilt or the late blight fungus, Phytophthora infestans, and should be rejected for planting stock. It is not definitely known whether potatoes affected with physiological brown-spot will produce as large a crop as healthy seed, but it is good practice to plant nothing but healthy-looking tubers, normal in appearance both inside and out. V.

Fertilizer for Early Tomatoes.

In your second article on early tomatoes a quick fertilizer was suggested. I am starting about 400 plants, and wish to know the very best fertilizer to put in the hill when I set them in the field about March 15? What do you advise?

San Diego Co., Cal. A. S. K.

When procurable, well-rotted stable or cow manure may be used with profit in this quantity of one good shovelful to the hill, or if the ground has recently produced a heavily manured crop, no further fertilizing will be necessary. In the absence of well-rotted manure use commercial fertilizer containing one to two per cent. of nitrogen, in the form of nitrate of soda, eight to 10 per cent. of phosphoric acid and six to eight per cent. of potash. Confine the use of this fertilizer to a strip about two feet wide along the course of the row, and use 600 to 800 pounds to the acre. K.

"Is that a man or a deer in the thicket?" "I guess it's safe to call it a deer," opined the guide. "If it had been a man he would have taken a shot at us by this time."—Washington Herald.

E. Frank Coe Fertilizers

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APPLES ON LONG ISLAND.

PART IV.

Pound Sweet: trees vigorous, fruit yellow, russet, sweet, fair quality, large, not productive; not desirable.

Red Astrachan: trees good growers, fruit red, small to medium, fine quality, productive good for local supply; season Summer, not desirable for shipping.

Rambo: trees fair growers, fruit red, medium to small, good quality, season Fall; fairly productive, not desirable.

Red Bietigheimer: trees good growers, fruit very large, red, poor flavor, not productive, not desirable.

Red June: trees poor to fair grower, fruit red, small, fair quality, not desirable.

Rome Beauty: trees good growers, fruit red, medium to large, fair quality, productive, desirable.

Golden Russet: trees fair growers, fruit yellow russet, medium fair quality, productive, not desirable.

English Golden Russet: trees poor growers, fruit russet, small, poor quality, productive, not desirable.

Roxbury Russet: trees good growers, fruit yellow russet, large, fair quality, productive, desirable as a russet only.

Sweet June: trees fair growers, fruit red, small, sweet, prolific, not desirable.

Early Strawberry: tree fair grower, fruit red, small, fair quality, productive; not desirable; season Summer.

Autumn or Hale Strawberry: trees fair growers, fruit red, large to medium, fine quality, prolific, season early Fall, desirable.

Early Ripe: tree good grower, fruit yellow, medium to large, fair quality, productive biennially; not desirable.

Seek-No-Further: tree fair growers, fruit yellow, small to medium, poor quality, not desirable.

Senator same as Oliver, not desirable.

Scott's Winter: tree good grower, fruit red, small, acid, poor quality; productive, not desirable.

Stark: tree good grower, fruit red, large, good quality, early Winter, prolific, desirable.

Shackelford: trees good grower, fruit light red, poor quality, medium, Ben Davis type, not so good; productive, not desirable.

Smith Cider: trees good growers, fruit small, irregular, poor quality, prolific, not desirable.

Sutton: trees fair growers, fruit medium to large, red, good quality, prolific, desirable for main trees.

Stayman: trees good growers, fruit red, medium to large, fine quality, productive, desirable either as main trees or fillers; good Winter apple, keeps well.

Twenty Ounce: trees fair to poor growers, fruit red, large, fine quality, productive; season late Fall, desirable.

Tallman: trees good growers, fruit small, yellow, fair quality, prolific, not desirable.

Tetofski: trees fair growers, fruit red, large, fine quality, season Summer, productive, desirable.

Wagener: trees fair growers, fruit red, large, good quality, productive, season late Fall and early Winter, desirable as main tree or filler.

Winesap: trees good growers, fruit red, small, fine quality, productive, not desirable.

Wolf River: trees fair growers, fruit yellow and red, large, poor quality, shy bearer, not desirable.

Wealthy: trees good growers, fruit red, medium to large, fair quality, prolific, season Fall, desirable as a filler only.

Walbridge: tree good growers, fruit yellow, large to medium, poor quality, prolific, not desirable.

Wisner's Dessert: trees poor growers, fruit medium, fair quality, not desirable.

Williams: trees fair growers, fruit red, large to medium, good quality, prolific, season Fall, desirable.

Yellow Transparent: trees fair growers, fruit yellow, good quality, small to medium, prolific; season early Summer, desirable, best of its season.

Yellow Bellflower: trees good growers, fruit yellow, medium to large, irregular; good quality, prolific, not desirable.

York Imperial: trees good growers, fruit red, medium to large, fair quality, productive as trees get large and older; fair Winter keeper; desirable for main trees only.

Winter Banana: trees fair growers, fruit yellow, large to small, irregular, fair quality; prolific as grown by my neighbor Mr. Moses B. Griffing; not satisfactory as he is regrafting to Stayman.

I have grouped my apples as to varieties as follows for this section of country.

Best apples to plant: Baldwin, Ben Davis, Esopus Spitzenburg, Gravenstein, Grimes, Rhode Island Greening, Hubbardston, Jonathan, King, McIntosh, Rome Beauty, Sutton, Stayman, Twenty Ounce, Tetofski, Wagener, Williams, Yellow Transparent, York Imperial.

Good apples to plant: Black Ben Davis, Bismarck, Duchess, Delicious, Fameuse, Fall Pippin, Florence Crab, Fanny, Gano, Northwestern Greening, Jefferis, Maiden Blush, Missouri Pippin, Martha Crab, Northern Spy, Red Astrachan, Roxbury Russet, Late Strawberry, Stark, Winesap, Wealthy.

Fair apples to plant: Alexander, Champion, Detroit Red, Ingram, Longfield, Newtown Pippin, Pewaukee, Porter, Shackelford, Yellow Bellflower.

Poor apples to plant: Akin, Arkansas Black, Benoni, Beach, Boiken, Coffelt, Chicago, Red Canada, Charlamoff, Early Melon, Early Harvard, Fallawater, Newtown Spitzenburg, Long Stem, Lawver, Lord Suffield, Mammoth Blacktwig, Monmouth Pippin, Mann, Oliver, Ohio Nonpareil, Primate, Rambo, Red Bietigheimer, Red June, Golden Russet, English Golden Russet, Sweet June, Early Strawberry, Early Ripe, Seek-No-Further, Senator, Scott's Winter, Smith's Cider, Tallman, Wolf River, Walbridge, Wisner's Dessert, Winter Banana.

My opinion of the varieties as tested is based not upon single tres but upon plantings of 20 or more trees of the varieties mentioned.

Best apples for Summer: Yellow Transparent, Tetofski, Gravenstein, Williams. Best apples for Fall: Twenty Ounce, Grimes, Wagener. Best apples for late Fall and early Winter: Jonathan, Hubbardston, McIntosh. Best apples for Winter: Baldwin, Ben Davis, Esopus Spitzenburg, Rhode Island Greening, King, Rome Beauty, Sutton, Stayman, York Imperial. Best apples for fillers: Yellow Transparent, Tetofski, Twenty Ounce, Wagener, Jonathan.

PRIZES AT STATE FAIR.—In addition to the first prize for general collection of apples, the following list of prizes obtained in 1912 and 1913 at the State Fair shows to some extent the adaptability of varieties mentioned for this section: First premiums 1912: Hubbardston, Longfield, Mammoth Blacktwig, Wagener, Scott's Winter, Stayman. Second premium 1912: Baldwin. Third premium on Baldwins this year was also taken by my neighbor Mr. Moses B. Griffing. Ben Davis, Bismarck, Delicious, Grimes, McIntosh, Pewaukee. Third premiums 1912: Fameuse, Gano, Northwestern, Greening, Primate, Twenty Ounce. First premiums 1913: Benoni, Bismarck, Esopus Spitzenburg, Fall Pippin, Fanny, Hubbardston, McIntosh, Porter, Rome Beauty, Stayman, Yellow Bellflower, York Imperial. Second premiums 1913: Delicious, Fameuse, Northwestern, Greening. Third premiums, 1913: Baldwin, Grimes, Williams Favorite.

YIELD AND PROFITS.—Previous to 1910 the yield of the orchard was very small: 1910, 800 bushels; 1911, 1,700 bushels; 1912, 1,100 bushels; 1913, 2,200; divided about as follows: one-sixth Stayman, one-sixth Jonathan, one-quarter Ben Davis, one-quarter Missouri Pippin, one-sixth other varieties, which gives a good idea of comparative yields. For this section the orchard is too young to make a profit as yet. Expenditures have much exceeded receipts each year; the fillers have not yet come to the front and paid for themselves and their care, and I question whether they will ever do so. I have boxed most of my apples, all that were suitable each year, and have received more than they would have sold for in barrels, but when the greater expense of handling and packing is considered, the barrel is probably as good a package for shipment as the box.

PETER ELBERT NOSTRAND.

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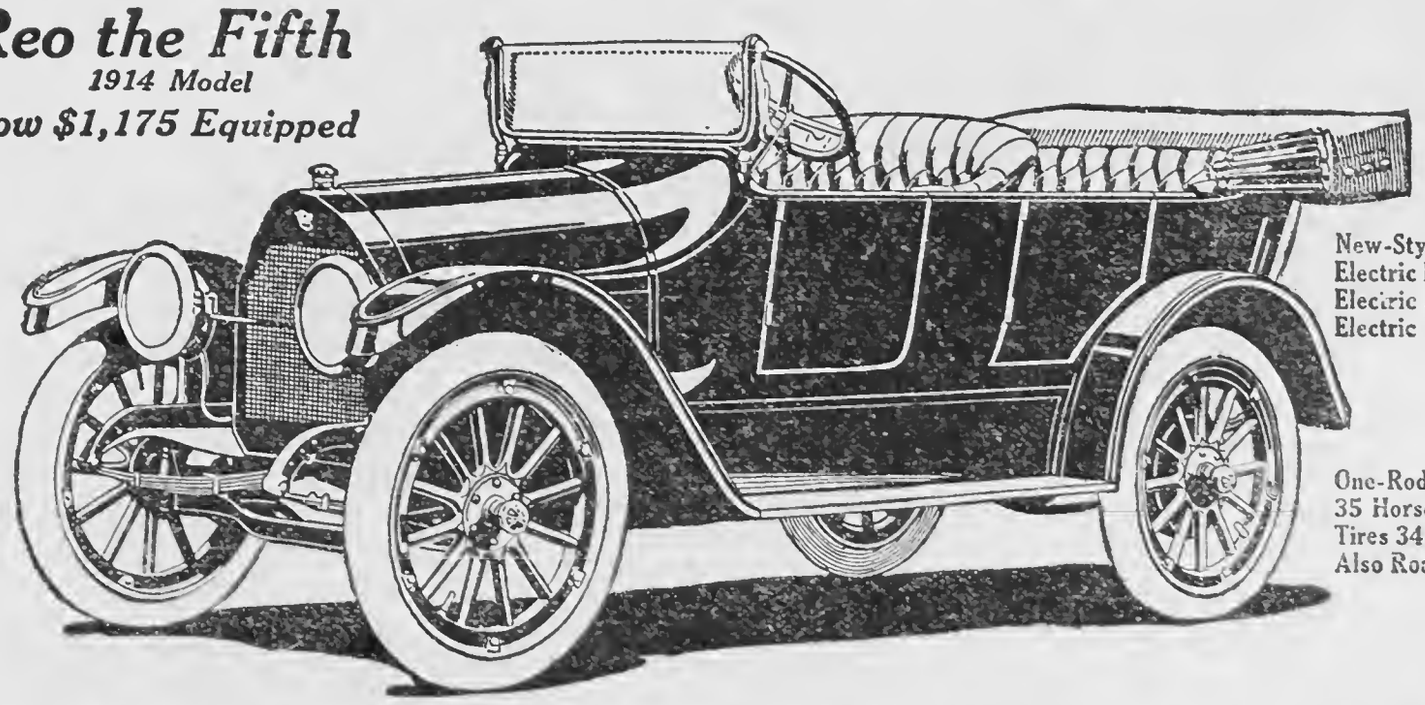

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Hope Farm Notes

SOME DISHWASHING.—All sorts of requests come from our people. Not long ago a woman asked for the statistics of dishwashing. Probably few people ever considered that this humble job could get up to the dignity of "statistics." The Government gathers and guesses at figures of all sorts. Every successful business must have the figures showing cost and income, or it will be wrecked. Yet who ever has thought it worth while to figure out the "statistics" of that most important of all "jobs"—kitchen work?

I think the way to get statistics is to go and get them. No use wandering off into the next county or going hat in hand to some expert. If you want dishwashing statistics go right into your own kitchen and get them. Nothing like taking your own advice, so I invaded the Hope Farm kitchen with tape measure, pencil and paper. On March 15 we had 15 people in the family. Three friends drove up to have dinner with us, but I did not count them, for when you mix statistics up with friendship you take the joy out of both jobs. The figures I am to give will show rather less than more of a day's dishwashing at Hope Farm. First I measured the dishes. Then I suddenly found that I had forgotten how to figure the area of a circle. It was necessary to go back 40 years to the children's school books in order to do it. It's easy enough when you hunt up the rule to find how many square inches you must wash and wipe over to clean up the day's dishes. Having obtained the figures, we found the number of dishes used during the day and proceeded to multiply. This is what we figure it out—counting both sides of each plate:

	Sq. Ins.
Cups	1.900
Saucers	1.281
Large Saucers	4.368
Large Plates	4.968
Small Plates	2.000
Platters	800
Glasses	5.740
Pitchers	650
Pots and Pans	2.120
Spoons	160
Total square inches	23.987

The large saucers are used by the children in eating cereal and milk. Do not be alarmed at the large area of "glasses." This is a temperance hotel, but the children drink milk freely and we are all fond of water. The total for the day will average more than this, as there are always extra pans and dishes which must be scoured or cleaned.

Now see what this means. Every square inch of this job must be washed and then wiped—gone over twice. Thus each day 166 square feet of surface must be cleaned and dried. When this is all done by hand it means going over 332 square feet with the hands. That represents 60,590 square feet in the course of a year, and there are 43,560 square feet in an acre. People say that no one has ever measured the possibilities of one acre of land. What about this acre and a half of dish surface? Let the women folks keep this up for 10 or 20 years, and they will come close to covering a good-sized farm. If we are to talk about farm economy for the outdoor jobs, what about this intense cultivation of dirty dishes? Would you go back to the scythe and quit the mowing machine, or go to pumping water by hand and get rid of the engine or windmill? I have something of an imagination, but I can hardly see you doing it. Yet how does the farm kitchen stand in this scheme of farm economy? Water for the barn stock is fine—but what about the kitchen stock? A good dishwashing machine ought to be a fixture, just as much as a mower or reaper. Personally I hope that some day cheap and neat paper plates will be invented, so that they can be burned up after the meal and leave the cook free to do something besides washing an acre of dish surface.

SOME WEATHER.—As nearly as I can find out, Hope Farm, or part of it, has been under the cultivation of white men something over 200 years. For some centuries before that the Indians grew grapes on our hills and exchanged them for furs and corn. In all that time, however, I doubt if the middle of March presented less of a Spring-like appearance than this year. The snowdrifts are still high on the hills, and the ground is frozen. The snow melts slowly—that's one good thing for our hills; but plowing is a long way off. Spraying has also been greatly delayed. It is hard to work through the drifts with the tank, and the ends of the day are too cold for spraying. This is the season when the spray business must jump when it does start, and a good power sprayer will half pay for itself in this sort of a season. In former seasons we have had spraying weather during each of the Winter months, but there has been little opportunity this year.

One thing at least we shall make sure of, and that is a good supply of fuel. We use dead chestnuts from the woods, hauled down in 10-foot lengths. We bought a saw and rigged it up by the woodshed. Then the gasoline engine on the power sprayer was belted up to the saw and put at work. I see no reason why this strong arm should sit idle on that sprayer for 10 months of the year, when it can be used for pumping and sawing.

Every year when we have a snowy Winter farmers console themselves by saying that the grass and grain crops are sure to be fine. This usually follows. Somehow farmers get the idea that the nitrogen which the snow brings down to the soil is responsible for the increase. I doubt if there is enough of it to count. It is true that some nitrogen is washed out of the air by the snow, but it is a very small amount after all. I think the snow helps the soil by filling it full of water, and helps the crops by protecting them, like the mulch on strawberries. When snow melts slowly the water settles deeply into the soil. It is far more likely to stay there than when it comes in a heavy rain which washes across the fields. The snow water remains in the soil, and thus the grass and grain have a better opportunity in early Spring. Then the snow covers the grain and new seeding, and prevents the heave and pull of the frost on the soil. Under the snow the plants may go on making root growth, as I am sure strawberries often do under the mulch. Then when the snow finally goes these protected plants are ready to begin growth at once. For this reason I expect this coming year to be a banner season for our cover crops—rye, vetch and Crimson clover. I think it is to be one of the years when Crimson clover does its best with us. As we have over 30 acres of these cover crops we are interested in the snow. I think this matter of Spring protection for our grain crops is to be an important one. We have tried sowing barley with the rye and cover crops. It makes a fair growth during the Fall, and then dies in a mat over the ground. Our experience is that this dead mat protects the young rye through the early Spring as a mulch.

Our old stone house is being used as a hospital just now. The boy is home from college with a case of "mumps," and he is quarantined in the room where we may say that George Washington may possibly have slept. At any rate, the house was here when Washington and his discouraged army wintered some four miles away. If he did not sleep in this old house he missed an opportunity. At any rate the boy's head is not swelled at any thought of his great ghostly companion. There is swelling enough with the mumps without adding to it. I suppose if we were to know how many cases there have been in that old house since its stones were laid the present affliction would seem a light one. No doubt before this house was built, Indians in their wigwams have greeted their little world with a swelled neck and a changed voice without knowing just what ailed them. These, however, are very poor companions of misery. We can only hope the younger children will skip the mumps. H. W. C.

ONE of the Atlantic City's life guards was discussing his profession. "Funny things happen to us guards sometimes," said he. "A society belle from Spruce street went into the water wearing one of those fashionable transformations, or wigs. A big wave went over her and when she came up the transformation was floating out to sea. She turned and ran to Tim. "'Oh, save my hair!' she yelled. 'Save my hair!' "'Pardon me, lady,' says Tim. 'I'm a life saver, not a hair restorer.'"—Philadelphia Ledger.

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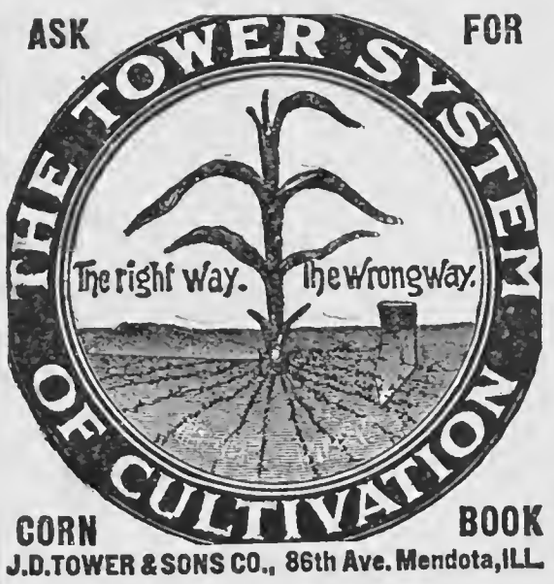

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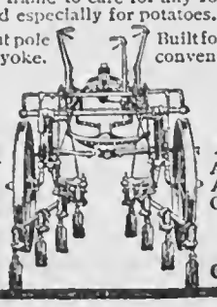

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Keep Up Spraying.

There is no scale in this section, and never has been. Is there any need of using dormant spray on apple orchard? My neighbors all use dormant spray, but do not know what they use it for.

Dale, N. Y. G. C. M.

Are you perfectly sure there is no scale in your section? We have known cases when people were very positive about this, yet the scale suddenly appeared. This insect breeds with great rapidity, and a very few of them would soon plaster an orchard. We know a number of fruit growers who feel that they have certainly cleaned the scale out of their orchard, yet they continue dormant spraying. They call it an insurance against scale which is worth while, and they are also convinced that the lime-sulphur helps clean out several other insects, and is also very useful in combating leaf-curl, brown rot, and several other diseases of fruit trees. We think your neighbors are wise in keeping up their spraying.

Coloring Lime-sulphur Mixture.

What can I use to color the lime-sulphur so we can tell where we left off spraying? D. P.

In my opinion there is very little need of a marker to indicate where the spraying has stopped when lime-sulphur is used. If the material is put on with sufficient thoroughness, it will leave a very evident mark when applied in Winter at the usual Winter strengths for scale. It may require that one get closer to the trees in order to see the mark, but it is always there with abundant definiteness wherever the applications are made sufficiently heavy. In the Summer the marks of spray are even more evident because of the foliage, upon which the dried spray clings and stands out very prominently. For these reasons therefore I would not advise the use of any marker in connection with lime-sulphur. If the inquirer is insistent on securing more distinct evidence, however, he can readily do so by adding slaked lime at the rate of three to six pounds per 50 gallons. This addition will make a very satisfactory marker, but it increases the mechanical difficulties of spraying somewhat, and it also tends to break down the polysulfids in the lime-sulphur solution, which may reduce the effectiveness of the spray to some extent.

J. P. STEWART,
Experimental Pomologist.
Penn. State College.

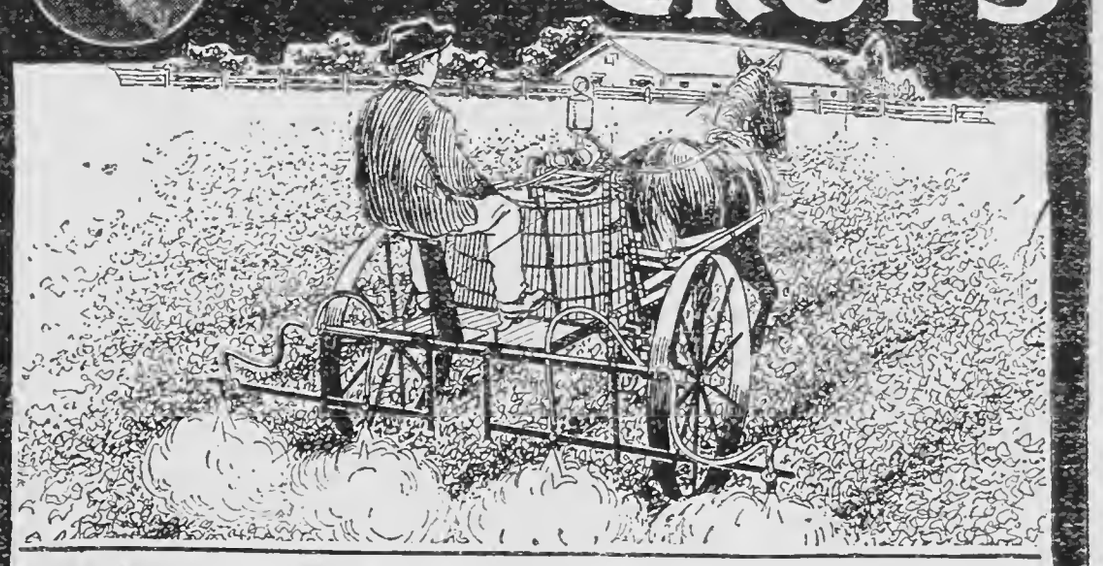
A few pounds of lime slaked and added to a barrel of the dilute lime-sulphur mixture used for dormant spraying, will make the trees much whiter so that one is able to distinguish the sprayed from the unsprayed trees. It will not be detrimental to the mixture. This question has oft n arisen among orchardists, and they speak of adding the lime as a marker. It does not render the lime-sulphur mixture any more effective in killing the scale, nor does it make it less so, but simply shows where it has been applied.

W. E. BRITTON,
Connecticut. State Entomologist.

If D. P. desires to have a marker in his lime-sulphur such can be secured by adding four to five pounds of caustic lime, which has been slaked and made into "milk of lime" to each 50 gallons of the spray mixture. This lime could be slaked up in any quantity as a stock solution, so as to have one pound of lime to each gallon of water; then in order to have four or five pounds of lime to each 50 gallons of the lime-sulphur it can be measured out in gallons. The stock solution of "milk of lime" should of course, be strained as it is put in the spray tank. We have used two pounds of lime to 50 gallons of lime-sulphur, but this does not mark the trees very distinctly, and I think four or five pounds would be better. M. A. BLAKE.
New Jersey. Horticulturist.

The addition of some material to the dilute lime-sulphur solution to mark trees during the progress of spraying operations is a subject which has been brought to our attention a number of times during the past few years. This was particularly true during the period which marked the change from the use of the old homemade, boiled lime-sulphur solution to the use of the concentrated preparations. With continued use of the concentrated solution growers in New York have come to recognize when the trees are thoroughly coated with the wash, and for this reason few orchardists take the trouble to add any marking material to the liquid. If, however, such material is desired it is possible to add a solution of air-slaked lime, or perhaps a milk of lime made from stone lime. If a marker is desired at least five pounds of either of these materials is necessary in order to whiten the trees. As a rule, however, I believe that if a tree is thoroughly drenched with the mixture it is unnecessary to add any marker to the solution.

H. E. HODGKISS.
Geneva, N. Y. Asst. Entomologist.

I WILL GUARANTEE TO INCREASE YOUR CROPS

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Established 1850

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TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

"The best farm papers are the ones that are willing to 'wise up' the farmers!"

That comes from a man who makes farming pay because he has studied it out in detail. What he means by "wise up" is to make people think. The world may be roughly divided into parrots and thinkers, with many shades of difference. The parrot is content to have things explained or analyzed for him. He takes the word of another, adapts it to his own meaning, without thought, and goes on. The thinker accepts no man's word until he has tested it by reason and common sense. To "wise up" a man is not to do his thinking for him, but to lead him on to think for himself. The noblest service you can render any man is to lead him to think sanely for himself.

*

I AM planning to take the U. S. Civil Service examination for field forecast agent. Part of the paper is "Questions on Crop-reporting Methods." Any information you can give me on the subject will be greatly appreciated. Did you not have an article on this subject in 1913? E. F. W.

Somehow we do not feel quite as civil toward this civil service examination business as we are told we ought to. We have received a number of letters from people who are evidently "cramming" for an examination. Most of them do not seem to be practically fitted for the work, but by reading a few books or articles they hope to get by on a written examination. At a real test of the human nature and common sense required to fill such a position many of these candidates would surely fail, though their paper qualifications might carry them through. There are many positions in scientific agriculture where plain sense or instinct is worth five times as much as study or book knowledge. The weakness of this civil service seems to be a failure to consider these essential things.

*

As stated, the work of the institute so far has wholly been along the line of instructing us how to increase the production. Most of us knew these things and some more, but what we never knew and no one of our teachers ventured to inform us, how to coöperate and change the conditions so we could receive a fair remuneration for our labor. There is where the rub is. We receive, as a whole, less for our products than any other section of this, or any other, country, while we pay higher wages, higher taxes and higher rate of interest on money than they do anywhere else, and also pay the very highest price for implements and machinery.

We add that to our weekly collection of studies of the 35-cent dollar. This time it comes from Montana. While the above statement will not be used by the railroads as an immigration document, we have not seen it controverted. It voices the discontent which has been growing regarding the one-sided education which many of these farmers feel they have been receiving. It may be and is argued that it is not the function of the colleges or stations or institutes to teach coöperation or business methods. The need of such education is recognized by the farmers themselves, and if the agencies we have mentioned cannot or will not give it they cannot blame the farmers if they go elsewhere for it, and have a kindly feeling for those who provide it for them. A large share of the work that must be done is not education at all, but the development of confidence in human nature, so that farmers may trust one another and learn to work together.

"It does me good to sit on the 'bleachers' and see you knock the frauds." I. C.

Massachusetts.

We have been accused of "playing to the galleries" before now. When we see who sits up there we realize that good acting is required. Those who sit on the "bleachers" take a hand in the game. They are far more human and nearer right than those who cover the soft reserved seats. We try to play a straight, fair game for all, with protection but no favors. And here is the philosophy laid down to us by a great agricultural paper:

"We do not take any stock in the so-called plain or common farmer. He is the most ungrateful citizen in the country, and will go back on you when you need him."

We have not found him so, but rather the most loyal friend that one can have. THE R. N.-Y. has been made what it is by this same "plain, common farmer." We have found him staunch and true. He has never failed as yet, and he never will.

*

"ENOUGH food wasted on my farm this season to feed three average families for a year," said a prominent Hudson River farmer.

"My team and truck frequently stand in line at the dock for a chance to load produce from four o'clock in the afternoon to 10 o'clock the next morning; some one has to pay the expense," said a large wholesale produce dealer in New York.

"The cost of fresh farm food products is so high I am forced to buy cheaper substitutes," said a prominent city housewife.

All three of these statements were recently made to the writer. Is it possible that we shall forever shut our eyes and permit this state of affairs to continue indefinitely? Food rotting on the farms within 65 miles of New York because the producer cannot get enough out of it to pay the cost of packing and shipping. Families in the city growing anæmic on cheap and adulterated food substitutes because these same farm products are too expensive for consumption. Dealers admitting the most extravagant form of distribution that could be advised; and speculating in food products, and controlling distribution in ways which they refuse to admit.

These are the conditions that exist. They are the conditions that the coöperative committees of the New York State Agricultural Society have been studying and working to eliminate. They are the conditions that Governor Glynn referred to in his vigorous message to the Legislature in support of the Food and Market bill which he proposed. But there is intimation that some one is afraid that some one else will get credit for it, and that consequently the bill cannot pass. This is a pretty situation, indeed. We can hardly believe that grown men will take such a position. But we shall see who are the friends of the farm, and who are its enemies; and if the farmers of New York State do not punish the latter and reward the former, we mistake their temper at this time. Must food rot and children starve within 65 miles of each other on a navigable river that a few middlemen may grow rich on the traffic in food?

*

THE United States Express Company, after 60 years of prosperity, has given up the fight for business and will be liquidated. The competition from parcel post and the lower rates forced by the Interstate Commerce Commission, have made it impossible for the express company to continue business at a profit. At least 10 years ago THE R. N.-Y. stated that the express companies had it in their power to stave off parcel post and keep their monopoly for 25 years longer. The way to do this was to make fair concessions and satisfy the public, give cheaper and better service, as they could easily do. The express companies hooted at such advice. They had the public by the throat, and Congress by the pocket. What more did they want? In their strength and power these express companies never dreamed that the people would kick themselves free and transfer the relation between hand and throat to the other side. These companies misjudged the power of public opinion and told the people to go to a place which they are now steering for. As it has turned out, they could not have done a more patriotic thing for their country, for they have taught the common people how to organize and use their power. Parcel post is more than a just public convenience. It is the beginning of an evolution in public service. As the express companies slide off into the waters of liquidation they may realize that their own selfish arrogance is responsible for their fate. *"Who is there to mourn for Logan?"*

EVERY year at this time we have many questions about planting the so-called "superior quality" apples. As a rule such varieties are not the heaviest bearers, and they require great care. In choice markets they sell at high prices. Will it pay to plant them in preference to the standard, hardy sorts which are known as wholesale fruit? In theory it might pay, but we have gone to practical men for the answer, and this one is typical:

Those who want to make money for sure and do it easiest, better in New York and New England stick to Baldwin, R. I. Greening and Spy; New Jersey and south to Virginia, Winesap; Ohio Valley, Rome Beauty. These are *sure* and safe. J. H. HALE.

Connecticut.

In our own orchard Baldwin and McIntosh Red are most profitable. There may be finer apples, but where the old sorts are well grown they will prove most profitable for the majority of growers.

*

THE boll weevil has caused a loss to the cotton crop of $500,000,000 during the past 20 years. Yet it has probably done the Gulf States more good than any man or group of men since the Civil War. *A nasty, crawling insect a greater benefactor than a man?* Yes, because the insect has compelled the South to break away from a one-crop system of growing cotton. Before the weevil came the South was buying hay, meat, butter, bread, beans and other food from the North, and at the same time exhausting her soil by sending away a crop high in fertilizing material. Wise men grew white-haired and died preaching a diversified farming, but their words were but little heeded. Then came the weevil, not preaching or arguing, but gnawing the heart out of the cotton business and bringing men face to face with ruin. That was a compelling force which drove farmers to corn and meat production. They would not have gone otherwise. As it is, the future will see the Gulf States one of the greatest meat-producing sections of the country. Man gave the theory; the weevil came along with the practical application and rubbed it in. Calamity is the companion which leads most of us to opportunity.

*

WE know a man who spends much of his time discussing what he calls "large questions." He does it somewhat to the detriment of his own farming. He can tell you all about the Mexican question and half a dozen others, and can also tell you just what the Administration ought to do. You would think he ought to go to Congress at least, but he talks just a little too much, and has cut out so large a job that his farm shows the effect of it. Now this man goes home and is hurt because his wife is not interested in these "large questions." Her mind deals with smaller things. She keeps an eye on the school teacher and encourages him; she has interested the people in a school garden and a children's corn contest and is helping to make a model country school. Her work is felt in the Grange, in the church, in all local activities, quietly but always for the little things which mean progress. She has tried to get her husband interested in these small things too, but he has no time for these trifles when Villa might become president of Mexico or Murphy be thrown out of Tammany Hall or a new tariff bill passed. This man could not influence one of these "large" things to save his life, while he might influence the little events right around him, and by so doing indirectly influence the larger ones. You cannot make him see it. He has hitched his wagon—not to a star, but to the reflection of one in the water. Let him work to make his own school district the best and happiest place to live in, and he would gain the power to influence these "large" matters. He cannot do it in any other way. So the man goes reaching after public rainbows, while the woman quietly directs the little things at her hand. Which do you call the better citizen?

BREVITIES.

YOU can hardly have too much "bread on the waters." It will not dissolve, but grow.

WE begin early to say that arsenate of lead paste as well as tar will make the crows say "sour grapes" to the seed corn.

As for patching up a poor lawn by raking it over and sowing seed on top, the chances are against success with the plan. It should be worked up and fitted all over.

TAKE it from us—there will be no let up in the campaign for a more comfortable kitchen. The women have equal rights with the cows for running water in the house.

COÖPERATION under government control has struck Northern Africa. In Tripoli, Italian capital is to be used in forming Arabs into agricultural groups directed by skilled Italian farmers.

So far as we know, lime is the only substance thus far used to color the lime-sulphur mixture as a marker. Some of the fruit growers believe that this extra lime weakens the fungicidal effect of the mixture.

WOMAN AND HOME

A Co-operative Farm Laundry

Which Minnesota Women Enjoy

By Miss Jennie Buell, Lecturer Michigan State Grange

The successful demonstration of a co-operative laundry at Chatfield, Minnesota, during the past year has arrested thought concerning the greatest remaining stronghold of household efficiency and waste. Such a stronghold is the weekly wash. Home improvements have dispensed with some burdensome tasks, and relegated others to the barn or factory, but washing and ironing still resist attack. Machines have alleviated but not wholly relieved the situation. For the most part the steam, the slop, the heavy tubs or machines, the exposure at the line—in short, Blue Monday and most of its accompaniments, remain.

The story of the Chatfield laundry should be familiar to every woman head of a household. It is simply home economics applied on a neighborhood scale. Acquaintance with the principles upon which it is founded and operated tends to pave the way for a similar laundry in every community. In some cases it will be slower to come than in others, because we are not all yet prepared to work together. Ah, and there's the rub! The Minnesota laundry grew very naturally and logically out of a coöperative creamery which was started and has been run upon true coöperative principles. These principles in brief are: 1. Votes based on men or patronage, not on capital stock; 2. Only reasonable interest paid on capital stock; 3. Net earnings divided on a patronage basis.

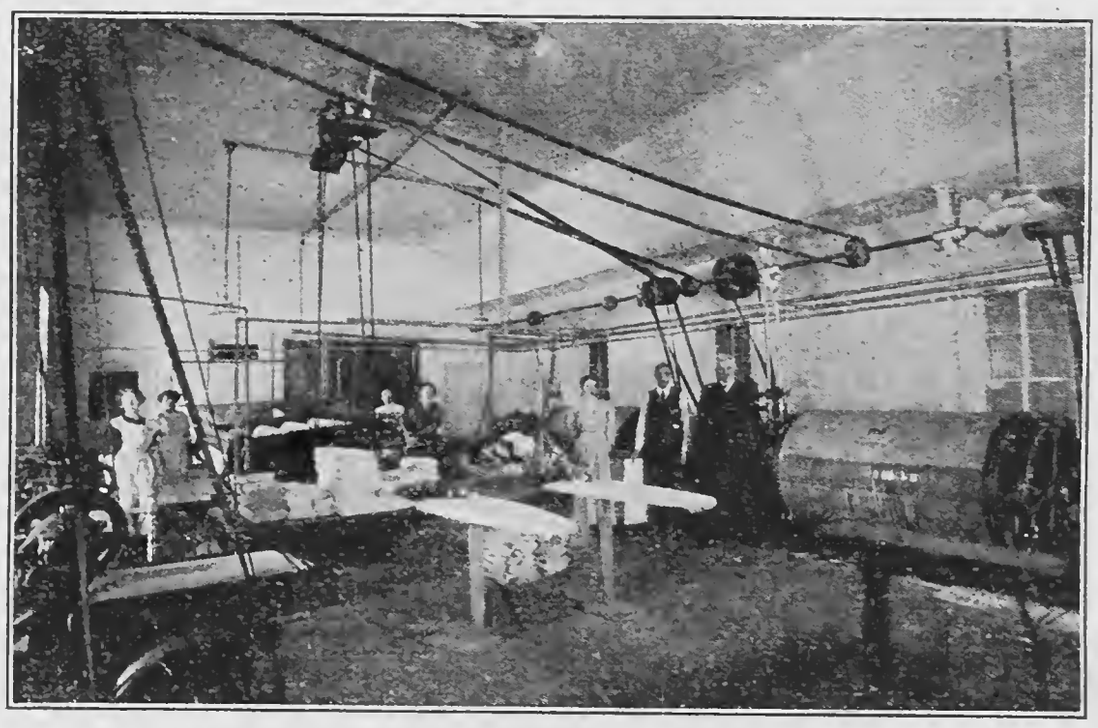
When these crystal principles are once understood by our women, the idea of really working together will have gained a tremendous leverage. The creamery at Chatfield opened in 1889, and has operated under these provisions. About seven years ago the man who was then butter maker rigged up an old churn with belting and shafting so that it could be run as a washing machine in the engine room. This suggested the economy of using the power plant for other purposes than that alone of butter making. There were the engine, water supply, sewer system and facilities for heating water—all installed but used only during afternoons. The practicability of the idea appealed to the management, but extensive repairs had just been made, and the matter halted until a year ago last Summer. The annual dividends, however, were voted to remain in the treasury and, in 1912, these amounted to $2,000. At this time the question of the feasibility of a coöperative laundry was brought up in the local farmers' club. In the popular discussion which ensued, the project gained headway, and a little later, at a Summer picnic, was put to popular vote. No one was debarred from this vote by reason of sex, and the result was overwhelmingly in favor of a laundry. Canvass for members of the proposed new association was made among both farm and townspeople. Shares sold for $5, and stockholders invested from one to five shares each. It must be remembered that each stockholder has but one vote, not matter how many shares he owns, making it an entirely democratic organization. There are now 224 shareholders, and every care has been taken to perfect the simplest organization consistent with highest efficiency. The officers of the creamery are also officers of the laundry association, but the business of each is kept entirely separate from that of the other. Thoroughly up to date and well protected laundry machinery, with capacity of $400 worth of work weekly, was installed in an unpretentious, sanitary and convenient addition to the creamery building. A competent manager is employed at a salary equal to that of a first-class butter maker, with an assistant at 20 cents per hour and five helpers at 15 cents per hour. Most of the washings come in on the cream wagons, but those from town are collected at an additional expense of about 10 per cent. The charges are five cents per pound for family washings, and this includes the ironing of all the flat work, underwear and hosiery. All other work, which cannot be ironed in the mangle, is starched, dried, folded and sent home in this shape unless ordered ironed by hand, in which latter case it is charged for at actual cost. About half the patrons order their clothes ironed. The first year's annual report showed that the laundry had done over 5,000 family washings at an average of 95 cents each.

The above is the business side of the story. The real success or failure of the laundry lies in the answer to the question, "What do the women think of it?"

CO-OPERATIVE LAUNDRY AT CHATFIELD, MINN.

If anyone really cares to know, she should send for the Minnesota Farmers' Institute Annual for 1913, which is a co-operation number, and read therein personal testimonials from 25 women who patronize this laundry. Address Superintendent A. D. Wilson, University Farm, St. Paul, Minn., with 11 cents for postage. In this report of the laundry appear such expressions regarding it as these made by the women themselves: "The work is excellent, much better than could be done at home"; "Find the fine articles as nice as the plain"; "Find plenty of things to do about the house to more than make up the cost"; "Best 'lift' I have received, and comes quite near to solving the hired help problem on the farm"; "Besides doing away with two days hard work each week, the washing and ironing are done better and cheaper than they could be done at home"; "I always know the clothes are sterilized when coming from the laundry"; "My husband says he will add another cow to the herd and that will pay the extra expense of the laundry by way of the coöperative creamery"; "No one could believe it without seeing it"; "I could go on for pages telling the joys gotten out of the time which used to be spent on labor that no person ever did for what pleasure they got out of it."

No help for the farm home can be too widely heralded until every woman in the land is relieved of *unnecessary* manual work, and is at liberty to devote more time to her family in other ways.



INTERIOR VIEW OF LAUNDRY.

Keeping Children on the Farm.

[The following paper was read by Mr. G. L. Ball at his local Grange in Cattaraugus Co., N. Y. A good share of the discussion of this topic is conducted by people who never had a farm and never raised any children. Here we have the real thing by a farmer.]

Our worthy lecturer has set me a hard task, to wit, to write about how to keep the boys on the farm. Hard, because I am not enthusiastic about it, and don't believe it is the thing to do in the sense that it is usually urged by writers on agricultural subjects.

First, the phrase, "Keep them on the farm," means a sort of restraint, or at least an urging to remain whether they like it or not. I do not agree with that idea at all, but would leave it to each individual to choose for himself. At the risk of being thought egotistical I will give a little of my own personal experience in agriculture. I began to be interested when quite young. As near as I can figure out, I was about three years old when the soil first began to tempt me to dig. My mother had a small pancake turner that seemed to me to be an ideal spade, and I was wont to borrow it for the purpose of digging in the garden. After digging a short time, I was quite apt to stop suddenly and go into the house saying I did not want to dig any more. Mother would say, "Why not? Did you see an angleworm?" I never acknowledged that to be the reason but would only say, "I do not want to dig any more," but the worm was the reason just the same. In other words I had run across what, to me, was disagreeable and consequently was ready to quit. Now I reason that is what happens to a great many of the farmer boys. They come to things that are disagreeable, and do not want to dig any more, even though they have an ideal spade and the most tempting dirt. If they have the real farmer spirit they will soon get over that and return with renewed courage to their digging, and worms will be to them as they were later on to me, fish bait. It matters but little what is to be done if it is done with an end to be gained, and with a hearty good will it is a pleasure and not a task.

Boys as well as the rest of huamnity are much influenced by what is going on around them, and by the point of view of their associates and friends, and you people who think the boys should be kept on the farm should be always alive to the fact that what you do and what your neighbors do is what your boys and other people's boys will judge by as to the desirability of being on the farm. Let us look at the subject from the viewpoint of the boy himself, as near as we can; or as we might if we were boys again.

The constitution of the United States guarantees to all citizens the right to life, liberty and the pursuit of happiness. When the boy sees the business man of the city or town riding in an auto and going on pleasure or business trips by rail, and having the chance of the theatre, lectures, etc., he is apt to think the city is just the place for him to begin the pursuit, not knowing, or rather not stopping to think, of the vast majority of city people who do not have the opportunities which seem to him to be a part of city life.

Another phase of the subject is best illustrated by a glance at our own neighborhood. Take 10 farms along our north road. What do we see? Why, simply this: that judging by what our farmers do, the proper thing is to work the farm with the sole object in view of being able to leave it and live in town as soon as possible. I will give a list of 10 farms: First, a farm rented and owner living in town; second, farm worked and lived on by owners; third, farm rented and owner moved to town; fourth, farm rented and owner living in town; fifth, rented and owner living in town; sixth, farm rented, owner living in town; seventh, farm rented and owner living in town; eighth, farm rented, owner living on the place; ninth, farm worked and lived on by owner; tenth, worked and lived on by owner. To recapitulate, six out of 10 of the owners of the best farms in this part of the county "gone to town." What other conclusion can a boy draw than that it is just about the best thing ever to go to town and kick your heels against a dry goods box?

Why not live on a farm as if you really liked it? Why not treat the farm as if it were the best place on earth for a home, and the freest and finest place for the development of a real live human being that has ever been found?

Why not enjoy the earth and the fullness thereof, forgetting the angleworms, and bless your lucky stars that you are not obliged to work in a stuffy office, or toil as a part of a machine in some health-destroying factory? Ten to one if you do so live, your boy or your neighbor's boy who comes in contact with you will not need to be kept on the farm, but will stay there for the same reason that you do.

R. N.-Y.—We think Mr. Ball gets right down to the vital point in this paper. In every large family there are both boys and girls who are not naturally fitted for farming. They ought to find some other job, but always remember the farm as their home. Most boys leave the farm because father's dollar and mother's ambition go first. They follow.

Woman and the Home

CUDDLE DOON.

The bairnies cuddle doon at nicht,
Wi mickle faucht an' din;
"Oh, try and sleep, ye waukrife rogues,
Your faither's comin' in."
They never heed a word I speak;
I try to give a froon,
But aye, I hap them up and cry,
"Oh, bairnies, cuddle doon."

Wee Jamie wi' the curly head—
He aye sleeps next the wa',
Bangs up an' cries, "I want a piece"—
The rascal starts them a'.
I rin and fetch them pieces, drinks,
They stop awee the soun',
Then draw the blankets up an' cry,
"Noo, weanies, cuddle doon."

But ere five minutes gang wee Rab
Cries out frae 'neath the claes,
"Mither, mak' Tam gie ower at once,
He's kittlin wi' his taes."
The mischief's in that Tam for tricks,
He'd bother half the toon,
And aye, I hap them up an' cry,
"Oh, bairnies, cuddle doon."

At length they hear their faither's fit,
An' as he steeks the door,
They turn their faces to the wa',
While Tam pretends to snore,
"Hae a' the weans been gude," he asks
As he pits off his shoon;
"The bairnies, John, are in their bed
And long since cuddled doon."

An' jnst before we bed oursel's,
We look at our wee lambs:
Tam has his airm round wee Rab's neck
An' Rab his airm ronn' Tam's
I lift wee Jamie up the bed,
An' as I straik each croon,
I whisper, till my heart fills up
"Oh, bairnies cuddle doon."

The bairnies cuddle down at nicht,
Wi mirth that's dear to me;
But sune the big worl's cark and care
Will quaten doon their glee.
Yet come what will to ilka ane,
May he who sits aboon
Aye whisper, though their pows be bauld,
"Oh, bairnies cuddle doon."

—Alex Anderson.

*

The Common Question.

With each forthcoming issue of the "Woman and Home Magazine" we expect to give practical questions in household matters. We want to obtain brief replies to these questions so that we may print the answers in the following magazine issue. In this way it will be possible to develop a vast amount of practical experience. The question for this month follows. This problem of carrying ham and bacon through the Summer has troubled many a busy housewife; even those who have an excellent smoke-house often find trouble in carrying the meat through the hot weather. The following method is practiced in sections of Ohio. We would like to have our housekeepers tell us if they have found a better way. The answers to this question will be printed next month, at which time we shall present a new problem.

We are looking for information. The method (used by most of the neighbors) of storing ham and bacon for Summer use seems to be to slice it just as they do for use, then cook it about half what they would for the table, lay it in a common crock, and pour on grease enough to cover it. Then slice and fry another spiderful and so on. This saves the ham, but it does not make very rich eating next Summer. I would like to get some method that will enable us to lay the whole ham away until wanted, then have it fresh and juicy as it is in March. W. H. P.

*

If we could see ourselves as others see us, there would be a quick change in many habits or ways of doing things. If the world were all lined with mirrors, most of what we call nature or natural actions in human beings would be quickly crowded out. Take for example the case of the woman shown in the picture. Take a guess at what she is doing. To save time, we will give you the answer. She is calling the men folks to dinner. The boss and the hired man are in a distant field. The neighbor has walked across, and they are talking politics. Dinner is ready and the women folks are going visiting as soon as they get through the meal, so this lady is dressed up for her afternoon outing. Dinner is ready and getting cold, and yet Bill has forgotten to look at the sun, and politics has charmed away his hunger; so she is out by the woodpile with the wind blowing down her throat, trying to make Bill hear. If some one were to hold a mirror right up into her face as she stands there, there would be a horn or a bell or a whistle on that farm within 24 hours.

Mr H. Markley, of New Jersey, took this picture and then took the other which is shown herewith. This whistle takes the place of screeching and calling.

WHAT IS THIS WOMAN DOING?

The whistle is a good signal, but we would prefer a little chime of Swiss bells, which could be bought for a comparatively low price. They are more musical than the loud harsh farm bell, carry far, and are easily managed when set up by the kitchen door.

Here is the way Mr. Markley puts it:

"There is no bawling one's head off on this farm. A 10-cent whistle saves dollars in time—saves the wife from headache from bawling till she in hoarse. When the wind is not dead wrong, its loud, mellow note can be heard for half a mile. It is handy always on a little hook by the kitchen door. A sharp blow,

"WHISTLE AND I'LL COME."

and the deed is done. No time lost, no strain, no fretting, no unpleasantness. If mother is busy at the moment, one of the children blows the whistle, as you see in the picture. In this family where it is used, one long blast means 'eats,' step double-quick; two blasts means someone has called to see you; three blasts calls the children at any time mother wants them."

*

"I guess it's a fact that a pair of trousers does not necessarily establish a prima facie case of strength of character!"

That is the honest comment of a man who was told some of the things which a widow on a little farm did to hold her family together. Under the conditions which this woman faced eight men out of 10 would have wilted and given up the struggle. This woman became head, tail and middle of the family, and took up her hard task with no murmur of complaint. "Strength of character?" There is nothing in all the world equal to the courage which a frail and naturally timid woman will show in a struggle for her children. If any man should make gratitude his religion it is the son of such a woman.

*

THERE was once a hired man—a big, strong fellow capable of doing first-class work. The farmer who employed him was a good provider—said he believed in eating food which "sticks to the ribs." So there was meat three times a day; sausage, ham bacon and beef, "all you want and more." The hired man ate with the rest of the family. While the others ate heartily and kept strong and efficient at their outdoor work, the hired man was a poor eater, and did not seem to have the "snap" and energy which his big body should have held. "What's the matter with you?" said the farmer. "Can't you eat? If a man will not eat he cannot do farm work. What's wrong?"

"Well," said the hired man, "I have never eaten so much meat before. Try me on rice or something like that."

They did, and it worked wonders. On simpler food which suited him the man held his strength and regained his energy. On experiment it was found that there were three groups of people at that one table, each doing their best work on certain definite kinds of food. Even in this well-regulated family a single standard of diet did not suit all. Many a farmer will say this is a fairy tale and that there never was such a hired man—yet we have seen just such a character. The chief lesson is for those farmers who think their cows will all do their best on a single standard ration. The fact is that in every dairy herd there are dainty cows which prefer certain feeds, and will pay a large premium when their tastes are consulted.

THE cover page of the February 28 issue reminded me so much of my dear old mother. It is almost a perfect likeness, and she was such a great lover of flowers. E. T. FLANAGAN.
Illinois.

We have had several letters stating that this picture reminded the writers of some dear old friend. Some weeks ago we printed the picture of an elderly man helping his wife at household work. This paper was hardly distributed before a young woman wrote saying that this was an excellent likeness of her dead father. They had no picture of him which was nearly as good as this random photograph. We were able to help her obtain a better one. Our effort is to avoid what may be called "fancy pictures" and print the homely and true scenes which are true to life. It has long been the policy of THE R. N.-Y. to reflect, as fairly as possible, the life of the strong middle class of country people.

*

MANY of our correspondents from isolated sections of the West and Southwest refer to deficient school facilities, and the lack of opportunity to acquire culture of mind or manner. In many cases the children who are thus growing up with a handicap that must hamper them through life belong to good American stock. On the other hand, we see here, in our great cities, the children of unlettered immigrants not only given a good common-school education, but instructed in arts, sciences and social accomplishments, through public or private generosity. Every American feels that his land of opportunity should offer a generous welcome to all who seek its shores. Yet when we wonder why young America seeks the city, and deserts the sweet-smiling furrow for the grimy pavement, is it not possible that educational as well as social opportunities form a part at least of the lure? Philanthropy has showered wealth on collegiate institutions, while primary and secondary schools have struggled on limited public funds. We need an awakened public conscience towards the needs of the common schools in rural districts. It is well for us to educate the stranger within our gates, but there seems a growing need to consider, with equal force, the claims of those who are of our own household.

*

"Tied to the stake!" Every boy has read thrilling Indian stories wherein some unfortunate victim was securely tied to a post with the hot fires blazing around him. The boy has thought what *he* would do if some comrade were being tortured in this way. How he would rush through the crowd, stamp out the fire and set the victim free! A noble thought surely! Why let it disappear like other dreams of action? During the hot months of Summer you may find mother or the girls *tied to the steak* in the hot, stifling kitchen! The range may be defective and old, the fuel poor, the kitchen unhandy so that the only pleasure about dinner is in the eating of it—with mother too hot and tired to share. Here may be your chance to make "dreams come true" by starting a campaign for a better kitchen. Begin it now.

*

IN the last magazine issue J. M. Drew told of a play which is being performed by students of the Minnesota Agricultural College. The object of this play was to present in dramatic form some of the arguments in favor of an agricultural education. There has been a stream of letters from people who want such a play for performance in their home town Several of the colleges have asked for it. Why not make use of the stage for a clean, impressive argument for farming the same as we use lectures or moving picture shows?

*

The Cooking Stove a Pulpit.

The blizzard whirled in upon New York without warning, and filled the streets with great drifts of snow. People who live in the country rather like snow in Winter, for it makes good sleighing, and in almost every case the grass and grain are better following the snowy Winter. In this great city, however, the snow is naturally out of place and before the blizzard was over, a great army of men were put at work carrying the snow away. Most of it was thrown into carts, which were hauled east and west and dumped into the river. In other cases, the snow was shoveled into the sewers, where it melted and ran off. But this blizzard, while a great inconvenience to the city, had its good side, for it provided labor for thousands of men who were out of work. Every Winter when times are hard in the smaller towns, thousands of these men head for New York. It is no place for them, for work is scarce. Yet they come here hunting for a job, and many of them are partly cared for by charitable organizations. This snow-shoveling gave them a chance, and many of them embraced it. Squads of them were found in every street—many of them poorly clad and rather ill-fed for the work. It is small wonder that some of these ill-fed and poorly-clad men frequented the saloons for something to warm them up in the face of that blizzard. There were moralists who found fault with this, and held these men up as terrible examples of what ought not to be. There were others who took the more sensible view, and what they said and wrote, showed that there are practical, warm-hearted people in this city as well as in the country. One of them for example wrote the following note which was printed in a daily paper:

"As you look out of your window you will probably see a bunch of men at work shoveling the snow away from your street. Watch these men. Some of them are not used to the work. Most of them have no overcoats. Some have no gloves or mittens, yet they are cleaning up the city for us. Do not moralize and groan if you see one of them coming out of a saloon wiping his mouth, but get busy on the other side. Take two or three loaves of bread. Cut them into thick slices, smear on the butter so you can't see the bread. Put a slice of meat between each two pieces of bread and butter, go out to these men toiling in the snow and say, 'Now sports, we are all men and we are all hungry at times. Here is my contribution for the good of humanity. Go to it.'"

No more practical advice to reasonable men could be given than this. There is no use talking, but a good cooking stove still remains about the best pulpit on earth from which to preach a sermon on intemperance.

The Family on a Bobsled.

There has been snow enough throughout the northern part of this country for the past Winter to satisfy anyone who likes snow. In Canada the sleighing has been long and continued, and from present appearances will continue far into April. The younger people are fond of snow, and there are times when the entire family turns out to enjoy it. The picture here given shows a Canadian family mounted on a bobsled all ready for a mile-a-minute spin down a steep, icy hill. This scene could be duplicated

THE WHOLE CANADIAN FAMILY AT PLAY.

on thousands of farms visited by THE R. N.-Y. each week. We have readers in every country on the globe. This paper will be read by families in Cuba, Porto Rico, Egypt and in countries close to the Equator. The majority of these older people were raised in the northern part of America and will well remember the bobsled coasting of 30 or more years ago. They will hardly be able, however, to make their children and grand-children of the South understand this picture, for it is one of the wildest stretches of imagination for the inhabitants of a hot country to realize that Winter hardens water to such an extent that one could walk on it. These older folks would gladly take another spin down hill, and it would do their descendants a world of good to endure the biting cold for a few seasons.

The picture here shows one of the drifts which accumulated in one of the narrow New York streets. Some of the streets were worse than others, owing to the fact that the wind whirled the snow through some open place and piled it in front of the higher houses. Then the snow upon the sidewalk was thrown off and a track was dug through the center of the street, so that after the storm was over there were two great drifts or piles, such as is shown in the picture. In the country, of course, the snow is left to take care of itself. When the weather permits, it melts and runs away, but in this great city, all the snow in the streets must be scraped up and taken away. When we consider the size of New York City, we can imagine what it means to carry away all the snow which piles upon this big island. At one time during the storm 15,000 men and something like 3,000 wagons and trucks were at work clearing away for traffic. Some of our farm boys think they are greatly abused when they are called upon to dig a path from the house to the barn or to the road. What would they think of tackling the job of cleaning this great island of such drifts as are shown in the picture?

Eggs for Tickets.

A new way to help out the egg market was recently started at a town in Arkansas. A moving picture house hung out the following sign:

"Admission for minors one egg; for adults two eggs."

This meant an increased patronage and a good supply of fresh eggs. As there was ready sale for the hen fruit, it may well be seen that this turned out to be a very fruitful scheme. It is probable, however, that regular performers on the stage would have been shy about their appearance if this plan of admission had been adapted, for there are few performers on the stage who are not made nervous when they see a basket of eggs in front.

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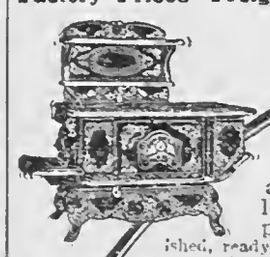

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THE LAND OF FULFILLMENT

A STORY OF HOMESTEADING

By ROSE SEELYE-MILLER

(*Continued from page 302, February 28.*)

"All but the creek claims, they weren't taken when I drove past but may be now; still nobody wants the creek land, it's too rough, steep hill, and low valley, and steep hill again."

Nate and Norm looked at each other blankly.

"What can one do about this vacant, unsurveyed land?"

"Oh, nothing, except to 'squat' on it, and hold it till it comes into market.'

"When'll that be?'

"No telling, when a railroad goes through I reckon, nobody knows when that'll be."

Norm turned the oxen and headed them east again towards the despised creek land. Both boys were keenly disappointed. They had been passed by many teams that day and most of the drivers had been urging their horses to the full limit of their speed.

"I understand now, why all those fellows were in such a hurry." Norm said moodily. "We'd ought to have taken up our land while at the Land Office."

"Oh, I don't know," Nate demurred. "I'm thinking that creek land will be just about what we want."

"You wanted to file right there in the office and you know it," Norm stormed.

"I've changed my mind since then," Nate retorted. "I think that creek land, will not be too Edenic. It'll likely have some stones on it, and after travelling seven miles to get a piece of stony land, I'm not going to let a good chance slip. What do we care about the land anyway? It wasn't really the land that we came after, but health and comradeship, so that we could go back, and do something in the East."

"Probably someone else has taken it before this," but Norm hurried the oxen at a speed hitherto unknown to that faithful and steady-going pair. Arrived again at the creek side, the boys stopped a moment, listening to a cluster of men debating, judging from what they heard, the creek land was not taken. Norm drove on to it, drew out the nails that held the "coop," on to the wagon, and then making a slip-plank of a couple of heavy boards, the two boys slid the shanty out on to the ground.

"What are you doing here?" inquired an angry voice, and the speaker backed up by several other men, most of them mere boys like Nate and Norm, approached them wi angry resistance written on their faces. "The creek is for everybody, and not for settlement."

"It might have seemed so a few minutes ago," Nate replied coolly, but now it belongs to us, and we're going to hold it and homestead it."

CHAPTER IV.

"You've only got one quarter section held with that shanty anyway," a young and kindly voice put in.

"Only one? Are we entitled to one quarter section each?" Nate turned swiftly and looked into the clear hazel eyes of Jim Maynard. "How can we know just where our land begins and where it ends?"

"You can tell about where you are by the corner posts. At every corner of every section, the surveyors dig four holes and make a heap of dirt in the centre, often placing a stone on the heap. Here," pointing to such a place, "is where my land ends, and yours begins. Tie a rag to your wagon wheel, and drive along and count the revolutions of your wheel, from one corner post to another, then you can easily tell where the line is between two quarter sections almost anywhere."

"Good!" cried Norm, brightening visibly, and Nate knotted his handkerchief about a wheel.

"If we hold a half section our joint land will run from one corner post to another and the line between the two quarters will be the dividing line between our two claims."

"Yes, and the land will run half a mile east and west. The creek right here is running north and south," explained Jim. "You can shove your shanty over on to the line and hold both quarters, that way till you can get your other one built."

This little, friendly encounter, cheered the boys a great deal, but both boys and oxen had put in the most strenuous day of their lives. But the bracing air, the glorious sleep, out under the open sky, caused them to waken feeling refreshed and strengthened.

"I feel like an inflated balloon," Nate declared as he went about getting the simple breakfast. Then before the rest of the settlers were stirring, (most of whom were young men of their own age or a little more) Nate and Norm were lumbering cityward with the best speed the oxen could make.

The crowd at the Land Office thinned at noon, and Nate and Norm stationed themselves on the steps to wait for its re-opening after dinner. Mr. Stamford gave them a few extra minutes, and the boys explained the situation.

"So you were crowded out? I was afraid of it. Men are so crazy for land, they file on any plat here, and then run for it. It isn't a very good way or a just way, but that will be changed in years to come, but just now we must meet the problem as it is. There is no doubt the land unsurveyed and out of the market will be better than this land on the creek, but if you want this said land, there is no reason why you should not have it. Why not file on both a preemption and a homestead each? This will give you a good square patch of land, and while some of it will be practically worthless, some of it ought to yield good results. The rough land will do for pasturage."

And so, Nathan Lee, aged twenty-one, with a very slight margin over, became a land-holder, and upon the same date, Norman Duane, about the same age, profited by Uncle Sam's beneficence. The boys paid their fees, bought some lumber and a few things they considered absolutely needful, and went lumbering homeward.

"It is funny," said Nate viewing the plains, "how many buffalo bones there are out our way, and so few nearer the city."

"There isn't anything funny about it," Norm retorted. "Can't you figure out two and two? The people who have settled on all these quarter sections have got rid of the bones, that's all."

"I can't see what they've done with them unless they've kept throwing them west, off their own land on to the next claim. I believe that is just what has been done, for they can't burn them, and they won't rot in years. Maybe," Nate added pensively, "these bones have been piled up for me to use. Lacking stones, I can pick buffalo bones. They're lighter and easier to handle, and enough to keep me busy for a long time."

"And that's your idea of agriculture!" snorted Norm.

"Doesn't it make you feel plenty rich to own three hundred and twenty acres of land?" Nate added dreamily, ignoring Norm's snort.

"It does, and it does not," admitted practical Norm. "You don't seem to realize that we have to live on our homesteads five years, and that we have to pay about two hundred red-hot dollars for our pre-emptions when we prove up. My mind just now, strange as it may seem," mockingly, "is bent upon the problem of how we are going to live, and move and have our being, until our wheat crop begins to roll in."

"I'm afraid you've about used your nest egg up, haven't you?"

"Eggs don't hatch just lying in a basket, they've got to be set."

"I sure hope yours hatches," observed Nate heartily, but after all I feel like a swine—letting you—"

"Shut up," responded Norm promptly. "It's for better or worse, you know we agreed to that, when you let me come with you."

"Let you?" and there was great emphasis and great meaning in Nate's words. "I hope—but it's an unequal partnership. You with your splendid strength, your nest egg, and me with—"

"You with a cough—if you'd give up that bad habit, I wouldn't ask much more of you—"

"Oh, pass out your pledge—no, wait a little, I guess I'm going to break it right now," and Nate began to cough violently.

"There, you see, just mention it, and you begin. I notice you cough a lot more when you happen to think of it than when you are plum interested in other things."

"Maybe it's so, I don't cough nights now. I'm so interested in sleeping, and truly, this air is like breathing heaven—I'm bound to quit."

The boys lapsed into silence, both speculating upon their land, its probable value, the experience before them, and the glory and the gladness of possession entered into their souls.

"We'll make good," said Nate as they drove on to their own soil.

"We'll make good," assented Norm. "And we'll stand by each other forever."

It was mid-afternoon, when they reached home, and after tethering the oxen, feeding the few hens, and making things comfortable in general, both boys set to work to fix up the inside of the shanty. They made a bunk, and put it on hinges, for a sleeping place, and when this was not in use, it could be put up out of the way. Nate suggested a table on the same plan, so a broad shelf was put beneath a small window which they had inserted in the shanty, and this too proved a great convenience, for there was so little room, it must needs be carefully conserved. Some corner shelves were put across one corner, for the few dishes and nails were driven in beneath this, for hanging the skillets and utensils on, and so the little shack on the plains began to look quite properly a bachelor's shanty.

"When do they plow and put in a crop?" inquired Nate innocently.

"You are a practical agriculturist," Norm laughed. "Out here they put a crop in, in the Spring, but back home, they sow a good deal of grain in the Fall."

"Well, I don't see why not here too! Can't we even begin to farm till next Spring?" Nate's voice was full of dismay and disappointment.

"The Winters are too open here; the grain would freeze out, if put in in the Fall, if it wasn't quite so late, we'd try putting in a few acres of flax, they raise the dandiest stuff on the virgin sod here! But it's too late!" There was a ring of finality in Norm's voice.

And so the matter rested, but the next morning after the other work was done, Nate took up the topic, as though it had been dropped but a moment before. "But we've got to do something!"

"We have. We have another house to build on the other half section of land, but before we do that we'll look over our land some. I see we own a large round, basin of land; it must have been an old lake bed, with banks like the sides of a cup, and through this little valley runs the creek. This upland looks all right enough, but that valley land will be richern' skim-milk, or I miss my guess."

The banks of the old lake were precipitous, and the boys had to hunt for a place to make their descent into that part of their possessions. Finding the least steep place, they made the descent, rather more hurriedly than they had expected to, for the top soil proved to be but a scale, and beneath it was nothing but loose, crumbling shale, that gave way with every step. Norm, heavy and less agile than Nate lost his footing and went rolling to the bottom, but Nate by expert balancing, and light, skimming of the surface, reached the ground upright. Both boys laughed and laughed, and then Norm recovering his gravity, rolled about in the grass, long, thick, luxuriant.

"My, but this grass is some wonder. If we had this back East we could make a little fortune cutting it for hay—but folks don't put up much hay here, they say the stock range all Winter and come out fat in the Spring, feeding on the dry buffalo grass."

"If this bottom land is so good, what about the hillside? That crumbled away like clear lard, that must be an extra fine soil." Nate observed, with an owl-like look of wisdom.

"That," snorted Norm. "There isn't soil enough there to grow bird feed! That," and he gathered a handful of the shale and sifted it through his fingers, "That," he repeated contemptuously. "I don't know what on earth that stuff could be good for!"

"'Speak gently to the erring'," Nate replied mildly, smiling at Norm's scornful denunciation of his judgment, and of the land judged.

"I wonder if we couldn't plow up just a little piece down here for a garden," Norm speculated. "I believe these bluffs would protect it from frost, and the ground is so rich, things would grow like Jack's beanstalk."

"You'd have to get the grass off someway," suggested Nate, wisely.

"Oh, wise agriculturist!" cried Norm, "I'd cut the grass and plow the land," then his exultation in his own superior wisdom oozed away. "But I haven't any plow."

The boys had been moving along, and suddenly around a sharp curve in the bank, Nate espied a monstrous heap of white. "Bones!" he cried. "Bones, bones everywhere and not a bone to pick!" but he bent to the pile and touched them with a feeling of half awe and reverence. "This is fairly uncanny! Norm! Did the buffaloes have a burying ground here, or did they come here to jump off and commit suicide? There's a carload of bones right here—I wonder—" But what Nate wondered remains a secret, for Norm broke in stormily.

"The neighbors are using our valley-land for a dump heap," and in verification of this statement, there came a shower of bones flying down the side of the embankment.

"Hey there!" shouted Norm indignantly, but Nate's hand shot out and shut off Norm's vocalization.

"Isn't that Maynard? the fellow who was so good to us? and moreover he's got a shining red plow; I saw it. Tell him you'll let him use your land to dump on, if he'll lend you his plow!"

"Hey!" shouted Norm, and in reply to the shout came an answering cry, and a pair of bright hazel eyes looked down upon them.

"Hope my impromptu shower, didn't hurt anyone," said Jim Maynard's boyish voice.

"Not a bit," Nate responded cordially. "We've just decided that we won't kick on being used for a dump, if you let us take your plow for a little while."

"Why, you can take the plow and welcome," Jim replied heartily. "But it's too late to plow anyway, and if you think of breaking up that valley, it's all foolishness, for it'll be covered with water likely sooner or later."

"It doesn't look much as though it had been under water for a good while," Norm said, not very pleasantly, "but I want to turn up a little land for a garden."

Norm was prodding away with a spade, turning up the blackest, richest kind of soil. "See that!" and Norm turned up another spadeful of soil. "It's rich enough to raise pie crust on—if we could only get the seed."

"There's no doubt about that, but pie-seed are scarce out here. It's jolly fun baching it, but it's jolly lonesome too. Say, I was in hopes one of you fellows would fetch out a piece of calico with you."

Both boys laughed. "No calico here. We're all boys together 'round here, and it's no fit place, for a woman just yet," Jim continued. "But I'm homesick to see a gingham apron."

"I'll get one, first time I go to the city," Nate agreed accommodatingly, "and I'll put up a clothes line, and keep it hanging out for the benefit of sore eyes."

And so with a laugh of good fellowship, Nate and Norm, made their way along the creek bed, to the road which lay just on the south line of their land, and then on up the hill there, where Norm got his oxen, and the plow, and all three boys set about making a garden patch.

"This'll be almost as good as a piece of calico," Jim agreed, as he watched the oxen lumbering along and turning up the richest soil the sun had ever shone on.

"I've got a dozen potatoes over to my shack, and a package of government garden seeds, which I will donate for the satisfaction of seeing this truck patch once in a while," Jim volunteered generously.

"Dump all the bones you want to," Nate replied hospitably, "and I'll help you pick up too."

And so it chanced that lettuce and radishes, young turnips and string beans, beets and a few potatoes began to grow upon the virgin soil of the valley plat. Jim and Nate picked bones assiduously, and when Jim's quarter section of land was picked clean, they both began on Nate's land. "We'll have that valley plum filled up," Jim averred gaily.

"I'm going to begin pounding them up for our six hens," Nate said happily. "They're prime good for hens, and ours are laying now. We're going to set one just as quick as we can."

That night after the dishes were washed Nate began making poultry feed out of the bones. He used a big stone, for a base and with a smaller one he pounded the dry bones up into scraps, and although it was time for any respectable fowl to be to sleep, the six flocked about him, picking up the falling spray. And as Nate watched how greedily the hens ate the bone scraps an idea, dim, vague, came into his mind, and he wondered vaguely if there were such a thing as a bone-cutter, and finally dispatched an inquiry for a catalogue of poultry supplies.

"Terribly rough, homely horns, these buffalo horns!" Jim essayed one day picking up a monster pair that lay near.

"I supposed horns grew as smooth as glass," Nate exposed his ignorance shamelessly. "I've seen whole windows full of horns in the city, as shiny as looking glasses."

"Huh! City horns are polished up like city people, and don't look any more like natural horns, than dudes do like men," Jim aired his superior wisdom freely.

"I wonder what color these horns really are," and Nate took out his jack knife and began cutting away the outer roughness.

"We could find out easy enough by trying one on the grindstone. If you want to scrub up some, we'll take them up and find out."

"Let's do it. We can fix up a pair apiece and keep them to hand down in years to come."

So at noon, the rough buffalo horns were tried upon the grindstone and much of the rough, checked, outer covering was ground off, revealing a horn as black as ebony, and about as hord.

"I believe they would polish up in great shape; we'll fix some to hang our hats on."

"They'll need scraping with glass, and rubbing with emery paper and rotten stone and oil, to put a final finish on them," Jim agreed. "I've got about all the junk in my shack that I want, but I'll help you fix some."

And so the remainder of the Summer drifted by. All the young settlers were busy, without accomplishing anything that turned into real money, and money seemed to be a very vital part of life in a new country, where everything was high and luxuries scarce. Nate and Norm had built the other shanty and had fitted it out reasonably, but both knew that their resources for the long Winter were pitiably inadequate. It is true that Nate had picked bones and fed the hens bountifully, that these same hens were laying well, and furnishing as many eggs as six hens could be expected to do, but they could not furnish a living for two hungry boys. Nate had, been thinking seriously for a long time, wondering, what he could do to add to their financial exchequer. He knew that the buffalo bones would be an asset, if they could be shipped to some fertilizing plant. The nearest railroad was 20 miles away, so that shipping seemed hardly feasible just then, but he hoped sometime to utilize those bones, although this had not occurred to him at first, and he meant, should he realize any profit from them to share with Jim Maynard, for he had worked as hard as Nate had, to pick them up. Still the clearing of the land had been the chief, and only object to Jim, while to Nate, the keeping out of doors, in the clean, dry air, was the main thing. To be in a pleasant companionship, and to be occupied in a light way, meant a good deal, for it kept both boys from dullness, and Jim perhaps from homesickness.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards their property and their children. There will be direct answers to actual questions and general statements of law.]

Wife's Right in Husband's Property Against His Will.

If a man dies, leaves a will and a widow without children, and she decides not to abide by the will, what portion of the estate is she entitled to in Pennsylvania? W. H. C.

In Pennsylvania a husband cannot by his will bar his wife from participating in his estate at his death. A widow may always refuse to accept the provision made for her by her husband's will and elect to take dower, which is a life interest in one-third of his real estate. But this does not cover all of her right. By the Act of April 1st, 1909 (P. L. 50) the widow of an intestate, if there be no children, is entitled to the real or personal estate, or both, to the aggregate value of $5,000 in addition to the widow's exemption of $300. If the value of the estate exceeds $5,000, the widow is entitled to such sum of $5,000 absolutely and in addition one-half the remaining real estate for life, and one-half the remaining personal estate absolutely. These latter provisions take the place of the dower right. The wife, electing to take under or against a will of her husband's shall manifest her election by a writing, signed, duly acknowledged and delivered to the executor or administrator and recorded.

Notice of Reading of Will.

Can you inform me what the law is in Ohio in the case of the reading of the will of a deceased person. Must all heirs be notified of the time of the reading of the will or not? In this case some of the heirs were notified and others were totally ignored.

There is no law in Ohio in regard to giving notice of the reading of a will, and if, as is sometimes done, the relatives of the deceased gather to hear the will read, it is more a matter of custom than of law, and it is in the discretion of the person who has the will in possession as to who shall be notified of its reading. But it is provided by law that no will shall be admitted to probate without notice to the widow or husband and next of kin (who would be the children, if any, and if none, then to the brothers and sisters, etc., of the testator) if any, resident in the State, in such manner and for such time as the Probate Court directs or approves.

Husband's Right Under Wife's Will.

If a farmer making deeds gives his wife (with children) all of his farm and possessions, does he get any of this property back? If his wife dying makes a will giving some to children and a part to husband for life only, does the law give any to him in the same way as a wife gets one-third dower?

In this case, the property belonging to the wife, the husband gets just as much as his wife gives him under the will. In South Carolina a husband has no right similar to the wife's dower right; that is, his right as tenant by the courtesy was abolished in 1883. You would therefore be entitled to just as much as you are given under the will.

Gift of Real Estate.

A man deeds one-third of his property to his wife and the remainder to one son. There is a family of children. 1. Is the son's deed good, that is, can he hold the property, or can the deed be broken? 2. Can the wife get any more than her deed specifies? 3. Would debts incurred for her and her family just before and after the man's death have to be paid out of her share? S. J. B.

1. It is not shown whether the deed from the father to the son and wife is in the form of a gift or whether there was consideration from the wife and from the son. In any event, a man can give his property to whomsoever he wishes, provided he does not do it to rid himself of his just debts and defeat the claims of his creditors. If he is solvent he can give his property away and, in this case, the deeds to the wife and son would be good.

2. The wife should have joined in the deed to the son to release her dower right; otherwise, her dower right in the son's property would still be good. In other words, a husband cannot defeat his wife's dower by giving property away.

3. If the gift was consummated before the man's death, property given to the wife would not be liable for any part of his debts. Neither could the son's property be taken for debts incurred by the father, but, of course, if the debts were incurred by the wife and family and not by the husband, they could look to her property for payment.

Wife's Dower Rights.

My deceased husband left no will. He owned houses covered with a blanket mortgage. The law gave me five thousand dollars in this real estate, which has drawn five per cent. interest. Is there any way for me to obtain this whole amount of five thousand dollars from the real estate without a forced sale? Or could I place a second mortgage on the property and obtain my money that way? Husband's relatives say half of net income belongs to them and I find myself financially embarrassed. M. E. S.

Massachusetts.

You do not make it quite plain in your letter by just what means the $5,000 interest in the estate was acquired by you. If it was not set out to you by the heir or the owners of the freehold according to law, nor assigned to you by the Probate Court, you may recover your dower interest by what is known as a writ of dower, which is an action to obtain your dower rights and damages for the detention thereof. By this action you get a certain specified part of the real estate, and after this is set aside, you may mortgage your interest in it. You must remember that your dower right is only a one-third interest in your husband's land for your life. It would be impracticable to put a second mortgage on the property. The most feasible plan would be for the heirs to pay you the sum of $5,000, if that has been declared to be the amount of your dower interest, or it may be that you may be able to secure a loan on this dower interest.

Minor Girl's Rights.

Will you state the privileges that a girl has before she is 21, according to law, in regard to keeping company and getting married without consent of guardian or parents?

The authority which a parent has over a child is not limited in any way except that it must not be so used as to endanger the child's safety or morals, and the parents have, therefore, the legal right to say what company a girl shall keep until she becomes of the age of 18 years in this State, when she obtains the right by law to consent to marriage. Until this time, however, she must obey her parents in all things, limited only by the statement made above, that the authority shall not be so exercised as to endanger the morals or safety of the child. A girl may not marry in this State before she becomes 18 years of age without her parent's consent. For other purposes than marriage the female becomes of age at 21 years.

Hambden Girls' Tomato Club.

In early Spring the movement was started to form a girls' tomato club. Those interested met at our central school house and the club was organized. The girls held a meeting each month or oftener as necessary, presiding at their own meetings generally. Under the rules of the club the girls were allowed to raise or buy their plants, as most of them were attending school. Their fathers made ready one-tenth of an acre of land; they planted their own crop, but had help about cultivation. The rest of the work was done by the girls. The season was very unfavorable, with a heavy frost June 10, which killed many of the plants to the ground. Later the drought hurt them badly, but the girls worked with true country grit, and despite the dry rot they made the following splendid records. Two of the girls had previously lived in town: Maude Mansell, 127 bushels, $83.69; Augusta Staple, 55 bushels, $27.42; Laura Parker, 43 bushels, $5.20; Dorothy Shattuck, 32 bushels, $5.70; Lois Bartlett, 80 bushels, $3.50; Beryl Maltbie, 18 bushels, $4.30. Some found market for green fruit and some on account of school work in the Fall could not dispose of their fruit, but all did some canning, and had good wholesome experience in connection with their work. They gave a play which was a splendid success, at which time they sold homemade candy that reflected honor on the helpful makers. In all they earned $21.52, which was divided equally among them at the end of the contest. One girl said to me: "I should have made twice as much had I raised potatoes." In this she was right. Our country girls have a chance to make their own money if they will only take the opportunities that lie at their door. One of my girls before the frost placed 250 sap pails over her young plants, and saved them from the June frost. MRS. JAMES LAMPMAN.

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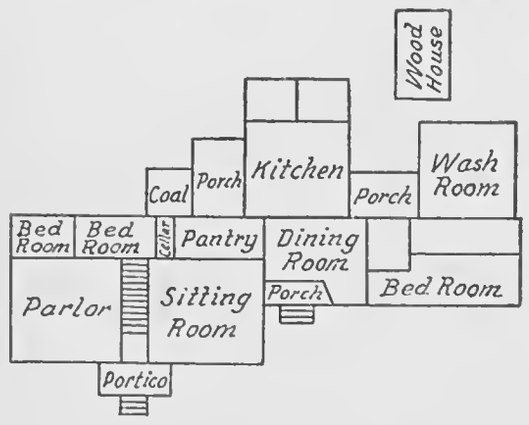
Rearranging the Farm House

A Study of Household Management

By A Farmer's Wife

PART I.

Within the past few years a number of articles have been published in the rural papers about the rearranging of farms; laying out and fencing the fields in such a way as to minimize time and labor, and there is no question that these suggestions have proved helpful to many readers. The same idea is just as applicable to the farmhouse as to the land. A large per cent of the older farmsteads were built in a rambling manner, caused by afterthoughts in the shape of



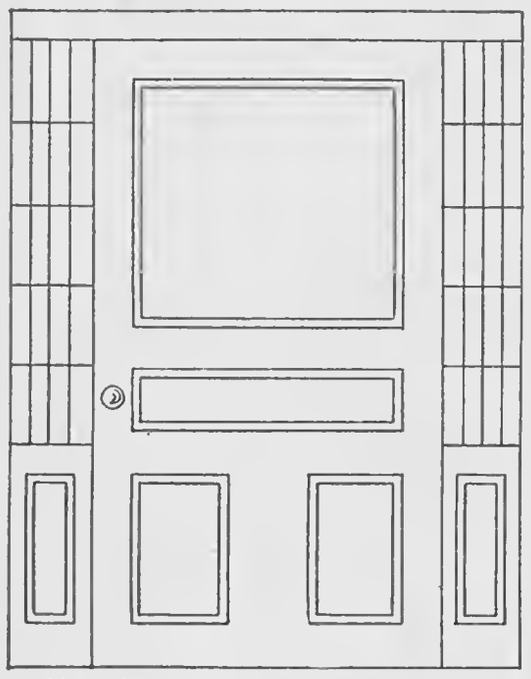
HOUSE PLAN AS IT WAS.

wings and lean-tos being added as the need for extra room arose. To rearrange and modernize one of these houses in order to make the housework easier and render life more comfortable and pleasant is no small task, and in one case has covered a period of a good many years.

Following the plan of the above mentioned articles I give a few diagrams, showing changes made, as I believe by this I can make myself better understood.

The reader will notice that we had a very small hall with stairway leading from it, between the parlor and sitting-room. These were removed and double doors placed between the two rooms, so now our parlor is "one of the family" and we do not feel away from home when in there. The outside door of the little hall had a very narrow window each side of it, extending over half way down from the top casing. A good-sized glass was fitted in the door, and little shelves made of basket covers were placed at regular intervals across the windows and filled with books, giving an attractive appearance and furnishing extra bookcases, while door retains its original effect upon the outside.

A large window 5x6 feet was purchased, together with the frame made to fit it. Then my husband and sons removed the two front windows of the sitting-room, placed the large frame in position and filled around it. A two-lighted sash was bought for the remaining window, the cost for all being $13.50. The stairs were placed in a portion of a pantry, so they lead from the dining-room, thus bringing the upper rooms much nearer and saving much travel and wear of carpets. The remainder of the pantry was converted into a bathroom, which is thus conveniently located near the stairway. The small inset porch was taken into the



THE HALL DOOR AS IMPROVED.

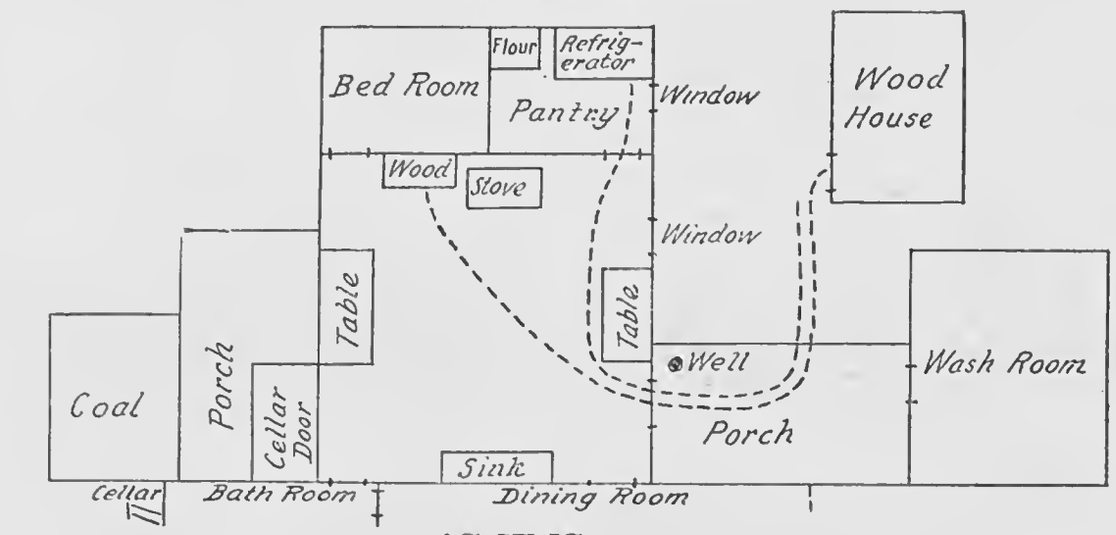
dining-room and double doors placed between that and the sitting-room, thus throwing the three large rooms together. The little portico was taken down and a large porch built instead. The partition between the two bedrooms adjoining sitting-room and parlor was taken out, making one good-sized room, from which a door was cut leading to bathroom. This brings us to the kitchen and its accessories, the pivot of the farm.

THE R. N.-Y. never uttered a truer statement than one in a recent issue, viz., "The most important room is the farm kitchen; the most important asset for the equipment of that kitchen is an unlimited supply of dry fuel and pure water." Our kitchen (and by this term I mean also the adjoining rooms that have a direct relation to it) has received more thought and attention than all the rest of the house. The old adage that "A penny saved is worth two earned" might well be paraphrased to read, "A step saved is worth two trips to a doctor." We have endeavored to eliminate all work and travel possible, not only for the household workers, but for the outside workers as well. I give a more detailed diagram of the kitchen that I may better explain improvements made.

Formerly the sink stood next to the dining-room wall, in order that the pump might be directly over the cistern, but had no leader. My husband made a large, shallow box 7x2 feet by 3 inches, and taking it to the hardware store had it lined with zinc, and a leader put in. This was then placed against the outside wall, to the right of the old sink, and adjusted high enough from the floor so the worker need not stoop while performing her duties. It was fastened in place with spikes and braces. A broad shelf covered with zinc was fitted to the top of it, and will slide from one end to the other, or can be removed entirely. This shelf makes an ideal kneading board, much more sanitary than those made of wood. Two drawers made of boxes were hung underneath; in one is kept spices, soda, etc.; in the other pie and cake tins.

Above the sink we put a series of shelves, one of which was slanted towards the back to hold the rolling pin, and curtains in front complete this cupboard. The pump was placed against the end of the sink, and this necessitated laying a horizontal pipe under the floor to the cistern, which was well packed in sawdust and has never given any trouble through freezing. Behind the sink was an ordinary window, which was taken out, and an opening made even with the top, large enough to hold a

AS IT WAS



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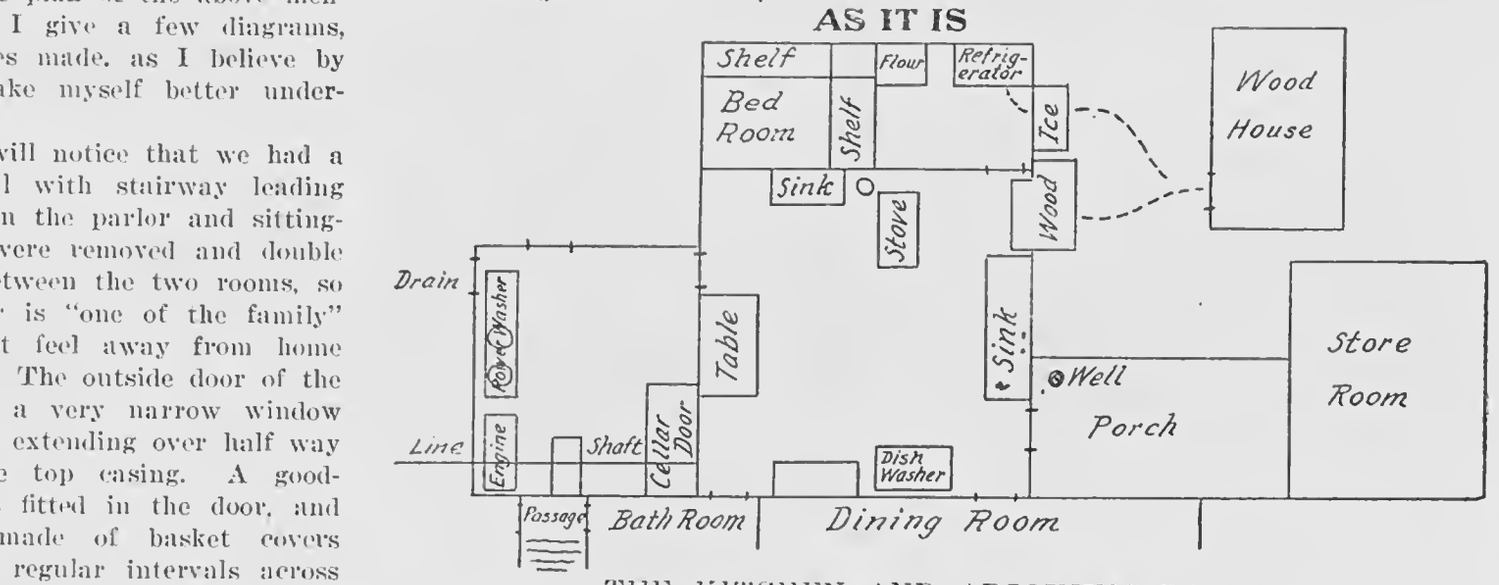
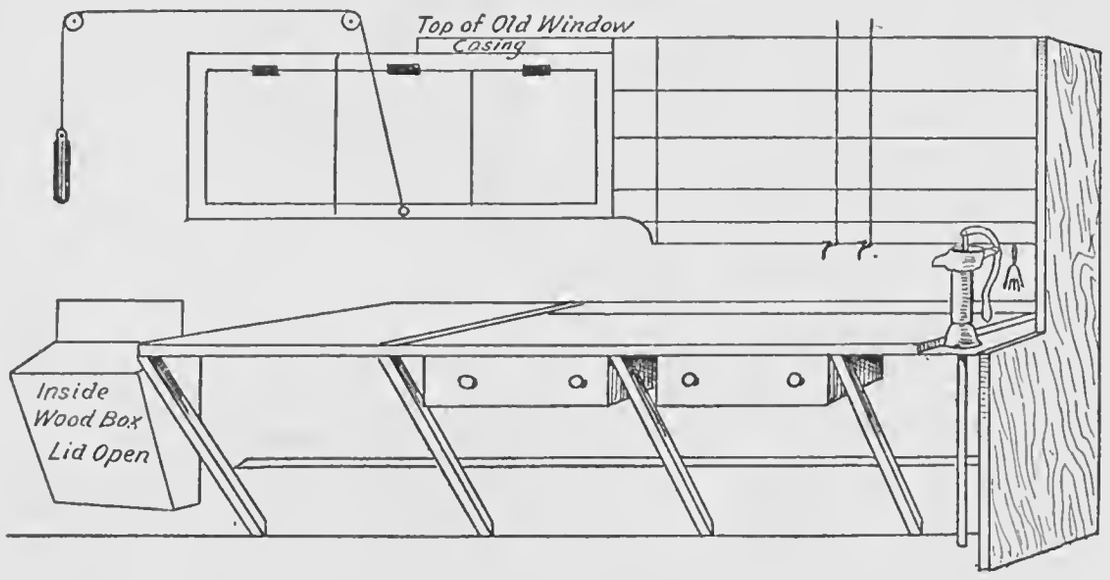


THE KITCHEN AND ADJOINING ROOMS.

window frame made for sash containing three 16x20 panes. The lower part of the old window was closed up. The new window was hung with hinges and adjusted to run open with a pulley, and is held in place with a weight. This window is a great comfort in warm weather, as it creates a large opening on a level with the worker's face. Buying it with the frame to fit it made it easy to place. The zinc lining was a poor investment, as it soon wore through. We then had one made of galvanized iron, which has lasted many years, and barring accidents will last as many more. This equipment, shelves, drawers, window, broad

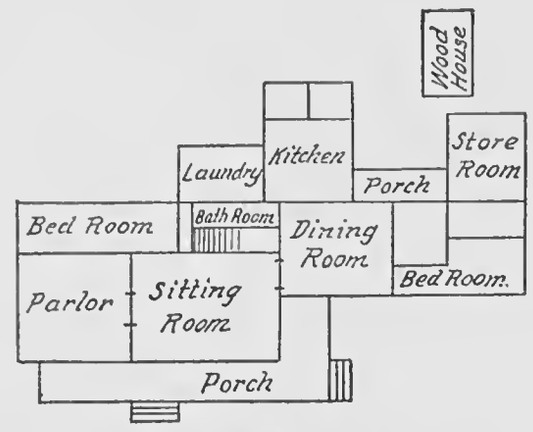


SINK AND SHELF CONVENIENCES.

shelf and sink with hot and cold water, make a very commodious home-made kitchen cabinet, as nearly everything needed is within reach of the worker. The pump, owing to the water system, is now useless, but the well being just outside, it is our plan to pipe to it and thus bring that water to the sink also.

Beyond the sink in the corner is the double woodbox, made partly inside but largely outside. This is a step saver, in earnest, for the men. Notice in the first diagram of kitchen the dotted line which shows the trip required for each armful of wood, making miles of travel in the course of a year. The new wood box, as you will notice, is made with a lid inside and one outside, each being held up when needed by a little wooden hook which drops in place as the lid is raised.

While here at the pantry door let me show you another step saver for the men. Note as before the trip made to carry the ice around through the kitchen into the pantry to the refrigerator. A happy thought came to us. After years of this traveling and attendant dripping, we now have a broad shelf on the outside of the window (which is very close to the refrigerator) built on a level with the window sill, whereon can be placed

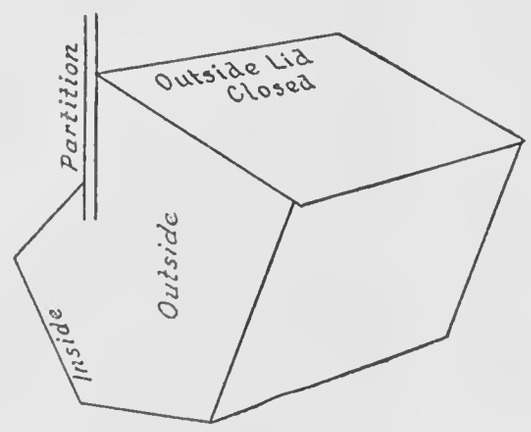


HOUSE AS MADE OVER.

enough ice to fill the box; then donning a pair of cloth mittens, the farmer-iceman goes into the pantry and places the ice where it belongs.

Another glance at the diagram shows the kitchen range turned around so it projects into the room, and will also reveal what a great improvement this is, as the stove now faces the sink, and the worker can easily turn from one to the other without taking a step. This range is unfinished upon the back, and I judge they all are, as they are intended to set back close to the wall; hence we annually give it a coat of aluminum paint, i.e., the whole of the stove except the top and shelf. This is much more satisfactory than blacking and lasts the year through very nicely. Directly over the range we cut a hole and cased it up with boards like a box. This makes a fine outlet for steam, smoke and heat, going into an attic.

Behind the stove is the hot-water tank, and beyond this another sink 20x30x6 inches, used primarily for lavatory purposes. When planning this sink we made inquiries at our local plumber's for a sink fitted with a rubber stopper instead of a strainer. We could get no satisfaction, and began to look elsewhere, and finally succeeded in locating one through correspondence. By putting in the plug the sink is converted into a nice washtub for hosiery, or any extras we may have to wash out, and do not wish to use the regular tub. It is very convenient, with hot and cold water, and cost 25 cents extra for the rubber stopper. Here we arrive at the boot room, the tidy (?) appearance of which I will not mention; suffice it to say that it contains boots and shoes used upon the farm: coats, hats, parts of harness, etc. A shelf three feet broad has been placed across one side about 30 inches from the floor, and another two feet broad higher up and across the other way. On these are kept the things dear to the heart of the average farmer—a box of harness tools, bolts, snaps, straps, buckles, a shoe



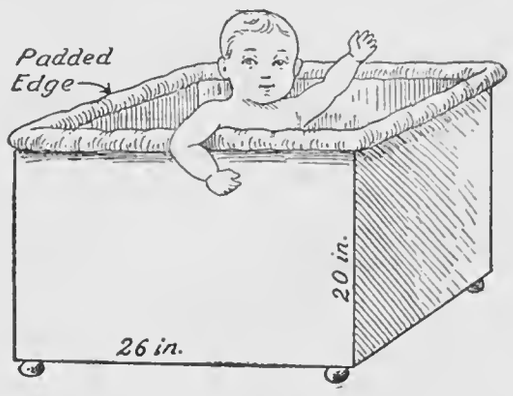
DOUBLE WOOD BOX.

repairing outfit and other articles too numerous to mention. A glance shows the room to be well furnished if not artistically arranged.

Where the original sink stood, is now an old-fashioned bureau, the legs of which were sawed off to make it set close to the floor. In this are kept kitchen aprons, towels, cloths, etc., and what has proved a comfort and step saver, extra pairs of the men's everyday socks, and handkerchiefs.

The Baby Box.

The biggest help I have found in home-making is my "baby box." In it he is safe from harm, no cold draft on his little feet, nor danger of burns from touching the hot stove when mother is busy. As I have never seen one like it, will tell you how I made it. I took a nice clean box made of smooth boards. It is 20 inches high and 26 inches square. I gave it a coat of dark red paint inside and out; then I cut strips of an old quilt and rolled them so to make a solid roll about two inches through, and long enough to reach around top of box; sewed the edges



BABY IN BOX.

over and over so it would stay in the roll, then I tacked a strip of stout ticking folded double so it would hold all around the top of box inside; laid the roll of quilt on top edge of box, brought the ticking up over the roll, drew it as tight as possible and tacked it smooth on outside of box, thus making a padded roll edge on which baby cannot bump his little chin. Over the ticking I fasten another cover of red calico which can be renewed when soiled. The box should be of half-inch boards, or else have an extra piece nailed on around the top, or the tacks will prick through. On the under side of box fasten on each corner a plate castor with four screws, thus raising the box from the floor so it is easy to roll anywhere, up by the window, so baby can look out of doors, or close to the fire when baby is cold, and feel safe that he cannot fall and burn himself. I fold a soft blanket and lay inside the box for him to sit on, and be plays there happy as can be with his toys.

New York. CORA HAMILTON.

SOUTHERN CREOLE COOKING.

"POSSUM AND TATERS."—I have eaten them cooked in stoves at home, and they were good, but one shining specimen looms up o'ershadowing all others. I wonder if the old mammy that fixed him up is still alive? She ought to have a monument, and a baked 'possum on top of it. It was 'way up in the cotton country, where there are nine darkeys to a white man, and on a cold January day, about dark, when we came in after a hunt. Old mammy with her head in a bandanna did her cooking in a big rock fireplace, in pots and pans and skillets, and had roasted us a couple of 'possums that way, with "yaller yam taters" with them, not the white gun-wadding kind that would choke an ostrich, but the "yaller" ones that run sugar. That 'possum and those "taters," and the way they were cooked, and the gravy! We forgot our manners, and just sopped it up with corn pone or biscuits, and washed it down with black coffee. Why, the things that old black slave, who could neither read nor write, could rake out of an open fireplace and a skillet, make Marion Harland's scientific messes look hardly fit for pig feed.

THE POULDEAU.—Then visions of pouldeau flit through my think box. The pouldeau is not a duck; it is a kind of water hen, and lives on shrimps, worms, minnows and other small live creatures. If fixed like a duck or goose it is so fishy it is uneatable, but a good French cook skins the animal and soaks him in vinegar and water a little while, and prepares a stew, pouldeau stew. Just how it is made I do not know, but it is great. A baked pouldeau is a dish that is hard to beat, and one apiece is about the right amount. A scientific cook can't cook them; it takes a person who just knows how. A canvasback is not in it with the humble pouldeau, if the right person handles them. What is it like? Ah! The English language was not built to describe French and Indian cookery, so I cannot tell you, but would like to show you.

THE PENSACOLA CHICKEN.—There is the turtle and the gopher, not the Western squirrel, but the dry-land terrapin, or as we call it, the Pensacola chicken, about 15 to 18 inches long and 10 to 12 wide, about the size of a small turtle, and cooked the same way. He brings back childhood's days, and my old Spanish-Indian nurse and cook, Maria Diaz, a typical Indian, and a cook who could not be beaten. As a small boy, if real good, she allowed me to kill and clean the turtle or gopher for her. If I was bad, she did it herself, or let my brother do it. I will tell you about it. You laid the gopher on his back and got a coal of fire and set it where his diamond shirt-stud would be if he was in full dress. He sticks out his head to see if the house is afire, when you jab him in the neck with a kitchen fork, and cut off his head with a big knife or a hatchet. I never heard one say it hurt, so it must not. You now stand him on end and take a hatchet and chop the bottom shell loose from the top one, all around; when this is done use a sharp knife and cut the bottom shell loose from the flesh and clean off any good pieces of meat still sticking to it. The front and back legs are then twisted loose, cut apart and skinned. The body is cleaned just like a chicken is, and if at the right season, you may find some eggs, and they are a prize. After all the meat is well washed, you can have either a turtle stew or a turtle gumbo. They are stewed much like chicken, but are seasoned with lemon, allspice, pepper and a little onion, and cooked until the meat will fall off the bones, and served with a lot of gravy. If it was not for bad manners you would eat a whole one. For gumbo, you make a kind of soup with the turtle, and the eggs are a big addition to either the gumbo or stew; season it highly, put in some lemon, and cook thoroughly, and you have something that will stick both to your ribs and memory. Yes, even the smell of it will tempt a miser to part with his coin. You can't get it in a restaurant, and a cook book cannot show you how. The art is handed down from mother to daughter, and if any of you young men are hunting a daughter get one that has a prepotency for making turtle stew or gumbo, for a poor cook can't. You can buy gophers by the half dozen, and keep them in a box and feed on grass and vegetables so as to have them on hand and fat when wanted. They live in burrows in the ground, and are snared in pits, or with a noose in a string.

CRAWFISH.—The next dish along the line is the crayfish or crawfish. They have never tasted as good to me as they did when a bare-footed rascal, catching them out of ditches and mud-holes, and cooking in any rusty can or bucket at hand, over a smoky fire in an old field; yet they are a tempting dish when boiled, tails broken off and skinned, and then served in a salad or gumbo or bisque, and one memory of them that seems impossible to shake off is of an obscure little French restaurant in New Orleans, where they served in a bisque, made of the heads cleaned and stuffed with the chopped meat from the tails, and seasoned, then cooked in a broth. I ate two plates, and but for the looks of it, would have had more. This with a little smothered lamb, dessert and coffee was the dinner. There is a flavor to the crayfish different from shrimp, lobster or crab, and it seems to have a kind of winning way with the palate.

ORANGE-FLOWER PRALINE.—After all these good things, I really feel the need of a dessert, a little square of orange-flower praline. The praline is made of the petals of orange-flowers stirred in granulated sugar cooked to the point where it turns back to sugar when stirred, and is esteemed as not only a delicacy, but a necessity in the old Creole families, and if Huyler or any of those big candy-makers could get it, they would throw three fits and a spasm for joy; they turn out nothing to touch it. It beats a wedding, for you have orange blossoms for life in it. M. A. PARKER.

Alabama.

CITY VISITOR: "Your father is shelling corn late to-night." Country Host: "He ain't shelling corn; he's winding his Waterbury watch."—Birmingham Age-Herald.

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Tuberous Begonias for the Home.

There are few classes of plants that have the great variety of form, coloring and habit of growth that the Begonias have. There are the luxuriant Rex varieties with their wonderful beauty of shape in the leaf, with their lustrous blendings of jade and silver, agate, bronze and gold. There are the fibrous rooted, or more common but still variedly beautiful sorts, easily reproduced, as are the Rex varieties, by cuttings of stalk or leaf, which obligingly throw out roots when placed in water or damp sand.

Many people have a great admiration for the tuberous-rooted Begonias, and their kin, the half-tuberous, or hybrid forms, with their dainty, vine-like foliage and their surmounting masses of waxen, ruby-tinted flowers. Unfortunately a large proportion of their admirers consider that the two latter classes thrive only with greenhouse culture, and thus miss one of the finest plants the amateur may enjoy.

Begonias, tuberous-rooted ones, will thrive most satisfyingly in the home. To be sure, they will not flourish with all sorts of conditions and discouragements, as will the geranium. But given the soil that they like, and plenty of moisture, they will grow amazingly and blossom profusely. Their needs are not at all difficult to supply. To begin with, get a good-sized root or tuber. They range in price from eight cents to 15 cents each, varying with the size, variety and the firm that sells them. The shades of color are particularly beautiful, pale yellow, deep orange, pure white, salmon pink, rose pink, deep red, and the flowers are both single and double. The latter look like huge waxen roses, but do not bloom quite so freely as the single varieties. The latter now have newer forms that are fringed, half doubled, and fluted, with shaded colorings that are simply gorgeous in effect when in bloom. They will continue to send up new flower clusters from the axil of each new leaf, as the plant grows, thus prolonging the blooming season sometimes for three months.

By potting the tubers in February, March or April they may be made to furnish a wealth of decoration through the Spring and Summer months, or by keeping them dormant until in May or June you can have them for Fall and early Winter. It is a good plan to pot a couple at a time and bring them on in a succession from Spring until early Winter.

They should be planted in rather small, shallow pots, in soil composed of half leaf mold, and nearly half a rich dark loam, with a little sand. The soil should be sifted once or twice thoroughly, to make it fine, soft and light. No rotted manure need be added, but when growth is well begun, which may be from 10 days to two weeks, liquid manure of nearly any sort, well diluted, will make them respond beautifully if applied once or twice a week. Be careful that you do not set the tubers out bottom side up. The slightly hollowed or concave side is the top. They should be placed only deep enough so the soil will not quite cover their tops, with the tuber in a slight depression in the center of the pot, so that it may absorb the water better.

The temperature of any comfortable living-room is well adapted to their needs. They remind us of the needs of our own lungs, and our general health, when they sicken because of too dry an atmosphere, so often found in coal-heated homes. They should never be allowed to become perfectly dry. Frequent shower-baths are their delight, and the keeping of pans of water on our radiators or stoves insures an atmosphere suited to them. The usual dry atmosphere in homes heated by coal fires causes a dryness, unless careful attention is given to the moisture question, that is injurious to human breathing organs and general tempers, to say nothing of the furniture. So the keeping of the Begonias in a state of health will be beneficial to all concerned. Unless we wish the plants to rest from blooming, we should never let them get real dry in the pots.

Those I have in my collection were photographed when the first blooms opened, and continued for many weeks after, increasing in size and beauty. The flowers, many of them, measured four to five inches across, and were so heavy they could hardly hold up their faces. The only poor luck I ever had with them, and I have raised them successfully several seasons, was with a particularly handsome specimen that I placed in a cold hall window. Result, every flower was dropped. But in general, if a room is comfortable to sit in it will suit the plants as to temperature. A thing that will be new to many flower lovers is that a tuber may be used year after year, if managed rightly, and made to increase in size to a remarkable extent. I used to think that a root could be used but one or two seasons successfully. After each blooming period I dried off the tuber, removed it from the pot, wrapped it in paper and stored it safely away from frost for the Winter. Managed this way they won't increase in size, and are soon worn out. But I know of a tuberous rooted Begonia that is 20 years old, and of a mammoth size. Its owner's custom has been to let it bloom as long as it will, with plenty of liquid food and good care. Then she sets it away on the top shelf of her cupboard, when only partly dried out. She sprinkles the soil occasionally during the Winter, so that it does not become perfectly dry. In March she removes the loose soil from around the tuber, without disturbing the latter, replacing it with some as described. Kept moist in a sunny window it soon puts out new growth, and is a wonder to all beholders. These Begonias do not require sunshine all day; in fact, they are better off without the direct rays during the heat of the day. The same general treatment will suffice for the new hybrid forms, chief of which in beauty and ease of culture is the wonderful Gloire de Lorraine, with its wealth of dawn-flushed, waxen flowers, so abundantly produced as almost to hide the delicate foliage. A small 10-cent plant of this kind will yield generous blossoms if treated as described, and will develop into a large plant, with intermittent seasons of rest and recuperation after periods of growth and exhaustive bloom.

M. G. F.

TUBEROUS BEGONIAS, SHOWING HABIT OF BLOOM.

WELL-GROWN TUBEROUS BEGONIA.

PLANTING THREE KINDS OF PEAS TOGETHER.

Three-storied Pea Vines.

A succession of early, second early and late peas from one planting in the same row is a most economical and satisfactory method for the home garden. In this way an unsightly row of spent early pea vines, a harbor for weeds, is entirely done away with, and in short-season climates like ours, Western Maine, we cannot raise successfully two crops on the same ground during the season.

I plant my pears on well-cultivated and fertilized land that is retentive of moisture. The rows to be planted are furrowed wide and several inches deep with a liberal supply of phosphate scattered the entire length, covering it well with earth, so that the seed will not come in contact with the fertilizer. Stout stakes are driven through the middle of each row from six to eight feet apart; on these poultry netting three to four feet wide is stretched about six inches from the ground. By this method seed can be planted on each side of the netting, thus giving an equal stand on both sides of the wire. I use the following proportion for planting: One quart of Nott's Excelsior to one pint each of Gregory's Excelsior and Dwarf Champion. As soon as the young plants have broken ground the earth is drawn around them, thus producing vigorous stocky plants able to be self-supporting until they reach the netting. Gregory's Excelsior being a taller pea than the Nott's Excelsior, does not crowd or reduce the crop of the latter in the least, and the last pod can be picked by the time the Gregory's Excelsior is on, while the Dwarf Champion, having a branching habit, occupies the space left by the declining earlier varieties.

From three rows of equal length, one planted with the three varieties mixed, one with Gregory's Excelsior, and the third with Dwarf Champion, the one planted with the mixed varieties yielded twice as much as either of the two rows.

By careful selection of my Nott's Excelsior seed I have nearly doubled the size of the pods from those first grown; in fact our grocer could scarcely believe that they were not peas of a standard variety. I have excluded all the second early peas from my garden except Gregory's Excelsior, as it is as early and much more prolific than the tall, loose-growing Gradus, Thomas Laxton and Early Morn.

The Everbearing and Champion of England I plant in the old-fashioned country way in the potato patch, eight to nine peas in every other hill in two rows, skipping every third row, the potato stalks giving sufficient support for the trailing vines without any apparent injury to the potato crop.

Maine. MYRA D. SCALES.

TIMID YOUTH: "What do I have to pay for a marriage license?" Facetious Clerk: "Well, you get it on the installment plan." Timid Youth: "How's that?" Facetious Clerk: "Ten shillings down and most of your salary each week for the rest of your life."—Tit-Bits.

JOHNNY, who is the son of a commuter gardener, knows the vegetables in the garden in the only true way. Johnny's father thought it a sign of extreme precocity that a four-year-old should tell a potato from a tomato. Just to show his neighbor he ordered Johnny to fetch a potato from the garden. Johnny did it. "How do you tell a potato from a tomato?" asked the neighbor. "A potato has black bugs," Johnny answered, "and a tomato has green."—N. Y. Evening Post.

Made-over Handbags.

There is no accessory that wears out sooner than a handbag, and I am sure there is hardly a woman who cannot find at least one such frame among her belongings. Although the bag is worn out you have disliked to throw the handsome frame away. Now is the time to make use of it. No matter what it is, silver, gilt or leather, bring it out and utilize it for one of the useful and smart little fabric bags that are to be all the rage this Spring. Two of these are pictured, and they are simple enough to copy. Indeed, the clever woman can originate still other and more attractive designs to suit her materials and individual requirements.

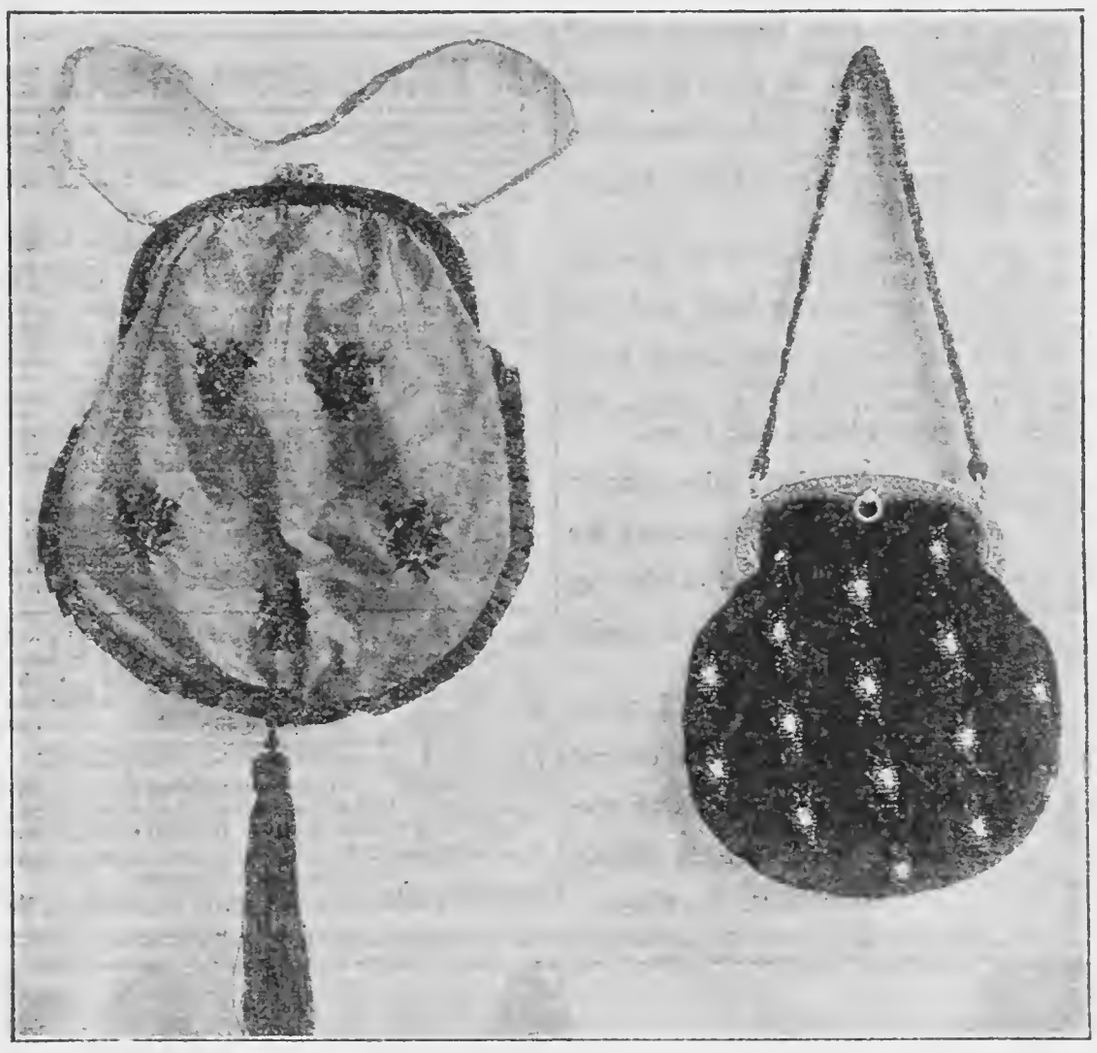
For the first bag, the scrap-bag yielded a piece of heavy pale mauve silk—a left-over from a blouse. Two eight by 10-inch pieces were folded together and the four corners rounded. One section was placed in an embroidery hoop and five clusters of flowers outlined with a pencil,—roses, forget-me-nots, violets, or any small blossom may be used. These were embroidered with dark mauve chenille, simply outlining and using lazy-daisy stitch. The effect was of flowers that could be picked. A side plaiting of inch-wide black satin ribbon was then basted around the embroidered section to the place where it began to curve for the mounting. The other section was basted to it, and the two sections sewed at one stitching. A lining of mauve silk cut the exact size of the outer sections was then fitted, it having already been stitched separately from the outside pieces. When the lining was slipped into the bag proper, it was secured at the top by turning in both the bag and lining and overcasting the two, ready to attach to the mounting. The latter, by the way, had already been freshened by covering with black satin to match the plaiting around the bag.

The bag was first secured to the mounting at the corners. The center of the fabric was then attached to the center of the mounting. It was an easy matter to blind-stitch the remaining portion of the bag to the mounting from the inside, using black button-hole twist. An inch strip of the mauve silk, interlined with buckram, was stitched for a strap to carry the bag by. It was secured to the mounting by slipping the ends through the little rings, loop-fashion, sewing firmly in place with mauve silk thread to match. A black silk tassel with a bit of silk cord garniture was sewed to the embroidered side of the bag, giving a jaunty finish.

A rose velour bag is pictured in No. 2. The girl happened to have an old silver mounting she had been saving, for mony years. When she saw an imported novelty bag in a city shop that was marked at a price that staggered her, she decided to copy the accessory and utilize the antique mounting. A piece of the rose velour from an old portiere was folded double, and rounded at the lower corners. At the upper section, the mounting was placed on it, and shaped accordingly. The velour was then seamed, and lined with a piece of the brocaded silk from the portiere also, which was left over from the loose coat fronts, recently cut away. But before lining, the velvet was placed on a tiny embroidery hoop, and beaded in a floral design, using black and pale rose beads for the purpose. It was the simplest thing imaginable to outline the designs with a lead pencil, merely dotting where a bead should be sewed. The bag was attached to the silver mounting exactly like the mauve silk one, with the exception that there were apertures in the mounting through which the needle could be thrust in securing the fabric. A black silk cord was twisted twice, and used for a handle.

Either of these bags may be varied to suit the materials at hand. If there is neither time or inclination to embroider or bead a bag, there are lovely tapestries already "embroidered," and velvets with flowers in the most realistic designs. It is really not so much a question of "lack of time" as taking advantage of spare moments. Ten cents worth of embroidery silk or beads will be the maximum expenditure, unless a tassel or bit of cord is required. Personally, I think nothing could be handsomer than a black velvet bag with a little "seed" bead design of Crimson Rambler roses, a green bead leaf showing now and then.

LOUISE E. DEW.



UTILIZING THE OLD MOUNTINGS.

No. 1. Home-made bag of mauve silk, combined with black satin plaiting, and mounting.

No. 2. Rose velour bag with flowers beaded.

Hospital Stories.

Grewsome things sometimes happen at the hospitals and sometimes very funny ones. Two men were in a hospital as patients, their names the same. One had a fine family grieving over his illness, the other seemed alone. The lone one died. The name was looked up, getting the address of the family man and word sent. A sobbing wife soon arrived, almost helpless from shock and grief, accompanied by a couple of friends to take care of what was left of the loved one. Imagine their feelings when they found the dead man they were dreading to see a burly negro of the blackest type!

An Italian was ill and went to a hospital. After the usual bath, clean garments and examination, he was resting comfortably waiting the effects of the medicine administered. Another Italian, an anxious friend, came next day, who could not speak English. He gesticulated wildly and his face denoted great suffering, as he tried to make himself understood. Hurried attendants, as his trouble could not be learned, grasped him and by main force, against struggles and resistance gave him a good bath and put him in a clean bed to await examination. Being put in the same ward as the first man, who could speak English, it was soon learned that he was not ill but had called to see his friend, and so received an unexpected and unwelcome bath.

In a large city at one of the hospitals where there is much dispensary charity work done, on Christmas Day over one hundred little poor children were invited. Seated by tables all around the room they enjoyed their beautiful tree. There was a present for each, and a stocking full of toys and goodies, and in the toe of each stocking a silver quarter. The quarter was a great surprise, many never having had one before. One little fellow said: "It's a real nickel," another "Ain't it a fake?"

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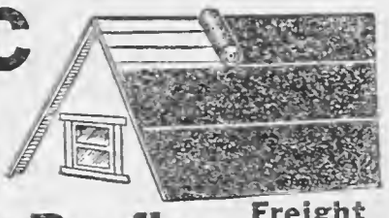

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IN BOOKLAND

I, Freedom, Dwell With Knowledge; I Abide With Men by Culture Trained and Fortified.

Deafness and Cheerfulness.

It is said that there are about one million persons in the country who are more or less deaf, the condition running from a slight loss of hearing to total deafness. From correspondence we judge that a number of thousands of our own subscribers are in that condition. One of the best books for these unfortunate people is "Deafness and Cheerfulness," by Dr. A. W. Jackson. This little book contains some of the soundest philosophy to be found in the English language, and is a fine example of first-class English. The author is a deaf man, so he knows his subject, and also what it means to live shut off in the silence. If possible, every person who is hard of hearing should read and study this little book, and it might also be well for the associates of the deaf man to read the book, for it will contain many lessons and admonitions for them. For some years we have made a practice of sending this book here and there as we came to know deaf people, in order that they might read it, and in each case we have asked them to tell us just what they thought about the philosophy which is taught by the author. Now we want to give with this a letter from such a man as a fair example of what cheerfulness in an affliction may mean. This is from an elderly man who might easily have been made sour and discontented by his affliction. There is a lesson for all of us in the cheerful spirit he shows in his criticism of the book.

Dr. Jackson has written a very readable book upon an unique and very unpromising theme. My criticisms are not so much with what the author has said as with what he has not said. A chapter might well have been added to ventilate the "Advantages of Deafness as a promoter of Cheerfulness." Like every other subject, there are two sides to be taken under consideration. The compensations are worthy of note, because they contribute largely to cheerfulness.

1. A partial or a total loss of hearing tends to quicken the power of sight, just as the blind are compensated by the sensitiveness of touch. Cut off from hearing, dependence is placed more upon sight; spectacles may still be necessary, but one has greater powers of observation. The deaf man sees everything. If he cannot as fully interpret nature and society as the man with hearing, yet he comprehends and appropriates both to a greater extent than some suppose. The music of nature is silent, but its poetry is vocal.

2. Deliverance from confusion, disorder and nerve-racking furies of both nature and society when at their worst. Many a man and woman whose sensitive nerves are daily tortured with the babel of harsh sounds would give much for a few hours or days of deliverance from the ever-present irritation; a time of calm quiet would truly be a rest sublime; such a rest would bring peace and when peace abides cheerfulness must reign.

3. Freedom from the infliction of unwelcome words. Very much which greets the normal ear would better not fall upon the auditory nerve. Our cheerfulness would be more constant and full if a considerable portion of talk which we are compelled to hear should lose itself in silence ere it disturbed our serenity.

4. Second nature. If deafness comes on gradually, it produces a readjustment of our mental processes; in a word it becomes second nature—as the fishes in a dark cave are sightless, yet disport themselves in their native element with as much apparent happiness as their neighbors outside in the light with full powers of sight. I do not say that in the case of the deaf these and other offsets, I might mention, are sufficient to make up for the loss of hearing, but I do claim they go a long way in that direction.

A. G. BLOOMFIELD.

A Neighborhood Library Branch.

We have it right here in the house, so feel qualified to tell about it. This town is long and narrow, with a number of small villages in its limits. The main library is in the center, in the graded school building, open once a week, on Fridays. There are five of the branches in outlying villages where some friendly person will accommodate the books. The salary is nothing, but you make your own rules. There are 50 books here, changed every six weeks. A public school is near, so half of the books are supposed to be juvenile, and the children can come any school day for an hour after school. The grownups come when they can. Books are to be taken out for two weeks, and renewed for two weeks more, and there is a rule about fines. But what we really do, is to suit rules to circumstances. Fines are not strictly enforced, as the state of the weather, the roads, the sometime absence of the librarian and various other things must be considered.

Our humble branch is in the kitchen, on shelves made from shoe boxes. The kitchen is in an ell facing the street, and seemed the most convenient place, and most easily cleaned up in muddy weather. Father seems to think the books are for his own especial benefit. We have first

A Dependable Friend.

chance at the books when they are changed, and try to read all, so to know what to recommend. Nearly all the books are fiction, as the demand is all for this, but in course of time one may get special books wanted from the central library.

Readers vary in number, being more in number when the mills are closed or in school vacations. The people are more interesting than the books. Small boys demand the Alger books. One lad spent half an hour on his knees personally examining the 50 books to see none was an Alger, then departed with none. One small girl asked for the "Algebra" books. Many children like the most sensational, one honest girl saying of a "Motor Girl's" volume: "My sister said she never read such a lovely book!" But they all read all the books, and one small boy from a large family next door shows a very true taste, but wants large print. He would like Kipling's Jungle Book next.

One young man thinks he likes problem novels or something instructive. He was very enthusiastic recently over Sheldon's "A Builder of Ships," and has recently had "The Parish of the Pines" and "A Year in a Coal Mine." He gets books for his family and a neighbor shut in by the care of a childish old mother. There is a bright young school girl who comes in the evening with a companion and takes several books, usually charged up a month ahead. A number of people read these. A tired young school teacher wants something bright and short in good print; this is charged up some time ahead, we do the choosing. Then there is a friendly neighbor who takes half a dozen books in as many names for the benefit of an incurable invalid on an outlying farm. These generally go for a month and are read by the neighborhood.

The circulation of books, including those read by the family of three inveterate readers, is about one hundred a month. Sister, who really took in the books, when no one else would, is too delicate to do church or club work, yet wanted to do her little to help. This seems to be the thing she can do. There is seldom anything that bothers her; she doesn't mind having the books here at all. Perhaps someone else, reading this, many find a similar opportunity.

Sister, following the advice of an experienced acquaintance, finds it most convenient to allow grown-ups to come in when they wish. But she does not try to stay in if she especially wishes to go out, usually putting a card on the outside door marked: "Out, Leave Books to be Returned." But she found it best to make a rule that children should only come for an hour after school.

One has to keep a record of the books and Sister calls this her easiest way. She uses an ordinary wide five-cent composition book.

Name	Number	Time Due
John Jones	441	Jan. 15
Paul Knight	40	Jan. 15
Susie Robinson ..	67B	Jan. 16

The line is crossed off when the book is returned, and a new entry made. This is only possible because there are seldom more than 20 books out at one time. For a week while Sister was away, and for many more weeks when she was out and father was in, the branch nearly ran itself. People came in, crossed off the entry under their names, chose a new book, recorded it and went out. The books are sorted into several different piles under general headings of Grown-ups, Boys, Girls and Little Children's. The children like it, and Sister finds it much easier.

Massachusetts. EDNA S. KNAPP.

Where Brains Are Needed.

"I claim it takes more brains to farm,"
said Ebenezer Brown,
"That what it does to git ahead and
make a splash in town;
Why, I know six or seven chaps from
this here neighborhood
Who went away to cities, where they're
busy makin' good.

"You take Chicago and New York—size
up the big men there—
The lawyer, doctor, merchant and the
multimillionaire—
You'll find they've all been farmer boys,
or lived in towns, at least,
Where they could have a chance to
learn the ways of bird and beast.

"Now take these city chaps who come to
cultivate the land—
I don't mean millionaires who farm for
fun, you understand—
But take the common city folks who try
to farm, and say!
It's pitiful the way they try to make
their farmin' pay.

"I've saw a dozen of 'em fail; I never
seen one yet
Who managed to be prominent or not
get into debt;
And so I claim a man may make an awful
splash in town
And not have brains enough to farm,"
said Ebenezer Brown.

—S. E. Kiser.

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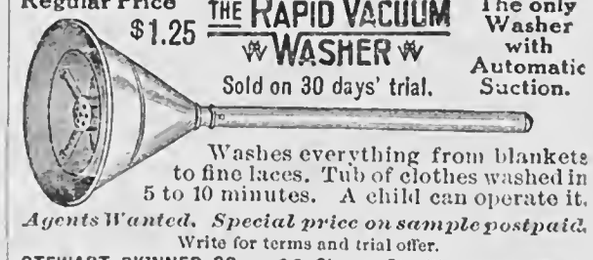

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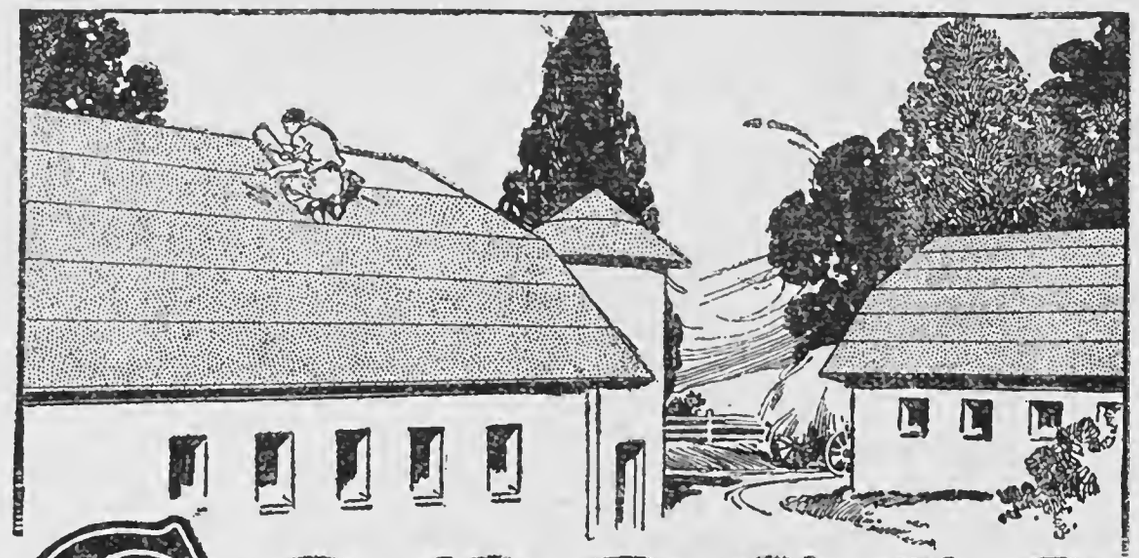

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Home Problems

[Under this heading we discuss actual home problems of real people. The questions are all genuine and they relate to real troubles. Some of them can be helped by kindly advice or discussion.]

Trade for a Boy.

Is it advisable for a young man to learn telegraphy for a trade, or would some other trade be preferable? It should be understood the young man has no special desire for a certain one. Just wants to learn some trade. It is said that telegraphy would not be desirable because it is expected the railroads will do away with telegraph in near future and use 'phone, thereby putting thousands of telegraph operators out of work.
Missouri. C. P.

This trade does not offer great inducements. We should not care to have one of our own boys enter it. It is quite likely that the telephone and an improved wireless system will finally be substituted for much of the telegraph work, and the outlook now is for government control of these utilities. We think there are greater opportunities in one of the mechanical trades.

Two Girls and $400.

I have a problem on which I would like advice from some of the readers. Maybe I can get ideas if not help. I have $400 saved up, and two girls. I wish to come East and get some small place, where I can raise poultry and keep a few cows. Our fares would have to come out of my capital. Can one get a place by small payments? Have some of the women readers had any experience getting homes that way? I would prefer to rent with privilege of buying. I was born and raised on a farm, and have worked outside at almost all kinds of men's work. I am ignorant of fruit, except small fruit; have never seen an apple tree. I have always had good success raising chickens, turkeys and geese. I am not particular about any place, but I cannot afford to look around either. I don't want to be too far from school.
Minnesota. MRS. L. W.

This is not an exceptional case. We have hundreds of cases where women left alone in this way, with a few hundred dollars, wish to start a home in the country. The great danger in such cases is that these women will fall into the hands of land sharks or swindlers who will obtain their money and then take the home away from them. We know where this very thing has been done. This woman presents one side of a hard problem. The other side, which fits into it, is presented by the man or woman with a farm, yet lacking the needed little capital or the housekeeper to conduct the business properly. THE R. N.-Y. tries to fit the two sides together. "Two girls and $400!" Where can a home be found for such a capital?

Developing a Direct Trade.

Where can I find a good market for pure maple syrup? We make fine syrup, weight 11 pounds to the gallon, or 11¾ pounds with can. We have been making only about three or four years, and we do not know where there is a good market. It only sells for 75 and 80 cents per gallon here, unless we peddle it, and we do not have time for that. We should get $1 per gallon packed and delivered at the depot, to make it pay. We would tap a thousand or 1,500 trees if we could get the market. Of course we sell a little here for the dollar and have a good customer in Florida. Can you suggest where we can get the market? I have tried until I am discouraged.
Pennsylvania. T. E. B.

Our chief reason for starting the department of "Subscribers' Exchange was to help find just such markets. There are thousands of our readers who would like to buy fine syrup. You do not know them and they do not know you—therefore you cannot find a good market, and they do not know where you live. The introduction would come through a few lines in this "Exchange." This was started far more to help in such introductions than to make any profit. Our best advice is to try it.

A Clergyman and Tramp Hens.

A clergyman has a small farm on which he grows small fruits, corn and potatoes. Just across the way his neighbor, a vociferous professing Christian keeps unrestrained a large flock of poultry to the constant annoyance and financial loss of the long-suffering preacher. This neighbor's attention has been repeatedly called to this nuisance, but without avail. What can be done? A.
Wayne Co., N. Y.

We sympathize with this clergyman. Those wandering hens are enough to scratch the pulpit off the platform and change the course of many a sermon. The ungodly might take a shotgun, shoot a dozen of the hens and throw them on to the neighbor's premises. If he were large enough, he might challenge the hen man to come out into the middle of the road and settle it. He might bring suit before the local justice of the peace, and find that he could not prove damages. The wives of the two parties might each stand at the fence, tell each other a few truths, and then never speak again as they pass by. All these things, and many more like them, have resulted from the visits of wandering hens, but in the case of this clergyman they are not to be thought of. Judging from experience, the best plan would be to make those hens work out and pay for their own damage. Put up a good house in a convenient place, with a good-sized yard around it. Leave the door of the yard open and scatter some corn inside. The hens will do the rest. They will go in after the corn. When a good bunch of them are safely inside, no one could be arrested who went out and shut the door and kept it shut. The hens will proceed to lay in their new quarters, and the owner of the hens cannot come and get them, without rendering himself liable for trespassing. Thus he will either find it necessary to make the clergyman a present of the hens, or pay for the damage they have done, and keep them at home. We could give a dozen methods of ending the trouble, which would involve a great deal of hot language, but "A soft answer turneth away wrath," and nothing could be softer than the "snap" of making this neighbor's hens contribute to your own egg basket.

WOMAN'S WORK IN THE PEACH ORCHARD.

A One-armed Farmer's Plan.

I am a young farmer. Two years ago I had the misfortune to lose my right arm. I am now trying to "farm it"; I have a farm of 115 acres, keep a team of big draft horses and a general purpose team. I intend to breed all four horses. Would it pay me to keep cows and a hired man, or sell cows and buy sheep and do my work alone? I have good pasture for sheep and goats. F. C.

During the past few months we have had a dozen problems like this one submitted to us. Several men who have lost an arm, at least three who have lost a leg, several who are totally deaf, others who are nearly blind, women who are lame or feeble—all have come asking how they can make a living on a farm. It is wonderful how the beaten and the afflicted look to the country for help and a new chance. It will do us all good to think out, if we can, a sensible plan for a crippled or afflicted farmer. We have several times referred to the farmer on Long Island with only one leg. This man, by using machinery and studying farm economy, has been able to make a great success. He has probably done better than he would, had he not lost his leg. The physical affliction has forced him to study his work as he could not otherwise have done. We advise this one-armed man to give up dairying. We know of a case where a man with a dairy had his arm crushed. He bought a milking machine and kept on, but a man should have two hands to *start* in the dairy business. There is surely a future with milch goats, breeding sheep and selling high-grade heifers. What would *you* do? We mean that there shall be one place at least where the troubled and afflicted may receive honest and sensible advice. That means experience!

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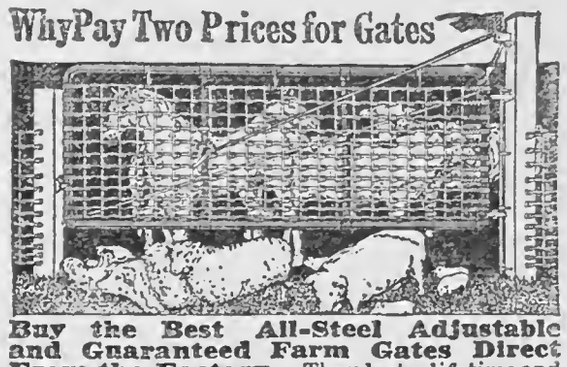

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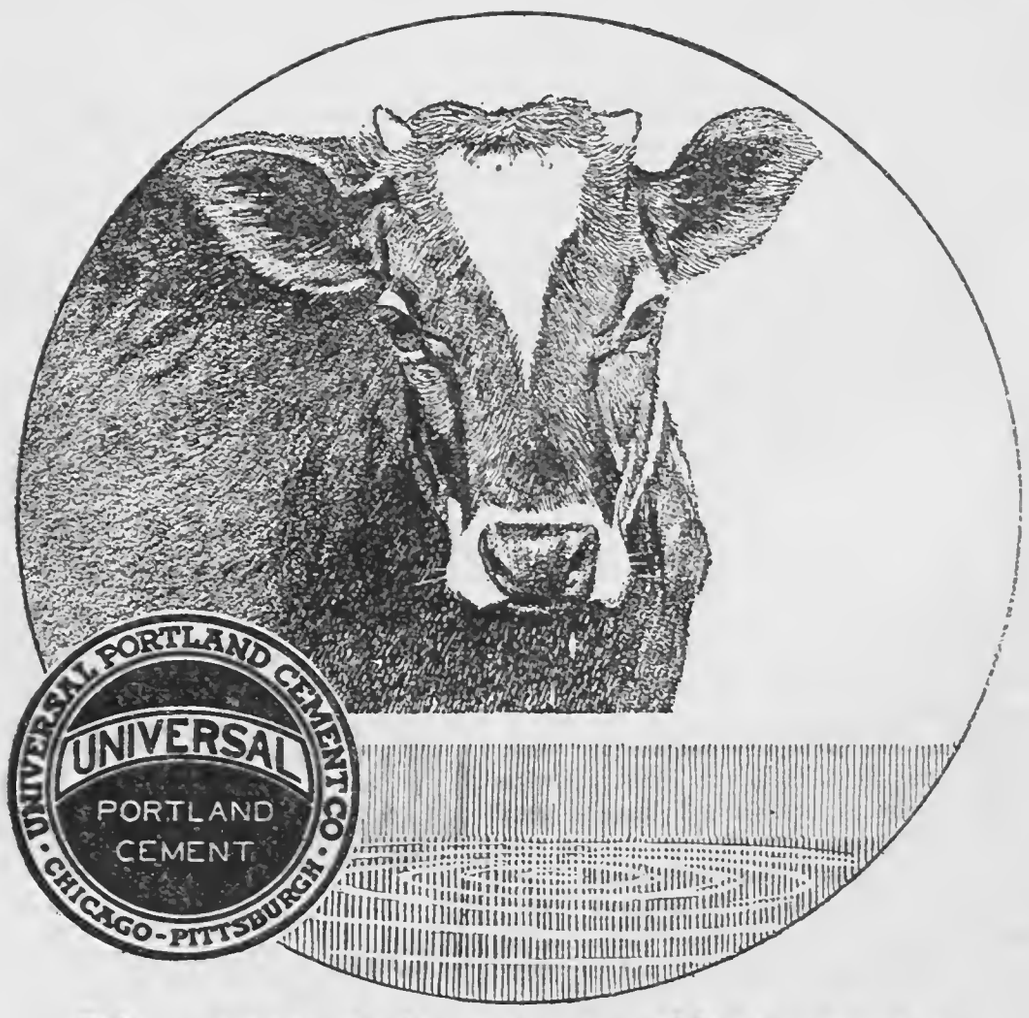

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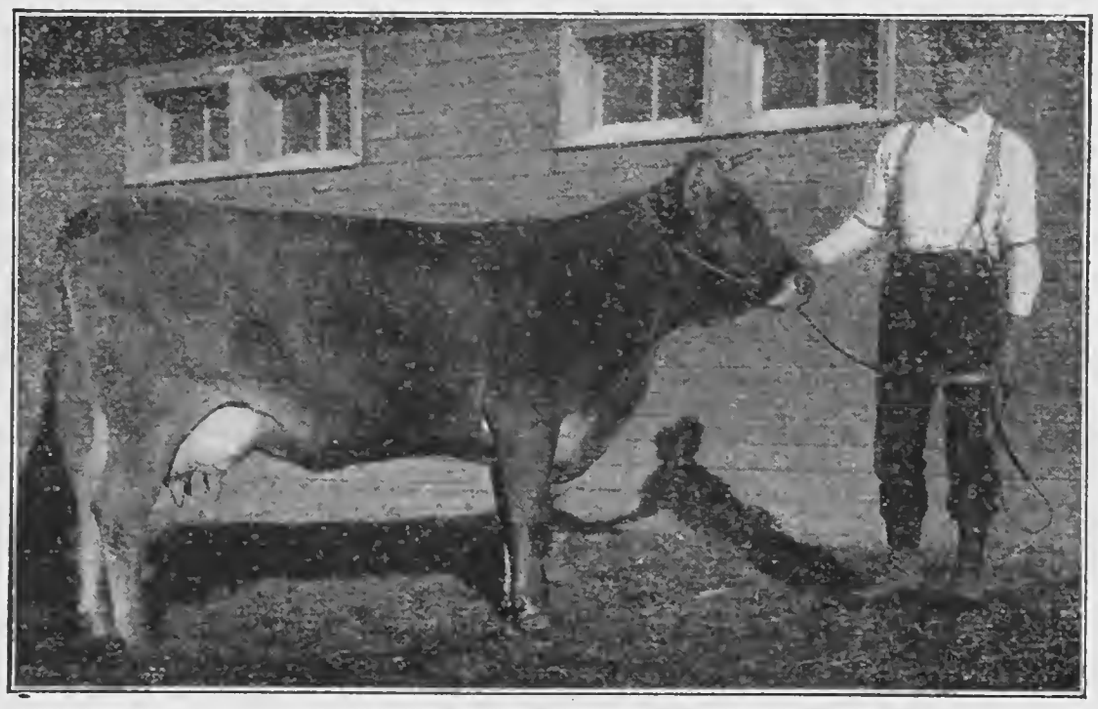
Live Stock and Dairy

THE BROWN SWISS COW.

On page 366, I note an inquiry in regard to whether the Brown Swiss cattle are good milk producers or not, and since I have had charge of a registered herd of Brown Swiss for five years, I feel somewhat acquainted with them and can say that after having had experience with registered Guernseys, Jerseys and grades of all breeds, I still maintain that the Brown Swiss cow produces a large amount of milk at a minimum cost. In my opinion they are one of the breeds which is going to be very popular in the near future. The principle difficulty is that they are not known. People who are fortunate enough to get them soon find their value and keep them. They are large rugged



A GOOD SPECIMEN OF BROWN SWISS COW.

cows and will consume a large amount of roughage and thrive where many of the tender breeds would starve. To prove my argument I might cite two or three records made in the herd I had charge of. One three-year-old heifer made a record of 9,172 pounds milk testing 4% butterfat; another 8,384 pounds. The second milking year of the above she produced 10,238 pounds and started on the third year with an average of 40 pounds per day for 96 days. I have spoken of only her, but the entire herd were close to the above in milking qualities.

There is a large milk producer near here who owns a Brown Swiss cow that produced 15,018 pounds milk last year and they have cows of nearly all the popular breeds; yet he maintains he can produce milk cheaper from the Swiss than from any of the other breeds, because they will thrive on feed that other cows will not touch and produce a large flow of milk. The above milk producer milks somewhere near 100 cows and is in a position to know the value of cows as milk producers. I was calling on another neighbor a few days ago who has 25 head of very high-grade cows, some producing 15,000 to 18,000 pounds per year, and in the herd was one Brown Swiss cow. In the conversation I learned that the neighbor had the chance to buy two more Swiss cows with this one but did not. Why? Because he did not know how good they were! Now he says he made a big mistake, that he did not purchase all three. I know of another neighbor who has been a large milk producer with grade cows from all the milking breeds, and by chance he bought two high-grade Swiss cows. What is his opinion? The best cows he ever owned in 14 years of experience. In my opinion the Brown Swiss, as an all round cow, takes second place to no other.

Massachusetts. A. A. B.

BUYING PUREBRED STOCK.

I have been a very much interested reader of the purebred live stock discussion, and would like to give my experience in that direction. As the demand here is for whole milk, for the local and Boston trade, I naturally thought to try Holsteins. I enclose two letters I received from breeders (both large breeders, of means). One will sell three heifers at $50 each, but note the sentence—"I should want to sell all three together." No one can find fault with his prices, but when he adds that last sentence, he puts his stock out of reach of the smaller breeder, or beginner.

In the other letter, you will see he puts his stock entirely out of reach of the ordinary farmer. He sells no heifers till tested. I do not know what he does with those cows which fall short of the requirements, but surely no one will care to purchase at any price and those cows which make larger returns, are certainly out of the reach of the common run of farmers, if for sale at all, yet this very breeder attends all the breeders' meetings, and talks long and loud on the advantages of registered stock.

I know well that every man has perfect right to do as he pleases with his live stock, or any other property he may have, but the point I want to make is this: How can the common run of farmers secure any purebred stock under these conditions? I do not believe any farmer of the present time will contend that purebred stock is not ahead of any scrubs, but until the big breeders act differently, it looks as though considerable scrub stock will, of necessity, be kept. I might add, that while I have had to give up my dream of purebreds, for the time being, I am not out of the race, and expect sometime to find a man who will sell me some of his purebreds.

Massachusetts. M. K.

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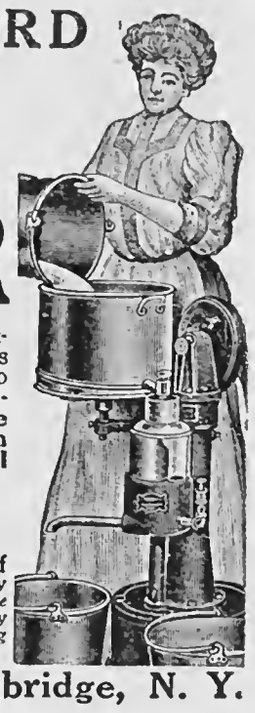

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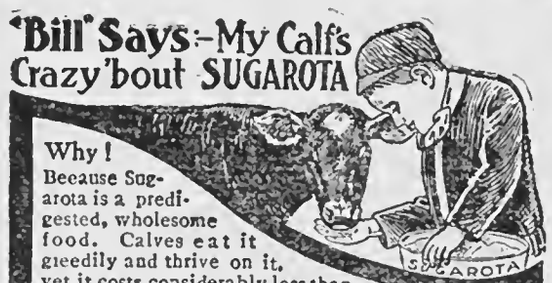

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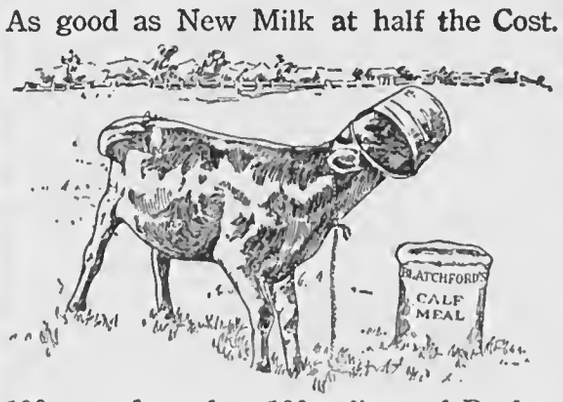

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BOARDER COWS.

There is a great deal more to this problem of finding out which cows are not paying their way than would appear on the surface. Weighing the milk and testing it for butterfat are important requirements, but there are other causes for low production than breed or individuality and a great many things must be taken into account before a cow can be placed in the discard as far as dairy qualities are concerned. Cow-testing associations that hire a specialist succeed better in weeding out the low producers than do many individual dairymen, because the specialist takes into account the surrounding conditions, etc., feeding and care, in forming his estimate of a cow's worth. And even after he has tabulated the results of his investigations the owner of the cow may conclude that owing to an unusually favorable market for his dairy products he can make a cow pay that tests low in butterfat

Feed and care affect milk flow. From the moment a calf is dropped a careful supervision of the feeding and care of its mother is necessary if the milk flow is to be kept up to normal during the entire lactation period. Experience shows that if one lets the milk flow decrease for even 24 hours it is next to impossible to raise it to its former yield unless more grain is fed than was necessary before the drop in production. Additional grain eats into the profits. Let a cold snap come or the cow be made to drink water that is too cold, and she will reduce her flow of milk in consequence. Therefore should not the cow be tested under the most favorable circumstances when she first freshens, and after being fed and cared for carefully so that her milk flow is kept as near the maximum as possible, be tested near the close of her lactation period if a true record of her worth is to be ascertained? It would be hard to tell the value of a cow's yearly production if all the conditions under which she works as well as the work she does are not carefully taken into the calculation. Many a good cow is condemned because of a low yield of milk when the chances are that in the hands of another dairyman under a different environment she would be a profit maker.

A standard is hard to find. Any particular standard by which a cow's production can be measured depends a great deal on circumstances. The dairyman who ships cream or makes butter may or may not want cows yielding high in butterfat, depending upon how he values the skim-milk for feeding purposes. Usually the standard butter cow is the one giving 6,000 pounds of milk a year, testing 5% and yielding 300 pounds of butterfat. However, many farmers and dairymen are content with cows testing below 4% and yielding less than 200 pounds of butterfat if they produce calves that will grow into fair beef animals and consume the skim-milk their mother yields at a profit. Also the milk dairyman with a market for milk testing as low as 3½% can afford to keep cows that the cream shipper would class as unprofitable. Likewise the whole milk dairyman would scarcely keep cows with low milk yields and high tests. The butterfat would not be of value to him. It takes an immense amount of feed and excellent care to induce a good cow to produce 6,000 pounds of milk in a year, so let the statisticians who delight in counting the number of boarder cows there are in existence first count the good cows that are not being fed properly or classified properly and reconstruct their figures accordingly.

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W. J.

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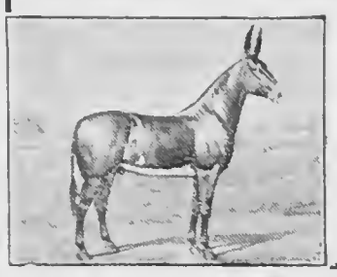
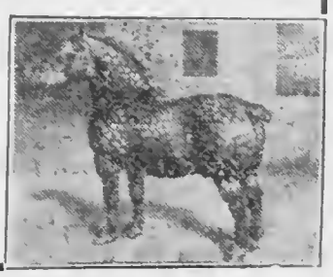
TODD'S SHORT NOTICE SALE
The Subscriber having sold his farm, must sell, without reserve, his ENTIRE HERD OF REGISTERED HOLSTEIN-FRIESIAN CATTLE, HORSES, MACHINERY, etc., on
Tuesday, March 31, 1914,
consisting of the following:
25 Head of Registered Holstein-Friesian Cows and Heifers,
ranging in age from calves to cows five years old, and FOUR YOUNG BULLS. The females are mostly daughters of King Fayne Beets No. 60690, and grand-daughters of Hengerveld De Kol, No. 23102, and nearly all have A. O. R. milk and butter records, also all the FARM HORSES, POULTRY and PIGS, and a GENERAL LINE of FARM MACHINERY, etc., together with 25 TONS of HAY.
The sale will take place at the farm near Somerville, N. J., on the above date, beginning at eleven o'clock, A. M. Cattle sold at three P. M. Nearest station to farm is Hamilton on P. & R. R.R. trains leave New York, at Liberty Street, at 5.40, 6.00, 11.00 A.M., and 1.00 P.M.
Sale will be absolute, rain or shine, and this will be a rare chance to secure high-class cattle, etc.
WM. K. HOPE (Auctioneer) JACOB TODD, Jr.

80—Imported—80
Percheron and Belgian Stallions and Mares
on sale. My exhibit comprises the largest number of big, heavy-boned, 2000 to 2400 lb. stallions to be found in the United States. The Cedar Rapids Jack Farm is the jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.





W. L. DeCLOW, Stallion and Jack Importing Farm, Cedar Rapids, Iowa

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Milk for Cow Feed.

Would it be injurious to feed warm separator milk back to a milch cow?
Milford, N. Y. A. D. B.

No. There would be no injury whatever. Such milk is good cow feed and is frequently fed on most farms. The results would be better from feeding such skimmed milk to little pigs or hens. As cow feed, however, such milk will give good results, and is not an unnatural feed as you claim.

Dairy Ration.

Will you give a balanced ration for Jersey cows in order to get the most butter? I feed early-cut well-cured mixed hay and water twice a day with the cold chill taken off. Grain available, cornmeal, cottonseed meal, oil meal, mixed feed, hominy, Ajax flakes, bran middlings, beet pulp, oatmeal and feed flour. Please give me a ration for the same cows in Summer while at grass. J. F.
Maine.

A good ration for your cows at present is cottonseed meal two parts (by weight), oil meal one part, cornmeal one part, and Ajax flakes two parts. When the cows are on pasture feed cottonseed meal three parts, cornmeal one part and bran one part. At present feed one pound of grain to 3½ or four pounds of milk. During the Summer the amount will depend on the amount of pasture. Give as much grain as will give a profitable increase in the milk production. C. L. M.

Another Dairy Ration.

Will you give me a balanced ration with these grains? I have nothing but corn fodder, and would like to have a balanced ration for my cows. Cottonseed $1.85; corn chop $1.35; oil meal $1.85; brewers' grains, dried, $1.60; gluten $1.60; bran $1.40. H. L. S.
Pennsylvania.

Mix 100 pounds of cottonseed meal, 100 pounds oil meal and 200 pounds wheat bran. Feed six to eight pounds daily, according to the amount of milk the cow gives. C. L. M.

Ration for Fattening Pigs,

Will you give me a balanced ration for pigs 10 weeks old or more? I have corn, beans and middlings, corn at 80 cents per bushel; beans $17 a ton, and middlings $28 per ton. We boil the beans in a 60-gallon iron kettle, then mix together and make into a slop. We fatten from 20 to 30 a year.
New York. G. W. W.

Equal parts corn and beans have about the nutritive ratio which gives best results for feeding pigs. Toward the end of the fattening period the proportion of corn should be increased. Your method of preparing the beans is a good one. The amount to be fed depends of course on the appetites of the pigs, and the judicious feeder will be able to tell when the pigs have sufficient nourishment and yet are not overfed. C. L. M.

Ration Without Succulents.

I am just starting in the dairy business and as I do not have any silage or roots to feed would like you to give me a balanced ration of the following: Gluten $1.50; sugarota dairy ration $1.45; brown middlings $1.40; red dog $1.60; corn, oats and barley $1.40; wheat bran $1.45; oil meal $2; corn and oats chop $1.60; Buffalo dairy ration $1.45. I have cut corn fodder and mixed hay for roughage. My cows are most of Guernsey breeding. The above named feeds are about all that can be bought in this vicinity. J. H. K.
Pennsylvania.

Mix together three parts, by weight, of gluten feed, two parts oil meal, two parts red dog flour, and three parts bran. It increases the palatability of feed to mix in two or three per cent. of fine salt, and I usually do it. It is also well to give the cows free access to salt, if convenient. Feed six to seven pounds a day to a cow giving 25 pounds of milk and more or less in proportion to milk production.
C. L. M.

Ration for Brood Sow.

Will you give me a balanced ration for brood sow before and after farrowing, made from following feeds? Cornmeal $1.55 per cwt.; bran $1.40; flour middlings $1.60; linseed meal $2. S. F. K.
New Jersey.

Before farrowing give a thin slop of three parts by weight of flour middlings, two parts wheat bran and one part oil meal. The slop may be made with water, or if milk or whey is available, so much the better. There is little danger of overfeeding, if the sow has plenty of exercise, and is supplied with charcoal, salt and ashes. For a few days before farrowing, and for two days after, feed moderately. Then give a slop made of three parts middlings, one part cornmeal and one part oil meal. If there is any tendency toward constipation add two parts bran. After a few days the feed should be increased considerably, and the sow should have all she will eat three times daily, and still have a good appetite for the next feed. C. L. M.

Balancing a Ration.

How may I make up a balanced ration out of the following: Cottonseed meal, per 100, $1.85; oil meal $1.75; molasses feed $1.25; cornmeal $1.40; bran $1.35; Timothy hay two feeds; silage one feed. E. P. V. A.
New York,

Mix three parts by weight of cottonseed meal, one of oil meal, one of cornmeal and two of bran. Feed with the silage. Feed one pound of grain per 3½ pounds of milk. C. L. M.

Molasses for Hogs.

I am starting to raise some hogs and have no milk to feed nor any tankage. What do you think about feeding molasses to hogs? What amount would you feed to pigs about six weeks old, and to a sow having newborn litter? How would you increase when pigs are getting older than six weeks? I would like to have some one answer this for me.
Pennsylvania. E. A. K.

Feeding molasses is commonly used to increase both the palatability and digestibility of the feed eaten. As hogs usually eat enough without molasses there is no reason why it should be fed to them for the purpose of increasing consumption, so for this reason molasses is not as valuable for pig feeding as it is for horses and cattle. Under some conditions, however, it is possible that molasses may increase the digestibility of the other feeding stuffs eaten sufficiently to warrant its use for pigs. C. S. G.

Local Butchers and Beef.

I have read the article on the first page of February 21. The East is not the only place where the packers have the retail butchers handcuffed. About six weeks ago a farmer near here brought a fine three-year-old dressed beef to town, to sell to a butcher. I happened to go into the market right behind the farmer and heard him say he had four quarters of beef which he would like to sell to the butcher. All the satisfaction he gave the farmer was, "We can't handle country-dressed beef," and no excuses or explanations given for choking the farmer off short. I bought one quarter of the beef and it was the best we have ever been able to buy in this town in the 19 years that we have lived here.

A month ago I took a basket of strictly fresh eggs into a grocery at Gary, Ind., and got 34 cents per dozen and at the same time they were selling them for 44 cents per dozen and these same storekeepers are making a great howl because some people who like a square deal go to mail-order houses t oget it. H.

363.1 Bushels Potatoes

From One Acre of Massachusetts Land

A. Webster Butler of Brockton, Mass., won the first southern zone prize offered by the Bowker Fertilizer Company for the largest yield of best quality potatoes grown exclusively on Stockbridge Potato Manure. His acre was a "rocky loam" producing about 2 1-2 tons of hay per acre in 1912 on manure. Rows were 36 in. apart and Green Mountains cut to two eyes were planted 14 inches apart. The piece was cultivated five times. The acre was sprayed with Pyrox.

STOCKBRIDGE POTATO MANURE

was applied 2100 lbs. broadcast and 700 lbs. in the drill. No other fertilizer or dressing of any kind was used. The entire crop weighed 21,783 lbs. or 363.1 bushels. His total score including quality points was 589 points, the highest in the southern zone.

Other Winners secured yields ranging from 311.1 bushels to 502.6 bushels in the northern zone, (Me., N. H., Vt.,) and from 183.8 bushels to 363.1 bushels in the southern zone, (Mass., R. I., Conn.)

Send us your name for complete and intructive statement concerning the results of the contest and how these great yields of potatoes were obtained. No other fertilizer than the Stockbridge Potato Manure was used.

BOWKER FERTILIZER COMPANY
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Pure Canada UNLEACHED HARDWOOD ASHES
"THE JOYNT BRAND."
The best, cheapest and most lasting fertilizer on earth. They are nature's plant food to build up the land and restore it to its original fertility Potash, Lime and Phos. Acid are contained in ashes. The potash is an active caustic potash and the lime is a vegetable lime which is the purest and strongest form of lime. The Joynt Brand Ashes are the best by test. Prices and information cheerfully given.
Address JOHN JOYNT, Box 297, Lucknow, Ontario, CANADA

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Hardwood Ashes Best Fertilizer in Use.
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Celery Culture, Beattie..... .50
Greenhouse Construction, Taft.... 1.50
The Rural New-Yorker, 333 W. 30th St., N. Y.

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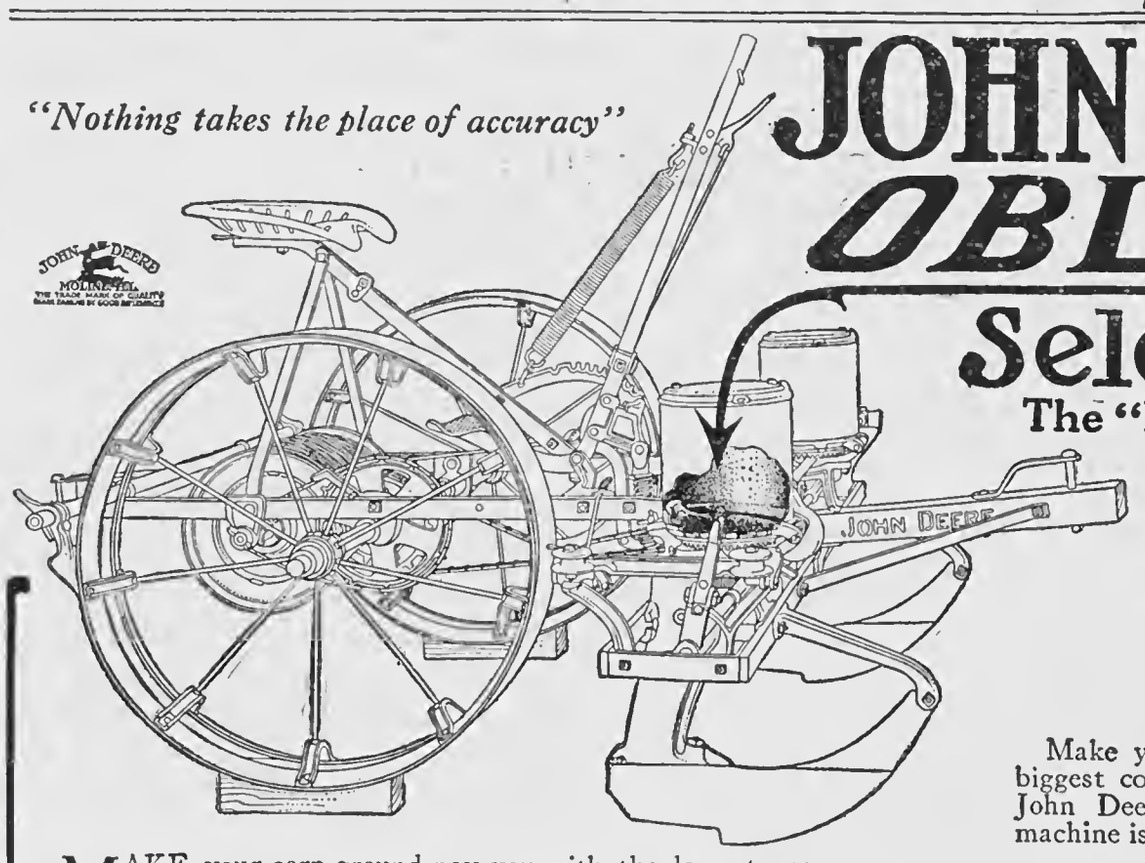

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The "Natural" drop

This machine maintains high accuracy even with ordinary seed. With well selected seed its dropping accuracy is practically perfect.

MAKE your corn ground pay you with the largest possible yield, by making sure that the required number of kernels is in each hill.

The seed must be there. Every "miss" means just that much thinner stand. No amount of cultivation can make up for inaccurate planting. The loss of one ear from every hundred hills costs you the price of one bushel per acre.

For years the John Deere Company has concentrated on accuracy in planting devices. The "Oblique Selection" solves the problem.

The results of its use are so profitable that many corn growers have discarded the best of previous machines. It is as far ahead of the old Edge Drop as it was ahead of the round hole plate.

Make your spring planting the start of your biggest corn crop by accurate dropping. The John Deere "Oblique Selection" will do it. The machine is a splendid investment.

Free Book Gives Valuable Corn Facts

Write us today for free booklet "More and Better Corn". It tells you why the average yield for the United States is only 25 bushels an acre, whereas better methods have produced 125, 175 and even 255 bushels per acre in places. It also describes and illustrates the John Deere "Oblique Selection" Corn Planter. The book to ask for is No. D 33

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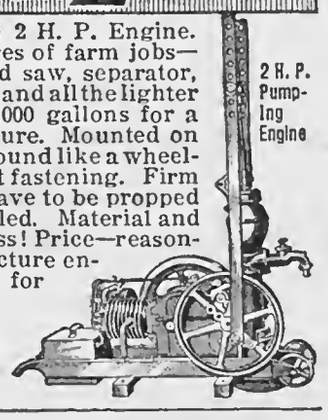

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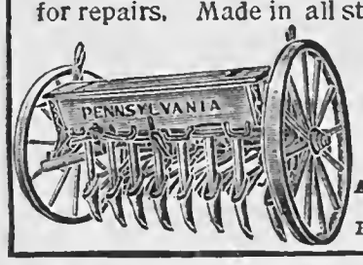
The Accurate Seeder

Bumper grain crops depend primarily upon the seed bed. The old reliable

Pennsylvania Grain Drill

has positive force feeds, low down construction, chain drive, extremely simple throughout. Just the drill for long years of hard service with minimum expense for repairs. Made in all standard sizes, fertilizer and plain, with either hoes or discs. WRITE FOR FREE CATALOG.



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If this Hertzler & Zook Grain Drill does not satisfy you in every way, ship it back, and if we fail to return your money in full, paying freight both ways, we forfeit $10,000 which our bankers hold to protect you—you can't lose. It's all one sided in your favor.

We make this big guarantee because we know this is the best drill on the market today—sows all kinds of grain, seed or fertilizer accurately and without waste. High, broad-tire wheels lighten draft. Extra large grain box. We also make a low down and plain seed drill. Sold direct from factory; saves you $10 to $20 dealers' profits.

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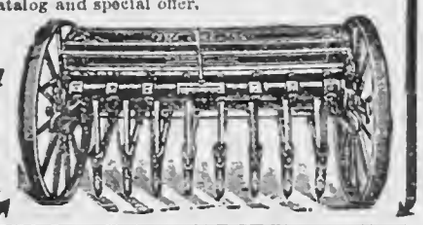

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Level, fertile, paying farms in the most desirable locations. Get my list of best Bargains. *Square deal always*
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The opportunity of securing **free homesteads of 160 acres** each, and the low priced lands of **Manitoba, Saskatchewan** and **Alberta,** will soon have passed.

Canada offers a hearty welcome to the Settler, to the man with a family looking for a home; to the farmers son, to the renter, to all who wish to live under better conditions.

Canada's grain yield in 1913 is the talk of the world. Luxuriant Grasses give cheap fodder for large herds; cost of raising and fattening for market is a trifle.

The sum realized for Beef, Butter, Milk and Cheese **will pay fifty per cent on the investment.**

Write for literature and particulars as to reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent,

J. S. Crawford,
301 E. Genesee Street,
Syracuse, N. Y.

160 ACRE FARMS IN WESTERN CANADA FREE

A Breeding Chart.

I was quite taken with the chart by Mr. Felch describing line-breeding in chickens on page 241. It could be used to demonstrate how we could drive scrubs of all kinds off the farms in a few years, by changing his figures a little, and substituting the words purebred for male and scrub for female. I don't know how he would produce one having fifteen-sixteenths, twenty-one-thirty-seconds, or twenty-seven-thirty-seconds. In crossing purebred and scrub stock, of any kind we use the terms, breeding up, and breeding down; you breed up by always using a purebred sire, you breed up or towards purebred stock, and by using a grade or scrub sire, you breed down or towards scrubs, and the removes are: one-half, three-fourths, seven-eighths, fifteen-eighteenths, thirty-one-thirty-seconds, sixty-three-sixty-fourths, which is practically purebred, but not all the herd books will admit them for registration. You could not do the live stock interests a better service than to get up such a chart and the explanation, and keep it in a conspicuous place in The R. N.-Y. I have heard for years about making two blades of grass, and two grains of corn grow, where one grew before. It is not the number of blades or grains you raise that counts, but what you do with them after you have raised them. There is many an old scrub in this State, and I expect in others, eating blades and grains that would not sell for the value of the feed they have eaten; in fact they could not be sold at all but farmers still continue to raise them.

UNCLE JIM.

Lame Turkey.

I received one tom and two hen turkeys last month, and apparently they were all right. The next day the tom appeared lame, but next day after that he seemed to be all right again. Since that time he has grown worse, and at this writing he is unable to stand at all. He lies on his breast with one leg extended out. The hens are doing well and seem to be at home in their new quarters. I wrote to the people that I purchased them from, but got no satisfaction. The birds have a run 15x35 to exercise in, but the tom does not move from his night quarters. F. J. S.

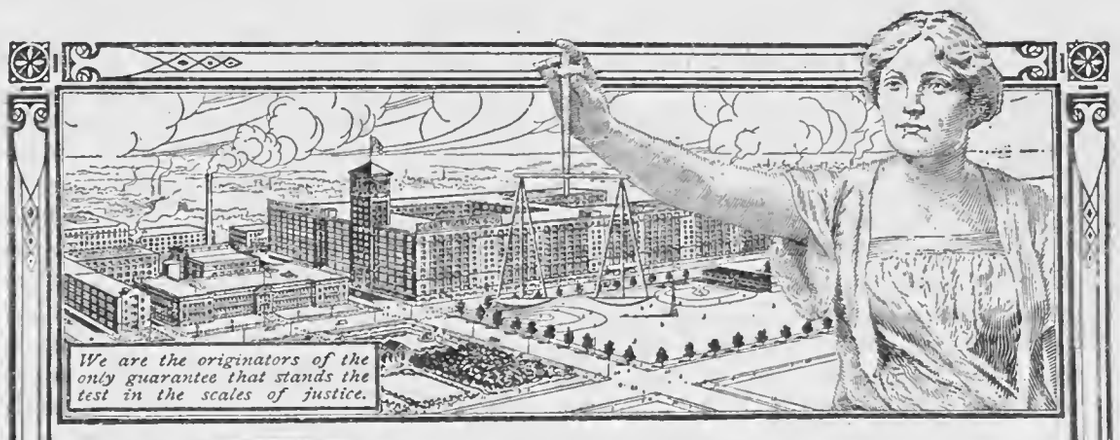
Connecticut.

If you can find no evidence of injury to this turkey's leg, it is very possible that rheumatism is the cause of the disability. I should place the tom by himself in warm dry quarters and feed him mederately upon soft, easily digested food, and if at hand would, give what skim-milk he would drink. As medicine, dissolve three grains of sodium salicylate in as much water as you can induce the turkey to take, and administer once or twice daily. M. B. D.

A Rice Incubator.—We have heard it claimed for the "natural method" of incubation that you can hatch with the hen and then eat up the incubator. The Chinese near Amoy have another scheme, as described by Consul Brissel:

"The breeder first takes a quantity of unhusked rice and roasts it, cooling it down by fanning or by allowing the wind to blow through until it is lukewarm. He then spreads a three-inch layer of the rice in a wooden tub and places about 100 eggs thereon; another layer of rice, this second and subsequent layers being but two inches in thickness, is spread over the eggs. Each tub will have six layers of rice and five layers of eggs, so that there will be 500 eggs in each tub. The rice should be heated once every 24 hours, the eggs being taken out at such times. When the eggs are again put in the rice the bottom layer is placed on top and each of the other layers one row lower down, while the eggs previously in the center of the tub are placed at the edge. The entire tub is covered with a cotton mattress. One of the great difficulties with this method is the inability to tell just when the eggs will hatch, which of course renders the smothering of the young very possible. The measure of success of the breeder depends largely upon his ability to care for the chicks at this time."

The lawyer was endeavoring to pump some free advice out of the doctor. "Which side is it best to lie on, Doc?" "The side that pays you the retainer."—Cincinnati Enquirer.



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IN THE face of an advancing leather market we still use the *genuine bark tanned* leather which has made *Williams Quality* mean the best in harness for the least money.

Our fair and square methods of manufacturing and selling create and hold in the minds of our customers the strictest confidence. Hundreds of horse owners who use harness daily will have none other than the celebrated *Williams Quality*.

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$37.95

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DAIRY FARMERS WANTED

THE Southeastern States need more milk, cream and butter producers. Each year $32,500,000 worth of Northern dairy products are shipped into the South. You can make money in this many crop, all the year-grazing country. Ample rain, (irrigation unnecessary) mild winters and pleasant summers make living enjoyable and highly profitable.

GOOD LAND $15 AN ACRE UP

produces heavy yields of alfalfa, clover, corn, wheat, fruit and truck. Profitable local markets greater than supply.

Alfalfa booklet, the "Southern Field" magazine and facts about dairying along the Southern Ry., M. & O. R. R. and Ga. So. & Fla. Ry., sent on request.

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60 acres, all Hay and Grain; 3 horses, 3 cows and full working equipment. $1,500 cash required.

Price, $4,000 for all. Near Town. Good roads.

Farmers Realty Co. QUAKERTOWN Pennsylvania

C. D. Rose Farm Agcy. SELLS FARMS. Send for list. State & Warren Sts., Trenton, N. J.

FERTILE FARMS—near Philadelphia—Mild climate, excellent markets, catalog. W. M. Stevens, Perkasie, Pa.

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Cheap enough. Mild climate. For information write State Board of Agriculture, Dover, Delaware

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$14,500 Buys 315 Acres—1 mile from High School, cheese factory, Borden's Milk Condensary, Depot, 6 churches; 11 from city. 100 acres level, rich loam soil; 70 acres valuable timber, balance splendid pasture; nice, 10-room house, furnace, bath, good, commodious barns, litter carrier, 53 patent stanchions, feed grinder, wood mill, gasoline power, pure spring water in all buildings. Including 43 cows, team, fodder, tools. Buildings and personal property insured for $9,000. Easy terms. Free list. ELLIS BROS., Springville, N. Y.

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Why not move now to the country with the greatest future--the South. Virginia and North Carolina are the Garden Spots. Mild climate, close to big markets. You can earn more here. Virginia apples sell for highest prices. Corn 50 to 100 bushels to acre, alfalfa 4 to 6 tons per acre, wheat, oats and all legumes thrive. Average rainfall 45 inches. List of desirable farms--$15.00 acre and up along the Norfolk & Western Ry. Write while you think of it for literature.

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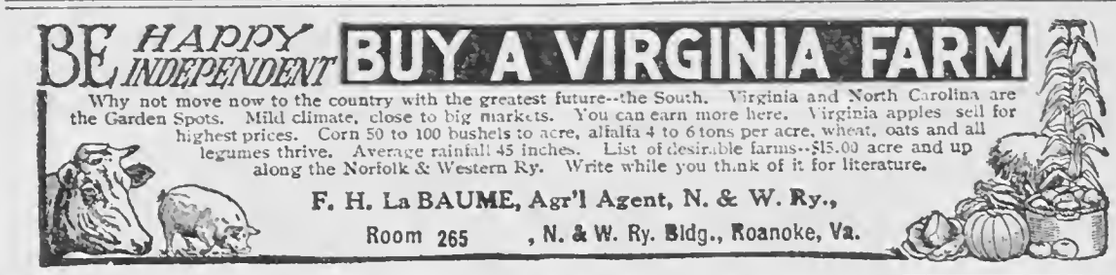

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Ten Months' Pasture Every Year

make the Golden Central South a natural dairy country, and there is money in it for the man who will start a dairy there now.

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IMPROVING POOR LAND IN MARYLAND.

The Quickest and Easiest Way.

[The following essay by J. E. Patton was awarded a prize by the Dorchester Pomona Grange. It is a compact statement of how to improve land in the Middle South. Much the same principles may be followed at the North by substituting rye, vetch, turnips and Soy beans.]

The quickest and at the same time the most economical way to improve poor land is through the use of legumes. Manure will help of course, but manure, like lime, should be used to help the legume. Clover and cow peas are the two great servants to be commanded in land building. If the land is too poor to grow clover, begin with cow peas. Other important points are proper drainage and deep plowing. Always go down to the subsoil, and after the first plowing turn up a little of the subsoil at each plowing, until the soil is of the desired depth (which you will never get too deep). Test land each year for acidity of soil, and if lime is needed apply at rate of 500 pounds to the acre after land is in good cultivation, then drag before seeding or planting the crop. A fourth point is thorough preparation of seed bed, and proper cultivation of growing crops; a fifth, rotation of crops.

Rotate crops as follows: First year seed the land to an early variety of cow peas, using 200 pounds acid phosphate and 40 pounds muriate of potash to the acre. In August double-disk the cow peas, then plow under and after the land is in proper condition and with a well-packed seed bed, seed to Crimson clover after a rain. Unquestionably wait for the rain, but keep the drag going at frequent intervals while waiting.

Second year top-dress the clover in February if the weather is favorable, with 300 pounds rock and kainit, equal parts, and just as clover begins to head out, plow under; then plant to corn, seeding Crimson clover in last working.

Third year, top-dress clover at usual time with 800 pounds rock and kainit, equal parts, plow under clover and plant tomatoes. Seed Scarlet clover in last working.

Fourth year, top-dress clover as usual with 300 pounds rock and kainit, cut clover at proper time for hay, then plant land to corn, seeding clover in last working. From this time on use the three year rotation, as mentioned in second, third and fourth years.

Tomato vines in hay are objectionable and it will be necessary to rake the clover field during freezing weather which will remove the majority of the vines. In this process of soil building there is just one cardinal point; put the fertilizer or manures always on the soil-building crop. But for the land's sake seed legumes wherever and whenever possible. Legumes, legumes, first, last and always.

THE CONCRETE MIXER.

I note on page 250 what Mr. Weaver says about mixing concrete. He admits that a mixer should be of sufficient size to handle a one-bag batch at one time, and then goes on and describes a mixer which is about half large enough for that, and which he claims is satisfactory. Why not construct a mixer large enough to take a one-bag batch at one time? All right, but do it different from what I did. I built one almost identically like the one Mr. Weaver describes except mine was twice the capacity and nearly four feet long. As the cost is a painful recollection for a poor man I will try to forget it. Probably my mechanical ability was not quite up to Mr. Weaver's. This mixer was sent to the junk heap because we could not get an even distribution of cement without taking a great deal of time. Several different men tried it besides myself, but we all had about the same results. If more cement than should be landed in one end or middle it staid there, though it mixed evenly with aggregate at that particular spot. The result was that each batch was a streaked mixture ranging from lean to rich. This might answer for underground foundations, but would not do at all for thin reënforced walls. Well, why not increase the diameter and decrease the length of a similar mixer? I have not tried this personally, but would judge two feet would be the limit in length permissible to insure uniform mixing. This would bring machine opening up quite a bit from the ground, and would make filling too slow. It would probably affect its stability also. Why tie up $15 to $30 in a mixer when the efficiency of a gang of men is not materially increased by so doing? Let each man think out for himself, on his own job, each act and motion that has to be gone through to mix a batch of concrete, both by hand and with machine, and estimate the time required for each, and probably in most cases it will be six of one and half dozen of the other. I know nothing about the large commercial mixers but as for homemade affairs, give me a square pointed shovel and a "sweatboard." MAURICE E. KENT.

Rhode Island.

Use of Fish-pots in Maryland.

Can the law stop me from fishing with fish-pot or wing fike on my own private land, where water flows only after big rains? At other times there is no water there. I find by Chapter 255 of 1910, it is unlawful to have fish-pots in any waters of the State; penalty not less than $25 nor more than $100 for each offense. J. E. E.

Greensboro, Md.

The following reply is made by State Game Warden Curley:

I do not know of any exception to the law prohibiting fish-pots. Of course the law is only applicable to rivers and streams, and if your inquirer does not set them in the same, but simply in a natural water course when it rains, I suppose it would not come within the provisions of the law, but I cannot imagine that there would be any fish in such a place.

TOMMY: "Pop, what is the difference between a luxury and a necessity?" Tommy's Pop: "Merely getting used to it, my son."—Winnipeg Telegram.

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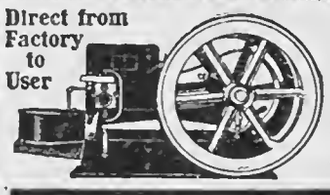

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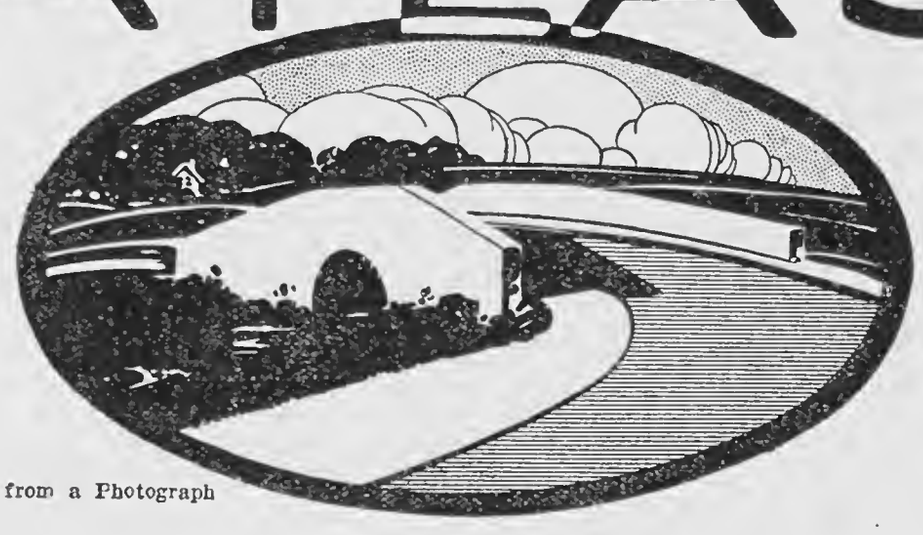

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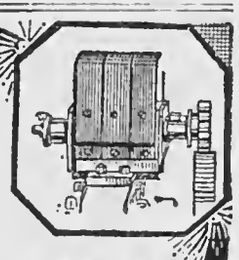

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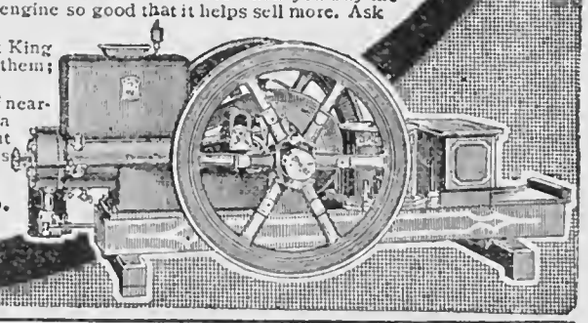

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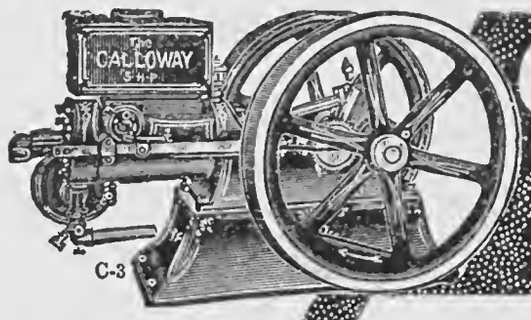

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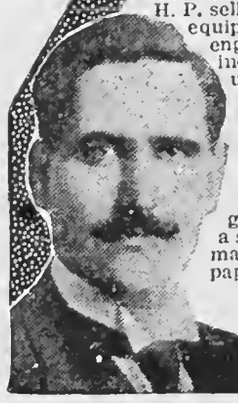

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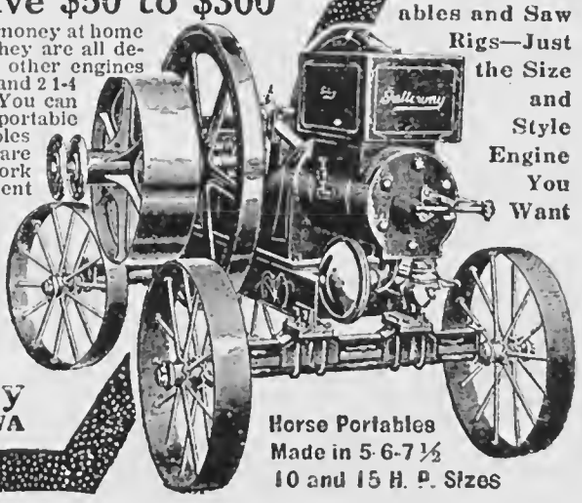

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The Henyard.

Breeding from Pullets.

Would 35 two-year-old hens be too many to mate with two yearling cockerels? Would you advise using pullets to breed from? They are purebred R. I. Red, hatched in April, were laying in September and in October I received 90 dozen eggs from 60. They have laid heavily all Winter, but seem full of vitality. I have a pen of two-year-olds that I keep to breed from, but would like to substitute some of the better marked pullets. The pullets paid me well, but the old hens rarely paid for their feed until lately. I would like next year to keep all pullets. Last year's stock was hatched from pullets and while the hatches were not remarkable, the chicks were strong and lusty. L. D. P.

Vermont.

One vigorous cockerel should be sufficient in a pen of 35 hens of the lighter breeds, and two would be ample for the heavier fowls. I should not hesitate to breed from well developed pullets, even though they had laid well all Winter; there is no adequate reason why their chicks should not be healthy and vigorous, as I have frequently demonstrated. The advantages of using old hens as breeders are that their eggs are larger, and the chicks hatched from them are consequently larger, and these old hens by living and laying for a year or more have demonstrated a vitality which the pullets have yet to prove; some of the pullets may be weaklings that will fail to stand up under egg production, and it would be unfortunate to hatch from such pullets.

Sour Crop.

I have a Buff Orpington pullet about 10 months old. She does not eat, and has not for about two weeks, only once in a while; she sits on the roost most of the time and when her head is held down a yellow kind of water runs out. Can you tell me what is the matter with her? R. W. M.

Hopewell Junction, N. Y.

This pullet may have catarrh of the crop, or "sour crop," due to the eating of indigestible food or poisoning by putrid meat or some other deleterious substance picked up by the bird. This disease is frequently a complication of some other trouble. The treatment consists in emptying the crop by holding the fowl head down and expressing the contents of the crop by gentle pressure and manipulation; after this about five grains of subnitrate of bismuth combined with two or three of bicarbonate of soda may be given, stirred up in a teaspoonful of water; this will relieve the acidity of the crop. Then remove the bird to comfortable quarters by herself and feed lightly upon soft easily digested food until she recovers.

Head-twisting Hens.

1. Some of my hens have a trouble which starts with a slight bending of the head to one side, which keeps getting worse and, when excited, they twist the head so that it is upside down and there is a rattle in the throat. Can you tell me the cause and also if there is anything I can do for them? 2. On page 1312, under "Poultry Notes," it speaks of cheap heavy spraying oil. Can you tell me of what it is composed and if it would be safe to use it in a brooder house for small chickens? House well ventilated; have been using one part of carbolic acid to four of kerosene for mites. W. F. H.

Massachusetts.

1. I cannot tell you what causes the peculiar actions of your fowls, having never seen anything of the kind that was not temporary, and apparently due to some local irritation which the hens were trying to rid themselves of. Irregular, purposeless, movements of the head are usually ascribed to congestion, or other disturbances, in the brain, very possibly a reflex from intestinal irritation due to the presence of worms or indigestion. A physic, as a teaspoonful of castor oil, could do no harm and might relieve the trouble.

2. I infer that the writer was speaking of one of the "soluble" spraying oils used by orchardists. These are oils usually derived from petroleum, so treated as to miscible with water, forming an emulsion. I know of no reason why they should not be as well adapted to brooders as to poultry houses, though I have never used them. The mixture that you are using is a very effective one, but probably more expensive than a spraying oil. M. B. D.

FEATHER PULLING.—Some time ago I wrote you asking about feather pulling; since then I have tried to cure it myself, and up to the present think I have cured the habit. Morning feed as follows: Oats, one pound; wheat, one pound; buckwheat, one-half pound; place same in a covered pan in which is a piece of lard the size of a butternut, melt and stir the same together, feed warm. Noon: Oats, one-half pound; buckwheat, one-half pound; mix with same amount of lard and let cool, then feed. Evening: Whole corn; raw meat twice a week. I have had no feather pulling since I started to feed the above, and my hens run together the same as ever. H. E. W.

Laying Ration.

I have a flock of 300 Barred P. Rock hens. Of the following grains, which ones, and in what proportion, are best for egg production? Corn, oats, wheat, barley, bran, sprouted oats, green cut bone, and plenty of beets and cabbage. Should beets be cooked and fed with meal as wet mash, or mash dry and beets raw, or a light feeding of wet mash and also dry mash before them all the time? Should breeders receive the same as laying hens? Give a good growing ration from the above grains for chicks after they are three or four weeks old. T. P.

Sterling, Ill.

All of the feeds that you mention are good for egg production, and none is "best." Sprouted oats are not needed where beets and cabbage are at hand, and vice versa. Green cut bone should be fed in moderation, especially to breeding pens. Beets should be fed raw, and these, also, should not be fed in excess. A wet mash is unnecessary, and undesirable, when dry mash is constantly before the fowls. Breeders should receive the same rations as layers, but they should not be fed quite as heavily and should be given more freedom and exercise. A good growing ration for chicks a month or more old is composed of cracked corn and wheat in equal parts for whole grain, and a mash made up of 30 pounds each of wheat bran, middlings, cornmeal, and beef scrap, to which 10 pounds of bone meal are added. (Cornell formula). Both whole grain and mash may be kept dry in hoppers constantly before the chicks on range, and one feeding a day of the mash moistened with skim-milk or water will hasten development. M. B. D.

Line and Inbreeding.

I wish to breed from my own stock. Will you inform with regard to line breeding, if I can do so and not inbreed? I have what I consider good pure stock, White Leghorns, and have picked some good cockerels from my own raising for breeding. W. E. L.

New Jersey.

The distinction between line and inbreeding is not very clear, though most writers seem to use the term inbreeding to describe a closer blood relationship than line-breeding. Mating a cock to his daughter would be called inbreeding; to a cousin, line-breeding. There is no good reason why you should not use males from your own flock, provided that you take pains to select the most vigorous and best developed birds of both sexes to make up your breeding pen. Careful selection should be practiced where inbreeding is the rule, as family defects are rapidly accentuated by inbreeding, and it is necessary to guard against this. M. B. D.

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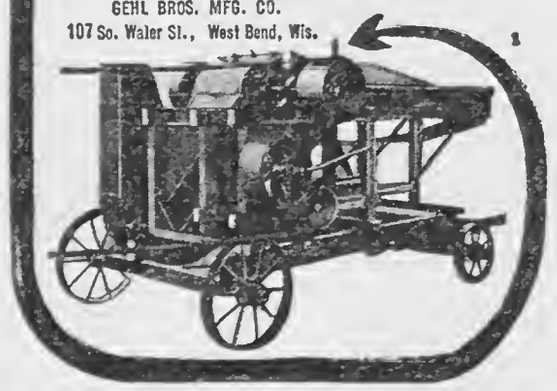

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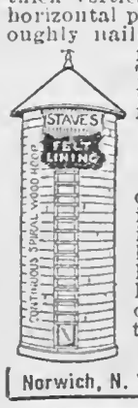

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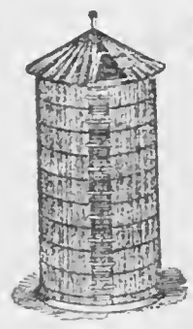

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Fish Bite Like hungry wolves any time of the year if you use Magic-Fish-Lure. Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a box to help introduce it. Agents wanted.
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TAKE OFF THE HORSE'S COAT ALSO

Do you go at the spring work with your overcoat on? Of course you don't—
Coats are a burden—you even roll up your shirt sleeves. Then how can you expect the horses to show proper energy under the hot sun with the same heavy coats on that they have worn all winter and which hold the wet sweat and dirt? Clip them before the work begins with a
Stewart Ball-Bearing Clipping Machine
They will get all the nourishment from their feed—be healthier and look better. They will dry off quickly, be more easily cleaned and feel better generally—that means work better. The Stewart Machine is not an expense—but a highly profitable investment. It turns easily, does more and closer work than any other machine—can't get out of order. Gears all file hard and cut from solid steel bar—protected and run in oil. Includes 6 feet new style easy running flexible shaft and celebrated Stewart's Single-Tension Clipping Head. The only machine that can be used without change for horses, mules and cows. You can make money clipping your neighbors' horses while yours will do better work. Each machine guaranteed. If it doesn't give perfect satisfaction, return it and get your money back. Complete from your dealer at $7.50
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from your sheep, longer, better wool that will bring you from 15c to 20c more from each sheep. Your flock will feel better and look better also. The
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Write for complete new catalog showing world's largest and most modern line of horse clipping and sheep shearing machines.

More Money From Your Hens!

Do You Want to Learn How?

WE are in a position to help you with your poultry. The best poultry writers in the country are ready to answer your questions, and will direct you step by step in the development and care of your flock. Through their help you may become an expert yourself, if you will follow their suggestions and take up a line of reading in connection with your practical work in the henyard. This service is free to all subscribers and their families. Make frequent use of it, and begin at any time.

Intensive Poultry Keeping.

What is the value of cob meal for poultry? Can it be fed to chickens ground corn and cob together? Is it practicable to do this with hand-power mill? I have one acre nicely adapted to poultry near a good market. Can I make a living on it? I would have to get about $500 per annum to pay expenses. I own my place and have money enough to establish a nice little plant; have kept small flock with good success for a number of years; am a practical gardener. B.

Brockton, Mass.

The cornmeal will not only be much better for the hens without the cobs, but will be much easier to grind; a great deal of power is required to grind cobs fine enough for feeding. But why grind either by hand? Your time and strength should be worth altogether too much to be used in this way. If you wish to utilize corn raised in your garden, feed it whole; its value is not enhanced a particle, except for small chicks, by grinding, or even cracking.

It would not be unreasonable for a good gardener located near a good market to expect to make $500 per year from an acre of ground devoted to poultry and gardening, but whether you can do it or not depends very largely upon your skill, energy, and strength, as well as to a considerable degree upon your ability as a salesman. My advice would be to be very niggardly in the use of your limited capital in building a poultry plant. Cut expenses on every corner until you become established in the business and know pretty nearly what you can expect in the way of income from your hens. Do not dream about more than 200 hens until you have made that number pay you fully as many dollars each year in net profits, and then, if you must dream about a thousand, try to wake up early. M. B. D.

The Hen With the Habit.

Prolific egg production depends upon the individual bird herself. Certain birds under adverse circumstances will produce more eggs than certain other birds that have the best of everything in the way of food and shelter. The persistent layer is qualified by inherited tendencies to produce eggs. No art of man can induce a hen to lay a large number of eggs unless she is that kind of a hen. Proper handling will induce her to do her best. Proper handling will induce some colts eventually to get a mark of 2:10. No amount of handling will make certain other colts show better than a four-minute gait. The same principle applies to the hen.

Arbitrary rules for care and feeding are not necessarily associated with large egg yields. The hen with the habit will lay anyway. And unless she has this inherited tendency she is not the hen to keep, certainly not the one to breed from. Success and profit result then from the heavy layer surrounded by ideal conditions. Nowadays the 200-egg hen is quite common throughout the country. She is the backbone of many a flock, and lends a helping hand to many a worthless sister hen whose body would grace the dinner table could she be identified. Unfortunately in the majority of flocks neither is known. What's the answer? The trapnest! Starting in October with 100 pullets and 20 trap-nests, March 1 will find the flock divided into say, three classes. The record sheet with show perhaps 20% that have each laid from 18 to 25 or more eggs per month. These pullets if they show all the qualities necessary to make good breeders will be retained as the nucleus of a breeding pen. Sixty of the remaining hens will perhaps be productive enough to keep until the end of their first laying period. The remaining 20 will go or will have gone already to the poultry market. Scientific line-breeding follows. A strain of prolific egg producers is not the only goal. Not only must the birds be able to pass down to their progeny the tendency sought for: they must also prove to be birds that will transmit a sound, vigorous constitution.

Henhouse for Brooding.

Could I use my 6x12 henhouse, board floor, for a brooder house, heating same with an oil stove or lanterns? If I may use this house for purpose mentioned, when shall I start my incubator in order to get best results? Should I use my floored house as brooder house, how long may I keep chicks in same? Is it not necessary that chicks have sand or soil upon which to walk, to prevent leg weakness? H. S.

Rhode Island.

You can use your henhouse for a brooder house if you warm it in some way but will have to have hovers of some kind to care for the chicks at night. The adaptable hovers made by several prominent manufacturers are well suited to use in such a building and do away with the necessity of heating the whole building. If this building has been used to shelter hens, you will have to take special pains to rid it of lice and mites before putting young chicks in it. Chicks should not be kept indoors upon board floors for more than three weeks. Fresh sods and dirt for the chicks to scratch in are of great value in a brooder house. I do not care to have chicks hatched before the last of March or later than June 1. If I could arrange it to suit me exactly, I would have every chick on the farm hatched on the first day of April; joke, or no joke. M. B. D.

Discolored Combs.

I have recently purchased some White Wyandotte hens, and I noticed that the comb and wattles of one of them was as I thought rather dark in color, but as they appeared to be otherwise healthy I did not think any thing serious the matter. Now another one of them is afflicted in the same way, the combs and wattles of the two are so longer red, but a dark and dull purple, and they now appear listless and somewhat droopy. Can you tell me what is the matter and what remedy? T. A. R.

Indiana.

A diagnosis cannot be made from the discoloration of the comb alone, as this is a symptom common to various diseases. Anything that would produce obstruction to the circulation would cause the comb to turn purple. This symptom is seen in diseases of the respiratory apparatus caused by the presence of molds or fungi, and it would be equally prominent if the action of the heart were disturbed by some disease, or disturbance of function, of that organ. I would suggest that you remove these birds from the flock to protect the rest from possible contagion, and watch for the development of other symptoms which may give you a clue to the nature of the disorder. M. B. D.

Limberneck.

I notice on page 164, J. W. N. has previously asked for a remedy for limberneck in chickens. I notice that the answer is the ax. For six years I have raised each year several thousand chickens; have had a few cases of limberneck which I have never failed to cure by giving one to three doses of castor oil, not less than a teaspoonful at a dose. If the case requires it, I give a dose in the morning and another at night. I have never given more than three or four doses and never had one die.

New York. J. B. CASTERLINE.

This treatment is a rational one. If limberneck is caused, as is supposed, by ptomaine poisoning from the ingestion of putrid meat, or other poisonous food, a flushing out of the digestive tract by a good cathartic is the obvious thing to do, and where enough of the poison has not already been absorbed to cause death, the fowl should recover. M. B. D.

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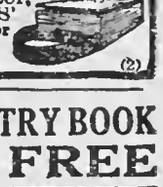

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Baby Chicks, Eggs AND CUSTOM HATCHING—Our S. C. W. Leghorns are bred for production and vigor; not for feathers and show type. White Orpingtons from Cooks' best. Pekin ducks. M. B. turkeys. Peaceful Valley Farm, Oxford Depot, N. Y.

S. C. W. LEGHORN **Baby Chicks** in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of J. M. CASE, Gilboa, New York. $1 per 15; $5 per 100

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, HAMILTON FARM, Huntington, New York

BARRON'S BEST BRITISH BIRDS LEGHORNS AND WYANDOTTES Contest winners. Eggs from imported birds for sale. F. PALMER, Cos Cob, Conn.

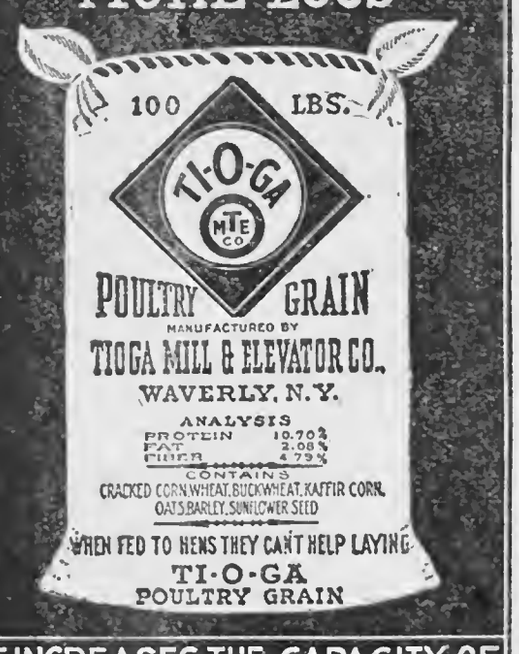
A Bargain in Hatching Eggs—UTILITY S. C. WHITE LEGHORNS. 75c.—15; $2.50—50; $4—100; $35—1000. Also a limited number of B. P. Rocks at $1—15; $5—100.
Riverside Poultry Farm, Gilboa, New York

LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. FRANCIS F. LINCOLN, Mt. Carmel, Connecticut

Baby Chicks OF LIVABILITY, eggs of hatchability from D. W. Youngs' strain, S. C. W. Leghorns, direct from his best matings Open front houses. Circular. WINANS & COFFIN, Stanfordville, N. Y.

Pedigreed S. C. Buff Leghorns
bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Chicago, Los Angeles, Indianapolis, etc. Get blood of "Egg Bred Winners." Dr. L. HEASLEY, Box R. N., Oorr, Michigan

MAKES HENS LAY MORE EGGS



IT INCREASES THE CAPACITY OF GOOD HENS, AND MAKES EVEN A POOR HEN DO HER LEVEL BEST

The Henyard.

THE EGG-LAYING CONTEST.

The nineteenth week of the contest shows a further gain of 516 eggs; the output for the week being 3,173. This is almost four eggs for every bird in the contest. Storrs Agricultural Station pen of White P. Rocks take first place with a score of 51, and the single pen of Buff Leghorns from Grand Rapids, Mich., are second with a score of 50. Frank L. Tuttle's pen of Barred Rocks are third, with a record of 49, and P. G. Platt's White Leghorns fourth with 48 to their credit. Forty-five pens have records of from 40 to 47 eggs each.

In the contest at Thorndale, Pa., Tom Barron's White Wyandottes lead all the pens of any breed, and his pen of White Leghorns stand next to his Wyandottes as the second best pen. The highest scoring hen is a Barred Rock, which has laid 105 eggs in the four Winter months. At 48 cents a dozen she has earned $4.20 in the four months, and has all the rest of the year to earn the cost of her feed. In the Thorndale, Pa., contest there are but five birds in a pen, the same number as in previous years at Storrs. This makes it easy to compare the records made from week to week for the three years to date. These records show that nearly every week gives a gain over the corresponding week of the previous year. This continuous gain in egg production is of immense value to the whole United States. It is stirring up breeders everywhere to produce better layers; it is showing up the possibilities of the business, and the result can hardly be other than greatly increased egg production, and the adding of millions of dollars value to our agricultural productions. That those who are interested in the performance of certain varieties may see how their breed lays a Storrs, I give the record below.

	WK.	TL.
BARRED ROCKS.		
J. F. Francis, New York	39	456
Frank L. Tuttle, Massachusetts.	49	274
A. B. Hall, Connecticut	40	167
Waveny Farm, Connecticut	31	155
WHITE P. ROCKS.		
Storrs Agr. Station, Connecticut	51	359
F. L. Benton, Connecticut	44	341
Storrs Agr. Station, Connecticut	33	241
Storrs Agr. Station, Connecticut	39	220
Storrs Agr. Station, Connecticut	38	206
Storrs Agr. Station, Connecticut	17	129
Albert T. Lentzen, Massachusetts	40	202
BUFF P. ROCKS.		
A. A. Hall, Connecticut	39	305
W. C. Morgan, Connecticut	36	137
WHITE WYANDOTTES.		
Tom Barron, England	44	735
Neale Bros., Rhode Island	46	558
Merrythought Farm, Connecticut	46	553
D. J. Ryan & Son, Connecticut.	33	372
West Mt. Poultry Yards, Connecticut	34	363
BUFF WYANDOTTES		
Dr. N. W. Sanborn, Massachusetts	41	326
Dr. N. W. Sanborn, Massachusetts	44	286
Am. Buff Wyandotte Club, New York	37	293
H. E. Hamilton, Connecticut	35	109
COLUMBIAN WYANDOTTES		
Nat'l Col. Wyandotte Club, Massachusetts	28	211
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	42	537
Geo. P. Dearborn, Florida	43	456
Pinecrest Orchards, Massachusetts	38	419
A. B. Brundage, Connecticut	47	394
J. S. Gillespie, Connecticut	41	375
Colonial Farm, New Hampshire	46	374
Harry B. Cook, Connecticut	43	371
R. C. REDS.		
Glenview Poultry Farm, Connecticut	42	405
C. S. Scoville, Connecticut	24	269
WHITE LEGHORNS.		
F. F. Lincoln, Connecticut	47	611
Storrs Agr. Station, Connecticut	45	589
Cecil Guernsey, New York	41	497
Storrs Agr. Station, Connecticut	43	439
Tom Barron, England	45	421
Marwood Poultry Farm, Pennsylvania	43	379
Storrs Agr. Station, Connecticut	41	367
Storrs Agr. Station, Connecticut	36	327
Branford Farm, Connecticut	45	353
Bonnie Brook Farm, New York.	41	366
L. E. Sands, Pennsylvania	39	326
P. G. Platt, Pennsylvania	48	320
F. M. Peasley, Connecticut	46	290
BUFF LEGHORNS.		
Wolverine Poultry Farm, Michigan	50	267
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	42	171
BUFF ORPINGTONS.		
O. Wilson, West Virginia	43	239
WHITE ORPINGTONS.		
P. A Demgar, New York	36	183
WHITE-LACED RED CORNISH.		
W. L. Red Cornish Club, Massachusetts	24	69
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	38	138
DUNGHILLS		
H. W. Collingwood, New Jersey	34	121
Daniel Hine, Connecticut	41	217
Daniel Hine, Connecticut	42	306
MIXED BREEDS.		
Profitable Pltry., Massachusetts	35	361
Profitable Pltry., Massachusetts	40	314

Total eggs laid to date is 23,719.

GEO. A. COSGROVE.

Baby Chicks

S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred. Strong. Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.
WESLEY GRINNELL, Sodus N. Y.

Day Old Chicks
and
Six to Eight Weeks Old Pullets

Kirkup's Strain S. C. White Leghorns, bred for vigor, size and Large White Market Eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.

Orders taken now for 6 to 8 Weeks Old Pullets for delivery April 10 to May 20. Write for prices. FREE BOOKLET—"Better Chickens"—describing Day Old Chicks, Pullets, Cockerels, etc. Send for it to day.

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KIRKUP BROS., Props.
MATTITUCK, L. I., NEW YORK

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SINGLE COMB WHITE LEGHORNS
I HAVE NO OTHER BREEDS

They are the standard for all the Leghorns of all America, and the greatest layers of all varieties of domestic fowl. I have hundreds of yearling hens and cocks for sale. Mating list free. Address
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Single Comb White Leghorn EGGS FOR HATCHING
From LAURELTON Layers. Bred for superior egg production and combining the finest strains of English and American blood.
$10.00 per hundred; $80.00 per thousand
Write for complete price list.
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Dune Alpin Heavy Laying S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
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Send for catalogue.
DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

The Reliable Spring Water Strain
Single Comb White Leghorns
are layers and payers. Write for Booklet.
Day old Chicks, Eggs for Hatching. No order is too large or too small. Our capacity is 20,000 eggs at one sitting. We guarantee safe delivery of chicks, and fertility of our eggs. We can and will please you. Send in your order and secure a positive delivery date.
SPRING WATER POULTRY FARM, STOCKTON, N. J.

S. C. White Leghorn Baby Chicks 10c. EACH. Safe arrival guaranteed. No order too large. Hatching EGGS by the setting or thousand; fertility guaranteed. Write for catalogue. RICHLAND FARMS, Box 37, Frederick, Md.

Barron Leghorns 282 EGG STOCK **"Storr's" Buff Rocks**
PRIZE WINNING EXHIBITION BUFF ROCK MATINGS. Barron cockerels also head my American Leghorns, exclusively. Toulouse Geese, largest in America. S. C. Reds, Rouen Ducks, Eng. Penciled Runner Ducks, Turkey Eggs. Farm Prices. Cir. Morris Farm, R. 4, Bridgeport, Conn.

S. C. WHITE LEGHORN EGGS for hatching and day old chicks from heavy-laying strain. Strong, healthy stock. Fawn and White and pure White Indian Runner Duck eggs for hatching. Write today for free circular to
Juniata Poultry Yards, Mifflintown, Pa.

S. C. W. LEGHORN EGGS—For hatching. $5 per 100.
LOREN A. LEROY, R. 1, Oswego, N. Y.

MOHEGAN FARM **Purebred Chix** AND HATCHING EGGS. White Leghorns only. 6,000-egg incubator operates until July. Standard prices. Guaranteed Delivery. MOHEGAN FARM, C. H. Baker, Peekskill, N. Y. One Hour from G. C. Sta., N. Y. City

Single Comb White Leghorns exclusively. Baby chix. Eggs for hatching. Send for circular. MEADOW VIEW POULTRY FARM, Lock Box 106, Suffield, Connecticut

Single Comb White Leghorn Eggs—$6 per 100. Eggs that fail to hatch replaced at half price. Ten pullets from this flock in Experiment Station test laid 1739 eggs in a year. ALKEN FARM, R. D. 2, Ithaca, New York

EZRA C. CARTER, Marathon, N. Y.
EGGS, COCKERELS, CHICKS *S. C. W. Leghorn Breeder*
Circ. explains how to breed great layers

Eggs from S. C. W. Leghorns headed by ½ Barron cockerel. Also S. C. Reds, B. Rocks and W. Wyandottes.
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S. C. White Leghorn Eggs for setting, $5 per hundred, from free range stock. Youngs' and Wyckoff's strains. Also baby chicks $10 per hundred. MAPLE GROVE POULTRY FARM, M. C. Dyer, Prop., Summit, N. Y.

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Young strain. Jacobus Silver Campines. Custom hatching a specialty.
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Single Comb White Leghorns
Hatching Eggs, $5 per 100. Day-old chicks—April, $12 per 100; May, $10 per 100. Delivery guaranteed.
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Eggs from limited flock of yearling and two-year hens. (No pullets mated.) $5 per 100.
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Eggs—selected—$5—100. Chicks—selected—$12—100. Mating list.
J. B. CASTERLINE, Orchard Park, N. Y.

FOR SALE—Eggs and Chicks
AND BREEDING PENS. WHITE LEGHORNS. My pen at Storrs' won $50 silver cup for the most profitable Connecticut pen. Best hen—252 eggs in one year. Booklet for stamp. F. M. PEASLEY, Cheshire, Connecticut

Baby Chix—S. C. White Leghorns, $10 per 100. S. C. R. I. Reds, $12 per 100. I. R. Ducklings. Eggs for hatching. Old established business.
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Columbian Wyandottes
Columbian Plymouth Rocks
Partridge Plymouth Rocks
S. C. White and Buff Leghorns
WILBURTHA POULTRY FARMS
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BABY CHICKS
BREEDING STOCK
Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks NOW.

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We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.
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GALEN FARMS, G. F. Gibson, Owner, Drawer G, CLYDE, N. Y.

SINGLE COMB WHITE LEGHORNS Exclusively D. W. Young's Strain. The finest in the world. Bred for their great Winter laying qualities. Over 2,000 layers on free farm Range. Largest plant of high class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity at $6.00 per 100; no order too large. Baby chicks $12.00 per 100; capacity 6,000 weekly. Now booking orders for March and April delivery. My book, "Profits in Poultry Keeping Solved," 5th Edition, given free with all $10.00 orders. Satisfaction guaranteed. Descriptive circulars free.
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Mattituck White Leghorn Farm Chicks
are large, healthy, vigorous, and make good layers.
From YOUNG'S strain..... $12 per 100
YOUNG'S and BARRON'S cross..... 15 per 100
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Headed by Tom Barron cockerels. $2 per setting; 3 sets, $5; $10 per 100. Barred Rocks, $2 per setting. W. Rocks, $2 per setting. G. H. TURNER, Bristol, Conn.

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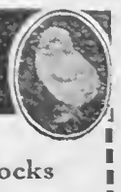

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S. C. White Leghorns, Rhode Island Reds and Columbian Plymouth Rocks
My Leghorns are bred for heavy egg production of large white eggs that bring the highest market prices. My Reds are unexcelled for egg production and for general purposes.
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3,000 CHICKS READY FOR SHIPMENT EVERY WEEK
Price $15.00 per 100. Full count and safe arrival guaranteed. Order direct from this ad. and get your chicks quick, or send for my free chick booklet. It's worth dollars to you if you are going to buy Chicks. It tells how I produce the "VITALITY" QUALITY kind.
D. C. R. HOFF, Lock Box No. 115, Neshanic Sta., N. J.

MAPES THE HEN-MAN GIVES FIGURES.

PART II.

Money on good farm loans is freely offered in our country at 5%. The value of fertilizer or poultry droppings, which have not yet been drawn into the account, will easily take care of that. I consider them worth about 10 cents per hen a year. I inventory the 1,800 hens on January 1 as worth about 80 cents each, when a fair proportion of them are pullets, making $1,440. That is a third more than they would bring as market poultry. I attended an auction sale last November within about 10 miles of me where over a thousand well-bred White Leghorns were sold, most of them being April and May hatched pullets. They were sold in lots of 50 and not a single lot reached the dollar mark. Most of them went around 70 cents; 5% on $4,440 amounts to $222. Deduct $180 value of fertilizer, and it leaves $42 for interest to be provided for out of the $5,000 from eggs and market poultry.

There is no depreciation on birds to be provided for as the flock averaged younger at the close of the year than at the beginning. I ran one of the brooders the second time and managed to raise about 1,100 pullets from 3,720 eggs incubated. Some of the increase of 800 birds on hand January 1 consisted of unsold cockerels, which accounts for the apparently low value I placed on them.

For the item of depreciation on buildings I hardly know what to allow. Probably interested readers can give as good an estimate as I. Most of it will be on the roofing. Most of the roofing used is guaranteed for 10 years without painting, so I think 2% will be liberal. This makes the account stand like this:

DR.	
Grain and feeds	$2,366.00
Coal, 4 tons at $4.40	17.60
Kerosene	6.00
Interest, $4,440 at 5%	222.00
Depreciation, $3,000 at 2%	60.00
Express charges	100.00
	$2,771.60
10 tons of mangels	40.00
	$2,811.60
CR.	
Eggs, sold	$4,100.00
Poultry, sold	438.35
Increased stock	500.00
Fertilizer	180.00
	$5,218.35

The balance of $2,406.75 is left for labor and oversight. Where both are done by the owner, as in my case, I think the correspondent, page 460, has most of her questions answered. Her letter found me fast in bed with a lame back, so that I have not been near the hens in over a week. The work is well enough systematized so that my one hired man was able to match the poultry work and dairy work together at a moment's notive and keep both running smoothly without any overtime work. I doubt if the hens have missed me. This gives him entire charge of 17 head of cattle (10 milking) three horses, and over 2,000 hens, and includes a daily trip to the creamery four miles away.

One pen of September pullets is just beginning to lay. The day they were five months old the thermometer was 10 below zero and he proudly brought in 15 pullet eggs from that pen to show me, as proof that he is holding down my job. He reports that 3½ hours is the most he has had to spend on poultry work any one day, and some days only 2½ hours.

There may be some places where 11 good cows with corresponding young stock, buildings, land, and equipment can be bought for less than $4,440, but they surely are not to be found in Orange County.

My little poultry plant is not large enough to be dignified with the name of a "business." It is more in the nature of an old man's diversion, but it seems to show how a rugged young farmer and working wife with good health, good judgment, and sufficient capital could make their farm "hum" so that the tide of humanity rushing cityward would stop and listen. To those already in the city having scant capital and experience I would say "beware the rocks."

O. W. MAPES.

PROFESSOR AT AGRICULTURAL SCHOOL: What kinds of farming are there? New Student: Extensive, intensive and pretensive.—Indianapolis Star.

Bitter Milk.

What is the cause of bitter milk? After setting away a while both milk and cream risen from pans are very bitter; makes good butter, and only tastes after it is a day or more old. M. E. W.

Scientific men tell us that certain bacteria will live and thrive in milk during cold weather, that is when the temperature is too low for the growth of the lactic acid bacillus which, as everybody knows, causes milk to become sour. These cool weather bacteria leave a bitter taste which is more noticeable when milk is not sour as well. My experience is that milk from strippers is more apt to turn bitter than milk from fresh cows; however, I know of no scientific backing for the latter statement. C. S. M.

Q AND A

Storing Butter.

How can I store my butter so it will keep for six to eight months? M. W.
Palisades, N. Y.

Butter for keeping a considerable length of time should be washed quite thoroughly, until the water comes off the butter quite clear. After this the main thing is to keep the butter as cold as possible, and free from strong odors or taints of any kind. A good cellar would be all right for keeping butter if well ventilated and free from odors, but most cellars do not come up to this standard. C. L. M.

The General says:-

Be sure you're *Certain-teed*— then go ahead.
Roof every building on your farm—house, barn, silo, granary, machine shed—everything with

Certain-teed

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This 15-year-guarantee label is on every roll or crate—and the three biggest roofing mills in the world back up the guarantee.
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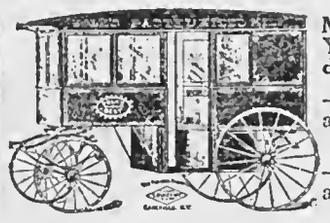

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—Parsons' Wagons are GOOD TO LOOK AT.
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—And Parsons' Wagons, like the finest horses,

ARE PEDIGREE STOCK

True, it has taken us twenty-seven years to reach our present Standard of perfection. We have made a name for ourselves and our product. Time, brains, money have been spent in achieving our success. PARSONS' is a sufficient guarantee.

ASK THE MILK DEALER ANYWHERE!
Milk Dealers', Bakers', Butchers' Wagons Exclusively.
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IF your silage is perfectly cured, succulent and palatable, free from mold, uniform from center to circumference, untainted by foreign matter; if it is not damaged by freezing in winter and never loses its flavor or juices through leakage or absorption, then you have a good silo. If you do not have these things you are not getting the results you are entitled to. The

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Perfectly Air-tight

Perfect-fitting doors make the silo absolutely air-tight. That keeps the ensilage sweet and fresh down to last forkful. Quick, easy adjustment—no hammer or wrench needed. Strong steel hoops form easy ladder. Built to last a lifetime—of White or Yellow Pine, Oregon Fir or Cypress. You may pay more money, but you can't buy a better silo. Our motto is Quality. *Write today for free catalog.*

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SILOS ARUNDEL $ FROM 66.00 UP

depending on the size. We make any size just as cheap.

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Examine it and if it is not as represented, don't take it.

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Are stamped with any name or address with serial numbers. They are simple, practical and a distinct and reliable mark. Samples free. Agents wanted.
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They preserve silage perfectly. Combine best construction, greatest durability and convenience. Easy to erect and keep air-tight. Write today for catalogue. Agents wanted. Address
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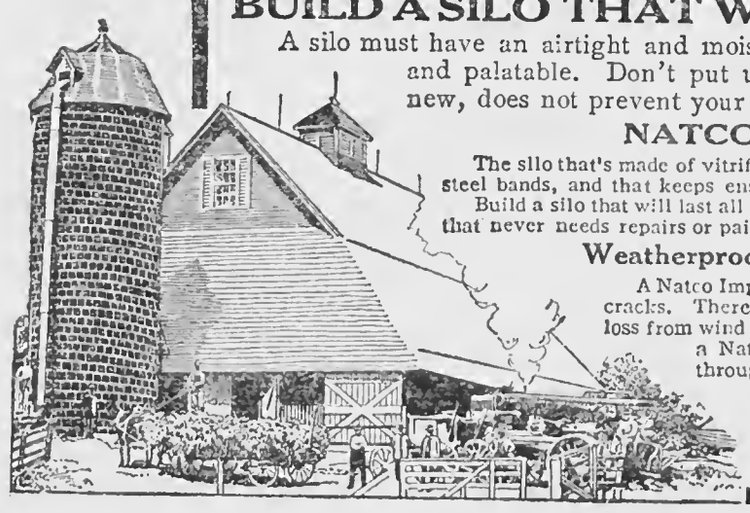
A silo must have an airtight and moistureproof wall to keep ensilage fresh, sweet, succulent and palatable. Don't put up a silo that soon will need repairs, and, even while new, does not prevent your ensilage from souring or rotting. Build a

NATCO IMPERISHABLE SILO



The silo that's made of vitrified clay hollow blocks, each layer reinforced by continuous steel bands, and that keeps ensilage in perfect condition right down to the last forkful. Build a silo that will last all your lifetime and for several generations after you—a silo that never needs repairs or painting and that stands a monument to your good judgment.

Weatherproof—Decayproof—Verminproof—Fireproof

A Natco Imperishable Silo wall never swells nor shrinks, never warps nor cracks. There are no hoops to tighten, no continual outlay for repairs—no loss from wind or weather—it's proof against them all. Any mason can erect a Natco Imperishable Silo and when the job's completed, you are through with silo troubles forever.

Write Today for FREE Silo Book We have an attractively illustrated book full of valuable information about ensilage and which also gives a complete description of the Natco Imperishable Silo. May we send you a copy? Ask for Book L

NATIONAL FIRE PROOFING COMPANY, Syracuse, N. Y.

MARKETS

PRODUCE RECEIPTS AT NEW YORK.

Week ending March 20.

Butter, lbs.	3,275,000
Eggs, doz.	2,861,600
Apples, bushels	108,500
Potatoes, bushels	126,700
Hay, tons	6,293
Wheat, bushels	328,200
Corn, bushels	15,750
Oats, bushels	313,125

Wholesale Prices at New York,

Week Ending Mar. 20, 1914.

BUTTER.

Creamery, extra, lb	25	@	25½
Good to Choice	23	@	24
Lower Grades	19	@	22
Storage	18	@	23
State Dairy, best	25	@	24
Common to Good	18	@	22
Factory	15	@	19
Packing Stock	13	@	17

Elgin, Ill., butter market firm at 26½ cents.
Philadelphia, western creamery, 27 cents.

CHEESE.

Whole Milk, best	19	@	19¼
Common to Good	14	@	18
Skims	06	@	12

EGGS.

White, choice to fancy, large	22	@	23
Common to good	18	@	21
Mixed colors, best	21	@	22
Common to good	17	@	20

FRESH FRUITS.

Apples—Spitzenburg, bbl.	4 00	@	5 50
Spy	4 00	@	6 00
Ben Davis	4 00	@	5 00
King	4 00	@	5 50
Greening	3 50	@	5 50
Newtown	6 00	@	7 50
Baldwin	4 00	@	5 25
Western, box	1 50	@	3 00
Strawberries, Fla., qt.	20	@	40

BEANS.

Marrow, 100 lbs.	4 20	@	5 35
Medium	3 45	@	3 55
Pea	3 15	@	3 50
Red Kidney	5 15	@	5 25
White Kidney	5 75	@	5 80
Yellow Eye	4 90	@	5 00
Lima, California	6 20	@	6 80

HOPS.

Prime to choice	42	@	44
Common to good	38	@	41
Pacific Coast	20	@	23
Old stock	15	@	18
German crop	67	@	72

VEGETABLES.

Potatoes—Maine, 180 lbs.	2 25	@	2 50
State, bulk, 180 lbs.	2 12	@	2 25
European, 108 lb. bag	1 00	@	1 75
Bermuda, bbl,	5 50	@	7 00
Florida	2 00	@	4 50
Sweet Potatoes, bbl	1 50	@	2 00
Beets, bbl.	2 00	@	2 50
Carrots, bbl.	2 25	@	2 50
Asparagus, California, doz.	2 50	@	5 00
Cabbage, Danish seed, ton	20 00	@	25 00
Imported	20 00	@	25 00
New, bbl. crate	1 50	@	1 75
Chicory, bbl.	2 00	@	3 75
Kale, bbl.	25	@	75
Lettuce, half-bbl. basket	1 00	@	4 00
Onions—White bu.	1 50	@	2 75
Red, 100 lb bag	2 25	@	2 75
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	2 50	@	3 75
Peas, Southern, bu.	3 00	@	8 00
Shallots, bbl.	4 00	@	4 50
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 00	@	4 50
String Beans, bu.	2 00	@	4 75
Squash, Marrow, bbl	3 00	@	3 50
Hubbard, bbl.	3 00	@	3 50
New, bu.	2 00	@	2 00
Egg Plants, Southern, bu,	2 00	@	3 25
Tomatoes, Southern, 6 bkt. crate	1 50	@	3 50

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 25
No. 2, box	2 00	@	3 00
Mushrooms, lb.	15	@	35
Radishes, 100 bunches	1 00	@	2 50
Tomatoes, lb.	25	@	35

LIVE POULTRY.

Chickens, for fricassee, lb	15	@	15½
Squab Broilers, pair, fancy	85	@	90
Broilers, fair to good, pair	45	@	55
Roasting chickens, lb.	18	@	20
Fowls	16	@	16½
Roosters	12	@	12½
Ducks	17	@	18
Geese	13	@	14

DRESSED POULTRY.

Turkeys, fresh killed, best	24	@	25
Common to good	18	@	24
Chickens, choice broilers, lb	30	@	35
Squab broilers, pair	90	@	1 00
Broilers, common to good	21	@	25
Roasters, fancy	24	@	25
Fowls	14	@	18
Capons, choice	26	@	28
Ducks	18	@	19
Geese	12	@	16
Squabs, doz.	2 50	@	5 00

HAY AND STRAW.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	19 50	@	20 00
No. 2	17 00	@	18 50
No. 3	14 00	@	17 00
Clover mixed	12 00	@	18 00
Straw, Rye	17 00	@	19 00

LIVE STOCK.

Native Steers	6 50	@	8 50
Bulls	6 00	@	7 50
Cows	4 00	@	7 00
Calves, prime veal, 100 lbs.	7 00	@	11 00
Culls	5 00	@	6 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	7 50	@	8 00
Hogs	9 00	@	9 40

MILLFEED.

Wheat Bran, ton	27 00	@	29 00
Middlings	28 00	@	30 00
Red Dog	29 00	@	30 50
Corn Meal	29 00	@	30 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	14	@	14½
Fair to good	11	@	13
Buttermilks	09	@	10
Lambs, Hothouse, each	5 00	@	6 50
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	1 04	@	..
No. 2, Hard Winter	1 02	@	..
Corn, as to quality, bush.	71	@	76
Oats, as to weight, bush.	43	@	46
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	28	@	30
Ordinary grades	23	@	25
Butter, fancy prints, lb.	31	@	34
Tub, choice	27	@	29
Chickens, roasting, lb,	27	@	30
Fowls	22	@	25
Turkeys	28	@	32

PRODUCTS, PRICES AND TRADE.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Miscellaneous wholesale prices at New York are mainly as previously reported, $1.81 and $1.71 per 40-quart can for B. and C., though less of the latter is arriving because of health board restrictions.

*

Butter has declined three cents during the week, best creamery now wholesaling at 25 cents. A great effort is being made to get rid of the storage creamery, prices on medium grades having been cut to 19 to 21 cents. The small amount of fancy State dairy arriving brings 24 cents, but most receipts are of lower grades, worth only 18 to 20.

*

Old cheese, particularly colored stock, is very scarce, and one cent higher. The supply of white is a little larger, but the market as a whole is in strong position. Prices in Canada at present are too high to encourage imports from that country. The low prices of butter and high figures for cheese are naturally turning more milk than usual into the latter, so that the output of new cheese is expected to be considerably increased.

*

The egg market is unsettled, prices running eight to nine cents per dozen lower than last week. Receipts for two days at New York ran over a million dozen. The top wholesale price for fresh eggs is 22 cents. This includes everything but large whites under special contract, and casual sales to customers who are looking for something extra choice and willing to pay a premium for it. Prices are now on a level with last year.

*

The embargo on potatoes from Holland has now been removed by the Department of Agriculture, as that country is considered free from the diseases which caused the quarantine.

*

Captain Polack, of the North German Lloyd, has just made his 200th trip across the Atlantic. He has been working for the company since 1886, and a captain since 1897.

*

Port Arthur, in Southeastern Texas, leads all ports in this country in grain shipment, the movement there in 1913 being 203,000,000 bushels, which is 25,000,000 bushels ahead of the next largest port, Buffalo.

*

The number of domestic animals in Germany, according to one of our consuls, is as follows: Poultry, 82,474,317; hogs, 21,885,073; cattle, 20,158,738; horses, 4,516,297; sheep, 5,787,848; goats, 3,383,971; hives of bees, 2,619,891.

*

Our trade balance, that is the excess of our exports over imports, for the seven months ending January 31, was about $454,000,000. Our exports for this period totalled $1,522,100,000. Our largest customers are England, Germany, Canada and France.

*

The telephone combination had net profits of $32,920,090 to turn over to stockholders January 1, making a dividend of 9.55 per cent. The number of daily telephone connections averaged 27,237,000, and there is a 16,111,011 mileage of wire.

*

The wool market in the East has been very dull. Some recent prices are: Michigan and New York, unwashed Delaine, 22 to 22½; Ohio half blood combing, 24 to 25; Kentucky, three-eighths blood, unwashed, 23 to 24. Shipments of wool from Australia to the United States for seven months past amounted to $1,556,255.

W. W. H.

Stop Feeding Butter Fat to the Hogs

—You Can Feed Them BETTER on Food That Costs a Lot Less

RUNNING your cream separator at the wrong speed leaves one-fifth to one-half of the cream in the skim milk which you feed to your hogs. Yet nobody on earth can turn the handle of a separator at the right speed by "guess."

The Stewart Speed Indicator stops all the waste and pays you 20% to 50% more butter-money because it keeps you turning exactly the proper number of revolutions per minute.

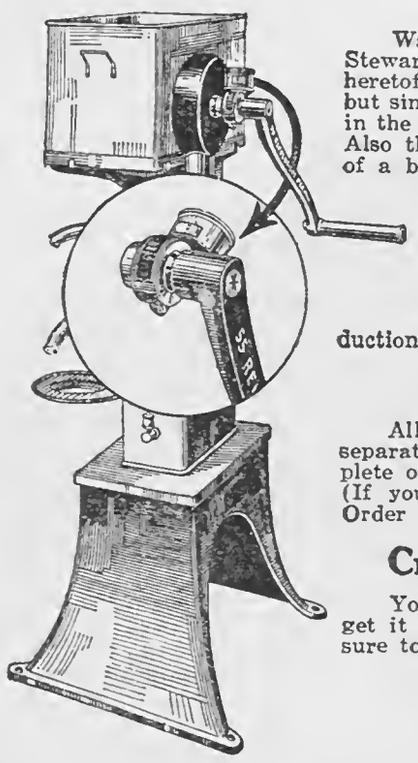
The "Kansas Farmer" says—"It is easy to lose the butter-fat (cream) of 2 or 3 cows in a 10 or 12 cow herd by incorrect cream separator turning." Dairymen have lost thousands of dollars just that way. But NOW hundreds of long-headed dairymen are saving the cream they used to waste—saving it by using a Stewart Speed Indicator on their separators. The

Stewart Speed Indicator for Cream Separators

goes on the crankshaft and shows how fast you are turning the crank-handle. The maker of your separator has already told you just how fast to turn it. If he says "55 revolutions" he means just that many—not even one more or one less per minute.

Just Watch the Stewart

Keep your eye on it as you turn the crank-handle. If it says "55," then you are cranking at the rate of 55 revolutions per minute. If it goes above or below that mark you must slow down or speed up, as the case may be. Keep it right there. No counting or timing is ever necessary—the Stewart tells at a glance.



For sale by Agricultural Implement and Hardware dealers all over the world.

"A Great Saving of Cream"

Walter L. Griffith of Wisconsin writes us: I find that the Stewart Indicator is a great help in many ways. I have found heretofore when separated milk stood, that cream would rise on it, but since using your Indicator there has been absolutely none, which in the cost of a year's time will amount to a great saving of cream. Also the cream gives a higher test and seems to be more even and of a better quality."

One dairyman with 20 cows lost $524.10 in a year by guessing at the speed he was turning the crank handle.

Another dairyman writes that he has 8 cows and that guesswork lost him $18.50 in one month.

How about YOU? Are you willing to throw cream to the hogs? Put a Stewart Speed Indicator on your separator and watch results. If it does not increase your cream production, then take it back within 30 days and get your money.

Price $10—Easy To Put On

All you have to do is to tell us the name and number of your separator, and the year it was made. We furnish the Stewart complete on a new crankshaft that you can easily install—all for $10. (If yours is a De Laval, then no extra crankshaft is necessary.) Order from your dealer or direct from us.

Cream Literature And Butter Book—Free

You ought to have this information right now—and you can get it free by filling out and mailing the coupon below to us. Be sure to send us the coupon today.

Stewart-Warner Speedometer Corporation,
107 Diversey Blvd., Chicago, Ill.

Please send me, free, all your literature on Cream Production and the books about the Stewart Speed Indicator for Cream Separators.

My name is.....

My address ..... State.....

Only device made that will operate 2 to 50 swinging stanchions and cowstops with one movement of the lever. Stanchions also operate singly—line up cows with gutter and embody all other latest features. All West Bend Equipment guaranteed. Write for catalog—shows full line of stanchions, also litter and feed carriers with rod or rigid track.

WEST BEND BARN EQUIPMENT CO.
204 South Water Street West Bend, Wis.

LIVERPOOL SALE AND PEDIGREE CO'S FOURTH CONSIGNMENT SALE

180—HEAD—180

SYRACUSE, N. Y., APRIL 14-15, 1914

From the entries received, it is certain that this will be the **BEST SALE OF THE SEASON.** All sound animals of very superior breeding. Animals that will improve any herd. All tuberculin tested.

Some of the best breeders in the country are sending their **"GOOD ONES"** to this sale. Plan to attend.

LIVERPOOL SALE & PEDIGREE CO.
LIVERPOOL, - - - NEW YORK

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : :

PUBLISHER'S DESK

Some time in January, as you will see by card I am sending you, this man W. Bradley of Brooklyn, N. Y., called upon about every milkman in Saratoga Springs (about 30 in number) selling individual cream dippers to dip cream from milk bottles, and the "Dairy World," as you will see on slip. Up to this time no one has received cream dippers or the paper. Each man paid his $2. Is this a fake deal or what is it? I am writing you thinking perhaps you might help us, but don't know that you can, as he gave no number in Brooklyn. We are all in the same boat anyway. G. C. W.
New York.

There is no paper so far as we know that is known as the Dairy World. The Jersey Bulletin of Indianapolis, Ind., is known as the Jersey Bulletin and Dairy World, and we find in the February 11th issue of that publication a warning is given against G. E. Mayo of New York City, who is alleged to have been working this same game. This notice will serve as a warning to dairymen generally to beware of these agents going about the country offering to sell cream dippers in connection with subscriptions to the Dairy World or other publications. Getting money under false pretenses is a criminal offence, and agents who practice it are liable to arrest.

The recognition of your 35-cent dollar for the farmer in Governor Glynn's special message on coöperative marketing is the best yet. It is now receiving recognition by speakers and the press everywhere. It has taken many years of hard pounding, but you are breaking in at last. W. H. K.
New York.

Seventeen years ago, there was a big fuss raised in this country about the 50-cent dollar. When the excitement subsided, we called attention to the farmer's 35-cent dollar. We have repeated the reference persistently ever since. Four years ago the New York State Agricultural Society took it up and now the air vibrates with the injustice of it. Sometimes it seems monotonous to harp everlastingly on one subject, but it seems the only way to drive an injustice home to the American people. But when they grasp the meaning of an economic and moral subject, it is hard to hold them in check. The 35-cent dollar must go.

To my utter astonishment I find this under the caption of an "old breeder's sage counsel," in the text columns of "The Country Gentleman," by one Frank R. Johnson:

"Did you always know how to price a bird in answer to an inquiry by mail?" asked the young breeder, who in his growing interest had moved his chair closer to me and permitted his cigar to go out.

"I did not," I confessed. "I used to study those letters of inquiry over and over, read them back and forth and between lines, endeavoring to get some insight into the writer's character, liberality, business judgment and so on, When I could not satisfy myself as to just where he belonged—whether in the liberal, conservative or close-buying class—I sat down to the desk and wrote three descriptions on three different sheets of paper of the same bird, pricing description No. 1 at $15, description No. 2 at $20, and description No. 3 at $25. That developed the situation. If the prospective purchaser was a sensible close buyer he bought on description No. 1. If he was one of those persons who measure their own and everybody else's importance by the dollar standard he promptly ignored descriptions Nos. 1 and 2 and mailed a check for bird priced under description No. 3. He would then point with pride to the bird and boast of the price he paid. Under some circumstances salesmanship of this kind might be subject to criticism, but you who have been in 'the game' any length of time cannot count upon the fingers of both hands the sales you have lost because you did not make your price sufficiently high to meet the idea of the purchaser. So it averages up after all."

Shades of Dawley! What is new about this fake, except the bold brazen way of publicly admitting the swindle and bragging about it? I can see how a man tainted with the practice could be insensible of the theft, but I fail to understand how the editor of a respectable farm paper should publish it to the world, and commend it to young breeders as "sage counsel." Mr. Johnson has confessed to a record that bars him forever from the advertising columns of THE R. N.-Y. His salesmanship may be successful, but his ideals are not, to say the least, of a high standard.

I have just read in THE R. N.-Y., page 246, Dr. Ulman's letter and your reply to him. I want to shake hands with Dr. Ulman, and you may add me to your list, towards 100 members. THE R. N.-Y. has done more for its subscribers than all the other papers put together, and now, with the help of the subscribers you can, I believe, in a short time put most of the fakers out of business. You have my hearty support in your new undertaking. I would like further to suggest that each member of the society send the secretary a list of all the papers he or she takes, excluding the daily newspaper, and also notify him and THE R. N.-Y. of any advertisement appearing in any of the papers having the odor of a fake. When such advertisement has been proved to be dishonest, the secretary should write the publisher and request him to discontinue publishing the advertisement. Should the publisher refuse to do as requested, then notify him of the number of his subscribers who will discontinue his paper unless the request is granted. It would not be very long before the publishers would be careful who they admitted to their columns.
Maine. A. F. J.

When I made the suggestion to organize an anti-fake society when a hundred readers had signified their willingness to become charter members, I did not know how much personal interest our people would take in the subject. Dr. Ulman and some others had persisted in sending us money to keep up the fight, and the suggestion for a voluntary society was made on the spur of the moment, but I have had several strong enthusiastic letters on the subject. The above letter gets clear into the marrow of the subject. I am chairman of a vigilance committee that is trying to discourage dishonest advertising. I have often pointed out that publishers dominate the situation. No dishonest advertiser could exist if the publisher refused to go into a conspiracy with him to rob the public. If we succeed in making the publisher feel his responsibility we will have no dishonest advertisers in the public press.

Charges of fraud are made in a suit brought in the Supreme Court by P. Berry & Sons of Hartford, Conn., against Johnstone & Coughlan, commission merchants. Among other things, Johnstone & Coughlan, highly regarded in the trade, are alleged to have bought thousands of tubs of inferior butter in the open market, scraped the tops of the tubs, substituted the name of McDermot Dairy, a maker of high grade butter, and sold the product. This is made a crime by the agricultural laws of the State, punishable by a fine of not less than $100 for each violation. Frank M. Coughlan, junior member of the firm, admitted the charge, and said that this was a custom of the trade and that no one could tell what butter he was eating by looking at the marks on the package.—Daily Paper.

It seems that Berry & Sons are jobbers. The commission merchants claim they knew or should know that the brand was not genuine, and that the same thing is done every day in the trade. This comes pretty near corroborating Gov. Glynn's advice that commission merchants are speculating in food products to the disadvantage of both producer and consumer.

You say you do not know the David Rising Seed Co., of Easton, Pa. I do. David Rising came to this section a year ago. He sold a lot of seed around here, and all paid him in advance except myself. On the order blank he refers to the Easton Trust Co. To my inquiry they replied that he carried a small account, but they did not know him and would not recommend him. I cancelled order and received threat to sue, etc. About April first last he delivered some very poor seed to a few of his customers, and to others none at all. Several of these got together and caught him in Flemington one day, and had him arrested. I was told that he returned the money. If the information is any use to you or your neighbors, I shall be repaid for the time and trouble of writing you. C. T.
New Jersey.

It is a pretty hard matter to elude THE R. N.-Y family. Schemers meet them everywhere, and the beauty of it is that one is always willing—I was going to say glad—to be of service to all the other members of the family. Ordering seed from a concern you do not know is a serious matter. The cost of the seed is trifling; but when you consider that it may result in the failure of a season's crop, you get at the extent of the possible loss. J. J. D.

"WHEN I was on the ocean and saw its boundless extent, I said to myself, '*Sic transit gloria mundi.*' Didn't you feel the insignificance of life that way?" "No; I never got beyond the sick transit."—Baltimore American.

THIS STEEL TRACK HAY CARRIER

Open bell, swivel reversible. Can not pass trip block while in operation. Easily reversed from the floor. Constructed of malleable iron. Travelers and sheavers revolve on turned bushing. Of recognized superiority, combining all the valuable features that experience has demonstrated to be desirable. With our No. 100 sling pulleys it makes a complete sling carrier.

ROCHESTER HAY, FEED and LITTER CARRIERS, WATER BASINS, DIVISION

STALLS and STANCHIONS are universally popular and our testimonials for their superiority are the best. Satisfaction guaranteed.

Let us send you FREE our 46-page catalog with complete descriptions, beautiful illustrations and splendid testimonials.

AGENTS WANTED. RESERVE YOUR TERRITORY NOW

The Ricker Manufacturing Co., 249 N. WATER ST. ROCHESTER, N. Y.

OUR SPECIAL No. 4

This Hay Carrier Is 12 Months Ahead!

DON'T think of buying any Hay Carriers until you see the new 1914 Model HARVESTERS. They're at least one year ahead of ordinary kinds both in mechanical improvements and strength. Double the size and twice the weight of old-fashioned, everyday fork carriers. Simple and strong—practically no repair expense.

Harvester Hay Carriers

1914 Models—for Steel, Wood or Cable Track

This Is Yours

This Hay Tool Book is free for the asking and is well worth having. *Write for it.*

Made in three types — sling or fork style. Eleven new and distinct improvements make them mechanically perfect. No matter where you unload your hay, the Harvester will handle it without re-roping or changing pulleys. You won't consider old-fashioned hay carriers after seeing the Harvester.

STAR GOODS

All Guaranteed STAR Stalls, Stanchions, Litter and Feed Carriers, Harvester Hay Tools, STAR Hoists, Cannon Ball Hangers, etc. *Write for details.*

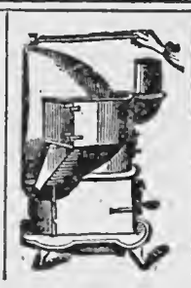
Our big "Hay Tool Book" tells the whole story. Let us send it. *We'll include the name of a dealer in your town who will gladly show you the Harvester Line for 1914.*

HUNT, HELM, FERRIS & CO., 53 Hunt St., Harvard, Ill.

A SAW BARGAIN

Send us $1.15 and get a 26-inch skew back steel hand-saw, postpaid. If not satisfied send it back and we will return your money and ask no questions. Similar bargains in all farm tools.

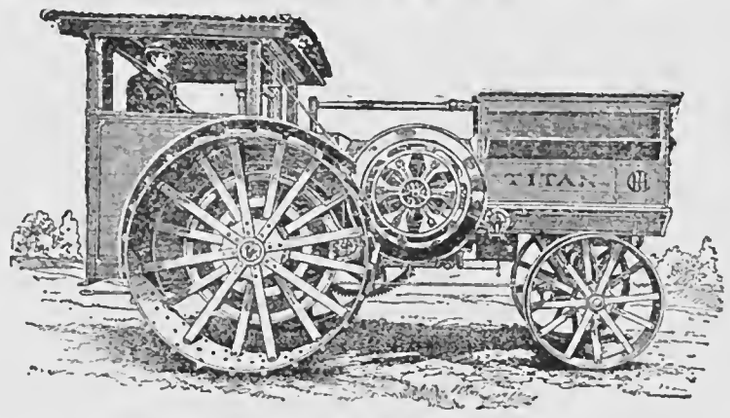
SLAWSON HARDWARE CO.
WHITE PLAINS -:- NEW YORK



COOK YOUR FEED and SAVE Half the Cost—with the PROFIT FARM BOILER

With Dumping Caldron. Empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, etc. Send for particulars and ask for circular J. D. R. Sperry & Co., Batavia, Ill.

International Harvester Oil Tractors



The I H C Line

GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Peg, Spring-Tooth, and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

INTERNATIONAL Harvester oil tractors rank first as machines for all-around farm use. Enumerate a dozen of your farm operations and you will find these tractors—Mogul or Titan—can be used with profit in all.

They furnish reliable power for all belt machines and for disking, plowing and other drawbar work. Features which make I H C tractors valuable are the truck design, the large mainshaft and its long bearings, the power starting system, the dust proof engine—features of proved value which you find on all I H C tractors.

I H C tractors, Mogul or Titan, are simple, strong, and easily operated. They are built in all sizes, 6–12 to 30–60-H. P., and in styles to meet the needs of every good sized farm. The I H C line also includes various styles of general purpose engines from 1 to 50-H. P., operating on high and low grade fuel oils.

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WEATHER AND CROPS.

From all accounts the peach crop in Western New York is ruined. The Fall was such that the trees did not harden off well, and the mercury has been several times down to 16 below or more in the peach belt. All growers report the same thing: that it is impossible to get more than a small per cent of the buds to bloom when taken into the house. Of course it may not be as bad as they think, but I am satisfied that if the statement is true that 16 degrees below ruins the crop, then it is a goner sure. C. I.

Rochester, N. Y.

The main money crops of this section are potatoes and beans. Potato buyers are offering 35 cents for white stock. Beans are all bought up on a hand-picked basis of $1.60 per bushel. Cattle buyers and local butchers pay 4½ to five cents for beef cattle, live weight. Dressed hogs nine to 10 cents per pound. Very few cattle or hogs to be had. Butter 28; eggs 25 in trade. R. T. S.

Empire, Mich.

We have had more snow this Winter than I ever knew before, and some of it fell in such masses as to break down orchards and forests. The ground has been covered with snow most of the time, making conditions ideal for Winter wheat. The roads have been very good, with excellent sleighing nearly the whole Winter. Much hauling of supplies for the farms has been done, such as ice, lime, fertilizer, logs, lumber and wood. Marketing of last year's crops is practically finished. However, dairying and fruit-growing have almost taken the place of general farming here, and these two occupations require market trips throughout the year. Our soil is glaciated clay, or Volusia silt loam, and when the soil is depleted of its lime and phosphorus, general farming will not pay. Corn in 1913 was immature on account of early frosts, and molded in the crib. Farmers are importing Ohio corn at 36 cents per 35-pound bushel, freight paid. Hundreds of carloads will be brought here before corn comes again. Last Fall the potato crop was good; it is selling now at 85 cents a bushel wholesale. Apples were a light crop, on account of the May frost and the Summer drought. Those on the hills who had frost drainage (air drainage) have good crops to sell now. As apples are around $6 a barrel, wholesale, they are a profitable crop this year. It must be remembered, however, that this year is an exception, and a very rare one. The present writer never before, in a somewhat lengthy life, saw apples so high, and never expects to see such prices again. Consequently, he would advise intending growers never to expect to get $6 a barrel for their apples. A senseless law requiring commodities to be sold by the pound instead of by the bushel was recently passed. It adds to the trouble of doing business and to the cost of living. Farm sales are in progress and prices rule high. Orchardists are spraying the dormant trees for scale and fungous pests. Considerable plowing for corn has already been done. Mareh came in with a blizzard, and according to tradition we expect his lion-like entrance to give promise of a lamb-like exit and an early Spring. J. C. M. J.

Lawrence Co., Pa.

Wheat 94; oats 40; potatoes 70; butter 30; eggs 28; chickens 14 live; ducks 12; turkeys 18. Cows are selling from $40 to $100, and extras more. M. H.

Dalton, O.

We are having real Winter weather, with lots of snow; stock wintering well; wheat looking fair. Fat cattle 7¾ to 8, and scarce; good dairy cows $50 to $75; horses $150 to $250; hogs 7 to 8 cents; butter 28 to 30; West Jefferson creamery 40 to 45; eggs 22. Hay, mixed, $14 to $15. Extra Timothy $17 to $19; straw $8 to $9; corn 65; oats 50; wheat 93; potatoes $1.10; apples 4 cents per pound; cabbage 3 cents a pound; poultry, hens, 13 to 14; roosters 15; springers 15.

Fultonham, Ohio. H. W. H.

Good milch cows sell at from $60 to $100; fancy stock more. Butter fat 30 cents; country butter 25; milk eight cents per quart; cream 30 cents per quart; fat cattle from six to seven cents per pound; hogs on foot seven cents; dressed 10; corn 65; wheat 95; oats 40; hay $10 to $14 per ton. Apples, best quality, $6 per barrel; Ben Davis $4.50 per barrel. Cabbage $4 per barrel; potatoes $1 per bushel. Chickens on foot 12 cents per pound; eggs 25. Hired men receive about $30 per month and board, or if married they get a large garden and house, furnished, instead of board. Most of the desirable men are hired the year around. R. W. L.

Corning, Ohio.

Horses $150 to $250, rather dull at present; cattle, fat, seven to eight cents; stockers 6½ to 7½; hogs, fat, 8 to 8½; sheep, very few changing hands; chickens 13½ cents, live; corn 59 (shelled); wheat 90 to 92; oats 37; barley 55; potatoes 75; rye 54; Timothy seed $1.50; clover seed $7; Alsike $9.25; Timothy hay $10 to $12; mixed hay $7.50 to $9.50; clover $6 to $8. tter 26; eggs 23; lard 12. Everything slightly lower than one year ago. More farms for rent than usual at this season of year. J. B.

Columbus Grove, O.

Farmers are not well enough organized to command any better prices than are offered by local merch nts or transient buyers. Good apples bring about 75 cents per bushel. Some fancy ones $1. Butchers get our pork dressed for less than the price of live hogs in Chicago. The farmers seem to think they can accomplish little by organizing, unless the consumers of our products would organize. Q. M.

Elk Rapids, Mich.

Glencoe is a mining town. Generally we get better prices than they do in similar locations. Hay from $15 to $18; straw $7 to $8; butter 32 cents; eggs 30; hogs $8.50 on foot; $10.50 dressed; cattle from $7 to $7.50, on foot; cows will run from $40 to $60; yearling calves from $20 to $25; corn 80; oats 50; wheat 95; potatoes 90; apples $1.25. All fruits scarce on account of frosts last year.

Glencoe, O. J. H. G.

March 10. We have had pretty steady Winter since the first of February, and some cold days, so much so that I cannot find a live fruit bud on our Kieffer pears, these seeming quite far advanced. The Japan plums are also Winter-killed, and I wish the trees were too, as I still spared some of them, but never got enough fruit to be worth while. The natives are more satisfactory all the while, and the Europeans are satisfactory, though not so sure a crop as the natives. For some reason our peaches seem unharmed, though I expect the buds are Winter-killed in lower places, where the thermometer registered 14 to 17 below. There were some apples last season on the hills, or where there was good air drainage and in such places there is not such a good setting of fruit buds on lower ground, but where the crop was killed by the May frost last season the trees are fairly set with fruit buds, and with the cold weather holding on so long it seems like a good prospect for a crop of apples for the coming season. C. W.

Wayne Co., O.

Horses $125 to $250; cattle, prime, 8½; butcher stuff, 5 to 7; cows, dairy, $40 to $75; butterfat 27; country butter 25; eggs 28; chickens 14; hogs 8¼. Hay, Timothy, on track, $11.75; clover, choice, $10.75; wheat 92; corn 70; oats 45; rye 70; potatoes 80. This is not much of a fruit country around here, and fruit was a failure last season. Apples retail at the stores at 70 to 80 cents a peck, one or two for five cents. There is no truck raised for the market here, only near the cities. N. B.

Atherton, O.

Butter 20 to 25 cents to the producers, 25 to 30 cents at retail. Those who have private customers obtain five to 10 cents more on the pound for butter and five cents more for eggs. Milk retails all the way from six to nine cents. Milch cows from $45 to $100 per head, although some good ones brought as high as $150 at sales this Winter. The range of prices for cattle and hogs at the stock yards at Oklahoma City, eight miles south of us, are for cattle $5.25 to $8.50, according to grade; hogs from $7.75 to $8.75 per head. During the growing season we have a truckers' market at the city, where the producer and consumer get together to their mutual benefit. The following are the retail prices: Potatoes 95 cents to $1.25; cabbage 3½ cents per pound; turnips, carrots, etc., about the same price; lettuce 15 cents a pound; onions 5 and 10 cents per pound; apples $1.75 to $2.75 per bushel; wheat 80; corn 68 to 70; oats 42 to 45; Kaffir corn $1.25 per 100; Alfalfa hay $13 to $15; prairie hay $12 to $14; cane hay $8; straw $5. Hens 13 to 14 cents per pound; turkeys 15; ducks 10; geese 8. Our normal rainfall from January 1 to date (March 14) should be over three inches, but so far we have had less than one inch. The weather is pleasant, but it still freezes nearly every night. Some oats have been in the ground about six weeks. C. A. D.

Britton, Okla.

Peach Prospects in Texas.

After considerable Summer weather in January, one day with the thermometer at 80 in shade, on February 7 real Winter came along, with thermometer close to 10 (above). Some of the peaches had started to bloom, all buds, plums, peaches and Kieffer pears, were considerably swollen, ready to open into full bloom within a few days. The result of course spelled disaster, especially since the hard freeze was followed by bright sunshine, thawing during the day and again freezing the following night. We have had since several more freezes, though not quite so bad. The result is today, March 4, Kieffer pears, seem to be all destroyed; Elberta peach likewise. Of my new ones, Eva and Millford fared the same as Elberta, hardly a live bud left. Of the others, Tena and Frank suffered least; they have enough blooms left for several crops, while all the rest, with favorable conditions from now on, can yet bring fair crops. I understand the J. H. Hale peach covers the time of Elberta and it will produce good crops when Elberta fails. The Tena comes in as Elberta goes out, and it is every way superior to Elberta, escaping when Elbertas are all killed. Ought not this eliminate that variety from our list of profitable sorts? This is a hard blow for the growers of our State, because during the last 15 years fully nine-tenths of the peach orchards set out, have been at least three-quarters Elbertas. Thus, when there is a good crop generally, there are more Elbertas than can be made use of in any way, there not even being one-tenth enough hogs to eat the surplus. On the other hand, failing so often, there is disaster any way it comes. The fact really is, the peach business in Texas of late years has been greatly demoralized, from as I see it a combination of causes.

Texas. J. W. STUBENRAUCH.

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FOR SALE—Prairie State Hovers, in good condition; used two seasons. W. H. COLLINGWOOD, Hammonton, N. J.

FOR SALE—Two International Hovers; used one and two seasons, good condition; $10 for both. No. 7 Mann Bone Cutter, used two months; $10; will prepay freight. JOHN A. LOSEE, Richfield Springs, N. Y.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A good creamery man with some capital; married; to go in partnership in an established business. Address C. J. ANDREWS, Clearwater, Wash.

FARM HANDS WANTED in institution work; salary $32 a month and maintenance to begin with. Address SUPERINTENDENT, Letchworth Village, Thiells, N. Y.

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FOR SALE—Good ten-acre farm in Connecticut, equipped for poultry, plenty of fruit and good buildings, $1,600; $700 down. Answer H. C., care R. N.-Y., 333 West 30th St., New York.

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TO RENT—Farm 135 acres; woodland, pasture, meadows, near Springfield, Mass., and tenement of five rooms in homestead used as summer home by owner; large barns; tools and stock to be owned by tenant; grown or no children preferred; state references. L. B. GILLET, Middletown, Conn.

FOR SALE—230-acre farm; stock, tools; 10-room house, basement barn, 30 tieups; running water; sugar orchard; plenty wood, lumber and fruit; silo; sugar corn; ice and hen houses; school 5 minutes' walk; have wintered 25 cows, five horses; possession at once. ARTHUR ROBINSON, Bridgewater Corners, Vermont.

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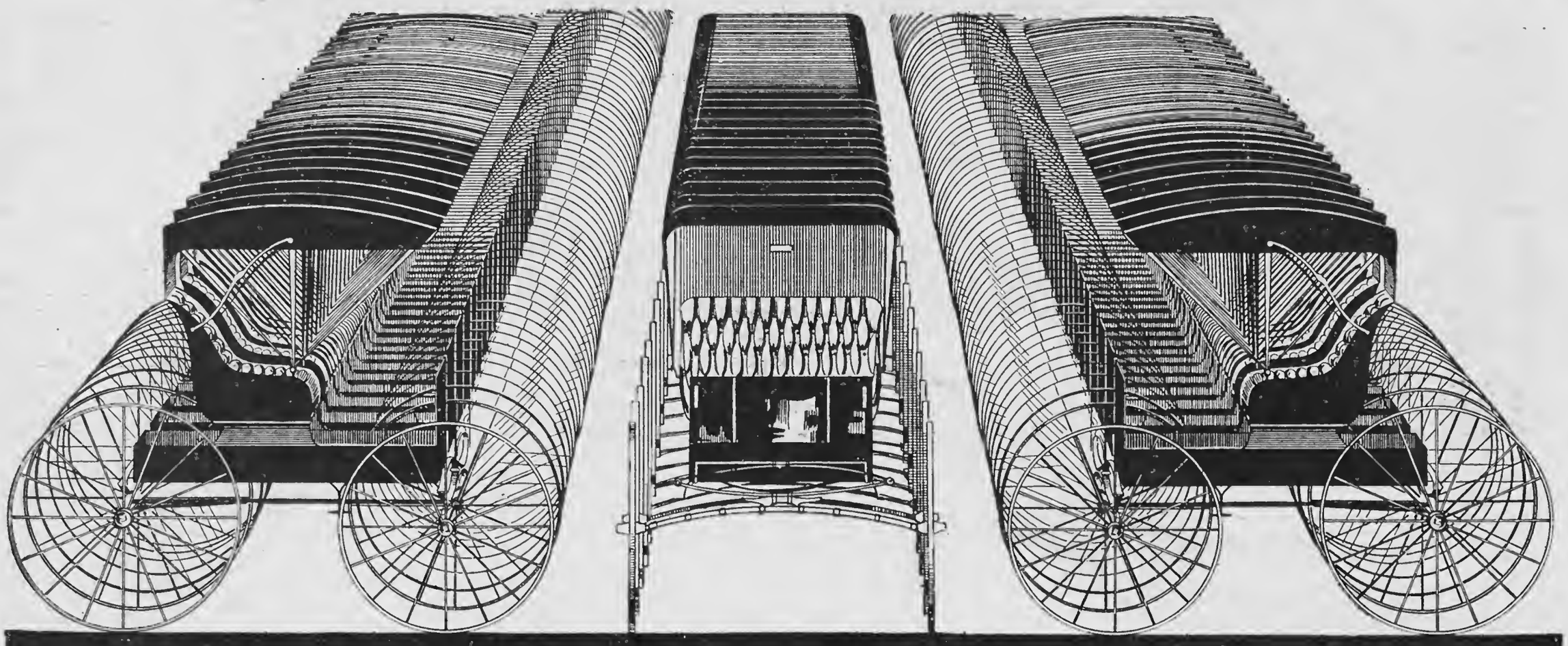

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII. No. 4249. NEW YORK, APRIL 4, 1914. WEEKLY $1.00 PER YEAR.

TRAINING A SADDLE HORSE.

How It Is Done.

[On page 366 appeared the following request by B. D.:

"I have a little mare of native stock, but sired by a well-bred horse of the carriage type; she is coming five, trimly built, and weighs, in good condition, 950 pounds. She has just been broken to drive and shows a very pleasant disposition, with a fair amount of life and nerve. Having no use for her on the farm, and not wishing to dispose of her at the price such horses bring, I would like to make a saddle and driving pony of her, for my own pleasure and that of my wife. I have handled horses and colts, from my youth up, but know nothing about training a horse to the proper gaits under the saddle."]

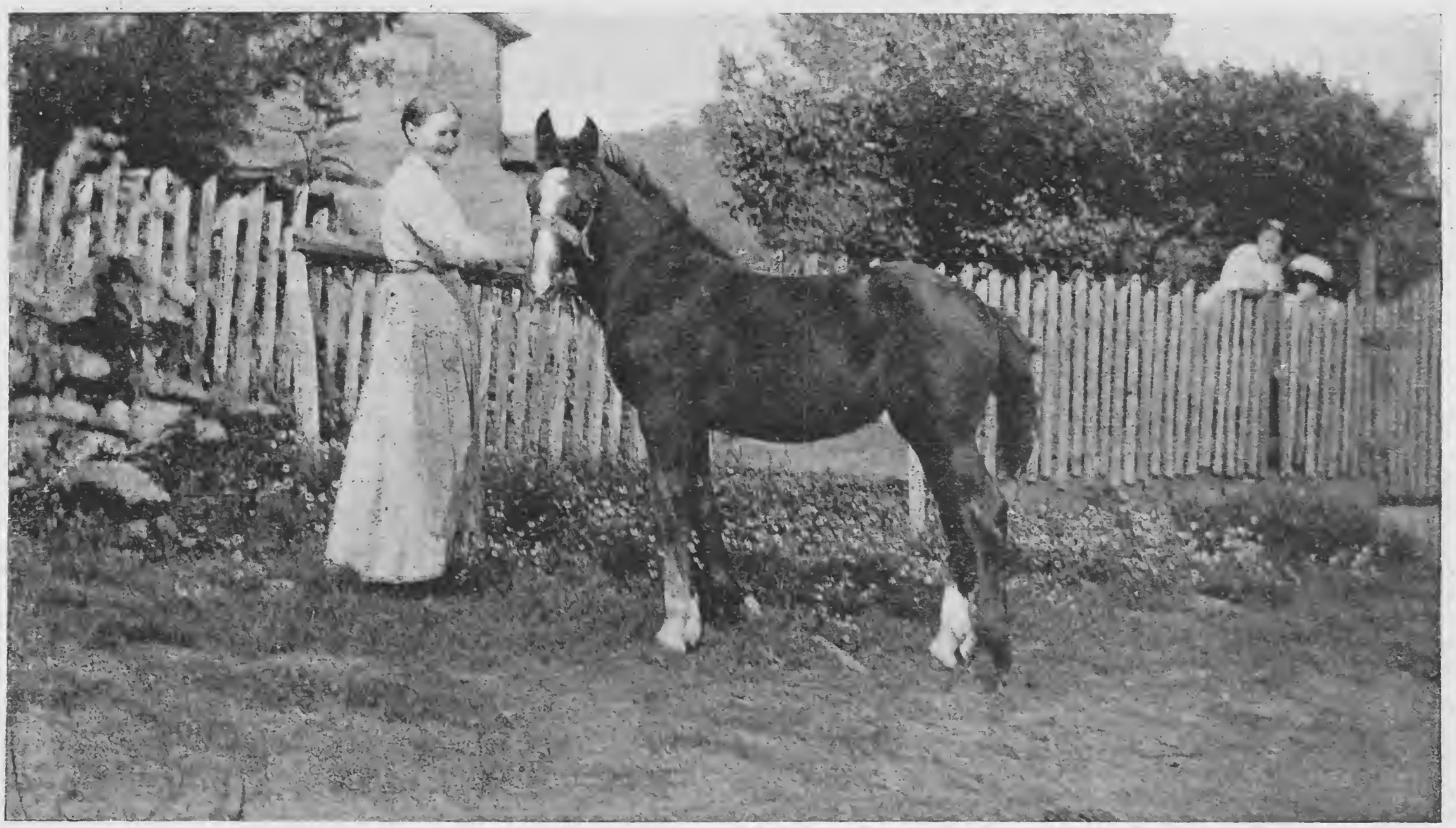
According to his description B. D. has a valuable animal. With a very little training she will make a useful animal. One great trouble in training such horses is that we are liable to ask too much of them. We try to teach them too much, and that all at once. It requires some skill and judgment to train a saddle horse. First the rider should know how to ride; unless he does he will not know what to expect from his mount. Next, much depends upon the equipment, the saddle and the bridle and their adjustment. It would take several pages to describe all these details. However, if B. D. is a natural horseman and a good rider he can soon have his mare broken to saddle, and that too without at all impairing her usefulness as a buggy animal. First then, do not let too many people manage her. Have an understanding with your wife as to what you expect of the horse and what you are trying to teach the animal. Use the same motions and the same words. Do not think of teaching several gaits. The practical gaits are the walk and the canter. Leave out the fancy gaits. A lazy slow walker is an abomination.

Get a good McClellan army saddle, your size, with good stout girths or cinches and a good broad folded blanket. Put it on carefully. Cinch it securely. Teach her to stand a good stout cinch. Teach the horse to stand for saddling. No fussing. Put on the blanket, smooth and without wrinkles, the broadest fold next the horse. No matter if the blanket looks big and clumsy. I would not use a "gag" bit, just a plain smooth-jointed bit that she can hold is better. In fact I like a straight easy bit for most horses; a single simple rein. Get her used to mounting. If she is a pet this mounting can be taught in the stall. Get her to understand that she must stand still until you are placed in the saddle (same as to the carriage). Have one word to stand: "Whoa." Have one word to go, "Get up" or the "chirrup." If she is highstrung do not fool her, but be ready when she is ready, but always use the word or signal.

Now make her walk. Do this without chafing or fretting her. Gradually teach her how to carry her head, not too high, not too low. Do not let her "hog the bit." It is all in how you hold your reins; a firm hold, a gentle hand, a flexible wrist, the reins crossed in the left hand, the light stiff whip in the right hand. Always carry the whip, she likes to watch it, and it keeps your hand occupied.

If she will walk let her walk. Going away from home is not the best time to teach the walk. Coming home is best, three miles and back first trip. Soon make it five miles. She will learn the walk best when somewhat wearied and on the way home. If she does not walk up "purty brisk," touch her with the heel or with the whip, just lightly. Sometimes in teaching the walk one has to "nag" her just a little, but always hold her to the walk. I think B. D. knows just how to do this. Always sit straight and square in the saddle in teaching the walk, no false motions, and use the word "walk." Also use the same word "walk" in driving lessons. After the first few lessons she will take pride in walking briskly. The walk is the best selling gait. A horse shows better under a walk anyway hooked up. So teach the walk first.

Now the canter. If the road is right and she wants to move out a little, lean slightly forward, press a trifle more down in the stirrup. Get the reins a trifle closer. Hold them a trifle higher. As you lean forward chirrup and touch very slightly with the whip. The whip is held pointing to the flank, close to the horse, and the butt of the whip points to the thumb. Never carry the whip high, or point forward. Never carry the reins way up in the air. I was very awkward when I first began to ride, and it would have been a difficult task had it not been for the instructions given me by an old cavalry officer. He said: "Keep your reins tight, but do not pull hard. Keep your toes pointed straight ahead. Always press the knees against the side of the horse. Do not carry the reins way up in the air. And above all things keep your elbows down by your side so that your forearms are horizontal. No horse can be made an easy rider if you let your arms or your legs flop." Do not try to put on any fancy English or park frills. Hold her head comfortably steady. Let her canter. Learn your seat. Learn your reins. Learn your horse's mouth. As in driving, she should draw a very little, about



A PENNSYLVANIA FARMER'S WIFE AND THE COLT WHICH WILL MAKE HER DRIVING HORSE. FIG. 211.

five pounds upon the bit, more when driving. Do not canter more than 10 or 20 rods at first, then back to the walk. Never tolerate the trot under saddle. Never tolerate the canter in harness. The word for canter and the word for trot, as well as the motions, should be different. I think B. D. knows all this already, but few others do.

Now about the stirrups. If you want a horse for your own use do not start out with short stirrup straps. Do not go after the English up and down daylight seat. Have the stirrups long enough so that the ball of your feet can just hold them comfortably. Let your feet rest in the stirrups and sit squarely down and back in the saddle. Let the wife handle and make love to the horse all she wants to, but do not let her ride until the animal is thoroughly broken. Then if your wife will use the same saddle you use and ride as you ride she will find horseback riding a pleasure. The plain western style, or old cavalry style of riding is the only practical style to my notion. I rode night and day for years, have broken many horses to ride, and I think the most useful horse is the one broken and ridden as I have suggested; not only that the horse used this way looks better (to my notion) under saddle and lasts longer. W.

PUNCHER AND TONGS.

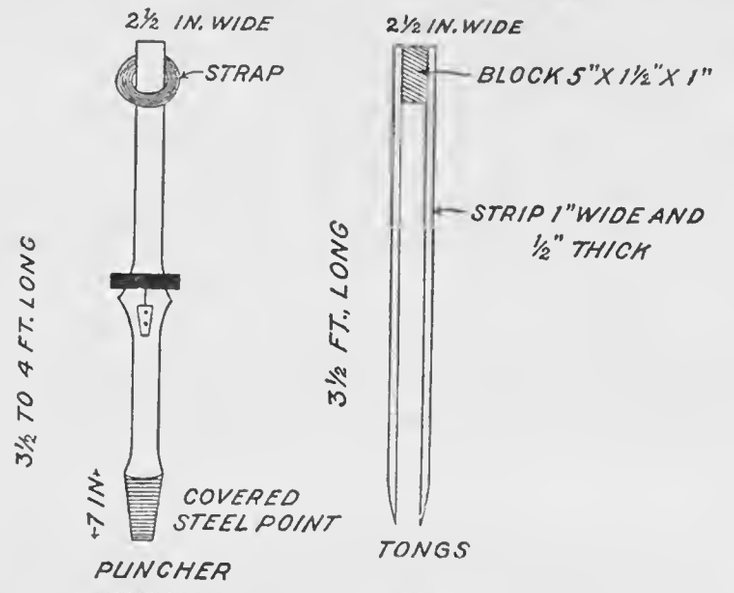
Two years ago for the benefit of the readers of The R. N.-Y. I described a tool, or rather a combination of two tools, used by truckers in South Jersey for setting sweet potato, cabbage, tomato, strawberry and other plants. In writing of these tools, which we call the puncher and tongs, I stated that a man with boy to drop plants could set 14,000 to 20,000 plants a day. Immediately a host of readers came right up claiming that the statement was untrue, but in the discussion that followed on rapid planting, I think most readers were convinced of its truthfulness. Because of this discussion, however, I fear many overlooked the description of the tools themselves. At any rate I have received many requests through The R. N.-Y. during the last two years, for directions on making and using the puncher and tongs; and many too have asked me to have them made for them. That I cannot do, and at the outset I wish to have it understood that I cannot go into the manufacturing business. These tools are not, so far as I am aware, for sale by any seedsman or dealers in agricultural implements. The ones I use were for the most part, made by myself, and I have no extra sets for sale. They are quite easy to make, anyone can make his own, and when once made will last a lifetime.

Practically all kinds of plants can be set successfully. Last year we set about 90,000 sweet potatoes, 25,000 strawberries, 8,000 cabbage and 4,000 tomato plants with these tools. The sweets were set on light sandy soil, and the cabbage, strawberries and tomatoes on heavier soil. The greatest speed can be made with sweet potato plants on light soil. Plants cannot be set so rapidly on heavy sticky soil, but even so the puncher and tongs is far ahead of a trowel for doing the work.

I do not know exactly how the puncher and tongs came into existence, but in this section hundreds of acres of sweet potatoes are grown annually, and as near as I can learn these tools have been slowly evolved by the growers themselves; who in order to increase their plantings found it absolutely necessary to have something that would make planting less laborious than if trowel were used, and at the same time be more rapid. They certainly have succeeded, or at any rate they think they have, for to-day practically all of the millions of sweet potatoes grown in this vicinity are set with the puncher and tongs.

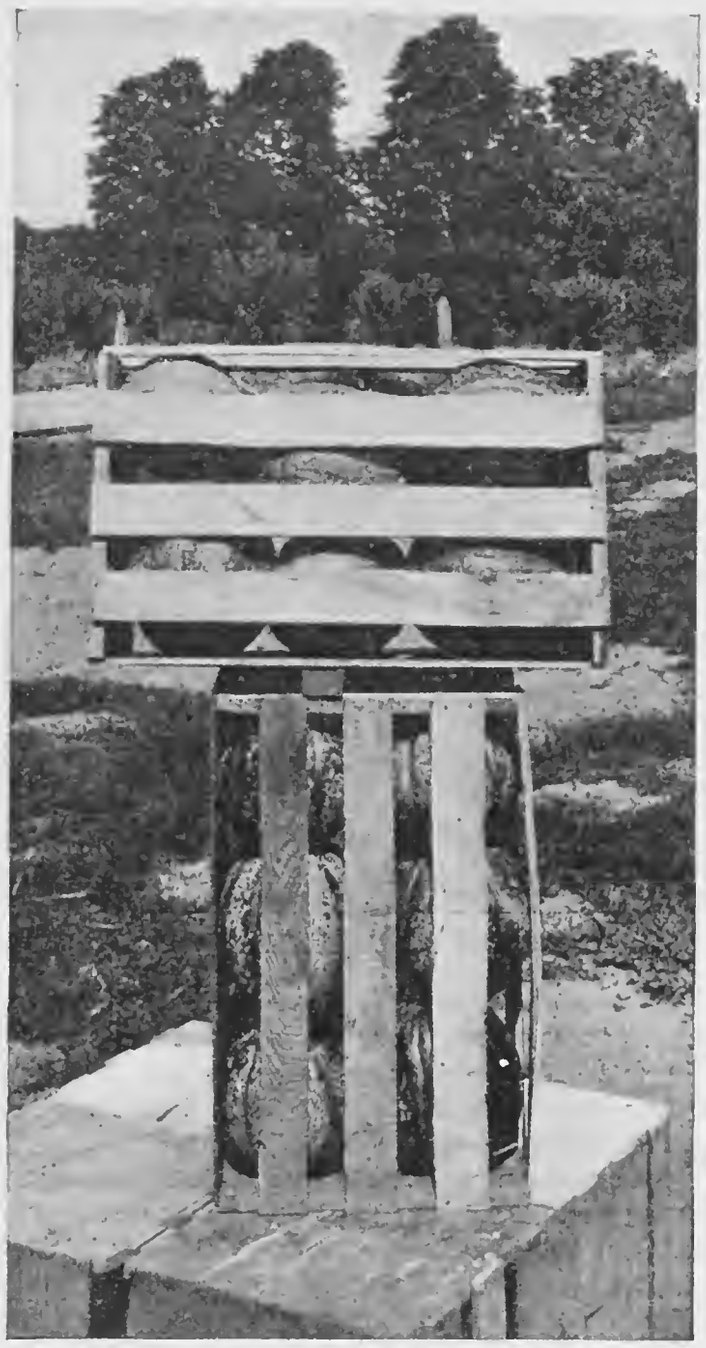
The puncher and tongs can be made as follows: Take a piece of white pine 3½ to four feet long, 2½ inches wide, 1¼ inch thick, and dress down for puncher as shown in the illustration, Fig. 212 For 25 or 50 cents a blacksmith will put on a steel point, or rather a steel covering for the wooden point, and also an iron strap to hold the handle in place. A cloth band for the arm is run through a slot in the top; for this an old suspender answers nicely. The tongs are simply two strips, each 3½ feet long, one inch wide and one-half inch thick, made to taper at the point and nailed to a 5x1½x1 inch block, which keeps them open at the points and gives some spring. Be careful to have the two strips come together squarely and tightly at the points. The length of both puncher and tongs should vary in accordance with the height of the operator. It will be quite easy for an inexperienced person to make both puncher and tongs, but his first attempt at using them will not be so easy. At first they seem very awkward and clumsy, and it is quite difficult to get a plant set at all. However, to do first *good* work and later *rapid* work requires much patience and practice, but after once getting the knack it is quite easy.

All operators do not handle these tools the same way, some prefer one, some another. The following is the way I like best myself. When setting plants walk with the row on your right. Have the right arm through the snug-fitting strap at the top of the puncher with the hand grasping the handle. Take the tongs in the left hand. First grasp the plant *at the very end of the root*, between the *points* of the tongs; insert the point of the puncher where the plant is to stand, and turn it part way around without withdrawing it; then with the tongs push the plant down beside the point of the puncher in the opening made by turning it, withdrawing the puncher as tongs are inserted. When the plant is in as deep as desired, release pressure on the tongs and remove them, striking immediately after with the puncher a short distance from the plant to pack the soil about the roots. In practice these movements follow each other in quick succession, and on clear ground plant setting goes almost like clockwork.



PUNCHER AND TONGS. Fig. 212.

A beginner will find catching the plant in the tongs the most difficult part of the operation, and emphasis should be laid on the necessity for doing it correctly. In practicing he should be careful always to pick up the plant by the end of the root, and have it between the two points of the tongs *clear down to their very end*. If a plant is grasped half way up the stem it will be doubled up when set and have both tops and roots in the air, and if caught an inch or so above the two points of the tongs it will be hard to get the plant set as deeply or as accurately as desired. Hence the necessity for having the tongs come together squarely at the points.



PACKING MELONS—WRONG WAY ABOVE, RIGHT WAY BELOW. Fig. 213.

As stated at the beginning of this article, a man with a boy to drop plants can set 14,000 to 20,000 plants in a day of 10 hours in the sandy soils, and he will not feel near as much like stretching himself across the ridges to get the "kinks" out of his back when night comes as does the man who sets plants all day with a trowel. TRUCKER, JR.

SPECIAL NEED OF PHOSPHORIC ACID.

As I have little stable manure, I am obliged to use liberal quantities of complete mixed goods, but have not been satisfied with the results. I have found that my soil seems to be especially deficient in phosphorus, and an additional amount of acid phosphate seemed to show greater results than any other single ingredient. But as my soil is also lacking in humus and all the other ingredients, and as I expect to spend my life on this farm, it occurred to me that perhaps I would get better permanent results from the use of bone meal. Last year I tried the raw bone meal, and the crop seemed to indicate more immediate results than I had been led to expect. Now, the question is, should I use both acid phosphate and bone meal in addition to other suitable elements, or perhaps in addition to a "complete" mixture, or would it be better, as I am situated, to use the bone alone as a source of phosphorus, and for such an amount of nitrogen as may become available the first season? In either case, would you suggest the amount of bone which I could profitably use, bearing in mind that I am not so anxious to make a large profit the first year or two, as I am to grow a large crop and at the same time be getting the land into condition to produce paying crops later on. Is there any danger of injuring the soil by the use of too much of the raw bone meal? Any suggestions will be gratefully received. S. S. C.

Hardwick, Vt.

We assume that you have tried lime and have learned that the trouble is not a lack of that element. Your soil may be sour or it may be too hard and compact for good culture. Active lime would partly remedy this, and to some extent make up for the lack of humus. We assume that you will increase the humus supply by plowing under cover crops. From choice in such a case we should use two-thirds of the phosphoric acid in the form of bone meal. About one-third in the form of acid phosphate will give available phosphoric acid for the immediate use of the crops. The remainder in the form of bone will become gradually available in the soil and prove a continuous source of supply, more reliable, we think, than an equal quantity of acid phosphate which has become "reverted" in the soil. We should plan to use clover, Soy beans or vetch as far as possible for cover crops as these supply nitrogen and will give vegetable matter which quickly changes to humus. Then use reasonable quantities of the complete fertilizer, and in addition for each acre 500 pounds of a mixture—one-third acid phosphate and two-thirds ground bone. Raw bone meal of good quantity will not injure your soil.

HARDINESS OF PEACHES.

[When people say that one variety of peach is "hardier" than another, just what do they mean?]

There are two kinds of hardiness in peaches—hardiness of bud and hardiness of wood. Fruit-growers often confuse the two. The peaches hardiest in wood are the small-growing varieties with compact heads, descendants of ancestors from Northern China, while the free-growing sorts with large heads and succulent wood, descendants of ancestors from Southern China, are tenderest in wood. In the first group are Hill Chili, Crosby, Gold Drop, Barnard, Triumph, Wager and Fitzgerald; among those most tender in wood are the two Crawfords, Chair Choice and Reeves Favorite.

The varieties most hardy in bud are those that have the thickest bud coverings and the most pubescence. Here again, the North China group of peaches are hardier in bud than those from South China, the varieties most hardy in bud being Crosby, Hill Chili, Triumph, Gold Drop and Stevens Rareripe, while the five most tender in bud are the two Crawfords, Chair Choice, Reeves Favorite and Elberta. A few years ago I sent several hundred circular letters to peach growers in Michigan and New York asking for information on this subject. The lists given above are made out from the answers I received. The consensus of opinion among the men to whom I wrote was that the peach must have a warm, well-drained soil to secure the greatest possible hardiness inherent to the species. Either extreme of moisture—excessive wetness or excessive dryness — gives favorable conditions for winter-killing. All were agreed that young trees suffer most from Winter freezes. So, too, there was a general agreement that peaches are more likely to suffer from cold if unthrifty than if thrifty. Most of these growers with whom I corresponded had found cover crops of material assistance in protecting the roots of the peach from cold and in causing the trees to ripen thoroughly. Nearly all growers prefer low-headed trees, claiming that both buds and branches are more often injured in high-headed trees. The testimony given was for most part unfavorable to wind-breaks.

Geneva Exp. Station. U. P. HEDRICK.

GROWING THE OSAGE MELON FOR PROFIT

PART II.

A deep cultivation is recommended for the first and second cultivation, and after that cultivation should be as shallow as possible. Muskmelons seem to delight in frequent working and hoeing, and as we are after the early melons, it is important that the vines be grown and rushed along to maturity as soon as possible. This is one of the important points in melon growing, as sometimes a difference of a week in marketing may mean $500 to $1,000 in profit where seven or eight acres are being grown. The sooner the melon can be grown and matured the sooner the cultivation can stop and the melon be ripened. If the melon can be grown fast in the first part of the season so as to reach its size, cultivation can cease and the soil will begin to dry out, which will have a tendency to ripen the melons earlier. In the picking and marketing of the melons care should be taken to handle them carefully and not bruise them, as it depends much upon the condition of the melon when it reaches the consumer whether he will want it or not.

The right and wrong way of packing is shown in Fig. 213. In the lower crate the melons are all laid one way and packed snug and tight so as not to shake and bruise in transit. In the upper crate some are laid one way and some another, giving a chance for shaking and bruising, and thus going to the market in bad condition. As I have no seed to sell I feel free to say a word in regard to seed. We have never trusted to the seed men for our Osage seed as few men can afford to save the best Osage melons to get seed from, but I have made it a practice for years to save our own seed from some of the earliest and best developed melons. Fig. 215 shows the type we desire for seed, a well-formed, shallow, even-ribbed melon, slightly netted and very thick-fleshed as shown in Fig. 185, page 475. It usually takes about two dozen of these melons to furnish one pound of seed, but we would be willing to pay $5 per pound for this seed, rather than $1 per pound for inferior seed.

Fig. 214 shows one day's picking, packed and ready for market. The boy shown in Fig. 216 is the junior member of the firm and is paid for picking every day he picks. Although but seven years of age, he has become expert in telling ripe melons. He is also an expert on the flavor of ripe melons, and it is surprising how much melon a small boy can hold.

Just a word on advertising. In my opinion the best way of advertising is to ship nothing that is inferior, and labeling the crate with the variety, stating where grown and by whom. If you have a really good article do not be afraid to waste a few crates by giving away to buyers, thereby letting them know what you have. This is one of the best ways of advertising (through a man's stomach) and it has enabled me to contract my crop for five years in succession to the same buyer before picking a melon. Melon growing, like other fruit, has its ups and downs, but taking it one year with another, if one has the soil, and can work up a market, growing melons with a flavor, putting them up in an attractive package, will prove a pleasant and profitable business.

H. B. BLANDFORD.

R. N.-Y.—Mr. Blandford's reference to flavor brings to mind the destructive and at the time of thrashing the separ- melon blight, which has made cantaloupe growing uncertain in many localities. Where blight exists, it is found that flavor deteriorates even before evidence of the disease is noticed on the foliage. There is little doubt that many poor melons that disappoint the consumer are from affected plants. But growers of superior stock in any intensive line are likely to find that they must select their own seed. This is true, too, in special florists' flowers.

ONE DAY'S PICKING OF OSAGE MELONS. FIG. 214.

TYPE OF MELONS DESIRED FOR SEED. FIG. 215.

A MELON FIELD AND A YOUNG PICKER. FIG. 216.

GROWING HAIRY VETCH FOR SEED.

At the present time little attention is paid to growing the seed of Hairy vetch as a commercial enterprise. It has been grown for seed in small quantities in Washington, Oregon, Michigan, Maryland, Ohio, Connecticut, and a few other Northern States, but the production has been inadequate to supply even the needs of the localities in which it was grown. Practically the entire supply of seed has been obtained from Russia and Germany, where it brings upon the wholesale market from three to seven cents a pound. During the last few years the annual import of Hairy vetch seed to the United States has been about 500,000 pounds. In America the seed varies in price from $4 to $9 per bushel of 60 pounds, so that under ordinary conditions seed production should be a profitable operation. There seems little likelihood that European seed will ever reach the farmer at a satisfactory price, and because of its hardiness and adaptability to varying soil and climatic conditions it can be, and should be, grown in nearly every State in the Union.

The methods of handling the seed crop vary; due partly to difference of opinion as to the best method, but more largely to the machinery which the grower has on hand. The planting of vetch for seed production should always be thinner than for hay and forage purposes. Generally in Europe the seed is sown with a grain drill or thrown broadcast on the rougher areas. It may be sown by itself, but often small quantities of oats or barley are used to give support to the growing vetch plant, and at the time of threshing the separation is accomplished by a fanning mill. Occasionally fields are planted in rows and cultivated. This seems experimentally to be the best method, but commercially it must be estimated if the increased yield resulting will offset the additional cost of cultivation. If the row method is to be used, the seeds are drilled in rows one to 1½ foot apart, and cultivation is practised as long as the plants will permit. Twenty to 30 pounds of seed per acre is the best rate of seeding according to tests made in Washington and Oregon, but more is required if the seed is to be sown broadcast.

In general practise the time of gathering should be whenever the bottom pods have become dry and are ready to burst. The vetch ripens its seed unevenly, but at this time there is the greatest per cent of mature seed on the plant. Later cutting occasions more shattering of the seed; while earlier cutting results in a considerable percentage of immature seed. In some localities where but little seed is raised, an ordinary mower is used to harvest the crop. The vetch is rolled back from the uncut area so that the machine will not break open the seed pods when cutting the next swath. Care must be taken, as the pods are very easily shattered. Sometimes the first swath cut is rolled over the uncut vetch, and when the succeeding swath is cut the two are rolled back out of the way. Thus by putting the vetch in larger swaths the loss from shattering is reduced.

If the growth of seed is to be undertaken for commercial purposes it is essential to have more adequate machinery. An ordinary grain binder can be used when the vetch is erect, and when thus harvested, the crop is put in shocks and allowed to remain there until thrashed. The important rule in growing vetch seed is to handle the crop rapidly and as little as possible to prevent loss by shattering.

When vetch is put through an ordinary thrashing machine there is danger of splitting the seeds. In order to reduce this cracking of the seeds to a minimum it is best to remove most of the concave teeth. The expense of thrashing is higher than might be imagined, usually from 18 to 25 cents per bushel. This is due to the fact that vetch thrashes very slowly. Under favorable conditions 10 to 12 bushels to the acre have been obtained, but as a rule only five or six may be expected. Before storing away in a cool, dry, well-ventilated loft, it is advisable to run the seed through a fanning mill. Besides removing any oats or barley present, this will eliminate many noxious weed seeds. Old seed germinates poorly, and if kept more than two years after growth it deteriorates rapidly. Many growers have already considered the production of Hairy vetch seed for their own home use. Undoubtedly it will not be long before this field is widened, and gradually cheaper American grown seed will replace the more costly imported stock of to-day.

THERE was a rhubarb show in London on February 28. It is said that nine-tenths of the world's supply of forced rhubarb is grown near Leeds, England.

FARMERS' CLUB

[Every query must be accompanied by tho name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Labels for a Large Orchard.

[There has been considerable inquiry about the best method of marking the trees in a large orchard. What is the best label? Where orchards are planted in large blocks it is not necessary to mark each tree. A good map of the orchard can be used for identification. In California growers are adopting the plan of painting numbers on each tree. This, with a map, answers the purpose. Others use flat wooden stakes with the variety name painted on. Most metal labels are of aluminum. On a large scale the machine described as follows can be used.]

The labels that we have found most satisfactory are those printed on aluminum tape by means of a labeling machine. This machine prints the letters in an embossed form so that they are not obliterated by any kind of spraying materials, which is frequently the case in many other kinds of labels. The labels themselves are loosely tacked to the trunk or on some of the larger limbs by means of brass escutcheon pins, about No. 16, 1½ to two inches long. These pins are simply driven into the wood far enough to hold the labels, thus enabling the label to be pushed out along the pins with the growth of the limb. The chief difficulty with this method is the relatively high cost of the labeling machine. This machine, at present, costs about $75, and it prints letters three-eighths inch high on seven-eighths inch aluminum tape. This tape can be bought at 70 cents a pound in 10-roll lots, which weigh about 14 pounds. Unless one's orchard interests are fairly large, therefore, he can hardly afford one of these machines by himself, and the alternative would be to secure one in the neighborhood through coöperation. Another plan would be to submit the legends desired on labels to some one who has one of these machines, or possibly to the manufacturers themselves, and have the labels printed by them as desired, merely at the cost of materials and labor involved, provided one can get them to do it. Any labeling scheme, however, should be accompanied by a satisfactory chart of the orchard upon which the records desired are placed. The painting method, which involves the painting of the desired information or numbers directly on the tree frequently does fairly well, especially if it is watched and renewed sufficiently often. Wherever lime-sulphur is used for scale, however, this scheme is less desirable, because heavy applications of lime-sulphur are likely to obscure or completely obliterate the paint. J. P. STEWART.

Penn. State College.

Grafting Black Walnut.

I have a Black walnut about three years old which I desire to graft to English walnut. Can I get a bearing tree sooner in this way, or by getting an English walnut tree grown from seed. When is the best time to do the grafting and the best method? I can get grafts from a bearing English walnut tree nearby.

Smyrna, Del. W. L. M.

The Black walnut can be grafted with the Persian walnut, and that is the proper thing to do if he wants to grow this nut. All the California growers, and the eastern as well, are using the Black walnut as a stock for the Persian in preference to growing it on its own roots. It is said to make a healthier and stronger tree. Of course a grafted tree is likely to bear much sooner than a seedling, the same as with fruit, like the apple. Moreover, from a grafted tree one knows what to expect in the way of tree and fruit characteristics.

The time to graft the Persian walnut is after the leaves have begun to push out, and are perhaps one-third grown. The method is by cleft-grafting, using very heavy, sappy wood, up to an inch in diameter and from one to several years old. One-year wood is often so light and pithy as to be absolutely useless. This grafting of nut trees is difficult to attain success with at first, but experienced grafters get excellent results. The methods must be studied from the published bulletins, with illustrations, such as Bulletin 254 of the Bureau of Plant Industry, U. S. Department of Agriculture, "The Persian Walnut Industry in the United States." If W. L. M. knows of a bearing Persian walnut tree he should have its characteristics studied by the Division of Pomology of the Bureau of Plant Industry at Washington, or some other competent authority. It is of the highest importance that all these trees should be recorded and studied.

W. C. D.

Grafting Walnuts in Pennsylvania.

Could English walnuts be grafted on young natural walnuts on branches about one inch in diameter? Would it do to use scions cut from trees direct from nursery? Is grafting done anything like grafting apples? Would they do well in Northern Lawrence Co., Pa.?

New Wilmington, Pa. J. H. J.

The Persian walnut can be grafted as he proposes but it needs skill and practice and special knowledge of conditions that it is not easy to convey in a brief reference. If J. H. J. will send to the Superintendent of Documents, Department of Agriculture, Washington, D. C., for Bulletin 254, Bureau of Plant Industry, "The Persian Walnut Industry in the United States," he will be able to get the neccessary information and cuts of the various steps in the operation. Another good bulletin is Bulletin 1, Walnut Experiment Station. McMinnville, Oregon. An even better way would be to visit the nut nurseries in Lancaster, Pa., during the grafting season and see how it is done there.

Scions cut from trees direct from nursery could be used if the buds had not started and if the scions were plump and sappy. It is not generally known, perhaps, that wood two years old or older, and as big as can be cut for grafting, will succeed where the light and pithy one-year-old wood will fail. Northern Lawrence County, Pa., ought to be good for the Persian walnut. There are some good trees farther north near Lake Erie.

W. C. DEMING.

Lime Ahead of Potatoes.

Will it be all right to plant potatoes on ground where I had corn last year, which I limed with ground limestone at the rate of 1,000 pounds per acre, after the corn was cut? I sowed to rye, which I plow under this Spring; have done this for two years without lime and had good crops, but think our land can stand some lime. Would it be better to put the lime on after the potatoes, before seeding either with oats or rye? E. T. M.

Troy, N. Y.

We do not think the application of ground limestone last year will affect the potatoes injuriously. The ground limestone does not have an active effect, and the rye which you are to plow in before the potatoes are planted would largely overcome the effect of the lime. On general principles it is better to use the lime in a rotation after the potatoes, and not directly ahead of them.

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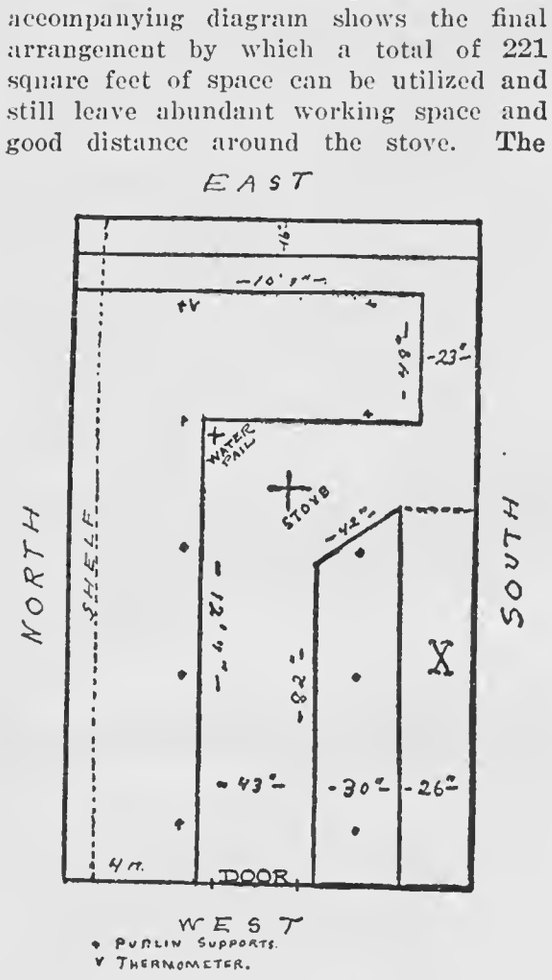
The Home Acre.

A HANDY GREENHOUSE.

Some good greenhouse plans have been given in these pages and I will therefore omit any detailed description of construction. The diagram herewith is a surface view at top of bench level.

This house is 12x20, side walls of wood four feet high. The top lumber, such as sash bars, purlin strips and ridge, also two ventilators, were purchased from a firm making a specialty of greenhouses. Lumber for the sides was purchased locally, and the bench lumber was pick-up stuff on the place. The entire cost of material including 14-inch heating stove was under $100. I did much drawing and planning for the bench arrangement and shelves to obtain a maximum amount of usable space with right light and temperature. The accompanying diagram shows the final arrangement by which a total of 221 square feet of space can be utilized and still leave abundant working space and good distance around the stove. The



SURFACE VIEW OF GREENHOUSE.

bench space proper gives 127 square feet. The space marked X is left open and filled level with the bench with potting soil. This is the best location for it, as the space is always in the shade—south side. However, boards can be laid over this space and utilized for germinating seed boxes or plants that can stand shade, like ferns. Around the sides and eight inches below the glass can be run a one-foot-wide shelf, with the exception of the walk on south side. Also through the center along the purlin supports can be run other one-foot shelves. This gives a total, as above, of 221 square feet. Still more can be obtained by adding a second shelf on the sides, to be used only for storage of boxes of germinating seeds. The space under the north bench may be used for cool plants like geraniums, cabbage, parsley, etc., as the sun strikes the floor under this bench clear to the wall. Under the other benches rhubarb may be forced from the first of the year till the outdoor crop is ready.

The writer has this greenhouse electric lighted and an extension phone from the house is installed. The stove is of the hot blast type, 14 inches in diameter. I now consider this too small, as there is sufficient radiating surface. With the present stove it is necessary to attend to it once during nights where the outside temperature is 25 or below. White ash nut soft coal is used in combination with nut hard coal, not mixed, but placed in the stove in alternate layers.

At the point marked V is kept an accurate thermometer about eight inches above the bed. A night temperature of 50 to 55 is maintained as closely as possible, with five degrees higher on cloudy days and 15 on clear days. This proves suitable for most bedding plants. Plants requiring higher temperature can be placed on the center shelves or closer to the stove. Peppers and tomato plants would be among these. Such a house as this, with a stove for heat, cannot help but be dusty. A good hand spray pump is used and plants sprayed twice or more weekly on clear mornings and the floor sprayed daily. Thick-leaved plants are sometimes washed by hand.

The ventilators are one at each end and on opposite sides. One or both are open on all clear days. The opening device is a two-foot stick with spikes driven in at intervals. This allows the ventilator to be held open at any desired distance by resting the spike on the roof while the end of the stick supports the ventilator. The fuel costs this Winter is averaging very close to one cent an hour, but it is worth it. P. L. W.

Michigan.

Fodder Crops for One Acre.

Can you suggest a crop that will yield enough hay to last two cows and one horse for one year on one acre of ground in the same year? W. G. R.

Long Island.

It is doubtful whether you can do this on light Long Island soil. We should make a trial of the following: Plow your ground early and give it thorough preparation. Use either a heavy dressing of stable manure, or a large quantity of chemical fertilizer. On half the acre sow as early as the weather will permit, fodder corn in drills 2½ feet apart. Sow this corn thickly, at least one bushel of seed to the half acre. Use a large-stalked corn, and give thorough culture. At the last cultivation in August sow on this half acre one pound of Cow-horn turnip seed, and one-half bushel each of rye and barley. Put this seed right in the corn, and work in with your cultivator. On the other half acre sow as early as possible Canada peas and oats, as we have so frequently advised. When this crop is ripe, probably in early July, cut it for hay, break up the soil at once, and seed to Japanese millet. Cut this for hay in early September, break up the ground again, and seed to one bushel each of barley and rye. On a narrow strip at one side of the field run a few rows of mangels or cattle beets, the rows 18 inches apart. You can, if you like, sow the seed on a small separate patch, and transplant the mangel plants after the oats and peas come off, or cut a strip of this crop while green for the purpose. You can cut the barley for a light crop in early November. The Cow-horn turnips if properly fed will provide much feed for the cows.

Garden Peas.

What is an average crop per acre of garden peas? What size crate is used, and what price is the pickers supposed to get? About what do they bring on the market? I intend to grow the Prosperity pea. J. A. G.

Pangburn, Ark.

The growing of peas for market is dependent upon so many conditions, mostly of purely a local nature, it is impossible to forecast anywhere near accurately the size of the crop or the price per bushel they will bring in the market at any given place or time. Under normal weather conditions, with proper fertilizing and cultivation, the yield may run anywhere from 100 bushels and up per acre. The price here in New Jersey has ranged from $2 per 28-quart basket for this first picking or two, down to as low as $1, and in some instances even less, when there was a plentiful supply in the market. When they are sold by the bushel, in the city market, they may be shipped in the ordinary bushel basket or crate. The 16-quart peach basket will answer very well, for delivery to the local market. The prices usually paid for picking is about 25 cents per bushel. The Prosperity pea is without doubt one of the finest early peas grown, and always commands a good price in the market. If you intend growing peas for market in considerable quantity, I would advise you also to plant the late Gradus or Prosperity and Telephone. The late Gradus comes in between the last of the early Gradus and the Telephone, thus lengthening the season to a considerable extent, and without any break in the pickings.

A.

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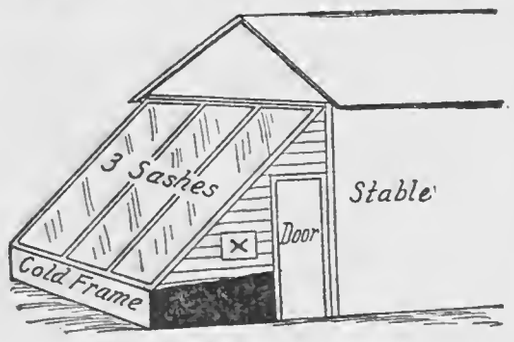
Ventilating a Greenhouse.

Is the ventilation afforded by two windows, as sketched, satisfactory, one at each end? I have a cold frame, leans against south end of horse stable, as shown. W. W. T.

Litchfield, Conn.

The method of ventilation suggested will not prove satisfactory, as it will be impossible to regulate the temperature by such an arrangement. The ventilators should be so arranged that the cold air cannot come in direct contact with the young and tender plants, for it is no more desirable for young plants to be exposed to sudden draughts of chilling air than it would be for young chickens or any other young live stock, and should be avoided as much as possible. This undesirable feature cannot be avoided with such a system of ventilating. Bottom ventilators are a fine arrangement for use in the warm days of late Spring and Summer, when operated in conjunction with top ventilators, as they greatly assist in keeping the house cool, but cannot be brought into use in the cool days of Spring without danger of doing more or less injury to the young and tender plants.

The ventilating shuold be done at the highest point in the house, as the heated air always rises to the top. The top ventilators when opened will not only permit it to escape, but will at the same time admit cool air to enter, which will,



VENTILATING FRAME.

on account of its being heavier, find its way to the lower parts of the house, but before coming in contact with the plants, it has been tempered so that it will reach them in a condition to be of the greatest possible benefit. If sashes are used for overhead, they should rest on rafters with seven-eighths guide between them and fitted loose enough to admit of the sliding up and down the rafters without bindings; a hook and eye on each side will hold them in position when closed, and if a few eyes are screwed into the rafters at intervals of two or three inches the sash may easily be lowered and held in position by the hooks, at any point that will admit of the desired amount of cool air necessary to regulate the temperature. If stationary sash bars are used, then provision should be made for hinged ventilators at the top, that may be easily raised and lowered. These can be held in position at any desired height, by the use of a piece of two-inch lath in which notches have been cut at intervals of three or four inches. Newspapers spread lightly over the plants will give much better protection against frost than muslin, are much handier to apply and remove, and are also less expensive. No covering of light material is an absolute protection when the outside temperature goes much below the freezing point. At such times some inside heat will be needed, and for a structure the size of yours, a small oak heating stove set in the center of the house will eliminate all danger from frost. K.

Building an Apple House.

I built an apple house, in 1911, two stories 24x36, 20 feet high to eaves. The lower story is a concrete wall 20 inches wide, 10 feet high; on this is framework. Sills 8x8; posts 8x8; plate 4x6; trimmer 10x14, 36 feet long, to take the upper floor timbers, floor timbers 3x8, 18 inches from center to center; floor one inch spruce, used 3x4 studding. The outside was sheathed, papered and sided, the inside papered, sheathed with matched pine, an inch wall strip put on, and ceiled again making two air spaces. Ceiled over head with matched pine; between the ceiling timber over head, which are 2x8, it is filled in with buckwheat shucks. The roof is slate. There is but one door for each floor; that should be a double door, each door made of two thicknesses matched lumber; one good-sized glass window for sorting that should have closed fitting shutters both inside and out. We have two trap-doors in upper floor for ventilation and hoisting barrels. Our building is set in a hillside, front facing north. I do not think you will want steam pipes in an apple house if it is properly built. You need a thermometer, below 32 set a little oil stove in for six or eight hours. If I were going to build again I would put a chimney in so as to use a wood stove if it was required. They freeze in the upper story so we get them out of there by Christmas. Our building holds 1,400 barrels. J. A. V.

Ravena, N. Y.

Cabbage Maggots.

I have a small bit of land upon which I grow vegetables, etc., for my own use. The land is sandy; a small quantity of manure has been applied every year for the past five years, and I consider it in good condition physically. There has not been a year in that time but what the roots of my young cabbage and cauliflower plants, turnips and parsnips have been attacked by maggots, and in some instances the roots eaten entirely. All other vegetables are not affected by these pests, and thrived abundantly. Can you explain why this occurs with the few mentioned? A. T. N.

Oakville, Ont.

The fly or mature insect of the cabbage maggot is said to have been imported from Europe about 1855 or 1856. Since then it has spread to almost every part of the North American continent where the cabbage or any of its related species are extensively grown. It is not only one of the most destructive insect enemies of the cabbage family, but the most difficult of control, on account of its attacking the roots of the plants. Its presence is never known, nor even suspected, until the plant begins to wilt, when in most cases it is beyond saving. Soils that are manured with stable manure or composted organic matter are very susceptible to infestation, as decaying organic matter of every description seems to be a favorite breeding ground for the insect, or a favorite place for the perfecting of the mature fly, and in the fertilizing of cabbage soils, it is well to use only commercial fertilizers as they are more or less of a deterrent, and crops fertilized with them alone are not so apt to be attacked by the maggot. For many years there was no known remedy for this insect, but the following methods of control are now being employed with some measure of success, but are not altogether practical to use on large plantations, on account of the great expense for labor in the application of them.

When this wilting of the plant is first noticed, a half teaspoonful of bisulphide of carbon, poured into a hole made near the root of the plant with a sharp stick, and immediately covered with damp soil, will, it is claimed, kill the maggots, and if the root is not entirely destroyed, the plant will recover and mature a good head. If the plant is beyond recovery, substitute another, which is not likely to be attacked. Carbolic acid emulsion is also recommended, which may be prepared in the following manner: Add to one pound of soap boiled in one gallon of water, one-half gallon of crude carbolic acid, dilute the whole with 40-50 parts of water. Apply to stalks of affected plants. In sections where the maggot is known to exist it is better to use the emulsion two or three days after setting the plants out, and repeat every two days until the plants outgrow danger of attack. K.

Worm Killers.

Where earthworms are very plentiful in lawns or gardens they often become a nuisance, their casts being disfiguring to closely clipped grass. The following liquids are recommended by the Florists' Exchange:

"Lime water can be made by mixing one pound of quicklime to a gallon of water. Allow it to stand two or three days until clear, then strain off the clear liquid and water well with the same. Corrosive sublimate at the rate of one ounce to 20 gallons of water will destroy the worms, but as some may be embedded in the tissue of diseased plants all may not be destroyed. The worm-killer made under Prof. A. D. Hall's advice is composed of the following: Mercuric perchloride, 10 pounds; hydrochloric acid four pounds; water, six pounds. To dilute for use add one-half ounce fluid to three gallons of water. The solution of corrosive sublimate or the worm-killer should be used when the soil is moist.

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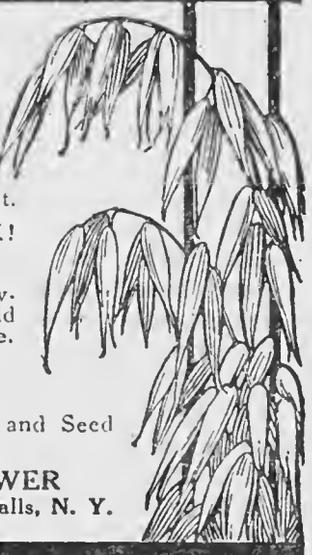

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It reqnires a capital of from $100,000 to $150,000 to equip and conduct a modern pea cannery, as the enterprise must compete with well-organized and favorably located plants, long established and having a recognized good will. A favorable location will be understood to cover questions of proper soil, climate, altitude, drainage, water supply and transportation, both rail and highway. In addition there must be easily accessible a supply of labor that can be relied on for a period of six weeks in mid-Summer. It will be apparent that the above considerations limit pea canning operations to relatively few localities, and nobody should undertake the business without reliable expert advice.

Will peas put into silage make as good cow feed as corn silage?

Pea silage is much better cow feed than corn silage. This has been the experience of many farmers located near Cazenovia. They are beginning to learn of its value and the demand for it is increasing each year.

How many tons per acre of peas for silage would be a fair yield?

Four tons of peas and vines per acre would be a good yield. H. B.

Believes in Manure Spreaders.

On page 225 H. H. asks for a discussion of implements necessary for a small farm of 40 to 60 acres. Just what tool or implement one should use depends on the team to be used and the character of the soil to be tilled. For a two or three-horse farm I would suggest that H. H. does not need a gang plow at all, which he seems to favor. But he should have a medium-sized sulky plow or a good-sized two-horse plow and a one-horse plow. I do not advise the use of a small plow for breaking purposes, for I practice deep and thorough tillage, and so on my Maryland farm a one-horse plow does but a very small part of the farm work, but there are some jobs from time to time in the doing of which no other tool can take its place. There are several styles of harrows on the market, but if I were restricted to its use of but one kind, I would choose a big section spike-tooth drag or smoothing harrow. Before the introduction of the disk harrow farms were tilled and crops were raised, it is true, but I wonder now how it was done. And so in progressive agriculture a disk harrow is now necessary on every well equipped farm. Then there is the plank drag, the roller, and the weeder. Of course a mower and rake are indispensable on every farm where hay is made. If corn and small grain are to be grown, as they should be wherever it is possible on every well regulated farm, a two-row corn planter, a riding cultivator, and a grain drill with grass seeder attachment will have to be added to the list. Experience is the farmer's best teacher, and a beginner should be governed somewhat in the selection of his implements by what is generally used by successful farmers in his particular locality. In conclusion I beg to differ with H. H. in his estimation of the value of the manure spreader. Good makes of spreaders are on the market now for half the amount he mentions, and my experience in the use of the spreader warrants the assertion that, in my judgment, the manure spreader is the king of labor-saving implements, and if properly used, will pay a big dividend on the capital invested. JORDAN B. WELLS.

Maryland.

"DON'T you want to dance the tango?" he asked. "Indeed I do," said the sweet young thing. "I want to dance it the worst way." "Oh, well, you'll have to excuse me. There are laws against that, you know."—Yonkers Statesman.

GOOD SEED AND A FANNING MILL.

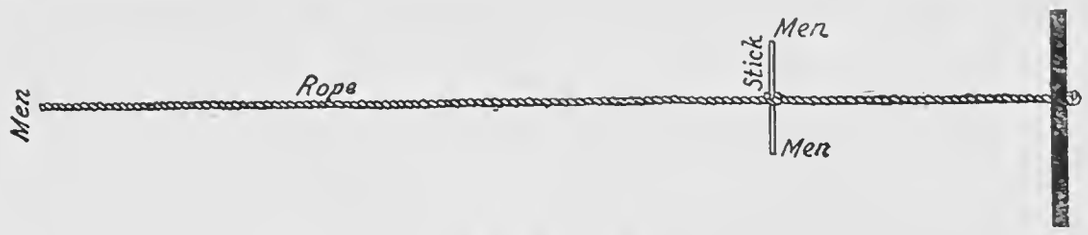
Unless a tool is taken care of, it's a waste of money to purchase; on the other hand if farm tools and implements are given the proper care they are a very valuable asset indeed, and no farmer can get along without some tools to carry on farm work. I don't like the idea of borrowing tools, and again if we can rent some implement to cut our crops, etc., we cannot always get it when most needed. The main thing to consider on any farm where grain is to be grown for chickens, sheep, hogs, etc., whether the farm be large or small, is the selection and planting of good seed. Every well-informed farmer knows the value of good seed grain. Without good seed the fertility of the soil and careful preparation are wasted. This naturally raises the question, what is good seed? The first requisite of good seed is a strong grain which starts quickly into growth when the seed is sown in a warm, moist soil.

In growing grain, and where you expect to get your seed for another year, it should be harvested at maturity without exposure to the sun and rain. The more nearly perfect condition it is in when thrashed and put in storage, the more likely it is to germinate and grow well when used for seed purposes. The use of a fanning mill will eliminate to quite an extent the reproduction of inferior plants, and consequently raises the quality of grain grown on farms where one is found in use. Although the number of days the fanning mill is used is very small indeed, it has been my experience that no grain grower can farm properly unless preparing his seed for the seed bed, and no implement on the farm, large or small, can be used to greater advantage and fill a more important place than this one piece of machinery. Of course it is best to buy one if you can, but you can always find two or three in every community in the hands of some farmer who will only be too glad to let you run your seed grain through. A fanning mill will pay for itself the first year. This fact has been demonstrated to me twice on my own farm. I would advise the use of the latest improved machines, put out by a reliable firm. H. W. SWOPE.

Pennsylvania.

Taking Kinks Out of Rope.

C. M. W., Winterton, N. Y., wants to know how to treat a new hay rope so it will not kink. This is how it is fixed on Ferncliff Farm. I take the rope, tie one end to a post and let a man hold the other end; pull the rope out tight, take fork handle, put rope once around handle, let two men walk from post to end of rope three or four times and the trouble is all over, but the man on the end of rope must let it twist in his hands. The diagram gives the idea. A. B. P.



METHOD OF TAKING KINKS OUT OF ROPE.

Tribes Hill, N. Y.

Four years ago last Summer we bought 175 feet of ⅞-inch rope. When the ground was dry we hitched a horse on one end and dragged it around for about an hour, drawing it around telephone poles, hitching posts and anything of the kind. This rope never bothered once. Perhaps it is not necessary to say it, but in unloading hay, always keep the horse on the same side of the rope. T. E. R.

Clinton, N. Y.

I notice that C. M. W. wants to know how to take and keep the kinks out of a hay rope. If he will put that rope in a barrel of water and let it stay there a week, or until it gets thoroughly wet, he will find it has developed all the kinks there are in it. Then take it out of the barrel and drag it on the ground until all the kinks have run out of it, and his trouble is out. As a fisherman for 28 years, I learned this in breaking in lines to hang in new nets, and also in taking the kinks out of the sheets and halyards of vessels. V. R.

Maryland.

C. M. W., page 300, asks how to take kinks out of new hay rope. If he will fasten a round ball to one end, tie other end to his wagon and drag it up and down the road for a mile or two, it will remove all kinks. Or pass one end around a post (round) and pull back and forth with one end loose; it will do the trick. W. K. K.

Dover, Del.

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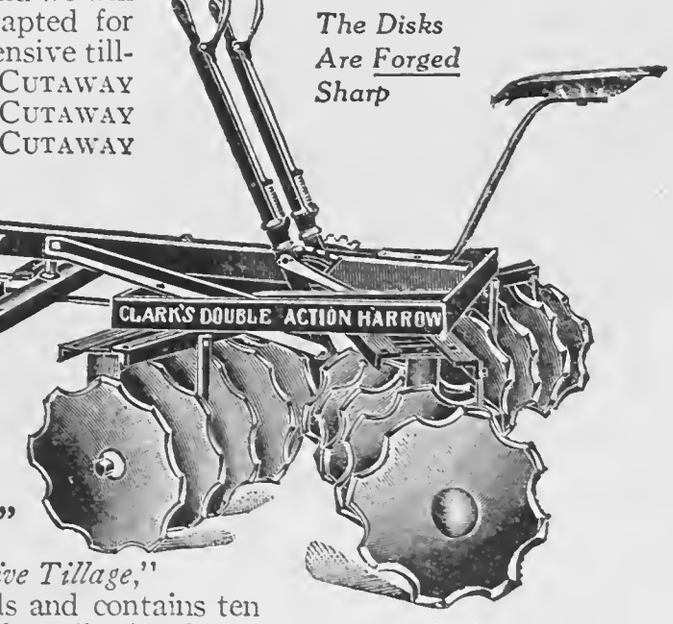

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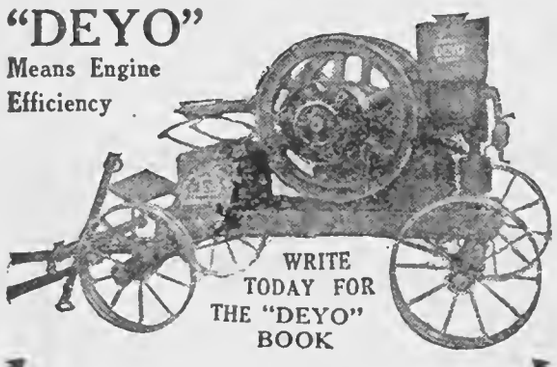

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Rossney Pear; Blowers Blackberry

1. Is the Rossney pear a good commercial variety? Is it of good quality for family use? 2. What do you know of the Blowers blackberry? I have had it growing three years, and it has never fruited; sometimes has a lot of fruit clusters with only two or three seeds to the berry. It blooms profusely and I have the Ward planted near by. H. G.

Rhinebeck, N. Y.

1. The Rossney pear is of very fair quality, but not as good as the Bartlett and some others. It would probably sell very well in market as it is of good appearance.

2. The Blowers blackberry is considered a good variety, but I have never grown it myself and do not know from experience of its habit of unproductiveness. However this has been reported from several sources and is probably defective in its female organs. It would be well to grow other varieties instead, that bear well. H. E. VAN DEMAN.

Care of Raspberries.

I have a patch of raspberries set out in 1912. August, 1913, the old canes were removed, and the new canes cut back. In September and October they made an abnormal growth, some of the canes being four and five feet. They were heavily manured with hen manure. I wish to know how to prune and care for them this Spring for best results.

Maryland. J. H.

Owing to the manner in which it bears its fruit, the blackcap should have considerable care in its yearly pruning. This should be done at two seasons of the year to get the best results. The young canes should be pinched back when they reach a height of 20 to 24 inches. In order to have the canes all about the same height, it will be necessary to go over the patch several times during the growing season and stop them as soon as they are high enough. This early pinching back will induce the development of more numerous side branches, and as the side branches form the fruit bearing wood for the following season, the more of them that can be developed the heavier the crop will be. This Summer pruning or pinching back of the new canes, is the most important factor in the culture of the crop, and must be carefully attended to, if the maximum results are to be obtained. The following Spring the side branches should be shortened back to 10 to 15 inches according to the size and and strength of the cane. The old fruiting canes should be cut out, removed and burned as soon as the crop is off; by so doing, many injurious insects will be destroyed, and perhaps disease be prevented.

Red raspberries should also have attention during the Summer, to regulate the height of canes, and induce the formation of fruiting wood for the succeeding season. The young canes should be pinched back when not over 24 inches high. This will cause the development of many side branches and also the production of a greater number of sprouts from the root. Both these types of growth are desirable and should be encouraged to a greater or lesser extent, according to the variety and the character of the soil, and the fertilizer used. The removal of the old fruiting canes may be deferred until Winter, when at the same time all the unhealthy-looking young canes should be removed. Good clean cultivation is necessary with both types of raspberries. The space between the rows should be plowed with a one-horse turning plow at least once a year, preferably in the Spring. The cultivation therefore should be sufficiently thorough to keep all weeds subdued, but should not be carried on late enough to interfere with the harvesting of the crop.

K.

HARDY PEACH BUDS.—The varieties that seem to stand the most freezing are those in most instances that develop small, tight, compact buds. The one variety of the large loose buds that seem to be hardier than others is the Belle of Georgia, and why this happens I do not know. In fact, I do not know anything about any of it, except long experience seems to show that the tight little buds, such as on Hill's Chili, Carman, Waddell, Champion and the like are the ones that come through the extreme freezing weather all right, when those of the Crawford type, Oldmixon and Elberta get killed entirely. J. H. HALE.

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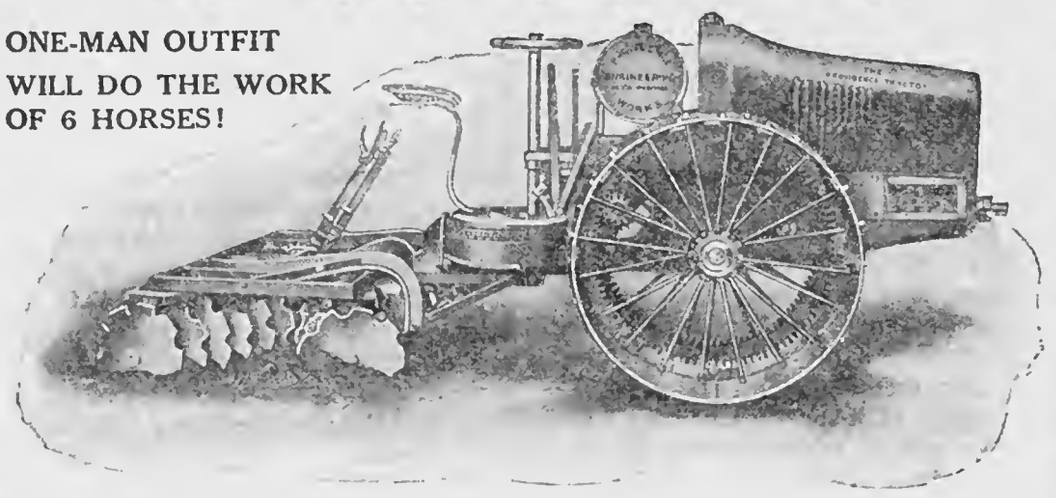

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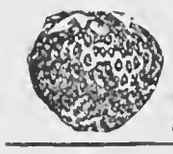

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THE RURAL NEW-YORKER
333 W. 30th St., New York City

Ownership of Timber Along Roadside.

A owns a farm; he sells the wood and timber on the farm to B. Later on he sells the land or farm to C. When he sold the wood and timber to B it was understood that B should have three years to cut and remove the same. C understands that his purchase of the farm is subject to the above deal. Who owns the wood and timber on the roadside? B claims it. What right has he to it, or had the owner any right to give him any right to cut it or embody it in the wood and timber deal? It is generally claimed that the wood and timber on the roadside belongs to the man who owns the farm, inasmuch as B had not cut the wood and timber before C bought it why does not the wood and timber belong to C? M. T. R.

Rhode Island.

It is generally understood that the ownership of trees along the roadside is in the adjoining owner. In this case it belonged to A, and when he sold the wood and timber on the farm to B it passed to B, and he did not lose that right by merely failing to cut to the present time. If he abandoned the cutting and showed that he did not intend to avail himself of the wood along the road, the ownership might pass to the present owner of the farm. Inasmuch as C has recognized B's right to the timber he must also recognize B's right to the timber along the road.

Title to Property on Seashore.

Will you give us the law as relates to control of shore privilege by owner of land bounded by the sea? Can said owner forbid and prosecute parties for taking seaweed which floats in at high water, also for taking seaweed from rocks at low water. W. F.

Maine.

As a general proposition, the title of an owner adjoining the seashore extends only to high water, but in Massachusetts and Maine this rule has been changed so as to give the soil of the shore to the land owners to low water mark provided the tide does not ebb more than 100 rods and to that extent if the tide ebbs to a greater distance, so that you own the property to low water mark and can keep trespassers off.

In regard to the seaweed which floats in at high water, if the same is obtained by people in boats before it affixes itself to your property, it probably would belong to the person that collects it, but they cannot go on your property to collect it. If they do they are trespassers. To make this seaweed your property, it must combine itself with the particles of soil in the adjacent land in such a manner that it can fairly be said to have combined with it so that it really becomes part of the soil. It then belongs to you.

"More or Less" in Deeds."

C came to me (S) to buy my land with buildings. S (myself) shows C together with a different relation of C's on two separate occasions, the dividing fences and all boundary lines, etc. (which C now acknowledges). S from slip of memory believed and at both times told C that there is about but not quite five acres of land. Lawyer draws agreement from description of both parties (deed not at hand), S to deliver April 1 to C the land with buildings now owned and occupied by S, bounded by lands of D., E., F., and G. No measurements given except five acres more or less. C pays $40 balance on acceptance of deed. Deed tendered C, drawn exactly as original deed to S shows three and one-fifth acres only. C refuses deed while acknowledging that S in transferring all the land S owned at any time, and the identical piece of land he examined as to boundary lines, etc., but that S must deliver five acres as per agreement or pay C (excessive) damages. C and relatives claim willingness to swear S stated S had measured land, which is false, and S not capable of doing so. Is this the law of Pennsylvania? S.

Pennsylvania.

The law in Pennsylvania and elsewhere seems to be that "more or less," as used in the description in a deed, indicates an intention that any small variation either above or below the number of acres mentioned shall be no cause for complaint by either party. For any small deficiency the purchaser will be held to have assumed the risk, and for any small excess the vendor will have no relief. In order to maintain an action on the ground of variances between the number of acres actually contained in the tract and that stated in the description, there must be some evidence of fraud or mistake. In this case, where S states that his land contains five acres more or less, and there is found to be three and one-fifth acres, there is considerable of a discrepancy, and notwithstanding the fact that C knew the boundaries, it may be held that there is too great a difference. It would, however, all depend on questions of fact; that is, whether C was sufficiently acquainted with land to know by viewing the parcel whether there were three or five acres in it, and whether S knew that there were only three and one-fifth acres when he told C there were about five acres. If C will take a reasonable view of the matter and accept a reasonable amount of settlement, that would appear to be the best way out of the difficulty.

Owner's Right in Adjoining Stream.

We are two women who own a farm, our home. There is a stream running across a part of it; then running across a yard, where our stock (horses, cattle and poultry) have to get their drinking water. In Spring (in March) when spraying of orchards is going on, a neighbor above, either rinses his barrels of spraying mixtures, or somehow gets the mixture into the creek, so that it comes down the creek (the current is not strong enough to carry it farther) and settles in the stream where my stock have to get their drinking water. It poisons my fowls, and I am afraid for my stock, as they do not like to drink it. He also has a concrete dam in the creek, also puts his rubbish in the side of stream, which washes down on us, (tin cans, etc). What can we do? P. L. W.

New York.

It is your right, as owner of land through which a stream runs, to have the stream continue to flow through your premises in its natural condition of purity and free from any contamination or pollution, such as would render it unfit for domestic or farming purposes, but this right, of course, is subject to the right of each proprietor to use the stream to a reasonable extent, and each owner is entitled to make such use of the stream as does not inflict substantial injury upon other owners. It would seem from your letter that the neighbor is making such unlawful use of the stream as to injure your property and damage your rights in the stream. Before writing to the State Board of Health, it might be well to send a letter to the owner who is doing the damage. If he does not stop polluting the stream, you can sue him for damages and also complain to the State Board of Health. Neither does the owner higher up the stream have the right to obstruct or detain the water of the stream to your detriment. You have a right to the unobstructed natural flow of the stream, and another owner cannot detain or consume so much of the water as may interfere with your rights. Of course, each owner along the stream has a right to as much water as may be reasonable and necessary for his proper domestic and farming uses, but he has not right to dam the water and keep it from you entirely, unless he has acquired it by prescription, that is, used it in that way to you or your predecessors' detriment for 20 years or more.

Getting Rid of Gray Squirrels.

Can you tell me how to get rid of grey squirrel? I have a couple of acres in a small suburban place, and am overrun with them. They not only destroy buildings, but I have seen them eat birds' eggs, destroy their nests, and they clean out my strawberries and cut off my fruit, dig up my bulbs and flowers and do great damage to my young trees. I don't want to shoot them, but all other methods have failed. I have tried arsenic and strychnine mixed up with nut food and placed it where the birds could not have access to it, and though the foraging must be hard work in this deep snow, they won't touch the poison offered. S. S. W.

West Newton, Mass.

R. N.-Y.—We turn this over to our readers who seem to have had experience with all sorts of things, from blessings to pests.

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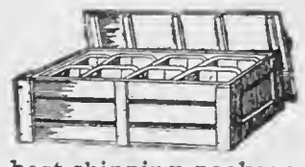

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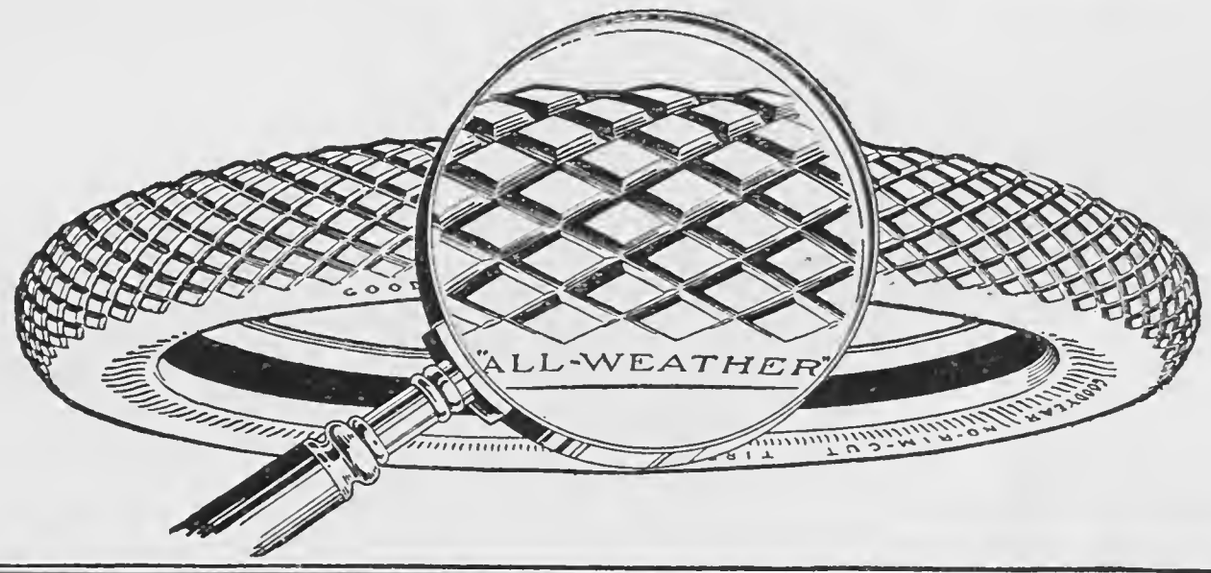

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(1481)

THE FARM SALE.

The picture given below will show how many of our northern farmers may be found during the next two or three weeks. This picture was taken in Western New York. The season of farm sales has come, and when they are well advertised, they generally call out a crowd. With this late Winter, there is not much to do around the farm, except the ordinary chores, and this leaves farmers free to attend such sales. Sometimes there are real bargains to be found in stock or tools, and at any rate, the farmers like to get together and visit and talk over matters which are of general interest, and so when the auctioneer begins his talk, there is usnally a crowd around

WHERE THE FARMERS MAY BE FOUND NOW.

him, very much like the one shown in this picture. In fact, the country auction sale is a recognized feature of rural life, and will continue to be such for a good many years to come.

Beets, Carrots and Parsnips.

I have a piece of land of about five acres that has been used for a cow pasture, or more of a cow yard; 12 cows have been kept in same, and green stuff hauled in to them so the land has been well manured. I plowed it last Fall and had a good dressing of cow manure on the sod after it was turned over. I am thinking of planting beets, carrots and parsnips on this land, and would like to have your advice as to whether these roots would be smooth. Some of my neighbors tell me that in their opinion they would be prongy and rough.

Danvers, Mass. G. W. D.

As a rule it is only when fresh stable manure is used in the growing of these root crops that they grow prongy or otherwise deformed. The beet requires a somewhat richer soil for good results than either the carrot or parsnip. In some of the large market gardens of the country as much as 60 tons or more of well-rotted manure to the acre is used for beet ground when it is intended to follow them with celery or other late crop, but if beets alone and but a single crop is grown on the land the quantity of manure is reduced to 35 or 40 tons to the acre. For the production of good marketable carrots or parsnips, 20 to 25 tons of well-rotted manure to the acre is sufficient. Cow manure is much less liable to cause deformity in root crops than any other kind produced on the farm, and the fact that your land was manured and plowed last Fall should in a great measure remove the danger of any great amount of the crop being deformed, as you have practically the same manurial conditions as would have resulted by composting the manure and applying after it had become well rotted. The best soil for carrots and parsnips is a deep sandy loam that has been heavily manured and cropped to corn or similar crop the year previous. Very little deformity will result to the roots grown in soil handled in this way. K.

Scientific Cultivation of Corn.

Which is the approved scientific method of cultivation of corn, to use a cultivator and leave the ground in small lumps, or to use a weeder and leave a "dust mulch?" I have heard arguments on both sides. Will you give me the correct method? E. S. R.

Pottstown, Pa.

There are a dozen approved scientific methods of cultivating corn. Science must adapt itself to conditions, and these vary with soil, climate and weather. With the average season, for corn culture, the best plan is to do a good share of the cultivating before the seed is planted. This means plowing properly, and harrowing many times before planting. This fitting immediately after plowing holds moisture in the ground and kills multitudes of weeds which would otherwise grow in the crop. Generally speaking, level culture with some shallow working tool is best for the corn crop. This would mean working the ground with a weeder, from the time the seed is put in until the stalks are about 18 inches high. After that a cultivator with small shallow teeth is used to keep what is known as a dust mulch on the surface of the ground. The plan of cultivating so as to leave lumps is not a scientific method in our average saeson of rainfall.

There are conditions, however, when this shallow dust mulch would not make the best cultivation. Occasionally we have a very wet season. The rain falls constantly through the earlier part of Summer, or when the corn is beginning to form its ears. We then have too much moisture in the soil, unless the ground has been perfectly drained. The object in a wet season is not to hold moisture in the ground, for the crop will usually be better if this surplus moisture is taken out. In such cases a rougher and deeper cultivation will pay better, or even a plowing between the rows will help, as this would hasten evaporation of the moisture and stop the corn from making an excessive growth of leaf and stalk. Thus it will be seen that no definite rules can be given for cultivating corn, as all the conditions must be considered, and the cultivation adapted to them. During the past few years still another scientific method has been suggested. This means no cultivation at all, but simply keeping down the weeds by hand pulling or scraping or slicing off with a hoe. Killing out these weeds prevents loss of moisture which the weeds would naturally take, and it has been found that in a heavy corn crop there is less evaporation of moisture from the soil than with most other crops. At least many careful experiments have shown that corn handled in this way without any cultivation whatever, but with the weeds destroyed, gave as heavy a crop as where the corn was thoroughly cultivated in a scientific manner.

WILLIE was struggling through the story in his reading lesson. "'No,' said the captain," he read, "'it was not a sloop. It was a larger vessel. By the rig I judged her to be a-a-a-a-a——'" The word was new to him. "Barque," supplied the teacher. Still Willie hesitated. "Barque!" repeated the teacher, this time sharply. Willie looked as though he had not heard aright. Then, with an apprehensive glance around the class, he shouted: "Bow-wow!"—Detroit Free Press.

ROOFING

Sample Free

THERE is a community up in Vermont that has found out all about Amatite. It began with a single farmer who wanted to roof a shed on his farm. He had heard that a new roofing had been invented which needed no painting. He found that its name was Amatite and he bought some and laid it. He found that it was just as easy to lay as the old-fashioned painted roofing, and it was sold in rolls with nails and cement supplies free as usual. And he found also that Amatite Roofing instead of costing more as might have been expected, actually cost less than other roofings of much less weight.

After the first winter, he noticed that the Amatite was exactly as good as ever, and after the second winter he was still unable to detect any change in it.

He has other roofings on his farm and he was accustomed to giving them a good heavy coat of paint every two years just as the manufacturers of those roofings urged him to do. He was glad that it was not necessary for him to paint the Amatite roof after the second year. It saved him money and trouble.

He began to tell his neighbors about Amatite, and the local dealer laid in a stock of it. Other farmers began buying it and had the same experience—the roofing gave faultless service year after year with no trouble whatever to the owners.

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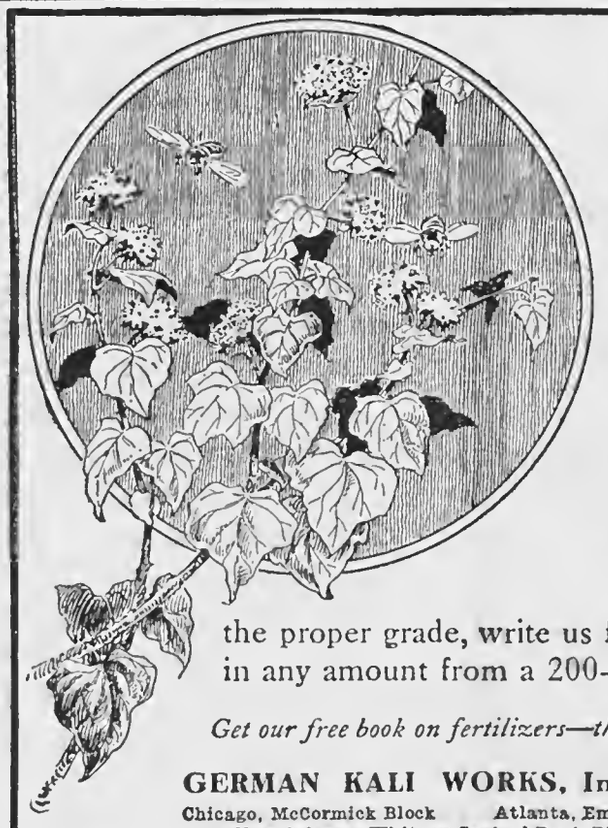

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Soaking Seed Potatoes for Scab.

I am advised to soak my seed in a solution of one pint formalin to 30 gallons of water for two hours. Will not this break off or injure the sprouts?

Soaking will break off many of these sprouts and the solution will injure their vitality a little; planting either by hand or in the planter will also break off more or less of the buds, but they usually sprout again and give a fair plant. Seed potatoes should not be permitted to make long thin sprouts, which are produced usually in warm and dark cellars. The seed potatoes ought to be spread out in some dry sunny place at least two weeks before planting. This place should be where the potatoes can be protected from frost. Thus exposed the tubers will make short heavy sprouts containing far more vitality than the long thin sprouts formed in the dark. These heavy sprouts will not be injured by the soaking, but this soaking may well be done a week or more before planting.

A farm paper states that this work may be hastened by piling the potatoes on the barn floor, sprinkling the solution over them and covering with a blanket.

We have not tried this plan of piling potatoes on the barn floor. This is the method followed after treating oats for smut. The oats are put in a pile and well soaked down. Then cover with blankets or sacks for two hours and spread out to dry. The oats absorb a large quantity of moisture and enough of the gas formed with them to cover the work and go through the pile and kill the germs of disease. The potatoes being very much larger when thus piled up would not, of course, absorb as much of the liquid, and we should doubt if enough of the gas would be formed under these conditions to destroy the scab germ. We should prefer the old plan of soaking, although it takes more time.

What about using sulphur? Is it fully equal to the formalin solution?

In our experience powdered sulphur in a dried form is not equal to the formula solution for destroying the scab germ. It does unquestionably kill some of these germs. Its chief value seems to be for preserving the cut pieces in the ground. It also makes something of an acid condition in the soil around the seed pieces, and this helps to prevent the work of the germ. We think it wise to use the powdered sulphur even when the seed has been properly soaked. We put such seed into peach baskets, scattering about two handfuls of powdered sulphur over the seed as it is put into the basket. The basket is well shaken down two or three times. A quantity of the sulphur is dropped out at this shaking upon a paper placed under the basket, so that it may be saved for further use. We think this sulphuring in combination with the soaking of the seed will pay.

Potato Blight in Winter.

The New York (Geneva) Experiment Station has tested the theory that the fungus causing potato blight does not winter over in the soil.

To test the liability to such transmission, the Station Botanist has carried on careful tests in two seasons; and finds no evidence that the fungus can survive the Winter in the field, in central New York, at least. In each of the tests, soil from a field of diseased potato plants was thoroughly mixed, in boxes, with broken, rotten tubers and pieces of blighted stems; and the boxes were exposed to the weather during early Winter. Later the boxes were brought into the forcing house, a sound potato tuber was planted in each and conditions made as favorable as possible for growth of plants and development of the disease. In spite of warmth, abundant moisture, both in the soil and in the air and luxuriant, succulent growth of the plants, not a sign of blighting appeared, even when the plants were grown in a special glass chamber and thoroughly wetted daily with water drained from some of the soil mixed with diseased material, or were painted with a thin mud made from such soil. The results, being negative, do not prove that the late-blight fungus cannot remain alive over Winter in the soil, but they make such persistence appear highly improbable.

It would seem unnecessary, then, to change the location of the potato crop to avoid this disease; especially as we know that thorough spraying will control both blight and rot and will increase the crop enough, taking one year with another, to make this a highly profitable regular practice in potato growing. The spraying of late potatoes should never be neglected.

Sulphur and Iron Pyrites as a Fertilizer.

Some recent experiments in France throw some light on this subject. Based upon the fact that sulphur is known to aid nitrification by entering into the chemical reactions that take place when organic and ammoniacal fertilizers are applied to the soil, these experimenters planned two series of tests. In one series nitrate of soda was used as the source of nitrogen, and in the other series dried blood was applied in such quantity as to furnish an equal amount of nitrogen as the nitrate carried. Two methods of application of the sulphur and pyrites were employed in each series. One method was to apply the sulphur to the surface of the soil at the rate of 50 and 100 pounds per acre, and the other was to mix it thoroughly with the soil at the same rates per acre. The results all along the line of the nitrate of soda series with wheat and beans showed only a variation of from two to four per cent. increase or decrease in yield. But quite different were the yields in the dried blood series. Both wheat and beans yielded better when the sulphur was thoroughly mixed with the soil than when applied on the surface only. The larger application of 100 pounds per acre showed much higher yields than the 50 pounds application all through the experiment.

In the dried blood series with 100 pounds of sulphur applied on the surface, the yield of wheat increased 21 per cent. and when that amount was mixed with the soil the increase was 30 per cent. With beans the increases were 30 and 60 per cent. respectively. Twice as much of the pyrites was applied as in the case of the pure sulphur. With an application of 200 pounds of pyrites per acre in the dried blood the wheat yield increased 20 per cent. in case of surface application, and 41 per cent. in case of a thorough mixture, while the yield of beans increased 25 and 52 per cent. respectively. These results indicate that sulphur and iron pyrites (a compound of sulphur and iron) may be used as fertilizer ingredients under certain conditions. G. M. T.

Postage Package for Boiled Cider.

Where can I buy packages in which to ship boiled cider by parcel post? The boiled cider is thick (soft jelly) but will require a tight package. Common jugs might do by packing them in a wooden box, but it makes the package pretty heavy. I do not think it safe to put it into tin cans; the acid would eat the cans and spoil the cider. Probably aluminum would cost too much. Glass of course is all right; cans, jars or bottles, and I am told that they are shipped by parcel post, but I don't know how they are packed. Perhaps there may be wooden kegs that are all right for the purpose? I wish to ship from one quart to three gallons. (Anything less than 50 pounds, package and all). Can you give me information that will help me out in this matter? D. J. C.

Randolph, Vt.

This was forwarded to the scientific assistant who has charge of the work of investigating suitable packages for farm products at Washington. He says:

I am without experience in that line. Wooden kegs properly made would perhaps serve the purpose quite well for the larger quantities within the weight limit of 50 pounds. For smaller quantities a metal container, something like those used for maple syrup, might answer the purpose. These would need to be enclosed within a wooden box or a corrugated-pasteboard container of at least two thicknesses. A metal container would have to be sanitary-enameled or lacquered on the inside to prevent the action of the acid in the cider on the metal. A person desiring to work up a business of this kind should consult his local postmaster to ascertain what kind of container he would admit to the mails and how it should be packed. The danger of leakage from puncture or other cause is considerable, and I do not know whether the postal authorities will sanction any kind of container for liquids other than those specified in the parcel-post regulations, with which the inquirer can familiarize himself by inquiry of his local postmaster. LEWIS B. FLOHR.

De Lawd made de mule ter give us a example of stubbo'nness, likewise ter show us how foolish it is ter be allus kickin' because you happen ter have de heels.—Atlanta Constitution.

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It is because the Mitchell is a sturdy and lasting proposition and may be maintained with maximum economy that the farmer finds it suited to his needs. When he buys it he realizes that he has made an investment which *pays big dividends in efficiency.*

The car that does the most work, lasts the longest and can be kept up with the least expense for repairs, is *the car that the Business Farmer needs* and this we declare to be the Mitchell because years of experience have *proved* it definitely.

The purpose of this advertisement is to request you Business Farmers to go at once to the nearest Mitchell dealer, examine the car carefully, take a ride in it and *drive it yourself* so as to get the *personal feel* and the *personal touch.* If it proves its merit it is the car you want. That's the *only way* to *buy* an automobile and the only real way to *sell* one.

Equipment of All the Mitchell Models That is Included in the List Prices:

Electric self-starter and generator—electric lights—electric horn—electric magnctic exploring lamp—speedometer—Tungsten valves—mohair top and dust cover—Jiffy quick-action side curtains—quick-action rain vision wind-shield—demountable rims with one extra—double extra tire carriers—Bair bow holders—license plate bracket—pump, jack and complete set of tools.

Prices F. O. B. Racine

Mitchell-Lewis Motor Co.
Racine, Wis, U.S.A.

Hardwood Ashes Best Fertilizer in Use. GEORGE STEVENS, Peterborough, Ont.

ROOFING—95 CENTS ROLL—108 Feet. Nails, Cement. RUBBER ROOFING CO., 5 Cortlandt St., New York

HORSE HEAD.
Best and cheapest way to get phosphorus—buy pulverized raw phosphate. It will put strength in your soil. It will put money in your pocket. Write for price, your R. R. station.
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Here Is the One Best Buy in Hay Carriers

The *Harvester!* The biggest "buy" because it's the biggest, strongest, most modern hay carrier.

The eleven big mechanical features of Harvester Hay Carierrs *begin where others leave off.* They mean greater durability, trouble-proof simplicity, and an enormous saving of labor. They mean money in your pocket—every one of them!

Harvester Hay Carriers

Star Goods
All Guaranteed — STAR Stalls, Stanchions, Litter and Feed Carriers, Harvester Hay Carriers, Star Hoists, Cannon Ball Hangers, etc. *Write for details*

1914 Models—for Steel, Wood or Cable Track

Both sling and fork styles — three types. Heavily re-inforced—extra strong where extra strain comes. Drive clear in or pull up at the end of your barn—unload the hay either way — the Harvester handles it without re-roping or changing pulleys.

Find out about our big leading features. It will pay you handsomely. Send your name.

We'll send you our new HayTool Book *and the name of a dealer in your locality who can show you the Harvester itself.*

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Free Hay Tool Book
This book gives full Harvester Hay Carrier details. Write us today—we'll send the book tomorrow.

EVENTS OF THE WEEK.

DOMESTIC.—The factory of the Eclair Moving Picture Company at Fort Lee, N. J., was destroyed by fire, March 19. The damage is estimated by the company officers at $650,000. In the basement vaults were completed negatives valued at thousands of dollars. These were destroyed. Films colored by a recently discovered process and which had been imported from France recently at a cost of $50,000 also were ruined. Only one piece of machinery, a lathe, valued at $1,500, was saved. Credit for saving $60,000 worth of films is given to the girls employed in the joining room.

The Windsor Hotel, at Milwaukee, Wis., was burned March 19, causing a loss of $300,000. Eight of the hotel's guests had narrow escapes from death; many others fled in their night clothes and took refuge in the lobby of a theatre across the way.

One man is dead as the result of a riot between strikers and deputies at the Gould Coupler Plant at Depew, near Buffalo, N. Y., March 23, and eight others were wounded, several dangerously. The town was placed under martial law March 24.

The largest business block in Durham, N. C., was destroyed by fire, March 23. The Duke Building, occupied by 5 and 10 cent stores and 200 offices was destroyed. The water main burst, and the fire continued to spread. The damage was estimated at nearly $1,000,000.

The 10-hour woman's labor law of Massachusetts was upheld as constitutional, March 23, by the Supreme Court. Massachusetts passed in 1909 a law limiting the employment of minors and women in manufacturing and mechanical establishments to 56 hours a week and 10 hours a day, with certain qualifications. The State reduced the hours from 56 to 54 in 1911, but the latter law was not in question in the case now decided. The case was carried to the Supreme Court on the appeal of Richard G. Riley, a superintendent in the Davol mill, in Fall River, who was convicted of requiring a woman to work five minutes over ten hours.

Over $10,000 profit in one year from the local saloon, which is owned by the municipality, is the report of the citizens' committee in charge of the grog shop, at Sisseton, S. D. Sisseton was dry for two years. Then the citizens voted it wet, and the city decided to hold the one license to be issued. A manager was hired and the saloon opened. The earnings will be divided between the municipality and a special road fund.

According to Frank W. Schumaker, on trial with other officers of the Sterling Debenture Corporation in the federal District Court for using the mails to defraud investors in the Oxford Linen Mills Company, more than 8,800,000 letters were mailed to prospective investors in the two years of its existence. It was shown that the circulars cost $753,000, of which, at the average cost of 3 cents for postage, the Postoffice Department received about $260,000 before its inspectors began to get evidence against the concern.

At a special meeting of the East Side Horse Owners' Protective Association in the University Settlement, March 24, a committee was appointed to wait on District Attorney Whitman and District Attorney Cropsey to inform them of a sudden recurrence of horse poisoning and horse stealing. Morse M. Frankel, director of the association, said that horse poisoners whose cases had been unaccountably postponed in the criminal courts were boasting on the East Side that the District Attorney was behind them. Within two weeks seven horses have been poisoned and 68 stolen.

FARM AND GARDEN.—Frederic W. Taylor, director of agriculture in the Philippine Islands, has resigned his position and will return to the United States.

C. L. Marlatt, chairman of the Federal Horticultural Board, is authority for the statement that, during the month of February, 44 nests of Browntail moth were detected on nursery fruit stocks imported from France. Attention is also called to the finding of an undescribed canker disease on chestnut from Hongo Tokyo, Japan, by California State inspectors at San Francisco. According to Dr. Haven Metcalf, the disease appears to be of the same type as the chestnut-bark disease, and there is every indication of its being equally as destructive if established in this country.

Dr. J. W. Robertson of Ottawa was re-elected to the presidency of the Canadian Seed Growers' Association at its concluding session. Mr. L. H. Newman of Ottawa was reappointed secretary.

A special feature arranged by Prof. A. H. Nehrling, of the Massachusetts Agricultural College, was a floricultural day which was held March 18. The program was very comprehensive, and the addresses were interesting and instructive.

All sorts of expositions are being held but here is a new one, the "Vermont Juvenile Agricultural Industrial Exposition," will be held at Windsor, Vt., on October 26. This is a new one, in the fact that it is the first time, probably, that an exposition has been held in New England for the purpose of showing the work of children. The exposition will include all sorts of farm products and all manual training products, such as, sewing, cooking, cement work, etc. It is an admirable scheme and has been planned by the Windsor County, Vt., Y. M. C. A. This association has held its children's corn show very successfully for three years, and we hope this exposition will be equally successful.

The Senate passed a bill, March 23, which authorizes the carrying in the mails of bulbs, seeds, plants and bushes at fourth class rates instead of second class as at present.

Plans for a nation-wide coöperation of farmers, backed up and financed by national and local banks, were discussed, March 23, at a luncheon given by the executive committee of the National Civic Federation at the Hotel Astor, New York. Chief among the speakers were Lieutenant Governor Sheffield Ingalls of Kansas, Andrew Carnegie and Dr. Albert Shaw. Agricultural educators from all sections of the country were present, and Dr. Seth Low, president of the federation, presided. The high cost of food products as one of the direct results of the lack of "industrialized agriculture" was one of the chief points Lieutenant Governor Ingalls made in his address. While the United States, he said, had been developing the theory of farming to its utmost point European countries had been making practical use of this knowledge, to the discomfiture of their teachers.

The New York Board of Water Supply wants 1,250,000 little evergreen trees to plant along the 40 miles of shore on the Ashokan and Kensico reservoirs in the new Catskill water system. It has asked contractors to bid on supplying the trees and setting them out within three years. They will be expected to replace trees that die. The trees are to protect the water along the thousand foot strip that the city owns on the shores of the reservoirs. The Board of Water Supply wants evergreens because leaves from deciduous trees are apt to turn the water brown in the Fall. The board grew 1,000,000 little evergreens in its own nurseries and set them out last year, and 500,000 more, which it bought from the State Conservation Commission.

The New York Milk Committee, through Paul E. Taylor secretary, has sent a protest to Governor Glynn and the State Legislature against the Webb bill in the Assembly and the Wheeler bill in the Senate, which were designed by their authors to strengthen the pure milk law and to hasten the elimination of bovine tuberculosis. The complaint against the bills is that they provide for a physical examination of cattle rather than the recognized tuberculin tests, and that they would not reach the necessity found for stamping out the disease in the dairy herds. It is pointed out that the tuberculin tests discovers 98.8 of tuberculous cattle, the physical examination from 3 to 5 per cent. The bills are attacked as uneconomic. The Milk Committee says 500,000 of the 1,500,000 dairy cows in the State are tuberculous and that the present State appropriation of $200,000 to pay for them is inadequate.

Recently Mrs. C. W. Morse brought a box of "meadow ants" from Europe, which she kept as pets. They were held by inspectors at New York, and the Department of Agriculture finds them "injurious insects, damaging meadows, lawns, and in some instances field crops," and decrees that they be shipped to Washington for destruction. According to the act of Congress, March 3, 1905, chapter 501, any insect injurious to vegetation is prohibited from importation.

By George! Wife, They're Right!

Fuller & Johnson Says

"In the Spring, the farmer is about the busiest man going. It takes all his time for plowing and planting. Right now, *before* the busy time sets in, is the time to find out all about the

FULLER & JOHNSON Farm Pump Engine

It means a whole lot to be sure of plenty of cool, fresh water all the year around. The F & J Farm Pump Engine does this and more.

Get the new catalogue with a full complete description. Convince yourself that this engine is one of the biggest labor savers for the farm. Fits any pump, no belts, no anchor posts, no special platform needed, no extras to buy. Comes complete. Sets right up to the pump ready to run. Don't wait until you are too busy. Get Catalog No. 17 NOW."

Fuller & Johnson Mfg. Company
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Lightning-Proof, Fire-Proof, Leak-Proof, Rust-Proof Once you lay an Edwards Tightcote Galvanized Steel Roof your roofing expense ends. Serviceable as long as building stands, never needing painting or repairs. Reduces cost of insurance. Any one can lay it—over old shingles.

Edwards TIGHTCOTE Galvanized Reo Steel Shingles

Reo Shingles

Each sheet galvanized by the exclusive Edwards Patent Tightcote Process *one at a time* after it is stamped and resquared. By Edwards Patent Interlocking Device nails are driven through under layer of metal only. No possibility of a leak.

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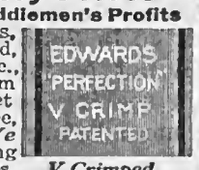

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burns kerosene and the cheaper oils at all loads under all conditions. It easily pulls four or more plows through sod or stubble and will save up to a dollar on every acre you plow. The OilPull furnishes cheap reliable power for threshing, baling, sawing and pumping. It will make money in harvesting, hauling and road-building. The wheels conform to any highway restriction. Three sizes 15-30, 25-45, and 30-60 horsepower.

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make good canvassers. Our subscription-working plan does not require any cash outlay. It gives the boy valuable, commercial experience and ready money. Send postal for details.

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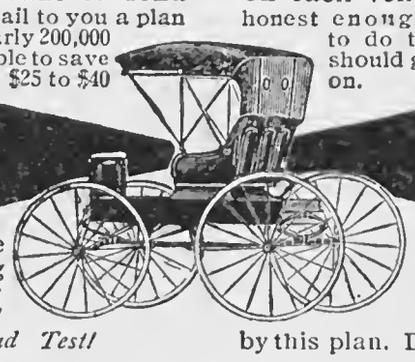
Let Phelps Send You

I have a 140 page book that I want to send you free. It *will* detail to you a plan that has helped nearly 200,000 people to save $25 to $40 on each vehicle. A plan good enough, honest enough and economical enough to do that, is one you should get posted on.



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It's your chance to get ahead of your neighbors—to be first to gain by this plan. Don't forget it—write tonight for it.

H. C. Phelps, *President*, The Ohio Carriage Manufacturing Company Station 290 Columbus, Ohio

SWEET POTATO QUESTIONS.

In regard to space required for growing 1,250,000 plants, we have two furnace-heated beds. One of these is 50x12 feet (600 square feet). We have run it several years, and it produces on an average 50,000 or 60,000 plants at one pnlling. It is customary here to make but one pulling, because all are working for early potatoes. It might be advisable to make two pullings, but we could not count on as many plants from the second pnlling as from the first. By firing onr bed very hard at the start and keeping it quite moist we could get more than 60,000 plants from 600 feet of bed space, bnt the plants wonld be too spindling for best resnlts. Then too, even if we did force them we could not depend on getting the potatoes to sprout heavily every year. Therefore when making only one pulling I would allow about 12,000 sqnare feet of space for producing 1,250,000 plants.

We have used furnace-heated beds and manure-heated beds. Both work well under favorable conditions, but the furnace-heated beds have the preference when it comes to growing any qnantity of plants. For less than 20,000 I would use a manure-heated bed. Above that quantity I would use either a furnace-heated bed or one heated with hot water. I believe this will be the future heating system for sweet potato beds, because it avoids all risks from fire and gives a uniform heat that is impossible to secnre in any other way.

I lately met a grower who made a hot-water heated potato bed last Spring. This grower has been very successful in the past with the furnace-heated bed, bnt his new bed gave him much better results than he ever secured with the furnace-heated beds. His bed was about 50x12 feet; there was no deep pit under the bed, no sleepers or boards to fall down on the flue and catch fire. He was very careful to get a good grade; then he dug a pit at the lower end of the bed for his heater, which was a small second-hand one formerly used in a brooder house, costing $27 when new. From this were run regular two-inch hot-water pipes; first a flow, then a return, alternating across the bed. As I recall it there were about 10 lines of pipe laid about 14 inches apart, and they must have been eight or 10 inches below the line of the potatoes. The pipes were in the sand, but a layer of old well-rotted manure had been placed below a layer of soil before the potatoes were put in. An expansion tank was located at the high end of the bed. A farmer-plumber did the work, and the cost to the grower was approximately $50 for the pipe and piping. This together with the heater made a total cost of $77. It took one-half ton of coal to heat the bed this season. If making another bed he would make bnt one change, and that in the heater. He would have one a little larger, and then he could heat two beds with the one stove, and at the time feel that he had a little extra heat in reserve if needed. The larger stove or heater would cost him $40, which with the piping would make a total cost of $90 for the outfit.

A furnace-heated bed requires an arched brick furnace four feet long, 1½ feet wide and 2½ or three feet high, and one or more flues of brick or tile to run two-thirds the length of the bed, besides heavy sleepers to go aeross the bed every five feet and enough boards to make a floor upon which the bed proper is made. The cost of this will depend on local conditions, cost of lumber, etc., and can best be figured out by the builder. The hot-water heated bed requires only enough lumber for the sides and ends. If a farmer wants to grow potatoes for only two years, I believe the furnace-heated bed will be the cheapest for him, provided he takes every precaution to avoid risks from fire. But for a permanent investment I feel sure the hot water would give best results. A furnace-heated bed can be built on level land, provided the land is far enough above the water level so the furnace will not be flooded during the Spring rains. Enough soil can be scooped off to make a good grade of one to two feet, which is sufficient to get a good draft. I have never seen a steam-heated bed, and cannot say how it would be best to run the pipes.

If the manure is intended for the field it will be entirely practical to gather it and hold it until March. Before commercial fertilizers came into existence, manure was used altogether, in this section, for sweets. It was hanled in the Fall, composted, and then turned once or twice before distributing it in the row in the Spring. Now manure is used broadcast, preferably for the crop preceding sweets, and fertilizer nsed in the row for sweets. Wood ashes are costly here and we have never used them, but we are convinced that sweet potatoes need a large amount of potash, and they want a sweet soil. Wood ashes contain both lime and potash and should be beneficial. The amount of fertilizer nsed here depends on the soil, but abont 700 ponnds to the acre of a 1.65-9-10 mixture distributed in the row is an average application. The fertilizer is distributed with a drill having a tooth behind to mix it with the soil. Most growers use the one-horse drill. Some, however, use a larger one, which takes four rows at a time. We secure far better results by distributing the fertilizer before ridging and have one or two good rains on it so as to wash out the injurious salts that will otherwise burn the plants. The burning from fertilizer is worse on very light sandy soil than on a sandy clay loam.

Sweet potatoes do not give best yields on acid soils and I would, by all means, use lime and I would buy the kind that gave me the most actual lime for the dollar. When figuring this I would include the labor for hauling, which will vary greatly with local conditions. We have nsed both ground limestone and burnt lime. Both give good results. We use 2,000 pounds of ground limestone and from 800 pounds to 1,000 ponnds of burnt lime per acre on our sandiest soils for sweets. Last year we could get ground limestone at $3.20 a ton f. o. b. our station and burnt lime at $5 a ton. We used the limestone. This year we can get burnt lime at $5 a ton and ground limestone at $4 a ton f. o. b. our station, and we have ordered the burnt lime.

We shall have to go to Missouri in order to be shown how to grow sweet potatoes without cultivation. We begin to cultivate when plants are well rooted, and continue once a week, if possible, until vines cover the gronnd. When planted in hills they are cultivated both ways, which reduces hand hoeing to a minimum. We have regular sweet potato harrows with vine turners attached, and set so as to scrape the sides of the ridges. When planted in drills the harrow can be used one way only and more hand work is necessary. Ordinary garden hoes are used by some growers to break the crust close to the plant, but a more satisfactory tool is the scalper, which is merely a small iron rod bent in the form of a triangle with the base flattened so as to have one sharp edge. This is put in a hoe-handle at a slight angle and used much the same as a hoe. It is light, more effective and an inexperienced hand is far less likely to cut off the small newly set potatoes than with a hoe. The scalper can be made for about 25 cents. When planted in hills the usual distance is 2½ feet each way, although some set plants 2½ feet one way and 24 to 28 inches the other way. In drills the rows are 2½ feet apart and plants 18 inches apart in the row.

There seems to be a great deal of confusion concerning the varieties of sweet potatoes, and quite frequently the same variety is called by two or three names and I have not, as yet, been able to get them satisfactorily straightened out. In regard to Yellow Jersey and Big Stem Jersey, I have always considered the Big Stem to be a form of Yellow Jersey, slightly larger in size, both in potato and leaf, a heavier yielder of longer spindle-shaped potatoes, later in maturing and a trifle more susceptible to attacks of stem rot.

TRUCKER, JR.

LITTLE Willie's mother had made him a fine new pair of knickers, but the little boy complained that they were uncomfortably tight. "They're tighter than my skin, mummie!" he declared. "Don't be silly, dear," remonstrated his mother. "They can't possibly be tighter than your skin." "But they are, mummie! Because I can sit down in my skin; but I can't sit down in these trousers!"—Melbourne Leader.

Studebaker

WAGONS BUGGIES HARNESS

Bought his Studebaker when he came home from the civil war—using it yet

WHEN David Hire, of Syracuse, Ind., got home from the Civil War he bought a Studebaker Farm Wagon. That was 48 years ago, and the same wagon is still hauling fifty bushels of wheat at a load to market.

Here is what Mr. Hire has to say about his Studebaker wagon.

"It may interest you to know that I have in my possession a Studebaker Farm Wagon bought just after I returned from the war, about 1866, I think. It carried a guarantee to haul 50 bushels of wheat and though it has been in constant use since it was bought, it is still good to haul that amount to market. I hope to use it for many years yet, as it is in good condition."

A REAL VETERAN

That is the way with Studebaker wagons. Built of air dried timber, with inspections at every step of manufacture, they outlast the ordinary wagon from twenty to thirty years.

You may be offered a wagon at less cost than a Studebaker, but consider that the cheaper wagon may last five or ten years, while a Studebaker will last a lifetime. That makes the Studebaker the better investment, doesn't it? *"Build not the cheapest, but the best"* has been the policy of Studebaker for over half a century.

You can't make a mistake if you buy a Studebaker Farm Wagon, Buggy or Harness.

STUDEBAKER South Bend, Ind.

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Adv. 2006

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"Can't-Sag" Gates Cost Less Last 5 Times as Long

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I'll save you big money on your farm gates. My new catalog quotes such astonishingly low prices on CAN'T-SAG GATES AND GATE STEELS that you simply can't afford to build another clumsy, all wood gate. My FREIGHT PAID PRICES are half what others charge for short-lived steel, wire and gas pipe gates.

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I give 30 days free trial and a signed 5-year guarantee. Send for my big free Gate Catalog at once—see why Can't-Sag Gates outsell and outlast all others. Read what other farmers and stockmen say about them. When you get this book you can either select complete CAN'T-SAG GATES, Ready to hang, any height, any length—painted or unpainted or if you prefer you can order just the GATE STEELS (which includes everything but the boards). With these you can build your own Gates in 30 minutes and SAVE BIG MONEY.

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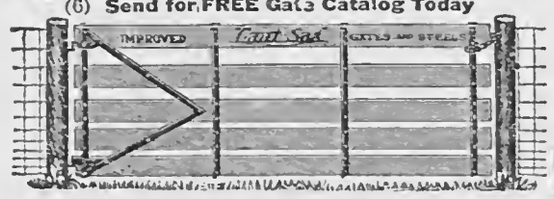

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Each board double bolted between 4 pairs of ANGLE STEEL uprights and 6 TRIANGULAR TRUSS BRACES. Patent reenforced SELF-LOCKING HINGE. Gate swings easily both ways—always hangs square and plumb. Elevating Attachment (furnished at slight additional cost) permits gates to be raised over deep snow or allows small stock to pass under. Write for FreeCatalog and FREIGHT PREPAID OFFER TODAY. Address

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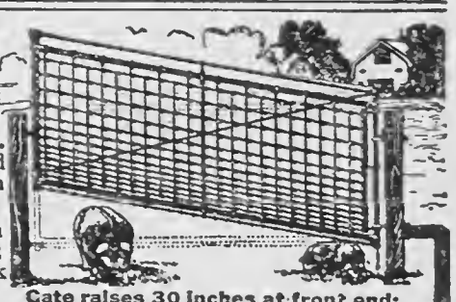

Cate raises 30 inches at front end; 12 inches at hinge ends.

You have to handle your big farm gate a dozen times a day. Why bother with a heavy, saggy, back-straining, rickety old wooden gate that gets snow bound in winter, mud bound in spring and summer, and soon falls to pieces?

For less money you can install a Republic Hercules Gate, which you can adjust to any position you like with little effort; always swings clear; locks automatically; resists all stock—lasts a lifetime.

You can tell a Republic Hercules Gate from any other Gate made, by its simple, strong construction; its solid tubular steel frame; its heavy, firm-standing, durable fabric; its easy raising device; its malleable iron fittings; its freedom from troublesome attachments.

We back it with a strong guarantee. Illustrated Catalog FREE.

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Strongest, heaviest wire. Double galvanized. Outlasts others nearly 2 to 1. Low prices direct from factory. Over 150 styles for every purpose—hog, sheep, poultry, rabbit, horse, cattle. Also lawn fence and gates of all styles. Mail postal for catalog and sample to test and compare with others. Address

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THE TOWNSEND STRETCHER

is the best implement made for stretching woven wire and is equally as good for plain, twisted or barbed wire. It has steel grips that never slip and is a very durable and convenient implement. Ask your Hardware Dealer for it. Satisfaction guaranteed. Circulars free.

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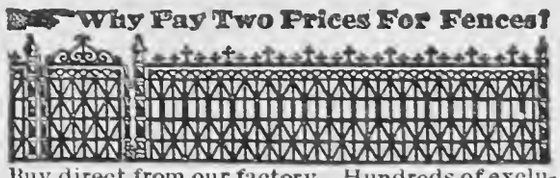

Buy direct from our factory. Hundreds of exclusive styles. Wire and Ornamental Iron guaranteed Fences for every purpose; Gates, etc. Write for Free Catalog, First Order and Early Buyer's Offer!

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40 designs—all steel. Handsome, costs less than wood, more durable. We can save you money. Write for free catalog and and special prices.

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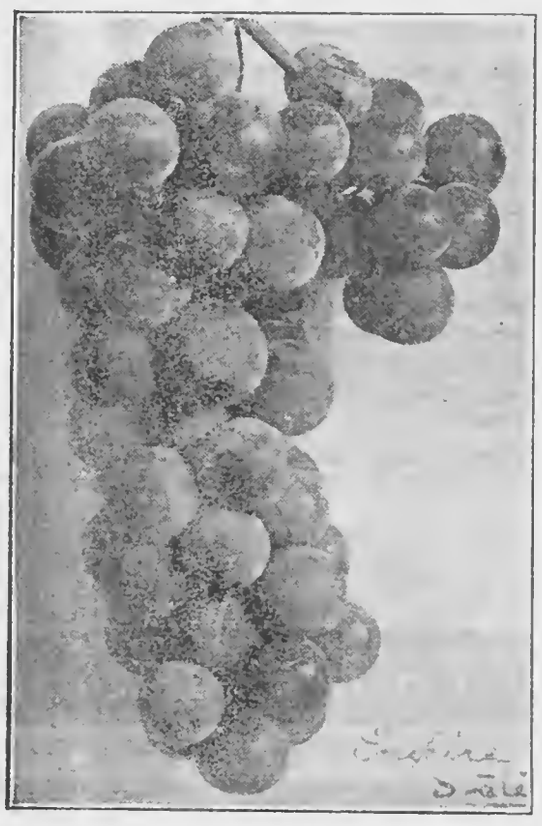
When you write advertisers mention The Rural New-Yorker and you'll get a quick reply and a "square deal." See guarantee editorial page. : : : : : :

PROFIT IN GRAPES.

Of all the fruits I find the grape one of the most satisfactory. It demands no heavy work, its culture is simple and its fruit is most agreeable to handle. Little extra labor is required for its harvest, there is a pleasing variety in color, size and flavor, a long season of ripening that permits ample time for marketing, and the fruit is not perishable as are most of the other small fruits. It is also profitable where there is a good local market, but in shipping I have had little experience. The local market can generally be depended on to pay considerably higher prices than the city markets, even without deducting the expenses of packing, transportation and commission. In this section three and even four cents per pound have long been the prevailing prices, while large shippers have often to be satisfied with one cent.

In planting for the local market there should be a good collection of varieties, running from earliest to latest, while, for shipping, only a very few kinds are wanted. This collection should consist mostly of grapes of the best quality, suitable for the table and dessert, and not only must they have quality but a great variety in flavor, color and size so as to



GRAPE, EMPIRE STATE.

appeal to every taste and avoid the satiety that a lack of variety might occasion. The demand for grapes as a regular article of diet may be greatly extended by such a judicious selection of varieties of the very best quality, and presented in packages convenient to handle as well as in small quantities. Usually the buyer prefers a small quantity because it calls for little money, is easy to carry home and is eaten up before the grapes have a chance to lose flavor and stale the appetite. One of the best forms for presenting grapes to the grocery trade I have found to be the small open tomato basket without handles, such as tomatoes are shipped in, four to the crate. These baskets hold about 3½ pounds of grapes, attractively heaped up, and are easily carried away by the customer or delivered by the grocer. They retail at 15 cents and the grower nets from three to 3½ cents per pound. Some grocers prefer to buy in half-bushel baskets and retail out by the pound, but I have known grocers to be unable to dispose of them in bulk while they sold readily in the small baskets.

I do not find the shipping basket of eight pounds to be suitable for this local trade. The quantity is too much for the average family, especially in the hot weather of August, when grapes are harvested here, but there is a large trade in half bushel baskets holding 17 pounds heaped, for putting up by the housewife, and selling for 50 cents. This is a very satisfactory form of marketing which I keep in my own hands without the intervention of a middleman. Orders for this trade comes in over the telephone in response to advertisements in the local paper. Such advertising is indispensable, and is not expensive. Usually I keep a regular standing advertisement and in addition, two or three others among the locals which are always read. "To keep well, eat plenty of grapes this hot weather"; "Try our delicious grapes, red, white and blue, for dessert and lunch," are some of the forms we choose to go with local items. I find also that there is an increasing demand for grapes to be made into bottled grape juice, and this usually goes in the form of half-bushel baskets. Sometimes an order for 100 or 200 pounds comes in, and on such a reduction is made.

Next we come to varieties, and I will enumerate those I have found most satisfactory. The earliest good grape to ripen is the Eclipse, coming a few days ahead of Moore's and Campbells. These latter are both very large showy black grapes of good quality, and are very popular sellers at a price generally a full cent above the main crop. Campbell's is the finer grape but is not a success with many growers according to reports. Here it is the best of all my collection, and in the greatest demand as long as it lasts, as it is a splendid keeper it can be made to cover all the season up to the Concord. I note here that black grapes always outsell the whites and reds, while the reds rank next. Other early kinds that must have a place to give variety are the Green Mountain and Brighton. The Green Mountain is a great bearer of a very sweet white grape that always pleases the taste, while the Brighton is a high quality red of great beauty. Then comes the well-known Delaware and the Concord, the latter in great demand, but the former not profitable here. Niagara and Moore's Diamond are magnificent white grapes, exceedingly showy, but their color is against them and their quality is not high enough to overcome the prejudice. There are some whites, however, whose quality will sell them, and of such are the Empire State, Duchess and Wapanuka.

Of reds there is a great list of fine grapes, among which some of the best are the Massasoit, Vergennes, Gaertner, Salem and Jefferson. For a late reddish yellow grape of fine quality and great vigor we have the Goethe. There is a dearth of black grapes later than the Concord, but a fine one larger than Concord is the Wilder, that is later here, and should be included. I find among the varieties originated by the late T. V. Munson some kinds that fill this gap and enable me to sell fine table grapes right on up to frost. These are the Carman, Muench and Fern Munson. For grape juice I find the Concord a good seller, but a better wine grape that will grow anywhere and bear great crops is the Ives, but it is not high quality. The Muench and Fern are fine for grape juice and there are several Munson sorts particularly recommended for this purpose, such as the Wine King and Ben Hur. With the above list any enterprising grower ought to be able to build up a profitable local trade against such competition as is ordinarily found in such markets. It is quality that counts.

L. R. JOHNSON.

Cape Girardeau Co., Mo.

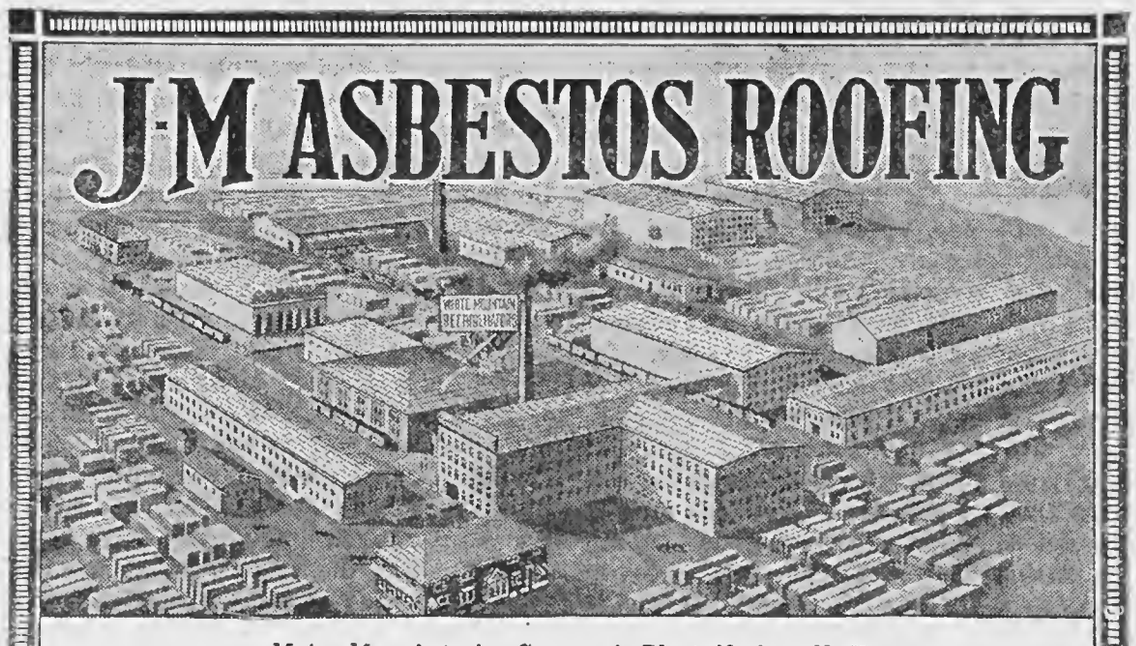
Care of Neglected Orchard.

We have an old Bartlett pear orchard (about 35 years old) that has been neglected until new growth, such as suckers, have thickly grown, some 1½ inches in diameter. In pruning this we cut out all the dead wood and as little of the new growth as was possible (some has borne fruit). The old wood was thickly covered with scale, which was killing the trees. We are now thoroughly spraying with lime-sulphur, one to 11, saturated solution. Was this the proper procedure?

Hightown, N. J. C. M. S.

It would seem that the pruning was done properly, for all dead wood is not only worthless but a positive injury. As the trees have been neglected for a long time there would be little need of heading back the growth, but there would be some useless branches that should be taken out to let in the sunlight. The spraying with lime-sulphur is the best thing known for killing scale insects, and it is also good for killing the germs of some of the fungus diseases. The Summer spraying for Codling moth larva, scab, etc., would come next and must not be neglected. H. E. VAN DEMAN.

"My dear one," said the young man, "I should like to ask you to marry me, but I cannot for a long, long time, I fear. Two people would starve on my salary." "O, George!" said the beautiful young girl, throwing her arms around his neck, "don't let that worry you for a minute. I'm a militant suffragette, and have been on four hunger strikes." Woman's Journal.



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THE USE OF COMMERCIAL "HUMUS."

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PART I.

BAGGING DIRT.—Some 25 years ago an Eastern man went to a Western State to talk on Eastern farming. He saw what to him were wasteful methods of handling that rich and fertile black soil. He told his hearers, among other things, that their soil was rich enough to be used as a fertilizer; that they might scoop it up and put it in bags, and sell it to Eastern farmers. This made a great uproar among his hearers. Then he went on to say that within 20 years this black soil would actually be scooped up, mixed with soluble chemicals, sent to the East, and used to produce more profitable crops of corn than the Western farmers could grow. Of course the audience laughed at him, and greatly enjoyed the joke. Then he went on to tell them that a Connecticut Yankee would buy a bushel of Illinois corn, feed that to hens in an apple orchard, save half of the manure in the henhouse, mix that manure with chemicals, and with the mixture raise another bushel of corn, which would be worth twice as much as the Western corn, while the other half of the manure would grow a bushel of apples, worth from two to three times as much as the original corn. Of course, those Western farmers put this man down as a blow-hard from Cape Cod, yet the time has come already when most of these things are being done. The Connecticut Yankee and the hen are certainly going through this corn performance to a finish, and producing the corn and the apples as stated, with the eggs and then the fat hen thrown in for good measure.

SELLING BLACK SOIL.—For the past half dozen years or more, black soil from the Western swamps has been scooped up and dried and used as a filler in the mixing of chemical fertilizers. More than this, within the last few years there has come upon the market in the East a number of forms of so-called "humus," which are offered for sale as a substitute for manure, as a fertilizer or as absorbents to be used in stables. All these developments show how scientists and farmers alike, in the Eastern part of this country, are scouring every nook and corner for plant food, in their effort to provide suitable manure or fertilizers for farm and garden use. The introduction of these forms of humus complicates the fertilizer situation considerably. It is possible for the dealers in this class of matter to tell very large stories, or at least make large suggestions about the value of their stuff. Our farmers have come to the point of buying their plant food on the basis of a chemical analysis, and most of them are familiar with the words nitrogen, potash, and phosphoric acid.

MISLEADING CLAIMS.—When therefore a form of humus is offered them, showing an analysis of three or four per cent. of nitrogen many of these farmers think at first that they are offered a great prize. When they are told that because a humus contains 3% of nitrogen it is four or five times as valuable as stable manure, they think they have a very plausible excuse for buying the new material. As a matter of fact, there are 10,000 and more farmers in New England who have pond holes or muck swamps containing five acres or more. The black stuff to be found in these low places is in many cases richer in nitrogen than the humus which is offered for sale at a big price per ton. We do not hesitate to say that farmers who own these pond holes and swamps can haul this muck up to a dry place, mix it thoroughly with slaked lime, work it over once through the Winter, and at the end of six months have as high a quality of humus as is offered for sale by most of the leading companies. In Vermont, several samples of muck were found which contained over 4% of nitrogen, and such muck limed and sweetened as we have mentioned, would be worth more to a farmer ton for ton, than the black soil which is offered him in bags at a good price per ton. Yet any farmer who has used fertilizers freely would know that the 80 pounds of nitrogen found in a 4% ton of this swamp muck, would not give him anything like the result to be obtained in 80 pounds of nitrogen, in nitrate of soda, or dried blood; 100 pounds of nitrate of soda, for example, will contain 16 pounds of nitrogen.

PLANT FOOD VALUE.—What farmer would be so foolish as to imagine that a ton of the dried muck soil, or humus, would give the returns on his crop which 500 pounds of nitrate of soda will surely give? Yet in offering these brands of humus to the public, the manufacturers seek to have it understood that a pound of their nitrogen is worth as much as a pound in manure or chemicals. They will deny making any such claim, yet if we read their literature we will see that the average buyer gets the impression that their material is three or four times as strong as manure, which is the standard that most farmers have for the purchase of plant food. During the past few years our experiment stations have recognized the weakness of confining the analysis of a fertilizer to only one form of nitrogen. There was a time when the experiment stations in their reports simply stated that a fertilizer carried two or four per cent. of nitrogen as the case might be, making no distinction whatever with regard to the quality or solubility of that nitrogen. Now, however, by common consent, and by law, they give not only the total nitrogen, but they state the different forms in which this nitrogen appears. Thus they state the amount present as nitrates; also the amount as ammonia, and they divide the organic nitrogen into two or three different classes, and they carefully tell farmers that whenever the so-called inactive organic nitrogen represents one-half of the total, it is not good economy to buy the material. This we consider sound advice, and it should be taken in the purchase of the black soil or humus now offered for sale.

An Old Man's Tree Planting.

On page 355 I have read with much pleasure the remarks of I. K. under the head of "Fruit Planting at Three-Score." It moves me to give some of my experience. I always had a love for fruit growing since I was old enough to love fruit to eat, but was not so conditioned that I could indulge my desires that way, except in a very small way, until I had reached the age of 65 years. Then I planted a peach orchard of several hundred trees. These trees grew up, did their duty and died of disease, old age and the ax; the ground they occupied has now another orchard on it of apples and peach set in 1906. The peaches are fillers and are in their prime. The apples are Baldwins, and many trees—they are standards—began bearing in 1912—a few fruits. Last year quite a number of barrels of very fine Baldwin apples were gathered in the orchard. These apple trees were set when I was 78 years old. I had set some apple trees when I was 73 years old—or young—and was told, and I thought most likely true, that I could not expect to eat of their fruit. But these trees have borne—some of them—three full crops of fruit, two to four barrels per tree. I said when told that I should never eat of their fruit, that I ate apples when a boy, from trees that some other man had set, and I wanted to set trees for some other boys to eat the apples. I have been fully repaid for my labor in the pleasure and recreation of caring for and seeing the trees grow, and I have been paid again in the hountiful harvests some of them yielded. Two years ago—I was then 84—I set a four-acre orchard of apple and peach. It is doing finely and I think someone—some boy perhaps—will have the pleasure of eating fruit from it. Yes, I will say to those of three score or more, do not hesitate to set fruit trees, peach, apple or other kinds, from fear that you may not eat of the fruit. And do not confine your settings to dwarfs; standards are better. Somebody set trees to bear apples for you to eat when a boy, and it is only fair that you provide for pleasure of other boys after you. If you love trees you will get full pay for your work in the pleasure of the work and imagining some boy smacking lips when biting into the luscious fruits.

Massachusetts. MONROE MORSE.

The Maple Sugar Season.

Look over the maple sugar making outfit now. See the pails are all right, see the pans are in good condition, and the bricks are all in place in the arch, and the evaporator is ready for business. Some sugar makers will wait until the last minute, then hurry to the hardware man or the tinner for new equipment or for repairing. A hardware man told me that if he could have the possible business in repairing a month earlier than the maple sugar season, he could do more efficient work, and the producers would save dollars by not having to wait their turn.

If you must secure new equipment this year, secure good. Good tin is best for buckets, I am told, and also for pans, but be sure it is good, and it costs. The best is none too good however. I am told that there is a certain chemical action in a galvanized pail which is exerted between the galvanizing and the sap, which might be injurious particularly to the life of the pail. That is why some declare a tin pail is better. Anyhow be ready for the run which will come in a week or two in some localities and in others perhaps a month yet. W. J.

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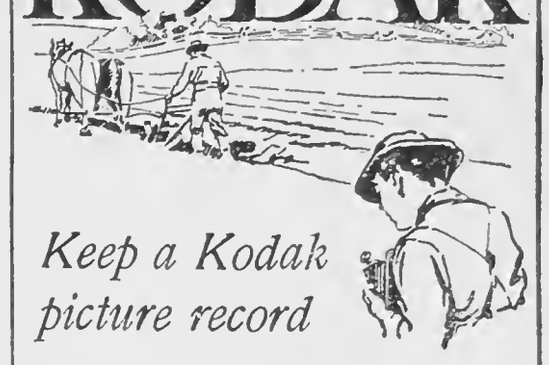

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Does more and better work than any other horse-hoe ever invented. It is light and easily handled, yet unusually strong. Has new steel wheel which prevents clogging with trash. Quickly adjusted to rows up to 3½ feet apart. Vine-turner attachment is great for many crops at last workings.

The Home Acre.

Fertilizing a Garden.

I have a small lot containing 8,000 square feet, which I use for a garden. In the last six years I have spread stable manure, covering the surface two inches deep, three times; have turned under Scarlet clover twice, and cow peas once. Besides, I spread hen manure three times, ashes, 30 bushels to acre, last Fall and another light spread of stable manure; used two sacks kainit last year on potatoes and other garden truck. Will you advise the best manure or fertilizer for potatoes and other garden truck this year? The land is in good shape. Soil is stiff and not clay. I was thinking of putting lime at the rate of 40 bushels per acre after the land is plowed this Spring. Last year's tomatoes rotted before maturing, and other vegetables seem to burn. J. M. W.

From what you say it seems that you have got your garden into a one-sided condition. You have an excess of nitrogen as compared with the mineral matters, which are mainly engaged in the maturity of seed and tubers. Now I cover my garden with manure every year, but I try to balance the ration by supplementing the nitrogenous manures with an abundance of phosphorus and potassium. After manuring the garden I make a mixture of four parts acid phosphate and one part sulphate of potash, and apply this at rate of 1,000 pounds an acre after turning under the manure. This is well worked into the surface soil. I would not use lime on the garden, as some vegetables are injured by it, and soil that has had so much manure is hardly acid enough to need lime. Lime will make green peas hard to cook, while it might possibly help the plants. Lime will cause the conditions in the soil to become favorable to the growth of the scab fungus on Irish potatoes. Keep on manuring, but also keep on with the acid phosphate and potash and you will be surprised at the increase in the crops.

Maryland. W. F. MASSEY.

Waterproofing Muslin for Frames.

Will you give formula for waterproofing muslin? I wish to make a test between glass and muslin sash for raising plants. I have 50 yards of 81-inch muslin. Give full information how to proceed and the quantities for this amount of material. G. M.

Fairton, N. J.

The following formula is used for waterproofing muslin as covering for frames. Old pale linseed oil, three pints; sugar of lead (acetate of lead) one ounce; white resin, four ounces. Grind the acetate with a little of the oil, then add the rest, and the resin. Heat carefully in an iron kettle, over a gentle fire. Apply with a brush, while hot, stretching the muslin over the frame or sash. It is not possible to give amount of paint required with any accuracy, as it not only soaks in more freely on the muslin than ordinary paint on wood, but there is also likely to be some wastage in applying. In ordinary painting the common rule is to divide the number of square feet of surface by 200, the result being the number of gallons of liquid paint required for two coats.

Planting Time for Vegetables.

Will you inform me the dates when to plant the following in New Jersey, five miles from Philadelphia: Sugar corn, corn, peas, beans, potatoes, tomatoes, cabbage, oats, watermelons and muskmelons, sweet potatoes, carrots, cucumbers, kale, spinach, turnips, green pepper, yellow onions and eggplant. M. J.

Merchantville, N. J.

In the normal seasons, the first early sweet corn is usually planted in latter part of April, and must be of some small growing sort, such as Early Adams, Cory or Minnesota. About the first of May, a second planting should be made, and at the same time a planting of Crosby or similar variety, and Country Gentleman or Stowell's Evergreen should be made. Successive plantings of some good sort should be made at intervals of 10 days or two weeks, until July 10 to 15 for late kinds, and may be prolonged until August 5 to 10 if early sorts are planted. Field corn may be planted May 15 to June 1.

Peas.—The round sorts may be planted as soon as the ground can be worked; at the first planting two or three varieties that will immediately succeed each other should be planted, or a succession may be had by planting the same variety at intervals of one week. Plant the wrinkled sorts about May 1; successive plantings of these sorts should be made up to the middle of June. Bush beans—The first planting of these may be made April 25 to May 1.

Pole beans should not be planted until the ground becomes thoroughly warmer, or until a night temperature of about 60 degrees is reached, this rule applies to all kinds of pole beans.

Potatoes.—The first planting for very early use, may be made as early as the ground can be prepared. For main crop, plant middle of April to May first. These should be ready to harvest by middle of August, when the ground may be used for late turnips, peas, beans or any other crop that will come in before frost.

Tomatoes.—Sow the seed in the hotbed about the 15th of March, set them out as soon as a night temperature of about 50 degrees is reached, which will be May 15 to 20. For late tomatoes sow the seed May 1 and plant in the field soon as ready.

Cabbage.—Early sorts, should be sown in the hotbed first to tenth of February, when plants make their second pair of true leaves; give plenty of air to harden them. Plant to field soon as ground can be worked. Sow late cabbage in a well prepared seed bed in the open, tenth to fifteenth of May, plant to field soon as large enough, which will be June 20 to July 1.

Watermelon and Muskmelon.—Plant as soon as a night temperature of 60 degrees is reached, which will be about the last of May.

Cucumbers.—Plant seed in well prepared hills May 10 to 15. For late pickles, plant August 1.

Kale.—For Fall use, sow the seed about May 15; for use the following Spring, sow the seed September 1.

Sweet Potatoes.—Bed the potatoes in a warm bed about April 1, plant sprouts to field, when the trees are well advanced in leaf.

Carrots.—First sowing may be made middle of April, which may be followed by successive sowings, at intervals of a month to July 15.

Spinach.—Sow soon as ground can be prepared. To be followed by later sowings at intervals of 12 to 14 days, up to May 25.

Turnip.—For early use, sow in April. For Fall and Winter use, sow August 1 to 15.

Peppers.—Sow seed middle of March in a well-prepared hotbed. As soon as the night temperature reaches 60-65 degrees they should be planted out.

Eggplant.—Sow seed in warm hotbed, about the last week of March. Plant out about June 1.

Onions.—Seed and sets may be planted as soon as the ground is in good working condition. K.

Planting City Lots.

The firm of Ellwanger & Barry has, during the last few years, built a large number of small houses on city lots in Rochester. These houses have been made suitable for small families, and the yards are left so as to provide some space for embellishment. Some of these backyard gardens have been fitted up in a very artistic manner, providing good models for similar work in other places. Mr. Wm. C. Barry has sent us the following notes, showing what is done with these lots, and suggestions for an outfit of fruit trees suitable for this work. We hope later to have pictures of some of the lots to show our readers.

"These lots average about 40x100 feet, the houses are about 26x28 feet, so that there is not great space for planting, but yards both front and rear have been made attractive by judicious planting. The purchasers of the property are allowed to make their own selection up to a certain amount, and there has been great rivalry as to who would have the best looking place. I enclose a list of trees and shrubs suitable for planting a place like those described, the cost of which would be about $15 to $20: One dwarf apple; one dwarf pear; one peach; one cherry; six currants; 12 raspberries; one dwarf evergreen; one maple or other ornamental tree; 12 shrubs; six roses; three paeonies; 100 California privet or Berberis Thunbergii for hedge."

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SEEDING ALFALFA.

I have about four acres of sandy loam, which has been mown for years and the meadow run out. It is in fair state of cultivation. Will you give me instructions for plowing the field and sowing Alfalfa this year? I desire also 8½ acres which was sown to oats two or three years by renters without seeding. I raised a fair crop of potatoes last year on the piece, but harvested too late to sow to wheat and seed. Could this be seeded to Red clover in the Spring with any degree of success? If not tell me the next best step. V. M. H.

Cuyahoga Falls, Ohio.

Cover the worn-out meadow with good barnyard manure and apply two tons per acre of ground limestone rock, the latter preferably, being put on just after the ground was plowed and not plowed under. We would wish the rock to be mixed with the top four inches of the soil in order to correct acidity, which would probably be present, and thus benefit the little Alfalfa plants when they were just gettng started rather than to have it plowed clear under, in which case the plants might suffer from acidity for some time before the lime could benefit them. In addition to these, 200 pounds per acre of steamed bone meal or of basic slag should be used. A larger application even than this would be an advantage, and would not require to be renewed as often as the lighter application. We would prepare a good seed bed and during the first half of April would seed the Alfalfa, using 20 pounds per acre of good seed, with one bushel of beardless barley. After removing the barley the field might require clipping once, but this should be done not later than September 1. The other field could be handled in just the same way, excepting to substitute the clover seed for Alfalfa.

CHAS. B. WING.

THE CULTURE OF HORSERADISH.

Will you tell me about the culture of horseradish? My soil is a clay loam with yellow clay sub-soil, in a good state of cultivation. I plowed a nine-inch furrow, then followed with a one-horse plow and turned four inches in the bottom of the first furrow. The ground had been in corn the year before, and I plowed under a good coat of manure. I furrowed as for potatoes, dropped six or eight-inch pieces of roots the size of a lead pencil, and 18 inches apart. The roots I gathered in old gardens, and were never cultivated but rather fought. I covered the roots three or four inches deep, and cared for them the same as I did for my corn. The tops were immense, they stood above my waist, dark and thrifty, but when I come to dig it all I had a mass of lateral roots. I weighed some single roots that went over eight pounds and had a spread of four feet, but there would not be over a pound of salable root. Was it a fault of soil, fertilization, roots or culture? D. R. B.

Pittsfield, Pa.

This crop requires a deep rich soil such as is found in the best market gardens of the country, and being naturally a swamp plant, if the land is inclined to considerable moisture all the better. Horseradish cannot be grown into first-class marketable roots on ordinary farm land the first year, no matter how well it may be manured. I think your land, however, was rich enough, but the manure was too raw, which supplied an excess of nitrogen. I judge this to be the case from the rank growth of top and root, but your manner of planting was greatly at fault, which at least accounts in part for the great spread of lateral roots.

In the vicinity of New York and Philadelphia the market gardens usually grow horseradish as a second crop, either with early cabbage, cauliflower or beets, and the planting is performed in the following manner: If planted with cabbage, the ground is lined off in rows 12 to 15 inches apart and the cabbage is planted in every alternate row. The planting of the cabbage is accompanied first, when the rows left vacant are planted to horseradish about 16 inches apart in the row, done in the following manner: With a sharpened stick about the thickness of a rake handle or a small iron bar, a hole eight to 10 inches deep is made, into which is dropped a small root six to eight inches long. This will bring the top end of the root two inches or more below the surface of the ground. With the foot, draw fine soil in over the root and press it down as in setting any other plant. As it is not desirable to have the roots make any top growth until the crop of cabbage is cleared off, the deep covering of the root will be an advantage in delaying the pushing up of tops, and if any should push above ground they are to be chopped off with the hoe and treated same as if they were weeds. This chopping off the top growth will in no way interfere with the making of the crop, as it is in the latter part of Summer the plants make their principle growth. After the cabbage has been cleared off in July the horseradish should be allowed to grow at will. About one good cultivation will be all that is necessary, as the leaves will cover the ground and, smother out practically all weeds. The horseradish being very hardy, it need not be dug until very late, and may be left in the ground until December, if the Winter is open enough to admit of digging the roots. The planting of the roots should not be done earlier than May first. If the land is in good tilth and the season favorable the plants will produce salable roots weighing from three-fourths of a pound to one pound each.

In the preparation of the finished product for market it should be grated fine and be entirely free from discoloration and woody substances. To accomplish this each root must be thoroughly washed and scraped clean of the outer skin or bark. This will leave the root nice and white and when grated and bottled presents a very attractive appearance, which helps very much in the ready sale of it at a good price. All that is necessary to prevent it from spoiling is to cover it with pure cider vinegar (never use malt vinegar) and tightly cork the bottles. K.

OHIO HORTICULTURAL NOTES.

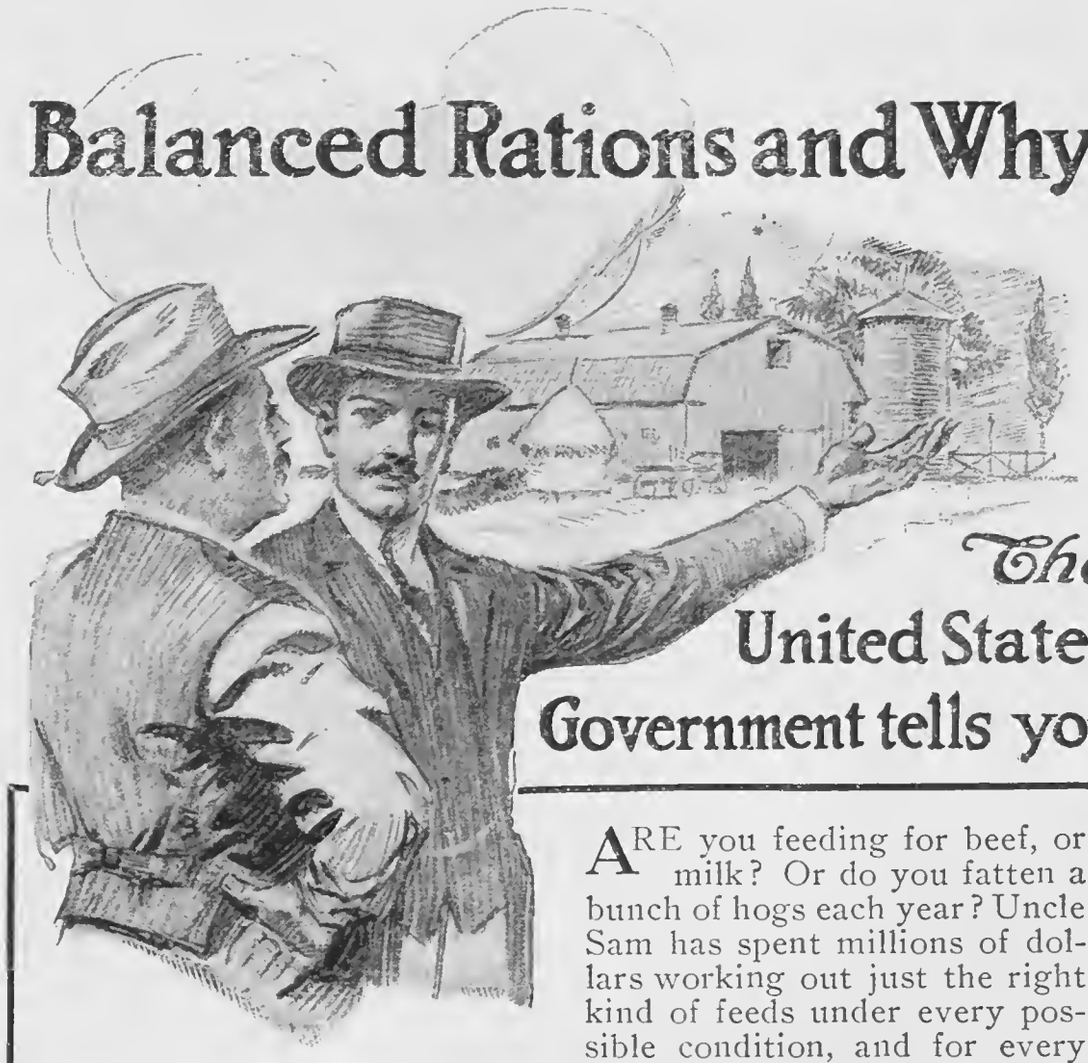
"Get a good sprayer, get one that will not go down on your hands. A day or two in spraying time will cut from a grower's bank balance, the price of the best outfit on the market," is the opinion of W. W. Farnsworth of Ohio. "No grower can afford to take a chance on a poor outfit, there are quite a number of good outfits on the market, the engine must be reliable, the pump must be efficient, and when it comes time to use it, the work must go along without a hitch. It will pay a man to go over his outfit, test it, have everything in readiness, and when spraying time comes, the work may go along without hitch or bother. It pays to be ready."

The practice of the Farnsworth Bros. of Ohio is interesting. They raise potatoes each alternate year in their orchard. After the potatoes are removed they level the field, seed to rye, and in the Spring seed the rye down with clover. They cut the rye before maturity, use a side delivery rake and turn the rye up under the trees. They aim to cut clover that year and handle in the same manner. This provides mulch and a supplementary crop is secured each alternate year.

The question of utilizing the soil while an orchard is developing is one that faces many horticulturists. W. N. Scarff of Ohio, describes this method which has been used by them: "Nine years ago we had an orchard of Montmorency cherries. We established this orchard in the Fall, and at the same time planted currants in the cherry tree rows, and three rows of currants between each row of cherry trees. The cherry trees were set 18x24 feet. In the Spring we set out strawberry plants between the rows of currants. These three crops came along very nicely, and in the Fall we had a good growth of strawberries, and the next year and the following year secured good crop. After two years we cut the currants down for cuttings to supply our nursery trade. Our returns came quickly, we found that we received about $100 the acre income from the system. We have received good rental for the ground, pay for our labor, interest on investment, and were out our money and labor only one year. This year we established five acres of blackberries, and between these we planted sweet potatoes. Had we established an apple orchard on this ground, the three plantings would have come along nicely."

Ohio apples must be advertised. This is the opinion of horticulturists in the Buckeye State, and for that reason the Ohio Apple Growers' Association has been organized. The Farnsworth Bros. of Lucas county were among the first to see the need of the association, and at the State Horticultural meeting in the Summer of 1913 held at Toledo and at their farms, the matter was discussed and preliminary arrangements made. The horticultural meeting held in connection with the Ohio Apple Show at Cleveland witnessed the final completion of the organization. The policy of the association is to establish sentiment in favor of better pack, create interest among Ohio consumers for Ohio fruit, secure orchard inspection and packing demonstrations, and to secure the assured aid from the State. In Cleveland less than 10 per cent. of the apples consumed were from Ohio trees, and the State of Ohio was producing but one-third the apples that were consumed. W. J.

Balanced Rations and Why



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One day Ned read up on protein. And that year he fed his porkers cornmeal and ear corn PLUS bloodmeal. It didn't cost him any more, because he cut down on the corn, and it resulted in a gain of 150 pounds per porker, instead of 100 pounds, as formerly. When Ned finally figured it out, he found that he had made a profit of $2.65 per pig with the new way of feeding, as against fifty to seventy cents a head profit in the old days.

Nowadays Ned ALWAYS reads up on such things as feeding, or fertilizing, or seed selection. IT PAYS.

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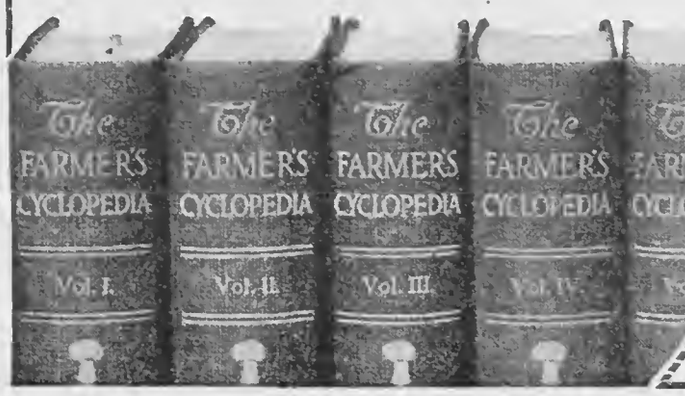

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Hope Farm Notes

THE HOPE FARM SCRUBS.

As Eaters.—There has been some controversy about the food which a hen will consume and the cost of feeding her. The Hope Farm plan for gathering statistics is to go right to your own property or companion when you want information.

"He is of age—ask him!"

I shall keep on repeating that text through the year, for it is the foundation of investigation and thought development. Thus we will ask the 10 scrub or "cull" hens in the laying contest at Storrs. I confess that we do not weigh and measure the food given to our hens at Hope Farm, but at this contest the grain and mash are weighed down to the fraction of an ounce. Prof. Kirkpatrick sends me the following statement of what the Hope Farm scrubs were guilty of during the first four months of the trial.

Statement of food consumed by pen No. 78:

Week Beginning	MASH LBS.		GRAIN LBS.	
November 1	5.0		6.6	
November 8	5.2		5.0	
November 15	5.1		5.0	
November 22	3.4		9.6	
November 29	4.4		7.2	
		23.1		33.4
December 6	4.5		4.0	
December 13	1.7		6.0	
December 20	6.0		6.1	
December 27	4.6		6.9	
		16.8		23.0
January 3	4.0		7.1	
January 10	1.3		14.0	
January 17	2.5		9.4	
January 24	4.0		9.6	
January 31	12.0		7.3	
		23.8		47.4
February 7	4.4		12.0	
February 14	4.0		14.0	
February 21	4.0		16.2	
February 28	4.0		12.0	
		16.4		54.2
Total	80.1		158.0	

Figuring It.—This makes a total of 238.1 pounds of mash and grain. In addition to this these birds consumed charcoal, grit, shells and green food, which could not well be accurately measured. In carload lots the mash cost $31.75 per ton—the mixed grain $35. I think $1.75 per 100 pounds for the mash and $2 for the grain would be a fair price. Thus those scrubs consumed $1.12 worth of mash and $3.16 worth of grain, or $4.28 in all during 119 days. That means 3.6 cents per day for 10 hens, or a little over one-third of a cent per day for one hen. Figured in another way each hen averaged a little over one ounce of mash and 2.12 ounces of grain per day, with a total yearly cost of $1.30 per year for grain and mash. I will assume that these hungry scrubs consumed more than the well-bred, blooded birds—though I have no other figures now. As it stands, my scrubs were guilty of larceny during these first four months.

Robber Hens.—Look right at their record. They consumed $4.28 cents worth of feed and laid 61 eggs during these 119 days. That means a food cost of seven cents per egg. I figure that 16 of these eggs would have sold at four cents each, and 45 at three cents, or $1.99 in all. Thus these scrubs owed $2.29 on their feed bill on March 1. I can go through the 790 purebreds in this contest and find about 200 that make a worse showing than this, but the laugh is now on my scrubs. Now gentlemen, have a fine hearty laugh at the scrubs, and then listen to this. We are told that the thing to do when you find a robber hen or cow is to kill her at once. Make pie of her! Instead of doing that I will, even now, back these scrubs to pay a profit on their feed before the contest is over! If some of you laughers think you are "sports" here is your opportunity.

What It Means.—The odds may seem to be against these scrubs. They are for the most part inferior in breeding, and have made a bad start. The season for high-priced eggs is about over, while the feed will continue to be expensive. The instinct and breeding of the scrub will prompt her to lay a few eggs and then quit. Several of them may die with a large feed bill unpaid. Yet I will take these odds and back them to pay a profit over the cost of feed before the contest ends on November 1. I will also back two of them to give at least one dollar profit over the cost of their food. I never bet on a horse race or a prize fight or an election or any other "chance game," but I do not consider this as a bet. Frankly, I would like to help a very worthy school for young colored people at the South. It seems to me that a chicken contest would be a very appropriate thing for collecting funds for educating colored boys and girls. If anyone wants to help the cause of education and the poultry business together over this question of the ability of my scrubs to pay their board bill, I think they can be accommodated.

More Snow.—The weather is no topic for consideration in Northern New Jersey. There was another snowstorm on March 22, not enough to cover the bare spots on the road, but quite enough to make outdoor work a nuisance. A year ago at this time we could plow and dig strawberry plants. This year there will be little chance for doing either for several weeks. The manure can be hauled out, trees trimmed and spraying started. The Summer's fuel has been cut and piled in the shed, and now we wait for the snow to get off the berry fields. There is a trade in Marshall plants, and some customers to the south of us cannot understand why we do not dig and ship. Could they come and see the snowdrifts over these plants they would believe us. We are planning to set out over an acre of our own this year, and they should go in early. This planting will be on land which had mangels last year. It was a tough old sod, full of white grubs two years ago. Young hogs worked it over. It was plowed in the Spring and seeded to oats and peas. When these were cut, cabbage followed with rye seeded in September. This rye was plowed under last Spring and mangels were planted. With all this thorough working the white grubs seem to be killed out. We shall give it a good coat of cornstalk manure, plow deeply and set Marshall plants two feet each way in hills. This will give us a crop of potted plants and a crop of fruit next year.

Humus.—This question of cover crops and chemicals seem to me to get down to the foundation of our Eastern farming. The greatest need of much of our oldest land is humus or vegetable matter. I will not quarrel with the statement that manure makes the best humus, but when you can sell hay and straw at $25 or more per ton such humus comes very high. Then again, consider the cost of hauling manure up such steep hills as we have. I gave up hauling manure away from the lower farm levels long ago. Cover crops plowed in and limed do the business. Yet there are many who seem to dislike the thought that soil can be maintained in fertility without manure. I do not know why they should think so, but that seems to be their feeling. The little boys and I intend to start an experiment this year at making a fair soil out of coal ashes, if we can. We intend to take sifted coal ashes for a start and use enough lime or chemicals to get the first crop going. This will be turnips or radishes. They will be spaded under when fully grown and buckwheat and rape seeded. This will be spaded under in September and rye and vetch seeded. We shall use enough chemicals to start these crops well and spade them under as they grow large enough. We expect, with this treatment, to see the ashes slowly change to "soil," taking on color and character, ability to hold moisture and productive power. The great problem with many of our Eastern soils is how to stuff them with vegetable matter at a cost within reach of the average purse. Can we do it with coal ashes and not use manure?

Roots.—We have learned that one of the most profitable side crops we can grow is mangels. Our cows had no roughage all Winter except cornstalks and mangels, and they kept up their flow of milk until the roots were all eaten up. Then the cows fell away. These roots are fine for hogs and for hens or horses—in fact on a farm like ours, where the roughage is nearly all a waste product, roots of some sort are nearly indispensable. Of course yellow turnips can be grown as a second crop following peas or even grass, but they are not equal to the mangels for feeding value.

H. W. C.

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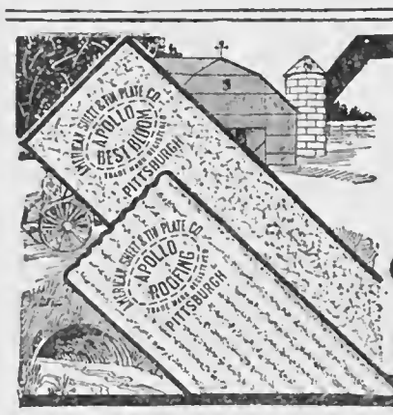

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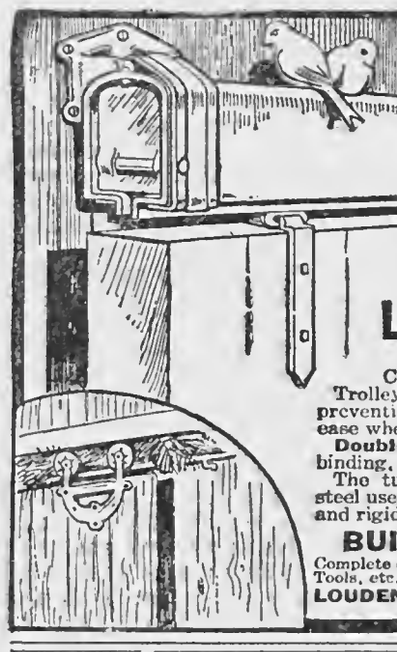

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Ruralisms

Strawberries in Florida.

I am told that we can take strawberry plants of this season's growth in August or a little later to Florida, set them out and obtain a good crop by Christmas. These would be plants that would naturally produce fruit next June. Is this true and would the plan pay?
Michigan. J. M.

It will be all right to grow strawberry plants in Michigan and ship them to Florida for fruiting purposes, provided the right varieties are selected. The Klondike is the most popular berry in Florida at present, and Missionary probably holds second place—in some localities running first. The Brandywine was at one time the most popular berry, but now probably holds third place. The time these berries should be set out in Florida depends upon the region in which they are planted. If in the northern portion of the strawberry section they should be planted in the field about the first of October, or preferably during the latter part of September. Weather conditions, however, will dictate to a considerable extent. It is an advantage to have the field under irrigation, but there are only a small percentage of the fields now completely under irrigation. If the plants are ready it would probably pay to set them out during the latter part of August or early in September for producing the early berries, that is those that would ripen around Christmas time. The largest quantity of strawberries are produced well to the southward—around Plant City, Lakeland and Arcadia. I have fruited strawberries from plants grown in Illinois and North Carolina, also from Florida grown plants, and find very little difference; they all fruit abundantly, and very soon after being set out.

P. H. ROLFS.
Director Florida Experiment Station.

A Business in Flower Culture.

I wish to raise flowers for the market, but know nothing about the business. I live three miles from a railroad station; have about four acres of land suitable for flowers and water to irrigate. What kinds sell best, and would it be profitable to hire a man who understands the business? L. R.
Watkins, N. Y.

A person who wishes to grow flowers for market, yet admits no special knowledge of the business, has much to learn, and many possibilities for disappointment. Flower-growing is a highly specialized business. Not only cultivation, but handling for market requires skill; knowledge of desirable varieties must be secured, and high-grade strains of seed selected in classes depending on seed propagation. Such intensive culture as is practised in high-class truck farming is called for. A person three miles from the railway must also give thought to shipping facilities, and to the market he intends to reach; trains must be convenient to get his stock to market early in the day.

Before making any large venture into flower growing, the aspirant should either take a course in floriculture at the State Agricultural College, or else supplement his experiments on his own place by conscientious reading and study. We doubt whether hiring a competent man would work out advantageously where the employer was entirely untrained—it would be a difficult position both for employer and employed.

If L. R. has already had a fair amount of experience in intensive truck growing many of the difficulties suggested would be absent, since he would understand efficient tillage, fertilization, succession crops, etc. As no reference is made to glass structures, we infer he intends to grow outdoor flowers only. As annual crops Asters, Gladioli and Dahlias are standards for cut flowers, and they bear transit well. For permanents pæonies are excellent, also Achillea Ptarmica "The Pearl," and a few other herbaceous plants, but the latter give modest returns, as they are in when the market is low. Probably pæonies, Asters and Dahlias are the most promising. With the limited data given it is impossible to advise very effectively; we can only suggest an outline. The possibilities for irrigation which L. R. mentions give him one great advantage, as drought is a serious hindrance to field flower culture.

NEW YORK FLOWER SHOW.

The New York flower show, held in the Grand Central Palace March 21-28, was marked both by profusion of display and high quality of the exhibits. It was said that there were 1,250,000 flowers on view, which does not convey a great deal of information, though the fact that one Azalea plant carried 2,000 blooms gives an idea of its quality. The plant display included much of the class known to florists as Easter stock. The forced Spring shrubs were charming; they included lilacs of all classes, laburnum or golden chain, which suggests a yellow Wistaria; Japanese cherries, Forsythia, Spiræas, standard Wistarias, Genistas, etc. There were many of the new French forcing Hydrangeas, white, all shades of pink, from pale flesh to deep rose, and blue. These Hydrangeas make enormous trusses of bloom, and possess unusual value as pot plants; they are the work of European hybridizers. Among them Mme. Emile Mouillere, white with carmine eye, General de Vibraye, bright rose, and La Lorraine, pale pink, are especially noticeable.

The glorious displays of heaths and Acacias showed the renewed interest in what European gardeners call New Holland plants—hard-wooded plants, chiefly from Australia. One enormous bush of Erica melanthera was eight feet high and four feet thick, completely covered with its tiny flesh-colored bells. This is a heath from the Cape of Good Hope. Erica Cavendishiana, a hybrid heath with very showy yellow flowers, seems the only yellow form satisfactory to the American trade.

A very odd exhibit was of the Gloriosa, a lily with flowers resembling Lilium speciosum of our gardens, but growing like a vine, trained around a balloon-like support. The variety shown was a new one, G. Roehrsiana, with brilliant crimson flowers.

A quantity of fine Amaryllis (Hippeastrums) were shown, and a great variety of Dutch bulbs. But the roses always attract the general public and notable among these were the Ramblers shown as standards and other pot plants; Lady Gay and Hiawatha were especially good. A new American rose that attracted much attention was Hadley, deep velvety crimson, which has size, finish and fragrance, as well as a marvelous color. Killarney Brilliant, a great advance on the original Killarney, and White Killarney showed the value of bud sports. There was a vase of the Cherokee rose of the South, which attracted much attention. Irish Fireflame, vivid orange, and Mlle. Cecile Brunner, flesh pink, were two of the little roses that have become so fashionable for corsage wear.

Carnations included a remarkable new yellow from Indiana, Yellow Prince, and many other novelties. There was a fine display of sweet peas. The snapdragons, Cyclamens and primroses made a profuse showing, and the orchids deserve more description than we can give them. From the public interest shown in the exhibition it would appear that New York has really awakened at last to a genuine interest in flowers, after many years of patient missionary work on the part of commercial florists and private gardeners—another endorsement of the great principle of coöperation. E. T. R.

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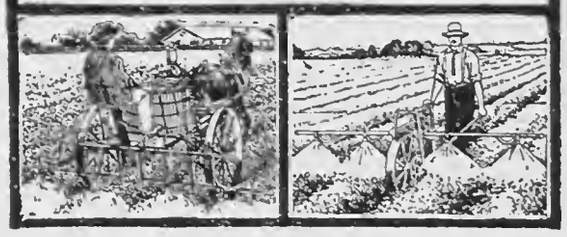

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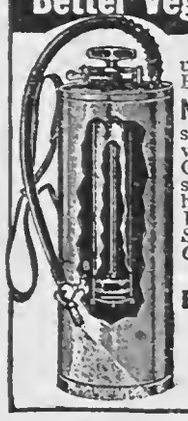
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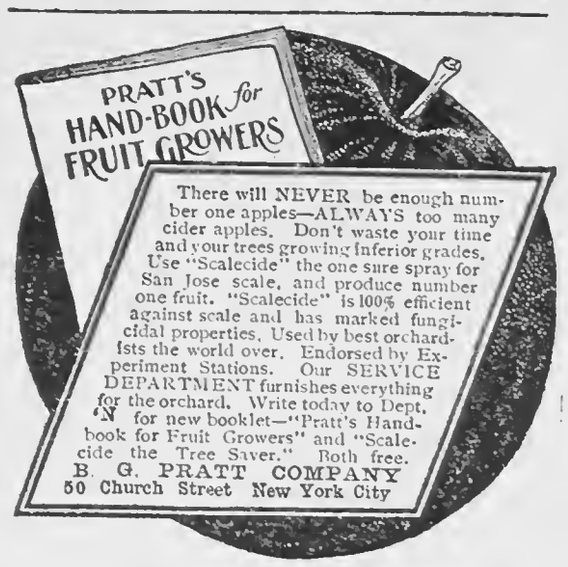

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THE LAND BANK of the State of New York may now be organized under law. The bill passed both branches of the Legislature before adjournment last week. The Governor has not signed it yet; but he will. It is one of his personal measures. Now, we must make it useful. The bank will probably be organized by the coöperative saving and loan associations now existing, if no more are promptly organized; but we ought to have two or three local organizations of farmers to go into the organization from the start, and get representation in the board. This is not absolutely necessary, but it is highly desirable. Who will be first? Talk it up in your Grange and clubs and homes. Instructions, literature and forms will be furnished. It will be a distinction to be the first. That privilege may go to your town, if you take it up at once.

*

ON March 17th new postage rates covering the shipment of plants and seeds went into effect. Hereafter the regular parcel post rates, weights, zones, rules and regulations will apply on seeds, bulbs, trees, plants, cuttings, etc., the same as on merchandise. Heretofore, such products have been in a class by themselves. A good many of our readers have been astonished to find that they could send potatoes by parcel post at a low figure provided they were to be used as food. When the potatoes were used for seed purposes, however, a very much higher rate was imposed. Hereafter, such rates will be uniform.

*

NOT long ago we printed an article which discussed a leading question in an unpopular way. The author signed his name and advanced some arguments and facts on what might be called the unpopular side. Now comes another man who writes:

"Why did you ever permit such an article to be printed! What he says may be true, but I know his conclusions are wrong!

Let us ask what is the reason for discussing a farm question? To give a one-sided argument from the popular standpoint alone? We do not think so. A theory or a statement which fears argument and cannot stand upon reason is unsound, and cannot endure. We assume that our readers are intelligent, reasoning people, open to fair argument, and with their conviction strengthened by thinking out the answer to an argument which goes against their own experience. We try to give all sides a fair hearing. For example, we might let a man argue that there is no such thing as a 35-cent dollar, or that farmers ought not to coöperate. That would not prove that we agreed with him, or that his argument could not be answered. We must all learn to take a broad view of life—not trying to stifle opposition, but learning how to answer it through fact and reason.

*

THAT is a noble sentiment by Mr. Monroe Morse on page 527. At 78 he planted a new apple orchard. When told that he would not live to eat of the fruit, he answered:

"I ate apples when a boy from trees that some other man planted years before. I want to plant trees that some other coming boy may eat the fruit."

That is a fine spirit. When a man loves a tree he can do no better thing for himself and for those who are to follow him than to keep on planting and caring for trees as long as he lives. The joy which comes to the true tree lover in watching the little stick which he puts into the ground grow into a shapely and a fruitful tree cannot be measured or counted in terms of money. And what more beautiful legacy can a man leave to posterity than a good orchard? The live stock which he develops with such pride and care may be scattered and handled so carelessly that its identity is lost. The beautiful fields of grass or grain or garden may go back to weeds or forest but the orchard will be respected and cared for. On our own farm six generations unknown to us have lived and worked. Now we can remember them only by the great, beautiful trees which they planted years ago, and which have brought down through the years to us the best that was in their lives.

*

Now comes the Postoffice Department trying to increase the size of the 35-cent dollar. The splendid machinery of parcel post is to be used in doing it. The Postmaster General has selected the following cities for an experiment: Washington, Boston, Atlanta, St. Louis, San Francisco, Baltimore, Detroit, La Crosse, Wis.: Lynn, Mass., and Rock Island, Ill. Rural carriers in the territory supplying these cities are instructed to collect the names of farmers on their routes who are willing to supply farm products by parcel post. Their names are to be printed and distributed among city people—the latter being urged to buy direct from these farmers—shipments being made by parcel post. The system is to be extended all over the country in time. The rapidity of this extension will depend on the business done in these trial places. Here comes the real parcel post—the thing we have wanted for years—the chance for direct dealing with consumers. Like every other experiment with parcel post it will move no faster than the people will push it. It is in the power of the farmer in these selected territories to spread this privilege all over the country. THE R. N.-Y. has fought for parcel post all through the last 20 years. Now its readers who live near these cities have a wonderful chance to be useful. Let them be the first of all to put their names on record and get into this direct trade!

*

WE have reported many cases where strange and outrageous "law" was handed out to farmers or gardeners who attempted to defend their property. Rhode Island has now provided the limit. The reported facts are as follows: Mr. L. C. Bartlett, of Providence, has a yard or garden in which he grows grapes and other fruit. For years he has been annoyed by boys who enter the premises and steal grapes. One day last Fall Mr. Bartlett caught one of these young thieves in the act of stealing. He took the young scamp by the collar and trousers, lifted him over a 34-inch fence and dropped him on the other side. During the struggle this boy scratched his leg. Mr. Bartlett was arrested for assault. The boy sued him for $5,000 damages, and a Rhode Island jury actually gave a verdict against Bartlett for $1,500! This seems to be his penalty for protecting his own property. A more preposterous thing in its line has never come to our notice. Mr. Bartlett should have taken such a boy over his knee and applied a rough pine shingle with a knothole in it in a manner familiar to many of us who were taught to respect property rights in the old-fashioned way. If he had done so he might have been hung for all we know, under the local laws. What is the matter with Rhode Island and her laws, that such an exhibition of donkey justice should be given to the world? We are gathering the facts about this case, and some of them will astonish the country. Suppose we find out right now whether a man owns his own fruit or not!

*

Lest we forget! We were told that the removal of the tariff on food products would surely decrease the cost of living by inducing heavy imports of food from other countries. THE R. N.-Y. has exposed the fallacy of this theory, for prices of food are not regulated by supply and demand, but by arbitrary rules of dealers and carriers. Take beef for example. When the tariff was cut or wiped out we were told that Argentina and Australia would send so much meat here that prices must fall. Secretary of Agriculture Houston now states that imports of beef from all sources amounts to only two per cent. of domestic production. The imports from Argentina are controlled by the beef trust—the same monopoly which has destroyed beef production and slaughtering in the East. There is therefore no hope that South American beef will bring down the price of meat. In both Argentina and Paraguay the number of cattle is declining. In 1832 Charles Darwin found the South American pampas covered with "countless" cattle and horses. There were so many cattle that they were considered common property—killed and eaten about as freely as roadside apples in New England. Horses were so plentiful that no one ever thought of riding a mare. Soldiers in their campaigns against the Indians drove great herds of mares which provided all their food. Now the world's population has increased so rapidly that there is a scarcity of meat. This scarcity will continue in this country until our Eastern farmers can find it profitable to produce beef. Under the conditions which prevailed 25 years ago it would still pay to raise and fatten steers on many a 100-acre farm. Free imports of meat will not help, for the trust will control these imports. The first step should be public slaughter-houses under Federal control—where cattle may be slaughtered and sold.

*

SOME months ago we gave the facts about the celebrated New Jersey cow case, which hung over a line fence between two farms. Briefly stated, a cow belonging to James Van Nest of Somerset County, went through or over the line fence into a corn field owned by Frederick Dealaman. This cow filled herself with green corn, and as is usual in such cases, suffered from bloat, lay down and died. Van Nest sued Dealaman for $50, which represented the value of the cow, on the ground that Dealaman failed to keep his line fence secured against the neighbors' cattle. Strange as it may seem, the court gave a verdict for this $50 to Van Nest. Dealaman was left in the peculiar position of suffering damage to his corn crop, and then being obliged to pay the value of the cow which destroyed the corn. This case was carried up to the Supreme Court, which sustained the verdict, ridiculous as it may seem. Dealaman was not satisfied, and to his credit be is said that he carried the case still further to the Court of Errors. This highest Court in New Jersey has now over-ruled the Supreme Court, set aside the verdict, and Dealaman is not obliged to pay for this cow. Judge Parker in his decision says:

> The provisions of the fence act requiring adjoining owners to make and maintain their respective proportions of partition fences impose no liability on an owner who is in default for accidental injury to animals of the adjoining owner which stray upon his land by reason of the defect in the fence he failed to repair.

Thus Jersey justice asserts itself at last, and the farmers of New Jersey owe a debt of gratitude to Mr. Dealaman for fighting his case through to the end. It certainly would be a most remarkable thing if every Jersey farmer were made liable in this way not only to suffer loss from wandering cattle, but also to pay for them when they killed themselves at the expense of his crop.

*

If any work will make this a better country to live in I think the growth of coöperation among the farmers will bring it about.—Lucius C. Tuckerman.

THAT is the Lord's truth in 25 words. Think for a moment and you will realize it. True coöperation will not only mean material benefits for farmers, but it will mean a broader view of life, a clearer insight into the future and a more unselfish idea of brotherhood and human duty as man to man. We are not speaking of what we call false coöperation, but the true spirit of taking and giving in return. There are so-called "coöperative" schemes now in which a large number of farmers do the work and provide the business. They may receive a small increase over individual work, but the great bulk of the profits go to a few shrewd men who take much but give little. True coöperation is the most hopeful thing in business life to-day, for it involves giving as well as taking.

BREVITIES.

UNDER ordinary conditions the chemicals to use with stable manure are acid phosphate and muriate of potash. We advise three parts of phosphate to one part of muriate.

WE know men who "win their spurs" and then never use them on anything that needs spurring up. The world is full of lazy drones which should feel the educated man's spurs.

FOR the first 24 hours or more of its age the little chick should *sleep*. It will do it no harm to spend the first 48 hours in the incubator—drying off and hardening for the battle of life. Let him *sleep*.

AT the recent New York flower show the gold medal for the best new rose was awarded to Hadley, bright crimson. Two other new American roses exhibited were Killarney Brilliant, pink, and Willowmere, golden yellow.

A SHORTAGE in the cocoanut crop may not trouble you, but it has helped the "producers" in the Philippines. Prices have gone to $25 per thousand. One nut where two grew before means better times for the planters.

PEACH curl. This disease can be controlled by a thorough spraying with lime sulphur or Bordeaux mixture *before* the buds open. If you wait until the buds open the disease germs may be inside, where the spray cannot reach them.

WE have received many letters from poultry men who ask if the X-ray could not be successfully used to determine the sex of very young chicks. It would surely be an advantage if the poultryman were able to guarantee that his baby chicks were pullets. We understand that the use of those powerful rays would sterilize or destroy such little birds. They could probably be used to tell whether a mature hen were laying but would not answer for the babies.

THE FOOD AND MARKET BILL.

The coöperative bill creating a Department of Foods and Markets passed the Legislature just before adjournment last week. The bill was sponsored from the first by Governor Glynn. It was introduced just two weeks before adjournment; and went before the Legislature with a special message in its favor. From the start it proved one of the most popular measures that has been proposed in years. Farmers saw its merits at once, and indorsed it at sight. The city papers gave columns to the Governor's plea for it and editorial approval besides. City consumers saw the possibilities in it for them, and approved. The commission men and food speculators did not see the possibilities of good in it for producers and consumers until the last two days. Then they got very busy, but the work was done. They tried the only available trick of preventing a vote in the Assembly. They delayed, but they could not entirely defeat the bill. The men they relied on to do the work stood loyally behind the bill, and it went through the Assembly just before adjournment 88 to 30.

We gave an outline of this bill two weeks ago. The principles of it have been much discussed in these columns. We have space for only a short reference this week. Briefly the bill provides the machinery of a free and open channel for the sale of farm food products direct from the farm to the city consumer without obstruction of any kind except the necessary licensed and bonded auctioneer through whom the goods must pass. It is the first intelligent and systematic effort to increase the value of the producer's dollar above 35 cents.

Governor Glynn worked hard, intelligently and effectively for this measure. We congratulate him. Senator Wheeler, who introduced it in the Senate, did a valuable service, and credit is due the Senate for putting it through promptly.

And here is something for farmers to remember. This bill was introduced in the Assembly by minority leader A. E. Smith, a Tammany Hall representative from New York. He stood by the bill loyally. It could not have become a law in the situation of the last few days without his services. Let farmers score just one point for Tammany. But Governor Glynn, Mr. Smith and Tammany, all combined, could not have got it through the Republican Assembly this year without the aid of Speaker Sweet. The bill went into the rules committee three days after its introduction. Speaker Sweet had its fate in his hands, and the result testifies to his approval and influence.

Credit is due others that we have no space at this late moment to record. Some of the Progressives deserve a big bunch of praise. One other factor we cannot neglect—farmers themselves, and especially the State Standing Committee on Coöperation fought valiantly for the bill. They responded promptly to every call and they created the sentiment which made the measure possible. Now for a better dollar. J. J. D.

Financing Southern Cotton Planters.

PART I.

If any man doubts the necessity of a system of cooperative farm credits, let him go South and study the economic conditions of the cotton planters. The principles that govern credits in the South are the same old principles we find in all countries and all places at all times when individual producers are dependent on money-lenders for capital to use in productive operations. These principles yet govern in the North and in the West, and in Europe as well as in America. They are emphasized in the South at the present time, because education there is not general, and because the system and the climate has developed there a peculiarly improvident class of producers. The conditions are such that a class of money-lenders operating as a unit furnish capital and credit to a class of producers acting as individuals. The principles governing a condition of this kind are always the same no matter when or where they operate. The men, no matter how few, who control the capital, control the producers, no matter how many. The producer gets enough to sustain life and to keep him in operation. The money-lender gets the surplus of every other man's productions and the accumulation of these individual surpluses makes him rich, while the producers necessarily remain poor. Of course an individual producer of special ability, perseverance and prudence occasionally rises above the conditions that fetter his neighbors, but the exceptions are no more than enough to prove the rule. The lender always exacts the highest possible rate for the use of money, and the borrower when helpless will always concede whatever demand is made. The lender finds his best opportunity for extortion where security is insufficient to guarantee the payment of the loan, yet where economic conditions make the risk practically safe.

English money is loaned to farmers in Ireland to the full appraised value of the farm at 3¼ per cent. interest to be amortized in 67½ years on an annual payment of one-quarter of one per cent. The Irish farmer pays 3½ per cent for 67½ years; and the farm is then free of mortgage. English money is invested in farm land debentures up to 66% of the land values of Denmark, France, Germany and other European countries at from three to four per cent. interest per annum, but English money is loaned in the State of Georgia on farm mortgages at eight per cent. per annum, and loans are made there up to only 40 per cent. of the value of the property. In addition to the interest the Georgia farmer must pay the cost of appraisal, the attorney's fees and disbursement for searching records and guaranteeing title; and the expense of drawing papers and recording titles. The mortgages, payable in bulk, run from one to five years. One English company loans for 10 years in special cases, but in such cases a substantial annual payment on the principal is demanded.

It is, however, in the matter of personal credits that the southern planter finds his greatest embarrassment. The conditions in Augusta, Georgia, are somewhat typical, but the system there is conducted with more moderation than in some other sections of the South. Some of the individual planters own their land; others rent it. In many cases the "Cotton Factor" owns large tracts of land and rents it to the planters. The "Cotton Factor" has an office and a warehouse in the city. He furnishes the capital during the season; and handles the cotton when it is ready for delivery.

March first is the time of making contracts with the factors in Augusta. The "factor's" offices line the streets in the cotton section. During the first week of March the main street in this section is crowded with planters of both white and black, and their wives and children, with their horses, mules and wagons, all waiting their turn to make arrangements with one "factor" or another for the necessary amount of credit to grow the next year's crop. Every planter is treated as a unit. Every contract is an individual contract. Some planters are worthy of more credit than others, and they get it; but the "factor" makes sure as far as human foresight can go. He takes a mortgage on everything in sight, including the mule, the plow, the harness and any other chattel the planter may own. He cannot mortgage the prospective cotton crop, because that is not grown; but he contracts for the purchase of it when ready for delivery, and later on makes payment on the purchase. The planter is rated by the number of plows he operates, but his loan is not made to him in bulk at the time the contract is made. He simply gets an advance from time to time as his needs demand and his condition warrants. In this way the "factor" is in a position to keep an eye on the planter during the growing season, and if necessary suggest or even dictate what the planter is to do. The usual rate for these loans is one per cent. a month or 12 per cent. a year. In Augusta I was told that some loans were made as low as eight per cent.; and that interest was paid only up to the time the cotton was delivered; but it is not an uncommon custom to charge interest at the rate of 12 per cent. for the full year. In cases where the "factor" is not himself financially able to handle the operation with his own money, he assigns his contracts with the planter to the bank, and gets a loan in order to keep up payments to the planters from time to time during the year, and in some cases when this not sufficient, he negotiates credit with the tradesmen, millers and fertilizer concerns, to help out until after the picking season.

J. J. D.

Those New York City Workers.

Farmers have sent us a number of reports about that carload of working men sent from New York to Fonda as an experiment. They seem to have been above the ordinary class of workmen, and were well received as a rule by the farmers who saw them. Some of these men were capable of doing good work from the start, while others knew little about farming, but appeared to be strong and willing. The trouble with most of them was that they expected too much for their services. Many of them demanded $35 a month and their board. It takes an expert hired man to earn that amount of money for farm or ordinary work, and frankly, a great many of these men were not worth that price. Most of them held out for it, however, and thus they were not all employed at Fonda, although they could have obtained jobs had they been willing to work for less money. Some of these men made a mistake in demanding such high figures. They did not have the farm experience to justify them in demanding high-class wages. They could have found work for less money, and with experience might have been worth the price they demanded. These city workmen will make a mistake if they expect too much from farmers in the way of wages. The experiment shows that there are workmen in the city who could be made very useful to our farmers after they learn more about country living and farm work, but these men cannot expect that New York farmers could ever afford to pay $35 a month and board for labor which is not of high class.

New York State News.

GLYNN ON GOOD ROADS.—There is no doubt that Governor Glynn has the knack of summoning facts and figures in convincing array, to his command. He was lately an editor. He writes in concise and convincing terms. About the matter of expenditures for our highway system, he begins his message to the Legislature, March 23, in these words: "New York is engaged in building 12,000 miles of road, which will wear out 40 years before they are paid for. Unless the State makes a radical change in the type of roads it builds it will cost from $20,000,000 to $30,000,000 yearly to maintain and rebuild New York's highways when the present system is completed." He continues by saying that the cost of building macadam roads is $12,000 per mile and that these roads will not last more than 10 years. At the end of these 10 years it will cost at least $6,000 per mile to rebuild them, and the State will have little to show for its expenditure of $250,000,000. "In the 20 years thereafter," he continues, "the tax for highways will be at least $20,000,000 each year, if our roads are to be kept in proper condition." The Governor's proposition is to use vitrified brick instead of macadam. A brick road costs from $20,000 to $25,000 per mile to build but it will last for 25 years, as it has been proven by the hardest kind of traffic over them in the cities, and the annual cost of maintaining them does not exceed $50 per mile. He also recommends that the State go into the business of manufacturing vitrified brick on its own account and thereby greatly reducing the cost of the same. He recommends that prison labor be used and it is his belief that these roads can be built for $15,000 per mile, and on this basis the total cost of a mile of brick road for 20 years would be $16,000 as against $36,000 for macadam roads. "An idea of the importance of the economy I propose," says the Governor, "may be gained from the fact that the total saving in the 7,300 miles of road yet to be constructed would amount to $146,000,000 in the 20 years after their completion, or more than the total cost of constructing our entire system of highways."

COMMISSIONER HUSON REAPPOINTED.—On March 25 Gov. Glynn sent the nomination of Calvin J. Huson to the Senate, to be State Commissioner of Agriculture, and it was immediately confirmed. This reappointment of Commissioner Huson will give general satisfaction to the farmers of the State. The Governor also nominated John F. Farrell, of New York, to be State Superintendent of Weights and Measures, to succeed Fritz Reichmann who resigned. This nomination was referred to the finance committee but will be confirmed later. Geo. W. Driscoll, of Syracuse, was renominated to the position of State Fair Commissioner. His nomination was immediately confirmed. The salary of the Commissioner of Agriculture was increased from $6,000 to $8,000 by a bill passed at the close of the session.

SOME NEW LAWS.—The Governor has signed the following bills: Chap. 60—Authorizing the construction of State and county highways by counties and towns as contractors, with convict labor, and providing for the purchase of machinery and tools. Chap. 61—Authorizing the supervision of any county to provide for the improvement of the highways in one or more towns at joint expense of county and town, and to prepare a definite system of county roads, and to employ convict labor. Chap. 64—Prohibiting the use of gasoline traction engines on public highways unless a person is sent ahead to give warning. Chap. 66—Providing that if farm or lot is divided by a line of tax districts and it consists of two or more parcels, with separate dwelling houses or other principal buildings, a portion of such farm lying in each district shall be separately assessed therein. As there have been 1,300 bills introduced in the Senate and about 1,500 in the Assembly, it is fair to presume that a very small minority of them will become laws.

NEW FORESTRY BUILDING.—The construction of the new building for the College of Forestry at Syracuse University will be begun in April. It is intended to be the most complete and best equipped building of its kind in the United States. The lowest bids for its construction call for an expenditure of $224,000 while the Legislature's appropriation was $250,000. The amount available for actual building operations is $240,000 the difference of $10,000 goes into the fund for administration expenses, etc.

BOYS TO THE FARMS.—New York City has purchased a tract of about 600 acres of land at Denton, N. Y., near Middletown, for its new reform work. The plan is to erect necessary buildings and conduct modern farming under the direction of experts. Much attention will be given to poultry and gardening for the New York markets. The first company of boys from the reformatory on Hart's Island, New York, arrived at the farm some days ago and it is expected that within a few weeks there will be 300 boys there.

COW TEST ASSOCIATIONS.—A campaign for arousing the interest of farmers of Jefferson County to the need of weeding out their unprofitable cows, has been begun by County Agent Robertson, of the Farm Bureau. He proposes to educate the farmers to the necessity of doing this by holding a series of meetings at eight different places in the county, and it is worthy of mention that all these meetings but one are held in Grange halls showing that the Farm Bureau has the cooperation of the Granges in this matter.

RURAL DEATH RATE COMPARISONS.—Some of the county Granges of the State have taken issue with the statement, which caused considerable comment at the State Grange meeting, and which appeared in the report of the tuberculosis committee to the State Grange, that the rural death rate is larger than the city death rate. It has been held that towns of several thousand population should not be classed as in rural districts and, further, that deaths of inmates in State hospitals located in the country should not be classified with the deaths of rural communities. In order to get an authoritative statement on this phase of the subject we interrogated Dr. Herman M. Biggs, State Commissioner of Health, who in a personal letter said, among other things: "Instead of decreasing the death rate in the rural districts you would find that if the deaths of non-residents occurring in the cities, where so many persons are taken for hospital treatment, were charged to the district in which they have legal residence the death rate in the rural districts would be increased. I realize the fact of course that deaths occurring in institutions located in the rural districts would materially increase the death rate of such places, but if we eliminated from consideration all deaths of persons occurring in State institutions the rural rate would exceed that of the cities by at least one point."

According to the January Bulletin, issued by the department, cities and villages of over 6,000 population are included in the urban territory, or in other words, all towns and villages up to 6,000 population are classified in the rural districts. The commissioner has had the statistics classified, confining to the rural districts all towns and villages under 2,500 population, and finds that the death rate for such rural districts is 15.3. The death rate of Greater New York is 13.7. It is a most striking contrast. Dr. Biggs says: "By excluding all places above 2,500 and including such statistics with those of our cities, the rural death rate is decreased only one-tenth of a point and exceeds that of the rest of the State by nearly one point." Of course, it is understood that under the present method of classification of mortality records all deaths are credited to the locality in which they occur.

Woman and the Home

From Day to Day

MOTHER OF FIVE.

She mothered five!
Night after night she watched a little bed.
Night after night she cooled a fevered head,
Day after day she guarded little feet.
Taught little minds the dangers of the street;
Taught little lips to utter simple prayers,
Whispered of strength that some day would be theirs
And trained them all to use it as they should.
She gave her babies to the nation's good.

She mothered five!
She gave her beauty; from her cheeks let fade
The rose's blushes; to her mother trade.
She saw the wrinkles furrowing her brow,
Yet smiling said, "My boy grows stronger now."
When pleasures called she turned away and said:
"I dare not leave my babies to be fed
By strangers' hands; besides they are so small
I must be near to answer when they call."

She mothered five!
Night after night they sat about her knee
And heard her tell of what some day would be.
From her they learned that in the world outside
Are cruelty and vice and selfishness and pride;
From her they learned the wrongs they ought to shun,
What things to love, what work must still be done.
She led them through the labyrinth of youth
And brought five men and women up to Truth.

She mothered five!
Her name may be unknown save to the few.
Of her the outside world but little knew.
But somewhere five are treading Virtue's ways,
Serving the world and brightening its days.
Somewhere are five, who, tempted, stand upright
Clinging to honor, keeping her memory bright.
Somewhere this mother toils and is alive
No more as one, but in the breasts of five,

Edgar A. Guest, in Detroit Free Press.

*

IN reading the excellent bulletin on "Bread" issued by the Ohio Agricultural College last December, we note that the utensils given as necessary for bread-making do not include a bread-mixer, and the recipes call for the old-fashioned hand kneading. We do not agree with this; the bread-mixer is, we think, an absolute necessity whenever bread is made at home, and if the directions given with it are accurately followed the bread is always good. And what a relief it is to hard-working arms! We also find it excellent for mixing stiff fruit cake.

*

HERE is a Californian recipe for grapefruit pie which, while not very useful in the North, may be appreciated by Florida readers: First bake a shell as for lemon pie; then make a filling as follows: Mix one tablespoonful of cornstarch in a little cold water, and over this pour one cupful of boiling water. To this add the juice of two grapefruit, the grated rind and juice of one orange, the beaten yolks of two eggs and the white of one and a small piece of butter. Put all in the double boiler and cook until thick, stirring all the time. When done, put in the shell. Then beat up the white of second egg with one-half cupful of sugar, until thick, and spread with a knife over the pie. Put in the oven and let brown lightly. Serve cold. This makes an excellent pie.

*

IN planning to improve home surroundings, do not forget that every rural family is entitled to some comfortable shady place that may form an outdoor sitting-room in Summer. We naturally expect to find such shade on every place, but trees are not always so arranged as to provide it, and in such cases quick-growing vines will be a help. Furthermore, this shady resting place should be provided with appropriate outdoor furniture; a table firm enough to stand without tipping and large enough to hold books or the dishes for an open-air meal; chairs or settles that will afford comfortable seats, and a little sewing stand that will not upset and scatter thread and thimbles broadcast. None of these requirements calls for a heavy expenditure, and yet they add greatly to the comfort of country living at a season when there is much hard work and little leisure.

*

THE State Superintendent of Schools of West Virginia has issued a bulletin on "Community Studies for Rural High Schools," prepared by the State Supervisor. This bulletin may be called an examination paper on local resources, as it asks the pupils for a complete account of the people, places and resources of their own immediate environment. The State Superintendent says:

The high schools are turning out many boys and girls who know something of Latin and German, something of the civilization of Greece and Rome, and something of geometry, but who know little or nothing about the community in which they live; they know nothing of its history, nothing of its traditions, nothing of its industries, nothing of its institutions, and nothing of its possibilities for the future. The life that goes on about them, with its needs, its failures, and its suggestions, makes no appeal to them, because they do not understand its significance. Our rural communities in West Virginia have greatly suffered in the past because the majority of their young people who have gone to high school and to college, have not returned to them to give them the benefit of their training and their increased ability. They have gone into the towns and cities of the State and into the towns and cities of other States, to seek opportunities there and to use the ability that they have developed. Many of them have gone to seek opportunities in distant places because the lessons they learned in school dealt largely with distant places and distant activities. They have yielded to the lure of things they have read about, and thought about. They have discovered no opportunities at home because they have not been taught how to look for them. Partly because of this desertion by many of their best young people, some of our rural communities are yet undeveloped, and many of those that have been developed owe their development to those who have come in from the outside.

We think these words are true of many localities besides West Virginia. If the school and the home inculcate local pride by pointing out the advantages of a locality, and at the same time direct thought toward improvement of disadvantages, they are likely to induce a solidarity of interest that will produce a high type of citizenship, and that is something we need more than some of the ornamental accomplishments now urged in modern education.

The Unknown Teacher.

In the "good old days" the school teacher in the little red schoolhouse was an important personage in the community, and each family of any social standing at all entertained the schoolmaster or ma'am at least once each term. Housekeepers in those days spoke of "having the teacher" much as they spoke of attending to every other duty in life, and if sickness or disaster put this important event off the calendar the mistress of the farmhouse declared herself "mortified to death," an expression much used in those times. But now it is a common thing to discover parents, good, intelligent folks, too, who cannot even name the man or woman who instructs the boys and girls day by day. Last Fall I met an intelligent, progressive farmer who had to appeal to his children to tell him who was their teacher during the fourth month of the term. "I never pay any attention to the school," he said apologetically.

It is hard on the children when the parents take this attitude toward the school, but it is also hard on the teacher. Many a lonely young person goes from house to house seeking board in the Fall only to be turned away. In many cases is is really impossible for the mistress of the farmhouse to add to her burdens, but in other instances women do not want to bother with a teacher.

Often a young girl or a young man capable of doing good work becomes disheartened because of the loneliness, and gets through the school in haphazard fashion. There is no incentive to do the best work, because no one ever commends, and the year is hurried past as quickly and easily as possible. Of course every young worker should do the best without thinking of outside conditions, but when a human being is practically alone in a commmnity it is hard to do the best. No one doubts that the farm housekeepers have their hands full, and that entertaining in the good old fashion is probably gone forever, but it doesn't take long to make friends with the unknown teacher and give her a hearty word of praise early in the term. Perhaps inviting her for a meal is out of the question, but the busiest woman can smile and say a good word to and for a lonely fellow mortal. If you want to make the school efficient "brag up" the teacher. Set so high a standard for her that she will have to try to live up to it. Make yourself a member of the publicity bureau to speak of the good work done in the schoolroom, and teacher and pupils will feel the encouragement.

HILDA RICHMOND.

Boys in House Cleaning.

From time immemorial the Spring housecleaning has been an all-absorbing subject, and one that cannot be set aside. It is only to be compared with the grand upheaval of nature which has to be endured annually when Jack Frost loses his hold, and the whole surface of the world is made over by floods and mud, sun and rain, until order is brought out of chaos, and the earth is finally solid under our feet again, made clean and fresh and sweet by the mighty forces brought to bear, and perfumed by the breath of violets.

While nature furnishes the forces and decides the manner in which outdoors shall be cleaned, man, or rather woman, must decide the question for indoors. House-cleaning is a fact; the question is, how and when is the best time to begin? To guide the housewife, various methods have been tried and written up, but many are still in doubt as to which is the best. Some say, clean one room at a time, while others advocate cleaning all the house at once and making a time of it; doubtless drawing inspiration from the fact that a week of deep mud is preferable to a more protracted season of less depth. In deciding this question considerable depends on the force the housewife has to work with. Some must do the greater part by themselves, with a little help from the men folks, while others hire a woman by the day, and often are obliged to call on the men then, which plainly proves that while women may seem to be crowding into the field of men's work, she is leaving an open field behind her which no one can fill so well as a man or a boy. The boy as a house-cleaner is superior to a man or two women and can make good wages at it. A boy will laugh at the idea of its being hard work to take up tacks, and shoulder the carpet as easily as a bag of meal, while as for moving the furniture out of doors, that is fun.

He may possibly need a little encouragement while dusting the carpet in order to dust it thoroughly, but he isn't all tired out when it is done; and while you are cleaning the windows he will have ample time to dust the furniture, pictures, etc., which he does not consider work, though it is a great help to have it all ready to set back into the room as soon as the carpet is down. Many boys can clean paint as well as a woman and as quickly. When all is ready he brings in the carpet and helps tack, or stretches it so that it is quite easy for you to tack. After that is done he is not too tired to begin another room, and if you feel equal to ordering and helping a little, will often do two rooms in a day, and be fresh enough for a game of ball afterward, and start fresh again the next morning.

Nearly every woman is familiar with the type of women who make a business of going out housecleaning, and who usually appear in the morning with a worn-out expression on their faces and tell how tired they are to begin with, and keep it up all through the day, until towards night they are so much more tired than you are, that you give them their money and send them home while you finish up yourself. You do not blame them, knowing that the work is too hard to be continued day after day by women; it is only fit for men or boys who are well and strong; and boys as professional housecleaners will find a wide field open for them to work in wherever they may be.

ALICE E. PINNEY.

Mrs. Skeptic—"Oh, go 'long, Anty Drudge! Telling me I don't need to boil nor hardrub my clothes. Everybody I know *always* has washed clothes this way."

Anty Drudge—"No, they haven't. Some heathen places they beat them with stones to get them clean. Why don't you do that if you *like* the hardest way? But if you want the *easy* way, just use Fels-Naptha Soap."

What does washday mean to you? Standing all day, drudging over the washboard, rubbing the dirt out of your clothes, and boiling them to pieces; filling your house with steam and smell, and making yourself tired out? Or

Thirty minutes for the clothes to soak in cool or lukewarm water with Fels-Naptha Soap; a light rub with the hands, rinsing and hanging on the line in half the time, with less than half the trouble than ever before?

Fels-Naptha works for you in cool or lukewarm water.

Buy it by the carton or box. Full directions are on the Red and Green Wrapper.

Fels & Co., Philadelphia.

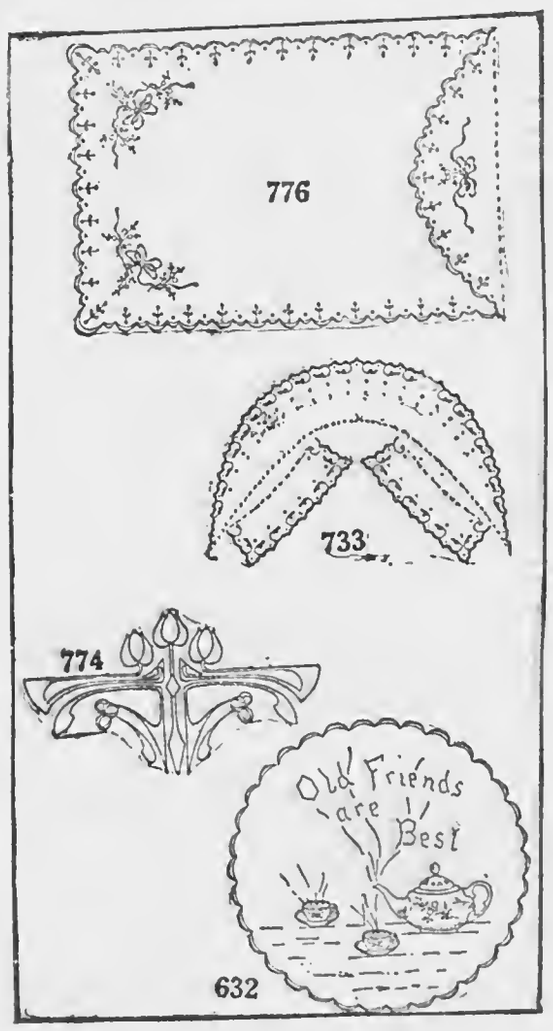
The Rural Patterns.

When ordering patterns always give number of pattern and measurement desired.

8185 Middy blouse for misses and small women, 16 to 18 years. 8195 Fancy blouse, 34 to 40 bust. 8200 Semi-princesse gown, 34 to 40 bust. 8174 Seven gored skirt, 26 to 36 waist. 8194 One-piece skirt, 22 to 30 waist. Price of each pattern 10 cents.

The following patterns at prices quoted include materials for working. Transfer patterns only will he furnished for 10 cents each.

No. 776. A design for embroidering an infant's carriage cover. Stamped on 21x36 best round thread Scotch linen, with one dozen 12 yard skeins of white mercerized floss to work, 60 cents.



No. 733. A design for embroidering a shawl collar and cuffs. The scalloped edges are to he buttonholed. The dots can he worked solidly or as eyelets. Stamped on best white pure Irish linen with mercerized floss to work, 60 cents.

No. 774. A design for embroidering the ends of a table or dresser scarf. Two ends twelve inches wide are given. Stamped and tinted on art crash, 17x54 inches, with mercerized floss to work, 40 cents.

No. 632. A design for embroidering a doyley ten and one-half inches in diameter. One transfer is given. Stamped and tinted on white Irish linen with mercerized floss to work, 25 cents.

Chocolate Buds.

Can any of the home candy-makers give me a recipe for the popular confections called chocolate buds? A. E. F.

Glimpses of Life in Colorado

"Are you going to the sale?" a neighbor asked me. "Everyhody goes, women as much as the men; they don't go to buy, hut to see the folks and then you get a lunch too." It was very strange to one not accustomed to it to see scores of women following around the men and auctioneer from farm stock to machinery and all the odds and ends of a sale; women with babies and little tots clinging to their skirts. For me it would be a very hard day's work, and I cannot become Westernized enough to think it is just the place for a woman. On the plains, however, it seems a woman can go wherever a man can. In many cases if the children are clothed and fed, that ends it, although they are sent to school usually, for it is the law. The little courtesies of life are not taught, and in too many cases, they are not even known by the parents themselves. It is a rare occurrence to see a man lift his hat when meeting a lady, and when it is done it is noted. The young men are greatly lacking in common politeness, those whom I have met, both here and in Wyoming. But there are portions of the East where it is no better. I was much surprised and also pleased when a young man backed out of the door when leaving, cap under his arm, until he was out of the door-way. He attended a short course at Fort Collins Agricultural College last year, and perhaps learned something of manners there, but his parents, particularly the mother, are a little above the average here intellectually, and I think she has had a hand in the training. The boy is a great reader and comes here for reading matter. We have numerous magazines sent us hy friends in the East as well as what we take, and are glad to pass them over. "I like a good short story that tells how rich people live. I am poor, but I love to read of elegance and riches," he told me. They are well-to-do farmers, live comfortably, and left a nice Iowa farm to come here for the mother's health, which has improved so wonderfully that money could not hire them to return.

A neighbor called yesterday and in course of the conversation remarked that she was doing her Summer sewing now, making two gingham house-dresses and lot of pillow slips of calico and gingham, as they were so easy to wash and did not show dirt like white. "I have a lot of good white cotton sheets and pillow slips for spare beds, but I use cotton blankets, gray or brown, Summer and Winter. They save a lot of hard work, and what's the use of killing one's self for the sake of color? I never had colored pillow slips, but I find lots of people do have them for common, and I am going to have them after this."

This woman is abundantly able to have what she needs and wishes, and is strong in hody, hut works hard, doing many things out of doors that really are men's work. There are kinds of white muslins that wash as easy as calico, but of course will show the soil sooner. If one lives in a dug-out it makes some difference, or a sod house not plastered, and has a family of small children. Circumstances alter cases oftentimes. Washing is hard work at the hest, hut doubly so where the water is poor. Some wells of water are so hard that lye has to be used in such quantities that a scum will rise instead of suds. Strange as it may seem the water sometimes is harder than another time from the same well. Only a mile from us a neighhor has a well where the water is very poor, "gyp" they call it, and soapstone, while just half a mile away the water is good. Ours is good, but rather hard. If there is one thing more than another that a woman needs handy and easy to get it is water, hut people who rent or are poor have to take it as they find it, or can get it.

It made my heart sad to hear of a woman who came here less than a year ago from Nebraska, so discouraged it was hard living, with a hushand and large family of children. "We always had plenty of feed for our stock, hogs to kill for our meat, lots of cows to milk and no lack of fuel. Here we have nothing, no hogs, for we raised nothing to feed them, and it's so with everything. We have no money to get hack with. The Lord knows what we will do—I don't." There are hundreds in like position in this western country. The real estate agent is a curse to the country in many ways. There are exceptions, but they are few compared with the many. People seem land mad. Many come here with plenty of money having sold their farms in Iowa and Nebraska for large sums; come here and pay from $10 to $25 an acre, fence, put down well, build fine houses, barns, etc. Do they count the cost after it is all done? It brings the raw land up to a pretty big figure, and then crops are very uncertain. Tame grasses, except in some places Alfalfa, cannot he raised. So the poor homesteader or renter must turn his stock on the range to pick what they can for a living. Very many of the women work out in the fields; plow, cultivate, run the mowing machine and horse rake, load hay, husk corn. I do not think it right when a woman has the house and family of children to care for. One or the other suffers, for it cannot all be done by one pair of hands. Very few women but milk. As a general thing so far as I have learned there are children, large families predominating. I have heard of no men compelling their wives to work in the field, but it seems a naturally drawn conclusion that they will. Scarcity of help is not always the reason. If the older children are girls they are put to the work, following the walking plow in some cases here. There are no schools from May until September in the country. A neighhor woman told me last Fall when we called there, that she helped husk corn in the field five days out of the week and the sixth she washed, ironed, churned, scrubbed, baked, swept and cleaned up for a family of four. Sunday they eitl r have company or go visiting. She is a healthy woman now, but she may not always be so strong. Nature cannot always stand being forced. That is the way some of the people live on the great plains of eastern Colorado. The work and talk is now setting hens and incuhators, getting the garden ready for planting, and looking over the catalogues. I have not heard one say aught against getting garden and flower seeds from the Government. They look forward for them, people of means too.

MRS. FREDERICK C. JOHNSON.

Oatmeal Crisps.

One tablespoon of butter; one cup of sugar; three cups of rolled oats; two teaspoons of haking powder mixed well with the oats; two eggs well heaten; one-half teaspoon of salt; vanilla flavoring mixed with the eggs. Cream butter and sugar, adding well-beaten egg and then the oats, mix very thoroughly. Drop from a teaspoon on waxed paper, leaving a large space hetween for spreading. When these cakes are baked on a buttered pan without the paper it is very difficult to get them off without hreaking. Bake a nice brown. M. A. R.

Hot Beverages Wanted.

I wish to ask what the readers of this department substitute for tea, when they want a tasty hot drink, yet feel that tea is not heneficial, especially at night. No doubt most of us ought to drink more liquid than is usually taken. There are good coffee suhstitutes. What about tea? Cocoa may be too rich, cambric tea and clear hot water too insipid. Will some one who has solved the problem satisfactorily tell the rest of us how you do it? G. L.

HOLLAND CHEESE LOAF.—Pare and shave potatoes in thin over-lapping slices to line a huttered pan. Then arrange in alternate layers of potatoes, grated cheese, salt, pepper and sliced onion. Fill the mold up with sweet milk covering the top with a layer of grated cheese and fine hread crumbs and bake from one to two hours. This is an excellent supper dish. G. M. W.

REMOVING PLASTER DUST.—Our plastered ceiling fell, and although I could sweep the carpet a new piece of oilcloth seemed to he ruined. After repeated washing it continued to look covered with dust. A friend told me to put a tablespoonful of kerosene oil in a basin of cold water and wipe it, which I did, and it looked almost as good as new.

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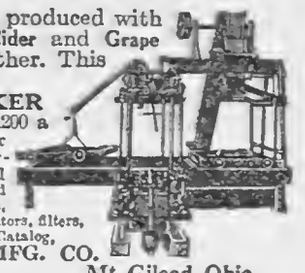

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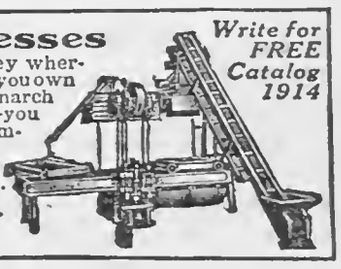

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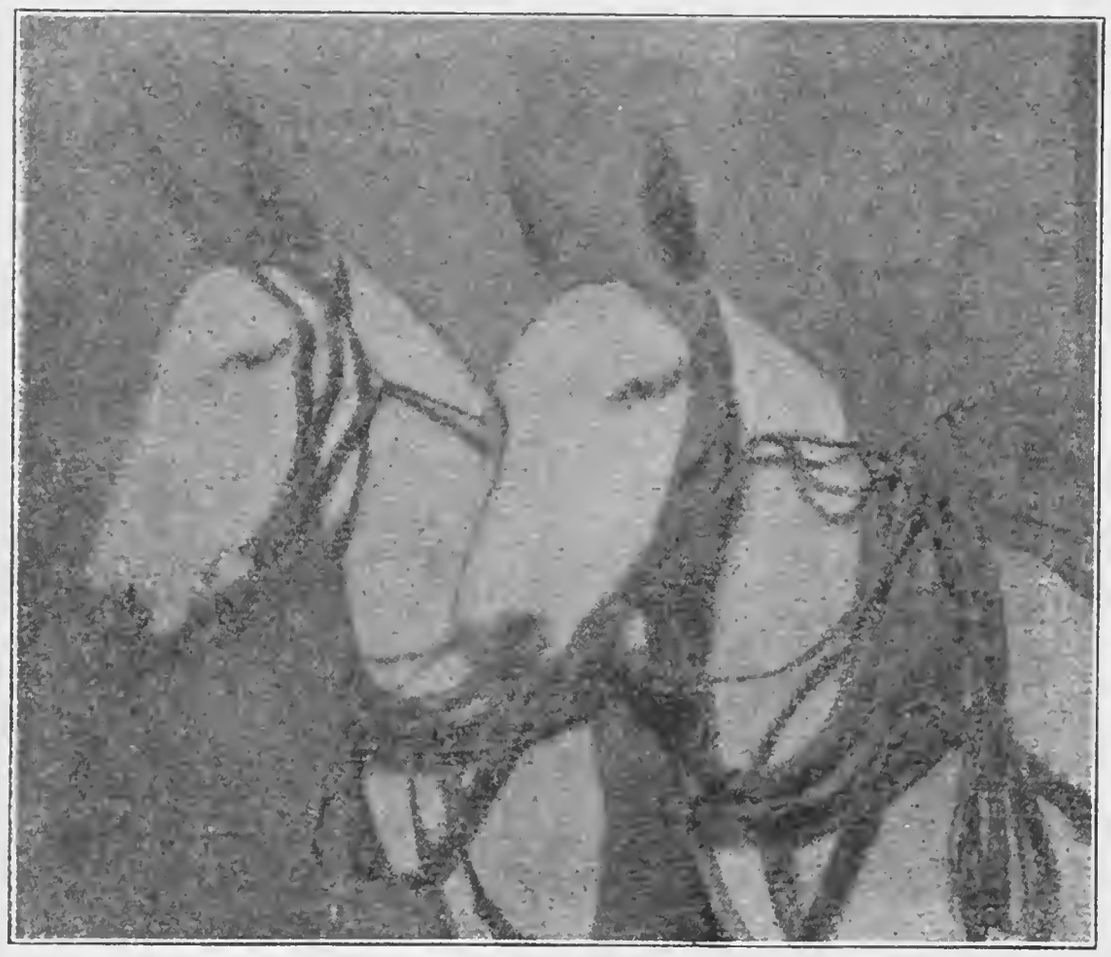
Live Stock and Dairy

CORN FEEDING FOR MULES.

We know northern farmers who are shocked sometimes when told that in the South and West working mules are fed almost entirely upon hay and corn. It has come to be generally believed that oats in some form make by far the best grain for working or driving animals. When we figure out the chemistry of the balanced ration we run upon the fact that most of the experts declare that corn does not contain enough protein or enough of the bone-forming material to sustain a working animal. How then can it be possible that these mules kept at hard work can thrive without oats? Probably these critics have never seen a mule at work, and are not acquainted with his character or his powers. When it comes to cheap feeding or peculiar feeding a mule is in a class by himself. Yet it certainly makes the northern farmer thoughtful when he hears about this hay and corn feeding. The Missouri Experiment Station conducted an experiment for two years with a view to testing this corn and oat proposition. They selected two pairs of mules that were well matched in type, size, quality and age. The hay which was fed these mules was



A GOOD TEAM OF MISSOURI MULES.

a mixed clover and Timothy with 10 to 25 per cent. of clover. Both corn and oats were shelled. They started out to feed the corn three times a day, and the hay twice, while the mules were kept hard at work. Record was kept of the food they consumed, the work they did and the spirit and endurance which they showed. One pair of mules was fed oats and hay entirely, and the other pair corn and oats. In order to be entirely fair, the experiment was shifted, i. e., for one period one pair of the mules would be fed on oats and hay. Then after a certain length of time in feeding, that same pair would have oats substituted for the corn. This gave a thorough chance to try both ways of feeding with both teams of mules. This experiment went on for two years, and the bulletin mentioned contains a thorough set of figures showing the results.

Briefly stated, when the mules were fed grain and hay, they maintained just as good health as when they received oats and hay, and the corn-fed mules kept their weight slightly better. The mules which were fed corn endured hard work in hot weather better than the others, and no difference could be detected in their spirit. On a fair basis of comparison the mules that were fed the corn did 6% more work than when they were fed oats. The oat-fed mules required 3% more grain, and nearly 1½ per cent. more hay to keep up their live weight than when fed corn and mixed hay. In this experiment the hay was worth $10 a ton, corn 50 cents a bushel, and oats 40 cents. After figuring the values out carefully, it was found that these mules were maintained for 28% less on the ration of corn than when oats were fed. This means that the feed of the mule on corn and hay cost $63.80 per year, while the feed of the mule fed on oats and hay cost $80.79. It would seem from these experiments that the old belief in the great superiority of oats as a feed for working stock has been pretty well exploded. In another experiment with colts it was found that bran and oil meal made an economical substitute for oats, and made a rather better grain. It is quite probable that much the same thing would be true on our eastern farms with a rather slow, heavy type of farm horse. In fact much of the mystery and old prejudice which has surrounded the feeding of oats to farm stock seems to be passing away before the test of actual feeds and figures. We think a mule is better able to take care of hay and corn alone than many horses. At the same time on a great many of our eastern farms, a good sample of flint corn with a small quantity of bran or oil meal added would prove a more economical grain than the oats.

Points for the Hampshire Sheep.

We have had Hampshire ewes give birth to lambs in November and again the following April, but we do not claim greater prolificacy on that account. The present season we have had only about a dozen single lambs dropped among 60 ewes, and have living over 1½ lambs to the ewe, having lost about 12 or 15 by various causes, principal of which was the use of some unsuitable fodder in feeding the ewes, we being very short of Alfalfa this year. So we find the Hampshire a very prolific sheep and the lambs usually weigh from 18 to 25 or 30 pounds to the pair. We often have two or three sets of triplets in a season, and raise them successfully. We believe that the average Hampshire is a little more prolific than any other breed. But chief of the Hampshire's assets is the fact that they drop large lambs, thus giving them a good start. The lambs grow faster and larger than from any other breed, often with good care weighing 90 to 100 pounds at 100 days old. The ewes are good milkers, and give good account of hay and grain fed to them. Here then we have what every man should be looking for, the ewe that will give the largest flow of milk and the largest lambs that grow on the milk. It is the lamb that makes the profit, and the great western ranches know this to be so; to-day there are probably more Hampshire rams being used on range flocks than of any other breed, and the Hampshire lambs are topping the market in Chicago at 80 pounds weight straight from the range. An immense Hampshire flock has just been started in Wyoming to furnish rams for the range, and we all know of Cooper's big stud in Illinois.

Sometimes we wish that it might be a Hampshire that would get the grand champion wether prize at the International from from the Southdowns or Shropshires, but then we console ourselves with the thought that it is the

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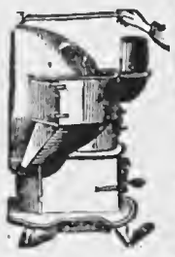

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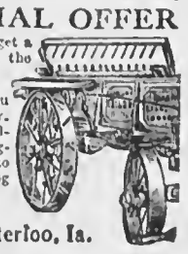

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dollars jingling in our pockets that we really need rather than the glory. Some day we shall have the glory too. The Hampshire is like the Short-horn; it prefers to make good in the everyday walks of life rather than in the showy places.

Now some generalities about sheep. First pick out the sheep that suits you best, remembering that unless you are going to raise Winter lambs you want one that raises the biggest, best lamb right from the time it is dropped. Then give it the best of feed and care. Give the ewe some oil cake, bran and a little corn, with clover hay or Alfalfa. Make a creep for the lambs before they get over two weeks old, and see them grow. Feed them in the creep some bran, oil cake, ground oats and cracked corn, and as they get older, some hay. If the lambs do not come until pasture, do not turn them out too early and then try to have some rape to which you can turn them when about two months old. If necessary to wean the lambs so they may have clean pasture, do so when they are about four months old. Mix one pint turpentine, one pound sulphate of iron and one pound gentian in one bushel fine salt, and keep before them all the time as a preventive of worms and as a tonic. It pays well. Just try making your lambs grow as fast as you can right from the start, and as soon as they get to weigh 60 or 70 pounds or more sell them. You will find that they do not cost nearly as much as where you keep them all Summer and then feed until January or February, and you will be that much ahead.

If you have your lambs come early and one gets chilled, take to the house and immerse to its ears and nose in just as hot water as you can bear your hand; give a teaspoon of stimulant in sweetened water and rub dry. Be careful it does not again get chilled. You will be surprised what apparently hopeless cases you can bring to life. Have plenty of Epsom salts on hand, and if a ewe does not come to her milk at once or has garget, give her one-quarter pound in water. Watch the lamb and see that he passes yellow manure within 24 hours after birth; if not give him an injection of warm soapy water. For scours in the lambs give castor oil in doses of one to two teaspoons. Always make it a point at each feeding time when the ewes are lined up at the hay racks to notice each lamb, to see that none is bloated, scouring or otherwise ailing. Remember that most trouble with sheep comes from improper feeding and lack of exercise. Get "The Domestic Sheep" by Stewart, and if you have any sick sheep try to diagnose from what you may learn in that book. You will usually find the trouble with the feed.

We have spoken rather briefly of various topics in the business of shepherding in this article, but later want to say something about choosing a ram and about keeping to one breed once you have chosen that as your breed. H. B.

The Good Dog.

I was interested in "Live Stock that Pays no Dividend," page 194. If it was not for the roaming dogs we could keep 100 or more sheep with little cost to us. Still we keep a dog. We are now using our fourth; three others, one after the other worn out in the service and gone. We use only thoroughbred Scotch Collie spays; they are always at home and call no dogs around. Instinctively they seem to know how to drive stock. The one lesson they require is to come back at command and not to get to chasing stock. Never strike them; kindness will do everything for them. Our present dog, a year old last March, drove cows all last Summer; would round up 30 head in a few minutes, that would take a man with much running and temper a much longer time. My grand-children used her most of the time last Summer. I have never had a bad-tempered one; this one is everybody's pet, but it does not hurt her for work. W. A. S.
Weatogue, Conn.

LITTLE Lucy had been dutifully entertaining the visitor until mamma came down. "Where were you born?" the good lady asked. "In New York." "What part? Tell me." Lucy thought a minute. Then she answered: "I think that all of me was born in New York."—Credit Lost.

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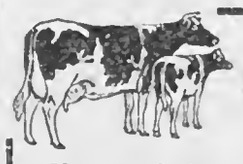
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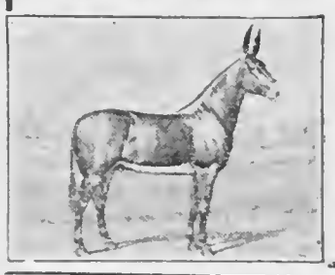

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Feed For Freshening Cow.

I have a cow nine years old, due to come in June 7, part Holstein and Guernsey. The last time she freshened she had udder trouble and came near losing one of her teats, so she was not bred last year. What grain would be best to feed her from now on? She will be dry in about a week and in good condition. I can get corn meal, bran, middlings, ground oats, oil meal; how would you mix them? How much to feed? I am feeding mixed hay, Alfalfa and Timothy. Every Summer she has a breaking out on her udder, something like cowpox.

New York. G. E. L.

At present feed the cow three or four pounds daily of a mixture of equal parts ground oats and bran. If this causes her to gain much in flesh, reduce the amount of grain. If the cow is turned to pasture later, omit the grain entirely. If she shows any symptoms of caked udder at calving time, before or after, give an ounce of saltpeter daily and rub the udder twice daily with two parts lard and one part spirits of turpentine. The breaking out on the udder is not at all uncommon, and need cause no alarm.

C. L. M.

Light or Dark Cottonseed.

I was recently told that cottonseed meal was of two colors, dark and light; that the light-colored was the fresh and the only kind fit to feed, the dark, old meal, and that it had, when so colored, lost its food value. What I have been buying has been a dark orange in color. I should like to know whether the above is true. A. R. B.

It is not possible to gauge the age of cottonseed meal by the mere consideration of its color as is suggested by A. R. B. Prof. Cathcart, chemist at the Experiment Station, states that the color of cottonseed meal might depend upon one of three things. First, the seed used, there being a slight difference in the color of different varieties; second, whether or not the seed was steamed before the oil was extracted; and third, whether or not any of the hulls were ground up and used with the meal. Exposure to the air oftentimes changes the color of the meal, and it is rather difficult to get different samples of cottonseed meal of identical color. The differences in my judgment might be accounted for in case the meal becomes rancid or was stored in quarters that were not dry, but rather favorable to the decomposition of the oil that may be present in the meal. The feeding value of cottonseed meal should be based upon its chemical analysis, or in other words its protein content, and not upon the mere matter of color, and it is not true that cottonseed meal that has lost its original or orange color has lost its feeding value. F. C. M.

Cow Ration With Timothy Hay.

What will be a good ration for cows, coming fresh soon, with nothing but Timothy hay for roughage? I have fed equal parts by weight of bran, white middlings, meal, dry distillers' grains. We have never been able to buy malt sprouts here before. How should it be fed, wet or dry, and what grain does it take the place of? Do you consider it any cheaper than other grain at prices given? A. P. S.

You will not be able to get a very satisfactory flow of milk with only Timothy hay as roughage. If you could get some dried beet pulp it would be a great help and when mixed with grain makes a good ration for the production of milk. Malt sprouts may be fed dry in limited quantities, but they are better soaked. They do not really take the place of any other grains satisfactorily, but are used as a sort of "filler" because they appear cheap, but they are really expensive. We would much prefer feeding a ration as follows: Three pounds gluten feed, five pounds distillers' dried grains, one pound oil meal, one pound cornmeal. C. S. G.

Feeding Work Horses.

What is the best and cheapest feed I could get for working horses? I fed, this Winter, with a few ears of corn and mixed hay, but my corn will soon run out. R. G.

The best feed that we have ever used for working horses is Timothy hay with oats and about 10% of wheat bran mixed through them. If you can get oats and bran at a reasonable price you will find that your horses will keep in excellent condition on this ration provided, of course, you feed liberally and work your horses carefully. If, however, you can get other feeds cheaper that will answer the purpose it may be economical to use a imxture of 75% dried brewers' grains and 25% cornmeal which should keep your horses in good working condition. If, for any reason, your horses should not be working for a few days it would be advisable to reduce the quantity of cornmeal in the ration or feed less of the mixture, as it is quite necessary to work horses which are fed heavily on this ration. Do not neglect to give your horses plenty of salt. C. S. G.

Feeding Young Cows.

What do you consider the best feeding ration for Jersey and Guernsey cows for butter production, and quantities to feed? I have been feeding two heifers, giving 20 and 25 pounds milk a day respectively, eight and nine pounds part bran and part gluten by weight, and 20 pounds Alfalfa per day, half of each, morning and night, giving them what corn fodder they clean up at noon. T. F. G.

New Jersey.

If your cows are keeping in good condition I see no reason for a change of feed as they seem to be giving a satisfactory flow of milk. If, however, you find that they are growing thin in flesh as a result of a high protein ration you may find it necessary to add a little cornmeal to the grain ration. C. S. G.

Ration for Young Pigs.

Will you give me a balanced grain ration for growing pigs about four or five months old? Will oil meal be all right in the place of tankage? It is hard to get tankage here. I have no milk for pigs and cannot turn them on pasture. What grain should I feed with stale bread to make a good feed for pigs?

New York. H. E. G.

If you cannot get tankage, oil meal will make a fairly good substitute. A good mixture for four to five months old pigs would be equal parts by weight of bran, middlings and cornmeal with 10% oil meal added. When you feed stale bread made into a slop with warm water in Winter, and cold water in Summer, you only have to add a little cornmeal for fattening purposes during the last six or eight weeks before marketing.

C. S. G.

Feeding for Milk.

I have a purebred prize-winning two-year Jersey which recently calved, and I am now feeding a grain mixture as follows: 100 pounds ground corn and oats, 50 pounds gluten, 50 pounds buckwheat middlings, 50 pounds cottonseed meal, 100 pounds bran; four quarts per day. As her milk yield runs but about two quarts per milking, I fear something is wrong. Have also fed chopped beets, carrots, potatoes and apples a few times; have taken the calf away. Do you think she is likely to do better later on when the cold is over?

Pennsylvania. E. T. C.

It is nothing uncommon for a two-year-old Jersey to give only two quarts of milk at a milking. The grain mixture which you are feeding is all right, but you do not state what roughage you have. If you are feeding plenty of good early cut hay with the roots and apples you are giving her a good chance to show what she can do, and the best way is to keep her a year if she is a valuable cow, and see if she will improve under natural Summer conditions. You can then decide what action to take. C. S. G.

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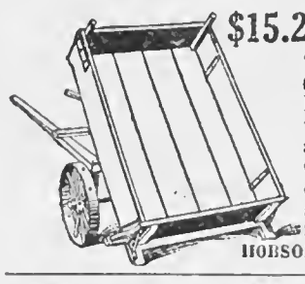

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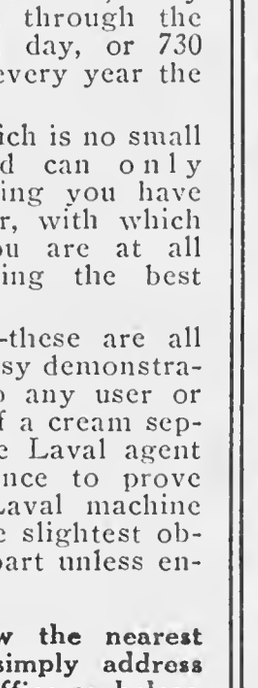

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will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

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A Small Silo.

I think of building a small silo. I have 20 acres, and would like to keep about three cows, have two now, but find it too expensive to feed them hay and grain, as all have to be bought. Would a small silo be suitable in such a case? If you think so, about what size? I have in mind to erect a small square one inside of barn. What dimensions would suit two or three cows? A. B. C.
Vineland, N. J.

I do not think that A. B. C. could afford to construct a silo to accommodate three cows. In the first place silage does not keep well in a square silo of small dimensions, and the expense of filling the silo, and the risk involved in keeping the silage sweet when such a small amount is fed daily, would in my judgment make it not only impractical but unprofitable. On a basis of unit cost per cow I do not think that it would be profitable to construct a modern silo with any degree of economy unless a dairyman has at least 10 or 12 cows. He might better resort to the growing of mangel wurzels, turnips or some other root crop that would fit in well with his truck farming, or he could resort to beet pulp as a source of succulence. It is not a problem of how small a silo might be built, but rather a question of keeping quality. Small silos, homemade, are often unsatisfactory, and their usefulness would not justify the expense involved. If A. B. C. could grow Alfalfa and supplement this with corn and beet pulp moistened with molasses water, I feel sure that he would be able to feed the three cows more economically.

F. C. MINKLER.

White Particles in Butter.

Can you tell us what sometimes causes white particles in butter from separator cream? Is it perhaps that too much milk goes through with cream and that this milk curdles? F.
Martinsville, N. J.

I think that probably your trouble is due to gathering the butter in the churn before washing. Stop churning when the granules of butter are small, about the size of wheat kernels; draw off the buttermilk, then wash three or four times with plenty of water, giving the churn a few turns each time. Wash until the water comes off clear, and be careful that the water is not much colder than the churning temperature of the cream. I do not think that the thickness of the cream has much to do with the appearance of white particles. An uneven distribution of salt, insufficient working or an over-ripe cream may cause white streaks. C. S. M.

The Milch Goat.

Hardly a day passes without our receiving one or two letters from people who want to buy a milch goat. It is curious what ideas many people have regarding these goats. Some of them appear to think that a goat will give almost as much milk as a cow, that it will live practically without care, and with little feed, and that it can be bought for a few dollars. People write us saying that they have a family of two or three, not enough to warrant them in buying a cow. They have heard that a goat will give milk enough for this family, that it can be kept in a piano box, fed on many of the kitchen wastes with a small amount of hay, and that for $5 or $8 a good goat can be obtained. Just where this vision of utility came from it is hard to say. The goat is an economical creature, but when we expect it to do such a remarkable performance as is herein enacted, the goat falls down and fails to please. The fact is that it is a very good goat that will give two quarts of milk a day and keep that up for three or four months. Of course, we read of goats that give six or seven quarts a day and do other remarkable things. We also hear of hens that pay a profit of $15 a year, and of men who dig 300 bushels of potatoes in a day, chop 10 cords of wood or hoe several acres. There may be such wonderful creatures, but they are not found in the ranks of ordinary hired men, and most of the goats which give this large quantity of milk are now dead. As for prices, a very reliable dealer writes us this: "A goat of any reliable breed that gives from one to two quarts of milk daily is worth $25 or $30, and a breeder can easily obtain that money for her. Such a thing as buying a good milch goat for $5 is entirely out of the question. He may be able to buy a young kid for $5 and raise her into a goat which might give three pints a day, but that is about the limit in the goat line. That young man who thinks he could keep a goat in a piano box and have her turn out milk enough for his entire family on little or no feed should forget his dream at once, for there is absolutely nothing to it."

Packing Butter.

A few weeks ago, I noticed in THE R. N.-Y. an inquiry about packing butter. Years ago I, and before that, my mother, packed butter every Summer, both for ourselves and for customers. It was preferably June butter. The cream was raised in the old-fashioned way in pans (creameries and separators were unheard of). After churning and rinsing the butter, it was salted and left over night. The next day it was worked and packed. We used tubs mostly, though sometimes stone jars. I think we often put a little salt at the bottom. Then the butter was put in, a layer about 1½ inch thick, and packed as solidly as possible with a wooden masher. Then a sprinkle of salt and another layer, and so on till full, the division into layers being for convenience in taking out. When within about an inch of the top, a clean white cloth cut a little larger than the tub was put on and a little strong brine put over that. This gave good satisfaction at that time, but I have never packed any separator butter. S.

Stricture of Teat.

I have a 1,200-pound cow, 10 years old, very fat. She is due to freshen within 10 days. Last August her left hind teat had (at first) a slight sore on the end. I pulled off the scab not knowing the extent of the sore, and I took a scab that covered the end like a thimble. Then I had a serious time and consulted a veterinary, who said it was caused by a sting or a thorn. It healed but partly, closed the orifice so the stream was very small. I fear trouble when she freshens. Can you suggest a treatment? I have a milking tube and know how to use it.
New York. F. E. W.

The stricture at the orifice of the teat should be nicked in one or more places with a teat bistoury and the cut kept from reuniting by frequent stretching with clean milking tube until healed. The nicking may be done with ordinary knife if skillfully handled but there is danger of cutting too deep and it would be best to have it done by a competent veterinarian with proper instruments. No milking tube, or other foreign body, should be inserted into the teat until first washed and dipped into boiling water. Infection is frequently carried into the udder in this way and one quarter lost.
M. B. D.

Care of English Rabbits.

I have a pair of English rabbits, and I would like your advice as to raising and caring for them. How often do they increase? Should I pen the doe separately before farrowing time? How old do the little ones get before the dam weans them? P. S.
Laurel, Del.

The does should be bred four or five times a year. It is a general idea that they will breed much oftener, but there is no gain in over-breeding a doe, as it will only impoverish her and the young will be weak and short-lived. Breeding in this way, each doe should produce from 25 to 30 young a year. The doe should never be kept in the same pen with the buck. The doe should be taken to the buck's hutch from three days to a week after weaning the young. The young should be weaned when they are about six weeks or two months old. Do not breed a young rabbit until it is at least nine months old. H. R. S.

Grain Hay.

Owing to the dry season I got no seeding last year. Could I sow a crop of Canada peas and oats, and cut them in time to raise a crop of millet on the same ground, after cutting the peas and oats green for hay? The ground is corn stubble and in fairly good condition. It had a good coat of stable manure on sod last year. If not, please advise me what to do. D. P. S.
New York.

You can sow oats and peas early and cut them for hay or fodder in time for a millet crop. This is the best combination we know of for an early hay crop.

Why I Started in the Dairy Business

When Dad left the farm to me I asked myself, "How are you going to make the old place pan out?" Dad had run it *his* way. I allowed I'd run it *my* way.

I borrowed money on it, bought more good native cows, became a dairy farmer, and put in a

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Dad had been paying Del Morgan and Tom Hoops 15 cents an hour for milking about 6 cows each. Cost him 5 cents a cow a day, or thereabouts. No money in that. My three-unit outfit milked 30 cows an hour. Del did most of the work, and I soon found that milking a cow twice a day cost 50 cents a month against $1.50 in the old-hand-milking days. Considerable saving, believe me.

Well, when a machine can milk cows faster and better than I can by hand, make 'em like it, produce a lot of cleaner milk, and cut down overhead expense about two-thirds, I'm ready to take the platform and tell you dairy farmers I'm strong for that machine.

Tom and Del have quit muttering and threatening to revolt. Dragged 'em out of bed pretty early in the old days. Now they sleep longer, start later, finish sooner, earn more than their salt. Got more outfits now, too. Paid the mortgage off long ago. Increased a one-horse wagon milk business to 75 cows and a flock of busy wagons. Traveling some!

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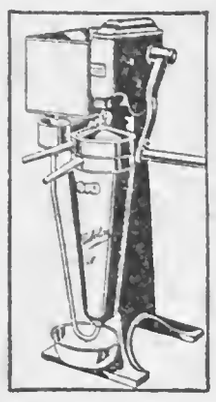
Bought it about the time I got its running mate, the MILKER. Talk about team work! Men, give me a TUBULAR, a bunch of teat cups with the upward squeeze, 75 high grade cows—or even less—and contented help like I've got, and I'm willing to take my chances with the old-fashioned chap who dairy farms with the drudgery methods of his grand-dad.



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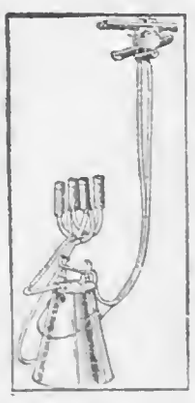

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WISCONSIN AND HOLSTEIN CATTLE.

Has the Badger State done more to make the Holstein tribe of dairy cattle famous in many countries than has any other section of this nation? A number of events recently have occurred that seem to show the great dairy State has set the pace in this respect. In the first place the registry office of the Holstein Association is located in this State, in Delavan, and has been for some years. Quite recently it was found necessary to increase office space, and in a new modern building that has been contracted the registry office will have an entire floor, 32 feet wide and 54 feet deep. By this time it requires a force of 20 clerks to handle the advanced registrations that come in from almost every section of the United States. Through this office a deal of the prize money is paid, which with the printing expense amounts to something like $40,000 a year. The postage alone amounts to over $2,000.

In the big milk and cream selling markets it is known that the Holstein tribe oftener is in the mouths of milk dealers and consumers than perhaps any one other tribe. It is known that the Holsteins, either purebred or high-class grades, largely form the herds in Wisconsin whence comes an immense daily supply. Wisconsin gave the white and black animal a tremendous boom when it chronicled the wonderful record of Colantha 4th's Johanna, and then right on the heels of the accomplishment Senator Stephenson, of Wisconsin, sent to the White House under the Taft Administration the Holstein cow Pauline Wayne. That in itself was a traveling advertisement for the big creatures of the dairy world.

It is but a few months since a Wisconsin breeder sent a fine Holstein sire and three heifers to the government of New Zealand, and this served as another distinguishing mark emanating from the great Badger commonwealth.

More local but deeply interesting events have taken place in Wisconsin. On an island that forms a part of Door County a Wisconsin man has planned to found a pure Holstein dairy. F. A. Dennett is the name of this dairyman and he purposes to head his herd with a sire valued at a half thousand dollars. About 10 purebred heifers will be taken to the island shortly and this is expected to form the start of one of the finest dairy herds in the State.

Peter Reiss, of Sheboygan, who is planning an extensive dairy farm near the falls, contemplates making use of 80 head of the white and black tribe.

Holstein breeders of Wisconsin who have shown stock at the International Exposition and at the State fairs give exceedingly interesting stories of the spread of this breed to many sections of the United States, a great deal of it going to new sections, and when one takes into consideration all of the Winconsin influences that have contributed to the use of this great dairy tribe, it is shown that the State stands in the very forefront of the entire movement.

J. L. GRAFF.

FEEDING DAIRY CALVES.

What would be a good ration for calves intended for dairy purposes? I have skim-milk, oil meal, wheat bran, wheat middlings, corn, oats, rye and wheat. For roughage I have corn stover, mixed clover, and Timothy hay. Should the ration be balanced? If so what is the nutritive ratio for such calves? I have endeavored to work out a balanced ration but could find no ratio. I notice that calves like corncob meal better than any other grain feed. Could this be used as the larger part of the grain feed? What is the reason for the calves becoming what is called pot-bellied? What is a cure for scours? A. R.

It will depend somewhat on the breed of cattle as to the food for the first month of the calf's life. If it is a Holstein I would feed it the mother's milk direct from the cow. If it is a Jersey or Guernsey, I would reduce the milk with part warm water to bring it down to something like three per cent milk. It is better to use water instead of skim-milk to reduce the whole milk, because the other solids usually follow the fat closely in rich milk, and therefore, if skim-milk were added, we would have too much protein, which would derange the digestive system just as quickly as too much fat.

After the calf is about a month old, I would begin to substitute skim-milk for the whole milk, a little at first, but in a couple of weeks get her onto all skim-milk. When we begin substituting the skim-milk, we begin to place a little dry grain before the calf. This grain may consist of one part of wheat bran, one of ground oats and one of cornmeal. To this add a tablespoonful of oil meal at each feed. The calf may have all she will eat of this grain ration fed dry, but it is poor practice to place grain in the milk for the calf. It is decidedly better for them to eat it dry, so that the digestive juices of the mouth and stomach may have a chance to act.

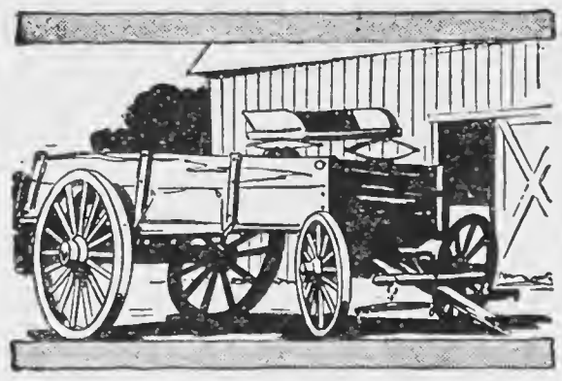
The clover and Timothy hay should be within reach of the calf all the while, but I think corn stover would be of very little value the first six months of the calf's life.

I hardly think that I would feed the calves on corncob meal. There is little good in a corncob but the ash. This can much better be supplied by the wheat bran, and I can see no use in taxing the little stomach with grinding up indigestible material. In fact, that is just what makes the calves "pot-bellied"—filling them too full of stuff that contains so little nourishment that they have to gorge themselves to live. On the other hand, it is not best to raise the calves on a too concentrated feed. The dairy cow ought to be able to get a good share of her food in the form of roughage to make her a profitable animal, and to do this she must of course have a good storage capacity. My rule is to give the calf enough grain to keep her in good flesh and fine thrifty condition, after which give her all the roughage she will eat. J. G. M.

Power for Separator.

Can a 750-pound capacity cream separator be operated successfully by a one-cylinder gasoline engine? My idea is that the motion is not steady enough. F. J. Q.

A separator of 750 pounds capacity or one of any other size can be successfully operated by a one-cylinder gasoline engine. It is better to belt from the engine to an intermediate or line shaft and from that to the separator. A governor pulley is sometimes used on the line shaft, belting from this to the separator pulley. If the governor pulley or some similar device is not used the belt should be shifted from the loose to the tight pulley on the separator gradually. If the separator is not fitted with a loose pulley, it should be brought to speed by hand and the belt put on while running. Separator manufacturers make various attachments for their separators to simplify running with a gasoline engine. It would be advisable to correspond with them. The engine should be set in a separate room and the exhaust piped out of the building. Milk, cream, butter or salt will absorb gasoline odors very readily.



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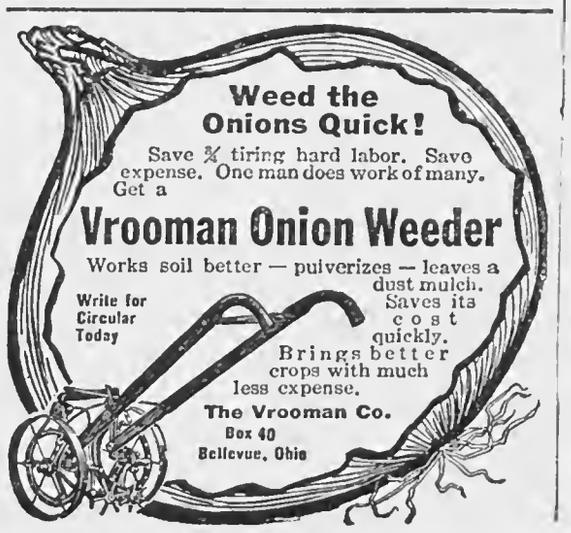

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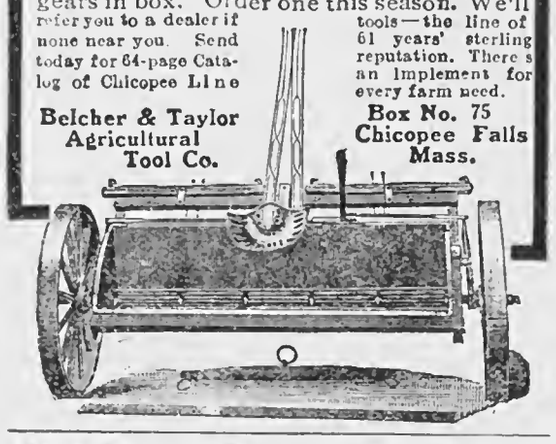

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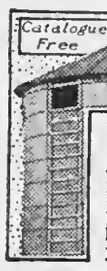

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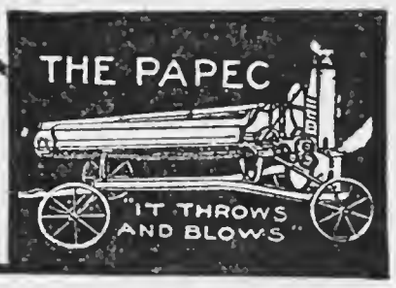

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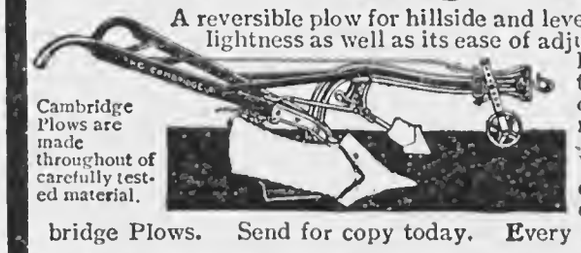

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A HOGHOUSE.

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North East, Pa.

In building such a house the point is to select a plot of ground sloping away from the building. In any case place your building adjacent to a driveway for convenience in feeding the animals and cleaning the house; also for loading and unloading the hogs brought in or shipped out. Building should be 16x12 feet rather than 10 feet in width, to allow for hallway and space occupied by feed trough, this will leave 8x8 feet clear in each pen, small enough for a large hog.

First dig a trench two feet deep and 15 inches wide and fill with concrete for foundation; make the back wall of concrete 16 feet long, eight feet high and eight inches thick. In setting up form cut four 2x4's a little longer than the height of wall, driving 30-penny nails every two feet on one side of 2x4, and say three nails on the narrow side of 2x4; put these inside of form at corners instead of outside. The cement will harden around nail heads and hold in place after form is taken down. These are posts to nail siding on. Embed a line of 2x4's at top in same manner for a plate to which the rafters are nailed. As feeding and cleaning will be done from hallway, front posts need not be over 5½ feet, a door three feet wide enters hallway from the end. Place a window in each end for light; doors entering house from yards can be 2x4 feet or 2x3 feet in cold climate.

Run a sill the length of house and three feet from north wall, this is to support the partition separating hallway from pen. Run a similar sill along to support building, but two inches lower than one supporting partition in hallway, this is to carry the liquids to front of house and keep beds dry. Cement the space between these two sills after house is completed, and lay boards on the four feet of pen opposite gate that opens into hallway. Do this while cement is soft; this is for beds. Next cement the portion of pen between the trough and doors, make this cement flush with the boards under bed and leave slightly concave, which will carry liquids out of door. Troughs should be of cement eight inches deep, two feet wide and three feet long inside measure; this allows a thickness of six inches for ends and fills four feet of space along hallway; trough projects six inches into hallway for convenience in pouring swill in through, and 18 inches in pen where the hogs take it out.

The gate occupies the other four feet along hallway, and should swing away from door at entrance. The boards and 2x4's intended for the roof can be used for frame on cement wall if care is taken in driving nails to leave room to pull them out. I am using asbestos coated paper on roof and it saves the trouble of recoating at regular intervals. If this house is to be used at farrowing time, run a 2x6 around the back of each pen, leaving eight inches clear above floor; attach same to bottom of gate, nothing beneath in front of trough; the pigs run under this when small.

GEORGE E. HOWELL.

Give Us a New Dog Tax.

As to dog tax law and its abuse, would it not be well to have the New York State Legislature pass a bill to compel every individual to pay the tax on every dog owned or harbored by him or her as the case may be? Should not this law be uniform in every town in the State? Islip, Suffolk Co., does not enforce a dog tax. Smithtown, adjoining, does enforce it as far as possible. One man I know who lives in Smithtown where a road divides the two towns, moved his dog house over the road. He is exempt. Why should club men have any more leeway than any other man? Are not men who belong to these clubs just as able to pay a tax as a neighbor? Many sporting men hire their dogs kept in the country; they in most cases pay no tax in the town where they are kept. Many of these men claim to pay their tax in the city. Do they? Their dogs never see the city after they are brought here. Should not these men be compelled to show receipts for their tax? A good dog, one that stays at home, is a valuable piece of property, but a dog that is allowed to run at large is a nuisance of the meanest kind. Not long since I had a dog 12 years old, that thought more of the neighbors' eggs than he did of fresh meat. Result, I had to put him on a trolley and keep him there most of the time. This same dog was the best watchdog at night, I ever saw, but he was a decided nuisance for all that. My experience is that the poorer the family who pay no tax, and some who do, keep the greatest number of dogs, for their neighbors to feed. Give us a uniform law to tax every dog and leave no loophole to evade this tax. F. E. N.

Brentwood, L. I.

HARNESS OIL.—I have kept watch through the columns of THE R. N.-Y. for some time for an article on oiling harnesses. We have always in the past used what was supposed to be pure neat's foot oil with a little lamp black to color. Some claim that this preparation makes the leather too soft, causing it to stretch and break the stitching when it comes to a strain. There are several kinds of prepared harness oils on the market. Have any of our Rural families had any experience with these? I have several sets of harness to oil, so am interested.

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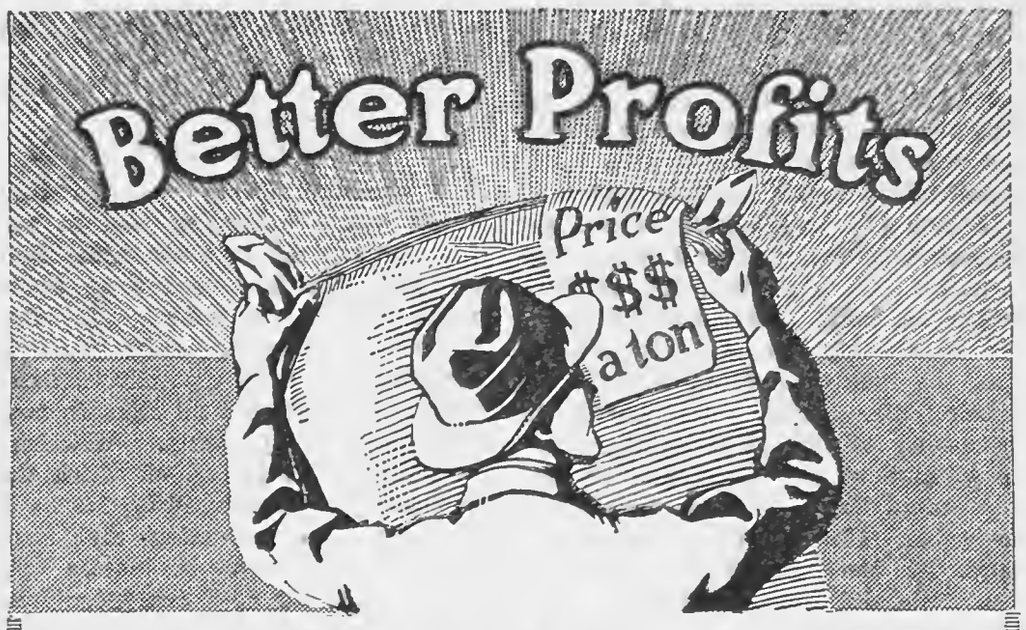

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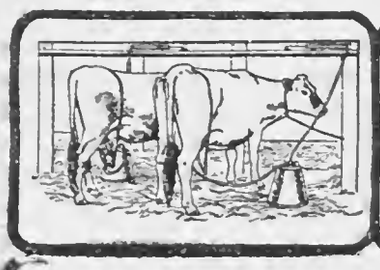

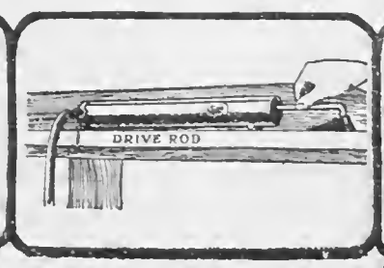

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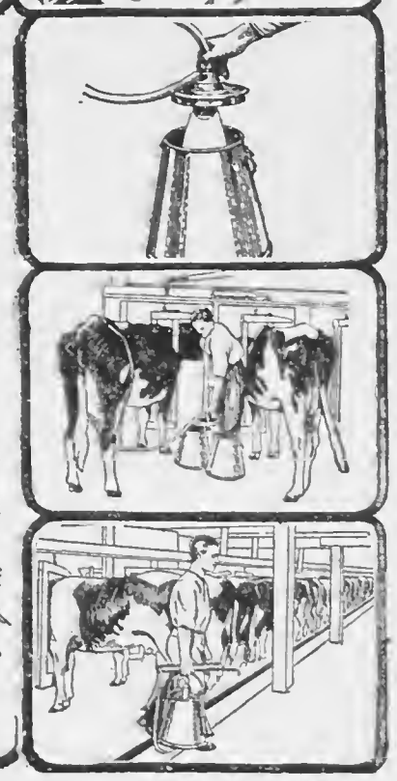


An Experience With Selling Cows.

The article on selling scrub cows to neighbors brings to mind a little experience we had several years ago. We had an inquiry for cows, and my husband selected some from our herd that he would sell, and told the man he could have them at $75 each (this was before we had any purebreds to offer). After looking them over he said he would take two of them, provided he could make his own selection. This being agreed to he selected two of the four offered and said he did not think the others were worth the price asked. Soon after another man came to look at our cows, and he told him he could have the other two at the same price. He bought the two cows rejected by the first buyer, also two calves. We did not call any of them scrubs, but have to sell some occasionally or would get overstocked. It's not often a person sells what he considers his best stock, unless he makes a sale.

The cows were removed to their different homes and of course fed on different feeds. The first man's sons told around that he had been beaten by Mr. S. on the cows he bought; that they did not give near as much milk as he said they would. The other man was more than pleased with the cows and calves he purchased. His cows were given good care and feed, and responded by giving him more milk than they were giving us, and are still in this dairy, giving excellent satisfaction. This man has since been back for more cows, also leaving the request that he be notified at any time when we might have anything in that line to sell. As to the quality of these cows, so far as we knew, we had no choice, for they had done about the same for us, and their breeding was along the same lines.

What made the difference? Was it the individual cow, the care and feeding, or the man behind the cow? We would not believe in selling to our neighbors anything we knew was not all right (or anyone else for that matter), but we believe the care and feeding and the cow wisdom of the man having them to care for has a great deal to do with what they do for us. This is just an illustration of what different men can do, not meaning in any way to criticise any remarks of the man who wrote the article referred too. MRS. R. M. S.

Two Acres of Hog Pasture.

1. On page 197 C. J. D. asked about raising pigs, and F. C. M. tells of a good mixture of seed to sow to have pasture all Summer. I would like to know how many pigs I could pasture on this mixture of seed on two acres, making two yards, one acre in each yard? 2. Can you give me the mixture to put on calves' horns so they will not grow, and is it injurious to them? D. S.

Port Norris, N. J.

1. The mixture referred to by D. S. was oats and peas, rape and clover. An acre of this mixture would accommodate conveniently 1,000 pounds, live weight, of pigs. This would mean five sows weighing 200 pounds each, or 10 100-pound pigs could be pastured on such area. The number that it would accommodate might depend further upon the season conditions, the important point to remember being that the animals should not be permitted to pasture the crop closely, as it will injure not only the oat and pea plants, but the rape plants as well. Our rule is to turn the pigs in when the oats and peas are eleven inches high, and feed in addition to the forage crop a mixture made up of corn and tankage, utilizing 10 pounds of corn to one pound of tankage. With smaller pigs we feed about 1½ pounds of this mixture for each 100 pounds of live weight. In this way they do less tramping in the field, and gain very rapidly.

2. Caustic potash obtainable in sticks at any drug store can be safely used to prevent horns appearing on calves. When the animal is three days old the hair should be clipped from the region where the horn would appear, covering the spot about as big as one-half dollar. The potash stick should then be moistened, and rubbed thoroughly over this area until there is evidence of bleeding from the point just adjacent to the appearing horn point. After this treatment some vaseline should be rubbed around the border to prevent the potash from running down into the eyes. If there is any appearance of the horns after the above procedure, the treatment should be repeated in about 10 days.

F. C. MINKLER.

WOOD AND STONE SILOS.

A complaint from a reader that the silage was not keeping well in his new tile silo led me to make some inquiries of those who had used them as to the value of tile and concrete in silo construction. There is evidently some conflict of opinion in the matter, and it is equally evident that all silos do not keep thier contents properly. Whether this is due to the material of which the silo is made, or whether it is due to faulty methods of construction and improper filling, seems to be a matter open to dispute. So far as I can judge from the evidence presented, however, I am compelled to believe that the material of which a silo is made is of far less consequence than the care with which it is constructed and filled.

Bulletin 70, issued by the Storrs (Conn.) Experiment Station two years ago, spoke disparagingly of the use of concrete or brick in silo building, and quoted a statement of the Illinois Experiment Station to the effect that in a silo constructed of stone, brick and cement the silage rotted at the sides and top to the extent of one-third of the entire amount, and that there was reason to believe that the loss could have been considerably obviated by building the silo of wood. This statement was made in 1888, however, when silo building was in its infancy in this country, and when the principles governing it were less well understood than now. The Storrs Station explains the alleged failure of stone or concrete silos on the ground that these materials being good conductors of heat permit rapid cooling of the silage next to them, and prevent its rising to that temperature which most encourages the necessary fermentation and discourages putrefactive changes. Despite this scientific explanation of why such silos do not keep their contents well, the fact remains that many of them, at least, do; and if some do, it is difficult to see why all of them should not.

A dairyman in Cayuga Co., N. Y., recently told me that he was using the silage from one of two monolithic concrete silos which he built during the past season and that it was keeping well and was perfectly satisfactory. Another dairyman in Schoharie County writes, in answer to inquiry, "Our silo is built of burned tile, 1x1 ft. 6 in. in size, with three holes. The tile are set on end and the holes poured full of concrete, making a nearly solid concrete wall. There is some frozen silage next the wall in severe weather, but I think less than in wooden silos. There is no more spoiled silage than in a wooden one. I expect to coat the inside with coal tar thinned with gasoline when convenient. Were I to build again, I should use something that would give me an air space. I should always build of tile, brick or concrete."

I have been in a great many wood silos, aside from my own, and have yet to see one in which the silage does not freeze next to the walls, in severe weather, or one in which there is not some loss of silage from mold and rotting before it is fed out. Wood stave silos are the popular ones in this vicinity, and are thoroughly satisfactory, being comparatively inexpensive in first cost, and keeping their contents as well as any silo can. Some square, board faced silos being among those first built, are still in use, and in the writer's opinion, this type is "coming back." One on the boyhood home farm was recently visited and the whole corn which had been put into it was found to have made silage of unexceptionable quality. This was State corn, however, with small stalks. From my personal observation and inquiries, I am satisfied that silage will not keep well in any silo which is not kept airtight, and which, when filled, does not have its contents uniformly distributed so that they will pack without leaving air spaces. I am satisfied, further, that wood, brick, concrete and tile all have their merits and demerits, and that the question of which one to use must depend largely upon the amount that one is willing and able to invest and his own idea of economy. M. B. DEAN.

Unseen Forces Behind Your Telephone

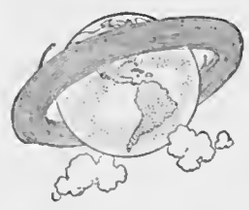
THE telephone instrument is a common sight, but it affords no idea of the magnitude of the mechanical equipment by which it is made effective.

To give you some conception of the great number of persons and the enormous quantity of materials required to maintain an always-efficient service, various comparisons are here presented.

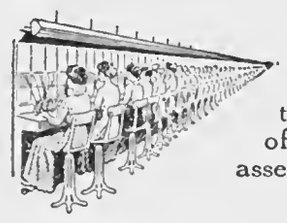
The cost of these materials unassembled is only 45% of the cost of constructing the telephone plant.

Poles
enough to build a stockade around California—12,480,000 of them, worth in the lumber yard about $40,000,000.

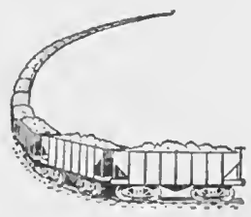
Telephones
enough to string around Lake Erie—8,000,000 of them, 5,000,000 Bell-owned, which, with equipment, cost at the factory $45,000,000.



Wire
to coil around the earth 621 times—15,460,000 miles of it, worth about $100,000,000, including 260,000 tons of copper, worth $88,000,000.



Switchboards
in a line would extend thirty-six miles—55,000 of them, which cost, unassembled, $90,000,000.



Lead and Tin
to load 6,600 coal cars—being 659,960,000 pounds, worth more than $37,000,000.

Buildings
sufficient to house a city of 150,000—more than a thousand buildings, which, unfurnished, and without land, cost $44,000,000.

Conduits
to go five times through the earth from pole to pole—225,778,000 feet, worth in the warehouse $9,000,000.

People
equal in numbers to the entire population of Wyoming—150,000 Bell System employes, not including those of connecting companies.

The poles are set all over this country, and strung with wires and cables; the conduits are buried under the great cities; the telephones are installed in separate homes and offices; the switchboards housed, connected and supplemented with other machinery, and the whole Bell System kept in running order so that each subscriber may talk at any time, anywhere.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

ROOFING Per Roll 108 Sq ft 62¢

Almost unbelievable—but true just the same! This unheard of low price for genuine wool-fibre, asphalt-saturated rubber surfaced roofing would be impossible for any other firm to quote—it's only possible with us because we have a capital of ten million dollars which enables us to buy raw materials in larger quantities and at a lower price than any one else. We save both ways—buying and manufacturing—and give our customers the benefit of this big saving. This is the strongest proof we have ever been able to offer in our more than 20 years of business history that we are the **World's Greatest Price Wreckers.**

Sensational Roofing Sale At Amazingly Low Prices

We established that reputation at the outset of our career when, under the name of the Chicago House Wrecking Co., we started out buying up Bankrupt, Receivers' and Sheriffs' Sales. We began smashing prices then and **we've been smashing prices ever since!** Give us the opportunity to do so and we will **prove** to you just as we have proved to thousands of others all over the country that

We Save You ⅓ to ½

on any kind of roofing you buy from us. We can furnish you material for re-roofing your house, barn, sheds, granary, poultry houses, etc., and also furnish the siding, conductor pipe, eaves trough and everything needed—**all** at a **big saving over what you would pay if you bought elsewhere.** It doesn't make a bit of difference what kind of roofing you have in mind to buy—whether Ready Roofing or Galvanized Steel—flat, corrugated, V crimped, standing seam, beaded ceiling or brick siding—we can supply your every need with just the kind you want. Our low freight prepaid prices will amaze you. Send us your name and address and we will prove that our prices are the

Lowest Prices In History of Roofing Business

You can order direct from this advertisement with perfect safety. Our legal binding guarantee, backed by our $10,000,000 capital fully protects you. If for any reason you are not satisfied with your purchase you can return it to us and we will promptly refund every cent and pay freight both ways. Here are some items you may be needing right now. If so, don't hesitate to send in your order. We guarantee complete satisfaction.

CORRUGATED STEEL Roofing, Per Square Ft. 1¼¢

Here is a fine opportunity to save big money on corrugated steel roofing. We are pricing it as low as 1¼c per square foot—a price heretofore unknown. Be sure to write for free samples.

GALVANIZED STEEL Roofing, Per Square Ft. 2¾¢

Highest grade, specially coated, made of specially prepared steel of superior quality. Practically rust-proof and will last a lifetime. Full size sheets. Besides corrugated, it comes in "V" crimped, standing seam and brick siding. Priced as low as 2¾c per square foot—an unheard of price for this grade. Send for free samples.

Big Assortment Samples Valuable Roofing Book Free

Settle this roofing question **right.** The only way you **can** settle it right is to send at once for our big assortment of **free roofing samples**—all kinds—**freight prepaid prices** and a copy of our free Roofing Book. This is the most valuable and reliable roofing guide ever published. **You need it.** Write your name and address on lines below and mail. We'll understand and send book and samples at once **free.**

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35th and Iron Streets, CHICAGO, ILL.

Your Name.....
Address.....
R. F. D..... State.....

Products, Prices and Trade.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Miscellaneous wholesale prices at New York are mainly as previously reported, $1.81 and $1.71 per 40-quart can for B. and C., though less of the latter is arriving because of health board restrictions.

Restaurants using two to three cans per day now pay 5½ to 5¾ cents for B. grade.

PRODUCE RECEIPTS AT NEW YORK.

Week ending March 27.

Butter, lbs.	2,878,000
Eggs, doz.	4,830,150
Apples, bushels	90,900
Potatoes, bushels	106,000
Hay, tons	7,634
Wheat, bushels	308,800
Corn, bushels	19,250
Oats, bushels	322,775

Wholesale Prices at New York, Week Ending Mar. 27, 1914.

BUTTER.

Receipts are heavy and the market dull, though prices on all grades remain about on the same basis as last week. Good storage stock is getting scare, selling from 19 to 22 cents. There is a little export business in medium qualities at 18 to 19 cents.

Creamery, extra, lb	25	@	26
Good to Choice	22	@	24
Lower Grades	19	@	21
Storage	17	@	23
State Dairy, best	23	@	24
Common to Good	18	@	22
Factory	15	@	19
Packing Stock	13	@	17

Elgin, Ill., butter market firm at 26⅝ cents. Philadelphia, western creamery, 27 cents.

CHEESE.

Receipts are light and business slow, owing to the high prices asked. The new make is selling quite readily but mainly in small lots at 17 to 17½ cents.

Whole Milk, new, best	17	@	17½
Old, best	19	@	19¼
Common to good	16	@	18

EGGS.

Receipts are very heavy on three recent days totaling 4,800,000 dozen. Some speculative demand has developed at the lower range of prices offered, on what are known as fresh gathered and firsts at 19 to 21 cents. A few nearby fancy white bring 25 cents, but they must be uniformly large and pure white. Here and there a retailer whose trade will stand it pays a cent or two more. Brown and mixed fancy sell mainly at 21 to 22 cents. Trade in white duck eggs is increasing, as buyers find that under modern methods of handling the eggs are free from the strong fishy taste of old-fashioned pond or puddle ducks. Prices on white Indian Runner range from 33 to 38 cents, unless under size.

White, choice to fancy, large	24	@	25
Common to good	18	@	22
Mixed colors, best	21	@	22
Common to good	17	@	20
Western fresh, white	22	@	24
Lower grades	17	@	19

FRESH FRUITS.

Apple trade has been active on stock free from scald, but considerable damage of this sort is noted. A range of $4 to $5 covers most sales of good barrel apples. Receipts of strawberries from the South are increasing. Some very fine Nic Ohmer sold up to 50 cents, but most business is from 25 to 30 cents.

Apples—Spitzenburg, bbl.	4 00	@	5 50
Spy	4 00	@	6 50
Ben Davis	4 00	@	5 00
King	4 00	@	5 50
Greening	4 00	@	6 00
Newtown	6 00	@	7 50
Baldwin	4 00	@	5 50
Western, box	1 50	@	3 00
Strawberries, Fla., qt.	25	@	60

BEANS.

Market is firm on choice marrow; medium and pea selling slowly; red kidney, dull; strong demand for Yellow eye. The California Lima situation is very strong, with holders refusing to sell under $7 per 100 pounds.

Marrow, 100 lbs.	4 20	@	5 40
Medium	3 45	@	3 55
Pea	3 15	@	3 50
Red Kidney	5 20	@	5 25
White Kidney	5 75	@	5 80
Yellow Eye	5 00	@	5 10
Lima, California	6 85	@	6 90

HOPS.

Prime to choice	43	@	44
Common to good	38	@	41
Pacific Coast	20	@	23
Old stock	15	@	18
German crop	67	@	72

VEGETABLES.

The potato market is very weak, except on new Bermuda. Large quantities of old are wholesaling at from one to 1¼ cent per pound. In spite of the exceptionally low prices there are increasing shipments from European countries where the quarantine has been lifted. The sweet potatoes offered are running mainly poor in quality and selling low. New cabbage in surplus and low; old selling fairly well at $25 to $27 per ton if sound. The onion market on good whites is firm; medium grades of red and yellow selling slowly. Southern tomatoes in heavy supply and mainly low.

Potatoes—Maine, 180 lbs.	2 25	@	2 50
State, bulk, 180 lbs.	2 25	@	2 37
European, 108 lb. bag	1 00	@	1 75
Bermuda, bbl,	5 50	@	7 25
Florida	2 00	@	4 50
Sweet Potatoes, bbl	1 00	@	2 00
Beets, bbl.	2 00	@	2 50
Carrots, bbl.	2 00	@	2 50
Asparagus, California, doz.	2 00	@	4 50
Southern, doz	2 00	@	3 50
Cabbage, Danish seed, ton	25 00	@	28 00
Imported	20 00	@	25 00
New, bbl. crate	1 50	@	1 75
Chicory, bbl.	3 00	@	3 50
Kale, bbl.	60	@	1 00
Lettuce, half-bbl. basket	1 00	@	4 00
Onions—White bu.	1 50	@	2 00
Red, 100 lb bag	2 25	@	2 75
Okra, bu.	2 00	@	3 00
Peppers, Southern, bu.	3 50	@	4 50
Peas, Southern, bu.	3 00	@	5 00
Shallots, bbl.	4 00	@	5 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 25	@	3 25
String Beans, bu.	2 00	@	4 75
Squash, Marrow, bbl	3 00	@	3 50
Hubbard, bbl.	3 00	@	3 50
New, bu.	2 25	@	3 25
Egg Plants, Southern, bu.	2 00	@	3 50
Tomatoes, Southern, 6 bkt. crate	1 00	@	3 00

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 25
No. 2, box	2 00	@	3 00
Musbrooms, lb.	15	@	35
Radishes, 100 bunches	1 00	@	2 50
Rhubarb, doz. bunches	25	@	60
Tomatoes, lb.	20	@	30

LIVE POULTRY.

Chickens, for fricassee, lb	15	@	15½
Squab Broilers, pair, fancy	85	@	90
Broilers, fair to good, pair	45	@	55
Fowls	18	@	19
Roosters	12	@	13
Ducks	17	@	18
Geese	12	@	13

DRESSED POULTRY.

Receipts of fresh killed are light, but demand slow, the market being well supplied with frozen stock of all grades, which were bought cheap enough to sell at lower figures than most fresh offerings.

Chickens, choice broilers, lb	30	@	35
Squab broilers, pair	90	@	1 00
Broilers, common to good	24	@	28
Roasters, fancy	24	@	25
Fowls	14	@	18
Ducks	12	@	17
Geese	12	@	16
Squabs, doz.	2 50	@	4 50

HAY AND STRAW.

The hay market continues dull on all but the highest Timothy. Good straight rye straw is still scarce, and selling up to $19 for best.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	19 50	@	20 00
No. 2	17 00	@	18 50
No. 3	14 00	@	16 50
Clover mixed	12 00	@	18 00
Straw, Rye	17 00	@	19 00

LIVE STOCK.

Native Steers	6 50	@	8 50
Bulls	6 00	@	7 50
Cows	4 00	@	7 00
Calves, prime veal, 100 lbs.	7 00	@	11 50
Culls	5 00	@	6 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	8 00	@	8 50
Hogs	9 00	@	9 40

MILLFEED.

Wheat Bran, ton	27 00	@	29 00
Middlings	28 00	@	30 00
Red Dog	29 00	@	31 00
Corn Meal	29 00	@	30 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	14	@	15
Fair to good	11	@	13
Buttermilks	09	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Nortbern Spring	1 03	@	..
No. 2, Red	1 04	@	..
No. 2, Hard Winter	1 02	@	..
Corn, as to quality, bush.	71	@	76
Oats, as to weight, bush.	43	@	46
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	28	@	30
Ordinary grades	23	@	25
Butter, fancy prints, lb.	31	@	33
Tub, choice	27	@	29
Chickens, roasting, lb.	27	@	30
Fowls	22	@	25
Turkeys	28	@	32

Extreme Prices.

The following figures represent a small volume of wholesale business handled by concerns having exceptionally high-class trade. Fruits and vegetables referred to are repacked, and culls sold at a nominal price; eggs are candled for blood spots as well as age defects; and poultry and meats are only the best obtainable. These prices are printed as showing one phase of the produce trade worth considering, but we cannot guarantee to give the names of dealers who will handle farmers' shipments on this basis.

Eggs, doz.	$0.40	@	$0.42
Butter, lb.	.32	@	.34
Potatoes, bu.	1.00	@	1.50
Apples, bu.	3.00	@	3.50
Lettuce, doz.	1.00	@	1.50
Chickens, roasting, lb.	.30	@	.35
Chickens, broilers, lb.	.50	@	.60
Lambs, head	9.00	@	10.00

A Western N. Y. canning company, doing a large business in green peas, is planning to do the thrashing on the farms instead of having the haulm hauled to the factory. Several thrashers run by gasoline engine will be mounted on automobile chassis and moved about quickly where needed.

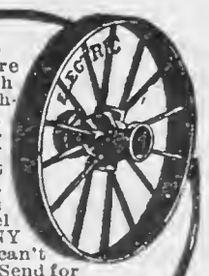
(Continued on page 551.)

Free Box of Samples

sent to your station charges prepaid. All sizes, 2 inches to 20 inches. Delivered prices quoted on request.

THE E. BIGLOW CO., New London, O.

ELECTRIC Steel Wheel Handy Wagons Are Big Money SAVERS!



No more high lifting or pitching. Saves you work and lightens draft nearly 50%. Don't rut fields or roads. We also furnish Electric Steel Wheels to fit ANY wagon. Wheels can't dry out or rot. Send for free book of facts and proofs.

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48 Elm Street,
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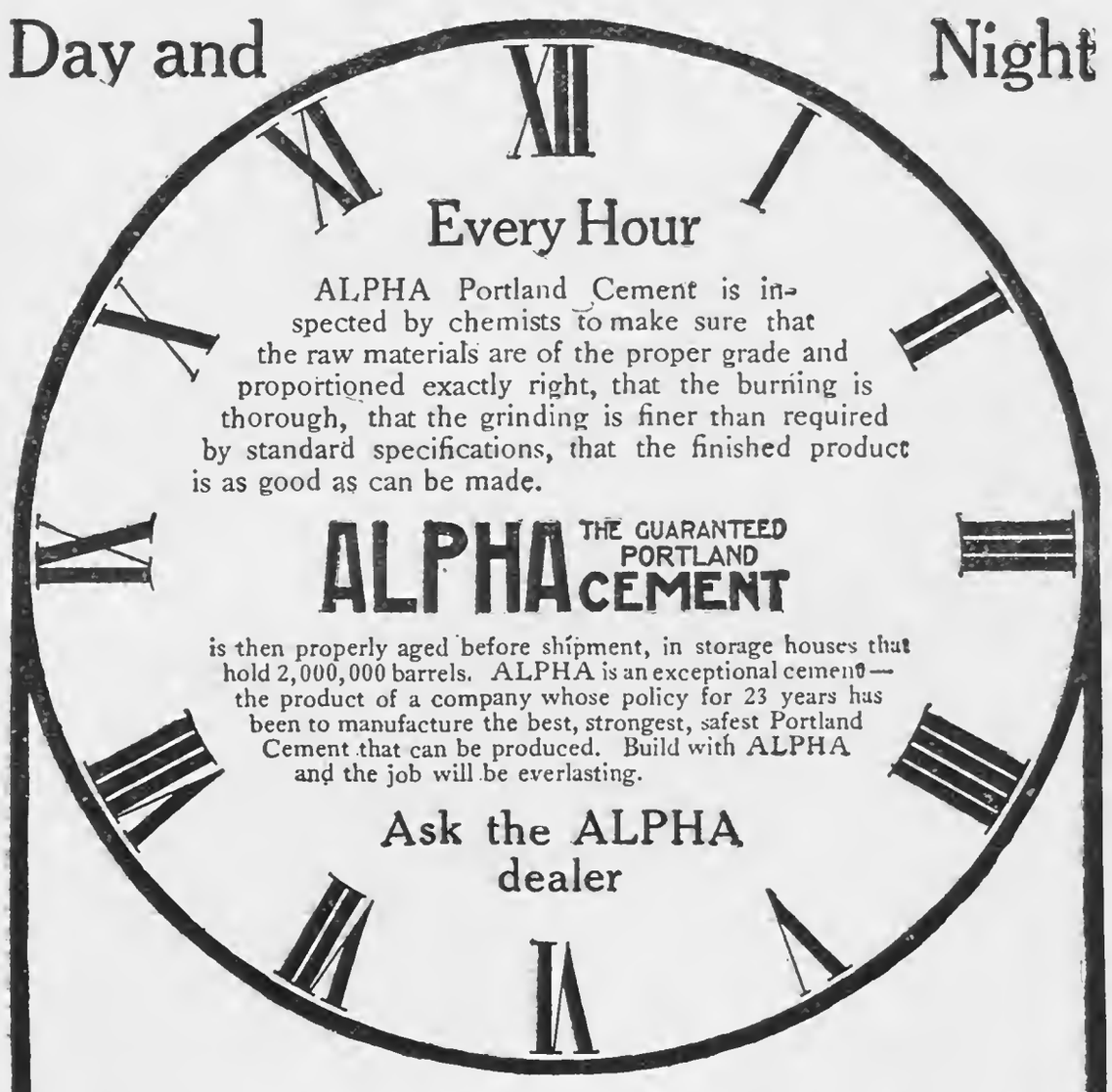
Day and Night



Every Hour

ALPHA Portland Cement is inspected by chemists to make sure that the raw materials are of the proper grade and proportioned exactly right, that the burning is thorough, that the grinding is finer than required by standard specifications, that the finished product is as good as can be made.

ALPHA THE GUARANTEED PORTLAND CEMENT

is then properly aged before shipment, in storage houses that hold 2,000,000 barrels. ALPHA is an exceptional cement—the product of a company whose policy for 23 years has been to manufacture the best, strongest, safest Portland Cement that can be produced. Build with ALPHA and the job will be everlasting.

Ask the ALPHA dealer

Insist on the Guaranteed Portland Cement

When you build of concrete, you build for permanence, and you cannot afford to skimp on the quality of the cement you use. Be careful, advises the U. S. Government, to use a brand *guaranteed* to be up to the government standard for strength.

ALPHA THE GUARANTEED PORTLAND CEMENT

is warranted to more than meet the U. S. Government standard and *every other* standard test. The Government uses it in important forts, lighthouses, dams and breakwaters, where strength and permanence are required.

ALPHA always gives most satisfactory results on the farm. Use it for making walks, silos, barn floors, posts, etc. It goes further and is cheaper in actual use than "just-as-good" substitutes, which may cost a few cents less per sack. Your dealer can supply ALPHA, the Guaranteed Portland Cement. Be sure to order by the full name, because there are fair, good and better grades in Portland Cement, just as in lumber.

25-Cent Farm Concrete Book—FREE

Our book, "Concrete in the Country," 112 pages, fully illustrated, shows more than 100 ways to improve the farm with ALPHA. Regular price 25 cents; free if you send the coupon or write, mentioning this publication, and tell what you plan to build.

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I may build a_____

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The Henyard.

Indian Runners; Hatching Laying Stock.

1. If a flock of Indian Runner ducks lay well in the first part of the Winter, will they lay as well in the hatching season? What would be a good feed for little Indian Runners? In what months is the best time to raise ducks for shipping to the city alive? 2. How early in the Spring may chickens be hatched to be kept for Winter layers. Is the first of March too early? Will they moult the same as old fowls hatched at this date?
Calverton, L. I. E. H. H.

1. Indian Runners that lay through the Fall will not always lay as well in the Spring. Much depends, however, upon the individual and the care. The best feed for ducks just hatched is rolled oats and bread crumbs in equal amounts, moistened enough to be crumbly, with a little fine grit added. Grit is very essential with any kind of feed, and should be continued till the ducks are nearly full grown. After that grit and oyster shells may be put in separate receptacles, and kept by the ducks all the time. When put into the mash two handfuls to the pailful is sufficient. When ducklings are two days old begin to add wheat bran and cornmeal in increasing quantities for a week, when the oats and crumbs may be discontinued. From this age a mixture of bran, cornmeal, meat scraps, and green stuff should be given. A good feed for adult ducks is vegetables, green stuff (in Winter cut clover or Alfalfa) and beef scraps, each one part; low-grade flour and bran, each two parts; cornmeal three parts. A pinch of salt should be put in each mess and a little ground charcoal once a week. The mash should always be crumbly, not sloppy. Ducks will live on less variety. The earlier the ducks are hatched and prepared for the market the better prices they will bring. On the large duck farms the incubators are usually started in January. This means ducklings in February and marketable ducks in April.

2. The Brahmas and Cochins should be hatched in March, the American breeds in April, and Leghorns and other Mediterranean breeds in May if we want eggs when they are the highest. There is such a thing as hatching pullets so early that they will begin to lay in the Summer and be ready to moult when we want eggs. In this case, however, they will eventually get round to change their costumes when the other ladies do and be in style.
W. H. HUSE.

White Diarrhœa.

1. I have about 500 chicks, two weeks old, which I think have the white diarrhœa. The chicks' bowels becomes clogged with a white paste substance forming over the rectum. They take the disease when three or four days old, and new cases develop each day. They stop eating and die in a day or two. I have them in a glass-front brooder-house 12x 20 feet. The house is warmed by hot water pipes running about six inches from the floor, and is divided into four pens. I have been feeding them exactly according to a bulletin published by the Ohio State Agricultural Department. What can I do to stop this disease? To what extent is it contagious? Is it a germ disease? Can I clean the house so that other chicks put in it will not catch the disease? If so, how? I have 800 eggs which I expect to hatch in about two weeks. What can I do to prevent these chicks from taking the disease? 2. In my last hatch of 700 eggs I had about 150 chicks, which died in the shell after they were grown. What could have caused this? Room containing incubators had about two quarts of water evaporated in it each day. Could this have made the air too moist? L. A. R.
Ohio.

1. You are evidently "up against" that scourge of poultrymen, white diarrhœa, probably of the bacillary type. This is a contagious disease caused by a specific germ which is transmitted from one chick to another through the medium of infected food and litter, and which is also passed down from infected hens to their chicks in the eggs. The only remedy is avoidance of hatching eggs from hens that are infected, destruction of all diseased chicks, and thorough disinfection of incubators, brooders and quarters occupied by infected stock. As there is no way of demonstrating the presence of the disease germ in living hens, I should not hatch twice from a flock whose chickens developed bad cases of white diarrhœa. Incubators should be disinfected by cleaning and washing the interior with a five per cent. solution of carbolic acid, or other disinfectant of equal strength; eggs should be dipped into grain alcohol of about 70 per cent. strength before being placed in the incubator, to destroy any germs upon the shell, and brooders should be given special attention in the matter of thorough disinfection. Only vigorous and thorough work will rid your premises of the infection. Burn all litter in infected pens, and use boiling water freely in cleaning floors and walls. Ask the Connecticut Experiment Station, at Storrs, Conn., for Bulletin 74, which discusses this disease, and speaks of the value of early and continuous feeding of sour milk.

2. The cause, or causes, of fully developed chicks dead in the shell are not known. Moisture in the air of the incubator room is necessary, and could not have caused the loss of the chicks.
M. B. D.

Roup and Breeding Stock.

Can you advise me whether a good laying hen that had roup very badly 18 months ago can be taken for breeding, or will the roup be carried through her to the chicks? She is the happiest and best hen in the flock, and I have selected her for breeding. G.
Glen Mead, N. Y.

It is not wise to breed from fowls that have ever suffered from true roup, not because the roup will be transmitted, but because such a fowl has received a severe check to her vigor which is pretty sure to lead to deficient vitality in the offspring. Many cases of simple catarrhal inflammation of the eyes and nasal passages are called roup, however, by those who have never seen the more severe disease, and it is possible that this hen which now seems so healthy did not have roup, after all. In that case, there is no objection to using her in the breeding pen.

Stove-heated Henhouse.

Is there anything objectionable in having artificial heat in a henhouse? I have a house 18 by 160 feet, with 700 pullets in it. I have a stove in the center, but it does not warm and dry it out well in the ends. How would it be to have three small coal stoves, one in the center and one in each end? J. B. W.
New York.

Artificial heating of poultry houses has been tried and found wanting, the results never having justified the cost. If properly ventilated, a henhouse should not be damp, and it will not be if by means of an open front, or other equally efficient means of ventilation, the air is changed with sufficient rapidity to prevent its becoming saturated with moisture and depositing this moisture upon the walls and floors. Ventilation is cheaper than coal, and I would make sure that I had adopted the best system possible for this before I installed more stoves. In most cases the open front style of building provides for the necessary exchange of air without detriment to the health of the hens.
M. B. D.

Skim-milk for Chicks.

Will you give method of using skim-milk for young chicks? Should it always be sour? Can you feed it from the start? Can it be used freely? Is further animal feed essential in the mash? W. I. B.
Massachusetts.

Soured skim-milk is one of the best foods that can be given young chicks, and if at hand, should be fed from the start. Its value lies not only in its nutrition but in its power to inhibit the growth of intestinal bacteria which cause or predispose to white diarrhœa. If given in unlimited quantity, or all that the chicks will readily eat, it will measurably take the place of other animal food, but the addition of beef scrap to the rations is also advisable though it need not be fed in as large quantity as if the skim-milk were not given. M. B. D.

Suspected Tuberculosis.

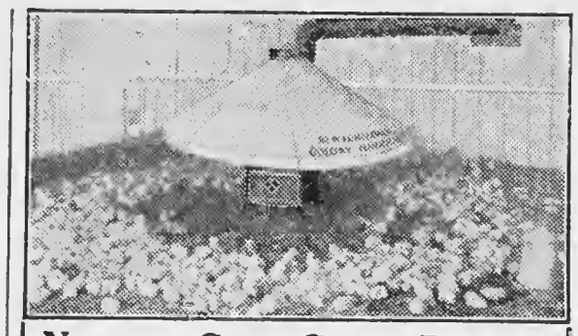
I enclose wing bone of a R. I. Red cockerel. You will observe the unnatural or diseased condition. Will you tell me what it is, and its cause and cure or prevention? This bird was thin, but had a good appetite, looked a trifle pale around comb and wattles, but was active, seemed as healthy as most of the rest of the flock.
New York. M. T. W.

The condition of this bone suggests tuberculosis, which frequently affects fowls, attacking any organ of the body, including the bones. It would be well to examine the other organs, particularly the liver, of any other fowls dying with similar symptoms, and see if the broken-down tubercles or masses of yellowish pus may be found. As to treatment, there is none, other than to remove evidently diseased birds from the flock, and to burn or bury the carcasses of those dying or killed. M. B. D.

Utilizing Old Hens.

How do the large poultry farms which breed Leghorns dispose of their hens when they have outlived their usefulness as layers? If it costs 90 cents to $1 to raise them to the laying point, what do they do with them to realize the first investment, as they must have hundreds to dispose of and a one or two-year-old Leghorn cannot be the best of eating.
Connecticut. G. M. S.

With the exception of those sold for breeders, the number of which would vary with the reputation of the breeder and the efforts he made to dispose of mature stock in this way, I know of no other outlet for surplus stock than the general market for fowls. While a two or three-year-old Leghorn may not be the best of eating, if in good condition, and properly cooked, she is not to be despised by any means. The turkey served the writer at a recent banquet was inferior, in his estimation, to a well-cooked two-year-old Leghorn hen. M. B. D.



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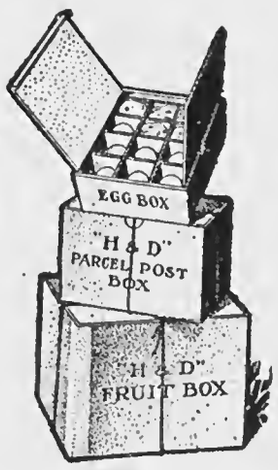

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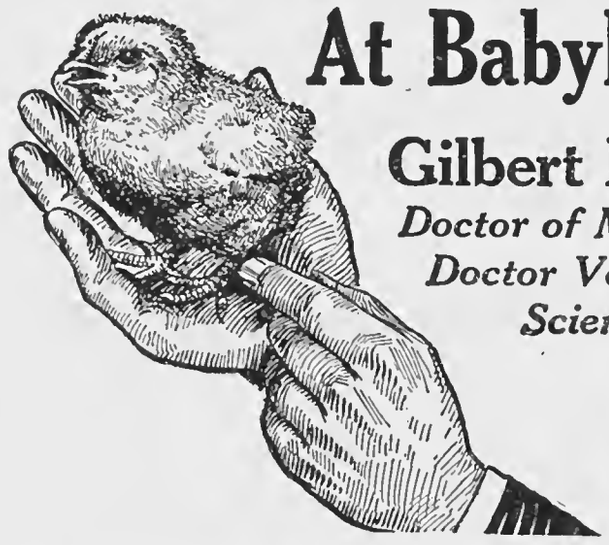
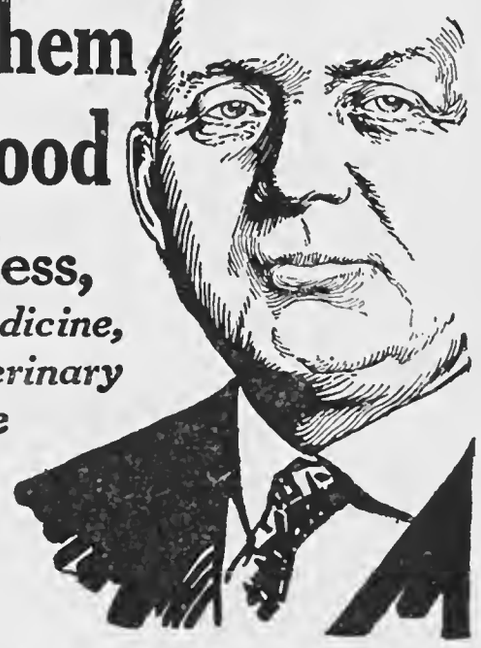
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The annual loss of young chicks in the United States is staggering. *More than one-half* the yearly hatch die before reaching pullet age—die through leg weakness, gapes and indigestion. Talk about conservation—think of the millions of dollars that poultry raisers could save by saving most of these chicks.
Yes, most of them can be saved—saved by starting them on
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Right from the very first feed. During my 25 years' experience as a doctor of medicine, a veterinary scientist and a successful poultry raiser, I discovered that, by using a certain nerve tonic and appetizer, *leg weakness could be absolutely overcome;* that the use of another certain chemical that is readily taken up by the blood would cure gapes, by causing the worms in the windpipe (the cause of gapes) to let go their hold and helping the chick throw them off. By combining these same ingredients with bitter tonics and laxatives, I found that I could control and invigorate the chick's digestion.
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The Henyard.

THE EGG-LAYING CONTEST.

Notwithstanding the heavy gain of over 600 eggs in last week's production, this, the twentieth week, shows a further gain of 264 eggs. The output for the week was 3,437—an average of over four eggs for every hen or pullet in the contest. Pen No. 42, the "sour milk" pen of White Leghorns from Storrs Agricultural Station, takes first place for the week with a score of 56. This is the highest number yet laid by any pen in the contest. The individual record is, 5, 6, 6, 7, 6, 2, 7, 5, 6, 6. This is certainly good laying and this pen has laid well from the start, for their total score is 645. Only two pens exceed this, Francis F. Lincoln's White Leghorns with a record of 659, and Tom Barron's White Wyandottes with a total of 785. Daniel Hine's pen of "Dunghills" take second place with a score of 55, the laying being remarkably even, viz.: 5, 5, 5, 6, 6, 7, 6, 5, 4, 5. But their total to date is only 361—less than half that of Barron's Wyandottes, and it is the totals that count.

Colonial Farms S. C. Reds laid 51, and four pens laid 50 each. They are Tom Barron's White Wyandottes, Frank L. Tuttle's Barred Rocks, the White Leghorns from Tomoka Poultry Farm, Ellington, Conn., and Tom Barron's White Leghorns; 52 pens laid 40 or over during the week. For those who wish to compare the records I give below some of the weekly scores and the totals:

	WK.	TL.
BARRED ROCKS.		
J. F. Francis, New York	42	498
Frank L. Tuttle, Massachusetts	50	324
A. B. Hall, Connecticut	42	209
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut.	47	406
Fred Benton, Connecticut	46	387
Storrs Agr. Sta., Connecticut.	47	288
Storrs Agr. Sta., Connecticut.	38	258
Albert T. Lentzen, Massachusetts	44	246
BUFF ROCKS.		
A. A. Hall Connecticut	46	351
W. C. Morgan, Connecticut	44	181
WHITE WYANDOTTES.		
Tom Barron, England	50	785
Neale Bros., Rhode Island	48	606
Merrythought Farm, Connecticut	46	499
D. J. Ryan & Son, Connecticut	48	420
West Mt. Plty. Yards, Connecticut	37	400
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	40	366
Dr. N. W. Sanborn, Massachusetts	40	326
Am. Buff Wyan. Club, New York	38	331
H. L. Hamilton, Connecticut	35	144
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan Club, Massachusetts	45	256
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	42	579
Geo. P. Dearborn, Florida	45	501
Pinecrest Orchards, Massachusetts	41	460
A. B. Brundage, Connecticut	49	443
Colonial Farm, New Hampshire	51	425
J. S. Gillespie, Connecticut	42	417
Harry B. Cook, Connecticut	39	410
R. I. REDS.		
Glenview Plty. Farm, Connecticut	46	451
C. S. Scoville, Connecticut	27	296
WHITE LEGHORNS.		
Francis F. Lincoln, Connecticut	48	659
Storrs Agr. Sta., Connecticut.	56	645
Cecil Guernsey, New York	41	538
Storrs Agr. Sta., Connecticut.	44	483
Tom Barron, England	50	471
Marwood Farm, Pennsylvania.	43	422
Storrs Agr. Sta., Connecticut.	48	415
Bonnie Brook Farm, New York	45	411
Branford Farm, Connecticut	45	398
L. C. Sands, Pennsylvania	44	370
Storrs Agr. Sta., Connecticut.	38	365
P. G. Platt, Pennsylvania	42	362
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	48	315
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	44	215
BUFF ORPINGTONS.		
O. Wilson, West Virginia	40	279
WHITE ORPINGTONS.		
P. A. Demgar, New York	46	239
WHITE LACED RED CORNISH.		
W. L. R. Cornish Club, Massachusetts	28	97
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	36	174
DUNGHILLS.		
H. W. Collingwood, New Jersey	33	154
Daniel Hine, Connecticut	55	361
Daniel Hine, Connecticut	38	255
MIXED BREEDS.		
Profitable Plty., Massachusetts	36	397
Profitable Plty., Massachusetts	37	351

I have a very interesting report from the Missouri contest, which is worth a separate article. GEO. A. COSGROVE.

Fat Laying Hens.

On page 135 B. B. says if he fed R. I. Reds same ration as lighter breeds they would get so fat they would not lay at all. How fat must a hen get to be too fat to lay? January 24 I saw a hen that had been laying for over two months killed, dressed and weighed. This hen was so fat that her hind parts had dragged on the ground in walking, and I never saw so fat a hen in my life; yet there were eggs yet to come. I had always believed they could be too fat to lay, but this shook my belief. Breed, White Wyandotte, dressed seven pounds.
Adrian, Mich. E. L. L.

The hens that are too fat to lay are probably outnumbered, 10 to one, by those that are too thin to lay. Eggs will not be formed unless there is a surplus above the needs of the hen for nutrition, and any such surplus not used in egg production will, of course, be stored as fat. Old hens take on fat readily, and old hens, as a rule, do not lay well; this may be the reason that over fatness has been so often blamed for sterility, but to just what extent it is responsible for it probably no one knows. M. B. D.

Hens Lay After Dark.

Can you tell me why the hens lay eggs after dark? We have got quite a few after dark lately and I would like to know the cause. E. C.
Massachusetts.

For no reason, that I am aware of, except that the egg chances to reach complete development at that time and is extruded. Fright, or some other unusual condition disturbing to the hen, might cause her to retain a fully developed egg within the oviduct and deposit it after dark. It is supposed to require about 16 hours for the full development of an egg within the oviduct but it need not be deposited in the nest except at the will of the hen. M. B. D.

Poultry Dog; Pasture for Hens,

1. Egg farming is my specialty; I am making preparations to go into the business extensively. I have imported some Leghorns and one Wyandotte from England. Some of my neighbors are bothered with chicken thieves. I have no dog; am going to get one. Which is the best breed of dogs for the poultryman, that is to watch and give alarm after night? 2. There are about eight acres of my chicken lot that are bare, and I wish to get it in a permanent sod. What would be the best kind of grass seed to sow, Timothy, Blue grass or Red-top? Should it be sown alone? If sown this season, will it stand much grazing the same year? I am thinking of sowing one-half acre in Alfalfa; would the chickens kill it by letting them run in to feed at will? This is a clay soil, and is underlaid with limestone, and rather rich. Poultry has been running on it for the past five years. J. P. G.
Versailles, O.

1. The Airedales seem very popular with some of our readers as watch dogs, though I surmise that the training of the individual dog has as much to do with his usefulness as the breed. 2. I should sow a mixture of the grass seeds that you mention if I wished a permanent sod, but should sow Alfalfa alone. Neither should be pastured by hens until thoroughly established, and even then, if many fowls are permitted constant access to a small plot of any kind of grass, they will destroy it. By pasturing very lightly the first season, and to only a limited extent thereafter, you may be able to keep a sod in the native grasses or in Alfalfa, but it is a different matter to keep hens that are confined to a run from destroying all green stuff, and unless your runs are large in proportion to the number of hens, you will not be apt to succeed. M. B. D.

House for 200 Hens.

I would like to know the best and cheapest way to build a henhouse that would accommodate about 200 hens. Could I use elm to an advantage? I had in mind to build one 7x5x12 feet and about 50 feet long. Would there be room enough for 200 hens in such a house?
New York. M. J. S.

Two hundred hens should have from 600 to 800 square feet of floor space, and a building 12x50 feet in size would do. It would be more economical, however, to build it deeper, say 16 to 20 feet, and make it long enough to give the desired floor space. The tendency has always been to build poultry houses narrow and long, but it is considered better practice, nowadays, to give them much greater depth, thus saving material by making them more nearly square and providing other advantages also. A building 20x30 feet would be superior to one 12x50, and would require less lumber in its construction. Elm, or any other lumber at hand, may be used, the chief requisite being tight walls on all sides but the front, and that preferably of the modern open style. M. B. D.

MRS. YOUNGBRIDE: "I'd like some fish, please. What are these in the barrel?" Clerk: "Salt mackerel, ma'am." Mrs. Youngbride: "Are they quite fresh?"—Boston Transcript.

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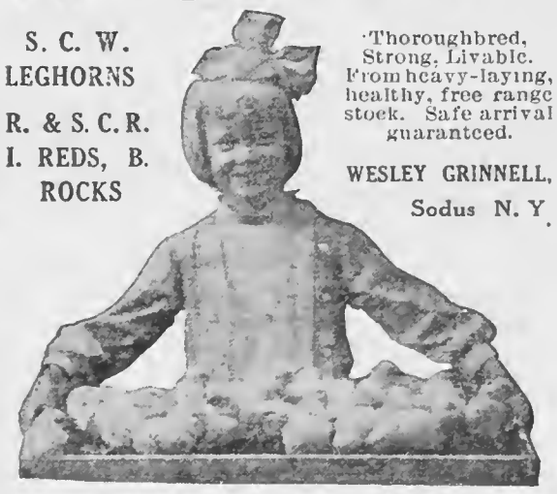

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Damp Henhouse.

I have a shed-roof poultry house 100x 14 feet, seven feet front, five feet back, with curtain front. I keep 500 hens in this house without partitions. The floor is made of matched lumber but the litter is always damp in Winter. The moisture seems to come from below, and the end where the fowls congregate the most gets the wettest, though the floor at this point is two feet above the ground. If I should cover the floor with one-ply tar felt and then lay another matched floor over this would it then be enough drier to warrant the extra expense? The building rests on posts 18 to 24 inches above well-drained ground, and is not enclosed under floor, thus allowing free circulation of air. I feel certain it is not caused by lack of ventilation, as we are very particular about this, never closing curtains day or night unless mercury goes very low. J. E. Y.

Baldwinsville, N. Y.

Excessive moisture in a house built above ground as yours is, is proof positive that the method of ventilation adopted does not cause a sufficiently rapid or complete change of air to remove the moisture from the house before it condenses on floor and walls. Moisture cannot come through a floor set upon posts, with free circulation underneath. In all probability, the openings in the front of your house are of such size or location that they do not permit of sufficiently rapid movement of the air from within out; otherwise the moisture laden air would be driven out before it became so saturated as to condense upon floor and walls. All moisture in such a house comes from the bodies of the fowls, and it is useless to insulate floors or walls; more efficient ventilation is the remedy.

M. B. D.

Ailing Turkeys.

What could I do for the roup? We have only lived here for one year, but the roup has been the great trouble with the place before. Last year I turned out in one brood 45 young turkeys and they lived and grew well until they were wing-feathered, and then the roup set in and our chickens had it too. We lost nearly all of them. H. H.

McDaniel, Md.

It is possible that your turkeys had "blackhead" instead of roup, as they are more subject to the former infection and are, in fact, almost impossible to raise in many sections because of this trouble. There is no cure for it, so far as known, though keeping them on ground not previously roamed over by turkeys and other fowls, and feeding them an abundance of soured skim-milk from the start are preventives.

True roup, the symptoms of which resemble those of a very severe cold in the head, is found more often among hens, and is to be prevented by destroying the carcasses of all fowls dead of the disease and thoroughly cleaning up and disinfecting their feeding utensils and living quarters. The first mentioned should be cleaned with boiling water, or a chemical disinfectant like a 5% solution of carbolic acid, and the quarters should be whitewashed with lime containing four ounces of crude carbolic acid to the gallon. Care must be taken promptly to remove all sick birds from the flock, as the disease spreads from one fowl to another, and their living quarters should be such as to protect them from taking colds, with which the disease is apt to start. M. B. D.

Leg Weakness in Chicks.

I had six Partridge Rocks hatched January 29, 1914; put them outside in a glass house for one week. Thinking it was too cold I put them in a warm cellar, on boards, with fresh sand and litter. After a week, or when they were about two weeks old, two of them got weak in legs and could not walk, and in two more weeks or when they were four weeks old, the remainder were affected the same. I asked an old chicken man, and he said it was leg weakness from being on boards, but he had never seen it happen until they were eight or 10 weeks old. Will you help me out?

New Jersey. G. B. H.

The loss of vitality manifesting itself as "leg weakness" is an almost inevitable result of keeping young chickens indoors and under artificial conditions. It is unusually seen at from two to four weeks of age and I know of no remedy or preventive other than to get the chicks out of doors and upon the ground for at least part of the time. I have never been able to keep chicks indoors for more than three weeks before they began to show signs of failing vitality but have had no trouble after they were placed in outdoor brooders and given access to the ground. Proper feeding with green stuff and meat food, and dirt and sods to scratch in, will help, but I know of no real remedy for this condition other than the outdoor life natural to fowls. M. B. D.

Feeding Laying Ducks.

I wish to know the proper rations and quantity to be fed to 25 Indian Runner ducks, to produce the best results in laying season. My ducks have a good range, and are stuffed with bran, cornmeal and middlings mash, yet are not laying at all now, although they began laying first of December. I wish to know what they lack, or if it is possible to overfeed.

Chambersville, Va. J. C. C.

I would suggest the following. A mash mixed to moist or crumby consistency made as follows: Two parts wheat middlings, two parts ground oats, one part cornmeal, one part meat meal, 10 per cent by weight of grit, 10 per cent by weight oyster shell. Mix with these equal parts by bulk of some finely chopped green food and feed it in long troughs, so that all fowls can get access to it at the same time. Feed this mixture three times a day, giving enough each time so that the birds will clean it up in 15 minutes. A. L. C.

Feeding Green Bone.

Will it be safe and good for little chicks when about three weeks old to give them about three to four times a week some green cut bones? How much should be fed each time to about 100 chicks or would beef scraps be better for them? Please advise about same for laying hens. E. F.

New York.

A good grade of beef scraps is to be preferred to green cut bone for young chicks, though the latter may be sparingly fed after the chicks are two or three weeks old. A "pinch" to each chick, gradually increasing the amount as they become older, may be given two or three times weekly. It is a better food for laying hens, though they may be overfed upon it if judgment is not used. Perhaps a half ounce per hen, twice a week, would usually be about right. Cutting bone is an exceedingly laborious job and where power is not at hand for this purpose few poultrymen will overfeed of it for any great length of time. M. B. D.

Mating Breeding Pens.

How many two-year-old R. I. Reds can I use for breeders with two cockerels, changing once a week in the same coop? One breeder tells me 50. W. J. W.

Connecticut.

Two vigorous cockerels should be sufficient for 50 hens of the larger breeds, though if only one is permitted in the pen at a time, I should change them oftener than once a week. Every day, or every other day, would be better. If these hens have the liberty of a yard, I should consider it as well to keep both cockerels with the flock, but if they are closely confined, better results might be obtained from alternating them.

M. B. D.

WHITE OR BROWN EGGS.—Last season country egg buyers in this locality discriminated between white and brown or mixed eggs. Previously no difference had been made to the producer, so people with small flocks of white-egg hens could not realize the advantage which white eggs hold above other eggs. People with large flocks crate and ship their own eggs. The demand for white eggs has been extreme this year and flocks of white-egg hens are far in excess of other kinds, yet few eggs could be obtained. At one time 50 cents a dozen was paid for white eggs, while 46 cents was given for brown and mixed eggs. An occasional buyer who had special contracts, offered 75 cents a dozen for choice white eggs. Consumers, knowing of these prices, thought poultrymen must be getting rich, but though prices were high, few producers got much money, for they did not have the eggs. One flock of R. I. Reds in our neighborhood gave good returns of brown eggs during all the period of high prices. Prices have dropped now and are running from 28 to 32 cents.

New York. C. M.

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The Henyard.

SENDING EGGS TO CUSTOM HATCHERS.

At this particular season of the year a good many people are planning how many chickens they can possibly get hatched, and how they will do it, with very little thought of how they will raise them. To meet this demand on the part of the American poultry lovers, custom hatcheries have sprung up all over the country. They have certainly filled a long-felt want. It is a calling that is full of tribulations for both hatcher and customer. The custom hatcher is bound to receive a great many complaints, even though he does his work with the utmost skill, because many people believe that an egg is an egg, and will hatch if properly incubated. This is not a fact, as the hatchability of the egg is influenced by all sorts of conditions before it reaches the incubator.

The first point to insure good, strong fertile eggs is comfortable, well-ventilated Winter quarters, such quarters as will insure perfect health of the breeding fowl. In the second place, the male at the head of the pen or flock must be active, not too closely related to the hens, and must be a bird that matured quickly for the breed.

There is a good deal said about the influence of feed on fertility, and the general opinion seems to be that a too heavy green bone diet reduces fertility, and the feeding of sprouted oats works just the other way. However, the feeding ration should be such as to supply all the demands for protein, carbohydrates, etc., and a list of such rations can be obtained from your experiment stations, and good feeding schedules are often given in the columns of this paper.

It is not wise to try to hatch eggs over two weeks old, and eggs saved for hatching should be turned at least every other day, handling the eggs just as little as possible. Again, dirty eggs are not apt to hatch as well, and washing them makes the egg porous and less apt to hatch, so it is best to discard the dirty eggs entirely. These conditions may be avoided by keeping the hens confined during muddy weather and seeing that the nests have clean straw and that the eggs are gathered every hour or so.

Many eggs that come to the hatcher seem to have too hard a shell, and it is well not to over-feed shell-making rations at breeding time.

In spite of all these conditions, eggs will sometimes run very infertile and in such cases a change of males is probably the only remedy, but it is a good plan to make fertility tests in a small way several weeks before the bulk of the season's hatch is on. P. L. W.

Rough Eggs.

What is the cause of my pullets laying rough eggs, and can it be helped? Are the eggs fit to set when in that condition? W. Y. B.

New York.

I do not know that the cause of rough shells is known, or that anything can be done to help it. It would be better not to breed from fowls that persistently lay rough-shelled eggs, though an occasional one may be found in any flock. I should see that the pullets had plenty of lime in the shape of oyster shells, and should expect that the trouble would gradually disappear. Very rough shelled eggs should not be incubated as they are more porous than smooth-shelled ones and it is possible that the tendency to lay that kind may be inherited. M. B. D.

Imperfect Eggs.

I have two chicks 4½ months old, Black Minorcas. They lay eggs about the size of a pigeon's egg and no yolk in it. I got one about a month ago and three now in four days. I feed my flock, mornings whole oats and buckwheat, scattered in litter; noon I make a mash with boiled barley, wheat, bran and middlings and table scraps; night oats and buckwheat. We give them lukewarm water three times a day, have plenty of grit, old lime wall for lime, and charcoal. Is this a sickness in these chicks? Alpine, N. Y. H. V.

Small, yolkless eggs are frequently found when pullets begin laying and need cause no uneasiness. They will do better with a little practice, and your Black Minorcas should produce large, handsome, eggs such as are characteristic of this variety. M. B. D.

THE young pastor was musically inclined, and frequently sang duets with a member of his choir. Recently he arose to announce the music for the morning service, and this is what he said in his agitation: "Miss Blank will now sing, 'Oh, Had I the Wings of a Dove, I Would Fly Away,' accompanied by the pastor."—Credit Lost.

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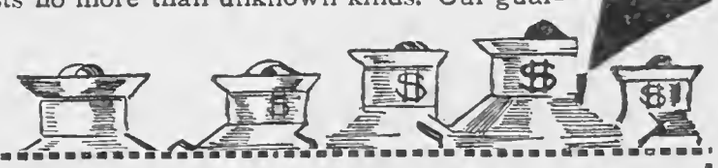

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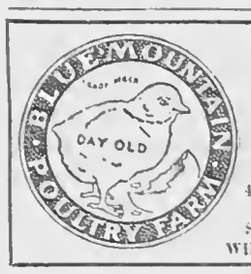

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THE MULE AS A FARM ANIMAL.

The mule is the cheapest work animal on the farm. He suits the careless hired man and the poor care-taker. Give him a good shed, tight on the north and west, and open on the south, fitted with long racks and troughs. Keep the racks full of good hay, corn fodder or good roughage, with plenty of good sound corn, oats and bran in the trough, with a supply of fresh water, and you have all that is necessary to take care of the mule. When the mules come in from work, take off the harness, turn them loose. They will lie down and roll, get up and take a drink, another roll and then eat some hay and grain. In this way the mule eats, drinks, and rests all night, and when you are ready to work Mr. Mule is ready. All you have to do is catch him, put on the harness and hitch up. No feeding, nor currying, only see that the racks and troughs are kept clean and plenty of good feed in them. Work him hard for six months and he will be in better condition than when he commenced.

A mule will not get foundered. He will run off, but never gets hurt; he has enough wit to stop when he gets in danger or a tight place. A horse will hurt himself, break up wagons, machinery, and when scared lose any sense that he ever had. A mule will stop short in a team, lie down, roll and get up without tangling himself up in the harness. If he gets over the trace, he will not move, if it hurts him, he's got more sense. He will do more work, look better with less care than a horse and do the work better.

The young man starting farming should purchase two or three good, roomy mares 15.2 to 16.2 hands high, weighing 1,100 to 1,400 pounds, and breed them to a first-class jack 15 to 16 hands high, and raise some mules. They will pay for the farm in a few years. Mares with blood tracing to good trotting families are better than the heavy draft mares. The purebred saddle and trotting bred mares averaging around 1,200 to 1,300 pounds, bred to jacks weighing close to 1,200, produce the finest class of mules.

What the young mule eats until ready to go to work at two years old would hardly be missed. At two years old he is ready to earn his keep. A man can have a pair of young mules to sell every year and another ready to take their place in the team. Young mules are easily raised. They are less subject to blemishes and disease than horses, seldom get injured or cut in wire fences. Good, quick, active mules with good heads are always in demand, those bred from trotting-bred mares having size commanding the best prices.

I was much surprised two years ago when in the West, to see so much difference in mules. Those bred from draft mares had heavy, lop ears, short heavy necks, while those down in Kentucky had better heads, ears thin and carried up, long thin neck, with better action. The demand for first-class mules is far above the supply, and well-broken mules four years old sell anywhere from $350 to $700 per pair. Maine lumbermen have representatives in the West buying the best mules they can find, paying $500 to $700 a pair for them. This means $700 to $1,000 a pair by the time they reach the lumber camps. I have a friend who buys the mules for one of the large Pennsylvania coal companies to be used in the mines. He scours the West every year in search of mules to meet their needs. There is a market for the mule wherever there is hauling. He fills a position which no other animal can. There is nothing in sight to take his place. He is needed in the mines, lumber camps, by railroads and on the farm.

Mules are becoming scarcer all the time. Look around the country and note the number of stallions. What does this mean? Less mules. You can buy a jack that will cost somewhere from $800 to $1,500. Splendid mule jacks can be had for $1,000. A three-year-old jack is as good as one five, and is growing into money. A three-year-old should be bred to about 25 mares; a four-year-old to 50 and at six he is ready for heavy service.

Jennets cost about $400 to $500 each. Large first-class ones weighing 1,100 pounds are very profitable, when bred to the best jacks. When in Lonisville, Ky., some time ago I saw one of the most attractive animals that I had ever seen. A large crowd had collected to inspect a "hinnie," the result of breeding a jennet to a finely bred trotting stallion. The owner had refused $1,000 for this exceptionally fine specimen. No person could have guessed his breeding. The long thin ears, fine silky coat of hair, thin skin, showing every blood vein like whip cords, and intelligent head, gave every indication of both strength and quickness. He was a grand animal and could trot in 2:40. A great many "hinnies" are being raised and command prices ranging $250 to $400 each.

Mr. L. M. Monsees says, "There is nothing that walks that will beat an old jennet for money-making." A jack may earn more for one or two years, but the jennet bred to a first-class jack will become the greatest money-maker. The mule breeder always has a source of good income. "Out in Missouri," when the farmer goes to bank and wants to borrow money, the banker asks, "How many mules have you?" The farmer says, "Fifty good two-year-olds." The banker says, "You can have $5,000. So long as coal is mined and railroads are built and lumber is hauled, their will be a demand for mules." Grow mules—not one year, but every year. Mr. Mule will save you money and pay the mortgage.

Pennsylvania. G. E. MORRISON.

CHURN OR CREAMERY.

"Will it pay to make butter rather than draw milk one-half mile to creamery?"

We have a number of letters from readers who ask whether it will pay them better to make butter at home or sell the cream. It seems that this question depends on many things besides the cows or the milk. Here is an argument for the creamery. The butter makers will be heard from next.

Take your milk to the creamery. I had a session of the home butter-making proposition a season, and we would have been considerably ahead had we carted the milk to the cheese factory a mile and a half distant. The next year we found it more convenient and satisfactory to separate the milk, carry it a half mile across fields, place it on a cream route, than make butter at home. The year we made butter we received better than the market price, and the following year when cream was sold we received one cent less than Elgin. Yet the latter was a better proposition. By taking milk to a creamery a great amonnt of bother is avoided. At best butter-making on the farm is bothersome. The creamery is equipped to handle the product, and has its system of marketing. You may have an exceptionally good market, be well equipped and are familiar with farm butter-making, which would make the proposition different in your case. I would advise buying some good cream separator, then separate the cream and take it to the creamery. W. J.

BUTTER FAT AND BUTTER.

Why will a pound of butterfat make more than a pound of butter, when we know that a pound is a pound? What can I treat my straw with to keep stock from eating it? I feed plenty of hay and grain, but they insist on eating their bedding. T. W. H.

Abingdon, Md.

When we speak of butterfat, we mean the pure fat of milk. One pound of butterfat will make more than a pound of butter because in finishing the process of butter-making, water, salt, particles of curd and a small amount of ash or mineral matter are mixed in with the butterfat. The average composition of butterfat is as follows: Fat 84%; water 12.73% curd 1.30% salt and ash 1.97%. The above composition may vary slightly. When a quantity of fat is given, and you wish to estimate the amount of butterfat that should result in an ordinary churning, divide by six and add the quantity to the fat.

As to your second question, eating some straw will not hurt your stock if they have plenty of other roughage they can get at. However, if you feel sure that eating the straw is doing them harm, get one of these hand spray pumps and spray kerosene over the bedding. That will make them leave the straw alone. If you use this you must be careful not not to let any kerosene get into the milk. Washing the udder or wiping it off with a damp cloth is best to make sure. R. B.

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The Henyard.

Rattling in Throat.

I have a cock bird that has a rattling in his throat, not a continuous rattling, but at times it is worse than others. He eats well, eye is bright and otherwise seems all right. I have tried washing throat with peroxide but did no good. He is a fine R. C. Red from a great laying strain. I would like to use him this season for a breeder. He will be two years old in the Spring. Can you give me a remedy? H. H.
Indiana.

The trouble is not in the throat, but in the respiratory passages, and is probably due to an accumulation of mucus, either from an ordinary cold, or from some other cause of inflammation of the respiratory tract. Try injecting a few drops of kerosene diluted with an equal quantity of olive or sweet oil into the nostrils and the cleft of the palate, or kerosene alone may be used. A small syringe, medicine dropper, or oil can may used for this purpose. Then keep the bird where he will not be exposed to dampness or to drafts of air while on the perch. M. B. D.

Picking Out the Profit Makers.

To the breeder whose heart is in the work comes the sore trial of having to cast aside a bird whose trap-nest record shows her to be high class, but whose stamina has not proved equal to the drain on her system, making her worthless as a breeder. The ordinary farm flock produces an average per hen of perhaps 60 to 70 eggs per year. Cases are quite common where the trap-nest shows records as high as 240 to 280 eggs per year. The latest from the Oregon Experiment Station gives the top record as 303. The 200-egg hen is therefore quite within the bounds of reason.

The average town or city dweller who desires to keep a dozen or more fowls ask first: "What breed shall I keep?" Later, when he has learned more about the egg machine, he will ask: "What strain shall I keep?" It's the strain, not the breed, when a large egg yield is sought.

It is conceded that the White Leghorn as a breed produces the largest number of eggs. Two comparative illustrations taken from actual figures obtained during the past 12 months will show the difference between an ordinary White Leghorn and a White Leghorn that has been scientifically line-bred and trap-nested for Winter eggs through a number of generations.

NO. I.

Month.	No. of eggs laid.	Sold for
Oct.	0	$ .00
Nov.	0	.00
Dec.	3	.15
Jan.	8	.32
Feb.	12	.36
Mar.	18	.54
April	20	.50
May	14	.35
June	14	.35
July	9	.30
Aug.	0	.00
Sept.	0	.00
		$2.87
Cost of feed 12 months		1.46
		$1.41

NO. II.

Month.	No. of eggs laid.	Sold for
Oct.	7	$ .28
Nov.	22	.92
Dec.	21	1.05
Jan.	18	.72
Feb.	25	.75
March	24	.72
April	22	.55
May	19	.47
June	20	.50
July	15	.50
Aug.	0	.00
Sept.	0	.00
		$6.46
Cost of feed 12 months		1.46
		$5.00

The ordinary commercial egg farm carrying from 1,000 to 5,000 layers cannot afford to trap-nest the entire flock during the pullet year. An equipment of trap-nests, and the labor incident to their proper care will not warrant the expense except in rare instances. A system, however, which will build up the general average of the flock and one which may be practiced by all breeders is to equip a small pen with trap-nests. If the plant carries 1,000 layers a pen to hold 50 birds and 10 trap-nests is ample. In September or October, when the pullets are gathered from the range place 50 of the best-developed birds in this trap-nest pen. By March 1 your records will show from five to 15 birds that are heavy Winter layers. Select the finest cock bird you have and save a sitting of eggs from the most vigorous pullet of the 15. If the bird chosen is also the heaviest layer so much the better. Select for stamina first and heavy Winter egg record second. Hatch this sitting of eggs, toe-mark the cockerels and sell their sisters off the place. When these cockerels are one year old the five or 15 selected trap-nesters will be two years old, and will be mated with the finest bird found with a toe-mark. Eggs from this mating will be hatched separately and the resulting cockerels used for the following Spring's breeding pen. If your breeding pen contains 300 two-year-old hens, select 30 of the finest cockerels and throw in with the flock 10 days before eggs are desired for hatching. Cockerels intended for one breeding pen should always be together from the time they are six weeks old. With proper housing and feed, breeding pens handled in this way will produce eggs running 92 to 97% fertile, and each year will show a higher egg yield per hen.
G. H. STRONG.

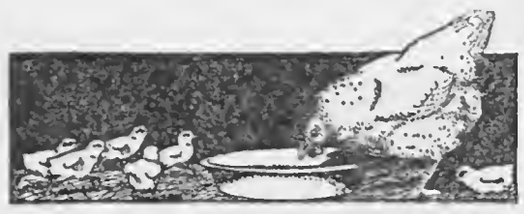
Pulping Mangels in Cider Mill

On page 275 F. M. P. asks for some machine to pulp mangels. Two years ago I raised quite a lot of these beets. One of our neighbors, who was moving to town, had an old cider press and told me if I wished I could have it for moving it. I have a three horse-power engine which I used to run it and found it made mangels into fine feed for cows or chickens. Some of the pieces will be too large for chickens to swallow, but will be so torn up they can easily pick them to pieces. I also used quite a lot of beets by sticking them up on nails and letting chickens pick them to pieces themselves. If F. M. P. keeps large flocks of poultry and has ground where he can raise beets, I think he will not be disappointed in an old cider mill to grind them, as they make a good feed cooked in an old kettle and mixed with bran or meal for a mash in cold weather. The mill I speak of is hand power and can be turned by hand as well as by power but as I had power I used it instead.
Gap, Pa. R. W. H.

R. N.-Y.—Last year we heard from a man who ran mangels through the silo shredder with the corn. The shredder pulped the beets and mixed this pulp with the silage.

"HERE'S dat dog you done los'," said Mr. Erastus Pinkley. "Yes," replied Uncle Razbury; "dat sho' is him." "Aain't you g'ineter gimmie no reward foh bringin' 'im back?" "Sho, I is. You kin keep de dog."—Washington Star.

"Now that you have agreed to marry me, dearest, I presume I had better ask your father's consent." "You may if you like, but it isn't at all necessary. I am in the habit of doing exactly as I please." "Oh, in that case, perhaps I'd better consult your father about the advisability of not marrying you then."—Detroit Free Press.



Why Feed Young Chicks Raw Grain?

It's just as easy to get a ready-cooked feed. Simply ask your dealer for H-O Steam-Cooked Chick Feed. You have no bother—we do the cooking at the mill. You will find H-O Steam-Cooked Chick Feed is far and away the best feed for chicks you ever tried.

H-O Steam-Cooked Chick Feed

is a scientific mixture of Corn, Cut-Oatmeal, Cracked Wheat, Kaffir Corn, Peas and Millet—*steam-cooked* by a special process in our mill.

Sold only in 10-lb., 25-lb., 50-lb. and 100-lb. bags, with tag showing guaranteed analysis. If you cannot get H-O Steam-Cooked Chick Feed, Intermediate Scratch, Scratch Feed, Poultry Feed, Dry Poultry Mash or Chick Feed from your dealer, write for samples and prices.

The H-O Company Mills: BUFFALO, N. Y. | **John J. Campbell** General Sales Agent HARTFORD, CONN.

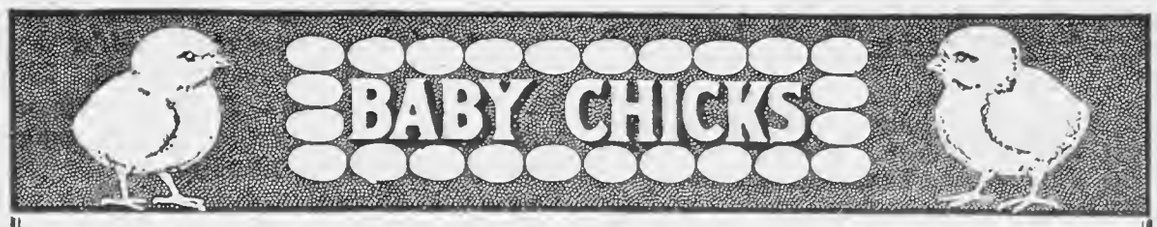
MOTTLED ANCONAS EGGS for hatching. 75c, 15; $4.00, 100. GEO. K. BOWDISH, Esperance, N. Y.

BARRED ROCKS—HATCHING EGGS—large, vigorous birds, free range, open house, heavy Winter layers, splendid broilers, $5 per 100; $1 for 15. W. A. ROONEY, Gilboa, N. Y.

THOROUGHBRED S. C. WHITE AND BROWN LEGHORNS EGGS—$3.50 per 100, or 75c. per 15. Also Rouen Ducks eggs. M. F. BOLT, Cincinnatus, N. Y.

IMPROVED SILVER CAMPINES
Exclusively, winning at Grand Central Palace. Stock and Eggs for Sale.
SHORT & TRIPP, - Cortland, N. Y.

Indian Runner Ducks—Fawn and white. Most profitable fowl. Snow-white eggs. Send for my free book on Culture. Eggs for hatching. Mrs. JAMES A. PUGH, "Sunnyacres," South Williamsport, Pa.



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They Fill the Bill

Thousands of customers say so—and they show they mean it by ordering every season. We are now shipping from 5,000 to 10,000 each week.

HATCHING DATES—April 9th, 15th, 23d

	25 Chicks	50 Chicks	100 Chicks
S. C. White Leghorns	$3.50	$6.00	$12.00
Barred Plymouth Rocks / Rhode Island Reds	4.25	7.50	15.00

Terms Cash with order Can not ship C. O. D., but will guarantee to deliver the chicks in first-class condition. If any are dead upon arrival will refund your money or replace them free of charge. To be sure of getting Kerr's Top Notch Quality Chicks order now—CATALOGUE FREE.

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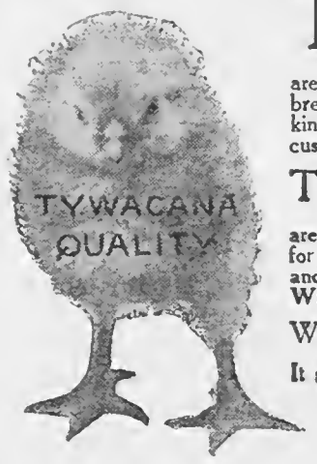

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are those which are hardy and vigorous and develop rapidly into heavy layers and good breeders. Just so with **Tywacana** chicks—they cost more to produce than the ordinary kind, but are worth vastly more than the slight difference in cost—as hundreds of our customers will testify.

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are practical birds—they've made good for us and will make good for you. Book your order **now** for day-old chicks, hatching eggs and breeding stock—the Tywacana kind. Chicks are shipped in **Wright** boxes with a guarantee of safe arrival and full count.

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It gives our reasonable prices and tells how we have developed our wonderful laying strains. Better write today.

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A. E. Wright, Supt Box 68, Farmingdale, L. I., New York

TYWACANA FARMS POULTRY CO.

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs. Glenview Poultry Farm, Rockville, Conn.

S. C. White Leghorn Eggs for setting, $5 per hundred, from free range stock. Youngs' and Wyckoff's strains. MAPLE GROVE POULTRY FARM, M. C. Dyer, Prop., Summit, New York

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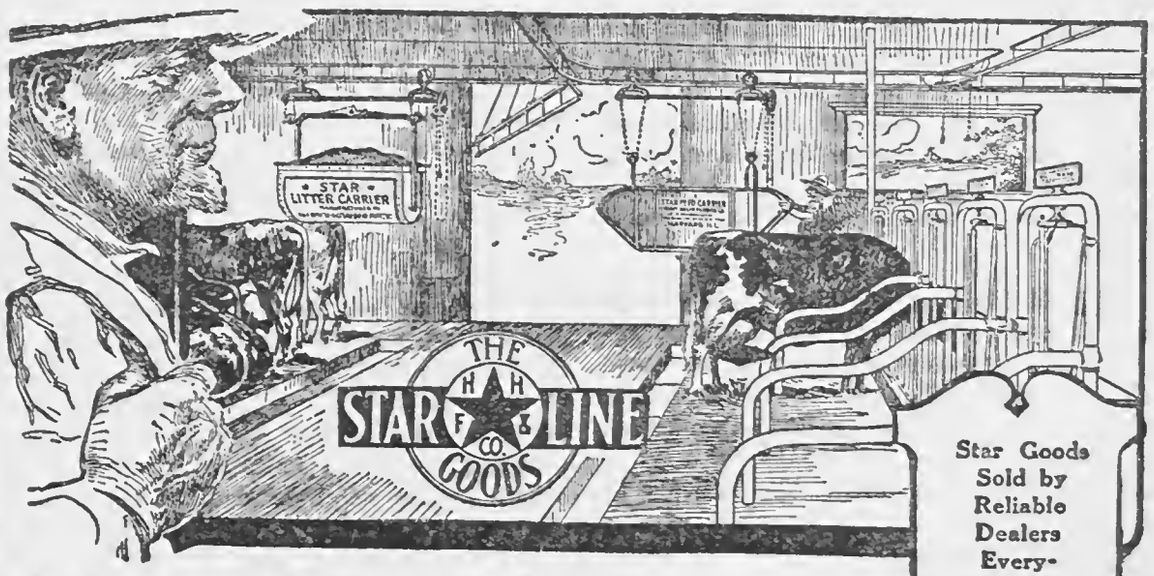
From free range; selected S. C. White Leghorns; prompt delivery. A hatch every week. Safe arrival guaranteed. Circular free. CHAS. R. STONE, Baby Chicken Farm, Staatsburg-on-Hudson, New York

Deming's S. C. R. I. Reds—Fancy laying stock. Eggs for hatching. Circular. H. P. DEMING, Robertsville, Conn.



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DON'T spend *wages* over and over again for work that Star Barn Equipment will do quicker, better, and at a *fraction of the cost.* With Star Barn Equipment, a single investment pays for a lifetime of service. The *saving* in wages, work, and time wasted, pays the cost of installation the *first year!* And you get *free* all the advantages of a cleaner, more sanitary, better kept barn. Let us prove our claims by mailing you our Book *FREE.*

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Stalls and Stanchions— ★ **Litter and Feed Carriers—**

The most comfortable, durable, and in the end the most economical Stalls and Stanchions in existence.

Built in Units. Get one or a dozen as you need them. Let your *Equipment* grow with your *herd.*

The Alignment device keeps cows lined up at the gutter, keeps the cows clean and comfortable and makes it easier for you and for the help.

Giant Star Stanchions begin to improve where others leave off. Labor-Saving, one-hand lock that stays locked—Patented Lock Guide—Sure-Stop—instant and easy adjustability to all neck widths — smooth wood lining firmly held in a "U bar;" these are a mere few appealing Star features that should make you insist on Giant Star Stanchions.

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PUBLISHER'S DESK

I spent $3 last Fall to go to the State Fair to shake hands with Collingwood, but he kept hidden. I commenced with the first issue. There are not many of us left. W. B.

New York.

This good friend began to read THE R. N.-Y. before Mr. Collingwood or myself were born; but we always feel a filial sentiment for the men who began at the beginning and stayed with the paper through all these years. We would consider shaking hands with a number of them sufficient return for a trip to the fair. By the way, it would be interesting to know how many of these old friends are yet with us and able to attend the fair. We would like to have them as our guests at a luncheon on the Fair Grounds next September. How many can come? It would be the pride of our lives to have a big number, and the good wives that are left with them.

Do you think the Empire Realty & reliable source to borrow money from?

Ohio. J. B. F.

Mortgage Company, Richmond, Va., a

This company advertises to loan money at five per cent. But if we understand their literature, you must first make contracts with them in $500 amounts or multiples of $500 and send them $4 a month on each $500 certificate until the loan is made. In no event can the loan be made short of six months, and there is no promise in the literature that we can find that it will be made in six years. The application simply becomes eligible for a loan in six months. The inference is that they may not have the money to make the loan at that time and you will have to wait until they have it or until they get good and ready to make it, if such a time should ever come. They make it appear as a desirable feature to make the mortgage payable in 10 years by paying monthly semi-annual or annual payments. The amortization principle is a good one, but we would not encourage farmers to bind themselves to pay one-tenth of the mortgage each year. A payment of one per cent. with the privilege of paying more would be all right. This looks to us like the Birmingham, Alabama, scheme previously referred to. The purpose there seemed to be more to get money in on the certificates than to loan it out on farm mortgages.

A good friend sends us a certificate for $25 issued by the Seminole Land & Investment Company and says we may use the proceeds to fight fakers. The fakers would be safe themselves in making such a donation. The certificate is a good specimen of a fake itself. The $25 are to be allowed on the purchase price of any lot bought at St. Cloud, Fla. In other words, you buy a lot and pay more than it is worth, probably several times over, and you will be allowed $25 as a sop to your injuries. The certificate is intended to make you feel you are getting something for nothing, and if you take the bait, you will feel the barb on the hook later on.

Enclosed find an acknowledgment from W. W. Wittman & Co., 16 W. Pratt St., Baltimore, Md., for two bushels of Virginia natural peach seed. We have written to them three times and can get no answer since the enclosed letter. We sent an order last year and received the seed right away, but this year we waited on them over a month and heard nothing. Will you see what you can do with them for us? D. S. A.

Pennsylvania.

This order was sent early in September, and November 24 the subscriber writes us he received them. If a firm could realize the advantage they would gain by acknowledging an order promptly or advising a customer that there was some necessary delay, a report of this kind would not come to us. With an unexplained delay of this kind a farmer does not feel inclined to send this house an order another year. We were as unsuccessful in getting replies to our inquiries as to the cause of the delay, but the goods were shipped. Farm operations are sadly upset by delays of this kind, but it is more the anxiety as to whether the goods will come in time for the season's use that causes annoyance and dissatisfaction to the farmer.

We have some inquiry and some criticism of the farm mortgage written by the Woodruff Trust Company, Joliet, Ill. The principal feature of the mortgage may be found in the following paragraph from the company's literature:

The interest charged to the farmer is at the rate of 6% per annum, and for each $1,000 borrowed the amount of the semi-annual payments, including both principal and interest, will be $43.62; so that by paying $43.62 semi-annually for 20 years the farmer is entirely out of debt. In paying the principal and interest covering a period of 20 years he has only paid out $1,730.40. If under the ordinary plan of borrowing money the farmer were to borrow $1,000 at even so low a rate as five per cent. per annum for 20 years, he would have paid out $2,000 at the end of this time, and of course in addition to this he would have paid out a considerable amount of money in renewal commissions and legal expenses.

One intelligent criticism from an Illinois farmer is the following:

The company loans the farmer $1,000 for 20 years; but the farmer pays six per cent. semi-annual interest on every dollar owed, and also pays the principal to the last cent within the 20 years. The comparison of their 6% loans with a 5% loan making out a saving to the farmer of $269.60 is not all that it seems on the surface. The farmer does not use their $1,000 for the full 20 years, but they estimate as if he did. This company charge the farmer 6% for every dollar of their money for every day he keeps it. In addition he is compelled to pay a part of the principal each year, whether he wants to or not.

The Woodruff Trust Company simply enforces thrift by insisting on a payment of part of the principal every six months. The only other advantage is the long term and consequent saving of legal expenses and commissioners for renewals of short term mortgages. As an offset to this, the company charges six per cent. interest, while in some cases at least the borrower may be able to get the use of money for five per cent. The apparent saving of $269.60 on a 20-year mortgage does not allow the farmer any credit in the calculation, for interest on the payments made every six months. The borrower pays six per cent. interest on the balance remaining due from payment to payment. The portion of the fixed semi-annual payment credited to principal increases every six months; and the amount credited to interest decreases in an equal proportion. The interest on $1,000 for 20 years at 6% is $1,200. By paying part of the principal from year to year, the borrower stops interest. The interest on these payments would amount to $469.50 at 6%. The principal of the contract is good; but the rate of interest is high. It is assumed that much of the money used by the trust company is the deposits of farmers and others in the neighborhood. They probably draw from three to four per cent. interest. The trust company of course, profits by the difference. In the cooperative associations of Europe the money goes direct to the associations at the low rate, and the borrower gets the benefit. Banks and trust companies must look out for their profits. Coöperation seeks only the benefit of its members, and we hope yet to see the mortgages of American farms financed on the coöperative plan.

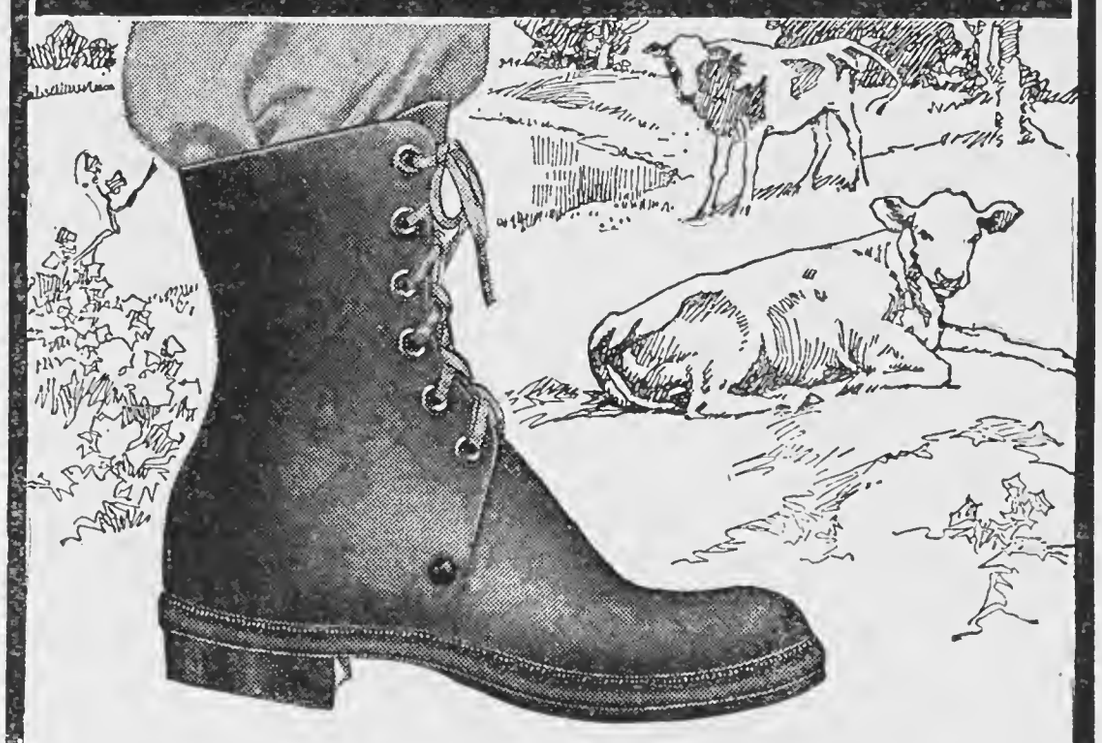
I have noticed the complaint from Hammonton, New Jersey, and your reply. You cannot expect anything but the curses of the dishonest, but you will have, or should have, the support of all decent men. M. P. B.

Virginia.

That is about right. THE R. N.-Y. cannot expect the approval of crooks, and there is no record that it ever received such approved or that it merited such approval. Let the rogues curse. J. J. D.

LITTLE John was full of mischief and during his first year at school hardly a day passed that he was not sent to stand in the corner. When the schoolhouse burned down and a new one was immediately begun, the little boy went to his father, who was County Superintendent. "Don't you think we could get the carpenter to build a *round* schoolhouse this time, father?" he said. "Why, son?" his father asked in astonishment. "Because," the little fellow answered, "I'm getting *very* tired of corners."—N. Y. Evening Post.

"Better than leather For all kinds of weather"



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Hub-Mark Bootees are made of the best grade of New Rubber and A1 Duck with leather insoles. They are reinforced at every point where the wear and the strain comes.

Buy a pair of these comfortable work shoes. Work day in and day out beside men who wear leather shoes. When their shoes are cracked, split, and useless yours will be solid. Bootees are cheaper than shoes made of leather, because they always outwear them.

Note this:—Look for the **Hub-Mark** on all kinds and styles of rubber footwear for men, women, boys and girls. You can rely on anything you buy from dealers who sell **Hub-Mark Bootees**—they are square dealers.

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World's Standard Footwear

RUN ON KEROSENE
6c for 10 Hours
Ellis Engines develop more power on cheap lamp oil than other engines do on high-priced gasoline. Will also operate successfully on distillate, petrol, alcohol or gasoline. Only three working parts.

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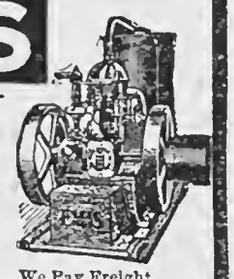

have patent throttle giving three engines in one; force-feed oiler; automobile type muffler; ball-bearing governor adjustable while running and other exclusive features.
MAKE US PROVE IT—Every engine sent on 30 days' approval. 10-year Guarantee. Special factory prices on all sizes. Thousands of satisfied users. Write for big new 1914 catalog and special discount prices. We Pay Freight.
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This machine has the one right cutting principle—center draft. Cutter bar is directly in front of wheels—mows back and forth on one side of field in any direction. No side draft. Cut crop is left in standing position and cures rapidly. One-third saving in time and labor. The Eureka Mower abolishes tedding and trampling of cut crop. It's the ideal mower for orchard and working between rows. Will cut weeds in pastures and brush that no other mower will handle. 5 sizes for one or two horses. 48 years on the market. Machines bought 30 years ago, and used every year, still in use. Prompt shipments. Write to-day.

EUREKA MOWER CO.
Box 868, Utica, N. Y.

MORE MONEY EASIER AND FASTER WORK

You lose $1.00 on every six sheep you shear in the old way. The Stewart gets a length and quality of wool that brings the highest price. Extra profits soon pay for it. The Stewart has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Its price complete, including 4 combs and 4 cutters of the celebrated Stewart quality is $11.50.

STEWART'S No. 9 BALL BEARING SHEARING MACHINE PRICE $11.50

gets all the wool and takes it off quickly and smoothly in one unbroken blanket. To shear with the Stewart Machine seems like play to those who have labored with hand shears in the old, hard, sweaty way. You don't have the same swollen aching wrists. You don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts like you used to do. **Get one from your dealer,** or send us $2.00 and we will ship C. O. D. for balance. Money back if you are not well pleased.

Stewart Ball Bearing Clipping Machine
For Horses, Mules and Cows

It pays to clip horses and mules in the spring—they look and feel better, do more work, rest better and get more good from their feed. Clipping the flanks and udders of cows prevents the dropping of filth into milk. The Stewart can be used for clipping horses, mules and cows without change. It's the easiest to turn, does the fastest work, stays sharp longer and is the most durable. **Get one from your dealer,** or send $2.00 and we will ship C.O.D. **PRICE** for the balance. Money back if not well pleased.

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Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines in the world.

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PRODUCTS, PRICES AND TRADE.

(*Continued from page 543.*)

The Census Bureau states that we raised 7,383,557,500 pounds of cotton in 1913. Its total value, including seed, will be about $1,000,000,000, or $80,000,000 more than last year.

I enclose New York quotations on imported eggs, 29 cents: State, 26, and would like to know why European eggs, which are on the water a week, and several days before that getting to steamer, should bring several cents more than ours which are in New York 10 hours after express company gets them, and we are sending every day so they must be fresh. S. L. P.

Cayuga Co., N. Y.

The quotation referred to, from an up-State newspaper, is either a typographical error or an item that has not been revised for several weeks, when eggs were much higher. At present there are but few European eggs on this market. Some are on the way, expected to sell at about 22 cents if they show up well on arrival.

Is it a business proposition to import eggs in natural state from Germany or Eastern Russia? If so, is it practiced by egg dealers and how can the eggs be compared with the native product.

Massachusetts. N. B.

Some eggs have been shipped to New York from Germany and Russia during the past season. Part were fresh and part limed or otherwise preserved. The quality was only fair and price ranged from 20 to 25 cents at time when good native eggs were bringing 10 to 15 cents more. There may be some future in this business, but it can be profitable only at times when eggs are scarce and high here. There is always risk of considerable damage on shipboard from heavy weather or heating.

A coming industry in salmon and weakfish has been started in Greenland. The output last year was about 3,000 one-pound cans. W. W. H.

WORLD'S CROPS.

The U. S. Bureau of Statistics states that the world's reported corn area is about 170,000,000 acres, 130,000,000 being in North and South America. The United States planted 105,000,000 acres and Argentina, 10,000,000. Southern Europe grows about 30,000,000 acres, mainly round flint varieties. Nearly 4,000,000 acres are planted in Italy. Hungary and the adjoining States produced 500,000,000, on 20,000,000 acres. Roumania, Bulgaria, Servia and Russia export from 50,000,000 to 80,000,000 bushels. At present Argentina exports the greater proportion of its corn, sending 4,600,000 bushels to the United States during the last four months of 1913, the price of this corn at New York ranging from 73 to 80 cents per bushel, which was somewhat less than our native corn brought. The Argentine corn is mainly small kernel flint.

The area in oats is about 144,000,000 acres, 85,000,000 in Europe, 38,500,000 in United States, and 10,500,000 in Canada. European Russia alone exceeds the United States with 43,000,000 acres. The per acre yield in Canada last year was about 40 bushels, United States, 30; Argentina, 40; Germany, 60; France, 32; Italy, 35; Russia, 28.

Russia leads in production of barley, the last crop being 574,118,000 bushels, on an area of 31,197,000 acres; United States, 178,189,000; Austria-Hungary, 158,628,000; Germany, 188,709,000; Spain, 68,772,000; Great Britain, 67,727,000; Japan, 101,119,000 bushels.

Rye covers about 108,000,000 acres, 95 per cent. being in Europe. Russia produces far more than all other countries together, 1,002,468,000 on 74,990,000 acres; Germany, 481,169,000; Austria-Hungary, 164,574,000; United States, 41,381,000.

The world's potato yield averages about 5,945,846,000 bushels. Germany producing 31 per cent. of this on 8,257,000 acres. Russia exceeds Germany in area, 10,975,000 acres, but falls nearly 500,000,000 short in yield. Other large acreages are: Austria-Hungary, 6,013,000; France, 3,863,000; United States, 3,711,000. Only 28 per cent. of the German crop is used for human food, the remainder being fed to live stock or distilled.

Argentina has about 3,716,000 acres in flax; British India, 3,757,000; Russia, 3,428,000; and the United States and Canada 4,873,000 acres. The yield of seed from these countries is about 96,000,000 bushels.

The ground has been frozen up and covered with snow for six weeks; the first good sleighing snow to last anytime in 20 years. The last week of January and about three days in February warm, and farmers plowed a good many acres; none since. Selling of milk by farmers is in the increase to the ice cream establishments and to the stores in coke region; 85 cents for 20% cream, or 25 cents per gallon for whole milk. Tree fruit, especially peaches and cherries, badly killed; wheat tops very brown but root looks all right. Grass so far very nice, also strawberries, as there has been no freezing and thawing. Cows are scarce and high. Buyers are bringing in from other counties, and holding sales where they run anywhere from $70 to $115. Good horses high and scarce. Corn, home grown, pretty well used up.

Dunbar, Pa. J. T. S.

All reports of examination of peach buds show no life in them, caused first by the warm weather in December and January swelling the buds and making them more tender, then in February 10 to 20 degrees below zero. Even the hardier kinds are almost entirely killed.

Ashtabula, O. W. C. B.

Prices for week ending March 21: Timothy hay $12.50; clover hay $10; mixed hay $11.50; straw $5.50, delivered to elevator, baling paid for by purchaser. Oats 36; corn 80 per cwt.; wheat 91; clover seed $7.25; steers 6½ to 7; hogs, dressed $10.60; potatoes 80; eggs 18; hens 13. H. H.

New Haven, Ind.

Plenty of snow at present, but it will soon have to go now. There are a great many sales at this time here, so many people moving to better themselves of course. Good heavy sound horses are bringing $250; cows are very high, $60 to $100 each. A cow with black and white color brings the highest price, regardless of some other point that she might lack. Cabbage $20 per ton; hay $14; potatoes 60 per bushel; butter 25; eggs 23. W. D. S.

Newfane, N. Y.

Corn 75 to 80; we had only half crop. Oats 37; wheat 95 to $1, half crop; bran $1.25 at mill; Timothy hay $15; clover hay $13; potatoes $1.10. Milch cows $40 to $60; calves $9; horses $125 to $150; sheep $4; lambs $5 to $7; beef cattle $7 per 100; hogs $7 to $8.40; butter 20; milk 20; skim-milk 10 cents per gallon at farm. Eggs 25; chickens 12 cents; young roosters 9; young chickens 15 and 16. Gardening crops only for home consumption; a good many apples raised here. I have about 1,200 trees; had a half crop last year, but did not ship to commission house, stocked them myself and sold them at $1 per bushel this Winter. I have a good many cherries, plums and peaches, which we sell on farm for good prices. Grapes bring 2½ to three cents per pound on farm. We make a good many ties, prices are for black oak 28 cents; white oak 45 cents apiece; props, black oak five to seven cents, white oak 9 to 10 cents apiece. We have a good deal building material made which brings us $15 per 1,000. In Summer we keep boarders from city, so make good home use of our vegetables, fruits, eggs and butter. A. B.

Bourbon, Mo.

Fish Bite Like hungry wolves any time of the year if you use **Magic-Fish-Lure.** Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a box to help introduce it. Agents wanted. **J. F. Gregory, Dept. 99 St. Louis, Mo**

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. **THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.**

Subscribers' Exchange

SHENANDOAH VALLEY FRUIT AND TRUCK Farm, within mile of Military Academy; female seminary, and high school buildings. Address PRIVATE BOX, N. End Kent, Winchester, Va.

WANTED A FARM—No less than 10 acres, about 50 miles from New York, about two miles from railroad station; give full description. GEO. DELECOURT, Spring Valley, N. Y. Box 530.

WANTED—Small dairy and fruit farm, 25 to 100 acres, good tillable soil, conveniently located in Orange, Ulster, or Dutchess counties; terms cash. Address L. B. S., care R. N.-Y., 333 W. 30th St., New York.

FOR SALE—260-acre dairy farm, with stock and tools; double house for two families; roomers or summer boarders; fine summer home; for photo. and description address G. C. VALENTINE, Deposit, N. Y.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

FOR SALE—570-acre farm, Brunswick County, Va.; splendid ten-room dwelling; all necessary out-buildings; one mile from depot; on good improved road; good land. Address N. F. NEBLETT, Meredithville, Va.

120 ACRES, NEW MEXICO—Grows anything; fruits, vegetables, Alfalfa; delightful climate; abundant pure water; near prosperous county seat and railroad; price reasonable. GEORGE SUMMERS, Inter-Southern Bldg., Louisville, Ky.

FOR SALE—Boarding house and dairy farm, 128 acres; stables for 44 cows; milk station on farm; house has 30 rooms; accommodates 50 guests; modern conveniences; telephone; price $11,000. Write for photos. and terms. Address OWNER, Willow Brook Cottage, Wallkill, N. Y.

MODEL POULTRY FARM—Successful business proposition, fully equipped with thoroughbred stock; 35 acres; capacity 3,000; large dwelling, mile from railroad; profits will return 20 per cent. on investment; $15,000, part cash. BOX 256, Beverly, N. J.

FOR SALE—One of the best farms in the Connecticut Valley; 125 acres, stock and tools included; 12-room house; plenty of out-buildings; barn 42x84, with basement; running water at house and barn; plenty of wood, lumber, fruit, cherries and berries of all kinds. Address M. HOLMAN, Unionville, Conn.

SPECIAL FARM FOR SALE—91-acre farm, 1¼ miles from Quakertown, near trolley line; bank barn for 30 head, and other outbuildings; plenty of fruit, good water; six acres of woods; all fields machine worked for quick sale, $6,500. IRWIN NEIL, Quakertown, R. D. No. 2, Bucks County, Pa.

100-ACRE FARM FOR SALE—18 miles from Boston, near two fast trolley lines and railroad; all fields machine worked; fine old 11-room house, with all modern improvements, shaded by four magnificent elms; new barn, some fruit; productive land; good roads; best of markets. M. L. FESK, Billerica, Mass.

FOR SALE—Farm of about 140 acres, situated in suburb of large city; 50 acres or more hard wood, fit to cut; farm will carry 25 cows, and milk sells at 5½ cents a quart at farm, 9 cents at city, 25 minutes' drive away. Here is a place the right man can make good money with, and the probable increase in the value of land will be large in near future. $5,000 down and balance as agreed. Address BOX 254, New Bedford, Mass.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

POULTRYMAN—experienced, single, reliable; best references. WEIN, 306 Ninth Ave., New York.

YOUNG MAN, 21 years, wants position on poultry farm; experienced; doesn't drink or smoke. DROUT, 24 Edson St., Corona, N. Y.

FARM HANDS WANTED in institution work; salary $32 a month and maintenance to begin with. Address SUPERINTENDENT, Letchworth Village, Thiells, N. Y.

WANTED—White woman for general housework on farm; three adults; no outside work; reference given and required; $5 a week. SIGNAL FARM, Sewickley, Pa.

WANTED—Capable, experienced, general housework; country, where few boarders are kept; reference given and required. K. H., Montgomery, N. Y.

FARM MANAGER WANTS responsible position, or will buy or rent good dairy, poultry, fruit farm. H. J. L., care R. N.-Y., 333 West 30th St., New York.

YOUNG WOMAN must be out of city next two months; will help in house or garden; salary secondary. M. B., care R. N.-Y., 333 W. 30th St., New York.

1912 GRADUATE of New York State College of Agriculture desires responsible position; good references. W. N. J., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED—Young man, 21, intelligent, ambitious and desirous of learning farming; willing worker; mother good German cook. J. McGUFFIN, 191 St. Nicholas Ave., New York City.

TWO AMBITIOUS HIGH-SCHOOL GRADUATES wish positions, together or singly, on farm this summer; right young men for small farmer wishing help; wages no object. A. FINK, Ridgefield Park, N. J.

WANTED POSITION to care for boats and machinery, gentleman's estate; licensed engineer, pilot, hunter; carpentering; sober, industrious; satisfaction guaranteed. Address O. H. C., care R. N.-Y., 333 West 30th St., New York.

WANTED—Position as manager of large farm or orchard; would like to become partner or owner if satisfactory; best of references; am natural horticulturist, with training and practice and executive ability. A. E. JOHNSON, Iola, Wis.

YOUNG MAN—Practical farmer, with scientific and business education, desires position as secretary or assistant to owner or manager of large farm or farm corporation; single; highest references. Address SECRETARY, care R. N.-Y., 333 West 30th St., New York.

TEMPERATE, PRACTICAL MANAGER, with some technical training wanted immediately for modern 170-acre farm; Alfalfa, potatoes, cows, pigs; desirable, permanent place for party willing to demonstrate at reasonable salary for first year. A. F. HOWES, 6 West Market St., Wilkes-Barre, Pa.

POSITION WANTED—As manager of gentleman's private estate by experienced married American, small family, 32 years old; thoroughly understands all branches of farming, gardening and greenhouse work, and can furnish best of references; eight years in charge of present position. THOMAS A. CLARK, care of Burnett Bros., New York City.

WANTED—Potato planter and digger. FRANK HARDING, Milford, Mass.

FOR SALE—14 Prairie State Universal hovers with regulators, 1913 model, $4.25 each. Just half price. H. BACON, Berwyn, Maryland.

FOR SALE—25 International Hovers; used season 1913; $6 each. W. H. SCHROM, Berwyn, Maryland.

WILL EXCHANGE a new No. 12 DeLaval Separator for good 6 horse-power gasoline engine or registered Jersey heifer calf. L. A. CATHER, Fairmont, W. Va.

BUY OF THE FARMER—Coarse Timothy Hay. CHANDLER BROS., New Gloucester, Me.

PURCHASE ALFALFA HAY direct of the producer and save money. F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—A carload of Alfalfa or Clover Hay; state price and quality. J. W. MILLER, Princeton, N. J.; R. D. 2.

THE ONONDAGA COUNTY FARM BUREAU is prepared to quote prices on Alfalfa, Timothy and Clover hay. 112 COURT HOUSE, Syracuse, N. Y.

FARM—168 acres, best corn land, $100 per acre. Address owner, D. E. CHILD, Findlay, Ohio.

FOR SALE—My farm of 245 acres; particulars address R. N. FAIRBANK, Bernardston, Mass.

93 ACRES and 12 ACRES—Two acres in grapes. Inquire N. M. KISTLER, Emporia, Va.

30 ACRES good land for $250. M. RIGEL, Yellow Pine, Ala.

FOR SALE—46 acres fruit farm. J. C. SYVON, Sheridan, Oregon.

WANTED—Good 50-acre farm for fruit, with buildings, water; state price and full particulars; no agents. G. H. S., 405 Fourth St., New York City.

46 ACRES—Fine cultivation; large house and barn; all kinds fruit trees, strawberries, never-failing water. HATTIE C. BENDER, Halsey Valley, N. Y.

FOR SALE—80-acre irrigated farm in Idaho fruit belt, close to electric car; telephone and R. F. D.; live stock, machinery; easy payments. Address owner, G. PRIMBS, Caldwell, Idaho.

"'Sal-Vet' results are entirely satisfactory. I bought it to rid my sheep of worms, and it certainly did the business. Also fed it to horses, colts and cows, and they are all doing finely."
L. J. ALLEN,
Willseyville, N. Y.

"Some of our neighbors have lost all of their pigs, and some of ours were not doing well, either; but since feeding 'Sal-Vet' to them they are doing fine." ISENBARGER BROS.,
Rt. No. 2, Battle Creek, Mich.

"I had two lots of hogs. To one lot I fed 'Sal-Vet'; was pleased with results, as they went to market in fine condition. To the other lot I fed no 'Sal-Vet.' These hogs did not fatten nearly so well, and at killing time we found many worms in them, while those that had the 'Sal-Vet' had no worms.
I have good faith in my hogs. They look well; but I also have faith enough in 'Sal-Vet' from my experience to believe that it will make them look better." ELWOOD CROSSLEY,
Rt. No. 1, Bloomsburg, Pa.

"I lost fifty dollars' worth of lambs from worms. Am sure that if I had had your 'Sal-Vet' sooner it would have saved me this fifty dollars, as I have not lost one since I began feeding it. Have also been feeding 'Sal-Vet' to a bunch of shoats; they are now the finest in town.
W. A. TOBY,
Lindley, N. Y.

"I lost a number of hogs, and more were dying; then I sent for your 'Sal-Vet.' Fed it to them immediately upon its arrival, and they at once picked up and are flourishing and thriving like the biblical 'green bay tree.' We have been killing some of these hogs and selling them for more than the market prices. If it had not been for the 'Sal-Vet' fed them, I am sure that we would not have one left to sell."
EDWARD F. DIBBLE (Seedgrower),
Honeoye Falls, N. Y.

"I have kept hogs all my life, and have fed lots of grain to make them grow. I sold one lot of hogs before I got the shipment of 'Sal-Vet,' but kept an equal number. I fed 'Sal-Vet' to the latter for two weeks, and while they were not as old as the first lot, I sold them and they weighed 250 pounds more than the oldest whieh had not had 'Sal-Vet'."
JOHN E. SEVERENCE,
Savannah, N. Y.

I'll Feed Your Stock 60 Days Before You Pay

I'll Stop Your Losses From Worms Or No Pay

I'll Prove It On Your Own Stock

I don't ask you to pay me one single cent until you have fed SAL-VET for 60 days and seen with your own eyes it's wonderful merit. I don't ask you to send me a penny **until I prove to you, on your own stock,** the great value of SAL-VET as a worm destroyer and conditioner. I have shipped tons and tons of SAL-VET to readers of this paper who have accepted my "no money down" offer. I want an opportunity **to show you** who have not yet accepted it, that it pays, and **pays big** to feed SAL-VET regularly to all your farm stock — Hogs, Horses, Sheep or Cattle. You have nothing to risk — everything to gain.

The Great Worm Destroyer

TRADE MARK

SAL-VET

REG. U.S. PAT. OFF.

The Great Live Stock Conditioner

makes all animals **thrive better, look better,** destroys and expels intestinal and stomach worms which prey on the digestive tract, **robbing** your animals of vitality and strength and keeping them in an unthrifty, unprofitable condition. SAL-VET will put them in condition to get more good out of their feed—makes them thrive faster — stops your losses from worms, makes stock sleek in coat, vigorous in action, and far better able to resist diseases. Millions of dollars are lost every year by stock raisers who do not keep their animals worm-free, healthy, and in a condition to get all the benefits of the rations fed.

My Best Advertisement Is A Pleased Customer

"I am as strong for SAL-VET as ever. Almost every one, in these parts, has lost hogs, but mine are still doing finely, thanks to SAL-VET." Dick Crookham, Lacey, Ia.

"SAL-VET has been a great help to my hogs as none have died since I fed it, although previous to its use, I had a number of losses T. J. Reed,
Rt. No. 1, Hutton Valley, Mo.

"Hog cholera has swept this part of the country, but for the first time in years, my own hogs escaped. I have been feeding SAL-VET and now I would not be without it for double the price."
Thomas Fitzgerald,
Rt. No. 2, Connersville, Ind.

"I took some of my poorest and weakest pigs, shut them up in a lot by themselves, and fed them SAL-VET in order to make a test. I found SAL-VET all you claim. These pigs are now good, strong, healthy shotes, weighing 125 to 150 pounds. I shall always feed SAL-VET the year 'round."
W. A. Kearn, Rt. No. 1, Tampico, Ills.

"Your SAL-VET is certainly all to the good, and you may always count on me to be a booster.
When the SAL-VET arrived, our hogs were either all sold or dead with cholera. There were five little runts alive, which were considered as good as dead, but, thanks to SAL-VET they are the best looking hogs of their age in the neighborhood.
My one regret is that we did not get SAL-VET sooner, as I feel that we could have saved the whole bunch."
LeRoy A. Barrett, Oswego, Ills.

"When the SAL-VET arrived my hogs were sick, and up to that time, I had lost sixteen pigs, all under twenty pounds. After the balance of the pigs had access to SAL-VET, they came through all right, and some of them now weigh 525 pounds, which I consider pretty good. I am talking SAL-VET to every man I meet, as I honestly believe it is the one conditioner and preventitive to feed to hogs the year 'round." Ben E. Woitte,
Prop. North Grove Farm,
Rt. No. 1, Milbank, S. D.

"When we butchered our hogs, we found them entirely free from worms, although before we began feeding SAL-VET, one hog in particular seemed badly out of condition and was coarse and rough. When we butchered him, he was the smoothest and fattest hog in the bunch."
F. H. Durflinger,
Rt. No. 8, Van Wert, Ohio.

Look For This Label

on all SAL-VET packages. Don't be deceived by imitations.

Don't buy "Sal" this or "Sal" that; get the original genuine SAL-VET.

PRICES 40 lbs., $2.25; 100 lbs., $5; 200 lbs., $9; 300 lbs., $13; 500 lbs., $21.12. No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold in bulk; only in Trade-Marked Sal-Vet packages. Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

Don't Send a Cent—Just the Coupon

Tell me how many head of stock you have and I'll ship you enough SAL-VET to feed them 60 days. You simply pay the freight on arrival—feed it as directed. At the end of two months report results. If SAL-VET has not done all I claim, I'll cancel the charge — you won't owe me a single penny. Send the coupon today and begin action against worm pests—the greatest enemy you have to contend with in raising stock.

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Ship me enough **Sal-Vet** to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days, and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

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P.O.....

Shipping Sta.....*State*.....

No. of Sheep.....*Hogs*.....*Cattle*.....*Horses*.....

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Cornell University
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BUFF WYANDOTTES WIN IN CALIFORNIA.

A Picture of the Winners.

The picture on this page shows the winning pen at the California egg-laying contest, which recently closed at Napa. This is a pen of Buff Wyandottes owned by W. H. Pearson. These six birds laid, during the year, 841 eggs, or 140 each, and they defeated 66 other pens, the nearest to them being six White Leghorns which laid 802. This California laying contest had several original features. Instead of starting as the others did in the Fall, so as to give breeders a chance to enter their Spring-hatched pullets, this contest opened in February, at a bad time for hens to start and make their best record. Instead of 10 hens to the pen, as is the case at Storrs, or five hens, as at Thorndale, Pa., each pen in this California contest had six hens, the owner having the privilege of keeping a rooster with them if he desired. The hens were all kept in one large building, with little or no exercise, being closely confined all through the year. The season in California was not favorable to egg production with hens kept under these conditions, and while this yield of 140 eggs this year does not compare favorably with the records made at Storrs, it does require good birds to give a fair record under the hard conditions of this California contest. During the earlier part of the contest the Leghorns ran rapidly to the front, and it was thought that they would make a runaway race of the trial, but later the Leghorns fell by the wayside, and the Buff Wyandottes steadily cut down their lead and finally passed them. In this contest a large proportion of the leaders were found in the American breed. Whether that shows that this larger type of hen is better suited to California conditions, or whether such birds are better adapted to close confinement, will be a matter for speculation. We think, however, it will be found that birds like the Wyandotte or Rhode Island Red are better adapted to a contest under these California conditions than are the lighter or more nervous birds like the Leghorn.

It is a question whether such a contest as this, with the birds closely confined and under conditions which would probably not be found in commercial egg production, really gives a fair test of the birds. However, there is no disputing the fact that Pearson's Wyandottes walked up to the front and stayed there. One report of this trial stated that these birds were trap-nested, but Mr. Pearson says this is a mistake, for they were not trap-nested at all. Pearson also claims that these birds are high scorers in the show ring, and that these trials demonstrate that fancy poultry, or what we would call blue ribbon stock, can also excel at egg production. These birds, however, will have to lay more than 140 eggs apiece in order to hold their own with some of the utility birds which are usually found at our Eastern contests.

These Wyandottes come from the stock of Dr. N. W. Sanborn. He has two pens of high score birds in Storrs contest. Dr. Sanborn's birds are making a very good record. Although not up at the top notch, they are, however, blue ribbon birds, and their record also goes to show that a hen may excel in the show ring and still lay a large number of eggs during the year. We think the California contest managers made a mistake in starting their contest so early in the year. It would be far better to wait until late in the Fall, as that would give breeders an opportunity to develop their Spring-hatched pullets so that they would start laying early in the contest. It is one of the most hopeful indications for the future of the poultry industry, that these contests are creating so much interest throughout the country. The poultry business has in the past lost something of the stimulating effect of the dairy cow contests which have done so much in the past to improve the dairy cow and give her a personal reputation. We believe that after a few more years of these contests, breeders will be able to develop breeds and "strains" of laying hens and place the business of handling pedigree birds upon a sure and strong foundation. There can be no question about the possibility of improved poultry culture in the future. For instance, the world's meat supplies are rapidly running short, and there is no way for men to turn under our present conditions in order greatly to increase the supplies of beef and pork. Improved marketing and selling conditions here in the East would have the effect of increasing the beef supply somewhat, but the cattle buyers and slaughterers now have such a monopoly in the matter that it is very difficult to improve conditions so long as they control. The people will have meat of some sort, and as prices of beef, mutton and pork go up, the hen man finds his opportunity for an increased supply of poultry and eggs. There seems to be no question about this, and therefore, the business should be thoroughly organized and complete investigations made regarding the best forms of the different breeds and the best ways of producing both eggs and chickens. Poultry contests are aiding this better than any other plan which has yet been devised, and it should be encouraged in every way and carried through.

A PEN OF BUFF WYANDOTTES—CHAMPIONS IN THE CALIFORNIA EGG-LAYING CONTEST. Fig. 223.

As further information about the breeding of these prize winning birds we print the following note from Dr. Sanborn:

"Pearson's pen was made up of six females that were two years old when the contest ended on February 20. These six layers were all sired by a cock that he hatched from eggs I shipped him

across the continent. These eggs were from my best show mating—headed by a cock that had won first at Madison Square Garden, and made up of nine females that had won ribbons at Boston, Washington or the Garden shows. So much for the sire of his pen that won first. On the female side of Pearson's pen that produced these six layers there was some blood not directly from my farm. On that side there was about one-fourth blood that was a constant winner at our State Fair. It was from a line of winning stock."

A BUNCH OF FACT AND OPINION.

The $1.50 Dollar.

We are greatly indebted to the services of your company in its endeavor to secure fair treatment for the public, and especially for your subscribers, from common carriers and other organizations, and it is for this reason that I call your attention to the situation outlined in this letter. There is, about seven miles from the center of Williamstown, a lime company which offers agricultural lime in hundred pound bags at $4 a ton. Mindful of the constant references in your excellent paper to the value of lime I wrote to railroads for rates from Zylonite Station in Adams, Mass., to Williamstown. I find that for the haul from Zylonite Station to North Adams the charge is made for lime in less than carload lots of five cents a hundred pounds. This is over the Pittsfield branch of the Boston and Albany Railroad, the westerly terminus of which is North Adams. The rates from North Adams to Williamstown, a distance of five miles, is five cents per hundred pounds. In other words, for hauling this product about seven miles the cost would be $2 a ton, or 50% of the value of the product. We hear a good deal about the desire of the poor abused railroad corporations to assist the rural communities. In fact we in Western Massachusetts the last few years have been told how eager a certain railroad corporation has been to open up the dark and benighted recesses of our hinterland to the civilizing influences of railroad and trolley facilities. This is a good example of the attitude of the railroad corporations toward the development of rural communities. While it is undoubtedly true that the attitude of the public in many instances has been unfair to corporations, it is still more true that this attitude has been caused by a long series of unreasonable and unfair acts of corporations toward the public. If there is any injustice toward public service corporations in the legislation of the present day, it is the logical result of the accumulated grievances of the public, to which through a long series of years the corporations turned a deaf ear in an insolent attitude of defiance. They sowed the wind and they are now reaping the whirlwind. SANBORN GROVE TENNY.

Massachusetts.

Rough Handling of Mail.

I was for nearly five years postmaster of the city of Fitchburg, Mass., so would be supposed to know a little about handling U. S. mails. Before parcel post existed the mails were handled in a very rough manner, which seemed wholly unnecessary; thrown loosely into bags and bags thrown with all the strength a clerk could muster, one clerk testing his strength with that of another, from one end of the long room to the other; slammed into a mail wagon and from wagon to car. The same treatment was given it from mail car to its office of destination. More than this, for much of it was repeated over and over before the addressee received his smashed up package. I have seen many baggage cars loaded with many kinds of freight, but not even cordwood and coal is handled so roughly or in such a don't-care kind of manner as the United States mails.

Is that method of handling necessary? If it continues, parcel post will soon become very unpopular. As parcels are now handled by the post the box or container must cost about as much as its average contents to prevent its being smashed en route. Why is the Postoffice Department so stupid in regard to this package handling? Why not require all who handle them to exercise the same care as do the express companies? Why not use hampers, pack them carefully with the packages, and insist that they be handled with the same care that crates of eggs are handled by express? I think if the Postoffice Department should push its parcel post improvements on that line it would prove much more popular than raising the weight allowed or reducing rates. THOS. H. MANN, M. D.

The Hired Man and Contracts.

A Canadian farmer brought suit against his hired man, for violating a contract or agreement of work for a certain term of months. In this case the hired man was engaged to work through the season. When the hardest work of the year came, this hired man simply left, claiming his wages up to date. If the farmer had discharged the hired man when work became slack, or through some incident which spoiled his season's plans, the hired man could have compelled the farmer to keep his contract, and either give him work or wages for the full term. This Canadian farmer appeared to think that it is a poor rule which will not work both ways, so he brought suit against the hired man. The courts have decided that a farm hand who makes a yearly contract with his employer, and who violates this agreement, is not entitled to his wages, but is liable for damages, sustained to the crops of the farmer,

ORCHARD INTER-CROPPED. Fig. 224.

because he left. Many a man will testify to the fact that his hired help have left him right in the crisis of his work, and sometimes the man goes because he can obtain better wages elsewhere, or he may have other reasons. Generally it has been supposed that there is no redress for this violation of contract, although if the farmer discharged the man he is always liable for the contract wages and damages as well. This Canadian decision puts the relations between farmer and hired man in a new light. They are under such a decision, on terms of equality in the law, so that a breach of contract is the same for one as for the other. It is not likely that a farmer could ever obtain damages from the ordinary hired man, but it is no more than fair that the two parties to a contract should have not only the same privileges, but equal responsibilities for violating their agreement.

Railroads and Apple Shipments.

Here is a case which will interest our fruit shippers. A fruit grower in an Eastern State received an order from a produce company for 20 barrels of apples, 10 of one well-known sort, and 10 of another. The buyer agreed to pay $2.50 a barrel f. o. b. at the grower's station. When the order came, the grower did not have a full 10 barrels of one sort. He therefore sent 12 barrels of the second variety or-

ORCHARD SHOWING COVER CROP. Fig. 225.

dered, seven of the other ordered variety, and three barrels of another well-known kind, all No. 1 fruit, properly packed. The shipment was made by order with bill-of-lading, with sight draft attached. After the apples arrived this produce company wrote that they had examined the shipment, and made complaint both as to kind and quality, but they demanded a rebate of 30 cents per barrel. The bill-of-lading expressly prohibited any inspection, yet the railroad company disregarded this instruction and permitted the buyer to look the apples over. For that reason the grower declined to give any rebate. He held that the railroad had violated its contract by permitting inspection. Therefore he declined to instruct the railroad as to distribution of goods. The apples were refused by the produce company after the shipper declined to give the rebate of 30 cents per barrel and the railroad refused to pay the price for which apples had been sold. The grower then got a judgment in the magistrate's court against the original railroad which started the freight. This case was appealed to the circuit court, and was tried, the jury giving a verdict to the grower for the full amount. The grower proved that the apples were No. 1 fruit. He also proved that the produce company was permitted to inspect the apples, yet the judge set aside the verdict, the railroad company offering $18 less than the amount sued for, on the ground that this figure was what the apples brought at their sale. The case will be tried again, but this statement will interest many of our readers who are shipping fruit with a bill-of-lading, like the one here mentioned, which prohibits inspection, but which prohibition is violated by the railroad. Not only in this case, but this grower states that the same thing has occurred with other apples shipped by him.

INTER-CROP AND COVER CROP.

A great many persons realize that to inter-crop a young orchard may give immediate returns, but they fail to realize that immediate returns also decreases the future returns unless you use judgment, and give enough fertilizer in some form to grow the inter-crop, and also furnish something for the growing orchard. By a system of inter-cropping with crops that are quick maturing and early, and later when the crop is harvested sowing a cover crop to turn under, the fertility of the orchard soil can ordinarily be kept in the best of condition. The picture of the three-year-old peach orchard, Fig. 224, was treated in this manner.

The first year the ground was plowed in the Spring, thoroughly disked and harrowed, marked both ways with a three-row sled marker as for corn, and the whips set in every fifth row, making the trees 17½ feet apart. Then we drilled garden peas between the trees. All were thoroughly cultivated. The peas were all harvested by the middle of July, at which time it was disked thoroughly, then sown broadcast with a combination of Crimson clover, Strasburg radishes, Cow-horn turnips and any left-over seeds of buckwheat or most anything that would help to cover the ground. The picture was taken last June about the time peas began to ripen. This crop of peas yielded at the rate of $18 per acre, while the peaches yielded a total of $31 per acre, this being their first crop.

Fig. 225 was taken in the apple orchard the last of August. Notice the density of the cover crop, six weeks' growth of oats and peas. This is no remarkable yield, but the inter-crop, we believe, more than pays for the cultivation and seed, while our orchard is in the best condition. Our orchard receives the dormant spray of lime and sulphur, also the apples are sprayed just after the petals fall with arsenate of lead, added to the lime-sulphur.

Indiana. E. H. BECK.

DOES SPRAYING POISON BIRDS?

I enclose a clipping from the Fitchburg *Sentinel*, which I think may prove of interest to you, and also to your readers. Spraying is done here in our town, and so far as I know there have been no deaths of birds or animals from the arseuate of lead used. I have fed hay to my horses which was cut under trees that had been sprayed, and have seen no ill effects. C. E. W.

Massachusetts.

The clipping referred to is from *Park's Magazine* —a letter from Niagara County, N. Y. The writer states that the slaughter of birds after spraying is "something awful."

Oh! if you could see the dead birds lying about after an orchard has been sprayed you would condemn more than cats. I have had two valuable cats killed by eating birds which had eaten poisoned insects, and the cats caught them as they were dying. The birds eat the insects that are covered with the poison, and they also drink the poisoned water from the leaves, and no bird escapes. They die by hundreds, and their little ones are left in the nest to starve or are poisoned likewise.

We have seen nothing of this bird slaughter in our own orchards, but this is worth considering. We have many readers in Western New York where the author of this article lives. Will they give us their experience? What are the facts about birds and spraying?

Dogs! A woman came home from Europe carrying what seemed at first sight a bull terrier dog. It turned out to be a dead dog, or rather its skin, turned into a "vanity box" in which this woman carried her perfumes, powders and handkerchief. This seems to be the latest use for Jack or Fido.

PRUNING GRAPEVINES.

I would like a little instruction on how to trim my grapevines, some two years old, some 15 years old, one 40 years old. E. D. S.
Savannah, N. Y.

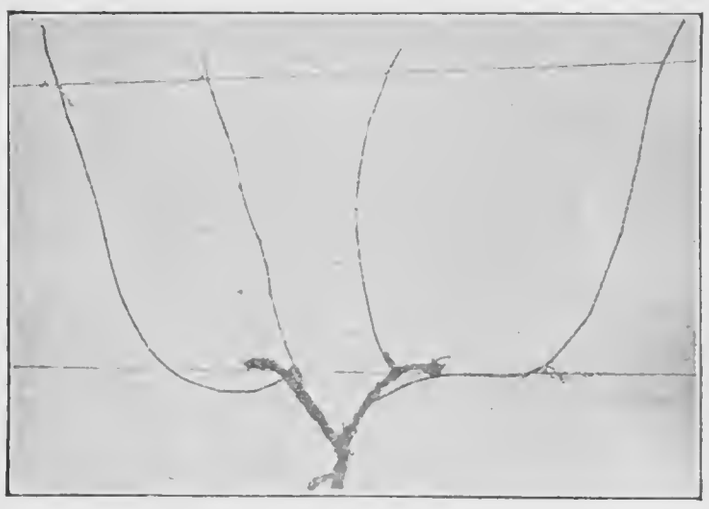
Since some of the vines concerned with this inquiry are 40 years old it is presumed that some sort of a trellis is employed. Not knowing the system of training that has been used in the past, it is impossible to give specified directions, but only general principles can be laid down.

First, a certain amount of old wood as a framework to support the fruiting wood must be carried; i. e., the stem, and in some systems, arms. It is almost needless to say that the stem should be straight and not crooked and gnarled. If such be present they should be renewed from the ground by utilizing suckers for the purpose. The arms should be kept shortened in and renewed at frequent intervals as they become guarled or diseased. From the stem in some systems or from short spurs on them the fruiting wood is obtained. This wood may be in one instance short spurs and in another canes carrying from six to 10 buds. When vines are pruned to spurs the major part of the tying is delayed till the fruit-bearing shoots are long enough to reach to the second wire of the trellis. This is also the case when the high-renewal system is employed. Here the fruiting wood is canes however, but they being tied horizontally along low wires the shoots require a Summer tying to the upper wires. When the other cane-renewal systems as the Chautauqua, the single stem, the double stem or the umbrella Kniffen, the canes are tied vertically, obliquely, horizontally or curved as the ribs of an umbrella. These canes arise from spurs left for the purpose, or from dormant buds on the old arms and stem. Well-ripened and properly located canes are selected, that is those that can most readily be adpusted to the wires. Oftentimes not much choice is left to the vineyardist and ill placed and immature canes must be used.

The accompanying pictures illustrate vines pruned and tied, the one according to the Chautanqua system, the other the high-renewal. In the first named no Summer tying is necessary, in the latter the shoots must be Summer tied, rye straw or raffia usually being utilized. In the Chautauqua system a stem and two arms are more or less permanent, although the arms are or should be renewed at frequent intervals. In the high-renewal practically all the wood older than two years is the short stem, reaching to the level of the lower wire, and a few short spurs from it, to furnish the fruiting wood for the following year. In both cases the trellis may be made with three wires, the lower being 18 or 20 inches from the ground and the others about the same distance apart. In pruning the fact that the best and greatest amount of fruit is borne on wood of one year's growth should ever be uppermost in the pruner's mind. F. E. GLADWIN.

"AN EASY GRAFT."

Every orchard grower in Missouri is familiar with the saw graft or, as it is often called, the Coburn method of grafting. Curiously enough, however, this method is practically unknown in most other parts of the country, notwithstanding that it is far easier than the common cleft graft and usually just as successful. Prof. W. W. Chenoweth of the Massachusetts Agricultural College is now introducing this graft to the farmers of the East, and probably it will be largely experimented with this season.



VINE PRUNED BY CHAUTAUQUA SYSTEM. FIG. 226.

Instead of using a grafting hook, a sharp even-toothed saw with a fairly good set is called into play. The branch to be grafted upon is sawed off in the usual manner, and it is preferable that the branch should not be more than 1½ or two inches in diameter. Then a cut is made with the saw, running from the top of the stub down the side a distance of two or three inches. The depth of the cut at the top should be about one-half inch and of course it will diminish as it extends down the stub.

The scion should be similar to that cut for a cleft-graft, but must be shaped a little differently. Both sides of the lower end are trimmed a distance of from 1½ to two inches, so as to secure a wedge, and one side should be thicker than the other. The best way of explaining the way to trim the scion is

MAKING CUT FOR GRAFT. FIG. 227.

to say that it must fit snugly into the saw cut, with the bark of the scion meeting that of the stub on each side. When fitted into place, the scion will be firmly anchored, if properly made. The next and final step is to apply grafting wax all around the scion, making certain that every part of the saw cut is covered. Commonly only one scion is inserted, for an expert in the use of the Coburn method expects pretty nearly every scion to grow. There is no reason, however, why two scions should not be grafted on a single stub. In fact, if it is found advisable to graft a large branch, it may be well to use three scions.

There are several advantages claimed for the Coburn method, but the one which appeals most

SCION INSERTED BUT NOT WAXED. FIG. 228.

strongly to the man who has a large orchard is the fact that the work can be done with extreme rapidity and yet with a certainty of success quite equal to that which may be expected when the slower cleft graft is employed. Then, the stub is not split down and less wax is required to protect the scion. This plan of grafting may be used on any fruit tree which is in condition for grafting. Many times failures to succeed when grafting cherry trees are due to the fact that the work is left until the dormant season is over, as is the practice when grafting apple trees. Success is much more certain if cherry trees are grafted in February or early March. E. J. FARRINGTON.
Massachusetts.

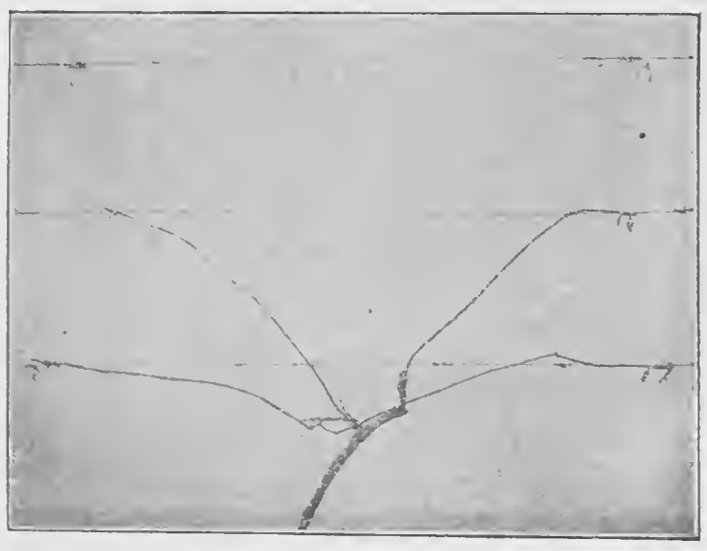
THE CHICKEN THIEF PROPOSITION.

On page 394 I read the article, "Chicken Thieves and Rural Police," by Leo A. Mapes. I will tell Mr. Mapes how we do business in Buckeyedom. About 35 years ago, in Northern Ohio, we were annoyed considerably by the loss of valuable horses, besides much petty theft. The farmers in this locality lost, in three months, 10 horses which had been stolen. Forbearance had ceased to be a virtue, and about 70 of them organized themselves into a vigilance committee, obtained a charter from the State, and later on many others did likewise, and formulated a State organization, again obtaining a State organization charter. This grants to every member of the several local organizations a pursuer's certificate and full power to make arrests without a warrant if necessary, the same as a deputized State marshal. In this section of Northern Ohio we have lost but two horses that we have not returned to the owners, and have sent several horse thieves to the penitentiary, some of them serving time now, besides chicken thieves, smokehouse looters, and many other misdemeanors until we have practically eliminated such lawless gentry. The expense of such organizations is nominal. We charge here one dollar a year for protection and can safely say that we have plenty of money in the treasury to follow a horse thief across the continent, and unless some fellow goes wrong we are thinking of importing a good live horse or chicken thief for the boys to work on, for fear they will lose interest with the dry rot. If we could get some of the good law-abiding citizens of New York to formulate such organizations (Pennsylvania and Ohio already have the Rural Police), we could call a convention and formulate a Tri-States organization whereby we could take down the State fence lines and make arrests wherever the culprit is found. W. C. WILLIAMS.
Huron Co., Ohio.

ACID PHOSPHATE IN MANURE.

I have been reading THE R. N.-Y. for March 7, and must say I think it one of the best numbers I have seen of the best agricultural paper I know. On page 378 H. H. asks about mixing hen manure with fertilizers. Your advice as to handling the droppings may be all right, but I think the desired end—the preservation from waste by heating, and having the material in suitable condition for use—may be attained with less trouble and expense. I have for several years past used acid phosphate for preserving the droppings from fermentation and waste. I scatter it on the droppings board freely, and if it is not convenient or weather does not permit cleaning the boards before the accumulation becomes objectionable, I scatter more acid phosphate over the material as it lies. The acid phosphate has the power almost entirely to prevent disagreeable odors, and keep the house sweet and fresh smelling. When I gather the droppings I put them in a pile in a protected place and mix with them more acid phosphate. Kept in this way, the droppings do not dry into hard lumps that require pulverizing, and are preserved entirely from waste. Also the acid phosphate is needed to help make the droppings a more well-balanced fertilizer. Some potash will need to be added when the manure is used at planting time. The potash might be used on the droppings board and in the pile, and it would assist in preserving the manure, but I should be afraid to use it on the boards, as I think the hens might eat the crystals, which would poison them.

While I am speaking about the use of acid phosphate, I will mention another place where I found its use very desirable last year. I used it in the horse stable, sprinkling it over the wet stable floor. Its use entirely prevented all unpleasant odors, and also kept the manure from heating and burning. Also it very largely—almost entirely—kept flies from breeding in the manure. I cannot say what proportional quantity of the acid phosphate is needed to produce the results I have secured, but I used it quite freely, as I considered its use cost nothing except the labor of using, as its fertilizing value fully offsets its cost. As warmer weather and fly time is coming soon, I think the knowledge that horse manure can be preserved from heating and flies prevented from breeding in it may be of



HIGH RENEWAL SYSTEM. FIG. 229.

value to many persons; and these ends may be attained entirely free of cost. MONROE MORSE.
Massachusetts.

R. N.-Y.—We have often advised the use of this phosphate in horse manure as a fly repellent. As to hen manure, one or two cases have been reported where too much acid phosphate was used and the hens' feet were injured.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

SOUTH JERSEY NOTES.

Nitrate of Soda for Tomatoes.

How should I use nitrate of soda with my tomato plants, both in cold frame and field? H. P. R.

Burlington, N. J.

We do not use nitrate of soda in the cold frames for any of our plants. A few years ago we had several sashes of egg-plants that were starting very slowly, and to get them going we decided to use a light dressing of nitrate of soda. If I remember right we used it on all but one or two sashes. The application was very light and made in the middles of the rows, which were five inches apart. A neighbor present at the time remarked that an application as light as that could do little hurt even if it did no good. But it did hurt them, and with the exception of the one or two sash the entire bed was practically ruined. I know of others who have had very disastrous results from using both nitrate of soda and ready-mixed fertilizers in the cold-frame beds. An early start with tomato plants means much, and every grower wants to give the best treatment, but in view of the uncertain results from the use of nitrate of soda I would rather advise anyone to use good homemade stable manure or hog manure, or a mixture of the two, in the beds for his main crop of plants, and use nitrate only on a few as an experiment. In passing I may say that while New York manure gives good results in the field it has a tendency to burn plants when used in cold frames. In the open field nitrate of soda is all right and if used early in the season, in moderate amounts, it will increase the yield and not at the expense of earliness. One hundred and fifty pounds per acre is a fair application. Three hundred pounds is quite heavy. Some growers use ready-mixed fertilizer in the hill and then as soon as the tomatoes start give one or two top-dressings of nitrate of soda, putting on from 100 to 150 pounds per acre at each application.

Strawberry Growing.

1. I have half an acre of strawberries; this is the second year. They gave me a big crop last year. They have had 800 pounds fertilizer, vegetable brand, put on them in three applications since Spring, 1912, when planted; 100 pounds bone meal. Hot dry weather set in before crop was gathered, cooked berries and plants both, but I mowed them down and weeded and tilled until freezing weather. They came out and grew big and healthy, but made no new plants. I did not top-dress them, as I am in South Jersey and get fair results without. What kind and how much fertilizer and how late will answer? Are they worth it? 2. I have two horses, will have but one this Summer, two hogs. I wish to put acre in some forage to cut and feed them. What should it be? I have ground near oak and maple swamp which grew large cabbage last year. How about that for forage, also for new strawberry bed? Old blackish soil near swamp was farmed first time in 15 years last year, but grew fine cabbage and turnips.

Manahawkin, N. J. J. C.

1. On the sandier types of soil, here in South Jersey, we find it is not necessary to mulch strawberries; but on heavy soils it pays to do so because freezing and thawing of the soil in late Fall and early Spring will throw out the plants. Our main crop strawberry has been the Gandy. They are grown in matted rows and we find that it pays well to use fertilizer on them the second year and also the third year provided the bed consists mainly of berries and not natural grasses and clovers as is so often the case the second or third season. Fertilizer should be applied just about the time growth starts in the Spring, and this year we are planning to use a 3.7-8-8 mixture, most of the nitrogen in which is quickly available, at the rate of 400 to 500 pounds per acre. It is put on with a drill that scatters it evenly over the row. I have seen fertilizer put on after blossoms appeared with the result that many of them were killed from contact with the fertilizer. 2. Forage crops are out of my line but I can think of nothing better than Canada field peas and oats seeded at the rate of one and one-half bushels of peas and one and one-half bushels of oats. That black soil near the swamp would seem to be ideal for both forage crops and berries. However, it would pay us better to plant that in berries and truck and depend on sweet corn stalks, cull tomatoes, sweet potatoes, etc., to furnish roughage for the horse and pigs.

Mussels for Lime.

We have been experimenting a little on our 200-acre farm with Alfalfa, and it seems to flourish all right. We would like to go into it more extensively, but the cost of lime added to the other expenses of starting make it rather expensive. We live near the "mussel beds" and would like to know something of the analysis of it and whether it would be right for clover or not. A. R.

I have no personal knowledge of the use of mussels as a source of lime, however I quote the following from the late Dr. E. B. Voorhees: In certain sections of the coast States farmers have access to an almost unlimited supply of mussels, which may be had for the carting. Analyses made at the New Jersey Experiment Station show them to contain, in their natural state, a very considerable amount of fertilizing constituents, the nitrogen reaching .90 per cent., the phosphoric acid and potash .12 and .13 per cent., respectively, and the lime 15.84 per cent. The organic portions of the mussels decay rapidly, and serve as a fairly good source of nitrogen; and since this product is twice as rich in this constituent as average yard manure, it is well worth the expense of hauling.

Lime on Sweet Potatoes.

Is it advisable to use lime on Lima beans and sweet potatoes and what lime do you think is the best for ground in Gloucester Co., N. J.? C. H.

We have used lime for Lima beans and sweet potatoes with good results. Both ground limestone and lump lime have been tried. There seems to be little difference in the results from either. On sandy soils we try to get on about one-half ton of lump lime and one ton of ground limestone per acre.

TRUCKER, JR.

Spring Rye and Vetch.

I seeded down about three acres to oats last Spring, and the dry weather killed out the grass. Can I put Spring rye and vetch on the lot for hay, and how much per acre to reseed? T. H.

Cambridge, N. Y.

You can sow Spring rye and vetch, but it will not give you as much or as good fodder as Canada peas and oats—which we have often advised.

THE AMERICAN PEACH ORCHARD, by Prof. Waugh. We have long needed a definite specialized book on peach culture, and Prof. Waugh's new work is very welcome. The chapters on climatology, soils and exposures, and on choice of varieties, will be found extremely helpful. Planting, care and marketing are treated from the selection of the trees to the final package, while the ultimate consumer is treated to a number of tested recipes. The catalogue of varieties is a welcome feature. Published by the Orange Judd Company, New York; 238 pages; illustrated; price $1.00.

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are money makers in that territory. Plant the kinds that pay best.

Harrisons' Trees are budded from bearing orchards. They are true to variety.

We sell only trees we grow. Every tree we ship is clean, straight, healthy.

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Free Catalog is unusually complete, practical and filled with helpful information for fruit growers. Write today.

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"Norway Maples arrived and unloaded. Must say this is the best Carload of Maples I ever handled."

I can fill your order for 100, a carload, or 1000 of as fine trees as you ever saw. Let me quote you my price on 8 to 10 and 10 to 12 foot delivered to your railroad station.

JAS. A. PATTERSON,
STEWARTSTOWN, -:- PA.
(Old Patterson Nurseries)

Native Evergreens—Hemlock, American Spruce, Arbor Vitae, White Pine, Balsam Fir, 6 to 12 inches, $5.50 per 1,000; 5,000 for $25, f.o.b. Also transplanted evergreens. Write for price list. The James A. Root Nurseries, Skaneateles, N. Y.

850,000 GRAPE VINES

69 varieties. Also Small Fruits, Trees, etc. Best rooted stock. Genuine, cheap. 2 sample vines—10c. Descriptive price list free. Lewis Roesch, Box D, Fredonia, N.Y.

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extra-select, two-year, 5 to 6-ft. by EXPRESS, Prepaid, for $3. Satisfaction guaranteed. Order at once and write for prices on full line of Nursery Stock. Sold direct to planters, at less than half the usual prices.

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1 Elberta peach; 1 Harvest, 1 Baldwin apple; 1 Bartlett pear; 1 Montmorency, 1 Oxheart cherry; 1 Orange quince; 1 Maloney prune. All 3½-4½ ft. Grapes; 1 Concord blue, 1 Delaware red. Currants: 1 Perfection, 1 White Grape. 3 Pleplant roots. Value $1.65 for 98c. Send today for free, 1914, wholesale, illustrated catalog of Fresh Dug, Guaranteed True to Name and Free from Disease Trees. Maloney Bros. & Wells Co., Box 89, Dansville, N.Y.

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Our own selection from list advertised last week will consist of at least three kinds and you have the privilege of barring one of these kinds as unsuitable for your locality. We offer our selection as follows:—

3½ to 5 ft. @ $8.00 per 100
3 to 4 ft. @ 6.00 per 100; 40.00 per 1,000
2 to 3 ft. @ 5.00 per 100; 30.00 per 1,000
1½ to 2½ ft. @ 3.00 per 100; 20.00 per 1,000

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Burbank and Abundance, 2 year, extra fine. $2,00 per 10, and $15 per 100.

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12 to 18 inches, extra fine at $6.00 per 100.

A full line of Ornamentals.

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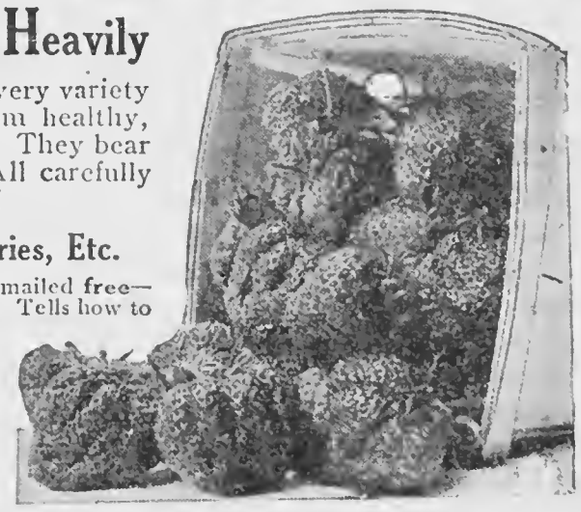

Farm Engineering.

Waterproofing Paper.

Can you tell me what cheap material I can use to waterproof paper? I can get almost any quantity of large heavy paper boxes, and could use them to line poultry houses, if they could be made waterproof without too much expense.
Palmyra, N. Y. W. L. P.

Paper may be readily waterproofed in a great many ways. Probably the cheapest method for use with your paper boxes is to coat them by means of a brush with hot coal tar, thus making a sort of roofing paper. Another mixture may be made for coating the paper, of half a pound of soap dissolved in a large teacupful of water mixed with half an ounce of gum arabic and one and one-half ounce of glue which have been dissolved together in another cupful of water. You will want more of the mixture than this will make, of course, but keep these proportions. Soak the paper in the solution and hang it up or lay it out to dry. If possible, roll the superfluous liquid out of it before spreading it out to dry. Try each of these methods on a box and see which is most successful. You can also compare the price of the treatment in your locality. In most places the coal tar would cost less and I should suppose that you could obtain it readily.
R. P. C.

Laying Wood Block Paving.

In laying wood block paving, which would be the best method to withstand heat, such as boiling water continuously poured on it, or where the sun shines all day long, cement or pitch for filling?
Rhode Island. J. M.

Not having had sufficient experience to be sure of the best method under the circumstances you describe, your question had to be referred to a number of experts who have had long experience with wood block paving, and strangely enough, they all recommend the pitch filling. Cement filling is used to some extent but, so far as I can learn in only an experimental way. Brick and asphalt blocks are commonly imbedded in concrete. On reading your questions several times, it has occurred to me that you may be asking two entirely separate things. In the first place, wood pavement, properly placed end grain up is very satisfactory. It depends somewhat on the character of the traffic, but it has been used on the main streets of many Massachusetts towns and cities for years. As to a surface coating for a roof or a floor or something of that kind, exposed to boiling water or a hot sun, concrete would be better than pitch alone. Cement would, of course, be as good as or better than concrete in most places, although costing more than concrete. R. P. C.

Siphon Over Elevation.

Can we siphon water over a ridge 33 feet high, where we can have the outlet 50 to 75 feet lower than the spring?
Grandview, Wash. J. M. P.

You cannot with safety siphon over a ridge 33 feet higher than the spring, no matter where the outlet may be placed. The reason is that a siphon works on the principle of the suction pump. In place of a piston removing the air from the pump cylinder, thus forming a partial vacuum and allowing the atmospheric pressure to force the water up to fill the vacuum, the water in the long arm of the siphon rushes out because of its weight, and leaves a partial vacuum, which is filled by water forced up the pipe from the spring by the atmospheric pressure on the water at the spring. Atmospheric pressure will support a column of water about 34 feet high. If you could so arrange your siphon pipe as, for instance, by digging a ditch at the top of the ridge so that the water would be well within that distance above the spring, your siphon would work. Placing it on top of the ground without accurate measurement being made, when the ridge is so near the maximum height, would be almost certain to result in failure. It is only this one point in the pipe that must be carefully placed, provided the pipe is airtight and the outlet is appreciably below the level of the spring. R. P. C.

Fireproofing Wood.

I am building a house, and wish to fireproof some of the framing material joining the brick work that will probably get pretty hot from the furnace. Can you tell me what material I can use, and how to use it to make this woodwork incombustible? H. L. M.
Painesville, O.

Making wood fireproof by means of a coating only is, in fact, merely the application to the wood of some substance which is fireproof. For instance, you could tack up a sheet of asbestos, but you don't wish to do so. The logical substitute is to paint the wood with a liquid asbestos paint. Really this is the same thing, but a little neater job. Such a paint consists of powdered asbestos seven parts, sodium borate four parts, gum lac three parts, water 20 parts. Dissolve the borax and lac in the hot water and add the asbestos. Give the wood four or five coatings, letting each one dry before applying the next. If you wish to treat the wood before putting it in position, soak it in a solution of boric acid, one pound; ammonium phosphate 10 pounds and water five gallons. A satisfactory job should result from either of the above protections, but on the whole, I think the paint is to be recommended because it may be easily renewed when renewal is needed. R. P. C.

Some Farm Conveniences.

A barrel stood at some convenient place in the barn will make a mighty handy place to stack the forks, shovels, and hoes. Some farmers may have a "wardrobe" for these tools, but there are hundreds of barns in which the forks and other tools are stood against the wall or a post. The barrel provides a place to put the tools, and when such place is provided, use it. Misplaced tools require time to find, and on one farm I know fully five days' time for one man for the year is spent in searching for scattered hand tools. There may be some niche or corner about the barn which is convenient and adapted for the placing of tools; if not try the barrel. It will pay. It is a simple idea, but its use will save steps and dollars in the year.

If a tine breaks from a fork, don't throw it away, but put it in the mowing machine tool box. You will find it will be one of the handiest tools about the machine during the haying season. It will enable one to get at oil holes and clean them out. It is just as efficient around other machinery. The curve in the tine makes it possible to get around shafting which could not be reached were it straight, and its length makes it more serviceable than a nail or spike. Another stunt will be to remove the axles from the old buggies and use them for props for the doors about the barn, and for such purposes as an iron crowbar may be used. In doing so save the clips, place them in a box kept for bolts and burrs, for they will come handy about the farm. W. J.

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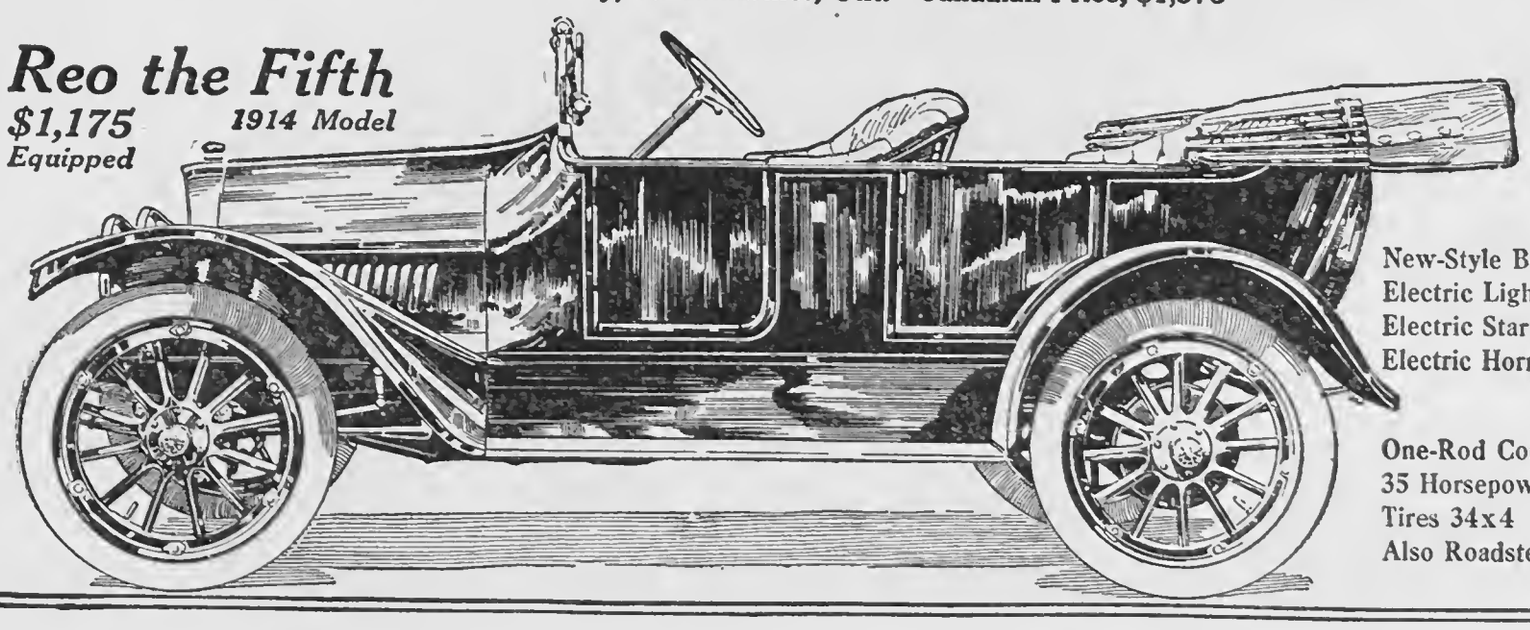

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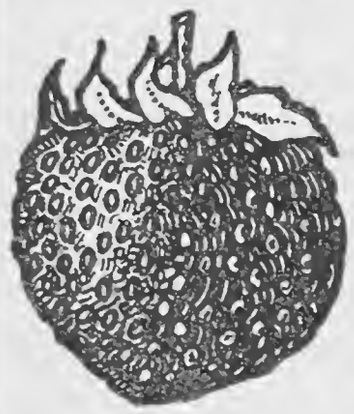

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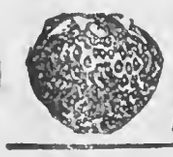

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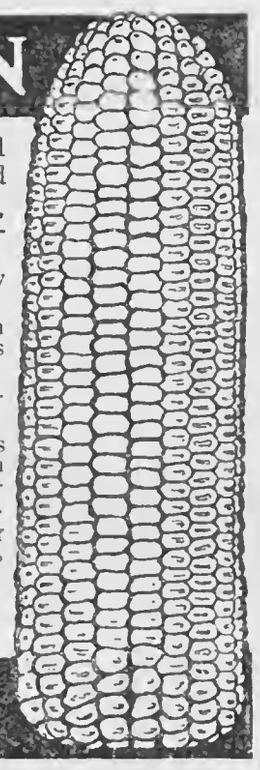

REAL SEED CORN

VETCH AS A MANURIAL PLANT.

PART I.

SECURING HARDY TYPES.—During the last decade much discussion has arisen regarding the use of vetches as green manure and cover crops. For many years it has been known as an admirable forage crop in foreign countries, as well as in the United States, but not until recent years has its full value been realized. This has come about chiefly through discoveries and research in modern agricultural principles. In 1890, Winogradsky, a Russian scientist, isolated bacteria for the first time. His projects were at first confined to such crops as cow peas, Red clover and Alfalfa, but at the beginning of the present century important experiments were tried with the vetches. A little later, in 1904, A. D. Shamel, of the Bureau of Plant Industry, introduced into the tobacco regions of Connecticut some of the seed of European grown vetch. He sowed this seed on some of the bottom land soil in Connecticut Valley, and at first only a small proportion of the plants resulting survived the Winter. Then the seeds from the hardiest of those plants were sown the following year resulting in a larger and stronger growth. This was continued for two more years, and at the end of that time a hardy variety was secured that was adaptable to the climatic and soil conditions of Connecticut Valley.

VETCH AND TOBACCO.—The important part of this experiment was not alone the securing of a desirable variety of vetch, but the fact that it brought to light the advisability of using vetch as a green manuring and cover crop when the tobacco was off the fields. It was found that it accomplished this by means of nitrifying organisms that work upon the plant roots. The nitrogen resulting from this action had been taken from the air and added to the soil. This experiment has been of lasting importance, as now throughout the Connecticut Valley Hairy vetch plays a large part in the addition of nitrogen to the tobacco crop. Tobacco, depending upon the variety, requires from four to eight per cent. of nitrogen, and the farmers have found that in using the Hairy vetch as a leguminous cover crop they can save about half of their fertilizer bill. The writer last Summer visited a number of tobacco growers in the vicinity of Hartford and was very much interested to see the progress that had been made there in this way. On a large farm near Rainbow the only fertilizer used in addition to the growth of vetch was common New York City manure, and after the plants had been reset a small amount of nitrate of soda was added. At several other places the farmers bought only phosphates and potash, relying wholly upon the vetch to produce the nitrogen. Possibly it is not safe to do this entirely, but the amount of nitrogen that need be purchased can be cut down to a much smaller figure than without the use of vetch.

OTHER EXPERIMENTS.—Connecticut is not the only section of the United States where the value of vetch has been felt. Experiments similar in nature to those performed by Mr. A. D. Shamel have been conducted in practically every part of the country. The South now uses common or English vetch as a green cover crop for cotton in Alabama, Georgia and the adjacent States. In the West, common vetch is used as a Winter crop with oats and wheat for hay production. This is a common practice in late years in Oregon and Washington. Tests on the Umatilla Experiment Farm at Hermiston, Oregon, have shown the superiority of vetches as a Winter cover crop, and also that Alfalfa, when grown near young trees in an orchard, gave a depressing effect upon the less hardy trees, while the vetch had no unfavorable influence over them. It now plays an important part in the Citrus groves of California, being more extensively used than any other green manuring crop. In Michigan, Wisconsin, and Minnesota vetch has been found to be the best seed and forage crop for the sandy jack-pine cut-over lands.

Thus the vetches have come to play an important part in various localities, and there is perhaps no crop to-day more worthy of the farmer's attention. Especially here in the East is it coming to be the leguminous crop in rotation and in many instances taking the place of Red clover, cow peas and Alfalfa. The successful results in Connecticut could well be duplicated in New York State, and doubtless within a few years it will take its place in the crop rotations of many of the largest farms.

W. H. BULLOCK.

Fertilizing Asparagus.

I have an asparagus patch of 2½ acres that is just six years old this Spring. The crowns were one year old when planted in 1908, and in 1910 I cut and sold $308.41; 1911 (price was very low) $206.43; 1912, $245.42; 1913, $408.63. I am sure I lost at least $50 of "grass" by not having help at the proper time and could not get it. I only manured this patch once; that was the second year, and from that time on I have been using a special mixture that our agent puts up for asparagus, that costs $27 per ton. I use 1,500 pounds per acre of this in early Spring, at first working, drilled up the rows; at my last cutting in July I use 1,500 pounds, and keep cultivation up as long as I can, and in spite of all I can do in the Winter for the last two years the yard grass will grow. Do you know of anything that could be done to get rid of it? It is an awful bother in the Spring.

C. J. R.

The natural habitat of asparagus being the sea coast, common salt applied at the rate of 800 to 1,000 pounds to the acre will not only prove more or less beneficial to the plants, but will destroy practically all weeds and grass that may infest the plantation. Crab or yard grass, like asparagus, prefers a sandy loam to a clay loam soil, and will thrive with more persistency in the rich light soils such as are generally used for asparagus than on any other kind of soil. In some sections of the country where the soils are light and where there is much high wind during the Winter, crab grass is really of great benefit in preventing the soil being blown away and is welcomed as a valuable protection against soil loss, which in certain sections where the winds are unbroken by woodland or hills would be very heavy if it was not protected by the covering of dead crab grass. The yield of your plantation seems to be nearly up to the average, but would no doubt greatly benefit by a good application of composted stable manure to which should be added about 35 pounds of muriate of potash and 100 pounds of fine ground natural phosphate rock to each ton of manure, about 15 tons of this manure and chemical mixture to the acre will be sufficient. Apply immediately at the close of the cutting season.

A very successful grower in Virginia, writing upon the subject of manuring asparagus beds, states that he had made a practice of applying 25 tons of well-rotted manure to the acre, broadcast and worked in with the cutaway harrow every third year, also using at the same time 500 to 1,000 pounds of finely ground raw bone, and every third year 500 pounds of kainit should be broadcast to the acre. There are many ideas as to what kinds of fertilizers are best for asparagus, how much should be used to the acre and when it should be applied. The most reasonable and common-sense method seems to be that advocated by the author of "Asparagus Culture," issued as a farmers' bulletin by the U. S. Department of Agriculture, in which he says: "Those growers who apply a liberal dressing of stable manure or fertilizer immediately after the cutting season, supply the required nourishment to the plants at the time they most need it, and can most profitably utilize it in the production of spears. Manure thus applied will also act as a mulch preventing the growth of weeds, keeping the soil light and cool, and preserving the moisture intact. The manure should not be applied directly on top of the row." As between manuring in the row and between the rows, the latter should be selected as the evidently advisable one by which the feeding roots of the plants are most easily reached.

K.

"SOME of your constituents are disagreeing with you," said the trusted lieutenant. "Well, keep tab on them," replied Senator Sorghum; "when enough disagree with me to constitute a reliable majority, I'm going to turn around and agree with them."—Washington Star.

Studebaker SIX

$1575

ELECTRICALLY
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ELECTRICALLY
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SEVEN PASSENGER
FULL-FLOATING REAR AXLE

Hunt Among the Highest Prices For a Car Worthy of Comparison With This

Don't be afraid to aim at a much higher price in seeking the equal of this Studebaker SIX.

Judge it by cars costing from several hundred to a thousand dollars more. Follow the comparison—point by point.

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Its measurements, front and rear are identical with cars costing much more.

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Without reducing the space, it cuts the weight tremendously—by scientific design and a proportion of lighter but strong steel forgings and stampings, found in no other car at any price.

Money Can't Buy a Better Axle

Look next at the full floating rear axle. No car at any price can improve upon it.

It's not a semi-floating; or a three-quarter floating; but a full floating rear axle.

This axle constitutes a 30,000 pound-inch factor of safety—you couldn't better it if you paid $5,000.

Full Supply of Timken Bearings

The Studebaker SIX has a full equipment of Timken bearings—not a partial equipment—but a full equipment.

So you couldn't do better in the matter of bearings if you paid $2,500—or more. (We are the largest buyers of Timken bearings in the world, by the way.)

Now, study the system of starting and lighting—the Studebaker-Wagner.

Unsurpassed Starting and Lighting

There isn't any better system than the Studebaker-Wagner separate unit.

You couldn't buy a better if you paid $5,000—it simply isn't made.

A Strictly Manufactured "Six"

Consider now, the way in which the car is built—the proportion of manufactured and assembled parts.

No car in the world—at any price—is more thoroughly manufactured than the Studebaker SIX.

Studebaker does not make the tires or the wheels.

But we do make all our own castings, stampings and forgings—all our own springs, and bodies, and upholstery — our own crown fenders, and cowls, and even our tops.

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You know something about Studebaker motors. We've built more than 120,000 of them.

This SIX motor was built and rebuilt, tested and re-tested, for three long years, before it was offered to the world.

The experiment was all over and out of it before many another "Six" was even conceived in the draughting room.

Go right on up to the costliest cars—you won't find a sweeter or a smoother or a quicker or a more flexible motor than this.

Hunt, Hunt—We're Glad to Have You

So, we repeat—start high above the Studebaker price in seeking another car worthy of comparison.

We not only welcome comparison—we urge it.

In bigness, in beauty, in power, in silence, in seating capacity, in manufactured strength, it convinces every man who examines it that he need not pay more than $1575.

Send for the Studebaker Proof Book. It tells how we manufacture Studebaker cars in the Studebaker factories.

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This is an extract from a folder just issued which you should read. It tells of the tremendous life-saving importance of the Studebaker Full Floating Rear Axle.

"If the shaft breaks will the wheels fall off?

"That is the acid test.

"In the floating axle the rear wheels are independent of the shafts for their connection with the car. Full floating axles do not break. Broken axle shafts occur only in non-floating types of construction in which, when a shaft breaks, a wheel loses its moorings.

"In the primitive, semi-floating type the axle shafts are asked for a wide range of service. In addition to turning the wheels. the shafts must support them and the entire weight of the car which rests upon these wheels. Each shaft is locked rigidly at both ends and supported with bearings of various types."

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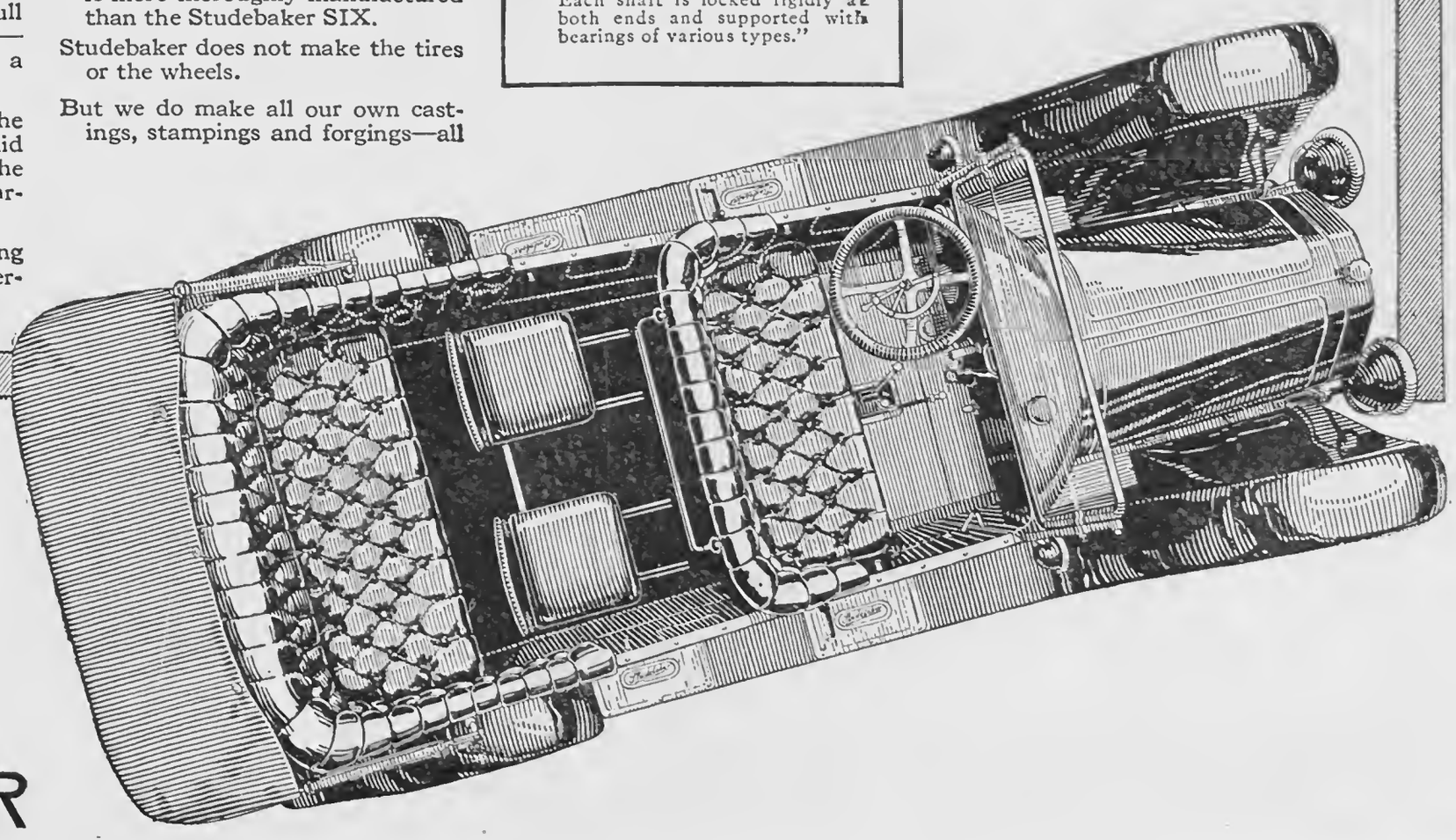

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SAFETY FIRST

Quality and Lower Cost Mileage for Goodrich Tire Users

Goodrich Unit Molding is the original "Safety First" idea in tire-making.

❖ ❖ ❖

The body of the tire, the side walls, the fabrics, the rubber, the bead and the Safety Tread are so well balanced and of such uniform high quality that this, coupled with Goodrich efficient workmanship, makes it possible to mold Goodrich Tires as a unit.

❖ ❖ ❖

The fine, strong fabric and high-grade rubber are literally interlocked by Goodrich Unit Molding. This is one reason why the treads do not separate and why "tire troubles" are practically unknown to Goodrich users.

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The thick, tough rubber bars and crosstie of the safety tread as shown here, *make* a "Safety First" roadway for the car. They clean and dry the path and *grip* it. Because the Safety Tread design is built as a unit, it rides easier than any other non-skid tire, and in fact just as smoothly as a smooth tread.

❖ ❖ ❖

Just the unit-group of bars and crosstie which brace and balance the strain on the tire so that the Safety Tread runs as a smooth tread does and gives more actual service and mileage.

The Accepted Standard

Goodrich Safety Tread Tires

Best in the Long Run

The Goodrich Safety Tread

—Five Bars and a Crosstie
—the "Safety First" Symbol

The quality of Goodrich Tires today is the standard by which all other high grade tires are judged. They represent perfection of tire-making and tire-knowledge—which gives Goodrich Tires leadership.

Pay no more than the following prices for the *accepted standard* automobile tire:

Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices	Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices
30x3	$11.70	$12.65	$2.80	34x4½	$33.00	$35.00	$6.15
30x3½	15.75	17.00	3.50	35x4½	34.00	36.05	6.30
32x3½	16.75	18.10	3.70	36x4½	35.00	37.10	6.45
33x4	23.55	25.25	4.75	37x5	41.95	44.45	7.70
34x4	24.35	26.05	4.90	38x5½	54.00	57.30	8.35

Free—Send for booklet, "Rules of the Road" and other valuable information. Address Service Department 16

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We are trying with all our might to furnish absolutely pure, Red, Alsike, Mammoth, Alfalfa, Timothy, Sweet Clover, and all other field seeds, with all *blasted* and *immature* grains removed. Write today for free samples and instructions "*How to Know Good Seed.*"
O. M. SCOTT & SON, 80 Main St., Marysville, Ohio

For Sale "Wilsons" Soy Beans, $2.75 Bushel
Cow Peas.....$2 25 to 2.50 "
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JOSEPH E. HOLLAND, Milford, Del.

We are among the largest growers of **ALSIKE CLOVER** in this country and offer good clean seed. Bushel, $11; half bushel, $5.75; peck, $3.
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WEEDLESS SWEET CLOVER
The white biennial. Also Alfalfa, Red, Timothy etc. *Sample and booklet telling* "How to Know Good Seed"; FREE. O. M. Scott & Son, 180 Main St., Marysville, O.

SWEET CLOVER SEED—Pure white and biennial yellow. Prices and circular how to grow it, sent on request. E. Barton, Box 29, Falmouth, Ky.

CLOVER SEED All varieties shipped. Direct Freight Prepaid.
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Absolutely true to name. Also Sweet, Red and other varieties.
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RHUBARB ROOTS FOR SALE—an extra fancy strain of Linnaens, the best variety. Prices, F.O.B., per doz., $1; per 100, $5; per 1,000, $35 Cash with order. Tompson Bros., R. D. 4, Attleboro, Mass.

Beardless Barley and Corn for Seed—Champion Beardless Barley and Salzer's Great Beardless Barley, 2 bu., $2.25, 5 bu., $5.25, 10 bu. or more, $1.00 bu. Early Michigan, 100 day corn as early as flint. Strong grower, heavy yielder, 1100 bu. of ears on 8 acres in 1912. Excellent for ensilage or grain crop. $2.00 per bu. shelled. No charge for bags. J. N. McPherson, Pine View Farm, Scottsville, N.Y.

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Fruit Trees
STRAWBERRY, ASPARAGUS, VEGETABLE PLANTS
All the Best Varieties. First-Class Stock. Prices Low. Catalogue Free.
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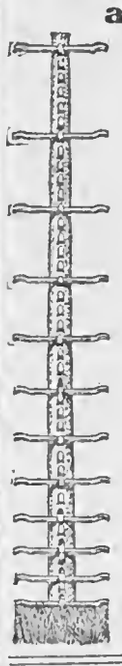
American Steel Fence Posts

Cheaper Than Wood and More Durable



Quality—High-class steel, heavily zinc coated inside and outside.

Strength—Strong enough to hold up any wire fence and furnish all necessary resistance.

Adaptability—Adapted to all conditions and will prove absolutely satisfactory wherever a good wire fence is desired.

Service—Give much more and much better service than can be expected of wood posts, and will not burn, rot or decay.

Durability—Have been in service since 1898, in every section of the United States, and the oldest posts are today as good as when set.

Adapted to All Wire Fences. Increase the life of a fence. Put a wire fence on permanent American Steel Posts and preserve the fence indefinitely; put it on wooden posts and it is like building a brick house on a wooden foundation.

For Sale By All Dealers.

We also make the celebrated AMERICAN FENCE, ELLWOOD FENCE, ROYAL FENCE, NATIONAL FENCE and the ANTHONY FENCE. These fences are galvanized by the wonderful new process we have developed and employed exclusively by us, effecting a heavier coat of zinc firmly united to the steel, affording absolute and permanent protection against destructive elements. The *greatest Galvanizing discovery of the age.* **Dealers Everywhere.**

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American Steel & Wire Co.
Chicago New York Cleveland Pittsburgh Denver

PURE FIELD SEEDS
Clover, Timothy, Alsike, Alfalfa and all kinds of PURE FIELD Seeds direct from producer to consumer; free from noxious weeds. Ask for samples.
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READ and then WRITE for
Wonderful Offerings in Nursery Stock for 60 Days
Beautify your property. Raise your own fruits Special Combination Offerings in fruits, flowers, shrubs, etc., $1.50 to $10. No rubbish. All first-class, home-grown, direct from the Nursery. Must be sold to make room for specialties. Write today.
STEPHEN HOYT'S SONS CO., New Canaan, Ct.

EVENTS OF THE WEEK.

DOMESTIC.—By the breaking of a suspension bridge across the San Joaquin River near Fresno, Cal., March 28, four men and one woman, crossing in an automobile, were plunged fifty feet into the swift stream and drowned. The bodies were not recovered.

Floods through the Hudson and Mohawk Valleys, New York, March 28-30, caused considerable damage. The greatest damage was done at Schenectady, where 350 families where driven from their homes. The loss at Schenectady is estimated at $750,000, the total loss in the Mohawk Valley at $1,250,000 and the loss in the Hudson Valley, at $500,000. On the Hudson the principal places to suffer are Troy, Watervliet, Albany and Rensselaer. Two men were drowned at Schenectady.

Frank Tanneubaum, the I. W. W. agitator, was found guilty, March 27, at New York, of participating in an unlawful assemblage in the Catholic Church of St. Alphonsus on the night of March 4, and to him was given the maximum penalty—one year in the penitentiary and a fine of $500.

The total number of employees laid off on all the lines of the New York Central system between September and March, reckoned by New York Central authorities, is 27,600. On the Erie 6,000 men had been laid off since December, and the road is now manned by a force 18,000 less than at the height of maintenance and improvement work of last Summer. This latter decrease is in large part due to the nearing of completion of double tracking and improvement work that the Erie has been doing on a large scale.

Mayor Mitchel, Police Commissioner McKay, the Corporation Counsel's office, the District Attorney and the courts have joined in an effort to rid New York of men who carry weapons without permission. The police are also moving to discover the character of men who have permits to bear arms and to learn whether there has been grafting in the issuing of such permits. The legal fee for a permit is $2.50. The authorities have heard that much more than this has been paid, and that licenses have been issued for large sums to persons who should never have had them.

In response to many inquiries from the United States concerning "inheritances now lying dormant in the English Chancery courts," the American Embassy, in London, is now sending out printed circulars trying to discourage Americans in small communities from being led by shyster lawyers and others into the hope that they have a chance of getting money from these ancient accounts. The embassy calls attention to the fact that there are no large unclaimed estates in Great Britain and to the additional fact that the statute of limitations almost always bar recovery.

The American fishing schooner Valiant, which was captured on May 11, 1913, by the Canadian fisheries protection sloop Joliffe, was declared confiscated, March 31, in the Admiralty Court, at Vancouver, B. C. The Valiant was seized by the Joliffe off the northern end of Vancouver Island, where she was alleged to have been fishing close in shore. She raced for the open sea when the Canadian vessel hove in sight, but was overhauled. One thousand pounds of halibut, some of the fish being still alive, were found below. The Valiant was of 18 tons and owned in Seattle.

FARM AND GARDEN.—The pure seed train, under the joint auspices of the Milwaukee Chamber of Commerce, the Wisconsin Bankers' Association and the Agricultural College, Madison, finished its two weeks' tour of the eastern portion of that State at Baraboo, March 21. Free exhibits of grains best adapted to Wisconsin were displayed and lectures given to the farmers en route.

It was announced, March 30, that the United States Weather Bureau is to establish sub-stations in the Connecticut tobacco belt about May 1 in order to enable growers to benefit by the government's service in the forecasting of storms and frosts. They will be under the direction of the Hartford station and will be located at Suffield, Tariffville, Hazardville and East Windsor Hill.

Judge Morton overruled the demurrers, at Boston, March 25, of D. Whiting & Sons, H. P. Hood & Sons and William Graustein, milk contractors, to a Federal indictment alleging a combination to fix the price paid to farmers for milk. He sustained demurrers to two other indictments charging monopoly and conspiracy in restraint of trade. The defendants bought milk in New England and controlled 86 per cent. of the product shipped to Boston and Worcester.

Indians on the Warm Springs agency, in Crook county, Wash., are taking a keen and practical interest in agricultural development, says D. C. Freeman, industrial agent for the Hill lines, who has just returned from the first farmers institute conducted for the redskins of that territory. More than seventy Indians attended the meeting, says Mr. Freeman. Practical agriculturists lectured on farming, live stock, orchards and gardening. L. H. Tiffany has been employed as agency agriculturist to advise the Indians and work with them in their agricultural development.

Experts of the Department of Agriculture estimate that the annual loss from hog cholera in the United States is $75,000,000. They regard its eradication as one of the most serious problems that faces the bureau of animal industry, for the loss caused by it is approximately as great as that from all other animal diseases combined. The loss from hogs killed outright by cholera in 1912 was estimated at $60,000,000. The loss to the hog industry indirectly resulting from the disease was about $15,000,000 more. The cholera is most common in the corn States of the West and South. The two other chief animal diseases are cattle tuberculosis and Texas fever.

INDIANA FARM NOTES.

The past Winter was a mild one up to about the first of February, when severe Winter weather set in. The coldest day of the season was on the ninth of February, when the mercury registered 17 degrees below zero. The first half of March maintained its general features—blustering, blowing, freezing, thawing, etc. The snow has now all gone, and with its disappearance our farmers are taking an account of the growing wheat. There is but one opinion as to its actual state, and that is that it is in excellent shape, and that, barring droughts, there will be a bumper crop. As the acreage is quite large—in fact much larger than last year; this is another feature to encourage the farmers. The fruit is as yet supposed to be safe, although April is the critical time for this. Spring grass seeding is now on hand here and our farmers are wondering whether the catch will be successful or not. It is quite discouraging to sow high-priced seed and have it thrown away because of failure to catch, as has so often been the case in the past. Quite an acreage of Alfalfa will again be started this year in spite of the fact that a strange worm did some damage last year in some fields already started. The pest is the army web-worm, but is said by the experts to be quite easily combated. The latest feature in the labor problem in this section is that farmers here are compelled as a last resort to make application to the Bureau of Emmigration at Washington, for farm help. The help furnished by the Bureau is said to be mostly aliens. Whether such help will prove satisfactory, time alone will tell. But few sugar camps will be opened here, as most of the sugar trees still remaining are so poor as to make tapping them unprofitable. Stock of all kinds has wintered well, as there was plenty of feed. Prices of dairy cows, are still going up, grades now bringing from $60 to $80 while purebreds sell at from $100 to $150. The present prices of farm produce are about as follows: Wheat 94; oats 36; corn, per cwt., 78; rye 57; dressed pork 11; dressed beef 11; dressed chickens 16; potatoes 75; Timothy seed $2.50; clover seed $8; Timothy hay, baled $13; clover hay, baled $11; eggs 25; butter 25; milk at the condensery, $1.60 per cwt., for four per cent. milk. D. L.

Elkhart Co., Ind.

Robins and bluebirds are at last with us, and although we have considerable snow in places our sleighing is gone. Up to this time Winter has hung on so persistently we are in hopes that Spring weather will now stay steadily. People along the Mohawk are fully aware of Spring conditions, as the water is exceptionally high, and several bridges went out this morning. G. R. S.

Saratoga Co., N. Y.

Many indications of Spring are here, birds are daily arriving on schedule time. Farmers are sowing clover seed, pruning and spraying fruit trees. Wheat is beginning to show life and the grass looks green. No hog cholera or any animal diseases we know of. A number of auction sales; horses and live stock selling high; horses $100 to $240; cows $45 to $135; eggs 28; butter 30. Not many farm sales. W. C. W.

Huron Co., Ohio.

The Winter was quite mild and open, with practically no storm until February 22. On that day a heavy mist came on, forming ice everywhere. Trees were broken down, telephone and telegraph wires broken, and the service completely demoralized over the entire State. Snow to the depth of 10 inches fell and a heavy wind piled it into huge drifts, blocking the roads. On March 16 farmers began preparing land for sowing oats. On the 18th another snowstorm came and today, March 19, there are several inches covering the ground. There has been much complaint of wheat heaving out by the alternate freezing and thawing of the land, and it is probable a small percentage of the crop is damaged. Cattle and other stock have gone through the Winter in good shape. Feed is plenty, except corn, which failed last year. Alfalfa hay $9 to $12 in stack or mow; corn 66 out of car; wheat 75; oats 40; potatoes 90. Butter 23; eggs 18. Clover seed $12 per bushel; Alfalfa seed $8; Timothy seed $3.75; apples $1.50 per bushel. Horses $200 down; mules same; cows $50 to $80; fat hogs $8 per hundred. Buying corn has taxed the recourses of our farmers to the limit. It is estimated that $2,000 a day has gone out of this county for corn alone for the last 100 days. H. M. R.

Fairbury, Neb.

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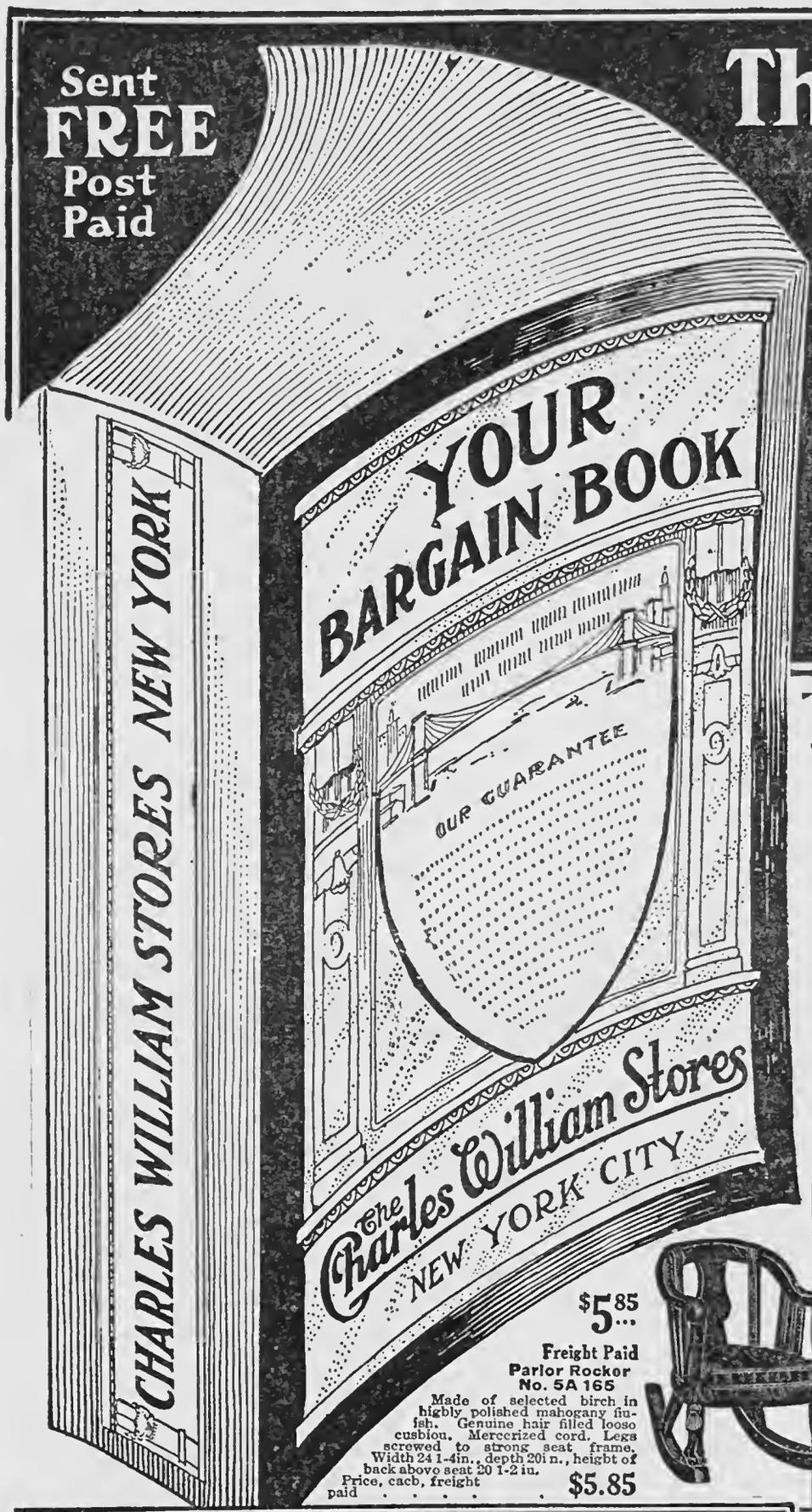

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Evercote Ready Roofing

$1.05 Per roll and up. Will last longer than shingle, tin or steel roof. Greatest of all roofs for houses, poultry pens, barns and sheds.

1 ply guaranteed 7 years
2 ply guaranteed 10 years
3 ply guaranteed 12 years

Write for Free Samples. 108 square feet in each roll. Nails and cement free. We pay freight on three rolls or more.

26 A 2000. 1 ply. Per roll, **$1.05**
26 A 2002. 2 ply. Per roll, **$1.30**
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Evercote House Barn Paint

63c A GAL. AND UP FOR BARN PAINT—Frt. Paid

Sold in six standard shades. Unexcelled for barns, structural iron, grain elevators, etc. Will not peel, blister or rub off. You can paint a big barn, two coats, for only $15.

98c a Gal. and up House Paint Freight Paid

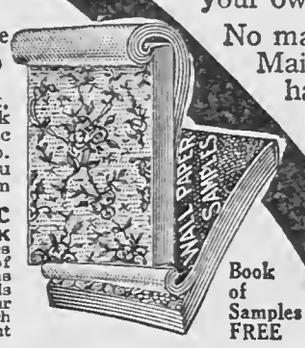
Guaranteed. Every gallon will cover 250 sq. ft. of surface if properly applied. You can paint a house of average size for only $8.70—two coats. We guarantee the materials and that our paints will give satisfaction. **Free Paint Book** and Color Cards, showing 180 samples.

Wall Paper

5c Per Double Roll and Up
FREIGHT PAID

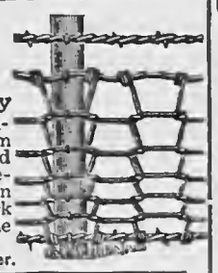
Brand new stock, latest New York designs, from 5c a double roll up. At our prices you can paper a room 10x12x9 for as low as **49c**

BIG Sample BOOK Sent FREE. Gives large assortment of handsome patterns to choose from. Tells how to measure your rooms. Shows each sample just as cut from stock.



Book of Samples FREE

Acme Junior 26-inch Hog Fence 16c per Rod



No. 28 A 10. Most satisfactory fence for both level and uneven surfaces made. Has bottom barbed wire woven in and stayed 6 inches apart. Absolutely prevents hogs from going under. Can also be used as a combination Stock Fence by running one or more line wires above it.

We Pay the Freight on 20 Rods or Over.

$2.25 Delivered FREE Men's Work Shoes

Greatest shoe in the market for everyday service. Stock is unlined Kangaroo grain, Blucher style, bellows tongue, oak soles. Sizes 6 to 12. No half sizes.

No. 7A905 Brown, Prepaid **$2.25**

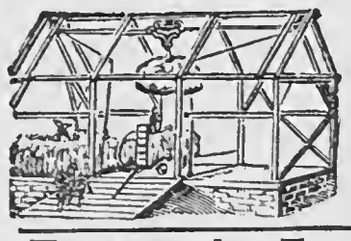
No. 7A906—Black, Prepaid . . . **$2.25**

Ladies' Flexible Welt Shoes, Prepaid, Per Pair $2.19

A beautiful easy gun calf leather shoe with dull top — neat last, Cuban heel and extension sole. Absolutely guaranteed. Sizes 2 1-2 to 8. D and E widths. State size.

No. 7A518—Prepaid Price, $2.19

Complete Hay Carrier Outfit For 30 Foot Barn



Freight Paid **$11.95**

Steel Track and Williams Double Swivel Carrier, complete with 100 ft. 3-4 in. carrier rope, 40 ft. 3-8 in. trip rope, 9 rafter brackets, 9 hanging hooks, 3 Pulleys, 4 Floor Hooks and good double harpoon Fork. See catalog for prices on larger sizes and other carriers.

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Made of solid color Linene, neatly embroidered in white. Sailor collar, novel side closing, cuffs and waistline piped with white. The embroidery which embellishes collar, front and cuffs is of the durable Japanese kind. Short sleeves. Skirt has a plait at center front and a plaited panel at the back. Visible pearl button closing. Sizes 32 to 44 inches bust measure. **No. 24D-806**—Cadet Blue, Prepaid Price, each **79c. No. 24D-807**—Tan, Prepaid Price, each **79c. No. 24D-808**—Lavender, Prepaid Price, each **79c.**

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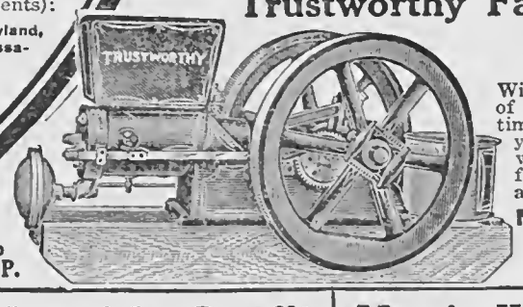

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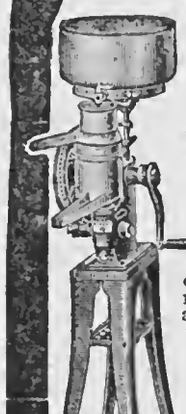

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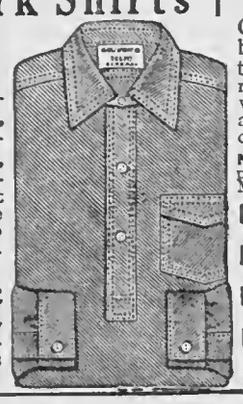

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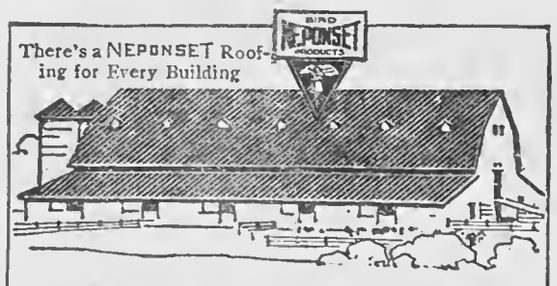

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Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

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PART IV.

The use of ornamental shrubbery in the adornment of the home grounds could no more be dispensed with than grass in the making of the lawn. The omission of either would leave the grounds with the appearance of being unfinished, if not unsightly and repulsive to the eye. In the planting of shrub beds and borders, careful consideration should be given to the height they will attain, habit of growth, the color and character of foliage, also the color of the flowers and the time of blooming. But few shrubs are adapted for specimens on the lawn, but should be grown in groups containing only such varieties as will produce a pleasing effect. These effects are altogether the result of the habit of growth, foliage and flower of the plants used. In planting shrubs they should be grouped with the idea of producing as natural effect as possible. If in the border, the taller growing sorts should have a rear location; if in the beds they should occupy the center. These tall robust sorts will form a background, against which the dwarfer growing varieties may be arranged in regular order as to their size, until the border is reached, the dwarf or decumbent sorts occupying the outer spaces, so that when they are viewed from any point the eye will be carried from the green lawn to the highest point in the shrubbery without being offended by the sight of bare stalks.

In the proper arrangement of shrubs we not only gain artistic advantages, but the practical as well. The first cost is practically the only cost, and their increasing size and beauty from year to year, return to the owner increased dividends in pleasure that would be difficult of computing. Home grounds liberally planted to beautiful flowering shrubs, usher in the Spring with bursting bloom buds, almost before the ground is bare of snow, to be followed by others in great profusion, as the season advances, reaching the grand climax of beauty in May and June, when the lilacs, Deutzias, Azaleas, Weigelas, Spiræas, Philadelphus, roses and many others are in the full glory of their bloom. Then on into the Summer with the ever-changing floral panorama, until the latter part of July and early August we are favored with another grand display in the blooms of the Althæas with their glorious hibiscus-like flowers of white, pink, purple, red, blue and rose. Hydrangea paniculata grandiflora, with its enormous panicles of snow white flowers, presents the appearance of a great snowbank, when a number of plants are grouped together, which later turn to a delicate pink color, remaining until late in the Autumn.

At the close of the season when the days are shortening and the nights growing longer and cooler, warning all nature to prepare for a season of rest, those of us who have enjoyed the beauty of the hardy flowering shrubs on our own grounds, for the first time, can mentally review the delightful changes they presented to us for our enjoyment the past season, and appropriately say, "There may be better and more delightful seasons in store for me, but no season of the past as good to live in as the one just closed."

K.

Raising Potted Plants.

Could I succeed in raising potted plants on an east porch sided up with glass on the east and partly on the south side, the other sides being filled in with rest of the building? The place would be heated with a stove. G. G.

Small quantities of pot plants are often successfully grown by amateurs with apparently uncongenial surroundings, but the location suggested does not sound at all promising. A porch with an opaque roof, house walls on north and west, and only the east side entirely glass would be very dark. Some foliage plants succeed in such locations, but few flowering specimens, and the unequal distribution of light would tend to produce one-sided growth. Such a glass-enclosed porch would add much to family comfort during cold weather, but we should not expect it to be a paying investment as a plant grower.

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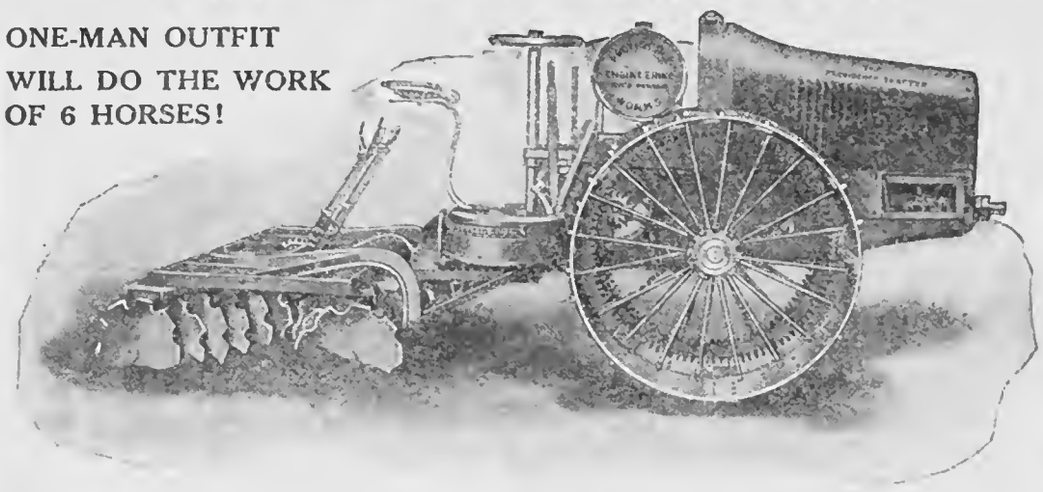

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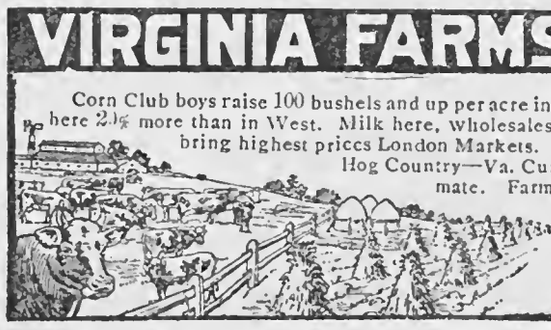

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THE USE OF COMMERCIAL "HUMUS."

Utilize Your Own Supply.

PART II.

PRACTICAL ILLUSTRATION.—To give a practical illustration, the analysis of a six-year-old hen, or rooster, might be identical with that of a broiler or a Spring chicken, yet who would pay the same price for the two kinds of meat, even when they were told that the analysis was the same? The same might be true of an ancient sheep and a hothouse lamb. In fact the chemist would hardly be able to tell the difference in his laboratory between a piece of flesh cut from a wolf, and another cut from a pet terrier dog. The flesh of the wolf, or of the hardy rooster, might actually show that the meat was stronger and contained more protein than that of the dog or the broiler, but those who bought the broiler or the dog would go beyond the analysis, and find out whether what they were buying was exactly suited to their needs or not. It is just exactly the same with regard to the purchase of fertilizers, and also in the purchase of this black soil or humus. No farmer should consider the argument that the nitrogen in this humus would last longer than that in chemicals. If a farmer were investing his money, he would want to put it where he could get sure and immediate returns, and not tie it up so that an equal amount of interest would come dribbling to him through a long series of years. It may well be laid down as a sure, definite rule in farming, that when a man buys plant food at all, it will pay him to buy the available and soluble kinds, rather than the inert, insoluble material for which he must wait years in order to obtain returns. Any man who has a pond hole, or muck swamp on his farm, can obtain the humus he needs through the use of lime largely as a return for his own labor.

FILL THE LAND.—By means of cover crops grown in the months when the land would otherwise be idle, he can by the use of available plant food, fill his land with humus or organic material very much cheaper and in very much better shape than by buying these unavailable forms of humus at a high figure. These chemical forms of black soil or humus have a fair place in agriculture. That is proved by the fact that it pays a farmer who has a swamp to haul this material out and use it. Such a man, however, who has a swamp of this kind, would not be justified in buying humus from another man's swamp at three or four times what it would cost him to haul the material out of his own pond hole or pasture. So long as this humus is presented for just what it is, without extravagant claims or unfair comparisons with manure, it is a legitimate product, and there are places where its use might be economical. In buying it, however, a farmer should remember that the greater part of its nitrogen is inert and not immediately available, and that he is paying when he buys such material about 18 cents a pound for nitrogen which the chemists declare is not worth over four cents.

BAD FARM ECONOMY.—We heard from one farmer in Georgia who thought of buying this "humus" in carload lots as a fertilizer for cotton! The freight would be $3 or more per ton. Right on his own farm was a low piece of land with thick layers of black soil. This stuff hauled out, limed and dried and spread on his land would enable this farmer to grow cow peas and Crimson clover to plow under. This would form the finest "humus" in the world. Another man in Ohio with a ledge of limestone right in his own neighborhood was considering the purchase of a fancy brand of lime at $10 per ton! Under a fair system of farm management it would be hard to think of a more extravagant way of farming than either of these plans.

Training Young Trees.

I am going to set out about 200 apple trees this Spring. I would like to know which would be the better way to do with these trees, cut them back, or leave them just as they come from the nursery, merely cutting out limbs that cross each other? Some people recommend planting the trees just as they come from the nursery, claiming they come to bearing at an early age, then cutting them back. Which do you think is advisable?
Adams Basin, N. Y. R. F. E.

Cut the trees back severely. They will not make a good shape if left as they come from the nursery. By cutting the tree back you are able to shape the head to suit your plan. We buy young trees, one year, and cut back to a single stem below the crotch—leaving two feet or a little more above ground. The roots are also cut back to five or six inches long. On an older tree we should cut so as to leave three or four buds above each limb of the crotch, leaving an outside bud at the end of each limb. A tree cut back in this way will make a better growth and a better head. Some planters put the tree in as it comes from the nursery and trim it later. We find it better to trim root and top before planting.

Smudging to Protect Fruit.

Smudging to prevent frost damage may be practical in some instances; however the writer's experience was a failure on several occasions. Having half an acre in strawberries in full bloom when frosty nights occurred, we collected a lot of stumps and other trash, wet corn fodder, etc., in the evening then arose after midnight and started fires all around, creating a dense smoke on one of those clear crisp frosty mornings when the heat is forced upward by the cold air pressing down. The smoke or smudge rose straight up skyward, resulting in no value but that of experience. I have decided to buy what berries and fruit we want in future when we lose the crop through frost.
Pennsylvania. W. H. STOUT.

Commercial Apples.

I have often thought a great mistake was made in planting for market the fancy varieties of apples which do not bear well. I believe in planting a commercial apple orchard quality should by all means be considered, but it must be combined with quantity if the orchard proves a success financially. It is true very often the finer varieties are not so hardy, neither do they bear as well, and after all they do not bring any more money on the market than many of our good standard varieties which have been grown successfully for years, and proved themselves money-makers. I should advise planting such varieties as are known to be regular bearers, and at the same time of as fine quality as possible.
New Jersey. JOHN H. BARCLAY.

"MY idea of happiness is to see the statue of Liberty in New York harbor from the deck of a returning steamer." "And why do you think you would enjoy seeing it?" "Because I've never been abroad."—Cleveland Plain Dealer.

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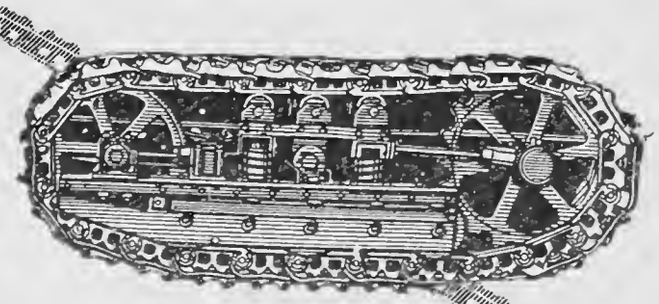

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The Caterpillar transmission is just as remarkable. There is no differential gearing. Each Caterpillar track is separately controlled by a friction clutch. You can pull with all the power on one track at a time and turn short, or—and here's the point—on both together while you are going ahead. There is no differential to let one side slip when you don't want it to. The gears are cut steel—enclosed in a dust-proof case and running in oil. Our forty-three years of manufacturing experience have taught us to be thorough.

But the Caterpillar tracks are the important difference. They allow the Caterpillar to work anywhere—on any soil, whether wet, loose or slippery. They support the tractor as a board placed over a mud-hole supports the weight of a man. *They never mire or pack the soil.* The pressure to the square inch on the ground is less than seven pounds—less than the weight of a man.

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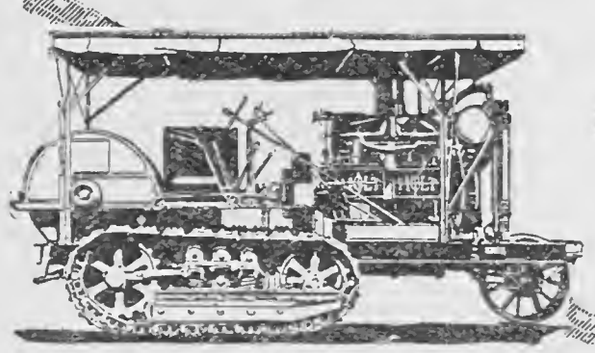

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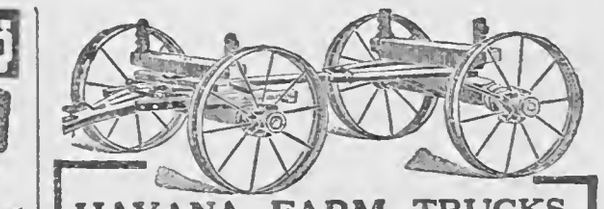

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This is a practical every day time-, labor-, and money-saver. It combines in a single implement a capital seeder, an admirable single wheel hoe, furrower, wheel-cultivator, and a rapid and efficient wheel garden plow. Sows all garden seeds in drills, or in hills 4, 6, 8, 12 or 24 inches apart.

IMMEDIATE SHIPMENT GUARANTEED

No. 16 Planet Jr Single Wheel Hoe, Cultivator, Rake and Plow

The highest type of Single Wheel Hoe made. It is light, handy, and adapted to use by man, woman, or child. Has leaf guard for close work, and a durable *steel* frame. A most useful tool in the family garden that makes the work really a spare-moment pastime.

No. 8 Planet Jr Horse Hoe and Cultivator

The best-known cultivating implement made. It is so strongly built that it withstands incredible strain, yet it is light and easy to handle. Has new steel wheel—will not clog with stones or trash. Cultivates to any depth and adjusts to any width. Opens and closes furrow, and hoes right up to plants without danger of injuring them.

No. 11 Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. It has steel frame. The plow opens furrows for manure, seed, etc. and can be reversed for covering. The cultivating teeth are adapted for deep or shallow work and for marking out. Crops can be worked both sides at once until 20 inches high.

Farm Management.

Cost of a Yearling Orchard.

As I see that you are trying to find out orchard costs, I send you mine. Last year I planted six acres to apple trees, 40x20 feet; that is, fillers one way only; about 100 cherry trees among these. It is just about a year since, and the enclosed figures show all expenses of labor and material, except interest and taxes. As you see, I sowed oats on the same land, costing me $31.45, receipts $78, profit $46.55, as against one year's expense on the orchard of $126.19. This is all the expense; land cost $27 an acre.

PAID OUT, 1913.

Plowing, 6 acres (1912)	$15.00
424 trees, one year old	54.22
Marking	3.00
Digging holes	10.00
Planting	6.00
Trimming after planting	2.00
Spray	3.00
Manure, mulching	11.00
Fertilizer, 4-6-8	3.67
Fertilizer, application	2.00
Spraying for lice, 2d and 3d times	3.00
Plowing strips toward the tree Sept. 15	5.00
Manure (part) Winter covering	3.00
Lime sulphur for rabbits	2.00
Wrapping for rabbits	3.30
	$126.19

Oats: Paid out:

Harrowing, seeding, 6 acres	$10.00
(Plowing charged to trees; see above.)	
Harvest	10.00
Seed	7.95
Thrashing	3.50
	$31.45

RECEIVED.

Grain 120 bushels at 50c	$60.00
1½ ton straw at 12.00	18.00
	$78.00

Hudson Valley, N. Y. D. E. S.

Do Not Mix Lime With Chemicals.

Tell me as to mixing lime with phosphates. I have acid phosphate, 5,344 pounds; muriate potash, 450 pounds; dried blood, 800 pounds; nitrate of soda, 200 pounds. My farm is light sandy soil. I wish to mix these chemicals with lime. How many pounds of lime should I use, and how many pounds of this mixture should I use per acre with oats, with silage corn, and with potatoes? I shall drill in oats and corn. F. J. K.

Barneveld, N. J.

If these chemicals are of average quality they will contain in round numbers about the following:

	Nitrogen	Phos. Acid	Potash
5,344 Acid Phosphate		750	
450 Muriate of Potash			225
800 Dried Blood	96		
200 Nitrate of Soda	32		
Total	128	750	225

This means a mixture containing 38 pounds of nitrogen, 220 pounds of phosphoric and 66 pounds of potash to the ton. It would be called a 2-11-3½ fertilizer. There is not enough potash unless you are sure that your soil is quite rich in that element. Do not mix any lime separately—broadcast. The lime will make the phosphate less available and if not used in the ground at once will set free some of the ammonia in the dried blood. We should add 200 pounds more muriate of potash and use per acre 300 pounds for oats, 400 for corn and at least 800 for potatoes.

Fixtures; Cement Test.

1. Were shingles in bunches ready to use, real estate in New York State in years of 1910 and 1911? Were wire in rolls and bench vice real estate the same years? 2. How can I tell when I am buying good cement? Is there some test? Vermont. J. H. B.

1. There is not enough information offered to indicate properly whether the shingles, wire and bench vice are real or personal property. As a general thing, if they are loose and have not been affixed to the realty, they are all of them personal property; but if they have been annexed to the real estate—that is, the shingles put on the house and the wire made into a fence—they would part of the real property and would not follow the tenant. On the matters stated, it would appear that all three are personal property.

2. There is no way you can test cement until after it is mixed, when there are machines for testing its tensile strength; but for all purposes around a farm, any of the standard Portland cements found advertised in responsible papers are sufficiently good.

ECONOMICAL HOUSE-BUILDING.—Will some of your readers give advice on the most practical house that can be built at smallest cost, concrete, hollow tile or frame? Also, practical ideas on inside finishing, whether plaster or wall board? House to be constructed to withstand cold as well as heat. M. M.

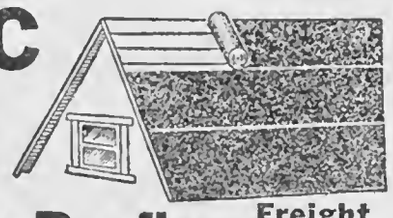
Croton-on-Hudson, N. Y.

MANURE PITS.—I have read quite a number of inquiries concerning manure pits. I will give you a description of mine, which works very satisfactorily. It is 12x40 feet inside, with seven feet walls 12 inches underground and eight inches thick above ground, reinforced with woven wire fencing. On the four-inch shoulder, the difference in thickness in wall, are placed 4x4 inch timbers, which also rest on a bearing timber through the centre. We placed the timbers one inch apart so as to let the liquid through in the liquid pit which is 2½ feet in depth on one end and 3½ feet on other, so that the liquid will drain to one end when being pumped out in wagon tank. This makes the pit for manure 3½ feet deep, which is the height of the wall above ground. My reason for making pit long instead of square is that you can drive on either side with spreader and you can easily reach to centre of pit with fork which I think is better than having an opening in wall to drive in and out as they have to with square pit, and as we use a automatic carrier it makes it easier to keep the manure level than if it were wider. A. H. B.

Cherry Valley, N. Y.

THE BACKYARD FARMER, by J. Willard Bolte. This book is written especially for the amateur gardener but with a knowledge of the subject that gives the book a practical tone. In addition to gardening and orchard work, there are brief talks on bees and poultry. The garden planting calendar is a useful one. Published by Forbes & Co., Chicago; 238 pages; price $1.00.

85c Per Roll 108 Sq. Ft.



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supplies your soil with the four plant-food elements in immediately available form needed by vegetables and small fruits for quick growth and early maturity. It is the most effective and convenient fertilizer you can apply for such crops and in the end the most economical.

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Wappingers Falls, N. Y., Dec. 1, 1913.

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We entered in 32 classes at the Poughkeepsie Fair, winning 25 first prizes and 7 seconds. One class was a collective exhibit of not less than 25 varieties for a prize of $25.00. In this class we were pitted against F. W. Vanderbilt's gardener, winning by a good margin.

Also in the Beets, Pumpkins and Squashes we carried away every "Blue" offered by the Fair association. So you can understand that we think Hubbard's "Bone Base" goods, as well as ourselves, are "Some Pumpkins."

I am very truly yours,
OSCAR R. WIDMER.

Write today for our booklets, **"Soil Fertility," "The Grass Crop," "The Apple,"** and **Hubbard's Bone Base 1914 Almanac,** which contains much valuable information about soil, fertilizers and other farm subjects. Sent free to any address.

THE ROGERS & HUBBARD CO., Address Dept. A, Middletown, Conn.

Office and Works, Portland, Conn.

The Home Acre.

Tomato-can Bird-house.

The little picture shown below is taken from an article by Frank C. Pillett of Iowa, at the Missouri State Horticultural meeting. He puts up tomato cans as shown in the picture for the bluebirds to nest in. The English sparrows drive the bluebirds away, bnt these sparrows were destroyed and then the other birds eame back. Two families were reared

TOMATO CAN BIRD HOUSE.

in one of these cans the same year. Wrens also took these cans for their homes.

Plant Lice.

Can you inform your readers what makes and what will cure lice on plants?
Bridgeton, N. J. L. M. P.

Aphid or plant lice infestation results from the presence of the insects in the soil, or from the vicinity of other plants already infested. Remedies commouly used are kerosene emulsion, tobacco, soap and pyrethrum. The dry pyrethrum powder or dry snuff is effective, when sprinkled over plants, but untidy in appearance. Pot plants may be dipped in hot water (120 to 125 deg.) without damage, but with complete destruction to the aphides. Pyrethrum powder, one ounce in three gallons of hot water, stepped 24 hours, is an excellent wash for aphis destruction; also tobacco tea, stems or dust well boiled, then diluted, giving the proportion of one pound of tobaeco to two gallons of water. It may be necessary to use remedies more than onee, as there will be re-infestation until all the insects are destroyed; they multiply with great rapidity.

Diseases of Cucumbers and Cabbage.

Can you suggest any remedy for what is known as downy mildew in cucumbers and melons, also for club or clump-foot in cabbage, kohl-rabi, etc. These crops to be grown in a garden that has been under cultivation for 10 years. G. C.
Floral Park, N. Y.

Downy mildew in cucumbers and muskmelons is quite prevalent in many sections along the Atlantic seaboard, causing much loss to growers of these crops. This disease may be effectively prevented by timely and frequent spraying with 3-6-50 Bordeaux mixture. Nothing weaker than this should be used; in some districts the 5-5-50 formula is largely used. It is quite important that the spraying be thoroughly done, every part of the plant must be covered with a fine spray. Spraying should commence as soon as the plants begin to run and continued at intervals of 10 or 12 days thereafter until the danger seems past.

Although club-root in cabbage has been known for a hundred years or more, no specific remedy has as yet been discovered for its cure or control. It has been observed, however, that it is more prevalent in acid soils than in sweet soils, and that it is seldom present in soils containing deposits of sea shells in considerable quantity, and on lands that have recently been heavily limed. Lime applied in large quantities destroy the slime mold which is composed of a plasmodium or mass of motile protoplasm, which is situated within the tissues of the plant. At the breaking up of the plasmodium, innumerable spores are released. At this period the lime becomes most effective, destroying the great majority of the spores before they can reach and attack a new victim. The treatment of the soil with lime is the only known means of control and air-slaked lime should be applied at the rate of 65 to 75 bushels to the acre every few years. The liming should be done some months in advance of planting. If an early Spring crop is to be raised the lime should be applied the previous Fall or early Winter. For late cabbage and allied crops the lime may be applied early in Spring.

When possible a system of crop rotation should be practiced, and as the disease will remain for several years in the soil, there should be several years intervening before cabbage or any of its allied species is again planted on the land. Club-root very often gets its start in the young plants in the seed bed, by reason of using infected soil, great care should be taken in the preparation of the seed bed that the soil is not taken from any portion of the grounds where cruciferous plants have been grown. K.

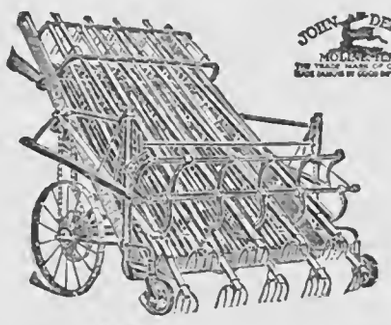
Coal Ashes for Improving Soil.

I have a lot of hard coal ashes. Is it fit for the soil, which is sour? I have one piece that was in cow peas last year, plowed under and then put in rye. I have another piece I shall put in cow peas this year. Would it do on either of these pieces? Would it hurt or benefit early potatoes? J. W. G. C.
Clayton, Mo.

Coal ashes carry very little plant food. There will rarely be more than three pounds each of potash and phosphoric acid in a ton, with little or no lime. As a fertilizer, therefore they are hardly worth considering. Yet they often give results when used on heavy stiff soils. This is because they open such soils and let in the air and moisture. They help light soils for the opposite reason, making them more compact. We should use them for this soil effect, but not with any thought of their plant food.

MAGISTRATE: "Officer, what is this man charged with?" Constable: "He's a camera fiend of the worst kind, yer worship." "But this man shouldn't have been arrested simply because he has a mania for talking pictures." "It isn't that, yer worship; he takes the cameras." —Credit Lost.

The Best Way
To Make Hay
Use a



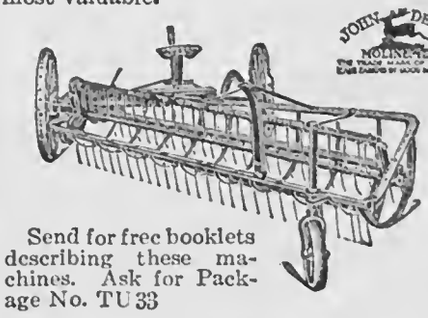
Dain Hay Loader

Load your hay onto the wagon with the Dain, the one-man rake bar hay loader that gathers up all the clean hay but leaves the trash. Rakes operated at exactly right speed to require least power. Strokes of rakes overlap, raking the ground twice. Hay is gathered from swath the full width of machine, regardless of mower used. Change to windrow work easily made. Automatically adjusts itself to handle light or heavy hay and never chokes up. Pushes hay onto center of wagon so that only one man is needed,—the driver. Ask us about other superior features.

Dain Side Delivery Rake

The Dain is the side delivery rake with the steel arch supporting the frame and a reel with three sets of closely succeeding flexible teeth, a construction which means both durability and gentle handling of hay.

The ground is raked clean and the hay left in fluffy windrows through which the air can readily pass so that it is cured without sun-scorching. The best quality of hay and therefore the most valuable.



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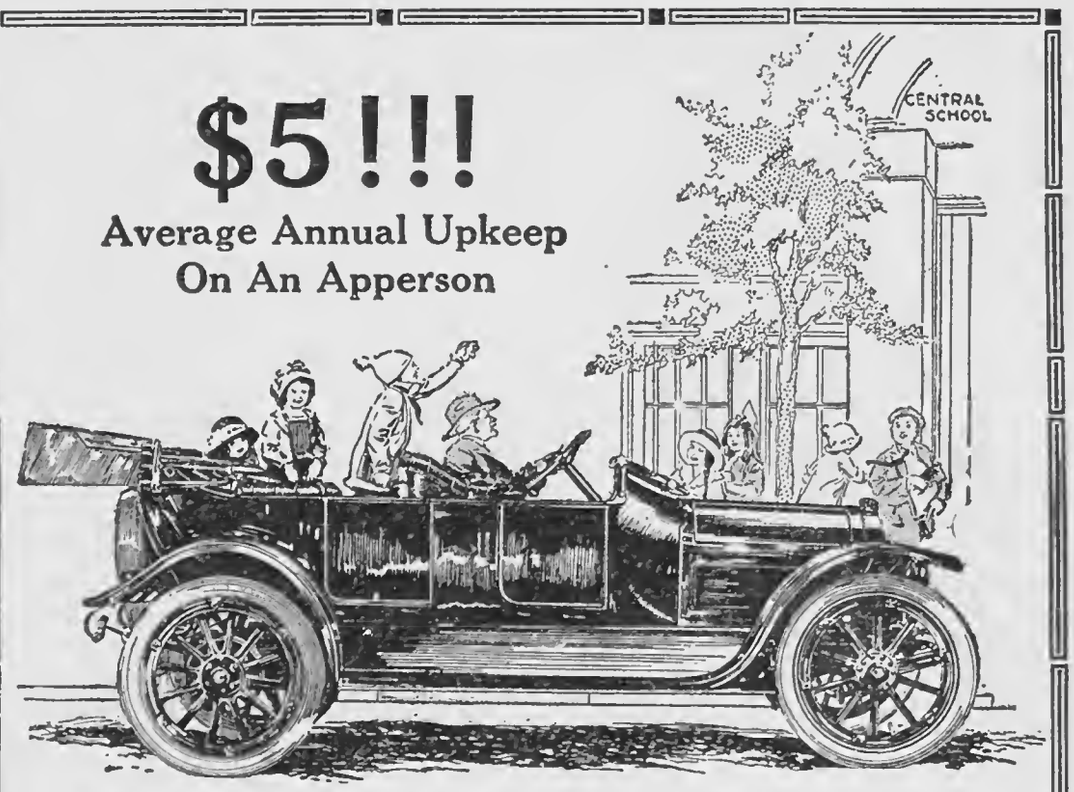

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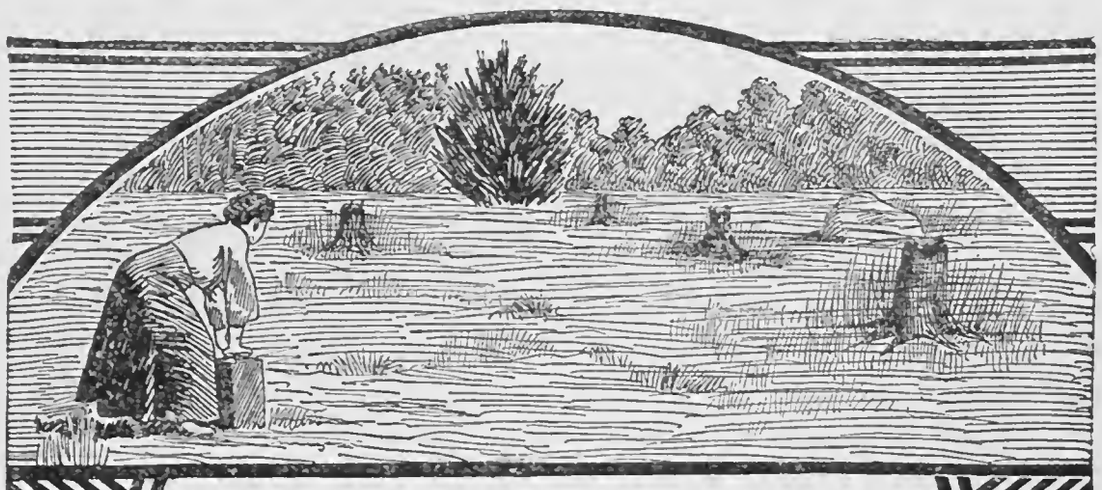

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Atlas Farm Powder
THE SAFEST EXPLOSIVE

you can improve your soil, get out stumps and shatter boulders quickly and cheaply, blast holes for tree planting, and do many other kinds of farm work in the most economical, up-to-date way. You need no expensive equipment. Atlas Farm Powder is put up in half-pound charges, ready to use as soon as you attach cap and fuse. It costs little and is sold by dealers near you, who can supply you quickly. We will tell you exactly what you need for any kind of job.

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Hope Farm Notes

GIFT OF SEED CORN.

If your neighbor was out of seed corn you would help him to a supply. If his home had been destroyed and a great misfortune had swept over him you would get out with others and help put him on his feet. That is true neighborly feeling. The more we have of it the better off we all are and the closer we get to that big brotherhood and true coöperation which we know must come before we can make this world what we want it to be, and what our children should have.

"Who is my neighbor?"

Not alone the man whose farm touches ours, or who lives in the same valley or country. Any man who is in need or who faces a great calamity or who has met with great misfortune. In other words, any man who is sorely in need of your help is your neighbor in the larger and better view of humanity.

Now listen to this.

Men, farmers and therefore neighbors are dying of hunger in their ruined homes in Albania. On the map you will see that this country lies to the southwest of Turkey. Wm. W. Howard has just returned from a 400-mile journey through the mountains of Albania. Last October the Servian troops destroyed 100 villages, burned or blew up 12,000 houses, killed 8,000 people, drove off the live stock, and destroyed the Winter supply of grain and fodder. As a result thousands of men, women and children are without shelter and food, and what is worse, without seed for the next crop.

The chief grain crop in these mountains is corn. The local varieties are small flints of an inferior quality. New and improved seed will mean wonders for the future of that country, aside from the pressing need for food. Now will you give your mite to help these unhappy neighbors in their trial? We do not ask for money. A few wealthy men will take care of the expense of distributing and handling. You can help by sending what you can spare of seed corn by parcel post. For the mountains flint varieties from New England and the northern part of the country are most desired. For the richer plains and valleys dent varieties from the West or Middle West will answer. A good quantity of Hope Farm flint will go, and this appeal is made to you—not for money, but for as much seed corn as you feel that you can spare, and the postage to carry it by parcel post. Such seed will not only produce food for starving people, but it will grow into a blessing as well. Will you write me at once what you can do? I will give directions for sending the seed.

TREES ON FENCE ROWS.—I find a good many people who buy farms and conclude that they can plant all the fence rows to fruit trees. Their argument is that they can, in this way, economize space. Their fence rows ought to give them a good fruit supply, while the fields are left clear for farm crops. The claim is that these fence rows or stone wall lines always show strong soil. So they do, but such soil is full of brier roots and weeds, and trees planted there require extra good care. To plant a tree on these rows and then let it alone is to invite some disaster. You cannot plow or cultivate close up to the fence, and unless you are willing to do much hand work the tree will suffer. We have grafted seedling trees in such places and had them do well. Such trees have formed a root system which adapts them to rough and ready culture, but the nursery tree planted in such a situation cannot endure what the seedling can. It must be hoed and kept clean for a circle of at least three feet and the trash must be kept down. Most people neglect to do this, but leave the tree to grow alone on that "strong ground," and it becomes a stunt or the borers get it. Better keep away from fence rows unless you are willing to do much hand work.

Should I lime my corn ground after plowing sod under, or wait until I seed it down to grass? It needs lime. Shall I plant potatoes on the same field where potatoes were planted last year and seeded down to rye? Both fields are alike. M. R.
New Jersey.

Of course a man should see these fields and know all about them before giving any decided answer. Generally speaking I should plow this sod and plant corn without liming—but use the lime when seeding down. Corn does not respond to lime as oats or wheat do, while grass needs lime. By working in the fresh lime at time of seeding you will give the grass a better chance. On general principles I would plant potatoes on the corn land rather than follow potatoes once more.

I have no stock and have a great quantity of straw. What is the best to do to get it back on the land? T. J. B.
Iowa.

I should haul it out, spread it much the same as manure and plow it under. Do this in the Fall or early Winter if possible, so as to let the straw rot all it will. I have known cases where farmers ran this straw through a fodder cutter before spreading it, but this would hardly pay. Here is the amount of plant food in a ton of straw:

POUNDS TO THE TON

	Nitrogen	Phos. Acid	Potash
Oat straw	12	4	25
Wheat straw	10	3	12
Rye straw	10	6	17

In our country such a thing as you speak of doing would be called very wasteful. We can sell rye straw for $20 and more per ton, while the plant food in that ton is worth only about $3.

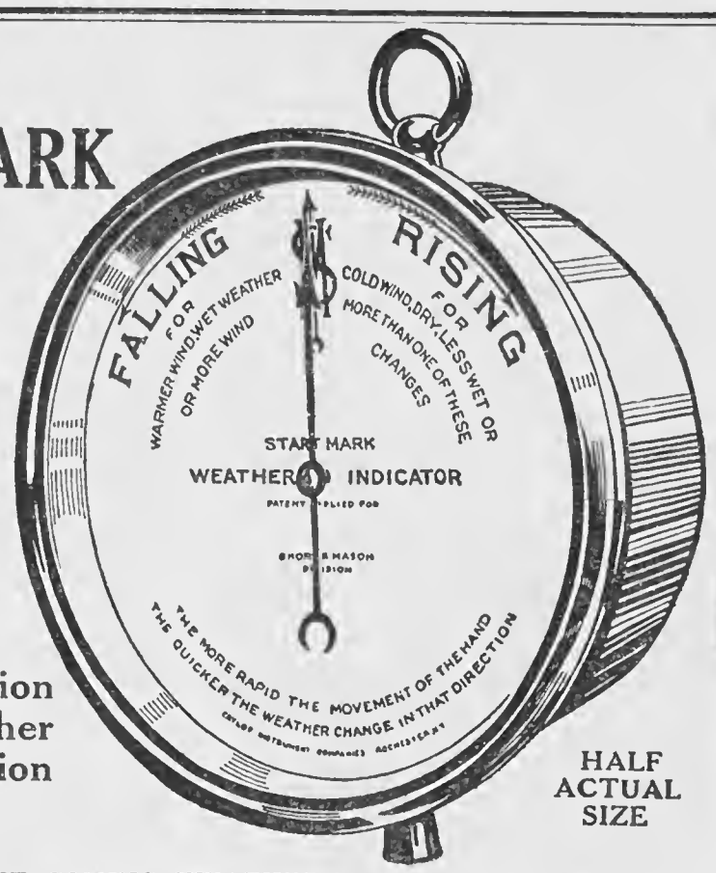
We have large apple orchards (10,000 bearing trees) and the humus problem is on account of our hilly land. Our State orchard expert advises to use one part nitrate of soda and three parts acid phosphate, six to 10 pounds per tree for bearing apple orchards whose condition and production are not satisfactory. Would a mixture of one part acid phosphate and four parts duck manure applied at rate of 20 pounds per tree, be a good substitute? What is relative value of ammonia and phosphorus in the two mixtures. Would it be advisable to sprinkle the acid phosphate over the floor of the duck sheds as the manure is made, or wait until ready to apply it? The manure is kept in sheds comparatively dry and run through an old thrashing machine before using. It comes from a large duck ranch where thousands of eight to 12-week old ducks are grown and fattened for the market, and old stock kept to supply the eggs. Would applying the acid phosphate to the runs of the young ducks be injurious to them in any way? Would floats be a cheaper or better source of phosphorus from the acid phosphate in this instance? J. W. W.
Virginia.

For apple trees we think the duck manure will answer. It will be slower than the nitrate, but with a crop like apples the organic forms of nitrogen will answer. The availability of the nitrate as compared with the duck manure would be about as 100 to 75. Why not use potash also? The trees will need it unless you know the soil is rich in that element.

TESTING NURSERY TREE.—The Babcock fat test for milk revolutionized the dairy business, as it provided an easy way of deciding the value of a sample of milk. The water in 100 pounds of milk was of no value; the butter maker bought it for the few pounds of fat mixed in with the water. When he could tell quickly just how much fat he was buying his business came down to a scientific basis. This principle is now being introduced into all sorts of products. Even coal is to be bought by sample on the basis of the units of heat which it contains. The fat test of milk is so familiar, and has been so useful, that farmers apply the name "Babcock" to any method of preventing the blind purchase of an article by applying a quick and sure test. Thus we speak of a Babcock test for nursery trees. This is very simple. You take cuttings from the trees as they are unpacked, and graft them into strong and healthy trees, as you would regular scions. They will come into bearing in two years or more, and show whether they are true to name or not. It is probable that the test can be quickened by grafting into dwarf trees, as such dwarfs are likely to force fruiting earlier than standards. H. W. C.

"If you don't mind, sir," said the new convict, addressing the warder, "I should like to be put at my own trade." "That might be a good idea," said the warder; "what may your trade be?" "I'm an aviator," said the new arrival.—Credit Lost.

This
START MARK
Weather
Indicator
Will Save
You Money



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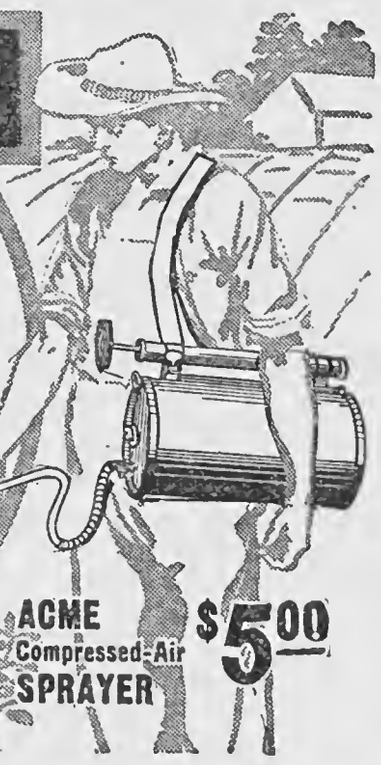

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and fatten your beef in one-third the time required elsewhere. There is a strong local demand at good prices, and all well-informed men predict that the beef of the future must come from the South.

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Patented June 10th, 1913
Eliminates guesswork. Standardizes the strength of the spray mixture. Saves work in mixing—no straining needed.

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say that "Corona Dry" has proved efficient—has always the same high efficiency—is more simple, cleaner and easier to handle than a paste material—is easily mixed and needs no straining—can be measured easily and correctly. "Corona Dry" positively kills and exterminates *Coddling Moth, Curculio and all leaf-eating insects* of both fruit and shade trees. One pound of "Corona Dry" will do the work of three pounds of paste and do it better. Write for booklet. Ask for Corona "Tree Insurance" Policy. Address

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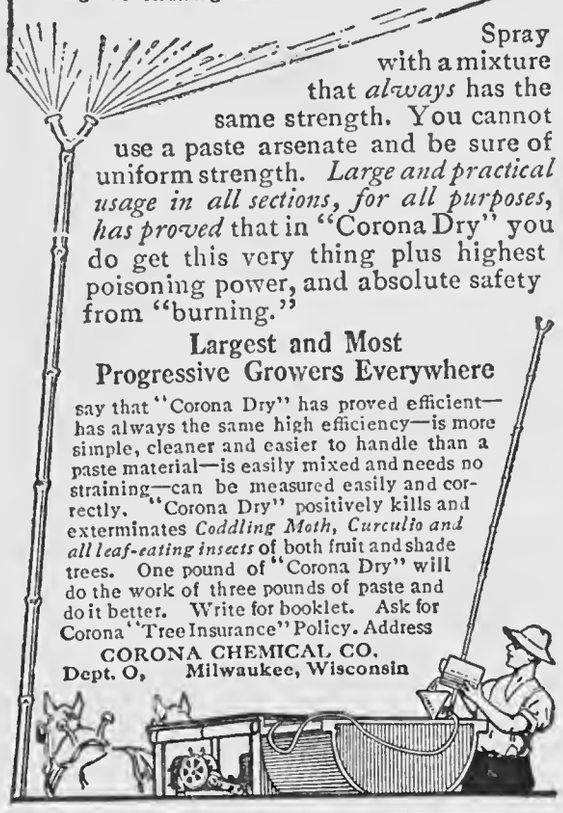

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Either grade will stand 600 pounds test and will be satisfactory for any power or hand sprayer,
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Sprays 4 rows with 12 nozzles, 3 on each. 8 are low-down nozzles for still more thorough spraying of sides and underside of vines. Spraying saves your crop and *increases the yield.* One of a dozen
IRON AGE FOUR and SIX-ROW
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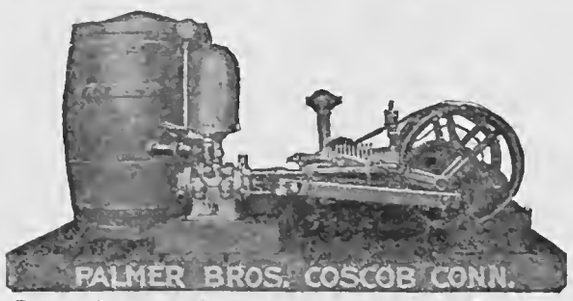
Sprays all sides at once.
We make Sprayers for every purpose.



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12

Ruralisms

Grafting Questions.

I have a few native plum and cherry trees which have grown very well. When they bore the fruit was poor, and a friend grafted them; every graft grew. Some of the plum trees include six different kinds. The trees were grafted about March 26, before the sap began to run, and the scions were taken from the trees and grafted immediately. Would you tell me whether the same thing can be done to apples, pears, or grapevines? W. D. K.

It is easier to graft apple and pear trees successfully than plum and cherry trees. Grapevines are more difficult to get to live. They must be grafted very early and below the ground and then banked up with earth to nearly the uppermost bud on the scion.

H. E. VAN DEMAN.

Grafting the Kieffer Pear.

I have about 50 Kieffer pear trees just commeneing to fruit. Which would be best to do—graft them (if so what to), bud them or cut them down?
Auburndale, Mass. C. B. C.

The Kieffer pear may be readily worked over with other and more desirable varieties, either by grafting or budding, the size of the trees determining the method of graftage to be employed. Cleft-grafting is the most common and successful method in general use, and should be employed when the body or main branches are an inch or more in diameter. When the body of the tree is not over two inches in diameter above the first set of limbs, it is a good plan to remove all the top above them, leaving a stub four to eight inches long, in which insert two scions by the cleft method, and when they have made some growth remove the remaining branches so that the entire strength of the tree may go to the growth and development of the grafts. When the trees are large the main branches must be worked at points that seem most suitable, but the work should be done in such a manner that when the new top has developed the tree will not be out of general balance, but that the original outline of the top be preserved as nearly as possible. Small trees will have to be whip-grafted or budded. The best time for grafting is in Spring, when the leaves are pushing forth, and if the work is properly done at this time very few of the scions will fail to grow. Budding is done in August, when the second flow of sap is running freely.

The Bartlett is the standard market variety, but when a number of sorts are desired the following list of varieties will be found very good, and covers the entire pear season: Summer pears, Bartlett, Clapp's Favorite, Autumn, Beurre d' Anjou Beurre Bosc, Buffum, Seekel, Winter, Lawrence, Vicar of Wakefield. For description of the above sorts see nursery catalogues. K.

Scale on Ivy.

Enclosed is a leaf from my English ivy plant that has been in the house all Winter. Lately I have found this scale on the leaf. Tell me what it is and how to deal with it. T. M. P.

Sponge the leaves with soapsuds, thus removing the scale insects. Whale-oil soap dissolved in hot water and diluted so as to give one pound of soap to six or seven gallons of water, is excellent, but rather unpleasant to use. Fir-tree oil and several other preparations sold by seedsmen, are excellent for use in such cases, but careful sponging with ordinary soapsuds is usually efficient. The trouble is not uncommon with house plants.

Long Island Apples.

In the interesting notes on apples for Long Island (page 403) I was surprised to find so few of the old standard varieties mentioned in Mr. Nostrand's list, also to see that out of the 24 named only five passed as desirable and one of them Ben Davis. That seems rough on the apples or the soil of Long Island. Here on the north shore the soil has produced for me some No. 1 fruit of Red Astrachan, King, Lady Sweet, Hubbardston, Rhode Island Greening, Spy, Newtown Pippin, Flory or Winter Banana, Peck's Pleasant, Roxbury Russet, Wealthy, Yellow Transparent, Dominie and a few other varieties and did the same in pears, plums and peaches, and that too at the time when the San José scale was getting in its fine work, and we had not struck just the right sure way to handle it. No, Long Island is all right for almost anything you want to do right.

JAMES HALLOWAY.

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Contains 21 Ingredients and Is Compounded With Bordeaux Mixture

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Spray your shade trees, fruit trees, flowers, and everything that grows with In-sect-ine.
One pint of In-sect-ine will make fifty gallons of spraying liquid.
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Remember you need nothing else but In-sect-ine for all kinds of spraying.
In-sect-ine answers all purposes.
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Is a Practical and Inexpensive Garden Tool
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No matter what kind of a sprayer you need we can supply you. Every Little Giant, from the Orchard power Sprayers to the Hand type, is so simply constructed and so mechanically right, that it gives the maximum of service with the least waste of effort and spray materials.

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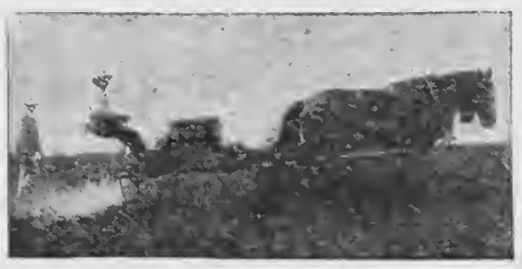

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

HERE are some points from that New Jersey cow case which was reported last week. The cow belonged to Van Nest and she went over upon Dealaman's farm. Van Nest's lawyers argued that Dealaman made an agreement by telephone to keep up his share of the line fence—therefore he was responsible for what happened when the cow passed over the farm line. Dealaman's lawyers argued that if he had gone after the cow with gun, dog or club and injured her he would have been responsible for damage. As it was the hired man drove the cow off peacefully. Dealaman helped doctor the cow and also helped bury her. Before the Court of Errors Dealaman's counsel showed what might follow if the verdict should stand. Suppose a farm worth $4,000 and mortgaged for $2,000. A purebred cow worth $1,500 or more, as many are, breaks in, grazes on corn as Van Nest's cow did, and dies. Under the first verdict in this case the farmer would be forced to pay for the cow and thereby lose his farm and home. This would be manifestly unjust, yet it might easily have happened had this cow verdict not been reversed. It was a good thing that Dealaman carried the case to the highest court. A much better way is to keep out of court entirely and make an agreement to put up a strong line fence.

*

THERE is no reason now why every farm mortgage in the State of New York should not be written for a long term of years under the new farm credit law. Where local saving and loan associations now exist these will be able to handle the farm mortgage, or new associations may be formed if this is thought necessary. Where no association exists certainly one should be organized promptly. Each loan bank may take mortgages anywhere within 50 miles of its office. The mortgage may run 40 years. It cannot be called, but it may be paid in full or in part any time. If you have any money to invest or if you want money on mortgage the bank will serve you. Talk it up in your neighborhood; and the State will help you organize, and will supervise the bank to protect your interests. The rate of interest on the mortgages will depend on the rate at which land bank bonds will sell. These bonds will be such an attractive investment we expect the first issue to sell at par at four per cent. interest, and later issues for less. Take this up in the Grange and in the club. It means a safe and convenient investment for any money you have idle; and if you have a mortgage or want one, it means peace of mind and smaller interest payments.

*

A PENNSYLVANIA reader wrote Senator Boies Penrose, or rather "licked a stamp," asking the Senator to stand up for parcel post. He received a letter back so quick that it must have got the first train out of Washington. What do you suppose the Senator told him? Here is part of the letter:

> I have always advocated the building up of the parcel post system, and shall continue to urge the development of the same to its fullest extent for the convenience and benefit of the American people. I am not in favor of any legislation which will hamper or cripple in any way the Postmaster General in the administration and development of the parcel post system. My attitude in Congress in this connection is well known and is a matter of public record.

There are a good many farmers in Pennsylvania who have on file letters from Senator Penrose about parcel post, written two years ago. In those old days Mr. Penrose made very short work of this correspondence. He told the farmers that he would give the subject "careful consideration," and then apparently he forgot all about it. His attitude in Congress strikes us like that of a man who gave "careful consideration" until he saw that the people were absolutely determined to have parcel post, or not to have public servants who opposed it. At any rate, here we have a great sign of progress. It's a very happy step forward from "careful consideration" to such a position as Senator Penrose now takes. "But why did you wait, my brother?"

*

WE once saw four men trying to turn a locomotive on an old-fashioned turnstile. It was one of those circular holes with a revolving track. The engine ran upon this track, then the men pushed against a beam or handle and turned the track around. In the case mentioned the engine ran on the track and the men pushed. They strained and toiled, but they could not stir the weight. Half a dozen others came, but it was like trying to lift the dead weight of the engine. Then the engineer opened the valve and let in a little steam. The engine crawled two feet ahead and stopped. Then the four men without effort pushed the track around. One stout man could have done it. In the first place the engine was out of balance. Those men were forced to lift tons of useless weight. By moving two feet ahead the engine balanced its own weight and no lifting was needed. Last week we saw a man and a boy trying to haul a load of bags on a two-wheeled cart. They strained, but could hardly move it. The boy got on the back end of the load and the man walked off with it easily. The load had been adjusted so that a large share of the weight was carried by the workmen. When the boy got in behind the balance was restored and the man was not obliged to *carry* it. Now a good many coöperative societies are bound to have the same trouble unless all the members keep in their place and do their fair share of the work. Good organization gives each man his own work to do. That means "balance," the same as with the engine and the cart. Let some of these men neglect their share or go to doing some other part and the weight of the enterprise is thrown upon someone else. Cooperation means not only sharing profits but sharing the labor and care as well. It is give as well as take.

*

YOU may be interested to know I am getting from $9 to $12 a barrel for fancy Northern Spy and Wagener apples. These apples were all wrapped in the orchard the day they were picked, and have never been dumped from a basket. These prices make a man feel he has reached the highest mark, but I have thought so many times before, only to do a little better later. These Spies have been retailing all Winter for $1 a dozen. GEO. R. SCHAUBER.

We have several reasons for printing this. First, possibilities in selling fruit. There are in New York City alone at least 250,000 people who never stop to ask the price of anything which pleases the eye or taste. If it suits them, they want it regardless of price. Draw a line just west of Buffalo straight down until it strikes the ocean or gulf and you have more of these buyers than can be found in any other territory of equal size on earth. These fine products are perishable and cannot be safely sent far in small lots. Therefore, those who live inside this territory, or near it, have a superior market chance. A poor soil near a great market is worth more than a rich soil far removed. Another thing is the fact that no man touches these high and dainty markets until he puts the highest skill into his products. If these apples had been sent to a commission man last Fall they might perhaps have netted $2 a barrel. The extra $7 to $10 represent judgment and skill and nerve on the part of the growers. These are only two of many points about these high prices.

*

Why do you not do your duty and tell your readers that the San José scale is dying out so that there is no need of spraying? S. A. E.
Michigan.

This matter of duty seems to come very easily to some people—with us it is often hard to understand just what a public duty is. *"Let us hear the conclusion of the whole matter."* The fact seems to be that throughout parts of New England, New Jersey, Pennsylvania and to some extent New York the scale is losing something of its power to spread. This seems to be due to an increase of its natural enemies. The scale has been with us about long enough for the parasites and insects which feed upon it to become quite numerous. All know how certain insects, like the potato beetle, increase as potato growing spreads. In somewhat the same manner the parasites which live upon a certain insect will increase as that insect spreads and thus provides the special food for the parasites. This seems to be what is happening slowly to the scale. After some years it is quite likely that this scale will be brought to the economic conditions of some other insects once very destructive but now kept in check by their parasites. The same thing may finally happen to the potato beetle, yet suppose we reasoned from that hope that there is no use spraying to kill the beetles! We consider it our duty to tell our readers to keep right on spraying to kill the scale. We hope that the parasites will some day master it, but they have not done so yet. We shall keep right on spraying, though we have "planted" the parasites in the orchard. It is our duty to tell our friends what we are going to do ourselves. Spray!

*

WE never knew the time when more interest was taken in convenient water systems for the farmhouse. Men may come and men may go, each bringing some large "issue," but the greatest household problem will remain the same—bringing water to the house, letting it circulate freely with heat and cold, and then taking it out in a safe and sanitary manner. We want to make our readers see that the bathroom, the "septic tank" and the kitchen water rank with the silage cutter, the reaper and the farm engine in importance. The Agricultural Department at Washington has just issued a pamphlet on "Farm Water Systems," which is of far greater importance than any bulletins on the Mexican War. It will tell you just how to get water to the house, what to do with it when you get it there, and how to take it out. It is free, and you should send for it. We shall stand for this water question just as we do for Alfalfa, lime or coöperation.

*

OUR old friend E. G. Lewis had a full and complete vocabulary of guff, sarcasm and abuse. No one knew better than he how to induce a confiding person to part with his money, or how to turn on him when, later the poor thing found that he had been duped. THE R. N.-Y. went through it all, from oily guff to murderous sarcasm. Mr. Lewis thought he did a master stroke when he urged his soldiers to call THE R. N.-Y.

That 10-cent paper!

Lewis seemed to think that would end us. It did drive the other farm papers out of the trial term offer, but we kept right on. We think of Lewis on receiving the enclosed:

> We subscribed for THE R. N.-Y. for a period of "10 weeks for 10 cents," and although we do not harbor any ill-feeling toward you or your solicitor, we think you have taken an unfair advantage of us by filling the paper so chock full of good things that we cannot possibly get along without it; consequently we are enclosing you $1 for a renewal for one year.
> Wisconsin. C. E. PATTERSON.

We could show thousands of letters like this one, where a short visit has led to life-long friendship. Some of them put it in a forcible and pointed way:

"You have your toe in my door and you force your way in. I cannot help helping you to do so."
New Jersey. J. D. M.

Selling goods by sample is the fairest way of doing business, provided the samples are representative and uniform. THE R. N.-Y. spends no time telling a stranger or anyone else what it is going to do. We rather say to all: "We put all we have into each issue of THE R. N.-Y. Some issues will suit your personal tastes better than others, but a fair reading of 10 papers will show you whether the paper will help you or not. We will accept your judgment in the matter." The other papers have abandoned this plan of selling by fair sample. THE R. N.-Y. has found it an admirable plan for extending its circulation, for a very large proportion of these visiting friends become regular members of the family.

BREVITIES.

OH who can hope to pay the piper when—old boarder cows are kept by boarder men?

ONE way to get that heavy soil of yours into the limelight is to use lime. Lime will lighten it.

THE Japanese are shipping eggs to Hawaii. The "Business hen" covers the world, and hatches out trade in all the corners.

STRIKING the keynote. Many people do it, but most of them put on the soft pedal, and seem to be afraid that someone will really hear the note.

IN Bulletin 127 the Pennsylvania Experiment Station gives a thorough study of the limestone and lime supplies of that State. It is a very full and complete record of Pennsylvania lime.

A NEWSPAPER report from Isabella de Sagua, March 30, states that Boatswain Lunemberg of the steamer Borney Castle fell from the bridge of the vessel into the harbor that day and was devoured by sharks before a rescuing boat could be lowered. Last year THE R. N.-Y. was informed, by a government official that sharks did not attack human beings, but several of our readers came forward with dissenting opinions.

THE NEW MARKET SYSTEM.

The new law creating a State Department of Foods and Markets is one of the most helpful pieces of legislation that we have adopted in the present generation. There is, however, no magic in a law. To permit a thing to be done is not to do it. The law will not operate itself. If the work should fall into perfunctory hands the Department would be useless. It is a work that must be pursued with vigor, perserverence and determination. It will not move along like the traditional sweet song. Every effort, every allurement and every device known to experienced manipulators will be employed to discredit the work and to defeat its purpose. Strength, cunning and experience will be combined against it. The interests opposed to it will be fighting for a privilege that they inherited, and for their own existence. There will yet be room in the produce trade for honest men and honest business; but there will be no place for the band of pirates who have dominated the trade for the last generation.

Against a few hundred speculators in foods we have the whole producing and consuming population of the State. We must select one man to lead these people. This leader must be a man of vision, of enthusiasm and executive ability. He must embrace the whole State within his horizon. He must start the food from the fields of farms to the tables of the consumers in a steady unobstructed stream, and if any man, or set of men, attempt to obstruct the channel or to deflect the traffic, he must not only prevent the obstruction or deflection, but he must strike down the hand that is raised against his work.

We may just as well understand the task before us now as at any other time. We are about to throw over a system that has been ideal for middlemen and disastrous to producers; and establish in its place a system that ought to be ideal for producers and disastrous to crooked commission men and food speculators. The farmer has been producing food for a living. The consumer has been paying to the limit of his ability. The middlemen have reaped the profits, and perpetuated extravagance and waste. For every dollar the consumer paid, the distributor got 65 cents. The producer got 35 cents. We are going to change this. We propose to give the consumer more for his dollar, and give the farmer more for his produce. The middleman must be content with much less for his services. Does anyone expect the middleman to surrender his 65 per cent. without a fight? We expect nothing of the kind. We look for a most interesting scrap. The end will not come all at once; but when the scrap is over the produce men, as we have known them in this generation, will be no more. In their place will be merchants handling food products on a fair profit, and doing a legitimate service. No others will be able to stand the test of inspection and the competition of the open State controlled market.

Our commissioner must establish grades and standards and packages and labels. He must develop local markets throughout the State, keep producers advised as to domestic and foreign markets, and publish prices established by auction markets. We have a salary of $6,000 for the place; and we want a $50,000 man to fill it. There will be lots of $1,000 men looking for the $6,000 job; but no $50,000 man will seek it. If we get him, we must seek him. The man with vision enough to see the great possibilities of the work will be big enough to sacrifice personal interests for the sake of the single service he can render both the present and future generations.

FINANCING SOUTHERN COTTON PLANTERS.

PART II.

Plowing begins in March. The planter must have food for himself and his family, and feed for his mule. He must have seed and fertilizers. He gets the first installment when the contract is signed with the "factor" in the early part of March. You then see the planter wending his way home, the wagon loaded with his purchases. It is doubtful if much of the money ever finds its way outside of the city limits.

The greatest hardship in this system to the planter is not so much the high rate of interest as in the fact that the crop is sold before it is planted, and eaten so to speak before it is gathered. No matter what the price, it must be delivered when picked; and it does not require much imagination to see that the price will generally be lowest when deliveries are being made by producers, and highest after the crop has left the growers' hands. Besides cotton varies greatly in quality. There are in all probably as many as 30 different grades as a result of growing, picking and caring for it. The price varies with the grade, and if the "factor" is inclined to make the most of the situation he finds an opportunity in fixing the grade and corresponding price. Whether the "factor" is unscrupulous, fair or altruistic, depends on the individual, but I doubt if a system could be devised to put him more completely in control of the situation.

I do not write to criticise Southern people or Southern customs. The Southern man may find as much to criticise in us as we do in them. The Southern people are courteous, hospitable, generous and chivalrous. I found the "factors" courteous and I have no doubt that their sympathy with the grower in his position is genuine, and at times leads him to unusual risks. The factor and the planter understand each other better than a stranger can understand either of them. I write not in the spirit of criticism, but in the hope of making a suggestion that may yet be found helpful. The trouble is not with the men, but with the system. The Southern farmer gives himself up too exclusively to the growing of cotton. The system is partly responsible for this. As we have seen, his mule and his chattels generally are pledged in advance for a cotton crop. To default in payment is the same to him as it would be with a banker or a manufacturer. He is in a system that makes and preserves records. Let him default once and his standing and credit ars gone. He must produce cotton to meet the debt. But the Southern farmer of the future will diversify his work. Today the Georgia farmer buys Alfalfa from New Mexico, fruit from South America, vegetables from Florida, pears from California, and apples from New York and Oregon. He goes to Missouri for his mules, to Minnesota for his flour and to Wisconsin for his butter. Many of these products, and good substitutes for all of them, can be grown on the farms of the State. A banker with a large and valuable farm told me he could not raise oats and corn to sell at a profit. He admitted cow peas and vetch grow luxuriantly and of course, make an excellent hay for milch cows. I asked him why he did not go into the dairy business. He said there was no dairying in his section except to supply liquid milk. The butter came from the North. I told him how a coöperative creamery might be built for $2,000; and butter supplied to all local trade from neighboring farms. He listened with great interest, but finally said: "Yes, but that requires organization." The air was enough to say that makes it impossible there. It required organization to establish his bank, and to erect a large number of cotton mills in the town, and to build a two million dollar power plant. It is never difficult to find men ready to organize capital where there is a promise of rich reward. With organized producers the profits are widely distributed and consequently the work is not so attractive to the genius of organization. Coöperative organization is as essential to the farmers of the South as it is to farmers everywhere else. It will not come all at once. It had better not. A slow growth is better for permanent results. Probably twenty million dollars worth of cotton is delivered to the Augusta market. For the most part the growers get a meagre living out of it. If these growers were united in coöperative organizations to furnish their own credit, buy their own supplies, and market their own product, they would save for themselves not less than five million dollars annually; and would probably be the most prosperous farmers on the face of the earth.

J. J. D.

KANSAS WEIGHTS AND MEASURES.

THE Weights and Measures Law, administered by the State Board of Health, states that unless there is a special written contract to the contrary, feeds made from the common cereals must be packed 100 pounds gross. The consumer can find protection under this law if, when he orders a sack of corn chop, for example, he discovers the package delivered to him weighs only 98 or 97 pounds, or even a less amount, gross.

This comes from the Kansas Agricultural College, and refers to the Kansas law. In the East we have been led to believe that Kansas is such a rich and fat State that laws to protect grain buyers would not be needed. Yet it seems that some Kansas dealers are giving "short weight" and systematically robbing buyers of 20 to 30 pounds out of each ton. Buyers acquired the habit of buying grain by the "sack" instead of by the pound, and the sack seems to have been steadily shrinking. Much the same thing is true all over the country. If it pays to weigh the milk and find the robber cows, it pays to weigh the feed and find the robber sacks. In old times soldiers used to "sack" a conquered city. Do not let the feed dealers try it on your pocketbook.

CO-OPERATION IN EGYPT.

EVEN Egypt has started agricultural coöperation, backed by the law. Consul Garrels of Alexandria states that the new Egyptian law contains the following:

They must consist of a minimum of 10 members, all agriculturists, agricultural workmen, land owners, or tenants of rural estates belonging to the same or neighboring vilayets. The sole objects of these societies are as follows: The purchase in common of animals, machines, and other agricultural things, the procuring of all agricultural implements and machines, the sale for the members' account of the crops and agricultural produce, the loaning to members only in money or kind, such loans being destined for useful expenditure and authorized by the statutes, the receipt of deposits of moneys from members according to the prescriptions of the statutes, and the undertaking of agricultural works for the good of the societies.

It was 115 years ago that Napoleon at the battle of the Pyramids exclaimed: "Soldiers, from yonder Pyramids 40 centuries look down upon you." This impassive view has now been extended for another century. They have looked upon scenes of slaughter and still more pitiful slavery—countless millions of human beings driven like dumb brutes at labor for others until the manhood was crushed out of them. In all that time they have looked upon no brighter or more hopeful aspect of human life than now, when these descendants of hopeless slaves have come up to the dignity of coöperative work! For everywhere coöperation means freedom along the road to brotherhood, and think of New York behind Egypt in coöperative laws!

NEW YORK STATE NEWS.

THE HOG SPECIAL.—A "hog special" has been run through western New York recently, during a period of 10 days, by the New York Central Railroad, under the auspices of the State Department of Agriculture. Lectures were given on board the train by experts on the swine industry and pork production. One said that there were 8,000 less hogs in the State now than a year ago. The price has increased $1.25 per head on the average. Lack of attention paid to breeding and the ravages of the hog cholera are given as the causes for the falling off in numbers. A few animals were on exhibition in one of the cars which were taken from private pens because of the fact that when selection was made at the Buffalo stock yards so many were afflicted with the cholera that none could be found of such quality as were needed for exhibition.

TROLLEY LINES CO-OPERATE.—According to a recent newspaper statement the New York Electric Railway Association is to put forth a strong effort to develop the inter-urban and suburban sections of the State traversed by the trolley lines, by inducing new settlers to locate there and to establish experiment farms along their lines and in various ways to bring the farming districts into more intimate relation to the urban districts as a means to better social conditions and improve market facilities. From the 500 rural communities that the inter-urban railways of the State now connect by 1,500 miles of track with the great metropolitan markets, every effort will be made for quick and reasonable shipment of farm produce.

A GOOD TEXT.—Commissioner Huson took a good text for a talk before the Dutchess County Farm Bureau and other farmers at Poughkeepsie last week. He said: "Don't compete with your neighbor; coöperate with him." Continuing, he said: "A community of farmers all engaged in producing the same special article is bound to attract attention to the locality. In trade there is a tendency to get together and farmers should do the same. Millbrook is famous for its Shropshire sheep, so every farmer who keeps sheep at all should keep Shropshires in central Dutchess. In Ontario they are doing that with the Hampshires with the result that buyers go there when they want Hampshires." In Yates county Mr. Huson popularized the raising of pigs. He said that some of his neighbors wanted to breed a different kind of pigs when they see he was raising about 400 head of one breed every year. But he advised them to raise the same as he did.

SMALL FARMS NOT PROFITABLE.—Prof. K. C. Livermore of the farm management department of Cornell discussed the subject in which he is specially interested at a meeting of farmers at South Byron last week. He referred to a survey of farms in Jefferson, Tompkins and Livingston counties, 578 farms reporting. Actual visits had been made to all of these farms during a period of several years in order to get the figures as nearly accurate as possible. It was shown that on the farms of less than 50 acres almost universally the farmers' sons had gone to the town or city to work, while on the large farms they had remained. It was also found that on these small farms the labor income, or what remains to the farmer after paying expenses, was less than nothing and it would have paid the farmer to have gone to work for some one else as hired man. The larger farms made a much better showing.

MANUAL OF CO-OPERATION.—The Department of Agriculture has recently issued Circular 94, a manual of coöperation. It is a very helpful piece of information on matters pertaining to coöperation among farmers. Marc W. Cole writes, "A Primer of Cooperation," in which he condenses in three pages a vast amount of information. J. C. Bellingham of Schenectady describes "The Citizens' Coöperative Supply Company" of that city, which has a membership of over 200. L. C. Tuckerman gives an account of the wonderfully successful fruit growers' association of the Hudson River Valley with headquarters at Milton. The second year of its organization the association did a business of $232,000 on a capital of $1,200. It has 84 members. Members of the American Commission tell how to adapt European systems of coöperation to this country. Emerson P. Harris describes a trial of an English plan in Montclair, N. J. The Montclair Coöperative Society started in 1912 with about 300 members. Their store is doing a business of $10,000 a month and saving members from five to eight per cent. The cost of doing business there has been reduced to 13 per cent. on retail price, including 3 per cent. for delivery

J. W. D.

Direct Dealing With Farmers.

I was quite interested in the story in a late R. N.-Y. of the cost of a barrel of apples, bought within 100 miles of New York City, for which the purchaser paid $1.50, and which cost him $1.67 carrying charges delivered at his home in the city. I have been wondering how he worked it to have such a charge. How far away from any recognized public carrier were they when he bought them, or did he send a private messenger for them?

My own experience is quite different. I bought a barrel of Northern Spys in Orange County last Fall, and they were delivered at my house in Brooklyn by the Wells-Fargo Express Company for 60 cents. The farmer received $2.50 of the $3.10 it cost me; that is, he had 80 cents of each dollar I paid. My farmer friends 75 miles from the city have been getting from 40 to 48 cents per dozen for eggs ever since the early Fall. I use about 1½ dozen a week. I buy them for 35 to 40 cents per dozen, and I have not had a poor one this Winter. Of course they are not the same eggs, but those I get from my grocer are good ones. I don't see how a 35-cent dollar is figured from that.

I bought my Winter supply of potatoes from one of my farmer friends referred to above. They cost me when safely in the cellar, freight and cartage paid, $1.01 per bushel. The farmer got 75 cents of each dollar I paid, and the railroad and the cartman divided the other 25 between them. I look at this thing from the consumer's side. I don't mean to pay a dollar for anything for which the producer gets only 35 cents. I wish the carrier and the distributor to get fair pay for their services, but not an unfair part of the price I pay.

J. J. W.

Brooklyn, N. Y.

Woman and the Home

From Day to Day

THE LOT OF THOUSANDS.

When hope lies dead within the heart,
  By secret sorrow long concealed,
We shrink lest looks or words impart
  What may not be revealed.

'Tis hard to smile when one would weep
  To speak when one would silent be;
To wake when one would wish to sleep,
  And wake to agony.

Yet such the lot for thousands cast
  Who wander in this world of care,
And bend beneath the bitter blast,
  To save them from despair.

Yet nature waits her guests to greet
  Where disappointment can not come.
And time leads with unerring feet
  The weary wanderer home.

—Anne Hunter (1742-1821).

*

THE equal suffragists in this city, who have been holding an elaborate fair recently, included a number of baking contests in the attraction. Quite naturally they challenged some of the anti-suffragists to enter these competitions, which would seem especially suited to those whose slogan is "Woman's place is in the home!" But, to the public surprise, the antis declined to compete, and the tempting fresh bread, the fragrant pies and cookies, were the work of "votes for women" enthusiasts. As one of the prize-winners was a woman who has often been prominent in suffrage "hikes," it would not appear as though she had lost her place in the home by occasionally marching out of it.

*

AT the recent New York flower show there was a little display of garden aprons, children's dresses and other garments, made by "The V. & R. Industries." This is a philanthropic agency for the benefit of convalescents discharged as cured from the Vanderbilt Clinic and Roosevelt Hospital. There are many cases where patients, while recovered from an illness or operation, are entirely too weak to go back to their regular work, and yet in sore straits for means of support. It is to tide them over this period that the "V. & R. Industries" were established by a group of philanthropic women. At present they are only handling women's work, but they are looking about for suitable men's handicrafts also, and have hopes of utilizing some lines of cement work for them. Among other things in this display were garden pillows, covered with enameled cloth, and stuffed with cork shavings—a great convenience for amateur gardeners, when kneeling on damp earth in their garden operations.

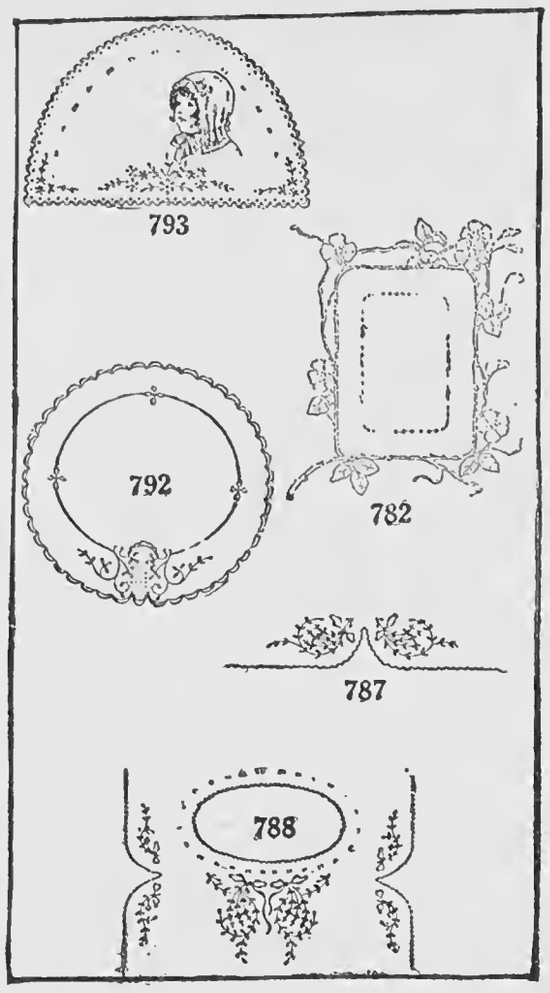
*

SINCE few farm housekeepers have the opportunity of securing coöperative help in laundry work, the next best thing is to simplify their needs in this direction, so far as comfort and cleanliness allow. We have referred, many times, to the use of seersucker or ripplette in lessening ironing, both for children's clothes and women's house dresses, while the cotton crapes have a useful place for nightgowns and other underwear. Knit union suits, as well as separate garments, in all the Summer styles, are another help. The present styles of little girls' frocks are largely made with bloomers for "underneaths" and this saves much ironing of little petticoats. But we wish every home laundry could be equipped with a mangle, household size, which would iron all the flat pieces quickly and well and which could be run by the gasoline engine. Unfortunately the gasoline engine has not yet been taught to hang clothes on the line, but the housekeeper can save herself much exposure in cold weather, or when it is damp underfoot, by having a trolley line rigged from the back porch, like the network of lines stretched over city backyards which may be viewed from THE R. N.-Y.'s office windows every day.

The Rural Patterns.

The prices quoted are for stamped goods and material for working but transfer patterns of any design will be furnished separately for 10 cents each.

No. 793.—A design for embroidering a one-piece child's cap. Stamped on pure Irish white linen with mercerized floss to work, 30 cents.

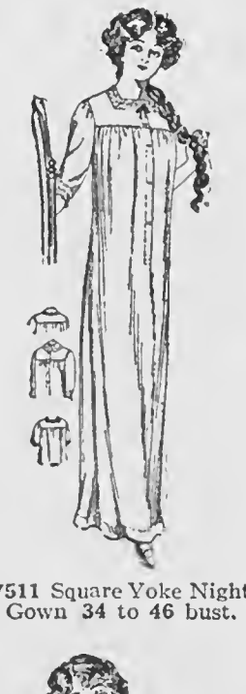


No. 792.—A design for embroidering a doyley six inches in diameter, six transfers are given. Stamped on best white Scotch linen with mercerized floss to work, 15 cents. Set of six, 80 cents.

No. 782.—A design for embroidering a photograph frame in wild rose design. Stamped and tinted on gray linene with mercerized floss to work, 20 cents.

No. 787.—A design for embroidering frills for women's and misses' drawers. Two transfers are given.

No. 788.—A design for embroidering a low neck nightgown with short sleeves. Stamped on best quality of nainsook with mercerized floss to work, $1.25.



7511 Square Yoke Night Gown 34 to 46 bust.

7839 House Gown or Nurse's Costume, 34 to 46 bust.

8206 Tunic Dress for Misses and Small Women, 16 and 18 years.

8213 Girl's Dress, 10 to 14 years.

8221 Child's Empire Dress, 1, 2 and 4 years.

8125 Child's Dress, 6 mos. or 1 year and 2 years.

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SINKS SNOWY WHITE

"OLD DUTCH" cleans the sink "as quick as a wink." Quickly banishes grease, dirt and stains from porcelain, enamel and metal parts. Equally effective for scrubbing wooden sink boards.

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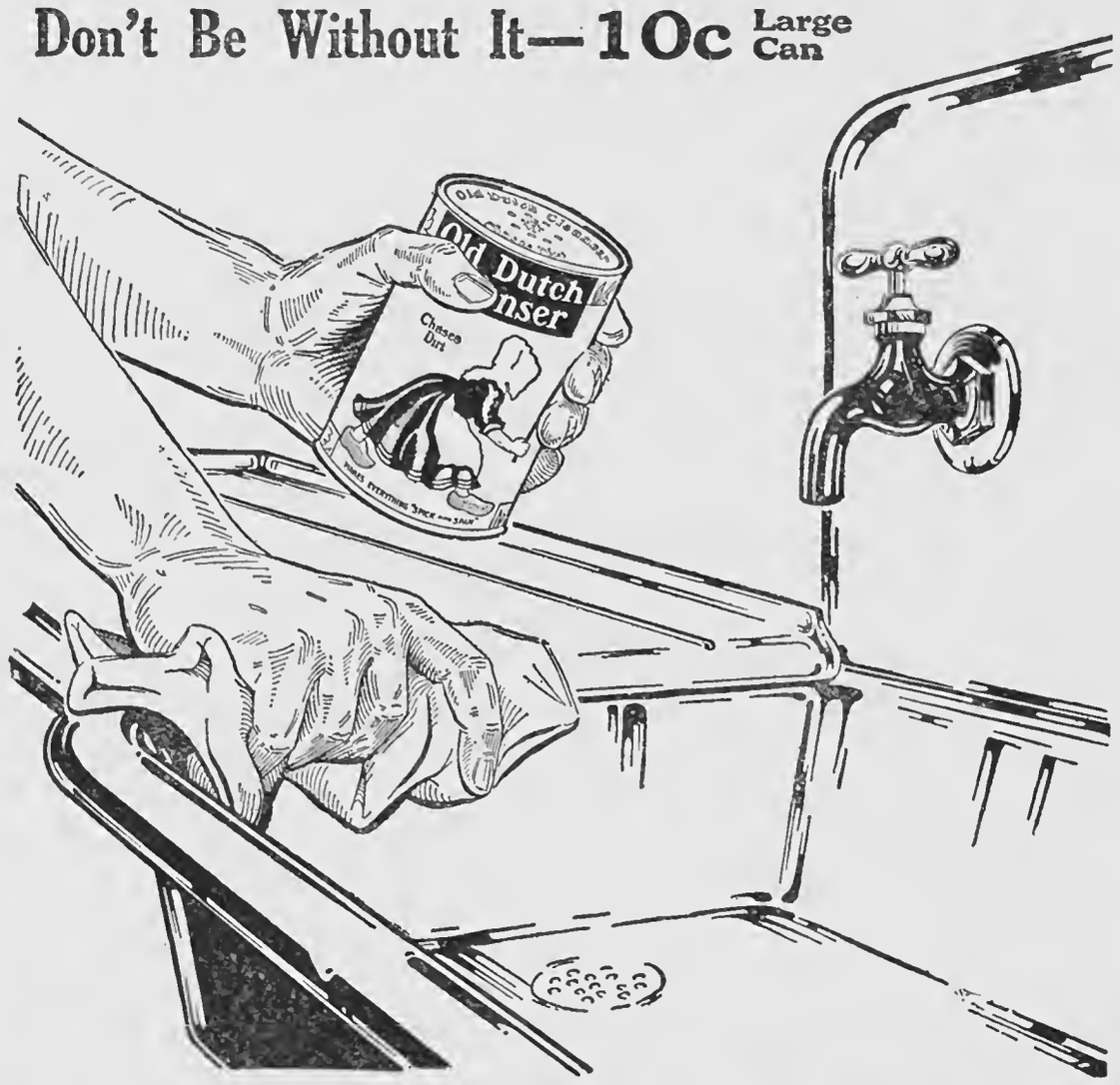

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Gold Coin Stoves and Ranges

Buy direct from factory and get a better stove for less money. Freight prepaid—stove comes all polished, ready to set up. Use it one year—if you aren't satisfied we refund your money.

Write for Catalog and Prices. Big Free Catalog shows why improved features of Gold Coin Stoves make them fuel-savers and splendid bakers—why they have given satisfaction for 53 years.

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BETTER LIGHT from KEROSENE
Beats Electric or Gasoline
TEN DAYS FREE
SEND NO MONEY

Without sending a cent you can use this wonderful, economical oil light 10 days Free, then return at our expense if not satisfied. Gives powerful white incandescent light, burns over 50 hours on one gallon Kerosene (coal oil). No odor, smoke or noise, simple, clean, won't explode. Guaranteed. *We want one person in each locality* to refer customers to. Write for 10-DAY FREE TRIAL OFFER—agents' wholesale prices and learn how to get ONE FREE. AGENTS WANTED
Make money evenings and spare time. One farmer cleared over $500 in 6 weeks. Exclusive territory given.
MANTLE LAMP CO., 521 Aladdin Bldg., Chicago, Illinois

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it's not a question of work or no work, but of keeping dry *while* you work. The coat that keeps out *all* the rain is

TOWER'S TRADE MARK FISH BRAND
REFLEX SLICKER

No water can reach you even through the openings between the buttons. Our famous Reflex Edges keep out every drop. Make the *Reflex Slicker* your wet weather service coat. It's the best your money can buy.

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Can you afford to pass up this great "direct-from-the-mill" offer? This is the "Glen Rock" plan we save you at least $8 on every overcoat, on every suit and fit you perfectly. We have a STYLE Book for you. It contains Fashion Plates galore and 40 pieces of goods showing popular patterns the men of New York are wearing this very minute.

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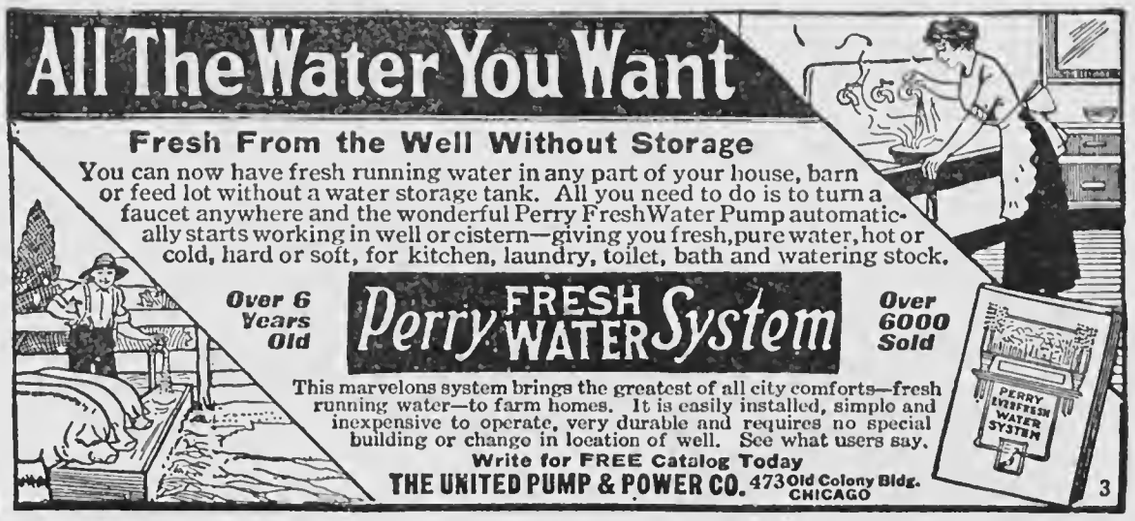

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You can now have fresh running water in any part of your house, barn or feed lot without a water storage tank. All you need to do is to turn a faucet anywhere and the wonderful Perry Fresh Water Pump automatically starts working in well or cistern—giving you fresh, pure water, hot or cold, hard or soft, for kitchen, laundry, toilet, bath and watering stock.

Over 6 Years Old
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Write for FREE Catalog Today
THE UNITED PUMP & POWER CO. 473 Old Colony Bldg. CHICAGO

Home-canned Meat.

Can you give me a recipe for canning meats, such as veal, in glass cans, so it will keep through the Summer?

H. W. S.

The following recipes are from the "Rural Cook Book." They were contributed by housekeepers who found these methods very satisfactory.

Half cook the meat in a kettle, cut meat from the bones. If this is done while the meat is hot, wring out a cloth from cold or tepid water, fold in several thicknesses, and set under the glass can, letting cloth come up about an inch around sides of can, and it will not break, no matter how hot the meat may be. If you spill more broth on the cloth be sure to wring out extra water from it, for if the cloth is sopping wet, the can will break. Having filled can with meat, pour in all the broth the can will hold, and see that it is salted and peppered just right for the table. Screw on cover without rubber and, if hot put in kettle partly filled with hot water, putting a tin in bottom of kettle to set cans on. Three quarts can be put in common-sized kettle. Cover with a well-fitting cover that will keep in the steam, and keep boiling for two hours. Take out one can at a time, and at once put on a good rubber. If you want to keep the meat for several months, if it is chicken, veal or beef, have hot melted beef suet and fill the cans even full. If you only care to keep the meat for two or three weeks fill up even full with boiling broth. This work must be done with dispatch, not letting the contents of the can cool in the least. Screw on the cover to the last limit, and if your covers and rubbers are not defective your meat will keep perfectly. In canning pork there is nearly always sufficient grease to broth; if not the can may be filled with lard.

Canning Meat in Tins.—Trim off all surplus tallow from meat, and either boil or roast the beef, using but little salt and pepper, preferably none at all, as these will attack the tin; meat can be spiced, etc., when removed from can to serve. When cooked remove from liquid and trim off from bones. If liquid is too greasy let it get cold and then remove tallow. While again heating liquid and meat boiling hot get the cans and covers ready, the covers to be pierced by an awl in the center. Use the friction top tin can only, for keeping meat through the Summer and dog days. You can use glass jars to keep same till May, but they are risky during warm weather. When meat and liquid are hot pack meat into the cans—any size you wish—not quite full, and pour liquid over, same so as to cover meat somewhat, then place on the covers good and tight. Put cans into oven and bake one or two hours. If cans are too full, liquid will ooze through vent. The baking will drive out every particle or atom of air through vent, and is absolutely necessary for safety. When nearly done baking liquefy some paraffin or sealing wax, and heat a soldering iron. The paraffin is to seal cover airtight around edge, and the soldering iron to use with solder to close up vent opening in center. Take out of oven a can at a time and solder vent opening as quickly as possible, then paraffin the edge of cover. Place cans—after finishing job—where it is dry and cool. A steer can be packed into about 50 or 60 quart cans.

Honey and Its Use.

There is $20,000,000 worth of honey produced in the United States annually. The greatest part of this honey is used by the large baking concerns. Honey is used in varying quantities in cakes and cookies. Sugar cakes and cookies, also those made with molasses, soon become so dry that they are not palatable. But honey cakes will keep in good condition almost indefinitely. Indeed they seem to improve with age. In many homes honey is a luxury. Honey is food in its most concentrated form, and should not be considered a luxury, as a pound of honey costs no more than a pound of good candy, and is much better for the children. Bread, butter and honey is not as expensive article of diet as pies and cakes that often make up the school luncheon. Can any housewife make a complex mixture that is more delicious than wholesome bread, good butter and honey, to say nothing of digestibility? We have substituted honey for molasses in cakes and cookies that call for sour milk and soda with good results. This gives variety, the cakes are better and one can bake in larger quantities as they do not become dry and hard. Honey used in making puddings gives a delightful flavor.

A cup of strained honey to a quart of cream makes a delicious ice cream. Honey can be made into candy with the addition of sugar. Plain honey candy is made by standing a vessel with one pound of honey, one pound sugar and one tablespoonful of water in another vessel of hot water until sugar melts and then cooking over a moderate fire until it forms a ball; turn into buttered pan, flavor with lemon and pull when cold.

Nut Honey.—Make a plain candy as above, and stir in nuts when taken from fire, place in buttered pan and cut into squares.

Honey Cream.—Take an equal quantity of honey and cream, stir into this mixture powdered sugar to make stiff and then knead like bread and form into fancy shapes. Use half honey instead of all sugar when making fudge and you will be pleased with the results.

Honey Delights.—Cook one cup of honey, one cup sugar and one cup sour cream until thick. When cold make into balls and place half an English walnut on each.

Honey can be used to sweeten lemonade or fruit punch when something extra fine or novel is wanted. Both raw and cooked fruit sweetened with honey is considered a great delicacy in many homes. Raw peaches and cream with honey are especially nice.

Comb honey kept for Winter use, should be kept in a warm place, as honey cells will grain and comb honey thus candied is not palatable. Extracted honey can often be liquefied by placing in a warm room for a few days, or the vessel of honey can be placed in another vessel of hot water. Honey should not be heated directly on the stove, as it is likely to impair its delicate flavor.

M. C. B.

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—the man who sells you a warm, strong, *comfortable* pair of Hansen's Gloves. There is *almost* as much danger in the wrong glove as in none at all. Keep your hands *well* with the perfect fitting

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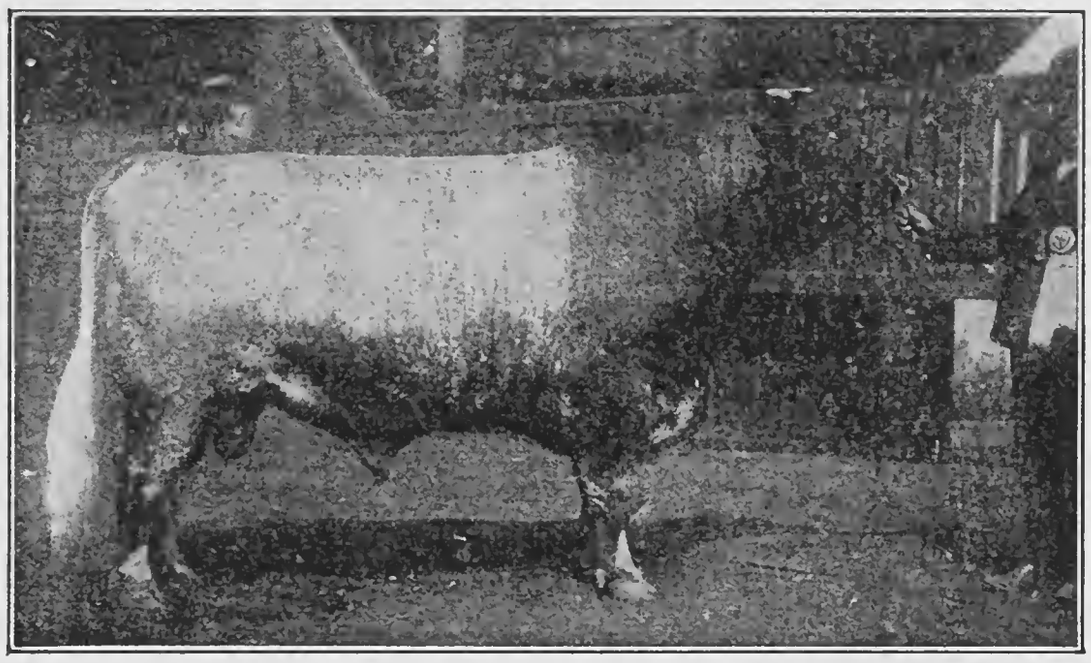
Live Stock and Dairy

SOME SHORT-HORN RECORDS.

A few years ago I was asked to furnish a paper for one of our local farmers' institutes, and I read one setting forth the merits of the Short-horn cow as a milker. After citing several remarkably good records I concluded with the statement that the dual-purpose cow was no longer a delusion as was claimed by some, but was here in the flesh and had come to stay. A part of the institute's force were strong dairy breed advocates, and they roasted me at every available opportunity during the remainder of the session. But



A GOOD SPECIMEN OF SHORTHORN BULL FROM THE MIDDLE WEST.

I have lived to see my prophecy abundantly fulfilled, for I have seen an American-bred Short-horn cow that has made 18,075 pounds of milk, 735 pounds of butter, in one year, under official test, and average daily production of 495 pounds of milk and two pounds of butter for the entire year. There are quite a number that have exceeded the 15,000 pound mark in one year, a countless number that have exceeded the 10,000 pound mark and many more in sight that are coming.

They have been taken up by the leading agricultural colleges of this country. At the Missouri college they have the cow Lula, with a milk record of 12,341 pounds and 615 pounds butter, and Panama Lady, 13,789 pounds milk, 572 of butter. Pansy of Stanton at the Michigan Agricultural College produced 10,058 pounds milk, 456.5 pounds of butter, in one year and during that time gained 324 pounds in weight. At the Iowa State College, College Miore produced 517 pounds butter in the year. Florence Airdrie, owned by the Nebraska College gave 10,436 pounds milk, 494 pounds butter. The New York State College of Agriculture has two remarkably good young cows in the Short-horn division of their dairy herd. Lady Clay 3d has a record as a four-year-old of 11,488 pounds milk, 558 pounds butter, in one year; Lady Clay 2d, at three years gave 8,540 pounds milk, 384 pounds of butter. The Glenside Herds report for 1913, 85 cows with records of 8,000 pounds or more and 34 better than 10,000, with Eldora Clay's 15,000 record. At the London Dairy Show last year, Sherwood Rose won first prize in a two-day test with 144 pounds milk testing 4.08 per cent. fat. Ruby won second prize with 115.5 pounds milk testing 5.6 per cent. of fat. R. W. Hobbs & Son of Gloucestershire report an average milk production of 6,400 pounds from their dairy of 200 milking Short-horns. But the best record of all is that of Model Maid, owned by Mr. James Shippy of England, that gave, from September 1, 1912, to August 31, 1913, 22,348 pounds milk, a record that will make some of the Holstein cow owners sit up and take notice. A. H. PRINCE.

Schuyler Co., N. Y.

Training a Saddle Horse.

I read the inquiry upon the training of a saddle horse from B. D. and your query concerning the same. I have been in the West for many years, and most of my business was carried on while in the saddle. From experience I would say that it would be impossible to train the horse in question to be good both as a saddle and single driving horse. A good saddle horse should not be allowed to carry a harness, as this tends to make them "heavy" in their gaits, and as a heavy-gaited horse is very tiresome to ride it should be avoided. In breaking this animal I should put a saddle upon her and turn her loose for two or three hours a day. Handle her considerably during a few days. Then when I did get in the saddle I would let her have her own way as much as possible. Avoid bringing her up short, as this will tend to make her nervous in future handling for the required gaits, and also tends to make her afraid of the bit, which is bad in a saddle horse. After she had quieted down and learned not to be afraid of you, I would try her in all her natural gaits until I found that which was the easiest for both the rider and horse. Then I would hold her to that gait as much as possible. The principle thing is patience. Do not give up and let her walk home, as she will forget. Teaching a horse new gaits is like teaching an old dog new tricks. Unless you gait your mare from some natural gait of her own you will probably have an ungaited mare. I do not know that this will help you in answering the questions of B. D., but I sure would like to have the mare myself to break, as she is about the right weight for a good saddle pony. W. L. SHORT.

Idaho.

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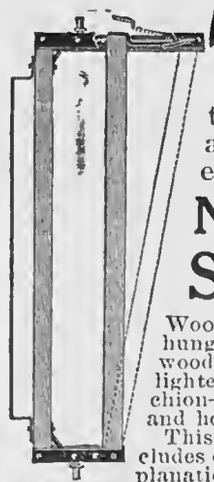

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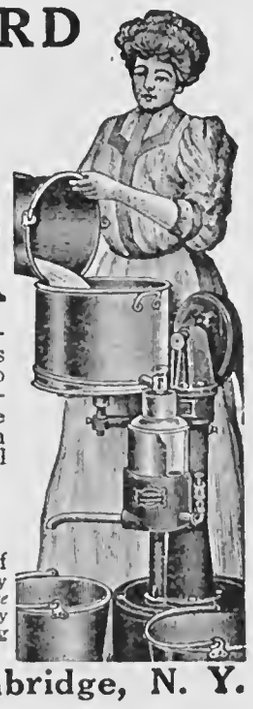

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SALE OF HOLSTEINS.

Establishing a new record for the average price a head, the Breeders Consignment Sale Company, concluded its sale of Holstein-Friesians at the Liverpool, N. Y., Pavilion with $90,335 in the treasury for 180 head. This is an average of $502 for each animal. Young animals sold as high as $1,000 and the banner price of the day was $4,150 for Johanna King Segis, offered by John Arfmann, of Middletown, N. Y., and purchased by Houslett & McNutt, of Oxford, Wis. An interesting feature of the day was the sale of three daughters of King of the Pontiacs by Stevens Bros. Co. Below are some of the more important sales:

Johanna King Segis, Houslett & McNutt, Oxford, Wis., $4,150; K. P. Lilith Boon, Chas. C. Disbrow, Norwalk, Conn., $3,200; K. P. Lilith Clothilde, T. E. Gotselman, Hampshire, Ill., $2,900; K. P. Daisy Copia, Oakhurst Farms, Gloversville, N. Y., $2,550; Fairmont Netherland Posch, R. E. Davis, Mexico, N. Y., $2,000; K. P. Lilith Lady Clothilde, T. E. Gotselman, Hampshire, Ill., $2,000; King Pontiac Beryl Korndyke, E. L. Pohl, Watertown, N. Y., $2,000; Zozo Pontiac Hengerveld, John Arfmann, Middletown, N. Y., $1,700; K. P. Mutual Pietertje, Oliver Cabana, Jr., Buffalo, N. Y., $1,525; Fiuderho Wayne Pontiac, Stevens Bros., Liverpool, N. Y., $1,410; King Segis Alcarta Clothilde, Morgan Bros., Chesterton, Ind., $1,300; Female Calf, H. C. Danks, Allemuchy, N. J., $1,305; King Pontiac Lad, Frank W. Adams, Chester, Vt., $1,200; K. P. Frindaella, John Arfmann, Middletown, N. Y., $1,200; Cornucopia Mae De Kol, Elmer Grimes, Alliance, O., $1,125; K. P. Mona De Kol Johanna, C. R. Moore, Garland, Pa., $1,020; K. P. Jeck Queen, W. G. Sterling, Frankford, N. Y., $1,025; Brookside Pinoocr Ormsby 2d, C. S. Fairchilds, Cazenovia, N. Y., $1,010; Contest Homestead Cornucopia, W. W. Chapin, Rochester, N. Y., $1,000; K. S. P. Soldene, Leon More, Lacona, N. Y., $1,000; K. P. Jacoba, Elmer Grimes, Alliance, O., $1,000; Pearl Macco, Henry Stevens, Lacona, N. Y., $960; Buttercip De Kol Netherland, A. P. Rogers, Danvers, Mass., $825; K. P. Elinda, T. E. Gotselman, Hampshire, Ill., $930; Pansy Veeman Hengerveld, Stevens Bros., Liverpool, N. Y., $810; Lulu Hengerveld Burke, Bernard Moyer, Finderne, N. J., $760; Lady Victoria Hengerveld Burke, E. A. Vandervort, Sidney, N. Y., $775; Alkamar Pledge Calamity De Kol, R. E. Davis, Mexico, N. Y., $700.

THE NEW ENGLAND MILK SITUATION.

There is some difference of opinion as regards satisfaction of price paid for milk the past Winter. Some are satisfied it was as good on the average as we could expect under present conditions; that is, general conditions all over field among the consumers, railroad transportation, and among the producer. The organization question, while moving at a good pace along satisfactory lines, has not yet reached that point where it could carry on a strong campaign of aggression to force the buyer to pay all we think is our due, or rather to make the production of tbis necessary product as profitable as some other lines in our business.

The New Hampshire producers as a general rule have a fairly well satisfied feeling, to a greater extent than Massachusette dairymen. Under present condition, and transportation charges that do not average up as they should according to distance the product is hauled, the short distance shipper has to pay more, or as much as some of the long distance shippers who are of course out of State, and thus we help support the others with something that should go into our own pocket. It is perhaps a hard matter to adjust the charges to fit all cases, yet there is much room for improvement, and to go at the matter in a bull-headed way sometimes results in raising charges to a higher level all along the line, without proper adjustment in extreme and unfair cases. It is much better to arbitrate this matter in a friendly way if possible and when not possible get a straight show of force behind you and with proper arrangement, this can be obtained.

The directors of the N. E. M. P. A. have been careful in not asking a prohibitive price for Summer milk to give the contractors no chance to put up a big howl as to how conditions will not stand it, etc., but have asked an advance of about two cents per can over last year's Summer prices. There is a strong feeling for having the price made yearly instead of every six months, and many were in favor of adopting this course at this price-making time. The way has been opened for this, or rather a start has been made by some small buyers both in Boston and outside, making this agreement last Fall. It is only a question of time when this method must be accepted by all, but of course the big fellows will put many obstacles and objections in the way, and hold the matter off as long as possible.

It is understood that some of the contractors have admitted that the price asked for the Summer is reasonable and think it should be paid. The producers have put a strong card forward in asking that in case of failure to agreement between buyers and producers the matter of price be left to the Boston Chamber of Commerce, their decision to be final. The hold-out contractors may not agree to this plan, because they know the producer has the sympathy and good will of this body, who have for some time had their committee on agriculture at work on the question pertaining to milk transportation and other matters of interest to producers in general The contractors also know, while they would get a square deal at their hands they would get no favors and these are what they often manage to work in somewhere while the other fellow is not looking. General conditions existing in the cities do not look favorable for a greater demand or consumption of milk at present, or in the near future, and we think for this reason and also the fact that a plentiful supply is being received and some going into butter, which is lower than for some time past, that a settlement on the terms asked for Summer milk should be satisfactory to a large majority of producers. There are of course always some who would want more, and demand more than it would be possible for the contractor to pay and conduct a profitable business or make a profit. The contractor has his troubles, and they are many and not the least of these is bad debts, yet he must pay for the milk received from producers, and in most cases is perfectly able and willing to do so. We must appreciate the fact, however, he has his rights as we have ours and be willing to work with him whenever possible, and adjust all the problems between us in a fair and satisfactory manner to both. Many times in the past some of the contractors have not shown a spirit of this kind we must admit, but they know in most cases that the time has gone by to a large extent for that attitude, and that it will be the best policy for them to try to be more fair in their offers and dealings with us. This has not been brought about through love altogether, but because it is and will be a much better policy, as the producer is gaining friends in the consumers' ranks and should a thorough understanding be obtained and practiced between the sensible consumer and the reasonable producer the contractor would be left out in the cold, or forced to be a servant to these, instead of boss of both. A. E. P.

Horses $150 to $275; cows (dairy) from $60 to $125; culls and canners $20 to $30 per head. Fat cattle from $6.25 to $9 per cwt.; hogs, fat, $7.50 to $9; brood sows from $30 to $40 per head. Sheep at sales from $6 to $6.75 per head; veal calves 10 cents per pound. Pigs from 40 to 60 pounds, 10 cents per pound. Wheat 87; oats 30; rye 70; barley 55; corn 63. Timothy seed $2 to $2.50 per bushel; clover seed $6 to $7 per bushel; Alfalfa seed $7 to $8. Milk $1.70 per hundred; butter 24; eggs 15; at present market unsettled owing to free trade. Cabbage four cents per pound. Potatoes $1; apples, Ben Davis, $1.50; Baldwins $2. Hay $8 to $12 per ton. Prices on grains are prices paid the farmer by elevator men; on produce, by local storekeepers. G. C. H.

East Liberty, O.

During March farmers could not get into the woods much on account of the deep snow. Schools had to close in rural districts for several days or weeks. Roads were quite impassable for a time. While the sleighing lasted, farmers hauled feed, fertilizer, lime, potatoes, hay, etc., making good use of the sleighing. Washington potatoes for seed have been 70 cents, eating potatoes 60; eggs 20; butter 27 at local markets. Dairymen not satisfied with milk prices for Summer months. V. S. C.

Elk Creek, N. Y.

We have had quite a Winter here, but hope it is over now. Stock is looking very well; wheat does not look very good. Good milch cows sell at from $65 to $90; country butter 28; milk six cents per quart. Horses $100 to $225; fat cattle six to eight cents and scarce. Hogs, fat, seven and eight cents; pigs $6 a pair. Eggs 16; good hay from $12 to $15; straw $7.50; wheat 98; corn 75. Potatoes $1 per bushel; apples seven cents per pound. There has not been much plowing done here yet. R. G. C.

East Fultonham, O.

FACETIOUS DOCTOR: (to artist): "The pictures on the walls are your failures, I suppose?" Dyspeptic Artist: "Yes. That's where you doctors have the pull over us. You can bury yours."—Winnipeg Telegram.

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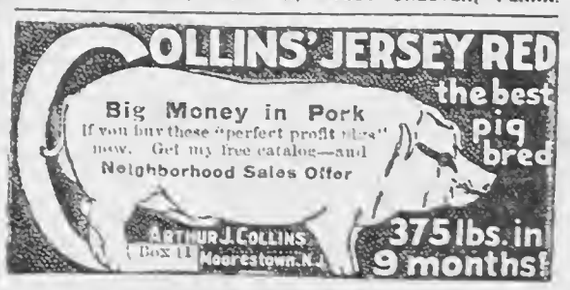

Silo for Small Herd.

1. Do you think it would pay me to build a silo for about 12 head of cattle? I can raise as good corn, I believe, as anyone in Western New York. I can raise Alfalfa on part of my farm, but it is very expensive getting it started. 2. I bought a sow in Atlanta, N. Y., which I wished to ship to Springwater, N. Y., a distance of about 10 miles. I asked the Atlanta railroad agent what it would cost to ship her to Springwater. He told me 10 cents per 100 pounds by freight. I had her shipped and it cost me 30 cents per 100 pounds; she weighed 500 pounds crated, so it cost me $1.50 to get her 10 miles. Don't you think that was too much, and if so how am I to make them straighten it? 3. Does a cow's milk vary as to test? That is, will it test more or less by change of feed, or as she nears the time to go dry? Will sour cream test as well as sweet?

Ontario Co., N. Y. W. H.

1. It does not seem to me that there can longer be any serious question as to the value of silage where dairy cows are kept and good corn can be raised. The only question remaining is as to whether the necessary investment will be warranted by the number of cows maintained. Opinions will differ as to this, but, in my judgment, no dairyman in position to utilize one should attempt to keep ten or more cows without a silo; and one can be profitably used for a smaller herd. With the proper use of lime, you can probably raise good crops of clover hay, and with an abundance of this, and silage, you will be in position to make the most from your dairy.

2. Transportation companies in this State are required to keep a copy of their freight charges on file with each agent and show it upon request. By applying to your local agent you will be able to ascertain if you have been overcharged, and if you find that the published rates have been exceeded in your case, you should place a claim for refund with him.

3. A cow's milk is constantly varying slightly in the amount of butterfat which it contains, but this fluctuation is within very narrow limits and is affected but little by the food given. The milk of any cow becomes richer, however, toward the close of her milking period. Souring cream does not alter the amount of butterfat which it contains. M. B. D.

Silage Questions.

Is frozen silage good? What size silo will hold enough to winter 10 cows? Is wood silo as good as concrete? What kind of food can be used for cows? Can Crimson clover be used, cut green, with corn? Do you cut silage fine or not, if so how fine? How is silage packed into silo? Do you salt silage when put into silo? How much silage can be fed to one cow? Is there anything needed like bran or meal of any kind on silage feed?

North Carolina. R. W. J.

Silage is apparently not injured by freezing if fed soon after it has thawed out and before it has had opportunity to spoil. Allowing four tons of silage per cow, ten cows would require a silo of 40-ton capacity, or 10 feet in diameter and 27 feet in height. As extra capacity is needed when filling a silo to allow for settling, 30 feet in height would be better. A narrow, high, silo is better than a broad and low one of the same capacity. Each kind of silo has its own advocates; wood is the material most commonly used and is thoroughly satisfactory. Good hay or straw of any kind may be fed with silage, though the clovers save grain by furnishing needed protein to balance the silage. Without clover more grain needs to be fed, and the high protein concentrates like cottonseed meal, gluten, brewers' grains, etc., are best. Many different crops have been successfully ensiled, but where corn can be raised to advantage it is easily the best crop for that purpose. Crimson clover would best be cut early and cured for hay to feed with corn silage. The finer silage is cut the better it packs, about one half inch is a desirable length. Silage is elevated into the silo by the same power that cuts it and it packs by its own weight, aided by a man or two in the silo to tramp it as it is filled. Even distribution of the silage seems to be of more importance than tramping. Silage is not ordinarily salted. A medium-sized cow in full flow of milk will eat from 35 to 40 pounds of silage per day, in addition to some hay and grain. Silage alone is not a well-balanced ration and is best fed in connection with clover hay and some grain. Corn meal should not be fed with it for milk production, but wheat bran and middlings and the grains mentioned above are suitable. M. B. D.

Tuberculous Beef.

How can I know when beef is fit to use of animals that have tuberculosis? I refer to cases where they have a cough and the lungs damaged, but appear healthy otherwise, and the beef is fat and looks well. If there are spots like bruises on feet, legs or body, in either case, would it be fit for use?

Canada. W. W. M.

If there is tuberculosis of the lungs or glandular structures of the body, but the disease is of moderate extent and confined to these parts, the healthy flesh may safely be used. If, however, careful examination of the meat shows white or yellowish ulcerations, small grape-like masses of "tubercles," or other evidences of disease, it should be disearded. A tubercle is a whitish or yellowish mass, varying in size from that of a pea, or smaller, to that of a walnut or larger. They are usually found in groups, and may affect any part of the carcass. They are sometimes found covering the under surface of the ribs, and in softer structures, like the liver, may often be seen as broken-down ulcerations filled with matter. M. B. D.

MANAGEMENT AND BREEDING OF HORSES, by Merritt W. Harper. This is a book full of information, which answers practically all the questions that may come up in the daily care and work with horses. Breeding, feeding and training are discussed very fully, while the chapter on common ailments of the horse touches all the ordinary troubles that come up on the farm or stable. Breeds and types are explained, and there is much wisdom in the advice on harnessing, as well as training. Published by the Orange Judd Company, New York; 446 pages, illustrated; price $2.00.

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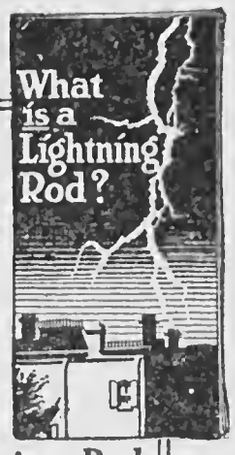

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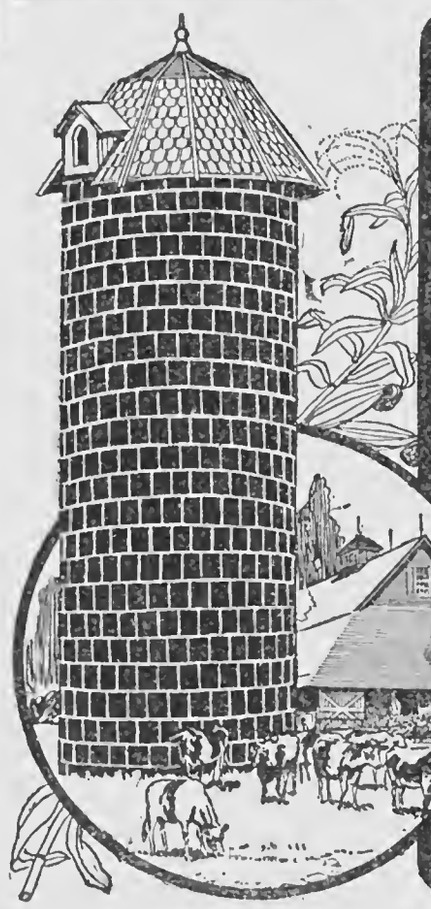

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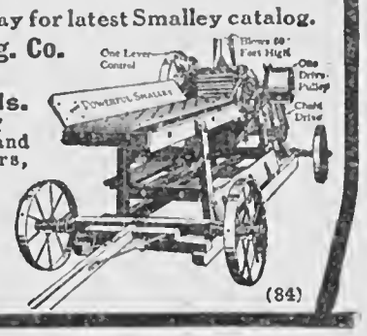

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on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land. In 1913 had a crop of 200 acres, which will realize him about $4,000. His wheat weighed 68 lbs. to the bushel and averaged over 35 bushels to the acre.

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DO NOT USE GRADE BULLS.

I have a Guernsey bull calf from a purebred Guernsey bull, the mother seven-eighths Guernsey and an extra good cow. Would you advise keeping such a bull for a sire to build up a herd? F. M. S.

Michigan.

The only condition under which a grade sire should be maintained in a dairy herd is merely an instance where the only desire is to freshen the cows. Only purebred animals breed true to type, and it is poor judgment to trust even a 15/16 bull to bring about improvement in a grade herd. If a man keeps a herd of dairy cows, not paying any regard for the calves produced, then a grade bull will freshen the cows as well as one of good individuality and good breeding, but the dairyman who is ambitions to have the name breeder added to his name should by all means use only purebred and registered sires, preferably one whose usefulness has been tried in some one's else herd. In my mind the greatest crime of the present day dairying is the slaughtering or sale of bulls for three cents per pound when they are in reality worth hundreds of dollars if they could be transferred to different dairymen in the community that are wanting just such sires. A mature bull that has proven his usefulness in the dairy herd by means of records which show that his daughters during their first or second calf have given an increased amount of milk when comparison is made with the heifer's dam, is worth far more to the owner of a grade herd than a young sire whose breeding may appear more select, but who has his reputation as a sire to make.

F. M. S. should in my judgment sell the bull calf referred to, and look around in his neighborhood or get in touch with some breeder of Guernseys who has a three or four year old sire that he is desirous of selling to the butcher for three cents per pound because he is related to the females he has in his herd that he is desirous of mating. By so doing he could start out definitely with an assurance that this bull would render service because he has rendered service, and unless he is jailed up in a box stall, and groomed with a pitchfork, there is no reason why he should not continue his usefulness until he is 10 or 15 years old. Grade bulls are all right for the cow dealer, but they have no part with the man who is desirous of being credited with the dignity of being a breeder.

F. C. MINKLER.

MISFITS IN BREEDING.

The coming season a good many are going to breed mares to the handiest horse without regard to the offspring being adapted to our needs. It will not pay us. Some of us have taken light trotting-bred mares to the handiest stallion, regardless whether he is a Shire, a Percheron or mongrel. We have had our farm experience and figured up in dollars and cents we are out because of the neglect. Our present farm horse power does not produce the dollars and cents in returns that it might be doing had we invested a dollar or two in time, and had we forgotten convenience.

We have a Percheron draft mare; although a grade, she is built on approved purebred lines. She weighs between 1,400 and 1,500. For convenience sake, five years ago, this mare was bred to a very ordinary stallion in the neighborhood. He was quite a serviceable farm horse, but the get of this stud is unsatisfactory. The result is a horse weighing about 1,500, much smaller than either the sire or dam. The offspring is a very ordinary farm horse in build, in service on the farm and in intelligence.

The results from another mare have enlightened us. She is trotting-bred, and her first colt was from a Coach sire. The mare weighs about 950 pounds, while the Coach weighed about 1,350. The result from the combination is a well-built 1,250-pound horse built on Coach lines. He is a very serviceable animal. Again for convenience sake, the mare was taken to a draft stallion of the ordinary kind. The result was a colt on draft lines, and she weighs scarcely 100 pounds more than the dam, and the result is neither drafter nor trotter. Another colt from the same mare bred to a trotting-bred stallion has produced a first-class road horse. Our good results from this mare were from the trotting-bred or the coach horse, while from the draft mare they were from the draft stallion. We have a two-year-old colt from a purebred Percheron draft stallion, and from the draft mare. This colt will not be two years for two months, and he is heavier now and far better built as a colt than the four-year-old progeny from the ordinary stud and the draft mare.

The advice of a good many successful breeders agrees that it does not pay to breed a light trotting-bred farm mare to a heavy draft stallion. The offspring might be gratifying, but generally the results are unsatisfactory. It does not pay to breed a draft mare to a mongrel or trotting-bred stallion. Mr. Nicodemus, one of the institute speakers of Ohio, and a successful breeder, advises against the breeding of a 1,200-pound draft mare to a ton stallion. He suggested the breeding of a 1,400 to 1,600-pound stud, and grading up the weight gradually. Extreme difference in weight of sire and dam in his experience produced frequently an inferior colt. It will pay the farmer to drive half-way across the county to the stallion that is adapted to his needs. In the offspring a day's time would be worth $50 in a better colt.

Ohio. W. J.

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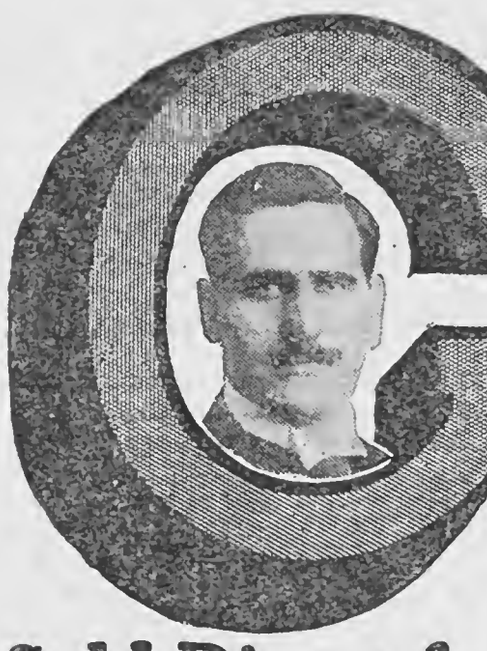

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If you think that there is any other separator in the world at any price that you would rather have than the Galloway, after you have given it a good, fair test, ship it right back to me at my expense. I'll agree right now to pay all the freight both ways so you won't be out a penny or under the slightest obligation if you decide not to keep the separator after having had the free trial. If you decide to keep it, I'll guarantee to save you from $30 to $50 besides giving you a separator that absolutely has no equal in the world at any price. Then on top of this remarkable offer, remember my New Galloway Sanitary is backed by a

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Every single New Galloway Sanitary cream separator that leaves my factory has a straight 10-year guarantee on materials and $25,000 legal bond back of it. You take no risk of my separator not only giving you the greatest of satisfaction for a 90-day trial period but for practically a lifetime. My 10-year guarantee and my bond are printed in black and white and there are no strings tied to them. They are regular contracts that protect every Galloway customer. Accept this most liberal offer with this positive protection back of it. Don't delay. Write me now. Get my catalog and full details of my Offer. Just fill in, cut out and mail the coupon.

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Then when you send for my catalog I am going to give you full details of my New Special 1914 Offer—the most liberal offer ever made and a coupon which entitles you to a free copy of my valuable book of information—Galloway's Dairy Cow Book—regular price $1.25. You want my Dairy Cow Book without fail. It's chuck full of cow facts. It will help you make your cows pay you a whole lot bigger profit. It tells how to feed and stable your cows—How to build up a milk-producing herd—How to make top quality butter—How to test your milk and many other important things you ought to know if you want to make big money in the Dairy business. This book is free to you. Just fill in, cut out and mail free coupon or write me a postal. Then as a clincher, I am going to make you a still bigger offer—one that will help you get your separator partly or entirely without cost to you in the end. This is my Co-operative-Profit Sharing Offer that has helped thousands of men pay for their machines. No canvassing. No soliciting. Just a straight business proposition. Write me today. Do it before you lay this paper down. Address

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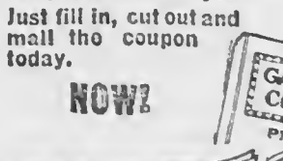

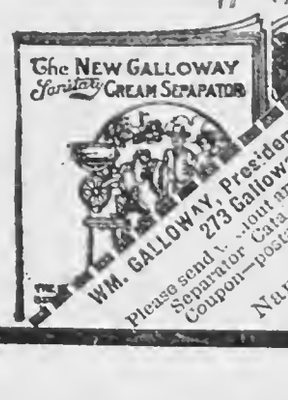

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Ration for Jersey.

Will you give me advice how to feed a Jersey cow, the best feed for milk and the right proportion? I have plenty of mangels and carrots and good hay; have been feeding gluten and bran, but do not know just what quantity we ought to give. F. R. G. B.

A common proportion for mixing bran and gluten is three pounds of gluten to five pounds of wheat bran. Of course the proportions, and the quantity to feed depend to a great extent upon the kind of hay you are feeding, the condition your cow is in and the amount of milk she is giving. If your hay is Alfalfa or clover you would not require so much gluten, as cornmeal could be substituted at a lower price. In regard to quantity it is usually best to let the cow decide that, feeding all she will eat and digest properly without getting off her feed. Your mangels and carrots should be cut into small pieces and fed liberally all that will be eaten with a relish twice a day. C. S. G.

Another Milk Ration.

Will you give your opinion as to feeding both milch cows and young stock the following feeds? 800 pounds rye, 500 pounds oats, 500 pounds corn and cob, all being ground together; in addition to the above feed the milch cows to have a fair allowance of dried brewers' grains soaked with the mill-feed. If you think it would pay to buy and mix other concentrates with this feed, state what proportion and what feed. J. H. D.

For milch cows I think you will find it profitable to mix 500 pounds of cottonseed meal with your feed. For young stock your mixture is very good as it stands. C. L. M.

Dairy Ration.

Will you please give me a balanced grain ration for dairy cows fresh now till they go to pasture? For roughage I have clover and Timothy mixed hay. I have my own oats and corn, which I can grind myself, and have in stock bran, middlings and gluten feed, and can get oil meal or cottonseed meal. H. C. P.

If you will mix equal parts by weight of the feeds you have on hand, and two parts of either cottonseed or oil meal, preferably cottonseed, you will have a very good milk ration. Feed six to seven pounds to a cow giving 25 pounds of milk daily, and more or less in proportion to milk flow. C. L. M.

Improving Milk Rations.

I have a cow, part Jersey and Holstein, came in middle of November. I am only getting from four to five quarts of milk from her a day; am feeding her bran and middlings. Can you tell how to feed her to better advantage, to produce more milk? Should she give more milk or is it the nature of the cow? She is a young cow and in good health.
Ohio. J. W.

Bran and middlings with an unknown quantity of roughage makes a very poor ration for the production of milk, so any cow freshening in November whether naturally productive or not, could not be expected to give a large quantity of milk at this time. If, for example, you are feeding mixed hay you should add one pound of oil meal and two pounds of cottonseed meal to your grain ration, and you will have a much better chance of producing a satisfactory flow of milk. C. S. G.

Winter Feed for Farm Horses.

We find that it is impossible to give any set rule for feeding either a working horse or one that is idle. It is mainly a matter of judgment, and best results can be secured only after long experience. During the Winter, when horses are doing practically no work, about the best method is to turn them out in the barnyard, where they can have plenty of cornstalks to pick at, and where they have plenty of room to exercise. With such treatment an ear of corn twice a day will be all the grain required. In Spring and Summer, when doing very hard work, we feed good sound corn for their grain ration, and govern the quantity by the size of the horse. Eight or nine large ears (or three to four quarts shelled corn) would be an average meal for a medium-sized farm horse. For medium work oats and corn mixed half and half and fed at the rate of three to four quarts to a meal will give satisfactory results.

The condition of a horse, however, does not depend on the grain ration alone. The hay fed night and morning will count fully as much as the grain, and it should be bright and clean, and cured so as to be palatable to the horse. Alfalfa and clover fed in moderate amounts, either night or morning; or preferably mixed with good bright Timothy and fed both night and morning will do much to keep the horse in ideal working trim.
South Jersey. TRUCKER, JR.

Ration With Molasses.

I am feeding four pounds of dried beet pulp wetted with molasses dissolved in hot water; also one pound wheat bran, two pounds gluten, and two pounds cottonseed meal a day. Is this a good ration, or would you advise some change? Do you think it profitable to feed molasses? I have plenty of clover and Timothy hay, but no silage. M. A. A.

I see no reason for making any change in the ration you are feeding. I believe that a certain amount of molasses may be fed profitably. It furnishes a comparatively cheap source of carbohydrates, and also has a good effect on the digestion. C. L. M.

Silage for Horses.

Every year there are questions about the wisdom of feeding silage to horses. Here is positive advice from the Colorado Experiment Station:

"Silage is not a safe horse feed. It is used to some extent for that purpose, but the feeder must be extremely careful in the examination of the silage that goes to the horses. Horses are more subject to digestive derangements than most other live stock, and while a comparatively small amount, say a fifth of their feed, by bulk, may consist of good silage, there is great danger from overfeeding, or from the feeding of moldy or spoiled silage.

"It is impossible wholly to prevent moldy spots in silage, these being caused frequently by imperfect packing, leaving slight air pockets. Also, it is very difficult to make sure that there are none of these moldy spots in silage which is being fed. Its use should be confined chiefly to growing colts and idle horses. As it contains about 75 per cent. water, it causes a horse to sweat easily and affects him otherwise in the same way that green feed or pasture does."

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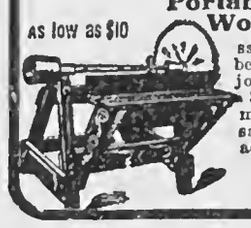

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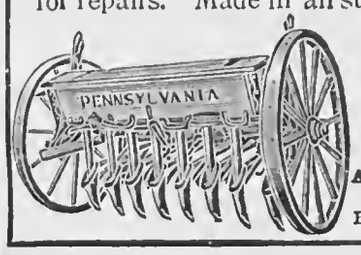

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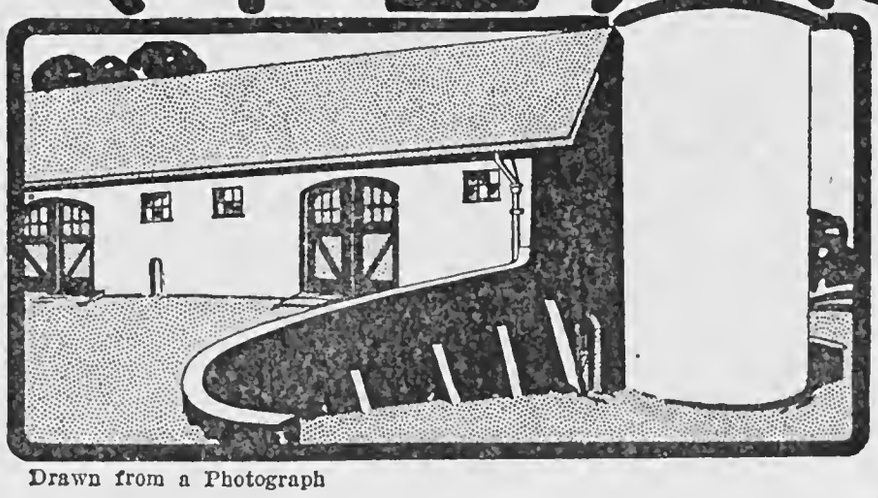

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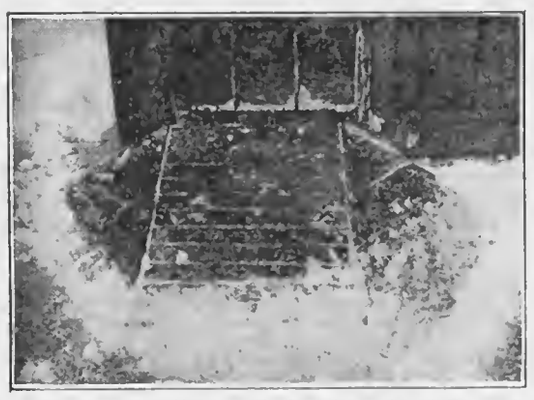
SELECTING THE BREEDERS.

The time is at hand for mating up the breeding pens on the farm. The poultrymen and fanciers will have done this before now, as their season begins early, but most farmers do not care to hatch before late April and early May, after the weather has become settled and the chicks require less care. If no selection other than that of eggs is made, little or no improvement can be expected in the farm flock. Mediocrity will perpetuate mediocrity, and no improvement in size, type, or productivity need be looked for. Farmers cannot trap-nest, and must depend upon some other method for selection of breeders. It will usually be possible to give a few hens an enclosure apart from the rest of the flock for a few weeks in the Spring, until the needed eggs for hatching have been secured. It may be taken for granted that only purebred fowls will be hatched this Spring, for, whatever may be said for or against mongrels in other stock, there is no need for anyone, nowadays, to keep mongrel



RUNWAY FOR CHICKS.

poultry. Careful experiment has shown that there is nothing gained by it, and the objections are obvious. Flocks of purebred fowls are so numerous and widespread that it should be possible for any farmer to obtain eggs from the breed of his choice and maintain his stock pure. It is not necessary, or even advisable, frequently to introduce new blood, and the old practice of changing cockerels with the neighbors every year should be given up. With careful selection of the breeders, choosing the strong, vigorous members of the flock, one should be able to build up a flock superior to those of his neighbors, and one which would only suffer by having their blood intermingled. In selecting a cockerel to place in the breeding pen choose one t at shows his vigor in his every action. He should have a blocky head, with short beak, bright full eyes, full comb and proud carriage. He should be of good size for his breed, "scrappy" to the point of insolence, generous to the hens, but an overbearing bully among his brethren. If he thinks that he can "lick" his master, so much the better. Not having been compelled yet to acknowledge the equality of the other sex, there is an air of masculine strength and superiority about vigorous males among the lower animals that is easier to see than describe.

Equal attention should be paid to vigor in the hens, for a hen that can't live can't lay. The hens that go into the breeding pen should be of good size, and layers of large eggs. A large egg means a large chick; this is the chief point in

GASOLENE TANK ON BROODER.

favor of using hens instead of pullets for breeders. Another one is that hens have demonstrated their ability to live through a full period of laying and pullets have not. A well-developed pullet will produce good chicks, however, and need not be discarded if enough hens are not at hand. Most people think that the laying type in hens means a long-bodied fowl, with wide spread legs and deep abdomen. As a dairy cow shows something of her capacity for production in the size of her paunch, so, in some measure, may a hen. A good laying hen, like a good workingman, is an early riser, but late in retiring. She is eager to begin eating in the morning and loth to quit at night. If she has made a good record during her first year, she will have begun laying early and molting late; and the pretty yellow legs that she began with will have faded out. Note that the useful females are seldom the pretty ones; among hens, I mean. It is now believed that prolificacy is transmitted through the male; so if you have a hen that you know is an extra good layer, mark her chicks and choose the best of them, if all right otherwise, to head your breeding pen.

M. B. D.

BOSTON MARKET REVIEW.

The greenhouse people who ship or sell their products to Boston are receiving a fair return for their trouble at this time. The frost damage in the South has helped them very much in obtaining profitable prices for their product; their dandelions bring around $2 per box; beet greens $1.50 to $1.75; lettuce up to $1.50 per box, with romaine, escarole and chicory 75 to $1 per box; tomatoes 50 cents and better per pound. Southern spinach sells at a good figure, going at $3.50 per barrel; kale bringing up to $1.75. California asparagus is reasonable at $3 to $4.50 per dozen; cauliflower $2.50 per crate; celery $1.50 and $2 per dozen. Southern green and wax beans $3.50 and $5 per basket. Cabbage $2.50 per crate.

Strawberries reasonable at 25 to 35 per box; oranges $3.75 and better per box for best, other grades $2 to $3. West India pineapples $3.50 and $4 per crate. Grapefruit $2.25 up to $4 per box; lemons $2.75 to $4. California oranges $1.50 to $2.50 per small box. The few cranberries left, go at $13.50 and $14 per barrel and $5 per box. Best bananas $3 per bunch. Others $1.25 and $2.25 for yellows; reds $2 to $4.50 per bunch.

Native old cabbage $1 to $1.50 per barrel; rutabagas $2 per bag; White Egg $1.25 per bushel. Beets $1.50 per bushel; carrots $1; parsnips $1.25; radish $2. Native onions are getting poor and are being closed out if possible, to get a reasonable offer. $2.50 and $3 per bag of 100 pounds usually takes them. Cuban and Mexican stock bring $3.25 or more per crate. Those who have some good sound squash left are happy, as it is no trouble to move them for $80 per ton. The Southern frosts again affect the potato market, giving the holders of Maine stock a chance to stiffen prices a bit when the demand is on as at present for planting. These bring $1.55 to $1.70 per bag of two bushels; Southern sweets $1 per basket. Cucumbers are easy at $8 per box for best and range down to $3.50 for poorest grade.

The apple market is good on fancy fruits, but demand is limited, as other fruits are plenty at a lower figure. Best Baldwins easily bring $5.50 to $6 per barrel; others $3.50 to $4.50. Good Russets go at $3.50 to $4.50; common native box fruit $2. Western fancy box fruit around $4 for Winter Banana and Delicious, with Rome Beauty and Spitzenburg $2.50 to $3. Exports, which have been almost half those of last season, are about over.

Baking bean prices are medium, pea beans $2.10 per bushel. Yellow eye $3.25 and kidney about the same or a few units lower.

Butter is still dropping, having lost about one-half cent per pound this week, with best Northern creamery going at 28 to 29 in tubs, boxes and prints about one cent per pound more. Best western 27 and 28; good to fair butter brings 24 to 26. Cheese holds its own better than butter, bringing 19 and 20 for last Fall stock, others 17½ to 20.

Eggs are about at their lowest ebb, yet reports of storing are not heavy. Their being about the cheapest article of food at present is generally known, and advantage taken of it by retail buyers and users. Best fresh bring 24 and 25; good 22 and 23. Live poultry trade is good and prices excellent; some bring 18 and better per pound. The bulk, however, bring 16 and 17; medium size are wanted and bring best prices. Dressed fowl and chickens about 20 cents per pound; roosters 15; capons 25 to 28; turkeys 18 to 24.

At Brighton market beef on hoof goes at $7.50 to $8.50 per hundred pounds for best grades; others 6½ and seven cents, while poorer grades bring four to five. Sheep and lambs light supply, prices easy at four to six for sheep and six to eight for lambs. Veal calves eight; western hogs nine to 9¼; dressed hogs up to 11½.

Milch cows plenty for demand, which is now moderate; prices range from $50 to $75 for ordinary stock, extra good ones higher. Calfskins about 22 per pound; cow hides 12; steer 13. Horse sales are moving along satisfactorily and prices are better for seller than buyer. Farmers are reported buying largely of medium weights for reason of lower cost and good ability to do work required; 1,800 to 1,900-pound horses bring $350 to $450, if sound, some even better; mediums $250 to $350; common and light weights $175 and $225 each.

Hay holds about the same at $22.50 per ton for best, other grades $15 to $21. Grains are higher or inclined that way at wholesale; meal $1.50 per bag; bran $30 to $31.75 per ton; middlings $31; mixed feed $30 and $32; cottonseed meal $32 and $33; linseed $32.50; beet pulp $27; gluten $32.

A. E. P.

Two Poultry Wrinkles.

The picture shows a new position for gasoline tank on Cornell brooder, which I find handy in filling. With tank low down the stepladder is eliminated and danger from spilling and fire is lessened. The other picture shows an improved runway for chicks, which I find works well. It has no corners at base, and the little fellows always find their way back to brooder.

M. E. K.

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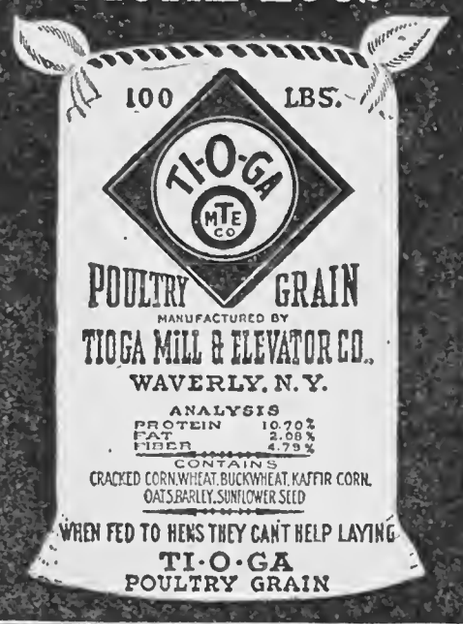

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die of bowel trouble more than any other cause. It is estimated that of every 1000 chicks hatched each year less than 400 reach marketable size. Germozone users raise, usually, 90% of chicks hatched. Germozone keeps the bowels regular. It prevents diarrhoea from overdrinking of water; from eating musty or spoiled food, etc. It should be given in drinking water twice a week from the day they are hatched. It stops the loss. Every chick that dies cuts badly into the profit from the rest. Every chick saved will pay the cost of a bottle of Germozone.

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For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844

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DON'T KILL YOUR BABY CHICKS WITH POOR FEED

Our SPECIAL CHICK FEED

is the sweetest and most wholesome feed on the market. It can be fed to human beings. ALWAYS FRESH AND ALWAYS THE SAME. Send for prices and booklet. WM. ORR & SONS, Box 1, R, Orr's Mills, New York

Poultry Netting—Write for bargain prices. EXCELSIOR WIRE MFG. CO., 5 Cortlandt St., N.Y.

Parcel Post Egg Boxes—NEW FLATS AND FILLERS. H. K. BRUNNER, 45 Harrison St., New York

S. C. Reds, Dark Brahma cockerels, $2.50; S. C. B. Leghorn cockerels, $1.50; R. C. and S. C. RED laying hens, $2.00. Won 76 ribbons this season, including New York and Philadelphia. Eggs and chix. Mating list free. Riverdale Poultry Farm, Riverdale, N. J

EGGS FOR HATCHING from thoroughbred stock at live and let live prices. Rhode Island Reds. Both Combs. $1 per 15; $3 per 50; $5 per 100. Sicilian Buttercups, $2 per 15. Write for mating list. J. M. DRUMM, Mercersburg, Pa.

PURE ROSE C. BROWN LEGHORN COCKERELS for breeders. I C. HAWKINS. R. 3, Middletown, New York

Pedigreed S. C. Buff Leghorns

bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Chicago, Los Angeles, Indianapolis, etc. Get blood of "Egg Bred Winners." Dr. L. HEASLEY, Box R. N., Dorr, Michigan

S. and R. Comb Buff Leghorns

stock for sale. Eggs for hatching from my winners and layers. Eggs, $1 to $3. Mating list.

GEO. McCANN, - R. D. 2, Coraopolis, Pa.

Hatching Eggs from S. C. W. Leghorns

bred for heavy egg production for 20 years. Headed by grandson of Lady Cornell. Official record was 257 eggs. $4—100; 75c. setting. Chicks, May, $9—100.

S. L. PURDIE, - Genoa, New York

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BABY CHICKS 12c EACH

From free range; selected S. C. White Leghorns; prompt delivery. A hatch every week. Safe arrival guaranteed. Circular free. CHAS. R. STONE, Baby Chicken Farm, Staatsburg-on-Hudson, New York

POULTRYMEN, ATTENTION—We guarantee safe delivery of strong, healthy S. C. W. Leghorn chicks at reasonable prices. 1500 each week from Hall's Mammoth Incubator. They will please you. A. B. HALL, Box A, Wallingford, Conn.

The Henyard.

Bone Meal for Poultry.

In a recent issue there was an article recommending bone meal as good for chickens. I have a lot of bone meal, pure crushed bone, such as I use for fertilizer on roses, etc. It costs $42 per ton. I have no guarantee that it is pure ground bone. Is this the kind that you mean is good for chickens and if so can I give them all they will eat of it?

Stockbridge, Mass. J. M.

We should be careful about feeding fertilizer bone, or fertilizer tankage to live stock. The bone may have been treated with sulphuric acid, or it may contain substances which would be injurious to the stock. Personally, we would not feed bone, scraps, or tankage, except under a guarantee that it was suitable for the purpose.

Worms in Poultry.

Can you tell me what is cause and treatment of small hard white or yellowish worms in gizzard of White Leghorn cockerels. Their health does not seem impaired. R. P. F.

New York.

These are parasitic worms which infest the crop and other digestive organs of fowls and sometimes lead to the death of the birds through destruction of the tissues. Perhaps as good a remedy as any is oil of turpentine, diluted with an equal quantity of any bland oil, and the mixture administered in tablespoonful doses. Dose to be repeated after an interval if necessary. Chopped garlic in the food is also very distasteful to these parasites and should be given if at hand. M. B. D.

Wyandottes and Plymouth Rocks.

I notice an inquiry asking for the distinguishing mark of the White Wyandotte. I am the person who originated the Silver Laced and White Wyandotte and made the standard of same. A few years ago the breeders of the Wyandotte type insisted upon the breeders of the Plymouth Rocks that they should stick to the type. The two birds are entirely different in type, the Wyandotte being a bird of curves and the Plymouth Rock being a bird of angles; in other words slab-sided and long-legged, and as your correspondent says, weighs about a pound more. Now if you would refer to the Standard of Perfection of various birds, you would get all the information required.

I also notice some one asks about the difference in the laying qualities. Being somewhat of an expert in this department, would say that whatever the variety may be, the breeder can by selection make the laying qualities whatever he desires. As a matter of fact, one of the largest experiment stations shows that the Silver Laced and the Buff Wyandottes excel all the other varieties in their year's work up to the first of January. This does not mean, however, that the Plymouth Rock, Cochin, Langshan, or in fact any other variety could not, by careful selection, be made to lay just as many eggs. Should your correspondent happen to strike a good laying strain of even a mongrel fowl, he might find that they lay more eggs than some of the purebreds, as fanciers of the purebreds often neglect this for *feather or type.* I am trying to emphasize the fact that laying qualities are within the manipulation of the fancier and breeder.

FRED A. HOUDLETTE.

R. C. White Leghorns.

Will you tell me whether the R. C. White Leghorn is as good a layer as the Single Comb? Can they be made to lay in five or six months after hatching? If so on what feed? H. S.

New York.

The chief difference between the Rose and the Single Comb varieties of the Leghorns is in the comb, though as the Single Comb Whites are more popular, good laying strains are probably more numerous and more to be depended upon than the Rose Comb variety of that color. Either should be brought to laying condition in five to six months from hatching, if well fed and kept growing from the start. They should have the ordinary grains, of which corn and wheat usually form the greater part, and a mash of ground grains combined with meat meal of beef scrap. Skim-milk is also a very valuable addition to the feed of growing chicks. M. B. D.

Feeding Beets to Hens.

I notice a reader asks for a beet pulping machine to prepare beets for his hens. Why anyone should spend time pulping beets for hens is beyond me. Simply split the beets in half and the hens will eat until their droppings are red like blood. A container of chicken wire, V-shape, at a suitable height, is good for exposing the beets. After they learn the trick splitting the beets is superfluous. E. L. S.

Massachusetts.

YOUNG'S STRAIN

SINGLE COMB WHITE LEGHORNS

I HAVE NO OTHER BREEDS

They are the standard for all the Leghorns of all America, and the greatest layers of all varieties of domestic fowl. I have hundreds of yearling hens and cocks for sale. Mating list free. Address

D. W. YOUNG, Monroe, New York

WHITE LEGHORNS
Eggs . . . $6.00 per 100
Baby Chix 12.00 " "
WHITE ROCKS
Eggs . . . $7.00 per 100
Baby Chix 15.00 " "
4000 Hens on free range, on separate farms
Safe arrival and fertility guaranteed.
William H. Truslow, Stroudsburg, Pa.

S.C.W. LEGHORN CHICKS AND EGGS
Chicks, $10 per 100. Eggs, $5 per 100. Breeders have free range.
Fornwood Poultry Farm, Box 2, Salt Point, N. Y.

S. C. W. Leghorn Chicks & Eggs
Purebred, large, vigorous, true Leghorn type. Seven years' experience. Not how many, but how good. Circular. VANCREST POULTRY FARM, Salt Point, New York

Single Comb White Leghorn Eggs—$6 per 100. Eggs that fail to hatch replaced at half price. Ten pullets from this flock in Experiment Station test laid 1739 eggs in a year. ALKEN FARM, R. D. 2, Ithaca, New York

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Fawn & White Indian Runner Ducks } BABY CHICKS AND DUCKLINGS
heavy-laying, pure white egg strains. Circular giving description, record, winnings, and guarantee, sent free. PATTERSON POULTRY FARM, Clayton, New York

EZRA C. CARTER, Marathon, N. Y.
EGGS
COCKERELS *S. C. W. Leghorn Breeder*
CHICKS Circ. explains how to breed great layers

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DO YOU WANT LOTS OF EGGS?—Brinkerhoff's famous strain of S. C. WHITE LEGHORNS are heavy layers. I have been breeding for heavy layers for twenty (20) years. I have them. Do you want them? F. D. Brinkerhoff, Genoa, New York

Day-Old Chicks—from excellent utility S. C. White Leghorns—$9 per 100. GEO. FROST, Levanna, Cayuga Co., N.Y.

Baby Chicks, Eggs AND CUSTOM HATCHING—Our S. C. W. Leghorns are bred for production and vigor; not for feathers and show type. White Orpingtons from Cooks' best. Pekin ducks. M. B. turkeys. Peaceful Valley Farm, Oxford Depot, N. Y.

S. C. White Leghorn Eggs for setting, $5 per hundred, from free range stock. Youngs' and Wyckoff's strains. MAPLE GROVE POULTRY FARM, M. C. Dyer, Prop., Summit, New York

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CHICKS 10c.—S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C. M. Lauver, Box 73, Richfield, Pa.

Baby Chicks & Ducklings—S. C. White Leghorns exclusively. From Youngs' strain. Prize winners at Madison Square Garden, 1913. Mating list free. BEAVER DAM POULTRY FARM, Harry Tweddle, Prop., Montgomery, N. Y.

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S. C. W. LEGHORNS
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Eggs for hatching at farmers' prices!
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No day-olds shipped.
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LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. FRANCIS F. LINCOLN, Mt. Carmel, Connecticut

Baby Chix—S. C. White Leghorns, $10 per 100. S. C. R. I. Reds, $12 per 100. I. R. Ducklings. Eggs for hatching. Old established business. ROCKY GLEN POULTRY FARM, Poughkeepsie, New York

Baby Chicks

S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.
WESLEY GRINNELL, Sodus N. Y.

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have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

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S. C. W. LEGHORNS a widely known flock of HEAVY LAYERS
Eggs for hatching ..... $5.00 per 100
Day-old chicks ..... 12.00 " "
Pullets, in Fall ..... 1.00 each
We took the prize for best hatchers of vigorous, livable chicks in a contest covering United States and Canada. Be Safe! and order from us. Make sure and order now. Thornehaven Poultry Farm
Shelter Island Heights, N. Y. The Shelter Island Hatchery

Mattituck White Leghorn Farm Chicks

are large, healthy, vigorous, and make good layers.
From YOUNG'S strain ..... $12 per 100
YOUNG'S and BARRON'S cross ..... 15 per 100
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Columbian Wyandottes
Columbian Plymouth Rocks
Partridge Plymouth Rocks
S. C. White and Buff Leghorns
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Box R, Trenton Junction, N. J.

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BABY CHICKS
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Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks NOW.

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Single Comb White Leghorns
are layers and payers. Write for Booklet.
Day old Chicks, Eggs for Hatching. No order is too large or too small. Our capacity is 20,000 eggs at one sitting. We guarantee safe delivery of chicks, and fertility of our eggs. We can and will please you. Send in your order and secure a positive delivery date.
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Single Comb White Leghorn EGGS FOR HATCHING

From LAURELTON Layers. Bred for Superior Egg Production and combining the Finest Strains of English and American Blood.

$8.00 per 100; $70.00 per 1,000
Baby Chicks, $20.00 per 100
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EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of J. M. CASE, Gilboa, New York. $1 per 15; $5 per 100

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Baby Chicks OF LIVABILITY, eggs of hatchability from D. W. Youngs' strain, S. C. W. Leghorns, direct from his best matings. Open front houses. Circular. WINANS & COFFIN, Stanfordville, N.Y.

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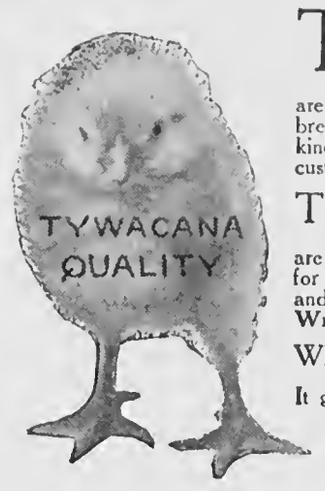

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are those which are hardy and vigorous and develop rapidly into heavy layers and good breeders. Just so with Tywacana chicks—they cost more to produce than the ordinary kind, but are worth vastly more than the slight difference in cost—as hundreds of our customers will testify.

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are practical birds—they've made good for us and will make good for you. Book your order now for day-old chicks, hatching eggs and breeding stock—the Tywacana kind. Chicks are shipped in Wright boxes with a guarantee of safe arrival and full count.

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BARRED ROCKS
Eggs—$1 per 15; $3.50 per 100. Baby chicks.
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BARRED ROCKS—HATCHING EGGS—large, vigorous birds, free range, open house, heavy Winter layers, splendid broilers, $5 per 100; $1 for 15. W. A. RODNEY, Gilboa, N.Y.

"Perfection" BarredRocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Few fine cockerels $3 and up. Dr. Hayman, Box R 48, Doylestown, Pa.

BARRED ROCK EGGS—$1 per 15; $4 per 100. Buff Orpington eggs, $1 per 15; $6 per 100. Fawn and White Runner Duck Eggs, $1 per 12; $6 per 100. J. I. HERETER, R. D. 4, Gettysburg, Pa.

PARKS STRAIN BARRED ROCKS
Breeders headed by Males from the High Pedigree Pens of J. W. Parks for Eight Years. Eggs Testing over 90% giving us 60 to 70%. Hatches $3 per 50; $6 per 100 THE MACKEY FARMS, Gilboa, N.Y.

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We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.
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GALEN FARMS, G. F. Gibson, Owner, Drawer G, CLYDE, N.Y.

S.C. WHITE LEGHORN EGGS for hatching and day old chicks from heavy-laying strain. Strong, healthy stock. Fawn and White and pure White Indian Runner Duck eggs for hatching. Write today for free circular to Juniata Poultry Yards, Mifflintown, Pa.

Silver Campines, White Orpingtons, Anconas
Prize stock. Extraordinary layers. Eggs, Chicks.
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OWNLAND FARM, Box 497, South Hammond, N. Y.

The Orange County Poultry House
(Patented)
Broods 700 chicks or houses 300 layers, Winter or Summer. One of my houses contains 300 pullets, hatched Sept. 11th last, that laid 124 eggs March 11th and 209 March 31st. "Come and see," or send for catalogue and price list.
O. W. MAPES, Middletown, N. Y.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn.

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a few choice ones left—$3, $4 and $5 each. White Wyandotte, Black Minorcas, Silver Campines.
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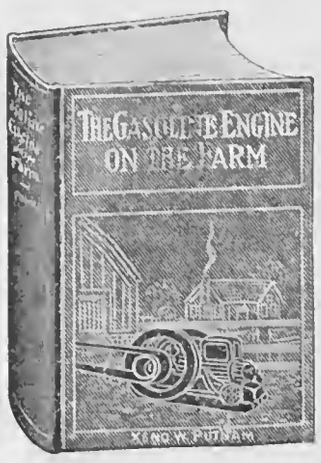
$1 for 15; $5 for 100. Collie Dogs, Persian Cats.
W. H. Ostrander, Coopers Plains, Steuben Co., N. Y.

THE GASOLINE ENGINE ON THE FARM. Its operation, repair and uses. By Xeno W. Putnam.



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The Rural New Yorker, 333 West 30th St., N. Y.

THE EGG-LAYING CONTEST.

The twenty-first week of the contest, ending March 27, shows the largest output to date; 3,597 eggs were laid, exceeding last week's good record by 160 eggs. Frank L. Tuttle's Barred Rocks win first place for the week with the highest score that has yet been made, viz., 59. The record is, 7, 5, 4, 5, 6, 6, 6, 6, 5, 5. W. C. Morgan's Buff P. Rocks tie with Neale Bros. White Wyandottes for second place, each pen scoring 54. The S. C. R. I. Reds of A. B. Brundage, are tied for third place with the White Wyandottes of Merrythought Farm, each scoring 53.

Barred P. Rocks made the highest average for the week as well as taking the first place. The four pens laid 212 eggs, average per pen 53. White Wyandottes are next, the five pens laying 243, average 48.6.

Buff P. Rocks are third with a pen average of 48. The S. C. R. I. Reds averaged 43.8 per pen. The White P. Rocks also averaged 43.8. The White Leghorns averaged 42.9 per pen. The R. C. Reds 41; and the three pens of Dunghills averaged 40.5. All the pens in the contest, good, bad and indifferent, averaged over 43 eggs each for the week. The week's score and the total is given below:

	WK.	TL.
BARRED ROCKS.		
J. J. Francis, New York	52	550
Frank L. Tuttle, Massachusetts	59	383
A. B. Hall, Connecticut	49	258
Waveny Farm, Connecticut	52	250
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut.	45	451
Storrs Agr. Sta., Connecticut.	47	335
F. H. Benton, Connecticut	45	432
Storrs Agr. Sta., Connecticut.	46	297
Albert T. Lentzen, Massachusetts	47	293
BUFF P. ROCKS.		
A. A. Hall, Connecticut	42	393
W. C. Morgan, Connecticut	54	235
WHITE WYANDOTTES.		
Tom Barron, England	52	837
Merrythought Farm, Connecticut	53	652
Neale Bros., Rhode Island	54	660
D. J. Ryan & Son, Connecticut	47	467
West Mt. Plty. Yards, Connecticut	37	437
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	46	412
Dr. N. W. Sanborn, Massachusetts	43	369
Am. Buff Wyan. Club, New York	37	368
H. L. Hamilton, Connecticut	42	186
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	45	301
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	39	618
Geo. P. Dearborn, Florida	43	544
Pinecrest Orchards, Massachusetts	47	507
Colonial Farm, New Hampshire	52	477
A. B. Brundage, Connecticut	53	496
J. S. Gillespie, Connecticut	45	462
Harry B. Cook, Connecticut	45	455
H. P. Deming, Connecticut	43	329
ROSECOMB REDS.		
Glenview Plty. Farm, Connecticut	44	495
C. S. Scoville, Connecticut	38	344
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut.	52	697
Francis F. Lincoln, Connecticut	38	697
Cecil Guernsey, New York	40	578
Storrs Agr. Sta., Connecticut.	43	526
Tom Barron, England	46	517
Storrs Agr. Sta., Connecticut.	49	464
Marwood Plty. Farm, Connecticut	45	467
Bonnie Brook Farm, New York	47	458
Bradford Farm, Connecticut	47	445
L. E. Sands, Pennsylvania	41	411
P. G. Platt, Pennsylvania	48	410
Storrs Agr. Sta., Connecticut.	42	407
Manor Plty. Farm, New York	47	394
Chas. W. Sherwood, Connecticut	48	386
F. M. Peasley, Connecticut	47	382
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	47	362
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	45	260
BUFF ORPINGTONS.		
O. Wilson, West Virginia	44	313
WHITE ORPINGTONS.		
P. A. Demgar, New York	38	267
WHITE LACED CORNISH.		
W. L. Red Cornish Club, Massachusetts	31	128
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	38	212
DUNGHILLS.		
H. W. Collingwood, New Jersey	36	190
Daniel Hine, Connecticut	46	407
Daniel Hine, Connecticut	40	290
MIXED BREEDS.		
Profitable Poultry, Massachusetts	39	436
Profitable Poultry, Massachusetts	44	395

The total number of eggs laid to date is 30,753. It may be noticed that the Storrs Agricultural Station pen of White Leghorns, pen No. 42, the pen that has been fed sour milk ever since they were hatched, has caught up now with Francis F. Lincoln's pen of White Leghorns, which hitherto has been the leading pen of that variety. Tom Barron's pen of White Wyandottes still leads in the total production by 140 eggs. GEO. A. COSGROVE.

Day Old Chicks
and
Six to Eight Weeks Old Pullets
Six weeks old 60 cents each
Eight weeks old 70 cents each
Kirkup's Strain S. C. White Leghorns, bred for vigor, size and Large White Market Eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.
Orders taken now for 6 to 8 Weeks Old Pullets for delivery April 10 to May 20. Write for prices. FREE BOOKLET—"Better Chickens"—describing Day Old Chicks, Pullets, Cockerels, etc. Send for it to day.
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AILING ANIMALS.

Pin Worms.

Six of my horses have had pin worms badly all Winter. I think they came from feeding fodder early in the Fall. They have had more feed than the rest and look the worse. I have fed salt, sulphur, and sulphate of iron (equal parts). I have injected milk and turpentine. Have fed oats, bran and the best Timothy hay, and then change back to corn again. I admit that after the use of the milk and turpentine I saw live worms pass, but even after careful treatment for days there seem to be just as many worms as before and the animals do not improve. I have not fed fodder for two months now. I have also used the old remedy, "hickory ashes." These horses are hunters and race horses and now is the time to put flesh on for the Spring training and they do not respond. Can't you suggest something else? W. M. A.

Pin worms live in the rectum and are not killed by internal medication. Worm mixtures containing copperas in sufficient quantities turn the manure black and destroy the worms in the intestines so that they do not appear in the manure. Pin worms commonly are associated with intestinal worms. Better give each horse two ounces of turpentine in a pint of raw linseed oil as one dose, after starving the animal for at least 12 hours. Repeat in two weeks if thought necessary. Three times a week inject into the rectum two or three quarts of soapy warm water containing one cupful of tobacco decoction made by steeping tobacco stems or leaves in boiling water; or use a decoction of four ounces of quassia chips to the gallon of hot water. A. S. A.

Sore Shoulders; Eczema.

1. I have a fine work horse about seven years old that I have owned for two years; every time I work him in a plow or harrow his shoulders get sore and all of the hair comes off. I have tried different collars and harness, both new and old, and the result is just the same. 2. A fine riding horse about the same age, every Spring has a breaking out under her stomach that extends from her breast to her hind legs, about a foot in width, and all of the hair comes off. It seems to itch a great deal and continues all Summer. We have tried different remedies that our veterinarian gave us, and it seems to do no good. What do you advise? D. A. G.

1. Fit the horse with a strong breast collar and twice a day bathe the shoulders with a lotion composed of half an ounce of tannic acid to half a gallon of soft, cold water; or use strong white oak bark tea. 2. Clip the mare. Bed her box stall with planing mill shavings or sawdust. Keep the bedding perfectly clean and dry. Do not feed corn or green grass. Feed whole oats, wheat bran and mixed clover hay. Keep the harness clean and dry. If any trouble starts, wash the parts once and then apply freely two or three times a day a salve of two parts sulphur, one part coal tar dip, and five parts of lanolin, or unsalted lard. A. S. A.

Rabbits With Sore Ears.

I have some rabbits which have a scab inside of the ear, and under this scab there are little specks about half as big as a pinhead, and they seem like lice. Could you advise some treatment? I have been using boracic acid diluted in water, putting it in the ear a drop at a time. J. M.

Cleanse the parts, removing the scabs; then keep them smeared with a mixture of one part of sulphur to five parts of lard or vaseline. A. S. A.

Pig-eating Sows.

What causes my brood sows to kill and eat their young, immediately after birth? How can I feed them to prevent them doing so? J. C. S.

This vice generally is brought on by pampering, stuffing sows on corn and other rich feed, withholding succulent or laxative feed and failing to enforce exercise every day while in pig. Such sows are flabby, soft, constipated, cross and nervous. The popular preventive is to feed salt pork to brood sows. The feeding of digester tankage as a part ration also is said to prevent the trouble. Make the sows take abundant exercise every day and feed mixed rations. Exercise may be encouraged by letting the sows root for whole oats sprinkled on a big barn floor well covered with litter. Feed Alfalfa or clover hay, adding a pound of silage or two pounds of beets, mangels or rutabagas. Give little or no corn to a brood sow. Enforce exercise. Handle the sow in her box stall every evening until she gets accustomed to the presence of man. Bring her to the farrowing time with her bowels relaxed and her muscles in good order. Then she will not be likely to have trouble in farrowing, and will be unlikely to kill and eat her pigs. A "Down East" reader of this paper once suggested a novel plan of preventing pig-eating and vouched for its efficacy. It was to remove the pigs, one by one, as soon as dropped, placing them in a cotton lined basket to be set near the stove. As soon as all the pigs are born give the sow the following "toddy" mash: One pint of rum, one quart molasses, three quarts of shorts, warm water to make one pailful. Let the sow drink this and as soon as she goes blissfully to sleep return the pigs, letting each suck and when the sow wakes up she will take to the pigs kindly. Remember it is the *sow* that is to have the rum! A. S. A.

Rickets.

I had 17 pigs born last November. Being late and the weather bad I could not let them run out on the ground very late in the Fall. I put them in the pen, each litter separate. When about two months old, one litter got something like rheumatism, could hardly get out of their nest to eat; then joints seemed to get enlarged and three of them have died. The other lot has done well up till now. I have just noticed one of them is getting in the same condition. These pigs have had good dry pens, been kept clean with plenty of oat straw for bedding; have been on double floors, so there was no circulation of air from below that could harm them. I fed them the same kind of feed I fed the sows, ground oats and barley and wheat middlings. Of late I have fed more corn; have had some separator milk that I have fed with the ground feed. Can you tell me the cause, and a remedy? C. L.

Such cases will not occur if you make sows and pigs take abundant exercise every day and feed some laxative or succulent feed. Sprinkle whole oats on a big barn floor and cover with litter; then let the pigs root for the oats. Stop feeding corn. Add roots and Alfalfa hay to the ration. Mix lime water freely in the slop. A. S. A.

Infected Eyes.

When lambs are a day or two old, and sometimes younger, their eyes turn red and become inflamed. Some of their eyes seem to have a white scum over them. I have been using hydrogen peroxide, but it does not seem to help them. What can I do for them?
West Virginia. H. C. S.

At birth wash the eyes with a saturated solution of boric acid applied on new swabs of absorbent cotton; then drop into each eye two drops of a one per cent. solution of nitrate of silver. Clean up, disinfect and whitewash the lambing stable and pens. Use the boric acid solution twice daily if any lamb has sore eyes after the preventive treatment has been given. A. S. A.

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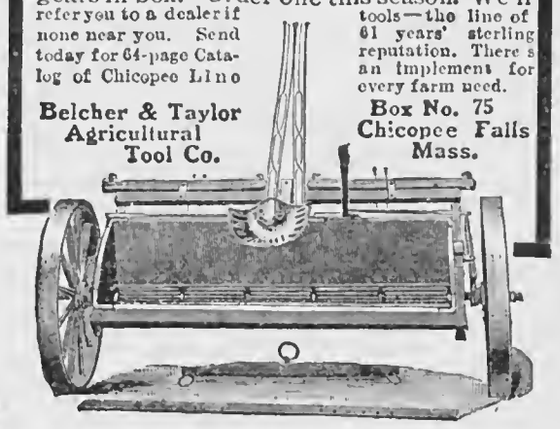

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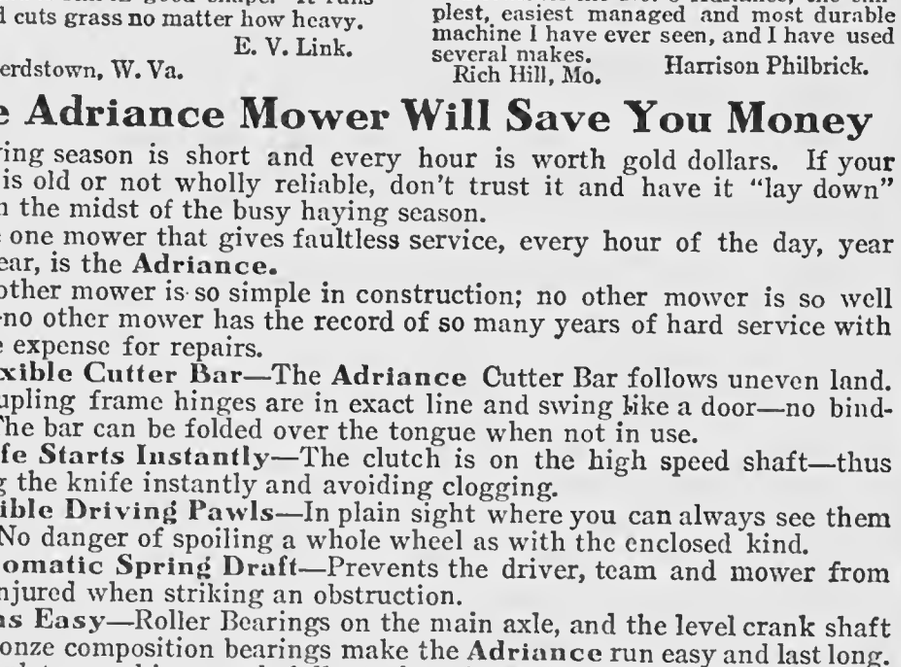

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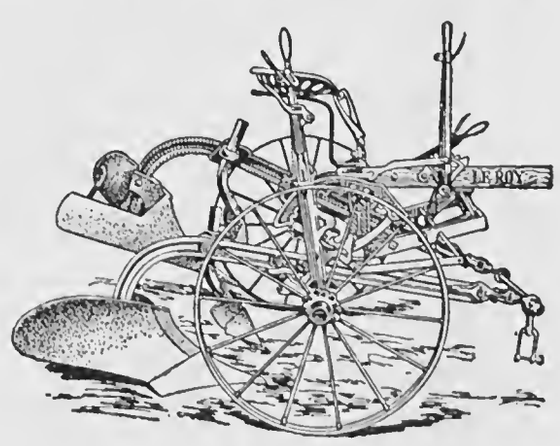

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Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.

Week ending April 3.

Butter, lbs.	2,630,000
Eggs, doz.	5,145,720
Apples, bushels	71,340
Potatoes, bushels	102,000
Hay, tons	6,430
Wheat, bushels	230,440
Corn, bushels	11,250
Oats, bushels	290,700

Wholesale Prices at New York, Week Ending April. 3, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are in some cases 10 cents lower, $1.61 and $1.51 per 40-quart can for B and C grades. A drop of 10 cents per can has been made to restaurants and hotels, those using three to four cans per day now paying 5¼ to 5½ cents per quart.

BUTTER.

The market is overstocked and the price outlook so uncertain that buyers are unwilling to stock up with more than enough for immediate needs. Reports are that the amount on the way is unusually large. Prices are generally one to two cents lower throughout the entire range of qualities, the exception being prime State dairy, of which there is but little offered.

Creamery, extra, lb	24	@	25
Good to Choice	21	@	23
Lower Grades	19	@	20
Storage	17	@	23
State Dairy, best	23	@	24
Common to Good	18	@	22
Factory	15	@	18¼
Packing Stock	12	@	16

Elgin, Ill., butter market firm at 25 cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

Arrivals of new whole milk are larger. No special price changes are noted, but the market is decidedly unsettled, and the new make will doubtless be lower.

Whole Milk, new, best	16	@	17
Old, best	19	@	19¼
Common to good	16	@	18

EGGS.

Receipts continue large. Arrivals for two days being 2,200,000 dozen. The demand is fairly good for large selected eggs suitable for special Easter trade, but the general bulk of stock is offered under 20 cents wholesale. A few European eggs of medium qualities are on sale at 18 to 18½ cents. Duck eggs selling well but lower, mainly 32 to 34 cents.

White, choice to fancy, large	24	@	25
Common to good	18	@	22
Mixed colors, best	21	@	23
Common to good	17	@	20
Western fresh, white	22	@	24
Lower grades	17	@	19

FRESH FRUITS.

The apple market is weak, mainly because of the large amount of fruit showing scald. The few choice barrelled apples arriving are selling fully up to the top quoted price. Strawberry receipts are increasing, but running good in quality and selling well.

Apples—Spitzenburg, bbl.	4 00	@	5 50
Spy	4 00	@	6 00
Ben Davis	4 00	@	4 50
Greening	4 00	@	6 00
Newtown	6 00	@	7 50
Baldwin	4 00	@	5 25
Western, box	1 50	@	3 00
Strawberries, Fla., qt.	25	@	60

BEANS.

The general range of prices is five to 10 cents per hundred pounds higher. Business is rather dull at this advance, but holders are firm in their ideas, especially on good marrow. Yellow Eye very scarce. The California Lima outlook is very strong. Prices have advanced 30 to 40 cents per hundred.

Marrow, 100 lbs.	4 30	@	5 45
Medium	3 55	@	3 65
Pea	3 15	@	3 65
Red Kidney	5 20	@	5 25
White Kidney	5 75	@	5 80
Yellow Eye	5 10	@	5 15
Lima, California	7 25	@	7 30

HOPS.

Prime to choice	43	@	44
Common to good	38	@	41
Pacific Coast	19	@	22
Old stock	15	@	18
German crop	65	@	70

VEGETABLES.

Prices on domestic potatoes are, 25 cents per barrel higher than last week, but business is light. Very little southern stock arriving; Bermuda $2 to $3 higher. Sweet potatoes very dull, except on a few choice South Jersey. The onion market is badly upset. This week's receipts of Egyptian have been mainly reshipped to other markets, and a cargo of Mexican onions has also been diverted.

Potatoes—Maine, 180 lbs.	2 37	@	2 62
State, bulk, 180 lbs.	2 25	@	2 50
European, 108 lb. bag	1 00	@	1 75
Bermuda, bbl.	6 00	@	9 00
Florida	3 00	@	6 00
Sweet Potatoes, bbl	1 00	@	2 00
Beets, bbl.	2 00	@	2 50
Carrots, bbl.	2 00	@	2 50
Asparagus, California, doz.	2 50	@	3 75
Southern, doz.	2 00	@	3 00
Cabbage, Danish seed, ton	25 00	@	28 00
Imported	20 00	@	25 00
New, bbl. crate	1 50	@	1 75
Chicory, bbl.	3 00	@	4 00
Kale, bbl.	35	@	65
Lettuce, half-bbl. basket	1 00	@	4 00
Onions—White bu.	1 50	@	2 00
Red, 100 lb bag	2 00	@	2 25
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	3 00	@	3 50
Peas, Southern, bu	2 50	@	5 00
Shallots, bbl.	5 00	@	8 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	1 00	@	2 00
String Beans, bu.	3 00	@	6 00
Squash, Marrow, bbl	3 00	@	3 50
Hubbard, bbl.	3 00	@	3 50
New, bu.	2 25	@	3 00
Egg Plants, Southern, bu.	2 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	75	@	2 50

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 50
No. 2, box	2 00	@	3 00
Mushrooms, lb.	15	@	35
Radishes, 100 bunches	2 00	@	4 00
Rhubarb, doz. bunches	25	@	60
Tomatoes, lb.	20	@	30

LIVE POULTRY.

Squab Broilers, pair, fancy	85	@	90
Fowls	18	@	19
Roosters	13	@	13½
Ducks	17	@	18
Geese	12	@	12½

DRESSED POULTRY.

Chickens, choice broilers, lb	30	@	35
Squab broilers, pair	80	@	1 00
Broilers, common to good	28	@	30
Roasters, fancy	24	@	25
Fowls	14	@	18
Ducks	12	@	17
Geese	13	@	14
Squabs, doz.	2 50	@	4 50

HAY AND STRAW.

The receipts of hay show large proportion of medium and low grades. Prices are practically unchanged. Choice rye straw still scarce and high.

Hay, Timothy No. 1, ton	20 50	@	21 00
Standard	19 50	@	20 00
No. 2	17 00	@	18 50
No. 3	14 00	@	16 50
Clover mixed	12 00	@	18 00
Straw, Rye	17 00	@	19 00

LIVE STOCK.

Native Steers	7 00	@	8 70
Bulls	5 25	@	7 50
Cows	3 25	@	6 40
Calves, prime veal, 100 lbs.	7 00	@	11 50
Culls	5 00	@	6 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	8 00	@	8 65
Hogs	8 50	@	9 20

MILLFEED.

Wheat Bran, ton	29 00	@	30 00
Middlings	30 00	@	31 00
Red Dog	31 00	@	31 50
Corn Meal	29 00	@	30 00
Linseed Meal	31 00	@	32 00

COUNTRY-DRESSED MEATS.

Calves, best	14	@	15
Fair to good	11	@	13
Buttermilks	09	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	13
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 01	@	..
No. 2, Red	1 03	@	..
No. 2, Hard Winter	1 00	@	..
Corn, as to quality, bush.	71	@	74
Oats, as to weight, bush.	43	@	45
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30	@	32
Mixed colors, new laid	27	@	29
Ordinary grades	23	@	25
Butter, fancy prints, lb.	31	@	33
Tub, choice	27	@	29
Chickens, roasting, lb.	27	@	30
Fowls	22	@	25
Turkeys	28	@	32

*

Several thousand pounds of butter, doctored with flour and water have been seized in Wisconsin. The adulteration was so skillfully done that considerable of the product offered had passed through the regular channels of trade before discovered by an inspector.

*

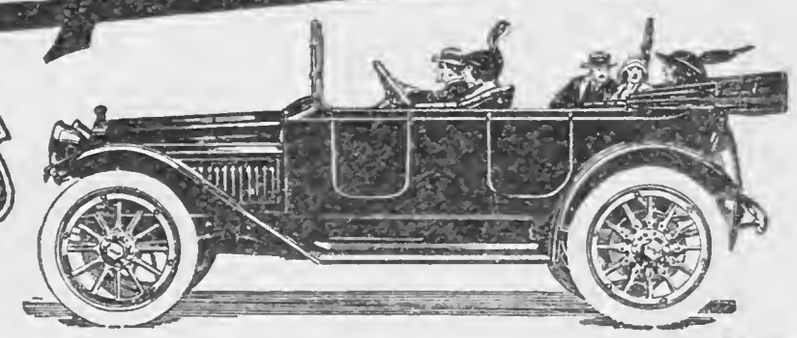
The Burley Tobacco Society, organized five years ago by farmers in Kentucky, Ohio and Indiana, has just passed out of existence, a final distribution of $316,000 having been made to the farmers in the pool. A business of $20,000,000 has been done during the five years. An improved organization, the Burley Tobacco Co., succeeds the old society.

At Shelbyville, Ky., the last sales of the season on the loose leaf market were made March 27, 17,265 pounds going at a range of $1 to $15 per 100 pounds. Sales since December have been 10,039,655 pounds at an average of 10 cents per pound.

*

The experience of a produce shipper putting up a special mark of vegetables is instructive, if not satisfactory to him. For a long time one produce house handled the goods, selling at what might be considered a good price. Then another concern made a strong bid for a trial shipment. They got it, sent a spy to the first house to learn what price was being paid and returned the shipper 10 per cent. more. For a week they got the entire output but fell down on the price so badly that the next week the old concern got the supply as before. This matter of changing commission houses is one of the hardest for a shipper to decide. A change may be desirable, and the idea of "letting well enough alone" is not always sound. But when produce is bringing what an experienced shipper may judge is well toward the top of its commercial value, a safe rule is to go slowly in changing, and have something more definite than the say-so of an interested party who is trying to steal a neighbor's customers.

Imperial



Send for Complete Story of the

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DON'T buy an automobile until you send for our folder describing our powerful, economical, beautiful Imperial 32. See the *real*, *actual* motor car quality offered you at a remarkably low price.

You get a powerful 4-cylinder, 40 horse power motor—able to take the steepest hills and travel any road. Big, roomy, luxurious body. Attractive body design like cars costing twice as much. 34-inch wheels; 34x4-inch tires. Left hand drive—center control. Electrically started and lighted. Latest and most complete equipment.

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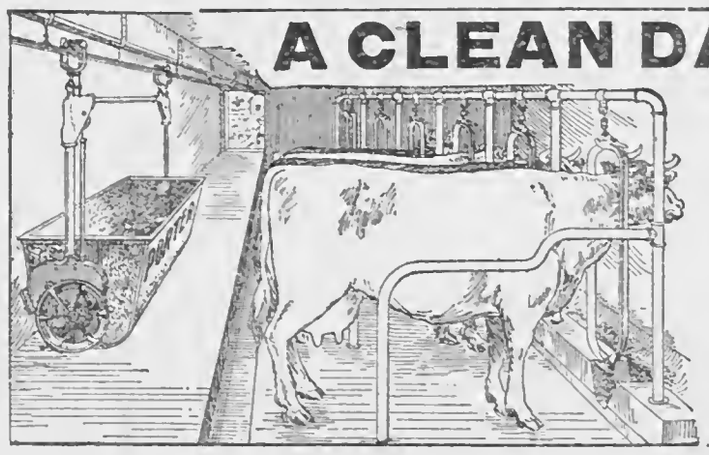


A CLEAN DAIRY BARN With Half the Work

By using a Porter Litter Carrier. It works on our Columbian Steel track, is easy running and will carry heavy loads. Our Perfect Cow Stanchions line up the cows without interfering with their comfort.

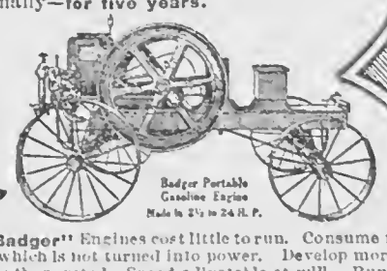
Porter Steel Stalls give perfect ventilation and light throughout the barn and make it easy to keep the cows clean.

We also make the celebrated Porter Hay Carriers and Barn Door Hangers. Send for catalog of our Perfect Barn Equipment.

J. E. PORTER CO., Ottawa, Ill.

You can turn your entire attention to your farm work and forget your chores and incidental big jobs, if you own one of these reliable machines. Simple enough for a boy to run. Dependable and durable. We guarantee every part—unconditionally—for five years.

Badger Farmer's Friend GASOLINE ENGINES



"Badger" Engines cost little to run. Consume no fuel which is not turned into power. Develop more power than rated. Speed adjustable at will. Run smoothly, need no blocking because perfectly balanced. Wearing parts case hardened and made adjustable. Use gas, gasoline or crude oil. Finest power plant for grinding, wood sawing, fodder cutting, churn, separator or milking machines. Made in portable, semi-portable and stationary types, 2½ to 30 H.P. Send for Catalog. Free Engineering Lessons sent on receipt of dealer's name.

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MOST MEN WHO SHAVE NEED A GOOD HONE

Here's one which we will send for

One New Yearly Subscription or Three Renewal Subscriptions

(One of these may be a renewal of your own subscription for one year.)

The size of this Hone is 2 x 4 inches. Manufactured of Clay and Rouge pressed and burned in kill, making it very hard.

If your neighbors are not subscribers to the Rural New-Yorker, get their subscriptions. If they are subscribers, get their renewal.

THE RURAL NEW-YORKER,
333 W. 30th St., New York City

SAVES $75.00 A farmer in this State sent his son to take a course in agriculture at

THE NEW YORK STATE SCHOOL OF AGRICULTURE
AT MORRISVILLE, N. Y.

From what the boy learned, he saved $75.00 on this year's fertilizer bills.

THE SCHOOL OFFERS

TO YOUNG MEN: Two-year and short winter courses in Agriculture, Dairying, Fruit Growing, and Poultry Husbandry.

TO YOUNG WOMEN: Two-year and short winter courses in Home Economics, including cookery, sewing, millinery, home nursing, household management, etc. Year trades courses in dressmaking and millinery to fit for professional work.

School has large, well-equipped laboratories, modern two-hundred-acre farm, pure-bred stock, well-trained staff.

Tuition is free to residents of New York State. **Entrance Requirements** are 16 years of age, good character, and completion of 8th grade school work.

For catalogue and information, address F. G. HELYAR, Director, MORRISVILLE, N. Y.

When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

PUBLISHER'S DESK

Some weeks ago I sold a pair of horses to a city man. He sent a veterinary surgeon to examine them before buying. He paid the fee for examination. The horses were pronounced sound, and the buyer took them at my price. Now the veterinarian comes around and intimates that I ought to give him something on the theory that I sold at a good price and could not have done so if he had not given them a good bill of health. What do you think? Should I give him anything? It has been suggested that, if I refuse, he may be in a position to block a deal some other time. E. F.
New York.

If you were to pay such a demand by a veterinary surgeon, you would be as guilty of procuring grafters as he is of soliciting graft. No custom and no fear of future injustice through him would justify you in bribing him to neglect his duty to his principal. He should have no interest in you and you no influence over him. He is hired to examine the horses and to give an honest opinion of their condition. A conscientious surgeon would refuse your money, if you offered it to him. To accept it would destroy whatever service he could otherwise render to the buyer. He cannot serve two masters. It is true he may do his principal as much injury in wantonly condemning a sound animal as he could do you in that case, but you are not responsible if you do nothing to tempt his behavior. This type of veterinarian is more numerous than we wish it were. We know there are men of high ideals in this profession. The grafter is a scandal to such men, and a menace to the profession. The associations ought to work out the grafters of this type and locate them. Such men are a discredit to any profession in which they secure membership.

Recently somebody offered to be one out of 100 to contribute financially to "Publisher's Desk." I would like to be another one, and pledge $5 each year. Please get the club together. E. P.
New York.

There have been many such offers; but as yet no cash contribution is necessary. Cash sent for this purpose has always been credited up to the sender's subscription, and some of them are paid 20 years in advance in consequence. But you become a charter member of the association to promote honest advertising.

Massachusetts, like Connecticut, has a law making it a criminal offense knowingly to make false statements in an advertisement of any kind. Under that law a conviction has just been secured in Massachusetts for the first time. Not content with this arrangement, a member of the Massachusetts Legislature has introduced a bill to discipline the newspapers that print false advertising. That leads the Berkshire Courier to say: "All over the country are newspapers that refuse doubtful or dirty medical advertising, and there are papers that will not handle liquor advertising. Beyond that papers cannot go far and live." Oh yes, they can. There is THE RURAL NEW-YORKER, of New York, for example. A prosperous, growing, influential publication, as well as one of the cleanest and most exacting as to its advertising in the whole field of publications—much more so than most religious and trade publications—and it continues to thrive and grow. It is at once an example, an encouragement and a rebuke to those papers that take doubtful advertising of any class. THE RURAL NEW-YORKER censors its columns more severely than any official ever would, with the result that it exerts a power for straight business that no similar publication can possibly claim. It is unique, alive, energetic, helpful, and successful. Does that not prove it possible for publishers to put character, discrimination and care into their advertising columns, safeguarding their readers; that it is possible to go beyond the mild exclusion of undesirable business and live?—Bristol Press.

Several friends sent us the above clipping with a request or suggestion to reprint it. At first our sense of modesty suggested to omit it, but we yield to the further consideration that there may be something in the argument to combat the contention that a paper cannot be clean and honest and live, and to support the contention that the cleaner and straighter a publication the better its prospects of prosperity.

I take four farm papers, and now I have got to get THE R. N.-Y., just because the "Boss" (my wife) says so. A. B. W.

We simply wish that a whole lot of other farmers had a similar boss.

Our experience with commission merchants was so unsatisfactory that some time back we eliminated all of their advertising, and have since refused to accept advertising from any produce commission house whatever. We are here, however, to serve our friends as best we can, and so when a New York State subscriber asked us for the names of commission merchants to handle hothouse lambs, we picked out half a dozen of the best we knew with financial rating, and sent the addresses to the subscriber. In response he shipped on the same day two lambs, weighing 27 and 28 pounds respectively, to Phillips & Sons, 277 Washington Street, New York, and two other lambs of exactly the same weight to Read & Garrison, 332 Washington Street, New York. He made no selection and insists that one shipment was exactly as good as the other. Read & Garrison made him prompt returns for $14 for the two lambs on March 6. Phillips & Sons made returns of $7 for the shipment to them. Read & Garrison wrote, "The stock is nice and we can use all that you can ship us." Phillips & Sons reported to us after complaint that the condition of the lambs was not good. This is the kind of thing that shippers have been up against in this market for at least 30 years of personal recollection. The farmers have no redress. The commission merchants fought our bill to create a State Department for marketing farm products. They will probably do everything they can to embarrass and defeat the purposes of the Department, but it is up to the State now to put a stop to transactions of the kind that we have reported above.

We took the Tribune Farmer for 10 years, until they discontinued; but like THE R. N.-Y. very much. Could we not help the paper? NEW READER.
New York.

The friends of the Tribune Farmer have become friends of THE R. N.-Y. There is one way all friends can help. Renew subscriptions promptly and induce neighbors to send for at least a 10-weeks subscription. Get farmers to know the kind of service THE R. N.-Y. is giving them. Then they are their own judge of its value to them.

About the first part of January I ordered a hundred ducks from the Chantecler Poultry Plant of Ulster, Pa. When they arrived some were dead, and others have been dying since, 25 or 30 probably in number. These were guaranteed or represented to be Walton Cumberland White Egg Indian Runner ducks, properly mated and ready to lay this month. Those examined have either no egg or only a little cluster of tiny egg germs. They were represented to be first-class as to size, markings and laying quality, and I paid every cent asked for them. I have received a pen of Waltons which are fine, and equal to photographs seen of prize winners. They came about the same distance in cold weather, and received the same feed and water, and weigh four to five pounds. Now the Ulster, Pa., lot are apparently mongrels with hardly any resemblance to a good Walton, and seven of them, full weight, weighed 17 pounds, about half size, and dirty, altogether different colors from the true Walton. You could never say they were the same breed or any particular breed, as they have varied markings, hardly any alike, but seem to be a Walton cross on some other duck.
Maine. E. E. I.

We wrote the proprietor of this poultry plant with regard to the subscriber's complaint, but we have not been able to induce him to take the complaint seriously or give it the attention which it deserves. Under the circumstances we are under the necessity of withdrawing any endorsement of this concern which may have been conveyed to our readers from the fact of an advertisement of it having appeared in our columns some time ago.

I enclose a receipt for some magazines for which my wife subscribed in August, 1913. I have received only one magazine. Can you do anything for me? W. S. M.
Maine.

Our letters to the International Advertising Syndicate, Boston, Mass., were returned from the post office unclaimed. They claim to have offices in Montreal and New York, but our advice is that the Mr. Gregory who claimed to represent this syndicate was never authorized to solicit subscriptions for the magazines he had on his list. J. J. D.

68 Years of Common Sense in Clothes Making

1846

No. 5130 Blue Serge Special is a suit of clothes made for real men of all ages who want the utmost in solid, substantial value for their money.

It's the culmination of sixty-eight years of common sense in Clothcraft Clothes making—which sounds easy, but wasn't.

It meant studying every little operation from cutting the cloth to sewing on the buttons—to find the one best and shortest way in each case.

Here's another point: Cutting the cloth for twenty suits at once not only means *doing it better*, it also means saving time and money.

That saving gives you better cloth, better lining, better designing.

No other method could have put so much all-round value into a suit like "5130" at $15.00—all ready to put on and wear.

Clothcraft includes many models, both in "5130" and in a variety of other fabrics and patterns. It's the one GUARANTEED ALL WOOL line at $10 to $20.

Write for the new Style Book and personal note of introduction to the nearest Clothcraft dealer.

1914

This label on every Clothcraft Suit. Our signed guaranty in the pocket of every coat.

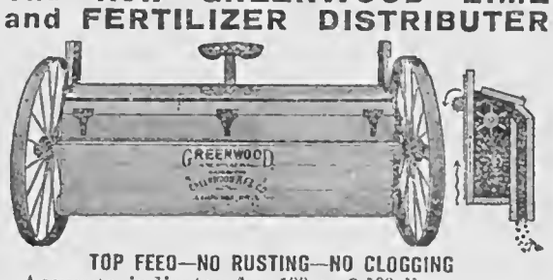
There is also a fall-weight Clothcraft Blue Serge Special at $18.50 known as No. 4130.

The Joseph & Feiss Company

Founded 1846—Oldest Makers of Men's Clothes in America

635 St. Clair Avenue, N. W. Cleveland, Sixth City

The New GREENWOOD LIME and FERTILIZER DISTRIBUTER



TOP FEED—NO RUSTING—NO CLOGGING
Accurate indicator for 100 to 3,500 lbs. per acre, whether material be wet, dry, sticky, lumpy, heavy or light. Write for booklet R to
GREENWOOD MFG. CO., Lawrence. Mass.

$10,000.00 Backs This Drill

If this drill does not satisfy you in every way after
30 DAYS' FREE TRIAL
ship it back at our expense and we will refund all your money, or forfeit $10,000 held in trust by our bankers to protect you. This is the best all-around drill on the market—sows all kinds of seed, grain or fertilizers. Strong, durable, exact. High, broad tires lighten pull. We also make a low down and plain seed drill. We sell direct from factory—save you $10 to $20 dealers' profits.
HERTZLER & ZOOK CO., Box 120, Belleville, Pa.

Hardwood Ashes Best Fertilizer in Use. GEORGE STEVENS, Peterborough, Ont.

ROOFING—95 CENTS ROLL—108 Feet, Nails, Cement. . RUBBER ROOFING CO., 5 Cortlandt St., New York

International Harvester Haying Machines

The I H C Line

GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Peg, Spring-Tooth, and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

WHEN haying time comes you cannot control weather conditions, but you can make the best of them if you use the rakes, tedders, stackers, loaders, sweep rakes and hay presses sold by I H C local dealers. With a line of I H C haying tools in your sheds you can come out of the least favorable weather conditions with the highest percentage of bright, well cured hay.

I H C haying tools are carried in stock or sold by local dealers who can take care of you quickly in case of accident. It is their business to see that you are satisfied with the I H C haying machines and tools you buy from them. You cannot go wrong if you buy only haying tools with the I H C trade mark.

Write us, and we will give you the name of the nearest dealer handling I H C haying tools, and we will send you catalogues on the machines in which you may be interested.

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

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BUFFALO MARKETS.

There is some new asparagus here, at 12 cents for very small bunches and 75 cents for large ones. Strawberries, Florida-grown, are 50 cents a quart and new potatoes five cents a quart. Eggs are decidedly cheaper, retailing as low as 25 cents for what are called fresh, though some dealers are up to 35 cents. Butter is now higher than eggs, pound for dozen, good grades not retailing for less than 30 cents. Potatoes retail at about 80 cents, the farmer getting 60 cents. Sweet potatoes are still rather low in spite of the late cold weather. The two-quart measure retails for 15 cents, being on a par with white turnips and the cheaper apples, most apples being up to 20 cents for a measure holding about a dozen. The barrel price is now up to $6 to retailers. Fine cucumbers 15 cents each; the imported endive 20 cents a pound. Beets five cents a bunch; radishes two bunches for five cents. String beans retail for 20 cents a quart. Cabbage and onions are still high, but there is new southern cabbage here and prices are not likely to last. The retail is five to 10 cents for smallish heads. Moderate-sized Spanish onions retail for two cents each or three for five cents. Home-grown onions are from $2 a bushel down to retailers. Spinach 30 cents a peck. The price of carrots, parsnips and vegetable oyster remain from five to eight cents a bunch or small measure. Celery is in better appearance than it was in the Fall and sells from five cents up. Southern fruits are still the cheapest of all market stuff. Lemons and oranges are 15 cents a dozen for the smaller sizes and tangarines are as low as 10 cents. Bananas are in great supply at eight cents a dozen up. They affect the prices of other fruits materially. Pineapples retail at 20 cents each. There is a growing demand for nuts in the market and hickories are cheap, $2 or less a bushel to retailers, with walnuts and butternuts $1.75. J. W. C.

THE MISSOURI EGG-LAYING CONTEST

The February report of this contest is quite interesting. A pen of Buff Orpingtons from Springfield, Mo., carried off the honors as the best laying pen for the month. They laid 205 eggs. Tom Barron's pen of White Leghorns lead all the pens in the total number laid, they being 109 eggs ahead of any other pen. The highest individual record has been made by a White Wyandotte from Pennsylvania and a Buff Rock from Missouri, each laying 74 eggs in the three months. The average of all the hens in the contest is 29 eggs, so these two leading hens have laid nearly three times as many as the average hen, and about as many in the three Winter months as the average Missouri hen lays in a year. There are 1,040 hens in this contest, making it far the largest egg-laying contest in the country. They laid 12,391 eggs in February.

COST OF FEEDING.—The hens in the last contest laid about 12 dozen each, on the average, which if sold at 25 cents would bring $3. The hens ate about 33% of grain, and about 38% of dry mash. The feed cost approximately two cents a pound. This made the cost of feeding about $1.42 each, leaving about $1.58 per hen for labor and profit. My neighbor, the editor of the Connecticut Farmer, who keeps about 600 White Leghorns, estimates the average price of eggs here in Connecticut at 36 cents. The 12 dozen eggs computed at these figures would bring $4.32, leaving the balance for labor and profit $2.90 per hen. (This amount, $2.90, is exactly the amount per hen that I made one year in the early days on my farm.) The best pen laid 17¼ dozen; at 36 cents this would be $6.21. This pen ate a little more feed, viz., $1.46 worth, leaving $4.75 for labor and profit per hen. The poorest pen in the contest laid just enough to pay for their feed, leaving nothing to pay for the labor.

This contest has a large number of entries from foreign countries. Below is the record of their best pens:

	EGGS.
White Leghorns, England	610
Buff Orpingtons, United States	501
S. C. Reds, Missouri	466
White Leghorns, New Zealand	341
White Leghorns, Vancouver Island	322
White Leghorns, British Columbia	309
White Wyandottes, Ontario	301
White Leghorns, Australia	278
White Leghorns, South Africa	216

The poor showing of these foreign pens is due to the poor condition at the time they were received, and the severe change in climate. One of the New Zealand pens had to be removed from the contest, and all suffered severely. The same is true of the Australian and South African pens.

The best pens of the different breeds laid as ollows:

	EGGS.
WHITE LEGHORNS.	
Tom Barron, England	610
BUFF ORPINGTONS.	
Bermuda Grass Orp. Yds., Texas	501
WHITE WYANDOTTES.	
Penn. Poultry Farm, Pennsylvania	495
S. C. REDS.	
Fred A. Bentz, Missouri	466
Anconas, Missouri	443
White Orpingtons, Ohio	434
Buff Leghorns, Missouri	433
Campines, New Jersey	426
Buff P. Rocks, Pennsylvania	419
White P. Rocks, Arkansas	409
Barred Rocks, Illinois	401
R. C. Reds, Missouri	393
American White Leghorns, Pennsylvania	368
"Rhinelanders," California	363
Black Orpingtons, Missouri	354
Silver Wyandottes, Iowa	348
Buff Wyandottes, Missouri	343
Black Langshans, Missouri	334

The report is very complete, showing the record of each of the 1,040 hens in the contest, but too long for these columns. GEO. A. COSGROVE.

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FOR SALE—Eight International Sanitary Hovers; good as new; $6 each. C. S. McKNIGHT, Ballston Spa., N. Y.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Man with small family to work on poultry farm. P. O. BOX 267, Carmel, N. Y.

YOUNG MAN, 18, wants job on farm; some experience; can milk, etc.; good reference. B. L., care R. N.-Y., 333 West 30th St., New York.

1912 GRADUATE of New York State College of Agriculture desires responsible position; good references. W. N. J., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED as manager of farm near Boston, by married American, age 48, with extensive experience in all branches and fruit a specialty. BOX 1243, Southbridge, Mass.

WANTED—White American man and wife, no children; wife for housework; man for general farm work; also single men. Apply, with references, to WHITE HORSE FARM, Paoli, Pa.

POULTRYMAN—Reliable young man, with experience, desires situation on commercial or private plant; references; state wages, etc. J. KOGEL, General Delivery, Nyack, N. Y.

ENGLISH-SPEAKING Hungarian couple, two children, desire position on farm; experienced. JOHN SEAMAN, 507 East 79th St., New York City.

WANTED—White woman for general housework on farm; three adults; no outside work; reference given and required; $5 a week. SIGNAL FARM, Sewickley, Pa.

POULTRY AND GENERAL FARMER WANTED who desires to work into a business of his own; must have good judgment and reference; commission basis. W. W. C., care R. N.-Y., 333 West 30th St., New York.

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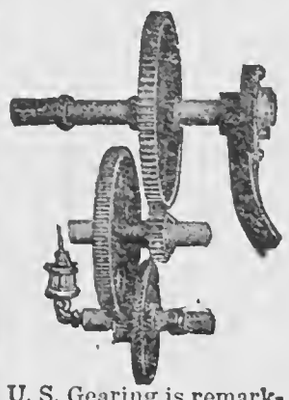

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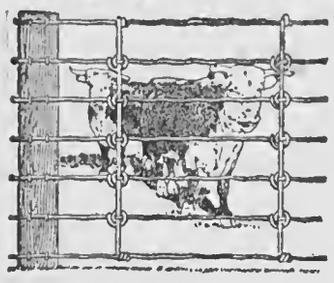

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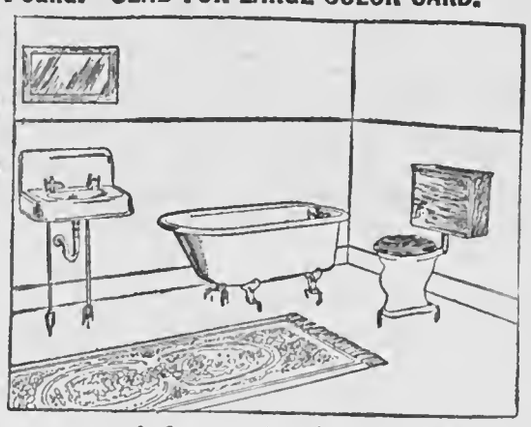

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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RED-TOP IN NEW YORK.

A Grass for Sour Land.

CONTRASTED WITH TIMOTHY.—The place of Timothy in New York agriculture is so important and prominent that the value and importance of Red-top is often overlooked. On the one hand, no one will argue that Red-top can successfully compete with Timothy, where conditions are favorable for the latter. Its yield per acre is less and the market prefers Timothy, for which it will pay a higher price. It lacks in palatability when compared with Timothy. On the other hand, much of our land will no longer grow Timothy, due to acidity and poor physical condition generally, in addition oftentimes to an actual depletion of soil fertility. On these lands Red-top is indispensable. Moreover, in many of our permanent pastures, where the conditions of soil, moisture and temperature are unfavorable, Red-top is again of greatest importance.

SPECIES OF RED-TOP.—Although there are a relatively large number of rather distinct species of this grass, three are of greater agricultural and commercial importance. The first of these more important varieties is Agrostis alba vulgaris, commonly known as "Red-top," due to the reddish appearance of the head or panicle when ripe. When this species first comes into bloom it gives a silvery appearance, but later becomes reddish, giving rise to its common name of Red-top. It is largely used for hay. The stem is the largest and coarsest of the three common species. Under very favorable conditions it will yield two tons per acre, although the yields throughout New York State, where it is grown, is probably not more than one ton per acre. The second species considered is Agrostis stolonifera, commonly known as "Bent" or "Creeping Bent" grass. Its stem is not so large, but finer than the Red-top. It is a very fine grass for permanent pastures, and would not be profitable to grow for hay where common Red-top could be grown. The cattle pasture on it readily while green and succulent, although its palatability decreases rather rapidly when it ripens and becomes dry. It spreads itself over the ground rapidly, and produces a fair amount of green pasturage and a good sod. The third species is Agrostis canina, commonly known as Rhode Island Bent, or Brown Bent grass. It is shorter and finer than the creeping Bent grass, and is used for pastures and lawns. Where conditions are favorable for the growth of the Bent grass for pasture purposes, it should be grown rather than the Brown Bent. Insomuch as the Brown Bent can adapt itself to greater extremes than the Bent or Creeping Bent grass, and forms a denser sod, it persists as a valuable grass where conditions are unfavorable to the Creeping Bent grass.

CHARACTERISTICS AND ADAPTATION.—One of the common characteristics of the group is that the Red-top grasses are stoloniferous. By this we mean that new plants arise from the underground root system, and thus it spreads itself more rapidly than a bunch grass, a common example of which is Orchard grass. New plants may arise from a joint of the grass stem, particularly the lower joint, by coming in contact with the soil, due to the bending character of the grass plant. It takes root in the soil, sends up new stems and gives rise to new plants. This habit of reproducing itself makes it a good sod-forming grass, much better than Timothy, and so makes it valuable in pastures where a strong sod, that will resist injury from tramping, is necessary. This stoloniferous habit is most developed in the Brown Bent grass, least developed in the common Red-top, while the Creeping Bent grass is intermediate between the two.

SOIL REQUIREMENTS.—Red-top will grow on

WESTERN NEW YORK SPRAYING SCENE. THE RIGID BARREL PROTECTS THE SPRAYMAN. FIG. 234.

acid lands, though it does not prefer them. This single characteristic or power to adapt itself to such condition of soil is of great economic importance in New York State, because so much of our land needs lime. Timothy will no longer grow. Red-top takes its place as the next best grass, and becomes of first importance in such regions. As soon as the lands are limed, the more valuable Timothy grass can again be raised. Until then, Red-top will be the most valuable grass that can be grown. Moreover, this adaptation to acid soil conditions is more marked in the Red-top used for hay than in either of the other species, although all three are resistant to soil acidity. Red-top is also adapted to wet conditions. It will produce a crop of hay on soils too wet for Timothy and Red clover. When grown under such conditions the hay is apt to be coarse, and is not considered so desirable or valuable. While adaptation to wet lands is a characteristic of the Red-top, the Brown Bent grass is adapted to dry lands, and is more resistant to drought. This makes the Bent grass—both Brown and Creeping Bent—valuable for pasture plants, particularly where there is a tendency to regional or seasonal droughts. The bent grasses are more resistant to the bad effects of high temperatures than many of the more valuable pasture plants, such as Kentucky Blue grass. Where drought and high temperatures occur, if not too extreme, Bent grass, therefore, offers an important means of utilizing much land that otherwise would be of little value. These adaptations to acid soils, wet soils, and to dry hot climates are, accordingly, of much importance in choosing seeds and grass mixtures in order to utilize best such lands, and to assure the best returns.

RED-TOP AND TIMOTHY.—Where conditions are favorable for Timothy, Red-top will give way to it. Red-top will respond to the application of lime, as well as Timothy does. Experiments have shown that, on lands that have been limed and seeded to both Red-top and Timothy, the Timothy grew at the expense of the Red-top, and that this latter gradually ran out as the Timothy increased. It is reasonable to expect that where lime is now the limiting factor in the production of Timothy on New York lands on which Red-top is now grown, such conditions may sometimes be reversed. Whether such conditions as these can be changed depends largely on the amount of lime required. It is not at all impossible that some lands require more lime than can at present be afforded. We must therefore, for a time at least, either cultivate our fields at an actual loss, due to the cost of lime to correct the conditions of soil and increase productiveness, trusting to get increased returns later, or continue to raise Red-top and be compelled to be satisfied with the smaller returns from it. Where the limiting factors are not lime as assumed above, but drainage, etc., such conditions present, of course, a different problem.

MAINTENANCE OF SOIL FERTILITY.—Red-top plays the same part in maintaining the present fertility of the lands that will grow it as Timothy does to the land on which it is grown. It offers a means of putting organic matter in needy soils. Such soils, that will only grow Red-top and are too acid for Timothy and Red clover, would become unproductive much faster were it not for the roots and stubble of the Red-top which are plowed under. It is the mainstay of the hill lands, especially in Southern New York, in restoring humus to these soils. What may be said of the relation of Red-top to the hay lands of New York may also be said of the pasture lands that are occupied by the Bent grass. The utilization of these grasses in the permanent pastures that will no longer grow the more valuable pasture grasses, is highly important in maintaining the organic content of such soils, and may be the means of reclaiming them, other conditions being equal, to more valuable pasturage production.

ITS PLACE IN THE ROTATION.—In some counties its place in the rotation is an important one. Where potatoes are grown as the principal cash crop it is especially so. Red-top three years, potatoes and oats is a common rotation. The Red-top may be cut two years, then manured, and instead of harvesting the hay the third year, the grass is plowed under, and the land planted to potatoes the year following. Potatoes are followed by oats. It should be noted that all three crops are more or less adapted to acid soil conditions, especially potatoes. Where potatoes are largely grown, such a rotation, and the place of Red-top in the rotation, may assume even greater importance.

Ordinarily we would prefer Timothy, Alfalfa, Blue grass and Red clover, and others of the more important forage plants, to Red-top. But in many cases our soils are in such a poor condition of fertility and productivity that we have no longer any preference in the matter. When we understand these conditions, and the wide adaptation of this Red-top group of grasses, we begin to appreciate more fully the importance and value of these grasses in New York State under our present conditions.

J. H. REISNER.

THE NEW YORK GAME LAWS.

The article on page 170, "A Farmer on Fool Laws," might be the text for a long sermon, to which the farmers of this region would respond a hearty amen. The only protection or aid we are allowed to give wild pheasants is to feed them. If they should go into a building to roost and a door should blow shut so as to fasten them in, the owner or occupant of the land would be liable to fine or imprisonment. On the other hand, if we put out grain or other feed for them it is sure under the present trespass laws that some party of game hogs will come along and kill them all off in a few minutes' shooting. It is a common thing for a party to start out in an automobile and kill 10 or more pheasants per man in a day's shooting (the legal limit is three males in the open season). Many of these people carry wire cutters, so that they will not be put to the trouble of opening gates. The worst of it is that the owner of the land has no redress. If he happens to be so fortunate as to get the names of the offenders he must institute a civil suit, and then is decidedly lucky if he is awarded six cents damages, and so escapes the court cost of the action. If the laws were so changed as to make it a misdemeanor to trespass on posted lands without written permission of the owner or occupant and if farmers were allowed to keep in partial domestication any game or fur mammals or birds on written notice to the local game warden, or on payment of a *reasonable* fee, and the game warden were given the powers of a trespass officer, the enforcement of the laws would be much easier; the sale of hunting permits would reimburse the farmers for their trouble and expense in caring for the game, the game hogs would be curbed in their activities; the amount of game on State and unposted territory would be greatly increased by drift from posted lands, and the average town man would be assured that for a reasonable price he could get within shooting distance of plenty of game.

At present pheasants are practically not protected at all in this part of the State. This is no fault of the local game warden. He must cover a territory about 30 miles long and 10 miles wide, including four or five extensive bays and marshes. Last Fall, in addition to this, he was busy for about two months collecting fish eggs for the State hatcheries. During this time the shooting was almost as continuous as on a rifle range that is being used by a regiment. This may be contrasted with the condition of fish protection on the largest bay under his control. Fishing is permitted with licensed nets in this bay during certain months, provided specified game fishes are not taken, or are returned to the water without injury. No application for a net license is granted unless it is approved by the game warden. This has practically stopped illegal fishing in the bay, as those who formerly were able to escape prosecution because of the difficulty of getting sufficient evidence to convict are now anxious to avoid the appearance of evil because they know that if the protector gets the idea that they are fishing illegally their license will be revoked or held up until they can prove to his satisfaction that they have violated no laws. The proposed changes in existing laws would have as salutary an effect in the case of land game. Under the present system any farmer who makes any attempt to protect or increase the game on his land, whether posted or not, is a fool who is simply catering to the pleasure of a gang from some nearby town, who will come along with an automobile, a supply of whiskey and a battery of pump guns and automatics to make a target of every living thing on the farm.

A good example of the result of the present laws is on our farm. We are working a tract of land nearly two miles long, practically surrounded by woods or marshes, on which a thousand pheasants could be raised every year without serious damage to any crops. Last year was a good season for the birds, and there were certainly more than a hundred brought to maturity. Of these we got one and others killed most of the remainder. There is a loose flock of perhaps 25 wintering partly on our land, and most of them are likely to survive, as the hunting season is now closed, and there is no further excuse for the presence in the woods of the man with the gun. There are also about a dozen ruffed grouse or partridge in the woods about us. If we had any assurance that the State would protect us we would feed these birds and give them shelter when needed, but we shall not do so as long as we know that we can never get any benefit, but will only be exposing ourselves to damage.

Wayne County, N. Y. ALFRED C. WEED.

RECORDING CLIMATE.

There are about 4,000 coöperative observers well distributed over the United States who keep a daily record of the weather and make a monthly report to the section directors. Each State has a section director who is an official of the Weather Bureau and has charge of the instruments loaned to the cooperative or voluntary observers who are under his direction. The local observers receive no pay for this work, but it requires not to exceed five or 10 minutes each day, and all supplies are furnished, such as pencils, report blanks, carbon sheets, franked envelopes, memorandum blanks and franked cards for reports to the local press. The monthly reports are made in triplicate; one is retained, two are sent to the section director, who keeps one and sends the other to the National Weather Bureau Office. These reports supply data for the Monthly Weather Review, the Annual Report of the Chief of the Weather Bureau and the Summaries of the various sections of the Climatical Service. The instruments supplied to the coöperative observers are a standard rain gauge and support, at the right hand of the picture, and self-registering maximum and minimum thermometers mounted in a thermometer shelter shown in foreground of Fig. 236. This thermometer shelter is so built that it keeps the thermometers dry, protects them from the direct rays of the sun and radiations and reflections from the ground, but permits free passage of the air. The shelter should be about four feet above the ground, preferably one rod from buildings, in the open, but not exposed to molestation by stock or persons. The shelter shown in the picture is protected by four posts to which are nailed some strong slats, so that the stock can rub against the posts without jarring the thermometers, since these posts and slats are not connected with the shelter in any way.

The weather data desired are the highest and lowest temperatures, precipitation in inches and times of beginning and ending, snowfall in inches and depth on ground, directions of wind, condition of sky and various phenomena such as frosts, sleet, thunderstorms, high winds, lunar and solar halos and coronas, auroras, etc., tornadoes, fogs, etc. The instruments are read and records made once a day, preferably about sunset, and at the same time each day. After reading, the rain gauge should be emptied and both thermometers reset, the shelter closed and locked. There are somewhat less than 200 forecast stations which are supplied with expensive recording barometers or barographs, thermographs, psychrometers or moisture gauges, rain gauges, wind vanes and anemometers, and which transit the data each day as taken, by telegraph to the Weather Bureau at Washington, where a daily weather chart and forecasts are made up and transmitted in turn to each station issuing daily weather maps, forecasts, flood, storm, ice and cold-wave warnings. These forecast stations are usually located in some large city near or on top of a government building, and are in charge of salaried men who through training and experience are well fitted for their work.

The work of the coöperative observer is rather interesting and if located along a much frequented walk the instruments are but little bother, even at busy times. The instruments are standardized and so are of great accuracy; therefore it is more satisfactory to read them than non-standard instruments. You have the satisfaction of knowing they are truthful, and besides you are sure of the highest and lowest temperatures. These instruments and accessories would cost $10 or $12, if purchased, and the Weather Bureau still retains their ownership, though they are loaned to the observer so long as he continues to record his observations and make his reports.

W. E. DUCKWALL.

Ohio.

Seeding Red Clover.

On page 292 you advise one of your readers to sow clover seed by scattering it on frozen ground. That was the practice years ago, but the up-to-date farmer uses a 20-disk drill, with disks four inches apart, and drills his clover seed. It takes only four quarts per acre and insures a stand with good seed. The old method of scattering clover seed on top of the ground is not only wasteful, but it is a matter of luck if one ever sees it again. F. W. OKIE.

Virginia.

R. N.-Y.—The advice was given in a case where only a small seeding was to be made—too small to make the ownership of a drill profitable. On a large scale the plan suggested is right.

FIGHTING FROST WITH FIRE.

PART I.

NEED OF IT.—We have had many questions about plans for fighting frost. In the West and South a good many fruit and vegetable growers have adopted the plan of providing fixtures for artificially heating the orchard or garden when the mercury goes too low at blooming time. Some of these growers report great success with their experiments, and evidently Eastern fruit growers are disposed to try it. Some of them have already done so. Here, for example, is a note from A. T. Henry of Connecticut, and there are others who have tried very much the same thing.

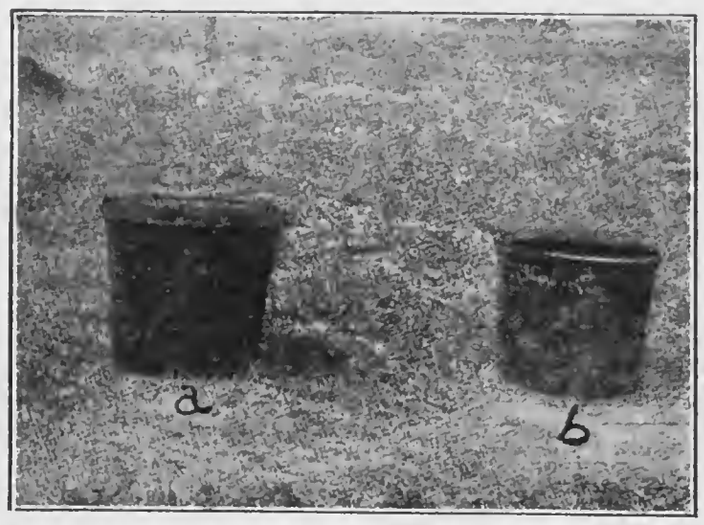
The article on orchard heaters is the most interesting I ever read. We have some of our own make, from powder cans, using excelsior, charcoal above, to start the coal burning. We have about 3,000. In an experimental way we raised the temperature seven degrees one night; had them out in orchard last Spring, but temperature did not go low enough.
Connecticut. A. T. HENRY.

It is very difficult to obtain actual facts from Eastern experience. All we can do is to make a fair statement of what Western men have done. Generally speaking, this plan of frost fighting has been most successful in protected places. For example, there may be a pocket of land, a rather low valley surrounded by higher ground. Naturally the cold air would roll into this pocket and increase the danger from frost. There would also be less danger that the wind would blow the heated air out. Thus many of the great successes in this method of preventing frost have been worked out in these low places, for there the heat from the fires and the smoke and smudge from the fuel are held around the trees.

BEST SITUATION.—A situation, too, where a strong wind-break stands to ward off the wind, will greatly help in work of this kind, and a good many Western growers now consider this in their planting, and make sure that wind-breaks are started so as to ward off the prevailing winds. A good many of our Eastern orchards, especially those of peaches, are purposely planted upon high hills, on the theory that these locations are less liable to frost, and that the wind and thorough air drainage will carry off many disease germs. Such locations are not well suited to frost fighting, for should there be a wind with the cold air, it would be almost impossible to hold the heat and smoke around the trees. The usual plan is to start little fires all through the orchard.

BURNERS USED.—In former years small piles of wood, brush or sawdust, or even soft coal, were used for this purpose. It has now been found better to use pots, or burners for this purpose. There are many types of these pots. In some cases ordinary kegs, used for carrying metal paint, are used, and they do excellent work when provided with covers. A picture of the form of pot which proves very successful with John Bland, of Missouri, is shown at Fig. 235. These pots have covers, and are known as the lard pail type. The cover may be raised more or less to increase or diminish the flame from the fuel. In other cases larger rectangular pots are used, which are divided into two compartments, one holding the burning oil, and the other forming a reservoir to hold an extra supply of the oil. What is needed is a fire which gives off a large amount of smoke. This heavy cloud of smoke hanging over the orchard tends to prevent radiation of heat, and thus the heat from the fires will remain longer in a protected orchard. In former years this fact was recognized by those who used slow smoking fires of wet straw. One of the earliest reports of experiment in California told of a man who drove slowly through his orchard, up and down the rows, with a large metal tank on wheels, this tank containing wet straw covered with damp manure, and a fire at the bottom which sent off great volumes of smoke and vapor. Any kind of a pail or keg that will hold the fuel, and can be regulated so as to make a slow and smoky fire, will answer. There may be cases where soft coal, or other material will make a cheaper fuel, but generally speaking a thick fuel oil has given best satisfaction. The oil heaters are quickly filled and easily lighted. The flame can be easily regulated, and the fuel supply easily kept up. The coal heaters are slow in starting, throw off very little heat at first, require more labor for filling and handling than the oil, and cannot easily be extinguished except by dumping out the contents.

EQUIPMENT.—The general method of handling these oil heaters is first to provide a reservoir, at some elevation near the orchard, and keep it filled with the oil. In most cases a pipe runs from this down to a level with the orchard. A tank on wheels is used to carry the oil. This tank is driven under the pipe and filled from it. It is then driven through the orchard, the oil being taken out in pails and poured into the heaters all ready for use. In many cases these growers fill their heaters early in April, and keep them constantly filled until all danger from frost has passed. There are some seasons where it is not necessary to start the fires at all. In that case after danger has passed these oil heaters are emptied back into the tank and the



POTS FOR FIGHTING FROST. FIG. 235.

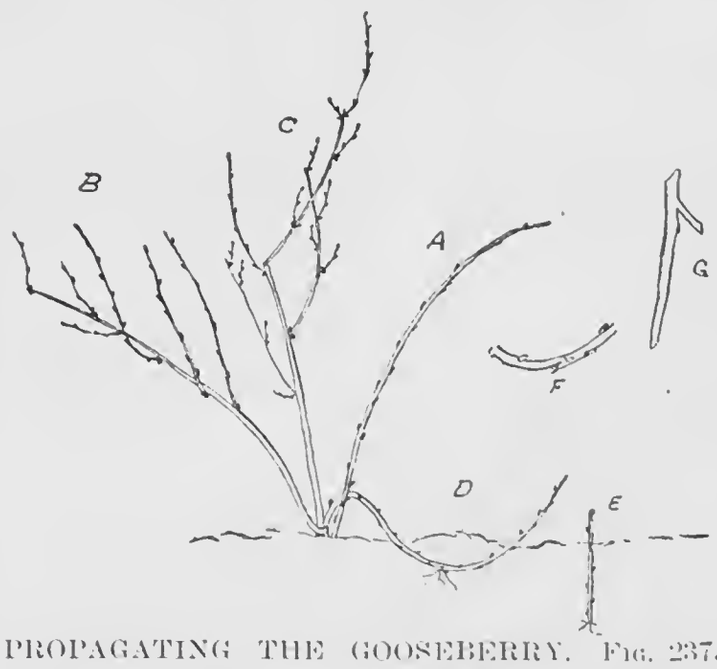
oil turned back into the reservoir. The rule is to place these heaters from 20 to 25 feet apart each way. The usual plan is to put them in rows between the trees, rather than close to or under the trees. On the windward side of the orchard a row of the pots will be placed about 10 feet apart, and 15 or 20 feet from the outside row. The heaters are placed in this way largely to make it easier for filling, lighting or extinguishing.

GROWING CURRANTS AND GOOSEBERRIES

There are many ways to propagate these fruits. If new varieties are wanted seeds are used, which are washed from the ripe fruit and planted in the Fall, or stratified until ground is fit for planting in

SHELTER FOR OFFICIAL THERMOMETER. FIG. 236.

Spring. If one desires to propagate a certain variety it may be done by separation, layering or cuttings. Many times these fruits will send up suckers, which if separated from the plant with some roots attached, make good plants. Layering is a very easy means of propagating. Cuttings are also easy to start, and though a large percentage may fail if carelessly handled, it will be the quickest



PROPAGATING THE GOOSEBERRY. FIG. 237.

way to increase the plants. The drawing, Fig. 237, shows a one-year-old shoot of gooseberry at A. This is the proper age to use for cuttings and layering, although the two-year-old shoot at B may be layered, but would not be apt to give as good a plant as the one-year shoot A. The three-year-old shoot at C is not desirable for either fruiting or propagation, and should be removed to give the younger wood a better chance. D shows a one-year-old shoot bent down and covered with earth. The tip is left uncovered, and usually a cut is made on the under side at the bend, as shown at F. This hastens root formation. The cut should not be made too deep. A small forked stick, as shown at G, is handy to hold in place the shoots that are too stiff to be held down by the soil placed over it. The layers should be laid down in the Fall or Spring, and left in place till the following Fall, when they may be removed to permanent quarters.

Cuttings should be taken from the one-year shoots such as A. Wood for cuttings should be cut with knife or shears, as broken ends seldom heal as well. The cuttings should have from eight to 12 eyes or buds, and are best taken in the Fall, tied in bundles and buried with butts up till Spring. The cuttings should be entirely covered, and in a well-drained place. The object in inverting the cuttings is to give the butts a chance to callus without starting growth in the tops. In the Spring the cuttings must be dug up as soon as the ground will permit, and are then ready to plant in rows about two or three inches apart in the row. Only two or three of the upper buds are exposed. The cuttings should be given clean culture. The plants should be removed to the permanent quarters the following Fall.

If it is not convenient to take the cuttings in the Fall, they may be taken in the Spring and planted in the rows the same as the trenched cuttings were. The age of the parent plant will make little or no difference to the cuttings, provided these are strong one-year-old shoots. Great emphasis should be given to the fact that cuttings should be taken from the best plants. If the plant is weak, if poor in its habit of growth or subject to disease more than the others, it should be discarded so far as propagation goes. R. B. G.

A FARM FERTILITY PROBLEM.

I am a beginner at farming and have a run-down farm that I wish to restore to a high state of cultivation. I have carefully read and studied farm papers, also books, on the above subjects and should like some of the successful readers of THE R. N.-Y. to give their idea as to which of the above methods would be best for a beginner.

My means are limited and I must, therefore, proceed carefully. I intend to make hay for market the main crop, potatoes next, chickens and small and large fruits, and raise whatever else can be consumed by the family. Stock, it seems, would be a long road to fertility of the soil, and the means of a good living. It would mean buying scrubs—as I could not afford purebred—and it seems absolutely foolish to buy scrubs when the cost of milk production by scrub stock, according to experiments in New England, is more than the receipts from same. Nearly all the farmers in my town have inferior stock and cut their hay, feed it, buy high-priced grain, have poor pastures that run out in hot weather, and sell their product at a loss, according to authorities. They have the labor of carting out manure, carting in hay, and keep carting in and out to keep such stock, and usually do a little teaming for others on the outside, to enable them to scratch out a living. Some of their farms are for sale and others are giving up the cows to try other crops, while the rest plod on in the same old way.

Having read that cows must give so many pounds of milk in order to pay a profit, and knowing that I cannot afford purebreds, and not wanting to start with "scrub boarders" and begin the long tedious job of grading up with a good sire, my idea is to try green manures, lime, and commercial fertilizers.

Will green manuring, lime and fertilizers give the good results claimed for them in print? I am starting to build up a 1¾ acre piece in this way. It is a sandy loam, with little gravel. A small crop of weeds was plowed under last October and the piece wheel-harrowed and sowed to rye, now a good thick stand. This Spring, when it is about 18 inches high, it will be plowed under and the manure from two cows for six months wheel-harrowed in. I shall raise on one-half of this piece roots for hens and cows, sweet corn and vegetables, and an experimental one-quarter acre of potatoes—being careful not to put manure on potato plot. The other half I shall seed to buckwheat. Will the buckwheat be in bloom in time to plow under and seed the piece to clover, or would some legume make a catch after rye and manure as before mentioned? What I think, is that the quicker the land can be made to grow clover or other nitrogen gatherer, and the more they are plowed in, the sooner the land will be in shape to grow grasses and clover or Alfalfa, also other crops—with the addition of lime to sweeten the constant fermentation; and fertilizers high in phosphoric acid and potash. H. N.

Massachusetts.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

GRAPE NOTES.

A 15-year-old Vine.

Would you advise me what I shall do with a grapevine that is about 15 years old, and has never borne fruit? It blossoms every year, but has no fruit.
Worcester, Mass. J. B. F.

Probably the reason that this vine has not fruited is that the flowers are self-sterile. This may come about through defective pollen—that is, pollen incapable of developing on the pistils of the flowers that produced it, or the flowers may all be male. In this case abundant pollen is produced but the pistils are abortive and do not function. This latter appears the more tenable explanation, for if other productive vines are near the sterile one they would quite likely fertilize it and fruit would be forthcoming if the difficulty be due to impotent pollen as was first suggested. As a relief for this condition I would suggest that the vine be cleft-grafted at or just below the surface of the ground to some desirable variety.
F. E. GLADWIN.

Making Grape Jelly.

I have about 16 acres set in Concord grapes five years. The average is about 4,000 to 5,000 one-half bushel baskets. Would it pay to put in a jelly outfit, and turn them into jelly? They ripen here about August 20, and we have had them to hang on about three weeks before we got through shipping. What would an outfit cost and how best put on the market? We made a few dozen last year on cook stove, put them on city market to grocerymen; quality pronounced first class. These few dozen paid well.
Worton, Md. B. F. R.

Grape jelly is evidently more in demand to-day than it has been for some years past. This is evidenced by the fact that some of the manufacturers of other grape products are about to begin the manufacture of grape jelly. There has been a great deal of jelly made and consumed in the New England States for some years. Most of this, however, has been made from the wild grapes that are picked green and which abound in the region. Whether some other variety or varieties than the Concord would be more adapted for this purpose is a question still unsettled. When Concords are used they are picked before they are fully ripe. A uniformally good and well advertised grape jelly should find a ready and profitable market. F. G.

How to Cut Vines.

I have two acres of Concord grapes two years old started for the Fuller system of pruning. They were trained to two vines. The past year laterals were pinched off at leaf as they started. Now I wish to bend down arms and cut back to four feet long and to one bud at spaces of about eight inches on each arm. I wish to know if I cut off lateral back to arm, will the dormant bud at crotch start with the other buds on arm that were not forced in growth this season? The reason for doing this is to have all bearing canes start from the same height on each arm. I also wish to know whether vine is injured in bending down if the outside bark cracks lengthways. These vines made a growth from 10 to 16 feet the past year, and it was hard to keep all laterals pinched out properly. R. C. H.
Leominster, Mass.

The basal buds of the laterals will start all right in this case but growth will not be as vigorous as that from the canes that are laid down as arms. This is due to the fact that the basal buds owing to their location are not so well supplied with plant food during the growing season as those toward the extremities where the sap flow is more abundant. The vines in question will be just as far advanced at the close of the growing season if the laterals be entirely removed and only the buds from the arms be allowed to grow. If there be sufficient and long enough laterals to reach from the arms on the lower wire to a second higher one fairly satisfactory yields may be obtained. Usually no injury results from the cracking of the outside bark; however, when bending down a cane for tying it sometimes happens that it is split nearly through, in which case, it very often dries out and breaks entirely away. When the canes are charged with sap as at the swelling of the buds they as a rule can be bent readily and without injury. F. E. GLADWIN.

Tobacco With Spray Mixtures.

Can any of the various tobacco extracts be mixed with Bordeaux and arsenate of lead mixture for spraying fruit trees at one operation, without affecting the value of either ingredient?
Lansdowne, Pa. J. H. B.

As I understand the matter, most, if not all of the tobacco extracts can safely be mixed with Bordeaux mixture; with lime-sulphur; with either of these containing lead arsenate; or with lead arsenate alone. In using tobacco extracts alone as a spray for aphids, it is best to add soap for a spreader. The soap usually contains free soda and is not needed and should not be added where used in combination with lead arsenate or either of the fungicides. W. E. B.

The Chemistry of Lime-Sulphur.

I note with interest your article on page 336 regarding the experimental mixing of spray materials, which brings to mind something which I noticed while spraying last Spring. For the blossom spray, an addition of a small amount of lime-sulphur was made to the arsenate of lead in order to combat scab and Codling moth with the same spray; this, I believe, I have seen recommended in THE R. N.-Y., as well as elsewhere. The resulting mixture was black, and a material resembling shoe-blacking gathered on the strainer. According to the chemistry I learned in high school, lime-sulphur is principally a solution of calcium sulphide, and this would react with lead arsenate if in solution. The formation of lead sulphide, which is black, would account for the blackness of the solution. When the spray was mixed as mentioned the lime-sulphur would be used up without affecting much of the arsenate of lead. Is this all correct, and if so, is the lead sulphide of any fungicidal value, or would it be better to use the arsenate alone? L. C. B.
Leominster, Mass.

The chemical composition of lime-sulphur is far more complicated, and the reaction does not occur in such a simple and direct manner as your formula would indicate. In fact, few expert chemists would be able to tell you exactly what would happen under the varying conditions. The commercial and homemade lime-sulphur mixtures contain a number of the higher sulphides of calcium, viz.: disulphide, trisulphide, tetrasulphide, and pentasulphide; the general name of polysulphides being given to all except the first. In addition to these another compound is formed called calcium thiosulphate, which on further boiling splits up into calcium sulphite and free sulphur. Calcium sulphide or monosulphide is probably not found in the mixture, as it is unstable and would quickly be changed. In the usual mixture, however, by far the greater portion consists of the tetrasulphide and the pentasulphide; and these are supposed to be of the greatest value for killing scale-insects. The chemistry of this mixture is explained in Bulletin 319 of the New York (Geneva) Experiment Station.

Whenever we add lead arsenate to a lime-sulphur mixture, there is always a change in color. Sometimes it blackens at once, sometimes it is first reddish or brownish, later becoming black. This blackening is undoubtedly due to the formation of lead sulphide but probably the reaction is slight and involves only a very small part of the mixture. A small amount of lead sulphide will color a barrel of mixture. The value of the whole as an insecticide or a fungicide is not materially changed. Ruth (Research Bulletin No. 12, Iowa Experiment Station) states that its fungicidal properties are not impaired by the addition of lead arsenate and the consequent blackening. W. E. B.

MRS. Brundage was crossing the ocean for the first time. One morning, as the captain was standing near her, she said: "Pardon my ignorance, but how do you manage to find your way across the trackless ocean?" "By means of the compass, madam," replied the gallant captain. "The needle invariably points north." "But," queried the woman, "suppose you wish to go south?"—Credit Lost.

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The Home Acre.

BEAUTIFYING THE HOME GROUNDS.

The beautifying of the rural home grounds, particularly those of the farm, has been sadly neglected by the great majority of the owners of country homes. Why so many of our rural residents have been so tardy in recognizing the natural charm and beauty that can be imparted to their home surroundings, by the appropriate use of a few ornamental trees, shrubs, and vines and flowering plants, might be possibly explained in the lack of knowledge as to how to do the work properly, or that, in providing the necessities and comforts of life, they have been too busy to think of the pleasures that would accrue to themselves and their families, by the expenditure of a little time and a small outlay of money for that purpose.

The time has come when this important feature in country life must no longer be neglected by those residing in their own homes. Wealthy owners of large and small country estates, by the proper development of their property, and beautifying the home grounds, have set an example that should at least in a measure be emulated by all owners of rural homes, no matter how small and unpretentious the grounds may be. There are but few owners of country places who cannot do in a limited way at least, what their more fortunate neighbors have done on a larger scale.

The enhanced value of the property, the pleasures to be attained, the refining influences surrounding the home life, and the restfulness and beauty expressed in the trees, shrubs, flowers, etc., that adorn the home grounds, will many times repay the small cost of the improvement. Farmers will be doing a noble deed to agitate this subject in an energetic way, and not only point out the desirable and satisfying features of beautiful home surroundings, but to tell how easily and cheaply they can be attained.

Danville, Pa. MRS. E. O. S.

HOW TO KILL MOLES.

Will you give the best method of combating the blind ground mole which burrows along within an inch of the surface, raising up a ridge in its course? It is becoming quite a nuisance about here.

Butler Co., Pa. L. O.

The mole is a perennial nuisance to gardeners, and in addition to his own misdemeanors his runs seem to encourage the field mice to additional depredations. The mole subsists almost entirely on animal food—worms, insects, etc., and it seems generally agreed that his feeding damage is small, but the destruction to plants caused by the underground tunnels is very great. The mice, largely vegetable feeders, attack roots and bulbs and their work is certainly facilitated by mole runs. Owing to their insect diet, it is not easy to poison moles, and most gardeners are agreed that trapping is the best plan. There are several good mole-traps sold by seedsmen; set carefully in the fresh runs they are sure to catch the animals. The traps should be moved about and set in different runs. Another plan is to punch a hole here and there in the run, and pour into each place a teaspoonful of bisulphide of carbon, stopping up the hole immediately. Some gardeners report entire satisfaction with this method; others assert it does not work with them. A third alternative is the use of strychnine in solution. Small pieces of meat, or kernels of corn in the milk stage are soaked in the poison and dropped in the runs. We have also been told that little flakes of salt mackerel, soaked in the poison may be used, but cannot speak from experience. Trapping has always been our preferred method. Some terriers, and also cats, are excellent mole-catchers; one old cat we know will watch a mole-run for hours until she sees the mole working, then plunge in a paw, and hook the mole out, like a fisherman landing a fish.

HEDGES AND SHADE TREES.

My house is situated on a 50-foot lot within eight feet of the side line of a proposed street. I would like to plant a hedge along here, also shade trees at the proper distance. From rear end of house to street in front, runs a sewer line, not much over three feet in the ground. What can I plant that will give me the least trouble filling this sewer with roots? I see every year others having trouble this way. In front, have a privet hedge, but for this proposed one would prefer arbor-vitæ, as it would be on the northwest side and I could allow it to grow to a height of say six or eight feet. Looking off across this proposed street, over a strip of ground 150 feet wide, I see a row of houses with their backyards abutting up against my boundary line. Here too I would like to plant a hedge, preferably evergreen, so as to shut off unsightly views. What would you plant, and what size? I have to consider economy. What distances apart for a hedge that I would like to see grow to a height of 15 or 20 feet? Also, how far from the true line would you plant this hedge, considering that people in time and out of time start fires in these backyards, and they are not careful where fire goes to either. J. B.

Plainfield, N. J.

The American arbor-vitæ is extensively used for hedging purposes, and you would no doubt find it well suited for your northwest side line. Trees two to three feet high are a convenient and comparatively safe size to transplant, as well as being quite moderate in price, usually selling at about $30 per 100 retail. The trench should be dug at least two feet wide and 18 to 20 inches deep, and very old well-rotted manure mixed with the soil to the full depth of the trench. The quality of manure used should be at least equal to one-fourth the amount of soil. If manure of the required age and fineness cannot be procured, pure raw bone meal may be used at the rate of one pound to each lineal foot of trench. Set the plants 2½ to three feet apart. I might say there is no tree used for ornamental or other purposes whose roots will not sooner or later find their way inside the sewer pipes, filling them with fibrous roots. The soft wooded trees, on account of their more rapid growth and greater requirements of water, will send their roots to moisture much more quickly than the hard-wooded and slower growing trees, and therefore should never be planted in close proximity to a sewer line. The Norway maple is among the most beautiful of our ornamental shade trees, and being of rather slow growth will perhaps give as little trouble in the matter of clogging the sewer with roots as any tree you could plant. The Pin oak is another beautiful shade tree that is not liable to give much trouble in that way. You will find either of these trees very satisfactory, as a shade tree, with the danger of clogging the sewer with roots, reduced to a minimum. The Norway maple is priced at about $1.25 each for trees eight to 10 feet; the Pin oak at $2 each for trees of the same size. Any first-class nursery can supply trees of these sizes named. Plant either of these trees 25 feet apart.

For the boundary line at rear of the row of houses, there is no other plant quite so well suited for hedging and screening out such undesirable views as the California privet. Plant a double row of them, two feet apart and two feet apart in the row, breaking joints and in a few years you will have a hedge screen that will be practically impassable and impenetrable to the eye, as well as being almost indestructible. Do not prune or shear off the tops, but allow it to grow at will. You can plant it to within two feet of your boundary line, and if at any time the limbs should hang over the line and be objected to by the adjoining property owners, it will be a comparatively small job to cut off the offending branches to the dividing property line. It will not be safe to plant evergreens on or near this line in hedge-row, as they sooner or later would be almost certain to be destroyed by fire. Plants four to six feet high can be bought at $8 to $10 per 100. K.

A TEACHER trying to impress on her children the rightness of kindness toward all animals, took them for a walk, to bring the lesson home to them. Hearing a scream from little Johnny, she asked: "What's the matter, Johnny?" "I've been sitting on a hornet," was the tearful response, "and I'm afraid I've hurt the poor thing."—Delineator.

AN Easterner who had bought a farm in California had heard of his neighbor's talent for raising large potatoes, so sent his farm-hand over to get a hundred pounds. "You go back home," answered the talented farmer to the messenger, "and tell your boss that I won't cut a potato for anyone!"—Everybody's Magazine.

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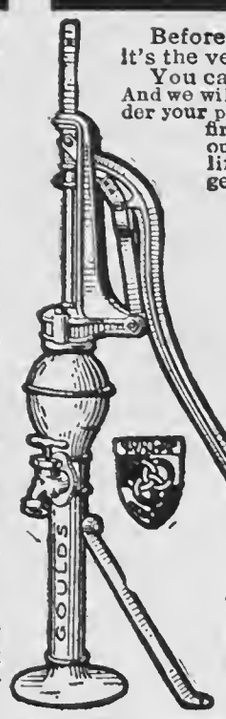

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THE USE OF COMMERCIAL BACTERIA.

There is a company which advertises a preparation which is intended to inoculate soil for leguminous plants, such as Alfalfa, clover, etc. They charge $2 per can. A can of this, they say, is sufficient for one acre. Can you tell me if there is such a commercial product in the line of a bacterium which will actually collect nitrogen from the air? If there is such a product would you advise one to invest in it? O. A. H.

New York.

The bacteria which are offered for sale are not intended to inoculate the *soil*, but are intended for use upon the seed. Inoculation of the soil would be understood as taking several hundred pounds of the soil from a field in which Alfalfa or clover had been successfully grown, and scattering it over the ground at the time of seeding. The object of this would be to introduce these bacteria so that they would spread and grow throughout the soil. The commercial bacteria are usually intended for use upon the seed, so that when it is put into the ground the bacteria will develop and do their work. The scientific men have proved that the pod-bearing plants, running all the way from Alfalfa to locust, are able to secure nitrogen from the air. For a long time it was evident that these plants possessed the ability to do this, but the scientific men could not explain how it was done. They finally discovered that the nitrogen was obtained through bacteria, or tiny forms of life, which live in little nodules or warts upon the roots of these plants. This knowledge led to various ways of introducing these bacteria. It was of the utmost importance to have these bacteria present. The simplest way of introducing them is to dig 300 or 400 pounds of soil out of a field where they are known to be present, and scatter this soil over an acre of ground at seeding time. It is not always possible for farmers to obtain this soil. It is also found that this soil will not only carry the bacteria, but also an abundance of weed seeds as well as germs of various diseases of plants. The chemists therefore worked out a plan for adding this bacteria without using the soil.

In a way this plan is similar to the modern system of distributing yeast cakes for bread raising in the place of the old plan of making the homemade yeast and distributing it through the neighborhood. The bacteria are taken from the soil and propagated or bred in a laboratory. They spread rapidly, and are so small that many millions of them can be put into a small bottle. These bacteria propagated in this way are bottled and sold with the food which they need for growth and propagation. Thus a farmer can buy a bottle of these bacteria and handle them according to the directions so as to increase them with great rapidity. The liquid in which they are bred may be sprinkled over the seed. Thus when the seed is put into the ground these living bacteria are attached to it and if all goes well with them, do their work upon the roots of the plant and spread through the field. This is the theory upon which these commercial bacteria do their work. It is a sensible method of inoculating the seed and starting it properly. It often happens that these commercial bacteria are not properly handled so that they lose more or less of their force and thus do not give complete satisfaction; but when handled properly, and if the ground is in proper condition with an abundance of lime, the introduction of these bacteria will certainly help the seed. The great trouble has been that farmers have not understood the most important thing about these bacteria. They cannot possibly take the place of fertilizer, of clean cultivation, good seed and lime. Somehow farmers get the idea that these bacteria will make Alfalfa or clover grow on very poor soil, but really they will do nothing of the sort. They are only an aid in the starting of the clover or Alfalfa seed into proper growth. They have their limitations, and unless the soil is in proper condition, the money spent for bacteria might far better be given to some charitable object.

"WHO was that modest-looking young man, Cyrus?" "Modest looking? Say, what do you think he was?" "I don't know. "He was a moving-picture maker. All he wanted was to borrow our church for a mock marriage, and then have a bogus shooting affray on the front steps!"—Cleveland Plain Dealer.

THE MAIL BAG.

Hand Power for Spraying.

Can as good results be obtained with a hand as power pump and which is advisable for spraying about 300 trees, 15 years old? L. J. B.

No, not in the majority of cases. It is a matter of steady pressure back of the nozzle. The power sprayer will keep up a constant high pressure which drives out the spray uniformly. The hand pumping is apt to be intermittent or irregular, for it takes a superior man to work the pump at constant high pressure.

A Silo Question.

Would it be good business judgment to construct a silo where eight cows are to be kept to produce milk for Bordens? If so what size and character of construction, concrete or wood? L. B.

Yes, if you consult the Borden people beforehand and learn what kind of a silo they will endorse. We understand they permit the use of silage under certain conditions which insure its being wholesome, but they will prohibit the use of inferior silage. Get their views before building.

Acetylene Refuse.

One of our neighbors spoke to me about getting a barrel of the refuse taken from acetylene generator to use around peach trees; claims it will kill grubs. How about apple and other trees? Is there any danger from emptying on grass or garden? A. S. B.

Rock Stream, N. Y.

This refuse is lime—about as valuable as ground limestone. After a month's exposure to the air there would be no danger from its use. We doubt if it will have any value for killing peach borers. We should simply spread it over soil which needed lime.

"Mill Run."

What does "ground screenings not exceeding mill run" mean when printed on the tag of a bag of feed? E. J. W.

It means that under the present law dealers are obliged to state what their feed contains. Formerly it was possible to buy pure bran or shorts, but now many millers blow the screenings taken out of the wheat back into the bran and sell it all together. "Mill run" is supposed to mean the average proportion of "screenings" found in the grain, but analysis often shows that there is much more than this put into the bran. "Screenings" are supposed to be the shrunken kernels of grain which are unfit for flour making. They also contain weed seeds and often oat hulls, sweepings and trash. In one case a feed was found to contain nearly three per cent. of sand and dirt, which all came from the screenings.

Poultry Droppings for Potatoes.

I have always used hen manure for corn with good success, also used it in the garden and around apple trees. I have always grown my potatoes with high-grade phosphate, and they have been smooth, free from scab and rot. Will it do to use hen manure either plowed or harrowed in for potatoes, or is it liable to produce scab? Most of my neighbors use stable manure in their potato field and usually have scabby potatoes.

F. A. C.

Hen manure contains a good proportion of ammonia, which is an alkaline, and might under some conditions increase the amount of scab if the potato seed contains much of the disease, or if the soil is filled with the germs. Under ordinary conditions there would not be much danger, and we should go ahead and use the manure. Some fine results have been reported to us from the use of crushed hen manure put on top of the hill and worked in.

Getting Rid of Pigeons.

Can you suggest a plan whereby I can get rid of the pigeons, which are a perfect pest, around my house? Being a closely settled neighborhood, and in the city limits, it is impossible to shoot them. They originated from a pair that a neighbor had, but now are claimed by no one, and a nuisance in the neighborhood.

Huntington, W. Va. J. S.

We were troubled in the same way, and got rid of the pigeons by shooting a few of them and keeping the barn closed as much as possible. The noise of the shooting seemed to frighten the pigeons and keep them away. If conditions are such that a gun cannot be used, you might poison them. Soak wheat in a solution of strychnine and sugar, and put it on a platform high up in the air, out of the reach of the farm poultry. Keep the barn closed as far as possible, and put this poison, if you can, where the pigeons are most likely to enter the buildings, or where they congregate. This will kill a number of them, and the rest will become suspicious and leave. The poisoned pigeons should be buried as soon as possible after they fall. We regret to poison these birds, but we know what a nuisance a flock of them will soon become if they are not driven off or taken care of.

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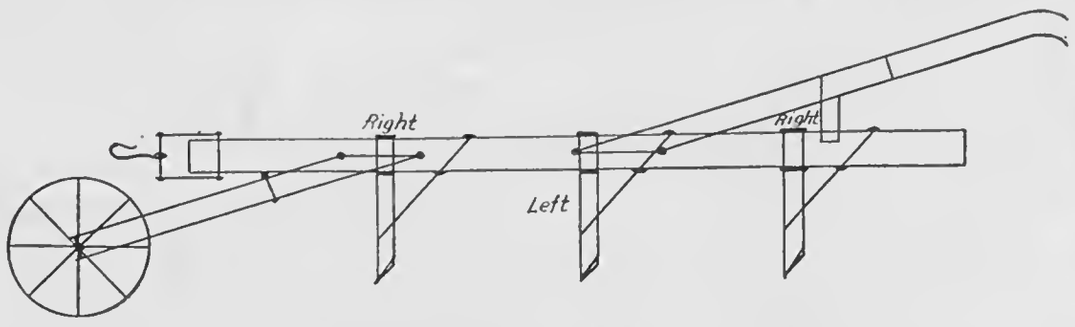
FROM OUR FARMS TO YOURS

Farm Management.

Spring Work.

The time for Spring work will soon be on hand. One of the most important things is draining land. With our short seasons and scarcity of help, this is often postponed for another year, and so on. As one of the great family of THE R. N.-Y. readers, I thought it would interest some to learn how we overcome the hardest work in draining, by a homemade tool, with which we can beat any ditching machine, horse or steam power, on stony and heavy land, such as we have here in Central New York. I send a rough sketch, and this is the way it is made: One hardwood plank, oak or maple, eight



HOMEMADE DITCHING TOOL.

or 10 feet long, three or four inches thick, 12 or 14 inches wide; three teeth of round iron or steel 1¼ inch thick, 16 or 18 inches long, with braces, welded to it, as shown in sketch. There is a shoulder on standard and braces for the plank to rest on, threaded on top. The lower end of teeth are flattened out and shaped like a cultivator tooth. The front tooth is set to the right, the middle to the left, and the last one to the right. Irons are about eight inches apart, and will make a ditch 10 to 12 inches wide. A pair of old cultivator handles will do to hold it. The depth is regulated by a wheel, as seen. I hope that some one may profit by this tool, which can be made for about $10 or so. J. B.

Central New York.

Sensible Talk About Vermont Farms.

I see by THE R. N.-Y. on page 395, that E. D. A. of New Jersey thinks, because land is cheap in Vermont, he can buy a farm here and make his fortune. The probability is that if the farm is in the southern part of the State the land may grow apples; if it is in the central or northern part it probably will not at an altitude of 1,000 feet. It is generally thought that a northern slope is better than a southern, as in the latter case the blossoms are more apt to be nipped by a late frost.

Your advice is good. By all means see the farm in the Spring—and in the Summer—and in the Fall; then make up your mind. It is as reasonable for a farmer to go down to New York City and purchase a dry goods store and engage in that business, as for one green at farming to engage in that business and expect to succeed. Fruit raising is good business and some succeed in it, but most do not. If E. D. A. wants to raise fruit, let him begin working for someone who understands the business and has made a success of it. There are a few such in Grand Isle, Chittenden and Addison Counties—possibly elsewhere—but I am not acquainted in the east part of the State. Planting trees, cultivating, trimming, spraying, digging borers, thinning apples and properly picking, grading and packing the fruit are different parts of the business which must be thoroughly learned if one expects to succeed. After E. D. A. has worked at the business a year or two, he will know whether he is adapted to the business, what varieties do well in any locality. The probability is that E. D. A. will not purchase a farm on the mountain for fruit growing. The Fameuse and crab apples are the only kinds that I think are really adapted to the mountains.

Look out for windy locations on the mountains. They can be known by the branches on the trees and by the bark. In Addison and Chittenden counties the western slopes of the mountains are swept by northwesters—either is fatal to fruit raising, since much of the fruit would be blown off in the Fall. In a region where southeast winds prevail, the branches of the trees in open positions are much shorter on the southeast side and the bark is smoother than on the opposite side. This condition of bark is more noticeable in deciduous trees than in evergreens, while the difference in the branches is rather more marked in evergreens.

If E. D. A. is willing to wait for returns and if the 240-acre farm is situated so he could ship pulp timber to advantage, he might purchase the farm, and set the 150 acres to Norway spruce. This species should not be set for lumber. After 15 or 20 years he can thin the trees and get an income, and after 10 or 15 years more he can get quite a cut of pulp. Most of our mountain land is better adapted to forest growing than to farming.

It seems strange that Vermonters should purchase land in New Jersey expecting to go there and make their fortune raising peaches, and that people in New Jersey should purchase farms in Vermont with the same ultimate object. I suppose such is the method of land agents. A. V.

Concrete Porch.

I wish to build a concrete porch 20x9 feet. The ground where I build is raised about four feet above surrounding soil. How deep do I need to go for foundation? L. C. M.

The foundation supports of a concrete porch should be carried below the frost line to avoid trouble from heaving. The necessary depth varies, of course, with the nature of the soil; from your diagram, I should judge that the cobblestone filling would prevent any heaving from frost, and that you would need to go only deep enough to secure firm footing for the concrete wall. M. B. D.

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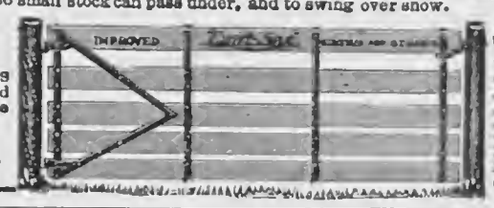

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Protecting Early Cantaloupes.

By placing a five-inch square frame (¾-inch stuff) four inches high, covered with tobacco cloth over a hill of cantaloupes, at the usual time of planting, will it make them any earlier? It will almost insure a perfect stand, and will keep away all insects until the plants get four or five rough leaves. I remember when I farmed in Southside, Virginia, we always made a tent of two birch twigs covered with tobacco cloth. We did it not to get the melons any earlier, but to protect them from the striped beetle. We never grew them for market, just for home use, but I remember well how much faster those grew that were protected by canvas. I am now in a great commercial cantaloupe country and would like to get my fruit in with the earliest. If I can get them well started I do not see why I should not be in with the first. They usually commence selling around $2.50 for carrier holding 45; in a week they get to $1.50, in two weeks to $1, and the remainder of the season from 45 to 60 cents. So you can readily see the importance of getting some in very early. I am only a small grower—about three acres. I composted my manure with ditch scrapings, one load manure and one load scrapings alternately on the pile, which was done in early Winter. I turned the pile three times and late in January. I put it in the checks 3x4, one big forkful to each crossing. When I plant what grade of fertilizer must I use and how much to the hill, and will it be necessary to make another application? It will cost around $15 per acre to cover the hills. If it is a success the little frames will last several years, the canvas will have to be replaced annually, but it is quite cheap, costing by the piece, two and one-third cents a yard. Will you give me your advice about this matter? I. S. W.

Maryland.

I have no doubt that, other things being equal, your plan of covering each cantaloupe hill will bring them earlier. Often a strong wind will do as much damage to young cantaloupe plants as a frost, and if you can keep those coverings in place they will serve to protect the plants from wind as well as from cold. However, I would try them on a small scale first and then, if satisfactory, enlarge next year. Sometimes two wires are bent like croquet arches and placed in the ground over the hill so as to form a sort of a skeleton tent, which is covered with cloth. This is quite similar to your bent twig idea or plan used in Virginia. While these plans may be all right I do not think they are used to any great extent in a commercial way. The growers in this section who want to come on the market with the first cantaloupes, usually start the plants in cold frames under glass and then have them ready for the field about the time the field planted cantaloupes are appearing above the ground. In order to get them transplanted without disturbing the roots it is necessary to plant the seeds on old sods, in berry baskets, or better yet in checks four inches apart each way, in a bed made up of three inches of fine manure overlaid with two inches of strong loamy soil. When plants get out in rough leaf the soil and manure is cut clear through with a tomato blocker (blocker is a hilling hoe with a straightened shank) which leaves each plant, or more usually two plants, standing in a four-inch block of soil and manure all to itself. If handled carefully these blocks can be taken to the field in a cart without disturbing the roots. Plants grown in this way have the advantage over plants started in the open field. But there are many chances of failures in such work and it should be tried out in a small way before going into it on a large scale.

Growers in this section seldom use both fertilizer and manure. The plan is to turn down a clover sod and use fertilizer in the hill, being careful to have the fertilizer well covered with soil, so that the seed will not come in direct contact with it when planting. A high-grade truck or vegetable fertilizer is used analyzing about 4-8-10. A large handful is placed in each cross or hill. In the absence of clover sod we use a large shovelful of strong hog-manure under each hill, without fertilizer. We have found no fertilizer or manure that will keep up a healthy vine growth until late in the season as well as a rich manure from the hog-pen. A second application of fertilizer will often aid in maintaining a heavy vine growth and in increasing the yield. The second application of fertilizer should be applied about the time, or a little before, plants begin to vine out and it should be harrowed in immediately. It should be applied at least six inches from the plant and care should be used to keep all particles of fertilizer away from the stem of the plant. TRUCKER, JR.

Sowing Asparagus Seed in Bed.

I would like to say that I differ with C. W. P. (page 436) in regard to the sowing of asparagus seed where the plants are to remain. In the first place there is no need for the roots being eight inches in the ground, unless you want to cut the hard white-butted shoots, for the markets are now very generally demanding tender green asparagus. But if this is the case and you want the roots deep in the ground there is no difficulty in getting them there from seed. I make trenches about 15 inches deep and fill them half full of fine rotten manure, cover lightly with soil and sow the seed, and when the plants are a few inches high thin them, and then work the soil to them as they grow till level. Then I give them several dressings of nitrate of soda during the Summer to push a strong growth, and I have cut fairly good shoots in 12 months after sowing the seed, and the second year cut fine shoots when transplanted roots would be making them like knitting needles. Four years ago I left a row in my garden for transplanting, and the remainder left as usual, and to this day the transplanted plants have not caught up in size of shoots to the ones that were never removed. That there is any more difficulty in combating insects and weeds than with the transplanted roots, I have never discovered. I can get asparagus at least a year sooner by untransplanted roots than by transplanting, and I want my roots rather near the surface, where they start earlier and give me tender green shoots.

W. F. MASSEY.

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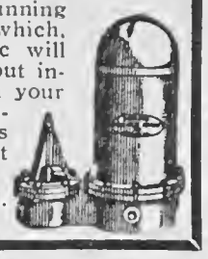

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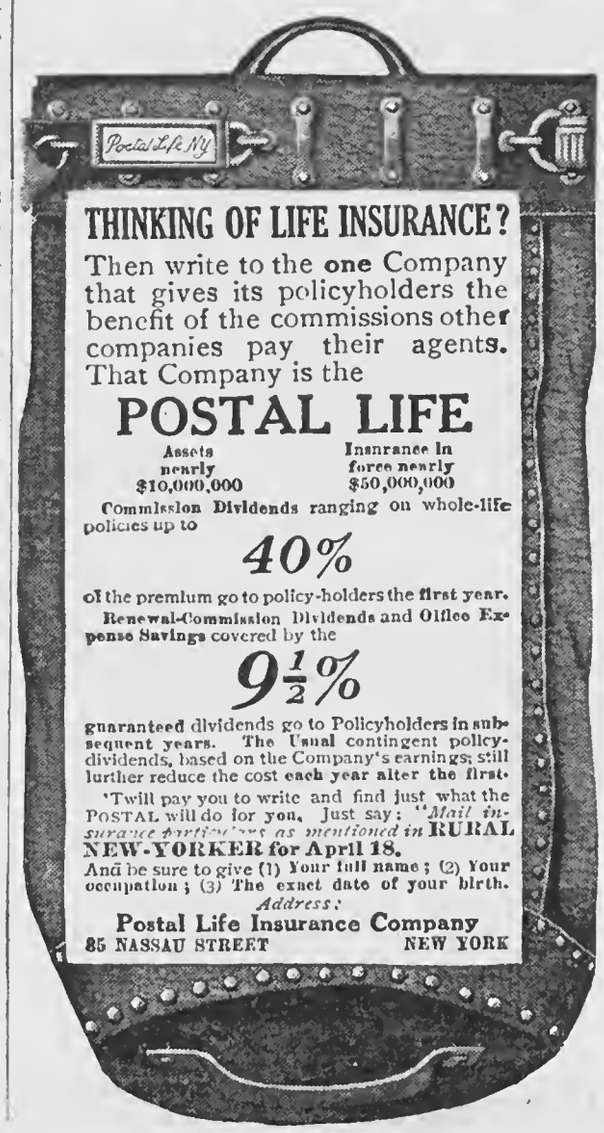

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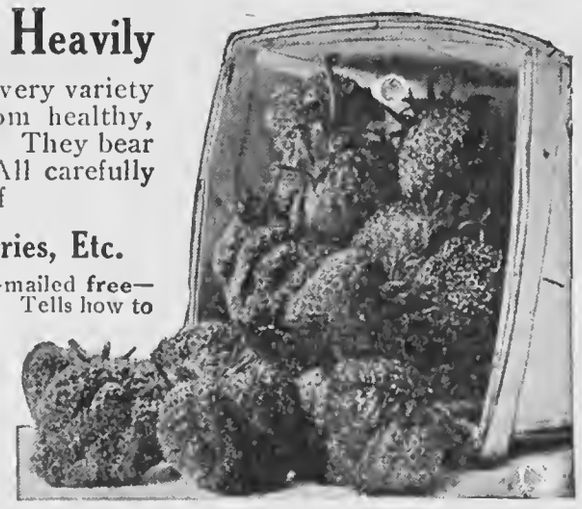

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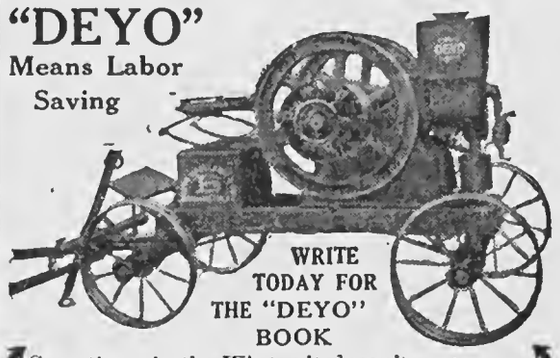

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The Home Acre.

Anthracnose in Raspberries; Kainit.

1. We have about 40 raspberry bushes, 12 of which are St. Regis. Last Summer on the old bushes the leaves turned brown and withered away. The berry, blossoms and the stalk on many of the bushes did the same thing. On the St. Regis the leaves act the same way; the stalks get a purplish appearance with greyish spots. I think it is anthracnose but am not sure. Is it advisable to spray with Bordeaux mixture before the buds swell and also after the blossoms fall? 2. Is it advisable to dig 100 pounds of kainit into about 1,200 square feet a week before planting, say corn, tomatoes, beans, etc.? Would raspberries be benefited by a handful around each bush? T. A. B.
College Point, N. Y.

1. Your raspberry plants were without doubt attacked by anthracnose and to prevent a recurrence of the attack this season all diseased canes must be cut out and burned, and those remaining must be thoroughly sprayed with 5-5-50 formula Bordeaux mixture as follows: First spraying before leaf buds open, spray young canes soon after they appear above ground; repeat the application 10 days or two weeks later, and again just before the blossoms open. The meaning of 5-5-50 mixture is five pounds of copper sulphate, five pounds of unslaked lime and 50 gallons of water.

2. Raspberries would not benefit to any appreciable extent by the application of a handful of kainit around each bush. To produce large luscious berries such as bring the top notch price in the market, requires liberal manuring and fertilizing. The ground should have a liberal application of well-rotted manure annually, along the rows, in Spring, supplemented by an application of muriate of potash at the rate of 200 pounds, and ground raw bone at the rate of 600 pounds per acre, plowed in as soon as the ground is in good workable condition. Cultivation should continue up to the time the fruit commences to ripen. To neglect the matter of liberal fertilizing and adequate cultivation of raspberries is to invite a crop of small-sized undesirable fruit that must be sold at greatly reduced prices. The application of 100 pounds of kainit to 1,200 square feet of ground would be of more or less benefit to such crops as corn, tomatoes, beans, etc. The extent of the beneficial results will depend much on the texture of the soil, and the amount of lime it contains. A liberal application of well-rotted manure will prove much more beneficial than the kainit.

K.

Poultry in Sprayed Orchard; Grafting Wild Apples.

1. I am intending to set out strawberries, raspberries, currants, etc., this Spring and also raise a considerable number of chickens. Do you think the spraying is required on such fruit during the first season, and if so would there be any danger to chickens allowed free range among the fruit, and also among potatoes that have been sprayed? 2. There are a number of small apple trees about two or three years old that have been growing up wild and clumped up in a corner of the farm. Would it be profitable to transplant the best of these trees, cut off tops and graft on scions? If so could this be done all at once in the Spring, or would it be better to transplant this Spring and do grafting later on? B. F.
New York.

1. Strawberries and raspberries will not need to be sprayed the first year. Currant bushes should be sprayed with lime and sulphur solution as soon as set out to guard against the San José scale, and later, when the leaves are one-half to two-thirds grown, to kill or prevent the currant worm from defoliating the bushes. No danger to the chickens. Potatoes must be sprayed for the potato beetles, also for potato blight. 2. I have used "wild" apple trees from fence corners, and have grafted them, also later in the season when the grafts did not take, put in buds, with good success. The trees must be strong, well-rooted, straight, and clean from the bottom up, no forks or sprouts from the bottom. But they are very apt to send up suckers from the roots, and if not well cared for and watched every year the suckers will sap the life from the tree. They can be grafted as soon as transplanted, leaving some limbs on to draw the sap up to the scions. J. A. H.

Small Fruits in Shade; Yearling Fowls.

1. I have a city lot 40x154; two apple trees and one pear tree on the back. Could I raise blackcaps or red raspberries, strawberries or any small fruits under the trees? 2. What is meant by yearling hens, from the shell one year, or from the first egg one year?
Rochester, N. Y. G. W. R.

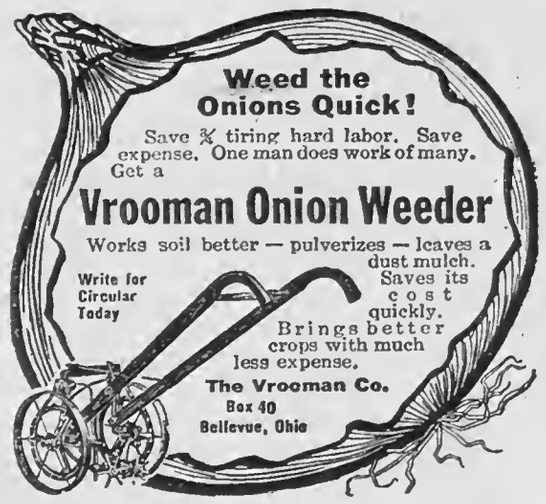
1. Small fruits of every kind will produce more or less berries in shaded situations. In the wild state, small fruits are found in almost every situation except in the densely shaded woodland, particularly the raspberry, blackberry and gooseberry, but the plants that are subjected to much shade rarely produce as heavy a crop, nor are the berries as large and of as good quality as those that have the benefit of full sunlight. Full exposure to sunlight is always desirable for strawberries, raspberries and blackberries, but currants and gooseberries are benefited by partial shading. If the trees are not large enough to prevent sunlight from reaching the plants, raspberries and strawberries may be grown near them with more or less success, but do not plant too close to the trees. On account of the limited root system of the bush fruits they will be greatly handicapped when grown near trees unless they are liberally supplied with manure or fertilizers, which must be supplied annually as a top-dressing and worked into the soil. In general practice the planting of berries in shaded situations is not commendable, but when one is limited to a small area upon which to plant these desirable adjuncts to the garden, it is perhaps better to attempt to grow them in such situations for home use, than to pass them by entirely.

2. All male and female chickens less than one year old from day of hatching are designated as cockerels and pullets. At the age of one year and upwards, as cocks and hens. K.

SUCCESS WITH HENS, by Robert Joos. The suggestions given in this book are definite and practical. There are 55 chapters, covering the subject from incubation to marketing of the product. Feeding, housing and care of poultry disease are all given attention. Published by Forbes & Co., Chicago; price $1.00.

LUCILLE (earnestly): "Karl, I want to ask you one question." Karl (also earnestly): "What is it, sweetheart?" Lucille (more in earnest than ever): "Karl, if you had never met me, would you have loved me just the same?"—Life.

"So you've been to a fortune teller again! Now, Bridget, do you really believe in fate?" "Sure, ma'am, and what else would we walk wid?"—Baltimore American.



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(1480)

WHAT KATY DID.

Will you tell me what the enclosed insects are? J. J. M.
LaFayette, Ind.

The interesting eggs on the branch mentioned in the foregoing letter were those of one of the katydids. The katydids are members of the grasshopper family, and are most interesting insects from many points of view. All of the katydids are noisy insects, especially during the night. The true katydid begins its shrill rasping song as soon as the sun disappears behind the western horizon, and keeps it up until day breaks in the east. The singing is at its height in August, and the song has been translated as "Katy did, Katy did; she did, she didn't." In this case it is the husband of Katy that makes most of the noise, for it is the males that do the singing. Whatever Katy is alternately accused and acquitted of doing we shall never know. Katy, herself, feebly but regularly answers her husband's querulous song with a single, spirited "chirp" which probably constitutes a scoff and a denial of the allegations.

The katydid that laid the eggs on the branch in Fig. 238 is known as the larger angular-winged katydid (Microcentrum laurifolium). The eggs are laid in the Fall, after which the insect succumbs to the vicissitudes of her strenuous life and

KATY. ID'S EGGS ON BRANCH. Fig. 238.

dies. Each egg is slate-colored, oval in shape and rather large, being shown about natural size in the figure. The insect first roughens the branch by biting off the bark with her jaws, and then deposits the eggs in two rows, glueing each egg fast. Each egg overlaps the one just above by about one-quarter of its length, and the eggs of the second row are deposited alternately with those of the first row. These eggs rest on the branch all Winter, subject to the variations of the weather conditions, and withstanding them successfully. About May they hatch, and the young katydids live for the most part upon bits of the leaves that they bite off and chew. In about two months they become full-grown and then their songs begin. The singing, however, of this angular-winged katydid is different from that of the true katydid, for it is simply a repetition from eight to 20 times of a sound like the syllable "tic." Apparently these katydids do not become abundant enough to cause any serious injury. At least the writer has never known them to injure trees to any extent. Probably they could be killed by spraying the trees upon which they occur with arsenate of lead.

GLENN W. HERRICK.

"You are the only member of the class that is not prepared on the subject of Moths," said the nature teacher, sternly. "Did you get a book at the library as I told you to do?" "Yes, Miss Burton," replied the boy, "I found a book about moths but I couldn't make much out of it." "What was the name of the book?" "Hints for Young Moth-ers."—Winnipeg Telegram.

VETCH AS A MANURIAL PLANT.

PART II.

INOCULATION FOR VETCH.—Although Hairy vetch can be grown on practically any well-drained type of soil in New York State, its success depends largely upon the presence of nitrifying bacteria in sufficient quantities on the roots. If Hairy vetch is to be grown for the first time on the farm, it is a matter of prime importance with the farmer to inoculate the soil with the proper germs to promote the growth of bacteria on the roots of the plants, and thus obtain the full nitrogenous value of the crop. There are two principal methods of securing this inoculation. The most successful one, and the one generally used in the East, is to use soil from a field that has already been producing a thrifty crop of vetch for the last few years. If this method is to be followed, it is advisable to get the soil from as near at hand as possible for then the bacteria are acclimate to the local conditions. A loam or clayey soil is usually considered best for this purpose because it contains more organic matter and a corresponding greater amount of bacteria. Possibly the easiest way of applying this transported soil is to scatter it over the field at the rate of 250-350 pounds per acre, judgment being used as to the strength of the culture. When scattering in this way it should be harrowed in immediately, for if long exposed the strong sunlight will kill the germs. Another method sometimes employed is to screen the soil, mix it with basic slag and vetch seed and then distribute it by means of a combination drill at the time of sowing. It should be noted however, that the acid form of phosphate will kill the bacteria when it comes in contact with them, and so if this form of phosphate is to be used it should be applied fully a week or even longer before inoculation. The United States Department of Agriculture at Washington has for distribution an artificial vetch culture. The chief advantage of using this lies in the fact that fewer weed seeds are present than in the so-called natural cultures. In nearly every case, however, the results have not been as satisfactory as in the use of the inoculated soil.

A PRACTICAL METHOD.—One plan that every farmer could use to advantage might be something like this: Take a small plot of ground of approximately half an acre, fertilize it in accordance with the system in use upon the farm, harrow in about 150 pounds of inoculated soil, and then sow it with 40-50 pounds of Hairy vetch seed and about a bushel of oats. Oats are perhaps the best crop to sow with the vetch, as maturing at a different time, the crops can be kept distinctive. In the first year there may be only partial inoculation, which is indicated by the healthy green plants intermingled with the poorer yellow ones that have not yet received enough bacteria on the roots to form nitrogen nodules. The second season, however, in nearly every instance will show a complete inoculation, and an abundance of inoculated soil will be available to distribute over the fields where vetch is to be grown. It is a curious fact, too, that when a couple of quarts of vetch seed is sown with Winter oats for a number of years, the soil gradually becomes inoculated. This is due to the fact that all vetch seed has clinging to it more or less of the nitrifying bacteria. This method is seldom used as it takes too long to get the best of results.

Thus in the growing of vetch, one of the first points a farmer must consider is the proper inoculation of the soil. A small plot in which to prepare his own cultures, will not only give him a cheap source of nodule-forming bacteria, but will also give him a chance to investigate the soil, climatic, and other conditions necessary for the successful growth of his vetch.

W. H. BULLOCK.

"My dog took first prize at the cat show." "How was that?" "He took the cat."—Columbia (University) Jester.

"MARIA," said the mistress to a favorite colored maid, "when's your birthday?" "Ma burfday, missis? I ain't got no burfday." "Why, Maria, of course you have a birthday. Everybody has a brthday." "I an't got no burfday," insisted the maid. "Never had no burfday. I was bohn in de night."—New York Times.

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Figure it out for yourself: 97.9 bushels of shelled corn cost $11.57—one bushel cost $11\frac{8}{10}$ cents; or in round numbers **12 cents per bushel.**

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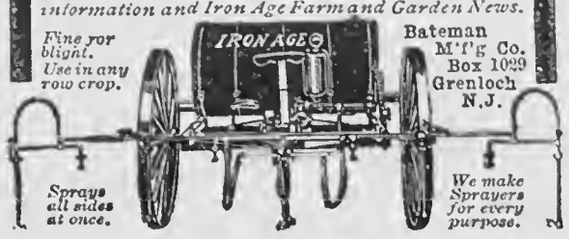

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Care of Old Orchards.

What would you do to an old apple orchard? It was plowed last Fall and needs cutting back. J. L.

Massachusetts.

It is, of course, impossible for an outsider to give definite rules about handling trees of this kind. A man ought to see the trees and study them before trying to tell just how they should be handled. As general advice we would begin May 1 on this plowed sod, and harrow once a week, up to July. A spring-tooth would be a good tool for this purpose. Then sow six pecks of buckwheat, and 10 to 15 pounds of Mammoth clover to each acre. If the trees are in bearing we would let the buckwheat mature, then cut it and let it remain on the ground. This would make a fine run for the hens.

As for cutting these trees back, we would rather take three years to dishorn them, rather than to do it all at once. Good judgment is required in doing this work, and it will pay you to get some good fruit grower to come and cut back two or three trees for you, to give you an idea of how it should be done. We would not cut the top all back this first year, unless there were good limbs and water-sprouts below the place where you cut.

Moving Bees.

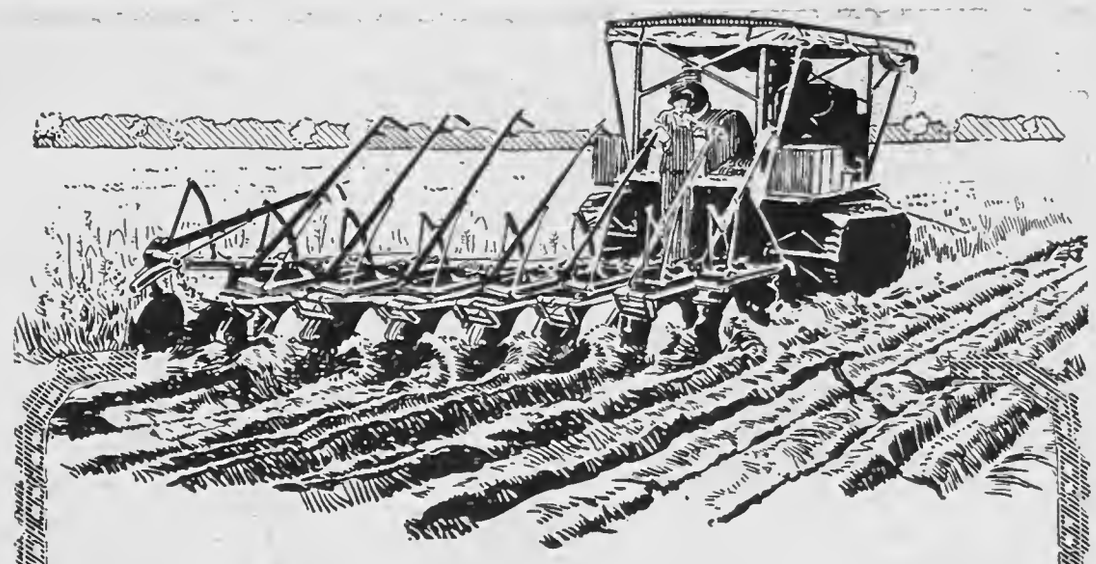
I have two hives of bees, but the hives are so old they are no longer fit for use. I wish to take the bees from the old hives and put them into new ones. Is it possible to do this? If so, how can it be done? V. K.

Carpenter, Del.

There are several methods of transferring bees from one hive to another, of which that known as Heddon's short method is probably as simple as any. The transferring should be done when some honey is coming in, and you should now wait until about fruit blooming time in the Spring. Then prepare your new hive with frames fitted with foundation or foundation starter and also make a box about eight inches deep, without cover, and just large enough to fit the bottom of your old hives without slipping down over. Don veil and gloves and with lighted smoker in hand give the bees a few whiffs of smoke at the entrance of the old hive, then remove the hive from its stand, setting it back several feet. Place the new hive on the stand of the old, with entrance facing the same way. Then go to the old, turn it bottom side up and cover the bottom with the box that you have made, open side down. With two sticks drum upon the sides of the hive until most of the bees have gone above into the box. They may then be carried to the new hive on the old stand and dumped in front of the entrance. As they run in watch for the queen, for she must be with them if they are to stay. If you do not care to trust to finding her as she goes in with the bees, you can place a zinc entrance guard in front of the opening before dumping the bees and this will keep the queen outside until the rest have gone in, giving you a chance to see her. If need be, drum the old hive again until you have got most of the bees and the queen. Then set the old hive about two feet in the rear of the new, with the entrance at right angles with that of the new. Leave it for three weeks, or until the brood in it has hatched, then turn it bottom side up and drum the bees out again, as before, and carry these to the new hive, dumping them in front of the entrance. Before doing this, smoke the bees in the new hive lightly so that they will admit the newcomers. A newly-hatched queen may go in with the second installment unless you again use your entrance guard, but unless you wish to preserve the old queen, it does not matter which one survives the conflict which will ensue.

I have transferred bees by removing the cover of the old hive and replacing it with my new one minus its bottom, and then drumming the bees directly up into the new hive and carrying it to the stand of the old hive. This is a shorter short method, but in order to use it the bottom of the new hive must fit the top of the old, or be made to, by use of strips of wood. M. B. D.

"Is she good-looking?" "Well, if faces were fortunes, she wouldn't have to pay much of an income tax."—Winnipeg Telegram.



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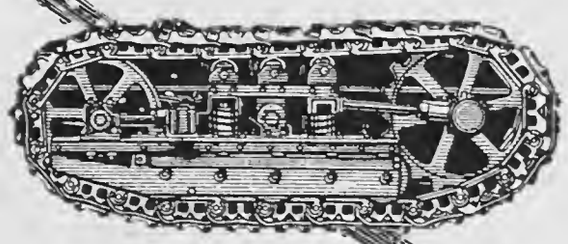

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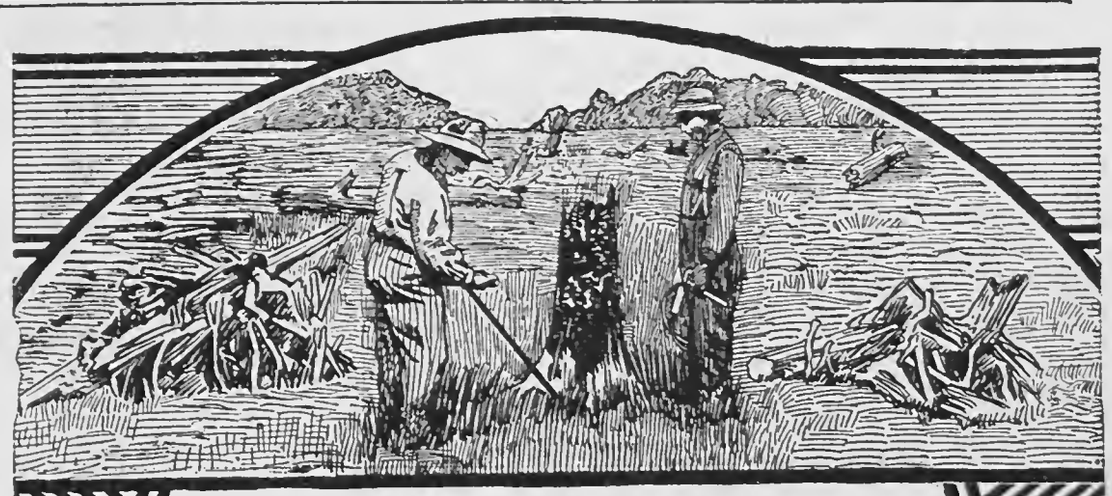

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EVENTS OF THE WEEK.

DOMESTIC.—The largest Federal income tax in Chicago will be paid by Julius Rosenwald, president of a mail order house. His return showed an income of $1,100,000 for the ten months ended December 31, 1913, or on a basis of $1,320,000 for twelve months.

During a blizzard, March 31, the Newfoundland sealing fleet met with great disaster. The steamer Newfoundland lost 77 of her crew, while as many more, it is feared, will be maimed as a result of exposure. The men lost were far from their ships, killing seals, when the storm, with blinding snow, swooped down upon them. They were exposed for 48 hours before assistance arrived and in that time many succumbed. The Newfoundland was one of a fleet of fifteen ships, carrying more than two thousand men, scattered among the ice floes near Belle Isle Strait. Another vessel, the Southern Cross, disappeared in the storm, and it is feared all on board, 175 men, are lost.

The twelve districts and twelve reserve cities of the Federal reserve banking system authorized by the new currency law were announced by the organization committee April 3. The cities to have Federal reserve banks are New York, Boston, Philadelphia, Cleveland, Richmond, Va., Atlanta, Chicago, St. Louis, Minneapolis, Dallas, Tex., San Francisco and Kansas City. Twelve districts are outlined with these cities as financial centers, it being required that the reserve bank of each district shall subscribe to a minimum of $4,000,000 of capital in the reserve system.

Fire which swept through two blocks along the bay shore at St. Augustine, Fla., April 2, destroyed 36 buildings, among them five hotels crowded with visitors from the North. There was only one death, although hundreds of persons had narrow escapes as they fled in their night clothes. The loss is estimated at between $600,000 and $700,000.

Nine men were killed and nine others narrowly escaped death, April 6, when a shaft leading to the underground workings on the foundation for the Harahan Bridge, being constructed across the Mississippi River at Memphis, Tenn., became filled with poisonous gases.

August Pajonk, alias August Miller, alias Albert Frei, alias Fred Klein, was recently sentenced in Chicago to two years in the penitentiary for obtaining money under false pretenses. Pajonk's plan was to advertise florists' stock for sale in the trade papers, and then make no return for the money.

Secretary of the Navy Daniels has signed an order which absolutely prohibits the use or introduction of alcoholic liquor upon any vessel of the navy yard or shore station. This order will become effective on July 1, 1914.

Mrs. Lillian M. N. Stevens, president of the National Woman's Christian Temperance Union and vice-president of the world's organization of the same name, died at her home at Portland, Me., April 6, of kidney disease. She had been ill since her return in December from Washington, where she had worked hard in the campaign for a national prohibition. law. Mrs. Stevens was born in Portland on March 1, 1844. Her maiden name was Ames. In 1867 she married Michael Stevens, a merchant of Portland, and in 1874 assisted in organizing the Maine W. C. T. U. From 1894 to 1898 Mrs. Stevens was vice-president of the National W. C. T. U., and after the death of Frances Willard she was elected president in 1898 at St. Paul. Since then she has been re-elected president each year.

Elections on April 7 resulted as follows: By a vote only one-sixth normal in the special election this State favored a constitutional convention. With President Wilson's administration the principal issue Dow J. Drukker, Republican was elected to Congress in the 7th New Jersey District, to succeed the late Robert J. Bremner, a Democrat. Emil Seidel, Socialist, was defeated by at least 5,000 for Mayor of Milwaukee, by Gerhardt A. Bading, non-partisan candidate. The Democrats retained the 12th Massachusetts District, electing Gallivan to succeed Curley, who is Mayor of Boston. The Republicans and Progressives ran in the order named. Kansas City elected a Democratic Mayor. Every one of the nine women candidates for seats in the City Council of Chicago was defeated. Throughout the State of Illinois the women carried a number of offices. The drys gained a number of larger towns in Illinois. The wets gained none, but retained control of several big cities. The drys in Illinois made substantial gains with the aid of women's votes in the local option elections. With now and then an exception, women voters more than offset the men, who generally rolled up majorities for the saloons. An impressive example of women's power was disclosed in Fulton county, where, with the carrying of Canton, the largest city, by over 1,000, and smaller places by lesser figures, the women swung the entire county into dry territory and put thirty-eight saloons out of business.

FARM AND GARDEN.—June 6 will be "Rooster Day" in Missouri. At that time, if the direction of T. E. Quisenberry, director of the Missouri poultry experiment station, are carried out, every Missourian will destroy surplus roosters. Prof. Quisenberry claims that the roosters of Missouri cause a loss of $3,000,000 to Missouri farmers every Summer. He insists the roosters should be exterminated as soon as the hatching season is over.

Nine hundred quarts of milk were given away free to a crowd of nearly 1,000 men, women and children at the State House steps, Boston, April 6, by the North Reading milk farmers, who charge that their product is going to waste because the big milk dealers will not pay them a fair price. A delegation of the farmers waited upon Governor Walsh to complain of the situation.

Henry Jackson Waters, president of the Kansas State Agricultural College, will spend 60 days this Summer in the Philippine Islands as a special representative of the United States to inspect the work being done by the Bureau of Agrienlture and Education and will make a report of the same to the War Department.

Wheat 95; oats 40; corn, short crop, and sells at all prices, from one cent per pound to 1¼ cents. Hay, clover, $9; mixed, $10; No. 1 Timothy $11.75. Eggs 15; butter, creamery 22; dairy 18; apples searce; selling from fruit stands, six for 25 cents. Spraying not common here. I have a few apples yet from small orchard, which was sprayed. Cows from $50 to $80 for common; other cattle, none moving to speak of. I have 75 head in all, including calves; 27 two-year-old steers, not ready for market. Several farmers feeding lambs, but none selling yet; hogs $8 per hundred on foot. Potatoes not raised for market here, some with garden crops. G. M.

Edon, O.

Cold and rainy; no spring farm work done as yet. Farm horses are worth from $200 to $300; good milch cows $75 to $100; purebred stock higher; dressed pork 11½ cents per pound; chickens 16 cents live; eggs 20. Milk eight cents per gallon; retail seven cents per quart. Best quality dairy butter sold to customers at creamery prices 34; at stores 26. Potatoes 85; cabbage four cents per pound; parsnips 1½ cents per pound. Hay $16 per ton; corn $20 per ton; wheat 95 cents per bushel; oats 42.

Elyria, O. J. S.

Snow having melted by March 20th, with a nice, warm sun George Green was able to till four acres of ground and plant early peas on March 25. The ground around here is a warm sand and the snow does not last long. While North Jersey had about four foot of snow, the heaviest fall around Millville was eight inches. H. S. M.

Burlington Co., N. J.

March will be remembered as one of the old-fashioned kind, cold, blustery, and plenty of snow drifts to open up. It has been a tax on the town to keep the roads open for mail carriers. Reports say we will have a poor peach crop. Eggs have taken a sudden drop to 18 cents; butter 24; potatoes 55; wheat 95; oats 40; corn 80; barley 68; mixed hay $12; bran $30. Veal 9½; pork 8; lambs 7; wool 16 to 18. Red Beans $2.25; apples, per bushel, $1; clover seed $10; Timothy seed $3.50. Good seed corn that has been tested and gives 95 per cent germination $1.25 per 60 pounds. E. T. B.

Canandaigua, N. Y.

It is very wet here now, and the Ohio River looks like the beginning of a small flood. Fruit growers are making a good start in spraying, and several carloads of lime-sulphur have been sold in this locality and more than a car of dry sulphur for making the mixture at home. Six carloads or more of fertilizers are being brought in here for the orchards this Spring. The prospect for all kinds of fruits was never better for the time of the year. Most of the peach buds are alive and strong and more backward than usual. Mice have done more damage in this locality than ever known before. Most of it was done during the snows about a month ago.

Proctorville, O. U. T. C.

Self-Setting PLANE ON TRIAL. GAGE TOOL CO., Vineland, N. J.

WE OFFER FOR SALE AT SACRIFICE

1—Blizzard with pipe complete, 1913
1—1913 McCormick Grain Binder
1—McCormick Corn Harvester
1—Corn Shredding Machine
1—Pohl Gasoline 15 H. P. Engine
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1—Wiard Two Way Gang Plow
1— Two Bottom Gang Plow
2—John Deere Two Bottom Gang Plows
2—Oliver Two Bottom Gang Plows
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2—Black Hawk Corn Planters
1—Peck Potato Digger
2—Pea Harvesting Machines
1—Rye Rubbing Machine
1—20 H. P. International Gasoline Tractor with one John Deere, Four Bottom Gang Plow
1—Geiser Threshing Machine
7—Heavy Wagons
1—International Hay Press. ADDRESS
THE BURT OLNEY CANNING CO., Oneida, N. Y.

Bargains Snapped up Quick Like This

Good land—217 acres. Two sets bulldings; one house worth $4,000; in fine shape. All kind of hen houses. Four big barns; corn crib; big orchard and other good house buildings, worth twice price asked. 3 miles to Railroad town. If sold this month only $4,000. Easy terms. Hay this year will pay near half price asked. Can run anto over it, lay so good. Now, do you want it? HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.

ROOFING COST

This is a point every farmer should consider carefully—the original purchase price means little, but figure out what the roofing cost per year will be. The cheapest roof that lasts only a year or two may prove the most costly in the long run—this is usually true.

"RAIN-TIGHT" Rubber Roofing

lasts almost indefinitely, and, counting the length of service, it is the most economical roof you can buy. It is made of Trinidad Lake Asphalt—the standard asphalt of the world. It is the same material that is used to make city pavements, which withstands the constant pounding of horses' hoofs and heavy-laden wagons.

Our brand of "PERFECT ROOFING" is the same as "RAIN-TIGHT" with Mica Flakes added to the surface, which make it fire-resisting. It is a non-conductor of heat and lightning and insures against fire from sparks falling on the roof.

PERFECT ROSIN-SIZED SHEATHING AND PERFECT-TARRED FELT ARE BEST FOR SHEATHING PURPOSES

If you need a new roof for any building, now or in the future, it will pay you to send for samples and booklet—write us to-day.

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It's a Pleasure to Farm in the South

NATURE coöperates with you at every turn in the Southeast. Crop failures are hardly known.

You are favored with 200 to 300 growing days, which allow two and three crops from the same land each season.

Expensive irrigation is unnecessary, as 45 to 60 inches of rain, well distributed through the growing season, fall annually.

The assortment of crops raised in the Southeast is the greatest anywhere in America. From the tropical citrus fruits to the finest varieties of apples, peaches, pears, grapes and numerous other fruits and nearly every known variety of grains, vegetables, grasses and legumes can be produced somewhere in the Southern Railway territory.

And with all these superior advantages Southeastern land now averages less than one-half the price of farms in other parts of America.

$15 to $50 An Acre Buys Excellent Homesteads

where the climate is exceedingly agreeable and healthful, where railroad communication is of the highest order and transportation to Northern markets but 24 to 48 hours.

Life in the rural sections of the South is all that could be desired. Modern highways and telephones, the best of high and agricultural schools, good churches and trading centers—all these advantages are to be had in this growing section.

INVESTIGATE SOUTHERN CONDITIONS

Avail yourself of the low Homeseeker's Rates. Write for particulars. Learn of the favorable conditions in the South. Ask for the "Southern Field" magazine, state booklets on Virginia, North or South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee and Kentucky. Let us know the state and line of farming in which you are interested.

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For Farm Improvements Only

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FOR SALE—Town lots in all growing towns. Ask for information on industrial and business openings.

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400,000 Settlers a Year

Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

For illustrated literature and reduced railway rates, apply to Superintendent of Immigration, Ottawa, Canada, or to the Canadian Government Agent.

J. S. Crawford,
301 E. Genesee Street,
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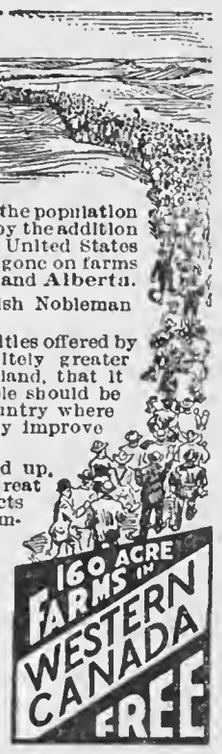

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Model Poultry Farms, handsome country seats.
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Send for our FARM CATALOGUE. 100 VIEWS of FRUIT, POULTRY and GENERAL FARMS in or near VINELAND, the FRUIT and POULTRY CENTRE of NEW JERSEY. Healthful climate. Mild Winter, Purest Water. Unexcelled Markets. Within 100 miles of TEN MILLION people. ERAY & MACGEORGE, LARGEST FARM AGENCY in SOUTH JERSEY, 1077 Drexel Building, Philadelphia, Pa., or Vineland, N. J.

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just off the Press, giving truthful descriptions and cuts of 100 fertile farms of all sizes, near Philadelphia. Splendid locations for Dairy, Fruit and Poultry. Liberal terms. Information and catalogue free. Write today. JACK'S FARM AGENCY, Schwenkville, Pa

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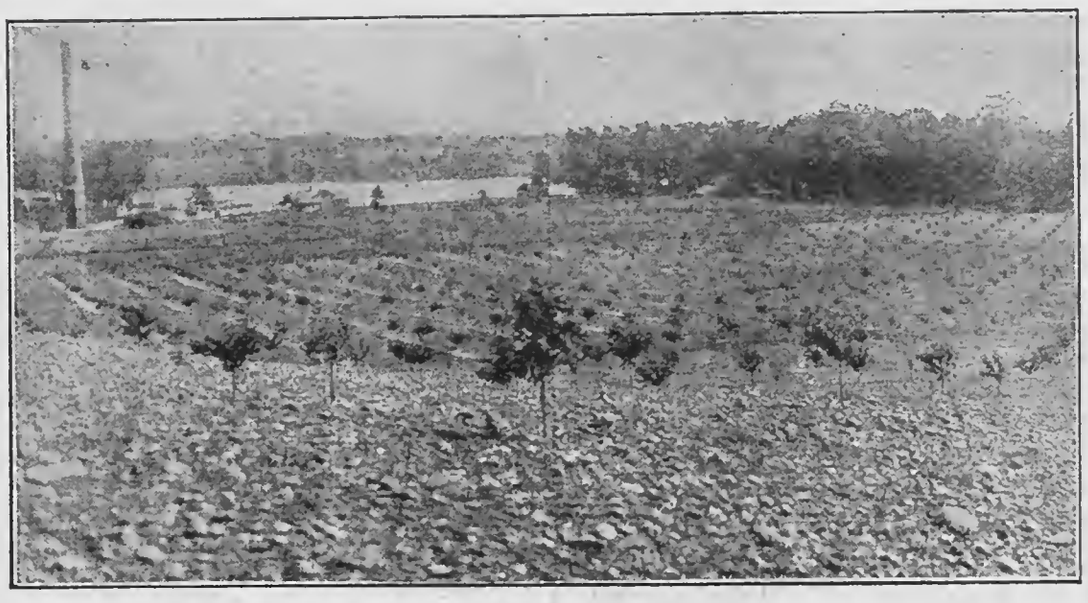
C. D. Rose Farm Agcy. SELLS FARMS. Send for list. State & Warren Sts. Trenton, N. J.

FARMS of all Sizes FOR ALL PURPOSES
Cheap enough. Mild climate. For information write State Board of Agriculture, Dover, Delaware

A MODERN SOUTHERN MICHIGAN ORCHARD.

By model the writer does not mean a small imitation of the real thing, which is the dictionary definition. But on the shores of Baw Beese Lake, Hillsdale County, Michigan, is a small orchard of about 11 acres, only one year from planting, that bids fair to be all that can be desired in the way of a profitable and pleasurable fruit venture. Situated upon a hill which slopes to nearly every point of the compass, with soil running through all gradations of stone, sand and black loam, this orchard will have as great a variety of growing conditions as might be found in several counties. And yet,



A WELL PLANNED ORCHARD IN SOUTHERN MICHIGAN.

the growth of the trees does not indicate, as yet, that difference in soil has made any difference in growth.

This land is owned by a man whose business calls him constantly out into the State, thereby making it necessary that all the labor be hired labor, but the owner has such an interest in this orchard that he is making sure every modern method of cultivation and fertilization is used. It is intended eventually that practically all of it will be an apple orchard, but at present peaches are used as fillers. About an acre right on the shore of the lake is devoted to grapes, and they have been so planted and cared for along straight lines that they make as pretty a picture as a flower garden. Another piece of about an acre will contain fruit of practically every kind for home use only. The trees were furnished by a prominent Michigan nursery firm, and the head of the company came personally to test the soil and see the ground before a tree was ordered. He was very enthusiastic over the outlook in Hillsdale County for future fruit farming, saying it was splendidly adapted to commercial peach and apple growing, and showed surprise that more farmers were not utilizing the hill slopes—and a large part of the county is such—for fruit growing.

About 1,300 trees of the first size and quality were planted, an expert being sent from the nursery to do the work. Of the entire quantity planted not over six have died, and five of those that died were planted in standing water, as there remained a little drainage work to be done at planting time. The trees have made an astonishing growth during the past season. A couple of months after planting, tree protectors were purchased at a cost of $5 a thousand and placed on the trees. These were made of wood such as is used in berry boxes, and are a great help to the tree, not only from the gnawing of rabbits, but also from the burning of the sun and any other causes that might injure the tender tree trunks.

One of the remarkable things about this orchard is that no fertilizer was applied previous to planting. The year immediately preceding the ground was in corn, and preceding that was part hill pasture and part swamp grass, but evidently the soil was rich enough, for the growth has been all that could be expected under the most favorable conditions. Cultivation has been kept up throughout the Summer in both directions, and not a weed has ever been seen. In late September 30 pounds of vetch and two bushels of rye were sown to the acre, which made a fine stand before snow came. This will be plowed under the coming Spring, and probably no further fertilizer will be applied until the trees show the actual need of it.

This is to be strictly a commercial orchard on a small scale, and every up-to-date way of picking, packing and marketing the fruit will be used. The intention is to show just how good fruit can be produced on our Southern Michigan soil, and it is hoped that a great number of farmers will plant such orchards, and in such quantities that the fruit-buying public will turn naturally to Southern Michigan as one of the great fruit sections. P. L. W.

Michigan.

POTATOES FOLLOWING STRAWBERRIES.

Would you advise planting potatoes on land occupied by strawberries last season? I have never raised these crops in succession and have wondered whether potatoes would tend to grow scabby on such land because of the berries taking the acidity from the soil. L. H. R.

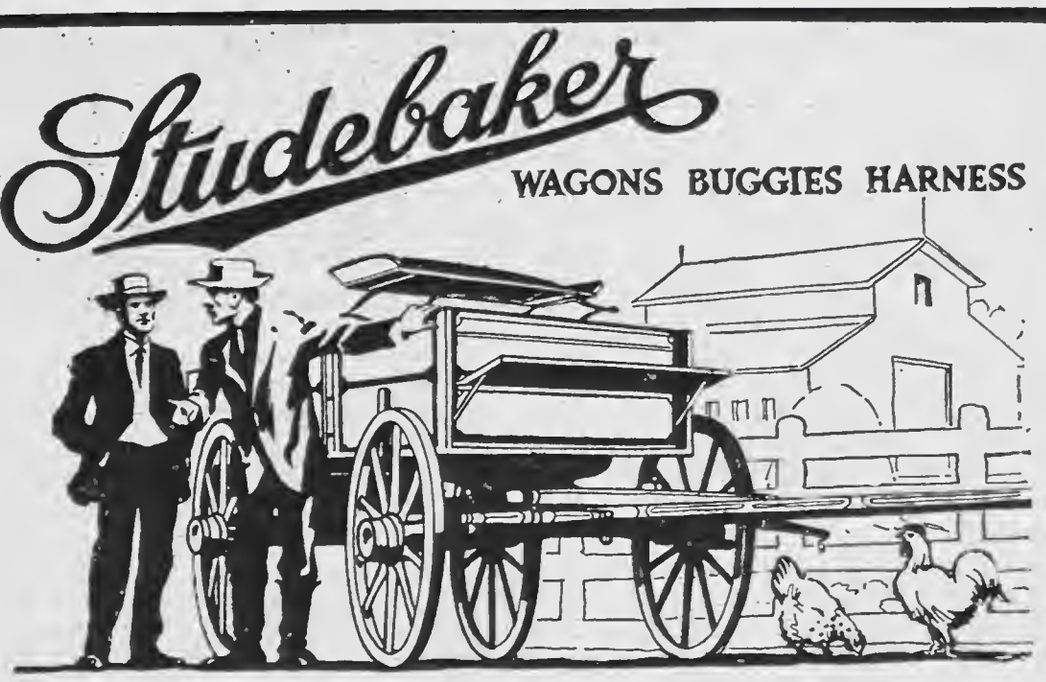
Harwinton, Conn.

Yes, potatoes will do well after a strawberry crop. The land where strawberries are grown is usually rich. Large quantities of manure are generally put on the strawberries for mulching, and when this with the plants is plowed under the soil is filled with humus, a condition which just suits the potato crop. The acid condition of the soil is what is needed to prevent the spread of potato scab. The germs of this disease thrive and spread best in an alkaline soil. In an acid soil they do not develop, while the strawberry crop makes its best growth on an acid soil. Thus a soil where strawberries have done well would be less likely to spread the disease of scab. We should go ahead and plant the potatoes on this soil.

DENTIST: "Have you been anywhere else?" Patient: "I went to see the chemist in our village." Dentist: "And what idiotic advice did he give you?" Patient: "He told me to come and see you, sir."—London Opinion.

Studebaker

WAGONS BUGGIES HARNESS



Outdoors for forty years painted once-carries five tons today

WHEN Mr. Peter Kern, Jr. of Reese, Mich. bought a Studebaker wagon, thirty-two years ago, the wagon had been working for eight years. This means that it has now been in use forty years.

A letter from Mr. Kern says:

"I bought my Studebaker from Henry Daley thirty-two years ago. The wagon has never been housed—always out in the open air and has had but one coat of paint in the forty years.

I have used this wagon to haul sugar beets, four tons at a time, over country roads. The material in the wagon is as hard as a bone.

In 1881 I bought more land, giving me a total of 340 acres, and my old wagon with one other Studebaker I bought fifteen years ago, has done all the hauling.

I will guarantee my old Studebaker to deliver 5 tons today. I am satisfied that the Studebaker is the best farm wagon in the country."

MADE OF THE RIGHT MATERIAL

This letter proves that Studebakers use good paint on their wagons, but the real reason for the long life of Mr. Kern's wagon is the material underneath the paint. Nothing but the best of everything is used in Studebaker wagons.

You can buy today a Studebaker wagon that will last you just as long and give you just as faithful service as the wagons Mr. Kern and others describe.

You may be offered a wagon represented to be "just as good as a Studebaker"—and at a lower price. Don't be fooled. It is the life of a wagon that counts. Studebaker wagons are the cheapest in the end.

Remember Studebakers have been building wagons for over sixty years and they know how to build wagons that will last longest and give the most satisfaction.

The same thing is true of Studebaker Buggies and Harness.

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Adv. 2007

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TOP FEED—NO RUSTING—NO CLOGGING

Accurate indicator for 100 to 3,500 lbs. per acre, whether material be wet, dry, sticky, lumpy, heavy or light. Write for booklet R to

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Free Box of Samples

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No. 3 Planet Jr Hill and Drill Seeder

Sows all garden seed accurately in hills and drills. Sows in a narrow line making wheel hoe cultivation quick and easy. Sows in hills 4, 6, 8, 12 or 24 inches apart. The seed index, graduated for both hills and drills, is always in plain view.

Planet Jr Farm and Garden Implements cut down the cost of cultivation, lighten labor, and give better results. $2 to $100, according to requirement. Fully guaranteed.

FREE Our new 72-page illustrated catalogue describing 60 implements for all kinds of cultivation. Write for it today.

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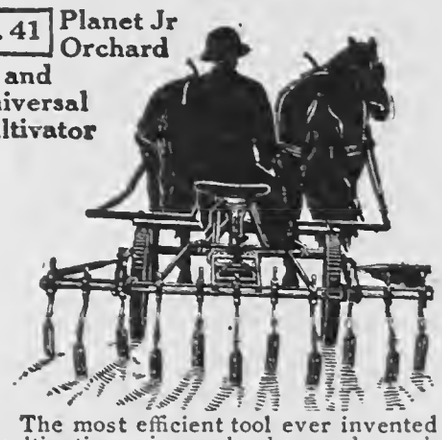
Immediate Shipment Guaranteed

No. 11 Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seed. The plow opens furrows for manure, seed, etc. and can be reversed for covering. The cultivating teeth are adapted for deep or shallow work and for marking out. Crops can be worked both sides at once until 20 inches high.

No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow

This is a practical every day time-, labor-, and money-saver for the woman in tending her vegetable garden as well as for the market-gardener. It combines in a single implement a capital seeder, an admirable single wheel hoe, furrower, wheel cultivator, and a rapid and efficient wheel garden plow. Sows all garden seeds in drills or in hills.



No. 41 Planet Jr Orchard and Universal Cultivator

The most efficient tool ever invented for cultivating vineyards, hopyards, and orchards of apple, citrus, olive and groves of orange, walnut, etc. It is equipped with fruit tree shield and side hitch for low trees. Carries teeth, sweeps, furrowers, plows, etc. Works deep or shallow and cuts from 4 to 6½ feet wide. Convertible into disc harrow and alfalfa cultivator.

Planet Jr 12-tooth Harrow, Cultivator and Pulverizer

An invaluable tool in the market-garden, truck and strawberry patches. Its 12 chisel-shaped teeth cut out all weeds, stir and mellow the soil and leave the ground in the finest condition without throwing dirt on plants. Can be set exactly to desired depth making delicate work easy.

Hope Farm Notes

On the New York police force there is a company of picked men known as the "strong-arm squad." They are big, husky fellows, ready to tackle anybody or any job. When there is liable to be a riot, or when toughs try to terrorize a neighborhood, these "strong-arm" men get into action and go where they are needed. The gasoline engine has become the "strong arm" of the farm. I can remember the time when manufacturers laughed at the idea of making an engine of less than five horse-power. Even that power was a ponderous, heavy thing, that could not be easily transported. I was a hired man in those days, and had to play the part of "strong arm." I know what the small gas engine has done to take up this burden.

The engine on our power sprayer pumped water and blew it out as spray faster and better than any hired man ever could. Even the boss would grow weary on the spray pump after a few hours' work, and the sprayer would be more like a squirt-gun than a prodneer of fine mist, which a spray ought to be. After spraying was over the "strong arm" would have stood idle if it had been confined to the single job. A loafer is a nuisance on any farm. So is the character that claims the right to a long vacation because it has done its duty at one hard job. So we lifted strong arm off the sprayer and mounted it at the well, near enough to be belted to the pump. The windmill lifted the water when the air was strong. When a calm fell upon us with an empty tank the little engine rolled up its sleeves and got on the job. Air is cheaper than gasoline, but it does not always move when you need it. The two together make a fine team. Then when the Summer's supply of wood had been hauled from the hill in 10-foot sticks there came another job for "strong arm." We bought a saw, moved the engine up near it, set it going, and these sticks were chewed up into firewood, while the redheads and their comrades piled the chunks in the shed. There are half a dozen other things which strong arm could do. It can turn the feed grinder or grindstone, or run the cutter to chop up the stalks, or slice the mangels. It is a great farm helper, and no one can realize its convenience until he has tried it out. It is a great educator when you can stand at ease and see this strong arm doing the work which formerly took the starch out of your own back.

When the wood was cut up the engine was lifted back upon the sprayer, ready for its original business once more. There are new types of sprayers, so arranged that the engine cannot be taken off. The manufacturers do this purposely, as they claim the engine should not be used for any work except spraying. We have found that a *good* engine is suitable for these different jobs, and I would rather keep it at steady work. Spraying thus far this season has been a slow, interrupted job. Winds and rains have been frequent, and we have been obliged to take advantage of a few hours of suitable weather here and there. As usual, we spray the apple trees with soluble oil and lime-sulphur on the peach trees. I know, of course, what some of the scientific men say, but experience tells us that the oil solutions spread better on older, rough-barked apple trees, and are more likely to get at the scale in the fuzz or fur-like growth around the bud. I have no quarrel with the lime-sulphur men; there is nothing to quarrel about. We like the oil for apple trees and use it. The lime-sulphur is excellent for peach trees—not only cleaning out the scale, but destroying the germs of curl-leaf and brown rot. It should have gone on before this, however, to do much good with brown rot.

This season there have been many questions about time and quantity in the spraying business. Therefore we have been doing some figuring. For filling the tank our plan is to drive alongside a little pond or pool and use the tank-filler. Our pool is formed by putting a dam across a little spring brook. The tank filler is put on a piece of plate at the bottom of this pool, the upper part attached to the pump, and the engine started. With this system it requires about eight minutes to fill the 250-gallon tank. Our apple trees are about 30 years old, I should judge—good-sized Baldwins. Between four and five gallons of spray are required to cover them well. The time required to spray such a tree will depend on many conditions—wood, shape of tree, pressure, and half a dozen other things. Far better take more time and do a thorough job, for if you leave a few parts of the tree untouched the scale insects will spread like a fire over it. Spraying for the scale is not like fighting the Codling worm. You must *hit* the scale with the spray mixture; it will not crawl up to any poison and eat it. There seems to be little doubt that the scale insect is weakening in our neighborhood. Yet this is no time to stop spraying. Rather make a rally and clean them out. As for fruit, we are at this moment promised a good crop of peaches and a small crop of apples.

The strawberries are very promising as Spring begins her tardy preparation. The heavy snow on top of the mulch gave the plants a good chance. They begin to crawl out of bed and stretch themselves, like one who has had a good rest and is now ready for a great day's work. I find some demand for Marshall plants, though we make no effort to "boom" this variety. It will probably fail to satisfy seven times out of 10 in ordinary soil and with ordinary culture. When you get it right, however, there is nothing finer. We are trying a few others this year—Joe, Chesapeake and Progressive. We have had Chesapeake before. It is a fine berry for hill culture. Joe is highly praised for its quality and its ability to produce on rather poor soil.

BIG STORIES.—Not long ago I printed a newspaper story about a Washington apple orchard which averaged $3,235 per acre for seven years. Now comes one of our readers in Wenatchee, asking me to print the following statement from the local paper, *The Daily World:*

An erroneous report is going the rounds of Eastern farm journals and other papers, bearing a Wenatchee date line. It tells the astounding news that L. W. Smith has averaged $3,235 per acre from his five-acre orchard on North Wenatchee avenue for seven years. The skepticism with which this report is commented upon in the East is not to be wondered at. The fact is that owing to a misprint, we should judge, the amount is given as per acre when it should have said per year. At any rate, we are in possession of the fact, and it is true that five acres of apple orchard has averaged $3,235 per year for seven years.

This paper claims that in 1911 O. G. France received $3,964 from one acre of Winesap apples, and that local growers average 500 boxes to the acre! The man who sends this says that from his own eight acres—10 years planted—he picked and sold last year 3,140 boxes of apples. I feel sure that some of our South Jersey and New York growers can match that. We have one field at Hope Farm with a little over one acre. There is a fringe of apple trees around it, with strawberries in the center. Last year this field gave us 175 barrels of Baldwin and Spy apples, and about $250 worth of berries and plants. The berry plants were three years old. There will be a fourth picking this year.

"RAW PHOSPHATE."—We have had several articles about the use of raw ground phosphate rock. Recently a Pennsylvania man asked if it would pay him to use sulphuric acid on the farm to "cut" this rock. Our answer is "No, it is too dangerous." Now comes a Michigan man with the following:

If J. O., page 37, will put his raw rock phosphate through the manure pile he will get just about the same result as if it was treated with sulphuric acid, provided there is enough horse manure in the pile to cause chemical action. A good way is to sprinkle the phosphate behind the animals and allow it to soak up the liquid; keep the manure pile wet enough to prevent burning and loss of ammonia, but allow it to be warm enough and wet enough to cause the change in the phosphate. Haul the manure to the field about once a month. J. A. V.

Where is your authority for any such statement? I have read several experiments at our government stations where this thing was tried. Careful chemical tests seemed to show that the manure had practically no effect upon the raw phosphate. H. W. C.

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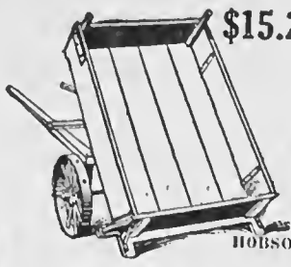

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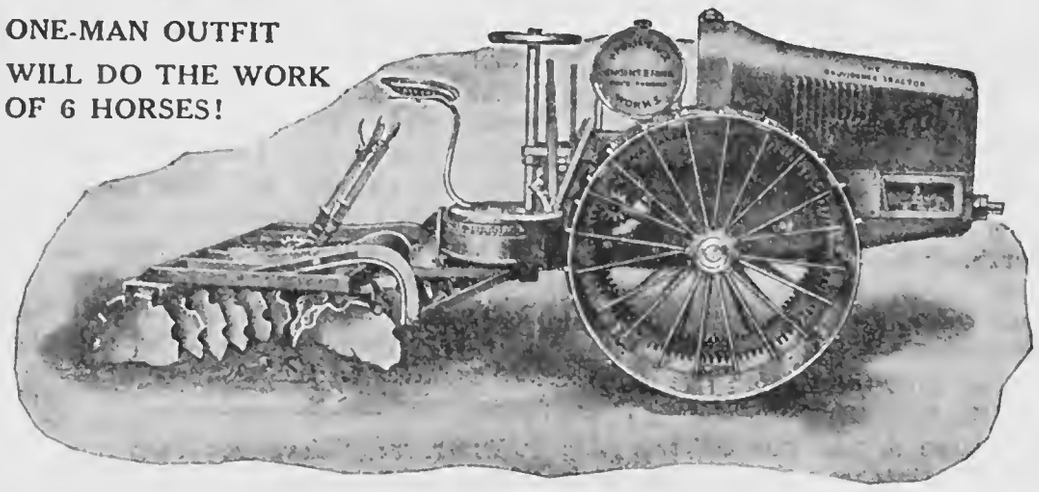

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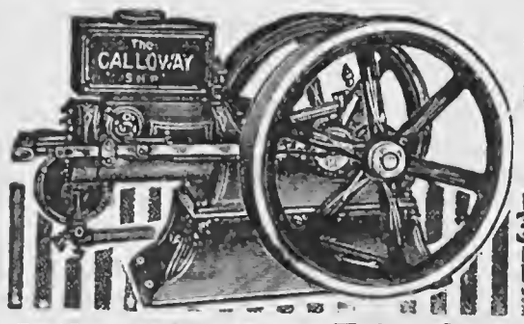

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ALFRED FRAVER
Fostoria, O.

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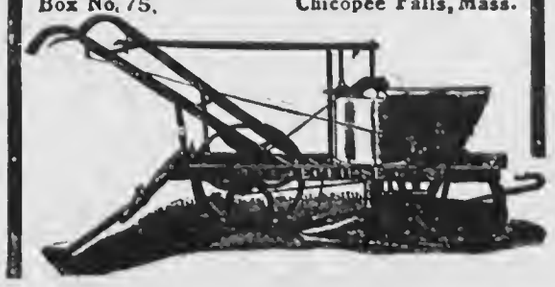

Ruralisms

Fighting the Woolly Aphis.

I have read that lime-sulphur solution is a potent remedy for the aphis that preys upon the roots of plants, but the writer did not specify what potency would be efficient, and yet safe to use, and not kill or injure the plants. Can you tell how much water should be added to lime-sulphur of 30 deg. to meet that want? W. H. L.

Winterset, Iowa.

Lime-sulphur has been tried as a remedy for woolly aphis on the roots of fruit trees, and was found to be more detrimental than beneficial. It damaged the roots. Dr. Edith M. Patch has shown that the woolly aphis of apple trees needs the elm to spend part of its life on. It migrates from the apple to the elm in the Fall, and returns to the apple in the Spring after it has worked on the elm leaves a while, causing elm leaf-curl. See Bulletins 217 and 220 of the Maine Experiment Station. So first get rid of the elms. Trees infested with woolly aphis should be treated as follows: Spray the tops with a 10-per-cent solution of kerosene emulsion to kill such woolly aphis as are there. To clean the roots remove the soil about the trunk of small trees for a foot, large trees farther—but it is seldom a serious pest on large trees—and put a liberal supply of tobacco dust on the ground and return the soil to its place. An experimenter in Georgia has used two to seven gallons of 10% kerosene emulsion, removing the soil as described above, and returning it immediately upon applying the emulsion. A decoction of tobacco water can be used, or tobacco extracts liberally diluted will also work. The blue aphis on China Asters can be prevented by applying a liberal supply of wood ashes to the soil before putting in the Asters. And then during the season examine the roots, and if aphis are found water the soil with a strong decoction of tobacco water made by soaking tobacco stems in water. If it is on the corn you are troubled with corn root aphis—to rotate crops is the best preventive. P. T. B.

Method of Budding.

In budding trees, is the cut in the stock cut through the inner bark so that the back of the bud comes in contact with the wood, or is it just through the outer bark? I have tried the bud placed under the outer bark, but have had no success. C. C. H.

In budding two cuts are made in the stock entirely through the bark, and in the form of a T. The corners of bark made by the intersecting cuts are then slightly raised, and the lower part of the little strip of bark which carries the bud is inserted and firmly forced downward until its upper edge passes the solid bark above the horizontal cut, and its whole under surface is in close contact with the soft outer sap-carrying wood layer. If the stock is in proper condition this will be accomplished very easily and quickly but if the bark is inclined to cling to the wood it may have to be loosened carefully the entire length of the bud strip, and when in this condition the chances for success are much poorer. The whole cut should then be wound tightly with soft tying material to exclude all air and water and to hold the bud in close contact with the sapwood, the bud proper only being left uncovered. Raffia is the material used for this purpose by the nurseries. In two weeks the ties should be cut as strangulation will occur if these are left on too long. Early the next Spring the stock is cut off close above the inserted bud and after growth starts all shoots springing from buds of the stock itself should be rubbed off as soon as they start, throwing the whole strength of the stock into the adopted bud. The season for budding usually extends from the tenth of July to September fifteenth, depending on the stock to be worked and also to a certain extent upon the season. G. R. S.

THE COST OF GRAFTING.—Grafting is usually done by the piece, where there is any quantity to do, and the price charged in this locality is three cents per scion. Although the writer has done this work it has been in connection with his pruning work, and was included with it, the charge being 30 cents per hour.

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Established 1850

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*

THE article on Red-top in New York is first of a series of articles on the behavior of the popular grasses in this State. There are too many farmers who think Timothy is the only suitable grass for hay-making. Timothy is the best grass for *selling*, but in many localities Red-top or Orchard grass will give more actual feed. We shall have the facts about them.

*

ANYONE claiming to operate a mineral rod on behalf of the United States Government is an impostor and should be let severely alone, or reported to the police.

That is the way the U. S. Geological Survey gets into the game when fakers try to ride it. A "mineral expert" named Wise is working in Alabama with a mineral rod, locating minerals. He tries to make it appear that the government is back of him. Let us all get wise to Mr. Wise and the rest of the mineral fakes. The Geological Survey seems to belong to that "strong-arm squad" the Hope Farm man tells about.

*

ON April 10th, Governor Glynn signed the bill creating a State Department of Foods and Markets. No legislation in recent years has been received with favor equal to the enthusiasm created by this measure. The agricultural organizations of the State indorsed it. City societies of consumers have approved it; and individual producers and individual consumers have seen in it a promise of closer relation and mutual advantage. It has attracted the attention of economists the country over, and all have seen in it a promise of better returns for the producer and a hope of some reduction in the cost of living for the consumer. Heretofore the only answer to the farmer's complaint of low prices was the admonition to produce more at lower cost. Now for the first time in this country, we have recognized the necessity of an economic distribution of farm food products, and have actually provided the machinery for a system to distribute at prices regulated by the law of supply and demand. The institution of this department marks an epoch in the economic agricultural conditions of this State. If successfully organized and developed it will, through adoption by other States, become virtually a national institution. Governor Glynn has secured the passage of other popular legislation, but if he did nothing else his administration would be sufficiently distinguished by the creation of this important economic department in the State Government.

*

I NOTICED what your correspondent from Maine says in regard to the bills introduced in Congress to prevent the killing of calves and dealing in veal in order to increase the supply of beef. Ex-Mayor Fitzgerald of Boston, in an address before the Wholesale Beef Dealers' Association, at their meeting in Boston, was reported as advocating a law to compel every farmer to raise at least one beef animal for every two acres of land that he owned. It seems to me it would be more sensible to limit the size of the beefsteak that these gentlemen eat at their breakfast table if they are so anxious to increase the supply and reduce the cost of beef.

Massachusetts. W. E. T.

As a rule, the anxiety of these gentlemen to benefit humanity stops when their own interest ends, or when their own self-denial would begin. A man's public argument rarely runs along with his private practice. These orators would willingly compel farmers to produce beef at a loss in order to lower the price of their own beefsteak. If we were to call for a law compelling them to eat baked beans and fish balls, so that the market price of beef would be cheaper, there would be a frightful howl. Yet most of these gentlemen would be better off for the bean and fish diet, while such a law would be just as sensible as and more useful than the one they advocate.

*

THUS far at least 50 persons have come asking what they can do to abate the tramp hen nuisance. These people have gardens in which they take great pride. The neighbors have hens in which they take no pride, but let them forage at will. These tramp birds, cursed with the indolence, cupidity or meanness of their owners, come into the garden and tear it apart. The trouble lies in the man behind the hen. What can we do with him to make him recognize ordinary human rights? Thousands of our readers will look at their ruined plants and regret that they have too much character and too little size to take this hen man out into the road and thrash him. Failing in that vent for their feelings, what can they do? They can shoot the hens after fair warning and then stand the legal consequences of carrying a dangerous weapon and destroying property. They can be held liable for the value of the hens. They can keep a smart, active dog and train him to chase these hens whenever they come upon the premises. The best thing we know of is to entice the hens into a house and keep them until the owner does his duty. The hens will more than pay for their food, while the hen man is getting wise. There is no meaner little annoyance than this one of the tramp hen. He who can endure it with patience is a good candidate for the job of Job.

*

WE have never known the time when so many wealthy men in the city were interested in what they call "the cause of the farmer." These gentlemen profess to be sincerely anxious to help the plain man on the farm, and they ask what they can do to be of real service to him. We do not need to tell them that before one can be of real service to another it is necessary to understand not only his condition, but his point of view, and the way he looks at life from his home. It stands to reason that one man cannot hope really to help another and give him permanent aid until he can understand just how his friend lives, how he works, and the conditions under which his life is passed. Therefore it will be clear to our city friends that they can do the farmer far more good if they understand just his point of view and the difficulties under which he works. Naturally a man cannot live and work out his life in a great city, and still understand just what it means to work through sunshine and through storm upon a mortgaged farm. A practical friend has made the following suggestion to us. It may not appeal directly to the gentlemen who are anxious to help their farmer friends, but we give it for what it is worth.

This man suggests that a good way to get at farming from the inside would be for some of these philanthropists to disguise themselves as hired men, and join one of the excursions of city laborers up into the country where farmers come and size up the workmen with purely an eye to business. It might certainly give some of our benevolent friends a new idea of the needs of agriculture, and its dignity as well, if they were to present themselves in this disguise, let the practical farmers view them with an unprejudiced eye, and size up their value exactly as they think they would be able to render practical services upon the farm. We should not object at all to listening to some of our friends in their discussion of the farm problem, and then let them hire out in this way as farm hands, and spend one month upon a practical dairy farm of an average type. It would afford us great pleasure again to listen to their remarks on the needs of the farmer when they return from this very practical experience in actual farm life.

*

"THE use or introduction for drinking purposes of alcoholic liquors on board any naval vessel or within any yard or station is strictly prohibited and commanding officers will be held directly responsible for the enforcement of this order."

That is the text of an order issued by Secretary of the Navy Josephus Daniels. That means absolute prohibition of the use or introduction of alcoholic liquor upon any vessel of the United States Navy or within any navy yard or shore station. If you would realize the full meaning of this go back into history for a century. On August 13, 1813, the American brig Argus, cruising in the English Channel, captured and destroyed a ship laden with wine. Guided by the light from this burning ship the English brig Pelican came upon the Argus. The crew of the latter were noted for their expert gunnery, but in this battle they could not hit the side of a barn. They were drunk on the wine they had captured, and the Argus was pounded into a wreck and captured! There is no more need of rum in the navy than there is on the locomotive or at the railroad switch. For years now the sailors in our navy have been punished severely if found drunk or caught bringing liquor on board. The officers, however, have been able to drink as they pleased, and some of them seem to have been "soaked" much of the time. What Secretary Daniels has done is to make one rule for both officers and enlisted men, and he is right—outside of any moral consideration of the matter. There can be no question of the fact that year by year public sentiment against liquor-drinking grows stronger and stronger. It is now only a question of time when rumseller and the "rum-punisher" will be regarded by respectable people as criminals or men afflicted with a moral disease. Our warships do not belong to naval officers—they belong to the people!

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THE efforts to give the American farmer a real parcel post have brought out a storm of ridicule from a class of people who habitually sneer at any effort to bring producer and consumer closer together. The Postoffice Department is trying to help city consumers find farmers who will ship farm produce direct by parcel post. A good sample of the efforts made to ridicule such a plan is a letter from Benjamin S. Dean, printed in the New York Sun. Here is one extract; we will take another later:

> Just imagine a Chautauqua County farmer wading through three feet of snow to feed the chickens and to milk the cows and doing up dainty parcels of produce for his brother man in New York city and giving this brother man the advantage of the reduction in the cost of transportation and the elimination of the middleman! Imagine it, I say, for you will never find him doing it.

The trouble with Mr. Dean is that he either has no imagination or doesn't know what he is talking about—probably both. Chautauqua County farmers are as intelligent as any others. When snow comes they must wade through it anyway. Mr. Dean wants them to continue wading for a 35-cent dollar. They will never get any larger share until they go after it, and parcel post shows them the way. "You will never find him doing it." That is where you make your mistake. We know a regiment of farmers who are selling sausage, lettuce, maple products, poultry, vegetables, meat and a dozen other things direct by parcel post. One man has sold over 25 pigs as bacon and sausage, by mail and netted over $6 per pig more than if he had sold to local butchers. Right over the line from Chautauqua County a farmer was discouraged because dealers would pay him only 65 cents a gallon for maple syrup. A single little notice in THE R. N.-Y. has already brought calls for over 50 gallons at one dollar. We can give hundreds of instances where farmers and their wives have developed direct trade, and more than doubled the 35-cent dollar by using parcel post. Such men as Benjamin S. Dean may sit on the fence and sneer and ridicule. They may even discourage a few faint-hearted people, but when it comes to holding up a useful reform of transportation they are just about as useful to society as a kernel of grit dropped inside the hub of a wheel!

BREVITIES.

IF you are thinking of letting the trees go without spraying or trusting to parasites—forget it and spray.

REPORTS show a great shortage of tomato plants in many trucking localities This is due to hot-house failures.

IN all this talk about how to keep the boy on the farm, why has not some one thought to *ask the boy?* He is the interested party—why not get his views?

MUCH time is lost in spraying waiting for the tank to be filled. Where a power sprayer is used a "tank filler" is a great time-saver, for the power will quickly pump the tank full.

RECENTLY a correspondent told of planting several kinds of peas together—mixing the seed so as to have a long-continued crop. Have any readers reports to give regarding this?

WHEN it comes to double-cropping a garden, you must remember that you cannot reasonably expect to make both crops produce full yields. For example, sweet corn growing among potatoes. You can only expect a fair crop from each.

A PIECE of New York property having a frontage of 27.6 feet on Broadway, and 94.11 feet on 20th St. was bought in 1842 for $3,000. The present assessed value of the land is $252,000. It was recently sold, after belonging to the same family for 72 years.

CO-OPERATION FOR MILK PRODUCERS.

Fair Profits to the Workers.

A NEW OPPORTUNITY.—Milk producers should find the solution of their problem through the new State Department of Foods and Markets. The opportunity for them to organize coöperative companies, and utilize the services of the market commissioner for the selling of their goods, is open to them as well as to other producers of the State. In every neighborhood where the Dairymen's League has members, it will be a simple matter to get the members together and coöperate under the coöperative law. Even where the League has no members there would be no delay in forming a company. The State has made an appropriation of $20,000 for coöperative organization work this year, and milk producers may as well get busy and get the benefit of the share of the service that rightly belongs to them. The work has already begun. Coöperative associations have already been formed in some sections. The purpose of the coöperative company of milk producers is to market the milk, and if necessary to care for it in one bulk by the company, instead of individually as it is usually done now.

EXCLUSIVE SALE.—Membership must include the condition that the milk produced shall be sold through the company, and this should be made a part of the by-laws or other form of contract. This is essential. Failure to provide for the sale of products exclusively through the company has been responsible for most of the discouragements in coöperation both in this country and in Europe. Beginners are always anxious to leave a loophole. They are perfectly willing to sign a contract with a New York milkman for six months or a year, and often without knowing much of anything about the responsibility of the buyer; but when it comes to their own company, where there is no question about its credit, they want to reserve the privilege of selling elsewhere. With the New York concern they readily sign a definite contract all in favor of the buyer. With their own company, they refuse a contract that binds them to anything. The result is that those who refuse to sell exclusively, through their own company, get the benefit of the association when milk is flush; but as soon as there is a scarcity, the dealer offers a fraction of a cent more, and these privileged members then abandon their own company, and weaken the organization. It is far better not to have such members at all. Coöperative companies must be run on business principles. Coöperative companies failed at first in Denmark, for just this reason. But no such mistakes are made there now. Every member pledges his milk to the association. The companies are universally successful, and Denmark is noted for the success of its coöperative dairy industry. Originally the Danish dairymen mistrusted one another and coöperative companies, just as dairymen did at first in Ireland, and as they heretofore have mistrusted in New York. The failures in Europe due to the causes referred to above, discredited coöperative work, and discouraged dairymen in Europe just as they have done with us. But just as soon as they organized right they were successful. Just as soon as we organize right, we shall be successful also. We now have the law, and the proper forms, and the State is willing and anxious to furnish the organizers, and start the coöperative enterprises.

WASTEFUL METHODS.—The method of distributing milk in small cities and towns by the individual farmers who produce it is extravagant and obsolete. As now practiced it is a slavish work, and the profits by no means compare with the labor and expense. The present methods require duplication of equipment of distribution by each producer in the business. Each distributor has a certain amount of dairy surplus which with him figures largely as waste. At times his supply falls short of the needs of his customers; and as a rule the whole territory within the distributing center will be covered by each of the competing wagons. With a coöperative dairy company in the neighborhood, all of the milk of all the producers would be delivered to the creamery or station, and then cooled, and prepared for distribution in bottles or otherwise. The distributing territory would be laid out in districts, and one equipment provided for distribution in each district. There would be no two wagons covering the same territory. The capital and labor required for distribution would be much less than now and the cost of distribution proportionately reduced. There would always be supply enough to fill the demand, and there would be no waste, because the surplus would go in with the regular deliveries to be manufactured or shipped to other markets. An important trade in butter, simple forms of cheese, and especially in ice cream could be developed from the creamery. Milk and cream are shipped from many up-State towns to New York, and a foreign concoction of skim-milk and cornstarch pudding returned to the town under the label of ice cream. When the ice cream is supplied in the town it is seldom made and controlled by the producers. There is every reason why the producer should have the benefit of this trade. By producing a high grade of ice cream, and advertising it, a large and profitable trade could be developed in every city and town in the State.

ELIMINATING WASTE.—Practically every business has side lines, specialties and waste products to dispose of. In many lines the profits come largely out of waste products. The farmer must get into the way of saving these wastes, and of preserving for himself the profits of incidental products, such as ice cream and cream cheese. Heretofore he has not been able to do so, because individually he could not afford to develop these incidental features of his business; but the coöperative factory can handle the goods and develop the trade and turn a neglected trade and a waste of material into a good business and a liberal profit.

DEALERS AND PRODUCERS.—During the last 30 years about a dozen milk dealers in New York City have set the price that consumers must pay for milk, and at the same time dictated the price that the producer of milk must accept for his product. The dealers have managed this because they have been closely organized and act as one person. Producers and consumers have been unorganized and each deals with the milk dealer as an individual. The family that cannot afford to buy milk on the dealer's terms has the privilege of going without it. The farmer who gets tired of producing milk at a loss, may sell his cows and go out of the business. There has been no alternative.

FORMING AN ORGANIZATION.—Now let us change the situation a bit. Let dairymen in every section organize a coöperative company. Let the members pledge the milk to their own company on the coöperative basis. Put the sale of the milk in the hands of a committee of their own members. If this committee can sell the milk at fair prices to establish creameries or shipping stations in their own neighborhood, well and good. The committee can demand good credit at good security, and prompt pay. If it cannot be sold locally, then provision can be made to ship or to manufacture it in a coöperative creamery at home. The individual dairyman would have no troubles. The committee and its salesman would have the business part of the company to look after. There are sections where a company of this kind cannot be operated without a struggle. The organized forces will put every possible obstacle in their way. They had this kind of opposition in Europe too. The fruit men had it in California, and the wheat growers are having it now in Minnesota and Dakota. But where producers organize properly and pledge the product to their own company, they always succeed against the impotent opposition of middlemen. The only way the middlemen ever succeed in opposition is by dividing the producers against each other. Let every member pledge all his milk to his own company, and after one year's trial, no producer would go back to the old and ruinous method of selling milk individually.

SAVINGS BOTH WAYS.—The organization that will receive the milk, and prepare it for distribution and sell it will also be in a position to buy for the dairyman many of his supplies at wholesale prices. Feed, fertilizers, hay, flour, salt and numerous other supplies can be bought in bulk at a great saving over local retail prices, and as this system is developed much of the trade would be direct between one farmers' coöperative company and another. The dairymen of the East should be able to buy their grain from the coöperative grain elevators of the West. The surplus products of one section could be easily marketed through the coöperative company in sections where such products do not thrive. In such cases the producers would sell direct to consumers through their respective associations, and both would be benefited. The only expense would be the necessary cost of transportation and distribution on the most economical basis. In discussing the possibilities of a trade of this kind it is necessary to remember that under the present system 65 cents of the consumer's dollar goes to the distributor. If we increase the producer's share by only 10 per cent. of the consumer's price, the dairymen of New York State would realize about $60,000,000 more than they do under present methods; and the farmers of the State all told would realize $200,000,000 more than they get now.

FARMERS AS PRODUCERS OF WEALTH.—Let farmers always remember this: Coöperation is not merely a system of buying or selling. It involves a great big fundamental principle of the distribution of wealth. Farmers are the greatest producers of wealth in the country or in the world; consequently they should be the wealthiest class in the country, or in the world. It requires no argument to prove that they are nothing of the kind. Why are they not in possession of the portion of wealth they create? Every man who creates wealth, or produces, must be supported. This support represents principally the cost of production. But most workers produce more than enough for support. This extra portion is called surplus. Of course, it rightly belongs to the man who created it, but in our complex system of production and distribution a few men manage to control the tools of production or the agencies of distribution, and through these agencies these few men manage to appropriate all the surpluses to their own use. The surplus of each individual producer may be small, but many such surpluses controlled by one man makes him rich. It is this accumulation of surpluses in one hand that makes the colossal fortune. If the surplus of all milk values were left in the hands of the dairymen who produce the milk, there could be no millionaire milk companies. The fortunes they make would simply be distributed among the producers. It would not make millionaries of any of them, but it will make them all more prosperous.

ECONOMIC PARASITES.—In so far as the distributor, the agent or the middleman renders a necessary service, he exercises an economic function in production, and is entitled to reward in proportion to his service. But the speculator, the manipulator and monopolist in food products render no legitimate service to anyone. They are, as far as producer and consumer are concerned, economic misfortunes. They are to distribution what frosts and droughts and insect pests are to production. We are not permitted to spray them with lime and sulphur, but just as we labor to keep rank weeds out of the vegetable garden, so must we work to keep useless middlemen out of the distribution of food products.

CO-OPERATIVE EFFORTS.—This is what coöperation is intended to accomplish. It is to preserve the surplus of production for the man who produces it. To accomplish this we must put the tools of production and the agencies that control distribution in the hands of the producers. Farmers control the tools, and we need in their case only to put the agencies that control distribution into their hands. It is not necessary in all cases for the producer to follow his product all the way to the consumer's table; nor would it be wise for the farmer to exact an excessive price. The State Department of Markets will aim to establish prices through the law of supply and demand. Surplus products will work off quickly at low prices. Short supplies will demand better returns. The purpose of the department is to keep the channel open for the flow of food from the farms to the city homes. The system cannot be established in a day or in a year; but if farmers lend themselves to the coöperative system, within ten years the farms of New York State will increase from 50 to 100 per cent. in value, and we will have in New York State the most favored and the most prosperous farmers in the world. J. J. D.

New York State News.

DISPOSAL OF DISEASED COWS.—When the New York Milk Committee made the statement that the Department of Agriculture was giving away tuberculous cattle to be killed and fed to the inmates of State institutions, they evidently did not have full information on the subject. Deputy Commissioner of Agriculture Harry B. Winters, in the absence of Commissioner Huson, denied the charges made by the New York Milk Committee. He says the department does not give away cows, and such cows as are killed are killed under the direction of a State veterinarian, and if the veterinarian finds the meat wholesome it is sold. If the meat is diseased it is destroyed with acids and buried. "In every instance," Deputy Winters is reported to have said, "a State veterinarian is in attendance at a killing." Under the segregation contract the institution, or the farmer who has charge of the cattle, has the right to use the milk after pasteurization but is enjoined from killing the cattle.

GETTING FARM HELP.—The manager of the Jefferson County Farm Bureau called a meeting of farmers who want help, for April 8, at the manager's office. All farmers who are willing to take such help as may be secured in coöperation with the agents of the Department of Agriculture and give them a fair trial, will meet and select one of their number, or some other representative, to go to New York and in conjunction with the Department agent make a first hand selection of laborers to suit the needs of the farmers. Each farmer makes out an application for the class of help wanted with the understanding that the laborer's transportation will be paid, the amount to be deducted from his earnings after being employed. This is an intelligent way of going after farm help, better for both farmer and laborer than to set a carload of men down at a station without any definite arrangement or undestanding as to where they shall go, or of what kind of work they will be required to perform.

NEW STATISTICIAN.—Dr. Cressy L. Wilbur, chief statistician of the U. S. Census Bureau, has been assigned by Director Harris to take charge of the new division of vital statistics in the State Department of Health, now being organized. The salary of the position is $4,000 a year. Prior to his connection with the census department, Dr. Wilbur was chief of the division of vital statistics of the State of Michigan.

NEW GRANGES.—The official report of the secretary of the National Grange just received shows that during the first three months of this year there were 12 new Granges organized in this State. The total of new Granges in the United States for that period was 220 and 11 reorganized. Ohio and Nebraska are tie for first place with 29 new Granges, followed by Kansas with 26.

GRAIN ELEVATOR RATE BILL.—Gov. Glynn has vetoed the grain elevator rate bill amending the law relative to the rate to be charged for elevating grain. The Governor says, in brief, that the present law provides that the maximum charge in any city not exceeding 130,000 population shall not be more than five-eighths of a cent per bushel. The amendment would insert after the word a "maximum charge," the words "to be made or fixed by any person, copartnership, or corporation, or association of persons, copartnerships, and corporations or any of them." The governor objected to the term "association of persons" whose effect might be to give legal stand to a possible combination which would otherwise violate the anti-trust laws of the State. The governor has signed the bill increasing the salary of the Commissioner of Agriculture from $6,000 to $8,000.

RURAL SCHOOL GARDENS.—Trophies in the form of cash prizes of $60, $30 and $15 are to be awarded by the State Fair Commission for rural school garden displays. A representative of the Education Department and one from Cornell will be in charge of the exhibits.

GOOD PRICES FOR COWS.—Up in the northern part of the State, according to reports, the demand for dairy cows is strong and the prices are more than good. It is believed that the market will advance rather than recede. One farmer and breeder sold five calves and a yearling for $825, and the purchaser left a standing order for what heifer calves there might be for sale, at $75 each when four or five days old. On another farm five calves but a few days old, brought $88 each. These cattle were mostly Holsteins. The increase in price on purebred stock has had its influence with grade cattle and these occasionally reach the $100 mark. J. W. D.

Woman and the Home

From Day to Day

THE ROBIN.

In the tall elm tree sat the robin bright,
Through the rainy April day,
And he caroled clear with a pure delight
In the face of the sky so gray,
And the silver rain through the blossoms dropped,
And fell on the robin's coat,
And his brave red breast, but he never stopped
Piping his cheerful note.

For, oh, the fields were green and glad,
And the blissful life that stirred
In the earth's wide breast was full and warm
In the heart of the little bird.
The rain-cloud lifted, the sunset light
Streamed wide over valley and hill;
As the plains of heaven the land grew bright
And the warm south wind was still.

Then loud and clear called the happy bird,
And rapturously he sang,
Till wood and meadow and riverside
With jubilant echoes rang.
But the sun dropped down in the great west,
And he hushed his song at last;
All nature softly sank to rest,
And the April day had passed.

—Celia Thaxter.

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HERE is a puzzling question that is offered to readers. A correspondent in New York State asks:

Can you tell me where I can get what were known years ago as "California Bees"? They resembled small pieces of dough, which upon being placed in a can of sweetened water started working or fermenting. They would sink to the bottom, bubbles would gather on them, they would rise to the surface, discharge the bubbles, then sink and repeat the process. This liquid after a time would sour and was used as a substitute for vinegar in pickling.

These "California Bees," of course, started a ferment in the sweetened water. Ordinary yeast could be used in similar fashion.

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ANY woman who is interested in home millinery should be sure to add milliners' pliers to her outfit. It is surprisingly easy to bend a wire just right with the handy little pliers, whether for stiffening a bow, edging a brim or supporting a ruche. When stiffening an upstanding halo of maline to trim the crown of a hat, it is a good plan to bend the wire into a series of square-cornered battlements, like the "walls of Troy" pattern, each battlement about three inches wide, and as high as the trimming requires. The wire can then be brought a little closer together at bottom than top, so as to give a slight flare. It can be fitted better than where there is a separate top and bottom wire, joined by upright pieces and is simple to make with the milliners' pliers.

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THE notion counter of a big department store is very instructive in the novelties it displays, which always reflect changes in fashion. In the days when every woman wore a high tight stock collar, boned to the last degree of endurance, collar foundations were prominently displayed, but they are now placed in the background. Collar supports of various inconspicuous kinds are plentiful, because transparent guimpes require them, but the newer neck trimmings are cut low in front, with some sort of stand-up collar at the back, which calls for invisible wiring. Ruche supports for the Medici pleatings are of fine wire, while for the flaring Gladstone collars one can buy fine wire by the spool; this is run along the hem of the collar. Among the newer fastenings, in additional to several new ideas in hooks, there are snap fasteners already attached to tape, which may be bought by the yard. If we wish to use pipings or covered cording for dress trimming, the notion counter offers cable cord, in several sizes, which may be bought by the yard or by the pound. It is soft and flexible, and when covered with silk it is used in both millinery and dress trimmings. Among minor conveniences at the notion counter are the skirt gauges, for measuring the length when hanging a skirt; they cost from 25 cents up. We have often noticed what a scant array of dressmaking conveniences some women possess, in spite of doing all the family sewing, and how much effort they have to waste, for the lack of some trifling aid. It is not only the lack of great conveniences such as running water, or adequate heating, that impair efficiency and add to labor, but also the small things that make work "handy," and thus reduce effort.

The Rural Patterns.

When ordering patterns always give number of pattern and measurement desired.

8158 Child's dress, 6 to 10 years. With square or round neck, long or short sleeves, with or without bloomers. 8090 Girl's dress, 10 to 14 years. With long or short sleeves. 8148 Girl's dress, 8 to

14 years. With straight skirt that can be plaited or gathered, blouse that can be left loose or cut off and drawn up at the waist line, with low or high shield, long or three-quarter sleeves, sailor or square collar. 3138 Boy's overalls, 4 to 8 years. 8159 Boy's Russian suit, 4 to 8 years. With square or sailor collar, long or short sleeves, high or low shield.

8172 Coat in kimono style, 34 to 40 bust. 8197 Eton coat with vestee, 34 to 42 bust. 7985 Semi-princesse dress for misses and small women, 16 and 18 years.

8191 Draped two-piece skirt for misses and small women, 16 and 18 years. 8123 Three-piece skirt, 22 to 32 waist. Price of each pattern 10 cents.

Diet for Diabetics.

Having in the family a diabetic patient, the subject of cooking minus the starch and sugar elements comes home to me. In general, doctors agree on fundamentals, but on certain points they differ. Oatmeal and all oat products are taboo by the average physician, but our family doctor feeds rolled oats in every imaginable form—gruel, porridge, bread. He cured a bad and chronic case while feeding the patient every day oatmeal in some guise. Again, doctors in general forbid tea and coffee, while some hospitals allow both. The printed list of edibles permits milk only after being peptonized, while some doctors give it raw or cooked in every possible way; others think it matters not how it is served, while still another class advise trying it each way and deciding which method suits the individual case. It is safest to gain the family doctor's opinion in every instance, then adhere to his advice, pinning perfect faith to his precepts. Diet is the strong factor in this trouble, usually only a tonic being added

If oatmeal is forbidden, then one is narrowed to gluten for bread, and one's ingenuity is taxed to vary its forms. When made with milk, and served hot the buns are delicious, but the cold raised yeast-bread is rather lean. When cut in slices it is made more palatable if chopped nuts are added. Make a sponge of the flour scalded with hot milk (new and sweet), and a cup or cake of yeast added after sponge cools somewhat. After this is light, mix like any raised bread with more flour and warm milk. If one hasn't the milk, use warm water and a little lard or butter. The biscuits made of sweet milk and baking powder, with salt, and shortening, may be mixed hard and cut out like biscuits, or dropped into gem pans with a spoon. Stirred up with buttermilk and soda, adding a well-beaten egg, improves their flavor. Nut meats may be added, likewise, to the rolls. Cakes of all kinds may be made by using saccharin, no sugar.

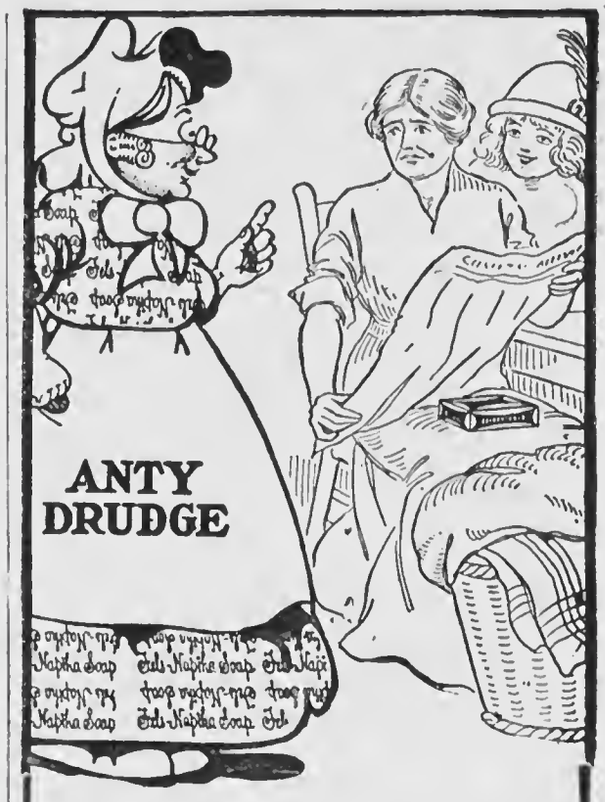
Some hospitals forbid cocoa or chocolate, while others do not. Almond bread or cakes, made of one part almond flour and one part gluten, are allowable and a welcome change, as are bran muffins, made one part bran to three parts gluten flour. Meats of all kinds are permitted, but if the gravies are to be thickened, it must be done with one of these three flours, as wheaten flour is banished altogether. Our physician said that white raised, sliced bread, toasted through and through, is less injurious than white flour in any form, although it is not to be served even thus.

Lemons, sour apples and sour oranges are given, and as sauce is almost imperative in so narrow a bill of fare, it behooves the patient to serve apples in a different way every time. They may be baked without flavoring, stewed, canned or preserved with either the orange or lemon juice and grated rind to give piquancy, or better still, may be peeled, cored, and sliced, covered with water, and cooked in the oven till a dark red. Sweetening in all instances is confined to saccharin, which is not so expensive when one becomes accustomed to the need of so small an amount. With practice one becomes expert in its use, even manufacturing pies and puddings, and using gluten for the crust. As eggs and milk may be taken indiscriminately, lemon, orange, cream, and custard pies are within easy reach. Even crackers may be made of pie crust and kept indefinitely for soups, stews, and chowders.

As the vegetable list is so limited, it is wise to can a fresh supply for Winter use, for the general health calls for this help, and the wide array of fish and meats (all but liver) is more palatable so supplemented. Greens galore are advised, dandelions, cresses, radishes, celery, oyster plant, asparagus, mushrooms, tomatoes, onions, cucumbers, lettuce, kale, chickory, beet-tops, spinach, string beans, olives, and all of these taken as green vegetables, or pickled. Oil and vinegar come in handy with many of these. The patient whose one standby in the vegetable line has been the trusty potato will be challenged for some vegetable to take its place.

Walnuts, almonds, filberts, pecans, Brazil nuts, and cocoanuts may be eaten and these chopped make good in sauces and cakes where fruit would be utilized. Peanuts and chestnuts are taboo. Shellfish, indeed, fish of all kinds in every imaginable form are allowable. Diabetes is a middle-age disease; the old and the young being seldom attacked by it, and frequently runs on for years, kept in check and often cured by careful dieting with seldom a fatality.

L. L. TROTT.



Mrs. Shiftless—"I'm ashamed to have you catch me reading when I ought to be washing my blankets. But I sent Mary to the village for some soap that wouldn't shrink wool, and the storekeeper wrapped it up in this newspaper that has such an interesting story in it. I just couldn't resist a look at it for a minute."

Anty Drudge—"Well, the storekeeper knew his business. He sent you Fels-Naptha Soap. Now if you'll spare me a few minutes I'll show you how to use it in lukewarm water. You can get through in no time, and then you can finish your story with an easy mind. Fels-Naptha is grand for all kinds of woolens, it makes them as soft and downy as when new."

Fels-Naptha will get your clothes on the line in a couple of hours after breakfast, and you can start ironing Monday afternoon, feeling rested and refreshed. That will make your Tuesday's work easier, too.

Fels-Naptha Soap works best in lukewarm water, and little rubbing is necessary. Your blankets will be soft and white.

Buy Fels-Naptha by the box or carton. The easy directions on the Red and Green Wrapper should be followed.

Fels & Co., Philadelphia.

FELS-NAPTHA

Art in Rags.

The old-fashioned women made carpet-rag rugs from motives of economy, considering them only as makeshifts, and, indeed, they could hardly have been mistaken for anything else. Modern women make them, some because "cottage rugs" are the fad at present; others because they admire the soft colorings and crisp daintiness of floor coverings that may go to the laundry as often as the bed linen and come forth as unspoiled. The latter sorts of women demand art before economy, usually buying the colors they require and tearing up new cloth to be woven into rugs; while the economical woman throws her old rags into some sort of apology for a rug and sits down to endure it.

Now, why may not each sort of woman have what she desires, even though art, economy and popularity joined issues? Certainly with the accumulation of half-worn garments in every home there can be no excuse for purchasing material to tear into strips, especially as repeated washings have lent to the old goods a softness of coloring that is ever essential to art in any form. Equally unreasonable is it for the woman to whom economy is a necessity to endure crudely colored floor coverings, for even though made of rags the rugs may be in soft, harmonious shades and designs, suitable for any room in the house.

For the room whose color-scheme is brown, let me suggest a rug in brown shading to white. The centre may be of mottled brown and white, with an inch-wide border of pure white marking the beginning of the outer border of plain, clear brown in a darker shade. For a bedroom a rug of lavender and gray made after the same style, with perhaps a final narrow border of black. Or another in shaded blacks and steel grays. Which, think you, would appeal first to the eye of the beholder—the economy or the artistic beauty of the floor coverings?

Then to whichever class of women you belong, if you are about to evolve rugs begin by carefully sorting the crude materials, both as to color and fabric. Keep black and colored hosiery separate, there being nothing better for borders, the black in stockings being particularly soft and pliable. There is seldom too much white, as when not wanted in the natural this can so easily be dyed to help along any preferred color scheme.

A favorite method of dyeing produces a shaded effect. Sew and tie the rags into skeins loosely. Then wind wide strips of cloth around the skeins very tightly, tying three or four inches apart. When dyed the places where the skein was tied will have absorbed little or none of the dye, while the untied portion will show the full depth of color, producing when woven, a shaded or mottled effect that is very pleasing. A similar effect is produced by cutting striped bed-ticking *across the stripe*; one bed-tick producing sufficient material to make the body of a small rug. There should be a narrow border of white, with a wider border of blue of the same shade.

The cutting and sewing of the rags need not be the irksome task it is usually considered. If you are so fortunate as to have friends engaged in the same task why not have a carpet-rag "bee," and make a jollification of it? Or little fingers may be brought into requisition, and much fun be gotten out of what will be indeed a great assistance. Even the sewing machine may be brought into service in the sewing. Tear sheets, pillow slips, etc., into large pieces having straight edges. Then lap one edge over the other, allowing the left-hand edge to project about three-eighths inches beyond the righthand edge; stitch across the ends twice, making a flat seam. There will be no loose edges if you stitch close to each edge. This will give you a tube of cloth which may be cut in one continuous strip, by beginning at the projecting edge and tearing round and round, cutting where sewed. Stockings also may be cut in one continuous piece from the hem to the toe. Begin with a gore-shaped piece, the narrow tip to be discarded, trimming the second row to proper width, and cutting round and round, as one peels an apple.

Carpet-rags should average about three-quarters of an inch in width, which statement should be taken mixed with judgment. Very thin or sleazy materials, such as stockings, a strip of which will stretch out into an infinitesimal thinness, should be cut wider; heavy materials such as flannels, etc., should be much narrower. To determine the proper thickness take a section of each material and twist it between the fingers, putting them side by side, which will enable one to determine about how the thickness will average when pounded together in a rug. It is really better, however, not to mix materials in the same rug, using the cotton rags by themselves, and the woolens and knit goods together.

Allow about 1½ pounds of three-quarter-inch rags for every yard of rug or carpet desired. That means the square yard, as most rag carpet is woven a yard wide. However, delicate-colored rugs which must go often to the laundry, are best made narrower, 2½x4½ feet being a good size. Darker rugs may be any size desired.

Room-size rugs are best woven in strips and sewed together, (for a six-by-nine rug two yard-wide strips woven nine feet long) having a border woven across the ends only, and either with or without a fringe of the carpet-warp.

Beside having them woven there are several ways of making carpet-rag rugs. By braiding the strands and sewing the braid together; by crocheting in strips with a large wooden hook, or by weaving on a hand-loom. A hand-loom may be made from a large board into the ends of which are driven nails about an inch apart and directly opposite each other. Carpet warp or heavy cord is strung back and forth over the board from nail to nail, then the rags are woven into this warp, over one thread and under the next, exactly as though darning a hole in the stocking. Either method makes very good rugs, but for general wear the more satisfactory method is to put the prepared rags in the hands of a competent weaver, who will submit designs and suggest colorings if desired.

MAUDE E. S. HYMERS.

Boiled Apples.

As to baking apples, it is one of the fine arts of the cook to have them right, and all Yankees were trained to its creed. But some are not situated to bake; for them, boiling can be used. When we were in the city cooking with gas stove we found this out and taught it to many friends. Put on clean apples, whole, as if to bake, with little water and sugar to taste. Simmer slowly till soft, take out apples, boil juice down to syrup and pour over. These will hardly be known from baked. E. D.

Raised Doughnuts.

How do you make the old-fashioned raised doughnut of our grandmothers; light, tender and toothsome as it was? How can the cook fry them so as not to soak fat, just how much shortening and sweetening? E. D.

Old-fashioned raised doughnuts are made as follows: One pint risen milk bread dough; one cup sugar; two eggs; one tablespoonful melted butter; spice to taste; flour enough to roll out. Put the bread dough into a bowl, and work the other ingredients into it, the flour last. Roll out, cut and fry in deep fat. To prevent the doughnuts from soaking fat, the fat should be boiling briskly when they are dropped in and only a few put in at a time, so as not to cool the fat too much. As they are cooked, the doughnuts should be laid on paper to drain.

Cheese Cake.

Will you give a recipe for cheese cake, same as we buy in bakeries? A. K.

The following recipe is, we think, richer than the bakery article, the proportion of egg being higher, but the general composition is the same. We sometimes use less egg, when it is convenient to do so: One and one-half cup cottage cheese, two tablespoonfuls cream, one-half cup sugar, three eggs, juice and grated rind of one lemon (or, if preferred, one teaspoonful vanilla); one teaspoonful melted butter. Press the curd through a colander, add the eggs, well beaten, then the other ingredients, and beat all till smooth. Line a deep pie dish with paste, fill with this mixture, and bake 30 minutes. If desired some currants may be added. Little tarts, baked in pattypans are nice, filled with this mixture.

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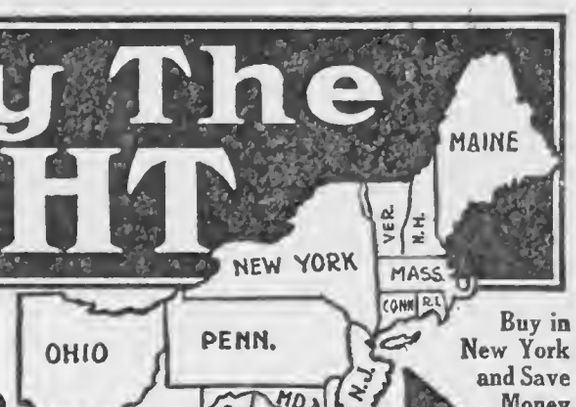

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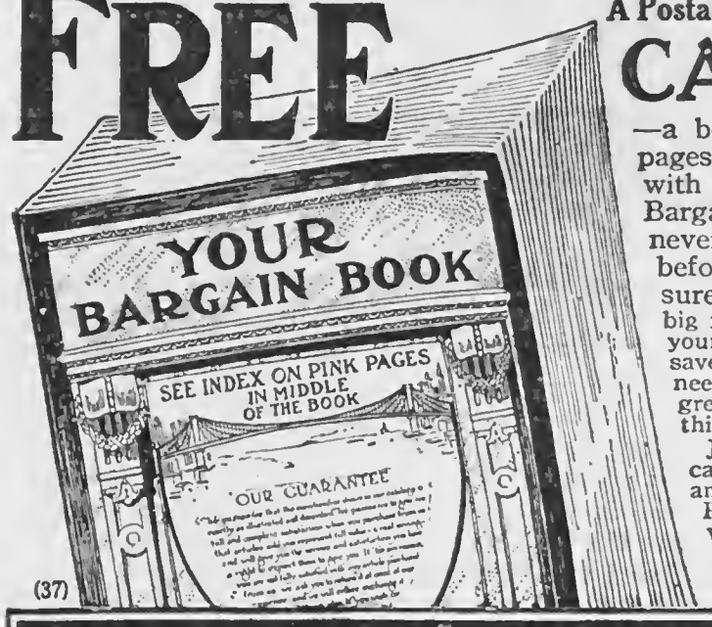

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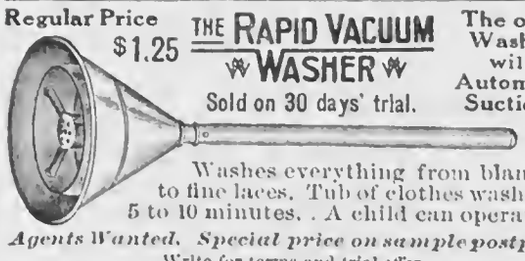

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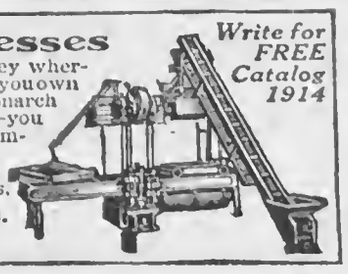

Write for FREE Catalog 1914

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I have to acknowledge the receipt of the full set of Three Kitchen Knives, when I only sent for one—the No. 1 small Carver—and am really entitled to only one (sent as a reward for subscription work). You certainly do all you promise and then some. The knives are certainly good ones, so good that I want more of one kind. Can you get for me five more of the No. 1, "Small Carver"—the pointed blade, hand forged? That little knife is one of the slickest Asparagus cutters I have seen yet, and that is what I want them for.

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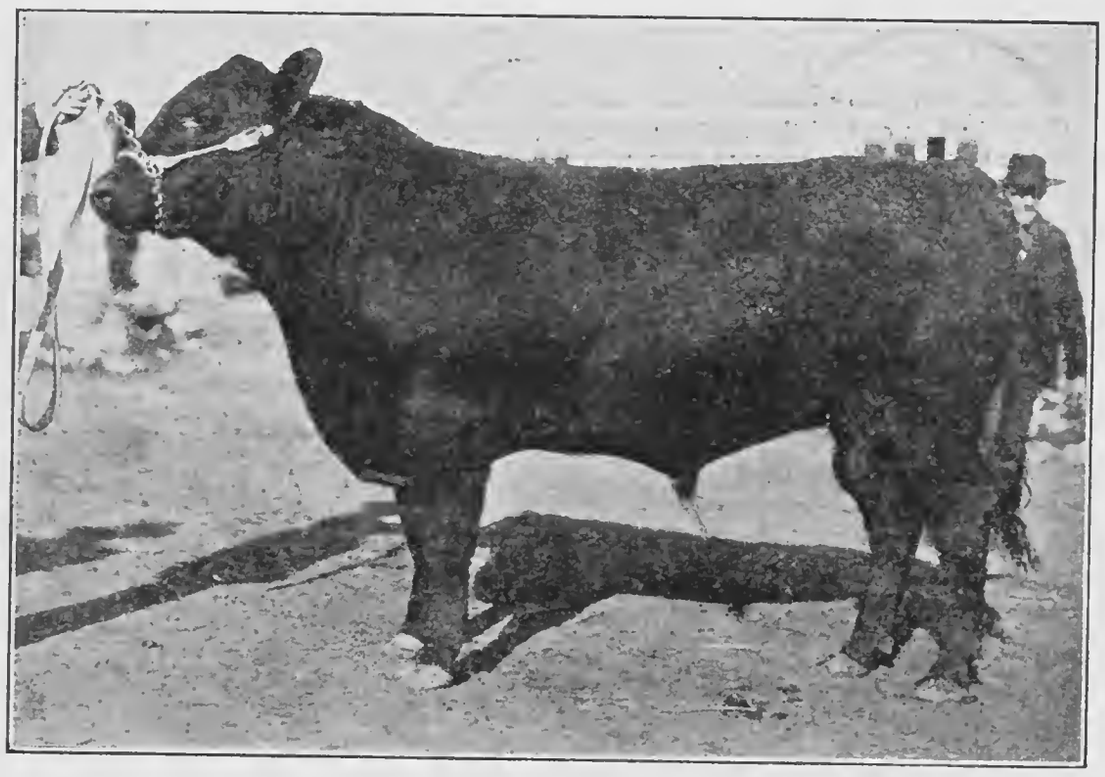
Live Stock and Dairy

TESTING A COW AND WHY.

[Since we printed the picture of that big-bagged Holstein there have been a number of requests for further information. How do they make these cows give so much milk and what is the use of it?]

I have received several letters regarding my cow, whose picture was published in THE R. N.-Y. One man says that the picture was a fake—that no cow ever carried such an udder. Now I can prove that it was not a fake, but a true untouched photograph. It is true that the picture was taken with the idea of showing up the cow's udder to the best effect.



GOOD SPECIMEN OF YEARLING ANGUS BULL.

That was what it was for, and by the way, that is one of the things that go to make a successful breeder in purebreds—to be able to *see* them, and then get them in shape so that others will be forced to see them. So the cow was photographed just a few hours before she calved, when she was in full bloom, plump and full, and with a fully distended udder. Then she was placed in the proper position with her udder just a little closer to the camera and her hind leg farthest from the camera pressing against the udder to throw it out and show it off. Anyone can get just as good a picture if he has the subject and tries hard enough, but there is no reason why the man who is too lazy to try should holler "fake."

In fitting the cow, I stated that I forced her dry when she was giving 30 pounds of milk per day. I did this by taking away all her feed but dry hay and then *stopped milking* her. Yes, her udder swelled up in a way to make one nervous. I did bathe her bag in hot water, but otherwise let her alone. I don't say that this treatment might not spoil some cows, or even this one next time, but one has to take chances if he would win.

The man I bought this heifer from paid $400 for her with the expectation of increasing her two-year-old record and making a profit on her. He did not dry her off, and she did not make a record with him. So I got her at $250. I have increased her record, and to-day she is worth at least $500, and her heifer calf $200 more. After the heifer's udder got soft again and the fever all out of it, I began graining her again, a mixture of ground oats (to give her life and vigor), wheat bran (as a laxative, and to lighten up her udder), hominy and oil meal to fatten her. Why hominy instead of cornmeal? Well, the hominy is not so heating, and it produces a *soft fat*, and so does the oil meal.

Remember that the test was a seven-day test, and therefore I wanted a soft fat—quickly put on and easy to get off. Her roughage consisted of mixed hay, Alfalfa and Timothy, early cut, also mangels, but no silage. Silage is good feed but too bulky for my purpose. I cannot afford to fill up the space inside my cow with anything containing so little nourishment as silage when I want her to do her best. After she freshened, but little milk was drawn from her udder at first. It was given lots of hand rubbing to keep down the "cake" and just enough milk withdrawn to relieve her. Now her feed consisted of hay and mangels, with a little bran and a very little oil meal. As soon as the swelling of the udder began to subside, I increased her grain ration, and put her back onto her former feed, with gluten added. I did not wish to get the swelling all out of her udder, for it is when this swelling is subsiding that the cow will generally test the highest.

As soon as it was practical to do so, she was milked four times a day, and fed grain and watered at every milking. She was fed grain at the rate of one pound of grain to four of milk, which is about the ratio which is generally considered safe feeding. After her test was finished, I milked her but three times a day for a short time, and then but twice. I have eased her off, and she is now giving around 50 pounds a day. I expect to grain her some all Summer, and keep her in the best physical condition, in regard to her health, that I know how. Sometime, when she is fully mature, I hope to "trot her another heat" and place her among the 30-pound cows.

Perhaps some breeders will say that I have told some "trade secrets" that might better have been left untold, but my excuse is that I believe it is best that there be no secrets. So many cows are making good tests that a good many people have come to think that a cow is no good unless she can make 20 or 30 pounds of butter in a week, while the fact re-

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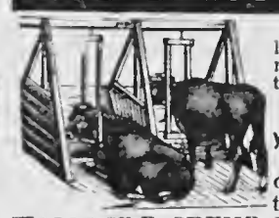

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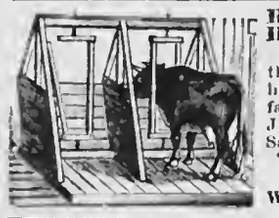

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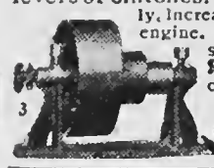

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Selected animals, all ages, for sale. We have the large Berkshires with extreme length and our herd is noted for the prolificacy of its sows. H. C. & H. B. HARPENDING, Dundee, N. Y.

Springbank Herd—Big Berkshires

I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs. J. E. WATSON, Proprietor, Marbledale, Ct.

ELLENWOOD FARM
BERKSHIRES

Pigs of both sexes and unrelated trios for sale. Our pigs are rich in Masterpiece, Lee and Premier blood. Let us furnish you with a foundation herd. Only choice animals sold for breeders.

Write us, or better yet, pay us a visit.

ELLENWOOD FARM, R. D. 1., Hatboro, Pa.

STANDARD LIVE STOCK BOOKS

Sheep in America, Wing	$1.00
Types and Breeds of Farm Animals, Plumb	2.00
Swine in America, Coburn	2.50
Diseases of Animals, Mayo	1.50
Science and Practice of Cheese Making, Van Slyke	1.75
Feeds and Feeding, Henry	2.25
Practical Dairy Bacteriology, Conn	1.25
The Horse Book, Johnstone	2.00
Forage Crops, Voorhees	1.50
Animal Husbandry for Schools, Harper	1.40
Questions and Answers on Butter Making, Publow	.50

THE RURAL NEW-YORKER, 333 W. 30th St., New York

mains that all the dairy cows of the country will not average *six* pounds.

You men who claim that there is nothing to the pure blood but the way she is handled just go ahead with your best grade and test her out. If you kill her, it will not be so bad as if you had bought a $500 pure blood and killed *her*, and if she makes 20 or 30 pounds of butter a week, the joke will be on me.

Why test at all? For no other reason than to prove that we have the goods. Jones goes away and comes home with a new horse. He sits on a nail keg down at the store and proclaims to all that he has the fastest horse in town—but he never lets him out when someone in a hurry pulls out to drive past him. Smith gets a new nag and keeps his mouth shut about him, but when Brown, who has always had the best horse in the neighborhood, pulls on him some day, Smith braces his feet, and getting a good hold on the reins, just chirrups a little and leaves Brown in a cloud of dust. Then we all know that Smith has the goods.

J. GRANT MORSE.

THE STATE AND "PUREBREDS."

The State of Kansas issues licenses to owners of purebred stallions. The process of examining pedigrees seems to have shaken out a few familiar ghosts of the live stock business.

Occasionally a worthless pedigree is discovered. One man tried to account for six generations in 11 years. A case was found where the sire claimed by the pedigree was not imported until a year after the colt was born. Records are on file in this office of all stallions ever imported into America, and it is possible to check any pedigree received.

This claim of offspring born after the parent died is familiar to us. We had it in that famous old cattle case of a few years ago. We have had several cases since where breeders were mighty careless about their records—to be as charitable about it as possible. We think it a good thing for the State to take up this matter of stallion pedigrees. A good stallion costs a small fortune. There is much money involved in breeding to produce a high-class animal and a farmer should have every possible protection when he pays a good price in the hope of obtaining a high-class colt. If there is anything in pedigree at all the farmer has a right to have it straight.

There are some things about this matter of "State control" which are a mile ahead of the times. One man wants a law compelling all farmers to raise two beef calves every year. Another would make it a penalty for dairymen to keep any bull whose dam had a record of less than 250 pounds of butter per year! We hear intelligent and influential men advocating a law to make it a severe penalty for anyone to permit any rooster to run at large except during the breeding season for poultry. The object of this is to compel the production of infertile eggs. Many of such things are properly put under the head of "fool legislation," or a clear interference with the rights of a man to conduct his business in his own way. In this use of "pure blood" a farmer should have some protection from the State.

Why I Breed Black and White.

Because they will produce more milk for the feed they consume than any other breed.

They are persistent milkers, and will give milk within a few days of freshening. I can obtain three times as much for the bob calves as for the smaller breeds. I sell all my calves from my grade cows when three days old for $7.50 each. These calves bring two-thirds more when accident renders them useless as milkers. I speak from experience, as I formerly bred Jersey cows, grades and purebreds.

My 21 milch Holstein cows give more milk than my 35 Jerseys. It is all bosh about Holsteins going dry for such a great length of time. We have great difficulty in drying up some of my Holsteins. Further, they are not so susceptible to the prevailing diseases among the smaller breeds of cattle.

New Jersey. W. P. BAINBRIDGE.

WAITER: "Were you ringing the bell, sir?" Customer (after long wait): Ringing it! Great Scott, no! I was tolling it—I thought you were dead!"—Everybody's Magazine.

DAIRY CATTLE

A Pontiac BULL CALF
BORN FEBRUARY 18, 1914. GET 44 lb. STOCK

Whose dam—grandam—and great grandam; Whose sire's Sister—dam and grandam are all A. R. O. Cows. His Sire's full sister is a 27 lb. 3-year old—fat, 4.5%. In his four generation pedigree are 12—30 lb. cows. Eleven cows who have held (11) "World's records" in their classes, and 1—25 lb. 2½-year cow, and 1—44 lb. cow. His dam carries over 40% the blood of the "World's Champion Butter Cow." K. P. Lass 44 lb. Butter 7 days—171 lb. Butter 30 days, etc. This bull is nicely marked—more black than white. A very soft coat. Active and intelligent. He will make a show bull—Price, $100.00. All papers. Crated. For pedigree address

F. C. BIGGS, TRUMANSBURG, N. Y.

Registered HOLSTEINS FOR SALE

Best A. R. O. breeding. 13 bulls and bull calves. 25 A. R. O. cows. 25 yearlings and heifer calves. Prices—Bull calves, $50. Heifer calves—$150. Cows $225 and up.

CHAS. A. HOWELL, Howells, Orange Co., N. Y.

70 miles from New York—main line Erie R. R.

Buy a Bull on Easy Terms
Long Time and 4 Per Cent Interest

Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.

JUSTAMERE FARM, Middletown Springs, Vt.

FOR SALE!
Prince Beauty Pietertje Hartog 14th

No. 102084. Dropped Oct. 29, 1911. Dam and sire's dam average 24.41 as three-year-olds. Sound and right. $100 takes him.

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The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy prodncers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.

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East River Grade Holsteins for Sale

50 Cows, just fresh, giving 40 to 50 lbs. per day.
20 Cows, due to calve this month and next.
25 Cows, served to come fresh in August and September.

If you are looking for dairy cows and large producers with good size and young, see these cows before buying elsewhere. WE TUBERCULINE TEST.

Registered and grade bulls always on hand.

JOHN B. WEBSTER

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BULL DAIRY MUST GO AT CUT PRICES
REG. HOLSTEIN MALE CALVES
$25 and upwards

Choicely bred, fine individuals. We aim to please our customers. Write today.

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$85 Buys Purebred Holstein Calf—Good breeding; more black than white; age, 4 months. MOHEGAN FARM, Hudson Valley Holstein Headquarters, Peekskill, N. Y.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Purebred Registered
HOLSTEIN CATTLE

To promote general prosperity and their own business, bankers in many parts of the country are buying purebred Holsteins by the carload and selling them on time to the farmers of the community.

Every year it becomes clearer that with large yield cows the cost of milk and butter production can be brought down to a point that makes dairying profitable.

A herd of purebred Holsteins is an investment that combines safety with large dividends.

Send for FREE Illustrated Descriptive Booklets

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ARDMORE FARM GUERNSEY

One purebred Bull—10 mo. Son of Imported Hayes Royal, 3rd. A grand show prospect. Address JAS. MAGNER, Manager, Glen Spey, Sullivan Co., N. Y.

Two Guernsey Herd Bulls of the Ledyard Bay and Masher Strains, three and four years old. Sure breeders. $150 each. J. E. Van Alstyne, Kinderhook, N. Y.

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GUERNSEYS
FOR SALE

Bull Calf, born in June, 1913
Bull Calf, born in December, 1913

These Calves are from high producing lines, and are excellent individuals.

WAYLAND, MASS.

Address:
Edmund H. Sears, Owner — Walter Jauncey, Jr., Supt.

Horses and Mules

HIGHLAND VIEW STOCK FARM

Our last importation of BELGIANS and PERCHERONS is the BEST we ever imported. We have sold more Stallions and Mares in the last sixty days than we ever sold in a year. WHY? Because we sell the good, big, drafty kind at the right price, and lower than the other fellow.

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KITTANNING, PA.

Why, Man Alive, Don't You Know

that purebred drafters at two years old will do more work and stand it better than ordinary grade animals at five? Our latest bulletin will prove to you that purebred drafters are less expensive than "scrubs". We will send you one on request. ADIRONDACK FARMS, 57 Warren St., Glens Falls, N.Y.

50 STALLIONS
and MARES, $250 to $1000 each

Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.

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Biggest Income Producers on the Farm young, purebred draft stallions; sons of famous imported prize winners and registered mares. Your community needs one of these great Percheron colts, coming 2 years old; weight 1200 to 1600; $500 to $500. Are you the man to profit thereby? Come and see our famous horses. Adirondack Farms, 57 Warren St., Glens Falls, N. Y.

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BULL CALF
For Sale
$75.00

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GUERNSEY BULL CALVES FOR SALE

Out of Healthy Tuberculin Tested Cows of Choicest Breeding—some Advanced Register Calves from Two to Twelve Months old.

BY Our HERD BULL
PRIDE'S MAY KING of LINOA VISTA No. 18617
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(May Rose Blood)
DAM, PRIDE of CASTLE HAYEN No. 25981 A. R. No. 1564. (Sheet Anchor Stock)

Apply to
FOX RUN FARM
F. S. GILCHRIST, Supt., PETERBORO, N. H.

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WHERE you see a GUERNSEY you know the owner is enjoying prosperity. WHY? Because for every dollar invested in feed, he is returned a profit.

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GUERNSEY CATTLE CLUB
BOX Y - - PETERBORO, N. H.

For Sale—**Guernsey Bull** 10 mos. old. Entitled to Registry. Lillian L. Hurff, Moorestown, N. J.

FOR SALE—Otterkill Farms Ayrshires Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer. Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

FOR SALE
6 Registered Jersey Heifers

Coming three year old, in calf. Also 2 cows, one with an official butter record of 632 lbs. 11 oz. in one year, and a heifer calf out of said cow. Also a good bull 4 years old from tested dam and granddam. This stock is in fine shape and they are a beautiful lot. For further particulars inquire of or write to

FOREST PARK FARM, Brandon, Vt.

JERSEY BULL—Two Years Old

Descendant of Golden Ferns Lad.

OLIVEDALE FARM, - Hillsdale, New York

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

JERSEYS HEIFER and BULL CALVES, $60 to $100 BRED HEIFERS and COWS, $100 to $200 Blood of the $15,000 Noble of Oakland, Financial King, etc. From heavy-producing dams. Bred to sons of Eminent Raleigh and Gamboge's Knight. OAKWOOD FARM, R. F. D. 3, Newburgh, New York

FOR SALE—JERSEY BULL CALF—ten months old. Fine pedigree. Sell cheap. Also Dachshund dog. Great pet. M. B. MOORE, West Troy, N. Y.

FOR SALE—**Two Richly-bred Jersey Bulls**—One yearling and one two year old. O. N. WILSON, Kittanning, Pa.

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

A Dairy Ration.

Can you balance a ration for my dairy from the following feeds, using all or some of those named? I am feeding silage, oat straw and Timothy mixed. I mixed 100 pounds brewers' grains, 100 pounds cottonseed meal, 80 pounds linseed meal, 100 pounds sucrose (molasses feed), 200 pounds ground oats and cornmeal (one-third oats to one-third corn) and 100 pounds buckwheat middlings together. How much of the mixed feed should I give a cow per day? My cows are good grade Holsteins but do not give as much milk as they should. H. D. W.

New York.

Your grain ration is a very good one as it stands. I should advise feeding one pound of the mixture to 3½ or four pounds of milk. If the cows gain in milk increase the grain proportionately. The best way to feed the grain is to scatter it over the silage. C. L. M.

Ration for New Milch Cows.

Will you give a balanced ration from the following feeds for new milch cows, weighing from 600 to 800 pounds? Bran, $1.40; gluten, $1.60; cottonseed, $1.80; meal, $1.50. I have mixed hay and corn silage. Silage was made of the Early Mastodon corn about half eared. M. T.

Wayne Co., N. Y.

The following ration ought to be satisfactory:

	Dry Matter	Digestible Protein	Total Digestible Nutrients
Silage, 30 lbs.....	7.920	.420	5.160
Mixed hay, 10 lbs....	8.710	.580	5.050
Bran, 2 lbs.	1.762	.238	1.190
Cottonseed meal, 3 lbs	2.790	1.128	2.418
Cornmeal, 2 lbs.....	1.808	.136	1.680
Total	22.980	2.502	15.498

Nutritive ratio, 1:5.2.

It is not to be understood that the amounts of roughage given should be rigidly followed. The amounts of silage and hay you have on hand should be taken into consideration. The amount of grain also will depend on the milking capacities of the cows. C. L. M.

Ration for Jersey.

I would like a balanced ration for Jersey cow. I have clover hay and can buy the following grains: Cornmeal, per cwt., $1.65; bran, $1.30; middlings, $1.40; oil cake, $1.85; ground feed (corn and oats), $1.35. G. W. W.

Wisconsin.

Feed the cow three times daily all the hay she will eat up clean. For the grain ration feed two pounds bran, three pounds oil cake and two pounds corn and oats. It is better to give the grain at two feedings, morning and night. C. L. M.

Ration for Sow and Pigs.

What is the very best and cheapest ration for a brood sow with nine pigs? At present I am feeding equal parts of oats, barley, middlings, and bran, about four quarts three times per day in her slop. Would it be all right to put some cornmeal with her feed? Will you give a ration for the pigs after weaning? My old pig pasture is about run out. Could I plow it early in the Spring and seed to something for early pasture? What would you advise sowing? I have a piece of new land that I plowed last Fall. Would like your advice on what to sow on it for pasturage. How would cow peas and oats do, and would they be safe to turn cattle in as regards bloat?

New York. L. M. S.

L. M. S. could safely add some cornmeal to the ration that he is now feeding his brood sow with pigs. In fact if he has grown the corn on his own farm it should constitute the bulk of the ration. The following feed mixture has given us very satisfactory results with brood sows suckling pigs: Ear corn, 100 pounds; digester tankage, 10 pounds; wheat bran, 15 pounds; oil meal, five pounds; bone meal, two pounds; salt, one pound. The corn is fed without any preparation whatsoever, and the balance of the ingredients are fed in the form of a thin slop twice daily. If it is desirable to use cornmeal it can well be mixed with the other ingredients and fed in the form of a thick slop twice daily. As to the amount to feed it is our rule to give the brood sows all they will clean up with relish after the pigs are old enough to make demands on their system, but during the first three weeks they are fed rather sparingly, as it is desired to let the pigs get hungry, and take some exercise in their endeavor to get sufficient milk, rather than allowing them to get an abundance of milk without any effort and then cuddle up in a corner and probably contact thumps.

Dwarf Essex rape probably leads the list of crops that can be grown during early Spring suitable for foraging swine. Alfalfa, of course, heads the list, but when you consider a crop to be seeded during the early Spring, rape is the most excellent one. A little variety, however, is desirable, and a mixture made up of oats, Canada field peas, rape and Red clover make a most excellent mixture, and instructions as to method of planting, etc., have been given repeatedly in these columns. Oats and peas from a dairyman's standpoint had best be fed as a soiling crop, rather than pastured by the cows, inasmuch as the ground is soft, and they do considerable injury to the plants if permitted to roam through the fields. With pigs, however, there is less waste, especially if it is possible to seed the material in rows rather than broadcast or drilled. F. C. M.

Ration for Montana.

Will you prepare a milk ration from the following feeds? Timothy hay, or grain hay (oats, wheat or barley); oats, barley, wheat, bran, middlings, shorts and flax meal; any of these may be obtained. Could you also give me some information about where a feeding chart, may be obtained? H. L. E.

Montana.

If the grain hay was cut before the grain was mature, its feeding value would be similar to that of good Timothy hay. If ripe, then its value is less, especially the wheat. Feed the cows all the hay they will eat up clean two or three times daily. For a grain ration mix two parts by weight of wheat bran, three parts flaxseed meal and three parts ground oats. Feed an average cow, giving 25 pounds of milk daily seven pounds of grain per day.

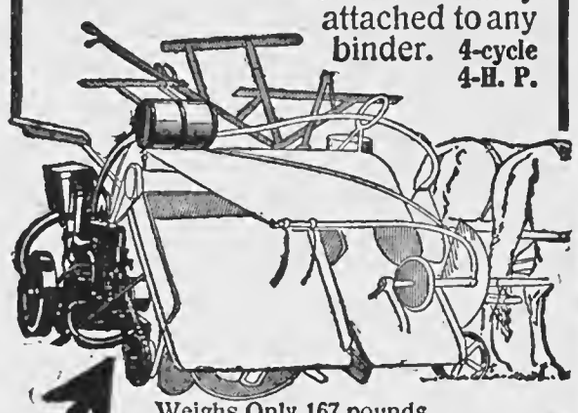
The U. S. Department of Agriculture, Washington, D. C., will furnish free bulletins on the subject of feeding. Bulletin No. 321 of the N. Y. College of Agriculture, Ithaca, N. Y., is very good, and perhaps your own experiment station at Bozeman can furnish something. The work of Prof. W. A. Henry, entitled "Feeds and Feeding," is the most complete I know about. It may be purchased from THE R. N.-Y., price $2.25. C. L. M.

"WHAT is a gusher in an oil field?" asked the Old Fogy. "The man who writes the prospectus," replied the Grouch.—Cincinnati Inquirer.

Save a Team During Harvest — Run Your Binder with 2 horses and a

Cushman Engine

Better than 4 horses without the engine. Team simply draws machine. Engine does all operating. Sickle never stops when bull wheel skids. Easily attached to any binder. 4-cycle 4-H. P.



Weighs Only 167 pounds

Quickly detached for any other farm power work. Delivers full 4 H. P. Speed changed while running. Has patented clutch pulley with sprocket for chain drive to double sprocket on binder. Schebler Carburetor. Also 2-cylinder 6-H. P. up to 20-H. P. heavy duty, light weight specialty farm engines. State size wanted.

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The Original Binder Engine

Jacobson Gasoline-Kerosene Engines

No matter what work you want to do, there's a Jacobson engine that's just the thing. One of our newest operates on either gasoline or kerosene. Jacobson Portable Gasoline Engines are approved and labeled by the Underwriters. They carry the heaviest loads with ease. Material and workmanship finest obtainable.

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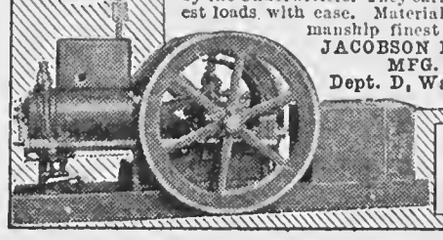

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DE LAVAL CREAM SEPARATORS

are the cheapest as well as the best

LOOK AHEAD!

DON'T TRY TO SAVE $10.00 TODAY if it means a loss of 25 cents a day for all the years a cream separator may last you.

THAT'S JUST WHAT YOU WILL do if you buy a cheap or inferior cream separator simply because its first price is a little less than that of the De Laval.

WHEN A PRUDENT MAN BUYS a cream separator he knows that what he is really paying for is not just so much iron, steel, brass and tin, whether it is called a separator or not.

WHAT HE WANTS IS A MAchine to perform a certain service, and he must be sure of the machine doing the work for which it is intended as thoroughly and with as little effort as possible on his part.

THOUSANDS OF BABCOCK AND other tests have proved that the De Laval skims closer than any other cream separator under any conditions, and particularly under the harder conditions always experienced at times.

JUST THINK WHAT A LOSS OF as little as 10 cents worth of cream at each skimming means to you in a year—twice a day for 365 days—over $70.00, and with as many as ten cows the cream losses alone from an inferior separator usually amount to more than this.

CREAMERYMEN, WHO ARE DEpendent on their separators for business success, have long since found out the difference between De Laval and other separators, with the result that De Laval factory separators are almost universally used the world over today.

DE LAVAL SEPARATORS ARE identical in all sizes, for one cow or a thousand, and the differences between separators are just the same with the smallest machine and the largest. They mean as much relatively to the little as the big user.

THEN THERE IS THE SAVING in labor because of the easier running and greater capacity of the De Laval over other machines and the less care required in cleaning and adjustment, worth at least 10 cents a day.

AND THERE IS THE INDISputable fact that a De Laval machine lasts from ten to twenty years as against an average of from two to five years in the case of other separators, or five times the average life of competitive machines.

THESE ARE THE REASONS why De Laval Separators are cheapest as well as best, why thousands of other machines are yearly being replaced with De Lavals and why their use is rapidly becoming as universal on the farm as in the creamery.

IT SHOULD BE REMEMBERED, moreover, that if first cost is a serious consideration a De Laval Separator may be bought on such liberal terms that it will actually save and pay for itself, as many thousands of them have done.

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer.
If you don't know the nearest De Laval agency simply write the nearest main office, as below.

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

LET THE WIND **PUMP** YOUR WATER **FOR NOTHING**

WHY PAY FOR GASOLINE WHEN WIND IS FREE!
Get a Big, Heavy, Powerful, Light Running, Double Geared

SAMSON WIND MILL

SEND FOR CATALOG
We also build Ideal Feed Mills, Pump Jacks, Hand Grinding Mills for Poultry Raisers, Gasoline Engines, Ensilage Cutters and Brass Candle Sticks

STOVER MANUFACTURING COMPANY
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A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

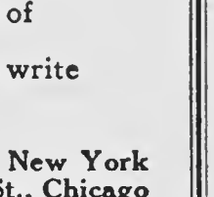
IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

No. 6 Drill and Wheel Hoe

BATEMAN M'F'G CO.
Box 1022
Grenloch, N. J.

Must Suit You



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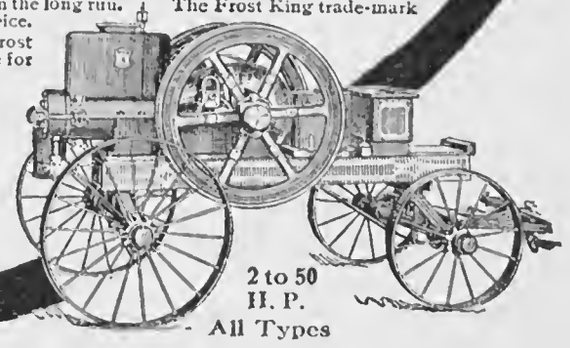
LAUSON FROST KING
Gasoline and Oil Engines

There are more drop forged and case hardened parts on Lauson Frost King Engines than any other. This means an engine as accurate in adjustment, and therefore as economical after five years' use as when new. The Lauson Frost King is built up to a standard, not down to a price. They cost a little more than some others to start with, but a great deal less in the long run. The Frost King trade-mark on an engine is a warranty of long, satisfactory service.

Guaranteed—We absolutely guarantee Lauson Frost King Engines to make good on every claim we make for them; also as to workmanship and material.

Write NOW for Free Book: "The Power that Backs the Modern Farmer" and name of nearest dealer who will be glad to give you a demonstration of the Frost King without obligation on your part. In writing us, state size engine you need.

The John Lauson Mfg. Co.
218 N. W. Street
NEW HOLSTEIN, WIS.



2 to 50 H. P. All Types

Value of Skim-milk.

What is skim-milk worth (run through a separator) per quart to feed pigs? I can get it for one-half cent per quart. Is it worth it? F. W. C.
Massachusetts.

Like all other feeds, skim-milk varies in value with the price of products which may be obtained by its use. When pork is high, food that will produce pork is worth more than it is when pork is low. Skim-milk is relatively more valuable for young pigs than for old, and its value is further increased if it is fed with grains which supplement it as a ration. In general, skim-milk is usually valued at from 20 to 25 cents per hundred pounds. At one-half cent per quart, you are paying 23 cents per hundred, a fair value for this dairy by-product.

Giving Away Butter Color.

It has been the custom in some of our local markets to give to each purchaser of oleomargarine a little package of coloring material with carefully worded directions about using it in the oleo. Is it lawful for dealers to give this colored matter out in this way? S. F. J.
New York.

In answer to this, I advise you that the statute in relation to coloring matter reads as follows:

"No person selling any oleaginous substance not made from pure milk or cream of the same as a substitute for butter shall sell, give away or deliver with such substance any coloring matter."

You will note that the prohibition above set forth is selling or giving away *with* the oleomargarine. It does not say that it shall not be sold 15 minutes after, from some other part of the store, or given away at some other time or place. The constitutionality of this statute was questioned, and a case was tried in Brooklyn, and the law declared constitutional; an appeal was taken by the dealer; the Appellate Division affirmed the decision of the lower court, and an appeal was then taken to the Court of Appeals. This appeal was argued but a short time since, and a decision handed down within the last two weeks, in which the law was held constitutional. We are now advised by a representative of the oleomargarine interests that they are prepared absolutely to observe the requirements of the statute.

G. L. FLANDERS, Counsel.

Trouble With Butter

"What is wrong with our butter?" Some years since, while driving through a section of familiar country, I called at a farmhouse. While at the table the hostess, knowing that I had long continued the making of Winter butter on the farm, began to apologise for the poor butter, asking me to give her the reason for such inferior quality. I noticed the general appearance suggested having been overworked, as the result of carelessness in allowing the granules to unite into lumps containing a quantity of buttermilk that had to be worked out. Flavor was decidedly off, which many times can be attributed to improper care of dairy utensils. But in this case with complete order and neatness prevailing I must look further. Following others to the barn to turn out cows to water and feed at noon, on entering the door I met that stagnant blast, such as we find in a tight stable with small space for cow and no ventilation. One of the party watered the stock, while the other was throwing down unripe western corn fodder. In passing through, I noticed four or five inches of refuse in the way of corn butts, etc., in bottom of manger. I remarked to the man putting this unripe woody corn into the manger, "How often do you feed this kind of fodder?"

"Three times per day."

"For how long?"

"Since last Fall."

I asked if they had no hay but was told they wanted to use up the fodder. No grain was given, depending on this corn alone. This lack of proper ventilation and improper ration was largely responsible for the poor butter. In a dairy of any size the most valuable person in the farm is he who thoroughly understands and puts into practice, scientific feeding and constant care of the milch cow. In many kinds of work, neglect does not involve any great damage more than the percent of labor not performed.

Clinton Co., N. Y. S. GORDON.

PRICES FOR NEW ENGLAND MILK.

There has been so much variation of prices paid for the New England milk sold to Boston dealers this past Winter that perhaps a glance at these prices may be interesting. The Deerfoot Farm Co., I think, paid the best of any contractor. Their October and November price was 42 to 45 cents per can, according to quality. December and January, 40 to 43; February and March, 38, making an average price of 40 cents or better for the six months. The price paid by Allen Bros. was: October, 38; November and December, 40; January and February prices are in doubt, some claiming 40, others 38; March probably 36, but no one seems to know for sure. Hood's prices were: October, 40; November and December 43; January and February, 40 and 38; March 36, an average price of 40. The Whiting Co. paid about 35 average for the six months in the territory distant from Boston, about the same as the above Alden and Hood prices. The above prices, except the Deerfoot, are highest paid by these companies the past Winter.

For some milk sold at retail the Deerfoot Co. paid several cents better than the price quoted above. Now we come to peddlers, or small dealers who are and have bought their milk direct from producers in Massachusetts, Southern New Hampshire and Western Maine. These people have paid an average price of about 40, regardless of distance from Boston. A few have paid 42 to 45 for nearby Massachusetts milk. A few of these also agreed to pay this price from last October to the coming October, but only two or three have kept the agreement to date. Most of them changed their mind this Spring when they saw the big contractors offering a cut price from last year, and they followed the same policy, and in many cases have gone even further and stopped buying independently for reason in most cases of pressure being brought by the big contractors in one way or another.

In some cases the contractors offered them milk at a lower price by considerable than these peddlers had been and were paying the producers, and gave them a further privilege of buying just what they needed from day to day, and as this quantity varies quite a lot it is a big advantage to these peddlers, as when they bought from the producer direct they had to take as the rule what was sent them, even if more than they could dispose of in regular lines of trade.

Now the question is, what are these producers who have been dropped by these peddlers going to do? Some have found a market with the big contractor who buys milk in or near their locality but at an unsatisfactory price. Others are trying to find a market for their product as cream or butter, and probably those with the cream proposition will be better off in the end by returning to, or keeping on their farms much fertility which they have been practically giving away in form of whole milk by selling at a price almost or quite below cost of production. This may be true in the butter question also, but at present prices this is perhaps a question. Other producers, and they are not a few, are offering their cows for sale, feeling hopeless in some cases of ever seeing a paying proposition in the sale of market milk under the condition and prices that now or in future will exist. In one section near Boston the producers are offering their milk free to the poorer class of consumer, hoping in this way to force the dealers to try to pay a fair price for this milk. Just how this idea will work out will be worth watching. Taking the situation as a whole it is as bad as or worse than ever known before. I believe yet a few months from now may make a different showing as influences are at work and will be further spurred up by present experiences to bring about a great change for the better.

The contractors with one exception have refused to accept the farmers' offer to leave the whole question of fixing a price with the Boston Chamber of Commerce. This is no credit to these contractors and will in the end hurt them more than the little they may gain by having their way or gaining their point at this present time.

A few producers by selling direct to large consumers, restaurants, hotels, etc., are getting eight and ten cents per quart by the can for first-class, clean, sanitary, rich Guernsey milk. The great trouble is these cases are comparatively rare and do not help the general conditions much except as an example of what is possible if best efforts are put forth to produce a high-class article. The farmers were very blind when they went against a bill before the Legislature last year to label place of production of milk sold in Boston. The producer who is ashamed to let it be known what town or State his product comes from, but is willing to let the contractor sell the same for nearby milk, when produced hundreds of miles away, deceiving the consumer in this or any other manner will not help conditions or produce confidence in the buyers' mind, and you cannot sell an article to advantage to any buyer who has not full confidence in the seller and his product.

A. E. P.

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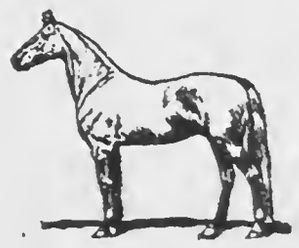

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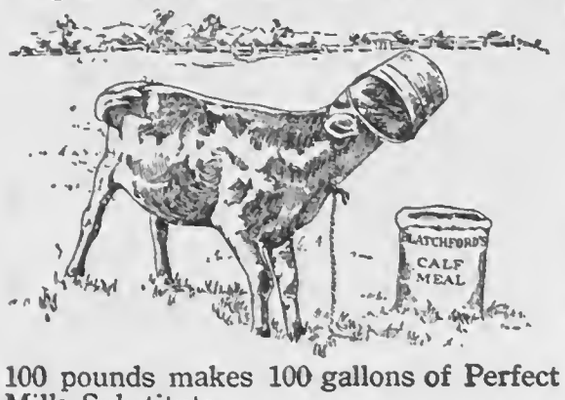

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AILING ANIMALS.

Rudlmentary Teat.

I have a young cow that has a small teat attached to one of the regular ones. It leaks a little when milking. Is there any remedy for it? She is nearly dry, and if there could be anything done would like to try it now. A. T.

The teat may be amputated by a qualified veterinarian when she is dry; or obliterate tbe milk duct in that teat by inserting a red-hot knitting needle. The operation by the expert is preferable treatment. A. S. A.

Fits.

I have four pigs farrowed in December. I have fed them four quarts of wheat feed and cornmeal mixed, and two quarts whole corn a day, not much milk. The pigs seem to grow well; lately when I feed them, as soon as they begin to eat they go in fits. They have not had a very warm place, but have had a dry place to sleep. They do not get much exercise. Could you tell me what I could do for them? M. G. T.

New York.

Indigestion from overfeeding and lack of exercise causes such attacks as you describe. Stop feeding the present rations and substitute a light slop of wheat middlings, ground (screened) oats, a little cornmeal and a little flaxseed meal. Make it up with hot water, just thick enough to pour well and add a pound of salt per hundred pounds of the dry feed. Allow free access to Alfalfa or clover hay and if possible supply roots. Make the pigs take abundant exercise by rooting for whole oats sprinkled on a big barn floor and covered wth litter. Have them run out as much as possible. Keep tbe bowels active, if necessary mixing a few ounces of raw linseed oil in the slop. A. S. A.

Bloating.

I have a two-year-old heifer due to calve in six or eight weeks. I have been feeding two bushels oats, three bushels corn, ground together. I give her, twice a day, one quart of the above feed and one quart of wheat bran. She has been doing well until last week. I found she was bloated quite a little and did not want to walk; lost her appetite. What can I do for her? Do you think it is her kidneys? Is tbe ration I am feeding all right? For roughage I feed cornstalks and clover hay. S.

Long Island.

The cow had an attack of indigestion and should have had a dose of pbysic. For bloat give two ounces of turpentine shaken up in a pint of raw linseed oil. A cow should have a pound of grain mixture for every three pounds of milk she produces, as well as good hay and silage. A. S. A.

Indigestion.

I have an old mare tbat does not gain in flesh; bad teeth fixed a year ago. I feed three times a day 3½ quarts chop each time (eight bushels oats, two rye, two buckwheat, three shelled corn ground together). She makes water often and when driven off a walk or pulled hard urine somewhat bloody and mare will strain in passing it. I. M. T.

Pennsylvania.

Do not feed ground feed to a horse. Keep it for the cows and hogs. Feed whole oats, adding one-ninth part of wheat bran and allowing one and one-quarter pounds of mixture for each hundred pounds of body weight as a day's ration. Also feed one pound of good hay per hundred pounds of body weight. Work or abundantly exercise the horse every day. Allow free access to rock salt. A. S. A.

Horse Sleeps Standing Up.

Last Fall my horse got cut in his hind ankle, was in sling about five weeks. He is in good shape, works well, but never lies down for rest. The cut from scraper cut one of the cords. I put him in a box stall 8x10 but he keeps standing. Is there anything to do for him?

New York. I. K.

Each time the horse comes in from work take off his harness and lead him to a sand heap, or soft place where he may feel like rolling. Pasture him in Summer. Bed well at night. He may in time lie down, but there is no way of making him do so, other than casting him with ropes. He will sleep well in the standing posture. A. S. A.

Dishorning.

I have several cows and heifers that I expect to have dishorned this Spring. About how soon should this be done so the green flies will not give me any trouble? Tbe last lot I had dishorned in tbe Fall. Some cows were very long in healing and one cow never did beal and never carried any calf long at a time; the dishorning caused abortion. She was fat and always looked well and I sold her to a dealer. One other cow suffered from flies and eventually died. Would flour from wheat or pulverized clear starch be good to put in horn to stop the bleeding and cause them to heal, or is there a special preparation for this purpose? The man who does the work around here does not use anything on the wound or inside of horn. Should the dishorners be sterilized after dishorning each cow? If so what is best for this purpose? W. L. M.

Delaware.

Do the dishorning any fine, mild day in Spring, before flies start to bother. Dress the horn stumps with pine tar. If any one bleeds, soak a wad of oakum in Monsel's solution of iron and bind on the part. Have the horns cut off close down in the hair and skin of base; then there will be less trouble. Place the dehorners in boiling water for 20 minutes before use and cleanse in a hot, five per cent. solution of carbolic acid or coal tar disinfectant after dishorning each cow. A. S. A.

Hog Cholera.

In December I bought a registered White Chester sow. Had her about a month when she was taken sick; would not eat anything and shook as if cold. Skin turned a dark blue and she had great difficulty in breathing; died after being sick two weeks. Since then a boar has died of same disease, and now another sow has it; seems to be very contagious. What is the disease? Was it brought on the place by the sow I bought in December? Will it be safe to keep hogs where they have been? Is there any cure for it? V. V. V.

New York.

The disease no doubt is cholera, and if that is so it will be necessary to have all hogs immunized by vaccination, else they will die of the disease in the infected yards and houses. Any graduate veterinarian can do the work, using reliable, fresh serum. We cannot say how the disease was introduced. A. S. A.

Feeding Cows in Calf.

Wby sbould cottonseed meal not be fed to cows in calf, and how soon after parturition can it safely be fed? If cottonseed meal and cornmeal are harmful, what is safe to feed and how much?

Vermont. A. P.

Both cottonseed meal and cornmeal may safely be fed to cows in calf; but only as a part of a grain and meal ration. Do not give over half a pound of cottonseed meal, twice a day, during early gestation, and reduce to balf a pound as the cow becomes heavy in calf. Corn meal need not be reduced in amount on account of gestation, but less of it is needed in hot water. Apply to your State Experiment Station for free bulletins on cow feeding. Make no sudden changes of feed. Bring cows gradually onto any new ration, then no damage will be done. A. S. A.

TEACHER (explaining fractions): "Suppose, now, Willie, you had eight little boys visiting you, and you had only one apple; how much would each little boy get?" Willie: "Wouldn't get any. I'd wait till they'd all gone home and eat it myself."—Boston Transcript.

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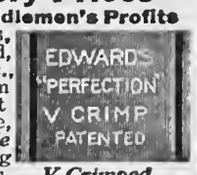

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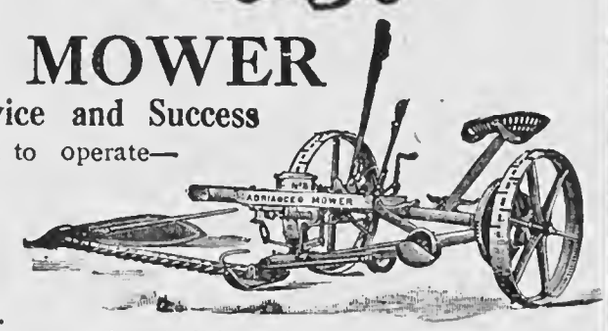

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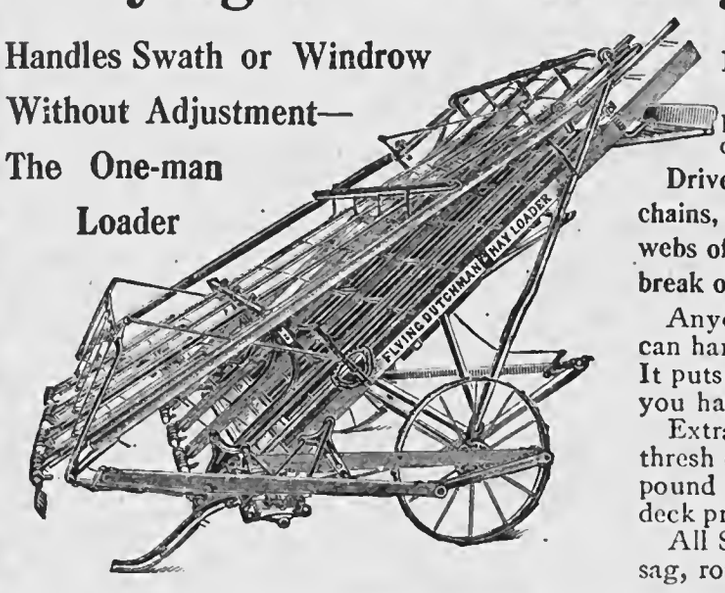

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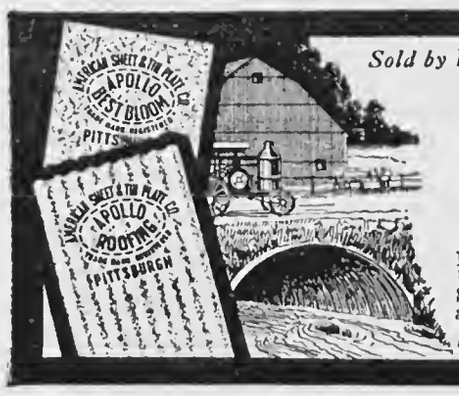

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Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.
Week ending April 9.

Butter, lbs.	2,482,160
Eggs, doz.	5,490,950
Apples, bushels	58,350
Potatoes, bushels	123,027
Hay, tons	6,149
Wheat, bushels	334,040
Corn, bushels	11,500
Oats, bushels	255,000

Wholesale Prices at New York,
Week Ending April 10, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are in some cases 10 cents lower. $1.61 and $1.51 per 40-quart can for B and C grades. A drop of 10 cents per can has been made to restaurants and hotels, those using three to four cans per day now paying 5¼ to 5½ cents per quart.

BUTTER.

Prices during the week have run a fraction of a cent above last report, but the market is unsettled and generally in favor of buyers. Holders, except those controlling special marks, have been quite ready to make reductions in order to move their stock.

Creamery, extra, lb	25 @ 26
Good to Choice	22 @ 24
Lower Grades	19 @ 21
Storage	17 @ 23
State Dairy, best	24 @ 25
Common to Good	18 @ 23
Factory	15 @ 18
Packing Stock	12 @ 16

Elgin, Ill., butter market firm at 24½ cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

The receipts of new made whole milk have been so heavy that a drop of two to three cents is noted and the market is in a decidedly uncertain state, especially on medium grades. Well cured new make is held firmly, and the same is true of high grade old. About 800 crates of New Zealand cheddar have been received at New York via London, selling mainly at 18 cents. The quality is good.

Whole Milk, new, best	14 @ 15
Old, best	19 @ 19¼
Common to good	15 @ 18

EGGS.

Business the early part of the week was good, owing to the Easter trade. Receipts were large, 1,880,000 dozen the first two days of the week. White eggs from nearby are more plentiful, and have to be large to bring the top quotations. A fair quality of European stock is selling at 18 to 19 cents, and fresh gathered from the Central West, 20 to 21. The quite common practice of mixing eggs tested out of incubators with new laid is not to be recommended. There is, of course, a difference in tested-out eggs, but they are not like normal fresh eggs and will not satisfy buyers of such stock. Experienced handlers can pick out these eggs by the appearance and feel of the shell, and such mixed lots are discounted—usually more than the mixture warrants. As a matter of business results will average better if the tested-out eggs are kept by themselves and sold for what they are.

White, choice to fancy, large	24 @ 25
Common to good	18 @ 22
Mixed colors, best	21 @ 22
Common to good	17 @ 20
Western fresh, white	22 @ 24
Lower grades	17 @ 19

FRESH FRUITS.

Receipts of apples rather light, and market decidedly firm. Strawberries in open crates are arriving freely, wholesaling mainly at 25 to 35 cents.

Apples—Spitzenburg, bbl.	4 00 @ 5 50
Spy	4 00 @ 7 00
Ben Davis	4 00 @ 4 50
Greening	4 00 @ 6 00
Newtown	6 00 @ 7 50
Baldwin	4 00 @ 5 50
Western, box	1 50 @ 3 00
Strawberries, Fla., qt.	25 @ 45

BEANS.

Very little business is noted at the recent advances. Red Kidney and choice State Marrow are held firmly; Yellow Eye scarce.

Marrow, 100 lbs.	4 40 @ 5 50
Medium	3 55 @ 3 65
Pea	3 20 @ 3 65
Red Kidney	5 25 @ 5 30
White Kidney	5 75 @ 5 80
Yellow Eye	5 15 @ 5 20
Lima, California	7 25 @ 7 30

HOPS.

Prime to choice	41 @ 43
Common to good	36 @ 40
Pacific Coast	19 @ 22
Old stock	15 @ 18
German crop	65 @ 70

VEGETABLES.

The potato market is quiet, but the price advances reported have been held, and in some cases a shilling per barrel added. The supply at New York now is chiefly Maine stock, which shows good quality. Prices paid at primary points in Central and Northern Maine do not vary much from one cent per pound, and the same figure is prevailing in interior New York markets, though many farmers are inclined to hold for more. In the Middle West farmers are getting 45 to 50 cents per bushel, with supplies scarce at many shipping points owing to bad roads. Many Minnesota farmers refuse to sell for less than 50 cents, which local buyers are unwilling to meet. Seed stock has been selling in the Central West at 55 to 75 cents, according to varieties. Choice Early Ohio and Cobbler have brought 80 cents in some cases. Several cargoes of foreign potatoes arriving at New York recently have been refused admission on inspection, and either destroyed or reshipped to other points. New potatoes from Florida are generally higher and selling well. New cabbage in heavy supply and dull. Asparagus is arriving freely and selling in the range of $1.75 to $3.50 per dozen wholesale.

Potatoes—Maine, 180 lbs.	2 50 @ 2 75
State, bulk, 180 lbs.	2 25 @ 2 50
Michigan, 180 lbs.	2 25 @ 2 50
Bermuda, bbl.	6 00 @ 9 00
Florida	5 50 @ 7 00
Sweet Potatoes, bbl	1 00 @ 2 00
Beets, bbl.	2 00 @ 2 50
Carrots, bbl.	2 00 @ 2 50
Asparagus, California, doz.	2 25 @ 3 50
Southern, doz.	1 25 @ 3 00
Cabbage, Danish seed, ton	24 00 @ 28 00
New, bbl. crate	2 00 @ 3 00
Chicory, bbl.	3 00 @ 4 00
Kale, bbl.	50 @ 1 00
Lettuce, half-bbl. basket	1 00 @ 3 00
Onions—White bu.	1 50 @ 2 25
Red, 100 lb bag	2 25 @ 2 50
Okra, bu	2 00 @ 3 00
Peppers, Southern, bu.	2 00 @ 3 00
Peas, Southern, bu.	1 50 @ 5 00
Shallots, bbl.	4 50 @ 5 00
Salsify, 100 bunches	5 00 @ 6 00
Spinach, bbl.	1 00 @ 1 75
String Beans, bu.	1 00 @ 3 50
Squash, Marrow, bbl	3 00 @ 3 50
Hubbard, bbl.	3 00 @ 3 50
New, bu.	1 50 @ 3 25
Egg Plants, Southern, bu.	2 00 @ 2 75
Tomatoes, Southern, 6 bkt. crate	75 @ 2 25

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	75 @ 1 25
No. 2, box	2 00 @ 3 00
Mushrooms, lb.	15 @ 40
Radishes, 100 bunches	2 00 @ 4 00
Rhubarb, doz. bunches	25 @ 60
Tomatoes, lb.	10 @ 20

LIVE POULTRY.

Squab Broilers, pair, fancy	85 @ 90
Fowls	20 @ 22
Roosters	13 @ 14
Ducks	18 @ 20
Geese	15 @ 20

DRESSED POULTRY.

Chickens, choice broilers, lb.	35 @ 45
Squab broilers, pair	80 @ 1 00
Broilers, common to good	28 @ 30
Roasters, fancy	24 @ 25
Fowls	15 @ 19
Ducks	12 @ 15
Geese	13 @ 14
Squabs, doz.	2 00 @ 4 50

(*Continued on page 615.*)

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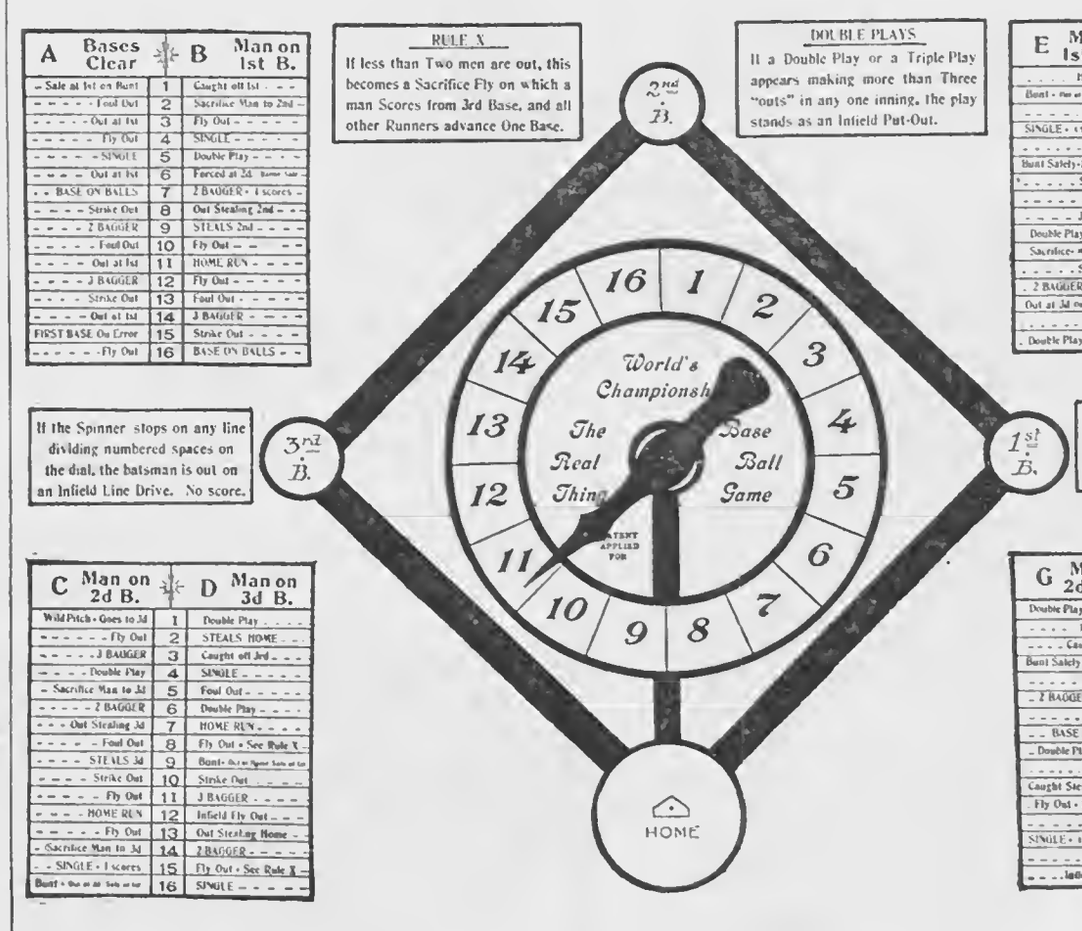

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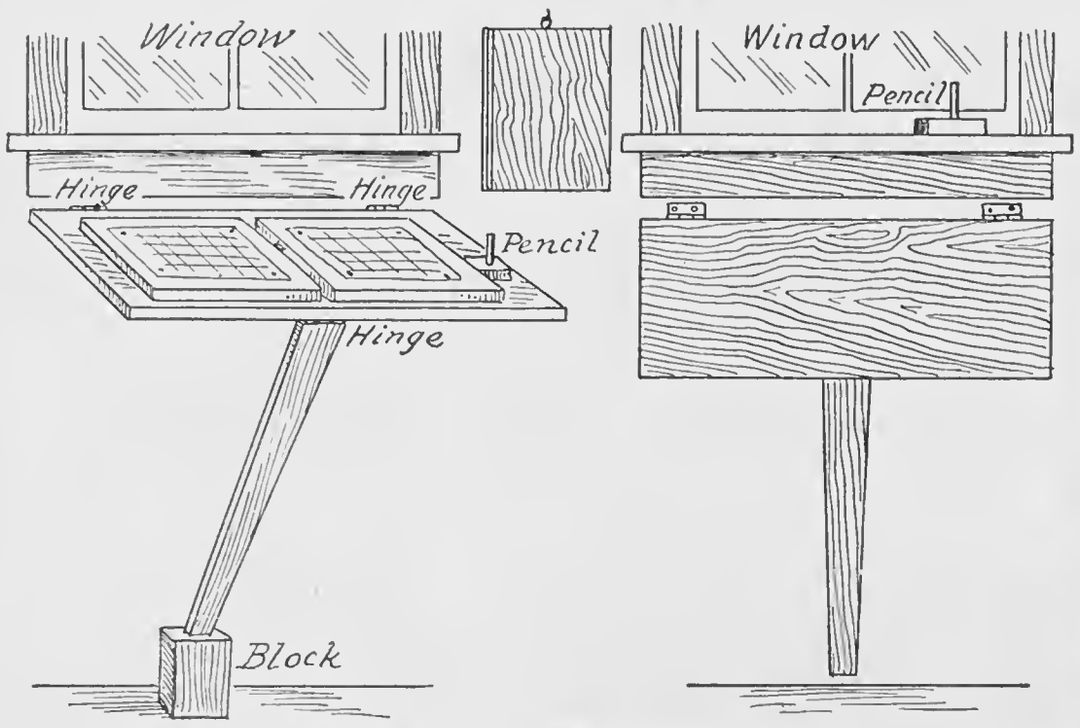
THE RURAL NEW-YORKER, 333 W. 30th St., New York City

DESK FOR MILK RECORDS.

I suppose there are no dairymen willing to answer to that name who do not keep records of the milk their cows give. We have kept tally of our cows for about 20 years and either tested samples of the milk or had it done for us, so that we know what our cows are doing. Most dairymen keep tally sheet tacked to the wall, but we found a handier way by making a sort of desk hinged to the wall at a convenient height, with a hinged leg, the end of which rests on a block, but may be let down so as to be flat to the wall. Here in Maine we can get blanks from the Department of Agriculture free, by filling out other blanks which they send with our year's work and returning to them. The blank for 20 cows is 13x17 inches. I took two planed boards



BARN DESK FOR MILK RECORDS.

of that size and hinged them together with screw rings in the outer edge of one and a hook on the outer edge of the other, so that when they were shut up the hook would catch over the screw eye and the screw eye was left to hang the board on. Tack the sheets on the inside of the boards and when not in use they are kept nice and clean. The top of the desk is 14½x34 inches, just right to lay the open sheets on. We use a short pencil, and instead of a string we use a block of inch-board 1x½x1½ inches with a hole in the middle of it. The scales are hung on a wire, fastened overhead. The picture explains the device.

Maine. C. H. FULLER.

Muslin Curtain Ventilation for Stables.

I would like to have some information on ventilating barns by the muslin curtain method. In your issue of June 15, 1907, H. E. Cooke, in answer to an inquiry, said that he had not tried the muslin curtain, or rather had not studied the system long, but that if he was building a new stable he would put in the cloth curtains and try them thoroughly, before resorting to any other means. I have not seen that he has made any comment on the subject since, and I wonder what his views are now. I would like to know if this system requires an outlet flue, and also if the barn walls have to be so carefully insulated as the King system requires. C. B. C.

Indiana.

Yes, I have had considerable experience with muslin curtains since 1907, at my farms and also at the State School of Agriculture at Canton. My experience and observation would sum up about like this; Muslin curtains are useful, and have a place in barn ventilation, but they do not take the place of flues. In a poultry house muslin does the work to perfection, and flues are a nuisance, as draughts of air will form downward and disturb the fowls. In fact, the poultry house does not require so frequent a change of air as a cow stable, and the curtains are just right. In a stable, however, where two pounds of live weight are kept to each cubic foot of air space, and a steady constant inflow and outflow of air is necessary, the curtains are not efficient unless the space is so large that temperatures are low and uncomfortable for dairy cows. Under such very large exposure and low temperature the air will show less humidity than with the flues, but the gain will not offset the low temperature. There is really no scientific principle involved in a muslin curtain ventilation; it is just simply a hole in the wall so finely divided that a direct draught is not formed against the animal. Wind pressure will control the changes to a much more marked degree than with the flues. Wind pressure affects every form of gravity or direct ventilation but with the flues it is reduced to a minimum.

I have made a combination of the flues and curtain for early Winter, that is late Fall and late Winter or early Spring use. There is a time when the flue circulation is sluggish and the muslin is helpful as an assistant. Of course for those who have no flues by all means put in muslin at once; the change will be surprising. H. E. COOK.

One day Mr. Smith went to buy a bushel of buckwheat for sowing. The man who sold the wheat was away, but the wife undertook to make the sale. She found a peck measure, and they went to the granary. She filled the measure twice, poured the contents into the bag and began to tie it up. "But, Mrs. Lawton," said the man, "It takes four pecks to make a bushel." "Oh, does it?" replied the woman, untying the bag. "Well, you see, I never had any experience in measuring grain before I was married. I always taught school."—Harper's Magazine.

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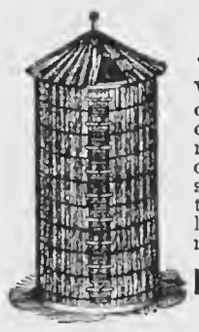

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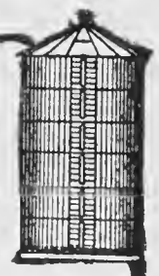

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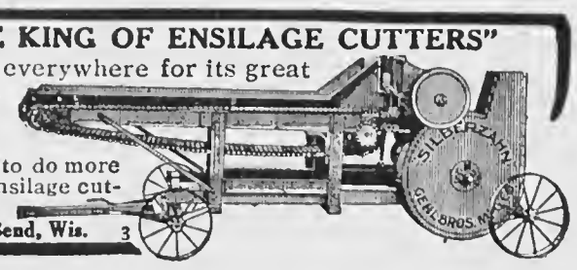

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The Henyard.

THE EGG-LAYING CONTEST.

The twenty-second week, ending April 3 shows a still further gain in egg production, though the gain is only 49. Barron's White Wyandottes tie the big score made by the Barred Rocks last week, namely 59. Three of his Wyandottes laid every day in the week. Their total now is 896. Pen No. 42, the "sour milk" pen of White Leghorns from Storrs Agricultural Station, have passed Francis F. Lincoln's pen of the same breed, and now hold second place in the total score made since the contest started. Their total is 752; this is 134 behind Barron's Wyandottes. Frank Tuttle's Barred Rocks that made the high score of 59 last week are still "on the job," with a record of 58 this week, giving them second place.

White P. Rocks from Albert T. Lenzen are third with a score of 57, and the "sour milk pen" of White Leghorns from Storrs Agriculture Station are fourth with a record of 55. Below is the week's score and the totals of the leading pens:

	WK.	TL.
BARRED ROCKS.		
J. J. Francais, New York	44	594
Frank L. Tuttle, Massachusetts	58	441
A. B. Hall, Connecticut	50	308
Waveny Farm, Connecticut	49	299
WHITE P. ROCKS.		
Storrs Agr. Sta., Connecticut	41	492
Fred H. Benton, Connecticut	44	476
Storrs Agr. Sta., Connecticut	43	378
Storrs Agr. Sta., Connecticut	44	350
Albert T. Lenzen, Massachusetts	57	350
Storrs Agr. Sta., Connecticut	43	340
Storrs Agr. Sta., Connecticut	25	218
BUFF P. ROCKS.		
A. A. Hall, Connecticut	46	439
W. C. Morgan, Jr., Connecticut	41	276
WHITE WYANDOTTES.		
Tom Barron, England	59	896
Neale Bros., Rhode Island	48	708
Merrythought Farm, Connecticut	54	706
D. J. Ryan & Son, Connecticut	47	514
West Mt. Plty. Yards, Connecticut	39	476
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	45	457
Dr. N. W. Sanborn, Massachusetts	43	412
Am. Buff Wyan. Club, New York	35	403
H. L. Hamilton, Connecticut	42	228
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	46	374
S. C. REDS.		
Dr. J. A. Fritchey, Pennsylvania	39	657
Geo. P. Dearborn, Florida	45	589
A. B. Brundage, Connecticut	53	549
Colonial Farm, New Hampshire	52	529
Harry B. Cook, Connecticut	46	501
Pinecrest Orchard, Massachusetts	47	554
J. S. Gillespie, Connecticut	35	497
H. P. Deming, Connecticut	41	370
Dr. J. C. Dingman, New York	49	341
R. C. REDS.		
Glenview Plty. Farm, Connecticut	46	541
C. S. Scoville, Connecticut	28	362
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut	55	752
F. F. Lincoln, Connecticut	47	744
Cecil Guernsey, New York	44	622
Storrs Agr. Sta., Connecticut	41	567
Tom Barron, England	48	565
Storrs Agr. Sta., Connecticut	51	515
Marwood Plty. Farm, Pennsylvania	44	511
Bonnie Brook Farm, New York	48	506
Branford Farm, Connecticut	50	495
P. G. Platt, Pennsylvania	54	464
L. E. Sands, Pennsylvania	44	454
Manor Plty. Farm, New York	46	440
Storrs Agr. Sta., Connecticut	45	452
F. M. Peasley, Connecticut	44	426
C. W. Sherwood, Connecticut	42	428
A. B. Hall, Connecticut	44	422
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	50	412
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	44	304
BUFF ORPINGTONS.		
O. Wilson, West Virginia	36	349
WHITE ORPINGTONS.		
P. A. Demgar, New York	42	309
WHITE LACED RED CORNISH.		
W. L. R. Cornish Club, Massachusetts	37	165
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	45	257
DUNGHILLS.		
H. W. Collingwood, New Jersey	42	232
Daniel Hine, Connecticut	45	452
Daniel Hine, Connecticut	37	332
MIXED BREEDS.		
Profitable Plty., Massachusetts	37	473
Profitable Plty., Massachusetts	44	439

At the egg-laying contest in Thorndale, Pa., Tom Barron's White Wyandottes lead all the other pens of any breed with a score of 467 eggs, and his White Leghorns hold second place with a total of 441. There are only five birds in a pen at this contest. The yards attached to each pen are an old heavy sod, and no green food had been fed other than that which the fowls could obtain when there was no snow on the ground. The egg yield under this treatment has exceeded that of any of the previous contests, and the mortality has been surprisingly small.

GEO. A. COSGROVE.

Eggs of Barron Leghorns.

Are the Barron eggs strictly white, uniform as to color and size? Why is it when I buy eggs from Leghorn farms that I sometimes get a chicken with grey feathers? J. L.

Mattituck, N. Y.

The Barron eggs are not uniform as to color or size. The pullets as a rule lay smaller eggs than the hens. This is usual in all flocks of any breed. Some of my Barron birds, both pullets and hens, lay very white eggs; others lay eggs slightly tinted with brown. I should say about 10 per cent. of the eggs are not clear white. Number 126 of the hens which laid 235 eggs in her pullet year, lays the brownest egg of any of them, and the very largest, really an extra large egg. She is a brawny large-boned, vigorous hen, and ought to breed powerful male birds, if one cared nothing about color of eggs.

If you get a "cnicken with gray feathers" from White Leghorn eggs bought for hatching, it is an indication that a rooster of some other breed has had a chance to mate with some of the hens; and it might have been two or three years ago that it happened; for the pullet resulting from that cross might not show any sign of it herself, but the foul feathers come ont in her daughter or granddaughter. GEO. A. COSGROVE.

Feed for Laying Hens and Henyard Muscovy Ducks.

1. What would be the best feed composition for laying fowls, and how much should be fed to about 20 hens, which have no yard or open lot privileges? 2. What would be proper, and how much, to feed about 15 Muscovy ducks, which like the chickens mentioned, above have no large space in which to roam about?

Trenton, N. J. I. V. B.

1. For a small flock it would be cheaper to buy the mash and scratch feeds put up by reputable houses. The aim in feeding both growing chicks and laying hens is to give them as large a variety of grains as possible. The scratch feeds should be mixed in litter to make the birds scratch. The mash may be placed in hoppers where the birds can get to it at any time. Give them all the scratch feed they will scratch for. Grit, shells and charcoal should be constantly before them, and sprouted oats or some other green food should be a regular article of diet.

2. Feed Muscovy ducks what they will eat of a mash composed of vegetables one part, cut clover or Alfalfa one part, beef scraps one part, low grade flour two parts, bran two parts, cornmeal three parts, or as many of these ingredients as you can. Add a pinch of salt to each mess, and once a week a little charcoal. Wet enough to make it crumbly. Keep grit and shells before them in boxes. Whole corn may be given for one meal a day, or more in cold weather when mash would freeze, but should not be given exclusively for a long period.

W. H. HUSE.

Single Comb Rhode Island Reds—Large, vigorous very dark red birds and great layers. Eggs and chicks. Mating list on request. A. E. ADAMS, Stony Creek, N. Y.

CHICKS—10c. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. For prices and information address, C. M. LAUVER, Box 73, Richfield, Pa.

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April 20th. $12 per 100; $3.25 for 25; safe delivery guaranteed; good circular free.
GEORGE PHILLIPS, R. 202, Seymour, Conn.

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Silver Laced Wyandottes—for beauty, quality, and utility. 15 eggs, $2. Send for feathers. F. M. SWART, Margaretville, N. Y.

W. WYANDOTTES—bred from $50 trio; elegant shape and color. Wonderful layers. 15 eggs, $2. W. W. Carman, Margaretville, N. Y.

EGGS FOR HATCHING—WHITE WYANDOTTES—Regal Strain; White Indian Runners—$1 per settings. Special Price by the hundred. Satisfaction guaranteed. F. Cryus Twining, Pineville, Pa.

WHITE WY'DOTTES For the Quality Kind Bred to Lay and Win. Also S. C. BUFF LEGHORNS, WHITE FAVEROLLES and LAKENVELDERS. Guaranteed Eggs and Chicks at right prices. Write for my circulars, they will interest you. In business since 1901. OWNLAND FARM, Box 497, South Hammond, N. Y.

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale. THOMAS C. GORDON, - Brockport, N. Y.

White Wyandottes THAT LAY. Eggs from two pens, headed by cockerels imported direct from Tom Barron. Also eggs from other pens. Circular. WM. J. THOMSON, Delhi, N. Y.

WHITE WYANDOTTE AND S. C. W. LEGHORN Eggs for Hatching—Farm bred. Pure stock. $1 per 15. M. W. BELL, Haddonfield, New Jersey

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	25 Chicks	50 Chicks	100 Chicks
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Terms Cash with order. Can not ship C. O. D., but will guarantee to deliver the chicks in first-class condition. If any are dead upon arrival will refund your money or replace them free of charge. To be sure of getting Kerr's Top Notch Quality Chicks order now—CATALOGUE FREE.

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Pure breed Belgian Hares, all sizes and ages, at the right prices; the finest kind for the table. Stock your farm with game, also table, with good tender meat. Ask for catalogue and prices.
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Blue ribbons from 15 shows—Madison Square Garden, etc. 14 years our Minorcas pleased the public. They will build a fancy egg trade in any city. One man claims—he trusts them to pay any mortgage off. We sell Rhode Island Reds, bred from record stock. No better White Turkeys bred. Have you our bulletin? Write COLDENHAM POULTRY YARDS
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Exclusively, winning at Grand Central Palace. Stock and Eggs for Sale.
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Prize stock. Extraordinary layers. Eggs, Chicks.
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Indian Runner Duck Eggs—$1.50 per 13, delivered anywhere in U. S. CRANDALL FARMS, Albion, New York

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INDIAN RUNNER Duck Eggs for Hatching. English penciled, white-egg strain, $1.50 for 13, delivered. Drakes, $1.50 each
ROTO SALT COMPANY - Union Springs, N. Y.

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Winners at both N. Y. shows. White Cornish fowls, the ideal breed for broilers. R. C. Reds—Winter layers. White Guineas and Bronze Turkeys. Fertile eggs that hatch. RIDGELEIGH F. & P. FARM, Huntington, L. I., N. Y.

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LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. FRANCIS F. LINCOLN, Mt. Carmel, Connecticut

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Imported direct from Tom Barron's farm; Tom Barron's defeated all American breeds; 5 hens laid 1190 eggs in 1 year, averaging 238; large handsome, vigorous white cockerels, $3 and $5; eggs, $1; $6 per 100.
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Eggs from S. C. W. Leghorns
headed by ½ Barron cockerel—15 for $1.50; 60 for $5. B. P. Rocks and S. C. Reds—15 for $1, 60 for $3. W. Wyandottes, 15 for $1.
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S. C. WHITE LEGHORNS
Eggs for hatching from selected, mature hens, bred for 18 years for vigor and Egg production.
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275 BLACK LEGHORNS laid $820 worth of eggs in one year. Circular free telling about them.
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REDS Rose and Single comb Rhode Island Reds. D. & F. Strain. 109 Acres devoted to them. Heavy layers and show record of 87 first in 12 years. Eggs, $2.00 per 15; $3.50 per 30; $5.00 per 50; $9.00 per 100; $80.00 per 1,000 eggs. Fine breeding cockerels at $5.00 each. We have size and type that shows well, looks well, breeds well and lays well. Order direct from this ad. or send for mating list.
DOTY & FREESE **REDS**
R. F. D. 9 Geneseo, N. Y.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn

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Hatch Chix That Live FAIRWATER FARM So. Yarmouth, Mass.

Rose Comb Brown Leghorns—Guaranteed eggs from selected pens of prize-winning, heavy-laying farm-raised birds. $2 per fifteen. Maplewood Poultry Farm, Milton, Vermont

The Orange County Poultry House
(Patented)
Its use revolutionizes life in the country on a farm. As a general thing I personally feed and water all my hens, for all day, between 7.30 and 9 a. m. Between 4 and 5.30 p. m. I gather the eggs, and count it a poor day when I don't get from $15 to $20 worth. Some days recently they have laid 1 200 or better when market quotations were 26 cts. per doz. Some labor contrast between that and making $26 worth of milk a day. Catalogue and price list on application.
O. W. MAPES, - - Middletown, N. Y.

EGGS FOR HATCHING from Kulp's famous 242-egg strains. S. C. White Leghorn, S. C. Rhode Island Reds—$1.50 per 15; $5 per hundred. 50 Good Cockerels at $2 each.
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VALLEY VIEW FARM This is just to remind you that it is not too late to get hatching eggs from "Mapes The Hen Man's" Strain, S. C. W. Leghorns, as I have the use of my father's flock in connection with my own. Good utility eggs at $6 per 100 or special matings at $2 and $3 per 15 eggs. No order too small or too large, as I can fill orders of 1000 eggs not over three days old.
Son of "Mapes The Hen Man" JESSE E. MAPES Middletown, N. Y.

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The famous Vibert flock of beautiful, brilliant, glowing **cherry to mahogany red-to-the-skin** rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but **specially selected, long backed, low tailed,** certified trapnested record layers, scientifically **line bred along Government lines** for heaviest winter egg production, with **yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness,** and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant **absolutely free from roup and white diarrhoea.** Highly fertile, clean, well shaped, unblemished eggs, **gathered hourly, shipped daily, delivered when wanted,** guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding **cockerels from trapnested hens,** trios, mated breeding pens for sale. Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.

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INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. **COLONIAL FARM, Box O, Temple, New Hampshire**

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Eggs for hatching. Breeding stock.
Sinclair Smith, 602 5th St., Brooklyn, N. Y.

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15). Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks.
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Deming's S. C. R. I. Reds—Fancy laying stock. Eggs for hatching. Circular. **H. P. DEMING, Robertsville, Conn.**

S. C. Reds, Dark Brahma cockerels, $2.50; S. C. B. Leghorn cockerels, $1.50; R. C. and S. C. RED laying hens, $2.00. Won 76 ribbons this season, including New York and Philadelphia. Eggs and chix. Mating list free. **Riverdale Poultry Farm, Riverdale, N. J**

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Eggs—$1 per 15; $3.50 per 100. Baby chicks.
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"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Few fine cockerels $3 and up. **Dr. Hayman, Box R 48, Doylestown, Pa.**

BARRED ROCK EGGS—$1 per 15; $4 per 100. Buff Orpington eggs, $1 per 15; $6 per 100. Fawn and White Runner Duck Eggs, $1 per 12; $6 per 100. **J. I. HERETER, R. D. 4, Gettysburg, Pa.**

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Breeders headed by Males from the High Pedigree Pens of J. W. Parks for Eight Years. Eggs Testing over 90% giving us 60 to 70%. Hatches $3 per 50; $6 per 100. **THE MACKEY FARMS, Gilboa, N. Y.**

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EIGHT BREEDS
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Eggs for hatching. Day old chicks and ducklings. You cannot buy stronger vitality.
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Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. **WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.**

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LAND and Water Fowls. Farm-raised stock, with eggs in season. Send 2c for my valuable illustrated descriptive **Poultry Book** for 1914 Write **Henry Pfile, Box 674 Freeport, Ill.**

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WRITE US FOR PRICES ON
OYSTER SHELL LIME BONE MEAL
CANADA AND COW PEAS
CHICK FEED, BEEF SCRAP and CHARCOAL
Lawn Seed, Timothy, Clover, Rape, Vetch, etc.
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DON'T KILL YOUR BABY CHICKS WITH POOR FEED
Our SPECIAL CHICK FEED
is the sweetest and most wholesome feed on the market. It can be fed to human beings. **ALWAYS FRESH AND ALWAYS THE SAME.** Send for prices and booklet. **WM. ORR & SONS, Box 1, R, Orr's Mills, New York**

MAKA-SHEL GRIT If you want plenty of eggs and strong chicks, feed a rough grit; feed a grit that grinds; feed "Maka-Shel." Used by the largest poultrymen. Ask your dealer or send $1.00 for two 100 lb. bags, f. o. b. cars; Middle and New England States, one ton at $10.00, freight paid. Agents wanted.
EDGE HILL SILICA ROCK CO. Box J New Brunswick, N. J.

Hens With Colds.

I have 32 pullets in one house that are not doing very well; I only get from four to six eggs a day from them. My henhouse has a basement under it where it is warm for them to roost and lay. They seem to sneeze all the time. One hen some time ago had yellow cheesy stuff on her mouth, and could not eat, so I killed her. Do you think she had some contagious disease? I am feeding mixed grain mornings, corn on the cob about three o'clock, beets one day and fresh ground bone the next; dry mash before them all the time; a deep litter on the floor and change it once a month.
New York. M. J. K.

If your hens are sneezing and showing other evidences of colds there is something wrong with the housing conditions and not with the feed. I suspect that the basement where your hens roost is not only warm, but damp, and that the trouble has its origin here. Hens will do well at almost any temperature if the air is dry but they cannot stand dampness for any great length of time in their living quarters. If a basement is used, and very few basements are suitable for poultry, it should be so open that the air within cannot become saturated with moisture. A basement opening on one or more sides at the ground level may easily be kept dry enough for poultry, but no cellar is suitable. My suggestion is that you look to the ventilation of both house and basement and open both to such an extent as shall keep them dry, if you have to take a whole side out. M. B. D.

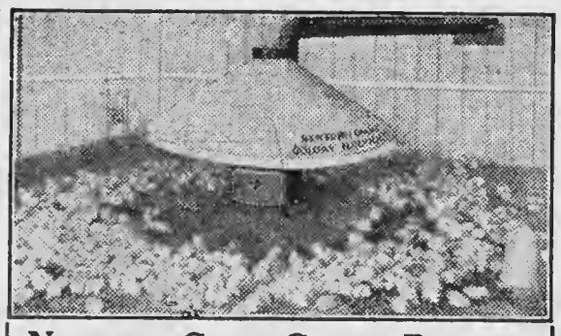
Ventilation for Henhouses.

I have a henhouse 18x160 feet; it was first built with loose floor overhead and straw on it, but is very cold, so am ceiling it with matched lumber on the sides and overhead with a door two feet wide in the center the whole length of the house, that we can have open or shut according to the weather. There are 32 windows 3x6 feet. Will cloth over half of the openings make sufficient ventilation? The house is located in a cold windy place. I have from 700 to 800 hens in the house. J. B. W.
New York.

If you have a two-foot opening in the front of the house for its entire length, you will hardly need any cloth windows for further ventilation. If your house is entirely closed, however, with no other means of ventilation than the windows, the opening of every other one of these, with a cloth screen to cover them in very cold, or very stormy, weather will probably admit air enough. A permanent cloth window is not a very satisfactory means of ventilation for a henhouse. Its pores soon become clogged with dust, and it is little better than a solid board screen. I prefer windows, guarded by poultry netting, which may be kept partially, or entirely open as the weather permits. Cloth screens upon hinged frames which may be lowered over such windows in very cold or stormy weather, and thus make it unnecessary to close them altogether, are valuable, however, and may be provided if thought best. With open windows in a very long house like yours the wind will sometimes sweep through it from one end to the other, and it is best to divide the house into comparatively short compartments by means of solid partitions of wood or cloth, making, say, four compartments in a 160-foot house. The amount of open window space needed can be best judged by the condition of the interior of the house; if the air within is so damp that moisture condenses upon the walls in cold weather, better ventilation must be provided. With such a house as yours, I think that I should depend upon open windows rather than cloth screens for ventilation, remembering that it matters comparatively little how cold the air within a henhouse is, if it is only dry.
M. B. D.

Eggs in Water Glass.

The use of water glass in preserving eggs is one of the simplest propositions connected with the chicken business, although a great deal of mystery has been developed about it. In several cases people have tried to sell a so-called new and mysterious method of preserving eggs, charging a good big price for it, which turned out to be nothing but our old friend water glass. You take one pound of water glass and then you take nine pounds of boiled water and mix the water glass thoroughly through it. This is put in a wooden bucket or stone crock. Take the egg as fresh as possible from the hen. Infertile eggs are much the best for the process. Take these fresh eggs, wipe them clean and put them into the water glass as soon as possible after they are laid. Keep them down in the liquid by a cover or weight and simply leave them alone in this liquid until you want to take them out and use them. They will keep reasonably well in this liquid for six months. You must have absolutely fresh and clean eggs. There would be no use whatever in putting stale eggs into this water glass solution, for it could not bring a dead egg to life or improve its quality. All the water glass can possibly do is to hold the egg in about the condition it was when it went into the solution, and when taken out of the water glass it should be used as quickly as possible.



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Coal Burning—Self Regulating
100 per cent efficient. Economical and safe. Superior to oil burners. Large and small farms are using the Ideal with success. The only system giving perfect satisfaction. Write for booklet describing the
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THOROUGHBRED POULTRY—Best 20 varieties, Healthy, vigorous stock. Good layers. Eggs, 15, $1: 40, $2. Catalog. **H. K. Mohr, R. No. 3, Quakertown, Pa.**

CHICKS THAT LIVE—A limited number of day-old chicks for sale during April. Write to **MAPLEWOOD FARM, Cheshire, Connecticut**

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs.
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Save Your Chicks From Lice

Safe—effective—quick in its action. Sprinkle it on the roosts—in the cracks—in the dust bath—on the young chicks—use it on lousy stock—it's a sure lice destroyer.

DR. HESS Instant Louse Killer

kills lice on poultry and farm stock, also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc. Sold in sifting-top cans—guaranteed—1 lb. 25c; 3 lbs. 60c (except in Canada and the far West). If not at your dealer's, write us.
DR. HESS & CLARK, Ashland, Ohio.

GERMOZONE'S Big Value

is not so much in its great efficiency as a remedy for roup, canker, chicken pox and other diseases of poultry, but it is the greatest bowel regulator in the world for either poultry or stock (including pet stock), counteracting, especially, bowel troubles due to musty, spoiled or improper food. With man, fowls or animals, regular bowels means health. Continued irregularity means some sickness, difficult to cure if not fatal. Thousands give Germozone regularly twice a week to chickens, young and old, at the same time having it ever handy as a ready remedy for other diseases. Sold by dealers or postpaid. One size only, 50 cents.
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For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
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Fish Bite Like hungry wolves any time of the year if you use **Magic-Fish-Lure.** Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a box to help introduce it. Agents wanted.
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The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Wright boxes are shipped to you flat and are easily set up and packed for shipment to your customers. *Write today for Free Booklet* describing The Wright Boxes for shipping chicks and eggs.
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Book your order *now* for *eggs* or *day-old chicks.* Send today for our free, big, beautiful catalog, describing **Tywacana Farms Leghorns and Rocks** and giving prices on chicks, eggs and breeding stock. Satisfaction guaranteed.
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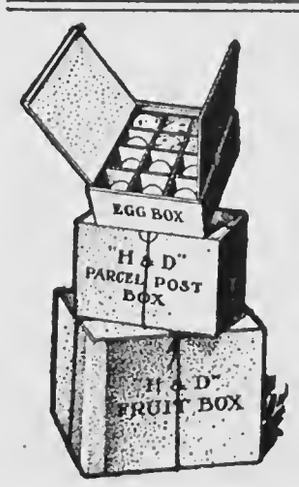
TYWACANA FARMS POULTRY CO. A. E. Wright, Supt. Box 68, Farmingdale, Long Island, N. Y.



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A POULTRY-BREEDING PROBLEM.

There is certainly much food for thought in the egg-laying contest at Storrs, Conn. Is there any known way of accounting for the wide discrepancy in egg yield? It must be that most, if not all, of the exhibitors have to a considerable extent followed the prescribed ration for egg yield, and yet with what results? Probably as variable as you would find on 82 farms selected at random where no particular attention had been paid to scientific feeding. Can you diagnose this situation? Here is an instance of our farm. As to myself I am a back-to-the-lander, been back for eight years. I started in with enthusiasm to raise chickens, but my losses were heavy during brooding time, having a lot of fruit to look after, and being alone I gave it up. I have raised a few chickens since but with no particular success till this year. The breed I am struggling with is Barred Plumouth Rocks. This year I got 14 pullets and they are a splendid looking lot. They with four of the hens are my layers; commenced laying Thanksgiving Day. Since Christmas they have laid over 50 per cent. The week ending January 23, they laid 66 eggs, exactly what 250 White Leghorns laid at Storrs that week, three and two-thirds eggs per hen, which was nearly equal to the second best pen at Storrs, viz. three and seven-tenths per hen, and exceeded by Barron's champions only. I have of course fed them fairly well, but no green bone, meat scrap nor meat meal, and have had no thought of competing with anyone. In fact I was so busy with fruit and farm work up to December 1 that they got mighty little attention. Fed them mostly wheat at night, some corn; since I shut them up have fed ground oats and bran, with some scratch feed in morning; cabbage or apples at noon, considerable milk, wheat and some corn at night. They have been up with the leaders right along. One week there were four pens ahead of them. I suppose the answer in my case is that I accidentally got hold of just the right cockerel. Would that I could trace him back! In previous years I have had very few eggs before March. There surely is some way to improve these laggards, as is shown in my case, but what is it? I am puzzled now as to next move. It hardly seems best to keep that cock another year with his offspring—too much inbreeding. But where can I get another one to carry on the good work? Must I simply take my chances? It does seem as if this condition should be followed up and tried out. F. E. B.

Ulster Co., N. Y.

I think you are too previous in comparing results at home and at Storrs. The 20 below zero cold snap, with wind 50 miles an hour, in January, cut down the egg yield badly. Already it is coming right up to high-water mark, unless the second cold snap to-day, with 17 below zero, gives another drop to the eggs. Many of the birds at Storrs were far from mature when they arrived. Some of the breeders selected, purposely as we know, late hatched pullets that would not be expected to begin to lay before January fist, but pullets that would likely lay right through the season late into October. That they were right, some of them, is shown by the eggs that are now being laid. Those fully matured pullets that were laying when they came, molted, many of them, and dropped way down in egg yield.

As to your own problem. Cannot you buy a brother to the male that has done you so much good? Mate him to the pullets, and mate the cock to the same hens he was with last year. In other words, retain last season's mating, and add a new one of your pullets and a cock that is not closely related. This will be your best plan. If impossible to buy the male that I suggest, perhaps you can find a cockerel that is of the same line of breeding. For your purpose I would not urge any inbreeding if you can avoid it. N. W. SANBORN.

Massachusetts.

Care of Duck Eggs; Runners.

If duck eggs are set under a hen leave the entire care of them to the hen, provided she is a good sitter. In an incubator treat them practically as you would hens' eggs. Maintain the proper temperature, turn daily and sprinkle with warm water towards the end of incubation.

When the ducklings are 24 hours old give them bread crumbs and rolled oats slightly moistened, with a little fine grit. Give a little four or five times a day if possible. After two days add bran and cornmeal in increasing quantities. In a week begin to add cheap flour and omit oats and crumbs. Gradually work up to the following for the growing and laying food: Vegetables one part, green stuff one part, beef scraps one part, low-grade flour two parts, bran two parts, cornmeal three parts. Add grit to all feed, fine to the little fellows, coarser to the adults. When they are full grown grit and oyster shells may be put in boxes and they will help themselves. A pinch of salt should be put in all mash, and once a week a little ground charcoal. Adult ducks may be given one feed a day of whole corn. This is especially good in cold weather, and when they are laying.

There are three varieties of Indian Runners, the English Pencilled, the American Fawn and White, and the White. The friends of each of the colored varieties claim that their birds are the only original. If you would be sure of getting the real thing consult the awards of premiums at the great poultry shows. The judges at such shows would not give premiums to birds that were badly disqualified. W. H. HUSE.

Cutting Out the Drones.

On page 280 Mrs. R. B. asks if there has been any way devised in arranging nests, other than trap-nests, whereby the laying hens could be separated from the non-layers. One way would be to divide the chicken house by a partition of wire netting, with roosts in both parts, and a row of nests placed on the floor of the coop under the partition. Each nest should be cut down at both ends, so that a hen could enter from one side, and come off the nest from the other side. A board should cover the top of the row of nests, and each nest should have vertical cleats at both entrances, so that a short piece of board could be slipped in to close the entrance. Put all the hens in one side and close all the nests in the other pen. When a hen is on the nest, close the nest on the side from which she entered and open the nest on the opposite side. This will cull out all the drones in a week, and these may be removed from the coop, and the operation repeated to cull out the poor layers.

New York. CHAS. A. WOOD.

Pigeon Cove, Mass.

Brushing Off Lamp Wicks.

Several years ago THE R. N.-Y. had an item in regard to using an old brush (an old toothbrush is fine) for rubbing the charred part from the incubator and brooder lamps, instead of using shears for trimming. We thought it a good idea, and ever since have used an old toothbrush to clean the wicks of the incubator lamps, and it certainly is much better than trimming. The wick is kept cleaned much easier, is always smooth and even, and no chance for some little thread to stick up and make a smoke. The wick itself lasts twice as long; this of itself is not of much consequence, but the changing of an old wick for a new one makes one's fingers greasy and oily, and that is a disagreeable feature. Using shears to cut the lamp wick—even if very sharp—often leaves a point on one end, and this smokes during the day when it gets charred, or a thread is left sticking up, which is overlooked in the semi-darkness of the incubator cellar, and this is sure to make trouble. With the brush to clean the wick, that is left smooth and bright as well as even, and easier to regulate the flame.

I have often wondered in looking over the incubator catalogues that no mention is ever made of the use of a brush for trimming the lamp, and so would like to bring its use to the many readers of THE R. N.-Y. who are interested in and are using incubators. HORACE B. PARKER.

Massachusetts.

Day Old Chicks

and

Six to Eight Weeks Old Pullets

Six weeks old 60 cents each
Eight weeks old 70 cents each

Kirkup's Strain S. C. White Leghorns, bred for vigor, size and Large White Market Eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.

Orders taken now for 6 to 8 Weeks Old Pullets for delivery April 10 to May 20. Write for prices. FREE BOOKLET—"Better Chickens"—describing Day Old Chicks, Pullets, Cockerels, etc. Send for it to day.

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Single Comb White Leghorns Exclusively

D.W. Young's strain. The finest in the world Bred for their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book—Profits in Poultry Keeping Solved—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free. EDGAR BRIGGS, Box 141, Pleasant Valley, N. Y.

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Purebred, large, vigorous, true Leghorn type. Seven years' experience. Not how many, but how good. Circular. VANCREST POULTRY FARM, Salt Point, New York

Single Comb White Leghorn Eggs—$6 per 100. Eggs that fail to hatch replaced at half price. Ten pullets from this flock in Experiment Station test laid 1739 eggs in a year. ALKEN FARM, R. D. 2, Ithaca, New York

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Fawn & White Indian Runner Ducks | **BABY CHICKS AND DUCKLINGS**
heavy-laying, pure white egg strains. Circular giving description, record, winnings, and guarantee, sent free. PATTERSON POULTRY FARM, Clayton, New York

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S. C. W. LEGHORN EGGS—For hatching. $5 per 100.
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MOHEGAN FARM Purebred Chix AND HATCHING EGGS. White Leghorns only. 6,000-egg incubator operates until July. Standard prices. Guaranteed Delivery. MOHEGAN FARM, C. H. Baker, Peekskill, N. Y. One Hour from G. C. Sta., N. Y. City

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DO YOU WANT LOTS OF EGGS?—Brinkerhoff's famous strain of S. C. WHITE LEGHORNS are heavy layers. I have been breeding for heavy layers for twenty (20) years. I have them. Do you want them? F. D. Brinkerhoff, Genoa, New York

Day-Old Chicks—from excellent utility S. C. White Leghorns—$9 per 100. GEO. FROST, Levanna, Cayuga Co., N. Y.

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BABY CHICKS AND EGGS FOR HATCHING, for heavy laying S. C. White Leghorn Hens mated to Tom Barron cockerels, also from one pen pure Barron stock. G BRUNDAGE, Salisbury Mills, Orange Co., New York

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WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write. HAMILTON FARM, Huntington, New York

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Black Leghorns—Baby Chicks. Hatching Eggs—the kind that lay. A. E. HAMPTON, Box 205, Pittstown, N. J.

EGGS FOR HATCHING from thoroughbred stock at live and let live prices. Rhode Island Reds. Both Combs. $1 per 15; $3 per 50; $5 per 100. Sicilian Buttercups. $2 per 15. Write for mating list. J. M. DRUMM, Mercersburg, Pa.

Baby Chix—S. C. White Leghorns, $10 per 100. S. C. R. I. Reds, $12 per 100. I. R. Ducklings. Eggs for hatching. Old established business. ROCKY GLEN POULTRY FARM, Poughkeepsie, New York

S. C. W. LEGHORN Baby Chicks in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

Baby Chicks

S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred. Strong. Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.

WESLEY GRINNELL, Sodus N. Y.

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED

Send for catalogue.

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Young's strain.....$10 per 100
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Safe delivery guaranteed. Catalogue free.

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Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks NOW.

The Reliable Spring Water Strain

Single Comb White Leghorns

are layers and payers. Write for Booklet.

Day old Chicks, Eggs for Hatching. No order is too large or too small. Our capacity is 20,000 eggs at one sitting. We guarantee safe delivery of chicks, and fertility of our eggs. We can and will please you. Send in your order and secure a positive delivery date.

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Single Comb White Leghorn EGGS FOR HATCHING

From LAURELTON Layers. Bred for Superior Egg Production and combining the Finest Strains of English and American Blood.

$8.00 per 100; $70.00 per 1,000
Baby Chicks, $20.00 per 100
(Orders filled promptly)

LAURELTON FARMS
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BABY CHICKS 12c EACH

From free range; selected S. C. White Leghorns; prompt delivery. A hatch every week. Safe arrival guaranteed. Circular free. CHAS. R. STONE, Baby Chicken Farm, Staatsburg-on-Hudson, New York

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We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.

Write For Free Catalog—It gives full description of our 1914 matings and prices of Baby Chicks, Eggs for Hatching, breeding stock and Indian Runner Ducklings.

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MY BREEDS RECOMMEND THEMSELVES

BARRON LEGHORNS—World's best
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TOULOUSE GEESE—Largest—lay 40 eggs

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by the sitting or thousand. Also BABY CHICKS from vigorous, heavy-laying stock. TOM BARRON and Wyckoff strains. Prices Low. Fertility and safe arriva guaranteed. Circulars free. R. T. EWING, Atlantic, Pa

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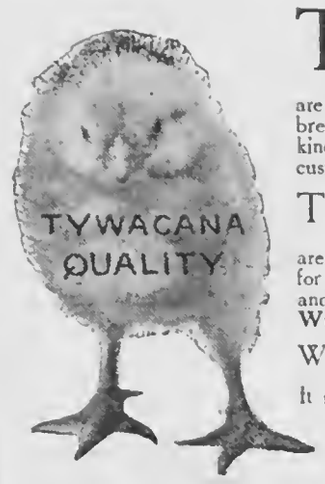
S. C. WHITE LEGHORN EGGS for hatching and day old chicks from heavy-laying strain. Strong, healthy stock. Fawn and White and pure White Indian Runner Duck eggs for hatching. Write today for free circular to Juniata Poultry Yards, Mifflintown, Pa.



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are those which are hardy and vigorous and develop rapidly into heavy layers and good breeders. Just so with Tywacana chicks—they cost more to produce than the ordinary kind, but are worth vastly more than the slight difference in cost—as hundreds of our customers will testify.

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are practical birds—they've made good for us and will make good for you. Book your order now for day-old chicks, hatching eggs and breeding stock—the Tywacana kind. Chicks are shipped in Wright boxes with a guarantee of safe arrival and full count.

WRITE FOR FREE ILLUSTRATED CATALOG

It gives our reasonable prices and tells how we have developed our wonderful laying strains. Better write today.

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TYWACANA FARMS POULTRY CO.

PUBLISHER'S DESK

The last chapter in the Sterling Debenture Corporation which swindled investors in the Oxford Linen Mills Company, Massachusetts, out of $10,000,000, was written last week. Seven of the officials were found guilty of using the mails to defraud, after a trial that lasted about a month. Three of them were sentenced to serve six years each in Atlanta Penitentiary. These were the former president, George H. Middlebrook, reported to be worth $1,000,000, Frank W. Schumaker, secretary, and Harry H. Platt, promoter. The others got three years each. In passing sentence Judge Anderson read the crooks of the country a wholesome warning. He said:

The financial gentlemen of New York who have an itching palm and who try to defraud the investors of this country must be taught a lesson. These men made millions out of the poor investors of this country and I cannot lose sight of that fact. What is the poor nurse from Utah who invested all her savings in these men's schemes to do? What recourse has she?

It is unfortunate that these schemers cannot be prevented from robbing poor people of their savings. Everyone at all familiar with the gold brick game in stock certificates knew from the first that the money put into these schemes would be a total loss to the people who parted with it. Yet the Government felt it could do nothing until the record of the ...bery was complete. Formerly some ...ese schemes were nipped in the bud by the issue of "fraud orders" against the promoters by the postoffice, but some of our humane law-makers including now Secretary Redfield, through their tender sympathies for crooks, succeeded in doing away with the "fraud order." Since then the schemers have had a free field. An occasional bunch like these gets a few years, but there is precious little comfort even in that to the poor people who lose the savings of a lifetime. It is said that the present Administration is going back to the "fraud order." The sooner the better.

Please record me as a charter member of the Fake Detection Association under Dr. Ulman. O. H. W.
Ohio.

All right, the record is made. The association is growing. There is no fee, but members pledge themselves not to subscribe for any paper that prints fake or deceptive advertising and refuse to receive such publications into the home.

The Hammonton, N. J., Strout agent must have forgotten his early lesson to abhor the business of trying to down his neighbor. What can he do more effectively to down them than to help the Strouts sell their farms for from 10 to 70 per cent. above their value?

If I believed his estimate of farm papers, I would not subscribe for them. If the business of a farm paper is not to warn its subscribers against frauds and crooks, as well as to disseminate the latest news, I would like to have the Strout agent tell me what it is for. Don't worry over the loss of his name from your subscription list. Here are three others to take his place. C. T. S.
New York.

Not worry? Bless your soul! The publisher who would not rejoice in his heart over a letter of that kind would be a cold proposition indeed. There are men and publishers who persist in saying that the plain farmer is ungrateful and that he does not reward those who serve him. I think if they were entirely truthful and honest they would admit that the plain farmer in the past has, like the rest of us, been too willing to reward those who pretended to serve him. If he has learned his lesson now and discriminates between those who serve and those who pretend to serve, so much the better for him. No farm paper in the country has a larger clientele of prosperous high-class farmers, but we confess to a keener concern for the interest of the plain working farmer. The former is pretty well able to take care of himself. We like to help the man who most needs assistance. So far from complaining of want of gratitude from them, we have frequent reasons to feel that they give us more credit than we deserve for the little service we can do them. How are you going to beat the gratitude that sends three names to take the place of one lost in a defense of all?

The Quaker Valley Manufacturing Company, Aurora, Ill., needs the attention of Publishers' Desk. They advertise to send free a so-called Klara Kling clothespin bag. When I wrote for it, they sent with it inducements to accept one of their stand-up scrubbers, which they also agree to send free to advertise in our neighborhood. They send the scrubber, or mop, on a 10-days' trial; and then demand $1.62 remittance for it. I have even offered to return it, but they now refuse to accept it, and threaten suit to collect. J. P. S.
New York.

The literature of this concern is very illuminating. Among other fakes they go to the extent of calling the victim a member of Quaker Valley Coöperative Community. Here is one of their letters:

Records of the United States Realization and Collection Bureau, who have been looking into the case for us, show that the standup scrubber we shipped you was promptly delivered by parcel post, and they are anxious to place it on docket for action in the courts. Their inspector has made his report. The amount involved is trivial—only $1.62—but that will make no difference. It must be paid within a week or we shall instruct the United States R. and C. Bureau to proceed. We very much regret the necessity for this action.

The Collection Bureau is probably one of their own employes. There is not the slightest danger that suit will be brought on any such scheme. It is simply an attempt to browbeat the victim out of $1.62. This is considerable space to give to such a petty fake, but such schemes often amount to a great deal in the aggregate. It is another lesson on gold bricks. It is the something-for-nothing trick.

We shipped A. G. Krispien, Jr., 433 Seventh St., West New York, N. J., one crate of eggs, which the express company claims to have delivered to him. We have been unable to get any word from him. If you can help me I will be very grateful. M. A. T.
New York.

Our investigation proved that Mr. Krispien had left the above address some time ago, and we were unable to get any trace of him. Now that New York City merchants are licensed and bonded, New Jersey is pretty sure to get those who cannot secure license here.

The organization of a local land bank will benefit every individual and every industry in the community in which it is located. It will benefit the boy or girl, man or woman with a little savings by furnishing a safe investment and a sure and safe earning capacity from the day the money is invested to the day it is withdrawn. It will benefit the farmer by affording a safe and profitable plan for investment if he has funds and by furnishing a loan on his property on favorable terms if he wants to borrow. It will favor the banker by the deposit of accumulated small savings which otherwise would never find their way to a bank. It will help the tradesman by furnishing capital for production and enterprise. It will benefit the whole community by encouraging thrift, stimulating industry and encouraging permanent improvement and investments. The community that creates attractive investments for its own capital and attracts capital from a distance is bound to be enterprising and prosperous.

In the past the improvident kept their money idle in the home, or invested it in tempting gold bricks. The more progressive deposited it in the local bank without interest and it went to Wall Street to be used in stock gambling. Now you have an opportunity to use it at home in the industries of your own community.

The central land bank will soon be organized. Your community ought to be represented in it. The State is ready to send men to tell you all about it, and to help you make the local organization, if you decide after hearing him that you are ready to go ahead, and if he finds you have the elements of success in your neighborhood. Talk it up in your clubs and homes; and if you want definite information ask for it. J. J. D.

MRS. DASHAHEAD (visiting at the vicarage): "What beautiful buttons you are sewing on your husband's waistcoat! Do you know, my husband once had some just like them?" The Vicar's Wife: "Yes, we found them each Sunday in the collection bag."—Melbourne Leader.

MORE MONEY-EASY WORK-BETTER STOCK

Get All the Wool from your sheep. You lose $1 on every six you shear by the old method. 15 to 20c more in wool from every sheep is worth considering. Why not make more money?

Horses and Mules Should be Clipped in the spring. Remove the heavy winter coat which holds the wet sweat and dirt. They will do more work for you and be better in every way.

STEWART'S No. 9 BALL-BEARING SHEARING MACHINE

PRICE $11.50

will get you longer, better and more wool and take it off quickly and smoothly in one unbroken blanket. To shear with the Stewart Machine seems like play to those who have labored with hand shears in the old, hard, sweaty way. You don't have the same swollen aching wrists. You don't sear and disfigure your sheep with uneven shearing and spoil the wool with second cuts as you used to do. The Stewart saves all that and easily and quickly gets you more and better wool. **Get one from your dealer,** or send us $2.00 and we will ship C. O. D. for balance. Money back if not pleased.

THE STEWART BALL-BEARING CLIPPING MACHINE

can be used for clipping horses, mules and cows without change. It's the easiest to turn, does the fastest work, stays sharp longer and is the most durable. **Get one from your dealer,** or send us $2.00 and we will ship C.O.D. for the balance. Your money back if you are not well pleased.

PRICE $7.50

Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines.

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Hardwood Ashes Best Fertilizer in Use. GEORGE STEVENS, Peterborough, Ont.

ROOFING—95 CENTS ROLL—108 Feet, Nails, Cement. RUBBER ROOFING CO., 5 Cortlandt St., New York

LIME CLUBS Farmers' Lime Club. obtain lime at wholesale prices. We'll tell you how to form a club. Write for particulars. (We ship Lime from 100 Mills)
CALEDONIA CHEMICAL COMPANY Caledonia, New York

LIME AND POTASH MIXTURE

Guaranteed Analysis, 40% Calcium Oxide, 1½% Available Phos. Acid, 5% Potash
IT IS MECHANICALLY PERFECT APPLY ANY TIME MOST VALUABLE WITH MANURE
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PRODUCTS, PRICES AND TRADE.

(*Continued from page 609.*)

HAY AND STRAW.

Receipts are ample for present demand, and market weak on low grades and small bales. Clover mixed selling well. Straw receipts increasing, but the market still firm for good qualities of straight rye.

Hay, Timothy No. 1, ton	20 50	@21 00
Standard	19 50	@20 00
No. 2	17 00	@18 50
No. 3	14 00	@16 50
Clover mixed	12 00	@18 00
Straw, Rye	17 00	@18 00

LIVE STOCK.

Native Steers	7 00	@ 9 10
Bulls	5 25	@ 7 50
Cows	3 25	@ 6 40
Calves, prime veal, 100 lbs	8 00	@12 00
Culls	5 00	@ 6 00
Sheep, 100 lbs	5 25	@ 6 50
Lambs	7 50	@ 8 60
Hogs	8 50	@ 9 50

MILLFEED.

Wheat Bran, ton	28 00	@29 00
Middlings	29 50	@30 00
Red Dog	31 00	@31 50
Corn Meal	29 00	@30 00
Linseed Meal	31 00	@32 00

COUNTRY-DRESSED MEATS.

Calves, best	14	@ 14½
Fair to good	11	@ 13
Buttermilks	8	@ 10
Lambs, Hothouse, each	4 00	@ 6 50
Pork, light	11	@ 12
Heavy	08	@ 09

GRAIN.

Wheat, No. 1, Northern Spring	1 00	@ ..
No. 2, Red	1 03	@ ..
No. 2, Hard Winter	1 00	@ ..
Corn, as to quality, bush	71	@ 73
Oats, as to weight, bush	43	@ 45
Rye	65	@ 68

RETAIL PRICES AT NEW YORK.

Those are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	33	@ 38
Mixed colors, new laid	28	@ 30
Ordinary grades	23	@ 25
Butter, fancy prints, lb	33	@ 34
Tub, choice	27	@ 29
Chickens, roasting, lb	30	@ 32
Fowls	25	@ 28
Turkeys	28	@ 32

WOOL.

Business at Boston has been rather dull mainly because of the scarcity of certain grades of fine wool. New scoured wool from the Southwest has brought up to 56 cents. Fleeces of Ohio quarter blood have brought 24½. The new clip from the ranches of Montana, Wyoming, Utah and Idaho is selling at 18 to 19 cents, and a small quantity of New York fleeces at 17 to 18 cents. Many farmers in New York and Michigan are holding for 20 cents or upwards.

Government Wheat Report.

The area of Winter wheat planted in this country was 36,506,000 acres. The condition at the opening of Spring was 95.6 per cent. of normal, which is 11.5 better than for the last 10 years. The estimated yield on this basis is 551,000,000 bushels.

The average condition of Winter rye is 91.3 per cent., which is three per cent. better than last year. The area in rye is 2,702,000 acres.

The Winter wheat outlook by percentages in some leading States is as follows: Oregon, 102; Utah, 99; Illinois, Missouri and Idaho, 98; Indiana, Tennesee, Oklahoma and Washington, 97; Ohio, Kansas and Kentucky, 96; New York, Virginia, Iowa, Mississippi, Arkansas, Arizona, Nevada and California, 95; West Virginia, Wyoming, Colorado and New Mexico, 94; Pennsylvania, Maryland, Nebraska, Alabama and Montana, 93; North Carolina, Michigan and Texas, 92; New Jersey, Delaware and Georgia, 91.

Plowing has been done for oats and corn. Wheat is looking just fair; not a large acreage was sown last Fall. Grass is starting nicely. Feed (rough forage) is pretty well picked up through here. Hay $8 to $10; clover seed $7.50 to $8; corn 95 per cwt.; oats 37 per bushel; wheat 92; country butter 25 to 28; butter fat 27½; eggs 16. Cows are high, $60 to $100, not many changing hand; good horses in good demand, $150 to $250. G. W. H.

Elida, O.

First Feed for Chicks.

I have just been reading Mrs. H. E. Matthews' very able article on the brooding of chicks, page 242. She speaks of the first feed not to be given until the chick is at least 48 hours old. I would like to emphasize this very strongly. Let me state my experience:

Three years ago I bought 450 baby chicks. I had two colony-house gasoline heated brooders in which they were placed. I began feeding an approved ration and tried to give them the best of care. Still when about three weeks old some of them began to droop. Their wings hung down, their eyes looked watery, they suffered with a diarrhœa, pasted up behind, and the final act was to lie down and die. I studied books and poultry papers and bulletins galore, and reached the conclusion that it was the dread white diarrhœa, and I was pretty blue thinking I had gotten this dreaded disease on my farm. I gave the living ones the best care I could, and the next year used some of this flock for breeders. I purchased an incubator and hatched my own chicks. These were placed in the brooder which had been cleaned and disinfected thoroughly. At the end of two or three weeks those which were of the first hatch began to "dump" as in the previous year. Now I was sure it was white diarrhœa and I was bluer than ever. About this time I read an article in a poultry journal on the feeding of chicks. The writer claimed they should not be fed until from 48 to 60 hours old. "If fed before," he said, "the egg yolk would not be absorbed but would remain within the chick and appear like a piece of hard cheese. The symptoms were very nearly like those of white diarrhœa and in nearly every case death would result." I started for the brooder at once and found 14 dead or dying chicks. These were taken to the house and after killing the dying ones a post mortem examination was performed on the entire lot.

Twelve out of the 14 showed unabsorbed egg yolk varying in size from a pea to a large marble. Others examined later showed the same results. The lesson was costly but I had learned it well, and so applied it on the next two hatches that same year. I did not feed until the chicks were from 50 to 60 hours old, and as a result I lost very few from bowel trouble. Last year I followed the same plan with good results, so I adopted the rule "*never feed chcks until at least 50 hours old*, with emphasis on *never and 50 hours*.

New York. C. T. STONE.

There are many causes for the bowel troubles. Chicks in transit sometimes get chilled causing a slow assimilation of the yolk. A wet chick just out of the shell dropping to a cooler nursery below may get a chill. Bowel trouble is sure to follow about the third week. Faulty incubation may, and probably does cause most of the trouble. Incubator chicks, if eggs have not been aired and cooled down properly, are apt to have more unabsorbed yolk than chicks hatched under a hen. It is claimed that the unabsorbed yolk affords a suitable culture medium for the bacteria resulting in fermentation causing diarrhœa. We place chicks in brooder when 24 hours old. Give water first and scatter grit and cracked grains for them to pick at. The hard grains at this time give the little digestive organs activity. The rich mashes which are easily digested are wrong at this age, and are usually fed by most people. So a safe rule is to say "48 hours for the first feed." In fact they will eat but little before that time and the first they eat should be cracked grains and grit.

H. E. MATTHEWS.

Egg-eating Hens.

Is there anything that will cure hens of eating eggs? I have killed some. Some of them are nice birds and I would like to keep them if I could break them. We blow eggs and fill the shell with the following mixture but this does not last long, neither will it do any good in some of the pens: Equal parts red pepper and mustard, wet with equal parts kerosene and hot water. It seems as though there must be something lacking in their food. We have a regular formula to feed by. It includes grit, oyster shell, charcoal and animal meal; have fed ground bone during the Winter. H. H. W.

Egg eating is apparently one of the vices due to close confinement, and idleness. Filing the beak, and stuffing egg shells with mustard, sometimes breaks the practice up, and as often fails. If hens can be given their liberty, they will often cease to eat their eggs, but if they cannot, their eggs must be removed before they break them. With one flock, the writer was compelled to arrange a battery of nests with a false bottom slanted in such a way that the eggs when laid immediately rolled out of reach of the hens. This false bottom was covered with carpet and saved the eggs. For several years no trouble of this kind has been experienced and broken eggs have been thrown to the hens. If any danger is anticipated, the nests should be darkened and the entrances so arranged that idle hens will not stand and peck at the contents of the nests. By a little watchfulness the offending fowls may sometimes be detected and removed from the flock. M. B. D.

Brooding Chicks Indoors.

I am planning to raise some chickens for layers when prices are good, and would like your advice. I have a small room, regular bathroom size, unused, heated by hot air, window about 2½x3 feet. I thought of getting 50 or 100 day-old chicks, Leghorn, in March, and after putting roofing paper on floor and base to put the litter on, turn the chicks into this room. Would a hover be necessary, or will the room do as it is? I feel as if I can give them better care in doors than out. Will March-hatched chicks be laying in November, December and January, or will they just be moulting? M. C. A.

Your plan will work all right for about three weeks, when you will find it necessary to get the chicks out upon the ground. If kept housed in a warm room longer than from two to three weeks, chicks begin to show leg weakness and other symptoms of lowered vitality, and unless given access to the open air and to mother earth, will dwindle and die. Your chicks would need a hover at night in such a room, but an open bran sack laid over them as they huddle together in the litter would probably be sufficient. Your greatest danger would lie in keeping them too warm. March hatched chicks should lay in October, but if hatched too early in that month and forced to early maturity, are apt to lay for a few weeks and then moult. M. B. D.

AUNT Lindy had brought around her three grandchildren for her mistress to see. The three little darkies, in calico smocks, stood squirming in line while Lindy proudly surveyed them. "What are their names, Lindy?" her mistress asked. "Dey's name' after flowers, ma'am. Ah name' 'em. De bigges' one's name' Gladiola. De nex' one, she name' Heliotrope." "Those are very pretty," her mistress said. "What is the littlest one named?" "She name' Artulficial, ma'am."—New Orleans Picayune.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG AMERICAN, 22, healthy, wants farm job; little experience; moderate salary. X. Y. Z., care R. N.-Y., 333 West 30th St., New York.

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GARDENER WANTED — Capable of taking charge of small hotel garden; high wages; send particulars regarding age, experience, references, etc. GEORGE T. SPERRY, Guilford, Conn.

WANTED—Position as foreman, by married farmer, one child; good, practical experience; all branches of farming; good references. Address V. F. L., care R. N.-Y., 333 West 30th St., New York.

AMBITIOUS, trustworthy married man of 34, extensive experience, desires position where intelligence and industry will be appreciated. HILL, care R. N.-Y., 333 West 30th St. New York.

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FOR SALE—80-acre irrigated farm in Idaho fruit belt, close to electric car; telephone and R. F. D.; live stock, machinery; easy payments. Address owner, G. PRIMBS, Caldwell, Idaho.

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108 ACRES irrigated farm, 50 miles above Brownsville, Texas, on Rio Grande River; own pump; 30 acres in Alfalfa; well improved; $150 per acre; easy terms. Address owner, M. HOLLOWAY, Box 122, Donna, Hidalgo Co., Tex.

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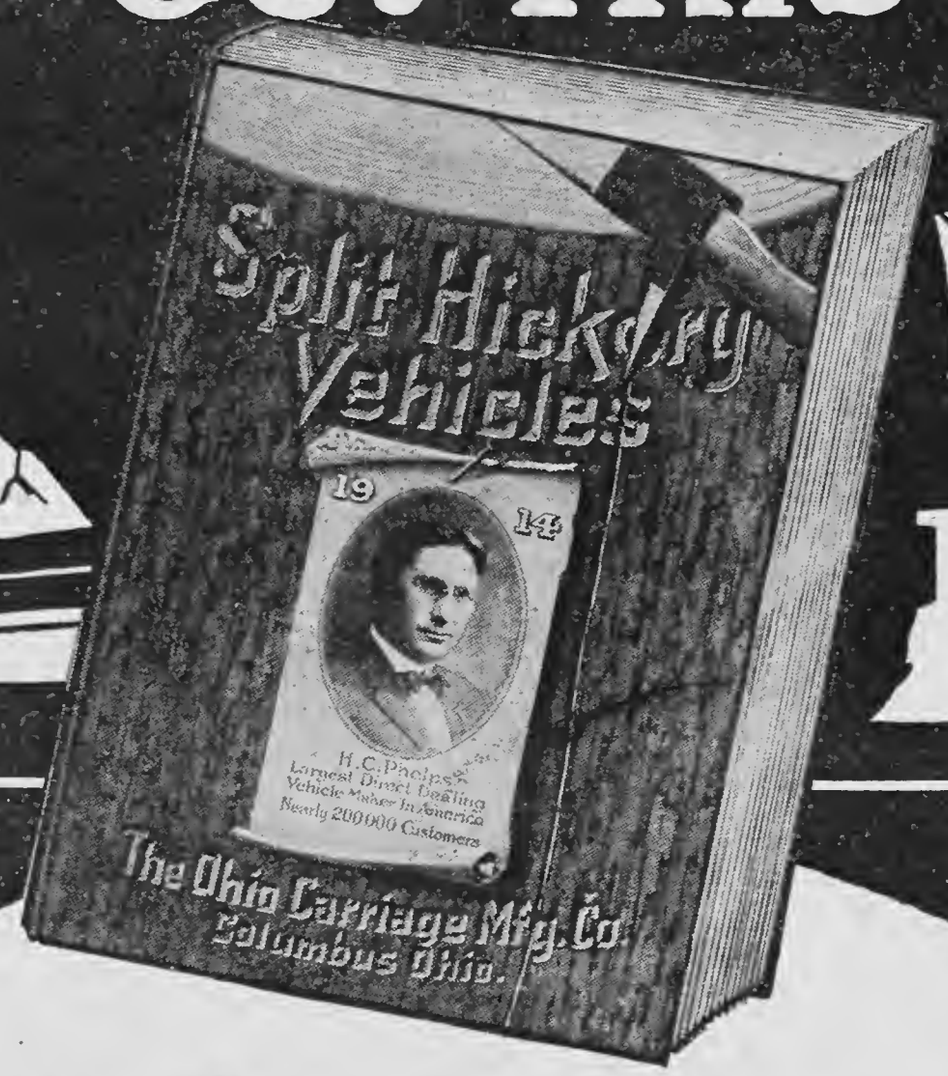

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII, No. 4252. NEW YORK, APRIL 25, 1914. WEEKLY $1.00 PER YEAR.

Cornell University

COMMERCIAL HOME CANNING OF FRUITS AND VEGETABLES.

PART I.

STERILIZATION.—The canning of fruits and vegetables on the farm is one of the greatest problems to be solved, in order that we let nothing go to waste. Great progress has been made in the last 25 years, and if we could look ahead 25 more, we would be surprised to see the improvement yet to come. Millions of dollars are lost every year throughout the fruit and vegetable growing sections, on account of stuff going to waste which could be saved if properly canned. This loss is so large that it would bankrupt any other industry in a very short time. There are few who do not share this loss, and fewer yet who could not increase the earning capacity of their farms, by sterilizing the product of their gardens and orchards, so as to keep indefinitely, and be sold at the most opportune time. The large canning factories scattered throughout the country afford but little relief against this loss, as only a few farmers who live close by can avail themselves of this convenience. The only solution is the home canning of fruits and vegetables by the grower on a smaller scale in the proper manner, so as to be readily sold at a popular price.

EARLY EFFORTS.—In 1825 Thos. Kemsett and Ezra Daggett obtained patents from the Government for putting up canned goods in hermetically sealed cans. The operation was somewhat crude, but the principle was the same then as now, viz.: to place the goods in airtight receptacles and subject them to heat sufficient to kill all ferment germs. Since that time scientists have studied very carefully into the causes that decay and spoil fruit and vegetables. The process of sterilization has been largely confined to the commercial canning industry, and the result has been that the United States is, or was, until recently far behind in the art of home canning. It seems that the business has been rather clouded in mystery to the rank and file, but the process of sterilization is a very simple one and easily understood by anyone of ordinary intelligence.

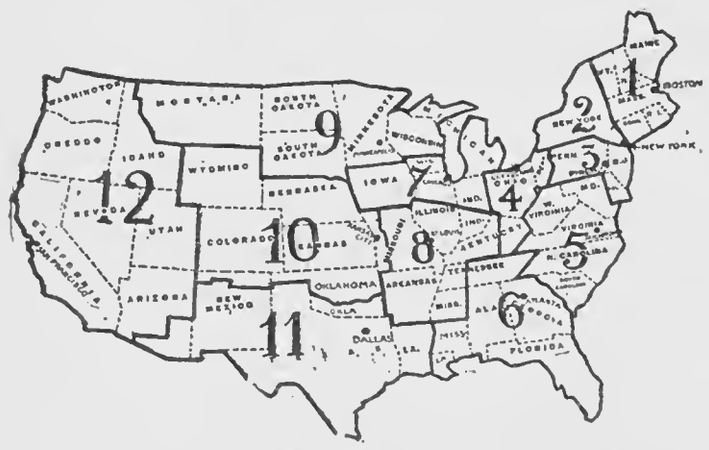
PRINCIPLE INVOLVED.—In European countries there are large quantities of canned goods put up at home, or by those who raise the fruit and vegetables, and the idea is fast becoming a fact in this country. There is really no secret about the art of canning. If so, it can be explained in two words—steam pressure. It is simply to place the fruit or vegetables in a jar or can that in some way may be tightly sealed to exclude the air, and then subjected to a sufficiently high degree of heat to kill all spores and ferment germs, and the goods will keep indefinitely. Applying intense heat the required time will kill every germ known to science, and if the contents of the container, no matter of what it is made, are subjected to this degree of heat, they will be properly sterilized, and there need be no fear but what they will keep, unless exposed in some way to the outside air.

THE MODEL FOR ALL INCUBATORS. Fig. 245.

HEAT AND DENSITY.—If the article so treated is kept away from the germ-laden air, fermentation will never occur. One fact has not been generally known, and that is, that the temperature of pure water in open kettles will never rise above 212 degrees no matter how hot the fire, nor how long applied. The water will remain at 212 degrees, unless altitude should make a difference, or if sugar is added in sufficient quantities the syrup will rise to 240 degrees because the sugar makes the water more dense. This is really one of the secrets of the canning business, and is mainly the reason why housekeepers are more successful in putting up fruit and preserves in syrup than in plain water. Now if you confine the water in a steamtight boiler the heat will immediately rise to a much higher degree, and this is the reason why professional canners can put up their goods without the addition of sugar, because they are equipped with steamtight boilers in which the goods can be subjected to steam pressure, which makes it just as easy to put up goods without preservatives as with preservatives. Therein lies the entire success in sterilizing food stuffs of any description so they will keep indefinitely. Cooking by steam under pressure spells success in the canning business. Sufficient heat and airtight cans do the trick. And here is where so many of the so-called canning outfits are impracticable, because they are nothing but open kettles, and are no better than a common washboiler, only being of different shape and described as canning outfits, and so mislead those who do not know the principles of sterilization. Corn, peas, beans, pumpkins, etc., require steam pressure. It is also a safer

process for sterilizing fruit, especially such as have large pits, as it is almost impossible to kill the germs located on the inside of such fruits without steam pressure.

ACIDS AND FERMENT GERMS.—We now come to another phase of the canning business, and one which has been no doubt a mystery to most people. In nearly all vegetables there are certain acids entirely different from the ferment germs from the fact that they will not cause fermentation, but if they are not removed, will cause the contents of the can to digest itself, or, in other words, become musty or unpalatable. For this the so-called blanching or parboiling is required. It consists in giving the vegetables a short boiling or dipping in hot water before placing in the cans, thus removing this destructive acid. Briefly, the spoiling of



LOCATIONS OF THE RESERVE BANKS.

food stuffs is caused by germs and spores, which multiply rapidly, causing fermentation, which very quickly makes the goods unfit and dangerous to eat. Clear water in an open kettle cannot be heated higher than 212 Fahr., no matter how hot the fire. It will simply form steam and evaporate. Some of the germs or spores are not killed at this heat, even after eight or 10 hours' continuous boiling. Steam under pressure raises the heat to a much higher degree, penetrating every particle of the contents of the can, thus thoroughly sterilizing them.

FURTHER CONSIDERATIONS.—Some vegetables contain acid which must be got rid of before placing in the cans. Certain food stuffs are very readily sterilized. All the different varieties of fruits and tomatoes are easily sterilized. Lima beans, string beans, corn, pumpkins, fish and meats are more difficult to sterilize. Any boiler in which the steam pressure can be raised to 15 pounds to the square inch will make a successful canning apparatus. On the other hand, any contrivance which is not steamtight and strong enough to stand the pressure will prove a failure. Boiling water is not hot enough. The cans containing the food stuffs must actually be placed inside the boiler, and the steam raised to the right pressure for that particular kind, and for a sufficient length of time to destroy the bacillus. All foods except fruit must be cooked in the can or jars, and not exposed to the air after sterilizing. Germs if not all killed, cause the cans to bulge and burst by forming a gas. These are called swells, and have to be thrown out. When food in the can is hot it is very much expanded, and when cooled forms a vacuum, and draws in the ends of the tin can if tight, thus denoting that the contents are in good condition.

EXTENT OF THE INDUSTRY.—It is impossible to estimate the amount of food stuffs canned at home and on the farm, but most of this is consumed by those who put it up, and is a different thing from commercial canning at home. The consumption of canned goods is increasing about 20 per cent. annually. During the season of 1913 there were about thirty million dozen cans of tomatoes, fifteen million dozen cans of corn, and other things in proportion packed by commercial factories. There are about 4,000 of these factories operating in this country, 99 per cent. of which use steam under pressure. Large quantities of these goods are of poor quality, owing to carelessness or greed of the owners, who do not take quality into consideration nearly as much as they do quantity, which have to be sold at a loss. Goods canned where produced and fresh from the trees or vines must naturally be of better quality and flavor. In addition, sanitary conditions can be better controlled by the individual canner than by the large factory where hundreds of laborers are employed. But it must be remembered that the factories have the advantage of improved machinery, and unless the home canned goods are of better quality, "home canning" on a commercial scale cannot compete with the factory output. WM. H. PARSIL.

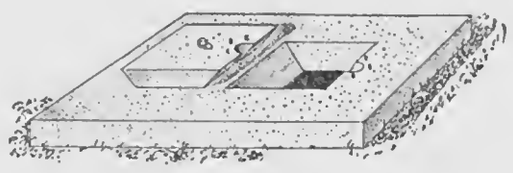
Middlesex Co., N. J.

WAR UPON THE ENGLISH SPARROW.

Can you give me some information about the English sparrow? Is it a fact that they keep all songbirds away, and that they are not insectivorous? I have read that they were most harmful to small country places for both those reasons. I have also read that the best way to rid the place of them was to soak wheat in whiskey and let them feed on it, and they would soon become helpless and could be gathered up and separated from the other birds, if any other kind shared their meal, and in that way the undesirable sparrow could be eliminated. If this could be done, how could one be sure of the English sparrow—I mean anyone who does not know an English sparrow from the snowbird or song sparrow? Have they any particular markings whereby one could distinguish them? There are hundreds of small birds on my small place that eat with the chickens all the time, and while I am glad to give a hungry bird feed I do not want the bluebirds and song sparrows driven away. E. M.

New York.

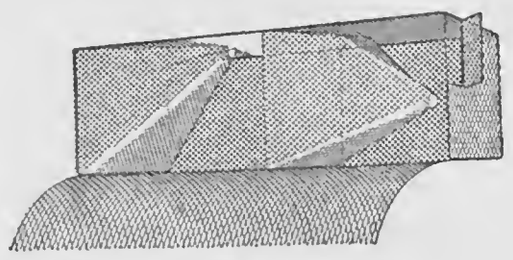
I doubt very much whether whiskey-soaked grain would ever be very useful in catching the English sparrow. He has been intimately associated with human beings during the past several thousand years, and has gradually accumulated much wisdom. It is probable that when individuals showed the slightest signs of intoxication the associates would become suspicious and refuse to take any more of the bait. In spreading poison we always endeavor to operate when the birds are hungry, so that the majority may partake of the poison dose before the symptoms become evident; otherwise as soon as one of the birds begins to act strangely the rest of the flock will stop feeding and thus escape permanent injury. I am sending you a copy of our bulletin on the "English Sparrow as a Pest." On pages 17 to 20 you will find described a funnel trap which was perfected in this Bureau (see (Fig. 247). With three of these traps we were able practically to exterminate the sparrows from the Agricultural



FUNNEL SPARROW TRAP. FIG. 247.

grounds in Washington three or four years ago. Up to the present time they have not regained more than 25 per cent. of their original abundance. This trap can be easily and economically made. It has the advantage that any native species may be liberated. In Fig. 250 is a very good illustration of the male and female sparrow, which should be of assistance to the novice in identifying the species.

Around farm buildings or chicken houses, where sparrows congregate in a large flock during the Winter, they may be easily captured by means of a sieve trap, as figured in Fig. 248. The sieve should be propped up for a week or more so that the birds may become perfectly familiar with it. A morning after a snowstorm should be chosen for trapping. The hungry birds may be easily captured by pulling away the prop as they are crowded together



SIEVE SPARROW TRAP. FIG. 248.

feeding upon the bait. Before operating the snow should be carefully swept away and the ground leveled so that the trap will fall evenly upon the ground. The sparrows may be driven through a little slide door in the back into a receiving box similar to the one shown in Fig. 247. I shall be glad to describe any further details that may not be quite clear to you. A. K. FISHER.

THE FARMER AND THE STOREKEEPER.

The articles in THE R. N.-Y. of March 14 suggest a matter which is of great public importance, viz.: the relation of the farmers and country dwellers to the catalogue houses and small dealers. Dealers' organizations in different lines have within the last few weeks been holding annual conventions, and one of the chief subjects of discussion and resolution has been as to how they can circumvent the catalogue houses and compel farmers to buy from the local merchants. Congress and the Postoffice Department have been memorialized and implored and besieged in an effort to get the parcel post so regulated that trade with the catalogue houses shall not be facilitated by this means and in every way such trade is made as difficult as possible. On page 402 F. A. C. of Missouri calls attention to some unnecessary expenses attached to the business of local merchants, and on the first page Daniel N. Pomeroy relates an instance where a Grange in New York was able to effect a saving of 40% in the purchase of a carload of drain tile. Are dealers justified in their actions, and are Granges justified in trading elsewhere?

Now, in this controversy between the farmers and the local merchants and small dealers over this matter, it is important that the question of equity should be clearly understood. If the contention of the dealers is correct, and if the farmers are under any manner or kind of obligations, either legal, moral or economic, to patronize only their local dealers, and entirely withhold trade from the catalogue people, we all want to know it; for surely the farmers who believe in justice and fair play would not wish to do any injustice to anybody in such matters. These relations have already reached a strained condition. When local dealers do not hesitate to express contempt for those who buy from catalogue houses, as they do, and when the dealers' organizations publicly adopt resolutions in opposition to all such transactions, the question of moral status should be admitted and recognized. In every town and hamlet and country place, as well as in the cities, there are poor men supporting their families with their bare hands, and it is imperative that these men should make every dollar count to the uttermost, and they do not wish that odium should be cast upon them because, forsooth, they elect to trade where they can get the most for their money. For it goes without saying that catalogue prices are materially lower than those of local dealers. What is the right and wrong of the case, therefore? Merchants and dealers of every class claim the undisputed right to trade wherever they please, and spend their money as they like. Have the farmers and country dwellers the same prerogative, or have they not? The question answers itself.

No matter how small the town nor how many dealers in a given line it may contain, every man who finds himself up against the world for a living, and who can scrape together enough means or credit to buy a hatful of goods may start up in business, and by the mere fact of his having elected to do so seems to regard himself as entitled to a share of the town's patronage, and is ready to join in the general chorus, "Trade at home," "Support home institutions," etc., and to cast contempt on those who choose to send away from home for their goods instead of paying him a round profit for doing this for them. Nor does he scruple to throw every obstacle in the way of others trading elsewhere, nor does he hesitate about joining the dealers' organization in asking for laws that shall curtail these rights and privileges as much as possible. There is no occasion for quarrel between dealers and farmers, and when dealers are willing to recognize the rights of others the utmost friendship may prevail. E. H.

Michigan.

A DIFFERENCE IN OAT RUST.

An uncle of mine in Delaware County, New York, 1,500 feet above sea level, told me that he once sowed oats on both sides of a small brook running through the farm, and that the oats on the side with the northern slope rusted badly, while those on the side sloping south did not rust at all. The brook could be stepped across anywhere without wetting the feet, and the land sloped sharply upward on each side, there being no flat. I have often wondered what could be the explanation of this.

Washington, D. C. C. W. B.

Of course, it is impossible to do anything more than give a guess in a case of this kind. It would be hard to account for the marked difference which is said to have occurred in the oats. If a scientist could visit the field while the oats were growing, and take samples for examination, and also study all the conditions, he could give a much better reply. Prof. F. C. Stewart of the Geneva Experiment Station says that if the oats sown on different sides of the creek were of different varieties, this fact might account for the appearance of the disease. Some varieties of oats are much more susceptible to rust than are others. Again, if the oats on different sides of the stream were sown at different times, that might be an explanation of the trouble. It seems that late-sown oats are much more liable to rust than those which are seeded earlier. If the oats on both sides of the stream were exactly the same in variety, selection, and time of sowing, in fact, if all the conditions were alike, there is only one guess to be made at the trouble. It may be that the oats on the north slope were shaded longer in the day, and thus the foliage was kept moist with the dew, and also after rains longer than the oats on the other side. The increase of moisture on the oats would have a tendency to increase the trouble from rust, but, of course, not knowing anything further about the case, it is difficult to give any exact opinion about it. Such differences do occur, and it is frequently almost impossible to figure out the cause.

ALFALFA IN JEFFERSON COUNTY, N. Y.

According to the census of 1890 there was no Alfalfa growing in Jefferson County. The census of 1900 reported four acres, and that of 1910 reported 244 acres. Since 1910 the acreage has increased to some extent. Alfalfa growing in Jefferson County has never given promise of wonderful results. Three seasons seem to be about as long a period, on the average, as the stands of this crop will return satisfactory yields. Many fields do not last longer than two seasons, and as a general rule two crops only are secured. Where the third cutting is made the plants are obliged to go into Winter with very little protection.

As a general thing the soil conditions in the county are unfavorable (undrained heavy clay), though there are some local soil areas of gravel. Many who have tried to grow this crop have met wih partial or complete faliure. While the majority of failures have been due to a disregard to the necessity of liming the soil, inoculating the seed, properly fitting the soil and time of sowing, some have failed after carefully observing all precautions. Open Winters with sleet or ice storms have proven most harmful as regards weather conditions to the Alfalfa crop. Many who have tried the crop in Jefferson County, and have watched others, are by no means optimistic concerning the future of Alfalfa. There are many instances on record where the crop has failed after every possible precaution concerning its growth has been observed.

Some field trials are being made wtih two of the so-called hardy varieties, namely, Grimm and Turkestan Alfalfas. Of the former there are now eight acres growing in the county; of the latter about one acre. What success these two varieties will make remains to be seen. They are now passing through their second Winter. The Grim Alfalfa differs from the common Alfalfa chiefly in respect to its root growth (see Fig. 249, which is decidedly branching in contrast to the long tap-root of the common sort. Whether this type of root will enable the plants to withstand any better the heaving action of the soil is a question that remains to be proven. The foliage of the two varieties differs only slightly, the leaves of the Grimm variety being slightly less lanceolate than the common Alfalfa.

F. E. ROBERTSON.

FIGHTING FROST WITH FIRE.

PART II.

WHEN TO START.—In the larger Western orchards alarm thermometers are used. These are regulated and attached so as to ring an alarm in the house whenever the mercury in the thermometer goes down to a certain point. Usually this is put at 33°, and when thus adjusted the house bell will ring when the thermometer register 33°. Some growers arrange for the alarm at 35°, or even higher, while others wait until the mercury strikes 32°. Good judgment is necessary in this point, so as to avoid wasting the fuel. Generally speaking, if the thermometer goes down slowly through the night, but reaches 32° a short time before sunrise, the experienced grower will not start his fires. If, however, the thermometer reaches 32° early in the night some of the pots will be started. This is a matter to be determined largely by experience and good judgment. There is more danger on a clear night than when the weather is cloudy. The U. S. Weather Service is prepared to report weather condtiions and forecasts, and many of the larger growers keep in close touch with the department, and are guided in lighting the fires by the weather reports or indications which they receive. There are various plans for starting the fires. In some orchards the oil burners may be connected with electric lighters. This service may go so far that at the time the warning bell rings in the house the fires are also automatically started in the heaters. Most growers, however, start their fires by using a torch, and pouring a small quantity of gasoline on top of the oil. In some cases men ride through the orchard on horseback, starting the fires or regulating the covers so as to increase or decrease the heat and smudge.

COST OF OUTFIT.—The cost of such an equipment will vary. The heaters cost from $20 to $75 per acre, with less than this for home-made fixtures, such as old cans or paint kegs. It will require at least 300 gallons of oil per acre to make sure of the average season. This will cost all the way from $10 to $20, depending upon the local price of the oil. In addition to this will be the cost of the tanks for distribution and storage, the time required in handling the outfit, and the other apparatus. Mr. John Bland of Missouri gives the following figures as the cost of equipment for a 30-acre orchard. In one year he says that 400 gallons per acre would have been required to carry the

GRIMM ALFALFA; COMMON ALFALFA. FIG. 249.

orchard through all the freezes. In most other seasons 250 gallons of oil would have answered. His estimate follows:

COST OF THIRTY-ACRE EQUIPMENT.

15,000 gallons of oil, at 3½c	$525.00
Storage tank of 15,000 gallons capacity	171.00
2,400 smudge pots, at 13c	312.00
300-gallon wagon tank	22.00
Cost of 30 acres	$1,030.00
Cost of one acre	34.33

This means $34 an acre, and it will seem prohibitive to many a grower, yet it is an effective form of insurance for the crop, and many a New York State grower could well have paid twice that sum in years past to protect his orchard in time of a late frost. We find that some of our readers appear to think that this method of fighting frost is designed for Winter protection. Nothing of the sort. It is merely intended as a possible means for raising the temperature artificially for a day or two at a time during the Spring, when an untimely frost strikes the orchard just at the time of blooming. The same system is employed by gardeners or strawberry growers, in protecting their fruit or vegetables. It does not work as well usually with these low-growing crops, which are close to the ground, and our judgment is that in most of the fruit orchards of the East the system will not give as good satisfaction as in the more level and protected Western orchards. We have, most of us, followed the plan of planting our trees on the hilltops, or upon rolling ground, and these are the hardest places of all to heat, since they receive a sweep of the wind which will carry the heat of the fires away.

MALE AND FEMALE ENGLISH SPARROW. FIG. 250.

NO FRIEND OF A GERMAN HARE.

J. V. inquires about German hares, and says he wants to secure some to liberate where he lives. They are plentiful in this section, and in the Summer many of the half-grown ones are caught and shipped to various parts of the country. I do not for a moment suppose that J. V. knows anything about a German hare. If he does, and he ever secures stock for liberating in his community, I advise the citizens of that place to shoot them at once, and I was going to say shoot J. V. at the same time, but if a person knowingly introduces this pest into a country shooting is altogether too gentle treatment for him; he should at the very least be hanged, drawn and quartered. A wealthy men in this county got them for his preserve a few years ago, but some of them soon got out, and in a short time the whole county was overrun with them. They will ruin any kind of a fruit tree that is less than 15 years old, though they decidedly prefer the apple. Every tree now that we set requires a heavy wire protector that costs almost as much as the tree itself. We have tried the cheaper protectors, but in the end they are the most expensive of all. A single hare will ruin as high as 100 trees in one night. Personally I have had nearly 700 ruined by them. In this township we have amended the game law to suit ourselves, and we hunt them from year's end to year's end, and if all townships kill as many as we do there must be an annual slaughter of forty or fifty thousand in the county. As a result of the hares every mother's son keeps a hound dog, while the shiftless, irresponsible fellows keep two or three, and as a result of the hounds a flock of sheep stands about the same chance as the proverbial clawless cat.

Dutchess Co., N. Y. HARVEY LOSEE.

A LIME-CRUSHING CLUB.

Dr. I. W. Carey of Highland County is planning to organize a club of farmers who will own the crusher and engine for crushing limestone for agricultural purposes, the machine to be moved about so as to avoid long hauls as much as possible. At present Dr. Carey owns the outfit, and has operated it for several seasons, going to different neighborhoods for, say, a 50-ton job, and moving elsewhere when all orders were filled. He charged $2 per ton for crushing, but says that $2.25 would be necessary to return a profit. He finds a greater profit in crushing stone for road-making, but thinks that it would be a good thing for a company of farmers to own and operate a crusher for their own needs. A crusher has been operated in the western part of the county, but this was recently sold and moved to the northern part of the county, and too far away to be of value to anyone in this vicinity. Good rock of magnesium and calcium composition is to be found almost anywhere here, and location of a crusher is governed by considerations of the easy distribution of the finished product. Of course a crushing club should be large enough to justify the purchase of a fair-sized outfit, and to keep it busy. W. E. D.

Hillsboro, Ohio.

PRUNING CHERRIES WHILE IN FRUIT.

I have a number of sour cherry trees which have grown too high and should be headed lower. How will it do to wait until cherries are ripe and then cut the upright branches off? It will be a cheap way of picking the fruit. Will it work well in re-shaping the trees? B.

Ohio.

We understand that Chas. S. Scoon, a well-known cherry grower at Geneva, N. Y., has tried this very plan. He advises against it. He says it merely hurts the tree without accomplishing any permanent shortage of height. As the result of such cutting he had five or six tall branches in the place of one. They were soon as high as before. His trees were too close together, so instead of trying to cut the tops off, he took out half the trees and gave them a chance to spread out. While Mr. Scoon does not advocate such topping, it is at times necessary to curtail the height. To do this it is better to cut out one or more entire central limbs down to where they branch from other wood. This cuts off height without stimulating too much wood growth up in the air. This is a fair statement of the matter. As an easy way to pick cherries, the plan might answer, but in its permanent effect upon the tree it will not pay.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Corn in Young Orchards.

Will corn hurt a young apple orchard? The land is new and sprouts up badly; good land. I. J. F.

Stuarts Draft, Va.

A variety of corn with a small short stalk would not hurt a young orchard, provided it is not planted close to the trees. We plant corn in our own orchard for four or five years at least, seeding down at the last cultivation to rye and vetch, plowing this crop under in the Spring and planting the corn again. One of the small low-growing and slender varieties will be better for this use than the larger kinds. Do not put the corn too close to the trees. We should leave at least four feet between the rows of trees and the first row of corn. If the land is good the corn crop ought to pay practically all the expenses of the spraying. That is what it does for us. Our own soil is not strong, and so we use lime and some fertilizer in addition to cover crops.

Tarnished Plant-bug on Dahlias.

What can I do to prevent an insect or bug from working in the buds of of my Dahlias just before the flower opens, destroying or injuring the bud so it does not open or bloom? I have noticed for three or four years our Dahlias would have plenty of buds, but would not open or flower. I found an insect working in the bud which seemed very shy, and upon being disturbed flew away. Last year from 50 plants, had only five flowers.

Amsterdam, N. Y. H. W.

The marauder is, no doubt, the Tarnished plant-bug, which is extremely destructive to Dahlias in some localities. Its control is difficult, as the adults, which are brown and dull yellow, about one-fifth of an inch long, are too active to be affected by insecticides. The young nymphs may be killed with seven per cent. kerosene emulsion or tobacco extract. The only other means of control is to clear up and burn all rubbish in the Fall, as the bugs hibernate in crop remnants. The insect pierces the young bud shoots and sucks the sap. The shoots are blackened and distorted, and the injury causes new side shoots to form, which often suffer the same way. Where flower buds develop, they are blasted or one-sided. Clean up all rubbish left around the garden, and burn it; you will destroy many other enemies besides this plant-bug.

Agricultural Student and Agent.

The Ohio Agricultural College tells of a student who studied the theory of fertilizers and plant food, went back to his home and talked to the farmers about the fertilizer business. According to the story, a fertilizer agent came along telling some of the surprising yarns about his goods. For example, this man claimed that the "filler" in a fertilizer was necessary in order to ripen the plant food, whatever that may mean, and that it prevented concentration, so that the plant would not get too much food at one time. It seems that this college student got into a debate with the agent, knew more about the subject than he did, and argued him down to the benefit and pride of his neighbors. This is a good story, and such a young man who could talk sensibly and fairly on the subject would prove a help to any farm community. Some of the fertilizer agents do like to tell big stories about their goods whenever they think they can get away with it, and find no one there who could expose their bogus science. There are other fertilizer agents, however, who know very much better than to do this, and they would not make any such foolish statement before a company of intelligent farmers. Such a man as is here spoken of might well be called down and shown up when he begins to talk his absurd lingo. On the other hand, there are intelligent fertilizer agents who are not only farmers themselves, but have made a careful study of the science of farming. These men can be, and usually are, of much value in a farming community. We do not believe in the theory that all agents are rogues and rascals, because they are trying to sell ready-mixed goods or manufactured articles. The tendency of the times and the tendeney of the farm education is to teach men to buy their goods to better advantage than ever before, yet there is no reason why the honest representative of a manufacturer should be branded as a rogue just because he tries to handle manufactured goods in a fair and honorable way. When an agent undertakes to bluff a farmer and tells him fairy tales about the wonderful and superior quality of his own goods, he ought to be called down, but they are not all of that class, and the reasonable people should have a fair and reasonable deal.

"Trenching" of Corn.

Since coming to this farm two years ago from New York State I have had poor success with corn due to "frenching." I am located on Chesapeake Bay and Worton Creek, in Kent County. The soil is clay loam, some sand mixed in, and is medium stiff, deficient in humus; heavy clay subsoil. This soil will run together and crust; if plowed wet lumps and is hard to fit. The history of the farm is that corn will "french" if plowed wet and planted early, although some excellent corn crops have been grown, but I cannot state under what conditions. Both years, 1912-13, ground was plowed too wet for this section, and planted about May 10. In 1912 on part of crop 2-8-10, on remainder 3½-8-4 fertilizer was used, 200 pounds to acre in the hill dropped with planter. In 1913 bone black, ground bone and kainit equal parts were used, 200 pounds under same conditions. Both years corn frenched, badly but later in 1913. This year I shall plow and plant late; if possible about May 20-25. Could you suggest a treatment or fertilizer that would be more advantageous? We have a large amount of oyster shell ground, but corn was not on that land. H. F. R.

Worton, Md.

The so-called frenching of corn is rather a mysterious trouble, and as a rule seems to be caused more by deficient drainage and soil acidity than by any fungus disease. I am perfectly familiar with the land in your section, and know that on many farms there are sinks that at times will hold water, and are always cold and wet in Spring, and hence are apt to be plowed too wet, when the surrounding land is in good plowing condition. Thorough drainage, liming occasionally, and the building up of the soil in vegetable decay, will be found to be the best preventives of the trouble. Plowing clay loam soil when wet is about one of the worst things a farmer can do for his land, for the soil will be cloggy all Summer, and will suffer more from dry weather by reason of the open condition of the soil, and the hard clods had as well be rocks so far as plant food in them is concerned. Much of that land would be greatly helped by tile drainage. Then too you seem to be making corn by depending on complete fertilizer mixtures. Growing corn by depending on these makes expensive corn. You should have a good three-year rotation that will bring a Winter cover of Crimson clover on the land to go in corn, and thus save the purchase of anything in the way of fertilizer but a carrier of phosphorus, for I do not believe that your land would need applications of potash if the soil was well stored with vegetable decay and limed about once in six years after plowing for corn. Right over in the next county of Queen Annes, the late S. T. Earle brought up his farm to an average of 40 bushels of wheat an acre and bought no fertilizer but plain acid phosphate, and that for the wheat. And in Talbot County W. O. Collier makes about 100 bushels of corn an acre on a Crimson clover sod without commercial fertilizer, and on land that formerly made 25 bushels. With good drainage and a good rotation of crops the lands in the Worton section of Kent County can be brought up to as high a production as any other part of the county. If you had clover to turn under, on which the farm manure had been spread during the Winter, you would need only an application of acid phosphate to make a good corn crop. W. F. MASSEY.

GRANNIE: "And wat's the matter wi' me richt leg, doctor?" Doctor: "Oh, just old age, Mrs. MacDougall." Grannie: "Hoots, man; ye're haverin'. The left leg's hale and sound, and they're baith the same age."—Punch.

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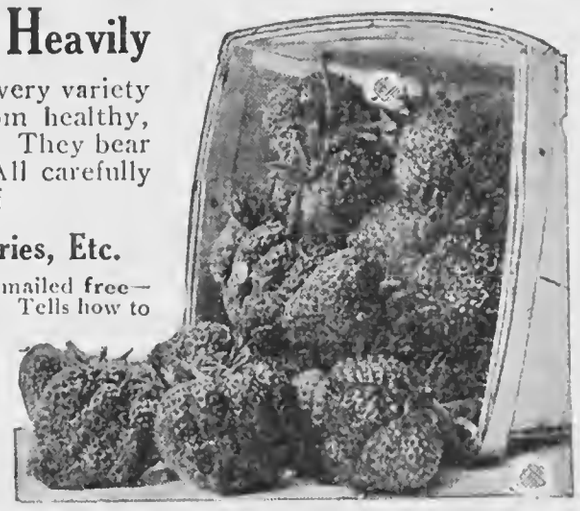

The Home Acre.

ESTABLISHING A LAWN.

I wish to put the ground about my new house in better condition, there being some of the excavating dirt about it. I can get some top soil or sand from the next lot, and have some good manure. Are there any fertilizing chemicals that will help? A good lawn, flowers, and possibly some garden truck is what I desire. P. J. H.

Long Island.

On the best natural grass lands it is almost invariably found upon making a comparison that the subsoil is distinctly of a heavier texture than the top soil, and very rarely if ever of a distinct sandy nature; hence it follows that for best results in the building up of land for lawn purposes, sand as a foundation is to be avoided, as much as possible. While it is true that fairly good lawns can be made and maintained on a distinctively sandy loam soil, underlaid with sand subsoil, it is equally true that the maintenance is more expensive and difficult than when the subsoil is of clay, as the grass will suffer much more quickly and severely during a drought, and if means of watering are not available, much of it will burn out entirely, particularly where the top soil is thin or where the capillary action of the water from some cause interfered with.

In the building up of the soil for lawn purposes, whatever the nature or texture of the soil used for a foundation, it should be spread evenly; that is it should be of equal and uniform depth all over the portion filled in, all unevenness should be avoided, so that when the top soil is put on, it also will be equal and uniform depth all over the made ground, otherwise the lawn will not be uniform in appearance but will be more or less spotted, due to the difference in the depth of the soils and kinds used in the filling in. All rubbish should be avoided and nothing in the way of scraps of lumber, brick, etc., should be mixed in the soil unless the fill is more than three feet deep; then such refuse may be used in the bottom, but never nearer than three feet to the surface. The top soil should be a good loam preferably from a cultivated field, as it is in much better mechanical condition and tilth than soils from vacant lots that have not been cultivated for a number of years. Soils from old worn-out lands are to be scrupulously avoided as totally unfit for lawn purposes. The top soil should be good and from eight to 12 inches deep. It should be made firm and be well fertilized with well-rotted, finely pulverized stable manure, applied at the rate of 20 to 30 tons to the acre, well worked into and thoroughly incorporated with the soil, either by plowing and harrowing or by spading and raking. If well manured at the time of making no other fertilizer will be required. The soil should in all respects receive the same care and fertilizing in the preparation as would be given if a prize crop of vegetables or grain was to be grown.

Before sowing the seed the land should be rolled with a hand roller. This will reveal all hollows and bumps; these should be leveled to the general surface with a steel rake, and if the surface showed much unevenness the first rolling, it should be rolled again, this time crossways of the first rolling, and all hollows filled up and bumps leveled as in the first rolling and raking. If the work has been properly done, the ground is now ready for the seed. If the soil is sandy and light, a mixture of grasses suitable for such soils should be sown. The same rule applies to heavy or intermediate soils. Nearly all the large seed houses can furnish grass seed suitable for any particular kind of soil, and when placing your order for the seed it is always well to state the nature and texture of the soil, so that your order may be filled with intelligence. In the sowing of seed do not be saving, but apply it in plenty, and sow it evenly, sow from 80 to 100 pounds to the acre. After the seed has been evenly sown, rake in very lightly and roll with the hand roller.

The proper maintenance and care of the lawn is of quite as much importance as that of the making. Therefore the cutting should be attended to as often as it is required; at the beginning the grass should not be cut closer to the ground than 1½ inches. After a few cuttings the grass will have become more firmly established when the mower may be lowered to cut it within an inch of the ground. In a wet season this height may be maintained throughout the season, but in a dry season it may be necessary to cut it somewhat higher and if a drought occurs, to suspend cutting until rains occur. Lawns cannot be kept in good condition from year to year without feeding, which necessarily must be supplied from the top, and should commence not later than the second year after establishing the lawn. The first food applied should be pure ground bone meal, at the rate of one-half ton to the acre early in Spring; a mid-summer application of bone may be made at the rate of one-fourth ton to the acre with increased benefit. The next food application should be well-rotted stable manure applied in early Winter, and just heavy enough to avoid smothering the grass. This is to be raked over in early Spring and all debris together with the rougher portion of the manure removed. These fertilizers should be applied alternately during the succeeding years as directed for the first and second years of feeding. In some soils, in fact most soils, it will greatly benefit the lawn to apply air-slaked lime at the rate of one ton to the acre about every fourth or fifth year, early in Spring. K.

Incubator as Hotbed.

I have an old incubator eight feet long, 28 inches wide, 400-egg capacity, lamps on both ends, that I would like to convert into some sort of arrangement to heat a bed for growing lettuce, etc., in a basement, with lots of windows on south side. I note quite a discussion in recent issues of utilizing lamps and oil heaters for cold frames. Can anyone advise me on my problem? J. B.

Oceanport, N. J.

I have seen hot water incubators converted into a propagating bed for the raising of vegetable and flowering plants that worked admirably, but have never seen the scheme tried out with a hot-air machine. I have no doubt it could be made to give good results, but the arrangement would probably have to be somewhat different from that provided for the hot water machine, particularly in the matter of drainage for the surplus water. With the hot water machine the surplus water was allowed to run inside the machine and out through the crevice at the door of the egg chamber. With a hot-air machine the matter of carrying off the drainage would have to be done from the outside. If I was handling this I would remove the top of the machine, and fit a sheet of zinc to the top, allowing the edges of the zinc to overlap the top of the incubator slightly on the sides, and at the ends. I would turn the edges of the zinc up a half-inch or so to act as a guard against water running on to the lamps. On this zinc I would fit a frame six or eight inches deep made from good seven-eighths inch material, to which I would fit a sash large enough to cover the top of the box or frame. I think with some such arrangement as this, and the use of about four inches of good soil in the bed, one would find it a very successful proposition. In the providing of this arrangement, the heat regulator would not be taken into account at all, as you would use a thermometer inside the plant frame and go according to it. The legs of the incubator would have to be elevated on one side a half-inch or so, so as to provide some fall for carrying off the surplus water. K.

A RELIGIOUS worker was visiting a Southern penitentiary, when one prisoner in some way took his fancy. This prisoner was a negro who evinced a religious fervor as deep as it was gratifying to the caller. "Of what are you accused?" the prisoner was asked. "Dey says I took a watch," answered the negro. "I made a good fight. I had a dandy lawyer, an' he done prove an alibi wif ten witnesses. Den my lawyer he shore made a strong speech to de jury. But it wasn't no use, suh; I gets ten years." "I don't see why you were not acquitted," said the religious worker. "Well, suh," explained the prisoner, "dere was shore one weak spot 'bout my defense—dey found de watch in my pocket."—Philadelphia Record.

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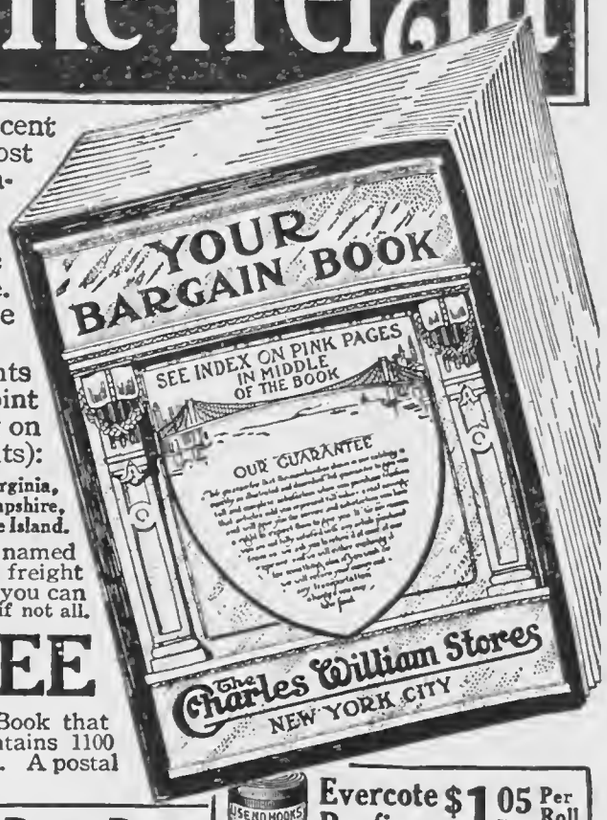

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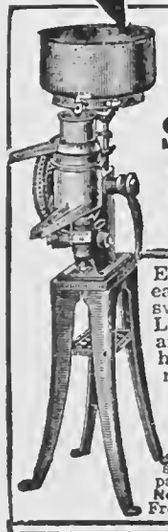

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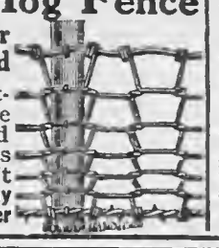

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GRAFTING QUESTIONS.

Would you give further advice on grafting as to time of cutting and inserting scions? I am interested in apple culture, and direct selling to consumers, and should like to try grafting Northern Spy on a few Oldenburg trees.
North Collins, N. Y. J. H. B.

Scions for grafting should be cut at once and stored in damp moss or sawdust and kept in a very cool place until wanted for setting as grafts. In a former article, page 172, I told how to cut and store the scions and also about making wax and the tools to use.

The ordinary method of grafting is what is known as the cleft or split style, and is very good for most fruit trees. There is almost no limit to the size of the trees that it may be used upon, for the work can be done on the smaller branches at any distance from the ground. The operator should begin at the top of any large tree and work downwards, so as to avoid danger of injuring the grafts set by working over or about them. Do not cut and attempt to make a success of grafts on very large stumps. Those about one to 2½ inches in diameter are about right. Select the most thrifty branches and such as have made the most vigorous growth the past season, and are likely to do so the coming one. The grafts will need all the vim the tree can give them. Cut the stumps about six inches from the crotch below them. Long, sprawly stumps are not good, for the grafts will soon replace the branch cut away and the less room for sprouts the better. Never cut squarely across in making the stub, but at an angle of about 45 degrees or more. Have the point of top of the slope on the upper side of the stub if it is not perpendicular, and on those that are perpendicular have it on the side next the prevailing Summer winds. This causes the growing grafts to bear their weight *against* the stump and not away from it, thus making the chances of blowing off while tender as small as is possible. The value of the sloping stump lies in the quicker and better healing over of the wound than if it was square on top. I never set but one scion on a stump and this always at the top of the slope. A very little of this point is cut off to make a place to receive the scion, but even this is not necessary. Cut the scion as it came from the tree into pieces about 3½ inches long or less. Trim each one to a wedge with long sloping cuts on opposite sides of the butt ends and be sure to have a bud near the top of the wedge. This wedge should be a little thicker on the edge on which the bud is, so that the pressure of the split stump will be greater there than on the other edge. Split the stump with a stout-bladed knife, and one that can be used as a pry to open the split. Insert the trimmed scion or graft by sliding the wedge with the thick edge outward or next the bark down the full length of the trimmed part. Be very careful to have the inside of the bark of both scion and stock to coincide or meet exactly. This is the place where the vital union takes place and the success of the whole operation depends on the skill and accurateness of the operator at this point.

Waxing properly is another most important matter. Many grafts fail because of imperfect waxing after all the rest of the work was well done. Be sure to cover every bit of the cut surfaces with the wax, and thick enough to withstand the warmth of the Summer sunshine. The wax may be applied with the hands or with a brush. In the latter case it must be kept slightly heated to be soft enough to be handled on a small brush. A pint or more in a granite iron cup kept over a lamp in a box or big can will serve very well to keep the wax hot.

Another good style for small stocks is the splice or tongue-graft. This is made by cutting a very long slope on the stock, and it must be as straight and smooth as it is possible to make it. About one-third the distance from the upper end, or point of this sloping cut, the knife should be forced downward deep enough to make a tongue half an inch or more in length. The scion is trimmed with a long slope, and a slit for the tongue of as nearly the same length as is possible. These two cut surfaces are then matched together, by forcing the tongues into the slits. This should make a very neat fit and a strong union. If the stock and scion are the same size the bark should match on both sides and at the ends as well, provided the work has been well done. If the stock is larger size the scion may be set so as to match the bark on one side only. The splice should be firmly tied or waxed grafting or budding cloth can be used instead, by bandaging all the splice very securely.

Bark-grafting can be done very successfully after the Spring flush of sap has become active enough to start the bark to peel. The stump should be cut as for cleft-grafting, and instead of splitting the stump only the bark should be slit at the top with a very sharp knife. The scion should be trimmed to a long slope all on one side, and the point forced down under the bark at the slit in the stock to the full length of the wedge. This should be bound fast with string and waxed or bandaged with waxed cloth. This kind of grafting can be done so late that the growth on the trees may be several inches long, but the scion must be kept perfectly dormant up to the time they are inserted.

H. E. VAN DEMAN.

Conifers from Seed.

I intend to plant some evergreen seeds, such as pine, spruce, cedar, arbor-vitæ, Silver fir and larch. Our soil is a light clay loam, and the only evergreen trees around here were planted. Will you advise me how to plant and care for them for the first three years? S. M.
Cincinnati, O.

For growing small quantities of conifers, the following method is given by Jackson Dawson of the Arnold Arboretum: Sow the seed soon after gathering in well-drained boxes, using well-pulverized sandy loam. Pile the boxes four or five deep in a sheltered place or pit, cover with boards, and when cold weather comes cover with leaves or hay. In the Spring (about the middle of April) move the boxes where they will get the morning sun. During the Summer keep the seedlings well weeded and watered. Shade with lath screens during the heat of the day in Summer. Winter the seedlings in the boxes, and transplant the next Spring, in rows. Put a mulch between the rows, which will conserve moisture and keep down weeds. Most conifers develop slowly at first, and are left in the seed-bed two or three years, root-pruned, and then set in nursery rows. Fir and larch seeds soon lose vitality, and have a lower viability than spruce and pine. Red cedar or juniper must have the pulp removed from the seed by maceration in hot water, following this by rubbing in sand. This seed may remain in the ground a year before germinating. The depth of planting varies with the size of the seed; larch needs just a sprinkle over it. If the seeds are sown in the open ground it may be done as soon as weather is settled in May, sowing in rows six inches apart, in well tilled soil, with mulch between rows, and shading as advised above.

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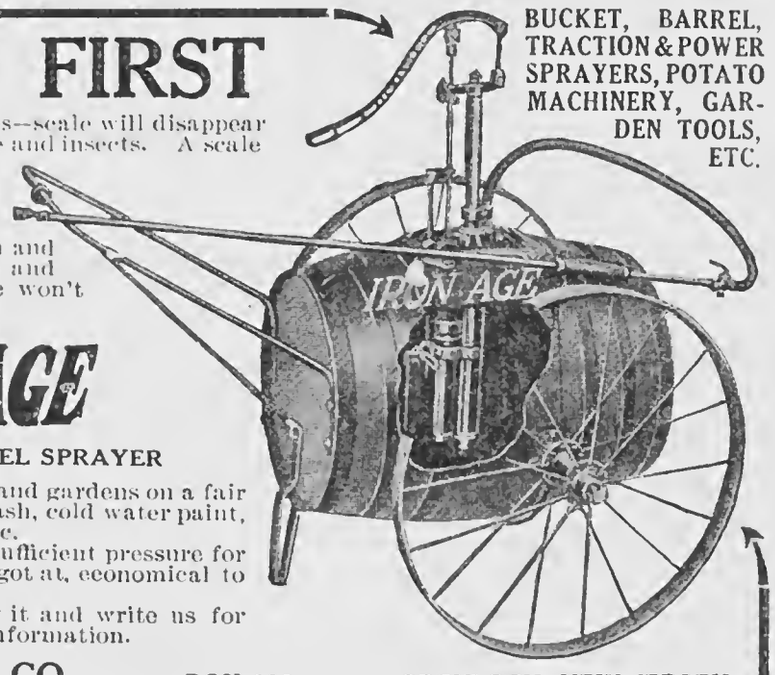

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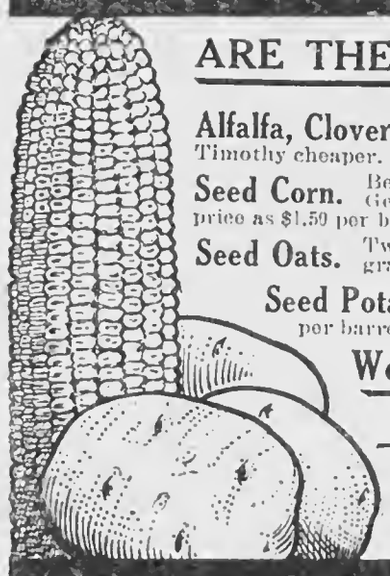

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FROM OUR FARMS TO YOURS

WORKING INTO A MEADOW.

A three-acre field was planted to field corn, in 1911, size and quality of crop unknown to writer. This field was fallowed in 1912 and cultivated to keep down weeds. In 1913, it was planted to field corn with commercial fertilizers, except a half acre which received thin coating of horse manure. This lot is too wet, in Spring, to plow and plant at regular time and, having harvested the corn crop too late to seed down last Fall I have decided to seed this Spring to Timothy, Red clover and Red-top, with oats as a nurse crop, said oats to be fed, as hay, to milch cows. I have just read in THE R. N.-Y. your advice to one subscriber "not to seed land in the Spring." If I postpone seeding until September, what treatment would you recommend for the Summer? I have stable manure as follows: Cow and calf, seven months, two cows, three months, one horse eight months, and pig seven months, the latter having been kept under barn with above manure. This quantity is only sufficient for one acre, to do a thorough job. Should I seed the remainder with commercial fertilizers (and which formula) or spread the manure over entire field supplementing with commercial fertilizers? The income, after grass is ready to cut, will be larger, and expenses smaller than any other crop that I can put in. By getting oat hay this year, I save on my hay crop and have a better feed than dry fodder or ordinary hay. I presume I might put in Essex rape, as a cover crop to plow under this Fall, when preparing to seed, and mow off the weeds which will show above the rape. I treated my orchard to rape last Fall, as well as other open plots, for plowing under this Spring, but I now note, in the catalogue of a very large and prominent nursery company, that rape does not supply nitrogen to the soil. My seed catalogue recommends rape as a nitrogen cover crop and I sowed it with this idea in mind. C. B. H.

Connecticut.

In this case we should follow as closely as possible what is known as the "Clark" method of seeding to grass. Put the manure on the garden or cover crop and depend on fertilizers for the grass. Plow the land as early as possible and sow Canada peas and oats as we have so often advised—using say 300 pounds of fertilizer per acre. Cut this crop in late June (or when the little peas begin to form in the pods) and cure the same as clover hay. Then two courses are open to you. Under the "Clark" method the pea and oat stubble would be plowed or disked and the soil would be harrowed and worked constantly all through July and August. This harrowing would be done at least 16 times before grass seeding—the object being to kill out all the old sod and the weeds and make a fine and level seed bed. After this long and thorough fitting about twice the ordinary quantity of Timothy and Red-top seed is used *alone*—without any grain crop whatever. The other plan means sowing buckwheat and turnips after the stubble has been plowed under. This crop will make a good growth in late Summer and is plowed under in early September, after which the ground is fitted and seeded to the grass. At the time of seeding 600 pounds per acre of a good grass fertilizer should be used, one of the high-grade commercial mixtures or the following chemicals. One part nitrate of soda, three parts fine ground bone and one part muriate of potash—all by weight. On most New England soils it will pay to use a ton of air-slaked lime to the acre after plowing under the peas and oats stubble. The plan of "intense culture" through July and August will prove more expensive than the other, but it will give a better seeding and a more permanent meadow.

Sowing Oats With Canada Peas.

In advising the sowing of oats and peas for hay, you say "plow the peas under and harrow in the oats." What do you mean by "plow the peas under"? I raise oats and Canada field peas every Spring for cow feed, but the peas never come up right. Perhaps I do not cover them deep enough. Does "plow the peas under" mean the peas should be broadcast on the land before the land is plowed and then be plowed under? Please tell me how to put in a crop of oats and Canada field peas to get best results. G. D. B.

To seed oats and peas on a small scale, the peas are first scattered on top of the ground before the soil is disturbed in any way. Above five pecks are used to the acre. Then with a small plow gauged to run above five inches deep, these peas are plowed in. In some cases a disk-harrow well weighted down can be used for the same purpose. The object is to put the peas into the ground about five inches below the surface. When this has been done, about three bushels of oats are spread broadcast on top of the furrows and then thoroughly harrowed in. This will leave the peas above five inches under the ground and the oats about two inches—the peas needing a deeper root system than the oats. The oats come up first, quickly followed by the peas, which, when they begin to run, find strong and high oat plants around which they may twine and thus keep off the ground. In some cases where large areas are put into oats and peas, farmers use an ordinary grain drill, mixing the peas and oats together, and sowing about three inches deep. This gives a good crop, but the peas will generally do better when they are put down deeper into the ground below the furrows.

The Loss of Soil.

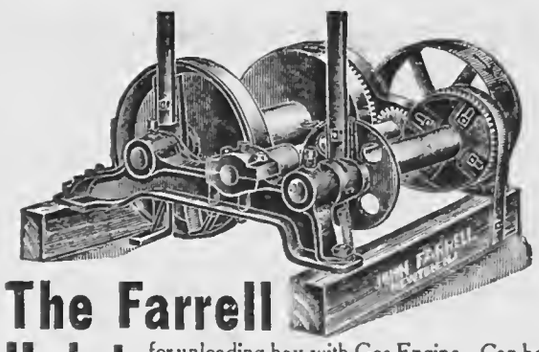
According to an estimate by Sir John Murray, the total annual rainfall upon all the land of the globe amounts to 29,347.4 cubic miles, and of this quantity 6,524 cubic miles drains off through rivers to the sea. A cubic mile of river water weighs, approximately, 4,205,650,000 tons, and carries in solution, on the average, about 420,000 tons of foreign matter. In all about 2,735,000,000 tons of solid substances are thus carried annually to the ocean.—United States Geological Survey.

This is what you may call dealing with large figures. One acre of soil one foot deep weighs about 2,100 tons. Thus the average loss by this washing means over 1,367,000 acres one foot deep, or an area nearly as large as the counties of Delaware, Cortland and Chemung, N. Y. This represents what is washed into the ocean each year! The question is how much of this is yearly contributed from your farm? How much of it can you prevent? Deep plowing and drainage will send more water into the soil instead of over its face, and cover crops and terraces will hold the flowing water back and help hold your soil where it belongs.

Oldenburg Apples Dropping.

Can you explain the reason for a healthy vigorous tree, Duchess of Oldenburg, not holding its fruit to maturity? It has had good care. A few apples matured and they are excellent in every way. It is generally covered with blossoms each Spring. H. D. W.

It is hard to even guess why the Oldenburg apples drop without fuller knowledge of the circumstances under which they are growing and the care the tree receives. When does the drop occur? What is the condition of the fruit that drops? Is the tree sprayed and if so with what? I know a man who used lime-sulphur for Codling moth and claimed he had fine results. Codling moth may be responsible for the early drop. With me Oldenburg is an early and heavy cropper. Trees set in 1909 last season gave from a peck to a bushel to the tree. It does not ripen the crop evenly, and needs two or three pickings to get all the fruit in prime condition. Some of the fruit will drop fully matured while some will still cling to the tree green and hard. If H. D. W. will spray thoroughly I think he can probably secure a fair crop. G. R. S.



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41A

NEW YORK STATE NEWS.

TUBERCULOUS CATTLE.—A hearing was given by Commissioner Huson on April 13 upon the charges that the carcass of a bull killed by order of the State authorities at Kingston, and found to be tubercular, was afterwards sold in Poughkeepsie. Several witnesses were examined. The inquiry developed the fact that some of the State veterinarians have been lax in the performance of their duties in regard to the slaughter and destruction of condemned cattle. This condition will be at once remedied by Commissioner Huson who has issued specific orders that the letter of the law must be complied with in every instance. It appears that the stamps supplied by the department for marking condemned carcasses were not kept in the personal custody of the veterinarian at Kingston, but "in a desk in the slaughter house and it was possible for anyone to have abstracted the stamps and used them without his (the veterinarian's) knowledge." The veterinarian believed that the "condemned" marks, in this particular instance, had been cut off and the "passed" marks substituted. The proprietor of a slaughter house said that it was quite possible for anyone to cut off the stamps and sell the carcass for food. The hearing is to be continued as soon as other facts are secured.

MORE CITY LABORERS.—Another carload of city laborers for the farm goes to Ogdensburg and to points in Jefferson County. It should be remembered that the labor bureau of the Department is constantly supplying farmers with help, in answer to the 25 applications, on the average, received at the Department daily. Already about 1,000 have found work on the farms of the State this season, and it is believed that 4,000 or 5,000 will be placed before the harvest season closes. Since the establishment of the labor bureau in 1905 about 35,000 men have been given positions on farms.

LEGISLATURE TO MEET MAY 4.—Gov. Glynn has called the Legislature in extraordinary session for May 4. He has announced that the only matters to be considered will relate to financial legislation. He says: "The Legislature during its closing hours passed over 650 bills and sent them to me for approval or disapproval, and over 50 requests have been made of me to submit to this session matters for legislation which proponents claim to be of importance. We have too many laws and in recent years we have had too protracted sessions." With this statement about 99 per cent. of the people of the State will agree without argument.

HIGHWAY BILLS VETOED.—The Governor refused to sign two bills relative to the purchase or lease of machinery for road making. One of these is the Thorn bill which would validate contracts made by town officers for the lease of highway machines. There are more than 500 such contracts between the manufacturers of road machinery and town boards and according to the Governor "these contracts represent a direct evasion of the highway law and misapplication of over $1,000,000 of the State's money." He holds that the law does not permit the use of money appropriated for repair and improvement of highways, for the purchase of expensive road machinery. The Governor also vetoed the bill which would increase the amount which a town can appropriate for road machinery from $500 to $1,000 without the vote of a town meeting. Says the Governor: "If the townships of the State are to purchase machinery I believe that the purchase should be made in open meeting where every taxpayer will have the opportunity to be heard."

SALT INDUSTRY.—It may not be known to many that the salt output of this State is practically one-third that of the entire country. The mines and brine wells were very actively worked last year and their output was 10,819,521 barrels, which was an increase of 317,307 barrels over 1912; that exceeded the amount produced in any previous year, and the records go back to 1797.

STATE WILL MAKE BRICK.—The Governor has signed the bill appropriating $25,000 to erect a plant for the manufacture of brick for use in constructing highways. The works will be established at the Elmira State Reformatory and convicts are to be employed in the work of brick making. This is the first step in the Governor's plan to have brick used more extensively for road making and the employment of prison labor for the purpose.

NATIONAL MILK ASSOCIATION.—The American Association of Medical Milk Commissioners is the lengthy title of an organization that will meet in Rochester on June 19 and 20. Dr. John W. Kerr, assistant surgeon-general of the United States Public Health Service, is president of the association. The object of the convention is to improve the milk supply. The program presents a list of notable speakers from several States who are experts on the question of milk production and supply. There will also be two contests, one a national certified milk contest open to all, and the other is a market milk contest open to all producers who ship milk into Rochester.

ONE SIGNED, ONE VETOED.—Gov. Glynn has signed the bill to amend the labor law in relation to the hours of labor in mercantile establishments. It reduces the number of hours in which children under 16 years may work from 54 to 48 hours in any one week, and from nine to eight hours in any one day. It also prohibits their employment after 6 p. m. instead of after 7 p. m. The vetoed measure related to the sale of canal lands that have been abandoned. The Governor objects to the bill on the grounds that it should not become the policy of the State to permit municipalities to secure public lands, for which the people were originally taxed, for less than their real value.

HOLSTEIN MEN TO HAVE SPECIAL TRAIN.—The Eastern States will send a big delegation to the national association meeting of Holstein Friesian breeders at Chicago on June 2 and 3. They will leave the day before the convention on a special train and many will be accompanied by their wives. This is the first time in many years that the annual meeting has been held outside Syracuse, and the western breeders are planning to give the convention a royal welcome and an exceptionally good time.

FORESTRY SCHOOL DEDICATION.—The formal opening of the new building devoted to the forestry school at Cornell will take place on May 15 with appropriate exercises. Among the speakers are Gifford Pinchot, Dr. L. H. Bailey and Henry S. Graves of Washington. On the following day the annual meeting of the Society of American Foresters, the national professional forestry association, will be held at the same place. This will be the first gathering of this society outside Washington. J. W. D.

Reports from Western New York show great damage to peach buds. Inspections of many large peach orchards in Orleans County show that the peach crop has been Winter-killed, and in several orchards where tests were made there are no prospects of any kind of a crop of Elberta, which are the best commercial peach here. Tests in an orchard where a usual crop of 4,000 bushels is harvested showed only one fertile bud alive out of 500.

Apples sold last Fall for $2.50 a barrel; No. 1 and No. 2 potatoes sold this Winter for 50, 55 and 65 cents a bushel. Good cows $75; cream, January 39, February, 37 cents, butterfat. Pigs, four weeks, $4; pork 12 cents pound.

Garland, Me. E. R. R.

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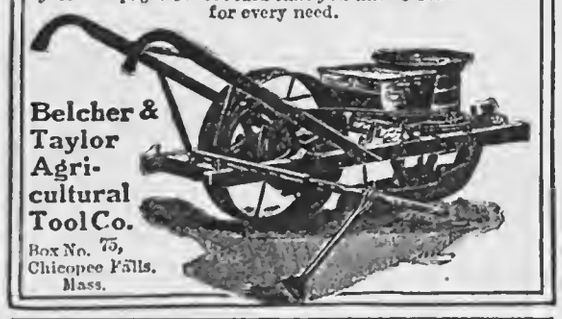

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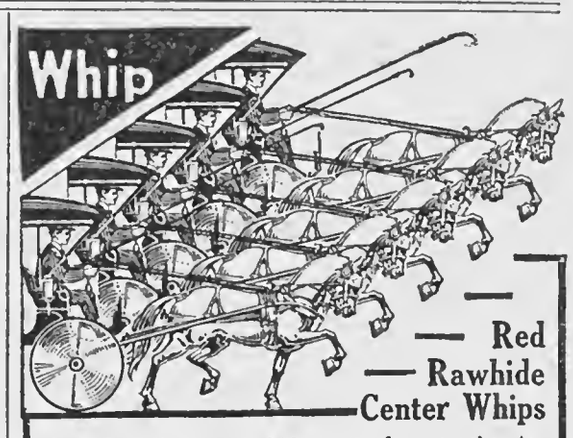

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The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 492, March 28.*)

Nate had ground away at the buffalo horns too, with unceasing zest, on rainy days, or days when Jim's team was too busy in other ways to be used for hauling the bones to the dumping place. To a boy like Nate, who had been accustomed to receive regular wages, this wageless life seemed peculiarly difficult. He knew that Norm was furnishing much more in every way in this partnership than was he. What could he do, where there was no chance for paid work—and someway he fell asleep thinking of black, shining buffalo horns.

Norm had cut and cared for the hay that grew on the valley plat, and it looked to him like a goodly supply for Winter, even should it be less open than the older settlers agreed to be common. It was too early to do Fall plowing, even should it be feasible to do it, and that would depend much upon whether it rained enough to make the breaking possible.

One fine day in September, Nate and Norm drove into the city, and Nate received several bulky letters and some thin ones, with circulars and catalogues. He was quite excited over these, and he tore open a catalogue and running through the pages swiftly, turned to poultry supplies, and bone cutters.

"Gee, but they do cost quite a bunch," he told himself, but even so he determined to have one, sometime, if he could raise the price. The balance of his mail he stowed away carefully, but the very sight of that pictured bone cutter sent his blood thrilling through his veins. He believed he could make that machine pay for itself and the thought of a real, commercial transaction, however small, was a thrilling thing just then. They had attended to the few small items of business they had to do, and were standing on the street corner, idly enough, watching the people surging about, all seeming alert, and intent upon getting somewhere in the shortest possible space of time, when a big, cheerful looking man in blue denim accosted them:

"Say, you! Are you looking for a job?" a hearty voice asked, and a pair of clear eyes, looked at Norm's husky figure approvingly.

"Yes," replied Norm, instantly, although up to the time he met the speaker, he had not been looking any further than his own plat of land for employment.

"I want a good pitcher on my steam thrashing outfit. Fellow left me in the lurch this morning. My name's Tom Miller."

"Sure," Norm assented simply, and his face shone as though a voice from heaven had accosted him. "Work, work, paid work," his inner consciousness kept singing.

"Come on then, we're just starting out. Hope I haven't robbed you of a man," Tom Miller said, turning to Nate questioningly, touching his rough cap as he spoke.

"Not at all," Nate replied smiling, "I'm not hiring any help just now."

"Lucky!" Tom Miller added. "Men are scarce. Don't know of anyone who wants to go for a cook, do you?"

"Yes," Nate responded quickly. "If your crew are not too fastidious, I'd like to sling hash for them for a spell."

Tom Miller, looked at Nate's neat outfit, his slim brown hands, his rather delicate, but fine face, his broad, yet sunken chest, and his shoulders, which were stooped.

"Lunger!" was Tom Miller's correct mental comment, alound he said. "We pay the cook the same as the thrasher. You look as though you could wrestle with pots and swing a dishrag. Come on!" and Tom Miller plunged forward as though all he had to do in life was to say to others, "come," and they should follow.

"I'm peculiarly expert with dishrags—and fond of them," Nate added whimsically measuring his stride to that of Tom Miller.

"Hold on a minute, Mr. Miller," Norm said. "We've got a yoke of oxen with us, and we'll have to picket, or stall or stable them somewhere, we can't leave them hitched to the wagon in the street."

"Fetch them along, grazing's free—you may get a chance to work them some in shock thrashing—but they're most too slow—everything is done with a slam and a rush out here." And with this Tom Miller, untied his team of splendid draught horses, and climbed into the lumber wagon. "Follow me, I live out about 10 miles southeast."

Nate hustled to untie the oxen and Norm sent them scurrying along the road following the cloud of dust which he saw in the distance. The two boys looking at each other gravely and then, with eye answering to eye, they both broke into a hilarious laugh.

"Glory!" said Nate.

"Hot dollars!" exulted Norm.

"How glad I am I have attended cooking school this Summer," gurgled Nate, with a sort of "prunes and prisms" dignity.

Then both lapsed into silence, broken only by Norm's guiding calls to his oxen, a "gee," here or a "haw" there, or a "giddap Reddy, hustle along Roan."

"The chickens!" blurted out Nate after some miles of silence.

"And the setting hens and the cat!" appended Norm.

"I rackon Jim'll take care of them when he finds we don't get back," Nate said easily.

"The cat can catch gophers enough for her living, and I'm sure Jim'll see to things," Norm said, but he felt a little uneasy, although it was a common thing for one young land-holder to "see too" some ones' else affairs, if the owner chanced to get home late at night. A state of affairs quite common, for the distances were long in that new country, of many settlers and few cities.

Nate found himself introduced to a cook shanty, a small building on wheels, which could be drawn from one thrashing place to another. In this shanty were long shelves on either side, for tables, benches to sit on, and a narrow runway between, where the cook was supposed to move as he passed the food. A range in one corner, with monstrous kettles, and cooking dishes, flour bin, sundry supplies, and so on.

"You two can bunk in together if you want to," Tome Miller said in leaving. There's springs and mattress, with blankets furnished for the cook, who's supposed to sleep in the cook cabin. Blankets and a tent for the other men."

"We'll bunk outside," Norm said, cheerfully.

"Never sleep indoors unless it rains," Nate assented, "and we don't either one know what springs and mattresses are."

"Men must get to work as soon as they can see, so breakfast'll have to be ready and eaten before daylight."

"All right," the new cook responded, as he watched Tom Miller plunge away. "Now I'll hop to it, and see what the cook can find for breakfast," and laughing and talking the two boys explored the contents of every utensil in the place, finding the supplies, good, abundant, and comfortable. It was pretty late when they wrapped the blankets about them, and slept under the clean September sky. And it was early, very early, when Norm dragged Nate from his slumbers and set him pottering over the cook stove.

Both boys worked briskly, and deftly, for they were accustomed to a limited space and it seemed good to have such an abundance to draw from for the meal.

The whistle blew for breakfast, and Nate stood, waiting for the coming of the crew. "I hope my halo is on straight," he whispered to Norm as the onslaught began. But he forgot all joking in the work before him, as he poured cup after cup of coffee, and dished up plateful after plateful of crisp bacon.

"This tastes like real cooking," one of the men affirmed, smiling up at Nate cordially.

"It sure does," agreed a second, and someway, Nate felt as though his halo was not only on straight but shining rather brilliantly.

For four weeks the boys worked harder than they had ever worked in their lives and at the end of that time they had learned many things. They saw how grain is handled in the West, they caught the real Western spirit, of push, and rush and enthusiasm. Every worker was a friend and brother to every other worker, but the drone had no place, and was pushed out as soon as he was found, in that busy hive of workers. When at last, Nate hung up his final dishrag, washed out the last towel, put away for the last time the tin cups and plates and dishes and slipped a cook book, he had smuggled in surreptitiously, into his pocket, with a little sigh of satisfaction.

"Good bye, men," said a heavy bass voice, and Nate looked up to see the crew gathered about the shanty door.

"Hello boys!" he cried joyfully.

"We've made up our minds you've done yourself proud on this trip, and we've brought you a little present," said the spokesman, and forthwith handed out a package.

Nate caught it, yanked off the string and held dangling in his hands six gingham aprons. He flushed, and then catching the spirit of the joke, he jumped up on the table and cried. "Hear, hear. Here's thanks to you, and may you everyone find a gingham apron in your home some day."

"The same to you, the same," and then followed a pandemonium of delight, as Nate carefully replaced the aprons in

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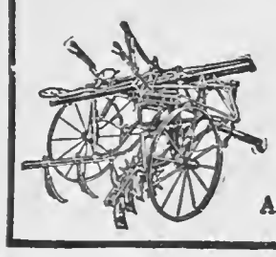

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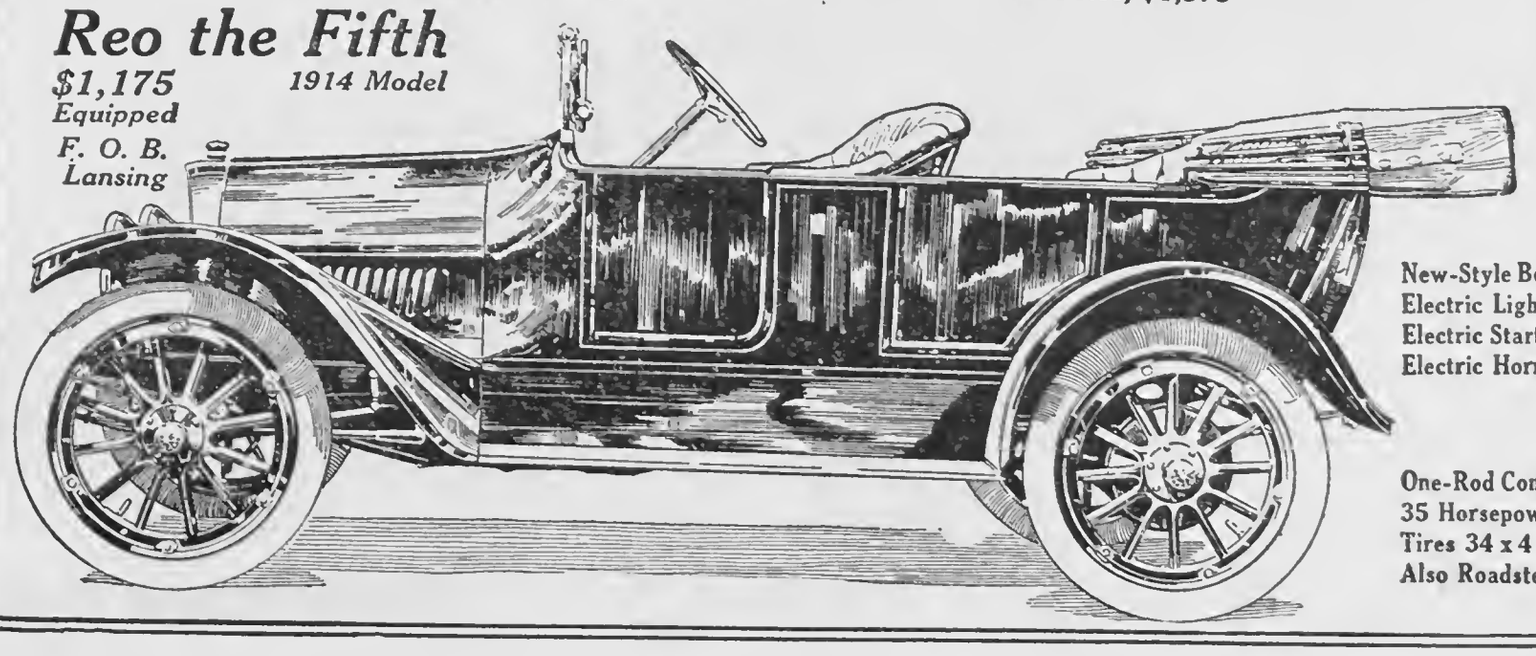

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their wrapping and buttoned the package inside his jumper.

When Tom Miller paid them off in real green money, the boys could hardly contain themselves.

"I've only paid the other men two fifty a day, but I'm going to make your wad an even hundred apiece, for your the bang uppest workers I've ever had in my kit," and Tom Miller shook both cordially by the hand. "Now you're both engaged for next Fall, remember."

Riding slowly homeward in the crisp October morning, with Red and Roan as sleek as a pair of kittens, Norm said, reluctantly, feeling himself almost like a traitor to his own traditions, "Red and Roan are all right for oxen—but if we get any crop at all we've got to have some horses another year."

"Yes," Nate agreed joyously. "We ought to have them before Spring work. We can't afford not to have them, and we've got to have a cow and a pig."

"There won't be any paid work this Winter," Norm cautioned.

"Oh, for money, to go on and develop things! I never supposed it cost anything to farm, but I'm going to get the biggest bone cutter I can find with part of my money, and the rest you can blow in, to suit yourself."

"Bosh, on a bone cutter, you might better buy your Winter flannels," Norm grouched. But he looked indulgently at Nate as he sat, with his shoulders nearer squared than he had ever carried them before.

They stopped in the city for a little rest, and fed the oxen, and themselves and then started on the home stretch, for miles they went silently, dreaming, thinking, thrilling with the joy of life, and all its gladness, for some way this adventure on the plains never dulled, never lost its zest or fullness.

"Why—ee—This begins to look like home, we're almost home—oh, the home trail, the home trail," chanted Nate joyously.

"It does look good, even that shale bank, and the hill and all—why—how queer things look—that isn't our house on the hill!" Norm sat up wide-eyed, and Nate stared incredulously.

"It certainly isn't the shack we left, but it's our place," Nate cried, startled.

Jim Maynard came running out to meet them, for he had sighted the oxen far away on the plains.

"Where in heavenly hades, have you been?" Jim inquired indignantly. "How do you expect a fellow to hold your land for you, and you traipse off like this? How was I to know you were coming back? Your claim is jumped. A fellow by the name of James is on it, shanty, cow and all. His shanty has blown down three times, but it hasn't discouraged him any, he's set it up again."

Jim looked at the boys knowingly, and laughed, but the faces of neither Nate nor Norm showed any understanding.

"You see," Jim explained definitely, "the wind rose very suddenly three times while the tenderfoot was away, and the shanty fell all to pieces."

"Oh," gasped Nate, "I see, you fellows pulled it down."

"I should call it a very-local-hurry-cane," Norm admitted slowly, the humor of the situation dawning on his perturbed mind.

"He's got possession, and possession is nine points of the law anywhere and about ten here," Jim said gloomily.

"It looks pretty bad," Norm admitted gravely.

"Is he religious?" Nate inquired naively. "Let's go along and have a little Sunday school talk with him anyway."

CHAPTER V.

THE INDIAN UPRISING.

"We'll just jog along, and have a little Sunday School talk with him," Nate reiterated significantly.

Jim, scenting some break of the usual monotony, jumped into the wagon and crouched down out of sight, where he might hear and yet not be seen. Norm drove up to the newcomers shanty and stopped.

"Hulloo!" shouted Nate cheerfully.

The door opened and a short, determined looking individual appeared, looking askance at the two boys.

"Got any chickens to sell?" Nate inquired blandly, with his most fatuous look of innocence and friendliness. "I see you have some fine lookers here."

"Naw," replied the man, "I've been eating all I could spare. I have some hens setting though, and maybe later if you wanted to get a pair or two—My name's James, John C. James."

"You don't happen to have any frame house you want to dispose of do you?"

"Nary one," Mr. James negatived, with a sharp look at Nate's impassive face.

"If that's the case, you'd better tote that one you're in off this place, for this land belongs to me and I've got the papers to show for it. Besides I can prove that you've been stealing my chickens and eating them, by your own admitting." Nate's voice was still bland and indulgent, and a pleasant smile wreathed his ingenuous face.

"I can prove," Mr. James countered sharply, "that you haven't lived on this place, nor fulfilled the law concerning it. I've got possession and I'm going to keep it. It's a good grazing place for my cow. That shale bank hain't no good for anything else." There was a furtive glance at the shale bank, where Mr. James had evidently been digging some.

"Shall we let him have it, brother?" Nate turned to Norm inquiringly. "He says it isn't any good anyway—and yet he seems to want it!" musingly.

"Why yes, I guess we may as well let him have it," Norm paused, and Mr. James looked pleased at his decision, which Norm modified in time by adding casually, "Till tomorrow, then I'll be bound he'll be taking kindly to moving off."

"That's the word. We'll give you time to pack up, and dust out decently," Nate said, and then scanning the sky, he remarked drily, "It looks to me as though this would be an awfully unhealthy place for you after tomorrow. I'm positive that by night there'll be a tornado—or SOMETHING!" There was a firm set to Nate's lips, although he spoke in an easy, bantering tone.

"Enough said," Norm agreed. "Till tomorrow then!" and both boys touched their caps to Mr. James who seemed almost at the point of spontaneous combustion. "I'll sally forth and mosey on," Norm said nonchalantly; turning Red and Roan Norm drove down into the little valley by the creek, and unhitched, tethering his oxen in the rich grass.

"What are you going to do?" Jim inquired admiringly, creeping out from his hiding place.

"Do?" stormed Norm. "We're going to hold this land. We've got to fix up better anyway. I've got some lumber right here, and I'm going to town tomorrow and get another load, and if that critter isn't off that place when we get back, he'll have to take his medicine, that's all."

Nate looked at Norm admiringly, but said drily, "Don't let your angry passions rise, Normy. Our esteemed tenant is scared plum out of his wits."

"Scared?" snorted Norm. "He's just about as scared as a bulldog with a bone, worried by a terrier. He's got a cabin as square as a mansard roof."

"La, me!" responded Nate daintily, "and I'm boodooed with a dimple," and he put one slim, brown hand up to the offending beauty spot in his own chin, which was rather good to look at if nothing more, "I wish I could fill in that ornamental cavity," Nate added disconsolately.

"I have a cavity much greater, and less ornamental, which I shall proceed to fill up with bread and bacon," Norm said savagely. "Now stop your being funny and take hold there, you graduated cook you!"

"Correct," Nate replied still pleasantly, "but, oh, my gizzard! If Mr. James don't get icicles on his tenderloin before midnight tomorrow, I miss my guess." Nate was busy making a little fire and slicing thin slices of bacon. Then toasting some crisply, handed it to Norm. "Assuage your grief, and may your good nature ever be more!"

"He's been living intemperately high, for the last month and he's got delirium tremens as a result. He'll be seeing things in a minute." Norm spoke gruffly, but he looked at Nate with a look as full of adoration as can be put into one pair of human eyes.

"I see!" Nate paused, a piece of bacon in midair. "Why, I heard something about Indians and ghost dances, in the city to-day. Did I hear it or is it merely the nightmare of good living, gone to my brain?" Another long pause, in which all three boys ate bread and bacon, and drank coffee to their heart's content.

"Hey," cried Nate, "but I have it, I have it sure!" But what he had he did not say. If there had been anyone to see, they would have seen three boys with heads close together, and with voices so low, they could scarcely be heard above their breathing, and finally Jim crept along the valley and disappeared, keeping well out of sight of any eagle eyes that might have been watching in the shanty.

The next morning long before light, Norm started for the city, while Nate by means of a long detour reached the back of Jim Maynard's shanty, where he found Jim, himself wide awake and listening for him.

"You take my horse," Jim whispered, and then his voice sank so low that none but Nate close by could hear a sound, but in a few minutes, Nate rode off with the horse's hoofs muffled with grain sacks, carrying carefully, a couple of cans that were labelled, "Paint."

About eight o'clock a foam-flecked steed drew up in front of Jim's shanty. There was a wild "Halloo!" which brought not only Jim, but Mr. James to the open. Whereat, the new-comer, waved his arms wildly, crying out, in an excited voice. "The Indians, the Indians! There's been ghost dances for three days and nights, and that is a sure sign that"—the voice paused significantly.

"Indians! And you're out warning the settlers!" gasped Jim.

"I'm pulling out, and warning as I pass along—I'd hate to think of this country swimming with blood and reeking with bodies of the settlers!" There was horror in the voice, and the man's face was unnaturally white.

Jim gave a shrill whistle and waved to Mr. James, and that gentleman hurried to the spot, for the conversation, had been excited and quite loud enough for him to catch its import.

"Indians." Jim ejaculated hoarsely. "Indian up-rising out beyond the river—ghost dances"—and with a hurried look backward, the rider put spurs to his horse and plunged away.

(Continued next month.)

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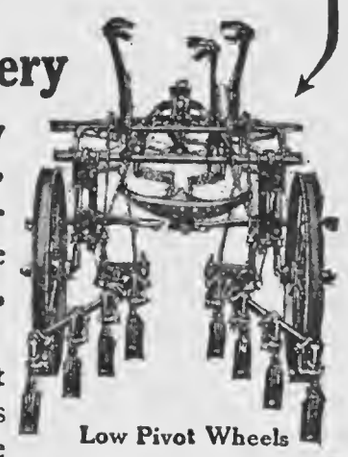

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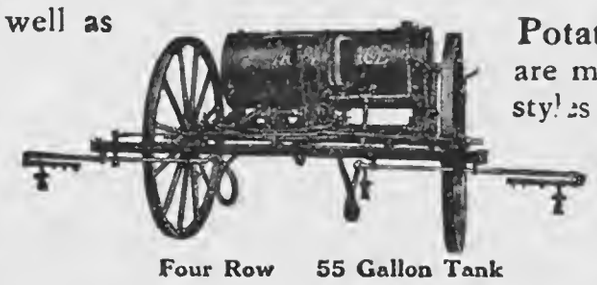

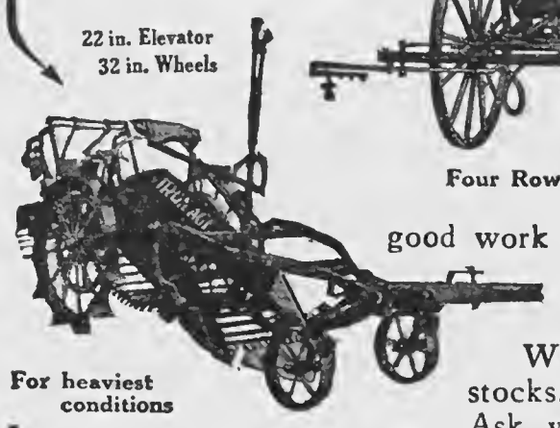

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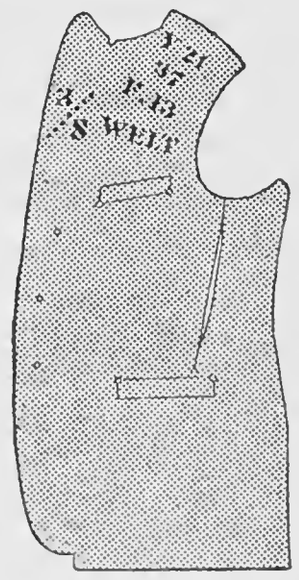

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Rights of Adjoining Property Owners in Highway.

Has a New Jersey property owner control to the road? Can a neighbor place a post with a mail box on it, on property that he—the neighbor—doesn't own, rent or control? Assuming that Mr. X, my neighbor, has placed a mail box along the road fronting my property, have I the right either to remove it myself or tell him to take it away? F. A. W.

New Jersey.

The general rule is that the owners of adjoining property own to the middle of the highway, and, subject to the rights of the travelling public, may exercise ownership over it. In this instance it does not appear that there is any law which would give your neighbor the right to put his mail box on your side of the road, but there may be regulations of the Postoffice Department requiring people who live off the road and who wish their mail delivered by rural delivery to furnish a mail box and, if no owner along the road would allow them access, they would be deprived of this privilege and this seems hardly equitable. There is no doubt that you could make him place the box where it would not interfere with you and your use of the road, but it seems also that he ought to have some place along the road where he can place his mail box.

Maintaining Fence Along Railroad.

Is there a law in the State of New Jersey compelling railroads to build fences along their properties where they adjoin farms? In this particular instance, I am trying to get the Pennsylvania Railroad to build a fence where it adjoins my farm. The representative of the company claims their deed does not specify that they shall build a fence, and my deed does not specify either. They want to make an offer as to what I will do. But they seem so willing that I should make them a proposition, that it seems to me there must be a loop-hole somewhere. Can you advise me in anyway? The amount of fencing, as called for in the deed—that is, in distance—is 13 chains and 84 links. How many rods is this? How many rods in a chain?

New Jersey. W. P. M.

Section 21 of the General Railroad Law of New Jersey requires "every company organized under this act to erect and maintain fences on the side of its road of the height and strength of division fences required by law, with gates or bar-ways at farm crossings."

You will note that this is made to apply to companies organized under the New Jersey laws, while the Pennsylvania Railroad is a Pennsylvania corporation. It would seem, however, that if this company avails itself of the New Jersey laws, it must also comply with them, and it would probably be well for you to notify the company that the fence is in disrepair and that you wish, if such be the fact, to keep stock in the field and that you will hold them responsible for any damage done to the stock if they get upon the railroad track.

There are four rods in a chain, which is 66 feet long.

Mortgagee's Interest in Insurance.

In 1905 I bought a farm for $2,600, subject to mortgage of $1,900, with an old house, a barn unpainted, built about 20 years ago, and some old rickety outbuildings, house and farm being insured for $300 each, total $600. Between 1905 and 1911, the buildings were as described, except rickety outbuildings either fell down or were torn down, as they were too rotten to be of any use. In 1912 I built a new house, costing about $3,000 with all modern improvements. I have house insured in one company for $2,000, in another company, the house for $300, barn $400, contents $100, cow barn $200, total insurance $3,000, the original insurance of $600 being annuled. The law firm that holds mortgage now write me they want my insurance papers to protect their client in case of loss if any, and must be made payable to client.

New York. T. C. T.

The interest of the law firm and the mortgagee in your insurance is governed entirely by the terms of the mortgage. Nearly all mortgages contain the clause that the mortgagor shall keep the property insured for the benefit of the mortgagee, and this clause varies to suit the wishes of the parties. You should ask to see your mortgage, and if you are to keep the property insured, you will probably have to do as the lawyers wish, but in no event are you required to turn over to them any more than the amount of their mortgage in case of a fire; and if you turn over to them as much as the full amount of the mortgage, then the property would be free of the mortgage.

Rotation for Melons.

Will muskmelons and watermelons do well on same ground two years in succession, or must I change ground? I had a good crop last year. P. L. F. J.

Walden, N. Y.

It will depend upon the soil. If melon insects and diseases were plentiful last year we would plant elsewhere. If the soil was quite free from these pests and the soil is naturally good we should follow with melons.

Homemade Tobacco Extract.

For some years the entomologists have strongly advised the use of tobacco extract for fighting various kinds of insects. It has come to be a regular proposition to use the extract alone, or in combination with other materials. This has led many farmers to ask why they cannot make the tobacco extract at home. Their proposition is to buy the stems or waste tobacco, steep it in water, and use this broth or liquid for spraying. From this have arisen questions as to the proper strength to use, or for determining just how to make a standard mixture. We have sent this question to some of our leading entomologists, asking how a farmer may know when the tobacco extract is the proper strength. How many pounds of tobacco should be use to a gallon of water, for example, and how long should it be boiled or steeped? The following statement is made by Prof. H. E. Hodgkiss, Asst. Entomologist, at the Geneva Station.

"Tobacco extract as prepared by the fruit-grower varies greatly in its insecticidal properties. This is due to the methods of making the preparation and the variation in the proportion of nicotine in tobacco. The alkaloid varies in amount according to the locality in which the plant is grown and to the parts of the plant from which it is extracted. The variation in the quantity of nicotine probably accounts for the little use of homemade decoctions in commercial plantings. The chief advantage obtained by the employment of standard nicotine preparations is that the amount of nicotine is constant, which makes it possible to obtain dilutions of definite strengths. The reasons for differences between homemade and commercial nicotine preparations are recognized, and I will consider them under the following headlines: 1. Ordinary tobacco juice; 2. standard nicotine preparations.

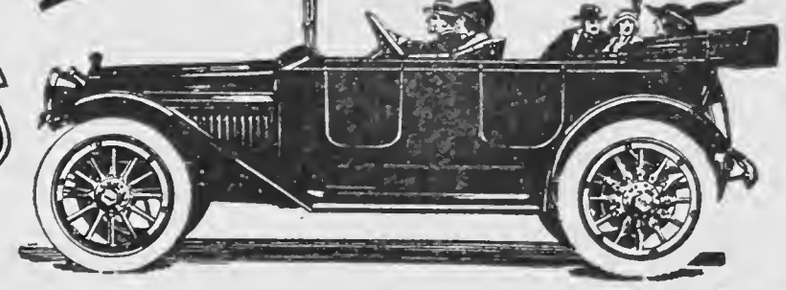
"1. The ordinary juice is obtained by a methodical steeping of the unused parts of the tobacco plant, such as trashy leaves, sweepings of warehouse and the wastes of manufacturing. The density of the extract and the amount of the nicotine vary according to the nature of the tobacco and the processes and extent of the steeping. The liquid is strongly colored and ferments on standing.

"2. Standard nicotine preparations are obtained by distilling ordinary tobacco juice. The vapor from the retort is conducted over sulphuric acid, giving nicotine sulphate and acid. A standard nicotine preparation contains a fixed amount of nicotine as nicotine sulphate and small quantities of sulphate of soda, carbonate of soda and certain organic salts. The liquid is clear, does not ferment, and possesses the distinct advantage over ordinary juices that the amount of nicotine is constant and is guaranteed. Since the nicotine preparations at guaranteed strengths of nicotine were placed on the market and were found to be constantly efficient, we have not advised the use of homemade tobacco solutions for the reasons as stated above; and we believe, from our own experience in making the preparations from tobacco stems, that it will be more profitable to the growers to purchase the material containing a guaranteed per cent. of nicotine than to try to make it themselves.

H. E. HODGKISS."

OKLAHOMA AND THE 35-CENT DOLLAR.—This question of the 35-cent dollar is moving faster than any other national thought. Even in Oklahoma, an agricultural State, the question of the great difference between the producer's and the consumer's prices is coming up. In the comparatively small town of Stillwater, Okla., on March 14, grocery stores were offering new potatoes at 10 cents a pound, or $6 a bushel. These potatoes were grown on truck farms in Louisiana and Texas, only a few hundred miles away, and they were grown by men who found little or no profit in their culture. Such situations as these ought to bring the matter directly home to both the farmers and consumers, and wherever we go we find the same tragedy of the price to the consumer worked out. It is a good thing that people all over the country are coming to realize what this 35-cent dollar represents, for they never can do anything to help solve the problem until it thoroughly works into the mind that this condition means far more than high price to the consumer, but also a robbery to the producer.

Imperial



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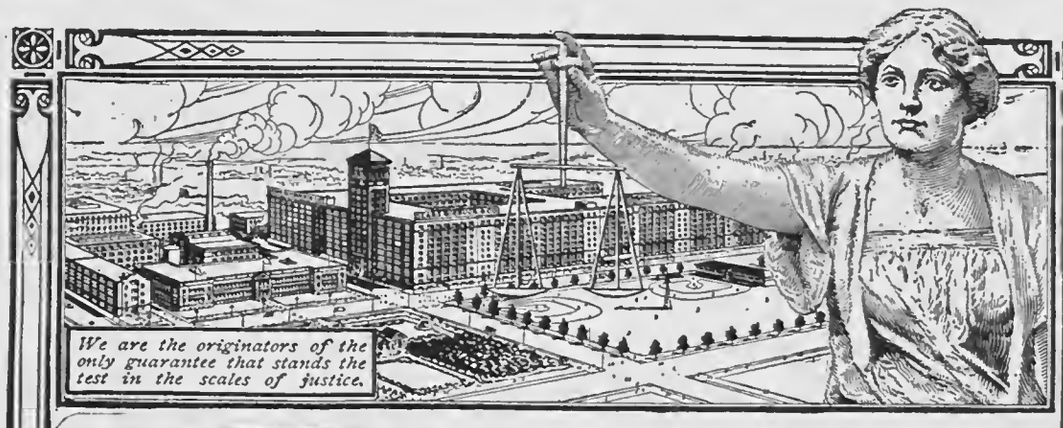

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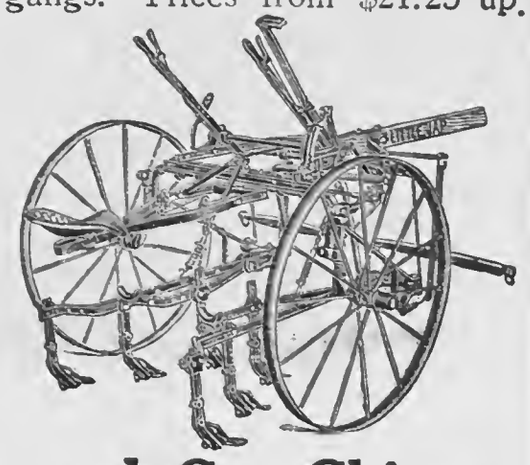

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EVENTS OF THE WEEK.

DOMESTIC.—In the Massachusetts Senate April 10 the anti-vaccination bill was passed to be engrossed. This measure provides that any person who has reached the age at which attendance at school is permitted or required, and who presents a written statement from a parent or guardian, or by himself, if 21 years old, which declares that such parent or guardian or person is opposed to vaccination, shall not, as a condition precedent to admission to the public schools, be required to submit to vaccination, except at the time of a threatened or actual outbreak of smallpox, when the school board shall temporarily debar such person from the schools.

The Hotel Sagamore, at Bolton, on Lake George, one of the largest hotels in the Adirondacks, was destroyed by fire April 12; loss $250,000.

Fire destroyed three business buildings at Culpeper, Va., April 13, and caused the death of one person. Five firemen were also hurt. The fire loss is $65,000.

A three-alarm fire at 545 and 547 West Twenty-second street, New York, April 13, stubbornly resisted the efforts of the firemen, caused a $200,000 loss and tied up street-car traffic on three lines converging at the Twenty-third Street Ferry for more than an hour.

A ton of flour going from Nezperce to Pierce City, Idaho, by mail, passed through Lewiston, April 13, and although the flour is in 50-pound sacks it is necessary to weigh it every time it is transferred in order to get the weight for the mail contracts. A Spokane concern shipped 1,000 pounds of crackers to local dealers on the Camas Prairie, the rate being four cents a hundred pounds less than freight on that class of goods.

Upon the theory that while it might be safe to give the Rockefeller Institute of Animal Research the wide latitude provided by Senator Colgate's bill, which had passed the New Jersey Legislature, it would be unwise to confer this authority on irresponsible persons, Governor Fielder vetoed the measure April 13. The bill would permit the institute to establish a bureau near New Brunswick. John D. Rockefeller had endowed the institute to the extent of $1,000,000, and James J. Hill had given $50,000. The objections to the bill were numerous, but the principal one was by Frederick P. Bellamy, of Brooklyn, representing the Newark Vivisection Investigation League, who said the measure was so wide in its scope that it would permit the vivisection of human beings. Mr. Bellamy said the bill would give license to any one to practise any kind of vivisection, and any five persons wishing to incorporate might do any amount of experimenting.

Seven persons were killed April 14 in a fire in The Melvin, an apartment house at Commonwealth and Long avennes, Boston, and sixteen were injured. Fire started in the boiler room and spread rapidly up the waste and elevator shafts, filling the house with flames and smoke. The house contained twenty-one families. The damage was $100,000. Mayor Curley inspected the building, and said that the blame was due to "second-class construction."

Paul D. Cravath's Summer home, Veraton, at Locust Valley, L. I., was destroyed by fire April 14, although most of the furnishings, except those in the servants' hall, where the fire started, were saved. The loss is between $150,000 and $200,000. April 15 the Summer home of Mrs. P. F. Collier, at Southampton, L. I., was destroyed by fire, with a loss of $100,000.

FARM AND GARDEN.—Winter came back to the Texas Panhandle April 8 with a temperature of 10 degrees above zero. All the fruit in the vicinity of Dalhart, it is believed, has been killed. An inch of snow fell.

Vegetable and fruit crops in central Florida were damaged to the extent of many thousands of dollars April 9 by a hail and wind storm and a sharp drop in the temperature. Southern Florida escaped with a cold rain. Frost in the northern part of the State did not affect the crops, which are hardly matured. Bonfires and smudges were used.

The American Florist reports that by a jury decision in the district court at Fort Dodge, Iowa, April 1, a grower of seed corn is held responsible for its failure to germinate or produce a banner crop of corn. The case that thus goes on record was brought by Edward Hart, who bought seed corn of Robert Lawler, of Clare. The seed failed to germinate, a second planting was necessary, and was so late as to impair seriously Hart's crop results. The jury found Lawler's advertisement of tested seed corn an indirect guarantee of the seed and awarded Hart $250 damages. The case will be appealed.

The Postal Department at Washington, D. C., has been notified by the Department of Agriculture of the Dominion of Canada that the importation of nursery stock, shrubs, etc., through the mails will no longer be allowed. The announcement is as follows: "Under a regulation of the Department of Agriculture, which took effect the first of March, 1914, the importation into Canada of all nursery stock, including trees, shrubs, plants, vines, grafts, scions, cuttings or buds, through the mails, is prohibited, excepting greenhouse-grown florists' stocks, cut flowers, herbaceous perennials and bedding plants, provided that a detailed statement of the contents be attached to the parcels containing such matter."

The annual series of "onion specials" are now running from Texas to Chicago and other Eastern markets. The vegetable is being delivered in large quantities at Laredo, Tex., the center of an enormous traffic in onions. From Laredo special trains are sent to St. Louis, Kansas City and Chicago, from which points the Texas product is distributed North, West and East. Heavy shipments are made also from Laredo to Galveston and thence by water to New York, New Orleans and other ports.

The Senate Committee on Agriculture took formal action April 15 dissociating the educational work of the Department of Agriculture from the Rockefeller Foundation. By an amendment agreed to the Department is forbidden to accept any financial assistance from private sources or to prosecute any work with funds supplied from any source other than the Federal Treasury. The work in certain Southern States through the agency of the general education board of the Rockefeller Foundation will not be discontinued. The committee authorized necessary appropriations aggregating about $25,000 a year for continuing the work, in which more than 600 employees are engaged.

A women's agricultural conference will be held at the Pe- lvania School of Horticulture for Women, Ambler, Pa., May 16. This is the first conference held under the auspices of the Women's National Agricultural and Horticultural Association. Among the speakers are Mrs. Francis King, of Michigan, president of the association and vice-president of the National Flower Club; George T. Powell, W. P. Hartman, Chief of the Bureau of Information and Markets of the Grange. The conference is to cover many subjects, such as agricultural education for women, hardy flowers, foreign food plants, fruit, poultry, vegetables, paeonies and Iris, aquatic plants, violet culture, canning and preserving, etc.

The record price for a New York fruit farm was recently paid in Yates County. The report is that Timothy Costello sold 55 acres of land just outside of Penn Yan for $60,000. This property carries an apple orchard of 50 acres, and it was bought by Glenn L. Wheeler. We understand that Mr. Costello bought the place nine years ago for about $11,000, and has since added about $5,000 in improvements. The apple orchard is a noted one, and known all over Western New York. All through the Lake section apple land has gone to a high figure when the orchards are of good varieties and properly handled. The increased value of fruit land in that section is not built upon boom prices, but represents a steady development in the earning capacity of the orchards. Probably nowhere else on earth has the fruit business developed so solidly and securely as in Western New York, and the high values for good apple orchards are legitimate, since they are based upon actual business and production.

The Dutchess County Coöperative Association was organized at the courthouse in Poughkeepsie on April 10. Charles C. Mitchell, of Millbrook, was elected president; Mr. Dickerson, vice-president; Mr. Hasbrouck, financial secretary; Mr. Lacy, corresponding secretary, and Mr. Hogan, treasurer. Strictly coöperative by-laws were adopted, and the organization is in line for associating itself with the new Food and Market Commission when this is organized, and also with provisions to secure for its members the benefit of the new Land Bank law.

OHIO CROPS.

The Ohio Agricultural Department makes the following report of crops for the State, April 1:

Wheat—Condition compared with average, 95%; condition reported one year ago, 93%; crop of 1913 still in producer's hands, 14%, approximately, 3,500,000 bushels.

Winter Barley—Condition compared with average, 96%; condition reported one year ago, 88%.

Rye—Condition compared with average, 96%; condition reported one year ago, 94%.

Corn—Condition in crib, compared with average, 93%; condition reported one year ago, 94%; remained on husk in field, 5%; damage to unhusked during Winter, 14%; damage to fodder during Winter, 23%.

Fruit—Prospect compared with normal yield, 83%; reported one year ago, 89%; buds, Winter-killed, 26%; reported one year ago 7%.

	1913	1914
Wheat	$1.01	$0.93
Corn	.53	.68
Barley	.64	.64
Oats	.36	.43
Rye	.74	.71
Potatoes	.57	.89
Hay	10.78	12.61

I have 40 per cent. live buds left on Elberta peach trees, and 30 per cent. on Mountain Rose and Oldmixon, which is twice as many as are needed to make a full crop. Mr. Barnes, of Barnes Bros., one of the largest growers in Wallingford, tells me there are enough remaining generally in that town to make a good crop. Wallingford and vicinity is the largest peach growing district in New England. Massachusetts and the northern part of Connecticut have lost probably all, or nearly all, the buds. N. S. P.

New Haven, Conn.

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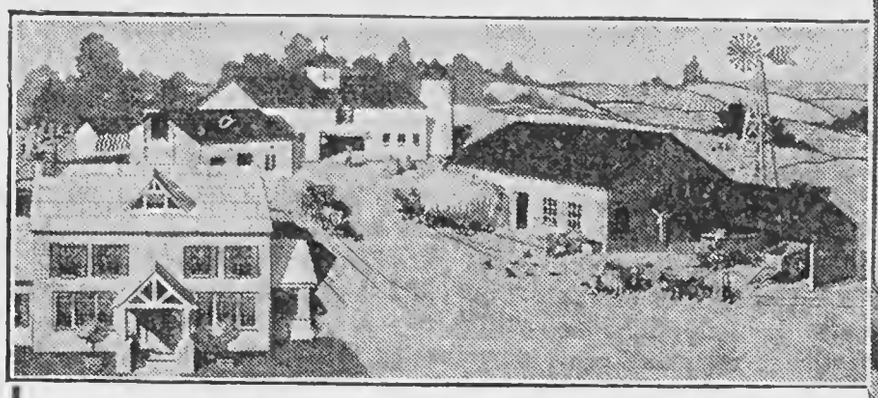

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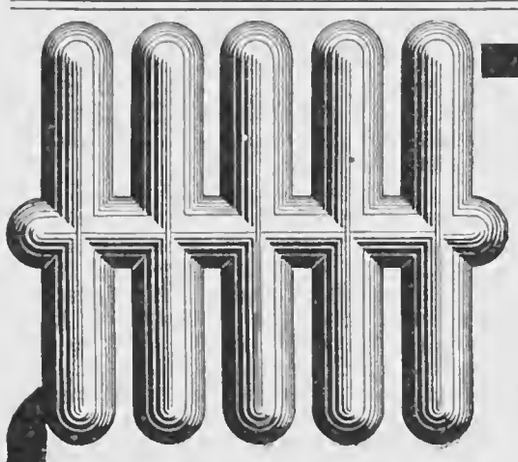
2383



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30 x 3½	15.75	17.00	3.50
32 x 3½	16.75	18.10	3.70
33 x 4	23.55	25.25	4.75
34 x 4	24.35	26.05	4.90
34 x 4½	33.00	35.00	6.15
35 x 4½	34.00	36.05	6.30
36 x 4½	35.00	37.10	6.45
37 x 5	41.95	44.45	7.70
38 x 5½	54.00	57.30	8.35

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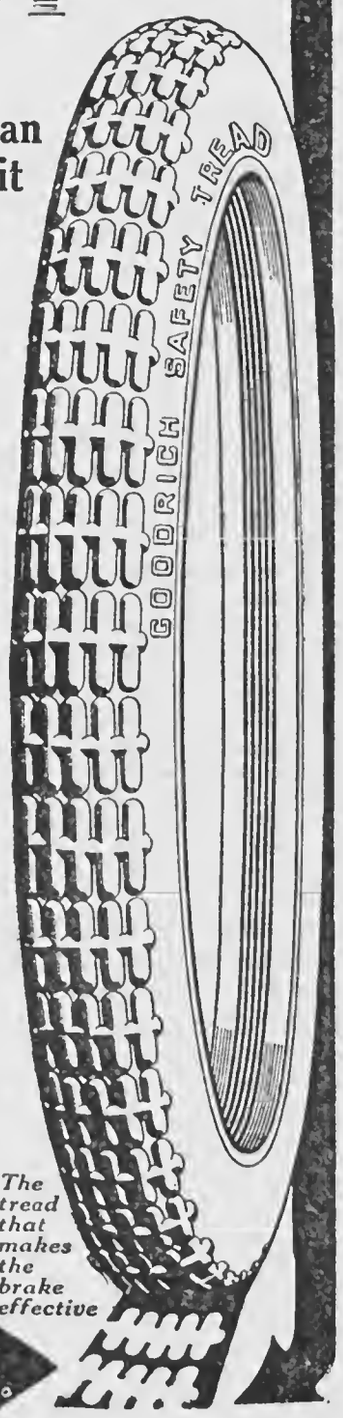


The tread that makes the brake effective

THE STRIPED TREE CRICKET.

Will you tell me what kind of insect or bug deposits eggs in a slit cut into the bark of the shoots of a young apple tree? I have found a number of these deposits on my trees. The slit is usually about an inch long and contains about 25 eggs.
Massachusetts. D. A. R.

The group of insects to which the grasshoppers, katydids, and crickets belong contains many species that are more or less injurious, and a few species that have constituted the greatest insect scourges man has ever known. We refer to the different kinds of locusts, especially the Rocky Mountain locust. Perhaps some who read these lines can recall from their own experience the great hordes of these locusts that swept over some of the Western States in the seventies, and literally ate every green

WORK OF TREE-CRICKET. Fig. 251.

thing in their path. Fortunately, the tree-crickets have never proven to be so injurious.

The tree-crickets are fragile in appearance and the wings are pale in color, almost white in one species, so that it is called the snowy tree-cricket. The tree-crickets are wonderful songsters. The song is heard mostly at night, although some of the singers may be heard on cloudy days. The singing begins as soon as the dusk appears, and continues during the whole night. The song seems to come from everywhere, and fills the air with a volume of shrill monotonous sound. The insects are remarkable for singing in unison, so that the songs of the different individuals constitute an insect chorus. The singers may be found among the branches of trees or shrubs, or even among tall grasses. The song of the snowy tree-cricket sounds like the word, *treat, treat, treat*, slowly and shrilly uttered without variation the whole night through. This is probably the most common insect song heard during Summer nights.

Although the tree-crickets are fragile looking, yet the female is provided with a stout ovipositor, with which she can bore holes in the stems of plants in which to deposit her eggs. The striped tree-cricket (Oecanthus nigricornis) drills several holes in a row in the stems and deposits a long white egg in each hole. Wherever she deposits these eggs she leaves a long narrow scar in the bark, like that shown in Fig. 251. In these scars there may be 20 to 30 eggs which are deposited in the Fall. The striped tree-cricket deposits her eggs preferably in the canes of raspberries and blackberries, and sometimes in the twigs of peach, currant, cherry, and now we find them in the apple, for the egg scars in the apple twigs referred to in the foregoing letter are made by this tree-cricket. This insect is sometimes quite destructive among raspberries, because the terminal shoots are destroyed by being broken off at the scar. The only feasible way of controlling this tree-cricket is to cut off and burn the infested twigs before the eggs hatch.

GLENN W. HERRICK.

STRAWBERRIES AND CORN.

Tell me what you think of a "fool trick" I am going to try this Spring. I had a piece of good grass, a section between two rows of trees, and in the adjoining section I have a nice strawberry patch one year old last Fall, which is in fine condition now. Last Fall quite early I plowed up the grass land, turning in a good heavy dressing of stable manure, with a flock of about 60 or 70 Buff Wyandotte hens following the plow and helping themselves to all the June bugs they could find. It was afterwards wheel-harrowed, the hens again having a picnic following it, and then drag-harrowed once or twice more under the same conditions. I think the grub question will be settled, and now I intend to plant it to Golden Bantam corn and set a strawberry bed in the rows, cultivating them as I cultivate the corn. The plants I can get easily from my old bed, which is right alongside of it, and I can work a half hour at a time whenever I can get a chance at taking up and transplanting them. The corn rows will be 3½ feet apart and the hills two feet apart, and I shall set a strawberry plant between each hill and keep them in hills the first year. After the corn is off I shall pull the stalks, which I always do, as I keep no cow, and either pack them around my apple trees for a mulch or use them to mulch the strawberry plants through the Winter, and then next Spring fork them off and put them around the trees. I like corn fodder to mulch strawberries about as well as anything I have ever used, as it is free from weed seed, does not pack down hard upon the plants, and is easily removed in the Spring. One year I had a large bed mulched with it and in the Spring took it off and packed it around an apple tree that had never had a fair crop of apples, but the following year, with no fertilizer of any kind I gathered nearly 40 bushels of apples. I shall spray three times this year, including one spraying with lime sulphur. Will you tell me what the following combination figures out in ammonia, phosphoric acid and potash, and what you would think of its use in my orchard which is sandy loam mostly? I think of mixing in equal parts by weight of nitrate of soda, muriate of potash, fine ground bone, acid phosphate, and tankage. Z. C. B.
Connecticut.

If the grubs have been killed out this plan is practical—in fact it is quite frequently done. We are not sure that this soil will be found free from grubs, in which case the plants will suffer. We should start the strawberry plants as early as possible. The Bantam corn makes a short stalk, and will not seriously interfere with the plants if the stalks are taken out at once after the ears have been picked. Then give the plants the best possible culture. We have seen some remarkable things done with corn and strawberries. In one case an old strawberry bed was picked and then at once plowed and fitted. Crosby corn was planted in rows three feet apart. This made a rapid growth, and early in August large layer or potted plants were set on straight lines down the middles of the corn rows. Both crops were hand hoed and the cornstalks cut as soon as the ears were fit, when horse culture was started. It was a wet season, and the plants made a good Fall growth and gave a fair crop the following year.

If the chemicals mentioned are of good quality the mixture should represent the following:

POUNDS IN TON.

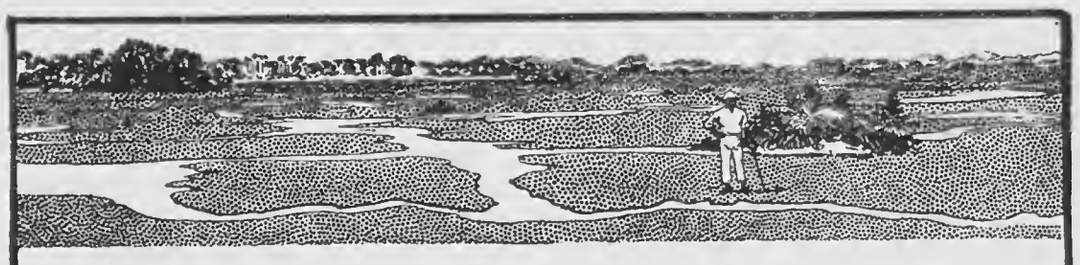
	Nitrogen	Phos. Acid	Potash
400 lbs. Nitrate of Soda	64	...	...
400 lbs. Fine Bone	12	100	...
400 lbs. Muriate of Potash	..	...	200
400 lbs. Acid Phosphate	..	64	...
400 lbs. Tankage	28	40	...
2000	104	204	200

This means 5.2% nitrogen, 10.2% phosphoric and 10% potash—a good mixture for garden crops.

MAGISTRATE (to prisoner, who has been before him every month for years).: "Ebenezer Noakes, aren't you ashamed to be seen here so often?" "Bless yer 'eart, sir, this place is quite respectable ter some places where I'm seen."—Melbourne Leader.

JONES met his neighbor Smith, who carried a gun in his hand. "Been shooting this morning?" asked Jones. "Yes, I had to kill my dog," answered Smith. "Why, was he mad?" asked Jones. "Well," said Smith, dryly, "he didn't seem to be any too well pleased."—National Monthly.

HOLDING a glass of clear honey in his right hand, father observed impressively: "It cost the little bees many a weary trip to fill this with sweetness from the flowers." Little Laura, who had been listening closely, exclaimed with great earnestness: "Wouldn't it have been too bad if one of them had dropped the glass?"—Judge.



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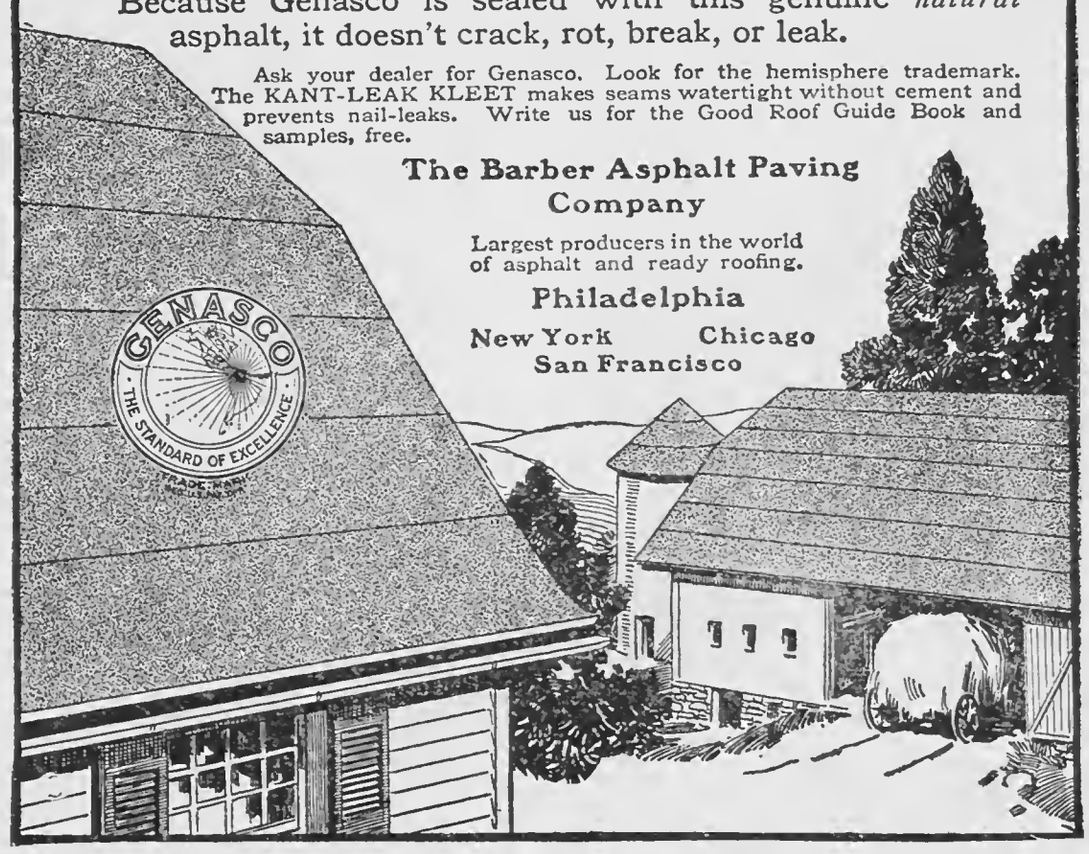

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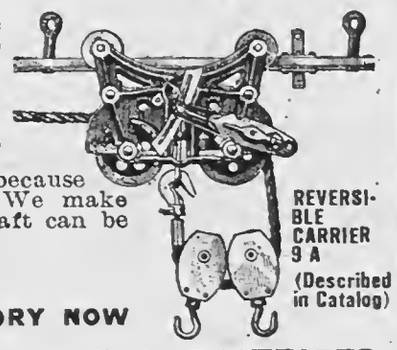

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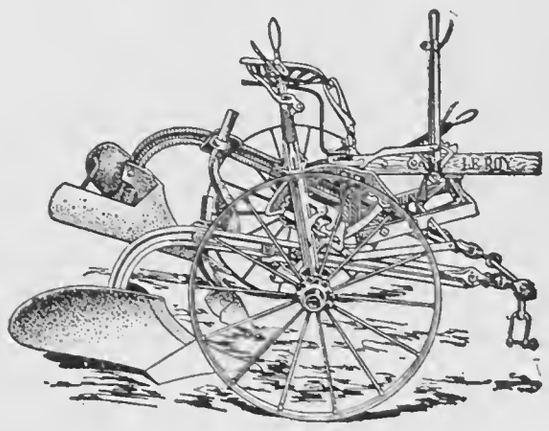
Le Roy, N. Y.

Gentlemen:—The two-way Reversible Sulky Plow I purchased from you last spring has turned out to be a most profitable investment and the best tool I have on the farm.

I figure the plow has paid for itself already just through the extra cost of fitting up the dead furrows had I used a one way plow.

It plowed 25 acres of stubble for beans, 20 acres of hard stony ground for wheat, 20 acres of old sod which had not been plowed for years, giving no trouble at all and without buying a single extra point. The points that came with the plow were not changed for the entire distance.



MANUFACTURED BY
The Le Roy Plow Co.
LeRoy, N. Y., U. S. A.

The other parts of the plow are as good as new. My boy did most of the plowing and came in at night just as fresh as he went out in the morning.

It is also easy on the horses for I never have to rest them. I figure it saved 455 miles of walking. I hope you sell a lot of them. Yours truly,
Fort Hill, N. Y., Dec. 12, 1913. John H. Parmelee.

The Le Roy handles just as easily in small fields as large and will turn the same sized furrow as any other with much less horse power.

Every farmer likes the **LIGHT DRAFT LE ROY**, because it works so easily, does such good work in a large variety of soil, is easy on the horses, pays for itself so quickly and saves walking 7 miles to the acre.

The Le Roy is guaranteed to do better work than any other reversible sulky plow made. Ask your dealer for a trial or write us.

We are not in a Trust or Combine, but are a strong Independent Company.

LE ROY PLOW CO., LE ROY, N. Y.

Hope Farm Notes

THE GARDEN.

Every year at or before this time the garden question becomes a living issue. It is far more important to us than the tariff, the Mexican question or Mr. Bryan's management of the State Department. Villa may be Mexico's president and he may try to annex the United States or Mr. Bryan may send a case of grape juice to King George, and still Hope Farm would move on. If, however, we were not able to go out at any time during the Summer and pick a dozen or more different vegetables there would be a social earthquake here. Properly so, because from Redhead up to Baldhead our folks have been trained to know that it is the duty of a piece of land to provide 60 per cent. of the family food through a good garden. These men who claim that it is cheaper to buy vegetables, or who are willing to live on meat, eggs and potatoes all Summer long will get no followers here. There is no law to prevent their prohibition of a good garden except the law of common sense, and who can enforce that?

A garden will cost some money and more work, but it is worth it all. You cannot spend a dollar to better advantage, and no hoe can scratch up more gold than a garden hoe. This season is late, and there is still ample time for some of these non-gardeners to make their start. Most of the wise ones have bought their seeds, but still we have people come asking for an outfit that will provide a full supply for an average-sized family. I could tell what we buy, or I could get other individuals to give their choice, but I find that gardeners vary in this as they do in other things. When you find the Leghorn hen man admitting the claims of his R. I. Red neighbor, or the Airedale dog man claiming that the bull dog has anything on *his* friend in fur you may expect two garden cranks to argue on seeds. To the man without much experience advice based on wide knowledge is better, for such advice is sure to cover observation of many different soils and localities.. If I wanted to know what varieties of strawberries would be likely to do well in a certain section I would go to a man like W. F. Allen, who sends plants everywhere and knows from reports how the varieties behave. So in order to get a fair idea of best seeds for an average garden I went to W. Atlee Burpee. The following list is based upon personal experience and also upon distribution, for critical buyers will discard the unsuitable and continue to try what satisfies them.

The following list has been compiled with a view of furnishing a family of six people with vegetables throughout the season:

150 feet peas, Prolific Extra Early, one quart.
75 feet peas, Pioneer, one pint.
75 feet peas, Stratagem, one pint.
40 feet onion sets, one quart.
100 feet onion, Southport Yellow Globe, one ounce.
75 feet beet, Black Red Ball, Detroit Dark Red, one ounce each.
50 feet lettuce, May King, Big Boston and Iceberg, one packet each.
30 feet spinach, Long Season, one ounce.
75 feet parsnip, Offenham Market, one ounce.
50 feet carrot, Early Short Scarlet, Danvers and Saint Valery, one packet each.
30 feet turnip, Early Milan and Red-Top White, one packet each.
200 feet sweet corn, Golden Bantam, Howling Mob, White Evergreen and Country Gentleman, one packet each.
100 feet string beans, Burpee's Stringless Green Pod, Burpee's Stringless White Wax, one pint each.
100 feet beans, dwarf Lima, Burpee Improved, Fordhook Bush, one pint each.
12 hills cucumber, Fordhook Famous, one packet.
15 hills watermelon, Fordhook Early, one packet.
15 hills muskmelon, New Fordhook, one packet.
6 hills Summer squash, Mammoth White Bush, one packet.
6 hills Winter squash, Hubbard, one packet.
6 hills pumpkin, Golden Oblong, one packet.

Two to four ounces of radish, Scarlet Button, Rapid White and White Icicle to be sown in the rows with other crops such as lettuce, as they will be used ere they would interfere with the maturing of the other crops.

Celery and late cabbage may be planted after early peas, string beans, etc., and room must be left for at least 50 tomato plants, or if it is preferred to raise these from seed, sow one packet each, Chalk's Early Jewel and Burpee's Matchless.

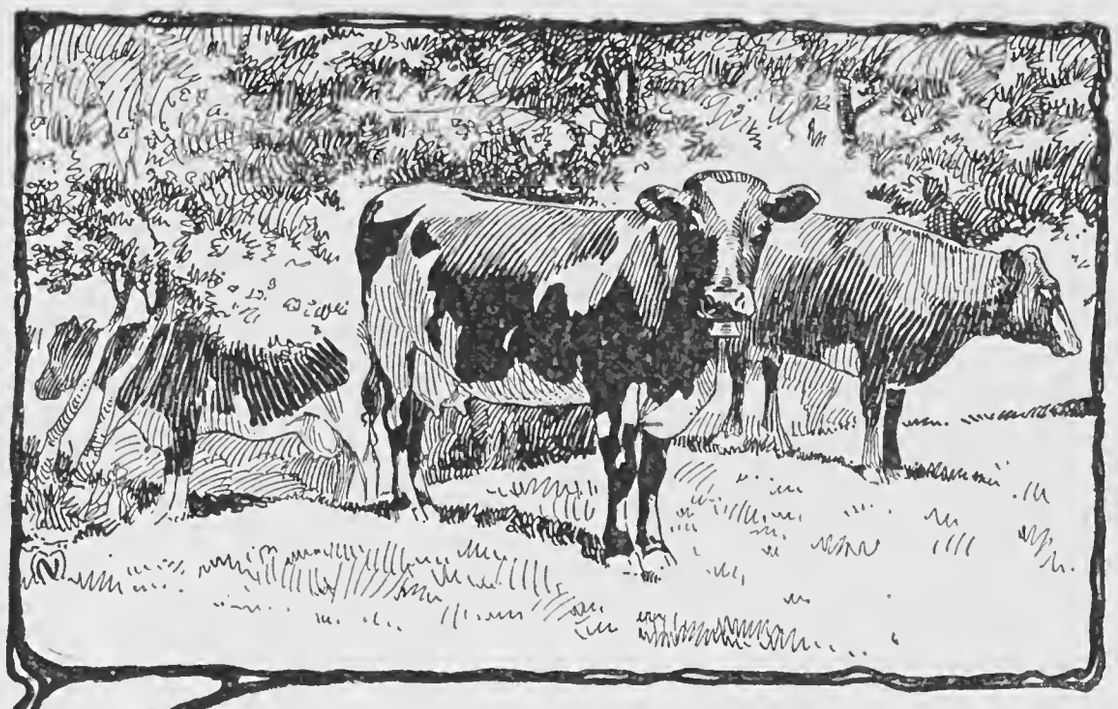
Mr. Burpee also likes Blue Bantam and British Wonder peas. He would add a rutabaga turnip and substitute Wayahead for May Queen lettuce and add Deacon. Extra Early is a good cucumber. Rapid Red is preferred to Scarlet Button radish. There are many who prefer Emerald Gem or Spicy to other melons.

HENS.—The Hope Farm representatives at the laying contest are still working away. They manufacture eggs on the whole better than I expected. I shall soon give their record, and financial standing up to date. We had them "scored" by an expert poultry judge to see how they would stand at a poultry show. You remember that seven of these birds were bought in the New York live poultry market—just as they came from Southern poultry dealers. The other three are of known parentage. When you see the scores you will know what we got. At home we have a flock of mongrels, a small pen of Leghorns and a bunch of R. I. Reds which I bought in Northern Vermont, expecting to compare these northern-grown birds with another lot from the Gulf coast. These Reds are good ones—not show-ring birds but strong, healthy hens and good performers. I want to breed the best of them to a cockerel of known pedigree. We have one in mind—son of a trap-nested hen of over 200-egg record, and sired by the son of another trap-nested hen of known pedigree. Following what we know about breeding cattle I think the use of such pedigreed birds on our best hens is the way for hen men to "breed up." If I can get some good pullets from this cross I will enter them in the next contest. We have another pen of "runt" Leghorns. You may remember that last Fall I got hold of a pen of small stunted birds. They were out of a large flock of finely bred Leghorns, but in some way they failed to grow in spite of the best care and feeding. The usual plan is to kill these runts, but I wanted to see if they would lay or breed, and if they did whether their chicks would come back to normal size. Most poultrymen thought they would not lay, but they started in March and are doing fairly. We have some of their eggs under good hens and I hope to show that chicks from these runts will "come back" and make good-sized birds.

"SLICKING UP."—We are trying our hand at a little landscape gardening this year. From time to time we have added to the lawn space around the house, but not much has been done at planting trees and shrubs. When we came to consider it seriously we found that some expert advice was needed in order to do it right. Fixing up the home grounds is something like making a dress—you have got to know how the separate pieces are to fit in and make contrasts before you start. Any man can dig holes and put in little trees or shrubs, but he ought to know before he starts them how they will look when they grow up. This is what we call vision or understanding. The possession of it separates the expert from the ordinary workman. Some people never can get it in any way. When it came to planning the future of our home grounds I confess that I could not tell how to group things for best effect. When one must make such a confession he is wise to leave the job to some one who knows. Mother knew about what she wanted, but did not understand the details, so we got expert advice. It is remarkable how these men who know can run their eye over a place and see how it will look years ahead when their plans mature. As this thing of making the home grounds attractive is coming to be more and more important I will try to tell how we do it—step by step as the work is planned. No one should tell me that such work does not pay. In the East at least now that roads are improving and travel is increasing a well-kept, neat lawn is a standing advertisement for the farm and the farmer.

H. W. C.

"HAVE you lived here all your life?" asked a traveller of a cadaverous rustic, who stood idly leaning against a fence. The rustic shifted his weight from one foot to the other. "Not yet!" he replied. —Melbourne Leader.



Pick out your California Farm this Spring

Look into the money-making possibilities of dairying, poultry-raising and fruit-growing in the San Joaquin Valley—heart of Golden California—now. This year will see thousands of homeseekers in California. **Your** foresight should lead you to anticipate this influx.

Here is a wonderfully fertile valley whose deep, rich soil, all-the-year-'round growing climate and irrigation facilities make it a food factory that produces a great range of crops in bountiful measure. Its location gives it ready access to markets eager for all that can be produced.

It is already a well-developed country. People here get together and coöperate to save and to make money for each other.

I am here to help you to locate to advantage. I am not selling land—but I can point out the land best adapted to various crops. I can save you time and travel. I want to secure ambitious, progressive farmers to cultivate these prolific acres along the Santa Fe.

Write for our free books, "San Joaquin Valley," "Dairying" and "Poultry." Read what they tell of the **reasons why** this country is good—of people who have made successes, and how—of results which **you** can get if you have only the necessary energy and ambition.

I would like you to read what the farmers already here have to say in regard to what has been done by them to win fortune in this land of big returns.

Send coupon, or your name and address on a postal, saying "San Joaquin Valley." This will bring the books promptly and any additional information desired. Write today.

C. L. Seagraves, Genl. Colonization Agent,
A. T. & S. F. Ry., 2209 Railway Exchange,
Chicago:

Please send me free copies of your three books on farming in the San Joaquin Valley, California.

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LOCAL FARMERS List with us, WHY? Because they know we advertise truthfully and extensively, COMMAND the respect of our Banks and Merchants, and look after their interests as well as those of the buyer. Our bargains are bargains. Seeing is believing.
FARMERS REALTY CO.
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Stock and Tools Included—105 acres, 15-room house, two barns, main one 40x60; basement; silo; fruit; 2 miles Railroad town; 7 cows; 5 horses; 50 hens; binder; plows; harrows; mower; rake; heavy wagons; buggies; sleighs; numerous other things, all for $4,000; $2,500 cash; balance, three and five years. Lady owns it must go. Catalog No. 102. HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.

THE BEST FARM IN NEW JERSEY at $10,000, I honestly believe, is one of 136 acres just out of Washington; near trolley. House of 9 rooms, bath, furnace; excellent outbuildings, with slate roofs. Land slopes south-east; 127 acres cultivable. E. E. SLOCUM, 141 Broadway, N. Y. City

150 FARMS FOR SALE—Near Phila. and Trenton markets; good R.R. and trolley facilities. New catalogue. Established 25 years. HORACE G. REEDER, Nowtown, Pa.

VIRGINIA FERTILE FARMS $15.00 ACRE & UP.
The most profitable farming in America is in the mild, healthy climate of Virginia. Yearly rainfall 45 inches. Alfalfa 4 to 6 tons acre, Corn 50 to 100 bu. acre. Specially adapted for cattle and hogs. Write for official list and literature.
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A FARMER'S GARDEN
Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

IRON AGE WHEEL HOES AND DRILLS
will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 38 combinations from which to choose at $2.50 to $12. One combined tool will do all of the work. Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free.

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Box 102B
Grenloch, N. J.

WANTED—Responsible party to take charge of our business in each county handling sale of Automatic Combination Tool, a combined wire fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 24 pounds. Sells readily to farmers, shops, contractors, etc. No experience necessary. Descriptive catalogue, prices and terms free upon request. HARRAH MFG. CO., Drawer O, Bloomfield, Indiana

HEADQUARTERS For New York "FARMS WORTH FARMING" Why? See Our Bulletin State Your Exact Needs
GARFIELD REAL ESTATE CO
2 GARFIELD BLDG. ROCHESTER, N.Y.

FERTILE FARMS—Beautiful Perkiomen Valley, excellent markets. Catalog. W. M. Stevens, Perkasie, Pa.

Not Something For Nothing...

but *something* in exchange for a little work securing new or renewal subscriptions to The Rural New-Yorker. A post card addressed to Department "M," The Rural New-Yorker, 333 West 30th Street, New York City, will bring you the details. Better send today.

14

Ruralisms

THE CHINESE WILD PEACH.

The illustration below is reproduced from Bulletin No. 91, issued by the Office of Foreign Seed and Plant Introduction. F. N. Meyer, botanical explorer for the Department of Agriculture, who sends this picture, says of the variety, botanically Amygdalus Davidiana:

A very vigorously growing form of the wild peach found in the well-trampled courtyard of a Chinese inn at Peking. It is said to be a hybrid. The trunk, five feet above the ground, measures 5 feet 6 inches in circumference. The Chinese name is "Mau tau shu," meaning "Hairy peach tree." This very vigorous growth under decidedly adverse conditions shows the resistance of the species, and indicates a wider range of usefulness for stock purposes than had been suspected.

Mr. Meyer has sent the Department 1,500 pounds of these peach stones, with this comment:

As there is a great deal of variation among these seeds, they may be graded according to size, the larger ones to be used as stocks for vigorously growing stone fruits, like peaches, apricots, certain plums, etc., while the smaller ones may be used as stocks for small or slow-growing stone fruits, such as bush-cherries, sand-cherries, dwarf plums, almonds, etc. A goodly portion of these seeds should also be devoted to testing against various diseases our stone fruits are suffering from, with the object of finding whether they will be less susceptible to such diseases when grafted on this remarkably healthy wild peach.

CHINESE WILD PEACH TREE IN COURTYARD AT PEKING.

Chinese Grafted Chrysanthemums.

Bulletin 92 of the Office of Foreign Seed and Plant Introduction reports on a species of Artemisia (wormwood) from Peking, China, which is thus described:

A biennial wormwood, occurring as a weed on all sorts of dry, waste places. The Chinese utilize this plant as a stock to graft Chrysanthemums upon, and claim that "mums" thus grafted are earlier, need less water and no manure, are more easily lifted and transplanted, and in general require far less care than when on their own roots. To obtain the best results the Chinese sow the seed in late Summer, in well-drained beds. The seeds germinate quickly, but the little plants make but very small growth during the Autumn and Winter. When Spring is there, however, they develop with great vigor, and in June they have well-formed stems. Now the Chinese cut off the main stem an inch or so from the ground and graft a Chrysanthemum scion upon it by the ordinary cleft-graft method; no wax is used, but only a small strip of fiber, while the plants are shaded during the first days. The stock and the scion soon unite and continue to grow vigorously. On very strongly developed specimens of stock the main branches are often used to insert on every one a different variety of Chrysanthemum or to train a beautiful "standard" tree of it, and some of such specimens are fully as good as the plants seen at home exhibitions of "mums." The above described method of grafting Chrysanthemums might prove to be valuable for the sections of the United States where the Summers are somewhat too short or the nights too cool to rear the plants successfully out of doors, as, for instance, in the more elevated parts of the Rocky Mountain States. Care has to be taken in watering the plants sparingly when lifted and planted in flower pots.

Suggestions About Shrubs.

Can you print suggestions on the culture and care of shrubs in general, which will be helpful to their best development in the hands of an amateur? Is there any book on shrubs, or do most shrubs take care of themselves when finally established? Can a person produce more flowers by any system of feeding?

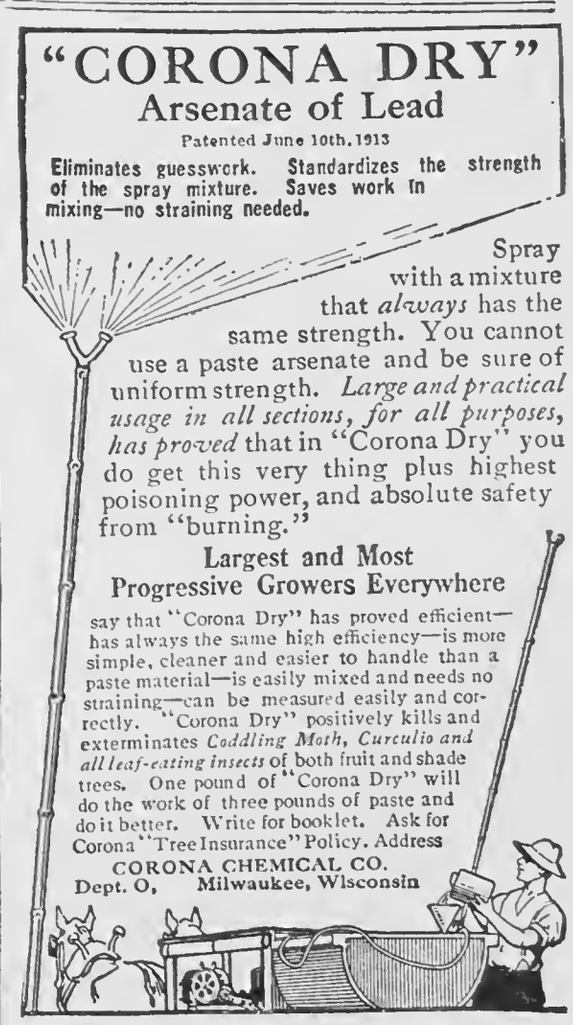
Boston, Mass. G. A. B.

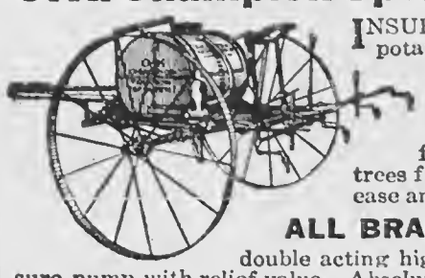
The two points that have most to do with the beauty and thrift of shrubs are planting and pruning. The ground should be prepared for them in advance, giving it as good culture as a cornfield, or, in the case of a single shrub, digging a hole that will insure good drainage, and filling with well pulverized soil. Unfermented manure or fertilizers should never come in contact with the roots of shrubs or trees. As the roots receive some injury when the shrub is lifted, the top should be cut back in proportion when it is set. Plant with care, working fine soil well in among the roots, firm the soil well, and then leave the top two or three inches loose for a mulch. A light mulch of old manure or other litter is an advantage, especially with conifers, but a heavy mulch is undesirable, as it is likely to cause roots to start too near the surface. A mulch of well-rotted manure spread around shrubs in the Fall, the remains lightly raked into the soil in Spring, is usually all the fertilizing needed, unless in a very sterile place.

A general rule for pruning shrubs is that early Spring bloomers be trimmed as soon as flowering is over, while those that bloom later should be pruned in Fall or late Winter. We often see Forsythias and early Spiræas neatly trimmed in Spring, the result being that most of the flowering wood is cut away. The flower-buds on early-blooming shrubs are formed the year before; those flowering in Summer or Autumn bloom on the current year's wood, hence the distinction.

A useful book, giving much information about shrubs and outdoor planting in general is "Landscape Gardening as Applied to Home Decoration," by S. T. Maynard; price $1.50.

SYLVIA, supple and slender, and Aunt Belle, bulky and benign, had returned from a shopping tour. Each had been trying to buy a ready-made suit. When they returned home, Sylvia was asked what success each had in her efforts to be fitted. "Well," said Sylvia, "I got along pretty well, but Aunt Belle is getting so fat that about all she can get, ready-made, is an umbrella."—Youth's Companion.





The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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To foreign countries in the Universal Postal Union, $2.04, equal to 8s. 6d., or 8½ marks, or 10½ francs. Remit in money order, express order, personal check or bank draft.

Entered at New York Post Office as Second Class Matter.

Advertising rates 60 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

The Rural New-Yorker has, at its command, the largest and most efficient corps of correspondents and advisers ever gathered by any farm paper in the world. Thus we can obtain for you the last word on any subject relating to the soil, its cultivation or its products, or the human life of the farm. This service is yours for the asking.

*

DOES it pay to buy the so-called "natural" potash, limes or marls? These limes are usually offered with a guarantee of about 50 per cent lime and small quantities of potash and phosphoric acid. We should figure the price. Usually, a plain lime with potash and phosphoric acid bought separately in chemicals will prove a better bargain. In one case a farmer was about to pay $9 per ton for one of these fancy-named limes when he found he could buy a good crushed limestone for $2.50. "What's in a name?" Certainly not $6.50 a ton.

*

ANOTHER agricultural "contest" is suggested by A. C. Baer of the Wisconsin Agricultural College:

While our great national exhibitions of dairy products are all very well in their way, there is perhaps nothing that will stimulate the local dairymen and gain public appreciation like a milk-scoring contest held in the home town, where the producer, dealer and consumer can meet with common interests and mutual good feeling.

As we understand it, this means a contest to show which producer or dealer furnishes the best milk. A "score" could be arranged so as to include sensible points of cleanliness, freedom from disease and filth, and quality, with producers, consumers and doctors to act as judges. It would interest the public, increase the sale of good milk and make a better understanding between dairymen and consumers. It would, of course, mean a great advertisement for the dairymen who scored high, and it might be said that this would favor the wealthy class, who can afford every sanitary appliance. We think, however, that it would reveal men in rather humble circumstances who through natural neatness furnish the finest of milk.

*

THE average woman has more sentiment and vision than her husband or father. That is as it should be, for the man's place is to provide the home—the woman's to make it. Coöperation is to be the great social development of the future. Left to the men alone, true coöperation would be a long time coming, for the masculine mind must get rid of many prejudices and ideas of individuality before he can coöperate truly. In every country community you will find that organizations of women are more enduring and usually more helpful than those of men. It is not strong power or money or love of gain which can hold a coöperative society together. It is rather sentiment or ideals which act like the clinging mortar to hold the bricks or stones together. In our country neighborhoods the influence of women will be greatly needed to make true coöperation a success. In fact, it can hardly be brought about without just such help. It is of great importance that women study this mighty question which, within five years, is to present the greatest national problem. We expect to give a number of articles from women who have been leaders in coöperative work.

ON page 618 will be found a map, showing where the regional banks are to be located under the new currency law. This law was fully explained in THE R. N.-Y. just after the bill was signed by the President. For a few days after these locations were announced the daily papers were bitter in their criticisms, declaring that several financial centers had been neglected. This criticism is now dying out. We think the banks were located not so much where the bankers wanted them as where they could best serve the people. It would be impossible to please everyone. If more banks are needed to cover business properly Congress can create them later.

*

MR. PARSIL'S articles on home canning represent the real thing. This is the true principle of farm management. So long as market prices for tomatoes and other truck are high enough to give a profit over labor, it will not pay to put the produce into cans. When the glut comes, and the produce must be wasted or sold at a loss, the cans come in as a friend of labor. It is something on the plan of Joseph putting the surplus of the fat years into storage to provide for the coming lean years. The lean garden months are in Winter, and then the home-filled cans find their sale. There are fair possibilities in this home canning—no great fortune, but a good chance to turn waste into profit. That is about all there is left in manufacturing to-day—turning waste into profit.

*

THERE is no corner of the country into which THE R. N.-Y. does not go. Here is a letter just at hand:

I got some seeds from —— ——, and he had the seeds wrapped in some papers, and the papers were named THE RURAL NEW-YORKER. I read some of the leaves, and I found some good reading on them, so I wish I could get a copy to see what the real paper is. Would you send me a copy, and also the price of the paper for one year? C. E. W.
Pennsylvania.

The seedsman here mentioned belongs to the brilliant ink, blowhard class—one of the last men you would expect to act as agent for THE R. N.-Y. We met an Alabama reader who said he found his first copy wrapped around a stone in the middle of a bale of Michigan hay! A Nebraska woman found a few torn pages in a package of nursery stock. She has subscribed in order to read the remainder of an article which interested her. An American, who had lived many years on the island of Java, found a torn copy of the paper. *"Father used to take it,"* he wrote when he sent his subscription. He said he had told his Indian wife about the maple syrup and buckwheat cakes he used to eat in Vermont years before, and he wanted to prove some of his statements. So we bought him two gallons of syrup and some buckwheat flour, and in due time, after a long journey, they brought a taste of old Vermont to "India's coral strand." We firmly believe that there is no paper in the country more widely distributed among American country homes, or more thoroughly read therein than THE R. N.-Y.

*

AN unwelcome guest at the banquet this year will be our old friend, Musca domestica, the common house-fly. This filthy and dangerous pest is a nuisance and a disease carrier—an enemy of society, to be killed at sight. During the Summer this rascal is capable of passing through 12 or more generations in one season. One individual fly lays about 120 eggs, which hatch better than the eggs in a hen's stolen nest. This shows the folly of trying to abate this terrible nuisance by killing these flies off one by one. We should begin a campaign early—right at the fountain head. This fly breeds from choice in horse manure, rarely selecting other forms of filth. If the horse manure can be kept out of reach of the flies, or treated so as to destroy the eggs, the fly nuisance will not be serious. Where only one or two horses are kept it may be promptly thrown into a room or shed with screened doors or windows, where the flies cannot reach it. Where there are more horses the manure can be hauled away frequently and plowed under, or piled at some distance from the buildings. Another precaution is to sprinkle chemicals over the fresh manure. Equal parts of acid phosphate and kainit make a good mixture for this. About two pounds per day for each horse will repel the flies or destroy their eggs, and make a great difference in the numbers which swarm around the house. This nasty insect may be called the typhoid fly, for it spreads many diseases by wiping its polluted feet over our food. In order to fight this nuisance effectively go right to headquarters and destroy the breeding places at the barn. You may kill 10,000 eggs with the energy required to "swat" one fly.

THERE are so many "days" to be observed now that one who tries to keep track of them is quite likely to be dazed. Now comes "Rooster Day," organized by the Department of Agriculture for observation in Kentucky and Tennessee. On that day (May 16) poultry dealers have agreed to pay the same prices for roosters that they do for hens or pullets. The object is to kill off the surplus roosters as part of the campaign for infertile eggs. The fact is that after May 15, 95 per cent of the roosters in this country are of no value except for food, and with the ordinary scrub that is very tough value. One-third of the fearful loss in the egg trade is due to the fertile egg, and this keeping a flock of surplus roosters around is worse than robbing your own henroost. "Rooster Day" is all right. Call in the friends and celebrate this new "day" by serving chicken pie.

*

I USED to think that I didn't have time to read farm papers, but have come to the belief that it pays to take time, especially THE R. N.-Y. G. W. M.
New York.

We can remember when a United States Senator stood up in the Senate and denounced farm papers as grafters and blackmailers. There was no use replying to him. There was no reply except that of history. The blackmailers were sure to betray themselves, the honest papers to be known as such. It was necessary for the farm papers to prove that they gave sincere and honest service to their readers. The doctor is said to bury his mistakes, the lawyer may "lay it on the judge," and the farmer can plow them under. The editor must stand by his printed record. No man could be a grafter and blackmailer very long and escape the clear, critical eyes of the half million people who read THE RURAL NEW-YORKER each week. Surely a paper that cannot make itself so interesting or forcible that people will be forced to read it does not fill any public want. Farm journalism is steadily gaining in character. When more of the farm papers get away from the dead level of platitudes and mount the hills where vital issues are to be found they will gain faster.

*

IN the midst of all this shouting and flag-waving over Mexico THE RURAL NEW-YORKER sincerely hopes that there will be no war. Of course we run the risk of being called cowards and "mollycoddles" for making that statement, but we can stand that with great philosophy. With a Civil War family record of three dead and two wounded in the previous generation, we know just what war means in its effect upon children, women and home far better than the swashbucklers who fight with their mouths at a very safe distance from the front. We also know that war and war talk have ever been the means employed by politicians and schemers to divert the minds of the common people from a study of their natural business rights. In this country we are now at the beginning of a mighty development in coöperation and social education. It will take years of patient work and study to reach higher ground, but if the plain people give their thought to it, blessings beyond calculation will follow. A "war scare" is the old trick—hoary as the ages—of diverting public attention from the really essential things which have now come into public thought. True, there have been and will be holy wars where great questions of human rights were and are at stake. There is nothing of the sort in this disreputable Mexican quarrel—nothing to arouse true patriotism or the higher feelings of the human heart. "Let us have peace!" that our plain people may win the victory against prejudice and political evils which has been started. The war screamers might well march out against the political evils right at home.

BREVITIES.

How shall we bring the Christmas egg to pass? Put a May egg down into water glass?

BEAR in mind that very live steam is needed properly to cook "canned goods." Boiling is not enough.

YOU probably never saw a crank who did not have "wheels in his head." Yet work without wheels is dead.

IT is now suggested that merely dipping the egg in water glass and letting it dry will serve as well as keeping it in the solution. We doubt it. Better stick to the old, approved method.

A GREAT trade in hog hair has developed in England. This hair is used in making brushes. Surely everything about the hog except his squeal is now utilized, and the scientists are at work evolving a squeal-less hog.

IN discussing the price of baby chicks has any farmer figured what it costs to hatch a chick in the incubator or under a hen? Count eggs, time, fuel and care, and divide by the number actually hatched. What does the chick cost?

WOMAN AND HOME

Among Gardens Along the Riviera

The Home of the Flowers

:: By Prof. Charles S. Plumb ::

There is a rather narrow strip of land that for over 300 miles borders the Mediterranean Sea along the coasts of Italy and France. This is commonly known as the Riviera, with the Gulf of Genoa the central part. All along this coast rugged mountains prevail, with but a narrow strip of level land at best, between foot hills and shore. These mountains rise by degrees into the high crests of the Maritime Alps but few miles back from the sea. The Winter months along this shore are milder and more sunny than elsewhere in Europe, because the high snow-covered mountains keep back the cold winds. For many years this has been a famous Winter resort, so that today one finds a continuous line of towns and cities touching elbows along much of this coast. Through this region Roman legions built roads and found their way en route to Britain, and centuries after, Napoleon in their trail, constructed along the steep mountain sides overlooking this beautiful, many-colored sea, some of the finest roads in the world. Each Winter hundreds of thousands of visitors come to this balmy region from all over the world, seeking rest and a mild, almost frost-free Winter.

This Riviera has an interesting vegetation. Of good soil, one sees but little. Sometimes almost treeless mountains come abruptly to the sea, as along by Monte Carlo and Nice. Yet there are many valleys and narrow river bottoms where the soil is very good. On the mountainsides where the sun's rays penetrate, up to not too chill an elevation, olive orchards prevail to a great extent. In fact until comparatively recent years, the farmers along this coast looked to the olive as about the only source of income. A very common sight is a little stone village perched on the mountainside or top, with extensive olive orchards all about. These villages are built very compactly, the houses joined together, forming a resisting wall on the exterior of the town, with narrow, dark, unsanitary streets within. Were you to walk through one of these villages so common along here, you could think of nothing but the times of the middle ages. Here these farmers located, probably largely for protection from the Saracens or from the pirates of the sea. Each town was in fact almost a fortress upon a hill.

But this land of sunshine and mellow Winter days was found suited to other crops than the olive. The palm has for centuries grown to perfection along the lower sheltered spots, and its picturesque leaves are seen in tropical style along much of the shore. Here at Bordighera, where a cape juts a bit into the sea, palm culture is a business, and it is said that 50,000 trees alone are found in this town of 4,000 population. Each year Rome receives from this place large numbers of palm leaves for Palm Sunday procession, while they also find a market in other parts of Europe for the Jewish celebrations. Modern civilization however, has worked a wonderful change here, as seen in the character of the landscape and in the habits of an army of people who but a few years ago looked to the olive for their annual income. Now flowers grow in wonderful profusion, and about every residence, in enclosed gardens, one sees a great variety of plants, producing a wide range of color and growing in great luxuriance. Palms, oranges, lemons, great century plants here and there with lofty flower stalk in bloom, geraniums, pansies, roses of all kinds, carnations, gilliflowers, beautiful feathery mimosas, attract the eye. Here in this region of rocky hillsides, stone walls are features on every side, and over these trail vines that in season are rich in bloom, a luxuriance of growth unknown elsewhere. One sees these vines covering walls with glorious effect. Along the country road not far from where I write, is a wall nearly 20 feet high, where now for two months geraniums richly dotted with pink bloom have hung in heavy festoons more than half way to the roadside.

Yet the real great change that is taking place along this Mediterranean shore is the production of flowers, commercially, to supply the needs of the European

"IN THE GOOD OLD SUMMER TIME."

market. The poor farmer along this coast found that the tourist was glad to buy his flowers, and so the garden became a source of income. Then he must meet more special needs, and the demand came for flowers of a kind and in quantity. Not only was the demand a local one, but it came from without. Shipments were made to points at a distance, and the business grew, until finally the owner of olive orchard began to destroy the source of this income, and replace it with one from flowers. And so right now a great transformation is taking place here. Already thousands of acres of olive orchards have been cut down, the land has been terraced, and behind the stone walls which hold back the little gardens of precious soil, will be seen rows of plants grown for flowers only. One may go out in any direction along the mountainsides and see the work of destruction and construction in progress. Great cement water tanks from 15 to 25 feet in diameter dot the hillsides, to furnish water for irrigation. While the rose and the carnation are the principal flowers grown, one sees some others, including gilliflowers, mimosas, violets, Anemones, hyacinths, etc. Here and there, where a few years ago only the olive groves could be seen, now one finds the land terraced to the summits, little cottages dotting the landscape, and the gardens dotted with men and women busily at work. These are an industrious people, as can easily be seen when one considers the conditions under which they live. They are owners of small pieces of land, and this more frequently than not is far from the highway, and is available by mule path only. In fact many of these little villages have no artery of commerce excepting a narrow mule or donkey path up the mountainside. As one goes about here, he finds the donkey or mule a vital factor in their transportation and labor problems. He is commonly adjusted for hauling on his back sacks of different supplies, or his back is used minus the sack. Most of the manure used in the flower gardens, and it is no small amount, is hauled up the mountainside on mule back in packs from the roadsides below where it has been hauled in carts. Then the land is spaded and worked to a surprising degree. I have noticed many gardeners' turning the soil to a depth of 15 to 20 inches and more. The plants are placed in regular rows, arrangements are provided for water by narrow irrigation ditches, usually of stone, and everything is systematic of arrangement and is given most attentive care.

A great commercial flower business is now found along this Riviera country, one of the large industries of its kind in the world, with Nice as the main center. Flowers are shipped in baskets all over Europe, to London, Berlin, Geneva, Vienna, and all points between. Here and there the producer either brings his flowers in to the local dealer, or disposes of them on the market, after which they are shipped in baskets similar to those used for parcel post in some European countries. Buyers deal in flowers in a large way.

Near where the writer is now stopping, is a small town, not far from the boundary between France and Italy. Each day in this little town, Sunday included, is held a local flower market on a public square adjoining the railway station. Producers from the entire surrounding country for miles, come in with baskets of flowers, or armfuls wrapped in paper. Each person secures a place in line on the market, pays a tax of two cents to the local municipality for the privilege of selling, and here seeks his buyer. The baskets are kept covered until the taxes are all collected, when a whistle is blown, and at once every cover is removed. As a rule the carnation sellers are in groups, and the same with those bringing roses. Buyers come here to purchase, bringing big empty baskets, and in an hour or two the market is all over, and everyone is en route home. It is a striking sight, this little market. Now in February 500 persons each day gather to sell, and just before Christmas as many as 800 come together. Here one may see in this little town four solid rows of carnations about four feet wide and the length of the square, perhaps 300 feet. Late in February I saw some of the choicest of carnations, eight dozens to the bunch, sell for just about $1 a bunch, and I bought a bunch, not so good, but very nice ones for a franc, or 20 cents. One may get all the violets desired for two cents a bunch of 50, while the same number in America more commonly sell for a dollar.

It is an interesting sight, the gathering of the people in this market. One meets the women on foot walking along with a big basket of flowers on the head. Here in Italy the peasant woman uses her head for carrying many things, and it is a common sight to see them along the country pathway, deftly balancing a big basket of flowers on the head. Yesterday, while walking along a country road, we met a woman with a basket at least four feet long, two wide and 15 inches high. By her side were two men, one carrying a baby that my wife says was not over six weeks old, and just as we came opposite them, the woman took the baby, and continued her walk, quite indifferent to the big basket on her head. Besides these people carrying flowers afoot, one meets many hauling baskets in carts, while along the shore, the street cars and regular trains also do a large business. In fact in France a special train each day gathers flowers at the different stations, just as milk trains run special in America.

In localities special phases of the flower industry have developed. In one trip among the hills in Italy, the writer found almost nothing but roses grown. In this neighborhood where I am now writing, carnations are the popular favorite. Up at Grasse, in France, a great perfumery industry has developed. Baedecker states that there are 35 perfumery factories here, and that 60,000 acres are devoted to flower culture, yielding annually 2,000 tons of roses and 2,500 tons of orange blossoms. Enormous quantities of violets are also grown here for perfumery, that from this flower giving great fame to this region.

The interest in flowers here is so universal that each Winter what is known as a "battle of flowers," and a flower carnival is held in different towns along the Riviera. Carriages and automobiles are decorated to more or less extent, some very beautifully, and these parade, while the occupants and onlookers exchange a fusillade of small boquets, to the edification of all. In the parade at Nice on Saturday last, several hundreds of vehicles were in line, and an enormous crowd of spectators participated. Even the small towns partake of their spirit of floral enthusiasm. However, a real lover of flowers cannot take much satisfaction

(*Continued on page 637.*)

Woman and the Home

The Bluebird.

Though Winter's power fades away,
The tyrant does not yield;
But still he holds a waning sway
O'er hill and stream and field.

But while he still is lingering,
Some lovely days appear,
Bright heralds from the train of Spring,
To tell that she is near.

It is as if a day of heaven
Had fallen from on high,
And God's own smiles, for sunlight given
Were smiling through the sky.

The bluebird now, with joyous note,
His song of welcome sings;
Joy swells melodious in his throat,
Joy quivers in his wings.

No cunning show of art severe,
But soft and low his lay—
A sunbeam shining to the ear—
Spring's softest, brightest ray.

Those magic tones call from the past
The sunny hours of youth;
And shining hopes come thronging fast
From worlds of love and truth.

The harmony is seen and heard;
For notes and rays combine
And joys and hopes, and sun and bird,
All seem to sing and shine.

—Noble Butler.

Love of Life.

Love you not the tall trees spreading wide
their branches,
Cooling with their green shade the sunny
days of June?
Love you not the little bird lost among
the leaflets,
Dreamily repeating a quaint, brief tune?

Is there not a joy in the waste windy
places,
Is there not a song by the long dusty
way?
Is there not a glory in the sudden hour of
struggle;
Is there not a peace in the long quiet
day?

Love you not the meadows with the deep
lush grasses;
Love you not the cloud-flocks noiseless in
their flight?
Love you not the cool wind that stirs to
meet the sunrise;
Love you not the stillness of the warm
Summer night?

Have you never wept with a grief that
slowly passes,
Have you never laughed when a joy goes
running by?
Know you not the peace of rest that follows labor?
You have not learnt to live, then; how
can you dare to die?

—Tertius Van Dyke.

The Hills.

Now men there be that love the plain
With yellow cornland drest,
And others love the sleepy vales
Where lazy cattle rest;
But some men love the ancient hills,
And these have chosen best.

For in the hills a man may go
Forever as he list,
And see a net of distant worlds,
Where streams and valleys twist
A league below, and seem to hold
The whole earth in his fist.

Or if he tread the dales beneath
A new delight is his,
For every crest's a kingdom-edge
Whose conqueror he is,
And every fell the frontier
Of unguessed emperies.

And when the clouds are on the land
In shelter he may lie,
And watch adown the misty glens
The rain go marching by,
Along the silent flanks of fells
Whose heads are in the sky.

And in the hills are crystal tarns
As deep as maiden's eyes,
About whose edge at middle-noon
The heavy sunshine lies,
And deep therein the troll-folk dwell,
Can make men wonderous wise.

The gorse of Spring is like a host
Of warriors in gold
And Summer heather like a cloak
Of purple on the wold,
While Autumn's russet bracken is
Monks' livery of old.

Our lord the sun knows every land,
But most he loves the fells;
At morning-break his earliest torch
Upon their summit dwells,
At eve he lingers there to catch
The sound of vesper bells.

The men who dwell among the hills
Have eyes both strong and kind,
For as they go about their works
In heaven's sun and wind,
The spirit of the established hills
Gives them the steadfast mind.

—W. N. Hodgson.

SPEAKING of "prize babies" on page 641, the judges at baby contests now have a "scale of points" for estimating the value of the coming President. We shall print this "scale" a little later. There ought to be three judges, some woman who "just loves babies," a child who has been crowded out of first place in the family by some new cherub, and some cold-blooded old doctor who knows bone and muscle and lung.

*

IN some localities, distant from a good hotel, farmers' wives can do a fair business catering to automobile parties. During the Summer thousands of parties tour the country, and they are often compelled to stop for dinner or over night at the hotels in small towns. These places are usually beer saloons with a "hotel" attachment, and are seldom comfortable. Such travellers would much rather stop at a clean roomy farmhouse, and when such a place was once found every guest would prove a living advertisement for it. What is more, such guests would in many cases, be only too glad to trade direct with the farmer and buy what he could supply in food.

*

NOT long since the troubles of a "high life" couple in New York were aired in the newspapers. They were to separate. The wife found her husband too slow because he had to work to earn a living. The husband, a good lawyer, could not keep up with his wife. She had nothing on earth to do but go from one form of amusement to another—dancing, card playing, eating or "entertaining." This man worked all day at his profession, and was then expected to attend parties until after midnight and get up for another day's work. There was no scandal, but the wife actually played so hard that the man could not keep up and do his work. Such things are bad enough with the idle rich, but they become pitifully wicked when people of moderate means try to give a poor imitation of this shirking of home work and care.

*

WOMEN certainly voted in Illinois, and their influence was felt. We have been told that the lower classes of women would vote, while others would not, also that while city women might vote, country women did not care. The Illinois election disproves both statements. The country women voters displayed more independence than their city sisters. Their votes made 22 Illinois counties "dry." It must be clear to anyone who can think that when the majority of women want the ballot they will get it. But should they have it until they give some indication that a majority of them want it?

*

"*Denmark is full of skilled women.*" That statement is made by H. Rider Haggard in his book on "Rural Denmark." Mr. Haggard tells how, at every turn, women are found doing the milk testing, egg selecting, analyzing and other work wherein accurate skill is needed. He says that trained women do this work better than men, since they are neater and more conscientious. Denmark has set the entire world an example of what coöperative work will do for a nation. Danish farmers could not have developed their dairy business except through scientific accuracy so as to save wastes. It seems that the women are doing much of this work for them. True coöperation will be impossible without the active work of women.

*

WOMEN and girls are winning all sorts of prizes in contests with men and boys. The latest is a contest at collecting the egg masses of the "tent caterpillar." Western Michigan was over-run with these pests, and prizes were offered to the school children who would climb the trees and secure the greatest number of these egg masses. The best report thus far is by Miss Vera Stickney of Wexford County, Michigan. She captured 2,800 of the masses, each containing no less than 200 eggs. The single school to which she belongs destroyed a total of 6,885 egg masses. The school children have taken great interest in this contest. It is a good thing to encourage, and it's good also to see the girls winning these prizes.

*

THE other day in a crowded elevator a number of women were talking excitedly. One of them rapidly turned her head, and a sharp hatpin which protruded four or five inches outside of her hat missed the writer's eye by the mere fraction of an inch. A woman walking on the street, met a friend who led a little girl by the hand. The first woman was so overjoyed to see this child that she caught her up in her arms, and brought her head down to kiss the child. The point of one of these savage hatpins entered the child's cheek within an inch of its eye. Dozens of cases can be given where this deadly hatpin has put eyes out of commission, scratched faces, and wrought havoc in general. The State of New Jersey tried to frame a law which would prohibit women from wearing these pins unless the point was protected or covered by some blunt attachment. It was laughed out of practice, and called a fool law, yet the hatpin handled as many women wear it in crowded places, is a nuisance and a danger. The sharp point should never be left outside of the hat, but should be cut off to a blunt point, or else covered with some protector which would take off the point and render it less liable to destroy the sight of an eye.

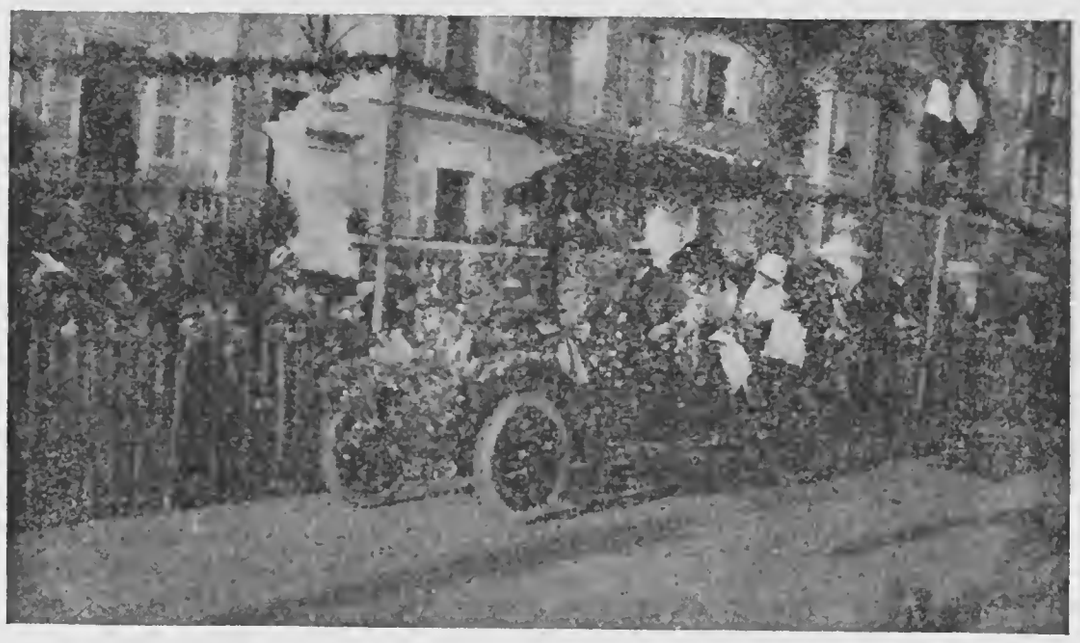
*

HERE is a lesson for farmer's daughters who wish to go to the city. We came 'back to the land' 18 years ago. In an isolated locality, two other farms joined us. The three could total 12 daughters. Eleven of the 12 are married, and the last one engaged. As far as the returns have been received there are about 25 grandchildren. None of the girls married a farmer. In the nearby village, many of the girls worked in the local stores and factories, and some secured jobs in New York. We had to total 30 families before we could find 12 daughters married in the same period of time.

FRANK HYDE.

But is the chief object with our daughters to get them "married off?" As not one of these girls married a farmer, it does not seem that moving to the country had much to do with it. Perhaps these girls became better housekeepers in the country than they would have done in town. At any rate this is a novel argument for "back-to-the-landing."

FLOWER GARDENS ON A TERRACED ITALIAN HILLSIDE.



FLORAL PARADE AT MENTONE, FRANCE. (See Page 633.)

The Tramp Hens Trapped.

Your advice to the Methodist minister reminds me of an incident that took place here many years ago. Mr. C. had a barn, horse, cow and a nice neighbor who kept a number of chickens, which made his barnyard and garden a favorite place to get a large part of their living. Several requests to Mr. S. to keep his chickens up bringing no results, Mr. C. purchased a fine healthy rooster and shut him up in his barn for a few days. After he was wonted to the place he fixed up a nice lot of nests and turned the bird out. Not long after he asked Mr. S. to come over and see his fine rooster. After showing his good points he turned to Mr. S. and said: "Mr. S. although he is the only chicken I have I am getting from 6 to 10 eggs a day." As this was about the number of eggs Mr. S.'s hens had fallen off, and several of them were cackling in the barn, Mr. S. took the hint, and Mr. C. was bothered no more by the hens. S. T. W.

"Two Girls and $400."

On page 499 we printed among farm problems a letter from a woman in Michigan. This woman's capital consisted of two girls and $400. She wanted to find a place on a small farm where this capital would enable her to start and develop a home. We printed it as one of the hard problems which face many of our country women. The response to this was prompt. Within two weeks 34 letters came from all sections of the country. It was a most remarkable collection. One man expressed a willingness to marry this woman. Another was willing to put up with the two girls for a while if he could use the $400 in developing his farm. Most of the letters, however, came from worthy people, who stood in need of help on their farms, or were sincerely desirous of helping a worthy woman find a home. One letter came from a trained nurse in an Eastern city. Out of her savings she had purchased a small farm, which she was trying to develop in fruit, and at the same time retain her work at the hospital until she could accumulate sufficient capital. She thought that probably this woman with the two girls could take hold of the property and develop it for her. Then there were childless old people left upon farms which they did not care to give up, and yet felt unable to do the necessary work. These people could provide excellent homes for the right kind of workers. This statement of a problem attracted remarkable attention. The woman who wanted help is now corresponding with several people, and may find exactly what she wants in the way of a situation. The discussion of these problems brings out the very best part of what we call the RURAL family. There is always some one eager to help another, and our circulation is so widespread that usually such problems find their solution, and that is the best part of farm journalism as we see it.

TALKING IT OVER

Bits of Experience from Housekeepers about the Home and Its Helps

KEEPING BUTTER.—On page 508 M. W., Palisades, N. Y., asks how to keep or store butter for six months. I will give my method. For the past 23 years I have owned a general store, where the country people bring their butter in rolls, as many grades as there are customers in number. I take the good and the fairly good and wrap each roll in clean muslin that will wrap about twice around the roll, then pack them on their ends in an earthen crock, as many as I can force in. Then fill the crock with strong brine made from dairy salt, so it will carry a potato the size of a duck egg, and then weight it down. If the butter is wrapped it will not bleach in the brine. One pound prints wrapped in waxed paper will keep well in crocks. I have held from June or later, until the following April, just as good as when it was packed, two tiers of eight rolls to the tier in 20-gallon jars.

J. E. S.

FOR CHAPPED HANDS.—To prevent chapped hands, cracked fingers, etc., use the following mixture after washing and drying the hands: Glycerine one ounce; bay rum two ounces; rose water two ounces; quince seed one dram; water one-half pint. Boil quince seeds in the water, strain and let cool before adding the other ingredients. Quince seeds may be bought at drug stores. The quince seeds seem to overcome the drying effect of the glycerine, so irritating to delicate skins. This mixture has the added advantage of leaving the hands clean; one can work without leaving a smear.

J. F. C.

SOOT FOR CUCUMBER BEETLES.—On page 444 I see unslaked lime and sulphur mixed is advised as a repellent for striped cucumber beetle. Plain common soot from the kitchen stove is just as good, and like June, may be had by the poorest.

J. F. C.

BURNING OUT CHIMNEY.—Your correspondent, N. C. R., on page 296, speaks of the new way (to her) of cleaning chimneys. That is a very old and very common way. But I think the method should be given with a word of caution. Burning out a chimney ought never to be attempted except on a rainy day. There is great danger from sparks outside, otherwise. And there should be plenty of help in case the heated chimney fires the woodwork around it. Sometimes one cannot bear the hand on the bricks, they become so heated. MRS. J. E. C.

A HINT ON BAKING POTATOES.—The next time you wash the potatoes for baking, try putting them in hot water and rub hard with a cloth, instead of the vegetable brush, and see how white they will be, and how easily they will clean. Then rinse in another dish of hot water and rub dry with another dry cloth. Prepared in this way, they will bake much more quickly. C. A. B.

FRESHENING LEMONS.—If lemons that are somewhat dry, are placed in a can of fresh buttermilk, they will become very much fresher and much better to use; they can also be kept for several weeks in the buttermilk. This is much better than placing them in water to keep them fresh. C. A. B.

KEEPING BUTTER.—M. W., Palisades, N. Y., asks how to keep butter for eight months. I have for nearly 20 years bought butter by the tub. I pack it solid in large stone crocks, leaving a space of about an inch on the top. This space I fill with brine as strong as possible. The crocks are best kept in a cool cellar. If the butter is perfectly fresh when put away it will keep a year. In taking out for use care must be exercised to keep the butter covered with the brine, for exposure to the air will quickly spoil it.

E. S. MILLER.

BITS OF WISDOM.—When beating eggs or cream have them cold as possible, and they will froth up better. Just enough hot water in the chocolate to melt, and then mix with brown sugar so as to spread even, makes a nice and quick frosting. For a change fry ham in the oven with a little sweet milk. Fry sausage in the oven for a nice brown without drying out. Can sausage after frying and seal in hot grease and have a feast in the Summer. When making sausage try sprinkling the seasoning in the cut meat and then grind, saving mixing. Place the cake tin when taking from the oven in a wet cloth, and find how much nicer the cake leaves the tin. When making oatmeal cookies soak the oatmeal in the milk at least 15 minutes before mixing. Vinegar will remove water mark from glass. If the good man when spraying with lime and sulphur will first rub his hands in vinegar, then wash the usual way he will find the hands nice and clean.

M. E. M. H.

TWO SUGGESTIONS.—In using pieces of carpet for rugs, instead of hemming the ends, ravel each end for two or three inches and tie the warp. It will never come undone and looks neater than a hem or binding. A wire potato masher is excellent to mix pancakes or any thin batter. The lumps come out so quickly, and there is no splashing. I always use it to give a final stirring to apple sauce.

MRS. KATE BASHORE.

HOT DRINKS.—Some one asked for a hot drink to use at night. Probably the inquirer is familiar with the commercial beverages, but wants something different After a long illness, the nurse made ginger tea for me by pouring a cup of boiling water on one-quarter teaspoon of ground ginger, let it settle, then poured off or strained the liquid, adding sugar and milk to taste. She gave me this at night, when I was chilly and couldn't sleep. A Boston specialist has her patients make cayenne pepper tea in a similar way, about as much pepper as one could take up on the point of the small blade of a penknife. This is stimulating and surely not insipid. Personally I have no use for it, because mother made us take Cayenne pepper and molasses when sister and I quarrelled in our little days. It worked. EDNA S. KNAPP.

SEASONING A CHOPPING BOWL.—A good plan when in need of a chopping bowl is to buy cottonwood bowls. When first purchased, before they are used at all, put into a wash boiler, cover with cold water, let heat to boiling point and boil for an hour or more, then take the boiler from the fire and let the bowl cool with the water. This process seasons the wood. If used before boiling, the inside becomes wet first and swells more than the outside, and the split follows as a consequence. A. M. M.

THE KITCHEN LIGHT.—A simple convenience which helps much in cooking breakfast on dark mornings, is a small shelf on the wall, above the kitchen table, just high enough to hold a lamp where the light will fall directly upon the top of the range. When the lamp was on the table, one could not see whether the griddle cakes were browning too much or not. Besides the lamp, there is room for the salt and pepper, so constantly needed, and a few other things. A drawer slides beneath the shelf, and at one end hang the kitchen scissors, which are often in demand. In the top of one corner of the shelf is a tack, from which the jelly bag can be suspended and drip into the dish on the table. E. F. M.

A Western Housekeeper Talks.

In this Western country where the houses are usually small and not conveniently arranged, many little makeshifts are resorted to. I am fortunate in living in a five-room house, which is called large in this great plains country of Colorado, and also have a little pantry and clothes closet besides. I find the gallon cans that canned pie fruit come in of great use in many ways, also the gallon syrup cans, one of which I use for a churn. As we have but one cow at present our 20-gallon barrel churn is too large and heavy for a small amount of cream, so my husband made a little dasher of an old chair round, cutting off the outside so it was clean and white and fitting pieces across one end, cutting a hole in the can cover for dasher. As this has to be larger somewhat than the wash, cream will splatter, so I took a small can lid, cutting hole just large enough for dash to work easily. Two quarts of cream can be churned in it, making usually two pounds of butter, and by churning often it does away with much hard work and also make a fine quality of butter. One of these cans I keep on the work table in the kitchen, where it is handy for many things; another is used for a double boiler.

In one of my dish cupboard drawers I have a little whetstone which is very handy; there is also a ball of cord. When cord is wanted we know just where it is, and save time and steps. A can opener and corkscrew combined is in this drawer together with other articles of everyday use.

An old white oil cloth came into my possession and I have made good use of it in covering the kitchen table where dishes are washed and cooking done. On the wall above the table another piece keeps the paper clean, and still another part is back of the cook stove to protect the wall there. On the table I keep a small can in which I put paring knives, cooking fork and a few clothes pins. The pins I use every day for hanging dish towels and clothes on the line, and it is handier than going every time to the large bag where they are kept.

One little grinding mill we greatly prize; not only because so handy, but saves dollars in course of the year. Its cost was only $1.35 from a mail order house. We grind chicken feed, coarse or fine, there being a screw to regulate it. We have our own cornmeal, soup, and breakfast food when we wish, taking clean wheat after washing and drying, grinding medium fine, and cooking slowly for some time. A coffee mill is fastened to the wall by screws, holds one pound of coffee berries; a screw top makes it air tight. A little cup holding four tablespoonfuls is on top ready to hold under the spout when grinding. We never buy the ground coffee.

MRS. FREDERICK C. JOHNSON.

Plain Talk About Paint.

In answer to E. W. S., page 455, in regard to paint, "Dutch" green, is what is known to the trade as bronze green. It is made up as he states of blind green, as a base, adding lampblack and burnt sienna in minute quantities until desired shade is had. E. W. S. must have met a misfit lot of painters who never heard of three of the commonest standard colors painters use. Let E. W. S. procure blind, chrome, permanent, or empire green; all of these are the same green with different labels on the cans. Take one-half gallon cold pressed linseed oil, one-half gallon turpentine, five pounds green (any of above) one pound burnt sienna, one-quarter pound lamp black, one-half pint Japan dryer. Mix together, tie a piece of cheesecloth on a pail, strain above through it, and you have a green paint that is as nearly wear-proof as paint can be made. Don't be afraid to use plenty of paint and plenty of elbow grease to spread it, and above anything else get a paint brush—a real one.

In regard to "glue paint," any other color will do as well. But why use "glue paint" at all? Why not use white lead, and cold pressed linseed oil? You'll save money and get a satisfying job.

On that porch take a putty knife and No. 2½ sandpaper, scrape and scratch and clean off every particle of paint, dirt, scales or anything else you can get off. Then mix to every gallon of paint you think you need 12½ pounds old Dutch process white lead, one-half gallon cold pressed linseed oil, one quart turpentine, one-quarter pound litharge (procured at drug store if not at paint shop). Before adding litharge break up separately a very little lampblack and add thereto until dark enough. Put on with a good brush. You may have to thin down some to use on first coat; if so do so with oil only. Allow plenty time between coats to harden, and you can safely eat any of this paint that chips off. Applied as above I can absolutely guarantee it to wear. A. F. R.

Burden Bearer and Partner

Some remarkable things are being said about women these days—mostly by other women. Miss Mabel Powers, in a recent speech, described what she calls **"The Hatrack Woman"**:

When primal man had won a victory, he had to have some place to deposit the beads and necklaces and other spoils of war. He had no home—not even a cave, as yet—and it was too much trouble to carry them around. So he hung them on his partner; woman was degraded from a mate to a hatrack, and from this beginning we have the plaything women of to-day. Girls quit playing with dolls at the age of 12, but some men find amusement in dolls all their lives.

It is probably true that some women are still content to act as "hatracks," or advertisements of their husband's or their father's ability to gain property, but THE RURAL NEW-YORKER does not reach many of them. The women who belong to THE RURAL family are not "hatracks" but burden bearers. They are not always profit sharers, but they **are** sharers of labor, care and responsibility—the true guardians of the home and of the generations to follow us.

Woman and Home is for Them

THE RURAL NEW-YORKER has been made strong and useful through the co-operation of its readers. They have made the paper their own. It has strength because it faithfully reflects their desires and their opinions. Now we want our women readers to take a good-sized share of the paper and use it to express their special desires and needs. The men have never yet failed to respond when help was needed. The women will be even keener to do their share now that opportunity is offered.

Experienced Information Wanted

Here are some of the things our women folks want to know about:

CARE OF THE CANARY BIRD.

KEEPING SUMMER BOARDERS.

THE VILLAGE DRESSMAKER. We would like to hear from some skillful dressmaker who can give us hints and suggestions about clothes.

THE BRIGHT SIDE OF LIFE. Short, humorous sketches from everyday life. Make them short and tell them naturally.

We can pay for such suitable sketches. Tell them as you would write a friendly letter. The chief object of WOMAN AND HOME is to help country women. This includes amusement and entertainment, but does not stop there, or with food and clothing. There are hard problems to be worked out in many farm homes. Sometimes they are too hard to be worked out alone. Sympathy and kindly confidence may help make them lighter. We want to help if we can. Tell us how we can be of service to you, and you will find all the power of THE RURAL NEW-YORKER at your command.

Parcel Post For Farm Women

:: :: Aid To Better Business :: ::

The mistress of Apple-Tree Farm was troubled all Winter because she was getting only 30 cents a dozen for eggs when the city folks were paying 50. Why doesn't she find out something about egg-mailing boxes, and go after that 50 cents herself? The parcel post is at her service, as well as at yours and mine.

Let us see what can be done with eggs. Postage in the second zone on two dozen eggs will be about eight cents. The mailing cases to carry two dozen will cost her in the neighborhood of 10 cents each. Then if she is going to do the thing nicely, there will be a further cost for a roll of smooth, brown wrapping paper to wrap the box, and for tissue paper or cotton to wrap each egg. The expenses will reach 18 or 20 cents a package, which means nine or 10 cents on every dozen sold, and this cost will remain the same whether eggs are worth 50 cents or 20. Customers who buy a few eggs when they are high-priced will want more when they are cheap, so Mrs. Brown must make her calculations for the year, and not reason that there is no money in it in June, and that she will give it up then and resume it in November; but she must know whether the profits of the high-priced months will be enough to carry her through the low-priced ones, or she must sell so many of the cheap eggs that a very tiny profit on each will mount up to a nice little sum. I have used eggs as an illustration because there is more talk just now about mailing eggs than any other farm product; but Mrs. Brown has many things on the farm that are as desirable for mailing as eggs. Perhaps she has time on her hands in the Winter when she could make shirt waists for other women or rompers for other women's children; and what about the maple syrup, mailable in sealed tins—or maple sugar and maple candy, mailable in almost any package? Is there a city near enough for her asparagus and green peas to reach customers in better shape than the wilted goods the grocers sell? And how about dressed chickens and sausages and home-cured hams? Berry boxes are made nowadays for mailing, and cartons to carry peaches and apples. I saw an advertisement the other day of a cooked chicken dinner with plum pudding and vegetables and all the fixings, which was to be sent the customer by mail, and I have eaten delicious soft-shell crabs sent ready cooked to a town where sea food was ordinarily unobtainable. Has she or have we got anything to sell that other people would like to buy, and are we doing anything about getting our goods to market?

The business of marketing by mail is a new one for everybody, and none of us can boast of much experience, but all of us can try experiments, knowing that anything that draws city and country, or town and town together must benefit both. Even if our experiments do not lead to great success in independent selling, we shall at least be in a better position to judge the middleman who has been handling our goods. Maybe after all it costs more than we thought to get things to market. But if we are going to try to establish a little business let us start in with a confident expectation of making it a success, and a resolution to be as patient in bringing up a young business as any other young thing. It is almost certain that at first the expenses will be greater than the returns, and many will say "It was too much bother," and it didn't pay, before the little enterprise had a fair chance to grow up. Many women dislike keeping accounts, but if we are going into business we must be able to tell what our expenses are and what returns we are getting, and careful calculations made beforehand may save a disappointing failure. Foresight is a lot more useful than hindsight.

But assuming that the farm has a good and desirable article to sell, and that Mrs. Brown knows how important it is to have a neat container for it, and fresh brown paper to wrap it in; that she appreciates the fact that fresh laundered waists must be tied to the bottom of the box and covered with tissue paper to preserve their dainty freshness; assuming that she wraps up her fruit so that it does not bruise, and her eggs so that they do not break, there is still one important part of her business to consider, and that is how to find customers.

There are lots of different ways of advertising beside putting a notice in the newspapers or having a billboard put up near the railroad track. The newspaper kind of advertising costs a good deal, and it is just as well for her to get her business started before venturing on a very great outlay on such notices. The surest way for her to find a market right away is for her to send samples and some sort of notification to people who know her or about her. Let us suppose that she wishes to sell maple nut fudge. First, I think she should make out a list, beginning with everybody who bought any of the Apple-tree crops last year—I should include everybody, the butcher who bought the calf and the city buyer who took the apples. Then I should add the Summer boarders who stayed with her last year, and if the neighbors were willing, the boarders who stayed with them and at Our Town Inn. I should include the former minister who left Our Town for a city church, and Sister Annie's daughter at boarding school, and her husband's nephew at Cornell. I should have 50 or 100 post cards printed or typewritten, or if that was too costly should write very carefully and plainly something like this:

> **APPLE-TREE FARM, OURTOWN, NEW YORK**
>
> **HOMEMADE MAPLE NUT FUDGE.** We are sending you a sample of our Maple Nut Fudge and hope to receive your order for one or more pounds. Our Fudge is home-made from our own maple syrup, carefully packed in neat cartons and sent postpaid on receipt of price in cash, stamps or P. O. order. 1 lb., 40c.; 2 lb., 75c.; 5 lbs., $1.50.
>
> *Ask for our prices on Maple Syrup in sealed tins.*

Then I should do up two or three ounces of the fudge, wrapping it carefully in paraffin paper, and daintily in brown or white wrapping paper, and send a post card and sample to every one on the list. I think Mrs. Brown would find that some of the people replied and that a few orders came in. And if her goods are really worth the price she asks she will soon find many people who are glad to get them. She must not be discouraged if customers are slow to respond, and if it takes a long time to pay for the first outlay on stamps and samples. The beginning is the hardest part. She must remember that this is a new business for everybody and not be discouraged if she makes some mistakes. Uncle Sam is giving her the same rates that he gives the biggest Chicago mail order houses, but he leaves Mrs. Brown to find out what use she can make of parcel post. Perhaps she will get some unexpected returns; perhaps this will lead to finding a better market for the main crops. The minister in the city may not want any fudge, but would like a barrel of Astrachan apples sent by freight next August. Since she has reminded him of Apple-tree Farm he will bring his custom there. I think she will soon find her little enterprise of value in many ways, all looking toward better business on the farm.

E. F.

Three Advertisements Free

IN order to encourage farm women to develop direct trade through parcel post THE R. N.-Y. will print free of cost in the May issue of Woman and Home three advertisements of farm produce for sale. These will appear in the

Subscribers' Exchange Department

The advertisers must be genuine farm women—wives or relatives of farmers who live on the farm and who offer home-grown or homemade goods for sale. The goods must be reliable and enough in quantity to supply a fair trade. We will use our judgment, after considering the circumstances, as to which advertisements to use, and will, if desired help arrange the form of the advertisement. The object of this is to show by practical illustration the possibilities of developing direct trade. Farm women who would like to try this should write us fully what they have to offer, with a clear description of it.

Direct Trade in Food.

A Maine subscriber tells us how he had developed a great direct trade in sauerkraut, horse radish, pickles and similar food. Here is an extract from his circular:

I am sending quotations of the following articles that I put up: Pure horseradish, per doz., $1; 2½ gal. keg of sauerkraut, $1.25; 4 gal. keg of sauerkraut, $1.50; 6 gal. keg of sauerkraut, $2; ½ bbl. of sauerkraut, 115 lbs. net, $3.25; 20 lb. keg of salted dandelion greens, $2.20; 30 lb. keg of salted dandelion greens, $3; vegetable salad, 9 oz. bottle, per doz., $1.50; pure apple jelly, per doz., $1.50; cucumber pickles, put up in mustard, salt, sugar, vinegar and a small amount of alum, 2½ gal. kegs, $1.75.

These are all simple food articles. You would think most families would provide their own supply. Yet this man has developed a great trade in which he gets the 100-cent dollar. His goods are always clean and uniform, and one package sells another. His trade is conducted on business principles, and is just as legitimate as any other. We shall keep on giving these little stories about selling food, for along this line is the great opportunity for farmers' wives and daughters.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards their property and their children. There will be direct answers to actual questions and general statements of law.]

Partition of Property.

What redress has a wife here in California if a farm is owned by her husband and herself, but he refuses to live on it, and will not sign a deed for its sale? There are two minor children, he partly contributes to their support. The wife is desirous of moving to town where she can support herself; is not strong enough physically to manage a farm. Is there no way she can get her share of money from the farm? W. N. W.

California.

You and your husband probably own the farm as tenants in common, and the only way for you to obtain your share of the value of the farm is to sell your interest in it, if anyone will buy, although it is probable that no one would care to buy under the circumstances. Failing in this you could commence what is called a partition proceeding to separate your common interest in the farm. After this is completed you could sell the part that was given you.

M. D.

Minor and Bank Account.

Will you let me know if my youngest sister, who is only 19 years old, can draw money from a savings bank which was in my mother's name, and put in trust of my sister through death? Now she is married can she put that money in her own and her husband's name, when she is only a minor. A. O. E.

New York.

Everything would depend on how and in whose name the money was deposited in the bank. If it was deposited in the mother's name the bank will probably not pay it out to the daughter unless letters of administration have been granted on the mother's estate, and a guardian appointed for the daughter. If, however, it was placed there in the name of the daughter, she can probably obtain the money at any time, or change it into her own name. The bank will be quite careful to see that it is paid out in accordance with the legal requirements, especially if the sum is large. It would be well to confer with an officer of the bank.

Property in Trust in Will.

Will you tell a widow having a married son (the only living child, he having a wife and children), how to make a will leaving an unencumbered farm for the said son for life, after his death to be equally divided for the grandchildren? Also how to word the will making her daughter-in-law executor or trustee after the death of said son provided she, the daughter-in-law, outlives the husband, also to make will so as to protect the property from any debts of said son.

South Carolina. H. B. G.

To do as you wish your will should contain the following provisions:

"I give and devise to my executor and trustee hereinafter named in fee simple my farm (describe sufficiently to identify) in trust nevertheless to manage and conserve said real property and to collect and receive the rent, income and profits thereof and to pay over the income thereof to my son..... during his life, and upon his death to convey said real property in fee simple to his children then living in equal shares.

"I hereby appoint my son..... the executor of and trustee under this my last will and testament, and on his death I appoint my daughter-in-law..... his successor as executor and trustee of this my last will and testament, and I direct that neither my son nor my daughter-in-law shall give any bond as such executor and trustee."

Inasmuch as the executor holds the property in trust for the children, it will not be liable for the debts of the son, and there is no need of making a provision for this in the will. M. D.

Wife's Right in Husband's Property.

Will you let me know as to a wife's right? My husband has never left home, and he is a man of 50 years, just married a year now. His mother and father deeded the farm to him, and he is to pay the other children so much at father's death. The mother has been dead three years next August. The father is 83 years. I would like to know if I have to work here and get nothing if my husband should predecease me? J. H. R.

Michigan.

It would appear from your letter that your husband is under some sort of a contract with his father with regard to the property by which the rights of the other children must be recognized. Just as soon as your husband obtains title to the property, in himself, your rights also attach, and may not be got rid of without your signing them away. Your interest amounts to a one-third part of all land of your husband for your life. It would appear that by a recent amendment of the laws of Michigan, in 1909, a widow is given one-third of the lands absolutely, which, of course, is a larger interest than a one-third interest for life.

M. D.

Giving Property to Incompetent.

Suppose you had an heir to your property, and you knew the prospective heir was incompetent to manage or keep the property, or if you wanted to give or deed some property to some incompetent person, how could you make the transfer so that the receiver could not sell, give it away, mortgage it, lease it for more than a year at a time, or in any way make it liable to debts, damage, or any other executions? G. W. S.

The way to dispose of your property for the benefit of the incompetent would be to give it to trustees to manage and conserve and pay over the income and profits to the incompetent as long as he lives, and then the trustees can deed it to whoever you name. If the incompetent has property of his own, there is no way he can "fix it" so that it cannot be used to pay his debts; that is, he cannot dispose of his property to defeat his creditors, but if he is incompetent an application can be made to a court for the appointment of a committee to administer his property and affairs.

M. D.

Change of Name.

Having married for the second time, and having two sons by first marriage, I should like to change their name to my present one. Can you advise me whether I have to go to the courts? If so, which one? S. S.

New York.

The legal way for you to change your sons' names is by application to court. This is neither a costly nor lengthy proceeding. However, if there is no property involved, and the boys are young, there appears to be no objection to their assuming your name without court action. But this would make it harder for them to trace their identity later on.

Among the Gardens Along the Riviera

(*Continued from page 633.*)

in seeing pretty bouquets ground under feet of horse or crushed by wheels. They might be used to some much better purpose.

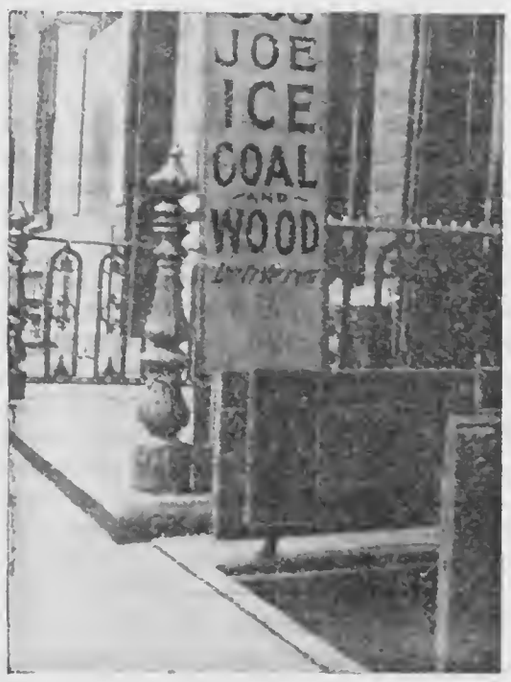
That this flower industry is a great thing for these people along the Mediterranean there is no doubt. Men who a few years ago purchased small tracts of land on the mountainsides for a comparatively small sum, have done extremely well financially, and their land has

"FLOWER GIRL" GOING TO MARKET.

increased greatly in value. But one may well wonder if this business is not going to be overdone. Great quantities of flowers for the market are produced during the Winter months on the south coast of England, and on the Seilly and Channel Islands. Only a few days ago I read in an English paper of tons of violets being destroyed in London, as a drug on the market. Just now prices here are low, and undoubtedly a very large and increasing production is on. Nevertheless a great industry is established to the everlasting credit of these people.

A Humble City Merchant.

The picture shows the business sign of a type of small retailer of which there are several thousand in New York. The sign always reads Joe or Johnnie (often Jonnie) or whatever the merchant's first name is. The cellar doors in the picture are the entrance to Joe's place of business. A basement is used because



HOME OF THE $1.75 DOLLAR.

the rent is cheaper ($5 to $10 per month) and the ice keeps better than above ground. It is bought from the large dealer's wagon, one or two cakes at a time, cut into five and ten-cent pieces and delivered at once. Some of the retailers have small hand carts for delivery and others carry it in a wood tub on their backs. Competition is sharp, many residence blocks in the vicinity of THE R. N.-Y. office having two or three of these small dealers.

The quantity of stock kept varies with the season. As cool weather approaches they will have at least half a cord of kindling and a ton each of large and small coal. The wood sells in five and ten-cent lots at the rate of about $30 per cord; the coal, 10 pounds for five cents; and ice, one-half to three-fourths cent per pound.

Developing the Farm Woman.

I find a great many useful helps on the women's page, and may sometime be able to give some one a little help. But it is help I am asking for at present. I would like your help in this way. Is there anything a farmer's wife can do to earn money? I have thought of making candy to sell, but I know but little about it, and then another idea I had was to make canvas gloves, such as men wear. Please give me some idea of how to go about this and how I may learn the way of making the candy, and if you think it would be profitable. MRS. E. S.

This woman mentions two enterprises she had thought of taking up. All that we need to consider about these enterprises is that either of them would change her from a producer to a manufacturer. The whole world is crying aloud for more producers. The army of the unemployed comes from the other ranks. What is the matter with this farm and countless other farms that fail to support the family? Undeveloped resources. Some years ago I was sent sprawling, as you might say, into possession of such a farm and such a family. As a farmer I think I stood pretty near the foot of the class; as a financier I had one fixed principle. I must spend less than I made. I like to spend, so here was incentive to make. When I began I saw so many things that needed doing, while my pair of not very strong hands could do only a few of them. I saw I must have labor-saving helps. I wanted a bread-mixer. The case stood about like this: I had two dollars, the price of the bread-mixer; the price also of the warm drawers a member of the family needed. In the house were two undershirts so thick and heavy their owner would never wear them. I took those shirts and made them into drawers, which lasted their wearer three seasons and were enthusiastically declared to be the warmest and most comfortable that person had ever worn, and I had my bread-mixer into the bargain and a lot of fun thrown in for good measure. One woman, laughing until the tears started, said: "Anyone who could make a pair of drawers out of a shirt deserved to succeed."

I found I saved 20 minutes every time I made bread. I might easily have dawdled this time away. I applied it to my out-of-door enterprises, the chickens and the garden. From this beginning I now have every labor-saver I want that I know of, save one, and that is under consideration. But to go back to my spending, I made a study of how I should spend. Whatever I buy is of good quality. For instance an aluminum wash basin at 50 cents is doing daily duty in an iron sink apparently as good as ever after 10 years. In provisioning the family exhaustive study has brought some astonishing results. I could borrow money at six per cent, buy the provisions at the new rate, sell them to the family at the old rate, and make a handsome profit.

Rome was not built in a day, neither was my other success—marketing the two money crops. It took at least two years to accomplish this, but for four years in one case and three in the other it has been simply a case of delivering the goods and cashing checks. Again, I could borrow money at six per cent, buy the money crops from the family at the old price, sell them at the new price, and make a handsome profit. These profits are of course my contribution to the family income.

Once upon a time to keep the wolf from the door, I made gloves until I could get a better job. I believe in doing anything that is honest if obliged to, but as a matter of choice I would never make canvas gloves. My knowledge of the candy business is second-hand. A friend who tried it was glad to quit. A great candy manufacturer used to come to the sanitarium where I was in training. Candy eating made an invalid of him, as it has of many others. If this woman must do something, I suggest raising early cucumbers for one thing. I have never tried, but I read of starting them under glass in the ground. I know there is demand for them here. Women need to get out of doors more, not mew up sewing or making candy. C.

System in Housecleaning.

Spring is such a busy time for everyone; nature itself seems to be working overtime to send forth the green grass and the beautiful flowers, and even the birds are on the wing, getting in readiness the homes in which to rear their young. The rush of outdoor work gets the good man out early, and teams and farming implements are busy from morn till night getting in the crops. The old saying, "one hour in the morning is worth two in the afternoon" seems very true, especially on the farm. House cleaning seems to be the interesting subject for the housewife these nice warm days, and before the rush of canning and jellies come in our way.

We always begin in the cellar; it is a good plan to carry out decayed apples, potatoes, or vegetables along through the Winter. It is much more healthful and it leaves less to do in the Spring. It is also a good plan to give the cellar wall a coat of whitewash, and if you do not have a cement floor to scrape off the damp earth; it will look better and seem sweet and clean.

After the cellar I go to the top and work down. Before beginning any room all the boxes and drawers are gone over, Winter clothes sorted out and put away again; paper rags sold, carpet rags looked over. Some do not believe in rag carpets, but I do, and hope always to have one for my dining room. Where there are children there are usually some good out-grown clothes that some of your neighbors would be very glad of, and they would be out of your way. When I pack Winter clothes away, each article, or several if they are the same kind, are wrapped in papers or put in paper sacks and marked. They need less handling over when you want them in the Fall.

If one has papering done and the family does not do the work themselves, it is necessary to have more than one room torn up at a time, but even then it can be done in such a way that the house does not seem to be topsy-turvy all over. The children can help in various ways, removing small articles of furniture, pulling tacks if you have carpets, and tearing off the old paper.

If we have room to move our furniture around, a little change here or there helps us to feel better, and when the last finishing touch is put to our work it makes us feel like beginning life over again. MRS. R. M. STAFFORD.

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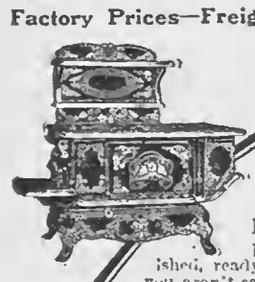

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Rearranging the Farm House

A Study of Household Management

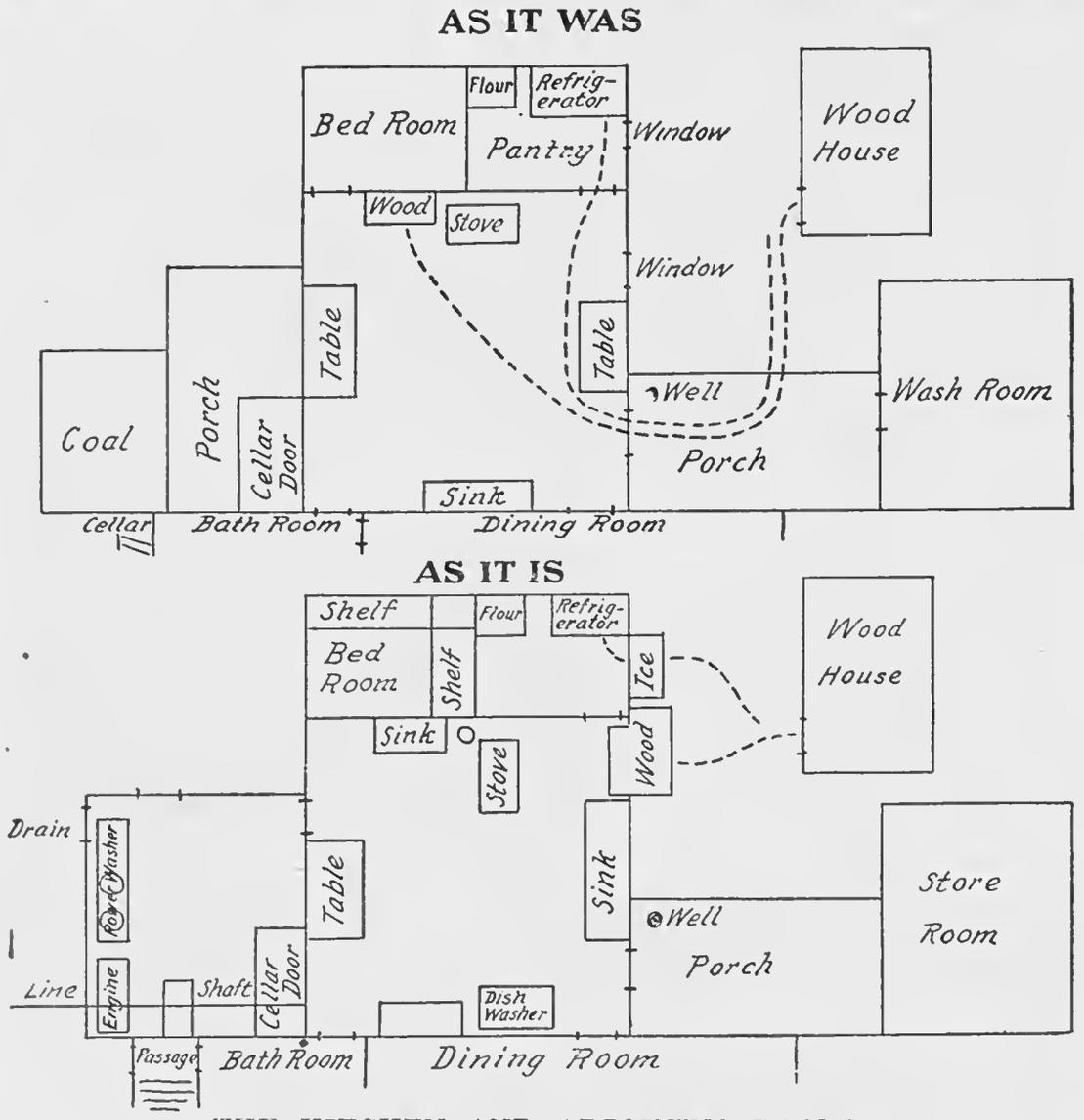
By A Farmer's Wife

PART II.

Above the bureau is a dish cupboard, and beside it, next to the dining-room door, stands the dishwashing machine, which has done faithful duty for nearly 21 years. This machine is a large galvanized iron box, fitted with wire racks into which the dishes are placed, and by turning a crank the water is thrown over them rapidly and later drawn off through a faucet in the bottom. These wires need to be taken out once or twice a year and the whole thing cleaned, as a scum-like substance gradually accumulates upon it. In answer to our inquiries regarding the machine, a lot of testimonials were sent, among them being one by Mrs. T. K. Beecher, sister-in-law of the famous Henry Ward Beecher, and she described her method of preparing the dishes for the machine, which we have always followed. She used a whisk broom (we now use a sink brush) and dish of hot water, sweeping the dirt from the dishes. A moment's thought will show any one that this method is a much more rapid way than scraping with a knife or even one of the new rubber plate scrapers. I never bother to pile each size of plates, etc., by themselves, but as fast as a few are swept they are placed in the machine, where there are racks for the different sizes, cups, silver, etc. I also put in the lamp chimneys. When our family was large the dishes were washed after each meal; now that it is smaller they are put in, excepting silver, and lid closed and left until the machine is full, or nearly so. The process of washing requires about three minutes, one for washing, and one-third each for two rinsings. The silver and chimneys are wiped and rest left to dry. If the dishes are not clean do not blame the machine; look for the cause and you will find it. Perhaps not enough soap was used, or the water was not hot enough; again some large dishes might have been placed so that the water could not reach others. The dishwasher will give good satisfaction if properly run. For soap I slice up a cake of ordinary laundry soap, add a couple of heaping tablespoons of washing powder, fill the basin with *cold* water and set it where it will heat slowly. When hot it is dissolved and is set off. This makes a jelly-like soap, easily dissolved, and is much more convenient for almost all uses than a cake.

And now a word as to the other dishes. When preparing a meal it is necessary for the worker to be in almost constant attendance, and with a dishpan of water and tea kettle all ready, it is but a moment's work to wash the different cooking utensils as they are emptied. By doing this, which really takes so little extra effort, when the meal is ready to be served, all or nearly all the most disagreeable part of the dishwashing is done, and afterwards there are left only the table dishes. This method seems to lighten the drudgery of the housework the most of anything I have ever tried; especially will one appreciate it when cooking for thrashers, hay-pressers, etc. In these cases it is well to begin 15 or 20 minutes earlier. It means a little closer application while in the kitchen, but well repays in the time saved. For the cooking dishes I find that some one of the scouring powders are a great help, and also a substance called steel wool, which comes in little rolls. A lump of this (which looks like curled hair), used with a little powder, will scrape a dish very readliy. After using, it needs to be rinsed and placed where it will dry, otherwise it will rust. It comes with paint supplies.

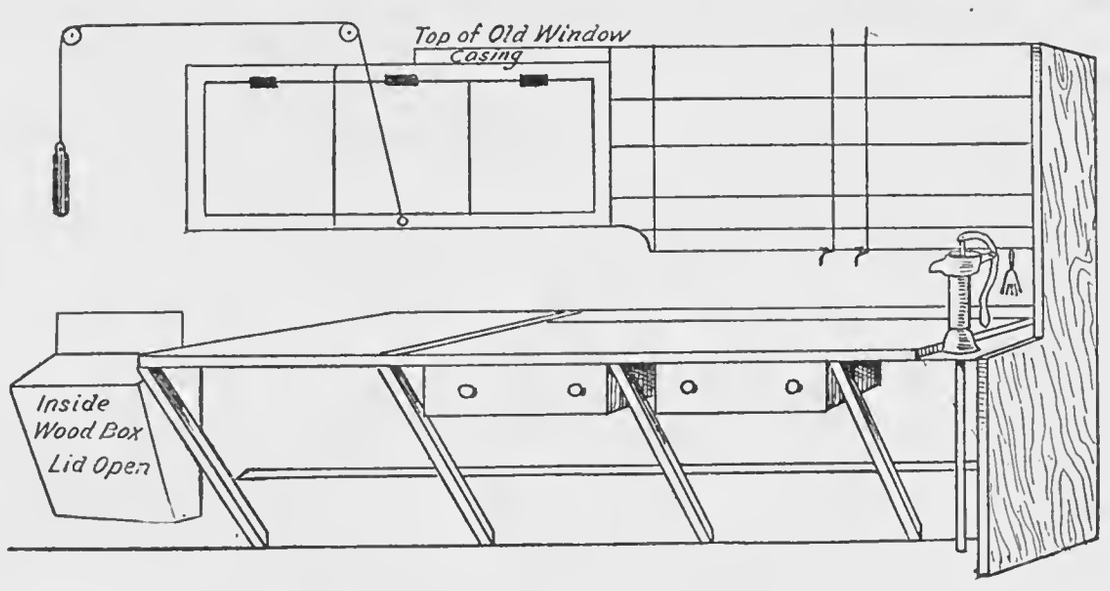
A couple of years ago my husband bought a small gasoline engine (two horse-power) with which to saw wood. Following the example of others in this locality, we installed this sturdy little helper in the house and find that it has revolutionized some parts of our housework to no small extent. Before this we had never seen any way to a water system, though we had put in the bathroom several years before, putting a 20-barrel galvanized tank in one of the attics, which was filled from the roof, with an overflow leading to cistern. This tank supplied the bathroom with cold water, and being adjacent to the kitchen, we could manage the hot water very easily. There was no water to be piped



THE KITCHEN AND ADJOINING ROOMS.

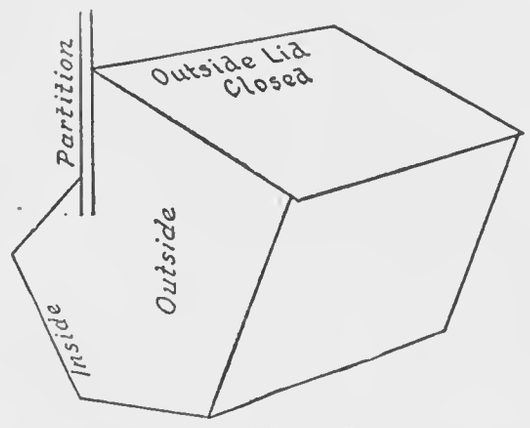
to the house without coming a long way, and we were fearful that if we sunk another well it would drain the one we have. After getting the engine, however, we built a large cistern in the cellar. This was made possible by the rambling style of the house, producing a large amount of roof space. We then bought a small rotary pump, costing about $8. Pipes were connected from this to both cisterns, and to the tank above. This gives us a very liberal supply of soft water. For all our plumbing we are indebted to a neighbor who lives on an adjoining farm, and who is a great genius. He, together with husband and sons, installed our steam heat, bathroom water system and engine. His wife and I purchased a vacuum cleaner together, which cost us $35. The one cleaner does the work of both houses very easily. It is an ordinary hand cleaner, requiring two persons to operate it. Our neighbor, who very correctly styles himself "The Handy Man," removed the crank shaft entirely, as it is run with an engine in their house as well as in ours.

Referring to the diagrams again, it will be seen that out of a porch and coal room we made a good-sized room adjacent to the kitchen on the left. In one corner of this room stands the engine, and by the side of it the vacuum cleaner upon a little platform. A hole was cut through the wall into the passageway between bedroom and bathroom. We bought 50 feet of ordinary garden hose, and taking the irons from the short hose that came with the cleaner, fitted them on to the other, and with this hose connected with the cleaner through this little opening in the wall. We can go either way and thus clean all the rooms. For the rooms above a hole was cut through the ceiling into the hall above; this was cased with a piece of eaves conductor pipe. The hose is pushed up through this, and we can thus reach anywhere on the upper floor, and the cleaner does just as thorough work with the 50 feet as with the 10 feet that came with it. Not wishing to bother with such a long piece of hose for the nearby room, it was cut once to a length just right for the dining-room. The dealer readily supplied another pair of irons, taken from a discarded hose. Above the engine was adjusted a long



SINK AND SHELF CONVENIENCES.

piece of gas pipe, reaching across the room and extending out of doors several feet. This is for a line shaft, and by means of this the vacuum cleaner is run and also the little pump, the latter being in the cellar, the outside door of which



DOUBLE WOOD BOX.

is in this room. A short shaft was fastened to one side of this cellar-way, directly under the line shaft above and about half way down. On this was fastened two pulleys, one of which is belted to the shaft above and the other to the pump, which stands just inside the cellar door. In the corner opposite the engine stands the power washer, and connects with the engine by a belt direct without going to the line shaft. We were quite fortunate in having our attention called to this machine, as it is the most complete of any I have ever seen, and cost no more than the older styles, $25. The machine is on one end of a platform of about seven feet; this leaves enough room for another tub and basket. The wringer is so constructed that it will operate from machine into tub, and *vice-versa*, and also swing over into other side of tub and wring the clothes into the basket while the washer is working. All this is accomplished with pedals. Back of the tub is a drain, thus only necessitating turning the tub over into it for emptying. For the machine we use one of the pieces of hose used for the cleaner. In putting in the water system two pipes were installed, leading to the machine from the kitchen, each having a gate or cut-off. By this means we can run both hot and cold water to the machine, and also into tub by use of a very short piece of hose, connected on to the pipes. Thus it is possible to wash indefinitely without rubbing the clothes or carrying any water. Having had our washing done away from the house for about 24 years, we find this a great saving in expenses. The engine has already paid for itself and the washing machine, and being still in seemingly good health, I think will, in time, pay for the rest of the improvements. We hope to have an ironer, and should we stop marketing our milk, we have a place for separator and churn. I find it very easy to operate the engine. I learned to stop it at first, and then to start it. Outside, where the line shaft extends, the men are expecting to establish a grindstone. This finishes our tour of inspection, and I earnestly hope that the readers may have gained some helpful hints to repay them for the trip.

Burning Out Chimneys.

In THE R. N.-Y. of Feb. 28th, I see a paragraph on chimney cleaning. We always clean our chimneys by burning them out with straw, but although we have a tin roof we are always careful to choose a day when there is no wind to carry sparks, and one when the buildings are damp. Then when the chimneys are burning we go from room to room through which the chimney goes—including the garret—to keep watch. Sometimes the wall-paper scorches around the stovepipe hole, or the tin that closes the hole gets red hot. Our house is nearly a hundred years old and with the large, well-built chimneys of those days, and taking the precautions I have mentioned, we consider it safe to clean the chimneys in this manner, in the country. In a house built as houses are now, or where the house is not isolated, we would not wish to run the risk. I was once in a house where a chimney got on fire by accident from a large open fire on the first floor, and in a third-story bedroom the supporting prongs of the tin in the stovepipe hole melted off, and the tin fell to the floor, burning the carpet. Flames came from the hole burning a shelf above the hole, and a bureau, before the trouble in the third-story room was discovered. A board held over the hole sent the draft and flames up until something more permanent could be done. A. H. W.

"Woodpile Day."

Start the ball rolling for "Woodpile Day." There is no reform so needed to make country life endurable for women as the sure supply of the year's wood, dry and secure. This especially applies to the South. I wrote you of the terrible suffering here, and sickness and death even among my neighbors, who rarely have a week's wood ahead. J. K.

There are too many special "days" now, but some of the present celebrations might well be cut out to make room for "Woodpile Day." Woodpile and water—there are the two great necessities for kitchen life, and kitchen life holds the home together. Are women justified in going on a strike when they must use green wood and tramp out after water? Thousands of men have struck for less and then gone home to pose as heroes in the eyes of their women folks.

Eating in Hot Weather

OUTDOOR MEALS.—Since it is the decree of the twentieth century to live out of doors as much as possible the year round, it is far and away the best place to take our meals during the hot months. If you have a wide back porch, or a strip of green grass in the back yard, where you can establish your dining-room, and still be convenient to the kitchen, you can ask for nothing better. The flies will, perhaps, be the only drawback, but since these nuisances breed and flourish only where food is allowed to stand uncovered, and in garbage dumps, and dirt heaps, they can be easily abolished, just as mosquitoes can be, by draining swampy spots, and by preventing unsanitary conditions to be fostered on or near the premises. If these conditions cannot be entirely controlled, the porch can be screened, or a little Summer house, large enough for table and chairs, built on the strip of green grass, and screened, would be ideal; this need not be expensive, and the pleasure gained from it in one season would more than overbalance the small outlay.

SIMPLE FOODS.—Hot weather meals, especially when they are to be served out of doors, should not have too many frills, just simple nourishing things made a little more attractive than at other times to tempt flagging appetites. It is the cool things we long for most; dishes we relish on cool days fail to inspire us when the mercury stands at 90 in the shade, and a meal of cold meat or fish, salad, etc., with say one light hot dish, fruit, and some simple dessert, made principally of milk and eggs, either chilled or frozen, is better than a heavy hot one. The ice cream freezer is a perfect blessing to the housekeeper in Summer, for it will help to furnish any variety of delicious, wholesome desserts that can be easily and quickly made.

HOT DISHES.—When there must be hot meals, plan to have enough food prepared for left-overs, to be utilized in tempting cold dishes for the next day. Have the meat a roast of some kind, beef, veal, lamb, or chicken, that can be cooked early in the morning while it is cool. A pan of baked beans, served with plenty of good Boston brown bread, cottage cheese, and a lettuce salad, followed with some simple dessert, makes a substantial meal, easy to prepare and serve, either on the porch, lawn, in the woods, or down by the river. A chicken and veal loaf is very satisfactory served cold. This is an excellent recipe: First remove the flesh from the bones of a three pound fowl or chicken, and cut into small pieces. Wipe two pounds of lean veal; trim off all skin and membrane and cut up also, then add to the chicken with one-half pound of sliced salt pork, and force all through the meat chopper. To the meat add four cream crackers, rolled fine, one cup of milk, three tablespoonfuls of lemon juice, one tablespoonful of minced onion, salt, pepper and a little chopped green pepper. Mix all thoroughly together, and pack a long narrow cake tin even full with the mixture. Lay some thin slices of fat salt pork over the top, and bake in a quick oven for the first 10 minutes, then reduce the temperature of the oven to a moderate heat, and continue baking for two hours longer, basting now and then with a little melted butter and hot water. Cool, and remove from the tin.

MAKING THINGS ATTRACTIVE.—The garnishing of a dish should receive special attention, shredded lettuce, cress, parsley, nasturtium blossoms, slices of lemon, or hard-boiled eggs, will go a long way in giving the cold meat or salad a pleasing and appetizing appearance. If the meat course is to be cold roast lamb, carefully trim and daintily shape the slices, then arrange them overlapping one another on a chilled platter, and surround with a border of parsley or cress. If this is to be a picnic or company dish, a border of hard-boiled eggs, cut in halves crosswise and deviled, with the parsley or cress, will make it a decidedly festive pièce de resistance. Or, if you are going to have lemon sherbet for the dessert, cut the lemons into halves, and after scooping out the inside, cut a slice from the bottom of each shell so it will stand alone, and fill these with cold cooked peas, mixed well with a good salad dressing, and arrange around the slices of cold roast beef, or chicken loaf. Mint jelly is delicious with cold lamb, so instead of the deviled eggs you might have a mold of mint jelly turned out in the centre of the dish, and the slices of cold meat placed around it.

JELLIED FISH is very nice, too, on hot days. Boil any white fish in just enough water to cover it, add a tablespoonful of lemon juice, a little salt, pepper, two cloves, and a bay leaf. When the fish is done drain it and flake. Cook the stock a little longer or until it is reduced to two cups, then pour boiling hot over one tablespoonful of granulated gelatine; dissolve, and strain the stock. Pour a portion of it in the bottom of a mold, cool, and add the fish; turn the remaining stock over it, and chill. Serve unmolded, within a circle of sliced cucumbers, moistened with French dressing.

EATING OUT OF DOORS IN HOT WEATHER.

SALADS.—A well-prepared salad, chilled and attractively served will often tempt one to eat when nothing would. Even an ordinary one of potatoes can be made one of the prettiest of luncheon or supper dishes when served in green pepper cases. The salad can be made from your own favorite rule. For the pepper cases, divide medium-sized green peppers into halves, remove the seeds and membrane, and parboil for a few minutes in salted water, then drain, chill, and fill lightly, with the salad. Another pretty form of serving this salad is gained by packing the potato mixture into the pepper shells while they are still hot, after parboiling, then chill, and cut into slices, and serve with a spoonful of mayonnaise disposed on each slice. There is another attractive vegetable salad, which tastes as well as it looks, this is made by cutting up some well cooked string beans; add an equal amount of cooked peas, beets cut in cubes, and carrots. Pour a little slightly sweetened lemon jelly in the bottom of individual molds, let this harden, then fill two-thirds full with the vegetables, and pour more of the jelly over the top. Chill until firm, and serve unmolded on lettuce, and pass mayonnaise or a cream dressing with it. Still another tempting salad is made by peeling little red and yellow tomatoes, an equal number of each, lay these alternately, one red and one yellow, on white lettuce leaves, and cover, just before sending to the table, with a simple oil and vinegar dressing.

SANDWICHES are easier to serve out of doors than bread and butter, for they save extra dishes. These can be the plain bread-and-butter folds when cold meat is served, or they can be made a substantial part of the meal, by using chopped meat, cold boiled eggs, or cheese, for fillings. Then there can be those with sweet fillings, to be used in lieu of cake. When you want your sandwiches specially nice beat the butter with a wooden spoon until creamy and smooth, and cut the slices very thin, remove the crust, and cut in fancy shapes or roll.

ROSAMOND LAMPMAN.

Some Canadian Recipes.

The following recipes without eggs might have been more useful earlier in the season. The housekeeper will be pleased at the size and excellence of this simple pudding: One cup of suet, one cup of raisins, one cup molasses, two cups milk, three cups flour, one teaspoonful soda. Steam two hours. Lemon sauce particularly good with this.

Graham, oatmeal or oatflake cookies: Three cups graham, oatmeal, or oatflake flour, two cups common flour, one cup lard, one cup milk, one cup sugar, one teaspoonful soda. Mix lard into flour, then add sugar, milk and soda last.

Ginger cookies: One cup of sugar, one cup molasses, one cup melted dripping, one cup boiling water, two teaspoonfuls soda, two teaspoonfuls ginger, two teaspoonfuls vanilla. Stir thick with flour, let it stand over night, roll out thin and bake. A most convenient recipe.

Another recipe that astonishes every cook who makes it for the first time is: 1½ cup flour, the pinch of salt that should go into most recipes, teaspoonful of baking powder, or soda and cream tartar, one cup of sugar, mixed well together. Break egg into cup, beat slightly, fill with milk, flavor, add to dry ingredients, bake immediately.

THEODORA C. MOORE.

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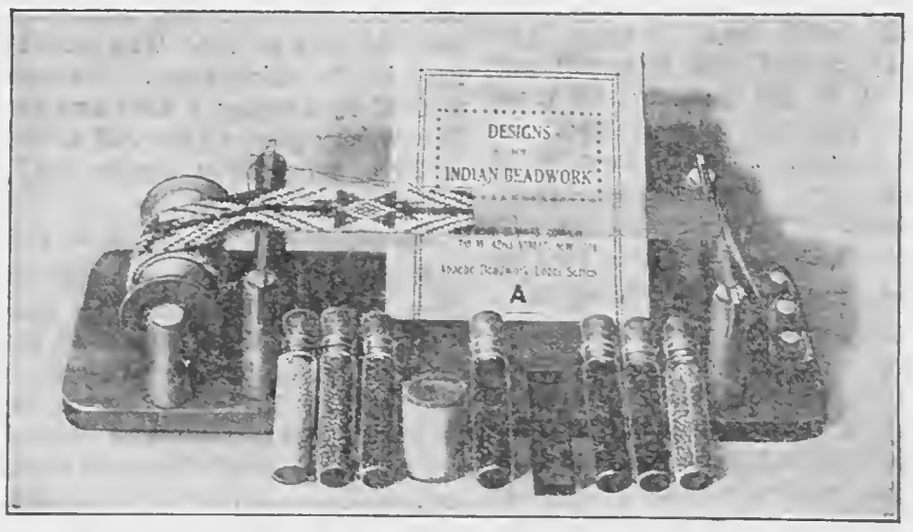

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The Common Question

The question last month related to keeping hams and bacon through the Summer:

The method (used by most of the neighbors) of storing ham and bacon for Summer use seems to be to slice it just as they do for use, then cook it about half what they would for the table, lay it in a common crock, and pour on grease enough to cover it. Then slice and fry another spiderful and so on. This saves the ham, but it does not make very rich eating next Summer. I would like to get some method that will enable us to lay the whole ham away until wanted, then have it fresh and juicy as it is in March. W. H. P.

Rural housewives have given us the following notes:

We have cut it as we would for cooking and packed it in a gallon jar, then set in oven and let bake until the meat is cooked. While it is hot we put a weight on and the grease covers it. We had some put down in that way that kept until a year from the next Summer, and was good. MRS. SARAH E. TAYLOR.

Iowa.

The U. S. Navy packs its hams in the following manner: The hams are first wrapped in oiled paper, then covered with cloth. They are then packed in small barrels holding about 100 pounds; the space between the hams being filled with fine salt. The hams thus packed keep perfectly. A. B. RANDALL.

New Hampshire.

This is my way of keeping smoked ham through the Summer. Do each ham up separately, in brown paper, or what is better, a paper flour bag, and inclose it in a meal bag, then bury in a barrel of wood ashes, and keep in the cellar or a cool place. When wanted for use take the ham out, cut off what is required, and replace in the ashes. I usually cut off enough for two or three meals.

MRS. CHAS. E. MARTINE.

Northern New Hampshire.

I am enclosing small piece of shoulder which was butchered December 15, 1912, and hence has survived one Summer's heat. After removal from smokehouse the meat is given a light sprinkling of powdered borax and suspended from the ceiling of the storeroom, each piece so hung that it does not touch any other. A couple of windows are left open for circulation of air. You will notice that our meat is skinned, as we prefer it that way, and then too the brine penetrates more thoroughly. This shoulder and a couple of strips of bacon were left from last year's supply and this Spring were dropped in the ham brine for a few days with the other meat. The meat will not mould, and flies will not touch it. It is the easiest and most satisfactory way of preservation we have found as yet. Hope it may be of use to others. "FARMER'S WIFE.

Long Island.

R. N.-Y.—This slice of ham was in good condition—excellent meat.

Hog-killing generally begins here November 15, and is all over by Christmas, except one or two are killed later for the purpose of getting fresh meat and sausage. It is salted down the day after killing, when perfectly cool. If it is frozen, it should be thawed before salting, or it will spoil. The salt is well rubbed in, and also piled over the meat, and then packed in a box, where it is allowed to stay from four to six weeks, depending on size of meat and weather. The salt is then washed off, and meat hung up and smoked until brown, as is wanted. Hickory wood is preferred for smoking, but almost any wood will do. Before fly time comes, the hams are taken down, rubbed with red pepper and sacked in large thick paper sacks, which will hold a 30 or 40 pound ham; then hung up again, and we almost always have an old ham for next Christmas. The sides need no more attention after smoking, but can be left hanging until used. If care is taken with the salting, well smoked and sacks tied well, no meat will ever be lost down here, and certainly not in Ohio. R. JELLICORSE.

Tennessee.

I solved the problem of carrying ham and bacon through the Summer the past season in the following way: After hams were properly smoked they were sliced neatly, all bones cut out, then packed carefully in gallon jars to within an inch of top. A plate which fitted inside the jar was put on, then the jars put in a moderate oven and kept there two hours. When taken out the meat was covered with its own fat, which when taken out through the Summer is exactly like fresh ham, only better. After opening a jar and taking out for meals, the fat must be returned in sufficient quantities to keep meat well covered. When jars are put away cover with heavy brown paper.

MRS. C. M. MCALLISTER.

New York.

Here we have had perfect success in keeping hams and bacon in dry air slaked lime, and others have been equally successful. The hams and bacon have been cured in the following brine: To 100 pounds pork take six pounds salt, two pounds brown sugar, two ounces saltpetre, six gallons of water, or enough to cover the meat. Keep in pickle six or eight weeks, then hang it up to dry. If there is no smokehouse it may be painted with "liquid smoke." Some people might think this unwholesome, but we used it several years and are still very much alive. A molasses barrel is convenient for pickling the meat in. When the pieces are dry, they may each be wrapped tightly in strong brown paper. Then take a flour or sugar barrel, put in a layer of air slaked lime in pretty fine powder, then a piece or pieces of the wrapped meat, cover entirely with more lime, then put in more meat. Do this until the barrel is full, having an ample layer of lime on top. The barrel may be kept in the third story. We tested this method by keeping a ham two years and it was very good at the end of that time. It is a delightfully simple method and we think it excellent.

Pennsylvania. ALICE E. FENTEM.

Doubtless most farm housewives still keep ham and bacon by the method described in the March magazine section of THE R. N.-Y., but we think the product very inferior in flavor. Bacon especially is easily kept, though I experimented several years before learning how. Wrap each well smoked piece in paraffin paper, (doubtless parchment paper would be better), put the pieces in a paper flour sack and keep in any dry place. Ours is kept in an attic storeroom over the kitchen, where it is often very hot in Summer, but the heat seems to make no difference. We had still some when fresh meat came again; used the last to fry with the fresh liver. I have been told that smoked hams may be kept in the same way by merely shutting them away from the air and from insects, but I have always feared that the bone in them would cause trouble. We slice ours, trim and remove bone, then pack without cooking, in wide gallon jars and cover with lard, taking care to have it cool enough not to heat the meat. This keeps well in the cellar, but ours is kept in the refrigerator. A compartment might be made for it in the icehouse. The last of ours, in fine condition, was used when filling silo about the middle of September. Pieces from which the bone cannot be readily removed are packed by themselves and used first, or boiled for immediate use. I cannot see where it would be an advantage to keep the hams whole. A half's day's work slicing and packing the meat disposes of the job for the season, and it is in convenient shape for use at a moment's notice. We appreciate the new department in THE R. N.-Y. It was our best farm paper before, but it is better than ever now. The studies in cooperation promise to be very interesting, and we hope practically helpful.

CLARA E. MCDERMID.

While the meat will keep nicely fried, it never tastes like ham cut fresh and juicy from the bone. At one of our Ladies' Club meetings we discussed this subject, and I will give some of the recipes used by the members. Dip hams three minutes in boiling water to free from insects, then enclose them in bags made of cotton cloth boiled in starch with a generous spoonful of red pepper, neither insects or flies will trouble them. Hang in a cool place. Another lady gave this recipe as one used for many years. Sift wood ashes, place a deep layer in a clean box. Place a layer of meat, then more ashes, until meat is packed. The ashes are easily washed off having no effect on the meat. Keep in a cool dry place, making sure there is a thick layer of ashes on top. Another housekeeper said they always buried their meat deep down in the oat bin and found it perfect when used. Another said hams and bacon were fine rubbed well with black pepper, and that they were not too highly seasoned when it was washed off. Another covers hers with hot paraffin using a paint brush. They never mold or dry out, and the paraffin may be used many times by boiling it up and letting the particles in it settle, then pour it into a dish to use the next year.

Ohio. MRS. JAMES LAMPMAN.

If W. H. P. will sprinkle his hams and bacon thoroughly with powdered borax and leave them in the smokehouse he will have no trouble from flies, bugs or mould. I have done this for years, and never yet lost a ham, and have had ham until butchering time in the Fall or Winter. The smokehouse is an ordinary wooden structure—not insect proof. After taking a few slices off a ham that you do not care to use up at once, if you sprinkle borax on it it will not mould and is safe from flies, and can be hung back in the smokehouse. I have kept hams and bacon in this way until butchering time in the Fall or Winter.

New York. M. C. EDINGTON.

Years ago, we used to bury our hams in the oat bin, and they were always good until we used them up, some time in July. A better way is to put each one in a paper bag and pack in an apple barrel in oats, shaking the barrel down to pack the oats around them solid. They keep better packed in this way upstairs than they do in the cellar, not so likely to mold. A cut ham put in a bag and hung in a dark cellarway ought to keep until it is used up. Still a better way is to pack them in dry salt. Place a layer of salt in the bottom of a meat cask or a box and cover the meat with salt. We pack our strips of bacon with the hams and shoulders, and leave them in the cellar. They will keep forever; the only objection is they have to be freshened.

New York. MRS. KATE W. BUSHON.

"Do you think I can safely ask your daughter to marry me?" "I am sure of it. She told me she wouldn't marry you if you were the last man on earth."—Houston Post.

The Hired Man's Children

The "common question," to be discussed in the May Number of Woman and Home, is suggested by the following letter:

Would You Object to Children?

Why do most of farm employers who advertise for help always specify "No children wanted"? I am a hired man with a family of three little ones, and we get along well. I think my employers have no reason to object to children. I admit a child that is not properly brought up is something of a nuisance around a place; but where do the farmers expect to get their future help if not from the farms? Certainly not from the city. I would like to hear from both sides of the question, and I think it would interest a lot of your readers, as you must number a good many hired men among them.

R. B. OWEN.

Connecticut.

Eggs in Water Glass.

Please give recipe for preserving eggs with water glass. J. R.

Decay in eggs is caused by putrefactive germs entering through the pores of the shell. These germs are active in a warm temperature, but inert when the eggs are in cold storage. The object in using water glass is to seal these shell pores, and if the eggs are put into the solution before the germs have entered, they will keep many months—usually a year. A standard strength is one part water glass (sodium silicate) to nine parts of water, in a stone or wood—not metal—vessel; put the eggs in the solution when fresh and keep them covered with the liquid. Be careful not to break any, as this might spoil the whole lot.

These preserved eggs must be sold for what they are, not as new-laid. In many places the law covers this, and where it does not a man will be a law unto himself. Water glass eggs are not suitable for poaching, and like limed eggs the shells must be pricked before boiling to avoid cracking.

The suggested plan of dipping the eggs in a strong water glass solution will be only partially successful, depending on how thoroughly the pores are sealed.

Sweeping Compounds.

Can you give me the formula for making sweeping compound? W. C. P.

There are a great number of sweeping compounds mostly consisting of sand and sawdust with some oil, as rosin or tar oils, in fact, almost any oil that is thick enough and does not dry readily, yet is not sticky. Salt alone is considered good for this purpose and one of the best compounds consists of sand, sawdust, salt and paraffin. The proportions are five pounds of sawdust, three ounces of salt, about 2½ pounds of sand. Mix the above with an ounce of paraffin dissolved in a quart of paraffin oil. The oil may be heated in a double boiler, and you will find that the paraffin wax will readily dissolve. Still another compound for absorbing or preventing dust may be readily made by mixing three ounces of mineral sperm oil with 22 ounces of Portland cement and add a drop or two of mirbane oil. Mix and stir thoroughly until it becomes a granular mass rather than a paste. R. P. C.

R. N.-Y.—Some housekeepers soak old newspapers, tear them in bits and scatter before sweeping.

Selling by Sample.

Just before Easter we received a pretty little box containing one egg—fresh and large. It was a sample of what the sender could furnish during the year. Inside the box was a card with this little advertisement:

THIS EGG

was taken from a clean nest and should reach you in less than twenty-four hours from the time it was laid.

When you eat it you will know what a real, fresh, sanitary egg tastes like.

Eggs mailed the same day they are laid. Every egg guaranteed absolutely fresh.

For every stale egg you find in our shipment we will send you—FREE—one dozen fresh eggs.

Forty-five cents per dozen, postage prepaid.

As soon as we can plow and plant we will begin raising vegetables to send by mail.

FAIRHOLME FARM

The egg was neatly packed in soft colored paper, and the whole thing was very attractive. Hundreds of bright farmers' wives are at work studying out little schemes for advertising the goods they have for sale. Customers like these little attentions. They are part of the trade.

The Significance of the Sign

Prize Babies and Otherwise

"What did ye have good to eat, Sarah? That's what I want to hear about first," was Aunt Hannah's greeting to Sarah upon her return from the all-day meeting of the Ladies' Aid. Aunt Hannah was "bed-rid," and came in touch with the outer world only as her niece, Sarah, or occas'onal visitors brought it to her in fragments.

"Well, I s'pose I hadn't ought to say it, but I dunno as there was anything any better than the custard pie I carried myself. Miss Russell brought an awful good-tastin' chocolate cake, and Kate Porter's beans was good, but Viny Fuller brought the queerest mess—all kinds of vegetables, potatoes, beets, string beans, an' all like that together, with some lettuce at this time o' year, too, and then a kind o' cold, sour gravy on it. They called it a solid, but my land, I wouldn't touch it, if some of the other ladies did say it was fine."

"My country! And I s'pose y' had to eat with them silver knives. I never handled 'em but jnst onct. That was to Hack Hines' funeral, y' know. I said then I didn't blame folks for eating with their forks if they didn't hev nothing but them stiff silver knives to eat with. But go on and tell what happened."

After a few minutes of bustling about, putting away the various wraps which had shielded her from the chill of late Autumn, Sarah sat with her feet in the oven and reviewed the events of the day.

"V'iny Fuller's oldest girl was there with her baby. Y' know she's married and lives out West somewhere; in Ohio, I guess. It's a real pretty little feller, the baby is; but with all that girl's going to college, an' all like that, she don't know nothin' scarcely about raising children. Y' know, Viny always was proud feeling, and liked to show that she was a little stylisher and knowed more than other folks, but she got took down good to-day, and found that there was some things she don't know so much about as some other people. Gertie—that's her girl; I can't remember the name of the feller she married, they have such queer names out West—she set there next to me a-holding her baby on her lap, so I says to her, 'Y' ain't weaned him yet, hev ye?'

"'Oh, yes,' s' she, 'when he was 10 months old.' (He's jest a year old now.)

"'Y' did?' s' I. 'Didn't he make an awful fuss? He's so young,' I says.

"'Why, no,' s' she. 'He didn't give me any tronble at all.'

"And then Viny spoke up and sh' she: 'I never saw anything like it. Gertie just stopped nursing him one day and began feeding him with a spoon, and he never seemed to know the difference and never cried at all.'

"'Then you must 'a' done it when the sign was just right,' s' I.

"Gertie jnst smiled and didn't say nothing; but I had no idee she didn't know what I meant, but Inez Day says, 'Of course. Nobody couldn't wean a child without lots o' trouble if the sign wa'n't right.'

"Then Kate Porter says right ont to Gertie, 'Did you go by the sign?' and Gertie looked kinder queer, and s' she, 'I don't understand.' Well, then, I tell y' we all pitched into Viny sure enough. Kate Porter spoke ont plain, and s' she, 'W'y, Viny Fuller, do you mean to say that you let your daughter grow up and have a baby and wean it right in your own house and you never explained to her about the sign?'

"Viny laughed, and says, 'I didn't know that *anybody* believed in such outlandish foolishness these days.' Then, I tell y', Kate was kinder mad, and she says, 'W'y, Viny, I know it's so. I never knew it to fail. Hain't I took care of most of the babies and sick folks in this town for 30 years. I've seen it tried over and over again.'

"An' everybody else, 'most, said they knew it was so. Inez Day says, 'I guess I know it ain't foolishness. When sister Emma's second boy was 22 months old she started to wean him, but she just couldn't. He cried and acted so that he pretty near got down sick. She finally looked in the almanac, and found the sign wa'n't quite right, so she waited till he was two, and then she didn't have a mite o' trouble.'

"Mis' Boland hadn't said nothing, so somebody asked her if she didn't believe in it, and y' know how quiet and slow and pretty spoken she is. She says, 'Well, y' know, I ain't never had no experience myself, but I remember my husband use' to always be very partic'lar to see that

FIRST PRIZE AT BABY SHOW.

the sign was right before he would wean the calves.'

"Everybody told of some happening to prove that it was true, an' finally Gertie says, 'Will you please tell me how to know when the sign is right? I'd like to understand this thing.' So Kate told her about how the sign must be going down, and *it must be below the heart*, or there would be trouble; an' Miss Day told how it was the same in doctoring, and 'specially for any operation, no matter whether it was docking a lamb or cutting off a man's leg. I guess Viny felt pretty cheap. Anyway, she didn't say nothing; but Gertie says she was glad to learn about it, 'cause she hadn't known anything of it before. We all told her she must of just by accident happened to strike it when the sign was just right, an' how lucky it was. But, I declare, I must get the supper on now, and I'll tell you the rest while we're eating."

In Viny Fuller's little cottage at this same hour Gertrude was saying to her mother:

"Have you an almanac, mamma? I certainly must see this matter proved conclusively. Let's see if the sign was below the heart."

A few moments' search and a swift turning back and forth of pages; then: "You're all right, mamma. I began to feed him on the tenth, and on that day the sign was exactly *in the neck*."

GRACE TAFT STUTSMAN.

A Prize Baby.

James Kenneth Glennie, whose picture is shown on this page, is a prize baby. He took first prize in his class of babies of 36 months in the "Better Babies Contest," which was conducted by the Mothers' Club of Buffalo, N. Y. Contests for better babies are certainly as useful and ought to be a good deal more interesting than contests for calves, or colts, or vegetables or fruits. As a rule the baby who takes a gold medal in a prize contest is quite likely to take the leather medal in the great contest of life, unless his parents are hard-headed sensible people who realize the limitations of the baby contest, and its prize. It is not likely that James Glennie will have a case of enlargement of the head, as the result of his success. The Buffalo Express in speaking of him has the following:

The Scotch were in the lead, also the contest showed a high order of babies and was a triumphant commentary on the Scotch infant's sturdiness and health. This little man is almost a thoroughbred Scotchman, but of American birth, his father and maternal grandmother being of purely Scotch descent.

The Scotch people are shrewd and thrifty as a rule, and are not likely to forget that this prize merely starts the baby on the race of life, with a good chance to win out again later on. This boy is the son of Mr. and Mrs. Stanley Glennie, who are members of Niagara Grange. We wrote Mrs. Glennie asking her to tell us how she raised her boy so as to give him sturdy frame and health, and enable him to start the battle of life so well. Her sensible answer is printed below.

We are very glad to see that Mrs. Glennie has such sensible ideas in regard to feeding a child. It seems that this boy has lived upon grain and fruit very largely and with little if any meat thus far. We believe that is a sensible way of bringing up a child. Children will be better off all through their lives if they are kept from meat until their second teeth are well developed at least. We know that this idea is ridiculed or combated by some very good people. We have seen children less than two years old gnawing a ham bone, eating large pieces of meat, or consuming the thick pot liquor in which corned beef and cabbage had been boiled. We have watched the development of a good many such children and without exception they have developed into nervous, high-strung young people, never thoroughly strong, but always with physical defects in some vital organ. Prize babies are not produced on a meat diet, but Mrs. Glennie's way of feeding the child is far more sensible.

Raising the Prize Baby.

I am a farmer's wife with a scarcity of help, and two prize babies to look after, making no account of milk, cream, chickens, and ducks. As to how I raised that particular baby, I am almost at a loss what to say, but first we never woke him up. My mother always said that when he was sleeping he was growing, and he certainly did not belie the statement, for he was as vigorous at four months as many babies at eight. He got his food from nature's fountain and in no other shape until he was a year old; then his diet was strained rolled oat porridge, shredded wheat and milk. Later on he developed an appetite for mashed potatoes. He was never indulged in pastry, but instead had bread and butter and cooked fruit with milk. He always slept in his basket alone and had plenty of outdoors, but I think a strong factor in his make-up is his Scotch ancestry, for he is almost a thoroughbred; there being some Scotch blood on my father's side also. I might add that he had a great-great-great uncle who commanded a battery in the Civil War and died a few years ago at the advanced age of 97. This might also have acted as an invigorant. I think this is about all the information I can give that will furnish light on his condition, except that he is an outdoor boy; only a storm keeps him inside. MRS. STANLEY GLENNIE.

A MAN who had bought some currant buns at a bakery found a fly in one. Returning to the bakery, he made an indignant complaint, and demanded another bun in place of the inhabited one. "I'm sorry, sir," said the saleswoman, "I can't give you another bun, but if you will bring back the fly I will exchange it for a currant."—Credit Lost.

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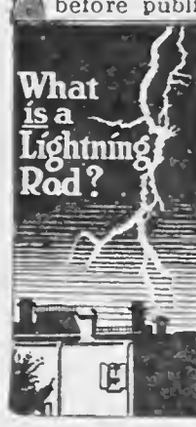

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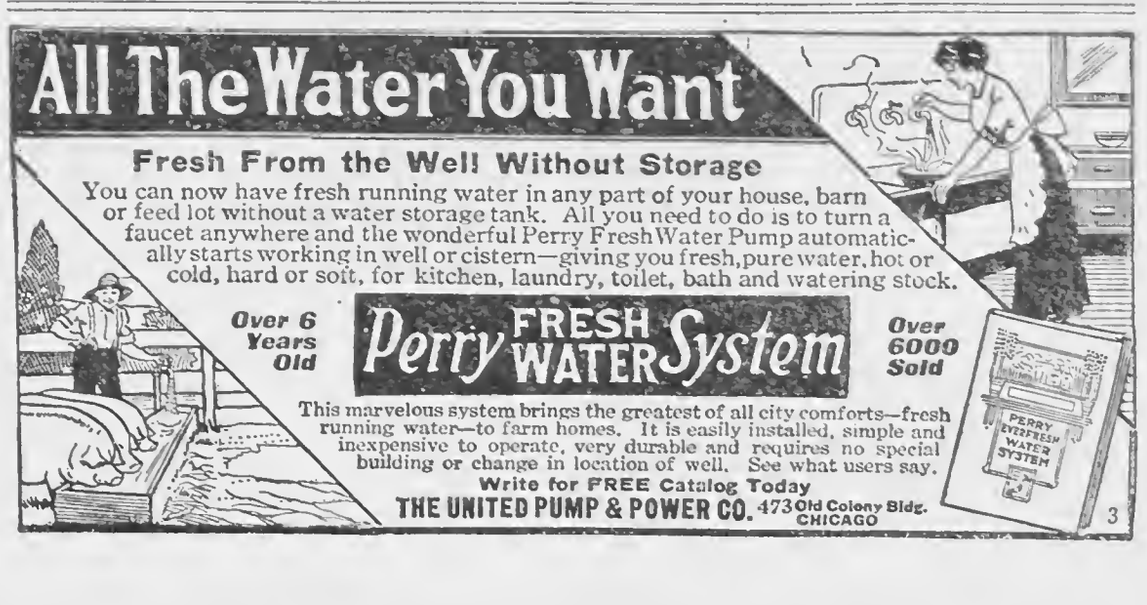

3

::: NOTABLE PEOPLE :::

Pictures of Common Folk—Three Vermont Notables

By notable we mean worth noticing or talking about. The big people, out in the limelight, usually receive more attention than they deserve. They are sure

CLEORA ABBOTT—PRIZE HEN WOMAN.

to be advertised. We seek the humbler individuals who do worthy things in smaller places, and are often passed by in the hurrying throng. This month there are three—as it happens all from Vermont, a State noted for its fine women and active old people. The two girls, Cleora Abbott and Marion Pilkington, belong to the Windsor County Boys' and Girls' Poultry Club. This was organized by the County Y. M. C. A., and contains 69 members, averaging 14 years of age—29 girls and 40 boys. Each member took a setting of 15 eggs of any desired breed—these eggs to be hatched and raised by a hen. Full records were kept of work, care, feed expense and similar items—each record certified by an adult. Cleora Abbott, age 15 years, won the highest honors. She hatched 15 chicks from 15 eggs. Up to January 1 the pullets out of these 15 chicks laid 113 eggs—a clear profit on the original 15 of about $12. Miss Clara won a 70-egg incubator and a pen of White Wyandottes worth $25.

Marion Pilkington is 13 years old. We see her in the picture with some of her R. I. Reds. She also obtained 15 chicks from 15 eggs through the help of her faithful friend—the hen. At the end of four months all these chicks were living. She won first prize for largest total weight of chicks—62 pounds—and won as prizes an incubator and a brooder. It is not likely that either one of these devices will equal the original old hen. It is hoped to develop this organization of young people into a coöperative egg-selling club. We tried to get these girls to tell just how they managed the eggs and chicks, but there is too much instinct in the thing of hatching 15 chicks from 15 eggs, and who can communicate instinct? At any rate Cleora and Marion are worthy to go into our list of notable people who set us all an example in doing humble things well.

And now what have you to say to A. P. Jones of Brandon, Vermont, who is shown climbing a telephone pole on his 80th birthday, and showing the boys how to do it? You see these people up in the "Bashful State" start early at doing good-sized things, and keep it up late. Some of these boys of 50 to 60 would have a dizzy head before they got 10 feet up that pole, but here is Brother Jones climbing it like a fly. Here is a brief story of his life:

I was born in Lincoln, Vt., in 1832; went to Fond du Lac, Wis., in 1854, was engineer on stationary, railroad locomotive, and steamboat. I was engineer on the Mississippi River when the Civil War broke out. I left Pittsburgh for New Orleans November 6, 1860, on steamer Bellwood, then returned to Fond du Lac and ran one engine in railroad shop for 12 years. I was also lineman for 10 years on railroad and telephone. I returned to Vermont 25 years ago, carried on a market garden for a few years, since which time I have been just a farmer. For the past few years I have not been able to do the heaviest part of the work, but take care of cows, horses and hens, and saw wood. I have never been sick to speak of; I think that my being temperate, using neither whiskey nor tobacco, is the reason for my good health.

A. P. JONES.

Opportunity and Woman.

At a recent public dinner in New York, Dr. Katherine B. Davis, Commissioner of Correction, remarked that she wished she had a husband, so that he could attend banquets for her when she was too busy to go herself. The Governor, the mayor or the district attorney, could send their wives, but she, an efficient spinster, had no one to protect her from the social obligations that eat up so much of a busy person's time. For a good many centuries men have been attending the banquets of life, while the women stayed in the cave, or the hut, or the castle, attending to the business of being a woman. During all these centuries, while the home was the industrial center, the women did just such work as they are doing today; they manufactured the food, they wove and made up the clothing; they cared for infancy and helpless age, and nursed the sick. When all these occupations became specialized and commercially profitable, men took them out of the home, reminding the women, however, that it was their duty to stay behind.

MARION PILKINGTON AND HER HENS.

Now we see women taking up all their old occupations again, in the outside world to which they have gone. Perhaps we can blame Elias Howe for some of our modern feminine unrest; without the sewing machine our feminine population would have been kept so busy hemming their frills that they would never have had time to become, like Dr. Davis, a full-fledged penologist with a doctor's degree. But we are not worrying, as some very good people do, over the changing attitude of women towards life. More than a hundred and fifty years ago Lady Mary Wortley Montagu remarked that she had traveled widely and seen much of the world, but she had only found two kinds of people in it, men and women, and they were very much alike. Modern conditions seem to bring out the wisdom of Lady Mary's remark. Through all history, Opportunity has ever found the man ready for it, and now we are giving our old friend Opportunity a chance to find the woman too. It is just as well to remember however, that all the opportunities seeking the right woman, are not roaming around the outside world. Some of the biggest and best opportunities that ever escaped their seekers have been grasped by hands callous from the broomhandle, or encumbered with a worn old thimble.

The Baked-bean Center Moving.

Who would have thought that the baked-bean center of this country was ever in danger of moving away from New England? Who would have thought, if it ever did go, it was likely to jump straight across the country and locate upon the desert? Yet if we are to believe the bean authorities at the Arizona Experiment Station, this is likely to follow. Listen to them as they step upon the house-tops and proclaim themselves prophets.

It is the year 1917. A lady is shopping in a large city grocery store. "Have you any canned baked beans?" she asks the salesman. "The best made, and two cents cheaper, too," he replies, producing a can. The striking label on the can catches the lady's eye immediately, and she takes it for a closer examination. "Arizona baked beans," she reads over a picturesque lithograph of an Indian dressed in full regalia. "Grown by the Papago Indians in Arizona for hundreds of years—a real American product." "This isn't the old Boston brand that I have been buying, but I will try it," she says. Two days later she orders a dozen cans.

This prediction is made by Prof. G. S. Freeman, the plant breeder who says that people do not realize the full value of the Tepary bean. It is a dry land bean, quite hard, and requires an extra time for cooking. Prof. Freeman claims that a given weight of Tepary beans will produce 40% more cooked beans than the ordinary kind which has been famed in song and story. It is equal in food value to other sorts of beans; a little higher in fact in the fats and oils. The Arizona people actually think that within a few years these beans put into cans will take care of the Western trade, and that the more they are eaten, the greater will be the demand for them.

No, Burbank seems to have nothing to do with the production of this bean. The Indians consumed it hundreds of years ago, even before the Pilgrim Fathers struck New England and began to eat baked beans and succotash. Surely the old times and the old traditions are crumbling all about us when Arizona comes forward well matched to fight New England for supremacy on the baked-bean question.

Back-to-the-Landers.

A number of interesting stories could be told about the "back-to-the-land" problem. We get many of them here, and all sides are certainly represented. In one case which has just come to our knowledge, a man and his wife left the city, bought a small farm in Southern New Jersey, and started in to try to pay for it. As usually happens, the money ran dry, for most "back-to-the-landers" do not realize what it means to get into a situation where the pay envelope does not come along every Saturday night. These people, however, were determined to own their farm, so the man left his wife to hold the place as best she could, and he enlisted in the army and went to the Philippines for several years. He sent his money back, and his wife used it wisely on the farm until it was paid for. Then he came back to improve the place and make his home. The children had grown up, and several of them wanted to go to town. They thought they would find a better opportunity there in a town business. This man finally gave way, sold his farm, and invested the money in a town business, only to lose it all, and to find that his boys were after all dissatisfied. They would not go back to the country with him, but the man and wife have made another trial, and are back on the land again. The man is still working in the town, going to his place to spend Sundays. His wages are going into the farm, and in the course of time he and his wife will have the place paid for again, and when they complete this "second struggle," he says, that no one can induce him to sell his home again.

In another case a man and his wife had a fine fruit farm, well stocked and well paying. They took their family to college for education and rented this fine farm to a back-to-the-lander family. This family took the place—the man stayed at his job for a while and put the money into the farm. They apparently worked hard, yet even with this fine place, on which the former owner made money, they have not been able to pay half their rent!

In another case two "back-to-the-landers," man and wife, left New York to establish a fruit and poultry farm in the country. They too ran upon the hard problem of lack of capital. They used up their ready money in two bad seasons before the farm was paid for, and before their hens and their fruit could give them much of an income. The man was unable to obtain his old job in the city. His wife was an expert stenographer, and she went back to her old place. The man stayed at home to keep house and work on the farm, because he felt that while he couldn't keep house as well as his wife could, he could work harder, as his strength was greater. The woman traveled back and forth some 60 miles a day, Summer and Winter, earning her salary and paying this cash in against her husband's labor. In a year or two they had the farm paid for, and the hens and the fruit are now doing well. These "back-to-the-landers" can look back upon their hard days with a smile. They would not sell their home, and it will grow more valuable with each year, and yet they understand only too well the absolute need of working capital to make such a place go. In another case a man and his wife, of middle years, bought a small place outside of the great city. They were wise enough to see after a little experience that it would take them several years to adapt themselves to farming or gardening, so that it would pay. Their farm was not paid for, and so both man and woman held their jobs in the city, and go and come every day, earning their salary as before, and hiring a housekeeper to take care of the place. In a year or two they will have the place paid for, with working capital, and some of their trees in bearing. Then they can take hold of the poultry business and develop it as they need.

"SHOWING US HOW" AT 80 YEARS.

Care of the Eyes

From Cradle to "Old Sight"

By Jos. E. Sternberg, M.D.

The subject is one of vital importance to all mankind. As you should all know, the eye is one of the most important and delicate organs in the body. You will then agree with me in the fact that the necessity of perfect sight is not only essential to our happiness, but necessary for our success in life.

INFANTILE CARE.—The care of the eyes must begin at birth. Statistics show that more than one-third of all those suffering from loss of sight, whether in our hospitals, institutions, or at large to-day, can trace their affliction to neiglect of their eyes at the time of their birth, either through lack of knowledge or cleanliness on the part of the attendants at that time. No physician or attendant has discharged his duty or obligation to State, mother or child, who has neglected to employ the necessary prophylactic measures. The family is, and should always be, instructed by their family physician in the proper hygienic care of the eyes. When these instructions are not given, it is safe for the mother to do this herself, washing both eyes morning and night with a solution of boric acid, which is made as follows: Get about 10 cents worth of pure boric acid (not kitchen borax), take half a teaspoon of the powder, and dissolve it in half a pint of hot water. When thoroughly dissolved it is ready for use (should always be used lukewarm). Before using the solution be sure to thoroughly cleanse your hands with soap and water. Tear off a bit of clean absorbent cotton, dip it in the solution, and wash both eyes, allowing the solution to get into the eyes, or a medicine dropper may be used, which should be boiled before using. What is left of the solution should be tightly corked in a clean bottle until needed again.

CONDITIONS IN CHILDHOOD.—Passing to childhood, the most common conditions we find are those of defective vision and cross eyes. In defective vision the child usually complains of headaches, holds its book too close to its face, the eyes water, tire easily, and there is a feeling of general discomfort. Never make light of such complaints. Children do have headache and stomachache when they believe it to be to their advantage as an excuse for not attending school, with a remarkable recovery by half-past nine, but many a child is considered wayward and backward at home and in school, when a proper examination would at once reveal the true cause. Statistics show that 10 per cent of all headaches are due to faulty muscle action, and 75 per cent to eye strain.

CROSS EYES—This trouble may be noticed during infancy or in childhood. As a rule this condition occurs early in life. Here much can be done when attended to early. Do not allow the child to go on, hoping the eyes may come straight. They seldom do; if not attended to, the turned eye is apt to become blind from disuse. Treatment for defective and cross eyes consists of a careful examination by a physician or oculist trained for this work, who will use the necessary methods to relax the child's eyes, find the true and exact condition, and prescribe the proper glasses. No child is too young to wear glasses if needed. I have on several occasions prescribed glasses for children aged as young as 18 months, with excellent results in defective vision and cross eyes.

Taking into consideration the abuses during school life it is essential that proper examinations be made by the teachers and parents at the very beginning, examining each eye separately, covering one while the other is being examined. This examination will show any deficiency. In cases of cross eyes, when wearing glasses does not help after a reasonable time, operation is the only means of overcoming the difficulty. You owe it to your child. When this is denied the child, who will be responsible when the child reaches adult life?

It should be the duty of parents to visit the school in order to observe the arangement of desks, light and sanitary conditions; where the parents will cooperate with the school, defects are quickly remedied. Following school life, various occupations carry with them a number of accidents, the most common of which are burns, foreign bodies in the eyes, and inflammatory conditions. Burns are always serious. If from acids neutralize and wash out thoroughly with bicarbonate, cooking soda, or a borax solution. If from lime use a strong solution of sugar water, olive oil, milk, or a weak solution of vinegar. *Never use*

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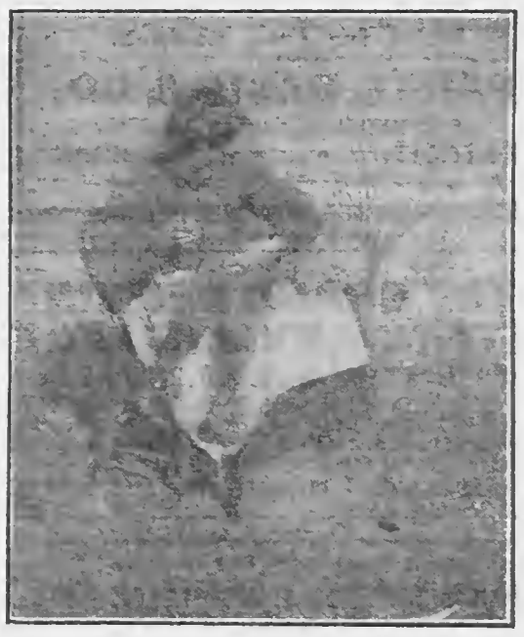
water alone in a lime burn. Blows, as a rule, cause hemorrhage under the skin (commonly known as black eye). This condition as a rule clears up without any treatment in about a week. In the early stage, however, cold compresses may help, while later hot compresses will hasten absorption. A solution of arnica is very beneficial applied hot or cold.

Foreign bodies most frequently lodge and can be found under the upper eyelid; they are easily removed by the following method. Have person look down, grasp eyelashes, draw lid down and away from the eyeball; then with a toothpick, match, or pencil turn lid up over it, when it is easily removed. If the foreign body is seen on the eyeball, do not rub it, as this will tend to embed it. Use a bit of absorbent cotton on a tooth-



LAID UP FOR REPAIRS.

pick, or a clean handkerchief, and quickly wipe it off. *Do not* under any circstances use *eyestones* or an unclean handkerchief, nor *poultice an eye.* If it is a small piece of steel use a small magnet. Should you fail to remove it see your physician at once.

INFLAMMATORY CONDITIONS.—These always mean a condition which, unless thoroughly understood, should not receive home treatment, as they often mean the loss of sight. Pink eye is a contagious disease, and is most prevalent in the Spring and Fall. The discharge is contagious; it is spread by unclean towels, handkerchiefs, and after washing in the basin of an infected person. If this occurs in school the child should be sent home at once, and not allowed to return until a certificate is had from the attending physician. It is not safe to attempt home treatment in this condition, as it is not in the danger of the condition itself, but in the possible complications which may arise. Consult your physician at once, or better still, your oculist.

OLD SIGHT.—Arriving at the age of 40, a change takes place in most eyes, commonly known as old sight. This change is a natural one. The first thing noticed is, while reading a person holds the book too far from the eyes (normal distance is about 14 inches from the eyes). At this time it is advisable to consult your oculist at once, who will prescribe the proper glasses. Do not go into the village store or to the peddler and pick out a pair of glasses. You may think you are getting them cheap; later you may regret it. Glasses purchased from peddlers and general stores are likely to result in improper fitting, causing much trouble difficult to eradicate later.

In conclusion it will be well to consider what defective sight means, what are the chance later in life. It reduces the value of the individual; partial loss of sight reduces the earning power in proportion to the degree, while complete loss of sight removes him from the wage-earners to the classes of dependents. Treat your eyes well; they are your best friends.

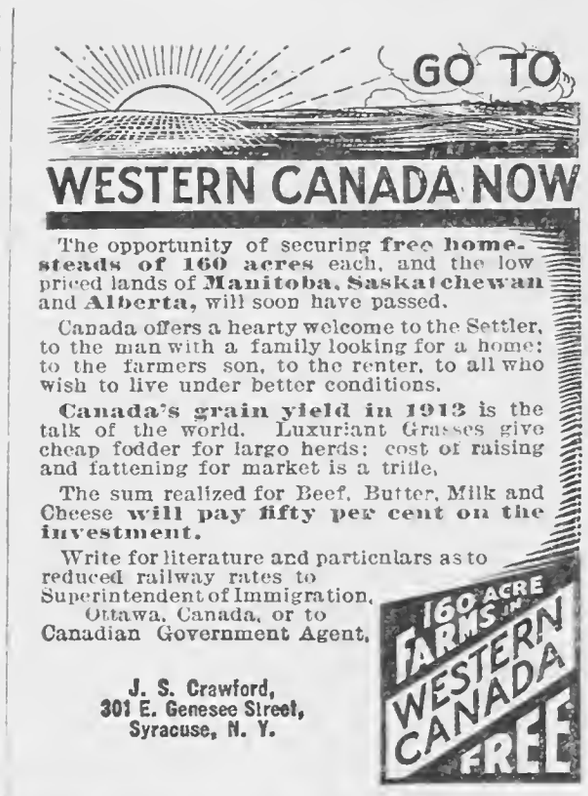
Sewage Disposal and Sewing.

Here are two pamphlets which should interest all country women. First is Bulletin 57, issued by the U. S. Department of Agriculture, at Washington. This discusses "Water Supply, Plumbing and Sewage Disposal for Country Homes." It is full of pictures and discusses this big water question in a practical way. This question is how to get the water into the farm house, how it may circulate as needed and then pass harmlessly out. Your home cannot be right until this question is settled. This free pamphlet helps settle it. The other is "Sewing, Darning and Patching," by Miss Della Hughes, issued by the Ontario Agricultural Department at Toronto, Ont. Miss Hughes is probably guessing at it, but her guess as to how thread and weaving originated is as close as we can get it:

While furs were still man's only clothing he discovered the use of fire. In absence of matches, the starting of the fire was a difficult problem, so it fell to a woman's lot to remain at home, to keep a perpetual fire, while man hunted for food. True to a woman's nature, she made use of her time, trying to keep her surroundings neat and tidy. She discovered that the reeds used for the floor covering stayed in place better if entwined. This was the origin of weaving. Long reeds were placed side by side on the ground corresponding to the warp thread of our modern textiles. In and out these were woven reeds not so strong, corresponding to our woof threads. Basketry of various kinds developed from this form of weaving, but no great improvement could be made until the advent of other fibres which were the result of the spinning industry. Spinning probably began by twisting fibres, hairs, grasses and sinews, or by rolling them between the thumb and fingers. Then it was found better to roll them between the palms of the hand, and later between the palms of the hand and the naked thigh. Yet in these rude methods we have the foundation of the spinning wheel and the steam-driven cotton spindle. When the primitive woman started to use goats' hair or wool, she fastened strands of it to a stone, twirling it around until the yarn was twisted as desired, after which it was wound around the stone and the process repeated. Some time after this the spindle came into use, then the whorl, then the distaff.

The work of sewing, darning and patching is taken up in detail. It is of course impossible to teach such things entirely through print, but these pictures and descriptions will interest all needlewomen.

TED Brown, an American, was touring Scotland and one afternoon mounted a high hill in company with a Scot who began bragging of the extensive view. "I suppose you can see America from here on a fine day," said the American, jocosely. "Oh, aye, farther than that," replied the other. "Farther than that?" "Aye! On a fine nicht we can see the mune."—Credit Lost.



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Live Stock and Dairy

PORK PRODUCTION FOR THE EAST.

How to Make Hogs Pay.

PART I.

A GOOD OPPORTUNITY.—Pork production affords unusual opportunities to the Eastern farmer, in view of the fact that available unexcelled markets for all classes of pork products prevail. In addition to the wants of the exacting population within any given area, the manufacturing industries utilize the services of foreigners and laborers who particularly relish fresh pork products, and willingly buy pork in any form. The Eastern farmer is interested in supplying this market, and it is essential that he know definitely and accurately the practices necessary for successful feeding, breeding and management of the swine herd. In the extensive trucking and market gardening districts of the East, there is annually wasted a vast amount of unmarketable products that might be used to advantage in feeding swine. In any dairy district swine serve as a means of utilizing the by-products, and make the

BROOD SOWS ENJOYING ALFALFA HAY.

salable products more concentrated and of greater value. In any section where corn and Alfalfa can be grown successfully, and where other forage crops produce average yields, the keeping of pigs would be a source of profit. The advantage of this phase of live stock farming might be briefly summarized as follows:

1. The initial investment is small as compared with other lines of live stock farming.
2. It is easy to "get in" or "get out" of the swine business.
3. Requires small expenditure for labor and is less exacting and confining than dairying or garden farming.
4. Enables utilization of farm, kitchen, orchard, garden, seed, mill and other waste products, without subjecting them to expensive methods of preparation.
5. Breeding animals are prolific (deliver large litters) thus enabling rapid and steady improvement by selection and systematic mating.
6. The animals mature at an early age; require short growing and fattening periods; can be readily marketed at any age or weight.
7. Necessary colony houses, fences and equipment can be provided at small cost without need of expensive labor.
8. Manure voided worth $3.50 per ton. Rooting improves clay soils and soddy orchards; while pigs scavenger and work over coarse barnyard manure and improve its texture and content.
9. There exists steady demand for meat or lard products; meats may be cured or placed in cold storage; the product is not perishable as is milk, vegetables, etc.
10. Establishes a market for home grown feeds, thus gives the farmer the grower's and feeder's profit.
11. It is much easier and far more economical to market a ton of pork than five tons of corn, its equivalent. The voidings add to the profit by maintaining soil fertility.
12. Swine in the barnyard make dairying or beef production more profitable, and the industry serves as either a side line or may engage extensive development.

Of course, there are certain limiting factors in reference to pork production that should be considered, and they may be stated as follows:

1. Losses sustained from cholera, parasites and pests.
2. The attention given sows at farrowing time is important, as is the raising of large litters, and keeping the youngsters growing steadily from birth to maturity are essential for success and profit.
3. Unless free range, green forage and home grown products, rather than purchased feeds are utilized, gains will be expensive and of questionable profit.
4. Losses will be entailed unless cool shady retreats are at hand during the Summer season, and dry protected quarters furnished during the Winter months.
5. Type and breeding of animals selected: Common grades, or scrubs develop slowly; require long fattening periods; the net gains are expensive; while their carcasses do not evidence extensive fleshing in regions of valuable cuts, hack, loin, hams and ribs; when comparison is made with purebreds or selected grades.

If reasonable care and judgment are exercised in the management of the herd, and modern practices in reference to sanitation are employed, there will be little danger of loss from disease or other causes. The factors that limit profits are: prolificacy, weight for age, quality, type, vigor and the use of young animals.

CHOOSING THE BREED.—Two distinct market types of swine prevail, namely, the fat, or lard hog and the bacon hog. Representative breeds have been developed, especially adapted for the production of specimens to supply specific market demands, and while these vary in color, size, prolificacy and age of maturity, selected individuals may be found in each of the breeds which have very little, if any difference in their ability of economically producing one hundred pounds of pork. A far greater problem for the swine grower is to make careful and systematic selection of individuals within any given breed, hence the choosing of the breed is of relatively small consequence. The leading fat breeds are represented by the Duroc Jersey, Chester White, Berkshire, Poland China and Small Yorkshire; while the foremost bacon breeds are identified as the Large Yorkshire and Tamworth. It is fundamental that the breeder determine first the particular kind of meat products that are in greatest demand at the available markets, then his personal preferences as to breed characteristics such as size, color, form, type, fattening and maturing qualities, should determine the breed to be selected.

THE FAT HOG.—For New Jersey conditions and markets the fat hog is the utility and popular type. In fact buyers offer no more per pound for marbled carcasses of bacon hogs than for a prime representative of one of the fat breeds, provided of course, both specimens are within the desired range of weight; the preference being for a carcass weighing from 175 to 200 pounds. It is common knowledge that representatives of the fat hog type reach such weights in a shorter period, that they are better adapted to pen feeding, and consequently more economical for converting farm products into meat, while the bacon hogs must have long growing and slow feeding periods, and require dairy by-products if the choicest fat-and-lean carcasses are to result. It is generally conceded that it requires more skill and a greater knowledge of feeding to grow and finish prime representatives of the bacon hog than is necessary with fat hogs.

THE BROOD SOW.—The brood sow is the unit of pork production. Regardless of breed or type she should have certain definite characteristics representing a happy combination of evident breeding and individual excellence. If it is desired to produce and sell animals for breeding purposes, the score card as established by the various registry associations should be studied, and care exercised toward selecting and developing that type of animal that is

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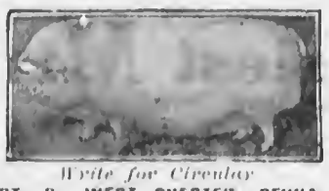

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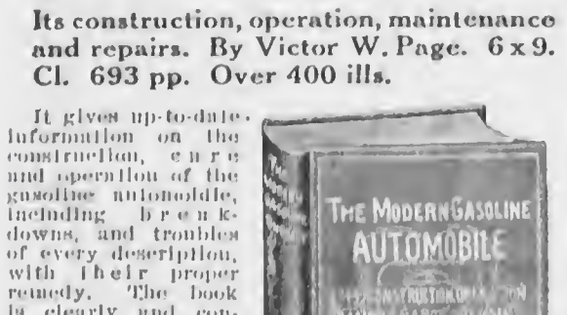

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held in the highest regard by the foremost breeders and judges. Utility from a butcher's block standpoint should measure every item upon which market selection is based, for ability to put on prime weight with quality makes the difference between profit and loss with swine. The purchase of bred sows is perhaps the easiest way to start in the swine business, and owing to the rapid rate of increase, the desired number of breeding animals can soon be established. In choosing such a sow for breeding purposes, the following points are of importance:

1. She should be purebred, well grown and developed by a reliable breeder, and registered in a record association in good standing.

2. She should trace to a large even litter, farrowed by a kindly disposed heavy milking dam that evidenced good size, vigor, quality and fleshing characteristics. The pedigree should show in short tabulation family performance and popular breeding.

3. She should evidence good weight for age; possess a clean shapely head, large bright eyes, heavy well set jaws, light neat jowl, trim ears with a short smooth neck. She should possess, if in good condition, a long, straight, broad back, smooth compact shoulders, deep well arched sides with even width throughout. The hams should be plump and shapely. The underline should be trim and dotted with many evenly placed rudimentaries. The legs should be straight and strong with clean dense bone, and the pasterns well supported. From every viewpoint she should evidence style, finish and symmetry.

4. Quality, as evidenced by the fine silky coat of hair, refined head and shoulder, clean fine bone and trim belly determines dressing percentage. Avoid selecting highly conditioned show animals for breeding purposes, as very often they prove unable to reproduce in satisfactory numbers with any degree of regularity.

5. The use of serum and virus has revolutionized the treatment for prevention against cholera, and if convenient to obtain immune foundation stock initial losses and disappointments will be lessened. F. C. MINKLER.

Live Stock Sales Establish Values.

"You do not realize the value of a good purebred cow; the maximum price paid for a well-bred producer is yet years away." This was the declaration of a well-known breeder at a live stock sale which I attended. Many believe we are near the limit of high prices. The dairy world has been interested in the $10,000 dairy cows, but it will be no surprise, some breeders believe within two of three decades, to see $25,000 and possibly a $50,000 dairy cow. I have at hand some interesting data regarding Short-horns. This breed had its innings in the latter part of the seventeenth century, when Virginia led with several minor importations. The Short-horn interest revived following the Civil War and the climax seemed to have occurred with the New York Mills sale in 1873. At this auction 109 head were sold in three hours. The footings of this sale totaled $380,000. One cow sold for $40,600, another $35,000, six others averaged $24,000 and eight others averaged $14,000 each. British breeders agreed that America was producing better Short-horns than in England, and came to the sale to take back the cream of the stock at any price. They had to pay for them to get them.

It is the opinion of many hard-headed business breeders that well advertised sales are grading up the price of purebred cattle. With the business ability, the publicity and increasing interest in the breeds, the man who wishes to get in good purebreds must do so at once, for prices are after altitude records. W. J.

MEETING OF GUERNSEY CATTLE CLUB. The annual meeting of the American Guernsey Cattle Club will be held at Hotel Imperial, Broadway and 32d Sts., New York City, May 13, at 10:30 a. m. Besides the regular business of hearing the reports of the year's work, the election of officers, etc., the question of changing the by-laws so as to surround the matter of transfers with greater safeguards will be presented. Opportunity will be given for consideration of matters relating to the welfare of the club and its work.

DAIRY CATTLE

In Service at Meridale Farms

Prince Jonquil 85334

is a worthy son of one of America's foremost dairy cows. His dam, *Springfield Owl's Era 123934*, a Meridale Jersey, in a year's work ending February 28, 1914, produced 16,457 lbs. milk, 1,168 lbs. butter, with an average fat test of 6.035%. The world's record is 1,175 lbs. Two previous yearly records attest her consistency in dairy work, while a daughter and practically a full sister in the Register of Merit further evidence that dairy quality runs in the blood.

His sire, *Interested Prince 58221* (Imported), has 25 daughters in the Register of Merit, with yields as high as 13,833 lbs. milk, 819 lbs. butter on yearly test. Thirteen daughters of Interested Prince and fifteen daughters of Springfield Owl in the Meridale herd are demonstrating to us every day the remarkable productive quality of the blood lines carried by Prince Jonquil.

We are breeding to him some heifers of exceptional promise. A few of them will be sold. For particulars address

AYER & McKINNEY
300 Chestnut Street, Philadelphia, Pa.

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

FOR SALE—Two Richly-bred Jersey Bulls—One yearling and one two year old. O. N. WILSON, Kittanning, Pa.

WANTED—JERSEY COW—Registered or good grade. Fresh in May preferred. John Brook, New Milford, Conn

FOR SALE—Otterkill Farms Ayrshires Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer. Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

DUTCH-BELTED (Registered) BULL CALF
For Sale
$75.00
CHAS. STEWART DAVISON
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Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

PUREBRED HOLSTEINS FOR ANY POCKETBOOK. $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. MOHEGAN FARM, Peekskill, N.Y. 1 hr. from Grand Cent. Sta.

Buy a Bull on Easy Terms
Long Time and 4 Per Cent Interest
Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.90 lbs in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.
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East River Grade Holstein Cows For Sale
50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.
These will suit the man that is looking for high class dairy cows. Large producers, good size and well marked.
Visit the East River Holsteins when in need of first class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.
Bell Phone No. 14 F.5. JOHN B. WEBSTER, Dept. Y Cortland, N. Y.

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HOLSTEIN CATTLE
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A good Holstein is little short of a perpetual motion milk-making machine, that while in milk uses her food for milk production and when dry stores up body fat to be converted into milk fat as soon as she freshens. She will earn 50 per cent. on the cost of her feed. Why not keep this kind?
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Out of Healthy Tuberculin Tested Cows of Choicest Breeding—some Advanced Register Calves from Two to Twelve Months old.
BY Our HERD BULL
PRIDE'S MAY KING of LINDA VISTA No. 18617
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(May Rose Blood)
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FOX RUN FARM
F. S. GILCHRIST, Supt., PETERBORO, N. H.

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50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

HIGHLAND VIEW STOCK FARM
Our last importation of BELGIANS and PERCHERONS is the BEST we ever imported. We have sold more Stallions and Mares in the last sixty days than we ever sold in a year. WHY? Because we sell the good, big, drafty kind at the right price, and lower than the other fellow.

O. N. WILSON, Prop.
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FOR SALE **Fine Registered Percheron Stallion** coming 22 years old and weighing over 1200 pounds. Will sell for $300. Your neighbors will pay his first cost in service fees within a year. And by that time your stallion will be worth—perhaps $1,000. Is that business? Write us today.
ADIRONDACK FARMS, 57 Warren St., Glens Falls, N.Y.

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An excellent opportunity to buy a few good mares, brood mares, or colts, at bargain prices.
VICTOR FARMS, - Bellvale, N. Y.

FOR SALE—Fine Registered Percheron Stallion coming 1 year old and weighing over 800 pounds. Will sell for $200. Will make biggest horse producer on the farm. Write today. Adirondack Farms, 57 Warren St., Glens Falls, N.Y.

Must Sell—REGISTERED PERCHERON STUD COLT. Coming 2 yr. Weight, 1600. Bay. Best of bone and quality. Right in every way. Arthur S. Nye, R. D., Orwell, Ashtabula Co., Ohio

AT STUD—"LANDAIS" (100,233) 92,338. Imported Registered Percheron Stallion. Gray, weight 1,900 lbs. Fee, $25. Walnut Grove Farm, Washingtonville, N. Y.

Beautiful, Registered Percheron Mare $350. Write, PAUL HANKS, Friendship, N. Y.

PERCHERON STALLIONS—Our hobby is quality. Buy from farmers. S. SCHOONMAKER, Gardiner, N. Y.

DOGS

Shepherd Puppies—$3. Write for particulars. Catalog. 25 varieties of poultry. BERKSHIRE PIONEER POULTRY YARDS, Berkshire, New York

AIREDALE PUPPIES five months old, bred and developed on my farm for farm service, from the celebrated "Oorang" and "Freeman Terror" strain of registered Champions. Strong and healthy, short wiry coats, beautiful black and dark tan, are gentle with children, faithful watch dogs, excellent hunters, easily taught to do or not to do. Shipped to any part of the country. The pleasure of owning a good dog will more than repay the small investment. Address F. B. HORTON, Woodland Park, Manchester, Conn.

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FOR SALE—Twenty-Five (25) **Reg. Hampshire Ewes** with fine lambs by their side.
HASLETT BROS., - Seneca, New York

FOR SALE—FIFTY REGISTERED **Hampshire Down Yearling Ewes** born in Jan. & Feb., 1913. Wm. C. Whipple, Purchase, N. Y.

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Two Guernsey Herd Bulls of the Ledyard Bay and Masher Strains, three and four years old. Sure breeders. $150 each. J. E. Van Alstyne, Kinderhook, N. Y.

FOR SALE
ARDMORE FARM GUERNSEY
One purebred Bull—10 mo. Son of Imported Hayes Royal, 3rd. A grand show prospect. Address JAS. MAGNER, Manager, Glen Spey, Sullivan Co., N. Y.

GUERNSEY BULL Wayside Glynn, No. 25807. Here is a yearling that combines breeding, type and disposition sufficient to warrant the belief that he will make a successful sire. Price, $85. Address, A. L. PAGE, (Owner), 62 Cortlandt St., N. Y. City. Wayside Farm, Chatham, N. J.

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Feeds and Feeding, Henry	2.25
Practical Dairy Bacteriology, Conn	1.25
The Horse Book, Johnstone	2.00
Forage Crops, Voorhees	1.50
Animal Husbandry for Schools, Harper	1.40
Questions and Answers on Butter Making, Publow	.50

THE RURAL NEW-YORKER, 333 W. 30th St., New York

RAISING STOCK CALVES.

Since the silo is coming into general use, and beef cattle are scarce and high-priced, the cost of raising beef calves becomes ever more important to farmers of the Eastern States. Therefore we would like to give some figures showing the profit from a small herd of beef cows and compare them with dairy cattle as sources of profit and consumers of high-priced feed.

Of 14 head of two-year-old heifers, three of them failing to breed, the following figures show the profit from letting 11 head raise their own calves. The three barren heifers, costing six cents per pound in the Spring, with an average weight of 1,030 pounds, makes them cost $61.80 apiece or $185.40 for the three; and after gaining 150 pounds apiece and selling at seven cents per pound, or $247.80, return a profit of $11.44 apiece counting $22.50 for six months pasture and $5.56 interest for the three head. The figures for the 11 head of young cows is as follows:

COST.

Weight 1,030 at 6 cents per lb., for 11 head	$679.80

FEED FOR 18 MONTHS.

Pasture 6 mo. at $1.25 for 11 head	$75.00
Silage 50 lbs. per day, 210 days for 11 head at $4 per ton	231.00
Cottonseed meal 1 lb. for 210 days at 2 cents per lb. for 11 head	46.20
Pasture 5 mo. the second year	68.75
Interest 18 mo. at 6%	61.18
Pasture for 11 calves 4 mo. at 25 cents	11.00
Bull service	33.00
Barn rent and equipment	55.00
Cost of keeping cows and calves	$581.13

No charge is here made for care of bedding, and no credit for manure, which is usually given at $15 per year; $4 per ton for silage yields sufficient profit under ordinary circumstances so that the profit pays for marketing it to the stock.

SELLING PRICE OF COWS.

Increase in live weight of 270 lbs. per cow. Total average weight 1,300 lbs. at 7 cents, $91.00; 11 head of cows at $91.00 per head		$1,001.00
Average weight of calves 610 lbs. at 6 mo. selling at 7 cents $42.70 apiece and for 11 calves		469.70
Selling price of 22 head		$1,470.70
Cost of heifers	$679.80	
Cost of keeping cows and calves	581.13	1,260.93
Profit from cows and calves		$209.77
Profit from 3 heifers		34.34
Total profit		$244.11
Profit derived from keeping a beef cow 18 months and allowing her to raise her own calf		$19.07

After noting these figures is it not plain to anyone that where land is cheap and pasturing stock is profitable, and where silos are used for wintering cows, the production of beef cattle is profitable, with not near so much work necessary as in running a dairy? The bother of careful breeding to keep up a high average milk production is eliminated.

Ohio. H. B. C.

Women and Silos.

In reply to the woman farmer of Illinois, will say that I have many times gone up in our silo and pitched out silage when business matters prevented my husband from getting home at feeding time, and while it is not an easy task it is not as hard work as pitching hay out of the mow. The silage settles after filling, so it is seldom necessary to climb to the top. There should be a stationary ladder in the chute. For a small dairy it would not be necessary to have a silo 40 feet high. Ours is 30 feet, and we winter not less than 20 head of stock. Where only a few cows are kept I do not think I would build a silo, as it is quite an expense to fill one and if not fed enough to remove a layer from the top every day it will not keep well. I consider it quite necessary for a farmer's wife to understand how to care for stock.

New York. MRS. J. S.

As for a woman getting silage out of a tall silo, it is one of my daily tasks, and is not difficult after a little practice. Wear a common sense skirt and climb in same as any one. A man does not scale the bare wall. B.

West Virginia.

In regard to the woman farmer and the high silo I can see no objection as long as the woman dresses for the work. Strong broad-heeled shoes, denim overalls, and a snug-fitting jacket or jumper will make the silo as accessible to her as is her flour in her kitchen cabinet. Skirts should never be worn around animals or around the buildings where animals are kept. They are cumbersome, unsafe, unsanitary, and immodest. They interfere with the free movement of the wearer, render her liable to accidents, gather and scatter filth, and are continually putting her in unseeming and unpleasant circumstances. I am a farmer and a farmer's boy, and I think I express the thoughts of the thinking farmers and farmer's boys when I write as I have. W. F. F.

You ask for more particulars about the silo that a woman empties. It is built in a corner of the barn, the barn floor being at one side and the opening for doors being in the center of that side. The hay mow is on one side, the other sides being the barn covering. Of course there are lining boards and the bottom is cemented. The door opening is built up with two sets of boards, which are nailed enough to hold them and taken out as the silage is fed. Against the side of the silo, between the haymow and the silo doors, is a permanent ladder or series of steps consisting of the barn girths and strips nailed between. There is also a movable ladder of suitable length in the barn usually, that can be used if necessary. Since the silage has been cut, the tools used are a rake, fork, basket and as many bags as there are head of stock to feed. The desired quantity of silage is put in the bags, which are then dropped to the barn floor, so only one trip has to be made to the silo. When the stalks were fed whole, they were thrown to the floor and then gathered up. The silo is 8x12 and 14 feet high, and when full will hold enough to feed three or four head once a day for six or eight months. Of course it is work to feed silage, but I don't know that it is any harder than several other things that have to be done on a farm. B. E.

Brown Swiss are Valuable.

I notice an inquiry from J. A., Middletown, N. J., regarding the advisability of purchasing a Brown Swiss heifer, answered by F. C. M. in a manner rather reflecting on this breed as compared with the other recognized dairy breeds, especially with regard to milk production and udder development. Under separate cover I am sending you a pamphlet containing the cuts and records of some of a herd in Illinois which I had under my supervision for about twenty years. On pages 11, 12, is a group of seven cows taken from the milking herd that I think show udder development that would be a credit to any breed. On pages 19, 20, is a list of 31 from that herd that in 1909 gave 307,641.8 pounds of milk, or practically 10,000 pounds apiece, average per year. Seventy-three of them gave over 400 pounds of butterfat, and three gave over 500 pounds of butterfat. These cattle were not forced for records and were out every day in the year.

The Brown Swiss Association started a registry for production a little over a year ago, and the results have been a surprise even to the breeders themselves. The average for production has been higher for the cows that have entered than of any of the other breeds to date and practically every cow that has entered thus far has qualified. One cow from the Michigan Agricultural College has made over 19,000 pounds of milk and 100 pounds of butter. From my own experience with these cattle I believe the average of production will rank as high as, if not higher, than any other dairy breed, and have recently started a herd on my own account. In Hoards' Dairyman you will find the record of a sale of Brown Swiss at Darlington, Wis., a State where the cattle are better known than any other section of the country. The herd consisted of five males and 22 females, 10 were calves under one year old. The herd was sold by a farmer to 14 other farmers at an average price of over $208 apiece; the highest price was $400. W. E. J.

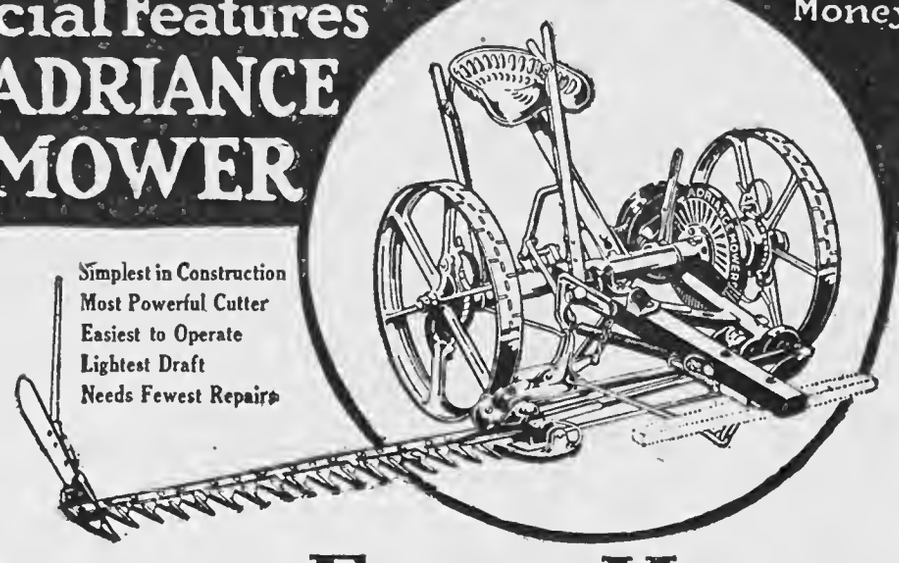
Charlotte, N. Y.

ANOTHER PROLIFIC SOW.—After reading record of prolific sow on page 193, as farrowing 13, 12, and 13 pigs in her last three litters, I am tempted to tell of mine. She is a grade Chester four years old this Spring. Last Spring she farrowed 16, last fall 19, and on January 30 last 17. O. A. R.

Thomaston, Me.

Examine the many Special Features of the ADRIANCE MOWER

Saves Time Horses and Money



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Most Powerful Cutter
Easiest to Operate
Lightest Draft
Needs Fewest Repairs

"Simplest—Easiest Managed —Most Durable"

The Verdict of the User—Read These Letters

I have an Adriance Mower that has been run for 30 years. It cut 25 acres the past season and is still in good shape. It runs easy and cuts grass no matter how heavy. E. V. Link. Shepherdstown, W. Va.

I have used the Adriance Mower made at Poughkeepsie, N. Y. for the last 19 years and consider the No. 8 Adriance, the simplest, easiest managed and most durable machine I have ever seen, and I have used several makes. Harrison Philbrick. Rich Hill, Mo.

The Adriance Mower Will Save You Money

Haying season is short and every hour is worth gold dollars. If your mower is old or not wholly reliable, don't trust it and have it "lay down" right in the midst of the busy haying season.

The one mower that gives faultless service, every hour of the day, year after year, is the **Adriance.**

No other mower is so simple in construction; no other mower is so well made—no other mower has the record of so many years of hard service with so little expense for repairs.

Flexible Cutter Bar—The **Adriance** Cutter Bar follows uneven land. The coupling frame hinges are in exact line and swing like a door—no binding. The bar can be folded over the tongue when not in use.

Knife Starts Instantly—The clutch is on the high speed shaft—thus starting the knife instantly and avoiding clogging.

Visible Driving Pawls—In plain sight where you can always see them work. No danger of spoiling a whole wheel as with the enclosed kind.

Automatic Spring Draft—Prevents the driver, team and mower from being injured when striking an obstruction.

Runs Easy—Roller Bearings on the main axle, and the level crank shaft with bronze composition bearings make the **Adriance** run easy and last long.

Complete machines and full stocks of repairs carried by our Branch Houses in all principal cities and dealers everywhere. Any Flying Dutchman Dealer can show you the **Adriance**—ask him. Write us for FREE BOOKLET on Flying Dutchman Hay Tools.

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MORE MONEY EASIER AND FASTER WORK

You lose $1.00 on every six sheep you shear in the old way. The Stewart gets a length and quality of wool that brings the highest price. Extra profits soon pay for it. The Stewart has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Its price complete, including 4 combs and 4 cutters of the celebrated Stewart quality is $11.50.

STEWART'S No. 9 BALL BEARING SHEARING MACHINE PRICE $11.50

gets all the wool and takes it off quickly and smoothly in one unbroken blanket. To shear with the Stewart Machine seems like play to those who have labored with hand shears in the old, hard, sweaty way. You don't have the same swollen aching wrists. You don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts like you used to do. **Get one from your dealer,** or send us $2.00 and we will ship C. O. D. for balance. Money back if you are not well pleased.

Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines in the world.

CHICAGO FLEXIBLE SHAFT CO.
143 La Salle Ave., CHICAGO, ILL.

Stewart Ball Bearing Clipping Machine

For Horses, Mules and Cows

It pays to clip horses and mules in the spring—they look and feel better, do more work, rest better and get more good from their feed. Clipping the flanks and udders of cows prevents the dropping of filth into milk. The Stewart can be used for clipping horses, mules and cows without change. It's the easiest to turn, does the fastest work, stays sharp longer and is the most durable. **Get one from your dealer,** or send $2.00 and we will ship C.O.D. **PRICE $7.50** for the balance. Money back if not well pleased.

SETTING A HEN.

To set a sitting hen and induce her to sit on a setting of eggs is not always an easy matter. In the first place, she is liable to be set in her ways, and not willing to sit where she is set unless she is set just where she chooses to sit. Of all instincts, the maternal is most immovably fixed. So, if you wish to move a broody hen to another place than that which she has chosen, go slowly. Leave her for two or three days until her broodiness has become an obsession from which she is not easily freed. Then, having arranged a new nest just where you want it, and placed within it a decoy of useless eggs, steal out quietly at night, without a lantern if possible, and gather the hen into your arms, with caressing touch, take her to the new location and put her gently into place, softly whispering "cuddle doon." She will probably stay while the darkness conceals the strange surroundings, but to make sure that the morning light will not bring an irresistible attack of homesickness, place a slatted potato crate over her. If you haven't any potato crates at hand, you shouldn't be setting hens. It is best to leave this potato crate in place for several days, removing it just before dark to feed and water the hen. Then it may be taken away and a dish of grain, with another of water, placed and kept within easy reach. Soft hay makes an excellent nest and it is often advised that a big sod should be placed beneath. It is a question how much influence such a sod exerts, for the fact that a stolen nest upon the ground usually yields a large proportion of chicks may be due to other causes than the ground. A stolen nest anywhere is usually prolific. Make the nest wide and shallow, at any rate. A deep hole leads to broken eggs and trampled chicks. Don't forget to dust the hen liberally with a good insect powder as soon as she has become well established; better forget her food than this. Work the powder well into her feathers, especially about the vent, and repeat this at least once a week while she is upon the nest. A sitting hen cannot protect herself from vermin, and she may be bled, even unto death, if not protected. This is the easiest time in the world to rid the mother of lice and protect the future chicks. A hen that is properly fed and cared for may safely be asked to hatch two broods of chicks before permanently leaving her nest. But, unless she is fed and watered and protected from lice, she will leave the nest after six weeks of sitting an emaciated physical wreck. To insure the hatching of all the eggs possible, it is well to remove the chicks as fast as they become thoroughly dry and strong, placing them in a covered basket behind the kitchen stove. The hen will then remain upon the unhatched eggs longer than she otherwise would. The large breeds are supposed to make the best mothers, and they certainly are willing to try, but this writer likes a mature Leghorn for this purpose. While not so inclined to become broody, perhaps, they are reliable when once they do start to replenish the earth; and being light of foot and active, they are not so apt to crush a helpless chick beneath ponderous claws while gazing stupidly about wondering where those distressed cries come from. They have the hot Mediterranean blood, too, and are perfectly willing to fight twice their weight in tomcats, if necessary to protect their young.

M. B. D.

Runt Pigs.

What is the cause of runt pigs in a litter of thrifty ones, and how are they avoided? Tried several ways and found only one way so far but do not know how long it will last. L. W. M.

Ohio.

There is no cure for a "runt" pig, and it is good policy to kill such a pig at birth. It seems probable that such a pig fails to receive average nutrition before birth, and the cause may be twisting of the umbilical cord so that blood circulation is impaired; or the cell elaboration and growth may be imperfect from the first, for reasons that cannot be confidently assigned. Runt pigs are least common where sows are in healthy condition. The fat, sluggish, overfed and under-exercised sow is more likely to produce runt pigs than is the sow that is properly fed and exercised. A. S. A.

AILING ANIMALS.

Periodic Ophthalmia.

I have a horse that has had sore eyes all Winter. First one is affected, then the other, very sore and inflamed. The horse is in good condition. There is a window right in front of her. What would be good for this trouble? H. S.

The disease no doubt is periodic ophthalmia (moon blindness) and recurs at intervals of a month or thereabout and causes blindness of one or both eyes after successive attacks. This may be retarded somewhat by slightly darkening the stable and twice daily washing the eyes with a saturated solution of boric acid applied each time on a fresh swab of absorbent cotton.

Lame Cows.

I have had two cows taken with lameness in stifle; when cow moved could hear grating of the joint. Cows taken with the same ailment were stabled side by side. Age of cows eight and 10 years; after becoming lame they lost flesh, could bear hardly any weight on legs. One was taken lame in May, soon after calving, one in October soon after calving, both heavy milkers, high-grade Jerseys; both out at pasture nights when taken lame, but were put in the stable night and morning to milk. Can you inform me whether there is any disease with such symptoms, or what do you think was the cause? N. H.

Oregon.

No disease would be likely to cause such symptoms. The cows no doubt have injured themselves in some way on pasture, or by jamming in a narrow gate, or falling on a cement floor or other hard surface. The grating noise suggests fracture of a condyle of the femur. We cannot suggest treatment without an examination, but such lameness in a cow tends to prove incurable. A. S. A.

Diseased Udder.

1. I have a Jersey cow about 12 years old. She has been giving milk since August, is rather thin but eats well. About three weeks ago milk from the right front quarter of her udder looked a little thick and dark, flesh in that quarter of udder seems a little thicker than remainder. At present the milk looks perfectly clear and seems all right until the utensils are washed with soapy water which forms a mucous substance. Could this be tuberculosis of the udder? 2. A four-year-old cow which freshened in October formed a habit of eating poultry droppings about three months ago. She eats well and is in pretty fair order. What do you advise in her case?

Virginia. D. J. D.

1. Tuberculosis certainly is to be suspected in such a case, and the cow, therefore, should be tested with tuberculin. More carefully cleanse and scald all milk utensils, as bacteria often cause stringy milk. 2. Give the cow an abundance of wheat bran and other meals and grains and she will not be so likely to have a depraved appetite. Also allow free access to rock salt. A. S. A.

Pig-eating Sows.

What should be done with a brood sow that will eat her pigs? I have one, a Berkshire, farrowed her second litter March 8, ate one pig when they were one week old, and two more at two weeks of age. I now take the sow from her pigs at night. She is in fine order, well housed, has been fed plenty of cabbage all Winter, and mixed grain chops, also charcoal and some salt. If no remedy I shall put her up at once and feed.

Pennsylvania. W. E. C.

The sow will be less likely to eat her pigs if you make digester tankage 10 per cent. of her feed when in pig. Also make her take abundant exercise daily and regulate her bowels by feeding roots and Alfalfa hay. If she is not a fine registered sow it may pay you best to fatten her for slaughter, as there is no certainty that she will not again eat her pigs. A. S. A.

Dropped Sole.

A friend has a valuable draft horse whose left front hoof is afflicted with falling sole. The outward hoof is contracted, and the sole falls so that at times the sole touches the ground, causing the animal pain. It is necessary to reset the shoe frequently, the blacksmith paring off the falling sole. The owner has been advised to bathe the sole frequently in soft soap. What can you advise?

New York. J. E. W.

The horse has been incurably foundered. Let the sole absolutely alone. Cover it with a dressing of pine tar and oakum, to be covered with a thick sole leather pad; then put on a wide webbed flat bar shoe which should rest only on the frog and walls. Reset the shoe once a month. A. S. A.

A Little Talk on "Protein," Etc.

By Charles Staff, Secretary of the Larrowe Milling Co., Detroit, Michigan, the World's Largest Distributers of Dried Beet Pulp and Manufacturers of Larro-Feed

Danger in Too Much PROTEIN

THAT word "PROTEIN" has undoubtedly misled more dairymen than any other term used in dairying, because it has been so often *misused* and abused. Heralded far and wide as the magic key to big dairy profits, thousands of dairymen are too apt to measure the value of every feed simply by the percentage of Protein it contains. To them, the higher the protein, the better the ration. *Nothing could be farther from the truth.*

For while a certain amount of protein is essential in EVERY ration, the real value of a feed cannot always be measured by the amount of crude protein it contains, an excess of Protein is as detrimental to the health of the animal as the shortage of it is detrimental to your profits. Then again, there is a considerable difference between crude protein and DIGESTIBLE protein—*a fact which should not be over-looked.*

For Example Take Linseed Meal

Why "36% Protein Guarantee" Is Misleading

There are two kinds on the market. New Process Oil Meal, (the kind which results from dissolving the oil in the crushed flaxseed with naphtha) is generally guaranteed to contain *36% PROTEIN,* whereas the *OLD* Process Meal (resulting from extracting the oil by pressure) is only guaranteed to contain *32% PROTEIN.*

Nevertheless the Old Process Meal is considered more valuable and sells at a higher price in the open market, because it has been found that the Protein in the Old Process Meal is 94% digestible as against 84% in the New Process Meal. In other words, reduced to real protein value as measured by digestibility the widely advertised 36% Protein Linseed Meal has no more protein value than the old process meal which tests only 32% protein, and contains considerably less fat.

This goes to show *the uncertainty* of feed values as expressed in percentages not based on digestibility. It also shows the risk you take, in attempting to buy not only Linseed meal, but all the other common ingredients in the open market, when you mix your feed at home. I know that thousands of dairymen follow the troublesome plan of mixing their own dairy rations, honestly believing that they are protecting themselves against adulteration, but, *I am prepared to prove* to any fair minded dairyman in America, *at my risk,* that there is a better, safer plan of selecting a feed for his cows.

I will prove to you on your own cows, at my risk, that you can have healthier cows, more milk and less labor by depending on the carefully analyzed, tested and ready mixed feed which we have perfected and named—

LARRO-FEED

The Ready-Mixed, Ready-to-Feed Ration

An Ideal Balanced Ration

We set out to make LARRO-FEED the best dairy ration ever produced—a ration that would not only beat anything already on the market, but anything that the dairyman could mix at home. We counseled with the greatest dairy experts, and conducted the most exhaustive tests under every conceivable condition. The result is LARRO-FEED—a better ration—a ready-mixed ration—*a guaranteed ration*—one that not only makes you more money and keeps your cows healthier, but also saves you all the bother of mixing your feeds at home.

You simply buy this *perfectly balanced ration,* ready-mixed in the sack and your cows will require nothing else except roughage to maintain their health and produce the maximum flow of milk.

Highest in Digestibility

A Feed Without a "Filler"

We claim for LARRO-FEED the highest digestibility of any dairy ration possible to compound; *plus perfect balance* of protein, fat and carbohydrates, *plus absolute freedom* from adulteration by weed seeds, corn cobs, oat hulls, oat clippings, mill sweepings, or any other filler of doubtful value; *plus absolute uniformity* both as to guaranteed food value of each ingredient and uniformity of mixture found in every sack.

You will find that LARRO-FEED never varies. It is always the same—always good. Such uniformity is absolutely impossible with the most carefully prepared home mixed ration. Our experts are constantly selecting and rejecting from the best the market affords. No ordinary test is sufficient—no manufacturer's claim is accepted. We analyze and test in our laboratories every carload of material to insure quality, then make a second laboratory analysis after mixing to insure uniformity.

What LARRO-FEED Contains!

Why We Use Dried Beet Pulp

No other dairy feed is constituted like LARRO-FEED. It is really a new discovery in dairy rations, which resulted from the wide spread use and experiments with Dried Beet Pulp. Practically every dairyman in America is familiar with the service our company rendered in the development of the Dried Beet Pulp industry. Perhaps you know how we fought against almost overwhelming obstacles to establish the efficiency of Dried Beet Pulp, as an essential part of your dairy ration.

We went so far as to feed hundreds of thousands of cows at our risk while doubting dairymen were making the test. We made good. We proved that Dried Beet Pulp came nearest to giving June pasture results. It has revolutionized the dairy ration of this country. It provided just the bulkiness and succulence needed, giving greater palatability to the feed and practically removing all danger of constipation and other digestive ailments.

Now we come to you with an ideal ready mixed ration called LARRO-FEED. A feed that contains just the right amount of the best quality, selected Dried Beet Pulp, mixed with choice Cottonseed Meal, Gluten Feed, Distillers' Grains, Wheat Bran, Wheat Middlings, and ¾ of 1% of salt.

What LARRO-FEED Will Do!

The Only Feed That's Guaranteed

We realize that the convenience of feeding LARRO-FEED right out of the sack will not alone induce you to give it a trial. It must prove to be a better feed, judged by what it will do for your cows. The convenience of the thing is a minor argument. The real test is whether it will produce more milk at no greater cost than the ration you are now using and whether it will maintain your animals in better health. If it will do these things, you won't hesitate to accept LARRO-FEED on its merit as a profit producer and at the same time you will appreciate the convenience of getting it in one sack, ready mixed and guaranteed from your dealer.

How You Can Know Without Risk That LARRO-FEED Will Make You More Money

We Furnish the Feed For This Test

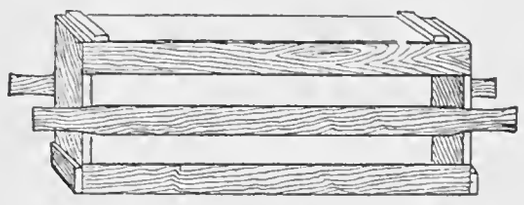
Simply go to your feed dealer and tell him you want to try LARRO-FEED at our risk. If he can't supply you write us direct. We will arrange to let you try 2 sacks (200 lbs.) on any cow in your herd at our risk. You simply watch results especially the second week. If you don't find that LARRO-FEED beats any ration you ever bought as well as any ration you ever mixed at home return the empty sacks and no charge whatever will be made for what you used.

The Larrowe Milling Co.

335 Gillespie Bldg., Detroit, Michigan

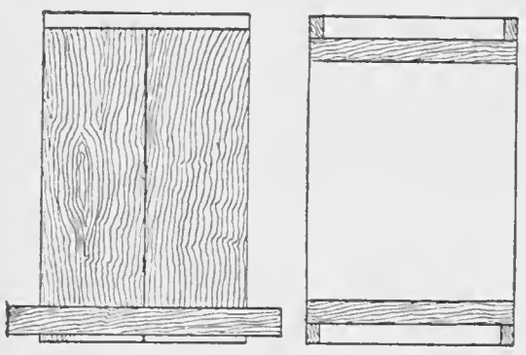
A SIMPLE HOG RACK.

H. R. H., of Ohio, asks how to build a simple and efficient hog-rack. The accompanying plan, shown in cuts, is one which T. M. Palmer, of Ashtabula County, Ohio, is using. It required but a little time for him to build it, and the plan may be adapted to any kind of lumber at hand. The rack should be about five feet long, and from 18 to 20 inches wide, 34 inches deep. Four standards of 1x4 inch stuff are used at the corners. Wider stuff may be used. For the side boards the builder used inch boards, eight inches wide. He used three boards to the side and allowed the middle board to extend at either end 10 inches for handles. At the top of the rack a 1x4



CRATE FOR MOVING HOGS.

inch piece is nailed across and another across the end at the top, leaving an opening an inch wide in which the end gate is placed. A 1x4 inch piece is nailed across the bottom at the ends, and the bottom boards come within an inch of these end strips so as to allow the end gates to slip in and be held firmly. The end gates may be made of two boards, the outside edges of which fit closely against the sides of the rack, and a one-inch square strip nailed across the lower edge. Care should be taken that about four inches in the clear should be left on the end boards, and here should be nailed a 1x4 strip with slightly projecting ends. These ends will prevent the end gate from falling through the rack, when it is lifted or tilted. By removing both the end gates, the rack can be used as a



ENDS OF HOG RACK.

chute, and for this purpose cleats should be nailed eight inches apart in the bottom of the rack. The end gates may be removed, the rack turned over a hog, and they will slip in the bottom openings as well as the top. When the bottom is used for the top, the rack may be turned over on a hog and it can be pushed along with the hog. In this way a hog may be loaded in any kind of a low-down vehicle or sled, where the animal will back.

It is not necessary to use lumber the dimensions of Mr. Palmer's specifications, and he advises two 1x4 inch boards in place of the eight-inch side board, and but one on the side may be used in the middle projecting beyond the end for handles. The rack will be a great deal better than "any old thing," that can be put together without plan or system.

WALTER JACK.

TRAINING A SADDLE HORSE.

I would recommend that B. D. (page 366) get a bridle with both curb and snaffle bits, as he will need both. In speaking of two of the gaits, I do not know which are desired, as there are five. A very good combination of gaits is the walk, trot and canter, of a three-gaited horse. To teach the horse to walk, ride her in the walk for several lessons, urge her to do her best and keep her at it during the entire ride. When she will keep it up without lagging you may teach her to trot. A horse must be able to walk four miles per hour at least. Use the snaffle rein mostly, the curb just tight enough to keep the head in position. Urge her from the walk to the trot, by a touch of both heels, and the whip if necessary. Use the snaffle mostly also, but keep it more closely against the jaw. No attempt should be made, at first, to produce speed, but an easy smooth action. After an easy, smooth and continuous trot is gained, you should increase the speed gradually.

You should always post when riding the trot. It makes it much easier to ride and saves the horse a great deal of jar. After you have the trot developed to your satisfaction, you may teach the canter. If, however, you wish your horse to single-foot you should teach the single-foot first, as it is harder to teach after the horse has learned to canter. Start the canter from the walk; if you let her go from the trot to the canter she will be apt to break into the canter when you wish her to trot. At first she will go at a fast gallop, but you should slow her down gradually to a slow canter, the slower the better. It will take some practice and a great deal of patience to teach this.

Mount the horse, draw the right snaffle rein until the head is turned slightly to the right. When ready to start, tighten the left snaffle, relax the right and lift the curb slightly, followed at the same instant with a touch of the heels in the flank, use the whip if necessary on the flank. This checks the left shoulder, and releases the right, causing the horse to lead with the right. A slight lift on the curb assists the front quarters to rise, thus keeping up the gait.

Do not let the horse break step, when disunited check her and start again. When riding this gait do not stand in the stirrups leaning forward with arms flopping, but sit close, gripping the saddle with the knees, and hold the arms close to the sides; keep a graceful position. There is almost no end to what you may teach a horse if you know how, and have the patience. It will not injure your horse to ride it if you do not let her get the habit of breaking into the canter when trotting.

H. H. F.

Jerome, Mich.

Overheated Horse.

I have a horse that is a bad blower in hot weather, and does not sweat. Can you advise me how to overcome it?

New Jersey. H. S. P.

The horse has been overheated at some time in his life and will never be likely to work comfortably in warm weather. Clip him in Spring. Work him in cool of morning and evening. Do not feed hay at noon in hot weather. Shade his head when at work. Feed oats, bran and hay.

A. S. A.

Indigestion.

I have a small grey mare about 19 years old that is troubled with catarrh of the bowels; has had it more or less for several years; at times not showing it for a long time, then it would come on again. At present it is quite bad. I have been feeding her mixed hay and long corn fodder cut about two inches long, one feed a day of the fodder; for grain about one quart of meal, or the same quantity of shelled corn ground with oats nearly equal parts; sometimes from two to five ears of whole corn at each feed. She is in good flesh and a good feeder. Had her teeth filed last Fall. I would like to know how to cure her.

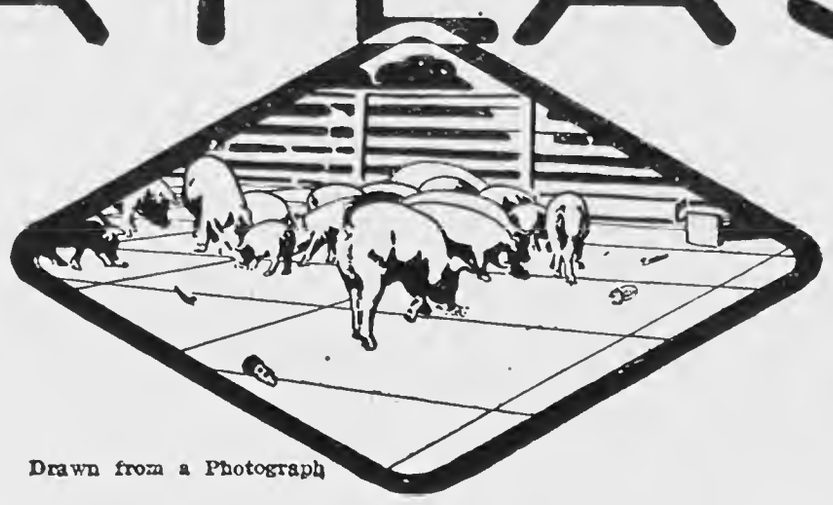
Delaware. W. H. W.

Do not feed ground feed to a horse. Feed sound old oats and mixed clover hay, without cut corn fodder. Allow not over a pound of grain and a pound of hay per hundred pounds of body weight as a day's ration until she is well; then slightly increase the amount if she has work to do. Never let her stand a single day idle in the stable. If the scouring persists, mix in each feed a heaping tablespoonful of a mixture of two parts powdered wood charcoal and one part each of powdered catechu, ground ginger root, subnitrate of bismuth and prepared chalk.

A. S. A.

"WHO gave the bride away?" asked Mrs. Evans of her daughter, who had just returned from the wedding. "Her little brother," replied the daughter; "he stood up in the middle of the ceremony, and yelled, 'Hurrah, Blanche, you've got him at last!'"—Credit Lost.

ATLAS



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Their practical construction stands for lasting service. Made of NO-CO-RO Metal—an exceptionally pure galvanized iron. Perfectly fitting doors make the "ZYRO" Silo

Absolutely Air-Tight

It cannot crack, shrink or collapse—is practically trouble-proof. Many unique and exclusive features put the "ZYRO" Silo in a class of its own. Write today for

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Tells all about "ZYRO" Silos and shows them "on duty" with many prominent farmers and dairymen. If you think of building a silo, study the "ZYRO" advantages. Write for helpful catalog today.

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The Craine Patent Triple Wall Silo has thick vertical wooden staves, inside; horizontal patent wooden covering thoroughly nailed, outside; and water-proof felt-like rubber roofing between. This makes a perfect non-conductor of heat. SCIENTIFIC in every feature of its construction.

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No silage spoiled by contact with concrete, tile or any mineral. Craine silage is sweet, clean and perfectly preserved—it is "drawn from the wood." No troublesome iron hoops requiring annual overhauling. The first cost is low and is the last. The Craine is, therefore, the cheapest on the market. Ask for illustrated booklet.

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What you get in addition to this Cypress Silo is: 1st—Our "1914" continuous door opening, with galvanized hardware and combination ladder; 2nd—Two galvanized cables; 3rd—Two new style anchor rods; 4th—Interior coated with "Shelco" gloss; 5th—Outside painted with oxide red paint.

This is the biggest value ever offered—buy now to be shipped when wanted.

Examine it and if it is not as represented, don't take it.

That is our proposition—can you beat it? We take the risk, and pay the freight back. Think it over. Deal with the maker direct.

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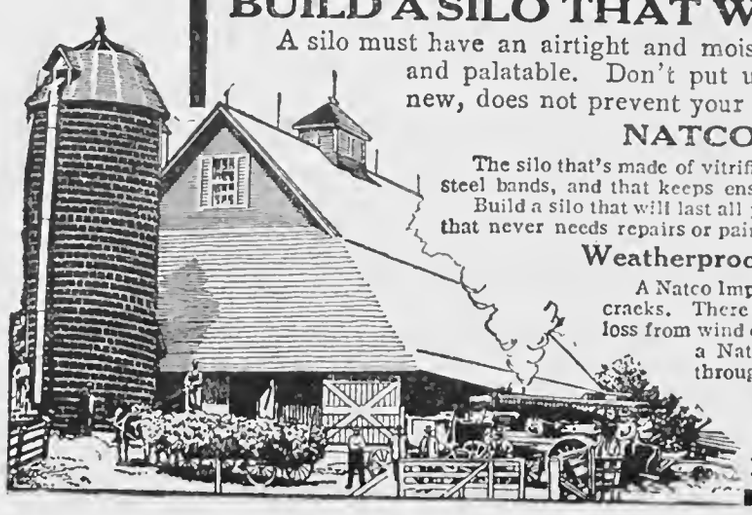
BUILD A SILO THAT WILL LAST FOR GENERATIONS



A silo must have an airtight and moistureproof wall to keep ensilage fresh, sweet, succulent and palatable. Don't put up a silo that soon will need repairs, and, even while new, does not prevent your ensilage from souring or rotting. Build a

NATCO IMPERISHABLE SILO

The silo that's made of vitrified clay hollow blocks, each layer reinforced by continuous steel bands, and that keeps ensilage in perfect condition right down to the last forkful. Build a silo that will last all your lifetime and for several generations after you—a silo that never needs repairs or painting and that stands a monument to your good judgment.

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NATIONAL FIRE PROOFING COMPANY, Syracuse, N. Y.

BREEDING BUTTERFAT; WORKING BULLS

How much can we improve the quality of Holstein milk by selecting the best specimens? What about working a bull?

It is possible within certain limits of increasing the percentage of butterfat by breeding and selection, although it is probably true that for market milk purposes it would be more desirable to look to the Holstein breed for quantity of milk, and if it becomes necessary to raise the quality or increase the butterfat or color, it is best to keep in the herd a few representatives of either the Jersey or Guernsey breed to supply milk of the quality desired. There are a number of instances that might be mentioned where the breeder is selecting Holstein sires from dams whose milk tested above the average in butterfat, instances where every female in the short tabulation of the sire's dam was a producer of say 4% milk. It is a debatable question whether this line of endeavor is worth while, for at best the amount of increase would be proportionately small, for in reality there is very little difference between milk testing 3½% and milk testing 4%. We oftentimes hear breeders state that they have relatively high-testing Holstein cattle, and that this condition is the result of careful selection and mating. It is reasonable to believe that improvement can be made along this line, in fact it has been done, yet just to what extent it is profitable would be hard to determine. It must be remembered, however, that if any change is made it must be necessarily slight, for in my judgment it would surely be foolish to start out with a 3% cow in an endeavor to get individuals that would produce 5% milk, since we have established at this time definite useful breeds that produce liberal amounts of 5% milk at low cost. In other words the Holstein breed of cattle is noted for producing milk of 3½% butterfat, and while instances are common where individuals produced milk of 4% quality and above, it is reasonable to believe that the bulk of the individuals will always produce milk of the 3 or 3½% quality, and it would be no doubt very difficult to produce both the quality and the quantity.

A bull can safely be put to work on a farm, and such activities will not decrease his usefulness as a breeder. In fact exercise is one of the essential requirements for successful management of a bull, and it is invariably the stall-fed bull whose potency is of questionable usefulness when he is two or three years old. Two years ago the Walker-Gordon farms were evidencing some difficulty in getting their cows safely settled, and put into vogue the practice of working their breeding sires, utilizing them in this case for hauling manure, and not only have they been able to increase the usefulness of the sires from a working standpoint, but they were able to get a higher breeding percentage and the bulls were much more easily handled and of less trouble to the care-takers. Of course, there would be a limit as to the amount of work and service that would be expected of a bull. He should not be expected to do team work to the extent of his ability and at the same time be responsible for heavy service in the breeding pen. As a rule bulls will look out for themselves when it comes to work, and it is true that more often they are not given enough exercise rather than they are given too much work. By subjecting a bull to regular work on a farm enables the owner to feed him a more substantial grain ration, which in turn is conducive to more efficient service as a breeder. Idle bulls are often given an excessive amount of roughage, and a minimum amount of grain, while their feet are often neglected, and their usefulness of short duration. In my judgment there is everything to be gained by breaking a bull to work either in harness or tread power. This will enable the owner to determine more accurately the real value of the bull, and he can keep him without great expense for maintenance until his first daughters come in milk, at which time their record of production can be compared with that of their dam's record, which is the real measure of value of a dairy bull. The present practice of selling bulls for three cents per pound that are worth $3 per pound is most unfortunate, and certainly the practice of working bulls, and letting them earn their feed by manual labor during the interval when they are under such test is one method of solving the bull problem. F. C. MINKLER.

COMPOSITION OF BUTTERFAT.

Does butterfat mean actual butter, or is there a difference? E. G. H.

Prof. H. H. Wing gives the following average composition of butter: Fat, 85%; casein, 1%; salt, 3%; water, 11%. In some cases there is more water than others. It ought not to rise above 15%, and there ought to be at least 80% of fat. Thus it will be seen that pure butterfat does not mean actual butter. It does mean enough of the fat combined with water to make it smear well on bread, and containing enough salt to give it a satisfactory taste. This question is frequently asked, so that it is evidently not clear to many people just what is meant by butterfat. If we remember that butter is the fat with water and salt added, we shall get a clear definition. A small quantity of casein or cheesy matter may be carried to the fat through the cream.

We may consider the difference between sugar and candy. Candy is made of sugar, yet all sugar is not candy. As the simplest form of candy, we may take molasses boiled down to a sticky paste. Molasses candy is usually made by adding more or less butter and sometimes other ingredients with the molasses, and boiling them sufficiently to make a thick sticky mass, which when cooled and pulled out so as to admit the air, becomes light in color and hard and firm in texture. While the candy contains molasses, molasses is not all candy, but as is the case with butter, is made from fat with the addition of other materials. The fat is the basis of butter and the fat test of milk, gives the amount of pure fat found in that milk. In order to figure the amount of actual butter that can be made from a sample of milk, we would find the amount of fat in that milk and then add about 15% to it, as this would give the amount of average butter which would be made from that fat.

Sweet Corn and the Silo.

I have two fields which will measure up about 15 acres together. I am in a quandary whether to plant this to silage corn for cow feed, or to plant it to sweet corn, selling the corn in New York and using the stalks and unsalable nubbins for silage, making up any shortage by purchase of cornmeal. Raising silage corn is undoubtedly the easiest, less care and less work than raising and selling sweet corn, but the latter appears to be the most profitable proposition. What say you? E. F. H.

This problem will require considerable figuring. Without question the field corn properly grown so as to form a good-sized ear, will make a better quality of silage than the sweet corn stalks with most of the ears picked off. From our experience such stalks of sweet corn, however, would be about equal in feeding value to the large silage corn grown in drills and not forming many ears. The weight per acre, however, of the silage corn would be much greater than that of the sweet corn. In Northern New Jersey, where the market for sweet corn is good, an acre of the late varieties properly grown and handled ought to bring from $50 to $60 worth of ears, in addition to the smaller ears of nubbins left upon the stalk. From a financial point of view, therefore, there would probably be a larger income from planting sweet corn, and selling the ears as is here suggested. Care, however, must be taken in handling a proposition of this kind. The earlier varieties of sweet corn would not be so satisfactory. The stalks are small, and will not give a heavy crop per acre. It would be better to cut these earlier varieties as soon as the ears are picked, and use them as green fodder to help out the pasture. The best results from this management will be in planting late varieties like Evergreen or Country Gentlemen, picking the ears in September, and immediately cutting the stalks into the silo. Silage from sweet corn stalks must be handled with care. The silo must be packed solidly.

To sum it up, a good field corn will give a better quality of silage, but it is doubtful if it would give enough greater feeding value from an acre to offset the cash returns from selling the ears of sweet corn.

Save All the Cream that Your Cows Give

BY TURNING your cream separator handle at the wrong speed you are losing anywhere up to half of your butter-fat. You are leaving this butter-fat in the milk because by "guessing" at the speed you turn your separator, you are not turning anywhere near the right speed. You are feeding, perhaps, 10 cows, and making a butter profit on only 5, 6 or 7 of them. But you can get a butter profit on all of them by putting a Stewart Speed Indicator on your cream separator. Thousands of dairymen who used to lose cream by turning at the wrong speed, just as you do now, are now saying it by using the

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This instrument goes on the crankshaft and shows how many revolutions you turn the handle per minute. There is no counting or timing—for the Stewart tells at a glance the exact speed you are turning the crank.

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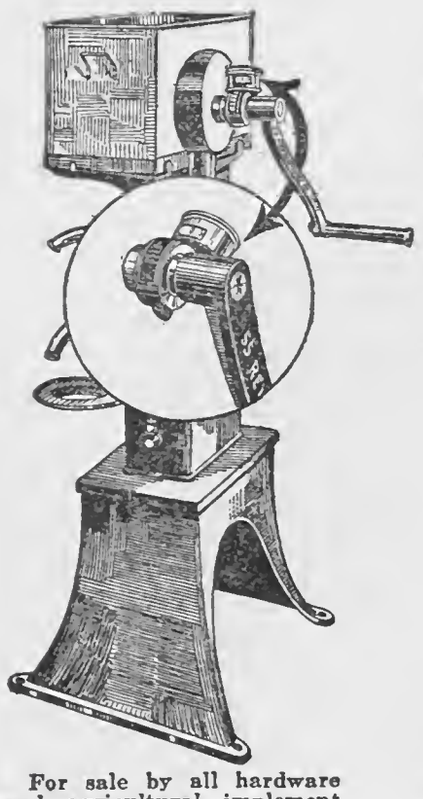
You cannot crank your separator at the correct speed by "guess". No living soul can do this. We tried thousands of people, and hardly one came anywhere near correct.

Any authority on dairying will tell you that even one wrong revolution per minute means a loss of cream. If you turn too slow, cream is left unseparated in the skim milk. If you turn too fast, particles of fat in the cream are burst and spoil the quality of the butter. Most people crank too slowly by ten to twenty revolutions per minute.



For sale by all hardware and agricultural implement dealers all over the world.

One dairyman with 20 cows lost $524.10 in one year by "guessing" at his speed. He found he turned it just half fast enough. Actual tests at Purdue showed this.

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Fits Any Separator—$10

It doesn't make any difference when your separator was made or what kind it is. The Stewart will fit it. Tell us the name, the number, and the year it was made and we furnish the Stewart Speed Indicator on a new crankshaft that you can easily put on. (If your separator is a De Laval, then no extra crankshaft is necessary.) The price is but $10 complete.

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If the Stewart doesn't increase your cream production, return it and get your money within 30 days.

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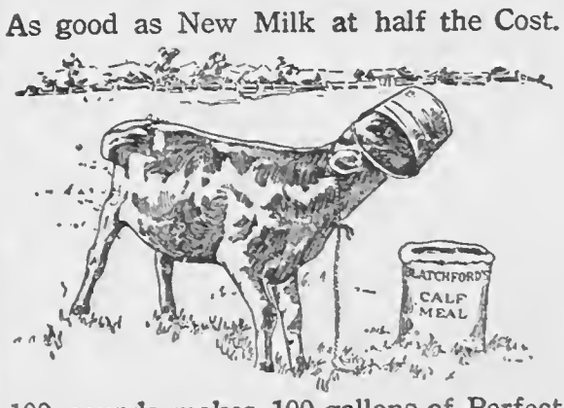

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FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Value of Mangels.

Will you advise me whether sugar beets or mangels make a good feed for pigs and which is the better? Should they be fed to pigs cooked or uncooked? Which will make the more milk when fed to cows? How will one peck beets compare in feeding value with one peck balanced ration of grain? J. R. M.

Mangels or sugar beets, with a proper amount of grain, are very beneficial to hogs. The sugar beets contain considerably more nutrients than the mangels. I should advise feeding the beets raw. The nutritive ratio of beets is similar to that of oats. However, the beets contain about 90 per cent. of water, while the oats contain 10 per cent. of water. A fair comparison of beets with oats or barley would make one pound of the grain worth six to eight pounds of beets. The beets, however, cannot entirely take the place of grain, though on account of their succulence their feeding value may be more than their analysis alone would indicate. C. L. M.

Feeding Work Horses.

Will you balance a ration for horses weighing about 1,200-1,300 pounds from the following feeds? Oats 60; bran $1.45 cwt.; mixed feed $1.60 cwt.; hominy and cornmeal $1.75; gluten $1.80; brewers' grains $1.45. I have heard the grains were good cheap horse feed. The horses are in good flesh and I would like to get them ready for the Spring work.
New York. O. P.

The following ration has been found by experiment to be satisfactory for horses weighing 1,000 pounds, and doing rather heavy work: Hay six pounds; wheat bran two pounds; corn, unground, four pounds; brewers' dried grains, eight pounds. For farm work my own advice would be to increase the amount of hay in the above ration to about 14 pounds for a 1,200-pound horse, and feed 15 pounds of grain daily. This is for horses at hard work. When idle or doing light work decrease the grain. Oats alone, or two parts oats to one of corn by weight, also make a good working ration for work horses. Feed the same as above.
C. L. M.

Value of Sorghum Silage and Seed.

Could the blades from stripping sorghum cane and the cane tops be used to advantage for silage, in connection with corn? If so about what proportion in weight would one dare use for good results? Can you give me an approximate estimate of the food value of sorghum seed? A. V. H.
Pomeroy, O.

There is no reason why blades from stripping sorghum cane and the cane tops could not be used to advantage for silage in connection with corn; in fact, the sorghum fodder leaves contain about 20% more protein than sorghum fodder, 5% more dry matter and 20% more of the carbohydrates.

According to Henry's "Feeds and Feeding," the digestible nutrients in sorghum seed are as follows: Crude protein, 4.5%; carbohydrates, 61.1%; fat, 2.8%. According to this analysis sorghum seed would compare favorably in feeding value to buckwheat flour or dried beet pulp, the former having a trifle more protein, while the latter, of course, contains no fat. The fair valuation, therefore, of the feeding value of sorghum seed would be about $26 or $28 per ton.
F. C. MINKLER.

Ration for Holstein.

Will you make up a balanced ration for a Holstein cow coming fresh in the middle of April? I have Timothy hay for roughage, and have oats that I can have ground. I can buy all kinds of concentrates. What should I feed after turning out to pasture? B. S.
New York.

A very good ration would be as follows: Ground oats three pounds, bran two pounds, oil meal two pounds and cottonseed meal two parts, by weight, one part of cornmeal and one of bran. The amount which can be fed with profit will depend on the amount and succulence of the pasture grass. C. L. M.

Milk Ration; Small Silo.

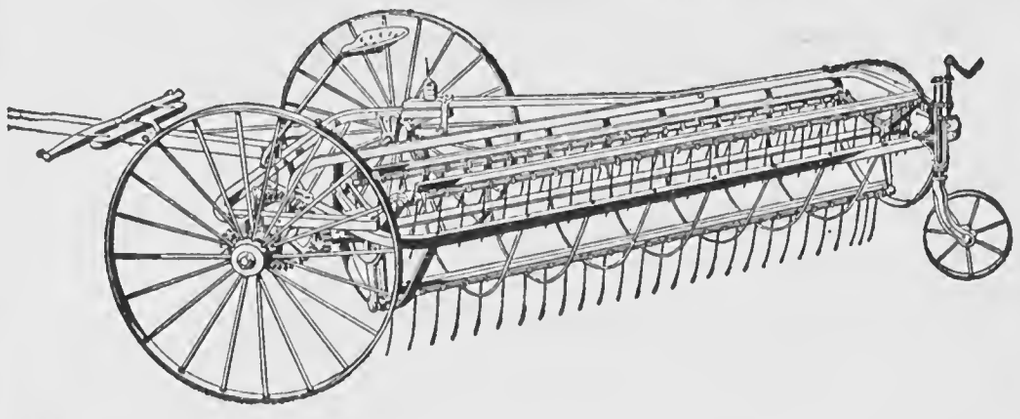
Will you give me a ration for cows, milking, grade Jerseys, from 800 to 1,000 pounds each, of the following feeds? I am feeding Timothy and clover hay, and have Ajax, cottonseed meal, cornmeal and bran. Can a silo be profitable when only four or six cows are kept and what size of silo 20 feet high would he required?
New York. W. H. B.

The following grain mixture will give you good results: Ajax flakes two pounds, cottonseed meal, three pounds, cornmeal one pound and bran two pounds. It is doubtful whether a silo will pay for only four to six cows. However, this will depend on many conditions. You will have to consider the cost of filling the silo, including growing the crop, and also the returns from the milk. A cylindrical silo nine feet in diameter and 20 feet high will hold an ample supply of silage for six cows, but a better size would be seven by 30 feet. C. L. M.

FISH MEAL FOR FEEDING.—In Germany feeders of beef cattle and hogs have been experimenting for sometime with fish meal as a feeding stuff. This meal is a ground-up residue from the extraction of oil from fish. This oil is forced out by pressure after thoroughly cooking the fish. The residue comes in the form of hard cakes, which are ground up into a meal and used for feed. For a time it was thought that this meal might prove injurious, especially when fed to dairy cattle, as it was thought likely that milk and butter would taste. This has apparently been overcome, and especially for beef cattle and pork-making the use of the meal now seems to be growing rapidly. It is hardly likely that this method of feeding will develop very fast in this country, although we shall probably come to it eventually. All over Europe the demand for cheap feeding products is constantly growing in excess of the supply, and European feeders are scouring the earth in the hope of obtaining new and cheaper products. The ocean contains an almost inexhaustible supply of food for man, for beast and for plant. It is largely a matter of learning how to take out this plant food and make it available.

"P'TATERS is good this mornin', madam," said the old farmer making his usual weekly call. "O, are they?" retorted the customer. "That reminds me. How is it that them you sold me last week is so much smaller at the bottom of the basket than at the top?" "Waal," replied the old man, "p'taters is growin' so fast now that by the time I get a basketful dug the last ones is about twice the size of the first."—Business.

International Harvester Haying Machines



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PREPARED BY THE INFORMATION BUREAU
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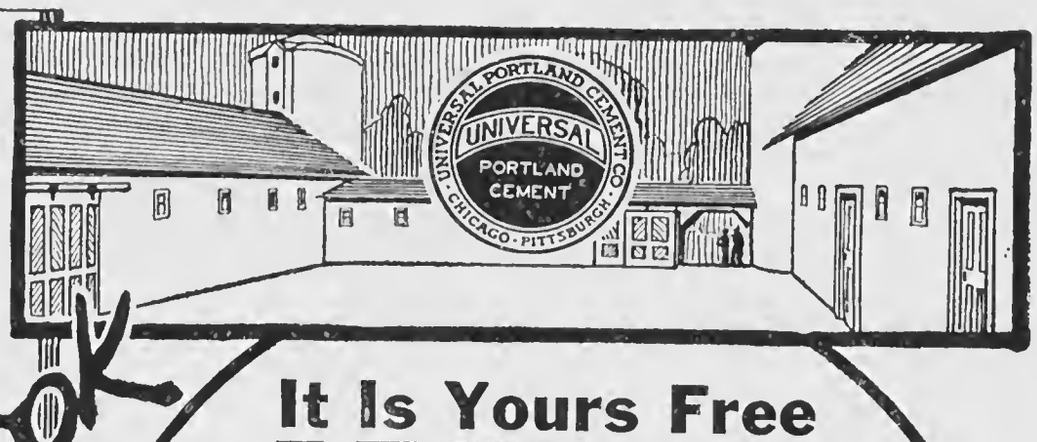

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Annual Output 12,000,000 Barrels

Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.
Week ending April 16.

Butter, lbs.	2,644,320
Eggs, doz.	5,717,460
Apples, bushels	62,990
Potatoes, bushels	107,295
Hay, tons	5,137
Wheat, bushels	424,960
Corn, bushels	103,150
Oats, bushels	312,500

Wholesale Prices at New York,
Week Ending April 17, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high-scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying 5¼ to 5½ cents per quart.

BUTTER.

The week is closing with large supplies, and a decline of one-half to one cent from last report, and considerable pressure to keep cleared up, especially on fresh creamery. Business in the lower grades of factory, or "ladles," as it is now called in New York, and packing stock is very good, at prices running from 12 to 18 cents.

Creamery, extra, lb	25	@	25½
Good to Choice	22	@	24
Lower Grades	19	@	21
Storage	17	@	22
State Dairy, best	24	@	25
Common to Good	18	@	22
Factory	11	@	18
Packing Stock	12	@	16

Elgin, Ill., butter market firm at 24½ cents.
Philadelphia, western creamery, 25 cents.

CHEESE.

The drop in prices caused some decrease in supplies, as shipments were diverted to other places. The main difficulty with the market seems to be the surplus of uncured and off-flavor cheese. When old cheese is high the temptation to hurry along the new make by high temperature curing is great. But there is always a bad reaction from this practice. Retail trade falls off rapidly because consumers do not like the ill-ripened cheese. The defect may sometimes be in the material or the way it is handled in making, but it is more often improper curing, thus discounting the price two to three cents per pound, or even more.

Whole Milk, new, best	14	@	15
Old, best	18	@	19
Common to good	14	@	16½

EGGS.

Receipts continue large, arrivals for the first three days of the week being 3,170,000 dozen. Prices have declined two to three cents on most grades, and at the lower figures considerable speculative trade is noted. The general range of prices is about on a level with last year.

White, choice to fancy, large	21	@	22
Common to good	18	@	20
Mixed colors, best	20	@	21
Common to good	17	@	19
Western fresh, white	19	@	21
Lower grades	15	@	18

FRESH FRUITS.

Arrivals of barrelled apples are light, the majority being ordinary fruit, which sells slowly. Fair to good grades of such standard varieties as Baldwin bring from $4 to $5 per barrel. Strawberries in light supply, but considerably off in condition and selling slowly.

Apples—Spitzenburg, bbl.	4 00	@	5 50
Spy	4 00	@	7 00
Ben Davis	4 00	@	4 50
Greening	4 00	@	6 00
Newtown	6 00	@	7 50
Baldwin	4 00	@	5 25
Western, box	1 50	@	3 00
Strawberries, Fla., qt.	10	@	35

BEANS.

The market is very dull, the only active item being Medium, which are scarce and five cents per hundred higher.

Marrow, 100 lbs.	4 40	@	5 50
Medium	3 70	@	3 75
Pea	3 20	@	3 50
Red Kidney	5 25	@	5 40
White Kidney	5 75	@	5 80
Yellow Eye	5 25	@	5 30
Lima, California	7 25	@	7 30

HOPS.

Prime to choice	40	@	42
Common to good	35	@	40
Pacific Coast	19	@	22
Old stock	15	@	18
German crop	64	@	68

VEGETABLES

Potato receipts have been large, with several thousand sacks from Europe admitted as free from disease. Prices run the same as last week, except on grades below medium, which are discounted as much as appears necessary in order to make sales. New onions from Texas are in heavy surplus and lower. New cabbage running inferior in quality; demand for the better grades good. Southern tomatoes in very large supply, but poor and selling low.

Potatoes—Maine, 180 lbs.	2 50	@	2 75
State, bulk, 180 lbs.	2 25	@	2 50
Michigan, 180 lbs.	2 25	@	2 50
Bermuda, bbl.	4 00	@	8 00
Florida	2 50	@	6 00
Sweet Potatoes, bbl	1 00	@	2 00
Beets, bbl.	2 00	@	2 50
Carrots, bbl.	1 50	@	2 00
Asparagus, California, doz.	2 25	@	3 50
Southern, doz.	1 50	@	3 00
Cabbage, New, bbl. crate	75	@	1 50
Chicory, bbl.	1 75	@	2 50
Kale, bbl.	50	@	65
Lettuce, half-bbl. basket	1 00	@	3 00
Onions—White bu.	1 50	@	2 25
Red, 100 lb bag	1 50	@	2 25
Southern, New, bu	1 00	@	2 00
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	2 00	@	3 00
Peas, Southern, bu.	1 50	@	5 00
Shallots, bbl.	1 50	@	3 00
Salsify, 100 bunches	5 00	@	6 00
Spinach, bbl.	50	@	75
String Beans, bu.	1 00	@	3 50
Squash, New, bu.	1 50	@	2 50
Egg Plants, Southern, bu.	1 50	@	2 50
Tomatoes, Southern, 6 bkt. crate	75	@	2 25

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	1 00	@	1 50
No. 2, box	2 00	@	3 00
Mushrooms, lb.	15	@	35
Radishes, 100 bunches	2 00	@	4 00
Rhubarb, doz. bunches	25	@	60
Tomatoes, lb.	10	@	20

LIVE POULTRY.

Squab Broilers, pair, fancy	85	@	90
Fowls	17	@	18
Roosters	11	@	12
Ducks	18	@	20
Geese	11	@	12

DRESSED POULTRY.

Chickens, choice broilers, lb.	35	@	45
Squab broilers, pair	80	@	1 00
Broilers, common to good	28	@	30
Roasters, fancy	24	@	25
Fowls	15	@	19
Ducks	12	@	15
Geese	13	@	14
Squabs, doz.	2 00	@	4 50

HAY AND STRAW.

An advance of 50 cents per ton is noted on most grades of Timothy and some clover mixed. Straight rye straw is scarce and 50 cents to $1 per ton higher.

Hay, Timothy No. 1, ton	21 00	@21 50
Standard	20 00	@20 50
No. 2	19 00	@19 50
No. 3	16 50	@18 00
Clover mixed	15 00	@19 00
Straw, Rye	17 00	@19 50

LIVE STOCK.

Native Steers	8 00	@	9 00
Bulls	5 50	@	5 80
Cows	3 25	@	6 50
Calves, prime veal, 100 lbs.	8 00	@	11 00
Culls	5 00	@	6 00
Sheep, 100 lbs	5 25	@	6 50
Lambs	7 50	@	8 85
Hogs	8 50	@	9 50

MILLFEED.

Wheat Bran, ton	28 00	@30 00
Middlings	29 50	@30 50
Red Dog	31 00	@31 50
Corn Meal	29 00	@30 00
Linseed Meal	31 00	@32 00

COUNTRY-DRESSED MEATS.

Calves, best	13	@	14
Fair to good	11	@	12
Buttermilks	8	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 01	@	..
No. 2, Red	1 04	@	..
No. 2, Hard Winter	1 01	@	..
Corn, as to quality, bush.	69	@	78
Oats, as to weight, bush.	43	@	44
Rye	65	@	70

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	26	@	28
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

Wool imports for the eight months ending February 28 amounted to $37,756,785. Of this $23,602,089 was for 116,133,979 pounds of raw wool, and the remainder manufactured goods.

Silk imports for the same period were 20,096,563 pounds of raw, worth $66,402,974, and $15,009,033 in manufactures.

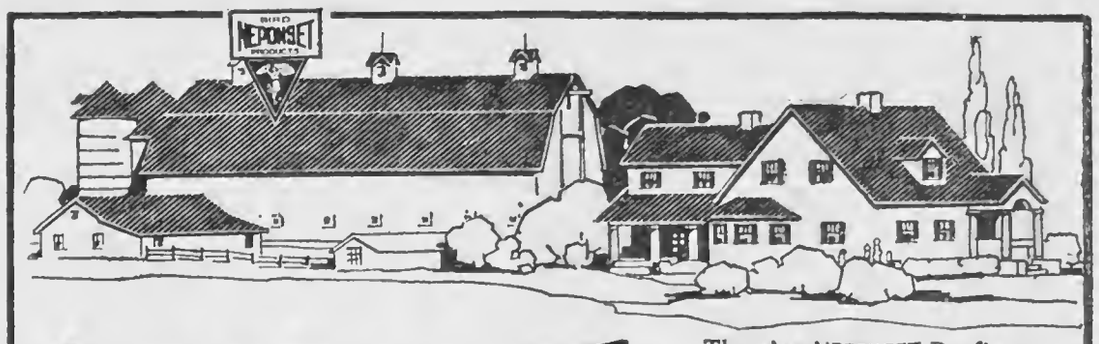
*

A cargo of meats recently arrived at New York direct from Melbourne, Australia. Most previous consignments have been trans-shipped from England. Among the items of this lot were 1,624 quarters of beef; 2,000 carcasses of mutton and 400 of veal. Argentine beef, running about 9,000,000 pounds per month, is being received at New York.

BOSTON MARKET REVIEW.

Fruit prices in Boston market are high for the season as the rule, especially on fancy apples, cranberries and strawberries. Florida oranges are also on the raise, but California stock is plenty and reasonable. Best fancy native Baldwins from cold storage bring up to $7 per barrel, with good to fair going at $4 to $6. The poor grades are in less demand and prices uneven. Western box stock $4 for Winter Banana and $2.50 to $3.50 for other varieties. Good native Russets $3.50 to $5 per barrel. Cranberries at $15 per barrel, return good money to the lucky holder. Florida oranges, best, $4 per box; California stock about $2.50. Cuban stock ranges anywhere between the other two. Strawberries around 40 cents per box, which price tells the story of short supply because of frost damage. Good lemons about $4 per box, others $2.50 and $3.50. Grape fruit $4.50 for Florida, California $2.50, with Cubans at about $3. Pineapples go at about $4 for crate with supplies getting more plentiful; prices are working lower. Bananas plentiful and prices reasonable to buyer; best large

(Continued on page 655.)



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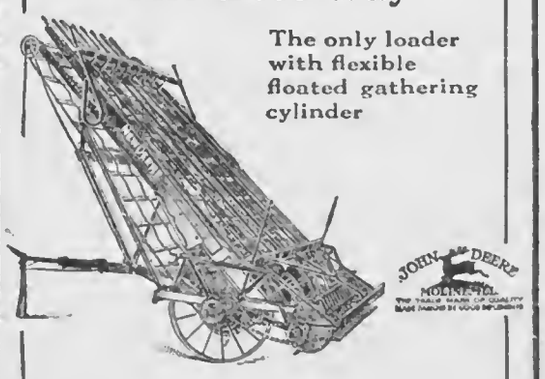

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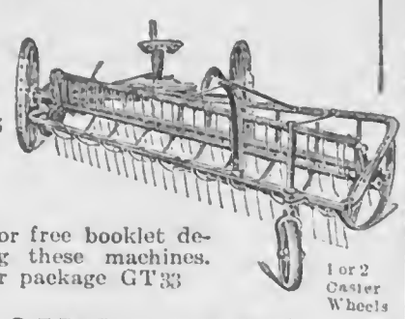

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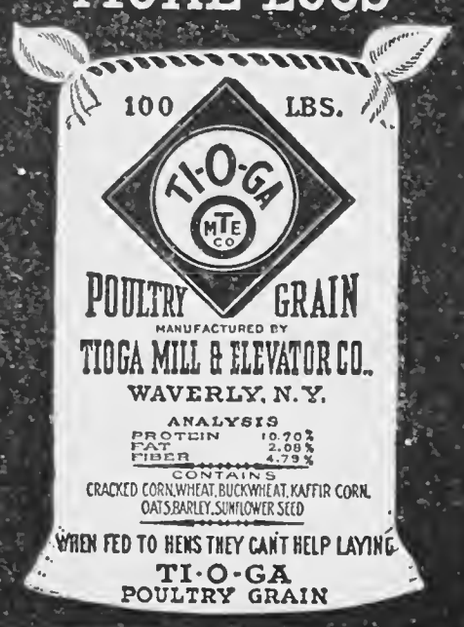

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S. C. White Leghorn Baby Chicks 10c. EACH. Safe arrival guaranteed. No order too large. Hatching **EGGS** by the setting or thousand; fertility guaranteed. Write for catalogue. **RICHLAND FARMS, Box 37, Frederick, Md.**

Keeping Green Bone.

Will you tell me how to keep raw cut bone so it can be fed in the Summer?
New York. J. C. R.

Green cut bone cannot be kept for a great length of time in warm weather, and should be cut and fed while fresh. Mixing it with some absorbent like dry bran will aid in keeping it sweet, and it will, of course, keep longer if stored in a cold place than in a warm one; you should plan, however, to cut it as needed for immediate use and not attempt to keep it longer than you could keep fresh meat under the same circumstances.
M. B. D.

Standard for Indian Runners.

I breed Indian Runner ducks, fawn and white, according to the present standard of light fawn. I wonder if the standard is to be changed when the new standard comes out in 1915, to the dark fawn and white, with very dark heads? There was a lot of talk about changing, and if it is changed, I want to know it before breeding this year. My ducks cleaned up everything by the present standard, but I want to be prepared for the future too. N. H. B.

Not being on the inside of the councils of the A. P. A., I cannot say what will be done in the new standard. My opinion is that there will not be any great change in the fawn. The admitting of the English Pencilled and the White Indian Runners as distinct classes will probably tend to keep the American birds in a middle position as regards color, neither very dark nor very light. With (erect) carriage and shape credited with 61 points out of a hundred, it would seem that these two features are of more importance than color.
W. H. HUSE.

The Productive Hen.

I see so many different ways of feeding; some get their reward in eggs, while others do not. It is interesting to read about purebred stock; how about the mixed breeds? As a general rule I do not think that all hens are doing as well as they ought to. This season we have a flock of 105, where we had about 75 last year, and get from four to eight eggs a day more now than last year. During December, 1912, we got 40 dozen. This month we have 60 dozen, up to date. We have no choice in any particular breed, but for the last five years we have had a purebred male. The French Frizzle hen does well crossed with R. I. Reds, but last year we got a Ancona. Most of our pullets are black. The Frizzled hens lay almost every day and are a nice looking hen; lay large eggs. I cannot give any particular color of eggs, as so many crosses cause mixed colors of egg shells. What do you think of the ration I am feeding, and the amount? I like to feed enough, and give a little more than they will eat, but none is wasted. Morning eight pounds mixed scratch feed thrown in litter, noon 10 pounds buckwheat; at night four pounds oats soaked during afternoon with hot water, and into which I mix a poultry tonic. Next day I start out with scratch feed but in place of buckwheat feed dry oats and at night a mash of four pounds, two parts cornmeal and one part bran, handful of beef scrap and cottonseed meal dampened. Third day, morning feed is the same, but noon they get corn on ears, and at night a prepared mash with a tonic; grit and oyster shell, also charcoal, with plenty of fresh water before them all the time. Once a week they get copperas water, which we find very healthful if not given in overdose. They have plenty of litter to work in. Green food like cabbage every other day. Dry oats and buckwheat are in a box; hens are always busy in them. I go to the henhouse a lot of times during the day and the hens are very tame. Most farmers feed their hens in the morning and do not see them till night, and then growl because the hens are as wild as hawks and do not lay. I think J. F. C. is right in his way of thinking in regard to White Leghorns; they are too wild, and are not so easy to tame as most other small breeds, which are all more or less wilder than the larger breeds. W. G. L.
Derby, N. Y.

Your plan of feeding is certainly a novel one, and violates about all the orthodox rules for feeding poultry; still, the test of any method is its results, and if yours are satisfactory, no one need criticise. Personally, I should feed mash every day, either dry, in hoppers, or moistened and fed at noon, and I should not keep whole grain constantly before the fowls in open boxes; neither should I feed poultry "tonics" unless my fowls were sick, and then I shouldn't do it either. I would not mix breeds as you are doing, but would keep one kind, and that purebred. I should not care to have my eggs of mixed colors; either a pure white or a pure brown suits the market best, and most of us have to cater to the market. While you are doing well with a small flock, I feel pretty sure that if you ever go onto a farm and keep poultry as a business you will find it advisable to change your methods somewhat. M. B. D.

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Day Old Chicks
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Six to Eight Weeks Old Pullets
Six weeks old 60 cents each
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Kirkup's Strain S. C. White Leghorns, bred for vigor, size and Large White Market Eggs. Fifty chicks or less, 20c each; one hundred, $15; five hundred, $62.50; one thousand, $125. Safe arrival guaranteed. Place order NOW.
Orders taken now for 6 to 8 Weeks Old Pullets for delivery April 10 to May 20. Write for prices. **FREE BOOKLET**—"Better Chickens"—describing Day Old Chicks, Pullets, Cockerels, etc. Send for it to day.
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Single Comb White Leghorn
EGGS
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From LAURELTON Layers. Bred for Superior Egg Production and combining the Finest Strains of English and American Blood.
$8.00 per 100; $70.00 per 1,000
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have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
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are practical birds—they've made good for us and will make good for you. Book your order **now** for day-old chicks, hatching eggs and breeding stock—the Tywacana kind. Chicks are shipped in **Wright** boxes with a guarantee of safe arrival and full count.

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THE SETTING OF THE HEN.

(After Bryant.)

Come, let us set the clucking hen.
Cleave not her neck with shining blade;
Soft let her strawy bed be made;
There lay the eggs, and there
Place the bristling creature with kindly care,
And press her down tenderly.
As, round the embryos 'neath her feet
We softly fold the cradle sheet.
Thus, then, do we set the hen.

What set we, then, 'neath this clucking hen?
Eggs, which after a score of days
Shall burst their shells, with chirps of praise;
Chicks, which the hen, with motherly breast,
Shall croon, and peck, and hide in nest:
We set within the guarded pen.
Destruction for the front-yard flower,
Havoc, wrought in a single hour,
When we set the clucking hen.

"Who set this old Dominique hen?"
The master, at no distant day,
Thus to his distressed wife shall say:
And gazing at the flower bed's wreck,
The wife shall answer, holding tears in check,
A pest of the land was he, then,
Bane of rude and thoughtless times;
And 'tis said he made some foolish rhymes
On setting the clucking hen.

M. B. D.

THE EGG-LAYING CONTEST.

The twenty-third week of the contest shows a slight loss, 39 eggs less than the previous week, the total being 3,607. The Barred Rocks are showing up well in this year's contest, far better than last year, when the majority of the entries were year-old hens. Frank Tuttle's pen of Barred Rocks take first place again with a score of 58. Two of his birds laid seven eggs each during the week. Another pen of Barred Rocks belonging to Waveny Farm laid 53, and Jules J. Francis' pen of the same breed laid 51, and the remaining pen of Rocks—A. B. Hall's—laid 45. This makes the pen average of the Barred Rocks for the week greater than that of any other breed, the average being 51.75. The White Wyandottes are next, their pen average being 50.2 for the week. White Wyandottes also take second place in the week's score, Merrythought Farm's pen laying 55. Storrs Agricultural Station's pen of White Leghorns are third with a score of 54. Barred Rocks tie with Tom Barron's White Wyandottes, and Storrs Agricultural Station's pen of White Leghorns (pen 42, the sour milk pen), for fourth place, each laying 53. Four pens laid 51 each.

Below I give the week's report and totals of the best pens:

	Week	Total
Barred Rocks.		
Jules J. Francis, New York	51	645
Frank L. Tuttle, Massachusetts	58	499
A. B. Hall, Connecticut	45	353
Waveny Farm, Connecticut	53	332
White P. Rocks.		
Albert T. Lentzen, Massachusetts	50	400
F. H. Benton, Connecticut	45	521
Storrs Agr. Station, Connecticut	35	385
Storrs Agr. Station, Connecticut	40	380
Storrs Agr. Station, Connecticut	41	533
Storrs Agr. Station, Connecticut	42	420
Storrs Agr. Station, Connecticut	24	342
Buff P. Rocks.		
A. A. Hall, Connecticut	50	489
W. C. Morgan, Jr., Connecticut	34	310
White Wyandottes.		
Tom Barron, England	53	949
West Mt. Poultry Yards, Connecticut	41	517
Merrythought Farm, Connecticut	51	761
Neale Bros., Rhode Island	51	759
D. J. Ryan & Son, Connecticut	51	565
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	49	506
Dr. N. W. Sanborn, Massachusetts	48	460
Am. Buff Wyandotte Club, New York	39	442
H. L. Hamilton, Connecticut	42	270
S. C. Reds.		
Robert Seaman, New York	45	329
J. S. Gillespie, Connecticut	44	541
Dr. J. C. Dingman, New York	38	383
Burnham Pltry. Farm, Massachusetts	40	337
H. P. Deming, Connecticut	46	416
Geo. P. Dearborn, Florida	46	629
Dr. J. A. Fritchey, Pennsylvania	48	705
Ernest Underhill, New Jersey	39	366
W. H. Bumsted, Connecticut	36	210
Pinecrest Orchards, Massachusetts	48	602
Harry B. Cook, Connecticut	45	546
Colonial Farm, New Hampshire	37	556
A. B. Brundage, Connecticut	51	600
Rose Comb Reds.		
Glenview Farm, Connecticut	42	583
C. S. Scoville, Connecticut	19	381
White Leghorns.		
Storrs Agr. Station, Connecticut	53	805
F. F. Lincoln, Connecticut	47	791
Cecil Guernsey, New York	41	663
Storrs Agr. Station, Connecticut	41	608
Tom Barron, England	45	610
Storrs Agr. Station, Connecticut	54	569
Marwood Plty. Farm, Pennsylvania	47	558
Beunle Brook Farm, New York	48	554
Branford Farm, Connecticut	44	539
P. G. Platt, Pennsylvania	49	513
Storrs Agr. Station, Connecticut	47	499
F. M. Peasley, Connecticut	45	481
L. E. Sands, Pennsylvania	41	496
C. W. Sherwood, Connecticut	48	476
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	51	463
Blue Andalusians.		
E. D. Bird, Connecticut	45	349
Buff Orpingtons.		
O. Wilson, West Virginia	39	351
White Orpingtons.		
P. A. Deingar, New York	41	350
White-laced Red Cornish.		
W. L. R. Cornish Club, Massachusetts	45	210
Silver Campines.		
W. J. H. Lobel, New Jersey	43	300
Dunghills.		
H. W. Collingwood, New Jersey	44	276
Daniel Hine, Connecticut	34	366
Daniel Hine, Connecticut	36	488
Mixed Breeds.		
Profitable Poultry, Massachusetts	39	512
Profitable Poultry, Massachusetts	40	479

GEO. A. COSGROVE.

Poor Hatches.

Last January I bought an Orpington cockerel, two hens and two pullets. Soon after I bought 15 White Leghorn pullets and a cockerel. Both pens have been laying splendidly from the first. The eggs are fertile and the coops are clean. I feed the Orpingtons a mixture of barley, beef scrap, wheat and buckwheat in the morning, and wheat and corn in the evening. Whole oats, bran, shell, charcoal, and grit are kept in hoppers before them all the time. The Leghorns I feed barley and oats in the morning, a mash of ground oats, cracked corn, wheat middlings, bran, Alfalfa meal, beef scrap and oil meal at noon, and wheat, buckwheat and corn at night. Wheat bran, charcoal, shell, and grit are kept before them all the time. Both pens are fed boiled potato peelings or raw mangels every other day. The whole grain is thrown in a deep straw litter. Lice are very scarce, yet out of 150 eggs set I have hatched four chickens. The Leghorns have had a slight cold, but the Orpingtons have not. What is the matter? M. W.

If these eggs were hatched in an incubator, the machine or its operator may, of course, be at fault, but if they were set under hens, I can account for the small hatch only on the ground of weak fertility. This may have been due to any one of several causes, but the most probable one is close confinement and heavy laying through the Winter. Hens or pullets that are shut up and forced for egg production through the Winter may produce perfectly fertile eggs in the Spring, but containing germs of such low vitality that they will never reach full development and leave the shell. There is also the possibility of lack of vigor in the males, but this would probably be noticeable in their behavior. If you can turn these fowls loose upon free range for a week or two before attempting to hatch any more eggs from them, you will be quite likely to get much more satisfactory results. M. B. D.

GRINDING ROOTS FOR HENS.—I notice an inquiry for a machine to slice vegetables for chickens. I have found a cider mill to answer every purpose. Just grind up the vegetables as you would apples for cider, but do not press them. They are broken into small pieces, and the chickens eat every bit of the ground vegetables. I have ground almost all kinds of vegetables, and found it successful. A. B. Y.

Lexington, Ky.

"MRS. Alden has five children; if there were seven more, how many children would Mrs. Alden have?" Several hands were raised. "Anna may tell us," said teacher. "How many children would she have, Anna?" "Enough."—New York Evening Post.

MOTTLED ANCONAS EGGS for hatching. 75c., 15; $4.00, 100. GEO. K. BOWDISH, Esperance, New York

S. C. W. LEGHORN Baby Chicks in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

Day-Old Chicks—from excellent utility S. C. White Leghorns—$9 per 100. GEO. FROST, Levanna, Cayuga Co., N.Y.

S. C W. LEGHORN EGGS—For hatching. $5 per 100. LOREN A. LEROY, R. 1, Oswego, N. Y.

LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. FRANCIS F. LINCOLN, Mt. Carmel, Connecticut

S. C. White Leghorns—WYCKOFF STRAIN—Eggs for hatching, $5 per 100. Unfertile eggs replaced. Robert E. Smith, Nassawadox, Va.

275 BLACK LEGHORNS laid $820 worth of eggs in one year. Circular free telling about them. William C. Merrill, North Sanford, Broome Co., N. Y.

FOR SALE—IMPORTED ENGLISH WHITE EGG STRAIN Indian Runner Duck Eggs $1.25 per 15. Henry Millard, Newfield, N. Y.

EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of J. M. CASE, Gilboa, New York. 75c per 15; $4 per 100

Baby Chicks OF LIVABILITY, eggs of hatchability from D. W. Youngs' strain, S. C. W. Leghorns, direct from his best matings. Open front houses. Circular. WINANS & COFFIN, Stanfordville, N. Y.

POULTRYMEN, ATTENTION—We guarantee safe delivery of strong, healthy S. C. W. Leghorn chicks at reasonable prices. 1500 each week from Hall's Mammoth Incubator. They will please you. A. B. HALL, Box A, Wallingford, Conn.

TOM BARRON'S . . . ENGLISH . . . WHITE LEGHORNS

Imported direct from Tom Barron's farm; Tom Barron's defeated all American breeds; 5 hens laid 1190 eggs in 1 year, averaging 238; large handsome, vigorous white cockerels, $3 and $5; eggs, $1; $6 per 100.

P. F. RAFFERTY, Marlboro, Mass.

The Orange County Poultry House

(Patented)

Its use revolutionizes life in the country on a farm. As a general thing I personally feed and water all my hens, for all day, between 7.30 and 9 a. m. Between 4 and 5.30 p. m. I gather the eggs, and count it a poor day when I don't get from $15 to $20 worth. Some days recently they have laid 1,200 or better when market quotations were 26 cts. per doz. Some labor contrast between that and making $26 worth of milk a day. Catalogue and price list on application. O. W. MAPES, - - Middletown, N. Y.

RHODE ISLAND REDS

The famous Vibert flock of beautiful, brilliant, glowing cherry to mahogany red-to-the-skin rose and single comb thoroughbreds. Not uncertain layers mated to males from uncertain layers, but specially selected, long backed, low tailed, certified trapnested record layers, scientifically line bred along Government lines for heaviest winter egg production, with yearly trapnest laying rates of 211 to 267 eggs; bred away from broodiness, and mated to large, vigorous, brilliant red males out of heaviest trapnest record layers. Heaviest winter laying, large, hardy Reds in America, hen hatched and raised, on absolutely free range, in wide-open front colony houses, on a scientific plant absolutely free from roup and white diarrhoea. Highly fertile, clean, well shaped, unblemished eggs, gathered hourly, shipped daily, delivered when wanted, guaranteed unbroken. Vibert Vitality Day Old Chicks. Splendid breeding cockerels from trapnested hens, trios, mated breeding pens for sale. Prompt shipment, safe delivery all over North and South America, courteous, strictly upright dealings. Mating booklet upon receipt of stamp.

VIBERT RED FARM, Box 1, Weston, New Jersey

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, 194 EGGS. Official record. We offer EGGS FOR HATCHING, from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

REDS Rose and Single comb Rhode Island Reds. D. & F. Strain. 109 Acres devoted to them. Heavy layers and show record of 87 first in 12 years. Eggs, $2.00 per 15; $3.50 per 30; $5.00 per 50; $9.00 per 100; $80.00 per 1,000 eggs. Fine breeding cockerels at $5.00 each. We have size and type that shows well, looks well, breeds well and lays well. Order direct from this ad. or send for mating list.

DOTY & FREESE R. F. D. 9 Geneseo, N. Y. **REDS**

Austin's 200 Egg Strain S. C. R. I. Reds

Standard bred; high record stock; red to the skin. Eggs for hatching, $1.50 to $10 per setting (15) Utility eggs, $7.50 per 100. 90% fertility, and safe delivery guaranteed. Chicks. AUSTIN'S POULTRY FARM, Box 17, Center Harbor, N. H.

R. I. Reds, Indian Runner Ducks

Eggs for hatching. Breeding stock. Sinclair Smith, 602 5th St., Brooklyn, N. Y.

R. C. Reds EXCLUSIVELY—If you want the best R. C. Rhode Island Eggs that are fully guaranteed, at a satisfactory price, write for catalogue. Roanoke Poultry Farm, Sewell, New Jersey

Single Comb Rhode Island Reds—Large, vigorous very dark red birds and great layers. Eggs and chicks. Mating list on request. A. E. ADAMS, Stony Creek, N. Y.

Deming's S. C. R. I. Reds—Fancy laying stock. Eggs for hatching. Circular. H. P. DEMING, Robertsville, Conn.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn.

S. C. Reds, Dark Brahma cockerels, $2.50; S. C. B. Leghorn cockerels, $1.50; R. C. and S. C. RED laying hens, $2.00. Won 76 ribbons this season, including New York and Philadelphia. Eggs and chix. Mating list free. Riverdale Poultry Farm, Riverdale, N. J

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs. Glenview Poultry Farm, Rockville, Conn.

PARKS STRAIN BARRED ROCKS

Breeders headed by Males from the High Pedigree Pens of J. W. Parks for Eight Years. Eggs Testing over 90% giving us 60 to 70%. Hatches $3 per 50; $6 per 100 THE MACKEY FARMS, Gilboa, N. Y.

BARRED ROCKS

Eggs—$1 per 15; $3.50 per 100. Baby chicks. B. H. HENION, - Brockport, New York

"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Few fine cockerels $3 and up. Dr. Hayman, Box R 48, Doylestown, Pa.

BARRED ROCK EGGS—$1 per 15; $4 per 100. Buff Orpington eggs, $1 per 15; $6 per 100. Fawn and White Runner Duck Eggs, $1 per 12; $6 per 100. J. I. HERETER, R. D. 4, Gettysburg, Pa.

Pittsfield Strain—Barred Rocks

Fine Cockerels, $3 each. Two for $5. Mrs. W. R. COMER, 10 Elmwood Road, Wellesley, Mass.

BARRED ROCKS—HATCHING EGGS—large, vigorous birds, free range, open house, heavy Winter layers, splendid broilers, $5 per 100; $1 for 15. W. A. RODNEY, Gilboa, N. Y.

S. C. Buff ORPINGTONS

scientifically line-bred for 10 years to develop size, color and heavy egg-production, as well as prize-winning qualities. Sunswick Orpingtons are great utility fowls. Cockerels make fine, large broilers and capons. Hens are great layers, 1,000 yearling fowls now for sale at very reasonable prices. Eggs for Hatching and Day-Old Chicks. Book your order now. Write today for FREE catalog.

SUNSWICK POULTRY FARM

Rufus Delafield, Owner Box N SOUTH PLAINFIELD, N. J.

May's Special on Eggs—A glimpse of our stock will prove to you they are the kind. We have bred poultry for years and know the best. Special for May. Orders filled in rotation. 30 Eggs $1.50 of Burnett Black Beauty, Minorcas, also Rhode Island Reds. Pekin Duck or White Turkeys Eggs also for sale. Minorca Eggs, any number, 5 cents each. Also Rhode Island Reds. Express paid anywhere in U. S. after May 1st, or Parcel Post free. Send for Poultry Advice at once. It's free. W. L. BURNETT, Montgomery, N. Y

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed Catalogue free. W. R. STEVENS, Culver Road, Lyons, N. Y.

THOROUGHBRED POULTRY—Best 20 varieties, Healthy, vigorous stock. Good layers. Eggs. 15, $1; 40, $2. Catalog. H. K. Mohr, R. No. 3, Quakertown, Pa

BARRED ROCK EGGS—from free range, hen-hatched matings. 90% fertility guaranteed. $1 setting; $2.50 fifty; $4 hundred. Eugene Hall, Chatham, Chester Co., Pa.

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. EAST DONEGAL POULTRY YARDS, MARIETTA, PA.

Columbian Wyandottes
Columbian Plymouth Rocks
Partridge Plymouth Rocks
S. C. White and Buff Leghorns

WILBURTHA POULTRY FARMS
Box R, Trenton Junction, N. J.

EGGS FOR HATCHING BABY CHICKS BREEDING STOCK

Write for free descriptive circular and prices of these healthy and vigorous birds—bred for prolific egg-production as well as to win at the Shows. Book your order for eggs or day-old chicks NOW.

WHITE WY'DOTTES For the Quality Kind Bred to Lay and Win. Also S. C. BUFF LEGHORNS, WHITE FAVEROLLES and LAKENVELDERS. Guaranteed Eggs and Chicks at right prices. Write for my circulars, they will interest you. In business since 1901. OWNLAND FARM, Box 497, South Hammond, N. Y.

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale. THOMAS C. GORDON, - Brockport, N. Y.

White Wyandottes THAT LAY. Eggs from two pens, headed by cockerels imported direct from Tom Barron. Also eggs from other pens. Circular. WM. J. THOMSON, Delhi, N. Y.

WHITE WYANDOTTE AND S. C. W. LEGHORN Eggs for Hatching—Farm bred. Pure stock. $1 per 15. M. W. BELL, Haddonfield, New Jersey

EGGS—Choice Buff Wyandotte eggs for sale. 75c for fifteen, $4.00 a hundred. Free range. CHAS. I. MILLER, R.F.D. No. 1, Hudson, N. Y.

EGGS FOR HATCHING—WHITE WYANDOTTES—Regal Strain; White Indian Runners—$1 per settings. Special Price by the hundred. Satisfaction guaranteed. F. Cryus Twining, Pineville, Pa.

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. Route 24, Athens, Pa.

Utility American Dominiques MONEY MAKERS Herbert Rooks, Mills, Pa.

PEAFOWL—100 Peafowl—beautiful birds, $15 pair. Pheasants, Canadian geese, Carneaux pigeons. Book on ornamental birds, colored plates, 75c. G. Veltman, Poughkeepsie, N.Y.

Silver Campines, White Orpingtons, Anconas

Prize stock. Extraordinary layers. Eggs, Chicks. ALGONQUIN FARMS, - Amesbury, Mass.

IMPROVED SILVER CAMPINES

Exclusively, winning at Grand Central Palace. Stock and Eggs for Sale. SHORT & TRIPP, - Cortland, N. Y.

BABY CHICKS—Campines, Silver-Golden, S. C. W. Leghorns. Range raised consistent egg producers. Catalogue free. S. D. HALL, Box N, Seville, Ohio

Silver Campines—Eggs, chicks, stock, low prices. L. J. GREENE, Wellsboro, Pa.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H.A. SOUDER, Box 29, Sellersville, Pa.

MAMMOTH TOULOUSE GEESE EGGS—35c. EACH. DELIVERED CRANDALL FARMS, Albion, N. Y.

GIANT BRONZE TURKEY EGGS, $4.00 per 10
RHODE ISLAND RED EGGS, $1.00 per 15
INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

Wild & Bronze Turkey Eggs—CHICKEN EGGS. Handsome catalog 2c. stamp, showing pure wild gobbler from the mountain. VALLEY VIEW POULTRY FARM, Belleville, Pa.

For Sale—Pure-Bred Bronze Turkey Eggs $3 per fifteen. Large White S. C. Black Minorca Eggs, 5c. each. L. M. STEWART, Vega, N. Y.

FOR SALE—EGGS—White Holland Turkeys. White African Guineas. S. C. R. I. Reds. E. L. STANFORD, E. Westmoreland, N. H.

PEKIN DUCKS THE BEST ON LONG ISLAND

Winners at both N. Y. shows. White Cornish fowls, the ideal breed for broilers. R. C. Reds—Winter layers. White Guineas and Bronze Turkeys. Fertile eggs that hatch. RIDGELEIGH F. & P. FARM, Huntington, L. I., N. Y.

White Indian Runner Duck Eggs—Guaranteed white egg strain. $1.50 per 13. FRED S. DEYOE, Hunter, Greene Co., N. Y.

Indian Runner Duck Eggs—$1.50 per 13, delivered anywhere in U. S. CRANDALL FARMS, Albion, New York

Indian Runner Ducks—Fawn and white. Most profitable fowl. Snow-white eggs. Send for my free book on Culture. Eggs for hatching. Mrs. JAMES A. PUGH, "Sunnyacres," South Williamsport, Pa.

MAMMOTH PEKIN DRAKES, Duck Eggs and Single Comb R. I. Red Eggs for sale. VERNON H. TIGER, Gladstone, New Jersey

COLORED. Muscovy, Pekin, Mallard ducks, geese, turkeys, Guineas, Rocks, Wyandottes, Leghorns. Free Catalog. B. F. KAHLER, Hughesville, Pa.

CHICKS—10c. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. For prices and information address, C. M. LAUVER, Box 73, Richfield, Pa.

Pedigreed S. C. Buff Leghorns

bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Chicago, Los Angeles, Indianapolis, etc. Get blood of "Egg Bred Winners." Dr. L. HEASLEY, Box R. N., Orr, Michigan

THOROUGHBRED S. C. WHITE AND BROWN LEGHORNS EGGS—$3.50 per 100, or 75c. per 15. Also Ronen Ducks eggs. M. F. BOLT, Cincinnatus, N. Y.

ROSE COMB BROWN LEGHORNS for Hatching. One dollar for thirteen. LEON L. SAGE, Crown Point, N. Y.

BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. John A. Roth, Quakertown, Pa.

PURE ROSE COMB BROWN LEGHORN COCKERELS for breeders. Trained Newfoundland dogs for boys. I. C. HAWKINS, Route 3, Middletown, New York

BELGIAN HARES

Pure breed Belgian Hares, all sizes and ages, at the right prices; the finest kind for the table. Stock your farm with game, also table, with good tender meat. Ask for catalogue and prices. CALEB BOGGS & SON, - Cheswold, Delaware

Belgian Hares AND WHITE ANGORA RABBITS—Send for prices and booklet free. Pleasant Valley Rabbit Farm, O. W. Phelps, Prop., Georgetown, N. Y.

FOR SALE—Choice Three-band Italian Queens. Tested—$2; untested, after June 1—$1. Write for booklet. W. K. Rockwell, Bloomfield, Conn.

35 VARIETIES Chickens, Ducks, Geese, Turkeys, O. I. C. Hogs, STOCK AND EGGS. REDUCED PRICES. Big new Illustrated circular, better than ever. FREE. John E. Heatwole, Harrisonburg, Va.

PUBLISHER'S DESK

We received the check for $845.56 last evening. God will surely bless you for the good work you are doing. Oh, such a relief to know we have got our hard-earned money back! It will teach us a lesson that we shall never forget. Will you please send us a bill for your trouble and time? God bless you. J. F.
Massachusetts.

This good woman and her husband took three installment contracts of a New York real estate operating company, and paid the installments on the first one for about three years, on the others for shorter periods, until they had paid in a total of $845.56. At the time of signing the contract with a soliciting agent they were told they could withdraw at any time and get their money back with interest. Recently, when they needed the money, and asked for it, they were told their contract entitled them to a return of only $699.22. This would be $146.30 less than the amount they paid in, without any interest at all. They were satisfied to get back the actual amount they paid in, but this was refused. When we took it up, different compromises were offered, which we refused. We believed the courts would give the investor a judgment for the full amount with interest; but we like to avoid suits if possible and the company finally decided to return the full amount of payment.

There is, of course, no bill for our services. If we did not have 160,000 farmers back of us, this company would laugh at any demands we might make on them. These good people are one of the 160,000. In using the influence of the paper for their just interests we feel THE R. N.-Y. is simply exercising the rightful functions of a farm paper, and yet we do not deny an element of personal pleasure in the gratitude of these good friends.

Please read the inclosed clipping from Up-to-Date Farming. I happen to know this Everitt, as I was raised near that town. I do not think it is time for him to turn into an angel yet. In fact he makes me tired. Please don't stop my paper. C. H. H.
Florida.

This refers to J. A. Everitt, the Indianapolis promoter, seed distributor and paper publisher. He has a simple way of disposing of any agency that interferes with his promotion schemes. He thinks it a crime to publish a paper like THE R. N.-Y. and is going to dispose of its criticisms by asking farmers to "stop it." Mr. Everitt has had some experience with stop orders. He published a cheap farm paper once of such a nature that the Government told him to "stop" putting it into the mails, and he "stopped." In the little Pennsylvania town where he began his career it is said the farmer's there "stopped" buying common potatoes for new seed varieties before Mr. Everitt went to Indianapolis. Some years back Mr. Everitt "stopped" encouraging the organization of the American Society of Equity after the members "stopped" contributing a part of their annual dues to support his private business. So it is seen that Mr. Everitt has had some experience with "stop" privileges. He now says that the "sincere men" who showed him out of the door of the American Society of Equity landed in jail and that the society went to "pot." We admit the Everitt part of the society went to "pot," but the men who wanted nothing of Everitt or his schemes went ahead and organized the society on coöperative lines and it is now a strong organization free from all taint of Everitt promotion schemes. Everitt is now trying to organize a new society. He admits that he is to get 25 cents out of the initiation fee paid by farmers on taking membership in this society. We do not need to say that THE R. N.-Y. is in favor of farm organizations by farmers. We have never known farmers to be organized by outsiders except for selfish purposes. When the outside promoter gets a fee, he is subject to suspicion and criticism. Before farmers of the Northwest place too much confidence in the Everitt schemes, they would better look up his recent records in the sale of "Miracle" wheat. Mr. Everitt flatters himself. He says THE R. N.-Y. is an ardent hater of J. A. Everitt. THE R. N.-Y. knows Mr. Everitt only by his acts and his record. It does not hate him ardently or otherwise. THE R. N.-Y. does not even hate fakers or crooks. It does hate fakes and crookedness.

What do you know about the Dan Patch Railroad referred to in the inclosed letter from M. W. Savage?
Kentucky. W. N. S.

To start with we know the letter is written and printed in a way to attempt to deceive you. The attempt is to make you think it is a personal letter written you with a pen by Mr. Savage. It is a printed process letter and no doubt goes to a whole list of possible investors. The only thing personal about it is your name skillfully written in at the address in a shade of ink a trifle lighter than the ink used in the printed letter. The purpose of this ingenuous letter is evidently to induce you to send $100 for a share of stock in the Dan Patch Railroad under the inducement of getting another share free. There is a lot of talk in the letter about confidence in Mr. Savage, his big and profitable enterprises, the people's profits, and a lot of similar guff. But there is not one definite word that would enable you to pass an intelligent judgment on the value of the bit of printed paper Mr. Savage wants to send you in exchange for your $100. Suppose you had a horse you wanted to sell. You fixed up a printed circular to look like a private letter and to read like one. In the letter you said you had made lots of money in different enterprises, that you wanted the confidence of the person addressed, that the people ought to own horses, and that you gave them a chance at these profits by offering them a horse for $100, and as a bonus you would give the buyers free another horse. You would be careful not to say what the horse cost to raise, or what he weighed, or what blemishes he had or what he was capable of earning. If one of the personal-printed, process, private letters fell into Mr. Savage's hands, do you think he would send you $100 and ask you to send on the horse? Don't you think he would want to know something about the value of the horse itself before he sent the check? Our judgment is that you ought to know as much about the Dan Patch stock before you buy it as Mr. Savage would want to know about your horse before he sent you a check for it.

I. W. Rosenthal, Portland, Oregon, advertised "A new Shubert piano, used one month, cost $550, will sell for $250." Investigation showed that the piano had been used seven years and the original price was $350. This evidence was sufficient for conviction.

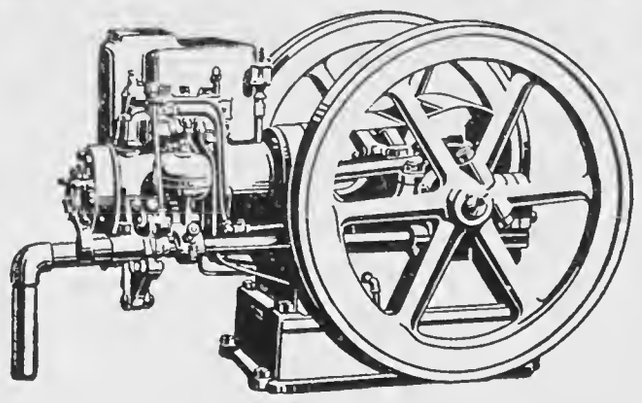
After a trial of four days, Harry L. Franc, manager of the King Furniture Company, Trenton, New Jersey, was found guilty of violating the advertising law by advertising "at $165, pianos equal to $350 and $400," which was alleged to be "misleading, untruthful and deceptive." Franc's counsel prepares to carry case to higher court.

The above is record of two convictions in alleged fraudulent piano advertisements. Heretofore it has been difficult to get convictions in such cases, but the new laws of many States against deceptive advertising, together with the growing public demand for honest advertising, seem to make convictions more certain.

If you mean business in your reply to Dr. Ulman on page 246, put me down as one subscriber who desires to enlist in the movement. I am also heartily in favor of the amendments proposed by A. F. J. on page 510. I am a regular subscriber of six farm papers, and while I have satisfied myself that they all try to conduct a clean, honest advertising section, THE R. N.-Y. is without doubt the most particular and conscientious along that line, and I am willing to submit my list to the rules proposed by A. F. J., and will gladly assist in trying to persuade the publishers to drop any advertiser whom you have proven to be dishonest. Thanks for your efforts in securing fair play for the farmer.
Michigan. W. H. A.

We certainly mean business if enough people signify their interest to warrant going ahead with an organization. We set the minimum limit at 100 volunteers. We have had quite a list, but not enough yet to meet the requirements. J. J. D.

THE lecturer raised his voice with emphatic confidence. "It is my belief, and I venture to assert it," he declared, "that there isn't a man in this audience who has ever done anything to prevent the destruction of our vast forests." A rather timid, henpecked-looking man quietly arose in the rear of the hall and said: "I—er—I've shot woodpeckers."—Everybody's Magazine.



Power Out of Cheap Oil

By means of the Secor-Higgins Oil-Fuel System, the system that has made the Rumely OilPull Tractor so successful, the

Falk Kerosene Engine

burns cheap kerosene and distillate, and furnishes convenient, reliable power for every farm purpose.

The Falk is easy to start in any weather—once started it requires but little attention. It runs evenly on a big load or a small one and will save money on either.

In sizes from 3 to 20 horsepower, mounted on skids, trucks or stationary bases.

A smooth running all-round power-plant for threshing, husking—shredding, baling, silage cutting, spraying and sawing.

Rumely service is back of every Rumely machine—49 branches and 11,000 dealers—supplies and repair parts on short notice.

Ask for Falk catalog No. 118.

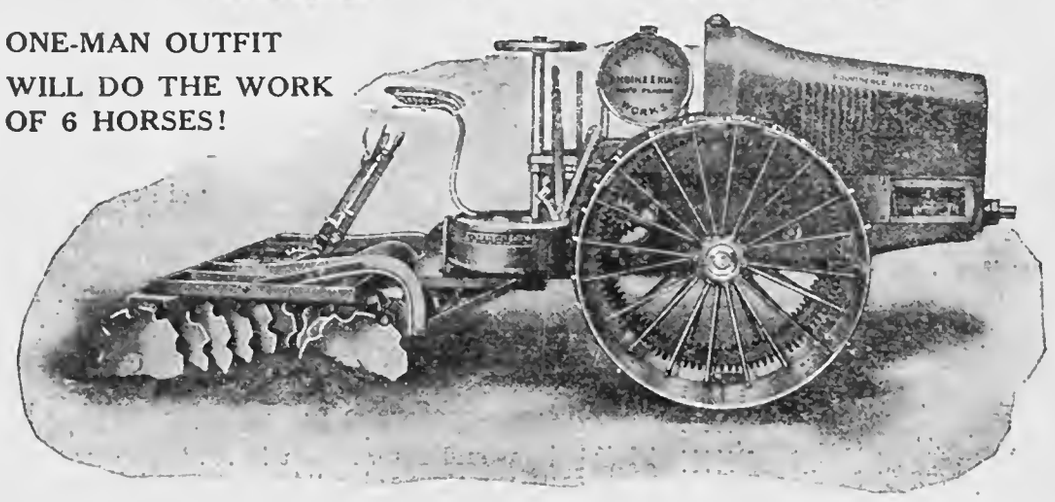
RUMELY LINES

Kerosene Tractors	Threshing Machines	Cream Separators	Road Machines
Gasoline Tractors	Corn Machines	Feed Mills	Grain Elevators
Engine Plows	Baling Presses	Stationary Engines	Steam Engines

RUMELY PRODUCTS COMPANY
(Incorporated)
Chicago *Power-Farming Machinery* Illinois
Harrisburg, Pa. Rochester, N. Y. Columbus, Ohio.

THE
PROVIDENCE TRACTOR

ONE-MAN OUTFIT
WILL DO THE WORK
OF 6 HORSES!



PROVIDENCE ENGINEERING WORKS
Reliable Agents Wanted PROVIDENCE, R. I., U. S. A.

You can turn your entire attention to your farm work and forget your chores and incidental big jobs, if you own one of these reliable machines. Simple enough for a boy to run. Dependable and durable. We **guarantee** every part—unconditionally—**for five years.**

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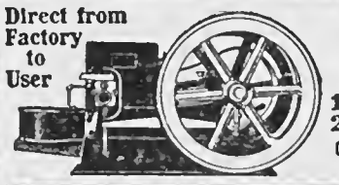

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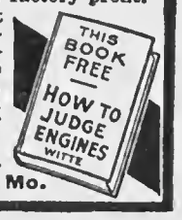

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BOSTON MARKET REVIEW.

(*Continued from page 651.*)

about $3 per bunch for yellow stock, seconds and thirds $2.50 to $1.25; reds $4.50 down to $2.

Asparagus plentiful at $3 to $4 per dozen bunches; California celery $2 per dozen is the rule. Florida tomatoes coming plentifully, but not in good quality as the rule, and prices are hard to maintain which give a profit to handlers; $2 to $3 per crate is about the prices, with native hothouse going at 40 cents per pound. Cucumbers are paying fair at $9 per box for best, others $7 to $5 according to condition and quality. Southern string beans sell well at about $4 per basket. Good native cabbage and Florida stock both sell at about the same price of $2 per crate and barrel. Southern spinach brings $2.50 per barrel if good. Kale about $1.50 per barrel. Native dandelions under glass $1.50 and better per box; best greens about $1 is the rule. Native lettuce pays well at $1.25 to $1.75 per box of 18 heads. Onions are plentiful for demand at $2.50 per 100-pound bag for native and New York stock. Foreign stock ranges from $2.50 to $3.50 per crate. Squash growers are very happy, as well they may be, to pocket five cents per pound, or at the rate of $100 per ton, for the last ends of their crop. Turnips hold about the same, $1.75 per bag for rutabaga, with Whitecap $3 per bag and White egg $1.25 per box. Old beets $1.75 per bushel, if in good condition; carrots $1; parsnips $1.50; radish $2.50 for fresh pulled.

Butter holds about the same, with supplies plenty and more coming, yet prices are fairly firm, ranging from 27½ to 29½ for best creamery and 24 to 27 for lower grades and storage stock. Cheese not plenty, not extra in quality, either old or new, and prices range from 15 to 20 cents per pound. Eggs have stood a slight raise for Easter trade, but will decline to the same former level or lower, as conditions are right for a large supply to continue for some time. Foreign invoices are much feared by dealers and make them slow to store heavily at present; 22 to 27 per dozen have ruled lately.

Wholesale meat prices, while high, do not seem at first thought to warrant the retail prices charged by the average market man, but in most cases these buy in cuts and not by half or whole carcasses and so pay several cents above quoted wholesale prices; yet a mighty good profit stays with them even at that. Best beef 14, others 8 to 12; lamb 12 for best, others 7 to 10; best veal 16, others 9 to 14. Dressed poultry 18 to 22, with broilers at about 25.

At Brighton stock yards trade slow, with plenty of stock on hand and some carried over from week to week, as dealers are not able to get prices asked in all cases, and hate to sell at no profit, or let the buyer get stock at his offer. A few good cows, of course, bring the price asked, some as high as $125 each, but much common stock is on hand, and some sell at $35 to $65. Oxen are scarce and high, a good pair calling for $300 to take away, and in most cases good ones are not for sale. Beef on hoof $7.50 to $8.50 for best, others $3.50 to $6.50 per hundred. Live hogs nine and better, dressed 11½. Small pigs very short, with prices $4 to $5 each. Sheep six cents per pound; lambs 8½; veal calves up to 9½. Cattle hides 12 to 14 cents per pound; calfskins 23.

The agitation in the grain market has given dealers the excuse they are always looking for to push up prices, and has been taken advantage of at present time by an unreasonable advance all along the line. Retail dealers sell cottonseed meal at $1.90 per bag; gluten $1.75; mixed feed $1.75; cornmeal $1.60 and oats $1.35. A. E. P.

We do not sell anything off our farm except butter, eggs, chickens and hogs, and the increase of our Jersey herd and some wheat when we raise more than 300 bushels. When we buy feed we buy in carload lots from St. Louis, Alton or Kansas City; 75 cents a bushel for corn is what we paid for last lot; were asked 79 cents last but we refused to buy. I paid $18 a ton for Alfalfa hay; $1.50 for shorts, white oats 46. We get 40 cents a pound for butter, until first of May. We sell from 90 to 100 pounds a week at that price, and 40 to 50 pounds at 30 and 35 cents at store. Eggs at present 17 to 20; veals 10 cents a pound; cows $60 to $80, some less some more. Holstein cows seem to bring the most money. I am sorry; I like the Jersey. Hogs eight cents a pound on foot; wheat 90. 1913 was a very dry year with us, only one rain in this locality in five months. Crops poor, except wheat; potatoes, oats, corn and hay, must all be bought. Drought and chinch bugs ruined our crops. Year before last we built a silo that gave us a chance to steal our corn from the bugs, otherwise we would not have got anything.

Bethalto, Ill. A. I.

Our staples are corn, oats, hay, rye cattle and hogs. Corn 60 to 65; oats 40; rye 60; hay $10 to $15; cattle $8 to $8.40 per cwt.; hogs $8 to $8.50; eggs 15; butter 26 to 28. C. B. P.

Albany, Ill.

I sell everything from the farm directly to consumers, and aim to produce only qualities and varieties to appeal to a high-class patronage. I have been unable to meet the demand for high quality produce. I base my prices on the retail prices charged by the best markets, and undersell them enough to make it well worth while for Summer people to motor 15 or 20 miles, in some cases three times a week, to obtain my produce. Of course the inducement is not only the price but the good quality and freshness. During the Summer my customers come here to buy; in the Winter I ship to them, chiefly by express. I find it difficult to get fair quotations, especially in Winter. In Summer I frequently charge twice the wholesale price, yet undersell the retail stores and peddlers. I consider THE R. N.-Y. the best in the field, and would be glad to help you at any time. FRANK REESE.

Monmouth Co., N. J.

Alternating Poultry Yards.

How many laying hens can be kept on a piece of ground 200x300 feet? I have divided the ground into two separate runs, one for Winter and one for Summer. What will be the best to sow in the runs, and when should it be sown? Can you tell me of a better plan? I intend to plow the runs in the Spring and Fall, and sow whatever green food will be the best, so they can have alternate runs and green food. H. A. P.

Delaware.

There is no limit, save foot room, to the number of hens that may be allowed upon a run of any given size. A small flock will quickly clean up a large area, and it is very difficult to keep green stuff in a poultry yard. Your plan of using yards alternately is a good one and will prolong the life of the vegetation. Here, wheat or rye sown in the Fall might be used; with you, Crimson clover might give better results. Another plan would be to sow a small yard to some rapidly growing stuff that would stand grazing, as Dwarf Essex rape, and give the hens the run of the other, only permitting them access to the green stuff for a half hour or so at night. These yards could be alternated each year. A few hens would quickly clean up a large area of new seeding in the Spring and you would probably have to use some Fall-grown grain if you wished to pasture it continuously for any length of time in the Summer. I can only make suggestions, which you will have to try out under your own conditions. M. B. D.

A Pulper for Beets.

A few weeks ago F. M. P of Connecticut, asked for a machine for pulping mangels for feeding poultry. F. M. P. wants to feed the green pulp in jars rather than let the hens peck at the beets. We had nearly 25 suggestions. The following seems most reliable to F. M. P. He thinks he can rig up his buzz-saw with a wide wood wheel with nails driven into the run so as to tear and pulp the beets.

"On page 275 F. M. P. wants to know how to get a machine to make beet pulp. This is how I did it. I had an old cast iron fly-wheel about 18 inches in diameter, happened to be heavy, about 50 pounds. First I fitted a piece of ¾-inch pipe for an axle or shaft to the wheel, with a crank on end of shaft, then I fitted a board on side of wheel cut round, exact size of wheel and bolted on wheel. Next I drove this board full of galvanized nails, fivepenny shingle nails, about three inches apart, and was careful that no two were on the same line as they revolved, next I set this on a box about 12 inches wide and 24 inches long, fastened axle to box so wheel would turn true. I built a hopper on side of wheel where nails revolve. This hopper must be built with care so beets will slide down to wheel and the nails will shred the beets fine and quickly. Almost everyone can make this kind of a shredder. Sizes need not be exactly like mine. I can shred a bushel in about 10 minutes, and altogether it is very satisfactory. J. S. K.

Suffolk Co., N. Y.

EGG-EATING DOGS.—I had them, and broke the habit by opening one end of egg in which a small quantity of red pepper was stirred with a stick, the hole covered with the flap from an envelope containing mucilage. Lay this where the dogs can reach it, watch and when he takes it press his jaws together to mash the egg. A sure cure. W. H. STOUT.

Pennsylvania.

THREE-YEAR-OLD LOUIS: "Oh, mother, what is this picture?" "That is a rhinoceros." "What is that thing on his nose?" "A horn." After a silence, "Mother, how does he blow it?"—Credit Lost.

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Help, Farms, Estates, Institutions. Write. Phone 6186 Cortlandt. Agency Maintained by qualifications, men placed. Have no branch. Sidney Sullivan, Expert, 99 Nassau

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There are no bondholders, mortgagees or other security holders.

(Signed) JOHN J. DILLON, Publisher.

Subscribed and sworn to before me this 18th day of April, 1914.

EDWARD J. LEVY,
Notary Public.
N. Y. City, No. 2146.

My commission expires March 31, 1916.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable **RURAL NEW-YORKER** readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Woman for cook and general housework. N. M. KISTLER, Emporia, Va.

FARM HAND—Young man wishes to learn up-to-date farming. I. A., care R. N.-Y., 333 West 30th St., New York.

FARMER WANTED — Experienced; married; permanent position. N. M. KISTLER, Emporia, Va.

WANTED—Girl desiring a good home in village, to help at housework; state wages and particulars when replying. G. L. COOPER, Lyndonville, N. Y.

MAN or MARRIED COUPLE to work farm; rent payable in labor; $300 required to purchase horse and cow. L. F., care R. N.-Y., 333 West 30th St., New York.

MARRIED MAN, no children, experienced gardening and farming, wants position on small farm or estate; particulars; references. E. HOLLAND, Sanbornville, N. H.

FARM HELP—The New York State School of Agriculture at Morrisville, N. Y., can recommend several trained, practical young men. F. G. HELYAR, Director, Morrisville, N. Y.

WANTED MAN—Good teamster and general farm work; also man to do chores around house and help with garden. Protestant preferred. W. M. F., care R. N.-Y., 333 West 30th St., New York.

WANTED on small place, near Hartford, ambitious, energetic man, experienced in farming and interested in poultry; good wages and share of profits to right man. G. A. KELLOGG, West Hartford, Conn.

WANTED—Married man as active farmer and assistant foreman; farm and orchard cultivation; state experience, qualifications and salary expected; give references. Address THE ORCHARDS, Bennington, Vt.

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FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

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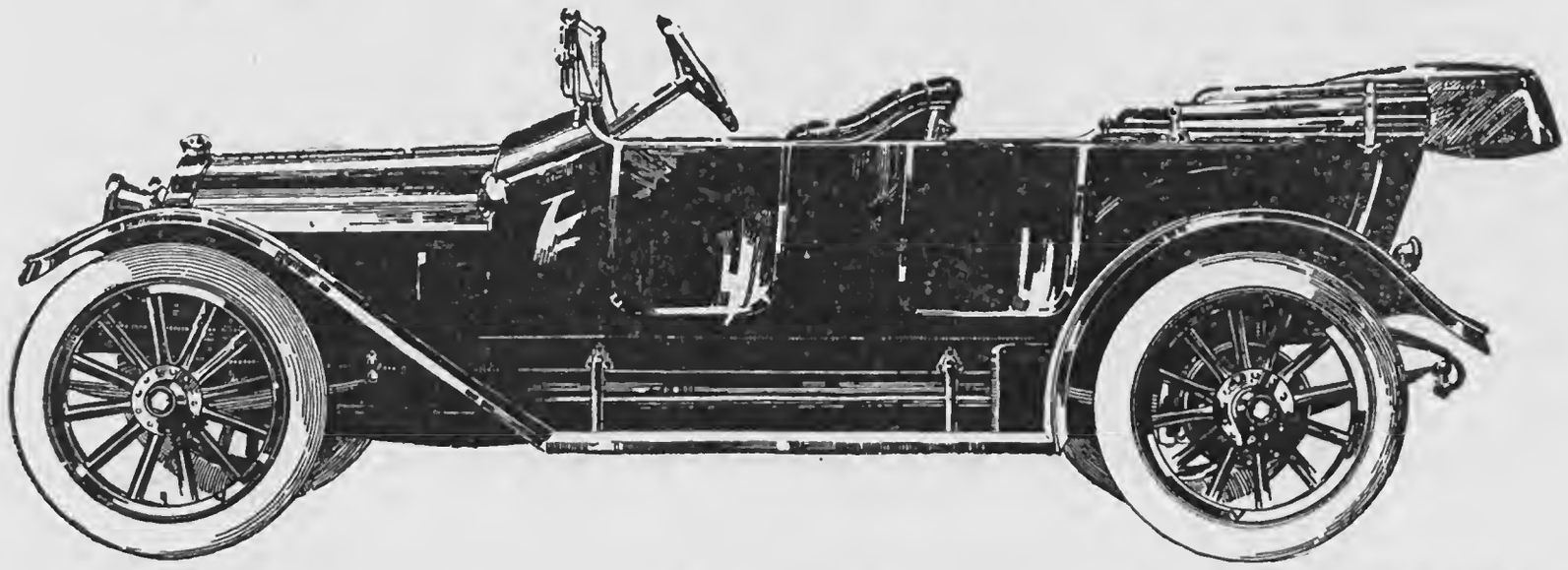

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THE RURAL NEW-YORKER

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SHEEP THE COMING ANIMAL.

A Great Future in the Business.

DIMINISHING FLOCKS.—There are fewer sheep in the United States this year than there were last year. Last year there were fewer than the year before. Mutton consumption is on the increase, mutton production is on the decrease. Western States that have supplied sheep in great numbers are fast losing their free and cheap pastures and large flocks. It is a land of homesteaders. Dairying has taken the Eastern States in its grasp, and sheep are a relic of former days in farm practice. Is there anything of significance in this for the man who owns land? I think so. Let me venture the propheey that ere many years prime mutton will, the year round, sell in the same notch with prime beef and pork. In fact, for a long time mutton of the right age and finish on the right market is the highest priced meat. Often it has been said, and it will stand repeating, that a flock of ewes of the right pattern, well cared for, and raising lambs to be sold fat at an early age, will return a larger dividend on the investment than a well-cared-for dairy herd, and this herd can be considerably above the average, too.

COWS vs SHEEP.—At a farmers' institute one man said that he was the same as in the penitentiary with his big herd of cows. The same job every day, the same long hours, and not much more pay than if he wore the stripes. Another man told of his flock of ewes nearly all raising twin lambs, that sell from $10 to $12 per pair at weaning time. "The lambs do the milking," he said, "and I clean the stables when I get ready, and market my product when it gets fat." These might have been extreme cases, but there was food for thought in both.

CONDITIONS REQUIRED.—To flourish in any business the disadvantages must be overcome and all natural advantages be made the most of. Any man can keep sheep, and at a profit, if he has good business sense and will apply himself, but unless he has a leaning toward the flock his efforts will not bring coin like that of the natural flock-master. This should not be marked up against the sheep, as it is true of any enterprise. The farm must have some equipment for the sheep's care, but it need not be expensive. With a wise owner they will live and thrive in the most common and home-made quarters.

GOOD FENCING NEEDED.—One drawback in starting sheep-keeping on the farm where they have long been absent is lack of fences. Two or three wires tightly stretched will turn the farm horses and dairy herd, but not the sheep, and a flock running at large on a farm is not good business. They love and devour young trees, berry and grape-vines and roses, and a few hours of liberty in the young corntield will work havoc. Give them credit for this, because it is this same appetite that prompts them to eat weeds and bushes and many things that might go to waste or be in the way of better farming. There is only one right way to fix the enclosure for sheep, and that is to fence so that there will be no first time for them to get out. Crawling under or through or jumping over fences is easily learned and never forgotten. I have seen old ewes as expert as goats at these tricks. Plain woven wire has no equal as a sheep fence, and it need not be high if the sheep have not learned to jump over poor fences. We have safely fenced flocks with a 26-inch hog fence. A barbed wire stretched above this makes doubly sure, and one more wire will turn all other stock.

BUILDINGS.—Shelter with dry footing and good roof is more important than well matched siding and closed doors and windows. Keep them dry and well fed and cold weather need not be feared. Of course very young lambs must not be exposed to cold blasts. We have raised many lambs in zero weather in plain sheds by putting a blanket on the youngster. This sounds foolish and bothersome to some folks, but it is easily and quickly done. Fresh air and pure water both Winter and Summer help to make mutton. Rains in Summer do no harm. It is the wet fleece in cold, windy weather that makes the sheep lose flesh and get catarrh.

THE DOG NUISANCE.—Dogs are to be reckoned with in sheep raising. It is a sad state of affairs when the cur dogs of our land hold such sway that many men stay out of the sheep business from fear that profits will be torn up and scared away in one night. Would that we had laws enacted and enforced compelling every dog owner to keep his dog as he does his cow or horse. If a dog is worth owning he is worth keeping in hand. What would we think of a man, or rather what would we do with him, if he had a ram galloping along the road after him and hopping over the fence into every one's yard or field as he went to town? Dog-proof fences can be made by using woven wire fence four feet high staked close to ground, and a barbed wire stretched above it. Bells offer some protection. A bell on every fourth or fifth sheep if the flock is large, and on every sheep if it is a small flock, will frighten some dogs, and the bells will attract some one in time to save the sheep.

A FLOCK OF SHEEP ON A PENNSYLVANIA ROADSIDE. Fig. 271.

Use small cow bells that will make some noise and not little toy sheep bells.

DISEASES AND PARASITES.—Another trouble to face is internal parasites, stomach worms and nodular disease that appear when sheep are pastured. Years ago these troubles were called paper-skin because of the bloodless looking skin of the affected sheep. Happily prevention is easy and cures are possible. Prevention is the proper thing. Keep tobacco where the flock can always get it. Tobacco stems are cheap, and when chopped up with fodder or silage cutter lambs will eat it as soon as they will eat anything, and so far as I know lambs that have always eaten tobacco are never troubled with internal parasites. These troubles just enumerated, and some minor ones that we can take up later, are more than offset by the advantages to the everyday farmer of keeping sheep, perhaps in a moderate way. Their care and feed bill need not be so great, and the income is always welcome. R. A. HAYNE.

Jefferson Co., Ohio.

WESTERN ALFALFA CULTURE.

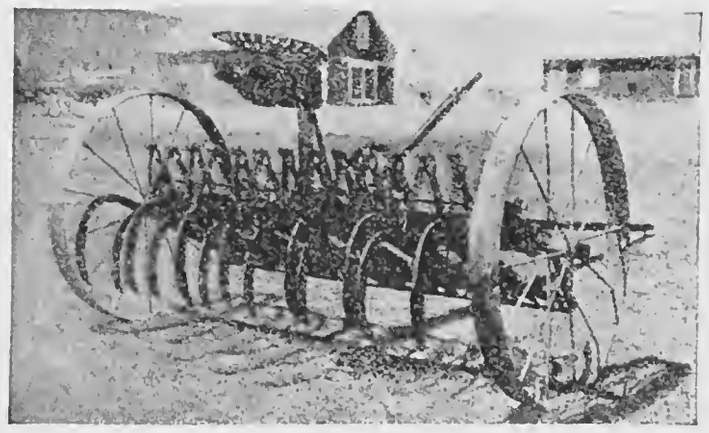
Some of the experiment stations are issuing excellent bulletins on Alfalfa culture. In the West this crop is the leading one. It is coming so that most of the other crops are based upon Alfalfa. The Kansas Station at Manhattan, in Bulletin 197, gives a good summary of Alfalfa conditions in that State. It seems that in Western Kansas Alfalfa may be planted in drills or rows, and cultivated like corn or sorghum. In the drier sections of the State this row cultivation is a success, and such Alfalfa usually produces more seed than when it is broadcast. It appears that the Alfalfa should be cut for seed when about half of the seed pods are brown. Many farmers cut their seed too soon, which results in a crop not as strong or vital as it should be. While Alfalfa has a very deep tap root, and is supposed to pump up water from the lower soil level, it leaves the ground very dry after a full crop. In Kansas, when the Alfalfa is to be followed by another crop, Kaffir corn or sorghum is recommended. The Kaffir is known as a drought-resisting crop, and will do better on the dry soil than corn or most other crops. These things are of great importance on the dry plains, and especially in a season of drought.

The Kansas Station says that when the Alfalfa is grown for hay, and the hay is sold, comparatively little plant food is added to the soil, while large quantities are taken away. The advice in Kansas is to feed the Alfalfa on the farm, and thus get it back on the land. The point, however, is that continued exports of Alfalfa away from the farm will run the soil down in spite of the fact that we have all been taught that Alfalfa is a soil renewer. In the Eastern States it is often very much more businesslike to raise Alfalfa and sell the hay, since it brings a large price in the market. Where this is done the point is to use large quantities of phosphoric acid and potash, and fair quantities of nitrogen in the form of chemicals, to keep up the supply. Where this is done selling Alfalfa may prove a good business in every way. In the Western Alfalfa fields it has been found desirable to scratch or work over the surface of the ground in Spring. This bulletin contains pictures of two machines, or tools used for this purpose. They are shown at Figs. 272 and 273. As will be seen, one looks like a hayrake, but with much heavier spring teeth than those found on the rake. The other tool is an ordinary spring-tooth harrow, with small sharp tooth attachments, which scratch and tear the ground without digging it too much. The latter type was recommended by our old friend John M. Jamison of Ohio, who often wrote us about it.

NOTES ON GRASS AND ALFALFA SEEDING.

In the Summer of 1911 I had 19 acres of potatoes. Of these, about 10 were early ones. These potatoes were kept clean, and after being dug with the digger with a little fitting, the land was in excellent condition for any crop which I might wish to plant. There had been potatoes on the piece of which I am going to speak, the previous year also, and it had had an application of one-half ton of high grade fertilizer to the acre, each year. After I had removed the first 3½ acres of potatoes, I had the piece thoroughly fitted with a spring-tooth, without plowing, and about August 20 I sowed it. The first three acres were sown to Alfalfa, and the other half acre to grass as in the Clark method. The land is what is known as Ontario fine sandy loam. This is a medium soil, grading between a sandy loam and a clay loam. I sowed 25 pounds of Alfalfa to the acre, mostly broadcast. As an experiment, I put in one bout with the hoes (double disk) of the drill. This with a previous experience, showed me that the drill will not do satisfactory work with such small seeds, without press wheels or some other means of regulating depth, for the Alfalfa drilled in came up unevenly, and was entirely missing in those spots where the soil was extra mellow. On the strip sown to grass, I put one half bushel of Timothy and Red-top per acre. As I did not have quite enough clear grass seed, I used a little that was mixed with Medium clover.

It rained that same day, and both pieces came up very quickly. The Alfalfa did well and the grass soon formed a lawn. One end of the piece is a limestone soil, and is naturally well drained, while the other is more clayey, and more retentive of water. It turned out to be a hard Winter on seed-

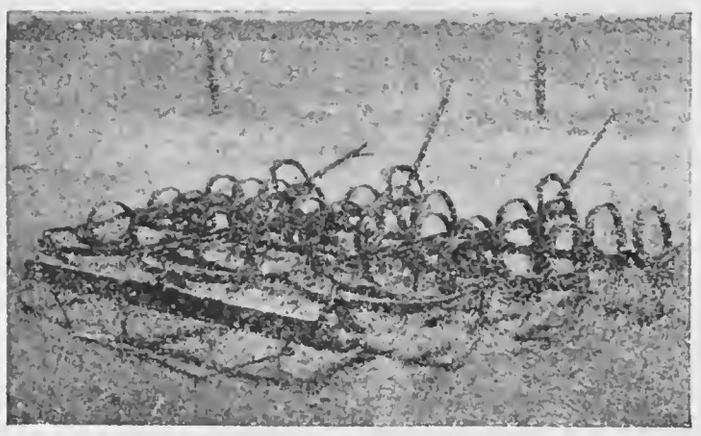


A Western Tool for Working Alfalfa. Fig. 272.

ing, and the Alfalfa on the wetter end killed out, but on the other end I got three good crops. Last year, I had the heaviest piece of hay on part of this piece of Alfalfa, that I ever cut. This was on the part that had the deeper soil. The dry weather cut down the yield on the shallow soil some, and made the second and third crops short.

The one-half acre of grass, which was put in according to the Clark method, except that the cultivation was applied to a valuable crop of potatoes, instead of to a bare field, yielded nearly two loads. As I had no scales, I cannot state the yield in tons, but we estimated the loads to weigh nearly 3,000 pounds. The rack was eight by 14 feet, and the standard about six feet above the rack. The loads were laid out over the sides of the rack a foot on each side and were perhaps a foot above the standard. The hay was short and fine, but very thick. I think a fair estimate of the yield would be five tons of field-cured hay per acre.

Next to this half acre, after removing the potatoes, and fitting as before, I sowed wheat and four quarts of Timothy per acre. This was sown about September 20. The wheat made a pretty good growth, but Winter-killed. I cut the piece for hay the following season. There was so little wheat left alive that it did not materially influence the yield. This piece of three acres yielded over nine loads, such as were described above. The hay was much taller and coarser than the other and was heavier. We thought that four tons per acre was a fair estimate for this piece. It will be seen that although sown a month later, on land which was, if anything,



Spring-Tooth Alfalfa Cultivator. Fig. 273.

poorer, four quarts of seed yielded nearly as much as one-half bushel of mixed Timothy and Red-top. The quality of the hay on the thinly seeded piece was much the best.

Early in the Spring, before I knew that the wheat was all killed, I seeded the piece with the wheat on it, with Red clover, Alsike and more Timothy. In the Fall, the whole piece, including the heavily seeded half acre, was top-dressed with 10 loads of manure per acre, applied with a spreader. The half acre was spread first, followed by the rest, the manure being applied as made.

In spite of the advantage which the half acre had, by being spread two months earlier than the average of the rest of the piece, it failed to yield as well as the rest of the piece in 1913. There was a good lot of Alsike in the hay where I sowed it the year before, but the Red clover and the extra Timothy did not show up to any extent. The whole 3½ acres were harvested at one time, no attempt being made to keep the two parts separate, so it is impossible to state the comparative yields, but the half acre had not more than from one-half to two-thirds as good a crop as the rest. The total yield was a little over 10 loads. The dry weather seemed to hit that which was heavily seeded, much worse than the other. It is impossible to say how much of the extra yield was due to the Alsike, but I think that the thinly-seeded piece would still have been ahead had there been no Alsike. In my opinion nothing is gained in sowing more than one peck of Timothy to the acre on perfectly fitted soil. Strange to say, the Red clover that was sown in with the grass on the half-acre piece came on quite well in 1913 and thus offset the Alsike on the other piece to a certain extent.

In sowing grass seed with my grain, I have usually used eight pounds of Red clover (Medium) two of Alsike and 10 of Timothy. This year my Red clover as well as that of my neighbors, seemed to be injured in some way so that there was scarcely any in the hay. The Alsike, however, did very well. I think that a few pounds of Alsike is pretty cheap insurance, and I shall increase mine to three or four pounds to the acre this year.

Adams Co., N. Y. ALBERT H. DE GRAFF.

AN OLD FERTILIZER FAKE.

Every now and then some one comes telling about the so-called "new mineral fertilizer." Sometimes it is a tale of woe from some person who paid for the stuff and found it worthless, or at least of no value to his crops. Or it may be some one who has for the moment been carried away by the fairy tales related about this stuff. They are on the point of investing their good dollars, but before they start they want to know a little more about it. We had one case where a company owning an orange grove in Cuba actually bought several tons of this material, not only receiving little or no plant food, but actually paying more than the price, and unable to obtain a rebate to which they were clearly entitled.

It is remarkable that this stuff can be kept before the market so long after the repeated exposure concerning it. They seem to do these things very well in Florida; would that they could run the land shark and the town lot boomers through the mill as they do fertilizer frauds.

In the last Florida report we are told how the commissioner, in order to be sure of his ground, obtained sample after sample of this new mineral fertilizer and analyzed it carefully. The first sample contained in one full ton exactly 18 ounces of phosphoric acid, of which nothing whatever was available, while there was not even a smell of available potash in the whole ton. In order to be sure, he took another sample. This one contained three pounds of phosphoric acid in a full ton, but there was not even a smell of available potash. Nothing like being sure, when you want to do a complete job with a fake, so he took a third sample. This one contained the marvellous amount of 14 ounces of phosphoric acid, in one full ton. Wonderful to relate, this sample actually contained one-third ounce of potash in the full ton.

You might think that would settle the matter, and it did, so far as the Florida commissioner was concerned. He issued a statement to the public condemning this new mineral fertilizer as a fake, and notified all dealers or agents that if they offered it for sale, they would be subject to the penalties imposed by the Florida law. That is good business, a model which many of our State commissioners might keep in mind. But did it shut off our friends this mineral fertilizer company? If their fertilizer contained as much available plant food as they could show of guff and nerve, they would have the most remarkable fertilizer compound that the world has ever seen.

The average man would do his best to forget mineral fertilizer if his scheme were shown up in this way, but these fellows are apparently working poor old Uncle Sam in their efforts to sell 15 cents worth of plant food at about $16. They are going direct to customers, hoping in this way to escape or get by the Florida law. The United States Government ought to take this matter up, and help the Florida authorities to handle this stuff.

It is hard to understand how intelligent men, some of whom have grown crops all their lives, could be induced to fall for such a proposition. One would think that the very stories told by these people would act to kill them off, but apparently there are still plenty of people in this country who think they can raise potatoes on guff and fairy tales.

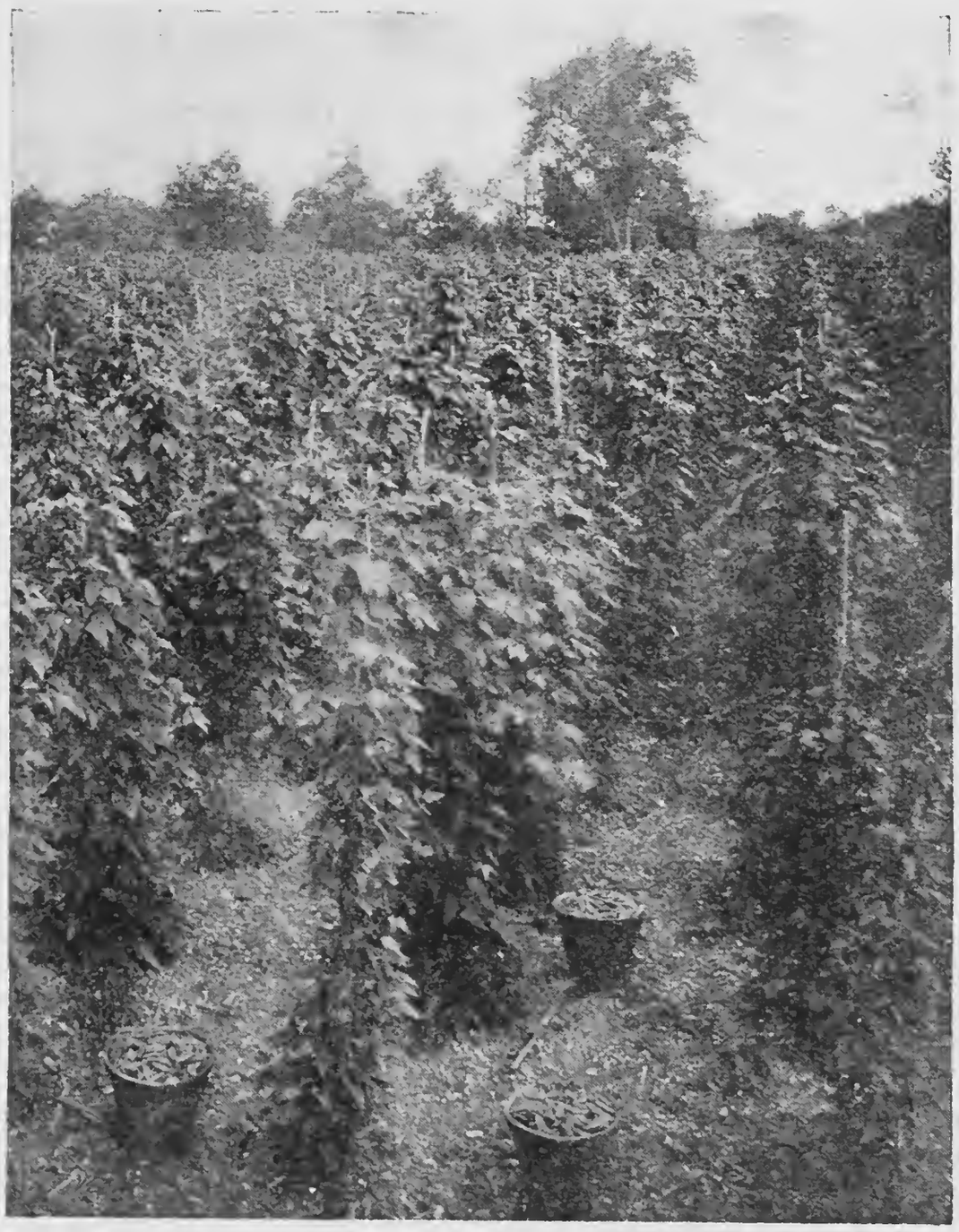
LIMA BEANS FOR MARKET.

I intend to plant 3,000 hills of pole Lima beans. Will you tell me how to care for them, from the preparing of the soil to gathering? My ground is quite high; I have plenty of stable manure. I. L. B.
Pine Bush, N. Y.

In former years we have grown a good many pole Lima beans, and our method was to mark out the ground in checks, with hills four to five feet apart each way. We furrowed out rather deep one way of the field, and then manured the hills before the poles were set. The best manure we could find for Limas was strong hog manure. Stable manure came next. A shovelful was placed in each check or cross mark and the hills were made up. On small plots the hills were made up by hand with large hilling hoes. On large areas a sweet potato ridger or a one-horse plow run around each row will make a quick job of it. After hills were made the poles were set. Ordinary-sized poles can be set quickly by using a crowbar to make the holes. We have also used wires for pole Limas. Strong posts were placed from 25 to 50 feet apart across the field and two strands of wire stretched along them, one strand being about 18 inches above the ground, the other 3½ to four feet. Some prefer the wire, some the poles, the preference being governed largely by the question as to which could be secured the cheaper.

Beans are planted here about April 25 to May 10, and we place each bean in by hand, eye down. Cultivation starts as soon as the young plant gets started, and on high ground it is essential to cultivate thoroughly throughout the entire season. When the beans began to send out runners they were tied to the poles with soft cotton twine. This had to be done about three times, and it was quite a job. In fact the pole Limas always seemed to be requiring attention of some kind, and this year we shall not have a single pole on the place. We did not last year, either, and we were not a bit sorry. Our bush Limas tasted just as good, sold as high, yielded as well and brought us more per acre than we ever secured from the poles, and with far less work. In other words, we have dropped the pole Limas and substituted the bush Lima. The Fordhook Bush Lima has made this change possible. It comes early and some years lasts the entire season. The pods fill out well, and the price is usually higher than for the flat-podded beans. It is also a good yielder. The bush beans are grown in rows four to 4½ feet apart, and the plants are 12 to 18 inches apart in the row. We furrow out with a one-horse plow; distribute the manure in the row, ridge up and plant. Beans are placed in by hand as for pole Limas. After that it is simply a matter of cultivation and picking. Italians or childr are glad to do the picking for 10 cents a ⅝-bushel basket. TRUCKER, JR.
Gloucester Co., N. J.

PLANTING POLE LIMA BEANS "EYE DOWN." FIG. 274.



A FIELD OF POLE LIMAS AT PICKING. FIG. 275.

HOW I CAME TO START IN THE CANNING BUSINESS.

PART II.

A LESSON FROM LOW PRICES.—For several years I lived near two towns, each of which had a factory for canning tomatoes. Nearly every farmer who lived near enough raised from one to five acres of tomatoes. The superintendent of one factory was a friend of mine; also I knew many of the operatives, and often while waiting to unload, I would go through the factory to watch the different processes the tomatoes went through. In that way I obtained a general idea of what was necessary to be done, which helped me much later, when I started for myself. Three years ago we moved to our present location and tried fruit-growing and trucking for the near markets, eight and 12 miles away. Every season just when we had the most of every crop, the price would drop so low that it did not pay to cart the stuff to market. Often I have seen tomatoes as low as seven cents per 16-quart basket; wax beans five cents per bushel; Limas, shelled, five cents per quart; peas, 40 cents per bushel. I did not see that these low prices benefited the consumer any, for as soon as the market closed, the storekeepers put the retail prices as high as they liked, regardless of what the farmer received. After two seasons of this, I began to look about for some means to get more for our crops, so I talked the matter over with several storekeepers, and found them inclined to think very favorably of the idea of home canning if I could produce superior quality. They were willing to pay more than for regular factory goods. This higher price is necessary to make it pay, as it costs more to put up by hand than by machines, and the cans cost more in small quantities. Next I got all the reading matter I could obtain on the subject, which was very little. From the very first I made up my mind to put quality first. How well I succeeded I will leave it to the Hope Farm man to say, as he has tried them.—[The goods were excellent.]

GLASS OR TIN CONTAINERS.—The glass jar is largely used at home, and although growing in favor for a certain class of trade, is not used very extensively commercially on account of weight and breakage. The goods show up much better in glass, and if delivered in person to the consumer, would no doubt prove very satisfactory. If the jar is to be returned, by all means charge for it when delivered, and rebate when jar is returned, otherwise I find the loss is too great. The tin can is the container used almost entirely in the commercial canneries. To-day the solder necessary to seal the can is attached to the cap. Also in many canneries the open top or sanitary can has taken the place of cap and hole cans. The open can top is closed by a machine called a double seamer. No solder is used except on the side seams on the outside. These cans are too expensive, unless on a large scale, on account of the machinery. A recent improvement in tin cans is the enamel-lined can. These cans are best for such articles as raspberries, cherries, plums, beets, rhubarb, etc., which contain acid, and when packed in ordinary cans lose their color. Tin cans are of many sizes and shapes, but there are certain styles, known as Standard No. 2 cans, with 1½ or 1⅜-inch opening. This is the size usually used for string beans, corn, peas, Limas, etc. No. 3 cans are Maryland standard or Jersey standard, according to the locality. The Jersey is the largest; 2 1-16 or 2 7-16 inch opening is right for either of these.

THE OUTFIT.—In ordering an outfit, it is necessary to give size of the opening you are going to use, so capping steel will fit. I had some trouble with mine, until I sent a cap to factory and had steel made right size. A good outfit for a beginner would be a home size steam pressure boiler or process kettle, with rack for holding cans; a No. 7 fire-pot, burning gasoline, for heating irons, two capping steels (two sizes) to fit caps, two tipping coppers, a galvanized iron boiler for scalding, blanching, etc.; a rack to fit, for holding tomatoes while dipping; a wire basket for blanching; a pair of can tongs, knives, buckets, a table to work on, a can of flux or some acid and zinc for making the flux, and some sal ammoniac for cleaning and retinning. This outfit will cost about $40 to $45. The cost of cans will vary with style and size, also locality will make a difference, on account of freight, but should not exceed $25 for No. 2 cans, $30 for No. 3 cans, including caps, labels, cases, etc. I do not know of any can company that will sell in lots of less than 500 of one size and style. The price is the same per thousand up to 2,000, and $1 per 1,000 less for 2,000 or more up to a carload.

FILLING.—A can of food should be as full as it can reasonably be packed and processed without injuring either the quality or appearance of the contents. All food packed in liquid should be filled to within one-half inch from top, and when free liquid is present, should cover the solids. A can of corn, beans or peas when opened and found to be one inch from top would be considered slack filled, and would be hard to sell at a price that would show a profit. Cans should be tested for leaks as soon as removed from process kettle. With a small stick tap on the can while hot. If the result is a dead, dull sound the can leaks; if clear and ringing, the can is tightly sealed. Another method is to place can in cold water. If bubbles arise, the can is not airtight. The standard packers' can has a hole in top for filling, and is furnished with a cap (to which the solder is already attached) for closing. In ordering these cans, always specify solder hemmed caps. After filling, place the cap over the opening, apply the soldering flux, press the hot circular capping steel on to the solder until melted, hold cap down with the iron rod, raise the steel an inch until solder is set. Apply a little flux to the vent hole in center of cap, touch a drop of solder to it with the tipping copper, and the can is sealed. Beginners will find many more things to learn, such as retinning capping steel and coppers, formulas for making flux and for cleaning, formulas for processing, blanching, exhausting, cooling, syrups, etc., to write all of which would make this article too long. WM. H. PARSIL.

Middlesex Co., N. J.

No sense in buying a baby chick and then giving care which nothing less than a giant could stand.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

True Value of Beardless Barley.

Is beardless barley as good for general crop as two-rowed barley? I can raise as much barley per acre as I can oats, and can use it to feed all kinds of stock, but object to barley with whiskers.

Wayne Co., N. Y. G. A. C.

Beardless barley yields from 15 to 45 bushels per acre, with us here in Central Ohio. On the same ground, we would expect 30 to 50 bushels of oats, and probably 20 to 50 bushels of bearded barley. A good many farmers are now growing beardless barley in preference to oats, because while the yield is a little less, the price is usually higher, and they figure that it pays them better. The real benefit though, from beardless barley is found in its qualities as a nurse crop. We began growing it about 15 years ago; up to that time we had been using oats, usually cutting them for hay. After one year's experience with the barley we discontinued the oats entirely and we have never yet found the equal of beardless barley for a nurse crop. Bearded barley, in our opinion, would go between the beardless and oats in its value as a nurse crop. We have no other grain that has shown itself anywhere near the equal of the beardless barley in this respect. It does not stool out as vigorously as oats, neither is it as leafy, consequently it shades the ground less. Its straw is stiffer than that of either oats or bearded barley, and it requires decidedly fertile ground in order to make it lodge. It does not grow as tall as bearded barley and therefore shades the ground less. It matures with us about July 12, thus enabling the grower to harvest it for grain if desired, and still get the crop off before the young clover or Alfalfa was suffering any. It also makes good hay. About half the time we cut ours for hay instead of grain, and all kinds of live stock eat the hay and relish it. CHAS. B. WING.

Ohio.

Water Cress.

Will you give me information about how to raise water cress? I have a brook on my farm. W. A. B.

New York.

The method most commonly employed for the establishment of this well-known aquatic plant is the sowing of seed at or near the source of the stream, which is carried by the current and deposited along the margins of the brook, where more or less of it will find lodgement in favorable places, the results bring scattering patches of the plant extending over a long reach of the stream. This makes the gathering of it sometimes quite tedious, if not difficult. The better plan is to sow the seeds in beds along the brook, as the crop is then brought within the confines of a limited territory that is at all times under control and easy of access for the gathering of the crop. When the stream runs through land that is comparatively level, the beds are easy of management, and are made by excavating the earth in strips four or five feet wide and about the same distance in length, when the water is, we will say, 14 inches deep. The bed should be excavated to a depth of 10 inches. Water cress is always found growing best naturally in rather shallow and clear water that has but little current and that has a gravelly or sandy bottom, so that in the preparation of the seed bed it is well to provide an environment that is as near nature as possible.

After this bed has been dug out to the required depth stakes should be driven down at each side of the excavation along the margin of the brook, and a piece of plank fitted across the entrance to keep the water from flooding the bed and possibly washing away the seed. Just enough water should be allowed on the beds to keep them moist until the seed germinates, which it will do quite freely in a few days. When the tops of the beds are fairly grown with young plants, more water should be let on; this is to be done in regular graduation as the plants develop, until they reach maturity, when the planks may be removed from the inlet to the beds as the cress will now be able to take care of itself. When a number of beds are formed an alley-way three or four feet wide should be left between them. Sow the seed about April 15.

Along streams where cress is growing wild, plantations may be very easily established by setting the plants eight to 12 inches apart each way. When plants are available it will be an easy matter to form new beds, as the plants transplant quite easily and grow readily and very rapidly under proper conditions.

K.

Stocking a Fish Pond.

What kind of fish is best to put in a pond fed by a spring brook? It has some small minnows, was once a trout brook, but is minus trout now. I have dammed the brook and it covers an acre or more, is from four to eight feet deep. I was thinking of stocking it with Wall-eyed pike, or would crappies or bullheads be better suited to a place of this kind?

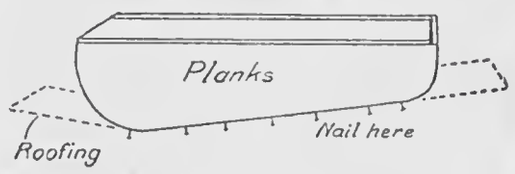
North End, Pa. A. L. E.

This pond is scarcely in shape to use for fish. Before stocking any water with fish provision must be made for feeding, otherwise the fish will not propagate, and while a limited number might live under such conditions they would remain immature and gradually disappear. This pond could no doubt be made suitable for bullheads, Yellow perch or even Black bass by propagating minnows in the brook above the pond and planting such vegetation as will provide plant food for the fry. Your pond probably has a mud bottom, which is suitable to bullheads and perch, and while bass can live in such a pond they prefer gravelly bottom with rocky spots for protection from water snakes and other enemies. Any of the following plants, which can be procured from seed houses at small cost, will grow and spread readily in such a pond and provide food and shelter for the young fish: Potamogeton, Ludwigia, Sagittaria natans and Vallisneria—all of which are oxygenerators, and should be planted in the shallows along the edges of pond. With a proper balance maintained and water temperature running from about 50 to 65 degrees in Summer it would be suitable for perch and bullheads, and probably bass. Such a pond could be used for the propagation of goldfish, and probably return a handsome income on the investment—and in this case you would need no minnow supply, artificial food in small quantities being used. Every Fall the pond could be drained and about $50 worth of young fish sold in a ready market. The cost of raising goldfish is infinitesimal, they make a pretty showing, are hardy and increase rapidly. Goldfish, unlike other species, enjoy constant sunlight, and the less shade around the pond the better.

H. L. H.

An Easily-made Mortar Box.

A handy mortar box may be easily made by taking two planks of equal length and from eight to 12 inches in width. These should be rounded at the two lower corners similar to the runner of a flat boat. Then take a sheet of steel or galvanized roofing, nail it to the



CONVENIENT MORTAR BOX. Fig. 252.

planks, which are used as the sides. The planks should be sufficiently long so the sheet of roofing will extend from one end to the other and cover the ends. The mortar box need not be heavy and the rounded bottom at the ends makes it convenient because of the absence of the corner at either end. A neighbor has a mortar box of this sort and it has made good, for it is continually loaned out in the community. Every farmer should have a mortar box for mixing cement, and this is as easy a way to make a serviceable one as has come to the attention of the writer. W. J.

MRS. SPENDERS: "Oh, John, I saw a sign in Bargen & Co.'s window today that reminded me of what I am most in——" Mr. Spenders (interrupting hastily): "I, too, saw a sign in their window that reminded me of what I am. It reads: 'Reduced to 49 cents.'"—Philadelphia Press.

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HEADQUARTERS FOR FARM SEEDS

Inferior Black Walnuts.

For the past two and in some cases three years nearly all Black walnut trees in this vicinity have borne a large percent. of worthless nuts. Trees noted have been of all ages and in different soils. Some people claim trimming will do it, but that does not stand proving, because some of mine have never had a limb removed. My vigorous trees on heavy ground have a great many young shoots on the inner limbs. Is it advisable to trim these off, and can you suggest anything to improve the nuts? H. H. A.

Millville, N. J.

It is quite probable that the cause of "worthless" walnuts referred to is either lack of proper pollination or droughts that have prevented normal development. This tree is native to many parts of New Jersey, and has no disease preying on it or the nuts, so far as I know, unless it be an insect that in some places infests the hulls. I have seen their larvæ in the hulls of walnuts in Ohio and elsewhere ever since I began to gather the nuts for eating but I have not noticed that they had worthless or inferior kernels. Pruning off some of the branches would not injure the nuts on those remaining. As a rule there is no need of pruning walnut trees after they have once been headed at the right height and kept from making forks that are likely to split when the trees get large. I would think the sprouts referred to will not make objectionable branches but if they should show that they will do so any such should be removed. Good, deep, rich soil is what our native walnut trees or any of the foreign kinds need and if they do not have it supplied naturally the soil should be enriched. A heavy coating of old rotten trash is excellent and if there is animal manure in it so much the better. I have had fine success with this treatment for pecan trees.

H. E. VAN DEMAN.

Quick Tank Filling.

I have found that about two working hours out of every 10 have to be spent in tank-filling, keeping the team and two men idle. To prevent this waste of time I have installed a centrifugal pump, which throws 75 gallons per minute. The water is obtained from a spring and has to be raised about 10 feet. We are fortunate in having electric power on the farm, and have run a wire a short distance to the spring. One of our neighbors has solved the problem in another way. He has elevated a large tank which he fills with a gas engine. The spray tanks can be filled from this in four or five minutes by means of a hose.

Wayne Co., N. Y. F. W. CORNWALL.

Transplanting Large Cherry Trees.

Will you advise as to moving several sour cherry trees, about 15 years old, and five inches in diameter at the base? Is there a fair chance of their living if carefully handled? E. F. D.

Billerica, Mass.

Transplanting trees of this age and size is nearly always attended with more or less risk, particularly fruit trees, and before removing them to new quarters, they should have a season's advance preparation for this important and perhaps critical event. If this is properly attended to and the work of removal and transplanting carefully done the chances of their living will be greatly enhanced. This Spring take a spade and dig a narrow trench all around each tree five or six feet in diameter, cutting off all roots running in a horizontal direction and carefully pruning the bruised and broken ends, going deep enough to get all horizontal roots, after which fill the trench with soil. This severing of the roots will force the tree to make myriads of fibrous roots running in every direction through the ball of earth about the tree. Next Fall or Spring the removal may be made, and should be done with as much soil adhering to the roots as it is possible to handle. The hole to receive them should be dug at least one foot larger in every way than the ball of earth attached to the tree, and filled in to the proper depth with good top soil, and this filling in around the roots should be of good rich soil. Care must be taken that all cavities under the tree are filled and the earth well firmed around the roots as filling in progresses. If these instructions are carefully followed, the chances of success in this work will be greatly favored. K.

Cadillac Standard of the World

How much should an automobile weigh?

Suppose that railroads should offer you as an inducement to trust your life in their hands, the argument that the weight of their rolling stock had been reduced to the lowest notch.

Suppose in the locomotive, they make the boiler wall so thin and so light, that it will barely withstand the normal pressure for a limited time.

Suppose they make the trucks, the wheels, and the axles barely strong enough to support the engine under the most favorable conditions.

Suppose they make the connecting rods barely strong enough to turn the wheels.

Then, going back to the cars, suppose they make the trucks, the wheels and the axles no stronger than just enough to carry them a few thousand miles.

Suppose they make the frame barely strong enough to support the body of the car.

Suppose they make the body barely strong enough to hold together.

Suppose they reduce the weight of every vital part to the lowest point.

Would you trust your life in the hands of a railroad which offered you such inducements?

Safety demands strength.

Strength demands material.

Material means weight.

If these be true, then:—

Absence of weight must mean absence of material.
Absence of material must mean absence of strength.
Absence of strength must mean absence of safety.

These things apply, whether you have in mind railroads or automobiles.

How much is your safety worth?

Cadillac materials are selected for their adaptability and fitness for the functions and duties which they must perform.

The designs of the various parts are adopted only after they have proven themselves to embody liberal factors of safety.

The Cadillac car will appeal to you because of its strength and its security, rather than upon the basis of lightness.

The Cadillac will appeal to you for its comfort as the luxurious Pullman appeals to you in contrast with the light-weight flimsy coach.

The Cadillac will appeal to you for its smoothness and steadiness in running, as the majestic liner is in contrast with the light weight barque in a choppy sea.

The Cadillac will appeal to you because of its sturdiness and its endurance, rather than upon the basis of fragility and impermanence.

Because of its strength, because of its enduring qualities, the Cadillac is an economical car to own and to operate, day-in-and-day-out and year-in-and-year-out.

The Cadillac is economical in fuel.

Hundreds of 1914 Cadillac users are averaging from 15 to 18 miles per gallon of gasoline in every-day service.

Special test runs have been made showing more than 22 miles per gallon, but this cannot be taken as a criterion for the average user.

In the recent test by the Royal Automobile Club of Great Britain, which won for the Cadillac the Dewar Trophy, the 1914 car averaged 17.17 miles per gallon for 1,000 miles over give-and-take roads—in spite of frequent stops and starts in testing the electrical cranking device.

It consumed less than one gallon of lubricating oil in traveling the 1,000 miles.

Hundreds of users are averaging more than 5,000 miles on tires. Some users are reporting from 6,000 to 8,000 miles and even more.

We believe that in tires, fuel and oil, the 1914 Cadillac will average more mileage than any car which approaches its efficiency.

Because of its standardization, because of the interchangeability of its parts, because of its sturdiness, because of its endurance, the Cadillac has been called,

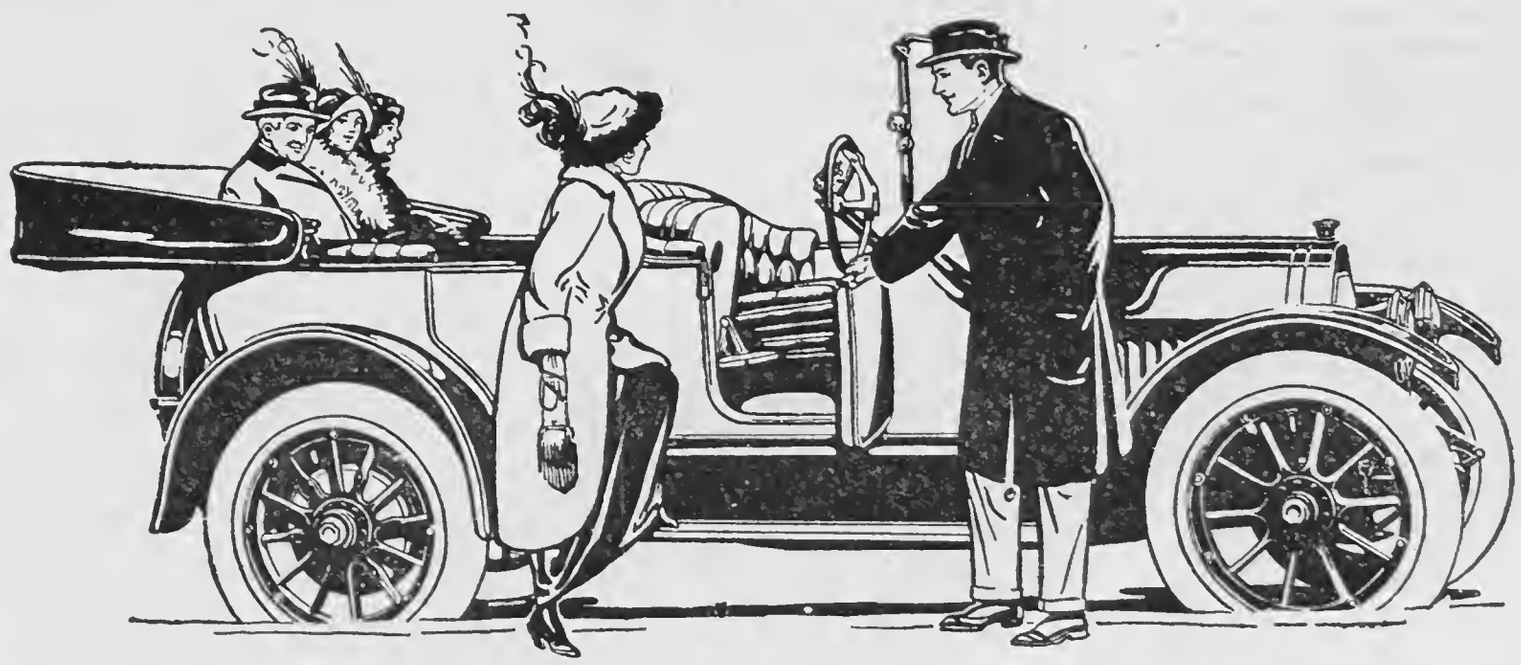
The Everlasting Car.

That this appellation is merited, we need but point to the 75,000 Cadillacs produced, all of which to the best of our knowledge are still doing duty, the oldest after eleven years of service—and many of them after having passed the 100,000 mile mark.

How much should an automobile weigh?

It should weigh enough to enable it successfully to perform the duties required of it.

It should weigh enough to enable it successfully to perform those duties day-in-and-day-out and year-in-and-year-out, at a minimum outlay for operation and maintenance,—performance and satisfaction considered,—and with a minimum depreciation in value after years of service.



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If you are not acquainted with the Cadillac dealer in your territory, write us for his name and address

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How Much Spray Material Made.

Can you tell me how many pounds of lime and of sulphur it will take to spray 100 trees, 50 apples and 50 peach trees? Is salt any benefit to the trees? If so how much will it take to spray the 100 trees? W. W. P.

Parsonsburg, Md.

It will take about 50 gallons of lime-sulphur solution diluted one to nine to spray, for San José scale, 50 apple trees 10 or 12 years of age. Half that amount ought to cover 50 peach trees six or seven years old. Variation from this amount will depend upon the size of trees, the amount of pump pressure, kind of nozzle used, and very much upon how the man behind the gun handles the spray rod. To make 50 gallons of the above solution it will require: Fresh stone lime 20 pounds; flowers or flour of sulphur 15 pounds; water 50 gallons. Salt is not used nowadays for this mixture. For a small number of trees it is more convenient to buy the concentrated solution, unless one is equipped for making the home boiled. Five gallons of the concentrated solution will make 50 gallons of mixture ready to use and will cost about $2.25. W. R. B.

Composting Muck With Lime.

There is an article on page 527 under the head of "Commercial Humus." In part you say: "We do not hesitate to say that farmers who own these pond holes and swamps can haul this muck up to a dry place, mix it thoroughly with slaked lime, work it thoroughly once in the Winter, and at the end of six months have as high a quality of humus as is offered for sale by most of the leading companies." Would you let me know what proportion of lime to use? If I stacked it in the field, first a six-inch layer of muck, then one-half inch slaked lime, then six inches muck and more lime in alternate layers, to the depth of four or five feet, would that be lime enough? That would be one to 12. Should it be roofed over or covered with swamp hay? I presume that common lump lime, air-slaked, is what you mean. Would this do to raise field beans on gravel soil? L. F. P.

Maine.

The general rule is to use about 200 pounds of air-slaked lime to each ton of the muck. That means about one part in 10. Some farmers use less than this, but for quick and active results this amount of lime will be found useful. The lime referred to is air-slaked lime, which should be lump lime left exposed until it crumbles to a powder. It would be advisable to cover the pile of muck over, although this is not necessary. You must remember that the muck is valuable chiefly for the amount of nitrogen which it contains. As a rule it is very deficient in both phosphoric acid and potash. The bean crop is peculiarly in need of both phosphate and potash, and for a complete fertilizer, this should be added to the muck. A good plan is to use a quantity of the fermented muck and harrow it in after plowing. Then drill in a combination of three parts acid phosphate to one part muriate of potash, using 400 or 500 pounds of this mixture per acre. In this way the muck can be used to supply the nitrogen, while the chemicals complete the balanced fertilizer. If you have quantities of hen manure or horse manure, which can be thrown into the pile from time to time as it is built up, you will quicken the ferments and hasten the preparation of the muck.

THE OHIO CLOVER FAMILY.

Many farmers in growing clover confine themselves to one or two varieties, while there is a whole family of these legumes that will grow on their farms, each with a special place where it will fit in better than any other. The two Red clovers, Medium and Mammoth, are biennials under ordinary conditions. In Central Ohio the Medium Red is ready to harvest about the 20th of June and the Mammoth Red about the middle of July. The latter should always have a strong seeding of Timothy to make it fine and hold it up, otherwise it grows too coarse and is likely to fall down. When thus seeded it makes a very large crop of good mixed hay. Alsike, a perennial clover, is valuable as a hay crop and should be sown with Medium Red, one part Alsike to two parts red. This combination will make more hay per acre than either will alone. Alsike is also the most valuable of all clovers for pasture on account of its perennial habit. The little White clover, also a perennial, is valuable in pastures, as it is permanent and adds to the amount of feed that the permanent pasture will produce. It is also very useful as a lawn grass, and should be sown in every lawn where a water supply is not at hand for use in dry weather. If not allowed to form blossoms and ripen seed it will remain green and fine in very dry weather. The only annual clover is the Crimson, the handsomest of all the family. Its value for hay or pasture is not equal to the other clovers. But where it grows well it is one of the very best cover crops. Sown in a late cultivation of the corn it grows later in the Fall and earlier in the Spring than any of the clovers. On good rich corn land a crop can be grown after corn and be in full bloom to plow for corn again the next Spring, thus helping to keep up the humus supply where corn is grown two years in succession. However, it is not a sure crop in Ohio, except on good rich dry soil.

Sweet clover, formerly known as a weed and still so regarded in some places, is coming into prominence. Where it has been tried there are two kinds, the white and yellow blossoms, the white being the better variety. The great value of the Sweet clover is in its soil improving powers. It will grow on very thin worn land if lime is present in sufficient quantities. On eroded hill land it is very valuable as making the soil conditions possible for Blue grass to follow it. It pays to have some of it in permanent pasture or fields to be pastured for a few years. Experiments prove that it has a value for hay when properly cared for. However its greatest use so far is as a soil restorer. It is also a biennial plant.

Alfalfa, a perennial plant, is the greatest of all the clovers where it can be grown successfully. It is one of the most widely distributed of all forage plants, and we are coming to believe that it can be grown on most farms if the conditions it demands are complied with. Its value is so great that it is well worth while going to both time and expense to establish at least a few acres on every farm where it can be grown. With this splendid array of clover to choose from there are very few farmers who might not, instead of one variety, be successfully and profitably growing at least four or five kinds of clover. When nature has been so lavish of her gifts to us of these legumes let us make the fullest possible use of them.

Ohio. HORATIO MARKLEY.

THE TENANT'S SHARE.—I notice on page 298 some questions asked by C. S. in regard to working a farm on shares, answered by W. M. K. If it is worked for one-third, and owner finds stock and tools, why should the tenant expect the owner to pay for thrashing the grain, any more than for husking the corn, or digging the potatoes, or any other part of the regular work? As to baling hay, if tenant is allowed to sell hay, which very few dairy farmers permit, it seems to me it is "up to the tenant" how he shall market it. Let us hear from others.

E. M. F.

"PA, did you eat any of the cook's dough?" "Of course not, child. What makes you ask that?" "Because I heard ma say she was going to make you cough it up."—Baltimore American.

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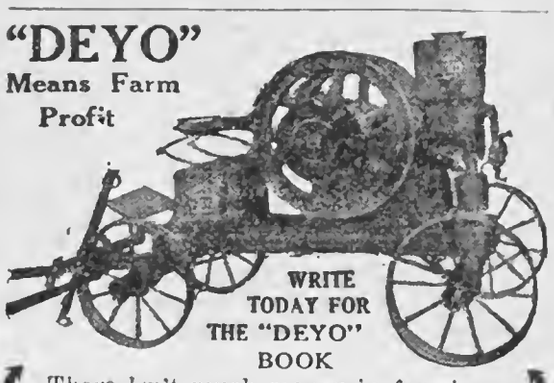

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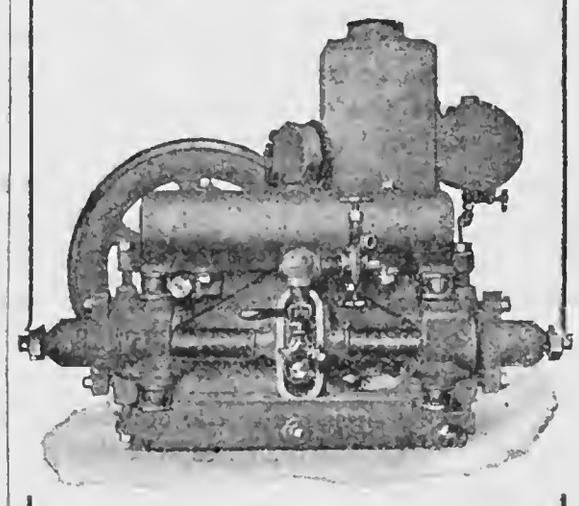
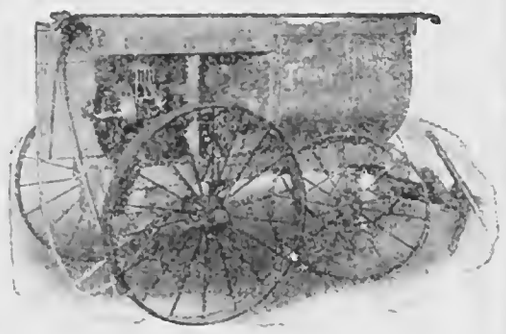
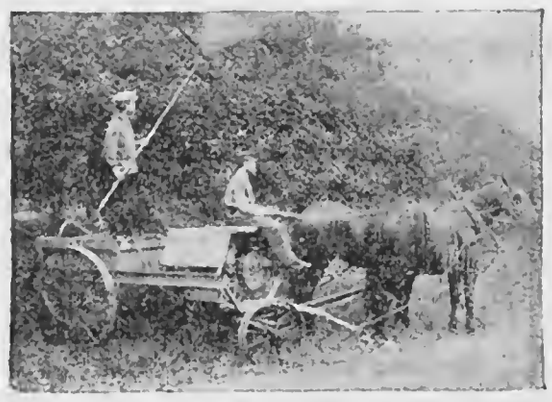


"Friend" Motor Pump



"Friend" Prince



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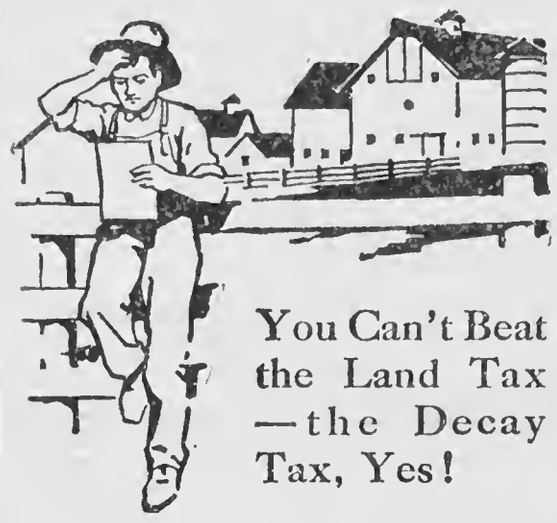

You Can't Beat the Land Tax—the Decay Tax, Yes!

The decay tax is high. A worn out paint coat results in rot, repair bills, run-down, hard-to-sell houses and a bad neighborhood spirit. That's a heavy tax, but you can dodge it. Paint *in time* and paint right. Good paint is far cheaper than new buildings.

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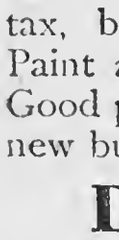

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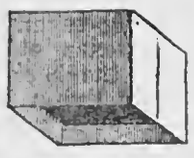

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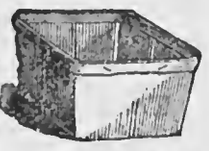

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which will weed, mulch and cultivate a strip six inches wide. $6.20 buys the Standard size machine, number 8½D, express paid.

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Send for a "Barker," "The Best Weed Killer Ever Used," and have it handy when you need it; or if more information is needed, write us Today—Now.

The Barker Mfg. Co., David City Nebr.

THE MAIL BAG.

Rock Phosphate on Strawberries.

I am going to set out two acres of strawberries this Spring, and would like to know if it would be advisable to use some rock phosphate. If so how much would you advise using to the acre, and what is the best way to apply it? I have a good rich loam soil. E. R.
Herrin, Ill.

No, we do not believe the rock phosphate would have any effect upon the strawberries. We should as soon expect a trotting horse to make a good record on a diet of rye straw. The strawberry demands *available* plant food if you are to expect this crop to do well. If your soil needs phosphoric acid and strawberries are wanted use acid phosphate. The rock phosphate may have value in permanently enriching the soil but for garden and fruit crops you need *active* plant food.

Cover Crop tor Light Soil.

What is the best cover crop to improve light soil—to be sown now and turned under in August? B. R.

For a light soil, the object being to put all the humus possible into it, we should sow the ground this Spring with Canada peas and oats as often described. Plow this crop under in late June, and give a fair dressing of lime. Then work up the soil at once and sow buckwheat and Cow-horn turnips. Plow this crop under in August, and you will be ready for seeding the Winter grain or grass.

Marketing Celery and Lettuce.

Could you give me any information in regard to marketing celery and lettuce?
New York. E. E. H.

Lettuce is marketed in baskets, barrels and crates. Perhaps the most popular package is the basket shaped like an inverted bell, holding about one bushel. Celery shipped here mainly in the rough, set up endwise in crates about three feet square, and later washed and bunched in warehouses here. When washed and trimmed on the farm it is packed in a variety of shallow boxes, sometimes tied in bunches of three stalks and sometimes singly.

Charging Effervescent Beverages.

When sweet cider, or for that matter any other non-alcoholic drink, is being bottled, what substance is added, and how, to make it sparkle or effervesce? What makes the so-called soda water or "soda pop" effervesce and how is the soda water made? G. B.
Meadow, Va.

The substance added in each case is carbonic acid gas forced in under high pressure, usually more than one hundred pounds per square inch. Soda water is merely common water to which this same carbonic acid gas has been added, so carbonated ginger ale, carbonated drinks of all kinds, are the drinks to which this gas has been added.

Leather Waste as Fertilizer.

Would the leather dust waste from a shoe factory have value as a fertilizer to use on lawn or garden? F. H. C.
Penn Yan, N. Y.

Very little if any. Leather contains considerable nitrogen, but is so unavailable that it will lie in the soil for years practically unchanged. It is doubtful if you would see any benefit from it for three years or more. It would not pay to spend money for this leather.

Fertilizer for Silage Corn.

I have three acres of land from which I cut rye last season, which I intend to plant to silo corn. Having lost my seeding and with no manure to turn under what kind of fertilizer would you advise using, and how much necessary to produce a good crop? How should the corn be planted to produce the most feed regardless of grain? C. J. R.

On such a field we should use one of the commercial corn mixtures, or two parts by weight of tankage, three parts acid phosphate and one part muriate of potash. Use at least 600 pounds per acre. From choice we should drill this corn so the stalks will stand about nine inches apart in three-foot drills.

Sawdust for Orchard Mulch

We have set out an orchard which we intend to manage after mulch method. We are cutting a timber lot, and there is quite a demand for the sawdust at 50 cents per load. We think we might better hold it for mulching the trees. Do you see anything against using it as a mulch? F. M. C.
New Jersey.

Our experience with raw sawdust has not been satisfactory for mulching trees. It is too sour, does not decay rapidly, and thus does not furnish a food form of humus. After the sawdust has been rotted thoroughly it will prove satisfactory. If the sawdust can be used as bedding, and thoroughly soaked with the liquids, or kept for a few months with the horse manure, it will then make a fair mulch for the trees, although we should use lime in connection with it. Raw sawdust, however, is not good to put around trees, and in our own case we should let the sawdust go at 50 cents a load.

Canada Peas and Oats on Poor Land.

Are Canada peas and oats the best crop to grow on poor moist land for hay? This hay is for dairy cows. Will lime help this crop? L. F. C.

It is a mistake to suppose that oats and peas will give a good crop on poor land. This crop requires good soil, either naturally strong, or made so through the addition of fertilizers or manures. The lime will help on such land, but you can hardly expect a profitable crop unless you feed it well.

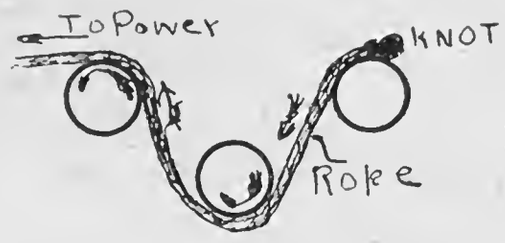
Preparing Sod for Potatoes.

I am thinking of planting seven acres of sod ground to potatoes, which I am going to cover with manure, and apply 300 pounds of phosphate analyzing 10 per cent. phosphoric acid and eight per cent. potash, applying the latter after the ground is plowed. Would an additional amount of rock phosphate increase the yield? If so how much should be applied? C. J. R.

No. You will not be likely to benefit in this year's potato crop by using raw rock phosphate. The potato is a quick-growing crop and needs available plant food. The rock phosphate, used with manure, might help clover or grass next year, or in following years, but for a crop like potatoes use available plant food.

Taking Kinks Out of Rope.

Some time ago I saw a question asking how to avoid kinks in a hay-carrier rope. I experienced this annoyance myself, and the following is the only successful remedy I could find: I procured a swivel the proper size for the rope, and spliced it in the end of the rope with a long splice, so it would run through the carrier block. Then instead of tying a knot in the end of the rope, I removed the pulley wheel and replaced the axle,



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putting it through the eye in the swivel. Now, when I pull down the fork, I can take all the twist out of the rope with ease. The sketch explains it.
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For What Some Ask for Three

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Now 16 makes of tires cost more than Goodyear prices—some up to one-half more. You can buy four Goodyear tires now for what some makers ask for three.

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Yet every high-priced tire lacks these four exclusive features:

Not one prevents rim-cutting in our satisfactory way. We control this feature, and no other faultless way has been found to end rim-cutting completely.

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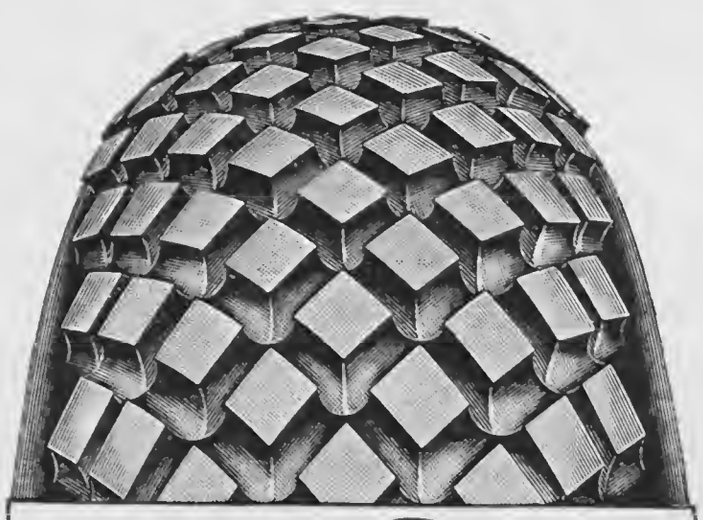

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CROPS AND PRICES.

Auction sales of farm products are unknown here. The leading farm industry in this section is dairying and potato raising. The dairy products are as a rule sold to the creamery as sweet cream. Below are prices paid at two creameries about 20 miles apart, showing variation in price for the year 1913. This cream is collected at the company's expense and will test about 20 per cent. butterfat. There is so little interest taken in production of beef here I would not attempt to quote prices on beef cattle. Dairy cows to ship to market bring from $50 to $75, with an occasional sale of something fancy for $80 or $90. Apples are the only fruit grown for market here. The producer does the picking and furnishes the barrel, and delivers at the shipping point. The purchaser does the packing. The price paid for crop of 1913 was $2 per barrel for the poorer kinds, and $2.50 for standard varieties like Baldwin, Spy and King. The larger part of potato crop of 1913 has been sold for 50 cents per bushel at shipping point, the bushel being the unit of measure here. Buyers are now offering 60 cents per bushel.

Price of butterfat at creameries 20 miles apart: Skowhegan Jersey Creamery—Jan. 40, Feb. 38, Mar. 38, Apr. 38, May 36, June 34½, July 36, Aug. 36½, Sept. 37, Oct. 38½, Nov. 40, Dec. 39. Ferndale Creamery Harmony—Jan. 36, Feb. 36, Mar. 36, Apr. 35, May 31, June 30, July 33, Aug. 34, Sept. 36, Oct. 37, Nov. 38, Dec. 39. H. O. B.
Canaan, Me.

April 19.—The first half of April was cold and rainy; farmers getting behind with their work. No gardens plowed or potatoes planted yet; roads drying up. Wheat looking fine; grass will soon do to turn out on. Live stock looking well, very little selling at present. Corn 80; wheat 90; hay $11 to $12; potatoes $1 to $1.25; butter 20; eggs 16; chickens 12.
Chesterhill, O. W. B. H.

This is largely a fruit section. It is reported the peaches are killed, a large percentage at least, by the extreme cold of the past Winter, but hope it will not be as bad as reported. Apples are in good shape; they promise a large crop, but of course farmers are not buying barrels yet. The seasons are later almost every year; that is good for fruit, holding it back, but makes it hard to raise corn and other Summer crops; seems too short for most of them. Hay still holds at $14 per ton; potatoes 60; butter 22; eggs 18. Horses and cows are cheaper, but still bringing pretty good prices. Wheat has stood the Winter fairly well so far; now with a warm rain and sunshine wheat and grass will soon have the appearance of Spring that will be welcome to most farmers. W. D. S.
Newfane, N. Y.

The sugar season has not been as good as some years and some have taken in their buckets. A few have commenced to plow and fix fences. There is no local demand for hay, as silos are supplying the deficiency of fodder. The demand for milch cows is quiet. Eggs 18 to 20; jar butter 21. Meal $1.45; bran $1.55; middlings $1.60. P. S. S.
Mayville, N. Y.

Wheat is looking fine. Sowing clover seed, and pruning is going on. No hog cholera here that we know of. April is very windy, with no snow or rain as yet. Auction sales are over now; horses $50 to $200; cows $50 to $125; fat hogs $8 per hundred. No hay moving. Potatoes 45; corn at car 75; butter 25; eggs 17. L. T.
Eaton Co., Mich.

We have had a very severe Winter here; it continued through March, and even since April set in have had some ice. Peach, pear and cherry trees are now in full bloom, with prospects of two-third crops, caused by late freezing in March and April. Wheat and meadows are looking extra well, with unusual prospects for a big wheat crop. Good milch cows $50 to $100; stock cattle six to eight cents; hogs seven to nine cents; horses $100 to $175; good mares $200 to $250. Wheat $1; corn $1.05; oats 70; potatoes $1. Hens 13½; eggs 15; butter, nice, 20. The continued rains have put the farmers considerably behind with their Spring work. W. H.
Washburn, Tenn.

FIGHTING THE SCALE.—This section has something of a reputation for fruit, the local storages holding approximately one-quarter million barrels, and the San José scale is not dying out that we know of, except where persistent spraying is practiced. We do know of a good many trees, including some whole orchards that have died from the effects of the scale. Nature may be assisting in their removal by providing enemies that prey upon them, but she needs the assistance of man with a power pump and a good strong solution to remove them before they remove the trees. We know of one school district in which seven men have bought rigs this Spring that never owned one before as an absolute necessity to save their trees from these pests. Help nature and she will help you, but don't impose too much on her generosity.
Niagara Co., N. Y. S. A. P.

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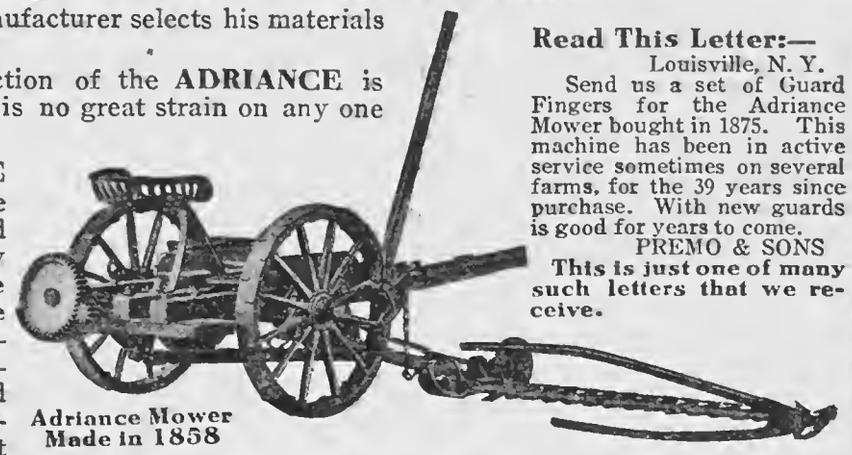

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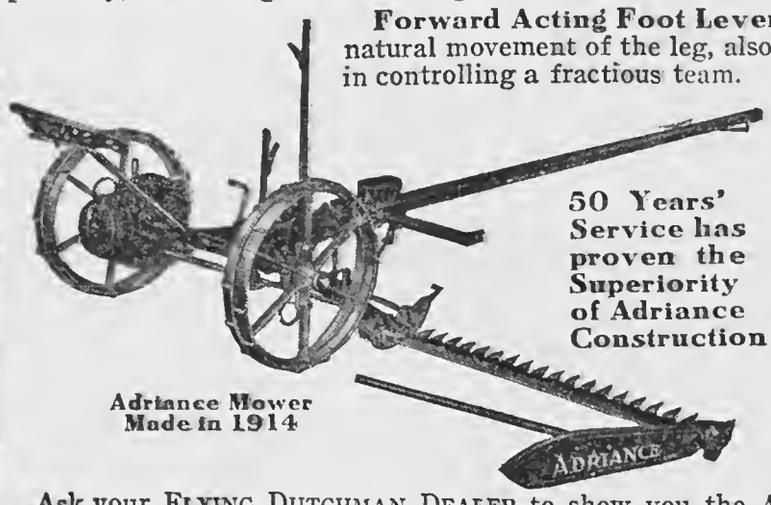

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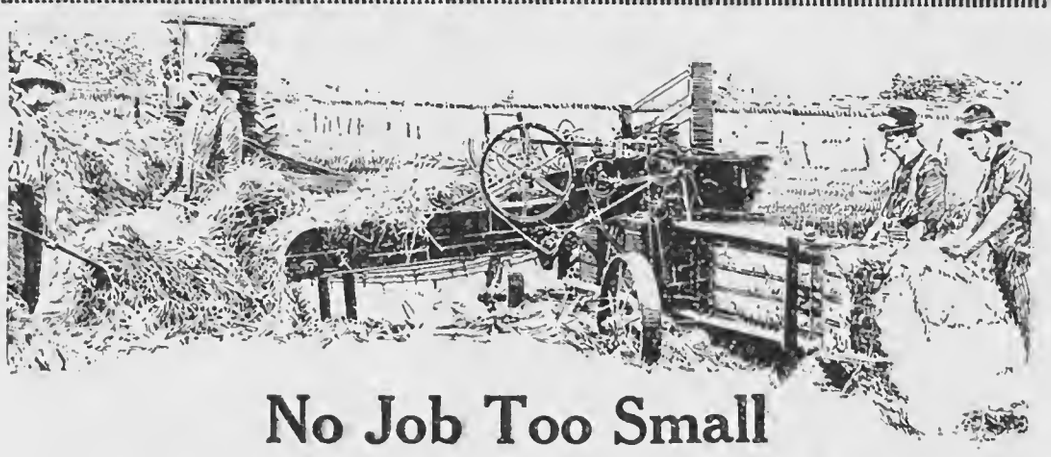

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The Home Acre.

Destroying Bindweed.

Can you inform me how to clear my soil of a vine known here as the Virginia creeper, or morning-glory, a small creeping vine which mats very thickly over and in the soil? I have read that a seeding of Alfalfa would destroy the morning-glory; I suppose the common morning-glory is meant. The seed of the plant I have called the Virginia creeper very much resemble an onion seed. There seem to be different varieties of the same plant, some with pink blossoms and some with white. T. M.

Willard, N. Y.

The weed referred to is bindweed or morning-glory; Virginia creeper is a different vine, and we have never seen cases where it became a troublesome weed. There are two objectionable morning-glories common in the East, Convolvulus sepium or hedge bindweed, flowers wholly white, or white striped pink, and field bindweed, C. arvensis, much smaller, with pink flowers. They have fleshy creeping rootstocks which bear numerous buds, and every bit of the root is likely to grow when broken up by the plow. This makes the bindweeds extremely difficult to eradicate; they propagate far more freely in this way than from seed, which is often produced scantily. Short rotations will control bindweed, late-sown hoed crops or rape being useful. Frequent use of a broad-shared cultivator will exhaust the weed's vitality. Pasturing with hogs is also advised. Seeding to Alfalfa is recommended as it tends to smother the bindweed, while the frequent cutting keeps down the top growth. The Alfalfa should be followed by a hoed crop, which will finish the destruction of the bindweed.

Growth of Cherry Grafts.

I grafted a cherry tree January 24, and it grew. There was a little tree besides the one I grafted in January, and I put a graft on it in March; they both grew, but the January graft is five feet taller than the one I put in in March. Why is this? The first graft could not start till the sap started in the Spring, neither could the graft that was put in in March. G. B. H.

Mechanicsburg, Pa.

It may be that the tree that made the strongest growth from the grafts set was the most vigorous. It is never wise to graft a feeble tree or branch with the expectation of getting good results. But it may have been from some other cause, such as a better union between the stock and scion. No one can always tell "the whys and wherefores" of things that occur, but it is well to try to understand the reasons so as to have them for future guidance. Cherry trees should always be grafted early, but January seems very early for Pennsylvania climate. Severe cold is almost sure to injure grafts that are set, and it must have been cold the date in January.

H. E. VAN DEMAN.

Strawberries for New York.

What varieties of strawberries are most suitable for Onondaga County, N. Y.? We wish to set one acre to about four or five varieties for market purposes. F. S.

Liverpool, N. Y.

Ten years ago I would probably have been very ready to advise F. S. what varieties to set, and possibly would have strongly recommended certain varieties on the strength of their behavior for a few years under my conditions. The safest way is for each grower to test out varieties for himself, as many varieties are very variable under different conditions, even behaving very differently occasionally on adjoining farms and in different fields on the same farm. There are, however, a few varieties that seem to do well under a wide range of conditions, and it is safe for the beginner to stick to these until he has had time to test out others in a small way.

Michel's Early has proven one of the best extra earlies with me, but like all extra earlies will not give as heavy a yield as the later varieties. Senator Dunlap seems at home under many different conditions and closely follows Michel's Early in season. If not allowed to grow too thickly it will give a good crop of handsome berries. Sample, Wm. Belt and Stevens Late do well over a wide range and produce a heavy crop of first class berries under good culture. All are strong growers and should be restricted. With the exception of Sample all have perfect blossoms. Sample has a pistillate blossom and must be set near staminate blossoming varieties to secure pollination. Sample is my very best berry. Let F. S. set aside one row for testing varieties and set a dozen or 25 of each variety. Then keep close tabs on this row at fruiting time and don't go wild over a variety from one season's trial. The probability is another variety will beat it next year. Among others to try in this row be sure to include Brandywine, Bubach, Chesapeake, Columbia, Glen Mary, Prolific and Uncle Jim. If any strawberries are grown near him F. S. can do no better than to get the experience of his neighbors with varieties. G. R. S.

Small Greenhouse for Spring Use.

I have just built greenhouse 11x30 feet, ridge about six feet, front side two feet high, 10.3x6 sash on south side, north roof papered, north side four feet high. I wish to start melons mostly, and perhaps transfer a few tomatoes, etc., from hotbed. Morning sun strikes two feet of north wall (it is dug into south side of hill). Do you think it suitable? Can I put bench along north wall? N. E. B.

Southold, L. I.

If I understand it you wish to use your greenhouse for, or in place of, a cold frame. That will work all right, and it is done quite often, but I do not think it would be advisable to put a bench along the north wall unless the sun will strike the melon or tomato plants you put there for a good part of the day. After we fill our cold frames with tomatoes we then clean all plants out of the hothouse (small greenhouse) and spot tomatoes in it just as we do in the cold frames. We have no fire in it at this time. It should be remembered, however, that there is much more space to heat up in a greenhouse than in a cold frame, and in cold weather such as we are having this Spring one can handle plants to better advantage in cold frames. TRUCKER, JR.

Germs of Potato Scab.

I notice the ability of scab germs to winter in the soil is in question, and will give a bit of experience. When you distributed the Carman No. 1, I came honestly in possession of eight scabby little tubers. They were cut fine and treated best we knew how. Most of them were planted in the kitchen garden, but a few hills displaced so much of the mangel crop, the resulting crop was of course very scabby; the next year it was soaked in corrosive sublimate and planted on the patch occupied by the mangels the previous year. That portion where potatoes grew both years was scabby, but the remainder of the crop was smooth. E. L. S.

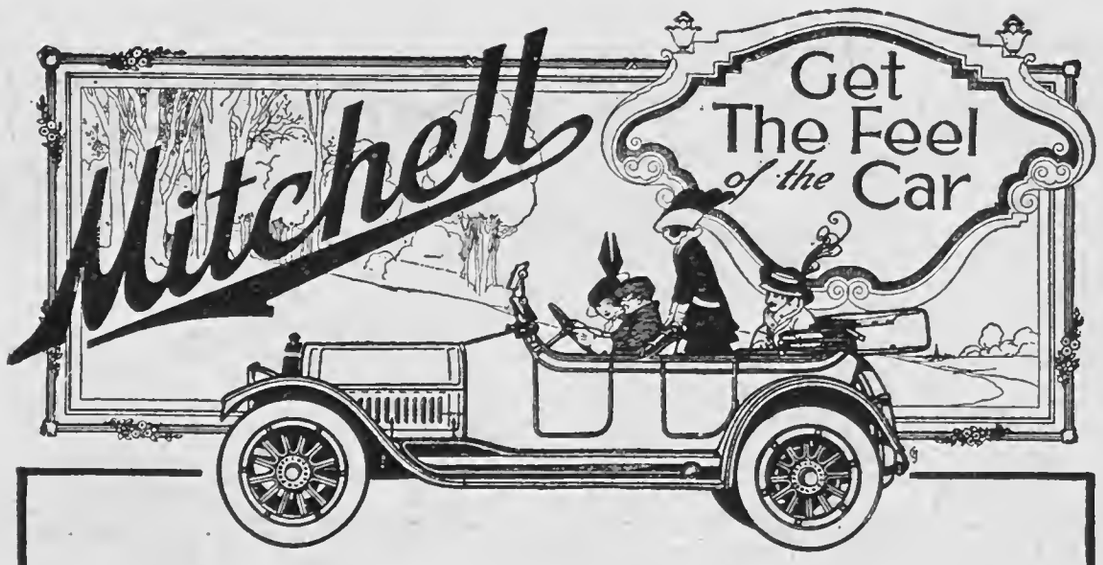
North Truro, Mass.

This experience supports scientific results. The scab disease is caused by a germ which can live over in the soil for several years. We might use perfectly smooth seed, or even soak thoroughly in the formalin solution, and yet have a scabby crop if these germs are already in the soil. The use of lime on such soil would stimulate the growth of those scab germs—while plowing under a green crop would have the opposite effect. It is not safe to follow potatoes with potatoes whenever the crop shows scab. We know of a farm where a five-year rotation is followed. Yet one field always grows a scabby crop even with four years in between.

Onion Smut.

The Wisconsin Experiment Station announces that experiments with a solution of formalin in water have shown the value of this remedy.

"The solution which brought most success was made at the rate of two ounces of formalin per gallon of water and applied at the rate of 145 gallons an acre, or about a gallon to every 300 feet of row. By means of an ordinary two-gallon oil can fastened by iron clamps on to the seeder and a soft lead pipe capable of being twisted in the proper direction, the solution can be quite easily applied. Smut is the most prevalent fungus disease attacking the onion. It is caused by a parasite living within the soil. As the land which is especially adapted to onion growing is somewhat limited, the same fields are too frequently planted to this crop year after year, with the result that the soil becomes charged with disease organisms."



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Sixes or fours—the Mitchell-Lewis Motor Company makes both. *Our idea is to suit the public taste.* We are not trying to cram either down your throat. We want you to try them both, sit in the driver's seat, get "the feel of the car," note carefully the action of the engine, the brakes and the steering apparatus. You can get the pulse of any car by doing the driving yourself. *And you can't get it any other way.*

You ought to know your own car even if you hire a driver. You ought to know it *before you buy it.* That definite process of acquiring information will often save you a lot of money and worlds of trouble. It eliminates all element of risk. *You buy with your eyes open*, and you don't buy through the eyes of somebody else who might happen to be prejudiced. We believe that anything which costs as much as an automobile ought to be bought that way—*and no other way.*

We are asking prospective customers to buy Mitchells that way. We are asking them to drive the car themselves and get what is known as "the feel of the car." It can't be gotten by sitting in the tonneau or even alongside the driver. The only way to reach the pulse of a car is *through the steering wheel.* The matter of detail may be learned afterwards if the car behaves well enough to arouse your interest. We think the Mitchell car whether Six or Four is the buy of the year. Try it yourself and see how close we have come to the truth.

Here is the Equipment for all the Mitchell Models Which Is Included in the List Prices:

Electric self-starter and generator—electric lights—electric horn—electric magnetic exploring lamp—mohair top and dust cover—Tungsten valves—Jiffy quick-action side curtains—quick-action two-piece rain vision wind-shield—demountable rims with one extra—speedometer—double extra tire carriers—Bair bow holders—license plate bracket—pump, jack and complete set of first-class tools.

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Eighty Years of Faithful Service to the American Public

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Galvanized—Corrugated—Extra Quality Coating—

SAVE ALL THE HAY—PAY BIG PROFITS!

More economical than barns or permanent sheds. Easy to put on and take off. Made in sections, thus occupying little space when not in use. Made in all sizes.

Mr. Hammitt of Hardy, Neb., says: "Your cover preserved my hay fine. I got $1.00 per ton more for stack protected with your cover than for other stacks in same field."

The saving on the first stack of hay will more than pay for Martin's Metal Stack Cover. With ordinary care will last 15 to 20 years.

SPECIAL OFFER! Write today for free, illustrated literature and special introductory price to first purchaser in each locality. Write QUICK!

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900-912 East Second St., Wichita, Kans. 25 S. Desplaines St., Chicago, Ill.

Stocks carried in Wichita, Kansas, Chicago, Illinois and Canton, Ohio. 10

Do Better Disking and Raise Bigger Crops

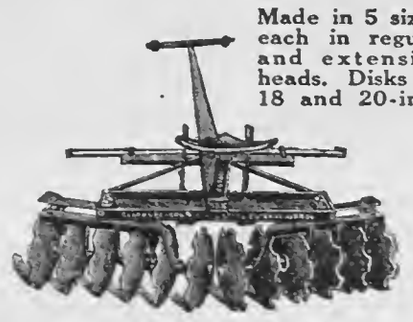
—You'll Make More Money

Regardless of how fertile or how poor the land, you can make more money by doing better disking. You can grow bigger crops at proportionately less cost.

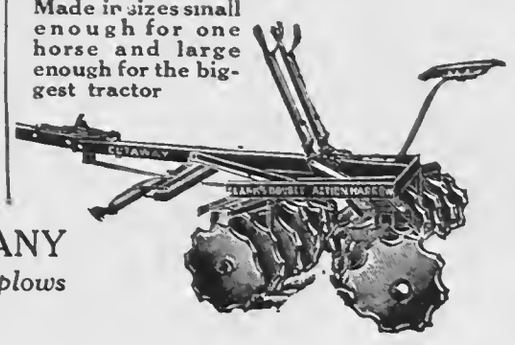
Cutaway (CLARK)

disk harrows will make you more money—they are specially designed for intensive tillage. Many farmers not only grow *bigger* crops at *proportionately* less cost by using CUTAWAY (CLARK) disk harrows, but they raise more per acre at less cost per acre. There is one for the biggest tractor or the smallest horse. Ask your dealer to show you a CUTAWAY (CLARK) disk harrow. If he doesn't sell the CUTAWAY (CLARK), write us. Don't accept a substitute. We ship direct where we have no agent. Write today for free catalog, *"The Soil and Intensive Tillage."*

Made in 5 sizes, each in regular and extension heads. Disks 16, 18 and 20-inch



Made in sizes small enough for one horse and large enough for the biggest tractor



THE CUTAWAY HARROW COMPANY

Maker of the original CLARK disk harrows and plows

839 MAIN ST., HIGGANUM, CONN.

EVENTS OF THE WEEK.

DOMESTIC.—April 17 a demented man attempted to assassinate Mayor Mitchel of New York by shooting at him while the mayor was in his automobile in front of the city hall. The bullet struck Corporation Counsel Polk in the jaw, inflicting a painful and disfiguring wound. The assailant, Michael P. Mahoney, aged 72, appears to be a dangerous crank. He was a blacksmith, out of work.

Seven men and one woman perished in the wreck of the three masted schooner Charles K. Buckley in the breakers off Long Branch, N. J., on April 15. There was only one survivor.

The government's hearing in a suit to be brought to dissolve the American Tin Plate Company began April 17, in the Federal Court, Brooklyn. The charges in the complaint include the bill of sale of subsidiary companies to the defendant, in which they agreed not to manufacture tin cans or sheet iron packages within a radius of 15 miles of the home office of the American Tin Plate Company in New York, for any company excepting the trust.

The Hotel Maryland, at Pasadena, one of the finest hotels in California, was swept by flames April 19. The amount of the damage may exceed $500,000. The structure was built about a decade ago. The blaze, it is believed, started from a defective gas furnace.

Fire in a small hotel at 741 Eighth Avenue, New York, April 17, caused the death of 11 persons. The building had narrow halls and one stairway, and the fire started in rubbish stored at the foot of the stairs. The Fire Department asserts the fire was due to gross carelessness; there were no adequate fire escapes.

The steamer Kyle, which went out two weeks before to search for the missing sealer Southern Cross, returned to St. Johns, N. F., April 20, with no news of the vessel. The Southern Cross, which had a crew of 173 men, has been given up as lost.

Thirty-nine dead, more than two-thirds of them women and children, a score missing and more than 20 wounded is the toll known, April 21, to have been taken in the 14 hour battle which raged the day before between State troops and striking coal miners in the Ludlow district, Colorado. Many fatalities were due to the action of the militia in driving the strikers out of their tent colony, and firing it. Further bloodshed was expected. The militia was armed with machine guns. Italians, Greeks and Austrian miners have appealed to their consular representatives for protection, and John McLennan, president of the local union district, asked the Red Cross in Denver to be prepared to render aid. The trouble is on the property of the Colorado Fuel and Iron Company, Rockefeller holdings. No train service through the war zone is permitted. A command of the troops is hemmed in by the strikers' lines, which extend three miles. Through this cordon only the dead wagon is allowed to pass. The Ludlow camp is a mass of charred debris. In the holes dug for protection again the rifle fire are the bodies of women and children, killed when the flames swept over them.

FARM AND GARDEN.—The Indiana Apple Show will be held at Tomlinson Hall, Indianapolis, November 18-24.

A "Potato Special" has been operated in the potato-growing section of Wisconsin by the Chicago & Northwestern railroad. The road is coöperating with the Agricultural College of the University of Wisconsin. The train was operated through Wood, Waushara, Columbia, Marquette, Adams and Juneau counties, each of which is among the leading potato-growing counties of the State. Practical lectures and demonstrations were given by experts from the university. The subject of pure seed growing was given especial attention.

The dreaded browntail moth has made its appearance again in New York State, and the State Department of Agriculture has taken steps for the immediate extermination of the pest. The department has ordered a minute inspection of every tree in the vicinity of East Hampton, Sag Harbor and other towns in Eastern Long Island. It has extended a general call to all land owners to aid and cooperate in finding and destroying the webs.

The United States Department of Agriculture, in an endeavor to obtain as much information as possible on the behavior of ornamental plants in all parts of the United States, asks the coöperation of interested persons throughout the country that the details may be obtained. With this end in view a form for recording such facts has been prepared. Blanks will be supplied to those willing to report information of this character by writing to F. L. Mulford, Landscape Gardener, Department of Agriculture, Washington, D. C.

The committee on the preliminary organization of the proposed Farm Mortgage Bankers' Association of America will hold a meeting at the Hotel Astor on May 7. Farm mortgage bankers from all parts of the United States have been asked to assist in forming the association. A form of constitution and by-laws has been drawn up, to be approved at the coming meeting.

Charles E. Henry, for twenty-five years a member of the Live Stock Exchange, who declares that he was driven out of business by the live stock "trust," began action at Bellevue, Ill., April 17, in a $250,000 damage suit against the exchange and all the packers who do a nationwide business. Henry alleges that an outsider has no chance to operate against the "trust," which fixes the prices and commissions to suit the members and refuses to buy or sell stock to or for any one who is not a member of this or any allied exchange anywhere in the country.

The semi-annual meeting of the Georgia State Horticultural Society will be held at Griffin, Ga., August 5-6.

The thirty-ninth annual convention of the American Association of Nurserymen will be held at Cleveland, O., June 21-26; secretary John Hall, 201 Granite Building, Rochester, N. Y.

MEXICO.—Active hostilities began between the United States and Mexico April 21. Marine forces from the Utah, the Florida and the Prairie seized Vera Cruz. Fourteen Americans, bluejackets and marines, were killed by the fire of the Mexican soldiers and 50 wounded. The Mexican death list is put at 126, their wounded 195. The waterfront, the custom house and all important piers, including those under the terminal works from which extend the railroads to the capital, were occupied. The Mexican commander, General Gustavo Maas, offered a stubborn resistance to the American advance, and for many hours there was fighting in the streets. The hurried action, without formal declaration of war, was to prevent the landing at Vera Cruz of a large shipment of arms and ammunition from Germany. April 23 Huerta formally severed diplomatic relations with this country and Nelson O'Shaughnessy, Chargé d'Affaires at Mexico City, received his passports and prepared to leave. An order was issued for the re-establishment of the embargo on transportation of arms across the Mexican border. This was a sequel of the threatening attitude of the Constitutionalist chief, Gen. Carranza. April 23 Gov. Johnson of California ordered nine companies of militia from San Diego to the Mexican border, where uneasiness existed among the people.

COMING FARMERS' MEETINGS.

American Association of Nurserymen, Cleveland, O., June 24-26.

Georgia State Horticultural Society, Summer meeting, Grillin, Ga., August 5-6.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

"FATHER," said the small boy, "what is a jingo?" "A jingo, my son, is a man who devotes his time to thinking up opportunities for other people to go out and be shot at."—Washington Star.

NEWRICH: "Captain, I understand there are several water-tight compartments on this boat. Well, I want one of those, and I don't care what it costs."—Credit Lost.

GLADYS (playing the piano): "Dear me, I am always wishing to break into song!" Muriel: "You wouldn't have to break in, dear, if you could find the key."—Melbourne Leader.

MUDGE: "Here's a man figured out that if all the money in the world were divided equally, each adult would get about thirty dollars." Mceg: "He's wrong. My wife would get sixty dollars."—Boston Transcript.

"WERE you glad to get back to school and see your dear teacher?" "Well," replied the very observant boy, "I guess I was just about as glad as dear teacher was to get back and see me."—Chicago Record.

America's Telephones Lead the World Service Best—Cost Lowest

from London "Daily Mail"

Why is it that Government ownership and management of the telephones is practically always a failure?

Why is it that throughout the length and breadth of Great Britain and the Continent hardly a single efficient long-distance service is to be found? Why is it that in New York one [illegible]

from "Electrical Industries" (London)

THERE is a certain amount of satisfaction in the fact that Mr. Winston Churchill got so angry over the freaks of the telephone the other day that he flung his receiver on the floor. As a member of the Government which purchased the telephone system, he deserves all the torture that Post Office working can inflict. But his rage, [illegible]

From "Le Petit Phare de Nantes," Paris

"But today I found I had to talk with Saint-Malo, and, wishing to be put through quickly, I had my name inscribed on the waiting list first thing in the morning; the operator told me—though very amiably, I must confess—that I would have to wait thirteen hours and ten minutes (you are reading it right) in order to be put through."

Herr Haberland, Deputy, in the Reichstag

"The average time required to get a connection with Berlin is now 1½ hours. Our business life and trade suffer considerably on account of this lack of telephone facilities, which exists not only between Dusseldorf and Berlin and between Berlin and the West, but also between other towns, such as Strassburg, Antwerp, etc."

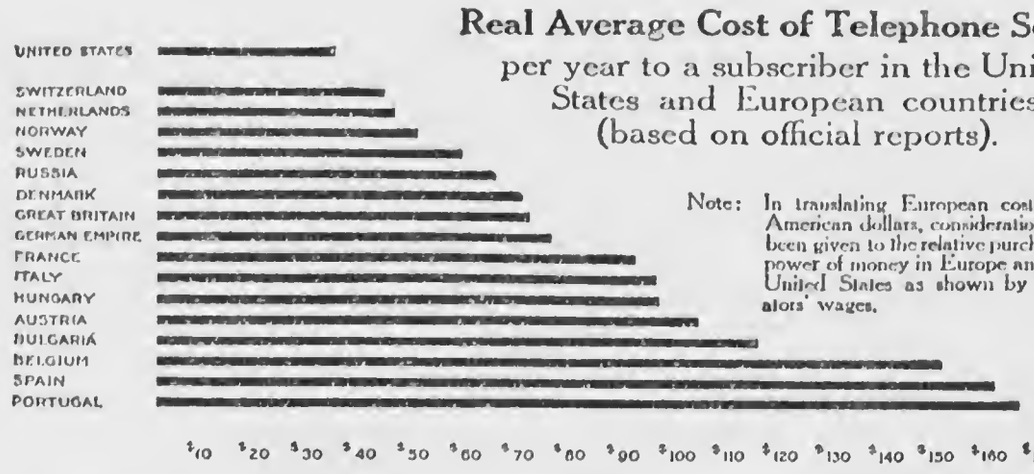
Herr Wendel, in the German Diet.

"I refer here to Freiberg. There the entire telephone service is interrupted at 9 o'clock p. m. Five minutes after 9 o'clock it is impossible to obtain a telephone connection."

Dr. R. Luther, in the Dresdner Anzeiger

"In the year 1913, 36 years after the discovery of the electro-magnetic telephone, in the age of the beginning of wireless telegraphy, one of the largest cities of Germany, Dresden, with half a million inhabitants, is without adequate telephone facilities."

Real Average Cost of Telephone Service
per year to a subscriber in the United States and European countries (based on official reports).



Note: In translating European costs into American dollars, consideration has been given to the relative purchasing power of money in Europe and the United States as shown by operators' wages.

These are the reasons why there are twelve times as many telephones for each hundred persons in the United States as in Europe.

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One Policy *One System* *Universal Service*

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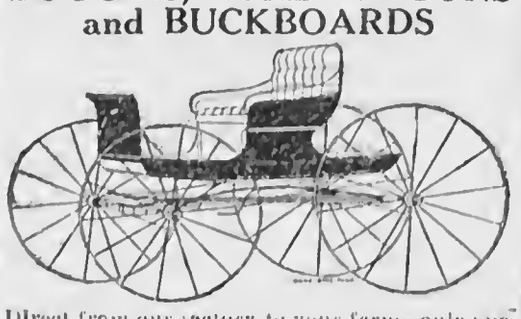

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WRITE ME!

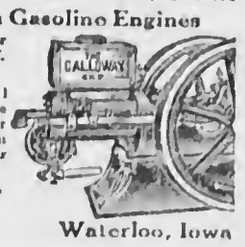
Get my new, low, factory prices on the Famous Galloway Engines and big, illustrated FREE catalog. My engines are standard, high quality engines. Made in sizes from 1 3-4 to 15 H. P. Over 40,000 in use today. All sold on 30 days FREE trial, backed by five year guarantee and $25,000 bond. Money back if not satisfied. Investigate! Quit paying exorbitant prices for inferior engines. Save middlemen's profit. Be your own dealer.

BUY DIRECT FROM THE MANUFACTURER
and Save $50 to $300 on Gasoline Engines

That comes about as near keeping your money at home as any way you can think of. Write me before you buy.

FREE Service Department that will help you select and install the best style and size engine you need for your work without cost to you. Let me send you my New 1914 Special Offer. Just write for my catalog and new, low prices today.

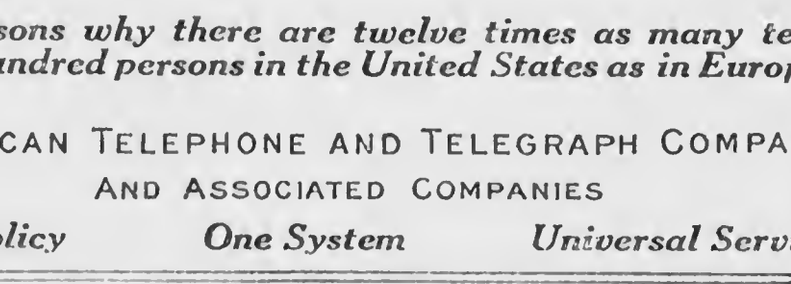
Address Wm. Galloway, Prest.
WM. GALLOWAY CO.
275 Galloway Station Waterloo, Iowa



Ellis Champion Threshers

Be Your Own Thresherman

Save enough to own the Thresher. Be independent. Do the work when you get ready.



Suit everyone. Both the professional thresherman or the farmer who wants a home outfit will find the Champion rightly named. The picture shows ELLIS CHAMPION NO. 2. It is complete with stacker, tailings, elevator and grain bagger. Connect it with steam, gasoline, tread or any other power, put in the grain and the Champion does the rest. No straw clogging. Any size.

We also make tread and sweep horse-power, drag or circular saws ensilage cutters, corn shellers, etc. Our catalog tells the whole story.

ELLIS KEYSTONE AGRICULTURAL WORKS, Pottstown, Pa.

"Two or Three Times as Good a Crop"
by the use of
Ferguson's
NITROGEN BACTERIA

That is what one user (name on request) writes of his experience last season with Field Peas. Scores of other users have had similar experiences with legumes—Clover, Alfalfa, Vetch, Peas, Beans.

There are three good reasons
for inoculating your seeds with Ferguson's Bacteria—

1. Bigger, better crops.
2. Richer soil for coming seasons.
3. No expense for fertilizers.

Ferguson's Bacteria gathers Nitrogen—the food plants must have—from the air. They store it on the roots, using part for the present crop, having part for the future.

$2 worth of Ferguson's Bacteria will do the work of $40 worth of commercial fertilizer.

Quarter-acre quantity, 50c; 1 acre, $2; 5 acres, $9. Let us explain why you need Nitrogen Bacteria and why Ferguson's is best. Write for special booklet N—free.

HOMEWOOD NITROGEN CO.
51 Liberty St., New York City
We want agents—a very liberal offer

Fireproof, Durable
Easy to apply

APOLLO ROOFING

Send for free booklet "Better Buildings"

Made from the well known APOLLO BEST BLOOM Galvanized Sheets, and unexcelled for lasting service and satisfaction. APOLLO BEST BLOOM Galvanized Sheets are specially adapted for Culverts, Silos, Tanks, Cisterns, Roofing, Siding, and all forms of sheet metal work. Sold by weight by leading dealers everywhere. Accept no substitute.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh.

Oats and Peas for Horse Hay.

Are oats and Canadian peas good for horse hay, or what would be best to put in with oats? Soil is heavy loam in a run-down apple orchard. O. H.

Irondequoit, N. Y.

Oats and peas properly cured will make a good feed for horses. We have fed it for exclusive roughage for many months, and the horses did well upon it. The oats help out the peas in feeding value, and also keep them off the ground, so that they cut and cure to better advantage. This crop requires good soil, or a fair amount of manure and fertilizer in order to give a good yield.

Adding Nitrate to Fertilizer.

I have on hand one ton of fertilizer containing 1-8-4, and I wish to know how much nitrate of soda to add to make it 2½-8-4. I also have one ton of 2-8-7 that I wish to increase to 3½-8-7. G. H. V. D.

New York.

Your ton of fertilizer contains one per cent. or 20 pounds of nitrogen. You want 2½ per cent. or 50 pounds. Thus you must add 30 pounds of nitrogen. Nitrate of soda contains 16 per cent. of nitrogen or 16 pounds to each 100 pounds. Thus if you use 200 pounds of nitrate you add 32 pounds, which will give what you want. This will make 2,200 pounds instead of one ton. To be exactly accurate you should add a few pounds each of acid phosphate and potash. Eight per cent. of 2,000 is 160 pounds of phosphoric acid, while eight per cent. of 2,200 is 160. You can add 100 pounds of acid phosphate and 25 pounds muriate of potash if you wish to be exact, but we should use the 200 pounds of nitrate and go ahead.

The Cost of Lawing.

The article on page 435, "Over-rated Professions," by A. O. Hill, will bear reading and considering. Mr. Hill brings to mind a matter that demands serious attention. I am an old man, and can well remember the time when lawyers did not generally charge extravagant prices for their services, and all kinds of court officials had very moderate pay compared with what they now have. No one objects to a proportionate rise in prices all round, but we do not want to increase the cost of the courts tenfold.

Statistics which I have examined and can furnish show that the cost of the courts of Vermont have increased more than tenfold within what may be called a recent period. It is well understood by many people who belong to the commoner class that $100 or more will not go far in obtaining justice in the courts against a couple of unscrupulous lawyers opposed. All are educated to advocate either side, whichever employs them. I am glad to know, however, that there have been cases which a lawyer has been found with honor enough to decline.

The constitution of Vermont, Part 1, Sec. 4, reads (italics added): "Every person within this State ought to find a certain remedy, by having recourse to the laws, for all injuries or wrongs he may receive in his person or property, or character; he ought to obtain right and justice, *freely and without being obliged to purchase it*, completely and without any denial; promptly and without delay; conformably to the laws." M. O. H.

Freezing Water Supply.

Regarding the article on page 447, W. C. H. "Freezing Water Supply," I have a water supply on my farm almost like the one mentioned, but with the thermometer 35 below, as it was here this last Winter, and the ground frozen solid all around the pipe, it has never given any trouble. If I had a system in the way he has I would expect the same results as he got. My pipe is about 1,500 feet long with not more than a 10-foot fall. The first half is inch pipe, remainder ¾-inch. I have no branch pipes. The water comes first to the cow barn, and makes a circuit of the barn, next to the hoghouse, makes a circuit of this, then on to the house, the same here, winding up in the horse barn. In the end of the pipe I put a plug and let a small continuous stream run; this will allow all faucets on the pipe to flow water when open. In each building that the water goes through I put a faucet on the turn of the pipe. These faucets will freeze up in extreme weather, but a pint of water will thaw them and you will find the running water there every time. I am unable to see why W. C. H. puts one-inch pipe in the center, I should think it should be at the intake.

Hamilton, N. Y. F. T.

Fresh-water Clams.

From your seemingly inexhaustible sources of information, can you inform me whether or not fresh-water clams are edible? C. W. G.

Syracuse, N. Y.

This question nearly ran the "inexhaustible sources" dry, but we have finally obtained the following from the highest authority:

"You are informed that the fresh-water clams are not generally regarded as edible. They presumably contain about the same quantity of nutriment as other shellfish, but are tough and insipid and, in some cases at least, have a disagreeable odor. They were eaten to some extent by the Indians and possibly, if properly prepared, might prove a fairly acceptable diet to white persons.

H. M. SMITH,
U. S. Fish Commissioner."

Want to Know.

ROOT CELLAR.—We are going to construct a root cellar this Spring outside of any building, and would like to know the best method of constructing such a cellar. A. C. C.

New York.

SEVENTEEN-YEAR LOCUSTS.—West Virginia is to enjoy the society of a brood of seventeen-year locusts in 1914. This brood will appear in 37 of the 55 counties, with perhaps straggling specimens in a few others. Most of these counties lie in the northwestern part of the State. The West Virginia Experiment Station at Morgantown has issued a bulletin on this locust, which gives a very full description of it. We had an extensive brood of this insect in Northern New Jersey two years ago. On our own farm it did very little damage, but on the hills a mile or so away, many young trees were seriously injured. We found no practical way of fighting the insect. Some remedies are suggested in this bulletin, but from our own experience we have not found any practical way of preventing danger. Our advice to those who are in the district where this locust is to appear, is not to trim their trees this Spring at all, but to leave the trimming until after the insect has come and gone.

MORE ABOUT BAY WAX.—Since writing my reply to the bayberry wax inquiry a few weeks ago one of my boy friends down in Rhode Island has supplied me with a sample of fresh gathered berries, and I find that simple boiling gives about a quarter of the wax present, about an ounce to the pound. Pressing hot gives more, removing the outer coat where all the wax is, and pressing that hot, gives more yet, and the largest quantity, all present in fact, which is about a quarter of the weight, is obtained by extraction with a volatile solvent, such as ether. But this process is inadvisable for the amateur on a small scale, and on a large scale requires special and rather expensive machines. I am told that the production of the wax is rather wide-spread, but that the fancy candle trade takes most of it, and the demand is irregular. Still, quite a quantity is made, one concern spoke of handling 15 to 20 tons a year. But the wholesale price, which is apt to run below 25 cents a pound, does not offer much return unless labor is very cheap. F. D. C.

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The Home Acre.

Spray to Destroy Dandelions.

1. Can you tell me what I can use to spray a lawn with, which is very badly infested with dandelions? It is impossible to plow it, and I would like to get something that would kill the dandelion and not the grass. Digging them would be impossible, as they are too many. 2. Where could I get English hawthorn and Spiræas? M. S. R. B.

1. The spray used to eradicate dandelions in lawn is iron sulphate, 1½ to two pounds to a gallon of water. Spray two or three days after mowing, and do not mow again for two or three days afterwards. The spraying should be done on a bright sunshiny day. A heavy wetting within two days after spraying destroys the weed-killing power. Spray at intervals of four to six weeks. 2. Any of the nurseries advertising ornamental stock will supply hawthorn and Spiræas.

Composting Pine Shavings.

We use pine shavings mixed with straw in our henhouse for litter. As the shavings are not good to put on the land in their present condition, can you tell me how to cause them to rot after making piles outdoors with other material, such as manure from horses and waste vegetables? How long should they lie before using? G. A. C.

Long Island.

This litter might be put right into the ordinary manure pile, or mixed into a compost with horse manure and other vegetable matter. After three months of heating in such a pile it ought to be in proper condition for use. The trouble with the pine shavings is that they contain an acid which may be injurious to the soil. Soaking the shavings with liquid manure, or thoroughly fermenting the shavings in the manure pile will get rid of this acid.

Wood Ashes and Bone Meal for Garden.

What is the value of wood ashes mixed with bone meal as a fertilizer for vegetable garden? What are the proportions of the two ingredients and what quantity of the mixture should be used? M. R.

Three parts of wood ashes mixed with one part of fine bone meal give a fair combination of lime, phosphoric acid and potash with a small quantity of nitrogen. This combination would not be the best one for garden or truck growing, as the nitrogen is not available enough. By adding one part more of nitrate of soda you would have a very fair mixture for your garden. We should not try to mix the ashes and bone, as the ashes are too fine. They may be spread by themselves, and harrowed in, and the bone and nitrate mixed and applied separately.

Cover Crop With Small Fruit.

I intend planting, in a few days time, a field in berries seven feet by three feet (rows). Will it be practical to sow later on this year Canada peas between the rows, the object being two-fold—nitrogen and humus gathering—and the peas to feed pigeons? I suppose the vines could rot on the ground till next Spring and then be turned by plow. This would not, I presume, hurt the berry plants. I also propose to plant Kafir corn in another portion of the field. D. E. S.

Centre Moriches, N. Y.

We would not advise you to sow oats and peas, or peas alone, between the rows of small fruit. If it should be a dry season both crops would suffer. You would get a very unsatisfactory crop from the oats and peas, while the berries would make a poor growth, and they would not recover this season. You could put a row of early potatoes midway between the rows of fruits, and if you gave them thorough cultivation both crops might get through, but it would be a mistake to sow a crop like peas or oats under these conditions. In a very wet season you might possibly get a fair crop, but under ordinary conditions there would be a failure. The fruit ought to be cultivated with great care all through the early part of the season, and this would pay much better than attempting to grow a double crop when there is not moisture enough even for one.

Whitewashing Orchard Trees.

Can you give me any information about whitewashing the trunks of orchard trees? I do so principally on account of the neat effect it gives. Would it be advisable to put carbolic acid or something of that nature in the whitewash, and would that discourage insects crawling upward from the ground? Is there anything better? What can I put in it to make it stick? I was told last year that a handful of salt to each pail would fasten it on, but it did not seem to work. F. P. F.

Bound Brook, N. J.

We should use a lime and sulphur mixture, about as it would go on the dormant tree, with enough milk of lime added to make a whitewash. This would not be perhaps as neat as the pure lime wash, but it would make a more useful application. A small quantity of salt stirred into the wash, or a little liquid glue thoroughly stirred up, will make this material stick.

Heating Frame With Lantern.

In a recent issue of your paper a correspondent told of heating a hotbed with a lantern. Can you give me more definite directions for using same, as I am unable to get good heating material? I wish to plant two 3x6 frames to tomatoes. Does not this seed require bottom heat? Wouldn't I have to keep sash raised all the time to allow for air?

Norfolk, Conn. C. C.

Those who have tried out this method of heating frames, claim it is all right. If the temperature overhead is kept high enough, bottom heat is not absolutely necessary, but without bottom heat the plants will be much longer in coming up and be somewhat slower in reaching planting-out size, but will in most instances be a little hardier than those raised with bottom heat. When lanterns or any other like method of heating is employed it will be necessary to admit more or less fresh air at all times, the fresh air inlet being regulated according to the outside temperature and the amount of breeze stirring. The cooler the air outside, the less the sash will need to be raised. This also applies when much breeze is stirring. It does not require a great amount of fresh air entering the frames to keep up a supply of oxygen for an ordinary lantern, and the operator will soon learn how to regulate the supply, minimizing the supply to just within the line of safety.

K.

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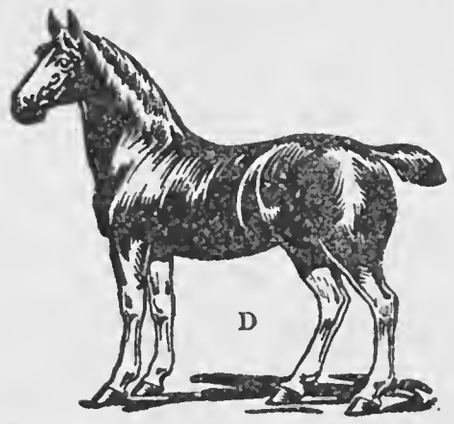

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CHRYSANTHEMUMS AND CARNATIONS.

Can you recommend something on the culture of Chrysanthemums and carnations? I wish to raise them on a small scale and would like a few pointers.
D. D. L.

1. Chrysanthemums are grown from cuttings produced by plants of the previous year, which are given a rest and cut back after flowering. The stools or suckers produced when started into growth give ample material for cuttings. The cuttings are inserted in sand, in a greenhouse, with bottom heat. Time of propagating varies from February to the end of May, according to the use made of the plants. Cuttings may be taken about June 1 and rooted in sandy soil in a spent hotbed; these should be lifted and potted about the middle of August, when they will make nice little plants. The Chrysanthemum dislikes a close stagnant admosphere under glass, and calls for abundant fresh air. Directions regarding soil and general treatment of Chrysanthemums were given on page 340, issue of March 7.

2. Carnations are propagated by cuttings made from strong lateral shoots, which are inserted in sand in either a bench or flats; February is a favorable time for this, though cuttings may be made from December to May. Conditions are the same as for Chrysanthemums; a moderate temperature (55 to 60 deg.), plenty of air, and care in watering, as excess of moisture tends to induce diseases peculiar to the propagating bench. In the case of both plants, the cuttings should be shaded from bright sunshine. In about four weeks the carnation cuttings will be well rooted, and they may then be transplanted into flats or small pots, where they remain until planted out in the field. During the Summer commercial growers give field culture, which produces robust plants. They are set out in April or May, according to weather conditions, and many growers leave them out until September, but this is not conducive to early bloom. In some cases they are planted in greenhouse benches by July, and though this involves a great deal of work for two months of fresh air, it pays in the quality of bloom produced. The inquirer does not say whether he is planning to grow Chrysanthemums and carnations for cut flowers, or for the pleasure the plants will give, which causes some indefiniteness in answering, as regards later treatment of the plants. Greenhouse treatment of carnations calls for moderate temperature (50 to 65 deg.) abundant air, careful watering and syringing. Friable loam composted with one-fifth its bulk of well-rotted manure, is a congenial soil.

CONTROLLING THE WATER LEVEL.

"A study of soil water" (page 474 R. N.-Y.) suggests a subject I would like to have discussed by those capable of doing so. Can the ground water level be to any extent controlled? Believing that it can led me to try to so control it. I give result below. Most wells in our section of country, last Summer, went dry. It fell to me to pump water from a well which usually went dry during dry season. Last season was unusually dry, and wells went dry that were never before known to do so. From well in question we obtained water for house and stock. When pumping for stock I used leaky trough made of two boards that conveyed water to kettle from which stock drank. The trough leaked so that the stones of the walled well were kept wet and also kept the soil in vicinity of well partly saturated. The well did not get dry. I am satisfied that the affinity of the partly saturated soil by capillary attraction maintained the water in the well above the ordinary ground water level. Before trying the experiment on the well I told some neighbors that I believed I could maintain water in our well until after water had left their wells. They had a good laugh at me. My well is on higher land than theirs, and not so deep as theirs. Yet we had water when they had none. J. P.
Oswego, N. Y.

Ground-water levels are commonly controlled by means of irrigation. In the vicinity of Auburn, Cal., irrigation is carried on in part for the purpose of maintaining well supplies. In southern California projects are being conducted which have for their objects the distribution of flood waters over land surfaces into which they may sink and replenish the well supplies. In these instances surface waters are used, and it should be obvious that if water were pumped from wells for such purposes the ground-water level would be lowered instead of raised because of evaporation and transpiration.

The persistence of the well here mentioned cannot be logically assigned to the cause stated in J. P.'s letter. Any forces of attraction existing between the soil water and the water table are altogether incompetent in the control of the ground-water level. The largest consideration in the case described is that of sanitation. The Survey has repeatedly cited as examples of dangerously unsanitary wells, those into which polluted surface waters, such as would be found around a stock trough, may percolate.
GEO. OTIS SMITH.
U. S. Geological Survey.

Japanese Plums; Apricots.

1. My Japanese plum trees are bearing very young, except the Wickson which I had nothing but a few sample specimens. Are the Wickson trees less prolific than those of the other varieties? What is the life of the Japanese plum tree? 2. I had an acre of rye which I cut when it was in bloom, and cured as hay. The sheep eat it with relish, and leave not even enough to bed the stable although they get a pound of bran each a day, together with some hay and oats cut in milk. Am I right when I assume that the protein of the kernel is continued in the stem before the kernel forms? 3. What kind of trees are the apricots? Are they small ornamental shrubs? Is the fruit good? Do the trees bear and are they worth planting? W. B.

1. The Wickson plum is not considered a shy bearer, but it may need cross-pollination under some conditions. It may be that the other varieties are not near enough to the Wickson to pollinate them, or do not bloom at the same time but this seems unlikely, for the bees carry pollen, and most of the Japan plum trees bloom about the same time.

2. The food material that finally goes into the grain is in the stalks and when they are cut during that stage the food value of the forage is almost equal to the grain with the matured straw.

3. The apricot is a fruit tree that grows as large as that of any variety of peach and bears abundantly where the climate is right for it, if there are no insects to trouble the fruit. Apricot trees are as hardy as ordinary peach trees, and are usually healthy and vigorous. In the regions west of the Rocky Mountains the fruit is grown abundantly but in the Central and Eastern States the curculio usually stings it while very young and cause it to fall off, and apricot growing is a failure. H. E. VAN DEMAN.

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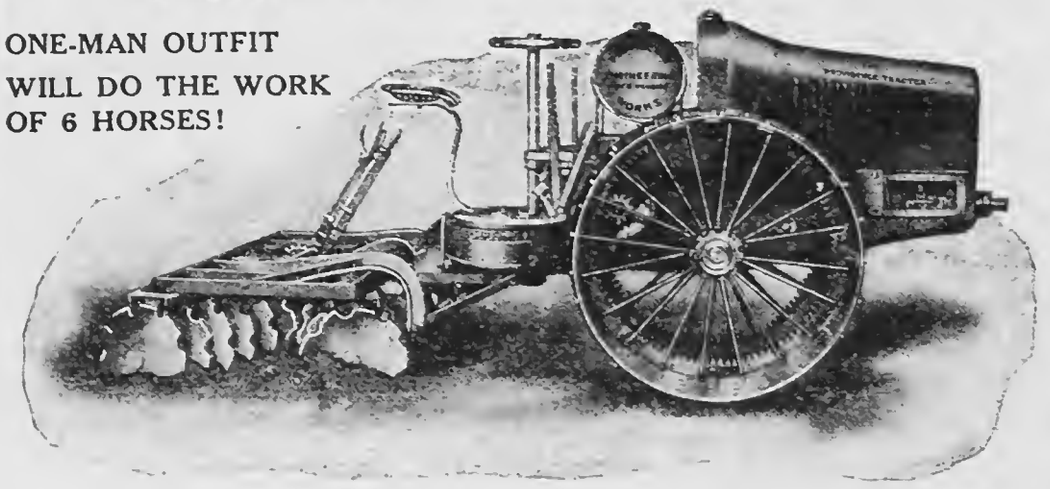

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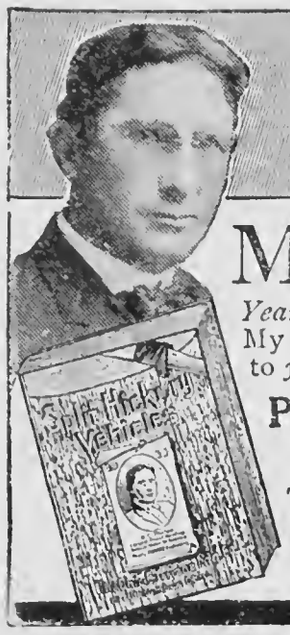

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Hope Farm Notes

During the past year I am sure there have been at least 50 letters much like the following:

"I want to write for the papers and magazines, and perhaps write a book or two. Tell me all you can about it. How do you advise me to start?"

In many cases I would not advise you to start at all. My advice is not worth much anyway. Writing good articles is like farming in one thing—unless you have "instinct" for it, all the study and labor in the world will never make the finished product. It will always be raw. I am no expert, and cannot analyze the subject, but here are a few suggestions:

MESSAGE.—In the first place no one should try to write articles or stories unless he can put an honest and true message into them. What is a message? Truth! The dictionary calls it "an official communication." In a writer it means an honest, self-denying desire to give his fellow men something that will help them to think or act along better and higher lines. Unless you can feel in your heart that you can deliver that sort of a message do not try to write articles or stories. There are writers who spin out words as a spider spins his web. The spider may catch flies by his spinning, but these words catch few human souls, for unless there is a message in them the words are soon blown out of memory.

WHERE IS THE MESSAGE?—In your own life and experience. Every week we have letters from people who say they want to write. They usually enclose letters of recommendation from people who say they have ability. My reply usually is to sail in and send a sample of their work. If I were buying a horse I should want to see him and drive him before paying the money. No use buying manuscripts "sight unseen." Most of these people ask us to give them a subject to write about. Now, with our great outfit of advisers, we know where to go with any ordinary question. We want original ideas most of all. So I tell these people to write not more than 500 words on some topic that they *know* about from actual experience, and which farmers *ought to know!* That simple test seems to discourage eight out of 10.

YOUR OWN LIFE!—It shakes a man up sometimes to sit down and ask himself—"What *do* I actually know which other men do not know? What can I give them as experience or advice which I know I can stand for even if the opinion were to carry me to the stake?" Out of that honest thought will come what I call the "message." Of course there are bumptions or "smart" people who have such a high estimate of their own opinion that they call it experience. I do not speak of them. They find their place for a "message" built upon any conceited opinion will finally change with a command to go far back to the rear seats of oblivion and sit down. What I mean by a message therefore comes out of your own life—not cut and dried like hay, but fresh and fragrant as clover—with a true desire to benefit someone. The young may come with a hopeful message of faith and confidence in that great beautiful future which opens before them. Older people may come with fire-tested experience—hardened by the years, yet true as steel. So the first point is—never try to write unless you have something to say—a message.

HOW DELIVER IT.—Here you come to the art of expression, which is a natural part of the writer. Many people kill themselves off through their "introduction." I had a fine old friend who could not start a letter without beginning: "I now take my pen in hand to write you a few lines." That was what you might call a self-evident fact. Of course he did. Everybody knew it. Who cares to be told what he knew before? Many a reader has dodged a fine article because the first part of it contained one of those dull and stale "introductions." Senator Roscoe Conkling had a great reputation as a forcible orator. His plan was to open with the strongest brief statement of his case, and then go on and prove it. That startled his audience, and they had to go on with him. At the great convention where Garfield was nominated in 1880, Senator Conkling supported Gen. Grant for a third term. He got up to make his speech under the most depressing conditions. The convention was against Grant, and the delegates were tired out by long speeches. Had Conkling led up to his subject as others had done, few would have listened to him. He knew how to put flowers on his "message." He looked over that great angry audience and said slowly and deliberately:

"You ask whence comes our candidate?
Our answer it shall be
He comes from Appomattox
And its famous apple tree."

What a yell went up. The great building rocked. In 20 words Conkling had put before them a glorious vision of Grant the soldier. It obscured their view of Grant the man, and they listened breathless for what was to follow. In many cases, not all, our writers may imitate Conkling and start off with a forcible paragraph to attract attention. At any rate, get into the heart of your subject at once and do not spend good words bowing and scraping and clearing your throat at the door of your reader's mind. That might have answered years ago when papers and magazines were few. Now there are half a dozen chasing each reader.

BE NATURAL.—I cannot understand why the average writer thinks he must get up on stilts whenever he starts to write his thoughts on paper. Some years ago I had studied so-called French for two terms at an agricultural college. Quite a distinguished Frenchman came to town, and I was brought out to talk to him. I should have known better, but I started what I now realize must have been something awful to the Frenchman. That polite gentleman listened in a puzzled way and then shrugged his shoulders and said: "Pardon me, but I do not understand dis new language. My English he quite bad, but I do my best."

Now many of our farm writers have a glorious message to present, but they seem to spoil it as I ruined my reputation as a French scholar. The message they have is a part of them—a sweet, homely, heart-pulling story just fitted to their plain words and shrewd expressions. When they write it out they use strained, stilted expressions, great big words and disjointed sentences which do not fit the thought at all. I have had people tell me that they were on the watch for big new words that they might fire them off in their writings, and thus gain a reputation for wisdom. A very foolish plan that; I would take great pleasure in chopping such words out of manuscript. There is a paper printed at the Tuskegee, Ala., negro college called "The Negro Farmer." One of its departments has this heading:

THE "BIG WORDS" AND
EVENTS EXPLAINED.
Farmers' Dictionary.

That is one of the most sensible things I have yet seen. There is hardly a paper in the country that would not do well to start such a dictionary, and in each issue I will agree to find a dozen words which ought to be explained to 80 per cent. of the readers.

PLAIN TALK.—I cannot make it too plain to the would-be writer that 75 per cent. of the people of this country *think* in words of one syllable. They read long words and understand some of them, but their thoughts run upon the wheels of short and common words. The average man and woman may really understand 400 different words. Nine-tenths of their talking and thinking will be done inside this limited list of tongue tools. If you want to carry your message to them get down where they live—into the language they speak. I cannot tell you how to write or how to put words together. The truth is I never was taught. At 25 years old I doubt if I could have given the distinction between a verb and adverb or an adjective. I shall have to confess that in place of the analysis of sentences which grammars give us I put words together by instinct or by the way they looked in groups. I read good English by the square acre and in this way came to group words together as I suppose an artist groups colors or a carpenter joins pieces of wood. There never was any excuse for this. A thorough study of grammar and the analysis of a language is the true way to understand it. I began at the other end and tried to work down. A great mistake—which my children shall not repeat. My daughter at college is selecting her studies for the second year. My advice is to make a thorough study of English the foundation of her education, and to group around this those things which are closest to it, and which will help her most in giving expression to a message. For that is about all there is in life—giving the message which we work out with toil and pain, or which comes to us by inspiration.

GOOD NATURE.—Do not hand out a "gronch" to the public or to your friends. A "gronch" is the germ of a mental disease. There should be a law against spreading all such. The world loves a cheerful writer, and will follow him if he carry a message which they need. In time of adversity they may come back to Jeremiah for a time, but their life will be cast with the hopeful heart and the patient mind. Be good natured, "loosen up" and learn the true distinction between fun and foolishness. Cut it short. Take up one thing at a time. Tell what you know and then stop. Make a mental analysis before you start, and have clearly in mind what you are going to try to prove. Stay on the ground, use short words, cut out introductions and tell it naturally. Never preach at your audience. Never play schoolmaster, and do not sneer at anyone. The best way to begin is to study your paper or magazine, and if you find a statement which you know to be wrong write a short and pleasant article correcting it. Do not criticise opinions so much as facts. If you can, from your own knowledge, prove that a printed statement is not correct you will help the paper and what you write will receive attention. But make it short and to the point. Do not write long articles and then count the words and write the number on the first page. The editor does not care how many words you write—it's their quality that he is after. To sum it up, boil yourself down and tell it naturally, be honest and keep good-natured. H. W. C.

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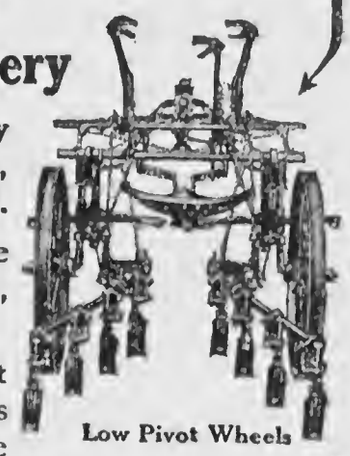

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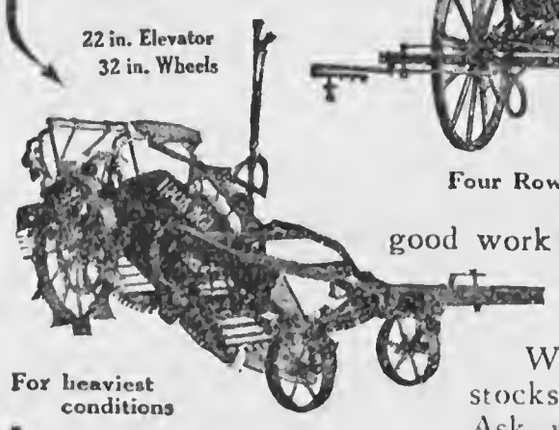

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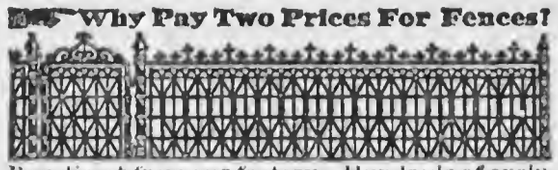

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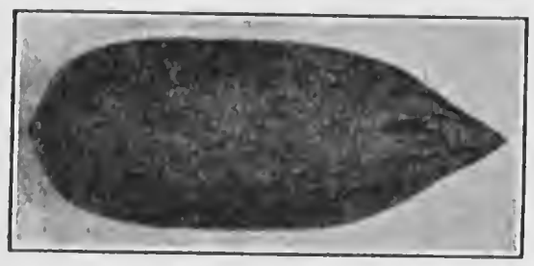
Ruralisms

THE CARMAN PECAN.

Just 21 years ago I sent Mr. E. S. Carman, the great hybridizer, specimens of the Carman pecan. He had a half tone illustration made of it which appeared in THE R. N.-Y. at that time. The illustration of the Carman given with this article is from the half-tone engraving that he had made.

I have fruited the Carman pecan 21 years, and am now able to give a pretty fair estimate of its value. Every month in the year men are sending me specimens of new pecans, and asking my opinion of them. My invariable answer is that I must fruit a pecan at least 15 years before I can pass upon its merits. The old way was to select a variety because the nuts looked large and fine, and propagate it without knowing anything further about it. The results are that the country is overstocked with varieties that are poor bearers, and that are badly diseased, and the kernels of which break in coming out. A few years ago I gave a definition of the perfect pecan, which has been pretty generally accepted by the horticultural world. It is this: A variety that comes into bearing early, and bears heavy annual crops; one that is a healthy vigorous grower, the kernels of which come out whole and the nuts of which are large enough and the flavor



THE CARMAN PECAN.

fine enough to sell well on the market. Finally, a variety that ripens early in the season. Now Carman has all these virtues. I have sold Carman all over the North to the most critical class, and they have given universal satisfaction. They have invariably come back for more. Carman has also been fruited by Prof. Van Deman upon his plantation, and he is much pleased with it. He writes: "I consider the flavor fully equal to Schley. I believe it well worthy of introduction." Now when we consider the fact that Schley is thought to be the finest flavored of all pecans, we see how great Prof. Van Deman's praise is. But the Schley is a poor bearer, and the worst diseased of all pecans, while the Carman is perfectly healthy, and a tremendous yearly bearer.

Several years ago a man came to my place who had spent much time in investigating the northern demand for fancy pecans. He knew exactly what that demand called for. My crop of nuts was just ripening, and I took him through the whole grove showing him trees of all the standard varieties. He pronounced many of them good, but none up to the highest standard. Then I took him to a Carman tree. The ground was covered with the large long, whitish-colored nuts. He cracked several and ate them. His delight was great. "Exactly what I have been hunting for," said he. "This is the perfect pecan for the fancy Northern trade." And his words have proved true, for wherever I have shipped Carman pecans to a critical buyer he has come back for more. Mr. Geo. Long of Louisiana has also fruited Carman along with many other named varieties on his plantation, and he tells me that it is, by long odds, the finest pecan he ever saw.

Now a great many of the named varieties of pecans are badly diseased, and others are very poor bearers. It is utterly useless to plant any of these for commercial purposes. The man who selects his trees by looking at a few handsome nuts, is very foolish, and he is going to pay very dearly for his folly some day. The man who is in the pecan business, and who is not testing the Carman pecan, is standing much in his own light. Of all Mr. Carman's namesakes it is the one that is destined to carry his name longest to far-off posterity, for when a pecan tree is planted it lasts a long time, and when the merits of this variety are known it is going to be very largely planted. It is far ahead of Stuart in nearly every respect. But I have not the slightest doubt as to its future welfare; it is on of the varieties that has come to stay. Taking it all in all, the Carman pecan is the best variety I know anything about, and I say this after 35 years' experience in pecan culture. In conclusion, I wish to add that I am very very proud to have done this little to perpetuate the name of one of the world's greatest and noblest hybridizers.

SAM H. JAMES.

Louisiana.

A Plea for the Quail.

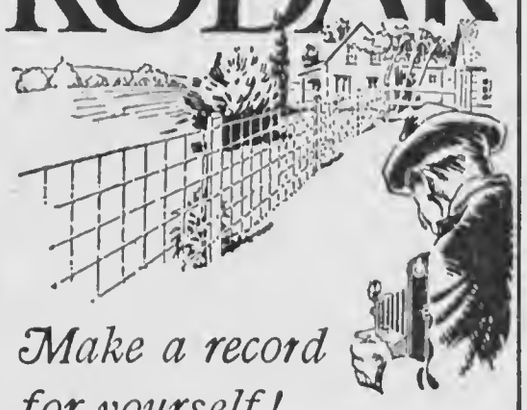
One Summer when I was a boy on the farm, my father had a large patch of peas planted, and before same had matured, we were bothered greatly by a large flock of blackbirds, this flock consisting of at least 500 birds. It is not necessary for me to dwell on the destructiveness of said birds in a pea-patch. I made frequent visits to the pea-patch in question, with a shotgun, and slaughtered all the blackbirds that I could. After making several trips, and shooting into the flocks several times, these birds naturally took the hint and began to give the peas a wide berth; however, on one of the last visits into the pea-patch, with the shotgun, after firing into the blackbirds as usual, when walking back through the peas, a quail unexpectedly arose, and wishing to determine whether or not this quail was feeding on the peas I raised my gun, fired and killed this bird. You can imagine my surprise on opening this bird, instead of finding any peas, I found nothing but a considerable number of grass seeds, small insects and one hard-shell potato bug, while this bird had not eaten a single pea. Although the fact of its eating a hard-shell potato bug was a big surprise to me, yet I have always advocated since that any bird of whatever species that would eat a bug of this character was and is too good a friend of the farmer to be ruthlessly slaughtered. Although this bird was killed by me, out of season, in order to find out whether or not it had been guilty of feeding on the peas, yet it has been the means of saving hundreds of these birds' lives, as, when I have been hunting, when the season was in, I have always made it a rule invariably to pass the "Bob White." I have written this, thinking that it might probably be of interest to a large number of your readers, and I believe that new laws should be enacted by our Legislature in protecting birds of this character.

C. E. SOUTHARD.

New Jersey.

"THEY say he does business on a large scale." "Yes, indeed; he weighs hay."—Buffalo Express.

KODAK



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A National Weekly Journal for Country and Suburban Homes

Established 1850

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*

I HAVE just closed the most prosperous season I have ever had in the pecan business. The parcel post has worked greatly in my favor, and is far safer than shipping by express. I have shipped as far as the Hawaiian Islands by parcel post, and when the packages are insured there is no loss. When shipping by express there was constant stealing and fraud.
Louisiana. SAM H. JAMES.

Mr. James conducted an organized campaign for selling the nuts, just as though he had a manufactured article. He found the papers which are read by people likely to buy high-priced nuts. Then he advertised, paying in some cases over $2 for a single line. Then he made use of parcel post and took in some 100-cent dollars. It seems that some people thought parcel post was to help them whether they used it or not. Give a man a chance to borrow a hoe and it would not insure him a garden full of vegetables unless he worked that hoe hard. Parcel post means opportunity for many—a chance to develop some little business or save transportation charges. There are thousands of our readers who may do on a smaller scale what Mr. James did with the nuts. We are going right after this thing earnestly and patiently until our people see the point.

*

IN one way and another the New York daily papers are learning that there is such a thing as a 35-cent dollar. In the New York *Times* Thomas M. Upp gives this story by a worker on a daily paper:

His mother, a poor Jewish widow, made what are called "hickory" shirts, which farmers wear in the fields. For this work she was paid 35 cents a dozen, furnishing her own thread. The farmer paid 50 cents for the shirt. The poor woman paid nine cents a quart for milk which the farmer sold for 2½ cents. To get one quart of milk the woman must make three shirts. To get one shirt the farmer must sell 20 quarts of milk.

This incident could be duplicated thousands of times to show how producer and consumer are kept apart in order that the middlemen and carriers may reap the profits. The widow certainly secures her mite with the corners cut off when she must make three shirts in order that the farmer may secure 2½ cents. Or the farmer must pay 50 cents in order that this woman may be able to buy one pint of his milk. Such a system of distribution as this means is responsible for the 35-cent dollar. The agitation and battle over this clipped dollar has for its object a reorganization of this old system into more direct dealing between consumer and producer. What is needed most of all is understanding on the part of city people that the farmers are not responsible for high prices. The farmer is robbed worse than the consumer is held up. The poor widow making shirts at three cents each, and the dairyman selling milk at 2½ cents have interests in common. They should be friends and business partners, for in no other way can the 35-cent dollar be increased and the 190-cent dollar be reduced.

PROF. F. C. MINKLER of New Jersey is justified in "feeling good" over the sale of that $5,000 colt (see page 676). When the New Jersey Live Stock Commission decided to import heavy draft horses for breeding purposes there was much criticism from breeders of the lighter driving or carriage horses. These men seemed to think that the natural place for the big draft horse is in the West, while for some reason the Atlantic Coast is better suited for drivers. But did they stop to think that the great market for draft horses is in the great importing cities on the Atlantic? Why not follow the general advice, and get close to your market with what that market calls for? Again, it does not matter where a horse is produced provided he has the desired quality. And so New Jersey comes forward with a $5,000 colt, and there may be more to follow. Keep your eye on New Jersey, some of you gentlemen who think she has no purebred stock except mosquitoes!

*

I SUSPECT that a very great part of the trouble in our cherry and other trees going up in the air is that a tree has to grow in some direction, and if we plant so close that it can't grow in all directions, it has to take the only one left open, and go up. I have now a cherry orchard that, for the benefit of my grandchildren, I have no doubt I should thin out half the trees and let it spread. M.

This suggests a number of things. Most of us plant the trees in our orchards too close. There is a rage for "fillers," so that the land may produce fruit early and pay its expenses. Yet who ever saw a first-class orchard of well-shaped trees which was started with "fillers," and kept crowded through its early life? On the other hand, how much does a man owe to his grandchildren, anyway? What have they done for him, and to what extent is he under any obligations to them? It is human nature for a man of middle years in planting an orchard to wish to see the fruit and to make the enterprise pay. Thus he usually crowds the trees close and makes an acre produce all it can. We have no doubt that at 30 years old 25 apple trees to the acre would be more satisfactory than 40, but it takes a strong man to wait 30 years.

*

ONE thing we may surely thank the experiment stations for—that is the improvement in the quality of mixed feeds. A few years ago some of these feeds were awful. The "molasses feeds" were worst, because a sweet taste may disguise the poorest trash. There were vital weed seeds, splinters, dirt and stuff put into these feeds—enough, in some cases, it would seem, to make an ostrich sick. Samples were found containing 3 per cent. or more of sand and grit. Such stuff must have contained sweepings which were half sand. The experiment stations year after year printed just what they found in these feeds. This publicity has driven the worst of them out of the market. The weed seeds are now usually ground or cooked before mixing, and the "screenings" are of better quality. The poorest of the molasses feeds have been driven out of business. Those now sold are of very much higher quality than the poor stuff which formerly disgraced the trade. In this case the stations have done fine work. If farmers would read the analyses printed on the tags and sacks they could protect themselves to a large extent.

*

THOSE who like to consider large figures will be interested in this:

The volume of the saline matter in the ocean is a little more than 4,800,000 cubic miles, or enough to cover the entire surface of the United States, exclusive of Alaska, 1.6 miles deep. The volume of the 10-mile rocky crust of the earth, including the mean elevation of the land above the sea, is 1,633,000,000 cubic miles. One per cent. of the contents of the oceans would cover all the land areas of the globe to a depth of 290 feet.—United States Geological Survey.

The ocean has for ages received the washings of the earth. Vast quantities of plant food have been leached out of the soil and sent to the ocean, where most of it has been kept. Part of it has been stored up as food in the billions of tons of fish which inhabit the ocean. The quantities of lime and phosphates which have been built up in the ocean are beyond the power of the average mind to compute. The ocean water contains in solution every substance which the earth has known, from gold to sand. The ocean holds these great stores in reserve, waiting the time when man shall need them so badly that necessity will force him to find a way to extract them. A century ago farmers thought they could afford to throw ashes and cotton-seed into the river, and burn straw. To do so now would be to throw away money. Two centuries hence, and before, the treasures of the ocean will be needed, its food for plant and for man will be utilized and the power of the waves will be used to heat and light and move the world's machinery.

THE U. S. Supreme Court has upheld a law which gave the State of Kansas the right to regulate the life insurance business. The Kansas Commissioner of Insurance, under this law, ordered certain insurance companies to reduce their rates. These companies brought suit to prevent such reduction on the ground that the State has no right to interfere with private business in this way. One question involved was whether selling a man an insurance guarantee was to be considered the same as selling him merchandise. The court was divided—the majority holding that under the Kansas law the Commissioner has the right to regulate these insurance rates when it is evident that such rates are too high. The insurance business has developed in a way which gives it a public rather than a private character, and thus the court holds that it is, within certain limits, subject to State control of its rates or prices. Some of the lawyers think that this decision opens the way to State regulation of prices of merchandise or rates of labor and transportation, but a study of the case does not seem to warrant that opinion. Undoubtedly, however, the tendency is toward giving the State the right to prevent *extortionate* charges.

*

THE R. N.-Y. still sincerely hopes there will be no war with the people of Mexico. The blood-stained murderer and traitor who now calls himself President of the Mexican Republic should be punished, but this country has no quarrel with the Mexican people. They need our friendship and our help. We have no right to absorb their territory or to interfere with their real government. The situation is not unlike that in which many a good man has found himself. Over the fence, in the next house, lives a hateful, overgrown bully of a boy. He has mastered a good-natured father and a doting mother, and terrorizes the neighborhood. He whips your children, insults the women and throws stones at you when you talk to him about it. He isn't your size, and you are supposed to have some dignity and character; but one day you get hold of that boy. You forget your dignity and you put a shingle to him until he roars for mercy. His parents will probably both turn on you, when they ought to make you a present. The mother runs out to shed tears over the "angel child," and the father, insulted and bullied by the young imp, rushes to defend his heir. But you are more of a man because you gave way to honest indignation. No one wants war with the Mexican people except three small classes of people: the crack-brained jingoes, who fight mostly with their mouths; those who in one way and another might make some money out of a war, and those who believe that a good "war scare" will take the minds of the people away from vital reforms of politics and social problems. The clear-sighted men, who really wish well for their country, understand that a war right at this time would do more than anything else to stop the progress which has been made during the past few years.

BREVITIES.

"HOT *air*" is natural gas, but it runs no honest business.

THE farmer who will lie abed will see the weeds and worms uphead.

LOVE in a cottage is all right when the rent for the cottage is in sight.

FRESH American asparagus has reached the Liverpool, England, market.

IT is just as easy to teach an old dog new tricks as to break a new dog of old tricks.

IN spite of the hard Winter, Lake Superior will be open to navigation earlier than usual.

LAST year little Denmark exported $123,317,000 worth of provisions and imported $7,213,500 worth.

THIS is the season when "gentle Spring" tarries on the way, and asserts her "rights" to do as she pleases.

THE largest strawberry fields in the world are said to be in Hampshire, England. From this district last year 1,300 tons of berries were sent.

IT is not strange to learn that these Hampshire berry growers have organized to build a basket factory and buy their fertilizers.

THIS Fall the voters of Wisconsin will vote on the proposition to "recall" unsuitable public officials. This has passed two legislatures by great majorities.

IN Alaska the great sporting event of the year is a dog team race. The run is 412 miles over the frozen snow. This year the race was won by a team of Siberian wolves.

IN Australia "rabbit freezing works" seem to be operated somewhat like our creameries. They buy the rabbits from hunters, freeze them and ship to England. The price for a rabbit is eight cents, for a "kitten" two cents.

LAND BANK OF THE STATE OF NEW YORK

System of Mortgage Credits Explained.

PART I.

LOCAL AND CENTRAL ASSOCIATIONS.—The system of mortgage credits adopted for New York State provides for local associations all over the State without limit as to number, and one central association, called the Land Bank of the State of New York. Any person, man, woman or child, may be a member of the local association; but, of course, only land owners may borrow money from it on mortgage. Members not land owners may borrow only on the shares held by themselves in the local association. These local land banks will be the saving and loan associations now existing and those yet to be formed in the State. These saving and loan associations have been adopted as the local organizations because the excellent law under which they are authorized already exists. They are strictly coöperative, and have been universally successful.

A DISTINCTION IN ASSOCIATIONS.—These local saving and loan associations must not be confounded with the so-called National savings and loan associations, which were not coöperative and which can no longer be organized in the State of New York.

THE LAND BANK.—The local savings and loan associations will own and control the Land Bank of the State of New York.

FORMATION OF ASSOCIATIONS.—A savings and loan association may be formed anywhere in the State by 15 persons, either men or women. It can operate only in the territory embraced in a radius of 50 miles. The 15 organizers should all live within this territory; but if 15 people cannot be found in the territory, a smaller number will do, provided enough people to make up the necessary 15 will assist them from the outside. It is, however, desirable that the whole 15 organizers live in the community in which the society is to operate, and these can usually be found within a radius of 50 miles. Usually the associations confine themselves to much smaller territory. One local association will be sufficient for any particular neighborhood; but there is no restriction on the number of local savings and loan associations that may be organized in the same place.

THE FIRST STEP.—When 15 persons have signified their intentions to become members of a savings and loan association, a meeting should be called. It is a good plan to have a subscription paper prepared, and have those who favor the organization sign it, and set down the number of shares he wishes to take, and if this is not done previous to the meeting, then it may be done at the meeting.

EXPERT AID.—It is desirable that a public-spirited and reliable lawyer should be one of the organizers, if one lives in the neighborhood. If there be a bank in the district it is most desirable that one of the officers or a principal employee of the bank shall be among the number, and that a leading citizen of the community in sympathy with the movement and commanding the respect of his neighbors shall also be among the 15 incorporators. It would be well, of course, to invite a representative from some neighboring savings and loan association to attend the meeting and give some practical advice, which is really more essential than the legal counsel.

LEGAL REQUIREMENTS.—Before holding the meeting, the men who are moving in this matter should write the Superintendent of Banks, Albany, N. Y., and get from him a copy of the law, which is self-explanatory in regard to organization and is direct in its terms. With a copy of the law before them, the organizers would draw up an organization certificate making and executing three copies, one of which they would hold themselves and send the other two to the Superintendent of Banks.

PROPER FORMS.—There are two forms of organization permitted by the law. These are known as: (1) The "permanent plan," and (2) the "serial plan." The organizers should be careful to avoid the "serial plan" and adopt the "permanent plan," which is a system of coöperation between borrowers and lenders; and which has been adopted by practically all the progressive organizations of the State.

CERTIFICATE AND BY-LAWS.—Before doing any business or receiving any money, however, it would be necessary to forward the organization certificate, together with by-laws also acknowledged by the incorporators, to the Superintendent of Banks. A copy of the necessary by-laws for the associations can be had from the Banking Department, from the New York State League of Savings and Loan Associations, or from the office of THE RURAL NEW-YORKER. Changes may be made in these by-laws within the law to suit local conditions and preferences.

PASSING INSPECTION.—Before executing the organization certificate and the by-laws, it would be well to submit those by-laws for review to the Banking Department, so that when the certificate and the proposed by-laws are forwarded to the Superintendent of Banks there will be very little doubt but that they will pass inspection there. It is in this respect that the advice of an experienced association advisor is desirable. The State will furnish instructors and organizers for the present, and at any time arrangements may be made for a competent advisor on application to THE RURAL NEW-YORKER. The banking department will not only pass upon the papers submitted to it, but will make an inquiry into the character and standing in the community of the persons who are organizing the association, and will not issue a certificate of authorization unless it is satisfied in this respect.

The by-laws should contain a clause that the new association will become affiliated with the Land Bank, this privilege being one that every association in the State decides for itself. J. J. D.

THE NEW YORK FARM BUREAU SERVICE

The County Farm Bureau work of farm management, field studies and demonstration is rapidly organizing. It is new work, and actual results will be slow at first. If properly handled and not over-advertised or boomed this promises to be a very useful part of farm education.

THE DUTCHESS COUNTY FARM BUREAU was opened July 1, 1913, with its office in Poughkeepsie. It was made possible by a subscription of $1,000 from the County Committee Y. M. C. A. to start the work. $50 per month from the State was immediately available, and the New York Central Railroad pays $5 per month to the agent, and passes him over its lines. A county appropriation of $1,000 was made by the supervisors in November. The bureau has an individual membership of farmers at $1 per year, and has received some private subscriptions. The Government gives the franking privilege. The benefits of the bureau are open to members and non-members alike. The growing of Alfalfa in Dutchess County has not passed the experimental stage. Several farmers have planted their crop under the direction of the agent, and it is hoped that a successful method of culture may be worked out. Clover has not done well in the county of late, due partly to the dry seasons and partly to the lack of lime. When the agent commenced work no source of lime was freely available to the county at a satisfactory price and of good quality. Such a source was located, and the railroad was induced to lower the freight rate from $1.60 to $1 per ton to all points in the county along its lines. The first car from this quarry was shipped into the county April 13. The material all passes a 20-mesh sieve, and costs $2.50 in bulk delivered. It analyzes 97 to 98 per cent carbonate of lime. Orders for approximately one thousand tons are pending, and will go in as fast as they can be filled.

There is a general awakening in the county as to the possibilities in the apple business, and farmers with neglected orchards are beginning to take an interest in them. The agent is co-operating with several men who are renovating such orchards. Spraying requirements of the section are apparently somewhat different from the usual recommendation made by the State and Cornell Station for Western New York conditions. Accordingly a spray calendar for the amateur apple orchardist has been issued by the bureau after consultation with State experts. This has been given general distribution. Co-operative organization for various purposes has apparently been more valuable than any other single line of work. With the aid of the bureau a County Coöperative Association for buying farm supplies and selling farm produce has been organized. A branch of the National Housewives' League has been organized in Poughkeepsie. One cow-testing association has started work and two more are pending. Several cars of fertilizer and other supplies have been purchased coöperatively at a large saving from local prices. The bureau has done much in the way of bringing State and government experts into the county to study local problems. The agent locates problems of a similar nature which come under the knowledge of a single expert, plans a campaign of one or two days, and enables the man to do three or four times as much work in a given time as he could do working alone in a strange county. One of the Cornell Extension Schools was held in the county this Winter under the auspices of the Farm Bureau, and plans for this work next Winter are now under way.

THE DELAWARE COUNTY BUREAU has only been in operation one month, but in that month there have been many calls for the County Agent to visit farms and suggest better methods of farming. There have also been many farmers at the office, who read the papers and carry on discussions. During the past month the agent has held meetings in the county for the purpose of the Farm Bureau and getting acquainted with the farmers. We have a number of men who are to grow certain crops on their farms under the supervision of the county agent that will be of value to that community, as they will show what can be done with proper care. The crops that are of particular interest are, oats and vetch grown for hay, Alfalfa, potatoes and corn. We have one man who is carrying on an experiment in drainage. While the agent cannot go to each man's farm and accomplish results, as it would take too much time, the demonstration crops that will be grown will give some definite information regarding that crop in that locality. The Bureau will be able to help the farmers in the purchase of lime at a reduction. It is also the aim of the Farm Bureau to form several cow-testing associations, so that the farmer will not be keeping cows that are "boarders."

ERIE COUNTY.—The Farm Bureau movement in Erie County was started February 1st, yet there seems to be a great deal of interest manifested by the farmers of the county in the new movement. Much of our time up to the present, of necessity, has been along organization lines in the office and field, the manager of the bureau having spoken before 23 audiences scattered well over the county. One agricultural extension school in coöperation with the College of Agriculture, Ithaca, N. Y., has been held, at which there was a registered attendance of 83, the largest school held in New York State this year. At the present plans are making for an agricultural demonstration car to go through the county, also arrangements for four orchard field demonstration meetings in different parts of the county, giving actual field instruction and demonstrations on pruning and spraying, etc. Several Alfalfa experiments will be conducted, comparing northern-grown with southern Alfalfa seed. Already something like 60 calls on the farm have been booked for work with individuals on their individual problems, which will be taken care of as soon as the roads are passable.

IN ONONDAGA COUNTY elaborate plans have been made to carry on extensive work. An excellent pamphlet has been issued by the Farm Bureau. This was organized on April 15, 1913, with some of the most prominent farmers in the county on the council and committees. The first thing the council did was to buy a motor car, so that the agent might get over the county rapidly and become acquainted with the farmers. This enabled the agent to get into every township and visit personally over 200 farmers. He has talked before every live Grange in the county. Dairying is the great farm interest in Onondaga, and the improvement of the dairy herd is the most serious problem. Even in this famous section of Alfalfa, lime and Holstein cattle, it is thought that the majority of the cows do not pay their way. They are capable of doing so, but fail through poor feeding, care, and housing. Two cow-contest associations have been formed, and cow-testing contests are being held in various parts of the county. Experiments in killing out wild mustard by the use of sprays are being tried. Farm surveys are to be made, and in connection with the feeding of dairy cattle, farmers will coöperate in selecting a good grade of dent corn suitable for the county. A start has been made with the old Onondaga White variety, which seems well suited to the locality. The proposition is to study this variety and develop it so as to adapt it particularly to local soil and climate. This bureau has a farm loans committee, and it also seeks to investigate and adjust, if possible, complaints made by its members in dealing with the public service companies.

The Buyers' and Sellers' Exchange has proven a complete success and bids fair to assume large proportions the coming year. A large number of people have been induced to use milk record sheets and lime, and to adopt better methods of cropping. We have inaugurated a system of permanent fertility, which proves to be successful and valuable to farmers, both in saving fertilizer bills and increasing yields. A number of people are using raw rock phosphate in contact with decaying organic matter, beginning this year. The work in renovating several old orchards is proceeding admirably.

NEW YORK STATE NEWS.

NEW FRUIT TREES.—Governor Glynn has signed Assemblyman Gillett's bill with regard to selling of fruit-bearing trees. This law requires that all fruit-bearing trees shipped from any point in the State shall have attached "to each car, box, bale or package a copy of a certificate of inspection issued by the Department of Agriculture and signed by the Commissioner of Agriculture, valid to the first day of September next following the date of issuance thereof." Labels specifying the varieties or names of the trees must also be attached. The law also provides for the recovery of damages if any of the trees prove untrue to name. It also requires all agents selling fruit-bearing trees to carry a certificate in writing showing authority to act as such agents. The act is to take effect on September 1 of this year.

"SIX DAYS SHALT" WITH EXCEPTIONS.—The bill introduced by Senator Brown to amend the law in relation to Sunday labor has become a law. It exempts from the provisions of the act which would limit labor to six days the week, the "employees in dairies, creameries, milk condenseries, milk powder factories, milk sugar factories, milk shipping stations, butter and cheese factories, ice cream manufacturing plants and milk bottling plants."

ANOTHER LAW.—Senator Godfrey's bill amending the charter of the city of Jamestown has been approved by the Governor. It authorizes the common council, on recommendation of the board of health, to acquire a municipal plant to handle and distribute milk, after the taxpayers have voted in favor of the proposition. We believe this is the first instance where a municipality has undertaken to handle the milk supply for the city.

LABOR DEPARTMENT ACTIVITY.—The Department of Labor was certainly busy during the month of March, according to a report recently issued by the department. Its agents inspected 5,731 factories, 3,293 mercantile establishments, 1,888 tenements and four mines. There were 24,341 orders issued during the month to factories, and of these 8,665 were in regard to fire protection. The department stopped work in 122 factories that were unclean, and seven factories were prosecuted on account of unsanitary conditions. During the month 18,982 visits were made by inspectors to determine whether or not orders of the department had been obeyed.

INSPECTING DAIRIES.—The work of inspecting every dairy in the State where cows are kept under the Bang system is under progress at this writing. This is done at the order of Commissioner Huson, who proposes to know what are the facts in the case in respect to the protection of the public against any possible danger of tuberculosis being transmitted through milk or the eating of veal. There are about 700 cows on 125 farms that are kept under the Bang system, and if it is discovered that they are not being kept according to agreement, that agreement will be canceled promptly.

GENESEE FRUIT GROWERS.—The Genesee County Fruit Growers' Association is planning to wage war against the San Jose scale this Spring. Two experts from Cornell will remain in the county for the Spring and Summer, and they will visit all orchards of the members of the association as soon as practicable. It is said that they will use a new formula for the spray, the ingredients of which will be made known to members of the association. This, if true, may be a good way to increase membership in the association, but it isn't a good way to cope with the scale. Unfortunately the scale is no respecter of horticultural associations.

OTSEGO FARM BUREAU.—The largest county farm bureau association in the State is that of Otsego County. It had a charter membership of 470, and now 628 farmers are connected with the bureau. The aim is to bring the number up to 1,000. This is by far the largest association of its kind, as Oneida, which stands next, has but 260, if we are correctly informed. Of course benefits are nowhere limited to members, but in a way every farmer in the county must receive benefit from the bureau's operations. Floyd S. Barlow, of New Brunswick, N. J., was chosen agent of the bureau, and he has been holding meetings all through the county to get the farmers interested in the movement.

STATE FAIR COMMISSION.—A meeting of the State Fair Commission was held in Syracuse April 30. At this meeting Commissioner Huson presided, and many details of the next fair were worked out. The premium lists for the fair are to be ready for distribution by June 1, and already a number of former exhibitors are applying for reservations. J. W. D.

Woman and the Home

From Day to Day

It Isn't the Thing You Do.

It isn't the thing you do, dear,
  It's the thing you leave undone
That gives you a bit of a heartache
  At the setting of the sun.
The tender word forgotten;
  The letter you did not write;
The flower you did not send, dear,
  Are your haunting ghosts tonight.

The stones you might have lifted
  Out of a brother's way;
The bit of a heartsome counsel
  You were hurried too much to say;
The loving touch of the hand, dear,
  The gentle, winning tone,
Which you had no time nor thought for
  With troubles of your own.

Those little acts of kindness
  So easily out of mind,
Those chances to be angels
  Which we poor mortals find,
They come in night and silence,
  Each sad reproachful wraith,
When hope is faint and flagging
  And a chill has fallen on faith.

For life is all too short, dear,
  And sorrow is all too great,
To suffer our slow compassion
  That tarries until too late;
And it isn't the thing you do, dear,
  It's the thing you leave undone
Which gives you a bit of heartache
  At the setting of the sun.

—Margaret E. Sangster.

*

STERILIZED bran, put up in packages like other cereals, is now sold by grocers, all ready for making bran bread or biscuits.

*

A CAKE cooler is inexpensive, but very useful; it consists of heavy tinned wire netting mounted on a raised frame, which permits the air to circulate under as well as around the cake. It is excellent for cooling bread also.

*

THE tender young sheep sorrel, which later is such an eyesore as it reddens the fields, makes a wholesome and delicious soup. Wash two quarts of the leaves very carefully, and cook till tender in a small quantity of water. Rub through a sieve, add seasoning, and three cupfuls of soup stock. Then make a paste of one tablespoonful of butter, rubbed smooth with one tablespoonful of flour, and use this to thicken one teacupful of hot milk. Add this to the soup, stirring well to keep smooth; let it boil up, and serve with croutons or heated crackers.

*

SUMMER is likely to come with a rush this year, judging by the late cold Spring. It sets work back in the house, as well as out of doors, for housecleaning that involves the moving of stoves cannot be done this chilly weather. In many places Summer work will be pressing before Spring work is over, both indoors and out. It will be a good season to think about "standardizing" the work to make one effort take the place of two. Just think, as you go about the house, where your greatest loss occurs, in time or energy; if it seems to present a problem you are unable to solve alone, perhaps the combined wisdom of others will provide a solution.

*

BEEF pie with potato crust is an old-fashioned English recipe for using cold roast beef. Boil five large potatoes in salted water; when done, slice a layer of them in a baking dish; then place a layer of meat, and salt and pepper, also celery salt; then potatoes and meat, and so on until your dish is full. It will take a teaspoonful of salt, a half of pepper and a saltspoonful of celery salt. Mash the remainder of your potatoes, which should make about a cupful; add one tablespoonful of butter. When cool, add one well-beaten egg, one cup of milk, one-half teaspoonful salt, and beat all together until very light; then work in enough flour, to which you have added one-half teaspoonful baking powder, to enable you to roll out in a sheet. When you have poured over your meat and potatoes a gravy which you have made from the scraps of fat and bones, place this paste over all, cut a cross slit in the middle and bake. A slice or two of onion improves this pie to those who like the flavor. It is very savory and nutritious.

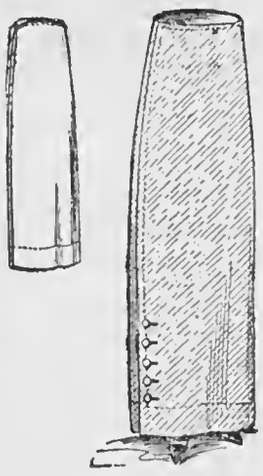
The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired. Price of each pattern 10 cents.

8223 Plain Guimpe, 34 to 42 bust.

7740 Child's Romper, 2 to 8 years.

8226 Child's Dress, 2 to 8 years.



8066 Two-Piece Skirt, 22 to 32 waist.

7731 Corset Cover, 34 to 42 bust.

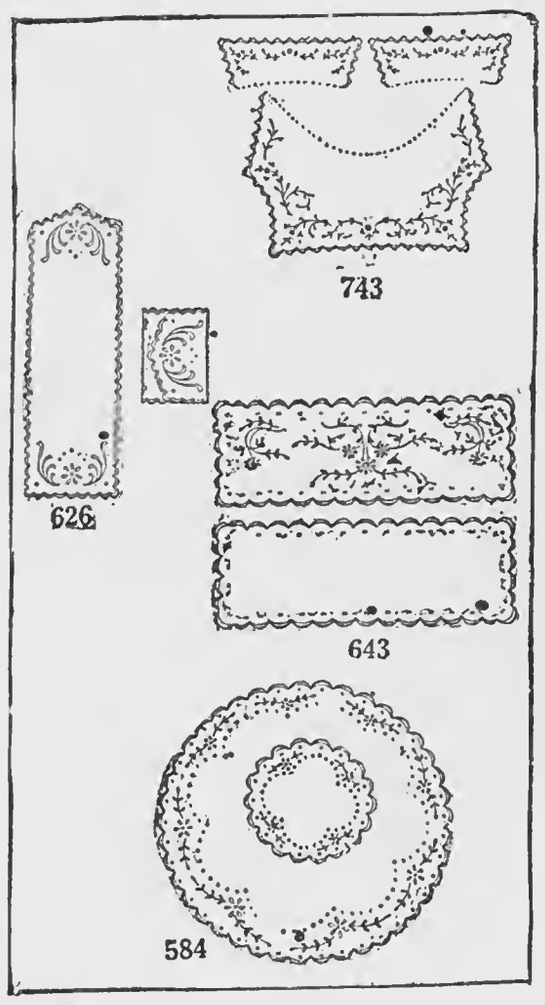
7609 Utility Caps, One Size.

Embroidery Designs.

The prices quoted are for stamped goods and material for working but transfer patterns of any design will be furnished separately for 10 cents each.

No. 743. A design for embroidering a child's sailor collar and cuffs. The scalloped edges are to be buttonholed, the leaves, petals and dots can be worked solidly or as eyelets. Stamped on linen lawn with mercerized floss to work, 25 cents.

No. 626. Design for embroidering a folding case for pins or veils. Stamped



on best white pure linen, with mercerized floss to work, 15 cents.

No. 643. Design for embroidering a pin-cushion cover having scalloped edges. Stamped on best round thread white linen, with mercerized floss, 50 cents.

No. 584. Design for embroidering a hat with scalloped edges. Stamped on pure white linen, with mercerized floss to work, 45 cents.

Seen in City Shops.

High collars, coming down in a low point in front, are a prominent feature in this season's styles; practically all of the blouses show them, whether silks, chiffons or wash goods. These collars do not include the Medici ruff of last year, which is now old-fashioned. Some of these collars are about the style of those worn by men when Madison was President, and have a cravat ribbon of black satin to hold them up; others resemble those shown in portraits of Lord Byron. These collars are not wired, but stiffened with starch. While standing erect, these collars roll outward, and thus do not come against the hair, while the sharp points stand out at either side of the face.

Colored separate waists have been out of style for a season or two, but they are now very much worn, both in plain colors and flowered materials. For an inexpensive, yet very pretty blouse, flowered voile is admirable, an excellent pattern being No. 8132, shown on page 231. Select a becoming color, and one that harmonizes with the jacket suit. A flaring stand-up collar may be worn with this blouse.

Some wonderful new underwear from Paris is made of fine handkerchief linen, trimmed with striped linen, narrow stripes of blue or rose on white.

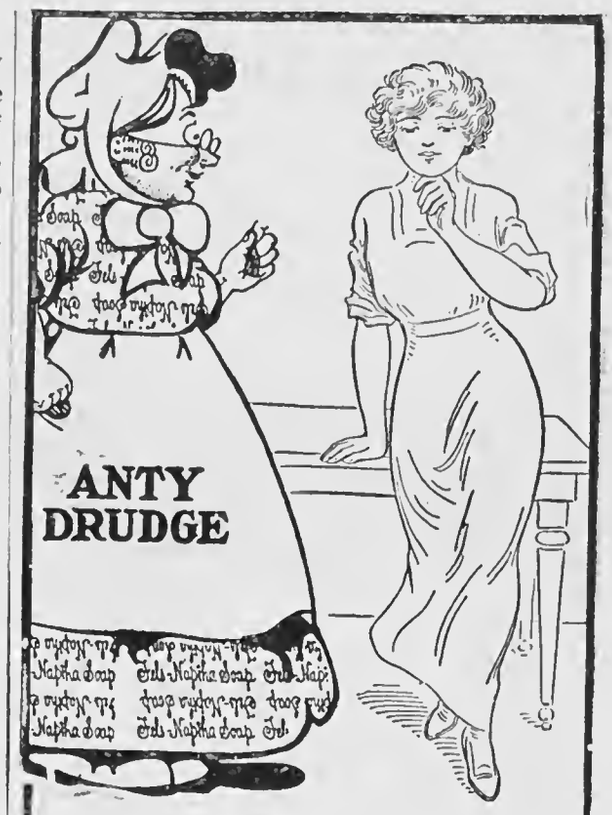
Among fashionable Spring shoes is a pump with two straps over the instep. Very sensible, as well as stylish, are women's patent leather pumps made just like a man's dancing pump, with low flat heels and no trimming except the usual grosgrain bow.

Panier tunics are a pretty model for the popular flowered materials, such as voile or crepe. A pattern for such an overdress was given on page 570, pattern No. 8206. This model is pretty for making over a dress, as the skirt could be of one material in solid color with a flowered over-dress. Another very pretty model for thin fabrics is the pattern No. 8200, shown on page 535. Many smart little silk or flowered crepe gowns seen in the shops are made after this model. It would be a pretty style for a graduation dress, made in fine voile. This is to be a fluffy season, with lots of frills, and the Summer dresses show this tendency quite strongly.

All the shops are full of bead necklaces; nothing is too odd or too showy to be worn. Of course they are called tango beads, but they only differ from the beads of former years in being more striking in their colors and combinations. If you have two necklaces with beads of different sizes, and colors that will harmonize, or make a striking contrast, combine the two, stringing the different beads alternately, and you will have a tango necklace. Many of them are finished with odd pendants formed of flat slides or plaques of the same material as the beads, tipped with a silk tassel.

HERE is a recipe for old-fashioned apple sauce that is very rich and savory: Fill a small stone crock with peeled, cored and quartered apples. Pour over them a pint of sugar dissolved in a large cupful of sweet cider and add a stick or two of cinnamon. Cover the crock closely and set in a very moderate oven for five or six hours, or over night. If good tart juicy apples are used the sauce is delicious.

WE have been asked several times to give a recipe for old-fashioned salt-rising bread. The following is a century-old recipe, sent to us with a strong endorsement: At noon, the day before baking, take one-half cupful of cornmeal and pour over it enough sweet milk, boiling hot, to make it the thickness of batter cakes. Keep warm. The next morning pour into a pitcher one pint of boiling water, add one teaspoonful of soda and one of salt. When cold enough so that it will not scald the flour, add enough to make a stiff batter, then add the cup of meal set the day before full of bubbles. Place the pitcher in a kettle of warm water, cover and keep warm. When the batter rises to the top of the pitcher pour it into a bread pan and add one and one-half pints of warm water and flour enough to knead it into loaves. Knead but little harder than for biscuit dough and bake as soon as dough rises to the top of pans. This will make five large loaves.



Mrs. Youngwise—"I'm afraid John's mother's offended. She came over to help with my washing, and it was nearly done. She said I hadn't done it right because I didn't boil my clothes like she and her mother always had, and I said she didn't spin and weave any more like people used to, and then she left in a huff."

Anty Drudge—"She'll get over it when I talk to her and tell her about Fels-Naptha Soap. I'll tell her to blame me because I advised you to use it."

Every year there is some new way to lighten women's work—but never a better nor more sensible one than the Fels-Naptha way.

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FELS-NAPTHA

Hot Beverages.

G. L. asks for recipes for hot beverages. I hope the following will prove helpful, some of which are nourishing, while others merely quench thirst.

An invalid who could not take a cup of hot water as the doctor prescribed found it very palatable when a dash of nutmeg was added. Another family always drinks hot water flavored with ginger for supper. Ginger being an irritant this would not be healthful to use all the time. One mother frequently flavors hot water with cinnamon or cloves instead of tea. A little sassafras tea is palatable and healthful. Peppermint and wintergreen both make very agreeable drinks for most people. Plant mint in the garden and you will have flavor for delicious beverages.

Fruitade can be served piping hot as well as ice cold. Make a syrup of sugar and water and squeeze juice from any kind of fruit, or several kinds; add the juice of a lemon, as this makes the flavor more pronounced. Put an amount of juice according to strength in cup and fill with hot water.

Oatmeal water is one of the most wholesome Summer drinks. To prepare, take a tablespoonful of oatmeal and a quart of water, boil one hour and strain. This is usually served cold, but may be served piping hot. Variation can be made by adding juice of lemon and two tablespoonfuls of sugar to the quart. Vinegar may be substituted for lemon juice.

Rhubarb tea is often relished even by children in the Spring. Cook rhubarb in quantity of water, strain and sweeten with sugar. Serve hot. Barley tea is a nourishing hot beverage. Wash two tablespoonfuls of pearl barley, scald with boiling water and boil 10 minutes, strain, and add two quarts of boiling water and reduce one-half. Sweeten and flavor with lemon juice. The bouillon cubes on the market make a delicious appetizing hot drink.

Caramel tea.—Take two cups of granulated sugar and one cup cream, boil until thick, and dilute with boiling water to consistency of thick syrup and put in can. Place a tablespoonful of mixture in cup and fill with boiling water.

Toast tea.—Toast stale bread and cover with boiling water, let stand a few minutes and strain. When making any beverage remember that a pinch of salt will develop or heighten—make more pronounced—any flavor. M. C. B.

Hand-made Rugs.

My knitted rug, just finished, is very satisfactory as far as looks are concerned, and I hope it will do as good service as my crocheted rug, which has already been in use a year, can be easily washed, and is heavy and firm enough to keep in place easily on the floor. Both have the same soft shaded coloring, the only bright stripe being of shaded old rose to deep crimson, except that the knitted one has a central stripe besides of old blue shaded into gray. The crimson shaded stripe is very easy to manage, as all the shades are done in the same dye in the following way. Crimson for wool is the dye used and pure white wool takes a deep crimson color for the darkest stripe. Underwear part cotton, mostly wool, takes a lighter color. Natural gray wool underwear takes a soft grayish color of the same tone, which shades in between a rose pink which cotton rags take when dipped in this same dye. The crimson stripe in this rug was baby's coat, a white wool one originally, but colored for his use as he began to play about out of doors, and the old blue stripe is all that is left of my wedding dress, which was called cadet blue then; a grayish shade, which has softened more like gray with the 17 years since. There are other stripes in the rugs which have pleasant associations—one pretty one of brown was made of baby John's outworn rompers, and an odd gray stripe was originally work aprons of shepherd check calico. There are some of Daughter's school dresses represented too, and at least one of Father's coats.

The knit one was done in strips with a color scheme as follows: Old blue shaded to gray for the central part of the rug, and an old rose and crimson shaded stripe at either side with shaded brown and black at the ends. A crosswise narrow strip was knitted to hold the rug in shape, but this was knitted of the same color as the stripe opposite and does not show. The coloring is in Roman stripe effect. There are 19 stripes in my rug, each color making one strip. These strips were sewn together with carpet warp, and the finished rug is nearly two yards long by a little more than one yard wide. The black strips on the ends of the rug were each knit longer than the other strips and the cross-knit strip set in to make the right shape.

A friend of mine once knitted a rug large enough nearly to cover the dining room floor. It was not a good idea, as besides being an immense amount of work, it made too thick and heavy a rug, being difficult to keep clean, on account of its weight and size. This sort of rug is only good for medium size, as in fact are also the crocheted ones and the heavy woven ones. I once made the same mistake by having heavy rags, cut twice as wide as ordinary rag carpet rags, woven into a rug large enough for an entire floor covering. It was woven in yard-wide strips and sewed together. It proved too heavy to manage, and finished its days as a curtain in the poultry house, not really as good there as something else would have been, and representing a big waste of time and work and some money. If a large woven rug is desired the rags should be cut as for ordinary rag carpet, narrow as will hold when sewn together.

I have seen two very good ones woven in this way, the center in each case being of hit-or-miss rags and with stripe on each end. One had an artistic border in soft pastel shades—no bright color at all. However, the coloring is largely a matter of individual taste, as we realized when this rug, just from the weaver's was proudly exhibited to two old ladies, near neighbors of ours. One looked at it dubiously and frankly said she thought it "the humbliest thing she ever did see." The other said the colors were well enough, but asked us over to see her carpet. I did go over soon, and the little old Frenchwoman took me proudly into her "best room" and threw up the shades. I don't know when I have seen anything so dazzling as that floor covering with its brilliant hues of brightest purple, orange, green and yellow. I am sure all the rest of the rainbow was there, but these shades were so bright. She assured me that she colored everything in the carpet. I could honestly say that I thought the colors very bright and pretty, but I could not help thinking that the combinations and brilliance and lack of shading left much to be desired. Carefully she drew down the curtains again, and closed the room, which was never used except on solemn occasions such as weddings or funerals.

The crocheted rug was made a square or rectangular shape by adding two extra stitches at the corner after first crocheting a square-cornered piece starting with 50 stitches. These rugs are usually round or oval, as are also the braided rugs.

For knitting the rug, long coarse needles such as sweaters are knitted on, are used. My needles are of celluloid and a bit over a foot in length, very smooth and easy to work with, much better than the ordinary wooden needles. The rags are cut as fine as will hold together easily, just as for weaving rag carpet, and are sewed and wound into balls. The stitch is plain garter stitch. For the crochet rug a large size crochet hook is used and the single crochet makes the firmest rug. Double crochet is sometimes used.

Housecleaning is a good time to pick up and wash all the outworn material which works well into rugs. Often the coloring can be done while other dyeing is under way, so saving time and work, then in the long Winter evenings it is a pleasure to sew and knit or crochet the rags, and when done these rugs are very serviceable and suitable for farm houses. F.

To Clean Saucepans.—White-lined agateware utensils can be easily and quickly cleaned by putting a tablespoonful of chloride of lime in the saucepan and filling with water. Let the water boil. This works like magic. C. C. H. G.

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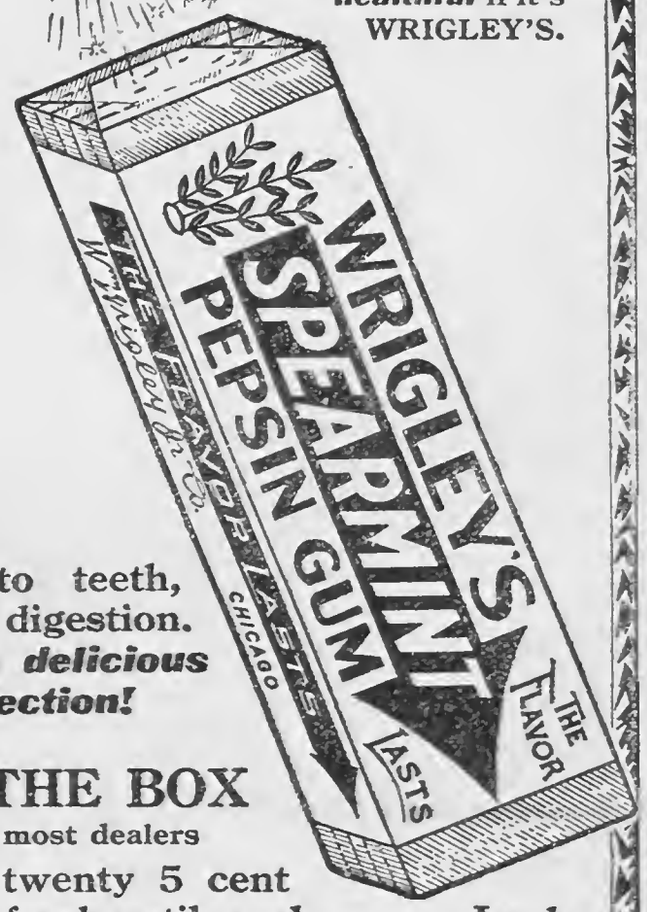

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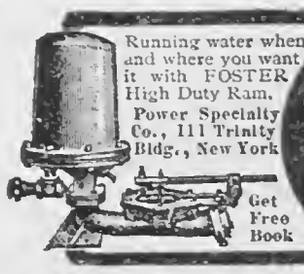

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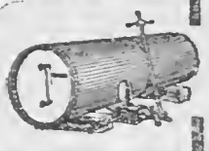

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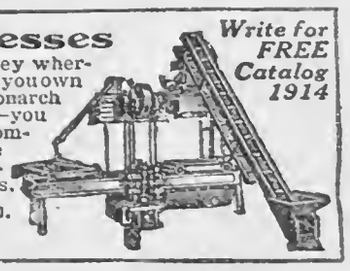

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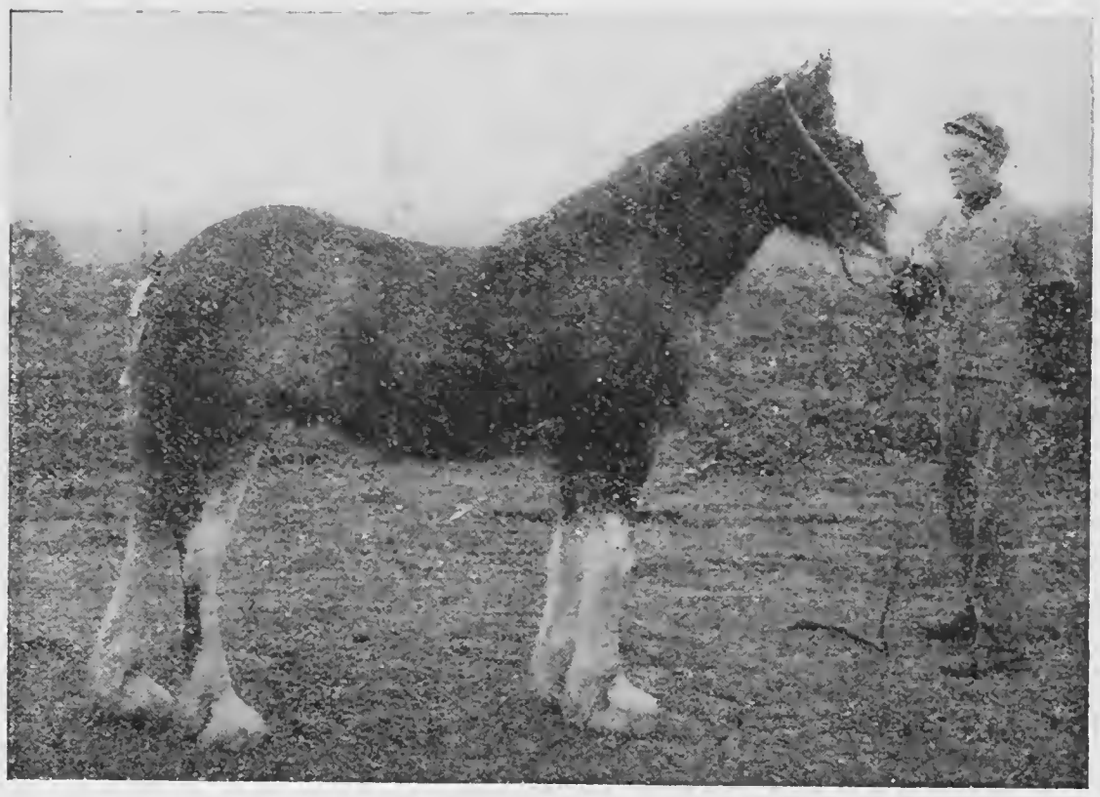
Live Stock and Dairy

A $5,000 CLYDESDALE COLT.

A transaction of special interest to the Eastern live stock breeders was made at Fairholme Farm in New Jersey last week, resulting in the sale of a 10-months-old Clydesdale colt for $5,000. This youngster, known as "Fairholme Footprint," has the distinction, as far as I know, of being the highest priced 10-months-old draft colt that has been sold in this country. Mr. F. Lothrop Ames of Langwater Farms, Massachusetts, is the buyer of this colt. This colt possesses rare individuality, and is backed up by blood lines and breeding that are unsurpassed. His dam, Harveistoun Baroness, was imported by Mr. Robert A. Fairbairn two years ago, after she won highest honors at the Scottish shows. She went direct to the International at Chicago and was awarded the grand championship at the International. She was returned to the farm at New Market, New Jersey, produced and raised "Fairholme Footprint," and was again fitted for the show ring, shipped to Chicago and again won the championship. The sire of "Fairholme Footprint" is Dunure Footprint, who is without doubt the most popular young stallion in Scotland, it being reported that at one of the recent shows in Scotland, 11 out of the 12 winners of the show were sired by this famous stallion. The grandsire of this colt is Baron o' Buchlyvie, and



FAIRHOLME FOOTPRINT, A $5,000 COLT.

he was sold at public auction for $45,500 Harveistoun Baroness was sired by Baron's Pride, undoubtedly the greatest sire that the Clydesdale breed has ever known, it being reported that the value of his immediate offspring is over $300,000, while he is said to have earned $150,000 in stud fees. As an individual "Fairholme Footprint" is without a peer. He combines size with substance, while his feet and legs evidence quality at every point. That he will be a prominent factor in the American show yard there is no doubt, and with such breeding and backing he should prove a remarkably prepotent sire. The sale of a yearling Clydesdale, raised and bred in New Jersey, for the highest price on record, will no doubt open the eyes of those interested in draft horse breeding in the East, as well as the trotting horse enthusiasts who heaped ridicule on Mr. Fairbairn and others, including the Live Stock Commission, when they imported the first draft horses for breeding purposes in New Jersey five years ago. In language more forceful than polite it was asserted that no one could raise draft horses successfully in this part of the country, and that nobody would buy them even though they were produced. The answer is "Fairholme Footprint." This will no doubt be a great impetus to draft horse breeding in the East, and only shows what can be accomplished if care is exercised in the selection of breeding matrons, with due regard for individuality and breeding. It might be added that Mr. Fairbairn refused $5,000 for the dam of this colt on the day that the sale was made, as Mr. Ames left the standing offer of $10,000 for the pair. F. C. MINKLER.

New Jersey Exp. Station.

HOME BUTTER-MAKING.

The question of disposing of the product of the cow to the best advantage has so many sides that it becomes quite a grave question. About 20 years ago a creamery started up about a mile from our place, and we carried our milk to it till it closed its doors, or had them closed. As "Mother" had made the butter before she started again, but as we were keeping more cows and she needed all her strength to do the housework, I decided to try my hand, and with her help did pretty well. A while after the factory started again, and they wanted us to help. I took a certain number of pounds of cream and carried to the factory and then churned a similar amount, and was satisfied that it would pay me to make butter. I tried this a second time with the same result. But, and that is a great big but, if mother or wife had to make the butter with their present health, the cream would go to the factory. We have 60 customers who are glad to pay the highest market price for our butter, and there is hardly a week that we could not get more customers. It takes about six hours a week to deliver our butter, and we make nearly 7,000 pounds a year. We are as well fitted as most creameries to make it, and as I like the work, it is no hardship.

To sum it all up, let me put it thus: Don't put butter-making onto already overworked women. The creamery is a god-send to them. If you don't make butter that brings the highest price you can make more out of the creamery. If you have surplus of women power and they are the kind that delight in making the high grade butter, and you have a market that will pay for quality, what it is worth, go ahead and make it, but it seems to me that it would be a good plan to get the boys on the farm interested in butter making, even to sending them to the agricultural college, at least for a short course. FERNSIDE DAIRY.

Maine.

WORLD'S RECORD FOR A DAIRY COW.—The Guernsey cow May Rilma, owned at the famous Chesterbrook Farm, the home of the late A. J. Cassatt, now owned by his son, Capt. E. B. Cassatt, has given in 365 days, 19,639.50 pounds milk, which contains 1,059.59 pounds butterfat. This cow was bred and raised at the farm, and her year's work has been carefully supervised under the regulations for the Advanced Register of Guernsey cattle conducted by the American Guernsey Cattle Club. While officially supervised by the representatives of the Pennsylvania Agricultural Experiment Station, her work has also been checked by six similar institutions in other States, and by a representative of the Dairy Division of the United States Department of Agriculture. This record surpasses that of any cow of all the dairy breeds in the world. May Rilma is producing more butterfat in her thirteenth month than in her first, thus widening the distance beyond her nearest competitor and more firmly establishing herself as queen of the dairy world.

THE superintendent was examining the school. "Who wrote 'Hamlet'?" he asked. A very frightened little boy rose and said: "Please, sir, I didn't." The superintendent was afterward relating the incident to the members of the schoolboard. "Haw, haw!" guffawed one. "I bet the little rascal did all the time."—The Delineator.

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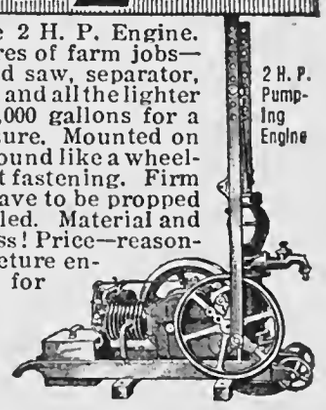

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"Don't dicker in purebred stock if you have a herd of a high standard, and the goods you buy and sell are the ordinary kind," is the opinion of Will Bullard, Holstein breeder of Ohio. Mr. Bullard says: "I had a chance to make some money. Three head from an ordinary herd of registered stock were offered for sale. The price was attractive, and I could have taken them in my herd, and in a short time nearly doubled my money. I would have sold them not on their merits but on the reputation of my herd. They would not have measured up to the expectations of my buyers, and it would have turned out to be an expensive deal in the end. Besides, it is unethical to sell inferior goods on the reputation of high-class stock.

"A dickerer who has his reputation established as a dealer and trader picked up the stock. He cleaned up several hundred dollars of easy money. The buyer since learned of the margin the dealer placed on the cattle. The buyer cannot blame the breeder for this rake-off which went to the dickerer, and the breeder will in no way suffer from the misrepresentations made to the final buyer. There are some dickerers who are on the level of horse traders. So long as the breeder does not become side-tracked into the dickering game, he will be an asset to the breeding business. There are men in the live stock business who are far above the petty deals. These men have a national reputation, their advertisements appear in the farm papers. Their word is absolutely reliable, and they consign their best stock to the consignment sales. If the breeder deals in stock, let him handle good stock, charge fair margins and give a fair deal, and then advertise his business. Otherwise let the local horse trader have the field without competition." W. J.

Ohio.

New England Milk Producers.

Another prop has been knocked from under the Boston milk contractors by the decision of Judge Morton of the U. S. District Court, at Boston, sustaining the demurrers filed by the defendants something over a year ago, and thus ending a long-drawn-out case. The case in question was started something like three years ago by indicting several Boston contractors and the then secretary of the B. C. M. P. A., Mr. Hunter, claiming a violation of the Sherman Anti-Trust Law. The claim was that these persons acted together in making an agreement as to price to be paid farmers for milk, thus forming a trust, and shutting out free and open competition in sale of this product. Two indictments were brought, one charging conspiracy in restraint of trade, the other charging combination in restraint of trade, and attempting to monopolize trade and commerce in milk. The judge finds in the first count that there was not an unreasonable restraint of trade shown to justify carrying the case further, so this count is dropped. In regard to the second indictment, the facts shown do not prove a crime has been committed, or prove any intention on defendants' part to force down the price paid for milk, or intention of underselling others in open market; or, in other words, the judge did not think the facts shown in either indictment would warrant indictment by a jury trial.

While most people who knew the situation did not think any other decision could be obtained, yet the uncertainty has worked much harm to producers in many ways. It has given the contractors an excuse to refuse to confer or agree on a price to pay for milk with the producers, except in individual cases, and these were confined to a statement that the contractor would pay a certain price for milk the coming month or two, and the average price for the coming six months would probably be so-and-so, subject to condition of market, demand, etc. To pin them down to any solid agreement was impossible in nearly all cases. It also frightened the farmers' organization into disbanding in a manner not very creditable to itself, at a time when it or something along its lines was necessary to the life of the milk production on our New England farms. Only a few months later the secretary of this association since its founding passed away, and many believed his death was hastened from worry over the situation and results, or failure of results, in the cause of the milk producers, to which cause he had given his best efforts, only to be judged unfairly by many who had no cause or right to judge. No doubt Mr. Hunter made some mistakes, but those who knew him best had great faith in him, and many of us know that the best and most honest man in the world, in the same position, would be called a rascal or worse by some of the men he was doing his level best to serve. That is the reward many get who try to help their fellow farmers, and it is so in other walks of life also, but seemingly not to such a great extent. The farmer seems to be naturally suspicious, and more willing to believe bad than good of his neighbors and best friends sometimes. These are sad facts to state, but too often true, and these are the strongest reasons why the farmers' organizations do not get better results.

At the death of the old Producers' Association a new one was formed by a few who had hope and were still willing to carry the battle on. A moderate success has crowned their efforts during the past year, and the first annual meeting, held last January, resulted in little or no friction, as all worked together in a creditable manner, and backed up the policy of the directors in their work the past year. The association also approved the action of its directors in securing the services of Mr. Pattee for secretary at a salary of $1,400 per year. The secretary's duties will be many, the most important of which is organizing the various sections of New England supplying milk to Boston. Another almost as important is maintaining an office in Boston as headquarters of the association, keeping track of and watching over all legislative matters which would affect the producers in any way, and keeping the producers informed of same by a monthly bulletin or otherwise, as seemed necessary; also in boosting and advertising our product to consumers in all ways possible. These various duties will keep him busy, and if he carries them out in an able manner he will certainly earn his money and be a good investment to the organization at this or a greater expense. His work up to date has been largely organizing in New Hampshire, where he is well known and liked. He has, of course, attended to some other matters, as he could, but as he has a big job before him, which takes time and patience, we must not expect perfect results all at once. It takes time to build a strong, stable organization, and while the situation is very bad at present, and prices much too low, if we keep our courage up and work together we regain our lost ground, and will win yet. If everybody helps we will show them that the New England milk producers are not dead, or even sleeping. Our work is to wake them up, and we can do it.

A. E. P.

An old colored woman boarded a street car and proffered the conductor five pennies for her fare. "I can't use them," he said gruffly. "Dat's all right, honey," she replied. "Jes' you give 'em to the company. They kin use 'em.—The Delineator.

SWINE

MULE-FOOT HOGS are Hardy, Prolific, and Mature quickly. Stock for sale. J. DUNLAP, Box 441, Williamsport, Ohio

FOR PURE BRED TAMWORTH SWINE write or visit WESTVIEW STOCK FARM, R. F. D. No. 1, Winston-Salem, North Carolina

DUROC PIGS—$16 PAIR. Write S. A. WEEKS, De Graff, O.

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, N. Y.

Cheshires—March pigs. August sow bred for May farrow. G. E. SMITH, Castile, New York

O.I.C.'s or CHESTER WHITES
Large, healthy and prolific. Nothing but Spring boars to offer. March and April farrow. May and June shipment, at 8 weeks age. All stock registered in Chester White Record or O.I.C. Swine Breeders' Association, and pedigrees recognized everywhere. VICTOR FARMS, Bellvale, Orange Co., New York

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa.

BERKSHIRES—Two Fall Boars and a few choice Spring Pigs at farmer's prices. Write, J. I. HERETER, Gettysburg, Pa.

Pure-Bred Berkshire Pigs
5 weeks old, $6 each. Farrowed, March 31.
HARRY ADAMS, - Titusville, Pa.

BERKSHIRE BOAR—Cholera Immune, 7 mos. old. Registered. Masterpiece blood. Fine type. Price, $25. OAKWOOD FARM, R. 3, Newburgh, N. Y.

Springbank Herd Big Berkshires
I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
J. E. WATSON, Proprietor, Marbledale, Ct.

LARGE BERKSHIRES AT HIGHWOOD
Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows.
H. C. & H. B. HARPENDING, Dundee, N. Y.

FOR SALE—BERKSHIRES
Two fine-matured herd boars. They are good individuals and bred strong in the blood lines of Masterpiece, Lord Premier and Premier Longfellow. Orders taken for this season's pigs. Also gilts and boars of last Fall's farrowing. Box R, ANIMAL HUSBANDRY DEPARTMENT, Syracuse University, Syracuse, N. Y.

ELLENWOOD FARM
BERKSHIRES
Pigs of both sexes and unrelated trios for sale. Our pigs are rich in Masterpiece, Lee and Premier blood. Let us furnish you with a foundation herd. Only choice animals sold for breeders.
Write us, or better yet, pay us a visit.
ELLENWOOD FARM, R. D. I., Hatboro, Pa.

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Collie—Females—Excellent Pedigree. $10 to $25. CLARK FARM, Boonton, New Jersey

COLLIE PUPS—the intelligent kind. Also Bloodhounds. NELSON'S, Grove City, Pa.

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Airedale Puppies (Female) Two months old. Pedigreed—at Moderate Prices. BRIGHTSIDE KENNELS, Dunellen, N. J.

BEAUTIFUL BLACK & WHITE Shepherd Puppies
Will make perfect family or watch dogs. 7 weeks' old. Mother, purebred Scotch shepherd, with fine pedigree. Write for particulars.
Mrs. M. W. ADAMS, ANCHORAGE FARM, Highland, New York

DAIRY CATTLE

FOR SALE—Otterkill Farms Ayrshires
Ayrshires stock of various ages, all well bred, the sire imported two years ago and was bred by Robert Wallace Auchenbrain of Scotland. All stock to be satisfactory or no sale. Price to suit the buyer.
Address Rudolph Hess, Mgr., Washingtonville, Orange Co., N. Y.

FOR SALE—REGISTERED JERSEY BULL—Ready for service. A fine individual. Eugene F. Wells, Tully, N. Y.

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

FOR SALE—Two Richly-bred Jersey Bulls—One yearling and one two year old. O. N. WILSON, Kittanning, Pa.

PUREBRED HOLSTEINS FOR ANY POCKETBOOK $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. MOHEGAN FARM, Peekskill, N. Y. 1 hr. from Grand Cent. Sta.

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REG. HOLSTEIN MALE CALVES
$25 and upwards
Choicely bred, fine individuals. We aim to please our customers. Write today.
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East River Grade Holstein Cows For Sale
50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.
These will suit the man that is looking for high-class dairy cows. Large producers, good size and well marked.
Visit the East River Holsteins when in need of first-class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.
Bell Phone No. 14 F.5. JOHN B. WEBSTER, Depr. Y Cortland, N. Y.

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Long Time and 4 Per Cent Interest
Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.
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The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
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Purebred Registered
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No matter how poor your present herd is, you can easily raise it to this standard in a few years by the intelligent use of a well-selected purebred Holstein-Friesian bull.
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Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

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O. N. WILSON, Prop.
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TROTTING AND ROAD HORSES
An excellent opportunity to buy a few good mares, brood mares, or colts, at bargain prices.
VICTOR FARMS, - Bellvale, N. Y.

AT STUD—"LANDAIS" (100,233) 92,338. Imported Registered Percheron Stallion. Gray, weight 1,900 lbs. Fee, $15. Walnut Grove Farm, Washingtonville, N. Y.

PERCHERON STALLIONS—Our hobby is quality. Buy from farmers. S. SCHOONMAKER, Gardiner, N. Y.

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Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y

3 Three-Ton YEAR OLD Grade Holstein Heifers
1 yearling Bull, Grade Holstein. Inquire
P. F. TORMEY, Middleburg, Schoharie Co., New York

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1914 edition, describes four distinct families represented at Meridale Farms. The oldest of them is the St. Lambert Matilda family, descended from the foundation stock selected twenty-five years ago for the original Meridale Herd.

One of our best bulls of this breeding is for sale, dropped September 15, 1913; solid fawn in color, with black tongue and switch. Individually, he measures up to a high standard of dairy type.

His sire, Gazelle's Fawn Rioter King 71966, has nine daughters and one son in the Register of Merit. His dam, Meridale Fontaine's Petite 138272, produced 6033 lbs. milk, 412 lbs. butter at 4 years old, and 8910 lbs. milk, 607 lbs. butter the year following, her fat test averaging 5.8% for the 2 years.

Particulars and pedigree, with copy of booklet, mailed on request.

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300 Chestnut St., Philadelphia, Pa.

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CUT down your feed bill and increase your cream check by keeping GUERNSEYS. A dairy of grade Guernseys will give you fine flavored yellow milk, cream, and butter.
Write for free literature
GUERNSEY CATTLE CLUB
Box Y, -:- Peterboro, N. H.

FOR SALE—REGISTERED GUERNSEY BULL—13 mos. old. Price right. G. Irving Austin, Merton, Monroe Co., N. Y.

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JUST the thing for preserving files of The Rural New-Yorker. Durable and cheap. Sent postpaid for 25 cents.
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AMERICA'S GREATEST AYRSHIRE HERD
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NEW YORK CITY, MAY 21
Every animal will be tuberculin tested prior to the sale, and certificate of health furnished to purchaser
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FASIG-TIPTON CO. Madison Square Garden New York City

DAIRYING IN CENTRAL NEW YORK.

1. Can an ordinary 30-cow dairy in Central New York be run at a profit on a 200-acre farm by two men, where all grain is purchased and only hay, stalks and pumpkins for a while in the Fall, are fed from the farm, milk selling at an average price of 3¼ cents per quart? 2. If not would increasing the dairy by 20 cows and using milking machines do it? 3. Would the addition of a silo do it? 4. Would the sale of cream, butter, or cheese at wholesale and the use of the by-product for hogs, increase the results, and as a general rule which of the four products is the most profitable? A. R.

Good Butter Pays Best.

1. I do not see why a dairy of 30 cows cannot be run at a profit on a 200-acre farm. Of course it will depend on the cows, how good they are as milk producers, and the man behind them. You speak of ordinary cows. I think there are too many of that kind being used for dairy purposes. I know of plenty of cows in my own neighborhood that are not milking over 4,000 pounds in a year. If a man had to buy all his grain, and depend entirely on hay and stalks, and only get 3½ cents for his milk, I am afraid he would not receive a very large profit from his cows. If he can raise Alfalfa to feed part of the time that would cut down the feed bill one-third any way. 2. I have never had any experience in using a milking machine. 3. I know the silo would help out wonderfully; with good silage to feed night and morning and hay in the middle of the day he would be surprised at the end of the year to see how much more he had made from his cows and at less expense. 4. Now I am coming to the part I take in the dairy business. I have 15 Jersey cows, mostly grades, and they make me 300 pounds of butter on an average per cow in a year. This butter sells at an average price of 36 cents per pound. Of course I have private customers that I furnish, and I could sell double the amount if I could make it. Many are making more butter per cow than I am, but this is better than 3½-cent milk, and I have the skim-milk, which is surely worth $10 per cow, to feed to pigs. With a little grain it does not take a great while to make a pig dress 100 pounds, which in our market is worth $12. I also sell a number of veal calves,
New York. CHAS. LEHMAN.

Not a Living Wage In It.

1. With good care and management the average cow would not give more than 2,300 quarts and by my experience the expenses would be about as follows:

To 2,300 qts. x 3¼ x 30 equals		$2,242.50
To 30 calves at $2		60.00
		$2,302.50
For grain at $27 per cow	$810	
For seeds	75	
For repairs	60	
For expense 4 horses	230	
For interest on $10,000 farm val.	500	
For interest and depreciation on tools and machinery of $800 val.	128	
For interest on stock	180	$1,983.00
Profit		$319.50

2. Adding 20 head to above dairy would bring at same rates $1,495, with an added expense of about $895, leaving a profit on the 50 head of $919.50.

3. By my experience the addition of a silo with a good quality of silage would add 10% to above profit.

4. This is a hard question to answer, as much depends upon the breed, butterfat in milk, local conditions, etc. Taking it for granted that the milk would test 4% and the average price 32 cents per pound for butterfat, each cow would produce 197.72 pounds, selling for $63.17 and allowing 20 cents per cwt. for skim-milk would bring gross receipts up to $72.97 per cow, as against $74.75 by selling whole milk, and there is a question of the skim-milk making $9.80 worth of pork, as I have had as little as $1.17, and the most I ever had was $8.85 per hog that I could credit to skim-milk, but I have no data as to amount of milk fed per pig. On the other hand I have fed skim-milk to veal calves and it has paid as high as 39 cents per cwt. Judging by neighbors' experience cheese would pay still less, and if cream was sold at market price per pound of fat there would be nothing gained in that direction, only less labor. E. P. ADAMS.
Chautauqua Co., N. Y.

Prefers to Make Cheese.

1. I think yes, if the farm is properly taken care of and has no boarder cows or boarder men; that is, the men must work and expect to raise crops enough for their teams and families' board and some to spare. There must be but very little forest land; the 200 acres must be nearly all cleared. By these questions it would seem that there was doubt of a 200-acre farm keeping 30 cows and paying labor. It would be doubtful on some farms with some men.

2. No I think 30 cows are more than the average 200-acre farm ought to keep.

3. Would the addition of a silo do it? I think it would have to be an extra farm of 200 acres to keep 50 cows even with a silo, and allowing no waste land, which nearly every farm has.

4. I think the sale of cream, butter, or cheese with hogs would increase the results. You ask which of the four products? I think there would be only three, as the hogs must necessarily be connected with one of the products, cream, butter, or cheese. I would expect every farm to have an orchard that would be made to help, and every farm usually has wood which would be quite an item. The calves from 30 cows ought to bring $3.50 at four weeks old. The men must have a chance to save these calves and not throw away, so as to sell the milk at 3¼ cents per quart. These questions do not take in consideration that there are many things on farm that will help, and not depend wholly on cows. It depends very much on the men, as some men can get so much better results from same cows than others, and not require as much feed to do it. I think cheese would be the most profitable. E. A. BENTLEY.
Allegany Co., N. Y.

Prefers Making Milk.

1. This question as put is not very clear. How far is this farm situated from a shipping station? Is this 200-acre farm all tillable land? What is the condition of the soil as to ease of tillage and fertility? Is it well fenced and watered? Are the buildings comfortable for housing 30 cows through the Winter season? Assuming a favorable answer to all these questions, it would still seem a hard task for two men to undertake the production of milk at a gross price of 3¼ cents per quart and have to buy all grains fed. If these men have capital sufficient to buy grains in car lots for cash it would help out some, still dairymen about here claim milk cannot be produced at a profit for less than 3½ cents per quart. However, labor conditions may be different in Central New York and such a business venture as this might pay a small profit.

2. I have not had experience with milking machines. Dairymen in general seem slow in adopting them.

3. Silos are one of the essentials in the profitable production of milk. A silo of 32 feet stave and 16 feet diameter ought to furnish sufficient silage for 30 cows during the Winter season; 12 to 15 acres of corn should fill it.

4. No, not with an ordinary herd of dairy cows. The four products of the dairy mentioned, in the order of their quick net profit returns would be, I think, milk, cream, cheese, butter.
Monroe Co., N. Y. J. E. BEEDLE.

Must Be a Mighty Worker.

1. I enclose these figures, nearly all from my experience, in answer to your first question. The farmer must be strong, a good manager and a hard worker to bring about this result.

2. To increase the dairy by 20 cows would make a much greater expense for help; have seen milking machines work, but am not convinced they are practical. There is a difference between farming with money and farming to make money. The low prices of milk, 2¾ cents, and the high price of feed and also of cows, make farmers free sellers; the production will grow less each year. Low prices with arbitrary rules will cause them to change to other lines.

3. We do not use silo; hay grows three tons to the acre; that will do for us. We raise young stock, sell cows and large quantities of hay, with many side lines to help out. Farmers can get along without making so much milk as formerly.

4. Where is the farmer who wants to go back to the old plan of butter and cheese making? It cannot be made up at home. Look out for a milk quake in five years.

Here are my figures:

200-acre farm at $40		$8,000
30 cows at $75 each		2,250
Value of horses		500
Farm tools, wagons and sleighs		400
		$11,150
Cows 6,000 lbs., 2,800 qts., at 3¼c, $91 each.		
30 cows at $91	$2,730	
Growth on young stock	200	
Depreciation on stock		$200.00
Annual loss on stock, accident and otherwise		150.00
Expense for feed		1,200.00
One man at $30, for one year		360.00
One man, extras milk 730 qts, 3¼c		23.72
Rent, value of house and garden		84.00
One man, potatoes, 25 bu. at 60c		15.00
One man, apples		12.00
One man, pears		2.00
Extra help		50.00
Blacksmith bills		30.00
Int. on investment at 4%		446.00
Expense for repairs, buildings and fences		200.00
60 tons of hay at $10	600	
Value of hay fed out		600.00
Family expenses		300.00
School tax		20.00
State and county tax		50.00
Poultry well managed.	150	
Beef for family use	45	
Two pigs well fattened	50	
Expense for reseeding		25.00
Incidental expenses		40.00
	$3,775.00	$3,807.72
Loss of expense	32.72	
	$3,807.72	
Value of labor to farmer and family lost.	500.00	

W. S. PECK.

You need a new

DE LAVAL SEPARATOR NOW

1st If you are still using some gravity or setting process of creaming—

BECAUSE YOUR COWS HAVE likely freshened now and your supply of milk is greater.

BECAUSE YOUR SPRING WORK requires every minute of your time and a good cream separator will be a great time and labor saver.

BECAUSE YOUR YOUNG CALVES will thrive best with warm, sweet separator skim-milk.

BECAUSE WITH YOUR INcreased milk flow your greater waste of cream, without a good cream separator, must run into more money than you can afford to lose.

2nd If you have a very old De Laval or an inferior separator whether new or old—

BECAUSE THE LOSSES OF THE poor separator from incomplete skimming, and the tainted product of the hard-to-clean and unsanitary separator mean most when your volume of milk is the greatest.

BECAUSE OF THE AMPLE AND "more than advertised" capacity of the De Laval, you can separate more quickly and save time, when time means most to you.

BECAUSE AN IMPROVED DE Laval Cream Separator is so much simpler and more easily handled and cared for than any other, and you can't afford to waste time these busy days fussing with an inferior or half worn-out machine.

BECAUSE THE DE LAVAL SEPArator of today is just as superior to other separators as other separators are to gravity setting.

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval Agency simply write the nearest main office, as below.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

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NOISELESS SIMPLE SANITARY DURABLE

The Wasson Stanchion Co., Box 60, Cuba, N. Y.

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"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

O. H. ROBERTSON, Wash. St., Forestville, Conn.

The Well Platform Everlasting

Ask the Alpha Dealer

Protect Your Health With ALPHA Cement

A concrete platform over your well, and a concrete casing in it, shut off the germ-laden surface water and safeguard your family with little trouble and slight expense.

Wood rots quickly; it is slippery, leaky, unsafe. Concrete, made of the right cement, is imperishable. Four sacks (1 barrel) of cement, mixed with sand and gravel, make a permanent concrete platform, 6 feet square, 5 inches thick, if you use

ALPHA THE GUARANTEED PORTLAND CEMENT

Its greater binding power makes ALPHA more economical than a cheaper cement. Every ounce is powerful, because it is mixed right, burned right, ground right and properly aged before being shipped. ALPHA is *guaranteed* to be stronger than the Government standard. Don't buy merely a "Portland" cement. Insist on ALPHA and be *sure*. If your dealer doesn't sell ALPHA, let us tell you where to get it.

112-Page Concrete Book—FREE

Our book "Concrete in the Country," shows 100 ways to improve your farm with ALPHA—how to make well-platforms, walks, stable floors, manure pits, etc. Regularly 25 cents. Sent free. Use the coupon or mention this publication.

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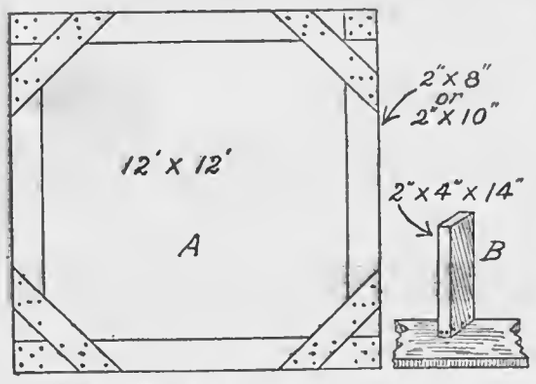
SQUARE SILO.

I would like to know more about the square silo mentioned in a recent number, what mistakes is one likely to make?
New York. C. D.

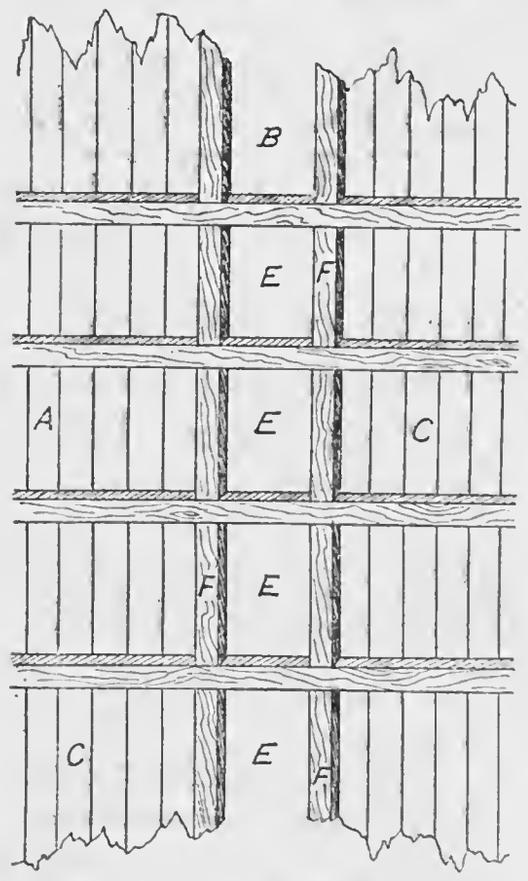
There are no mistakes to avoid if one uses good material, and good workmanship in constructing. They are built in plan exactly as they were 20 years ago, the only special difference being the extent of the elaboration the man may indulge in. One near me recently built cost something like $600, and holds no more, nor does it keep its silage any better than a more modest one nearby, that cost about a third as much. We here present another diagram of the girths made ready to go into the erection of the silo. If it is desired that the silo shall be 12x12 feet inside measurement, the girths should be 13 feet long and this proportion would hold good in any sized silo.

Put these hard wood girths down to make a perfect square and spike at the



GROUND PLAN OF SQUARE SILO.

ends so to make true angles. After spiking, cut a corner length, and spike it across the angle, placing this cross-piece far enough in to cut off six inches of the sharp corner angle, of the girths. Make the foundation for the silo out of stone cement, brought up high enough above the surface so that it will be protected from surface water. Make this platform two feet larger all around, than the size of the building. Make the first girth double, spiking two of the 2x8 together. Bed it into fresh cement, and bank up a little with it before it sets. Now cut 12 pieces of 2x4, into 14 inch lengths, and toenail them onto the girths, four feet apart, set flush with the inside edge



SIDE OF SILO SHOWING DOORS.

of the girths. Have another frame made and lay it onto these spacers, and spike down through to these spacers, being sure that the girths are plumb to keep the inside walls a true perpendicular. Put on another row of spacers the same way, and so on up 12 feet, when they can be cut a little longer, until at the top you, for the last, can use 30 inch spacer. True up the frame with braces, and go to laying the siding for the inside face of the silo. Use three inch wide lining, splice on the girths, drive up snug, and keep on round until within 20 inches from where you started.

As you proceed with the erecting of the frame, you will soon discover that the girths can be put in place, and spiked together on the frame quite as well as to first make them on the ground, and hoist them entire. Get the door space plumb and of equal width all the way up and cut in 2x4s between girths for door jambs, setting each in an inch, so to make the doorway 18 inches. Make as many short doors as spaces. Center each in the center of a girth, of course fitting them in on the inside, so the pressure of the silage holds them in place. Cover the outside of the silo with any kind of siding you choose. Good roofing paper put on up and down, answers all right if not molested. Put on any good roof. A roof affords no protection to the silage, more than to keep out snow. With us, the silo is placed against the side of the dairy barn, and "tied" to it to make it secure against the winds. If the silo were to be made more than 12 feet square, better use 2x10-inch girths. In many silos the corner tie that does away with the angle, is made of a 2x12 and is concaved so that the corner is very nearly a circle, and avoids trouble in turning when putting in the siding. In the cut below, A is outside of silo; B doorway; C inside lining; E doors; F 4x4 cut in between girths.
JOHN GOULD.

Silo for Three Cows.

I have just read the answer to A. B. C., New Jersey, page 539, and do not agree that it takes 10 to 12 cows before it is economical to build a silo. My father has had one for 10 years and has not had over three cows in this time, and mostly two, but he also fed some silage to horses. He had only two and three horses. When I went to farming I also erected a silo for three cows, and would not think of doing without. Both silos are made practically the same, only mine is 7½x24 feet, while my father's is 8x30 feet. They are round, made by sawing elm ⅜x3 inches and making five thickness forming hoops, spaced two feet at bottom to three feet at top, and sheathed with 1x4 yellow pine. I made mine all alone, except raising, which was done with a traction engine the day of silo filling, except about 30 minutes while the mistress of the house helped to space the hoops. V. D. M.
Ohio.

Imitation Silage.

We have a small silo 8x20 feet on the place, but intend to keep but one or two cows. Of course it is impractical to fill a silo for one or two cows, but I hate to see the silo empty. How would it work to grow, say sweet corn and cure it in the shock, then when thoroughly cured cut and put into the silo? Would it be liable to heat or undergo decomposition? We have a number of horses that well-cured fodder might be fed to, but am afraid of silage as it spoils faster than we could use it, but thought perhaps by putting the well-cured fodder in the silo this difficulty might be overcome.
Connecticut. R. C. B.

R. N.-Y.—We doubt this plan of cutting dry sweet corn stalks into the silo for two cows. Our plan would be to grow a good variety of flint corn for grain. The stalks will make good feed for all the stock. For the cows, if you want an "imitation silage" you can cut these stalks into a hogshead or vat and pour over hot water, cover and let them steam. Add a small quantity of waste molasses and you will have a "fair silage." By cutting in this way frequently there will be much less loss than if you cut the silo full.

VENEZUELA SILOS.—There is a demand for silos in Venezuela. At the present time it is said that there is not a single silo in that republic. At the present time there has been no rain for four months in Venezuela, and there will be two months more of drought. This means heavy loss from live stock. During the rainy season there will be a tremendous growth of green fodder, and a good silo properly handled would carry it over and prove even more useful than it is in this country.

"MR. Brown's started his garden. I saw him planting his seeds this morning." "That reminds me. It's time I turned the chickens loose."—Detroit Free Press.

TEACHER: "Tommy, what is a boomerang?" Tommy: "I can't describe it exactly, but I know it has a short tail and can climb trees."—Birmingham Age-Herald.

"FATHER, you took a science degree at college, didn't you?" "Yes, my boy; I spent two years on science." "When you look in a mirror the left side of your face appears to be the right side, and the right side seems to be the left. The looking-glass reverses it, doesn't it?" "Yes, my lad." "Then, why, papa, doesn't it reverse the top and bottom of your face in the same way?"—Melbourne Australasian.

Crazy About His
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THAT is the way in which one user of the SHARPLES MILKER (name on request) expresses his enthusiasm. This man's letter of endorsement was purely voluntary and was sent to a man in no way affiliated with The Sharples Company in answer to his request for a frank statement as to just what the SHARPLES MILKER would and would not do. The full text of his letter follows:

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TWO SIDES OF THE DOG.

"Dog Haters and Dog Lovers."

THE R. N.-Y. is certainly a success as an "Artful Dodger" on the dog question. I suppose the distiller and the saloonkeeper might speak on the liquor question as you do on the dog. "There seems to be no way of reconciling the liquor lovers and the liquor haters and bringing them into any fair compromise. It is a fight to the death on the part of the liquor haters, and a defensive fight on the part of the liquor lovers. We should say that the latter are gaining ground, as liquor is made more carefully and the business has been brought under greater system."

If the whiskey men said any such thing, would you consider they had made any sort of reply, or in any sense closed the discussion? Yet they would have been stating facts as you did in similar remarks on the dog. I deny too that I at least am a dog hater. I do not hate dogs; in fact I would like to keep one, did I not believe by so doing I would be setting a bad example and encouraging a practice I think at once a source of danger and financial loss. I "hate," if you please, the dog habit. If you as a dog lover believe in the practice, why not say so and explain why you recommend, by indirection at least, the keeping of dogs by farmers? Tell us why there is any offset to the loss of millions annually in sheep killed by dogs—where there is any to the danger to human life and safety? What can you set against the death by hydrophobia of at least one human being every week on the average in the United States? What pays for the practical abandonment of sheep growing in all States east of the Mississippi because of the menace to flocks by dogs?

I am ready to admit and even to maintain there are some dogs which return a profit to their owners, and there are also many others which while not financially profitable are yet so faithful and good in temper as to make "their company equivalent to their board." It is the average I am discussing, and we all know there are few dogs that will not worry sheep if they have a chance. The facts are that sheep cannot be kept on account of dogs, and if THE R. N.-Y. thinks that a desirable state of affairs for the country in general and farmers in particular please tell us why.

Those "dog lovers" who believe their chickens and other goods safe because they own dogs would do well to read accounts of the raids of robbers on some of the houses of wealthy suburbanites on Long Island, which took place in February. The thieves stole, not only what they could find loose but took some 25 dogs, fancy Airedales, Boston terriers, English bulls, etc. Enough said as to the "protection" afforded by ugly dogs.

I think THE R. N.-Y. the best paper of its class in America, and one of the best of any class, but no human institution is perfect, and I think I detect a little bias here on the dog question. I admit I am biased, and think I have reasons to be. W. A. LANDERS.

New York.

He Saved My Life.

I wish you would print the experience I had with a dog. I am the owner of an Airedale, which my father brought home last March, and I would not part with him for anything. I went out eeling in my boat last April 27, and took along my shotgun and my faithful friend the Airedale. When I was about a mile and a half from the shore I wanted to anchor my boat and start eeling, when my gnn which was lying on the sternsheet, accidentally discharged and shattered my left leg so badly that it was impossbile for me to walk. I managed to get the boat to the shore, but could not walk from the shore to the house which was almost half a mile from where I landed my boat. I yelled, but all in vain. I would have bled to death had not my dog barked and run to the house and jumped against my father when he came out to look what the dog was barking for, and after jumping up at him he started back to where I was and back to the house until he drew my father's attention towards me. We only had the dog about a month before it happened.

I fully agree that the Airedale is a most faithful and useful dog. I am also glad to hear that all people are not dog haters. I think that every home should have a dog. He will protect the property as well as the majority of watchmen. How many criminals have been located by the police with the aid of a dog which otherwise would still be free from jail? How many rats, mink, weasels and other chicken thieves have been caught and destroyed by the dog? If it wasn't for the dogs that clear away this vermin I think a good many of the people would have to sit up all night with a shotgun at their shohulder. There would be considerably more poultry, stock and vegetables stolen from the country people if it wasn't for our faithful friend, the dog. As we have very poor police protection in most country places we are thankful to have a dog. E. F. S.

Staten Island.

Where Dogs Pay.

Like others the above subject has more than one side. I am well aware that only a very few farmers make their canine stock pay them anything, but that is partly the farmer's fault. Here on our farm our pair of collies pay all the farm taxes and the interest on the mortgage besides. In addition to that they are always willing to put the chickens out of the front yard, help drive the other farm stock or do anything else that a farm dog should do. They have saved our poultry from two and four-legged "varmints" several times. There is such a demand for pups that we expect soon to increase our "best paying farm stock." Don't despise the *well bred* farm dog till you stop and think a bit about what he will earn you if given the chance. A Prussian who lives not far away and who raises prize Duroc Jersey hogs and collies, says that he can make more out of a female collie in a year than he can out of one of his fine sows. J. H. TUBBS.

Nebraska.

THE UNDERGROUND SILO.

I should be glad to know if any of the readers of THE R. N.-Y. have ever tried an underground silo, or if there is any valid objection to them? Silos are almost unknown in this Province yet, and I should imagine an outside silo would be liable to freeze in this climate. The conditions here are ideal for the construction of underground concrete silos. Excavation can be made to any depth with no danger of caving, and water would rarely give any trouble. J. H.

Whitewater, Manitoba.

We have had some little discussion of these pit or underground silos. The conclusion seems to be that they prove satisfactory on dry, well-drained or sandy land, but they are not satisfactory on wet land where the water level is high. They are dug out something like a well, preferably square, and are lined on the inside with brick, stone, or cement, or in some case they are built like an underground icehouse with two walls, and air space between. The corn is cut in the same as for any other silo, and packed down solidly. Most of them are built two feet or more above ground, and a little house or shelter is built over them. The Nebraska Experiment Station at Lincoln has printed a little pamphlet describing these silos, which you might well study. In some parts of the West where the soil is naturally dry, the cost of building material is high, and the winds cold and strong, these pit silos are very satisfactory.

EXPERIMENTS WITH PIGS.—Farmers who are interested in fattening hogs should read Bulletin No. 175 of the Kentucky Experiment Station at Lexington. This gives the results of various experiments in growing and fattening hogs, both in the dry lot and also upon forage crops. While, of course, the methods employed are in a way peculiar to the South Central West, still any farmer, and particularly those who wish to keep hogs at pasture, can learn much from this bulletin. The notes on feeding the sow while she is nursing her pigs are very good. Among other things we are told of the following remedy or treatment for pigs that are infected with worms. The following mixture is a dose for a 100-pound pig: Santonin, 2½ grains; areca nut, one dram; calomel, one grain; sodium bicarbonate, one dram. Pigs are starved for 12 hours previous to giving the remedy, the medicine being thoroughly stirred in a small amount of ground feed, and repeated in 10 days.

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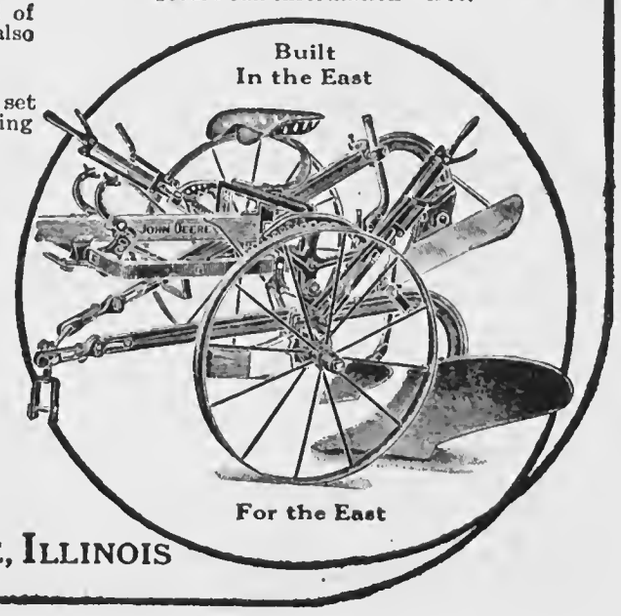

JOHN DEERE, MOLINE, ILLINOIS

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Feeding Young Bull.

I have an Angus bull about 18 months old; he weighs about 800 pounds. I think he should weigh 1,000 pounds at this age. He has always been dainty about his feed. He had a well-balanced ration until about a year old. Since then he has had corn fodder only, as roughage, and for grain, all the cornmeal and oilmeal he wanted, which never exceeded four pounds of corn or three of oilmeal per day. What can I do to grow him? He appears to be well. H. D. B.

Though this bull seems well he is a dainty feeder, and weighs only 800 pounds, when he should weigh 1,000 or 1,200 pounds, showing that all is not right with him. Have him tested for tuberculosis, or if you prefer, get rid of him and start with one that eats well and makes good use of what he eats. Dainty feeders though often showing some thrift are seldom profitable, are always an aggravation, and in the case of breeding stock the defect may be inherited and crop out in the calves. However, stock tonics, medicated salts molasses, salt or a change to clover or Alfalfa hay or pasture may be tried, but I find that when stock won't eat they won't, and that is all there is to it in most cases. W. E. D.

Ration for Sheep; Knee-Sprung Horse.

1. I have a flock of 30 sheep. I am feeding them at present one part oats to two of bran, also turnips and all the hay they will eat. Is this a well-balanced ration? The ewes will lamb about the first of April. 2. I have a horse that is knee-sprung. What could I do to help him? F. O.

1. The grain ration which you are feeding your sheep ought to be about right to keep them in good condition before lambing. After the lambs come you will, of course, have to feed more heavily of both grain and roots. The growth of the lambs depend largely on their getting a good start in the first few weeks. Some corn can also be used in the ration after the lambs are born.

2. In regard to your horse, there is little that you can do to remedy his complaint. Care should be taken that he is not over-driven or subjected to any strain which will make the trouble worse.

Summer Dairy Ration.

I would like your advice on the following ration and how you would improve it. I have six Jersey cows, and try to have one fresh every two months of the year. I am feeding for grain a mixture of 100 pounds cornmeal, 100 pounds bran, 100 pounds gluten and 100 pounds oatmeal, one pound to about every four pounds of milk to each cow, with a few roots every morning; cornstalks, mixed hay two-thirds clover and one-third Timothy, for the roughage. I make my own butter for private customers. I would like to have a ration for Summer, when pasture is short. I always feed some grain the year around. H. F. S.

The addition of 100 pounds of linseed oil meal or cottonseed meal will improve your ration, as it is rather low in protein. The cottonseed meal should be avoided with cows soon to freshen, and for a week after freshening. A good Summer ration would be equal parts by weight, dried brewers' grains, cottonseed or oil meal and cornmeal, or one part each of cornmeal and bran and two of cottonseed or oil meal. C. L. M.

Gluten Meal.

I frequently see gluten meal mentioned in feed formulas for poultry, but judge that it is not in common use, because it is not carried in stock by dealers in this city, and they seem to know little if any more than I do concerning its manufacture. What is the raw material?
Winona, Minn. A. B. Q.

Gluten meal and gluten feed are trade names applied to by-products from the manufacture of cornstarch and glucose. Gluten meal is that portion of the corn kernel which remains after the removal of the greater part of the starch and the germ, as well as the outer covering known as the bran. When this bran is left in the feed, it is known as gluten feed. This product contains a much smaller proportion of crude protein than the gluten meal, but it is the product which is most generally used. It is a valuable dairy and poultry food, ranking with malt sprouts, brewers' dried grains, and buckwheat middlings as a carrier of protein. Gluten meal is higher in protein content, ranking with linseed oil meal in this respect. The retail price of gluten feed in my market, just now, is $1.55 per hundred. M. B. D.

Pumpkins or Mangels For Pigs.

Are pumpkins equal to mangels as part of a Winter ration for growing pigs two to six months old? We like the beets, but think we can grow the pumpkins cheaper, ton for ton. W. C. W.
New Canaan, Conn.

There is very little actual difference in the composition of the field pumpkin when comparison is made with mangels as the following analysis shows:

	Water	Ash	Carbohydrates: Crude Protein	Fiber	N. free extract	Fat
Field Pumpkin	90.9	0.5	1.3	1.7	5.2	0.4
Mangel	90.9	1.1	1.4	0.9	5.5	0.2

However, both of these products should be fed largely as an appetizer, and not primarily as a source of food. It is a fact, however, that where pumpkins are fed in large quantities to swine the seeds stimulate unduly the excretions of the kidneys, and thus prevent vigorous growth and activity. Definite information regarding this somewhat traditional effect is lacking as far as actual comparison is concerned, but there is no doubt but that growing pigs should not be fed large quantities of pumpkin seeds.

On the other hand mangel-wurzels are not only more palatable but certainly more easily stored, and more easily fed, and there is no evil effect from even heavy feeding of mangels, although this is not recommended. It seems to me that the question of succulence for pigs during the Winter months is somewhat exaggerated, and the use of Alfalfa or clover hay certainly is equally as useful and much easier to feed, and it gives the same effect as far as laxativeness is concerned, and in addition supplies sufficient bulk. If I were choosing, however, between pumpkins anl mangel-wurzels, I am sure that I would take the mangels. On the other hand if I had access to second or third cutting of Alfalfa, nicely cured with all the leaves retained, I would prefer the use of such hay in a ration for brood sows or growing youngsters. It is easier to pulp the beets and mix them with the feed than is the case with pumpkins. On the other hand it is suggested that pumpkin seeds are most excellent as a vermifuge, and are useful in limited quantities for use in eliminating intestinal worms or parasites, that infest the intestinal organs of the pigs. Oftentimes pigs thrive more vigorously after they have been fed limited amounts of pumpkins, and it would seem reasonable to believe that the immediate cause is the fact that the parasites have been eliminated, and the animal thus enabled to make better use of the food consumed, rather than the fact that the pumpkins themselves supply the food nutrients. Pigs require more concentrated food than is found in the field pumpkin, and they should be used as an appetizer and vermifuge, rather than the chief source of food. I would advise W. C. W. to cling to mangel-wurzels in preference to pumpkins.

F. C. MINKLER.

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The day of the old slat-apron silo filler is gone. No wise farmer is going to use one when he can get a money-saving, grip-hook, force-feed SMALLEY, that does the work quicker, easier and at less cost. It handles silage, cow peas or alfalfa in a hurry. Cuts it fine and uniform. Packs silage tighter—gives more tonnage.

No Power Waste

One pulley and chain-drive on blower outfits replace power-wasting idlers.

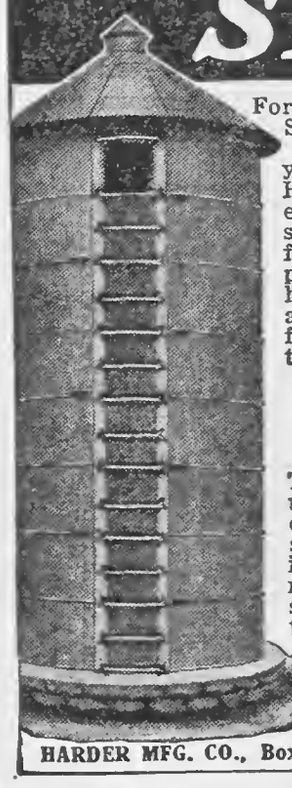
1914 Carrier

A 5 H. P. Engine will run a No. 12 force-feed and our 1914 enclosed carrier. Special alfalfa grinding screen furnished extra, protected by screen patent No. 721,246. Make your own meal.

Send postal today for latest Smalley catalog.
The Smalley Mfg. Co.
Box 229
Manitowoc, Wis.
Manufacturers of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.

(84)

Harder Silos



For 15 years the One Best Silo. Big, sensational improvements this year, making the Harder Silo better than ever. Of massive strength, anchored fast, solid as an oak, perfect fitting doors, highest grade material and construction—perfect in every detail—that's the Harder Silo.

More durable, less expensive, than concrete and tile.

The kind "Uncle Sam" uses. Big free catalog describes the new spline-dowel, the new intermediate ladder rung, the anchor, and scores of other distinctive features. It tells why *you* need a Harder Silo. Write today.

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HARDER MFG. CO., Box 11, Cobleskill, N. Y.

The Proof of Any Silo is in Its Silage

If your silage is perfectly cured, succulent and palatable, free from mold, uniform from center to circumference, untainted by foreign matter, then you have a good silo. The

INDIANA SILO

assures you of these results. Let our silo help you. Our Early Buyers' Proposition will save you many dollars in the purchase of an INDIANA SILO. In quality and economy of service it stands without a peer.

"Silo Profits", the "Watch-Tower" story and our new catalog all free. Address nearest office.

THE INDIANA SILO CO., 518 Union Bldg., Anderson, Ind.
Kansas City, Mo. 518 Exchange Bldg. Des Moines, Ia. 518 Indiana Bldg. Fort Worth, Tex. 518 Live Stock Ex. Bldg.

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Over 64 Years Experience Back of it.

ROSS Machines are fully guaranteed
You take no risk

Oldest and Largest in the World

We want to prove that our machines are a good investment before you give up your money. We know they are so good that we do not feel it a risk to make this offer. Many new features have been added which you should know about. Special made machines for New York State and the East. We make many styles and sizes to meet any and all conditions. Write for catalog.
The E. W. Ross Co., Box 113, Springfield, O.

Danger Lurks in Mouldy Silage

Each Unadilla Silo, possessing faultless construction, keeps the fodder contents pure, succulent and palatable in every clime. Free catalogue explains how the adjustable front and perfect sealing doors, whose fasteners make a safe ladder, insure positive air-tightness, prevent mouldy silage and minimize feeding labor. Discount on early orders. Agents wanted. Address
UNADILLA SILO CO., Box C, Unadilla, N. Y.
Licensed under Harder & Schlichter patents.

$15.25 Delivered at any Station East of Mississippi River.
"Lucky Low Down" Dump Cart, Strong, substantial hard wood body. Steel wheels, wide tires, steel axle. Body 12x40x60 ins. Capacity 1400 lbs. Hundreds of pleased customers all over the country. Saves its cost every year.
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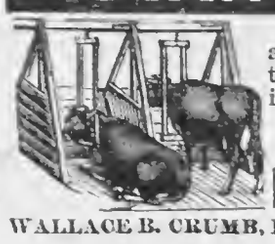


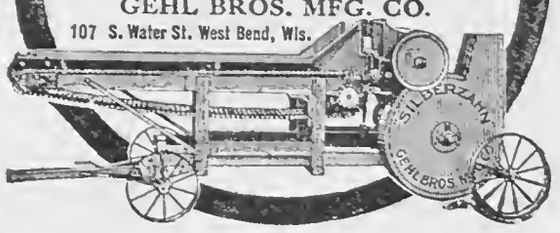
Send for my booklet and learn why these fasteners are being installed in the stables of many

PUBLIC INSTITUTIONS

WALLACE B. CRUMB, Box M4, Forestville, Conn.

Light Running **Silberzahn**

Study the ensilage cutter problem from every angle—speed, durability, safety, saving of power. The more you learn, the more you'll agree that "The Light Running Silberzahn" is best of all. Has the strongest built frame, throat and blower that never clog, best knife adjustment, positive safety device and other valuable features found in no other. Write today for catalog and proof.
GEHL BROS. MFG. CO.
107 S. Water St. West Bend, Wis.



HUNTERS -- TRAPPERS

If you want an ideal lamp for night fishing, trapping, hunting or for work about farm or machinery, send to-day for a

Baldwin Lamp

Projects a 14 candle power light 150 feet. Burns Acetylene Gas. Weight 6 oz. Height 3½ in. Can be carried in hand or worn on cap or belt, leaving both hands free. No oil, soot or glass. Absolutely safe and simple. Fifty hours bright light costs 25c. Useful as well during Automobile repairing. Catalogue free and instructive booklet, "Knots and How to Tie Them" mailed on request.
At all dealers or by mail prepaid - $1.00
JOHN SIMMONS CO.
148 Leonard St. New York City

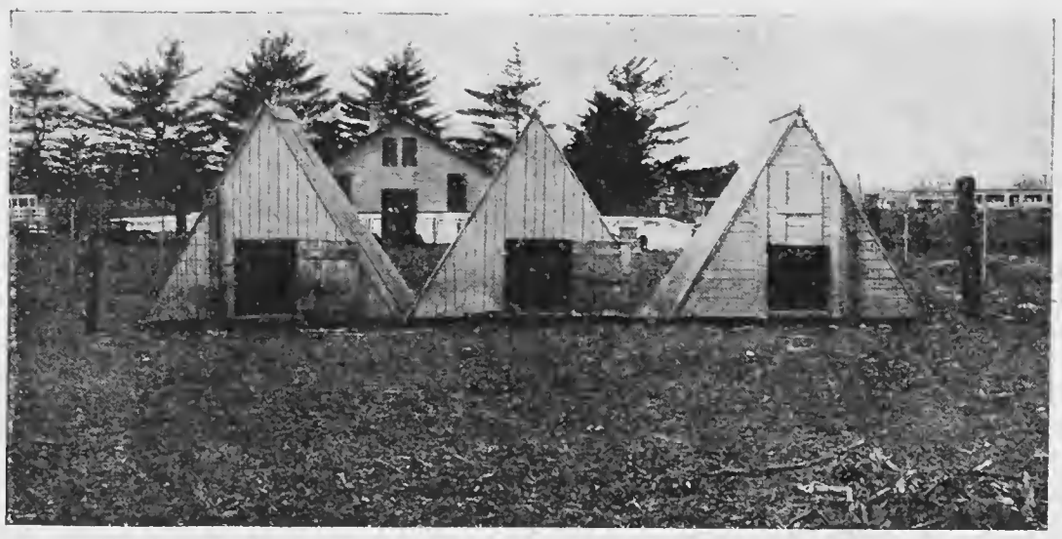
When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

PORK PRODUCTION FOR THE EAST.

How to Make Hogs Pay.

PART II.

CARE OF THE BROOD SOW.—Clean sanitary quarters must be furnished both before and after farrowing if it is desired to develop strong vigorous pigs. The chubby brood sow that is confined to a small pen, and not given regular outdoor exercise, seldom farrows a satisfactory litter of pigs. The colon house is perhaps the most satisfactory means of housing brood sows during the Winter months and at farrowing time, and if suitable yards are at hand, the houses can be grouped together at the far end of the field, covered with straw or corn fodder, and will provide very comfortable and healthy quarters throughout the Winter months. Our experience during the past two years suggests that equal parts of corn and Alfalfa hay, the latter fed in racks, and the former fed on the ear, is without doubt the most economical and desirable ration for brood sows during this period of the year. It is not only an economical ration, but both products are home-grown and by means of this feed combination the caretaker is able to satisfy the appetites of his charges without overfeeding or fattening. Careful records should be kept at mating time, such as will enable the herdsman to isolate the sows a week before farrowing time. Here again the colony house proves its worth. By this means of separation the sow is not annoyed by squealing youngsters or noisy feeders in adjoining pens, and is less liable to injure the small pigs. If left alone she is more apt to raise all the pigs she farrows, a very important item.



COLONY HOUSES FOR BROOD SOWS.

CHOOSING THE MALE.—The most exacting care should be exercised in choosing the herd boar. He is by far the most important and influencing animal in the herd, for indirectly he stamps every pig farrowed. Upon his potency and ability to perpetuate fixed characteristics depends the number and type of pigs produced. He should be purebred and registered, and belong to the same breed as the sows. He must possess those qualities desired in his pigs, for like begets like. He must be masculine, resolute and vigorous. Exercise is of prime importance, for many males are absolutely ruined as breeders by close confinement and heavy feeding. It has been demonstrated time and again that small weak litters are the result of inactivity on the part of the male previous to mating. He should have outdoor exercise every day, preferably in an open yard adjacent to the brood sows. Mature boars should be used whenever possible, as their services usually result in stronger, larger and more uniform litters. The use of the breeding crate makes it possible to mate young gilts with heavy males without injury. Coarse-headed, heavy-shouldered, narrow-backed, deep-rumped males with long coarse legs, shallow bodies and slim hams, should never be used for service. The pigs sired are bound to show like habits of growth and undesirable conformation. Quality, finish, and evident breeding must stand out preeminently.

AGE TO BREED.—Well-grown gilts may be bred when nine months old, but in the absence of size and vigor, delay is necessary. The period of gestation is 16 weeks, or 114 days. Two litters per year may be obtained from aged sows, preferably in March and September, or April and October provided suitable farrowing quarters and good care can be furnished. Otherwise May or June pigs can best take care of themselves. Brood sows or gilts must not be fat or fleshy at mating season or at any other time, unless intended for slaughter. Small weak litters and uneasy mothers result from such practice. Breeding animals of every class thrive better and are more

READY FOR WINTER COVERING OF FODDER.

A quick test for your dairy salt

STIR up a tablespoonful of Worcester Salt in half a glass of water. Do the same with ordinary salt, in another glass. Note the difference.

Worcester Salt quickly dissolves to a clean, sparkling brine and tastes genuinely salty. Ordinary salt stays cloudy — "scummy" — and has a bitter after-taste.

Take no chances with the flavor of your butter. Use nothing but Worcester Salt. It brings out the finest flavor of your butter instead of killing it.

Prize butter makers use Worcester Salt. They can tell you why.

WORCESTER SALT

The Salt with the Savor

A practical dairyman has written our booklet—"Buttermaking on the Farm." Send us your dealer's name and address and we will mail you a copy free of charge.

For farm and dairy use Worcester Salt is put up in 28 and 56 pound Irish linen bags and 14-pound muslin bags. Good grocers everywhere carry Worcester Salt. Get a bag.

WORCESTER SALT COMPANY

Largest Producers of High-Grade Salt in the World

NEW YORK

PURE FEEDING MOLASSES

We are first hands and can quote you absolutely bottom prices, delivered your station, in lots of anywhere from one barrel to a trainload.

THE MEADER-ATLAS CO.

N. Y. Office, 107 Hudson Street, New York City

15 95 AND UPWARD ON TRIAL.

AMERICAN CREAM SEPARATOR

A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

AMERICAN SEPARATOR CO. Box 1075 BAINBRIDGE, N. Y.

Everjet Elastic Paint

A Cheap Farm Paint

A splendid, glossy, black paint—very elastic, heat-proof, cold-proof and water-proof. Just the thing for hard outdoor service on the farm. It costs much less than ordinary paint.

BARRETT MFG. CO.

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HARRIS GOVERNOR PULLEY

$5.45 F.O.B. FACTORY

A high-grade, reliable, durable governor pulley at a price every one can afford. No need of paying $9 to $15 when you can buy the HARRIS for $5.45 complete.

INCREASES CREAM PROFITS

Runs separator at a steady, uniform speed. Starts it slowly, gradually increases speed, takes up all jerk and jar of engine. Saves wear and tear on separator. Quickly pays for itself. Adapted for fanning-mill, churn, or any other light machinery. Your dealer has it—if not, send $5.45 for a complete pulley. Don't accept a substitute.

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405 Caswell Blk.

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STANDARDIZED.

EASY AND SAFE TO USE
INEXPENSIVE

KILLS LICE

ON ALL LIVE STOCK

DISINFECTS.
CLEANSES.
PURIFIES.

It has so many uses that it is a necessity on every farm.

USED IN THE TREATMENT OF MANGE, SCAB, RINGWORM, SCRATCHES, ETC.

Destroys Disease Germs

DRIVES AWAY FLIES

For Sale by All Druggists

Write for Free Booklets

PARKE, DAVIS & CO.

DEPARTMENT OF ANIMAL INDUSTRY

DETROIT, - - MICHIGAN

Why Feed Flies

You can get more cow's milk, more horse strength, more hog fat, if you keep off flies.

Use

Sirenia Oil

It is feed economy and animal satisfaction. Sirenia is made of pure oils. Sirenia is applied with a cloth, no sprayer necessary. Ask your dealer for a dollar can of it. Do not buy a substitute. There isn't any. If your dealer doesn't handle, send us his name and a one dollar bill and we will send a one dollar can, postpaid.

We Will Refund Your Money If Not Satisfied

Drives flies from cattle and horses, fleas from hogs and dogs, lice from poultry, ticks from sheep. It will also heal sores or scratches on animals. Send a dollar now; or write us a card for the endorsements of users who wouldn't be without it.

United States Whip Co.

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PATENT YOUR IDEAS

$9,000 offered for certain inventions. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. Patents advertised for sale at our expense in Manufacturers' Journals.

CHANDLEE & CHANDLEE, Patent Att'ys

Established 16 Years

922 F. Street, Washington, D. C.

GET ALL THE WOOL~LONGER AND BETTER~MORE MONEY!

You will net from **15c to 20c more on every sheep** you shear with a **Stewart No. Machine.** Don't labor with hand shears in the old, hard, sweaty way. Don't have aching, swollen wrists. Don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts. Take off the fleece **smoothly and quickly in one unbroken blanket** with a

Stewart No. 9 BALL BEARING Shearing Machine

and get a length and quality of wool that will bring the highest price. The Stewart runs so easily a child can turn the handle while you shear. Extra profits soon pay for it. It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart pattern, $11.50.

Get one from your dealer, or send us $2.00 and we will ship C.O.D. for the balance. Money back if you are not well pleased with it.

PRICE **$11.50**

The Best for Clipping Horses, Mules and Cows

Stewart BALL BEARING Clipping Machine

To clip horses at the proper time improves them in every way. They look and feel better, do more work, rest better and get more good from their feed. Insist on having the "Stewart." It's the easiest to turn, does the fastest work, stays sharp longer and is more durable than any other clipping machine made. **Get one from your dealer,** price $7.50 or send us $2.00 and we will ship C.O.D. for balance. Satisfaction guaranteed.

CHICAGO FLEXIBLE SHAFT CO. 143 La Salle Ave., **CHICAGO, ILL.**

Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines.

vigorous on a variety of feeds and regular feeding, while there is a direct relation prevailing between inactivity and lack of exercise on the part of breeding animals and mortality of their brooded young. F. C. M.

Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.
Week ending April 23.

Butter, lbs.	2,724,240
Eggs, doz.	5,196,600
Apples, bushels	61,834
Potatoes, bushels	179,800
Hay, tons	4,520
Wheat, bushels	238,080
Corn, bushels	21,150
Oats, bushels	326,400

Wholesale Prices at New York,
Week Ending April 24, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 6-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high-scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying 5¼ to 5½ cents per quart.

BUTTER.

The receipts of fresh creamery, of medium and lower grades, are in considerable surplus of demand. High scoring new stock is moving quickly. There is a fair demand for factory and packing stock of medium to good grades.

Creamery, extra, lb	25	@	25½
Good to Choice	22	@	24
Lower Grades	19	@	21
Storage	17	@	22
State Dairy, best	24	@	25
Common to Good	18	@	21
Factory	14	@	18
Packing Stock	12	@	17

Elgin, Ill., butter market firm at 23½ cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

The market is very irregular on both new and old make, mainly because of the low average of quality. Wagon peddlers are handling some of the cheap skims on account of the low price at which they may be bought. New Zealand whole milk Cheddars are here in commercial quantities, selling mainly at 17 to 18 cents.

Whole Milk, new, best	13	@	14
Old, best	18	@	19
Common to good	14	@	16½

EGGS.

Prices remain on practically the same level as last week. Receipts are large, but business in eggs suitable for storage is good, in fact much better than current consumptive trade. From 20 to 22 cents covers most of the wholesale business in choice new-laid.

White, choice to fancy, large	21	@	22
Common to good	18	@	20
Mixed colors, best	20	@	21
Common to good	17	@	19
Western fresh, white	19	@	21
Lower grades	15	@	18

FRESH FRUITS.

Receipts of barrelled apples are light, and a large proportion showing scald or other storage defects. A range of $4 to $5 covers most of the wholesale business in sound stock of standard varieties like Baldwin. The Virginia Newtown, commonly known as Albemarle, brings more—up to $7 when fancy. Strawberries quite plentiful but in better condition than last week, selling from 15 to 35 cents.

Apples—Russet, bbl.	3 25	@	4 50
Spy	3 50	@	6 50
Ben Davis	4 00	@	4 50
Greening	4.00	@	6 50
Newtown	6 00	@	7 50
Baldwin	3 50	@	5 00
Western, box	1 50	@	3 00
Strawberries, Fla., qt.	20	@	35

BEANS.

Business is slow, but good grades of Medium and Pea are held slightly above quotations. Yellow Eye very scarce.

Marrow, 100 lbs.	4 40	@	5 50
Medium	3 70	@	3 75
Pea	3 20	@	3 70
Red Kidney	5 25	@	5 50
White Kidney	5 75	@	5 80
Yellow Eye	5 25	@	5 50
Lima, California	7 20	@	7 30

HOPS.

Prime to choice	39	@	41
Common to good	35	@	38
Pacific Coast	19	@	21
Old stock	15	@	18
German crop	63	@	67

VEGETABLES.

Arrivals of old potatoes are moderate, and prices 25 cents higher on the better grades. New potatoes from the South selling well when of fair size, but many running small—pigeon-egg size. Old onions are poor and hard to sell; new from the South in large supply. String beans from Florida are low because of poor quality. Cabbage very low, scarcely paying freight in some cases. Tomatoes are averaging very poor; a few fancy bring up to $3 per crate, but the bulk of sales run below $2.

Potatoes—Maine, 180 lbs.	2 75	@	3 00
State, bulk, 180 lbs.	2 50	@	2 75
Bermuda, bbl.	4 00	@	7 25
Florida	2 50	@	6 00
Sweet Potatoes, bbl	1 00	@	2 00
Beets, bbl.	2 00	@	2 50
Carrots, bbl.	1 50	@	2 25
Asparagus, California, doz.	2 00	@	4 00
Southern, doz.	1 50	@	3 50
Cabbage, New, bbl. crate	75	@	1 50
Chicory, bbl.	2 00	@	3 00
Kale, bbl.	40	@	65
Lettuce, half-bbl. basket	1 00	@	2 50
Onions—White bu.	1 50	@	2 25
Red, 100 lb bag	75	@	1 50
Southern, New, bu	1 00	@	2 00
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	2 00	@	2 75
Peas, Southern, bu.	2 00	@	6 00
Shallots, bbl.	3 00	@	4 00
Salsify, 100 bunches	4 00	@	5 00
Spinach, bbl.	50	@	75
String Beans, bu.	1 00	@	3 00
Squash, New, bu.	1 00	@	1 75
Egg Plants, Southern, bu.	1 50	@	2 25
Tomatoes, Southern, 6 bkt. crate	1 00	@	3 50

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	60	@	1 00
No. 2, box	2 00	@	3 00
Mushrooms, lb.	15	@	35
Radishes, 100 bunches	2 00	@	3 00
Rhubarb, doz. bunches	40	@	60
Tomatoes, lb.	10	@	20

LIVE POULTRY.

Squab Broilers, pair, fancy	85	@	90
Fowls	17	@	18½
Roosters	11	@	12
Ducks	17	@	18
Geese	11	@	12

DRESSED POULTRY.

Chickens, choice broilers, lb.	35	@	45
Squab broilers, pair	80	@	1 00
Broilers, common to good	30	@	32
Roasters, fancy	24	@	25
Fowls	15	@	19
Ducks	12	@	15
Geese	13	@	14
Squabs, doz.	2 00	@	4 50

HAY AND STRAW.

There is an advance of 50 cents to $1 per ton on the better grades of Timothy and clover mixed. Receipts are moderate, though considerable is reported on the way. Straw more plentiful and 50 cents lower.

Hay, Timothy No. 1, ton	21 50	@	22 00
Standard	21 00	@	21 50
No. 2	20 00	@	20 50
No. 3	18 50	@	19 00
Clover mixed	15 00	@	20 00
Straw, Rye	17 00	@	18 50

LIVE STOCK.

Native Steers	7 00	@	8 65
Bulls	5 50	@	7 00
Cows	3 25	@	6 50
Calves, prime veal, 100 lbs.	8 00	@	9 75
Culls	5 00	@	6 00
Sheep, 100 lbs	5 25	@	6 50
Lambs	7 50	@	8 25
Hogs	8 50	@	9 30

MILLFEED.

Wheat Bran, ton	28 00	@	30 00
Middlings	29 50	@	30 50
Red Dog	31 00	@	31 50
Corn Meal	27 00	@	28 00
Linseed Meal	31 00	@	32 00

COUNTRY-DRESSED MEATS.

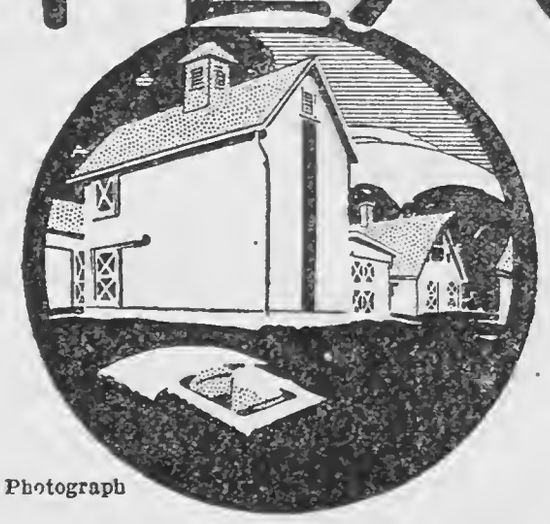
Calves, best	13	@	14
Fair to good	11	@	12
Buttermilks	8	@	10
Lambs, Hothouse, each	5 00	@	7 00
Pork, light	11	@	12
Heavy	08	@	09

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	1 05	@	..
No. 2, Hard Winter	1 03	@	..
Corn, as to quality, bush.	69	@	76
Oats, as to weight, bush.	43	@	44
Rye	65	@	70

(*Continued on page 687.*)

ATLAS



Drawn from a Photograph

The ice house and root cellar are two necessities on the modern business farm. Just ask the U. S. Dept. of Agriculture what materials they recommend for building them.

But make no mistake—the concrete should be made of Atlas Portland Cement. The neighbor who has used Atlas can tell you why. Ask him, and ask your dealer for Atlas. You'll be glad you did.

PORTLAND ATLAS CEMENT

THE ATLAS PORTLAND CEMENT CO. PORTLAND ATLAS CEMENT 30 BROAD ST. NEW YORK

Lap-Joint Tiles —Better Walls

Stronger—more durable—less matter exposed to feed on inside—every joint solid as a rock. Silage settles better and keeps better in

LANSING
VITRIFIED TILE SILO

Tiles are reinforced with twisted steel—continuous doorway—easy-climbing ladder. All features superior, yet costs no more than others. First cost is only cost. The glazed tile keeps all the good in the silage—no juice is lost. *Write for Catalog.*

Batavia Machine Co., Batavia, N.Y.

Ask about Climax Silage Cutters and Bidwell Bean Threshers.

BABY CHICKS FROM DAVIS' STRAIN

of Single Comb White Leghorns, bred for size, vigor and heavy egg production. Prizes taken wherever shown. Chicks—$11 per 100; $100 per 1000. Eggs—$5 per 100; $50 per 1000.

LOCUST CORNER PLTY. FARM
A. W. Davis, Prop., Mt. Sinai, Long Island, N. Y.

TOM BARRON'S
World's Greatest Layers
N.A. Contest 282 Eggs
Mo. Contest 258 Eggs

S. C. White Leghorns
Buff Orpingtons
White Wyandottes
S. C. R. I. Reds

SPECIAL SETTING, 15 EGGS PREPAID $2

Any of above strains, from hens with trapnest records of 170 to 189 eggs—90 laid during six winter months—mated to cockerels from mothers with trapnest records of 212 eggs or more. A SPLENDID opportunity—act today!
FREE Catalog contains valuable information that will increase your egg yield.

THE PENNSYLVANIA POULTRY FARM
Office, 2029 Pearl Street, Lancaster, Pa.

For Sale—Pure-Bred Bronze Turkey Eggs $3 per fifteen. Large White S. C. Black Minorca Eggs, 5c. each. L. M. STEWART, Vega, N. Y.

I'll Feed Your Stock 60 Days Before You Pay

I don't ask you to pay me one single cent until you have fed SAL-VET for 60 days and seen with your own eyes its wonderful merit as a worm destroyer and conditioner.

The Great Worm Destroyer SAL-VET

Makes all animals thrive better, look better, **destroys and expels** intestinal and stomach worms which prey upon the digestive tract, robbing your animals of vitality and strength, and keeping them in an unthrifty and unprofitable condition. **Read this:**

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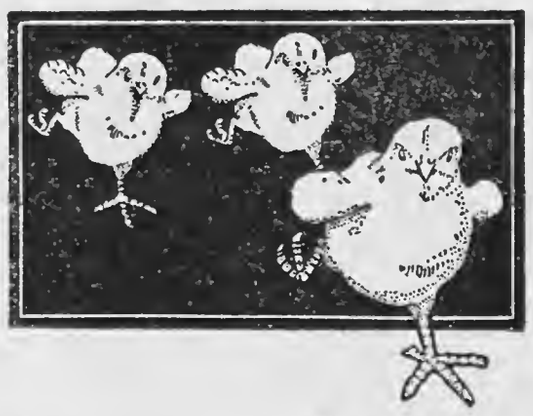
P.O.....State.....
Shipping Sta.....
No. of Sheep.....
Hogs.....
Cattle.....
Horses.....



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Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. **WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.**

S. C. W. LEGHORN **Baby Chicks** in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H. A. SOUDER, Box 29, Sellersville, Pa.

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. EAST DONEGAL POULTRY YARDS, MARIETTA, PA.

PEAFOWL—100 Peafowl—beautiful birds. $15 pair. Pheasants, Canadian geese, Carneaux pigeons. Book on ornamental birds, colored plates, 75c. G. Veltman, Poughkeepsie, N.Y.

FOR SALE—Choice Three-band Italian Queens. Tested—$2; untested, after June 1—$1. Write for booklet. W. K. Rockwell, Bloomfield, Conn.

BELGIAN HARES
Pure breed Belgian Hares, all sizes and ages, at the right prices; the finest kind for the table. Stock your farm with game, also table, with good tender meat. Ask for catalogue and prices.
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35 VARIETIES Chickens, Ducks, Geese, Turkeys, O. I. C. Hogs, STOCK AND EGGS. REDUCED PRICES. Big new Illustrated circular, better than ever. FREE.
John E. Heatwole, Harrisonburg, Va.

The Henyard.

Questions in Hen Feeding.

Is green bone and meat good for hens in the Summer? Is a wet mash as good for hens in the morning as a dry one? Would you advise me to raise beets and carrots for hens in Winter? F. W.
New York.

Green cut bone may be fed in the Summer if care is taken not to allow it to become tainted or to use bone to which tainted meat is attached. It should be fed in moderation, and is, of course, not so much needed by fowls that are on range and able to pick up bugs and worms. When dry mash is fed it is not given in the morning or at noon as a single meal, but it is kept before the fowls either all day or through the afternoon, usually the former. The hens are allowed free access to it at all times, as they will eat but a mouthful or two at a time and will not gorge themselves with it as they would with wet mash if they had opportunity. Most poultrymen prefer to feed dry mash in this way rather than to give a wet mash once or twice daily. It saves labor, and the results in the long run are undoubtedly quite as good. Either mangels or cabbages should be raised for Winter feed for fowls if practicable. They are probably about equal in feeding value, and the choice between them will depend upon which can be raised and stored to best advantage. As a rule, mangel beets will have the advantage in these respects. M. B. D.

Another Turkey Record.

Though not expecting any championship honors I can bring forward the laying records of two turkey hens that can beat the one on page 241. During the season of 1912 a black hen laid 80 eggs, the other a Bronze, laid 86. These eggs were all laid before either hen showed any desire to sit. They were set July 6 and 13 respectively, and although the poults were late hatched they were ready for the Christmas market at eight to 12 pounds. During the season of 1913 the same black hen laid 17 eggs, then set, and when her brood was three to four weeks old began laying again, laying 81 or 98 in all. The same Bronze hen laid 16, set and when her brood was a few weeks old laid again, this time laying 89, making 105 eggs for the season. This record makes no account of broken eggs, of which there were a few. Another hen in our flock, a Bronze, laid a total of 68 eggs and raised two separate broods, both of her own hatching during the Summer of 1913. BERTRAM M. BALL.
Vermont.

Loss of Feathers; Feeding Chicks.

1. My chickens get bare spots right in front of the tail. I don't know what causes it, looks ugly but it has no effect on laying. Could you give me a remedy for it? 2. What is the proper feed for baby chicks? A. A. S.
Englishtown, N. Y.

1. These bare spots may be due to the work of depluming mites, or, possibly, to the habit of feather pulling. A little lard or vaseline to which one fourth of its bulk of blue, or mercurial, ointment has been added, well rubbed into the bare places will destroy the mites and permit new feathers to grow. 2. Baby chicks may be started on bread crumbs moistened with milk, rolled oats, crumbled johnny cake, fine grit and water, and after a day or two, hard chick feed composed of one part pinhead oat meal, two parts finely cracked corn, and three parts cracked wheat. A mash kept before them dry in little trays, and also fed moistened alternating with the hard feed, may be made up of three parts each of wheat bran, wheat middlings, corn meal, and sifted beef scrap, to which one part of bone meal may well be added. Baby chicks should be fed five times daily for the first few weeks, a little at a time, later the meals may be reduced to three daily, a moist mash being given once. M. B. D.

Paralyzed Fowls.

Several times lately, I have noticed that a few of my flock of S. C. White Leghorns seem to lose the use of their legs for a short time. I have put them in "broody coops" and within 24 hours they apparently are all right again. They usually seem to be some of the best birds and heaviest layers. Their vitality seems unimpaired, as they flutter around, close to the floor, using their wings only. Combs and eyes are as bright as usual. Mortality is very low. Cement floors seem to gather moisture more this Winter than last, and when the floors are cleaned, I have used ground limestone on the floor in order to dry it. Could you give me any idea as to the cause of this trouble? E. H. H.
New York.

Temporary paralysis of the legs is a common affliction of fowls that have been closely confined and heavily fed for some time; it is believed to be also due to rheumatism contracted in damp, ill-ventilated quarters. Removal to a dry warm place and the administration of a dose of physic, as a teaspoonful of castor oil, usually suffices to cure cases of moderate severity. Occasionally it is necessary to kill fowls that do not recover. M. B. D.

Day Old Chicks

and

Six to Eight Weeks Old Pullets

6 weeks old 60 cents
8 weeks old 70 cents

Kirkup's Strain S. C. White Leghorns bred for size, vigor, and large white market eggs—$15 per 100—$62.50 per 500—$125 per 1000—Safe delivery guaranteed. **Order Today.**

REDUCED PRICES AFTER MAY 15

Day Old Chicks, $10 per 100—Yearling Hens, $1.25 each. Delivery after May 1

It will pay you to get a breeding pen now—Why?—You can get May and June hatched chicks, get a good egg production until late in the Fall and then have a fine breeding pen for next season. **We guarantee stock to be "Right."** Send for Free Booklet, describing chicks, pullets and breeding stock.

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Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.

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GREATEST LAYERS IN AMERICA

MY BREEDS RECOMMEND THEMSELVES

BARRON LEGHORNS—World's best
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HALF-BARRON LEGHORNS—A 200-egg bird
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TOULOUSE GEESE—Largest—lay 40 eggs

Eggs and chicks—all ages—all year. Custom brooding saves brooder trouble.

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Farm Prices, Circular
MORRIS-FARM, R. 4, Bridgeport, Conn.

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS
PRICES LOW, QUALITY CONSIDERED

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DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

Mattituck White Leghorn Farm CHICKS

give satisfaction. Try them. Prices now, for immediate delivery:

Young's strain..... $10 per 100
Young's & Barron's cross..... 15 per 100

Safe delivery guaranteed. Catalogue free.
A. H. PENNY, - Mattituck, New York

Single Comb White Leghorns Exclusively
D.W. Young's strain. The finest in the world. Bred for their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book—**Profits in Poultry Keeping Solved**—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free.
EDGAR BRIGGS, Box 141, Pleasant Valley, N.Y.

TOM BARRON'S . . . ENGLISH . . . WHITE LEGHORNS
Imported direct from Tom Barron's farm; Tom Barron's defeated all American breeds; 5 hens laid 1190 eggs in 1 year, averaging 238; large handsome, vigorous white cockerels, $3 and $5; eggs, $1; $6 per 100.

P. F. RAFFERTY, Marlboro, Mass.

Eggs from S. C. W. Leghorns
headed by ½ Barron cockerel—15 for $1.50; 60 for $5. B. P. Rocks and S. C. Reds—15 for $1; 60 for $3. W. Wyandottes, 15 for $1.
HARRY M. HALL, R. No. 2, Chester Depot, Vermont

EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of J. M. CASE, Gilboa, New York. 75c per 15; $4 per 100

S.C. WHITE LEGHORN EGGS for hatching and day old chicks from heavy-laying strain. Strong, healthy stock. Fawn and White and pure White Indian Runner Duck eggs for hatching. Write today for free circular to
Juniata Poultry Yards, Mifflintown, Pa.

THOROUGHBRED POULTRY—Best 20 varieties, Healthy, vigorous stock. Good layers. Eggs. 15, $1: 40, $2. Catalog. H.K. Mohr, R.No.3, Quakertown, Pa.

Baby Chicks & Ducklings—S. C. White Leghorns exclusively. From Youngs' strain. Prize winners at Madison Square Garden, 1913. Mating list free. BEAVER DAM POULTRY FARM, Harry Tweddle, Prop., Montgomery, N. Y.

S. C. White Leghorn Eggs for Hatching
by the sitting or thousand. Also BABY CHICKS from vigorous, heavy-laying stock. TOM BARRON and Wyckoff strains. Prices Low. Fertility and safe arrival guaranteed. Circulars free. R. T. EWING, Atlantic, Pa.

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Eggs for hatching from selected, mature hens, bred for 18 years for vigor and Egg production.
FLOYD Q. WHITE, Successor to White & Rice, Yorktown, N. Y.

S.C.W. LEGHORNS—Eggs for hatching from heavy layers. Eggs are running over 90% in fertility. $1.50 for 15; $6 per 100. Also few pens for sale at attractive prices. ROBT. G. MERCER, R. F. D. 3, Lynchburg, Virginia

BABY CHIX—S. C. White Leghorns, $10 per 100. I. R. Ducklings. Eggs for hatching. Old established business. ROCKY GLEN POULTRY FARM, Poughkeepsie, New York

Range-bred Winter Layers
Well filled egg-baskets in Winter spell success for the poultry keeper. Hatching eggs six dollars per hundred. Day-old chicks double, from our selected heavy-laying strain. S. C. W. Leghorns.
RAMAPO POULTRY & FRUIT FARM, Spring Valley, N.Y.

Baby Chicks, Eggs AND CUSTOM HATCHING—Our S. C. W. Leghorns are bred for production and vigor; not for feathers and show type. White Orpingtons from Cooks' best. Pekin ducks. M. B. turkeys. Peaceful Valley Farm, Oxford Depot, N. Y.

S. C. White Leghorn Baby Chicks 10c. EACH. Safe arrival guaranteed. No order too large. Hatching EGGS by the setting or thousand; fertility guaranteed. Write for catalogue. RICHLAND FARMS, Box 37, Frederick, Md.

S. C. WHITE LEGHORNS / **Fawn & White Indian Runner Ducks** EGGS FOR HATCHING BABY CHICKS AND DUCKLINGS
heavy-laying, pure white egg strains. Circular giving description, record, winnings, and guarantee, sent free. PATTERSON POULTRY FARM, Clayton, New York

Single Comb White Leghorn Eggs—$6 per 100. Eggs that fail to hatch replaced at half price. Ten pullets from this flock in Experiment Station test laid 1739 eggs in a year. ALKEN FARM, R. D. 2, Ithaca, New York

BABY CHICKS AND EGGS FOR HATCHING, for heavy laying S. C. White Leghorn Hens mated to Tom Barron cockerels, also from one pen pure Barron stock.
G BRUNDAGE, Salisbury Mills, Orange Co., New York

Baby Chicks OF LIVABILITY, eggs of hatchability from D.W. Youngs' strain, S.C.W. Leghorns, direct from his best matings. Open front houses. Circular. WINANS & COFFIN, Stanfordville, N. Y.

CHICKS—10c. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C. M. LAUVER, Box 73, Richfield, Pa.

S. C. White Leghorns—WYCKOFF STRAIN—Eggs for hatching, $5 per 100. Unfertile eggs replaced. Robert E. Smith, Nassawadox, Va.

Day-Old Chicks—from excellent utility S. C. White Leghorns—$9 per 100. GEO. FROST, Levanna, Cayuga Co., N.Y.

LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. FRANCIS F. LINCOLN, Mt. Carmel, Connecticut

EGGS FOR HATCHING from Kulp's famous 242-egg strains. S. C. White Leghorn, S. C. Rhode Island Reds—$1.50 per 15; $5 per hundred. 50 Good Cockerels at $2 each.
H. A. BACON, Hillcrest Poultry Farm, Berwyn, Maryland

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, HAMILTON FARM, Huntington, New York

275 BLACK LEGHORNS laid $820 worth of eggs in one year. Circular free telling about them.
William C. Merrill, North Sanford, Broome Co., N.Y.

Pedigreed S. C. Buff Leghorns
bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Chicago, Los Angeles, Indianapolis, etc. Get blood of "Egg Bred Winners." Dr. L. HEASLEY, Box R. N., Oorr, Michigan

BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. John A. Roth, Quakertown, Pa.

ROSE COMB BROWN LEGHORNS for Hatching. One dollar for thirteen. LEON L. SAGE, Crown Point, N. Y.

S. C. Reds, Dark Brahma cockerels, $2.50; S. C. B. Leghorn cockerels, $1.50; R. C. and S. C. RED laying hens, $2.00. Won 76 ribbons this season, including New York and Philadelphia. Eggs and chix. Mating list free. Riverdale Poultry Farm, Riverdale, N. J

Utility American Dominiques MONEY MAKERS Herbert Rooks, Mills, Pa.

MOTTLED ANCONAS EGGS for hatching. 75c., 15; $4.00, 100. GEO. K. BOWDISH, Esperance, New York

Write for Circular EIGHT BREEDS 45 ACRES
Eggs for hatching. Day old chicks and ducklings. You cannot buy stronger vitality.
SHOHOLA FRUIT & POULTRY FARM, Shohola, - - Pennsylvania

Wanted—500 White Leghorn Pullets
6 weeks old, for delivery June 1st. Name lowest price and state strain furnished.
Sunnycrest Orchards - Kinderhook, N. Y.

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. Route 24, Athens, Pa.

Silver Laced Wyandottes—for beauty, quality, and utility. 15 eggs, $2. Send for feathers. F. M. SWART, Margaretville, N. Y.

White Wyandottes THAT LAY. Eggs from two pens, headed by cockerels imported direct from Tom Barron. Also eggs from other pens. Circular. WM. J. THOMSON, Delhi, N. Y.

W. WYANDOTTES—bred from $50 trio; elegant shape and color. Wonderful layers. 15 eggs, $2. W.W. Carman, Margaretville, N.Y.

EGGS FOR HATCHING—WHITE WYANDOTTES—Regal Strain; White Indian Runners—$1 per settings. Special Price by the hundred. Satisfaction guaranteed. F. Cyrus Twining, Pineville, Pa.

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Our SPECIAL CHICK FEED
is the sweetest and most wholesome feed on the market. It can be fed to human beings. ALWAYS FRESH AND ALWAYS THE SAME. Send for prices and booklet. WM. ORR & SONS, Box 1, R, Orr's Mills, New York

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THE EGG-LAYING CONTEST.

In the twenty-fourth week of the contest, 3,590 eggs were laid as against 3,607 the previous week. The total number laid by all the pens is 41,606.

Waveny Farm's Barred Rocks tie with A. B. Brundage's S. C. R. I. Reds for first place in the week's score, each pen laying 55. Pen No. 41, White Leghorns from Storrs Agricultural Station, takes second place with a score of 51. This is not the "sour milk" pen. Merrythought Farm's White Wyandottes tie with N. W. Hendrix's pen of White Leghorns for third place each laying 53. P. G. Platt's White Leghorns laid 52, as did D. J. Ryan & Son's White Wyandottes. Five pens laid 51, and six pens laid 50.

The value of these egg-laying contests to the poultry industry of the United States, is far greater than most people think. That each succeeding contest should show a gain over previous contests, is certainly an indication that progress is being made in producing better layers, and a gain of only a half dozen eggs per hen in a year, means millions of dollars in the pockets of American poultrymen. From careful observation I have come to the conclusion that the demand this year for eggs for hatching and for day-old chicks, is greater than it has ever been before. A friend of mine has started a new idea, new to me at least; that is, custom brooding. For five cents a week he will take day-old chicks and raise them for customers. Chicks will be marked and recorded, and put into mammoth brooders, and carefully attended to. It opens a new field for poultry work.

At the Storrs contest the Barred Rocks make the highest pen average of any breed, taking the place which the White Wyandottes have held until now.

The records for the week are given below, also the totals:

BARRED ROCKS.	WK.	TL.
A. B. Hall, Connecticut	50	403
Frank L. Tuttle, Massachusetts	51	555
Waveny Farm, Connecticut	55	407
J. J. Francais, New York	45	690
WHITE ROCKS.		
Albert T. Lenzen, Massachusetts	49	449
F. H. Benton, Connecticut	39	560
Storrs Agr. Sta., Connecticut	28	413
Storrs Agr. Sta., Connecticut	43	423
Storrs Agr. Sta., Connecticut	41	574
Storrs Agr. Sta., Connecticut	43	463
Storrs Agr. Sta., Connecticut	33	275
BUFF P. ROCKS.		
A. A. Hall, Connecticut	44	533
W. C. Morgan, Jr., Connecticut	47	357
WHITE WYANDOTTES.		
Tom Barron, England	36	985
West Mt. Plty. Yards, Connecticut ...4	37	554
Merrythought Farm, Connecticut	53	814
Neale Bros., Rhode Island	42	801
D. J. Ryan & Son, Connecticut	52	617
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	49	555
Dr. N. W. Sanborn, Massachusetts	45	505
Am. Buff Wyan. Club, New York	42	484
H. L. Hamilton, Connecticut	45	315
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	51	443
S. C. REDS.		
Robert Seaman, New York	42	371
J. S. Gillespie, Connecticut	40	575
Dr. J. C. Dingman, New York	41	424
Burnham Plty. Yards, Massachusetts	37	374
H. P. Deming, Connecticut	44	460
Geo. P. Dearborn, Florida	36	665
Dr. J. A. Fritchie, Pennsylvania	38	743
Ernest Underhill, New Jersey	45	411
W. H. Bumsted, Connecticut	30	240
Pinecrest Orchards, Massachusetts	51	653
Harry B. Cook, Connecticut	44	600
Colonial Farm, New Hampshire	40	606
A. B. Brundage, Connecticut	55	655
R. C. REDS.		
Glenview Farm, Connecticut	34	617
C. S. Scoville, Connecticut	25	406
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut	46	545
Storrs Agr. Sta., Connecticut	43	651
Storrs Agr. Sta., Connecticut	54	623
Storrs Agr. Sta., Connecticut	50	855
Storrs Agr. Sta., Connecticut	50	494
Braeside Plty Farm, Pennsylvania	44	467
Glenview Farm, Connecticut	50	510
Manor Plty. Farm, New York	48	533
A. B. Hall, Connecticut	48	512
Marwood Plty. Farm, Pennsylvania	51	609
Geo. M. Harris, Connecticut	48	440
Bonnie Brook Farm, New York	46	600
N. W. Hendrix, Connecticut	53	456
J. J. Linehan, Massachusetts	44	418
F. F. Lincoln, Connecticut	49	840
Cecil Guernsey, New York	42	705
T. W. Moore, Connecticut	46	448
Chas. N. St. John, New York	44	417
C. W. Sherwood, Connecticut	49	525
L. E. Sands, Pennsylvania	48	544
C. H. Savage, Connecticut	48	464
P. G. Platt, Pennsylvania	52	565
Tom Barron, England	47	657
Branford Farm, Connecticut	45	584
F. M. Peasley, Connecticut	48	519
BUFF LEGHORNS.		
Wolverine Plty. Yards, Michigan	50	513
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	47	396
BUFF ORPINGTONS.		
O. Wilson, West Virginia	38	426
WHITE ORPINGTONS.		
P. A. Demgar, New York	42	392
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	33	243
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	44	344
DUNGHILLS.		
H. W. Collingwood, New Jersey	50	326
Daniel Hine, Connecticut	42	408
Daniel Hine, Connecticut	32	520
MIXED BREEDS.		
Profitable Plty., Massachusetts	30	542
Profitable Plty., Massachusetts	33	512

GEO. A. COSGROVE.

JINKS: "I see that 'Bathhouse John' beat his female opponent in the Chicago election." Bilkins: "Yes, the women made a mistake. They should have nominated 'Washtub Jane' against him."—Birmingham Age-Herald.

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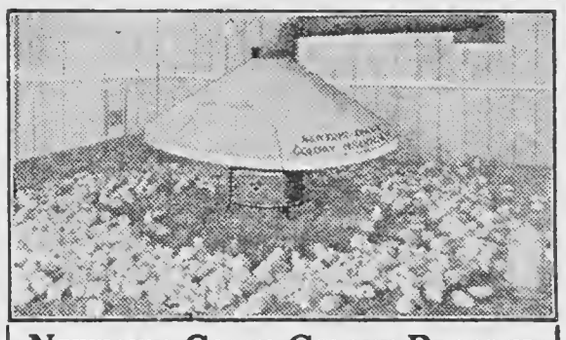

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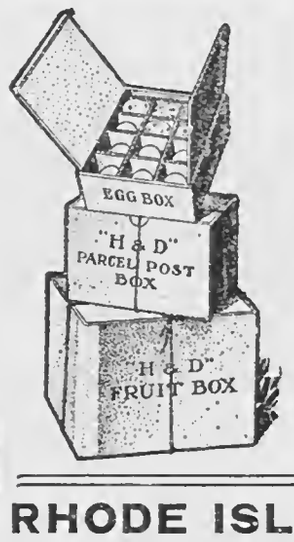

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Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn.

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Eggs—$1 per 15; $3.50 per 100. Baby chicks.
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EGGS—Five vigorous strains, bred to pay. S. C. White Leghorn, Light Brahma, Black Langshang, Anconas, White Wyandotte. $4 per hundred; $1 per fifteen. ROBINSON BROS., Plain City, Ohio

PUBLISHER'S DESK

Last December two men visited this village asking permission to photograph residences, children of the household, etc. A few days later two others returned with proofs soliciting orders for pictures and post cards at the rate of $1 per dozen. Many orders were given, and we were told the pictures would be sent by mail. Receipts bear the name of The Advance Stock Negative Company, 761 East 133rd Street, New York. Letters addressed to them have remained unanswered. I. M.
New York.

Our letters were forwarded to Easton, Pa., and returned from there unclaimed. This would indicate that the company finds it more convenient to move from place to place rather than continue at any one address. But why pay for pictures before they are in your hands? They asked the money? Oh, yes; but you were not obliged to hand it over until you got the pictures. If they will not trust you, do not trust them until they show themselves more worthy of trust than you are.

I note in your issue of April 4th an inquiry as to the Empire Realty & Mortgage Co., and the loaning of money at 5%. In this connection I am sending you a contract such as has been issued in Florida. As you state in your explanation, the whole game rests on what is called the "eligibility clause." The agents lead you to suppose that at the end of six months, by making a six months' lump sum payment which will make the payments for a year, you will be able to get your money. As a matter of fact if anyone will take the trouble to do a little figuring it will be easy to see that mighty few people will get any money and the whole thing should be branded as a fake. Last year the laws of Florida were changed so that it is impossible for these companies to operate here, and as a result some of the officers of the different companies have been arrested and they have ceased to do business.

The game was first started purely to induce people into it in order to get their initial six months payments and then have them drop it. It worked all right and I understand the Birmingham company you refer to made thousands of dollars out of their victims, and they educated the people who afterward started the same game in other parts of the South. The contract, I understand, was drawn by one of the South's greatest lawyers and there is no flaw in it as far as the company is concerned. At first sight it looks more than fair, but after you have figured it over for a while and looked into some of the settlements you will soon see where you come out. You simply can't tie them to anything definite, so the best thing to do it to let it alone. A. H. B.
Florida.

This letter states the conditions of the installment contract very clearly. The promise of an easy loan is a great inducement to the man who wants to borrow; but the company wants deposits, not an opportunity to loan money. When you have made payments for six months, you discover that the company has done nothing but promise that you are "eligible" for a loan. They have not bound themselves to give you anything, but you have contracted to keep on making payments whether they make you the loan or not. We are glad that the State of Florida has put the ban on these contracts. The States and the courts are fast coming to see that a free contract is not always a fair or a just contract. We must come to the principle that it is the duty of the State to protect the inexperienced and innocent from the allurements of craft and cunning.

Referring to the reference on page 206 to an alleged purchase of land by the Thwing Company, or the Circle Magazine, at Demarest, N. J., for promotion purposes, being a resident of Demarest I have examined the records and find no property assessed to Mr. Thwing or his company. From the item referring to the Thwing scheme some one may get a wrong impression as to the village of Demarest. This village is 20 miles from New York, and three miles from Englewood. It is only 25 minutes walk from the trolley, which will soon be extended to the village. We have 38 trains daily. The town is beautifully located, and has many distinguished citizens. While we repudiate promoters, we do not want their unauthorized references to allow any misapprehension of the beauties and advantages of our home town. C. F.
New Jersey.

While we think our correspondent above is needlessly sensitive, we are glad to know that he has the home instinct. We did not intend our reference to Mr. Thwing's scheme to cast any reflection on Demarest. What we wanted our people to understand is that land 20 miles from New York is no more calculated to yield 100% profit as promised by the Thwing Company than property situated elsewhere, and in this case we can only repeat our standing advice, always to see land and know its value before making an investment in it.

An ordinance passed by the Aldermen two weeks ago making it a misdemeanor to publish false or misleading advertisements became a law yesterday without the Mayor's action. The bill covers all kinds of advertising and the penalty is a fine of $25 to $250 or imprisonment for five days to six months or both.—New York City Paper.

This law was passed at the suggestion of the Vigilance Committee of the Advertising Men's League. It would not be necessary if publishers would do their duty by the public. If the Vigilance Committee follows up violations of the law and insists on prosecutions both publisher and advertiser will reform, and everybody will gain by the reform.

Governor Glynn has signed the bill prepared by the Commission appointed by Superintendent Van Tuyl to revise the banking laws of the State of New York. This law provides for an investigation by the Superintendent of Banks of violations of the law by individuals or corporations which do something of a banking business, though the companies are organized under the general business law, and the individuals conducting the business seem to be operating without proper authority of law. As Governor Glynn has pointed out, recent decisions of the court have held that the real estate investment companies which issue debentures and installment contracts are acting in violation of the law, and a final decision on this point is pending in the higher courts. If the decision is sustained, as is probable, the authority of the Superintendent of Banks to investigate such violations will probably be sufficient to protect the inexperienced investor against the agents and allurements of fake real estate promoters in this State. For 20 years I have been fighting these schemes; and it is gratifying to consider that at last we have found a means of regulating if not suppressing their operations. Effective regulation would be equivalent to suppression, because to take the fake out of them is to kill them.

As there cannot be a great deal in the business at a dollar per year for such a paper as yours, and as it must come to considerable to notify all of your subscribers, please bear in mind that you might as well save—as far as I am concerned—your stamp, as I shall most likely not fail to resubscribe even at twice your price, and do it in ample time.
Michigan. H. P. H.

Our correspondent touches an important subject in this letter. For the most part THE R. N.-Y. subscribers renew regularly from year to year. They belong to an organization, and pay their dues annually. We think such faithful and persistent patrons are entitled to the courtesy of an individual notice by mail when the annual renewal is due. The postage for this one notice alone, amounts to about $2,000 a year. In addition to this there is the printing, addressing, inserting and stamping of the two hundred thousand letters or thereabouts. While we appreciate the interest of our friend who writes above in saving this expense, we consider it a courtesy that we are glad to extend. What we would like to avoid, however, is the expense of a repetition of this expense. Some of our friends whose original subscription dates back of our present records of 15 years, overlook or neglect the notice, and it is necessary to repeat it one or more times before the renewal comes along. There are good reasons and legitimate excuses for much of this; but a large percentage of it is probably due to a mere oversight, as a result of a feeling when the first notice is received that there is time enough in a day or two. Each one does not realize, as this correspondent evidently does, that if everyone delayed the renewal after the expiration notice was received, necessitating a second notice, the expense would be something of a burden, and we would be short just that much in the quality of service we could give through the paper as a whole. We print the letter as an example of a good purpose and a commendable practice. J. J. D.

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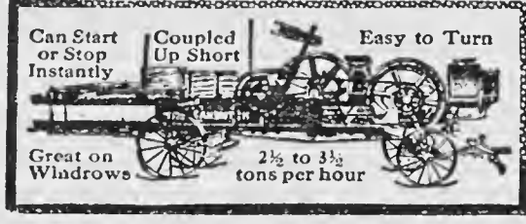

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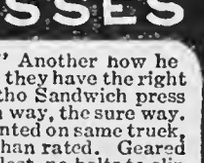
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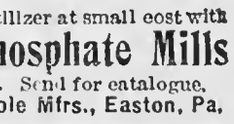
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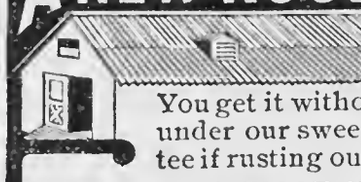

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PRODUCTS, PRICES AND TRADE.

(*Continued from page 683.*)

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	26	@	28
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

The muskmelon crop of Southern California will be large this year—probably 5,000 carloads, or not far from 72,000,000 melons.

*

We imported 38,000,000 pounds of glycerine last year. It comes largely from England, France and Belgium. About 30,000,000 pounds are manufactured in this country. A large proportion of the glycerine is used in making explosives, but it is of importance in medicine, the arts and industries.

*

The island of Dominica, British West Indies, is most important in the production of the lime, that small lemon-like fruit with an acid and flavor of its own. The annual crop is about 370,000 barrels. New York alone receives 35,000 barrels of the limes, but the heaviest part of the crop is manufactured into juice on the island, 600,000 gallons of the raw and concentrated juice being a normal year's output.

The Russian Government is preparing to irrigate 8,000,000 acres in Turkestan, which has been found suitable for cotton growing. The cost will be $360,500,000. Turkestan now produces 400,000,000 pounds of cotton, which is about half the raw material required in Russian manufacture.

Making a Start in Poultry.

I would like your advice on going into the poultry business. I have eight acres of land 18 miles from Buffalo and about one-quarter mile from railway station. The land slopes to the southeast, with quite a hill on the north and west sides. There is a never-failing spring on the property which would run by gravity to the poultry houses. The soil is a gravel loam underlaid with hard pan or clay. There are no trees on the place. Would it not be advisable to set out an orchard of apples, with peaches as fillers? The only building on the place is an old shop with basement, which could be made into an incubator cellar with very little expense. I have about $1,000 to start with, and could raise a few hundred more if necessary. How does the Buffalo market compare with the New York market? What kind of laying house would you advise? As to my experience with poultry, I have kept from 25 to 100 hens for the past six years, and have been able to obtain an average of $1.20 net profit per hen per year. I should expect to start slow and gradually work up to 1,000 or more hens if I made a success of the business. C. W. C.

New York.

It is difficult to reply or suggest in a limited space to an extent that would be most helpful. Your location with its slope and spring seems to be excellent. Trees for shade are desirable, really a necessity. Peaches when the trees were small would provide delicious dessert for the hens unless surrounded by poultry netting. Apples on the trees would not be troubled. Your intention to start slowly is a wise one. The style of laying house would depend upon your own preference and the breed of poultry. The smaller, more active breeds will usually stand more crowding than the larger fowls. As a rule small numbers in colony houses will lay better than a larger number in one large house. Do not waste money on expensive houses. Put it into the best birds from the best laying strain that you can get of the breed that you prefer, and keep that breed exclusively.

Unless you know reliable parties in New York to whom you can profitably send eggs and poultry I would advise beginning with the nearer market. If you could work up a private trade in gilt edge poultry products you would be less dependent upon the general market.

W. H. H.

Delayed Incubation.

Why did my eggs take from 22 to 23 days to hatch? I have a small incubator cellar 12 by 12, in which I operate one incubator. I kept a fairly even temperature, 102 deg., for the first three days, increasing to 103 deg., and the hatch did not show any signs of lack of moisture. Does too much moisture delay the hatch? I am not positive about the age of the eggs when set, as I gathered them from surrounding farms, but they claimed that they were not over a week old.

North Carolina. M. L. W.

Chicks should hatch in 21 days from time of placing them in the incubator, but this time will vary with the temperature maintained. If the machine is run at too low a temperature the hatch may be delayed a day or two, while if the temperature is kept too high, the hatch will be premature. Each machine should be run at the temperature recommended by its manufacturers, but in case of poor results, the thermometer used should be tested by comparison with a certified physician's thermometer to ascertain its accuracy. In your case, the temperature was evidently kept too low, and this may have been due to the use of an inaccurate thermometer. M. B. D.

Hatching Layers.

Recently another reader and myself discussed the best time to incubate for the production of early Winter layers. He claims that chicks hatched out by the end of April will be amply early. I think they should be earlier. Breed White Leghorns, flock of about 200. Will you give your opinion? B. A. F.

New Jersey.

Chicks hatched any time in April or early May may be made to lay in the Fall, if fed and cared for in such a way as to keep them growing continuously from the start. Much depends upon the care, as well as upon the age, in producing early layers. If it were practicable to do so, I should have every chick upon my place hatched during the first week in April, but I consider any time in that month satisfactory, and do hatch up to the first of June. M. B. D.

Leghorns With Colds.

What ails my hens? My S. C. White Leghorns seem to breathe hard and open their mouths as if it hurt them to breathe. These are the only symptoms I have noticed. I have used dust from barn floor in litter. Would this have any connection with the trouble, do you think? I did not know but what it might be roup, but the symptoms do not agree with those given. H. T. F.

Connecticut.

The most common obstruction to breathing noted in fowls is caused by the ordinary colds to which they are subject, but more serious diseases like roup may begin with this symptom. Some fungi derived from moldy litter at times find their way into the respiratory passages of fowls and obstruct breathing. Assuming that colds are responsible for the trouble in your flock, you should add permanganate of potash to their drinking water; making a stock solution of this drug by adding one ounce to three pints of water, and adding a pint of this stock solution to each two quarts of drinking water. Give them no other water to drink and see that they are not exposed to drafts or dampness in their quarters.

M. B. D.

Laying Ration; Feeding Chicks.

I have about 30 hens and only get three and four eggs a day. What would you advise me to feed them to make them lay better, and about how much feed ought a flock of hens have at once? The hens are all mixed stock. What would you advise me to feed young chicks when they are first hatched? F. G.

New Jersey.

There is no one food, or combination of foods, that will "make hens lay"; their laying is dependent upon many conditions, such as the age of the hens, the comfort of their surroundings, and their general care. All of the ordinary grains are useful though corn, wheat, and oats form the basis of all rations. Buckwheat and barley are also valuable additions to the whole grain diet. A part of the food should be given in the form of ground grain mash, fed either wet or dry, and to this mash meat food of some kind should be added. Skim-milk and buttermilk are very useful when they are to be had, and green stuff is also necessary for the best results. A flock of hens ought to have all the food that they want; they will not lay if scrimped. It is not necessary that any exact combination of foods be used but formulas for making well balanced rations are frequently given in these columns. These combinations give better results than haphazard feeding and are the result of experiment and study. Stale bread crumbs moistened with skim-milk, johnny cake made of cornmeal, rolled, or pinhead oats, and finely cracked wheat and corn are all excellent foods for young chicks, and may be fed from the start until the chicks are old enough to eat coarser grains and such ground grain mashes as are fed to mature stock.

M. B. D.

Catarrh of Crop.

Will you tell what to do for a hen that has her crop filled up with water, also what the cause of it is and what it is called? If the hen is held up by the legs the water will run out of her mouth, then she will fill up again. B. C. M.

Concord, Mass.

This is probably catarrh of the crop, or "sour crop," due to indigestion or the eating of improper food. A physic, such as a teaspoonful of castor oil, may be given the bird; after its operation the crop may be emptied by gentle pressure with the head held down and a little soda given in water to counteract the acidity of the crop contents. A few grains of subnitrate of bismuth suspended in water and given once a day will also aid. The fowl should be placed by itself and fed upon soft easily digestible food until it recovers. M. B. D.

Hot-water or Hot-air Incubator.

Is a water heated incubator better than a hot-air heated? C. L.

Pennsylvania.

It is utterly immaterial whether an incubator is heated by hot water or hot air, so far as hatching is concerned; both are successfully used. The choice, then, becomes one between some particular hot water heated incubator and another heated by hot air. So far as my observation goes, the higher priced, higher grade, machines use hot air, while the cheaper ones are heated by hot water, but the choice should be made after considering the merits of the machine as a whole, and should not be based solely upon the method of heating. M. B. D.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

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WANTED—Sober, trustworthy single man to care for stock and general farm work. Good place for right man. F. C. W., care R. N.-Y., 333 West 30th St., New York.

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POULTRYMAN—Young man, some experience, Cornell training, desires situation on commercial up-to-date plant; no tobacco or intoxicants. SCHAUB 2004 Madison Ave., New York.

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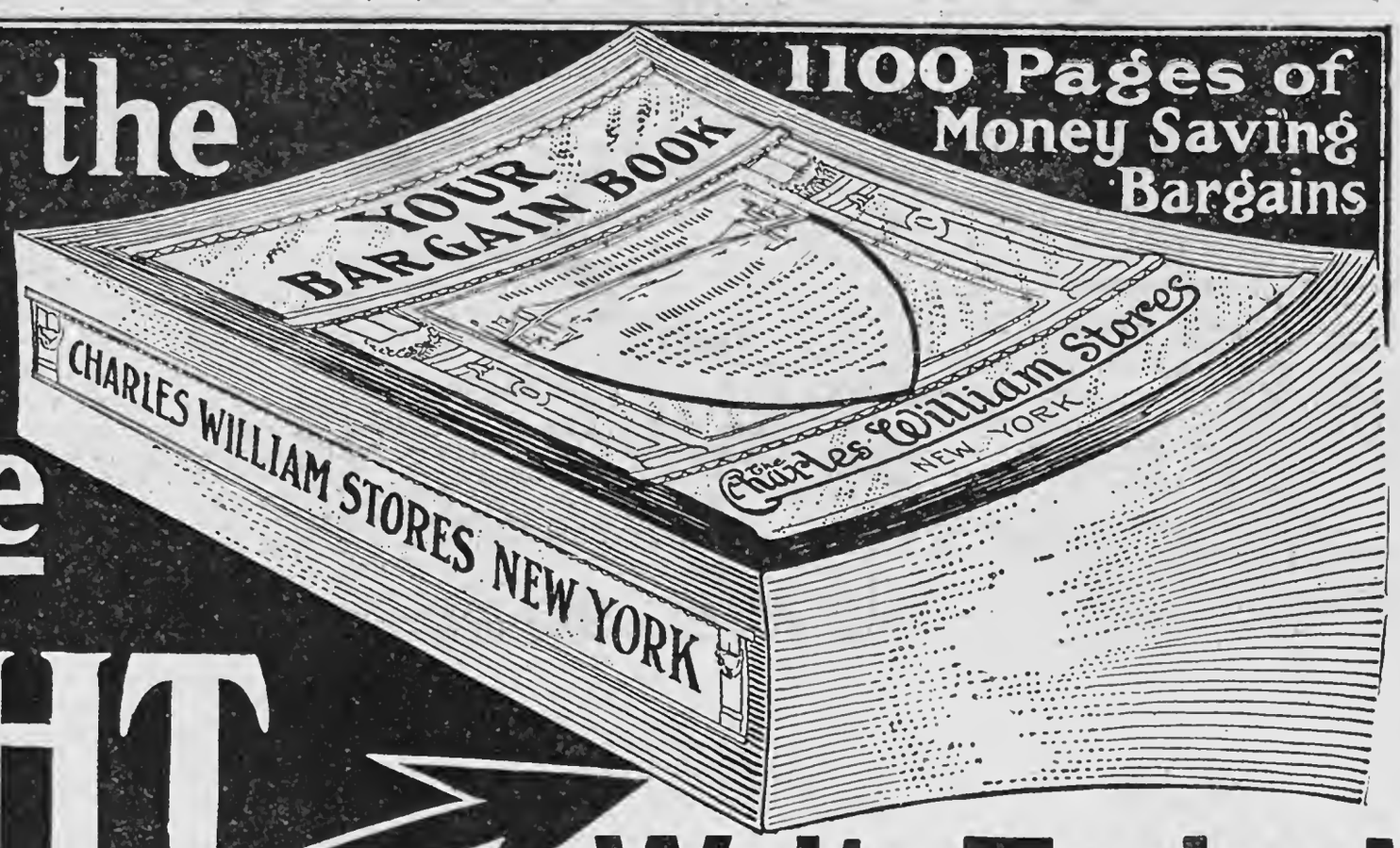

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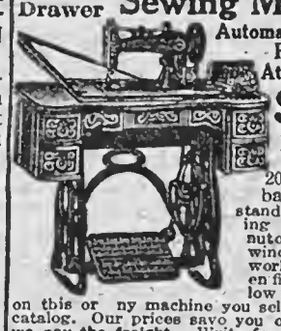

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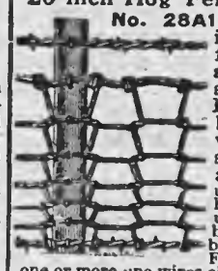

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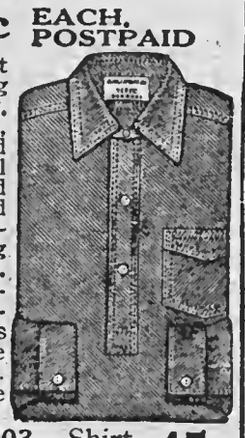

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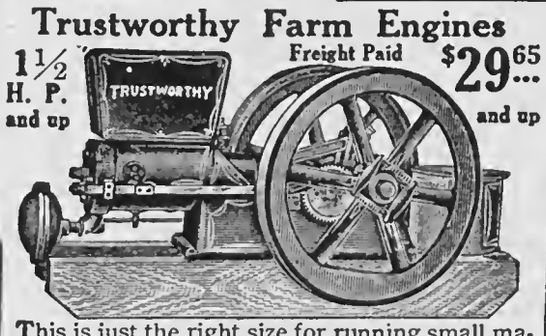

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GROWING PRIZE STRAWBERRIES.

The Man, the Berry and the Work.

RETIRED FARMERS.—In every town or city where there is room for gardens you will find "strawberry cranks" who have learned how to produce the finest fruit. These are usually elderly men—often retired from the active business of life. Energetic and restless, they are not content to sit down and talk and wait, but they take a small piece of land and perform upon it miracles in fruit and flower production. We know of one such man—a "retired farmer." He worked his farm as long as he could do so profitably. His boys were all girls, and they married and moved away. So this farmer finally sold out and with his wife moved to town. Now this man had followed the history of many of these "retired farmers," and he observed that out of about 15 couples who had left the farm while in good general health there were now 10 widows, three rather old feeble men and two well preserved. Thirteen of these men had dropped their habits of industry when coming to town. Instead of working steadily through the day, with their minds occupied with plans for the farm, they sat about at the store or post office, or talked aimlessly with old cronies on the street. At the same time they kept on eating as freely as when they were hard at work. They lived on through a few peevish and unhappy years and then dropped away. Their wives did their own housework as they did on the farm, kept busy with fair exercise and survived their husbands. The two men who kept their health took up some light manual labor and saved their lives by keeping busy.

So this "retired farmer" was wise. He bought a house with a good-sized piece of land, started a garden and built a small greenhouse. What he did on that less than an acre was a wonder. When he came to town he had expected to live on the proceeds from the sale of his farm, using the interest and part of the principal each year. To his surprise he found that his garden and greenhouse were supporting him—actually giving him a larger income than his large farm had given during the few years before he left it. This man was a good farmer, but he had become a "gardening crank," and that is a step up the scale.

"CRANKS" AND CRANKS.—There are two kinds of cranks. One is impractical, the other is an expert who pays little attention to the rules which others lay down for him, but does what his instinct tells him to do. A "strawberry crank" does not pay much attention to printed rules in books or papers, but he "asks the strawberry plant" what it needs. As a rule the "strawberry crank" cannot tell you how he does it, and the beginner could not understand it anyway until he has watched plants develop through every growing day for several years. There is a difference between a "crank" and a crank. Some years ago a man wrote us that he had invented a sure and cheap way of killing the San José scale. We must pledge ourselves not to reveal his great secret. Then he came and said, "I never saw one of these scales—will you send me a twig carrying some of the insects?" Here was a man sure that he had a remedy for a trouble he had never seen. He was a "crank." Another man for the past 20 years has contended that the scale will finally be conquered and kept in check by parasites. I think he is a far-sighted crank, and that in the future his theory will prove true.

SOIL AND PLANTING.—If you could get the strawberry crank to talk about details he would probably tell you that the way to produce prize berries is about as follows: Get your plants started as early in the Spring as possible. Take larger plants of last season before they have made much top. You must have strong, rich soil, full of organic matter, so that it will not bake hard near fruiting time. It is better to take soil which has been well hoed and cultivated for

"THE STRAWBERRY CRANK" TURNING OUT PRIZE BERRIES. FIG. 281.

several years, so as to avoid white grubs. The cultivating destroys these nasty insects. We would rather plow or spade in pea or bean vines, or cow peas, than to put in manure, but the soil must be rich and full of some sort of organic matter if you want prize berries. An old sod is worst of all, both on account of the white grubs and the trouble in keeping the grass and weeds down. Plow or spade the ground *deep* and rake or harrow the surface down level. Get your plants as fresh from the field as possible, and do not let the roots be exposed to the sun and air for a moment. Keep them covered with damp moss or soil. Nip off about two inches of the roots, and if the stems are well grown nip them off and leave new foliage to grow from the crown. We do not plant the fruit tree exactly as it comes out of the nurseryman's box—why should we the strawberry plant?

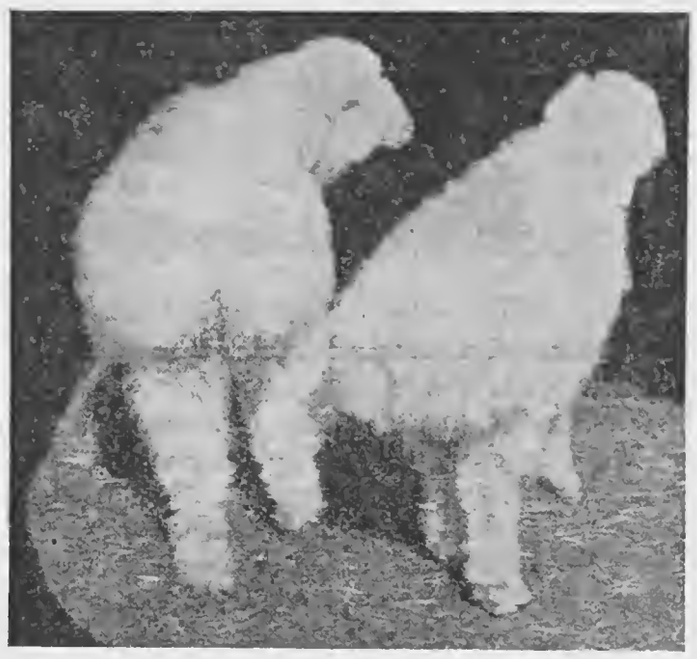
THE RIGHT KIND.—If you are after big, fancy berries you must take certain varieties which are naturally poor plant-makers and shy bearers. If you want milk testing 5% or more of fat you get a Jersey or a Guernsey cow, because it is the nature of these breeds to make that kind of milk. It might not pay to keep them if you were shipping three-cent milk to the city, but if you are after "quality" milk you know where to go after it. Much the same with strawberries. It is the nature of some varieties like Marshall, Chesapeake, Mary and the old Parker Earle to grow in hills if you help them a little, and produce a comparatively few great berries rather than many small berries and runners.

HOW TO PLANT.—Planting 2½x2 feet is good practice when you bed out the hills. In order to get the best fruit the berries should not be shaded too much, as they are in matted rows. There will be a fringe of fruit around the outer rim of the hill, and this should meet the sun. In planting we would not dig a hole, but push a flat trowel or spade into the soil and work it until there is room to put in the plant. With a quick flirt of the hand shake out the roots fan shape and put them in behind the spade. Pull this out quickly and the soil falls in around the plant. Get it down so that the crown is just above ground and firm the soil around it level. Do not under any circumstances *pinch the soil around the plant and leave the hard pinched mass there.*

FERTILIZERS.—The time to fertilize the strawberry is when it is planted. It is a close feeding plant—that is, its roots do not extend out into the row like those of corn and potatoes. Its food must be soluble and put up close to it. In properly fitted soil chemical fertilizers are best. You can use one of the ready-mixed fruit or truck fertilizers, or mix the following: One part, by weight, nitrate of soda, one part dried blood, three parts fine bone, one part sulphate of potash. From choice we should scatter this in a strip about a foot wide where the row is to be and rake or cultivate it in before planting.

NOW FOR WORK.—Thus far it has been pretty much all play—now the real work begins. These plants must be hoed or worked twice a week until August, and watched with a critical eye to know just what to do with them. The so-called lazy man's way is to put a thick mulch of clean straw all over the ground. This keeps most of the weeds from growing. A few come up through the straw and can be pulled by hand. You will have better plants and better berries if you keep the mulch off and depend on a sharp scuffle hoe to keep down the weeds. This sort of a hoe does not dig, but slices and cuts the upper soil crust without disturbing the roots. In a rich garden soil it is a good plan to sow lettuce or radishes or even dwarf peas between the strawberry rows—anything that will not shade the plants. Keeping these crops clean will help in hoeing the berries. They must be kept clean, and the soil must be kept stirred up until August at least. There will be some bloom on these plants. In commercial culture we let this bloom alone to make berries, but when you are growing fancy garden berries it will pay to nip this bloom off and prevent fruiting. Late in June runners will begin to form. Now comes the instinct or judgment which only the true crank may know. What you ought to do is to lay down or root three strong runners around each plant you set out. This is called the parent plant, and the "hill" you are after will comprise this plant and three of its strong runners rooted evenly around it. It will require judgment to select the three best ones and put them in the right places. When they are thus placed every other runner which this hill makes should be nipped off as soon as you can find it. It is in pruning off these runners that the ordinary strawberry crank falls by the wayside, for it is dull, monotonous and back-breaking work. It can be done in a garden, but would not pay in commercial culture.

JUDGMENT REQUIRED.—In August there will come a time when more instinct is required. We all know the modern theory of handling a peach orchard. The plan is to feed well in Spring and give the most thorough culture up to July or August. This produces a fine growth of wood on the trees. By the middle of July these trees usually have all the new wood they ought to carry. If they keep on growing wood they will not make strong fruit buds, and the wood they have already made will not be ripened or hardened for Winter. So the object is



THE TAILLESS RUSSIAN SHEEP. FIG. 282.
(See page 705.)

to *stop growth.* This is usually done by seeding a cover crop or letting the weeds and grass grow naturally. These living crops take the moisture and available plant food in the soil, and the tree stops growing and ripens its fruit and starts fruit buds for next year. Now in something the same way these hill-grown, rank strawberry plants should be started in August into making their buds for next year. We cannot handle them as we do the peach trees, and keen judgment is required. We may in some cases use a mixture of acid phosphate and potash. This contains no nitrogen, and will not stimulate growth, but help the formation of fruit buds. We may cover the ground with a thick mulch of chopped straw or coarse hay. This prevents weed growth and with the potash and phosphate will help the bud formation. In some cases where the leaf and stem growth is extravagant it will pay

FRUITING HABIT OF JABOTICABA. FIG. 283.

to make a thick seeding of oats and barley right among the berries. This will act much the same as a cover crop in a peach orchard. This crop should not be permitted to grow too high, and the runners should still be cut from the berries.

THE OVERCOAT.—Just before the ground freezes the entire patch should be covered with a thick mulch of coarse straw, hay or stalks. A strawberry overcoat should not fit down close to the plants. They must breathe. You do not need to prevent their freezing, but you want to prevent freeze and thaw during the early Spring, or on sunny Winter days. The next year you loosen the mulch to let the plants go through, and you have them much like those shown in the picture. The strawberry crank is completing his job by applying a little more of that fertilizer at blooming time. Then he will put back the mulch and wait for the harvest.

FITTING SOIL FOR GRASS.

I have a field of about eight acres which I would like to get seeded to grass for hay. It is rather light sandy soil; have had it in rotation of crops for the last 18 years; hay two years, pastured two years, then plowed and planted to corn one year. The next year would reseed to clover and Timothy with a cover crop of oats along with the grass seed; the grass seed would make a good start after seeding, but when the hot sun came on in July and August the grass would all burn out. I have been doing this for the last five years. I have had corn on this land now two years, and wish to reseed again this Spring or Summer to grass seed. I have thought of trying another way to get a stand of grass seeding. This land, no doubt, is run out badly as I have never put on any manure, as we have none to put back. Would you consider it wise to sow Velvet beans on this land and plow under, or Giant spurrey? Which of these two would you advise to be sown and plowed under the latter part of July or the first of August, then put in the grass seed? I intend to sow one ton of commercial fertilizer when I sow the grass seed about the first of August, or what would you advise to do better? This Giant spurrey and Velvet beans are both something new to me, as I have never had any experience with either of them. They are highly recommended in the seed catalogue to grow great crops on very poor soil. I also want to put on lime. When would be the best time to do this? Will it be all right to put on lime just before I sow grass seed and work it in first? T. M.
Michigan.

If that field were on our own farm, we should say that it needed both lime and humus, in order to make it fit for growing a large crop of grass. Natural grass land is porous enough to hold moisture well. This light soil evidently has little organic matter in it, and therefore dries out rapidly during a drought. Once get it well seeded to grass and clover, and the decaying roots of the sod will help keep up the humus supply. We should spend the earlier part of this year in filling that soil with organic matter, and then seed to grass alone next Fall. There is no use experimenting with untried cover crops just because you see them mentioned in the seed catalogue. When any seedsman booms an untried plant of this kind, and claims great things for it, you may safely conclude that he is trying to fill his pocket with money, rather than to fill your soil with humus.

The Velvet bean will do well in the South. We have seen the vines in Florida so long that they literally chased a man out of the cornfield and climbed trees along a field 15 or 20 feet high. Because they did that in Florida, there is no reason that they would do the same with you, and in your position you would far better stick to the old reliable crops which have been proved serviceable again and again. Instead of trying spurrey and Velvet beans, we should work that land up as early in the Spring as possible, and put in a heavy seeding of Canada peas and oats. Use a fair amount of a soluble fertilizer to push these crops on. In late June plow the whole mass right under, and put one ton per acre of air-slaked lime on the furrows and harrow in, rolling the land down hard so as to pack down the cover crop after plowing. Then two plans are open to you. One is to keep that ground thoroughly stirred up again and again through the later Summer until September, which is the time for seeding. The other is to sow a heavy seeding of buckwheat and rape, immediately after putting on the lime when the peas and oats are plowed under. Let the buckwheat and rape grow until the latter part of August, and then plow them under, working cross-wise from the first plowing. Then fit the soil as well as possible, and put in a heavy seeding about the middle of September. Put the grass seed in alone after fitting the soil perfectly, and grading it so as to prevent hollows or uneven places. You will find that this stuffs the soil with organic matter, and using lime freely, will make this field hold moisture better, and enable the grass to make a far better start, and give a better crop.

HERE is something of a new argument for sheep, coming from the Canadian Northwest:

Of the three hundred known Saskatchewan farm weeds, the sheep will eat and make splendid mutton of no fewer than 260, while stock and horses will merely take 60 or 70 of them. Where Summer fallows are fenced, a flock of sheep will keep down the weeds which absorb so much of the precious moisture, converting them to a fat profit in mutton.

There is no question about the weed-killing power of sheep. Many nurserymen and gardeners keep a few sheep to tidy up the lanes and fence corners by cleaning out the weeds. There should be more of them kept, and there would be—but for the cur dogs.

TRANSPLANTING ALFALFA PLANTS.

[A year ago Prof. N. E. Hansen of the South Dakota Experiment Station, wrote us about his plan of transplanting Alfalfa in the dry Northwest. The little seedling plants were started in drills, dug up somewhat like cabbage and celery plants, and put in with one of the horse power plant setting machines. We wrote some of the best Alfalfa experts in the Eastern States about this, but most of them had never heard of it. Now we have the following further statement from Prof. Hansen, in answer to a question. As you will see, he does not yet advocate this plan for general use except under some conditions in the Northwest.]

In some of the limestone sections of New York State Alfalfa does well, but in other sections it has been almost impossible to get a stand that would last. Many people (farmers) in this section have made a brave effort to grow it and most of them have given up with disgust at the results. Personally I have been studying Alfalfa for many years, but have had a farm for only three years on which to try it out. I believe that I am on the right way now, if I can get some hardy plants, and am therefore greatly interested in Prof. Hansen's plan of growing and setting plants. After reading his bulletin and circular, I am convinced that it is a very practical way, not only for seed, but for hay as well, and I certainly will give it a very thorough trial

It has been a year since the bulletin was written and I would like very much to know how the past year has affected Prof. Hansen's opinion as regards the setting of fields of Alfalfa plants for hay, and how far apart he would recommend their setting for a hay crop, with the idea of cultivating the first year or so until the crowns cover the ground. Last Summer I put in a five-acre field to Alfalfa in the usual way, sowing 20 pounds per acre. This field has good natural drainage and we limed thoroughly, inoculated the seed with the bacteria for Alfalfa, gave exceedingly thorough tillage and in short did everything according to the New York State rule. It went into Winter in fine shape, is now covered deep with snow and we are wondering how it will look in late Spring and Summer.

If you try transplanting dig your plants in the Fall, as the bark is too slippery in the Spring. Also, transplanting in the Fall after a grain crop will probably be better than in Spring: unless you have a good cellar to store the plants to keep them back till the rush of Spring seeding is over. My machine transplanting method for Alfalfa was designed primarily for the dry uplands of the Far West, wherever the soil conditions are unfavorable for getting a stand of Alfalfa, as the plants dry up before the roots get to moisture. It was also intended to be a certain method of spacing Alfalfa plants on the driest uplands where no irrigation is possible.

The old method of 20 pounds of seed per acre means 106 seeds per square foot. The experience of many farmers who are working with me on this upland problem indicates that for the driest uplands in the Far West each Alfalfa plant should have eight or nine square feet. The varieties of the Russian and Siberian Alfalfas that I am working with have very often 500 stems per plant by the second year: each crown covering one or two square feet. Such plants must certainly be given more room. In the Eastern States the largest rainfall in my opinion, will allow for a much denser plant population. That is, many more plants can be raised on the square yard. The hay will also be finer.

I shall be pleased to get your experience later. I am not ready to recommend the transplanting method to the farmer. For the uplands of the Far West, farmers have been forced into the method of raising seed in cultivated rows far enough for cultivation: usually three feet, owing to the limited moisture not permitting denser sowing. But wherever this is necessary, I believe we can give the plants more space and greater certainty by the plant method than by the seed method. They will also survive the attacks of blister beetles and other insects the first year, which are sometimes disastrous to Alfalfa plants just coming up from the seed. Yields of five to six pounds are not uncommon from transplanted plants the first year. I wish no one to believe it faster than can be shown by field demonstrations. At all events it is a quick method of raising pure seed of new varieties. In 1913 at this station 350,000 Cossack and Cherno Alfalfa plants were grown from 3½ pounds of seed on a little over an acre of land (exactly 1.13 acres). This would set 72 acres at 3x3 feet or 4860 plants per acre. The longer I work at the problem of Alfalfa for dry western uplands, the more I become convinced that transplanting one year plants into cultivated rows with suitable machinery is a safer and surer method than sowing the seed in cultivated rows, as the plants have one year's start and can stand more hardship the first year.

[PROF.] N. E. HANSEN.

South Dakota Experiment Station.

FEDERAL SLAUGHTER HOUSES.

Canadian Tariffs.

I was greatly pleased at that short editorial on page 532 on the free food movement and its unsatisfactory results. Little use in removing tariff walls when the trade is absolutely controlled by trusts and monopolistic gangs. We have the food problem in Canada more acute than it ever was in the United States. We are here, today, the highest taxed country in the world. We occupy the pinnacle of the mountain in high cost of living. We look down upon the whole world. We are the top-notchers in paying high prices for food products. We pay $14 per head customs duty, or $70 per family, while you in the States pay but $3.50, or $17.50 per family. We positively can say that we pay 400 per cent. more direct customs tax than you do, and still you people complain. Besides this large tax, we pay an indirect tax to the protected manufacturer of $40 per head, or for a family of five, $200, as the yearly bill for Canadian manufactured goods more than under a free trade policy. Adding $70, annual customs tax, to $200, annual subsidy to Canadian manufacturers, the breadwinner for a family of five would appear to contribute $270 yearly on account of tariff barriers. I have drawn the attention of Premier Borden to your editorial, and the solution you suggest, viz: public owned abattoirs under federal control where cattle shall be slaughtered and sold.

NOT SPEEDY BUT RELIABLE. FIG. 284.

A friend in Nova Scotia has been advocating this scheme for months, but the middlemen and even the editors of the papers he was contributing to, came down on him like thousands of bricks. The "middlemen" would be completely put out of business in the meat line here in public slaughter houses under federal control, when the animals would be slaughtered and sold probably by auction to the highest bidder after the manner of a board of trade exchange. Undoubtedly this plan would reduce the price of beef in many cases one-half. In Ottawa, Saturday, dressed beef, good, sold at $11 per 100 pounds. The retail price of chuck was 18 cents, while roasts was 24 to 35 cents. The average retail price of the carcass was about 24 cents, first double the carcass price and two cents to the good. I trust that Premier Borden will give your suggestion the consideration it deserves. I stated that I thought it "criminal negligence" on the part of the government to stand pat, and not to act on this suggestion.

Ontario. J. C. MCDONALD.

CROWN GALL ON PECAN TREE. FIG. 285.

LIMESTONE CRUSHING CLUBS.

In my opinion the "community crusher" is the solution to the limestone problem. I found the lands of this county badly in need of lime, and so as soon as I had organized the farmers into clubs I took up the limestone proposition. In each of the clubs there is some member who is going to buy a crusher, and he will go around and crush the rock for the farmers in that district. They are going to charge $2 per ton for quarrying and crushing the rock, and I feel sure that they will reduce the price after this year, as I know that it is only costing them from 50 cents to $1 per ton to put the crushed limestone in the heap. Under this arrangement the farmer avoids a long haul, and I have figured that it costs about 25 cents every time a ton of crushed rock is moved one mile. In 1912 the farmers of this county used about 800 tons of limestone, and last year they used 4,000 tons. I expect there will be 10 or 12 crushers at work in the county this year, and I believe they will use at least 10,000 tons. I shall be glad to give you any further information you may desire.

GEOFFREY MORGAN.

Christian Co., Ky. Farm Demonstrator.

R. N.-Y.—The limestone crushing club will undoubtedly lead toward co-operative effort in other lines, and thus show the farmer how he may combine with his fellows.

TITLE TO MANURE ON FARM.

A owned two farms. Each farm was separated by a highway and not connected with each other. A sold one of these farms to B, and it appears that A lives on the place he owns at present but kept his cattle on the place he sold to B, in the barn, also with the understanding that B would allow him to keep his cattle on his place until the first of April, 1914. The title was closed in January and B moved on the place and took full possession. There were quite a number of loads of manure on the place that B bought, and when he was buying the place and taking title to it there was nothing said about it in any way. After B had the farm three weeks he started hauling out the manure and putting it on the farm he had bought. A came along and told him to leave this manure alone, as this was his property. He said, "If I sold you the farm I did not sell you the manure that was on the farm." However, B kept on hauling out the manure, thinking he had a perfect right to it. A called up the sheriff and had B arrested for theft. He was taken before a justice of the peace and had to pay the costs. B is a poor man—a Polander just come from New York City, and has no friends. I think he was in the right. Give me your version of this matter, as one-half of this little community of ours seems to think that B was in the right. J. K.

Connecticut.

As a general proposition, manure made upon a farm, from the consumption of its products, and in the ordinary manner, is regarded either as between the man who sells and the man who buys, or a mortgagor and mortgagee, or landlord and tenant, as part of the real property and passes with the farm, and this is generally true of both the manure itself and of compost formed of its mixture with hay, straw, soil or other substances, and whether it or they be found where the manure is dropped or gathered into heaps or piles or moved to different parts of the farm. The reason for the general rule is that since the substance of the land produces the manure, it should remain on the farm for its enrichment, and the soil should not be impoverished because of its removal by a vendor or outgoing tenant. So in this case if there was nothing said between A and B at the time the farm was sold, the manure would pass with the farm and become the property of B, and he had a right to spread it on the farm.

Of course manure may be sold from a farm by the owner or by a tenant, the same as the annual crops may be sold, and it may be the subject of contract; but where nothing is said between the vendor and vendee, the rule is as above stated with the exception of the States of New Jersey and North Carolina, where manure is held to be personal property and not a part of the realty.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Sowing Crimson Clover in Spring.

Would you advise us to seed land in early Spring with Crimson clover? We know all about its dying out in the Winter. Would you think Red-top and Timothy, or only Timothy would be the best for profit in seeding down? B. B.

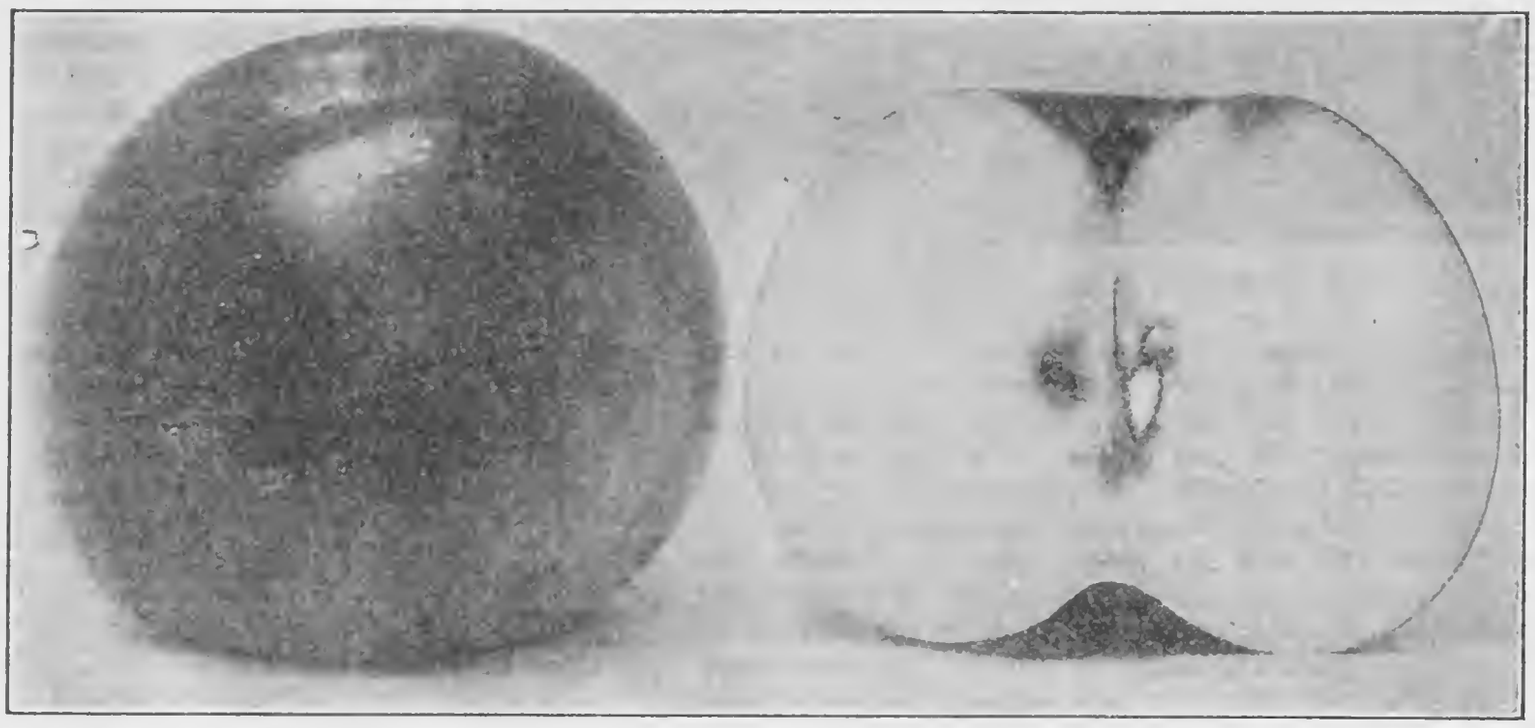
Putnam, Conn.

No. Not by any means. Crimson clover is the last thing we would seed in the Spring. It is by nature a cold weather plant and cannot endure the hot Summer sun. It is a plant for Fall seeding—to go through Fall and Winter. Alsike clover will be better for your purpose. Timothy needs an alkaline soil, which means lime. Red-top will do well on an acid soil. It is a slender grass, which grows well with the Timothy—therefore we seed them together.

The Hudson Apple.

On page 265 Mr. Wm. H. Hart of Dutchess Co., New York, tells us about the Hudson apple, which he thinks will become an excellent variety for New York growers. There have been many letters from growers regarding the Hudson, and so we print at Fig. 286 pictures of fair specimens of the apple, showing the exterior and also the core. The apple reached us out of storage in excellent condition. It is of the size shown in the picture, with firm flesh and an agreeable flavor, rather mild, and not as tart or acid as Baldwin. We judge that this will be an acquisition both from its quality and appearance, and also its ability to keep well in storage. Regarding the parentage of the Hudson, Mr. Hart now sends us the following additional note:

"Regarding the parentage of the Hudson apple, to my surprise I received a letter to-day from S. W. Underhill, the originator, who says that he grew this apple from the seed of a remarkable specimen of Newtown Pippin, which was so affected by the Spy pollen as to be plainly striped or marked with red. I had understood from Mr. Underhill years ago that he grew the Hudson from a Spy seed. I am greatly pleased to learn the true parentage, which explains much in the variety." W. H. HART.



THE HUDSON APPLE; SECTION AND SIDE VIEW. FIG. 286.

Honey Questions.

Is there such a thing as crystallized honey, and if so, how is it done? Which is the better honey, buckwheat or clover, or in other words, the dark or the light honey? E. J. A.

West Philadelphia, Pa.

Honey crystallizes naturally upon prolonged exposure to low temperatures, though the nectar from different plants seems to vary as to the length of time and degree of cold required to produce this transformation. Extracted honey crystallizes more readily also than that in the comb. If you wish to crystallize extracted honey, stir some that has already crystallized into the fluid honey and keep it in a cold place; on the other hand, if you wish to keep honey from solidifying, store it in a warm dry place. There is no difference, that I am aware of, in the wholesomeness of dark and light honey; choice between them is wholly a matter of taste. Clover, basswood, and other light-colored honeys are of more delicate flavor than that made from buckwheat and are preferred by most people; some, however, like the stronger flavor of buckwheat best and it has the advantage of being considerably cheaper in most markets. M. B. D.

Planting Vegetables.

Will you give me some information, as to growing vegetables as follows? Brussels sprouts, cauliflower, cow beets, bush beans, kale, muskmelon, watermelon.

Huntington, L. I. O. B.

In your latitude the proper time of sowing seeds of the varieties mentioned would be about as follows; Brussels sprouts should be sown in hot-bed about April 11, and treated in all respects the same as cabbage, or the sowing of seed may be deferred until May 1 to 10, and sown in the seed bed in the open ground, and transplanted to the garden soon as large enough. The first sowing of cauliflower seed should be made in the hot-bed March 1, for later use, sowings should be made in the seed bed in open ground about April 25 and May 20, transplanted to garden soon as possible. In raising plants of this vegetable care must be taken to keep them in a thrifty condition at all times; if allowed to suffer for water or food until the stems become hard and woody they will be worthless.

Mangels, (cow beets) are sown as ground is in good workable condition. Beans (bush), for a continuous supply throughout the season, should be sown first May 15, and every 15 days thereafter up to July 31.

Kale is sown in the seedbed in open ground about May 10, and transplanted to garden as soon as plants are large enough; the distance apart will depend on the variety; the dwarf sorts, two feet apart each way, the larger sorts, six inches farther apart each way. The most popular market variety is the Dwarf Curled or Dwarf German Green. This variety resembles somewhat the foliage of the rutabaga, a turnip, the leaves being a bluish green. It is grown in very large quantities South, for the markets of the North. The Dwarf Green Curled Scotch, is also largely cultivated for Winter use, and is well adapted for the gardens of our northern sections. It is very hardy and will remain over Winter in almost any place where the temperature does not go much below zero.

For muskmelons, make first planting in open ground May 15-20. A second planting may be made June 10. Plant watermelon May 20-25, or when the temperature at night does not go below 60 degrees. K.

The Mulch as Frost Protection.

I was interested in reading on page 563 Mr. Stout's experience in trying to protect his strawberries by smudging. If he had mulched he could have done it in daylight and slept peacefully at night. On Friday, Saturday and Sunday nights, May 9, 10, 11 of last year, we had very severe frosts in western Pennsylvania; Saturday and Sunday nights there being from 10 to 12 degrees of frost. It killed the strawberries and the new growths on the grapes. But one man of my acquaintance, Thomas Greenfield of Oakdale, had a good crop of strawberries. He and his hired man on Saturday afternoon, when they found it was going to be as cold as or colder than the previous night, scraped up every bit of mulching material that could be found on the place, putting it on the strawberry bed. He had enough for all except one little corner. The corner which was not mulched had no fruit last Summer, but over the remainder of the strawberry bed there was a very fair crop. The way he put it to me was: "I never made so much money in so short a time. I made three hundred dollars (for that was the price of his crop) by that one afternoon's work."

P. T. B.

Sowing Oats and Peas.

I have a sandy loam soil, somewhat run down, on which I wish to sow Canada field peas and oats. There is no manure available, but I want to spread at least 1,000 pounds of ground limestone per acre. The lime, however, cannot be delivered now. I understand the peas must be planted early and covered deep, and therefore, to gain time, would it be a good plan to sow the peas on top of ground and plow under at once, then wait till I can get the lime, possibly two weeks, work it in with the disk harrow before sowing oats which I would cover with the spike-tooth harrow? The field had corn on it last year, and is free from weeds. What is the quantity each of oats and peas usually sown per acre, to be cut for hay? T. J.

Southington, Conn.

We should not use the lime in this way after waiting two weeks. With reasonable weather these peas will have sprouted and many of the sprouts will be near the surface, and a disk harrow will chop too many of them off, and there would be trouble after this was done. Rains may set in and delay this disking, and then you will find it difficult to seed the oats. We should go ahead and put in the oats and peas together, and not use the lime unless it could be worked in when the ground is seeded. Anyway 1,000 pounds of ground limestone is too small an application to be of any particular benefit to this crop. There should be at least two tons of ground limestone, if this land is as sour as we suspect it is. Our plan would be to put in the oats nd peas without the lime. We should use some fertilizer with this crop and use the lime in larger quantity when the ground is plowed after cutting the oats and peas. The usual quantity per acre is five pecks of peas and three bushels of oats.

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Alfalfa Plant on left Inoculated with Ferguson's Bacteria; on the right, not Inoculated. From Gov. Bulletin No. 159

The Home Acre.

Rye Before Berries.

I have a piece of ground sown to rye last Fall on which I intend to plant raspberries and strawberries this Spring. I would like to allow the rye time to grow before turning it under. When should this ground be plowed and what is the best method of fitting such a field for the small fruits? Would an application of lime be a benefit to the raspberries? F. T. J.

You could delay planting the raspberries and strawberries if you take care of the plant properly. If you are to do this, unpack the plants promptly when they come and put them close together in drills. Strawberries may be put one inch apart and the raspberries two inches, cutting the latter back severely and seeing that the roots are covered. Water them from time to time if need be. As the rye is coming into bloom, plow it in and immediately pack down hard with a roller or heavy drag. Then fit the ground thoroughly and set out the plants, taking them from the drills a few at a time. The strawberries do not require lime. Raspberries do not respond to lime freely, but after plowing under this rye, the soil may be too sour, so that an application of limestone immediately after plowing would pay.

Notes From A Maryland Garden.

Our calendar seems to have slipped a cog. Winter did not begin till February, but once started it has held the stage, and here after the middle of April still gives us chilly mornings. I have been in the habit of planting my earliest roasting ear corn in March, but it was well into April before it was done this year. By the 20th of April I usually think about getting the early tomato plants from the frames into the garden. This year they will probably stay in the frame till May. The early peas which should be blooming now are only two or three inches above the ground, and the sweet peas that were planted in January, are but just now showing above ground. Spinach has wintered well, but has made a slow Spring growth, and the late Spring crop of lettuce, with which we generally wind up the lettuce season in May, looks as though it may be June before we get the heads.

I planted in the Fall of 1912 a lot of the so-called Dutch Roman hyacinths; really small bulbs of the regular Dutch hyacinths. They gave me a fine bloom last Spring and I ripened the bulbs, which had greatly increased in size, and replanted them last Fall. Now the bed is very showy, and the spikes are fully as large as those of the regular Dutch bulbs. I believe that it would be a good plan to import the small size bulbs and grow them one season here.

The first planting of Gladiolus corms was made the first week in April. But I do not plant all at once, but keep back some for a succession. Planted in groups among the shrubbery border plants the flowers have a better effect than standing alone.

A new tomato of any promise is always a temptation to me. Of course I do not depend on the new ones, but always try one or two novelties. This year I invested a dollar in a paper of the new John Baer, which is claimed to be the earliest and best ever. The seed certainly germinated well and I have a superabundance of plants, and hope for a new sensation.

While as a rule I do not think that it pays a gardener to save vegetable seed, there are occasional plants where it can be done to advantage. For several years I bought potted plants of eggplants from the Northern growers, and every season had diseased plants. I then bought seed of the Black Beauty, selected a fruit on one of the best plants and let it ripen, and got an abundance of seed from the one fruit, and have never had any more disease in my eggplants. But, while one can put tomato plants out in the cold frames and harden them off, I have never found this any advantage to the eggplant. I set the small plants in thumb pots in the greenhouse, shift to threes and then to fours, and get plants with leaves larger than my hand before setting them out, and never set them before the last of May. The soil is then so warm that they grow right off. A chilled eggplant takes a long time to recover.

Aside from the green onions, which we have been eating a month, the first fruits from outside in the garden was rhubarb; could have had this earlier had I used my old method of turning barrels over the hills and banking around with hot manure. But this was neglected at the right time, and we get only the natural growth. One Spring job in the rhubarb bed is the cutting out of the bloom heads that persist in trying to get up. We want all the growth in the leaf stalks, and cut out every bloom head that shows before it has time to open flowers, for we are growing rhubarb for the leaf stalks. W. F. MASSEY.

Maryland.

Late Planted Telephone Peas.

In "Brevities" you ask if anyone can report on planting mixed peas for a long continued crop. I have the long continued crop all right, but do not plant mixed peas. I use the Telephone, which planted first of July will bear continuously till killed by frost. If planted in April or May the vines die, but planted in July three or four inches deep they remain green till killed. In 1913 I had green peas into November, and when they were killed by frost there were peas in all stages from ripe peas to blossoms. E. E. S.

Skowhegan, Me.

Growing a Crop of Mulch.

I have been a small fruit grower for many years, and have made great success mulching with straw. Straw mulch saves lots of hard work; it keeps the weeds down, holds the moisture and keeps the fruits clean. With me straw is scarce, hard to find, and I have to look for some other mulch that will take the place of straw. What do you advise in its place? Small fruit growing without a mulch of some kind is a failure with a slow man behind this business, but mulch is what produces big crops in Maine. A. A. E.

Maine.

This problem is troubling many strawberry growers. Small fruit growing is coming into localities where little grain is grown. This makes a shortage of straw, and the grower can hardly afford to buy baled straw for his purpose. Usually some late planted crop is most economical. There are few crops better for this purpose than Japanese millet. A thick seeding of this millet on rich ground will give a heavy crop of coarse material, which when cut just before the seed forms will make a very good mulch. Another good mulching crop is sorghum, or ordinary field corn, broadcast thickly on rich ground late in the season. Both the millet and the sorghum can in an ordinary season be seeded on an old strawberry bed. After picking the old bed is plowed under, and the ground fitted. The millet or sorghum seeded after such a bed will have time to develop a good crop, and cut just before frost will make good mulching material quite free from weed seed. The millet or corn stubble may then be plowed, and seeded to rye if desired. Another plan followed somewhat in a wet season, is to sow barley alone, or barley and oats together, right among the strawberries in early September, after cleaning the beds up. This grain makes a thick growth during the Fall, and in Winter mats down over the berries, providing a partial mulch, and saving considerable mulch material in that way.

Corn Ear-worm.

The Kansas Experiment Station rightly states that the corn worm causes a loss of millions of dollers:

"The corn ear-worm is destructive to the sorghums, Alfalfa, cow peas, and tomatoes, as well as corn. It is able to fly long distances, and is therefore a serious pest to control. No method has been found to eliminate entirely the damage done by the ear-worm, but the individual farmer can greatly reduce the injury to his crop by planting a thoroughly prepared seed bed as early as it is possible to do so, and avoid a set-back from cold weather."

In New Jersey experiments have been made in dusting a dry poison like powdered arsenate of lead on the corn as the ears form. Machines are made for the purpose, and some very good results are reported.

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EVENTS OF THE WEEK.

DOMESTIC.—Fire swept the plant of the Federal Steel Company and the Harris Chemical Company on the Delaware River front at Chester, Pa., April 26, causing a loss of $500,000. Six fireman were injured, two seriously.

The plants of the Atlantic Fertilizer Company and the United States Fertilizer Company were destroyed at Baltimore, April 26, by fire, with a loss estimated at $1,350,000. The fire is thought to have originated from spontaneous combustion in the condensing chamber of the Atlantic plant.

Fighting in Fremont County, Col., between striking miners and militia, continued April 26-28, seven men being killed near Canyon City, April 28. President Wilson invoked his constitutional authority and intervened in the domestic affairs of Colorado by ordering Federal troops there to stop the warfare between mine operators and miners. In a proclamation issued from the White House he commanded all seditionists and disturbers to disperse by April 30. Governor Elias M. Ammons, of Colorado, issued a proclamation declaring the State to be in insurrection and practically declaring martial law. Fifteen more men were killed, April 29, in two battles in the Colorado strike district. One battle was fought at Forbes, near Trinidad, and the other at Walsenburg, where the fighting had already been continuous for 48 hours. Many wounded were carried away. The total casualties since the strike was began on April 20 are estimated at 47 killed and 44 wounded. At the inquest into the burning of the tent colony at Ludlow witnesses testified that militiamen set fire to the tents, which caused the terrible loss of life there, and that they fired continually at the Ranch House, where the refugees were huddled for safety.

Harry Etchells, once head steward of the White Star Line, recovered a verdict for $18,000 in the Supreme Court, April 24, from the Wells Fargo Express Company. He lost a leg when a truck owned by the company scraped him off a sidewalk and under the wheels.

Four miners are known to be dead, 59 were rescued, 38 of them severely burned and 172 others were entombed in two burning mines near Ecles, W. Va., April 28, as the result of an explosion of gas in mines Nos. 5 and 6 of the New River Collieries Company.

During a furious gale on the Great Lakes, April 28, the steamer Benjamin Noble, her crew of twenty or more and a large cargo of railroad iron were swallowed in the waters of Lake Superior off Duluth. All efforts to find the hulk of the steamer have proved fruitless. Four bodies have been recovered. The general belief is that the vessel missed the Duluth entrance and struck the Point and foundered in deep water. In addition to the high seas there was a heavy snow, and the Duluth entry light was out. The steamer was making the first trip of the season. Several other wrecks were reported.

MEXICO.—The United States accepted offer of Brazil, Argentina and Chili to act as mediators between this government and Mexico "in the conflict between the United States and Mexico." The first step of the mediators, according to the diplomatic authorities, will consist of a request of the United States for a definition of that "reparation" which it has been led to demand as essential to the preservation of the dignity of the United States. Huerta formally accepted the offer of mediation April 27. The mediators are moving now to obtain an agreement between Huerta and Carranza for the suspension of internal strife in Mexico while efforts are being made for a peaceful solution of the present crisis. The receipt of Huerta's reply followed close upon the disclosure in Washington of the fact that England, France and Germany have been exercising great pressure upon him to consent to a peaceful settlement of the present difficulties. * * * The Administration feels confident that the taking of Vera Cruz has seriously crippled Huerta. It believes that by depriving him of the customs collected at that port, which it estimates at 3,000,000 pesos, or $1,500,000 a month, which is 40 per cent. of the total customs revenue of the republic, it has achieved a giant stride toward his elimination. These receipts are now being segregated but no part of them is reaching the Huerta government. * * * More than 2,600 destitute refugees from Mexico were at Galveston, April 26. Three trainloads of Americans held at Mexico City, and 113 American farmers and their families held at Soledad, were brought away by Commander Tweedie of the British cruiser Essex, who went to the capital accompanied by his orderly and interpreter, and used such moral force upon Huerta that the captives were permitted to go.

FARM AND GARDEN.—At a recent meeting of the Agricultural Council of Cornell University two appointments were made to the staff in the Department of Floriculture. These were the appointment of David Lumsden of the New Hampshire College of Agriculture as assistant professor of floriculture, and Clark L. Thayer of the Massachusetts Agricultural College as assistant in investigation.

The Western Seedsmen's Association held its thirteenth annual meeting at Omaha, Neb., April 20. The following officers were re-elected: H. A. Johns, Sioux City, Ia., president; C. C. Massie, Minneapolis, Minn., vice-president; Henry Winheim, Omaha, Neb., treasurer; Mel L. Webster, Independence, Ia., secretary. L. L. May, H. A. Johns and C. C. Massie were made members of the grievance committee.

Reorganization of the work of the Department of Agriculture was proposed in an amendment to the agricultural appropriation bill reported to the Senate at Washington, April 17, by the agricultural committee. The committee made a half-million-dollar increase in the house bill. Under the amendment the Secretary would be instructed to submit a plan for a complete reorganization of the Department to Congress and to prepare his estimates for the fiscal year 1916 along the lines of the recommended plan. The committee struck from the bill the appropriation for Congressional distribution of free seeds.

As the result of an outbreak of rabies in the vicinity the State Department of Agriculture has established a quarantine on all dogs at Newburgh, N. Y.

COMING FARMERS' MEETINGS.

American Association of Nurserymen, Cleveland, O., June 24-26.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

BOSTON MARKET REVIEW.

The supply of fruits in the market is none too heavy for the demand, and prices are steady or inclined upward on several things, including oranges and grapefruit. The former are nearly 50 cents per crate higher than a week ago, as Floridas are about done, and higher prices in other markets on Califoruia fruit, decreases the supply sent here which naturally stiffens prices here. Floridas bring up to $4.50 per box, and Californias up to $3.50 for navels and up to $2.50 per small box for tangerines and bloods. Florida grapefruit $3.50 to $4.50 per box; Cuban $3 to $3.75; California stock about $2.75. Good apples are also in the high-price class, bringing up to $7 per barrel for best Baldwins, with good going at $5 to $6. Russets bring $3.50 to $5 per barrel; common box fruit goes at $2 or better per box. Western box stock of good quality brings $4 to $4.50 for Winter Banana and Delicious, and about $2.50 to $3.50 for other kinds. Cranberries bring the nice figure of $15 and better per barrel. Strawberries offered are rather poor in quality, and prices correspond; fruit from Florida and Louisiana 20 to 30 cents per box. Lemons are fairly plenty and prices range from $2.50 to $4.25. California stock brings the higher figure. Bananas iu fair supply and prices reasonable. Extras bring $3.25 per bunch, good to medium bunches, fair sized fruit, go at from $2 to $2.75, and small bnnches $1 to $1.50 for yellows with reds at 50 cents to $1 per bunch higher. Pineapples are plentiful and will continue so for some time, and prices, which are reasonable to buyer, are apt to be more so; for the past few days $2.50 to $3 per crate was about the price paid.

The few Hubbard squash left bring up to $1.20 per ton; some claim to have receive even better this last week. Hothouse tomatoes are decliniug, and best prices now are 40 cents per pound, with Florida stock at $3 and $3.50 per crate of six baskets. Good lettuce sells very well at $1 per box, some not so good at 50 to 75 cents per box. Other greeu stuff is increasing in supply, and prices are dropping, cucumbers selling at $5 per box for No. 1, others $2.50 to $4. Southern spinach bring $1 per barrel; kale about the same or less. Native dandelions 50 to 65 cents per box; beet greens the same; bunch beets $1.75 per dozen; bunch carrots $1.25 per dozen; old beets, per box, $2; old carrots $1.50; parsnips $1.50 per box; bunch radish $2 per box; Southern string and wax beans $3 per basket. New Florida cabbage $2.50 per crate; old native stock has sold hard and slow, many going at $1 per barrel; a few at $1.50 if extra good. California and Southern asparagus $2.50 to $4 per dozen bunches; celery up to $2 per dozen bunches. Onions and potatoes both are stiffer in price, owing to small receipts, chiefly. Native, Conn., and New York stock now brings about $3 per 100-pound bag; foreign stock $3.50 and $4 per crate. Maine potatoes now bring $2 per bag of two bushels at the yards, or 10 cents per bag higher at wholesale houses. Many are still going south, as the southern crop is late this season owing to adverse weather conditions. Some claim 25 per cent. of the last crop is still in growers' hands and being held for higher prices. Sweets bring $1 per basket.

Eggs are slightly higher, as fewer are being received and some are putting into cold storage for the late Summer trade; the prices paid for these are said to be 20 and 22 cents per dozen. Fancy fresh eggs bring 25 and 27; others of good quality 24 and 25 cents for eastern stock; Western eggs 22 to 24. Many are being used for hatching, as young chicks are in demand at 15 cents and better each, the supply in some cases not being enough to keep up with orders.

Butter is easy, best quality not too plenty, but other grades plentiful to make it up. Best New England stock 26 to 29 cents in box and tubs; best western 26½; good, 24 and 25; cheap grades 23 and 24. Cheese just in fair supply, with no surplus; prices range from 14 to 16 for good to 17 and 20 for best.

Live poultry is in just fair demand, with prices on hens in good condition, ranging up to 19 cents per pound; others 15 and 16 with roosters down to 12. Dressed stock of fowls 18 to 21; turkeys 25 and 27.

Beef is about the same in range of price and supply; best 12 to 14; good 9 to 11; poor grades eight to 10. Live beef ranges from $3.50 to $5.50 for poor or medium grades up to $8.50 for best at Brighton. Live hogs around nine cents per pound; dressed about two cents per pound higher. Live sheep and lambs 4 to 8; dressed 10 to 14; live veals 7½ to 10; dressed 11 to 16. Cow and steer hides 13 and 14 cents per pound; calfskins 22.

Horse trade is slowing down some in demand, but prices are holding about the same as the past few weeks, but as the supply is plenty of medium and light weight common stock, prices are apt to be in buyers favor on these if they hold off a while. Heavy high-grade horses, however, are short and high. There seems to be an extra demand for farm horses this Spring, the reason for which is that prices have been for the past few years steadily increasing, and many have put off buying one year on account of thinking the limit had been reached, and next season would see a decline, and so the old team was used until one or both perhaps died and a purchase had to be made now to replace these. Some have turned to oxen, which are also way up in price for various reasons, short supply, big demand and high price of beef, being chief reasons. A light young pair readily brings $200 and hard to get at that; good teams bring $300 and better. I believe it will pay many to raise at these prices, and to prove our belief in same, are starting a good promising pair this Spring. A. E. P.

April 22. Prices at auction for good heavy draught horses $175 to $225. Cows from $75 to $125; heifers, one year old, $40 to $50; hogs $9 per cwt; pigs $3 to $4; fowls, old, 15; young 25. Eggs 16; butter 30; lard 13 to 15. Corn, per barrel three bushel in ears, $1.10. Hay $15; potatoes 85. No fruit on market, as last year we did not have any. Prospects look good so far; peaches in full bloom and spraying is over. Graiu and grass is looking fine. Farmers are a little behind on account of cold and wet weather; have not done sowing oats and planting early potatoes yet. Labor, per day, $1.50 for 10 hours' work on public work; on farm $1.25. L. E. B.

Beaver Creek, Md.

Cattle often sell for more at home than at Pittsburgh stock yards, because butcher would have freight from yard. Potatoes are quoted at 75 and 80; but home-grown are retailing from $1 to $1.25. Elgin butter retails at 29 in city, but farmers who attend market every week were selling at 35 to 40. Eggs were selling about two cents above mark, but in two or three weeks will be 10 to 15 cents above mark, as the people say all eggs are good this time of year. Chickens, if young, are far above; 2½ to three pounds nicely dressed $1; two to five pounds $1.25 to $1.50 each; old hens 25 cents per pound. Good young horses, 1,500 pounds, $500 to $700 per pair, nearly all teams are brought from the West. Our turkeys averaged 40 cents per pound Christmas and New Year, but commission men quoted good 28 to 30, so you will see that the paper quotes price, but there are plenty of people who want something fresh from the country and are willing to pay good prices for it. G. V. L.

Eighty Four, Pa.

We are at present getting 36 cents for dairy bntter, but some is selling as low as 28 cents. Milk is $1.50 per cwt. at cooling station. Calves nine cents per pound, live; fat cattle eight to nine cents, live weight; fat hogs 12, dressed weight; eggs 16; home-cured ham 20. Wheat $1; oats 50; corn 75. J. Y. H.

Elverson, Pa.

Potatoes, wholesale, 90; potatoes, retail, $1.15; corn, wholesale, 70; corn, retail, 85; oats, retail, 60; wheat, wholesale, 90; butter, retail, 36; pork, wholesale, 13; lard, retail 16; eggs, retail, 20 to 25; hay $20; fodder 2½ cents a bundle; fruits scarce. I can from 8,000 to 10,000 cans of tomatoes every season, which I wholesale at $1.10 per dozen; retail at 12½ cents per can. M. T. R.

Chester Co., Pa.

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Farm Engineering.

Leaky Tank.

W. H. M., page 447, is bothered with leaky water storage tank. Draw all water from tank and cover inside, including bottom, with metal lath or one-inch mesh poultry wire, using plug or piece of pipe to preserve opening for pipe, and plaster with three coats of cement plaster, using some hair in first coat, applying succeeding coats just as preceding one is drying. Make first and second coats rough to hold next coat better. Take one part good lime paste, three parts sand and mix thoroughly into heavy mortar; then add two parts cement with water to "temper" and apply. For first coat add hair, moistened, to lime and sand and have thoroughly worked into mixture. After dry the surface may be coated with some of the waterproofing compounds that may help make waterproof. Alum is recommended mixed with the cement. It must be remembered that cement is not waterproof, and when wet beyond saturation will filter some moisture. To make it waterproof it must have some impervious coating. But W. H. M. will find if he follows above directions he will have only an occasional drop, here and there. Fasten wire or lath securely and do not try to make the wire, if wire be used, lie too snug to staves—leave room for plaster to clinch. I have an outdoor water tank so treated, and will give a stave silo a similar lining—I believe the cheapest way to build a first-class silo. W. F. M.

Pennsylvania.

Waterproofing a Cellar.

Regarding the inquiry of A. S., on page 447, relating to waterproofing a cellar, I will say, that the sure way would be to mop over the present concrete floor with pitch, and up the wall as high as water would come in. Then lay down a thickness of tarred paper all over the cellar bottom and mop this over with pitch, as in the beginning. Then add another covering of paper and another coating of pitch. This is same as first covering for tar and gravel roof. Above this, put about two inches of concrete. If the cellar has water in it, continuously, a depression must be made, either outside the cellar or inside, at the lowest point, and the water kept pumped out until the cement is laid. I understand there are preparations made, which the manufacturers guarantee, that consist of material ground so fine that by applying it to concrete, it fills the pores so tight that water is kept out. With this I have had no experience, however.

Maine. J. H. R.

Cement Will Renew the Pails.

There are a thousand and one ways in which cement may be applied on the farm. Here is one of the simple ways which makes a sack of cement more than pay its way. A lot of us have pails which have been used either in the milk-yard or watering stock, which are useless because of holes in the bottom. Some of these may be too near the scrap heap for repair, yet by mixing a little cement and spreading it over the bottom of the pail, its life will be continued this season at least. The pail would make a good one in which to feed calves, and for such purposes as an old pail is used about the house and barn. The pail may seem a little heavier, but the use of the cement will pay. WALTER JACK.

Engine for Pumping from Well.

My two horse power kerosene engine is speeded to 650 revolutions per minute, equipped with six-inch drive pulley. I wish to belt to 16-foot line shaft and operate pump-jack, that is equipped with 12-inch pulley and geared five to one, the stroke being six, eight or 10-inch. The well is 158 feet deep and I believe 50 strokes per minute would be fast enough to run the pump. Will you advise what size pulleys to use on line shaft to operate pump at this speed?

New York. R. W. A.

The particular sizes of the pulleys you use on the countershaft must depend upon what you can get readily. As I understand it, you wish the 12-inch pulley on your pump-jack to run at 250 revolutions per minute. Then the pulleys on the countershaft would bear the ratio to each other of 650 to 250, if the engine pulley were the same size as the pump jack pulley. It is half the size, however, so the pulleys on the countershaft would be in the ratio of one-half that given, or 650 divided by 250 times one-half, which equals 13 divided by 10. The pulleys may be in this ratio, that is, one 13 inches in diameter and the other one 10 inches, or one 6½ inches and the other five or any other combination having the ratio of 13 to 10. The larger one of the two should be belted up to the engine.

Let us see how this works out. The belt running from the engine to the countershaft pulley is an endless belt. Therefore every part of it travels the same distance in the same period of time. A point on the engine pulley in one minute would travel around the circumference of the six-inch pulley 650 times. It would go, therefore, 650x6x3.1416 inches. A point on the counter shaft pulley must go the same distance but we know it will go SxDx3.1416 inches where S is the speed of the countershaft and D is the diameter of that pulley. So 650x6x3.1416 equals SxDx3.1416 and as the constant cancels out 650x6 divided by D equals S. By using the same argument in considering the belt from countershaft to pump, we find that 250x12x3.1416 equals Sxdx3.1416 where S is the speed of the countershaft and d is the diameter of the second pulley on the shaft. From this we find, by cancelling the constant, that 250x12 divided by d equals S. And in both of the cases S, the speed of the countershaft is the same so we can say that 650x6 divided by D equals 250x12 divided by d. Therefore,

$$\frac{3900}{D} = \frac{3000}{d} \text{ or } \frac{d}{D} = \frac{3000}{3906} = \frac{10}{13}$$

The smaller you make the pulleys, the faster the countershaft will rotate. I should recommend the 10 and 13-inch size, although they will cost more than the five and 6½-inch size. The difference will not be great. R. P. C.

Cement for Steps and Walls.

How can I figure out the quantities of sand, gravel and cement, required in making walks, steps, walls, etc.? The mixture would be six to one. The walks would be a three-inch base with one-inch top of two in one. The steps would be seven inches riser, eight inches tread, six inches stringer and would have a finish one inch thick of two in one.

No. Adams, Mass. G. W. J.

By a one to six mixture I presume you mean one part of cement, two parts of sand and four parts of gravel. This is called by concrete workers a one-two-four mixture. With these proportions, two bags of cement, 3½ cubic feet of sand, and seven cubic feet of gravel when mixed together will make eight cubic feet of concrete finished. I think this is altogether too good a mixture to use for the purposes you mention. I would suggest that you use a mixture of one part cement, 2½ parts sand and five parts gravel. With this mixture two bags of cement, 4⅜ cubic feet of sand and 8¾ cubic feet of gravel will make 10 cubic feet of concrete. The sand and gravel are always measured by volume. Any kind of a box will do as long as you know the contents in cubic feet. It would be best to make a box without a bottom and just large enough so that if it is laid on a mixing board and filled with sand level full once, you will have enough sand to mix with two bags of cement, while if filled with stone twice, you will have the proper amount of stone. Such a box for the last given mixture would contain 4⅜ cubic feet, so it could well be one foot deep, 21 inches wide, and 30 inches long. Shovel the box full, level it off without ramming or packing the contents, lift the box and you have the proper proportions. For the finishing or wearing course, the mixture can be one bag of cement to two cubic feet of sand or, to use the same box as above, mark off one inch down from the top on the inside, a line all around the box. Fill with sand up to this line and you will have about four cubic feet. Mix this amount with two bags of cement. The resulting mortar will have a bulk of about 4½ cubic feet.

The exact proportioning of materials and the volume of the resulting concrete or mortar has been the subject of prolonged controversy. As a result there are two reasonably good formulas for determining the amount of sand or gravel in a cubic yard of concrete.

Barrels of cement per cubic yard of concrete equals,

$$\frac{6.75}{\text{Parts of gravel to one part cement}}$$

Cubic feet of sand per cu. yd. concrete equals $27 \times \frac{\text{Parts sand to 1 part of cement}}{\text{Parts gravel to 1 part of cement}}$

These are very nearly in accordance with the calculations made by experts. For example, let us apply it to a 1-2 ½-5 mixture. There would be

$\frac{6.75}{5}$ or 1.35 barrels of cement, and

$27 \times \frac{2\frac{1}{2}}{5}$ or 13.5 cubic feet of sand and

2x13.5 or 27 cubic feet of gravel

in one cubic yard of concrete. These amounts are obviously too large by about 12 per cent. If we take 88 per cent. of the totals given, we will get much nearer the truth. That will give us 1.2 barrels of cement, 12 cubic feet of sand, and 24 cubic feet of gravel.

The above formulas are the best of the lot given and are the simplest but the results are, as shown, too large, so apply them with care, taking for most mixtures, about 88 per cent. of the total given. R. P. C.

Mrs. Smith was engaging a new servant, and sat facing the latest applicant. "I hope," said she, "that you had no angry words with your last mistress before leaving." "Oh, dear, mum; none whatever," the prospective maid replied, with a toss of her head. "While she was having her bath, I just locked the bathroom door, took all my things, and went away as quietly as possible."—Youth's Companion.

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Genesee Co., N. Y., will have an immense crop of apples the coming season, the prospect for the largest yield in several years is good. Most of the farmers claim that Baldwins promise the best, with Greenings and Kings not far behind. A. S. Davis, an authority on fruit throughout the county, stated, April 22, that unless there are frosts between now and May 30th, "this will be the biggest apple year we have seen since 1896." That year was such a phenomenal one that there was a saying that hitching posts had apples on them. J. C.

April 24. Not one per cent. of peach buds came through Winter. Pears are fine; cherries fine; plums good, frequently irregular. Too early for telling; some apples, but many show fine where they did not bear last year. Too early for quince. Strawberries very short, due to lack of growth during dry season last Summer. As a whole prospects are for between "good" and "fine" aside from peaches. F. L. E.
Athens, Pa.

April 25. We are in the cold zone of Western New York. No blossoms yet. While the Winter was long and cold I do not think the buds of apple, pear, plum and cherry are damaged. We had a blanket of snow that was a great protection. We cannot grow peaches successfully. I have orchard heaters and oil for heating about eight acres of cherries. My experience with heaters for two seasons has been quite favorable. D. C. H.
Hornell, N. Y.

April 24. We are having a very cold backward Spring in this section, and practically everything is perfectly dormant yet. Peach buds are unquestionably destroyed, or practically so. The trees went into the Winter in poor shape, owing to the late warm Fall, and this is also true of other tree fruits and small fruits, although they seem to be in fair shape, and think there is a fair prospect for fruit of everything outside of peach. The cool weather has kept everything dormant, so far, and nothing should suffer from Spring frosts.
THE STORRS & HARRISON CO.
Lake Co., O.

April 24. I have not made a personal examination of the peach buds, but it is generally considered that the buds are nearly all killed. Prospects are good for apples. Grapes are raised quite extensively and buds and wood in good condition. Farm work of all kinds is very backward. I. C.
Penn Yan, N. Y.

April 24. Peaches have been reported entirely killed three times this Winter by all but Jay Allis, who has said all the time he had some. Now he says he has enough for a good crop, as many as last year. Apples, pears, cherries, etc., all promise a full crop. I do not look for a big crop of peaches, and if those who still say "no crop" do not have some, it will be a light crop. I am changing my system of storage over into ammonia. Will raise 30 acres bush limas for canning. Wheat, grass and Alfalfa all look well. C. A.
Medina, N. Y.

April 26. This year even good old Lake Ontario could not save our peach buds. There is very little left beside Carman and Champion. The warm weather last Fall had started the buds, and for this reason they were not able to stand the extreme cold. As to apples there is great promise now for a big crop. Some are predicting the biggest crop since 1906, and have even set the price at $2 per barrel to the grower for first-class fruit. It seems rather early to make any predictions, for it has been my experience that in four years ont of five the determining factor in the size of the crop has been the condition of the weather during blooming time. Long continued cold wet weather or hot muggy, rainy days mean serious damage. I understand that apples and cherries are in full bloom in Southern Illinois, and are very far advanced in Michigan and other Central States. This early blooming increases the danger of damage to the apple crop. F. W. CORNWALL.
Wayne Co., N. Y.

Sixty to 80 per cent. of peach buds killed—enough live buds for a light crop under continued favorable conditions. Apples promise an abundant crop. Season very late and but little of "dormant" spray applied as yet (Apr. 26).
Wayne Co., N. Y. C. E. W.

April 27. For apples I think the prospects are favorable to a good bloom; that is, trees will, I think as a rule, make a good start for a good crop if other things continue favorable. It is however early yet to determine very much about them, though I think in this section fruit has all survived the hard Winter in good shape except peaches. These I think were materially hurt in the zero weather. L. B.
Stanley, N. Y.

April 25. As to fruit buds, they are yet in a backward condition. In our own locality (the Wallingford district) the prospect for peach blossoms is good, even Elbertas showing a good percentage of live buds. In most orchard localities yellow varieties are showing next to no live buds; white varieties, a considerable per cent. alive. I believe this locality is more favored than any other peach section I know of in the eastern district. As to apples, I think there will be a heavy blossoming, yet they are not forward enough to show definitely just the situation. J. NORRIS BARNES.
Connecticut.

We have had a very backward Spring. Almost all farmers are behind with their work, some not through hauling manure yet, and scarcely anyone through plowing for corn. But few early potatoes planted, and some just seeding their Red clover on wheat ground. Most fruit growers are through spraying. Peaches and plums have just blossomed out. Some fruit growers report that they will have a full crop of peaches, while others say their crop will be very light. Many apple and peach orchards and grape vineyards have been planted out this season. Wheat $10; hay, mixed $16; corn 70; butter 30; eggs 18; pork $10. Horses from $100 to $200; cows from $50 to $100. Large quantities of cantaloupes will be planted this season. C. H.
Dover, Del.

April 23. Spring has been unusually backward and cold this year. We finished sowing oats to-day. There is a saying in this part of the country that if fruit trees do not blossom in April there will be no fruit, but the buds look so dormant that I cannot see how they will get out before May. Prices on everything are high and farm labor is scarce. Each morning they let out from 25 to 30 men from the "lockup" where they seek shelter at night, but as far as I can learn not one of them ever hunts employment in the country. M. J. K.
Hardin Co., O.

The section in which I live is undergoing a change, like the one that caused Goldsmith to write "The Deserted Village":

"A noble peasantry, its country's pride,
When once destroyed can never be supplied."

The weary plowman no longer plods his way, he has been replaced by the landscape gardener, and his plows have changed to a gas-pull lawn mower; his once fertile fields to golf links and tennis courts, and a real, genuine son of the soil is a rare article here. They are all agriculturists; they run a newspaper, a bank, or a trust company in Philadelphia, and try farming with imported cattle, attended by valets in white duck suits. Sooner or later they get tired and quit, and all they have to show for their egotism is the knowledge gained that they don't know it all. I claim that it takes a better man on the farm than it does in the bank. Plowboys have gone to the city and made good in all the professions, but I have yet to see the first back-to-the-lander with a check book and an exaggerated opinion of self importance who could make a farm pay a profit. T. L.
Chester Co., Pa.

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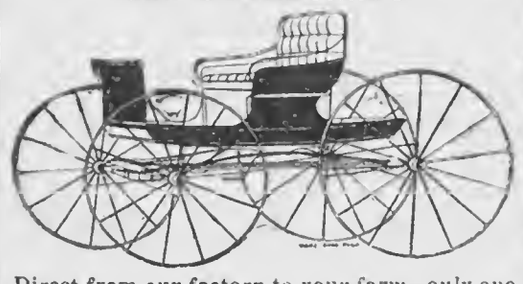

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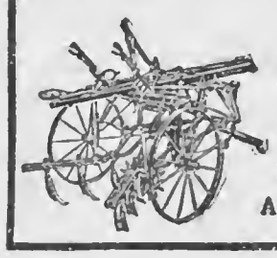

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THE RURAL NEW-YORKER, 333 W. 30TH STREET, NEW YORK

Top-Working Small Trees.

I have a number of trees of about 2½ to three inches in diameter, at a distance of 18 inches from the ground. The fruit is of poor quality and the limbs forming the frame of the top are very poorly formed, making weak trees, which are liable to split when the tree is older. Would it be advisable to saw off the top, making the stock a stub of 18 inches and inserting grafts in this; or, to place grafts on stubs of main branches and to graft but few each year until the whole top was top-worked? These trees are thrifty and five or six years old. T. J. S.

Ligonier, Ind.

Wherever possible I would advise that the smaller limbs be top-worked a few at a time rather than the entire trunk of the tree. This will cause less shock to the tree, and will leave some leaf area to elaborate food and pump sap to the scions. If the scaffold limbs are so

TOP-WORKING SMALL APPLE TREES.

placed as to be a danger to the future of the tree, the main trunk should be worked at once. The above illustrates a combination of these methods. Dormant scions should be used, and the wounds thoroughly waxed for the best results.

M. W. RICHARDS.

A Sensible "Back-to-the-Lander."

One of the most interesting things connected with our work is the study of the letters from town and city people who meditate some future move to the country. Some of these back-to-the-landers are not very wise about their plans. They are enthusiastic, and somewhat carried away by the stories which are told them of the great possibilities on a farm. There are others, however, who go at their plan with a thorough investigation, and they do not make their start until they know just what they are doing. Many of these people are small business men, who have been taught by their town experience to consider things carefully. The following letter is from a candy manufacturer in a New England State. This man hopes some day to go to the country and live upon a farm, but you can see from his letter that he is not going to plunge, but study the proposition as carefully as he would if he were to sell out his present business and establish himself in another line with which he was not at all familiar. We would commend this man's view of the situation as one well worthy of imitation.

As you will note, my line of business is quite remote from the line your paper takes up. Yet in spite of the fact that I take three trade papers, THE R. N.-Y. seems to get read each week ahead of all the others, so while I may say I am a confectioner by trade, I am a farmer at heart, and I enjoy very much reading the things your paper takes up. It seems to me if I were a real farmer I could do without a plow rather than THE R. N.-Y. However, I am in hopes some day to be back on the sod breathing God's pure air and treading on something besides paving stones. I know something of farm life, being born and brought up on one, and yet I believe before a man should make a back-to-the-land move he wants to think carefully and choose wisely. Farming to-day is a big business proposition, and has to be conducted on business methods, as well as any other business enterprise, to make a success. The day is past when any fool could farm. O. S. M.

Maine.

Spraying and Bird Killing.

[On page 554 was printed a statement from a bird-lover who objected to spraying poisons for killing fruit worms. She stated that in Western New York the slaughter of birds from this spraying was "something awful," and that even cats were killed by eating the poisoned birds. We have put the question up to our practical fruit growers.]

I notice on page 554 the clipping from the "Fitchburg Sentinel" regarding spraying and birds. In this neighborhood nearly everyone sprays with lime and sulphur and arsenate of lead. Our own orchard is sprayed thoroughly each year, and I have yet to see the first bird that that has been killed or injured by such spraying. We also have two cats that roam our orchards every day hunting for mice, and a neighbor has seven cats, and I have yet to hear of the first one to be injured by eating poisoned birds. Every season we raise hundreds of chickens, and from the time they are hatched until Winter they run under these sprayed trees. A foot of our orchard is in sod, and we cut and feed to cows and horses the hay that grows under these trees. It is safe to guess that all such fool things that crop out from time to time in the magazines and dairy papers emanate from the brain of some bird crank who is blessed with more sentiment than real knowledge of the bird question.

Vermont. A. A. HALLADAY.

On page 554 is an article relative to the slaughter of birds by the use of arsenical sprays. I accept your invitation to the readers from Niagara County to tell of their experience, and in justice to the farmers of the county the unjust impression such an article would create should be corrected. I have used arsenate of lead in spraying for several years, but I have never observed any ill nor disastrous effects upon the birds from its use. I am well acquainted with the spraying conditions through the county, and I feel confident that such a condition as the article cites is most unusual, and not, by any means, a general condition in the county. HOWARD ALLEN HOPKINS.

Niagara Co., N. Y.

Unless conditions differ greatly here in Massachusetts, I should say that the letter in Park's Magazine is greatly exaggerated. On my place in Medfield in 1912 I found three birds dead from eating insects poisoned by spraying. That year I had 39 nests on my place of 14 different species of birds. The following year, 1913, I sprayed all fruit trees, but left the elms unsprayed. I found only one bird that I thought died from poison. Incidentally the elms were every bit as free from damage as the trees along the roads which were sprayed by the town. But I would not advise anyone to try the experiment of giving up spraying, unless he has the birds nesting on his place first. I made an effort to attract birds. Many birds that die undoubtedly go into thick weeds, and are never found, but I think the letter quoted is a good deal exaggerated. DAVENPORT BROWN.

Massachusetts.

The article quoted seems to be very much exaggerated, and misleading. I have sprayed our apple orchards where we keep baby chickens, and have seen no ill effects. The chickens were not confined during the spraying, and ran about at will. Naturally they were frightened at the approach of the spray team with the large horses attached, and got into their coops until the sprayers had passed. I have never seen a dead chicken or a dead bird in this orchard, or any dead birds in the orchards where the chickens are not kept. The amount of arsenate of lead used is so small—three pounds to 50 gallons of water—that there is really no danger to the birds, and the sun quickly dries up the moisture on the leaves. Such statements as the one quoted on page 554 appear every year as the season comes around, and are made up entirely from imagination in the first place, and then kept in storage until Spring is with us again, and something sensational is wanted, when the article is revamped and put on duty once more. It is then copied by our paper from another in order to fill the space, and goes in that manner from one end of the land to the other, from the Atlantic to the Pacific. Something sensational is what many papers desire. The plain facts and truth are not effective enough for numerous editors. HORACE B. PARKER.

Massachusetts.

I have over 300 plum trees, and some cherries and apples. Gooseberries and the like I spray every year at least six times in a season, and I have never found a dead bird either on or around my place. Under the trees I have Alfalfa growing, and in it run old and young chicks, and not one of them ever died, though the Alfalfa is white with spray. All kinds of birds nest and raise their young in my trees, red breasts, redbirds, bluebirds, mocking-birds and droves of sparrows. I use three pounds arsenate of lead to 50 gallons of lime-sulphur, with no bad results to any birds here.

Ohio. C. JACKSON.

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Yours truly, William Redmore,
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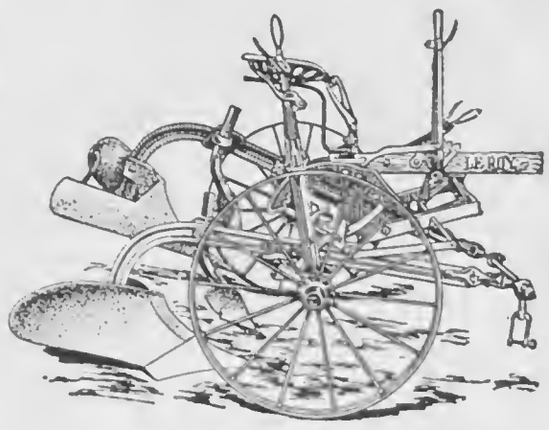

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Hope Farm Notes

THE HOPE FARM SCRUBS.

You may call them what you like—scrubs, culls, mongrels or "hens." The score card shows that some of them would take fair place in a poultry show, but they stand as ordinary hens. What are they doing? You remember that up to March 1 these hens consumed 80.1 pounds of mash and 158 pounds of grain. Thus the eggs they had laid up to that time cost seven cents each for feed alone! A friend in Pennsylvania thinks these hens will not pay for their feed before November 1, when the contest closes. He sent a dollar for that school for colored youth in Georgia, and a backer of the hens has put up another dollar for the school. I do not wish to start any gambling or betting schemes, but I would like to help the school while we watch the hens.

DOING BETTER.—The man who has so little faith in the Hope Farm scrubs is likely to lose, for they came forward in March, and are doing even better in April. During the month of March they consumed 25.18 pounds of mash and 48.17 pounds of grain. This means a total for 150 days of 105.28 pounds of mash and 206.17 of grain. At the prices figured last month this means a total cost of $5.96. Thus the average cost for each hen is 59.6 cents, or a little short of .4 of a cent per day—each hen averaging 1.12 ounces of mash and 2.3 ounces of grain per day. To my surprise these scrubs are not such gluttons as we had been led to expect. We shall find that many other pens in the contest consumed considerably more food. Now up to the first of April these 10 hens laid 214 eggs. As the feed cost was $5.96 these eggs cost about 2.8 cents, or 33.6 cents per dozen. Thus the scrubs had not yet paid for their feed up to April 1, but I predict that on May first they will show a profit.

THEY ARE COMING.—It took these hens a long time to wake up. They all had colds to start with, and were poorly developed. In January several good judges ridiculed the folly of entering such birds, and freely predicted that several of them would never lay an egg. I stayed right by the scrubs, and they stayed by the feed hopper. In the week ending April 17 these "culls" laid 50 eggs. There are 82 pens in the contest and only 13 of them laid more eggs than my scrubs during that week. Tom Barron's famous Wyandottes laid only 36 and his Leghorns 47. Thus for this brief period the Hope Farm scrubs laid all around the champions. I think these birds have just begun. It took the turtle some time to get going, but he kept at it. You see I stay right by these hens yet. April and May will see them paying their bills.

INDIVIDUALS.—When it comes to individual records we have another one coming. Since this contest began three of my birds have laid 45, 41 and 37 eggs respectively. The best one is a mongrel showing some "Red" blood. This bird laid 45 eggs, beginning the latter part of January. At the average cost of feed she consumed 59.6 cents worth, which makes her eggs cost about 16 cents a dozen thus far. During the month of March my best bird laid 22 eggs at an average cost of 14 cents for feed. Here is another thing for the gentlemen who had so much fun laughing at my scrubs. During the month of March out of 820 birds in the contest, 105 hens and no more outlaid the best feathered Hope Farmer with her 22 eggs. There were 18 of the blue bloods that never laid an egg, seven laid one egg, nine laid two, 10 laid three, seven laid four, nine laid five, 11 laid six and so on. Those famous Tom Barron Wyandottes gave one hen laying 28, another 25, another 23, and one more with 22. The other six fell below my best hen. There are 150 purebred Reds in the contest, yet only 19 of them laid more during March than the best Hope Farmer! There are 330 White Leghorns, yet only 25 beat our best bird with 22. Not long ago one of our friends seemed a little afraid that the Hope Farm man would be bluffed or laughed out of this contest. I rather think not, when even for a week these scrubs can beat out Tom Barron's Wyandottes and show up a few individuals capable of getting near a front seat. Our birds made a very poor start, and they may dry up yet after a short spurt, but in any event we stay right by them, and will carry through the plan.

HOME HENS.—Our birds at Hope Farm are laying well. A pen of 30 R. I. Reds gives us 20 eggs a day, more or less. Of course that does not touch the feathered wonders that we hear about, but seldom see. Yet these Reds pay. The runt Leghorns are laying well, and their eggs are fertile, as little chicks attest. One of these pure Leghorn runts is gray—barred somewhat like a Plymouth Rock. The scientists tell us that the plumage of the Leghorn carries this tendency to revert to barred or gray markings under under some conditions of breeding. While the hens are doing well now I have little faith in them for Christmas eggs. The way to hatch out Christmas eggs is to set the infertile eggs in the water-glass incubator and keep them there until wanted.

COVER CROPS.—The following note came last Winter, but in some way it has been left until now:

On page 1350 the Hope Farm man states that "next Spring, when the thick mat (rye) is plowed under, it will be as if nature had hauled 10 or 12 tons of good manure * * * and spread it over each acre." Will he explain how this is reasoned out? He cannot mean that this "mat" of rye would collect and hold nitrates, phosphoric acid and potash enough to equal 10 or 12 loads of good manure, aside from the vast amount of humus supplied by the latter. The rye, if matured, would only supply approximately a ton of straw for humus to an acre. OAKWOOD FARM.

Orange Co., N. Y.

As things look now on the hill I would stand by this remark. The "mat" is not rye alone, but a combination of rye, Crimson clover and turnips. Of course a crop of rye alone would not be worth 10 tons of manure, though it would be worth very much more than one ton of straw. The clover and the turnips will add much organic matter, while the clover adds nitrogen. Remember, too, that we use lime after plowing this stuff under. This hastens decay and makes the plant food available, while the rapid fermentation is good for this tough, hard soil. The Delaware Experiment Station found the following plant food in crops from one acre:

POUNDS PER ACRE.

	Nitrogen	P. Acid	Potash
Turnips	109.1	25.9	142.7
Cr. Clover..	134.4	61.2	88.2

The plant food in the acre of turnips was worth $21.09; that in the clover $22.37.

This includes both top and root. I do not pretend to say that all this plant food is added to the soil. I think about half of the nitrogen in the Crimson clover is so added from the air. I have found that the turnips have the ability to use unavailable forms of potash and phosphoric acid, and leave them so that following crops of corn or the trees can use them. I believe that at least half of the potash and phosphoric acid in these turnips is a clear gain to that hard soil in available plant food.

Ten tons of stable manure may contain 100 pounds of nitrogen, 60 of phosphoric acid, and 120 of potash, and perhaps 5,000 pounds of organic matter. While I do not claim that my cover crop will add to the soil this amount of plant food, it *will* add more organic matter, and with the use of lime I can make this organic matter more useful to my soil than the straw in the manure. With the price of manure and the cost of hauling it up my hill, 10 tons would cost me at least $40. I think I am justified therefore in saying that Nature has just about made me a present of 10 tons of manure in the rye, clover and turnips. At least, I would rather have this crop for what it cost me than to pay for the 10 tons of manure. I do not blame people for doubting some of these statements about cover crops, lime and chemicals, but those of us who have stayed by them year after year so as to see their effect know something of their value. The same inquirer asks this:

Will you also advise regarding success of using Soy beans in corn? We hear it has not proven satisfactory owing to the corn shading beans too much.

I do not know, for the truth is that Soy beans have never been very successful with us. Cow peas pay better. Our reports indicate that Soy beans in corn do not always pay. I would rather plant the corn alone, or put sunflowers with it. I would plant the Soy beans alone and not put them in the silo, but cut and cure for dry fodder.

WORKING UP TIMBER.—I have just completed a venture that may interest readers. When I came to get bids on my new house on my farm in New Jersey I found it was going to cost so much that I was completely discouraged. When it occurred to me that I had enough standing timber on my farm, principally dead chestnuts and oaks, to do the job, I immediately set to work to find someone to bring a mill to the farm and saw the lumber for me by the thousand. I could get no one to touch it on account of there not being enough to pay. Finally I hired a sawmill, picked up my own crew, used my farm help and team to haul the logs, and finished the job. The lumber is now in the house and has been for a month, although we did not start to move the mill to my farm until January 1. I think I saved about $1,500 on the operation, not including the value of the trees on the stump. Besides I have built an ice house out of what was left, and have still enough on hand to furnish the timber for a good big barn, also a big pile of stove wood and sawdust. I presume I would not have had the nerve to have undertaken the job if I had not been brought up around my father's sawmill in North Carolina, and had had charge of a large sawmill on the Nense River in North Carolina below New Bern, just after the Civil War.

E. F. H.

That interests us, as we are in much the same situation. I have 30 acres of chestnut (dead and dying) and oak, yet it seems impossible to sell the trees on the ground. Several parties have made so-called offers which are more or less polite invitations to make them a present of the property. The only way that I can see for us to get anything out of it is to do it ourselves. I plan to buy a sawmill outfit, including an engine, locate it in the woods and work the job when other work is slack. I find there is fair sale for 2x4's and other timber when cut up to order, and we want to put up several buildings ourselves. When a man sells standing timber he does well to get 30 cents on the dollar. Cut it up yourself and you can make fair wages and a little over. H. W. C.

"GOOD gracious!" exclaimed Miss Priscilla when she saw the hired man wearily pulling a loaded wheelbarrow. "It would be easier if you pushed it." "Maybe," was the answer; "but I'm tired of the sight of the thing."—N. Y. Evening Post.

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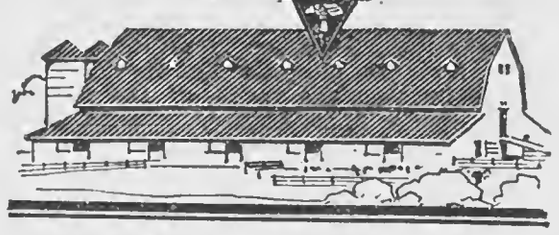

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Ruralisms

The Jaboticaba.

Bulletin 92 of the Office of Foreign Seed and Plant Introduction discusses an interesting Brazilian tree with a peculiar habit of fruiting, shown in Fig. 283, page 690. This tree, botanically Myrciaria cauliflora, belongs to the myrtle family. Says the bulletin:

Among the fruit trees cultivated in gardens about Rio de Janeiro the Jaboticaba is one of the commonest, and certainly one of the most beautiful. The largest trees are 30 to 40 feet in height and fully 40 feet in spread, with dense, umbrageous, dome-shaped heads of light green foliage. The individual leaves vary in size according to the variety, some being three inches in length while others are not more than two, oblong-lanceolate in form, glossy, light green in color, usually pink in the young stage. The trunk of the tree is oftentimes very large, one specimen that we measured being 80 inches in circumference at the base, and usually branches close to the ground. The bark is smooth, grayish-brown in color, reminding one of the bark of the guava and other myrtaceous fruits.

The name jaboticaba is a Tupi word, spelled by some authorities *jabuticaba;* this name is applied only to the fruit, the suffix "eira" being added to signify the tree, making the word "jaboticabeira," or jaboticaba-tree. The name is usually pronounced here at Rio as though spelled ja-bu-ti-ca-ba, with accent on the fourth syllable.

The tree flowers in May and June, and the fruit ripens in October and November. As signified by the specific name, *cauliflora,* the fruits are produced on the old wood, and we have seen many trees whose trunks were literally covered with fruits down to within two or three feet of the ground. The fruiting is not confined, however, to the large wood, but extends clear out to the ends of the smallest branches; the fruits are sessile or nearly so, and a tree covered with them from the ground to the ends of the small limbs presents a rather unusual appearance, to say the least.

The fruits seen in the markets here vary greatly in size, but otherwise seem to be alike. A good specimen is an inch and a half in diameter, round or nearly so, and dark maroon-purple in color, greatly resembling in appearance some of the grapes of the Rotundifolia type. This resemblance extends to the internal characteristics of the fruit as well, the texture of the flesh, its color and flavor, as well as the seeds, suggesting a grape more than any other temperate fruit. The skin is thick and very tough; it is broken by squeezing the fruit with the thumb and first finger, when the pulp slides out into the mouth and the skin is discarded. The pulp is translucent, very juicy, and of a subacid, pleasant flavor, with a rather peculiar "twang" which one is not sure to like at first, but which is very agreeable as soon as one becomes accustomed to it. The seeds, one to four in number, are rather large and adhere closely to the pulp; the boys here seem to swallow them, but this may not be a very desirable proceeding from a physiological standpoint. The Brazilians seem almost passionately fond of this fruit, especially the children, who spend hours at a time under the trees hunting for the ripe fruits and then working them off with a long pole, if they are where they cannot be reached.

Small Greenhouse.

I was very much interested in the description of a small and inexpensive greenhouse described by P. L. W., Michigan, page 517, for it is my intention to build something of the kind the coming Fall. I have 18 hotbed sash which are in good condition, and I thought that they would make all of the roof for a house about 12x30 feet by getting some small sash to be used for ventilators. There were one or two things which P. L. W. did not explain. What arrangement did he make of his smoke pipe? Was the stove set below the level of the path? About what size of stove would it require for a house the size I mentioned above? Would it not be better to have the walls lower or the benches higher, so that there would not be any bench space in the shade? I thought of having the roof six feet wide on one side and about eight on the other. My house would set very nearly the same as P. L. W.'s, but possibly not quite square with the different points of the compass.

Madrid, N. Y. W. H. B.

W. H. B. can use his hotbed sash for a greenhouse roof, but they shut off a lot more light in the Winter than regular sash bars would. In the Summer this would be an advantage. Stove pipe to my stove runs up from stove to within a foot and a half of ridge, then west to the end and up into a five-foot galvanized stack. This stack is soldered to a pane of galvanized steel and is placed in the roof just like a pane of glass. Stove sets on level of path. I doubt if one stove would heat satisfactorily over a 12x20 house, and for this size I shall use an 18-inch stove the coming Winter. I now use 14-inch. In a 12x30 house I should use two 16-inch stoves, one near each end, and fire each moderately. This would be much better than forcing one large stove in the center, and use no more fuel. We have a market gardener and plant grower near us who uses four such stoves to heat his 60-foot house, and says he uses less fuel and with better results than formerly, when he tried to heat it with two stoves. If no bench space is wanted in the shade, a row of 18-inch glass can be put in the south wall just below the plate; 32 deg. is the standard pitch of greenhouses but many uneven-span houses are being built and used satisfactorily. P. L. W.

Michigan.

Dry Bordeaux; Burbank Plum.

1. Your boys used dry Bordeaux on their potatoes. What do you think of its efficency compared with the solution? Is it practical to dust more than a single row at a time? What is the formula for making the dry powder? 2. What can be done with the Burbank plum? The consuming public does not care for it in the natural state or preserved. How about making jelly of them, or evaporating the fruit? F. W. M.

Massachusetts.

1. We have tried dry Bordeaux several times. The weather condtions have much to do with its effectiveness. The best time to apply the powder is in the early morning of the bright day, when the dew is on the vines. When the powder is dusted carefully on such a day, the moisture dries, and the powder remains. Under such conditions we have found it very effective, when Paris green was mixed with it, for destroying bugs. For preventing the blight, the powder has not been as effective with us as the liquid Bordeaux. In a very windy time, or where there are frequent showers, the powder does not appear to stick to the vines as well as the liquid. For low vines and shrubs, when the conditions are right, the powder is effective. For trees, and when a high wind is blowing, or with frequent showers, we have found the liquid more effective.

2. We shall have to pass the question of what to do with the Burbank plum. We would like to hear from Mr. Burbank himself, or from some of his admirers.

Grafting Cherry

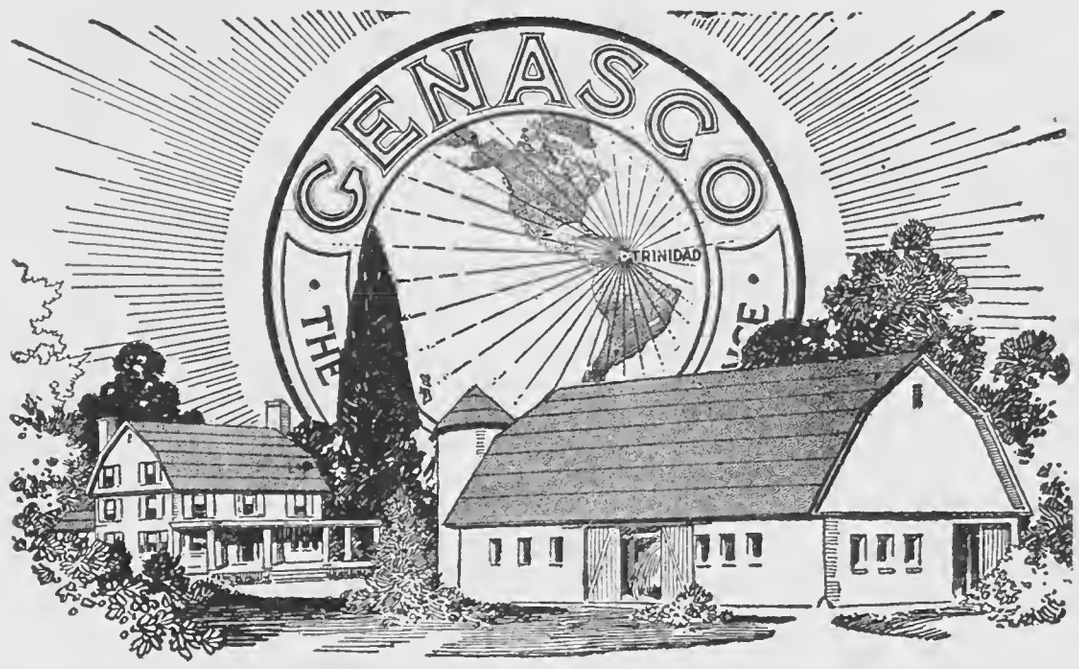
We have a sweet cherry, somewhat heart-shaped, beautiful clear red with one side of a pale amber color. Description of Rockford resembles it most nearly, except that Rockford is said to be large. Ours is about the size of Early Richmond, ripens the latter part of July and fore part of August. Can this be grafted or not? If so, on what kind of stock? Our tree is giving signs of decay. Could they be grafted on Pigeon cherry tree?

Oswego, N. Y. E. E. K.

This may be the Rockport (not "Rockford") cherry, but the name is of little consequence to the owner of this tree in view of the fact that it suits his uses well. It is not possible to name a variety certainly from meagre description. The proper way to get at the identity is to send to the pomologist of the U. S. Department of Agriculture at Washington, D. C., for boxes and franks to enable the inquirer to send on specimens for examination at the proper season, and it is possible the correct name may be given. There need be no difficulty in propagating from the tree by budding or grafting on sweet cherry or Mazzard stocks. The wild cherries are none of them suitable for this purpose. One of the very best of the late sweet cherries is Schmidt, which can be bought from the nurseries, and I would advise planting some of the trees of it also, for it is excellent for market and house use.

H. E. VAN DEMAN.

WHITEWASH AND FROST.—What is there to the advice to whitewash peach trees with lime spray in early Spring to avoid damage from frost? Whitening the trees in this way helps to some extent. The lighter color of such trees means a slower absorption of heat, and thus the buds do not start and develop as rapidly as on the darker-colored trees. Growers who have tried this agree that if they can keep the white color on the trees they can hold back the buds and often save them from a late frost. The trouble is to keep the whitewash on the trees. It is too easily washed off by Spring rains, but when it can be kept on the trees it will surely help to hold back the buds.



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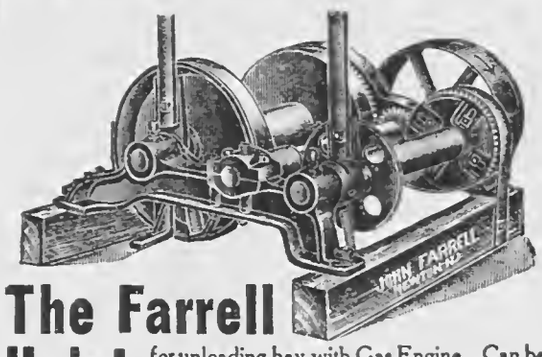

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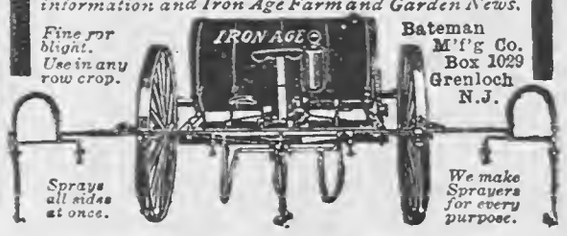

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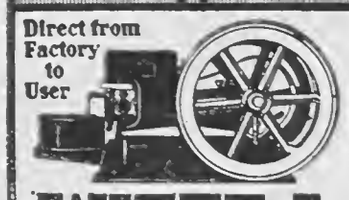

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Established 1850

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*

THE present Indian Commissioner has issued instructions to superintendents which begin as follows:

I greatly desire it to be understood throughout the service that the present administration of Indian affairs is determined that every Indian shall have opportunity and encouragement to accomplish industrial betterments.

Good. Let every Indian have such opportunity, and do not stop there. Take in the white men, the black men and those of various shades of brown. Why give the Indians any special privilege? Also include the women, and particularly the children, while we are at it. "Industrial betterment" is good.

*

SINCE the first of March there has been great complaint about the poor hatching of eggs. Early in the year hatching reports were very favorable. Then came the delayed hard Winter. There were many frozen combs and the vitality of breeding stock was greatly impaired. With all this some breeders made the mistake of forcing breeding pens for high egg records. The result has been many very poor hatches. Conditions are better now, but it looks as if the early chick crop will be light. Many breeders tell us they will continue to hatch much later than usual, but from present indications good pullets will be scarce and high next Fall.

*

I am sending my milk to a coöperative creamery, where they sell by test, and do not think I get the test that I should. I think that I could get a sample from the creamery. Is there any way that I could get it tested by the State, and where should I send it. I have saved samples from my milk at home and had it tested as an individual cow, and they made it test higher than at the creamery. S.

Under the New York law the Commissioner of Agriculture is authorized to make independent tests in a case of this sort. If you think you are not receiving a fair test write quietly to Hon. Calvin J. Huson, Department of Agriculture, Albany, N. Y., and tell him what you suspect. He will send an inspector to take samples and make tests. Do not tell the creamery what you are doing. It will be an advantage to have this inspector come without warning and take samples without any preparation.

*

I WANT to express my appreciation of your views on Mexican war talk, as expressed in editorial on page 672. I am rather inclined to be hot-headed and do rash things, but I admire the man who can first take sober second thought. I believe, as you do, that this is a disreputable quarrel, and if persisted in will be terrible in its consequences. There are nobler battles to be fought, which, if not accompanied by so much of "shouting and flag-waving" have infinitely greater prospects in leading the millions of our poor, oppressed people up onto higher ground and teaching them to demand their right as citizens of this great country. E. D. P.

We are safe in saying that this note expresses the sentiments of the great majority of our readers—and thoughtful people generally. Here and there are noisy shouters and fire-eaters—who may be trusted to keep far away from any firing line. The great body of sober and sensible Americans do not want any war or any war scare. Representatives of the South American republics have offered to mediate and help settle the difficulty. We hope they will succeed, not only for the sake of honorable peace, but because a settlement arranged in this way will have a permanent effect upon the future of this continent. What are known as the Latin-American Republics have long distrusted this country and its policy toward them. The prompt acceptance of their offers to help settle this Mexican trouble will go far to give them a kindlier feeling and greater respect for us. No finer thing could have happened in this unfortunate situation, and we sincerely hope that these republics will be able to arrange for a lasting peace.

*

SOME of the real estate agents and boomers do not think much of our general advice to back-to-the-landers. It is somewhat like the famous advice about marriage—"Don't." We qualify this, however, by adding: "Until you know what you are doing, and have money enough to provide fair capital." A man may obtain the capital, but knowledge comes only through raw blisters. Here is one conclusive argument from a real estate dealer:

"What do you know about going back to the land anyway?"

Why—very little. We went back ourselves, bought a rough hillside farm and have kept quite accurate accounts. Of course that experience is a very poor qualification beside the brilliant imaginations of some of these modern writers, but it is the best we have. Then during the past 20 years, beginning with Geo. A. Cosgrove's story, THE R. N.-Y. has printed more actual true accounts of back-to-the-landing than all the other farm papers put together. We might be said to have made this a specialty, having been through the mill ourselves.

*

THE U. S. Census Bureau has made a new estimate of the country's population. This gives New York City a total of 5,333,537—a gain in four years of 786,047. The State has now a population of nearly 10,000,000, and the entire country, not including territories, is 98,731,324. Every State in the Union except Iowa has gained. All the large cities and towns show great gains. Our farmers are interested in this last fact, for upon the water-shed draining into the upper Atlantic may be found the finest markets of the world. Here are two of the world's largest cities and six averaging more than half a million each. There are 26 with more than 100,000 and averaging nearly 200,000. This vast army of consumers must be fed, and at least half a million of them never stop to ask the price of food which pleases their eye. This Atlantic coast territory is to remain the great headquarters for American shipping and manufacturing, and thus it affords the greatest market future for our farmers. Organization and coöperative work have enabled the producers in distant States to supply much of the food sent into this great section. The same agencies worked out by our own farmers will enable New England, New York, New Jersey and Pennsylvania to supply the finer and higher-priced food which these rich markets demand. That is why the young man growing up on our Eastern farms today has a better opportunity than any other section of the country can offer him.

*

THE larger this country grows the closer its corners seem to be pulled together. Twenty-five years ago the average person on the Atlantic coast had but a dim notion of the northwestern part of this country. Had anyone stated at that time that apples from Oregon and Washington would top the market in New York and be found on sale in every New England city he would have been voted a hare-brained dreamer. Yet for the past six years or more these apples have actually set the price for fruit in our Eastern markets. It is probable that the presence of this fine, graded fruit has done more than anything else to compel our eastern growers to improve their methods. Or California! Men are now alive who remember when some of our wisest statesmen argued that the State was not worth taking or occupying. These men claimed that the deserts and the mountains would forever hold the Atlantic and Pacific coasts apart. Yet this year fresh asparagus was sent from California across the continent and over the ocean to Liverpool, England, and sold at a profit. A man representing a fruit growers' association in Puyallup Valley, Washington, has just visited New York, where he took orders for many carloads of dried raspberries and blackberries. This fruit is to be grown and evaporated in a valley 4,000 miles from this market. This will be done while thousands of acres of excellent berry land lies idle within 150 miles of New York. Formerly the ends and corners of this great country were held apart by steel bars. Now they seem to be at the ends of a rubber band. What mighty force has brought these wonders about? One word tells it—coöperation. The farmers on the Pacific coast have been able to get together, standardize their products, and do their business as an organization. Individual effort could never have carried their products half way across the continent. Beyond that all profit would have been swallowed up by middlemen. No greater argument for organization and coöperation among farmers was ever given than this wiping out distance in continental trade.

*

MR. Frank A. Vanderlip, president of the National City Bank, recently addressed the cotton manufacturers. He expressed the opinion which some of our city financiers have of the farmer. It is a poorly disguised contempt and anger that the farmer will not mind his own business and go on taking his 35-cent dollar in silence. Here is a sample:

If a railroad manager is culpable and is answerable to society for anything less than 100 per cent. of efficiency, what of the farmer and planter, holding the great agency of production—land—and utilizing it with but 40 per cent. of efficiency? That is the indictment that stands against no small part of the agricultural community—a conduct of their business on a basis of 40 per cent. of efficiency.

Mr. Vanderlip forgets or does not know the simplest thing in this entire business. When the railroads are asked to be "efficient" they immediately demand the right to charge higher rates. They demand five cents more of the consumer's dollar as the price of "efficiency." That is just what the farmer demands, and he has just as much right to it as the railroads or any other interest. Give him five cents more of this dollar and "efficiency" will soon take care of itself. He cannot buy the things needed to make him efficient until he obtains his fair share. Cannot the wise Mr. Vanderlip see that the purchase of these things by the farmer would do more than anything he can mention to create markets and improve business? He suggests a national inquiry into the efficiency of farmers. Why not? The more you look into it the more the public will see that there will be no true "efficiency" until the farmers can enlarge that 35-cent dollar! Just think for a moment! "Efficiency" always costs money—for new materials and equipment. Do these bankers and statesmen expect the farmers to perform miracles? It would seem so, for they want farm efficiency on a 35-cent dollar, while all other interests are allowed a larger income in order to become "efficient."

*

HENRY Wallace, the acknowledged leader of farm journalism in this country, recently celebrated his seventy-eighth birthday. Among other things Mr. Wallace said:

I have 10 years of work planned ahead of me. I may not do it all; I may not do any of it, but I am prepared to do it and feel thoroughly able to. Old age is the best part of life. The battles of life are past and a man has little to worry him. He has more control of himself. He knows just what he is capable of doing and is less likely to go astray in his plans. His long experience gives him an advantage, and he sees the world more accurately and with a keener perspective.

Henry Wallace is a great man. Any man who can talk in this way and view life with this cheerful philosophy when close to four score has somehow managed to drink from the fountain of perpetual youth. We have seen too many men at 60, or even at 50, grow sour and cynical as the years leave them behind. The best years of life are yet to come.

"The years no charm from Nature take,
As sweet her voices call,
As beautiful her mornings break,
As fair her evenings fall."

Henry Wallace is a great man because he has found the true greatness of life. That is the power to keep faith and hope and good cheer in his heart so that the young may know the blessedness of growing old.

BREVITIES.

TRY the moth-ball treatment for repelling squash bugs this year.

THE advice to cotton mills is to burn Egyptian cotton-seed found in imported bales. This cleans out the pink boll-worm—very destructive to American cotton.

A "MODEL dairy" has been established in Paraguay—about the last civilized place one would expect to find model dairying. It is a country where even now "butter" is made by putting milk or cream into a skin bag and trailing it over the ground behind a horse.

BULLETIN No. 84 of the U. S. Department of Agriculture is entitled "Experiments with Udo, the New Japanese Vegetable." Udo is Aralia cordata, which is grown here as an ornamental plant. The blanched shoots, treated like asparagus, are highly recommended.

A SHIPMENT of 2,000 apple and pear trees was recently made from Oregon and California to Portugal. They arrived in good condition, and started growing at once. The ends of the world were formerly separated by iron bars. Now they seem to be at the end of a rubber band.

LAND BANK OF THE STATE OF NEW YORK
System of Mortgage Credits Explained.

PART II.

PREPARING FOR BUSINESS.—When the Superintendent of Banks has issued a certificate of authority and approved the by-laws, the association is then ready for business, and the first payment on shares is due. These payments are usually called dues. None of this money, which is called capital, can be paid out for expenses; and for this reason some associations think it well to require each member to pay an initial fee of from 25 cents to one dollar as required to pay organization expenses. In other cases, the necessary expenses are advanced by one or more of the members, and this is repaid later out of the earnings.

HANDLING CAPITAL.—The amount to be paid on shares may be arranged under the provisions of the law to suit local conditions and desires of members. Arrangements may be made to have "dues" paid weekly, monthly, or annually. The shares on loans may be made to mature at any time from 10 to 40 years. Installment shares in a savings and loan association are not paid up in full in one or two payments, as shares are paid in a business corporation. Heretofore the dues have usually been paid monthly, and the plan has been to mature them in about 10 to 12 years. On this plan a member subscribes for one share that will be worth $100 when it matures or "runs out." He pays 50 cents monthly or $6 per year. If loans are made at six per cent. interest, the shares will mature in a little less than 12 years. The member will have paid in in monthly cash installments a total of nearly $70. The profits are added yearly to his credits and he draws out $100, or the face value of his share. If he is a borrower, he must take one share for every $100 borrowed, and besides paying his regular installments he must also pay the annual interest on the loan. These monthly methods of payment have been popular in towns and cities where the members have a steady salary income. It was desirable to make the payments large enough to mature the shares or liquidate the mortgage in about 10 to 12 years.

METHOD OF PAYMENT.—With the advantages of the Land Bank to furnish cash as needed, there will not be the need of large payments nor of maturity of stock or liquidation of mortgages in so short a time. With farmers the monthly payments might in some cases be embarrassing, so under the new plans, payments will probably be made quarterly or semi-annually, and the shares and mortgages will mature any time short of 40 years. To do this the annual payments will be only one per cent. of the principal in addition to the interest. If the interest rate at the Land Bank is 4½ per cent. annually, then a yearly payment of 5½ per cent. of the loan will leave the farm free and clear in about 40 years. Of course, any or all of the mortgage may be paid at any time, and the payments reduced accordingly; but the payment cannot be demanded until the mortgage matures, provided the payments are made regularly. Of course, the same advantage accrues to the member who does not borrow. He or she makes the payments regularly. The amount to his or her credit including the profits from year to year, may be all withdrawn at any time. If the payments are continued to maturity, the face of the shares is all withdrawn at one time.

MEMBERSHIP.—Members of a savings and loan association are those persons to whom shares have been issued or transferred. Guardians holding shares for others have all the privileges of members except the right to vote. Juvenile shares may be issued to minors and dividends paid on same, but the owners of such shares do not have the right to vote. Members of savings and loan associations are divided into three quite distinct classes.

First we have persons who have a steady income who have no wish to borrow, but who wish to save a definite portion of their earnings as it comes in. When they subscribe for installment shares they provide to make regular payments at definite times. They have an absolutely safe investment and the money begins to draw profit as soon as deposited. The enforced payments encourage saving and thrift. In this class of members we always have a number of public-spirited men and women who are influenced neither by the profit or the privileges of making a loan, but who take shares and membership because they wish to be identified with a worthy public enterprise and desire to encourage it. They also find the investment safe and the profit satisfactory.

Second, we have persons with a small but steady income, such as clerks, farm hands and renters, who have an ambition to own a home or a farm, but who have not enough saved to make the first payment. These persons accumulate steadily on installment shares. Their saving is safe, and every dollar is earning profits as soon as paid in. When they have enough saved up to make the first payment on a home or farm, they have established a reputation for sobriety and thrift, and the association is willing to take a mortgage for the balance of the purchase money.

Third, we have the man who has enough money to make the first payment on a home or farm; or who already owns a place and wants to improve it with buildings, fences, drainage or otherwise, and wants to place a mortgage to complete the purchase price, or to meet the cost of repairs. He may already have a mortgage expiring, which he wishes to renew on better terms. He gets the advantage of a long time loan at favorable rates, and with the privilege of amortizing the loan in small annual payments.

SAVING AND ACCUMULATION SHARES.—In addition to the above classification, an association may, if it so provides to do in its by-laws, issue "saving shares" upon which payments are made from time to time as the member may elect; or it may issue "accumulation prepaid shares," on which a payment of $50 or more is made at the time of subscription. The earnings are added to this until the share matures and is worth $100; or "income shares" which are paid for in advance at face value at the time of subscription. The dividends on these shares are paid in cash. J. J. D.

A VERDICT OF SIX CENTS.
Is This the Value of "Reputation?"
"Sky Farm" Brought Down to Earth!

Last week the libel suit of Frederick O. Groesbeck, the poultry dealer, of Hartford, Conn., against THE RURAL NEW-YORKER was tried in the Federal Court in New York City. The complaint was based on an article published in the paper on Oct. 9, 1909, reading as follows:

Mr. F. O. Groesbeck, Secretary of the Hartford Show Association, of Hartford, Conn., whatever that may be, is one of the most impudent and contemptible defaulters that has yet come to our attention. One of our subscribers accepted his notes in payment of accounts that should have been paid in cash. When the notes became due they were protested for nonpayment at the bank, and protest fees added to the account. After exhausting every other peaceable means to collect on them the notes were sent to us. Mr. Groesbeck first attempted to discredit his creditor; but when finally confronted with the facts flatly refused to meet his obligations. He did not even have the decency to do it in respectable language. We believe him utterly unworthy of confidence or credit.

To justify the publication THE R. N.-Y. showed that Groesbeck conveyed his 12-acre poultry farm at Vernon, Conn., to his mother; that in the year 1908 he was being sued for debts, and at that time assigned the chattels of his Hartford store to his father; and made a bill of sale also of his poultry to a man named Trout; that two judgments were entered against him immediately afterwards; and that neither of them has been paid. One of these judgments was in favor of an employee who sued for a balance of wages after four years' service. The contention was that these conveyances were made to escape the payment of just debts. It was shown that several other claims were against him, and returned uncollectable. Lawyers in Hartford had reported that he was execution proof, and consequently that the claims could not be collected.

It was further shown that he advertised himself as the owner of farms when in truth he owned no land or farms. One source of amusement to the court and jury was his alleged ownership of "Sky Farm." After much hesitation he admitted that this was a backyard attached to the house he rented at $35 a month in the city of Hartford, and that he had some cats there. He advertised himself as the president and treasurer of the Hartford Supply Company, and solicited orders and remittances, but was forced to admit that there never was any company by that name. It was further shown that he printed several pictures of his neighbor's large poultry farm and birds and represented them to be his own. He represented his birds as bred from a special line of ancestry for 15 years, and solicited orders for birds and eggs on this basis, but the 5,000 birds that he claimed as his belonged to his neighbor; and he bought birds and eggs from farmers to fill orders. He brought several character witnesses who swore that his reputation was good; but they admitted on cross-examination that they knew nothing of the above record. Several other witnesses testified that his reputation was decidedly bad, and when questioned gave intelligent instances to prove it.

In the Spring of 1908, Groesbeck bought chicks from N. O. Ward, West Willington, Conn., to the amount of $113. He did not pay for them, and Ward sued and took an attachment on the Vernon place. A settlement was then made by Groesbeck paying $50 in cash and balance in three notes. Two of these notes went to protest, and after trying in vain to get the money on them they were sent to THE R. N.-Y. Groesbeck refused to pay and the warning followed. Then for the first time Groesbeck set up the claim that the chicks were not to be paid for unless he sold them at a profit above expense, and that the notes were not to be paid unless he made profit to do so. Ward denied this, and the Groesbeck letters corroborated Ward. The jury evidently refused to believe this absurd story.

The trial took three days and a half. The case was clearly against Groesbeck, and it was expected that the jury would not be out more than 15 to 20 minutes. Later it was rumored from the jury room that 11 jurors were in favor of a verdict for THE R. N.-Y. and one in favor of Groesbeck. The jury remained out all the afternoon. The court expressed the opinion that they should come to an agreement, if possible; and finally they came in for a verdict of six cents for Groesbeck. This is really a more humiliating result for Groesbeck than if the 11 jurors had succeeded in their demands for a verdict for THE R. N.-Y. The verdict for the paper might result because the jury did not think the libel serious enough to be of any account. Such a verdict might be entered against a man of the highest reputation and character. But as this verdict now stands the article is held to be libelous, per se, but that Groesbeck's reputation and character were such that the article could not injure his feelings, his reputation and his business in excess of six cents.

It was shown that THE R. N.-Y. acted solely in the interest of its subscribers and the public and frankly assumed the responsibility and expense of its position; that no prudent man knowing the facts would send Groesbeck a remittance by mail, and for this reason it was necessary for Groesbeck to deceive the public in order to get orders and remittances by mail. The court made it plain in the charge to the jury that a paper protecting the interests of its readers in exposing wrong doing was performing a meritorious public service.

New York State News.

NO MORE LAWS JUST NOW.—The bills passed by the last Legislature that were left in the hands of the Governor have now been disposed of, the 30-day period having expired on April 27. There were about 700 bills left with the Governor, all but 105 of which were acted upon by him. These became automatically vetoed with the expiration of the 30-day period. The Governor has used the pruning knife on the appropriation measures and the total of appropriations will not exceed $39,000,000, which is a new minimum mark for recent years. It is $11,000,000 less than was appropriated last year for similar purposes and less by $6,000,000 than the amount for 1912. This is the first time since 1909 that the appropriations for current expenses have been less than the indirect revenues. The comptroller estimates that the State's revenues to meet these expenditures of $39,000,000 will be $42,000,000. The inheritance tax from an unusually large number of estates of very wealthy men has accounted for the large revenue from indirect sources. In all 522 new laws were enacted this year, which is the lowest since 1891, when 389 laws were placed on the statute books. Last year 838 was the total number. The largest number of new laws in any one year was in 1895 when the total was 1,034.

ORGANIZED LABOR.—In a special bulletin issued by the Department of Labor a few days ago it was announced that organized labor in the State has a greater total of members than at any time in our history. The total membership on September 30, 1913 was 665,248, of which 78,522 were women. The membership increase during the year was 138,576 or 26.3 per cent. New York City has 29 per cent. of the organizations and 74 per cent of the membership. The city's total membership is 491,793.

STATE DRAINAGE LAW.—Gov. Glynn has signed the bill making radical changes in the State drainage laws. It makes practically a new law similar to the drainage laws of Michigan and Illinois. It provides for the drainage of swamp lands in two or more counties as well as in a single county. It creates drainage districts, so that the lands benefited by the drainage may all be in a district and bonds may be issued by that district, instead of the towns issuing the bonds and charging back upon the lands benefited, which has heretofore resulted in trouble and confusion.

CAYUGA FARM BUREAU.—Cayuga County falls into line with a Farm Bureau, of which W. B. Avery of Aurora has been elected president, E. B. Rounds of New Hope vice-president, and Ernest Tabor of Meridian secretary. The meeting for organization was attended by about 100 farmers, and an organization was perfected after an address by M. C. Burritt, Superintendent of Farm Bureaus of the State. J. Robert Teall is manager of the bureau and farm agent.

GOOD SUGGESTION.—"Plant a thousand trees on waste land Arbor Day instead of setting out two or three on school grounds." This sentiment was expressed recently by Dean Baker of the Syracuse School of Forestry. As an example of Arbor Day interest worth while, Dean Baker directs attention to the fact that the Jamestown high school has a tract of many acres on which it proposes to set out a young forest. He will participate in the exercises of Arbor Day there. Ten students are now setting out a tract of over 100 acres with 20,000 trees, at the Chittenango Forest Station.

HIGHWAY OFFICIALS GO FREE.—The Albany County grand jury, after a long investigation of the charges made by James W. Osborne, special graft investigator, against State Engineer Bensel, Duncan W. Peck, C. Gordon Reel and Charles F. Foley, failed to find an indictment against them, and so reported on April 28. The inquiry involved the letting of 26 contracts involving $3,000,000 by Deputy Commissioner Foley, and their approval by the entire commission, Bensel, Peck and Reel. The entire batch of contracts was said to have been approved in an hour's time, according to Commissioner Osborne.

VARY SURPRISED.—State Master W. H. Vary was tendered a surprise at his home on April 27, at Watertown, the occasion being the anniversary of his birthday. About 60 members of the Watertown Grange were present, who left with the State Master a valuable traveling bag as a memento of the occasion. Mr. Vary was assured, according to the report, that his Watertown friends confidently looked forward to his elevation to the office of National Grange Master.

$10,000,000 FOR ROADS.—Gov. Glynn has signed the bill appropriating $10,000,000 of the second referendum fund for the construction of new highways. He, however, declined to approve the companion bill appropriating $675,000 for interest on highway bonds issued under the new referendum. The attorney general has given the opinion that the appropriation did not affect the interest provision in the referendum itself and therefore this interest need not be raised at this time. The Governor's approval of the bill will make it possible to advertise all the roads for which plans and specifications have been prepared, and it will also allow the highway engineers to design, this Summer, the most important roads for the completion of a great trunk line in time for advertising the same in the Fall.

STATE FAIR FINANCES.—At the meeting of the State Fair Commission in Syracuse on April 28, it was reported that the treasury was without funds owing to the fact that the Legislature failed to pass the annual supply bill. It is believed, however, that this condition of things will be remedied when the Legislature meets in extraordinary session May 4. Among the items in the supply bill which failed to get through were these: $45,000 for premiums at the next State Fair; $12,500 for printing and advertising and $15,000 for maintenance of grounds. C. D. Porter of Albion was reappointed superintendent of the fruit department of the fair. The commission has decided to offer a special premium of $175 for the best display of roses, consisting of 500 blossoms of 12 varieties.

J. W. D.

Woman and the Home

From Day to Day

WHEN THE CANNON BOOMS!

When the cannon booms,
When the snare drums rattle fiercely
And the feet of men in khaki hammer time out on the pave,
It is easy to be brave;
It is easy to believe God is angry with the other Man, our brother,
And has left the sword of Gideon in our wayward human hand
When the cannon booms.

When the cannon booms,
When the battle flags are fluttering and men are going mad
With the blind desire for glory,
Filled with visions grand and gory,
It is easy to assent
To the Corsican blasphemer's scoffing creed;
It is easy to believe God is with the big battalions,
Whether cherubim or hellions,
When the cannon booms.

When the cannon booms,
When the primal love of fighting stirs the tiger in our blood,
And the fascinating smell
Of the sulphur fumes of hell
Rouses memories of the pit from which our human nature rose,
It is easy to forget,
God was not found in the earthquake, in the strong wind or the fire;
It is easy to forget how at last the prophet heard Him
As a still, small voice,
When the cannon booms.

When the cannon booms,
When the war lords strut and swagger
And the battleships are plowing for the bitter crop of death,
While the shouting rends the ear
Echoing from the empyrean,
It is difficult to hear
Through the din the Galilean
With His calm voice preaching peace on earth to men!
'Twill be easier to claim,
If we will, the Christian name,
To become as little children and be men of gentle will,
When the cannon booms, the cannon booms no more.

—William Herbert Carruth.

*

BELGIUM has conferred the cross of the Order of Agriculture upon Mrs. Belle Van Dorn Harbert of Colorado, president of the International Congress of Farm Women. This is, we are told, the first time this order has been conferred upon a woman.

*

THE girl with a delicate skin should remember that a reddish brown chiffon veil worn when driving, motoring or walking, is an excellent protection against sunburn and freckles, while the white veil is no protection. With the brisk winds and strong sun of Spring a sensitive skin suffers very quickly.

*

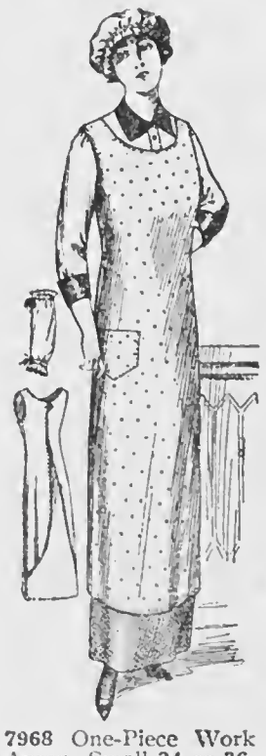
WISCONSIN has an anti-gossip law. The newspapers recently reported the conviction, under this law, of a person who made slanderous statements about another, and who thus became liable to a fine of $250, with the alternative of a year in jail. It was quite a shock to discover that the gossip thus convicted was a man, because we have been taught, from the time of Solomon at least, that talking about one's acquaintances was such a purely feminine failing.

*

THE newspapers recently noted the fact that a very wealthy young woman had entered a New England hospital to take a nurse's course. Later it was announced that she had given up her course and the newspapers quote her as saying: "I thought training in a hospital meant taking care of patients. I find it is three-fourths housework and drudgery." Newspaper stories are not always accurate, and the quotation given may be entirely incorrect in this case, but there is no doubt that many young probationers get their first shock of disillusion in a hospital when they find that wearing a becoming uniform and bathing a patient's fevered brow form a very small part of the duties required. It is hard for them to realize that a woman who is not willing to scrub a floor well is not fit to be trusted with a hospital patient. If we would take all the hard, or tiring, or unpleasant duties that must be done when nursing some member of the family at home, and then multiply them by the dozen or the hundred, we may get an idea of what professional nursing means. Out of the first drudgery, however, arises the passion for service, which puts the work of a nurse on a plane by itself. It was not until Florence Nightingale took the light of her lamp through wretched hospitals at Scutari that people realized nursing was an occupation for educated women. When we contrast the trained nurse of to-day with Sairey Gamp and Betsy Brig, who certainly represented the ignorant mercenary of their period, or with the degraded women who used to be given this work in city hospitals, we may be very grateful for our altered ideals of service. Perhaps, in the course of time, the same solution will be applied to domestic service, and we shall realize that this too is essentially the work of refined women. English papers contain many advertisements of "lady helps," "lady cooks," "lady nurses," "lady gardeners," these awkward terms meaning educated or refined women trained to manual work. Surely it is not unreasonable to suggest that trained mind and character is quite as necessary in one whose work forms part of the home as in the outside helper who is only with us in sickness.

The Rural Patterns.

When ordering patterns always give number of patterns and measurements desired. Price of each pattern 10 cents.



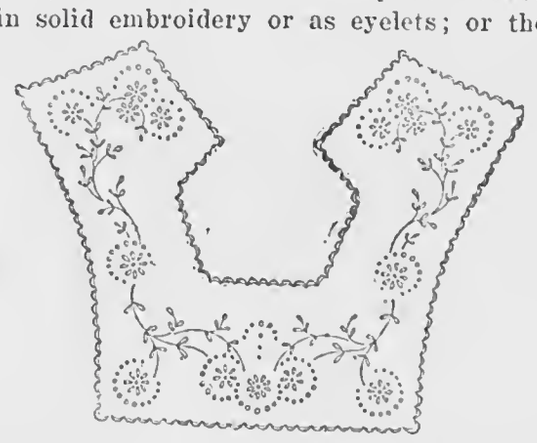
7968 One-Piece Work Apron, Small 34 or 36, Medium 38 or 40, Large 42 or 44 bust.

8205 Short Coat, 34 to 42 bust.

8111 Boy's Shirt, 6 to 12 years.

7608 House Jacket with Fitted Back, 34 to 44 bust.

No. 514 is a design for embroidering a square collar. The scallops on the edges are to be padded and buttonholed, the dots, flowers and leaves may be worked in solid embroidery or as eyelets; or the



leaves can be worked solidly with the flowers and dots as eyelets; or the dots only can be worked as eyelets. The stems are to be outlined. Stamped on pure Irish linen with mercerized floss to work, 25 cents.

A Farmers' Club.

Macomb is a township of large dairy farms in Northern New York. It has no railroad, no trolley line, no village of any size. When the children complete their eighth grade work in school they go 10 to 15 miles to a high school in an adjoining town.

These farmers felt the need of some social life to break up the monotony of their workaday world, and to attract the young people to the farm. The old-time huskings, quiltings, and apple parings are only memories of the older inhabitant. Rainy day visits are seldom indulged in, and the church attracts but few. The social need became so urgent that a call was sent to each home asking every member of the family, from the youngest to the oldest, to meet at the hall over the corner grocery on a certain Saturday evening. About 35 responded to the call. A chairman was chosen and the purpose of the meeting was stated. Permanent officers were elected, a committee was appointed to draw up a constitution and by-laws, and the Macomb Farmers' Club became a factor of importance in the community. It is now successfully launched on the fourth year of its existence. Meetings are held once in two weeks, on Saturday evening.

A program is presented at each meeting consisting of music, recitations, current events and discussions of farm or timely topics. After the program the young people play games or dance until 12 o'clock. There is a club picnic in August and several banquets and socials are held during the year. Some attention is given to dramatic work, and a play is presented each Winter. Last year prizes were given the boys for growing corn and potatoes, the girls for the making of bread and cake. The club has purchased a piano, song books, silverware and dishes.

While the president has general supervision of the club, the programs are made out by committees, thus keeping up the interest by giving each one in turn a share in the work. A kindlier spirit has grown in the community, feuds have been forgotten, and best of all, the club members have learned to work together for the common good. MRS. NETTIE C. ROYCE.

A Wise Woman Says:

"Neighbors are like members of your own household once removed, that is if they are the genuine article," remarked Mrs. Sage, when a question of rights and duties came up. "You can, of course, live next door to people for years, in the country as well as in the city, and not know their tastes in garden stuff or in wallpaper. You can bow and say good morning as you pass in the highway, always speak of them as excellent sort of folks, and never see the inside of each other's houses, or exchange opinions or views. That is a very safe way of dealing with the man and woman over the boundary fence; by avoiding all dealings with them you steer clear of chances for disagreement as much as possible. There are people as well taken on these terms; some have a little more money or breeding, and do not care for the simple, old-fashioned country demoeraey; others have so few brains and such crude ideas of manners as to make it impossible to admit an equality of footing. We are bound to meet reserve with good-humored letting alone, and we suspect that the keep-to-themselves people miss more than all their gains amount to.

"I am a firm believer in neighborliness, myself. That is a miserably narrow life where there is nothing to give and no desire to take. It does us all good to broaden out in sympathy, to laugh because another laughs, and to keep still because another wants to talk. There is some grist in almost every man's talk if our millstones are dressed to crack the kernel of his talk.

"When I urge that neighborly relations exact almost as much from us as do ties of blood I have in mind the patience, forbearance and charity necessary if we are to enjoy the people Heaven has given us to live among. We must take them for better or for worse, and we must not be surprised or discouraged when, now and then, there seems less of the better than we could wish. Take all things together, year in and year out, there is a surprising sum of good in even the neighbors who try our patience and make us wish sometimes that some one else might live next them. If we resolutely put annoyance and resentment far from us, and bravely endeavor to follow St. Paul's receipt as to whatsoever things are of good report, I believe there will gradually grow up in us that patience and charity that blesses him that gives and him that takes." A. T. S.

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Our Women Readers

will be interested in the articles given for soliciting subscriptions to The Rural New-Yorker.

Send postal to Department "M."

The Rural New-Yorker
333 West 30th Street
New York City

16

Seen in New York Shops.

Capes have come into style again and are to be the fashionable Summer wraps. They are half or three-quarters length, and very full, rippling all around the wearer; some are made so as to permit one end to be thrown over the shoulder. They have flaring stand-up collars, and some are made with an inner waistcoat of contrasting silk; others have inner straps like the golf capes worn so much a dozen years ago. With the small hats with high quills or pompons, swathing cloak thrown over one shoulder, and tight skirt below, the wearer's outline suggests an Italian army officer. These capes are made in broadcloth, silk and satin; some are cut quite low at the neck, with the flaring or falling collar, while others have high collars.

For outing and general wear the coats modeled after the Scotch and English Balmacaan waterproofs are in great favor, both for men and women. They are quite rippling at the bottom, with raglan sleeves; originally made in homespun or waterproof cloth they are now seen in a great variety of materials. This is a good model for a coat to slip over Summer dresses, like a sport coat, and may be made of heavy cotton or linen materials, such as brocaded ratine, golfine, cotton corduroy or duvetyne. We have a pattern for this style of coat, No. 8266, sizes from 34 to 44 bust.

Among inexpensive and durable petticoats for girls are those made of halcyon cloth, which cost $1; they are made in blue, green, brown and black, length 32, 34 and 36 inches. They are specially made for school wear. Among women's silk petticoats charming ones are made of what is called pussy willow taffeta, which is much softer than ordinary taffeta, and very lustrous. These petticoats, which cost $6.75 each, come in all fashionable shades, as well as black and white.

Wing-collar blouses of white lawn, which cost $2, had mannish little white lawn ties to hold up the collar. Vestettes of organdie or net looked like a pleated "dicky" coming down to the waist, with a stand-up collar and linen buttons. Some have a turn-down flaring collar, which lies over the coat collar; these are very pretty in pique. A black and white check jacket suit looks very smart with a white pique vestette and collar.

We have just become accustomed to the short flaring peplum or overskirt brought in by Oriental styles when something new appears—the Cossack overdress. This is a plain slightly flared tunic reaching to the knees or below, and is modeled on the long full-skirted overcoat, worn by Russian soldiers. With some of the excessively tight skirts worn below this full tunic, it requires a second glance to be sure that it is a skirt, and not a more masculine garment that is worn. In one very stylish model the skirt and little bolero jacket were of striped material, while the Cossack tunic was a solid color. It came below the knee, and was buttoned all down the front.

Tangerine is a vivid shade of deep orange that is greatly worn, not only in trimmings and millinery, but even in gowns and street suits. A tailored suit of tangerine crape cloth, made after an extreme and elaborate model, is rather startling in the bright sunlight of a crowded New York street. However, a little of this vivid color in millinery is very attractive, and is often seen on hats of dark myrtle green straw, which are plentiful, but not always becoming.

A Talk About Rolls.

When your dough has been kneaded down, and has become light the second time, rolled and drawn out into a long thin strip (see "Small Stuff," page 455) you may cut these strips into small even pieces of suitable size, and you are ready to make any of the various styles of rolls. Vienna rolls are made by rolling the small pieces into balls; these balls are allowed to stand until they become somewhat soft. When they are placed on the board they are rolled with the hands until about five inches long, about one inch thick in the centre, and the size of a lead pencil on the ends. Roll the ball of dough back and forth under the hand until it becomes the right thickness for the largest part of the roll. Then with the closed fingers of both hands start in the centre, roll the ends. As you roll gradually draw the dough lengthwise. Be sure that the taper is gradual, and that there are no broad bunches in the dough. Place the rolls on a tin far enough apart so that they will not touch each other when light. Just before putting in the oven wash them with milk and the yolk of an egg, and make three slantwise slashes across the top with a very sharp knife. In making this dough use half milk and half water with plenty of shortening.

In making finger rolls, which are nice for soups, make the balls about one-third the size of other rolls, and roll out into straight sticks about the size of a lead pencil. Do not allow these to touch each other on the tin, and bake well.

A bun dough is made in the same way as a roll dough, with the addition of currants, which are rolled thoroughly in flour and put into the sponge when light. There are two, or maybe more, ways of making up buns. Probably the method most likely to give satisfaction to the housewife, the way I make them, is to cut the dough, when light, into small pieces about the same size as for rolls. Roll these pieces on the board into long sticks about half an inch thick. Roll each of these sticks into a coil and place on tins. Place them on the tin rather closely with the end of the coil touching the side of the pan or the next roll in such a manner that they will not uncoil in raising. Bake in hot oven. If a frosting is desired they may be wetted slightly when taken from the oven and dusted with powdered sugar. Bakers us a syrup made from sugar and water, which is applied before going into the oven. But I have found this somewhat difficult to make.

Hot cross buns are made from the same kind of dough, with the addition of spices [currants and citron are also added. Eds.]. The dough is divided as for rolls, and simply rolled in round balls which are placed on the tins to raise. They should be well flattened down with the palms. The cross may be made with a sharp knife after they have been washed with milk and egg, just before going into the oven. If you would have good rolls or bread never wash your dough before it becomes light.

A BAKER'S WIFE.

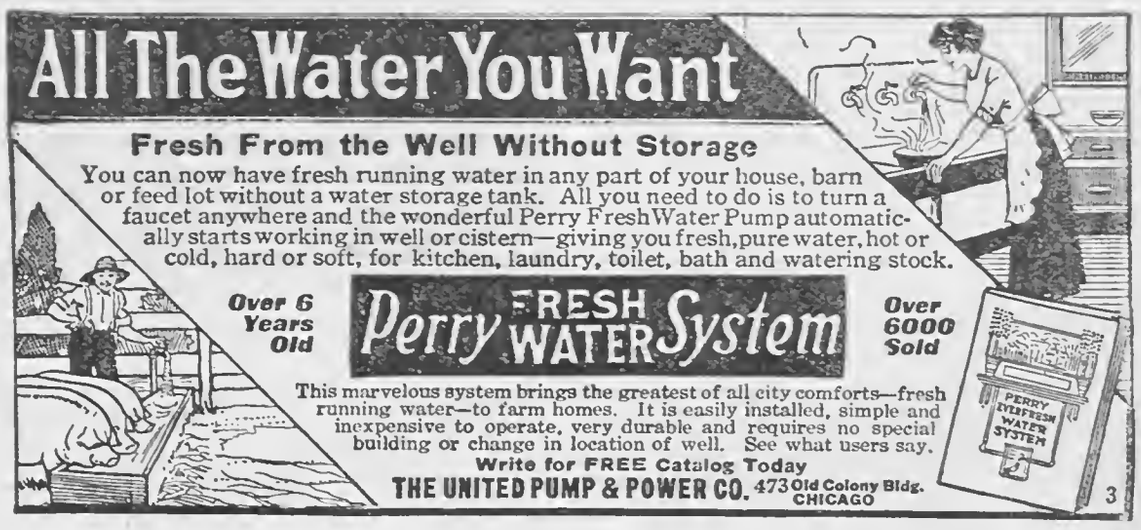
Stale Bread and Cake.

There is never any stale bread or cake to go to waste in our household. Milk toast is our favorite way of using old bread, and I never allow a lot to accumulate, but make toast for supper or breakfast often. Left-over graham or whole wheat muffins can well be utilized also. Cut in small slices and brown thoroughly in the oven any time when there is a hot fire, care being taken that it does not scorch. The gravy may be made and set aside to be reheated. I often do these things while about the forenoon's baking. At supper time it is only a moment's work to heat the gravy, dip the toast in warm (not hot) water, arrange neatly on warmed individual plates, pour over the hot gravy, dot with bits of butter and serve at once. This is far more attractive than when served from one large dish.

Left-over cake, no matter what kinds or how many, if not too stale, makes a most delicious pudding. Cut in small slices. Make a filling as follows: One pint milk heated near boiling, beat yolks of one or two eggs with two heaping tablespoonfuls sugar, one heaping tablespoonful of cornstarch and a teaspoonful of water and pinch of salt; add to the hot milk and boil two minutes, stirring constantly. Cool and flavor with vanilla. Place a layer of the cake in individual dessert dishes (preferably of glass) cover with a layer of the filling followed by cake and more filling. Beat white of egg stiff, sweeten and flavor and spread over the tops. Dot with bits of bright jelly.

MRS. J.

NOVELS are sweets. All people with healthy literary appetites love them—almost all women; a vast number of clear, hard-headed men, judges, bishops, chancellors, mathematicians, are notorious novel readers, as well as young boys and sweet girls, and their kind, tender mothers.—William Makepeace Thackeray.



DEAR Mr. Dillon:—Do all the R. N.-Y. readers live in Vermont? They are extremely bashful about asking for free samples of DERMAL CREAM which is very good for sunburn. Dr. F. D. Crane, Chemist, Montclair, N. J.

TEA BY PARCEL POST
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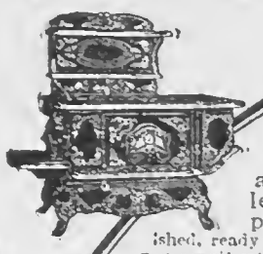
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REGISTRY FOR PERCHERON HORSES.

I am located in Connecticut and desire information as to registry associations for Percheron horses. There are horses in Connecticut that appear to be recorded in an Ohio association known as the American Breeders' and Importers' Percheron Registry Company, John A. Forney, secretary. There are also some horses in this community registered in an association called the American Percheron Registry Association of La Grange, Illinois. There are also some horses here that are recorded in the Percheron Society of America. The last I know to be correct, as it is the Association that is recognized throughout the United States for Percheron horses, but I want to know what these other associations are, especially this association at La Grange. Can this association register a Percheron horse? Can they record a horse of Nivernais breeding as a Percheron? S. D. W.

There is but one association in the United States that is universally recognized for Percheron horses. This is the Percheron Society of America, located at Chicago, Ill. It is capitalized for $100,000, has more than 6,000 members, has registered also 100,000 animals, and has been in existence since 1876, and possesses all of the original books, records and documents back to that time.

The so-called Forney Association of Ohio has existed since 1905. They do not possess original books or records dating back of 1904. They recorded, until some time in 1906 at least, top-cross or graded-up Percheron horses. They are not recognized by leading stallion boards, by breeders generally, nor by foreign governments for purposes of export.

The so-called American Percheron Registry Association of La Grange, Illinois, was organized in 1905 for the express purpose of recording grade Percheron horses having three or more top-crosses of purebred sires. They have never been recognized for any other purpose other than for the registration of grade horses, have always been outlawed by all stallion boards, have no standing with breeders of Percheron horses, and, it is needless to add, have never been recognized by foreign governments for purposes of export.

There is probably no objection to the existence of a record for grade horses, but there is nothing in the certificates of pedigree issued by the so-called La Grange Association which would indicate to an uninformed party that the pedigree was for a grade horse, and because of this fact many such horses have been disposed of to unsuspecting purchasers as purebred, whereas they are not, and cannot be expected to breed with the same degree of prepotency that purebred horses do. Men who are unscrupulous enough to sell animals recorded in the so-called La Grange Association to men who believe they are buying purebreds are usually cunning enough to represent the animals, not as purebreds, but simply as registered horses, and in such cases the buyers have no recourse in law, for they are "registered" in an association which exists for the registration of grades.

New York and the New England States and some of the Southern States, have been particularly injured by the operations of persons handling such animals. Horsemen throughout the Central West are sufficiently well informed now not to be caught by stuff of this kind, but the men in the East and South, not so well informed, are frequently caught in some such manner. Within the past 10 days I have had a letter from a prominent business man in one of the Southern States who advises me that a horse recorded in the so-called La Grange Association has been sold in his town for a sum in excess of $1000. From information given by him relative to the case, I am satisfied that the horse was picked up in some of the communities where good draft horses are being bred, probably for $250 or $300, and taken south by some speculator who had first had him recorded in the so-called La Grange Association.

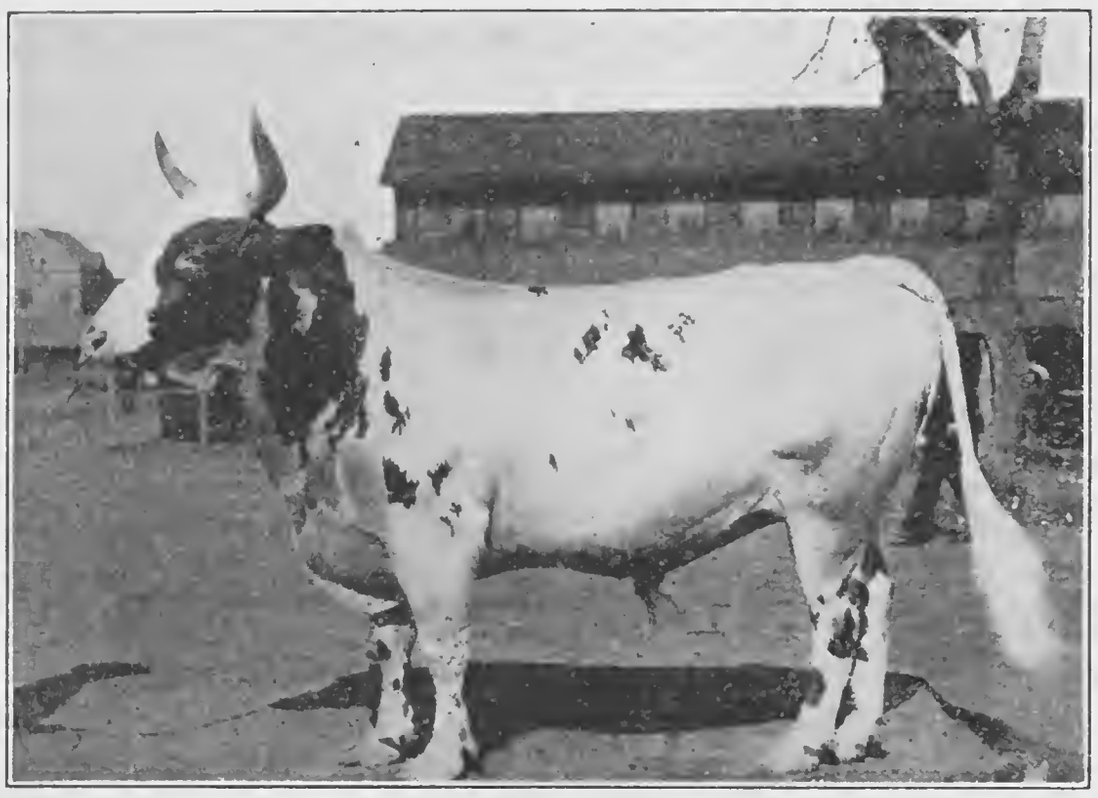
Summarizing the case for the protection of horsemen in the East, I may make this brief statement. Certificates of pedigree issued by the American Percheron Horse Breeders' Association, *numbered under No. 35912*, signed by S. D. Thompson, secretary, are valid. Certificates of pedigree issued by the Percheron Registry Company, Charles C. Glenn, secretary, are valid, but it is necessary to have the latter pedigrees rewritten or renumbered by the Percheron Society of America before produce from such animals can be recorded. This is because the Percheron Registry Company was taken over bodily by the Percheron Society of American in 1911. Certificates of pedigree of any number issued by the American Percheron Horse Breeders' Association or by the Percheron Society of America, signed by George W. Stubblefield or the undersigned, are valid.

WAYNE DINSMORE.
Secretary Percheron Society
of America, Chicago, Ill.

"LINE-BREEDING" AND "INBREEDING."

On page 505, a writer makes it appear that breeding a fowl "to his daughter would be called inbreeding; to a cousin, line-breeding." This is an error, and is exactly wrong as a comparison. Breeding sire to daughter is *line-breeding* as well as *inbreeding*. It is line-breeding with reference to the perpetuation of the male line. Breeding to a cousin is not line-breeding unless both parents contain the same blood upon one side, and that being the blood that it is desired to perpetuate. Generally the first step in line-breeding is breeding the male to daughter if it is the sire's line that is to be carried down the line. Of course if the mother's side is the one we wish to perpetuate the proposition can be reversed by mating mother with son. This would be line-breeding with reference to the mother. Any system of inbreeding that perpetuates the blood of a certain sire or dam for several generations is line-breeding. In line-breeding, if desired, the blood of sire can be made more and more predominant in succeeding generations while in other forms of inbreeding the original stock can be almost obliterated. To illustrate: An animal called "Sultan" is bred to an animal called "Fantine." The calf, a male, is mated with a heifer from a sister of Fantine, and sired by an animal named "Jumbo." This cousin mating would not be much like line-breeding. Now if this second calf was mated with another cousin not closely related to either "Sultan" or "Fantine" and so on for several generations, there would be very little of "Sultan's" blood in the progeny. So the breeder would not be line-breeding to "Sultan," nor would it be line-breeding to "Fantine," and yet it would be close inbreeding. Line-breeding to "Sultan" means keeping the progeny stron; in the blood of "Sultan," that is, line-breeding with reference to the male line. Line-breeding to "Fantine" means keeping the progeny strong in the blood of "Fantine." In line breeding the blood of one animal is infused more or less in every generation. Inbreeding does not necessarily do this. While line-breeding may include some new blood, it always carries a predominance of the blood of the animal whose line we are perpetuating. In one case the farther down the line we go the stronger the blood of that animal; in the other case, even by close inbreeding, the less of the blood of that animal will we have in the progeny. It is an interesting problem to note the number of combinations that can be made in line-breeding, and also in inbreeding without line-breeding. The reader will find out that we can breed the blood of "Old Sultan" into a strain in a few generations, or we can breed it almost out in the same number of generations and be inbreeding all the time. If the blood of "Old Sultan" predominates in your breeding stock you are line-breeding to him, otherwise, although you are inbreeding every mating your work may not be line-breeding. There are many ways of perpetnating a line of descent. Sometimes several yards or flocks are started from the same sire. These yards or families are line-bred with reference to the blood of that sire. Generations later an animal can be taken from one of these yards and used upon one of the other line-bred yards. This will avoid close inbreeding, yet it may be intensive line-breeding. W.
Michigan.

The distinction between inbreeding and line-breeding, as I have several times said, is one that is not clearly made by many writers using these terms; that made by W. is one that I prefer, but it is one that is not uniformly made by authorities, and is, in fact, quite contrary to some of the best. As evidence of this, I quote from "Principles of Breeding" by Davenport, as follows: "By line-breeding is meant the restriction of selection and mating to individuals of a single line of descent." * * * "It not only combines animals very similar in their characters, but it narrows the pedigree to *few and closely related lines of descent*. Line-breeding carried to its limits involves the breeding together of individuals closely related. When it involves the breeding together of sire and offspring, or dam and offspring, or of brother and sister, it becomes inbreeding, or breeding in and in. It is line-breeding carried to its limits. Three forms of *inbreeding* are possible among animals, namely, breeding the sire upon his daughters, breeding the dam to her own son or sons successively, breeding together of brother and sister. Nobody claims advantages in *inbreeding*, per se, but it is the acme of line-breeding, and when superior individuals are at hand it is the most powerful method known of making the most of their excellence. It is the method by which the highest possible percentage of the blood of an exceptional individual, or of a particularly fortunate nick, can be preserved, fused into and ultimately made to characterize an entire line of descent on both sides." Space will not permit further quotations but enough has been given to show that the statement criticised, viz., "Breeding a fowl to his daughter would be called inbreeding; to a cousin, line-breeding" is correct, even though not in accordance with some writer's use of these terms. M. B. D.



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Tailless Russian Sheep.

The lambs shown at Fig. 282 represent a breed of Russian sheep which Prof. Hanson and the South Dakota Agricultural College has imported. Prof. Hanson went to Siberia last Summer gathering a supply of the seed of Alfalfa varieties which seemed suited to our Western plains. On former trips he had frequently noted curious breeds of sheep, some of which appeared fairly well adapted to the cold dry sections of this country. Thus he brought back several specimens of the breed which is shown in the picture. They were first reported as being of the fat-tailed variety. This is a mistake, for these sheep have no tails whatever, and thus are different from Persian fat-tailed sheep, which are being bred in Texas and Kansas for fur-producing purposes. The sheep here shown, however, have the ability to lay on a great quantity of fat on the rear of the body. In time of drought or when food is short, they live upon this accumulation of fat. Prof. Hanson and the South Dakota Experiment people believe that this breed of sheep will find a place in this country, where it will prove useful when it has become adapted to local conditions. It is said that there are several other breeds of sheep in Russia which ought to be bred here for experiment purposes.

Inbred Horses.

Would it be advisable to breed a half-blood Percheron mare to her sire who has got uniformly good colts out of a mixed lot of mares, mostly of light weight? What are the drawbacks to breeding in that way? G. W. S.

Vermont.

Incestuous breeding is resorted to when it is desired to fix definitely certain characteristics that have accumulated as result of systematic mating. It is not recommended under conditions as suggested by G. W. S., and in my judgment it would be much better to mate this mare to an unrelated draft stallion in the county, rather than breed her to her sire. Inbreeding or incestuous breeding often times results in producing undersized animals, individuals with weakened constitutional vigor and vitality, and animals whose genitive system is often impaired. Deformed as well as undersized animals result, and it is not safe to breed as is suggested by your correspondent. Only the very hardiest and strongest individuals should be inbred, and then only when there is some one or more definite characteristics that it is intended to establish more permanently. Often with swine inbreeding can be practiced, since the bulk of the animals are marketed as carcasses when young, but for horses, particularly draft horses, the practice is to be discouraged. I think G. W. S. will get much better results if he takes this mare to the best unrelated draft stallion in his community, and that he should avoid the dangerous practice of mating a sire to his daughter. F. C. MINKLER.

Cribbing.

I have a young mare that I wish to breed this Spring. She cribs; will her colts be likely to learn it from her?

Pennsylvania. H. P.

Many hold that cribbing may be learned by imitation, and some even consider the tendency hereditary. We have never seen anything in practice to corroborate either belief. Breed the mare if she is in good health. A. S. A.

Lameness.

A mare has gone lame in front leg; it seems to be in fetlock. She is all right when standing in stable, but after a little drive she is very lame the next morning. After two or three days she is all right. She is 20 years old. She eats well and is in a good condition. J. L.

New York.

As often stated here, it is impossible for anyone to diagnose mysterious cases of lameness without making a personal examination and for that reason you should at once employ the local graduate veterinarian. A. S. A.

Garget.

What can I do for my Jersey cow? Her milk has pieces of yellow matter which seems to come from only one teat. She is hard to milk, teats are bloated and her flow is very irregular. These pieces seem like light colored butter, and when touched are of a slimy nature. Some go through the strainer of milk pail while some clog it and cheesecloth strainer on can seems covered with this matter. It does not affect the milk in any way, tastes natural, looks natural and stays natural. What would you suggest? I am selling the milk retail and have had no complaint and we use the milk for ourselves. X. Y. Z.

New York.

Such milk is absolutely unfit for use and the seller would be subject to prosecution under dairy inspection laws. It is quite possible that the udder is tuberculous and if so the milk is deadly for infants or young animals. The cow should be tested with tuberculin. If she is free from tuberculosis the affected quarter should be dried off and the milk from the other quarters only used if found to be perfectly normal in every way. Milk three times a day and then rub in a mixture of half an ounce each of gum camphor and solid extract of belladonna leaves rubbed up in half a cupful of lard. A. S. A.

Lameness.

Can anyone tell me what to do for a horse that has a sprained shoulder? I had a rowel in her, blistered her twice and is still lame. W. D.

Without making an examination we are unable to give a confident opinion in a mysterious case of lameness, but we think it quite likely that shoulder lameness is not present. Foot lameness is far more common. If the foot is thrust out in front (pointed) when the horse stands at rest the lameness is in the foot, and we would clip the hair from the hoof-head and blister it with cerate of cantharides twice a month until relieved. A. S. A.

BROWN SWISS CATTLE.—My attention has been called to an article on page 500 regarding Brown Swiss cattle. We have been breeding these cattle since 1877, and were interested with Mr. Scott of Worcester, Mass., in the importation of the second and third lot of these animals, which came to this country from their home in Switzerland. We have cows now being tested; one finished her year's test in March with a record of 14,145 pounds of milk to her credit. On page 501, near the close of the article on boarder cows, the writer says "it takes an immense amount of feed and excellent care to induce a *good cow* to produce 6,000 pounds of milk in a year." Our Brown Swiss have been giving us year in and year out at the rate of 10,000 pounds of milk per year with only ordinary care.

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How to Make Hogs Pay.

PART III.

GRAIN RATIONS. — The following named feeds are standard when it comes to feeding hogs. Corn, barley, Alfalfa hay, digester tankage, red dog flour, wheat bran and oil meal. This does not include waste products, but suggests feeds that may be used as a basis for successful feeding. The following rations are useful:

For brood sows before and after farrowing, cornmeal 100 pounds, digester tankage 12 pounds, wheat bran 10 pounds, oil meal four pounds, bone meal two pounds. To be fed in such quantities as would maintain a vigorous active appearance. A safe rule is to permit the brood sows to gain one-half pound daily from the time they are bred until farrowing time, gradually increasing the feed after farrowing, as the pigs demand more milk, until the brood sow is on full feed, all she will eat with relish.

For young pigs before weaning: Red dog flour 100 pounds, crushed seed oats 100 pounds, digester tankage 10 pounds. Fed in such quantities as the pigs will clean up readily at three feedings periods. This may be supplemented with a small amount of soaked shelled corn.

For pigs weaned until weighing 50 pounds: Soaked shelled corn or ear corn 100 pounds, red dog flour 50 pounds, wheat bran 15 pounds, digester tankage 10 pounds, skim-milk, four pounds of milk for each one pound of grain fed.

For market pigs, first period, three to six months of age: Cornmeal 120 pounds, red dog flour 25 pounds, digester tankage 10 pounds. Second period, six months to one year: Ear corn 100 pounds, digester tankage five pounds. This mixture should be fed to the animals intended for fattening purposes in such quantities as they will eat and clean up with relish. There is no advantage in grinding corn for swine. The tankage or red dog flour can be mixed with water or skim-milk, and fed as a thin slop. The use of Alfalfa, rape or clover pasture will materially cheapen grains during early growing and fattening periods. Soaked shelled corn and 5% of tankage added makes a fine feed for suckling pigs when fed in small quantities.

ALFALFA FOR SWINE.—The use of Alfalfa has practically revolutionized the swine industry, and it can be fed either as a green forage after it is two years old, or fed in the form of Alfalfa hay to growing animals, and especially to brood sows. The following precautions, however, should guide its use:

1. Alfalfa can safely be pastured with a limited number of swine, provided the animals are not allowed to crop the plants closely.

2. At least two cuttings for hay should be made during the season; the appearance of the crown shoots and blossoms suggesting the appropriate time.

3. The animals should be turned in at the outset, when the plants are from seven to nine inches high, and never allowed to make the field look like a regular pastured area.

4. Four brood sows with average litters may be allowed per acre at the outset, provided they are liberally fed a grain mixture and the number reduced as unfavorable conditions appear.

5. The period from May 1 to October 1 suggests the safe limits of the pasturing season; however, with due regard to season conditions, Fall sows with litters may be turned in for part days up to November 1st. The crop winters stronger if the plants are left about seven inches high.

6. If shotes intended for fattening or gilts for breeding purposes are utilized, a safe guide is suggested of one ton of live weight per acre. With ear corn and tankage, supplementing the forage, gains and growth will be most economical.

7. Based upon value of the pork produced, the labor saved, the amount of fertility added and distributed, and the health and type of the Alfalfa pastured pig, this practically supplies the means of obtaining by far the greatest income from an acre of this famous forage and hay crop.

Swine may be used to harvest the corn crop to advantage, provided the following points are given attention:

1. Enough animals should be turned into a field to clean up all corn in about 20 days, or approximately 20 125-pound shotes per acre.

2. Rape, clover or a combination mixture should be seeded in the corn at time of last cultivation to furnish variety and supply needed protein. Four pounds of rape and eight pounds of clover make a good mixture.

3. In case no green forage is available, a small amount of tankage should be fed in the form of a thin slop; five per cent. of estimated corn consumed.

4. The pigs should gradually be accustomed to green corn by cutting and feeding small amounts while in dry yards or pasture, else let in field for part days only at the outset.

5. The ears should be well glazed, and the stalks show evidence of partial maturity before the animals are let into the field; furthermore, the pigs should be taken out of the corn field on wet days and during muddy weather.

6. The hogs will gather the corn as clean as the average man at much less cost. Shotes weighing about 125 pounds are best suited for such feeding. Old sows are more wasteful.

FREDERICK C. MINKLER.

CO-OPERATIVE SOCIETY NOTES.

The most unique coöperative association recently organized in this State is the Newlots Coöperative Pasteurizing Company. Samuel Fish is president of this Company, and B. M. Gordon secretary and treasurer. They have subscribed and paid in on account of stock $3,500 of their $10,000 capitalization. This creamery is located in Greater New York, and it has seven original members, who have purchased this stock, and are building this pasteurizing plant; they own 629 cows. That men are engaged in the dairy business within Greater New York is in itself a remarkable fact. These men are all foreigners, and are making money; in fact they seem to be making more money than are the dairymen located in the most fertile valleys of this State. The coöperative form of organization appeals to these men very strongly, and they are anxious to take advantage of the new coöperative laws recently enacted.

At Hurleyville, the Jewish farmers of that neighborhood have organized a cooperative creamery. This creamery is financed entirely by the Jewish farmers of that locality. They have purchased a site and built a model creamery in all respects; Louis Billowitz is the manager. It is making a high-class, unsalted butter, and is making sales directly to the consumers in New York City. One of the newest features of their selling campaign is the division of the net profits of the creamery with the purchasers of their product. Each eight-ounce package of butter is wrapped in a paper, which at the end of the year is computed by the managers of the creamery to entitle the purchaser to share in the profits of the creamery. The stock-holders and members of this coöperative creamery receive 50 per cent. of the net profit; the employees 25 per cent. and the consumers of the butter 25 per cent.

A very enthusiastic meeting of farmers in the town of Whitehall was held April 10, at the Grange Hall in that village, where final steps were taken for the organization of the Whitehall Cooperative Company. Fully one-half of the farmers of the town were present at this meeting. Officers were elected; articles of incorporation were drawn up and signed, and the book for stock subscriptions was opened. This company will be incorporated with $1,000 capital stock, and $500 was paid in to the treasurer during this meeting. All of the subscribers have agreed to take five shares of stock at $5 each in this company, so that it may have ample capital with which to do a purchasing business. These farmers are almost all engaged in dairying, and through this new coöperative company i tend to buy all of their farm supplies. The local prices of the commercial kinds of feeds in Whitehall are extremely high, and by combining their orders these farmers are assured at the start of a saving of from $3 to $7 a ton on the feeds they use. For the first year the secretary, Edward D. Adams, is to perform the services of manager.

The South Shore Growers' and Shippers' Association, located at Dunkirk, N. Y., which has a membership of 700, the Chautauqua and Erie Grape Company (a company which markets about one-fourth of the Chautauqua County grape belt crop) and, the Keystone Grape Company of North East, Penna. are about to organize a large coöperative company. Nearly all of the farmers in this locality, bankers, and merchants in general, are deeply interested in this movement. The Bureau of Coöperation in the Department of Agriculture has received several letters from bankers and business men in this locality urging the formation of some such large coöperative company to assist in marketing more directly not only the grapes of the Chautauqua and Erie fruit belt, but all sorts of farm produce. A large meeting was called at Westfield on April 11 at which the tentative by-laws were carefully gone over with the assistance of the Superintendent of Coöperation and a committee was appointed with one member from each township whose duty was to solicit stock subscriptions. George E. Pierce, of North East, Penna., L. R. Dean, of Brockton, S. J. Cook, of Sheridan, Mr. W. N. Slauson, of Silver Creek and Fred Johnson of Westfield are members of this committee. It is hoped that before the next meeting, which is called on April 25, this committee will be able to secure the necessary stock subscriptions, and the membership in the company of at least 50 per cent. of the entire number of grape growers in the Chautauqua grape belt.

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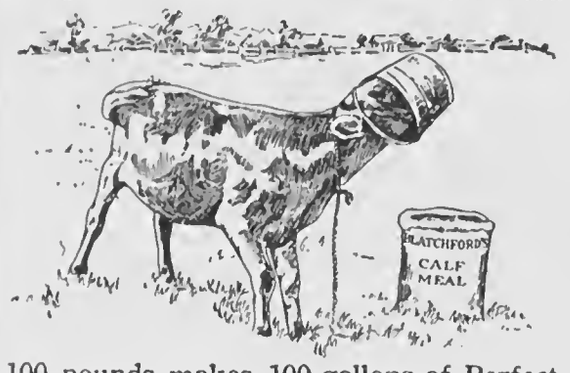

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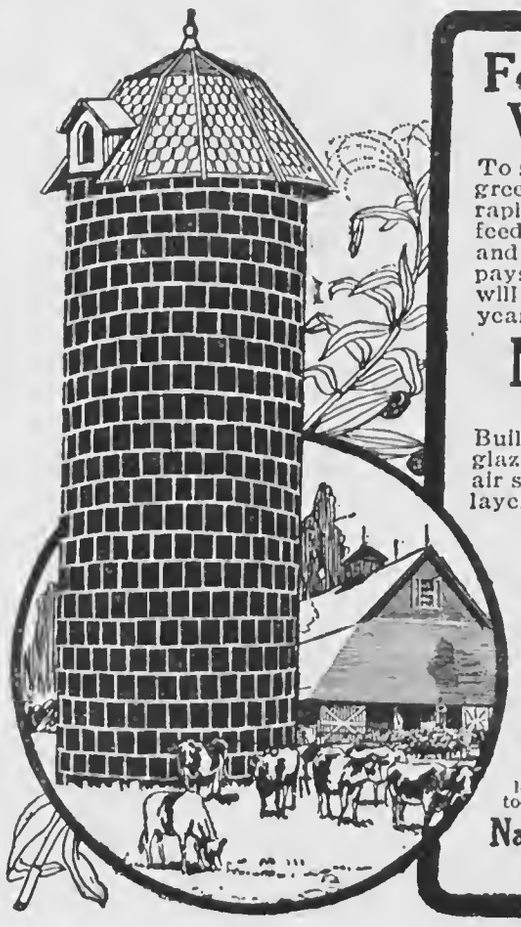

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Syracuse, N. Y.

Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.
Week ending April 30.

Butter, lbs.	2,541,160
Eggs, doz.	4,433,640
Apples, bushels	74,775
Potatoes, bushels	255,790
Hay, tons	7,278
Wheat, bushels	539,560
Corn, bushels	23,000
Oats, bushels	530,800

Wholesale Prices at New York,
Week Ending May 1, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high-scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 5¼ to 5½ cents per quart. Two or three large milk concerns in New York are working up new restaurant trade on the basis of $1.85 per 40-quart can.

BUTTER.

An advance of one-fourth cent has been made on the better grades of fresh creamery, though trade is light at this figure and buyers very critical as to quality. The proportion of high scoring creamery is smaller than usual. Packing stock is rather scarce, and there is a fairly active market for factory and process.

Creamery, extra, lb	25½@ 26
Good to Choice	22 @ 25
Lower Grades	19 @ 21
Storage	17 @ 22
State Dairy, best	24 @ 25
Common to Good	18 @ 21
Factory	14 @ 18
Packing Stock	13 @ 17

Elgin, Ill., butter market firm at 23½ cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

Receipts are only moderate and a slight advance is noted in price of some of the new make. Old whole milk is comparatively scarce and market very firm.

Whole Milk, new, best	14 @ 14¼
Old, best	18 @ 19
Common to good	14 @ 16¼

EGGS.

There is a one-cent advance in most grades. An occasional lot of fancy white brings 24 cents, but 23 is the top for most of this grade.

White, choice to fancy, large	22 @ 23
Common to good	18 @ 21
Mixed colors, best	21 @ 22
Common to good	17 @ 20
Western fresh, white	21 @ 22
Lower grades	15 @ 18

FRESH FRUITS.

Apple receipts are light and market dull except on fancy quality free from scald. Strawberries arriving in very poor condition, selling at 10 to 20 cents per quart.

Apples—Russet, bbl.	3 25 @ 4 50
Spy	3 50 @ 6 50
Ben Davis	4 00 @ 4 50
Greening	4.00 @ 6 50
Newtown	6 00 @ 7 50
Baldwin	3 50 @ 5 50
Western, box	1 50 @ 2 50
Strawberries, Fla., qt.	10 @ 25

BEANS.

Marrow, 100 lbs.	4 40 @ 5 50
Medium	3 70 @ 3 80
Pea	3 20 @ 3 70
Red Kidney	5 70 @ 5 75
White Kidney	5 75 @ 5 80
Yellow Eye	5 25 @ 5 50
Lima, California	7 20 @ 7 30

HOPS.

Prime to choice	39 @ 41
Common to good	35 @ 38
Pacific Coast	19 @ 21
Old stock	15 @ 18
German crop	63 @ 67

VEGETABLES.

The potato market is weak and slightly lower on both old and southern new. Some Danish are bringing $1.80 per 165-pound bag. The best Maine are a shilling less than last week.

Potatoes—Maine, 180 lbs.	2 62 @ 2 87
State, bulk, 180 lbs.	2 50 @ 2 75
Bermuda, bbl.	2 50 @ 5 25
Florida	2 35 @ 5 00
Sweet Potatoes, bbl	1 00 @ 2 00
Beets, 100 bunches	2 00 @ 4 00
Carrots, bbl.	1 50 @ 2 25
Asparagus, California, doz.	2 00 @ 4 00
Southern, doz	1 25 @ 3 00
Nearby	2 00 @ 4 50
Cabbage, New, bbl. crate	1 00 @ 2 00
Chicory, bbl	1 50 @ 2 50
Kale, bbl	50 @ 65
Lettuce, half-bbl. basket	50 @ 1 25
Onions—White bu.	1 50 @ 2 00
Red, 100 lb bag	1 00 @ 2 25
Southern, New, bu	1 25 @ 1 75
Okra, bu	2 00 @ 3 00
Peppers, Southern, bu.	2 00 @ 2 75
Peas, Southern, bu.	2 00 @ 3 00
Shallots, bbl.	3 00 @ 4 00
Salsify, 100 bunches	4 00 @ 5 00
Spinach, bbl.	25 @ 75
String Beans, bu.	1 00 @ 3 00
Squash, New, bu	50 @ 1 00
Egg Plants, Southern, bu.	2 00 @ 3 25
Tomatoes, Southern, 6 bkt. crate	1 00 @ 3 50

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	60 @ 1 00
No. 2, box	2 00 @ 3 00
Mushrooms, lb.	15 @ 35
Radishes, 100 bunches	2 00 @ 3 00
Rhubarb, doz. bunches	40 @ 60
Tomatoes, lb.	15 @ 25

LIVE POULTRY.

Squab Broilers, pair, fancy	60 @ 75
Fowls	17 @ 17½
Roosters	10 @ 11
Ducks	15 @ 16
Geese	10 @ 12

DRESSED POULTRY.

Chickens, choice broilers, lb	35 @ 45
Squab broilers, pair	80 @ 1 00
Broilers, common to good	30 @ 32
Fowls	15 @ 18
Ducks	8 @ 13
Geese	9 @ 14
Squabs, doz.	2 00 @ 4 50

HAY AND STRAW.

Hay market is quiet, with practically no change in prices since last week. Receipts are increasing. Straw is 50 cents lower.

Hay, Timothy No. 1, ton	21 50 @22 00
Standard	21 00 @21 50
No. 2	19 00 @20 50
No. 3	17 00 @18 00
Clover mixed	15 00 @20 00
Straw, Rye	17 00 @18 00

LIVE STOCK.

Native Steers	7 40 @ 9 05
Bulls	5 50 @ 7 00
Cows	3 25 @ 6 80
Calves, prime veal, 100 lbs.	7 00 @10 75
Culls	5 00 @ 6 00
Sheep, 100 lbs	5 25 @ 6 00
Lambs	7 25 @ 7 90
Hogs	8 50 @ 9 40

MILLFEED.

Wheat Bran, ton	28 00 @30 00
Middlings	29 50 @30 50
Red Dog	31 00 @31 50
Corn Meal	27 00 @28 00
Linseed Meal	31 00 @31 50

COUNTRY-DRESSED MEATS.

Calves, best	12 @ 13
Fair to good	09 @ 11
Lambs, Hothouse, each	3 00 @ 7 00
Pork, light	11 @ 12
Heavy	08 @ 09

GRAIN.

Wheat, No. 1, Northern Spring	1 01 @ ..
No. 2, Red	1 05 @ ..
No. 2, Hard Winter	1 02 @ ..
Corn, as to quality, bush.	69 @ 75
Oats, as to weight, bush.	43 @ 44
Rye	65 @ 70

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30 @ 35
Mixed colors, new laid	26 @ 28
Ordinary grades	20 @ 22
Butter, fancy prints, lb.	32 @ 34
Tub, choice	27 @ 29
Chickens, roasting, lb,	30 @ 32
Fowls	25 @ 28

*

About 3,000 carloads of Bermuda onions will be shipped from Texas this year. The cabbage and lettuce marketed thus far amounts to 2,000 cars, and there will be at least 4,000 cars of new potatoes.

*

Two interesting definitions were recently given by eminent authorities. The N. Y. health board describes sausage as, "a comminuted meat from cattle or swine, or a mixture of such meats, either fresh, salted, pickled or smoked, with or without added salt and spices, and with or without the addition of edible animal fats, blood and sugar."

The other definition concerns the stringless bean canned, which, according to the Government agricultural authorities, is "any young bean processed so young as to have escaped having its strings get tough."

*

In a New York restaurant of the type where the customer gives his order at a counter, the counter man shouting it through a window to the chef and his assistants, is a man of all work called Tony. Counter men, assistant managers, etc., are frequently changed, for reasons satisfactory to them or the boss, but through all these various dispensations Tony stays on the job. He can scrub the floor, wash dishes, clear the tables, dress the window and wait on customers, and he is an artist at making two-story shortcake, with the strawberries set like little steeples on the ground work of beaten egg and sugar. In addition to all of this adaptability he has the rare accomplishment of not talking much, which adds materially to his value in a job where deeds, rather than words, are needed. W. W. H.

Fistula of the Milk Duct.

1. We have a young cow four years old which had one of her teats scratched in the pasture fence last Fall, when she had her calf by her side, and we never paid any attention to it. It healed up and now the milk leaks out of that one teat steadily. Is there any way that we could cure it? 2. We bought a city mare which had been driven without any shoes on and now she has the points of her hoofs from her hind feet all worn off. We had her shod and now she goes lame, but the hind ones worst. Could you give us any advice about this case?
New Jersey. J. L.

1. When the cow is dry have the fistulous opening closed by operation, or by cauterizing with a red hot knitting needle or other instrument. Better have a qualified veterinarian do the work. Meanwhile bind a strip of surgeons' tape around the part. 2. As soon as the ground is soft remove the shoes and turn the mare to pasture for the Summer. Once a month blister the hoof-heads with cerate of cantharides, after removal of the hair. This will stimulate growth of new sound horn. A. S. A.

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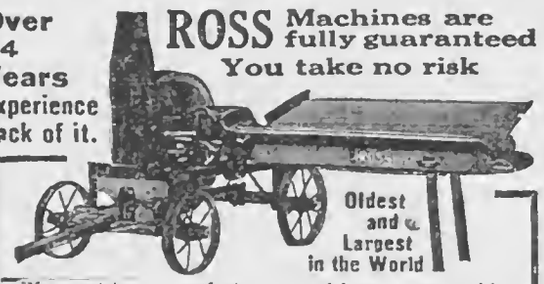

We want to prove that our machines are a good investment before you give up your money. We know they are so good that we do not feel it a risk to make this offer. Many new features have been added which you should know about. Special made machines for New York State and the East. We make many styles and sizes to meet any and all conditions. Write for catalog.

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Stop Your Cream Separator Losses

DAY after day you are leaving cream in the milk that goes to the hogs—because you are not turning the crank of your separator at the right speed. The Stewart Speed Indicator makes you crank properly and saves all this cream. (You can feed your hogs better on food that costs less than 30 cents a pound.)

The cream you are now throwing away amounts to many dollars a month. If you don't think so, listen to this:

Actual tests at Purdue Experiment Station proved that one dairyman with 20 cows lost $524.10 in one year by "guessing" at the speed he turned the crank.

Another dairyman owning 8 cows says he lost $18.50 *in one month* because he "guessed." The

Stewart Speed Indicator for Cream Separators

goes on the crankshaft of your separator and shows the exact speed you are cranking. Just tell us the name of your separator, its number, and what year it was made. We furnish the Stewart Speed Indicator on a new crankshaft that will fit. (If yours is a De Laval, then no extra crankshaft is necessary.)

Price $10—30 Days' Trial

Order from your dealer or direct from us. The price—complete—is $10 only. If it does not increase your cream production within 30 days return it and get your money back.

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Fill in the coupon and send it to us today. We'll forward all this literature—free—at once. Don't wait. Mail the coupon now.

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Please send me, free, all your literature on Cream Production and the book about the Stewart Speed Indicator for Cream Separators.
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International Harvester Cream Separators

The I H C Line

GRAIN AND HAY MACHINES
Binders, Reapers
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Planters, Pickers
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THOUSANDS of farmers now own International cream separators. They separate the milk at milking time when it separates best. Once or twice a week they have only the cream to take to the creamery and the fresh, warm skim milk builds up fat, healthy pigs and calves. They save slow and wasteful skimming by hand and save many creamery trips.

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If you will write us we will send you illustrated catalogues telling all about International cream separators. If you do not know who sells them we will tell you where they may be seen.

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

Lousy Poultry Can't Pay

Lice-infested poultry are a constant loss to the poultryman. Lice suck the rich lifeblood from poultry, stunt the growth of young chicks and rob you of your well earned dollars. These pests reduce the hens' laying ability. Buy an effective louse killer and use it liberally.

DR. HESS
INSTANT LOUSE KILLER

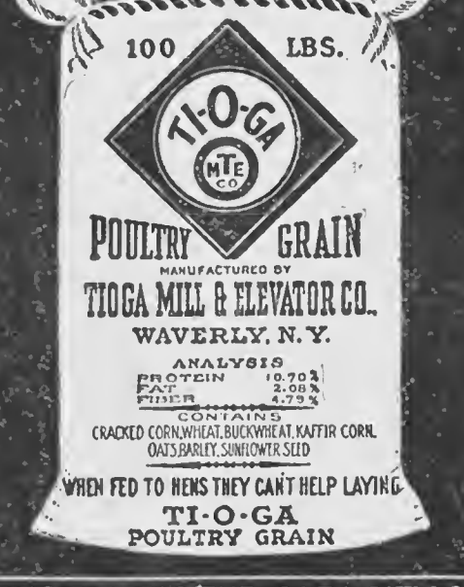
Kills Lice Instantly. Sprinkle it thoroughly on lousy hens, rub it well under the wings and neck, put it in the dust bath, in the nests, roosts and cracks. Instant Louse Killer also kills lice on farm stock, bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes. Comes in handy, sifting-top cans.

1 lb. 25c; 3 lbs. 60. Except in Canada and far West.

If not at your dealer's, write—

DR. HESS & CLARK
Ashland, Ohio

MAKES HENS LAY MORE EGGS



IT INCREASES THE CAPACITY OF GOOD HENS, AND MAKES EVEN A POOR HEN DO HER LEVEL BEST

MAKA-SHEL GRIT If you want plenty of eggs and strong chicks, feed a rough grit; feed a grit that grinds; feed "Maka-Shel." Used by the largest poultrymen. Ask your dealer or send $1.00 for two 100 lb. bags, f. o. b. cars; Middle and New England States, one ton at $10.00, freight paid. Agents wanted.

EDGE HILL SILICA ROCK CO.
Box J New Brunswick, N. J

DON'T KILL YOUR BABY CHICKS WITH POOR FEED
Our SPECIAL CHICK FEED
is the sweetest and most wholesome feed on the market. It can be fed to human beings. **ALWAYS FRESH AND ALWAYS THE SAME.** Send for prices and booklet. **WM. ORR & SONS, Box 1, R, Orr's Mills, New York**

WE CAN MAKE you attractive prices on Malt Sprouts, Cattle Salt, Granulated Charcoal, **OYSTER SHELL LIME**, Sunflower and Hemp Seed, Beef Scrap, Chick Feed, etc.
CHARLES H. REEVE & CO., Inc., 179 West St., New York

MacKellar's Charcoal
For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1814
R. MacKELLAR'S SONS CO., Peekskill, N.Y.

Poultry Netting —Write for bargain prices. **EXCELSIOR WIRE MFG. CO., 5 Cortlandt St., N.Y.**

THE ORANGE COUNTY POULTRY HOUSE
(Patented)
Combination brooding and laying house. Cheap, Practical, Durable. Saves steps, Saves chicks, Saves money. Catalogue and price list. **O. W. MAPES, Middletown, N.Y.**

Parcel Post Egg Boxes—NEW FLATS AND FILLERS.
H. K. BRUNNER, 45 Harrison St., New York

FOR SALE—Choice Three-band Italian Queens. Tested—$2; untested, after June 1—$1. Write for booklet. **W. K. Rockwell, Bloomfield, Conn.**

Belgian Hares AND WHITE ANGORA RABBITS—Send for prices and booklet free. **Pleasant Valley Rabbit Farm, O. W. Phelps, Prop., Georgetown, N. Y.**

BELGIAN HARES
Pure breed Belgian Hares, all sizes and ages, at the right prices; the finest kind for the table. Stock your farm with game, also table, with good tender meat. Ask for catalogue and prices.
CALEB BOGGS & SON, - Cheswold, Delaware

The Henyard.

Two-story Henhouse; Family Churn.

I have a two-story building 16x26, which I would like to utilize as a brooder and laying house. Can you recommend any suggestion? Also do you know anything about the Ott system of poultry "flats." Is it practical? 2. Can you recommend any family churn? F. W.
New York.

1. Two-story houses for poultry do not seem to have met with permanent favor, and are seldom built now, I think. You can doubtless utilize yours by arranging it so that the fowls may have access to the upper story for roosting quarters, and leave so much of the lower floor as is needed clear for the brooders. I am not acquainted with the system of poultry "flats" that you mention but have never known of any other than a one-story building being permanently adopted as the proper type for a poultry house.

2. A simple churn of either the dash or barrel type is to be recommended. My own preference, where the cream from only one or two cows is to be churned, is the old-fashioned dash churn of proper size. A barrel churn works much more easily, but requires considerably more time in churning, at least, in my experience. If this type is chosen, it is well to get one somewhat larger than the rated "cow" capacity. This will give more room for concussion of the cream in churning and will hasten the operation. M. B. D.

Dry Brewers' Grains for Poultry.

What is your opinion of dried brewers' grains vs. wheat bran in making up dry mash for poultry? I know a farmer in this vicinity who keeps a flock of mixed fowls and during this season feeds considerable "beer grains" (not dried) with the result that his egg yield is exceptional. I have given close attention to the various mash formulas, wet and dry, but do not recall any instance where brewers' grains have been used or recommended. Have you any data of interest or can you see any harmful results in the use of this feed? If not I am inclined to experiment a little and will later let you know the effect. A. C. T.
New Jersey.

I have never known of dried brewers' grains being used in a mash for poultry; neither do I know of any reason why they should not be if hens will eat them without waste. I doubt if hens would take kindly to them in dry mash, because of their light hull-like character, but trial would soon settle that. They rank considerably higher in protein than wheat bran, and I am now using them with considerable satisfaction to lighten up my horse and cow feed of cornmeal and oil meal. If hens like them they should prove a valuable source of protein in their rations. M. B. D.

Lice on Poultry.

Can you tell me of a remedy to rid poultry of body lice? I have read that they do no harm, and the poultry, if given a chance, will keep them down. My houses are perfectly sanitary, droppings removed daily, litter frequently changed, entire house and nest boxes sprayed often, and as often as once in two weeks I dust them with powder. I have used all the different brands, but they are all alike, merely check the pests. Recently on 100 hens I have used three pounds; result the same. This treatment, to say nothing of the labor expended, is becoming expensive at 25 cents per pound, and I am afraid it will soon exceed my feed bill. W.
Maine.

The effort required to keep poultry entirely free from body lice would probably not be profitably expended, even if it were possible to do so. If nests, perches, etc., are kept from becoming the hiding and breeding places of vermin by occasional applications of insecticides like kerosene and crude carbolic acid, and the hens themselves are given opportunity for frequent dust baths, vermin will be kept within bounds and will do no appreciable harm. The Lawry lice powder, made according to the following directions, is cheap and efficient: Spread 2½ pounds of plaster of paris in a shallow pan; pour one-quarter pint of crude carbolic acid into a cup, and add three-quarters pint of gasolene. Pour this mixture over the plaster of paris, mixing thoroughly. Rub through wire window screen; allow it to stand for several hours until entirely dry, but away from a stove or light. Keep in a closed can or jar, and apply through a sifter or with the fingers, working it well into the feathers, especially about the vent. A very little of the powder is sufficient for a fowl.

M. B. D.

Day Old Chicks
and
Six to Eight Weeks Old Pullets

6 weeks old 60 cents
8 weeks old 70 cents

Kirkup's Strain S. C. White Leghorns bred for size, vigor, and large white market eggs—$15 per 100—$62.50 per 500—$125 per 1000—Safe delivery guaranteed. **Order Today.**

REDUCED PRICES AFTER MAY 15

Day Old Chicks, $10 per 100—Yearling Hens, $1.25 each. Delivery after May 1

It will pay you to get a breeding pen now—Why?—You can get May and June hatched chicks, get a good egg production until late in the Fall and then have a fine breeding pen for next season. **We guarantee stock to be "Right."** Send for Free Booklet, describing chicks, pullets and breeding stock.

CHESTNUT POULTRY FARM
KIRKUP BROS., Props.
MATTITUCK, L. I., NEW YORK

YOUNG'S STRAIN
SINGLE COMB WHITE LEGHORNS
I HAVE NO OTHER BREEDS

They are the standard for all the Leghorns of all America, and the greatest layers of all varieties of domestic fowl. I have hundreds of yearling hens and cocks for sale. Mating list free.
Address

D. W. YOUNG, Monroe, New York

Baby Chicks

S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.

WESLEY GRINNELL,
Sodus N. Y.

MATTITUCK WHITE LEGHORN FARM
CHICKS
GIVE SATISFACTION. TRY THEM. PRICES NOW, FOR IMMEDIATE DELIVERY

Young's strain.....$10 per 100
Young's & Barron's cross..... 12 per 100
FOR JUNE
Young's strain..... $9 per 100
Young's & Barron's cross.....10 per 100
Safe delivery guaranteed. Catalogue free.
A. H. PENNY, - Mattituck, New York

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED

Send for catalogue.

DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

May's Special on Eggs—A glimpse of our stock will prove to you they are the kind. We have bred poultry for years and know the best. Special for May. Orders filled in rotation. 30 Eggs $1.50 of Burnett Black Beauty, Minorcas, also Rhode Island Reds. Pekin Duck or White Turkeys Eggs also for sale. Minorca Eggs, any number, 5 cents each. Also Rhode Island Reds. Express paid anywhere in U. S. after May 1st, or Parcel Post free. Send for Poultry Advice at once. It's free. **W. L. BURNETT, Montgomery, N. Y.**

Eggs from S. C. W. Leghorns
headed by ½ Barron cockerel—15 for $1.50; 60 for $5. B. P. Rocks and S. C. Reds—15 for $1; 60 for $3. W. Wyandottes, 15 for $1.
HARRY M. HALL, R. No. 2, Chester Depot, Vermont

Elizabeth Poultry Farm—Custom Hatching. Eggs for Hatching, and day-old baby chicks, from 1,500 selected breeding stock. S. C. W. Leghorns, Barred Rocks and Buff Orpingtons. Write for **PRICES.** Visitors are welcome to inspect our stock any day except Sunday. **JOHN H. WARFEL AND SON, Rohrerstown, Pa.**

S. C. WHITE LEGHORNS / **Fawn & White Indian Runner Ducks** } EGGS FOR HATCHING BABY CHICKS AND DUCKLINGS
heavy-laying, pure white egg strains. Circular giving description, record, winnings, and guarantee, sent free. **PATTERSON POULTRY FARM, Clayton, New York**

Baby Chicks, Eggs AND CUSTOM HATCHING—Our S. C. W. Leghorns are bred for production and vigor; not for feathers and show type. White Orpingtons from Cooks' best. Pekin ducks. M. B. turkeys. **Peaceful Valley Farm, Oxford Depot, N. Y.**

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. **EAST DONEGAL POULTRY YARDS, MARIETTA, PA.**

GREATEST LAYERS IN AMERICA
MY BREEDS RECOMMEND THEMSELVES
BARRON LEGHORNS—World's best
BARRON WYANDOTTES—England's best
STORR'S BUFF ROCKS—America's best rocks
VIBERT-AUSTIN REDS—200 & 260-egg flocks combined
HALF-BARRON LEGHORNS—A 200-egg bird
WALTON'S ENG. PENCILLED DUCKS—World's record
TOULOUSE GEESE—Largest—lay 40 eggs
Eggs and chicks—all ages—all year. Custom brooding saves brooder trouble.
"ROUEN DUCKS"
Farm Prices, Circular
MORRIS-FARM, R. 4, Bridgeport, Conn.

S. C. W. Leghorn Chicks & Eggs
Purebred, large, vigorous, true Leghorn type. Seven years' experience. Not how many, but how good. Circular. **VANCREST POULTRY FARM, Salt Point, New York**

BABY CHICKS FROM DAVIS' STRAIN
of Single Comb White Leghorns, bred for size, vigor and heavy egg production. Prizes taken wherever shown. Chicks—$11 per 100; $100 per 1000. Eggs—$5 per 100; $50 per 1000.
LOCUST CORNER PLTY. FARM
A. W. Davis, Prop., - Mt. Sinai, Long Island, N. Y.

BABY CHICKS AND EGGS FOR HATCHING, for heavy laying S. C. White Leghorn Hens mated to Tom Barron cockerels, also from one pen pure Barron stock.
G BRUNDAGE, Salisbury Mills, Orange Co., New York

S. C. W. LEGHORNS—Eggs for hatching from heavy layers. Eggs are running over 90% in fertility. $1.50 for 15; $6 per 100. Also few pens for sale at attractive prices. **ROBT. G. MERCER, R. F. D. 3, Lynchburg, Virginia**

CHICKS—10c. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. **C. M. LAUVER, Box 73, Richfield, Pa.**

BABY CHIX—S. C. White Leghorns, $10 per 100. I. R. Ducklings. Eggs for hatching. Old established business.
ROCKY GLEN POULTRY FARM, Poughkeepsie, New York

S. C. WHITE LEGHORNS
Eggs for hatching from selected, mature hens, bred for 18 years for vigor and Egg production.
FLOYD Q WHITE, Successor to White & Rice, Yorktown, N. Y.

EGGS FOR HATCHING—If in want of a large and heavy-laying strain of S. C. W. Leghorns, order of **J. M. CASE, Gilboa, New York.** 75c per 15; $4 per 100

Baby Chicks & Ducklings—S. C. White Leghorns exclusively. From Youngs' strain. Prize winners at Madison Square Garden, 1913. Mating list free. **BEAVER DAM POULTRY FARM, Harry Tweddle, Prop., Montgomery, N. Y.**

S. C. White Leghorns—WYCKOFF STRAIN—Eggs for hatching, $5 per 100. Unfertile eggs replaced. **Robert E. Smith, Nassawadox, Va.**

S. C. W. LEGHORN Baby Chicks in any numbers. **HENHAVEN POULTRY YARDS, Cortland, N. Y.**

EGGS FOR HATCHING from Kulp's famous 242-egg strains. S. C. White Leghorn, S. C. Rhode Island Reds—$1.50 per 15; $5 per hundred. 50 Good Cockerels at $2 each.
H. A. BACON, Hillcrest Poultry Farm, Berwyn, Maryland

Day-Old Chicks—from excellent utility S. C. White Leghorns—$9 per 100. **GEO. FROST, Levanna, Cayuga Co., N. Y.**

Pedigreed S. C. Buff Leghorns
bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Chicago, Los Angeles, Indianapolis, etc. Get blood of "Egg Bred Winners." **Dr. L. HEASLEY, Box R. N., Dorr, Michigan**

LINCOLN'S WINTER-LAYING LEGHORNS lead pens of all America in Storrs' contest. Eggs, $6 per 100; chicks, $15 per 100. **FRANCIS F. LINCOLN, Mt. Carmel, Connecticut**

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, **HAMILTON FARM, Huntington, New York**

ROSE COMB BROWN LEGHORNS for Hatching. One dollar for thirteen. **LEON L. SAGE, Crown Point, N. Y.**

S. C. BROWN & WHITE LEGHORNS, Dk. & Lt. BRAHMAS, R. I. REDS, W. Wyandottes & Barred Rocks. Show & Utility quality. Won 76 ribbons this season, including New York & Philadelphia. EGGS, Baby CHICKS, Breeders. Illustrated catalog free. **Riverdale Poultry Farm, Riverdale, N. J**

BUFF WHITE LEGHORNS, S. C. R. I. REDS—Eggs 90c. per 15; $1.50 per 30. Mottled Anconas, Bl. Minorcas, eggs $1.00 per 15; $1.75 per 30. Catalogue free. **John A. Roth, Quakertown, Pa.**

Utility American Dominiques MONEY MAKERS **Herbert Rooks, Mills, Pa.**

MOTTLED ANCONAS EGGS for hatching. 75c., 15; $4.00, 100. GEO. K. BOWDISH, Esperance, New York

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. **Route 24, Athens, Pa.**

POULTRYMEN, ATTENTION—We guarantee safe delivery of strong, healthy S. C. W. Leghorn chicks at reasonable prices. 1500 each week from Hall's Mammoth Incubator. They will please you. **A. B. HALL, Box A, Wallingford, Conn.**

BARRED ROCKS
Eggs—$1 per 15; $3.50 per 100. Baby chicks.
B. H. HENION, - Brockport, New York

BARRED ROCKS—HATCHING EGGS—large, vigorous birds, free range, open house, heavy Winter layers, splendid broilers, $5 per 100; $1 for 15. **W. A. ROONEY, Gilboa, N. Y.**

Eggs for Hatching—BARRED ROCKS. GOOD LAYERS. Pens are headed with Cockerels from Pittsfield Heavy-Laying strain. 80c. per 15; $4 per 100. **S. H. MILLER, Hague, N. Y.**

"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. **Dr. HAYMAN, Box R 48, Doylestown, Pa.**

White Wyandotte and Barred Rock Eggs
$1 per 15, $4 per 100. Giant Mammoth Bronze Turkey eggs, $5 per 11. Fawn Indian Runner Ducks, $1 per 12; $6 per 100. **C. A. HERSHEY, R. 1, McKnightstown, Pa.**

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed. Catalogue free. **W. R. STEVENS, Culver Road, Lyons, N. Y.**

Silver Campines, White Orpingtons, Anconas
Prize stock. Extraordinary layers. Eggs, Chicks.
ALGONQUIN FARMS, - Amesbury, Mass.

THE EGG-LAYING CONTEST.

The twenty-fifth week of the contest, ending April 24, shows a gain over last week of 92 eggs; the total being 3,682. The S. C. Reds of A. B. Brundage, President of the Connecticut Poultry Association, tie with the White Leghorns of pen 41 from Storrs Agricultural Station, for first place for the week; each pen laying 56. Five pens compete for second place, with scores of 55 each. They are Frank L. Tuttle's Barred Rocks, Waveny Farms Barred Rocks, the Columbian Wyandottes from the National Columbian Wyandotte Club, Francis F. Lincoln's White Leghorns and Chas. Heigl's White Leghorns.

A. B. Hall's pen of Barred Rocks ties with pen No. 42, Storrs Station's White Leghorns, for third place, each scoring 54. The weekly score and the totals are given below:

	WK.	TL.
BARRED ROCKS.		
A. B. Hall, Connecticut.....	54	457
Frank L. Tuttle, Massachusetts	55	605
Waveny Farm, Connecticut...	55	462
J. F. Francais, New York....	36	736
WHITE ROCKS.		
Albert T. Lentzen, Massachusetts	52	501
Fred H. Benton, Connecticut..	44	604
Storrs Agr. Sta., Connecticut..	41	454
Storrs Agr. Sta., Connecticut..	52	475
Storrs Agr. Sta., Connecticut..	34	608
Storrs Agr. Sta., Connecticut..	31	494
Storrs Agr. Sta., Connecticut..	43	318
BUFF P. ROCKS.		
A. A. Hall, Connecticut.....	50	583
W. C. Morgan, Connecticut....	48	405
WHITE WYANDOTTES.		
Tom Barron, England	48	1033
West Mt. Plty. Yards, Connecticut	33	587
Merrythought Farm, Connecticut	49	863
Neale Bros., Rhode Island.....	43	844
D. J. Ryan & Son, Connecticut	47	654
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	46	601
Dr. N. W. Sanborn, Massachusetts	39	544
Am. Buff Wyan. Club, New York	44	528
H. L. Hamilton, Connecticut...	46	361
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	55	498
S. C. REDS.		
Robt. Seaman, New York.....	47	418
J. S. Gillespie, Connecticut....	42	617
Dr. J. C. Dingman, New York	46	470
Burnham Plty. Farm, Massachusetts	34	408
Homer P. Deming, Connecticut	45	505
Geo. P. Dearborn, Florida....	40	705
Dr. J. A. Fritchey, Pennsylvania	46	789
Ernest Underhill, New Jersey.	39	450
W. H. Bumsted, Connecticut..	33	273
Pinecrest Orchard, Massachusetts	37	692
Harry B. Cook, Connecticut...	45	645
Colonial Farm, New Hampshire	38	644
A. B. Brundage, Connecticut..	56	711
R. C. REDS.		
Glenview Farm, Connecticut..	36	653
C. S. Scoville, Connecticut....	38	444
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut..	51	596
Storrs Agr. Sta., Connecticut..	42	693
Storrs Agr. Sta., Connecticut..	56	679
Storrs Agr. Sta., Connecticut..	54	909
Storrs Agr. Sta., Connecticut..	53	547
Braeside Plty Farm, Pennsylvania	48	515
Glenview Farm, Connecticut...	51	561
Manor Plty Farm, New York..	48	581
A. B. Hall, Connecticut.....	53	565
Marwood Plty Farm, Pennsylvania	50	659
Geo. M. Harris, Connecticut...	39	479
Bonnie Brook Farm, New York	47	647
N. W. Hendryx, Connecticut..	52	508
J. J. Linehan, Massachusetts..	51	469
F. F. Lincoln, Connecticut....	55	895
Cecil Guernsey, New York....	42	747
T. W. Moore, Connecticut.....	46	494
C. N. St. John, New York.....	36	483
C. N. Sherwood, Connecticut..	51	576
L. E. Sands, Pennsylvania.....	47	591
Tom Barron, England	50	707
Branford Farm, Connecticut...	47	631
P. G. Platt, Pennsylvania.....	47	612
F. M. Peasley, Connecticut....	41	560
C. H. Savage, Connecticut.....	49	513
Mrs. K. E. Woodruff, Connecticut	51	499
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	51	564
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut.....	49	445
BUFF ORPINGTONS.		
O. Wilson, West Virginia.....	44	470
WHITE ORPINGTONS.		
P. A. Demgar, New York.....	35	425
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	36	279
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	45	389
DUNGHILLS.		
H. W. Collingwood, New Jersey	46	372
Daniel Hine, Connecticut.....	44	452
Daniel Hine, Connecticut.....	39	559
MIXED BREEDS.		
Profitable Poultry, Massachusetts	32	574
Profitable Poultry, Massachusetts	35	547

The total number of eggs laid to date is 45,288. GEO. A. COSGROVE.

The Hawk and the Hen.

I am greatly harassed by hawks preying on my poultry. Will you give me any plans to counteract them? I have tried traps on poles and tried scaring them by shotgun, which seems to have very little effect on them. I intend to put strychnine on the necks of one-day chicks. I lose about two-thirds of all my poultry every year by these pests. I am the only one about the farm to handle a gun, and I cannot watch them for days as some do. W. H. D.

Maryland.

I am afraid that you will have to work your problem out for yourself, for there is no good sure way so far as I am aware, by which you can rid yourself of these pests. Assuming that the small growing chicks are the ones caught, you might combat the hawks by some if not all of the following means. Raise the chicks near buildings where they can be watched. Use a gun on hawks prowling about the yards whenever you can. Clean away all the hiding places so that the hawks can't slip up on the chicks so slyly. Train a dog to watch and drive them away. Keep guineas, which are very alert and will give an alarm. Destroy the nests of hawks if they can be located. Keep chicks in covered runs when small, if necessary. Certain breeds like the Leghorn are very alert and learn very quickly to make themselves scarce when any of the larger birds come around, and you may wish to use these. Some breeds are protectively colored, and some such breed should be kept where hawks are bothersom. White birds make a fine target for any of these enemies.

It is claimed by some that quite large doses of nux vomica, which is strychnine in crude form, will not kill fowl on account of the arrangement of their digestive systems, but smaller doses will kill hawks. They also claim that one of the first parts of a bird that the hawk eats is the crop, and that if a dose of nux vomica is given in the feed of the birds any hawk that catches one soon after gets a fatal dose. You might try the poison with one and stake him out where Mr. Hawk will get him.

ROY H. WAITE.

Maryland Experiment Station.

Sickly Chicks.

What is it that is usually responsible for the abnormal development of most chickens raised in brooders indoors before it is possible to get them on the ground? It is a common experience to observe such chickens, as they approach the age of three or four weeks, give way to "leg weakness," unnatural feather growth, indications of vertigo, etc. Under like conditions of feed and care, with the exception that the chickens have access to the ground and the open air, development is satisfactory. What is the cause?

New York. E. W. B.

I do not know that any other explanation of the lack of thrift and vitality in house-reared chicks, as shown by leg weakness, etc., can be given than that such confinement deprives them of the natural conditions which are essential to growth and strength. It has been found that human babies do better out of doors, and many have to be kept there to save their lives. It is not strange, then, that young chicks whose immediate ancestors have not been made house-proof by generations of close confinement cannot endure such artificial conditions. I have no doubt that a race of fowls might be produced by generations of life and breeding in confinement that would thrive indoors and wither out, but with those we have, the natural life is the outdoor one.

M. B. D.

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PUBLISHER'S DESK

My mother, Mrs. M. J. Warren, who is now 84 years of age, was induced by representations through the mail, and by agents, to pay in to the E. G. Lewis concern of University City, Mo., sums of money covering a period of five or six years. A payment of $52 was made, which payment was completed in 1910; this sum of money was obtained from my mother by representations that if she joined the American Woman's League she would be entitled to a home as long as she lived; the home was to be completed in three years from the time of her final payment of the membership fee.

Lewis induced my mother to return to his institution all papers and correspondence that had passed between his concern and her, even to the money-order receipts that she had saved. All my mother has to show for the money she paid into the "American Woman's League" is the inclosed certificate No. 21648, and a letter dated June 21st, 1911. I am in poor circumstances myself, and my mother needs a great deal of care and attention. If there is any possible way that this man can be made return this money to my mother, I will greatly appreciate the same. M. D. S.

Michigan.

The women of the country sent Lewis over a million and a half dollars of money on this scheme. It is in evidence that during the time he was receiving it, he was losing $50,000 a month trying to publish cheap papers. He had to keep the papers going in order to keep the scheme going, and the money flowing in. In all his schemes he got ten or twelve millions, and it is all lost to the victims. Just now he has another scheme somewhere in California. If you have any money you want to put out on promises, Lewis will accommodate you any time.

A manual for quack doctors, telling them how to get the greatest possible amount of money from the largest possible number of patients, was found by United States Postoffice Inspectors today in a raid on the office of the Meyer Medical Company, whose proprietors were arrested on charges of using the mails to defraud. The manual tells how to hypnotize a patient and how to diagnose his physical and more particularly his financial condition. The instructions are devoted almost entirely to methods of getting money quickly and certainly. Much of the contents of the manual relating to diagnosis of the cases usually treated by concerns of this class is unprintable under the postal laws.

This description of the quack doctor manual reminds us of the Strout "Buggy-Seat Conferences," addressed to the local agents for the sale of farms. This Meyer Medical Company has another significant suggestion. E. G. Lewis was at one time connected with it in some way, and always referred to Mr. Meyer as one of the first-class citizens of St. Louis, who took stock in the Lewis companies and who went on the stand readily to testify to Lewis' good character, ability and good faith in separating women from their money. In other words, Meyer was one of the business men of St. Louis who confirmed Congressman Ashbrook and Secretary Redfield in the belief that Lewis might have been a millionaire if the postoffice had permitted Lewis to go on robbing women and children. After hearing the Meyer testimony, or maybe it was before hearing it, Mr. Redfield expressed regret that he was not in on the Lewis deals. Lewis will now no doubt testify to the good character of Meyer, and Secretary Redfield will have another opportunity to keep a promoter out of jail.

George F. Cole, engaged in the commission business at 131 South Market St., in this city, was arrested this morning by Deputy United States Marshal Ruhl on a warrant charging him with using the United States mails in a scheme to defraud. He was arraigned before United States Commissioner Hayes at the Federal Building this forenoon and held in the sum of $2,500. Cole, the Government alleges, sent letters to farmers throughout the New England States and particularly New Hampshire, stating that he was ready to buy poultry, butter and eggs as well as other produce, promising good prices. By this means, the Government contends, he was enabled to get shipped to his basement in the market district large quantities of produce, butter, poultry and eggs for which the Government asserts in its complaint he never intended to pay.—Local Paper.

Mr. Cole has had experience with the courts before. His trouble this time, it seems, grew out of a representation that a fire caused losses which made it impossible for him to pay farmers for goods consigned to him. His previous trouble grew out of an allegation that he caused notices to be sent farmers, who had shipped goods to him, that Mr. Cole was dead. We had many complaints against him some years back, mostly from Maine farmers; and we thought after the show-up of these complaints and the court record, that he would find few farmers again willing to ship goods to him. But this time he seems to have operated in another State. He says he might have made $100,000 if he had been dishonest. This would indicate that he found no difficulty in inducing producers to consign goods to him. He occupied a basement room in the market district.

I shipped 10 bags of beans to J. F. Wygant, Washington Street, New York, upon representation that he would pay $1 per bag for them. I have never heard from him. I do not expect you to recover but just give the experience for what it is worth. W. C.

The commission house claimed it lost 40 cents on this shipment, but as the report was not made until a year after the transaction, we could not work up much sympathy for the loss. The case was reported to the Commissioner of Agriculture, who now has authority to issue licenses or revoke them, and his view may be inferred from this later letter from the shipper:

On January 21 I received money order for $6.60 for the beans according to my claim, deducting for bags and expressage. Now I blame it all on you, for when I presented my claim I said I did not expect you to recover, but you went and did it, and you see the outcome. I am in $6.60. Many thanks to you. W. C.

The produce commission law and the Department of Agriculture were the principal factors in this settlement.

We do not know who is engineering the promotion scheme under the title of The Luther Burbank Society, Santa Rosa, Cal., but he is a star performer. He is certainly capitalizing the Burbank notoriety for all it is worth. The scheme was first worked on the life membership dodge, each subscriber pledging himself to pay a handsome fee for a set of books. Then an honorary membershhip was skillfully provided in ways to give no suspicion of what was coming, but now these "honorary" members begin to cry, so we are told, for recognition, and a plan is proposed to permit them to contribute $81 to the success of the scheme. What will be next we do not know, but opportunities for further contributions are not improbable. Indeed, we think them quite certain.

In the drugstores and other shops of New York alleged Burbank seeds are sold at $1 a bunch, containing 12 packages. Inquiry at reliable seeds stores reveals the fact that with one exception these 12 packets contain about one-half the amount of seed put up by responsible houses in each packet. In the Burbank collection you get 12 packets for $1. These seed packets usually retail for 10 cents each, but when put up by the reliable houses the packets contain about double the amount of seed. Besides, from the reliable houses you are sure to get carefully grown and tested varieties of seeds. From a concern with a scheme you are always guessing. I would not take chances on them if the seeds were a gift.

Dr. Julian P. Thomas, head of the J. P. Thomas Natural Food Company, of 522 West 37th St., who calls himself the inventor of the only sure remedy to cut the high cost of living, was arraigned yesterday before United States Commissioner Houghton and held in $5,000 bail on a charge of using the mails to defraud. Edmund Honvery, a postoffice inspector, complained that Dr. Thomas wrote to him urging his treatment for an ailment after the inspector had feigned symptoms. The doctor said he had brought himself to such a state of physical perfection on a diet of one raw onion, half a tomato and one of his raw wheat biscuits that he could lift 2,000 pounds, and the diet, he said, cost him less than 5 cents a day. The inspectors said Dr. Thomas's gross revenue from his "factory" was $100 a day for the last five years.—Daily Paper.

It is alleged that Dr. Thomas received letters describing the ills of patients, and prescribed for them without seeing the patients. It is said that people describing normal conditions were also advised that they needed treatment, and that the fee was as high as $40. However this may be, the trade in raw biscuits seemed profitable. J. J. D.

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Marking Laying Hens.

If I use paint on white hens, one color for each month I see them laying, what would be the limit in number of colors to weed out in the end of 12 months? What do the laying contests show by trap-nesting, the hens that lay four or six months, lay as many eggs as those that lay eight or 10 months, or what is the average? L. E. S.

Lyndonville, Vt.

Of all the questions THE R. N.-Y. ever sent me to be answered, I think the above "takes the cake." If L. E. S.'s plan was carried out for a year, I would like to see the hens. They would be a lot of walking rainbows sure. I knew a man in Massachusetts who built fences across his henyard and kept his Barred Rocks from getting too fat by feeding in the farthest yard. When a hen got so fat she couldn't fly over the fence, she had to go hungry until she thinned down enough to fly over and get to the feed. But L. E. S.'s scheme is not quite clear to me. If he is going to paint a streak on a hen only once a month, how is he going to tell that the hen has laid all that month or not? As to weeding out those with the fewest colors on, that would depend on how close he wanted to cull.

L. E. S. asks "What do the laying contests show by trap-nesting? That hens that lay four or six months, lay as many as those that lay eight or 10 months, or what is the average?" Trap-nesting shows each day what hens in the pen have laid; each hen when taken out of the nest has her number marked on the egg, also a mark is made under her number on a sheet of paper; the number of these marks showing how many eggs she has laid in the month or year. Trap-nesting makes it necessary to go around about once an hour to release the hens that have laid, so that other hens can use the nests. If one has as many trap-nests as he has hens, it would not be necessary to go so often.

GEO. A. COSGROVE.

Disinfecting Incubator.

Will you please inform me what you think is best to use to disinfect an incubator? O. N.

Connecticut.

Obtain from your druggist or physician one or two tablets of corrosive sublimate each of which when dissolved in two quarts of water will make a 1 to 4,000 solution. Dissolve in an earthen or wooden vessel and wash the interior of the incubator with the solution. This is the strongest disinfectant available, but is a powerful poison and neither tablets nor solution should be left where children or animals might swallow them. A 5% solution of carbolic acid in water will answer the same purpose. This is also a poison but its odor makes its accidental ingestion less likely. A still more convenient method of disinfecting an incubator would be to purchase a small sized formaldehyde candle, such as is used to disinfect rooms, and burn that in the closed incubator. The interior should first be cleaned, however. M. B. D.

Poor Hatch.

I have about 100 pullets, in fine condition, are laying very well, but it seems their eggs do not hatch. I had two hens coming off, one got two chicks the other none. The eggs were all fertile and a full-grown chick in every egg. What can be the trouble? I started the incubator with 350 eggs before the hens were due. They are White Orpingtons. The shell does not come off the egg when boiled.

New York. E. H.

There is evidently a lack of vigor in your flock somewhere which prevents your eggs from hatching, though fertile. This may be due to the heavy laying of the pullets through the Winter, or, possibly to an excessive number of pullets with the males in the breeding pen; or the males, themselves, may be at fault. Close confinement of the flock and heavy feeding through the Winter also tends to lack of vigorous fertility in the Spring. As the season advances, particularly after you have turned your fowls out, this condition will probably improve, and you may get a better hatch from the eggs in the incubator than from those set earlier under hens. If it can well be avoided, eggs from fowls that have been closely confined through the Winter, and fed for egg production, should not be depended upon for hatching in the Spring. They may be fertile, but are apt to contain weak germs which can never develop into vigorous chicks.

M. B. D.

Stiffness in Hogs.

Fall pigs fat and doing well, all at once stiffen up and stop eating, grow poor and cannot walk. They were on cement floors with lots of straw, and are all of good registered Berkshire stock. Old brood sow that I showed at fairs last Fall lost all hair from her back; she has no vermin but is very smooth on the back, without a hair. I have fed prepared salt.

New York. O. F. C.

It is a mistake to give much salt, of any kind, to hogs. A pound of salt to each hundred pounds of ground feed used in making slop is enough in most instances. We have known of a number of cases where harm has been done by oversalting hogs, especially in pig. There is no need of such doping. Overfeeding and lack of exercise is the cause of stiffening and lameness in pigs and sows. Rickets is induced. Worms are a complication. Turn the pigs and sows out on green feed as soon as possible and in addition feed very light, laxative slop, if it is needed in addition to green feed. The sow may regain her coat if so treated. Fevered condition from heavy feeding caused the loss of hair, or you may have used too much kerosene to "slick" her coat at the fairs. A. S. A.

Lymphangitis.

Could you tell me what is the matter with my horse? I bought a mare about a month ago, she is nine or ten years old and she seems to eat all right. I fed her ground oats and Timothy mixed with clover, but as soon as she stands in the barn a day or so her hind legs swell in the joints. Her udder gets big and hard and there is a hardening of the veins of abdomen. She will eat all her feed, but eats slowly and when I use the curry comb seems in pain. S. F. N.

Ohio.

Have her teeth put in order by a veterinarian and then feed whole oats. Allow her a box stall in stable, but work or exercise her every day. Each time she comes in rub her legs dry and bandage them from feet to hocks. The swelling has resulted from attacks of lymphangitis (milk leg) and will not altogether disappear. A. S. A.

Feeding Brood Mare.

I have an 11-year-old road mare due to foal for first time about June 1. How should she be fed, driven and cared for both now and after foaling? C. B. T.

Maine.

Use the mare for light work to within a week of foaling. Let her occupy a roomy box stall in the stable, but never let her stand a single day without work or exercise. Feed whole oats, wheat bran and mixed hay. Do not feed grass if she is to work. If she has no work to do turn her on grass when it is ready, for an hour or so a day at first, and gradually accustom her to living on grass without other feed. Reduce the oats and increase bran as foaling time approaches. For foaling have the box stall cleaned out, disinfected and whitewashed and put in fresh, clean bedding on foaling day. Saturate the stump of the navel with tincture of iodine at birth and then keep it well coated with boric acid. Feed the mare lightly after foaling, and in a week she and the foal can go on grass. If she is to work she may return to it in three weeks, but must be worked only a part of a day for the first week, as she will be weak and soft. Each time she comes in hot and tired feed her a pound or two of hay in an ordinary stall while she is cooling off, and milk her almost dry before the foal is allowed to suck. Let the foal have access to cool fresh water at will, and as soon as possible allow it to eat oatmeal. Add wheat bran gradually, and allow grass and hay as soon as the foal cares to eat such feed.

A. S. A.

Milkless Sows.

What was the matter with this sow? She farrowed at proper time, 10 nice pigs, which tried to suck, but could get no milk. She looked as though she had plenty of milk. She farrowed with ease, was not sick, did not have milk fever or caked teats, and acted naturally in every way. She had been fed on oats and wheat; was not fat nor poor, but in good condition and had plenty of exercise until a week before farrowing, when I put her in a small pen by herself.

Alberta. A. R. M.

We take it that these were her first pigs, and if that is so it must be that the teats are "blind" (without milk ducts). Such cases have been met with, and in some instances may be remedied by operation. Garget may also lead to suppression of milk. Do not breed this sow again. A. S. A.

Garget.

I have a Jersey heifer that freshened February 21. Her udder was caked but by putting on hot or cold water and massaging the cake was nearly gone. The calf was chilled so we had to feed it and keep it where it was warm for a few days. Shortly after putting the calf with the mother (about three times a day) her udder in one quarter became discolored and swollen very badly. We had milked her partly out in the morning a few times. We tried rubbing again and got medicine from a veterinarian with the result that the quarter is still swollen some and thick. The skin is loose, though it does not seem to be sore, and the fever has subsided for about two weeks. Her milk has continued good. We have been rubbing it night and morning lately with sweet oil. Though I massage it well for 15 minutes it does not seem to improve it. What do you advise? G. W. M.

New York.

Massage three times a day with lanolin and each night with a mixture of one part of mercurial ointment and two parts of soft soap. If the enlargement is not due to tuberculosis, this treatment may do some good. It is well to test such cows with tuberculin. A. S. A.

Scratches.

I have a western horse nine years old, purchased last Spring. He had a scar in his left forward foot, where they told me he had been cut in barbed wire. Last Fall he ran a nail or dirt in the crack of his hoof in the same foot, below fetlock. I put carbolic acid on it, and the acid ran over this old scar; it cracked open and became sore, and he became lame. I took him to a veterinarian and he pronounced it scratches. He gave me salve to apply twice a day. I did so, and a week later the other foot became the same way. I applied the salve on both feet all Winter. He is much better just now; is not lame but a little stiff when he first comes out. The same disease is now starting in his hind feet. He is in good health. Would you advise me what to do for him? L. M. D.

Poultice the affected parts for three days with hot flaxseed meal changed night and morning. Then wash clean once, but do not afterward wash the parts. Washing aggravates scratches. After discontinuing the poultices apply twice daily an ointment composed of two drams of sulphur and one dram each of spirits of camphor and compound tincture of benzoin to the ounce of unsalted lard or lanolin. Keep the horse from standing in a cold draft in the stable. If the legs stock up when the horse stands over night bandage them snugly with flannel each time he comes into the stable and if possible allow a roomy box stall, in place of an ordinary stall.

A. S. A.

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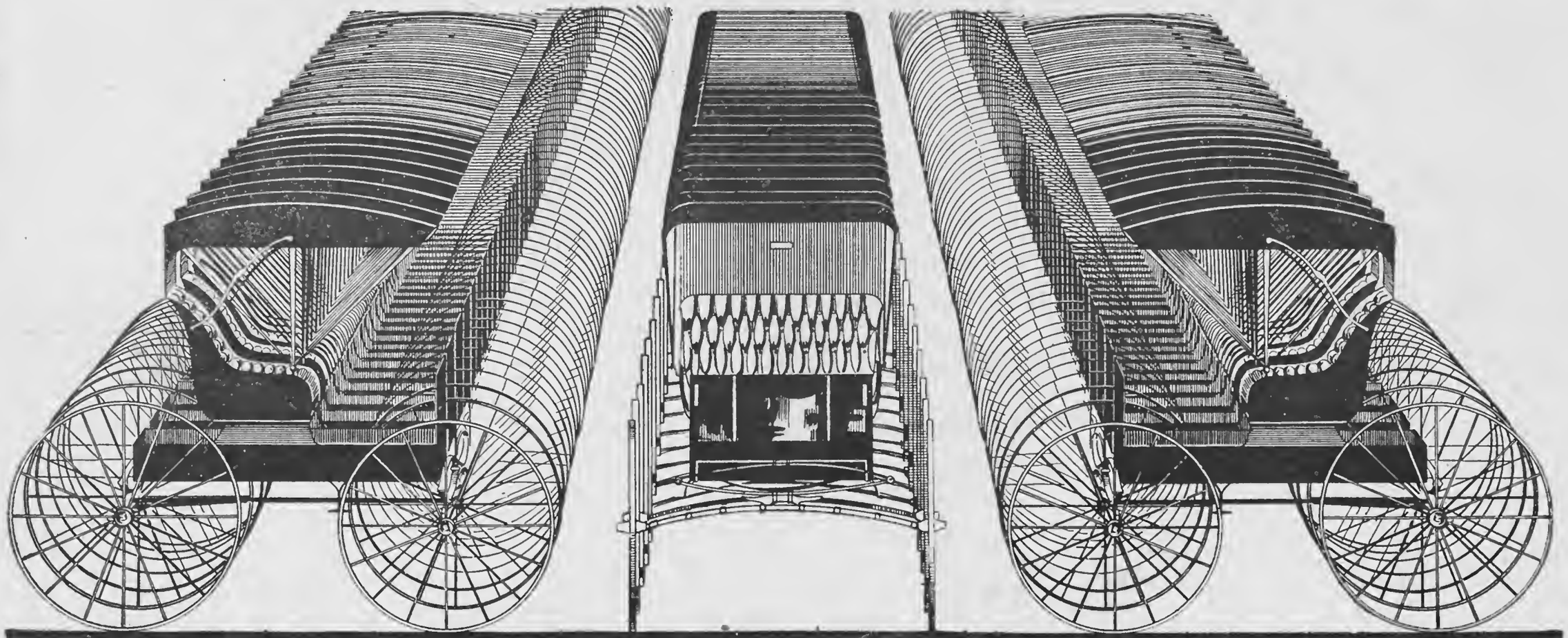

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CARBON DIOXIDE IN INCUBATION.

Bad Air in the Incubator.

[Bulletin 76 of the Connecticut Experiment Station contains a report of very long and patient work by Prof G. H. Lamson, Jr., in studying the presence of carbonic acid gas formed in incubators. There has been much discussion concerning the functions and the effect of this gas, and we may say that Prof. Lamson's work has solved the problem. The bulletin is a technical discussion of a chemical question, but Prof. Lamson has prepared for us a more practical statement—which follows.]

HEN VS. INCUBATOR.—The problem of artificial incubation has been the question of how we can hatch as many and as strong chickens in the incubator as under the hen. Some hold that the same per cent. and as strong chickens can be hatched in the incubator as under the hen, but this is not substantiated by those who have carefully experimented with artificial and natural incubation, and even the incubator manufacturers claim that their machines only approximate the old hen's ability to bring off good hatches and produce vigorous chicks. What the differences are between natural and artificial incubation and what the factor or factors that produce the different results are problems well worthy of considerable study, for great is the economic importance to the country if even a small increase can be made in the hatching efficiency of the incubator.

THE WOODEN HEN.—A temperature of 102½ degrees Fhr. during the first half of the period of incubation and 103½ degrees Fhr. during the last half of that period closely approximates the temperature found under the average hen. So with a level incubator, a reliable thermometer and a reasonable amount of care in looking after the lamp and thermostat, the temperature need not worry the incubator operator. By turning the eggs twice each day this function of the hen is taken care of as well as is necessary. If cooling is practiced according to the suggestion of the incubator manufacturers no harm will be done, at least, and the operator will approximate the hen's "out to lunch" periods. If these conditions are essentially the same as those found under the hen the factor making the difference between natural and artificial incubation must then be elsewhere. The next question comes: Is it in the moisture of the air or the chemical composition of the air?

MOISTURE.—Just what amount of moisture is necessary for the most successful incubation the writer does not profess to know. In most of the work on moisture the ordinary incubator hygrometers have been used to measure this factor, and these instruments are a delusion and snare as far as an accurate measurement of the humidity is concerned. There are as strong adherents of the moisture as non-moisture, and while some have had better results with one than with the other it is known that the chick embryo is able to withstand a wide variation of moisture and hatch. That there is an opportunity to get more light on the subject of moisture in incubation by the use of accurate methods is evident to anyone who has given this problem much thought.

"BAD AIR."—It is known that there is in fresh air a small amount (.03 per cent.) of a combination of gases called carbon dioxide or carbonic acid gas, and that this is breathed out by animals, the hen included, in large amounts from the lungs. It was believed by some that carbon dioxide was the factor that made the difference between the hen and the wooden hen, for the incubator could not breathe, but the fumes from the lamp were known to contain carbon dioxide and the question others raised was as to the possibility of there being more carbon dioxide in the incubator than in under the hen. To determine the truth about this question it was necessary to construct an apparatus that would have a ventilation that was entirely free from any fumes of the incubator lamp and at the same time have the temperature and moisture controlled. This necessitated various attachments which would not be practical in ordinary incubation or in the commercial incubator, for the aim was not to design a new incubator for the market, but to study these factors accurately and keep them under control. These incubators were sealed during the progress of incubation, except for a few minutes to test and weigh the eggs. The eggs were turned by a curved device on a circular tray, and the air was pumped into the incubator at the same rate during each hour through the process of incubation, and the air surrounding the eggs was tested by a chemist, Mr. H. D. Edmond, by whose ingenuity the construction of the apparatus was made a success. The work was carried on through the hatching season of five years and nearly 10,000 eggs were incubated.

THE CELEBRATED TOM BARRON WHITE WYANDOTTES AT THE STORRS EGG-LAYING CONTEST. Fig. 290.

AIR UNDER THE HEN.—The results showed early in the experiments that the chief source of the carbon dioxide was the chick embryo. With a hen sitting on boiled or china eggs the carbon dioxide under her was found to be small in amount. With fertile eggs in an incubator or under a hen the carbon dioxide increased slowly at first, and rapidly after the ninth day of incubation until it reached the maximum a little before the chickens hatched. This increase closely approximates the increase in the weight of the chick embryo. If the ventilation was slow and sluggish then the carbon dioxide increased more rapidly and reached a high figure compared with the incubator supplied with a rapid circulation from one quarter of a cubic foot to 15 cubic feet each hour during incubation, in other words by cutting down the amount of fresh air we allowed the carbon dioxide given off from the eggs to ac-

cumulate in large quantities and noted the effects upon hatching by increasing the rate of ventilation, but small quantities were present in the incubator.

THE LIMIT.—Possibly the easiest method of explaining the effect of carbon dioxide is to say that the normal fresh air contains three parts of carbon dioxide in 10,000 parts of air. When the ventilation was cut down to a slow rate the carbon dioxide reached over 500 parts in 10,000 and only about 12 per cent. of the fertile eggs hatched and half of these were crippled chicks, showing that amount was not good for the chicks. To find out how much carbon dioxide there was in under the hens during incubation the air was drawn through a wooden egg placed in the center of a nest (see Fig. 291) and the carbon dioxide usually reached 55 parts as a maximum. In order to duplicate this ventilation, the experimental incubators were run with five cubic feet each hour, and the results each time closely approximated the percentage hatched under the hen. It was found, however, that good hatches were had when the carbon dioxide went higher than this, but that they were reduced after the amount exceeded 150 parts. In the commercial incubators tested the carbon dioxide seldom exceeded 50 parts or closely approximated the conditions under the hen. The chicks hatched well in air varying in amount of carbon dioxide from 30 to 150 parts in 10,000 within the experimental incubators. The hen and the commercial incubators tested did not exceed these limits in any case. It was proved conclusively that the normal commercial incubator is not faulty in the amount of carbon dioxide. Mammoth machines were not tested. Carbon dioxide was added artificially, and it did not produce bad results until it occurred in large amounts.

DON'T WORRY.—Incubator operators need not worry about the carbon dioxide factor. If more was beneficial all that would be necessary would be to reduce the speed of ventilation. In case the operator has had very poor results with eggs from hens that are hatching well in other incubators and are known to be strong then he might do well to inspect his heater to find if any part had been bent in shipment and in case there was a defect have another supplied. Heretofore, the value of carbon dioxide in incubation has been a much debated point, some holding that it was beneficial to the developing embryo and others feeling that its presence in the fumes of the lamp was the reason for poor hatches. Incubator manufacturers not knowing its value or danger have experimented on the public by changing the amount of ventilation in their incubators and have even sought to increase carbon dioxide artificially, so that while the value of these experiments does not come directly to the poultryman it is hoped that they may in a measure protect him from being a future object for experiment.

Without holding any brief for the incubators or incubator manufacturers, experiments have shown that there is more liability of poor results in hatching from weak germed eggs than from any other source, and that it will be easier to hatch more chickens from eggs containing strong germs under poor incubating conditions than it will be to hatch from the weak germs under the most ideal incubating conditions of temperature, moisture and ventilation. G. H. LAMSON, JR.

ARE TOM BARRON'S HENS WYANDOTTES?

As it was a very serious question in my mind whether any "Standard" Wyandottes could make the unusual egg records which the "Barron" birds have made at both Storrs and Mountain Grove, I wrote to both Prof. Quisenberry and to Prof. Kirkpatrick, and asked to have an opinion on the "type" of these birds. Prof. Kirkpatrick sent me a photograph of the cockerel, stating: "I think as I see them they are considerably different from our American type of Wyandotte. *They are longer in body.*" I submitted this photograph to Mr. W. B. Atherton, the editor of the American Fancier and Stockkeeper, who said, "The bird is a Rhode Island Red shape and type, white, with a rose comb and poor carriage." Prof. Kirkpatrick wrote to me as follows:

I am pleased to advise that Judge W. H. Card visited us a few days ago, and I took the liberty of asking him to pass on Mr. Barron's Wyandottes, and am at liberty to give his opinion. I felt that perhaps as a judge his summary of the case might be a little more trustworthy than my own.

Unless I am in error, Card does not think Barron's Wyandottes would score 75 in the Boston show. He says they correspond more nearly with, and in fact, are almost typical Rhode Island Whites with their long horizontal back and body, that they are not true Wyandotte shape by any means. Card thinks furthermore that the little white in their ear lobes probably indicates Mediterranean blood, and they are also off in leg color. This may, however, be due to their excessive egg production. Card adds, however, that these birds are the most energetic, "snappiest" bunch of hens he has seen for a long while. They go for their food not exactly as if they were starved, but as if they were enjoying it and meant business.

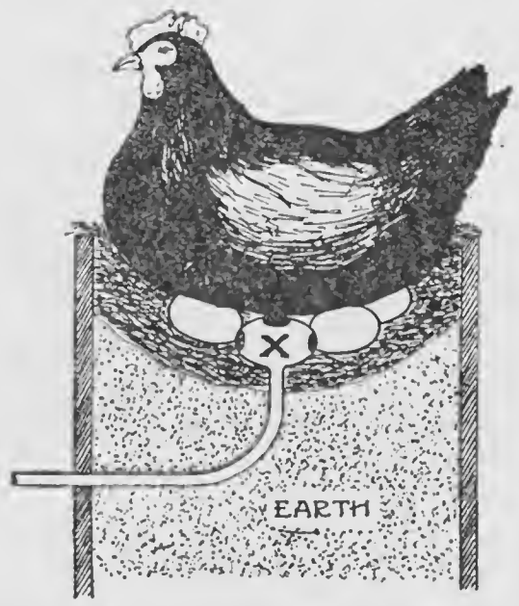
Mr. Barron deserves great credit for making a Wyandotte-Leghorn cross that will lay well, but what about the hundreds of innocent purchasers of this hybrid stock, who believe they have standard Wyandotte type?

I notice that Mr. Cosgrove and others report that the "Barron" Leghorns lay an off-colored egg. This would indicate the same White Indian Game blood that was crossed on Leghorn some years ago to correct the whitish legs coming from the Minorca blood used to give the old Leghorn size. Anyone who handled large flocks of Leghorns for commercial egg production, say 10 years ago, knows how hard it was to eradicate the off-colored egg layer, and as off-colored eggs cut the price on "fancy selected white" grades, some of the best looking and laying hens had to be disposed of. These off-colored eggs were never hatched and finally a white egg strain was established. There are several strains in the East that have been brought to as high an average as the Barron birds, but they lay a clear white egg.

New Jersey. BUCHANAN BURR, M. D.

Well, What Of It?

It will require the strongest evidence to convince us that Tom Barron has entered any "mongrel" or hybrid birds in this contest. There is no question about the ability of these Barron hens to lay eggs, and the sensible poultry keeper can easily forgive a hen which lays 200 eggs a year if her shape and clothes are not cut after the exact pattern. In order to get at the facts we wrote Judge W. H. Card for his real opinion—here it is. We see no evidence in it to justify any criticism of Mr. Barron. If



TESTING AIR UNDER THE HEN. FIG. 291.

there are breeders who have the birds which can beat these champions, what are they doing up on the fence crowing about it? Let them get down into the contest pen.

We have also obtained special permission from President Thompson of the American Poultry Association to reproduce from the Standard of Perfection the ideal picture of a White Wyandotte. It is found on page 725. Compare this with the Barron Wyandottes and read what is said on page 724.

Poor Exhibition Birds, But Mighty Layers!

As regards the Barron Wyandottes, from the show room standpoint they are poor exhibition Wyandottes; we can't say that they are not Wyandottes at all, but surely have the shape of the Rhode Island Whites or Reds, which is the antithesis of true Wyandotte shape. They have a little white in ear lobes, which might indicate Leghorn or Mediterranean blood; their legs are not a bright yellow, in fact nearly a White Orpington color, yet this may also indicates excessive laying, which often causes the leg color to fade.

In so far as they have a rose comb, and are white, with what might be called yellow legs and beak, and are also a good-sized fowl, they could be called White Wyandottes of a pronounced utility type, similar to the fowls found on many White Wyandotte utility plants; which generally have a long body and back almost horizontal. Many White Wyandotte show birds have white in lobes, and it is not counted a disqualification in the Standard.

This bunch of birds (Barron's Wyandottes at Storrs) are certainly the liveliest, snappiest lot of hens I have ever seen together. When feeding they pick up their grain, etc., in a very decisive manner, not as though they were starved, but as though they relished it, and wanted the world to know it; for example, just as an energetic person goes about his work with a snap, a know-how and a vim; in short they acted as though they thoroughly enjoyed living.

One point which seems to me not exactly according to Hoyle is the fact that every Wyandotte breeder hails the Wyandotte as the breed with the right shape for a layer just because of these big egg records made by these utility hens, which have not in any particular the true Wyandotte shape, when it is a well-known fact that the show Wyandotte type is a very poor layer; it is really booming the breed under false pretenses. The 1915 new Standard will call for a shape more like utility type, although far from the extreme type seen in Barron's birds. Understand me, I have only my observation of these birds to say they are hybrids; but they look the part all right.

Utility White Wyandottes are not show birds, and White Wyandotte show birds are about as good layers as the Game. There are two sides to this question. Much credit should be given any breeder or breeders who can evolve a breed into such laying wonders as are these Barron hens; further than that, all utility Wyandotte breeders have come to know that the longer bodied type are great layers, which is along the same plane as Barron's ideas; therefore I have nothing to criticise except the attitude of show bird breeders claiming all the thunder of the utility people without having the goods that produce said "thunder." For my part I would like to see the Wyandotte come into its own. As roasters and broilers they are unequaled; yet this is show stock that have these qualifications; a bird modified from both types would be the thing, and that is what the standard makers are striving for.

W. H. CARD.

HAY FROM CRIMSON CLOVER.

Is it wise to cut Crimson clover for hay? At what condition of growth is it best to cut it? How late can it be used for hay before it is dangerous for stock? I have a young orchard under my care which was sown to Crimson clover last year for green manuring. It has made such a rapid and thick growth that it will be impossible to turn it under without plowing very deep. The orchard had been neglected and the roots are therefore near the surface. The orchard is now bearing. I would like to cut this Crimson clover for hay and then plow under the stubble. Is it wise to do so? W. S. F.

Gunston, Va.

Here comes this yearly question. We have it from at least a dozen people. Crimson clover makes excellent hay for cattle. We consider it superior to Red clover for hay, when cut early. There has been some trouble from late-cut Crimson clover when fed to horses. After the bloom heads turn brown you will find upon examination, hard little spines or hooks—quite perceptible as you pull these dry heads through your fingers. There have been cases where these little spines formed lumps or balls in the stomachs of horses so that they died of colic. Many horses fed on this kind of hay never suffer, but some have done so, and it is safe advice never to feed this late-cut hay to horses. Cut early in bloom there will be no trouble, and cattle eat the hay safely in any event. We should by all means cut this clover, as it shows the red bloom freely and make hay of it. If you have other hay we should feed it to the horses or mules and feed the Crimson to cattle. Plow the stubble under as green manure. At Fig. 293 are pictures of two of these balls found in the stomach of a horse. This picture is re-engraved from a government bulletin on Crimson clover.

RAW PHOSPHATE ROCK AND MANURE.

On page 598, H. W. C. asks J. A. V. for his authority that stable manure will convert the phosphoric compounds in raw rock (phosphate) into more available forms. I can quote E. E. Miller, in "Fertilizing for Profits," page 25, last paragraph: "When (raw rock or floats) mixed with stable manure or with any considerable quantity of decaying vegetable matter it will, however, gradually be changed into forms that plants can use."

And why not? The phosphate compounds of floats ground finely are readily broken up anyway, and why should not acids formed in decaying vegetation be used to break up into more available forms of phosphate, as well as sulphuric acid? While doing so the acid which some claim sours land when decaying vegetation is plowed under, is used up in its work on the floats, and is then no longer an acid to sour land. Therefore the floats is then a "sweetener" of souring manure, and used in this way lessens the necessity of lime.

Many times I have seen in THE R. N.-Y. advice to use acid phosphate to soak up urine in stables and as a dust on droppings boards of henhouses. "Floats" is cheaper, will work better owing to the action of acids in droppings acting on floats. Then too you run the risk of liberating the ammonia of the droppings by acid phosphate. I should prefer the use of land plaster on hen manure (droppings boards) also in stable, for the ammonia will readily unite with land plaster, forming sulphate of ammonia, a now-volatile compound, and this can be then applied to the soil and plants get ammonia,

rather than the air, where it surely goes when liberated and has half a chance. F. L. ADAMS.

Florida.

R. N.-Y.—All we ask is that you state the case fairly. What J. A. V. said was that the action of the manure pile would be about the same as that of sulphuric acid on the phosphate rock. The powerful acid "cuts" or dissolves the rock, and makes the phosphoric acid available. There is no such action as this in the manure. We stated that the experiment station had been unable to find any such action. As proof of this statement we offer the following, dated May 1:

So far as I am aware there is no experimental evidence published by any of the stations to warrant the statement that manure makes the phosphoric acid of phosphate rock available to any appreciable extent. We tried for a number of years by both laboratory and field experiments to determine the effect of manure on phosphate rock mixed with it. We came to the conclusion that the effect at best was inappreciable.

Tennessee Exp. Station. C. A. MOOERS,
Chemist and Agronomist.

There have been some good reports from our readers regarding the results from the use of ground rock phosphates with manure but most of them do not show positively whether the gains were due to the phosphoric acid or to some action of the rock phosphate in preventing the escape of ammonia as land plaster would do.

ARSENATE OF LEAD AND SEED CORN.

Is there any solution that can be put on seed corn to keep the crows from pulling it, besides coal tar? I have used coal tar for a number of years with good success, but it cannot be used in any kind of plantings. I would like to plant a field of silage corn on a farm about a mile from where I live. I have never raised corn there before, but it is in between two woods, and I think that crows would make short work of it. Is there a law that prevents sowing corn saturated with strychnine on the field, broadcast for the crows to eat? E. S.

For many years farmers, in New England at least, have been treating their seed corn with tar to protect it from crows. To accomplish this the tar must be thinned until it does not form a waterproof coating over the seed, or germination would be impossible. In course of time the crows seem to have learned to attack corn thus treated, making this method less successful, and an opportunity for experiments has offered itself. The Massachusetts Agricultural Experiment Station took up this subject several years ago, first applying tar to the seed as usual, and following this, while the tar was fresh, with a mixture of Paris green and road dust. The seed thus treated was planted with an ordinary planter, and was entirely unmolested both by crows and wireworms. The results were so satisfactory that they were published, and apparently tested by many, for many reports, both favorable and unfavorable, were received. Most of the unfavorable reports were to the effect that the seed failed to germinate, which was evidently due to applying the tar improperly.

One real defect in this method, however, is that two treatments of the seed are necessary: one with the tar, the other with the Paris green and dust. Accordingly, arsenate of lead paste was diluted to a thick paint and the seeds were thoroughly covered with this, and were then allowed to dry before planting. None of the corn thus planted was touched by crows, though adjoining untreated fields were attacked. Wireworms were found around the seed in the ground but did not touch it until the plants were two inches or more high. At this time they were found inside the seed, but the plants were no longer dependent upon this, so that no harm was done. It should be noted that in some tests of this material in the West, it was found that the wireworms entered the seed after sprouting, at the point where the sprout left the seed, thus escaping the poison and destroying the plants. This was not the case in the Station tests. H. T. FERNALD.

Massachusetts Exp. Station.

MEDIUM RED CLOVER SEEDING.

Medium Red, the most common and most valuable of Ohio's family of clovers, is a biennial plant that thrives in every county of our State. When the conditions necessary for its growth are complied with, these conditions are a well-drained soil with abundance of organic matter and plant food, including lime. The usual method of seeding is with wheat or oats as a nurse crop. When sown with wheat the seed can be sown any time from the middle of February until the first of May with fair success. In the early seeding, a time when the ground is frozen and more or less honeycombed should be selected, as then many of the seeds will fall into crevices and become covered by the soil later on. This covering of the seed is greatly to be desired. The late seeding should be done when the surface of the ground dries and is full of small cracks, into which the seed may fall and become covered. Thus we find that both early and late seeding has the same end in view—the covering of the seed. Very often the seed that is not covered starts to grow the first warm day, and then perishes either by freezing or by drying out before it has sufficient root to carry it through even a few days of early dry weather. At best the present method of sowing the seed on top of the ground is a wasteful one, resulting in the loss of from one-half to two-thirds of the seed used annually. When

COMMON MUSHROOM. AGARICUS CAMPESTRIS. Fig. 292.

the seed is sown late and the ground is dry a thorough harrowing with spike-tooth harrow is of great value in covering the seed and will not injure the wheat, but is often a benefit to it. Before many years a machine that will sow and cover the seed and not damage the wheat will be used for seeding on wheat ground, and at least half the seed be saved by so doing. Seeding with oats is very much more successful if a very early oat is used and a somewhat lighter seeding of the oats; also if the soil is well firmed and a good seed bed prepared,

HAIR BALLS FROM CRIMSON CLOVER HAY. Fig. 293.

as the young clover will suffer less from dry weather if these directions are followed. After the nurse crop, especially the wheat, has been removed the clover begins to grow rapidly, and if left alone will bloom considerably and ripen some seed the first year, and that is what we want to prevent, as the plant is weakened for the next year by allowing it to do so. To prevent this we clip it about a month after wheat harvest if the growth is fairly good, cultivating it about four inches from the ground. By doing this we get rid of the annual

A SCREEN FOR PROTECTING MELON PLANTS. Fig. 294.

weeds and prevent the clover blooming and cause it to make a stockier growth. However, this clipping must be done early enough to have a good growth for Winter protection. With a full stand treated in this way on fairly good soil at least 2½ tons of hay per acre should be cut, instead of the present average crop of 1 1-3 tons per acre for the State. We believe the present low average is largely due to an imperfect stand, due to bad method of seeding and lack of care the first year. If after cutting the nurse crop the growth is not vigorous the application of five tons of manure per acre, put on with spreader, will do wonders for it. If two crops, one of hay and one of seed, are to be cut the next year it is imperative that the hay crop be taken off as early as possible, for if allowed to become fairly mature the chances for seed crop are greatly reduced. If a large crop of seed is desired, and the hay not needed, pasture the clover through May and then clip about two weeks before the usual time for cutting for hay, thus giving the seed crop an earlier start. By so doing a large crop of seed is almost assured. HORATIO MARKLEY.

COVER CROPS, LIME AND FERTILIZER.

We have been dairy farmers. A few years ago we built a nice sanitary stable with cement floor, sanitary fixtures and three large silos. We had 75 cows and the new stable was for 100 with 50 on either side. Before we could get well started and get in the new stock intended, the cattle were not found just right, and in the end we sold off all the stock and the part of farm where we built the new stable, and went out of the dairy business. The cows were sold in other dairies. All our trouble came from a Borden inspector's call, and the news somehow spread that he condemned our stock, which was not the case, but it put us out all the same and sickened us of the dairy. But without the stock we cannot have the manure. We have quite a start with poultry and some hogs. Last Fall some Crimson clover was sown with buckwheat in an oat field. It was put in with a cutaway harrow. The buckwheat did not do well, as the drought kept it back at the start. But a fine crop of oats came in, and the clover looked well at beginning of Winter. This is our first trial with Crimson clover, and it was put in to turn under this Spring. Can we break up the sod this Spring, put in corn and at the last cultivation put in buckwheat and Crimson clover, plow under in Spring and put in oats or barley for the grain? In Fall sow to rye to plow under in Spring, and then go over again with the corn and others as before in a two-year rotation. Can we do this without manure, and how shall we come out in the end? Will our soil keep up and grow better, or must we use manure in some shape. Land is naturally well drained, I think, and mostly up-land and rolling, but not very high. We could have the manure from the poultry, keeping a large number, and also hogs and some cows. I. B.

New York.

There is no question whatever about the possibility of producing good crops of corn year after year without manure. We are doing this very thing on our own farm, and have continued it for six years or more. We plant a flint corn which gives a short season of growth, so that planting may be delayed in order to obtain the largest growth in the cover crop. At the last cultivation of this corn, which with us comes in early August, we seed about 20 pounds of Hairy vetch, and three pecks of rye to the acre. In a season of sufficient moisture we should add to this one pound of Cow-horn turnip seed, and about eight pounds of Crimson clover. This is scattered on top of the ground through the corn, and then gone over with a shallow cultivator. It pays to rake over the spaces between the hills left uncovered by the cultivator with a rake. With a fair amount of moisture this crop properly starts, and grows in the corn. Cutting the corn crop tramples it down somewhat, but does very little permanent injury. The following Spring the rye and the vetch are usually shoulder high early in May. The Cow-horn turnips do not live over Winter, and the Crimson clover is thrown out of the soil during March about six times out of ten. The rye and vetch are plowed under by dragging a heavy chain at the front of the plow. As soon as possible after plowing under, we broadcast each year 500 to 600 pounds of slaked lime, which is at once harrowed into the soil. In plowing under cover crops of this sort in Spring, when the winds are high, packing with a roller or heavy drag, and a prompt harrowing is necessary.

The corn is planted at the usual time and fertilized in the hill with a mixture of chemicals, or crushed hen manure re-enforced with these chemicals, as we have often advised. Again in August the cover crop is put in as before, and year after year this plan follows. Our crops of corn have been heavy, both stalk and ear. They increase from year to year, and the soil itself is growing more mellow, and is in better condition generally. This plan of cover crops, lime and fertilizer, with corn following corn, could be kept up indefinitely, but for the trouble with corn smut and corn insects. After a number of years in many localities corn smut becomes so bad that in order to kill out the disease a rotation is necessary. The same becomes true of the corn worm, but except for these troubles the system may be kept up year after year in a very satisfactory manner. Your plan of corn two years followed by small grain is practical.

The southern part of New York is too far north to be sure of Crimson clover. We should not depend on it for a Winter legume, but should substitute Hairy vetch, using a small quantity of Crimson clover and Cow-horn turnips as indicated above.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Mushroom of the Fields.

The common mushroom, Agaricus campestris, so generally grown for market in cellars and caves may be found, usually in October, growing in old pastures in large numbers. Fig. 292 shows how these mushrooms look at the right stage for eating. They have a creamy white, smooth cap, a white, smooth stem, excepting for a slight ring where the cap breaks loose as the mushroom expands, and pinkish or brown gills. The gills produce the spores, which are brown in this case, and the flesh of both stem and cap is white. There is no cup at base of stem, nor warts on the cap, and the stem is not bulbous nor scaly. This mushroom is thus described so that in gathering them in the field no mistake need be made, and one of the poisonous Amanitas picked instead. The Agaricus campestris usually appears in the Fall, and in the open fields. Nothing need be said about the preparation of mushrooms for the table nor of their culture in cellars, which most people know about. The picture shows the mushrooms at about one-half natural size and at an immature stage; when ripe ready to shed the spores the mushrooms are nearly flat on top, are much darker and have a dry appearance. The spores fall to the ground, are carried about by wind and water, and produce the mycelium or spawn which in turn again produces a mushroom.

Ohio. W. E. DUCKWALL.

Mixing Ashes and Hen Manure.

As you stand for the open mind, permit me to disagree with you in agricultural practice. Because going over the ground twice doubles the toil, I mix ashes and fine hen manure and immediately sow them. The material lies so thin upon the ground, especially if harrowed in, that there is no chance for any active chemical union, with loss of nitrogen. I think I have proved this time and again, and think the job is done better, and the surface covered more evenly when the mixture is well combined beforehand.

Maine. G. S. P.

We have often stated that if the ashes and hen manure are immediately worked underground after mixing no particular harm will result. To mix fresh manure with ashes or to use the ashes on the manure as we do plaster or road dust is about the worst farm practice one can mention. We know dozens of farmers who did both things and gave as their authority just such statements as are made above. When we come to analyze such statements we find that there was no advice to mix ashes and leave the manure to expel its ammonia, but these farmers did not analyze and did not stop to reason out the difference. In such cases we think it wiser to print positive advice one way or the other, and let the farmer reason out the shades of difference.

Fighting the Strawberry Weevil.

What about spraying strawberries to drive away the weevil in blossom time?

Browns Mills, N. J. S. J. S.

As the larvæ feed upon the pollen of the buds of staminate varieties, the staminate varieties are most injured, and injury may be avoided by growing as few rows of staminate varieties as are necessary for fertilizing the rest of the bed. Indeed, the very early staminate varieties might be used as a trap crop for attracting the weevils, which might be destroyed by covering the rows with straw and burning, or possibly by spraying with arsenicals. By planting rows of early varieties which flower freely and produce an abundance of pollen near woods and fence-rows where the beetles have hibernated and appear first, they might be effectively trapped, and then destroyed. Although the larvæ cannot be reached with any insecticide, the beetles feed more or less on the buds and foliage, and further experiments should be made in spraying for them with arsenicals. In view of the recent success in the use of arsenate of lead against the plum curculio, we would suggest the thorough spraying of badly infested beds with arsenate of lead three to five pounds per barrel, applying it with an under-spray nozzle so as thoroughly to cover every bit of foliage. This should be applied as soon as the buds commence to form, and probably a week later, before they blossom, as it is then that the beetles are feeding. Spraying at that season can do no possible harm to the berries, and to spray after the buds are injured is useless. The destruction of all trash and rubbish in and around the fields during the Winter will destroy some of the hibernating weevils, and it will be well to avoid mulching the beds where the beetle is troublesome, if the mulch is not absolutely necessary, as it furnishes them the best hibernating quarters. J. T. H.

Dry Earth Vault.

Can you or any of your readers tell me if it is possible to build a fairly sanitary privy, for use for four or five months in the Summer? I can not put in bath room and septic tank until water system is put in, and in the meantime I would like to build the next best thing.

New York. F. H. H.

The ordinary country privy need not be unsanitary if properly built and cared for. For convenience, particularly for that of the women of the household, it should adjoin some rear room of the house, usually the woodshed, and it should be built with a tight vault which flies cannot enter. Aside from the possibility of polluting nearby wells, usually a rather remote possibility, the danger from a privy vault lies in the entrance of flies which later visit the house and leave some of the filth sticking to their legs and feet upon human food. A tight plank box on skids to which a horse may be hitched facilitates the removal of the contents of the privy at necessary intervals, and a box or barrel of road dust or dry loam kept where a little can be thrown frequently over the contents of the vault will keep them dry and inoffensive. There are few better deodorizers than dry loam and the natural instinct which some animals display in covering their excreta with it may, perhaps, indicate Nature's desire that it should be used for this purpose.

M. B. D.

Orchard on Low Land.

I set out an orchard three years ago this Spring, plowing under an old sod, which in the low places was moss grown. Part of the field is high and part low, soil dark in color but sandy, water settles in the low places. I set the field to Wealthy apples, filling with currants and gooseberries. The latter nearly all died within a year. The trees are all alive but have made practically no growth and currants the same. Last Spring I set black raspberries where the gooseberries died. What does the soil need? I have several barrels of droppings from the henhouse, and that is all, as what fertilizer I have from the barnyard I wish to use in a young cherry orchard where I intend to put corn. G. W. N.

Michigan.

It is very evident that at least the lower part of the ground set to orchard is too low for any of the fruits planted on it. My advice is to put it to meadow, especially Red-top grass and Alsike clover, and plant the fruits desired on higher land. Ground that moss grows on is almost sure to be unsuitable for ordinary fruits, and the fact that water stands on it is very good evidence of its unsuitability. If it is practicable to drain the land it might be made fit for orchard trees and bush fruits. Even in that case it may be sour, and need an application of lime to "sweeten" it.

H. E. VAN DEMAN.

Lime on Corn Ground.

1. We have a piece of land that was planted last year to potatoes and this year we wish to plant it to corn and also break up land adjoining it for corn. Next Spring we shall probably sow grass seed with oats on it. Would it be better to apply lime this year or next? And would you advise sowing Winter rye when the last cultivation is given the corn? Our land is a light sandy soil and quickly runs out. Cows have the run of the field for several weeks in the Fall, so would tread down and eat off whatever was sown in the corn. 2. Do you ever sow Canada field peas with oats when you sow grass seed? 3. Would acid phosphate sprinkled on horse manure be likely to injure pigs in any way where they are on the manure? A. S.

York Co., Maine.

On the land where potatoes were grown last year we should plant corn without lime. On sod ground we would use the lime this year. On open ground we would hold the lime until grass seeding. Corn does not respond to lime as grass does, and we would rather use it when the seed is put in. On sod ground, however, the lime will help break up the sod, and make it more available. We have some cases reported where grass seed put in with oats and peas made a fair stand, when the conditions were right. Generally, however, the oats and peas make such a rank, heavy growth that they are likely to smother out the young grass. In such quantities as we have advised it would be safe enough to use the acid phosphate in the manure. There would be no injury to the pigs.

Fertilizer Bluff from Oregon.

A fertilizer is being sold here at the rate of $2 per ton that has the following guarantee printed on the bag: "Nitrogen 7¼; phosphoric acid available 5%; phosphoric acid, total, 12%; potash 6%. Derived from whale guano, ground whale bone and sulphate of potash." Isn't that about the average of any good fertilizer? The manufacturers claim a 25-pound bag of this is equal to seven tons of the best stable manure.

Roseburg, Ore. S. D. E.

Such a fertilizer would contain 140 pounds of nitrogen, 100 of available phosphoric acid and 120 of potash. On the Atlantic coast 250 pounds sulphate of potash would give the potash, 250 pounds sulphate of ammonia and 600 pounds nitrate of soda would give more than the nitrogen and 200 pounds fine bone and 400 of acid phosphate would give more phosphoric acid. Thus the 1700 pounds of chemicals would give more plant food at less than one quarter the cost. The claim that a 25 pound bag of this fertilizer is equal to seven tons of manure is nonsense; a ton of good manure contains 10 pounds of nitrogen, 12 of potash and six of phosphoric acid, while 25 pounds of this mixture will contain less than two pounds of nitrogen, less than two of phosphoric acid and not much more of potash. This fertilizer agent can show an analysis of 200 per cent. wind.

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Killing the Peach Borer.

Hardly a day passes without a question about using some paste or smear upon the trunks of peach trees to kill off the borers. The papers are full of so-called cures for this hateful insect which will avoid the time and labor required in cutting or worming them out. Many of these preparations are sold at a high figure, others claim to have a patent on their peculiar method or some secret process of killing this pest. A large number who apply to us have heard that tar or asphaltum painted around the base of the tree will thoroughly clean out the borer. It is often hard to know what to say to these people, since they know of some one who had tried the tar and obtained what they call excellent results. From our own experience we should discourage the use of such materials. They may kill out a few of the borers, but with us it has always been necessary to go over the trees by hand, and make sure that all the insects have been destroyed. At one time we used quantities of hot lye, apparently with excellent results. It became evident, however, that a good many of the borers escaped. Still the work of cleaning off the gum so that the hot lye could operate properly meant about as much work as digging out the borers.

The most effective thing we know of is a strong coating of lime-sulphur mixture of about the strength that would be used for Winter spraying. This could be painted on the lower part of the tree, or sprayed upon the trunk, driving the spray down to the base. This coating of lime-sulphur should be kept upon the tree all the time, and while this remedy is the best we know of as a wash or smear, we would not recommend it as a total substitute for hand digging. We believe that more or less of the latter will be necessary anyway in sections where the borer is very bad. As for tar and asphalt, our advice is to go very slowly with them. The tar we know varies considerably in composition and some of it would we believe prove injurious. We would not pay any large price for a smear or wash which was guaranteed to take the place of digging, because we do not believe it is possible for any coating of this kind to thoroughly clean out the borer.

Apple Aphis.

The apple aphis or louse has received very little attention from the average farmer. The aphids are so small that it is hard to realize the damage they cause is so great. They make up for their lack of size by their persistence and numbers. There is much technical information that could be given, but such can be best obtained from the bulletins of the Bureau of Entomology at Washington. The object now is to call attention to the presence of this insect in time to check his work of destruction. As soon as the apple buds begin to swell in the Spring these little pests begin to hatch from the eggs that were laid on the twigs in the previous Fall. As soon as hatched they commence sucking the sap from the tender fruit buds as the buds begin to grow. This produces the clusters of small misshapen fruit which many growers have been unable to account for, as they had sprayed with both Winter and Summer sprays for ordinary insects. The aphis once established and allowed to go unmolested will increase with great rapidity. They not only cause misshapen fruit, but poorly developed and distorted wood growth results. Many young trees can be formed where the unchecked aphis has so weakened the tree that it will not recover for several years.

As the season advances the aphis will leave the fruit buds and attack the growing shoots, often in such numbers as completely to cover the bark. The young leaves are also affected, causing them to curl, and preventing them from fully developing. There is only one practical method of combating the aphis in an apple orchard, and that is to spray with tobacco extracts, several brands of which are on the market. This extract may be added to any of the usual Summer or Winter sprays, and so save the cost of the extra application. Treatment should not be delayed if good results are desired. It should be given not later than the first Codling moth spraying. If the treatment is delayed longer there will be difficulty in checking the insect as the curled leaves protect the aphis from the spray. Examine the young buds for signs of these pests, and if any are found, spray as directed. Do not let the small numbers in the Spring fool you, as they will increase to many thousands in one season if they are not checked.

R. B. G.

Action of Lime on Soils.

Will burned lime applied at the rate of one ton to the acre on oat ground unlock potash and nitrogen to the extent that it would be advisable to use 300 pounds of acid rock instead of an equal amount of 2-8-10 commercial fertilizer?

Milford, N. Y. M. H. P.

The 2-8-10 commercial fertilizer that you suggested is better adapted for use on oat ground after treatment with lime than the rock phosphate alone. Although lime, when applied in proper quantities, will act as an indirect fertilizer in unlocking potash, nitrogen, and phosphoric acid, the action is not complete at any one time, and the amounts that it makes available are small in comparison to the needs of the crop. The following explanation will show how burnt lime acts as a liberator of the three plant food elements. When lime is applied, there seems to come about a reciprocity between the bases of the insoluble or difficultly soluble forms of potash in the soil, and the base of the lime. These bases then change places, and after several more transitions the potash goes into a soluble form available for plant usage. It seems strange, but it is nevertheless true, that the action takes place more readily between the lime and the potash locked up in the soil, than with the richer artificial crop stimulators as farm manure or commercial fertilizers. The proper amount of lime needed varies with every set of conditions, and a superabundance will prove wasteful to the soil, since more potash will be unlocked than can be readily taken up or completely converted. The exact changes of the potash from the insoluble to the soluble form are very complex, but it is a fundamental fact that potash is more readily available to crop growth through the action of lime.

In the case of nitrogen no direct interchange of bases takes place. The nitrogen is only available for plant usage in the nitrate form, and must be so converted before the plant will make use of it. Tiny organisms are essential for this transition, and as the lime makes possible the breaking down of the nitrogenous compounds in the soil, these bacteria seize upon the nitrogen, changing it over to the ammonia form. Other bacteria now convert it to a more complex compound, and finally it reaches the nitrate stage. But to make this bacterial action possible, the soil must be alkaline, and lime is best fitted to produce this working medium. Besides giving suitable conditions for the change, the lime furnishes a base for the nitrate when formed.

The phosphoric acid exists in the soil in such highly unavailable forms as lime, iron and alumina phosphates, and these are so insoluble that ordinary drainage water carries relatively small proportions. The lime phosphate, however, is considerably more soluble in lime water or pure water than the other two, thus the more lime phosphate and the less iron and alumina phosphates, the more readily is the phosphoric acid available. This being the case, the amount of available phosphoric acid in a well limed soil, other things being equal, is greater than in one deficient in lime. It is supposed that lime also attacks the iron and alumina phosphates, converting the phosphoric acid into the more soluble forms. All of these actions are complex in detail and many chemical deductions must be made, but it has been conclusively proven that lime exerts a very important influence in unlocking the plant food constituents.

B.

On moving into a new neighborhood the small boy of the family was cautioned not to fight with his new acquaintances. One day Tommy came home with a black eye and badly bespattered with mud. "Why, Tommy," said his mother, "didn't I tell you not to fight until you had counted 100?" "Yes'm," sniffed Tommy, "and look what Willie Smith did while I was counting."—Ladies' Home Journal.

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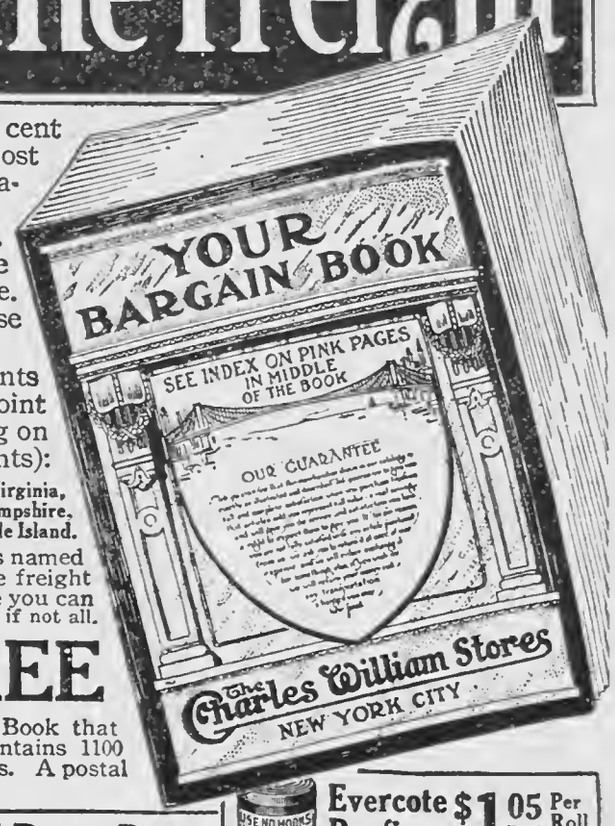

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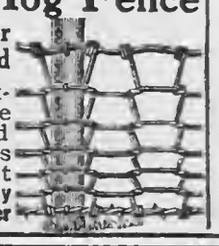

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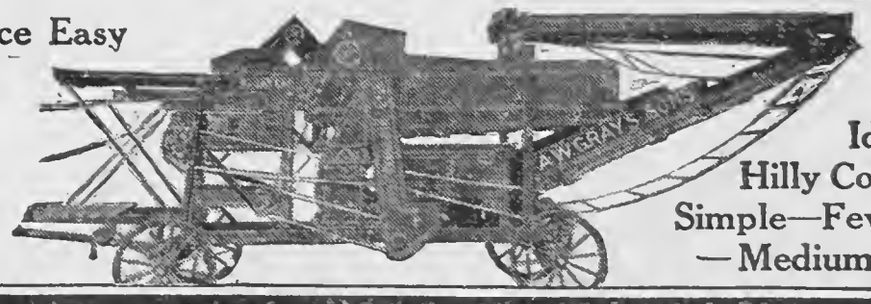

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Care of Little Turkeys.

I have just read Mrs. Niles Grover's article on "Turkey Raising" and think it one of the best and most concise I ever read. I had 95 nice large turkeys, all larger than pigeons, some would weigh five or six pounds, and I lost 60 of them before I found that it was the buckwheat I was feeding. My bad luck always comes after they are over the size of pigeons. I can get them up that far with hardly a death; then sometimes I lose almost one-half; why, I do not know. Sometimes I am lucky and only lose a few, but always some. Will Mrs. Grover tell us what kind of insect powder she uses? My kind seems only to put the lice to sleep and they revive after a little. Also will she tell us where we can find a market for feathers and what the "fluff feathers" are, and how does she pull the quills so as not to break them? Can dark turkeys' feathers be sold? MRS. L. P. M.

So. Plattsburgh, N. Y.

The three worst enemies of little turkeys are lice, overfeeding and damp. Successfully combat these and a fine flock is almost sure to result. If the brooding turkey and nest can be kept free from lice before hatching time the battle is half won. Dust the nest material well when eggs are put in, and dust the turkey each week, sifting the powder well through the feathers.

The third day after taking the baby poults from the nest dust them in the following manner: Prepare a box large enough to hold a brood of 20 to 25, with a cover not entirely tight. Sit on the ground in front of the coop, spread an old cloth over your lap and catch the poults, one at a time. Grasp him firmly by the legs, lay him on the cloth and straighten out the wings. Dust thoroughly, all over, especially the underside of wings and body and on the head. The dust will not hurt the eyes except to make them blink for a while. Put poult in the box and close the cover. The first thing he does is to shake himself, thus sifting the powder again all through the down. Each one as you put him in will do the same, redusting them all each time. The box will be full of fine dust all the time you are working, and few lice will survive such treatment. When all have been treated turn over the box and let them out. Repeat every week, or better yet, every three days if poults show signs of beng lousy, until too large to catch easily. Always dust the mother, taking the hand to sift the powder through her feathers. The lice will be found on the underside of legs, wings and at the base of quills.

Where the lice are very troublesome whitewash the coops every week, putting kerosene in the whitewash, and being careful to fill all corners and crevices. Many use lard or oil on the poults; perhaps it is all right, but I find the insect powder effective and harmless. I only used lard once, and then I mixed it with sulphur making a salve. I applied it to the heads and underside of wings. In two days my little poults began to droop and die. I investigated and found each little wing blistered and the skin all off. Every last one of them turned his little pink toes to the sun. Vinegar was recommended to me as an excellent louse killer but I never have tried it. Most of the insect powders put up in tight boxes are good, but that purchased in bulk is doubtful. If not taken good care of it becomes too old and loses its strength. There is the Cornell powder, which can be made at home, and sulphur alone is good. I believe more depends on a thorough and persistent application than on the kind of powder.

Many turkey raisers ask the question: "Why do my young turkeys die when about the size of pigeons? They grow and seem fine until then, but I lose sometimes half my flock at that time." In some cases it may be blackhead, and that is a bad disease to combat. Bulletins on the treatment of blackheads can be obtained from experiment stations. But there are other enemies to young turkeys, and many are sacrificed to causes less hard to fight. Overfeeding is one, bringing on indigestion, diarrhœa, liver trouble, etc. Little turkeys must be kept hungry and moving about; exercise is very essential, and they will not exercise if overfed and pampered. They need plenty of sharp grit, and plenty of fresh water in clean dishes. A disinfectant may be added, carbolic acid is good for the bowels and is used in the proportion of one teaspoonful carbolic to one gallon of water.

The first food must be something easily digested, and a hard-boiled egg is *not*. A raw egg is food for an invalid. Wheat bran is light and will not pack in the bowels. Sour milk is excellent for all fowls, the acid acting on the digestive organs. Mix the bran rather dry with sour milk and add a raw egg. Feed only what they will clean up quickly. Continue this food for a month, giving only a little grain such as oat flake or fine chick feed. Change very gradually to a grain diet; first cracked wheat and a little corn, and later whole wheat, oats and buckwheat. Rye and millet seed can also be given, or a mixture of good grains.

When the turkeys are in range they need be fed but once a day. Keep poults out of green grain. If allowed the run of a field of unripe grain they will gorge themselves and die. All grain fed to young turkeys should be a year old. Be sure they are well supplied with sharp grit and fine oyster shells. Keep sour milk before them if possible, but never cook it. Green food must be supplied to young turkeys; they will not, at first, pick it themselves. Cut fine with an old pair of shears kept for the purpose, and mix it with the bran, sour milk and raw egg. Green dandelions, narrow dock, onion tops and mustard are all relished by turkeys. After a little it will become quite a task to cut enough for a flock of 50 or more. They are very fond of it.

Place the coops on new ground every year, away from chickens and feed them separately. Keep the coops dry and clean. If without floors move to clean ground every day and in case of a continued rain sprinkle coal ashes underneath the coop. The little poults must have good care, but never be pampered. Give them all the liberty possible. Study turkey nature and use common sense.

New York. MRS. NILES GROVER.

Hens With Distended Crops.

Now and then one of my hens becomes sick, with a distended crop, so distended that it becomes a deformity. On pressure it seems filled with air and some soft substance. After a few days the hen dies. The feed consists of corn, wheat, buckwheat, occasionally a warm or a dry mash, and scraps from the table. Of the latter they are extremely fond, and while I fear it is that which makes the trouble I can see no good reason for it. The scraps consist of bread, cooked meat, cooked potatoes and raw potato peelings, with remnants of the various side dishes (vegetables) common to good tables. It does not seem to be due to overfeeding of grain. Coffee and tea grounds are dumped into the garbage pail and disappear with the rest. Are the latter injurious to fowls? S. P.

New York.

Hens are subject to a catarrhal inflammation of the crop, due to improper feeding, or to other unhygienic conditions connected with their care, and this manifests itself by distension of the crop with fluids that are often sour—whence the name, sour-crop—and a general appearance of debility upon the part of the fowl. Garbage from hotels and large boarding houses is very liable to contain unwholesome materials and is a somewhat dangerous food unless carefully inspected before feeding. Smaller quantities from private tables are not as likely, of course, to contain bits of spoiled meat and other deleterious food. The distended crop of a hen suffering from this trouble should be emptied by careful manipulation of the crop while holding the hen head downward. She should then be given a little water containing a pinch of bicarbonate of soda, as a sweetener, and placed by herself where she can be fed sparingly upon soft easily digested food until she recovers. M. B. D.

Control of Egg Production.

Some time ago THE R. N.-Y. published an article by G. H. S. taking exception to my position that a hen had control of her egg production; that she could stop it at will, etc. I am in receipt of a letter from an ornithologist in Missouri, Mr. James Newton Baskett—author of "The Story of the Birds"—who endorses my thought completely. The letter is very interesting. Mr. Baskett says: "It is well known to ornithologists that wild birds control the number and time of laying, and while the clutch of a bird may be, say, six, she can be induced by daily robbing her nest of a single egg, to lay two or three times that number. There is a record of a vireo which began building a nest, and when it was completed a cow bird had laid in it all the usual number of eggs except one. The vireo laid that one egg (only) which was necessary to complete the clutch, then went to sitting. If a bird's nest is broken up, she will at once make another nest and lay another clutch of eggs. She most assuredly has control by will of her egg production, as does the common hen. The reason we have the 200-egg hen now is because we have trained her by daily robbing her nest to lay more than the usual clutch of 12 or 15, so that by heredity she has come to lay many eggs."

And he adds: "I doubt if the high layer would continue to lay, if the eggs were left piled up in the nest; and for that reason I have not been able to abandon the idea of a nest egg being suggestive. The hen seeing the clutch not complete is likely to try to fill it out."

I am reminded that the bottom trapnest in my pen of 13 Barron White Leghorns, is on the floor, and it has a nest egg in it, plainly visible when the trapdoor is open. The hens bother me by getting on this nest when they don't want to lay. Two or three hens get "trapped" on this nest every day, that do not lay. Evidently the sight of the egg suggests laying to them, but of course they cannot lay until an egg is grown and ready. These 13 birds are showing their Barron breeding by laying eight to 11 eggs a day, though the truth compels me to add that they have only laid 11 once. Nine, however, is frequently laid for several days in succession, and as one pullet is out of condition and there are really only 12 to lay, this makes a 75% yield, which is not bad considering the weather we have had. GEO. A. COSGROVE.

CROPS AND PRICES.

May 4. Barley, fair quality, $1.05 for 100 pounds; oats 35 to shippers, 40 between farmers; rye 60 per 60 pounds; potatoes 50 to shippers, 55 to 65 to grocers in town. Whole milk to creamery $1.50 per 100. Butter 26 to consumers from creamery, corn from $14 to $16 per ton in car. This is mostly a dairy section; cows selling from $70 to $100. Crops looking fine; a nice rain last night which was much needed. Prospects for fruit fair. W. T. W.

Beloit, Wis.

Beef cattle 7½ to 8½; milch cows $35 to $60; horses $150 to $200; hogs $8.40 to $8.70; butter 25; eggs 15; poultry 12½ to 13. Hay $17.50 to $18 per ton; corn 75 cents per bushel; potatoes $1; apples $5 to $6 per barrel. N. L.

Borden, Ind.

April 27. Maple sugar making finished in most bushes about the 18th of April; most of the sugar made was in April, though bushes were tapped from the 19th to 21st of March. From 1½ to two pounds to a tree was about an average. Owing to cold and late snows only a few oats have been sown, and no other crops got in. Farmers are fixing fences, getting out manure, driving home phosphates and lime from cars, etc. Maple sugar prices at our local stores were 12 cents for best, eight and nine for darker grades. Eggs 18; butter 30; milk in cheese factory $1.23 per cwt.; pork 11 cents by the carcass. A backward cold Spring, but warmer at present and pastures beginning to look green. No stock is turned out to pasture. E. A. B.

Cattaraugus Co., N. Y.

April 30. Corn 65; oats 38; wheat 90; cream 27; butter 25; eggs 16. Hay, Timothy, $15; clover, $12; cows, from $40 to $50; cattle six to seven cents pr pound; hogs, about eight; poultry 14. Potatoes about 60 cents per bushel. Farm land sells from $100 to $150 per acre, according to improvements.

Bloomingdale, Ind. S. B.

April 27. Common stock cattle have advanced here in the past two years fully thirty-three and one-third per cent. Good two-year-old grazing cattle bring 6½ to seven cents per pound; export steers 7½ to eight; dairy cattle, not registered, from $50 to $75. Farm butter 25 to 30; Irish potatoes are worth in the local market $1 per bushel. No fruit for sale. Eggs 16; early Spring lambs 7½; stock hogs, not registered, about 10 cents per pound. These prices are obtained at private sales. R. H. P.

Blacksburg, Va.

April 28. Mixed hay $11.50, loose in mow; buyer pays baling and seller must deliver baled hay to car. Timothy $14; clover $10; corn 90 per cwt.; wheat 90 per bushel; oats 35; potatoes 75; eggs 16; butter 20; steers seven; calves seven; sheep three to four; lambs five to six; hogs 8¼. Much interest in spraying here this year. Farmers pruned and cleaned up their orchards as never before. Poor apples that would grade about No. 3 retail 70 to 80 cents per peck.

New Haven, Ind. H. H.

Cattle are coming through the Winter in good condition. Much grain is being fed. Some farmers are short of hay and are buying loose hay for $12 per ton at the barns. The season is backward; no farmwork done yet and probably none will be done before the 10th of May. Pastures show very little green, and cattle will not get out to get much feed before the middle of May. Potatoes sell for 60 cents at the railroad station. Growers are somewhat discouraged as to the future, and some decrease in acreage is indicated; no powdery scab in this vicinity. The repeated loss from early frost has put a damper on the growing of sweet corn for canning factories, and not so many will plant, but there will be no great difference in the acreage, as some farmers who are fortunately situated so that their farms escape damage from early frost will plant more. There will be more corn planted for the silo. Dairying is on the increase and if the market continues in the future as good as the past few years. Central Maine will see a further increase in the number of cows on the farms. Many, however, are apprehensive of the effects of free trade on the dairy and poultry industries, and are making their plans so that they may change their business into some other line. There is a growing demand for beef and some farmers are planning to introduce beef-producing blood into their herds where dairy blood has hitherto predominated. There is not quite as brisk a demand for cows as a year ago, and prices range from $30 to $60, with some extra cows higher. Butter is 28 cents at local stores; eggs 20; mixed feed $1.55 per cwt.; corn $1.70 for two bushel bag; cottonseed $1.85 per cwt.; gluten $1.70; red dog $1.75. There is a great increase of interest in cooperative societies for the buying and sale of farm commodities and new branches of the so-called Farmers' Union are being formed every week. One has been formed nearly every day recently somewhere in Maine. R. W. H.

Thorndike, Me.

FATHER (desirous to impress son): "History repeats itself, my boy." Son: "Not at our school, dad; they make us kids do it."—Melbourne Leader.

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Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.
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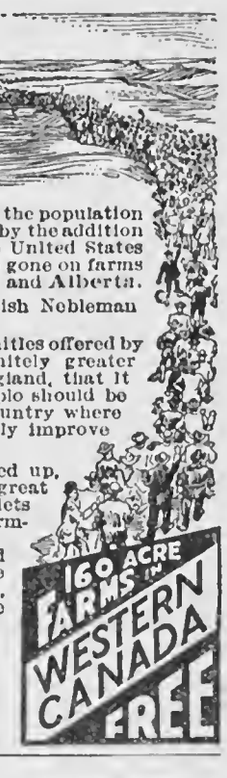

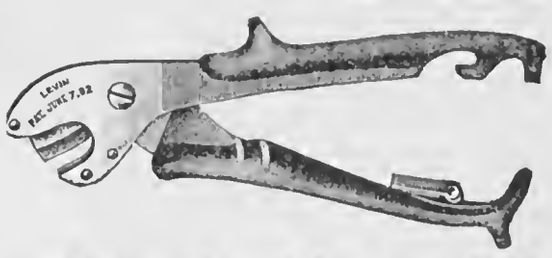

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Marketing Horseradish.

Can you give information where to market horseradish roots, and the kind of package and probable price. F. O. G.
New Jersey.

There is always more or less demand for horseradish in any of the larger towns and cities, at a price that is remunerative and often quite a profit. It may be sold in the whole root, scraped ready for grating, grated without vinegar and prepared ready for use. The best distributors are the meat dealers, who handle it at a profit of 25% to 30% over the first cost. As a rule there is slow sale for it in the whole root, as most people dislike grating it and will not buy it in that form if it is to be had grated. It usually commands about 10 cents per pound in the root, retail; sometimes and in some sections more may be obtained, but the average retail price is around this. When grated and sold without vinegar, the price obtained for it retail is from 20 to 30 cents per quart. When mixed with good cider vinegar ready for use, it is almost always sold in square, large mouthed bottles, holding about one-half pint, for which 10 cents is charged at retail. Grocers and meat dealers prefer it put up in bottles, and for the regular 10-cent retail size, the retailers usually pay 80 to 90 cents per dozen. In all large market centers there are dealers and distributers to whom horseradish may be sold in bulk. The average price is from $100 to $150 per ton in the root. It may be shipped in crates, open head barrels or potato bags, with equal safety. K.

Alfalfa in Northern New Jersey.

I have given much time and thought to the Alfalfa problem, and have been experimenting for several years in Northern New Jersey, in a small way, with some success, so feel that I can give some assistance to those who are trying to grow this valuable forage. I find that the time to plant Alfalfa is from the 15th to 25th of August, and the most important thing is to have the land in right condition—well cultivated and free from weed seed. This can only be done by plowing the land in the Spring as early as possible, and keeping it cultivated with the Acme harrow (a few days after every rain) so that by planting time there are no weed seeds left in the top soil, and the seed bed in condition to allow the Alfalfa to grow at once, no matter how dry the season may have been. The seed should be sown in the early morning before the dew is off, covered with the Acme harrow, set to run shallow, and then rolled at once. This will insure a stand of nothing but what comes from the seed sown, and that should be the best obtainable.

A. C. WORTH.

R. N.-Y.—From our experience we think Mr. Worth is correct in this. Does it pay to try to start Alfalfa except on the deeper valley soils which are well adapted to it? There are some soils which must be practically made over before Alfalfa will thrive permanently. We think that such soils are more naturally adapted to Soy beans, Alsike and cow peas, and that these will give us protein crops cheaper than Alfalfa will.

Neglected or Abandoned Land.

I am told about Virginia farms that are claimed to be good land with about half valuable timber, oak, hickory and other varieties. It is claimed that the owners held slaves up to the Civil War, and when they were freed the land grew mostly into timbers. Can this be true?
Youngstown, N. Y. R. S.

Yes—why not? Much the same thing may be said of parts of New England. There were many hillside farms occupied by large families. We know of cases where four and even more young men out of one family went to the Civil War, and not one returned to carry on the farm. Those who survived went West to take up government land. Thus those fine farms left to the old folks slowly went out of commission. Today, on many of them, you will find old stone walls in the woods showing that trees have come up in what were once meadows and cultivated fields. In the South, when the Civil War ended, the labor system was upset. Most of the former slaves went wandering away. It was impossible to care for the great farms which, under slavery, were well kept, and they were abandoned. Nature is always looking over the fence trying to get her fingers into an abandoned farm, and these fingers mean trees and brush. Much of this land, both in New England and Virginia, is naturally strong—capable of producing good crops. The changes which produced the forest, however, may have destroyed markets or means of transportation, or changed conditions so that the place would not be suitable for a home. Do not take the word of any real estate agent or land owner as the final word. Do not buy any such land without going to see it and looking it all over. Geo. A. Cosgrove tell how he went "back-to-the-land." He hunted up a farm in the mud of Spring and did not like it. After hunting all Summer he went back to the first farm in the glory of the Autumn foliage—and bought it.

SHORT STORIES.

Lime and Manure.

Is it true that a small quantity of air-slaked lime destroys the efficiency of rotted manure? Would it be advisable to use the two together in a trench for sweet peas? J. D. T.
Auburn, N. Y.

The action of the air-slaked lime would be to set free some of the ammonia in the manure. If this mixture were made above ground or in the open air, the manure would be lost. If, however, the two were mixed together in the ground, there would not be any particular loss, because while the ammonia might still be set free, it would be absorbed and held in the soil to be used by the plants, and it would thus be safe to mix the two together in the soil in case you wish to make the manure more available.

English Sparrows and Cabbage Worms.

From time to time I read inquiries in your columns in regard to the much despised English sparrow. We, also, used to consider them a genuine nuisance, but the last two years we have discovered one redeeming feature. W notice they have taken to the cabbage worm. On several occasions I have seen sparrows crawling among the loose leaves of a growing cabbage to hunt out and devour every worm. Now the question is, have they lately acquired this taste, and only in this vicinity? If they all learn to eat cabbage worms, they are not to be despised. I know they are troublesome in devouring lettuce and green peas. Young peavines can be protected by an application of paris green powder sifted on when dew is on. But you will not kill a single sparrow. They will not indulge in the luxury after the application.
Staunton, Ill. R. L. R.

Setting Up a Buzz Saw.

Take two planks eight to 10 feet long, placing them parallel with the belt, one at each end of the saw frame. Bolt or fasten with wood screws frame to plank about in the middle. At the end of the plank next to the belt toward the power drive a ¾-inch bolt about two inches in the ground so that frame cannot slide toward power. Also drive a bolt behind the frame at the side of the same plank so that the frame cannot swing. If you wish to tighten belt slide saw plank and all and put a stick between bolt and end of plank, and it will stay in line as well as it was before. The two bolts driven in the ground will be all that is necessary to hold it solid, doing away with crotches, stakes or other fastenings, besides being a good real quicker set up. H. G. ANDREWS.

THAT NASTY FLY.—I keep a horse and a cow, both in the same barn near the house. There is a basement under the barn, opening to the east, and a henyard with running water in the yard. The manure is thrown down into this basement every day and a little cracked corn is scattered in it; 30 hens soon scratch it around and woe to the bugs, worms and larvæ in it. I spray the cow, horse and hens with soluble oil 50 to one. Also the stables, henhouse, etc. We have no flies to bother us. I have no dead water around and spray with soluble oil all sinks, drains, etc., daily. We have no mosquitoes. Our home is in Southern Vermont. A. L. B.

LABOR SHORT-CUTS.—We have a tank for making lime-sulphur, make 500 gallons at a time, but can make more and use from the tank without barreling it if we wish. We cook by direct steam and coils both, and have a marine engine, and with the propeller blade in the center of the tank can reverse the blade as often as desired; it stirs up contents of the tank running at high speed. I have become tired of sowing high-priced clover, Alfalfa, etc., on top of the ground, and so have bought a disk grass seeder, and all over the country, farmers are doing the same thing. C. A.
Orleans Co., N. Y.

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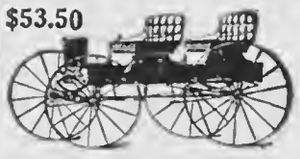

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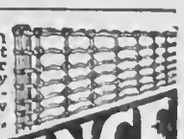

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EVENTS OF THE WEEK.

DOMESTIC.—An electric shock, caused by crossed wires, cost the New England Telephone and Telegraph Company $15,000 in Superior Court at Exeter, N. H., April 30. This sum was awarded to John A. McAdam, who was disabled for more than a year by a shock received while telephoning in 1911.

The loss of life in the coal mine at Eccles, W. Va., April 30, is now put at 172.

A cloudburst in Oklahoma May 3 destroyed the new $125,000 railway bridge over the Canadian River at Geary, and caused great damage in the surrounding country.

Michael P. Mahoney, who wounded Corporation Counsel Polk in an attempt to kill Mayor Mitchel, of New York, April 17, was ordered by Judge Mulqueen, in General Sessions, May 4, to be confined to Matteawan. The finding of the lunacy commission stated that Mahoney was incapable of making his defence of the trial of the indictment and that he "was in a state of idiocy, imbecility, lunacy or insanity at the time of the commission of the crime."

Two persons were killed at Maud, Tex., May 4, and half the houses in the town destroyed by a cyclone which also did severe damage at Redwater and near Pittsburgh, Tex., injuring some 14 people in the three towns.

The freight steamer Columbian of the Leyland Line, bound from Antwerp for New York, caught fire and was wrecked by a series of explosions in her hold when 150 miles south of Sable Island, May 3. A boat containing 14 of her crew was picked up, May 5, by the Cunard Line steamship Franconia, one of the vessels which responded to the wireless call from the North German Lloyd steamship Seydlitz, the first craft to sight the burning Columbian. Captain McDonald and 13 members of the crew in another boat were saved by the steamer Manhattan, bound for New York from Antwerp. There were no passengers.

United States troops are keeping peace in Colorado. Attempts are being made to impeach Governor Ammons for his failure to restore order. The inquest into the deaths of women and children when the tent colony at Ludlow was destroyed is arousing strong feeling against the militia. Major W. A. Holbrook, in charge of the Federal troops in the Trinidad district, has construed Secretary Garrison's proclamation as to the disarming of all persons in the strike zone who are not in the active service of the United States Army to include members of the Colorado militia as well as strikers, mine guards and others. Consequently the order is being carried out on that theory.

MEXICO.—The announcement was made at Washington, May 5, that the three South American mediators in the Mexican difficulty would meet at Niagara Falls, Canada, May 18, to receive representatives of the parties to the controversy. * * * Carranza, following a split with Villa, threatened to resign as first chief of the Constitutionalists. His resignation would mean a rival revolution. General Velasco, Federal commander, is said to have offered to go over to help Villa with 1,200 men. * * * Huerta is reported in a panic as rebels take the capitals of three States and approach to within 167 miles of Mexico City. Strategically, the dictator has to deal with the Americans in front and the rebels in the rear. * * * Huerta, who apparently has no intention of resigning, continues to concentrate troops between Mexico City and Vera Cruz. The railroad has been mined between these points. The Huerta government factory is turning out 6,000 bombs daily. Funston's army, ready to repel attack, chafes under the restraint of orders from Washington. * * * Villa has unequivocally declined the request of General Maas, commander at Saltillo, to join the Federals in avenging the American occupation of Vera Cruz. * * * Two of the sailors shot in the fighting at Vera Cruz died on the hospital ship Solace. The wounded are being brought to New York. * * * Admiral Badger reported that Tampico was attacked by rebels, following the arrival of their artillery. * * * News reached Vera Cruz, May 4, that John R. Sillman, acting American Consul at San Luis Potosi, had been a prisoner in the hands of General Joaquin Maas, the Federal commander, for 11 days and had been threatened every night with execution. * * * As far as is known no American in Mexico City has been killed or even injured so far. Clubs and business houses with few exceptions have reopened their doors. Among them is the American Club, which was assaulted by a mob during the first few days after the American occupation of Vera Cruz, but is now open under the protection of a police guard. The country club also is in operation and is much frequented by American golfers.

FARM AND GARDEN.—It is estimated that the Southern Pacific will need 5,000 cars to move the west coast cantaloupe crop to eastern and southern markets. The Southern Pacific expects this season to carry to the east from southern California alone close to 72,000,000 cantaloupes. The first trainload of cantaloupes will move east about May 20.

The Department of Agriculture of New York State was informed, May 5, that an area of about one-quarter square mile in Westchester county is infested with Gypsy moth. Inspectors were despatched to fight the pest.

The Farm Mortgage Bankers Association of America was formed in New York, May 7, by seventy-five men from all over the country, but principally from the South and West. It is the first organization of men in this business. One of the principal objects of the new association will be to obtain legislation favorable to farm mortgage investments. The farm mortgage men were told that there is reason to believe savings banks in some States, such as Massachusetts, will join with them to get laws passed making farm mortgages legal investments for savings banks and trustees in such States. A visitor told the convention that the best field for spreading the gospel of farm mortgages as sound investments was New England. A legislative committee will be appointed and the association's work will proceed at once along several lines. There will be an immediate effort to counteract a tendency to lawmaking that the members consider adverse to the farm mortgage business, and there will be work to legalize farm mortgages as savings bank investments in those States which, like Massachusetts, do not at present allow them. The members hope also to do something toward exempting farm mortgages in the banks of investors from taxation.

FRUIT REPORTS.

May 3. Apples 80% live buds; peaches none; pears 20 per cent. G. W. D.
East Bethany, N. Y.

April 26. As far as I can yet judge we shall have a poor crop of peaches, a fair crop of apples and a good crop of cherries and plums. This only refers to our own immediate neighborhood.
Hamilton, Canada. H. A.

May 4. Scale is vanishing; as a precaution we sprayed our orchards this Spring, although no live scale appear to remain. The parasite detected by Prof. Grim of the Kutztown, Pa., Normal School, is manifest in this section, and the fruit growers feel gratefnl to Prof. Grim, and are more than pleased with the hope that spraying may be unnecessary in future to hold San José scale in check. Prospects for fruit are very promising, and the lateness of the season leads to the belief that damaging frosts may not occur at the critical period. It is now three weeks later than usual for planting Spring crops, and much of the oats are yet to be seeded. Potatoes will be planted rather more than an average acreage. Grain and grass prospects are encouraging. The clover root-borer is very damaging to clover that is a year old, the roots being pulverized by the insects, of which a number are usually found near the crown of the roots.
Schuylkill Co., Pa. W. H. STOUT.

April 26. The peach buds are all killed by the hard Winter. One grower told me he had failed to find a live bud on his trees. Pears are also very light in blossom. Very few plums, plenty of cherries and apple buds galore. With good weather at blossoming time, and barring frosts, I look for a bumper crop for 1914.
Pavilion, N. Y. M. G.

April 30. Peaches are not going to blossom very much; think the weather was pretty cold for them during January and February, but the apples are going to blossom very full, and it looks as though we might have a large apple crop. We are having lots of rain now, so that we may not have it so wet at blossoming time. I do not think pears will blossom very heavily as there was a good crop last year. M. A. C.
Le Roy, N. Y.

Our Winter was mild, and stock came through in good shape. Most fruits promise well; some varieties of apples are not blooming well, but the prospect is for a fair but hardly an average crop. Wheat is in fine condition. It is too dry for the young clover and for oats. The ground never plowed in nicer shape than this Spring, so we expect to raise corn this year. D. E. R.
Payson, Ill.

The severe Winter weather through February killed only a few peach buds here, and some of the cherry buds, but April 9th and 10th we had some cold weather that killed many more buds, and still there are more than an abundance of peaches left. The cherry crop promises light, probably a third to half crop. Plums and pears are full and apples seem to have the best average bloom I ever saw, and one in looking from the top of a high hill over the country can see by the white profusion bloom where the orchards are located, and they are numerous in this part of the country. They are blooming about 10 days later than common, and all varieties are in bloom at practically the same time, the early bloomers starting out a few days before the late ones, and the warm weather hurried them along so that they got out before early ones dropped. Probably the fertilizer that was used last year had quite a lot to do with the good bloom. During and since the snows of February the mice have wrought havoc in the orchards all over this part of the country. Some people report as many as half the trees ruined. Generally it is likely there have been as many as 5% of the trees girdled, not only in sod but in all kinds of loose soil. Some of them have been dug around and earth banked up to keep them away but still they worked and poisoned wheat has been fed to them and the end is not yet. Plant lice are scarce yet, but we have some Black Leaf 40 ready for them. It will soon be time for fruit packages. U. T. COX.
Lawrence Co., O.

While in Western New York the past Winter, at nearly every institute, the question of the fruit buds and their condition would be raised. We found that in many cases, with the mercury dropping to 15 below, the peach buds were dead, while in other localities a large per cent. would be reported alive. Naturally I was interested, for with the mercury at 34 and 36 below the day I started from Maine I felt certain there was no hope for fruit on my little experimental plot. It is now the first of May, and I am at my Summer home and find that the buds of the Waddell, Early Canada and Belle of Georgia are nearly all alive, while the Elberta, Mayflower and others are dead. My land is light rocky loam, underdrained, and if peach trees will live through the Winter we have just had, and which is so reluctant to surrender its grip, it seems as though we might count on their staying with us right along. Last year the Elberta's came out in good shape after three or four attacks going to 24 and 28 below.
Central Maine. GEO. M. TWITCHELL.

April 30. We have had a bad month for business; it has been extremely cold or hot. For two different days the mercury has gone to 80 deg. in the shade, and then followed by freezes. Today we had a little snow. There has been a heavy fall of rain. April 25 we had a heavy thunder shower. The ground has been too wet to work; very little plowing done. No oats sown yet. Cultivated orchards too wet to do spraying. Stock take as much feed as in Winter; scarcely any turned out to pasturage. Wheat and grass are looking very promising. Alfalfa has come through well, and is starting out finely where it was not winter-killed. People are afraid to put out cabbage on account of the tariff being removed on foreign cabbage. More wild geese about than usual. Horses are not in as much demand as other Springs, and not quite as high priced. Hay $12 to $14 per ton; wheat 95; oats 40; barley 70; corn 85; good seed corn $1.25 per 60 pounds. Veal nine; young pigs $3 to $4 apiece. Early potatoes $1; late 75; butter 24; eggs 18. E. T. B.
Canandaigua, N. Y.

COMING FARMERS' MEETINGS.

Holstein Breeders' Association, Chicago, Ill., June 2.

American Association of Nurserymen, Cleveland, O., June 24-26.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

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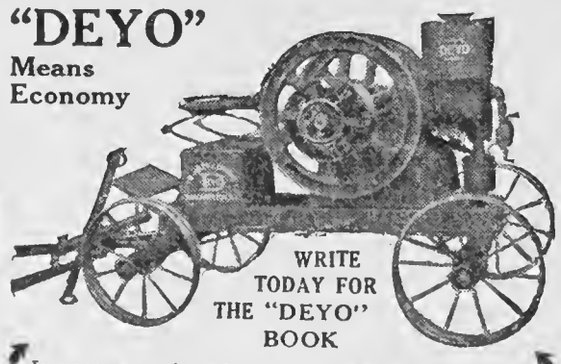

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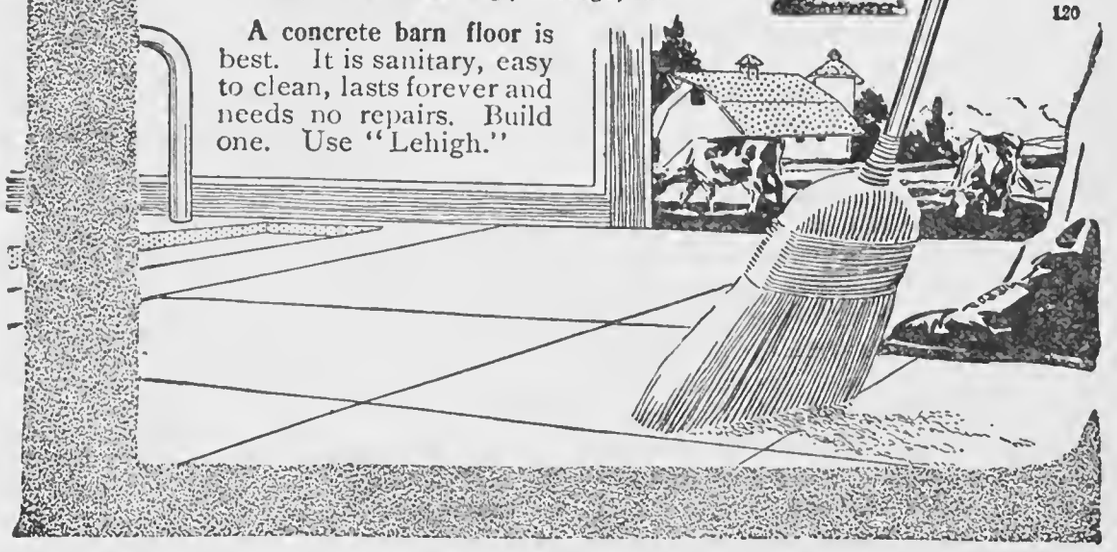


120

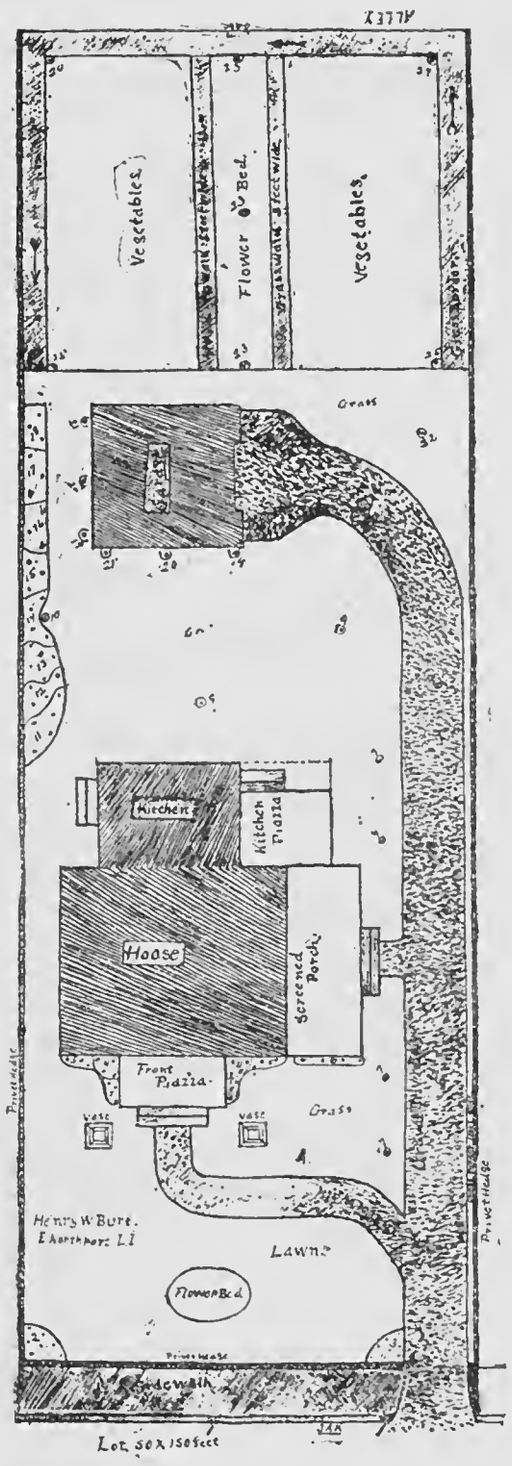
The Home Acre.

Laying Out Small Place.

I have noticed with interest your landscape designs for plots in THE R. N.-Y. I am interested in having a lot, which I have just purchased, laid out with location of paths and such shrubbery as you think would go well with this location. The surrounding country is in lots, with no houses nearer than 400 feet away. I do not want too much put on the lot, but just enough to make the place look neat and up to date.

Long Island. H. W. B.

All necessary grading should be done before trees, shrubs, etc., are planted. For specimen trees and shrubs (that is shrubs located by individual numbers), holes should be dug at least six inches larger than the diameter extension of the roots, 20 inches in depth, and filled with good surface soil mixed with one-fourth its bulk of old well-rotted manure.



The spaces to be occupied by mass plantings should be prepared by trenching. Commencing at one end of the ground to be trenched, a space four or five feet wide is dug out one spade deep, and the surface soil thrown aside. The subsoil is then dug up one spade deep and mixed with a liberal quantity of rotted stable manure; a second section of like width of the surface soil is now to be thrown on top of the first section of subsoil, and the second section of subsoil prepared same as the first, and so on until the entire space of ground to be prepared is gone over. When the digging is finished the last section will be without surface soil, which is to be filled with the surface soil thrown aside when the first section was dug. The surface should then be leveled and a liberal application of rotted manure be given and mixed well with the soil. The sod should be carefully edged up to these plantings as shown on plan by the regular lines enclosing them.

After planting, all tall trees should be staked to prevent them from being moved back and forth by the wind. The tying should be done with some kind of soft material, and in such a manner as to prevent the trees being in any way injured by the stake or tying material.

All deciduous trees and shrubs should be pruned when planted. If this is neglected some of them will be apt to die the first season after planting. This pruning consists in cutting back the top one-fourth to one-third.

Where Rhododendrons and Azaleas are to be planted, an excavation two feet deep should be made, and filled in with good top soil mixed with one-third or one-half its bulk of fibrous sods chopped fine. No manure is to be mixed with this, but after planting the surface of the soil should be covered an inch or so with old cattle manure. Renew this mulching about the middle of July every year. These plants are quite sensitive to drought; and in dry weather should be kept well watered, not merely sprinkled, but the ground soaked at least two feet deep, once a week during the drought. Soak the balls of earth around the roots well at time of planting. This is best done by standing the plants in a tub of water a few minutes with the burlap on. Remove burlap from roots before planting. Late in the Fall give the plants a mulching of forest leaves six or eight inches deep, and further protect them with board wind-breaks from the cold winds of the north, northeast and northwest.

For privet hedge, a trench should be dug 16 inches wide and as much in depth, and filled with good surface soil and well-rotted stable manure in the proportion of three parts soil to one part manure. Immediately after planting the privet should be cut evenly to within four or five inches of the ground and then be allowed to grow the first season without further trimming. The second year the plants should be cut down evenly to within 10 inches of the ground, and be allowed to grow as in the first year without further trimming. The third year cut down to within 15 inches of the ground, when the new growth has reached a height of two to three feet, or the height the hedge is desired, stretch a line along the hedge at the desired height and cut off the tops of the plants evenly to the line.

For evergreens use only good surface soil. The beds should be dug 18 inches or more deep. About 10 pounds of pure raw bone meal mixed with the soil in each bed will prove very beneficial. Use plenty of good stable manure on flower beds and vegetable garden annually.

The driveway and walk should be excavated to a depth of six inches, and if crushed limestone or shale is used as a top-dressing there should be at least three inches of good gravel put in first as a foundation. Cover with two inches of the kind of top-dressing desired.

PLANTING LIST.

Planting No. 1.—3 Norway maple for street, 10-12 feet	$6.00
Planting No. 2 and 3.—16 Thuya globosa (Globe arborvitæ) 18 inches	16.00
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Planting No. 5, 5, 5, 5.—12 Azalea Amœna, 12 inches across, at 50c	6.00
Planting No. 6.—4 Lonicera Halleana, at 25c	1.00
Planting No. 7.—4 Golden privet, at 50c	2.00
Planting No. 8.—1 Oriental plane, 8 feet	1.25
Planting No. 9.—1 Wier's cut-leaved maple, 8, 10 feet	.75
Planting No. 10.—1 Purple-leaved maple, 8, 10 feet	1.50

SHRUBS.

Planting No. 11.—5 Spiræa Van Houttei, at 25c	1.25
Planting No. 12.—4 Syringa Persica, at 35c	1.40
Planting No. 13.—5 Deutzia Pride of Rochester, at 25c	1.25
Planting No. 14.—4 Forsythia suspensa, at 20c	.80
Planting No. 15.—3 Weigela Hortensis nivea, at 25c	.75
Planting No. 16.—3 Spiræa Douglasii, at 20c	.60
Planting No. 17.—3 Spiræa arguta, at 25c	.75
Planting No. 18.—3 Deutzia gracilis, at 25c	.75

ROSES, ETC.

Planting No. 19.—2 Climbing rose, Dorothy Perkins	.70
Planting No. 20.—2 Climbing rose, Dr. W. Van Fleet	.70
Planting No. 21—2 Climbing Rose, Philadelphia Rambler	.70
Planting No. 22.—1 Magnolia Soulangeana, 3, 4 feet	1.50
Planting No. 23.—3 Bartlett pear, 5, 6 feet, at 60c	1.80
Planting No. 24.—2 Apple, Early Harvest, 6, 7 feet, at 60c	1.20
Planting No. 25.—2 Apple, Red Astrachan 6, 7 feet, at 60c	1.00
700 California privet, 18, 24 inches, at $25.00 per 1,000	17.50
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J. A. K.

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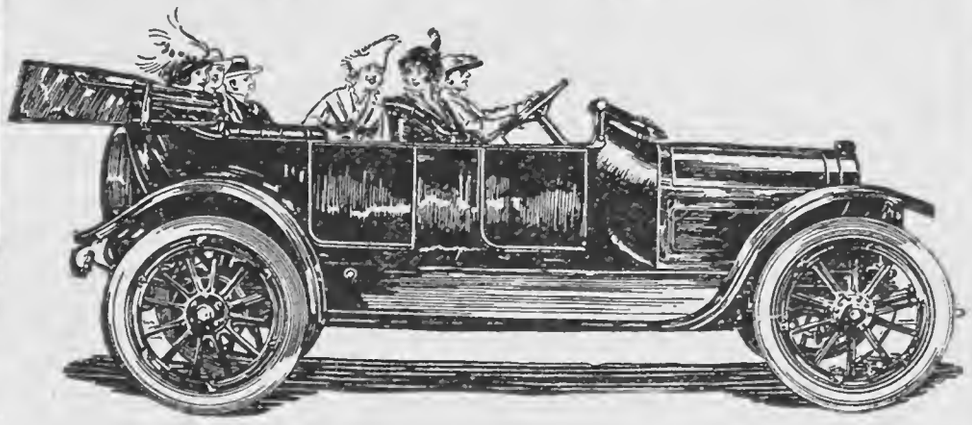

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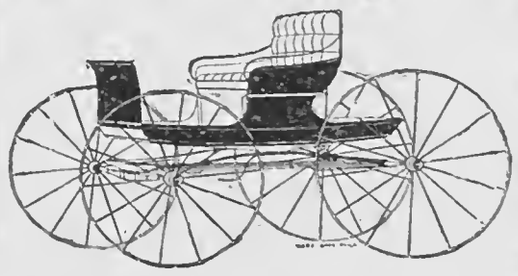

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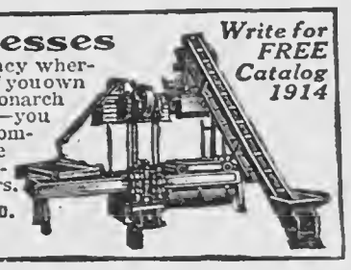

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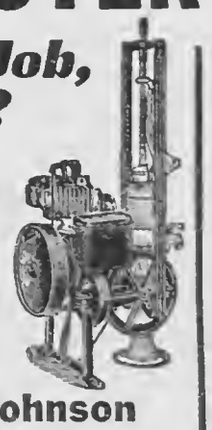

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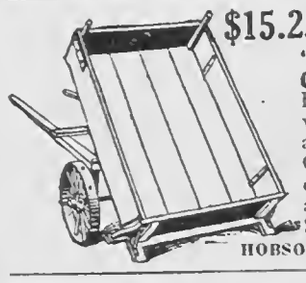

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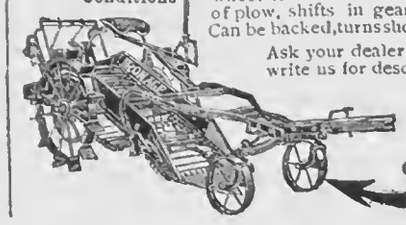

BATEMAN M'F'G CO.
Box 102D
Grenloch, N. J.

Hope Farm Notes

With great interest, not to say anxiety, I await the Hope Farm man's comments on the invasion of Mexico, which is as germane to agriculture as his report of the baseball game, as exciting and interesting as any I ever read, though I do not devote much time to them. What business have we there? If American honor is to be maintained, why not seize Vera Cruz and hold it for awhile? But to invade Mexico and punish the nation for the wanton act of a usurper, seems hardly a dignified or excusable performance.
Maine. G. S. P.

You can never convince me that any large number of Americans are lying awake nights waiting for the Hope Farm man to fire an opinion at the Mexican situation. I know no more about it than 10,000,000 or more other citizens; not as much, apparently, as some of my friends and neighbors who can tell you just what this nation ought to do. I cannot think what the American people were doing when they did not elect some of these warriors in place of Mr. Wilson. Why he did not select one of those walking exponents of wisdom for Secretary of State is past understanding. Personally I am opposed to war for many reasons. During the former Mexican War Lowell put it like this in the "Biglow Papers":

"As fer war—I call it murder,
There ye have it plain an' flat.
I don't want to go no furder
Than my Testyment fer that!"

* * * * * * * * * * *

"Laborin' man an' laborin' woman,
Have one glory an' one shame,
Everything that's done inhuman
Injures all of 'em the same."

That was written 67 years ago, but it has grown truer with each year. A war with the Mexican people would be straight, brutal, unjustified murder, and it would put back the real progress of farmers and other working people in this country for 25 years. If you will read the "Life of Mark Hanna" with careful thought you will see how the great "patriotic spirit" aroused by the Spanish War enabled the politicians quietly to work through and develop much of the legislation which we are now fighting so hard to overcome.

There were five in my family who were thrown out of a normal childhood by the Civil War. These valiant fire-eaters think they can tell President Wilson how to conduct the case, but I challenge any of them to tell me something new about what war really means. I would rather take care of the orphans and desolated homes that we now have, rather than make new ones. Lets go back to the "Bigłow Papers" again:

"Call me coward—call me traitor,
Just as suits your mean idees,
Here I stand a tyrant-hater
An' the friend o' God an' Peace."

At the present time there is no greater tyrant in this country than the mistaken "patriotism" or prejudice which drives men to yell and wave their hats over a war scare when right within gun shot of their homes are quiet issues and humbler things which demand their patriotism.

As for the "insult to the flag" part of it I think bloodshed would only drive the spirit of it in deeper than ever. Some years ago in a crowd of people a man told another to go to a place which a great general said was the equal of war. He was a little snipe of a man. The other could have taken him over his knee and shingled him, and the crowd all expected it to be done—for that was the accepted method of resenting an "insult." The larger man looked at the little whippersnapper puffed up like a bantam rooster, and there came to him the saving grace of the comical side of it. And so instead of punching him the big man said:

"Thank you, sir, for the invitation to go home with you, but I might interfere with your domestic arrangements!"

The crowd roared, and after he saw the point this "insulter" laughed too. The two men have been friends for years. To talk about plunging this great nation into war because a few Mexicans may make faces or swear in a language we do not understand is nonsense.

The fact is that no man can give a single reason for a war with Mexico that will for a moment stand the test of reason, religion or plain common sense. You might take a man who for long years has worked to obtain justice and a "square deal." No one paid attention to him because he could not interest them. At last after long years he made his case so clear and strong that he attracted attention, and the people who were to decide the matter began to think of giving him justice. All that was needed was a little more clear, honest thinking and the thing was done. Suppose right at that time some one went to these people who were to decide and inflamed their minds with whiskey. Where would our friend be after his long struggle to arouse popular thought? He would take a back seat once more until these people "got over it," and then he must begin again. Now in a larger way that is what a war or a "war scare" would mean to our farmers and workmen. We would lose the hold upon popular thought which we are gaining for the 35-cent dollar, farm credits and co-operation, and when the war was over it would be necessary to begin all over once more. For this reason alone, if for no other, the farmers of this country should oppose a war as powerfully as they have fought a dozen other things which were clearly against their interests. As for handling the situation, I have the greatest confidence in President Wilson and Secretary Bryan. I am going about my business without advising or criticising them.

Farm Notes.—Spring finally came rushing into our valley like one who had tarried by the wayside against the rules and then ran in with a great bluff of finding fault with others. And all the Hope Farmers, from Aunt Jennie down to the little black and white calf in the barn, are glad to see Spring and what she started in the meadows and trees. The crab apple trees came first. They were in leaf by May 1 with the bloom just opening. Most of the crab bloom was killed by a late frost last year, and we had little fruit. Now we are to make it up. The Carman peaches came next. They are budded full, and it looks like a bumper crop. Carman and Belle of Georgia always stand the hard Winters better than Elberta, though that variety carries a fair crop this year. Last year was our heavy apple year and I did not expect a full crop, but the trees have more bloom than I expected. Strawberries never came out finer and the cover crops are jumping. Hope Farm as usual faces the season with good nature. Sorry it is so late, but when your land is all plastered with cover crops it does not make so much difference, because these crops will give some sort of an income anyway—if you let them go.

There are several hundred thousand new Hope Farmers to be introduced. We never started beekeping somehow. The children were stung badly when quite small, and no one here cares for a bee. A neighbor exchanged honey for some of our surplus. But now I have arranged with a bee keeper to pasture some of his bees. He lives some miles away where manufacturing has killed out most of the bloom. So he brought some 15 hives up on our clean, wind-swept hills and set them under a big apple tree. They went to work at once, and proceeded to business on the first flowers. They mind their own business. One of the Italians thought to investigate them, but they did the investigating, and he did the running. We get a share of the honey and the bees are said to help our fruit.

All hands have been working on the lawns at our job of landscape gardening. Mr. Kemp has charge of this job. Mother and I stand back and work in the ranks. The first thing he did was to make a map of the grounds, with each plant and shrub numbered in place. Then he began with the hedge along the road. It is something like putting a machine together in order to get it right. To me there can be no argument worth considering against beautifying the home surroundings. It cannot always be done on an elaborate scale, or with expensive plants and shrubs, but the habit of making the home grounds neat and tidy is one of the best things a child can pick up. If a man and woman can give their children clean and neat habits of mind, head and hand they give them half the battle of life. Many a farmer would far better spend the money he would pay for an auto in beautifying the grounds around the house and water fixtures inside the house. That is our theory—and practice.

Then comes the old familiar garden question. We had our first asparagus on April 27—it was late this year but we hope to make up for lost time. What can be better than a supper of tender asparagus tops cooked in milk and served with cream, bread and butter and baked apple or stewed rhubarb? It takes a large asparagus bed and a well-bred and very sympathetic cow to keep our family going. The peas and a dozen other vegetables are coming on to help later. What *can* a farmer be thinking about when he lets the garden go, or leaves the wife to hoe out a poor little weedy strip? What is your honest opinion anyway of a man who claims to be able to tell President Wilson what to do in Mexico, and yet lets the season go from asparagus to turnips without an attempt at a decent garden? I have my opinion of him as pronounced as that about war.

As usual Spring comes with high drying winds that suck the moisture rapidly out of the soil. This requires special treatment, for on our dry hills this soil moisture is precious. The land should not be left in rough furrows after plowing any longer than necessary. These rough, loose furrows let in the air and the wind blows out the moisture and leaves the soil in dry clods. Such soil should be harrowed down level as soon after plowing as possible. This presents less surface to the wind, and the soil being more compact holds more of its moisture. On such land as ours it will pay to harrow down each day's plowing as the last job of the day. Most men object to doing this, and they do not like to change from plow to harrow but it will pay to do it.

To what extent can a regular yearly subscriber to a rural telephone legally allow it to be used through his exchange by members of his own family or visiting friends, or neighbors without a fee being imposed? Has the operator a right to require name of subscribers before making the exchange or connection?

The extent to which members of a subscriber's family, visiting friends and neighbors may use his telephone is dependent entirely upon the terms of the yearly contract. A contract allowing the us of the 'phone by the family would include visitors of the family, but would probably not include neighbors who come in purposely to use the 'phone. So this subscriber may allow his family and visitors to use his 'phone, but unless the contract so specifies should not allow its use by neighbors where they come in specifically for this purpose. If the contract does not allow anyone but the subscriber's family to use the 'phone, the operator is justified in inquiring if the user is one entitled to its use. H. W. C.

Hog Manure for Apple Orchards.

On page 141, I note your remarks on nitrogenous manures affecting the color of apples. Our orchard is located in the Okanogan Valley, and we have planted a seven-foot strip of Alfalfa between our tree rows. Over this strip are moved portable hogpens. Is the hog manure going to take the color out of our apples? The hogs are only a money-maker and we do not wish to have anything on the ranch that in any manner detracts from the apple. W. N. M.

It is not likely that the penning of a few hogs on the strips of Alfalfa will so affect the apples on the trees as to cause them to grow too large and lack color, but it is easy to try it out in a small way. Hogs running loose in an orchard are often a decided benefit by adding fertility to the soil. In the Okanogan country, which is in northern Washington, I have seen apples on young trees that had been over-irrigated caused to grow too large and lack color, but by reasonable control of the water I do not think there is such danger.

H. E. VAN DEMAN.

The Best Way
To Make Hay
Use a

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Load your hay onto the wagon with the Dain, the one-man rake bar hay loader that gathers up all the clean hay but leaves the trash. Rakes operated at exactly right speed to require least power. Strokes of rakes overlap, raking the ground twice. Hay is gathered from swath the full width of machine, regardless of mower used. Change to windrow work easily made. Automatically adjusts itself to handle light or heavy hay and never chokes up. Pushes hay onto center of wagon so that only one man is needed,—the driver. Ask us about other superior features.

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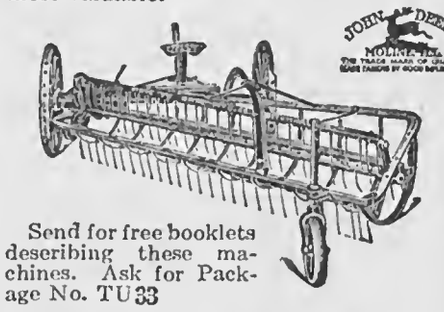

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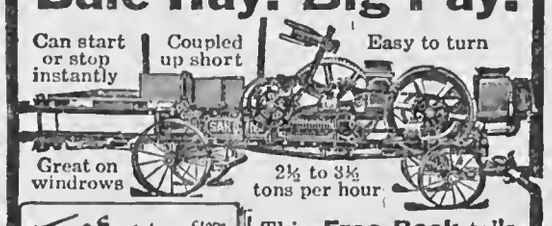
JOHN DEERE, Moline, Illinois

Bale Hay! Big Pay!



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Ruralisms

Desirable Pecans.

I notice on page 401, H. E. Van Deman says that there are varieties of pecans that are immune to "scab" fungus, phylloxera, shuck worm, etc. I have some land in the Mississippi Delta lands of Louisiana (about 40 miles above Ferriday, where Mr. Van Deman's company has a pecan grove) on which I wish to plant pecans. Would he give a list of what he considers the most profitable of the "papershell" pecans to plant in that location? W. C. V.

Mayaguez, P. R.

There are considerable differences in the immunity of the varieties of the pecan in regard to the scab fungus and their susceptibility to it. The varieties from Texas seem to be the most affected. Those that are the least affected and are of fine quality of nuts and bear well in the Delta region are the Stuart, Van Deman, Moneymaker, Carman, Success and Schley. What they may develop in regard to their ability to be the free from the ravages of the "shuck worm" we do not know as yet, but so far this pest has not been very bad on any of them as I have observed them.

H. E. VAN DEMAN.

The Cabbage Maggot.

On page 518, you have an answer to query on the cabbage maggot. As the treatment recommended does not commence until injury is apparent, I would suggest that the correspondent try the following method, which is a preventive rather than a cure: The cabbage growers in the vicinity of the New York Agricultural Experiment Station were having a great deal of trouble from both the cabbage maggot and the turnip flea-beetle. They called upon the station to help them out, and as a result of a series of experiments conducted by that station, which were published in Bulletin 334, they found that by growing the cabbages in cold frames tightly screened with cheesecloth, having about 20 to 30 threads to the inch, all damage from these two pests could be obviated. The experience of four years has shown that the use of cheesecloth is entirely practicable. In experiments in protecting plants the cost of screening plants ranged from six to 20 cents a thousand.

P. T. B.

Weed Killers.

How can I make a reliable weed-killer? I. M.

It is inferred that this inquiry relates to sprays used to kill weeds in walks or drives. A number of different preparations are used for this purpose. Hot brine (one pound salt to one gallon water) is found very effective on walks and roadways. Most commercial "weed-killers," however, are arsenical compounds, which endure for a long time, as they do not readily leach away. The easiest form to use is made by dissolving arsenite of soda, one pound in three to nine gallons of water. Better try the hot brine if the weed-killer must be used in a place frequented by pet dogs or cats, as the animals might suffer through walking on the freshly treated surface, and then licking their feet. However, where the arsenic seems safe to use, its lasting qualities make it more desirable than the brine. Of course the weed killer must not be allowed to overflow on lawn or flower beds.

Apple Trees Do Not Bear.

I have two apple trees that were planted 16 years ago, and have never borne fruit, but blossomed last year. They are in clay soil. Name unknown. What can I do to promote fruiting?

Patton, Pa. E. M.

It is not uncommon for some varieties like Red Astrachan and Northern Spy, particularly the latter, to fruit late in life. Trees of this sort growing in heavy soil, and which have a severe annual pruning, cannot be expected to produce fruit; they are too busy making wood. In such a case, I would resort to the girdling already described in THE R. N.-Y. by Prof. Van Deman, or I would do some root pruning. On the other hand, I have seen trees which were brought into bearing by pruning. The only reason I can advance as to why the pruning did it was because they had not been sufficiently well fed, and the heavy pruning stimulated the growth of the tree, enabling it to bear. Should your correspondent's tree be in this condition—he can tell whether or not it has fruit spurs—I would prune it so as to allow a good circulation of air among the branches, and to enable the sun to reach all parts of the tree at some time during the day. In addition, fertilize the tree, using about 2½ pounds of nitrate of soda, 3½ pounds dried blood, 10 pounds acid phosphate, and two pounds muriate of potash. Spread this broadcast under the tree from near the trunk out to three or four feet beyond the ends of the branches. If you prefer to use a mixed fertilizer, use one containing about 6% nitrogen, 10% phosphoric acid, and 5% potash, sowing broadcast as described about 20 pounds. As the tree blossomed last year, the latter method may give the desired results. Many trees failed to fruit last year in Pennsylvania because of heavy late frosts when the trees were in bloom. E.

Propagating Grapes; Raising Melons.

1. I have a few acres of grapes. I have bought all the plants so far, and would like to know how to raise my own vines. 2. When is the best time to plant watermelons, cantaloupes and cucumbers in the open ground? D. B.

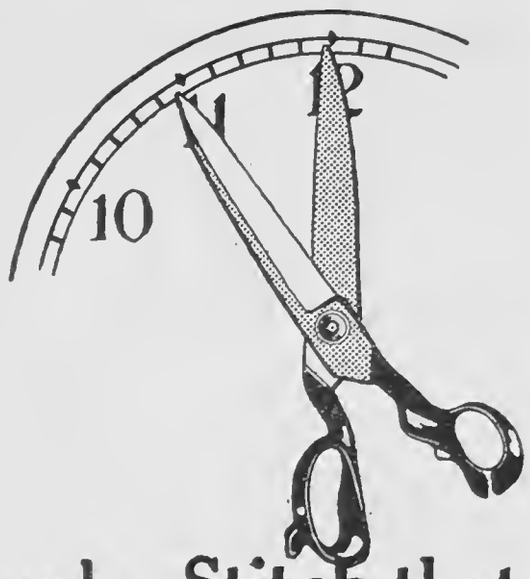
Rosenhayn, N. J.

1. There are several methods by which the grape may be readily propagated, but the most common and most frequently employed is from hard wood cuttings, cut to two or three eye lengths. These cuttings are usually made in late Fall or early Winter from well-matured wood, tied in bundles of 50 and stored in moist sand or decayed sawdust, in a cool cellar or buried in the open ground that is well drained until settled weather comes the following Spring, when they are planted in rows two to three feet apart, with the cuttings four to six inches apart in the row. In this preparation of the soil for their reception, it should be deeply plowed and well pulverized. If this precaution is taken in the preparation of the ground, the planting operation is much simplified; all that will be necessary is the stretching of a planting line where the row comes and push the cuttings into the loose soil at a slant of about 40 deg. to 45 deg., covering the top bud about one inch deep with soil. The end of the cutting above the top bud should be left three or four inches long. This will provide ample room for the hand in handling and much reduce the danger of breaking off the bud when planting. The lower end of the cutting should be cut to within one inch of the bottom bud. This method of propagating the grape will be found quite satisfactory, with nearly all the standard varieties.

2. Plant watermelons, cantaloupes and cucumbers in the open ground, when the soil becomes warmer, and the temperature at night remains at about 55 degrees.

K.

A GUEST was expected for dinner, and Bobby had received five cents as the price of his silence during the meal. He was as quiet as a mouse until, discovering that his favorte dessert was being served, he could not longer curb his enthusiasm. He drew the coin from his pocket and, rolling it across the table, exclaimed: "Here's your nickel, mamma. I'd rather talk."—Pittsburgh Chronicle-Telegraph.



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A National Weekly Journal for Country and Suburban Homes

Established 1850

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JOHN J. DILLON, Treasurer and General Manager.
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In order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

The Rural New-Yorker has, at its command, the largest and most efficient corps of correspondents and advisers ever gathered by any farm paper in the world. Thus we can obtain for you the last word on any subject relating to the soil, its cultivation or its products, or the human life of the farm. This service is yours for the asking.

*

A FEW weeks ago we suggested a plan for scoring the milk supplied to town or city. The scheme would be to offer prizes for the cleanest milk. Dairymen who supply milk to the local market should be encouraged to compete and send samples, or samples could be taken at random off their wagons. There ought to be a fair "score" for judging and an expert to decide. This plan would interest consumers in good milk and be a good thing for dairymen. We understand the suggestion will be taken up in several large towns.

*

THE Pennsylvania Railroad recently closed its saloon in the Pittsburgh station. No more intoxicating liquors will be sold at the stations or on the trains of this company. This action is due largely to public sentiment. Prohibition is spreading like a fire in Pennsylvania, and the State will undoubtedly be "dry" in a few years. The Pennsylvania ordered its employees to quit drinking, and the public demanded the "square deal." If liquor is a bad thing for workmen it is just as bad for officers and patrons, and should be kept away from all. Just as soon as the public show that they mean business the temperance question will be settled.

*

FOR some years past the "carbonic acid" theory has been discussed by incubator men. Some thought the gas necessary in the incubator—others considered it responsible for bad hatching. Prof. Lamson's long experiments, recorded on our first page, settle the problem. If now he can obtain as conclusive facts regarding the moisture question he will put brains into the "wooden hen." Some may feel, as they generally do, that anything done at the experiment stations is theoretical and not practical. If running incubators for five years, carefully watching the results many days and parts of many nights, is merely theoretical the man who does it may well sigh for a practical job.

*

IN using lime-sulphur spray this year, one to nine, I have burned my fingers severely, causing a good deal of suffering and leaving my hands partly disabled for a couple of weeks. This occurred in spite of the free use of vaseline on the hands. After the injury had been done I used rubber gloves with leather gloves over them which, of course, gave perfect protection. I have never heard of this injury before and I wish to warn the "tenderfoot" variety of farmer of the possibility.

W. C. D.

We have had the same trouble, though not so serious. The oil sprays do not "bite" in this way. Our folks use heavy canvas gloves and glasses or goggles. It is better to protect the horses with light blankets. By all means warn the "tenderfooted" farmer. The rocky road may make him lame, and if his hands give out he cannot feel his way, or count the money which the real estate men tell him he ought to make. A farmer should dress for his job, and keep his hands as free from injury as he can.

THE latest suggestion is to use ground limestone as a dust upon seed potatoes at the time of planting. This comes from farmers who have quantities of the ground limestone on hand, and think it will take the place of plaster or of sulphur in dusting the seed pieces. Our advice is brief and emphatic—*Don't do it. If you think of doing it, forget it at once.* Powdered sulphur really is effective in preventing the scab disease, and it will help to prevent the seed pieces from rotting in the soil. Land plaster serves to dry out the seed, but has no other particular advantage. Ground limestone will, if anything, increase the scab disease, and will have no beneficial effect whatever. You might far better use the road dust on the seed pieces, for while it would do no particular good, it would not act to increase the germ disease as the ground limestone would be likely to do. The best plan is to soak the seed thoroughly in the formalin solution which we have so often explained, or to dust sulphur on the seed pieces as they are cut. We do both, and find both the solution and the sulphur to be useful.

*

WE have been accused by some enthusiastic parties of favoring the fertilizer trust, because we do not boil over with enthusiasm for the use of raw phosphate rock in the place of bone or acid phosphate. There are two trusts that we stand for. One is the old-fashioned trust in Providence, the other a trust in the tried and tested truths of science. The latter is usually known as common sense. We use phosphoric acid to feed our crops promptly and fully—not to store it up for the future. It is admitted that superphosphate, bone and similar forms give the quick returns, while the raw phosphate does not. But, say the raw phosphate men, the manure pile and the decaying sod make the raw phosphate available! Why use the costly sulphuric acid to "dissolve" the rock when your manure pile or your clover will do it for you? If the manure and the clover possessed any such power there could be only one answer—but are they able to do this? Some years ago a fertilizer concern offering the raw phosphate claimed that Prof. Mooers of Tennessee had found that manure *did* make this phosphate available. He denied the statement, and now after several years more he denies it again:

So far as I am aware there is no experimental evidence published by any of the stations to warrant the statement that manure makes the phosphoric acid of phosphate rock available to any appreciable extent. We tried for a number of years by both laboratory and field experiments to determine the effect of manure on phosphate rock mixed with it. We came to the conclusion that the effect at best was inappreciable.

Tennessee Exp. Station. C. A. MOOERS.

Personally we have felt that the raw phosphate men were injuring their own cause by claiming too much for their methods. Some of them go so far as to say that horse manure will "dissolve" phosphate rock as effectively as sulphuric acid. That is great nonsense, which will disappoint many farmers and lead them to loss. No one would welcome a cheaper form of available phosphoric acid more heartily than we would, but we want to know about it before turning our readers astray.

*

THE picture of a White Wyandotte hen on the next page is shown by special permission of the American Poultry Association in order that our readers may clearly distinguish the difference between those English Wyandottes and the ideal type of the American standard. On May 1 these English birds at the Storrs egg-laying contest were 112 eggs ahead of the next best pen. Thus far they have, without question, laid all around the other birds in the contest, and are still holding their own. This fact has naturally aroused the curiosity, if not the suspicion, of many poultry men. The standard American Wyandotte is a lazy layer. If you doubt it look at the "ideal" bird on page 725. She is a round, plump, dumpling of a sleepy hen, and does not look capable of laying 60 eggs in a year. The Hope Farm man will match his scrubs against 10 such "ideals." It is notorious among practical egg men that the fanciers have been ruining the Wyandotte as an egg-laying machine. Therefore when Barron comes with birds that run and jump for their feed, and do in three months what the standard Wyandotte would do in a year, it is a natural thing to talk "hybrid" or "off type." All that has been proved thus far is that these English Wyandottes would be thrown out of a poultry show on "points." After being thrown out four of them could safely go into a henhouse and challenge 10 of the high-scoring "standards" to an egg contest. Mr. Card tells us on page 714 that the next "standard" will contain a modified or utility form for Wyandottes. It is high time, and here we have the whole case given away. No living hen of the sleepy shape and appearance of this "Standard" could have any chance in an egg contest. As well expect a big draft horse to trot in three minutes or less. We may thank these English Wyandottes and the egg-laying contests for putting the spur of public opinion into the A. P. A., and making them realize that people eat eggs rather than feathers.

The R. N.-Y. is not acting for Tom Barron or any other individual. If anyone has evidence that these champion layers are hybrid or cross-bred birds put up to boom the breed, let him come forward with it at once. It seems to us it is up to the American Poultry Association to prove that these birds are hybrids, or else wake up their sleepy Wyandotte into energy and eggs.

*

THE trustees of Cornell University have elected Dr. Beverly T. Galloway as dean of the N. Y. State College of Agriculture. Dr. Galloway is the present Assistant Secretary of Agriculture at Washington. He is 50 years old and a native of Missouri. A farm-raised boy, he developed into a flower grower and botanist of high reputation. Entering the Department of Agriculture, he rose by painstaking and careful work to the position of Assistant Secretary. Dr. Galloway is an organizer and worker rather than an orator, and he will have ample opportunity for service in New York State at this time, when the idea of organization is uppermost.

*

I have often wondered if the 35-cent dollar which you have so persistently and effectively advertised was a strictly American institution, or whether it was a universal thing. In this connection I have just noted a publication mentioned in the Experiment Station Record which gives some interesting figures bearing on the distribution of the consumer's cost of meat in Paris. It is said to be as follows:

Original producer	76%
Railways	2%
Cattle commissioners	1%
City of Paris	5%
Wholesale dealers	3%
Retail dealers	13%

This distribution, if correct, shows a condition of affairs quite different from what obtains in this country.

K. S.

The 35-cent dollar is an average of net returns received by farmers under many different conditions. The Department of Agriculture has issued figures which show an average of about 40 cents. Our own estimate is made up from thousands of reports which are sent from all over the country. In some cases the producer gets 100 cents of the final price, as the consumer comes to the door and buys. On the other hand we have many cases where a shipper, instead of being paid for his goods, received a bill for the balance due for freight. It was claimed that the goods did not bring enough to pay expenses, though in some of these very cases the goods were actually sold at a high figure. Between these two extremes lies the average—a 35-cent dollar. It has been estimated that the yearly farm crop of food and fibre costs the final consumer about $16,000,000,000. The producer receives of this about $6,000,000,000—the handlers taking the difference. For more than 10 years we have challenged anyone to disprove these statements, but thus far no one has been able to controvert them. The situation is worse in this country for various reasons. This is a tremendous nation with long and costly hauls for food. We were last of all the civilized nations to adopt parcel post. The carriers have far greater monopolies than in European countries. Our roads are generally not so good, and our people have not been trained in coöperative work. These are some of the reasons why the 35-cent dollar is so largely an "American institution." The greatest issue in all American life today, is how to find some way of giving the producer 50 cents or more of the final price of his product. A way will be found when the majority of our people understand how the consumer's dollar is divided. The only way to make them understand is to keep at them.

BREVITIES.

GUARD the garden.

RUNNING water in the kitchen will save walking for the wife.

A MAN is known by the back yard he keeps—not by the paint on the front of his house.

WITH Spring late and work rushing this is not exactly the open season for writing letters.

IT seems that the man who would train a dog or a horse successfully must first be trained himself.

HERE is a queer freak of nature—rhubarb is sour but the more acid it carries the more it sweetens the family life with its first mess.

RIGHT now when the Winter's manure is to be hauled out, comes the time when we all wish the job had been done day by day through the Winter.

REPORTS which come to us of the city workmen taken to Wayne Co., indicate that these men and women are contented, and have given good satisfaction.

READ what is said about using arsenate of lead on seed corn to repel the crows. There are many reports showing that crows are getting to rather like the taste of tar.

LAND BANK OF THE STATE OF NEW YORK

System of Mortgage Credits Explained.

PART III.

ADVANTAGES SHOWN.—It will be seen that every opportunity is offered in these associations for the accommodation of people who wish to save or invest money in large or small amounts. They afford every advantage of the savings bank with none of the savings bank's faults. They are equally as safe. They pay a better rate of income. The deposits begin to earn income sooner on an average and there is less loss of income from withdrawals. The money is in the control of the men who earn it and save it. They learn how to use it and control it; and it is used for their own business and profit. There is little or no expense in the management of it. The work of the officers is mainly gratuitous. With the savings banks there is a heavy expense of management which comes out of the earnings of the depositors. The money of the savings bank is either invested in speculative building enterprises or in bonds or stocks, but it is not invested in the small mortgages of the frugal people who worked for it and saved it. The savings banks perform a legitimate service in safeguarding the savings of the poor, but they do not compare in efficiency with the savings and loan associations, either in profits on savings or in loans to their own patrons.

LIMIT OF INVESTMENT.—The accumulations of payments on shares, interest and amortization payments on mortgages constitute the capital of the savings and loan associations. They may borrow limited amounts, and when they have a surplus not needed by their own members, they may invest in certain standard securities, but their exclusive business is to loan on first mortgages on real estate to their own members. They can loan to members only or to other associations.

ADVANTAGES SHOWN.—Heretofore the money paid in by the members was all the funds available for loaning to members on mortgages. If the funds were short, the borrowing member simply had to wait until the payments accumulated. In cities and towns where there were many members who wanted to save and comparatively few borrowers, the plan worked all right; but where there was more demand for loans than there was money to supply them the result could not be entirely satisfactory. That was the reason the savings and loan association could not entirely supply farm needs as it was heretofore organized. Some associations in towns had more money than they needed for their urban members. These took neighboring farmers in as members, and made loans to them; but the farmers of a neighborhood could not organize an association of their own and depend on its funds to finance their mortgages. It would take too long to accumulate funds enough to go around. The need was that money should be available at any and all times to take up a mortgage just when the land owner wanted it. This requirement will now be supplied through the Land Bank.

THE LAND BANK.—The law authorizing the organization of the Land Bank of the State of New York was indorsed by Governor Glynn and passed both branches of the Legislature in the session of 1914. It was promptly signed by the Governor, and is now a law, and plans are under way to organize the bank.

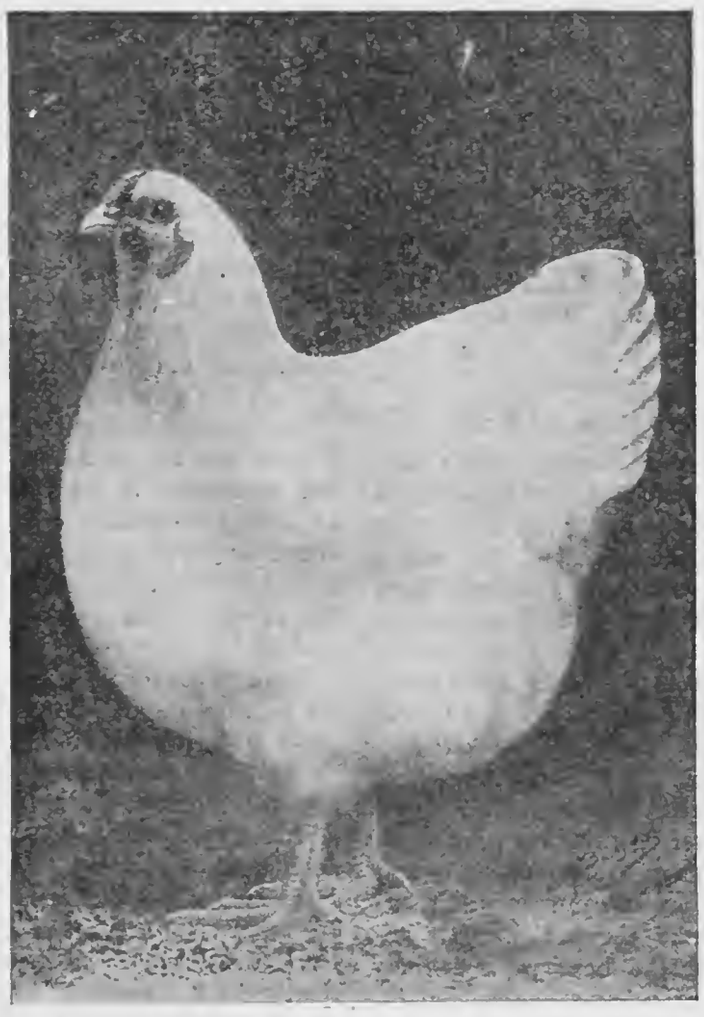
ITS POWERS.—This Land Bank of the State of New York will be located in the city of New York. It will be organized by the Savings and Loan Association, and owned exclusively by them. Of course each member of a Savings and Loan Association will actually own his share of the Land Bank through his share of the local association. No local association will be obliged to become a member of the Land Bank. It may become a member or not as its members prefer, but just as a person must be a member of the local association to get a mortgage from it, so the local association must be a member of the Land Bank in order to benefit from it. The local association will become a member of the Land Bank by taking one or more shares in the Land Bank, and the local association will then be entitled to all the benefits of the Land Bank.

THE BANK'S ORGANIZATION.—The Land Bank will be organized in the following manner: When 10 or more local associations signify their intention of becoming members of the Land Bank a meeting will be held of such members, a charter and by-laws will be prepared. These will be submitted to the Superintendent of Banks. He will approve them, and issue a certificate of authority to open up for business. The 10 or more local associations will then receive their certificate of shares in the Land Bank, and pay in $1,000 for each share. Directors and officers will then be elected and the Land Bank will be ready for business. It will have the money received for shares as capital to loan on real estate mortgages. It will also have the authority under regulations of the State to sell Land Bonds. These bonds will be secured by the first mortgages on real estate and an officer of the State will see that each bond sold is secured by such a first mortgage on real estate. This provision will make the Land Bank bonds one of the safest forms of security in the country, and the bonds should sell for as low a rate of interest as most municipal or State bonds.

SUBSCRIPTIONS TO BANK SHARES.—The local association now formed and doing business with resources amounting to $10,000 is in a position to subscribe for one share in the Land Bank, and pay $1,000 for it. New local associations will have two methods open to this. They may organize and go on doing business and accumulating assets until each has resources of $10,000; and then subscribe to one share in the Land Bank. In some sections this method may be a little too slow for the members of the local association. They may want mortgage money at once, and several members may want to place mortgages at once. The new association would not have the money in sufficient volume to make the loans promptly. In that case the mortgages could be prepared and executed to the local association. These mortgages would then be assigned to the Land Bank, and the local association would receive in return one one-thousand-dollar share in the Land Bank and the balance in cash, which would go to the local members who executed the mortgages. When the local association has once secured membership in the Land Bank it need then never be short of funds to finance the mortgages of its members. Of course, it would use its own money first, if it had the funds, but if it were short at any time, the borrowing member would execute his mortgage to his own local association. The mortgage will then be assigned to the Land Bank, and placed in the custody of the Comptroller of the State. The money for the mortgage would be sent from the Land Bank to the local association and handed over to the farmer or homeowner who executed the mortgage. This may go on indefinitely because the Land Bank is authorized to sell bonds as fast as the mortgages are received. The amount of bonds it can sell is limited only by its capital and the mortgages assigned to it. J. J. D.

Farmers' Transportation Association.

A farmers' meeting held May 1, at Burlington, N. J., developed into a permanent organization known as the Farmers' Transportation Association, with W. T. Baggs, Beverly, N. J., president, L. A. Page, Palmyra, N. J., secretary, and with an executive committee of 15 up-to-date men, each representing a shipping section. The primary object of this association is to bring about an improvement in rail transportation facilities for the handling of fruit and produce from the river front section of Burlington County, especially for the markets of Newark and New York. Late deliveries of the Pennsylvania Railroad Company and the Adams Express Company mean losses of thousands of dollars each season to the shippers on account of late arrivals at the destination. The growers have banded together in this move for a protection to their interests, and are hopeful of bringing better conditions about. Lack of railroad competition through this section, which is one of the very best for farm truck in the State, has been the cause of long and continued unsatisfactory service. Pressure will be brought to bear from every known source to give the shippers in that section the service they are entitled to, and which they are compelled to pay for.



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THE IDEAL WHITE WYANDOTTE HEN.

(Reproduced by special permission from "The Standard of Perfection.")

New York State News.

CLAIMS AGAINST THE STATE.—The work of disposing of claims against the State is being pursued vigorously by the Attorney General. During the first four months of this year 157 cases have been tried involving claims to the amount of $2,015,490.84 and during the same time 411 actions were dismissed, the damages aggregating $1,677,580.72. It is believed that this record has never before been equalled.

HUDSON VALLEY FRUIT.—The present prospects are that the apple crop in the Hudson River Valley will exceed that of last year. It is said that a large number of new trees are coming into bearing this year and that old orchards have been better cared for than previously. The outlook for pears is good. The Germantown Fruit Growers' association is looking to do a large business this year, and expects to build up a large f. o. b. business in addition to acting as a purchasing agency for the members. Strawberry growers expect a normal crop.

RURAL SCHOOL DAY.—The Department of Education is behind an effort to create a larger interest among people in their local schools. It is proposed to appoint some day next Fall on recommendation, or with the coöperation of the Governor, when the people of the State shall meet in their respective schoolhouses to discuss any matters that pertain to school interests, and collectively to consider the needs, opportunities and conditions of their schools. It is planned to have the annual university convocation on the same day, and thus emphasize the solidarity of the educational interests of the State. It is all a part of a plan of Commissioner Finley to bring the University of the State of New York into closer touch with the educational forces of the State at large.

A GRANGE EXCHANGE.—The Suffolk County Pomona Grange, representing the combined interests of the 13 Subordinate Granges in the county, has established a Bureau of Information and Markets—the object of which bureau is not only to help the farmers find satisfactory markets, but also give them assistance regarding prices and supplies on given markets, and help them arrive at the most approved methods in sorting, grading, packing and shipping. The markets are sought with the ultimate consumer—private families, boarding houses, restaurants, clubs, hotels and cooperative buying and selling societies, organized in many places. Only A1 produce is to be shipped, and by reason of the great number of farmers on Long Island cooperating, all orders received, regardless of size, can readily be filled to the entire satisfaction of the purchaser. This bureau also maintains what is termed a "Farmers' Exchange" for helping farmers in one community to find supplies or sell supplies to those in another district.

THE LEGISLATURE.—The extraordinary session of the Legislature is on. Just whether it will get anywhere on the appropriation bills can be better told later. There is something more than a rumor that each party will set their stakes and stand by them and they will not be set in the same place. The Governor is said to have an appropriation bill for consideration which totals about $600,000 less than either of the bills offered by the Senate and Assembly at the regular session. He has also drawn tentatively a supply bill which is said to represent a still greater saving than $600,000 over any supply bill submitted to the Legislature at the last session. It is likely that if the Senate and Assembly bills appear as economical to the Governor as these he has drawn his will never see the light. The Governor's appropriation bill leaves the offices of the Department of Efficiency and State Fire Marshal intact. And it is said not to interfere with any official.

J. W. D.

Government Crop Report.

According to the Bureau of Statistics the outlook for Winter wheat is unusually favorable. The plant has wintered in good condition and but little trouble from insects and disease is reported. Present estimates, 95.9 per cent, would indicate a yield of 630,000,000 bushels, or 107,000,000 in excess of last year.

The condition of Winter rye is 93.4 per cent. of normal, two per cent. about last year.

Meadows promise 2.4 per cent. better than last year. The stock of hay on farms May 1 was estimated at 7,832,000 tons, compared with 10,828,000 tons last year.

The total area reported in Winter wheat at present is 35,387,000 acres. About 3.1 per cent. of the Fall sowing has been abandoned. Areas in some of the principal Winter wheat States are as follows: Kansas, 7,950,000 acres; Nebraska, 3,123,000; Illinois, 2,576,000; Missouri, 2,549,000; Indiana, 2,485,000; Oklahoma, 2,465,000; Ohio, 2,090,000; Pennsylvania, 1,312,000; Washington, 1,201,000; Texas, 1,082,000. Those above 500,000 acres are: Michigan, Kentucky, Tennessee, Maryland, Virginia, North Carolina and Oregon.

A DRAINAGE FIELD MEETING will be held at Webster, Monroe County, N. Y., May 23, in which the latest models of several types of ditching machines will be in use. The meeting will be held under the joint auspices of the Monroe County Farm Bureau, the State College of Agriculture and the New York State Drainage Association. The area selected is representative of soil conditions in much of Western New York, and the complete system of drainage for the area will be shown on maps, and the reason for its arrangements will be explained by experts in attendance. The machines in operation will be the Buckeye traction ditcher, the Cyclone ditching plow and one or more types of small ditching plow. Hand tools for ditching will also be on exhibition. Methods of taking levels will be shown. Samples of tile will be on exhibition and methods of laying and of protecting joints will be explained. The demonstration is reached by the Rochester and Sodus trolley line and also by the R. W. and O. Branch of the New York Central. E. O. FIPPIN.

CORNELL FORESTRY SCHOOL.—The Department of Forestry at the New York State College of Agriculture at Cornell University has just moved into its new building, and the program for the opening, which is to take place on May 15, includes addresses by many men prominent in State and federal work. At the morning session, former director L. H. Bailey will speak on "The Forest" and W. H. Vary, Master New York State Grange, will discuss the possibilities of our farm woodlots. The afternoon and evening of May 15 will be devoted to a discussion of the lines of principal effort in American Forestry for the next decade. Professor J. W. Toumey, director of the Yale Forest School, will speak on the education side of this question, while practical problems and the duty of making public opinion effective will be discussed by F. L. Moore, President, Empire State Forest Products Association, President H. S. Drinker of Lehigh University, and J. S. Whipple, President, New York State Forestry Association. The problems confronting the National Forest Service, and its work in solving them, will be the theme of H. S. Graves, Forester of the U. S. Department of Agriculture. Gifford Pinchot, President National Conservation Association, will discuss the lines of principal effort of that association during the next 10 years in the national movement for rational use of our great natural resources. The work of forestry in the States of the East, will be the topic of Mr. Alfred Gaskill, State Forester of New Jersey, on Saturday, May 16, at an open meeting of the Society of American Foresters.

Woman and the Home

From Day to Day

THE VOLUNTEERS.

The Volunteers! The Volunteers!
I dream, as in the bygone years,
I hear again their stirring cheers,
And see their banners shine,
What time the yet unconquered north
Pours to the wars her legions forth,
For many a wrong to strike a blow
With mailed hand at Mexico.

The volunteers! Ah, where are they
Who bade the hostile surges stay
When the black forts of Monterey
Frowned on their dauntless line?
When, undismayed amid the shock
Of war, like Cerro Gordo's rock,
They stood, or rushed more madly on
Than tropic tempest o'er San Juan.

On Angostura's crowded field
Their shattered columns scorned to yield,
And wildly yet defiance pealed
Their flashing batteries' throats;
And echoed then the rifle's crack,
As deadly as when on the track
Of flying foe, of yore, its voice
Bade Orleans' dark-eyed girls rejoice.

Blent with the roar of guns and bombs,
How grandly from the dim past comes
The roll of their victorious drums,
Their bugles' joyous notes.
When over Mexico's proud towers,
And the fair valley's storied bowers,
Fit recompense of toil and scars,
In triumph waved their flag of stars.

Ah, comrades of your own tried troop,
Whose honor ne'er to shame might stoop,
Of lion heart and eagle swoop,
But you alone remain;
On all the rest has fallen the hush
Of death; the men whose battle rush
Was wild as sun loosed torrent's flow
On Orizaba's crest of snow.

The Volunteers! The Volunteers!
God send us peace through all our years,
But if the cloud of war appears,
We'll see them once again.
From broad Ohio's peaceful side,
From where the Maumee pours its tide
From storm-lashed Erie's wintry shore,
Shall spring the volunteers once more.
—William Haines Lytle.

THE poem above dates from the Mexican War of 1846. The author, an Ohio man, served in that war, and was killed in the battle of Chickamauga, September 20, 1863.

*

THIS recipe for nut macaroons is highly recommended. Beat the whites of two eggs very light and add gradually, beating constantly, a cupful of pulverized maple sugar, whipping until the mixture will hold its shape. Then fold in one large cupful of chopped pecans which have been lightly sprinkled with salt. Drop quickly from the tip of the spoon one inch apart on an unbuttered tin sheet and bake in a slow oven until delicately browned.

*

THE Florists' Exchange reports that the women of Central City, Ky., are conducting a plant exchange for amateur gardeners on certain specified days. All varieties of pot plants will be exchanged, also shrubs, seeds, slips and bulbs. Anyone having more plants or other articles of one kind than they wish are to bring them in and exchange them for something else. A committee will value each plant sent in and the exchange will be made accordingly. The exchange is to be conducted on the first Saturday in each month hereafter, and everyone is invited to take part.

*

THE lieutenant-governor of a Middle West State has been studying the problem of the unskilled workman, while his wife wished to investigate working girls' troubles. The statesman got a job handling packing cases in a corset factory for $4 a week, but did not make good and was discharged after three days. The statesman's wife got a job in a knitting mill at $5 a week, stuck her week out, was not discharged, and during this time received three offers of marriage. We do not know whether there is any particular moral attached, but the fact that a statesman who got down among the plain people was unable to earn $4 a week makes us wonder whether, on the other hand, the taxpayers get the full worth of their money from those they set in high places. Evidently a position of social dignity, which must have released her from everyday drudgery, did not lessen the industrial efficiency of the statesman's wife, since she was able to hold her position, while $5 a week for a factory beginner must be counted as excellent. Furthermore, we must not forget the three offers of marriage from fellow employees, which were evidence of her social success as a working girl. The equal suffragists ought get a good deal of consolation from the discovery that, given the same environment, a woman is worth a dollar a week more than a statesman, with three chances for a husband thrown in to boot!

*

THE Children's Bureau of the U. S. Department of Labor has just issued Publication No. 6, "New Zealand Society for the Health of Women and Children." New Zealand has been described as a country that is like one big family, and this no doubt aids in the experiments made for social betterment. Two striking features in connection with the society described in this bulletin are the formation of local committees in every township where women could be interested and the establishment of a body of trained nurses, whose duty is to give aid to women and children, especially in isolated rural communities. Owing to the earnest work done in the advancement of this movement by Lady Plunket, wife of a former governor of New Zealand, these trained women are known as Plunket nurses. As a contrast in baby-saving, we find that Dunedin, New Zealand, a city of 41,529, had in 1911 a death rate for babies under one year of four per cent.; Lowell, Mass., 1910, had an infant death rate of 23.1. The infant death rate for the whole of New Zealand (where birth registry is strictly enforced) is 5.1; for Rhode Island 15.8, and for New Hampshire 14.6. We strongly recommend a study of this bulletin, which may be procured from the Chief of the Children's Bureau at Washington; it suggests a valuable line of work for the Grange, and for all clubs and societies in which farm and rural women are interested.

The Conservation of Fuel.

It really seems as though nearly half the fuel used is wasted by injudicious management. There are ways and ways to save. First the furnace; we use a common hot-air furnace, and we have found it saving over the old base-burner-range system. It heats the house better, and really seems to consume little more coal than a good-sized base-burner, and the heat can be turned on or off any room desired, which is something that cannot be done with the stationary stove.

To conserve fuel in this, we keep close at hand the siftings from the coal, and on warm days a shovelful or two of these siftings will "bank" the fire, keep it going and yet hold the heat in abeyance. At night this same scheme is resorted to, and it proves an economical method, because it uses every scrap of coal, even the dust, and it is all turned into heat. We use chiefly soft coal, but can use wood or any kind of fuel. When a little fire is needed in early Fall or late Spring, a few chunks of railroad ties come in handy; they will burn slowly and throw off a good deal of heat. Still another thing, which works better with a steam or hot-water furnace than with the hot air, is this: Papers and old magazines are saved, and in case of needing a little fire these are twisted or wound into tight bundles, and put in on a small fire. They will sometimes heat a house comfortably all day—one bundle will—if the weather is not very cold. If all the old rags which are thrown out were rolled into tight bundles and burned in a hot-air furnace or in any kind of a stove, the country would be the better for it, and the house more comfortable, provided these were used on the right kind of a day.

We have a woodbox, and in this accumulates a great deal of litter. It makes a great "muss" to try to burn it in the kitchen range, and when it becomes necessary to remove this litter, it is shoveled into a bushel basket and carried to the cellar, to use in the furnace when needed. One woman saved the price of Summer fuel almost entirely by using cobs which she gathered from the pigpen. Dry, nothing makes a better or hotter fire than corncobs, and a tubful will do a good deal of cooking if managed right.

Baking can be done with a light fire with a little extra care—that is small baking, like pies, layer cakes or cookies. Make the fire and heat the stove lids hot, have ready your pie or cake to put in the oven, put in as many hot stove lids as you require, and place the pies or layer cakes on these, and have them on the top grate. You will find that the hot lids answer every purpose of the big fire and the hot bottom oven. Such things can be baked with one-half or one-fourth the fuel required to heat the stove to baking heat all over. Another thing is to use the fire while it is in operation. Of course the fire suggested above, will not be kept long enough to cook much, but water may be heated for any amount of dishwashing, etc. Of course where the stove lids are removed something must supply their place, and a kettle or two will do it.

We usually have a soft coal fire in the range in the morning, and only one fire. To use this then, one must be prepared the night before, if baking stewing, etc., needs to be done, by having the utensils ready for instant use on rising. It takes but a little while to make the dessert for dinner, or the cake for supper, and get them baked with this one fire. Then too, considerable ironing may be done by this one fire. If there are two to work so much the better, but if there is but one, the irons may be heated after the breakfast is taken up, the dishes may simply be piled up, and the worker iron until the fire gets too low, and then with red coals inside the stove, she may still go on, by putting the irons right on to the coals. Extra holders will be needed for this, and the irons will need wiping, but a good many plain things may be ironed with irons heated inside the stove.

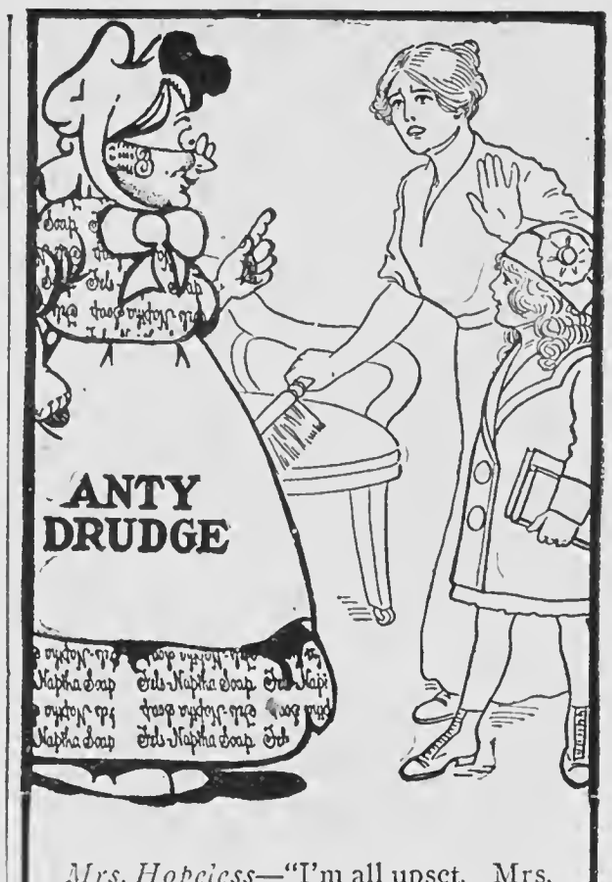
Make the two-hour rice pudding, bake beans, roast meat, etc., in the oven on washday. By cooking meats and things which need long cooking by the one range fire, it will take little fire to cook the vegetables for dinner when that time comes and only a light wood fire will be needed, or gasoline, or other substitute.

The fireless cooker is all right for many things, but for many others, it really is not a saving. If we have to make a fire to heat soapstones, etc., we have made about enough to cook potatoes and such things without the cooker, but for cooking things which require a long time it is useful.

We can conserve by using the fire when we require it, and using both top of the stove and the oven. We may conserve by having things ready to put right over the fire the first thing it is made in the morning, for one good soft coal fire will hold heat to keep things simmering for some hours, but if the things are not put on until the breakfast is over and the work done up, then there will be practically no fire to do it with. Make ready the night before. It isn't any special economy to make a lot of things to get stale. If one pie serves the family then make only one; it takes such a few minutes to make one, and this one can be baked by the single fire in range. Any pie is a hundred per cent. better the day it is baked. Manage your dampers well, and moreover do not neglect the fresh air. Houses are sometimes cold, or rather people are, simply because there is no oxygen left in the air to breathe. A well-aired room will seem much warmer than a higher temperature in a room that is stuffy and unaired. R. S. M.

SOME SAUSAGE DISHES.—"Variety is is the spice of life," in cooking as well as other things, and there are more ways than one of cooking sausage. First, they are good fried or baked in the oven. Second, they are fine cooked with baked beans, in place of salt pork. Soak, boil and season beans as usual. When ready for the oven slice two or three links or sliced sausage meat in small pieces and mix with the beans and bake. They give a nice flavor to the beans and are not greasy. To cook with dried beef, brown or sizzle beef, put a tablespoonful of flour and small piece of butter in frying pan. Then add water and one or more cooked sausage (left over) cut in small bits, and an egg, stirring until it thickens. It is a nice change from beef cooked in milk, especially if you happen to be short of milk. Sausage gives a nice flavor to baked beans for sandwiches.

ALICE E. PINNEY.



Mrs. Hopeless—"I'm all upset. Mrs. Pryor phoned me yesterday that she was going to drive over this afternoon, so I had to put off washing. It takes me all day, and I wouldn't have her catch me working for anything—she'd never get done talking about my poor management."

Anty Drudge—"My dear, I'm afraid you're a poor manager, to put your washing off. You should have used Fels-Naptha Soap. Then you would have been ready to see your visitor, with the wash safely out of the way."

Doing a little each day, with Fels-Naptha Soap to make your work easy, will keep your house clean and fresh, and won't tire you out, either.

Fels-Naptha will do your washing for you in cool or lukewarm water, without hard rubbing or boiling the clothes, and will do it better, quicker and easier than ever.

Fels-Naptha does every kind of work. It makes dirt disappear, dissolves grease, and makes stains vanish, even stubborn blood stains.

Buy it by the box or carton. Follow the directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired. Price of each pattern 10 cents.

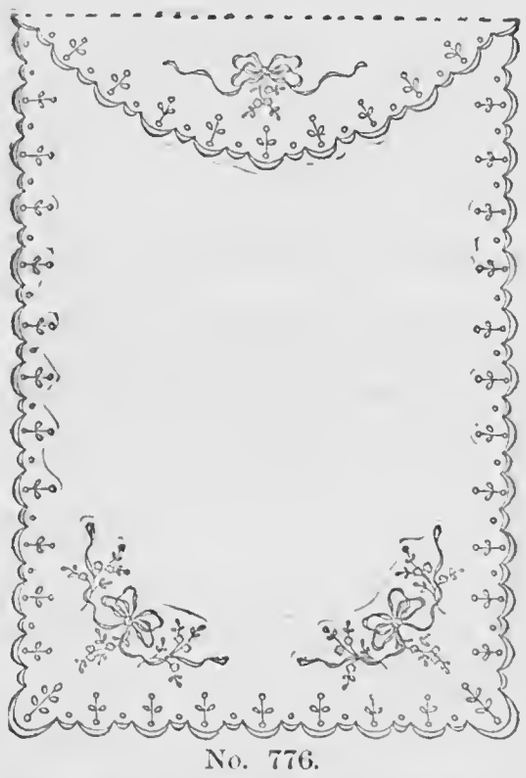
Girl's costume 8257, sizes 10, 12 and 14 years. 8255, semi-princess dress for misses and small women, 16 and 18 years.

No. 8257. No. 8255.

No. 8237. No. 8249.

8237, boy's suit, 4 to 8 years. 8249, child's rompers, 2, 4 and 6 years.

No. 776. A design for embroidering an infant's carriage cover. The scalloped edges are to be padded and button-holed. The dots and ovals within the scallops



No. 776.

can be worked solidly or as eyelets. The flowers, leaves and ribbon are to be worked solidly and the stems are to be outlined. Stamped on 21x36 best round thread Scotch linen with 1 doz. 12 yd. skeins of mercerized floss, 60 cents.

Seen in New York Shops.

Flat hand-embroidered collars and cuffs of linen, which were so much worn a few years ago, are worn again on Spring jacket suits. One handsome set, which consisted of a shawl collar and round cuffs was of rose and white striped handkerchief linen, hand-embroidered in white with forget-me-nots and a scalloped border. It was beautiful fine work, like convent embroidery, and the set was priced at $6.50.

Separate skirts are shown in numerous models, disputing the reign of the one-piece dress. There are beach skirts, sport skirts, walking skirts and "danse" skirts; the separate top coats and cloaks make them a necessity. Dark blue or black serge is a standard material in woolen goods, while linen, crash, ratine and cotton corduroy in white and colors are much used for wash skirts. Many of these skirts have tunics or draperies. Among plain models suitable for wash goods the peg-top and two-piece patterns are in favor.

Tulle ruffs, which many women like when they leave off furs in the Spring, are now made of waterproof tulle or maline; the models are about the same as last year. The "waterproof" material is more durable in wear, and does not melt down at a slight wetting.

Braided rugs are climbing up in the world; one large shop offers them priced from $9.25 to $108.50. They are made in dark colors brightened with dashes of red or blue; of course new material is used in the making. They are made with a wonderful care that home workers in old carpet rags are not likely to imitate. Each strand is rolled smoothly by hand, and twisted, then braided so that no folds show, the braid being smooth and round. The braids are sewn together near the seam, the stitches set very closely, so the rug is reversible. We are told that an oval rug 30 by 52 inches takes one woman from three to six days to complete.

Many people are only acquainted with Canton chairs through magazine illustrations, and do not know, from personal experience, the comfort of this Chinese bamboo furniture. These are the hour-glass chairs with comfortable arm-rests, which magazine artists so often depict in drawing a group of society people on porch or terrace; it is only within recent years that they have become readily procurable in the United States, though long familiar abroad. They are woven of seasoned bamboo by Chinese artisans, and are very durable, extremely light (averaging about eight pounds) and most comfortable. The round base makes them very firm on the lawn, and they are easily carried about. The standard arm chair costs $5, while a style without arm rests is $4.50, and a child's chair 18 inches high is $1.25. Hour-glass tea tables 16½ inches high are $5, and small stands 18 inches high are $1.75. Large deck chairs and settees are offered at higher prices.

Among the new table linen we find dinner napkins have the monogram or initial embroidered in the center, though it is still correct to have it placed in the corner. For luncheon or breakfast set, where a centerpiece and doilies are used, colored cloths with white borders, or white cloths with colored borders, are a fancy of the moment. Fashionable table linen is plainer than it has been, and there are fewer all-over designs. A center of satin and plain stripes, with a floral border, is very popular, or a border of Roman key design, and such cloths are easily matched and always in good taste. There are also borders in figure designs such as a pattern of Cupids.

Inexpensive Substitutes for Polished Floors.

Housecleaning time is here, but with polished floors and rugs, its terrors are far less than in the olden time, when carpets were all nailed down over a thick padding of straw. Few of us, however, are in possession of real polished wood floors, as many of our houses have only a hard-wood floor in the kitchen, being built in the days when less thought was given to sanitary housekeeping. Having a house of this kind, we have experimented with several different floor coverings, and thinking that the knowledge thus gained might be of use to others, decided to pass it on.

In rooms where the wear is very hard, inlaid linoleum, cemented to the floor, is perhaps the most satisfactory floor covering; but it is also expensive. For a border around rugs there is a paper veneer made in perfect imitation of expensive wood. This is pasted to the floor, given first a coat of shellac, and then varnished. We have tried this, and find that while it wears well, it is inclined to crack over the cracks in the flood.

The most satisfactory, inexpensive floor covering we have found is table oil-cloth, pasted to the floor. One floor, thus treated, has been in use eight years and is in perfect condition still. We chanced to discover a piece of oil-cloth in an oak flooring pattern, at one of our local dry goods stores; and decided to try it on our front hall floor. The result was far more satisfactory than was at first expected. We have since used more of it with pleasing results. In some rooms we have treated it to a coat of shellac, properly thinned with denatured alcohol; and over this a coat of floor varnish; and believe that if kept varnished, it will wear indefinitely. The thing of first importance, is to have it well pasted to the floor. Unless well stretched on the floor, it will blister in drying, and of course will neither look nor wear so well. Paste for the purpose should be rather thick. Ample time should be given for drying, before varnishing. If your local dealer cannot furnish it, you can usually get table oilcloth in an oak wood stripe from the large mail order houses.

MARION LAWRENCE.

Hot Drink Substitutes for Tea and Coffee.

A correspondent asks for a hot drink substitute for tea. We seem to have solved the problem to our satisfaction and our experience may be of benefit to others. Hot milk is good (for those who like it) and is very nourishing. Many people can drink new milk or top milk (creamy) if enough tea or coffee be added to it to flavor and heat it palatably, though this is really only a modification, not a substitute. The tea or coffee need not be very strong to give the desired flavor, but should be freshly made and boiling hot. Unless the milk is new or part cream the resulting drink is insipid after the fashion of "milk and water" cambric tea. Our children are very fond of "crust coffee." This is made by browning or toasting a slice of dry bread until it is brown clear through, though not burnt. This hard substance when steeped in hot water yields a cup of brown looking "coffee" which nearly all children like when served hot with a little sugar and cream. This is a good drink for ailing children. Usually a cup of this is relished as soon as appetite returns, and is sufficient in itself for the first meal. Another nourishing drink for invalids or nursing mothers is made by steeping a tablespoonful of grapenuts in a half cup of boiling water, and then adding a half cup of creamy milk with sugar if desired.

F.

ECONOMY CAKE.—Two cups sugar, two cups water, two tablespoonfuls lard (heaping), two teaspoonfuls cinnamon, one teaspoonful clover, ½ teaspoonful salt, one pound seeded raisins. Boil all together 10 or 15 minutes. When cold add three heaping cups flour sifted with one heaping teaspoonful soda. This makes one large or two small cakes.

M. P.

SMALL CHURNINGS.—Mrs. Frederick C. Johnson of Colorado writes, on page 635, of making an improvised churn to be used in churning cream from one cow. For more than 25 years I have used a large milk crock to contain the cream from our cow, when ready to churn, and have used a spoon-shaped wire egg beater to churn the butter. It comes quickly, and this method is much less bother than any other way I know of. MRS. M. E. S.

LITTLE do men perceive what solitude is and how far it extendeth; for a crowd is not company, and faces are but a gallery of pictures, and talk but a tinkling cymbal where there is no love.—Bacon.

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17

Live Stock and Dairy

SYSTEMATIC GRADE BREEDING.

A tremendous waste of time and of valuable purebred sires has resulted in the past 40 or 50 years from wrongly conceived and carried out methods of "improving" farm horses. Men have wanted to increase their horse stocks in size, weight and quality, and so have widely employed imported, purebred draft stallions; but in many instances these sires have been injudiciously used with disappointing results. Errors in breeding need no longer occur. Experience has pointed out what is wrong, and young breeders may now direct their operations intelligently and with every prospect of success.

When the grading-up process commenced, our female breeding stock was comparatively small in stature, light in bone and weight, possessed of considerable speed and marked endurance, but lacking in type, character and ability for heavy draft work. To change the character of the stock as quickly as possible to that of a serviceable draft sort, heavy draft stallions from Europe were introduced and employed. The first progeny from the mating of these sires with our native mares were half-bred "Normans" (as French horses were then called), or "Clydesdales" or "English Shires," or "Suffolks," as the case might be. But

CONNECTICUT CATTLE HAULING GRAIN FOR THE EGG CONTEST.

the cross was too violent. There was little "likeness" between mares and stallions, therefore, "like could not produce like," and the colts usually were sorry misfits, mongrels and nondescripts. So disappointing were these first "grades" (really cross-breds), that the owners abandoned at once or soon their first used sires, and experimented with those of other breeds. The American-Norman, American-Clydesdale, American-Shire or American-Suffolk grade fillies were not bred back to sires of the breeds first used, but were out-crossed to other breeds. For example, the American-Norman filly was not bred back to a Norman (Percheron or French Draft) stallion, but was mated with a Clydesdale, or Shire or Suffolk Punch sire, and later on the imported Belgian stallion was used in like manner. Such mating was done in every possible combination and conglomeration, until our horses were "composite photographs" of practically all of the imported breeds, on a native American base or foundation. Not only were imported draft breeds used in this way. Soon imported Coach and light horses came in, or were employed during the same early experiments, and to the wonderful mess of "horse soup" or "horse hash," was added the blood of the English Thoroughbred, Hackney, Cleveland Bay or Yorkshire Coach; the French or German Coach; the Russian Orloff; several pony breeds and some Canadian draft and light stock, together with that of our own American-bred Morgans, Trotters and Pacers.

During this period of breed and blood fusing in America, when mixing and crossing, instead of true grading-up was being done, the French breeders preserved, purified and improved their Percherons, French Drafts and French Coachers; the Belgians marvelously improved their draft horses (Cheval de trait Belgique), and the English and Scotch did likewise with their Suffolks, Shires, Clydesdales and other breeds just mentioned. The American farmer and breeder had no ideal draft type of horse in mind. He did not know just what he wanted, nor how to get it, hence his breeding operations could not and did not result in the production and establishment of a standard, desirable American draft horse. All the while he did know what kind of trotter he wanted, had an ideal type in view, worked intelligently toward it *and got it;* for he evolved, developed and perfected, by intelligent selection and patient, persistent inbreeding and line-breeding the best trotting horse in the world—the American Standard-bred horse that holds all of the world's trotting records for speed, at long or short distances.

Had American trotting horse breeders imitated the draft horse breeders in their mixing, blending, fusing and inter-crossing methods of breed spoiling, there would have been no Standard-bred horse to-day. Had our draft horse breeders copied the trotting horsemen in their breeding methods we might easily have had a Standard-bred American draft horse to-day. We certainly might have had great, well-defined specialist breeding communities in every State, devoted to and noted for the production of a given high-class quality draft horse of one or another of the imported heavy draft breeds, introduced long years ago but not kept pure and not consecutively used for generations to produce practically purebred, graded-up horses of their kind. The fact that we have missed our opportunity and not produced purebred draft horses in numbers explains why we still have to import British and French and Belgian draft stallions annually in great numbers, at a fine profit to the Old World breeder and the New World dealer; but purebred mares are now coming in, and at last we are trying to supply the great and growing demand for home-bred stallions of the various pure breeds. Such home-bred sires are preferable to those from abroad, cheaper, more prepotent and, therefore, likely to prove more profitable in service.

Benefiting from the somewhat sorry experience of our pioneer draft horse breeders, the beginner in such breeding should know that success can only come from unswerving employment of the following sensible rules for the production of high-grade horses:

1. An ideal horse must be decided upon at the start and one pure breed selected and drawn upon for sires.

2. Sound, healthy mares of as nearly the required ideal as possible, must be selected and used from the first to mate with purebred sires of the selected breed.

3. All male progeny must be castrated, all below-standard female progeny discarded, and the approved females bred continuously and consecutively to sires of the selected pure breed.

4. All of the breeding stock and young stock must be so fed at all times as perfectly to develop all of the possibilities of each animal.

5. Only sound, healthy sires and dams must be mated, and everything possible must be done to strengthen constitution and resistant powers against disease.

By following such methods of breeding, any man may in 20 years or less, fill his stables and pastures with practically purebred draft or light horses. Five consecutive top-crosses of the blood of the same pure breed make the progeny to all intents and purposes purebred, and when an additional top-cross is put on, making six in all, only one and one-half per cent. of the blood in the veins of the graded-up progeny will represent that of

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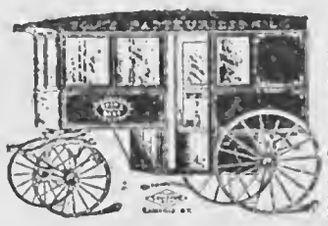

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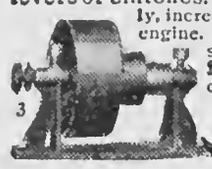

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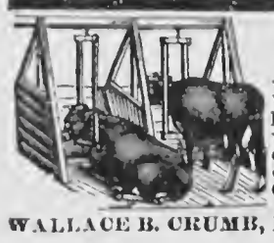

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the foundation female stock. That is to say that the six-top-cross horse will be 98.5 per cent. Percheron, or Belgian, or Clydesdale, or Shire or whatever breed has furnished the purebred sires in a direct, unbroken line. This is the only correct and sensible way in which to grade-up horses, or farm animals of any kind. A. S. ALEXANDER, M. D. C.

University of Wisconsin.

That $5,000 Clydesdale Colt.

[On page 676 is a statement of the high-priced colt which Mr. F. L. Ames of Massachusetts has bought. Will Mr. Ames tell us what is to be done with this colt? Will he be used for breeding prize stock, or does Mr. Ames think that the Eastern State can profitably grow draft horses for the city markets?]

My object in buying Mr. Fairbairn's colt was to produce high-class breeding stock. There are a great many draft horses imported into this country from Scotland every year for breeding purposes. Today, we are producing better Guernseys than can be bought on the Island of Guernsey, and I see no reason why it is not possible to breed as good draft horses here as they do on the other side. It is my intention to produce high-class breeding stock that will sell at a good price. On our expensive land here, with our long Winters, it is very doubtful to my mind, whether it would be a profitable thing to breed grade draft horses, but I feel that the breeder here in the East can produce breeding stock at a profit, and supply stallions for the Western trade, where conditions are very favorable for the production of the commercial article. F. L. AMES.

Percherons, Belgians and Jerseys.

I can give you several reasons why I handle the Percheron horse. First, because he is the most popular draft horse in this country, and he is better and more readily sold than the others. Secondly, he is a niee big clean-cut fellow, with good clean limbs, light footed, good life, good style and makes a good general-purpose horse. Third, he makes a good horse to mate with our small chunky mares of all breeds.

I handle the Belgian horse because he is the second-best draft horse in this country, and gaining on the Percheron every day. He is a growthy big fellow, that gives us great size, he is a great feeder, and will eat almost any kind of roughage, and any kind of vegetables and grain with a relish. He is a short-coupled good middle horse with lots of endurance. It takes less feed to keep him in the same condition than any other draft horse in the world.

We keep the Jersey cow for butter and milk. She will produce more butterfat and solider and better butter on less feed than any cow in the field today. In other words she is a piece of machinery that does more work with less power than the others. We are not in the beef business, hence we do not turn our attention to the beef cow. We are in the milk business, hence do not turn our attention to cow that gives the greatest flow and greatest quantity of milk.

Pennsylvania. O. N. WILSON.

Possibilities in Mule Raising.

What are the possibilities in raising mules as compared with horses for Eastern farmers? That is, if a man has mules for breeding and can find a jack reasonably near, will it pay him to raise mule colts rather than horse colts?

There is a brisk demand in South Jersey for mules, and on a number of occasions the Live Stock Commission has received requests for jacks for service. It was suggested that while the State offered a number of stallions for stud purposes that it would be well to meet the demand for mule breeding by providing jacks of good individuality and usefulness. We have always refrained from taking this step, as the law creating the Live Stock Commission was established to promote interest in the breeding of live stock, and the raising of mules is not primarily breeding, that is, if we take as our aim the problem of improving the type and usefulness of a particular class of animals. Your efforts are halted the first generation in mule breeding, and it would seem that the individuals had best take up such problems on their own part. There is no doubt but that the mule is gaining in popularity in South Jersey, especially within the area where the farmers are able to market their products in Philadelphia. They maintain that mules are better adapted for night road work, can put in longer hours if necessary, and are no doubt very well adapted to the class of work that is required on a truck farm. It is further stated that in South Jersey the mule colts sell higher than horse colts. To what extent it would be advisable to produce mules for market is a question, but surely it is more profitable to grow mules than to produce such animals for farm work. Often times men object to working mules, and again it is claimed that they are not so well adapted for work on soft ground. It would seem reasonable to conclude that if the conditions on one's farm were such that mules would be adapted for the farm and delivery work, that there would be as much money in producing them as there would be in breeding horses. It is known that they are somewhat easier to care for with safety as far as feeding is concerned, and furthermore, it is very seldom that a mule is injured by wire fences when he is at pasture. He seems to have the ability of protecting himself, a possession that draft horses do not always have. If I wanted a pair of mules and lived in South Jersey, I am sure that I would prefer to breed them rather than purchase them, and believe that it could be accomplished more economically. The medium size mule out of a 1,100 or 1,200 pound mare seems to be the popular type, notwithstanding the fact that a number of years ago the sugar loaf or larger type of mule seemed to bring the highest prices. F. C. M.

Curds in Buttermilk.

Can you tell me of any way to handle milk to eradicate the effects of casein? I have a grade Jersey cow giving 12 quarts of milk per day, from which we can only gather enough cream to churn about one pound of butter per day; buttermilk is full of flaky curds. I am feeding meadow hay, sugar beets about one-half bushel per day, and four quarts per day of bran, corn chop, brown middlings and ground oats, equal parts.

Pennsylvania. E. R. F.

The flaky curds in the buttermilk are not butter, but particles of curdled milk, and have nothing to do with the amount of butter you obtain. They may be avoided by keeping the milk out of the cream as much as possible, if the cream is separated by gravity methods, and by frequent stirring of the cream while ripening. If you are not getting as much butter as you should it is probably due to poor separation rather than faulty churning. C. L. M.

Shoeboil.

I have a horse which has a shoeboil of long standing. I have put medicine from a veterinarian on it for some time, and also tried iodine and camphor. It does not heal up. At times the leg swells and sometimes the boil breaks open. Can you advise me what to do in this case?

New York. C. H. O.

There is only one proper method of treatment in such a case, and that is to cut off the shoeboil and then treat as a common wound. The operation is simple and performed as follows: A piano wire is knotted around the base of the shoeboil and then pulled very tight to make the "neck" of enclosed tissues as narrow as possible. The "neck" is then cut through and bleeding vessels picked up and ligated, or the actual cautery used to stop bleeding. Some veterinarians use a cautery to remove the mass, instead of using a knife. If the wound then is wetted several times daily with a lotion compound of one ounce of sugar of lead and six drams of sulphate of zinc in a pint of water, it will heal quickly and would leave only a small scar. A. S. A.

"Do you put your faith in the wisdom of the plain people?" "I do," replied Senator Sorghum, "until they get to thinking they know more about running the country than I do."—Washington Star.

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Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.

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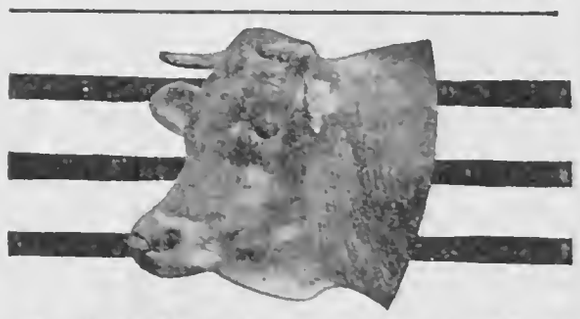

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Choicely bred, fine individuals. We aim to please our customers. Write today.

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50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.

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According to figures compiled by the department of animal husbandry of Illinois University, a cow must produce 4,000 pounds of milk and 160 pounds of fat a year to pay for feed and labor. Every 1,000 pounds above this brings a yearly profit of $10. Thus a 5,000 pound cow earns $10 a year, an 8,000 pound cow earns $40, but when production reaches 10,000 pounds the profit is $63.

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ECONOMICAL production combined with rich fine flavored yellow Milk, Cream, and Butter, makes her most desirable as a Dairy Animal. Write for facts.

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BOX Y - - PETERBORO, N. H.

FEEDING PROBLEMS.

UNDER this heading we endeavor to give advice and suggestions about feeding mixtures of grains and fodders. No definite rules are given, but the advice is based upon experience and average analysis of foods. By "protein" is meant the elements in the food which go to make muscle or lean meat. "Carbohydrates" comprise the starch, sugar, etc., which make fat and provide fuel for the body, while "fat" is the pure oil found in foods. "Dry matter" means the weight of actual food left in fodder or grain when all the water is driven off. A "narrow ration" means one in which the proportion of protein to carbohydrates is close—a "wide" ration means one which shows a larger proportion of carbohydrates.

Corn and Cob Meal; Calf Pasture.

1. A great many men in this section feed corn and cob meal to their cattle. I do not like to feed the cob. Is there enough nutriment value to supply energy to digest it? Does it pay to feed it? 2. I would like to know what to sow that will make good calf pasture the first year. I thought of sowing Soy beans, corn, and rye. Possibly you might suggest a change in the mixture. H. D. B.
Michigan.

1. There is no satisfactory data concerning the value of corncobs, and their presence in corn and cob meal is of very questionable value. B. E. Carmichael of the Ohio Experiment Station, in a letter to me says: "I think it can safely be said that the presence of the cob does not add to the actual food value of the material. The nutriment in corncob is so difficult of digestion that I do not believe that ground cobs, if fed alone, would prevent animals from starving to death." I have fed corn and cob meal to cattle for some time, mostly with good results but sometimes the cobs injured the bowels of the cattle, causing the passage of blood, which would stop when I changed to plain meal. I have solved the difficulty by attaching a sheller to the feed mill and shelling all corn fed, which may then be ground as fine as desired and at less expense than ear corn, besides we have the cobs to burn. When dry enough by all means shell and grind the corn fed to cattle.

2. Rye, oats and Canada field peas if sowed early would be good and later corn and rye sowed together ought to provide either feed or pasture, and perhaps the Soy beans would work in well or some rape if desired. For late Summer or Fall seeding rye and vetch if suited to your soil ought to give good late pasture and early pasture next Spring. Knowing well the destructive habits of calves I advise soiling, if possible, instead of pasturing. W. E. D.

Dairy Ration.

Can you give me a balanced ration of the following feeds with mixed hay for roughage: Mixed wheat feed $1.50 per cwt.; cornmeal $1.45; cottonseed meal $1.75; yellow gluten $1.65, or any other feed that you would consider cheaper to go with the mixed hay. My cow has shrunk in milk during Winter. How can I increase flow? F. R. P.

No doubt the cold weather during the latter part of Winter had a tendency to reduce the flow of milk, as it affects other animals the same way when they are deprived of natural conditions and expected to produce profitable returns during the period when they would naturally be unproductive in their wild or natural state, and which has been gradually changed by domestication. For a grain ration to be fed with mixed hay you could use the following mixture: Five pounds mixed wheat feed, two pounds cottonseed meal, two pounds oil meal, one pound cornmeal. You will notice that oil meal is substituted for gluten as you have no succulent feed and your cow will produce better results with some laxative feed like oil meal. C. S. G.

Feeds for Cows and Hogs.

1. Will you give me a balanced ration with clover hay and corn fodder for roughage, and with no silage? The following are the grain feeds: Bran, oilmeal, corn chop, sucrene dairy feed. I can get cottonseed meal; have never fed any of it. We feed for butter; cows will be fresh this Spring. 2. Are wheat and oats, equal parts by weight ground together, as good and as cheap as middlings for hogs? W. A. L.
Pennsylvania.

1. From the feeds you mention I would compound a grain ration as follows: Five pounds wheat bran; two pounds oil meal; two pounds cottonseed meal; two pounds corn chop. These ingredients should be well mixed together and fed in two feeds per day, morning and night. The quantity for each feeding must be regulated according to the requirements of each cow individually. Cottonseed meal is a very valuable ingredient for the purpose of furnishing protein, but care should be exercised not to feed any corn chop or cottonseed within at least three weeks after parturition, as it is liable to cause fever and caked udder. You should feed the clover hay twice a day, morning and night with corn fodder at noon—feeding liberally each time.

2. I would prefer middlings for hogs in preference to wheat and oats ground together, equal parts, at the present prices at which each is selling. C. S. G.

Summer Cow Ration.

How and what should I feed my cow, from now until she becomes fresh, September 15? My hay is mostly Timothy, the pasture is nothing extra, no Fall feed. She is eight years old, weighs about 1,000, Jersey grade; she came fresh last October, gave 12 quarts of milk for about two months. She is giving now seven quarts a day. I am feeding her 100 pounds bran, 100 pounds ground oats, 50 pounds gluten, 30 oil meal, four quarts to a feed twice a day. W. R. S.
Vermont.

Your cow is doing very well, and getting a good balanced ration except the Timothy, which is not as good as mixed hay or clover or Alfalfa for the production of milk. You should gradually decrease the amount of grain you are feeding proportionately as the flow of milk decreased, so that you will be feeding only two or three quarts a day by the first of July, the amount depending entirely on the condition of the cow. She should be practically dry at that time, and should have no gluten or oil meal until at least three weeks after freshening. She should have plenty of good pasture range and if she keeps in good flesh on the available pasturage no grain would be needed during the period of about two months while she is not giving milk. C. S. G.

Ingredients for Balanced Ration.

Would you give me the ingredients for a balanced ration bearing about the proportions of one to six or six and a half? My roughage consists of mixed hay once a day, meadow hay twice; cows are Jersey, Holstein and grade Guernsey. Bran $1.60; middlings $1.60; mixed feed $1.60; cornmeal $1.60; gluten $1.60; hominy $1.70; linseed meal $1.90; ground oats $1.75; distillers' grain $1.75. In a piece of land once planted to potatoes, I spread two cords manure and expected to seed it down to Winter rye for feed, hoping also to kill out the witch-grass. It got too late to plant rye; now, would you advise Winter rye as soon as snow is off or put in Spring rye? H. A. K.

The following formula comes very near to your requirements: 20 pounds hay; four pounds distillers' grains; four pounds dried beet pulp; two pounds gluten feed; two pounds cornmeal; two pounds mixed feed. Oats are rather high priced for feeding now, and you will not require any oilmeal while you are feeding beet pulp. We would sow Spring rye now in preference to the Winter variety, as the chances would be better for a good crop. C. S. G.

Staggers.

I have a four-year-old heifer which was fresh last September. Everything was all right and she has been giving about eight quarts milk. Now she seems to have developed some nervous trouble. She will stagger when let out of the stable and will sometimes go around in a circle for quite a few minutes. She has nearly dried up, and has no appetite. Can you suggest the possible cause or a remedy? The heifer has always been in vigorous health. I am feeding hay and silage, and about six quarts ground feed twice daily.
New York. F. N. G.

Indigestion is the cause. Do not feed a milch cow over one pound of grain or meal mixture (concentrate) for every three or four pounds of milk produced. Physic the cow with Epsom salts and then feed good hay, a half feed of silage and far less meal than you have been giving. Grass, when ready, will be the best possible remedy. Allow her a box stall. A. S. A.

"AND what do you know about Moses?" "Please, teacher, it's my first Sunday here and I don't know anybody."—Punch.

DE LAVAL

as superior to other separators as other separators are to gravity creaming

WHY STOP HALF WAY IN BUYING A CREAM SEPARATOR?

THE ABOVE HEADING SUMS up the cream separator case, as it concerns every prospective buyer of a separator and every user of an inferior separator, in as few words as it could well be put.

OTHER SEPARATORS SKIM cleaner than is possible on the average with gravity creaming, and De Laval Cream Separators skim as much closer still than other separators, particularly under the harder conditions of cool milk, running heavy cream or separating the milk of stripper cows.

OTHER SEPARATORS PRODUCE a cream superior to gravity creaming, and De Laval cream is smoother, less frothy and so much better than the cream of other separators that De Laval made butter always scores highest in every important contest.

OTHER SEPARATORS SAVE time and labor over gravity setting or creaming of milk, and De Laval Separators by reason of their easier turning, greater capacity, easier cleaning and easier handling save a great deal of time and labor over other separators.

OTHER SEPARATORS SAVE their cost every year, as a rule, over gravity creaming, and De Laval Separators save their cost every year over other separators and last from ten to twenty years, or on an average five times as long as other separators.

DE LAVAL SEPARATORS COST a little more than other separators, but very little, and they soon save that small difference and go on saving it every few months, as other separators would go on wasting it, for all the years they last.

WHY THEN BUT HALF SOLVE the problem of best results and greatest economy in dairying by the purchase of an inferior separator or go on dairying with this important problem but half solved if you are already using an inferior separator that you might so easily replace with a De Laval?

THE SEASON OF GREATEST production is now at hand when all these differences count for most with every user who should have a separator and is trying to get along without one. No other dairy question is of anywhere near as great dollars-and-cents importance.

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Every De Laval local agent is glad of the opportunity to prove every claim here made. It will cost you nothing and may save you much to give him the opportunity. If you don't know the nearest De Laval agent simply address the nearest main office, as below.

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A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

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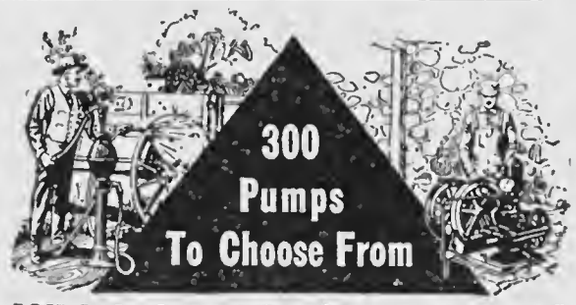

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Fish Bite Like hungry wolves any time of the year if you use Magic-Fish-Lure. Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a box to help introduce it. Agents wanted.
J. F. Gregory, Dept. 99 St. Louis, Mo

Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.
Week ending May 7.

Butter, lbs.	3,067,500
Eggs, doz.	5,545,400
Apples, bushels	55,828
Potatoes, bushels	145,300
Hay, tons	7,253
Wheat, bushels	835,840
Corn, bushels	32,200
Oats, bushels	435,200

Wholesale Prices at New York,
Week Ending May 8, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.50	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following premiums over contract prices were paid high-scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 5¼ to 5½ cents per quart. Two or three large milk concerns in New York are working up new restaurant trade on the basis of $1.85 per 40-quart can.

BUTTER.

The quality of fresh creamery receipts is averaging poor. There is a one-half cent advance on some of the top grades, and some slight improvement in market for best storage creamery. The medium grades of creamery are selling rather slowly, as buyers are unwilling to pay the prices asked. Dairy markets in Northern New York interior points are strong. Recent sales on the Utica Board of Trade have run within one-half to one cent of the same grades delivered at New York.

Creamery, extra, lb.	26	@	26½
Good to Choice	22	@	25
Lower Grades	19	@	21
Storage	17	@	22
State Dairy, best	25	@	25½
Common to Good	18	@	22
Factory	14	@	18
Packing Stock	13	@	17

Elgin, Ill., butter market 25 cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

Business in the better grades of new whole milk is improving. Some lots are held at higher figures than quotation, but 14 to 14¼ cover most sales of high scoring new.

Whole Milk, new, best	14	@	14¼
Old, best	18	@	19
Common to good	14	@	16½

EGGS.

The market is weak and one to two cents lower. The proportion of low quality in average receipts is larger than usual in many of the standard individual marks. Nearby white eggs are plentiful, very few selling above 22 cents. Duck eggs are lower and hard to sell. Several shipments of dishonestly packed eggs have been noted recently, the first two layers all right and the remainder culls or preserved eggs. Such shipments are usually sent to houses that sell by appearance, without careful candling of the whole case. Occasionally the man responsible for the deception gets paid the full price before the trick is found out, but he soon gets on a black list of undesirables, and the consequences are sure to be unprofitable for him.

White, choice to fancy, large	21	@	22¼
Common to good	18	@	20
Mixed colors, best	21	@	22
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18

FRESH FRUITS.

Arrivals of apples are only moderate. Prices are running about the same as last week, scalded and lower grade stock being hard to sell. Strawberries are showing up very poor, owing to the wet muggy weather.

Apples—Russet, bbl.	3 25	@	4 50
Spy	3 50	@	6 50
Ben Davis	4 00	@	4 50
Greening	4.00	@	6 50
Newtown	6 00	@	7 50
Baldwin	3 50	@	5 50
Western, box	1 50	@	2 50
Strawberries, Va., qt.	20	@	22
Carolina	10	@	20

BEANS.

Marrow, 100 lbs.	4 40	@	5 50
Medium	3 70	@	3 80
Pea	3 20	@	3 75
Red Kidney	5 70	@	5 90
White Kidney	5 75	@	5 80
Yellow Eye	5 25	@	5 50
Lima, California	7 20	@	7 25

HOPS.

Prime to choice	39	@	41
Common to good	35	@	38
Pacific Coast	19	@	21
Old stock	15	@	18
German crop	63	@	67

VEGETABLES.

The market on old potatoes is dull, the top figures quoted being extremes. Large quantities of State and Western have sold 25 cents per 180 pounds lower, new potatoes from Florida are in good demand when of fair size. Several thousand sacks of Danish have sold within the range of $1.25 to $1.75, and occasionally a lot of inferior down to $1. Old onions are scarce and higher; new from the South in moderate supply. Cabbage receipts are large and prices lower. Green beans and peas running poor. Tomatoes low, except for choicest grades.

Potatoes—Maine, 180 lbs.	2 40	@	2 75
State, bulk, 180 lbs.	2 25	@	2 62
Bermuda, bbl,	2 50	@	5 00
Florida	2 35	@	5 00
Sweet Potatoes, bbl	1 60	@	2 00
Beets, 100 bunches	2 00	@	5 00
Carrots, bbl.	1 50	@	3 00
Asparagus, California, doz.	2 00	@	4 00
Southern, doz	1 50	@	2 50
Nearby	1 00	@	3 50
Cabbage, New, bbl. crate	1 25	@	2 00
Chicory, bbl.	2 00	@	3 50
Kale, bbl.	50	@	1 00
Lettuce, half-bbl. basket	50	@	1 25
Onions—White bu.	2 50	@	3 50
Red, 100 lb bag	2 50	@	3 50
Southern, New, bu	1 50	@	2 25
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	2 00	@	2 75
Peas, Southern, bu.	1 50	@	3 50
Shallots, bbl.	2 00	@	2 50
Salsify, 100 bunches	4 00	@	5 00
Spinach, bbl.	25	@	1 25
String Beans, bu.	1 00	@	3 00
Squash, New, bu.	50	@	1 00
Egg Plants, Southern, bu.	1 00	@	3 00
Tomatoes, Southern, 6 bkt. crate	1 00	@	3 25

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	60	@	1 00
No. 2, box	2 00	@	3 50
Mushrooms, lb.	15	@	35
Radishes, 100 bunches	1 00	@	1 50
Rhubarb, doz. bunches	40	@	60
Tomatoes, lb.	15	@	20

LIVE POULTRY.

Broilers, lb.	35	@	40
Fowls	18	@	18½
Roosters	10	@	11
Ducks	13	@	14
Geese	10	@	12

DRESSED POULTRY.

Chickens, choice broilers, lb.	35	@	45
Squab broilers, pair	70	@	90
Broilers, common to good	30	@	32
Fowls	15	@	17
Ducks	8	@	13
Geese	9	@	14
Squabs, doz.	2 00	@	4 50

HAY AND STRAW.

The market on the better Timothy grades is in slightly better condition, though no price improvement is noted. Medium grades are dull. Straw unchanged from last week.

Hay, Timothy No. 1, ton	21 50	@	22 00
Standard	21 00	@	21 50
No. 2	19 00	@	20 50
No. 3	17 00	@	18 00
Clover mixed	15 00	@	20 00
Straw, Rye	16 00	@	17 00

LIVE STOCK.

Native Steers	7 25	@	8 95
Bulls	5 50	@	7 75
Cows	3 25	@	6 75
Calves, prime veal, 100 lbs.	7 00	@	10 75
Culls	5 00	@	6 00
Sheep, 100 lbs	4 25	@	5 25
Lambs	7 25	@	7 65
Hogs	8 50	@	9 10

MILLFEED.

Wheat Bran, ton	28 00	@	30 00
Middlings	29 50	@	30 50
Red Dog	31 00	@	31 50
Corn Meal	26 00	@	27 00
Linseed Meal	31 00	@	31 50

COUNTRY-DRESSED MEATS.

Calves, best	12	@	13
Fair to good	09	@	11
Lambs, Hothouse, each	2 00	@	7 00

GRAIN.

Wheat, No. 1, Northern Spring	1 00	@	..
No. 2, Red	1 03	@	..
No. 2, Hard Winter	1 03	@	..
Corn, as to quality, bush.	69	@	75
Oats, as to weight, bush.	43	@	45
Rye	65	@	70

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	24	@	25
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb,	30	@	33
Fowls	25	@	28

*

The seal catch from the banks of Newfoundland was 233,718, worth $498,086. This is the result of two months work of 4,000 men and 19 vessels.

*

Tomato pulp forms the base of many condiments. A company in Northern Ohio will this year have 3,600 acres of Tomatoes under contract for the manufacturing of pulp and ketchup.

*

Here is the programme of food deliveries made daily to a New York restaurant feeding about 1,000 people. At five a. m. the man with the rolls leaves two or three grain sacks of these, according to the order given the day before. Next comes a wagon with crullers, and another with corn cakes. Then the ice man arrives, followed by the fancy pastry delivery, eclairs, cream rolls, cheese cake and various knick-knacks. By this time the butcher is on hand with whatever was ordered—it may be a large chunk of roasting beef, corned beef, a dozen hams, lamb chops, etc. Before the butcher gets away, the milkman arrives and leaves two or three cans. Next is the pie wagon with regular stock of standard-built pies, about 60 nine-inch ones, to be cut in quarters and sold at seven cents a slice, and 25 dwarfs selling at five cents for a half. Another baker brings the pumpernickel, a dozen loaves or more, and last of all comes the man with charlotte russe. A tally of the various tradesmen named above will show seven different bakers, specialists, handling what in former years one bakery was supposed to stock.

W. W. H.

"Now, Henry," said Mrs. Tomley, "I want you to be good while I'm out." "I'll be good for a penny," replied Henry. "Henry," she said, "I want you to remember that you cannot be a son of mine unless you are good for nothing!"—Credit Lost.

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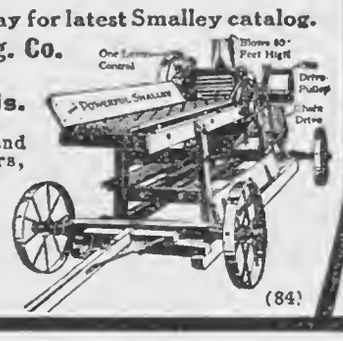

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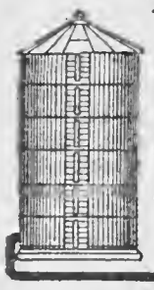
The SILO With 3 BEARINGS AROUND THE DOORS



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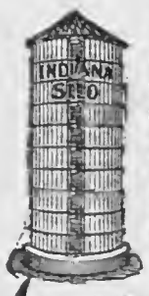

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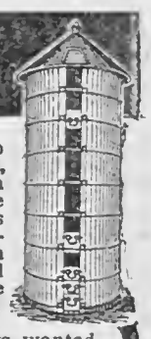

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The Henyard.

Turkey With Swollen Head.

I have a young hen turkey, that has soft white bunches, or swellings, on each side of head, under the eyes, along the side of bill. We have bathed them with camphorated oil, also kerosene, but they seem to be getting larger. She seems to be lively, and eats all right, but I am afraid trouble is contagious, as I have three others running with her. Can you tell me the cause and remedy?

New York. M. B.

The socket containing the eyeball is lined by mucous membrane continuous with that of the nasal passages. Catarrhal inflammation sometimes extends to the eyeball socket and causes an accumulation of thick cheesy mucus beneath or about the eye, producing a more or less prominent swelling there. If this swelling does not subside of itself it may be opened with a clean sharp knife and the contents gently pressed out; after which the wound may be dressed by applying an antiseptic, such as carbolized vaseline in 5% strength. M. B. D.

Installment Incubation.

Having seen the discussion in your paper in regard to eggs at different stages of incubation in the same incubator, I am giving our experience. For the past three years we have been supplying private trade, and could not get enough surplus eggs to fill a machine all at once, so tried putting in 100 eggs, or a trayful each week in each of two three-tray 300-egg incubators, and have had success. We do not test out, and our average has been slightly over 75 strong chicks out of each 100 eggs by this method. This is about the same as we averaged by the old method of filling the machine, and I cannot see any difference either in number or quality of chicks. T. H. L.

West Nyack, N. Y.

Silage and Buckwheat for Hens.

Is it well to feed corn silage to laying hens? They seem fond of it. Is buckwheat good in connection with other grain? E. A. A.

New York.

Corn silage is a good feed for fowls, and buckwheat is also excellent as part of the grain ration; better, the writer thinks, than it is usually credited with being. It is particularly valuable in the Winter when its heat producing qualities are most needed. M. B. D.

Feeding Laying Hens.

I was interested in what Messrs. Stone and Matthews had to say, on page 615, regarding feed for chicks. Lest some may think there is no other side to this question, I wish to quote from a recent address of Professor Atwood, of the West Virginia Experiment Station.

"Of all our domesticated animals, baby chicks stand in a class by themselves in respect to their rapidity of growth. Chicks when hatched weigh about one and one-half ounces each, and they can be made to weigh 2½ pounds, or 40 ounces apiece, when 12 weeks old. This is an increase of slightly more than 26 times the original weight in 12 weeks. In other words, during the first 12 weeks of its life a little chick averages to increase in weight each week more than double its original weight. Let us see what this means, taking for example a young child. If a baby weighing 10 pounds at birth were to grow relatively as fast as a chicken, it would weigh 260 pounds when 12 weeks of age! This extreme rapidity of growth in the case of a chicken requires liberal feeding, and I have never yet been able to understand why the advice is so frequently given not to overfeed little chickens, for if the chicks are healthy and are given an opportunity to take a normal amount of exercise, they will not eat more than they can properly digest and assimilate. A baby, under normal conditions, doubles its original weight in about 180 days; a chick, in about six days. In other words, the process of digestion and assimilation are about 30 times as active in the case of a chick as in a baby, and the amount of food required is about 30 times as great, in proportion to the body weight. Liberal feeding is the keynote of success in feeding little chicks.

"As stated above, the advice is frequently given to feed chicks scantily during the first few days or until the contents of the yolk sac is fully absorbed. This advice is like much other that is founded entirely on theory. It is true that there is a considerable amount of nutritive material stored up in the yolk sac in the case of a chick just hatched, but nature has provided this reserve material to supplement, but not to take the place of other food materials that the chick is able to get by its own efforts or by the efforts of the mother hen. In passing, it may be well to say that this view of early and liberal feeding is apparently being adopted more and more widely by the most successful men in the poultry business.

"Admitting that the baby chick should be fed liberally and as soon after it is hatched as it desires food, the question at once arises, what shall it be fed? The fact that a chick doubles its original weight in about six days gives us some very valuable information on this subject, for it has been proved, in the case of animals that suckle their young, that the composition of the mother's milk varies directly according to the length of time required for the young to double its original weight * * * The more quickly the young animal doubles this weight, the more protein and ash constituent it receives in its ration. In fact, we might naturally expect this to be the case, for if the body of an animal is to be built up quickly, it stands to reason that the ration should be concentrated and contain an abundance of protein to form flesh, and ash constituents to form bone."

It is not for me to say whether Professor Atwood is right or not If he is right, then the chick should be fed liberally from the time it begins to crave food, furthermore the ration should be concentrated from the start A friend of mine, who has been raising chickens for over 20 years purely from the love of it, has had such remarkable success that if he were an advertiser rather than an amateur, he would be known from one end of the country to the other. His chicks are never allowed to go hungry from the time they are taken from the incubator, and from the start they are fed a concentrated ration. Every natural craving is thus met from the beginning, and in the Fall the fowl's bodies are so replete with substance and vigor that they beget egg records that are very wonderful to me. And they win the better in this race, I am inclined to believe, just because they do not receive the check of semi-starvation during the first two or three days of life. I may add that I have had the same trouble Mr. Stone experienced, and many times—even when I starved the chicks for 48 and (in some cases) 72 hours before feeding. Perhaps some other factor than feeding has entered in, both in his use and mine. In fact, it seems more reasonable to me that chilling, rather than feeding, may cause the non-absorption of the yolk-sac. Does not the successful mother-hen feed her chicks from the start?

MELVIN BRANDOW.

A SPEAKER, in the course of a tirade against the universities and education, expressed his thankfulness that he had never been corrupted by contact with a college. "Do I understand that the gentleman is thankful for his ignorance?" asked one of his audience. "Well, yes," was the answer, "you can put it that way if you like!" "Well, all I have to say," said the interrupter, "is that you have much to be thankful for!"—Melbourne Australasian.

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A. H. PENNY, - Mattituck, New York

May's Special on Eggs—A glimpse of our stock will prove to you they are the kind. We have bred poultry for years and know the best. Special for May. Orders filled in rotation. 30 Eggs $1.50 of Burnett Black Beauty, Minorcas, also Rhode Island Reds. Pekin Duck or White Turkeys Eggs also for sale. Minorca Eggs, any number, 5 cents each. Also Rhode Island Reds. Express paid anywhere in U. S. after May 1st, or Parcel Post free. Send for Poultry Advice at once. It's free. W. L. BURNETT, Montgomory, N. Y.

STOCK AND EGGS—Indian Runners, R. & S. C. White Leghorns, Reds. Also Eggs from Pekins, White Runners, Colored and White Museovoys, Partridge, Barred & Columbian Rocks, Partridge & White Wyandottes, White Crested Polish & White Holland turkeys. Mule-foot hogs. Pea fowl and Toulouse ganders for sale. GLENWOOD FARM, Randall, New York

The Celebrated Hungarian and English **PARTRIDGES and PHEASANTS**
Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.

Single Comb White Leghorns Exclusively
D.W. Young's strain. The finest in the world. Bred for their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book—Profits in Poultry Keeping Solved—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free. EDGAR BRIGGS, Box 141, Pleasant Valley, N.Y.

Dune Alpin Heavy Laying S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED
Send for catalogue.
DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

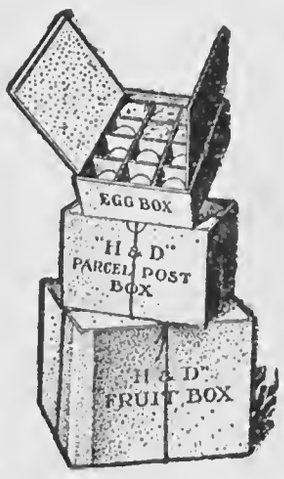
The Mark of Poultry Quality
The Tywacana Farms Indian Head signifies to either the novice or extensive breeder, hardy, vigorous birds of great laying ability.
TY-WAC-A-NA
WHITE LEGHORNS, BARRED AND WHITE PLYMOUTH ROCKS
are the surest layers and are best for marketing. Years of utility breeding are back of them. They are birds to be proud of, being well marked and well colored and full of stamina. Tywacana Baby Chicks are shipped in strong, light boxes insuring safe delivery after long shipments.
PRACTICAL, PROFITABLE FARM BIRDS
They are big and hardy, excellent layers and great hustlers—just the birds for the farm.
Send for our beautiful catalog.
TYWACANA FARMS POULTRY CO.
A. E. Wright, Supt.,
Box 68 Farmingdale, L. I., N. Y.

GREATEST LAYERS IN AMERICA
MY BREEDS RECOMMEND THEMSELVES
BARRON LEGHORNS—World's best
BARRON WYANDOTTES—England's best
STORR'S BUFF ROCKS—America's best rocks
VIBERT-AUSTIN REDS—200 & 260-egg flocks combined
HALF-BARRON LEGHORNS—A 200-egg bird
WALTON'S ENG. PENCILLED DUCKS—World's record
TOULOUSE GEESE—Largest—lay 40 eggs
Eggs and chicks—all ages—all year. Custom brooding saves brooder trouble.
"ROUEN DUCKS"
Farm Prices, Circular
MORRIS-FARM, R. 4, Bridgeport, Conn.

Baby Chicks
S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.
WESLEY GRINNELL, Sodus N. Y.

Day Old Chicks
and
Six to Eight Weeks Old Pullets
6 weeks old 60 cents
8 weeks old 70 cents
Kirkup's Strain S. C. White Leghorns bred for size, vigor, and large white market eggs—$15 per 100—$62.50 per 500—$125 per 1000—Safe delivery guaranteed. Order Today.
REDUCED PRICES AFTER MAY 15
Day Old Chicks, $10 per 100—Yearling Hens, $1.25 each. Delivery after May 1
It will pay you to get a breeding pen now—Why?—You can get May and June hatched chicks, get a good egg production until late in the Fall and then have a fine breeding pen for next season. We guarantee stock to be "Right." Send for Free Booklet, describing chicks, pullets and breeding stock.
CHESTNUT POULTRY FARM
KIRKUP BROS., Props.
MATTITUCK, L. I., NEW YORK



SHIP BY PARCEL POST IN STRONG, LIGHT "H & D" BOXES
"H & D" Boxes are designed to carry farm products by Parcel Post. They meet all requirements of new regulations and *guarantee safe delivery*. Made of double-faced, corrugated Jute board—a perfect cushion for eggs and other fragile articles—protects from heat and cold. Waterproof, sanitary, light, firm and strong. Shipped knocked-down, easy to set up and pack.
"H & D" Three-piece Egg Boxes—Five Sizes
Safest, most convenient for mailing. Double thickness corrugated board on all sides. Sizes, one to six dozen eggs. A one-piece dozen-size box for special trade.
"H & D" Boxes for Dressed Fowls, Fruit, Butter, Etc.
We make up shipping boxes for any kind of farm produce. Write stating size and weight of articles you ship for quotation on boxes.
Send for Free booklet *"How to pack it for parcel post"*
"H & D" Chick Boxes and Fireless Brooders known and used by successful poultry men everywhere. *Write today for booklet.*
THE HINDE & DAUCH PAPER CO., Dept. E, SANDUSKY, OHIO

The Henyard.

THE EGG-LAYING CONTEST.

The twenty-sixth week of the egg-laying contest at Storrs shows a falling off in egg production, as was to be anticipated. The hen thinks the weather is warm enough now, so she ought to be raising a family. The worms are up, the grass has started, and all the other birds are doing it, so she stops laying eggs and gets broody. Does her *will* have anything to do with this? Does she stop laying *because she wants to become a mother?* Or does she become broody because she has laid out that clutch of eggs, and the next clutch are not ready yet? In one of my Leghorn houses there is an old Orpington hen that hatched some chicks for me last Summer. After the chicks were weaned I put her in the Leghorn house. She laid up to last of December, then wanted to sit. I let her sit, after vainly trying to break her up. She "set" on a nest egg from last of December until middle of April. I used to take her off nearly every day, and she would talk to me constantly while I was within hearing, not scolding, as a sitting hen usnally does, but a gentle crooning. I would pet her and talk to her and we really enjoyed each other's society. When I changed her nest egg to another nest she would hunt for it until she found it, then go on that nest. I let her do as she pleased, and she mothered that egg for nearly four months. Now her head is getting red, she has given up trying to hatch that egg, and will be laying soon. In her case that "next clutch of eggs" has ceased to develop for about four months.

Tom Barron's pen of White Leghorns come to the top this week with a score of 56—their total is 763. His Wyandottes laid 42, and their total is 1,075.

Merrythought Farm's White Wyandottes take second place with a score of 55. Three pens laid 54 each. They are A. B. Brundage's S. C. Reds; pen 42 of Storrs Agricultural Station, White Leghorns, and the Buff Leghorns from Wolverine Poultry Farm, Grand Rapids, Michigan. Storrs Station pen No. 41 of White Leghorns laid 53, and A. B. Hall's pen of same breed also laid 53. Below is the week's record:

	WK.	TL.
BARRED ROCKS.		
A. B. Hall, Connecticut	48	505
Frank L. Tuttle, Massachusetts	51	656
Waveny Farm, Connecticut	47	509
J. J. Francais, New York	4	767
WHITE ROCKS.		
Albert T. Lenzen, Massachusetts	49	550
F. H. Benton, Connecticut	43	647
Storrs Agr. Sta., Connecticut	37	491
Storrs Agr. Sta., Connecticut	50	525
Storrs Agr. Sta., Connecticut	42	650
Storrs Agr. Sta., Connecticut	34	528
Storrs Agr. Sta., Connecticut	37	355
BUFF ROCKS.		
A. A. Hall, Connecticut	47	630
W. C. Morgan, Jr., Connecticut	46	451
WHITE WYANDOTTES.		
Tom Barron, England	42	1075
West Mt. Plty. Yards, Connecticut	34	621
Merrythought Farm, Connecticut	55	918
Neale Bros., Rhode Island	42	886
D. J. Ryan & Son, Connecticut	43	707
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	41	642
Dr. N. W. Sanborn, Massachusetts	45	589
Am. Buff Wyan. Club, New York	39	567
H. L. Hamilton, Connecticut	35	396
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	49	547
S. C. REDS.		
Robert Seaman, New York	43	461
J. S. Gillespie, Connecticut	44	661
Dr. J. C. Dingman, New York	45	515
Burnham Plty. Farm, Massachusetts	41	449
H. P. Deming, Connecticut	41	546
Geo. P. Dearborn, Florida	42	747
Dr. J. A. Fritchey, Pennsylvania	39	828
Ernest Underhill, New Jersey	34	484
W. H. Bumsted, Connecticut	35	308
Pinecrest Orchards, Massachusetts	40	732
Harry B. Cook, Connecticut	40	685
Colonial Farm, New Hampshire	47	691
A. B. Brundage, Connecticut	54	765
R. C. REDS.		
Glenview Farm, Connecticut	34	687
C. S. Scoville, Connecticut	32	476
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut	49	645
Storrs Agr. Sta., Connecticut	41	734
Storrs Agr. Sta., Connecticut	53	732
Storrs Agr. Sta., Connecticut	54	963
Storrs Agr. Sta., Connecticut	49	596
Braeside Plty Farm, Pennsylvania	48	563
Glenview Farm, Connecticut	52	613
Manor Plty. Farm, New York	47	628
A. B. Hall, Connecticut	53	618
Marwood Plty. Farm, Pennsylvania	49	708
Geo. M. Harris, Connecticut	37	516
Bonnie Brook Farm, New York	49	696
N. W. Hendryx, Connecticut	50	558
J. J. Linehan, Massachusetts	44	513
F. F. Lincoln, Connecticut	50	945
Cecil Guernsey, New York	42	789
T. W. Moore, Connecticut	48	542
C. N. St. John, New York	41	524
C. W. Sherwood, Connecticut	41	617
L. E. Sands, Pennsylvania	29	626
Tomoka Farm, Connecticut	46	527
Venture Plty. Farm, New York	44	507
Mrs. K. E. Woodruff, Connecticut	44	543
Windsweep Farm, Connecticut	47	503
C. H. Savage, Connecticut	51	564
P. G. Platt, Pennsylvania	49	661
Heneta Bone Co., New Jersey	13	120
F. M. Peasley, Connecticut	44	604
Chas. Heigel, Ohio	31	478
Tom Barron, England	56	763
Branford Farm, Connecticut	43	674
James Munn, Massachusetts	49	519
Geo. A. Cosgrove, Connecticut	48	481
BUFF LEGHORNS.		
Wolverine Plty Farm, Michigan	54	618
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	47	492
BUFF ORPINGTONS.		
O. Wilson, West Virginia	30	500
WHITE ORPINGTONS.		
P. A. Demgar, New York	30	455
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	41	320
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	40	429
DUNGHILLS.		
H. W. Collingwood, New Jersey	45	417
Daniel Hine, Connecticut	37	489
Daniel Hine, Connecticut	32	591
MIXED BREEDS.		
Profitable Poultry, Massachusetts	37	611
Profitable Poultry, Massachusetts	29	526

GEO. A. COSGROVE.

Ailing Chicks.

Can you tell me what is the matter with my three-weeks-old chicks, and what to do for them? I have used the ax so far. The first sign of the disease is weakness and stiffness in the legs. Later on they walk with their heads down and cannot straighten up. The only part of chick that grows is the back and under bill. Their droppings are all right until the later stages, when they become a watery yellowish white. Chicks always have plenty of grit, sweet milk and water before them. A. F. C.

Orleans Co., N. Y.

The lack of vitality shown by your chicks in their stunted growth, weakness and diarrhœa may be partially due to lack of inherited vigor because of weak parent stock and partially to improper brooding and feeding. Without knowing more about these things it is impossible to say where the trouble lies with your chicks. You do not mention the use of soft mash food which is essential for best development of young chicks, and you speak of feeding sweet milk; the feeding of soured milk is to be preferred as it not only contains all the nutriment of sweet milk but in addition has the property of preventing, or at least retarding, the development of certain causes of diarrhœa. M. B. D.

Too many chicks die young

Let's apply common sense to the feeding of chicks. They have tender stomachs. Their digestive organs are delicate. *They should not be fed raw grain.* Their feed should be *steam-cooked* to prepare it thoroughly for assimilation. The only chick feed that is steam-cooked is

H-O Steam-Cooked Chick Feed

This feed is a scientific mixture of Corn, Cut-Oatmeal, Cracked Wheat, Kaffir Corn, Peas and Millet—*steam cooked* by a special process in our mill.

Sold only in 10-lb., 25-lb., 50-lb. and 100-lb. bags, with tag showing guaranteed analysis. If you cannot get H-O Steam-cooked Chick Feed, Intermediate Scratch, Scratch Feed, Poultry Feed, Dry Poultry Mash or Chick Feed, from your dealer, write for sample and prices.

The H-O Company, Mills: BUFFALO, N. Y. | John J. Campbell, General Sales Agent, HARTFORD, CONN.

PUREBRED TOM BARRON STRAIN
WHITE LEGHORN EGGS
Price reduced to $1 per 15 after June 1st.
MAPLEDALE EGG FARM, - Erin, New York

POULTRY HOUSE ROOF

is a very important part of the building. Poultry is very sensitive to dampness. Leaky roof may affect the whole flock causing colds and roup. To insure protection to your flock cover your houses with

"RAIN-TIGHT" RUBBER ROOFING

It is composed of **Trinidad Lake Asphalt**—The Standard asphalt of the world—no other "Secret combinations" that sound "big" but mean little. Nature made it, and took her time about it. That's why it lasts. Our brand of **"Perfect Roofing"** is the same as **"Rain-Tight"** with mica flakes added to the surface which make it fire-resisting. It is a non-conductor of heat and lightning and insures against fire from sparks falling on the roof,

PERFECT ROSIN SIZED SHEATHING AND PERFECT TARRED FELT ARE BEST FOR SHEATHING PURPOSES

If you need a new roof for any building, now or in the future, it will pay you to send for samples and booklet—write us today.

MAURICE O'MEARA CO., 448 Pearl Street, New York City

The VIBERT REDS

A flock of deep glowing and *brilliant cherry to mahogany red* to the skin rose and single comb Rhode Island Reds, famous for being *the heaviest-laying trapnested flock* of the breed in existence. Long-backed, low-tailed birds, hatched and raised by hens only on absolutely free range in open-front colony houses wide open all winter. A plant on which *roup and white diarrhœa are entirely unknown.*

Highly fertile, strong eggs for hatching the year round. Chicks in small lots from specially selected eggs. Cockerels from trapnested hens of high laying rates. Breeding pens, trios, and utility stock for sale at reduced Spring prices—

all from
THE HEAVIEST-LAYING REDS IN AMERICA

Prompt service, courteous and honorable treatment, backed by a national reputation for square dealing. 1914 mating booklet upon request.

VIBERT RED FARM, Box 1, Weston, N. J.

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, bent every American entry of the American breeds, each bird averaged for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

Austin's 200 Egg Strain S. C. R. I. Reds
Standard bred: high record stock; red to the skin. Half prices on eggs for hatching. Booked up for season on chicks.
AUSTIN'S POULTRY FARM, Box 17, Centre Harbor, N. H.

R. I. Reds, Indian Runner Ducks
Eggs for hatching. Breeding stock.
Sinclair Smith, 602 5th St., Brooklyn, N. Y.

Single Comb Rhode Island Reds—Large, vigorous very dark red birds and great layers. Eggs and chicks. Mating list on request. A. E. ADAMS, Stony Creek, N. Y.

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs.
Glenview Poultry Farm, Rockville, Conn.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn.

SINGLE COMB RED EGGS
Exhibition stock. $1.75 per fifteen.
L. B. KIRKPATRICK, - Brighton, N. Y.

FOR SALE—PURE-BRED RHODE ISLAND RED'S EGGS per 15 $1.00—S. C. BLACK MINORCA EGGS 5c each; layers of large white eggs. L. M. Stewart, Vega, N. Y.

500 S. C. R. I. Reds—June hatched. ROCKY GLEN POULTRY FARM, Po'keepsie, N. Y.

BARRED ROCKS
Eggs—$1 per 15; $3.50 per 100. Baby chicks.
B. H. HENION, - Brockport, New York

"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Dr. HAYMAN, Box R 48, Doylestown, Pa.

BARRED ROCKS—HATCHING EGGS—large, vigorous birds, free range, open house, heavy Winter layers, splendid broilers, $5 per 100; $1 for 15. W. A. ROONEY, Gilboa, N. Y.

Eggs for Hatching—BARRED ROCKS. GOOD LAYERS. Pens are headed with Cockerels from Pittsfield Heavy-Laying strain. 80c. per 15; $4 per 100. S. H. MILLER, Hague, N. Y.

White Wyandotte and Barred Rock Eggs
$1 per 15, $4 per 100. Giant Mammoth Bronze Turkey eggs, $5 per 11. Fawn Indian Runner Ducks, $1 per 12; $6 per 100. C. A. HERSHEY, R. 1, McKnightstown, Pa.

W. WYANDOTTES—bred from $50 trio; elegant shape and color. Wonderful layers. 15 eggs, $2. W.W. Carman, Margaretville, N.Y.

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale.
THOMAS C. GORDON, - Brockport, N. Y.

White Wyandottes THAT LAY. Eggs from two pens, headed by cockerels imported direct from Tom Barron. Also eggs from other pens. Circular. WM. J. THOMSON, Delhi, N. Y.

EGGS—Choice Buff Wyandotte eggs for sale. 75c for fifteen, $4.00 a hundred. Free range.
CHAS. I. MILLER, R.F.D. No. 1, Hudson, N. Y.

Silver Laced Wyandottes—for beauty, quality, and utility. 15 eggs, $2. Send for feathers. F. M. SWART, Margaretville, N. Y.

White Wyandottes & Buff Leghorns
Special low prices now. Circulars free.
OWNLAND FARM, - Box 497, South Hammond, New York

LEE'S LICE KILLER, Germozone, Louse Powder, Egg Maker and other Poultry remedies have a succesful reputation of twenty years behind them. They have brought success to thousands of Poultry raisers and will to you. Lee's big "New Poultry Book", "Reading Symptoms of Disease" and "Poultry Pointers" free from all Lee's dealers, or write direct. The New Mandy Lee Incubator is a real automatic hatcher. Write for catalogue.
GEO. P. LEE CO., 972 HARNEY ST. OMAHA, NEB.

SPECIAL PREPAID OFFER

TOM BARRON ENGLISH LEGHORNS

Send cheque or money order for $1.50, and we will forward to any address, a setting of 15 eggs prepaid, from our best matings of trap-nested females, and full blood Tom Barron males. (200-egg or more progeny.) These will furnish you with the best utility blood for breeding purposes at a very small cost.

We are now booking orders for April hatched cockerels of this strain to be delivered in July, weight guaranteed 2-2½ lbs. at 75c. and $1.00 each, according to size. Send small deposit with order.

FOLSOM POULTRY FARM - FOLSOM, N. J.

EGGS FOR HATCHING, S. C. W. LEGHORNS, Bred to Lay Winter Eggs; Never Offered For Sale Before, $10.00 Per Hundred, $2.00 Per Setting. ROSEDALE POULTRY FARM, Hempstead, L. I., R. F. D. No. 4., New York Office, 22-24 West 43rd St.

BABY CHICKS FROM DAVIS' STRAIN of Single Comb White Leghorns, bred for size, vigor and heavy egg production. Prizes taken wherever shown. Chicks—$10 per 100; $95 per 1000. Eggs—$5 per 100; $50 per 1000.
LOCUST CORNER PLTY. FARM
A. W. Davis, Prop., - Mt. Sinai, Long Island, N. Y.

Atkins' White Leghorns Are Profit Payers—selected hatching eggs, $2 for 15. Robert Atkins, Esopus, N.Y. Established 1889.

Black Leghorn Eggs for Sale—Greatest Winter layers. White eggs. Circular free. WM. C. MERRILL, North Sanford, N.Y.

S. C. W. Leghorn Chicks
Tom Barron and other heavy laying blood. W. Rock and W.W. Pullets for sale. John Lorton Lee, Carmel, N.Y

S. C. White Leghorn Baby Chicks
From Large, Vigorous, Bred to Lay stock. Wyckoff, and Tom Barron's Strain Direct. Wyckoff strain only $8.00 per 100 after June 1st. $75.00 per 1000. Safe arrival guaranteed. Circulars Free. R. T. EWING, Atlantic, Pa.

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed Catalogue free. W. R. STEVENS, Culver Road, Lyons, N.Y.

White Indian Runner Duck Eggs
from blue ribbon winners at Boston 1913 and 1914. $1.50 per twelve. Frank F. Terry, Assonet, Mass.

BARGAIN—To make room, will sacrifice 50 WHITE I. R. DUCKS AND 20 DRAKES AT $1 EACH. Gnaranteed white egg strain. J. M. WISOTZKEY, R. No. 3, Gettysburg, Pa.

Indian Runner Duck Eggs—Fawn and white, Valentiue's strain. Bred from prize-winning birds. White egg strain. Eggs $1 per 13. ROBERT K. TWEDDLE, Montgomery, N. Y.

Indian Runner Ducks—Most profitable fowl. Book, "Culture of Ducks," free. Mrs. J. A. PUGH, South Williamsport, Penn.

Indian Runner Duck Eggs—$1.25 per 12; $6 per 100, express paid. CRANDALL FARMS, Albion, New York

White Indian Runner Duck Eggs—Guaranteed white egg strain. $1.50 per 13. FRED S. DEYDE, Hunter, Greene Co., N. Y.

COLORED. Muscovy, Pekin, Mallard ducks, geese, turkeys Guineas, Rocks, Wyandottes, Leghorns. Free Catalog. B. F. KAHLER, Hughesville, Pa.

GIANT BRONZE TURKEY EGGS, $4.00 per 10
RHODE ISLAND RED EGGS, $1.00 per 15
INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

Wanted—2 Bronze Turkey Hens and 1 Tom
Not related. Also 30 Bronze Turkey Eggs, for hatching. Address, A. UNDERWOOD, Supt., Purchase, N. Y.

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. Route 24, Athens, Pa.

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. EAST DONEGAL POULTRY YARDS, MARIETTA, PA.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H.A. SOUDER, Box 29, Sellersville, Pa.

PUBLISHER'S DESK

We still get occasional letters from people who, either by accident or design, neglect to sign their names. For various and sufficient reasons it is impossible for us to give attention to such letters. If the subject is not important enough to you to justify the signing of your name to what you have to say about it, then let the subject rest.

There are others, I presume, like the Sterling Debenture Corporation scamps, who wish you would suspend publication. But keep up your good work. Scare the scamps. E. V.
New Jersey.

It is not a particularly easy job to scare the scamps. So long as the people put up easy money on their schemes the seamps will take chances; but we want at least to protect our own people and others when we can. Now and then the scamps get a jail sentence, but the people never get back the money they give up to them.

The Record-Herald has decided to eliminate liquor advertising from its columns. It will fulfil its existing contracts to print this class of advertising and having done that it will accept no more.

Advices from down-State indicate that the women of Illinois, newly enfranchised, will vote hundreds, possibly thousands, of saloons out of Illinois villages, towns and cities next Tuesday. Every important city in the State except Chicago, Peoria and East St. Louis will vote on local option. Anticipating this election, the Record-Herald's announcement is believed to carry much significance regarding the drift of sentiment on the liquor question in Illinois.—Chicago Dispatch.

Publishers give up the revenue from liquor and other objectionable forms of advertising reluctantly; but the list of clean publications is growing with or without the ballot. Women's influence will always be on the side of cleanliness and decency.

Your letter with check in settlement of my claim against Adams Express received. I thank you for the interest you took in this matter and am pleased to know that in THE R. N.-Y. the common people have a court of last resort. I am enclosing $2.30 for two new and three trial subscriptions. E. H. B.
Massachusetts.

That puts the obligation on us. Our people usually do their part and throw in a little for interest and good luck.

I saw an advertisement in a local paper wanting women to do sewing at home. I answered it and got a reply by return mail offering good wages for making aprons. They wanted $3 at once for goods, and would pay me $2 per hundred and pay for goods. My bill was $14. I have heard nothing since. The address was Supply House, Cleveland, Ohio. Can you help me? E. L.
New York.

Our letters addressed to the United Supply House were returned stating they had moved and left no address. All these work-at-home concerns are fakes and about the meanest fakes we know. They scheme to cheat the invalids and cripples.

A. D. Bradley & Co., 193 Reade Street, this city, received shipment of eggs from one of our subscribers but neglected to send check for $24 to cover same. The information now is that they have moved and we are unable to locate them. Bear them in mind if they solicit shipments from another address later.

Joseph Wewer and Rudolph Menzer, saloonkeepers at Washington Ave. and 163d St., the Bronx, were sentenced yesterday to Blackwell's Island for a year and a day each by Judge Thomas in the Federal District Court for using the mails to sell "love powders" and "mystic rings." They were convicted on the testimony of "Professor" Aspra Gatalica, known as Frank Serkulj, alleged leader of the conspirators. Serkulj pleaded guilty and said that Wewer and Menzer furnished the circulars and stamps and got most of the profits.—Daily Paper.

Farmers do not run into the mystic game very much; but it may interest them to know for what purpose their mail service is used at times, and what progress the department is making to confine it to legitimate uses.

I had over 30 replies to my bone cutter advertisement, and so secured a good one at less than 50% of cost originally.
New York. H. W. H.

This refers to a little notice for a second-hand bone cutter in Subscribers' Exchange. It would be too much to expect that every person would find just what he wants or find a customer for what he wishes to sell, through this department; but there are 160,000 members in THE R. N.-Y. family, and each paper seems to be read by five people on an average, so it would seem that the requirements were broad enough to satisfy any situation.

I wish you would see if you can collect the enclosed bill for me. The Key City Nursery Company, 180 Bennett Street, Dubuque, Iowa, ordered these plants from me last Spring. I shipped them on April 12 and they promised to pay for them June 1st. I have sent them several bills but they have not paid nor have they answered my letters. B. P.
Delaware.

This was a small bill of $3.50, but with such a record none of our people will want to ship plants on orders from the Key City Nursery Co. We were unable to get any reply to our letters and the collection was not made.

Enclosed you will find a slice of fresh bacon. Please roast the same and serve to your numerous family of subscribers.
Connecticut. A. A.

This is a proposition by Mr. N. W. Bacon, 120 Boylston Street, Boston, Mass. He wants to give our friend a city lot all for nothing. With the free lot he throws in enough guff to arouse the vanity of the average man, but he seems to have made this "selection" of a distinguished citizen without taking the pains to get acquainted with his man.

Please place my name on your records as a member of Dr. Ulman's "Fake Detection Association." I hope the membership will run into millions.
New York. C. R. C.

The name is recorded. A remarkable thing about the charter members of this association is the high class of business and professional men and farmers who send in their names. The number does not increase so very fast, but the high standing and intelligence of those who signify their willingness to become members is significant.

Mr. Frederick G. Gammeck of West Hartford, Conn., testified to a personal experience in the libel suit of F. O. Groesbeck, Hartford, Conn., against THE R. N.-Y. in the Federal Court last month. Mr. Gammeck told Mr. Groesbeck that he expected to buy a breeding cockerel from a man named William Davis. Groesbeck, so Mr. Gammeck testified, claimed that he knew Davis and could buy the bird cheaper than Gammeck. Later Groesbeck reported that he could get a bird for $2 or one for $3; or a still better one for $5; and the latter was ordered. The bird, however, proved unsatisfactory and after repeated efforts to get an adjustment through Groesbeck, Mr. Gammeck got in touch with Mr. Davis, and found that the bird was an ordinary mongrel, and that Groesbeck paid $1.50 for it. Gammeck found that he paid Groesbeck a profit of $3.50 on a $1.50 rooster.

It is possible to get one or two sympathizers of crooks on a jury of 12 men anywhere; but thank goodness it has not yet been demonstrated that it is possible to find 12 crook sympathizers in one case.

I have been confined to the house four months with neuritis, and am just able to hang on to a pencil with my left hand, but I want to ask what you know about this medicine, Sanatogen. I had a little faith in it, seeing it advertised in the Christian Herald and recommended by such men as Henry Watterson and John Temple Graves, but before buying it I consulted a nerve specialist who had been called in my ease. I enclose a letter telling what he thinks of it, also a letter from the Bauer Chemical Company.
Pennsylvania. L. L.

The letter from the nerve specialist said "Sanatogen" had been carefully analyzed and that it was simply cottage cheese, its only virtue being the fact that it is harmless, and that it had absolutely no medicinal value. While the letter from the proprietors of "Sanatogen" intimated that the preparation would cure tired nerves, the only definite thing in it is the information that "Sanatogen" may be had from druggists in three sizes, at $1, $1.90 and $3.60.

It was our previous information that "Sanatogen" contained some combination of phosphates in addition to the cottage cheese, and that the cost of the materials of the dollar size was about eight cents at the outside. We have never found a chemist or a physician to credit it with any medicinal value. J. J. D.

It needs no painting

THOSE neat sparkling roofs with their crushed mineral shining in the sun—you see them all over the country—they are Amatite roofs.

The fact that Amatite *needs no painting* means a great saving to those who use it.

It is also a great convenience not to have to paint roofs.

Many buyers have adopted the policy of using nothing but Amatite owing to this economy and satisfaction.

A booklet about Amatite will be sent free on request.

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DIRECT FROM MILL AT MILL PRICES

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Positively the greatest steel roofing proposition ever made. Before you invest in new roof covering, siding or ceiling for any building first learn about the *one* best and cheapest.

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Reo Shingles

actually cost less and *outlast three ordinary roofs*—last a lifetime—when the building wears out you still have the roof—never needs painting or repairs. It is *rot-proof, fire-proof, rust-proof,* and guaranteed *lightning-proof.* Any one can lay it, right over old shingles if you desire.

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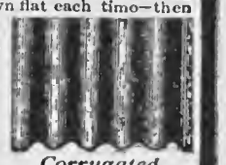
By Edwards Patent Interlocking Device, see illustration below, nails driven through underlayer of metal only—no exposure—no leaks.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You get it without argument under our sweeping guarantee if rusting out occurs in an

AMERICAN INGOT IRON ROOF

Rust-resisting Pure Iron—Not Steel

Our bond protects you. No painting—no repairs. Lifetime service—low cost. Lightning-proof—fire-proof. Write today for Free Roofing Catalog.

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Station 16, MIDDLETOWN, OHIO

Ditching With Plow

By actual test, under average conditions, two men can complete a drain, 700 feet long, ready for tile, in nine hours, if this

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is used. Tile drained land repays the investment in three average years. A week's tile draining will more than pay for the plow in labor saved. Ask for plow catalog showing 25 styles of which this ditching plow is one.

BATEMAN M'F'G CO.
Box 1023. Grenloch, N. J.

TILE ATTACHMENT WITH EACH PLOW

GAUGED for 3½ ft.

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Ration for Milch Cows.

1. Can you give me a balanced ration for fresh milking cows from the following grain? Cottonseed meal, cornmeal, wheat bran and brown middlings. 2. Can yellow ochre and glue be mixed for floor paint and what proportions?

R. W. F.

1. You can make a very good grain ration for fresh cows by mixing the grains you mention in the following proportions: Four pounds wheat bran; two pounds cottonseed meal; two pounds cornmeal, one pound brown middlings. Whether this will constitute a balanced ration or not depends upon the roughage available. If you have good mixed hay and clover it will produce very satisfactory results but some form of succulent feed should be added such as ensilage or dried beet pulp if the best results are to be obtained. 2. You could mix yellow ochre and shellac for floor paint but yellow ochre and glue would not be good for anything as glue will not stand water.

C. S. G.

Timothy for Cow.

Will you advise a ration for a mixed herd of cows where the milk is bottled and good color of cream is desired? I have for fodder some good Timothy and the kind of fodder raised on farms where it has not been seeded down for years; do not know what name one should give it, although some people call it "fine cow hay"; bran, protein 14½%, $1.45; wheat feed, protein 15%, $1.50; distillers' dried grains, $1.55; gluten, $1.55; cottonseed $1.75; meal $1.40. W. P. V.

Pennsylvania.

You cannot expect to obtain very satisfactory results by feeding Timothy hay to milch cows. You would do better to feed this to your horses and use only your "fine cow hay" for the production of milk. For a grain ration you could use the following: Four pounds dried distillers' grains; two pounds wheat bran; two pounds cottonseed meal; two pounds oil meal or four pounds dried beet pulp soaked before being mixed with other feed. If your cows are very thin in flesh you could add two pounds of cornmeal to this mixture and feed as much to each cow as she requires, regulating the amount according to her ability to eat and digest the feed eaten and the amount of milk she is giving. Do not feed cottonseed or cornmeal to cows within two months before parturition or two weeks thereafter. C. S. G.

Ration for Cow.

Will you give balanced ration for cows for me, using the following feeds? Corn silage; mixed hay (clover and Timothy); cornmeal $1.55; gluten $1.70; cottonseed meal $1.90; bran $1.55; linseed meal $2 per cwt. C. F. J.

Pennsylvania.

For the production of milk we would advise the following grain formula: Five pounds wheat bran; two pounds cottonseed meal; two pounds cornmeal; one pound gluten feed. This should be mixed thoroughly together and fed in two feeds, morning and evening, with about 40 pounds of silage divided between the two feeds. The noon feed should be mixed hay, feeding just what will be readily eaten without much waste. The amount of silage and grain to be fed to each cow must always be regulated by the appetite of each cow and the quantity of milk she is giving. C. S. G.

Promoting Heifer's Growth.

I have a heifer which has had a calf six months too soon, as she is only 19 months old. Can you tell me a combination of feed that will increase her size instead of her milk supply?

New Jersey. M. R. T.

The same kind of nutriments are used for both milk production and animal growth, therefore your only course is to feed the heifer a ration sufficiently liberal to provide for both milk and growth. Keep the heifer in good smooth condition, but not fat. It will be better not to breed her for about six months from the time she freshened, but keep right on milking her until about two months before she freshens again. C. L. M.

AILING ANIMALS.

Warts.

I have a yearling bull which has two clusters of warts, one on the top of his neck just in front of his shoulder, about 20 in number; another cluster on the knee and ankle of his left forward leg, about 15 in number. One neighbor said castor oil would remove them, but they seemed to grow. Another said one tablespoonful of soda and one-half teacupful of vinegar would kill them, but it does not. Can you give me some advice what to do? J. B. H.

New York.

Castor oil well rubbed in once a day is an excellent remedy for masses of small warts upon the udder or on the muzzle. Large warts of cattle should at once be twisted out and the bleeding stopped by applying a hot iron or Monsels solution or powder. If they cannot be removed in this way they should be cut out. A. S. A.

Snuffles.

We have lately lost five shotes weighing in the neighborhood of 75 pounds each. They were first attacked with a cough, which gradually diminished but did not wholly leave them. Their heads swelled, eyes were bloodshot, had great difficulty in breathing, grew thinner each day as each succeeding day found them eating with greater difficulty. I finally killed them and had a veterinarian examine one of them, and he pronounced it osteo-porosis, as the cheek bones were excessively enlarged by a soft bony growth which could be easily sliced off with a knife, this growth pressed against the wind-pipe thereby causing the difficulty in breathing. He claimed there was no known cause for this growth, neither was there any known remedy. We feed a mixture of wheat middlings, bran and meal. The swine have access to salt and charcoal though they do not eat much of it. The pens are kept clean. The hogs are purebred Berkshires. Will you inform me if there is a known cause and a remedy? E. F.

Massachusetts.

The disease is not osteo-porosis, but is maxillary rachitis (rickets), commonly termed "snuffles" or "bullnose" (French: "reniflement," German, "schnufelkrankheit"). The disease is due to malnutrition (disturbance in metabolism) and is most likely to attack pigs of pampered sows. A deficiency in lime salts in the drinking water and feed is to be suspected as a contributing cause. Preventive measures consist in making the sows live a natural life, out of doors as much as possible and fed on mixed rations including 10 per cent. of digester tankage. Precipitated phosphate of lime should be mixed in the feed daily for sows and pigs. Lime water may be added to the milk or slop and sows given free access to wood ashes, charcoal and slaked lime. Avoid heavy feeding on corn. Confinement to pens is especially dangerous for both sows and pigs. Worms should be combated by the usual remedies. The disease is incurable so that affected pigs should be destroyed and burned. Affected stock should not be retained for breeding purposes. A. S. A.

Age Limit for Guineas.

How many years will a Guinea hen lay her usual number of eggs and at what age does she cease to be profitable? Can a Guinea rooster be kept to the same age or must I keep young males? I have never found anything on this subject in poultry books. E. T.

Mt. Kisco, N. Y.

Guinea hens usually are prolific layers until they are eight or 10 years old. Male birds should be renewed every four or five years.

Leg Weakness.

My hens seem to have some disease which affects them so they cannot walk; have had three or four out of 200 pullets hatched last season go that way. All have recovered so far except one, whose bones seem to be very soft. They also lay some soft-shelled eggs. I feed cracked corn, oats, wheat, buckwheat for whole grain, mixed feed, cornmeal, beef scraps, charcoal for mash; also sand and grit.

J. L. W.

Leg weakness in mature fowls is thought to be due to rheumatism contracted in damp drafty quarters, or to close confinement and heavy feeding during the Winter months. If the conditions at fault can be corrected, most cases recover without special treatment; in other cases, a good physic, like a teaspoonful or two of castor oil, is all that is necessary to put them upon their feet agan.

M. B. D.

Feed for Laying Hens.

I have 30 laying hens which average about 12 eggs a day. They are fed a scratch feed three times a day, consisting of 13 pounds oats, 20 pounds corn and 36 pounds wheat; this mixture lasts one week. There is a dry mash before them all the time, consisting of the following: Cornmeal, 15 parts; animal meal, 16 parts; Alfalfa meal, 16 parts. There is oyster shell, charcoal, and grit in hoppers before them at all times, as well as tepid water. A large armful of meadow hay is put in the coops every other day on top of the litter. The house is 20 by 10 feet, and has the Cornell system of nests and roosts. Can you tell me how I can increase my egg production? They are all White Wyandottes, hatched May 1st, 1913. I will be very thankful for any information on the subject.

G. H. R.

A dry mash consisting of practically equal parts of corn meal and Alfalfa meal is not well balanced as it contains too much protein in proportion to the carbohydrates, and too much of it in animal meal. A better mixture would be 100 pounds each of wheat bran, middlings, gluten feed, and cornmeal, to which is added 50 pounds of animal meal and one quart of salt. Clover hay would be far superior to meadow hay, and some green food should be provided if possible. If nothing else is at hand, dried beet pulp, which can be purchased through any feed dealer, is a fair substitute. Whether this system of feeding will increase your egg output no one can say, but it is a better one than that you are using, and should give better results.

Turkey With Swelling.

Some time ago I wrote to you asking what I should do for a turkey that had swellings on face. I received answer and followed directions but she does not improve. We opened the swelling and pressed them out and used carbolic vaseline, but they fill right up again. I also took some peroxide diluted with boiled water and syringed it out. There is a discharge from one of the eyes. Is there anything else I can do and was it all right to use the peroxide? Would you kill the bird? Would she be fit for food? She eats well, seems well enough otherwise. M. B.

Your treatment with hydrogen peroxide is good and it will probably be still more efficacious if, after syringing out the pus cavites, you fill them with some dry antiseptic powder, like iodoform, aristol, or boric acid. The nostrils and cleft of the mouth may well be syringed out with the peroxide also, if there is any discharge from them. If the turkey is a vigorous one, eating well, and apparently does not suffer from the local affection, it would seem a pity to kill her at the beginning of the breeding season.

M. B. D.

GETTING RID OF GREY SQUIRRELS.—The reader who writes on page 521 about them, will find that whole corn soaked in water poisoned with strychnine crystals, will kill the squirrels off rapidly, with little danger to birds that he cares for. Robins do not touch whole grains: blackbirds and crows will. Sprinkle the corn about the edge or edges of the patch adjoining the grove where the squirrels stay, late in the evening, when there is prospect of fair weather. Some put it out late in the afternoon, when they will get it for their last meal. But finding it in the morning is best, when they are out for breakfast before people are stirring to frighten them. I have seen them dead by the dozen in the West, where settlers are annoyed by them, particularly if a patch adjoins a forest or small grove of trees. The plan may not work if this man's, or his neighbors' fowls have access to his fields.

T. C. P.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED ON POULTRY FARM—Man and wife. E. L. TREWER, Freehold, N. J.

FARM FOREMAN, practical, life experience, married, references. E., Brewster, New York.

POSITION WANTED by young man, 24 years of age, as manager on duck farm: four years' experience. THOMAS KING, Beemerville, N. J.

WANTED IN BERKSHIRE HILLS—Young woman of character for general housework and companion. MRS. WILLIAM FORD, Drury, Berkshire County, Mass.

PARTNER WANTED to start poultry plant: Virginia farm, near large markets; single man. M. Y., care R. N.-Y., 333 West 30th St., New York.

WANTED POSITION AS HERDSMAN in an A1 Guernsey herd where an experienced A. R. feeder can get results; married, one child. BOX 192, Peekskill, N. Y.

FARM HELP—The New York State School of Agriculture at Morrisville, N. Y., can recommend several trained, practical young men. F. G. HELYAR, Director, Morrisville, N. Y.

WANTED—Single man for general farm work. Must be strictly sober and honest; good milker; wages $25, board and washing. Send reference in first letter. OAKHURST FARM, Millerton, N. Y.

FARM SUPERINTENDENT is open for engagement has had life experience managing large estates; understands farm and construction work has good references. BOX 116, Pocantico Hills, N. Y.

POSITION WANTED as manager of dairy or poultry farm; married, no children; thoroughly experienced, with practical and scientific knowledge. H. A., care R. N.-Y., 333 West 30th St., New York.

WANTED POSITION AS FARM FOREMAN or head dairyman on private estate; single; life experience; up-to-date farming and management of purebred stock; do own doctoring; make excellent butter; references. Address F. BOWCOCK, care of General Post Office, New York.

POSITION WANTED as working foreman by married man, 35 years old, five children; hustler; twenty years' experience; fruit or dairy farm preferred; can take charge of 30 cows with no help except during harvest; does not drink. B. J., care R. N.-Y., 333 West 30th St., New York.

YOUNG, MARRIED POULTRYMAN DESIRES position; commercial or estate; graduate of Massachusetts College poultry course, and knowledge of fruit-growing, accounting, corresponding and typewriting; honest and dependable; references submitted. BOX C. F. H., care R. N.-Y., 333 West 30th St., New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

FOR SALE—White potatoes, direct from farm, 80 cents bushel. WILLARD B. KILLE, Swedesboro, N. J.

BROODER STOVE WANTED about May 20 for 200 chicks. FRENCH, 208 New Britain Ave., Hartford, Coun.

VERMONT MAPLE SUGAR AND SYRUP—The most delicious sweet known. Sugar, ten-pound pails, $1.20; syrup, $1.10 per gallon. Send your order direct to the maker. L. H. GALE, South Londonderry, Vermont.

FOR SALE—A four and one-half and a thirteen and one-half horse power gasoline engine. Will sell for seventy-five and two hundred dollars respectively. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.

FARM WANTED—In Maryland or Virginia in exchange for New Jersey property. G. F. MELICK, Metuchen, N. J.

FOR SALE—Farm of 70 acres, well watered, good buildings, good wood lot, one mile from Railroad, stores, church, blacksmith, on mail route. L. L. SMITH, Westdale, N. Y.

FOR SALE—Chautauqua grape farm, 90 acres; splendidly situated; fine buildings; $2,000 down; liberal terms balance; description, photographs upon request. HARRY STANSBURY, Forestville, N. Y.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

FOR SALE—Owego, Tioga County, N. Y., Colonial frame house, 17 rooms, 8 fire places, large halls, furnace, bath, gas, electricity on the beautiful Susquehanna River; lot 80x300; ideal summer or all-the-year home. Sell for $7,000. Address OWNER, Box 255, Owego, Tioga County, N. Y.

FARM FOR SALE—60 acres with 6-room frame house and large barn, 3½ miles from L. V. R.R. station and market; 1 mile from village store; 3 acres wood; pleasant, healthy location; daily mails; telephone service. Price, $1,500, cash. Write to DANIEL HOGAN, R.D., Wyalusing, Bradford County, Pa.

DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. **THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.**

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

FARMERS' SECURITY BUREAU, NEW YORK Agency Famous for Reliable Farm Help. No Branch. **SIDNEY SULLIVAN, Expert, 99 Nassau Street**

HUMOROUS

"WHY is the weather so fascinating a topic of conversation?" "Well," replied Farmer Corntossel, "I suppose it's because it's one of the few subjects of general interest that you ain't supposed to read about in 'The Congressional Record' before you can pretend to understand it."—Washington Star.

"So," said the visitor, "you intend to become a physician, when you grow up." "Yes, sir," said the youth. "And why have you decided upon the medical profession?" "Well, a doctor seems to be the only man that keeps on getting paid whether his work is satisfactory or not."—Ladies' Home Journal.

LITTLE Marie was sitting on her grandfather's knee one day, and, after looking at him intently for a time, she said: "Grandpa, were you in the ark?" "Certainly not, my dear," answered the astonished old gentleman. "Then why weren't you drowned?"—London Evening Standard.

"Go and see if there are any crows in that field of corn," said the farmer to the new plow boy. The boy went out, and came back with the news that he had counted fifty-four. "Did you drive them away?" asked his master. "No, sir," replied the boy, "I thought they were all yours."—Melbourne Australasian.

LITTLE Prescott had been leaning out of an upstairs window. "Come away from the window, son," his father said sternly. "You might fall out and get a hump on your back—like the camels you saw yesterday." The little boy was silent for a few minutes. Then he asked: "Father, do all the little camels have to fall out the window to get their humps?"—New York Evening Post.

UNCLE Luke had been over into Calhoun County to see the son of his old master, now grown to ripe age and judicial office. "Luke, how does Mr. John look?" asked the old gentleman. "He's getting stout, eh?" "Yas, suh," agreed Luke. "Ah will say dat w'en Ah saw Mas'r John ev'y button on his wais'coat was doin' its duty, sah."—New York Evening Post.

THE cemetery fence had been destroyed by a bush fire, and subscriptions were being taken up in the district with the object of erecting a new one. "I don't see as how I should," replied an old farmer, when asked for a donation. "What's the good of a fence around a cemetery, anyhow? Those who are in the cemetery can't get out, and those who are out don't want to get in."—Melbourne Australasian.

THRIFTY housewives are now taking measures to keep the housefly from the domicile, so as to avoid the perplexing problem of getting rid of them. "Flies," remarked one woman recently, "are a tremendous nuisance. When one gets into a cup of coffee it makes me fairly miserable to see it." "Makes you miserable!" exclaimed her listener. "Well, don't you think it makes the fly more so?"—New York Tribune.

A YOUNG lady returned to her home in a small Maryland town after a Winter in Baltimore, and was told that her old colored laundress had just died after a brief illness. Shortly afterwards Aunt Annie appeared, quite alive, and looking for work. "Why, Aunt Annie!" said the astonished girl, "I am so glad to see you. I heard you were dead." "Yes, honey," said the old woman, "Ise done hyeard dat too, but I neber did believe it."—New York Evening Post.

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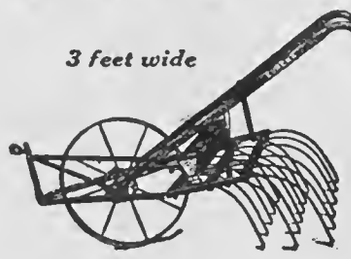

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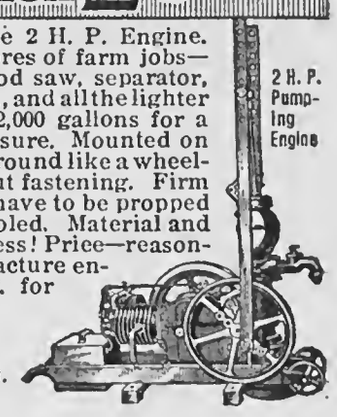

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THE
RURAL NEW-YORKER
A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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MUSHROOMS IN THE HOUSE CELLAR.

Largely a "Gold Brick" Job.

I am thinking of growing mushrooms for profit, and would like to know if you think the advice A. P. Fegert gives is good to follow? RICHMOND.

The article referred to is one of those newspaper yarns which are spun in the daily papers from time to time. Here is a sample:

Home-grown mushrooms in any amount may be sold in the Manhattan market for from 55 cents to $1 a pound, according to A. P. Fegert, who says he cleared $1,000 on his own crops from September to April.

MISLEADING ADVICE.— Quite often we observe statements in various papers and magazines regarding mushroom growing, and always, as in the case of A. P. Fegert, large financial returns are obtained, and the impression given to the uninitiated that all that is necessary is to go and pluck the crop and sell it at a high figure, the same as you can occasionally gather mushrooms from an old pasture on a dewy morning. In the clipping under present consideration the statement is made that all that can be grown can be disposed of at 55 cents to $1.00 per pound. During the past few seasons growers on different occasions have not received a cent for large shipments, and it is rare indeed that 50 cents per pound is obtained, the average running 20 to 30 cents. Now it is possible under the most favorable conditions to grow one pound per square foot of bed surface, but the general average is very much lower than this. It would be safe to figure from nothing to one-half pound per foot of bed surface, as it is much easier to obtain no mushrooms at all than a profitable crop, though the chances for success are better now than five or six years ago. At that time, or a few years previous, a method of making spawn direct from the tissue of the mushroom was discovered, and by that method it was possible to select and perpetuate any variety that showed superior merits, as to size, color, prolificness and any other desirable features.

IMPROVED SPAWN.—Previous to this discovery spawn was almost entirely produced in England and mushrooms of all shapes, sizes, and colors, came from a single planting. The American process consisted of taking portions of a selected mushroom and placing them in a sterilized medium suitable to the germination of the spores in tubes. In a short time the mycelium permeated the material, which was used to inoculate bricks composed of horse manure, soil, etc. After inoculation the bricks of manure were allowed sufficient time for the spawn to run and give them a white mouldy appearance, when the growth was arrested and brick dried out ready for shipment. This spawn produced remarkable crops, and in a short time the producers were swamped with orders, and cast about for means to fill them, and incidentally their pockets also. Each season our crops became smaller and prices of mushrooms mounted higher, till one September we reached $1.25 per pound from a New York commission house, for the few obtained from a large area. Investigation proved that the spawn manufacturers instead of using the material from the tubes to inoculate each brick conceived the idea of making up a large pile of their material for brick and inoculating the pile, thereby getting quantity at low cost of production. At present I understand they have gone back to the original method and results are more certain, which accounts for the low prices prevailing the past few seasons.

PERSONAL EXPERIENCE.—We have not grown mushrooms for several years, as we found the work too unpleasant and the chances for success too precarious. We have grown them under greenhouse benches, in special houses, and in our dwelling house cellar. The latter place is satisfactory if so located that the temperature can be maintained near 55 deg. without any drying heat, but imagine making a manure storage pit of your house cellar! I do not think it will appeal to many as a desirable proposition. To grow mushrooms successfully it is necessary to have fresh horse manure containing a good proportion of short litter. This should be

"EVERYBODY WORKS BUT FATHER!" MAKING THE FAMILY GARDEN. FIG. 298.

piled and tramped solid to a depth of three to four feet and three to five inches of good loam spread over top of pile. At end of one week or sooner in hot weather the manure must be forked round, watered well, tramped solid and another covering of soil applied.

PREPARATION OF BED.—It is necessary to turn the manure four or five times and usually beneficial to add one-fifth to one-quarter in bulk of loam during the composting. Water must usually be added in considerable quantity, but at end of composting the material dare not be saturated as failure is almost certain. A fair guide is to squeeze a portion of it hard, and if moisture can be squeezed out but not in sufficient quantity to drop off the hand it is in pretty fair condition. Should the work be done outdoors and a heavy rain occur a day or two before time to make up beds the loss may be com-

plete, so it is best to be equipped to do this work under cover. The material should be put in the beds 10 inches deep and compacted as firmly as possible. Insert good thermometers in different portions of the beds and watch them closely. The temperature may go over 100 deg. and should be allowed to decline to 80 deg. before spawning.

SPAWNING.—If American pure culture spawn is used cut the brick into 10 or 12 pieces and insert a piece about 10 inches apart each way, making a hole so spawn is covered nearly two inches. Press manure down immediately, and follow up with a spade or some implement to firm the surface of the bed thoroughly. The cellar should be kept moist without applying any water to the surface of the bed, and when, upon examination you find small white threads running out into manure from the pieces of spawn inserted the beds are ready for casing. Good old sod is best for this purpose, and should be well broken up and screened, but not too fine. The application should be 1½ to two inches deep and well firmed down soon as applied. The soil should be as moist as is possible to handle easily, so that water need not be applied before mushrooms appear. The time of casing is usually two weeks after spawning.

CARE OF BED.—If beds become dry during bearing water must be applied, care being exercised to make only heavy enough to wet casing without going into manure underneath. When mushrooms are pulled the skins should be removed and all holes in surface of bed filled up with soil before water is applied. It is a good practice to have water about 90 deg. when applying to beds. That is an outline of what is required to have a fair degree of success with this crop, and our experience has been that you may have a good crop one season, and as near as possible the following season we duplicated or endeavored to duplicate conditions and treatment and met with a flat failure, that being one of the causes of our going out of the business. Another was the very unpleasant nature of the work, as all our men objected very strongly to it. I stated above that we tried it in our house cellar. For a week or more the house smelled like a stable, and certainly was an unpleasant place to live in, though after the beds were cased over there was no odor from them. By balancing work, and expense, and uncertainty, with a possible return of one cent or less to 25 cents per foot, you can easily see it is not a get-rich-quick scheme, but a hard work and uncertain proposition that any amateur should hesitate to go into extensively without some practical experience. E. J. WEAVER.

Lancaster Co., Pa.

POISON IVY.

These are the days when the city vacationist hies himself to the shady hillside or to the vine-embowered stream for his annual outing, and happy is he if he escapes the thousand and one dangers that beset the path of the unwary visitor innocent of country ways and places, so that he may return safe and whole to his routine duties.

But it is not my purpose to speak of angry bulls and hornets' nests, nor of quagmires and quicksands, but merely to bring to notice some of the various forms of that most dreaded of all common plants, Rhus toxicodendron of the botanist, otherwise known as "poison ivy." For several years I had wandered freely through the fields and woods of New York, Wisconsin, Kansas, Nebraska and Illinois without ever seeing any great amount of poison ivy—scarcely enough to become familiar with it—but not until I came to live in Southern Rhode Island did I ever see it in all its luxuriance, or come to realize how multifold are the places and manner of its growth. More and more the wonder to me is that so many people luckily escape, for in this section of New England it abounds everywhere. The automobilist passing along country roads may reach out his hand and grasp it; the callow youth may take his best girl and a picnic lunch, and seeking a fine shady nook, unsuspectingly plant himself in the midst of it; a group of romping children looking for wild flowers may plunge into it, and even the initiated when out berrying, tramping, hunting or fishing may unwittingly come in contact with it. On the other hand, it requires no technical scientific knowledge nor any great amount of skill to learn to identify it and to become familiar with its more usual habits of growth.

Everyone who has seen very much poison ivy, or even read about it, would probably recognize it readily in one of its most characteristic forms on a fence or stone heap, or even a brush pile. In the case of the stone wall, the ivy roots find soil and moisture and protection underneath the wall, while the growth above ground is comparatively free from the injurious plow or mowing machine, and rises luxuriantly into air and sunlight upon this substantial structure. In fact, so securely does the plant establish itself underneath and between the stones that it is exceedingly difficult even with the hottest fire completely to get rid of it.

Another favorite mode of growth is shown in Fig. 299, where as a climbing vine it secures both protection and an abundance of sunlight by climbing the trunk of a tree. Where the trunk is devoid of branches the ivy is readily discovered, but it often happens that the trunk is covered with its own branches, in which case the ivy becomes so intermingled with these that only a close observer is

HOW POISON IVY CLIMBS A TREE. Fig. 299.

likely to detect its presence. But even those quite familiar with the commoner modes of growth of poison ivy are hardly prepared to recognize the peculiar form of development it takes sometimes, as in Fig. 300. Here the entire mass of foliage of what at first glance appears to be an ordinary tree is made up of poison ivy leaves, the tree itself being dead and merely furnishing the physical support for the luxuriant growth of ivy that has taken possession of it. In this instance the main stem of the ivy is as thick through as one's wrist, and is securely fastened to the trunk by characteristic masses of fibrous roots. Such a growth is peculiarly dangerous; since it is so unusual and unexpected. The unexpected, however, happens frequently in the case of poison ivy. Within a rod of this tree-like form is a fine growth of huckleberries. For an hour at a time I have stood knee-deep in poison ivy while I picked quarts of the most luscious black huckleberries that I ever saw. In this case scarcely a leaf of the ivy was visible above the huckleberry bushes, but underneath was a veritable tangle of it. In a somewhat tantalizing manner, the finest blackberries and huckleberries are often closely intermingled with it. One who is somewhat discriminating, however, soon learns to distinguish it from other vines, and the peculiar form, color, texture and arrangement of the leaves become so impressed upon one's mind that he learns to distinguish it almost instantly; even children learn to know it at once and to avoid it, as I can vouch for in the case of my little eight-year-old daughter, who goes about with

AN IVY COVERED TREE. Fig. 300.

me freely through fields and woods and seldom fails to recognize it as soon as anyone else does.

The vines most commonly mistaken for it in many localities are, in part, the following: Virgin's bower, Virginia creeper, trailing blackberry, bittersweet and the like, any of which may frequently be found growing side by side with it, and often intermingled with it. While the virgin's bower has its leaves in groups of three, like the ivy, its white blossoms are larger and much more conspicuous, and its peculiar hairy clusters of seeds in late Summer are a sure means of discrimination. I knew of a farmer who, on one occasion, left his haying, and shouting at frequent intervals drove his team across lots at breakneck speed because his wife was picking what he had supposed was poison ivy, when as a matter of fact, it was only virgin's bower, and perfectly harmless, as was shown in the sequel. In another instance, a certain corner of the farm was scrupulously avoided, and children and hired men were carefully cautioned against touching any of the leaves, but the groups of five leaves rather than three might indicate, even to the novice, that this plant was Virginia creeper. The blackberry theoretically is on the plan of five, but the trailing variety, which somewhat resembles the ivy, frequently has only three leaflets in a cluster; but the veining and texture of the leaf are different, and this vine may further be distinguished by the prickers and by the edible fruit. The bittersweet may be readily distinguished later in the season by its bright yellow and red berries. The ivy, on the other hand, during Fall and Winter has rather close clusters of dun-colored berries.

Many magazine and newspaper articles give recipes telling what to use to counteract ivy poisoning, all good enough in their way, but a more sensible way is for everyone to study the plant carefully enough throughout the entire cycle of its development through the successive seasons of the year so as to be able readily to recognize it in any of its forms. Great care should be taken especially with children to teach its dangers and the various characteristics by which it may be identified, and by way of supplementing this work, village and town officers might well take upon themselves the task of exterminating it within village limits or of erecting signboards for the benefit of unsuspecting children and the unwary public generally.

Rhode Island. HERMAN CHURCHILL.

R. N.-Y.—It must be remembered that poison ivy is not always a climber, but sometimes grows erect. Patches of young plants often show a mass of erect stems from one to two feet high. The leaves are quite like those of the box elder; sometimes the margin is toothed, sometimes almost entire. The color is bright, rather light green, surface smooth. The fringe of aerial rootlets along the stem, which enable it to cling to its support, are very characteristic.

EXPERIENCE WITH AN EXPRESS COMPANY

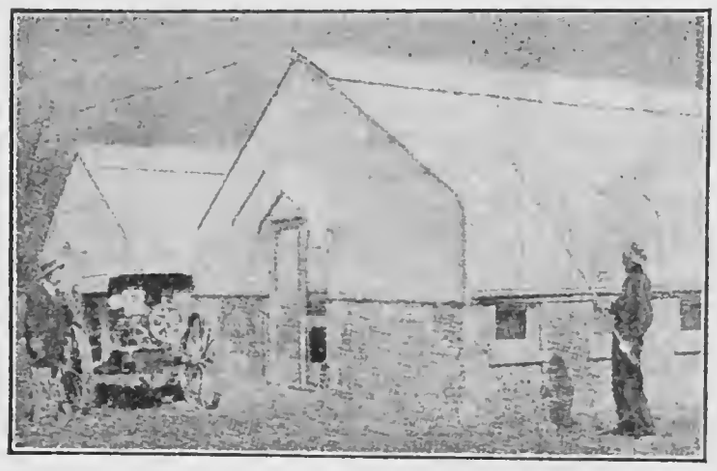
It must be a source of great satisfaction to you to look back upon the work you accomplished in behalf of the parcel post. After the experience I have had with express companies I feel like sending you a periodical letter of thanks for all that you have done. The expression used by a member of Congress at Washington recently that express companies are "parasites" appealed to me strongly. I have recently had my attention called to the following experience with one of them: To insure the arrival of personal effects at or before her arrival a woman sent her trunk before her departure to this town through an express company. It never arrived, but was shipped by error to New York although the address was plainly given and the receipt in her possession correctly states the destination. After much telegraphing and telephoning on the part of the owner the trunk was eventually returned to its starting point, but for this the *express company collected a further* charge in addition to the prepayment on the original shipment. The owner was put to great inconvenience, to expense for telegrams and telephone messages, and for necessary renovation of dresses injured by remaining packed for a long period. This occurred last midsummer. Demand has been made for the damage and a full explanation was sent. After some weeks the company claimed the letter of details could not be found; another was sent. Since then many letters have been sent on behalf of the claimant, but the matter is not adjusted. The company finally wrote the matter was in charge of its Boston office; then in charge of its New York office, and the last message stated that its Philadelphia office would attend to it. I was told by an ex-agent of an express company that it was the deliberate policy of his employer to delay adjustments until the claimant was worn out. It is this sort of attitude that has disgusted the public with corporations, and is resulting in legislation that is doubtless in many cases too drastic. I hope the day will come when every express company will be compelled to treat the public from which it obtains its substance in the same courteous and fair-minded way that is customary in the majority of modern business transactions. The parcel post appears to be our only hope in the transportation of small parcels. Everyone should write to his Congressman and Senator to uphold the extension of the parcel post. We are deeply indebted to THE R. N.-Y. for its magnificent service in this matter. SANBORN G. TENNEY.

Massachusetts.

WHEN you come to this dog question it would be interesting to see what the women folks have to say about it.

DISCUSSION OF A CABBAGE CROP.

I am 15 years of age. My father had a considerable portion of our acreage turned under last Fall, and I propose to put under cultivation half an acre in Danish Ballhead cabbage to the end that I may learn something as well as make some money. Will you tell me whether I should start with seed or young plants? Our land is a clay loam, turned under last Fall, having been in sod for a good many years. How much seed will it require? How many plants can I figure on?



SPRAYING WHITEWASH ON CONSERVATORY. FIG. 301.

What fertilizer should I use? What time should I plant the seed or sets, and could you state about the probable cost from planting to harvest, my time figured at 7½ cents an hour? We have a cultivator I could use to do the seeding and cultivation with and would you dare venture a guess as to the profits I might expect, all things considered? C. E. D.

Erie Co., N. Y.

Both cabbage and potatoes are subject to a wide variation in yield and cash returns to the acre, owing to season conditions affecting growth and final development, as well as the fact that there is no holding over of a crop. Then again, in a year of favorable conditions and large acreage, resulting in a heavy yield, the price is apt to be discouragingly low. When, on the other hand, the acreage, weather conditions, etc., are about normal there is big profit in the cabbage crop. Taking it on an average for 10 years there is good money in cabbage.

SOIL AND PREPARATION.—A well-drained, well-fertilized clay loam is ideal ground for cabbage. If it be Fall plowed without manure it is well to apply fine manure in the Spring and thoroughly disk it in. If plowed in the Spring this should be done early, plowing under a good coat of manure, for cabbage is a rank feeder. Cabbage ground wants frequent and thorough cultivation right up to time for setting the plants. Just before planting an application of 500 pounds of 5-8-10 fertilizer will prove very beneficial to the crop.

SEED.—The best and purest seed possible should be secured, as there is so often a mixture in this, and it is disappointing at harvest time to find a percentage of all-season or domestic cabbage scattered through the crop. The true Danish Ballhead is a medium size, sometimes a little elongated, and very solid, with a little rise or button on the top in the center of the head. The heads will average from three to six pounds each.

QUANTITY OF SEED.—One pound of good seed, if conditions are right, will furnish plants for four acres, but it is better to sow more than this as an insurance. The seed is usually sown with a seed drill in rows 12 to 16 inches apart, and not too crowded in the rows. This will allow the plants to be more stocky and have shorter stems. They should be kept clean of weeds and well cultivated; May 15 is about the average date for sowing the seed.

TIME AND MANNER OF PLANTING.—The time of planting in this latitude is around the last week in June. A great many are set later than this date, but chances are not as good with late planting. The cabbage planter is generally used in fields of any extent, as the machine drops a quality of water just as the plant is stuck and the work goes on rapidly. About three to four acres can be planted in this way, in a day. It requires a driver, two men or boys to stick plants and two to get the plants ready and in convenient shape for the stickers. If a small area, say an acre, is to be planted it can be done cheaper by hand setting, especially if the rows are short. The longer the rows the better the machine works, as there is less turning. In field culture the rows are usually three feet apart, while the plants in the row are from 15 to 18 inches apart. This allows for from 7,000 to 10,000 plants to the acre. The outside leaves always droop down and often dry up after setting, but if the little center leaves look green and lively the plant is all right and will come on sooner than if replaced by another plant.

CULTIVATION.—This is one of the most important steps in profitable cabbage raising. The cultivation should be started as soon as planting is finished, not even waiting for the plants to stand up. This leaves a level fine mulch, and obliterates all evidence of tramping and packing of the surface that occurred during the planting. *Then keep the cultivator going* at least once a week, until the plants are well heading. The twisting and turning of the plants by the cultivator when they get large only seems to give the roots a better hold on the soil. The cabbage crop needs a great deal of moisture to enable the plants to absorb the needed fertility, which has been developed and applied, and the frequent cultivation conserves and retains the moisture to this end. Level and shallow culture is advisable with this crop. Danish cabbage is usually harvested after November 1st, although when the earlier heads show a lighter color which indicates ripening and danger of cracking open, they are cut out and stored or marketed, or loosened in the ground, leaving only a few roots holding, which stops the pumping up of moisture and will often prevent bursting of the heads.

THE YIELD AND PRICE.—The yield runs from eight to 25 tons to the acre, as extremes, 15 tons to the acre being a good average. In the price per ton there is also a wide range—from $3 to $50 a ton. There is big money in cabbage at $10 to $15 per ton when the yield is good. There is great loss by shrinkage in storing cabbage, and it is an expensive crop to rehandle, so, if possible, it is best in the majority of cases to market direct from the field. However, if it is determined to store, a good out of doors storage is made by setting up two posts with a

PROTECTING CHERRIES FROM BIRDS. FIG. 302.

ridge pole from one to the other of these posts. Rails on poles set up on either side meet at the ridge making a long A-shaped storage in which the cabbage is piled carefully, allowing good ventilation at the ends, for cabbage must be kept cool—close to freezing—and even a little frost will do no harm, as it does in potatoes. The outside of this storage is covered with straw and then coarse manure, as needed, according to the severity of the weather. In such a storage cabbage can be taken out at any time without exposure to freezing winds.

INSECT ENEMIES.—Often the small black flea proves troublesome in the case of the young plants, when they are just starting from the seed. Bulletins on sprays of different sorts and for different purposes can be secured from the State Experiment Station at Geneva by sending in a request. Some seasons, the cabbage louse or woolly aphis is very destructive to the growing crop. If these affected plants are discovered in time the lice can be wiped off by using a cloth and whale oil soap emulsion, but if they are too far gone the plant should be removed from the field and destroyed. Spraying the crop for this trouble seems to have little effect.

It is not customary to plant cabbage on the same ground the second year, as this practice often induces what is known as stump rot. The average cost of an acre of cabbage is around $50 to $60. This cost can be greatly reduced where a large acreage is grown, the machine planter and riding two row cultivator being used; but in the case of a small acreage where these advantages are not to be had, $50 to $60 per acre is the average cost, this estimate being based on my own experience and what information I have come in touch with outside. A good crop of cabbage, when the market is right, ought to net the grower from $100 to $400 per acre.

H. E. C.

"BUILDING UP" POOR SOIL.

I have read the inquiry of H. N., on page 587, and while I cannot answer the questions he asks, I feel impelled to assure him the cow route to soil fertility is not as bad as he thinks. My problem is much like his, back-to-the-lander on a run-down farm, and I chose the cow route. I could not afford purebreds, especially to practice on, as I was fresh from the city, but there are some scrub cows which can pay their way. By finding one of these, and raising a heifer calf or two from purebred bulls each year, I now have six head, and these with my team give me considerable manure for a 25-acre fruit farm, besides paying a modest profit on the side. We make butter, and feed the skim-milk to calves and pigs.

I have been at it three years, and am beginning to see some results here and there from my tile and manure, and I am satisfied. If Nature were restoring fertility to H. N.'s farm or mine, successive crops of weeds would finally be followed by scrub trees, and in the course of a century or so the land might reach a fair state of fertility. While it is possible to hasten the process somewhat, building up run-down land strikes me as pretty gradual business, at best. Manure is popularly regarded here as the best means for this purpose. Buffalo manure (horse manure with shavings) costs $28 per carload ,and is generally used one carload to the acre, by those not having stock manure of their own. Another method of upbuilding soil fertility often resorted to is sowing oats and Timothy and clover seed with a 2-8-10 fertilizer, and then broadcasting about 400 pounds of raw ground bone per acre. This becomes available too late to help the oats, and gives a heavy stand of hay, with a good sod to plow under. Rye is generally used as a cover crop.

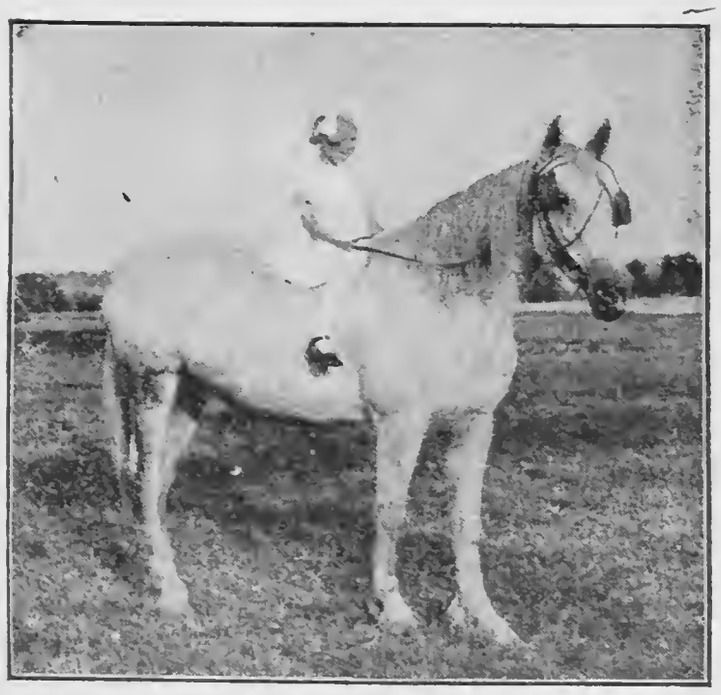
A. M.

Erie Co., N. Y.

R. N.-Y.—Our own soil, originally hard and sour, has been doubled in productive power without the use of any manure. Such manure as we do make is put on the fields near the buildings. The rest of the farm has been built up by plowing under crops of rye, vetch, Crimson clover and turnips with lime each year.

THE LOCAL STORE QUESTION.

On page 618 is a discussion of the catalogue house plan of building. Suppose you have $100, and it will take it all to buy from your local merchant. His prices, some at least, look high. By examining the catalogue sent in response to your postal card for prices you find that the goods will cost $75, and freight one or two dollars, say $5, so as to allow plenty. You have your goods and $20 in your pocket to use in your own business. If you bought from the local dealer he would have had $20 to $25 in his pocket, and in either case the bulk of the $100 would go to the city dealer and the carrying company. I see no reason why the country merchant cannot sell as cheaply as anyone else. The better class of catalogue houses advertise "satisfaction guaranteed; if for any reason or no reason our goods are not satisfactory you may return them and we will repay your money and the freight both ways." The fact that they are making fortunes while dealing on these terms shows that their prices



THE FARM CAVALRY. FIG. 303.

are not too low. The local dealer has an advantage in that you see and examine the goods before buying, and you can buy in smaller lots than you would if sending away for goods, also you can often barter produce instead of cash. The fact is the buyer needs to prosper as well as the seller for any satisfactory sort of prosperity. What we need is an equitable division of the results of our efforts. B.

Illinois.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

The Robin and the Cherry.

Fruit eating birds consider the wayward cherry tree their special property. As soon as the fruit shows color, business begins, and the householder is fortunate if he gets a quart of thoroughly ripened cherries from a fair sized tree. The man in the picture, Fig. 302, has an effective remedy, though somewhat troublesome to apply. In Europe this practice of protecting fruit trees with netting is quite common, garden supply concerns selling nets of various sizes, in some cases quite large trees being covered.

Rye Questions.

Do you think it is better to mow the rye for feeding or plow it down when I can buy the bedding at $4 per load? I also have a piece of new land which I plowed and disked about a dozen times. I would like to put this to cow peas about June, then plow down in August then sow to rye. Do you think it will grow? H. L.

New Jersey.

We should save the cash by cutting as much rye as was needed for bedding and plowing under the balance. It will all go back to the land. Save the cash. The cow peas will make a fair growth and will help produce a good crop of rye.

What is "Frenching" of Corn?

You excite my curiosity. On page 620 an inquiry is made about "frenching" corn, apparently some disease. The term cannot be found in my dictionary. What is it? D. R.

Payson, Ill.

I have never seen any real explanation of the tronble in corn and tobacco plants, which farmers call "frenching." In either case the plants in the early growth stop, and become completely stunted. The leaves of corn get striped with white, and the plants never get over 10 inches high. Similar conditions are shown by tobacco plants. In some sections the term frenching is applied to the leaf-curl in the peach, Exoasens deformans, the cause of which is well known. Frenching in corn generally appears on spots in a field that are deficient in drainage, and where the soil is acid. Corn very seldom frenches on well-drained and fertile soil. I have never found any apparent fungus connected with frenched corn plants, but it may be there is some harmful soil bacteria which have a hand in it. I have never seen any publication from any of the stations dealing with this trouble, but I have seen hundreds of frenched plants of corn and tobacco, and it seems to be one of the mysteries of plant life which need investigation. I have had corn frenched in my garden, where the soil is light, rich and well drained, and I have seen fields in which there were sinks in the level field where water would stand a little while after a rain, and these sinks would make frenched plants all over the area. I have no record of any investigation of the trouble, and am inclined to attribute it to soil acidity more than anything else.

W. F. MASSEY.

Owls and Sparrows.

It is stated that the hooting owl, the natural enemy of the English sparrow, is now ridding Elmira, N. Y. of the sparrow. It is claimed by those who have made a study of animals that the Great owl is the natural enemy of the hare.

Syracuse, N. Y. E. B.

The owls which so far have been found to prey upon this bird are the Short-eared and Screech owl. The latter bird takes more sparrows than any other bird of prey so far as we know. It is not likely that either of these species is the owl referred to by your correspondent, as the hooting owl as the name would be appropriate to neither of them.

W. L. MCATEE.

U. S. Dept. of Agriculture.

What is "Pulp Timber?"

In a recent article I see reference to the value of the "pulp timber" on a Vermont farm. Tell us what this is and what it is worth. J. M. S.

The woods chiefly used for pulp in this section are spruce, balsam fir and poplar, but the former is used more than either of the other two, and is in more demand. Last Fall the International Paper Company were paying $9.75 per cord for spruce pulp wood delivered at the mill peeled, and $8.75 unpeeled. Poplar peeled was selling on car here in Vermont for $6.50 in smaller sizes, and $7.50 in large sizes. A. F. HAWES.

Vermont. State Forester.

Wholesomeness of Scabby Potatoes.

Are potatoes that have been infected with scab as wholesome as those not so infected? Is there any danger in using them for human food? F. H.

Galway, N. Y.

We have used such potatoes many times and find no difference in food value. Scabby potatoes are wasteful for a good share of the tuber must be pared off with the skin, but we have found no difference in quality.

Arsenate With Lime Sulphur.

May I with safety, use commercial lime-sulphur solution with arsenate of lead on my apple and peach trees to prevent the Codling-moth on apples and the curculio on my peach trees? If the above-mentioned solutions can be used together, please state at what strength. Would you advise me to spray with the arsenate of lead alone, and omit the lime-sulphur? M. C.

New York.

When spraying for the Codling-worm, we use three pounds of arsenate of lead in 50 gallons of water, adding one gallon of lime-sulphur concentrate. This combination has proved very effective in fighting the Codling-worm. The addition of the lime-sulphur makes the poison stick better to the foliage, and we think it more effective, besides helping somewhat in destroying fungus diseases of the apple foliage.

OHIO CROP REPORT.

The Ohio Agricultural Department gives the following report of conditions in that State:

Wheat, conditions compared with an average, 99 per cent.; Oats, estimated area for the harvest of 1914, 1,489,090 acres; Spring barley, area sown compared with last year, 89 per cent.; Winter barley, conditions compared with an average, 96 per cent.; Rye, conditions compared with an average, 99 per cent.; Clover, average date of seeding, March 26, acreage sown compared with last year, 99 per cent.; Fruit, prospect compared with normal yield, 88 per cent.; Berries, prospect compared with normal yield, 93 per cent.

AVERAGE PRICES.

Wheat, 93 cents per bushel; corn, 70 per bushel; barley, 65 cents per bushel; oats, 43 cents per bushel; rye, 71 cents per bushel; potatoes, 88 cents per bushel; hay, $12.77 per ton; Alfalfa, $15.16 per ton.

Prospects for a large apple crop this year; peaches almost a failure, some orchards near the lake will have half crop. Cherries full crop. Farmers are busy planting trees. Many farmers are setting out large quantities of fruit.

Barker, N. Y. P. P. L.

May 8. At the present time the prospects are very good for a normal yield of apples in this section of Chautauqua County. The peach outlook is not very promising, many growers reporting the peach buds having been destroyed by the cold last Winter. The outlook for other small fruits, such as berries, is very good, with the exception of blackberries, which have been killed in some locations. Spring is very backward and at this writing there are very few oats and early peas sown. We had another heavy rain yesterday and last night which, will further delay farm operations. S. J. C.

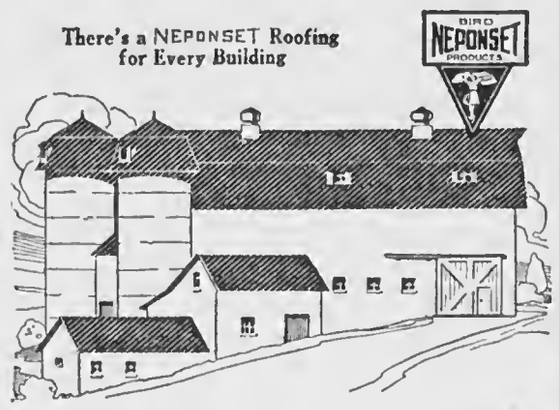
Silver Creek, N. Y.

Surely Spring has overslept this year, and is getting up way behind. Here it is May 11, and farmers just getting in oats; planting time and ground not yet ready. Something will have to hustle to catch up. Pastures look fairly well, but the meadows, when are we going cut our hay? Good spots, poor spots, and bare spots, mostly latter. Superintendent Lacey of the Dutchess Farm Bureau has been through here looking for Alfalfa. He had to use a microscope to find any, and clover is about as scarce. Fruit trees are promising well. Winter wheat nearly all killed. No Spring wheat. The cows have eaten up nearly all the fodder and are looking for grass. H. V. D. K.

Eastern Dutchess Co., N. Y.

May 5. This locality is not adapted to fruit culture, and has very little demand for garden truck. This village is a shipping point, with a population of about 500. Wheat 90; corn, shelled, 60; oats 36; hay, Timothy, per ton, $12.25; clover hay $10.25; beans, per bushel, $1.90. Potatoes are not shipped from here, but for local demand at grocery stores price is 50; wool 22. This is also a sugar beet section. Growers receive $5 per ton at factory. Beef, per cwt., $5 to $7.50; hogs $8; sheep $5; lambs $7.50; veal calves $8; milch cows $50 to $75; milk at cheese factory $1.30 per cwt.; butter at grocery 24; eggs 17. Horses, per pair, $350 to $425. O. H. R.

Ashley, Mich.



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Quickly made, "hurry-up," "bargain roofings" soon tell their own story of narrow-minded economy. A quick-spoiling roof which is a constant nuisance and source of expense is the answer.

Broad-minded economy will convince you that—only "slowly made" roofings are slow to wear out.

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Also makers of Neponset Shingles, Wall Board and Building Papers.

Save $4 to $8 per Acre
Seed and Fodder

On Clover, Alfalfa, Flax, Vetch, Peas, Timothy, short grain, etc. A rake or tedder will knock off and waste the seed and leaves. You save all that waste by equipping your mower with the

THORNBURGH
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BUNCHER AND WINDROWER

Easily attached to ANY Mower

Deposits crop to side, out of way of mower and team on next round. Leaves crop in either loose, hollow bunches or in windrows; heads and leaves in center, stems, which hold the sap, sticking out to dry quick.

Saves the seed and leaves and half the labor. Saves making extra trips over the field with dump-rake, side-delivery rake and tedder.

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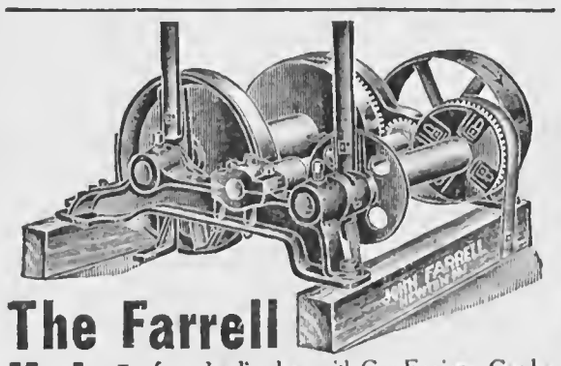

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All Leading Varieties. Also Fruit Trees, and Vegetable Plants. Catalogue Free.
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Seed Corn Imp. Early Learning, Reid's Yellow Dent and White Cap. 1912 crop. Perfect germination. $2 bu. Catalog free. Theo. Burt & Sons, Melrose, O.

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CALYX SPRAY NOZZLE
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Satisfaction guaranteed. Price . . . $1.00 Postpaid

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"Never Saw Peas Do So Well"

This is what a user (name on request) says about his experience with

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NITROGEN BACTERIA

He made a close comparison, inoculating part of his peas with the bacteria, planting others near them without inoculation. Those without inoculation dried up and died; the others yielded a wonderful crop.

This is the usual experience of any one who inoculates legume seeds—peas, beans, alfalfa, clover, vetch—with Ferguson's Bacteria. Plants MUST have Nitrogen. Ferguson's Bacteria gather Nitrogen from the air and store it on the roots of the plants. They store up more than the plants can use, so that part is left to enrich the soil for future crops. The same bottle contains all the varieties of Bacteria necessary for the inoculation of any legume.

Better than the best commercial fertilizer at one-twentieth the cost

Quarter-acre quantity, 50c; 1 acre, $2; 5 acres, $9. Let us explain why you need Nitrogen Bacteria and why Ferguson's is best. Write for special booklet N—free.

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We are trying with all our might to furnish absolutely pure Alfalfa seed, with all blasted and immature grains removed. All other field seeds, *Soy Beans*, *Vetch*, *Sweet Clover*, etc. Write for samples and booklet telling "How to Know Good Seed."
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PLANTS—Sweet Potato, 100, 35c; 400, $1.00. Postpaid $2.00 per 1,000. Cabbage, $1.00 per 1,000. List free. W. S. FORD & SON, Hartly, Del.

Millions of Sweet Potato TOMATO, CABBAGE AND Cauliflower Plants, Rhubarb Roots. Price list free. M. N. DORGO, Vineland, N. J.

100,000 1-YEAR ALFALFA ROOTS FOR TRANSPLANTING
Sure success. Early Wisconsin grown seed corn. Silver King (White), Golden Glow, Number 12. Inoculating Alfalfa Soil. VAN LOON, La Crosse, Wis.

SWEETCLOVER SEED—Pure white and biennial yellow. Prices and circular how to grow it, sent on request. E. Barton, Box 29, Falmouth, Ky.

SPRAYING TO SAVE MATERIAL.

PERSONAL PRACTICE.—I have been interested in reading the amount of spray the "Hope Farm man" used on his trees this Spring. I notice that the amount he uses is about the same as that which is ordinarily recommended in the various agricultural publications, so it may prove interesting to some to know how a fruit grower who is undoubtedly equally particular about doing a good job of spraying is able to get over a fine, healthy orchard of 20-year-old trees (400 trees in all) with just 600 gallons of soluble oil. That is an average of only a gallon and a half of solution to a tree, yet I would be glad to see anyone who may be at all skeptical of the results look over our work. We accomplish these results by spraying in a way just opposite to that recommended at the New York Fruit Growers' Association last year. There it was said, "One ought to spray against the wind." We never do. Furthermore, while most fruit growers are very particular to insert from one to six new disks in the Friend nozzles per day, we use the old one from one to three years, all of which sounds very bad I'll admit, but it is results that always count in the end, and we are convinced that we save fully as much time by our way of spraying as we save in material. Of course, I am limiting my remarks now to the dormant spraying.

APPLIANCES USED.—When we go out to spray at this season we see that everything is all shipshape with engine and hose (we use one of the older models of the Friend outfits). Then, we give the man in the tower a short rod with a straight nozzle. The man on the ground is provided with about 50 feet of line and a longer rod on which we place an angle nozzle tilted up. Then we set the pressure gauge to read from 200 to 275 pounds pressure per square inch. That gives us a mist out of the nozzle even if the hole in the disk is an eighth of an inch across.

WINDY WEATHER DESIRED.—Now comes the strangest part of the way we spray; we want a good breeze to be blowing. The wind is what saves the spray for us. If there is a good strong east wind blowing we start in at the eastern side of the orchard and wet the first row well on the eastern side; as we turn back on the eastern side of the second row we find it very damp already, and probably the team will not have to stop before any individual tree in order for us to finish the job on the way back, and so we keep on across the orchard. Three-fourths of one day will easily cover the 400 20-year-old trees on one side, provided everything goes along well. Having done this, if the wind stays east, we work in our other orchards until it has swung around to the west. Then, we start in again and spray the rows from the west. As I said, we used just six 100-gallon tanks in this 20-year-old orchard. In an orchard in which are approximately 100 trees ranging from 30 to 40 years of age we used just two tanks in spraying both ways.

ADVANTAGES OF THE PLAN.—Our men have no occasion to get covered with spray; it is a job that we quickly get out of the way, and our results have been most satisfactory. Most of our trees are really sprayed completely about three times by this method, and yet even then, please take note that in that orchard of large healthy 20-year-old trees we used but one gallon and a half of fluid to the tree. Our method is almost as economical of lime-sulphur as of oil, we have found in the past. The man who sprays against the wind, or on a day when there is no wind at all, drives in under the branches as far as he can, takes his long unhandy 12-foot rod (a heavy thing by the time 3 p. m. approaches) and does his best to get in the middle branches; a limb four feet from his nozzle doesn't get touched, but he himself is getting covered most of the time. It will take him and the helper below at least three or four minutes to do any kind of a job on a tree of only medium size, during which time his nozzle is running a continuous stream of high-priced material, let alone the cost of his time.

RAPID AND EFFICIENT WORK.—Our nozzles are running a pretty big stream of expensive material too most of the time, but we're making very few stops. The mist from our nozzles looks like a sizable jet of steam, broken up still finer and projected with much extra force by the strong breeze behind it. It is carried horizontally straight through the trees. Spray with the same pressure on a still day and the particles of mist at once become readily distinguishable and fall straight to the ground. Just one word further (as to the ultimate results of our methods). The jobber who handled over 1,200 barrels of our Baldwins last Winter remarked that finer Baldwins could hardly be grown in this country. He has about two and a half carloads of Ben Davis in storage for us yet. Concerning these, he wrote us on the twentieth of March that he had sold 10 barrels of these (No. 1) for $5.25 per barrel, but that these were sold through the store more with the idea of getting a good look at the fruit than for the sale of moving them.

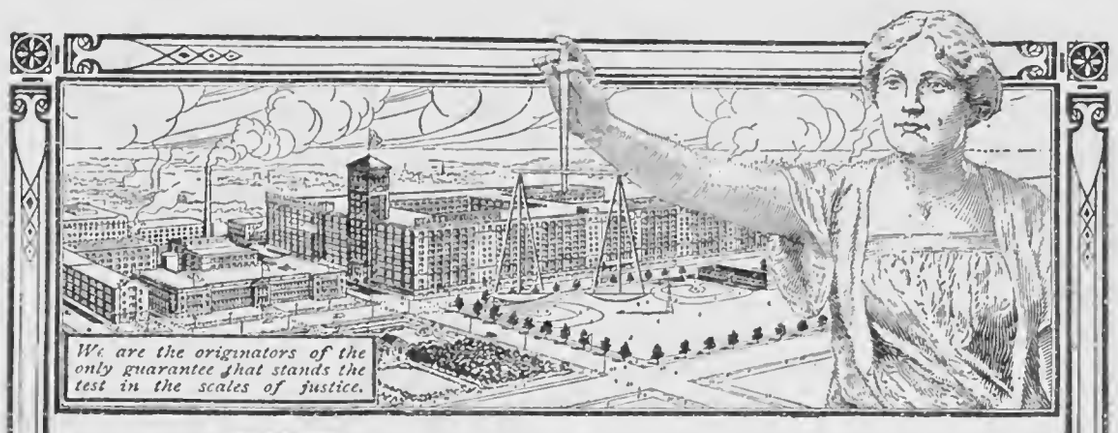
H. T. DEMAREST.

Orange Co., N. Y.

Killing Out Johnson Grass.

A good many years ago under a former management THE R. N.-Y. annually distributed small quantities of seeds to its readers. The object was to distribute promising tested varieties, and also to obtain extended trials of novelties which possessed merit in some localities, but had not been fully tried out. Under this plan some of the best varieties now under cultivation were distributed and tested. Among other things, small packages of Johnson grass were distributed. In parts of the South this grass had given most remarkable yield of forage, and it was thought that it might add greatly to the productive power of some of our lands in the Middle North and West. Unfortunately this grass proved to be a terrible pest on many farms, spreading as rapidly and as dangerously as witch grass, and causing an immense amount of trouble. In the South this grass became a terrible nuisance, although some stock men on cheap, damp land considered it a great blessing as a feed for their stock, until finally it got away from them, crawling out of their pastures into the cultivated fields of cotton and corn. Laws have been passed against propagating it, and the powers of the Department of Agriculture have been set in motion to devise schemes for killing it out. The Arizona Experiment Station has issued a pamphlet on the subject. One of the first things the Arizona Legislature did after the State was organized was to pass the Johnson Grass Law. This prohibited the transportation, commerce, or sowing of Johnson grass in any form. It also prohibited the seeding of this grass along canals, public highways, or the railroad right of way. The State recognized Johnson grass as one of its worst invaders and enemies of farming.

It is claimed that a heavy stand of this grass cuts down the value of an acre of irrigated land from $25 to $50. The worst places for the propagation of this grass are along the banks of the irrigating ditches and canals, and also along the banks of the rivers. The most practical way of getting rid of it apparently is to keep sheep confined or herded upon the infested ditch banks and on waste seedy ground. The Johnson grass propagates not only from seed, but from underground roots as well, springing up from the joints so long as the plant has any life in it. As is the case with quack grass, one practical way of cleaning it out is entirely to destroy the growth of the grass above ground. If the grass is cut off again and again it cannot, of course, make seed, which stops one method of propagation. If also the plant cannot make growth above ground the root system will die, as there must be a stem growing above ground to serve as the lungs of the plant. On land therefore that is heavily stocked with sheep, the Johnson grass will be killed out, for the sheep will nibble every spear of the grass down almost into the ground, thus preventing growth above ground, and destroying the underground roots. This same plan has been followed successfully in a number of cases in fighting quack grass, and it is more effective than the plan often used of seeding to a thick crop of buckwheat, or similar grain, so as to make a rank growth which will smother out the growth above ground.



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Even if we asked as much as others, the Little Jap would still be the greatest cultivator value on the market. We guarantee it to please you better than any other cultivator you can possibly buy or we will gladly refund your money.

The Bradley line includes single row and double row riding and walking cultivators of all kinds. You will find them fully described in our big General Catalog, but if you want our new Cultivator and Implement Book, which describes our complete line of Bradley cultivators, harrows, plows, planters, etc., besides buggies, wagons, harness, gasoline engines, supplies for dairymen, poultrymen, fruit growers, etc., just say "Send me Cultivator Book No. 66R64

NO other farm implement of modern times has so clearly demonstrated its superiority over all others of its kind. The patented Pivot Axle Seat Bar Lever Dodging Device can be obtained only on the Little Jap. It is the only cultivator perfectly adapted for either hillside or level ground use—among straight or crooked rows. A boy can operate it as easily as a man—weight of operator makes no difference.

The Little Jap is the easiest of all cultivators for the team to handle.

We furnish the Little Jap with all kinds of pin break and spring trip shovel gangs, surface gangs, spring tooth gangs and disc gangs. Prices from $21.25 up.

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TILE DRAINED LAND IS MORE PRODUCTIVE

ROUND TILE

Carries off surplus water. Increases the value of your land. Acres of swampy land reclaimed and made fertile by using JACKSON'S DRAIN TILE. We are producers of Albany Blue Slip Clay, Hollow Brick and Blocks. Dealers in Sewer Pipe, Flue Lining, Fire Brick and Chimney Tops. Send for catalog and prices. John H. Jackson Tile Co., Inc., 89 Third Ave., Albany, N. Y.

The Picture Shows What Subsoiling Did

This corn was grown on worn out land at the Experiment Farm at Brookhaven, Miss. All of it was planted and cultivated the same way, at the same time. The ground on the left was untreated; that on the right was subsoiled—blasted and broken up four feet deep and thus restored to fertility. By using

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EVENTS OF THE WEEK.

DOMESTIC.—John L. Billard, head of the Billard Company of New Haven, admitted to the Interstate Commerce Commission, May 7, that he made $2,700,000 profit out of a single transaction with the New Haven railroad. This is the transaction in which the New England Navigation Company, a New Haven subsidiary, sold a block of Boston and Maine stock to Billard at $125 a share and bought back the identical block a few months later at $150 a share. It is the transaction which the Interstate Commerce Commission had charged resulted in the disappearance of $2,700,000 of the New Haven railroad assets. Another transaction was disclosed in the course of the day's proceedings in which Billard sold 15,000 shares of Boston and Maine stock to another New Haven subsidiary at $154 a share, when the stock was being bought at $140 a share. Mr. Billard declined to say what this transaction netted him. Mr. Billard said he had burned all his books, papers and checks which would throw light on the dealings of the Billard Company with the New Haven railroad.

The sentences imposed upon Samuel Gompers, John Mitchell and Frank Morrison, officers of the American Federation of Labor, for violation of the injunction of the Supreme Court of the District of Columbia in the Bucks' Stove and Range proceedings, were set aside by the Supreme Court of the United States, May 11, on the ground that the alleged offences were not committed within the three years covered by the statute of limitations. This decision brings to an end seven years' litigation, which grew out of the long controversy between the Bucks' Stove and Range Company and the Federation of Labor.

Compulsory disarmament of all civilians, including deputy sheriffs, began in the Colorado strike zone, May 13, by order of President Wilson. The Colorado Peace Association, an organization of women headed by Mrs. Alma V. Lafferty, a former State legislator, is waiting for Gov. Ammons to take action on its reports against the militia's conduct in the Ludlow affair. Passage of the $1,000,000 militia bill makes possible the return to the strike zone of the State militia, and if Gov. Ammons permits the guards to go back the women plan to start recall proceedings.

Seven dead and three severely injured was the toll of the explosion of one of the boilers of the Old Dominion liner, Jefferson, May 11, five miles inside of Cape Henry, Va. The dead were all colored firemen and coal passers.

Flood from the continuous rain, May 11-12, caused a suspension of operations at the Ford Motor plant at Detroit, Mich. This means a loss in wages of $200,000. The water inundated the basement of the great power house, putting the 5,000 horse-power engine out of business and causing damage of $75,000.

The second trial of Police Lieutenant Becker for complicity in the murder of the gambler, Rosenthal, in New York, brought out damaging statements, May 12, two witnesses, Shapiro and Rose being allowed to introduce testimony that was excluded from the former trial.

FARM AND GARDEN.—Senator Johnson, of Maine, has proposed an amendment to the agricultural appropriation bill increasing the appropriation for the enforcement of the plant quarantine act from $50,000 to $150,000.

A quarantine against Maine potatoes, effective August 1, has been declared by the United States Department of Agriculture on account of the prevalence of powdery scab in that State, particularly in Aroostook County. After August 1 no common or Irish potatoes can be moved out of Maine except under regulations which the Department of Agriculture will publish shortly. Powdery scab has been prevalent for some time among Maine potatoes, but hitherto the State authorities have been responsible for preventing the spread of the disease. With the enforcement of the new quarantine, the federal government will take charge of the work. There will be, it is said, no radical change in the existing restrictions.

A large gathering of Texas florists met at Waco, May 4-5, and formed a State organization with the following officers: President, Robert C. Kerr, Houston; vice-president, W. J. Baker, Fort Worth; secretary-treasurer, George M. Cosh, Houston; press representative, L. J. Tackett, Fort Worth; educational director, E. J. Kyle, College Station.

The dates of the dog show held at the New York State Fair at Syracuse are September 3, 4 and 5. It will be under A. K. C. rules.

The rural credits bill, prepared by a sub-committee of the Banking and Currency committees of the two houses, was introduced in the Senate and House at Washington, May 12, by Senator Hollis and Representative Bulkley. It is understood that the President and the sub-committee are not agreed on the bill as presented. President Wilson is said to have desired a bill for a rural credits system operated by private capital under government supervision. The sub-committee desired a bill providing for government rural credit banks and informed the President that a "bankers' bill" could not get through Congress. A system of banks operated under a control similar to that which the government exercises over existing national banks was the most feasible plan found by the committee after hearings. The Federal Reserve Board is to have final jurisdiction over the proposed rural credit banks. The Hollis-Bulkley bill proposes the creation of farm loan associations, with a capital of not less than $10,000 each, which shall be authorized to make loans to farmers for productive purposes, not to exceed $4,000 to any borrower. All loans are to be on the amortization plan, for not less than five nor more than 30 years. The land mortgage associations may sell their mortgages, indorsed, to an amount not exceeding 20 times the capital and surplus of the respective associations, to the federal land banks created by the act. It is provided that 12 federal land banks (their locations to be determined by the Federal Reserve Board) shall be organized, each with a capital of not less than $500,000. They may issue bonds on approval of the Rerserve Board, based on the security of the mortgages which they have purchased. The rate of interest will be fixed by the Federal Reserve Board. The land bank and the local farm associations will each get one-half of 1 per cent. per annum on the total outstanding unpaid amount of the mortgages they have placed.

MEXICO.—The seizure of Lobos Island is made ground for complaint by Huerta though American officials explain that the island was not seized, but merely occupied to maintain the lighthouse for the benefit of navigation. It was stated, May 12, that Huerta has in his possession a document signed by the commander of the United States destroyer Fanning certifying that Lobos Island was seized by force. Gen. Huerta has notified the mediators that he considers the seizure of the island a violation of the armistice and it will probably be vacated. Tampico was captured, May 13, and is now occupied by the Constitutionalists. The Federal forces evacuated the city and retreated over the National Railroad of Mexico toward San Louis Potosi, where Huerta probably will make his next stand against the successful advance of the troops of Carranza and Villa toward Mexico City. The fall of Tampico was the outcome of one of the most decisive battles of the Mexican revolution. It gives the Constitutionalists an important port on the Gulf of Mexico, the first they have had; puts into their hands the most valuable oil field in all Mexico, and it opens up a source of revenue through the customs collections. It also gives them an important new base for their preparations for the march on to Mexico City. Military experts say that it will be at least six weeks before Carranza and his followers could hope to penetrate from Tampico on to the capitol of the republic. * * * Huerta has called attention to the fact that five of the snipers at Vera Cruz who have been arrested and are about to be put on trial for their lives are not Mexican subjects, but citizens of South American countries. Unfortunately three of these men are Chileans and one of them may be a Brazilian. These are two of the countries now engaged in promoting the mediation programme. The fifth sniper is a Peruvian. All five were taken from a Norwegian vessel in the harbor.

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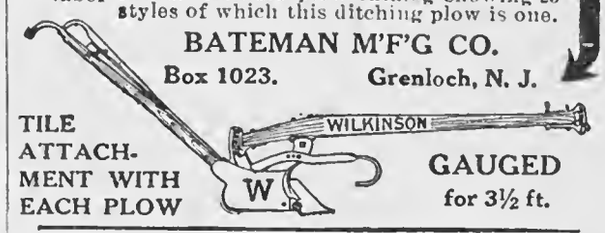

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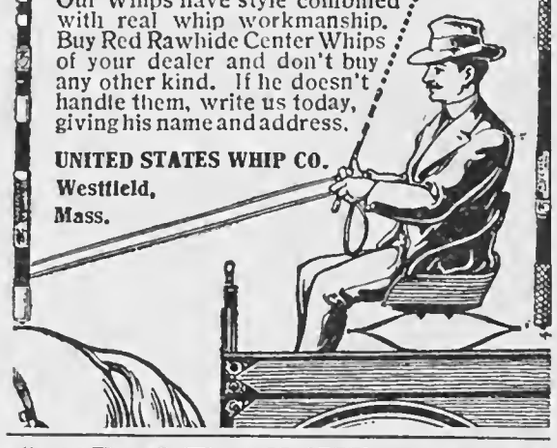

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Bee Moth; Squash Borer.

1. Do you know any remedy for worms in beehives? 2. What will prevent squash borers? J. M. F.
Ellisville, Ark.

1. The worms found in the honeycomb of unused hives or weak colonies are hatched from eggs laid by the bee moth and are best prevented from making their appearance by keeping only strong colonies of Italian or hybrid bees in the apiary and using care to store unused comb where the moths cannot get at it. A good colony of Italians or even of hybrids will protect itself from the ravages of the bee moth, while ordinary black bees, especially if the colony is weak, seem unable to keep the moths out of their hives. Strong colonies in good hives will protect themselves, and comb outside of hives may be fumigated with sulphur fumes to kill any eggs or worms present, and then stored in some moth tight place to protect them.

2. I know of no remedy for the squash borers other than that usually recommended of slitting the wilted vine lengthwise until the borer is found and then removing it and covering several joints of the vine with earth to enlarge the root system of the plant and aid in its support. This borer hatches from eggs laid upon the stem of the plant by moths and then burrows into the vine. These moths fly at twilight, and until the vines become too large, they may be protected by wire or mosquito netting stretched over the ordinary cucumber boxes usually set about such plants. M. B. D.

Handling a Muck Soil.

How should the land described below be treated and what crops are best adapted for cultivation? The land in question contains between two and three acres and consists of a muck bed about eight or 10 inches deep along the outside and a number of feet deep in the center. The top layer, which is about eight inches in thickness, is rich in humus, and the soil underneath is black and mellow. The bottom soil is clay. The land can easily be drained. This bed of muck is located in a deep gully surrounded by hills, and is well protected by woods on three sides. Into it has been washed the soil, etc., from these hills since time immemorial. J. S. R.
Buffalo, N. Y.

Every piece of land requires special study and attention in order to handle it properly. Generally speaking, however, muck lands are sour, and they require lime. They contain considerable quantities of nitrogen, but it is rarely available for plant food, until the ground has been well drained, limed and cultivated. Muck soils are also deficient in phosphoric acid, and very much so in potash. The first thing to do with such a soil is to drain it, so as to take out the surplus water, and reduce the water level. Then plow or disk the ground, and put on at least one ton to the acre of air-slaked lime. Harrow it thoroughly in. We would then, to start with, plant corn and use in the hill about 400 pounds to the acre of a mixture of three parts fine ground bone, to one of muriate of potash. Give good culture, and sow rye and clover at the last cultivation. The following year this soil will be ready for practically any farm crop, if the drainage has been well done. Such soils are generally very fine hay land, and also excellent for onions, cabbage, celery, and similar truck crops.

Watermelon and Corn Questions.

1. What are the best methods, other than plugging, of telling when watermelons are fit for use? 2. Is there any way of successfully starting garden corn in pots or sods, or any way to get it early? O. B.
Villa Nova, Ontario.

1. It is quite easy to make a mistake in picking watermelons. Even an expert will sometimes get fooled. Some press on the melon with the palm of the hand, and if they hear a cracking sound inside the melon they feel sure it is ripe. This is not the best way, however, for the pressure cracks the core, or heart, and the melon does not open as nicely as before it was cracked. Personally I prefer the thumping method, and when melons ripen normally it is fairly reliable. A ripe melon will have a thick, heavy, dense or solid sound when thumped, while a green melon will sound hollow and empty. The degree of ripeness in the melon governs the degree of hollowness in the sound. Melons on dead vines sometimes have a hollow sound when thumped even when red inside. Such melons are known as "clinkers," and are very poor eating.

2. Garden corn can be started under glass in paper pots and transplanted to the field in much the same manner as tomatoes. Such a method would be all right for a garden, but because of early Southern shipments it would not pay us here to go into it in a commercial way. TRUCKER, JR.

Water Cress on the Farm.

One of the most delicious vegetables in the world is water cress, and yet with few exceptions the farmers are doing without this delicacy when they could have it freely and for nothing more than the gathering. England is full of water cress. It grows wild in the running brooklets, in the hedge ditches and along small river banks; it is on every table in season and on sale in every city, town and village, but here in our own country it is found only in the markets of the great cities. Yet we have unexampled facilities in the millions of free running springs that in many States are found in such profusion. All that is demanded for the raising of cress is a running spring of pure water. Five cents will buy a packet of seed from any seedsman. Sow seeds in the mud at the edge of the water. They germinate easily and the plants will soon fill the bed of the stream and continue to spread down its channel. If growing near the source of the spring where the waters are warm, it will be ready for use in February and March, while the garden is still bare. It is surely not exaggerating to say that it is the equal of lettuce or of celery. No vegetable is more wholesome. I have seen a few who did not fancy it at first taste, but the same may be said of celery. Do not fail to stock your spring branch with cress and enjoy at no cost but the gathering a delicious vegetable that city people pay high prices for. Here is a chance for some enterprising boy or girl to make some money. Be the first to sell water cress in your town. Give away samples of it and thus develop a line of customers. It will be all easy pleasant work, for the cutting of the cress by snipping off the stems with shears is simple work even for a child. But if you undertake to start a bed it must be protected from the poultry and live stock, for they like it so well that they would quickly eat it all up. Enclose a few yards below the spring. If the stream bed be very narrow, widen it so the water will spread over a level space at a depth of from one to three or four inches. Cress is at its best when pure spring water runs through it.
L. R. JOHNSON.
Cape Girardeau Co., Mo.

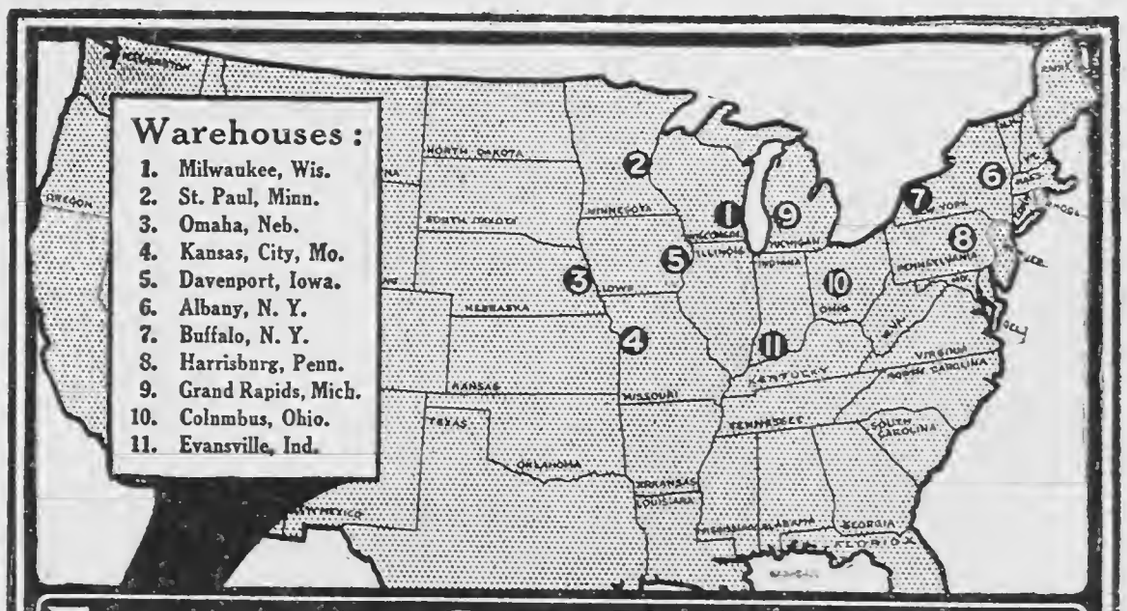
WANT TO KNOW.

Protecting The Bank of a Stream.

There is a stream running through my farm, about 40 feet in width. At one point the stream has formed an island, in the center, and in making its way around the island has caved in the bank on one side. At this point the stream is steadily eating away the bank. Can any of your readers offer a method by which I can protect this bank from further encroachment? Can you tell me the principle of the Eads jetties in use on the Mississippi, and whether the principle would be applicable to the protection of the banks of a small stream?
JOHN ALAN HAMILTON.
Erie Co., N. Y.

TRAINING A DOG.—How should I train a collie dog, and also how keep him from taking any food from strangers?
Alwent, Pa. J. M. L.

GRIMM ALFALFA.—I note on page 619 comments by F. E. Robertson on Alfalfa growing in Jefferson Co., N. Y., and illustration of the Grimm and Turkestan varieties. In Putnam Co., N. Y., last Summer I seeded two plots, identical as to previous treatment and location, one with Colorado grown seed and the other with Grimm. Today the Grimm is at least a week earlier than the other, was not injured by heaving ground, and the crowns contain more leaf shoots. Both stands would be considered good.
New York. H. W. HEALY.



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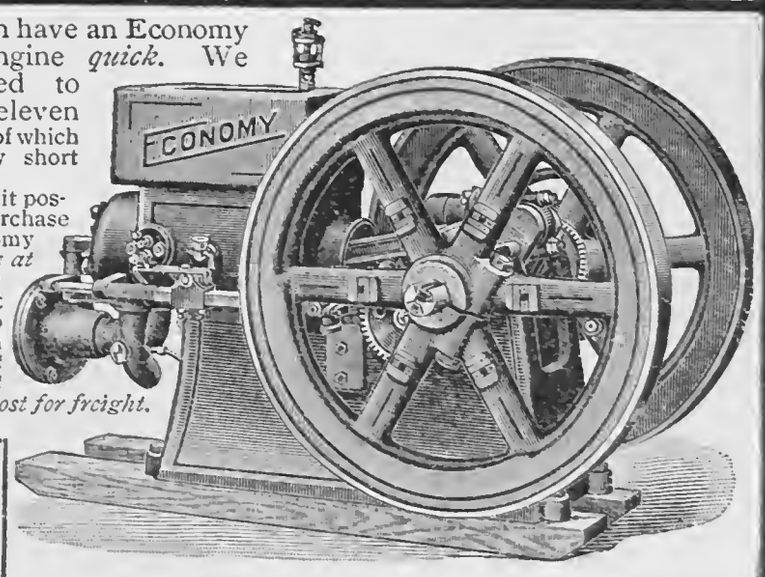

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Hope Farm Notes

There never was anything quite like the way the fruit bloom burst out upon us this year. I have said that season after season, yet it seems to be true. Nature does her work in the same old way; yet, perhaps, as we go along a little further this evidence of renewed youth seems to appeal to us more and more. The bloom was late this year, and we had begun to think that perhaps after all the hard Winter had weakened the buds so that only a few of the stronger ones could struggle out. Then, after a few dull, rainy days, there came one of those sharp May winds which drive the clouds and the fog off the hills, and the sun burst out bright and warm. Then it seemed that a miracle had been wrought over night. Standing on our hill we looked off over the rolling country upon a glorious picture. The grass and rye had painted the fields a deep green. There was a shimmer of lighter green on the woods. Here and there along the fence rows and in the corners the cherries were great masses of white. The plum orchard was like a white cloud, and great masses of pink had gathered where, a few days before we saw the dead brown of the peach orchards. The wind was blowing and the sun flooding all the hills with light, and the apple trees were showing the first light tinge of pink. It was a glorious picture. The man who could look off through that balmy sunshine and see the picture which the great artist had painted without being moved would be a hard citizen. I should be a little afraid of him. And probably no one can realize what it means so fully as he who has developed an orchard under hard conditions—seen the little trees grow and slowly develop until they become strong, and finally burst out into bloom to begin the real business of life. Men may gain millions or show their power in all sorts of contests with man or nature, but he who takes an abandoned field and through his own care and toil turns it into a fruitful orchard feels the supreme joy of life when Spring finally comes dancing up the valley, and puts the first bloom on his trees.

The Crop.—It looks now like the largest peach crop we ever had. Carman and Belle of Georgia are loaded full. Elberta has a fair bloom, but we have not been planting Elberta heavily. Everyone else seemed to be doing so—we think it a good plan to keep away from the crowd. At the middle of May things look right for a heavy peach yield. This condition is general through our section of Northern New Jersey. South of us there seems more damage by winter-killing, while farther north this damage is severe. I think what we may call the total crop of the Eastern States will be light, and this should be a good peach year with us. As for apples, this is supposed to be our short year, but to our surprise the bloom is heavy. The younger trees on the hill are coming on with their first fair-sized crop, but the great surprise is in an old orchard of high-headed trees near the barns. Ever since we have been here these trees have carried a great crop every other year, while in the alternate years they gave barely a peck each. Last year, for example, some of them gave 10 or 12 barrels. Thus to follow history these trees would rest this year and give us only a few big specimens. To my astonishment I find them full of bloom—loaded for as large a crop as we had last season. These trees are Nyack Pippin, Porter and Pound Sweet, and for years and years this habit of alternate bearing has been fixed. Yet here they are ready for another full crop. I can give no explanation except that two years ago we followed our plan of penning some lively shotes around these trees. The pigs were kept in portable yards and in little houses built on runners. They were kept under a tree until the sod was well torn up, and then moved on to the next tree, and so on up and down the row. They got about half their living in this way, and gave these trees a remarkable cultivation. I can think of no other reason for this year's display of buds. Looks as if they had been grafted into new life with a hog's snout!

The strawberries are in great shape—the bloom coming on thick and strong. As you know, we have had nothing but Marshall up to this year. Now we are trying three other sorts. Most of our beds are four and five years old, yet they are still profitable. I think the variety and the handling have something to do with this but it pays us, when a bed is once well started in hills, to let it stay four years at least. The five-year-old bed will be plowed after picking and put into a late crop. This may be celery or late sweet corn or cabbage. With the last named crops it will be possible to set potted strawberry plants between the rows of corn or cabbage, give all hand culture and have the soil reset in strawberries for another year. The chances now are that we shall have more berries than ever before—in fact Hope Farm never started the season more favorably.

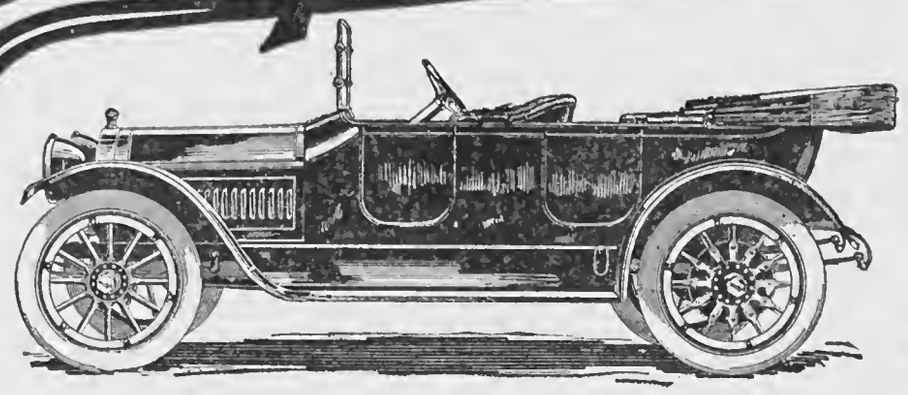
Cover Crops.—This cool wet Spring has greatly bothered the potato planters, but has been ideal for the rye and vetch. Most of the Crimson clover was killed in February, but the vetch is fair, while the rye is fine. At this season it is easy to see several special advantages of a cover crop. We have enough rye growing in our young orchards to give us at least 350 bushels of grain and 12 tons of straw if we were to let it go to maturity. That means over $500 worth of material from seed roughly covered in the corn crop last Fall. In a wet season, as this promises to be, this crop could actually be cut and taken away—the stubble plowed under in late June and fertilizer and lime used. The trees would not suffer greatly. But good orcharding is not alone a matter of keeping trees from suffering. You must keep them up to the top notch of happiness. That means in addition to spraying and pruning keeping the soil around their feet porous, clean, sweet, rich and full of humus. So we shall just cut enough of this rye to serve as bedding, and plow the rest right under as soon as it is large enough. Under it goes. You may think this is like plowing under $500 in good money—and it is. This plan, however, is not like that of the man who hid his lord's money in the earth, but it is like gaining 10 talents for the one that is given you. This cover crop packed into the soil and well limed gives opportunity to the tree, and a strong apple tree is one of the things which never will abuse an opportunity.

Wet Soils.—Another thing about cover crops, and particularly rye, is their ability to dry out a wet soil. We have several cases of it this year. Several fields at the lower farm below the spring are naturally wet. One of them, through some misplay, was not seeded in rye late last Fall. The others were. The difference in condition this Spring is remarkable. The bare field is knee deep with mud in some places and will not be workable until June. The fields where rye is growing are comparatively dry and can be plowed for fodder corn by May 15. The rank-growing rye has sucked the moisture out of this soil so rapidly that it has dried. The scientists who have measured and estimated this matter conclude that crops of grain remove from the soil while growing about 500 tons of water for each ton of dry matter in the crop. Thus you can see what a crop of this rank-growing rye does to a wet soil in Spring! There can be no question about this fact and in it lies as much of a danger on dry soils as of an advantage on wet soils. This very power of the rye plant to suck out the soil moisture may injure the soil's productive power if carried too far. Some people get a little greedy and want grain and straw and trees too. So they let oats or rye or wheat mature in a young orchard. The season turns dry and the grain crop takes about all the available moisture which the soil contains. The trees suffer and so do other crops which follow the grain.

Thus the nicest sort of judgment is required to know when to plow the cover crop under and what to do next. In a wet season like this one the crop may safely go past the bloom. In a dry season I would put it under before that. In any case, just as soon as it is plowed under, pack or crush the soil down so as to compact the cover crop solidly under ground and prevent the air from entering to dry it out. I will try to tell how we do it when we come to the job—not because we claim to know how, but to make some basis for reasoning and thinking it out.

H. W. C.

Imperial



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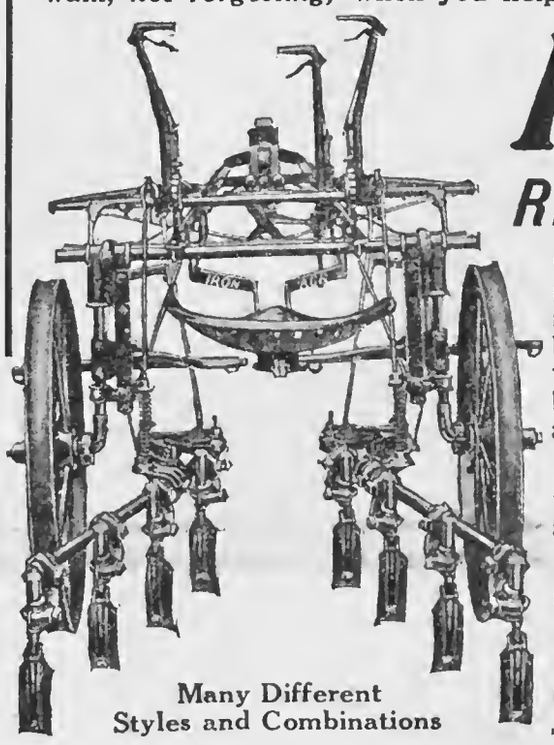

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Ruralisms

Failing Boxwood.

In our yard we have some boxwood which is perhaps about a hundred years old. It appears to be dying. Will you give me some information in regard to it? We would like to preserve it. Could it be transplanted? G. E. M.

Sheepshead Bay, N. Y.

No particulars are given as to the condition here involved, or the situation of the bush. Box prefers a rather moist but well-drained soil (that is, one free from standing water) and partial shade. While it is hardy as far north as Massachusetts, unfavorable weather conditions may cause killing back in this latitude; for example, late growth, that does not become fully ripened, will suffer during a severe Winter. Troubles from insects and disease are rare, but in a hot dry location red spider is sometimes very troublesome and destructive; for this spraying with whale oil soap solution is advised, early in the Spring before growth starts, or in the Fall. Red spider is also controlled by vigorous syringing of the foliage with cold water during Summer. Your shrub may have suffered from red spider, it may be Winter-killed, or, for a third cause of injury, it may be starved. The ground may be exhausted, and further depleted by adjacent trees. We should mulch with well-rotted short manure, scratching it slightly into the surface, trim off dead shoots, and keep a watch for red spider. It is not difficult to transplant box, but an old specimen needs more care than a young one.

Advice to a Nut Planter.

1. In planting a nut orchard how far apart should the trees be set, and what varieties are best to plant in western Pennsylvania or northern Ohio? In planting trees for timber how far apart should the trees be set? In planting different varieties for timber should each variety be planted by itself or is it best to plant promiscuously? J. A. C.

1. J. A. C. does not say what nut trees he wishes to plant, but I take it that he refers to the larger kinds, such as the Persian (English) walnut, pecan and Shagbark hickory. A California authority on the Persian walnut says: "With vigorous growing varieties on good soil 60 feet apart is none too much and less than 50 feet should not be considered in any case." Under such conditions interplanting with some other crop would be desirable. Peaches would be a good example. In the South they set pecan trees from 50 to 75 feet apart, according to circumstances. As no one knows how well pecan trees will grow in western Pennsylvania or northern Ohio it is impossible to say just how far apart they should be set. For the Shagbark hickory 50 or 60 feet would not be too far, but as nobody would be likely to plant an orchard of seedling shagbarks, and it would be difficult to get enough grafted or budded shagbarks of any variety, not to speak of tested varieties, to set an orchard, this question does not at present loom important. For a chestnut orchard the trees should be considerably nearer, depending on the type of chestnut. The Japanese and Chinese, and probably the new blight-immune hybrids from which we hope for so much, are small trees and could be set at 30 feet perhaps. The native American and European chestnuts are of larger build.

As to varieties these are not determined. It would be well to test out all the varieties that the nut specialists carry. The Rush, Nebo, Hall, Holden, Pomeroy and some of the French varieties grown on the Pacific Coast are among the walnuts that may be tried. For the pecan the Indiana varieties are the most promising, such as the Busseron, Indiana, Green River and others. Of the southern varieties the Stuart seems best adapted to growing north of its normal range. As for the chestnut, until we can get varieties immune to the blight, no one ought to think of planting this nut in any but an experimental and very limited way, certainly not where the native chestnut and the blight are both found.

Six or eight feet apart for nut trees for timber is recommended as about the right distance. But if J. A. C. is seriously thinking of setting any number of nut trees he should by no means depend upon the scanty advice that anyone can give to a letter of inquiry, but should study diligently the various publications on the subject, particularly the bulletins on nut culture issued by the U. S. government and the experiment stations of nut-growing States, such as California, Texas, North Carolina and others. The Northern Nut Growers' Association furnishes free on application a list of the important nut publications in the U. S.

WILLIAM CHAMPION DEMING, M. D.

Mice Gnawing Peach Trees.

I am having trouble with mice girdling my five-year-old peach trees. Is there anything that can be done? Will a coating of grafting applied to the girdled trees do any good, where they are completely girdled? They are injured under the ground. I wormed them last October, and it has been done since then, but must have been done before Winter came, as the trees have made an effort to make new bark on the bare wood. Did you ever hear of putting castor beans at butt of trees to keep away mice? I have used them in pea rows to keep out moles. I paint the trees at every worming (twice a year) with a thick lime sulphur paste 'way down in the ground, and up above and that has kept away the mice, but this time they have eaten lime-sulphur, bark and all. Is there perhaps any carbolated disinfectant powder that I could sprinkle in the hole that would keep them away from the trees? E. L. L.

Vineland, N. J.

Bridge-grafting—putting one end of scion in the wood below the wound and the other above, may save these trees. We have had no experience with the castor bean treatment. The smear of lime-sulphur usually repels vermin. Try a small quantity of Paris green or arsenate of lead in the lime-sulphur. Mechanical protectors of wire cloth or strips of veneering are surest. Tobacco dust or stems have been suggested. We are rarely troubled when a pile of coal ashes is left around the base of the tree and the snow tramped down. Charcoal or the ashes will cause the snow to melt quicker.

WAYNE COUNTY, N.Y., FRUIT NOTES.

A brief inspection trip through the orchards of Sodus and vicinity towns was recently made by Professor Herrick, entomologist of the State College of Agriculture at Ithaca. The trip was made mainly to enable a better search for the leaf-roller. Sodus and Rose orchards were inspected, but no insects of this variety were found. The pear tree psylla was found to some extent. In some orchards it was found that the under sides of the limbs were not being reached with the spray. The spray was usually found in solution of 25 gallons of lime and sulphur to 200 gallons of water. Mr. Herrick advised the additon of 50 pounds of lime and more thorough work under the limbs. No eggs of the pink aphis were found. The professor has recently found the moth that is parent to the green fruit worm, which eats holes in apples and pears. He is quite certain that fruit growers will be able to control this insect through spraying with arsenate of lead just before the bloom.

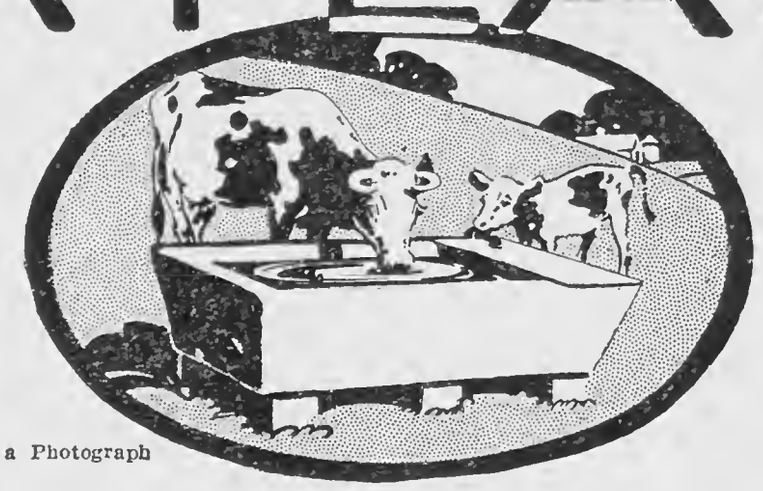
Many eggs of the tent caterpillar were found on peach trees and it looks as though an outbreak of this pest might occur unless the matter is taken in time. Spraying with a light solution of arsenate of lead will prevent the damage that might occur from neglecting to spray, but this should be done early in order to avoid damage to the foliage. Mr. Herrick has promised to come to Sodus again in a few weeks, when arrangements will be made for several fruit growers to accompany him to various orchards for the purpose of studying insects. Northern Wayne growers desiring to engage in the visit to the orchards should notify B. J. Case of Sodus.

Prof. D. P. Witter of the State Bureau of Farmers' Institutes, acting jointly with the State Department of Agriculture and the Northern Central Railway, will be in Northern Wayne one day each month this Summer. His services are free to fruit growers and farmers who may desire advice and inspection of their orchards. As this county is without a farm bureau the special services of trained experts are highly appreciated by the growers.

It begins to look as though the lake section of Wayne County is not to be counted entirely out on peach production this year. In the district immediately facing the lake there are reports coming in of some prospects for a crop after all. The Sodus Fruit Farm, which has a large acreage devoted to peaches, will make a fairly good showing. W. T. Sergeant, also in the lake district, reports prospects as fair. The inland growers, except here and there in a sheltered position, will have one of the smallest yields in years. Arrangements have been completed at East Williamson for the construction of a pickle factory. An acreage sufficient to maintain a large factory was easily secured. Over 100 acres were pledged in one day. A. H. P.

Sodus, N. Y.

ATLAS



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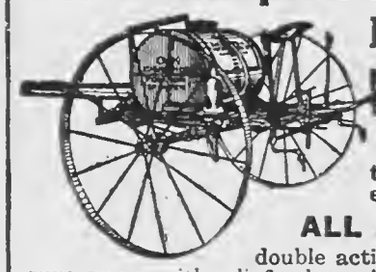

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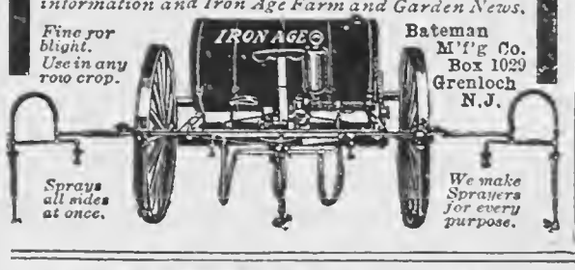

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Established 1850

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*

Now gentlemen, let's organize a compaign to get people to stop calling cattle, sheep, swine or poultry thoroughbreds, and to stop the absurd spelling of chix and dnx. The word "Thoroughbred" refers to a distinct breed of horses—racing animals. It would be just as sensible to call a cow a Berkshire or a Wyandotte as to call her a thoroughbred. If she is eligible to registry she is *purebred*, which is the right name for her. As for that fool spelling, there is no excuse for it whatever.

*

COMMISSIONER Calvin J. Huson of New York has issued a proclamation against the tent caterpiller:

Now, therefore, by virtue of the authority conferred upon me by sections 304 and 305 of the Agricultural Law, I do hereby declare that tent caterpillars are a nuisance and a menace to the horticultural interests of the State and that all owners or persons in possession of any land or premises on which there are trees or plants infested by tent caterpillars are hereby required and commanded to destroy the nests or webs, including caterpillars, on their premises on or before June 1, 1914.

No question about the nuisance and menace part of it. In our part of New Jersey the wild cherry trees are alive with this pest, with tents at nearly every crotch. On Long Island the insect may be found everywhere. There will be fearful damage to trees and fruit if these insects are not destroyed. Every wild cherry tree should be cut out and burned as thoroughly as poison ivy. Talk about the tented enemy—these caterpillers are worse than any Mexicans on either side of the quarrel.

*

THE new tariff has now been in operation for six months, and the import and export figures are available. There should be at least one full crop year under this tariff before we may fairly draw definite conclusions. Thus far the result has been an increase in imports of manufactured goods, a decrease in imports of articles which go into American goods and a decrease in exports of American manufacturers. This indicates heavier imports of manufactured goods for the future and to that extent increased competition for American manufacturers. As to the effect of these imports upon retail prices for such goods it is too early yet to give any exact figures. Broadly speaking there has been little change. We doubt if retail prices fall, though the goods will probably be of a little higher quality. One economic fallacy has been exploded. We were told that the remedy for the high cost of living lay in wiping off the tariff on food products. The argument was that if meat, for example, were admitted free, there would be such heavy imports that prices must fall. During the six months since the new tariff went into effect 83,000,000 pounds of beef have been imported. This is about 12 ounces for each unit of our population, or two ounces per month. We must remember too that Canada rushed her surplus stock over the line at once. We doubt if even this two ounces of meat will be equalled in the future since all over the world the meat supply is short. THE R. N.-Y. predicted just this outcome, for the prices of food and particularly of meat are not determined by any tariff, but by the conditions which are controlled by the monopolies which buy, handle and carry our food. Make it possible for the owners of medium-sized farms in the Eastern States to raise and sell meat animals at a fair profit and the meat question will be provided for. To make this possible there must be a change in the buying and distribution of meat. In former years when local butchers were also slaughterers there was some profit in raising beef on these farms, because there was some competition among local buyers. There are two ways of helping this situation. One is through coöperative associations for slaughtering and selling local grown stock. The other is through Federal slaughter houses where stock can be slaughtered and sold under government supervision. It will be one of these things or enforced vegetarianism for the next generation.

*

"ABSOLUTELY FALSE."

That is what Tom Barron cables in reply to the suggestion that his Wyandottes at the egg-laying contest are hybrid or cross-bred birds. Thus far there is no evidence to prove that these laying wonders are mongrels except the statement that they would be scaled very low at a poultry show as "standard" Wyandottes. The fanciers will have to do better than that if they expect practical poultry men to take them seriously. We are simply coming to the point which we predicted when these egg-laying contests started. Now all can understand why the fancy breeders and the poultry papers sneered at these contests and refused to report them. For these contests put up fact against fancy, success against shape, eggs against extravagant claims, figures against feathers. The old "black tongue and switch" of the Jersey cow had to get out before the scales and Babcock tester. Cows did not give milk and butter with their tongue or tail, and practical men forced the breeders to give them a utility type of dairy cow. The same thing is working out for the hen through these egg-laying contests. It has come to a head through these Tom Barron birds. They may not score 75 points by the "standard," but they make the "ideal" birds look like English sparrows on the nest—which is a better tester for performance than the exhibition coop. We invite the fanciers to come forward with the evidence to show that these hens in question are hybrids or cross-breds, or better yet, to come out with 10 "standard" hens that can equal their record. Come gentlemen—it's up to you!

*

THE "BUMPER" CROP OF WHEAT.

THE reports generally agree that the wheat crop promises at this time to be a "bumper" or record breaker. A dozen things may interfere to cloud this prospect, but today the prospect is good for the largest crop of wheat this country has ever known. It is amusing to see how the great daily papers rush into double-leaded italics to tell the world about this. The farmer, tramping his dusty way behind harrow and drill last Fall did not look like a hero to these city financiers. Last Winter, as he looked with anxious eye across his lonely fields he received little sympathy. He gets little of either credit or sympathy now, though the great financial interests intend to mount the product of his labor in order to reach their fingers into prosperity and good times. The big wheat crop will mean rich tolls for the railroads, good business for the banks in providing money to move the crops, good trade for manufacturers of everything that touches the wheat, and hope for the bread eaters, who think that a surplus of wheat will mean cheaper flour and thus a lower cost of living. They all see prosperity in sight as the result of this great wheat crop, but none of them seems to include the farmer, who has made all this great prosperity possible in the coming good times. On their own records the railroads, the bankers, the business men and the manufacturers have failed to bring "prosperity." They all had to wait until the plain man behind the team on the lonely farm got his chance from Nature and thus made the big crop possible. All, every one of them, is on the run to get a share of what the farmer produces. They will take and take until out of every bushel of wheat which the farmer produces they will leave him about 12 quarts with which to pay his expenses and get ready for another crop. The remaining 20 quarts will go to the handlers who pass on the wheat until it is handed to the consumer as flour or bread. Now, since the last "bumper crop" in this country our people have learned a few things, and now we can put a few of them to the test. We have claimed that in case of a bumper crop the railroads, the handlers and the dealers will be paid just as much per bushel as when the crop was short. We have also claimed that in case of such a crop the farmer, unlike these handlers, will receive a smaller price per bushel, so that in the total the part of the money for this crop remaining on the farms will be no more or even less than when there were fewer bushels at a higher figure. Another claim is that with this bumper crop the price of bread and of flour is not materially reduced to the consumer, while the price of feed does not drop in proportion to the drop in the price of grain! In other words our claim has been that under our present system of distribution of the crop and the consumer's dollar a big crop means a large gain to those who never produced it, and no particular advantage to the farmers who did all the work and who would stand all the loss in case of failure. Now this coming big wheat crop will give us all a chance to test these claims. We welcome the opportunity of showing what becomes of this big crop.

*

MR. Weaver's article on mushroom growing is about the most sensible statement of the subject that we have seen. This mushroom proposition is a wonderful magnet for the city man's money. It seems so easy to push mushroom spawn into a pile of compost and then wait until it grows into dollars! Mr. Weaver had several crops that seemed just like finding money, but when he cut out mushrooms he was about $2,500 behind. When this happens to an experienced grower what chance will an amateur have with mushrooms? Not quite as much as the young mouse who went out to fight the kitten and found the old cat.

*

Is it true that a law has been passed, going into effect July 1, 1914, holding a farmer responsible for all injuries to his hired man, whether it was through farmer's neglect or not? For instance, if the hired man working in woods, cut his foot, and crippled it, would his employer be held responsible? Could a contract that would be legal be made releasing the farmer from all obligations? B. W. P.

We have explained this several times but the New York law seems to have been confused with that of New Jersey and Connecticut. In those States farmers are liable for injuries to hired men. In New York the law states directly that the liability "*shall not include farm laborers or domestic servants.*" Thus farmers are exempt and cannot be held legally responsible for such injuries.

*

THERE will soon be great stories about mummy or cave wheat offered at high figures. Usually the story is that a few kernels of grain were found in a mummy. When planted these grains made a wonderful growth—developing new qualities during their 1,000 year's sleep. They are now offered for sale at say 10 cents a kernel! In truth the actual life of wheat is short. There are no authentic records that mummy wheat has ever been known to sprout. It is a good story to sprout in mummified brains, but that is all. Prof. C. F. Wheeler has given us some records of wheat testing:

In 1844 wheat three years old gave 163 germinable grains out of 300 sown. The same wheat tested in 1849, after eight years; none germinated. The same wheat tested in 1850, after nine years; none germinated. Another sample of wheat tested in 1844, three years old, gave 139 germinable grains out of 300. Another sample tested when it was three years old gave 140 germinable grains out of 300.

If this season, you hear the old story of "mummy wheat" set it down as a fake at once. We think two years is the limit for safely keeping any wheat for seed.

BREVITIES.

EVERY day should be "rooster day." Make him into pie!

No—do not trust to the lime-sulphur spray for killing tent caterpillars.

SOD culture for the pigs. Give them a chance at an old sod and see their roots grow.

CURE the oats and pea hay about as you would clover—in the swath and cock. It does better cured in the shade.

THE water-glass hen is as important just now as any prize winner. Get the infertile eggs into water glass now!

YOU might not think it, but the business of packing shrimps in this country amounts to $1,000,000 per year. Most of this work is done along the Gulf of Mexico.

"FATHER finds his tall step-ladder more useful since he fixed the legs on eye-bolts at the side of the top, so the legs would swing either forward or back," says E.

THE latest proposition is a bird census for the Department of Agriculture. The object is to find out how many pairs of birds nest within a given area. Voluntary bird observers are wanted by the department.

THE highest ambition of a farmer should be to make his farm "a garden spot." The way to start this is to start a fine fruit and vegetable garden. That saves health and meat bills and also shows what you can do with soil when you try.

THE South Dakota Experiment Station claims to have a variety of sugar beet which is one-quarter sugar. This variety was produced by testing hundreds of beets and discarding all except the sweetest. Seed was obtained from the best and beets from this seed were in turn tested. The result is a variety actually carrying 25 per cent. of sugar.

ORGANIZING THE LAND BANK.

Representatives of the Savings and Loan Associations of the State of New York met at the Banking Department in Albany on May 8, to outline plans for the organization of the Land Bank. An organization committee was appointed consisting of three delegates from each Judicial District of the State, the president of the State League, the president of the Metropolitan League, the president of the New York State Agricultural Society, and a representative of the State Banking Department. The Superintendent of Banks is to prepare a suitable provision for incorporation in the by-laws of associations that propose to become members of the Land Bank. The superintendent will also notify each association in the State that it has the privilege of becoming a member of the Land Bank and of sharing in its provisions for the benefit of the members of the association.

Governor Glynn paid the members the signal distinction of attending the conference in person. His address was one of the best contributions to farm credit literature that has yet been heard on the subject. Students who were invited by the Governor during the regular session of the Legislature to instruct him on the principles of coöperative credits began to realize how completely they had been misled by the Governor's modesty, when he began to reveal his breadth of information and add entirely new chapters to the volumes that have already been written on the subject. He had the details of the systems in Europe and of the early attempts to establish a Land Bank in ante-bellum days in America as fresh in mind as his own early days on a New York State farm, where he learned the need a system to finance the farm mortgage.

"When I came to Albany and became a bank director," he said, "I found money there ready for business men in Albany, and Buffalo and New York, but none for the farmer; and I made up my mind that if I ever got into a position where I could do it, I would change these conditions. So when I became Governor, one of the first things I did was to send for the Superintendent of Banks and tell him I wanted a Land Bank, and whatever personal or political influence I have will be used for the development of this system of land mortgage credits."

Governor Glynn's enthusiasm became infectious, and the delegates went home predicting that the organization of the bank would be effected not later than the fifteenth of next September.

LAND BANK OF THE STATE OF NEW YORK

System of Mortgage Credits Explained.

PART IV.

FEATURES OF THE PLAN.—It has already been seen that this system of mortgage credits includes two features. First, the central institution, called the Land Bank, which is to gather money from outside sources through the sale of its own bonds secured by mortgages, and furnish this money to the local associations for the use of farmers and home owners. The other feature of the system is the local organization, known as the savings and loan associations. The system was built up on the savings and loan association law because these associations are purely coöperative. They are controlled and managed by the members; and the members get all the benefits. There is no profit to go to anyone else; and the administration is honest, efficient and economical. It would, of course, be possible to organize one or more large capitalized banks in the State for the purpose of loaning money on mortgages. This plan was considered and may yet be adopted supplementary to our present plan. But the cost of managing such an institution would be considerable, and naturally the capitalists who formed it would want to make the best possible profits for themselves. They would need to keep agents, and appraisers and collectors, in the field all the time, travelling from place to place, to look after the business, and the people who secured the loans would be obliged to pay this heavy expense in one way or another. It was to avoid this expense of costly administration and extra profits that the local association plan was adopted. The officers of the local association are familiar with values in the neighborhood. They also know the individuals who wish to borrow, and so know the moral risk in the loan. They are on the ground all the time to see that the rules are complied with and the property kept in proper repair. They are also there to make collection of interest and payments when due. While the association is young and small this work is done voluntarily by the members. There is no expense; and when the association grows large and strong the expense is trifling. There is no profit to go to anyone outside of the association. The members get the benefit of low rates of interest on the loan, and if there is any profit from it, he gets it back in dividends. The Land Bank enables all the mortgage creditors of the State to mass all their mortgage credits behind the Land Bank bonds, making them by State supervision an attractive investment, and the borrowers will reap the benefit of this sound and stable security without any more responsibility than he now incurs in placing a mortgage with an individual or institution. He will get his mortgage money at the rate of the Land Bank bonds plus the actual, economical expense of operating the bank. For the first time anywhere in this country the mortgages of the small homes and farms are placed on the financial basis to which their merit entitles them, and on a plane equal to that of any other industrial security in the whole country.

COST OF LOAN.—The farmer or home owner may borrow on a mortgage for 40 years or less. The rate of interest will be determined by the rate of the Land Bank bonds, and expense of administration. The borrower will make an amortization payment of one per cent. a year on a 40-year mortgage; and if interest is about 4.3 per cent. his annual payments will be $5.25 on every hundred dollars borrowed. At the end of the 40 years there will be no mortgage left. This is based on the French table of annuities. So long as the borrower pays his annual dues, the mortgage cannot be called for payment, but the borrower has the right to pay any part or all of the mortgage at any time and close the account.

PLANNING FOR ASSOCIATION.—Where local associations now exist it will be well for neighboring farmers to become members, but before doing so it may be necessary for the city and village association to change its by-laws so that payments may be made quarterly, semi-annually or possibly in some places yearly. If the old association for any reason does not wish to change its by-laws to allow longer intervals of payment then a new association may be formed in the same territory. The monthly system of payments may not be adapted to farmers in some sections. The combination of village and farm interests will undoubtedly strengthen the local associations. Where new associations are formed it will be well to interest both village and farming classes, but where this is not practical, then the association may be formed either by residents of the city or village or by farmers exclusively.

The people needing mortgage accommodations are fortunate that Governor Glynn and the Banking Department of the State are deeply interested in the subject, and are willing and anxious to do everything possible to organize and develop the system. Full instructions and blanks will be supplied by the Banking Department, and organizers and instructors will be furnished by the State Department of Agriculture. Of course men are fortunate if they do not need a mortgage. Such citizens will not be interested for themselves. No one would suggest a mortgage for an owner who does not need the money, but for those who need it and must have it, no better system has yet been devised.

SAFE INVESTMENTS.—The Land Bank bonds will be a convenient and safe investment for wage earners, farmers or any investor, large or small. They will be written in small denominations and may be bought and sold from one person to another. A person with $20 idle may buy a Land Bank bond and it will earn interest at once. When he wants the money he can sell it, or if he has more money idle he can buy another. This opportunity to invest in safe bonds ought to absorb much of the money that now goes to get-rich-quick schemes and gold-brick ventures. J. J. D.

THE FARMER OR THE PHEASANT.

In this great Empire State the law considers a pheasant of greater importance than a farmer. The law protects the pheasant and does not protect the farmer. The pheasant can pull acres of corn and the farmer must stand by and see his crop destroyed, and he must not harm so much as a pinfeather on the pheasant.

That is the way A. B. Katkamier of Ontario Co., N. Y., puts it. He gives the following correspondence:

Macedon, N. Y., April 6, 1914.

Hon. Thomas Carmody, Attorney General, Albany, N. Y.

Dear Sir:—For two years my corn fields have been badly damaged by the pheasants pulling up the seedling corn plants. This year I desire to grow a measured acre of corn, in order to get a maximum yield. I want every corn plant to grow. Will you please tell me how I can protect the corn field from the pheasants? Two years ago the seed corn was tarred, and last year considerable shelled corn was sown over the field, but neither method seemed to have any deterring effect on the corn pulling by the pheasants.

Yours very truly,

A. B. KATKAMIER.

The Attorney General referred matter to the Commissioner of Agriculture, as coming within the jurisdiction of that officer, and his reply is as follows:

Albany, April 20, 1914.

Mr. A. B. Katkamier, Macedon, N. Y.

My Dear Sir:—The Attorney General has referred to this office (Department of Agriculture) your communication addressed to him in regard to the destruction of corn plants by the pheasants. We have a somewhat similar question up in regard to the girdling of young apple trees by rabbits.

I appreciate the fact that there must be some relief found from this situation, but I confess I hardly know how it can be worked out under the law as it now stands. These rabbits and birds are protected by law, so that it is unlawful to shoot or destroy them, and there is no question but, in many localities, they are causing much damage. I am going to take this question up with the Conservation Commission and some others, and see if some plan cannot be worked out that will relieve this situation.

Sincerely yours,

CALVIN J. HUSON, Commissioner.

It will give the Commissioner extra power to "take this question up" if we all express our opinion on the subject. Here is a chance to stick a stamp for the corn crop.

New York State News.

AFTER ROAD CONTRACTORS.—The attorney-general has instituted proceedings to recover thousands of dollars from road contractors and their bondsmen for violating their contracts in road construction. It is stated that the State highway commissioner will cooperate with the attorney-general in these proceedings. Probably the first cases will be in Rockland and Suffolk counties where graft indictments have been recently found, and Warren and Montgomery counties will be next on the list. Under the highway law all contractors are bonded for 50 per cent. of the amount of their contracts and the bond is held until the roads have been accepted by the State authorities. In several of the cases it is said that the State still holds the bonds of contractors who have built roads that have not been constructed in accordance with the contracts. In Rockland County the alleged loss to the State is put at $21,417; in Warren County $15,800; in Suffolk County $38,600 and in Montgomery County $5,846.

NEW FORESTRY BUILDING.—The program of exercises upon the opening of the new forestry building at Cornell University, May 15, was elaborate and introduced to those in attendance some of the foremost forestry experts and officials. Among the prominent names were those of W. B. Greeley, Washington, D. C.; C. R. Pettis, Albany, superintendent of forests; Charles M. Dow, director of the Letchworth park and arboretum of Jamestown, N. Y.; W. H. Vary, master of the State Grange who discussed forestry on the farm; James W. Tonmey, of the Yale Forest School, New Haven, Conn.; F. L. Moore of Watertown, N. Y.; H. S. Drinker of Pennsylvania, president of the American Forestry Association; J. S. Whipple, president of the State Forestry Ass ation; Dr. L. H. Bailey of Ithaea; Gifford Pinchot, president of the National Conservation Commission.

BOVINE TUBERCULOSIS CONFERENCE.—At a conference held at the agricultural deparmtent on May 11, the question of eliminating or restricting bovine tuberculosis was discussed. It was the opinion of those present that the bovine tuberculosis law has not resulted in the elimination of this disease to the extent that had been hoped for. A resolution was adopted asking Gov. Glynn to appoint a commission to investigate the subject and report, with recommendations for legislation, to the governor before the convening of the legislature of 1915. The governor was requested to name on the commission, with such others as he deemed advisable Commissioner Huson, Dr. V. A. Moore and Hon. Seth Low. The Wheeler-Machold bill which passed the Senate but was killed in the rules committee of the Assembly, was intended to supplant the present law and it will be recommended that the new commission make it the basis of a new measure to be introduced in the next legislature.

STATE GRANGE SCHOLARSHIPS.—The time is approaching for the examination of candidates for the State Grange scholarships. These scholarships have a value of $50 each and are awarded on competitive examination based on a general knowledge of arithmetic, geography, history and English composition. The State Grange appropriates annually $600 for the 12 scholarships. Candidates must be at least 17 years of age and members of the Grange. Examinations are to be held in each county where there is an applicant on the third Saturday in June, and under the supervision of the Pomona Grange master and a committee of two chosen by him. These scholarships have been continued for several years and with growing interest. They have served to extend Grange influence and attract interest in the activities of the Grange. In many counties there are young men who have taken this short Winter course greatly to their benefit, and who have returned to the farm with a broader view of the calling of agriculture and a renewed interest in the farm.

NEW YORK APPLE GRADING LAW.—On July 1 the new apple grading law will become operative. The law provides for four classes of fruit, or rather grades of fruit. First, the New York standard fancy grade. Second, the Standard "A" grade. Third, the Standard "B" grade. Fourth, Unclassified, comprising apples not conforming to the specifications required of the preceding grades, or if conforming are not branded in accordance therewith. All closed apple packages shall bear the name of the packer or the person by whose authority the apples were packed, the correct name of the variety, the grade of the apples contained and the minimum size of the fruit. Violations of the law are punishable by a fine, for the first offense, and not more than $25 and not less than $10; for the second offense by a fine of not more than $50 and not less than $25 and for the third and each subsequent offense, by a fine not exceeding $200 and not less than $50 together, in all cases, with the costs of prosecution.

BARGE CANAL FLEET.—An important bit of news is to the effect that a barge canal fleet of 30 vessels will run betwen New York and Buffalo when the barge canal is completed. The New York and Buffalo Steamship company will soon be incorporated at Albany, with a capital of $3,500,000 to operate this line of fast freight vessels on the canal. The vessels will be driven by electricity and operated from the pilot house instead of from the engine room. Owing to the fact that there will be 380 bridges over the canal, the majority of them only about 15 feet above the level of the water, the vessels will be built low and resemble enclosed car floats. Each will be 275 feet in length and 40 feet in width and will have a capacity of 1,500 tons. The distance from New York to Buffalo via the canal is about 500 miles which will be covered by the boats in 108 hours. This time will include 35 hours for stops and 12 hours delay in the locks. The average speed of the boats will be eight miles an hour but they can make ten. These boats will cost about $6,500 each. That this canal traffic will prove a very considerable competitor to the railways when the full fleet is in operation, is shown by the advantage it will have in the point of time of transportation. It is said that it takes quick freight eight days to reach Buffalo from New York and heavy freight, such as coal, sometimes nearly three weeks. This by rail. An official of the proposed line of vessels is quoted as saying that the boats will make the trip in three days and the rates will be 20 per cent lower than rail rates. These fast boats will be known as express boats and will stop at Albany, Troy, Schenectady, Utica, Syracuse and Rochester. The other boats will stop at all of the 30 cities on the route and will make the trip in 119 hours. The boats will make no stops at any of the Hudson River cities, except Albany, and will not be operated on the lakes. J. W. D.

Woman and the Home

From Day to Day

THE BIVOUAC OF THE DEAD.

The muffled drum's sad roll has beat
The soldier's last tattoo;
No more on Life's parade shall meet
That brave and fallen few.
On Fame's eternal camping-ground
Their silent tents are spread,
And Glory guards, with solemn round,
The bivouac of the dead.

No rumor of the foe's advance
Now swells upon the wind;
No troubled thought at midnight haunts
Of loved ones left behind;
No vision of the morrow's strife
The warrior's dream alarms;
No braying horn nor screaming fife
At dawn shall call to arms.

Their shivered swords are red with rust,
Their plumed heads are bowed;
Their haughty banner, trailed in dust,
Is now their martial shroud.
And plenteous funeral tears have washed
The red stains from each brow,
And the proud forms, by battle gashed,
Are free from anguish now.

Rest on, embalmed and sainted dead!
Dear as the blood ye gave;
No impious footstep here shall tread
The herbage of your grave;
Nor shall your glory be forgot
While Fame her record keeps,
Or Honor points the hallowed spot
Where Valor proudly sleeps.

—Theodore O'Hara.

*

WITH the centralized school, rural scholars are sent to town. An idea directly opposite to this was proposed by Henry Kelley at a recent meeting of the Connecticut Nurserymen's Association, who pointed out the advantages of establishing city schools in the country. He is thus quoted by the Florists' Exchange:

If good judgment were to prevail in our cities when a new school building is necessary, instead of looking around for the most expensive lot to be found that is to benefit some one with a pull, and then building a building out of all proportions to what it should cost, it would be better to go out some distance into the rural district, on the line of a good trolley, then buy ten acres for, say one-half what we would pay in the city, and build a comfortable, sanitary, sensible school house with every improvement that can be devised; have your swimming pool, athletic field, kitchen and work shop; have the grounds laid out with a variety of trees and shrubs; have space for gardens of vegetables, plants and flowers.

*

TWENTY years ago a correspondent wrote to this department of THE R. N.-Y., telling of her experiments in wearing one-piece undergarments and one-piece dresses, and urging other women to try her plan, which she found comfortable and convenient. It must be 40 years since some courageous reformers invented one-piece combinations, which they called "chemiloons," and which most women regarded as very daring and radical experiments. Now we have all adopted these changes in costume, and have an opportunity to realize that the radicalism of one generation is very often the conservative progress of the next. Nothing will prevent silly women from wearing silly clothes, but whenever disposed to quarrel with fashion, remember that sensible women now dress far more comfortably and hygienically than they did a generation ago, and this without looking "backwoodsy" or unfashionable.

*

EACH year, when our daffodils are all in bloom, we wonder how any garden lover can be content without a generous display of these lovely flowers. We care very little for the double ones, though a few of the old-fashioned double forms of Pseudo-Narcissus give variety, but our taste is all for the single sorts, and one has a noble array at moderate cost. The trumpet sorts we grow in quantity are Emperor, Empress and Horsfieldii, which are beautiful, hardy and inexpensive, while the Welsh daffodil, Sir Watkin, is equally satisfactory. The Poet's Narcissus in its two forms, Poeticus and Poeticus Ornatus, is freely naturalized in the lawn. The double Poet's Narcissus dies out with us, apparently not hardy, and the same is true of some very fine trumpets, such as Glory of Leyden, but a number of the Barrii section do well, and are very showy. Spring bulbs are the most fascinating ornaments of the garden, and there is no limit to their possibilities.

SEEK not to be rich, but happy. The one lies in bags, the other in content, which wealth can never give.—William Penn.

The Rural Patterns.

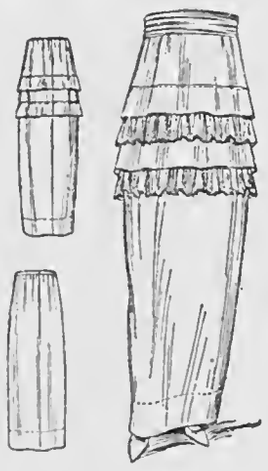
When ordering patterns always give number of patterns and measurements desired. Price of each pattern 10 cents.

8240, fancy tucked blouse, 34 to 42 bust; 8241, semi-princess dress, 34 to 42 bust. 8258, semi-princess dress for

No. 8240.

No. 8241.

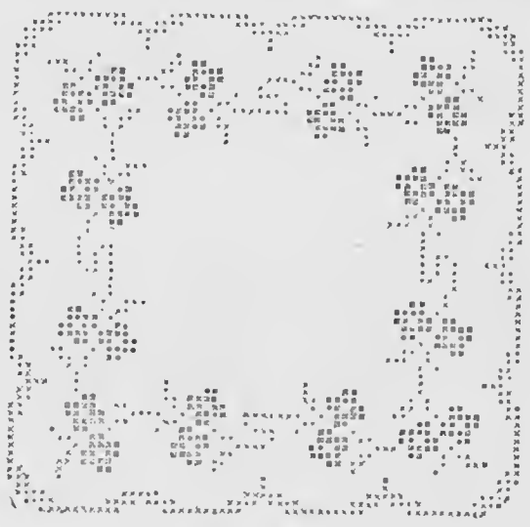
No. 8258.



No. 8239.

misses and small women, 16 and 18 years; 8239, one-piece skirt, 22 to 32 waist.

No. 754. A design for embroidering a pillow or cushion cover in cross-stitch style. In the pattern all the stitches are shown as simple crosses but in the illus-



No. 754.

tration, some are lighter, some heavier. The lighter stitches represent the border and the leaves. The heavier crosses represent flowers. Stamped on art ticking 22x22 inches, with green back and mercerized floss to work, 40 cents.

Seen in New York Shops.

A pretty hat seen in a Fifth Avenue shop was a close shape of blue straw, the crown covered with blue ribbon. At the right side the ribbon was brought over to make a perky tall bow, and the edge of the curved brim was outlined with a double row of small daisies. There was nothing startling about the hat but the price, which was $28; however, it suggests a smart style for making an inexpensive hat.

A new idea in fastening a fancy blouse is to use links made of two-inch strands of small beads, having a larger bead at either end. These pass through eyelets, and all sorts of combinations may be used.

A trimming seen on a chiffon blouse consisted of floral figures cut out of a handsome ribbon and applied on the plain material with fine buttonhole stitch. The ribbon itself was used as a girdle.

Most large shops now display a wide choice in ready-made mourning garments—hats, wraps and dresses. As a rule styles are much more sensible than they used to be. It is now considered that pure white in a plain material may be worn in the house, or during warm weather, for the deepest mourning. Materials should be plain, never embroidered, figured or cross-barred, and there should be no trimming except tucks, hemstitched ruffles and open hemming. Voile, China silk, crepe de chine, plain batiste and plain cotton crape are all suitable. When in deep mourning black girdles or trimmings are not allowable with these white dresses, but they may be worn with what is called second mourning. A new fashion permits white hats and veils for young girls' mourning, the veils being of white Brussels net edged with dull white ribbon, and these white hats are worn by older women also. Collars and cuffs of white organdie, which follow the fashionable flaring outline, are very becoming for mourning dresses and blouses, costing, made up, from 50 cents to $1.50 for the set. White crape cuffs and collars, which are also worn with the deepest mourning, are rather newer, and cost $3.50 the set. Many widows nowadays do not wear the small bonnet formerly invariable, but replace it with a small round hat with a veil of crape or net edged with crape folds hanging at the back. This is entirely correct if the brim is faced with white crape, but it is a mistake for a widow to omit the white facing from her first mourning, though this is often done. Of course a face veil of net with crape or dull ribbon edge is worn also.

Flower blocks are articles in china, glass or metal, more or less ornamental, containing holes into which the stems of heavy flowers may be inserted. The block is put into the bottom of the vase or bowl, which is filled with water as usual; then the flowers are arranged, some of the stems being inserted in the block, so that the flowers stand up in any desired position. This is a Japanese idea, and many quaint models are shown, frogs, turtles and crabs of bronze being very popular; there are also squirming fishes of white Japanese porcelain, all being heavy enough to hold the flowers; they cost from around 50 cents up to $1.50 or more. English flower blocks of clear glass are plain in shape, costing from 15 cents for a two-inch size, and up to $2.50 for the eight-inch block; these larger ones are complete vases in themselves, as the cavities for the flowers are little wells that hold water.

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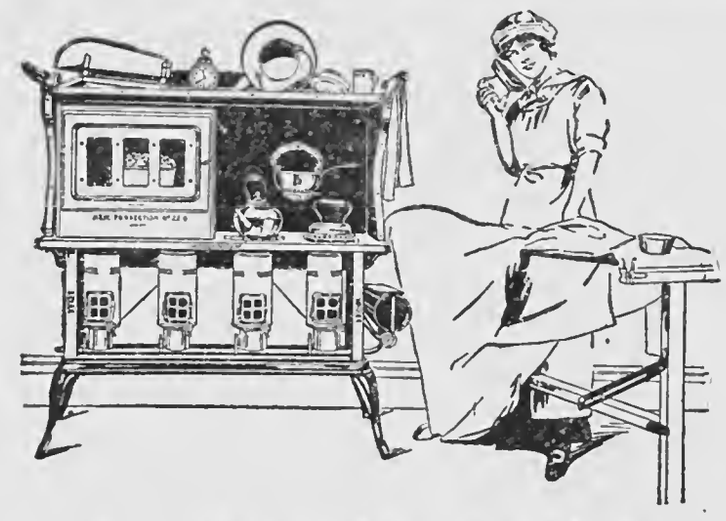

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Making and Serving of Beverages.

Beverages are taken for their temperature—hot or cold, for their delicious flavor, or for their stimulating qualities, and sometimes for their highly nutritive value, as when milk, eggs, cocoa, or chocolate is used. All beverages should be made with the utmost care, and served daintily, if it be but a cup of tea; always using freshly boiled water for the hot ones, and freshly drawn, cooled on ice, or iced for the cold ones.

The best rule for making tea is the old-fashioned one: "One teaspoonful for each person and one for the pot." Scald the teapot, which should be either silver, aluminum, earthen, or granite, but never of tin, with boiling water, and when this is turned out put in the tea, and pour over it the fresh boiling water, and allow it to stand five minutes, then pour immediately. Some prefer a thin slice of lemon added to their cup of tea to cream or milk. Iced tea is delicious, and on a hot day as refreshing as a beverage can be. Make your tea in the usual way, then strain it and set on ice until needed. For a quicker way, pour the freshly brewed tea into glasses one-third full of finely crushed ice, and sweeten to suit the taste, and a slice of lemon or orange, or a few crushed mint leaves, may be added if one likes.

Coffee is a stimulant rather than a nutrient as many are lead to suppose, but a single cup of coffee taken at breakfast and one at dinner rarely proves harmful if properly made, and when iced it is quite as delicious as iced tea. Coffee or tea taken with either milk or sugar alone is much more healthful and less likely to cause ill effects than if both sugar and milk are used.

This is my rule for making seven cups of really delicious and healthful coffee: Scald the coffee pot in the same manner as when tea is made. Beat one-half of an egg, and crush the shell, then add one cup of coffee, two-thirds Java and one-third Mocha makes an excellent blend, and one-half cup of cold water, and stir well together. Put this into the scalded coffee pot, and pour over it seven cups of boiling water, and let boil up three times, or for five minutes, then add one-half cup of cold water, and allow it to stand twenty minutes where it will keep hot without boiling. Serve in heated cups with cream and sugar. For iced coffee simply dilute strong, plain boiled coffee with hot milk, add sugar to suit the taste, and chill. Serve in glasses with crushed ice.

Unlike tea or coffee, chocolate and cocoa have a high food value, containing both protein and fat. It is because of its high percentage of fat that chocolate is likely to cause indigestion if used to excess, or when taken in connection with a heavy meal. Cocoa, being less rich in fat, is, therefore, more easily digested, and forms a wholesome beverage for both old and young.

To make eight cups of perfectly delicious chocolate, scald one quart of milk in a double boiler. Scrape four ounces of chocolate and add one tablespoonful of sugar, put all in a small saucepan, with one-half cup of boiling water; heat over hot water, and stir until smooth and glossy, then add to the scalded milk, and beat all vigorously with a wire egg beater for a moment or two, and serve. A teaspoonful of whipped cream placed in the bottom of each cup and the hot chocolate poured over it makes it just so much more delicious. For iced chocolate, stand the hot prepared beverage aside to cool, and when cold fill glasses one-third full of crushed ice, add a little powdered sugar; then pour in the chocolate, and top with a spoonful of whipped cream. Cocoa should be made and served in the same manner as chocolate.

Beverages made with fruit juice are cooling and refreshing. Because of the acids and mineral matters they contain they furnish a wholesome and direct effect upon the system, and for this reason are especially beneficial during the hot weather. A plain lemon syrup will furnish a foundation for any number of delightful fruit combinations, and with a good supply on hand the busy housekeeper can concoct a lemon or orangeade, or a fruit punch, at almost a moments notice.

To make the syrup, mix together one pint of sugar and one quart of cold water, and when the sugar is dissolved heat gradually to the boiling point, and let boil fifteen minutes, then add two cupfuls of strained lemon juice, cool, and turn into a glass fruit jar, cover, and keep in a cool place. When needed for a plain lemonade simply dilute with ice water to suit individual tastes, and garnish with thin slices of lemon. A delightful tea punch may be made by adding three cupfuls of the lemon syrup to two quarts of well brewed tea.

For a glass of orangeade add the strained juice of one orange to two tablespoonfuls of prepared lemon syrup, and three-fourths of a cupful of plain cold or ice water. Ornament the top with a slice of the fruit, and dust with a wash of nutmeg. Another simple and delicious drink is made by adding one pint of grated pineapple to one pint of syrup, and three pints of water. Set on ice for three or four hours, then strain and serve.

Raspberry shrub is very simple to prepare. Wash and pick over two quarts of very ripe but perfectly fresh berries, place them in an earthen or porcelain bowl, and sprinkle over them one cupful of sugar, letting them stand two or three hours, then strain through a flannel jelly bag. To the juice add one pint of lemon syrup, and one quart of ice water.

You who never made a ginger lemonade should try this recipe, it is simply delicious. Cook one-half pound of Canton ginger, one and one-half cupfuls of sugar, and the grated rind of two lemons and one orange, in three pints of water for 20 minutes. Squeeze the juice from six lemons and two oranges, and add to the boiling syrup, then remove from the fire, cool, strain, and set on ice until ready to use. Dilute with ice water as desired.

Mint Punch.—Make a syrup by boiling one quart of water and one pint of sugar in the same manner as for lemon syrup. Separate a good sized bunch of fresh mint in pieces, and add to two cupfuls of boiling water, cover, and let stand five minutes, then strain into the syrup, with one pint of strawberry juice, the juice of two oranges, and six lemons, and cool. When ready to serve add ice water to suit the taste, and strain. Place a block of ice in the centre of the punch bowl, and pour the punch over it, then garnish with fresh mint leaves and whole strawberries. ROSAMOND LAMPMAN.

More Notes from Colorado.

Canon City, Colarado, is now on the map. At one time, not so many years ago, the railroad, following the banks of the Arkansas River through the plains of eastern Colorado, and on to the west along sandstone cliffs, stopped short at the mining regions near the base of the Rocky Mountains. There was no alternative—no way around or through the barrier that loomed conspicuously beyond. The river, starting from somewhere away up there, had plowed its way through a deep narrow chasm, and emerged into the valley where cactus, sagebrush, coyotes, jack rabbits and prairie dogs had full possession. From these conditions the old timers may tell you of the evolution of Canon City. Those who have come out to this beautiful, modern, mountain town in recent years see only the result.

Canon City nestles at the foot of tall, irregular peaks just at the opening of the present famous "Royal Gorge," through which, as a result of persistency and engineering skill, heavily loaded trains thunder eastward and westward to meet the demands of traffic. From the clear cut "Skyline Drive" that trails over the "hogback" 300 feet above the outskirts, you may look down on the "City Beautiful" with its broad, well-kept streets, State Penitentiary buildings, schools, churches, lodge halls, up-to-date depots, Y. M. C. A. building, public and private homes, banks and business blocks—all backed up by the best class of people with a business enterprise that keeps things moving. Canon City, however, is preeminently a city of homes. It stretches itself miles to the east in orchard tracts. To the south of the river, on a distinctive highland or shelf more areas of orchard land spread themselves over what is known as "Lincoln Park," making withal a complete setting for the picture within.

On a Summer day you may see all the roads leading into town lined with one-horse wagons piled high with crates of berries or quantities of garden stuff for shipment through the numerous fruit and vegetable associations that handle the trade for the eastern markets. Every man, woman and child is busy as occasion demands during the fruiting season, and the main rural population is seen in the open, "carrier" in hand, or "topping" boxes in the shade. Many are out here for the mountain air, and they get it on eating and sleeping porches, or in the berry patches. Retired farmers, lawyers, preachers, or teachers, it makes no difference in the Canon City districts. Then from October until Christmas the apple industry is in full swing. Canon City apples are coming to be known far and wide by their excellent flavor, due to the altitude, as well as their keeping qualities. Apple picking and packing are among the fine arts, and the scientific handling of the extensive crop is worth the best effort of all interested parties. Orchardists are making a special study of fruit growing, through horticultural societies and institutes where experiments is exchanged and information gained through experts from the State College. Frosts and insect pests have had their innings at times, though to its credit, the oldest settlers affirm that such things have been unthought of for years in succession. At any rate with rich soil and ample irrigation system a good living may be gained in the poorest of years.

Just now, everything is propitious from every viewpoint. Aside from the resources of "vine and fig tree" there is the climate, unexcelled in nature's sanitarium, sheltered on three sides from the rougher elements of wind and storm. Scenic drives lead out in every direction to attractions of pass and canyon—incentives to camping and picnics the whole year through. And then there is always the beauty of the "everlasting hills" stretching away to the distant ranges.

CLARA ABIGAIL GEBHARDT.

Why should we sweep rugs and pile carpets with the nap just because custom says so? It is this crushing down of the nap which makes a new rug into an old one, and it would seem that sweeping against the nap would assist in keeping the pile raised as it should be. Don't be slaves to custom but think for yourselves, and sweep carpets *against* the grain to preserve its freshness.

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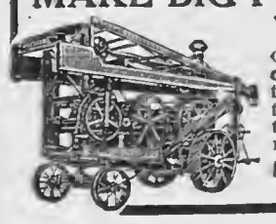

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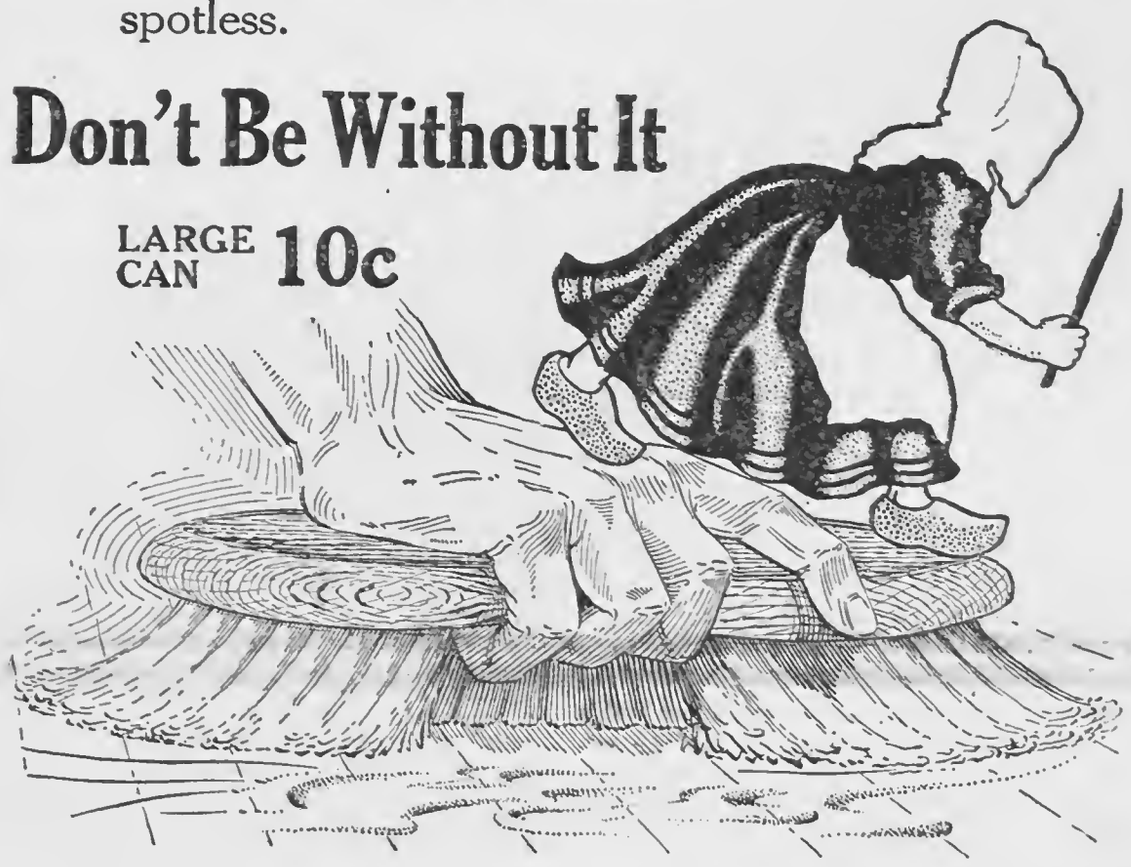

Live Stock and Dairy

BUYING A PUREBRED BULL.

It would seem to me that the average dairyman is not entirely level-headed on this question of engaging in the breeding of purebred cattle. I have a suspicion that a large percentage of these men have never been in the dairy business for themselves before, and get the idea that they should "get in right" on the start by investing in full bloods, and, by the way, you can almost always spot one of these men as soon as you hear him speak, for he will inquire if you have any "Thoroughbreds" to sell. (Just think of alluding to a big bony pot-bellied Holstein cow as a "thoroughbred.") Of course everyone who keeps a dairy should own a purebred bull, and I say "everybody" advisedly. It is poor policy to depend on some other man's bull, and it is hardly fair to the other man either. The main trouble is that it is often inconvenient to take cows away at any time, and the result is that some of our cows fail to breed and we suffer a loss much greater than the cost and maintenance of a bull of our own. In my own

A SEVEN-YEAR-OLD GUERNSEY COW.

case, the getting with calf of one valuable cow that I had been having trouble in breeding fully paid for my registered bull.

Then again, the percentage of profit on a purebred bull in use in a native or grade herd is much greater than it would be in a purebred herd. One can depend upon a grade cow, sired by a purebred bull, as being worth from $10 to $25 more than she would be if sired by a grade. So, when one considers the price at which a purebred bull calf (or an older one either) can be bought, it would seem that no one would continue to use grades. Then I would buy a registered heifer calf, if I were reasonably sure that I could raise the calf into a well-developed cow. If I did not know how to raise a calf at all, I would first experiment on grades.

In buying the calf, select a good individual. This is imperative if one would expect to get good results. Don't, under any circumstances, be fooled into buying a worthless calf just because it is trying to keep from cancellation a valuable pedigree. Always bear in mind that the value of a pedigree is problemetical. What the cow or the bull has done is largely what they have been given a *chance* to do. Smith buys a bull and places him at the head of a big herd of the best cows that money will buy. He keeps him until he is old, and keeps adding to his herd all the best cows that he can buy. The result is that Smith's bull becomes the sire of a long list of "tested" daughters, and his name is valuable in a pedigree accordingly. Brown buys a full brother to Smith's bull, and an equally good animal in every way. But Brown is a poor struggling farmer just working into a herd of purebreds. So his bull is used mostly for grades, and he sires but a few purebred daughters. The consequence is that he goes down in history as a "no account," and his name in a pedigree amounts to nothing. Still the blood of Brown's bull is just as valuable as that of Smith's excepting for the *advertising* worth of the more fortunate animal. In reality neither bull may have had much intrinsic value.

As an illustration: Suppose that Smith buys 100 cows that on an average have official tests averaging 20 pounds of butter in a week. From these cows he raises 200 heifer calves, all sired by the one bull. At maturity, if these young cows do not average better than their dams, but very little credit should be given the sire. Still a bull with 200 tested daughters would be considered a marvel. And, do you know, just this sort of thing is being done? It most certainly is. Men are pooling their money and scouring the country for the best cows they can find. These cows are brought together and bred to certain bulls. These bulls are producing a lot of good calves, and they ought to. Other men are mortgaging their farms to buy the bull calves sired by these favored lords of the barnyard. Do you suppose that they are getting the worth of their money?

A good many have the idea that if they cannot go in for one of these "boomed" animals they may just as well keep out. when the fact of the case is that $100 or $200 *judiciously* expended in the purchase of a bull would secure just as good an animal as $1,000 or $2,000 spent for an animal that *seems* to be worth that much to the uninitiated. But this is not saying that *no* bull is worth $2,000 or even much more than that.

J. GRANT MORSE.

AMERICAN JERSEY CATTLE CLUB.

Two things were given special consideration at the annual meeting of the American Jersey Cattle club last week in New York city. These were the increase in registration fees for males from $1 to $5, and the proposed reduction of fees on cattle imported from the Island of Jersey. These questions both called out much discussion. The former came up as an amendment to the by-laws, to be submitted to the membership for a mail vote, and provided for an increase as above stated "in all cases wherein record of birth has not been filed, and also in all cases wherein the animal is over two years old at the date of application." but if the date of birth, etc., has been filed then the fees to members shall be $1 and to non-members $2. The same fees were made applicable to females.

The other proposition referred to was to reduce the fees on animals imported from the island from $100 to $10 for all animals that passed the registry of merit test there, and $25 for all others. On vote the proposition did not carry. It was then decided to investigate conditions to ascertain if some test basis could be fixed for the levying of the fees on island imports.

Several others were considered and will be submitted to the membership. Among the more important of these were the following:

Permitting the change of names of animals which have not been printed in the Herd Register, provided application to make the change has been made to the secretary within a year and a fee of $5 has been paid; concerning the use of numerals in names which must be used in sequence with the dates of birth; refusing to register animals under names that are misleading, or profane; requiring that twins be registered at the same time "unless one of the twins is dead and the death has been reported to the club"; empowering the executive committee to instruct the secretary to register an animal in case of the refusal of the owner of the sire or of the breeder of an animal to sign an application for registration, etc.; requiring the seller of an animal to furnish a certificate of transfer on forms provided by the secretary without cost; permitting agricultural colleges and experiment stations to enter herds of Jersey cattle at the same rates as paid by members; provided that

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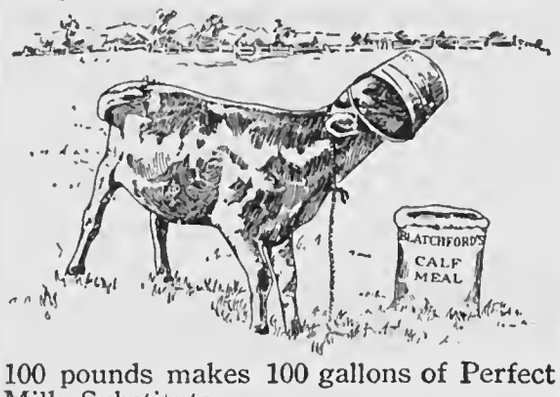

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Yarmouth Farm Chesters

April farrow, registered, growthy and prolific. Also Poland Chinas. Rollo Young, R. D. 4, Coatesville, Chester Co., Pa.

animals owned but not bred in Canada may be entered in the A. J. C. C. Herd Register if they were imported from the United States, the Island of Jersey or Great Britain, and animals bred, or both bred and owned in Canada, to be eligible to entry here must be the progeny of animals already entered, or being already entered in the Canadian records must trace an unbroken line of registration either to ancestry in the A. J. C. C. Herd Register or to animals entered in the Island of Jersey Herd Book; abolishing the requirement that the letters "A. J. C. C." be tattooed in the ear of each imported animal; empowering the executive committee to appoint a representative to visit any herd for the purpose of inspecting the records kept.

The more important suggested amendments to the constitution that were approved, were: Providing for the holding of special meetings of the club outside the State of New York; permitting the voting of proxies by members of the club only; requiring that an applicant for membership in the club shall be an owner of Jersey cattle, and if "five of the total votes cast (in an election to membership) are negative, the candidate shall not be admitted to membership except by the unanimous vote of the board of directors."

According to the report of President Darling, the past year has been one of the most successful in the history of the club. The revenues increased over $9,000, the registrations 3,655, the transfers 4,777. The total registrations last year were 29,381 and the total transfers 34,737. The net income the past year was $86,673.62. The expenses were $68,158.26. The complete registration is 121,000 bulls and 307,240 cows.

Officers for the ensuing year are: President, E. A. Darling of New York; vice-president, Prof. H. S. Redfield of New York; treasurer, John P. Hudson of Georgetown, N. J.; secretary R. M. Gow of New York. Directors: Geo. W. Sisson of Potsdam; John I. Bishop of Philadelphia; S. N. Warren of Spring Hill, Tenn.; G. T. Chaffee of Rutland, Vt.; L. F. Herrick of Worcester, Mass.

The annual banquet was held at the Manhattan hotel on the evening prior to the business meeting of the club, the guests of the association being Dr. W. O. Thompson, president of the Ohio State University; Dr. L. H. Bailey of Ithaca; Prof. F. C. Minkler of the New Jersey State Experiment Station; Mr. C. L. Hill, president of the Guernsey Cattle Club and Mr. W. W. Marsh of Iowa, who addressed the banqueters.

Skin Trouble.

What makes little pigs scurrify? They are six weeks old, have a dry pen, lots of sunshine and are bedded with oat straw. Do you think oat straw causes the trouble? M. F. R.

Pennsylvania.

Dusty, chaffy oat straw is about the poorest possible bedding for pigs. It also is highly dangerous on account of the dust it contains. This gets into the lungs, causes cough and in some instances fatal pneumonia. Substitute shredded corn fodder, rye or wheat straw, or hay as bedding. Wash the pigs with a 1-100 solution of coal tar dip and repeat as required. Keep the pigs out of wet and filth. A. S. A.

Partial Paralysis.

I have a sow suckling pigs; has become stiff in her hind quarters, and can hardly get one foot ahead of the other. What is the trouble? I have been feeding her on whole corn, and meal slop. We have no veterinarian in easy reach. G. W. S.

Maryland.

As often explained here, fat, flabby, pampered sows are prone to this form of paralysis, or parturient eclampsia. It is brought on by the strain and drain of nursing, and is induced by stuffing on corn and other rich feed and restricting the exercise. Wean the pigs. Turn the sow out on grass and feed slop or middlings, a little cornmeal and bran, and 10 per cent. of digester tankage. Sows will not suffer in this way if made to take exercise every day while in pig, and fed mixed, laxative rations, including Alfalfa, roots or silage and a little tankage. Keep most of the corn for fattening hogs. A. S. A.

Failing Cow.

I have a young cow six months gone with second calf. She had a bad attack of indigestion two weeks ago. I gave her two doses of Epsom salts, 1½ pound to a dose, also gave her proprietary medicine for a week, then gave her nux vomica to give her appetite. The cow is better, has no pain, but the appetite is no good; she will not eat feed of any kind. Sometimes she will nibble a little at a mash of cornmeal and bran. I am keeping her out of doors all I can. She has free access to green rye and Crimson clover, but she will only look at it, has got very poor. What do you advise?

New Jersey. G. A. J.

Uterine examination should be made as the cow may be carrying a dead calf. If so it must be removed at once. If that is not the cause of symptoms described then we should expect the presence of tuberculosis. To make sure, have the cow tested with tuberculin. Any graduate veterinarian can apply the test. A. S. A.

HORSES

HIGHLAND VIEW STOCK FARM

Our last importation of BELGIANS and PERCHERONS is the BEST we ever imported. We have sold more Stallions and Mares in the last sixty days than we ever sold in a year. WHY? Because we sell the good, big, drafty kind at the right price, and cheaper than the other fellow.

O. N. WILSON, Prop. KITTANNING, PA.

50 STALLIONS

and MARES, $250 to $1000 each

Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.

A. W. Green, Middlefield, O.

R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

AT STUD—"LANDAIS" (100,233) 92,338. Imported Registered Percheron Stallion. Gray, weight 1,900 lbs. Fee, $25 Walnut Grove Farm, Washingtonville, N. Y.

Suffolk Stallion for Sale—thoroughbred and registered, eight years old, weighs 1700 pounds. For prices and particulars, write George H. Benn, Houlton, Maine

MAKE MONEY

Buy a **pure bred** draft stud colt and two fillies. Stallion would sell in two years for enough to pay first cost of the three. Your fillies should drop two colts by him; the four maturing at $2,000 **and costing you practically nothing.** Or, if you keep stallion he will mature at fancy price and **breed** for you a big and steady income. Make money. We will help you. Write today. ADIRONDACK FARMS, 31 Maple Street, Glen Falls, New York

SWINE

REGISTERED CHESHIRE PIGS

from Sweepstake's Boar. N. Y. State Fair, 1913.

EARLE R. POTTER, - Leeds, New York

O. I. C. WHITES—All sold out of matured stock. Now offering Spring pigs. My stock is right, so are the prices. Member O. I. C. Swine Breeders' Association. Wayside Farm, Chatham, N. J. Address, A. L. Page, (Owner), 62 Cortlandt St., N. Y. City

TEN Purebred Large Berkshire Boar Pigs, 8 weeks upwards. Inoculated. $7 each. CLOVERDALE FARM, Charlotte, N. Y.

Springbank Herd—Big Berkshires

I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs. J. E. WATSON, Proprietor, Marbledale, Ct.

LARGE BERKSHIRES AT HIGHWOOD

Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows. H. C. & H. B. HARPENDING, Dundee, N. Y.

For Sale—Reg. Berkshire Boar

2 years old, superb specimen, weighing about 600 pounds. Bred by H. C. & H. B. Harpending. Small price for quick sale. Address, Agder Farm, Royalston, Mass. E. F. Porter, Mgr.

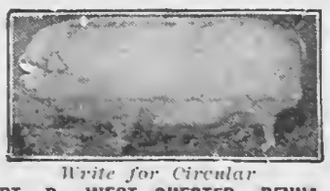
BERKSHIRES

We have fifteen fine boars for sale, sired by Sepurbus, 136000 and Rivals Emblem 167700, the great sires of Gregory Farm, White Hall, Ill., the home of the famous Masterpiece. These boars are from seven to twelve months of age, are the heighth of breeding and type. Here is a fine chance to improve your herd. Write for prices and descriptions.

TOMPKINS FARM, - Lansdale, Pa.

Eureka Stock Farm

Registered Jersey Cattle. 4 mos. to 2 yrs. old. Chester White, Poland China and Berkshire Pigs, all ages. Lincoln Buck Lambs. Variety of Poultry.



Write for Circular

EDWARD WALTER, DEPT. R, WEST CHESTER, PENNA.

DAIRY CATTLE

Wanted to Buy—CATTLE BY THE CARLOAD One hundred head wanted (due to calve) during July to September. Holsteins and Ayrshires preferred. Address, A. S. EDWARDS, Stepney Depot, Conn.

BROWN SWISS CATTLE

All cows tested eligible for Registry of production. Animals of various ages for sale. GEORGE W. HARRIS, Wethersfield, Conn.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

PUREBRED HOLSTEINS FOR ANY POCKETBOOK, $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. MOHEGAN FARM, Peekskill, N. Y. 1 hr. from Grand Cent. Sta.

REGISTERED HOLSTEIN YEARLING BULLS

Sired by Colonel Korndyke De Kol, one of the best sons of Pontiac Korndyke. Also 4 grandsons of the King of the Butter Kings, from choice heavy-milking dams, at popular prices. Write me what you want. Donald F. McLennan, Syracuse, New York

HIGH GRADE
HOLSTEINS

The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.

F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holstein Cows For Sale

50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.

These will suit the man that is looking for high-class dairy cows. Large producers, good size and well marked.

Visit the East River Holsteins when in need of first-class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.

Bell Phone No. 14 F.5. JOHN B. WEBSTER, Dept. Y Cortland, N. Y.

Buy a Bull on Easy Terms

Long Time and 4 Per Cent Interest

Holstein bull calves, sired by a **SON OF KING OF THE PONTIACS**, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of **A. R. O. DAMS. WRITE AT ONCE** for breeding, prices, and particulars regarding our terms.

JUSTAMERE FARM, Middletown Springs, Vt.

Purebred Registered
HOLSTEIN CATTLE

In the production of milk and butter the larger the cow the larger the profit, other things being equal. This principle has been established through the investigations of government experts and is generally recognized.

When a cow's milking days are over, size is still an important factor. The big Holstein-Friesian, weighing anywhere from 1,000 to 1,800 pounds with her clean white fat well distributed through her muscular system, proves a most profitable dairy beef animal.

Send for FREE Illustrated Descriptive Booklets

Holstein-Friesian Asso., F. L. Houghton, Sec'y Box 105 Brattleboro, Vt.

Registered Guernsey Bull for Sale

9 months old; Glenwood stock; fine specimen. Price, reasonable. H. A. CRDASDALE, Delaware Water Gap, Pa.

AT FARMERS' PRICES—THOROUGHBRED, REGISTERED YOUNG GUERNSEY BULLS, rich in the blood of the famous Island bull, "Sheet Anchor." For prices and particulars, address MANAGER HILLTOP FARMS, Littleton, N. H.

GUERNSEY BULL

Wayside Glynn, No. 25807. Here is a yearling that combines breeding, type and disposition sufficient to warrant the belief that he will make a successful sire. Price, $85. Address, A. L. PAGE, (Owner), 62 Cortlandt St., N. Y. City. Wayside Farm, Chatham, N. J.

FOR SALE—**Guernsey Bull Calf**—Priam of Girdle Ridge, No. 28003. Dropped Sept. 23, 1913. Sire, Imp. Sequel's Monogram, No. 15649. Dam, Imp. Pride of the Hougnette, No. 28254. This animal is a good individual, nicely marked, white switch and a clear nose. Tuberculin tested. Price, $100, if taken now. Your money back if he does not suit. Further particulars for the asking. Address, SUPT. GIRDLE RIDGE, Katonah, New York

DAIRYMEN

When you buy Cows consider this

Are they making you a profit?

Buy GUERNSEYS and be sure of profit.

Write for literature

GUERNSEY CATTLE CLUB
BOX Y, PETERBORO, N. H.

ANNUAL DECORATION DAY AUCTION

160 Head High Class Imported Jersey Cattle

Saturday May 30th, 1914 "Linden Grove" Coopersburg, Penna.

As Usual, "The Pick of the Island of Jersey"

THE CATALOG TELLS THE TALE. MENTION "RURAL NEW-YORKER"

T. S. COOPER & SONS, Coopersburg, Lehigh County, Penna.

The Henyard.

THE EGG-LAYING CONTEST.

The twenty-seventh week, ending Friday, May 8, shows no falling off in egg production but a slight gain. The output for the week was 3,358 which is 37 more than were laid the week before.

The remarkable laying of Tom Barron's White Wyandottes is stirring up some of the fanciers and others. Vague charges are being made, such as that "they are hybrids," "a cross with some other breed." "not true to *our* Wyandotte shape," etc. I have written to Mr. Barron of the criticisms asking him to cable me, "statement false," if it is false. Personally I have no idea that he has ever crossed them with any other breed; but if he has, I am sure it was done to improve the laying qualities of the "strain," and without the slightest thought of fraud. This subject of "pure bloods" cannot be adequately treated within the limits of this report.

A White Leghorn pen laid the highest number this week, Glenview Poultry Farm's pen laying 56. White Leghorns also take second place, pen number 39 from Storrs Station laying 55. Mrs. K. E. Woodruff's White Leghorns from New Haven laid 54, and two pens of S. C. Reds laid the same number. They are the Colonial Farm pen, and A. B. Brundage's pen. Two pens of White Leghorns laid 53. Tom Barron's White Wyandottes lead all other pens with a total score of 1,119; next to them stands the White Leghorn pen No. 42 from Storrs Station with a total of 1,015. This is the "sour milk" pen. The week's performance and the totals are given below:

	WK.	TL.
BARRED ROCKS.		
A. B. Hall, Connecticut	43	548
Frank L. Tuttle, Massachusetts	36	692
Waveny Farm, Connecticut	41	550
J. J. Francais, New York	48	851
WHITE ROCKS.		
Albert T. Lenzen, Massachusetts	49	599
F. H. Benton, Connecticut	43	690
Storrs Agr. Sta., Connecticut	32	523
Storrs Agr. Sta., Connecticut	46	571
Storrs Agr. Sta., Connecticut	32	682
Storrs Agr. Sta., Connecticut	46	574
Storrs Agr. Sta., Connecticut	24	379
BUFF ROCKS.		
A. A. Hall, Connecticut	45	675
W. C. Morgan, Jr., Connecticut	39	490
WHITE WYANDOTTES.		
Tom Barron, England	44	1119
West Mt. Plty. Yards, Connecticut	36	657
Merrythought Farm, Connecticut	46	964
Neale Bros., Rhode Island	44	930
D. J. Ryan & Son, Connecticut	45	752
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	47	689
Dr. N. W. Sanborn, Massachusetts	42	631
Am. Buff Wyan. Club, New York	34	601
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	49	596
S. C. REDS.		
Robert Seaman, New York	48	509
J. S. Gillespie, Connecticut	36	697
Dr. J. C. Dingman, New York	47	562
Burnham Plty Farm, Massachusetts	42	491
H. P. Deming, Connecticut	41	587
Geo. P. Dearborn, Florida	38	785
Dr. J. A. Ritchey, Pennsylvania	41	869
Ernest Underhill, New Jersey	36	520
W. H. Bumsted, Connecticut	37	345
Pinecrest Orchards, Massachusetts	45	777
Harry B. Cook, Connecticut	40	725
Colonial Farm, New Hampshire	54	745
A. B. Brundage, Connecticut	54	819
R. C. REDS.		
Glenview Plty. Farm, Connecticut	31	718
C. S. Scoville, Connecticut	23	499
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut	55	700
Storrs Agr. Sta., Connecticut	46	780
Storrs Agr. Sta., Connecticut	53	785
Storrs Agr. Sta., Connecticut	52	1015
Storrs Agr. Sta., Connecticut	48	644
Braeside Plty. Farm, Pennsylvania	45	608
Glenview Farm, Connecticut	56	669
Manor Plty. Farm, New York	47	675
A. B. Hall, Connecticut	51	669
Marwood Plty. Farm, Connecticut	53	761
Geo. M. Harris, Connecticut	48	606
Bonnie Brook Farm, New York	45	558
N. W. Hendryx, Connecticut	48	606
J. J. Linehan, Massachusetts	45	558
F. F. Lincoln, Connecticut	48	993
Cecil Guernsey, New York	46	835
T. W. Moore, Connecticut	44	586
Chas. N. St. John, New York	47	571
C. W. Sherwood, Connecticut	46	663
L. E. Sands, Pennsylvania	43	663
Tomoka Plty. Farm, Connecticut	46	573
Venture Plty Farm, New York	45	552
Mrs. K. E. Woodruff, Connecticut	54	597
Windsweep Farm, Connecticut	47	550
C. H. Savage, Connecticut	50	614
P. G. Platt, Pennsylvania	51	712
Heneta Bone Co., New Jersey	21	141
F. M. Peasley, Connecticut	51	655
Chas. Heigl, Ohio	40	518
Tom Barron, England	52	815
Branford Farm, Connecticut	49	723
James Munn, Massachusetts	49	568
Geo. A. Cosgrove, Connecticut	47	528
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	52	670
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	50	542
BUFF ORPINGTONS.		
O. Wilson, West Virginia	28	528
WHITE ORPINGTONS.		
P. A. Demgar, New York	32	487
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	39	359
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	47	478
DUNGHILLS.		
H. W. Collingwood, New Jersey	48	465
Daniel Hine, Connecticut	36	525
Daniel Hine, Connecticut	37	628
MIXED BREEDS.		
Profitable Plty., Massachusetts	41	652
Profitable Plty., Massachusetts	36	612

GEO. A. COSGROVE.

The Figures on Baby Chicks.

In answer to the query on page 632 under "Brevities" as to the cost of baby chicks, will say that I keep an account of the cost of each hatch, and give below the cost of a couple of typical ones. The cost of eggs is figured at the price at which they are sold for hatching.

RECORD NO. 5.

120 eggs, at 5c each		$6.00
Battery and lamp		.10
Grain alcohol		.06
Carbolic acid		.005
Lamp wick		.005
Kerosene oil		.81
		$6.98
Credit 21 infertile eggs for chick feed		.21
No. of chicks hatched	63)	6.77
Each		.1075
Expense of No. 6, same as No. 5,		$6.98
Credit 7 infertile eggs for chick feed		.07
No. of chicks hatched	66)	6.91
Each		.1047

The quantity of oil used in each hatch is determined from the quantity purchased for several hatches. The time required caring for a hatch is approximately as follows:

	hr.	min.
Dipping eggs	..	15
Cooling eggs	..	..
Turning	3	30
Filling lamp	1	15
Candling	1	..
	6 hours.	
Cleaning and disinfecting	1 hour.	
	7 hours.	

In the case of Record No. 5, 63 chicks at 12c equals $7.56 or a profit of 79 cents, amounting to about 11 cents per hour for the operator's time. In the case of Record No. 6, 66 chicks at 12c equals $7.92 or $1.01 profit amounting to about 14 cents per hour. A. D. RAND.

New York.

BILL Smith, a country shopkeeper, went to town to buy goods. They were sent home before him. When the boxes arrived Mrs. Smith, who was minding the shop, uttered a scream, seized a hatchet, and began to force off the lid of the largest. "What's the matter?" asked a bystander. Pale and faint, Mrs. Smith pointed to an inscription on the lid. It read: "Bill inside."—Melbourne Australasian.

Day Old Chicks
and
Six to Eight Weeks Old Pullets
6 weeks old 60 cents
8 weeks old 70 cents
Kirkup's Strain S. C. White Leghorns bred for size, vigor, and large white market eggs—$15 per 100—$62.50 per 500—$125 per 1000—Safe delivery guaranteed. **Order Today.**
REDUCED PRICES AFTER MAY 15
Day Old Chicks, $10 per 100—Yearling Hens, $1.25 each. Delivery after May 1
It will pay you to get a breeding pen now—Why?—You can get May and June hatched chicks, get a good egg production until late in the Fall and then have a fine breeding pen for next season. **We guarantee stock to be "Right."** Send for Free Booklet, describing chicks, pullets and breeding stock.
CHESTNUT POULTRY FARM
KIRKUP BROS., Props.
MATTITUCK, L. I., NEW YORK

The Mark of Poultry Quality
The Tywacana Farms Indian Head signifies to either the novice or extensive breeder. hardy, vigorous birds of great laying ability.
TY-WAC-A-NA
WHITE LEGHORNS, BARRED AND WHITE PLYMOUTH ROCKS
are the surest layers and are best for marketing. Years of utility breeding are back of them. They are birds to be proud of, being well marked and well colored and full of stamina. Tywacana Baby Chicks are shipped in strong, light boxes insuring safe delivery after long shipments.
PRACTICAL, PROFITABLE FARM BIRDS
They are big and hardy, excellent layers and great hustlers—just the birds for the farm.
Send for our beautiful catalog.
TYWACANA FARMS POULTRY CO.
A. E. Wright, Supt.
Box 68 Farmingdale, L. I., N. Y.
TYWACANA FARMS POULTRY CO.

Baby Chicks
S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred, Strong. Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.
WESLEY GRINNELL, Sodus N. Y.

MATTITUCK WHITE LEGHORN FARM
CHICKS
GIVE SATISFACTION. TRY THEM. PRICES NOW, FOR IMMEDIATE DELIVERY
Young's strain.....$10 per 100
Young's & Barron's cross..... 12 per 100
FOR JUNE
Young's strain..... $9 per 100
Young's & Barron's cross.....10 per 100
Safe delivery guaranteed. Catalogue free.
A. H. PENNY, - Mattituck, New York

Dune Alpin Heavy Laying
S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
HATCHING EGGS OR DAY OLD CHICKS
PRICES LOW, QUALITY CONSIDERED
Send for catalogue.
DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

TOM BARRON'S
BEST STRAINS AND HIS
283-282-260-248
EGG STRAINS ARE AT
MORRIS-FARM, R. 4, Bridgeport, Conn.
"GREATEST LAYERS IN AMERICA"
BARRON LEGHORNS AND WYANDOTTES
BUFF ROCKS, REDS, DUCKS, GEESE

Single Comb White Leghorns Exclusively
D.W. Young's strain. The finest in the world. Bred or their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book—Profits in Poultry Keeping Solved—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free.
EDGAR BRIGGS, Box 141, Pleasant Valley, N.Y.

GIBSON Strain Day-Old CHICKS
We ship lively, hardy chicks from our strain of large size, vigorous breeding stock of bred-to-lay S. C. White Leghorns, Barred Plymouth Rocks and Rhode Island Reds.
Write For Free Catalog—It gives full description of our 1914 matings and prices of Baby Chicks, Eggs for Hatching, breeding stock and Indian Runner Ducklings.
GALEN FARMS, G. F. Gibson, Owner, Drawer G, CLYDE, N.Y.

Parcel Post Egg Boxes—NEW FLATS AND FILLERS.
H. K. BRUNNER, 45 Harrison St., New York

300 LICE Or More on One Hen
is by no means uncommon. No one would expect to fatten a steer with that number of "ticks" sucking his blood, but many expect the old hen to go ahead shelling out eggs while lice and mites are sapping her very life. We have counted over 2000 dead lice under a row of ten hens, on a roost board painted the night before with Lee's Lice Killer. This great killer does double duty—contact kills mites, lice, bedbugs, etc. about the roosts; the vapor kills lice on the chickens sitting over it. Put up only in airtight cans.

For sale at over 10,000 towns.
Three sizes—35 cts., 60 cts., $1.00. Poultry Book free.
GEO. H. LEE CO. Omaha, Nebr.

EGGS FOR HATCHING, S.C.W. LEGHORNS, Bred to Lay Winter Eggs; Never Offered For Sale Before, $10.00 Per Hundred, $2.00 Per Setting. ROSEDALE POULTRY FARM, Hempstead, L. I., R. F. D. No. 4., New York Office, 22-24 West 43rd St.

TOM BARRON'S . . . ENGLISH . . . WHITE LEGHORNS
Imported direct from Tom Barron's farm; Tom Barron's defeated all American breeds; 5 hens laid 1190 eggs in 1 year, averaging 238; large handsome, vigorous white cockerels, $3 and $5; eggs, $1; $6 per 100.
P. F. RAFFERTY, Marlboro, Mass.

S. C. White Leghorn Baby Chicks
From Large, Vigorous, Bred to Lay stock. Wyckoff, and Tom Barron's Strain Direct. Wyckoff strain only $8.00 per 100 after June 1st. $75.00 per 1000. Safe arrival guaranteed. Circulars Free. R. T. EWING, Atlantic, Pa.

S. C. W. Leghorn Chicks & Eggs
Purebred, large, vigorous, true Leghorn type. Seven years' experience. Not how many, but how good. Circular. VANCREST POULTRY FARM, Salt Point, New York

BABY CHIX—S. C. White Leghorns, $10 per 100. I. R. Ducklings. Eggs for hatching. Old established business. ROCKY GLEN POULTRY FARM, Poughkeepsie, New York

S. C. WHITE LEGHORNS
Eggs for hatching from selected, mature hens, bred for 18 years for vigor and Egg production.
FLOYD Q. WHITE, Successor to White & Rice, Yorktown, N. Y.

BRED for EGGS—Young strain S. C. W. Leghorns. Many hatches result 90 per cent fertility. Many of the hens lay 6 eggs per week. We guarantee 80 per cent fertility or free renewals; free range stock, 15 eggs, $1; 100 eggs $4, delivered to you. Free valuable instructions for feeding, forcing and getting eggs all the time.
R. J. GIBBIN, Mount Holly, New Jersey

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, HAMILTON FARM, Huntington, New York

EGGS FOR HATCHING from Kulp's famous 242-egg strains. S. C. White Leghorn, S. C. Rhode Island Reds—$1.50 per 15; $5 per hundred. 50 Good Cockerels at $2 each.
H. A BACON, Hillcrest Poultry Farm, Berwyn, Maryland

PUREBRED TOM BARRON STRAIN
WHITE LEGHORN EGGS
Price reduced to $1 per 15 after June 1st.
MAPLEDALE EGG FARM, - Erin, New York

S. C. White Leghorns—WYCKOFF STRAIN—Eggs for hatching, $5 per 100. Unfertile eggs replaced. Robert E. Smith, Nassawadox, Va.

S. C. W. LEGHORN **Baby Chicks** in any numbers. HENHAVEN POULTRY YARDS, Cortland, N. Y.

Atkins' White Leghorns Are Profit Payers—selected hatching eggs, $2 for 15. Robert Atkins, Esopus, N.Y. Established 1889.

Black Leghorn Eggs for Sale—Greatest Winter layers. White eggs. Circular free. WM. C. MERRILL, North Sanford, N.Y.

CHICKS—10c. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C. M. LAUVER, Box 73, Richfield, Pa.

Baby Chicks & Ducklings—S. C. White Leghorns exclusively. From Youngs' strain. Prize winners at Madison Square Garden, 1913. Mating list free. BEAVER DAM POULTRY FARM, Harry Tweddle, Prop., Montgomery, N. Y.

S. C. BROWN & WHITE LEGHORNS, DK. & LT. BRAHMAS, R. I. REDS, W. Wyandottes & Barred Rocks. Show & Utility quality. Won 76 ribbons this season, including New York & Philadelphia. EGGS, Baby CHICKS, Breeders. Illustrated catalog free. Riverdale Poultry Farm, Riverdale, N. J

ROSE COMB BROWN LEGHORNS for Hatching. One dollar for thirteen. LEON L. SAGE, Crown Point, N. Y.

May's Special on Eggs—A glimpse of our stock will prove to you they are the kind. We have bred poultry for years and know the best. Special for May. Orders filled in rotation. 30 Eggs $1.50 of Burnett Black Beauty, Minoreas, also Rhode Island Reds. Pekin Duck or White Turkeys Eggs also for sale. Minoreas Eggs, any number, 5 cents each. Also Rhode Island Reds, Express paid anywhere in U. S. after May 1st, or Parcel Post free. Send for Poultry Advice at once. It's free. W. L. BURNETT, Montgomery, N. Y.

MAKA-SHEL If you want plenty of eggs and strong chicks, feed a rough grit; feed a grit that grinds; feed "Maka-Shel." Used by the largest poultrymen. Ask your dealer or send $1.00 for two 100 lb. bags, f. o. b. cars; Middle and New England States, one ton at $10.00, freight paid. Agents wanted. **GRIT**

EDGE HILL SILICA ROCK CO.
Box J New Brunswick, N. J

DON'T KILL YOUR BABY CHICKS WITH POOR FEED
Our SPECIAL CHICK FEED
is the sweetest and most wholesome feed on the market. It can be fed to human beings. ALWAYS FRESH AND ALWAYS THE SAME. Send for prices and booklet. WM. ORR & SONS, Box I, R, Orr's Mills, New York

THE ORANGE COUNTY POULTRY HOUSE
(Patented)
Combination brooding and laying house. Cheap, Practical, Durable. Saves steps, Saves chicks, Saves money. Catalogue and price list. O. W. MAPES, Middletown, N. Y.

MacKellar's Charcoal
For Poultry is best. Course or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1814
R. MacKELLAR'S SONS CO., Peekskill, N. Y.

CREONOID

Makes the Hen-house Sanitary

A perfectly sanitary hen-house means profitable hens! It's merely a matter of keeping the interior of the hen-house free from lice, flies, nits, etc. This is easily done with Creonoid—a coal-tar product which no vermin can stand.

Creonoid also protects your cows from being pestered by flies and increases their yield of milk.

Ask your dealer for it.

BARRETT MFG. CO.
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Philadelphia
Boston St. Louis
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Cincinnati Kansas City
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The VIBERT REDS

A flock of deep glowing and *brilliant cherry to mahogany red* to the skin rose and single comb Rhode Island Reds, famous for being *the heaviest-laying trapnested flock* of the breed in existence. Long-backed, low-tailed birds, hatched and raised by hens only on absolutely free range in open-front colony houses wide open all winter. A plant on which *roup and white diarrhœa are entirely unknown.*

Highly fertile, strong eggs for hatching the year round.
Chicks in small lots from specially selected eggs.
Cockerels from trapnested hens of high laying rates.
Breeding pens, trios, and utility stock for sale at reduced Spring prices—

all from
THE HEAVIEST-LAYING REDS IN AMERICA

Prompt service, courteous and honorable treatment, backed by a national reputation for square dealing. 1914 mating booklet upon request.

VIBERT RED FARM, Box 1, Weston, N. J.

REDS Rose and Single comb Rhode Island Reds. D. & F. Strain. 109 Acres devoted to them. Heavy layers and show record of 87 first in 12 years. Eggs, $2.00 per 15; $3.50 per 30; $5.00 per 50; $9.00 per 100; $80.00 per 1,000 eggs. Fine breeding cockerels at $5.00 each. We have **size** and **type** that **shows well, looks well, breeds well** and **lays well.** Order direct from this ad. or send for mating list.

DOTY & FREESE **REDS**
R. F. D. 9 Geneseo, N. Y.

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, **194 EGGS.** Official record. We offer **EGGS FOR HATCHING,** from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. **COLONIAL FARM, Box O, Temple, New Hampshire**

Austin's 200 Egg Strain S.C. R.I. Reds
Standard bred; high record stock; red to the skin. Half prices on eggs for hatching. Booked up for season on chicks. : : : :
AUSTIN'S POULTRY FARM, Box 17, Centre Harbor, N. H.

R. I. Reds, Indian Runner Ducks
Eggs for hatching. Breeding stock.
Sinclair Smith, 602 5th St., Brooklyn, N. Y.

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs.
Glenview Poultry Farm, Rockville, Conn.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. **A. QUACKENBUSH, Darien, Conn.**

FOR SALE—PURE-BRED RHODE ISLAND RED'S EGGS per 15 $1.00—**S. C. BLACK MINORCA EGGS** 5c each; layers of large white eggs. **L. M. Stewart, Vega, N. Y.**

White Wyandottes & Buff Leghorns
Special low prices now. Circulars free.
OWNLAND FARM, - Box 497, South Hammond, New York

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale.
THOMAS C. GORDON, - Brockport, N. Y.

EGGS—Choice Buff Wyandotte eggs for sale, 75c for fifteen, $4.00 a hundred. Free range.
CHAS. I. MILLER, R.F.D. No. 1, Hudson, N. Y.

Ring-Neck Pheasant Eggs—**$2.75 A SETTING OF 15.** Golden and Silver Pheasant Eggs, $3.75 a setting of 15. Ring-Neck Pheasant Eggs, $15 per 100. Address **SUPT. TAHLULAH FARM, Babylon, Long Island, New York**

FOR SALE—Choice Three-band Italian Queens. Tested—$2; untested, after June 1—$1 Write for booklet. **W. K. Rockwell, Bloomfield, Conn.**

Belgian Hares AND WHITE ANGORA RABBITS—Send for prices and booklet free. **Pleasant Valley Rabbit Farm, D. W. Phelps, Prop., Georgetown, N. Y.**

BARRED ROCKS
Eggs—$1 per 15; $3.50 per 100. Baby chicks.
B. H. HENION, - Brockport, New York

"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. **Dr. HAYMAN, Box R 48, Dovlestown, Pa.**

POULTRYMEN—Send 2c stamp for Illustrated price list describing 35 varieties. **EAST DONEGAL POULTRY YARDS, MARIETTA, PA.**

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed Catalogue free. **W. R. STEVENS, Culver Road, Lyons, N.Y.**

The Henyard.

Feeding Young Chicks.

A question of great interest to amateur poultrymen at this time of the year is how to feed young chicks. Here is the way they do it at the Agricultural Station at Mountain Grove, Missouri. "We sprinkle a little clover chaff, shredded Alfalfa, fine cut straw, or other clean litter free from must or mold, over the floor of the brooder before the chicks are put in it. We fill a small fountain with sour milk or buttermilk for the first half of the day, and water for the last half. If you cannot get the milk, then see that they always have plenty of pure water. We prefer sour milk to sweet milk, because much of the harmful bacteria in the intestinal tract is prevented from developing by the lactic acid of the sour milk. The acid of milk aids digestion, kills bacteria and has an appetizing effect.

"Begin by feeding a mixture of two-thirds rolled oats, one-third wheat bran, with a small amount of fine charcoal. Oatmeal is the finest food known for young animals. This is fed on a clean board four or five times a day, and the board removed after five minutes. Clean sand or fine grit is given at the same time. After two or three days we begin feeding a little commercial chick feed with the above mixture, and gradually increase this. The rolled oats and bran are fed morning, noon and night, and the chick feed thrown in the litter between meals. After the fifth day feed a dry mash made as follows: Two parts wheat bran, one part cornmeal, one part middlings, one-half part rolled oats. To every 100 pounds of this add a handful of charcoal, a handful of bone meal, and one-half pound of table salt, mixing it in thoroughly. When the chicks are five or six weeks old their ration of chick feed and rolled oats may be gradually changed to cracked corn, wheat and kaffir corn. Continue the dry mash, and the sour milk if you can get it. Get the chicks out on bare ground and in colony houses as soon as possible. Feed them from hoppers both of dry mash and grains. Let them have free range and help themselves to all the feed they want. If you want to push them rapidly feed a wet mash once a day with 10% of fine beef scrap in it."

This is the Missouri way, but I prefer the Cornell College way.

GEO. A. COSGROVE.

Poor Hatch.

I have about 200 pullets in fine condition, are laying very well, but it seems their eggs do not hatch. I had two hens coming off, one got two chicks, the other none. The eggs were all fertile and full-grown chick in every egg. What can be the trouble? I started the incubator with 350 eggs before the hens were due. They are White Orpingtons. The shell does not come off the egg when boiled.

New York. E. H.

There is evidently a lack of vigor in your flock somewhere which prevents your eggs from hatching, though fertile. This may be due to the heavy laying of the pullets through the Winter, or, possibly to an excessive number of pullets with the males in the breeding pen; or the males, themselves, may be at fault. Close confinement of the flock and heavy feeding through the Winter also tends to lack of vigorous fertility in the Spring. As the season advances, particularly after you have turned your fowls out, this condition will probably improve, and you may get a better hatch from the eggs in the incubator than from those set earlier under hens. If it can well be avoided, eggs from fowls that have been closely confined through the Winter, and fed for egg production, should not be depended upon for hatching in the Spring. They may be fertile, but are apt to contain weak germs which can never develop into vigorous chicks. M. B. D.

Loss of Young Chicks.

Do S. C. W. Leghorn day-old chicks have wing feathers that cover their bodies? I have lost 52 out of 200 and a lot more are on the same road as they are rocking backing and forth, don't want to eat, and a lot of them had feathers longer than their bodies. The seller claims that these chicks being older than day old, and being on the road for two days without anything to eat were starved so when they did start to eat couldn't stand it. F. W. M.

Connecticut.

The wing feathers of White Leghorn chicks develop rapidly but do not cover their bodies at one day old. They are well started by the beginning of the third day, however, and in a few days more are as long as the chicks' bodies; some that I have now, five days from the incubator, have wings that extend to within about three-quarters of an inch from the extreme end of the body and their tails are about one-half inch long. Your experience in losing chicks is far from uncommon, whether purchased as "day olds" or hatched on the premises. Many chicks start out in life with a lack of vitality which condemns them to a very brief existence. M. B. D.

On Farms Where Efficiency Rules

—where progressiveness marks every feature of equipment and method—you will find the buildings covered, once and forever, with

J-M ASBESTOS ROOFING

"The Roll of Honor"

A roofing of everlasting, pliable stone, made of pure Asbestos and Trinidad Lake Asphalt. A perfect protection for otherwise perishable buildings. Requires no paint or other protection. No maintenance cost. Keeps buildings cool in summer, warm in winter. Affords wonderful fire protection. Proof against every weather condition. Easy to lay with J-M Cleats, which come with each roll. White and attractive—no cement-smeared, unsightly joints or laps.

J-M REGAL ROOFING was perfected to supply a demand for a rubber type, wool felt roofing, lower in price than J-M ASBESTOS, but containing the H. W. Johns-Manville Co.'s standard of quality and service. Also applied with J-M CLEATS.

J-M ASBESTOS SHINGLES meet the demand for a decorative fire-proof residence roofing that never needs paint.

Your dealer keeps J-M Roofings, or you may order direct. Write nearest branch for Book No. 38

The Sharples Separator Co.
West Chester Pa. U.S.A.

April 8, 1914.

H. W. Johns-Manville Company,
New York City, New York.

Gentlemen:

We are using your Asbestos Roofing on our new dairy barn, having decided to adopt it because of the satisfaction it has given us on other buildings. Our barn and equipment are thoroughly modern in every way, and our dairy is run on a profit-producing basis, so that the feature of ultimate saving which can be made with your permanent roofing was an attractive one. It also gives an appearance of neatness, which is very valuable on a dairy farm like ours. We are glad to recommend it.

Yours very truly,
THE SHARPLES SEPARATOR CO.
R. L. Sharples
Vice-President.

PTS-HLC.

JOHNS-MANVILLE SERVICE COVERS THE CONTINENT

H. W. JOHNS-MANVILLE CO.

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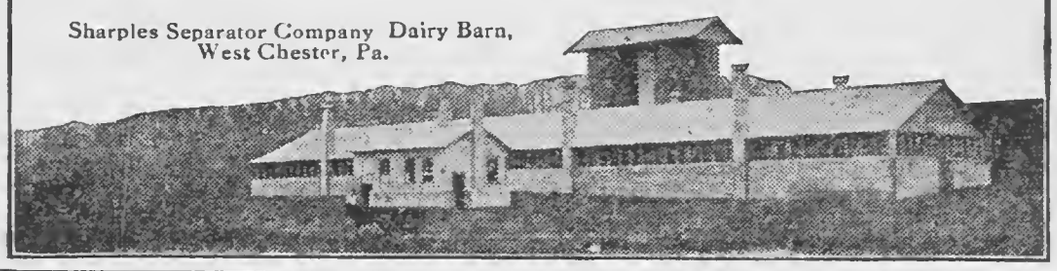
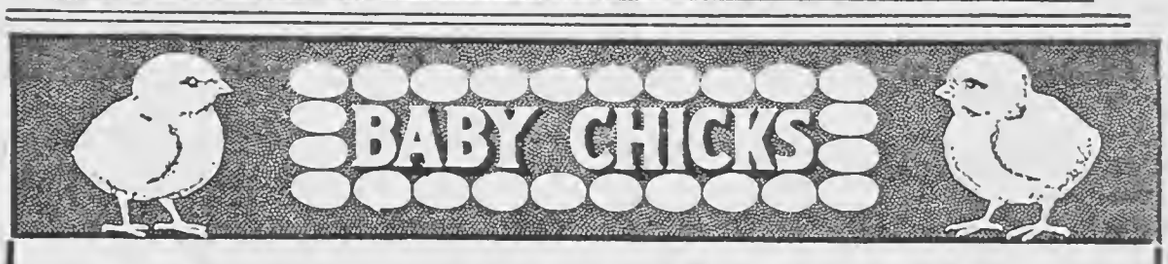
Sharples Separator Company Dairy Barn, West Chester, Pa.





10,000 KERR'S CHICKS at CUT PRICES

Ready for Shipment May 28th and June 2nd

	25 Chicks	50 Chicks	100 Chicks
S. C. White Leghorns	$3.00	$5.00	$10.00
Barred Plymouth Rocks	3.50	6.00	12.00
Rhode Island Reds	3.75	6.50	13.00

Regular price $12.00 to $20.00 per 100.

Terms Cash with order. Can not ship C.O.D., but will guarantee to deliver the chicks in first-class condition. If any are dead upon arrival will refund your money or replace them free of charge. These chicks are from healthy, vigorous, pure breed stock. The kind that will produce eggs and plenty of them.

To be sure of getting Kerr's Top Notch Quality Chicks order now. Send for **Free Catalogue No. 5.**

THE KERR CHICKERY FRENCHTOWN, N. J.

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. **Route 24, Athens, Pa.**

35 Best Breeds Poultry—Eggs, reduced Price. Big new Illustrated Circular Free. **JOHN E. HEATWOLE, Harrisonburg, Virginia**

White Indian Runner Duck Eggs
from blue ribbon winners at Boston 1913 and 1914. $1.50 per twelve. **Frank F. Terry, Assonet, Mass.**

White Indian Runner Duck Eggs—Guaranteed white egg strain. $1.50 per 13. **FRED S. DEYOE, Hunter, Greene Co., N. Y.**

Indian Runner Ducks—Most profitable fowl. Book, "Culture of Ducks," free. **Mrs. J. A. PUGH, South Williamsport, Penn.**

Indian Runner Duck Eggs—$1.25 per 12; $6 per 100, express paid. **CRANDALL FARMS, Albion, New York**

Indian Runner Duck Eggs—Fawn and white, Valentine's strain. Bred from prize-winning birds. White egg strain. Eggs $1 per 13. **ROBERT K. TWEDDLE, Montgomery, N. Y.**

GIANT BRONZE TURKEY EGGS, $4.00 per 10
RHODE ISLAND RED EGGS, $1.00 per 15
INDIAN RUNNER DUCK EGGS, $1.00 per 12
H. J. VAN DYKE, GETTYSBURG, PENNSYLVANIA

TURKEY, CHICKEN, and DUCK EGGS—15 varieties by Insured Parcel Post and at reduced prices. **W. R. CARLE, Rt. 1, Jacobsburg, Ohio**

WHITE CHINESE GEESE, 90 egg strain. Eggs 25c each. Fertility guaranteed; prompt shipment. **Geo. E. Howell, Spruce Farm, Howells, N. Y.**

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS-GUINEAS and HARES. Stock and eggs. 60 page catalogue free. **H.A. SOUDER, Box 29, Sellersville, Pa.**

Silver Campines, White Orpingtons, Anconas
Prize stock. Extraordinary layers. Eggs, Chicks.
ALGONQUIN FARMS, - Amesbury, Mass.

S. C. Black Minorcas—Eggs, $4. 100; $1. 15. Prize stock. **G. C. Miller, Oxford, N. J.**

HIGH GRADE FARM-RAISED RHODE ISLAND REDS, and White Plymouth Rocks, Eggs for hatching, $1; 30 eggs, $1.50; Runner Duck eggs $1; Chick, $12.50 per 100. **L. A. ROBBINS, Pepperell, Massachusetts**

Bargain Prices Now for Runner
ALSO S. C. WHITE LEGHORN EGGS.
Mrs. GALVIN WILCOX, - Spencer, N. Y.

STANDARD LIVE STOCK BOOKS

Sheep in America, Wing	$1.00
Types and Breeds of Farm Animals, Plumb	2.00
Swine in America, Coburn	2.50
Diseases of Animals, Mayo	1.50
Science and Practice of Cheese Making, Van Slyke	1.75
Feeds and Feeding, Henry	2.25
Practical Dairy Bacteriology, Conn	1.25
The Horse Book, Johnstone	2.00
Forage Crops, Voorhees	1.50
Animal Husbandry for Schools, Harper	1.40
Questions and Answers on Butter Making, Publow	.50

THE RURAL NEW-YORKER, 333 W. 30th St., New York

PUBLISHER'S DESK

Occasionally a farmer is a little careless in his correspondence. Recently we had a claim from one of them against a Brooklyn concern. We made a demand for settlement, and the remittance was promptly sent the farmer, but no reply was made to our letter. The farmer also neglected to advise us that he had received the settlement. In accordance with our custom, we continued to follow up the complaint, and it was not until some months later that we forced the information from the Brooklyn concern that the account had been adjusted. This, of course, was embarrassing for us. The experience is rare, but it does occasionally occur. If a shipper receives communication of any kind after complaint is forwarded to us, the new information should be promptly forwarded, and remittances should be promptly reported. There is no charge in any case for what we can do; but the advice will save trouble, loss of time and embarrassment to us.

I found my imaginary name on the suckers' list last Fall. In August I attended the Cambridge fair and while there, I ran across a man who gave three agricultural papers for three years and a fountain pen, all for one dollar, you see, something for nothing. I took them; about three weeks later I saw on the publisher's page of THE R. N.-Y., warning of this game, so I gave it up for lost right away, and it was lost. C. W. N.
New York.

The bargain counter is a poor place to look for service, and service is what is needed in a farm paper. The fountain pen fakers have been debarred from fairs in Ohio and Michigan; and they ought to be denied the privilege of playing their deceptive game on all New York State fair grounds.

It affords me pleasure to inform you that my recent claim of $6.60 against the Adams Express Company for a damaged case of eggs, has been paid and I hereby thank you for the valuable service you thus rendered me. If at any time I can give you any assistance at this end it will be a pleasure to do so.
Maryland. J. B. W.

I have at last received package from Adams Express Company—one year from time of shipment. I paid them the $3.50 which they said was transportation expenses. The goods were all right but badly mussed up. I am extremely grateful to you for all your kindness and trouble in the matter. I shall lose no opportunity to speak a good word for you, and as the Irishman said, "May your powers never grow less." W. M.
Rhode Island.

Kindly pardon my tardiness in informing you of my settlement with the Adams Express Company in regard to dead chicks, amount $12.24. Records of carelessness were complete but they withheld payment. I want to express my sincere thanks for your earnest efforts and I feel the matter was cleared up through your kindness. C. M. V.
Rhode Island.

I received check of $6.20 from Adams Express Company, which is my full claim against them. I thank you very much for entering my claim. F. A. S.
New York.

I received payment of $9.60 for the eggs sent Mr. Mapes which became so oily while in possession of Adams Express Company that he could not use them. I thank you for your work and will pay you whatever is right for same.
New York. H. J. T.

Received check for $12.60 from Adams Express Company to cover my egg shipment of August 2, which contained cracked, broken and stained eggs to that amount. Please accept my thanks.
Pennsylvania. W. J. K.

I received check for $7.20 in settlement of my claim against Adams Express Company for the box of meat lost in transit. Send me your charges and I will settle. Thank you kindly for your help. M. S.
Ohio.

The above letters affecting one express company shows the necessity of some system in the shipment and marketing of farm food products. We could fill columns of such reports every week. The first step in the saving of these losses, is to assemble the goods at the shipping stations, and ship in car lots to men in the markets representing the shippers. The essential to this system is coöperative organizations of shippers.

I was interested in your account of Geo. F. Cole in THE R. N.-Y. Perhaps you will be interested to see how slickly he fooled us. He offered two or three cents better prices for eggs than I was getting, at Faneuil Hall market, but if he did not pay for any of his goods, he could afford to offer a good price.
Massachusetts. C. H. G.

For 25 years now I have been warning country shippers against this trick of irresponsible commission men. It would seem that the shipper ought to catch on after a while. The commission man who offers prices above the market, is reasonably sure to leave you his creditor in the end. At different times we thought it impossible that Cole could ever get shipments again except for cash in advance, but each time he bobs up with a haul from a new section. Put a pin in him now.

You seem to have tried to collect many bad bills for your readers, and I am going to ask your kind offices in an effort to get the enclosed bill for $18.60 for me from Jos. Ash, Sweet Clover Farms Dairy, 643 Lexington Ave., New York. This covers eggs sent to Mr. Ash in 1912.
New York. J. E. O.

There are things beyond us, and the collection of this claim is one of them. Our attorneys fell down on the job as well as ourselves. If these city concerns cannot show a satisfactory rating, it is better to have cash before the goods are shipped. Where you are a member of a coöperative company the manager of your company will have a rating before he ships eggs to a customer. He may sell them through the State Market Commission, and in either case you will be $18.60 ahead and probably more owing to better price.

Edwin K. Hanley of Binghamton, general manager of the National Development Company, who was last week found guilty of having used the United States mails for fraudulent purposes, also appeared before Judge George W. Ray yesterday, but the passing of sentence was deferred because Hanley has agreed to pay back about $2,000 to persons who put money into the Development Company. "I commit you to jail until May 26," judge Ray told the prisoner, "in order that you may have an opportunity to make restitution, but this does not involve any promise whatever on the part of the court."—Local Paper.

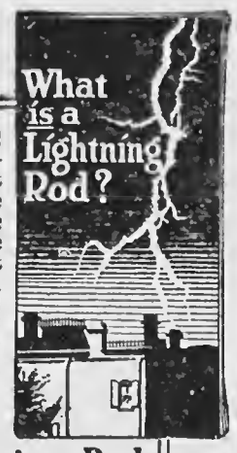
We are glad to see a tendency on the part of courts to encourage crooks to make restitution to the poor people who have become victims of their schemes.

I saw an advertisement of the Cluthe Co., 125 East 23rd Street, New York City, in which they offer to send a Cluthe truss on 60 days' trial without the purchaser having to risk a single cent. I sent $12 and got, to me, a worthless and crude appliance. I returned it twice and each time they sent it back and refused to return my money as originally promised. F. F. H.
Ohio.

When we read the advertisement we got the idea that it stated clearly that the purchaser was entitled to 60 days' trial, and that if the test did not prove the value of the truss then it was to be returned and the purchase price would be refunded. We wrote the company and got a reply from Chas. Cluthe & Sons, Bloomfield, N. J., who seem to be the proprietors. They say that they do not give such a broad guarantee as we understood. In their letter to us they ignore the terms of the advertisement, and say they accept orders only as per the booklet, as per guarantee, and as per order blank. This order blank specified to guarantee to fulfill all claims made for it in book entitled "Cluthe's Advice to the Ruptured." The order blank also says this is the "only device for rupture that is sent on 60 days' trial and guaranteed to hold successfully; it is the most comfortable holder ever invented."

It would seem from the correspondence that the advertisement implied plainly enough that the purchaser was to have an unconditional trial of 60 days without risk of a cent; but that the order blank modified this condition so that the truss was guaranteed only to the extent specified in the book. Our notion is that the layman like ourselves would get his idea from the advertisement, and would not bother to decipher the technical terms of the booklet or of the order blank. The plan of salesmanship has evidently been carefully worked out. There is little question that an astute mind has worked out all the details to make it technically legal; but our correspondent who accepted the advertisement in good faith is out his $12. If our laws do sanction such a transaction is our application of law and justice all that it should be? J. J. D.

Free!



When you are solicited to buy, **know** what arguments are sound and what are false. Here are some **real facts about lightning** protection; facts you've long wanted to know, but never before published. 20 pages, 9 in. by 4, printed and profusely illustrated in two colors. One copy free; extra copies 4c each.
Cole Bros. Lightning Rod Co. 314 S. 7th St., St. Louis.

C B F R Lightning Rod

CRAINE SILO IT CAN'T COLLAPSE

The Craine Patent Triple Wall Silo has thick vertical wooden staves, inside; horizontal patent wooden covering thoroughly nailed, outside; and water-proof felt-like rubber roofing between. This makes a perfect non-conductor of heat. SCIENTIFIC in every feature of its construction.

IT'S FROST-PROOF
AIR-TIGHT PERMANENT

No silage spoiled by contact with concrete, tile or any mineral. Craine silage is sweet, clean and perfectly preserved—it is "drawn from the wood." No troublesome iron hoops requiring annual overhauling. The first cost is low and is the last. The Craine is, therefore, the cheapest on the market. Ask for illustrated booklet.

W. L. Scott Lumber Co.
Norwich, N. Y. Milwaukee Wis. Kansas City, Mo.

Unadilla Silos Are Trustworthy

They preserve silage perfectly. Combine best construction, greatest durability and convenience. Easy to erect and keep air-tight. Write today for catalogue. Agents wanted. Address
UNADILLA SILO CO., Box C, Unadilla, N. Y

Fill Your Silo Pay when Satisfied

Over 64 Years Experience Back of it.

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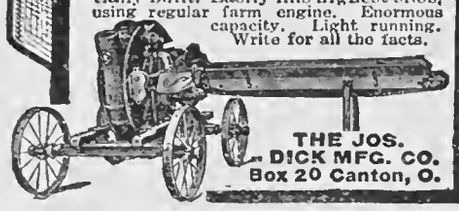

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Products, Prices and Trade.

PRODUCE RECEIPTS AT NEW YORK.

Week ending May 14.

Butter, lbs.	3,065,160
Eggs, doz.	5,533,530
Apples, bushels	55,300
Potatoes, bushels	103,700
Hay, tons	7,552
Wheat, bushels	962,560
Corn, bushels	34,350
Oats, bushels	408,000

Wholesale Prices at New York, Week Ending May 15, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.50	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Last year the following preminms over contract prices were paid high-scoring dairies: April, May and June, seven cents per 100 pounds; July, eight; August, 10; September and October, 11; November, five.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 5¼ to 5½ cents per quart. Two or three large milk concerns in New York are working up new restaurant trade on the basis of $1.85 per 40-quart can.

BUTTER.

The usual defects in changing from barn feed to pasture are very noticeable in this week's receipts—a mixture of flavor which many consumers do not like. Buyers are taking only enough for current needs until this hay-to-grass condition is over. This naturally makes the market unsettled and tending toward lower prices.

Creamery, extra, lb	26 @	26½
Good to Choice	22 @	24
Lower Grades	19 @	21
Storage	17 @	22
State Dairy, best	25 @	26
Common to Good	18 @	22
Factory	14 @	18
Packing Stock	15 @	17

Elgin, Ill., butter market 26 cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

The market is weak and a good many cuts in price are noted—one-fourth cent regularly, and more if necessary to move stock.

Whole Milk, new, best	13 @	14
Old, best.	17½@	18½
Common to good	12 @	15

EGGS.

Receipts are large, and quality running poor. Considerable trouble is reported from mixtures of incubator eggs with fresh stock. In one instance 18 dozen out of a 30-dozen case were incubators, with a large proportion of rots and spots. Of course such things are contrary to law, but who is going to enforce the law against the man who sends such stuff to market? Certainly, not the dealers in the city. They have all they can attend to without looking for further trouble. But the law of common sense ought to prevent this sort of abuse of the egg business. Anyone who thinks he is getting fresh-egg prices for these tested-out eggs is mistaken. If they are not rotten the receiver may make returns at what they are worth and not say anything, handling the deal the easiest way.

White, choice to fancy, large	22 @	23
Common to good	18 @	21
Mixed colors, best.	21 @	22
Common to good.	17 @	20
Western fresh, white	21 @	22
Lower grades	15 @	18

FRESH FRUITS.

Apples in rather free supply and market dull except for fancy which are scarce. The writer has noticed more scald this year than for some time past. Strawberries are getting plentiful, and selling low, considering the good quality of a large proportion of the receipts.

Apples—Russet, bbl.	3 00 @	4 00
Spy	3 00 @	5 00
Ben Davis	3 00 @	4 00
Greening	4.00 @	6 00
Newtown	6 00 @	7 00
Baldwin	3 00 @	5 00
Western, box	1 25 @	2 25
Strawberries, Va., qt.	8 @	12
Carolina	8 @	15

BEANS.

Marrow, 100 lbs.	4 85 @	5 40
Medium	3 70 @	3 85
Pea	3 20 @	3 75
Red Kidney	5 70 @	5 90
White Kidney	5 65 @	5 75
Yellow Eye	5 25 @	5 50
Lima, California	7 35 @	7 40

HOPS.

Prime to choice	38 @	40
Common to good.	35 @	37
Pacific Coast	18 @	20
Old stock	15 @	18
German crop	63 @	67

VEGETABLES.

Market on old potatoes very dull, and many sales 25 cents under last week's figures. Prices at some interior points are on a higher basis than New York, there being less competition with the European and new southern crop. Florida stock is selling well and running better in quality. Asparagus is in large supply from nearby and discounting the southern in quality. New cabbage in better condition, some having sold up to $2 per barrel crate.

Potatoes—Maine, 180 lbs.	2 37 @	2 62
State, bulk, 180 lbs.	2 25 @	2 50
Bermuda, bbl,	2 50 @	3 00
Florida	2 75 @	5 35
Sweet Potatoes, bbl	1 00 @	2 00
Beets, 100 bunches	2 00 @	6 00
Carrots, bbl.	1 50 @	3 00
Asparagus, California, doz.	1 00 @	2 50
Southern, doz	75 @	1 50
Nearby	1 25 @	2 75
Cabbage, New, bbl. crate	1 25 @	1 75
Chicory, bbl.	1 00 @	2 00
Kale, bbl.	50 @	75
Lettuce, half-bbl. basket	25 @	75
Onions—Old, 100 lb. bag	2 50 @	3 50
Southern, New, bu	1 50 @	2 25
Okra, bu	2 00 @	3 00
Peppers, Southern, bu.	2 00 @	2 75
Peas, Southern, bu.	50 @	1 75
Shallots, bbl.	2 00 @	2 50
Salsify, 100 bunches	4 00 @	5 00
Spinach, bbl.	25 @	1 25
String Beans, bu.	50 @	3 00
Squash, New, bu.	50 @	1 25
Egg Plants, Southern, bu.	1 00 @	3 00
Tomatoes, Southern, 6 bkt. crate	1 00 @	2 50

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, doz.	50 @	75
No. 2, box	2 00 @	3 50
Mushrooms, lb.	15 @	35
Tomatoes, lb.	15 @	20

LIVE POULTRY.

Broilers, lb.	35 @	40
Fowls	15 @	18
Roosters	11 @	12
Ducks	13 @	14
Geese	10 @	11

DRESSED POULTRY.

Chickens, choice broilers, lb.	40 @	45
Squab broilers, pair	70 @	90
Broilers, common to good	30 @	35
Fowls	15 @	18
Ducks	8 @	13
Geese	9 @	14
Squabs, doz.	2 00 @	4 50

HAY AND STRAW.

Most grades of hay are 50 cents lower, medium grades being in surplus. Straw market well and prices practically unchanged.

Hay, Timothy No. 1, ton	21 50 @22 00
Standard	21 00 @21 50
No. 2	19 00 @20 50
No. 3	17 00 @18 00
Clover mixed	15 00 @20 00
Straw, Rye	16 00 @17 00

LIVE STOCK.

Native Steers	7 25 @	7 50
Bulls	5 50 @	7 60
Cows	3 25 @	6 75
Calves, prime veal, 100 lbs.	8 50 @	11 50
Culls	5 00 @	6 00
Sheep, 100 lbs	4 25 @	5 25
Lambs	8 00 @	8 25
Hogs	8 50 @	8 90

COUNTRY-DRESSED MEATS.

Calves, best	12 @	15
Fair to good	09 @	11
Lambs, Hothouse, each	4 00 @	7 50

GRAIN.

Wheat, No. 1, Northern Spring	1 05 @	..
No. 2, Red	1 04 @	..
No. 2, Hard Winter	1 03 @	..
Corn, as to quality, bush.	69 @	78
Oats, as to weight, bush.	43 @	46
Rye	65 @	70

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30 @	35
Mixed colors, new laid	24 @	25
Ordinary grades	20 @	22
Butter, fancy prints, lb.	32 @	34
Tub, choice	27 @	29
Chickens, roasting, lb.	30 @	32
Fowls	25 @	2 8

The making of moving picture films in this country has become a large industry. During the nine months ending March 31, we exported 146,000,000 linear feet of film. England takes nearly nine-tenths of our film exports.

*

Our imports of meats from Argentina since January 1 have been: 298,000 quarters of beef, 73,000 carcasses of mutton and 37,000 of lamb. Following are current retail prices of meats in New York. These are not the figures of "special sales," or the highest or lowest prices, but are fairly representative of business with many thousands of consumers: Roasting beef, 11 to 15 cents, according to cut; leg of mutton, 12½; leg of lamb, 15; leg of veal 16; pork chops, 18; stewing mutton, eight cents.

Wheat $1; potatoes $1 by the car, by the bushel $1.10 to $1.15; oats 46; corn 80; barley 75; rye 75; butter 28; eggs 18; milk 16 a gallon; lard 16; bacon 22; beef 14 to 20; veal 18 to 25; cows 50 to 95; calves, four weeks old, from $8 to $10 per 100; fat cattle $7.50 to $9; pigs, four weeks old, $6 to $8 per pair. P. W. L.

Balliettsville, Pa.

Cows, fresh, $80 to $120 as to quality; demand for dairy cattle is very brisk. Milk at local creamery or shipping station $1.20 for a 40-quart can. No local butter is offered on market. Eggs 20 to 21. Farmers in this locality have very little to offer outside of milk, eggs and poultry. P. M. D.

No. Branch, N. J.

Cows $50 and up; butter 28; milk six cents quart. A1 hay $14; apples 75 to $1; potatoes 65; onions $1.50; oats 45 to 50; corn 80. These prices are at private sale. H. E. L.

Rheims, N. Y.

May 10. Farm horses run from $100 to $250; mules about the same. At a public sale two days ago of unregistered Holsteins, prices for milch cows were as follows: 27 mature cows averaged $106 per head, 31 bred yearling heifers $70 per head. Milk delivered at creamery $1.60 per 100 pounds. J. W. C.

Lincoln, Neb.

This section produces corn, oats, hogs, cattle and horses. Farmers prepare and cultivate better than formerly; but more ground is plowed each year than should be. This is accounted for by the high rent paid by tenants, compelling them to get every dollar possible from the soil. Other farmers who own land, think they must do the same, and hence farms are getting poorer. But there are some, who grow Alfalfa and feed all their crops. Silos are getting plentiful; dairy cows are taking place of beef cattle. Much manure is wasted leaching and burning. Farmers are learning to control the San José scale in orchards. Corn 65; oats 32; hogs 7½ cents per pound; prime cattle 8; butcher stuff 7. Horses, chunks, $140 to $160; heavy horses $180 to $220; drivers $125 to $175. O. G. H.

Albany, Ind.

Cows $30 to $100; milk from 8 to 10 cents per quart; butter 30; eggs 15 cents per pound; chicken 14; lard 13; potatoes 75; corn 75; oats 40; rye 65; wheat 95;. Hay $15; hogs 10½; beef cattle, dressed, 12½ to 13; veal calves, live, 8½ to 9; sheep, live 4½; lambs 6.

Barree, Pa. J. S.

May 4. Prices of horses, say from $75 to $200; cows from $50 to $80. Hogs $8.50 per cwt.; steers six to seven cents; calves 10; lambs six to seven. Butterfat 22½; butter 25; eggs 17; corn 60 to 65 per 70 pounds; oats 40 to 50 as to quality, very poor light oats last year; wheat 92. Fowls 11; turkey 15; potatoes 50 to 65. Spring rather late, oats nearly sown and coming up, plowing for corn. Garden truck being planted; had light frosts last week. We have considerable rain past two weeks. Old peach trees mostly killed, the younger trees seem to be more alive; cherry and plum trees coming to bloom. This is one of the best farming counties in the State. Land price runs from $65 to $125 to the acre. It is a great onion raising county. Hundreds of acres raised each year, prices about 60 cents per bushel, last year. One firm is putting out nearly 100 acres of onions this year. Farm help $25 per month and board, day help rather scarce. Wagon from $1 to $1.50 per day. I think free trade is very wrong as it brings our high-priced land in competition with the cheap lands of other countries. With the present high wages people can well afford to pay the ruling prices of produce. W. D.

Albion, Ill.

We live too close to Washington, D. C., for much farming to be done. About half of the inhabitants of this county (Alexandria) find employment in the city. Quite a lot of milk sold at 16 to 17 cents per gallon to the middleman. Winter price 20 to 22. Some fruit growing and trucking; the people along the mountain country produce the staple crops, such as cattle, hogs, hay, corn and wheat. Horses and cows are scarce and high. Grain and stock bring as much here as in the city. H. C. S.

Barcroft, Va.

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WANTED ON POULTRY FARM—Man and wife. E. L. TREWER, Freehold, N. J.

WANTED—Superintendent for small truck farm in Maryland. A. N. L., care R. N.-Y., 333 W. 30th St., New York.

POSITION WANTED—Poultry man with years of experience in all lines, including turkeys, geese, ducks and pheasants. C. F. YAKE, Lebanon, Pa.

WANTED—Good steady farmhand, able to do all kinds of farm work including milking; state wages. RUFUS GERHARD, R. D. No. 1, Weatherly, Pa.

WANTED POSITION AS HERDSMAN in an A1 Guernsey herd where an experienced A. R. feeder can get results; married, one child. BOX 192, Peekskill, N. Y.

WANTED—Single man for general farm work. Must be strictly sober and honest; good milker; wages $25, board and washing. Send reference in first letter. OAKHURST FARM, Millerton, N. Y.

WANTED, A PRACTICAL FARMER, to take charge of a 34-acre farm near Greenwich, Conn. As a special inducement to good, reliable man, owner will make no charge for first year's rent. Apply MADAME EUGENIE, 634 Fifth Ave., New York.

CORNELL AGRICULTURAL STUDENT, finishing third year, who has had five summers' actual farm experience, desires position during vacation on an up-to-date farm within 100 miles of New York; can give references. C. B. H., 411 Dryden Road, Ithaca, N. Y.

POSITION WANTED as working foreman by married man, 35 years old, five children; hustler; twenty years' experience; fruit or dairy farm preferred; can take charge of 30 cows with no help except during harvest; does not drink. B. J., care R. N.-Y., 333 West 30th St., New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

FOR SALE—Car good hay; $15 per ton, f. o. b. L. H. STREVY, R. D. 47, New Albany, Pa.

WANTED—2¼ bushels each, white kidney and marrow beans. FRIEND TIBBITTS, New Hartford, N. Y.

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FOR SALE—Fruit farm; 3,500 trees—apple, peach, pear, quince, cherry; 3 acres strawberries; all tillable; ten minutes' walk to railroad station. Price $7,500. E. D. HUFFMAN, Owner, Marshall's Creek, Monroe County, Pa.

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HUMOROUS

HE had just been rejected, and the shock had made a deep effect upon him. "I shall never marry now," he said dejectedly. "Don't be foolish! Why not?" she inquired. "Well," he said, "if you won't have me, who will?"—Credit Lost.

LADY, in boot shop: "These shoes pinch terribly. Haven't you anything larger?" Assistant: "You asked for number two's, ma'am. I can give you number three's or number four's or——" Lady: "The idea! I want something larger in number two's!"—Melbourne Australasian.

CRUSTY TRAVELLER, in railway carriage, caustically; "I am glad to see your baby has stopped crying, madam." Mother: "Yes sir. You are the only thing that's pleased him since he saw the animals at the Zoo!"—Melbourne Australasian.

"HAVE you anything to say before sentence is pronounced against you?" asked the judge. "The only thing I'm kickin' about," answered the convicted burglar, "is bein' identified by a man that kep' his head under the bed-clothes the whole time. That's wrong."—Chicago Record.

BEGGAR: "Mister, I ain't had nothing to eat for two days." Gentleman: "You told me that very same story a week ago." Beggar: "Oh! Then surely, boss, you'll help a poor man what ain't had nothin' to eat for nine days?"—Credit Lost.

"SOME adjectives," said a school teacher, "are made from nouns, such as 'dangerous,' meaning full of danger, and 'hazardous,' full of hazard. Can any body give me another example?" "Yes, sir," replied a fat boy. "Pious—full of pie!"—Melbourne Australasian.

"COLONEL," said the book agent to the Texas rancher, "those are mighty fine boys of yours." "The finest ever, stranger," acquiesced the colonel. "The finest in Texas." "I reckon you buy them anything they want?" "Why sure, stranger; I buy them anything they need, whether they want it or not." "Then, colonel, let me sell you a cyclopedia for them. There's nothing else that will benefit them so much." The colonel looked at the agent in astonishment. "Why, stranger," said he, "them boys of mine don't need no cyclopedias. They ride mules."—Lippincott's.

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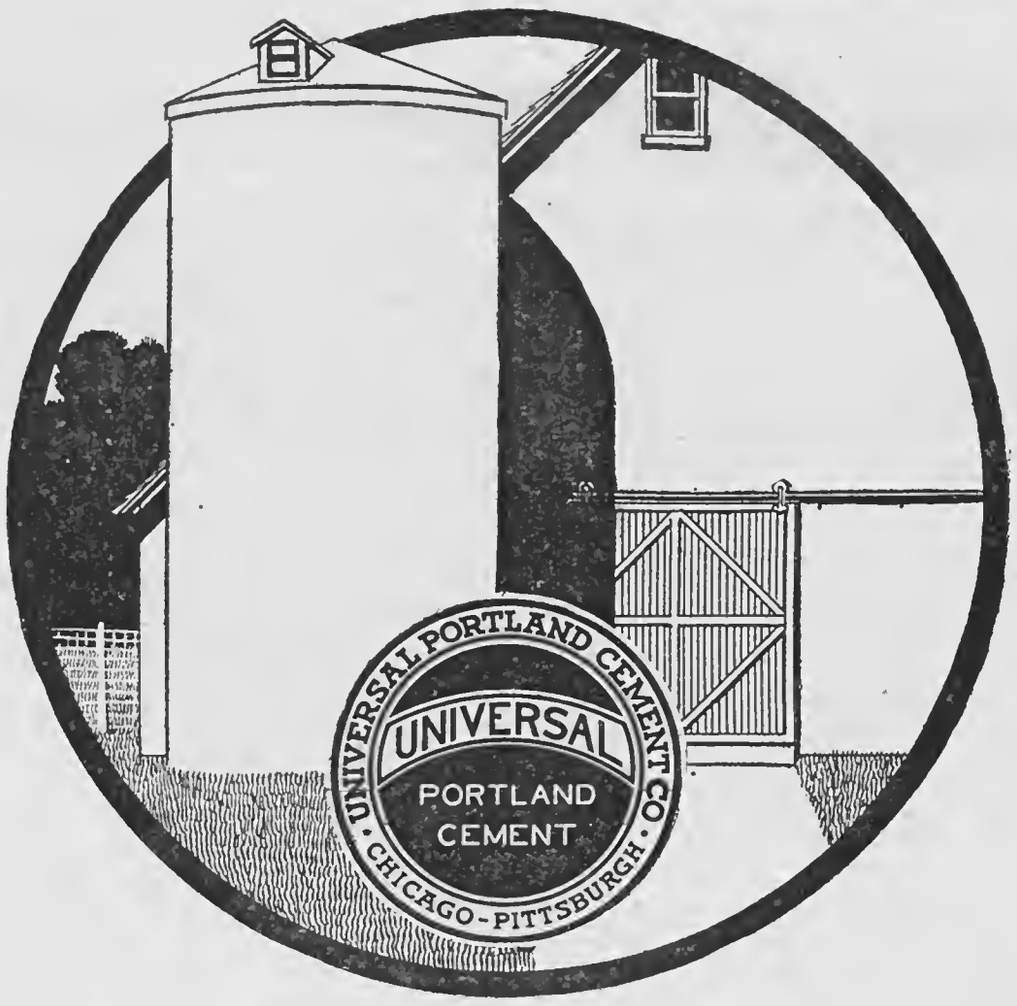

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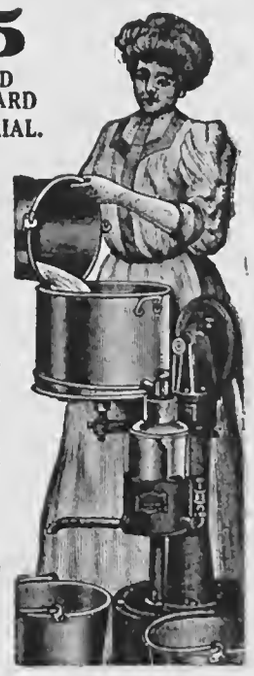

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII, No. 4257. NEW YORK, MAY 30, 1914. WEEKLY $1.00 PER YEAR.

THE ARGUMENT FOR ALFALFA AS A NEW YORK STATE CROP.

AN INCREASING CROP.—The first introduction of Alfalfa into the United States was in New York State about the year 1812, but for about ninety years it was little cultivated here. The seed brought from Chile to Southern California about 1854 is the source from which most of the Alfalfa grown in the State today has been derived. Some of the States in the West annually produce from one to over two million acres. In New York State in 1899, only 5,582 acres of Alfalfa were reported, averaging 2.33 tons per acre. In the next decade, the thirteenth census shows a marked increase, 35,353 acres, averaging 2.46 tons per acre. The growing interest in, and importance of the crop in the West, has undoubtedly affected the increased interest in the crop in New York, and with this increased interest has come a greater appreciation of its value, and a more general knowledge of the principles involved in growing it successfully. In spite of handicaps, Alfalfa culture is steadily gaining in the State. Unfavorable climatic conditions, especially the hard Winter, the high relative humidity, the low fertility of the soil, especially the low lime content, our lack of knowledge regarding inoculation and consequent failures have tended to retard its culture. Coupled with these factors, is the competition with Timothy and clover, so well suited to New York conditions, which it had to meet. Still another factor has been the conservatism of the Eastern farmers.

SOIL AND PREPARATION.—With the introduction and propagation of the hardier forms of Alfalfa, soil fertility is being considered more important than soil structure. With proper management a soil of good fertility and unfavorable soil structure, such as a very heavy clay subsoil, will give much better results than a soil of low fertility and good structure. In New York, the real reason for the failure of Alfalfa has more likely been poor fertility than unfavorable physical conditions of the soil. The needs for sufficient lime and inoculation, and a well-prepared seed bed are being recognized, and the Alfalfa failures are becoming less. In a series of coöperative experiments with about 200 farmers carried on by the Geneva Experiment Station a few years ago, the results showed that where the soil was untreated only 20 per cent. of the Alfalfa seedings were successful; where lime was applied to the soil, 40 per cent. were successful: where inoculation without lime was tried 60 per cent. of the experiments were successful, and where both lime and inoculation were used, 80 per cent. were successful. Only 20 per cent. were failures. This shows clearly the general need both for lime and inoculation throughout the State.

CROP VALUES.—Table 1 gives a comparison of the market values of Alfalfa, clover and Timothy, based on data secured from the last census report. It should be noted first that the yield per acre is more than twice that of Timothy and almost twice as great as the yield of clover. The price per ton was greater than for clover but less than for Timothy. With a wider recognition of the general superiority of Alfalfa hay, and a continued increase in demand, it may be expected that Alfalfa will soon rank first, and supersede Timothy. The surprising difference in value between the three crops is shown by the value per acre. The value of Alfalfa per acre is more than double the value of either clover or Timothy. With large yields, which may be expected, when more is known about the different factors affecting its successful culture, we should expect this value per acre to be higher than it is at present.

TABLE 1.

MARKET VALUES (13TH CENSUS REPORT, 1909.)

CROP	Yield per acre	Price per ton	Value per Acre
Alfalfa	2.46 tons	$13.58	$33.41
Clover	1.32 "	12.31	16.25
Timothy	1.07 "	14.62	15.64

Table 2 gives a comparison of the feeding values of these same hays. The feeding value per ton is taken from Farmers' Bulletin 339, U. S. Department of Agriculture, based on the value of the various digestible nutrients found in each. It will be seen that Alfalfa has a feeding value per acre almost five times as great as that of Timothy and over two and one half times as great as that of clover.

"DECORATION DAY." A MEETING OF THE BLUE AND THE GRAY AT HEADQUARTERS. FIG. 305.

TABLE 2.

FEEDING VALUES OF ALFALFA AND OTHER HAYS.

CROP	Value per ton	Yield per acre	Value per acre
Alfalfa	$20.16	2.46 tons	$49.57
Clover	14.12	1.32 "	18.64
Timothy	9.80	1.07 "	10.49

VALUE IN RATION.—In comparing the value of Alfalfa with bran and Timothy for feeding dairy cows, the Illinois Agricultural Experiment Station found (Bulletin 146) that a ration containing eight pounds of Alfalfa hay proves to be equal to the same ration when bran is substituted for the Alfalfa; also that a ration containing 10 pounds of Alfalfa hay produces 17 per cent. more milk than the same ration when Timothy is substituted for the Alfalfa.

ALFALFA AND SOIL FERTILITY.—Another important consideration is the effect of Alfalfa in

maintaining or increasing the fertility of the soil. As is well known, Alfalfa is a legume and can secure its nitrogen from the air. Table 3 has been compiled from the percentages of the three essential fertilizer ingredients, nitrogen, phosphoric acid and potash, found in Alfalfa and Timothy hay as given in Hunt's "Forage and Fiber Crops in America."

TABLE 3.

FERTILIZER INGREDIENTS IN 1 TON OF TIMOTHY AND ALFALFA HAY.

FERTILIZER ELEMENTS	TIMOTHY Pounds	TIMOTHY Value	ALFALFA Pounds	ALFALFA Value
Nitrogen	25.2	$5.04	43.8	$8.76
Phosphoric Acid....	10.6	.42	10.2	.41
Potash	18.0	.72	33.6	1.34
Total		$6.18		$10.51
Less N. secured from air.				8.76
		$6.18		$1.75

Of course all the ingredients found in the hay must have come from the soil in the case of the Timothy, and when the hay was removed from the land or marketed, these soil fertility ingredients were removed as well. In the case of the Alfalfa only the phosphoric acid and potash ingredients were removed from the soil, for the Alfalfa has furnished its own nitrogen from the air. In all probability, it has either left as much nitrogen in the soil as was found before the Alfalfa was grown, or it has actually increased the amount of nitrogen in the soil. The values of these ingredients were taken as 20 cents per pound for the nitrogen and four cents each for the phosphoric acid and potash found. It will be seen from the table that the value of the fertilizer ingredients on the above basis is $6.18 for each ton of Timothy hay, and $10.51 for each ton of Alfalfa hay. But inasmuch as the nitrogen content of the soil has not been reduced by the Alfalfa crop, the value of the nitrogen should be subtracted, which makes the total value of the ingredients removed and not returned $1.75 per ton. Figuring on the acre yield, the value of the ingredients removed by the Timothy is $6.61 and by the Alfalfa $4.31, or $2.30 more, in spite of the fact that the yield of Timothy is less than one-half that of Alfalfa. When a man sells a ton of Timothy he sells $6.18 worth of fertilizer constituents from his land; when he sells a ton of Alfalfa hay he sells but $1.75 worth of ingredients. From the standpoint of the maintenance of soil fertility, the culture of Alfalfa presents important considerations with which we must deal.

ACREAGE OF ALFALFA.—With a knowledge of the foregoing facts before us we still find the relative acreage devoted to Alfalfa ludicrously small. The thirteenth census reports in New York for 1909: 1,078,358 acres Timothy alone; 2,935,470 acres Timothy and clover mixed; 87,267 acres clover alone; 35,343 acres Alfalfa. Much must yet be done in the way of selection and development of Alfalfa varieties to meet varying climatic, fertility and soil conditions, and in the way of increased knowledge to understand various cultural methods that will insure the maximum yields and highest quality forages. J. H. REISNER.

R. N.-Y.—Has anyone definitely proved that Alfalfa takes all its nitrogen from the air and does not rob the soil of that element? We think this claim is to large. Again, we do not believe, from our own experience, that Alfalfa will prove profitable everywhere in the East. It is a wonderful crop and should be grown wherever a reasonable expense in labor and money will start it, but there are some soils where the crop is not naturally at home and where, we believe, other crops will give greater profit.

SEEDING GRASS IN THE CORN.

I wish to plow one acre of sandy loam soil as early as I can, and sow three bushels of oats on it and when about eight inches high or about the first of June, plow it under and plant to early sweet corn. At the last cultivation of the corn I would sow a mixture of Timothy, Mammoth clover and Orchard grass seed to make a meadow for the next year. When I plant the corn I would use about 400 pounds of a good corn fertilizer to the acre. Let us hear how you think it would work turning a corn field into a meadow the next year.
Denmark, N. Y. G. H. V. D.

Why do you sow the oats alone? The object is to obtain as much organic matter as possible to plow into the ground. We should sow Canada peas with the oats and also add one pound to the acre of white turnip seed. This will give you double the amount of organic matter that the oats alone would furnish. As you are seeding down the grass, we think that after this crop is plowed in, a ton at least of ground limestone should be harrowed into the soil before corn planting, unless you know that the soil itself is alkaline now. The plan of seeding the grass in the corn is followed by a good many farmers in New England and New York State. Some of them report success with this method, but not all. The soil must be in first-class condition to begin with, and unless there is a fair rainfall during the late Summer and Fall, the grass seed will not do well. In time of drought such a plan of seeding would not be likely to go through. The culture of the corn must, of course, be entirely level. The hills should be hoed down, and the whole surface left as smooth as possible, as otherwise there will be great trouble in cutting the hay. Many of the failures with this system have come where the corn was held up and the surface left rough and uneven, so that the mower could not do a good job in cutting the grass. You should use more seed than is commonly required in seeding the grass alone, and the seed ought to be spread both ways to obtain an even distribution. A very light cultivator or narrow harrow should be used to cover the seed and it will be necessary to use a rake around and between the hills to cover all the seed. Under right conditions of soil and climate and seeding this plan would give fair results, but with careless preparation of the soil, the stand of grass will not be satisfactory.

LAND BANK OF THE STATE OF NEW YORK

System of Mortgage Credits Explained.

PART V.

AN APPEAL TO LOCAL PRIDE.—No local banker or business man should hesitate to assist in the organization of a savings and loan association in his town. Anything that tends to improve the conditions of the neighborhood will benefit the local banker and tradesmen. These institutions manage saving and thrift. They accumulate savings and convert them through the local bank into productive enterprises. They form habits of saving in the young. They encourage the home instinct in the laborer and clerk. They inspire the hired man to save up until he can make a first payment on a farm of his own. They will keep boys and girls on the farm who without this incentive would seek city employment. If a man or woman has a dollar saved, the savings and loan association will keep it safe and pay for the use of it. If a member is in temporary distress he can get his money back. If he has real property, or if he is about to acquire it, he can get a reasonable loan on terms that reduce the annual payments below the normal rate of interest alone under the mortgage system of the past. All citizens are proud of a neighborhood where conditions like these exist. All interests profit by it; and all men should be proud of an opportunity to contribute to the contentment and prosperity that such a state of affairs creates in a neighborhood.

NO LONGER A SUPPLICANT.—For the first time in the history of the United States the financing of the farm mortgage is, under this system, put on a level with large corporations, or a public utility. It puts the financing of the farm mortgage on an equal footing with the sale of bonds of a city or township, or of the State itself. The farmer need no longer be a supplicant at the door of the money-lender. No man can any longer claim a farmer's vote or otherwise control his actions on an intimation that the mortgage may otherwise be foreclosed. Just as a city may bind all its citizens to the payment of city bonds, and sell the combined credit of its citizens at a lower rate of interest than the individual bonds of the citizens would have to pay, so the Land Bank of the State of New York may sell its bonds based on the security of the accumulated mortgages at a lower rate than each farmer would be obliged to pay on his individual mortgage. The farmer gets the benefit of this rate without incurring any additional responsibility himself. Just as the municipality or public utility corporation issues its bonds, and goes into the market and sells them on their merits for what they demand in the money market, so the farmer or home owner through his Land Bank, will sell bonds based on the combined credit of the farm and home mortgages, on terms regulated by the supply of money at the time and the quality of security offered. Since there is no better security anywhere the rate should not exceed the interest rate on municipal or State bonds. In this process the farmer and home-owner for the first time liquefy and standardize their mortgage credits. By this we mean he has converted his mortgage into a negotiable bond and given that bond such a stable value that it will readily and conveniently pass from one person to another without fear of loss by anyone, and without hesitation as to its actual value. The consciousness on the part of the owner that he is financing his business on an equal footing with other business men, that he is the master of the situation and not a supplicant for favors, stimulates an independence of action and sense of freedom that results in greater business success, and in higher appreciation of citizenship.

THE TORRENS SYSTEM.—As we begin to develop this system of mortgage credits and register mortgages under it, we may as well begin right, and register both farm title and farm mortgage under the Torrens System of land and title registration. This system originated with Sir Robert Richard Torrens in Australia in 1858. It has been adopted in England, Canada, South America, and in some of our States, including Massachusetts, Illinois, Indiana, Wisconsin, Michigan, California, Colorado and possibly some other States. In New York we passed a title law in 1908. Under this law an official examiner makes one examination and report of the records of the property. The title is then approved and registered by the Supreme Court and afterward the title can never be questioned. After that transfer is made by simply surrendering the old certificate and filing a new one at the nominal cost of two dollars. No more lawyers are needed and no further search of title required. There is no guarantee of title required and no fear that the title will ever be questioned. The State guarantees the title by its own act. Lest, however, the official examiner should make an oversight in the first examination for the Torrens title, an "assurance fund" is provided to compensate any person who through no negligence of his own is deprived of his rightful interest in the property and this must be claimed within six months of the original registration. This is a simple and a safe and economic method of insuring title to real estate. It was opposed by title insurance companies, which make enormous profits from the insurance of titles, owners and mortgagors in large cities. There is no one to oppose it in country districts, and in the interests of economy, convenience and safety, every association should provide in its by-laws that titles in the future must be registered under Article 12 of the Real Property Law as amended by Chapter 627 of the Laws of 1910. This is the title of the law under which the Torrens system of land titles is authorized in the State of New York. J. J. D.

A FARM TRACTOR IN WESTERN N. Y.

The scarcity and inefficiency of hired help require the large farmer to seek the most economical way to raise and market his farm crops. We wanted something to take the place of four to eight horses and relieve us of two or three men. To cut out the expense of feeding and care of eight horses for four months in Winter is quite an item. Our land is not all in one body and there is much hauling to be done that is extremely hard for horses. We wanted something to do this work up and down hill with eight or 10 tons load, and not require to exceed two men. This led me to try a farm tractor.

After studying the subject for some time we decided we wanted a medium heft machine, not extremely light nor too heavy to move on ordinary soil; one that would develop its full rated power at the draw-bar with the least consumption of fuel. Almost any of the tractors can develop all belt power the average farmer needs, but when it comes to a stiff pull up a heavy grade it is not always satisfactory to the buyer. We wanted a machine that would burn either gasoline or kerosene; by this I mean one equipped with two tanks so that you have the choice of two fuels. We also wanted a machine that could make four miles per hour on the road when necessary.

Of course we wanted as few parts and as simple a machine as was consistent with durable construction. We also considered how much delay in getting repairs in case of the breakage of any of the parts. The above are a few of the many points considered that may seem foolish to many, but the first cost of a tractor is large, and one should try to get as near as possible to a machine that will answer his purpose.

I presume that many are anxious to know what a tractor will do on our farm here in Western New York, with fields running from two to 50 acres each, with hollows and knolls to contend with and short turns to make at times. We have for plowing a four-plow gang, each plow independent, and called 14-inch plows, turning about five feet in width. We plow from eight to nine inches deep. The points of plows cut a little deeper, but do not turn the dirt out of furrow. With everything working well and suitable soil we can plow one acre per hour, working in eight or 10-acre fields. We have plowed on steep grade, down the hill only and went back empty, seven acres in 10 hours. We cannot plow as level and smooth as by hand or sulky, but can plow much more and deeper, and so far as I can judge the grain crops are as good on engine-plowed ground as on that plowed by hand.

We use for harrowing spring-tooth harrows, smoothing harrows and 12-foot plank drag, such as the soil may require at the time. We fit from 10 to 20 acres per day for Spring or Summer grain. We like the tractor for heavy mowing, and for loading hay with loader it is a great success with us. In hauling baled hay to the car, a distance of five miles with heavy grade, we load one car on average per day. In hauling potatoes it does the work of four teams.

When thrashing time comes we have only to hitch on the thrasher machine, use just our own farm help and the engine runs itself until we want it to stop. A little over one year's experience is not entirely conclusive as to the durability and cost of upkeep of a tractor. So far we have had but little trouble from breakage and the cost of fuel has been much less than we expected. C. C.

GROUND LIMESTONE AND POTATO SEED.

I HAVE a quantity of ground limestone on hand. Would you advise me to use it for dusting over the seed pieces of potato as they are cut—the same as land plaster or sulphur is used? G. R.

Ground Limestone Not Desirable.

Personally I never had any good results in controlling potato scab by adding lime or any substance which would tend to make the ground alkaline. In this region flowers of sulphur is worthless, and I am inclined to think no good results can be made with it elsewhere, for the potato scab fungus really likes to grow in quite a high percentage of sulphur. As to the use of ground limestone on cut potatoes, I can see no object in it if he has in mind potato scab prevention or prevention of the ordinary potato diseases. If it is just a method of drying the cut pieces so they will be less liable to rot when placed in wet or poorly drained ground, it is possible there might be some advantage. Just at present, there is such a craze on for using ground limestone as a fertilizer that it is liable to be recommended for anything. Ground limestone used in large quantities on acid soils will undoubtedly be good for potato production. Potato scab fungus does not thrive well on acid soil. If one puts on enough ground lime or other alkaline fertilizer to cause acid soils to become sufficiently neutral or alkaline to raise good potatoes, there will be plenty of scab there if they do not treat the potatoes for the prevention of scab. There are only two treatments which have proved worth while; the first is liquid formaldehyde at the rate of one pound to 40 gallons of water, the tubers to be soaked in this solution one and one-half hour before being cut. In using corrosive sublimate, the tubers should be treated before being cut, for a period of one and one-half hour in a solution made up by dissolving powdered corrosive sublimate in water at the rate of one ounce to six gallons of water. This is not only a good disinfectant for the prevention of potato scab, but is the most efficient one for the prevention of Rhizoctonia and practically all of the potato rot-producing fungi, including the Fusarium rot. H. L. BOLLEY.

North Dakota Station.

Sulphur Is Better.

I would advise against the use of ground limestone for dusting seed potatoes after cutting. I would rather use nothing whatever than ground limestone. Land plaster has been very widely used, and seems to have given good results. Numerous experiments in Canada over a period of several years have shown that the yield from seed dusted with land plaster is greater than that from undusted seed. Flowers of sulphur also is good for dusting cut seed. It is believed that the sulphur has some influence in the prevention of scab, and perhaps also acts as a fungicide in the prevention of rotting of the seed, although that has not been demonstrated. One objection to sulphur is the fact that it gets into the eyes of the person cutting the seed and handling the potatoes in planting.

Geneva (N. Y.) Exp. Station. F. C. STEWART.

Soak the Seed Potatoes.

I should not recommend rolling the cut potato tubers in ground limestone before planting, unless I had positive evidence that there were no germs of potato scab disease on the potato tuber, or in the soil; and since it is practically impossible to have such assurance in advance, I think it would be very unwise to use the ground limestone, as proposed. The employment of land plaster instead of ground limestone would not be open to this objection, for whereas ground limestone will increase scab very materially, land plaster is practically neutral in this respect. If the seed tubers are treated properly with corrosive sublimate solution before planting, there will be little need of rolling them in sulphur before planting, although if the soil itself is already seriously contaminated, this treatment would have a slightly beneficial effect, since through the oxidation of the sulphur within the potato hill, sulphuric acid would be formed, which would lessen the tendency to the development of potato scab on the tubers in the hill. It must be borne in mind, however, that if sulphur is used on soils already excessively acid, it will have a positively poisonous effect, as I demonstrated several years ago, in connection with my experiments in Rhode Island. In fact, recent German investigators have found that the employment of sulphur in soils is likely to be advantageous only in case there is plenty of carbonate of lime in the soil. In some instances, benefit from its use has been noticed when such conditions existed. Where superphosphate is used, however, sulphur is being continually applied to the land in the shape of gypsum contained in the superphosphate. Hence, the possibility of the sulphur having any direct fertilizer value when used in conjunction with such a fertilizer would be exceedingly small. Wherever soils are only slightly acid, neutral, or alkaline, the seed tubers may be rolled in sulphur without the probability of poisonous results. H. J. WHEELER.

A ROCKY MOUNTAIN CANARY, BORN IN NEW JERSEY. FIG. 306.

BUILDING A RAILROAD.

THERE is a question of great interest not only to myself but to all the people in this section. How can we get a railroad through this part of the country? The length of the road would be about 30 miles, beginning at Wallace, N. Y., on the Erie and D. L. & W. railroads, and running to Stanley or Geneva, N. Y. This is a fine farming country, all the way. The principal crops are potatoes, hay, fruits and dairy products. At present we have to haul this produce from three to 10 miles to markets. We have a fine grade for a road, and the right of way would be free. Farmers through this section would give from $100 to $1,000 to have some kind of a railroad. The railroads now here surround a large section of farming country, and they also prevent any other company from building a road here. These roads are now getting all the freight from this country, but to a great disadvantage to all the people who live here. Could the Public Service Commission do anything to help us, or is there anything we can do to help ourselves? We cannot build the road, for we have not enough money. J. R. D.

We are not experienced in building railroads. Practical steps however to be taken would be about as follows:

First, you must provide the funds. Some one must get at work in earnest. He must either get the surrounding farmers to subscribe to enough of the stock and bonds to start such a road, or find some substantial banker who will underwrite the bonds and stocks needed, and also furnish the equipment. This money must be in sight somewhere before you can think of starting such a railroad.

In the next place, you must obtain the permission and approval of the Public Service Commission of your district. You could not build a railroad or street line at the present time without obtaining from this commission a certificate of public convenience or necessity. You must prove to them that the road is necessary for the convenience of the public. You will probably find that this is hard to obtain. Not long ago an effort was made to obtain a road running through New York. The present railroads fought it so hard before the Public Service Commission that this commission would not grant a certificate. This proposed company had ample financial backing, but the opposition was so fierce that the commission held that there was no necessity for a third road, and that there probably was not business enough to keep them all properly running.

In the next place; you will have to obtain a clear right of way through the territory, even if you obtain a certificate from the commission. Probably this would not be hard to obtain, as the proposed road runs through a farming section where the people need this new convenience. From the map it appears that this road would run through a country where there are no large towns. For the most part this road would be paralleled by two other roads within fair distance. The chances are that there would be some difficulty in getting a certificate from the commission, since there would be hard opposition from the roads already operating in this territory. There would probably be less trouble in obtaining a certificate for a trolley line instead of a railroad. This would be much cheaper to build and grade, and would probably prove a greater convenience for your farmers, since freight stations could be put at short intervals.

It is possible that water power for running the trolley through electricity might be developed at the rivers and creeks in this territory. There is another plan which might be developed. That is for the farmers to combine, and with the State put in a good macadam public road through this territory, and establish upon it an automobile trucking line. They could provide a suitable service with these trucks for carrying freight and passengers promptly and thus come close to serving the purpose of a railroad. This plan is being carried out in a number of places with fair success. In any event, the first thing to do is to make sure of the money. The cost for a railroad or trolley line will be heavy. It is doubtful if the farmers themselves can finance such a line, and it will be necessary to get some financial institution to handle it. They must then obtain the consent of the Public Service Commission before they can start seriously at such an enterprise. It is quite possible that the automobile truck service would be the most feasible plan for a community of this kind.

"ROCKY MOUNTAIN CANARY."

THE picture at Fig. 306 shows a little donkey colt, or a Rocky Mountain canary. This kind of canary is very rare in the East, and little Killarney, as this one is called, has attracted great attention. She is owned by Mrs. Frederick A. Wilson of Englishtown, N. J. The father of Killarney was known as Jack, and its mother as Jill. It is the only little donkey that has really shown robust health in the many attempts at breeding which have been made at Bellwood Farm. Therefore Killarney is something of a novelty, and we are glad to give her the picture in THE R. N.-Y. May she grow up to be a true representative of New Jersey, and it is also in order to remember John Burns, the special custodian, breeder, handler, and breaker of Miss Killarney.

"SWAT THE FLY."—Everyone seems to be waking up for the fly fight. The latest advice comes from James W. Helme, Dairy and Food Commissioner of Michigan:

"Consider the house-fly and his mate. They toil not, neither do they spin, but when it comes to bringing forth posterity, they have got Teddy Roosevelt's hobby beat a mile. About this time Mr. and Mrs. H. Fly leave their Winter quarters and hie themselves to the nearest manure pile, where Mrs. H. Fly makes her nest and lays 120 eggs at one sitting. As a layer Mrs. Fly has got the White Leghorn beat to a frazzle. In 12 hours these eggs hatch into maggots and unless picked up by the old hen and converted into eggs, they crawl down in the manure and eat for a week. Then after lying dormant for another week, they come out full-fledged flies dressed out in an Easter suit minus the hat and split skirt, and proceed to give the race suicide theory another blow in the solar plexus. Every fly killed in May means 1,000,000 less flies in September. Now is the time to swat the fly and swat him hard."

No question about the damage from this filthy insect, but do more than "swat." Go to the origin of things and either keep the horse manure under cover or well sprinkled with equal parts of acid phosphate and kainit. Five minutes at this work will accomplish more than five days work at "swatting."

THE CO-OPERATIVE CONFERENCE.

At the request of Commissioner Huson, a conference was held at the State Agricultural Department in Albany, on May 20th to discuss methods of organization of farm coöperative associations and companies. The men who attended were largely from the membership of the State Standing Committee on Coöperation and for the most part farmers from the fields and leaders in coöperative companies in their home towns. Their interest in the work is testified to in the fact that at this busy season, they leave their farm work, pay their own expense to Albany, and respond to the request of the commissioner to help the State in the development of coöperation work which it has undertaken.

The sense of the meeting as definitely and concisely expressed was that the Bureaus of Farm Institutes and County Agents where organized, should discuss and encourage coöperation as an educational function of their work. Directors Van Alstyne and Burritt both favored this policy, realizing that selling of his products is often a more important and more difficult problem to the farmer than the growing of them.

(2) That the special organizers that go out at the request of local communities to help organize coöperative companies be required to demonstrate their qualifications by passing an examination on cooperative organization and economics before being assigned to the work.

(3) That the representatives of the Department should continue to help build up and develop organizations once formed, where their services are further needed and required, as well as initiate new associations.

(4) That the Department should devise a simple and uniform system of bookkeeping and accounting and instruct local officers, where needed, in the opening of accounts.

At the request of Commissioner Huson a committee consisting of Prof. G. N. Lauman of Cornell University, C. R. White, Ionia, Seth Bush, Rochester and C. C. Mitchell, Millbrook, were appointed a committee to advise with the Commission and Director Cole, and to assist them in formulating rules to govern in carrying out the recommendations and the work as a whole.

Mr. Fred Sessions of Utica was selected as chairman of the conference; and it is only just to say that we have never attended a meeting of any class of business men where the speakers so closely confined themselves to the purpose to be accomplished. The discussions were directed to the question in hand and the problems were handled with uniform earnestness and intelligence. This work is not being inspired by a sudden burst of enthusiasm. These men expect difficulties and trials and troubles just as they always have in their homes and farms and families and business. They do not expect or promise miracles. They know to be permanent and beneficial the development must be slow and gradual. But they know they can accomplish things through coöperation that they cannot do individually, and as a matter of fact with less difficulty for the company than each separate farmer now encounters individually. Their minds are made up and their purpose is set; and the work is going forward. You will not see any miracles. No man will be able to sell poor goods for big prices; but five years from now when you look back to the records you are making today, you will see such a change in the marketing of farm products and in the purchase of farm supplies that you will wonder how we ever tolerated present methods.

Montgomery County Farm Bureau.

The Directors of the Montgomery County Farm Bureau engaged Mr. Allen S. Merchant as their county agent. Mr. Merchant was born and raised on a farm in Western New York, where he performed all kinds of manual farm labor. He took the four years' course in agriculture at the New Jersey State College. Mr. Merchant has addressed 18 Farm Bureau meetings on bureau work, has held two oat treatments for smut demonstrations, one orchard pruning demonstration, has helped to prune several orchards, showing the farmer how the work should be done; has made many personal visits to farms, giving information on many farm matters; he has secured for the county two Community Schools in Agriculture to be held next December; he has written a booklet on the Plans and Purposes of the Montgomery County Farm Bureau, which will be ready to go forward in the mail within a week. Every farmer in the county will be sent one of these booklets. The coöperation of more than 25 farmers has been secured in demonstrating the use of nitrate of soda on farm crops. One farmer is carrying out a demonstration in fertilizer chemicals on quite an extensive scale, to determine the elements of plant food the soil needs most, and just how profitable different fertilizer chemicals will be applied to different crops, compared with goods purchased ready mixed. Other farmers are coöperating in the growing of hay, Alfalfa, potato tuber unit selection and hill selection.

Canadian Fruit Outlook.

The Department of Agriculture at Ottawa states that in Nova Scotia fruit trees have come through the Winter in good condition, with prospect of a heavy set of bloom. British Columbia has had a very mild Winter, and all fruits promise favorably. In the peach sections of Ontario considerable damage has been done by the severe weather of January and February, following a mild early Winter. The outlook is that throughout the entire Niagara peninsula the peach crop will be the lightest in 25 years.

Monroe County, New York.

As everywhere else in the State, the season has been a backward one in Western New York. On May 15 many farmers had not yet sown oats. At Beechwood Farm we have given up this crop this season, experience having taught us that not one year in five is the crop a profitable one when sown after the first week in May. Grass and wheat never looked better at this time of year. April was almost an ideal month for both crops. The old meadows have a good start, too, and there will be a rank growth of grass to turn under before all are plowed for beans and corn. We have about 10 acres of our bean ground plowed at this writing (May 19). Early plowing and good tillage before planting is half the battle against weeds and drought. Peas for the canners are very late planted this year, and the chances of their proving a paying crop this season are small indeed. I would rather plant beans instead. Not in my memory has there been a more complete "clean up" of peaches; 90 per cent of the growers will not have enough of this fruit for table use. Only close along the lake shore and in especially favored locations is there promise of a crop. The total will not amount to more than 5 per cent to 10 per cent of last year's yield. Pears are blossoming fairly well, plums heavily, and apples, young and old of nearly all varieties, give promise of the heaviest crop in many years. M. C. B.

Agriculturally everything is opening up nicely in the West. Corn is going in this week with the soil in the very best condition; a little dry earlier, but two or three inches of rain Sunday night has relieved that situation. There will be a great crop of Winter wheat, and I think also of corn, in all sections that were drought-stricken last year. This is only history repeating itself. That drought in Kansas Nebraska, Oklahoma, Missouri and Southern Iowa pulverized the soil a couple of feet deep, so to speak, plowed it with the great drought-plow and compacted it at the same time, so that it takes up a great amount of moisture without swelling the streams. Under these conditions we should have a great crop. The fruit in that section, however, will likely be a partial failure, because of the effect of the drought of last year on the coming fruit buds. HENRY WALLACE.

Butter 18; eggs 17; potatoes 60; apples $1; wheat 90; corn 90 cents per hundred pounds. A. Y. S.
Bringhurst, Ind.

May 16.—We are having a very late season up here in the Worcester country hills. Doing our first plowing to-day. Plum and cherry trees in bloom; peach trees just coming in leaf; not a sign yet of apple or peach blossoms—in fact, according to my diary, just 20 days later than last year. Currant and berry bushes look well. Cattle have been out to pasture 10 days. It has been cold and wet, so the grass is in abundance, and looks like a big hay crop. We have spread a big lot of fertilizer and chemicals this year, and want to spray for Codling moths to-morrow if the wind will let us; have had terrible winds all Spring. Hay $20; cows $35 to $125; horses mostly automobiles. C. B. H.
Petersham, Mass.

May 16.—Good cows are selling from $60 to $80; fair to good $35 to $50. Milk at Whiting's $1.25 per 100 pounds for test 4 per cent. Potatoes $2.10 per 180 pounds. No apples last year in this section. Eggs 20, New York price, to-day for strictly fresh at this station. Good calves eight cents per pound. Hay $18 to $20 per ton. No garden crop; too far from market. F. M. B.
West Cambridge, N. Y.

The late Spring and much wet weather has been delaying the farm work here, but crops promise to be abundant. Wheat looks especially fine, and a good hay-crop is now assured. Early potatoes are well started, and the late varieties are nearly all planted. Tobacco plants are well started, and setting out will begin about May 20. The acreage will be less than last season. The peach buds did not suffer from frosts to the extent that earlier reports had it, and a fair crop is expected. Cherries will be abundant and the later fruits promise fair. Fat cattle are now moving to market at good prices for good quality. A lot of 15 steers was recently shipped from Quarryville for New York that averaged 1,561 pounds at nine cents on board cars, Quarryville. The average weight when stabled was 1,107 pounds.
Lancaster Co., Pa. B. A. R.

Fruit crop very promising, strawberries in full bloom, raspberries good but winter-killed badly. Fair crop of peaches; pears and apples are good, likewise plums. Grapes and dewberries in the Italian settlements south of us are fair.
Atco, N. J. N. E. V.

We have a truck farm with a vineyard and apple trees. Potatoes averaged through Winter 70; cabbage 82 to 85 per cwt.; squash 50 cents to $1 per cwt. Butter, country, 30; creamery, 40 to 45; eggs 20; hens 18; Spring chicken 38 and 46 cents, wholesale. Cows sell from $40 to $75; calves 10 to 11 per lb.; hogs, 10 to 11. Young pigs, $5 to $8 per pair. Wheat $1.10; corn 50. E. M.
Beltsville, Md.

May 13. Some oats are sown on dry spots; some have sown by hand who meant to drill them but many who got their ground plowed in the Fall to get their oats in early, have not been able to get on it yet. It is too wet to get manure on the planting ground, and is a bother when trying to make fence, as water fills the hole when digging for end posts, and dirt caves in. The parasite for San José scale does not seem to have reached us yet, I had a young plum orchard with some scale on it last Spring, and we started to spray it, but the wind drove us out, and we did not get at it again; the scale spread very fast, and has killed the trees wherever it is thick on them. Peach buds killed, plums and other fruits blooming and all right.
Waterford, N. Y. M. F.

I devote my time to raising fruit. This year it looks as if we will have a large crop of peaches. The fruit business has become an epidemic; it is being distributed by the Agricultural Department for the benefit of the consumer in in a year of plenty. The Department has caused many persons to plant trees on ground or locations not adapted to fruit culture. When everything is favorable those trees produce enough fruit to lower the price so there is a very small margin of profit. I cannot see where the Department is helping the farmer. It is making new offices with nice fat salaries attached for a lot of glib-tongued individuals who if put to work with their own brains and capital would make a failure. I bumped up against one of them who did not know me and was surprised, so was he when we parted. In my opinion we don't need them when we have practical men giving their experience in papers like THE R. N.-Y. Last year had things my own way, as I was the only grower who had any peaches to speak of, sold direct to consumer. Elberta a full crop and finest I ever saw; they averaged $1.75 per basket, sold some for $2.50 per basket. Looking fine this year; I consider them the finest peach for the bank account.
New Pen, Pa. G. W. W.

Catching Sparrows in the Night.

Having read your article on page 618 regarding the English sparrow, I would like to give you my experience in getting rid of these pests. I take an ordinary pocket electric flash light that costs about one dollar and hold it close to me. Another person beats around their roosting places with a fish pole, and when disturbed they fly straight for the tiny light. Those that you do not get in your hand drop to the floor and are easily picked up. An ordinary barn can be completely rid of them in about 15 minutes. Of course it must be done on a dark night.
Ontario, Canada. P. O. A.

QUICKLIME OR HYDRATED LIME.—We have often been asked if hydrated lime is just as good as burnt lime or quicklime for making the lime-sulphur mixture or Bordeaux. We have had experience with the two limes in making Bordeaux, and it seems to be evident that the quicklime is superior for this purpose. We think the same is true of the lime-sulhpur, although we have not had personal experience with the hydrated lime for this purpose. From choice we should take the quicklime.

COMING FARMERS' MEETINGS.

Holstein Breeders' Association, Chicago, Ill., June 2.

Pennsylvania State Horticultural Association, Summer meeting, State College, Pa., June 17-18.

American Association of Nurserymen, Cleveland, O., June 24-26.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

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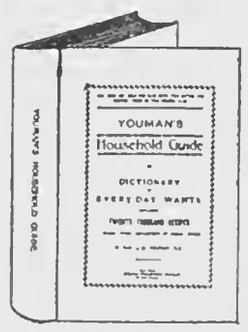

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The Rural New-Yorker, 333 W. 30th St., N. Y.

Man-eating Sharks.

There seems to be some doubt whether sharks really attack humans. I have secured some information on the subject from a couple of Bahama Islanders which I send for the benefit of your fish department. You say a certain government official says they don't tackle humans. Government officials know a heap but they don't know it all. The Bahama Islanders say they do eat men, that is, the big ones do. If a person is in water where he can wade he can frighten the small ones away, but the big ones don't seare worth a cent, and then you would better look out. My informants said they knew of a big shark swallowing a man, but the man had a knife in his hand and promptly cut an exit from the shark, and as soon as he could conveniently excuse himself he went home. I don't think our old friend Jonah was onto his job—indeed he wasn't. F. H. C.

Boca Raton, Fla.

R. N.-Y.—But those Bahama Islanders were eertainly onto their job of "telling about it." We might suggest the following conclusive test for the government experts to prove their case. Let them jump off a wharf into water where sharks are known to be waiting. Of course it might be claimed that they carry so many figures that they would make dry eating, but the experiment would be a good one.

An Effective Fire Extinguisher.

I have been interested in a couple of artieles in your paper on the use of fire extinguishers and the employment of carbon tetrachloride for this purpose. In our laboratory we use an extinguisher made in New York City whieh employs carbon tetrachloride as the aetive agent. This extinguisher consists of a eylinder and a piston therein actuated by a handle. It is loaded with earbon tetraehloride, and kept in this condition for use. To operate, the handle is merely worked back and forth and the fluid forcibly thrown on the blaze. This chemical is very volatile, about as much so as chloroform, and extinguishes the fire by produeing a blanket of non-flammable vapor whieh takes the place of the air necessary to the maintenanee of the flame. We have found this extinguisher equally efficient with burning wood, gasoline, alcohol, ether and other highly inflammable materials. It can be used where water would have no effeet whatever, as, for instance, if a quantity of oil is on fire. No hand fire extinguisher is of much use after the fire attains eonsiderable size, but if employed while the flame is small the one under diseussion will do very efficient work. W. F. DUBOIS.

Chief, Buffalo Laboratory.
U. S. Dept. of Chemistry.

Aphides on Rudbeckia.

I have a clump of perennial plants known hereabouts as "Golden Glow." They are free bloomers, the flowers a bright yellow, and pretty, but have the drawbaek of becoming infested with insects clustering on the blooms just at flowering time. The inseets are reddish in color, and are not unlike "red spiders." This seems general, and several of my neighbors have disearded them on this account. What is the best means of prevention, or the best way to get rid of them? W. H. T.

Germantown, Pa.

There is a reddish plant louse or aphis, not red spider, that is very tronblesome on the Golden Glow Rudbeekia. It is not usually noticed until so plentiful as to disfigure the plant. It ean be dislodged by spraying with tobaeco extract, which may be procured, with directions, from any seedsman, or with seven per cent. kerosene emulsion. It is well to inspect the plants from time to time, before the flowering period, noticing any aphids present, and using preventive spraying before the trouble is serious. Red spider is also likely to appear on the under side of the leaves during very dry hot weather; the sprays referred to will be beneficial, but this enemy may also be routed by hard spraying with cold water.

Alfalfa Questions.

On page 446 an article on Alfalfa by Harry Chapin eauses me to proeeed more carefully, and seek advice. I have 18 aeres wheat seeded to Timothy last Fall, and to Red clover this Spring. Would it be wise to sow two quarts Alfalfa to acre for inoculation purposes? Would that amount be suffieient, and would it be benefieial? Soil is good rieh loam.

Bloomingdale, Mieh. V. V. R.

I should not advise the sowing of a small quantity of Alfalfa with other seeding, for the purpose of inoculating the soil, though it might survive, and inoculation take place in two or three years, if the field had a heavy applieation of manure before seeding, thus insuring a plentiful supply of nitrogen in the soil. At best it is a tedious and uncertain method. If the small quantity of Alfalfa would grow a full seeding would; if it would not grow no inoculation would result. Where Sweet elover grows wild by the roadside Alfalfa will grow in the adjaeent field without inoculation, where it does not grow the soil can be inoculated by a very simple and inexpensive process. Three hundred pounds per aere, of soil from an old Sweet elover or Alfalfa patch, sown broadeast and dragged in without exposure to a hot sun, will seeure inoculation. I would advise letting the Timothy and clover on wheat field take their natural course, and select some other field well drained and in good condition, on which a eultivated crop was grown last year. Fit the ground as indicated on page 446, inoculate with soil if neeessary. Sow 30 pounds per acre of pure northern grown Alfalfa seed and expect at once paying crops and Alfalfa.

H. C.

Sawdust as a Manure.

J. Q. B., on page 402, asks: "Would oak sawdust be of any value as a manure?" The proprietor of a sawmill in Wilkes-Barre told me he had a ready sale for all his sawdust at one dollar for a two-horse wagon-box full, and 50 cents for a one-horse wagon-box full; that it was bought by livery men, and horse keepers, for bedding their horses, and absorbing the liquid manure, and that farmers bought it readily, believing it was more valuable than when straw was used for bedding. He said sawdust was a deodorizer and disinfeetant in stables. I do not believe it is any better deodorizer than elean straw, and not nearly so good as dry earth, or land plaster. It is doubtful whether it is a deodorizer at all. It merely overpowers the foul odors of the stable, by the more pungent smell of the pine and hemlock tree. As an absorbent of liquid manure, it is no better than cut straw, or chaff, whieh will rot eompletely in a few months, while sawdust will remain sound in the soil for many years. Sawdust does not soon deeay. I have seen it in the soil after it had been plowed under three years, as sound as ever. Pine wood, when the pores are kept thoroughly saturated with water, is indestruetible. Some of the sawdust in our icehouse, whieh has been in use for 20 years, is not rotten. The large creek that runs through our farm in an overflow of its banks, left in some places considerable sawdust from the mills above. These plaees when the ground was plowed, produced nothing, because the sawdust made the ground so light and porous, it could not retain moisture, without which plants cannot grow.

When farmers in this region were clearing woodland, they were careful to put the old pine "sogs" on top of the log-heaps to be eonsumed, for well they know from experienee that rotten wood was an injury to the soil, and that no wheat would grow where the rotten wood was mixed with the soil. I once bought several loads of manure in which pine shavings and sawdust from a planing mill had been used for bedding and have always been sorry, for it was a long time in rotting, and the value of the manure seemed to be impaired by the shavings and sawdust. J. W. INGHAM.

Pine Shavings Hard to Rot.

Referring to composting pine shavings, page 668, will say white pine shavings make fine bedding for horses, cows or poultry, and I have used them for years, but have been unable to compost them as they seem to get tougher with age. We have plowed under manure, which we considered well composted and found on replowing the land three years thereafter, clean well-preserved shavings fit to be used for bedding again, if they could have been collected. We now spread the shavings manure with the spreader in the Fall on the corn stubble. This gives the rains a chance to leach the manurial value from the shavings and the wind will blow most of them away during the Winter. H. H. L.

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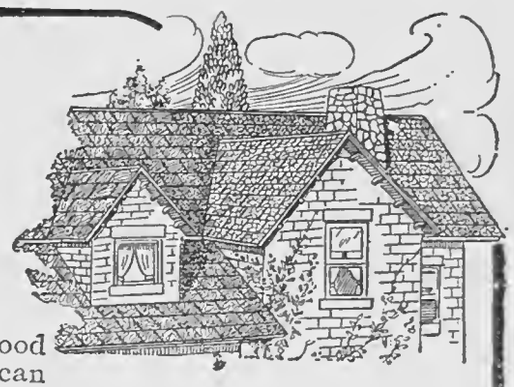

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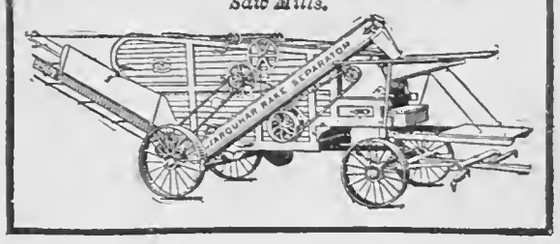

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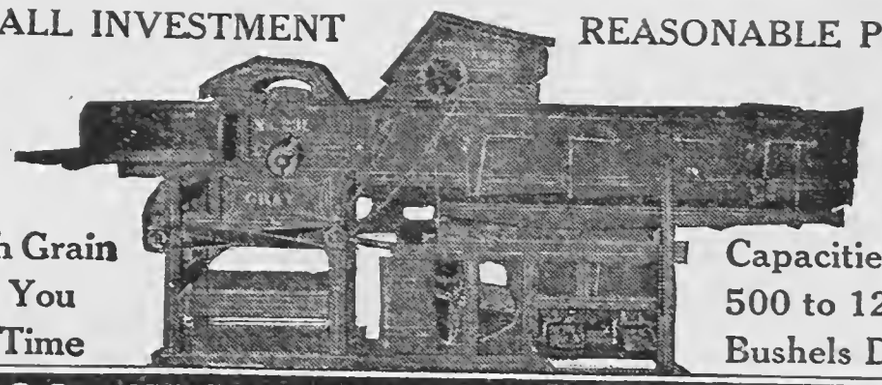

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The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 626, April 25.*)

"I thought," Mr. James said, through chattering lips, "that the Indians were all on reservations, and safe in the custody of the government."

"They are," Jim replied laconically, "but if they take it into their heads to murder the government officials, and hike out on a massacre, what's going to prevent it?" Jim stared gloomily westward.

"Do you—do you—think it's—dangerous?" Mr. James could hardly articulate.

"Why, I don't know as 'tis," Jim replied reassuringly. "I've never been scalped, and it seems as though it would be a little inconvenient—if not exactly dangerous."

"Wh-what you going to do?" Mr. James inquired, wiping his face hurriedly, for the cold sweat was oozing from his forehead.

"I guess I'll eat my breakfast," Jim replied. "I may's well have one more meal. Come in and have a pot of coffee with me, and I'll open a can of something, might as well live high, if it's only for a brief span," dismally.

"Where are the fellers that stopped to my house last night?" Mr. James asked furtively.

"Someone stop there?" Jim inquired innocently.

"Just almost dark," Mr. James said, a little more quietly.

"Oh, yes, an ox team," Jime seemed to remember. "Why they turned around and went back didn't they?"

"They went down into my ravine."

"Do any damage? Wan't indians, was they?"

"I guess not—though both of 'em was brown enough to be 'most anything. I think they messed with my chickens, mebbe stole some eggs!"

"What'd they want?"

"Claimed the place, said 'twas theirn, 'nd they'd give me till to-day to get off. 'Spose they'l come back?"

"Oh, the fellows that own the place!" Jim said understandingly. "They aren't only kids, anyway."

"I come of fighting stock," Mr. James spread his short legs apart, and puffed out his chest, proudly. "Land hain't much good anyway, all shale mostly. Shale's no good," he added with a furtive look at Jim.

"I'm no fighter myself," Jim returned gloomily, "and I hope to glory I don't have to fight. I guess I'll clean my rifle, although I couldn't shoot a flock of haystacks. Indians most always go in clusters, don't they, like grapes, or buffaloes or things? Might be easy enough to plug one in a bunch, but then it might be like firing into a wasps' nest—you might get the rest stinging at you." Jim went dismally into his house, and ate a hearty breakfast.

Mr. James, with many furtive shoulder-back glances, stubbed across the line, and after waiting, fearful for something and finding nothing doing, he crept out, and went down into the ravine, to inspect his setting hens. He found them undisturbed.

"Harmless sort of fellers, them," he murmured. "I wonder if I couldn't take these settin' hens with me, if the Injuns should come."

"Halloo, halloo, halloo!" came a shrill call, and a horseman halted on the hill, waving wildly to the man in the ravine. With heavily beating heart Mr. James ran up to meet the rider as fast as his stubby legs could carry him.

"There are rumors—however vague I am not prepared to say—that there will be an Indian uprising; there have been ghost-dances, and some say the Indians are already this side of the river."

The rider spoke in well-modulated tones and with chosen words; evidently he wanted to keep wholly within the truth of his statements.

"Do—do you think there's any immediate danger?" Mr. James inquired feverishly.

"I don't say there is any danger at all. I merely say there are rumors. But I'm on to the city, and somewhat in a hurry," and with a polite lifting of his hat the man rode down the hill, leaving Mr. James staring blankly after him.

In the afternoon some wagons with women and children passed by. These were followed by a wagon with four horses hitched to it, and in the wagon was piled a heterogenous lot of stuff, and to the first wagon was hitched a second, bearing a cow and a crate of something that might have been pigs. All these things looked to Mr. James as though moving on might be the better thing to do; but he was stubborn, and hated to give up just then; so he went from shanty to shanty, from land-holder to land-holder. All seemed discussing the momentous question, and what would be best to do under the circumstances. Would it be best to face the enemy or to fly from them? Some seemed wild for adventure, and others seemed anxious to pull out while there might be a chance.

"Once get into the city," Hank Jones argued, "then we could put up a front; but here on the open plain we couldn't do anything—just tomahawked and scalped and thrown out to the coyotes—ugh!" and Hank shuddered, as though he could see the gory sight and hear the howling of the wolves.

At five o'clock three men rode up to Jim Maynard's shanty.

"I s'pose you've heard," began the spokesman.

"Yes," Jim agreed, "we've heard," and his words included the body of settlers then collected about him. "Mr. James, here, is of fighting stock, and he—"

"Oh, I dunno's I want to fight. I never fit Injuns." His ruddy face had lost much color and his voice much assurance and bravado.

"The question is, what are we to do? Shall we all collect here and defend our land and ourselves, or shall we pack up and drive our cattle before us and go to the city?"

"I'm for going to the—" began Jim.

"So'm I," Mr. James agreed hastily. "I don't want to be scalped by no redskins."

"No, no!" cried a dozen voices. "Where's your valor? Mr. James for leader. He's fighting stock. He's the oldest. Mr. James—Mr. James for leader!" and a wild babel ensued.

"You see," Jim said to Mr. James gloomily, "you've brought this on us. If you'd cleared out there wouldn't have been anything to keep me, and I might have got away, too; but now—"

"Mr. James to the front! Mr. James to the front! He'll lead and bear the brunt of the battle, and guide us to safety!" It was Hank Jones now, and the boys fell into order, pushing Mr. James to the front, and in this way they marched to the James shack, and filled it to overflowing and crowded around it on the outside. Once collected there, Hank Jones suggested a cheer for their leader. "Three cheers for Mr. James, and we'll fight like him!" cried Hank, and the cheer went up.

Mr. James had sulked into the shanty, but at this he stubbed to the door.

"Shut up, you young varmints! Do you want to let 'em know right where we be? Now, shut up, the hull bunch!"

At nine o'clock Nate and Norm arrived, and Mr. James shrunk smaller than he had before.

"I don't believe there's a word of truth in it," Norm said, after listening to the rumors.

"But we did hear some talking about ghost-dances," Nate put in, grimly.

"There's been men warning us all day," Jim Maynard contested.

"And women and children and wagons and live stock have been going past, as though—" put in Hank Jones.

"I believe I can smell paint now. The savages always paint up for a battle," Jim Maynard whispered alertly. "Mr. James is our leader. He is a fighter—"

"Let him go out and reconnoitre," suggested Hank Jones, and he thrust the unwilling Mr. James out into the night. His face was white and his lips were trembling, and as they pushed him towards the hill-crest a sinuous form glided out of the darkness, near Jim Maynard's shanty. Mr. James trembled as he stood, but he could not advance.

"They're here!" he muttered, and he lifted his half-palsied feet, but he could scarcely move. Jim Maynard, standing near, fired, and then a dozen torches flashed into light, and a band of painted braves, gay with color and feathers, galloped into sight not a quarter of a mile distant.

"It's all according to Hoyle," Nate's voice spoke close to Mr. James's ear. "Feathers, paint, and—" here a mighty war whoop rent the air. "If you've ever done anything you're sorry for, you had better say your prayers, captain," Nate's voice still pursued, and Nate's long legs kept easily beside the older man's short ones.

The marauding band moved forward with a rush, shrieking, whooping, brandishing their torches. The boys in the shanty kept up a volley of shots, and pandemonium went wild. Mr. James was making for the creek bed.

"What, aren't you going to fight—to lead us on to victory?" Nate's voice was still close to the fleeing man. Mr. James's legs went like windmill wings, and he cursed the rank-growing grass in the valley. He stumbled over the buffalo bones, and sank deep in the soft earth of the garden, but with every fall he rose up again, and with every curse he sped forward, leaping, running, bounding, like one gone mad in a frenzy of fear, and as he plunged he muttered: "I wisht that shale land was at the bottom of the brimstone pit! I wisht them savages was under it! I wish—" and here a sudden turning of the creek sent his plunging form into the waters below him.

CHAPTER VI.

THE VIRGIN SOIL AND THE VIRGIN CROP. THE HORN OF PLENTY.

"Where's James?" asked Norm eagerly. And the question, "Where's James?" went around the circle, but none could answer.

"He's probably taken the trail, and will never be heard of again," Jim said, gaily. "The thieving, ornery land-jumper!"

"And all this war-paint and feathers are wasted on the desert air," wailed one of the Indian (?) braves.

"I wanted to give him a smell of my torch," a second voice moaned.

"And I just thought I'd like to paint him a smile," and another waved wildly with a paint pail.

Nate came sprinting back to the dishevelled group by the shanty, singing, "'There's one more river—there's one more river to cross, and our friend, the enemy, is crossing it," he volunteered to the dozen or more questioning voices.

"You haven't killed him?" protested Norm horrified.

"Oh, no; nothing as good as that, but something pretty nearly, for he has had an impromptu bath in the creek—fell headlong; but his cursing was enough to make the water boil. Wash up, fellows, and I'll make some coffee," Nate urged. "You've done us a mighty white turn, and you scared even me nearly to death. You're sure you're harmless?" and Nate edged off fearfully.

"He couldn't have held the land, anyway," Hank Jones declared. "A man doesn't have to live on his land for the first six months unless he wants to. He has that much grace, and the Government lets a fellow off if he needs to go to earn his living."

"He was such a consummate nuisance!" put in Jim Maynard; "always nosing around, and he had a fair chance to go."

"I don't know," Norm put in for fairness. "He came here and saw this land deserted. Maybe he didn't mean to stay more than over night when he stopped, and then he stayed longer and found out no one came to claim it, and so he decided to stick to it himself."

"Oh, he meant to have it. We told him, singly and in pairs and collectively, that the land was filed on fair and square, and that you would be back sure. He knew, but he needed an earthquake to shove him off. We tore his shanty down three times, and that would have given most anyone a hint of their unwelcomeness, but he's nothing but a ornery old—"

"He won't bother any for awhile," Nate put in soothingly. "He'll probably spread this tale of the Indian uprising far and near, and that will discourage any other would-be claim jumpers."

Scattered feathers, half-burned torches and a pot of red paint decorated the landscape the next morning; but heavy clouds drove Nate and Norm to extra efforts to get their new lumber made up into something more habitable than the thin board shack. Mr. James had left the boys' shanty. He had used it as a barn for his cow and one horse.

"We must advertise this stuff he left," Nate said, taking an inventory of the same. And so a few days later on an advertisement appeared in the local city paper:

"Taken up on ¼ section 36.R.17, one 8x12 frame dwelling; also one red cow and one dapple grey horse. Owner prove property, pay costs and remove the same."

This was signed by both boys. The advertisement ran for six months, but the owner did not appear, nor prove property, nor remove it.

"Gee, but this feels like Fall," Nate said as he began picking up the scattered war trophies.

"We've got a lot to do before we can go into Winter quarters with any comfort," Norm added, flinging a torch into the heap of debris collected.

"I'm wondering," said Nate, "if James didn't have some shred of right on his side. I'm not sure we are holding this land according to the full letter of the law, and I'm bound to hold it square."

"If we'd filed tree claims instead of pre-emptions, I am sure we would be safe with our 320 acres each. I believe when we go into Wetasket we will see about it and have the filing changed."

"We'll hold it square, anyway. I wonder where our papers are? We left them when we went to thrash." Nate spoke coolly enough, but Norm gasped.

"Our papers! Could that tyke have taken them?"

"Even if he did they're put down at the Land Office. We may as well pound away at this building work till it rains so we can't. We'll have time enough to hunt for the papers."

But Norm would not delay, rushed into the shanty and began to look.

"I wonder if they are in that fellow's trunk," Norm stormed. "I hate to open it, but I'll have to. He showed little enough consideration when he chucked our things out."

The trunk was locked, but Nate managed to open it with a nail, and the missing papers were found safe, much to the satisfaction of both boys. As they stood reading a little stream of water trickled down and struck Norm in the back of the neck.

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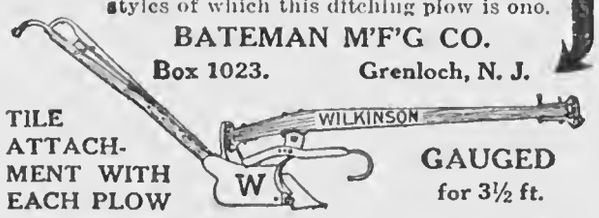

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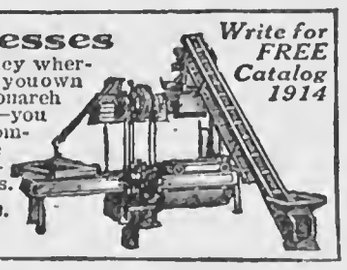

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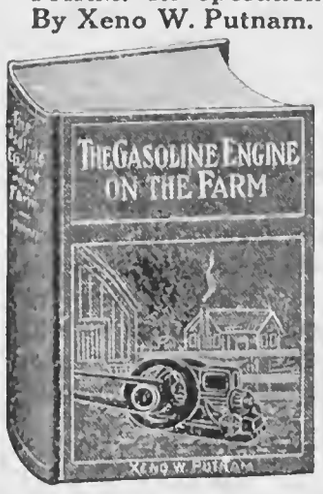

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The Rural New Yorker, 333 West 30th St., N. Y.

"Why, it's leaking!" exclaimed Norm, looking up and receiving the washout in one eye.

"What doing, fellows?" inquired Jim's voice at the open door.

"We're getting leaked on," Nate replied cheerfully.

"And you'll get leaked on a lot more. We're in for a three days' rain. Where's your tar paper and an extra hammer? We could cover and batten one shanty in a little while if we all took hold; but you'll be about drowned out unless you do something to stop the cracks. It's been dry for a month now, and everything split open as far as it can be.

"Tar paper!" spurted Nate.

"And tar paper!" chortled Norm.

"Why, you're out of the fashion if you don't tar-paper your house out here. It makes it warm, and it keeps out wind and rain better than lumber or plaster."

"I thought homesteading and farming the simplest, easiest things in the world, and inexpensive; but I'm blamed if both don't eat up money like a gourmand," Nate said, whimsically.

"If it's got to be tar paper, it has to be; and if it's going to rain so we can't work, I'm going to Wetasket and lay in our Fall supplies. The rain won't hurt me, and the oxen will be out in it, anyway. I must begin to plow the minute the rain stops. I must get some land broken ready for Spring. We must make out a complete list now, so we will not have to go again till it freezes. We've simply got to have a breaking plow."

With Jim's practical help the boys made out a list that seemed adequate. And beside the general list Nate added a few small items for his own use.

"Put down emery paper, rotten stone and oil for me," said Nate; "and call at the post office and at the freight office, too. I'm expecting a bone cutter. I ordered it C. O. D. I couldn't wait till I got my money."

"Practical things, absolute necessities," Norm said laconically; but he made the memorandum.

"I'll make 'em pay for themselves," Nate answered cheerfully, smiling at Norm.

"Well, as you've been pretty economical with your cough medicine, maybe we can afford a few cents for emery paper to amuse the kid—" Norm stopped, looked at Nate sharply. "Say, kid, I don't know when you've coughed."

"I'm pretty well quit of that bad habit," gloried Nate, throwing his shoulders back and trying to thrust out his still shrunken chest. "I haven't taken a drop of medicine since we came here!" with evident pride.

"But I've bought stuff every time I've been to town," Norm demurred.

"And I've lugged it back every time I've been. I fixed it up with the druggist. I just wanted to see how long it would be before you noticed." Nate looked radiant.

"Why, you little scamp, you!" Norm spoke as though to a little child, for the lifting of this fearful handicap from the one he loved best filled him with such joy it nearly overwhelmed him. "Shake, kid; shake," and the two boys' hands met in a strong clasp. "Come to look at you; you do look as gay as a boy with a brand-new spanking." Norm paused again to fill his eyes with the goodly sight. "You're filling out, too. Your skin must be as thick again as it was when I first found you, lopping in your own blood under the pine tree at home."

"He looks as though he had pin fever. His legs are swelled up as big as knitting needles," Jim said dryly; but he stood with his back to the boys, and he thrust a bronzed hand across his eyes before he turned around.

"And to think I'd never noticed," murmured Norm, slipping his arms into his oilskin coat. "I'll bring you a great big treat of oil and rotten stone." And Norm went lumbering away.

"What are you going to do now?" inquired Jim, after Norm had gone.

"I'm going to begin to dig a little cellar under the shanty. I can make an opening to throw the dirt out, and we'll need a place for our vegetables. I see there's quite a little bunch out in the garden."

"I'll help," Jim volunteered. "No floor in this shack. We can begin right here."

Nate found the pick-axe and spade, and Jim took hold with the pick, while Nate shoveled out the soil loosened up by him. They were in the midst of their work, with dirt flying in every direction, when Hank Jones appeared.

"We're digging a cellar for our Winter supplies," Nate informed.

"Go get your shovel, you gazaboo!" ordered Jim; and Hank, nothing loth, joined his great force to that of the other boys. They had a jolly dinner together, and the work went forward with great gusto until Nate had to attend to the evening work.

"There!" he cried exultantly. "We've got quite a hole in the ground." Nate wiped his forehead and gazed admiringly at the cellar. "I believe I know better how to dig than I do to milk; but we can't let that cow go unmilked."

"Let Jim milk. He grew up milking," Hank suggested. "You're better at grub slinging."

"I'll sling the grub, but I'd like to milk that cow!"

"I'll work a little longer here," Hank volunteered.

"Which side do you sit on to do the pumping?" Nate inquired earnestly as he stood beside the red cow.

"Most any side," Jim replied. "She might be a left-handed pumper, for all I know."

"Is there a difference?" Nate asked innocently.

"You might try it and see," Jim said maliciously.

Nate sat down carefully on the left side of the cow. She turned her head and looked at him askance, but she did not say anything else. Nate reached forth a slim hand and began the pumping process, but only for an instant. The red cow lifted one onyx hoof and set it down inside the milk pail. Nate escaped unhurt, looking daggers at Jim, who stood convulsed with laughter.

"Try the other side," Jim suggested mildly.

Again Nate essayed to make friends with the red cow, but he had only reached out a tentative hand, when again the red cow lifted her hoof and objected.

"My thirst for knowledge is assuaged, Jimmie, come now; show off, smarty!" Nate said good-naturedly. And Jim, laughing and gurgling, sat down and filled the pail with milk, while Nate stood in abject admiration nearby. "How do you do it?" Nate asked, in awe.

"It's easy. Your early education was neglected, that's all."

"When I was in the cook shanty I made pancakes," Nate mused dreamily, with one eye on the triumphant Jim. "And cornmeal mush and milk wasn't bad, and I learned to juggle with milk and eggs and sugar, and make—"

"Shut up!" Jim said promptly. "I've showed you what I can do; now you go ahead and show your accomplishments—sissy things, anyway."

"That reminds me," said Nate with a laugh; and the two boys went back to the shanty. Nate plunged in, forgetting for a moment the cellar digging, and just caught himself on the brink, tipping half the milk over on to Hank, who stood below.

"Milk baths for Cleopatra!" Hank cried, spluttering and wiping his eyes. "It's a waste of good material that. Say, there isn't any use trying to dig here any more. I've struck slate. I've dug a little square hole, just to see how it is, but it's slate clear through."

"Nate is going to juggle with eggs and cornmeal and all sorts of things," Jim informed cheerfully. "And you and I will lay a floor while he does his slight-of-hand."

"Huh!" said Nate. "Who said so?"

"You said you could; now prove it," and with a laugh all three boys set to work.

When Norm drove up to the shanty door there issued odors most delectable, and Nate, with a pan of hot biscuits in one hand and a fork in the other, greeted him gaily.

"Get in here," Jim said. "Hank and I'll take your team. You've been out in the wet all day, and it's Nate's treat tonight."

Norm, nothing loath, entered the warm little shack and beheld the goodly array of eatables.

"Glory! but it seems good to get back home; and you've got on one of your gingham aprons. Say, I've got more stuff for you—letters," and he drew from his inner pocket several. "And your bone-cutter."

"Glory! but this is a red-letter day at the sign of the gingham apron," Nate chanted, flourishing an open letter. "I can sell all the buffalo horns I can supply for from $2.50 up per pair. Look here!" and Nate held the letter before Norm's astonished eyes.

"How on earth did you think of it? This'll be the first harvest off the land. I never should have thought of trying to sell such stuff. What a head you've got, anyway!"

"I hope it rains three days more. We'll jam into the horn-polishing business, and maybe we can earn a team of horses before Spring, if we have good luck."

"I've never helped, but I'm going to now. Even your worst foolishness seems to turn out into money, someway," Norm said warmly.

It rained for two days steadily, and Nate and Norm worked at buffalo horns as though their lives depended on it, and owing to so much having been accomplished before by Nate and Jim, at the end of the second day 15 pairs of horns were ready for shipment to an Eastern curio firm. And it happened that that very day Nate had a chance to ship them, sending to Wetasket by some settler going that way.

The third morning dawned clear and bright; Norm was up early, and after breakfast he brought out the oxen and the shining new breaking plow. "Now we'll lay out a land and break the virgin soil!" Norm exulted, so with many fussings and measurings, Norm finally turned a long furrow north and south, directly across the line between Jim Maynard's place and his own. How those boys gloated over that first furrow, Nate walking beside Norm as he guided the oxen to their task. How the rich black soil seemed fraught with romance and fortune! That soil, never turned to the sun before; never perhaps even trodden by a white man's foot. Oh, there was a glory of gladness in the clear October air, and it was not until afternoon that Nate could tear himself away from the fascinating field work; and he had taken his first real lesson in farming. After dinner, however, he uncrated and set up the bone-cutter in the chicken house, and set to work to grind the buffalo bones into a meal, which he hoped also to make a commercial product. The machine was a heavy, ball-bearing one, and the grinding was not as hard as he had expected. Still he hoped to fix some way by which it could be turned by horse or ox power. The days flew by as days had never done before. What with the breaking, which both boys enjoyed and shared, and the horn-polishing and bone-cutting, the time was so fully occupied with real work, full of zest and enthusiasm, it seemed almost no time until the first check for the sale of the polished buffalo horns arrived. Nate tore the letter open and glanced at the check. "Seven-fifty," he said joyously; "seven-fifty for those old, worthless horns."

Norm took the check. "Seven-fifty," he scouted. "Can't you read. It's seventy-five dollars!" Norm himself stood fairly aghast at the enormity of the good luck.

Nate gasped, gurgled, grasped the check and looked again. "You're right," he said, almost choking, to think that perhaps he could do his share and help along the partnership, which had seemed so one-sided to him. And, moreover, there was a hurry order for more polished horns.

Highly elated and encouraged by this venture, both boys devoted every moment of their spare time to preparing the horns for market. It was an arduous task, long and difficult, and very particular, and not one pair was relinquished until they were as smooth as glass and as rich as ebony. Every morning before light the boys worked with the grindstone, and every night they scraped with glass, rubbed with emery paper, with rotten stone, and finally with oil for the final finish. The grindstone Nate fixed with a foot pedal, so that one could use it without help, and this facilitated the work very materially. After the first return from the sale of the buffalo horns Nate and Norm considered buying a team of horses with great seriousness.

"We could buy a team for three hundred dollars," Norm said thoughtfully; "young mares, too."

"With the buffalo money, and what there is left of our thrashing swag, we could pay for one horse now and give our note for the other. It seems as though we could polish horns enough to pay for the other long before Spring," Nate replied optimistically. But Norm had an inbred horror of debt, which, however, after much thought, was overruled. With the horses, then both boys could break all day, and so give them a greater acreage for cropping the following Spring. And so it chanced that Norm went questing for the team, and came back at night with a span of beautiful dapple-grey mares. But with the team came other expenses. They must have harnesses, and a second breaking plow; and then, too, they must have good barn shelter, with feed and plenty of hay.

(To be continued next month.)

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Hope Farm Notes

AS nearly as I can make out, this Hope Farm man uses air-slaked lime and puts it on every year instead of every four or five years. Does he not know that this is right against the advice of most of the authorities and experts? S. B. J.

He does—he knows it well. I do not pretend to be an expert or an authority. If I had that pleasure it would be in line for me to tell people just what they ought to do, and scold them a little if they failed to do it. I just use lime because experience tells me that it pays, and figures show that right here we get more lime for a dollar in the slaked lime. When you count in freight and handling, and consider that you must use twice as much of the ground limestone the slaked lime is cheaper. It might not be so in your section, but I would not buy until I had figured out the cost of a pound of lime in both kinds.

Another reason why we use slaked lime is that we want a quick, sharp action upon the soil. We are raising fruit, and the soil is naturally hard and tough. It needs breaking up and crumbling. The slaked lime is b tter for this work. Again, we plow under catch crops of rye, vetch and clover *every year*—not every three or four years. This yearly plowing under of green crops is likely to keep the land sour. Rye in particular would be bad on the land if plowed in year after year without lime. It is the toughest of our cover crops, and with its big hollow stems admits the air so that it is very likely to ferment unless handled right. With this yearly use of cover crops I am not so anxious to store humus up in the soil as I am to break the organic matter up and feed it to the trees. Thus we use 500 pounds or more of slaked lime per acre after plowing under the cover crop. This helps keep the soil sweet and hastens the decay of the rye. Do not mix this plan up with that followed in Western grain or stock feeding. The soil in such sections is different from ours, and the rotation is such that yearly applications of lime cannot well be made. So they use two tons or more of ground limestone when seeding to grass, grain or clover, or when plowing a sod for corn. While they plow under a sod every four or five years, we plow in a heavy green crop each year. That is why annual applications of lime pay us, but the system is not for general application. You see a man must use brains with lime, and think out a plan to suit his needs. Some of those experts talk as if it should be considered a crime to use slaked lime. I judge that some of them would like to have a law which would compel a man to use ground limestone. I would like to take a broader view of the matter, and tell a man to study and figure so that he may know when to use slaked lime or limestone, and how to buy a pound of *lime* for least money.

We use lime on everything except potatoes and strawberries. Field corn does not respond to it as some other crops do, though sweet corn is more likely to. We like to use a little lime whenever we plow green rye under. For example, we planted a field in sweet corn May 16. Rye was growing there—a little over two feet high. I would rather have it four feet, but this was an early planting. A heavy chain dragging in front of the plow put this rye under, and the plow was put down deep. Then we took the lime spreader and put about 600 pounds per acre right on the rough furrows. Then came the big Cutaway well weighted down. With this green young rye the weight of the Cutaway is enough to pack it solid. Had the rye been older we should have used the roller before the Cutaway. Then followed the Acme harrow, and the field was ready for planting. Fertilizer will be applied when the corn is four to five inches high. In a general way that is our plan for working cover crops. Under this system we have seen our soil grow more and more mellow and productive, while our trees have grown into fruiting at a very moderate expense.

"DECORATION DAY."—I think the picture on our first page this week is one of the most effective presentments of the subject that I have ever seen. This picture was taken in a border State, where war meant the separation of families and ruin. Here are two old soldiers—one who wore the blue and one who fought in gray, united beside the grave of some old comrade who died in the bloom of his youth. Beside them stands the little child—not able to realize what this ceremony means to the old men, and yet feeling something of the mingled sorrow and joy which fills their hearts. It seems to be impossible for an older generation to convey the full meaning of life's tragedy to those who follow. At a great army banquet once I asked a young man who sat next me if he could realize what the Civil War must have meant to the men of moderate means who left their families unprovided for and marched into actual battle. He looked at me in mild wonder at such a question, and said he had never really thought of it. The war was an acknowledged fact—tucked away for 50 years in history. He felt that the outcome of the war had been a good thing for him, but as for analyzing the sentiments of the people who actually took part in it, he was "not interested." When the company sang, or tried to sing, "America" this man helped out in a perfunctory way. When they sang one of these foolish songs about

"Father pays the bills;
He's all right!"

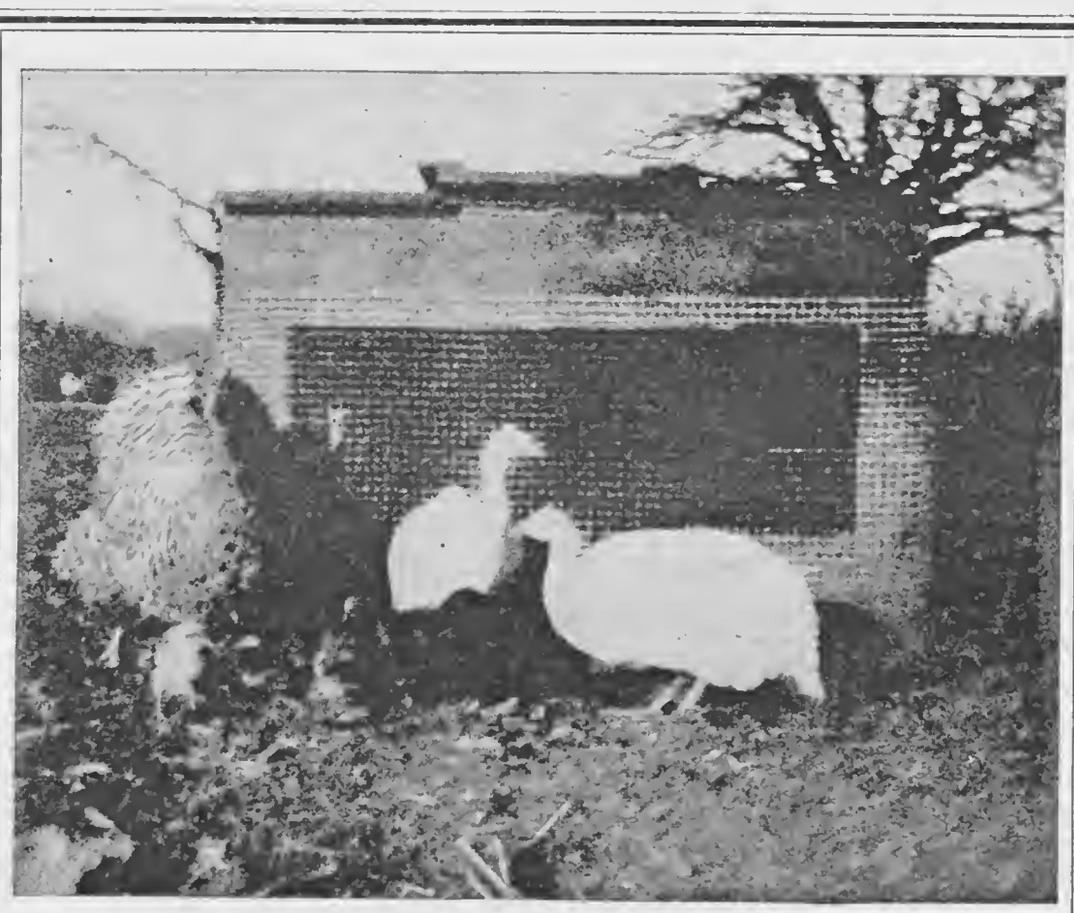
my friend tuned up in great voice. There was nothing mean or unpatriotic about him—a sound, clean young man; he simply failed to grasp the sentiment of it all. Show him these two old soldiers at the grave, and he could not realize how, as they watch those flowers, "the past rises before them like a dream." This young fellow cannot yet see that out of these dreams and visions must come the strength of the ages to give men that patriotism which can endure with patience and go down to the humblest things of life. "Decoration Day" will soon be a memory—vanishing into the great tumult of the busy years, yet there are many of us who can never forget what it means. It is harder for the women who endured the war privations to forget. Woman's world is at home, and oftentimes within its narrow walls there must dwell with her deep sorrows and painful memories. For to woman has always been given the hardest burden of the years and the poorest chance to throw off the yoke at home with outside pleasure or occupations. As Whittier wrote of the overworked farmer's wife:

"Sometimes her narrow kitchen walls
Stretched away into stately halls."

You see these old soldiers and their children have these dreams and memories of Decoration Day to break down their hard and narrow surroundings so that they may for the time being live in "stately halls" of imagination. Now the connection of what follows with Decoration Day is not entirely clear, but I say it now that we may think it over.

SENTIMENT THROUGH BUSINESS.—We are asked sometimes why in this Woman and Home Magazine we have so much to say about the business opportunities for farm women. It is because, with most women, their way to independent thought and feeling lies in the way of financial independence. When a woman can feel that she has developed some little source of financial income, and has proved herself, in some small degree, capable of doing business, she begins to take up that spirit and hope which go with independence. She is a better wife and mother and housekeeper from the fact that she has some little part in the world's business. It is easier for her to conjure up those "stately halls" while washing dishes or scrubbing, and we are all the better for visits to our more "stately halls." That is why this matter of developing little plans for selling homemade products will be the strongest feature of this magazine. We cannot have too many suggestions or true statements of what farm women have done in this line.

CHILD LABOR.—At this season the old idea of working children comes up. Shall we pay them for their labor or expect them to work for nothing? Here is a big question with many sides to it. Some people argue that the child should not be paid. "Make him realize that home is a coöperative enterprise where all must work and share." Thus these people talk, but many of them forget the last two words of their programme. The children work all right, but have no share or right to property. I think each child should have a regular job to perform with the understanding that this is his contribution to the home. After that is done I think it a wise plan to pay him for special labor. I follow that plan with our children and it has worked well thus far. We pay them in several ways. They make a bargain at so much for a job, they get a commission on sales, or they have the proceeds from a small piece of land. Not long ago the boys bargained to do a certain piece of work for 15 cents each. When we came to settle up little Redhead claimed that I had "a 50-cent job for 15 cents." When his attention was called to the men in the Scriptures who agreed to work all day for a penny while those who came at noon get the same because of a contract he agreed, but hereafter he will consider his labor bargains more carefully. Our boys have bank accounts for their savings. The three little boys have taken a rich piece of ground—perhaps one-eighth of an acre. They will set out Marshall strawberry plants three feet each way and plant Irish Cobbler potatoes 18 inches each way among the berries, with a few Telephone peas in each potato hill. This will mean hard culture. The potatoes will be dug early and then the boys will sell potted plants and lay down hills of strawberries for next year's crop. They will have the entire proceeds from the field. I shall try to get them to figure whether it will pay them to hire one of the Italians for a day's labor. A boy should be taught to *manage* as well as work. H. W. C.



CO-OPERATION IN THE HEN YARD.

The Plymouth Rock hen shown above is the mother of the two broods here represented. She hatched and brooded the White African Guineas during the middle of Summer. Then she stole her nest and hatched out a brood of her own about November 1. When the Guineas found that there were new babies in the family they followed the old hen about as if they were tiny chicks. Mrs. P. Rock cannot get rid of them and does not try to. Here is a co-operative society in feathers which might make many a human family take notice.

Penalizing the Saloonkeeper.

A NEBRASKA law giving the wife and children of men who become habitual drunkards an action against saloonkeepers who sell them liquor was sustained by the Supreme Court at Washington, on April 27th. Mrs. May Budger recovered heavy damages against Omaha saloonkeepers who had sold drinks to her husband, a paperhanger, and the court affirmed the judgment in an appeal taken by the saloonkeepers and their bondsmen.

This case is well settled. For many years temperance people have made a battle for this principle. If a man loses life or limb in a factory through an imperfect machine, or an accident which might have been prevented by the owner, his family would have a clear right to damages. They have the right to live, and husband and father's labor is essential. When a rum-seller makes a man an habitual drunkard he leaves the victim worse than if he had lost limb or life, and he should be made to pay for it. The strict enforcement of such a law will force many a rum-seller out of business—a splendid outcome!

A Little Discouraged at Parcel Post.

I HAVE been trying to study up whether or not it would pay to place an advertisement, taking advantage of your assisting offer in April 25th issue, page 636, encouraging parcel post business, and while it is proven a helpful thing, it strikes me that the mail authorities need "jacking up" before it proves fully successful. I have worried and fretted and wondered how I might assist in making ends meet, for I am trying to manage the poultry part of farm life, while my husband works out at carpenter trade, for it seems impossible to make a living off our farm without any capital, it being so dreadfully stony and hilly, too. We secured quite substantial egg carriers (having sent West for same), feeling that we might profit by sending eggs to New York privately, and our experience at that was discouraging through parcel post carelessness. About two dozen out of four were broken. One would think to see them packed that they could go anywhere in United States without breakage, so we had to cut that out. Then I managed to secure two customers for dressed chicken, and for all they are marked "Perishable" they are sometimes three days on the road. One sent last Friday, for instance, was collected here at 3 P. M. Friday, and never reached Park Place, Brooklyn, until Monday evening, and then had a great hole in end of package, where a mouse had had its feast off leg, and customer said it was unfit to eat. It has me rather discouraged, wondering how one can do business under such conditions. I might in time work up a little trade if Uncle Sam's men would only have more assisting power. Carefulness would aid a great many, and parcel post business, too. I like the country and like farming, but a woman cannot undertake anything but poultry out here. MRS. P. T. R.

New Jersey.

R. N.-Y.—We think the parcel post conditions will slowly improve as the service grows. We have had much worse complaint about express packages. A package collected late in the afternoon on a rural route in New Jersey could hardly be expected to leave the local post office that day, and it probably lay over Sunday in the New York office. We have never advised egg shipments, though some report fair success. We should stick to parcel post a while longer. You must remember that there is a certain proportion of loss in all business.

Ruralisms

New Blackberries.

If we estimate the progress of the blackberry by the number of new varieties that are being introduced we must admit that the prospects of its improvement are very bright. In this respect there is no comparison between it and the black raspberry although the ease with which the latter is raised from the seed should bring forward many new claimants. Among the new blackberries put out in quite recent times are the Himalaya, Robinson, Nanticoke, Watts, Joy, Star, Black Diamond a.d McDonald, while the Mersereau, Ward, Blowers and Eldorado are but little older than some of these. These make up an even dozen in number and the chances are certainly in favor of some of them possessing superior qualities.

Commenting on this list, I have already described the Himalaya. Since then I have received a letter from W. F. Bellairs, Missouri, in which he protests against my depreciation of that variety. He calls it the best berry ever grown and is planting several acres of it. Nevertheless a careful perusual of his letter fails to discover any definite statement of what the plant has really done for him that entitles it to recognition. I fear he is depending too much on printed statements by interested parties. The Robinson is a standard commercial sort in Texas, and will not stand a temperature much below zero. I had great hopes of it, for the berries are large aud fine and it is said to be very drought-resisting, but last year when my vines had everything in their favor, they failed to set a good half crop, and condemned themselves forever as shy bearers. A Texas friend writes that the Robinson is also shy with him, and that he finds it unprofitable. Therefore exit Robinson. Other Texas sorts, the Dallas and Sorsby, will prove themselves here this Summer. Of the McDonald I have already written. This season should be a conclusive test of it here, for I have it in quantity and adjoining varieties with which it succeeds in Texas.

The Nanticoke was introduced in 1912 as the latest of all varieties, and therefore a profitable market sort. It has never shown rust, is quite hardy (said to have come from Norway) is a fine table berry, but is too tender for a long distance shipper. The Nanticoke has not yet borne for me. The Watts, I have found to be a truly magnificent berry, possessing every desirable quality, great vigor, productiveness, luscious fruit of the largest size, but alas, the rust has doomed it for its victim and it seems little more resistant than the Kittatinny. My trial plants of Joy and Star (Ewing's Wonder) have just been set. The Star is planted six feet apart in row and tied up to eight foot stakes, which would lead one to think that it had a cross of strange blood in it, but we are told that it is quite distinct from the Himalaya which is a "light yielder of small berries." Then comes the Black Diamond with characteristics something like the Star. I have the benefit of the evidence of a fruit grower with no financial interest in this variety who writes me from New Jersey, where it also originated, that he finds it the most profitable sort in his community where berry growing is the chief industry. Its berry is large, glossy black and a good shipper and ripens after main season is over. He advises that plants be set six feet apart and rows eight feet. His soil is rather thin and sandy.

Of the older class of varieties Eldorado has an established reputation as a fine market berry. It is hardy even in the Northern States, and I have never had a cane to rust. Occasionally it has been charged with being shy in fruiting, but I do not find it so; on the contrary, it is one of the most productive. The Blowers does not seem to show qualities of any great value. It has not impressed me as a superior sort. The Mersereau fully sustained every claim made for it and might head the list were it not so subject to rust as greatly to impair its value. Every year I have to dig out a large proportion of its vines, and it acts as a propagator of the disease among more resistant kinds. I shall never plant more of it although it is a noble variety in all other respects. The last on the list is the Ward, and here we come to one of really sterling worth. It resembles the Mersereau in shape of berry but I do not find it quite so large and so sweet, neither is it quite so vigorous in growth so far as I have tested it but as regards the crucial test, resistance to rust, I find it one of the best. Ward, therefore, is one of the newer varieties that I should choose to set largely of if I were making a new planting. It is pictured herewith. L. R. JOHNSON.

Cape Girardeau Co., Mo.

THE WARD BLACKBERRY.

Snapdragons.

Do snapdragons come up second year from crowns where they were first set out, or do they start up any and everywhere seed has dropped? Will they thrive in sunny location? Do they need protection in Winter? M. M. A.

Closter, N. J.

The common garden snapdragon is a perennial, but is largely grown merely for the first crop of flowers. Most varieties are hardy here if covered with a mulch during Winter. Seeds are sown early in the Spring in frames or hotbeds, and transplanted later in the open ground. For early blooming they are sown in August or September, and carried over Winter in a cold frame or under a mulch. They like a sunny location, but will also thrive with partial shade, especially the dwarf sorts. Like most perennials, they will self-sow to some extent if allowed to ripen seed, though not as freely as some other plants do.

Planting Beans "Eye Down."

I read your article on "Writing for the Press," and here is my contribution. Anyone who will notice how a bean sprouts and grows will question the advantage to be gained by planting a Lima bean with the "eye" down. W. P.

Greenfield, Mich.

I cannot tell you as a botanist could just what changes take place when a bean begius to grow. But as I have observed it the bean first of all sends a sprout out from the "eye." This first sprout forms the root of the future plant. If the bean is planted "eye down" this sprout goes right straight down in a natural way, little rootlets come out from it and the bean is rooted. After this root gets a foothold the bean itself is lifted out of the ground; it splits in two halves and the true leaves come out from between these halves. Now suppose the bean is planted "eye up." What will happen? One of two things. If it has been planted shallow the little sprout which later becomes the root will come right up to the sun and perish and the bean die. If, on the other hand, there is a good covering of soil over it and the bean has plenty of vitality this sprout will start up and then bend over and go down. The top will appear four or five days or a week behind those planted "eye down." Through a misunderstanding we had, one time, about half an acre of Limas planted "eyes up." That experience was so very unsatisfactory that we cannot emphasize too strongly the importance of planting Lima beans "eye down." TRUCKER, JR.

Birds and Spray Poison.

The article on spraying and bird killing, page 697, is of interest to me because I have birds galore, but no cherries. There are several cherry orchards near here. My son and I spent several days trying to find out why they had bushels of cherries and we none at harvest. We spent two days during the cherry harvest in one orchard, and never saw a bird or heard one while there. We have done the same in other orchards near here and there were no birds there. They all sprayed their trees. I believe it is money in their pockets to spray their cherry trees with poisons, for if they do they will have cherries to eat and sell. With more than 20 large bearing cherry trees I have to buy or use them half grown. I am crank enough to believe what I see. I have never seen Alfalfa white with spray but I have seen cherry trees green with paris green. S. E. H.

Illinois.

"Then," said the man who was preparing the sketch, "I shall say that you first saw life in the little village of Backwoodsville——" "No," said Mr. Selfmade, "I was born there, but I didn't see any life till I came to town."—Chicago Tribune.

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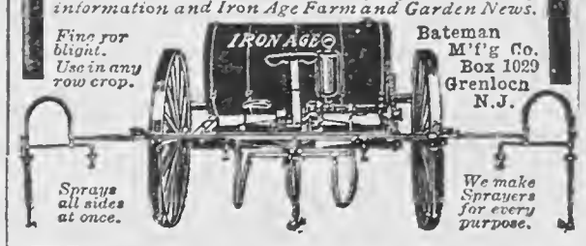

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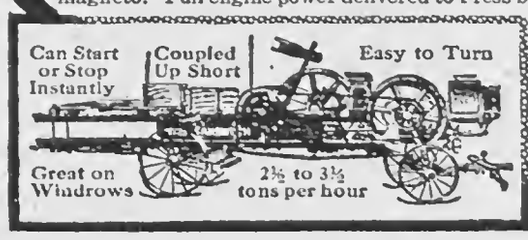

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

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TEN WEEKS FOR 10 CENTS.

IN order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

THOUSANDS of our readers will join with us in the deepest sympathy for our old friend, Prof. H. E. Van Deman, who has just been obliged to undergo a serious operation. Van Deman's friends are everywhere, and they are of the warm-hearted kind who remember. Let us all hope that our good friend may speedily recover.

*

IN the June number of the Woman and Home Department we shall begin a series of articles on

FARMING BY WOMEN.

The first one will tell how a woman who fell heir to a farm in Maine handled the hay crop. There are many women who have been left to take care of farms. Some are compelled to live alone—others farm by proxy. They grow everything from hay to honey, and we find that they keep books more accurately than the men. Their figures will make us all think.

*

A FEW years ago THE R. N.-Y. began to talk about using the moving picture show to help farmers' institute work. We were promptly given 50 reasons to prove that it could not be used. Yet it is being used right along. In Washington the State Good Roads Association sends about a motion picture showing how to use the split log drag on the road. Mr. D. Ward King, the inventor of this drag, is the hero of the motion picture. They tell us boys and girls leave the farm to chase the motion picture show. Can we not use it to help move them back?

*

THE public sentiment of this country will soon break out like a volcano on the subject of temperance. While Prohibition as a political issue has not made great progress, as a social and business issue it is rapidly becoming the largest thing in public life. It is confidently stated by those who know that Congress will, within a few months, take the first steps toward submitting a constitutional amendment prohibiting the manufacture and sale of distilled liquors. The House is ready to support partial prohibition—the Senate will probably delay. There is no particular division of parties over the question. There is a new division—saloon and anti-saloon. During the past five years the growth of temperance sentiment has been astonishing, and particularly in the country districts. The discussion of the 35-cent dollar has helped in this, because farmers see that the vast sums spent for liquor represent an economic waste. Absolutely no good can come out of the business of selling liquor, while it absorbs millions which ought to be spent for food and other necessities. The brewers, distillers and saloon keepers understand the mighty struggle that is coming and they are trying to prepare for it by various compromises. They will fail. Slowly but surely the liquor business will be driven into the large towns and cities, where it will become so evidently a menace and an economic disaster that public sentiment will wipe it out. If anyone doubt the truth of this prophecy let him consider how the temperance question has gained as a factor in public life during the past 10 years. We can remember what a fierce storm of hatred arose when President Hayes stopped serving wine at the White House. When Secretary Bryan served grape juice in place of liquor he had the outspoken endorsement of a great majority of American citizens. No class of people in this country are more interested in pushing this question of temperance than farmers. The money squandered for drink helps keep their dollar at 35 cents.

*

FOR a dozen years we have been coming at this season to give this advice—*Plant Corn!* Here we come again, more emphatic than ever before. Corn is the great American grain food—the most useful plant servant that grows on the farm. Put it into the silo and it gives the cattle barn pasture while snow and ice cover the fields. Dry and husk it and the grain feeds everything on the farm, from grandfather down to the smallest baby chick. Winter the horses on the dry stalks and turn the hay into cash. And where can the crop be found that can take care of an old sod or of a cover crop like corn? The tough, rank-growing corn will eat up the sod and leave it in far better shape for seeding to grass or grain, or for potatoes or any other farm crop. What can be better for a young orchard than a quick-growing flint variety? The crop will pay for all labor in the orchard and leave another cover crop to be plowed under. Feeder, farm scavenger and soil worker—that is corn. Work up that old eyesore of a pasture, or that old back field, fit it and fertilize it and *plant corn! Plant corn!*

*

IN this discussion of utility and standard poultry we want it clearly understood from the start that THE R. N.-Y. is not appearing as the champion of Tom Barron or anyone else. All there is about it is that these Barron birds, with their egg-laying performance, have brought to a blaze the conflict between utility and "standard," which has long been smouldering. The foundation fact is that these English birds, entered as "Wyandottes," are laying rings around the other birds at the egg contests. We shall not be surprised if the American Leghorns prove to be the "white hopes" to beat them out yet, but to-day these "Wyandotte" hens are champions. Now the point is this: Are these birds true "Wyandottes," or are they cross-bred birds with Leghorn or other blood mixed in? What difference does it make? Suppose a cow were to make the world's record at producing milk or butter. She is "boomed" as a Jersey cow, and her great record adds to the value of every other Jersey, and particularly to her own family lines. There is a great demand for her "blood" on the strength of her record. Now comes an authority claiming that this cow is a "grade" or a cross-bred cow, carrying both Jersey and Guernsey blood. Anyone can see that this would complicate matters at once, for if this cow had the blood of both breeds in her veins she would be a very useful dairy animal, but under breeding rules not eligible to registry, being neither a "Jersey" nor a "Guernsey," but a cross-bred cow. The case is not exactly the same with poultry, yet if a man is paying good money for Leghorns, Wyandottes or "Rocks," he has something definite in mind, and does not want a mixture of breeds unless he knows what he is buying. Now we open our columns to any evidence to show that these English Wyandottes are anything but what their name implies. Opinions and guesses are not evidence. It ought to be possible for the poultry experts to prove this point one way or the other. It seems to be up to the "standard" people to offer the proof first. Now, gentlemen, you have the floor!

*

WE are asked many times if there is on the market to-day a light gasoline or electric cultivator which will do the work of a single horse or a single team in a practical manner. We do not know of one which may be endorsed as fully practical. Such a tool is greatly needed, and many engineers and mechanics are trying to work out the plan. They seem to have worked on two quite different principles. One type presents a heavy machine with cultivator teeth dragging behind it like the plows on a tractor, tearing or digging up the soil like a horse cultivator. Such a tool must be quite heavy in order to grip the soil hard enough to drag itself along. The other type applies only enough motive power to the wheels to move the weight of the machine and a little more. The tearing or scratching effect upon the soil results from a power separate from that which moves the machine on. In one type digging is effected by a drum with teeth or spikes in its surface, which revolves or rolls over, tearing up the soil as it goes. In the other type sharp teeth are set in a ring, which revolves with a circular motion like the fingers of the hand whirled around in soft sand, or not unlike the claws of a hen digging and scratching in a garden. We think the type which separates the power of locomotion from that of work will most likely prove superior. At this time we do not know of one of these power cultivators which we can unqualifiedly recommend. We know a large gardener and nurseryman who says after a trial that he will promptly buy 20 of a certain machine when certain parts and adjustments are made stronger and mechanically correct. This man says that these machines, working properly, would enable him to dispense with at least 30 work-horses, just as the automobile has cut out four or five driving horses. We believe the gasolene cultivator is on the way and nearly in sight. At this time, however, the truth is that he who buys one must expect to pay for a share of the experimenting needed to perfect the machine. If any man is willing to do that it is his privilege to do so, and he helps other farmers by doing it, but he should know before he starts what he is doing.

*

I HAVE grown Alfalfa successfully on several farms in Maryland and also in New York, and have also had, in both States, a number of failures. I feel confident that failure in the last year or so has been largely caused by seed of improper adaptation to the locality. H. W. H.

We have had many statements like the above. We believe that much of the Alfalfa seed which has been used in the Eastern States is quite unsuited to the local conditions. Most likely we shall find that with Alfalfa, as with vetch and to some extent seed corn, the conditions of the section in which it is grown have much to do with its behavior when planted. In fact this question of seed adaptability and purity seems to be the coming great agricultural problem. We think it will be found greater than fertilizing or cultivation.

*

THERE are two things about this Mexican situation which we should all remember. The war now raging in Mexico is mainly a class struggle for the land rights of small freeholders. Mexico has been and is a country of large estates, with two principal classes—great land owners, and laborers, who have been in some ways little better than slaves. The great land owners have controlled the country in an arbitrary, despotic way. There is now appearing a third class—small freeholders, or the more intelligent laborers who desire to obtain land of their own. In one way not unlike the situation in France at the time of the Revolution, this new class of Mexicans are fighting to destroy land monopoly. When we come to understand this we may see how impossible it would be for this country to "pacify" Mexico. This land question is one which the Mexican people must settle for themselves. A strong class of small freeholders is always the surest guarantee of peace and order. The other thing to remember is that all this war talk is largely kept up by promoters or exploiters who have started rubber, fruit or oil propositions in Mexico. We have, in years past, exposed some of the companies which have sold stock in these Mexican enterprises. Some of them are fakes and nothing more; others are honest enterprises. All took their chances in a country which they knew was like a political volcano, and there is no reason why they should involve this nation in war.

BREVITIES.

REST and warmth is about all the little chick needs during the first 48 hours of its life.

"WHAT is meant by a food stuff?" asked the professor of domestic science. "My young brother," answered the young woman.

BEE-KEEPING in Porto Rico has grown in five years to a $100,000 business. The Porto Rican human may have his lazy days, but the bees are busy.

YOU will be interested in that story of the custom canning business, page 770. Here is a new scheme for carrying fresh meat through the warm weather.

WHAT do you say to agriculture in Greenland? It has been started in fox farming in four small islands in Good Hope Bay. We shall not emigrate.

MASSACHUSETTS undertook to bell the cat by passing a law to compel Tom and Tabby to stand for a license. The bill was defeated by a useful class of citizens, long known as friends of the cat.

WISCONSIN UNIVERSITY is planning a correspondence course in food study for prospective brides and young housekeepers. In the correspondence before marriage "angel food" is most discussed. Afterward the bride sadly finds that her husband is made by what he eats.

A NUMBER of delegations have been sent to Europe to "study farm conditions" at public expense. No doubt other gentlemen would be glad to go. Now comes the word that 50 South African *farmers* will go to England, Scotland, Canada and the United States to observe farm conditions. These men seem to be real farmers.

ON April 3, 200 cases of California asparagus arrived in Liverpool, England, in good condition. This asparagus brought good prices, and there will be a large demand for it in the future, during the season before local asparagus comes into market. There has always been a large demand for canned American "grass." This is the first time the fresh "grass" has been sent over.

WOMAN AND HOME

THE FOUR-LEGGED HERO

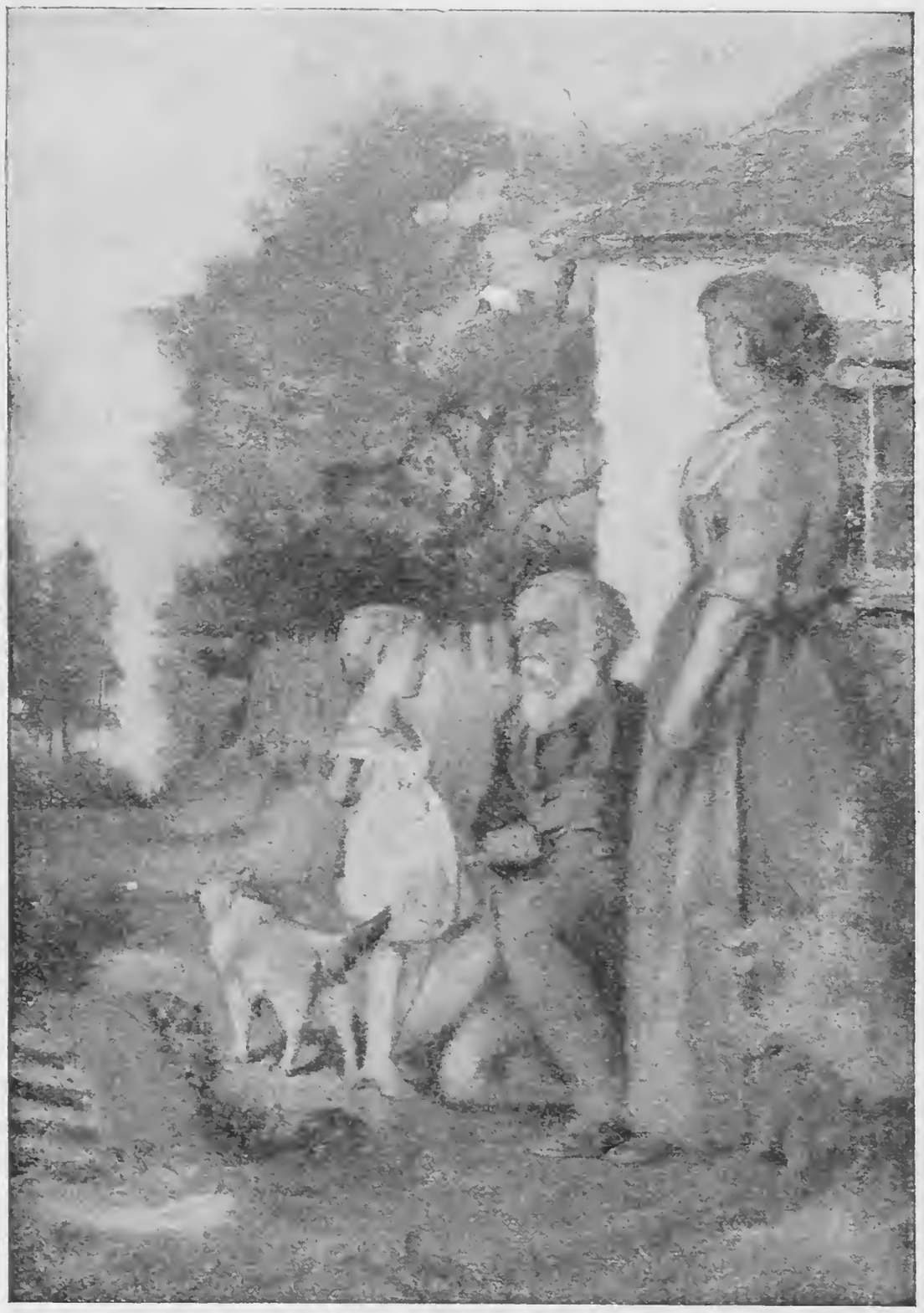
A STORY OF DECORATION DAY

By "THE HOPE FARM MAN"

Illustration By HAYNSWORTH BALDREY

You want another story—bringing Decoration Day
And flags and soldiers in it? Well, now, while your Pa's away
A-meeting with old comrades in the churchyard with the flowers,
Recalling back to memory ghosts of long-forgotten hours,
I'll just whirl in an' tell you while the thing is on my mind,
A story of old war-times that you'll never, never find
In printed books or papers, but for all that I tell you
We never should forget it or say it isn't true.
We came from West Virginia; just take out your little book
Wherein there's maps and pictures, and you hardly need to look
To see the way she hinges, right between the North and South;
Those mountains, as you may say, were the teeth in slavery's mouth.
And brother fought with brother—yes, and father fought with son.
All *my* boys loved the Union, and the whole of them but one
Marched off to serve McClellan. Billy's wife was Southern bred;
For her sake he turned southward, where old Stonewall Jackson led,
And me and mother waited through the war, with no one there
But Katie, Billy's daughter—little tot with eyes and hair
Just like yours to a shadow—for her mammy's heart grew still
When news come back that Billy was asleep at Malvern Hill.
I tell you it was lonesome waiting through those weary days.
The memory of that waiting can't be blotted out—it stays.
First one side and then t'other went a-riding back and forth.
As war went rolling southward or again rolled back up North.
One evening I sat nodding, with my bad leg on a chair;
A tap came at the window—I was mighty hard to scare
In those days—"Come!" I shouted. Strange enough it is to tell,
The door swung slowly open, and in walked, or rather fell,
A slender, light-haired fellow, pale, with ragged coat of blue,
A bandage on his forehead—didn't need to ask, we knew—
A wounded Union soldier—knew it all before he said,
"*A friend!*" We washed and fed him, and just tucked him into bed.
Don't know how far he'd wandered in his weakness and his pain.
Just raved about his mother, with the fever at his brain.
We hid him in the attic and we nursed him up with care,
Till tardy strength came to him and brought back his rightful share,
Until one pleasant morning—seems as though 'twas yesterday,
Around the rocks below us rode a squad of troops in gray.
"Run! Jump into that haystack!" I says. "Pull the hay down right!"
Was hardly under cover when the soldiers rode in sight.
Our Katie sat there playing with her dog out in the sun.
I called her up and whispered: "Don't betray him, little one!
Don't tell them where he's hiding; never mind what they may do.
Just do your duty, Katie. I know you'll be brave and true."
"Now, then! We want that soldier!" says the leader. "Well," says I,
"You better come and get him—I would say—you better *try*."
Then Katie's little doggie brussled up his hair and growled
As though he'd like to fight 'em; and the ugly captain scowled
And then grinned through his whiskers. "Here, jest catch that dog!" he said,
"And tie that rope around him—'round his neck, below his head,
And let the young one see him; you'll hear from her 'fore he yelps.
Now hang him up—be lively! Yes! Every little helps!"
They caught poor little Rover and then hung him to the tree
Down there beside the haystack—little Katie looked at me
With eyes just running over. Oh! If I had had my gun
I'd drilled through that big feller's heart a passage for the sun.
Poor little girl; she pleaded, "Please, sir, let my doggie go!
Please, please don't hang old Rover—you just *know* I love him so!"
"Well, will you tell?" "I can't sir, for I love that soldier, too,
An' grandpa told me always that I must be brave and true."
"Well, string him up!" Poor Rover! They just yanked him till his toes
Scarce scraped the ground—no whimper from the little dog arose.
The little four-legged hero—just chuck full of loyal grit.
There was tarrier blood into him, and them tarriers never quit.
"Now, will you tell?" Poor Rover! how he turned his patient eye
Up to his little mistress. "Don't you tell me any lie!"
The sneering captain added; but she raised her little head
And just fought back her sobbing. "*I will never tell!*" she said.
Then that hay stack rose up lively—much to every one's surprise;
Out jumped the Union soldier, fire just blazing from his eyes—
Just couldn't stand it longer. He stood up and faced 'em all.
"Don't dare to plague that baby! Fight with *men*, or not at all!"
They jumped on him and bound him, with his hands behind his back.
He stooped and kissed poor Katie as they led him down the track.
"Don't you cry, my little woman; you were true as steel," he said;
But the baby didn't hear him, for her little dog was dead!
They passed on down the mountain, leaving Katie lying there,
Her baby fingers clutching poor, dead Rover's curly hair.

At last the war was over and the wounds began to heal;
The rankling in your bosom sorter lost its savage feel.
We wondered if that soldier ever lived to get away;
Set talking it with Katie on the porch one Summer day.
A man rode up the mountain. My old eyes were getting dim;
I didn't need my glasses. "Katie, girl," says I, "that's *him!*"
Seems though I'd *always* known him—we sat there and talked away,
When he spoke up so solemn: "This is Decoration Day.
The graves of all the heroes will be covered thick with flowers,
The brave and silent soldiers sleeping through the Summer hours."
Then little Katie whispered, hardly knowing how 'twould sound,
"Old Rover loved the Union!" That big fellow gave a bound



I CALLED HER UP AND WHISPERED, "DON'T BETRAY HIM, LITTLE ONE."

Up straight as though you'd shot him. "Come," says he, now right away
Let's show our love for Rover this first Decoration Day."
Queer sight it was to see them hunting posies on the road;
Don't take such willing workers long to pick up quite a load.
I limped, and mother with me, just to see them decorate.
They wasn't any speaking— couldn't none of us orate.
The soldier only muttered—something glistening in his eye:
"*He who dies to serve his country has a holy death to die!*"
That's how this story *started*. I was sorter scared, I own,
When, 'most before I knew it, Kate bloomed out a woman grown.
The soldier says "I want her!" Nothing left for me to say.
I let them do the talking, and I reckon that the way.
Your eyes and hair and figure favor hers, my little dear,
And I, your double gran'pop, find myself a sitting here.
We don't forget old Rover when it's Decoration Day;
We give him fond remembrance, though his grave is far away.
Your mother says that never can we hope to pay the score;
He died to serve his country—not a single man did more.

Woman and the Home

Training the Other Woman's Child.

They all sat round in friendly chat
Discussing mostly this and that,
And a hat.

Until a neighbor's wayward lad
Was seen to act in ways quite bad;
Oh, 'twas sad!

One thought she knew what must be done
With every child beneath the sun—
She had none.

And ere her yarn had been quite spun
Another's theories were begun—
She had one.

The third was not so sure she knew,
But thus and so she thought she'd do—
She had two.

The next one added, "Let me see;
These things work out so differently."
She had three.

The fifth drew on her wisdom store
And said, "I'd have to think it o'er."
She had four.

And then one sighed, "I don't contrive
Fixt rules for boys, they're too alive."
She had five.

"I know it leaves one in a fix,
This straightening of crooked sticks."
She had six.
And one declared, "There's no rule giv'n,
But do your best and trust to heav'n!"
She had sev'n.
—Alice Crowell Hoffman, in The Woman's Home Companion.

Her Biscuits.

A lot of folks had come to dine,
Offers of help she did decline.
She thought she knew a great big lot,
And went to make some biscuits hot
She measured carefully cup on cup,
And deftly mixed ingredients up,
But when quite done they were as hard,
As any pebble on the sward,
Or any rock upon the beach,
And yet our New-wed had her speech,
And coolly stated with a smile,
(Her dimples rippling all the while)
"I merely just forgot the stuff,
They use to make the mean things puff!"
And so, forsooth we all agreed,
She made a gracious mistress freed,
Form every sort of irking blame,
For any cooks had been the same,
If she'd left out the lightning stuff,
That goes to make all biscuits puff.
—Rose Seelye-Miller.

"Have an Apple."

[Dedicated to Editor of THE R. N.-Y. in appreciation of his expression, "Have an apple."]

Most all of us, like peaches, pears, or cherries,
Or plums, or figs, or dates; or some like berries;
But the best of all to eat
Having choice from sour to sweet
Is an apple—*"Have an apple"*
It will make your day complete.

When Smith, or Jones, or Brown, or Dusenberry
Says, "Come boys, have a smile, let's all be merry."
Be prepared to do this act
Using courtesy and tact
With the apple—*"Have an apple."*
It will please them for a fact.

When Mary Jane cooks goodies for her Billie
And her little folks, John Hennery and Tillie,
Nothing gets their taste or eye
More than dumpling or a pie
Made of apple—*"Have an apple."*
And another bye and bye.

When walking through the streets you want some pleasure,
The kind of pleasure you will surely treasure.
To some hungry looking boy
Pass an apple. Note the joy
On his face—*"Have an apple."*
Will not injure or annoy.

That apples are king though of all fruits that grow,
We all of us—everyone—surely must know;
For the greatest temptation
That befell our relation
Was when Eve said, *"Have an apple."*
Adam fell—expiation.

That the slogan is old you need not be told.
Now all who belong to THE R. N.-Y. fold
Cordially are invited
To all make a united
Apple cry—*"Have an apple"*;
And we'll all be "de-e-light-ed."
O.

MOTHER'S ROOM! There ought to be such a room in every farmhouse. Not a sleeping-room, but a place set apart for the women of the family to have for their own. The head of a business must have his office where he can be alone if need be. Mother is the head of the house, and she should have her room fitted to suit herself. We have found a farm woman who has fitted up just such a room. She calls it her sewing-room. It is really home headquarters, and we are to have a full description of it.

* * *

WE are talking seriously of buying a small auto in partnership with our best friends. Father would take care of it; they have a place to keep it. Both families are honest and of very moderate means. We can get a small, new, reliable car for $395. It is lightweight and not at all fancy: for instance, in place of the running-board it has a step like a buggy. I wonder if

DO you realize how the Rural family is scattered over the country? While most of you are working with coats off and in the midst of grass and flowers, others are still in the snow. The little picture shows what some of the children of our big family are doing right now—far up in Canada. By way of contrast we could show you other Rural children on the Canal Zone who run about in the sun—and never saw ice or snow.

people ever did buy an auto in partnership, and what terms of agreement they entered into? E.

Our folks have tried about every sort of partnership or combination, and they can tell. To make a success of such a combination we should think the sparker between the two families should be dull and slow to act. Family explosions do not drive the car steadily, but blow up the connections. It will work best where there are no children in either family.

* * *

WE have in our community a White Wyandotte hen that laid 93 eggs in that many consecutive days in her fourth year. Her owner values her at $100. She is named Pin Feather.
Michigan. P. L. W.

Why not call her "pin money"? In a few years she would enable her owner to buy diamond pins. Her daughters would be sought after far and wide. There may be such birds in many a farm flock—flowers that blush unseen and provide custards or fried eggs when the poultry world would chase after them if they were known. In last year's poultry contest at Storrs, Mrs. Haynes of Idaho entered six Wyandotte hens. They were carried on horseback and stage many miles before the express company could start them on a 3,000-mile journey. Yet these birds from the back mountains beat all the other Wyandottes in the show.

* * *

THE *Women's Journal* tells the story of how Colorado women influenced the Governor to put an end to civil war in their State:

"They issued a call in the name of the womanhood of their State for a meeting at the Capitol. One thousand of them, with the cries of the slaughtered in their ears and aghast at the horror of ruthless State murder of their fellow citizens, marched to the Capitol and demanded an audience with the Governor. He refused to see them. They stood firm and repeated their demand. The Governor hesitated; he did not want to see them; but they were voters; besides, there was something awe-inspiring in their spirit and numbers; they meant business. The Governor reluctantly admitted them."

These women, once admitted, stayed there until they saw a message calling for Federal aid filed. Most of these women went on duty at 10 o'clock in the forenoon, and at 10 o'clock at night 150 still remained in the Governor's office, not leaving until he had surrendered. "Votes for women" has no more determined opponent than the New York *Sun*, yet this exhibition on the part of these Colorado women compells that paper to say:

"We hope these determined women, who did a necessary job so thoroughly and well, will now see to it that the administration of their State does not fall into laxity and inefficiency again. They have shown that they can compel action in a crisis; let them now take counsel to prevent such a crisis from again arising.

* * *

WILL you please write something emphatic and persuasive on the desirability of men folks coming to meals on time when they can? So many farm women lose valuable time waiting unnecessarily. Last night the best father in the world was at the house when the water was put on to boil for tea. It takes 10 minutes; he knows it. But he wandered off to plant three short rows of potatoes, then conversed with the neighbor over the wire fence, and turned up half an hour late. On one farm, where the man of the house is especially bad about this, a wise young cook, in oil-stove weather, heats the blue-flame oven piping hot and sets it on the range, and is thus prepared with a place to keep food hot until the man deigns to appear. K.

"Emphatic" is well enough, but with a well-trained man "persuasive" should not be necessary. Who trains the man into this habit? Does *he* ever have to wait for the women folks to get ready? Try a cold meal on him for once and see how it works.

* * *

THE Ohio Agricultural College states that Sharon Center, Ohio, is the smallest town in that State having a system of waterworks. From the side of a hill well above the general level of the village, a strong spring flows from the sandstone rock. The stream from this spring fills a four-inch pipe, and the flow does not vary perceptibly with the change of seasons. A large cement tank holding 900 barrels has been built farther up on the summit of the hill. A hydraulic ram has been set a little below the outlet of the spring. From this water is forced into the tank. A service pipe leads from the tank to the town almost a mile away. This water, coming as it does from the sandstone rock, is pure, and has the added advantage of being soft. There are many farms in Ohio where it would be possible to install a hydraulic ram and service pipes to supply the house and barn with an abundant supply of fresh pure water. In many cases there is a nearby hill, high enough above the house, where a cement storage tank could be located, thus insuring a constant supply safe from frost.

Advice to Young Writers.

I WAS much interested in the talk about writing, on page 670. You are, in this, doing a great service to the hundreds of young men and women who think there is big money in writing for the press, and yet have nothing to say worth either writing or reading. Only a few days ago a young man came to me with a story for criticism, saying that even his wife did not seem able to understand it! I told him that I did not understand it either, and suggested that he send it to some magazine, mentioning two or three. He said he was afraid to do it, for fear they would steal it, dress it up in their own way, and thus deprive him of the rewards of his labor. I told him that might happen once in a very, very long while, but did not think there was much danger of it. He then wanted me to hand it to my oldest son and get his opinion, which might be better than mine. He went over the same story with my son, and when he told him there was nothing in it, he said: "Then writers are simply at the mercy of the editors." "Certainly. The seller is always at the mercy of the buyer. Those clothing people down the street are at your mercy. If they don't offer you the clothes you want, you don't buy them; that's all," my son replied. "What shall I do?" he asked. "What are you doing now?" "Clerking in a store." H. C. then said: "Write a story about clerking. There's any amount of story material going to waste every day, if men only knew how to write it up."

You are about right in saying that 75 per cent. of the people think in monosyllables. I have been amusing myself for some time past in figuring out the per cent. of polysyllables in articles, from whatever source, that appeal to me. I find they run from 20 to 25 per cent.; and it is only rarely I can stand to read one that runs much more than that. Another thing I have noticed is that the men whose writings appeal to me use mainly words of Anglo-Saxon derivation. Of course we can't get along with less than 10 per cent., or perhaps 15 per cent., of foreign words that have become rooted and grounded in our language. I find I cannot read with patience any man who uses 40 to 45 per cent. of big words. The fact is I don't read him long, but just quit. HENRY WALLACE.
Iowa.

Advertising for Teachers.

THE annual school meetings are held about May 5, and soon after that a cry will be heard that the rural trustees can't find teachers. Yet it is a fact that every year the so-called "normal" schools and training classes are turning out quantities of young men and women licensed to teach, but many of whom never afterward teach at all. When they come out, unless there is influence (chicanery) at work for them they are at sea. There is no opening for them unless they put a fee into the slot of a self-constituted teachers' agency and take their risk for taking out a State office. The fee used to be two dollars, but now is probably more, and a commission on the salary obtained. The State provides no way for bringing together the teacher and the school. Many get discouraged and turn to something else, although each normal graduate will have cost the State $900 or more, and the individual has given three or four years of young life, and expenses of self-support. There is occasionally one who is not willing to buy a State office. There are plenty of well-qualified persons to be obtained if the right and easy means are employed. Now, are you not desirous enough to help the schools to be willing to put in your paper a little piece of advice to trustees, somewhat like enclosed, and see how it works:

SCHOOL TRUSTEES, ATTENTION!

When in need of a teacher just put an advertisement like this in your local paper, and see how long before you have one:

WANTED—A teacher in District No. ....., Town of ....., County ....., State of .....
Address, ——— ———, Trustee,
Post Office .....,
State .....

I knew of one trustee who had been harassed for three months to find a teacher and put in an advertisement and had a teacher in 48 hours.
MARY E. SHEPARD.

SALICYLIC ACID IN CANNING.—The Agricultural Department says that enormous quantities of salicylic acid are sold in the South and Southwest for home canning. One grocer sold over 7,000 four-ounce packages. Still more of this and boric acid are sold under fancy names at a high price. The "directions" tell us to fill the jar with fruit or vegetables, cover with water and add a teaspoonful of the powder. This stuff may prevent decay of the fruit, but it means a nasty and dangerous food. The Department states: "Salicylic acid is a medicine of the greatest value in acute articular rheumatism and certain other diseases. It is well known as a poisonous substance, and one of the evils which may accompany its use is derangement of the digestion. It is therefore plain that its extensive use in food may lead to disturbance of digestion and health." The good old Methodist *hot* treatment is the safest and best way to preserve fruit or vegetables. Never, never use drugs or dope.

"Short Stories"

All Sorts of Personal Experience With Food, Friends and Fixtures

A WOMAN'S BANK.—Berlin, Germany, has a woman's bank (Frauenbank) with membership limited to women. It does a general banking business and furnishes legal advice regarding estates, taxes and investments for women. It has over 1,000 members. The shares have a nominal value of 100 marks ($23.80) and each shareholder carries a liability of 200 marks in addition to the cost of the share. Interest is paid, varying from 3½ per cent. with three weeks notice to five per cent. with a year's notice.

CLOVER TEA.—Some one asks for a substitute for tea. To the real tea or coffee lover there are no substitutes, but my daughters and I have taken comfort in clover tea. It is to be had, I think, at the drug stores, or was some years ago, when it had a vogue, but trying to make it of your own Red clover blooms has not been satisfactory to me. It is worth a trial. L. J. S.

THE TRAMP HEN.—In your notes concerning the tramp hen let me advise those so troubled to bore a hole in several grains of corn, tie eight inches of wrapping twine to each grain. On the other end tie a tag with some appropriate scriptural motto. The hen devours the corn and does not devour the tag, but carries a message to its heathen owner.
Norristown, Pa. G.

TAKING LODGERS.—For some of the village residents who would like a little money, maybe this experience would suggest something. Coming out of the post office one day in our old home, a village of about two thousand inhabitants, the assistant postmaster introduced me to a lady who was looking for a room and did not want to go to the hotel, patronized mostly by commercial travellers. This lady was looking up ancestors for a would-be member of the D. A. R. Sister was away, so I took the stranger in on that and another visit. She gladly paid a good price and proved very good company. E. S.

BOARDING THE TEACHER.—Would this do for a common question: "What ails the teachers?" In a Connecticut village of somewhere about three thousand population, with up-to-date schools, five teachers are hesitating about signing their contracts until they are sure of having some place to live. One country school has been given up because there can be found no place for the teacher to board. The children are carried by barge to another district. Here teachers have been unable for years past to get board, have had to board four miles away, and come here by trolley. The reason assigned is that most people work in the mills and rise early. The teachers would have company nights and use the parlor and keep the piano going until midnight nearly every night, and the household was kept awake. The school superintendent is finding, where possible, teachers who live near the schools; he believes that solves the trouble and gives a better and more interested teacher. K.

A WOMAN'S 35-CENT DOLLAR.—We are old subscribers to your paper. It is the best of the many farm papers we get. I am interested in your talks on the farmer's 35-cent dollar, and want to tell you of an experience I had last week. I have about 40 pounds of beeswax which I want to sell. I called by telephone a wholesale druggist in Bradford, our nearest city, and asked the price of beeswax. "Fifty cents per pound. How much do you want?" he said. I answered, "None, but I have some to sell. What will you give me for it?" Twenty-eight cents was his answer. I then called another druggist who was selling it for 60 cents, but would only give me 25 cents. And he put in the proviso that it must be pure beeswax. I didn't know you could make any other kind. At any rate I still have my beeswax. Wish some of the farm women would tell through your paper how they extract the wax from the comb. I find it a tedious job and well forth 50 cents per pound to do. J. A. G.

ADOPTED CHILDREN.—The paragraph on page 1304 with reference to adopted children brings to my mind the experience of a friend of my boyhood days. This man was a good farmer who was blessed with a large family of good children. He gave them all a good chance to get an education, and all finished the course at the State Normal School, and I believe one or two went on through college. All found or made homes for themselves, and our friend and his wife were left alone on the farm. All this happened something like 15 years ago. Not long after the youngest daughter was married the father was surprised on his return from a short absence to find that while he had been away his wife had adopted a little girl about 12 years of age. This girl proved to be very helpful and agreeable, and after a short trial the old people adopted her legally. The next Summer the foster mother took the little girl with her when she made a visit of several weeks at her old home in the East. When she returned she found it was her turn to be surprised, for during her absence her husband had adopted a girl and a boy (a brother and sister who had been left homeless). When I last saw my old friend, two or three years ago, he told me that all three adopted children were doing well, and that both he and his wife were nearly as fond of them as they were of their own children.
J. M. DREW.

THE SHUT-IN.—If you want to help a shut-in or invalid do not make her the repository of all your troubles. Don't think that because she suffers she has a lot of sympathy to extend to you. In all probability she does have more sympathy for you, but the recital of your woes leaves her more or less depressed, especially as she thinks about them after you are gone. Therefore do leave her something cheery to turn over in her mind when she is alone. Having been more or less of an invalid for three years I speak from experience. If you can find that she is interested in any especial line remember her when you see items concerning it, and the little clippings mailed to her may do her much good, for they show your thought of her as well as help her on in her hobby. If possible show her the funny side of things. Cultivate the humorous view if you want to help others as well as yourself. C. B.
Vermont.

CARE OF THE PIANO.—A piano is almost as sensitive to heat and cold as an invalid. It should not be placed too near a fire, as the heat draws the wood. Neither should it be near an open window as on a wet day the dampness is apt to rust the keys and wires and take the polish off the case. Always keep the piano closed when it is not in use. The keys should be dusted frequently with an old silk handkerchief and rubbed occasionally with a cloth moistened with methylated spirits. If they get very yellow rub with a very little lemon juice and whiting, and remove it with a damp cloth. But be very careful that none of the dust falls between the keys. If the case gets clouded and dull looking, give it a good polish with a very little furniture polish and rub with a chamois leather. In towns it is apt to get smoky. To remove this wipe over with a cloth wrung out of vinegar and then polish. Don't put your piano close to the wall as it deadens the tone. To keep it in perfect order it should be tuned about every three months. A piano is never heard to the best advantage in a room that is overcrowded with furniture and hung with many draperies. MRS. J. J. O'C.

BURNING OUT CHIMNEYS.—I see in THE R. N.-Y. some inquiries about burning out chimneys. I wish you would warn all readers against such a foolish thing, it is very dangerous and wasteful. They are taking long chances on burning their property, also their neighbors, if there are any close by. Tell them to try the following, and report results. Remove pipe from stove ,and clean well, cover over top of chimney with boards, then take a revolver, and insert two or three blank cartridges; insert your hand into bottom hole in chimney and fire off the cartridges. The resulting concussion will bring down practically all the soot in chimney. Gather it all up and put in sack or barrel, and use it on your farm or garden. It is a most excellent fertilizer. If any of the readers don't happen to have a revolver borrow one from your neighbor, if he has one, if not go buy one, and while at it get as good a one as you can. It is a good thing to have handy, for such vermin as chicken thieves, skunks, tramps, etc. G. J.

R. N.-Y.—In New York State you might be called on to secure a permit or license before you fired into the chimney. "Shooting up the soot" is a good one anyway.

KEEPING SMOKED MEAT.—In our family the problem of keeping smoked meat is a very simple one. As soon as convenient, after smoking, we paint all smoked meat with whitewash, using simply lime and water of about the consistency of paint. Two coats of the whitewash is put on, letting the first coat dry before the second is applied. After the last coat is dry we wrap the meat carefully in paper sacks, flour sacks are good, and hang in the cellar or any convenient place until needed. We often keep the meat from Spring until late Fall, and have never lost any. It seems as fresh as when first smoked. Flies never bother it after whitewashing. This rule has been used in the family for many years, with entire success. L. S.

A HAIR RESTORER.—"Have you any faith in hair restorers?" asked Jack of his chum. "Do you really think that my hair would grow if I used some?" "O, I don't know," said Jim with a thought and a chuckle. "A hair restorer worked wonders with my brother Dick—I'll tell you about it. A cousin of ours paid us a visit. She was 'fat and 40,' but a big kid. She was tremendously interested in hair restorers. How she did pity the chap that was bald! Well, Dick told her that his hair was too fine to grow, so when she had returned to her home he received a bottle of the magic fluid. Soon after, he sent her his picture, and there was a remarkable change in his appearance, for he certainly had a luxuriant growth of hair. Now, Maggie, our cousin, had always wanted to go into the hair restorer business, and she felt so encouraged by this that she wrote to my brother and told him her plans. He was afraid that she would not succeed, so he wrote back and confessed that he had wanted, so much, to make her think that the hair restorer had done wonders, that he had had his picture taken with a wig on. She didn't go into the hair restorer business, but she married him. Now, you are a bachelor. Perhaps a hair restorer would have the same effect upon you as it had upon my brother Dick." But Jack gave him a push and said, "My hair might grow gray, then." J. C. MCB.

THE AGENT.—I'm no dressmaker and we have no canary, but we do have funny experiences sometimes. I wonder how many people realize what a nuisance the average peddler and agent can be to a busy housewife? I have no objection to that way of making a living if anyone likes it, but it isn't necessary to be disagreeable about it. One very hot day when I hadn't kept house very long one of our boys came in with his hair full of bees and a liberal supply of stings. I was baking bread and preparing dinner over a hot range, overheated and overbusy myself, the boy thoroughly terrified, and the moment a most inauspicious one for receiving calls, when a medicine agent arrived. He was carrying Dr. Somebody's "Specific Cure-all for All the Ills of Life," and insisted upon selling us some. As a matter of fact every member of our household—and there were a lot of us—was perfectly well except for those bee stings, and we told the gentleman that was our only affliction. He was sure, however, that we weren't strong, something must be wrong with us, our complexions indicated liver trouble and various ills, and we must require his medicine. I was too busy trying to relieve the boy to give very respectful attention, but the price was high at first and came done by leaps and bounds, while the would-be seller assured us that our everlasting-never-ending future depended entirely upon the judicious use of his specific. When I could get in a word myself I reminded him that we needed only a cure-all for stings, and if he hadn't that I feared that we could use nothing else. He still persisted in urging me to buy, telling me precisely how to take the stuff and adding, "And it would benefit your husband too." Even in the hurry and flurry of the moment a vision of my husband, who was a picture of health, made the situation appear irresistibly funny to us all and I couldn't resist the suggestion that if my taking the decoction would be a great benefit to my husband I might consider it. The man was almost too angry to speak and soon left, but by the time he reached the next neighbor his eloquence had returned and he was thoroughly insulting. Somehow it seemed to us that a tactful and observing man could have seen that he had struck a very inopportune time to advertise his goods.
M.

That Is My Property!

ON a recent Sunday there was a great disturbance in a fashionable New York church. A crowd of outsiders tried to interrupt the service, and were thrown out without gloves or ceremony. The police had hold of one man, and were prepared to give him what they called the "giant swing" when his wife rushed to his rescue and shouted:

"That Is My Property. I Do Not Want It Damaged!"

That is a new idea in property rights. In old times it was understood that the wife was the property of the husband. Perhaps the new times will see a reversal of this principle! We have seen women go out and get wood or water or do chores while husband, son or brother sat idly by the fire. Perhaps she regarded these great citizens as her property, and did not want them damaged! When she sets that form of human property at work carrying out her ideals in public life the world will be better and happier.

Women Can Manage Their Own Property

We know that from the last month's experience. The men folks, aided by the women, have made THE R. N.-Y. what it is by making it their mental property. Visitors tell us the paper is found on the desk of every important agricultural official and of every strong business man because they know it expresses the opinions and the sentiments of the great mass of working farmers.

Now we want this magazine department of Woman and Home, in like manner, to represent fairly and sincerely the opinions and desires of the farm women. It is the property of such women, and they can make it represent them just as the men have made THE R. N.-Y. such a power in public life. Since our April number appeared we have received

Over 400 Letters From Farm Women

discussing what had been printed or adding new experiences. Nothing could be finer or more hopeful than the way these sensible farm women come to help manage their property by suggestion or experience. We invite them to come and tell us their triumphs or their troubles. Every power that THE R. N.-Y. possesses is at your service. This department is your property. Tell us how you want it put at work.

We Want Boiled Down Human Nature

Which means that we want short, condensed articles and stories which deal with true human experience.

BRIGHT DIALOGUES. We can use a number of short dialogues or conversations between two or more people. They should not be over 300 words long. They may be real or imaginary, and may cover any subject from setting a hen to discussing a poem. Just tell us in a few words how two bright people would talk out the heart of some familiar subject.

STEP SAVERS. Tell us how you manage to get your work done in an orderly way with least labor. Suppose you had to go the rest of the way through life on a crutch and *had to keep going*. How would you do it?

SEND US ANYTHING you may think of out of your own experience or observation. We probably cannot print it unless it is short, true, good-natured, useful and of general interest. Do not hesitate to tell us just what you have in mind. That is the way to manage your property.

A Woman's Co-operative Store

Ten Country Women and Two From Town

By Helen I. Castella

IT was the school teacher who started it the afternoon the mite meeting met at Mrs. Mays, where she had been boarding, to get what she called "the rasp" off her nerves They had sampled Mrs. Lumley's plum cake and Mrs. Bonivard's doughnuts. Their appetites had been satiated (if one might use such a word in connection with eatables that fairly melted in one's mouth) with Mrs. Proctor's marmalade and Johanna Curie's trifles. A delicious yellow layer-cake, with walnut filling fairly oozing from its cracks, stood out upon the table, while with no thought or connivance at color scheme, the green of the pickles, the yellow and white of the deviled eggs, and the pink of the freshly boiled tongue made a sight that fairly created an appetite if one had been foolish enough to come to the table without it.

"My, but you women are foolish!" Some of the sharp edge had gotten from the school-teacher's nerves into her voice during the years of close confinement and endeavor to keep up with a constantly changing and experimental curriculum. "Every one of you has the making of pin-money right to hand, for each of you prides herself on what you call your 'specialty,' but you just eat and eat it up, over and over again. I don't believe one of you women ever earned a dollar in your lives!"

"I did—but 'twasn't on sweet potato pie—which I pride myself is my specialty. I taught school before I was married." Mrs. Bergman looked around the table and then at Nettie Middleton with a triumphant air. It was almost as though she had said, "And it's a pity you hadn't done likewise."

"Yes, it is!" The tired school-teacher had no hesitancy in agreeing with the plump matron's unspoken speech. "But you see, we teachers, once we get past the first bloom, are too tired when night comes, to fix up with the idea of catching any man. I'll bet you got your husband before you were 23, and I don't care—even if I was married—and could make things like you people, I declare if I'd be above making extra pin-money for myself."

"We're not above it!" the chorus was unanimous. "It's the other way round, Miss Middleton. We're beneath it. There isn't any way of selling what we make, unless 'twould be through the women's exchanges, and somehow, eatables are not practical to be sold that way. One or two of us have tried at Christmas time; but there are so many women nearer who can see just what sells best, an' what is needed—"

"Why don't you coöperate?" said Nettie Middleton, sharply; "form yourselves into a body of women, pledged to stick by each other, and make an outlet for what you know will sell, once people have tasted it, from its very deliciousness? What you want is to make a business for yourselves—not to rely on somebody else's business already established."

"But, you see, Miss Middleton, each of us is a home woman. We don't know anything about business—we're all tied down with families. Of course none of us could leave home, but maybe we could get together in some way if we had somebody to tell us."

"I'm trying to tell you—but I'm used to explaining things on a blackboard. Suppose we'd take it this way, and say we'd form ourselves into a coöperative club, and we'd have dues of—well—say two dollars a month, apiece. Now don't all gasp"—as several "ohs!" and general exclamations of dismay were heard, "try and bear in mind that it's business we're discussing, and not a purely social affair where you meet to talk over fancy work and gossip. The two-dollar assessment would give us an income, if there were twelve of us (Reba and myself included) of $24 a month to meet expenses of a small, neat shop right in the residential part of the nearest city. There'd be two of us to run the shop, and 10 of you to keep it supplied with the stuff to sell. Each of you would have two basket hampers, and these would be constantly going, full from you to the shop, and empty from the shop to you. The parcel post would, of course, be the manner of transportation. You would send whatever you could spare, and all that you could spare, every day, every other day, or at least twice a week, keeping a careful account of all actual money expended, such as sugar, spices, and so forth, but having the agreement between us all that time is to be given free. No one is to charge anything for the actual labor. Now, to make this clearer, suppose I give you an illustration.

"Mrs. Bonivard makes these doughnuts. We'll imagine that we're selling on an average of 10 dozen doughnuts a day, at 12 cents a dozen. That would net us $1.20, and probably the cost of the material used for that amount would not exceed 20 cents. That 20 cents would belong to Mrs. Bonivard, the one dollar going into our capital (not our expense fund); the capital, being all profit, would be our remuneration for labor. Now Mrs. Bonivard would probably be supplying the shop with something besides doughnuts, which we would reckon on the same ratio. Putting each of you down for a profit of $2 a day would give us at the end of the week $120 dollars, divided among 12 people, $10 dollars a week apiece. Naturally this wouldn't be a fixed amount—it would largely vary by what was sent in and sold; but with two people to keep you posted all the time as to what there was a demand for—it does seem as though—" she paused, pencil in the air, a dreamy look in her tired blue eyes.

"And the store would be all ours, wouldn't it?" It was Mrs. Bonivard who broke the silence, perhaps because the doughnut idea had taken hold of her with intensity, "I mean, would belong to all of us, so's we could all have a say."

"Exactly. We'd be business partners. In the first place, we would all have a hand in furnishing it with something from our own homes to give it an individuality to stand on. Of course we'd have to get a showcase—maybe second-hand; but wouldn't it be nice to have all the china in the window alike?"

"Grandmother's old blue set!" interrupted Mrs. Mays, estatically, "the very thing! There's nothing like those platters for a walnut cake, and gingerbread cookies with raisins in 'em piled up on one of them plates 'll fairly make your mouth water!"

"We'd need curtains, wouldn't we, Miss Middleton?" Neither Johanna Curie nor any of the other ladies saw anything funny in thinking of curtains at this time. "I've been wonderin' all Summer what use I was goin' to make of that heavy lace I've been workin' on. I can see them now—cream color homespun, edged with the lace, on a brass rod, clear across the window. It'll be swell!"

"I vote, if Miss Middleton's willing to see us through what she's proposed, that we make her treasurer of the organization," and although at first the school-teacher's hands went up in protest, in the end she yielded, for it was through hers and her sister's hands that the money would pass anyway.

"Let us understand, though, that no one is working under anyone else. If, for any reason one of us wishes to withdraw, we can do so by paying our monthly dues for the current month, and receiving from the capital all money coming to you from an equal division of the cash on hand. Certain months some of you may contribute a great many more things than the others, and again, the next month, it may be just the other way around. Bnt I know our sales will show at the end of the month a pretty fair division, especially if we each view the place with a proprietory interest, realizing that it is going to add not only cents, but dollars to our income."

The little shop is now in its third year. To its surprise, almost from the first, it was spoken of in the neighborhood as "the delicatessen," although it had entertained no such aspirations. But Nettie's sister, Reba, confessed that all her life she had a hankering to make salads, and from her modest bowl of potato salad, set temptingly in the window, there have evolved chicken, crab and Waldorf, each having its particular day in the week.

Nettie, always considered the business manager of the firm, has been besieged many times to take on new members, all women anxious to add to their income by placing homemade products on sale, but after consultation wtih the others, she still refuses. Were the contributors greater in number, the shop might lose the delightful reputation it has for things that are "just right." Not one of the 10 countrywomen would dream of putting into a hamper a scorched or soggy cake, or jelly composed of anything but pure fruit juice and sugar. Mrs. Nickleson's roast chickens, arriving on Friday night, are browned to a turn, and have solved the problem of many a Sunday night supper, as have also the appetizing pans of pork and baked beans and the Boston brown bread on Saturday nights.

And Mrs. Mays no longer wrinkles up her forehead when the twins hang around Dad and tease to know whether he thinks he can send them to college. Because she knows that if Dad cannot, she can.

Advertisements For Farm Women

IN the last magazine number of Woman and Home we offered three free advertisements for homemade articles offered by farm women. The object of this was to show the possibilities for business in our Subscribers' Exchange Department. So many women applied that we found it difficult to make selections. After considering all carefully we decided to insert four instead of three advertisements for the following named women:

Miss Amy A. Harwood, Dorset, Vt.
Mrs. Wm. H. Atkins, New Paltz, N. Y.
Mrs. C. J. Gilbert, Cranesville, Pa.
Mrs. W. A. Smith, Clarkson, N. Y.

This seems as fair a selection as we can make. The advertisements will be found in the *Subscribers' Exchange* on page 787. This department was established for the special purpose of giving smaller advertisers a chance to announce their goods at little cost, and in a place where such announcements would surely be noticed. Advertising is a fair and necessary part of all business.

Printer's Ink in Some Form Must Be Used if we would attract the attention of buyers outside of our own neighborhood. We find after careful investigation that THE R. N.-Y. is read each week by over half a million readers—all of whom have desires to gratify and more or less money to satisfy such desires. Right here then, in our own big family, lies a business opportunity for you if you have some article which represents a fair bargain. We print these four advertisements as an experiment to show our readers the possibilities of home direct trade.

Business Canning for Neighborhood.

ABOUT eight years ago Mr. and Mrs. Cornelius Canfield, of Cattaraugus County, N. Y., began canning their surplus from field and garden, using tin cans and doing the cooking on a cook-stove, and the same year put up a few dozen cans for neighbors. Mr. Canfield and wife had worked in a canning factory and understood the work. They had so many calls for canning that they soon bought a canner, and having built a new house, they utilized their old one for canning. After the second or third year they began canning beef, and their meat canning now exceeds all else. Within the past year they have canned 2,102 cans of vegetables and cereals, 7,968 meat (custom work), some fruit; also chickens and rabbits that are not reckoned. Their custom work is greatly appreciated, as in all the hundreds of cans we have used we never found a poor one, nor, to our knowledge, has anyone of beef; a very few of beans once spoiled.

Their meat canning this year lasted till May, they canning 15 quarters of beef the last week in April. Of their own products, they canned 953 of meat and 1,728 other things within the last year. Mr. and Mrs. Canfield, with the help of one other in hurrying seasons, do this work as well as the work on a small farm and housework. Their prices for custom work are as follows: Corn, 75 cents a dozen; peas and beans (shelled and cut), 65 cents a dozen; beef on the bone, 75 cents a dozen; cut from bone, 65 cents; pork and ham, 65 cents a dozen. Prices of their own goods: Beef, $3.60 a dozen; corn, $1.30; beans, $1.40; tomatoes, $1.40. It will be seen that within a year they have canned 12,751 cans, besides some things that were not reckoned. They do not tell their formula for canning, but they cook meat five hours; other things longer than where steam heat does the cooking. They use wood for fuel, and in hurrying times often have to cook all night to keep up and keep things from spoiling; but they seem to be satisfied with their work, and make enough so that they continue in spite of the hard work. They ship the bones to Buffalo for 60 cents a hundredweight, but we think a good bone cutter would pay them, or their neighbors, and have the bones kept nearer home. They have calls for their canning from distant States as well as the home towns, and people bring their meat from miles around. When we raise our meat and have it canned at Canfield's we know what we are eating, and we also know where to take any surplus garden stuff, including pumpkins, squashes, as well as the other things mentioned. E. A. B.

A Hopeful Illinois Woman.

ON page 637 Mrs. E. S. writes, asking about candy making. I know a woman, about 10 miles from here, who has made candy for years for her sole support, and now at the present time she is helping to support her son's family of eight children, her son having died. She makes up about four tons of sugar every Winter, and her machinery consists of a laundry stove and two brass kettles, in which she can make 20 pounds of candy each, and a marble-top table to cut the candy on. She makes a kind of peppermint candy. Mrs. E. S. can do whatever she likes to do—do her very best at it, stick to it, and she will succeed. I have tried a number of things myself, and I can make the most the year around selling milk. I try to supply my list of customers, and if I get short of milk I buy. I live on a farm, and have been boss and manager for almost 14 years (as I have been a widow that long), and now am getting to the place which is called pleasant living—that is, where I can get all the necessaries and some small luxuries. I am satisfied on the farm, and am thankful that I live in Illinois, and also that we, women of Illinois, can vote. I like THE R. N.-Y., which I have read for more than 20 years. MRS. A. W.

Keeping Summer Boarders

How Farm Women Do It

The Boarder as a Crop Consumer.

WHEN I read in the "Woman and Home" department of THE R. N.-Y. about experienced information wanted, and glanced on down to see that Summer boarders were one of the items mentioned, I remarked to my mother, who is my partner, that our information was certainly experienced, whether valuable or not. We have kept Summer boarders for 15 years, and have been intimately acquainted with every phase of the business. That we have not yet retired means that we do not make a fortune, but with no extra equipment other than an old-fashioned 11-roomed house, comfortably but plainly furnished, and a large, shady yard on a 15-acre fruit farm in Southern Michigan, we make from $200 to $300 extra each season.

We consider ourselves successful because our boarders say they enjoy our home and cooking, and return year after year, and we find it profitable when other neighbors, who charge more, cannot make it pay. We cater to city people, who want a quiet, restful place, and receive $7 per week. We find that they want just what we like—plenty of fresh fruit, vegetables, milk and eggs, and we make a specialty of them. We do not have a large variety at any meal, but an abundance of each fruit in season at every meal, and vegetables at dinner and supper.

I believe the secret of our success is good management. We never let anything go to waste, and plan our meals so that we can utilize what is left from dinner for supper. The meat from dinner makes croquettes or a souffle for supper; only occasionally is it cut cold, for that is the most expensive though the easiest way. Mother's specialties in cooking are croquettes, waffles, bread and pies, for which she is always sure of a compliment from new boarders. It is surprising how little baking most city people do, and waffles for breakfast, homemade breads and fruit pies for dinner, and little extra dishes for supper, which require more time than cost, are always enjoyed. I try to have the dining-table look neat and attractive, with flowers and pretty dishes. And parsley—we couldn't get along without that, for, like charity, it covers up a lot of mistakes and makes many a dish look tempting that would otherwise be passed by.

We work hard during the season; Monday and Tuesday morning we frequently have the washing and ironing done before breakfast. Other mornings we gather the vegetables and fruit to be used, or hoe in the garden; there is always plenty to be done. But we manage to get through by dinner time, and in the afternoon we rest awhile.

We agree heartily with the "Hope Farm Man" when he advocates keeping the home grounds beautified. There is no better advertisement for a farm than a pretty yard, aside from the pleasure it gives the owner for seven months in the year. We are fortunate in having fine, hard maple trees for shade. Along the south side of the yard we have a flower border nine feet wide that runs the length of the yard, 150 feet. In it we have Spring bulbs and perennials of all kinds, that bloom from March until November. We are never without flowers in bloom, and with very little work, for the plants are close together with little chance for grass or weeds to spring up. Around the porches we have vines, and some shrubbery in the yard. People always like to look around our yard. It is kept clean, back as well as front, and fenced against chickens of our own and our neighbors. Flowers surely do attract boarders. In August there is always a group around the evening primroses and moon-flowers watching them "pop" open.

Many wonder how two small people can do so much—plant a large garden and tend it, care for so many flowers and the yard, work with fruit, raise chickens, keep Summer boarders and hire no help. I notice among my neighbors a great difference in the way they manage their work. Some are never through, and yet accomplish little. There isn't so much in working hard as working to advantage; doing the right thing at the right time and not always be behind with the work.

We have not yet solved the farm problem of marketing our fruit. We can raise it, but very often cannot sell it, so that we can even have 35 cents of the consumer's dollar; but if we can keep from eight to ten boarders, and feed them our vegetables, surplus fruit, chickens and eggs, it is the most profitable market we can take them to, and nets us for our labor a fair profit. M.

Michigan.

The Boarders' Requirements.

SUMMER boarders, especially if they come from the city, come to your home, usually during the months of July and August, for a rest, and that means a change of food, people, surroundings—in fact, a change in everything, and see to it they are not disappointed. We raise all of our own vegetables and have all the milk we want to use. We also have hens, ducks, Belgian hares, and once in awhile the good man of the house furnishes fish, as we live right in sight of a large river. These with the other meats bought from the market insure no lack of variety. If possible serve no vegetables bought at the grocery, put up in tin cans, nor food bought at the bakery, and don't feed them on baker's bread, for they have that at home the whole year round.

Perhaps your family want breakfast at six o'clock. Serve this first, and have the first meal for your guests at eight o'clock, for they would much rather *hear* you tell about the beautiful sights and sounds of the rising sun and singing birds than to be obliged to rise from their beds to realize it themselves. For breakfast we have griddle cakes and maple syrup, eggs, potatoes in some form, coffee or cocoa, and plenty of good milk. This last is on the table at every meal, a large pitcher full, so if they care for more than one glass they can have it. Don't make the mistake of serving the heaviest meal at noon, but instead a sort of luncheon, consisting of bread and butter, a salad of some kind, radishes, lettuce and fruit, or any light food at one o'clock. The evening meal or dinner is ready at six o'clock, with meat, potatoes, two kinds of vegetables, coffee, and for dessert one kind of pie or pudding, and quite often ice cream, bread and butter and jelly, fruit of some kind, either currants, raspberries, strawberries or apples.

See to it that your table presents a tidy appearance, and do have a clean butter plate, a good tablecloth and napkins, and shining glass and silver. No matter how many flies there are elsewhere, keep them from your eating-room.

Keep a strict account of everything you buy, and at the end of the week, when each pays his bill, you will find you are making good wages; at least, in my 18 years' exprience it has paid well. Last year the board was $7.50 per week; children half price.

At first advertise in some city daily, and after that the boarders themselves are, or ought to be, the best advertisement.

In regard to the sleeping-rooms—give them plenty of light and air, and make them look cool; it matters not whether there are carpets on the floor or not, for a good coat of paint or matting looks equally as well and looks much cooler. Muslin or cheesecloth for curtains, springs and mattresses, and a good supply of light bedding, and some plain furniture is good enough, for they will remain outdoors most of the time, when not sleeping and eating.

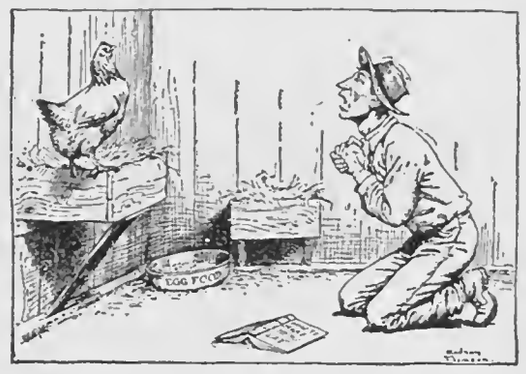
Take your team and go to some grove for an all-day's picnic, not forgetting the well-filled lunch-basket, and they will enjoy the change as well as you, and with lawn tennis, croquet, fishing, boating and bathing they will not lack for amusement. With us our greatest problem is to secure help in the kitchen, but since we have done what we could, and let the rest go undone, we have got along better.

There are so few kinds of work a farmer's wife can do to earn money that I often wonder more do not take some guests from the city, for every season we turn away more than we entertain.

Chenango Co., N. Y. E. N. SMITH.

LAY THE JANUARY EGG NOW.

NO, the picture here given does not represent the Hope Farm man begging his scrub hens to improve a little upon their egg yield. They are doing that now without any such appeal, and the gentleman down on his knees in that henhouse does not look at all like the Hope Farm man. Nor does this represent Tom Barron, the great English breeder; or Geo. A. Cosgrove, or Dr. Dean, or any of the other known poultry experts, trying a new trick on the hen. We know a woman who hung a copy of "The Business Hen" in her henhouse, and claimed that within a few days the egg yield nearly doubled; but this hen looks as though she cared very little for literature. This picture represents the dream of a city artist, as printed in *Collier's*. The man who is responsible for this thinks he has given an excellent representation of the good old farmer and one of the prize hens at the egg contest. He is in blissful ignorance of the fact that what he has really pictured is an escaped lunatic, with a Brahma hen who has retained the plumage of her



breed, the shape of a duck, and the independence of a bantam rooster. Underneath this picture we find the following printed:

"*The farmer has to borrow money when interest is highest. His hens always stop laying when eggs are highest.*"

The new land bank is going to take care of this interest proposition, and as for the hens, the intelligent farmer now knows that if he wants an omelet or a custard in January, it isn't necessary for him to get down on his knees in the henhouse when the hen refuses to lay. Far better go to the jar of water-glass, take out a few good specimens, and dream of Summer while you eat the custard pie. Just now eggs are rolling into the house, so that they seem to be a nuisance. Next January the nuisance would lie in the fact that the hens have gone on a strike. Then you will find the jar of water-glass a strike breaker. True, the hen might not recognize her own egg in January, and she could not hatch it out even with six weeks of incubation, but it's an egg all the same, capable of taking its place in pie, cake or pudding. So get up off your knees and stop wringing your hands. Go and buy some water-glass. Put the kettle on the stove and boil some water. Put one pound of the water-glass into nine pounds of this boiled water, and pour the whole thing into a wood bucket or stone jar. Then go out to the henhouse and get some eggs as close to the hen as you can find them. By close to the hen we don't mean an egg that has been close to a sitting hen for three or four days, but one that is only about an hour old. Wash these eggs off clean, put them down into that water-glass, put on a cover to keep them down in the liquid, put the whole thing away in a cool dark place, and go to business. The hen will stop her laying all in good time. Next Winter you will not be obliged to go in such a humble attitude as we see this man pictured. The hen may lay, or not, for all you care, so far as your dinner is concerned. Take her eggs out of that water-glass bucket, and the chances are 10 to one that this old hen, like the great majority of other ladies, when she finds that she is no longer boss of the situation, will get right to work and attend to business.

Mrs. Dictate—"I am so glad I came to visit my son's wife. I can teach her so much. You see, I am boiling these clothes. You can't convince *me* there's any soap will make clothes white without boiling."

Anty Drudge—"If you have some more soiled clothes, I will convince you in just 30 minutes that you *can* get them clean and white without boiling or hard rubbing. I know what Fels-Naptha will do, and you're just the kind of woman I like to meet."

Be sure to buy Fels-Naptha the next time you need soap. It will make *all* your work easy and pleasant.

One of the *best* things it will do for you is to get the weekly wash on the line in half the time, with less than half the bother than ever before.

Just soak the clothes about 30 minutes in cool or lukewarm water, rub lightly, rinse and hang out. No boiling or hard rubbing is necessary with Fels-Naptha. Makes cleaning, scrubbing and all kinds of housework just as easy.

Better buy it by the box or carton. Easy directions are on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

THE HOME DRESSMAKER

Talks on Home-made Clothes

A GIRL'S SUMMER CLOTHES

A Plain Talk on Clothes.

CATALOGUE STYLES.—First let me urge you, no matter what fashion books you have, to get catalogues of the best stores. New York leads us in fashions, so try to have catalogues from two or three stores. "The fashion books show what may be worn, but the good store catalogues show what will be worn," said the best dressmaker I ever knew. Only avoid the cheap mail-order houses; they often give good value, but their garments lack the distinction in cut and line of those from more exclusive stores. I know a poor little country bride who made the garments in her trousseau at home most carefully from fashion papers and paper patterns. Only when she went to her city home scarcely one of the styles she had chosen was worn there; she felt dreadfully about it. Don't expect too much of your clothes; you can't look like the illustration of costume figured if you make it. Really, you don't want to, for many illustrators admit using an impossible type. Don't be afraid to dress your hair in the way you like if it is becoming, and if one general style of dress and hat should suit you best, keep on wearing it, changing only enough so you won't be noticeable.

SKIRTS AND BLOUSES.—A close study of fashion periodicals and catalogues has shown me but one waist with the old-fashioned high collar. Many have a collar just across the back, and the front is gathered on a cord and ties at the neck. Many have the corners of the fronts turned back at the neck like revers, with collar across the back. Some have elastic bands at the waist. All seem to be loose and slouchy. By the way, how important the corset is in the new "corsetless effect." Skirts seem to show a width of from 1 yard to 1¾. The skirt one yard wide is draped and open for some distance in the front. Some one who has been studying the subject says that a small person can just step in a skirt 54 inches wide. Does that mean that she could step across a mud-puddle or into an open car with ease? I know a little lady who once had a modish house-gown made, very scanty and clinging. It looked well until madame attempted to do something out at the barn; then things happened to the seams.

ODDS AND ENDS.—Silk underwear is especially comfortable under the narrow skirts. One Boston store catalogues full-length silk bloomers, reaching to the ankle. I wonder who wears them? Shoes are very noticeable with our present styles, as are hose. The latter should match the dress. Many shoes show the new "Konkave" heel, but I have seen several styles with a new, low, broad heel.

Minaret flounce distenders can be bought, opening to any distance up to two yards. They remind one of a hoop skirt not fully grown.

At the Easter church parade in Boston it was noticed that all bright colors had disappeared; only dark colors were seen. The skirts were noticeably short and scant.

Have any of you tried ripplette for morning wear? I thought it needed no ironing, but it does; only smoothing with a warm iron will do nicely.

Cravenette makes the most delightful skirts for rough and outing wear. It does not crush and wears for ages.

A New York catalogue shows a delightful beach or automobile bonnet of silk and fine straw, that would do as well for driving or would stay on in the open cars this Summer. It comes in various collars and is not expensive.

Tassels seem to be the latest in trimming, and appear on all sorts of things, in all sorts of places.

Anyone who is chilly will find a little gown of thin wool or cotton and wool made with V-neck and short sleeves very comfortable on chilly days. I am planning one of white poplar cloth with black lines. The sailor collar and cuffs will be inlaid with silk, and the girdle made like directions given in THE R. N.-Y. The skirt will be draped slightly and have three big smoked pearl buttons for decoration. The back of the waist will come over on the front to form a yoke, and the front will be draped to match the skirt. The hat to go with it is black hemp, with white crown and black ribbon bow standing up at the back. The bow catches the wind like a sail.

I fancy the reason some readymade frocks are so cheap this year is because it takes so little cloth to make them. I have seen wash-dresses for five dollars that would make a woman look well-dressed anywhere. A little bolero suit recently seen took only 3⅓ yards of 36-inch goods.

A novel jabot recently seen was laced together in the center with ribbons. I make my neckwear from designs in the catalogues, and find the materials in piece-bag and lace-box.

EDNA S. KNAPP.

A Dressmaker's Hints.

GENERAL DETAILS.—Dame Fashion, it seems to me, was never so kind to her votaries with lean pocketbooks as this year, for while the dresses require a little more material this year than last, they combine so many materials that all the old dresses can be made over, and where there are little women and men in the family, it is a small piece, indeed, of good cloth that cannot be utilized. To begin with the grown-ups' clothes first, there are a few general details to be observed which show the dress to be of this season's make; but aside from these there is a great diversity in the styles, and anyone can have what she likes. The skirts are somewhat fuller this season—in fact, full enough to be comfortable in walking, although they have the appearance in most cases of being as narrow as last year at the bottom, but they are all full at the top; that is, there are always some gathers at the top, and there is in most cases a bulging effect, beginning at and just a little below the largest part of the hips. The only exception to this is where one of the extremely long, full tunics is employed, this tunic being really a full skirt of three-quarter or seven-eighths length over a narrow underskirt, of contrasting material usually.

TUNICS AND RUFFLES.—Now this bulging effect at the hips is obtained in a great variety of ways, and incidentally they are the means or, rather, part of the means, by which you can make a "new" dress out of two old ones; or if the right materials are not on hand, by buying a yard or two of new material to combine with the old. There is the short, hip-length tunic similar to that worn last year, only it must ripple or flare at the lower edge. Then there is the skirt with two or three (depending on the height of the person) rather narrow ruffles, generally about seven inches wide, placed anywhere from three to five inches down from the waist-line. This, of course, is only suitable for soft material, and the skirt should be draped up in the back under the lower ruffle so as to give the desired narrow effect at the bottom. An allowance of several inches must be made from the sides to the back in the length of the skirt for this drapery. For the skirt of heavier material it is better to use circular ruffles, and these may be put on straight around or slightly higher in front than in the back or *vice versa*. Another type of ruffled skirt has the circular ruffles, beginning at the waist and continuing to just below the broad part of the hip, being from three to five in number. Sometimes these ruffles do not meet in front but start from under a graduated box-pleat. Still another skirt is the one with all flounces, three or more, but in every case the widest flounces are at the top.

PANIERS.—Then there are the skirts with paniers, and those that give the panier effect—puffs around the hips; and some of them have a bustle-like effect in the back. To make the ordinary panier or puff, if a regular pattern is not to be had, a pattern for one of the short tunics like those worn last year can be used by allowing extra fullness at the back and the front (where the goods is cut on the straight); also the hip seams should be slanted so as to give the greatest possible width to the bottom of the puff. It must be cut longer than the ordinary tunic so as to allow for the puffing out. The easiest way to finish the bottom is to put a narrow hem on the tunic and then run a cord through it, as it is easier to keep the gathers in the right place than if gathered in just the ordinary way. Sometimes these puffs are finished with a ruffle. While this may be made separately, and put on at the last, much the easier way is to allow the additional length of the ruffle on the tunic itself, and then either put a tuck in the material or sew a bias piece of some soft material where the top of the ruffle is to be and shirr on a cord.

THE NEW BUSTLE.—The bustle effect in the back can be obtained by making quite a full skirt and allowing extra length both at the top and bottom of the back breadth. Then start a little away from the side seams and gather the fullness of the back breadth until it makes the skirt the usual width, and tack it to the lining yoke of the skirt. The width of the puff will depend, of course, on the person who wears it, for, of course, a very thin person would look better in a very full puff, whereas a person at all inclined to stoutness should have a smaller puff. The depth of the puff to get the best results in effect is usually about a third of the length of the entire skirt, but this can be determined individually by trying on in front of a glass. However, to get the right effect the skirt must be draped up in the back so as to give the narrow effect at the bottom of the skirt. In fact, nearly all the skirts this year are draped up in the back in contrast to those of last year, which were draped up in front.

WAISTS AND SLEEVES.—Now as to the dominant note in waists and sleeves. All the waists open in front, and the majority have the V-shaped opening at the neck, although occasionally you see the rounding and the square effect in front. But they all have the flaring collar of some sort, which is loosely fitted to the neck—in fact, that loose effect must be given to the entire dress—there must be no look of tightness anywhere. The opening in the front is filled in with all sorts of soft materials, depending on the character of the dress; lace, tulle, net, chiffon or little vestees of washable organdie (sheer lawn or batiste will answer), with flaring collar to match, usually finished with machine hemstitching. Sometimes there is a shaped collar of satin, or whatever the girdle of the dress is, and inside of that a frill of lace, wired to stand up at the back like a Medeci collar. As to sleeves, anyone can have what they want so long as they are plain at the armhole—that is, no gathers. The kimono sleeve is still used, also the extra large, slightly enlarged and ordinary armhole, and all lengths are permissible. On the elbow and three-quarter length sleeves there is usually a cuff of some sort with a frill of lace, net or batiste, whereas the full-length tight sleeve has no cuff but is finished plain with a frill. As to girdles, anyone can also have what they like. There are a great many Roman striped girdles and girdles of contrasting materials, some finished with a bow, while others have a little bunch of flowers of contrasting colors to hide the fastening.

COATS, OR WRAPS rather, are of three general styles—the short, flaring Eton jacket; the big, voluminous wraps, all shirrings and frills; and the capes, which seem to be mostly in military effect. As figured and striped goods are combined with plain materials, and coats are sometimes of different material than the skirts, only being trimmed in some way to show that they belong to the skirts, or else being of a color contained in the skirt, it is easy to make over old dresses and coats.

MRS. BELLE BEARDSLEY.

The Rural Patterns.

When ordering patterns always give number of pattern and measurements desired. Price of each pattern 10 cents.

8229 Semi-Princesse Dress for Misses and Small Women, 16 and 18 years.

6775 Girl's Apron, 8 to 14 years.

8207 Girl's Low Belted Dress, 8 to 12 years.

8219 Girl's Middy Dress, 6 to 10 years.

8214 Child's Petticoat, 2 to 6 years.

8228 Boy's Box Plaited Suit, 2 to 8 years.

8224 Fancy Blouse, 34 to 42 bust.

8210 Tucked Blouse, 34 to 42 bust.

8208 Girl's Long Waisted Dress, 4 to 8 years.

7872 Gathered Blouse with Square Yoke, 34 to 42 bust.

FARM WOMEN'S PROBLEMS

LAW, SUFFRAGE AND OTHERS

Payment of Damage by Horse.

I BOUGHT an old, gentle mare and took her here to the blacksmith to get her hoofs trimmed. When I tied her there I saw she was hard to handle, but as I could be of no help I went away shopping. When I came back the blacksmith told me he could not do anything with the horse; she smashed a lamp, damaged a plow and so on—made $1.50 damage altogether that he wanted me to pay for. Have I to pay this?

Iowa. H. L.

Unless the blacksmith agreed to assume charge of the mare, or had already done so, it would seem from your statement of the case that you were negligent in leaving her without a caretaker after you saw she was hard to handle, and you, therefore, ought to pay the damage. If the damage was due in any way to the negligence of the blacksmith or his helpers in his handling of the mare, he would be liable.

Second Wife's Rights in Property.

What are the laws in New Jersey in regard to second wife's or husband's rights to each other's property, there being no children by second marriage?

New Jersey. H. R. C.

The rights of a second wife or of a second husband are practically similar to those of the first wife or husband. If there are no children or brothers and sisters, father or mother, or other relatives of either the whole or the half blood, or any descendants, all of the real estate would go to the husband or wife in fee simple, and the same would be true of the personal property, but if there were any relatives of course the distribution would be different.

Releasing Wife's Dower by Deed.

A buys a tract of land from B. A's wife's name does not appear in the deed from B to A. A sells the property to C, and in the deed to C the name of A's wife does not appear in the body of the deed. A's wife, however, signs the deed with her husband, and her signature is duly acknowledged before a notary public. Could A's wife recover her interest in said property because of her name not being mentioned in the body of the deed to C? If she could not hold her one-third interest in the property after signing with her husband in the transfer, why would the deed be counted defective, if counted thus? C. W. H.

Maryland.

There seems to be no decision on this point in the State of Maryland. However, in the majority of the States it has been held that where a wife does not join in the body of a deed by her husband, but merely joins in its execution by signing and acknowledging it, her dower is not barred, but there are decisions holding to the contrary, but on neither side is there a Maryland decision. It might be held that it was merely an inadvertence in not joining the wife's name in the body of the deed, and that she showed her intention of releasing her dower right by signing and acknowledging it. If the property is valuable, it might be worth while, provided the wife really did not mean to release her dower, to begin an action to recover her dower right. The deed is defective in not joining the wife as a party grantor.

New Jersey Marriage License Law.

I want to know something about the marriage laws of New Jersey. One of the contracting parties is a life-long resident of that State. Does the law require both parties to appear before the license clerk, and can the license be obtained and the couple be married on the same day. O. P. A.

The law requires both parties to appear before the clerk issuing the license, and the license must be obtained at least twenty-four hours prior to the time the ceremony is to be performed. The license will have to be obtained from the clerk of the city, borough, or town of the resident party.

Descent of Property Under Will.

My grandfather wills a share of his estate to his son (my father), said share to fall to me at my father's death. My father died leaving a will in which he requests that said share be equally divided among his children. Which will holds in the State of Pennsylvania?

Pennsylvania. T. D. E.

This would all depend upon the wording of the wills. A power of appointment may have been given to your father in your grandfather's will, and in that event your father could dispose of his property by his will. It this was not done, and as you said the property was given to your father for life, and then to you, then your father had no right to dispose of it by will, and it should go to you. Your grandfather's will would govern.

Inheritance of Illegitimate Child.

1. According to the laws of the State of Massachusetts can an illegitimate child inherit a share in property that came to said child's mother from her present husband? There are children by present husband. 2. What is the share of the widow when there are children in the State of Masachusetts? H. L. W.

1. The illegitimate child is the heir of his mother and of any maternal ancestor. The child would not receive property which came to his mother from her husband, unless the husband has acknowledged the child as his own. The illegitimate child whose parents have intermarried, if acknowledged by his or her father, is considered legitimate. If the mother wanted to leave any property to her illegitimate child, she could do so by will, wherever the property came from.

2. The widow is entitled to such parts of the personal estate as the probate court may allow as necessaries for the widow

ILLINOIS WOMAN AT THE WRINGER.

herself and the family under her care, and such other articles as are necessary for the comfortable sustenance of the family, and the use of the house and furniture for six months after death. The remaining property, both real and personal, goes one-third to widow, and the balance equally to the children.

Descent of Property.

What is the law in Michigan in regard to leaving property where there are two sets of children, the man having married the second time, if there is a joint deed? Does the wife have all the property that is left, to do with as she likes, or do the children come in for part of it? Do the children from the first marriage come in for more than those of the second? J. F. B.

If the property is held by the father and mother as tenants by the entirety, the survivor of them would hold it absolutely, and the children would not be entitled to share in it; but if they hold it as tenants in common, the share of the deceased would be distributed according to the law of the descent of real property. The property of the father would descend equally to all of the children, as it would through the mother if it originally came from the father. The law is that kindred of the half-blood inherit equally with those of the whole blood in the same degree, unless the inheritance came to the intestate from his ancestor, and in such case all not of the blood of such ancestor shall be excluded.

VOTES FOR WOMEN.

A Man's Sensible Opinion.

I am opposed to woman suffrage. I believe, however, that if a majority of women in State or nation want the voting privilege and duty they should have it, and I will, when shown that such a majority exists, not only withdraw my opposition, but turn in and help them. At present I thoroughly believe the great majority of women not only do not want to vote, but are opposed to having the duty forced upon them, and believing that, I should consider it an outrageous injustice to compel them to do that which they do not want simply to gratify a small minority who do. I have on several occasions told suffragist friends if they had any evidence tending to show that women wanted to vote I would thank them to present it to me. No such evidence has yet been shown. Most suffragists frankly admit that the majority of women do not want to vote, but notwithstanding that fact, those who do should be granted the right. I cannot admit any justice in such a claim. Some tell me they believe the majority of women do want to vote. When I ask for evidence they often promise to produce it, but so far I have heard no more from them.

Some suffragists say, as does your correspondent Emma B. Wilkie, "I for one want to vote," therefore the women "should have the privilege of voting whether they wanted to or not." If there is any justice in such a statement I would like to have it explained. I fail to see it. About the most expressive statement of the suffragist position is one attributed to Lillian Bell, the noted authoress: "Want to vote? Of course we do. Not that we care anything about voting, but because they don't want us to." When the majority of women want the vote they will have no trouble to get it. Until that time the few agitators who do should be disregarded. W. L.

A Country Woman's Yes.

This is why one country woman is in favor of equal suffrage. Because she does not believe in taxation without representation. She is tired of having to pay her hard-earned money and receive almost nothing in return; tired of having her assessment raised out of all proportion to others, and having money paid out lavishly on the roads, and then having roads that are so poor they endanger life and limb. She is also tired of seeing streets lined with saloons. She is tired of being in the same class as idiots, lunatics and criminals. Other reasons might be mentioned, but perhaps these are enough for now. Y.

An Iowa Woman's "Rights."

If I am the only woman in Iowa who wants to vote I should not be denied that right; if I am the only woman in the United States who wants representation in government I should be represented. Representation in government is an inherent right. My right to self-government is inherent because I am an intelligent human being; this right may be denied or abridged by others, but cannot be destroyed, except upon my own initiative. Being an intelligent human being, obeying the laws of the land, I should have a voice in naming the lawmakers—instead of which I suffer the disgrace of disfranchisement. VIOLA KAUFMAN.

Iowa.

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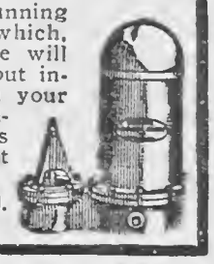
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EATING FOR THE FUN OF IT

WHAT HEALTHY MEN WANT

THE FARM SUPPLIES IT ALL

Good Meal for a Fruit Grower.

I WILL suppose the time is August, and the orchards and gardens are teeming with fruit and vegetable products ready for harvest, and it may be that the cook would prepare something like the following: Corn bread, butter, fried chicken and gravy, mashed potatoes, sweet potatoes, sliced tomatoes and cucumbers, Country Gentleman sweet corn on the cob, Lima beans, apple sauce, soft peaches and cream, apple pie, milk and water to drink, ice cream and cake. That would suit me, and if one is so dyspeptic he could not do justice to that, I am not able to provide it.

Lawrence Co., Ohio. U. T. COX.

Some Ohio Substantials.

IT is the plain and simple foods that one likes best and remembers longest, such as Graham or buckwheat griddle cakes with butter and syrup, bacon and eggs, an occasional roast of beef, veal or pork, baked potatoes, eaten with butter, and baked sweet potatoes and squash should be included, too. Then there are flaky baking powder biscuits eaten with butter spread with some fruit butter or jams; baked sweet apples eaten with cream, properly cooked peas fresh from the garden, or some corn boiled on the cob, and spread with butter, and eaten the way it was intended to be eaten; some nice sliced ripe tomatoes, sprinkled with sugar but without vinegar, or perhaps some well-ripened peaches with cream. Mush made of Graham or cornmeal and eaten with cream or whole milk is fit for anybody. The so-called fancy things are not important, and usually are more costly to prepare than they are worth, but for a warm weather dessert some home-made ice cream, made from real cream, is really worth while. Water or milk drank at meal time is all right and far better than coffee, cocoa or tea. Now it should not be difficult to pick out enough articles from the above list to make a good dinner, and I have but little choice which ones should be selected. W. E. DUCKWALL.

Ohio.

Singing the Wife's Praises.

MY wife is descended from old Virginia and Kentucky stock, and knows how to cook in a way I have never seen equaled even by my mother, and she was one of the best cooks in the world. One of the best things, and also the rarest, almost impossible to find it anywhere, is home-made cheese and the curd made from sweet milk, of which the cheese is made. Mrs. Allis has found out she can make any amount, no matter how small, of milk into curd and save it until she has enough to make a small cheese. It is as easy as making butter. I will tell you one meal that is not to be sneezed at: Young spring chicken, Kentucky style, and creamed gravy, mashed potatoes (no one but Mrs. Allis knows how to mash potatoes), bread which beats angel food, and such butter! Some kind of pie, of which the best is apple, custard, lemon custard, grape, black raspberry, etc., and Jonathan apple jelly and home-made cheese all through the meal and with the pie. C. ALLIS.

Maryland's Wide Bill of Fare.

WHEN I was a boy I thought that the height of good eating in Spring was a dinner of boiled turnip greens with smoked hog's jowl and cornmeal dumplings, all boiled together. I still like the dish, but of late years seldom get it, and in fact find that less hearty food is better, and now I am satisfied with roast chicken as the meat dish, and a good variety of vegetables, never less than three. At this time of the year we use green onions, sweet potatoes roasted (never steam them as Northern people are apt to) and spinach. When the spinach is over we use the young tops of the chard as a substitute, and a very good imitation of spinach, and later the matured leaf stalks boiled like asparagus. I am fond of sweets, and always like a dessert of some sort, just now rhubarb puffs. As a regular drink I use the fermented Bulgarian milk, and find it splendid, but still I drink some coffee. The various food faddists make me tired. It is not what a man eats usually, but how much he eats. A man can gorge on any sort of food and ruin his digestion, while he can eat in moderation what he likes and keep well. I have always done so, and now in my seventy-fifth year I am still doing so, have a very comfortable stomach and sleep like a baby, walk four to five miles a day, and work in my garden to rest from the desk work. I should say that I slip in a baked apple for dessert as often as anything, and always eat an orange or half grape fruit for breakfast. W. F. MASSEY.

"WHAT? HAVE YOU EATEN ALL THAT ALREADY?"

Virginia Home Farm Dinners.

THERE are two dinners that appeal to me, and I will mention them in order of preference. First (and preferable), the dinner in early Summer, company expected and we are going to give of our best, all home-grown. Fried Spring chickens, green peas and snaps and new potatoes creamed, followed by strawberries and cream (real thick cream), washed down by buttermilk during the meat course; cake and ice cream. Second, for Winter—roast turkey and Virginia boiled ham, cranberry sauce, potatoes, salsify, followed by baked apples and cake. Coffee or buttermilk. The turkey tastes better if stuffed with oysters, which can be obtained easily in most parts of this State of Virginia. Virginia cheroots, made of Virginia tobacco, are a good postprandial digestive.

WALTER WHATELY.

Sec. Va. Hort. Society.

The Best Meal I Ever Ate.

THE best meal I ever ate! Do I remember it? Well, I should say I do, the same as if it were yesterday. It was this way. One of my jobs, as a boy, was to get up early, go about three-quarters of a mile to a pasture and bring our cow in for milking. As the chilly Fall days came on, I would frequently get to the pasture soon after daybreak, and, being barefooted, it was one of my great joys to make the cow get up and warm my chilly feet on the spot vacated by the cow. On one of these frosty mornings I was told to hurry back, for there would be honey and hot biscuits for breakfast. Now, I am fond of honey, and, like a bear, would go a long way to get it. So, the morning in question, I did not waste much time in getting to the pasture, but, much to my disgust, I could not find the cow. The longer I searched, the hungrier I got, until the visions of honey and hot biscuits became fairly maddening. I finally found the old cow, and got her home, my appetite whetted by the cold morning and two-hour tramp, and I found the biscuits awaiting me, ready to be popped into the oven. The curtain may come down on a hungry boy, a pitcher of cold, sweet milk, plenty of fresh butter, hot biscuits and honey, real honey with the aroma of clover blossoms clinging to it like a breath of June. BEVERLY T. GALLOWAY.

My Most Difficult Meal.

ONCE upon a time long years ago I lived on a Western ranch in Montana. My husband was dairy foreman, and I did the cooking for the men. The number varied from five or six in Winter to 25 or 30 in Summer. The season had been excellent, and the Alfalfa was like a green sea in the sandy desert; 26 men were working to secure it. For help I had a girl of 16, who had come out during vacation, and a blue-eyed baby a year old. After a troublesome night with the teething babe, four o'clock found me tired enough to stay in bed. However, this was not to be thought of. The supplies were a day late, and after breakfast I found I had on hand two loaves of bread and about a quart of flour, and no supplies due till after dinner. On a 3,000-acre ranch you cannot telephone the grocer, neither can you borrow from your neighbor, for you haven't one nearer than four or five miles. So I was puzzled how to feed those men on two loaves of bread. I found I had about two quarts of bolted cornmeal (the real article was not to be had). A frantic search in the granary revealed a sack of bran. With the flour I had and the thick buttermilk I made brown bread. The buttermilk rose nobly to its duty, and it came from the oven brown, fragrant and tender. Left from the dinner the day before were onion and radish tops, carefully saved for greens, and a generous amount of spinach added. Early in the day I had put a home-cured ham to boil, and had planned on a 20-pound lard pail of tapioca to furnish dessert. About 10 o'clock the thermometer was standing at 90 degrees, and I picked the baby up and stepped out on the porch. I saw a livery rig turn in at the driveway. They stopped at the door. It was a U. S. Senator and two prominent physicians from New York on their way to Missoula to study the dread spotted fever that had broken out there. And they wanted to stay to dinner! They were to watch the men make hay and look over the sleek Holsteins. I tried to keep the consternation out of my face and tell them they were welcome, and they drove out to the field. I flew to the storeroom, hoping to find I had overlooked something, but no; two solitary cans of tomatoes and a bottle of cherished relish, made the year before of tender radish pods with vinegar and cayenne pepper, were all the empty shelves held.

There were about two pounds of macaroni left, and 29 hungry men to feed from it. The stove was full; not an inch of available room left. I poured boiling water over the macaroni and popped it in the oven to cook. I opened the cans of tomatoes, and put them in the oven, too, and when the macaroni was done placed them together. The long table, capable of seating 30 men, was covered with white oilcloth. Think of it, my friend, and I had been brought up in the East, where to entertain a U. S. Senator the very best linen and the choicest china would be used, and the most delectable of eatables furnished. I set the table with our dishes and the polished steel knives and three-tined forks, placing a napkin, made of a neatly hemmed sugar sack, at our guests' places, for they had asked to eat with the family, so I was taking them at their word. A tin spoon and a vegetable dish completed the dishes, and this was our menu:

Potatoes, boiled whole; hot boiled sliced ham; greens; peach pickles; brown bread (?); macaroni and tomatoes; radish relish; great pitchers of icy buttermilk; tapioca pudding; coffee, with thick cream.

I always kept a sweet pickle made of various kinds of dried fruit, and at this time happened to have peaches, and one of the greatest blessings we had was a well-filled ice-house. These men laid all the small conventionalities aside, and the ride had given them ravenous appetites, so they did full justice to the dinner. They enjoyed the simple greens without any garnish, and ate slice after slice of the brown bread. The Senator told me he was raised in New England, and it tasted as it did years ago when he was a boy on a farm and ate it fresh from his mother's brick oven. They sat at the table long after the men left for work, and told us many interesting stories of their life-work. Before they left they came to say good-bye, and the physician said when he finished his work he would take a vacation and visit us again, but after spending some time in the valley he was taken a victim of the fever and died. And this, I think, was the most difficult meal I ever served.

Ohio. MRS. JAMES LAMPMAN.

A Plain Meal Best.

I HAVE no recollection of any best meal as a single meal, although some time there may have been one which appeared "the best" for some local reason. I suppose what you really would like to know is what combination one likes best, makes the person feel best, and is a possibility. With me it is a 4 per cent milk, about one pint, with bread a couple of days baked, long enough at any rate to lose its freshness and will crumble, about three ounces of full cream cheese cured at low temperature for six months, a few crackers and two baked sweet apples. The ration is balanced, contains a variety, and "sets well" on my stomach. I mix the milk, bread and apples together, and eat the cheese on the side. Try it. H. E. COOK.

He Remembers Baked Apples.

OF course something depends on the season, dosen't it? When, as now, you can have asparagus *ad lib.*, or, as later, strawberries, green peas, or corn 15 minutes from your own bushes, you could not leave such things, and there are many more, out of your bill of fare. But if I must make up a real good dinner out of things that can almost always be had or are in the house, here goes: There is nothing quite so compelling to the board as the smell of good ham combined with a little onion in the frying pan. So I bid for some choice fried, or even boiled, ham, with potatoes fried with onions, homemade bread with plenty of sweet butter, three large baked Baldwins with the syrup cooked down and poured over them so that it jellies, plenty of cream and a nice bit of a cooky or ginger snap to end up with if there's any room. W. C. DEMING.

Caring For Household Pets

The Canary Bird and the Goldfish

The Happy Little Companion

A Canary At the Farm.

Folks has be'n to town, and Sahry
  Fetched 'er home a pet canary—
And of all the blame' contrary,
  Aggervating things alive!
I love music—that's I love it
  When it's free—and plenty of it;
But I kind o' git above it,
  At a dollar eighty-five!

Reason's plain as I'm a-sayin',—
  Jes' the idy now o' layin'
Out yer money, and a-payin'
  For a willer-cage and bird,
When the medder-larks is wingin'
  Round you, and the woods is ringin'
With the beautifullest singin'
  That a mortal ever heard!

Sahry's sot, tho'—so I tell her
  He's a purty little feller,
With his wings o' creamy yeller,
  And his eyes keen as a cat.
And the twitter o' the critter
  'Pears to absolutely glitter.
Guess I'll have to go and git her
  A high-priceter cage 'n that.

—James Whitcomb Riley.

My Friend the Canary.

THE canary, the cheeriest of household pets, deserves a place in every rural home. They are such lively, happy little creatures, perfectly contented all day long, and will sing no matter where you put them. The cage for this pet should be at least 10 inches long, 7 inches high and wide, and preferably of brass, which is easier kept clean; should hang from four to six feet from the floor.

Birds require a temperature of from 68 to 80 degrees Fahrenheit. If the room is cooler than this at night the bird should be covered. Do not hang your bird right in front of the window. When hung from the ceiling a little at one side he will get all the light and not feel the cold that comes through the glass. Be very careful about drafts at all times, as birds are as susceptible to colds as concert singers, and not as easily cured.

GENERAL CARE.—Birds love a sunbath, but never place them in the midsummer sun without some shade, and keep out the Summer sun at noon. It is best not to hang your bird out of doors in the Summer, as he is so apt to take cold. Possibly on a sultry day, when the wind does not blow, he might be put out of doors for a couple of hours in the middle of the day.

So many people say to me, "My bird does not sing." I ask them, did he hang out doors last Summer, or in front of the window last Winter. "Yes, he hung out all Summer, and I do put him in the window." It is best to keep your bird well and you will not have to doctor him.

FEEDING.—When purchasing a bird go to some reliable person and pick out a healthy bird, and there will be less danger of its getting sick. Young birds have pink feet. The two kinds usually found in bird stores are the Hartz Mountains birds, or natural singers that have received but very little training, and the St. Andreasburg Rollers, which have had the best of training from the first. The latter are much superior to the first mentioned. Canaries are said to be the greatest gluttons in the animal kingdom, so beware and do not overfeed. Feed one-third German rape and two-thirds canary seed. Give fresh water and gravel daily; in Summer fresh water twice a day. Keep cuttle bone always in cage. Every few days give a bit of green food, lettuce, chickweed, apple if it is ripe and not too sour. Each week one-half teaspoonful of song food placed on floor of the cage or in special dish. Do not feed hemp seed. Once or twice a week and all through moulting time feed the egg mixture, and if he should be ailing he relishes soft food more than seed.

INSECT PARASITES.—One of the greatest enemies the birds have is lice or mites; but if proper precaution is taken you will have little trouble. Place damp white cloth on cage for an hour in the evening, or allow to remain all night. You will see tiny red mites on it when removed. Scald cage occasionally and paint end of perches and where swing hangs with coal oil. Wash cage with soap and water once a week, and either wash and dry or scrape perches often. Dust bird with mite exterminator. Allow bird to bathe every other day, twice a week in cold weather.

OTHER CARE.—Manicure bird occasionally; catch and hold to the light; cut the nails just beyond the red vein in foot or toe. If feet are sore or scaly, soak in warm water for several evenings, dry and apply a little vaseline. Moulting season with canaries is in July, August and September. They are weaker during these months, and should have the best of care. Keep out of draft, feed cracker and egg mixture often, with a little song food and some green relish. The German remedy for all bird ailments is a small piece of salt fat pork, rubbed over with cayenne pepper. The egg mixture consists of the yolk of an egg boiled 20 minutes and three or four oyster crackers, pulverized, and a generous pinch of cayenne pepper. This can be slightly salted. Mash fine and mix well. Great care should be taken in selecting seed, as inferior seeds are substituted and are injurious to the birds. The small round brown seed is rape, and tastes sweet, and if your seed should be bitter do not feed it, as it is mustard or some inferior seed. The light seed is Sicilian canary, and should be bright and shiny. Some bird-seed mixtures have millet, which will not hurt the bird, but he does not require it. The German breeders feed only the rape seed.

Birds kept by these directions will be healthy, happy, and very little trouble. It is necessary to know your birds and love them if you would be successful. Try to gain their confidence, move slowly when working by the cage, avoid all quick motions which might scare the bird. Give your bird a name and talk to it, and you will soon find it will become well acquainted with you. If it is necessary to catch the bird, put the hand in slowly and do not attempt to catch him until you are sure the opportunity is right for it. Hold him carefully with his wings closed so he cannot flutter or riffle his plumage. It is a good plan to let the bird out occasionally and fly around the room. Exercise is very beneficial, and it makes them so happy.

LORETTA B. MOORE.

Care of the Pet Fish.

Will you tell me the right care for goldfish? How prepare the aquarium, and how often to feed the fish and to change the water, what to do for the fish when they are sick, drop the fins and act sluggish? A. S.

Not knowing the conditions existing I cannot answer definitely what remedy would give permanent relief. An aquarium best suited to fish should be rectangular; the round globes distort objects and do not appear to give as good results. There should be a bed of nice clean gravel at bottom and sufficient plant life to keep fish healthy—parrot's feather is a suitable and much used weed—and the water should be obtained from a healthy source and always the same. City water often, from filtration, is too pure for aquarium use, and sometimes retains sufficient chemicals to injure the fish. Well water makes a good unvarying supply in most cases. The gravel bed in a small aquarium can be kept clean by using an ordinary hand syringe and forcing fresh water into the gravel, which agitates it sufficient to allow uneaten food and other impurities to arise and be removed. Goldfish should be fed about once a week and in limited quantity, never more than twice a week. The best way to fill an aquarium is with an ordinary dipper—taking out enough of the stale water to reduce the bulk in aquarium about half and replace with as many dippers of fresh water as you had taken out. While filling also agitate water by filling dipper, raising it and pouring it back so as to bubble the water as much as possible.

When the dorsal fin drops on a fish it is a sign of sickness and he should be promptly removed from aquarium and segregated for study. If he develops "tail rot" it is better to kill him, but if only fungus growth it can be cured by placing it in a salt bath for a few moments. In preparing such a bath take a sufficiency of water out of aquarium so as to retain even temperature and place in a bowl, put a teaspoonful of salt in this and remove sick fish with a silver tablespoon and drop him into salt bath—he should remain in this about 20 seconds, but if he turns on his side and shows signs of distress take him out into fresh water again. When rested and refreshed you may repeat salt bath if necessary. In marked case a fungus growth the spots may be touched with hydrogen peroxide, using a feather for the operation. A simple way of removing small particles from the bottom of an aquarium is to use a glass tube.

H. S. H.

MOTHERHOOD.—The picture shown on this page was printed in "Our Dumb Animals." The incident is vouched for by a reliable correspondent. The mother rat was killed and the childless cat actually adopted the young rats and nursed them as we see in the picture.

Back to the Farm.

THIS is the title of the play which the Minnesota students use as a human bulletin for advertising the agricultural college. Here is a bit of the humor—a dialogue between Gus, a Swedish hired man, and Hulda, the maid:

Gus: "Har, vat you doing?"

Hulda: "Ay sweeping des floor."

Gus (rising and coming over to her): "Don't you know no better dan to raise all dis dust? You stir up all the yerms and bacilli and tings. You gat hydrophobia if you don't look out. Dat ban dangerons. Don't you keep your mouth open all de time. Dat ban dangerons, too." (Goes back, sits down at desk and writes.)

Hulda (edges up to him): "Ay like you ven you talk like dat. You are such smart man. Ay going to marry you, ain't I?"

Gus: "Ya, when you learn to be up-to-date farmer's wife, but not until den."

Hulda (edges nearer and nudges him with her elbow): "Ay like you pretty good. Ay let you kiss me, if you vant to."

Gus (just about to kiss, stops short and holds up hand as if to ward her off): "No, dat not be sanitary."

Hulda: "Oh, Gus!"

Gus: "No; ay tell you dat not be sanitary." (Pause.) "Ay bane reading dat on das paper. Ah, ay got good idea—strain 'em out yist like das milk." (Crosses to desk, takes piece of cheesecloth from the desk and places over her mouth and kisses her. Crosses to L. with thumbs t ust in his vest and chest thrown out, returns and kisses her again.)

This will, no doubt, raise a laugh, and will be accepted as a good jab at the "germ theory," but that's the way we prefer to have strangers kiss the baby—only a steel plate would be better than cheesecloth.

As Others See Us.

I wish to tell you how I came to be a subscriber. I attended a poultry show, and there was a young man there representing THE R. N.-Y., and he was such a persistent talker that I gave him 10 cents to get rid of him. I took the paper home and read it, and I liked it so well that I subscribe for it every year, and hope I may be able to do so as long as I live. G. W. J.

That young man kept on talking because he had a good thing to talk about. "We are advertised by our loving friends."

I have just finished reading this week's R. N.-Y., and I am a wiser woman farmer. MARY BAILLIS.
New Jersey.

The woman farmer usually has a struggle to keep her farm going. We will help whenever we can.

Enclosed please find $1 for which send THE R. N.-Y. to Mr. W. K. Slygh. Being an "old batch" I want him to have good company, and believe me, nothing could be better than THE R. N.-Y.
H. B. G.

When we consider who is usually considered the ideal companion for an "old batch," this is a high compliment. Let us hope THE R. N.-Y. will start such a home feeling that the "old bateh" will be compelled to make the home complete.

I feel that I cannot close this letter without thanking you for the good I get out of the paper. It helps me to keep faith in the world and in people's advertisements. I am not afraid to send money to a R. N.-Y. advertiser, for your paper would scare the rogues away.
Florida. I. M. S.

We would throw a scare at them at least, and keep them out of the house from the beginning. The wolf would have to give a very good imitation of a sheep to get in.

Page 636 of THE R. N.-Y. is alone worth the price of one year's subscription. You will find inclosed the name of a few of my friends whom I want to have a sample copy of such a paper as you are putting out. We take a great many publications and of a great variety, but yours is very near the top in the list.
New York. FLORA S. UPTON.

This was the page containing that article on parcel post for farm women. There can be no question about the possibilities in this line. It takes time, patience and some money to develop any new way of doing business, but there is no doubt that thousands of customers are waiting to learn where they can buy the things which farm women have to sell.

We receive so much benefit from THE R. N.-Y. and enjoy the editorial page, the Hope Farm man and the woman's page so much that it is the first magazine we open. We find in it the discussion of the problems that we are interested in and the article "Parcel Post for Farm Women," in April 25th issue put more encouragement and hope into my system that anything I have read in years. We have had several large fruit crops with low prices and last year a complete failure. The Summer boarders are our most successful asset. The parcel post article pointed out things that perhaps we could sell in the city market—vegetables and choice fruit—by working up a trade among people who come here to board. We cannot do it in our small town. M. H.

My husband was very much alarmed about our cow last year. Our neighbor told us to bring a veterinarian, but the one in our district does not seem to realize just what a cow means to a poor farmer, and so I told my husband to wait and that I would ask THE R. N.-Y. what to do for our cow. As the paper helped others, it would help us too, and so it did, for Dr. Alexander told us just what to do for the cow, and she was saved through good treatment, and brought through her sickness safely, and that is why as poor farmers and back-to-the-landers, we think so much of THE R. N.-Y. MRS. JOHN B.
New Jersey.

We wish we could always settle these cases so happily. Sometimes people wait too long about describing the animals and then do not make the symptoms clear. The women are usually clearer than the men, and they give sick animals better care.

The Wild Flower Collector

By IDA M. JACKSON

PART I.

LUCK has come to the country girl. The thing that the world wants is right at her door. Perhaps it is the bunch of blue vervain that flourishes in the wood-lot, or the clump of elder bushes over by the duck pond. There are scores of desirable plants that are not in the dealer's catalogue. Indeed, there are but few plants of any kind that do not have marked decorative value sometime during their life. It is astonishing to find out how many lovely things grow in out-of-the-way places. Learn to see things. A trained collector will find something of value wherever he goes. There are dozens of beautiful wild flowers worthy of cultivation, and all of them show improvement in the hands of even an ordinary gardener. There is a neat little fortune for the person who will plant and cultivate the bird's-foot violet. Take for example the Colorado nurseryman who is making the flora of his State so popular. He saw surpassing grace and beauty in the Rocky Mountain columbine. He collected plants and saved seeds till now he supplies the world with that beautiful flower. He it was who saw, as in a vision, the possibilities of the Mariposa lily, and to-day every one of those lilies that finds it way into the channels of trade passes through his hands. Another worthy flower is the wood Anemone. It ought to be called "Poet's Anemone." Its drooping involucre, its sweet little flushed buds, which finally open snow white, all combine to make it a desirable plant for any situation.

WOODLAND BEAUTY.—The Sabbatia angularis, with its perfectly delightful star-shaped pink flowers in an ample panicle, comes at a time when blooms are scarce. Seeds of this plant could be gathered and sown in the Autumn or early Spring, and in a few years a fine bed of plants would be the result. Sabbatia angularis is a near relative of the beautiful blue-fringed gentian. Among the creeping plants none is finer than "trailing wahoo." It is at its best when grown on the bank of a stream, and nothing could be prettier than its shining green leaves and pink berries reflected in the water. Mitchella repens or partridge berry is another pretty creeper. Its red berries remain all Winter. The daintiest of all the "carpet" plants is Linnæa borealis. It loves the mossy woods and cold bogs of the North, but can be grown in more southern localities. The flowers are small and sweet scented. This is not a fad of the hour, as an ever-increasing demand for wild flowers from numerous sources will testify. A few progressive nurserymen and florists do a large business in wild flowers as a "side line," one firm distributing to the trade as many as one hundred thousand plants of a single species in one season.

NEEDS AND SUGGESTIONS.—Fortunately many country girls have had a high-school course in botany, and are prepared to begin the work at once. In all orders sent out botanical names are used, and if an unfamiliar plant is called for the text-book can generally be relied on for descriptions. Learn to visualize descriptions. Dealers have their lists, which can be had for the asking. Such plants can be selected as can be done to advantage, and the dealer advised. Right here let it be said that the thing a collector *must do* is to get the plants that are fairly abundant in his locality and let the "other fellows" get those that are plentiful with them. Always leave plenty and to spare for next year's seeding. Accordingly as a species is more or less plentiful the dealer expects you to gauge your prices. For instance, a collector at one station might get out Phlox divaricata (incorrectly called wild sweet William) for three dollars per thousand and make good wages, while another collector at a different station would have to ask six dollars per thousand because of scarcity.

COST AND PRICES.—The dealer always sends an inquiry and asks your best price before placing the order. Almost every locality is rich in some one or more species, and these you can get out at 20 or 30 cents per hundred and make as good wages as a dressmaker or school teacher. I have offered to get cranesbill, Greek valerian, Smilacina racemosa (false spikenard), and several other items for two dollars per thousand because they are so abundant that I could well afford to do it. These offers are all booked, and some day the hoped-for order will appear. At this writing I have an inquiry for 500 Asclepias tuberosa, the beautiful orange-colored milkweed; also my best price per hundred. Now, I have only 50 of these plants located, but I don't wish to turn down a prospective order, so I write, explaining the situation and ask for a few days to investigate. Perhaps my price of two dollars per hundred will see a little high to the dealer, but if none of his other collectors can supply him any cheaper then I get the order.

AN ATTRACTIVE SERVICE OF GREENS.

Springtime Greens.

AT this time of year we are laying aside the heavy clothing of Winter, opening our windows and doors to the warm breezes of Spring, and as we also turn away from the heavy foods of Winter nature demands a decided change of diet. Now is the time when we want the delicate green foods of Spring; salads, asparagus, and greens of all sorts. This is a good time to form new food habits and better ones for the better health and the greater efficiency of each member of the household. At a recent address before the new canning and garden clubs of Cortland Co., N. Y., Prof. O. H. Benson, U. S. Department of Agriculture specialist in charge of canning and garden club work, spoke very convincingly of the great need of the American people for better food habits. As a nation he said we are accused of three things; of being a nation of spenders, a nation of weak stomachs, and a nation of patent medicine users. Much of this he attributed to the fact that we are a nation of meat eaters. He did not advocate vegetarianism, but he did wish the people to learn to put meat in its proper place in the diet, using it more as a condiment, or a seasoner of food, not putting it on our tables as a dish by itself oftener than once a day. Along the line of his work he had interviewed many prominent physicians, who declared that 85% of their patients are sick because they aren't properly fed. Their diet includes too much protein, too little cellulose or bulk foods, such as the outer layer of grains, and the fruits and vegetables, and too little of the valuable vegetable acids and mineral salts of fruit, vegetables and greens. He had corresponded with various druggists in different States of the Union, and at his request they had kept accurate records of daily sales. The lowest record of any drugstore of any State reported over 60% of the sales to be of patent medicine laxatives, while some reported it as high as 90%. All of this harmful habit-forming drug habit is necessitated because people will not eat enough fruit, greens and vegetables. They prefer to take their salts out of a bottle, instead of in a palatable, attractive form. The food they are in the habit of eating is too concentrated, and far too rich and highly seasoned. Consequently a large percentage of the people are ailing, and inefficient. There are few jobs where efficiency does not count. And every one in the heart, longs for perfect, abounding health. But people will spend large sums of money and do everything under the sun but reform their habits of living and eating.

THE BLOODROOT, SANGUINARIA CANADENSIS.

Perhaps the earliest to those in reach of the markets, is lettuce. At five cents a bunch lettuce is as cheap as any food of equal value to be bought. A home-made cold frame will soon raise enough for the family table long before that sown in the open gardens is ready for use, and in it may be started early lettuce, beet, tomato and onion plants for transplanting into the garden for an extra early supply of those.

The dandelion is springing up everywhere and in its youngest earliest days it is best to use it raw in salads. A good one for everyday use for a time is made of at least one chopped hard-boiled egg for each member of the family. Add an equal bulk of the tender young dandelions also chopped and a little chopped raw onion, if liked. Over this turn a dressing made of two tablespoons of olive oil to one of vinegar or lemon juice, one-half teaspoon of mustard, one teaspoon of salt, one-quarter teaspoon of pepper and one teaspoon of maple syrup or of sugar. It is well to make a large bottle of this dressing in the proportions given, mixing it thoroughly by vigorously shaking the bottle. This dressing in itself is an appetizer and laxative, and very easily prepared.

To vary this salad, use different greens such as young horseradish leaves, mustard, sorrel, lettuce, cucumbers, radishes, tart apples and crisp raw cabbage finely shaved, which is a never-failing and valuable laxative and iron tonic. Instead of eggs other fillers may be used in the preparation of greatly valued salad, such as cold boiled potatoes, boiled cabbage, carrots, beets, and other vegetables, cold boiled greens, beans, canned snap beans, peas, tomatoes, sweet peppers, boiled rice, macaroni and spaghetti, noodles, cracker and bread crumbs and occasionally cold meats. Other dressings as the well-known mayonnaise, sour cream dressings, and plain boiled dressings may be used. Thus the combinations are endless. And all are attractive and very palatable.

And while the greens are in their prime let us learn to can them, if we never have done so before. Pint glass cans are best for most family use, Swiss chard perhaps the best greens known. Besides this there are beet greens with the small beets on, mustard, spinach, kale, redroot, dandelions and milkweed. All are good and easily canned. The method is much the same for all kinds. The following is that recomended to the canning clubs that are under supervision of the government specialists, and may be considered as thoroughly reliable. First, clean and wash well. For convenience it is best to place them in a wire basket and immerse them in boiling water for from five to 15 minutes, depending on the tenderness, bitterness, or acidity of the various kinds. Dandelions, for instance, should be boiled for from 10 to 15 minutes, on account of their excess of bitterness. Then lift the basket and plunge it into cold water. This checks the flow of the juices that have started, and coagulates them. This blanching process serves four purposes. It reduces the bulk, eliminates the acids, checks flow of juices preserving the color bodies, and reduces the time of the cooking after it it placed in the cans. If some sort of seasoning is desired a slice of bacon may be placed, in each can. Then the can should be filled, adding hot water to level it to the top; add one teaspoon of salt to the quart or one-half teaspoon to the pint can, place the top in position, using only new rubbers of good quality. Partially tighten the top and place in a covered wash boiler, or 16-quart tin sap bucket, either of which should have a perforated board or slat bottom on which to stand the cans. Fill with warm water two-thirds the height of the can. Throw over the top a cheese cloth or heavier cloth, and over this fit the top on as tightly as possible. Put a brick on each end of the boiler cover, or on the close fitting pan or basin chosen to use as a cover for the bucket, and boil for two hours. Then remove, tighten the tops at once, and invert. All cans and rubbers should have been sterilized in boiling water before filling and care should be taken not to touch the inside of cans or tops with hands after. In Winter, or later in the season these canned greens will prove a blessing to the daily menus. They may be used in soups, cream sauces, jellied and molded for salads with all sorts of dressings, garnishes and accompaniments. A well-liked but little known combination, is tomatoes with greens. Add a can of tomatoes, juice and all, to a well drained, seasoned and chopped bowl of greens. The tomato will mingle agreeably with the greens and its acidity gives the greens the needed tartness or flavor. Bacon fat or butter, or plain boiled salt pork makes a good seasoning for all greens.

MRS. E. G. FLINT.

"AT any rate, I can truthfully say my business is never at a standstill." "What is your business?" "Moving pictures."—Judge.

THE COMMON QUESTION

THE HIRED MAN'S CHILDREN

The Parents to Blame.

IN so many advertisements for help we read "no children." If one has been about the world very much, and mingled with all classes, the question why the children are not wanted by those who hire is very soon answered. It is not always the fault of the child, but more often the parents. They are not brought up to obey, neither are they taught the rights of others, or not to meddle with what does not belong to them. Again, what they do at home why not away from home? An instance comes to mind which happened some years ago. A sister-in-law and little daughter of some three years were spending the day with us on the farm. While preparing dinner I heard the piano keys making strange sounds. As the mother knew I never allowed small children to touch the piano, and she was sewing in the room I waited a moment, but the sound continued, and going to the door I found the child walking on the keyboard. I told her to get right off and never to do it again. "Mamma lets me walk on hers," she said. "Never mind if she does, you cannot walk on mine," I replied, and she never did. Who was to blame? The mother without question. We hired a man and wife one time, the wife to assist with housework. They had a little baby boy six or eight months old. Before arrangements could be made for accommodating them they slept in the spare bedroom. It was a small room, and I thought the room upstairs was large and more pleasant. It was not finished, but was a very comfortable room in Summer. After moving, up to the garret, they called it, the woman did not seem to care to do more than she was obliged to; her baby took very much more time to look after, wash for, etc., in fact she did not begin to pay for her board. Sometimes she would leave him on the bed, and read or go out of doors for her own amusement, the baby crying at the top of his voice. The man was a good worker, and they needed the wages badly, but we discharged her, he staid a while after, then left.

When in New York State, some years ago, a friend wished us to go into a fine house as caretakers until the owner could occupy it some months later. "I want no children to mar the house." My husband made the remark that his father had a large family, but they were brought up not to injure, break or hurt in any way the house or surroundings, but it is one case in a hundred where they are so taught. The bump of destructiveness is very large in some children. A young girl called here with her parents a few days ago. She never had been here before but she tried to see into every room, even the pantry door was tried, but her mother spoke to her not to open it. I have seen little children pound the windows with whatever was handy without a word from the mother—it was not their house. In a nutshell the answer is, teach the children to mind, be respectful, and not injure property, and the "no children" advertisement will not appear.

MRS. FREDERICK C. JOHNSON.

Children Not Well Trained.

This question of children other than our own constantly about us, is not a simple one, so much depends on circumstances. For instance, a man who owns a farm has more authority over lawless children than a woman would have. If he loves children, has true dignity, and has even poorly brought-up children on his farm, he can control them to a certain extent, which a woman could not so well do. Thus, he might be able to manage without being too much annoyed by children, even if the parents themselves were ignorant or unreasonable, or both, and the children unbridled. Taking the average run of help, we find very often parents utterly unfit to bring up children, who thus become a nuisance, being destructive and not being old enough to work, finding pleasure in many ways which are not agreeable to the farm owner, such as swarming over barns and storehouses, and penetrating even into the storerooms where goods are stored, appropriating what they fancy, painting black stripes on a red barn, possessing the orchard, biting great apples and then throwing them on the ground, driving nails in the window casings, and whittling them, etc. All these things have happened here, and we have been very free from annoyance compared with those who have had more children about. No objection is made to a peaceable, law-abiding pair of parents, with children who are early taught that the house, yard and garden which they occupy is sacred to them, and the house, yard and garden which we occupy is sacred to us. The reason, then, why, as a general thing, I fight shy of children belonging to hired help on the farm, is not that I do not love children even fairly well brought up, but because I have the same objection to having a horde of unbridled children over whom I have no control, romping over my home, that you would have to riding behind a team of lively horses with the reins dragging on the ground. You could manage the team, even if lively, if you had the reins, but you object to being at their mercy.

E. E. D.

Turkey Raising For Women.

I PROMISED I would give an article on turkey raising. We certainly have had a fine article on page 426, March 14 issue. I agree with Mrs. Grover when she says, get good stock. It is essential to successful turkey raising. What most I am to say is to urge women and girls who are on a farm, and would like to earn a little "pin money," to try turkey raising. You certainly would be surprised how much you can earn in this way as a side line. It is not necessary to give all your time. Turkeys always bring a good price at Thanksgiving time. The markets never have too many good large fat turkeys. It is a fascinating business; you do not know how interested you may become in turkey raising. They are intelligent birds, and learn to come to your call. You can work up a good business as a fancier if you would but try. Get the best stock you can find, raise some choice birds, and see how quickly you can dispose of them at a good price. I would not have you think it an easy business, for there is work in any good business, and a certain expense to be met.

THE HEAD OF THE FLOCK.

A young woman said to me recently: "Would you advise me to go into the business largely?" Said I: "By all means no. Get a good trio of turkeys, and see what you can do before you go into it extensively."

When I commenced my father gave me two Bronze hens. They laid 26 eggs and hatched every one. One little poult died when but a day old; the 25 I raised to full-grown birds. I dressed and shipped them to the Boston market, and they netted me $44.85 at a very low price at that time. I can say I felt very proud of my two turkeys. Of course they must be fed, but any farm ought to furnish the wife or daughter feed for her turkeys. Again, there are people who think a turkey the worst thing that could come upon the premises, but that is where they are mistaken, for they destroy innumerable numbers of insects, such as grasshoppers, crickets, bugs, grubs, and I have seen them eat small snakes. They certainly are a benefit to the farmer in that way. Turkeys are not as hard to raise as one may imagine. As Mrs. Grover said, everyone has individual methods of caring for them. I hope someone who reads this article may at least try luck at turkey raising.

MRS. E. J. RYDER.

Jefferson Co., N. Y.

Good Meals For Baby.

ALLOW me to put a plea for the baby of last year as the warm weather is coming on. We often hear about the difficulties of the baby's second Summer, while as a matter of course they are less than those of the first Summer necessarily, the popular opinion probably rising from the fact that many people seem to think the little stomach has grown or advanced during the previous Winter from baby to adult capacity. Nearly everyone is fairly careful what baby gets to eat the first year, but by the second year they think nothing ever did kill him, and now he can eat pork and cabbage. Naturally the little stomach revolts and we have a very sick baby. Now, when you have a very tasty vegetable soup, don't, in common mercy, divide with the baby; far better give him one vegetable at a time, and we would know better than to do that, but in a soup almost anything looks harmless and we don't think. Broths, if not too highly seasoned; cakes and cookies made with cream, custards, bread puddings, eggs, both raw and cooked, rice, and a great variety in the same line furnish so many safe foods that there is little excuse for subjecting baby to the pain and danger of improper foods. Of course these things must be adapted to the individual child. The highly recommended fruit juices, for instance, don't agree with our baby at all.

Another source of danger is the frequent changes in temperature. We are busy house cleaning, gardening, etc., and often fail to notice the change till baby gets chilled, especially when the first warm days come, and we enjoy them so much.

M.

Husbands and Home Improvements.

NEARLY all the farm papers have been printing the wife's side of the home improvement topic. Somehow I became imbued with the idea that I was being mistreated, and not having the many labor lighteners that I ought to have. But I couldn't make myself believe that it was necessary for me to resort to rebellion and adroit schemes in order to get them. My husband did not, I felt sure, require that kind of treatment to make him do the right thing. One evening I mentioned my ideas to him. He heard me out and then he went and got his account books and showed me plainly just what hard work and skilful planning had done in making both ends meet and lap just a little over, the past year. He said, and I know it is the truth, that the improvements placed on the farm and its buildings were just as much for my interest as for his, we being comrades and partners; that they meant larger profits and that those profits would permit, in time, of my having all the many modern improvements that I craved. Meanwhile, he would help me as much as possible with the hardest work. It seems, to me, that this most common problem ought to be met by wives with a spirit of tolerance and good will. I do not believe that many farm men deliberately refuse to furnish such conveniences to their women folks. When they do, then no one can blame the wives from resorting to almost any tactics necessary to secure them. But, to my mind, the average farm husband likes modern improvements as much as his wife does, and is ready to furnish them if financially able without being compelled by strikes and undignified conspiracies.

MARY E. GARDNER.

When you write advertisers mention The Rural New-Yorker and you'll get a quick reply and a "square deal." See guarantee editorial page.

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Percolation is the automatic process of pumping hot water up the tube and over the coffee grounds extracting only the good of the coffee, leaving the coffee free from any muddiness or bitter taste—a perfectly clear, delicious, full strength beverage, wholesome and always uniform. This Seven-Cup percolator is made of the best grade Lake copper, handsomely nickel plated; aluminum basket; rosewood handle—handsome pattern. The percolator is of simple construction; no complicated mechanism to get out of order; easy to operate; easy to clean; absolutely sanitary.

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If your neighbors are not subscribers to the Rural New-Yorker, get their subscriptions. If they are subscribers, get their renewal.

Rural New-Yorker, 333 West 30th St., New York.

Live Stock and Dairy

BROWN SWISS CATTLE.

Our attention being called to an article regarding the Brown Swiss cow on page 500, I thought a short article giving a few facts regarding their history in this country and their proved dairy qualities would be of interest to your readers. As I have been owner and breeder of these cattle since 1877 I am somewhat familiar with their characteristics and history. Moreover, I have owned many of the animals that have been a credit to their breed. Coming originally from Switzerland, a mountainous country, where they have been bred, we have good reasons for believing, in the same locality by a pastoral people for the same purpose, viz., the production of milk of superior quality, for a longer period than any other breed of cattle. They were first introduced into New England, where there are to-day many excellent herds, representatives of which always attract attention by their beauty whenever shown by their owners at the fairs in the different States. These cattle are extremely hardy, and have gradually moved westward from New England, so that now there may be found large as well as small herds among lovers of good cattle in all the Middle and many of the Western States, Wisconsin, a dairy State, rapidly taking the lead in the number of herds owned within its borders. Those who are breeders and owners of these cattle do not keep them simply because of their attractive appearance but because they find them to be profitable milk producers.

It is now nearly three years since a registry of production was established by Brown Swiss breeders, with the result that no breed has ever made more rapid progress or qualified a larger percentage of its own in so short a time. To-day College Beavura 2d 2577, owned by the Michigan Agricultural College, with an official record of 19,460 pounds milk and 798.16 pounds butterfat, stands at the head of the list of mature cows in Register of Production. There are in this register 39 mature cows with an average of 11,446 pounds of milk, 447.91 pounds butterfat; 16 cows five years old average 12,087 pounds milk, 483.08 pounds butterfat; 14 cows four years old average 10,108 pounds milk, 409.76 pounds butterfat; 15 cows three years old average 10,010 pounds milk, 403.30 pounds butterfat; 10 cows two years old average 8,422 pounds milk, 360.59 pounds butterfat, making 94 cows and heifers with an average of 10,805 pounds milk, 439.91 pounds butterfat.

With these records of production secured with the coöperation of various agricultural colleges in making the tests, we have convincing evidence of the value of the Brown Swiss cow as a milk producer. Still other records are being made. Two sister-cows of this breed owned by us have just completed a year's test for the registry of production. Zerelda 2929 gave 14,145 pounds of milk and 574.98 pounds butterfat. Mawnautuck Girl 3575, two years younger, gave 13,463 pounds milk, 498.42 pounds butterfat. In a seven-day official test Zerelda gave 332.6 pounds milk, 12.147 pounds butterfat; Mawnautuck Girl gave 365.3 pounds milk, 12.457 pounds butterfat; Cleopatra's Minnie gave 458.0 pounds milk, 14.641 pounds butterfat. The interested reader can draw his own conclusions from these facts. G. W. H.

Wethersfield, Conn.

Silage a Substitute for Dry Feed.

I became involved in an argument with a neighbor who has not much to say in favor of the silo, and the controversy developed some very interesting figures. In fact it was necessary to do quite a little figuring before the silo won out over the older methods of storing feed. From the feeding tables and from experience we find that 30 pounds of silage can be substituted for 12 pounds of clover hay in a cow's dairy ration. Using that ratio as a basis and placing the value of an acre of land at $150 the following figures show the results obtained from comparing silage with dry clover hay as a feed. The yield on good land of 3½ tons clover hay in the two cuttings is used and also a yield of 14 tons of silage corn on the same land with the value of $150. Such land would yield 60 bushels of corn to the acre.

Cost of producing an acre of clover, the nurse crop paying for the seeding:

Use of the land 2 years, 5% interest and 1½% taxes on $150	$19.50
Seed	2.50
Cost of harvesting 3½ tons at $2.50 per ton	8.75
Barn storage or depreciation and tax charges at 50 cents per ton	1.75
Cost of an acre of clover	$32.50

Cost of one acre of corn put in the silo:

Interest and taxes for one year on land	$9.75
Seed corn	.20
Labor; plowing, harrowing, rolling, planting, cultivating and cutting for one acre, allowing $1.25 for labor and $2.50 for team work and estimating the time at 35 team work hrs. at 25 cents per hour	8.75
Cost of filling silo 14 tons at $1 per ton	14.00
Interest of $10 on a value of $200 for a 100-ton silo and $12 depreciation makes $22 for seven acres of 14 tons or for one acre	3.14
Cost of an acre of corn in the silo	$35.84

If it takes 30 pounds of silage in a ration as a substitute for 12 pounds of clover hay, it would be necessary to feed 2½ tons of silage as a substitute for one ton of clover. Therefore 14 tons of silage would furnish as much feed as five and three-fifths tons of clover, and one acre of silage would produce as much feed as one and three-fifth acres of clover. That being the case the acre of silage costing $35.84 would feed as much as one and three-fifths acres of clover hay costing $32.50 per acre.

The comparison of the two kinds of feed using the above figures is as follows:

Cost of one and three-fifths acres of clover hay containing the food value of one acre of silage	$52.00
Cost of producing 14 tons or one acre of silage	35.84
Balance in favor of silage	$16.36

There is still another way to compare the value of silage and clover. If the cost of production of silage is $35.84 for 14 tons the cost for one ton is $2.56. And if 2½ tons of silage is worth as much as clover hay valued at $12.00 then the silage is worth $4.80 per ton leaving a profit over its cost of production of $2.24 per ton. However computed by the acre the silage at $4.80 is worth $67.20, while the clover hay is only worth $42, a difference of $23.20 in favor of silage. H. B. C.

R. N.-Y.—Without disputing these figures, the fact remains that a combination of silage and clover hay will give better dairy results than feeding on either one alone. This has been demonstrated many times, for the cow craves and needs a certain proportion of dry fodder with the silage.

Milk Testing as a Profession.

Will you give me some information regarding the possibilities of milk-testing as a profession, the qualifications necessary, remuneration and chances of employment when efficient? M. M.

Milk-testing as a profession includes both dairy inspection and cow-testing work, and in some cases, advanced registry work also. The qualifications are much the same in any case, although a tester working for an association should be familiar with the feeding and management of dairy cattle as well as sanitary conditions and the testing of the milk itself. Some States require an examination to test the familiarity of the applicant's knowledge with the Babcock test. In any case, it would be well to write to your State College of Agriculture for details. Cow-testing offers a good opening to a young man desiring considerable out of doors work, and either that or dairy inspection work, if faithfully followed up, will prove a good foundation for a better position in dairy lines. A short course in dairying at your agricultural college should give you the necessary instruction and after a couple of years of experience you should be in a position to better yourself considerably. B. B.

Pigs on Witch Grass.

I have about one-quarter of an acre, which was plowed and harrowed late last Fall, which is badly infested with witch grass, and I would like to know if the following plan would be advisable to eliminate it: Plant rape or ruta-baga turnips broadcast, and when sufficiently grown, fence in about one-quarter of the lot and put in one or two Spring pigs, leaving them long enough thoroughly to clean and root up, then move onto a new section and replant first one to be fed on later, and repeat this until the lot has been covered. Pigs to have portable house and fed on grain for balance of ration. Do you consider the plan a good one, and would they eat out the witch grass roots if not fed too much other food? W. O. W.

Boothbay, Me.

The plan suggested is a feasible one, and instead of mixing Dwarf Essex rape and ruta-baga turnips I would prefer Dwarf Essex rape and Sweet clover, using six pounds of the rape and 10 pounds of the Sweet clover per acre. This should not be pastured until the plants are eight or 10 inches high. It would be well to plant the entire area, and let the animals pasture sparingly until August and September at which time they should be turned in and permitted to clean up the crop. It should then be plowed, planted with rye or wheat, and in all probability this treatment will eliminate the weeds. One-quarter of an acre would accommodate about 500 pounds, live weight of shoats, and would supply the bulk of their feed throughout the season. To supplement this feed, ear corn and digester tankage would be more economical, feeding the tankage in a thin slop to the extent of 10% tankage to the amount of corn fed. F. C. M.

A PAIR OF PENNSYLVANIA BUSINESS BERKSHIRES 11 MONTHS OLD; TOTAL WEIGHT 759 POUNDS.

A TOURIST in Scotland came to a wide ferry. It was stormy, and the wind was constantly increasing. The Scottish ferryman agreed to take the tourist across, but told him to wait until he had first taken a "coo" across. When he had returned and started across with the traveller the latter became curious. "Will you tell me why you took the cow over and made me wait?" he asked. "Weel, now," explained the ferryman, "you see the coo were valuable, and I feared th' wind wud increase so th' boat might upset on th' second trip."—London Farm and Home.

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AYRSHIRES AT AUCTION.

The first auction sale of dairy cattle ever held in New York City took place May 21 under management of the Fasig-Tipton Co. Ayrshires of excellent quality from the following farms were sold: Ryanogue Farms, Brewster, N. Y.; Lountaka Farms, Morristown, N. J.; and Cliffdale Farms, Poughkeepsie, N. Y.

Ryanogue Gwynette (35568), a two-year-old heifer of exceptional breeding and promise, was bought by F. H. Knox, of Buffalo, N. Y., for $875. Mr. Knox also took Imp. Foulton White Rose (29350) for $425, and Ruberta of Woodhull (26795), $250.

W. F. Spickermann, of Greenwich, Conn., bought Springhill Queen Hugo (31355) $550; Ryanogue Bessie (27682) $275; Imp. Lessnessock Nell (30574) $650; and Ryanogue Friskey (36079) $475.

R. R. Ness, of Howick, Quebec, Can., bought the following six: Imp. Shewalton Beauty, $550; Imp. Ryanogue Peter Pan (13622), $500; Ryanogue Miss Mysie (36080), $200; Imp. Auchenbainzie Primula "21290" (26878), $200; Ryanogue Joan Pan (36860), $125; and Ryanogue Benehan Commander (16415), $75.

Among other sales were: Rosette 2nd (23915), $250, and Imp. Grange Firefly "25688" (27315), $125, to J. W. Lane, St. James, L. I. Ryanogue Killarney, $125; Ryanogue Accountant (16419), $150; Master's Double Cross (37120), $80; and Oak Leaf Brownie (37119), $110, to F. C. Stetson, Sterlington, N. Y. Betty of Hillview (25549), $225, and Ryanogue Challenger (15904), $200, to Wm. Simpson, Cuba, N. Y. Ryanogue Milk Maid (36853), $175; Ryanogue Surprise (15618), $225; Ryanogue Primrose (36847), $235; Ryanogue Hugo's Miss Prim (36851), and Ryanogue Lilac (36848), $150, to M. G. Hershey, Hershey, Pa. Ryanogue Biddy (36866), $110, to W. J. Morris, Trenton, N. J. Imp. Benchan Lizzie "29189" (36069), $325, to H. J. Chisholm, Portchester, N. Y. Ryanogue Victor's Flora (36859), $175, to J. R. Yale, Brewster, N. Y. Imp. Toward Point Dew Drop "28202" (30607), $150; Ryanogue Francis (29338), $200; Imp. Lochland Mysie 4th "24986" (27553), $260; Lenetta Barcheskie (24481), $150, and Orchard Hill Victor Hugo, $175, to Peter Murray, Manomet, Mass. Nora's Emblem (37118), $250, and Imp. Lessensock Maud "25679" (27011), $225, to Fairholm Farm, Newmarket, N. J. Imp. Lanrieston White Lady "29384" (37115), $125, and Imp. Netherhall Brownie 19th (31481), $210, to B. M. Frank, Huntington, N. Y. Master's Rosalie (37117), $260, and Imp. Burnhouses Yellow Bess, 2d, "24567" (27310), $190, to J. B. Wilbur, Manchester, Vt.

Concrete for Milk-room Floor.

I am fitting up a milk room in an outbuilding which has a single floor about two feet from the ground. Would you advise laying an inch of concrete made of Portland cement over this? How should it be mixed, and should it be put on wet or dry boards? Is there any other preparation that would be better?

Stoneham, Mass. J. P. H.

Thin concrete floors an inch or more in thickness are successfully laid over wooden ones, but it is essential that the wood floor should be very rigid as a thin layer of concrete is easily cracked if allowed to spring. Such a floor should be reinforced with close mesh wire netting, and made from a comparatively rich mixture of concrete. Floors in ordinary out buildings are not apt to be suitable for such work, and unless this one is very rigid, or can be made so by supporting the floor joists from underneath, you would probably find it better to remove the old floor and fill up the space beneath with large stones and lay your concrete floor upon that foundation. Ordinarily, this is easily done, and there can then be no question about the success of the job. M. B. D.

Garget.

I have a two-year-old Holstein heifer with a calf nine days old. Before calving her udder was much enlarged and very hard. I gave her salts, put lard and turpentine on udder before and after calving, and gave her saltpeter after; fed her lightly of hay and stalks, milked her about half clean. She gave bloody milk from all teats. I milk her clean now, but milk is a little bloody. Blood settles to bottom of pan. What is the trouble and what should be done? Will the trouble pass away after the udder becomes normal, which is nearly so now? Will it be safe to use the milk?

A. D. W.

Acute congestion of the udder has been present and it led to rupture of small blood vessels, causing the presence of blood in the udder. It would seem that she is gradually recovering as you gave correct treatment. The milk may be used as soon as it is perfectly normal. Foment the udder with hot water three times a day. Massage well each time. At night rub in a mixture of one part of mercurial ointment and two parts of soft soap. Give her a dram of saltpeter twice daily in water. Feed lightly. Keep her off grass for the present. A. S. A.

Breeding an Old Mare.

I have a valuable mare weighing 1,200, coming 26 this Spring. At the ages of 19 and 20 she foaled two perfectly formed and desirable mare colts to a large well-bred Percheron stallion. This Spring I wish to breed her to a trotting horse about her build and temperament. Several local horsemen advise against it on account of the mare's age. She is in good flesh and spirits. I would like the advice of some experienced breeder.

Pennsylvania. M. M. D.

The mare should have been bred from each season after producing a foal at 20 years of age. She may not now conceive if bred, but as she is in good condition and health there should be no particular danger in having her bred, or in the production of a foal. There are many cases on record of successful foaling in a mare of her age. A. S. A.

Nasal Gleet.

I have a mare that has a roaring in the head and sometimes runs freely at the nose. If I feed her on dusty feed she has a bad cough; if she gets wet the roaring is worse. She has been this way five or six years, only gets worse all the time. She is now in foal. Can you tell me what to do for her? W. W. P.

Maryland.

Nasal gleet or chronic catarrh in such cases may be due to glanders, so that the first step should be to have an examination made by a graduate veterinarian. If glanders is not present he may find that the discharge is due to a tumor (polypus) in a nostril, or to a diseased molar tooth, or associated with a collection of pus in a sinus of the skull. These conditions are remediable by operation. Such a case cannot be successfully treated by the owner. A. S. A.

Periodic Ophthalmia.

Could you tell me what ails our horse and suggest a remedy? A few days ago I noticed the tears coming out of his eye, and it was feverish and swollen, especially just above the eyelid. He seems to be losing his sight in that eye.

Ohio. A. F.

This disease (moon blindness) is incurable and results in blindness from cataract after successive attacks. Blindness may be somewhat retarded by bathing the eyes twice daily with a saturated solution of boric acid, applied each time on fresh swabs of absorbent cotton. At time of attack give a dram of iodide of potash in the drinking water night and morning until the attack subsides. At such times also keep the eye covered with a soft cloth to be kept wet with a lotion composed of 10 drops of carbolic acid and half a dram each of sulphate of zinc and fluid extract of belladonna leaves in a quart of soft, cold water. A. S. A.

Thin Mare.

I have a large mare that is due to foal early in June. She is getting very poor, and is losing strength. I am feeding her six quarts of whole oats and a little wheat each day. She does not eat much hay and sometimes leaves her grain. Can you tell me what I can do for her? I am not working her and letting her run out of doors all day. M. J. K.

New York.

Do not feed wheat to a horse. It is highly indigestible to these animals and may be a partial cause of the thin condition. Substitute one-ninth part of wheat bran with the whole oats and add good mixed hay in addition to grass. Have her teeth attended to by a veterinarian who should make sure, by examination, that the colt is not dead and retained. A. S. A.

REMOVING HOG LICE.—Melt lard, not hot enough to burn the hog, and turn on the back from the head to the tail end and it will kill the parasites very quickly. Simple and never fails. E. R. B.

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Cows, yearling and two-year-old heifers. Some of the heifers served. Also heifer calves. CHARLES G. FOSTER, P. O. Box 173, Morristown, Morris Co., New Jersey

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35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.
These will suit the man that is looking for high-class dairy cows. Large producers, good size and well marked.
Visit the East River Holsteins when in need of first-class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.
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I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
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Fine Collie Pups—Males, $8; females, $5 up. Real drivers. Brookside Farm, Prospect, O

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AILING ANIMALS.

Indigestion.

I have a valuable 1200-pound western gelding which seems very nervous when hitched on a drill or a noisy wagon. He has had several short sick spells, colic, swelled legs, and skin trouble. Now he has scatches. He was fed whole oats, old. The veterinarian advised feeding ground oats, but he keeps rather thin and nervous. He has had some oil meal, stock food and oats. He has never been right in bowels, also gets a cold easily, and scours on the road. Can you prescribe for him? H. F. B.

The nervousness is a matter of temperament, but may improve if the digestion can be remedied. If the horse has a long, weak, washy coupling the scouring is natural under those conditions and will prove incurable. Have the teeth attended to by a veterinarian. Also have the horse clipped if the coat is long and rough. Feed eight parts of whole oats and one part of wheat bran, allowing one and one-fifth pounds per hundred pounds of body weight as a day's ration. Feed a little over one pound of hay per hundred pounds, give one-half of it at the night meal. In the feed night and morning mix a heaping tablespoonful of a mixture of two parts of powdered wood charcoal and one part each of powdered nux, gentian root, saltpeter and fenugreek. A. S. A.

Horse With Worms.

I have a horse that I have doctored for worms three months and have tried everything I have heard of, all to no avail. Could you give me a practical formula? R. W.
New York.

A treatment for worms recommended by the U. S. Bureau of Animal Industry is, in the case of the long round worms, to give twice daily for three or four days a drench composed of turpentine one ounce, linseed oil three ounces, to be followed on the fourth day by a physic of Barbadoes aloes, one ounce. Or santonin, two to four drams with calomel one to two drams, may be given; this dose is not to be repeated but is to be followed in six hours by one quart of linseed oil. For the small pin worms that infest the large bowel, injections into the rectum of infusions, or teas, of quassia chips, a half pound to the gallon of water, once or twice daily for a few days, followed by a physic, are beneficial. Intestinal worms are usually seen in horses that are in poor condition, and part of the treatment is such care and feeding as shall put the horse in condition to keep itself free from these parasites. M. B. D.

Lump on Knee.

1. I have a horse that does not lie down at night to rest and sleep, and then he sleeps in the team when standing. Is there anything to overcome this trouble? 2. Another horse has a lump on his front knee caused by slipping and falling on the barn floor. Is there anything to do for it? F. W. K.
Ohio.

1. Many horses sleep in the standing position and are unable to rise without help if they lie down. The vertebrae of the loins in some of these cases have become united (anchylosed) and rheumatism may be the cause. The horse may lie down if you allow him to occupy a well-bedded box stall. 2. If the lump has been there for a long time it will prove permanent. Clip off the hair and rub in a little oleate of mercury once a day. A. S. A.

Stocked Legs.

I have a mare 12 years old that stocks badly in her hind legs. She works every day. The swelling goes down during the day, but is there again in the morning; standing over Sunday they swell up to the knee. I have cement floor. Is there any danger of big leg? What can be done to dispel the swelling? E. M.

Allow the mare a box stall in the stable and each time she comes in rub her legs dry and then bandage them, from feet to knees and hocks, with flannel. It would be best to have a dirt floor in the stall, and to keep it well bedded with clean straw, or planing-mill shavings or sawdust. Never let her stand for a single day idle in the stable. If there is no work for her to do turn her out in the yard or field, or give her exercise to halter. The swellings will in time become organized and permanent if this treatment is not given. A. S. A.

Foul in Foot.

I have had trouble with my cows having sore feet, and have eight cases now. Six cases are with the hind feet, two with front feet. The foot gets dry and feverish between the claws, then the foot and ankle begin to swell. The foot gradually cracks between the hoof and develops into a running sore. I am using a solution of creolin to wash the sores, but with little success. What is it and what can I do for it? J. C. L.

The disease is not contagious. It is caused by wading in filth and mud or grit, or standing in stagnant water. Do away with such causes. Cleanse the parts perfectly and cut away any undermun or loose horn; then immerse the foot for a few moments in a hot, saturated solution of sulphate of copper. Afterward apply a wad of oakum or cotton saturated in a five per cent. solution of coal tar disinfectant. Renew the latter dressing once daily. Dust with slaked lime as soon as doing well. A. S. A.

Lump in Teat.

I have a cow which has a lump in her teat. She came fresh in April. The lump bothers when milking, the milk comes slowly. Is there anything I can do to take the lump out? A. V. C.
New York.

A veterinarian should be employed to remove the lump with special instruments. If you cannot have this done insert sterilized dilators or teat plugs, between milkings; but these are apt to cause infection and loss of the quarter. In some instances the obstruction has to be cut through in four different directions, by means of a sterilized teat bistoury or slitter. The veterinarian should be entrusted with such work. A. S. A.

LIVE STOCK NOTES AND PRICES.

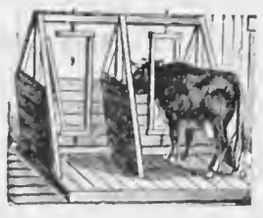
May 10. Corn 60; wheat 90; oats 35; potatoes 75; hay $10; dairy cows $50 to $80; fat cattle $8 per cwt.; hogs $8.35; hens 12; eggs 17; butter 20; butterfat 23. W. I.
Bourbon, Ind.

Milch cows $60 to $90; cows for killing, fat 12 cents, dressed; calves 10 to 10½; no steers in this country. Milk 20 cents. Pittsburgh 18 net. Butter 32 to 33; eggs 22; apples $1.75; potatoes 90. C. E. S.
Elwood, Pa.

Wheat, per bushel, 70; flour, 100 pounds, $1.15 to $1.20; oats $1; barley $1; potatoes 45; eggs 15; milk, 100 pounds, $1.20; butter, pound, 30; butterfat 28; veal 13½; pork 10; beef, on foot, seven to eight cents; cows $60 to $70; horses from $40 to $200 each; apples, per box, 75. J. G.
Peterson, Ill.

May 13. The prices given are what the farmer receives from local dealers, butchers, or mills, except cows and horses which change hands mostly between farmers. Consumers' prices another story. Horses $100 to $250, according to age, weight, etc.; cows $40 to $125. Dressed beef, straight, 10 to 12; veal 12 to 14; chickens, live, 10 to 12. Butter 23; eggs 15. Wheat 85 to 90; oats 45; corn 60 to 65; rye 70; buckwheat 55 to 60. Hay, Timothy, $10 and $12; clover $8 to $10; straw $6 to $8. Potatoes 70 to 80. W. P. K.
Summerville, Pa.

May 9. Horses are in great demand here this Spring, even cripples bringing $100 at auction. Young Western horses from $175 to $250; cows, ordinary, fresh $50 to $90; high grade $90 to $115; registered (and they are far too few) 125 to $160 for Holstein. The Bucks County Holstein-Friesian Association is of recent organization, and offers some good animals. This is principally a market milk section, going to Philadelphia and Trenton market, four cents a quart at present after paying freight. Spring pigs very scarce and high. We paid $6.50 for seven-weeks-old pigs in April. Dressed pork 11½ cents in March, somewhat lower now. Fowls 18 cents alive, 22 dressed. Potatoes, 90 to $1, average for Winter 85. Little fruit is raised in this section, although several commercial orchards have been recently set, one of 1,700 trees, set by two young graduates of Pennsylvania College. The Spring has been cold and wet but prospects for fruit are excellent. Hay $17 to $18 per ton. Eggs 18 cents a dozen, sold in nearby village at grocers, being six cents below last year. High grade Guernsey butter, which we sell to neighboring farmers, 32, being eight cents below last year's average for April. Not much gardening here, except in lower end of county, near Philadelphia and Trenton. We are 13 miles from latter, and 28 from former. We get fair prices, but poor, high-paid help is the main drawback to farming. Staple crops here are hay, potatoes, corn, wheat and oats, finished products being milk, pork, poultry, eggs and fruit. Very few sons born and bred on the soil on the farms here, because it requires three or four times the capital to stock a farm it did 25 years ago, because they are not satisfied to hang to a scrub cow's tail along with their fathers, and possibly they see the middlemen riding in limousines. Who can blame them for going to the city? We need sound organization in selling produce as well as in buying supplies. Most any novice can grow a crop, but to market it at a profit is a far more serious proposition. Our Grange has started the Keystone Exchange in this State and farmers should coöperate to make it a success. They must organize or be crowded to the wall. I find the most prosperous farmers here, are those who retail their produce in the markets named, or in nearby villages every week, or those who grow hay and potatoes in connection with market milk. The prosperous farmer is one who is not prejudiced against changing a poor method for a better one but still one who is not radical or whimsical. M. C. T.
Bucks Co., Pa.



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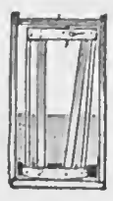

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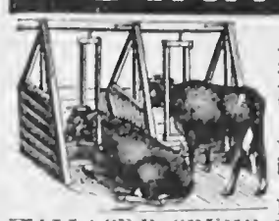

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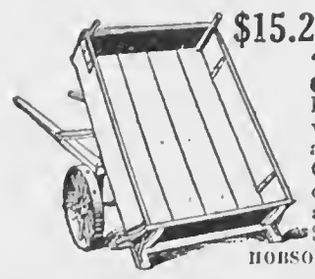

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The Henyard.

Building Up a Poultry Business.

I aim to make my poultry the big end of my business, leading in egg production and taking in the raising of broilers, roasters and possibly baby chicks as side issues. I would prefer to sell a superior class of eggs to a private retail trade. I expect to handle also vegetables and fruit of the same class, but as side issues, fruit consisting of apples, pears, peaches and berries. I desire to work on a system by which I can house, feed, raise my stock and dispose of my products which will return me a reasonable profit. Shall I continue my present style of laying house? (See diagram.) What method shall I adopt as to feeds and feeding? Give formulas for laying mash and scratch food. How can I best raise my stock, i. e., incubation, feeding, free range or confinement? How old can I keep my hens for profit? How shall I mate for my breeding stock? Can I with profit use the trap-nest? Should I expect better results by trap-nesting my breeders and line-breeding or from time to time introduce different blood? As the matter of breed is more or less a personal taste, or liking, I have decided on the R. I. Reds, with an idea of breeding them a trifle heavier. C. C. L.

Experience will doubtless lead you to modify your plans as your business develops, though these seem good for the start. Your type of laying house is an excellent one, and need not be changed unless in building others you see opportunity for improvements. There are various successful methods of feeding, though the one which has come to be adopted by the majority of poultrymen, known as the dry mash method, may be considered the standard. This consists in keeping a mixture of dry ground grains constantly before the fowls in open hoppers, and feeding mixed whole grains in the litter, morning and night. There are many good formulas for the dry mash; the following being used at the Cornell (N. Y.) Station: 60 pounds cornmeal; 60 pounds wheat middlings; 30 pounds wheat bran; 10 pounds Alfalfa meal; 10 pounds oil meal; 50 pounds beef scrap; one pound salt. For the whole grain mixture, they use 60 pounds corn; 60 pounds wheat; 30 pounds oats; and 30 pounds buckwheat; omitting the buckwheat in the Summer. Incubators are a necessity when large numbers of chicks are to be hatched, and the greater the amount of range the chicks can have the better. Individual colony houses for the chicks scattered through the orchard would be my preference, though a long hot-water heated brooder house would save labor, and probably some expense. Young chicks should have both mash and cracked grains as well as meat scrap and sour milk, if the latter is available. For grains I know of nothing better than the "one, two, three mixture," viz., one part pinhead oatmeal, two parts finely cracked corn, and three parts cracked wheat. For the mash (Cornell formula), three parts each cornmeal, wheat middlings, wheat bran and beef scrap, to which one part of bone meal is added. This is fed dry in shallow trays and open hoppers, and is also given as a moist mash from one to three times daily according to their age. Three times daily at from one to two weeks of age; twice daily from two to four weeks, and once daily after four weeks. The same mash is always available, in dry form, to the chicks.

No one can say how long you can keep your fowls at a profit. It has generally been thought that hens should be disposed of after their second year of laying, and this has been the general practice among poultryman; there is a tendency now, however, to question the economy of replacing two-year-old hens and some poultrymen are making the experiment of keeping their stock for three years. In mating breeders you should select for size, vigor and prolificacy, using males from your best layers. To ascertain which these are you may trap-nest, though it is very doubtful if you will find it practicable to do this. The early-laying pullets may be placed by themselves, however, and of these, those that continue laying longest in the fall may safely be considered the best layers. If the best of these are kept through a second Winter without forcing for egg production they will make a superior breeding pen in the Spring. Early laying, early rising, late molting, late retiring, heavy eating, bright-looking, busy hens which lay the color out of their shanks may be considered the best layers, and the most vigorous, active, and most nearly true to the desired type of these should go into the breeding pen. However you select your breeders, whether by trap-nest or otherwise, endeavor to improve your own flock and do not throw away all the gain that you may have made by introducing "new blood" every few years. As you suggest, it would be impossible to answer your questions in full within limits less than a book would afford, but these few hints may be of value to you. Finally, get in touch with your experiment station and learn all that they can teach you. M. B. D.

A Talk About Capons.

What is a good method of feeding capons? I have a flock of 20 S. C. R. I. Reds. Is it proper to keep a feed of grain, two parts corn, two parts wheat, and one part oats before them all the time? They will be marketed when a year old. H. C.

Greenwich, Conn.

Would like to know if it is profitable to caponize Leghorn cockerels? Will they grow large enough to bring a top price, and how long does it take to get their growth with proper care? A. T. L.

New York.

The demand for capons in the large markets comes from after the holiday season until May. The heavier birds are worth the most per pound; thus when six to eight-pound capons are quoted at 28 cents per pound, 10-pound capons would be worth 30 to 32 cents per pound. These are representative wholesale prices in the height of the season. To be grown most profitably they should be of a naturally large variety. Experienced growers use the American or Asiatic breeds or crosses of them. While young and growing fast they should have plenty of range to develop their size as well as to enable them to gather much of their own food. During this period they are voracious feeders and grow very fast. They are usually sold when about eight to 10 months old. It should be the aim of the grower to get them just as large as possible by this age. In fact at 10 months of age well-grown capons should be as large as they ever would be. On general farms, where grass range is available, very good results are obtained by feeding only whole corn from the time they are caponized until they are sent to market. Under confinement, and it is doubtful if capons can be raised profitable for the open market under such conditions, they should be given a moist mash once a day of equal parts of cornmeal, wheat middlings and ground oats with ten per cent. of meat scraps. Twice a day they may be given a grain feed of equal parts of corn and oats. Skim-milk is an excellent food for them and can be given in the mash and also in the thick sour form alone. Capons fatten very easily, and many growers make no change in the feeding for finishing them off. They may, however, be penned up and given the mash as described twice a day and one feed of whole corn at night. In feeding any kind of poultry or stock for fattening care should be taken that only as much food be given each time as they will consume in a short time, in this case 10 minutes. The feeding troughs should be capacious enough so that all the fowls can get at the food at the same time, otherwise the larger and stronger will get the lion's share.

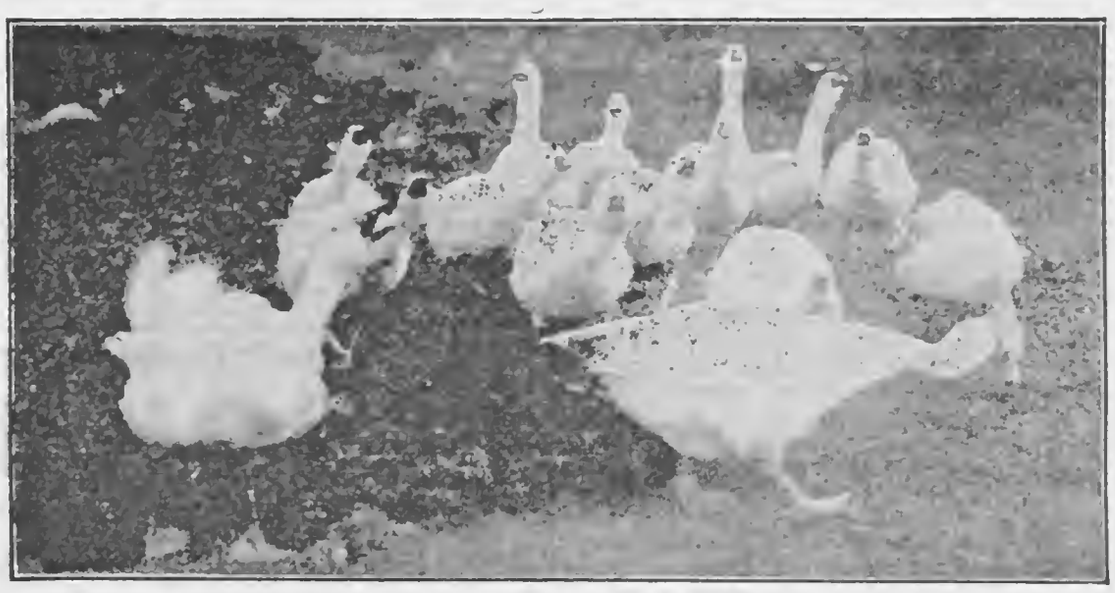
Capons are plucked in a special manner for the large markets, and if one is to dispose of some in such a place one should become familiar with the special preparation. The smaller breeds are a failure as a commercial proposition in capon production, although they can be caponized and will make very desirable six-pound capons in six or seven months. For home use some people do this with Leghorns and other of this class of breeds. I believe this may be a very advisable habit where only Leghorns are kept and where nice roasting chickens are desired. By caponizing they remain as tender as broilers and keep on growing up to roasting size. A. L. C.

Gas-heated Incubators.

What is your opinion of running an incubator with artificial gas? Will the incubator receive as much oxygen by using gas as it does with an oil lamp, or is there any difference? As far as being safe, I think one is as safe as the other, but my landlord doesn't take the same view, therefore I am compelled to run my incubator with gas, if I run it at all. I have 450 eggs in the incubator now, and I do not wish to discontinue running it. I have tested out for the first time, and I have lost but 40 out of the 450 eggs. C. S. D.

New York.

Next to electricity, gas is the best source of heat for incubators, and practically all the exact incubators used in laboratories are so heated. When used for hen or duck eggs care should be taken that there are no gas leaks, and that all gases from the flame are carried to a chimney or led out doors. With a "hot air" incubator especial care should be used to see that the air system is airtight; in hot water machines there is less chance of fumes entering the egg chamber. There is going to be enough oxygen in any event. The danger is from unburned gas and partly burned gas poisoning the eggs, and this danger is greater than with oil. On the other hand, the heat is much more constant, especially if a gas thermostat or heat regulator is used. These can be purchased from dealers in laboratory supplies, but some little ingenuity would have to be used in fitting them to an ordinary incubator. Once working, however, they will hold the temperature within 0.1 deg. Fhr. regardless of the gas pressure. If the best grade of tube is used gas is far safer, from the fire risk standpoint, than oil.



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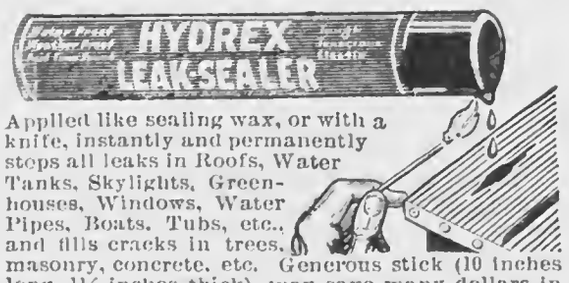

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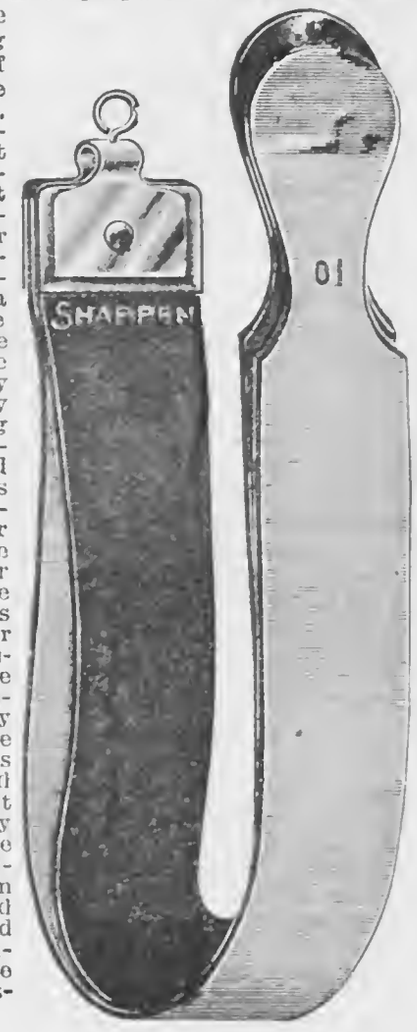

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The Henyard.

Feeding at the California Contest.

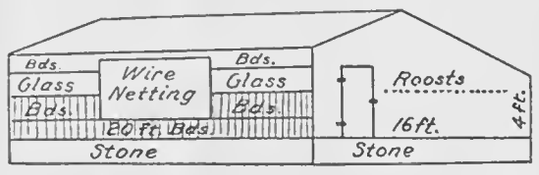
Since we gave that report of the California laying contest, on page 553, there have been requests for the plan followed in feeding. At this contest the hens were kept in one large house—there were no outside runs and a poor chance for exercise. Under such conditions there would naturally be a different system of feeding from where the hens were out doors part of the time. The hens were fed as follows:

"Birds were fed twice daily, dry mash in the evening about 1½ hour before sundown, wheat, cracked corn and oats in the morning, green feed at noon; grit and shells in the straw. We made birds scratch in the morning because if exercised at night birds take cold after going to roost, especially during molt. The mash was composed as follows: For 50 pounds—wheat 13½ pounds, middlings 20 pounds, bran 7½ pounds, Soy beans 2½, meat scraps four and ground bone 2½. During molt I feed five pounds of meat scraps, instead of four, and added to the mash 5% of sand. The 460 birds would consume about 45 pounds of the above mixture daily. No two pens consumed alike. The same pen did not consume alike every week. The consumption varied with the production. The grain was fed in the straw, 26 quarts to the house, fed in this proportion, three of wheat, one cracked corn, one oats. In midwinter birds were costing us about 12 cents per month (11¾), the larger breeds costing one-fourth more than the Leghorns."

A Satisfactory Concrete Henhouse.

[There has been some criticism of concrete poultry houses. Therefore we are glad to print a description of such a house that has made good.]

The henhouse has an eight-inch wall, gable roofed. It is 40 feet long, 14⅓ feet wide; gables carried up with cement and shingled roof, using 26 bunches of shingles. It was built in Fall, 1913, and has housed 124 Brown Leghorns, free from disease, with no loss at all; perfectly dry and practically no smell whatever. There



CONCRETE HENHOUSE.

are two pens, 17 feet; feed room six feet (scant); all walls eight inches; side walls 6½ feet with 2x6-inch plank wall plate overhung two inches, with eight-inch spikes driven down into cement wall. Foundation was dug 2½ feet deep and filled with broken field stone, somewhat wider than wall, or 12 to 14 inches. We used 2x12-inch plank for form boards, building six inches, then reinforcing by using heavy fence wire all around house in the wall, thus making a continuous bond. After finishing one foot of height we left the forms as filled for one or two days. When forms were raised another foot for building until sides and ends were complete. The window and door forms were placed as needed of 2x6-inch, and large enough to be re-cased.

For the floor we leveled off the dirt thrown in from the foundation with a top-dressing of fine sand and cement wet down, then old tar paper. All over floor, two and three-ply; then 1½ inches of good cement mortar, well troweled, smooth. For ventilation we used 2x4-inch on end on north side of house two feet centers and nailed at top to floor joists, leaving the bottom open for 18 inches, steel lath or wooden lath for nailing on face side to leave four inches dead air space chimney, the whole length of north side. One inch of good wall fibre plaster on the lath makes the air chambers complete.

Over floor joists we used three-inch strips, three inches apart, with six inches of straw on upper floor. In each gable we made an opening 24x28 inches with a trap door hinged at top to be let down outside in extremely cold weather. The west door was made double, on inside and outside door. On south side we placed five windows of 12 lights 7x9 inches, two sash, to raise or lower, with frame of wire screen inside. We used 6x8-inch wide paddles for outside paddle finish to house.

Side walls should be carried up with cement flush with top side of rafters even over a part of the plank roof plate. One can use as many extra cloth window sash and doors as circumstances may require. We have our own gravel and sand pits close at hand, so this is a cheap house to build. Rafters and floor joists were nailed together as put up, and spiked to plank roof-plate. We used six or eight inches of straw for floor covering, so the hens' feed did not come in contact with cement. Roosts are along north side of house, with nest boxes under, and all easily removable. Center partition was boarded up 2½ feet, remainder wire screen. Doors are all placed near south side, so as to disturb fowls as little as possible. I have built a number of houses, but this is by far the best. A 16 or 18-foot wide house would house 200 fowls easily, in this climate. We usually shut up stock December 1 and keep there until April 1. F. M. P.

Scipioville, N. Y.

Wrynecked Pullet.

I have a pullet that has wryneck; she is nine months old in good condition, except that her neck is twisted upside down and she cannot pick up her food, or drink unless held in position so that she can locate it. I have given her salts and olive oil at different times, but it has not cured her. How can I relieve her?

Cresskill, N. J. N. E. B.

If this pullet's head and neck are permanently fixed in the position you describe, I am at loss to account for it or suggest a remedy. Twisting of the head and neck in this way is usually ascribed to vertigo from some brain disturbance, and this, in turn, is apt to be caused by intestinal irritation from indigestion or the presence of parasites. At a venture, I should give this pullet one or two grains of calomel in tablet form and after a few hours follow it with about two teaspoonfuls of castor oil. This would clear out the digestive tract and might remove the source of irritation; if it did not, I should conclude that the pullet had some permanent brain trouble and kill her. M. B. D.

Cholera; Diarrhœa in Chicks.

1. My hens are getting sick and I have already lost four of them. They start by losing appetite, and after the first day they mope around and the comb turns dark. Most of them have the diarrhœa, soft and tinged with yellow. I keep Barred Rocks and feed scratch food in litter, also give them dry mash in hoppers before them all the time. 2. Can you tell me a cure for diarrhœa in young chicks? G. F.

Amston, Conn.

1. This may be cholera, though not of a very malignant type, and it will be best to guard against its further spread by removing promptly from the flock all birds that show signs of sickness and burning or burying deeply all carcasses of those dying from the disease. The poultry house and utensils used in it should be cleaned and disinfected, the former by whitewashing with lime wash containing four ounces of crude carbolic acid to the gallon, and the latter by cleaning with *boiling* water. No moldy or tainted food should be given the fowls, and their quarters should be kept in a generally clean and sanitary condition.

2. Sour milk fed in abundance to young chicks is a preventive of some forms of diarrhœa caused by germs, but I know of no remedy of any great value for the diarrhœal diseases when they have once become established. Hatching from only healthy and vigorous stock and raising the chicks in quarters and upon ground not contaminated by others that have been sick are the essential methods of preventing diarrhœa, aside from proper feeding. A sick chicken should be killed, not cured, and diarrhœa should be prevented rather than perpetuated by keeping sick fowls about. M. B. D.

Eating Shingle Nails and Tacks.

We have just had the following experience, which may be worth noting in your poultry department. We placed 1,500 White Leghorn baby chicks in new brooder house about a month ago. The loss was very few until 10 days ago, many apparently full-sized healthy chicks began to drop their wings, quit eating and die. We at once commenced to open the dead bodies and found our birds had been swallowing shingle nails and sometimes four-penny nails which had been dropped around the building. We have opened 26 and found a nail in the gizzard of each and at last a dozen others still alive show similar symptoms. Of course we shall not be guilty of dropping nails around in the future.

California. W. H. MACY.

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is the sweetest and most wholesome feed on the market. It can be fed to human beings. ALWAYS FRESH AND ALWAYS THE SAME. Send for prices and booklet. WM. ORR & SONS, Box 1, R, Orr's Mills, New York

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and
Six to Eight Weeks Old Pullets
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Kirkup's Strain S. C. White Leghorns bred for size, vigor, and large white market eggs—$15 per 100—$62.50 per 500—$125 per 1000—Safe delivery guaranteed. Order Today.
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MAY and JUNE are pre-eminently the months that nature choose for egg hatching. It is wise to have hatches late, as the late season makes May and June hatches safe investments. Stock is needed. We offer special our Black Beauty Minorcas, only $1.30 per 50, $5 per 100. Also following breeds at same price: White Leghorns, Brahmas and Reds. Pekin Ducks eggs, 10 for $1.50. Turkeys eggs, 50 cents and $1 each. Ribbons from all big shows. We ship in safe box, Express paid. Poultry Advice mailed free. Send orders at once. Telegraph office at Montgomery. Letters answered by return mail. W. L. Burnett, Prop., Coldenham Poultry Yards, Montgomery, N. Y.

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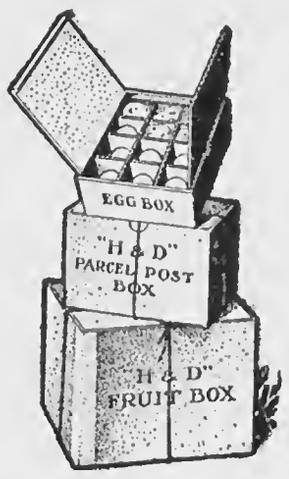

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The Henyard.

THE EGG-LAYING CONTEST.

The twenty-eighth week shows a further gain of 91 eggs, 3,649 being laid during the week. The highest number laid during this contest was in the twenty-fifth week, when 3,682 were produced.

Leghorns make the high scores this week, Tom Barron's White Leghorns taking first place with a score of 61. This is a high record; it is an average of over six eggs in seven days for every hen in the pen. I wrote Mr. Barron some time ago asking why his Leghorns were making such a poor showing compared with former years. His reply was, "Those birds are bred right; they will show up bye and bye." He seemed to have perfect confidence in what the *breeding* would compel those birds to do. His White Wyandottes are now 293 eggs ahead of his White Leghorns, owing in great measure to the splendid start the former made, while the Leghorns laid very poorly at first, but lately the Leghorns are steadily reducing that difference and undoubtedly will make a good showing before the contest closes.

Marwood Poultry Farm's White Leghorns tie with Wolverine Poultry Farm's Buff Leghorns for second place, each pen scoring 59. Windsweep Farm takes third place with a record of 56, and P. G. Platt is fourth with a score of 55. Pen number 43 of Storrs Agricultural Station laid 54, Francis F. Lincoln's pen laid 54, and Mrs. K. E. Woodruff's pen laid 54. All the above are White Leghorns. Below are the week's record and the totals:

	WK.	TL.
BARRED ROCKS.		
A. B. Hall, Connecticut	48	596
Frank L. Tuttle, Massachusetts	38	730
Waveny Farms, Connecticut	51	601
J. J. Francais, New York	48	863
WHITE P. ROCKS.		
Albert T. Lenzen, Massachusetts	49	649
F. H. Benton, Connecticut	44	734
Storrs Agr. Sta., Connecticut	36	559
Storrs Agr. Sta., Connecticut	41	612
Storrs Agr. Sta., Connecticut	37	719
Storrs Agr. Sta., Connecticut	41	615
Storrs Agr. Sta., Connecticut	34	403
BUFF P. ROCKS.		
A. A. Hall, Connecticut	44	719
W. C. Morgan, Jr., Connecticut	31	521
WHITE WYANDOTTES.		
Tom Barron, England	50	1169
West Mt. Plty. Yards, Connecticut	36	693
Merrythought Farm, Connecticut	46	1010
Neale Bros., Rhode Island	43	973
D. J. Ryan & Son, Connecticut	33	785
BUFF WYANDOTTES.		
Dr. N. W. Sanborn, Massachusetts	51	740
Dr. N. W. Sanborn, Massachusetts	34	665
Am. Buff Wyan. Club, New York	45	646
H. L. Hamilton, Connecticut	31	452
COLUMBIAN WYANDOTTES.		
Nat'l Col. Wyan. Club, Massachusetts	53	649
S. C. REDS.		
Robert Seaman, New York	33	542
J. S. Gillespie, Connecticut	35	732
Dr. J. C. Dingman, New York	48	610
Burnham Plty. Farm, Massachusetts	33	524
H. P. Deming, Connecticut	41	628
Geo. P. Dearborn, Florida	37	822
Dr. J. A. Fritchey, Pennsylvania	44	913
Ernest Underhill, New Jersey	40	560
W. H. Bumsted, Connecticut	29	374
Pinecrest Orchards, Massachusetts	51	828
Harry B. Cook, Connecticut	39	754
Colonial Farm, New Hampshire	39	784
A. B. Brundage, Connecticut	43	862
R. C. REDS.		
Glenview Plty. Farm, Connecticut	44	762
C. S. Scoville, Connecticut	24	523
WHITE LEGHORNS.		
Storrs Agr. Sta., Connecticut	52	752
Storrs Agr. Sta., Connecticut	48	828
Storrs Agr. Sta., Connecticut	51	836
Storrs Agr. Sta., Connecticut	51	1066
Storrs Agr. Sta., Connecticut	54	698
Braeside Plty. Farm, Pennsylvania	51	659
Glenview Plty. Farm, Connecticut	52	721
Manor Plty. Farm, New York	50	725
A. B. Hall, Connecticut	51	720
Marwood Plty. Farm, Pennsylvania	59	820
Geo. M. Harris, Connecticut	46	607
Bonnie Brook Farm, New York	45	784
N. W. Hendryx, Connecticut	44	650
J. J. Linehan, Massachusetts	51	609
F. F. Lincoln, Connecticut	54	1047
Cecil Guernsey, New York	50	885
T. W. Moore, Connecticut	48	634
Chas. N. St. John, New York	48	619
C. W. Sherwood, Connecticut	52	715
L. E. Sands, Pennsylvania	46	709
Tomoka Plty. Farm, Connecticut	48	621
Venture Plty. Farm, New York	45	597
Mrs. K. E. Woodruff, Connecticut	54	651
Windsweep Farm, Connecticut	56	606
C. H. Savage, Connecticut	52	666
P. G. Platt, Pennsylvania	55	767
Heneta Boue Co., New Jersey	25	166
F. M. Peasley, Connecticut	51	706
Chas. Heigl, Ohio	52	570
Tom Barron, England	61	876
Branford Farm, Connecticut	53	776
James Munn, Massachusetts	48	616
Geo. A. Cosgrove, Connecticut	53	581
BUFF LEGHORNS.		
Wolverine Plty. Farm, Michigan	59	729
BLUE ANDALUSIANS.		
E. D. Bird, Connecticut	48	590
BUFF ORPINGTONS.		
O. Wilson, West Virginia	45	573
WHITE ORPINGTONS.		
P. A. Demgar, New York	32	519
WHITE LACED RED CORNISH.		
W. L. R. C. Club, Massachusetts	30	389
SILVER CAMPINES.		
W. J. H. Lobel, New Jersey	52	530
DUNGHILLS.		
H. W. Collingwood, New Jersey	47	512
Daniel Hine, Connecticut	32	557
Daniel Hine, Connecticut	43	671
MIXED BREEDS.		
Profitable Plty., Massachusetts	42	694
Profitable Plty., Massachusetts	39	651

GEO. A. COSGROVE.

Those English Wyandottes.

IT was with much interest I read what THE R. N.-Y. had to say in regard to the Barron Wyandottes. It seems to me Judge Card, you and others have missed the main point. I have been a breeder of Leghorns for years and Wyandottes for 18 years. The first glance I gave the group of Barron Wyandottes, on page 713, I took them for large Leghorns, then I read the inscription under, stating they were Wyandottes. I have a very strong glass and using this I enlarged the birds a half, and am positive by their shape, hardiness of feather and rather whip tails, also shape of combs, that these 10 females are the result of a cross of either Leghorn or White Minorca blood. That Barron would have extra layers from such a cross of Wyandottes, Leghorn or Minorca most breeders know. This would not place Mr. Barron in the ranks of expert breeders, for the reason that any number of amateurs have made just such crosses with same results. It is the contention of many well-known breeders that these cross-bred pullets if bred to will not produce young that will anywhere near equal in egg yield the original cross-breeds. So in order to continue the high yield you must each year make the same cross. The cut of ideal female of standard does not have the approval of the best Wyandotte breeders. Mr. A. G. Duston wrote me he was not breeding to this standard, and considered the 1910 standard cut nearer correct.

That high-class American Standard White Wyandottes are grand layers I have proven to my own satisfaction at least. I purchased a trio of White Wyandottes, cockerel and two pullets, and two weeks later another pullet, the three pullets laid over 200 eggs each in their pullet year. They were only six weeks in the molt and starting to lay. Two of these are laying equally as well as during their first season, and bid fair to go to the 200 mark as two-year-olds. I am keeping their record and setting all their eggs, the third one has wanted to sit twice, but she will go to 130 for second year. And these are high-class birds, for which I paid $50 for the trio and $12.50 for third pullet. I did not ask for layers, I asked for best exhibition quality they could send for the price.

New York. W. W. CARMAN.

R. N.-Y.—If any small boy can breed such layers as these English Wyandottes show themselves to be the wonder to us is why the larger boys have not done it before, and proved their ability at one of the egg contests. At both Storrs and at Thorndale, Pa., these English Wyandottes lead the crowd, and we understand they are pedigreed birds with records of several years of [illegible] ted breeding.

Hen Versus Hawk.

W. H. D., Maryland, asks how to catch the hawk. I will give a plan that has always worked well here; how it will work on Maryland hawks I cannot tell. Take some sticks about two feet long, sharpen them at one end, drive them into the ground, and make a circular pen about two feet in diameter, a small opening on one side. Cover the top with hen wire. Place a chicken in the pen, put a steel trap in the opening, and several traps on the ground around the pen. The hawk will light on the ground and walk around the pen, and is almost sure to be caught. If you put a live chicken in the pen, close the opening on the side with wire netting so the chicken cannot get out. Make the pen out in a field some distance from the house so the hawks will come and not be afraid to stay there until they are caught. The pen is sometimes made with a little alleyway leading up to the opening on the side. Place the trap in this.

New York. T. F. H.

"What uncleanly people they seem to be out West!" said Mrs. De Lite. "Here is a case of a man starting to clean out a town, and they actually shot him!"—Credit Lost.

The VIBERT REDS

A flock of deep glowing and *brilliant cherry to mahogany red* to the skin rose and single comb Rhode Island Reds, famous for being *the heaviest-laying trapnested flock* of the breed in existence. Long-backed, low-tailed birds, hatched and raised by hens only on absolutely free range in open-front colony houses wide open all winter. A plant on which *roup and white diarrhœa are entirely unknown.*

Highly fertile, strong eggs for hatching the year round. Chicks in small lots from specially selected eggs. Cockerels from trapnested hens of high laying rates. Breeding pens, trios, and utility stock for sale at reduced Spring prices—

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THE HEAVIEST-LAYING REDS IN AMERICA

Prompt service, courteous and honorable treatment, backed by a national reputation for square dealing. 1914 mating booklet upon request.

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REDS Rose and Single comb Rhode Island Reds. D. & F. Strain. 109 Acres devoted to them. Heavy layers and show record of 87 first in 12 years. Eggs, $2.00 per 15; $3.50 per 30; $5.00 per 50; $9.00 per 100; $80.00 per 1,000 eggs. Fine breeding cockerels at $5.00 each. We have size and type that shows well, looks well, breeds well and lays well. Order direct from this ad. or send for mating list.

DOTY & FREESE R. F. D. 9 Geneseo, N. Y. **REDS**

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, beat every American entry of the American breeds, each bird averaged for the year, 194 EGGS. Official record. We offer EGGS FOR HATCHING, from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

R. I. Reds, Indian Runner Ducks

Eggs for hatching. Breeding stock.

Sinclair Smith, 602 5th St., Brooklyn, N. Y.

Austin's 200 Egg Strain S. C. R. I. Reds

Standard bred; high record stock; red to the skin. Half prices on eggs for hatching. Booked up for season on chicks.

AUSTIN'S POULTRY FARM, Box 17, Centre Harbor, N. H.

Single Comb Reds Only—Bred right, grown right, mated to produce vigorous stock of first class utility and good standard quality. Eggs for hatching, my specialty. $1.00 per 15, $6.00 per 100. Stock reasonable. A. QUACKENBUSH, Darien, Conn.

EGGS that hatch and chicks that live from the Rose Comb Reds which won first at the two Egg Laying Contests, Storrs.

Glenview Poultry Farm, Rockville, Conn.

S. C. Mottled Anconas

Golden Spangled, Golden Penciled, Silver Spangled Hamburgs, W. C. B. Polish, Houdans, S. C. Rhode Island Reds, White Rocks Columbian Wyandottes, Fawn. Also White Indian Runner Ducks, White Guineas, Pearl Guineas—13 eggs, $1. Buff Turkeys, White Holland Turkeys—11 eggs, $3. Catalogue free.

BERKSHIRE PIONEER POULTRY YARDS, Berkshire, New York

Silver Campines, White Orpingtons, Anconas

Prize stock. Extraordinary layers. Eggs, Chicks.

ALGONQUIN FARMS, - Amesbury, Mass.

SILVER CAMPINE EGGS—$3.50 per 15. BUTTERCUPS—$2. Setting of each, $5. W. H. MAYS, Goshen, Indiana

Silver Campines and White Wyandottes. Superb free range stock. Baby Chicks and Eggs for hatching—low prices—Satisfaction guaranteed. MOHAWK LOOGE FARM, CORNWALL, CONN.

S. C. Black Minorcas—Eggs, $4. 100; $1. 15. Prize stock. G. C. Miller, Oxford, N. J.

White Wyandottes & Buff Leghorns

Special low prices now. Circulars free.

OWNLAND FARM, - Box 497, South Hammond, New York

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale.

THOMAS C. GORDON, - Brockport, N. Y.

EGGS—Choice Buff Wyandotte eggs for sale. 75c for fifteen, $4.00 a hundred. Free range.

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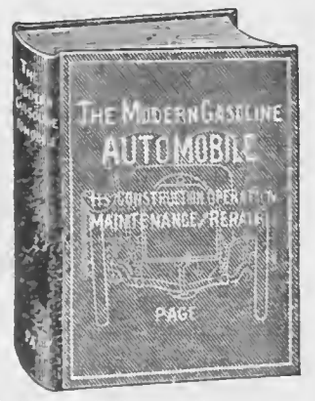

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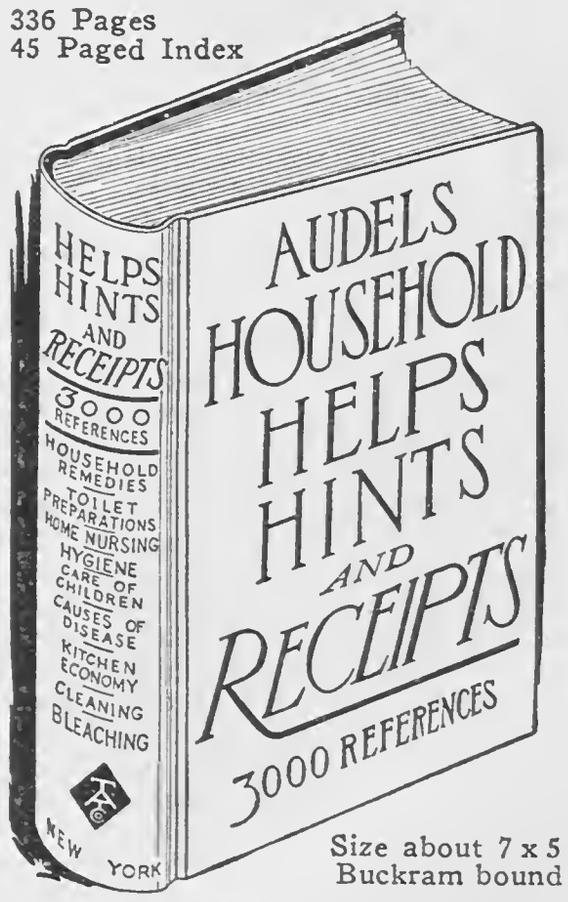

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THE LADY OR THE SILO.

[We often print articles which give the unpopular side of a subject. Here is one on silos. Personally we believe a good silo is a great aid to the dairymen. Yet this man puts up an argument which is entitled to consideration.]

I note on page 310 that the question has not yet been settled as to whether a woman 60 years of age should climb to the top of a stave silo and throw down silage to feed cows. I say emphatically, no! For no young man, no matter how pressed with work, should ask his mother or his wife to do any such thing. The average farmer—and no doubt this boy will also plead guilty—wastes each day ample time to get out sufficient silage to feed 25 cows twice, at best only a 15-minute job. Many an Eastern farmer without even a thought of the value of time will lean against the wheel of a neighbor's buggy or the door frame of the grain store long enough not only to get out his silage but also to curry his horses and groom his cows thoroughly. It is a shame and a disgrace to let a herd of dairy cattle go from November to May untouched by brush or card, and covered with filth. If done daily it will not require two minutes per animal to keep them in fine order.

But to return to our subject, the silo. After this young man has got out the silage—which, by the way, should always be fed after milking, if the cattle and barn are clean—the housework not pressing and the woman a lover of animals, perhaps the mother might do the milking; and I will warrant that she will get more milk, and that the cows will have a better time than they would with any man about. At the risk of being burned at the stake as a heretic, I tell this young man he does not need a silo, and I venture the assertion first advanced just 30 years ago by the veteran breeder, William Crozier, that the silo has no permanent place in American agriculture. The silo has no stronger advocate than Frank Sherman Peer, and yet he admits that it is nothing to agriculture as compared with the soiling of cattle with Summer green feed.

Massachusetts was the original home of the silo in the United States. It was in Billerica about 1879, that Dr. Bailey built the first one. Yet Massachusetts is gradually abandoning them. For miles around my home are farms fitted with silos which are no longer used. Just to quote one case in point, the late George Freeman of Shrewsbury was one of the "old school" of farmers, keen, thorough and successful. He built himself a very fine silo at a cost of $500, and this he filled on a few occasions. But he soon found he could put his silage land into other crops, and with the money he actually paid out for silo filling buy all the extra haled hay he needed. Here in Massachusetts it is useless to figure on much less than a dollar per ton merely to get the corn into the silo, and on occasions when the "September gales" broke and twisted the corn so that the binder could not be used, the cost would easily mount to $1.50 per ton. It may be set down as an axiom that in this State every good man has some steady work, so that to get together a gang of laborers for silo filling means the payment of 20 cents an hour to incompetent and worthless help. Then add $5 per day for nine hours work of double teams and $3.50 for single teams, and up goes the tonnage cost. The cost figured in the foregoing presupposes the hiring of a cutter and engine, but makes no allowance for the work done by the owner's own men and horses.

Then again, the farm where silage is grown often decreases in fertility, for on account of the short haul, some field near the barn is chosen for the crop, and the constant applying to this field of most of the Winter's manure robs the outlying fields of a fertility that might be theirs through a judicious system of rotation. There is still another objection that one seldom hears mentioned, and that is, the number of times some cow in the herd goes "off feed" through moldy silage. No matter how good the silo or how nice the silage there will be moldy spots, either because the corn was too dry or improperly mixed, or even because some portions were tramped too much. This mold, white, blue, red, pink or green (and I have seen all these colors) is poison to a cow, and I have known careful feeders to throw out by hand any mold they found. Under a proper system of dry Winter feeding with either beet pulp, or plenty of bran or linseed, the cows are never "off feed." If the young farmer will plant some small-stalked variety of flint corn he will have part of the grain ration for his cows, horses, hens and hogs, his cows will eat most of the fodder without cutting, and the residue can be used for horse bedding. Better still, all the work from start to finish can be done by the farm's regular crew. Of course there are farms, heavily stocked, where the silo works well. I know of one farm where 100 cows are kept on 60 acres of land by buying some hay and filling four or five silos. But this farmer has plenty of men, horses, and tools to do most of the work himself.

At some time in their lives most farmers get the silo fever. Some resist it and some succumb. The writer had it so badly that it cost $1,500 to cure him. He built the first stave silo in this town 14 years ago at a cost of $400 and later spent $117 more for a cutter and carrier. (We already had steam engine.) Then for 10 years he filled this silo religiously at the cost of a thousand dollars, and fed the product to 25 milking cows. But the best thing he ever did was when at the solicitation of his wife, he tore the silo to pieces and converted it into a cornerib.

Massachusetts. HENRY G. MANSFIELD.

Ham Sandwich for Cattle.

What is gained by planting sunflowers or Soy beans in corn for silage and how is the seed mixed?

In theory using the sunflowers or beans is like putting the meat into the sandwich. Corn represents the bread and butter containing chiefly the food elements which make fat but are somewhat lacking in the elements which make bone and muscle. These elements are supplied in greater amount by the sunflower and beans. Thus the theory is that when mixed with the corn these supply the "meat in the sandwich." A few farmers carry out this plan but most of them prefer to cut the beans, cure as hay and feed them separately.

Dairy Ration.

I want a balanced grain ration for my cows of the following feeds: Ground corn with cob, cottonseed meal, and middlings. J. H.

You do not state what hay is available but we take it that silage and corn fodder or some mixed hay may be used. In this case the mixture you are using is far too low in protein. It would be better to mix three parts of corn and cob meal, three parts of wheat middlings, two parts bran, and two parts cottonseed meal.

G. E. W.

Turnips or Mangels.

Could I sow Cow-horn turnips with my cover crops, which are either rye and Crimson clover or rye alone, and feed them as succulent food for cows the coming Winter? Would I get better results by sowing mangels? What is the relative value of Cow-horn turnips as compared with mangels? J. H.

Cow-horn turnips are often sown with rye and Crimson clover for stock, particularly sheep. Two pounds to the acre is plenty and can be mixed with the Crimson clover seed and sown with it. Their especial value lies in the saving of labor and the use of land, and they are easier fed by turning the stock into the field than by pulling and storing. One trouble about sowing them with Crimson clover is that unless they are sown fairly early they will not make sufficient growth before frost comes, so that enough of them are large enough to be worth pulling. They are not as valuable as mangels as a feed for dairy cows, and are of more use to sheep in the field than to cows since a sheep can get closer and eat the turnip large or small right out of the ground while a cow gets only the benefit of the top and the root of the larger turnips. They are certainly better than no roots at all, and where you cannot make the mangel crop a special feature, Cow-horn turnips are certainly a good crop to have on the side. As a cheap root supply for sheep I know nothing better. R. B.

"Hollow Tail."

My bull has what we call hollow tail. One of my neighbors told me he had one affected the same way last Fall, and when he had his cattle dishorned he had the sick one dishorned also, and found nothing in his hornes; they were hollow. He then examined his tail and found that the same way. He cut the tail open and put salt and pepper in it and the animal has been doing better ever since. I examined my bull's tail and found he had about two inches hollow. I treated him and he has been improving since. A stock man told me I should blister him back of his head. Do you think I should do the blistering or not? I will watch him for tuberculosis in the meanwhile.

Virginia. J. F. J.

The horns of all adult cattle are hollow and there is no such disease as "hollow tail" or "wolf in the tail." These are myths, handed down from the dark ages of barbarism when poor old women were burned at the stake as witches, and they should be abandoned by all intelligent people, just as such folk no longer believe in the alleged influence of the signs of the zodiac. The soft place in the bull's tail was caused by the tail becoming caught on a snag and yanked loose. The condition has nothing whatever to do with the disease present, and such disease often affects cows that have no horns, or that have lost their tails. Better follow the advice we gave you previously. A. S. A.

Fits.

I have a cow that is subject to fits at certain times when she is on full feed of grass, but on dry feed, such as hay and stalks, she is not bothered with them. She will be eating when suddenly she begins to shake and stagger sidewise, sometimes she falls flat and then again she will keep her feet and it may be several days before she has another attack. When she falls she gets right up on her feet and begins eating. Can you tell me what is the matter? C. W. F.

New York.

This cow has something wrong with her heart, or the jugular veins, so that she suffers from rush of blood to the head when grazing. Better feed her green feed from a rack and keep her off grass. If the trouble continues she should go to the butcher, as there is no cure. A. S. A.

A YOUNG man who needed false teeth wrote to a dentist, ordering a set as follows: "My mouth is three inches acrost, five eighths inches threw the jaw. Some hummocky on the edge. Shaped like a hoss-shew, toe forward. If you want me to be more particular I shall have to come thar."—Sacred Heart Review.

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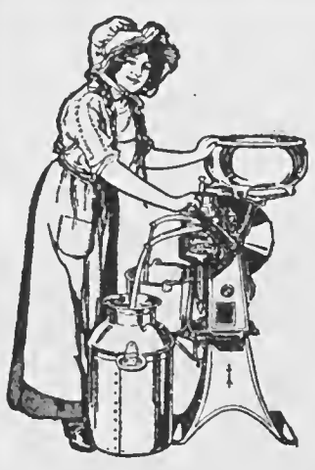

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ON THE CONTRARY, WITH A 1914 De Laval machine placed beside any other separator the difference is apparent at first sight to the man who never saw a separator before.

IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction; the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together; the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, he will still further *see the difference*.

IF HE WILL GO A STEP FARther and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL TAKE THE two machines home, as every De Laval agent will be glad to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks, he will see still greater difference in everything that enters into cream separator practicability and usefulness.

THE MAN WHO TAKES EVEN the first step indicated in seeing for himself the differenee between the De Laval and other cream separators doesn't put his money into any other machine one time in a thousand.

THE COMPARATIVELY FEW buyers of other separators are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to *see the difference* for themselves.

THE WISE BUYER OF A CREAM separator today does see this difference when buying his *first* separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a *second* cream separator a year or two later.

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THAT'S THE REASON WHY four buyers out of five are buying De Laval Cream Separators in 1914, and why the use of De Laval machines will, before long, be nearly as universal on the farm as already is the creamery and milk plant use of power or factory separators.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

EVENTS OF THE WEEK.

DOMESTIC.—May 14, C. S. Mellen, former president of the New York, New Haven & Hartford Railroad, testified before the Interstate Commerce Commission as to the financial deals of that road, which resulted in heavy loss to the stockholders. He gave the name of former Police Inspector Thomas F. Byrnes, of New York, as the distributor of a $1,200,000 "slush fund" with which the New Haven railroad expected to purchase enough influence to modify to its satisfaction the franchise held by the New York, Westchester & Boston Railway. In his testimony, May 19, Mr. Mellen declared that the "Westchester deal," in which more than $11 000,000 of the New Haven's money was expended, was managed by the late J. P. Morgan and William Rockefeller, but chiefly the former. Through Mr. Mellen's testimony it became apparent that the Billard transaction, through which the New Haven apparently lost $2,700,000, was put through for the purpose of avoiding a Massachusetts law. He referred to various political influences consulted, including the Administration then at Washington.

Ten men, most of them chemists, were killed by the explosion of acid and chemicals in the mixing room of the Mexican Crude Rubber Company, at Detroit, Mich., May 15. The company manufactured imitation rubber, and it is understood that ether and other explosives were used in large quantities.

Captain Edward F. Carson, Troop A, Colorado National Guard, admitted on the witness stand before the court-martial at Denver, May 18, that the soldiers looted the Ludlow tent colony on the night the colony was burned, causing the death of two women and eleven children. Carson added that he saw soldiers and civilians bearing away all kinds of property. He saw soldiers carrying off suits of clothes, miscellaneous clothing, umbrellas, jewelry, blankets and grips and satchels filled with all sorts of stuff belonging to the strikers. Even trunks were taken.

Twenty firemen were overcome by acid fumes May 18 in fighting a fire which destroyed the six-story brick building at 463 Greenwich street, New York. The loss is estimated at $150,000. Fumes from muriatic acid stored in the building trebled the difficulties of the fire fighters.

The trial of Becker, formerly police lieutenant, for the murder of the gambler Rosenthal in New York, still continued May 18-20 to bring out testimony damaging to the defense, the widow of one of the executed gunmen being a big witness for the prosecution.

May 19, there were serious forest fires in 19 counties of Michigan; 5,000 men were out fighting them. Iron River was reported wiped out by the flames.

After 14 days of terrible suffering in an open boat, five survivors of the freight steamer Columbian were picked up in the North Atlantic May 17 by the United States revenue cutter Seneca. One died at the moment of rescue. Eleven others of the boat's crew, which left the Columbian when she was burned just south of Sable Island on May 3, succumbed in the meanwhile to injuries and privations, and their bodies had been cast overboard. The death roll of the lost freighter now stands at fifteen. The survivors had lived on only a few ship's biscuits and a cask of water, which had long since been exhausted.

Fairbanks, Alaska, cabled May 17 that Circle City, Eagle City and scores of woodchoppers' and mining camps with many native villages along the Yukon above Fort Yukon have been destroyed by the worst flood in the history of the north. Flood marks on the Yukon show that water in the past rose more than a hundred feet when ice jammed in the canyons. Circle City and Eagle City are only thirty feet above the Yukon's normal level.

FARM AND GARDEN.—The greatest tulip exhibit ever possible anywhere outside Holland will be a part of the national exhibit of the Netherlands at the Panama-Pacific International Exposition at San Francisco in 1915. Two acres will be devoted to the tulip beds.

The test case of Ralph Miller, county treasurer, versus the George H. Mellen Co., of Springfield, Ohio, has been assigned for hearing May 18 in the Court of Appeals at Springfield. This is the case which is to determine whether or not the growing crops in the greenhouses and nurseries are assessable for taxation. A decision adverse to the trade interests has been given in the lower court, and the case has been carried up by the Springfield Florists' Club, with the aid of cash subscriptions by many other florists through the State. Able counsel has been engaged and a vigorous defense has been prepared, as the outcome will be of far-reaching importance to the florists' trade.

The Summer meeting of the State Horticultural Association of Pennsylvania will be held at State College, Pa., June 17 and 18. The Association will be the guests of the Department of Horticulture and Experimental Pomology. At that time the experimental plats on the college farm will be in splendid shape and will afford interesting studies to all who are interested in experimental fertilizer work. The cover-crop and fertilizer work in the College Experimental Orchard will at that time show up the growth which each treatment is producing. A trip over the entire plant of the college will be arranged. Dean Watts, M. G. Kains, Professor-elect of Horticulture; Dr. J. P. Stewart and Professor H. A. Surface of the State Department of Agriculture, and others will speak at the meetings.

MEXICO.—The United States will permit the Constitutionalists to use Tampico for the purpose of getting war supplies to carry on the fight against Huerta. * * * The peace conference between representatives of the United States, President Huerta and the A. B. C. envoys began May 20 at Niagara Falls, Ont. It is believed that one month will be occupied in thrashing out the various suggestions from delegates looking to the avoidance of war. * * * Rebel forces are reported to have dashed into San Luis Potosi and seized the main plaza of the city, routing the garrison with heavy losses. * * * Belief that United States Consul John R. Silliman has been killed by the Federals is growing. Constitutionalist agents on the border assert this is a fact. The arrival of a train from San Luis Potosi at Mexico City without Mr. Silliman has reawakened fears in Washington about the consul's fate. * * * Villa's main army engaged 5,000 of the Federal garrison outside Saltillo May 19. The Federals were repulsed with heavy losses. The rebels took 800 prisoners and captured 600,000 rounds of ammunition. * * * At Paredon a desperate battle was fought May 19. At Ramos Arispe there had been desperate fighting for two days. Throughout the country lying between and in the district near Saltillo skirmishes, which are in reality battles of lesses magnitude, are being waged constantly. Details of the Saltillo campaign indicate that Saltillo may be in practically every respect a second Torreon. The Federals are not surrendering an inch of ground without a battle. Every move toward Saltillo made by the rebels is met with determined resistance by the Federals.

Eggs were 50 cents each, meat $3.50 a kilo, hay $15 a bale, and other prices are in proportion in Guaymas, Mexico, according to advices received May 15. The people of the west coast port are literally starving. Only the rich can afford to buy the few food articles purchasable, and the poorer people are dying by scores daily of starvation. Because of the siege of the city the people fear to attempt to get away. Even fish are prohibitive in price, all of the fishermen having either been impressed into the Federal army or having joined the rebels.

NEW YORK STATE NEWS.

MADISON COUNTY FARMERS.—At a meeting of farmers of Madison County recently a coöperative organization was formed under the new State laws, and the following were elected officers for the ensuing year: Levi Timmerman, president; J. H. Wilson, first vice-president; E. O. Messenger, second vice-president; K. M. Harsh, secretary; A. H. Root, treasurer. The meeting was held at Grange Hall in Canastota, and representatives of the State Agricultural Department were present. Those interested in agriculture and in truck crops especially, fully realized the importance of coöperation and the plans presented by the representatives of the department appealed to them with great force.

RECORDS BROKEN.—Four world's records are said to have been broken last week at the Holstein-Friesian sale at the Liverpool pavilion near Syracuse. At private sale $25,000 was paid for a half interest in King Segis Pontiac Alcartra. An unnamed son of the same bull brought $11,300 at auction, the highest price, it is said, ever paid for a bull calf. It went to Fred J. Karlin of Illinois. Another record went down when Mr. John Arfman of Middletown, paid $3,000 for the cow, Lyndon Alcartra Polkadot. She is a 32.67 pound animal. The world's record price for a three-year-old was paid by the Lawson company in giving $1,050 for the cow Finderne Pontiac Twisk, with a record of 30.60 pounds. Briar Daisy, a 31-pound cow, was sold by F. W. Scott of Granville for $1,400, and her yearling daughter went at the price of $535. The average price paid at this sale of Holsteins on more than 100 head, was $1,400.

CREAMERY BURNED.—The Thousand Island Creamery, located near Alexandria Bay, was burned to the ground on May 18, loss $10,000. The building carried an insurance of $3,000, and the machinery contained therein was valued at over $4,000. It was not insured but was rendered useless; also 1,500 pounds of butter and 10,000 pounds of milk were destroyed. About 300 pounds of cheese were carried out and saved.

LEGISLATURE ADJOURNS.—The special session of the State Legislature adjourned on Wednesday afternoon, May 20. The appropriation bills commanded the attention of the legislative leaders and committees, and several conferences were held to see if an agreement could be reached on several items before the bill was again submitted to the two houses. When the members gathered for the final session it was found that the appropriation bills totaled over $35,000,000. The revenues of the State from indirect resources amount to about $42,000,000. Special appropriations amounted to about $6,000,000, and it is intended to keep about $2,000,000 in the treasury. The Governor was asked if he would sign a bill levying a direct tax of one-tenth of a mill to make up the deficiency. He would not. And he told the conferees if they didn't cut out or cut down some items he would. They then reduced the amount called for to $34,445,000. The reduction cut out $200,000 for the elimination of railroad crossings; $10,000 for the School of Forestry; $10,000 for improvements at Cornell; $30,000 for a new building at Alfred University; $10,000 for heating State fair buildings; $10,000 for Geneva Experiment Station; $35,000 for printing the session laws, beside several others. The date of holding the primary election was changed so as to accommodate Jewish voters, Atonement Day falling on the date first set for the primaries. J. W. D.

NEW ENGLAND MILK SITUATION.

Much milk legislation has been agitated the past few months by interested parties, among this several bills recommended by former Mayor Fitzgerald to define pure milk, or what would be recognized as such by health boards and under the law. These last were all turned down by the Legislature, while some others have not been reported from committees yet. The one most noticeable and most heard of is the former so-called Ell bill, now recommended under a new name, and also changed somewhat from its former shape; yet the general features and objects of this bill remain the same. It does not look at present as if any legislation of any importance would be passed at this session for reason of a contemplated change in the State Board of Health, which now consists of several members, all having about equal authority, to do away with these altogether, and have all authority vested in one head, known as Health Commissioner. The present idea is to appoint one for five or six years and have an advisory board of perhaps six members to assist him, all these to be physicians of good standing.

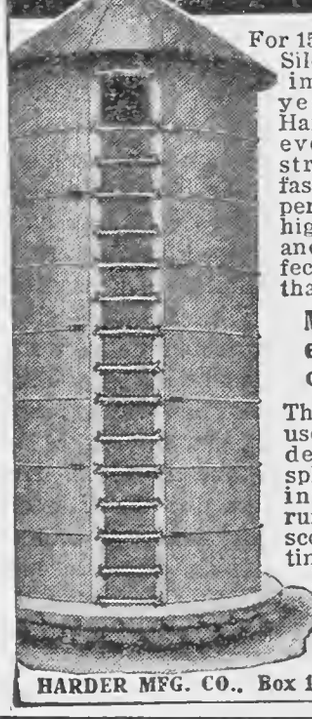
Governor Walsh is a strong believer in the plan, and is working to bring the change about. As it would be bad policy to pass a bill on milk requirements, etc., that would conflict in any way with the above changes at this time, a general understanding exists to rest easy and let present laws and regulations suffice until we know just what we are at. So many mistakes have been made in the past on these matters that "be sure you are right before you go ahead" is the best and safest policy, and this will be followed at this time.

Two interesting notes show some light as to the matter of profit made by milk contractors. In this case it is the H. P. Hood Co. which is reported to be paying producers in a certain section in Massachusetts the following price for milk: For April, 2.98 cents per quart; May, 2.05; June, 2.07; July, August and September, three cents, an average for the Summer months of less than 2¾ cents per quart. These are net prices at the farm. The same company has just been awarded a contract to supply the Boston City Hospital 1,200 quarts daily at 6⅝ cents per quart. I should like to see this company figure this difference in price to make good their claims in the past of only a fraction of a cent per quart staying with them as profit. I know they employ experts to do their figuring. Here is a chance to keep them employed to make the right showing on paper. Can they do it? It does not seem possible that present low prices paid for Boston wholesale milk could long continue, as we are advised that some dealers are not getting enough for their wants (at present time, which is the flush time of all the year) but are looking for new dairies to add to the present supply. I also know of many producing dairies in the surrounding towns which have sold a large part of their cows this Spring, and some of these will sell the rest as soon as buyers can be found. These facts and other causes which will be heard of in the next few months must bring a better price; all signs point that way. Also the Massachusetts Railroad Commissioners reports show a falling off of 726,184 quarts in March of 1914 from March of 1913.

The only way to make up the shortage is to ship in more long-distance milk, which must be treated to be safe for use, and yet in the face of these facts the Meaney bill to label this milk as to source of production was turned down last year. Does it mean people do not care where their milk supply comes from, or how old or how much or what treatment it may have received? Do not the consumers want nearby fresh Massachusetts milk? It certainly looks as if they were not particular about it. All these things should be looked at and studied by the new Commissioner when that change is made, and any new laws passed should consider these points, and the blame should be put where deserved for letting this state of affairs get where it is.

Around four cents per quart, wholesale, seems to be about the average price paid for Summer milk in different cities in New England. I know of a very few cases where producers are receiving five cents per quart. I wish there were more of these at a profit, for anything less is out of the question under our conditions, and yet too many producers are willing to sell for less. In some cases their circumstances are such they can't turn to anything else, and must sell at practically what is offered; but some who sell at these prices are not obliged to, but they do it. Another case for education; let the good work go on, and keep it moving. A. E. P.

Harder Silos



For 15 years the One Best Silo. Big, sensational improvements this year, making the Harder Silo better than ever. Of massive strength, anchored fast, solid as an oak, perfect fitting doors, highest grade material and construction—perfect in every detail—that's the Harder Silo.

More durable, less expensive, than concrete and tile.

The kind "Uncle Sam" uses. Big free catalog describes the new spline-dowel, the new intermediate ladder rung, the anchor, and scores of other distinctive features. It tells why *you* need a Harder Silo. Write today.

Catalog Free Write Us

HARDER MFG. CO., Box 11, Cobleskill, N. Y.

Elbert Hubbard
(Fra Elbertus)

Recently took "time off" long enough to write a message to farmers on the subject

"The Silo and Which is Best"

The article, which is sort of a history of silos generally, is penned in Elbert Hubbard's unique and interesting style, with all the quirks and quirls and homely philosophy that have made the Sage of East Aurora famous.

Through an arrangement between Mr. Hubbard and The Canton Culvert Company, makers of the famous

"ZYRO" Galvanized
ANTI-CORROSIVE
No-Co-Ro METAL SILO

The article has been published in booklet form. A free copy is yours for the asking.

The Canton Culvert Co., Box 440, Canton, O.

UNADILLA Was Chosen

New York authorities demanded durability, preservability and economy, found all three qualities in the Unadilla Silo and erected 15 on State Industrial farms. Same reasons led the Borden Milk Co. to equip their model farms with Unadillas. Send for catalogue and conclusive proof of superior construction and new features. Liberal discount for early orders. Agents wanted. Address

UNADILLA SILO CO., Box C Unadilla, N. Y.

SILOS

8 x 20	$ 64.72
10 x 24	92.23
12 x 26	118.25
14 x 28	144.65
16 x 30	173.89

Other sizes in proportion. Ask for Catalogue.
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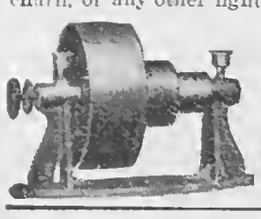
HARRIS GOVERNOR PULLEY

A high-grade, reliable, durable governor pulley at a price every one can afford. No need of paying $9 to $15 when you can buy the HARRIS for $5.45 complete.

$5.45 F.O.B. FACTORY

INCREASES CREAM PROFITS

Runs separator at a steady, uniform speed. Starts it slowly, gradually increases speed, takes up all jerk and jar of engine. Saves wear and tear on separator. Quickly pays for itself. Adapted for fanning-mill, churn, or any other light machinery. Your dealer has it—if not, send $5.45 for a complete pulley. Don't accept a substitute.



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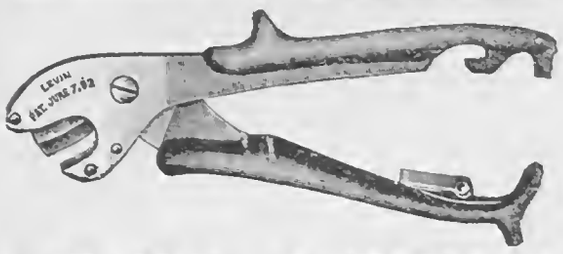


LEVIN PRUNER

THE best Pruner. Cuts ½-inch dry branch. Quick, clean, easy cut. We will send it postpaid for one new yearly subscription at $1, or for club of 10 ten-week trials at 10 cents each.

These articles are not given with a subscription to The Rural New-Yorker, but are given to the agent as a reward, in place of cash, for extending the subscription list of The Rural New-Yorker.

THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

PUBLISHER'S DESK

I note your article relative to Frederick O. Groesbeck of Hartford, Conn. I write this to say that on February 28, 1908, said Groesbeck ordered from me 2,000 cinnamon vines, amounting to $24. These I shipped him at once. I have not been able to get anything at all from him in payment. A. T. C.
New York.

We demanded payment on this account, and get the reply that he owes this correspondent nothing . At the recent suit for libel, three bills from three different publishers for advertising were presented against Groesbeck, and he denied owing any of them. Two protested notes were presented, and he denied owing anything on them. Two unsatisfied judgments were presented, one of them for wages of an employee, and he repudiated them. He admitted himself that he put the title of his poultry farm in his mother's name, made a bill of sale of his store to his father, and a bill of sale of chickens to another man at the time these creditors were pressing for payment. Hartford lawyers, it was testified, reported him execution proof, and Groesbeck testified that the sheriff on one occasion "got in bad" by making a levy on chickens which he had covered with a bill of sale. Under the circumstances we advise A. T. C. to charge his $24 to profit and loss.

I am very glad of the strict supervision of the advertisements of THE RURAL NEW-YORKER, and assure you that if anything can be done to make the other farm papers come up to the same high standard I will do what I can for the cause. I enclose a letter advertisement, which must be quite largely distributed among a varied class of people, as it is a multigraph letter. It looks to me as though the main thing in the blank is the three dollars to be remitted. I have had such letters from varied sources, and have always gone on the supposition that if I could write anything worth publishing I could find a place for it without contracting and paying in advance for its distribution. The general style, however, is such that many imaginative young people might be misled into thinking that the remittance of the three dollars would make them finished writers with good incomes. Your paper has improved greatly in the past few years. C. S. G.
Pennsylvania.

The advertisement enclosed is from Franklin Davies, literary agent, 500 Fifth Avenue, New York. The $3 fee is requested to show sincerity and in return you will receive an outline for a marketable story, with suggestions for style, length, etc., and the story when returned to him will be sold for from $15 to $75 less 20% commission. If the story you submit is not marketable it will be returned for correction. We rather assume the majority of the manuscripts would be returned. Our subscriber is right. If you write anything of merit you will find a place for it without paying some one for the privilege of outlining your plot.

Herbert Myrick, the self-styled editor and president of Springfield, Mass., does not like the Land Bank of the State of New York. He says it is a failure, but he has not learned enough about it to know that it has not been yet organized. The only place that a bank which does not exist can be a failure is in the mind of a prejudiced critic. What Mr. Myrick doesn't know about the Land Bank is apparent in the jumble of things he says about it which are not true. But no one expected this bank to please Myrick. How could any bank without the Myrick brand please Myrick? When he built the much lauded concrete building, some years ago, Mr. Myrick introduced a financial scheme that he might approve for New York State farmers. He controlled several incorporated stock companies which never owned a brick or a foot of ground, and issued from them building certificates giving the impression that they had the Myrick building behind them as security. In fact the purchasers of the certificates were, in some instances at least, told flatly that the certificates made them part owners of the building. They of course did nothing of the kind. The certificate shorn, of much confusing verbiage, was simply an acknowledgement that the holder of it had deposited fifteen dollars with Mr. Myrick. It afterwards turned out that the depositor had to die to gain some of the promised rewards for the use of the deposited money. It bore about the same relation to the Myrick building that a farmer's unpaid grocery bill bears to his neighbor's barn. Farmers have had trouble in getting the money sent for these certificates returned, and several of them have appealed to us for help. We collected the money on one of them from Mr. Myrick some days ago. Such is one of the Myrick schemes of finance. New York State farmers do not want any of that style of finance in their system of farm credits. There is none of it in the Land Bank and the omission probably accounts for Mr. Myrick's sneers.

The New York State League of Savings and Loan Associations will hold its annual meeting in the convention hall of Hotel Statler in the city of Buffalo, on June 11 and 12. Mr. Edwin F. Howell, chairman of the legislative committee, will give an exhaustive analysis of the provisions of the new Land Bank soon to be organized. Many other important subjects are to be discussed by men of State-wide influence and fame. A symposium on "organization of new associations and gaining the confidence of the community" will be a feature of the meeting. This will interest farmers, as many of them will become members of the new association in order to benefit by the provisions of the Land Bank.

"An ounce of preventive is worth a pound of cure." I am urged to invest in three dozen washers for $19.80 plus freight, and to sell them at $54, making a profit on same of $34.20 or nearly 173%. It seems too good to be true. Can you express an opinion on the subject? I omit the name of the company intentionally. If honest they should pay for their advertisement. If not reliable I will expose them gladly. INQUIRER.
New Hampshire.

This class of advertisers appeal to the cupidity of local agents. They offer you big profits to get your remittance; but the profits must come, not from them, but out of your neighbors. They do not care whether you get the $54 or not, so long as they get the $19.80. At best they offer you the privilege of faking your neighbors. In this particular instance, at least, we think they have picked the wrong man.

I have two shares of preferred stock of the Monaton Realty Investing Corporation, par value $100 each. What chance is there of getting anything on them? I had a letter from a party in Connecticut who proposes to issue participation certificates to be secured to the same extent as second mortgagees holding mortgages against the property. I wrote the corporation and never got a favorable reply. R. R. S.
Vermont.

Our latest advice is that the receiver of the Monaton Realty Investing Corporation, Maximilian Morgenthau, filed a report in the Supreme Court that he had been unable to find any cash of the corporation, that it had no active bank account, and there were no funds in his possession with which to defray the cost of an examination of its affairs. The company's books are in the possession of the United States Attorney. Proceedings are under way to forfeit the charter of the company. It is doubtful if the shares have any value whatever; and it is not advisable to put up any new money on any pretext.

I don't need your paper any more than "a cat needs two tails." However, I am anxious to show my appreciation to any publication that has the nerve to show up the fakes and frauds the way you have. It must mean a good deal to turn down the advertising you do. You are doing a great thing for the farmers. I don't see how a farmer dare be without THE R. N.-Y. I hope to be able and eligible to do some advertising in your paper in the near future. F. W. T.
New York.

The thought of this letter comes to us in many different forms of expression. In them all the wonder is expressed that THE R. N.-Y. does not have more subscribers than it has, though the list is constantly growing. Business men understand the meaning of loss of revenue from discarded advertising, but few understand the expense of getting information that justifies the criticism of respectable crooks. Even then the rogues sometimes think they can hoodwink the public by filing a libel suit. Whether they are ever tried or not and as a rule they are not, there is heavy expense in preparing for them. If tried, a single sympathizer with crooks on the jury can prevent a clean-cut rebuke to the schemer by insisting on a disagreement. No paper could face such conditions without the full sympathy and coöperation of a large list of subscribers. The larger the list the easier the work. It is the only opportunity that farmers have ever had to express themselves in this kind of protection. It will continue as long as they approve of it and want it. It could not continue, if they became indifferent to it.
J. J. D.

Wet or Dry Mash.

Have there been any comparative experiments between the moist and dry mash in feeding poultry carried out systematically by an experiment station? If so which method gave the better results?
Maine. F. C. C.

I am informed that the Experiment Station at Cornell University has conducted some extensive experiments with the different methods of feeding, but that the bulletin giving the results of their experiments is now out of print. In one they fed four pens of 40 birds each; pen 1 was hopper fed upon grain only and gave a net profit of $15.35; pen 2 was fed three times daily upon grain only and made a net profit of $19.96; pen 3 was fed grain morning and night and a wet mash at noon, and the net profit was $21.25; pen 4 was fed grain morning and night and a dry mash of the same feeds as were given wet to pen 3 was kept before them; the profit was $28.67. I presume that other stations have carried out similar experiments, though I do not know of them. So far as my observation has gone, the feeding of dry mash has become well nigh universal with poultrymen keeping fowls upon a large scale, and while the above ratio of profits would undoubtedly not always obtain, there is little doubt that it is the most profitable method. M. B. D.

Eradicating Hen Lice.

My old fowls are quite badly affected with the large gray hen lice. Will you give me a certain method to get rid of these vermin? C. G. G.
New Jersey.

The only certain method of permanently freeing fowls of body lice that I know of it to dust them at frequent intervals with a good lice powder, but few will take the pains to do this sufficiently often and well entirely to rid the fowls of their parasites, and fortunately it is not necessary that this should be done. If given access to a good dust bath and kept free from the red mites by painting the perches, nests boxes, etc., with some good insecticide like kerosene and carbolic acid, the less important large body lice will do little or no harm in any numbers in which they are likely to survive.
M. B. D.

Charcoal for Poultry.

Is the practice of feeding charcoal to poultry based on scientific or practical principles? Does it have any chemical effect upon the hen, or is its value largely mechanical?

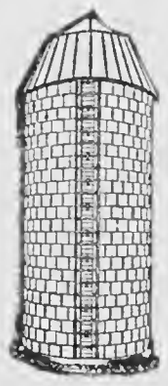
In regard to charcoal, theoretically it is valuable in poultry rations as a purifier or absorber of impurities, but personally I have never had a great deal of faith in its actual practical value. In fact, we feed practically none of it in our rations here, nor do we recommend the feeding of it. Chemically, or from a true nutritive standpoint, I do not believe that it has any value. It may have a little, as I mentioned, as an internal disinfectant or absorber of impurities.
New Jersey Station. H. R. LEWIS.

It is my personal opinion that charcoal is of no particular value if the chicks are in health, and I am not sure that it is of any particular value if they are out of health, although it has sort of been assumed that chicks with digestive disorders, especially where there was any tendeney for the formation of gas, should receive charcoal which would tend to absorb these gases and perhaps be of some service. I feel that no special physiological effect is to be expected from the use of charcoal, nor has it any chemical properties that make it particularly desirable. I think the prevalent idea in using it is that it may be a sort of chemical absorber. I am afraid, however, that after all we cannot cite you any experimental evidence bearing on this point.
Storrs, Conn. W. F. KIRKPATRICK.

I fed charcoal for years, both in mash feeds, pulverized and with cracked grains and in hoppers, granulated. I considered it a conditioner, crop sweetener and a sort of cure-all. Sometimes when the chicks were not eating as well as usual or droppings were off color I would put in a double dose in their dough, and I was satisfied that it was a good "cure-all.". I am not ready to say that it is of no value. We are using a very little, if any, at this time. I would rather suggest that it be placed in the hoppers where poultry of all ages can get some if they wish to do so. D. J. LAMBERT.
Rhode Island.

May Rilma Beats All Records
On April 8th, this wonderful Guernsey cow completed a year's test, giving 1059.55 lbs. Butter Fat on Chesterbrook Farm at Berwyn, Pa. Owner, Capt. E. B. Cassat. Sup't, R. A. Colgan,

The Green Mountain Silo Helped
Green Mountain Silos will help *your* herd to produce more milk. The lumber is thick and carefully selected; the hoops are very strong, and the most convenient of all doors are used. Write today for catalogue.
The Creamery Package Mfg. Co., 338 W. St., Rutland, Vt.

Lap-Joint Tiles ← —Better Walls

Stronger—more durable—less mortar exposed to feed on inside—every joint solid as a rock. Silage settles better and keeps better in
LANSING
VITRIFIED TILE SILO
Tiles are reinforced with twisted steel—continuous doorway—easy-climbing ladder. All features superior, yet costs no more than others. First cost is only cost. The glazed tile keeps all the good in the silage—no juice is lost. *Write for Catalog.*
Batavia Machine Co., Batavia, N.Y.
Ask about Climax Silage Cutters and Bidwell Threshers.

SILOS ARUNDEL $ FROM 66.00 UP
depending on the size. We make any size just as cheap.
What you get in addition to this Cypress Silo is:
1st—Our "1914" continuous door opening, with galvanized hardware and combination ladder; 2nd—Two galvanized cables; 3rd—Two new style anchor rods; 4th—Interior coated with "Shelco" gloss; 5th—Outside painted with oxide red paint.
This is the biggest value ever offered—buy now to be shipped when wanted.
Examine it and if it is not as represented, don't take it.
That is our proposition—can you beat it? We take the risk, and pay the freight back. Think it over. Deal with the maker direct.
You can buy the "Arundel" Silo on *credit*. Make a profit before you fully pay for it. Write for our New Way Selling Plan No. 25 Do it now.
THE ARUNDEL SILO BUILDERS BALTIMORE, MARYLAND

The Proof of Any Silo is in Its Silage
If your silage is perfectly cured, succulent and palatable, free from mold, uniform from center to circumference, untainted by foreign matter, then you have a good silo. The
INDIANA SILO
assures you of these results. Let our silo help you. Our Early Buyers' Proposition will save you many dollars in the purchase of an INDIANA SILO. In quality and economy of service it stands without a peer,
"Silo Profits", the "Watch-Tower" story and our new catalog all free. Address nearest office.
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Kansas City, Mo. 518 Exchange Bldg. Des Moines, Ia. 518 Indiana Bldg. Fort Worth, Tex. 518 Live Stock Ex. Bldg.

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ROSS Machines are fully guaranteed
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The E. W. Ross Co., Box 113, Springfield, O.

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Any readers who have not received the annual index of THE RURAL NEW-YORKER, and desire it will be supplied on application to THE RURAL NEW-YORKER, 333 W. 30th St., New York.

Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending May 22, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4¾ to five cents per quart.

BUTTER.

The early part of the week was decidedly a buyers' market, but later, receipts were higher and the accumulation was cleared up in better shape, prices running one-half to one cent below the previous week. There is some improvement in quality, but none of the new make is suitable to hold.

Creamery, extra, lb	25	@	26
Good to Choice	22	@	24
Lower Grades	19	@	21
Storage	17	@	22
State Dairy, best	24	@	25
Common to Good	18	@	22
Factory	14	@	18
Packing Stock	13	@	17

Elgin, Ill., butter market 25½ cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

Receipts are large and prices generally one-fourth cent lower. Speculative buying is slack, some having stock on hand that cannot be moved except at a loss.

Whole Milk, new, best	13½	@	13¾
Common to good	11	@	13
Skims	5	@	10

EGGS.

The market is unsettled, with a general tendency toward lower prices, because of large receipts and irregular qualities. Careful candling is needed to weed out heat defects, nest eggs and incubators.

White, choice to fancy, large	22	@	23
Common to good	18	@	21
Mixed colors, best	21	@	22
Common to good	17	@	20
Western fresh, white	20	@	21
Lower grades	15	@	18

FRESH FRUITS.

Apple receipts are light and quality below medium. Strawberries are plentiful but running poor this week, with many sales below 10 cents wholesale. At retail they bring 15 to 25 cents.

Apples—Russet, bbl.	3 00	@	4 00
Spy	3 00	@	4 50
Ben Davis	3 00	@	4 00
Greening	4.00	@	6 00
Newtown	5 00	@	6 00
Baldwin	3 00	@	4 50
Western, box	1 25	@	2 25
Strawberries, Va., qt.	8	@	12
Carolina	8	@	15
Maryland	9	@	14

BEANS.

Marrow, 100 lbs	4 85	@	5 30
Medium	3 70	@	3 85
Pea	3 20	@	3 75
Red Kidney	5 70	@	5 85
White Kidney	5 65	@	5 75
Yellow Eye	5 25	@	5 50
Lima, California	7 35	@	7 40

HOPS.

Prime to choice	38	@	40
Common to good	35	@	37
Pacific Coast	18	@	20
Old stock	15	@	18
German crop	63	@	67

VEGETABLES.

The close of the old potato season finds an exceedingly weak market and heavy losses by some late holders. Receipts have continued large with a considerable quantity from Europe. Part of the time new potatoes from Bermuda and the South have sold at prices that attracted buyers who ordinarily stick to old potatoes. The onion market is very firm and prices unusually high. Cabbage in heavy excess and low. Asparagus in large supply both from the South and nearby.

Potatoes—Maine, 180 lbs.	2 50	@	2 75
State, bulk, 180 lbs.	2 25	@	2 50
Bermuda, bbl.	2 50	@	5 00
Southern, new	2 00	@	5 50
Sweet Potatoes, bu.	40	@	1 00
Beets, 100 bunches	2 00	@	6 00
Carrots, bbl.	1 50	@	3 00
Asparagus, Green, doz.	1 75	@	2 00
White, doz.	1 75	@	2 00
Cabbage, New, bbl. crate	75	@	1 50
Kale, bbl.	25	@	30
Lettuce, half-bbl. basket	75	@	1 50
Onions—Old, 100 lb. bag	3 50	@	4 50
Southern, New, bu	2 00	@	2 75
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	1 25	@	2 50
Peas, Southern, bu.	75	@	2 00
Spinach, bbl.	25	@	75
String Beans, bu.	25	@	1 50
Squash, New, bu.	50	@	1 25
Egg Plants, Southern, bu.	1 00	@	2 50
Tomatoes, Southern, 6 bkt. crate	1 00	@	1 75

HOTHOUSE PRODUCTS.

Cucumbers, No. 1, box	2 00	@	3 00
No. 2, box	1 00	@	1 50
Mushrooms, lb.	15	@	35
Tomatoes, lb.	10	@	15

LIVE POULTRY.

Broilers, lb.	32	@	35
Fowls	15	@	17
Roosters	10	@	11
Ducks	13	@	13½
Geese	10	@	11

DRESSED POULTRY.

Chickens, choice broilers, lb.	40	@	45
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	19
Ducks	8	@	13
Geese	9	@	14
Squabs, doz.	2 00	@	4 50

HAY AND STRAW.

Receipts are only moderate and prices on the same level as last week. The last Government report gave the amount of all hay on farms as 7,830,000 tons. This is 1,998,000 less than in 1913 and 3,086,000 more than in 1912. Private advices from Northern and Central Ohio are that about 10 per cent. of the old crop is in farmers' hands, and that the outlook is favorable for a large new yield. In Western New York farmers still have large quantities of old hay on hand, which will be marketed as soon as the Spring planting is over.

Hay, Timothy No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 50
No. 3	17 00	@	18 00
Clover mixed	15 00	@	20 00
Straw, Rye	16 00	@	17 00

LIVE STOCK.

Native Steers	8 00	@	8 75
Bulls	6 00	@	7 75
Cows	3 50	@	6 50
Calves, prime veal, 100 lbs.	8 50	@	11 50
Culls	5 00	@	6 00
Sheep, 100 lbs	5 00	@	6 00
Lambs	8 00	@	8 25
Hogs	8 50	@	9 00

COUNTRY-DRESSED MEATS.

Calves, best	12	@	15
Fair to good	09	@	11
Lambs, Hothouse, each	4 00	@	7 00

GRAIN.

Wheat, No. 1, Northern Spring	1 05	@	..
No. 2, Red	1 07	@	..
No. 2, Hard Winter	1 07	@	..
Corn, as to quality, bush	70	@	80
Oats, as to weight, bush	43	@	46
Rye	70	@	75

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	28	@	30
Mixed colors, new laid	24	@	25
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

During the first three months of this year, 1,860,000 dozen eggs were shipped from China to the United States. These cost from 12 to 15 cents per dozen delivered at shipping point. The freight cost to Seattle is about $2.10 per case of 30 dozen, but this does not include cold storage and would be the cold weather price by the Northern route. Refrigeration would double the cost. In future all cases of eggs from China must be branded "Product of China." Many of them have previously been labelled "Fresh Pullets," as they often run small.

*

Is there a steady demand in New York city or nearby markets for white shell Indian Runner duck eggs (best grade) every month in the year? Can you quote me about what would be the average market price? W. S. B.

These white duck eggs sell well in New York at times, but the market is irregular. Two months ago some of them brought 40 to 45 cents wholesale; now it is hard to sell them, a good many going as low as 18 to 20 cents. The very finest were recently seen retailing at 25 cents per dozen. It will be well to go slowly about starting a large white duck egg plant if New York market must be depended on to handle them. W. W. H.

May 12.—Wheat 80; oats 45; corn 80; hay $15 per ton. Butter 20; cream 23; eggs 15. Hogs $1.75 per 100 pounds; milch cows $50 to $80; yearling steers and two-year-olds are selling at 7 cents per pound. Potatoes $1.20, shipped in. No demand for garden truck in a small town. J. H.

Gira d, Kan.

This is mainly a mixed farming country with corn, oats and wheat as the main crops, and dairying as a side line. Corn 57; oats 32; wheat 70; cream 21½ cents. No milk sold as every farmer has a lot of pigs. Good milch cows $90. All stock cattle sell about the same as at Omaha. Eggs 15 cents; chickens 11 cents. P. H.

Leigh, Neb.

May 14.—This section has extra good prospects for wheat, oats fair, corn planting about done, being a little later than usual. Apples and peaches look well, cherries fair; very few strawberries and pears. We have had rather a cool Spring. Prices of live stock follow closely the Kansas City markets. Not much dairying done here. Country butter 17; eggs 16; hens 13. J. R. M.

Butler, Mo.

May 5.—Cattle are held at high prices, the large herds at about $8 to $8.50 per cwt., either a little more or less, according to condition. Dairy cows have sold at auction sales for about $80; some animals I saw sold for $86, and one cow for $92. Heifers were sold at public sale February 17 at $38 to $42. Pork at the market, now $9 per cwt. Potatoes sold in car lots in the Fall at 90 cents per cwt.; lately at 60 cents per cwt. Apples sold last season, mixed lots, at $1 to $1.14; cherries sweet at five to seven cents; sour, three cents a pound; apricots five cents a pound. Butter 20; eggs 15. In the Winter butter was 25 to 30; eggs 35. One of our local cattlemen told me a few days ago of a prospective deal of $50,000, he to take a half interest: in that case the cattle to be lumped at so much a head. During the Summer the cattle are pastured on government land on the hills; in Winter the feed is Alfalfa hay. C. L. G.

Cedar Edge, Colo.

Rheumatism.

I have a fine cow dog (Great Dane) about two years old. About three months ago we noticed he acted as though he was sore in his loins. He used to jump and put his front paws on my shoulders, but now he cannot raise himself a foot from the ground. If he runs fast he yelps with pain. Has had worms. His appetite is good, but is not anxious to work. What is the trouble? P. H. E.

While it is possible that the dog has a chronic disease of the kidneys the disease may prove to be lumbar rheumatism and that would offer more promise of recovery. It would be best, if possible, to have the dog examined and prescribed for by a graduate veterinarian. He should also examine the urine. If you cannot have this done give the dog a five grain capsule of salol night and morning and if found necessary give a similar dose every four hours when the dog is suffering acutely. Keep him in a warm, dry place. A. S. A.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

COLLEGE STUDENT wants work on good general farm for 12 weeks during Summer. Address M. G. M., 517 W. Fourth St., Elmira, N. Y.

POSITION WANTED AS WORKING FOREMAN by married man, 35 years old; five children; 20 years' experience. B. J., care R. N.-Y., 333 West 30th St., New York.

MAN WITH BIG EXPERIENCE HANDLING men on public works wants position on farm or estate; practical farm and poultry experience; expert on grading and dynamite work. K. O., care R. N.-Y., 333 West 30th St., New York.

WANTED, A PRACTICAL FARMER, to take charge of a 34-acre farm near Greenwich, Conn. As a special inducement to good, reliable man, owner will make no charge for first year's rent. Apply MADAME EUGENIE, 634 Fifth Ave., New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Family cow, goose eggs, goslings, for cash and light horse. MUELLER, R. F. D. 2, Westwood, N. J., care HAUETER.

VERMONT MAPLE SYRUP @ $1.00 PER GAL.; maple sugar, 5 and 10-pound pails, 15 cents per pound; fancy caked sugar, 18 cents. Choice fresh eggs in any quantity. JAY T. SMITH, Rupert, Vt.

FOR SALE—A four and one-half and a thirteen and one-half horse power gasoline engine. Will sell for seventy-five and two hundred dollars respectively. ONEIDA COMMUNITY, LIMITED, Oneida, N. Y.

HOMEMADE NEEDLEWORK — Crochet linen Japanese whorl collars for coat or dresses, white or ecru; 75 cents post paid; also batting by the yard, 15, 20 and 25 cents. MRS. C. J. GILBERT, Cranesville, Erie Co., Pa. R. F. D. 1.

PURE MAPLE CANDIES—The Aimee Sweets were first made for critical tourists who passed on the road. They are now wanted everywhere. From pure Vermont maple, with or without nuts. Sample boxes 25 and 50 cents each. MRS. AMY A. HARWOOD, Dorset, Vt. R. 1

GOLDEN BANTAM SWEET CORN — Home canned. The best variety known. Yellow, sweet, rich. Send 20 cents for a full-sized sample of this home prepared corn. "Like mother used to make." MRS. W. A. SMITH, Clarkson, N. Y.

PURE GRAPE JUICE—The Atkeus pure, home-made grape juice is made from ripe, selected Concord grapes raised on our own farm and made under our own eye. We have sold to doctors, to churches and individuals. Prices: One quart, 35 cents; one gallon, $1.25; five gallons, $6.. CHERRY HILL COTTAGE, New Paltz, N. Y.

FARM FOR SALE. M. MUIR, Raymilton, Pa.

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TO RENT—Furnished house for Summer in a beautiful locality, six miles from Amsterdam, on macadam road. Address CHAS. I. SCHUYLER, R. D. 2, Amsterdam, N. Y.

FOR SALE—Dairy farm, stock and tools; 110 acres, keeping 40 cattle and three horses; modern stable; 12-room house; steam heat, etc.; 10 minutes' walk from town. DR. W. R. SMITH, West Brookfield, Mass.

FOR SALE—40-acre farm with fruit of all kinds soil clay loam; some is gravely; half mile to railroad; stone road to city; good building; wish to hear only from those interested. W. A. PLASNYNSKI, Box 25, Ludington, Mich. R. F. D. No. 1.

COMPLETELY EQUIPPED commercial poultry farm, 35 acres; 3,000 capacity; thoroughbred stock; plenty fruit; large dwelling; mile from railroad. New York-Philadelphia. Successful business proposition, returning handsome profits; $15,000 part cash. BOX 256, Beverly, N. J.

PEACH MOUNTAIN FARM—near Great Serpent Mound, Adams County, Ohio; 572 acres; 10,000 peach, apple, cherry, pear, fruiting now; beautiful location 400 feet above station one mile away; full farm equipment; bargain terms. Write owner, E. E. RICHARDS, Box 563, Columbus, Ohio.

FARM FOR SALE—Farm of 160 acres, 2 miles from McDonough Village; an excellent dairy farm; good market for milk; land lays level and is easy to till, and under good cultivation; buildings and fences are first-class and in good repair; 150 thousand feet of sawing lumber on the place, mostly hemlock; owner wishes to sell on account of ill health. For price and terms call or address GEO. A. PURDY, Oxford, N. Y., or ALBERT BECKWITH, McDonough, N. Y.

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HUMOROUS

QUIDNUNC: "What makes your hair so much grayer than your whiskers?" Bulfinch: "Why, my hair is a great deal older than my whiskers."—Woman's Journal.

"EVERY time I see grandfather's sword I want to go to war." "Well?" "But every time I notice grandfather's wooden leg I cool down."—Louisville Courier-Journal.

A BACKWOODSMAN who had been elected to the Legislature went to the city postoffiee to get some stamps. "What denomination?" inquired the clerk. "Lutheran," said the member, modestly. —Woman's Journal.

LITTLE Rollo had been reproved for his table manners by papa and mamma. He trained his baby stare on mamma to ask: "When you was a little girl didnt y'ever dip your jelly roll in coffee?" "No, my dear," with a tinge of acerbity. "Y'ot to try it. Gee, it's great!"—Buffalo Express.

"Now, Thomas," said the teacher severely, "how many times must I tell you not to snap your fingers? Put your hand down and presently I'll hear from you." Five minutes later she said: "Now, then Thomas, what was it you wanted to say?" "There was a man in the entry a while ago," said Thomas serenely, "and he went out with your new silk umbrella.'—Toronto Sun.

AN Ohio man tells of a farmer in that State who, even in the hour of adversity, could think of others. An unseasonable frost had completed the damage done by the insects to his potatoes. The tops of the plants, which had served as pasturage for the pests, were wholly destroyed. Meeting him at the post office one day a friend asked: "How are you, Tom? Things goin' well?" "Goin' well!" exclaimed the old man, "I should say not! There's trouble and plenty of it! Why, up at my place there's nine million potato-bugs, an' nothin' for them to eat."—Credit Lost.

A NORTHERN school teacher was spending her vacation down South, and, as she was passing a tumble-down shanty, she heard an old negress call to a child: "Come heah, yo' Exy! Exy!" "That seems like a very peculiar name for a child, Auntie," said the teacher. "Dat ain't her full name," answered the mother with pride; "da't jest de pet name I calls her fer short. It's a mighty grand name wot dat chile has got. I picked it out'n a medicine book. Dat chile's full name am 'Eczema.'"—New Orleans Picayune.

A MERCHANT'S carnival was being held in a country village and little girls represented the various shops. One, dressed in a white muslin frock, gayly strung with garlands of bon-bons, advertised the local candy store. When the festival began she fairly glistened with attractive confectionery, but as time wore on her decorations grew less. Finally, at the end of the last act, not a bon-bon was to be seen. "Why, Dora!" cried the stage manager, "where in the world are all your decorations? Have you lost them?" "Oh, no," replied Dora: "They're perfectly safe. I'm wearing them on the inside."—Toronto Sun.

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The One-Man Loader

With this Loader, one man can put on a good, even load of hay, in practically the same time that it would take two men with other loaders.

The Flying Dutchman loads hay, clover or alfalfa without "chewing it up" or threshing out the seed.

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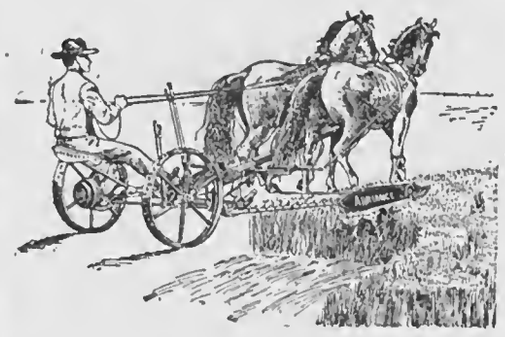

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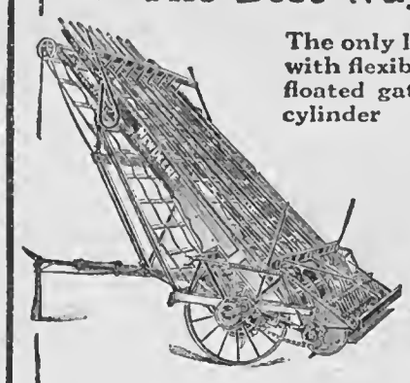

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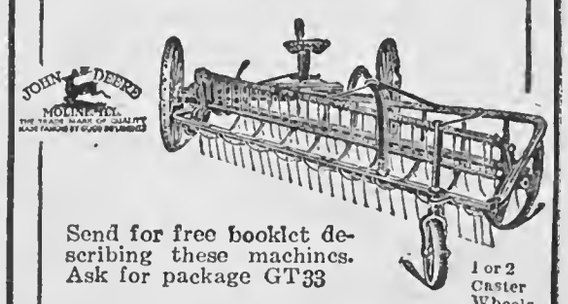

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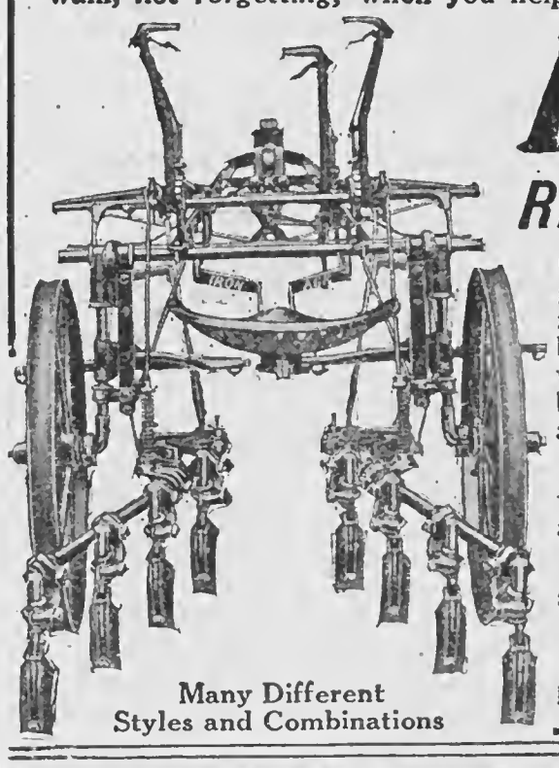

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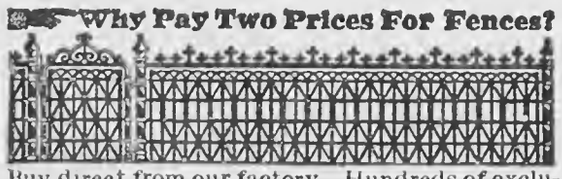

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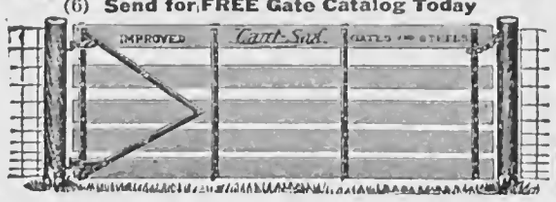

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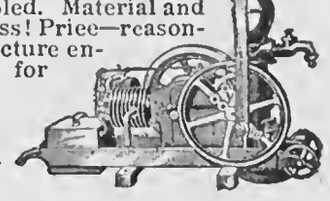

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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A TREATMENT FOR WHITE DIARRHŒA.

"Commercial Starter" for First Feeding.

IN February, 1913, I took charge of the poultry department of Broad Brook Farm, and for the first three months was accustoming myself to the work of a new position. There were about 2,000 pullets for egg production only; and 500 yearlings, the pick from the previous year's 2,000 birds, used as breeders. About May 1st I took personal charge of the young chicks and incubators and found them badly infected with bacillary white diarrhœa. The mortality previously had been very high, which I supposed was largely due to this trouble. The chicks were dying in such large numbers, it was questionable whether we would be able to fill our laying houses in the Fall. I was informed there had been white diarrhœa in the plant the year before. After a talk with the superintendent, he wrote to three of the leading experiment stations on poultry. They advised having a State expert on white diarrhœa come down and go over the plant. We requested him to come down and advise us what it were best to do.

EXPERT ADVICE.—He arrived about May 6th, and after looking over the baby chicks, and making a bacteriological examination of them and some hens, said the plant was badly infected with bacillary white diarrhœa (Bacillus pullorum), and that there was no cure. The State Expert advised us that the only way to get the plant free from white diarrhœa was to have a blood agglutination test of all breeding stock, use eggs for breeding that were from hens that proved free of the disease, or sell all the stock and make a new start next season with eggs from a plant known to be free from the trouble. While he said there was no cure, he advised us to use sulphocarbolate compound with mercury, sulphocarbolate 30 grains, mercuric one grain, and so try to reduce the high mortality and enable us to raise the 2,000 pullets. I state this to emphasize the seriousness of the trouble.

THE BABY CHICK AND THE BABY CHICKENER. FIG. 317.

METHOD OF TREATMENT.—The method used was to make a stock solution, use it in the drinking water and in the wet mash, and squirt a pen dropper full down each chick's throat as it was taken from the incubator. We tried this medicine on a number of hatches, and found very little benefit from its use. Here, and where I had charge of poultry before, I always gave the baby chicks all the sour skimmed milk they would drink, keeping it always before them in open pans, also fresh water with permanganate of potassium in it, in fountains. As sour skimmed milk has always been a great help in raising baby chicks, on account of its anti-putrefactive action in the intestines, I decided to use sour skimmed milk, or still better, commercial starter (6% to 7% lactic acid), on account of its higher percentage of lactic acid, in comparison with the medicine.

PREPARING SOUR MILK.—Commercial starter is made by adding a good lactic ferment (which can be obtained from any dairy supply house) to a small quantity of sterilized skimmed or whole milk that has been cooled to a temperature of 85° F. after sterilizing, and let stand in a warm room (70° F.) until it has curdled; this takes from 20 to 40 hours. As soon as it curdled it should be cooled down to 50° F. or lower; this prevents any further growth of

germs. The commercial starter should not be allowed to get over-ripe, as the germs are most numerous and most active in the starter about the time it curdles. Everything that comes in contact with it must be sterilized before using. A small package, costing 75 cents, is large enough to inoculate two quarts of sterilized milk. After the first inoculation with lactic ferment, a small quantity of the commercial starter is saved to inoculate the next two quarts or more. If great care and cleanliness is observed it is only necessary to buy lactic ferment for a few inoculations. I have used a good clean buttermilk and sour skim-milk with very near as good results (of course they should not be sterilized, as it would kill the lactic acid bacteria), but prefer commercial starter, as it contains a higher percentage of lactic acid and is a cleaner sour.

USING THE SOUR MILK.—The method I used was as follows: As soon as the baby chicks are dry in the incubator, about 24 hours earlier than I would otherwise move them to the brooder, I take them out and give each chick a pen dropper full of commercial starter down its throat. By taking the chicks out as soon as they are dry, and by keeping the light excluded from the incubator compartment during hatching (I use a dark curtain for this), the chicks have very little chance to eat any droppings or pieces of eggshell, and to a certain extent the spread of the infection is prevented. As soon as I started to use the commercial starter the high mortality stopped, and we were able to raise 60 to 70 per cent of chicks hatched. To give the medicine and commercial starter a fair test I took alternating incubator compartments of chicks, giving to one the medicine, the second, commercial starter, and the third, nothing. In each test the mortality was very high in chicks that were given nothing. In one case 100 per cent, or all, died. The chicks receiving medicine did a very little better than those that were given nothing. Of the chicks given commercial starter, I was able to raise 60 to 70 per cent. In September, 1913, we put 1,650 strong, vigorous pullets in the laying houses and sold over 200.

METHOD OF FEEDING.—A few hours after the baby chicks are in the brooder they are given fresh water with permanganate of potassium in it, and this is always before them. As soon as they learn to drink well, sour skimmed milk is always before them in open pans. This is not given for about two days, as the chicks wallow in it badly and then get chilled. No food is given for 36 hours after they are in the brooder. First two days: Pin-head oatmeal mixed with 15 per cent. fine sifted meat scrap, grit, shell and charcoal, is fed five times a day in low pans, and it is left before the chicks about 10 minutes at each feeding. For the next two days to two weeks fine grains are fed in the litter three times a day, dry mash twice a day in low troughs with screens over them. These are left before chicks 15 minutes in the morning, 30 minutes in the afternoon. Two to four weeks, grain the same as above, dry mash before chicks 30 minutes in the morning and all afternoon. As the commercial starter and sour skim-milk seemed to overcome the disease, we decided to breed our 1914 pullets from our own stock without any blood agglutination test or bringing in new blood. The stock here had been selected for over eight years.

SELECTED STOCK.—This year we have 750 yearling breeders, the pick of last year's laying stock. They will average over four pounds each and are all S. C. White Leghorns. For March their egg production was over 48 per cent; for April 62 per cent; for this month to date it is over 60 per cent. We mated these yearlings with our own cockerels. The cockerels were put with the hens when they were taken off the range in October, 1913. All breeding stock had sour skim-milk to drink once a day for the months of January and February. The milk was given in low pans. This year every chick that is hatched is given a pen dropper full of commercial starter down its throat as soon as it is dry, and has sour skim-milk always before it as soon as it learns to drink without wallowing in it. The feeding, care, etc., are the same as given during 1913.

IMPROVED CONDITIONS.—Our first hatch this year came off February 22. To date, May 6th, we have hatched 4,552 chicks, and the total loss has been 420 chicks, or 9 per cent. There has been no sign of white diarrhœa in any of the chicks that died or are living. All the chicks have grown fast and are strong. Some of the cockerels weighed 1½ pounds at seven weeks, and were crowing. Of course for years sour skim-milk has been fed by many others to baby chicks as soon as they would drink it, but to check or prevent bacillary white diarrhœa I believe it is essential that it be given at the very earliest possible moment after the chicks are hatched. That is as soon as it is safe to remove them from the incubator, so that the lactic acid may prevent or destroy the germs as soon as possible. My method of giving so large a dose and so early in the life of the chick, is to fill as far as possible the intestinal tract with lactic acid. I believe that the one dose given at this time does more good as a preventive and cure than all the sour skimmed milk or other treatment given afterward. I think this is emphasized by the seriousness of the outbreak and high mortality last year before I used this method; and the very low mortality this year and last year after using it.

New York. EDWARD S. PARSONS.

WHAT WOULD YOU DO?

A Chicken Man's Honor.

I SHOULD very much like to have the readers of THE R. N.-Y. express their opinions as to what is the right, just and fair thing to do when one has sent eggs for hatching to an unknown party several hundred miles away, who reports that "none of the eggs hatched: they were all infertile." Suppose that in your own yard eggs from the same pen have tested—after a week's incubation under hens—only two clear eggs out of 43 under the hens, and on the eighteenth day, after taking out the eggs with dead germs, and some eggs had been broken in the nests; there were left 34 eggs with well-developed chicks in, that give every indication of hatching. Such being your experience in your own yard, it becomes very difficult to believe that the dozen sent away were "all infertile." But no matter what you *think*, the question is, what ought you to do? Should you take the buyer's word without question and send him a duplicate of his order without charge, or offer him another lot at half price?

I should like to have a consensus of opinion from both the buyer's and the seller's point of view, as to what really is the honest, just thing to do, and fair to both parties under such circumstances. The seller has used every possible care to have these eggs fertile, has turned them every other day, has packed them so that when received none is cracked or broken, has carefully kept them in a temperature from 50 to 60 degrees, and delivered them in good condition to the express company. Hasn't he done all that his part of the contract calls for? After they have passed out of his control, ought he still to be responsible? Or, is it right that his responsibility should continue until the eggs are actually in the possession of the buyer? Should his responsibility *end* when the eggs reach the buyer? Or must he continue to take all the risks until the chicks are actually hatched out? From the buyer's point of view he has paid out his good money to get, *not eggs* but some chicks; but the getting of chicks may be frustrated in many ways. It is only fair to the seller that his eggs should be tested after a week's incubation and the result at once reported to him; that is, considering his responsibility does not end until after a week's incubation. If no such report is made, and at the end of the hatch he is told that "the eggs did not hatch; all were infertile," is he then in honor bound to replace the eggs without charge? I would like the opinion of R. N.-Y. readers on this question.

GEO. A. COSGROVE.

SHORT COVER CROPPING; GRASS SEEDING

WILL it pay to sow some cover crop in corn at the last cultivation of corn, when same would have to be plowed up as soon as the weather permits after the first of June to get the land ready for oats? The land that I cultivate is comparatively level. On account of handling a fruit crop, it is impossible for me to do any Fall seeding. I am some distance from the railroad and it takes all of my motive power to deliver the apples to the station. I note that you advise against the seeding of grass with oats. I would much prefer to seed the grass in the Fall, but for reasons stated above it is impossible for me to seed grass except in the Spring. I have obtained remarkable results from seeding about 1¼ bushels of oats with one gallon of Timothy and one gallon of clover per acre, using 400 pounds of basic slag per acre. The oats make from 15 to 25 bushels per acre, governed largely by the season. F. D. W.

Virginia.

R. N.-Y.—Yes, we would sow a cover crop even though it had only 60 days to grow. Even in that time rye or turnips or Crimson clover will more than pay for the labor and seed. The cover crop serves a double purpose. It occupies the ground during Fall and Winter, which is the season when most of the valuable nitrates are lost from the soil. We have often told how these nitrates are formed most rapidly during late Summer and early Fall. When the soil is occupied by vigorous young crops most of these valuable nitrates are saved, but when the soil is left bare there is great loss from leaching. Thus the cover crops come in at just the right time to save this loss, for in the South, particularly, there is great loss from the open, unfrozen soil. By all means sow cover crops. THE R. N.-Y. does not lay down any cast-iron rules about farming. With us and under our own conditions Fall seeding to grass gives best results. We can readily see that a combination of other conditions might make seeding with oats more economical. In that case we should certainly follow the plan. It is evidence of good and intelligent farming when men break away, if need be, from standard rules and use their brains to think out the best modification to suit their needs. We have had evidence of this in studying this "Clark method" of seeding to grass. Many farmers found themselves utterly unable to carry out all the details of this system, yet by modifying it somewhat they obtained far better grass than ever before.

RAW PHOSPHATE OR ACID PHOSPHATE.

CONCERNING the discussion in recent issues of THE R. N.-Y., respecting the treatment of manure with gypsum, floats and acid phosphate, permit me to call attention to the experiments at the Ohio Experiment Station, which have now been in progress for 17 years, and the latest summary of which is published in Circular No. 144. Taking the summary for the entire period, as given in Table XIX, it will be seen that the net gain from the use of floats has been so much greater than that from gypsum that *it would have been cheaper to use floats at more than double the price actually paid for it than to use gypsum had it cost nothing.*

As between floats and acid phosphate, the table shows nearly the same relative differences in effect. That is, it would have been cheaper to use acid phosphate at a 50-per cent greater cost than to have used floats as a gift. The only effect that can be certainly ascribed to gypsum is the arrest of ammonia, and acid phosphate is more effective than gypsum in this respect (instead of liberating ammonia, as one of your correspondents states) and it is also the most effective carrier of phosphorus in use as a fertilizer.

But this table does not tell the whole story: Referring to Table XVIII, it will be seen that, whereas all the manures have produced greater increase in yield during the later years of the test than during the first nine years, the manures re-enforced with acid phosphate are the only ones which have caused a greater rate of increase than that produced by the untreated manures. This is exactly contrary to what was expected when the experiment was planned. The floats, or raw phosphate, carries approximately twice as much phosphorus as the acid phosphate, and it was expected that this would gradually become available in the soil and that in consequence the rate of gain from the floats-treated manure would show greater increase than that from the manure treated with acid phosphate.

While the floats has not been as effective a carrier of phosphorus as acid phosphate, there can be no doubt that it is giving up some phosphorus to the crop. In the average, the 320 pounds of floats used in the manure has added $8.36 per acre to the value of the crop, whereas in another experiment in which the same quantity of floats has been used alone in a rotation of corn, oats and clover for nine years, it has produced but $2.60 in value of increase. In considering these results it must be borne in mind that the experiments have been made on a soil hungry for both phosphorus and nitrogen, and this nitrogen is probably one reason for the superior effectiveness of the acid phosphate.

Ohio Exp. Station. CHAS. E. THORNE.

MOST reports tell of a shrinkage in weight of grain in storage. In Utah, a very dry country, wheat gained from two to four per cent. in weight. The grain weighed less at thrashing time than at any other.

THE Egyptian onion crop is only about half that of last year, yet the demand for this shortened product is good and prices are excellent. A large share of this crop is shipped to America through Liverpool, England. Here seems to be a case where one blade of grass brought the farmers more than two blades.

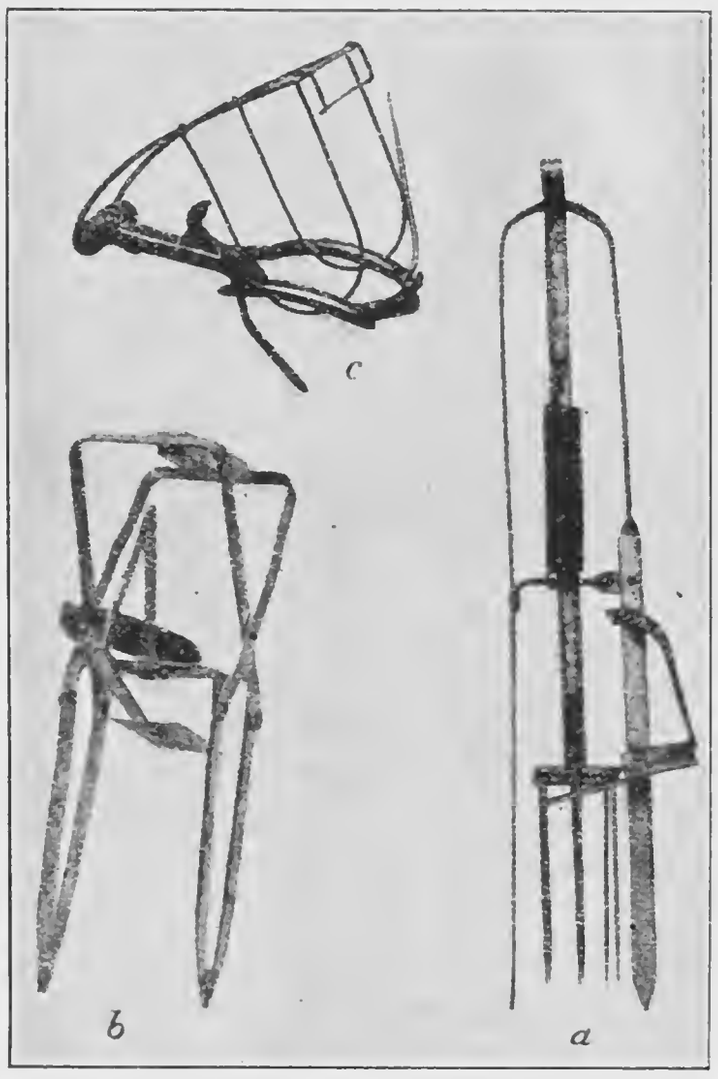
ALL sorts of expositions are being held. A new one will open next April in Milan, Italy. This will be an exposition of stone. It will show the development of marble, granite and stone working. There are many of us who could supply several miles of stone wall of very high quality to such an exposition.

THE COMMON MOLE.

A Subterranean Invader in the Lawn.

WE never had so many questions about the common mole, and how to destroy it, as are coming this year. The Department of Agriculture at Washington has issued Farmers' Bulletin 583. This is from the Biological Survey, and gives a very good account of the mole and its habits. Most of our readers are familiar with the work of this little animal, having seen his ridges or runways on the lawn, through the garden, or in the field. The mole is a great nuisance on the lawn, making his way just below the surface, and leaving a ridge along the ground. Hundreds of people have tried to kill him in ordinary ways and failed. The mole eats little if any vegetable food. Now and then seeds or other vegetable matter may be found in his stomach, but the great bulk of his food appears to be earthworms and white grubs, or ants and cutworms. Moles have been captured alive, and kept for a time, to observe their feeding habits. They were found to eat ravenously of beefsteak, bird flesh, fish, or almost anything in the way of fresh meat. A very few eat green corn on the cob, but most of them starved to death when supplied with potatoes, sweet potatoes, or ordinary vegetables.

Some of our people are sure that the moles destroy vegetables, as they claim to find their evidence of this in the runways. They must remember that other animals, like mice, also use these runways at times, so that the mole gets the discredit of helping himself in the garden. As a matter of fact, except for the damage it does in raising the ridge along the lawn, the mole ranks with the skunk as a destroyer of white grubs and injurious insects. If he would keep out of lawns, parks, cemeteries, or flower beds, the mole instead of being a pest would be one of the most useful little animals we could have on the farm, and yet the nuisance he creates by digging along our lawns and gardens makes it necessary for us to put him out of business. The only successful way of doing this is to trap him. Fig. 318, taken from the Farmers' Bulletin, shows three types of these traps. The form shown at A has been very satisfactory with us. It work with a powerful spring, and when set the sharp harpoons are pulled up and set with a spring. Then the trap is driven into the ground right over the runway. The mole, working along through his burrow, snaps the trap, the harpoons plunge down and pierce him in the ground. We have found no better way to catch the mole than by using one of these traps.



TYPES OF MOLE TRAPS: *a*, HARPOON TYPE; *b*, SCISSOR-JAW TYPE; *c*, CHOKER TYPE. FIG. 318.

MAKING AND SAVING GOOD HAY.

THE time to cut clover for hay is when the plant is in full bloom, or, in other words, when one-third of the heads have turned brown. At this stage it is about 80 per cent water, and it cannot be stored safely if it contains over 25 per cent, so the problem of curing clover hay is simply that of evaporating the difference between 80 per cent of water and about 25 per cent, or reducing the water content to 25 per cent or less. In order to do this quickly, or in from 24 to 36 hours, it must be done through the leaves. As soon as the stem is separated from the stubble the supply from below ceases, while the evaporation from the leaf continues as long as it has life in it. In order to secure this quick evaporation air must have free access to the leaves. Hence the problem of curing clover is to keep it in as loose form as possible.

CURING CLOVER.—When the crop is heavy and the sun hot the leaf structure of the upper part of the swath is often killed, as is shown by the leaves becoming brown or black, while those in the under part of the swath are scarcely changed in color. Hence the value of the tedder in lifting the swath and allowing free access of the air. Unless this is done the clover is sunburned, and if the leaf structure is killed before the sap is out of the stalk it is impossible to make good hay, nor can the curing be done in any reasonable time. It is impossible to cure clover hay during damp, muggy weather. It is, however, an easy matter to cure it in clear, sunshiny weather with a fresh north or northwest wind. In fact it is easy to cure clover hay if the atmosphere is very dry with sunshine and any kind of a breeze. The problem therefore is to keep the clover so loose that it is quickly converted into hay by the evaporation of the moisture through the leaf, and before the leaf structure is destroyed by the hot sun. With good weather clover in the condition above described can be cut one evening, tedded or put in small windrows before dinner the following day, and hauled in during the afternoon. Where one has only a few acres of clover probably the best method of handling is to cut and allow it to wilt, put it in cocks, then cover it with hay caps and let it go through the sweating process in cock. This is not practical when there is a large acreage, however.

AN ERROR IN PRACTICE.—A good many farmers when rain threatens make the mistake of putting their hay in windrows. It should be remembered that clover will suffer less injury from rain even when dry lying in the swath than it will if put in windrows, or even in small, loosely-built cocks without covering. I have seen many farmers hasten when rain threatened to put their hay in cocks, only to have it wet through to the bottom, and I have never seen any good hay come out of these soaked bunches after they were shaken out.

STORING THE HAY. FIG. 319.

THE HAY LOADER SAVES LABOR. FIG. 320.

HANDLING TIMOTHY.—Timothy is at the best stage for cutting when it is in full bloom. If one has a large amount of grass of the same grade to harvest, a beginning should be made a little before the best stage for cutting, so as not to lose from being overripe. If the day is bright and breezy I proceed as follows: I start the mowing machine about nine o'clock in the morning, and stop the same as soon as I think there is sufficient grass cut to handle during the day. If, however, I have suspicion of foul weather I stop the machine before I think there is half enough down, as it is better to secure one or two loads of hay thoroughly well made than to have twice the quantity partly spoiled with a rain shower. I start the tedder about one hour after starting the mower. If the Timothy is very heavy it is given a second tedding, going in the opposite direction. Then about noon I start the rake, and about an hour later commence hauling, and clean up the last swath before seven o'clock in the afternoon. After the hay is in the barn the latter is tightly closed at night. There is no danger of heating or molding in the mow if the Timothy is cut when the bloom is on the head, and mowed away without any rain or dew on it. The hay will come out in the Winter bright green in color, and it will be worth almost as much to feed and the stock will relish it almost as well as the grass it was made from. There is a good deal in arranging machinery to work together. A tedder works better if it takes just two swaths of the mower, and a rake is more satisfactory when it is wide enough to gather in three swaths. This of course requires two horses, but it pays, because hay must be handled quickly.

HARVESTING ALFALFA.—The proper time to cut Alfalfa is when it is from one-fourth to one-half in bloom, provided there is good weather for curing it. When the usual time for harvesting the crop approaches it begins to prepare for it as though it were a foreseen event by throwing out buds near the root, thus forming a crown. If the Alfalfa is cut before it has prepared itself by throwing out these buds or new shoots from the root it will not do anything in the way of growing until it has time to start these shoots. That may be a matter of a week or 10 days. In the meanwhile weeds will fight for the possession of the land, and therefore if the Alfalfa is cut too early there will inevitably be a short crop following. On the other hand, if it is let go too late the plant will throw its strength to the shoots, and the main stalk will begin to crinkle down. It will go on and produce seed, but as a seed crop detracts very much from the next cutting.

CURING THE CROP.—There are two ways of handling this crop. One is to cut it at the time specified above, allow it to wilt, put it in cock, then cover with a cap and let it stand for a few days. Then on a clear day remove the cap, open up the cock, air it and sun it, and then put it in the mow. The other method is to cut it in the evening or early in the morning, after the dew has dried away, and put it in small windrows. Then when by taking a wisp of it and twisting it hard no moisture can be seen on the outside it is ready to be put in the barn. The first is the safest way so far as the present crop is concerned, but the objection is that if the cocks stand on the ground more than a day or two the Alfalfa underneath will be killed, and the field will be badly spotted. Alfalfa is no more difficult to cure than clover, provided there is the same amount of heat, wind and sunshine. In fact, it is scarcely as difficult. Whichever method is adopted the great object in curing Alfalfa is to preserve the leaves, and it should not be allowed to stand until after they have begun to fall, which they will do shortly after the new shoots from the root are an inch or so in length. The greater part of the nutriment in Alfalfa is contained in the leaves. These are worth more than their weight in bran. Caring for hay to avoid as much waste of its feeding value as possible is important. A great amount of hay is stacked out of doors and allowed to take all kinds of weather, causing a continuous waste.

Illinois. H. C. W.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Peach Leaf-curl.

I HAVE a peach orchard I did not spray with lime-sulphur which has a fair crop of fruit and a rather bad case of leaf-curl. Can you tell me of any spray that would have a tendency to check it? The trees are about six years old, varieties Elberta, Salway, Fox Seedlings, Carman, Belle of Georgia and Crawford's Late. M. G. S.
Smithsburg, Ind.

Unfortunately for M. G. S. there is no method of checking an attack of peach leaf-curl appreciably within one season if it once gets a good start. He can, indeed, spray immediately, and again in about four weeks, with S-S-50 self-boiled lime-sulphur, with about two pounds of arsenate of lead to the 50 gallons. Such treatment is good orchard practice as a preventive of brown rot and other troubles, and will exert something of a checking influence on the leaf curl, but cannot be expected to abate the attack greatly. The virulence of the attack will gradually disappear anyway as the season gets warmer, and no more serious damage need be expected until next Spring. At that time, however, if the proper preventive measures are not taken *before the buds open*, a repetition of the attack will likely occur unless the weather be unusually dry and warm at leafing-out time. The proper dormant spray to use for the control of this disease is boiled lime-sulphur diluted to 4.5 to 5 degrees Beaumé, *but this is not a safe spray to use after the trees are in leaf.*

C. A. LUDWIG.

City Boys as Farm Helpers.

AT this season we are overrun with calls from students and city men who want work on the farm. These young men expect good wages and agreeable board, but usually have no skill to offer. We have written some of our best farmers and fruit growers, asking if they want such helpers, and what such men are worth. The following letters are typical of many others. We do not tell what these farmers should do—we tell just what they say:

My experience with that class of help has been that they are good for nothing; they come out to have a good time. I have spent time and money on them, but would not take them if they would come and work for nothing and board themselves. That is about my neighbors' experience, as I was the means of getting them here. They want big wages, the best room in the house, wife and daughters to wait on them, parlor with someone to entertain them, so they can show off their white tennis and baseball suits and try to show what they think is their superiority over the country.

J. A. HEPWORTH.

The college student expects too much and is inclined to give little in return. A few farmers and fruit growers have employed such labor and "put them through," giving them the "raw" end and not caring for criticisms afterward. Some of the graduates of agricultural colleges are a "fright," a disgrace to any institution, absolutely lacking in horse sense, even candidates for higher degrees, and yet sons of farmers are required to pass up two and three years each of three foreign and "dead" languages in order to pass entrance requirements. A prominent Jersey farmer with "husky" sons, employs college men with farm experience and says "you need do no more than my sons." He grows a very large acreage of hay and gives them five to six weeks of haying. Western New York fruit growers as a class are prejudiced against inexperienced students and city labor during Summer vacation; their employment is a constant source of nerve-racking to the employer and tends to disorganize regular employees. A prominent agricultural educator recently remarked, "It is not what they (students) can earn, but how much more damage than good will be done." Agricultural college entrance requirements should include at least one year's work on an up-to-date farm. W. E. C.

CUSTOMER: "I want something for fleas." Drug Clerk: "Why don't you get a dog?"—Judge.

BOSTON MARKET REVIEW.

THE general condition of green stuff in Boston market is fair supply and reasonable prices on most goods which are heavily used by consumers. The exceptions to this general rule are onions, lettuce and apples. The onion supply is lessened through short crop in Egypt and Texas, which both usually send the main supply at this time of year to our market. Old natives bring the unusual price of nearly $5 per 100-pound bag, while the others bring about the same figure per bag, and $2.75 per crate. Potatoes hold firm under medium supply, and only light demand the last few days has kept them from taking a raise which will come at any time now, as Southern new ones will be late in reaching our market in any quantity, and reports do not promise a large crop from most sections. Good firm old turnips are high, bringing $3 per bag, and White Eggs $1.50 and better per bushel. Old beets, if good, $2 per box; carrots about the same. New bunch beets and carrots $1.50 and $1.00 per dozen bunches. Southern Summer squash $1.50 to $2.00 per crate. Cucumbers $5 per box for No. 1, others $4, $5 and $2.50. Southern cabbage $2.50 per crate; California celery $2 per dozen. Southern beans $2 to $2.75 per basket for green and wax. Spinach about $1.50 per barrel. Southern kale $1 per barrel. Native Asparagus just coming in, and sells at $4 and $4.50 per box; California about $2 per dozen, while the supply from Pennsylvania and Jersey sells at $2 to $3.

Native apples reach $8 per barrel for best Baldwin, with Russets at about $5; box fruit $2 to $3. Western box fruit $3.50 to $4 for Delicious and Winesap, others at $2.50 are quickly taken. Grapefruit $3 and $4 per box, Cuban about $3; lemons $2.50 and $3; oranges have reached a high figure, most of them bring $3.50 to $4.50 per box. Bananas fairly plenty at $3.25 for best large fancy fruit, good bunches at $2 to $2.75; small bunches $1.25 and $1.50 for yellow, while reds bring about $1 per bunch more on each grade. Plenty of pineapple make prices reasonable, and more are shortly expected; $2 and $3 per crate is the figure. Strawberries quite plenty and bring 10 to 20 cents per box. These will rule low, as native will be with us in a week or two baring mishaps.

Egg receipts are moderate, which might be applied to the demand also, and probably 50 per cent. are being stored for future use. Prices range from 26 and 27 for fancy fresh nearby, while good fresh medium stock goes at 24 and 25; good quality Western stock also goes at 24 to 25, others around 23 for most sales. Live poultry in fair demand with supply about right to fill orders. Hens and chickens bring up to 17½ per pound; roosters about 12, with good fat ducks going at 18. Dressed stock 17 to 22 for fowls; ducks 20 to 21.

Butter is slowly rising in price for very best quality, which is short, and sells up to 30; good quality also sells well at 27 and 28 by tub; poorer grades are still plenty, and prices are about from 24 to 26; dealers are anxious to sell these grades whenever possible. Cheese is moving in small lots at moderate prices. New cheese from grass not on the market much; prices on good common cheese average 14 to 15. Some fancy goes at 18.

Milch cows in small demand and prices easier; average cows brought around $60, some milkers at $50, a few at $40. Young bulls $25. Horse trade good on best grades of drafters, and prices satisfactory to seller at $350 up to $475 each, lighter grades sell more slowly, but demand is fair on these, and prices range from $150 to $300.

Hay market a little off in prices, as supply more than equals demand this Spring by a slight margin, and prospects are now good for a large crop for this season; best $23; other grades $14 to $20. Not much drop in grain as yet, but advices are not to buy in heavy supply, as a lower level is shortly expected. Mixed feed $28 to $30 per ton; cottonseed meal about $33; gluten $29; cornmeal $1.45 to $1.50 per bag. A. E. P.

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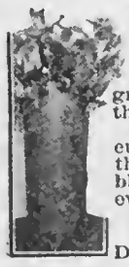
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The Home Acre.

More About Peach Borers.

ON page 717 I read the article on killing the peach borer, having had no experience in digging them out. I have a few fine trees and never noticed signs of borers until I saw the gum this Spring. On scraping with a knife I found some holes almost grown over and others with old dead sawdust in them. It looked as though the borer was not at home. Will you tell me when and how to look for the borer and take him out? F. W. T.

Bardwell, Mass.

We have known the borer to dig five inches or more under the bark, straight down the tree. The only way to make sure of him is to take a wire with a little crook at the end of it, and push it down the burrow to the end. By working it around, and pulling it out, you will generally drag out the borer, if he is there. Our own plan is to scrape off the gum; then with the sharp pointed blade of a knife slit the bark down over the burrow to the bottom. Do not cut across, but cut down, digging out the bark over the passage made by the borer. If he is at home you will find him at the bottom, often below the ground. At this season he has about done his work for the year, and could hardly do more damage. The best time to hunt for borers is in the Fall. They are then rather small, but have not done much damage, and by cutting down their passage they may be found and destroyed before they injure the tree. This cutting out plan is the best we know of. Next to it in efficiency will probably come the plan of painting or spraying the base of the tree thoroughly with a lime-sulphur wash.

HUSTLING THE PIE PLANT CROP TO MARKET. FIG. 321.

Notes from a Maryland Garden.

IT is the third week in May, and the third planting of corn for roasting ears is coming up. The first planting was made in April of the Early Norfolk Market corn. This is a great improvement on the old Adams Early, the ears being longer and the crop earlier. I usually plant this in March, but this Spring there was no corn-planting weather in March, and it was April before the seed went into the ground. The later plantings are the Country Gentleman, for though some of the extra early sweet corns are of good eating quality, like the Golden Bantam for instance, we get too little here from these to make it pay to occupy space in the garden with them. The Norfolk Market corn is of course not a sugar corn, but it is early and we get larger ears, and the quality is not at all bad. Then too, it can be planted earlier than any sugar corn, which would be apt to rot in the cool weather of early Spring. Any ears are good when we can get them by the 20th of June.

Along the wire fence at the north end of the garden I have Berger's Green pod beans. These are a great improvement on the old Dutch Caseknife bean, make nice string beans and the ripe beans are as good as navy beans, which we cannot grow well here. This would be a very fine bean to plant in a cornfield, but in the garden I cannot afford to let the cornstalks stand as bean poles, for as soon as the ears are past value for the table the stalks are pulled out, and the ground prepared for a later crop.

This cool Spring has been a wonderful season for the rhubarb, and we never had a better growth of the Linnaeus. The chard, sown thickly, is now getting quite thick along the rows. I sow this rather thickly because the young thinnings are the best of all substitutes for spinach, and we can get many messes in thinning the plants out to six inches apart, which is as close as they should stand for the full development of the leaf stalks, which we boil like asparagus later.

And the cool weather seems to have suited the asparagus too, for the stalks are of unusual size, thanks to the heavy manuring last Summer after cutting stopped. That is the time to prepare for big asparagus shoots, getting the strong growth on the roots in the Fall to make strong crowns for the Spring. Now, as soon as cutting stops, we will pile on the manure and fertilizer, and cultivate the plants clean the rest of the season, knowing that they are storing up food to make fat shoots next Spring.

The early Queen onions have all been used, and now we are using the offsets of the Yellow Potato onion for green onions. These clean off perfectly white and are now in fine shape for the table, while the main bulbs can go on to ripen. These were planted last Fall, and the soil banked over them as a Winter protection to the bulbs. This has now been pulled away to allow the bulbs to swell and form on the surface.

The dasheens are starting, and I hope to get a crop of larger corms than the dry weather last Summer allowed me to get. My crop last Summer made such small corms that I did not test their eating quality, and hope to get some next Fall that we can use on the table

In the flower line, the Dahlia seed, sown in the open border, is now up. I never start these inside early, for sown in the open ground the plants come into bloom just in the best Dahlia weather of the Fall, and as I sow some seed every Spring I have selected from time to time a collection that is hard to beat among the named sorts offered. But more of the flowers later. W. F. MASSEY.

Maryland.

Destroying Chickweed.

OUR entire farm is infested with chickweed. Even the old grass fields are showing it. Is it to be taken as a serious pest? How shall we rid farm of it? MRS. C. L. R.

Purcellville, Va.

Chickwood is becoming to be a serious pest in some parts of the country, especially in trucking sections, with such crops as strawberries and Fall-sown crops, as kale. Owing to its early maturity it does its principal damage in early Spring before ordinary crops have a chance to grow. When it occurs in hay, clover and Alfalfa fields it seldom does more than temporary damage. Alfalfa matted with it the first Spring after seeding may not have any more after that. There is no remedy for getting rid of it, other than keeping it from going to seed. Spraying with the chemicals ordinarily used for killing other seed have very little or no effect. Shading to kill it out cannot be practiced, because at the time of year when chickweed is growing the most rapidly other crops make very little or no growth.

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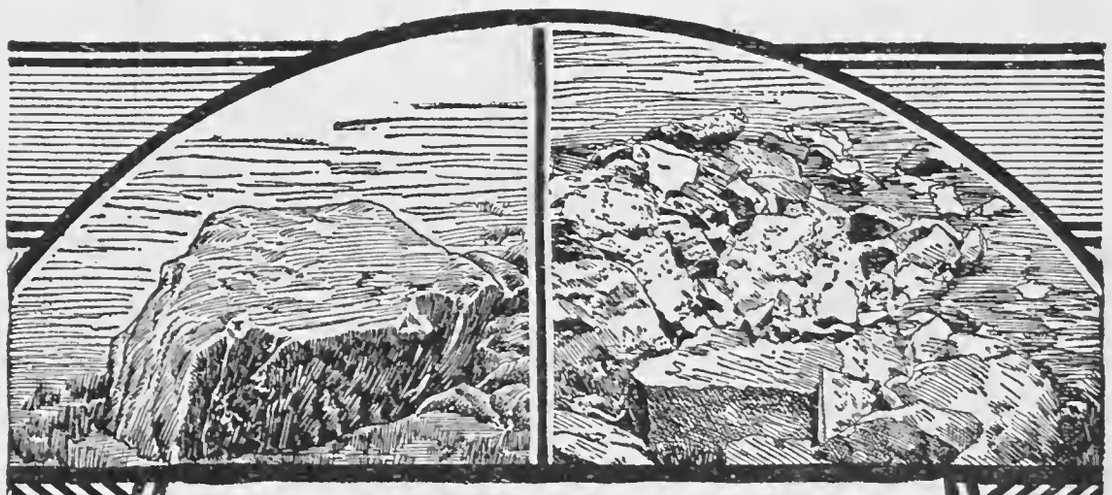

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EVENTS OF THE WEEK.

DOMESTIC.—May 20, Chas. S. Mellen, in testimony at Washington, told of the acquisition by the New Haven of the Rhode Island trolleys at a cost of between $19,000,000 and $20,000,000. These trolleys are now losing the New Haven between $300,000 and $400,000 a year, and Mr. Mellen acknowledged that the railroad had paid twice their value for them. Mr. Mellen declared that ex-Senator Nelson W. Aldrich had been active in bringing about this transaction. As the result of this testimony, light is beginning to break on the transaction in Boston and Maine stock by which John L. Billard of New Haven made $2,748,000. The evidence seems to indicate that the New Haven's holding of Boston and Maine was sold to Billard in order to evade a Massachusetts law, and was bought back as soon as this legal obstacle was removed. Billard refused to regard the transaction as a mere accommodation and kept the profit, although the minutes of the New Haven board of directors showed that strenuous efforts were made to get him to give it up.

The Federal Grand Jury, at Pittsburgh, Pa., May 21, recommended the indictment of five employees of the Carbon Steel Company on a charge of conspiring to defraud the United States in connection with steel furnished for the locks of the Panama Canal. The steel is alleged to have been of a very inferior quality, with the exception of the ends of the beams and plates, which were highly tempered, so that when the Government inspectors chipped a piece off the ends to have the steel analyzed they would secure only the highest grade metal. The steel furnished by the Carbon Steel Company is alleged to be of such a low quality as to make its use in the locks and gates unsafe. The gates and locks which contain this low grade metal are likely to collapse at any time, it is alleged.

Between $312,000,000 and $313,000,000 is the sum which will be placed opposite John D. Rockefeller's name on Cuyahoga county's personal tax duplicate at Cleveland, Ohio. Mr. Rockefeller failed to make a return May 23, as ordered, and county tax commissioners immediately began a compilation of a list of his tangible and intangible personal property.

Fire in lumber yards on the flats at Cleveland, Ohio, May 25, caused a loss estimated at $1,000,000 and destroyed a large portion of the Central viaduct, which connects the south side with the business part of the east side.

A compromise agreement was reached May 26 between the Administration and organized labor concerning the provisions in the anti-trust bill covering the rights of labor under the proposed law. The compromise forestalls a fight in the House which labor confidently expected it could win by an overwhelming majority. The compromise contemplates that the Democrats of the Judiciary Committee shall offer two amendments to the pro-labor paragraphs. These will have the support of labor adherents and Democrats generally. The amendment covers the section providing that labor, fraternal and agricultural associations formed for purposes of mutual help and not profit shall not be prevented from organizing and carrying out their legitimate objects.

MEXICO.—A general plan for the pacification of Mexico, covering several of the important points at issue, has been drawn up by the A. B. C. mediators. This plan has been agreed to by the United States and Huerta delegates. Justice Lamar said May 26 that the outlook for a satisfactory settlement is now "extremely favorable." Carranza remains, however, a stumbling block in the way of peace. The Constitutionalist leader maintains his stand for the absolute elimination of Huerta and the Cientificos. He regards mediation regarding the internal affairs of Mexico as an unwarranted meddling on the part of the South American diplomats and the United States. . . . Army and navy officials in Washington are preparing for the moving of United States troops to Mexico City when Villa enters Huerta's capital. It is feared that a reign of terror will follow the occupation of the capital by the rebels. . . . John R. Silliman, the American Vice-Consul, who was imprisoned by the Federals at Saltillo, arrived May 26 at Vera Cruz. He is still suffering from fever brought on by the hardships of his journey to Mexico City from Saltillo. . . .

FARM AND GARDEN.—Three students in the agricultural department of Columbia University have started, through the efforts of Prof. O. S. Morgan, head of the department, experimental work in agriculture on a six-acre plot in Madison, N. J., part of the Nathaniel Niles farm. If the results are satisfactory it is possible the university will establish an experimental farm on which all its agricultural students will work. Through the Summer the three young men will cultivate the ground, each as if it were his individual enterprise, save for the fact that a man who has had both practical and college experience in agricultural metho will act as adviser. Not only will they raise their own products but they will market them.

Fifteen thousand additional farmhands will be needed in Oklahoma to harvest the 1914 wheat crop, State Labor Commissioner Daugherty announced May 23. He estimates the crop at 40,000,000 bushels, the largest the State has ever produced. Harvesting will begin in the southern part of the State the first week in June, and will continue thirty days.

The Chicago *Daily Tribune* of May 16 states that the firm of Rosenberg & Lieberman, wholesale seedsmen of Milwaukee, was fined $400 recently for the fraudulent use of the mails, of which charge they were indicted last November. The firm advertised itself as specialists in dry land Montana grown Alfalfa seed, urging that this seed is grown farther north than any, and was a better drought resister than others. The firm also obtained the O. K. of the Agricultural Station of Wisconsin, and called its chief brand "The Government Brand," yet they had purchased Alfalfa seed not only from Europe, but from the section that they had cautioned their customers against, and only a small portion of their purchases came from Montana.

COMING FARMERS' MEETINGS.

Pennsylvania State Horticultural Association, Summer meeting, State College, Pa., June 17-18.

American Association of Nurserymen, Cleveland, Ohio, June 24-26.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

The Massachusetts State Board of Agriculture will hold its Annual Summer Field Meeting at the Hood Farm, Lowell, Mass., on Wednesday, June 24, 1914. Lectures and demonstrations on topics of interest to farmers are being arranged. All sessions will be free to the public.

May 20. William H. Reid and Secretary Taylor of the N. J. Horticultural Society were present at a largely attended session of the Oak Grove Grange at Pittstown to explain the workings and aims of the State Society. It was followed by an interesting discussion of fruit growing. Hunterdon County has a prospect of a good crop of fruit on the few orchards left in that section. H.
Riverton, N. J.

May 19. We have had a cold Spring, frost May 18, and the ground is just getting ready to plow, soil mostly clay, some red loam. Few have anything planted except peas and a few potatoes. Many farmers here are to plant squash for the factory, getting $8 a ton. Many also raise raspberries, and almost everyone raises poultry and ships eggs to the Boston market. The trees have not as yet leaved out, but are just started. Hay in the barn is worth $11 to $12; corn, bran, meal, and most feeds are $1.60 per 100-pound bag; oats 54. Eggs from 20 to 22 here in the market; those shipping get 25 to 27 and deduct three cents express. J. C. S.
So. Thomaston, Me.

"DID the husband of that militant suffragette who was always longing for peace ever find it?" "He has found comparative peace. He is with the army in Mexico."—Houston Post.

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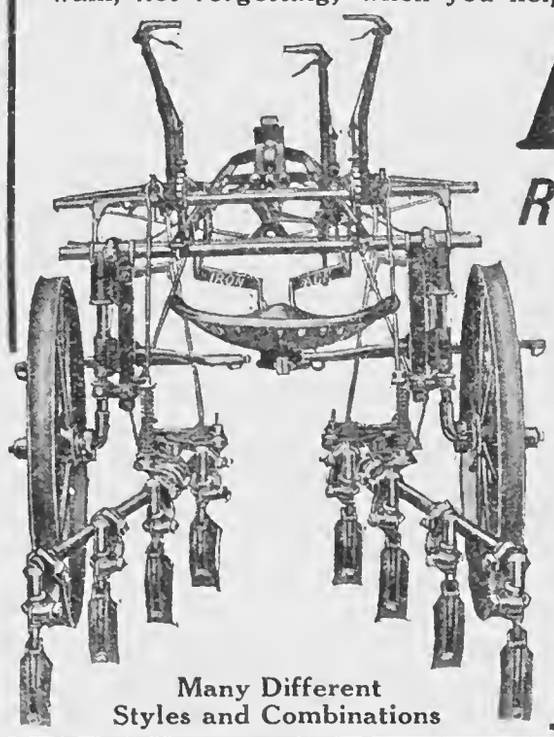

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Pea and Bean
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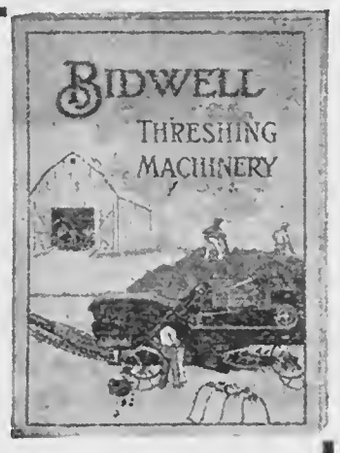

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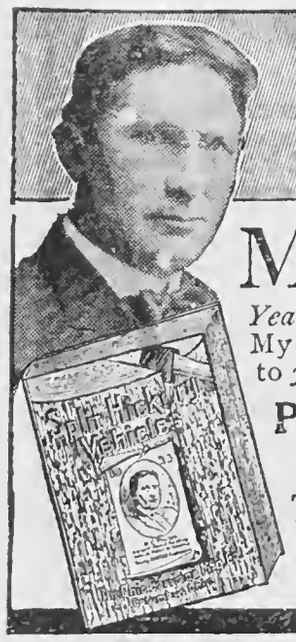

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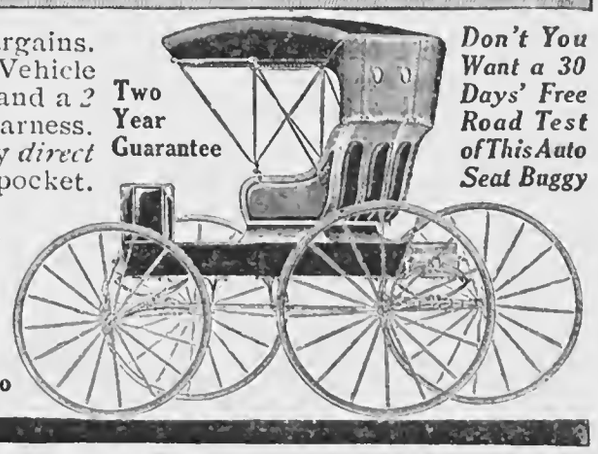

Don't You Want a 30 Days' Free Road Test of This Auto Seat Buggy

LEGAL QUESTIONS.

Proof of Claim Against Decedent.

I am running a hay press, and I baled hay for a man named T. A. When I moved it in the barn I asked him if he would pay for half of the baling, as P. M. had cut the hay on halves and he said that he would, and his daughter A., who was at home, said so too; and I baled the hay. When I got through baling, he did not have the money and said he would pay as soon as the hay was delivered. T. A. died and, after the funeral was over, I went down to collect the money and found a change. T. A.'s other daughter M., from New York, had taken possession and she said that she owned everything there, the farm and all, for the last seven years; but she had permitted her father to have the use of it as long as he lived and, when he died, everything was hers, and she would not pay one cent of my bill. Can it be collected? M. S.

New York.

This bill surely ought to be collected. If this lady owned the farm all this while, then her father acted as her undisclosed agent and she, having received the benefit of your work, cannot now say that she will not pay for it. If the daughter proves that the property is hers and will not pay the bill, you should bring an action against her to collect it; if it is not hers then you can file a claim against the estate of the father.

Septic Tank as Nuisance.

Will you inform me how close to a dwelling a septic tank can be placed according to law? The village of Eastwood is putting in a tank at the back of my place, which will spoil the sale of at least 10 building lots for me, as it is placed in a position which otherwise would have been made into a street. Will you advise me if I have any redress in the matter and what steps to take?

New York. R. M. P.

There does not appear to be any law regulating the distance from a dwelling at which a septic tank can be placed. If this septic tank will prove a nuisance, injurious to the health, you may complain to the local board of health and they must take action to remedy it, and if it is otherwise a nuisance but not injurious to health, you may take legal proceedings to have the nuisance abated; but at the present time there appears to be nothing that you can do except to use your persuasion upon the village authorities to have it located at some other place. In all these matters of improvement someone is liable to suffer inconvenience so that the majority may be benefited, but you cannot be made to suffer in health for the benefit even of a village or city. Your best plan of action would seem to take this matter up with the local board of health.

Support of Wife and Children.

I having cause to leave my wife and two children, nine days after she had me arrested charging me with desertion and non-support. I support my two children, pay $16 a month, but do not support my wife; but she keeps the two children. We had separation papers issued two years ago, which will be up August 23rd. If I call on my wife with a witness and ask her to come and live with me again, as her home is there if she will come, by doing this if she refuses to do so will I have to support her or not? At the hearing she said she did not want anything, she just wanted support for her children and she would work for her living. This statement was made in presence of three witnesses. F. W. D.

Pennsylvania.

It would appear from the reading of your letter that your wife has obtained a separation from you and that you are to pay $16 per month for the support of the two children who live with her. Whether you can ask her to come back to your home would depend upon the terms of the separation decree. If there is nothing to the contrary in the decree, or is not provided otherwise, and you offer to provide a good home for her where you will be kind to her, it is always her duty to come back to you. You must understand that you cannot use this request merely as a ruse to get rid of paying for the support of your children, but if you are in earnest and intend to treat your wife properly and support her, she should come back.

Regulation of City Markets.

A lot of market gardeners have formed an association for the purpose of getting better market facilities in Newark, N. J. The present authorities of Newark are driving us out of our present market site without providing for another suitable place for us. Now we contemplate buying our own site and establishing a farmers' wholesale market governed by farmers. Must we get a permit from the authorities of the community we locate in to establish such a market? If so can they refuse it? D. H.

New Jersey.

The regulation of public markets and the provisions for erecting new ones are governed entirely by the State laws respecting the erection of markets in cities and by the city ordinances of Newark. The State law provides that whenever in the judgment of the common council or other governing body of any city market facilities or additional facilities are or may be required for public uses the common council shall appoint commissioners to purchase such lands and erect buildings thereon to be used as a public market, and provision is made in the city ordinances for one market called Central Market. If you contemplate locating a new market in the city you will have to get the consent of the city authorities; probably of the committee on public markets. If you have had trouble with the market committee, it probably will not be an easy matter to persuade the common council that a new market is needed. And if they come to the conclusion that the market facilities at present are sufficient, they could refuse to authorize the building of a new market. If you are properly organized and can make noise enough and can get a hearing in the city newspapers, the council might deem it advisable to give you a permit to establish a new market.

Two Irishmen were washing windows on the tenth floor of a London building, and one of them lost his footing and fell to the pavement below. His frightened companion ran down the stairs and had just reached the fallen man's side as the doctor said: "I guess the poor fellow is dead." At that the injured man opened his eyes and said: "Oi'm not dead." "Keep quiet," said the other Irishman, "sure the doctor must know best."—Credit Lost.

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On Clover, Alfalfa, Flax, Vetch, Peas, Timothy, short grain, etc. A rake or tedder will knock off and waste the seed and leaves. You save all that waste by equipping your mower with the

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BUNCHER AND WINDROWER

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Deposits crop to side, out of way of mower and team on next round. Leaves crop in either loose, hollow bunches or in windrows; heads and leaves in center, stems, which hold the sap, sticking out to dry quick.

Saves the seed and leaves and half the labor. Saves making extra trips over the field with dump-rake, side-delivery rake and tedder.

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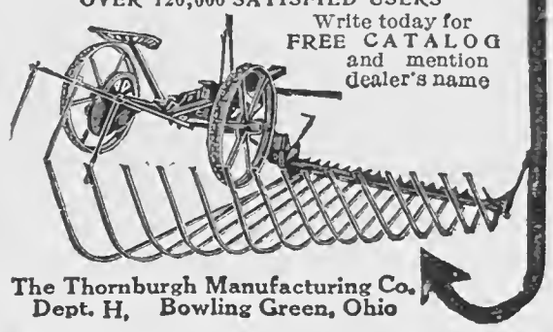

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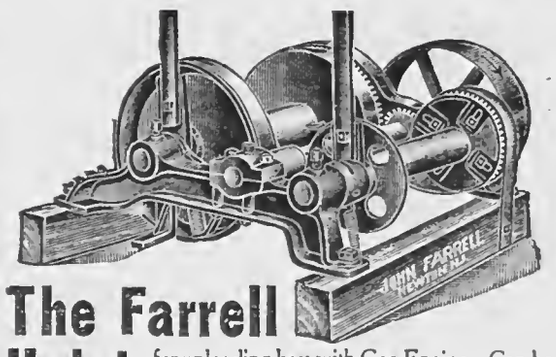

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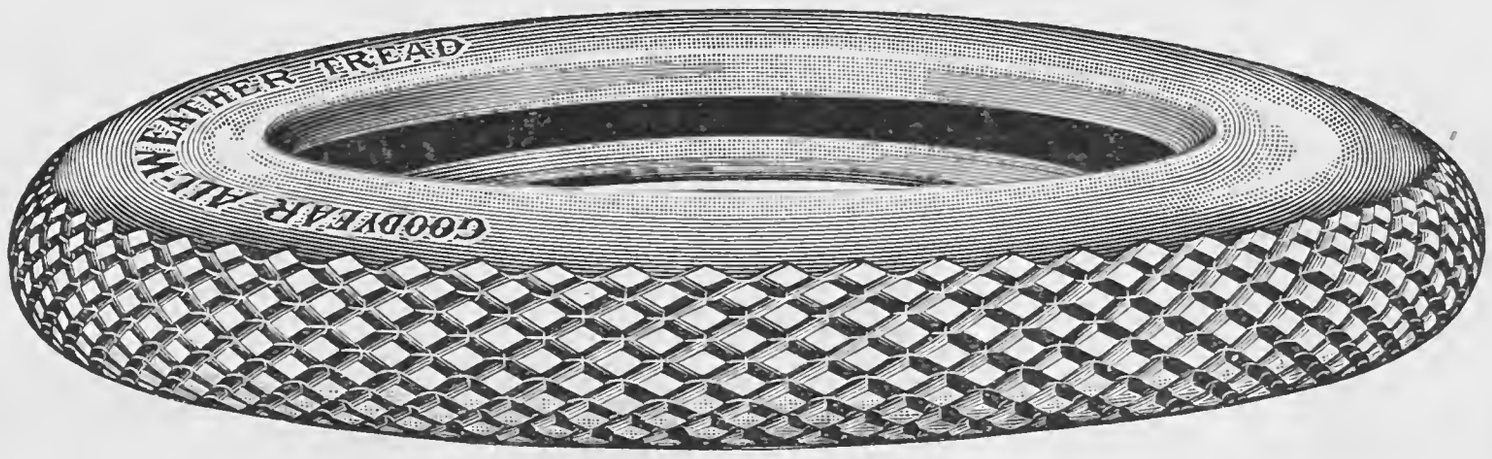

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Let men, if they will, claim a tire as good as the Goodyear No-Rim-Cut tire. But don't let men claim a better tire to charge you a higher price.

Bear in mind that Goodyear tires hold top place in Tiredom. They outsell any other. After millions of tests, men are adopting them faster than ever. Our this year's sales break every record, by 55 per cent.

And these tires offer four great features found in no other tire. Compel the men who ask higher prices to show some reason for them.

From $5 to $15 More

Sixteen makes of tires now sell above the Goodyear prices. The price per tire will often run from $5 to $15 more.

The reason lies in our mammoth output, our factory efficiency, our modest profit. It results from Goodyear popularity. Those extra prices, we can prove to you, are utterly unjust.

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Our No-Rim-Cut feature—the only feasible way to end the ruin of rim-cutting.

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Our All-Weather tread—the anti-skid which runs like a smooth tread. A tough, double-thick tread with deep, sharp, resistless grips.

No extra price buys these things, nor anything that's like them. Nor can it buy a better tire in any other way. Can you think—with our prestige—we would let any maker give you more than Goodyear gives?

If not, get Goodyear tires at Goodyear prices. Any dealer will supply them.

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(1562)

Hope Farm Notes

FARM NOTES.—We began spraying for Codling worm May 22. This is a little later than usual, yet we would willingly have waited a little longer, but there is so much of it to do and so many windy days that we began early. This year produces stronger arguments for the power sprayer. We could not begin to handle our proposition with hand-power pumps. The worm waits for no man, and the gasoline hired man beats any flesh and blood at the pump. It will be a race for us anyway to get the last of the poison on before the worms get at the apples. As usual we use three pounds of arsenate of lead and one gallon of lime-sulphur to 50 gallons of water. The lime-sulphur adds to the sticking power of the mixture and has some effect upon leaf diseases also. Some of our people complain that filling the tank is a nuisance. We have a little dam in a spring brook, thus making a small pool. The lower end of the tank filler is put in this pool and the engine pumps up the water well strained. We can fill the 250-gallon tank in less than 10 minutes, and have the spray material ready meanwhile.

The Marshall strawberries promise a great yield this year. I never saw this variety make more bloom. The soil is full of moisture and the mulch prevents evaporation, so it looks like a sure thing for the crop. We have one five-year-old bed. It will give a fair yield this season, but is so foul with grass and weeds that it would not pay to clean it up. It is an eyesore and something of a disgrace to a strawberry grower, yet we shall pick some of our finest berries out of this sorrel-shaded field. As soon as picking is over that field will be plowed and planted to celery. We have the seed started under straw. Thus far we have failed with the celery crop, but this year we try again under better conditions.

The Redheads are trying their hand at raising a few baby chicks which came to us by express. These chicks are kept over night in a "fireless brooder" or ordinary wooden box. There is litter at the bottom, and an old coat is thrown over it at night. At first this was put beside the stove at night, but when the chicks began to jump out and run over the floor the chief cook objected. On sunny days the chicks are put out on the grass in a wire-topped box with no bottom. Those little Leghorns are doing well with this rather crude treatment. The boys also have two Red hens patiently sitting on 24 eggs, which came from a flock of cross-bred hens famous for their laying qualities.

As June approaches the prospects for our fruit crop grow brighter and better. We are now sure that the peaches got past the cold weather. The trees are loaded with fruit, some of it already as large as Delaware grapes. Brown rot, "June drop" and half a dozen enemies are still ahead, but we expect to get by them with a fair crop. I understand that north of us the crop is light, and that some growers who often sell 1,000 baskets or more will have to buy this season. I think there should be a good trade in crated peaches to ship into these northern sections where there is not enough trade to warrant carload shipments. Thus far I have not tried selling for distant shipment, as it is more satisfactory to pick the ripe peach and deliver it at once. This season I want to try the experiment of picking some of the fruit while a little hard and shipping by express. It is worth trying at least to enlarge your trade territory. We are grouping most of our peach trees near the buildings. Over the hills, out of sight, many are stolen. The trees are headed so that inter-cropping may be practiced, and this pays with us. Between the younger trees we have potatoes, tomatoes or Lima beans. The bush Lima is a good crop for this purpose. We can plant three rows between two rows of peach trees, and by fertilizing well and giving good culture the trees are well tended and the beans give a good crop. Between the older trees we usually grow two rows of garden peas. This pays for the culture, and the pea vines are cut and piled around the trees shortly after July 4. Then the space between the trees is seeded to rye, buckwheat and clover. Later the trees bend down with their fruit, and the cover crop does not make much growth until Fall, when the rye and clover come on with a rush.

The apple crop will be a good one. It is still a mystery to me why we have the second heavy bloom in succession on our old trees. It was never before known on this farm. At one end of this orchard Jack has fenced off space for a dog kennel, where he handles dogs. Several of these dogs have run about here, so that the ground is entirely bare. I notice that the trees near these bare spots are loaded to the tips, while those back in the sod, while showing some bloom, are by no means as well covered. What causes this unusual blooming I cannot say. The large Baldwins, which gave us such a crop last year, are behaving themselves with great propriety, and according to the rules, for they have only a scattering bloom. The young trees in hill orchard have started a year earlier than I expected, and promise a great crop. The chances are that the apple crop throughout the country will be a big one, and that prices will be low except for superior and well-packed fruit. This is one of the seasons when the finest work at spraying, handling and packing will pay, for only fine specimens will bring high prices.

We got our potatoes in rather late, but in good shape. The potato field this year is at the back of the farm—a "loafer field," which a few years ago was in brush, White birch and cedars. These were grubbed out and the field was cut up with the disk plow. Then corn was planted, followed by a cover crop. Two years ago we planted apple trees, 20 feet apart, the fillers to be cut out later. Last year flint corn was planted, with rye and Crimson clover for a cover crop. The clover killed out, but the rye grew well and the grass came in thick. On May 18 we began plowing this field, with the rye about three feet high. A heavy chain tucked this rye under the furrow. First the plowman went around each row of trees, turning a furrow from each side to them. Then taking two alleys together, he went round and round. We found the grass sod very tough in some places, and this made us change our plans somewhat. After plowing the Cutaway came in, working first the way of the furrows and then across. This chopped up the soil without ripping out the green rye or grass. The Acme followed to cut up and smooth down the surface. If this field had been clean we should have used the planter and made a ridge up over the rows. Under the circumstances the reverse of this plan seemed best. So we scooped out furrows with the shovel plow, going in the direction of the plowing without ripping out too much rye The seed and fertilizer were dropped by hand in these furrows and covered lightly with the plow. The object was to get this seed down into the green rye, then to cover lightly, and then put on the fertilizer. Within a few days the cultivators will start working more and more of the soil into these furrows, and ripping up the grass and weeds between the rows. Later will come the weeder, but we plan to work that ground several times before the potatoes come up and thus keep the weeds down. This will be called rather rough and crude culture, but it seemed the best thing to do under our circumstances. Several inquirers have written asking about the Southern potato crop. Is it as large as usual? These men have old potatoes on hand, and do not know whether to sell at once or take the risk of holding for a rise. As a rule such a speculation is a pure gamble. Unlike wheat or corn, potatoes cannot be stored indefinitely or shipped in all weathers. It is not therefore a true case of demand and supply, and no one is ever sure of the crop unsold. From what I can learn, the South has as large a crop as usual, and shipments which would interfere with the old potatoes will soon begin. In my own case I should sell out the old stock at once at fair prices. I can see nothing in the present market to justify holding. H. W. C.

Study Your Wheat Before You Harvest It

If the stand and quality are bad you must do better. If they are good it will pay you to make them better. A better fertilizer will do it. The usual wheat fertilizers do not contain enough available

POTASH

See, too, whether your wheat is lodging. Potash stiffens the straw. If there's clover in the wheat, is the stand all you could wish? Many progressive farmers use Potash heavily on wheat followed by clover.

Study Your Wheat at Thrashing Time

If the ratio of grain to straw is too low, if the kernels are shrunken, your ground lacks Potash. Potash makes long heads well filled with plump, hardy grains.

Use a fertilizer with 6 to 8 per cent. available Potash, instead of 1 to 2, and balance the phosphoric acid of the bone or phosphate.

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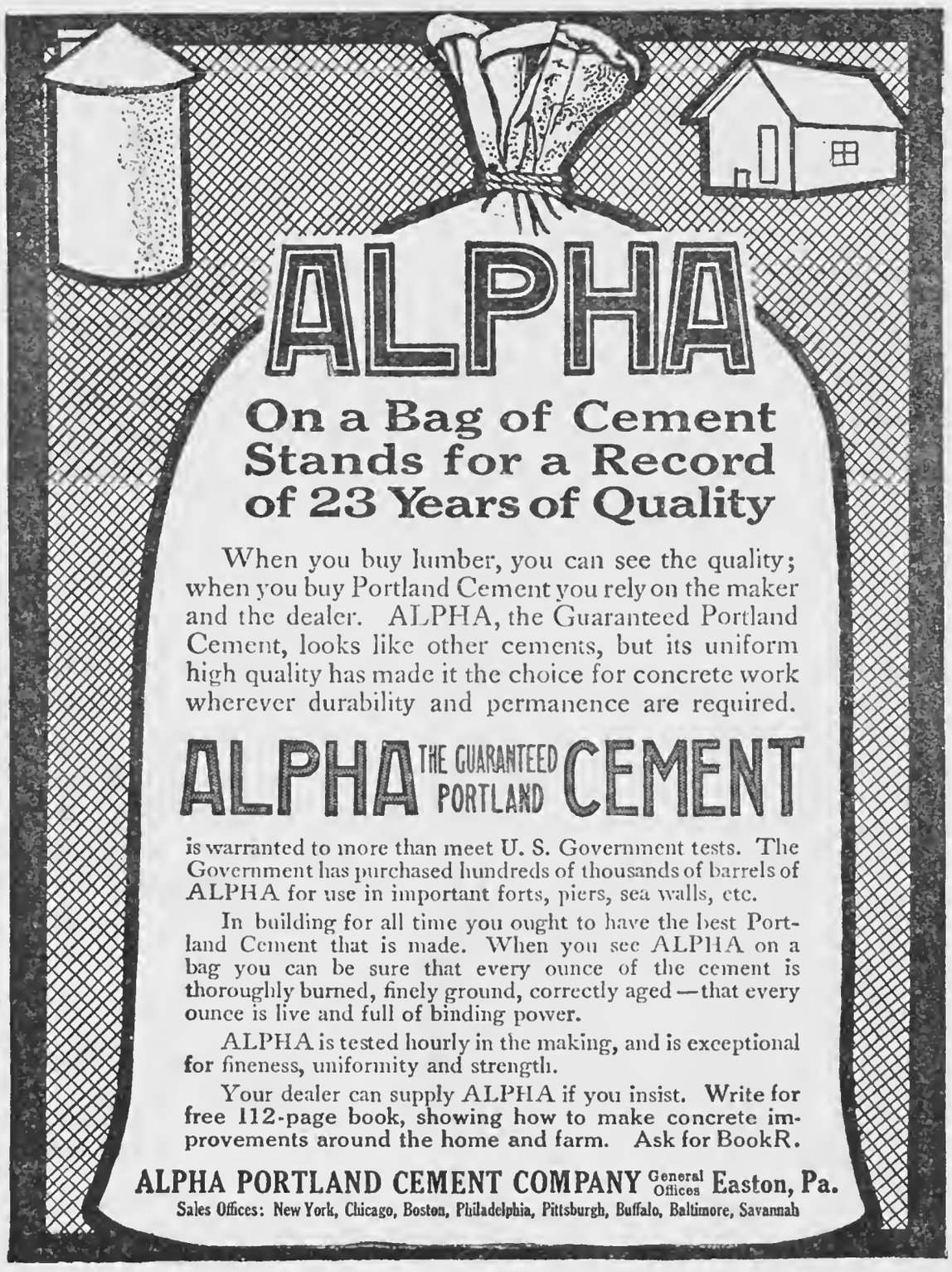

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Ruralisms

Experience With Grimes Golden.

REFERRING to article on Grimes Golden, page 382, my experience has been similar; trees not only short-lived, but preferred by mice over all other kinds. I noticed in my first orchard 30 years ago, that Grimes took this bark disease close to ground and soon died, whereas Ben Davis, right alongside remained perfectly healthy and I find Gano, that better favored sister of Ben, fully as healthy. I never saw a Gano with any disease of bark, or injury from mice even when every Grimes in orchard succumbed to one or other in spite of my feeding strychnine to mice freely. The idea is not original with me, but I am now planting Gano seed to graft with Grimes 24 inches high. When should I do this and should I transplant Gano to orchard before grafting? A. R.

Owensboro, Ky.

The fault that Grimes apple trees has of being very subject to rotting at the collar is an old one. The idea advanced that the mice prefer the bark of this variety to that of others is new to me, but it may be true. As the best way to avoid the root or collar-rot is to top or double-graft the Grimes trees on Gano or some other healthy stock, the prevention of mouse injury would also be secured if it can be done in this way. To plant Gano seeds from which to grow seedlings for use as stocks for Grimes might be well or it might not be. The use of root-grafted Gano trees would be the safer plan. It is better to do the grafting or budding while the trees are yet in the nursery than after they are planted in orchard form.

H. E. VAN DEMAN.

Chinese Cabbage.

A CABBAGE with a flavor that makes it suitable for use in slaws was introduced from China several years ago by the U. S. Department of Agriculture, and the Department now announces that it has been successfully grown in this country and that samples of its seed will be distributed on request until the present supply is exhausted. This cabbage is called Pai Ts'ai, Brassica Pekinensis. Since its introduction here several years ago it has proved of unusual promise for late Summer planting, owing to its extremely rapid growth, in the Department's gardens. The Department now recommends it for more general use. The people in China plant this cabbage thinly. It is planted in rows and then the weak plants are pulled up, or else it is scattered over a space and then transplanted when of sufficient size. The plants must be manured heavily when about eight or 10 inches high—not sooner, or they will "burn," and not later or they will not mature before cold weather. The leaves should be tied up when they are pretty well grown, so that the long, loose leaves will not fall away from the center and become frostbitten, if extra-fine close heads are desired. The cabbages need a good deal of room. Therefore, the plants should be placed not less than two feet apart in rows that have at least three feet space between. Further information on how to cultivate this cabbage, as well as seeds for the same, may be obtained by writing the Office of Foreign Seed and Plant Introduction, U. S. Department of Agriculture, Washington, D. C. We have grown this cabbage for Summer use, and find it very crisp and tender, but with us it has suffered excessively from the attack of flea-beetles.

Destroying Chickweed.

Growing Cucumbers for Profit.

THE acreage devoted to cucumber growing for pickling purposes is increasing, particularly in Northeastern Ohio, in Michigan and Wisconsin. Many growers who produce tomatoes for canning and cucumbers for pickling station salting prefer the cucumber to the tomato crop, the returns and amount of labor considered. Growers and pickle men advise that cucumbers will do well on most soils except very heavy clay. The best soil is loamy, mixed with sand and clay. There is much of this soil on the lake shore in Ohio, Pennsylvania and other States, while there is suitable land throughout Michigan and in much of Wisconsin. The best manure to use is well-rotted horse manure, particularly on heavy clay soil, while on sandy soil hog or well-rotted cow manure should be used.

There are two ways of seeding, one in hills and the other in drills. In seeding in hills, after having fitted the ground as for corn, mark it off six by three feet. Where the marks cross, hollow out and put in a shovelful of well-rotted manure. Cover this manure with about three inches of soil, if the weather is dry, and if wet, two inches. Do not plant less than a dozen seeds in a hill, and when the plants are about four inches high, thin to about three or four to the hill. Leave only the most vigorous ones and they should be well distributed in the hill.

In seeding in drills, use a shovel or stubble plow, mark out the field in trenches about six or eight inches deep. The trenches should be about the same distance apart as the rows in hilling the crop. In driving between the trenches drop a forkful of manure in each trench at intervals of about two feet, and then distribute this with a fork or potato hook. Use from four to six loads to the acre, and cover with a two-horse corn cultivator by throwing the dirt in on the manure. Then follow the furrow with an ordinary garden seed drill, and set it so it will drop the seeds about two or three inches apart. When the plants are about four inches high, they should be thinned to about 10 inches apart, leaving only the most promising ones. Some growers have used a corn planter, mixing the seeds with an ordinary well balanced fertilizer, and drilling in this way. Cultivation with an ordinary two-horse corn cultivator is practiced.

Many growers secure good results from either method of planting, but many are particularly gratified in their results from drilling. Planting is advised between the 25th of May and June 1st, although cucumbers may be planted as late as the middle of June. If the ground is very dry, and you are planting in hills, many advise soaking seed overnight, using water at temperature of about 100 degrees. The pickle companies furnish seeds at 50 cents the pound, payable out of the crop, and these varieties are the very best for the purpose. It does not pay to economize in the use of seed nor the application of manure.

In Northwestern Pennsylvania the farmers growing pickles in Southwestern Erie county, declare $100 an acre is an ordinary return from the crop, while frequently an acre yields sufficiently above this amount to pay for harvesting that acre. The largest returns from an acre are from a Michigan grower, who received over $250 from an acre, it is reported. W. J.

"To what do you attribute your longevity?" asked the reporter. "My which?" quired the oldest inhabitant. "Your longevity," repeated the reporter. "As far as I can remember, I ain't never had no such complaint."—Vancouver Saturday Sunset.

Growing wood doesn't rot Cut wood need not

Sap is the life of growing wood. The moment wood is cut the natural sap dries out of it and leaves the pores open. After that the less moisture in the wood the better. Paint made from

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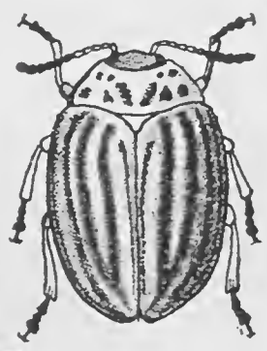

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include many sizes and styles of equipment from which to choose the one that will best insure your crop against loss. Good for tomatoes, cabbage, pickles, cantaloupe and other row crops. We have a "Spray" book that tells all about them. Also a calendar telling "When, How and What to Spray With." Don't wait until Mr. Bug arrives or you may have to adopt poor, slow and costly methods.

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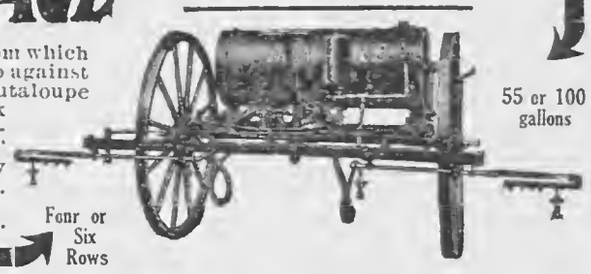

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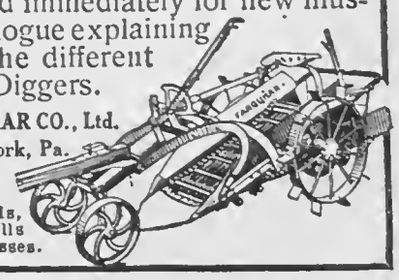

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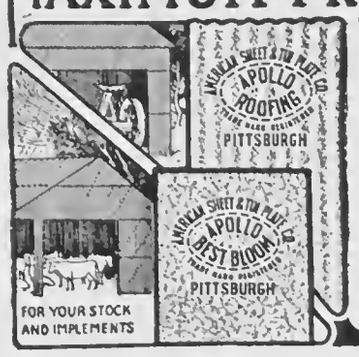

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York

HERBERT W. COLLINGWOOD, President and Editor.
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We believe that every advertisement in this paper is backed by a responsible person. But to make doubly sure we will make good any loss to paid subscribers sustained by trusting any deliberate swindler advertising in our columns, and any such swindler will be publicly exposed. We protect subscribers against rogues, but we do not guarantee to adjust trifling differences between subscribers and honest, responsible advertisers. Neither will we be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and you must have mentioned THE RURAL NEW-YORKER when writing the advertiser.

TEN WEEKS FOR 10 CENTS.

IN order to maintain the improvement and enlargements that we are now planning for THE R. N.-Y., we should have a circulation of 200,000 copies weekly. We must depend on our old friends for this increase. To make it easy for these friends to introduce the paper to other farmers who do not now take it we will send it 10 weeks for 10 cents for strictly introductory purposes. We will appreciate the interest of friends who help make up the needed increase of subscriptions.

*

THE Department of Agriculture states that the cost of producing a bushel of wheat in Saskatchewan, Canada, is 55 cents, or 62 cents to put that wheat on board the cars at country points. This cost has increased, while the selling price of wheat has fallen from 81.2 cents to 66.125 cents per bushel. This leaves a wheat farmer a margin of 4.125 cents a bushel. How much of the consumer's dollar does this Canadian wheat grower receive, and how much of the product made by that consumer can he buy with his 4.125 cents?

*

IN the last Woman and Home magazine, page 770, was the story of Mr. and Mrs. Canfield, who do custom canning for the neighbors. They put vegetables, fruits and meat into cans. Now this meat canning may open a way for a direct trade between farmers and consumers. At present the farmer with one or two beef animals to sell has no satisfactory market. The local butcher will not pay a fair price, and it will not pay to ship unless a reasonable number of animals can be sent. Therefore the single beef animal is usually sold at a loss or at no profit. If this meat can be put into good-sized cans in a cleanly way it can be handled to better advantage. There would be a demand for it in the city, and after some experimenting farmers would know just how to prepare it for the trade. Here is a chance to use the cans to obtain more of the consumer's dollar.

*

A READER at Hastings, Nebraska, sends us the local prices paid farmers for farm produce. Hogs bring $7.75, steers $6, cows $5 per cwt., and hens 12 cents per pound. Yet our friend says:

I will say that if anyone has enough money to spare to buy beefsteak or pork, either will cost 25 cents per pound, with only one profit added to the purchase price of seven and 7¾ cents for the raw material after it is cut up. As for me and my house, we go without meat except on company days, and find that we are better off, not only financially but physically.

This we figure to be 28 cents of the consumer's dollar to the farmer—with only one handler between. If we are wrong in this will some "two blades of grass" mathematician set us right? By the time that beef got to the Atlantic coast it would be worth 53 cents or more. This man should extend his meatless meals to the "company." They would be better off also. When we stated two weeks ago that the policy of the beef trust is driving the people to vegetarianism we did not suppose it would start out West—in the beef country.

*

NO doubt some one will come criticising the remarks about city and student labor on page 792. It is their privilege to do so, but so far as we can learn these notes express the opinion of most practical farmers on this subject. During our short Northern Summers time is precious—or ought to be—and every farmer knows that unskilled or playful "helpers" are only in his way. There are among these students and city men some who give good service and earn good wages. As a rule such men have little trouble in finding a job. On the other hand there are ball players and sports who imagine they can bluff some of these farmers and draw good wages while having a pleasant little outing. They make a big mistake in this, and our advice to the patronizing and conceited young man is to keep away from a successful fruit farm, for we can promise him that his conceit will be quickly dissolved in sweat. On the other hand, it might be possible for many of those young fellows, if they wanted to, to "brace up" and learn how to be mighty helpful.

*

THE SHEEP AND THE WATCHDOGS.

"The stockholders in times of prosperity are like sheep—they go on and browse. When there's trouble they all make for the same hole in the fence and injure themselves."

THAT remark is credited to Charles H. Mellen, formerly president of New York, New Haven and Hartford Railroad. Mr. Mellen was testifying before an investigating committee at Washington about the mismanagement of his railroad. Whatever we may say about Mr. Mellen as a railroad wrecker we must all admit that he exposed one great truth and one great weakness of human nature in the above statement. Not a man who reads this can, if he be honest, deny that this applies more or less directly to some of his own behavior.

All men are in a way stockholders. They may buy stock in some business enterprise—either co-operative or some form of a trust or monopoly. That of course is what Mr. Mellen meant, but in a larger way we are all stockholders in the great business of society. That is the very foundation theory of a republic—the fact that every man has some little voice in government and some definite interest in the way that government is administered. All are shareholders in the Nation, or else we no longer live in a republic. Some men may have a larger share than others—due to property rights, intelligence or responsibility, but all are shareholders in some degree. Now as the simplest illustration take a coöperative society, a building and loan association, or a small manufacturing company. Ask yourself if Mr. Mellen is right. We know dozens of such organizations where most of the members "go on and browse." A few men conduct the organization, but the average stockholder pays little attention and asks no questions so long as his dividends come regularly. When for some reason the business goes wrong these stockholders fall into a panic, and not knowing the real cause or history of it probably do just the wrong thing, and ruin the enterprise. There was a fire in a girls' school. There had been no fire drills—no discussion of what to do in an emergency. All that had been left to the teachers. The result was a wild rush for the stairs and a dozen were trampled to death. Fire broke out in a girls' college at midnight. There had been weekly fire drills and each girl had studied the situation. As a result 500 students gathered and marched out of the building singing their college songs. In one case the students had been left to browse—in the other they mastered the situation. If the smaller shareholders of the New Haven road could have received a drill corresponding to that of the college girls, J. P. Morgan would not have dared to play checkers with a great corporation, and Mr. Mellen would not now be telling about it.

Or, take the larger view of a shareholder's duty. From the election of school trustee up to the selection of a President, you and all the rest of us, have been acting more or less like sheep, rather than watchdogs. We may work hard to elect a man or a set of men—then we "go on and browse," leaving these men unwatched to do almost as they please. If a man is of our own party we justify most that he does for political reason. If he belongs to the other party we criticise him and try to tear him down, even though he honestly tries to do what we know in our heart to be right. Now and then good men of all parties unite to put some strong and true man in office. He faces public evils which are rooted in politics because they have been growing for 20 years. No man, however strong and honest, can reform these things in his short term of a few years, yet because he does not do the impossible at once we listen to the politicians and tear this man out of office as soon as we have a chance.

Tell us now if this is an honest indictment. Have we not stated in this the weakness of human nature as applied to public matters? We might go further, and say that many men like to be watchdogs provided they can watch some one else and not themselves. Such men will tell you how to conduct the Mexican war, yet permit the school in their own district to become a failure through lack of supervision. The great problem in American public life today is how to turn the sheep into faithful and fighting watchdogs. The people understand this, as is shown by the demand for primary nominations and the recall of unfaithful officials. All the laws on earth, however, will never give us what we need until plain, common men like ourselves stop being sheep and play the higher intelligent part of watchdogs—ready to give up something of our own comfort if need be for public service. There is too much truth in Mellen's remark. It is for us to change it. The great reformer is made possible by the thousands of honest men who back him at every turn. His strength comes from their watchfulness. The great rascal is made possible by the thousands of good men who let him alone to do as he pleases. His strength comes from their indifference.

*

WE like the tone of that letter from Tom Barron which is printed on the next page. There is a bluff, hearty courage and conviction in the following:

Personally, I do not care a hang if I do not sell a bird to an American breeder, for I do not wish to undo anything that the American may have done as regards putting up a standard type. My point is that type is but a small consideration, seeing that I absolutely breed with the idea of getting the highest layer.

Thus far the people who claim that these birds are cross-bred or not pure Wyandottes have absolutely failed to produce evidence that would carry conviction. They have the chance to do so, for our columns are open to them. All we want to do is to learn for the benefit of our readers how to find the most economical hen. By that we mean the hen which will give us most eggs for a dollar. We will be one of five, 10, 20 or any number to raise a fund for the purpose of having every bird in the egg-laying contests accurately scored by the "standard." Then let us compare their "scores" with their records. Or, we will contribute to a fund to buy a pen of the highest scoring White Wyandottes that can be found and enter them in the next contest!

*

A REPRESENTATIVE of the Jewish Agricultural Society has just sent us the following letter:

The first Farmers' Savings and Loan Association was organized and over $60,000 worth of shares were subscribed at Centreville, N. Y., last week. Arrangements were made to apply for a charter. I shall endeavor within a few days to send you a more complete statement of the proceedings. I take this opportunity to express to you on behalf of the farmers present at the meeting a unanimous vote of thanks for your co-operation in arranging this meeting, and in general for the interest you have shown in the Land Bank.

New York. J. W. P.

This is the first exclusively farm savings and loan association to be formed to utilize the benefits of the Land Bank. The Jewish farmer and the altruistic friends of the Jewish farmer know a good thing when they see it. They have traditions of trade and finance behind them of many centuries. They are the first farmers of the State to organize to be ready to profit by the Land Bank the day it is opened for business. Other sections, however, are getting ready and some others may have advanced thus far; but this is the first one to report. We ought to have a fair representation of farm associations as charter members of the bank. How about your section?

BREVITIES.

IF you would catch a farmer off his guard—go unawares and visit his backyard.

WHAT'S the use of a college education unless it can give a boy or girl moral and business advantage?

NOW we have a corn cob-rot discovered in Kansas. This disease spreads in storage.

THE "Bang" system of handling tuberculous cows does not mean banging them with the milking stool or the boot, but separating them from the rest of the herd.

IN Saskatoon, Western Canada, any citizen can, by paying one dollar, obtain a vacant lot to be used as a garden. The city plows and disks the ground for him.

THE fur business has got down to the point where the skins of moles have value. More than 3,000,000 moleskins were sold in England during the past three years.

IN the old days, when corn required at least 130 days to develop, we had to plant by May 20. Now with real 90-day corn we can let the cover crops grow large and wait until June 15 if we have it.

THOSE kind-hearted friends who told us that thousands of song birds are annually killed by spraying orchards. Where is their evidence? We have given them every chance to prove their statement, but proof is not forthcoming.

THE so-called tobacco wireworm does great damage to the tobacco crop and also injures corn. One suggested remedy is growing cow peas or Crimson clover one year before tobacco or corn are planted. That's good advice whether there are worms or not.

WE have a number of questions about prices to charge for custom spraying. In our own case we charge one dollar per hour for the work of a power sprayer, two horses and two men. When we furnish spraying materials we figure a profit of 20 per cent. on materials.

LAND BANK OF THE STATE OF NEW YORK

System of Mortgage Credits Explained.

PART VI.

AVOID EASY CREDIT.—An easier method of securing money on mortgage could be provided, but this system was not devised to invite the largest possible risk in order to secure the corresponding greatest possible profit to the lender. It was devised to enable an owner to sell a safe and conservative credit at the lowest possible interest rate, and on the easiest possible terms of repayment. It was not the purpose of this particular plan to make it too easy to go into a heavy mortgage debt. Every virtue may be cultivated until it becomes a sin. Instead of a blessing a mortgage may become a curse. Since the dawn of history one set of men through cunning and device have sought to profit by other men's labor. They have never found a means more subtle or more suited to their purpose than the instruments of credit. Away back where Roman history begins to escape from the mists of allegory and fable we find the astute money-lender alluring the less crafty tiller of the soil into debt. We read that the Roman law gave the creditor possession not only of the debtor himself but also of the debtor's family. The debtor may be cast into prison; but this extreme privilege was seldom resorted to, for the reason that the prisoner working in the fields to reduce his indebtedness was a better asset to his owner than a man in jail. Within writer's memory, the company store in New York State encouraged the factory operatives to exceed their wages in store credit so as to control their trade and their liberties better. Today in the Southern States the factor controls the cotton planters through advances on loans. His purpose is to keep the planters always a little in debt. If by any chance the crop is sufficient to clear up the advance loan, then the ingenuity of the factor is exercised to sell the planter some article of luxury, such as a horse or a buggy, in order to keep him in debt and in the power of the factor. So instead of making loans too tempting, this system was surrounded with safeguards to make it save and protect the borrower by putting the control into his own hands. Mortgage banks to be controlled by bankers and capitalists have been proposed to finance farm mortgages. We bid farmers to have a warning of them. If organized at all, such banks will exist for the purpose of making dividends. Provisions simple enough will appear in the mortgage, but later on they may have a serious meaning. The expense of conducting such an institution would be burdensome, and the owner would pay the expense. What may be altruistic at this time may turn out to be a "pound of flesh" to the next generation.

Other systems than the one here mentioned may, of course, be successful; and in some situations may be needed. Some earnest and sincere advocates of farm credits favor a duplicate system, and this may yet come. There is room for another system, but the plan would need to be developed with care. It would be an easy matter under the allurements of good profits to accumulate money on stocks and bonds of a mortgage bank to loan on farm mortgages involving unusual risks and high rates of interest and expensive disbursements. But there would be a day of reckoning, as there has been with some institutions in the past. A brief period of easy money would encourage speculation and risk. Losses and demoralization would be the inevitable result of an expensive and wasteful system. To avoid this some plan of local supervision and responsibility must be provided in any system adopted. Coöperative credits should, however, furnish all the cash the individual credit will warrant on a safe basis. The rules of the savings and loan associations are elastic and comprehensive. They permit considerable latitude in individual requirements; and it is believed that any case of safe requirements can be accommodated under them. People of small means will be invited to invest their money in the bonds of the Land Bank, and safety was necessarily the first consideration in making a law for its organization. If the law has any fault it is on the side of safety. Later on it may be that experience will justify removing some of the restrictions that safety seems on the start to demand. No man unworthy of credit should hope to get it through this system. It is believed that every man will be able to get the portion of credit to which he is entitled. The system is new and needs to be worked out and developed. The first step is local organization and the sooner this is effected, the sooner the benefits and conveniences will materialize.

SAVINGS AND LOAN LOCATIONS.—The following shows the location of savings and loan associations in the State by counties and post offices. The figures following the post office indicate the number of associations in that city or town. For example there are four associations in Binghamton, Broome County:

Albany—Albany, 15.
Alleghany—Alfred.
Broome—Binghamton 4, Deposit, Gowanda.
Cattaraugus—Olean, Salamanca.
Chautauqua—Jamestown 5, Dunkirk 2, Silver Creek.
Chemung—Elmira 5.
Chenango—Norwich, Oxford.
Columbia—Hudson 2, Stuyvesant Falls.
Cortland—Marathon, Cortland.
Delaware—Walton.
Dutchess—Poughkeepsie.
Erie—Buffalo 248, Springville, Tonawanda 3, West Seneca, Lancaster, Hamburg, East Aurora, Depew.
Franklin—Saranac Lake.
Fulton—Gloversville 3.
Genesee—Batavia 2.
Greene—Catskill 2.
Herkimer—Dolgeville, Frankfort, Herkimer, Ilion.
Jefferson—Carthage, Clayton, Watertown 2.
Kings—Brooklyn 49.
Lewis—Lowville.
Livingston—Dansville.
Madison—Canastota, Oneida.
Monroe—Rochester 81, Brighton, Brockport, East Rochester, Fairport, Gates, Irondequoit.
Nassau—Hempstead, Port Washington, Rockville Centre.
New York—New York 172.
Niagara—North Tonawanda, Lockport, Nigara Falls, Suspension Bridge.
Oneida—Utica 3, Whitesboro, Rome, Oriskany Falls.
Onondaga—Syracuse 19.
Ontario—Geneva 2.
Orange—Newburgh, Port Jervis 9, Goshen, Middletown 3, Central Valley 2, Monroe.
Orleans—Medina, Albion.
Oswego—Oswego 12.
Otsego—Oneonta.
Queens—Long Island City 3, Woodhaven, Flushing, Jamaica, Whitestone.
Rensselaer—Castleton, Hoosick Falls 2, Troy 4.
Richmond—Stapleton, Mariner's Harbor 2, New Brighton, Port Richmond 2, West New Brighton 3, Tottenville, Tompkinsville.
Rockland—Spring Valley 3, Nyack, Pearl River, Haverstraw, Suffern.
St. Lawrence—Canton, Gouverneur, Norwood, Ogdensburg, Potsdam.
Saratoga—Mechanicsville.
Schenectady—Schenectady 2.
Seneca—Seneca Falls.
Steuben—Avoca, Bath, Cohocton, Corning, Hornell 2, North Cohocton, Wallace, Wayland.
Suffolk—Amityville, Babylon, Sayville.
Tioga—Waverly 2.
Tompkins—Freeville.
Ulster—Rondout 2, Kingston, Saugerties.
Warren—Glens Falls.
Washington—Whitehall.
Wayne—Lyons, Palmyra.
Westchester—Yonkers 2, White Plains 2, Hastings-on-Hudson, Mount Vernon, Mamaroneck, New Rochelle, Peekskill, Tarrytown, Tuckahoe, Williamsbridge.
Wyoming—Attica.
Yates—Penn Yan.

Farmers living in the vicinity of any of these places may very readily find the officers of any of these savings and loan associations. It would be well for a number of farmers to send one or more delegates to confer with the town association with a view of farmers becoming members of the existing association. To accommodate the farmers it would be necessary for the existing association to become a member of the Land Bank, and to change its charter and by-laws so that dues could be paid quarterly or semi-annually, or possibly annually in some localities. The prospect of a large increase in membership of substantial farmers will encourage any association to give their requirements proper consideration. Societies which have made the change in their rules to meet farm conditions have found that the new rules worked most satisfactorily, and it is probable that any association would be glad to adopt rules within the law, and in accordance with successful practice elsewhere to attract and accommodate the new members. If for any reason the existing association does not wish to change the rules and the farmers find the monthly payments impractical, they may form a new association for themselves. J. J. D.

A LETTER FROM TOM BARRON.

Those Wyandottes and Leghorn Hens.

[We are at liberty to print the following extracts from a personal letter received from Mr. Barron, the English poultry breeder. After what has been said regarding the type of the English Wyandottes it is only fair to let Mr. Barron make this plain and candid statement.]

"UTILITY BIRDS."—Evidently the great point at issue in your country is the same as in mine. That is, the exhibition men are trying to set up anything that will mislead people, in respect to the utility poultry keeping and go so far as to say that the fowls are "crossed," "little weedy birds," etc. But the point really is that these men have lost in this country a tremendous amount of business, through the utility men teaching the working people that the bird that would lay was the bird for them, and not the exhibition bird, because the latter was only to look at. The utility men have provided the bird that will benefit them. Apparently the same thing applies to the exhibition men of your country, and they are now beginning to say that our birds are not purebred, because they may lay a tinted egg, or the birds may not be as good a type as the exhibition bird, or may be a different type.

THEY SCORE LOW.—My birds may possibly score very low in your exhibition pens in Ameriea, and may do the same in this country. In fact I do not think they would get a "highly commended" card. But the point is that we have never bred for exhibition purposes, nor admitted doing so, but have bred hens specially to lay eggs, and have tried to make this quite clear. By using the trap-nest it has brought out a different type of bird altogether, to what was started with. For instanee, we find from long use of it, the smallest bird lays the most eggs, and the longest-backed bird makes the heaviest layer. Now this is absolutely against the show type of English and American birds. The utility White Wyandottes weigh four to five pounds, while the exhibition bird of this same breed will scale 8½ pounds—that is the female—and the cockerel weighs 9½ pounds. The reason that my birds are tinted in lobe is that the trap-nest seems to have brought out this defect—if utility people can call it a defect—in addition to the long back mentioned. But we cannot help it if the trap-nest does produce the bird with these, in bringing out the layer. The birds must necessarily breed their type in producing the high record bird.

NEVER WAS "CROSSED."—Personally, I do not care a hang if I do not sell a bird to an American breeder, for I do not wish to undo anything that the American may have done as regards putting up a standard type. My point is that type is but a small consideration, seeing that I absolutely breed with the idea of getting the highest layer. In the matter of my birds being "off color" in the leg the same thing holds good. It is the effect brought about in getting the heaviest layer by the trap-nest, the best layers being the worst in this respect, and in some cases are absolutely pure white in the leg. Now, my White Wyandottes have never had a cross put into them since I have had them, this last 15 years, and the same is precisely the case with the White Leghorns. The trap-nest is therefore entirely responsible for this change in type, etc.

THEY NEED NOT BUY.—I am positive that even if I did not sell a stock bird, or any eggs for hatching purposes, I could still get a living out of my poultry, and that without any fear of the world denouncing me as a fraud. I am certain that from my utility poultry, being bred specially for laying, I could make three dollars per bird per year for egg production alone. But mind you, if America—or England if it came to that—did put me down as a fraud, I would see to it that I did not sell any more stock, so that they could not take away my good name. All the same, I am very sorry that some of my friends in your country should have attempted to denounce my birds as hybrids. There are always people who will willingly or otherwise believe adverse reports on any matter whatever, but I have always tried to show your people that it is layers that I do breed. TOM BARRON.
England.

New York State News.

CHEESE MAKERS CONVENE.—A cheese makers' conference was held May 26 to 28 at Hogue's Lower Five Mills cheese factory at Allegany and on the two following days at Varysburg cheese factory. The cheese instructors of the State demonstrated the latest and most improved methods on scientific cheese making.

SUPERINTENDENTS OF HIGHWAYS.—On June 25th and 26th the annual meeting of county superintendents of highways of the State will be held at Ithaca, when over 300 are expected to be in attendance. State Superintendent Carlisle and Senator Murtaugh are to deliver addresses. Some of the innovations which have been worked out on the roads of the county will be pointed out on a trip over the roads under direction of the special route committee.

OTSEGO POTATO CONTEST.—The district superintendents of Otsego County, in conjunction with the Farm Bureau, will conduct a series of potato growing contests among the pupils of the rural districts in the county and prizes will be awarded to the winners, a Holstein bull calf being first premium. The contest will be conducted after the "tuber unit method." Each contestant will plant 25 potatoes of a purebred variety and each tuber will be cut into four pieces, one piece to the hill. By a unit is meant the four pieces of each potato. Except the plowing, all the work must be done by the contestant.

CONVICTS ON ROADS.—State Superintendent of Prisons Riley is credited with the statement that 250 miles of convict-built dirt roads will be constructed this year in this State. He was granted $50,000 by the Legislature to test convicts as road makers. Instead of making macadam roads he will make a much longer mileage of dirt roads. Officials in Warren, Washington, Saratoga and Essex Counties have applied for convict help.

COLD STORAGE VIOLATIONS.—Since January 1 there have been 39 prosecutions for violation of the cold storage law. There have been 13 convictions, 11 dismissed by consent, five held for Special Sessions and 10 not returned.

LEADERS WANTED.—A personal note from Prof. Lauman says, respecting the School for Leadership in Country Life to be held at Ithaca June 23 to July 3, "We have sent an announcement of the school to every Subordinate Grange in the State, hoping that wherever there is a real leader who may be persuaded to come to us, we may get in touch with him." Community leaders or those who would like to be, will surely gain much by attendance on this brief session in the interest of rural life. J. W. D.

The Continuous Wheat Harvest.

WITH the exception of one month (January) wheat is being sown in some part of the world, and there is a wheat harvest somewhere every month but October, according to the International Institute of Agriculture.

Starting with January, Argentina and neighboring South American countries, New Zealand and Australia are finishing their Winter wheat harvest, the principal part of the work having been done in December. Winter wheat cutting starts in British India in February and lasts three months. March and April complete the Egyptian harvest.

In May, the United States, China, Japan, Spain and Portugal start with Winter wheat, and the first Spring wheat in the United States is harvested.

June marks the beginning of harvest in many countries of South Central Europe. Germany and Northern Europe begin in July. Great Britain and Canada's heaviest cuttings are in August and September, and in the latter month Denmark, the Netherlands, Russia and Switzerland close.

In a normal season practically no wheat is cut in October. November starts the first cuttings in Argentina and Ethiopia, and closes the last of Great Britain's wheat harvest.

Crop Notes.

THE Government report shows that in the Winter wheat and chief corn-growing States the weather is favorable though rain is needed in the Ohio Valley. In the western part of the corn belt, planting has been completed under good conditions. Pastures and oats are prospering in the northern sections, but suffering from drought in the south. Weather in the Spring wheat belt is favorable. Oklahoma and parts of Texas have suffered from continued rains, hindering planting and cultivation. The Atlantic States need rain badly.

B. W. Snow says, "There is a marked deficiency in rainfall for the present season over the greater part of the corn and oats territory. It has been particularly dry through central and southern Illinois, Missouri, eastern Kansas, Nebraska and Iowa, and a period of hot weather before rain is received will bring wide complaints from corn and oat fields."

Woman and the Home

From Day to Day

Humbler Heroes.

It might not be so difficult to lead the light brigade.
While the army cheered behind you, and the fifes and bugles played;
It might be rather easy with the war-shriek in your ears
To forget the bite of bullets and the taste of blood and tears.
But to be a scrubwoman, with four Babies, or more,
Every day, every day setting your back On the rack,
And all your reward forever not quite A full bite
Of bread for your babies. Say! In the heat of the day
You might be a hero to head a brigade,
But a hero like her? I'm afraid! I'm afraid!

—Edmund Vance Cooke in Saturday Evening Post.

*

IN washing very heavy dirty garments, such as men's overalls, if a washing machine is not used the hands may be saved in the rubbing by using a scrubbing brush. The garment is laid on the board, and there scrubbed, with plenty of soap. Sooty oven cloths may be cleansed by soaking over night in just enough kerosene to cover and then washing with cold water and abundant soap.

*

AT a recent meeting of a medical society in this city operations for adenoids came up for discussion, and the opinion was strongly expressed that nasal breathing was the best preventive of adenoids. In other words, teach a child from babyhood to keep his mouth closed, and to breathe through his nose, and this trouble is not likely to appear.

*

WHERE a delicate narrow lace is desired for fine underwear or infants' clothes, Armenian edging may be recommended. It costs from three cents a yard up, and looks like a "real" lace, with its fine thread and spider-web pattern. This narrow Armenian lace is just right for finishing hand-embroidered garments, or little nainsook slips for the new baby.

*

FOR a specially dainty sandwich, use Boston brown bread, cut very thin. Spread with a mixture made of half a pint of cream, whipped very stiff, half a cupful of dates, stoned and chopped, half a cupful of nut meats, chopped fine, and a little powdered sugar, all stirred well together. Spread the filling smooth, and put the sandwiches together neatly, cutting into fancy shapes if desired.

*

A RECENT reference to the use of a mangle, as a labor-saving laundry device, has called out questions as to price, etc. A good mangle, household size, is sold by a New York department store for $5.74; it has hardwood rollers, and is clamped to any table, like a wringer. Of course turning a mangle is not a sedentary occupation, as Mr. Mantalini discovered, but it saves ironing of all flat pieces, and will take one away from the stove in hot weather.

*

JAVELLE water, which is a useful bleach for removing stains, is made by dissolving one pound of sal-soda and one-quarter pound of chloride of lime in two quarts of boiling water. When these substances have dissolved as far as possible, and the solution has settled, pour off the clear part and bottle—and be sure to label the bottle properly. The dregs may be used to flush waste pipes, or to scour unpainted woodwork. When the undiluted Javelle water is used to remove stains on tablecloths, or similar white materials, the article is spread out flat, and the spot scrubbed with a brush dipped in the Javelle water; after this the fabric is rinsed in water containing a little ammonia to counteract the corrosive effect of the bleach. It should be remembered that the bleach has a powerful action on the hands. A small quantity of this bleach in the rinsing water will whiten yellow fabrics, or those that have become dingy through bad water or careless methods. Many professional laundresses use entirely too much of the bleach to save rubbing, and thus destroy the fabrics.

Seen in New York Shops.

AMONG simple but smart blouses for warm weather wear are many with low neck and elbow or three-quarter sleeves of the raglan shape. Favorite materials are voile, either plain or embroidered, fine crape and marquisette, with collar and cuffs of organdie. One of these waists with elbow sleeves had odd flaring bell-shaped cuffs of organdie. This organdie may be bought in a quality that launders well.

One of the large shops is exhibiting new styles in women's wear named after "The Salamander," a new, and to our mind rather disagreeable American novel, soon to make its appearance as a drama. The "Salamander" gowns have a Russian blouse effect with long straight tunic and a little touch of red in trimming or necktie. Little buckled shoes, silk stockings with contrasting clocks, underwear, hats and hand bags all appear in these "Salamander" styles, which are rather simple and girlish in effect.

Some combinations of brown and white are offered as a new French idea, and they are very becoming for Summer wear. A very handsome gown of embroidered white voile had a little sleeveless jacket of brown satin; it buttoned to the waist in front, and had sash ends in the back. Brown hat, slippers and parasol with a fine white dress will be found very effective. A white duvetyn dress made with a long redingote was trimmed with brown soutache braid. The very dark brown known as tete-de-negre, as well as golden and bronze shades, are used in this way. Bronze kid is much used for Summer slippers and pumps. The combination of brown and white is fashionable for children, too, and is more becoming to a child who tans very readily than brighter colors.

Taffeta is so enormously popular now that it is not surprising to learn that the Paris dressmakers are preparing to discard it for satin. However, it will no doubt hold its popularity here for some time, and we see some handsome jacket suits of this material that are very suitable for Summer. Women of conservative taste will find the new long Cossack tunic very suitable for taffeta; some of them are edged with a half-inch knife pleating, the same trimming being used to edge the short coat. Little kimono coats, loosely fitting, may be worn over a separate waist of lace, maline or chiffon, or one of these materials made up with just enough taffeta to form when attached to the skirt, a one-piece dress. A waist of maline or tulle is not quite as perishable as it sounds, since it is really more like a draping of tulle over a lace, net or chiffon foundation. Still, it is no fabric for a frugal buyer, though used abroad for flounced and draped skirts, as well as bodices.

It is not easy to dress a girl of 12, because she is often too big for little girls' styles, and too young to copy her elder sisters. A nice model for this age seen in a high-class shop was made of tan-colored crash. The waist was a plain Norfolk coat with smart little patch pockets and a belt of the same material, while the plain skirt had a box pleat both back and front. The blouse had pearl buttons and white linen collar and cuffs. This very practical model is suitable for any color in linen, galatea, etc.

A good many children's suits are made this season on "Oliver Twist" models. These are modeled after the quaint styles illustrated in early editions of Dickens, the principle feature being the skirt, or trousers, buttoning on to a plain, rather short-waisted blouse. In the boys' suits the trousers are plain and straight, made of colored chambray, galatea, or linen, the blouse white, with round Dutch collar and cuffs of the colored material. The girls' dresses have plain little four-gored skirts of colored material, and like the boys' suits, they have colored collars and cuffs on the plain blouse. In both cases there are many buttons fastening the short waist to its continuation, and a double row of buttons on the front of the blouse, which, to the Dickens student, recalls not only poor little Oliver, but also the ghost of Master B., in the "Haunted House," who was clad in an obsolete suit, much too tight, with a double row of gleaming buttons.

Rose Beads Again.

PLEASE publish through "Woman and the Home" column, how to make rose beads out of dried rose petals.

F. E. M.

These beads are not usually made from dried rose petals, but from fresh ones. The following directions given by an Oregon correspondent are reprinted from our issue of June 14, 1913:

Gather the petals when free from moisture, say a 10-pound pail packed full, put them through the food-grinder at least six times. Hunt up an old rusty kettle or pail, the rustier the better, rub it vigorously so there will be no loose pieces of rust, then plaster the rose pulp over the bottom and sides, about one-half inch in thickness, cover and set away in a cool place for two days, when you will find that the rust is turning the pulp black. Put it through the food-grinder again at least four times and plaster it over the kettle again and let stand as before. Put through the grinder again three or four times, the more the better, and if it is a good jet black it has had enough of the rust treatment and is ready to be formed into beads, provided it is of the right consistency. Roll a small piece of the pulp in the palm of the hand; if it makes a good firm ball it is all right; if it cracks it is too dry and should be sprinkled and rolled in a wet cloth for a few hours, and if it is too soft to keep its shape well, the pulp should be spread out to dry a little. To get the beads the same size press the pulp through small funnel; this will form bars of the pulp, which may be cut into pieces of equal length. Roll the pieces in the hand as children make mud marbles, and shape with the fingers. Put a pin straight through each one as you finish it and stick the pin upright in a cushion or mat, until the beads dry, when the pins may be slipped out and the beads are finished. String on a dark thread with about eight seed beads between the rose beads. The daintiest effect is produced by stringing as follows: one rose bead, two steel beads, four jet black beads, two steel beads, repeat. Gold or any preferred color of seed beads may be used in place of the steel beads. Keep in a covered box when not wearing them and their fragrance will last indefinitely.

Some suggestions: A drop or two of olive oil mixed into the pulp before it is put through the grinder the last time will give the beads a glossier black. The smaller beads are much daintier, make them so they will be about the size of allspice berries after they are dry. They shrink about one-half. Make some very small ones and combine with seed beads to make some of the beautiful necklaces worn so much. If the grinder and other utensils used when grinding the pulp are washed at once, first with cold water, they will not be stained. A little oil rubbed into the hands, olive oil is good, and then some lemon juice, will remove the stain from fingers.

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Salt Cucumber Pickles.

Would you give me the recipe for old fashioned salt cucumber pickles?

MRS. W. A. S.

The following recipe is for storing the cucumbers in barrels, but they may be put in large crocks in the same way: Choose small cucumbers free from spots. Put a layer of cucumbers in the bottom of a cask, then a layer of coarse salt, about one-fourth inch thick, then another layer of cucumbers, more salt, and so on until all are used. Place a board on top of the pickles, with a heavy stone to keep them down. Then pour in about a quart of water to moisten the salt, which, with the juice exuding from the cucumbers should make sufficient brine to cover. Continue to add cucumbers, as they are gathered, in layers as before; a few cabbage or horseradish leaves on top, under the board, will prevent molding. When the cask is full, tuck a cloth closely around the edges, put board and weight on top, and cover closely, and the cucumbers will keep for a year or two. When cucumbers are wanted for pickling, remove cloth, board and stone, and wash them well in warm water; wipe all scum from sides of cask with a clean cloth, take out cucumbers, and then cover any remaining as before. Soak cucumbers for three days in cold water, changing water each day; drain and wipe carefully. Half fill a large porcelain-lined preserving kettle with good cider vinegar, put in as many cucumbers as the vinegar will cover, with a piece of alum the size of a hazelnut; heat to boiling point, stirring with a wooden spoon so that they do not soften at bottom of kettle, and then drain, throwing away the vinegar. Cover with fresh cold vinegar, spice if desired. A little chopped horseradish at top will prevent molding.

Cooking Eggplant.

Could you give some recipes for cooking eggplant? W. W. H.

A favorite method for cooking eggplant is frying; it is also broiled, stewed, scalloped and stuffed. For frying, peel and cut egg-plant into slices one-fourth inch thick (it may be thicker if liked) lay in a bowl of cold salted water, and leave one hour with a plate on top to keep it under the water. Remove from water and wipe dry. Then dip in fritter batter, or in egg and cracker crumbs, and fry in deep fat. If egg and crumbs are used dip the slices and then put in the icebox for an hour before frying.

To broil, slice, soak and wipe the eggplant as for frying. After drying lay the slices for 15 minutes in a marinade made by stirring together five tablespoonfuls of olive oil with two teaspoonfuls of vinegar. At the end of 15 minutes remove the eggplant, drain in a colander, sprinkle with pepper and salt, and broil on a gridiron over a clear fire. Cook for five minutes on one side before turning the broiler; serve very hot.

For scalloped eggplant, peel, cut into dice, and soak in cold salt water for an hour. Then parboil 20 minutes, drain, and put in layers, in a baking dish, alternately with crumbs. Dot each layer with butter, pepper and salt, and strew with minced green pepper if you have it. When the dish is filled, cover with a layer of crumbs moistened with cream; dot with butter, cover, and bake half an hour; then remove cover and brown. It may also be scalloped with alternate layers of chopped ripe tomatoes.

For stuffed eggplant wash and wipe a large fruit, then boil for 10 or 15 minutes. Drain and let it get perfectly cold, then cut in half lengthwise, and scrape out the center, leaving the walls three-quarters of an inch thick. The pulp is then chopped fine, and two tablespoonfuls of bread crumbs, a tablespoonful of melted butter, pepper and salt added. Half a cupful of chopped ham, and the same amount of chopped chicken or veal, stirred in, is a great improvement, but may be omitted if not at hand. The shells are then filled with the prepared eggplant, which should be moistened with soup stock or gravy so as to make a stiff paste; it should be nicely rounded on top and covered with buttered crumbs. Lay the two halves in a baking dish, pouring some soup stock around them, and bake one hour basting frequently, then remove the eggplant, thicken the stock with browned flour, and pour this sauce around the eggplant on a hot dish.

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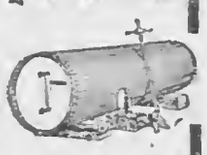

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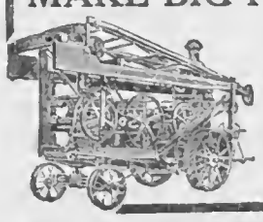

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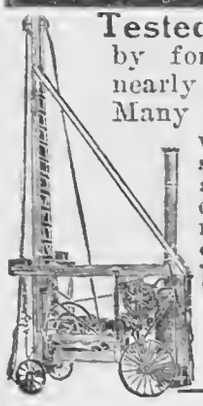

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Live Stock and Dairy

Starting With Blemished Purebreds.

WITH limited means I wish to start breeding registered Holstein cattle, and am seeking advice as to best methods. My own idea is to buy a well-bred cow with an official record, a cow that has some blemish like a lost quarter or big knee or knocked-down hip, one that the fancy breeders would not like to have around when the visitors come, she to be already bred to a bull of merit. Does the average heavy milking Holstein cow give milk rich enough to pass Massachusetts standard, 12.15 total solids, 3.35 butterfat. C. W. P.

New Hampshire.

The method suggested by C. W. P. of entering the field of purebred live stock breeding is meritorious, and there is no reason why animals that may have met with an accident as suggested should not prove useful breeders, and serve well as foundation stock. It very often happens that large breeders in their endeavors to establish world-breaking records go a little too far, and as result udder troubles prevail, and the animals do not present an attractive appearance in the regular dairy. He should make clear, however, that this is the real cause for wanting to sell such an animal, rather than an excuse justifying such offering; and furthermore, there should be abundant evidence that the cow while in her prime was not only a producer, but an animal of individual excellence and merit. Blemishes such as swollen knees or enlarged hocks or other unsightly appearances do not in any way effect the animal's ability to reproduce if properly mated, and often times it is possible to buy such animals at low cost. Only a few days ago I visited a dairy herd in New Jersey made up of grade cows, and the owner pointed out to me a certain animal in the herd that had been purchased from a prominent breeder because he did not care to keep her in the herd, since her udder was so pendent and unsound. Nevertheless, during the past year she produced over 15,000 pounds of milk and a calf that was eligible for registry. She was purchased at a lower cost than the average grade dairy cow, and will serve well as foundation stock for this breeder. I have always maintained that the use of discarded females or of aged bulls whose usefulness has been definitely tried and whose value has been established is the best source from which to select breeding animals for the poor man or the beginner who desires to enlist in breeding work. It is entirely an appropriate means, and by all odds commendable.

In reply to the inquiry as to whether Holstein milk alone will meet the Massachusetts requirements, quoted as 12.15% total solids and 3.35% butterfat, it is possible that a great many Holstein cows would not meet this requirement, especially during the early period of their lactation. The most economical means of meeting this condition would be to purchase a few grade Guernsey or Jersey cows, and thoroughly mix all milk, and in this way enable the dairyman to meet the requirements of the State without question. Where a large herd of Holstein cows is maintained, care should be exercised to avoid having a large number of them freshen during the Spring when the flush flow prevails. There is no reason why a selected herd of Holstein cows varying in their lactation period should not produce milk of sufficient quality to meet the State requirements. It would seem most unfortunate if the standard as fixed by law would brand a man a criminal who sold pure unadulterated milk as drawn from healthy cows without changing its form or content in any way. F. C. MINKLER.

Red and White Holsteins.

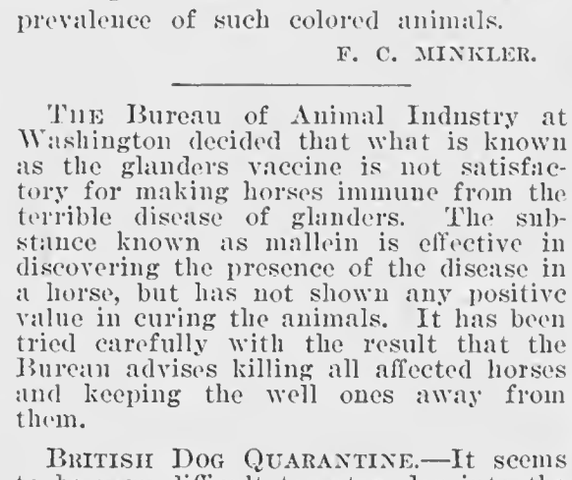
IS it possible for a purebred Holstein cow to drop a red and white calf when the sire is a registered Holstein? The calf is well marked for the Holstein if the red had been black. Is there a strain of the red and white Holstein? The dam is of the De Kol family, and is said to be eligible to registry. J. S. J.

It is possible for a purebred Holstein cow to drop a calf marked red and white, even though the animal be regularly registered in the recognized herd book as established for this breed. Such animals, however, are not eligible for registration in the Holstein-Friesian Herd Book. In Holland it is quite common to see a cow other than black and white in color that is designated as a Holstein. It is probably due to an atavistic or "breeding back" character, since a portion of the foundation stock used in establishing the Holstein-Friesian breed were red in color, and their progeny may at times evidence such dormant characterstics. I would want to make sure, however, that the Holstein cow had not been running in a pasture where a stray bull of one of the common beef breeds may have been active, for often times it is easier to explain the appearance of red markings in calves in this way rather than by means of historical evidence as suggested. The Secretary of the Holstein-Friesian Association at Brattleboro, Vt., could no doubt give additional information as to prevalence of such colored animals. F. C. MINKLER.

THE Bureau of Animal Industry at Washington decided that what is known as the glanders vaccine is not satisfactory for making horses immune from the terrible disease of glanders. The substance known as mallein is effective in discovering the presence of the disease in a horse, but has not shown any positive value in curing the animals. It has been tried carefully with the result that the Bureau advises killing all affected horses and keeping the well ones away from them.

BRITISH DOG QUARANTINE.—It seems to be very difficult to get a dog into the British Islands. There are strict laws providing for this. No dog from a foreign country can be landed in Great Britain unless the owner has obtained a license from the British Board of Agriculture. Upon landing the dog must be kept in quarantine for six months at the expense of the owners. The regulations are very strict, and any violations will render the offender liable to prosecution, and may cause the destruction of the dog. If it were possible to apply these strict regulations against dogs which work into a sheep-growing community, there would be more wool and more mutton.

"S-S-S-S-SUS-SAY, ma," stammered Bobby, through the suds, as his mother scrubbed and scrubbed him. "I guess you want to get rid o' me, don't you?" "Why, no, Bobby dear," replied his mother. "Whatever put such an idea into your mind?" Oh, nuthin'," said Bobby, "only it seems to me you're tryin' to rub me out."—Onward.



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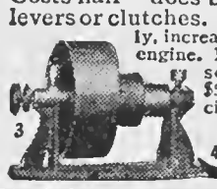

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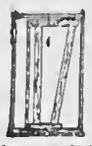

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Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an ANTISEPTIC AND GERMICIDE [NON-POISONOUS]

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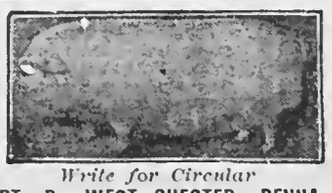

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April farrow, registered, growthy and prolific. Also Poland Chinas. **Rollo Young, R. D. 4, Coatesville, Chester Co., Pa.**

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PREVENTING NAVEL AND JOINT DISEASE

I SHOULD like to see an article on the care of the newly-born colt's navel. Should it be tied? Should it be disinfected? S. C.

Morris, N. Y.

The disease is due to filth germs entering the system by way of the raw navel stump at birth. The germs are found upon dirty floors, and in contaminated bedding. They may form in a decomposing clot of blood caused by tying the navel. The germs cause an abscess at the navel, and from it pus germs are carried into the system and cause secondary abscess, notably in the joints of the extremities, but also in the liver or other parts of the body in some cases. The disease may be prevented by cleanliness and disinfection. Have the mare foal in a roomy box stall that has been cleaned, disinfected with a 1-1000 solution of bichloride of mercury and then whitewashed with fresh-made lime wash. This should be freely applied to walls, floor and ceiling. Then put in fresh clean bedding. When the foal is dropped free its mouth and nose of membranes and at once attend to the navel. The navel cord (umbilicus) should only be tied (ligated) when absolutely necessary. It is much better to have the cord break off naturally. If the mare is lying down make her rise and the cord then may break. If it does not break it should be severed by means of an ecraseur or emasculator or scraped through with a clean, disinfected knife, after ligating, an inch or so from the body and then two or three inches lower, with clean strings soaked in a five per cent. solution of carbolic acid. Just as soon as possible afterward, the string on the stump of the navel should be loosened (a bowknot having been tied when it was put on) and if it is seen that bleeding will not occur the string should be removed. The stump of the navel should be thoroughly saturated with tincture of iodine at birth, whether a string is used or not, and then should be frequently dusted with a mixture of equal parts of finely powdered alum, boric acid and starch powder until well crusted over. Iodine should be freely applied again if it is seen that the stump of the navel is wet. Another good treatment is to saturate the navel at birth with a 1-500 solution of corrosive sublimate and then use the solution twice a day until the navel shrinks up, drops off and no raw spot can be seen. Where the disease has been prevalent a graduate veterinarian should be employed to give the foal a protective hypodermic dose of antistreptococcic serum at birth. The serum also should be used should infection occur.

In addition to caring for the navel at birth it is highly important to see that the bowels move promptly and fully soon after birth. The first manure (meconium) is a sticky substance which tends to adhere to the lining of the intestinal tract unless brought away by the action of the first milk (colostrum) which contains a purgative principle. To assist nature give the foal rectal injection of a few ounces of warm water and a teaspoonful of glycerine, or inject warm sweet oil or slippery elm bark tea, or molasses, cream and warm water. Do not inject large quantities of strong soapy warm water. If the bowels do not respond promptly give the foal two or three tablespoonfuls of best castor oil shaken up in milk. Before the foal is allowed to suck for the first time wash the mare's udder with a two per cent solution of coal tar disinfectant or carbolic and then rinse off well with warm water. Afterward keep the udder clean. Burn or bury all soiled bedding and the afterbirth, and put in new clean bedding as soon as the foal has been attended to and the mare has "cleaned." Few losses will occur if these simple instructions are carefully followed.

A. S. ALEXANDER, M. D. C.

May 19. The following are prices received by ranchers. Fat cattle from $6.50 to $7.50 per cwt.; hogs $8 per cwt.; mutton sheep $5 per cwt.; dairy cows from $70 to $100 each. Good heavy horses from $400 to $600 a pair. Wheat 85; oats 48; potatoes 40 cents per cwt.; onions $3 per cwt.; beets $1.25 per cwt. Strawberries $2 per crate; rhubarb three cents a pound; apples from $1.50 to $2.50 the box. Ranch butter 25 cents a pound. H. J. J.

Springdale, Wash.

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PUREBRED HOLSTEINS FOR ANY POCKETBOOK, $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. **MOHEGAN FARM, Peekskill, N.Y.** 1 hr. from Grand Cent. Sta.

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Royally Bred, Fashionably Marked (More white than black)

True Dairy Conformation. Splendidly Grown. Born in January, 1914

Sire—Sir Pontiac Beeman Korndyke 77995 whose full sister, whose dam and sire's dam, average over 28 lbs. 7 days, 115 lbs. 30 days, 4.01% Butter fat. His sire is from Pontiac Artis 31.71 lbs., a full sister to Pontiac Jewel 30.72 lbs., the only two full sisters of the breed that average over 1000 lbs. butter in a year. ∴ ∴ ∴

Dam is a grand-daughter of Pontiac Segis and Alcartra Ormesby, a daughter of Alcartra Polkadot 28.08 lbs. Four A. R. O. daughters, two of them over 29 lbs. each ∴ ∴ ∴

Where can he be equalled for $100.00 crated, all papers?

For pedigree and any other information regarding bulls of all ages, write **F. C. BIGGS, TRUMANSBURG, N. Y.**

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5 Registered Holstein Bull Calves 1 month old, four-fifths white well bred, $35 each; express paid to your station with all papers. 4 Registered Holstein Heifer Calves for $400. 1 car load of Registered Heifers Bred. 1 car load of Registered Cows due to freshen this Fall, and 100 High Grade Holstein Cows. Orders for 7/8 Holstein Heifer Calves at $15 each, to be shipped this Fall. Express paid if ordered in lots of 5. 1 car load of High Grade Yearlings for $40 each. **REAGAN BROS., Tully, N. Y.**

Buy a Bull on Easy Terms

Long Time and 4 Per Cent Interest

Holstein bull calves, sired by a **SON OF KING OF THE PONTIACS**, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of **A. R. O. DAMS. WRITE AT ONCE** for breeding, prices and particulars regarding our terms.

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HOLSTEINS

The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.

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East River Grade Holstein Cows For Sale

80 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
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Purebred Registered

HOLSTEIN CATTLE

The Wisconsin Farmer notes that fewer and fewer of the Wisconsin farmers are content to milk and care for cows that are able to produce only about 150 pounds of butter. During two weeks last Spring 145 Wisconsin dairymen purchased registered purebred Holstein sires in order to improve their herds.

Everywhere the more progressive dairymen are alive to the necessity of using **bred-for-production** sires in order to bring up the butter-fat yield of their cows to a profitable figure.

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We are first hands and can quote you absolutely bottom prices, delivered your station, in lots of anywhere from one barrel to a trainload.

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Airedale—thirteen mos. old; pedigree; $25, if good home. **MAPLE SHADE POULTRY FARM, Box 14, Hightstown, N. J.**

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pedigreed; beautiful; natural heelers. Females—$8; males—$10. **WALTER STANFIELD, Hillsdale, Michigan**

COLLIES—Beautifully marked; elegantly bred puppies. The kind that know what you say to them. Males—$6; females, $4. Shipped on approval. **WM. W. KETCH, Cohocton, New York**

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Wanted to Buy—CATTLE BY THE CARLOAD One hundred head wanted (due to calve) during July to September. Holsteins and Ayrshires preferred. Address, A. S. EDWARDS, Stepney Depot, Conn.

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All cows tested eligible for Registry of production. Animals of various ages for sale.

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Thirty-eight Island-bred Jerseys have been carefully selected for use at Meridale Farms. Every one of them is backed by prize-winning and butter-tested ancestry; and through authenticated test work, year after year, they are building a solid reputation in America.

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PRICES 40 lbs., $2.25; 100 lbs., $5; 200 lbs., $9; 300 lbs., $13; 500 lbs., $21.12. No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold by peddlers nor in bulk; only in Trade-Marked Sal-Vet packages. Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

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Sidney R. Feil, Pres.—THE S. R. FEIL CO., Dept. RNY 6-6-14 Cleveland, O.
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Sheep..... Hogs.....
Cattle.....
Horses.....

Q74)

A New Test for Tuberculosis in Cattle.

THE more recent application of tuberculin as a test for tuberculosis in cattle and hogs, known as the intradermal test, has been favorably reported on by the Agricultural College at Berkeley, Cal. This test differs from the ordinary tuberculin test chiefly in that tuberculin is injected into the deep layers of the skin instead of beneath it and more directly into the circulation. The reaction to this test is noted, not in an elevation of temperature shown by infected cattle, but by the formation within a few hours after the injection of a more or less well defined swelling at the site of the puncture. This swelling appears in infected cattle only and varies in size from that of a hazelnut to that of an orange. The preferred site for this injection in cattle is one of the two folds of soft skin just beneath the base of the tail.

Since the reaction to the intradermal test depends upon a swelling at the point of injection and not upon a variation in the animal's normal temperature, it possesses the advantage of not being dependent in any way upon changes in the methods of handling or feeding cattle, nor is it affected by advanced pregnancy, recent parturition, or the period of heat. It has the disadvantage, however, of requiring the services of one who has had experience in the observation and interpretation of the reaction. It is not a method for the layman, or for the veterinarian either, unless the latter has qualified himself by use of the test to correctly read his findings.

The investigators at Berkeley do not recommend the intradermal test as a universal substitute for the better known subcutaneous injection of tuberculin, but they believe it to be more convenient for use under certain conditions, and probably as reliable. They strongly urge that only those who have qualified themselves to do so should attempt to make a diagnosis by its aid, but as experience in its use is easily gained by those making tuberculin tests they consider it a valuable addition to the veterinarian's equipment for detecting tuberculous cattle and they advocate its more general use.

M. B. D.

"Woman Killed by a Bull."

THE following item recently appeared in the daily papers:

WABASH, Ind., May 3.—Mrs. Philip Lembarger, wife of a farmer, was gored to death by a bull to-day. She was crossing a 40-acre field with her 12-year-old daughter when the animal attacked her. Dr. A. E. Rodgers, who was passing, armed himself with a pitchfork and went into the field, but was immediately set upon by six steers. For 30 minutes the doctor fought off the animals, with the unconscious woman at his feet and the little girl clinging to him. He and the child finally were rescued by some men, but Mrs. Lembarger was dead when they picked her up.

While it is well to take most newspaper reports with some allowance, this story may be true, but the reporter failed to say what the bull was doing while the rescuer was fighting the steers. A well-trained bull, one that has not been teased till cross and vicious, and when out in a field with other cattle, will seldom molest anybody, though strangers gaudily dressed might be chased out, but for steers to fight anyone of their own initiative is very improbable. In the case referred to the steers were undoubtedly excited by the actions of the bull, and for the time were highly dangerous to anything or person opposing or fighting them. Trouble of certain kinds seem to cause cattle to go mad, and the mania seems to spread quickly through a bunch, just as a panic of fear does, and what are ordinarily quiet steers, gentle family cows and peaceable bulls become veritable demons without fear or sense of pain. Occasionally polled cattle will scrap among themselves, though they do not often get mad enough to hurt each other. I recall a bunch of polled steers that seemed to spend one-third their time butting each other and milling around in circles, perhaps three or four at a time and for a half hour or more. They would be eating quietly at the racks one minute, and perhaps the next they would be out in the open field milling around as described and apparently without cause for the quarrel. Live stock and poultry both, at times attempt to kill weak, maimed or ailing members of the flock, or else they let them severely alone.

It is the unusual that excites cattle, which start up to investigate, and about that time timid women or children wave an apron or start to run, and if a bull is present or even wild, excitable steers, trouble may occur. Sometimes the cattle want salt, or they start to chase a dog accompanying some one, and if the weather is cool and bracing and the proper state of excitement is reached, a tragedy may result. Though I understand cattle pretty well, and do not fear them, I do not take unnecessary risks; while I keep them gentle and as unafraid of me as possible yet I let them know that I am the boss. Barring minor accidents I can report no personal injury from cattle, but kicks from both horses and cattle are to be expected and guarded against. Don't trust any kind of live stock too far.

Ohio. W. E. DUCKWALL.

The Draft Horse Situation.

THE Percheron Horse Society of America issues the following table to show the number of vehicles in use inside the city limits of Chicago. This represents the number of licenses issued for the three years:

1-horse vehicle....	40109	38429	38305
2-horse vehicle....	17640	16728	15851
3-horse vehicle....	331	325	256
4-horse vehicle....	34	20	17
Auto delivery wagons (less than 1 ton)	436	1680	2448
Auto trucks (1 ton or over)	363	1155	1759

The decrease in one-horse vehicles is properly to be credited to the rapidly increasing use of auto trucks less than one ton, which are particularly adapted to light delivery work. The decrease in two-horse vehicles is attributed by the men who are best informed on team requirements in Chicago to be due to the elimination of light pairs which are used for delivery work by the large department stores, and to the reduction in light pairs owned by well-to-do persons who used them for pleasure purposes. The closing out of a large number of livery stables and consequent sale of driving pairs owned by them, is responsible for several hundred other horses, so that it appears certain that the reduction of 1789 two-horse vehicles which has occurred between April 30, 1911 and April 30, 1914, is due to causes just noted and not to any reduction in the number of draft pairs in use; in fact, it is the judgment of some of the best informed horsemen at the Union Stock Yards, after a review of the above figures, that there has actually been an increase in draft pairs. It is figured that the auto trucks and business vehicles have displaced about 10,000 horses. These trucks are mostly used for long hauls. For the shorter hauls big horses are still preferred, and there is no present indication that the demand for high-class draft horses will fall off.

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For farm and dairy use Worcester Salt is put up in 14 pound muslin bags and in 28 and 56 pound Irish linen bags. Smaller sizes for table use. Good grocers everywhere sell Worcester Salt. Get a bag.

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Largest Producers of High-Grade Salt in the World

NEW YORK

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IT CAN'T COLLAPSE

The Craine Patent Triple Wall Silo has thick vertical wooden staves, inside; horizontal patent wooden covering thoroughly nailed, outside; and water-proof felt-like rubber roofing between. This makes a perfect non-conductor of heat. SCIENTIFIC in every feature of its construction.

IT'S FROST-PROOF
AIR-TIGHT PERMANENT

No silage spoiled by contact with concrete, tile or any mineral. Craine silage is sweet, clean and perfectly preserved—it is "drawn from the wood." No troublesome iron hoops requiring annual overhauling. The first cost is low and is the last. The Craine is, therefore, the cheapest on the market. Ask for illustrated booklet.

W. L. Scott Lumber Co.

Norwich, N. Y. Milwaukee Wis. Kansas City, Mo.

Cuts silage evenly

Packs better—lasts better—makes better feed

The knives of the Blizzard make a clean, shear cut and the silage is cut slick as a whistle, in even lengths, from ¼ to 1½ inches. Silage cut by a

BLIZZARD Ensilage Cutter

packs better, keeps better, and, according to our customers, makes better feed, increasing milk yield and butter fat.

OTHER GOOD POINTS

of the Blizzard are: Light running—any farm engine runs it. Eats up silage fast as you can feed. Easily fills highest silos. Simple, safe and durable. Self-feed table. *New catalog tells whole construction.* Write for it now, before you forget.

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The day of the old slat-apron silo filler is gone. No wise farmer is going to use one when he can get a money-saving, grip-hook, force-feed SMALLEY, that does the work quicker, easier and at less cost. It handles silage, cow peas or alfalfa in a hurry. Cuts it fine and uniform. Packs silage tighter—gives more tonnage.

No Power Waste

One pulley and chain-drive on blower outfits replace power-wasting idlers.

1914 Carrier

A 5 H. P. Engine will run a No. 12 force-feed and our 1914 enclosed carrier. Special alfalfa grinding screen furnished extra, protected by screen patent No. 721,246. Make your own meal.

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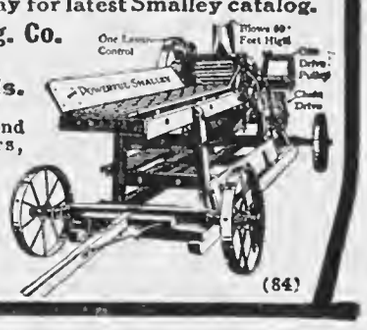
Manufacturers of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.



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The Silo Filler With the Direct Drive

Wonderful recent improvements of "Ohio" eclipse anything ever before produced. *One* lever controls *all* movements—reverses by wood friction *at finger pressure.* Self-feeder—with famous "Bull Dog" grip. Patented Direct Drive—*Shear cut—non-explosive, non-clogging.* Enormous tonnage *on half inch cut*—50 to 250 tons a day—6 to 15 h. p. 20-year durability. "Ohio-cut" silage famous—cuts all crops. Used by Experiment Stations everywhere. Guaranteed. Many big new features this year.

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CLIMAX SILAGE CUTTER

Insures quicker work on small power. Then there are the principles of the Inward Shear of thin oil-tempered knives; the heavy toothed feed roll, narrow throat, all illustrated and described in

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ZYRO Metal Silos

preserve silage perfectly. They are substantially built along correct lines. "Zyro" Silos cannot crack or shrink and are practically trouble proof. All sizes. Write for FREE Catalog NOW. Tells the complete story of "Zyro" Silos. Ask for it To-Day.

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is known everywhere for its great simplicity, strength and durability, its can't clog and safety features, its absolute supremacy among ensilage cutters. It stands the test of hardest work. **Guaranteed** to do more and better work on less power than any other ensilage cutter on the market. Write for catalog and proof.

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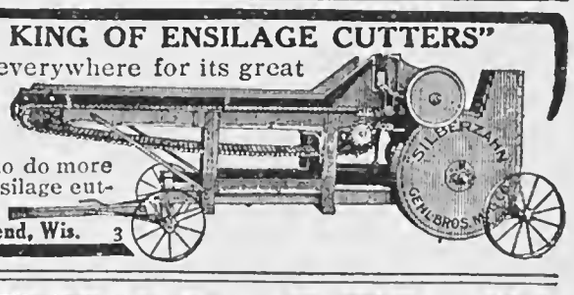

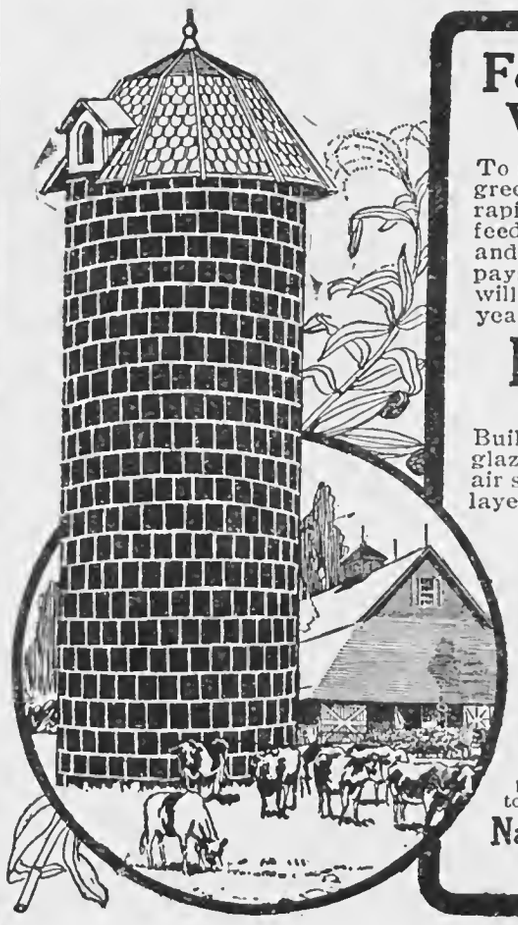

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R. I. Reds, Indian Runner Ducks

Eggs for hatching. Breeding stock.
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Austin's 200 Egg Strain S. C. R. I. Reds

Standard bred: high record stock; red to the skin. Half prices on eggs for hatching. Booked up for season on chicks. :-: :-:

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FOR SALE—PURE-BRED RHODE ISLAND RED'S EGGS per 15 $1.00—S. C. BLACK MINORCA EGGS 5c each; layers of large white eggs. L. M. Stewart, Vega, N. Y.

White Wyandottes—Utility eggs, $1 per 15. Good stock for sale.
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"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Dr. HAYMAN, Box R 48, Doylestown, Pa.

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Indian Runner Duck Eggs—$1.25 per 12; $6 per 100, express paid. CRANDALL FARMS, Albion, New York

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HAWTHORN FARM BUFF ORPINGTONS—Best display at Buffalo for 6 years. Free range stock. Splendid combination of exhibition and utility qualities. Buff and White June chicks, 15c. Williamsville, New York

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain: breeders and eggs. Send 2-cent stamp for illustrated catalogue. Route 24, Athens, Pa.

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Single Comb White Leghorns Exclusively

D.W. Young's strain. The finest in the world. Bred or their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book Profits in Poultry Keeping Solved—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free. EDGAR BRIGGS, Box 141, Pleasant Valley, N.Y.

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Tom Barron and other heavy laying blood. W. Rock and W.W. Pullets for sale. John Lorton Lee, Carmel, N.Y

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Purebred, large, vigorous, true Leghorn type. Seven years' experience Not how many, but how good. Circular. VANCREST POULTRY FARM, Salt Point, New York

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TOM BARRON'S ENGLISH WHITE LEGHORNS

Special for June—Eggs $5 per 100

Imported direct from Tom Barron's Farm. Trapnested stock. 280-egg strain. The greatest laying strain in the world. Eggs, $1 per set; $5 per 100.
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Send for booklet and prices

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GUINEA PIGS—My whole breeding stock. Solid blacks, whites, rods, and mixed. None better; some worth $3 to $5. 60 or more in lot, $40, or will divide fairly in 2 lots at $20.
F. W. FLETCHER, Auburndale, Mass.

The Henyard.

THE EGG-LAYING CONTEST.

NOTWITHSTANDING the fact that the broody season is now in full swing, the loss in egg production for the twenty-ninth week is only 31 from the high record of 3,649 last week. The White Leghorns from England and from Ohio, tie for first place with the high score of 61. The single pen of Buff Leghorns from Wolverine Poultry Yards take second place with a score of 59, and Braeside Poultry Farm's White Leghorns are third with a record of 58. Francis F. Lincoln's White Leghorns tie with Geo. A. Cosgrove's pen of same breed for fourth place, each pen laying 57; 27 pens in all laid from 50 to 56 each, including H. W. Collingwood's pen of scrubs—as he calls them—which laid 54, making a higher score than any of the Rhode Island Reds, Buff Wyandottes, White Wyandottes, Buff Rocks, and 10 other varieties. In fact there was 64 pens out of the 82 in the contest, that laid fewer eggs than Mr. Collingwood's "scrubs." It begins to look as if those who laughed at these "scrubs" at the beginning of the contest were somewhat premature in their mirth. Below is the week's record and the totals:

Barred Rocks.	Week	Total
A. B. Hall, Connecticut	53	649
Frank L. Tuttle, Massachusetts	37	767
Waveny Farm, Connecticut	55	656
J. F. Francais, New York	39	902
White P. Rocks.		
Albert T. Lenzen, Massachusetts	54	703
F. H. Benton, Connecticut	49	783
Storrs Agr. Sta., Connecticut	45	604
Storrs Agr. Sta., Connecticut	37	649
Storrs Agr. Sta., Connecticut	39	758
Storrs Agr. Sta., Connecticut	41	656
Storrs Agr. Sta., Connecticut	34	437
Buff P. Rocks.		
A. A. Hall, Connecticut	42	761
W. C. Morgan, Jr., Connecticut	38	559
White Wyandottes.		
Tom Barron, England	48	1217
West Mt. Poultry Yards, Connecticut	32	725
Merrythought Farm, Connecticut	33	1043
Neale Bros., Rhode Island	49	1022
D. J. Ryan & Son, Connecticut	32	817
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	42	782
Dr. N. W. Sanborn, Massachusetts	40	705
Am. Buff Wyandotte Club, New York	31	677
H. L. Hamilton, Connecticut	45	497
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	47	696
S. C. Reds.		
Robert Seaman, New York	30	572
J. S. Gillespie, Connecticut	32	764
D. J. C. Dingman, New York	48	658
Burnham Pltry. Yards, Massachusetts	36	560
H. P. Deming, Connecticut	34	662
Geo. P. Dearborn, Florida	33	855
Dr. J. A. Fritchey, Pennsylvania	41	954
Ernest Underhill, New Jersey	34	594
W. H. Bumsted, Connecticut	29	403
Pinecrest Orchards, Massachusetts	50	878
Harry B. Cook, Connecticut	31	785
Colonial Farm, New Hampshire	37	821
A. B. Brundage, Connecticut	49	911
R. C. Reds.		
Glenview Poultry Farm Connecticut	44	806
C. S. Scoville, Connecticut	26	549
White Leghorns.		
Storrs Agr. Sta., Connecticut	50	802
Storrs Agr. Sta., Connecticut	45	873
Storrs Agr. Sta., Connecticut	51	887
Storrs Agr. Sta., Connecticut	54	1120
Storrs Agr. Sta., Connecticut	47	745
Braeside Poultry Farm, Pennsylvania	58	717
Glenview Poultry Farm, Connecticut	52	773
Manor Poultry Farm, New York	51	776
A. B. Hall, Connecticut	49	769
Marwood Poultry Farm, Pennsylvania	54	874
Geo. M. Harris, Connecticut	41	648
Bonnie Brook Farm, New York	47	831
N. W. Hendryx, Connecticut	50	700
J. J. Linehan, Massachusetts	49	658
F. F. Lincoln, Connecticut	57	1104
Cecil Guernsey, New York	54	939
T. W. Moore, Connecticut	55	689
Chas. N. St. John, New York	54	673
C. W. Sherwood, Connecticut	48	763
L. E. Sands, Pennsylvania	51	760
Tomoka Poultry Farm, Connecticut	48	669
Venture Poultry Farm, New York	45	642
Mrs. K. E. Woodruff, Connecticut	56	707
Windsween Farm, Connecticut	49	655
C. H. Savage, Connecticut	50	716
P. G. Platt, Pennsylvania	56	823
Heneta Bone Co., New Jersey	21	187
Fred. M. Peasley, Connecticut	49	755
Chas. Heigl, Ohio	61	631
Tom Barron, England	61	937
Branford Farm, Connecticut	52	828
James Munn, Massachusetts	49	665
Geo. A. Cosgrove, Connecticut	57	638
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	59	788
Blue Andalusians.		
E. D. Bird, Connecticut	49	639
Buff Orpingtons.		
O. Wilson, West Virginia	33	606
White Orpingtons.		
P. A. Demgar, New York	35	554
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	25	414
Silver Campines.		
Wm. J. H. Lobel, New Jersey	53	583
Dunghills.		
H. W. Collingwood, New Jersey	54	566
Daniel Hine, Connecticut	35	592
Daniel Hine, Connecticut	24	695
Mixed Breeds.		
Profitable Poultry, Massachusetts	28	722
Profitable Poultry, Massachusetts	36	687

The total number laid to date is 59,637.

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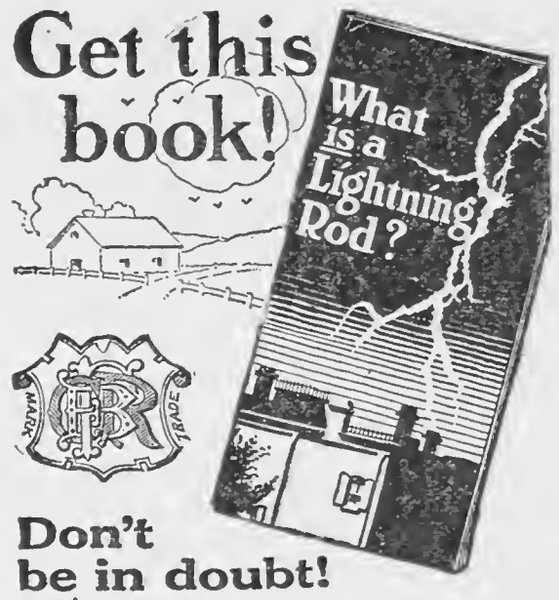

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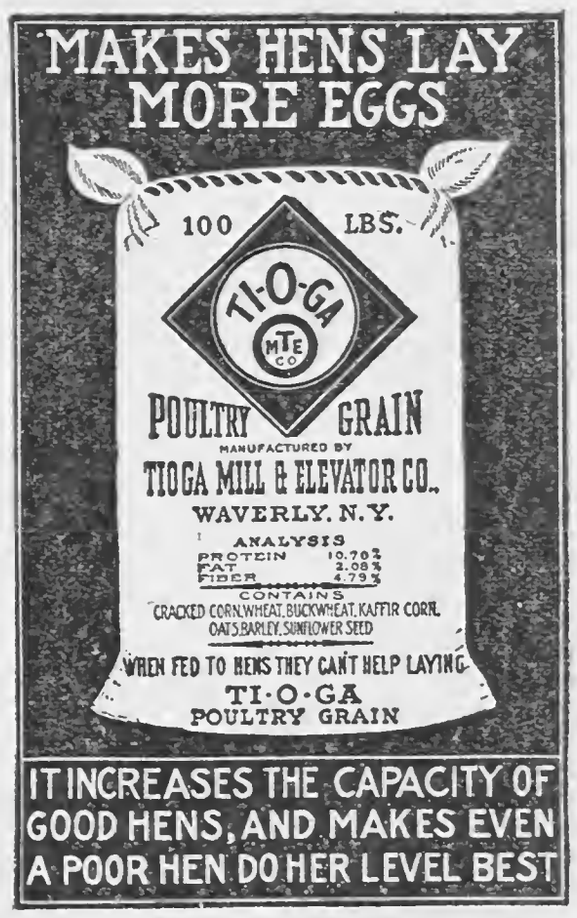

PUBLISHER'S DESK

Can you give us any information regarding C. Abramson, 233 Madison Street, New York? I shipped him a crate of eggs April 6 and he sent me a check for them, but the check came back unpaid, as there were no funds to pay it. In the meantime I had sent another shipment and now cannot hear from Mr. Abramson. He promised to pay 28 cents a dozen. Can you help find him? A. R.
New York.

We have 13 complaints from farmers, aggregating $200, including two shipments made Mr. Abramson in 1911 which are unadjusted. This amount has been lost because of failure to investigate the standing before making shipments. His initial inquiry was for trial shipments at 28 cents per dozen. When inquiry was made why shippers had not received returns he claimed checks were lost or tags had come off cases and he could not tell who was the shipper. We are informed that he sent out something like a hundred checks dated ahead, all of which were protested when presented. His office was in a basement, but he has moved now and the advice is that he has gone to Pittsburgh. He will probably play the same trick on shippers from that point. His removal was doubtless planned in advance as this is usually the case with concerns sending out quotations above the market price.

A poor woman who is in my employ and who has a child to support, was induced by H. H. Tilley of 68 Valentine Ave., Mt. Vernon, N. Y., to give him $50 for an old phonograph which was not worth $15. It took this woman a long time to save this money and the loss of it means privation to herself and her child. Will you please write to Mr. Tilley and see if you cannot induce him to take back the machine and refund the money? A. C. O.
New Jersey.

After addressing several letters to Mr. Tilley he called on us and gave his version of the transaction but refused to accept return of the machine. At the time of his call he made an offer of $15 in settlement which offer he since withdrew and now agrees to refund $10 of the money.

I have been approached to buy some of the International Text Book Company stock of Scranton, Pa. I inclose you some of their pamphlets. I have declined the opportunity to purchase. I could get no statement from the salesman that would show the necessity of selling this stock if it is as good to hold as represented. I would like a copy of the paper in which you referred to this matter. S. E.
New York.

One of the pamphlets states that the agents of the company are now to be sent into small towns and country districts in which they have not heretofore operated. It claims that the rural territory is most productive for them, and that country boys and girls are easiest enrolled. According to this pamphlet the country districts are to be canvassed by these agents and solicitors, and for this reason it may be well to restate some facts that have been said before.

The concern has an army of agents soliciting the scholarships. These agents and the advertising literature of the company encourage every proposed student to believe he can manage the courses, and better his position and greatly increase his income. Contracts are made with people who are not able to follow the work, and after a short trial give it up. They pay the first installment, and while they get no benefit whatever, the company enforces payment for the balance of the contract. This inflicts rather a severe hardship and loss to some young people who can ill afford the loss.

As to the stock investment, a bill is before the Massachusetts Legislature to enforce this and other correspondence schools selling stocks to file information about them with the State Corporation Commissioner. In a hearing before the legislative committee which is considering the bill, a representative of the Scranton concern stated that the bill was aimed at them, and that the bill was introduced to make the International Correspondence School pay money to prevent its passage. Representative Clarence A. Barnes of Mansfield, who proposed the bill, is reported to have said:

These people, one way or another, are reaching a lot of poor people and inducing them to invest in securities. Now when a man buys of a stock broker he appreciates it is purely a commercial transaction, but when a school attempts to sell securities it assumes a fiduciary relation towards its pupils.

"Instructors of these schools," he charged, "and their agents go into the homes of students, get into their confidence and ascertain how much money they have in the bank. They will then remark that 'if you have any money to invest and ever get a chance to buy stock in this Lackawanna company (for instance), get all you can of it.'

"Three or four weeks later a salesman from the Lackawanna Coal & Lumber Company puts in his appearance and makes an easy sale of stocks. The instructor gets a rake-off for 'tipping off' the salesman and at least one higher official receives a share."

Mr. Barnes cited the case of a poor widow in Roxbury who, he said, invested $650 in one company because one of her boarders, a student of the correspondence schools, had told her to purchase the stock. Later she learned that the student had received a commission of $10 for the "tip" he had given the company.

We have seen volumes of literature on the several companies promoted by the men connected with the Scranton concern, but we have not seen anything that would give an intelligent idea of the value of the stocks. They lay great stress on the fact that the International Text-book Company stock is in the hands of good people, and that it is not sold on the exchanges, and that the price is maintained by the company. Instead of being arguments why you should buy, these facts are reasons to us against buying the stock. So long as the company pays the dividends, and sells through agents, and takes the stock off the hands of those who want to sell it, all is well, but no purchaser has any guarantee that the dividend will be paid in the future, no person has any guarantee that the stock will be taken off his hands later on. The company may not pay dividends in the future. It may not continue to sell the stock over again. It may do neither; and in such case the holder of the stock would find no market for it.

It is not enough that a stock pays dividends, and that the promoters of it, buy it up again to maintain the price. Dividends are often paid for a time on worthless stocks, and the fact that the promoters organize an agency to take up the stock and sell it over again is evidence that the stock does not sell on the open market on its merits at prices established for it. The Massachusetts Legislature will do well to pass its bill. Why shouldn't this concern furnish information to show whether or not the poor people of the State are getting value for their money?

I send you part of the correspondence between C. L. B. Landis of Reading, Pa., which shows that he owes me $8. I have made various efforts to secure payment, and I take the liberty to ask you to do by me as you have by some of your other subscribers and attempt to make the collection. I will be much obliged whether you can collect or not. J. H. R.
Maine.

From a mere sense of duty we have been trying to get this settlement from Mr. Landis. We failed as we expected we would. We have had complaints of him for 15 years or more, and do not recall a single adjustment. We expect no redress for complainants. Our only hope is to lessen the number of them.

Please make me a formal member of the Uhlman Club. I have long been an actual, acting member, having dropped the Success magazine because of the Lewis advertisement, and long years ago shunted that Indianapolis fake, also let go of a farm paper whose editor was and is master of the diverse problems that confront the soil tiller here. Please publish the pledge again. Every farmer should join and all should live up to the pledge, although sometimes it will hurt. As I am pledged to be a life member of THE RURAL NEW-YORKER fraternity, enclosed is my subscription. G. F. M.
Florida.

The Anti-Fake Club is growing. A few more members and we will form our organization. When this is done, a definite pledge will be drafted, and suitable regulations prescribed. The idea of the organization is to discourage dishonest advertising by calling the attention of publishers to them and by refusing to receive papers the publishers of which persist in printing the advertising of fakers and rogues. J. J. D.

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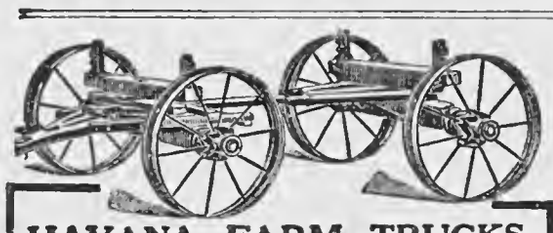

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending May 29, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4¾ to five cents per quart.

BUTTER.

The market has been somewhat stronger this week with advances of one-fourth to one-half cent on the better grades. The quality of the current receipts is running better.

Creamery, extra, lb	25	@	26½
Good to Choice	22	@	25
Lower Grades	19	@	21
State Dairy, best	24	@	25
Common to Good	18	@	23
Factory	16	@	19
Packing Stock	13	@	17

Elgin, Ill., butter market 25¾ cents.
Philadelphia, western creamery, 26 cents.

CHEESE.

The market is decidedly firm on the better grades of whole milk. A small amount of business at 14 cents is noted, but not enough to warrant an advance in quotations.

Whole Milk, new, best	13½	@	13¾
Common to good	11	@	13
Skims	5	@	10

EGGS.

Quality of the bulk of receipts is averaging poorly, owing to hot weather. Large quantities of medium grade eggs are going into short-time storage on shippers' price limits.

White, choice to fancy, large	22	@	23
Common to good	18	@	21
Mixed colors, best	21	@	22
Common to good	17	@	20
Western fresh, white	20	@	21
Lower grades	15	@	18

FRESH FRUITS.

Apples in large supply and market very weak. Strawberry receipts are increasing and prices very low, from three to 10 cents wholesale. A few huckleberries from North Carolina have arrived wholesaling at 25 to 30 cents per quart. Several carloads of Florida watermelons are in this week bringing $60 to $70 per 100.

Apples—Russet, bbl.	3 00	@	3 75
Spy	3 00	@	3 75
Ben Davis	3 00	@	4 00
Greening	4.00	@	6 00
Newtown	5 00	@	6 00
Baldwin	3 00	@	4 50
Western, box	1 25	@	2 25
Strawberries, Va., qt.	3	@	7
Carolina	3	@	7
Maryland	5	@	10

BEANS.

Marrow, 100 lbs	4 85	@	5 25
Medium	3 70	@	3 80
Pea	3 20	@	3 75
Red Kidney	5 70	@	5 85
White Kidney	5 65	@	5 75
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

Prime to choice	38	@	40
Common to good	35	@	37
Pacific Coast	18	@	20
Old stock	15	@	18
German crop	63	@	67

VEGETABLES.

Old potato market very weak and lower, sales of good quality running from $2 to $2.50 per 180 pounds, with the outside price extreme. Asparagus low, owing to heavy receipts from nearby. Cabbage selling well, at 75 cents to $1 per barrel. Peas in good demand. String beans generally poor. Lettuce in great surplus.

Potatoes—Maine, 180 lbs.	2 25	@	2 50
State, bulk, 180 lbs.	2 00	@	2 37
Bermuda, bbl.	2 00	@	4 75
Southern, new	1 75	@	4 25
Sweet Potatoes, bu.	40	@	1 25
Beets, 100 bunches	2 00	@	5 00
Carrots, bbl.	1 50	@	3 00
Asparagus, Green, doz.	1 75	@	2 00
White, doz.	1 00	@	1 25
Cabbage, New, bbl. crate	50	@	1 25
Kale, bbl.	25	@	35
Lettuce, half-bbl. basket	25	@	75
Onions—Southern, New, bu.	2 00	@	2 50
Okra, bu	3 00	@	6 00
Peppers, Southern, bu.	1 25	@	2 50
Peas, Southern, bu.	50	@	1 25
Spinach, bbl.	50	@	75
String Beans, bu.	50	@	1 50
Squash, New, bu.	50	@	1 00
Egg Plants, Southern, bu.	1 00	@	2 50
Tomatoes, Southern, 6 bkt. crate	1 00	@	1 75

LIVE POULTRY.

Broilers, lb.	32	@	38
Fowls	15	@	16½
Roosters	9	@	9½
Ducks	13	@	13½
Geese	10	@	11

DRESSED POULTRY.

Chickens, choice broilers, lb.	40	@	45
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	18½
Ducks	8	@	15
Geese	9	@	14
Squabs, doz.	1 75	@	4 25

HAY AND STRAW.

Hay receipts light, and trade barely enough to use up current arrivals. Straw in large supply and 50 cents to $1 lower.

Hay, Timothy No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 00
No. 3	17 00	@	18 00
Clover mixed	15 00	@	20 50
Straw, Rye	16 00	@	16 50

LIVE STOCK.

Native Steers	8 00	@	8 75
Bulls	6 00	@	7 75
Cows	3 50	@	6 50
Calves, prime veal, 100 lbs.	8 50	@	10 50
Culls	5 00	@	6 00
Sheep, 100 lbs	4 00	@	5 00
Lambs	7 75	@	8 00
Hogs	8 50	@	9 00

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	1 11	@	..
No. 2, Hard Winter	1 05	@	..
Corn, as to quality, bush.	70	@	80
Oats, as to weight, bush.	43	@	47
Rye	70	@	73

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	28	@	30
Mixed colors, new laid	24	@	25
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

The Government reports the following average prices of farm products:

	April 15. 1914.	1913.
Hogs, per 100 lbs.	$7.80	$7.94
Beef cattle, 100 lbs.	6.29	6.08
Veal calves, 100 lbs.	7.68	7.38
Sheep, per 100 lbs.	4.96	5.16
Lambs, per 100 lbs.	6.47	6.59
Milch cows, per hd.	59.60	55.34
Horses, per hd.	138.00	148.00
Honey comb, per lb.	.137	.141
Apples, per bush.	1.37	.85
Peanuts, per lb.	.049	.048
Beans (dry), bush.	2.11	2.11
Sweet potatoes, bush.	.92	.94
Cabbage, 100 lbs.	2.23	1.15
Onions, per bush.	1.60	.79
Wool, unw., per lb.	.168	.177
Clover seed, p. bush.	8.06	11.00
Timothy seed, per bush.	2.28	1.74
Alfalfa seed, bush.	6.77	8.36
Broom corn, per ton	89.00	58.00
Cotton seed, per ton	24.17	21.89
Maple sugar, per lb.	.125	.130
Maple syrup, gal.	1.10	1.10
Hops, per lb.	.206	.150
Paid by farmers:		
Bran, per ton	28.50	24.69
Clov. seed, per bush.	9.84	12.90
Timothy seed, bush.	2.95	2.43
Alfalfa seed, bush.	8.17	9.99

*

Candy is made to a large extent in Boston. 30 manufacturers turning out 50,000 tons yearly. One concern alone makes 30,000,000 pounds.

LESTER H. LATHAM, Auctioneer, HILLSBORO, N.H.

AUCTION SALE

THE NOTED VALUABLE MANSFIELD STOCK FARM CHAMPION and BLUE RIBBON PRIZE BROWN SWISS STOCK at ESSEX JUNCTION, VT.

The Farm Machinery and Tools will be sold Wednesday, June 10. The Stock, Horses, etc., Thursday, June 11.

In this herd there will by found such stock as Benjamin C. 3437 bred by E. M. Barton, Hinsdale, Ill. Silken Pride 4476 bred by Fernando Wheeler, Stonington, Conn., and many others by the best breeders of Brown Swiss. In the past few years Mr. Carl Robbins, the former owner, has bought and bred the best blood that could be found in this country. All to be sold without limit or reserve.

For complete description and photos of farm buildings and breeding of stock, write or phone the auctioneer. Homer Parker, resident manager, will show property before sale.

ROYAL S. WENTWORTH, Owner, Chelsea, Massachusetts

QUEEN BEES—Now is the time to get gentle hustling bees and more gilt-edged honey by introducing one of my thoroughbred Italian queens. Send $1. for laying queen with full instructions. Circular free. R. A. NUSBAUM, Duncan Falls, Ohio

FOR SALE—Choice Three-band Italian Queens. Tested—$2; untested, after June 1—$1. Write for booklot. W. K. Rockwell, Bloomfield, Conn.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WOULD LIKE WORK ON FARM—Cannot milk. LLOYD DAVIS, care Albert Fuller, West Valley, Catt. Co., N. Y.

WANTED ALL AROUND BLACKSMITH—Will hire or help set up in business. B. C. WOOD, Wheeler, New York.

WANTED—Intelligent, energetic woman or man to work on mouse farm, July or longer. A. LATHROP, Granby, Mass.

POSITION WANTED BY HOLLANDER—Single; good milker, teamster and acquainted with all farm machines; state wages. Address A. BONS, care A. Pas, De Bruce, N. Y.

WANTED—Position as herdsman; am a Cornell man, with practical experience in Holstein testing, breeding, feeding, and own veterinary; best of references. J. J. HENRY, DeRuyter, N. Y.

WANTED—Position as poultryman or manager of small truck, fruit and poultry farm by young man, strictly temperate; agricultural college training; life experience; references. R. P., care R. N.-Y., 333 West 30th St., New York.

WANTED POSITION — American, single, 30; temperate; worked for four years on truck and dairy farm; can do carpenter work; farmed two years for myself; best reference. Address STEADY, care R. N.-Y., 333 West 30th St. N. Y.

FARMER WITH LONG EXPERIENCE and efficient manager, open for position to take charge of farm; expert agriculturist, dairyman and fruit-grower; men, machinery and tools; American with small family. E. HOWE, Southbridge, Mass.

ORCHARD SPECIALIST—Single, American, age 25; agricultural school graduate; large experience in fruit growing. Specialties: Apple, peach and small fruits. Open for position as manager for up-to-date fruit grower or orchard company. State particulars fully in replying to HOWARD I. EARL, 228 Westfield Ave., Elizabeth, N. J.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

MAPLE COVE FARM—Products direct to consumers. ROUTE 24, Athens, Pa.

FARM FOR RENT ON SHARES—Good location. Address X, care R. N.-Y., 333 West 30th St., New York.

WOULD EXCHANGE EQUITY in attractive suburban income property for rent of farm, stock and tools. E. C. MOORE, Maplewood, N. J.

FOR SALE—Fruit and poultry farm; 32 acres; excellent land; good water; cherries, plums, pears and apples for market; fully equipped poultry plant; 10 minutes walk to station; telephone and R. D. GEO. WHITENACK, Skillman, N. J.

WANTED—A 200-ACRE FARM near railroad, with good buildings and fertile soil adapted to general farming; must be located within 100 miles of New York City and near navigable water; owners only. G. W. K., care R. N.-Y., 333 West 30th St., New York.

FOR SALE—Fruit farm, 140 acres; 600 bearing apples last year; prospect 500 this year. Price $4,000. For particulars apply C. G. ADAMS, Colerain, Mass.

FOR RENT—Couple would rent very reasonable half of a large, modern farmhouse in Southern New England (Rhode Island); high ground; fine view of ocean and country; ideal for elderly couple or party seeking health. Address SUNNYSIDE, care R. N.-Y., 333 West 30th St., New York.

PEACH MOUNTAIN FARM—near Great Serpent Mound, Adams County, Ohio; 572 acres; 10,000 peach, apple, cherry, pear, fruiting now; beautiful location 400 feet above station one mile away; full farm equipment; bargain terms. Write owner, E. E. RICHARDS, Box 563, Columbus, Ohio.

FOR SALE—The East Donegal Poultry Yards; an up-to-date plant, well stocked with poultry and fruit; an old-established business whose shipments include every State in the Union and foreign countries. Reason for selling, the death of the proprietor. EAST DONEGAL POULTRY YARDS, Marietta, Pa.

FOR SALE—Ten-acre farm in village, near Putnam, Conn.; suitable for poultry and fruit; good seven-room house and barn and seven poultry houses; will include one good horse, three wagons, two brooders, 2,000 feet lumber, small tools, and 20 hens (pure-breeds) for $1,700; $800 cash. C., care R. N.-Y., 333 West 30th St., New York.

FARM FOR SALE—Farm of 160 acres, 2 miles from McDonough Village; an excellent dairy farm; good market for milk; land lays level and is easy to till, and under good cultivation; buildings and fences are first-class and in good repair; 150 thousand feet of sawing lumber on the place, mostly hemlock; owner wishes to sell on account of ill health. For price and terms call or address GEO. A. PURDY, Oxford, N. Y., or ALBERT BECKWITH, McDonough, N. Y.

FOR SALE—One of the best dairy farms in Chenango County, 225 acres, in a high state of cultivation; always been occupied by owner, who on account of ill health must sell. Two extra good dwellings; fine 42x90 basement barn, with large shed attached; tool barn, shop, new carriage house, hen house and sheep shed, all painted and equipped with lightning rods; running water in house and barn; large orchard in good condition; 30,000 feet of fine hemlock and large quantity of hard wood; good neighbors and school near at hand; two miles from river; four miles from railroad depot. Price $8,000. C. L. STONE, Oxford N. Y.

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What are the elements which enter into Cadillac reputation?

That the Cadillac is regarded with profound admiration the world over, everyone knows.

There is nothing new in the statement that its reputation is international.

And the high favor in which it is held, here at home, is almost a houshold word.

But it is interesting to dissect the elements which go to make this unique reputation.

Precisely, why is the Cadillac, by common consent, invariably discussed as a car apart from all other cars?

The average owner would probably express his enthusiasm at first in terms of general satisfaction.

His contentment is so complete that he rarely bothers to analyze its component parts.

But the comforts and the advantages which he enjoys are none the less definite and specific.

It would be practically impossible to persuade any Cadillac owner, for instance, that any other car compares with it in riding quality.

This peculiar Cadillac quality—and it is distinct and distinguishably different—has its immediate source in the two-speed direct-drive axle.

But far back of that—underlying it and emphasizing it—is the principle of intense standardization, interchangeability, correct alignment of its parts and units and the harmonious operation of those units with one another.

How much these contribute to the exquisite ease and steadiness of the Cadillac, how much they contribute to its constancy and endurance, and how important they are considered as principles, is indicated by the two awards of the world's most significant motor car honor, the *Dewar Trophy*.

These Cadillac features everyone recalls immediately.

But it is equally interesting and important to remember that the Cadillac is what it is—the standard of the world—because of the features which characterize the car itself:

An engine of 40-50 horsepower which those who know motor car engines recognize as unsurpassed in fineness of construction and in capabilities commensurate with its proportions.

A cooling system so adequate that overheating is practically unknown.

A lubricating system so competent, so simple, so free from annoyance that you scarce realize its existence.

A carburetor so efficient, so flexible that it needs acknowledge no superior.

A clutch so smooth, so velvety in its action, so simple and so dependable that it leaves nothing to be desired.

A system of electrical cranking, lighting and ignition (now in its third successful year on the Cadillac) so nearly 100 per cent efficient that it would be difficult to more nearly approach perfection.

A steering mechanism so steady, so safe and so sure,—possessing none of the attributes which might make it otherwise—that you always feel secure.

Axles so strong, so substantial that they are equal to any legitimate demands.

A spring suspension so soft, so flexible, so yielding that it abundantly justifies the popular saying:—"The Cadillac carries its own good road with it."

A car, in all, designed with such consummate skill and executed with such painstaking care that it will uphold the name of "Cadillac" and all that the name implies.

A car, in all, which embodies in surpassing measure, all of those qualities which make motor car ownership desirable.

STYLES AND PRICES

Standard Touring Car, five passenger	$1975.00		
Seven passenger car	$2075.00	Landaulet Coupe, three passenger .	$2500.00
Phaeton, four passenger	1975.00	Inside drive Limousine, five passenger	2800.00
Roadster, two passenger	1975.00	Standard Limousine, seven passenger	3250.00

All prices are F. O. B. Detroit, including top, windshield, demountable rims and full equipment.

Cadillac Motor Car Co., Detroit, Mich.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII. No. 4259. NEW YORK, JUNE 13, 1914. WEEKLY $1.00 PER YEAR.

A JERSEY GENTLEMAN.

Teacher of Dairying and Determination.

"*WE have with us today*," a Jersey gentleman, Julia's Majesty, A. J. C. C. 89717—the head of the Jersey herd at Deep Spring Farms, New Jersey. Some of you may have attended a banquet or a political meeting at which various notables were to speak. It soon becomes tiresome—the long monotonous round of oratorical hacks who are trotted out to exhibit their mental spavins and repeat their stale jokes and stories.

"*We have with us tonight!*" That is the way the chairman begins, and the audience will brighten up enough to take a look at the new speaker. He is usually some bloodless slouch of a man without enough ambition to square up his shoulders or power enough to keep them squared. The listeners size up his limp nerveless attitude. "There is no speculation" in his eyes. It is evident from his face and form that he has no message to deliver. There will be nothing but platitudes or dodging of the truth from him and his would-be hearers either go out, talk to their neighbors or let their minds go wandering away to more agreeable things.

"*We have with us tonight.*" The chairman repeats the old formula, but this time there comes a man of a different type. His head is up, his shoulders are squared, he looks you right in the eye with that strange spiritual thing which men call personal power. Every listener knows that here is a man with a message—a man who brings a bit of truth cut out of his own experience, and a slice of human nature handed down out of the years. There is something strong and compelling about that eye and carriage, and every man in the room sits up to listen. For power attracts power, and the face of a strong personality will always dominate society.

A JERSEY GENTLEMAN—JULIA'S MAJESTY, A. J. C. C. 89717. FIG. 322.

So when we say, "*We have with us today a Jersey gentleman!*" you look at his face first of all. Here we have the picture of power—strong, masculine and vigorous. Here is no lazy lunkhead or sleepy barnyard boss, but a wide-eyed intelligent king of the herd, full of nerve and pride of royal descent. You never saw a successful racehorse or a prize dairy cow or the father of a high-class business hen who was afraid to look you in the eye, or who went about with a moping, sleepy attitude. On the contrary, such creatures, like this bull, show that touch of wild freedom which has ever given the males of a race or breed the power to dominate and excel. It does not make so much difference where a *man* comes from as where he comes out. He may be rightly classed as a "scrub" as regards his origin, yet by sheer force of personality he may win a place among men which fairly entitles him to the right to "stand before kings." It is different with this Jersey gentleman, for Julia's Majesty comes by his name through the blood of some of the greatest Jerseys that ever lived. Why, if Jersey cattle were human beings this determined looking individual would be a prince of the royal blood. His mother and his maternal ancestors for four generations carried the blood of Julia. The blood of Majesty on the father's side makes him worthy of his great name. This bull has the backing and we see from his face and neck, the power and individuality which gives him value as a breeding sire.

Aside from the great lesson in dairy breeding which this bull and his pedigree teaches we are glad to have this strong, determined masculine face looking squarely into the eyes of our readers. Many of us need the indomitable spirit which this Jersey gentleman shows as we face him. Men can learn much from the so-called lower animals. We wish we had the power to make certain careless, easy-going people go every day and sit down beside a bulldog with a full comprehension of that dog's "message." Such people ought to watch that thick neck, the power of the square jaw and that short nose and the never-die grip of those teeth and realize that Providence had put these things before them as a sermon on the patient, hangdog spirit which they need more than all else. Or, we would like to compel some of these obstinate, selfish, prejudiced characters to sit and watch a woodchuck at its hole. It ought to come to such men in time that they are travelling along the way to the supreme stupid selfishness of the woodchuck. For that creature has been known when hunted by dogs or other animals to run into her hole and push her young ones out one by one to appease the enemy! At any rate we would like to have you keep this picture of Julia's Majesty hanging where you can readily see it. The breeding lesson it teaches and the possibility of herd improvement are wonderful, but the moral and mental lesson may be yet more useful. What? A man learn something of his duty from the picture of a Jersey bull? Why not? Do we not all know times when it would be much easier to shrug our shoulders and say nothing rather than face our duty? Do we not know that the more we shrug and shirk the harder that inevitable duty will become? At such times it will help to have this determined face looking at us and hear the following:

"*We have with us today a Jersey gentleman, Julio's Majesty, and also the gentleman whose duty it is to maintain the majesty of this household.*"

WHY BOYS LEAVE THE FARM.

THE easiest way to explain this puzzling question is to give my own experience. It is as follows:

One sultry July day, while following the plow in my father's cornfield, a happy thought came to me that I could make some "easy money" by harvesting the boneset which grew just over the fence in a piece of waste land. A few weeks later I cut this medicine, cured it very carefully in the shade to preserve its color, stripped the leaves and tops and got it in first-class shape for the market. Then I asked the local druggist what he would pay for my crop of 150 pounds. He said he could not use such a large quantity, and referred me to three prominent dealers in crude drugs. I sent them samples and asked for quotations; my dream of "easy money" vanished, however, when their offer came. The first offered three cents a pound, another 3½, and the last 4½ cents. Having no other choice, I accepted the largest offer and in due time received a check for $5.50. (The jobber had deducted $1.25 for freight.) After paying for the bags I had left just $4.50, about $1.25 a day, the usual wage for a country lad.

Meeting the druggist shortly afterward I asked

him what he charged for boneset. He replied, "Five cents an ounce." Then I got my pencil and commenced figuring. If one ounce cost five cents, a pound would bring 80 cents; at that rate my crop of 150 pounds was worth $120. Then I figured some more and found that the middleman who merely carried my medicine to the consumer got $114.50, while I got only $4.50 for doing all the hard work in the boiling hot sun. Then it dawned on me that I would be silly to stay on the farm and work like a mule for $4.50 when I could go to town and make $114.50 in the easier and more genteel end of the game.

After making this discovery I went home and told my dad that he could never make a farmer out of me, for I was born to be a druggist; so I packed my grip and left for the Ohio State University to take a course in pharmacy. My chum in the country school saw the point too, and left the farm at the same time for Omaha, where he now has two drug-stores and is worth $150,000. I now teach pharmacy in a big university, own a grape fruit grove in Florida, and a cherry orchard in Michigan, and am fairly comfortable. Needless to say that neither of us regrets having left the farm for the easier and better paying end of the game. The foregoing shows very plainly why boys leave the farm. I have given this explanation, not to encourage boys to go to the city and thus escape an intolerable condition but to inspire in them a desire to terminate the unjust conditions.

There is a very simple way to change these conditions, so let me explain: While still in college I got a copy of the 13th Annual U. S. Labor Report, and learned therefrom that practically all of the nation's products are handled on *the same basis as boneset*. By comparing the cost of labor and raw material with the retail price I learned that *it costs from three to ten times more to carry an article to the user than it does to make the article*.

Strange to say, very strange indeed, this astounding fact has not been recognized by our statesmen. However, I am pleased to note that at least one editor is aware of it. The editor of THE R. N.-Y. says "The farmer produces $1.00 wo.th of foodstuffs but gets only 35 cents for it, while the middlemen who merely carry this product to the consumer get 65 cents." This arrangement of the city people for "putting it over" is called a "35-cent dollar." No great skill is required to carry the finished product to the consumer. *Why then, should the middlemen be paid twice as much as the producers?* It is exactly the same as paying an experienced chef $1.00 for baking a cake and a snob of a waiter in a dress suit $2.00 for passing the cake among the guests in the front room. The middlemen are only common, ordinary waiters who, in the world's work, merely pass around the things which other people make by hard labor. They are not entitled, therefore, to such generous pay for so menial a task.

To correct this unfairness of the existing method I have submitted to Postmaster-General Burleson, a plan which will enable him to furnish this distributive service through a Postal Market at a reasonable cost, a cost more in keeping with the menial nature of the work. In the Postal Market all sorts of foodstuffs would be handled in standard packages and grades and the charge would be *just sufficient to cover the actual cost of hauling the product from the farm to the consumer*, via the Postal Market, probably not more than five or 10 cents on the dollar.

Under such an arrangement the farmer would get 90 or 95 cents of the dollar instead of 35 cents. Nearly all of the money that goes to the middlemen would go to *the farmer where it rightfully belongs. In this way alone can the boys be kept on the farm. Make it worth while for them to stay!* As things are now you cannot reasonably expect them to remain, for no one would stay on the farm and work for 35 cents when he could go to town and get 65 cents in the easier and more genteel end of the game. If you would like to have the farmer's income increased three fold in the way indicated, and thereby make farm life sufficiently attractive to keep the boys at home, write to Mr. Burleson and ask him to establish a Postal Market. R. L. GREENE.

R. N.-Y.—Mr. Greene forgets to state that thousands of farmers are already getting more of the 35-cent dollar by direct trade through the parcel post we now have. Let them not only write Mr. Burleson but develop the trade possibilities which they now enjoy.

WE have the report of a farmer who invented an appliance, but lacked the capital to manufacture it. A corporation has infringed the patent, but the farmer would be obliged to mortgage his farm in order to pay a lawyer to fight the case.

ENGLISH WYANDOTTES AS BREEDERS.

I HAVE been much interested in your remarks, as well as Mr. Card's, regarding Tom Barron's White Wyandottes. I can see no use in trying to get up a controversy. I can see no real benefit in anyone trying to prove whether Mr. Barron's birds are straight Wyandottes or not. The fact that Mr. Barron has produced these birds that can beat all comers is sufficient to prove he is a master. The one great thought that occurs to me is just this: Can the progeny of these English birds bred by Americans in America, keep up the good work. That is the real issue from my point of view. The French can beat all comers in raising table fowls. Mr. Barron seems to be able to beat all comers in raising birds that can lay eggs. Well and good; I take my hat off to them, but what about the hundreds of men and women who are and will be sending many dollars for this English stock? Are they going to get stock that will keep up the question? Birds bred to feather and shape are the real backbone to the whole fabric, and the American Poultry Association is the supreme factor of all that has been proven in the poultry world? I feel that those who go in too strong for the English stock will be disappointed, and it won't be Mr. Barron's fault.

There should be no conflict between utility and standard birds, as you call the latter. Anyone, whether standard or utility breeder, can sell birds, but he cannot sell skill. Anyone can buy paper, type, ink, presses, and publish a paper, but in reading THE R. N.-Y. I have arrived at the opinion there is somewhere behind these necessary articles "skill," a real knowledge on how to get out a paper. Change the name, the paper would be just as good, but change the management, and no one can predict the result. No doubt these birds of Mr. Barron's could not win in a show; at the same time I have seen birds that would not win according to the standard produce winners. Now then, can Tom Barron's birds produce birds that can equal his records?

Then again birds as a rule that lay so well are not just the proper breeders; it costs too much energy. I have had some experience along that line.

Let me use a few more lines to congratulate you on your article *re* temperance; it is surely bound to come, this giving up liquor. Men are becoming bolder and now are not afraid to speak out against this evil. I can remember the time at poultry shows drinking was the regular order, not only drinking but drunkenness and today—why, it's only a few who fall down, and they are also looked down on. All things left out just one thing will compel the drunks getting less every year, and that is a purely business proposition. It is bound to come; then there is the nastiness of it, the loss to one's standing, etc., and I trust I'll live to see the day when drunkenness will be only history. I like your paper bully. D. LINCOLN ORR.

R. N.-Y.—As we saw last week, Mr. Barron takes a fair and strong position on this matter. He says in effect—"Here are my birds. They are *layers;* that is all I claim for them, and you are under no obligation to buy them if you have any question whatever regarding their breeding qualities."

IS "BACK TO THE LAND" A FAILURE.

THE back-to-the-land movement is not a failure, although there is a tendency just now to proclaim its end. From 1890 to 1900 there was a decided gain for the country. Since that there has been a check worth looking into. Here in Florida the larger part of migration is made up of Northern farmers, but there is at the same time an increase of those who have been merchants, clerks, school teachers, and not a few ministers. The difficulty all along the line has been the small percentage of those who desire to create homes. A much larger percentage consisted of those who were tired of doing what they were at, or possibly were total failures, and who got the idea that they could enrich themselves out of the land. Three hundred letters came to me in one Winter, about the chances here in Florida. I suppose this large number was due to the fact that I have written two or three books on making homes in the country. But I have never written a book that would mislead the unsettled crowd to imagine it can reap without sowing anywhere.

My answer is invariably, "You can make a living anywhere in the country if you first study the conditions, and are willing to adjust your habits to the requirements of Nature; provided in the next place that you are comparatively healthy, and your family will coöperate with you heartily." There are no two sections in the United States where the conditions are the same. If I had not already a good deal of experience with land and land culture, and considerable knowledge of legumes and soil-making, I would take a Winter in an agricultural college, before gathering in an experience of actual experiment. This applies to old people, both men and women, as well as to young. You must get the knowledge from somewhere, especially the elemental knowledge of gardening and orchard work, or you will make a failure of it. "There is no place on earth today so full of enthusiasm and knowledge combined as an experiment station or agricultural college."

That is what you want, enthusiasm based on knowledge. Do not come here or go anywhere else with a dull suspicion that you are both ignorant and unwilling to do what will be demanded of you. But by all means the chief difficulty, not only here but in every part of the country, is the increased expectation of getting rich. All about me are unsatisfied settlers, who have done nothing for the last three or four years but plant huge fields of melons or sweet potatoes; or invest in orange groves, expecting in every case to become wealthy at once. It was just so in New York, where the country homemakers undertook to get rich on hops and strawberries. Nine out of ten went bankrupt inside five years. One year gives a fine crop of melons, just about enough for the market; and the grower gets through with a full pocket at the end of the season. The next year there will be an over supply of melons, and down goes the price. The speculative grower goes down with it.

Nearby me is the great celery section of Florida, and it has been advertised so faithfully as to bring thousands of planters. Everyone of these planters was after money and not after a home. After two or three years of profitable culture the crash came, and celery was not worth the digging or packing. School ma'ams and school masters and ex-lawyers went back to the city. If you expect to leave city life for country life, there is only one passage for you that will lead to success; and that is you must make a home for yourself and family.

You will be more surprised when I tell you that a country home requires something more than eatable crops. You will not succeed if you cannot induce the birds to coöperate with you. This is not sentiment but facts; and how are you to do this if you do not know one bird from another, and have never cared to understand their meaning and purpose. Is there a brook on your land, I mean the land you intend to purchase? Let me assure you that if you are coming into the country to live, brook power will be of immense importance to you. It can be very cheaply induced to do a lot of barn work, and even light your house.

A recent letter says, "Do you think I can make a success keeping bees, growing vegetables, and raising chickens?" These three things seem easy, but within rifle range of my home there is a chicken establishment, apparently successful, but closing up and selling out as a failure. No money in chickens. I cleared over $150 last year on 40 fowls, and know there is money in fowls. As for bees, they are a very important factor in home-making, to pollenize our fruit, and to furnish us honey. A good home should realize one hundred dollars a year surplus on honey. Some instinct is needed along this line as well as experience. Truck growing is not a matter where one can compete always with success. In all cases you have to know when to back out.

Florida. E. P. POWELL.

AGRICULTURE IN CANADA.

IN Western Canada the cry is "away from wheat." That country has been growing nothing but wheat and oats. This has made it necessary for farmers to pay cash for practically all of their supplies, many of which might just as well be produced on their own farms. "Away from wheat" does not mean giving up wheat growing entirely, but dropping part of it and attempting to produce some other money crop and also part of the supplies which at present must be bought. Among other things, farmers were advised to invest in sheep, and this was done to such an extent that there was a large crop of wool this year. No commercial facilities for handling this wool existed, and new markets must be promptly found. The Department of Agriculture at Saskatchewan stepped in to handle the wool for the Government. Farmers will therefore send their wool direct to the Department and the Commissioner of Agriculture will see that it is marketed properly. Here is a case where if the Government did not act a very large part of this wool crop would be practically given away by the farmers in an unorganized and undeveloped market. Why should not the Government take a hand in such a case?

QUICK FILLING FOR SPRAYER TANK.

Harnessing the Electric Motor.

SOME weeks ago we printed a brief note from F. W. Cornwall of Wayne County, N. Y., telling how water was rapidly pumped into the spraying tank. This thing of rapid tank filling is one of the big problems in successful spraying. With the wind and the weather tricky, we often are held up just when the poison should go on the trees; it becomes vitally necessary to lose as little time as possible in filling the tank. Many a spraying job has been partly ruined by the long delays in obtaining water. In some cases 20% of the time is spent in pumping water by hand, or dipping it up in pails. An efficient job requires a prompt and rapid water-filling outfit. Mr. Cornwall told us how he had solved this problem by the use of an electric motor for raising the water. The two pictures at Figs. 324 and 325 show something of the way this works. The first one shows a powerful pump with the electric motor in place. This is put down into a brook or creek which could not be reached directly from the spraying tank. Happily in this case there is an electric current which can be wired down to the motor, so as to give the necessary power. Then when it is ready the power is applied, and the water is rapidly thrown up, as shown in the other picture, directly into the tank, saving more than half the time formerly spent in obtaining a water supply.

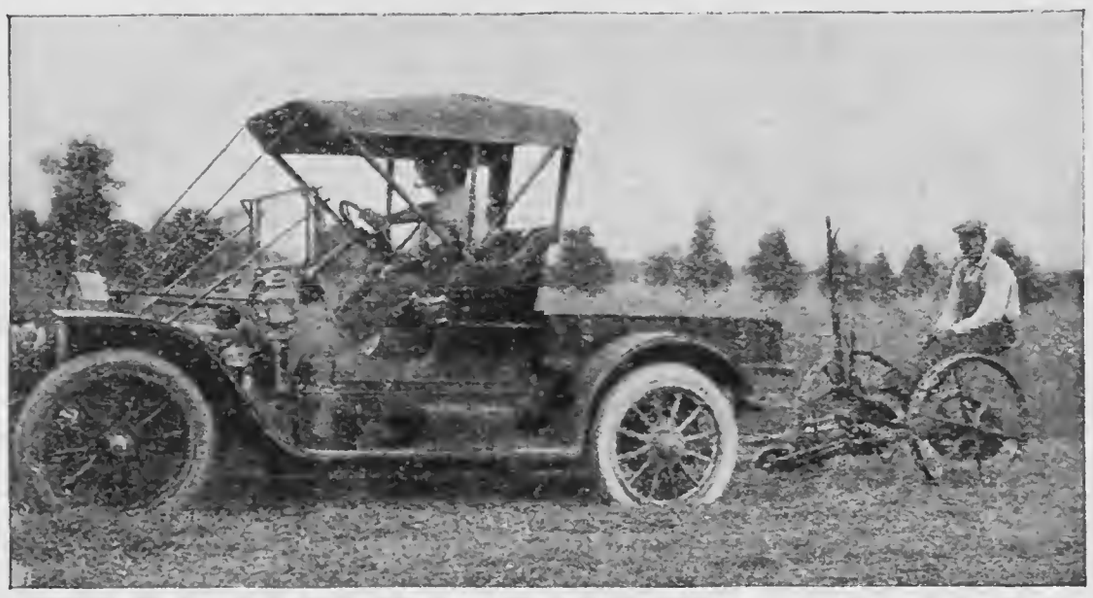
In another case, on a nearby farm the electric current is used to pump water up into a large tank. Then the sprayer is driven under the tank or below it, and the water rapidly runs in through a large pipe. We have seen half a dozen different devices rigged up by various farmers to meet the requirement of rapid tank filling, for everyone who has spraying to do realized the absolute importance of a quick, strong water supply. As has been said, the worm waits for no man. The weather is no respector of persons, and the wind pays no attention to the proprieties. As man is master of no one of these three things, it simply becomes necessary for him to become as efficient as possible in the few things over which he may obtain control, and the water supply is certainly one of these.

MOTOR CAR AND MOWER.

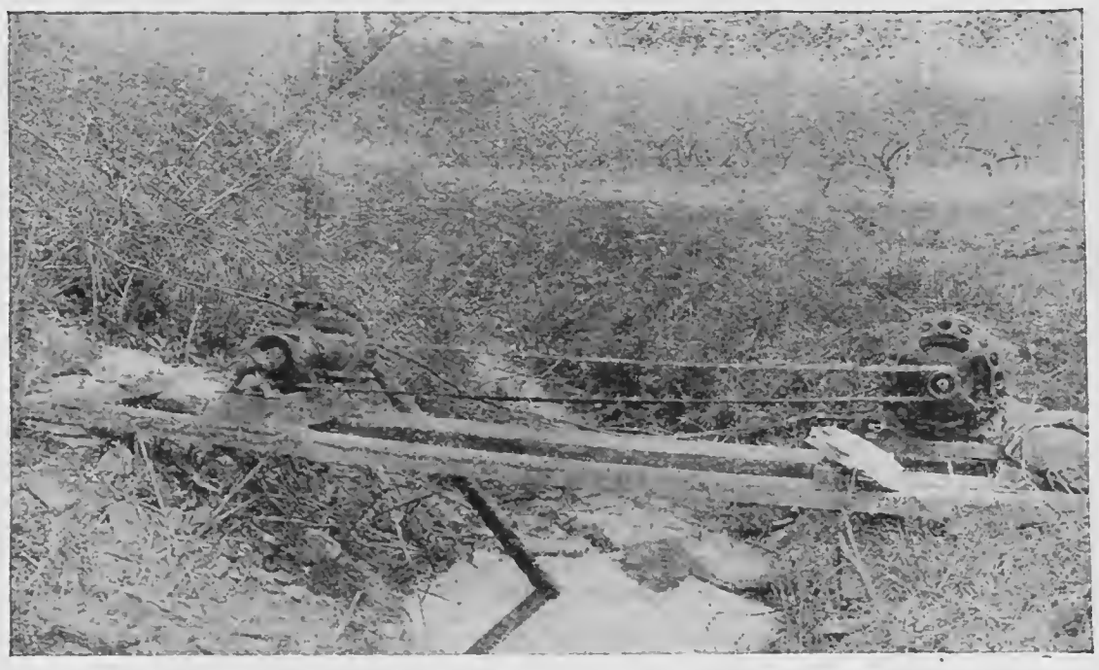
ONE of our readers driving along the road last year, saw across the field the outfit pictured at Fig. 323. He went close to it and took a picture. Here we have an ordinary driving car arranged so as to provide the motive power for the mowing machine. A short tongue is put on the mower and fastened so that the machine follows the car. One man sits on the machine to guide it properly, while the car is driven by a careful driver. With the mower knives kept sharp, this outfit travelled about one-third to a half faster than the average team of horses, and did excellent work, stopping neither for sun, nor to be watered or fed. As a rule, it requires a man of considerable mechanical skill to fit up an outfit of this sort so that it will work properly, and as a rule we do not advise the average man to tinker very much with an expensive car in his efforts to make it do more than carry matter swiftly about the country. Where a man has the skill, however, and enough knowledge of mechanics to fix the attachment properly, there is no doubt that the car can often be used for the lighter jobs at farm work.

AN EASTERN MAN IN NEBRASKA.

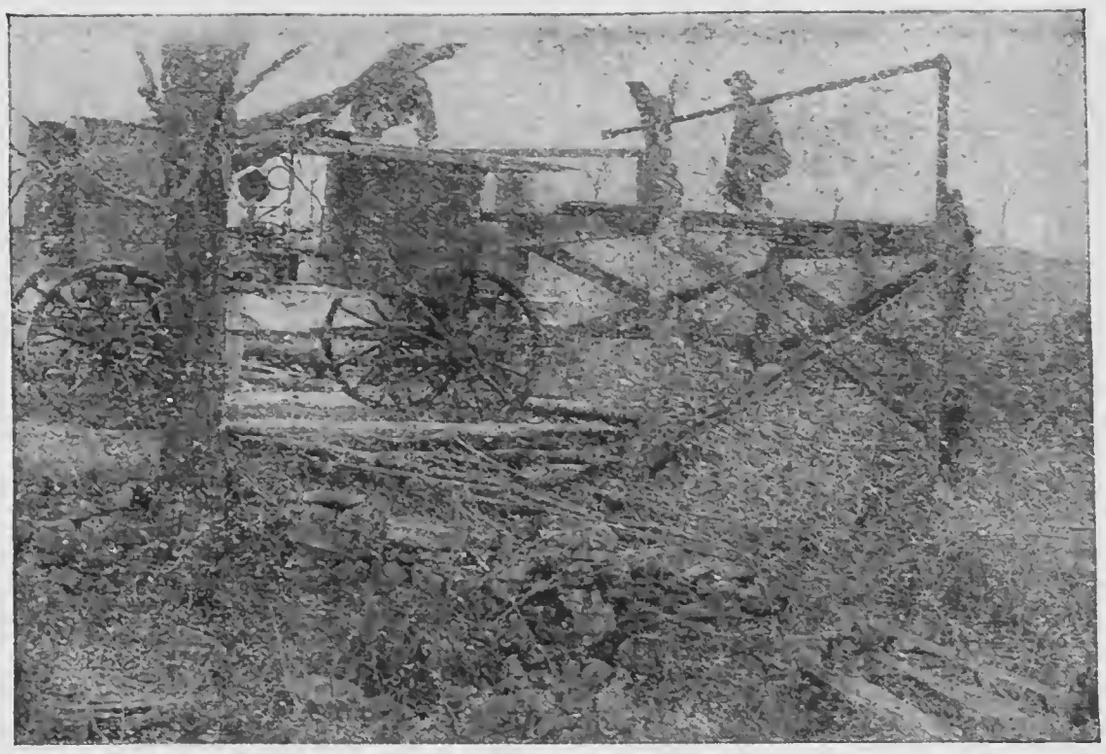
IN regard to stock—horses, cattle, sheep and hogs are sold at private sale, auction, to traders from the large markets, and to local traders, but the price is based on the South Omaha and St. Joe market, from which nearly every farmer who handles stock at all gets daily reports from his commission man, either by letter or by subscription paid by commission man to the market journals. On cattle, sheep and hogs the shipper gets the value set for the day by the big packers, less a commission of about $12 a car, and the business is fairly honestly conducted. One cannot sell except through a commission firm, but can buy from either the regular firms or speculators. There is on every load of feeder stock the selling commission, usually a speculator's profit, and usually a buying commission. I expect you are familiar with the process, but I will give my view of it. The horse sales are too crooked for a square pen, and are held in a ring, and jumping the bid by the auctioneer is so common as to excite no comment. Each horse is described and blemishes told as he is led in, but "a little rough about the hock" may mean a cripple from curb or spavin, and a little cut on the leg may mean a barb wire cut to the bone. However, they usually deliver the horses you buy and load them on the cars for you, so they compare favorably with the New York dealers as frequently described in THE R. N.-Y.



USING THE CAR ON THE MOWING MACHINE. FIG. 323.



PUMPING THE SPRAY WATER BY ELECTRIC POWER. FIG 324.



QUICKLY FILLING THE SPRAYING TANK. FIG 325.

This is more of a beef and grain than a dairy country, and most of the milk as such is sold direct to the consumer by the producer, who runs a retail route of his own with the usual overlapping, each man going all over town. The general farmers sell cream to the ice cream factory. I do not know the price. Others trade butter to the grocers at more than it is worth, 20 to 25 cents per pound, and it is barreled and sent to renovators. Eggs are sold to the grocers at 10 to 15 cents per dozen, occasionally as high as 25 cents in November and December. Poultry to dealers at three to four cents under Omaha wholesale per pound. There are a great many apples raised here, but mostly by general farmers, who neglected the orchards and sold the whole crop on the trees to buyers from the larger cities at a purely nominal price. The last few years have seen a great improvement in growing methods, and last year an association was formed which sold the crop from the sprayed orchards at from $1.50 to $2.50 per barrel F. O. B. Nebraska City, buyer furnishing one man in each packing crew to oversee and help pack. The association also buys spraying and barrel material, and is proving its value. The local market is well supplied with garden produce by nearby gardeners, many of whom peddle their own, while some sell to the stores. On this place of 500 acres I shall have 40 acres for truck and canning factory. The factory pays $7 per ton for sweet corn, 30 cents per bushel for tomatoes and $3 per ton for pumpkin. We have a man handling the garden produce, except for canning, on a commission of one-third the selling price, he doing all the gathering, preparing and delivering, but using our team and wagon. Bunch stuff brings 30 to 40 cents per dozen from the stores, and five cents retail. Tomatoes start at 10 cents per pound from stores and drop to 30 cents per bushel. Cabbage starts at four cents from stores and drops to nothing.

Sometimes we ship a little truck to Omaha, but the firms there do a wholesale as well as commission business, pay what they please, make returns when they get ready, with no control whatever, so the results are not always satisfactory. The staple crops here, are corn, wheat (Winter) and Alfalfa, with small amounts of Spring wheat, oats, prairie and Timothy hay. I am a town-raised factory hand from Massachusetts myself, but have had charge of large farms for the past 12 years, and this country is the best I have seen for the three staples above, and high-flavored long-keeping dessert apples such as Jonathan, Grimes Golden, and standard market apples, as Ben Davis, Winesap, York Imperial and Black Twig. C. E. DWYER.

Nebraska.

MANURE OWNERSHIP IN CONNECTICUT.

I THINK your answer to J. K., on page 691, as to manure, must be modified in Connecticut. I bought a farm here some years ago, and after the contract was signed, the seller raised the question about the manure. Thinking there was no doubt on the point, I offered to leave it to a well-known local lawyer, who said that in this State manure was personal property and could be removed by the seller of a farm. This settled my own case, but having been a lawyer, and being surprised that Connecticut should be in such a very small minority on the question, I took the trouble to look it up.

I found that about 75 years ago, if my memory serves me rightly, the highest court in the State had expressed an opinion that manure was personal property. This question was not involved in the decision of the case then before the court, and the expression of opinion is, therefore, known as a dictum, has no binding force on the court if the question should come before it again, and, technically, leaves the question still open in the State, as there has never been another case upon it. I say technically the question is open, since the highest court might, or might not follow the old dictum. Practically, however, lower tribunals would probably consider themselves bound to follow an expression of the opinion of the highest court, so that it would be necessary to carry a case to that court to secure any other decision. This would probably involve more expense than the value of the manure, so that we must be content to see Connecticut in a situation where, as you say, only New Jersey and North Carolina agree with her and where she gives encouragement to a bad principle of farming. The simplest way to change matters would be to get the Farmers' Club in the Legislature to get together and pass a law declaring manure made on a farm to be a part of the real estate, and to pass as such. A. F.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

PRINCIPLES OF SALESMANSHIP.

"I BELIEVE a neat well-painted wagon is an essential to success in huckstering, as a neat well-arranged store front is needed by the grocer to command trade," is the opinion of Jay Bates of Ashtabula County, Ohio. "If one is going in the business, he should see that his stock is clean, well arranged and is free from defects or injury," declares Mr. Bates. "The young man who engages in the business not only should possess a neat-looking wagon and team but should dress well himself. The clerk in the city grocery, should he be poorly dressed and should he be unkempt and uncleanly about his appearance would lose business for his store, and the huckster who goes about in his gardening garments would soon gravitate toward a low-class trade, and this would finally fizzle out. It is a principle of salesmanship that good appearance paves the way for good sales, will keep old customers and add new ones. I believe in wholesaling as much as possible. I have the town divided, and on one side of a certain railroad I

MAKE THE HUCKSTER'S WAGON NEAT.

wholesale, and on the other side, such goods as I may have left I retail. In this way I do not compete with the dealers who buy from me. It is as unethical for the huckster to sell in territory where he wholesales, as it is for a wholesale house to retail in territory in which it supplies local dealers." WALTER JACK.

Ohio.

Cement Wall.

How much gravel should be mixed with a bag of cement for a cellar wall, to fill the form with large rocks? How thick should the wall be to support a cottage on rocky soil? A. H. D.

Gray, Me.

A good proportion for such a wall is one part of cement, 2½ parts of sand and five parts of gravel or broken stone, these proportions being by measurement, or bulk. Sometimes bank gravel may be had, which contains sufficient sand to make it unnecessary to add this as a separate ingredient; in that case, use one part of cement to five of the natural sand-gravel mixture. Ten inches is a standard thickness for cellar walls, but eight inches would be ample in rocky soil and for a medium-sized house. By permitting the use of larger stones as filling, the wider wall might be more satisfactory than the narrower one. Such a wall should rest upon a footing course, or a layer of concrete six to eight inches thick and extending the same distance from the wall upon either side. M. B. D.

Filler for Homemade Fertilizer.

What can I use as a filler to keep home-mixed fertilizer from absorbing moisture and getting lumpy? Salts like nitrate of soda, ammonia sulphate and muriate of potash seem to make mixture this way. Would land plaster help? What do fertilizer companies use as a filler? J. H.

Glenarm, Md.

The experience of J. H. in having his fertilizer lump and harden after mixing is one of the disadvantages of home-mixing of fertilizer when only high-grade materials are used. However, this trouble is not confined alone to the home-mixed fertilizer—that sold on the market often does the same thing. Such materials as muriate of potash, kainit, nitrate of soda, calcium nitrate, etc., absorb water, and mixtures in which they occur are liable to harden upon standing for a few weeks. Fertilizer companies prevent this by properly combining water-absorbing materials with those that do not, but often they use some inert materials that will hold water and prevent caking. For this purpose there is perhaps nothing better than fine dry muck or peat. For the farmer there is perhaps nothing better than gypsum, fine dry sand, dry coal ashes, cinders, dry sawdust and even fine dry earth. Lime or wood ashes should never be used unless the farmer is sure he knows what he is doing. When a mixture contains considerable quantities of bone meal or cottonseed meal, no filler or drier will be needed.

Why Not Cover Crops?

Enclosed is a Hairy vetch plant which we grew for the first time on our farm last Winter, along with clover, rye and turnips. The plant sent is comparatively small, but shows a larger nodule than most of them. Some of the plants are above the knees at this date (May 10) and all are well filled with nodules. So far as we know, vetch has never been grown on this place before, neither has Crimson clover. The ground has not been inoculated; still a two-horse plow will not cover it without a chain. I will back you in your statement on page 698, as I believe mine will equal it.

May's Landing, N. J. T. W. K.

This vetch measures 18 inches from the ground to the tip. It was a vigorous plant, and the roots were well covered with nodules. Such a crop as this would without question take the place of five tons of stable manure, and in connection with the other crops will easily cover the Hope Farm man's claim of giving the value of 10 tons of good farm manure. There is no question about the value of such a crop when plowed under. It grows right on the spot, the roots work all through the ground, it adds no weed seeds to the soil, does not require hauling or spreading, enables a farmer to plow the ground earlier than he otherwise could, and gives him encouragement in half a dozen other ways. Thus it is strange that our Eastern farmers will ever permit a corn field, or a potato field, to remain bare through the Winter. The loss from leaching is so evident, and the gain from putting under the cover crop is so easy to see, that it seems astonishing that farmers will not adopt this simple plan of letting nature play the part of manure spreader and manure giver.

A Farm in Vermont.

THE R. N.-Y. has an article, on page 395, headed as above. Vermont is over one-half mountain; along the base of these high mountains run foot hills at an elevation of 500 to 1,000 feet. On these foot hills is good land for potatoes and grass, oats, buckwheat and clover, but above 500 feet elevation corn seldom gets ripe. The evergreen timber line is about 1,000 feet elevation, and above that cultivation stops because of the short Summer and the early and late frosts. Pastures run up to 2,000 feet elevation and are good perpetual pasture.

The valleys are about 100 to 200 feet elevation, and are very rich, warmer and productive, but narrow, and the land is worth $100 an acre, while the foot hills and mountain sides, when the timber is gone, are worth scarce $5 an acre. There are thousands of farms for sale for less than the house and barn are worth. These farms are cold sour land, all worn out and abandoned. Vermont is the best watered State—cool springs, mostly soft water, with pure air and scenery unsurpassed. But you should see a farm in Summer, when the crops are growing to see what it is. Apple orchards on our mountain sides are not a success. A. L. B.

So. Dorset, Vt.

May 30. Our nearest markets are Wilkes Barre and Scranton; following prices are what we farmers receive: Butter 35 at customers. Potatoes 85 to $1; apples 50 to $1.25; eggs 25 in Summer, 40 in Winter. Hay $15. Cattle $40 to $75. Chickens 14, live weight. Veal calves 8½ to 9; pork 9; horses $225 to $250, heavy draft horses. A. H. R.

Vernon, Pa.

May 29. Apples blooming generally full, although the crop was large in this section last year. Pears are the same or more so. Peaches, in this immediate vicinity generally show a good set, and hardly any blossoms seem to drop. Currants are looking very well. The recent very warm weather has broken the price of asparagus, which has kept up remarkably well, 12 cents being low, but it is now two or three cents below that. Cutworms appear to be less troublesome than during the last three or four years.

West Barrington, R. I. F. T. J.

May 23. Secretary Whately of the Virginia State Horticultural Society reports that the general prospect is for a large apple crop in Virginia. A heavy drop of some varieties is reported as now in progress in some localities heard from, and this may quite possibly be general. However, many reports say trees are so heavily loaded that thinning will be necessary unless a considerable number drop off. Condition of crop is generally good. Twig blight is reported from some districts, especially on Pippin and York Imperial trees. The export season is now just over. In the season 1913-14 there were 1,764,163 barrels exported, against 2,764,409 barrels in 1911-12, and 2,959,633 barrels in 1912-13.

May 16. Land is selling from $125 to $200 an acre; there was a small place sold for $250 per acre. Horses $125 to $200 apiece. I saw a team of brood mares sold at auction for $650. Beef cattle $6.25 to $6.75 per cwt. Calves 7½ cents per pound; milch cows $50 to $80. Cream around 26 cents per pound; dairy butter 23; eggs 17. Old hens about 12 cents a pound; hogs $7.25 to $7.75 per cwt. Apple trees did not bloom very full around here; cherries and plums bloomed very full. Strawberries shipped in selling at 15 cents per box. Hay $10 per ton. Corn 60 to 65 cents per bushel. Oats 35 to 40; potatoes, old, at $1.20. The corn is not all planted as yet; it has been cold and wet here. C. G. H.

Anamosa, Iowa.

COMING FARMERS' MEETINGS.

Pennsylvania State Horticultural Association, Summer meeting, State College, Pa., June 17-18.

Massachusetts State Board of Agriculture, Annual Summer Field Meeting, Hood Farm, Lowell Mass., June 24.

American Association of Nurserymen, Cleveland, Ohio, June 24-26.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22-24.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Associations, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

"I SEE you have announced me as the world-renowned orator," said the gifted speaker. "Yes," replied the chairman. "We had to do something to make you seem important. Nobody around here ever heard of you."—Washington Star.

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Spraying Vegetables.

1. What are the best ingredients to mix together for spraying early tomatoes, for blight and bugs, and the number of pounds of each ingredient to 50 gallons of water? 2. I wish to spray my watermelons for blight, bugs and lice. Can you inform me what to mix for the purpose without destroying the vine? 3. I wish to put arsenate of lead on my sweet potato sprouts this year as I wish to plant them from the bed and spray by putting the arsenate of lead in a bucket of water, and dipping the tops of the sprouts into it as I pull them. How much arsenate of lead should I put to a bucket of water, or how much arsenate of lead should I use if I spray the sprouts before I pull them? F. A. S.

Clarksboro, N. J.

1. The best preparation for spraying early tomatoes for bugs and blight is Bordeaux mixture with arsenate of lead added. The Bordeaux is for the blight and the arsenate of lead for the bugs. A very good formula for making Bordeaux is to make up a 4-5-50 mixture; that is, four pounds of copper sulphate (bluestone) and five pounds of lime to 50 gallons of water. Place the copper sulphate in a cloth bag and suspend near the top of the water in a bucket or barrel, where it should dissolve in a few hours. Use good quicklime and slake slowly with a small quantity of water, dilute to 25 gallons and strain. Dilute the copper sulphate solution to 25 gallons and add together the two dilute solutions to make 50 gallons of the mixture. To this add three pounds arsenate of lead. Dissolve the arsenate of lead in a small pail first. It will then mix with the large quantity very readily. The standard formula for Bordeaux is 4-4-50, but it is safer to have more lime so as to take up all free copper, thus lessening danger from burning. We find, however, that the home mixing of spraying materials is quite a nuisance in a busy time and we prefer the commercial mixtures. There are a number of good makes. Whatever the brand it is best to follow directions on the containers in preparing these ready to mix materials, and there will very likely be little injury from burning. We use the same strength on tomatoes as is recommended for white potatoes.

2. The Bordeaux and arsenate of lead mixtures are about as good a spray as you can get for watermelons to be used for bugs and blight. It will not be effective for lice. We have never found anything for killing lice that would give satisfactory results. This year, however, we are going to try Black Leaf 40. This is a tobacco extract, made in Kentucky. I talked with a cantaloupe grower from Delaware last Summer and he was very successful in using it. I do not know just how it will do in our hands but we are going to try it on a small scale and see.

3. I believe you will get better results and save time by spraying your sweet potato sprouts in the bed before pulling. Arsenate of lead used at the rate of three pounds to 50 gallons of water will be about right. In dipping plants you are very apt to get some of the mixture on the roots, and burning is much more likely to occur that way than if plants were sprayed. TRUCKER, JR.

FAIRS IN NEW YORK STATE, 1914.

New York State Fair, Syracuse, Aug. 31-Sept. 5.
Albany, Altamont, Aug. 18-21 incl.
Allegany, Angelica, Sept. 15-18 incl.
Cuba, Cuba, Sept. 22-25 incl.
Wellsville, Fair Association, Wellsville, Sept. 1-4 incl.
Broome, Whitney Point, Aug. 11-14 incl.
Binghamton Exposition, Binghamton, Sept. 29-Oct. 2. incl.
Cattaraugus, Little Valley, Sept. 7-11 incl.
Franklinville, Franklinville, Undecided
Olean, Olean, Sept. 7-11 incl.
Cayuga, Moravia, Aug. 25-28 incl.
Chautauqua, Central Park, Dunkirk, Sept. 1-4 incl.
Chemung, Elmira, Sept. 7-11 incl.
Chenango, Norwich, Aug. 25-28 incl.
Afton, Afton, Sept. 8-11 incl.
Riverside Society, Greene, Undecided.
Clinton, Plattsburg, Sept. 7-11 incl.
Columbia, Chatham, Sept. 7-11 incl.
Cortland, Cortland, Aug. 18-21 incl.
Delaware, Delhi, Sept. 8-10.
Catskill Society, Margaretville, Aug. 18-21 incl.
Delaware Valley, Walton, Sept. 1-4 incl.
Deposit, Deposit, Undecided.
Dutchess, Poughkeepsie, Sept. 7-11 incl.
Erie, Hamburg, Sept. 22-25 incl.
Essex, Westport, Aug. 25-28 incl.
Franklin, Malone, Sept. 15-18 incl.
Genesee, Batavia, Sept. 16-19 incl.
Greene, Cairo, Aug. 18-20 incl.
Herkimer, Herkimer, Sept. 7-10 incl.
Jefferson, Watertown, Aug. 25-28 incl.
Cape Vincent, Cape Vincent, Sept. 1-4 incl.
Lewis, Lowville, Aug. 25-28 incl.
Livingston, Hemlock, Oct. 1-3 incl.
Madison, Brookfield, Sept. 21-24 incl.
Four Co., De Ruyter, Aug. 11-14 incl.
Monroe, Brockport, Sept. 2-5 incl.
Rochester Exposition, Rochester, Sept. 7-19 incl.
Montgomery, Fonda, Sept. 29-Oct. 3 incl.
New York, American Institute, New York, Nov. 4-6 incl.
Niagara, Lockport, Aug. 25-29 incl.
Oneida, Rome, Sept. 22-24 incl.
Vernon Agricultural Soc., Vernon, Sept. 29-Oct. 1 incl.
Boonville Fair, Boonville, Sept. 8-11 incl.
Onondaga, West Phoenix, Aug. 18-21 incl.
Ontario, Canandaigua, Sept. 17-19 incl.
Gorham Agri. Soc., Reeds Corners, Oct. 1-3 incl.
Naples Agri. Soc., Naples, Sept. 10-12 incl.
Orange, Middletown, Aug. 25-28 incl.
Orleans, Albion, Sept. 9-12 incl.
Oswego, Fulton, Aug. 11-14 incl.
Sandy Creek Society, Sandy Creek, Aug. 18-21 incl.
Otsego, Cooperstown, Sept. 22-24 incl.
Morris Fair Assn., Morris, Sept. 29-Oct. 1 incl.
Oneonta Union, Oneonta, Sept. 14-17 incl.
Richfield Springs Society, Richfield Springs, Undecided.
Schenevus Valley Soc. Schenevus, Aug. 11-13 incl.
Putnam, Carmel, Sept. 1-4 incl.
Queens, Mineola, Sept. 22-26 incl.
Rensselaer, Troy, Aug. 18-21 incl.
Agri. & Liberal Arts Soc., Nassau, Sept. 15-18 incl.
Richmond, Dongan Hills, Sept. 2-7 incl.
Rockland, Orangeburg, Sept. 7-11 incl.
Rockland Co. Assn., New City, Aug. 31-Sept. 4 incl.
St. Lawrence, Canton, Sept. 15-18 incl.
Oswegatchie Soc., Ogdensburg, Aug. 31-Sept. 4 incl.
Gouverneur Agri., Gouverneur, Aug. 18-21 incl.
Raequette Valley, Potsdam, Sept. 8-11 incl.
Saratoga, Ballston Spa, Aug. 24-28 incl.
Schoharie, Schoharie, Aug. 24-27 incl.
Cobleskill Soc., Cobleskill, Sept. 21-25 incl.
Schuyler, Watkins, Sept. 8-11 incl.
Seneca, Waterloo, Sept. 10-12 incl.
Steuben, Bath, Sept. 22-25 incl.
Hornellsville Fair, Hornell, Aug. 25-28 incl.
Southern Steuben Soc., Troupsburg, Sept. 1-5 incl.
Suffolk, Riverhead, Sept. 15-18 incl.
Sullivan, Monticello, Aug. 18-21 incl.
Tioga, Owego, Sept. 1-4 incl.
Northern Tioga Soc., Newark Valley, Aug. 4-6 incl.
Tompkins, Ithaca, Sept. 15-18 incl.
Dryden Agri. Soc., Dryden, Sept. 8-11 incl.
Union, Trumansburg, Aug. 25-28 incl.
Ulster, Ellenville, Aug. 11-14 incl.
Warren, Warrensburg, Sept. 1-4 incl.
Washington, Hudson Falls, Sept. 8-11 incl.
Cambridge Valley, Cambridge, Aug. 31-Sept. 4 incl.
Wayne, Lyons, Undecided.
Newark Fair Assn., Newark, Sept. 10-12 incl.
Palmyra Union Soc., Palmyra, Sept. 24-26 incl.
Westchester, Mt. Kisco, Oct. 1-3 incl.
White Plains Fair, White Plains, Sept. 16-19 incl.
Wyoming, Warsaw, Aug. 18-21 incl.
Silver Lake Agri. Soc., Perry, Aug. 11-13 incl.
Yates, Penn Yan, Sept. 15-18 incl.
Dundee Fair Assn., Dundee, Sept. 29-Oct. 1 incl.

May 21. Apples just getting in blossom; grass crop looks good. The biggest and best crop of maple sweets for years. Hay $20; potatoes 75; no apples. Milk down to $1.30 per hundred, goes to Boston. Butter 30; eggs 20; pigs $4; cows $30 to $90; veal eight cents. Roads good, city people coming as usual. Help high and scarce at $2 per day, both men and women. A. L. B.

So. Dorset, Vt.

May 21. Good milch cows from $75 to $100 each; horses from $150 up to $250. Beef cattle, live, 6½ cents a pound; beef, dressed, 11 to 12. Hay about $12 per ton. Butter 20; eggs 17.

Beavertown, Pa. C. W. B.

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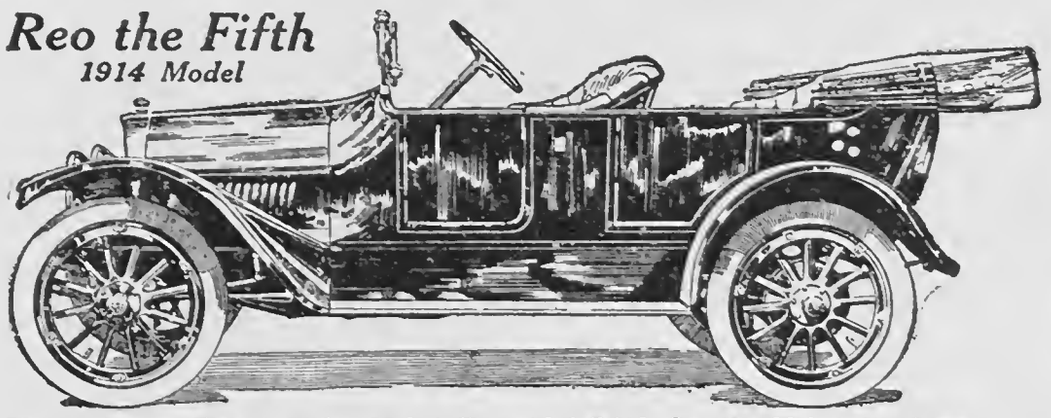

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LEGAL MATTERS.

Witness of Signature.

I am in partnership with a man who is a caretaker of an estate long since in disuse. He had a number of hens, a few incubators, brooders and so on, and I gave him one hundred dollars as a half interest. He gave me a receipt for it stating I owned half of his stock of poultry, incubators, etc. It was dated and signed by him and the place designated, the location of the plant, I mean, but it was witnessed by no one, just his signature. Is this legal? Can I withdraw at any time? The receipt does not state any duration. Is such an instrument necessary to be drawn by a notary, and would you advise me to have the receipt witnessed? F. L.

Long Island.

This seems to be legal if your partner made his statement of the terms full enough to cover your interest. You cannot withdraw at any time anymore than he can. An instrument such as this does not have to be drawn by a notary. It would be better for you to have the signature of your partner on the receipt witnessed as then you have a disinterested party to prove he signed the paper, but it is good of course without a witness. Anyone who knows his signature, however, can state that it is his signature.

M. D.

Dispute Over Division Fences.

I bought 100 acres of land here in Virginia in 1884, and in 1888 traded 70 acres of it. The division line was surveyed by county surveyor employed by the buyer, who afterward sold it, when it was surveyed by another county surveyor. It has since been twice sold, and the division line has always been accepted by all owners until now. The present owner has just had it surveyed and claims about 21 feet in width on main road. What can I do? He threatens me with suit to recover "his" property. Can he change the division line after 26 years' undisputed possession and all previous owners satisfied?"

Virginia. J. H. C.

If the description in the deed which you gave to your grantee was correct, and the description was correct after a second survey, there seems to be no chance whatsoever for the present owner to succeed in an action against you. It certainly would be poor policy to give up land after so long undisputed possession without fighting for it. It would be well to find out whether the mistake in the survey was made by the surveyor employed by the present owner or by the other two surveyors. If there was a mistake in their survey and the line fence was put in its present place through a mistake, there might be some chance for him to recover. Otherwise it does not appear how you would be liable for the mistakes of the surveyors nor why the present owner should come to you instead of to his grantor, who, if anyone, would be directly liable to the present owner.

M. D.

Points of Law.

The telephone company has a guy wire attached to an apple tree. Can I have it removed? The owner stated she did not give the company the right to attach wire to apple tree. She stated she was willing to have it removed, but did not want any trouble with telephone company. R. T. B.

New York.

If the telephone company attached their guy wire to the apple trees without authority, they are a continuing trespasser and the owner may remove the wire at any time without notice; but the best way would be for the owner to write to the company that she wished to have the wire removed, and that if it is not done by a certain date, she will have it removed herself.

Spraying Law in Ohio.

What is the law of Ohio as regards spraying fruit trees, and penalty where spraying is not done? G. S.

Waynesfield, O.

The law follows:

Be it enacted by the General Assembly of the State of Ohio:

Section 1: That sections 6441-1 and 6441-2 of the General Code be amended to read as follows:

Sec. 6441-1. Whoever being the owner or manager of an orchard, or of one or more fruit trees shall spray or cause to be sprayed said trees one or more times during the period from November first to May fifteenth with some suitable preparation for the destruction of the San José, oyster shell or scurvy scale.

Sec. 6441-2. Whoever knowingly violates this act shall be fined not less than five dollars nor more than one hundred dollars for each year such spraying is not performed. It shall be the duty of the prosecuting attorney of the county in which any violation of this act may occur or the attorney general upon the request of the State board of agriculture or its successors to prosecute all violations of this act.

Section 2. That said original sections 6441-1 and 6441-2 of the General Code be and the same is hereby repealed.

EVENTS OF THE WEEK.

DOMESTIC.—With seven dead, thousands of feet of railroad track washed out and many persons driven from their homes in the lowlands of Texas, the flood situation was more serious, May 28, than it has been at any time since last December. A dozen rivers in the State were on a rampage. Property loss in south and southwest Texas is very heavy. Mexicans at Brownsville and elsewhere along the Rio Grande have been forced out by the flood water of that stream.

The Interstate Commerce Commission announced, May 28, that it will undertake an inquiry into the financial relationship existing between the Baltimore and Ohio and the Cincinnati, Hamilton and Dayton Railway. In the Senate a resolution was introduced by Senator Norris of Nebraska calling upon the Attorney-General to advise the Senate whether or not the New York Central and Hudson River Railroad and its subsidiaries are in an unlawful combination in restraint of trade. The Norris resolution asks further, if the Attorney-General answers in the affirmative, why he has not proceeded against this system under the Sherman anti-trust law to enforce a dissolution.

The Canadian Pacific Railway steamer Empress of Ireland was sunk at 2.30 a. m., May 29, in the St. Lawrence River, 30 miles east of Father Point, after a collision with the collier Storstad. The Empress of Ireland, which was rammed amidships, sank within 14 minutes; the Storstad reached Quebec, though badly damaged. Only 452 of the 1,476 persons on the large steamer were saved. The almost immediate sinking of the big passenger steamship indicates that the collier must have torn half way through her, crushing the outer cabins and opening up and flooding the engine room immediately. There was practically no time to launch the boats which had not been crushed in the collision. Help was given by the Dominion steamship Eureka and the mail steamer Lady Evelyn, which were called by wireless during the few minutes before the steamer went down. There was a sudden fog at the time, due to great quantities of ice in the Gulf of St. Lawrence. The Empress of Ireland, which was one of the finest of the Canadina Pacific fleet, sailed from Quebec a few hours before the collision. The Storstad, a Norwegian vessel was engaged in carrying coal from Nova Scotia to Montreal and Quebec. Responsibility for the St. Lawrence disaster will not be fixed without a bitter controversy between the two ship commanders concerned and their partisans. Capt. Kendall of the Empress of Ireland blames Capt. Andersen of the Storstad and is accused by Andersen. Each is supported by his crew. A Government commission will take evidence regarding it. Off Father Point, at the scene of the disaster, launches are cruising and waiting for bodies to appear on the river's surface. It is likely that the hulk of the Empress of Ireland will be shattered by dynamite so that hundreds of corpses may be freed and $1,000,000 worth of silver bullion be salvaged.

FARM AND GARDEN.—The Department of Labor has requests for 85,000 men to go to Oklahoma, Kansas and Missouri to help harvest the wheat crops. Secretary Wilson received a telegram, May 28, from Labor Commissioner John T. Fitzpatrick of Missouri, saying that it will require 30,000 men to handle the wheat crop, that the early harvest will begin about June 15 and that should the drought continue the harvest will begin earlier. Wages from $2 to $3.50 a day, according to experience, class of work and condition, will be paid. Director W. I. O'Brien of the Kansas State Employment Bureau says that Kansas will need more than 40,000 men beginning June 15, and that wages will range upward from $2 a day and board. Oklahoma will need 15,000 men.

The Ohio Experiment Station, Wooster, will hold its next Wheatfield Meeting on Friday afternoon, June 19, to be followed with a meeting in the Opera House that evening, which will be addressed by Governor Cox and at which Professor Vivian will give an illustrated lecture describing his trip around the world.

The National Dairy Show will be held at Chicago, October 22-31. Monday, Oct. 26, is Holstein cattle day; Oct. 27 Ayrshire day; Oct. 28 Jersey cattle day; Oct. 29 Guernsey cattle day. The following special days are arranged for: Friday, Oct. 23rd, Grange Day; Saturday, Oct. 24th, County High School Pupils' Day; Monday, Oct. 26th, Women's Club Day; Tuesday, Oct. 27th, Railroad Dairy Dept. Men's Day; Wednesday, Oct. 28th, Milk Dealers' Day; Thursday, Oct. 29th, Milk Producers' Day; Friday, Oct. 30th, Ice Cream Manufacturers' Day; Saturday, Oct. 31st, School Children's Day.

In order to provide for the growing and selling, direct to farmers, of seed potatoes guaranteed to be purebred and free from disease, The American Florist states that the Houghton County Potato Growers' Association was organized in Michigan at the beginning of this year. The association will specialize at first in the Irish Cobbler as an early and the Sir Walter Raleigh as a medium late variety. The association provides for a system of inspection by committees composed of the county agent and two members from each of the four principal localities in the county. These committees, with the officers of the association, form the executive committee. There are no dues, but to defray the expenses of the association a fee of 5 cents is charged for each bushel of certified seed potatoes sold through its agency. The association aims to dispose of the seed potatoes among the farmers rather than to dealers.

The New York State Department of Agriculture has issued a warning against glanders or farcy, with the following order: 1. That all persons importing or bringing any equine from or through the States of New Jersey, Pennsylvania, Connecticut, Vermont or Massachusetts into the State of New York, shall notify the Commissioner of Agriculture of the State of New York in writing immediately upon the shipment of such animals into the State of New York, giving information as follows: (a) The point of shipment; (b) The route or routes over which said animal or animals are to come into the State; (c) The point of destination within the State; (d) The time or probable time of arrival of such animal or animals at place of destination within the State. 2. That the said animals so shipped, imported or brought in shall be held at such point of destination within the State, for inspection and examination by the said Commissioner of Agriculture or his duly authorized representative, at least 10 days from the time of arrival at such point of destination, unless sooner released by the Commissioner of Agriculture or his duly authorized representative.

The annual poultrymen's convention of the Massachusetts Agricultural College is to be held at Amherst, July 22, 23 and 24. One of the special features this year will be a series of large charts, drawings, photographs and descriptive matter representing the correct equipment and proper management of a small Massachusetts poultry farm in all its details. The grounds, the houses, the number of hens per acre and per man, and the details of care and management will be graphically and completely illustrated. In addition there will be as large and instructive an educational and commercial exhibit as possible. The program consists of three solid days of lectures and demonstrations by the best authorities in the country. Program in full will be issued about the middle of June and can be secured from the Director of The Extension Service, M. A. C., Amherst, Mass.

The Paterson, N. J., Poultry, Pigeon and Pet Stock Association will hold its annual show at the Ellison Street Auditorium Nov. 18-21. It is expected that there will be a horticultural display held with it. Following is a list of officers of the organization: G. W. Cisco, superintendent; Dr. G. Johnston, secretary-treasurer; Walter A. Schultz, president; Arthur W. Bishop, vice president; Wm. Horne, Assistant Secretary. Partial list of the judges includes W. H. Card, J. Harry Wolsieffer, Louis Paul Graham, H. J. Fiske, and James Glasgow.

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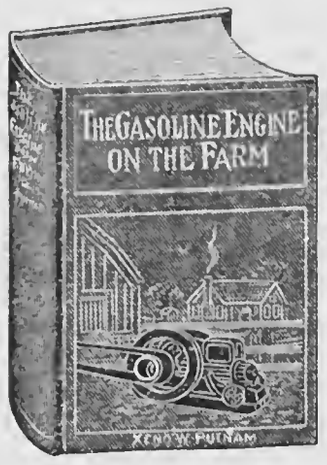

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The Henyard.

Identifying Young Ducks.

How can one tell young (this year's) ducks and drakes from old ones? The breeds are Indian Runners and Pekin.
New York. R. S. B.

The bill of a young fawn and white Runner drake is yellow; of an old drake, greenish yellow. A young duck's bill is yellow, spotted with green; an old duck's dull cucumber green. These are the only general differences. In the case of Pekins there are no general differences by which one can distinguish all birds. The owner of a small flock might know the individual birds and thus distinguish them. Otherwise they should be kept in separate pens or wear leg bands.
W. H. HUSE.

Sour Milk for Chicks.

Much has been said about feeding sour milk to growing chicks. One of the pens entered in the laying contest by the Connecticut Agricultural College has made a remarkable record, and this pen has been fed on sour milk from their earliest chickhood. It is believed that a good deal of their success at the trap-nest has been due to this diet. In a recent news note Prof. Kirkpatrick, of the Connecticut College, makes the following statement about this feeding of sour milk.

"One commercial poultryman in the State who brooded 7,000 chickens last season has unofficially reported to the Station that he believed he developed his pullets a month earlier than in previous years by the use of sour milk. The plan of using the milk is to allow it to thicken and put it before the chicks so that they can help themselves at all times. As a matter of fact the Station believes in the use of milk so thoroughly that all of its commercial chicks have their beaks dipped into the milk as they are taken from the incubator in order to be sure that they get started in life right."

We understand that a good many poultrymen throughout the country are coming to this same belief, and they are feeding the milk freely. In one case that we know of a poultry company is using a commercial bacteria or starter, which when put into milk sours it in just the right way to produce the desired effect upon hens.

Care of Litter.

A few weeks ago I saw a question in regard to the length of time litter should be used for poultry without being changed. My experience has been that some times it lasts much better than at others, and I have found that by using a garden rake, to pull the litter out from under the dropping boards and towards the south side of the houses it lasts much longer than when this is not done. I usually do this about every day or at least every other day, and I believe it pays well for the labor spent.
New York. C. A. CASTLE.

Eggs for Hatching.

As you are generally considered an oracle I would like you to inform me of a place where I can get eggs for hatching.
Oklahoma. J. D. T.

If we have any such reputation we would gladly shed it without delay. The oracles had the reputation of emitting wise remarks, but their wisdom was so complicated that no one could tell just what they meant. They needed one or more interpreters. THE R. N.-Y. does no bragging about its wisdom. We try to speak the thought of our readers in such language that anyone can tell what is meant. An oracle needs interpreters. We try to cut them out, and we can tell you where to get the eggs.

Dried Brewers' Grains for Poultry.

A. C. T. asks about dried brewers' grains for poultry. I have been using the following mixture for at least three months, and have as good results as when using a different mixture: 125 pounds dried brewers' grains, 125 pounds malt sprouts, 100 pounds hominy, 100 pounds gluten, five pounds salt. This really is my cow feed, but I use 100 pounds of this mixture and 100 pounds wheat middlings, to which I add 20 pounds beef scrap, and keep before the hens continually. Dried brewers' grains are cheaper than wheat bran, higher in protein, and help to lighten up a heavy feed, as M. B. D. says. I also feed them to my horses in place of bran with ground corn and rye. H. E.
New Paltz, N. Y.

White Leghorns as Sitters.

Many persons think Leghorns will not sit or will not make good sitters and good mothers. We find this a very mistaken notion if they are handled in the following manner. We leave the hens wanting to sit on the nests until the second or third night, and choose only those which show the most gentleness and quietness when handled. At night remove each hen to a separate coop or large box, in which we have prepared a new nest, and then place hen on one or more nest eggs. Have this coop or box tight to keep her in and darkened with old sacks or old carpet. Leave hens entirely alone the first day, putting feed by her at night or the next morning. Seven out of 10 hens will thus make good sitters, and eggs can safely be put under them the second or third day. Feed in coops and never let hens out until the chicks are hatched. W. H. M.
California.

R. N.-Y.—Most Leghorn breeders prefer hens that do not want to sit. At the Australian egg contest the sitting Leghorn is regarded as a nuisance and breeders are advised not to use them in breeding pens.

Inbreeding.

I raised a beautiful pen of White Orpingtons last Summer, eight pullets and one cockerel, all vigorous and well developed birds, but I do not want to use their eggs for hatching this Spring, as the cockerel is a direct brother to the pullets. The pullets have been laying heavily all Winter. My intentions are to get a setting of eggs from some other fancier with good stock and raise a cockerel to use with these eight when they are coming two years; then I think I shall get results. I have refused to sell or use myself, any eggs this year for hatching. Under these circumstances am I right or wrong? W. S. P.
New York.

If these pullets have laid heavily all Winter, the chances are that the eggs may not prove very strongly fertile, and yet, they may. The fact that the cockeral is a brother to the pullets need not debar you from breeding from them if they are all well developed and vigorous. This, of course, is inbreeding, but inbreeding is not necessarily a mistaken practice, though if done indiscriminately it would probably lead to more rapid deterioration in a flock than indiscriminate out breeding. Any breeding, whether in or out breeding, should be done by selection, and if you select for size, vigor, type, and productivity, you need not fear to mate close relatives. M. B. D.

Hemorrhage of Oviduct.

I have lost about 40 hens, Leghorns. They seem to have difficulty in laying, which causes them to have a hemorrhage. It does not affect the Wyandottes. Any information as to the cause would be greatly appreciated. C. E. P.
Connecticut.

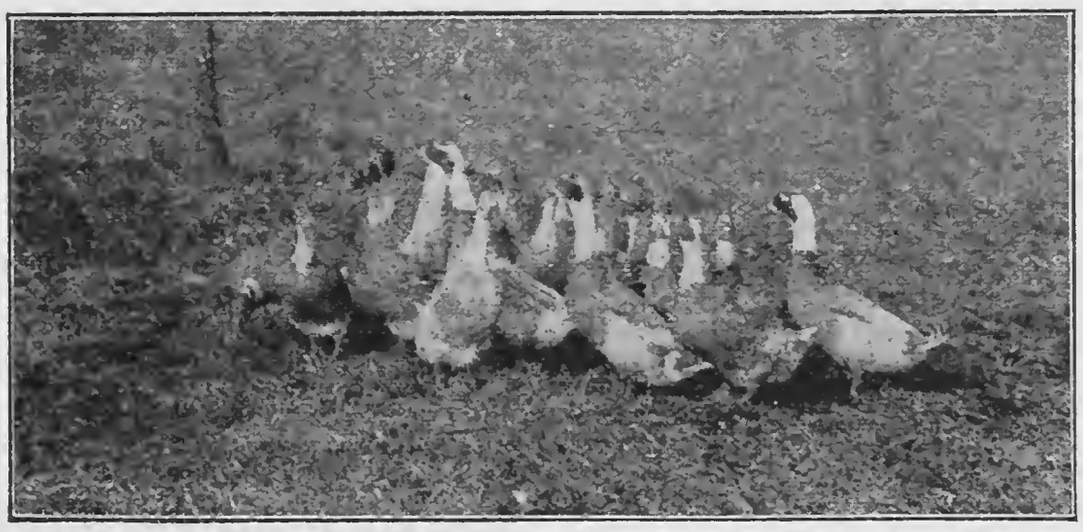
Hemorrhage from the oviduct is a symptom of inflammation of that organ supposed to be due to irritating food, condiments, overfeeding with heavy laying and lack of exercise and perhaps an inherited weakness which predisposes to trouble with that organ. I would suggest giving the flock as much range as possible and feeding an abundance of green stuff with little meat or other stimulating food. M. B. D.

Breeding Leghorns.

I am going to start some S. C. White Leghorns, and I want a good variety. I can purchase some good Leghorn eggs at $4 per hundred but they are not the Tom Barron strain. Would it be advisable to purchase these eggs and cross pullets with Tom Barron cockerels? Would that make the pullets the Tom Barron strain as they are counted the best strain? Would it be advisable for me to change the cockerels with the pullets as I thought that the cockerels and pullets would be related and that would be inbreeding. But would it change it if I got a thoroughbred Barron bird from a different party, still keep the strain, and inbreed? F. W. M.
Pennsylvania.

Your purebred—the word thoroughbred is applied only to horses—White Leghorns would not be the Tom Barron strain unless all the males and females in the flock were descended directly from his stock. By mating Barron cockerels with some other strain of purebred White Leghorns you would mix the strains while keeping the variety pure; in other words, you would have a mixed strain of purebred White Leghorns. You might get a very excellent flock in this way, but you could not call them the Barron strain since he would be responsible for only one-half the blood in the flock. After breeding them a few years you could call them your own strain, and maybe you could beat Mr. Barron at making them lay.

It is true that mating the cockerels and pullets of your own flock would be inbreeding, but that is not necessarily an unwise thing to do; probably Mr. Barron has inbred his fowls for a good many years. When you inbreed in this way, however, you should be careful to select only big, strong, healthy, and vigorous fowls of both sexes for your breeding pens. Carefully cull out all weak, inferior, specimens from your breeders and you can safely inbreed for years, perhaps as long as you keep hens. Getting a Barron cockerel from some other flock to mate with your Barron pullets would still be inbreeding, though not as closely. M. B. D.



A BUNCH OF INDIAN RUNNER DUCKS. FIG 326.

Horse Feed for Fowls.

Is horse feed good for dry mash for chickens? I used bran, oats and cornmeal. F. N.
New York.

A mixture of wheat bran, ground oats and cornmeal, while not especially adapted to the needs of hens or chickens, may be fed to them, of course, as they are all good poultry foods. For very young chicks the oat hulls might better be sifted out, and the addition of meat meal in the proportion of about one-eighth part by weight would improve the mixture. The fowls should also have mixed whole grain as part of their rations. M. B. D.

"THAT'S a terrible cough you've got, Murphy." "'Tis, sor; but, begorra"—with a glance at the churchyard—"bad as it is, there's thousands lying over the wall there would be glad of it."—New York Evening Post.

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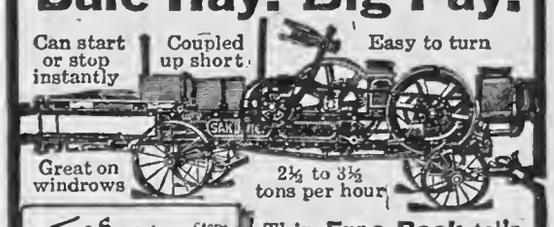

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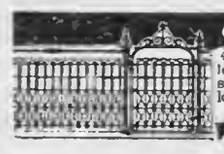

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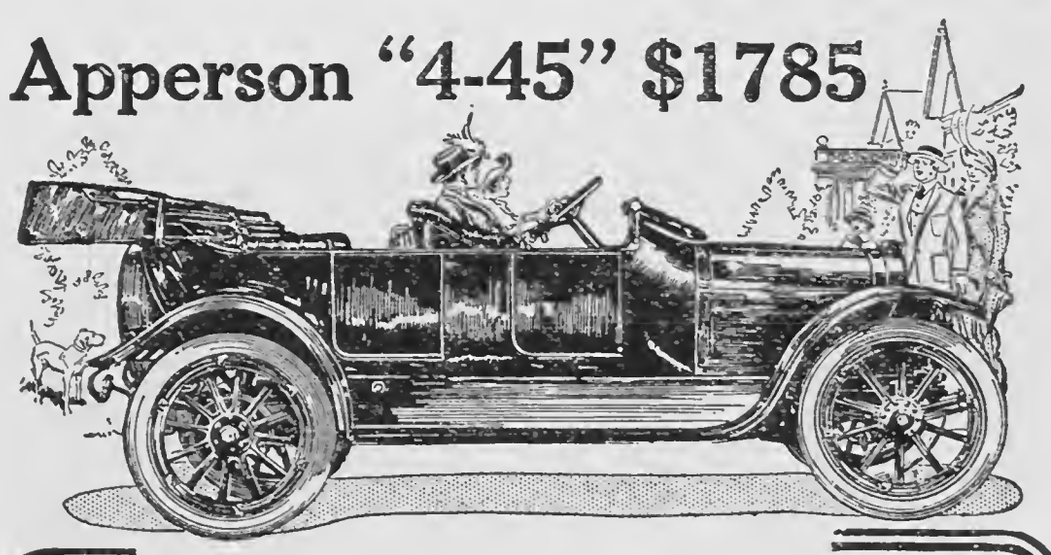

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Hope Farm Notes

THE STORM.—People sometimes ask why we leave ridges along the sides of our hills and do not plow up and down the steep sides. Could they have been here on the afternoon of May 27 they would have needed no further argument. One of those flooding storms which now and then tear down our valley jumped out of the west and got to business at once. The day had been hot and sultry. We had been pushing all the week to finish the spraying. After dinner Mother and the girls drove to town to do some shopping. The little boys had a chance to go fishing. Up on the hill the power sprayer was puffing and coughing with Merrill, Philip and one of the Italians on the battery. Tom and Broker had hauled the big load up the hill and were trying to nibble rye as they pulled through the cover crops. Suddenly a strange darkness began to gather. It did not seem to be caused by gathering clouds, but somehow the light faded out. The air was still and deep mutterings of thunder were heard in the west. A stranger in these parts would hardly have expected more than a passing shower from these indications, but those of us who know the possibilities of this valley realized what was coming. It was no time for spraying, and no chance to get the machine back to the barn. They just unhitched the horses, put the hood over the engine and a quintette of horse and humarity made a charge for the barn. Before they reached it the storm *broke*. That is just what it did. Great floods of water seemed suddenly to be let loose. Almost before you could think it great streams of water appeared on the hillside. Suddenly the brook jumped out of its course and made a track across a plowed field, tearing and gouging as it went. In their little coop by the house, Redhead's baby chicks were dancing about, proud in the fact that they were past the danger period of babyhood. The flood whirled upon them and the little things were drowned! The leaves and fruit from the cherry trees went flying, and here and there a big limb twisted and split until it came crashing down. This lasted about two hours, then of a sudden the rain stopped, the clouds went blowing away before the wind and the sun smiled upon us once more.

GOOD AND BAD.—And it was a very wet spot of the earth that reflected the sun's smile. The soil was like a sponge. The rye was beaten down, and on every plowed strip there was a puddle, or a gulley. Had our hills not been covered with growing crops great holes would have been cut out, and some of the best soil carried down to the lower levels where we do not need it. The thick, matted rye held the flood back and the ridges along the tree rows spread it out so that it had no chance to form into little torrents and cut up the soil. The sprayer was all right. The next day a turn of the handle set it working. We had to go over the last few rows once more, but as a rule when the arsenate and lime-sulphur once dries on the leaves it is almost impossible to wash it off. On the whole our farm is better off for the storm. The rye was growing so rapidly that it was sucking too much moisture out of the ground around the trees. This soaker fills the soil once more. It will make heavier rye, easier plowing and better fruit.

BEHIND.—By Decoration Day we had not planted a kernel of field corn. Sweet corn was up, but we have been unable to get the ground ready for the flint. Spraying took a full week, including wind and storm, and we decided to fit the ground for mangels and carrots first. These roots are grown in a young orchard. A crop of rye standing nearly head high was plowed under. The soil is very sour, so we put on about 1,500 pounds of slaked lime per acre and worked it thoroughly in. Then the mangel seed is drilled in rows 2½ feet apart and fertilizer used along the drills. It is hard to describe just how such work is done. One horr's work at it is worth 10 pages of description.

It is like telling people how to plow rye under by hanging a chain on the plow. I have taken pictures of our outfit which I hope will show up properly. It seems like a sinful waste to many farmers when these great rye crops go right into the ground. Let any man come and see the rye and vetch we are turning under and see how the lime takes hold of it and he will quickly agree that such a crop equals eight to 10 tons of manure in its effect upon the soil. Of course I know that some of the experts say that rye is hardly worth considering as a manurial crop. They are welcome to their opinion—all I know is what rye has done for our soil, and I shall always seed it in every cover crop. On a grain farm rye might make trouble by mixing in with the wheat. It is such a hardy and tough crop that it will live under hard conditions, and sometimes after a hard Winter the farmer finds his wheat fields half full of rye. I am speaking of a fruit farm where it is necessary to keep the soil full of humus. In such situations rye is the backbone of manuring.

I know too, that most farmers would criticise our plan of plowing this rye under. Why not cut it to feed to stock or to sell as grain and straw? It is just a question of how you plan to run the farm. Selling the rye crop means immediate cash. Plowing it under with lime means that your trees, if you take care of them, will give this money back with interest in the future. It is an investment. I could probably sell our cover crops of rye and straw for $500 this year. My belief is that by plowing them under I can get three times that in the future out of the increased fruit crop and this year's corn crop. You must remember that this rye is a pretty cheap crop. Last August, while cultivating the corn for the last time, we scattered the rye, clover and turnips among the corn. The last cultivating of the corn worked the seed in. Nothing more has been done to it. Now it stands shoulder and head high. We put it under, use lime and plant corn again. Fertilizer is used in the hill, good culture given and next August in goes another cover crop. Under this treatment year after year we have seen our hard soil grow mellow and darker colored, our trees come into bearing, our corn crops increase and the rye crop start at waist high and improve until it stands over my head.

Do you think it would pay to hill up young peach trees to keep out the borers? Have you ever practised doing that in your orchards at Hope Farm? Would not the insect that lays the eggs lay it just above the mound of dirt? R. B. O.
Connecticut.

We mound up the peach trees in the Fall after digging out the borers. Coal ashes make a good mound. This gives protection from mice and helps with rabbits, and also protects the roots. At one time we left this mound around the tree during the Summer, but now we level down in Spring. This gives a better chance for culture, and we have found that in a drought the mound bakes like a brick around the trunk of the tree, leaving the bark tender and more likely to be injured. It is true that when the mound is left tight to the tree the borer insect lays her eggs above it. Often the mud cracks or works loose, so the insect can get down lower, and in any event the borer does great damage working down behind the mound. I should prefer to break the mound down in Spring, work around the tree, and paint or spray the trunk with a lime-sulphur wash. This will prevent some of the egg-laying. The borers that do hatch should be dug out.

Would it pay to grow State corn or not under these circumstances: We have 10 cows, and between 900 and 1,000 hens. We have always grown five and six acres of silo corn and put it in silo when mature. But it seems to me it might pay to grow State corn and husk it and feed the stalks in the Winter from the field to the cows, as we have engine and cutting box. After husking could it be put in silo, or would it be too dry to keep well? Would it pay more to have it put in silo because of lateness? H. S.
Union, N. Y.

This is a question which a man must settle for himself. We cure and husk the corn—not having any silo. This is because our stock consists mostly of horses and hens, neither one doing well in silage. We need the shelled corn most, so we grow a flint variety, husk off the ears, dry the stalks and feed them to horses and cows. If I had 10 cows to feed I should have a silo, yet with 1,000 hens I should try to save the grain bill. In such case, from our experience, we should plant a few acres of some variety like Eureka corn for the silo. On rich, well-manured soil, this corn gives a tremendous yield, and a few acres of it would fill a small silo. The quantity of silage is not so high, since the ears do not usually develop early, but it gives a great bulk of silo filling. The rest of the corn ground would be planted to some good flint variety, cut and husked in the usual way. I would not cut the dry stalks all into the silo, but would make a box or vat to hold a week's feeding. Cut this full and pour boiling water over it and then cover. It will steam and partly cook into a good "imitation silage" that is better than dry stalks cut into the regular silo. A little feeding molasses put in with it will lead the cows to eat it all up clean. Our plan for substituting for the silo is to grow a crop of mangels and carrots. With good culture on strong ground you can grow a large crop of these roots. They make a fine combination for feeding with dry stalks, and are better, I think, than silage, and are fine for the hens during the Winter. Few crops will respond to chicken manure better than mangels.

We have at times many eggs which have been incubated, and out of which the young chicks did not fully mature and hatch out. Would such eggs be any good as a fertilizer around young trees, shrubs, currants, raspberries and the like—say, take away four to six inches of soil, put around the tree or bush six to 10 eggs, smash them with a shovel and replace the soil? If this would work out all right it would not only get rid of the eggs, but help to fertilize at the same time. H. G. B.
Connecticut.

Such eggs contain lime and the elements of plant food. Here is a comparison between eggs and ordinary stable manure:

POUNDS IN 100.

	Nitrogen	Phos. Acid	Potash
Eggs.....	2.25	6½ oz.	2½ oz.
Stable manure.	8 oz.	4. oz.	10 oz.

Eight or 10 eggs will not give much plant food, but it will be available, and will make any currant or raspberry bush proceed to lay wood and fruit. If you could train the hen that laid the eggs to scratch around the bush without injuring it you would have a great combination. Seriously this is a good way to dispose of stale eggs. I have seen grown-up men go out with a basket of them and throw at a mark. If you could get wood ashes to use with the eggs you would have a good combination. H. W. C.

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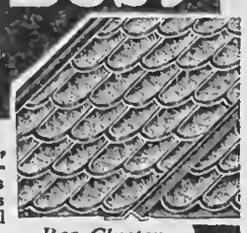

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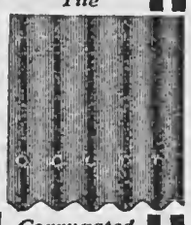

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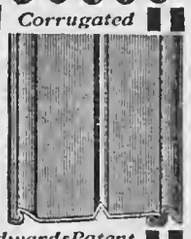

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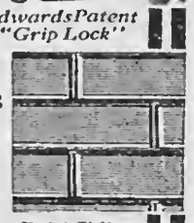

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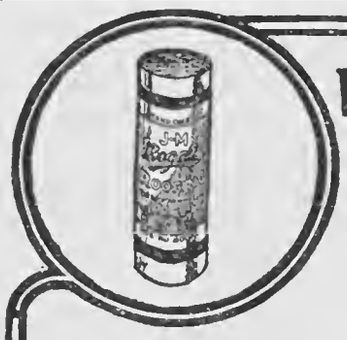

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2520

Ruralisms

Hardy Climbing Rose; Sowbugs.

WILL you tell me the best climbing rose, taking in consideration a foliage that will withstand insects and disease, also hardiness to endure the Winters of Central New York? I wish to cover a trellis which is a part of the ornamental work on a garage I am building, and it is desirable to have one that will not need spraying, and if there is such a rose, one that is hardy enough to withstand the Winters without laying down. 2. I am greatly troubled in my garden, especially in the hotbeds and cold frames, with sowbugs or wood lice and snails, eating the young seedlings as fast as they appear above the ground. I have tried stopping them with potatoes cut in two and hollowed out and laid among the seedlings, but with small results. If you know of any way to destroy them I should like to know of it. C. L. K.

Syracuse, N. Y.

1. It is hard to call any one the "best climbing rose"; there are so many worthy ones. In this case, however, where hardiness, vigor and free growth are desired, we can suggest two—Dorothy Perkins, and the Japanese Memorial rose, Rosa Wichuraiana. The first named is very hardy and robust, and produces an enormous profusion of double bright pink flowers, while Wichuraiana has single white flowers followed by an abundance of red heps; the foliage is persistent until late in the season, taking on a bronzy tint. Wichuraiana can be trained nicely over a trellis or arch, but in nature it loves to trail on the ground, where it roots freely, a habit which makes it very useful on rocky slopes. Of the two roses named, Dorothy Perkins is of course the more showy in flowers, while Wichuraiana has a little the more resistant foliage. Any rose, especially against a building, may at times suffer from mildew, but the Memorial rose is less liable to this than any other we know. Rose-hopper attacks may call for spraying, at times, but no rose is exempt from this.

2. A florist's cure for sowbugs is one part of Paris green to five parts of sugar. Mix thoroughly and then run it from a cone of stiff brown paper, having a small hole in the bottom, along the boards edging greenhouse benches. In the case of frames it would be wise to lay strips of wood in the beds, and run the poison along these. A florist says he has an occasional wholesale poisoning of these little crustaceans in his greenhouse, averaging about six sowbugs to every square inch of bench. Snail preventives are to scatter bits of camphor-gum about the plants, to strew a line of salt about the edges of the beds, and to dust lime about the plants. Toads and turtles are helpful pets to get rid of these marauders.

Lime Sulphur for Poison Ivy.

I HAVE always been poisoned very easily with poison ivy. I have been on fire with it from head to foot, and once my arms were swollen with it so that I could not raise my right hand to my face. In those days I tried every "cure" that I ever heard of, but all to no purpose, as I had just to wear it out and it generally took the whole season to do it. This year I got poisoned on the arm with it. I had made some lime-sulphur solution for spraying, and tried this on it; just coated the poison twice a day for two days (four applications), and the poison was "dead as a door nail." This remedy may not work on all but it is the only thing that I ever tried that did any good. C. W. D.

West Virginia.

R. N.-Y.—This is a new one. Lime-sulphur has been used for all sorts of things from dipping sheep to cleaning the cellar. When used with arsenate of lead it is about as near to being a "cure all" for trees as has yet been produced. Now, if it will relieve poison ivy, it becomes a benefactor indeed.

Pickle-worms on Cantaloupe.

CAN you tell what will prevent the destruction of my cantaloupes? For the last two or three years they have been infested with a worm light in color and from three-quarters to one inch long. Apparently this worm enters the cantaloupes and muskmelons just in the same manner the Codling-moth enters the apple. I cannot see how he enters the melons, but he makes a hole on coming out. Some of the melons do not show any signs of this worm until they are cut, then it is found to have been there and the melon is not fit to use.

Gunston, Va. W. S. F.

The "worm" is the larva of the Eudioptis hyalinata, a moth of a white color with a dark border on the outer edges of the front wings and part of the rear wings. The larvæ are somewhat over an inch long and are commonly known as "pickle worms," as they attack cucumbers as well as melons. Powdered white hellebore has been used for them successfully, but it is far less trouble to use arsenate of lead, one pound in 30 gallons of water, with some corn syrup to make it stick better. The insect is far more troublesome South than in the North, and in many parts of the South forbids the growing of melons unless kept down by arsenical spraying. The spraying will be more use if the poison is mixed with Bordeaux mixture, two pounds of lead arsenate to 30 gallons of the Bordeaux, and thus the leaf rust and blight of the foliage can be prevented while preventing the worms. The spraying must be begun early, for the worm enters the partially grown melons, and when the moths are seen flying around it is time to go to work. W. F. MASSEY.

Killing Weeds With Arsenate of Soda.

THE Hawaii Agricultural Experiment Station at Honolulu, under the charge of E. V. Wilcox, issues a bulletin on this subject. Experiments have been made with a number of weed-killing chemicals, but the best results were secured from this arsenite, which is usually prepared by boiling together common white arsenic and washing soda or sal soda. Theoretically these chemicals combine in such a proportion that if about 1½ pound of soda be used for each pound of white arsenic, the proper combination will take place to render all of the arsenic soluble by the formation of arsenite of soda. In practice a considerably larger proportion of soda has been used, up to four pounds per pound of white arsenic. It seems unnecessary, however, to use more than two pounds of soda per pound of white arsenic. In preparing arsenite of soda good results have been obtained from boiling a mixture of one pound white arsenic and two pounds sal soda per gallon of water for from 15 to 20 minutes. The exact length of time to continue the boiling can not be stated beforehand with any certainty but the boiling should be continued until the solution becomes clear. The clearing of the solution indicates that the proper chemical combination has taken place. In Australia, where arsenite of soda has been widely used for killing weeds, the common practice is to buy the arsenite of soda as such on the market, but in the spraying thus far done in Hawaii with arsenite of soda, it has been prepared by boiling white arsenic and sal soda as just described. The stock solution obtained by boiling together the sal soda and white arsenic is to be diluted before spraying with 15 to 24 parts of water, depending on the hardiness of the weeds to be destroyed. In Massachusetts it proved effective when used at the rate of one part to 66 parts of water. In Hawaii, the formula calling for two pounds crystal sal soda, one pound arsenic, boiled until clear in one gallon of water, and then diluted with 24 gallons of water, was applied at the rate of about 100 gallons to the acre. It is usually applied with a knapsack sprayer.

In spraying with arsenite of soda it should be remembered that the effect is produced by contact with the aerial portions of the plant. The spray should be applied in the form of a fine mist so as merely to cover the surface of the leaves and the stems. Care should be exercised not to drench the plants, since no more effect would be thus obtained, and the risk would be run of introducing too much arsenic into the soil. It should, of course, be remembered that the arsenite is poisonous and stock animals should not be allowed to browse upon sprayed vegetation until after sufficient rain has fallen to wash off what may remain on the foliage. As a rule the effect of the spray begins to be manifested within a few hours in the withering and browning in the leaves of sprayed plants. They are thus rendered unpalatable as feed for animals. The spray must remain in contact with the foliage for at least two hours, in order to have the desired effect. In applying arsenite, therefore, a clear day should be chosen, or at least one in which it is not likely to rain soon after the application of the spray.

Hellebore for Crow Poison.

MANY years since, an old farmer said, "Soak your corn in hellebore water. The crows would not touch it, and it would send the corn right up, green and strong, was worth a load of manure to the acre." I have tried it for 60 years and have never known it to fail. One of my fields is bounded on two sides by Spruce Glen, where thousands of crows roost in the Winter, and where many breed in Summer. When I plant this field with corn, I soak the seed in this water, and after planting never need to look at it again, for I know it is safe. The crows will sample it in a place or two, then leave for some other field, and will put a black mark on that piece for a Summer. It is called by some, crow poison, others, eleva, but its proper name is white hellebore, and one of the strongest poisons of our climate, though after many trials, I never knew a bird killed, nor one hurt by eating it. My way has been to put it in a large kettle on the kitchen stove, until its strength is exhausted. When cool, soak the seed a few hours before planting. It can then be dried a little so not to clog the planter, and the crop is insured. The hellebore grows near wet places along small brooks, it is often found by the side of skunks cabbage, of a much lighter green, runs higher, with smaller stalk. A pick is best to dig it, as it has many white rootlets spreading from a small bulb. If you have any seed left after planting, do not let the hens have it. My informant said, after his man had finished his piece, he emptied the contents of his bag to the hens and every one died. Try the hellebore. J. W. Y.

Meriden, Conn.

R. N.-Y.—The plant referred to is doubtless Veratrum viride, the false hellebore or American white hellebore, which is similar, by some considered identical, with the white hellebore of Europe, V. album. It is also called devil's bite, duckretter, wolfsbane, bear corn, Indian uncus, crow poison, and a host of other names. It has large plaited stemless leaves, and a large loose cluster of yellowish green flowers. It is extremely poisonous, some fatalities being reported from gathering the young leaves in early Spring, in mistake for marsh marigold greens. Animals do not relish the plant, the flavor being acrid and burning, but chickens have been poisoned by the seeds.

Pruning Cherries.

In respect to pruning cherries at fruiting, about 40 years ago a Royal Ann cherry died, and a number of sprouts came up from the stock which proved of quite good quality. Many times in picking we saw off the tops. The second year after we cut the tops off we get the finest cherries from these sprouts. If I were "R" I would try it on one or two trees and note results. As Oregon climate is a law unto itself one cannot know that it will work in other sections.

Oregon. S. T. W.

Protecting Manure from Flies.

You advise the use of acid phosphate on manure to keep flies away. Will Kentucky or Tennessee rock phosphate do, or must a more concentrated form be used? P. E. H.

Kentucky.

No—the ground phosphate rock will not serve the purpose as well as acid phosphate and kainit. Any dry dust would help somewhat, but the chemical action in the acid phosphate is the important part of the treatment.

Pruning Apple Trees.

I have 200 Winter apple trees, Baldwin and Northern Spy, nine years old. Pruning the young trees in the future, what is the best time in the year? Should I trim the limbs back the year before to make them bear. S. H.

Armstrong Co., Pa.

The best time to prune would be about June 15 to 20. The effect of pruning at this time would be to induce a heavier setting of fruit, and to check wood growth. If the trees are neglected and need a heavy pruning it is best to extend the work over two or three years. Fall, Winter or Spring pruning has a tendency to promote wood growth at the expense of annual crops of fruit. R. B. G.

AUNTIE felt called upon to chide Annie for getting wet so often. One day mother and auntie were sitting by the dining table talking of Annie's still being out when it was beginning to rain. Just then they heard the kitchen door open softly. "Who has wet feet now?" called auntie. An ominous stillness for the space of three seconds, then a gruff voice replied: "The iceman."—Harper's Magazine.

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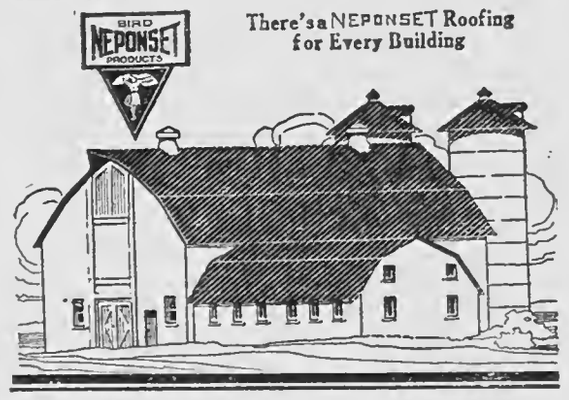

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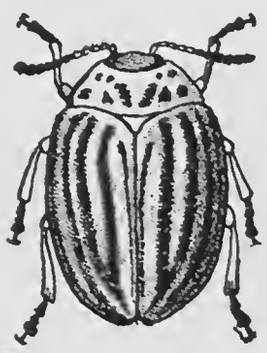

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*

THROUGHOUT Southern New York the past seven years have been much like the lean years in Egypt. One disastrous drought has followed another, bringing loss and trouble to the farms. This year starts in better—as if there would be moisture enough to start us back to the fat years once more. We hope so. It is high time, and the outlook is now good for it. A few wet seasons will work wonders on the New York hills. As one friend puts it:

I have lost my seeding twice on the same plot by sowing in the drought of the Fall, and am now trying Spring seeding. All my seeding of last year was killed by the drought, and meadows look hard; we have had a seven-year cycle of Summer droughts, just the time that I have been on the farm. Seven years of rain now would do more to boom farming in this section than all the agricultural banks that can be established.

And yet, there is no fair way of comparing the rainy season and the agricultural bank. One is the act of nature—the other the act or work of man. Neither nature nor man alone can be said to do most for humanity. In spite of wet seasons the hills of Southern New York declined as farm lands very largely because the farmers lacked capital to work their farms properly. The very blessings of the wet years to come cannot be properly utilized without some system of banking which will make the farm land a more convenient asset.

*

THE talk about a "war" with Mexico has about died out—killed by the evident feeling of the American people that there is nothing to fight about. Let no one think, however, that this means that our people are growing weak or cowardly. They have simply grasped the situation and realize that the suggested "war" was mainly a scheme of promoters and land grabbers to force Uncle Sam to handle their hot chestnuts from the fire. The following incident, related by a friend at Mobile, Ala., gives us a glimpse at the true National spirit:

Yesterday, Esau Frolichstein, the boy killed at Vera Cruz, was buried here with a regular military funeral. There was everything on the same scale as though he had been an officer, the greatest number of stores closed, even most of the moving picture shows stopped business. These facts are more significant when you get below the surface. Frolichstein in the first place was a Jew, his people were respected but poor and retiring, his father having run a little cigar factory and failing in that I understand is selling goods on the road; his aunts, or cousins, run a small millinery store, and probably just about make a living out of it. Taking it all together, he was in life a very inconspicuous individual, yet, in spite of the obscurity of his family, lack of influence, and the general but unjust prejudice against his nationality by the masses, he was honored to the full measure, the State sending the Governor and his staff, the army and the navy being represented, and all the city officials, besides each religious denomination having its official representatives, even the Confederate veterans attending officially. M. A. P.

In this we see one of the most hopeful indications of the times. This humble individual honored as a hero *because he was ready to serve his country*. Yet that honor is mingled with reserve and self-control, without revenge or hatred. We call that hopeful because it shows that our people are coming more to a calmer and reasonable view of public matters, and thus learning more of their power to control public men by controlling themselves.

HAY dealers in Virginia and other Southern States demand hay put up in small bales. Many of their customers buy in very small lots, and want bales which can be easily handled—say not over 90 to 100 pounds. The Dairy and Food Commissioner of Virginia has ordered that no damaged hay be sold in that State. This makes low grade or discolored hay very unsalable, and Virginia dealers will be forced to reject all shipments of poor hay.

*

THE only safe and sure way to sell a crop that we know of is to keep an accurate account of the cost of production. We may not be able to get it down to the last cent, but we ought to know at the end of the season about what the crop has cost per pound or bushel. Then we can tell whether the price at which we can sell is fair or not. As a rule we find that when we can command a price which gives us a fair or even a small profit over cost, it is better to sell rather than take the risk of farm storage. If for two years in succession the crop does not sell for more than it costs with ordinary production, it is time to produce something else. At any rate a fair idea of the cost of production is the essential factor.

*

"DO IT, OR GET OUT!"

THE latest public advocate of government ownership of railroads is Chas. H. Mellen, whose remarks about sheep and shareholders were quoted last week. Mr. Mellen ought to know. He drew $60,000 per year as a railroad president—$25,000 for railroad work and $35,000, we should judge, for "doing it" for men higher up.

A group of workmen were patching up the road. There was one honest man who knew that some of the material he was using was defective. He protested to the walking boss and received this ultimatum:

"Do it or get out!"

The man had a family and he knew the power of the boss. He "did it." Later this boss ran upon the man above him in construction work. There came another question about handling the job, and the ultimatum was the same. Then there came a man from headquarters who commanded the construction boss to do his work in a certain way. His words had a familiar sound:

"Do it or get out!"

At headquarters a question about bookkeeping arose. Great financial deals were going on and figures must be juggled to cover up the use of some of this money. Then there were men who controlled certain blocks of stock which were needed to elect convenient directors. Then there were directors who must be shown that it was to their interest to sit tight and do what they were told. We judge from Mr. Mellen's testimony that more than half the money he received as president was paid him for passing along the old, brutal command:

"Do it or get out!"

Then, apparently, there came a time when Mr. Mellen felt a heavy hand upon his own shoulder. His time had come for "doing it." J. P. Morgan pointed at the work he wanted done and gave the same old command. *"I was practically fired,"* says Mellen in his testimony. He certainly was not fired by any particular ambition to save the "sheep" among his shareholders. And finally Mr. Morgan himself faced the old command. What? The financial master? The railroad king? The man whose frown made millionaires tremble? Yes, at last there came one, stern, immovable, resistless, who said: *"I am death! I cannot be denied. You have had your chance to 'do it,' now 'get out!'"*

Mr. Mellen certainly ranks as an expert. We do not wonder that he favors government ownership. The history which he has opened up will convince thousands that if anyone is to issue the old command, *"Do it or get out,"* such power should lie with the American people.

*

WE have a case where a man made a small quantity of lime-sulphur mixture, used it on young fruit trees and injured them. He attributed the loss to the lime-sulphur and thus condemned it. Investigation showed that the mixing was done in an old tar barrel, and that the tar thus put on the trees was chiefly responsible for the damage. We know another man who, not content with using soluble oil as directed, added a large quantity of soft soap. The dregs from this mess injured several trees, and the oil was blamed for it. There is probably no manufacturer of standard farm products who could not tell a similar story. As a rule the people who do these things do not mean to be unfair, but they are not careful of their facts, and get them mixed up with experiments. The same thing is true of much of the work done by our experiment stations. We know of one case where a station man stated that a potash salt would benefit peach trees on light soil. He was right, but a man in the audience understood that one word *salt*, and claimed that the speaker stated that common salt would take the place of a complete fertilizer! This may be one reason why our scientific men are so cautious in stating their conclusions. There may be two safe methods—one to say as little as possible, the other to say enough to explain in full.

*

SOME years ago there appeared a book entitled, "The Fat of The Land." It was a very optimistic story of a back-to-the-lander who made a small fortune on a western farm. For a while this book was held up as a "model" by the people who intend to "show these old timers how to farm." Many a woman made life a burden to her husband by comparing his humble efforts at farming with the great success of this "fat" farmer. It developed later that the whole thing was a pleasant fiction. There was no farm at all. The author wrote the book to keep up his spirits while recovering from a hospital operation—carrying out in imagination some of the things he read in the farm papers. That was all there was to it, yet the author wrote some solid truths which could not be disputed. For example, he said that a poor man could start on a farm with two brood sows or two sitting hens, and by constantly laboring to produce the best pigs and the best hens in the country, make his farm famous and reach success. That is a great truth. A hen is a small unit in the animal world, yet she offers unlimited possibilities to an observant and patient man or boy. Let anyone start today with any breed which he really loves. Let him learn what a good hen is, and form his ideal, always selecting that kind of a hen. Before many years he will win in one of the egg-laying contests, and then nothing can stop his success. There will always remain this opportunity for the patient man with an ideal and the courage to work it out.

*

IT appears that some of the county agents are encouraging experiments with chemicals, lime, raw phosphate rock, etc., as against complete fertilizers. They also seek to test Alfalfa hay, Soy beans, etc., against mixed feeds. Some of the manufacturers object to this as interference with their business rights. One of them puts it this way:

"What would you say if these agents advised farmers to read the free bulletins or the other farm papers in place of THE R. N.-Y.?"

That is easy. We should say something like this: "Go ahead. The Lord bless you and give you the wisdom to select the farm literature which is of real service to you." If THE R. N.-Y cannot be made strong and interesting enough to hold its readers we have no right to complain. If it cannot stand fair comparison with the other farm papers it is our business to learn how to make it so that it can. If we cannot give a service different from that of the government bulletins we have no right to ask the government to call its bulletins off. We want no special privilege or government protection—only a fair chance to present our argument. As for those who have been selling goods to farmers as individuals we have long believed that a business revolution is coming. In the future more and more buying will be done through coöperative associations. This is a business-like proceeding and should be encouraged fairly by all friends of the farmer. We are opposed to the scheme of branding manufacturers as leeches or using unfair means to discredit them. Give them a fair chance, no more, no less.

BREVITIES.

To keep the hogs in first-class shape—put in a little patch of rape.

Now they are talking about raising "fur-bearing sheep." It is not likely that any man who has failed to grow the ordinary breeds of sheep will be likely to succeed with the "furs."

BOOTS and shoes have advanced 50 cents a pair in England. "Increased cost of raw materials" is the reason given. Let's see—the new tariff was to give cheaper shoe leather. Have *you* found it?

TALKING of irrigation, the Egyptian government has just awarded a contract for a pumping plant which will take every 24 hours 2,000,000,000 gallons of water from the Nile and force it where it may run over the land and water the crops.

THE skunk earns $3,000,000 each year for American trappers. These skunk skins are usually sent abroad and come back to us as "Alaska sable." Many a woman who would nearly faint away at the sight of a skunk would do quite the reverse when clothed in "Alaska sables" or "black marten."

Monroe County Drainage Demonstration.

RECOGNIZING that the drainage of low wet areas is one of the great farm problems of Western New York, county farm bureau manager Toan arranged for a demonstration of drainage machinery and methods at Webster, on May 23rd. More than 500 people, chiefly from the vicinity of Webster, but also from all parts of Western New York, attended this demonstration, which was on the whole very successful.

While the Farm Bureau arranged for the demonstration and was responsible for advertising and organizing it, it could not have been successfully carried out had it not been for the hearty coöperation of the local Grange and of Prof. E. O. Fippin of the State College of Agriculture at Cornell, together with the State Drainage Association. The local committee from the Farm Bureau and the Webster Grange deserve great credit for their work. The actual demonstration of drainage methods was in direct charge of Prof. Fippin, assisted by B. B. Robb and W. W. Warsaw, also of Cornell. The demonstration was made possible by the offer of the land for this purpose of Mr. Peet, on whose farm the demonstration was held. Both Mr. Peet and his son contributed very much to the success of the demonstration.

The Buckeye Traction Ditcher Company had a new machine in charge of their superintendent on the grounds. This machine dug a few rods of ditch in a very satisfactory manner, but because of the crowd and the wrong kind of buckets on the elevators, the demonstrator in charge declined to complete the ditch, much to the disappointment of many persons present, especially those who came late. A Cyclone ditcher was also on the ground. The motive power to operate this machine was supplied by a "Leader" gas tractor. While the tractor itself is apparently a very satisfactory machine for some kinds of work, it did not go well with the "Cyclone" ditcher, as the spread of the wheels was not right for straddling the ditch and because where it had to cross the ditch in turning at the ends it refilled part of it. The Cyclone did not, therefore, have a fair trial and some dissatisfaction was expressed with this.

The Du Pont Powder Company gave the best demonstration of the day, blowing up about 50 feet of underbrush in a strip three or four feet wide. It showed its adaptability for work in rough land and in opening ditches through woods.

There were six types of ditching plows on exhibition, most of which were drawn by horses to show what small tools could do in this line. In addition to this there were many kinds of hand ditching tools, supplied by the hardware company in Rochester. The Drainage Department of Cornell also had two or three different drainage levels on the ground, together with an exhibition of drain tile. Many questions were answered and a great deal of information was obtained by farmers on the various kinds of drainage machinery and methods which cannot fail to be of great value to the community and to this section of the State.

As far as interest was concerned, this occasion could not have been more successful. Between 90 and 100 automobiles were lined up on the road and in the lane near Mr. Peet's farmhouse. Some estimated the attendance as high as 600 people. Because of the fact that few of the demonstrators realized the interest in drainage, nor believed the prediction of Farm Bureau Manager Toan that he would have from 300 to 500 people present, the demonstrations were not altogether satisfactory. As a matter of fact a demonstration of this sort is probably more effective when a smaller number of people are present than when the crowd was as large as it was on Saturday at Webster. M. C. B.

Pheasants and New Game Law.

IN the correspondence with A. B. Katkameier published on page 747 Commissioner Huson is apparently in error. The Conservation Law as published by the Conservation Commission for 1913 says in Section 196, page 39: "The owners or occupants of inclosed or occupied farms and lands or a person duly authorized in writing by such owner or occupant may take except by use of ferrets in any manner at any time and in any number varying hares and cottontail rabbits which are injuring their property." If this means anything it permits the use of traps and makes it possible for any farmer to protect his young trees or nursery stock from rabbits. Rabbits almost never trouble trees until deep snow comes, and in a normal Winter they can be exterminated or so reduced in numbers as to be practically harmless long before that.

The case of the pheasant is somewhat different and more confusing. We have heard many reports of great damage to cornfields and apple orchards near the woods, but have seen none of it on our own land. The only pheasants whose stomach contents I have seen had been eating grasshoppers and marsh plants, with a few kernels of wheat left in the field after harvest. One had 30 or more large hoppers in the crop, besides those that had passed on. The law does not permit us to kill pheasants because they have been eating our crops, but the new law signed by the Governor about April first apparently makes it possible for the farmer to get some money out of them by going into the business of raising game birds, etc., either as a main crop or as a side issue. The farmer is apparently also better protected against trespassers, and it may be that many will find that the loss of a few hills of corn is repaid by the gain to be made from the birds.

I say these things are apparently so because the printed set of game laws for 1914 is not yet available and a reading of the new law in connection with the old sections may change the apparent meaning of some parts. ALFRED C. WEED.

Wayne County, N. Y.

New York State News.

CONVICTS AT WORK.—Convicts have already been set to work on some of the highways of the State. There are at this writing five convict squads on the roads and three of these are in Clinton County, two in Warren County. By the provisions of the new law convicts can be engaged in roadwork outside the former 30-mile radius from the prison where confined, so that now they may be employed in any part of the State. They are glad to get out of doors and are keen for the chance of work, and the results of their labors thus far are said to be satisfactory in the improvement of the highways. As there will be a large percentage of the roads of the State that will not be touched by the funds appropriated for the highways by the State, it is proposed to have the dirt roads worked by the convicts.

A LONG SERVICE.—A complimentary dinner was tendered George L. Flanders, counsel to the Department of Agriculture, by Commissioner Huson on the evening of June 1, on the completion of 30 years' service in that department. In 1884 the State Dairy Commission was organized; later it became the State Department of Agriculture. Mr. Flanders was connected with the Dairy Commission and for three decades has served the interests of agriculture in the State in connection with the Agricultural Department. About 30 guests assembled and a letter was read from Gov. Glynn of a congratulatory nature. The occasion was also the anniversary of 25 years in office of J. J. Caughlin, Deputy Commissioner in charge of the Buffalo office.

GRANGE MEETING.—The June meeting of the Columbia County Pomona Grange will be held at the Berkshire Industrial Farm, at Canaan, Columbia County on June 20. There will be addresses by Dean H. E. Cook of the Canton Agricultural school and John Sloan of the State Grange Purchasing Agency of Olean. The Berkshire Industrial School now has about 100 boys enrolled and is doing a fine work. There will be a large attendance and visitors will find an inspection of the farm, farm building and school most interesting.

THE HICKORY BARK BEETLE.—A bulletin from the State College of Forestry at Syracuse asserts that the hickory trees in the State are doomed as shade trees and from a commercial standpoint, unless active work is done to check the ravages of the hickory bark beetle. This small insect lives between the inner bark and the sap wood and cuts off the flow of sap to the upper part of the tree. Dr. M. W. Blackman of the college would be pleased to have reports on the work of the beetle in any part of the State and he will give suggestions on combating the pest.

THE CATERPILLAR PEST.—While all is being done that can be, in some sections of the State, in the attempt to carry out the order of Commissioner Huson to destroy the nests of the tent-caterpillar, the added spur of the law to this desirable end came a little too late, it is feared, to be of great avail. The Commissioner is reported as desiring to enlist the assistance of the State highway patrolmen in destroying the tent caterpillar webs along the State roads. Reports from sections in St. Lawrence County, particularly, are to the effect that the caterpillars are more numerous this year than ever and apple, maple and other trees are denuded of leaves. The worms hang in festoons from trees and pedestrians in village streets avoid passing under the trees so decorated, and in some of the worse infested sections the houses have been almost literally covered with the pests.

THE LABOR BUREAU.—On August 1 the new bureau of employment of the State Department of Labor will be put into operation. The principal office will be in New York and there will be two sub-offices, one in Brooklyn and one in Manhattan. There will also be branch bureaus in seven of the larger up-State cities. There will be one director who will act under the supervision of Commissioner Lynch and who will draw a salary of $4,000. Each branch office and sub-office will be in charge of a superintendent whose salary will be $2,000. Some of the things that the new bureau will undertake to accomplish will be to prevent the exploitation of labor, especially among the foreign born; the investigation of the causes of unemployment; the application of a remedy for the same; and the supervisions of private employment bureaus.

SUPPLYING FARM LABORERS.—The Onondaga Farm Bureau has been helping the farmers to secure laborers for the season and has placed about 40 on various farms in the county. It is said that about 200 men have called on the bureau for employment. A good hand gets about $30 a month and if married $35 to $40, has a tenement house without rent, firewood, milk and other things from the farm. The farm bureau will look after the matter of marketing farm products for its members with particular reference to milk for the city of Syracuse. It is possible that the question of public market facilities may have the attention of the committee in charge of marketing.

CROPS IN WESTERN NEW YORK.—The secretary of the Western New York Horticultural Society is quoted as saying that the reports on fruit crops that he has received from different sections of Western New York are to the effect that there will be a large apple crop, barring possible damage to it by storms or cold. The trees have bloomed heavily and progressive orchardists, as those of the apple country are known to be, have sprayed carefully so that insect injuries are not anticipated. Peaches will be a very light crop with best outlook in the vicinity of Lake Ontario which may have prevented some losses from the freeze. Cherries blossomed heavily and have set well. Pears and plums will be a good crop. Strawberries blossomed heavily and there will be a large crop. J. W. D.

Estimating the Apple Crop.

HOW shall we estimate a prospective apple crop? The members of the New York Fruit Growers' Association will soon be asked for their opinions. How do we know when we have an exact 100 per cent yield or an exact 50 or 40 per cent. yield? These questions may seem nonsensical, yet they are quite important. Of course it is, and must always be very much a matter of guesswork, but cannot there be evolved some more accurate or scientific way for basing an opinion on a growing fruit crop? I would like to see this matter freely discussed in THE R. N.-Y., and to know the ideas of fruit growers on this subject.

For myself, I wish to call a normal yield for an orchard or locality a full crop or 100 per cent.; anything above or below what I consider normal to be estimated as nearly as I may be able at over or under 100 per cent. There is rarely, or perhaps never a year when an orchard or group of orchards in a locality is producing a full crop on every tree. Such a condition, if it occurred, would clearly be regarded as an overflow crop and might properly be called a 200 per cent. crop. It is my belief that when we have what we call a normal crop, all varieties included, not many over 50 per cent. of the bearing trees are really producing fruit, owing to the habit that most varieties have of only bearing on alternate years.

Now for your opinions; are we to call such a 50-per cent. crop or 100 per cent. crop? For this season I estimate that 35 per cent of the apple trees of this locality were in full bloom and 20 per cent. more were in partial or scattered bloom. The conditions have been ideal; lots of moisture in the soil, lots of sunshine and warmth, fruit setting well and growth is very rapid. My own crop promises to be larger and finer than ever before. Trees in splendid health, and up to this date no aphis or other annoying insect. W. S. TEATOR.

Dutchess Co., N. Y.

Massachusetts Grange Activities.

THE lecturer of the Massachusetts State Grange, Mrs. Geo. S. Ladd, has announced a Bird Field Day for July 23, at the farm of J. H. Noble, Pittsfield, Mass. The State Audubon Society and the State Ornithologist will coöperate with the State Grange lecturer in the program for this meeting. All kinds of bird houses will be on exhibition and there will be, either at this meeting or one to be held in Worcester or possibly both, a Bird Pageant. Speakers for the day will tell many things about the birds that every member of the Grange, and others as well, should know. In July there will be held at the Massachusetts Agricultural College a New England lecturers' conference when it is expected that the National Lecturer, Geo. W. F. Gaunt of New Jersey, and Miss Jennie Buell, lecturer of Michigan State Grange, will be present. All subordinate and Pomona lecturers of New England will be invited to be at the conference, as well as the State lecturers from the New England States. The conference will be held on July 30; July 31 will be known as Homemakers' Day and August 1 will be a State Grange Field Day. On May 20 a Degree Rally took place at Faneuil Hall, Boston, when four States and 68 Granges were represented. Two degrees were exemplified by a men's degree staff of Waltham, Mass., and one by the ladies' degree staff of Shrewsbury Grange, comprising 51 people, all the degrees being illustrated by appropriate tableaux. The Subordinate Granges of Massachusetts are many of them entering heartily into the competition for prizes offered by the State Grange for best community service during the year. Much valuable, constructive work is being done this season by the Bay State Granges under the leadership of the efficient State lecturer. J. W. D.

National Grange Matters.

THE legislative committee of the National Grange spent a week in Washington recently going over the compromise Farm Credit bill presented by Congressman Bulkley. This bill is somewhat similar to the Bathrick measure in that it recognizes Government aid. The bill was reported favorably by the sub-committee and it is believed that there is a majority of the joint committee in favor of the measure. National Master Wilson says that the Grange is given the credit for killing the Moss-Fletcher bill through the active response made to the appeal to Granges throughout the country to support the Bathrick bill. The National Master will address field meetings in Colorado, Wyoming, Kentucky, Ohio, Delaware, Rhode Island, Maine, Missouri, besides looking after the work in his own State, Illinois. J. W. D.

Government Cotton Report.

THE condition, May 25, was 74.3 per cent. of normal, compared with 79.1 in 1913, and 78.9 in 1912. The average for 10 years past is 80.4. Percentages by States are as follows: Texas, 65; Oklahoma, 68; South Carolina 72; North Carolina, 76; Arkansas, 79; Georgia and Tennessee, 80; Florida and Louisiana, 82; Virginia, 83; Alabama, 85; Missouri, 86; Mississippi, 87. Drought has hindered the plant in the Carolinas and Florida and it has suffered from excessive rains in parts of Mississippi, Texas, Arkansas ad Oklahoma.

Foreign Crops.

Rains have improved the wheat crop in Germany and Roumania. In Hungary the wheat prospect is poor, but corn is starting well. Wheat sowing is rapidly progressing in Argentina and Australia. A five per cent. acreage increase is reported in the latter country. In India the outlook is generally favorable. In France wheat looks badly. The prospects in Italy are favorable, except in the southern part. Good rains in the lower Volga regions of Russia have improved conditions there.

Wheat is being cut in Southern Oklahoma, the crop being about 97 per cent.. Dry weather is needed for the harvest.

Spring wheat in North Dakota is a week to 10 days late. Soil conditions and weather favorable.

Clement & Curtis report Winter wheat condition 5.2 points under the Government report, indicating a yield of 622,312,000 bushels; Spring wheat 94.1; total wheat prospects, 877,000,000 bushels. Oat acreage, 98.9 per cent. of last year. Condition 85.5, indicating crop of 1,165,454,000 bushels.

The Nebraska June report gives Winter wheat conditions 98 per cent. of last year, and acreage 103 per cent. In Nemaha and Richardson Counties fly has done 30 to 50 per cent. damage, and a number of fields have been plowed up. Corn planting has been completed under favorable conditions, 40 per cent. being up. The area is a trifle less than last year.

Woman and the Home

From Day to Day

The Fatherland.

Where is the true man's fatherland?
  Is it where he by chance is born?
  Doth not the yearning spirit scorn
In such scant borders to be spanned?
Oh, yes! his fatherland must be
As the blue heaven wide and free!

Is it alone where freedom is,
  Where God is God and man is man?
  Doth he not claim a broader span
For the soul's love of home than this?
Oh, yes, his fatherland must be
As the blue heaven wide and free!

Where'er a human heart doth wear
  Joy's myrtle-wreath or sorrow's gyves,
  Where'er a human spirit strives
After a life more true and fair,
There is the true man's birthplace grand,
His is a world-wide fatherland!

Where'er a single slave doth pine,
  Where'er one man may help another,—
  Thank God for such a birthright, brother,—
That spot of earth is thine and mine!
There is the true man's birthplace grand,
His is a world-wide fatherland!

—James Russell Lowell.

*

LOBSTER sandwiches, which are savory and unusual, may be made from canned lobster where fresh sea food is not available. Mince the lobster fine, add half the quantity of shredded lettuce, a little chopped cucumber pickle, and enough mayonnaise dressing to moisten. Mix well, and spread between either white or brown bread, which should be buttered. Cut into small triangles.

*

HOUSEKEEPING on the great German steamer Vaterland, which recently made her first appearance in the harbor of New York, means catering for a family of about 5,000. Electricity is largely used in all sorts of kitchen work. There is an electric toaster, which makes 6,000 slices of toast a day. An electric machine whips cream; in about five minutes it can whip enough for 1,500 people. A row of kettles, electrically heated, boil the eggs, which are put in wire baskets attached to a complicated device, which registers the time required for cooking, and automatically lifts the eggs out at the proper time. A revolving meat-cutting machine cuts 82 slices of cold ham in a minute, while the bread-slicer cuts 64 slices a minute, all of uniform thinness. A whole kitchen is given over to making tea, coffee and chocolate. Of course the silverware is all polished by machinery, and the newest devices in vacuum cleaners are used. The first, second, third and steerage cabins have separate kitchens, cooks and stewards.

*

OLD-FASHIONED English housewives used to make a poultice of scraped potato to relieve pain from swollen bruises or burns. A doctor writing to the London Lancet recently endorsed this treatment in cases of gout, lumbago, rheumatism and bruises, especially in reducing swellings in cases of synovitis (inflammation of the membranes lining joints, as knee, ankle or wrist, or sheathing tendons). In acute cases the raw potato juice was made into a fomentation with hot water, and was found to give great relief. The actual medicinal agent of the potato juice seems unknown. We do not believe in substituting amateur dosing for trained medical care, in the case of any serious ailment, but there are many occasions in isolated homes where the home doctor is obliged to give first aid, and we are always rather pleased to learn that some of our home remedies have a sound basis for belief in them.

*

IN warring against flies the housekeeper must remember that care about the barn is not the only thing; she must do her part also. Her efforts must include proper care of all kitchen wastes. Such things as are intended for pigs or chickens must be kept in closed receptacles, while absolute waste, such as tea and coffee grounds, and other inedible or deleterious substances, should be burned or buried. On small suburban lots it is a common custom to make a shallow hole to receive vegetable wastes, each layer receiving a sprinkling of lime, and the hole being gradually filled with earth. This is a good plan, for it not only does away with the offense of the rotting, refuse, but also forms a useful compost. Wire garbage incinerators are made, which are simply like a tall upright basket of heavy wire, reënforced with iron hoops, and standing up several inches on iron feet; with a little kindling and, if need be, a little kerosene carefully used, garbage is quickly burned with the good draft provided, and it is much safer than a bonfire. Of course the cellar windows should be just as carefully screened as the rest of the house. It is an excellent plan to have a fruit and vegetable closet in the cellar enclosed in wire netting, raised from the floor, preferably on casters, and with netting shelves. This allows a free circulation of air, and if a tight-fitting door is kept closed there is no trouble from those exasperating little flies that are so troublesome with juicy fruits. Of course there should be a netted meat safe or cooling closet, which should be a valuable annex to the icebox. If ice is out of reach, some of the evaporating systems of cooling food will be desirable.

The Rural Patterns.

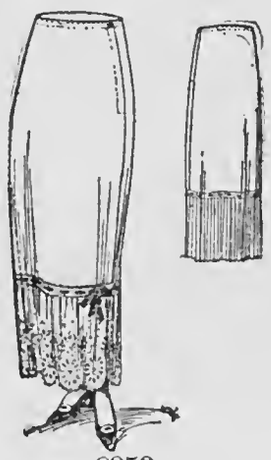
When ordering patterns always give number of pattern and measurements desired. Price of each pattern 10 cents.

7465, child's one-piece dress, 2 to 6 years; embroidery pattern 386 for scallops; embroidery pattern 652 for daisy spray. 8259, plain blouse, 34 to 44 bust. 7612, corset cover with straight upper edge, 34 to 42 bust. 8253, two-piece petticoat for misses and small women, 16 and 18 years.

7465.

8259.

7612.



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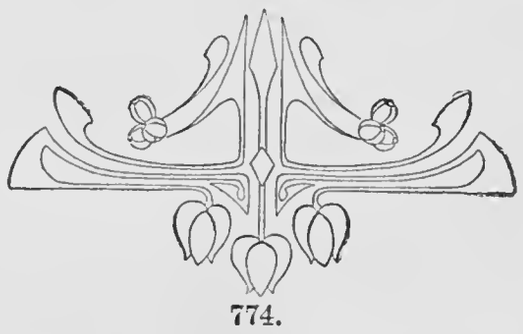

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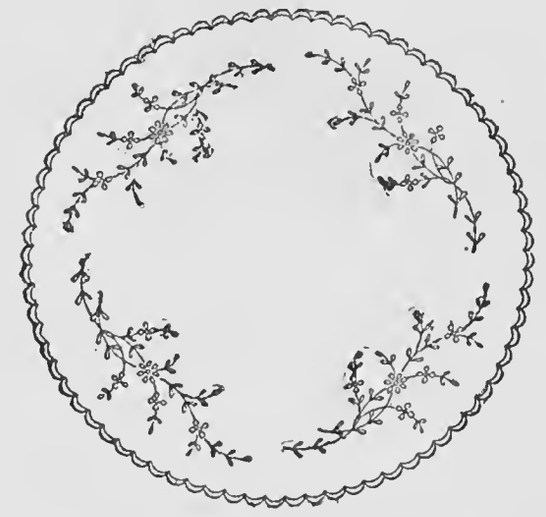


684.

No. 774. Design for embroidering the ends of a table or dresser scarf. Two ends 12 inches wide are given. The design can all be worked solidly, all in outline or in a combination of solid work and outline; or the material can be tinted between the lines and the design outlined with a contrasting color. Stamped and tinted on art crash, 17x54 inches, with mercerized floss to work, 40 cents.

No. 684. A design for an embroidered center cloth twenty-two inches in diameter. One transfer is given. The scalloped edges are to be padded and buttonholed. The leaves and flowers can be worked solidly or as eyelets. The stems are to be outlined. Stamped on best white Scotch linen, with mercerized floss to work, 55 cents.

Graham-Flour Recipes.

GRAHAM Yeast Bread.—Take one quart of liquid yeast, three quarts of graham flour and one quart of white flour, salt and shortening, and two tablespoonfuls of brown sugar. Let rise once, then put in pans, raise, being careful not to get too light, as it will fall if you do. Bake about 45 minutes.

Graham Muffins.—One quart of sweet milk, one egg, one-half teaspoon salt, two teaspoons melted shortening, one tablespoon brown sugar, two tablespoons baking powder, graham flour to make stiff batter. Bake about 30 minutes in hot oven, in muffin rings.

Graham Wafers.—One-half cup butter or any prepared shortening, four tablespoons sugar, one well-beaten egg, one-half teaspoon salt, one teaspoon of soda dissolved in two tablespoons hot water, one-half cup sweet milk. Beat mixture thoroughly and then add as much graham flour as the mixture will hold, knead until it sticks together. Roll very thin and cut into wafers. Bake in a moderate oven until a golden brown and very crisp. Splendid for tea or school lunches.

Graham Pudding.—One pound dates, one cup nut meats, one cup sugar, one cup graham flour, one quart of water. Salt to taste. Boil 15 minutes. Serve cold with whipped cream. No one would suspect its humble origin.

Graham Cake.—Two cups buttermilk, two cups brown sugar, two tablespoons melted butter, two teaspoons soda, one teaspoon salt, one teaspoon each of cinnamon, cloves and nutmeg, one cup raisins, one egg, one cup white flour, graham flour to make a stiff batter.

MRS. F. C. G.

Cottage Cheese Variations.

PLAIN Cottage Cheese.—Take the clabbered milk and put it on the back of the range to heat and curd, taking care that the whey does not boil. Pour off the whey and put the curd in a sugar bag to drip.

Another method: Take the clabber and pour into it boiling water to curd the solid part of the clabber quickly. Cut several times with a knife and drain as above. Each method has its advocates. Mash the drained curd very soft and smooth with a silver spoon much as you would mash potatoes until all the lumps are gone. Add one tablespoon of thick sour cream to each pint of curd and three tablespoons of sweet cream, with salt and pepper to taste. Beat well till it is light and fluffy.

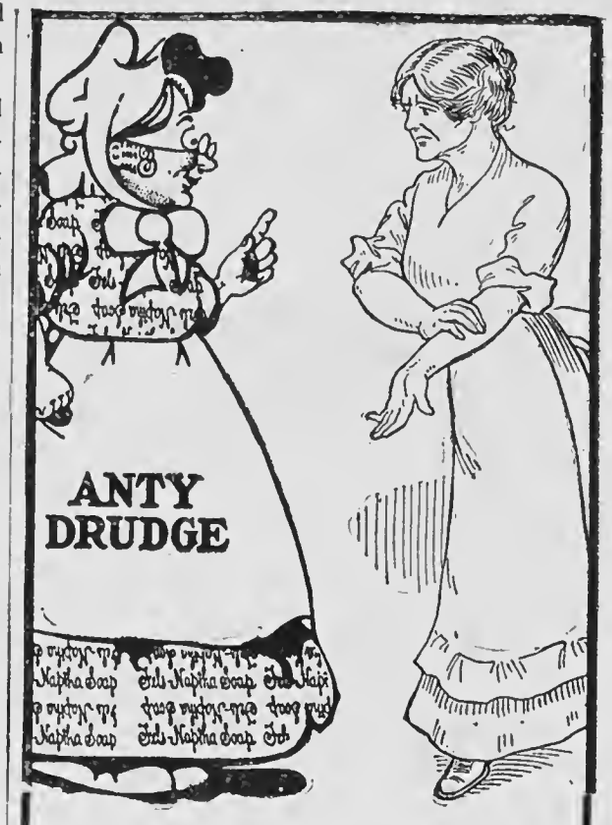
Cottage Cheese with Chives.—Make your cottage cheese as above and just before serving add to each cup of cheese two tablespoons of chives washed, drained and chopped fine. Mix well and serve at once.

Cottage Cheese with Sweet Peppers.—Make the cottage cheese as above and just before serving mix lightly into it long ribbons of red, yellow and green sweet pepper. A pair of kitchen shears will cut the peppers finer than an ordinary knife.

Cottage Cheese Salad.—Make the cheese in the usual way and form it into little balls or pats. Arrange individual small plates with ribbons of lettuce and on each green mound put a ball or pat of cheese. Over the top just before serving put a spoonful of golden mayonnaise.

Cottage Cheese Sandwiches.—Mix into each cup of cheese one cup of minced boiled ham and season to taste. Spread rather thickly on thin slices of buttered bread and cover with another slice. Good for hot evenings. HILDA RICHMOND.

A BLESSED companion is a book—a book that fitly chosen is a lifelong friend. —Douglas Jerrold.



Mrs. Caustic—"Yesterday Annie asked me if I believed any girl ever died for love, and I said, 'Yes, lots. They marry and then work themselves to death for their husbands.'"

Anty Drudge—"Well, they needn't. And I don't believe any woman does, any more, since Fels-Naptha Soap was made. It does the work and leaves women time for rest and pleasure."

Don't make yourself sick doing work the hard way when there's a better way to do the same work and it's easy.

Fels-Naptha Soap in cool or lukewarm water does the *hard* part of your work *for* you. Clothes are sweeter, cleaner and whiter in less than half the time, and don't have to be hard-rubbed nor boiled. And for washing dishes and all kinds of cleaning, it has no equal.

Fels-Naptha saves your strength. Buy it by the carton or box and follow the easy directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

Seen in New York Shops.

JUST about the time some reformer decides that a certain fashion is ridiculous or immodest, and proceeds to denounce it, the intangible authority that decides our fashions moves on to something else. We still see references to slit skirts, but the skirts themselves have disappeared from the smart shops, and from up-to-date wearers. Extreme styles that are ugly or absurd rarely have any large following, except among those whose taste is for the bizarre and sensational. The next style to shock the conservative will doubtless be the pull-back bustle effect, which is foreshadowed by up-and-down fan-like ruffles on the back of some new gowns. However, the reign of this style is disputed by the long straight Cossack tunic, which is pretty and graceful. Some of the frilled "bustles" appearing look very much like the costume of the early eighties.

Sailor hats this season are rather narrow in the brim, and usually trimmed; the plain sailor is little worn except by young girls. A favorite style is of fine white straw, trimmed with flaring little black Mercury wings on each side, and a band of glossy black ribbon. Some of them are trimmed with patent leather bands and shiny black cherries. White chip hats with black trimming are very smart. A traveling sailor hat was covered with black and white checked cashmere, the under side of the brim being faced with black straw, while the only trimming was a black and white wing standing up in front. One very handsome hat seen was of white horsehair, with a square crown and narrow brim slightly rolled at the side; it was trimmed with six large black velvet flowers, like four-petaled roses, placed around the crown nearly at the top.

Rhubarb pink is one of the new colors seen in waists, and in fabrics for evening dresses. It is just the glowing tender shade of the young rhubarb stalks.

A separate skirt of white epouge had a flaring tunic longer at the back of plaid, the tunic fastened down the front with jade buttons. It was to be worn with white waists. Colored linen waists with white skirts are among the newer ideas; the linen is pink, bright red, jade green, blue or canary yellow, with flaring collar and cuffs of white. The effect, above a white skirt, is rather odd.

Fashionable baby clothes are simpler than ever in design, but are made expensive by beautiful hand sewing and fineness of material. A pretty model was fine batiste in the bishop shape, sleeves and skirt all in one. There was a little smocked yoke in both front and back, sleeves and neck were edged with narrow lace, real Valenciennes, and the little gown fastened in the back with two tiny pearl buttons. Smocking is used a good deal in babies' frocks, and also appears in the blouses and tunic skirts of their elders. Another fine little robe is trimmed with hand-made tucks, very fine featherstitching and French knots; the front is laid in fine tucks, with featherstitching and knots between, while the back had two box pleats, one on each side of the closing. The French knots are very pretty, but we do not like them on babies' frocks, for the knot might easily get into a place where it would cause discomfort to the tender flesh. We like the new babies' bands, made of fine silk and wool. They are like low-neck skirts, with straps over the shoulders, buttoned in the front.

Accordion, box and fine knife pleatings are used to make long tunics of thin materials. A gown of canary yellow crêpe de chine had both waist and tunic of half-inch box pleats, the narrow underskirt of the same material being entirely plain. A crush girdle of black glazed taffeta was finished with a large butterfly bow in front. Another gown was white crêpe de chine, the tunic half-inch knife pleats, and the underskirt Roman striped silk blue, pink and black predominating, the stripes going round, instead of up and down. The waist was a sort of kimono drapery of the striped silk over a blouse of the white crape, with a butterfly sash of the silk in the back. Some striped voiles made in a similar style were not pleated, but had the long tunic with the stripes going up and down, the underskirt with the stripes going around, and a loose kimono blouse. A wide girdle of suéde finished the dress; one in which the stripes were a soft shade of yellow had a belt of dull old blue, while another dress, with brown and fawn predominating, was belted with olive green.

In a Vermont Door-yard.

IT was early in the morning when an excited girl of twelve came rushing to me. "Oh! I just saw two birds flying and fighting! They were orange and black and yellow!" Her news was all exclamation points, and she was breathless, but her birds were not hard to guess, for an oriole had been calling and singing for days, about the house. Of course, she had seen two males quarreling.

This girl belongs to a Junior Audubon class, and is learning to be always on the watch for new birds. A few days ago, she had seen a tiny chebec (the least flycatcher) that another girl had found dead, so now she was interested in a bird of the same kind, that is continually after flying insects in our yard. As quick as a flash he is, and always hungry. He comes close to our windows, and does not mind our presence. He and his mate have pre-empted a maple in the middle of our lawn, and woe to the small bird that approaches it! Now, while the girl watched, one of these chebecs went to the maple, with a string in its beak, and after gathering it up a bit, flew up to the partially-made nest, in the upright forking branches, thus showing the girl how it is constructed. We gave some attention to the bluebirds that have a nest in a box made of old shingles, and attached to the side of the house, and suddenly the quarreling orioles dashed past us in a vivid flash of color. Later one of them sang. The bright and interested girl was learning a good deal. But there was still more to learn. A tiny bird with a short, notched tail, spoke from the Porter tree, and at once I was excited, for surely that was a voice that I knew, but had not heard for a year. We moved around, until we could see that the little fellow was all stripes, and by that, and the slightly fretful call, I knew it was a pine siskin, an irregular Winter visitor, now on his way to the far North for the Summer, having wintered south of us. The girl had a good look, and she will remember, and she will not forget that this is a cousin of the goldfinch that she had recently seen.

A robin was gathering dead grass by the billful, and taking it to a neighbor's maple. The girl had learned how a robin forms its nest of mud and grasses, so now she watched this one. Then she inquired if I had lately seen the robin with one foot. Sometime ago, a robin was seen hanging head-downward, suspended by a string tangled about the branch and its leg. When the neighbors had rescued it the leg was found to be broken off, held only by the skin, which was stripped from the bone in a dreadful way. This was cut and after some hours the bird was allowed to go, as it fought so hard to get out. It was seen to grow strong and able to provide for itself, in the following days, but we decided that if we put out strings for nesting birds, we would make them short.

There were more birds to see—the fearless little chipping sparrows, a goldfinch, and later, a yellow-throated vireo and a white-crowned sparrow, but the girl must go to school, so she hurried away, but her mates will hear what she learned in the door-yard, and they will want to see what she saw.

Our boys and girls are finding the study of birds extremely interesting. What a wholesome study it is! I wish all the children of the farms, villages and cities could be taught to see what there is to see of bird-life. There is no more innocent pleasure, and both chilren and birds would be benefited. E. F. M.

Cooking for Diabetics.

A. W. G. asks for recipes for diabetic cookery. I have a diabetic patient in the family, and have a list of foods prepared by a good physician. All kinds of meat (not liver) fish and eggs cooked in any way; gluten bread (but I make muffins and griddle cakes from the flour with baking powder and an egg). For vegetables, lettuce, celery, spinach, onions, cabbage and cauliflower, string beans; apples sour, oranges sour, and grapefruit; also all nuts but peanuts and chestnuts. He has tea and coffee weak, the cup half filled with hot milk. He has saccharin tablets for sweetening (there are several makes); one tablet will sweeten a cup of coffee. I make custards and coffee and lemon or orange jelly, with three or four tablets to a pint of milk or jelly, they dissolve quickly in the hot milk or liquid. Cocoanut can be added to the custard for a change. This diet is varied enough for anyone I think.

F. B. T.

I was on a diabetic diet for nearly a year. The order was to cut out starch and sugar, and at first it seemed as if that cut out nearly everything. At least I got quite thin and well.

I purchased a certain brand of gluten flour and made a "lazy biscuit": Two measuring cups of gluten flour; two tablespoonfuls lard; two teaspoonfuls baking powder; a little salt. Mix with milk or water; stir and put in pattypans. This amount makes eight nice biscuits.

I ate all the fruit I could and tried to follow the following:

MAY TAKE.

Soups or broths of beef, chicken, mutton, veal, oysters, clams, terrapin or turtle (not thickened with any farinaceous substances), beef tea.

Shell fish and all kinds of fish, fresh, salted, dried, pickled or otherwise preserved (no dressing containing flour).

Eggs in any way most acceptable.

Fat beef, mutton, ham or bacon, poultry, sweetbreads, calf's head, sausage, kidneys, pig's feet, tongue, tripe, game (all cooked free of flour, potatoes, bread or crackers).

Gluten porridge, gluten bread, gluten gems, gluten biscuits, gluten wafers, gluten griddle cakes, almond bread or cakes, bran bread or cakes.

String beans, spinach, beet-tops, chicory, kale, lettuce plain or dressed with oil and vinegar, cucumbers, onions, tomatoes, mushrooms, asparagus, oyster plant, celery, dandelions, cresses, radishes, pickles, olives.

Custards, jellies, creams (without sugar), walnuts, almonds, filberts, Brazil nuts, cocoanuts, pecans.

Tea or coffee (without sugar), pure water, peptonized milk.

MUST NOT TAKE.

Liver, sugars, sweets or starches of any kind, wheaten bread or biscuits, corn bread, oatmeal, barley, rice, rye bread, arrowroot, sago, macaroni, tapioca, vermicelli, potatoes, parsnips, beets, turnips, peas, carrots, melons, fruits, puddings, pastry, pies, ices, honey, jams, sweet or sparkling wines, cordials, cider, porter lager, chestnuts, peanuts.

I have read that an ideal treatment for diabetes is that of Dr. Guelpa of Paris. He advocates a three-day fast, accompanied by a bottle of Hunyadi Water each day of the fast. They say by the end of the third day, all signs of the disease have disappeared, in practically every case. MRS. L.

THE race is divided into two classes—those who go ahead and do something and those who sit still and inquire "Why wasn't it done the other way?"—Oliver Wendell Holmes.

Mix ½ cup sugar and ¼ cup butter. Add 1 beaten egg. Mix and sift 1½ cups flour and 2 teaspoons baking powder. Add alternately with ½ cup milk to first mixture. Bake 30 minutes.

A Cake for 12c Baked in a

"Wear-Ever" ALUMINUM CAKE PAN

"Wear-Ever" Aluminum Cake Pans bake good cakes because they bake quickly and evenly on all sides at once.

"Wear-Ever" Utensils are solid metal---cannot chip---cannot rust---pure and safe.

Replace utensils that wear out with utensils that "Wear-Ever"

Send for our new folder, "Delicious Cake Recipes" mailed free upon request.

WANTED: Men to demonstrate and sell "Wear-Ever" specialties. Only those who can furnish security will be considered.

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Dept. 53 New Kensington, Pa., or
Northern Aluminum Co., Ltd., Toronto, Ontario
Send prepaid 1-qt. "Wear-Ever" Stewpan. Enclosed is 20c in stamps---money refunded if not satisfied
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DAISY FLY KILLER placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 6 sent by express prepaid for $1.

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—JOHN FRIGAR, Chief Engineer.

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—LEONARD PEARSON, Pa State Veterinarian.

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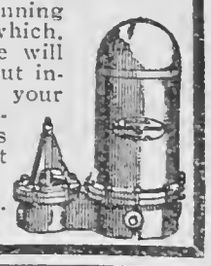
If you have a spring, running stream or dam, write us which, your requirements, and we will tell you just how to go about installing a water system on your place. Our booklet "C" contains many other evidences of perfect satisfaction. Sent free upon request.



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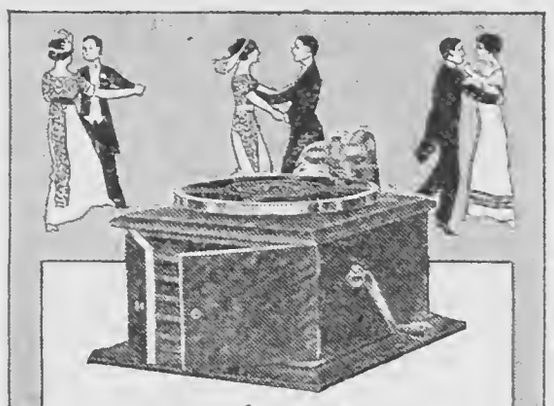

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will entitle you to a reward. Send for our Reward List.

Department "M"

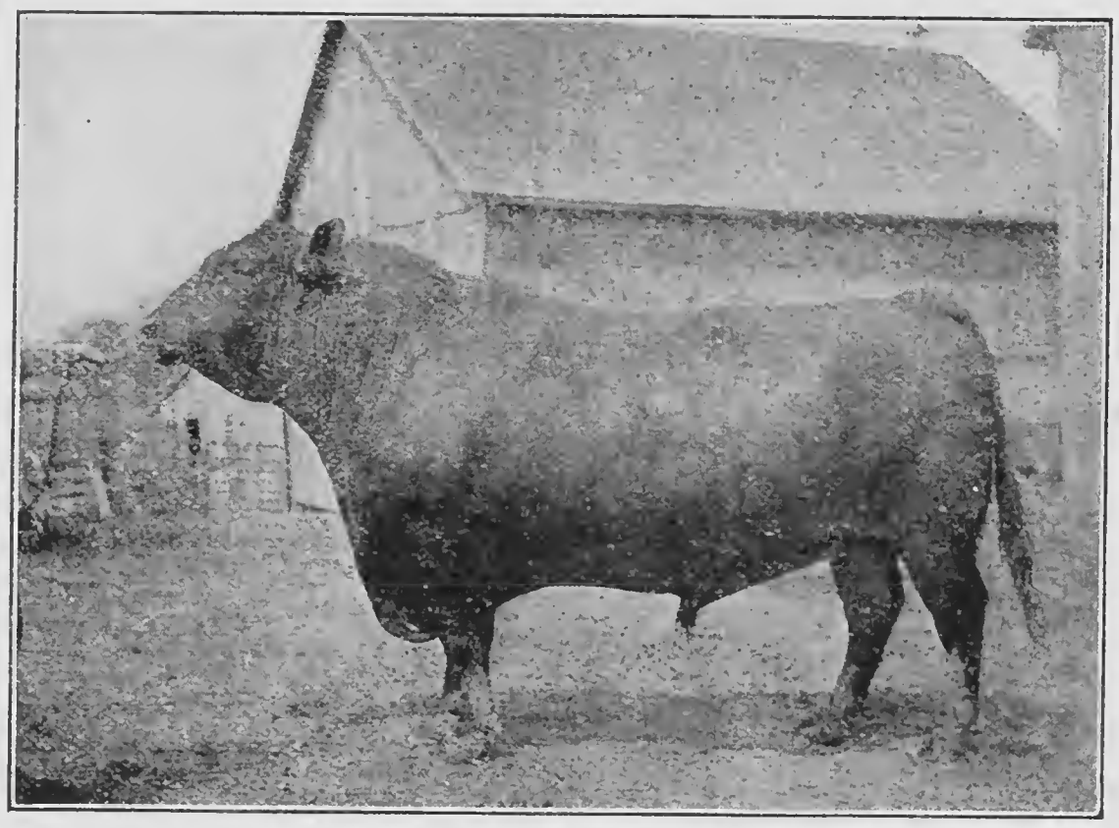
The Rural New-Yorker
333 West 30th Street
New York City

One of our friends writes:
"The Pruner, sent as a reward, is all O. K. Many thanks"—G. A. S., Lewisville, Ohio

Live Stock and Dairy

BEEF CATTLE FOR THE EAST.

IT is quite surprising how many farmers in the Eastern States are considering the plan of breeding and raising beef cattle. Some of these men are dairymen who for one reason or another have concluded that beef might pay them better than milk or butter, so they are looking about and studying the beef question as best they can. We are not sure that such a change would pay and we should advise a man to be very careful before making a change from dairying. At the same time it is well to study the various beef breeds and get a fair idea as to their value. It is not entirely a matter of breeding beef calves and turning them out to pasture through the Summer and feeding them through the Winter, for there are about as many points to the business as there are in dairying, and no man can make a profit at beef raising unless he understands the



A HIGH-CLASS ANGUS. FIG. 328.

principles of feeding and knows how to handle the animals. One great drawback will be our long cold Winters which will mean a long continued season of barn feeding which would be expensive and make it difficult to compete under present conditions with the beef produced in the South and Southwest where the pasture season is longer. In some parts of New England, certain farmers are considering the plan of using the black Scotch cattle, either the Angus or Galloway, for crossing upon large native cows. The grades from this cross are usually large blocky animals not of much value for the dairy but of good shape and size for beef. They are very hardy and can be kept well in herds. Another value from this cross is found in the thick, black hide; now that the fur-bearing animals are diminishing in numbers, the hide of the black Scotch cattle has an increasing value and makes an excellent substitute for buffalo and the larger hides used for robes or coats. Thus a grade of the black Scotch animal has a double value both for beef and for its hides, and the chances are that the business of producing such cattle could be made to pay well with good management. Fig. 328 shows a high-class Angus bull. This animal was imported from Scotland and was used in the herd of Dr. H. N. Brown of Highland County, Ohio.

Raising an Orphan Foal.

WILL you tell how to feed a young colt in case the dam will not own it? Is there anything one can do to induce the dam to own the colt? I have a mare that had a colt two years ago, and would not own it. A. R.

When a mare does not own her foal, or if she proves vicious and will not let it suck, pen her in a corner of a box stall, by means of a gate or hurdle through the bars of which the foal can get at the udder. If necessary use a twitch a few times to keep the mare quiet while the foal sucks. She sometimes will own the foal when it has sucked a number of times. Do not retain such a mare for breeding. A foal may be raised on cows' milk, if one chooses milk poor in butterfat, but from a fresh cow. Dilute the milk with hot water. Mix with it two tablespoonfuls of limewater and two teaspoonfuls of granulated sugar per pint. Feed it blood warm. At first allow the foal a cupful once an hour; then gradually lengthen the feeding periods and increase the amount of milk allowed. Give the milk from a sterilized nursing bottle and rubber teat, or from a small teapot having the thumb of an old kid glove drawn over its spout and pierced with several holes by means of a darning needle. Give the foal free access to rolled oats in a box. When it eats oats well, add wheat bran gradually. In three or four weeks sweet skim-milk may form a part of the ration and then be gradually substituted for new milk. If the foal scours withhold milk and give warm water and limewater, sweetened, after a dose of two ounces of castor oil shaken up in milk. Give the foal a calf or other foal as companion, and soon let it run on new, clean grass, near the house, but not with adult stock. Better relegate the work of raising an orphan foal to some kindly woman. It is a tedious chore, and needs the motherly instinct and patience of a woman, who should be presented with the colt for her pains. A. S. A.

The "Eye Test" for Tuberculosis.

WHAT do you know about the eye test for tuberculosis? I tested my cow; she did not react. My neighbors tell me the test is not worth anything. Warren, Ohio. J. B. J.

There is no absolutely infallible test for tuberculosis in cattle, but those in which tuberculin is used are the most satisfactory and are sufficiently reliable for all practical purposes. The eye, or ophthalmic, test is a good one when properly made and when the condition which may vitiate it are guarded against. It is essential that reliable and properly prepared tuberculin be used and best that cattle being tested should be confined under shelter. Exposure to rain, bright sunlight, or strong winds that would irritate the eyes, or opportunity to wipe them off against hay or other substances might make it difficult to judge of the effect of the tuberculin. The method of using this test is to put one or two drops of tuberculin directly into the eye while someone holds the animal's head elevated and the eyelids apart. The reaction, if there is to be any, is usually apparent by the eighth hour, though it is sometimes delayed as long as 24 hours. It is shown by watering and reddening of the eye and by swelling of the lid; later "matter" forms at the inner angle of the eye, and may run down the face. Like all tuberculin tests, this one is most satisfactory when made by one whose experience enables him to judge of the certainty of the reaction and whether there may have been conditions present which could have interferred with it. The ophthalmic is the most simple of the tuberculin tests, and in the hands of the inexpert layman, probably the most satisfactory; it is questionable, however, whether it would be wise for an inexperienced owner to condemn a valuable cow on the strength of his own unaided observation of this test. M. B. D.

"Now, Thomas, tell me in what battle King Richard III was mortally wounded." "His last one, mum."—Credit Lost.

SANITATION

would have saved a great many of the 7,420,912 hogs valued at $59,455,700.00 lost in United States during 1913 from

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You can make your hog pens sanitary if you use

KRESO DIP No. 1

The Standardized, Reliable Dip and Disinfectant.

We will send you free a booklet on the treatment of mange, eczema or pitch mange, arthritis, sore mouth, etc.

We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to keep your hogs free from lice and parasites and disease.

Write for them—they are free.

KRESO DIP No. 1 has been used at the large state fairs in the United States for the last ten years to prevent the spread of contagious disease. It has done it, and KRESO DIP No. 1 will do the same for you on the farm.

KRESO DIP No. 1 is Easy to Use—Reliable—For Sale by All Druggists—Effective—Not Expensive.

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Dep't Animal Industry. DETROIT, MICH.

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Gombault's Caustic Balsam

Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

Don't Cut Out A SHOE BOIL, CAPPED HOCK OR BURSITIS FOR

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

will remove them and leave no blemishes. Reduces any puff or swelling. Does not blister or remove the hair, and horse can be worked. $2 a bottle delivered. Book 6 K free.

ABSORBINE, JR., the antiseptic liniment for mankind. For Boils, Bruises, Old Sores, Swellings, Varicose Veins, Varicosities. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Will tell more if you write

W. F. YOUNG, P. D. F., 88 Temple St., Springfield, Mass.

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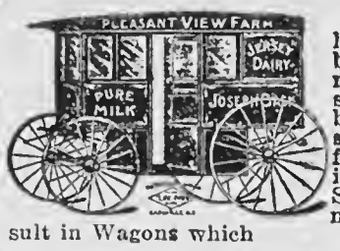

Are built of selected materials, by skilled workmen. Experts spend time, brains, money, searching for defects, hunting for improvements. Such methods in manufacture result in Wagons which

NEVER WEAR OUT

For these reasons Parson's "Low-down" Milk Wagons are popular. More popular still because of their "low-down" feature. Near to the ground, they are easy to jump into or out of. They're easy to load and unload. They won't overturn. Their cost is "low-down" too.

Milk Dealers', Bakers', Butchers' Wagons Exclusively

"FOR 27 YEARS THE STANDARD"

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QUINN'S OINTMENT

The Mild Blister

Painless—safe—easy to apply—no scar. Horse can be worked. Use for splints, bog spavins, curbs, wind puffs, swelling of throat and glands and all other flesh enlargements. Excellent for wire cuts and red sores. Write for information. For sale at druggists or direct—price, $1.00 delivered.

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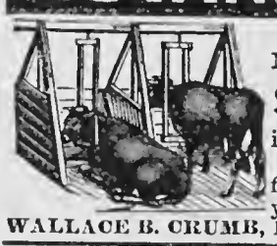

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in feed in one winter." Send address for specifications of inexpensive yet sanitary cow stable to

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"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

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$3 Package CURES any case or money refunded.
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30 DAYS' TRIAL—STATIONARY WHEN OPEN

NOISELESS SIMPLE SANITARY DURABLE

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EQUIP YOUR BARN THE West Bend WAY

Our patented lever device which *operates 2 to 50 Swinging Stanchions and Cowstops* at one throw of the lever, is the biggest improvement ever made in barn equipment. Only device in the world that will do it. Saves much time, trouble and labor in fastening and releasing cows. West Bend Equipment

REDUCES YOUR BARN WORK

Costs no more than others—yet has many superior features. We manufacture a complete line of stanchions, stalls, pens, feed and litter carriers, etc. Write for catalog showing complete line.

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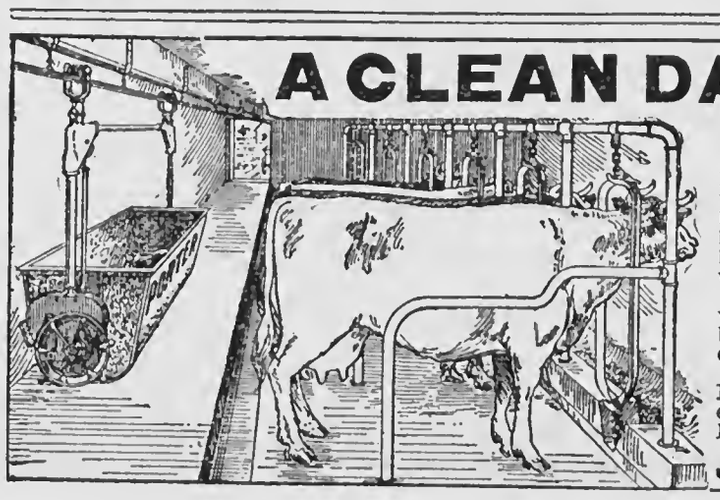

A CLEAN DAIRY BARN With Half the Work

By using a Porter Litter Carrier. It works on our Columbian Steel track, is easy running and will carry heavy loads. Our Perfect Cow Stanchions line up the cows without interfering with their comfort.

Porter Steel Stalls give perfect ventilation and light throughout the barn and make it easy to keep the cows clean.

We also make the celebrated Porter Hay Carriers and Barn Door Hangers. Send for catalog of our Perfect Barn Equipment.

J. E. PORTER CO., Ottawa, Ill.

INFLUENCE OF SIRE.

ON page 682 in the article on making hogs pay, F. C. M. says the male decides the number of offspring. Science says, the female of all animals that bring forth their young alive, decide the number of offspring. W. M. P.
Silver Creek, N. Y.

W. M. P. has quoted only in part from my article relating to the influence of the sire. What I did say is as follows: "The most exacting care should be exercised in choosing the herd boar. He is by far the most important and influencing animal in the herd, for indirectly he stamps every pig farrowed. Upon his potency and ability to perpetuate fixed characteristics depends the number and type of pigs produced." It is understood, of course, that the boar is only one of the individual factors that influence prolificacy, but since the herd boar is usually mated with a large number of sows, he has a greater opportunity of exercising his influence, not only as regards type, but certainly as regards the number of brooded young. A further thought that should not be overlooked in the article was the point in reference to the direct influence of the male regarding the vitality and vigor of the pigs at farrowing time. While it is true that the male function is completed as soon as the sow is settled, there is no doubt but that inactivity on the part of the male during the mating season is largely responsible for weak litters lacking in uniformity and vitality. Prolificacy depends upon the forces of heredity of course, and for this reason not only the males but brood sows should be selected from large litters, not only in one generation, but in as many generations as is possible. It was not my intention to give the impression that the number of offspring depended entirely upon the male, but I do affirm that his influence in respect to this characteristic is greater than is usually appreciated. It should not be the aim of the breeder merely to increase in numbers, he should aim to increase in type by increasing utility value of the individuals. Profits with swine depend upon, first prolificacy, second, upon type and quality and third, upon the amount of home-grown feeds fed. It costs no more to grow a sow that will produce only three pigs than it does to maintain a brood sow that will produce 12 pigs, and one of the sure ways to get large litters is to select males whose ancestors were members of large families, ones masculine and resolute to transmit such prepotency in a marked degree. F. C. M.

BOSTON MARKETS.

THE supply and demand for green stuff in Boston market has been quite lively the past few days, and prices have been reasonable to both buyer and seller as the rule. Old potatoes are lower, as new ones are expected shortly, and many prefer to wait for these and buy the others only when obliged to. Maine stocks $1.50 to $1.60 per bag, the few new ones bring about $6 per barrel; sweets $4 per crate. Texas and other onions around $3 per crate. Rutabaga turnips $3 per bag for old stocks. New white $2 per dozen bunches. Old beets $2 per bushel; new 75 cents per dozen bunches. Carrots $1.50 per bushel; new $1 per dozen bunches; parsnips $1.50 per bushel; new radish 75 cents per bushel. Mushrooms 50 cents per pound; rhubarb one to 1½ cents per pound. Southern green peas about $3 per bushel; string beans, poor quality, $1.50 to $2 per basket. Cabbage 85 cents to $1.25 per crate. Cucumbers more plentiful and best bring only $4 per bushel; seconds $2.50 to $3.50 per box. Spinach and kale 60 cents per box. Lettuce still a little short, and sells at $1 and better per box. Celery from California $2 per dozen bunches. Southern Summer squash $1.50 and $1.75 per crate.

Hothouse tomatoes seem low at 20 cents per pound, but as the pickings at this late season are good in some cases, and only natural heat is required, they pay as well, or better, than some other things. Floridas about $3 per crate. Southern strawberries plentiful and cheap, but in most cases not good in quality. Maryland stock is now largely on the market, with Jerseys promised in a few days; 10 to 15 cents per box are the average prices; some sell lower. Nice pineapples plenty at $2.25 to $3 per crate. Oranges reasonable and in fair supply from California at $2.75 to $3.50 for navels and bloods. Foreign stocks range from $2.50 to $3.75, the few Floridas bring about $4. Lemons in big demand and prices range a little higher, $5, $6 and $7.50 per box being the figures. Grapefruit from Florida $4 per box, others $2.25 and $3. California cantaloupes $6 per large crate; cherries 25 cents per pound. Bananas $3 per bunch for best, others $2.50, $2 and $1.50 for yellow; reds $4.50, $3.50 and $2. The few native apples bring about $7 per barrel for Baldwins and $5 per barrel for Russets. Western box fruit $4 for Delicious. Winesaps $3 and a few others at $2.50. Butter receipts are fairly large, quality and color good and prices inclined upward. Packers are reported to be the largest buyers for storage to blend with their artificial produce, as a certain percentage so used reduces considerable on the government tax they pay, and also gives a better product. It is reported around 26 cents per pound is what is paid by these people, and as this price is considered rather high to pay by those who would buy for speculation only the latter class are in doubt just what course to take; that is, whether to buy now or take chances later. Cheese buyers are also holding off for about the same reasons, so that sales in that have been small. Wholesale butter prices for best creamery butter are up to 29 cents by tub; boxes and prints of the same class 29 and 30; good quality butter 25 to 28; poor quality as low as 18 in some cases. Prices in various cities throughout New England range from 25 to 30. Cheese of good quality ranges from 14 to 18. Eggs also rising and receipts declining, and will continue so for reasons of increased consumption in the country by city visitors, etc. Best quality fresh about 28, other grades 23 to 27.

Dressed poultry in just fair demand with fowls at 21; live fowls 17; live ducks about 15; good dressed turkeys 24 to 25.

Cattle at Brighton markets in light supply in about all classes, and sales as the rule satisfactory to sellers. Beef cattle cleaned up well; steers of good quality brought 7½ live weight. A few good cows brought 7, best bulls 5½, one for 8, cows in fair condition 4, 5 and 6 cents per pound. Good veals 6 to 10, with demand quite lively. Live hogs brought about 8½. Dressed hogs 11, supply short. One milch cow is reported to have brought near $140; others varied from around $100 down to $50. Horse market continues good on all good animals, especially the big ones, which if they suit the purchasers readily bring up to $450 each; others of lighter weight around $300, other classes $150 to $250.

Grain prices are held up by large holders and no hopes of much let-up for a few months yet. Meal at wholesale $1.49 to $1.60 per bag; oats range just under 50 cents per bushel; bran per ton about $27; hay $17 to $24 per ton. A. E. P.

"I DON'T want no rubbish, no fine sentiments, if you please," said the widow, when she was asked what kind of an epitaph she desired for her late husband's tombstones. "Let it be short and simple—something like this: "'Wm. Johnston, agged 75 years. The good die young.'"—Stray stories.

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Wanted to Buy—CATTLE BY THE CARLOAD One hundred head wanted (due to calve) during July to September. Holsteins and Ayrshires preferred. Address, A. S. EDWARDS, Stepney Depot, Conn.

AYRSHIRE BULL—12 months; bred for production; ¾ white; beauty; $75. 2 Bull Calves. BELL FARM, Hollis, New Hampshire

For Sale—Several well-bred REGISTERED AYRSHIRE BULLS about a year old. Write or call. BRISTOL COUNTY AGRICULTURAL SCHOOL, Segreganset, Massachusetts

Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N.Y.

PUREBRED HOLSTEINS FOR ANY POCKETBOOK, $200 to $1,000. Tuberculin Tested. Hudson Valley Holstein Headquarters. MOHEGAN FARM, Peekskill, N.Y. 1 hr. from Grand Cent. Sta.

FOR SALE—A SPLENDID GRANDDAUGHTER OF
THE KING OF THE PONTIACS
And a World's Champion Cow
CHERRY BROOK FARM, R.F.D., Kent, O.

For Sale—Choice Holstein Bull Calves from two to four months old; sired by King Pontiac Solomon, one of the good sons of King of the Pontiacs. Dams have good official records. Also a choice lot of Berkshire pigs, about ten weeks old. Prices very reasonable. WARNER STOCK FARM, Warner, N. Y.

BARGAIN SALE
HOLSTEIN BULL
ready for heavy service; son of the Great Milk and Butter King; A. R. O. dam. Two choice cows due in August. Several male calves. One fine heifer calf. HILLHURST FARM, F. H. Rivenburgh, Prop., Munnsville, N. Y.

Brown Swiss Cattle—Bulls ready for service. Cows and Heifers. All animals descended from cows entered in or eligible for Registry of Production. GEORGE W. HARRIS, Wethersfield, Conn

HOLSTEINS FOR SALE
5 Registered Holstein Bull Calves 1 month old, four-fifths white well bred, $35 each; express paid to your station with all papers. 4 Registered Holstein Heifer Calves for $400. 1 car load of Registered Heifers Bred. 1 car load of Registered Cows due to freshen this Fall, and 100 High Grade Holstein Cows. Orders for 75 Holstein Heifer Calves at $15 each, to be shipped this Fall. Express paid if ordered in lots of 5. 1 car load of High Grade Yearlings for $40 each. REAGAN BROS., Tully, N. Y.

HIGH GRADE
HOLSTEINS
The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holstein Cows For Sale
50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.
These will suit the man that is looking for high-class dairy cows. Large producers, good size and well marked.
Visit the East River Holsteins when in need of first-class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.
Bell Phone No. 14 F.5. JOHN B. WEBSTER, Dept. Y Cortland, N. Y.

Purebred Registered
HOLSTEIN CATTLE
The Capital, Topeka, Kansas, June 16, said: "When Maid Henry, the famous 13-year-old Holstein owned by the Kansas Agricultural College, was working so hard for the record of 19,600 pounds of milk and 835 pounds of butter in a year's time, dairymen prophesied that the Maid would be ruined. But Maid Henry returns to show that she is some cow even after breaking a record. She has a 114 pound male calf, born just the other day to prove it."
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SWINE

FOR SALE—Purebred Chester White Boar Pigs, sired by prize winning Boar. $10.00 each; registered 8 or 9 weeks old. A. J. LAM, Oriskany, N. Y.

Yarmouth Farm Chesters
April farrow, registered, growthy and prolific. Also Poland Chinas. Rollo Young, R. D. 4, Coatesville, Chester Co., Pa.

DUROC PIGS—$16 PAIR. Write S. A. WEEKS, De Graff, O.

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, N. Y.

Duroc Pigs Two Boars—ten months old, $25.00 each. Spring Pigs six and ten weeks old, $8.00. Each with registry papers. JAMES E. VAN ALSTYNE, SECRETARY, KINDERHOOK, N. Y.

PIGS—500 to 1,000 head always ready for shipment. Large, growthy type. Shipment at two months' old. NEW ENGLAND LIVE STOCK CO., - Peabody, Mass.

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ereildoun, Pa

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Choice Boars, old enough for service.
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BERKSHIRES *GUARANTEED Cholera Immune*
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LARGE BERKSHIRES AT HIGHWOOD
Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows.
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Springbank Herd—Big Berkshires
I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
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Fine Collie Pups—Males, $8; females, $5 up. Rea drivers. Brookside Farm, Prospect, O

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MAKE MONEY
Buy a pure bred draft stud colt and two fillies. Stallion would sell in two years for enough to pay first cost of the three. Your fillies should drop two colts by him; the four maturing at $2,000 and costing you practically nothing. Or, if you keep stallion he will mature at fancy price and breed for you a big and steady income. Make money. We will help you. Write today. ADIRONDACK FARMS, 31 Maple Street, Glen Falls, New York

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Our last importation of BELGIANS and PERCHERONS is the BEST we ever imported. We have sold more Stallions and Mares in the last sixty days than we ever sold in a year. WHY? Because we sell the good, big, drafty kind at the right price, and cheaper than the other fellow.

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50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

AT STUD—"LANDAIS" (100,233) 92,338. Imported Registered Percheron Stallion. Gray, weight 1,900 lbs. Fee, $25 Walnut Grove Farm, Washingtonville, N. Y.

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FOR SALE—Flock 20 Thoroughbred Shropshire Sheep, will be sold at a sacrifice to sell quick. OWEN NOLAN, Mt. Carmel, Conn.

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FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

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FOR SALE
Cows, yearling and two-year-old heifers. Some of the heifers served. Also heifer calves. CHARLES G. FOSTER, P. O. Box 173, Morristown, Morris Co., New Jersey

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Begin by Purchasing a Thoroughbred Jersey Bull
He is the most important factor in increasing the producing quality of your herd.
With good grade Jersey cows and a thoroughbred bull you may shortly raise cows that will average 400 pounds of butter per year.
The nearer you approach the thoroughbred, the greater the producing value. A good bull pays big returns on his cost from the first.
Let us send you some Jersey facts.
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MAY RILMA
Gives . . . 19673 lbs. milk
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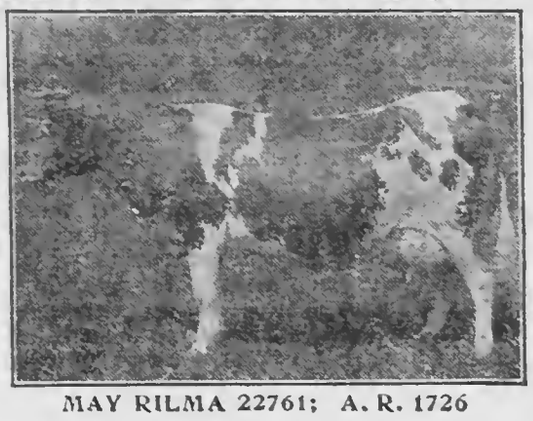

MAY RILMA 22761; A. R. 1726
MAKING HER THE CHAMPION DAIRY COW OF ALL BREEDS
Write for the story of this cow's work and receive with it general literature about the breed
AMERICAN GUERNSEY CATTLE CLUB Box "Y," Peterboro, N. H.

PIT OR UNDERGROUND SILOS.

SINCE mentioning those silos on page 680 a circular from the Arizona Experiment Station has come. Out in that hot and dry country the pit silo is advised, as they are not affected by the hot sun or scorching winds. The following description is given of the way such silos are made in Western Kansas. Of course this would not answer in humid sections where water stands near the surface:

The silo is constructed in the following manner: A circular trench five or six inches wide and eight to 16 feet inside diameter, depending on the size of the silo desired, is excavated to a depth of two or three feet with a very narrow long-handled spade. This ring is filled with strong concrete and allowed to harden; thus no forms are required. The center is then excavated and the pit dug plumb with the inside of the curb. After the excavation has been carried down about five feet the walls are cemented with a one or two-inch layer of cement mortar, 1:2, applied with a plasterer's trowel; a second five-foot section is then dug out and plastered. This is repeated until the proper depth is reached. This system of completing five-foot section as the pit is sunk does away with the need of scaffolding. The top ring should be carried up three or four feet above the general level with concrete or masonry and the ground sloped away from the pit so as to drain well. A roof is provided which also forms the support for the hoist. The hoisting is done by block and tackle and a horse, or, if more convenient, a hand windlass may be used. An overhead track leads from the silo along the line of feed racks so that the silage is handled only once, when loaded into the carrier in the silo. This carrier may be constructed so as to distribute the silage along the feed racks instead of dumping it in one place. Under no circumstances should a permanent ladder be constructed in a silo, since it will cause the silage to spoil. It will be found convenient to provide three moveable ladders of different length to use as the level of the silage goes down.

Before entering a pit silo be sure that it does not contain deadly gas. This is especially apt to occur during quiet weather. A candle or a scrap of burning paper may be used to test the pit; gas in quantity will dim or extinguish it.

A WYANDOTTE BREEDER TALKS.

ON page 724 you say the Standard type Wyandotte is a dumpy, sleepy, lazy-looking individual. You could hardly be farther from the truth. She is as dainty, as alert and as handsome a piece of hen flesh as is bred. You should look at some of the prize winners at New York. The first pullet at the Garden, January, 1913, seemed to me to be the nearest to standard type I have ever seen, and if there was a lazy feather on her, I didn't see it, and I spent a good bit looking at her. It is true the Wyandotte may not have the build of a racehorse, but like the truck horse, she can stand a lot of work. I for one don't want a bird to go at top speed for a little while and then have to be rubbed down and rested. Give me one that can work hard and steady for a long spell, and laying eggs is work for a hen, which you will have to admit.

If you had studied the birds at the first contest at Storrs, you would have seen that Mr. McConnell's pen, that did so well, one of his birds laying 247 eggs in 336 days, contained birds nearer to the standard type than any other pen of Wyandottes. The long backed birds were the poorest of all. Beulah Farms', the winners, five birds were all different shape. The Buff Orpington hen that made such a wonderful record had the single comb and whitish pink shanks of an Orpington, but that was all. She was nearer Wyandotte type than anything else. The breeder of the first pullet at the 1913 Palace show tells me she has been a splendid layer, and what is more, practically all her eggs are fertile and hatchable. One of my very best pullets, a prize winner, has layed steadily since last October and has not tried to sit yet. I think you will be very much disappointed when you see the New Standard for White Wyandottes, for they will not be changed to a "utility" type as Mr. Card says, he meaning I suppose, R. I. Red type, for he is a strong Red man, and of course they are the "only utility birds." About the only change is a change in the wording of the description of the back, from *short* to *moderately short*. I doubt very much if one will notice much difference in type in the show room, for there are very few very short-backed birds among the winners, most are moderately short now. That word short has been very much abused, some judges taking it to mean no back, the hackle and tail meeting. It has been this wrong interpretation which has made some people think the Standard Wyandotte was killed as an egg producer. True, some judges have required a no-back bird for the Standard said short, which can mean a lot.

I really don't think many who have bred White Wyandottes doubt that Mr. Barron's birds are purebred. Off-shaped birds will come from the best of matings. I haven't seen his birds as yet, but I venture to say that I have birds I know to be White Wyandottes, that are as far or farther from the Standard type than his, yet they of course are not to be compared with his as layers. Just because his birds have white lobes and R. I. Red backs, don't think for one minute that that is the "secret." It's Mr. Barron. The trouble is that most people, like myself, pay very little attention to type so long as a bird lays. I am anxious to see if all of Mr. Barron's birds are the same type, for I have a hunch that I shall find six or eight different ones.

Mr. Graham of Massachusetts said at Storrs two years ago that there was no reason why a roly-poly White Wyandotte should not be just as good layer as a long-backed one. The trouble is people have assumed they were not.

Why all this agitation over these White Wyandottes of Mr. Barron's as to their purity? Are they any farther from the Standard type than his Leghorns or many other birds in the contest? I think not. I have seen Leghorns of Mr. Barron's that were just as far off. I had the good fortune to hold birds for a judge when he was comparing them at a local show this past Winter and among the White Leghorn males was a Barron cock that was nearer Minorca shape than anything else. Also a Barron six-months-old pullet was coarser than any hen I ever saw, and no Leghorn shape. No one doubted that these birds were pure Leghorns. It is simply because everyone has gone daffy over Leghorns for eggs, and when any other breed shows them up, they are mongrels with Leghorn blood. There is no trouble with the Standard, or at least very little; it is with us, who don't pay enough attention to it. The breed doesn't make any difference, for the best one is the one you like the best. It is what a man can do with what he has. Don't worry about the type, but tell us how to make any type lay. It is much more important, for there is no one typical egg type, at least those that know it, never seem to be able to pick it out. Mr. Barron, when picking out the great layers at Storrs, didn't do it that way.

Connecticut. G. M. ALLERTON.

BUFFALO MARKETS.

THE markets are now full of home-grown lettuce, asparagus, green onions, radishes, all at low prices—lettuce, three heads for five cents, radishes at two bunches for five cents. The old crop of onions is still dear, best home-grown not quoted wholesale at less than $2.50 a bushel, but the green bunches are four for five cents. Asparagus in fine quality at five to seven cents a medium-sized bunch. Cabbage is still very high. Old beets, turnips and carrots have about disappeared, and as the new crop is not in to any great extent the prices are high. Retailers pay 25 cents up for new carrots and beets per dozen bunches. String beans are down to five cents a quart. There is still some supply of hot-house cucumbers at five cents each, and tomatoes at 15 cents for six. Strawberries are fairly plenty at 12 cents a quart, the quality being very good. The home strawberry crop is likely to be injured by lack of rain. Apples sell at $3.50 to $5.50 per barrel, wholesale, and 12 to 15 cents a measure of about six fine-looking western specimens. The promise is of a big new crop, but next to no home-grown peaches. Potatoes remain stationary at not over 85 cents wholesale, but retailers usually ask $1 a bushel. Butter is quoted strong, but not above 28 cents wholesale, and 29 to 32 cents to the consumer for best grades.

J. W. C.

May 19. Farmers are late in planting their crops, owing to so much wet weather. A few pieces of oats have been sown. There is no demand for cows on account of the low prices for dairy products. Butter brings only 23 and milk sold to a shipping station for $1.05 per cwt. Seed buckwheat $1 per bushel; oats 55; meal $1.45 per cwt.; eggs 20. P. S. S.

Mayville, N. Y.

Horses are selling for $125 to $200; cattle 7¾ cents; calves $25 to $30 each; hogs 7½ to 7¾ cents; sheep five to 5½; lambs $7.50 to $8.50 per head; wool 20 cents; butter 25; eggs 16; poultry and hens 13; roosters six; geese 10. Potatoes $1; wheat 88; rye 75; oats 40; corn 75; hay $15. This is a stock country, and rye, oats, corn and hay are shipped in, making prices we receive higher than would otherwise be.

Elmer, Mo. J. E. M.

May 21. We are getting the following prices for our farm products: Milk $1.40 per cwt.; we sell to the condensers. Butter 25; eggs 20; potatoes three-quarter cent per pound; oats $20 per ton; hay $12 per ton; straw $4 per ton. Hogs eight cents on foot; cattle 8½ on foot. We do not raise any fruit for the market, nor vegetables. We are buying onions for our store for 5½ cents; they come from Australia. We are also buying some Australian beef for our boarding house, paying 10 cents delivered at our station. This is a dairy country. The principle crops are hay and oats. Most of the farmers sell their milk or cream to the condensers or creameries. Cows are high. Almost any kind of a cow will sell for $100 or more. Many have sold this year for $150. No wheat raised here except for feed. Most of our vegetables and fruit comes from eastern Washington and California. R. G. B.

Belleville, Wash.

DE LAVAL
SEPARATORS
Used exclusively by
98% of the World's Creameries

TEN YEARS AGO THERE WERE a dozen different makes of creamery or factory separators in use. Today over 98 per cent of the world's creameries use De Laval Separators exclusively.

IT MEANS A DIFFERENCE OF several thousand dollars a year whether a De Laval or some other make of separator is used in a creamery.

EXACTLY THE SAME DIFFERences exist, on a smaller scale, in the use of farm separators. Owing to the fact, however, that most farm users do not keep as accurate records as the creameryman, or test their skim-milk with the Babcock tester, they do not appreciate just what the difference between a good and a poor separator means to them in dollars and cents.

NOW, IF YOU WERE IN NEED of legal advice, you would go to a lawyer. If you were sick you would consult a doctor. If you had the toothache you would call on a dentist. Why? Because these men are all specialists in their line, and you rely upon their judgment and skill.

WHEN IT COMES TO BUYING A separator why not profit by the experience of the creameryman which qualifies him to advise you correctly? He **knows** which separator will give you the best service and be the most economical for you to buy. That's why 98 per cent of the world's creameries and milk dealers use the De Laval exclusively.

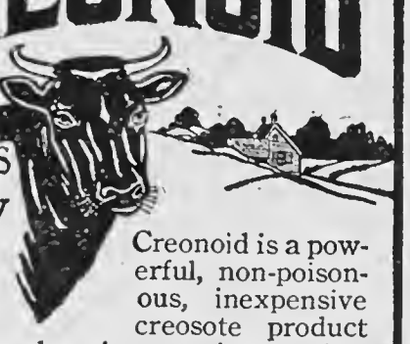
THERE CAN BE NO BETTER recommendation for the De Laval than the fact that the men who make the separation of milk a business use the De Laval to the practical exclusion of all other makes of cream separators

Your local De Laval agent will be glad to let you try a De Laval for yourself on your own place. If you don't know the nearest De Laval agency simply write the nearest main office, as below.

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

CREONOID



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Creonoid is a powerful, non-poisonous, inexpensive creosote product which is obnoxious to insects but not to animals or fowl. Spray it on cows to keep them from being tormented by flies. Spray in the hennery to exterminate lice. Result will be more eggs and more milk.

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Why Feed Flies

You can get more cow's milk, more horse strength, more hog fat, if you keep off flies.

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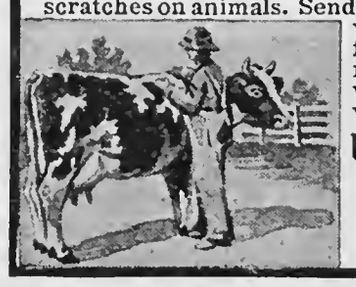
Sirenia Oil

It is feed economy and animal satisfaction. Sirenia is made of pure oils. Sirenia is applied with a cloth, no sprayer necessary. Ask your dealer for a dollar can of it. Do not buy a substitute. There isn't any. If your dealer doesn't handle, send us his name and a one dollar bill and we will send a one dollar can, postpaid.

We Will Refund Your Money If Not Satisfied

Drives flies from cattle and horses, fleas from hogs and dogs, lice from poultry, ticks from sheep. It will also heal sores or scratches on animals. Send a dollar now; or write us a card for the endorsements of users who wouldn't be without it.



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Westfield, Mass.

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Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

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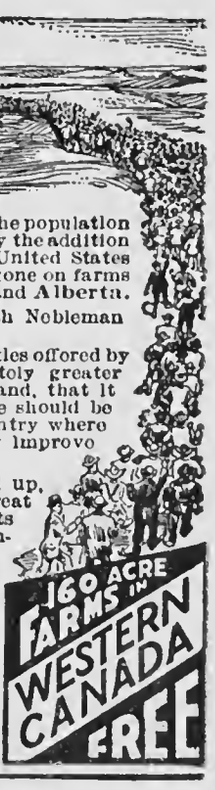
400,000 Settlers a Year



Immigration figures show that the population of Canada increased during 1913, by the addition of 400,000 new settlers from the United States and Europe. Most of these have gone on farms in Manitoba, Saskatchewan and Alberta.

Lord William Percy, an English Nobleman says:

"The possibilities and opportunities offered by the Canadian West are so infinitely greater than those which exist in England, that it seems absurd to think that people should be impeded from coming to the country where they can most easily and certainly improve their position."

New districts are being opened up, which will make accessible a great number of homesteads in districts especially adapted to mixed farming and grain raising.

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J. S. Crawford,
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Send Your Boys and Girls to
The New York State School of Agriculture
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Scientific and Practical Instruction in
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Executor Must Sacrifice to close estate at once.
Listen to this: 114 acres, 7-room house, two stories and porch. Barn 40x48. Granary, milk house, apples, cherries; 4 miles to railroad town. Buildings insured for $1,800. Price, $1,500; part cash. Catalogue No. 95. HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.

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333 W. 30th St., N. Y. City.

The Henyard.

THE EGG-LAYING CONTEST.

THE thirtieth week of the contest shows a little more falling off in egg production as the number of broody hens increase. The intensely hot weather of last week was another factor. Anything that tends to make the fowls uncomfortable, tends also to a decrease in the egg output. The English White Leghorns make the high score for the week; viz., 61, the same number that they laid last week. Their total lacks only two eggs of the 1,000 mark. This pen is steadily climbing towards the top, but five pens are now ahead of them. Chas. N. St. John's pen of White Leghorns takes second place with a score of 60, and the Buff Leghorns from Wolverine Poultry Farm are third with a score of 59. Three pens of White Leghorns tie for fourth place with scores of 58 each. They are Marwood Poultry Farm's pen, Thomas W. Moore's pen, from Connecticut and Chas. Heigl's pen from Ohio. A. B. Hall's pen of Barred Rocks tie with Geo. A. Cosgrove's White Leghorns with score of 57 each.

The pen average of the White Leghorns is now far ahead of that of any other breed. The average this week for the whole 33 pens, is 51.2; for the White Wyandottes it is 39.4; for the S. C. Reds it is 38.3; for the White P. Rocks it is 41.5; for the Barred Rocks it is 47. But now is the time of the year when the non-setting qualities of the Leghorn gives the breed a decided advantage over the broody kind. Below is the week's record:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	57	706
Frank L. Tuttle, Masaschusetts	46	813
Waveny Farm, Connecticut	47	703
J. F. Francais, New York	38	940
White P. Rocks.		
Albert T. Lenzen, Massachusetts	51	754
F. H. Benton, Connecticut	48	831
Storrs Agr. Station, Connecticut	41	645
Storrs Agr. Station, Connecticut	36	685
Storrs Agr. Station, Connecticut	38	796
Storrs Agr. Station, Connecticut	36	692
Storrs Agr. Station, Connecticut	41	478
Buff P. Rocks.		
A. A. Hall, Connecticut	46	807
W. C. Morgan, Jr., Connecticut	39	598
White Wyandottes.		
Tom Barron, England	49	1,266
West Mt. Poultry Yards, Connecticut	23	748
Merrythought Farm, Connecticut	38	1,081
Neale Bros., Rhode Island	54	1,076
D. J. Ryan & Son, Connecticut	33	850
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	38	820
Dr. N. W. Sanborn, Massachusetts	52	757
Am. Buff. Wyan. Club, New York	26	703
H. L. Hamilton, Connecticut	37	534
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	47	743
S. C. Reds.		
Robert Seaman, New York	31	603
J. S. Gillespie, Connecticut	42	806
Dr. J. C. Dingman, New York	50	708
Burnham Pltry. Farm, Massachusetts	39	599
H. P. Deming, Connecticut	35	697
Geo. P. Dearborn, Florida	35	890
Dr. J. A. Fritchey, Pennsylvania	32	986
Ernest Underhill, New Jersey	33	627
W. H. Bumsted, Connecticut	39	442
Pinecrest Orchards, Massachusetts	40	918
Harry B. Cook, Connecticut	37	822
Colonial Farm, New Hampshire	34	855
A. B. Brundage, Connecticut	51	962
Rose Comb Reds.		
Genview Farm, Connecticut	24	830
C. S. Scoville, Connecticut	28	577
White Leghorns.		
Storrs Agr. Station, Connecticut	47	849
Storrs Agr. Station, Connecticut	49	922
Storrs gr. Station, Connecticut	44	931
Storrs Agr. Station, Connecticut	53	1,173
Storrs Agr. Station, Connecticut	47	792
Braeside Poultry Farm, Pennsylvania	51	768
Glenview Farm, Connecticut	52	825
Manor Poultry Farm, New York	41	817
A. B. Hall, Connecticut	54	823
Marwood Poultry Farm, Pennsylvania	58	932
Geo. M. Harris, Connecticut	48	696
Bonnie Brook Farm, New York	55	866
N. W. Hendryx, Connecticut	54	754
J. J. Linehan, Massachusetts	50	708
F. F. Lincoln, Connecticut	56	1,160
Cecil Guernsey, New York	49	988
T. W. Moore, Connecticut	58	747
Chas. N. St. John, New York	60	733
C. W. Sherwood, Connecticut	49	812
L. E. Sands, Pennsylvania	49	809
Tomoka Poultry Farm, Connecticut	51	720
Venture Poultry Farm, New York	47	689
Mrs. K. E. Woodruff, Connecticut	56	763
Windsweep Farm, Connecticut	52	707
C. H. Savage, Connecticut	53	769
P. G. Platt, Pennsylvania	56	879
Heneta Bone Co., New Jersey	26	213
F. M. Peasley, Connecticut	47	802
Chas. Heigl, Ohio	58	689
Tom Barron, England	61	998
Branford Farm, Connecticut	54	882
James Munn, Massachusetts	48	713
Geo. A. Cosgrove, Connecticut	57	695
Buff Leghorns.		
Wolverine Poultry Yards, Michigan	59	847
Blue Andalusians.		
E. D. Bird, Connecticut	45	684
Buff Orpingtons.		
O. Wilson, West Virginia	15	621
White Orpingtons.		
P. A. Demgar, New York	34	588
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	21	435
Silver Campines.		
W. J. H. Lobel, New Jersey	45	628
Dunghills.		
H. W. Collingwood, New Jersey	53	619
Daniel Hine, Connecticut	31	626
Daniel Hine, Connecticut	28	723
Mixed Breeds.		
Profitable Poultry, Massachusetts	20	742
Profitable Poultry, Massachusetts	29	716

Total number laid, 63,221.

GEO. A. COSGROVE.

Henhouse Curtains; Egg Eaters.

If J. B. W., page 612, will tack the muslin on the window frames of his henhouse with two or three small pleats on every side, the wind slatting the loose cloth will keep it from becoming clogged with dust.

I think if H. H. W., page 615, will stir up a mash of wheat bran and good strong vinegar and feed his hens all they will eat of it once a day for three days in succession the hens will stop eating their eggs. V. E. K.

Mexico, N. Y.

Protrusion of Oviduct.

I have a fine flock of hens, but they are afflicted with some unknown disease that causes protrusion of the oviduct. Can you give me some light on this matter? A. Z.

New York.

This trouble is probably inflammation of the egg tube, or oviduct, and may be caused by heavy laying while the fowls are closely confined and forced for egg production. Irritating food, overly large eggs, excess of pepper or other condiments in the food, or other conditions which lower the vitality of the hen, probably predispose to this trouble. Giving the fowls free range, if possible, and feeding plenty of green stuff, with little meat or other stimulating food should correct the trouble. Those that show protrusion of the oviduct in the form of a reddish mass at the vent should be promptly removed from the pen as the other fowls are apt to peck at and finally kill such hens. M. B. D.

Cleansing an Incubator.

Can you tell me what will take that offensive odor from the incubator after a hatch? I have tried scrubbing with hot water and have burned sulphur in it with no results. Others report the same trouble. H. W. M.

Ohio.

I have never noted any offensive odor about an incubator which thorough scrubbing with hot water and soap would not remove; if the trays and the interior are clean there should be no offensive odor. If such an odor persists after cleaning, however, it is possible that chloride of lime placed in the hatching chamber upon a shallow dish would destroy it, or thorough sunning of the machine in the open air might be efficacious. M. B. D.

Colds; Loss of Feathers.

1. I have some hens that make a noise like whooping, have been so for three weeks. I have given them coal oil, sulphur, rubbed throat with turpentine. When they breathe, mouth opens and there is a loose rattle. What is the disease, and a cure? 2. What is the matter with hens when the feathers fall off their heads and the scalp seems to be scaly? They are getting worse; not all are affected. I have rubbed them with lard and sulphur, also coal oil but that does not seem to do any good. G. M. B.

Michigan.

1. Hens are subject to "colds," or catarrhal inflammations of the respiratory tract which cause them to breathe with evident difficulty and there are certain fungus growths derived from moldy litter which also obstruct the breathing. The most common cause of the symptoms that you describe is exposure to dampness and drafts in poorly constructed roosting quarters and the remedy is removal of the cause, or of the hens to better quarters. Permanganate of potash crystals dissolved in the drinking water, a teaspoonful to the quart, is helpful in overcoming the colds.

2. Loss of feathers from the head and neck is usually due to the work of the depluming mite which burrows in the skin at the base of the feathers. A little simple grease, to which may be added one fourth its bulk of "blue ointment," will destroy the mite and give an opportunity for new feathers to grow. This should be rubbed into the bare spots. The chapter on diseases of fowls in the "Business Hen," published by THE R. N.-Y., contains about all one needs to know of the ordinary poultry diseases and their treatment. M. B. D.

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PUBLISHER'S DESK

Your Woman and Home monthly department is getting to be one of the strong features of the paper. G. C.
Connecticut.

Certainly it is. We intended it should be. But wait. We have not been able to do it justice because the old press had more work than it could do. Our new 64-page two-color duplicate press will be in some time during June. It always takes a few weeks to adjust a new press and get it working just right, but we expect to have it working in fine shape by September. In the meantime the Woman's Department will be developing and we propose ultimately to make it the best magazine for farm women to be found in this country or any other country. Just watch it grow and develop in character and importance and interest.

A writer in one of the farm papers discussing the New York coöperation law says this:

The form of by-law sent out by the office of the Commissioner of Agriculture provides that each subscriber for stock on organization of an association under the law shall pay in 20% above par to form a reserve fund. Thus a person subscribing for $100 par value of stock would pay in $120. Should a stockholder die, under this provision his estate could be mulcted out of the difference between the book value of the stock and its par value.

This indicates a confusion of mind in reference to corporate stock companies. The stock of a corporation simply indicates the fractional part of the company that he owns. If the company has a surplus or reserve fund, he owns his fractional share of that also; and there is no way himself or his estate can be mulcted out of his share of the surplus any more than he could be mulcted out of the par value of the stock. It is easy enough for a man unfamiliar with stock company affairs to make an error of this kind, but we ought to be able to expect something better from a publication that assumes to instruct the people. Of course, it is entirely optional with the local organizers of a coöperative company whether they provide a reserve fund or not; but if they do they are just as fully protected in the reserve fund as they are in the capital of the company.

Herbert Myrick wants to know if any of the subscribers to his papers have had unsatisfactory dealings with John W. Woodruff. We rise to speak. Some years back Woodruff was organizing branches of the American Farm Co., in different sections of New York State, and getting from $12,000 to $20,000 out of a section. THE R. N.-Y. showed him up, and while it was defending Woodruff's libel suits for a half million dollars, Mr. Myrick was giving him encouragement and support in the State by publishing his advertising. If any of his subscribers lost their investments as a result of the advertising perhaps Mr. Myrick will now make good their losses. These victims now have the floor.

I was informed by some who were present at the last Chicago National Convention on Farm Credits and Marketing, that it was a bankers' and big business men's affair. Out of the 500 who attended there were only 16 farmers. While I do not want to be understood as being against business men, yet I cannot but feel that a movement of this kind should, at least, be controlled by men who are actual farmers, and not by men who profit by the system of marketing which is now in vogue. I understand that at this convention the Minneapolis Chamber of Commerce and the Chicago Board of Trade were much in evidence. We had hoped to gain recognition there, and have one of our men on the program, but this was denied us. From what I have heard of this convention and of the men at the head of it, I do not believe that very much good to the farmer will result from the work. J. M. A.
North Dakota.

One of the progressive farmers of New York State sent us the above letter to him from a mutual friend of the Northwest. He accompanied it with the following comment: "Think of it! The livest marketing coöperative organization in the entire Northwest denied a place on the programme of a National Marketing Commission!" There are a number of farmer-uplift concerns just about as near the farmer as this one, and I think it would not be amiss to print the experience of the Equity Coöperative Exchange for the general information

Please advise whether I should send $25 to the Southern Georgia Railroad Land Development Bureau, Washington, D. C., as requested in the inclosed letter? I cannot go to see the property at present but if you think the affair good, I should not mind spending the money.
New York. (MISS) G. V. S.

We have been unable to get any satisfactory information as to the standing of the concern. The party in charge of the Washington office replied that he had instructions to say that they did not care to give out information regarding the Bureau. The most that we can make out of the literature is that they are willing to give you a five or ten acre plot of land somewhere for $25. Where it is and what it is worth we do not know, except that it is somewhere in Georgia. The literature is distinctly of the land promotion type; and altogether our advice to our correspondent is to keep her $25.

Noting in Publisher's Desk, page 754, what F. F. H., Ohio, says about truss he got from Chas. Cluthe & Sons, 125 E. 23d St., New York, I had about the same experience a few years ago. J. D. S.
New Jersey.

It always happens that way. The experience of one is usually the experience of many others. If these experiences were generally known, there would be fewer disappointments. We propose that our people, at least, shall know them.

On page 582, in issue of April 11th, we referred to two sales of hothouse lambs, one being made by Phillips & Sons, 277 Washington Street, and the other by Read & Garrison of 322 Washington Street. The farmer said the shipments were exactly alike and made at the same time. Read & Garrison returned sales for $14, and reported the lambs prime; Phillips & Son returned $7 and reported that they sold the extreme top market price considering their condition and that the pelts were covered with lice. We made some general comments on the matter, and Messrs. Phillips & Sons have complained to us that this article unfairly accuses them of having been guilty of some impropriety in the handling of the two lambs shipped to them. They say that they do not handle or make a business of handling hothouse lambs; that they do not solicit, nor do they care to handle them; that the two lambs in question came to them unsolicited and from a person who had never been a customer; that upon receiving them they did the best they could to dispose of them at the best prices obtainable.

We sent this name to our subscriber because the firm had been long in business, had a high rating and stood well in the trade. Its announcement said they handled calves, and we took it for granted they handled lambs. Our criticism was intended to be a general marketing condition of which this was a mere incident and all of which it was hoped the new Market Commission would in time correct. We intend no innuendo in THE R. N.-Y. When the interest of readers demand it, we try to give the facts, and when we criticise we try to leave no doubt of the intent, but we would not for any purpose or consideration knowingly allow a reflection on an honest name, and we did not intend to make any accusation of dishonesty against this firm in connection with this transaction.

J. J. D.

Bumble-foot.

I have several chickens which have a boil on the ball of the foot. The foot around the toes swells up and becomes very hot. The substance which they excrete is very thin and white. Three of my chickens died. Could you tell me the cause of this and if there is any cure for this? L. M.

This is the so-called bumble-foot, or abscess formation in the sole of the foot. Bruising of the feet by jumping from high perches to hard floors probably predisposes to the trouble, which is directly caused, however, by infection through a slight injury of some kind, such as vigorous scratching might produce. Like any abscess, it should be treated by being opened freely, the contents syringed out and the wound dressed with some antiseptic ointment, such as carbolized vaseline in 5% strength. The fowls should then be kept upon clean floors or runs until the wound has healed. M. B. D.

Chicks that Pick Toes—What Will Stop It?

One of our readers in California says he has been greatly troubled by having the chicks picking each others toes. They keep up this practice until considerable injury is done. He wants to know if the trouble is general among poultry keepers, and what they do to stop it if it once gets started.

We have noticed that this complaint almost invariably comes from persons who are trying to keep too many chickens in a small enclosure without a sufficient amount of exercise, and without a proper supply of green feed in their ration. Small flocks of chicks on a free grassy range practically never acquire this destructive habit. We have had several reports this seson of considerable damage being done from this cause. Although we are raising over thirty thousand chicks here this year we give them free range, and keep them in small enough colonies so that we seldom have a case of toe picking C. S. GREENE.
New Jersey.

I have never been troubled with the little chicks picking each others toes, except perhaps before they had received their first feed. The cause undoubtedly must be improper feeding, and consequent malnutrition. I feed sour milk liberally, and I believe that its addition to the diet of the chicks ought to help overcome the habit. Depriving the chicks of sufficient bone and feathers forming food elements i. e. bone meal, granulated bone, beef scrap, etc., would undoubtedly favor the formation of the habit. The application of flexible collodion to the sore toes will help prevent further injury.
New York. J. C. DINGMAN.

This vicious habit is most liable to develop with specially strong chickens which are closely confined and which are not kept busy. It occurs more often and is more serious when there is no meat or animal food in the ration, though when they get a taste of blood it seems to make them crazy whether they have meat or not. As usual prevention is the best cure. Give the chicks as much room as is practical and keep them busy—digging chick food out of litter, tearing sod to pieces and working at green stuff, either sprouted oats, mangels which have been split open or rye or oats which have been cut up for them. Where the trouble has developed, much can be done along these lines and of course any which have been injured removed. Generally the habit can be checked by catching a few of the worst offenders and either removing them or clipping a little off the end of the beak, enough to just start the blood a little. This makes the beak sore and while they are thinking about the hurt they forget the toe picking. FRED B. SKINNER.
New York.

This is very common trouble where one keeps large numbers of chicks together, and I have lost many chicks by it years ago. It comes from idleness. I think—"Satan finds some mischief still for idle chicks to do." But when they get a taste of blood they act crazy, and soon eat up the chick. I have taken 20 picked chicks out of one brooder in 12 hours some years ago. By a little watchfulness to check it when first started we have no more trouble nowadays. At the first sign of this trouble I hang a piece of lean tough meat by a string just so it will clean the floor, and it seems to take their attention and satisfy their abnormal craving, and it is rarely ever necessary to put a second piece in the same brooder. FLOYD Q. WHITE.
New York.

The Cornell feeding method will prevent the acquisition of this bad habit, particularly if an abundant supply of sour skim-milk or buttermilk is always at the reach of the chicks. Any little injury to a toe will start it, and we must be ever watchful to stamp it out as quickly as possible. A little pine tar on the injured toe, with separation from the flock for a few days, will put the injured chick on the job again. Aside from accidents, I regard it as a sure indication of a faulty ration. FRED. M. PEASLEY.
Connecticut.

It has been my experience that the most natural thing for young chicks to do when first hatched is to pick at anything prominent or that moves in front of them, which accounts for the inclination to pick at each others toes, or even their own toes when closely confined. If the web of the toe has been punched in such a way as to produce a wound, on which blood appears, it immediately attracts the attention of the young chicks, and they pick at it, and their natural predisposition for animal food in their diet, gives them the inclination to keep on picking until they produce injury. I was troubled with this when I first started to raise chicks, but by giving them more space and a good percentage of blood meal, or other animal food, in their rations, the trouble entirely disappeared, and we have had none of it for years.
New York. SINCLAIR SMITH.

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending June 6, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4¾ to five cents per quart. The supply for New York trade is increasing, but the demand is good and no special price reductions noted.

BUTTER.

Early in the week the market advanced one cent and was decidedly firm, but weakened later. The advance was held on the top grades, but considerable price cutting was noted on qualities running medium or lower. Speculators are on the watch for long lines of uniform quality for storage, as for holding this is much preferable to small odd shipments.

Creamery, extra, lb	27	@	27½
Good to Choice	23	@	26
Lower Grades	20	@	22
State Dairy, best	25	@	26
Common to Good	18	@	23
Factory	16	@	19
Packing Stock	15	@	17½

Elgin, Ill., butter market 25¾ cents.
Philadelphia, western creamery, 27 cents.

CHEESE.

The market is active, owing to the large speculative demand, prices running from one-half to one cent above last week. Current receipts of whole milk are kept cleared up closely. Receipts of skims are only moderate, but business very quiet.

Whole Milk, new, best	14¼	@	14½
Common to good	11	@	13
Skims	5	@	10

EGGS.

The market is firm on the better grades, which form a comparatively small part of the receipts. There is a general complaint of heat damage, which makes close candling necessary for supplying critical trade. Some very fine white duck eggs are seen, but the demand for them is slack and prices running barely on a level with hens' eggs of similar quality. Most shippers nail the cover of egg cases too firmly to the middle partition. A nail quite near each edge of the cover at this point is sufficient. The cover can be removed without breaking, which often happens when trying to get out the inside nails. An egg case may have to be opened and closed two or three times before reaching the retailer.

White, choice to fancy, large	23	@	23½
Common to good	18	@	22
Mixed colors, best	22	@	23
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18

FRESH FRUITS.

Apple trade is dull mainly owing to the inferior quality of the apples offered. Peaches from Georgia are now arriving in carload lots, selling from $2 to $2.50 per crate, wholesale. Strawberries are plentiful and very low. Some speculators who bought heavily in the Middle South have had heavy losses on the shipments sent here. At these low prices the wagon peddlers dispose of large quantities. They are able to retail a fair quality at two quarts for 25 cents.

Apples—Russet, bbl.	2 25	@	3 00
Spy	3 00	@	5 00
Ben Davis	2 50	@	3 00
Newtown	5 00	@	6 00
Baldwin	2 50	@	3 00
Western, box	1 25	@	2 25
Strawberries, Va., qt.	5	@	10
Jersey	8	@	14
Maryland	8	@	15
Peaches, 6-basket crate	1 75	@	2 50
Blackberries, Carolina, qt.	12	@	18
Huckleberries, qt.	8	@	13
Gooseberries, qt.	8	@	10
Muskmelons, Cal., crate	3 00	@	4 00
Watermelons, 100	50 00	@	60 00

BEANS.

Receipts are light but business extremely dull on all varieties.

Marrow, 100 lbs.	4 85	@	5 25
Medium	3 70	@	3 80
Pea	3 20	@	3 70
Red Kidney	5 70	@	5 85
White Kidney	5 65	@	5 75
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

Reports from Oregon indicate that the crop there will be at least 10,000 bales less than last year, and the California yield is expected to be cut nearly as much. Speculators are offering 14 to 15 cents for the new crop with few takers.

Prime to choice	38	@	40
Common to good	34	@	37
Pacific Coast	18	@	20
Old stock	15	@	18
German crop	63	@	67

VEGETABLES.

Old potatoes picked up a little the latter part of the week, with a shilling advance on some grades of State and Western. Receipts of new from the South very large, some out of condition so that they were abandoned as worthless or seized by the health authorities. Onions dull, except for the best grades. Peas and green beans very low and many of them in poor condition. Cabbage trade active, but prices practically unchanged. Cucumbers and tomatoes in heavy supply and low, except for the best.

Potatoes—Maine, 180 lbs.	2 25	@	2 50
State, bulk, 180 lbs.	2 00	@	2 50
Bermuda, bbl.	2 00	@	4 50
Southern, new	1 75	@	4 50
Sweet Potatoes, bu.	40	@	60
Beets, 100 bunches	1 00	@	3 00
Carrots, bbl.	1 75	@	3 25
Cucumbers, bu.	25	@	1 00
Corn, Southern, 100	3 00	@	5 00
Asparagus, Green, doz.	1 75	@	2 00
White, doz.	1 00	@	1 25
Cabbage, New, bbl. crate	50	@	1 50
Kale, bbl.	25	@	50
Lettuce, half-bbl. basket	25	@	75
Onions—Southern, New, bu.	1 50	@	2 50
Okra, bu	2 50	@	5 00
Peppers, Southern, bu.	1 50	@	2 50
Peas, Southern, bu.	25	@	2 00
Radishes, 100 bunches	50	@	75
Spinach, bbl.	50	@	75
String Beans, bu.	25	@	1 00
Squash, New, bu.	50	@	1 00
Egg Plants, Southern, bu.	1 00	@	2 25
Tomatoes, Southern, 6 bkt. crate	1 00	@	2 00

LIVE POULTRY.

Broilers, lb.	32	@	38
Fowls	15	@	16½
Roosters	9	@	10
Ducks	13	@	14
Geese	10	@	11

DRESSED POULTRY.

Chickens, choice broilers, lb.	40	@	42
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	18½
Ducks, Spring	15	@	16
Geese	9	@	14
Squabs, doz.	1 75	@	4 25

HAY AND STRAW.

Receipts of hay are small, but demand light and few sales made at the top prices. There is some call for choice clover mixed, which is scarce. Straw market unchanged.

Hay, Timothy No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 00
No. 3	17 00	@	18 00
Clover mixed	15 00	@	20 50
Straw, Rye	16 00	@	17 00

LIVE STOCK.

Native Steers	6 75	@	8 90
Bulls	5 50	@	7 50
Cows	3 50	@	6 80
Calves, prime veal, 100 lbs.	8 50	@	11 25
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 00
Lambs	9 00	@	9 75
Hogs	8 50	@	8 70

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	95¼	@	..
No. 2, Hard Winter	1 05	@	..
Corn, as to quality, bush.	70	@	80
Oats, as to weight, bush.	43	@	47
Rye	70	@	73

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz.	30	@	35
Mixed colors, new laid	24	@	28
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

May 24. We had a sudden drop in temperature and two hours' cold, drizzly rain when 90 per cent. of the Baldwins were in full bloom, followed by 20 hours' cold wind. Today is ideal. Bloom profuse with Baldwin and Ben Davis; Greening fair, Wealthy and Duchess full.

North River, N. Y. E. M. C.

Hogs, live, 7¼ to eight; hogs, dressed, 10. Butter 20-26; eggs 18; chickens 14; veals, live, eight; good cows sold this Spring from $60 to $80, as to condition. I think $70 would be a fair average. Cows are very scarce. Farmers are raising more calves now. Horses are very high; any good horse will bring from $200 to $300; three and four-year-olds from $150 to $250. Very few sheep kept (plenty of dogs). The writer sold two good grade ewes for $23. Potatoes $1 a bushel. J. H. R.

Woodcock, Pa.

Cattle and horses are very high; former about nine cents per pound and horses all the way from $100 apiece to $500 a span, mules nearly same. In my county butter is 25; eggs 17; hogs $7.90 per 100 pounds; potatoes $1.20. Hay $19; clover same; millet seed $1.50. Apples and peaches were very high last Fall and Winter; apples now are about $3 a bushel. Promise at present is for a fair crop of peaches and apples. Not very many strawberries grown in our part of the State, and now very dry. Wheat and oats short. H. E. N.

Curryville, Mo.

May 24. Corn 95 per cwt.; wheat 90 a bushel; oats 37; barley 50; rye 56; clover seed $7; Alsike $8; Timothy $2; Timothy hay, bales by farmer, $15.50; Timothy hay, baled by farmer and delivered to car, $15.50; mixed $14; clover $12; potatoes 75; seed potatoes $1 to $1.50; eggs 16; butter 18 to 30. Season very late and wet; some corn up, but only about half corn planted. Planting will not be completed before June 1. Wheat, rye and grasses looking finest in years. Rye beginning to head. Oats coming along in good shape but seeded late. All fruit looks well, especially strawberries.

New Haven, Ind. H. H.

Dairy cows from $40 to $80, grades; bulls, registered, $35 to $100 per head. Beef cows $55 to $75; steers, two years, $55 to $65; three years $65 to $75. Hogs 6½ to 7½ per pound; sheep $2.50 to $5 per head. Horses: mares, draft, 1,400-1,600 pounds, $175; 1,600-1,800 pounds $200; chunks, 1,200 pounds, $125; geldings, 1,400-1,600 pounds, $150. Mules, 1,300-1,400 pounds, $175. Poultry, one dozen common, $3.50; turkeys 15 cents per pound; ducks 10 cents per pound. Butter, creamery, 30; farm butter 20; eggs 15-20 cents; butterfat 22-30. Alfalfa $7 to $7.50 per ton. These are cash prices, time sales bring higher prices.

Caldwell, Idaho. G. P.

At auction sales everything brings a good price for everything, household utensils, furniture, etc. There has been an unusual lot of sales the last three or four years, people disposing of everything to move on to Canada. Horses sell here at all prices from $50 to $250, according to age and condition. Cows are from $45 to $102. The latter was paid for a common cow in a sale. Cattle have brought unusually high prices; calves $6 just born; yearling calves $20 in Fall. Chickens are from 40 to 45 cents; hogs very high; young pigs at weaning $7 a pair. This Spring there is an unusual lot of pigs in the immediate vicinity. Butter at stores 18; eggs 12½ at some towns, others 15. Cream 21 cents a pound for butterfat in cash, or 23 cents in trade. Two merchandise stores take cream from two different creameries; cream is shipped to Minot. This country has not advanced to have a creamery of its own, so it is only stations. Wheat and flax is the principle money crop here. An unusual amount of interest is centered in silos, so a big acreage of corn is to be planted to fill these new ornaments. I understand they cost, say 14x30 feet, about $300 or $350. Garden truck is a fizzle here; no market, only once in a while. Onions sell readily at two cents a pound; potatoes sell around 50 cents to stores; they retail at 60. Considerable have been raised the last two years, each individual ships his own in carload lots. They go to St. Paul or Kansas City. Several report poor returns. Almost every farmer raises horses here. This Spring they are not in very good demand. Wages are $35 and $40 a month with board and washing. There are a number of steam and gas plowing outfits. Oats 35; barley 50. Crop failure by hail last year. F. S.

Lansford, N. D.

DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Intelligent, energetic woman or man to work on mouse farm, July or longer. A. LATHROP, Granby, Mass.

WANTED—Job on poultry farm by reliable young man, 18 years; references. ROGER RAMSAY, 1519 Sunnyside Ave., Chicago, Ill.

SITUATION WANTED on dairy or fruit farm by city man; experience more than wages wanted. EXPERIENCE, care R. N.-Y., 333 West 30th St., New York.

COLLEGE STUDENT WISHES WORK for the summer on general farm; very little remuneration expected. K. I. B. T., 141 Herkimer St., Brooklyn, N. Y.

YOUNG MAN, 19, wants work on farm for school vacation; milker, hand mower; three Summers' experience; reference. R. A. MOORE, Rutland, Vt.

FARMER'S DAUGHTER, with hospital experience, wishes position as nurse or companion; physicians' reference; please state compensation. BOX 75, Hanover, York County, Pa.

WANTED—By young married man of wide, practical experience, position in charge of purebreed herd where results are desired; fully familiar with breeding, feeding, A. R. O. work, buttermaking, etc. Address BOX 192, Peekskill, N. Y.

WANTED A JOB FOR JULY AND AUGUST by a high school boy, 16½ years; height 5 feet 8 inches, 162 lbs., on farm, place, camping or surveying party, where he can make himself useful; bright and intelligent. Address CLARK, care R. N.-Y., 333 West 30th St., New York.

POULTRYMAN—Graduate poultry course, with two years best practical experience; at present in full charge entire plant of 3,000 hens and ducks; best references from present and past employer. German, age 33; single. WILLIAM SCHUKOWSKY, Lime Ridge Farm, Poughquag, N. Y.

HOUSEKEEPER WANTED—Widow with young daughter; capable, cheerful, above reproach; pretty village home; churches, school near; easy place (myself and niece); no tobacco, drinking or dogs; no washing; permanent, peaceful home for right one. Address, giving full particulars, A. T. COOK, Seedsman, Hyde Park, Dutchess County, N. Y.

WANTED—By strictly sober and industrious single man, position as herdsman or dairyman combined, or would accept either one singly. A1 butter-maker; life experience in handling and caring for stock; best of references given and required; state wages and full particulars in first letter. Address DAIRYMAN, General Delivery, Portchester, N. Y.

WANTED—Position as herdsman or caretaker by strictly sober, single man; life experience in handling and caring for stock; fully capable of handling large farm and dairy; no encumberance; can go anywhere. State wages and full particulars in first letter; no triflers need answer; best of references given and required. Address S. J., care R. N.-Y., 333 West 30th St., New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

HORSES THOROUGHLY AND CAREFULLY broken to saddle for the road or field; distance no object. L. HOWARTH, Mt. Freedom, N. J.

RUGS FOR SALE—Woven in hand-loom; firm, colored with old-fashioned dyes, bright, pretty. Write CORDELIA A. PATTERSON, Groton, N. Y. R. D. No. 11.

VERMONT MAPLE SYRUP @ $1.00 PER GAL. Maple sugar, 10-pound pails, 15 cents per pound; fancy caked sugar, 18 cents. Choice fresh eggs in any quantity. JAY T. SMITH, Rupert, Vermont.

EARLY RICHMOND CHERRIES—June 25th to July 5th; Morency's, July 5th to 10th; 6 cents pound in baskets; delivered express office. Canned on the farm in 2-pound enameled sanitary cans; syruped, with pits; $1.25 per dozen. SENECA FRUIT FARM, Waterloo, N. Y.

MAPLE SYRUP FOR SALE FROM THE MAPLE Grove; taking a first prize at the Centennial Exposition; guaranteed under the provisions of the Pure Food and Drug Act; in gallon cans, $1.25 for a gallon f.o.b Norwich, B. & M. R. R. Price of 50 gallons on application. GOVE HILL FARM, Donald MacKay, Supt., Thetford Center, Vt.

FOR SALE—Highland Farm. For particulars address GEO. W. MILES, Georgetown, Del.

FOR SALE OR RENT, Morristown, N. J.—65 acres; beautiful dwelling; every improvement. CLARKE, 2062 Ryer Ave., Bronx, N. Y.

FOR SALE—320-acre Virginia apple orchard; 800 bearing trees; 800 two-year trees; station five miles. Enquire C. C. WHEAT, Big Island, Virginia.

TO RENT—Furnished house for Summer in a beautiful locality, six miles from Amsterdam, on macadam road. Address CHAS. I. SCHUYLER, R. D. 2, Amsterdam, N. Y.

FLORIDA FARM FOR RENT—Crops growing every month in year; near church, school and best of markets; tenant to furnish good horse and tools. F. L. ADAMS, West Tampa, Fla.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

FOR SALE—Fruit farm, 140 acres; 600 barrels apples last year; prospect 500 this year. Price $4,000. For particulars apply C. G. ADAMS, Colerain, Mass.

FOR SALE—Fruit and poultry farm; 32 acres; excellent land; good water; cherries, plums, pears and apples for market; fully equipped poultry plant; 10 minutes walk to station; telephone and R. D. GEO. WHITENACK, Skillman, N. J.

275 ACRES—Good buildings; cuts 60 tons hay; 1 mile large railroad; village; adjoins large lake Summer resort; 500,000 feet timber; large sugar grove; four apple orchards. Cheap to a quick buyer; part cash. Address OWNER, Box 82, Wilmington, Vt.

HUMOROUS

"WAS your husband cool when you told him there was a burglar in the house?" asked Mrs. Hammer. "Cool," replied Mrs. Gabb. "I should say he was cool. Why, his teeth chattered."—Cincinnati Enquirer.

"DID you kill the moths with the balls I recommended?" asked the druggist. "No, I didn't," said the customer truculently. "I sat up all night and didn't hit a single moth."—Cleveland Plain Opinion.

"SEE here, waiter," exclaimed the indignant customer, "here's a piece of wood in my sausage!" "Yes, sir," replied the waiter, "but I'm sure—" "Sure nothing! I don't mind finding the dog, but I'm blowed if I'm going to eat the kennel, too."—Tit-Bits.

"WITH telephones and automobiles," said the economist, "the farmer will soon be entirely independent of the city." "Never," replied Mrs. Corntossel. "We'll always have to be going to town—unless they discover some way of sending moving pictures by mail."—Washington Star.

"WHY, look here," said the merchant, who was in need of a boy, "aren't you the same boy who was in here a week ago?" "Yes, sir," said the applicant. "I thought so. And didn't I tell you then that I wanted an older boy?" "Yes, sir. That's why I'm back. I'm older now."—Ladies' Home Journal.

"IT'S surprising how unpractical some very learned men are." "Yes, there's Professor Lingwist, for example. He spent over half his life in acquiring fluency in nine or ten different languages, and then went and married a wife who never gives him a chance to get a word in edgeways."—Melbourne Australasian.

"I UNDERSTAND that you have a very fine new baby brother," said the minister. "Yes, sir," replied young Percy. "He is a nice baby." "And," continued the minister, "I hope he is a good baby." "Oh, I guess he is," said Percy dubiously. "He don't smoke or drink any, but sometimes he seems to me to swear some."—Christian Advocate.

WILLIS: "What's the election today for? Anybody happen to know?" "Gillis: "It is to determine whether we shall have a convention to nominate delegates who will be voted on as to whether they will attend a caucus which will decide whether we shall have a primary to determine whether the people want to vote on this same question again next year."—Puck.

WHEN Jasper got back to his office his boss said: "Look here, does it take you a half hour to go down to the corner and do an errand for me?" "It did this time, sir," answered Jasper. "A man dropped a quarter down a hole in the sidewalk." "And it took you all this time to get it out?" "Yes, sir; you see, I had to wait till the man went away."—Savannah News.

THE school teacher exclaimed, impatiently, one afternoon: "Johnny Jones, what are you fumbling with there?" Johnny hung his head and was silent. But the telltale of the class spoke up: "It's a pin he's got, ma'am." "Well, take it from him," said the teacher, "and bring it here to me." This was done, and then, in a mollified voice the teacher said: "Now, Johnny Jones, get up and recite your history lesson." But Johnny did not obey. He blushed, hung his head and sat still. "Johnny," said the teacher, "rise, I tell you!" Then the little fellow blurted out, distressfully: "I can't ma'am. That there pin you took is what holds me trousers up!"—Pittsburgh Chronicle-Telegraph.

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Why John Deere Hay Presses Give Best Service

John Deere Motor Press

THE press that gives the best service of any of its size because it does better work more rapidly and with a smaller engine. It is the press with the powerful eeeentric drive. Gears are mounted off center, giving greatly inereased power on working stroke, just when it is needed, and a quick return of the plunger on the idle stroke.

Double drive with straight belts and belt idlers eliminates wear on the belts, press and engine bearings, equally distributes the work, more readily transmits the power and results in smoother operation.

Plunger has a prying instead of butting action, relieving press of all jar or shock. There are no back gears or fly wheel, which means fewer parts to operate, less repair expense and less power required to operate the press. Self feed carries hay well down into baling chamber, while improved block dropper, *patented* tucker and powerful plunger make smooth, well pressed bales, the kind that bring the highest price.

High grade steel frame is continuous throughout without joints or splices; baling case will withstand all strain. Easily removable, well built gasolene engine is mounted on main frame, making a complete, self contained motor press easily moved and always ready for work.

John Deere Self Feed Pull Power Press

GIVES the best service of any two-horse press because it is a pull power press. Pull power delivers bales to the front out of the way of dust and dirt and enables you to set press at center of stack, the most convenient point. You don't have to move it from one end of stack to the other. Work can be done with one less man than with push power presses.

Pull power feature does away with necessity for high, heavy and dangerous pitman. Horses do not have to delay in stepping over pitman, and you do not waste horse flesh in doing the work. Self feed increases capacity. Feeder arm carries hay well down into baling chamber and evenly packed square end bales are always assured.

Built in three standard sizes, 14x18, 16x18 and 18x22, with capacity of ½ ton to 1½ tons per hour. A simple but very serviceable press that always gives satisfaction.

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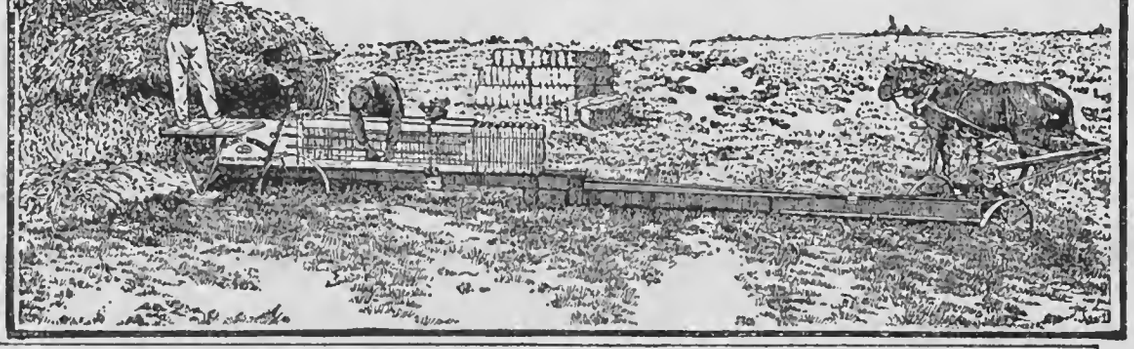

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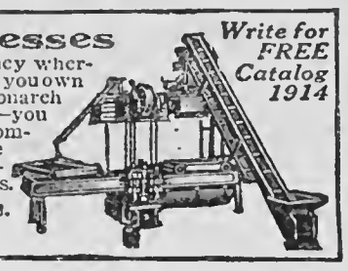

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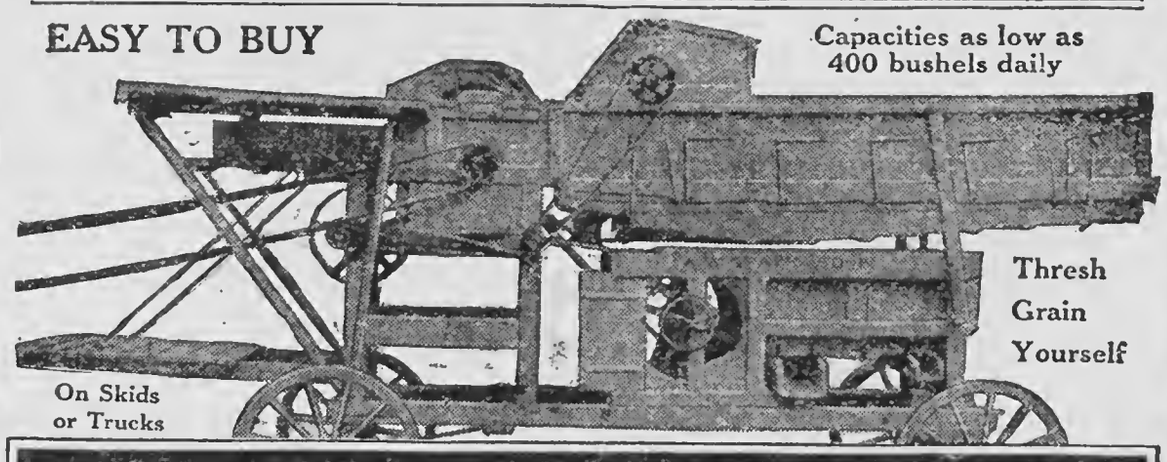

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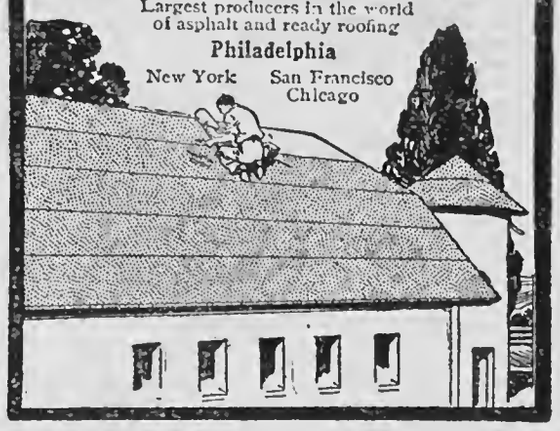

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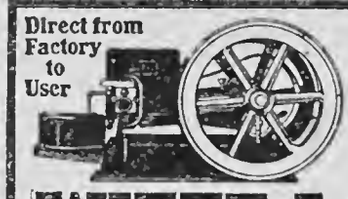

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII, No. 4260. NEW YORK, JUNE 20, 1914. WEEKLY $1.00 PER YEAR.

SHOW POINTS OF A HOLSTEIN COW.

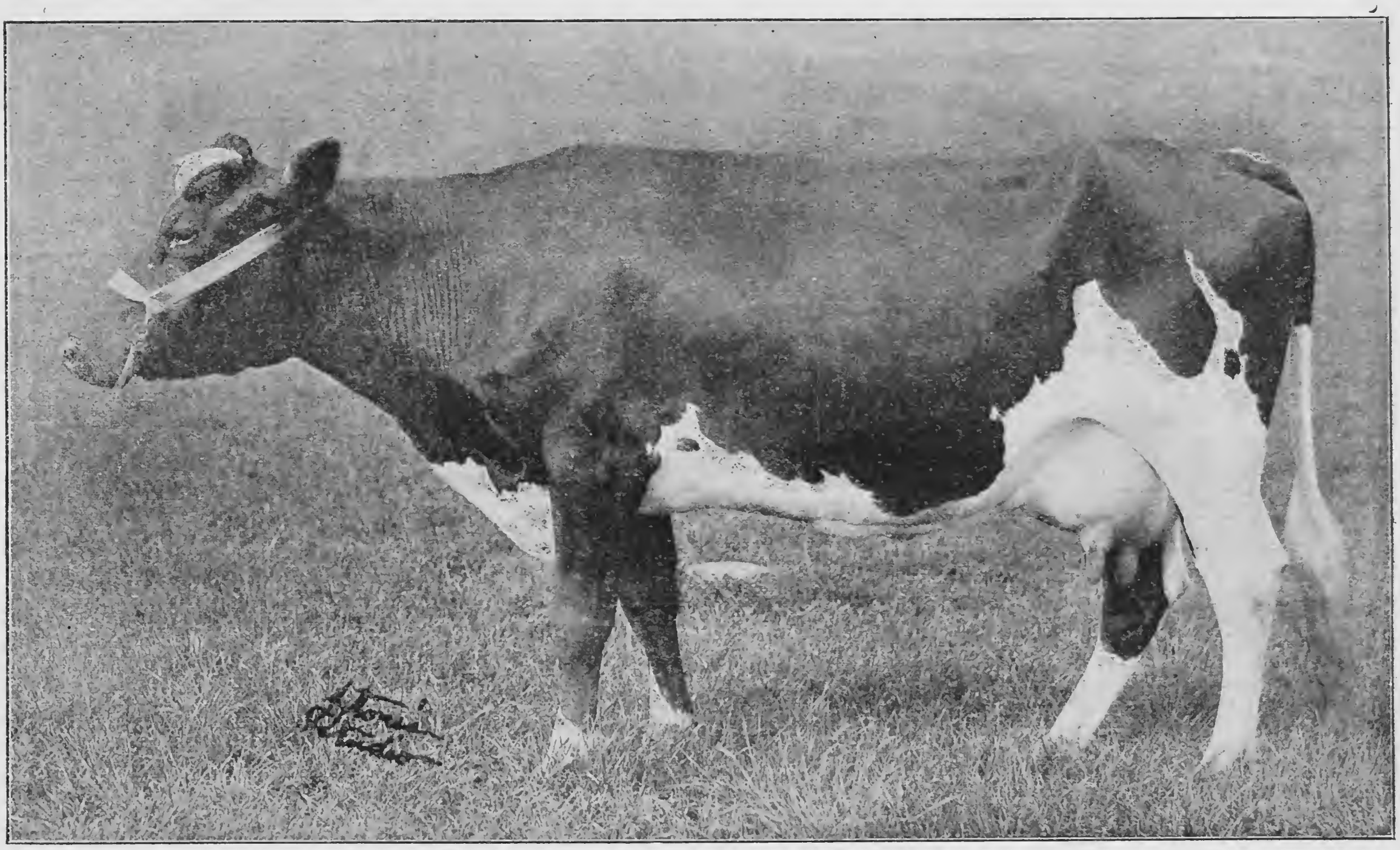
Looking the Animal Over.

Will you tell us what to look for in a Holstein cow in order to pick out her show points?

PRINCIPLES OF EXCELLENCE.—What are the "show points" of a Holstein cow? Well, that is something of a question as to who the judge is going to be. No animal will win first prize at all of the shows for the simple reason that the same man does not always act as judge. So let us see if we cannot reason the thing out among ourselves. In the first place, the Holstein cow is a *dairy* animal. Some of her more ardent admirers go so far as to claim that she is a dual-purpose animal. But I think these men make a mistake. For when a Holstein cow possesses dual-purpose qualities she is not an ideal Holstein. You may rest assured that she is not so good a dairy animal as she ought to be, and I think that it would be better for her owners to keep her in the background, breed her to a bull of pronounced dairy type in the hopes of getting some heifers from her that lack her "dual-purpose" qualities, and veal her bull calves always.

POPULAR IMPRESSIONS.—I can see right now that we are going to get into trouble in this matter of the show cow. The judge likes to please the crowd, and the crowd likes a handsome, smooth animal with plenty of flesh, which of course makes graceful lines, and really a thing of beauty. Nature abhors sharp corners and ragged edges. She goes in for curves and plumpness every time. But the modern Holstein cow is not a natural thing. She is the result of man's working for a long time to the back is taken into consideration, but I am change the course of nature and induce bossy to give milk enough to raise three or four calves, and keep it up long after the calves cease to need the milk. Man can change the works of nature, but he has to pay for what he gets every time. He can more fully develop one function, but it is always at the expense of some other function. That is the reason why a cow cannot be an ideal dairy animal and an ideal beef animal at the same time. If you will accept the foregoing as facts, I think we can now go about the job of analysing our Holstein show cow.

SALIENT POINTS.—In the first place, she must eat a lot of food, and for this purpose she must have a wide mouth with strong jaws. Here is a slap at the beauty idea right on the start. But the dainty, poor feeder will have the fine muzzle and the poorly developed jaw, and she is the cow we have no use for. If our cow eats a lot of food, it has to go somewhere. So she must have a lot of storage capacity. She must be of long body, deep and wide. Her ribs must be far apart—for a cow has only so many ribs anyhow, so if they form "slats" the length of her sides they must be placed a good way apart to reach. These ribs must also be well sprung; that is, they must be curved like a hoop. This, of course, makes more room for her several stomachs and other internal organs, not the least of which is the lungs. Then it is a pet phrase among writers on the dairy cow to say that she must be "wedge-shaped." That is all right if only afraid that those who do not understand the meaning of the phrase sometimes take it to mean that the cow should be flat or "slab-sided." By wedge-shaped we mean that she should be very wide at the hips, because there is to be a tremendous udder hung between her hind legs, and those legs must be well spread to make room for it. Then her back should taper along to sharp, thin shoulder tops, because our cow carries no superfluous flesh, and nature has as usual asserted her authority and taken off from one end what we have added to the other. The neck will, of course, be thin also, but wide—or, should I say deep—next to the shoulders and tapering nicely to the union of the head. The throat should be clean and not show enlarged glands.



THE HOLSTEIN COW "KUPERUS WALKER," No. 97457. 461.2 POUNDS OF MILK IN SEVEN DAYS. FIG. 329.

FURTHER CHARACTERISTICS.—The legs should be neat of bone and moderately short. But I think we should not expect too much in the way of short legs. We want a long back, long neck, long ribs and a long tail. Now isn't it asking almost too much of Nature to give us all of these and then place stubby legs under our cow? Of course Nature can do it if she wants to, for she has the dachshund to prove it; but I think that few of us will maintain that the dachshund's legs add very much to his beauty, and we will not strive for that type of cow. The cow's back should be straight clear back to the tail setting. A sloping rump shows weakness, and not only this, but we almost invariably get poor forequarters of the udder, with the teats

pointing towards the fore feet, with this type of back. The tail should be large at the base, and should taper nicely down to the end, which should reach the hocks or below. And I like to see a good, heavy switch, too. As one of our best dairy authorities once said, "A cow that hasn't vitality enough to grow a switch isn't much good anyhow."

UDDER AND HIDE.—The udder should be very capacious, but very flexible. Avoid a fleshy udder. The quarters should be all well developed, and the front ones should extend well forward. The teats should be placed well apart, and point straight down, and of course they are better of medium size. The skin should be of medium thickness, but very soft and loose under the hand, and mellow. The hair should be fine, thick and of an oily appearance. Now this question of the skin is not a matter of beauty alone. It is the only outward indication that we have of the inside lining or mucous membrane of the cow, and of course this has much to do with her function as a milk producer. Other outward indications of the inside workings of the cow are her milk veins. The nourishment is taken from the food and poured into the arteries, and is taken down to the udder on the *inside* of the cow. The milk is secreted by the udder glands from this arterial blood, and then the "used up" blood, as we might say, is sent back to the heart through the *milk veins*. If these veins are elastic, large and tortuous, we conclude that a great deal of blood is being sent to the udder for milk extraction, because a great deal comes away from it.

BOVINE BEAUTY.—I think that perhaps I have touched upon most of the really essential points, but there are a few "beauty marks" that will win favor. I like to see a pair of small black incurving horns. No horns at all are better than big, ill-shaped horns, and we sometimes have a suspicion that bossy might have had such horns before they were cut off. A large, full, placid eye helps mightily also. Such an eye shows not only health but a good disposition, which is very essential. It will profit you nothing, though your cow may give you 40 quarts of milk a day, if she kicks it all over you and the barn just before you arise from milking her. And but few men are so constituted that such conduct will not eventually tend to injure their good nature. Then the color really does make a difference. A Holstein may be dark, but I like a nice big star or shield of white in the face, the legs all white, a good part of the tail, and, of course, the switch. Then if the belly is white, and that color extends well up around the flanks, we have a very prettily colored cow. On the other hand, if she be light, I like to have the sides of the head and neck black, leaving a nice strip in the face. A few big spots on the body help also, but I do not like a speckled one. Perhaps the best color is the evenly marked cow with big spots, with possibly the white a little in preponderance.

J. GRANT MORSE.

THE COUNTY AGENT AND CO-OPERATION.

THE county agent's field is an exceedingly large one. His activities might be grouped under four heads:

1. To suggest to the farmer on his farm ways of handling his soil and managing his business so that he may receive more bushels or pounds for the labor and capital employed.

2. To help him solve the problems of marketing so that he may receive more dollars for what he produces.

3. Assist him in his purchases, so that those dollars may go further—buy more of the necessities and embellishments of life.

4. To help organize the forces of society so that country life may become as full and rich as we all believe it should be.

EXPERIENCE IN OHIO.—As thus outlined, co-operative buying and selling may assume large proportions in the association work, and is capable of almost indefinite extension as experience may justify. In Ohio we are feeling our way along, and work of this kind has been restricted largely to the purchase of commercial fertilizer. The history of this movement is as follows: Early in 1913 Mr. H. P. Miller, agent for Portage County, by placing an order for 1,000 tons, and paying cash on delivery, secured prices on fertilizers that saved the consumer over $4 per ton over the prevailing price paid for fertilizer. One or two other counties were given the benefit of Mr. Miller's contract, and the organization for the distribution of the fertilizer was begun. Men were selected at each shipping point in the organized territory who would receive orders from the farmers, and to whom the cars should be billed. These agents were to notify the farmers upon arrival of the goods, and assist in the unloading of the cars. For this service they received a commission of 75 cents per ton. The farmers were notified of the arrangements and requested to send their orders to the men handling the goods at their respective shipping points. Accompanying each order an advance payment of $2 was demanded, as a guarantee that goods would be taken and paid for promptly on arrival. In the face of all sorts of opposition and misrepresentation about 2,000 tons were placed for use in the Fall of 1913.

INCREASING BUSINESS.—The success of the movement was so pronounced that the entire output of the factory was purchased on the same terms for the Spring trade of 1914, and by the same system of distribution 20,000 tons of fertilizer have been placed in the hands of the farmers composing the organization at a saving of over $80,000. The volume of business has been so great as to outrun the capacity of the company through which we have done business, and some vexatious delays have been occasioned. The success of the movement threatens its failure. Plans are now under consideration to buy, if possible, the output of other fertilizer companies and greatly broaden the movement. If farmers will only work together it is possible to effect a still larger saving in fertilizers. Under a somewhat similar plan of distribution nearly $5,000 worth of paints and oils has been purchased by the Geauga County farmers with a saving to them of $600.

EXCHANGING PRODUCTS.—There is a big field for the exchange of products between farmers of different sections of the country. Green County, Ohio, produces corn and Alfalfa. Portage County produces potatoes, and Geauga maple syrup, and these counties are consumers of corn and Alfalfa. A number of cars of Green County's products have found their way direct from the farmer producer in Green County to the farmer consumer in Portage and Geauga counties, and Portage County potatoes and Geauga County syrup have gone to the consumer in Green County. The dollar in these exchanges has been unclipped save by the railroads. A quantity of clover and Alfalfa seed has been purchased from seed producing sections; this has been entirely satisfactory. Where county agents can give personal attention and inspection pure, clean seed is guaranteed.

REQUIREMENTS FOR DISTRIBUTION.—Some of the progressive farmers of this section are beginning to realize something of the fearful cost of distribution under the present system, and are clamoring for the coöperative purchase of all supplies. This seems unwise without suitable warehouses and equipment, a tried organization and business experience. If the movement can be held in check while these requisites are being built up and perfected, this phase of the county agent movement may contribute much toward the solution of the great problem of the age.

F. L. ALLEN.

A SENSIBLE COUNTRY MERCHANT TALKS

AFTER reading the articles on "The Local Store," on pages 618 and 739, I am incited to write a few words in reply. I am a farmer and always have been one, therefore my sympathies are with the farmer, but I am also in the mercantile business, so I know whereof I speak. The articles referred to above do an injustice to the average country storekeeper, and do not indicate a broad understanding of the conditions a merchant has to contend with. B says he can see no reason why the country merchant cannot sell as cheaply as anyone else. That statement alone would tend to show he had not used his reasoning powers. He also states that the mail-order houses are getting rich, which would indicate they are not selling too cheap. That is very true. Let us find the cause.

In the first place, all the reputable mail-order houses are backed by plenty of capital. They have an establishment valued at several hundred thousand dollars. They do a business of several millions. The capacity per unit for filling orders in a mail house is a hundredfold that of the country store whose clerk will spend an hour pulling down all the dress goods it contains in order to sell a customer a few yards, in exchange for a roll of butter that he will have to dispose of at a loss. The majority of mail-order houses fill your orders through outside firms. They have your money to pay for same, therefore get large discounts and concessions which we can never hope to get. I used to buy large quantities from these firms before I went into business for myself. Their prices are much lower, but when you take into consideration the quality, the loss of the use of your money for several weeks, the delay in getting them (on several occasions the goods were so long en route, I had no use for them when they finally arrived) the freight bills and the fact that the goods are not always what you expected, yet one does not want to go to the trouble of returning them, I don't think the average purchaser is much ahead after a term of years.

Right here is where the shoe pinches. Every country merchant carries all his customers some of the time and some of his customers all of the time, for the simple reason that every blessed cent the debtor can rake or scrape up he or she will fire into the city man and live on their obliging country merchant, who is forced to borrow money to hold them up. We are an independent race. I do not dispute the right of anyone to buy where he chooses, but would it not seem to be purchasers' duty, after carrying them through sickness and lean years, to apply the money they send away on their old accounts, thereby enabling us to sell to them cheaper, as we are compelled to tack these poor accounts on the selling prices, or go to the wall? If it was just the poor it would not be so bad, but a large per cent. of prosperous farmers with bank accounts and automobiles will not pay a store bill "till the last dog is hung." They say, "He is glad enough to get our trade, let him wait." Does my friend know of any merchant who for the amount of work, anxiety, risk, the capital invested, is getting any richer than he ought? Don't judge by appearances, but look on his books and note the thousands he is carrying from year to year; you will be surprised to see the names and accounts written there. The mail house runs no risk. Your local merchant risks everything. The expenses in proportion to the volume of business are not to be compared with his city rival. Don't kick your benefactor, but boost. If all advocates of mail-order houses would pay us for goods before they get them, we would quote you prices that would put our city brethren out of business. That is the only way we will all get our equitable division of the results of our labor.

B. C. WOOD.

New York.

HARVESTING GRAIN WITH POULTRY.

A YEAR or so ago there were several paragraphs in THE R. N.-Y. about letting chicks harvest their own grain. Last year we had a small piece of Winter wheat which we allowed some half-grown chicks from colony houses to harvest. We never had chicks do better. Later they helped themselves from a buckwheat field. We could devote six or eight acres to growing grain for feeding chicks in this way and it would be the most profitable way in which to use the land. Most of the straw would go back. We have wheat which was planted in the Fall, also rye, although I believe that rye grain is not good for young chicks. Is there a succession of grains that would give the chicks a continuance of feed from about the middle of May to the last of October? H. H.

Maryland.

We often have reports from people who turn a flock of chickens into a buckwheat field, and leave them to clean up the grain. This seems to give very general satisfaction. In some cases where considerable grain is grown, hens are kept in portable houses, which are hauled about in various parts of the field, leaving the hens to pick up the scattered grain. In this way the birds obtain a good share of their food, and the grain is saved. There might be cases where this plan of leaving hens to harvest grain crops could be followed out. We have never been able to get our hens to relish rye as a whole grain. They appear to dislike it, but will eat it fairly well in a mash, mixed with cornmeal and other feeds that they like, or when the rye is mixed with cornmeal and baked into a cake. The hens will probably not thrive in a rye field, but they will take care of oats, barley, peas or wheat. They could be started in the wheat field from a Fall seeding, then turned into oats and peas, then barley, and then finished off with buckwheat, pains being taken to seed these crops at intervals so as to make a succession of grains. Such a plan would not pay, except under rather extraordinary circumstances, but it should be worked out if desired. As is well known, in many parts of the West hogs are kept very economically by letting them graze or pasture a succession of crops. They may start with rye or wheat in the Spring, and follow through oats and peas and buckwheat, to corn and rape. In these cases corn is often planted in drills, and rape seeded at the last cultivation. The hogs are turned in when the corn is soft in the ear, and left there to clean up rape and corn, which they do successfully. Something of this plan could be followed with poultry, although we do not know of any cases where it has been actually carried out.

THE dwarf fruit tree suits the older man, for it is a giant at early bearing. For the young man it seems more like a toy.

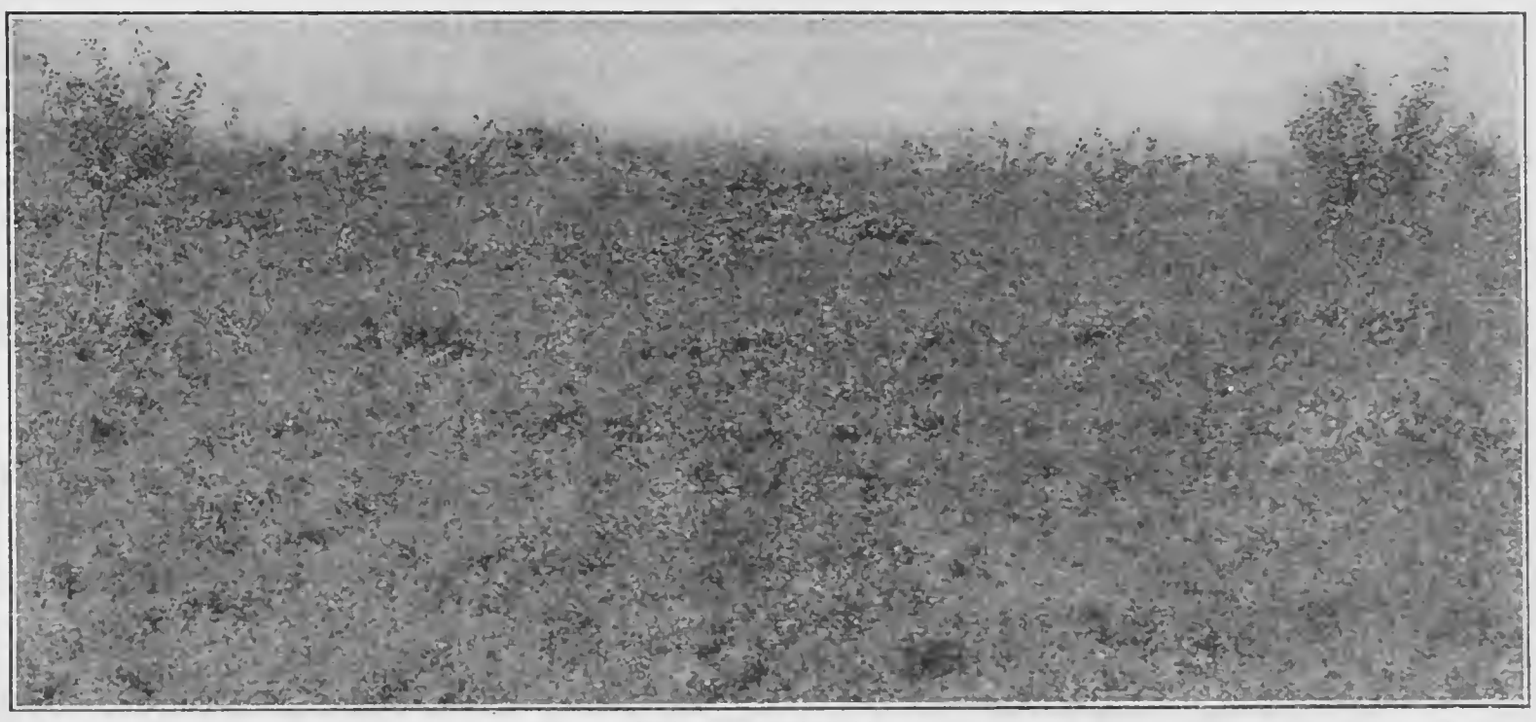
SCIENTIFIC PRODUCTION OF FINE APPLES.

From Plowing to Packing.

PART I.

IDEALS IN QUALITY.—It is the aim in this paper, the first of a series on apple packing, to discuss briefly some of the important points in securing good fruit. We all agree that the general appearance of the package has much to do with the sale of the fruit contained, yet sometimes fail to realize fully that the consumer is being rapidly educated to look beyond the external and place an increased value on the real quality of the fruit itself. It is a fact that a great deal of fruit which would best be sold in bulk is being handled in expensive packages, and the grower is often at a loss to know why he fails to get satisfactory prices, and frequently attributes it to dishonesty on the part of dealers. The frequent stagnation of the apple market, which is very discouraging, especially to the small grower who is not prepared to hold his fruit, is almost wholly due to lack of distribution, poor quality and faulty packing. Remove the latter two and distribution will be much facilitated, because it is so dependent on quality and packing. There is rarely if ever an over supply of good fruit, because people are willing to pay the price if they can only get a good article. Given any variety, the degree of quality will depend on how near it approaches the ideal for that variety in size and color, and upon its freedom from insect and fungus infections, bruising and other forms of mechanical injury. Uniformity in size, color and soundness are also important, particularly when fruit is to be packed in boxes. Of the many factors involved in securing the above, the most important are likely to be s o i l management—including fertilization—spraying, pruning and thinning of fruit. Failure properly to attend to any one of these, no matter how w e l l all others may be looked after, u s u a l l y means failure to realize full returns from the effort and expense involved.

ALFALFA AS A PERMANENT SOURCE OF MULCH IN APPLE ORCHARD. FIG. 330.



HAIRY VETCH COVER CROP IN A YOUNG ORCHARD. FIG. 331.

SIZE OF FRUIT.—The s i z e of fruit is largely dependent upon those factors which determine the amount of tree growth, viz.: moisture a n d fertilization. The former, however, is likely to be the m o s t important as w e l l as the cheapest and surest m e a n s of controlling size; in fact, moisture control is likely to be the m o s t important problem with which the orchardist has to deal. At the present time there are two systems of soil management available, either of which will meet requirements in this regard. These are tillage combined with some form of cover crop and sod mulch. Sod alone has failed miserably when carefully compared with these two systems, and except in a few special cases is hardly to be considered where more than average results are desired. Compared with tillage and cover crops, sod mulch appears to be somewhat the more efficient in conserving moisture; usually gives more tree growth, at least with young trees; tends to bring trees into earlier bearing, and may produce fruit of a little higher color. It is particularly adapted where the land is too steep or too rough for easy tillage, or on soils which are especially subject to washing.

SOD MULCH, as here referred to, consists of a permanent grass cover and the maintenance of a definite mulch extending from within a few feet of the tree trunk to somewhat beyond the tips of the branches. The material should not be brought up close to the tree because of danger of injury by mice, but in any case the mulch system should combine some form of trunk protection. This mulch may be secured by cutting and drawing up the grass and other growth from between the trees, supplementing this, if necessary, by sufficient outside material, such as swamp hay or straw to maintain a covering of several inches in thickness, or sufficient to keep down all grass and weed growth. The system is effectively started by allowing a rye cover crop to stand until it comes into bloom, at which time it is mowed and later drawn up to the trees. A permanent grass cover is easily started by sowing in the young rye, or after it is cut, as for clover or other hay crops. Tests at the Pennsylvania Station indicate that Alfalfa may be successfully used as a permanent cover and source of mulch, and that it is possible to maintain satisfactory mulch and tree growth, at least until the trees are in profitable bearing, and use one cutting per year of Alfalfa as hay. So far as operating expense is concerned, studies by the Geneva Station appear to indicate that sod mulch is at least no more expensive than tillage.

TILLAGE still remains a favorite means of orchard soil management, but if not practiced so as to insure a good soil or dust mulch it will prove little better than sod alone. Tillage should not continue later than mid-season, although this will depend somewhat on the amount of rainfall, the size of crop and the cover-crop used. During dry seasons or seasons of very heavy crops, tillage may continue a little longer. A cover crop should be sown at the last cultivation. If nitrogen is lacking, as indicated by scant, weakly tree growth, it is possibly best to use a legume, such as one of the clovers, vetch, or Soy beans, but where nitrogen is not needed or appears to be in excess, then rye, millet, buckwheat, rape or Cow-horn turnips will be cheaper and quite satisfactory. Rye has an added advantage in that it may be sown quite late in the season. Vetch appears well suited to use as a cover crop because of its low moisture requirements, comparative hardiness and ability as a nitrogen gatherer. The cover crop should be turned under the following Spring and before it begins to draw too heavily on the soil moisture. Deep plowing in any case should be avoided, particularly within the root area, and with old trees, or those which have not been cultivated for a number of years.

State College, Pa. R. H. BELL.

TWO EPOCH-MAKING DAIRY MEETINGS.

MY mind runs back to a February day in 1872, when in compliance with a call I had issued in the Wisconsin State press seven men met in the city of Watertown to organize a State Dairymen's Association. Very faint and feeble was that beginning. The total value of the dairy product of the State did not exceed a million dollars. To-day the value of the annual dairy product—cattle sales included—is over a hundred million dollars.

From that February day till now the Wisconsin Dairymen's Association has been the leader and guide of the industry every hour of the time. Out of it have come some of the most potent educational forces of the State for the promotion of a more enlightened agriculture, among which I would mention the Dairy and Food Commission, the Farm Institute, the Dairy School. The College of Agriculture itself has been greatly nourished and built up by the powerful influence of this association, which in its advocacy of wise laws, in its defence of sagacious measures, in its absolutely non-partisan course, has been constantly respected as a great force working for the true advancement of the State. The proud preëminence of Wisconsin as a producer of dairy thought, dairy product, dairy cattle, and dairy machinery is due in a very great measure to this organization. "Behold how great a fire a little spark kindleth."

In 1881, while presiding at the session of the Northwestern Dairymen's Association at Lake Geneva, Wisconsin, I was waited upon by Mr. Knapp, assistant freight agent of the C. & N. W. R. R., and Judge Burchard, land commissioner of the same road, with the request that the Northwestern Association hold its next session at Mankato, Minnesota. These men stated that the farming interests of that State were in a deplorable condition through the ruinous effect of constant wheat growing. The product per acre had fallen so low, and the quality as well, that the railroads were threatened as well as the farmers with a ruinous loss of business. "Something must be done at once," said Judge Burchard, "to pull the Minnesota farmer and the railroad out of this hole. The farmers have heard of what the cow is doing in Wisconsin and Northern Illinois for your redemption. Your convention to-day convinces me that here is a great redeeming force if we could once set it at work in our State."

The result of the conference was that the Chicago & Northwestern and the Chicago & St. Paul railroads agreed to give free transportation to one hundred dairymen from Illinois and Wisconsin to Mankato and return, if the Northwestern Association would hold a convention in that city the next Winter. That convention was one of the most memorable in its character and final effect of any in my recollection, covering a period of over 40 years. The daily attendance of farmers was over 1,200 for three days. All of the speakers were practical dairy farmers, and their thought and advice shed such a flood of light upon the subject that hundreds of farmers made preparation at once to install the cow in place of the plow. The next Winter another great convention of the same organization was held in the same city. From the impulse thus started and the seed sown at these two conventions, the dairy industry in Minnesota at once took on definite shape and progress. Out of it came the right organization of forces, the passage of favoring legislation, the creation in the minds of the Minnesota farmers of a determined, definite purpose to prosecute the industry thoroughly and steadfastly. To-day Minnesota occupies a front place in the extent, and particularly in the quality, of all her dairy products. The value of her dairy products now exceeds that of any other branch of her agriculture.

These two present to my mind the most notable instances of the effect of concentrated thought and purpose in the promotion of advanced agriculture as shown by after results. They show with pronounced clearness the power of right ideas in the furthering of the prosperity of the farmer.

W. D. HOARD,
Editor *Hoard's Dairyman.*

MANY refugees from Mexico have appeared in the Gulf States—driven out by the revolution. Even should there be war between this country and Mexico these people would continue to come here for protection.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Growing a Crop of Mulch Material.

WHAT can be planted for mulching after picking strawberries from a bed made last year, occupying an acre, but a very poor stand? Material is to be cut and used on an adjoining half acre of berries set out this season. After cutting this material, what should be planted that would build up the soil and put it in condition for berries again in a year? J. E. H.

Franklin Co., Ohio.

Here is a plan which has been successfully carried out by a number of Eastern growers. As soon after picking as possible plow the ground, turning the strawberry vines and weeds completely under. Then make a heavy seeding of Japanese Barnyard millet, after fitting the ground thoroughly. We should use 30 pounds of seed to the acre. If the soil is not in the best of condition, a small quantity of fertilizer will pay with the millet seed. This millet, when properly grown in a fair season, makes excellent mulching material. The stems are large and coarse, and protect the berries better than ordinary straw, and a heavy seeding of the millet will smother out most of the weeds and give clean mulching material. This can be cut just before the seeds form in the millet, and stacked ready for use at mulching the strawberries. As soon as possible after cutting the millet, work up the land again and sow to rye. If this can be done around the first of September, add 15 pounds of the seed of Hairy vetch to the rye. If cutting the millet is delayed longer than that, we would not advise sowing the vetch so late, but would add to the rye half a bushel of barley, and 1½ pounds of Dwarf Essex rape seed. The barley will make a considerable Fall growth along with the rape. They will be killed out through the Winter and afford a protection for the rye, which will come on and give a good growth in the Spring. Then by plowing under this rye when about two feet high, and packing the ground down hard, you will have a very good preparation for another crop of strawberries.

Why the Hired Man Left.

"I COULDN'T learn anything where I was at work, is the reason I quit." That was what a hired man told me a few days ago, and after he had explained, I was satisfied that he had sensible reasons for leaving the farmer. The young man told his story, and a good many of us should take notice, or the help problem will become more unsolvable each year.

"I read what I could," said the young man. "I observed and inquired, and in spite of having had the opportunity of going to school only three or four years at the most, I made the best of my meagre opportunities. I tried to pick good places as I shifted from pillar to post. I worked at several good places. I learned many things, but I learned much more by reading, and in this the last place which I left would have proved a handicap to my progress. I am interested in purebred stock, and the farmer for whom I worked was disinterested, he was absolutely ignorant about breeds, the selection of a sire, the judging of a dairy cow, and of feeds and feeding. He fed hay all Winter, and aimed to have the cows come fresh on June grass pasture. I tried to talk silo to him for the coming corn crop, but he seemed well supplied with those old arguments that were passed around in the country store a dozen years ago opposing the 'cyclone catcher.' He said it didn't pay to feed his cows, he declared his barn was as handy as any in the neighborhood. I disagreed with him on this point. The stables were divided by hay bays, hay was hauled from stacks in the field to the barn and then carried in for feeding. In fact I had no chance to learn. I had to do chores until late at night, and my time for reading was cut down to just the few moments at bedtime in which I was able just to keep my eyes open. Everything was against me, and I gave notice that I would quit. I did it. There are a good many young fellows who just want to put in their time, who don't care to get ahead, and with these it makes little difference whether or not they accomplish results just so they pull across the cash from the boss. These are the fellows who will work for a boss of that sort until doomsday, and then rent a farm and go on the same old way. I flatter myself that by reading I have learned a mighty lot and I consider that I have the privilege of choosing my employer, and this is as sacred right of my own as the boss has in discriminating in the matter of hiring help."

I found that this young man has a remarkable store of good sensible information about farm work, and I would match him his fund of knowledge against that of many farmers twice his age. When he tells me that it pays the hired man to choose his boss I think he was right.

W. J.

Farm Woman Wants a Job.

I AM an American woman and wish to learn more general farming. Poultry I understand, but the use of up-to-date machinery and the raising of general crops I do not. I am a thorough housekeeper, taught school a few years ago, and understand buying in large quantities. Considering what I know, can I get a position on a good general farm? I own a small place, but do not feel that I can handle it, unless I know something more than raising chickens.

New Jersey. MRS. A. J. K.

It ought to be easy for such a woman to obtain a position, provided she is willing to do some housework. Most farmers seem to object to taking helpers except at a strict basis of hired service. When "learning how" is part of it, the farmer is more likely to think that *he* ought to be paid rather than that he should pay the laborer. In the case of this woman there should be little trouble in her securing a place on a first-class farm.

Septic Tanks.

WILL you give me some information in regard to septic tanks for sewage disposal? Are the metal tanks satisfactory? On a large place (three acres) would it be all right to discharge the effluent on to surface 30 or 40 feet away from tank, 50 or 60 feet from house, without nitrification bed?

Wellesley, Mass. F. K. B.

I know of no reason save lack of durability why metal septic tanks should not be satisfactory; the advantages of concrete are such, however, that I should prefer it. Surface discharge from a septic tank would be more or less offensive near a dwelling and it would be far better to dispose of the effluent through drain tile laid a few inches beneath the surface. Such tile may be laid deep enough to plow over and the land is not kept from other use, while all sewage is out of sight. M. B. D.

Slippery Concrete.

IN putting down a cement floor in my barn, my contractor, contrary to instructions, made it too smooth, and in consequence it has become slippery and dangerous for our horses "the stalls are planked). Do you happen to know of an inexpensive method of roughing the cement floor? H. E. T.

New York.

A concrete floor that is made, or has become, too smooth for safety may be roughened by suitable tools that are made for that purpose; a hammer similar to a stone cutter's hammer, but with a corrugated face, being commonly used. I know of no easier method of accomplishing the desired result. M. B. D.

Refusal of Medical Services.

DOES a doctor who refuses to go to a sick person at night, have a right to practice his profession I sent a rig for him and would have taken him to the house and back, but he said, "he did not go out at night." I asked him if some one were dying if he would not go, but he cut me short with a "good-bye." It is surely an odd thing if a doctor can hang out his sign and practice but just go when he feels like it. J. D. S.

New York.

A physician is under no legal obligation to attend a patient whom he does not desire to attend, though, having once undertaken to care for a sick person, he may not break an implied contract for the necessary services by deserting the case without giving ample opportunity for a substitute to be obtained. A physician's license to practice medicine is not in the nature of a granted privilege, by virtue of which, society is entitled to his services; it is rather a restriction, required by society to protect itself against incompetent practitioners. No one may practise without it, but no one is compelled to practise if he possesses it. The present tendency in legislation is to discriminate against regularly licensed physicians by permitting the adherents of various irregular cults to practise medicine without requiring of them the same preparation for the work that is required of physicians of the established schools.

M. B. D.

Drying Peas and String Beans.

I WISH to try drying some peas and string beans this season. What is the best way? At what stage should the peas be picked? Should they be sun-dried in the pods, or shelled before drying? Can string beans be improved by picking just before pods begin to dry, on the same principle of curing hay? That is to say, would it be practical to pick the pods while in the mature, but still green stage, and shell them after drying in sun on trays; or would it be best to let them dry up on vines? Above for food, not for seed; the object sought being the dried beans, not pods. J. C.

Robinsville, N. J.

The drying or dehydrating of peas and string beans is a comparatively new industry with the processes that have come into being in the last few years. The method of preparation is applicable to all fruits and vegetables. Both peas and string beans should be dehydrated while in the young, tender stage. A tough, fibrous vegetable before drying is the same tough vegetable when processed. The peas are always shelled. The strings are taken from the beans. Aged stock does not make nearly so satisfactory dried product.

The peas and beans or other vegetable when prepared are placed in sanitary cabinets, where they are subjected to a warm, dry air, in which they are dried, the temperature never exceeding 160 degrees Fahrenheit. The vegetables are distributed on trays in the cabinets and the average heat should be 140 degrees for three hours when they are finished. During the dehydrating process the cell structures and the food values remain undisturbed. Upon soaking them in cold water for a short time, they return to a perfectly fresh green condition. A machine has been devised that enables the operator to do quicker work with less heat by the employment of moving air within the cabinet. The air in the machine is standardized by a pre-cooling and then heating system, so as to secure a continuity of operation regardless of atmospheric conditions, the capacity of the machine being maintained at all times. With some of the older methods of evaporation requiring high heat pressures the cell structures are broken down and the vapor carries off much of the food value. At Webster, N. Y., this new process has reached quite a commercial development. Pumpkins, corn, and a wide variety of the products of the garden and orchard can be thus treated by the new system. Season before last, during the plethora of onions, tons of the tear makers were dehydrated for use in the U. S. Navy.

A. H. P.

EXPLODING DYNAMITE WITH BATTERY.—Have any of your readers had any experience in exploding dynamite with a battery box from a gasoline engine? I wish to blast out some short ditches where it is necessary to fire a number of shots at once, but do not want to go to the expense of a blasting machine. They cost from $12 to $17. G. H. S.

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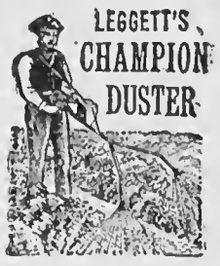
NO WATER TO HAUL



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Potato Duster (Horse Power) dusts four rows. Save time, labor and crops. Ask your dealer for them. Send us postal to-day for free booklets.
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For July, August, Septeuber Planting, Runner and Pot-Grown. Catalog Free. Harry L. Squires, Remsenburg, N.Y.

SWEET POTATO, TOMATO, CELERY, EGG, PEPPER and CABBAGE PLANTS. List Free. C. BECKER, Vineland, N.J.

PLANTS—SWEET POTATO, $1.50 per 1,000—CAULIFLOWER, $2 per 1,000. CABBAGE, $1 per 1,000 List free. W. S. FORD & SON, Hartly, Delaware

Tomato, Cabbage, Pepper & Celery Plants
Good quality at lowest prices. C. E. FIELD, Sewell, N. J.

Cabbage Plants—all varieties, 1,000, $1; 10,000, $8.50: (100, 30c.; 500, $1, postpaid.) Plant catalog free. GLICK'S PLANT FARMS, Smuketown, Pa

THOUSANDS OF PLANTS—Sweet Potato, $1 50 per M. Tomato 90c per M. Cabbage $1.00 per M. Order from this ad. or send for free list. PENROSE PLANT & TRUCK FARM, W. P. Drake, Dover, Del.

VEGETABLE PLANTS
CELERY, CABBAGE, CAULIFLOWER, TOMATO, PEPPER, EGG PLANTS. Special Prices on Large Lots. Catalogue Free. HARRY L. SQUIRES, Remsenburg, N. Y.

TOMATO PLANTS—thousands and thousands of Tomato Plants @ $1 per 1,000. 10,000 or more, 90c. per 1,000. Also Cabbage, Flat Dutch Surehead, Danish Ballhead, $1 per 1,000; 10,000 or more, 90c. per 1000. Celery, very best—Golden self-blanching. Also White Plume. We can fill your orders quick. ROMANCE SEED AND PLANT FARM, Caleb Boggs & Son, Cheswold, Delaware

CANVAS COVERS—wagons, hay stacks, machinery, porches, Roofing, waterproof duck, and heavy canvas for all purposes at wholesale prices. 10-oz. wagon covers 7½ x 12 feet, $3.60 prepaid. Write for prices, stating size required. W. W. STANLEY, 50 CHURCH STREET, NEW YORK CITY

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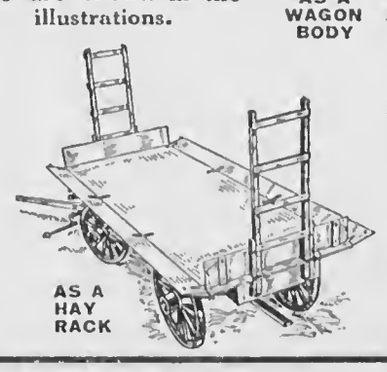
Its capacity as a wagon box is from 22 to 24 barrels; or in bulk, 75 bushels.

As a stock rack its width allows of drawing nearly double the usual number of calves or sheep.



JOHN MURPHY
Holley, N. Y.

DON'T FAIL TO SEND TODAY FOR DESCRIPTIVE BOOKLET TELLING MORE ABOUT THIS WAGON BODY

Rye and Timothy for Hay.

LAST Fall I worked a piece of oat stubble up well with Cutaway harrow and sowed to rye with good seeding of Timothy and clover. The rye is now heading out and among it there is quite a heavy growth of quack grass. Would it be better to let all grow and ripen and get what grain and straw I can, or would it be more profitable to cut all for fodder? How near ripe should the rye be for fodder? Would such fodder be safe to feed to dairy cows?

Wright, N. Y. S. W. C.

With us it would depend on how badly we needed the feed. If short of hay we would cut the green rye and cure it. Rye is the poorest of all the grains for making into hay. It is tough and hard, and stock do not eat it as well as they do oats or wheat, when dried. If cut for this purpose it should not get past the bloom and would better be cut as the heads are forming. Unless there is need of the green rye as hay we should let it mature into straw and grain.

The Emergency Auto Truck.

THE picture shows a quite common happening on a New York street. A broken axle has stalled the load of lumber on a street car track, and the car company's "emergency" auto truck is there to remove the blockade. The wagon is

A BREAKDOWN ON THE CAR TRACK. FIG. 333.

jacked up enough to get a two-wheeled truck less than six inches high under the broken axle, and the load is then hauled to one side of the track by the horse, or auto power if necessary. The horse is taking the resting spell philosophically, and perhaps reflecting that putting a two-horse load on a one-horse wagon is poor practice.

Field Stone for Building.

IN many parts of the best dairy regions of New England and New York the removal of loose field stones is necessary after every plowing, and their disposition becomes a problem. Would it not be practicable to use these stones for smaller outbuildings, and perhaps even for stables and houses? Could such buildings be built cheaper than those of concrete, and could they be so built that they would not be damp? Is there any literature upon this subject of erecting such buildings? I hope to return to my old home in Delaware county, N. Y., in a few years, and the subject is of much interest to me. C. W. B.

Washington, D. C.

Considerable stonework is being done for country building. In our own neighborhood several large buildings have been erected in just the way you mention, using the waste stone from the stone wall, or when picked up on the ground. Many farmers take great pride in building houses of this sort, and we think the practice is growing. The best way to get hold of this matter is, as usual with such questions, to call upon our readers for experience. We have no doubt that we shall find many who have built these houses, and who can give us practical details about it. We want to know the comparative cost of such buildings, how much of the work could be done by the farmer and his hired help, in fact any practical information which would help such a man as the writer of the above to understand the business thoroughly. We expect in this way to obtain just the information these stone builders need.

DRIVING MOLES AWAY.—Seeing some of THE R. N.-Y. readers were wanting to know how to exterminate moles I will give them a remedy. Get lime or lye and dig a hole in their runs and put it in and plant castor beans around; they will soon get rid of the pests. We were troubled with them all last Simmer.

Holyoke, Mass. E. H.

LEGAL MATTERS.

Line Fence Trouble.

I HAVE two neighbors; I will call them A and B. A and myself each builds half of all line fence that is required. B and myself have a cow pasture opposite each other, and he claims that his part of the line fence is where there is not any alongside of our meadows. I have purebred Ayrshires and he has a grade Holstein bull. He claims that if this bull gets into my pasture and does damage he is not responsible, for he would get through my fence, until after his bull is two years old. What is the law about the line fence, and also in regard to the bull matter. J. M. L.

New York.

It is hard to understand how the age of the bull affects this matter in any way. If he is liable for damage, he would also be before, the bull was two years of age. The law provides that each owner of two adjoining tracts of land shall make and maintain a just and equitable portion of the division fence between such lands, unless one of them shall choose to let his lands lie open to the use of all animals which may be lawfully upon the other's lands, and does not permit any animals lawfully upon his premises to go upon lands so lying open. If you cannot come to any understanding with your neighbor as to which part of the fence each of you is to maintain, you will not be able to settle disputes, and you would be liable to your neighbor for the injury caused to him by the trespassing of your stock on his land, and he in turn would be liable to you if his stock broke through the fence; so the best precedure would be to have your difficulties settled by the fence viewers of the town as quickly as possible. M. D.

Outlaw of Claim.

When is the following bill outlawed or not collectable? A, living in Connecticut, buys some goods from B, who lives in Illinois, in December, 1907. A makes several payments on the bill, the last payment being made in May, 1909, and owing to a disagreement A has not paid anything since on the bill. When will this bill be outlawed or not collectable? Would it come under the Illinois law or the Connecticut law? W. A. O.

Connecticut.

The law of Connecticut would probably govern in this case, as B would probably bring an action in that State if he attempted to collect the bill. The limit on matters of this kind is six years in Connecticut and 10 years in Illinois, and the six years would run in Connecticut from the date of the last payment made by A, and unless some payment is made or promise to pay in writing is made by A, the bill will be outlawed in May, 1915.

Old-age Pension; Increase of Assessment.

(1) An old soldier was born April 25th, 1840. He will therefore celebrate his seventy-fifth birthday this year. Will he be entitled to the old age pension which is allowed at that age, or would he have to wait another year? (2) Can an assessor increase the valuation of a farm property without consulting the owner of the same. There has been no improvements made since the appraisal last year, but the taxes were raised so there was a dollar more taxes to pay on a seven-acre plot, and the assessor did not call on the owners. E. K.

(1) For the purpose of obtaining the pension the soldier will not become 75 years of age until April 25, 1915, and he will not be entitled to an old-age pension until that time.

(2) The assessors may increase the valuation of farm property without consulting the owner of the farm. It may be that the tax rate has arisen, instead of the assessment increased. If you wish to have your assessment reduced the assessors give a hearing to all those who wish it on the third Tuesday of August in each year, and you can make your complaint at that time.

Autocars Reduce Hauling Costs of Farm Products

Albert Hansell and W. H. Adams Tell of Advantages of Quick and Economica Motor Equipment

ALBERT HANSELL, a prominent farmer and fruit grower, of Burlington, N. J., bought an *Autocar* in February, 1911. In discussing it recently, he said:

"I bought the car because I became convinced that hauling my fruit to market with horses and wagons was too expensive. After several years of service with the *Autocar*, I know now that I was right. The car makes three trips to Dock Street, Philadelphia, 15 miles distant, in a day, while a team of horses is making one. And horses, after such a trip, have to be rested up the next day.

"My *Autocar* often makes three trips to Trenton and back in a day, a total distance of 120 miles. Since I have had the car, it has travelled more than 32,000 miles without a serious breakdown, and has added greatly to my profits thorough the quick marketing of my goods."

W. H. ADAMS, another Burlington County, N. J., farmer, says of his *Autocar:*

"The results have certainly been beyond my expectations. I use the car to haul my fruit, garden truck, etc., to the markets at Philadelphia and Trenton. Several times a week I make three trips to Philadelphia and return, 90 miles in all, in a day. One trip a day is the limit for horses. It means a great deal to a farmer to get his products to market quickly while prices are good. My *Autocar* has been a revelation in this work, and its reliability and economy have surprised me. I could not afford to be without it. It is easily handled and taken care of, never breaks down on the road, and has been a first-class vestment in every respect."

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The AUTOCAR has proved itself the most convenient and dependable motor truck for farm work and for average country roads. Write us today, Dept. "R"

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You're *now* using only the *top foot* of your ground. Below the plow-cut the soil is rich in mineral plant food. Make this subsoil productive! Break it up with Atlas Farm Powder and get four or five feet of crop-growing fertility. The extra profit from one year's increased yield will more than pay the cost.

Atlas Farm Powder

THE SAFEST EXPLOSIVE

—easy to use, low in cost, and sold by dealers near you—has made thousands of worn-out farms rich, fertile and profitable, and thousands of good farms better. Punch holes into the subsoil, load, fire and the work is *done!*

Any intelligent man can use Atlas Farm Powder without experience or risk. It is the cheapest and fastest farm hand for blasting stumps and boulders, digging ditches, and making most satisfactory holes for tree-planting.

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Our new illustrated book, "Better Farming," tells how you can make more money and protect your crops from drouth by using Atlas Farm Powder. It shows the economical way of doing many kinds of work on the farm. Mail the coupon and get it FREE.

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LATE-PLANTED TELEPHONE PEAS.

RECENTLY a reader in Maine related his plan of planting Telephone peas late in the season, so as to obtain a succession of peas through the Summer and Fall. Usually late-planted peas fail, and this statement about Telephone has aroused much interest. Here are a few comments:

If anyone in this climate has said anything of the sort about the Telephone or any other English pea I would have said at once that he was mistaken. But what may be done in the Maine climate is another thing, and I cannot undertake to contradict it. I can plant peas here in August and have them bear till frost, but it is not a continuous bearing, for the one crop will just about bring them to frost. Just now is about as late as we can get any pea to make a single crop here, that is planted the middle of April. But by planting in deep open furrows in August and working the soil to them, we can make a Fall crop. Planted in July I do not think that here we could make any crop at all. We must wait till the nights get longer and cooler. I plant Premium Gem and other wrinkled peas in August, and seldom fail to make a crop, but only the same one picking that we get from planting in February.
Maryland. W. F. MASSEY.

We never plant wrinkled peas as early in the season as we do the round peas, because we find the wrinkled pea much more likely to decay in cold wet soil than the round sorts. We have never tried the Telephone pea planted in July three or four inches deep, as is the practice of your Maine reader, but I have seen the Gradus planted under much the same conditions, and it failed to stand the intense heat which almost always comes in August. Perhaps the Telephone could stand more heat, but I rather doubt the practicability of such late planting for our part of the State. TRUCKER, JR.
New Jersey.

While I have not personal knowledge of the fact, yet I should not doubt the statement of your correspondent as to his success in late planting of garden peas of the Telephone type. While the peas would mildew here, yet in cooler climates like England, and I think also in Maine, they would continue to produce pods throughout the season until killed by frost. W. ATLEE BURPEE.

It has not been our experience that late planting of Telephone peas will give a continuous crop or result as described in your letter. We suspect that your correspondent in Maine has drawn a general conclusion from a specific incident.
D. M. FERRY & CO.

The Telephone is one of several varieties of tall growing, wrinkled peas, and usually should be planted slightly later in the Spring than is the case with such varieties as Alaska. Under New York conditions, however, the plants do not succeed when planted late, becoming stunted and subject to mildew and are under such conditions unproductive. It is very unusual to have this variety succeed well when planted late.
Geneva, N. Y. O. M. TAYLOR.

Harrowing to Beat the Crows.

I HAVE noticed the discussion in your paper of the various ways of preventing crows from digging up seeded corn. For the past three years I have harrowed the field, with a spike-tooth harrow, with the teeth set well back, immediately after planting. This does not displace any of the corn, contrary to the predictions of my neighbors. I do not believe the crows have found a single hill after the harrowing until the corn plants have shown up above the ground. I plant the corn from four to five inches deep, and keep the harrows going over it about twice a week, or oftener if there are showers. This keeps about a three-inch mulch on the surface, makes it easy for the corn to come up and practically eliminates all the weeds. This deep planting makes the corn three to four days later in coming up; but by that time it is so firmly rooted and the substance of the kernel so fully consumed by the growing plant, that the crows do not apparently find it worth while to pull more than a very few hills. Last year, as near as I can estimate, there were 40 hills missing in 11 acres, or less than one in a thousand. The labor of early harrowing is many times repaid by the saving of cultivation and hand hoeing later in the season, not to mention the conservation of the moisture. W. A. W.
Hurley, N. Y.

"Sewage Disposal for Country Homes."

A BULLETIN of special interest to those confronted with the problem of sewage disposal in rural homes has just been issued as No. 59 of the Cornell Reading Course for farmers. This bulletin describes in detail the construction of modern septic tanks and also gives plans for building earth closets, sanitary privies, and chemical tanks. It is especially complete in its description of septic tanks, giving considerable space to the principles of their construction and rules for locating and laying the necessary system of purifying tile. This bulletin may be obtained by any resident of New York State by addressing the College of Agriculture, Department of Rural Engineering, Ithaca, N. Y. M. B. D.

EVENTS OF THE WEEK.

DOMESTIC.—The tornado which swept across northwestern Iowa, June 6, killed seven persons and injured a dozen, some seriously. Property damage in Sanborn is estimated at $150,000. Two elevators, the city tower, the electric light plant and a lumber yard were swept away.

Snow fell at Boise, Idaho, June 6, the first ever recorded by the Weather Bureau for June in its 50 years of operation there. In addition to this phenomenon the day was the coldest on record for June, and the mean temperature was the same as was recorded on January 5.

Fire in the North Burns Block, in North Street, Pittsfield, Mass., June 7, spread to several other buildings and caused a loss estimated at $150,000.

Fire trapped 100 persons in the tenement at 90 Essex Street, New York, June 10. Eight are dead and seven in Gouverneur Hospital were recovering. Others were hurt less seriously. The blaze started in rubbish in a closet under the floor stairs.

During a gale which swept Chaleurs Bay, between New Brunswick and the Gaspe coast of Quebec, June 4-5, it is believed that between 100 and 125 lives were lost during the two days. The victims were fishermen, and a particularly sad feature of the tragedy is that in most cases more than one member of a family was taken. The Chaleurs Bay fishermen ply their craft in families, the father owning the boat and his sons sailing with him as assistants. The 250 fishing boats sheltered in the Gaspe harbor were destroyed, being torn from their anchors and dashed to pieces on the rocks. The loss to the fishing boats and to buildings wrecked along the shore will exceed $500,000. The boats were nearly all equipped with motors and these with all the fishing tackle were destroyed. This means a terrible loss to the Gaspe population, which largely subsists by fishing. The steamship Canada of the Gaspe line nearly foundered in the bay and was so badly damaged that she will have to be dry docked. There was a heavy snowfall all along the Gaspe coast. Ice an inch thick formed in ponds and snow had to be shovelled from the line of the Gaspe railway at several places.

FARM AND GARDEN.—The annual meeting and show of the American Peony Society was held at the Art Institute, Chicago, June 9-10.

The twelfth annual convention of the Pacific Coast Association of Nurserymen was held at Vancouver, B. C., June 16-18, 1914.

The Summer Meeting of the Virginia State Horticultural Society will be held at the University of Virginia, Charlottesville, Va., on Wednesday, July 15, in connection with the Rural Life Conference of the University Summer School.

The Adams Express Company has opened a food products bureau in Philadelphia to bring producer and consumer together. The company will become a clearing house for excess production, disposing of fruits, berries, butter, eggs, poultry, fish, meats and other food articles at a minimum of expense to seller and buyer. The company is responsible to both, delivering the commodities to the buyer's door and the money to the seller without any intervening agency. The rate on the class of merchandise for which the bureau has been designed is 25 per cent. below the commercial rate fixed by the Interstate Commerce Commission and is no higher than parcel post charges.

Shower baths for hogs and other live stock in transit is one of the Summer innovations announced by the Baltimore and Ohio Railroad to add to the comfort of Summer travel. The baths will be provided at terminals and at resting stations when the animals are fed and watered. One of the purposes of the baths is to increase the road's dining car business by mitigating the odors wafted into passenger cars from cattle trains.

A party of 53 farmers, under the leadership of Johannes Adriaan Neser, member for Potchefstroom in the parliament of the Union of South Africa, left Cape Town, June 6, for England on their way to America, where they are to make a tour of investigation of agricultural methods.

In connection with the Summer school of agriculture at the Massachusetts Agricultural College, Amherst, June 30 to July 28, is a school for rural social service starting July 15.

The School for Leadership in Rural Life will be held at Cornell University, Ithaca, N. Y., June 23-July 3. Within the scope of the School are included courses in principles of rural sociology, social function of rural institutions, rural social engineering, the rural mind, rural personal ideals, applied rural psychology, principles of leadership, study of the individual, social organization, principles of rural economy, survey of rural economic conditions, coöperation, rural health and hygiene, rural recreation, psychology of the country girl, group organization for girls' work, rural social survey, extension teaching in agriculture—eighteen distinct courses in all, covering the whole general field of rural social science. The regular class work will occupy all of the morning periods. The afternoons will be given over to demonstrations, conferences, and pastimes, and the evenings to programs that combine educational and entertainment features. The lectures and demonstrations will be supplemented by a carefully selected and arranged country-life exhibit. Complete program of the school, including detailed descriptions of the courses, may be had on application to the secretary, A. R. Mann, College of Agriculture, Ithaca, New York.

COMING FARMERS' MEETINGS.

Massachusetts State Board of Agriculture, Annual Summer Field Meeting, Hood Farm, Lowell, Mass., June 24.

American Association of Nurserymen, Cleveland, Ohio, June 24-26.

Certified Milk Producers' Association of America seventh annual convention, Copley-Plaza Hotel, Boston, Mass., June 25-26.

School for Leadership in Country Life, New York State College of Agriculture, Cornell University, Ithaca, New York, June 23 to July 3, 1914.

Summer meeting, Virginia State Horticultural Society, Charlottesville, Va., July 15.

Summer school of agriculture and country life, Massachusetts Agricultural College, Amherst, June 30-July 28.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22-24.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August 5, 6, 7.

39th Annual Convention of the American Poultry Association to be held at Chicago, Ill., Augnst 8th to 15th, 1914, inclusive.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Associations, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Government Whitewash.

SLAKE one-half bushel of lime with boiling water, keeping it covered during the process. Strain it. Add a peck of salt, dissolved in warm water; three pounds of ground rice, put in boiling water and boiled to a soft paste; one-half pound of Spanish whiting; and one pound clear glue dissolved in warm water. Mix well and let stand several days. When used put on as hot as possible.

Soy Beans in Silage Corn.

ON page 698 (Hope Farm Notes) you advise against the use of Soy beans in corn. I live in the center of Dutchess County, and wish you had been at my place last Fall to see them grow, and the past Winter to see the silage fed to cows, and then the cows milked; you would have said by all means plant Soy beans in silage corn. I have planted Medium Green Soy beans three years, and where woodchucks and rabbits can be controlled have had good crops. They ripen here for seed. Neighbors have planted Soy beans, and are successful. One man planted them six or eight years. Everybody votes them a success, not only in growing, but in a big reduction of feed bills. I plant Early Mastodon corn (Delaware grown) and mix two quarts corn and one Soy beans and plant with planter. If thoroughly mixed I get a fairly good stand of both, corn growing 10 to 14 feet, and beans 2½ to three feet, and I don't think that is the end, for the next year's crop is very much better.
G. D. B.

MONROE COUNTY NOTES.

THE backword Spring has been succeeded by three weeks of beautiful weather during which the oats and most of the corn have been put in the ground. The spraying following the fall of the blossoms has also been done. But during all this time there has been practically no rain, and it is getting dry. Both grass and grain are showing this lack of water. In spite of a good start grass will be short unless there are good rains at once. Farmers who did not get their bean ground plowed early are now paying for it and will probably continue to do so throughout the season. The peach crop in Western New York is apparently doomed this year. As if the shortage of blossoms were not enough peach trees everywhere in the region have been visited by a terrible epidemic of leaf-curl. Practically every orchard sprayed as well as unsprayed has a 75 to 90 per cent. infection. Growers are giving two reasons for failure of the spray to protect against leaf-curl this year, the lateness of the application and lack of thoroughness. Instances are cited of very thorough and early spraying which kept the infection down to 10 or 15 per cent. For some reason apples have not set as they blossomed. Where there was a promise of an overload there will be only a fair setting. Plums have not set even as well as apples. This crop and pears will both be light. M. C. B.

Wheat $1.10 per cwt.; barley $1.10; rye $1 per cwt.; oats $1.25 per cwt.; flour $2.50 per cwt. Cows $45 per head, dairy cows $55 to $75; butter 20; cheese 18 to 20. Potatoes one cent per pound; apples one cent per pound; strawberries $1 per gallon. Eggs 20; chickens $4 to $6 per dozen. E. W. G.
Adin, Cal.

June 8. I am today working the corn with a 14-tooth cultivator. The weather is too dry and hot here, but we shall have perhaps more than an average crop of wheat, corn was never more promising, while oats and grass will yet respond to timely rains. Last week two light showers broke a three weeks' dry spell, and we are conserving moisture and wishing for more rain. W. E. D.
Hillsboro, O.

Corn 62; oats 34; wheat 80; Timothy seed $1.50 to $1.80; clover seed $6 to $8. Eggs 16; butterfat 20. Poultry, roasters, six; hens 12; broilers 13; turkeys 15; geese nine; ducks 10. Wool 14 to 18. Hides 10 to 11. Fat cattle $7.35 to $7.50; hogs $7.50 to $7.80. Hay $9 to $12, baled. Potatoes $1 to $1.10. No market for garden truck, too much shipped in from the South. These are the prices that the farmer gets. Very dry here now. J. S. S.
Cromwell, Iowa.

June 6. Asparagus 15 cents per bunch retail, wholesale 8½ to 12½; potatoes $1 retail, wholesale 71. Cows, fresh, $75 to $90 for good ones, others $50. Beef cows $45 to $60; 10 to 12 cents a pound dressed. Butter 30; milk, retail six cents, wholesale three cents, six months, four cents six months. Calves nine cents live; fowls 18 to 22 live; eggs 20. Young pigs $8 per pair. Rhubarb two cents per bunch. Hay $11 to $12 in barn, $18 to $20 in market. Strawberries 12 to 15 retail. A. E. S.
Factoryville, Pa.

June 6. This has been an unusually wet Spring and a good many of the farmers who are short of help and teams are somewhat backward in finishing their seeding and it has also held back the work on the highways. However, our town has a new 20 horsepower road roller and a heavy grader and we have turnpiked around 30 miles already in about 16 days, so if we are not shut off too quickly by the State now, will fix the roads fairly well yet. Grass looks fine and also grain that is up. Some of the farmers are busy planting corn and potatoes. Cows are high and scarce.
Farmersville, N. Y. R. S. H.

May 26. Harvesting and marketing what is thought will be the biggest strawberry crop ever grown on the Delaware and Maryland Peninsular has just commenced. Buyers from the North have arrived and paid as high as $6 per 32-quart crate for choice berries on the start. The Crimson clover crop which is also one of the largest on record, is being harvested. The weather is very favorable saving this crop. The weather is very dry, which is delaying tomato growers from setting their plants; the majority of growers have their ground prepared. An unusually large crop of cantaloupes has been planted. A large acreage of peas has been planted for the canneries; peas are beginning to suffer for rain. The outlook for the wheat crop is very good.
Dover, Del. C. H.

May 22. Price of beef has been about 8½ to nine cents for old cows well fattened, and good steers 10 cents per pound. Hides 13 to 15 according to condition and manner of dressing; 10 to 12 cents if sold in local market. Nearly all calves are fattened and shipped alive to New York. During the last year the price for prime live calves or veals has ranged from seven to nine cents; mutton nine to 10. Most lambs in this section are dressed, and sold in Ticonderoga (which is our nearest market). At the commencement of the season in August, 1913, dressed lambs sold for 14 cents per pound, but later and as the supply became more plentiful the price dropped to 12. I have never learned there was any drop in price to the consumer. Dressed fowls 20; chickens 25. In December, 1913, eggs sold for 40 cents per dozen to the markets and 45 to the consumer. Now they are 18 to 20 to the grocers and 22 to 25 to the consumer. The best price for prime butter to the producer was about 36; it is now about 30. Butterfat has ranged from 28 to 34; cows from $35 to $65. Hardly any fruit in this vicinity last year and not much market gardening done. S. W. C.
Wright, N. Y.

The Henyard.

Incubation Under Difficulties.

I WAS much interested in article, "Carbon Dioxide in Incubation," on page 713. I will give an incident that goes to prove the statement made therein, that "it is known that the chick embryo is able to withstand a wide variation of moisture and hatch," and also that some variation in other respects will not always cause failure.

Being unable to secure sitting hens in sufficient number this Spring I put in use a 70-egg capacity, single-wall, hot-water incubator, new a year ago; had been run only once, and had a record of two chicks. The only place available for its operation was in an upper room, fairly warm in daytime, but cool at night; this location, combined with a single-wall machine and a regulator that seemed to work by contraries, produced a somewhat variable temperature in egg chamber. Not caring to trust eggs from good stock in such a contraption, and really doubting if any chicks could be secured under such conditions, I placed 67 eggs in machine from a pen of two-year-old White Rock hens, (15) mated with a R. I. Red cockerel. These eggs were three weeks old, had only been turned once during that time, and had been kept on the lower shelf of a closet where the temperature at night must have gone as low as 40 degrees.

The temperature of incubator in first twenty-four hours varied from 97 to 106 degrees, after it was held fairly steady at 103-104 degrees, with variations of 98 to 105 degrees. Eggs were tested on seventh day, and three removed. At this time I discovered that tank of machine was leaking, at a far corner which could not be reached. No hens were available, so I put some cornmeal in the tank, in hope that a few particles might find the leak; bade farewell to my last hope of chicks, and kept up steam. To do so it was necessary to pour a cup full of water in the tank every two or three days. Eggs were turned twice a day, and cooled once; from five to 15 minutes, according to temperature of the room. The longer periods were given during the last week, but at any time during the three weeks when it was noted that the temperature was climbing toward 105 degrees the tray was pulled out for a breath of air. The inside of incubator was damp all along one side, and at times the door swelled so it was hard to open. The eggs began to hatch on time, and 56 chicks were secured from 64 fertile eggs; a better per cent. than was secured from hens which hatched at same time, and so far the chicks from machine seem stronger, are more lively, and grow faster. I am not advising others to try hatching under these conditions, but my experience shows what can be done—sometimes. L. H. PHINNEY.

Massachusetts.

Killing and Dressing Ducks.

IF ducks are killed for home consumption they can be slaughtered in any way and scalded. Ducks and geese should be left longer in the hot water than chickens, or wrapped in an old blanket or sack to start the down. If they are to be killed for market the heads should be left on and not disfigured in any way. The Boston market demands dry-picked ducks, and all intending to ship ducks to that city should acquire the art of picking them dry. They should be killed with a pointed knife, sharp on both edges. This may be thrust into the roof of the mouth so as to pierce the brain, and then turned so as to cut the arteries and cause profuse bleeding. Another way is to insert the point of the blade just back of the head with a sawing motion that cuts the two main arteries, and then thrust into the right eyesocket back of the eyeball till the brain is touched. A rap on the head with a short club before sticking will stun the bird and prevent much fluttering. The secret of successful dry picking is to get the feathers off while the bird is dying, for as soon as the duck is dead the muscles contract and hold the feathers tight. After killing, the duck may be hung by feet at a convenient height, or laid on the lap with the head between the right knee and the feather box. Whichever way is adopted the most important thing is to strip off the feathers at the utmost speed, with a pail of water near by, into which the right hand should occasionally be dipped in order to make the feathers stick to it. The fingers can get a better grip on the feathers than when dry. The left hand should hold the carcass, and when necessary pull the skin taut to prevent tearing as the right hand pulls off the feathers by the handful. Much of the down can be rubbed off by the wet hand. The rest must be pulled out separately or shaved off with a knife of good steel honed to a razor edge. The long flight feathers of the wings are usually left on, as are those for an inch or more from the head. The latter is not removed. Any tears of skin should be sewed up.

As soon as the feathers are all removed the carcass should be put at once into cold water, and after it is washed thoroughly to remove all blood from the body and dirt from the feet, it should be put into colder water, ice water if possible. If the ducks are to be shipped to Boston or other large markets they should be carefully prepared by folding the head under one of the wings and then tying a string or tape around the body to hold the head and wings in position. In warm weather the carcasses should be kept on ice till shipped, and should be packed in ice, either in boxes that are to be returned, or if too far away to make the return of boxes profitable, in barrels that need not be returned. W. H. HUSE.

New Hampshire.

Fowls With Colds.

Some weeks ago I purchased some Black Minorca chickens. They soon developed what seemed to be colds. They have a rattling sound in breathing and keep their mouths open most of the time. I do not think it is roup, as I have not noticed any discharge from nostrils or eyes. I have lost two, and the rest all seem to have the same symptoms. Do you think it is bronchitis? A. L. M.

New York.

These fowls are probably suffering from colds due to exposure to cold and dampness in their roosting quarters. They may be treated by adding permanganate of potash crystals to their drinking water, a teaspoonful to the quart, and by injecting with a medicine dropper or small oil can a drop or two of kerosene into each nostril and the cleft of the mouth. The birds should be kept in dry comfortable quarters until recovery. M. B. D.

EGG-EATING HENS.—Somebody asks for a remedy for hens eating their eggs. The most efficacious thing I ever heard of is to feed them chopped, fat salt pork. In fact, as far as my experience and observation both go, it is as sure and speedy a cure as it is easy to give. Somehow it seems to fill an aching void in the hen, and she no longer hankers after her own "hen-fruit." M. W. B.

ANOTHER REMEDY.—I see, on page 615, that H. H. W. is having the trouble that all poultry keepers meet with, hens eating eggs. I have heard this complaint many times and have had experience many times notwithstanding I have used trapnests and fed balanced rations. Here is a remedy that everyone uses in this section and have never heard of a case where it failed to cure hens eating eggs; Vinegar in drinking water will do the trick.

Central Square, N. Y. E. D. B.

ELECTRIC INCUBATION.—There is little to add to my note of last year on electric incubators, but as there are constantly new readers it may as well be repeated that while the electric current is rather expensive, it is the ideal method of heating. Once adjusted, there is nothing further to be done but turn the eggs and wait the 20 days, (since the constant heat gains a day,) while there is no fire risk and no odor. On the other hand the cost, which depends directly on the coldness of the room in which the machine is, may run as high as 10 cents per day. But peace of mind, safety and certainty are sometimes cheap at any price. Each has his own ideas about added moisture, but where there is no flame in the room, the air may be far drier than normal, and a wet bulb thermometer will show that more moisture is needed than when a flame is used. F. D. C.

A PRECOCIOUS COCKEREL.—Here is a pretty good cockerel story. I tried an experiment this Spring in crossing a White Leghorn cockerel with a B. P. Rock hen. The result was snow white chicks, but quite a bit larger than the W. Leghorns. I have one young cockerel that was hatched April 12 and developed so fast that on May 22 he was strutting around crowing, just 40 days old. Can any one beat that? I. J. D.

Iowa.

TRIMMING INCUBATOR LAMPS.—On page 613, H. B. Parker tells how to trim incubator and brooder lamps. His brush may work all right but the ordinary match which lights his lamps will beat the brush a mile. If he will, before turning up the wick rub his match back and forth over the burner, the charred part and no more will be removed, and the lamp will be trimmed exactly even with top of burner, anyone trying this way will never bother with a brush.

Butler, Pa. J. C. H.

HAWKS AND POULTRY.—I note an inquiry on how to prevent ravages of hawks. I have had my coops near buildings, but these small hawks would come down within six feet of house, and make off with chickens, and were so quick that I found it impossible to shoot them. The most satisfactory method I have found was to strew rows of brush, preferably spruce and fir, small trees, 10 or 15 feet apart, in the chickens' run. This gives the chickens shelter and breaks the bird's swoop. W.

Maine.

ANOTHER LAYING WONDER.—Although a short-term egg record is of little value in selecting breeders, I desire to report what I think is a most remarkable performance. My son has a White Orpington pullet which has laid 48 eggs in 44 consecutive days. (March 30 to May 12 inclusive). She then rested three days and has laid 11 more in the last 11 days. On two mornings an egg was found on the roost platform which had been laid some time before daylight, and yet that same day she went on the nest and laid another. Two other days she laid two soft-shelled eggs, but both were full size. We are absolutely sure no other hens obtained access to the house. I never before heard of a hen laying 44 days without skipping a day—to say nothing of the four extra eggs. It is only fair to say she did not begin to lay until the middle of March and had no doubt been storing up energy all Winter. F. N. B.

New York.

REPORTER: "I hear a wild man was seen roaming about in a swamp here." Native: "Yes; he was a city man, trying to locate a choice building lot he'd just bought."—Chicago Daily News.

TOMMY started his third helping of pudding with delight. "Once upon a time, Tommy," admonished his mother, "there was a little boy who ate too much pudding, and he burst!" Tommy considered. "There isn't such a thing as too much pudding," he decided. There must be," contended his mother, "otherwise why did the little boy burst?" Tommy passed his plate for the fourth time saying—"I suppose because there was not enough hoy."—Yonkers Statesman.

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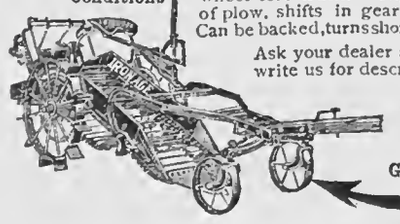

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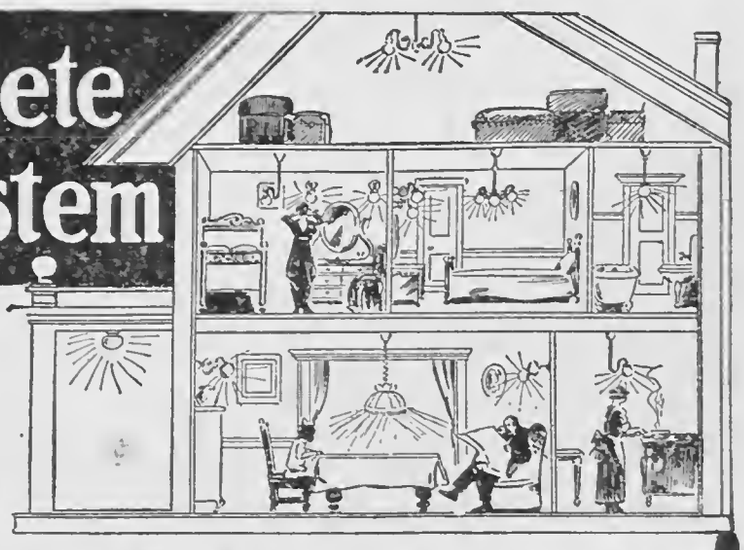

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Hope Farm Notes

HIS FEATHERS RUFFLED.

MR. John H. Robinson, editor of Farm Poultry, devotes a page of his paper to prove that "*It is up to the Hope Farm Man.*" This is all about my opinion regarding "standard" White Wyandotte poultry. Mr. Robinson devotes some 1,000 words to showing that the Hope Farm man is anything but an authority on poultry. Everyone knew that before. Then our friend gets down to these propositions:

For a year's laying on my place I will match a pen of 10 White Wyandottes of an exhibition stock, with such length of leg and feather as are shown in the Standard ideal, against any 10 "bred to lay" non-Standard Wyandottes that the Hope Farm may select for a year's laying at Hope Farm.

For a year's laying on my place I will match a pen of four extremely low set, loose feathered exhibition White Wyandottes against an equal number of non-Standard Wyandottes, kept as one flock on Hope Farm.

For a year's laying on my place I will match a pen of 10 Standard White Wyandottes—no two from the same breeder—against 20 scrubs of the kind the Hope Farm man sent to the laying competition at Storrs Experiment Station to be selected as these were and kept as one flock for a year on Hope Farm.

Now I never had the pleasure of meeting Mr. Robinson, who is regarded as a high authority on poultry. A good friend who seems to be posted writes me this:

"Brother John is mighty shrewd, and he can certainly twist the other fellow's statements and meaning in an astonishing way." Now right at the beginning I will say that I am neither a word-twister nor a poultry expert. I have a few opinions which I am prepared to back. We printed on page 725 the picture of what is supposed to be an ideal Wyandotte hen. I called it a plump dumpling of a bird, and I do not believe hens shaped like that one can make a good laying record. Now if Brother Robinson will come forward with birds of that shape, I will meet him with utility birds. The plan of conducting such a contest with one flock on my farm and the other on his farm is nonsense. Such an arrangement would queer it from the start. Most people would regard such a "contest" as a bluffing match between hired men, no matter how carefully it was conducted. It would be a match not between types of hens as much as between types of hen-feeders. As a hen-feeder and a word-twister, the Hope Farm man would be beaten long before he went into the ring. The place for such a trial is at one of the egg-laying contests. I have the utmost confidence in the managers of these contests. Brother Robinson can arrange to have his birds cared for and fed as he specifies. I am willing to leave it to the contest managers. So all Brother Robinson now has to do is to say which public contest he prefers and come right up to the rack with his birds. Under no circumstances whatever will I go into any contest with the pens separated and not under official supervision. I agree to collect the birds, pay the entrance fee and then let them alone without a murmur or a kick, no matter what they do. My plan will be to call for volunteers who have good utility Wyandottes which they are willing to match against the "standard" type. Then we will select the birds with the best breeding and shape for egg production. I hope Brother Robinson will do much the same and select birds which score as close to "perfection" as possible. Then we shall have the long-delayed square-toed contest between plumage and performance or standard vs. utility. *Come Brother Robinson, walk up to the rack with your birds.*

LONG AND SHORT BACKS.—The Wyandotte breeders understand well enough that I have nothing against their breed. I have kept Wyandottes in a small way, and like them. I am merely trying to help settle this old question about "standard" and utility. Both sides have been going around for some years with chips on their shoulders, but when it comes to knocking them off it seems to me like "after you Alphonse." So the Hope Farm man comes forward and knocks off both chips—first by entering his "scrubs" at the poultry contest. This operated just as I felt it would. First both sides laughed till they cried. Then the scrubs began to lay a few rings around the weekly records of the pure bloods. Laughter, they say, is close to tears. It is also close to a scrap. Thump the Hope Farm man all you please, gentlemen. You can't hurt his feelings by calling him ignorant, stupid—a drone or a fraud. He might possibly be all four. If, however, he can line up the "standard" and utility men for a square and straight contest between short back and long back he will be well satisfied. When this question of Tom Barron's Wyandottes came up I wrote all the Americans who have entered Wyandottes in the egg-laying contests, asking how high their birds would score. Here is a sample of the replies:

I took a trip over to Thorndale to look over my Wyandottes there, and I do not think my birds would score over 85. I have had 14 years' breeding experience with Wyandottes, and would say that the Standard makers have almost killed the breed by insisting on too short a body for utility purposes. I am a machinist by trade, and came out in the country to die of consumption 15 years ago. I was broken in health and pocketbook, and started to raise Wyandotte chickens. It was not long before they began to shorten the backs of the Wyandottes and I fell short on Winter eggs. I tried to stay with them for a couple of years, but I found if I wanted eggs in Winter in paying quantity I had to breed longer backs. I have done so and my birds are giving me a nice living from utility stock entirely. GEORGE W. MIDDLETON.
Pennsylvania.

This backs up what Tom Barron said about the working people of England demanding a bird that will lay eggs. There is a whole lot at stake in such a contest as Mr. Robinson proposes, and I think the utility men will welcome it. I want to hear from all who are interested in regard to selecting utility birds with known "egg pedigrees." Of course I assume that Mr. Robinson will agree to enter one of the egg-laying contests with this important matter at stake.

How deep do you plow to cover up such tall rye in order to get a good seed bed, and at the same time not have it tangling in the cultivator and other machinery. J. W. B.

On the average our plows run six to seven inches deep. The heavy chain in front turns the rye under and packs it down. Both Cutaway and Acme run with a shallow cut and we rarely cultivate over three inches deep. I think this rather shallow plowing for corn where the soil is well packed better on the whole than deeper working. Surely shallow cultivation in an ordinary season is better than deep working. Our plan is to plow under the rye and clover and operate so as to decay and use up this mass of green stuff as rapidly as possible. Where a green crop is plowed under only once in four or five years the plans would be different, but where we put under big crops every year our scheme is to make them available at once. This is done by packing them where the roots of the corn would naturally feed and putting on lime.

You say that you apply fertilizer to growing corn by hand. Let me know how you apply it so as to prevent it from burning the corn. J. W. B.

I do not suppose our method would stand any scientific test. We simply take a handful of fertilizer and with a twist or flirt of the wrist scatter it alongside of the hill of corn. The plan is not to drop it in a bunch but to cover a space six to eight inches long beside the growing corn. The cultivator and hoe will work it into the ground properly. One year the men dropped the fertilizer right on the growing corn in the hill. I thought it was ruined, but the weather continued dry and no damage was done. This fertilizer was mainly bone and potash, which was not so "hot" as acid phosphate would have been. In a wet season acid phosphate put right on the hill might have injured the corn. A good corn fertilizer can be made by mixing one part of tankage or dried blood, three parts fine bone or acid phosphate and one part muriate of potash.
H. W. C.

"DON'T you ever change your mind?" "Of course," replied Miss Cayenne. "It is very desirable to change your mind occasionally in order to call attention to the fact that you had any in the first place,"—Washington Star.

"Doctoring" a Piece of Hard Soil.

WE have a piece of land lying low, so low in fact that the water stands on it at times, but on account of neighbors we cannot get a fall to drain it. I have plowed this piece today, and it is baked hard and turns up in chunks. The soil is a clay; it doesn't seem to have any humus in it at all. We plowed the grass up last Fall and left it open all Winter. I am thinking of putting one ton of limestone to the acre, harrowing it in well and sowing Crimson clover to plow under next Spring. Do you think this would help it any, and how much clover should I put to the acre? Would I better sow it now or wait till later?
New Haven, Conn. R. B. O.

Unless this land can be drained in some way it is not likely to prove satisfactory. It is possible that by digging deep wells in it you could strike down below the subsoil a stratum of sand or gravel, which will permit the surface water to soak down and away. There are some localities where this plan can be worked out successfully. Our advice would be to use burnt or slaked lime instead of the ground limestone. On soil of this character you need a strong and quick chemical action, and the slaked lime will give this far better than the ground limestone can. You will make a mistake in depending upon Crimson clover alone as a cover crop. This clover is not well adapted for your locality, or to this kind of soil. In fact Crimson clover is not a sure crop north of Philadelphia, although in some seasons it will go through and make a success. Our plan would be to use at least one ton of slaked lime at once, then sow two bushels of buckwheat and two pounds of Cowhorn turnips to the acre. This ought to make heavy growth. About the middle of August we would plow this crop under the ground, fit the soil and then sow on each acre one bushel of rye and 20 pounds of the seed of Hairy vetch. This would make a good growth for the Fall, and come in the Spring, and when plowed under will supply large quantities of organic matter—very much more than you could hope to get from the Crimson clover.

The Marauder Crow.

In an article last Winter on that black rascal, the crow, he was defended for his good qualities. I do not happen to know any, but know many bad qualities. Unless the crow is exterminated, or greatly reduced in numbers, he will exterminate our song birds. Eggs and young birds are the principle part of his diet. The crows took the young robins from two nests last Summer within 40 feet of the house. W. M. PATTYSON.
New York.

"ALBERT," said the teacher to a small pupil, "do you know what wind is?" "Yes, ma'am," was the reply, "wind is air that's in a hurry."—Credit Lost.

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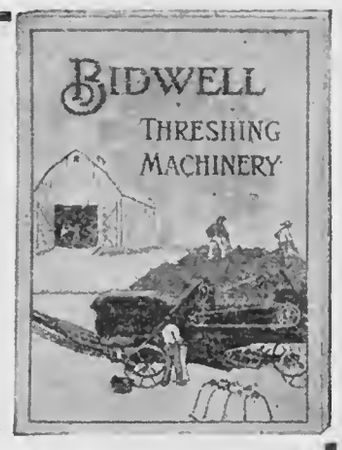

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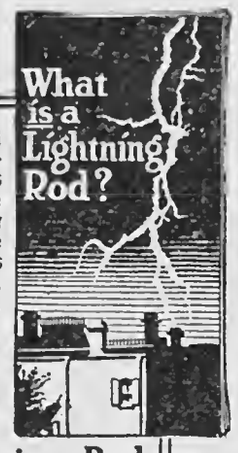

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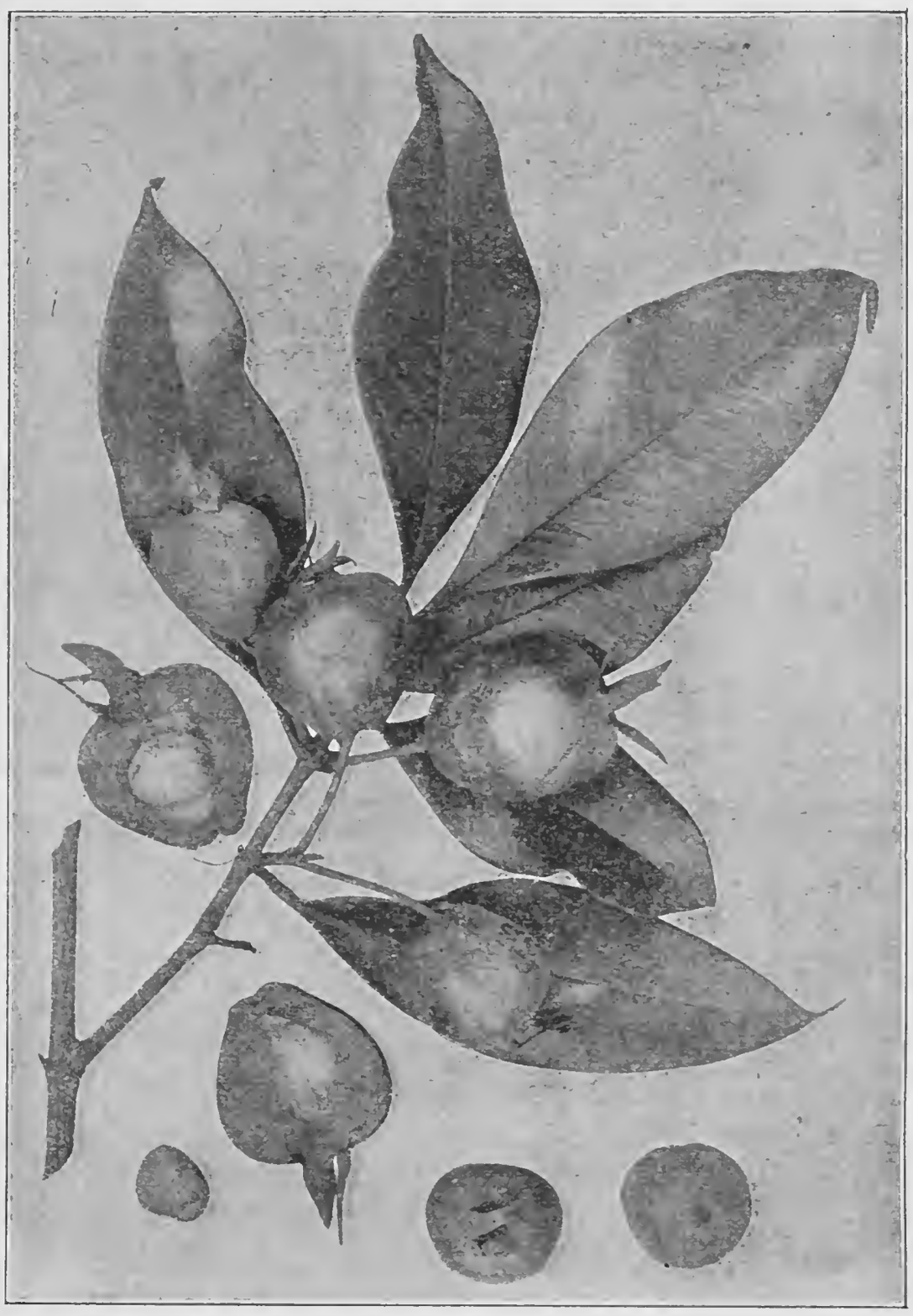
Ruralisms

A VALUED BRAZILIAN FRUIT.

AMONG interesting fruits described in Bulletin 93, issued by the Office of Foreign Seed and Plant Introduction, is the pitomba. Mr. Dorsett, Mr. Shamel and Mr. Popenoe have collected a quantity of valuable things during their recent Brazilian expedition, giving especial attention to myrtaceous fruits, of which there are many in Brazil. The pitomba, botanically Eugenia luschnathiana, is thus described:

The tree is from 20 to 30 feet in height, compact, densely foliated and very handsome in appearance. The individual leaves are elliptical lanceolate, acuminate, about 3½ inches in length, thick and leathery, glossy, deep green above, light green beneath. Veins scarcely discernible on upper surface. The fruits, which are produced on the small branches, are broadly obovate in form, about one inch in length and seven-eighths inches in breadth, on an average. The stem is one inch or more in length, slender. Apex flattened and broad, crowned by the persistent calyx, with four or five green lanceolate sepals one-half inch or more in length. Color of fruit deep orange yellow, when fully ripe almost bright orange. Skin thin, tender and easily broken, enclosing a soft melting pulp, bright orange in color, very juicy, and of an acid, very aromatic flavor. The aroma of the fruits themselves is very penetrating. The seeds, normally one in number but sometimes two, three, or rarely four, are attached to one side of the seed cavity, and do not adhere to the flesh. When single, the seed is nearly round, slightly less than one-half inch in diameter, the seed coat whitish. When more than one, the seeds are hemispherical or angular. The season here is December. The trees which we have seen do not produce as heavy a crop as the grumichama or some other myrtaceous fruit, but nevertheless bear fairly abundantly. The fruit is especially esteemed for making jellies, and is also used for jams and sherbets, while the negroes relish them when eaten out of hand. The flavor, however, is somewhat acid, when they are eaten in this way; and the fruit will probably be of the greatest value for culinary use rather than dessert. It should be tried in the warmest parts of Florida and California. It seems to be vigorous and easily grown, great numbers of volunteer seedlings springing up around the base of the tree after the fruit has dropped.

The picture, Fig. 334, shows foliage and fruits of the pitomba, from the garden of Col. Elvidio Esteres Assis, at Cabulla, Bahia, Brazil. The brilliant yellow color, and agreeable, penetrating odor of this fruit make it very interesting. Its flavor, though somewhat acid, is pleasant, and is used principally in the manufacture of jams and jellies, for which purpose it is highly esteemed by the Brazilians. Another Eugenia, E. uniflora (Michelii?) the pitanga, is already grown to a limited extent in Florida and California. In Brazil it is a favorite hedge plant. This is called the Cayenne or Surinam cherry, while the Jambolan plum and the rose apple or jambosade of the East Indies, the grumichama of Brazil and the Brush cherry of Australia are other Eugenias valued for their fruit.



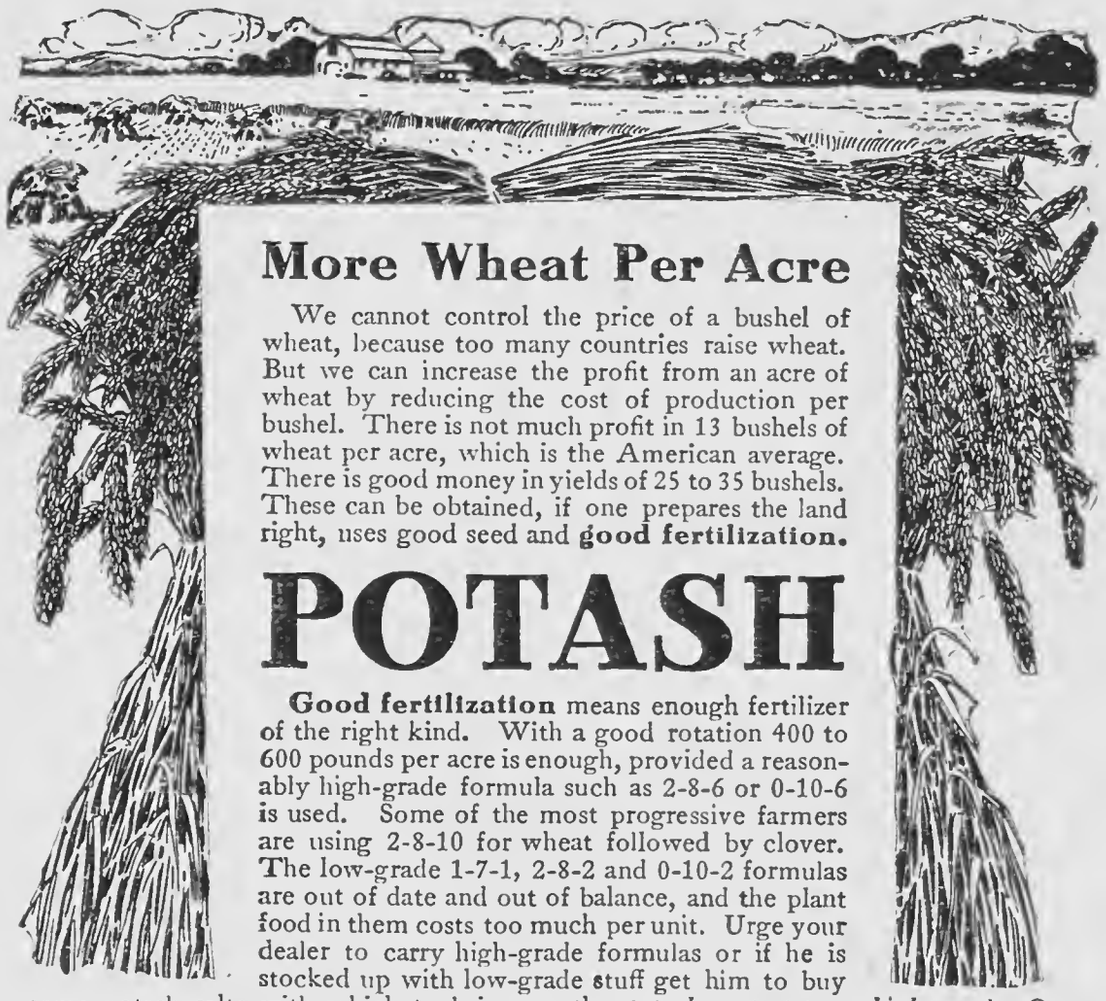
FOLIAGE AND FRUITS OF THE PITOMBA. FIG. 334.

Burnet, an Old-fashioned Plant.

CAN you tell me where I can find the plant called "burnet," which is an old-fashioned plant used in making drinks in hot weather? J. J. H.
Jericho, L. I.

"Burnet" is Poterium Sanguisorba, a perennial herb producing branching flower-stems three feet high, with reddish purple flowers. Both the common burnet and a smaller variety called Lesser burnet are natives of Great Britain, where they are grown in old-fashioned gardens for the leaves, which are used in salads and in cooling drinks. We do not know where the plant may be procured in this country, as it does not appear in any catalogue accessible to us. The Canadian burnet, P. Canadense, or Sanguisorba Canadensis, is a native plant, found in wet woods in the North; it has white flowers. The Poteriums belong to the Rosaceæ or Rose family.

POISONING CORN.—I have noticed several articles in regard to treating seed corn and crows in your paper. I used to have lots of trouble in this way, but have hit on a plan that works very successfully for me. After planting the corn and rolling the ground I take a pint or a quart of corn, according to the size of the field, that has been previously soaked in 10 cents worth of strychnine and allowed to dry. Then I plant with a planter very shallow 10 to 12 hills in a place in the prominent parts of the field, being careful that the crows can see the marks of the planter. I usually do this in the evening, and in the morning there will be a few dead and dying crows, which keeps the rest from ever visiting the field again. D. B. WEAVER.



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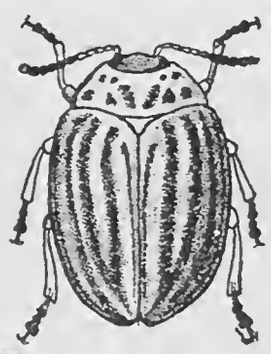

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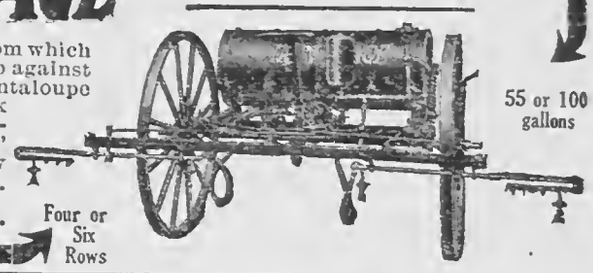

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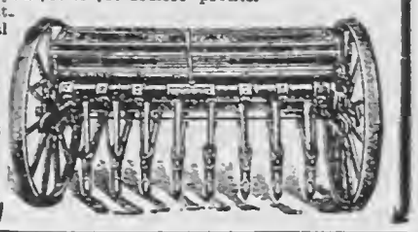

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*

SOME of the Maine potato growers are troubled over rumors of what the Agricultural Department will do to prevent shipment of diseased potatoes. The powdery scab has been found in some sections of Maine. The Department has prepared certain regulations for shipping potatoes:

They will provide for the shipment after inspection of all sound healthy potatoes. No potatoes exposed in any way to powdery scab will be shipped out as seed stock, but clean potatoes from which all scabby specimens have been removed may be forwarded as table stock. The inspection of table stock will probably be limited to the area known to be infected with powdery scab, which includes Aroostook and a few towns south of that county.

It is not likely that any large proportion of Maine potatoes will be confined to the State except those actually carrying the disease. Seed stock will be carefully examined, and the new regulation will probably compel some shipments for table purposes which would otherwise go as seed.

*

HERE is a thing for the water-glass egg people to think about. There is no question about the economy in using this material to preserve *fresh* eggs. We have several water-glass hens in the cellar safely carrying infertile eggs to Thanksgiving or even Christmas. Now we have always advised this plan as a means of holding the family egg supply. We would stop right there. We find that some of our people are putting eggs into water-glass expecting to take them out again in November and sell as new-laid eggs.

Forget it at once!

Such a plan will ruin any hope you may have for building up a good trade. The water-glass egg is not *fresh*. It is a good family substitute, but there it stops. Any attempt to sell it without plainly stating what it is will hurt you far more than the extra price can help you. Water-glass is for home use. Cold storage is the place for keeping salable eggs.

*

ONE of the most valuable bulletins issued by any of the experiment stations in many years is the recent pamphlet by Dr. G. F. Warren, from Cornell. This does not tell how to grow any crop, but it will make farmers *think* about the agricultural conditions in New York State. Dr. Warren gives us figures and facts showing the size and value of farm crops for many years, and the prices which farmers have received for them. Here we have a clear statement of the 35-cent dollar. These gentlemen who say there is no such thing ought to study this bulletin. And the "two blades of grass" theory! Dr. Warren shows clearly and scientifically that farmers will gladly produce two blades of grass as soon as the one blade now grown returns to the producer as fair a profit as now goes to the handlers. To try to make the farmer produce two blades while he gets 35 per cent. of the value of one blade is as fruitless as telling the ocean to stop flooding the harbor. We shall give a popular study of this bulletin in the hope of helping farmers to *think* out the lessons it teaches. It is very encouraging to have our experiment stations get down to the fundamentals of true farm political economy.

WE understand that S. A. Martin, the Farm Bureau Agent for Onondaga County, New York, has started a campaign for testing what is called "a permanent system of fertilization." This means the use of ground phosphate rock in a rotation containing clover and Alfalfa, and also in combination with ground limestone. The Geneva Experiment Station will coöperate in this experiment. It is a good idea. We have had a good many statements about the use of raw phosphate. Some were too loose to stand still, others were tied too fast to prejudices to be of any value. Onondaga County is a first-rate place to test the matter out.

*

MANY a farmer will lose money this season through not looking ahead three months ago. The bugs will be at the potatoes before you know it, and no poison on hand to kill them promptly. Just when plowing is most needed the plow point breaks and you find that you did not order new ones. The cultivator teeth are worn out, and will not fit on securely, but you did not lay in a new supply. You intended to order a new blade for the mower, but overlooked it, and the best part of a good hay day will be lost. We are all more or less guilty of these failures to look ahead, and each one spells loss. Our Northern growing seasons are short at best, and apparently growing shorter. Hindsight is all right to think about, but foresight goes walking out with profit.

*

THE Supreme Court has decided that the Federal or National Government has dominant power over railroads which do an interstate business. Various States have claimed the power to regulate that part of the business of these interstate roads, which was carried on inside of their territory. What the Court has now decided is that an order of the Interstate Commerce Commission is superior to State legislation. The case before the Court referred to alleged rate discrimination against Shreveport, La. This town is 40 miles from the Texas boundary line, and is a business rival of Dallas and Houston, Tex. The merchants of Shreveport complained that they had been shut out of all Texas business because the railroad commissioners of that State had compelled the railroads running through Texas to reduce rates lower than what the Interstate Commerce Commissioner allowed the railroads running into Shreveport. By means of this difference in freight rates of course Dallas and Houston were given an advantage over Shreveport. For example, 60 cents would carry a quantity of merchandise 160 miles east of Dallas, while the same amount carried similar merchandise only 55 miles west of Shreveport. Thus the trade of Eastern Texas was being monopolized through a State law operating on interstate railroads. The question was, whether a single State should have such arbitrary power to prevent injury or ruin to a city or section through rate discrimination. The Supreme Court decides that the Commission is to have this final power. The decision is generally hailed as a "victory" for the railroads. They will now be, it is said, "under one instead of many masters." The final outcome may not be such a victory after all. The "one master" may finally be the people representing government ownership.

*

NOW comes the report of a new breed of poultry imported into England. This is the Dervish fowl—the product, it is said, of 1,000 years of breeding.

The forebears of these fowls were left at Khartum by the Dervishes at the time of the rout, and they are of pure breed. The more salient of the two breeds is rose comb, the cock having bright golden yellow points and black legs. The pullets look just like water birds, black with a sort of gold powdering, black beaks, legs and eyes, and a little black tuft on their heads. They are quite small and rather long in the leg.

There is usually a rush for "something new" in all lines, but the chances are that you now have, right on your farm, the foundation for something far more profitable than this Dervish. One reason the Hope Farm man started his scrubs at the egg contest was to demonstrate, if he can, the value of "grading up" with purebred fowls. We are all talking about the great value of purebred dairy sires, as if the improvement in our herds must come through their blood. Why not the same with hens? We believe these egg-laying contests are finally to give us laying strains of hens with the habit so well fixed that we can use their blood for improvement as confidently as we now use the blood of some celebrated family of dairy cattle. Starting with what you now have, and breeding judiciously in this way, you can secure the best hen for your farm.

WE intend to follow this "bumper crop" of wheat right through. The Government reports indicate a considerable increase in the yield. Now let us all watch the prices which are actually paid to farmers for their wheat. We do not mean the trade prices printed in the daily papers, but the actual figures at which a farmer can sell his crop in the local market. Many farmers have kept accurate figures showing prices paid for the wheat in former years and also prices paid for bran and other mill feeds. With a "bumper crop" the prices for feed ought to be lower, while if the farmer is to get any profit out of the increased yield, he should receive as much per bushel this year as last year or the year before. Does it not stand to reason that if the wheat crop is increased by 20 per cent. the price of bran and mill feed should drop 20 per cent. in price? Does it not also stand to reason that if the handlers all receive as much for carrying one bushel of this mighty crop, while the price of bread is not reduced, that the price to the farmer should likewise remain the same? The daily papers are now filling up with statements like the following:

E. G. Broenniman, vice president of the New York Produce Exchange and a prominent flour man, got back to New York from the Southwest yesterday fully convinced from first h nd observation that a Winter wheat crop of undreamed of proportions has been successfully raised.

But there will be no dreams about the meaning of all this. We shall see the price to the producer hammered down cent by cent, while the bread eater will continue to pay his old price. Now we do not want the trade prices and figures printed in the daily papers, but we want the actual figures from farmers who sell wheat. You ought to receive as much per bushel for your "bumper crop" as for the smaller ones of former years. Bran and mill feed ought to be cheaper. Now will you send us accurate figures when you sell or buy, showing just how this year's prices compare with former ones?

*

THE honest nurseryman has a few tricks up his sleeve, like all the rest. Most of them are old. Here is a new one, reported by the Malone Telegram. A farmer in St. Lawrence County, N. Y., ordered a number of McIntosh Red apple trees from the McIntosh Nursery Company in Ontario. He did this because he had been told that the Canadian-grown trees are superior. In order to import trees from Canada it is necessary to obtain a permit from the National Agricultural Department, and also a certificate from the Canadian authorities that the trees have been fumigated. This farmer obtained permission to import these trees. To his surprise he received a message from a local butcher that certain trees had arrived for him. This farmer notified the revenue collector, who went to the butcher's house, where he found the trees, bearing what purported to be tags of inspection from the Canadian officials. The butcher explained the matter by saying that the trees were shipped to him from Iowa. He was instructed by this Canadian nursery to divide these trees into two lots and deliver them to two buyers. The Canadian nursery had sent him a lot of tags, which he was to affix before delivering the trees, and this he had done, so as to give the impression that these Iowa-grown trees had really been grown in Canada, and inspected by the Canadians. This butcher had letters from the Canadian nurserymen which proved his story. He did not even take the trouble to read the tags which were sent him, but had pasted them on, as though this were an everyday practice. The collector let this butcher go, upon this explanation. He telephoned to the Canadian nurserymen, and they promptly saw that they were "caught with the goods on." Not daring to come over the line and face the evidence of their deceit, these fellows told the butcher to sell the trees for what he could get, and he did so, the result being that the original purchaser got some of these trees at a lower figure than he was expected to pay the Canadian nurserymen. This is a new trick of the trade, although it may have been played before for all we know. Very likely these Iowa trees were just as good as those which were really grown in Canada, but what a farce this so-called inspection has proved to be by such miserable cases as this.

BREVITIES.

SOME people embrace an opportunity so hard that they hug it to death.

A REMARKABLE American cargo recently left Seattle for China. There were 60 logs—40 feet long and five to nine feet in diameter, and weighing 25 tons or more!

LAST year the brick yards along the Hudson Valley turned out over one billion bricks valued at $5,636,661. These bricks were used in New York City. Rather expensive clay soil!

DRY POISONS FOR COTTON WORMS.

[As most of our readers know, arsenate of lead is now produced and sold in a dry or powdered form, and has been offered as a substitute for Paris green. Certain manufacturers of Paris green have stated that the dry arsenate is a failure as an insecticide, very injurious to workmen and dangerous to those who use it in the field. We have no interest in any such controversy except a desire to give our readers the truth, that they may safely use their own judgment. We sent to chemists, entomologists and practical farmers asking for the facts. They all, without exception, agree that the dry arsenate is a safe and effective form of poison. The following statement from W. E. Hinds, State Entomologist of Alabama, is typical.]

THE MANUFACTURER'S SIDE.—I have corresponded with several manufacturers of arsenate of lead and have talked wth a number personally, and all agree in stating that they consider arsenate of lead much safer to manufacture than is Paris green. It is a general practice among insecticide manufacturers to make Paris green only during the Winter season, while they can make arsenate of lead, either powder or paste, at any time of year. Several manufacturers have stated to me that in all their experience they have known of no single case of serious effects to workmen engaged in the manufacture of arsenate of lead, either paste or powder.

EXPERIENCE OF USERS.—From the standpoint of the user of the material, I would say that in the campaign against the cotton worm in the Fall of 1911, more than a million pounds of arsenical poisons were sold for use in Alabama and Mississippi alone. At least two-thirds of this material was powdered arsenate of lead. Before the end of that season very numerous records of the following nature had accumulated: Planters would start their poisoning work with Paris green, which is generally applied as a dust by what is called in the South the pole and bag method. In this method of distribution the common practice is to cut a piece of 1x4-inch board so that it will be 12 or 15 inches longer than the distance at which the rows of cotton are planted. Cut four square blocks of the same material. The blocks are nailed at right angles on the under side of the board, one at each end, and the others about 15 inches in from each end. A large hole is bored in each end half way between the vertical boards, and through these openings the poison is introduced after the apparatus is completed. The bag is formed of common sheeting or doubled cheese-cloth usually, and is tacked smoothly and tightly along one side of the board, stretched around the blocks and fastened to the opposite side of the board, thus making a rectangular bag with solid wooden top and ends. The middle of the board is cut down to a size that can be conveniently held in the hands. This outfit is usually carried by a workman riding a mule. It is jarred by the movement of the animal in trotting or by jarring it on the pommel of the saddle. Occasionally the poles are made long enough to carry four bags and treat four rows instead of two. Workmen on large plantations work in groups of probably several men. Many of them take no precautions whatever against inhaling the dust, but we advise covering the nose and month with a handkerchief to reduce or prevent inhalation of the material. Powdered arsenate of lead is applied undiluted with this outfit. The supply of poison is often carried in a wagon at the ends of the rows, and a workman there refills the empty bags so that the riders may exchange them and continue their work without delay.

DANGER FROM PARIS GREEN.—The writer has personal knowledge of many instances in which the use of Paris green distributed in this manner has produced serious sores upon both workmen and animals engaged in its distribution. Sores are formed especially where perspiration accumulates and chafing occurs, and is undoubtedly due to the effect of the accumulation of water soluble arsenic in the Paris green. In many cases workmen became alarmed and refused to continue to use Paris green, thus forcing the planters to change from Paris green to powdered arsenate of lead as a source of poison.

ARSENATE OF LEAD SAFER.—The writer has personally seen the application of powdered arsenate of lead carried on on a large scale, and has in his possession photographs of a gang of workmen riding at a trot across a cotton field, and the cloud of white dust around them could be seen for a very long distance, and shows clearly in the photographs. Even where engaged continuously in this work for many days in succession, and with the vast quantity of material used in this State in the season of 1911, the writer has been unable, even with special inquiry, to learn of a single case in which a sore was formed on either workman or animal, or of any other injurious effects from the use of powdered arsenate of lead.

INSECTICIDAL VALUES.—So far as the insecticidal value of the two materials is concerned, it has been repeatedly demonstrated that the powdered arsenate of lead protects the cotton plant for about three weeks on the average, while with Paris green the protection may not last, and usually does not last, more than a few days, particularly during showery weather. I have known instances where five applications of Paris green were made for the control of one brood of cotton worms. The arsenate of lead costs somewhat more per acre for the poison than does Paris green, but beside adhering longer and much better to the foliage, it has the additional advantage of not checking the fruiting of the plant while Paris green may do so, even though not showing apparent burning, and if carelessly distributed it is very certain to burn and kill many plants through its water soluble arsenic.

Alabama Entomologist. W. E. HINDS.

A Day's Work; Harvesting and Haying.

THE Department of Agriculture has collected figures to show how much one man or one horse should accomplish at handling hay or grain crops. The following statistics are supposed to give what is called a normal day's work. At harvesting grain with a tender or header the net hours in the field for one day averaged 10⅓ hours:

IMPLEMENT	Width of implement Feet	Number of horses generally used	Harvested per day Acres
Grain binder	5	3	9.26
	6	3	10.96
	7	4	15.24
	8	4	18.19
Grain header	10	6	24.18
	12	6	28.56
	14	6	28.46

At shocking grain the following figures were worked out—a "day" representing 9.91 hours.

YIELD PER ACRE	Shocked per day Acres
1 to 20 bushels	10.09
21 to 40 bushels	8.73
41 to 60 bushels	8.46
61 bushels and over	7.36

In regard to mowing it was found that the most efficient width of the sickle bar in the mower was seven feet. The following figures are based on a day in the field:

OPERATION	Most Common width Feet	Number of horses	Acreage per day
Mowing	5	2	8.85
Raking	8	1	11.99
	10	2	17.91
Tedding	6	1	9.75
	10	2	15.88
Cocking (1 man)	..	..	6.29

So now, if you think figures would stimulate the hired man, let him drink these in.

New York State News.

SULLIVAN PROBERS QUIT.—A committee was appointed in the Assembly last Winter to investigate graft in the Highway Department. It was known as the Sullivan committee. Assemblyman J. L. Sullivan being its chairman. But an investigating committee without funds to carry on the investigation never gets far, and as the Legislature failed to give the committee any money and as it could not get any from private sources, the committee has gone home and it is probable that there will be no more meetings this Summer and possibly not at all.

HOLSTEIN-FRIESIAN ASSOCIATION.—Syracuse will have the annual convention of the Holstein-Friesian association again in 1915. It was so voted at the annual session held last week in Chicago. It was agreed to hold the convention alternately between the East and the West. Wing R. Smith was re-elected treasurer and Albert K. Brockway was made a member of the board of directors.

STATE SEALERS.—The annual convention of the State sealers of weights and measures will be held in Watertown on June 24 to 26. A long list of speakers is announced and a profitable session is anticipated. The delegates will visit the large paper mills in the vicinity, take a trip to the Thousand Islands and be otherwise entertained.

INSTRUCTION IN APPLE PACKING.—The New York Central will coöperate with the State Agricultural department in operating a train for the demonstration of apple packing methods to comply with the new law. These trains will be run through the fruit regions of Western New York, and one car will be devoted to the demonstrations while the other will be used for the purposes of the lecturers who will accompany the train.

FINE PEA CROP.—One of the finest pea crops ever grown in the vicinity of Batavia will be that of the present season. The same may be said of the spinach crop. One canning company has, it is said, 1,400 acres of peas growing and of uniformly fine appearance. Several thrashers are now being made ready for the work of thrashing out the peas, and have been stationed on farms where the peas are grown and also at the factory at Batavia.

NEW LAWS.—Gov. Glynn signed this week four bills passed at the special session of the Legislature. One authorizes the Governor to direct the State Comptroller to borrow $100,000 for the use of the National Guard should it be called out for service. Another bill appropriates $225,000 to pay the interest accrued on certain State highway improvement bonds. Another reappropriates unexpended balances of the highway improvement appropriations aggregating $1,045,000, and appropriating $2,227,255 for the canal sinking fund.

CONFERENCE ON MILK PROBLEMS.—It is announced that arrangements are being made by the officials of the New York Milk Commission, in conjunction with representatives of the Dairymen's League, to hold a national conference of milk producers, dealers, consumers and health departments at Atlantic City on June 22.

THE GRANGE HONORED.—The Grange of this State as well as its chief representative, State Master W. H. Vary, have been honored by his nomination, which is said to be equivalent to an election, as a director of group 3 of the New York Federal Reserve bank.

FORESTRY COLLEGE FACULTY.—The faculty of the State Forestry College at Syracuse will be materially strengthened by the addition of three new men who were elected this week. They are Dr. C. C. Adams, who will become assistant professor of forest zoology. He comes from the University of Illinois. Prof. Fred J. Baker was chosen professor of forest products. He is at present studying at the University of Munich, Germany. He is a brother of Dean Baker of the college. Prof. E. F. McCarthy was made director of the college's Ranger School at Wanakena to succeed R. P. Prichard who will become an instructor at the college. Louis Marshall of New York was re-elected president of the board, Congressman John R. Clancy was chosen vice-president and former senator Hendrick S. Holden treasurer. James S. Whipple, president of the State forestry association, is quoted as saying that the State should add 1,500,000 acres to its forest holdings. "The two great things in forestry work today," said he, "are better fire protection and the extensive planting of trees." J. W. D.

Government Crop Report.

THE Winter wheat harvest is now under way with prospect that the large early estimate, 638,000,000 bushels, will be reached. The Spring wheat outlook is 95.5 per cent. of normal, two points above last year. The total area in all wheat is 53,377,000 acres, 3,200,000 more than last year, and the entire crop is expected to reach 900,000,000 bushels.

In oats there are 38,383,000 acres, condition 89.5, indicating 1,216,000,000 bushels. Barley, 7,528,000 acres, condition 95.5, probable yield 206,000,000 bushels. Hay 88.7 per cent. or 1.2 above last year.

Following is the estimated yield of the chief Winter wheat States: Kansas, 148,000,000 bushels; Nebraska, 65,000,000; Indiana, 42,000,000; Oklahoma, 41,900,000; Illinois, 41,800,000; Ohio, 37,800,000; Missouri, 36,700,000; Washington, 32,100,000; Pennsylvania, 23,200,000; Texas, 16,900,000; Michigan, 15,900,000; Oregon, 15,000,000; Montana, 13,000,000; Iowa, 10,800,000; Kentucky, 10,400,00; Idaho, 10,100,000; Virginia,9,400,000; Tennessee, 8,600,000; California, 8,100,000; New York, 7,700,000; North Carolina, 6,300,000. Following are the Spring wheat estimates: North Dakota, 85,600,000 bushels; Minnesota, 63,800,000; South Dakota, 46,200,000; Washington, 21,300,000.

Ohio Crops.

THE Ohio Agricultural Commission gives the following crop figures for that State, the report being made June 1:

Wheat—Prospect compared with normal yield	103 per cent.
Original area seeded	1,635,185 acres.
Area abandoned this Spring	1,754 acres.
Area remaining for harvest	1,633,431 acres.
Oats—Prospect compared with normal yield	83 per cent.
Rye—Prospect compared with normal yield	96 per cent.
Winter Barley—Prospect compared with normal yield	93 per cent.
Spring Barley—Prospect compared with normal yield	87 per cent.
Clover—Prospect compared with normal yield	88 per cent.
Timothy—Prospect compared with normal yield	88 per cent.
Damage by grub	3 per cent.
Hogs—Fed for Summer markets	54 per cent.
Condition compared with an average	95 per cent.
Spring Pigs—Number saved compared with an average	86 per cent.
Sheep—Condition compared with an average	96 per cent.
Lambs—Number saved compared with an average	94 per cent.
Fruit—Prospect compared with normal yield	81 per cent.

AVERAGE PRICES.

Per bushel—wheat 93 cents; corn 73 cents; barley 63 cents; oats 44 cents; rye 71 cents; potatoes 90 cents.
Per ton—hay $13.05; Alfalfa $15.34.

Crop Outlook in New York and United States.

	New York.	United States.
WHEAT—		
June 1 forecast, bush.	7,700,000	900,000,000
Final, avge. 5 years, 1909-1913, bush.	6,793,000	686,691,000
OATS—		
June 1 forecast, bush.	36,900,000	1,216,000,000
Final, avge. 5 years, 1909-1913, bush.	39,681,000	1,131,175,000
BARLEY—		
June 1 forecast, bush.	1,900,000	206,000,000
Final, avge. 5 years, 1909-1913, bush.	2,081,000	181,881,000
RYE—		
Condition June 1, 1914	91	93.3
Condition June 1, 10-year average	88	89.7
HAY—		
Condition June 1, 1914	91	88.7
Condition June 1, 6-year average	90	87.4
CLOVER—		
Acreage, per cent. of 1913	98	90.4
Condition June 1, 1914	89	81.1
Condition June 1, 10-year average	91	85.7
ALFALFA—		
Condition June 1, 1914	93	98.9
Condition June 1, 8-year average	92	91.1
PASTURE—		
Condition June 1, 1914	91	89.8
Condition June 1, 10-year average	92	90.0
CABBAGES—		
Condition June 1, 1914	89	84.6
Condition June 1, 8-year average	90	86.8
ONIONS—		
Condition June 1, 1914	87	88.2
Condition June 1, 8-year average	89	89.7
APPLES—		
Condition June 1, 1914	88	73.7
Condition June 1, 10-year average	84	66.5
PEACHES—		
Condition June 1, 1914	20	61.7
Condition June 1, 10-year average	63	59.2
PEARS—		
Condition June 1, 1914	73	68.4
Condition June 1, 6-year average	80	65.3
BLACKBERRIES—		
Condition June 1, 1914	87	87.5
Condition June 1, 8-year average	91	87.1
RASPBERRIES—		
Condition June 1, 1914	88	89.0
Condition June 1, 8-year average	90	85.8
WATERMELONS—		
Condition June 1, 1914	81	77.0
Condition June 1, 8-year average	82	79.7
CANTALOUPES—		
Condition June 1, 1914	88	82.1
Condition June 1, 8-year average	85	80.0
SUGAR BEETS—		
Condition June 1, 1914	..	....
Condition June 1, 8-year average	91	89.5

Woman and the Home

From Day to Day

Pittypat and Tippytoe.

All day they come and go—
Pittypat and Tippytoe!
  Footprints up and down the hall,
    Playthings scattered on the floor,
  Finger marks along the wall,
    Tell-tale smudges on the door;
By these presents you shall know,
Pittypat and Tippytoe.

How they riot at their play!
And a dozen times a day
  In they troop, demanding bread—
    Only buttered bread will do,
  And the butter must be spread
    Inches thick wih sugar, too!
And I never can say "No,"
Pittypat and Tippytoe.

Sometimes there are griefs to soothe,
Sometimes ruffled brows to smooth;
  For (I much regret to say)
    Tippytoe and Pittypat
  Sometimes interrupt their play
    With an internecine spat;
Fie, for shame! to quarrel so—
Pittypat and Tippytoe!

Of the thousand worrying things,
Every day recurrent brings!
  Hands to scrub and hair to brush,
    Search for playthings gone amiss,
  Many a wee complaint to hush,
    Many a little bump to kiss;
Life seems one vain, fleeting show,
To Pittypat and Tippytoe!

And when day is at an end,
There are little duds to mend;
  Little frocks are strangely torn,
    Little shoes great holes reveal,
  Little hose, but one day worn,
    Rudely yawn at toe and heel!
Who but you could work such woe,
Pittypat and Tippytoe?

But when comes this thought to me:
"Some there are that childless be,"
  Stealing to their little beds,
    With a love I can not speak,
  Tenderly I stroke their heads—
    Fondly kiss each velvet cheek,
God help those who do not know,
A Pittypat and Tippytoe!

On the floor and down the hall,
Rudely smutched upon the wall,
  There are proofs in every kind
    Of the havoc they have wrought,
  And upon my heart you'd find
    Just such trade-marks, if you sought;
O, how glad I am 'tis so,
Pittypat and Tippytoe.

—Eugene Field.

*

DURING the cherry season you should have at least one cherry cobbler. Line a deep baking dish with rich pie crust, giving an ornamental finish around the edge. Middle West housekeepers like a square enameled pan for this. Wash, stem and pit enough ox-heart cherries to fill the dish three-fourths full, mixing in plenty of sugar (about two cupfuls) before putting the fruit in the crust. Cut strips of the crust one inch wide, and put in a lattice over the fruit. Bake till well done in a medium oven and serve with cream, whipped if you prefer it.

*

THE mother of one active little two-year-old says that the baby's red cap and sweater serve a very useful purpose in enabling her to keep track of the child. She can catch the gleam of red even when he is in the farthest corner of the door-yard, and the color shows up among bushes, so that he is visible when duller colors would tend to put him out of sight. We never thought of this idea before, but it seems to us a very good one. Khaki and the various dim tertiary colors provide "protective coloration" for an army in the open field, but they may also cause a little runaway to melt apparently into the surrounding field just at the moment when his anxious mother is straining her eyes for a glimpse of him.

*

THE season for prickly heat, hives and similar afflictions opened early this year, during the warm humid weather of May. One can get a good deal of misery out of these ailments, though they are so trifling in themselves. For hives, our usual treatment is to sponge the surface with a teaspoonful of baking soda in a cupful of warm water, or to moisten the eruption freely with sweet spirits of nitre. A dose of magnesia internally is helpful. There are, however, chronic cases of hives, resulting from conditions that need skilled medical care; for instance, some forms of gout. Prickly heat, in which minute vesicles form on the skin, accompanied by extreme pricking irritation, is common to newcomers in the tropics, and is not uncommon here. When it exists, coarse or harsh soap should not be used, and the skin should be well dusted, after bathing, with antiseptic powder, such as borated talcum. The itching is relieved temporarily by a carbolic acid lotion. Rough underwear, hot drinks, violent exercise, or anything that induces excessive perspiration increases the trouble. Painting with iodine is also recommended, but we would rather not use it without the doctor's recommendation.

*

DURING the past nine years the Travelers' Aid Society of this city has definitely helped 82,382 persons, and has incidentally helped many others. The aim of the society is the protection of persons traveling alone, but especially young women, boys and girls. We think that the work of this society ought to be better known in country districts, because of the protection it offers to strangers coming to the city. There is an agent of the society at each of the large railway terminals here, and any of the coast and river steamers will be met by appointment. The great transatlantic steamers are always met by these agents. Any woman who finds herself in need of counsel or aid can secure it from these people, and the moral protection given often means much more than material help. Many and terrible are the dangers of the city for the ignorant and inexperienced. The society's headquarters are the Travelers' Aid Society Building, 465 Lexington Avenue, New York, and this is an address which should be filed away carefully by rural pastors, Granges and local societies, since it may sometime be needed in a sudden emergency. If notified in advance the society will send an agent to meet young women or children on their arrival in this city, in cases where there is no one to see that they reach their proper destination in safety.

Seen in New York Shops.

"PARTLY-MADE" sport skirts are accordion pleated, attached to a waistband and with the hem turned up, but the back seam is merely basted, so that the skirt can easily be adjusted to fit. They are offered in serge, black, navy blue and white, and in black and white check; price $4.50 each.

Tango necklaces are composed of ribbon links separated by groups of beads, and finished with tassels of silk or beads, the necklace being bust length. The ribbon links may be of satin or velvet one-half to three-quarters of an inch broad, and folded under into a "V" at the ends, where the beads are attached. As an example, a necklace seen was made of three six-inch links of black satin ribbon united by links composed of small beads, lapis and cut jet alternately, within the center a long oval amber bead. The two ends of the necklace, which are not united, were finished with a one-inch length of the small beads, passing into a flat oval plaque of amber, with a black silk tassel at the very end. Italian porcelain beads, which are decorated with gay colored flowers, are often used in these tango necklaces, as well as alone, or mixed with crystal beads. Opaque beads always look better with a touch of crystal to give them sparkle. Oriental prayer beads, often gorgeous in coloring and finished with vivid silk tassels, are offered with the others. Some of them consist of carved or painted beads, separated at intervals by a carved bead of odd shape, such as a fish, an elephant, a pagoda, a mandarin, etc. Kimono bangles from Japan are bracelets of carved sandalwood beads, fastening with a gay tassel; they cost 75 cents each.

Beach sweaters of Angora wool cost from $7.50 to $15. They are made with a V-shaped neck and rolled collar, turnback cuffs, patch pockets and belt. They are made in all sorts of vivid colors. Beautiful sweaters are of knitted silk, orange, old rose emerald green, royal blue, etc. Scarves or mufflers are made to match both silk and wool sweaters. There are also many models of spencers or tight-fitting sleeveless jackets knitted in Shetland wool, which are intended for mountain and seashore wear.

Hats of hemp or split straw in the dark brown known as tete de negre are considered good style, with blue or green suits; they are usually self-trimmed, but sometimes with metallic dark blue, green or black plumage. Blue or green hats are often quite unbecoming, while this peculiar dark brown seems to brighten the complexion of the wearer.

A pretty "tub dress" was of colored cotton crape with a tight underskirt, and above it a flaring overskirt attached to a deep yoke pointed over the hips. The waist was a loose blouse with elbow sleeves having turned-back embroidered white cuffs, and a square rolling collar, open in front, to match the cuffs.

Some very smart waists seen were of striped crepe de chine—hair line stripes of dark blue, red or black one-fourth inch apart. The waists were very plain, with raglan sleeves of full length, and had flaring collars and turnback cuffs of hemstitched white organdie.

"Neck girdles" costing from 10 to 25 cents, consist of silk cord, about the thickness of lead pencil, finished with tassels at the ends. They are made in a great variety of colors, and are either worn around the base of a flaring collar, like a necktie, or run through a casing around the neck of a shirred blouse.

A very smart blouse was made of canary yellow handkerchief linen, cut in raglan style, with collar, cuffs and vest of white pique. Around the collar and cuffs were loops through which narrow black moire ribbon passed, tying in a bow at the side of the cuff, and in front of the collar.

The new skirts are much shorter than they have been, not only clearing the ground all around, but in many cases being not more than ankle length, or even a little above. This is a decided change from the long clinging model, but has the merit of good sense. The short skirt has an awkward look, however, when there is a good deal of drapery above.

The varnished effect in millinery, noted in varnished straw hats and glossy ribbon, has been carried to an extreme. We have seen some of the small wings used in trimming varnished to the highest degree of stiff shininess, the feathers firmly stuck together by their coating. They were durable, but might as well have been made of papier-mache as far as looks were concerned. The small wings, standing at right angles on crown or brim, are even smarter than flowers this season.

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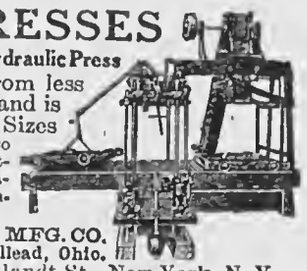
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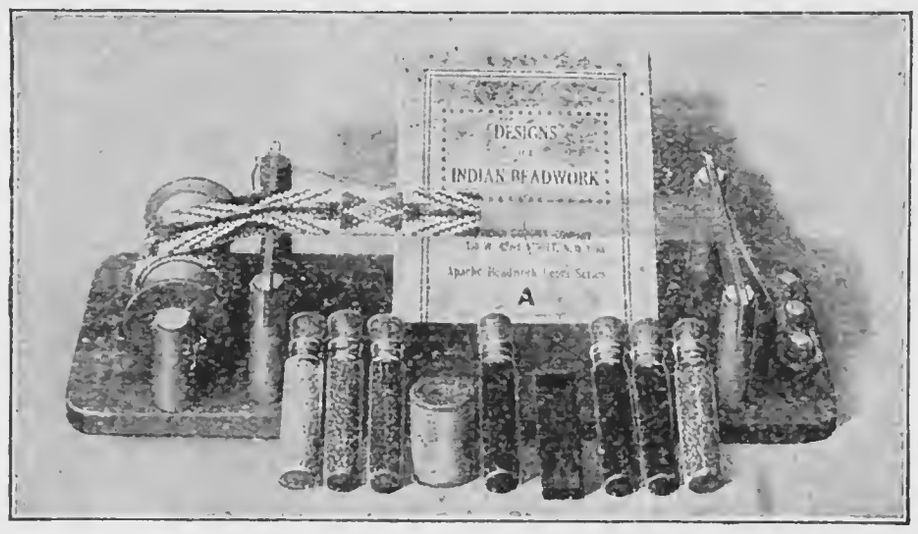

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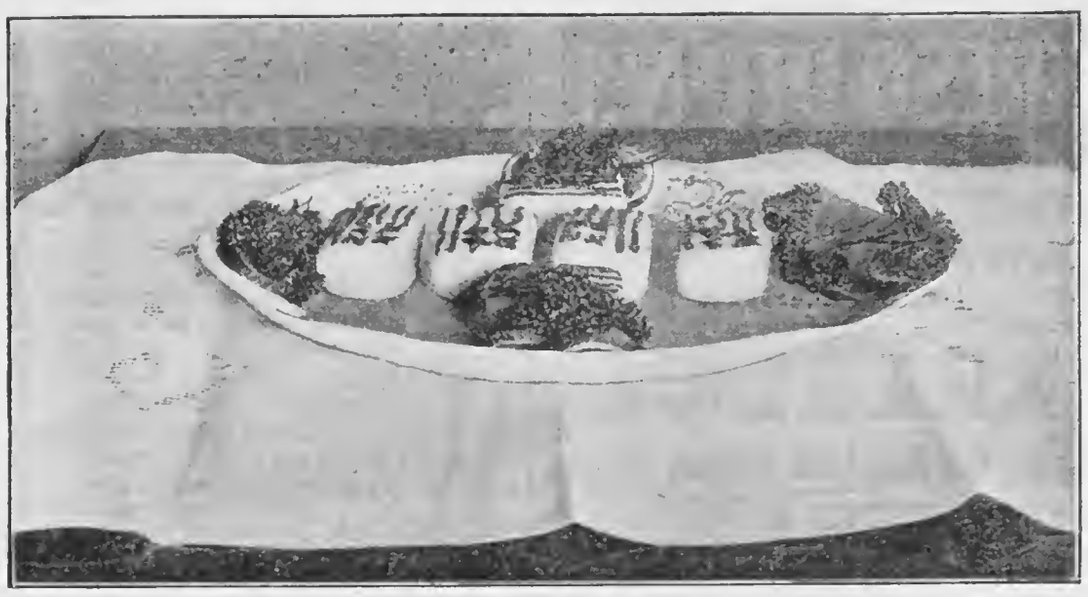
A July-day Celebration Dinner.

A LUNCHEON or little dinner party, where the sentiment of the day has been successfully carried out, offers a happy medium in which a hostess may show her patriotism on July-day without too much rejuvenating. Serve it out-of-doors, of course, if there is a good place for it, and have a little display of fireworks at the close of the evening, or if the dinner is to be in the middle of the day, and there can be no fireworks, there



FISH CROQUETTES, INDEPENDENCE STYLE. FIG 335.

might be a short patriotic speech by the orator of the party, or a few appropriate recitations by one or more of the guests, and some national hymns sung.

If there is not a garden or a desirable porch, any good-sized dining-room may be made very attractive with the aid of flags, red, white and blue bunting, and ferns. Decorate the walls with the bunting, or crepe paper in these colors can be used. For the table decorations shown here, cover the table with a plain white damask cloth, and in the center place a medium-sized window-glass, with a piece of green crepe paper the same size beneath it, and conceal the edges with daisies, or made. The same kind of heavy white paper that formed the tents was used for this. The shade and standard is cut in four sections, and decorated with flags, cut from the flag-designed crepe paper; they are then fastened together by means of little brass paper fasteners. Four narrow strips of the paper holds the top and base together, and a square piece of heavy card-board, with an incision cut in the center large enough for a candle to fit in without slipping, is placed on the top of the base just beneath the shade.

As for the menu, this, too, may have a touch of patriotism about it, as

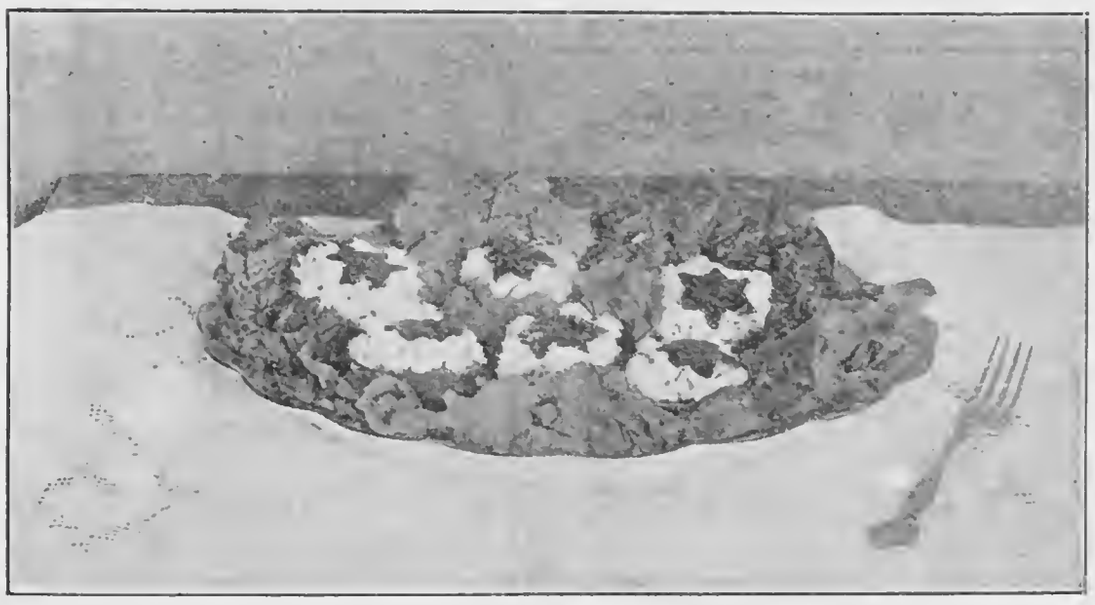
Washington coupe (cherry cocktail)
Soup, if you like
Radishes Pickles
Fish a la Independence cucumbers
Southern fried chicken; peas, creamed new potatoes
Star salad rolls
Mount Vernon cream (plain vanilla ice cream decorated with candied cherries)
Martha Washington cake
Rebellion punch (raspberry shrub)

The cherry cocktail is made from a quart of ripe red cherries. Wash, stone,

DECORATIONS FOR INDEPENDENCE DAY DINNER. FIG. 336.

blue cornflowers, and green leaves.

From a piece of heavy white paper make a miniature army tent, add a tiny silk flag to the top, and place this near the center of the glass, then arrange around it half-a-dozen, or more, according to their size, toy soldiers. Instead of place-cards there are little peaked tents with a small flag floating from the



A PATRIOTIC STAR SALAD. FIG. 337.

peak, and the name of the guest written across the front. The place favors are small drum-shape boxes covered with red, white and blue paper, and filled with red and white bonbons.

The candle shades are very attractive and quite new, the one in plain white with the simple flag decorations is home-

and chill them; put them into star shape paper cases, or sherbet glass, and cover with a mixture of one teaspoonful of lemon juice, one tablespoonful of orange juice, and one tablespoonful of powdered sugar.

For the fish course mix a little salt, a speck of cayenne, and one and one-half cupfuls of white sauce; then add two cupfuls of flaked cold boiled white fish, and the beaten yolks of two eggs. Shape the mixture into flat oblong croquettes, egg, crumb, and fry in deep fat, then drain on a napkin or soft paper. In the meantime cut red or green peppers into thin strips and tiny stars, and ornament each croquette with these, flat fashion. Arrange on a hot platter with parsley or cress, and serve with a rich cream sauce, to which a little lemon juice has been added, and sliced crisped cucumbers dressed with a French dressing.

If the weather is very hot one might prefer a cold meat course, in this case the chicken may be prepared the day before it is needed, in this way. Clean and cut up two young fowls, and cover with cold water, adding a little chopped carrot, onion, and celery, with one bay leaf, three whole cloves, six peppercorns, and one tablespoonful of salt. Heat, and cook slowly until tender; then remove the meat; take out the bones and chop. Reduce the stock to one pint, and cool it; then skim off the fat; reheat, and strain over one teaspoonful of dissolved gelatine. Season with a little pepper and a few drops of onion juice, and add the chopped meat. Pack in a plain mould, and chill. Serve thinly sliced, garnish with parsley or cress.

The salad is simply cream or cottage cheese, seasoned and moistened with French dressing, then heaped lightly on slices of tomato, and the top ornamented with a star cut from red pepper. Each slice is placed on a crisp lettuce leaf, and more of the dressing is poured over all.

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Two Favorite Desserts.

Sour Cream Pie.—Mix together one cup of sugar and one cup of raisins, then add one egg, a pinch of salt, one teaspoon each of cinnamon and allspice, and one-half teaspoon cloves. Mix all these ingredients thoroughly, and stir in one cup of sour cream. Bake in one crust, and when cold cover with whipped cream flavored with vanilla. These pies will keep several days by omitting the whipped cream until ready to serve.

Tapioca Pudding.—Soak two-thirds of a cup of tapioca over night. In the morning, cook in water until clear, then add one quart of milk. Let come to a boil and add two eggs, beaten light, two-thirds of a cup of sugar, two tablespoonfuls flour. Flavor with vanilla. Set away to cool and then place in individual dishes and cover with a tablespoonful of canned strawberries and whipped cream on top. The beauty of this is to have it as cold as possible.

IT is not written, blessed is he that feedeth the poor, but he that considereth the poor.—Ruskin.

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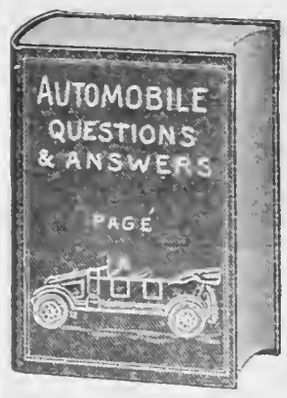

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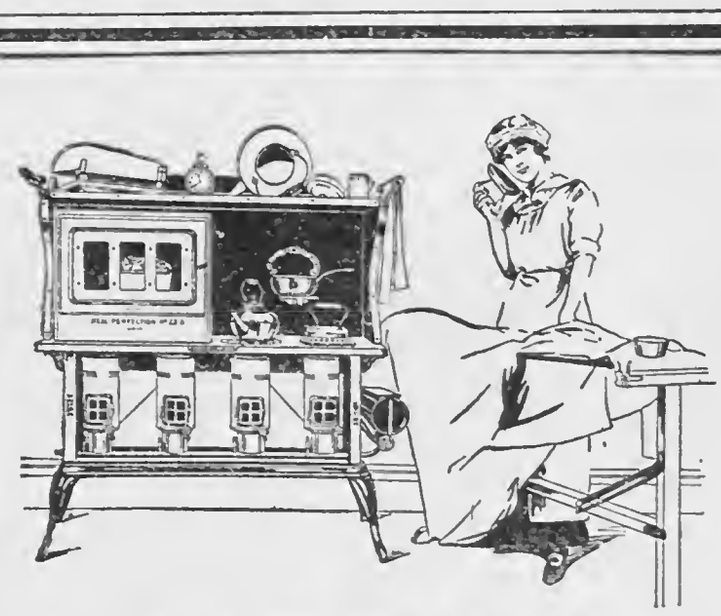

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TAPPING A BLOATED ANIMAL.

EVERY owner should have an idea how to tap animals when one of them is unfortunate enough to suffer an attack of bloating from acute indigestion. Medicines are of course useful in this complaint, but will fail in many cases where the urgency is great from such severe extension of the intestines with gas that death would follow were not mechanical means adopted for the relief of the patient. The instrument proper for the operation is a double one, the "trocar," a dagger-like probe with handle, and fitted intimately into a tube called the "canula." The trocar is forced into the intestines through the abdominal wall, a preliminary cut having been made with a small, sharp knife to allow the point of the instrument to enter the skin. When the trocar and canula have been introduced the full length, inwards, downwards and forwards, the canula is held in place by the thumb and fingers and the trocar withdrawn. If gas does not come at the first operation it is often possible to find the gas by partially extracting the canula and then introducing it at a different angle. Sometimes in tapping horses fluid comes through the tube and this is even more commonly seen in cows. It shows as a rule a very bad condition of the stomach in the cow or intestines in the horse, and indicates that the indigestion is acute. Caution must be taken where this fluid exudes, for if the canula has to be withdrawn when gas has ceased to flow and the trocar is not first inserted in the tube the latter will draw up fluid by capillary attraction and be apt to deposit it between the abdominal wall and the intestine or stomach as the case may be. When this happens the fluid with its decomposing matters acts as a foreign body and is sure to set up trouble, such as an abscess, which is a rather common and very troublesome sequel to a badly performed operation.

The horse is to be tapped upon the right side in the space between the point of the ilium, last rib and spine. This is the space where the hair grows in opposite direction to the hair on the sides. Select a spot high up to the outer edge of this "cow-licked" hair towards the direction of the animal's head. Let it be high, for if chosen too low an artery is apt to be struck, and there is also thicker muscle, and an abscess is therefore more liable to be caused. Clip hair from a small place, then cleanse with antiseptic and water. Any effective antiseptic will do, such as carbolic acid, or any one of the tar product disinfectants. Now cut a small slit large enough to accommodate the point of the trocar and then sharply thrust it downwards, inwards and forwards the full length, and this done slowly remove the trocar, leaving the canula in place.

Cows and sheep are tapped upon the opposite side from horses. The spot to tap, upon the left side in cows and sheep corresponds to that in horses being between the point of the ilium, last rib and spine in the depression usually found in that part. As a rule a mistake is made in tapping cows. The text books say to measure a span each way from the point of the hip bone, last rib and spine. This is fairly correct, but will make the incision come too low. Tap as close to the spine as possible aiming the trocar straight downwards, inwards and forwards and of course being particular in no way to touch or injure the spinal processes. In cows this high tapping prevents flow of blood, removes gas when low tapping would fail, and is far less likely to be followed by an abscess than low tapping. Stand on the other side of the cow when making the incision through the skin and introducing the trocar, else there will be liability of receiving a kick. In horses place a twitch on the nose before tapping, unless there is great urgency, as is sometimes the case.

After removal of the trocar and canula in all animals cleanse the wound and bring its lips together by manipulations with the fingers, then dust freely with iodoform. In cows, where the wound is larger than in the horse, it is well to introduce a pin, as is done after bleeding, and then wind a small string around it in figure 8 fashion. In cows it is often well to tie the canula in place for 12 hours or even longer, until all trouble has subsided.

A. S. ALEXANDER, M. D. C.

GOOD TYPE OF COACH HORSE. FIG. 338.

Green Feed for Hogs.

IS there any objection to "soiling" hogs using freshly cut peas and oats, Alfalfa, Soy beans, cow peas, clover and even green fodder corn? Would there be any danger of bloating? J. S. C.
Goshen, N. Y.

There is no objection to practicing the soiling system with swine, and there is absolutely no danger of bloating. Alfalfa is the source of one of the very best soiling crops, and can be used extensively in pork production. If rape and Sweet clover are used the area can be safely pastured when the plants are from eight to nine inches high, and if they are put in in rows it is probable that this pasture is equally as economical as the soiling system if one takes into consideration the cost of harvesting soiling crops. As to the amount of such feed that may be fed it would be a safe rule to give the animals all that they will eat with relish, although it is understood that this is not a fattening ration, and if it is intended to fatten the animals it is necessary to use some corn and tankage, or some corn, molasses and tankage in addition to the green crops. The use of soiling crops would be of the greatest advantage to breeding animals, especially brood sows and their pigs, particularly if the animals are given cool quarters and the green forage provided regularly in reasonable amounts. It is doubtful whether Soy beans or cow peas would make good soiling crops inasmuch as they do not yield in proportion to the amount of corn, and a very good use of the corn and Soy beans is where both are planted at the same time, and the animals turned in to harvest the crop early in September. We find that rape is one of the most satisfactory crops that we can grow for swine feeding to supplement corn, as it is not only economical, but a crop that can be seeded at any time during the Spring up to August 1, and one that is not only palatable, but satisfying to the animals.

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We have a few of his sons, from four months to a year old, that we will sell at very low prices. These animals are good enough to go in any herd, as they are from Register of Merit dams producing from 400-lbs. of butter per year upward and of splendid breeding and type—many of them imported from the Island of Jersey.

WM. M. HARRIS,

Telegraph and Telephone Branchville, N. J. — **Deep Spring Farms, Walpack Center, N. J.**

FARVIEW ADMIRAL WALKER GELSCHE 71,144. No finer-bred Holstein bull in State. Reasonable to quick buyer. **J. S. BROWN, Black Hall, Conn.**

FOR SALE—REGISTERED Holstein Yearling Bull—Sire, Prince Calamitus; grandam, Calamity Pietertje De Kal, whose record is 84½ lbs.; first premium cow at Danbury Fair, 1913. Also registered Yearling Boar. **ARROWPOINT FARM, New Preston, Ct.**

HORSES

HIGHLAND VIEW STOCK FARM

Our last importation of BELGIANS and PERCHERONS is the BEST we ever imported. We have sold more Stallions and Mares in the last sixty days than we ever sold in a year. WHY? Because we sell the good, big, drafty kind at the right price, and cheaper than the other fellow.

O. N. WILSON, Prop.
KITTANNING, PA.

50 STALLIONS

and MARES, $250 to $1000 each

Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.

A.W. Green, Middlefield, O.

R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

MAN ALIVE!

LOOK HERE! We can sell you a fine registered yearling Percheron Stallion for $350 worth $700 next spring; should mature $1000 or more, do the farm work of any good horse, save time and expense of breeding your mares outside, get colts worth $200 to $300; and service fees should pay the wages of a hired man or send boy or girl to college. We have more stud colts than we can carry; pure-bred fillies, too. Come see them or write for photos. ADIRONDACK FARMS, 57 Maple Street, Glens Falls, N. Y.

AT STUD—"LANDAIS" (100.233) 92,338. Imported Registered Percheron Stallion. Gray, weight 1,900 lbs. Fee, $25. **Walnut Grove Farm, Washingtonville, N. Y.**

DOGS

Dogs for Sale

Airedale Puppies (female) Four months old. Pedigreed—at Moderate Prices. **BRIGHTSIDE KENNELS, Dunellen, N. J.**

For Sale TWO LITTERS OF Pedigreed Airedale Pups

Six weeks old. Farm raised.
FRANK MEAD, · Amenia, New York

COLLIE PUPS—the intelligent kind. Also Bloodhounds. **NELSON'S, Grove City, Pa.**

STANDARD LIVE STOCK BOOKS

Sheep in America, Wing	$1.00
Types and Breeds of Farm Animals, Plumb	2.00
Swine in America, Coburn	2.50
Diseases of Animals, Mayo	1.50
Science and Practice of Cheese Making, Van Slyke	1.75
Feeds and Feeding, Henry	2.25
Practical Dairy Bacteriology, Conn	1.25
The Horse Book, Johnstone	2.00
Forage Crops, Voorhees	1.50
Animal Husbandry for Schools, Harper	1.40
Questions and Answers on Butter Making, Publow	.50

THE RURAL NEW-YORKER, 333 W. 30th St., New York

Overdose of Tuberculin.

WOULD a cow tested for tuberculosis that had an over quantity of tuberculin injected show an increased temperature even if sound? Our dairy of 36 cows was tested about a week ago by local veterinarian, only one showing an increased temperature (106 deg.). I have a slight suspicion the proper quantity was not used in her case; she appeared a bit stiff the day after test, especially in near fore leg. She is the most thought of cow in dairy, and we should be sorry to lose her. She stood test all right February, 1913. How soon could she be tested again? C. H.

An excessive dose of tuberculin would not produce the rise in a cow's temperature characteristic of tuberculosis; double the usual amount is used when occasion demands it as when, after repeated tests, the animal's system becomes more resistant to its action. The length of time which an injection of tuberculin will prevent reaction to a subsequent one is a variable one, but it is customary to make re-tests after six weeks. There are several conditions which may prevent reaction in a tuberculous animal and only repeated negative tests at considerable intervals can be considered positive evidence of freedom from the disease.

M. B. D.

Milking Fresh Cow.

I would like J. Grant Morse to explain why he drew so little milk from his cow's udder at first. R. E. P.

I did not milk my cow out clean at first because I was afraid of milk fever. The doctors think that this disease is caused by the sudden change or shock to the cow's system. The milk is secreted from the blood by the gland known as the udder. Our best cows secrete an enormous quantity when they first freshen and before they freshened they were secreting none at all. So it is a general practice among the "men who know how" to draw but little milk at first, and so hold in check the secretion until the system can adjust itself to the change. Will Dr. Alexander give this thing to us so that we can all understand it?

J. GRANT MORSE.

Age of Cattle.

How can the age of a cow be told when she has no horns? W. K.

By her teeth. Any expert can give you instructions, or you can get them from a veterinary text book. A. S. A.

Salivation.

I have a horse that when she eats her corn scatters about a half gallon of water. Do you know any remedy for it? New York. F. G.

A diseased molar tooth, or sharp teeth, or a sore tongue or the presence of stones (calculi) in the salivary ducts, are causes of such profuse flow of saliva. Have a qualified veterinarian make an examination. A. S. A.

Grass for Work Horses.

Which is better for horses that are kept at work all the time except Sunday, to feed a mixture of corn and oats with Timothy and clover hay, and keep it at night and Sunday, or feed grain and turn out at night on blue grass pasture? Of course if they are turned out at night they will have what hay they want. Virginia. F. D. W.

Hard worked horses do best when fed hay, oats and bran, without green grass, if the owner can afford such feeding. Grass tends to loosen and soften a work horse, but most small farmers allow their horses to pasture when possible, and claim to have seen no ill effects. If grass is to be used give it every day, not at irregular periods. A. S. A.

Dropsical Swellings.

Some of my sheep have a swelling under the jaw. The swelling seems soft at first and then becomes hard. I have lost several from this in other years. In other sheep it gradually disappeared. What is the remedy? I do not find the disease mentioned in any of the books on sheep. New York. H. W.

The swellings do not constitute a disease, but merely indicate anemia (bloodlessness) from the ravages of intestinal parasites, or some other debilitating disease. On general principles medicines to destroy worms should be administered. A tablespoonful of gasoline in new milk is appropriate and may be repeated two or three times at intervals of two days. This kills stomach worms, or drives them out of the sheep. If tape worms are present freshly powdered kamala in a two-dram dose is best. It is administered after starving the sheep for 18 hours or more. Generous feeding is indicated in all such cases, and the sheep should have new grass, rather than old, tainted pastures. A. S. A.

Something New

Milk with fly-blanket on $1.25 each, postpaid. Manufactured by **Jacob Horr**, Mechanicsburg, Ohio

DAIRY CATTLE

Wanted to Buy—CATTLE BY THE CARLOAD One hundred head wanted (due to calve) during July to September. Holsteins and Ayrshires preferred. Address, A. S. EDWARDS, Stepney Depot, Conn.

AYRSHIRE BULL—12 months; bred for production; ¾ white; beauty; $75. 2 Bull Calves. **BELL FARM, Hollis, New Hampshire**

For Sale—Several well-bred REGISTERED **AYRSHIRE BULLS** about a year old. Write or call. **BRISTOL COUNTY AGRICULTURAL SCHOOL, Segreganset, Massachusetts**

Brown Swiss Cattle—Bulls ready for service. Cows and Heifers. All animals descended from cows entered in or eligible for Registry of Production. **GEORGE W. HARRIS, Wethersfield, Conn**

Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. **Edgewood Farm, Whitewater, Wis.**

Holstein-Friesian Bull Calves For Sale—Write for special offer. **THE GATES HOMESTEAD FARM, Chittenango, N. Y.**

WILL SELL 4 Choice Holstein Pure-Bred Bull Calves $100 to $325, according to blood. **MOHEGAN FARM C. H. BAKER, Peekskill, N. Y.**

For Sale—Choice Holstein Bull Calves from two to four months old; sired by King Pontiac Solomon, one of the good sons of King of the Pontiacs. Dams have good official records. Also a choice lot of Berkshire pigs, about ten weeks old. Prices very reasonable. **WARNER STOCK FARM, Warner, N. Y.**

HOLSTEINS FOR SALE

5 Registered Holstein Bull Calves 1 month old, four-fifths white well bred, $35 each; express paid to your station with all papers. 4 Registered Holstein Heifer Calves for $400. 1 car load of Registered Heifers Bred. 1 car load of Registered Cows due to freshen this Fall, and 100 High Grade Holstein Cows. Orders for 7's Holstein Heifer Calves at $15 each, to be shipped this Fall. Express paid if ordered in lots of 5. 1 car load of High Grade Yearlings for $40 each. **REAGAN BROS., Tully, N. Y.**

Buy a Bull on Easy Terms

Long Time and 4 Per Cent Interest

Holstein bull calves, sired by a **SON OF KING OF THE PONTIACS**, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of **A. R. O. DAMS. WRITE AT ONCE** for breeding, prices, and particulars regarding our terms.

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HIGH GRADE HOLSTEINS

The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.

F. P. SAUNDERS & SON, Cortland, N. Y.

East River Grade Holstein Cows For Sale

50 Cows, just fresh, milking 40 to 55 lbs. per day.
35 Cows, due to calve this month and next.
35 Cows, served to calve this fall. All served to a reg. bull.

These will suit the man that is looking for high-class dairy cows. Large producers, good size and well marked.

Visit the East River Holsteins when in need of first-class dairy cows. Stay and see them milked. WE TUBERCULINE TEST. Registered bull calves and service bulls always on hand.

Bell Phone No. 14 F.5. **JOHN B. WEBSTER,** Dept. Y Cortland, N. Y.

Purebred Registered **HOLSTEIN CATTLE**

The successful dairyman has judgment, business ability and courage. Cutting down expenses is not enough. He must know how to invest.

Appl business methods to your farm, keep a record of the net profit from each cow and you'll soon convince yourself of the economy of putting your money into efficient milkers.

You'll find one good Holstein will do the work of two, perhaps three, ordinary cows. You save greatly on feed, and divide the expense of housing and labor by two or three.

Send for FREE Illustrated Descriptive Booklets

Holstein-Friesian Asso., F. L. Houghton, Sec'y Box 105 Brattleboro, Vt.

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DUROC PIGS—$16 PAIR. Write S. A. WEEKS, De Graff, O.

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, N. Y.

Duroc Pigs Two Boars—ten months old, $25.00 each. Spring Pigs six and ten weeks old, $8.00. Each with registry papers. **JAMES E. VAN ALSTYNE, SECRETARY, KINDERHOOK, N. Y.**

PIGS—500 to 1,000 head always ready for shipment. Large, growthy type. Shipment at two months' old. **NEW ENGLAND LIVE STOCK CO., · Peabody, Mass.**

I have For Sale, 1 litter of O. I. C. PIGS seven weeks old. F. H. SCARRITT, RAQUETTE LAKE, N. Y. Hamilton County

Woodlynn Farm Berkshires

Choice Boars, old enough for service. **JOHN W. COOPER, · Pineville, Pa.**

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Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows. **H. C. & H. B. HARPENDING, Dundee, N. Y.**

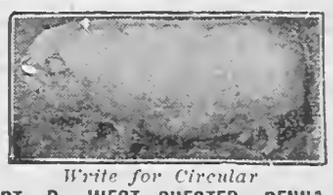
Springbank Herd—Big Berkshires

I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs. **J. E. WATSON, Proprietor, Marbledale, Ct.**

BERKSHIRES

We have fifteen fine boars for sale, sired by Sepurbus, 136000 and Rivals Emblem 167700, the great sires of Gregory Farm, White Hall, Ill., the home of the famous Masterpiece. These boars are from seven to twelve months of age, are the heighth of breeding and type. Here is a fine chance to improve your herd. Write for prices and descriptions. **TOMPKINS FARM, - Lansdale, Pa.**

Eureka Stock Farm



Registered Jersey Cattle, 4 mos. to 2 yrs. old. Chester White, Poland China and Berkshire Pigs, all ages. Lincoln Buck Lambs. Variety of Poultry. *Write for Circular*

EDWARD WALTER, DEPT. R, WEST CHESTER, PENNA.

DAIRY CATTLE

JERSEY COW—4 years old. Second calf. Bargain price. **W. A. RANDEL, Seymour, Conn.**

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. **R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.**

Fern Hill Farm—REGISTERED JERSEYS. Tuberculin tested. Cows, heifers and young bulls, by "His Majesty the King." Imported. **FERN HILL FARM, West Chester, Pa.**

JERSEY BULL—Two Years Old

By "His Majesty the King," out of "Combination's Grey Belle," both imported. **FERN HILL FARM, West Chester, Pa**

Fosterfield's Herd Registered Jerseys

FOR SALE

Cows, yearling and two-year-old heifers. Some of the heifers served. Also heifer calves. **CHARLES G. FOSTER, P. O. Box 173, Morristown, Morris Co., New Jersey**

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GUERNSEYS
Herd Bulls

Langwater Fisherman 21837	King of the May 9001, A. R. 72
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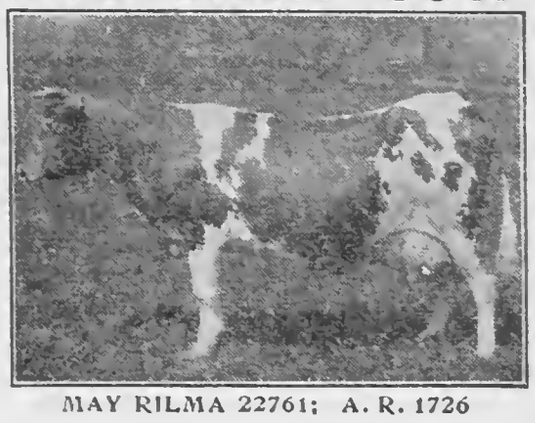
We now offer choice bull calves sired by the above, and out of cows now on A. R. test.

Indian Bridge Farm, Edmund H. Sears, Owner — *Address Walter Jauncey, Jr., Supt. Wayland, Mass.*

THE WORLD'S RECORD DAIRY COW
THE GUERNSEY COW
MAY RILMA

Gives . . . 19673 lbs. milk
Containing 1073.41 lbs. butter fat
IN 365 DAYS



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MAKING HER THE CHAMPION DAIRY COW OF ALL BREEDS

Write for the story of this cow's work and receive with it general literature about the breed

AMERICAN GUERNSEY CATTLE CLUB Box "Y," Peterboro, N. H.

THE MILKING MACHINE SAVES DAIRYING

IN most arguments pertaining to machinery, the first consideration is the cost, but with the power milker the cost seems to me the last point of argument, so will consider the many-sided question of getting the milking done in a regular, gentle and economical way, with considerable emphasis on the *gentleness*, which means more milk on less feed; fewer cows for the butcher, and less for the soap-fat man.

ADVANTAGES OF THE MACHINE.—The first side to consider is satisfaction of having three dependable milkers, more reliable than the owner, the superintendent, or manager. It is more reliable than any hand milker, no matter what his title may be; three milkers always sober, even-tempered, up on time every morning, will not smoke or carry matches in the barn, no beating cows with stools or clubs, no profane, loud talk among the cows, no holidays off on every other Sunday or more. Just consider a Sunday evening in August, 99 degrees in the stable, 25 cows to milk, no one shows up to help. I know how you feel like asking the good willing wife to help. I know how she has been asked many times before. It means one hour or more of hot work with the cow's tail around your neck or in your eye most of the time. That is one side, the old way. The new way, after you start engine, get milkers adjusted, feed cows, the good wife comes out without changing any clothes, stands by the door or window, waiting to assist carrying the milk to cool, while you attend the three units, which do the hot job in between the cows just as quickly as any three men in the neighborhood, without using any language which would not be fit for your wife or children to hear.

RELIABILITY seems to come next. Is any machine perfect, never wearing out or occasionally breaking some part, or getting out of adjustment? Has the binder, mower, or potato machinery been discarded because it broke down when in the midst of harvest? Did you take your wind pump down because it got out of order? Has the general use of machinery been checked because they break a 25-cent part? The same has to be considered with the milker. But say you have three units or more; if one does get unmanageable or give out in a busy time, you still have two others. Can you say that of all your machinery, or any part of it? We have none here that will interchange parts and still work like the milker. Personally I believe there are more man or manager failures than real machine failures; close observation and also records kept by the P. R. R. Company show that 70% of the failures on locomotives are due direct to the man and not the mechanism. The milker is able to duplicate the calf on all teats at one time without the butt, when no more milk is to be had.

INITIAL COST AND UPKEEP.—We have not been using one long enough to find out the upkeep. I do know that it is made of non-corrosive metal and rubber, and believe many parts will last for a generation. Like other machines, in one man's care lasts many times longer than in other hands. As I understand this side of the question, there has been a slight advance owing to more expensive material used and a greater demand, showing positively that they are filling the place of hand milkers in many dairies. The price depends on the number of units, also on amount of piping necessary to reach the power room.

RETURNS FROM INVESTMENT.—Yes, that's what we are farmers for, trying to get returns from the soil by using fertilizer and seed, and doing most of the work with machinery. Why? Because it is cheaper and increases the returns. I do not know much about the banking or commercial world, but they are after the returns just the same. Returns from the milker investment can be figured in many ways, so will just note a few as I see them: First, cost of our equipment $510, February 1st, 1914, and for easy figures will say interest $30. It is satisfaction to know one can get done milking before dark, and when help all take a day off, and not start at noon, it is worth $100 per year. Another way of getting returns: One man and team can stay one hour longer in field during one hundred busy days at 30 cents per hour, which means good interest. Another way, in Winter season can do with one man less, wages and board ($35), make $105. That will more than pay for gasoline and other oils for two years.

THE COW'S OPINION.—The cows can answer a number of questions in reference to the milker after the first week of use, and the principal one is, that she likes it better than hand milking, and you know what that means in the pail and in the pocket or bank or automobile, whichever you choose. Compared with other machinery, as to cost and hours used per year, take the reaper and binder at a cost of $125 new, used about 30 hours per year, about $4.16 per hour's use in the field. The milker will be used about 730 hours per year, or 70 cents per hour's use in the barn, and you can compare it with almost any machine, and will find it is the most used compared with the price of any implement on the farm. D. S. CROSHAW.

New Jersey.

COW KEEPING IN NEW ENGLAND.

THERE is quite a general opinion broadcast over New England that the number of cows in Massachusetts and also in the other States that largely supply Boston market with whole milk are decreasing at the rate of about 5,000 yearly. It has been officially stated that the above figures are correct in Massachusetts and New Hampshire. It is a fact that the number as a whole is decreasing faster than is good for us, but I think the decrease has been overrated, for this reason: In a neighboring town about 30 farmers who formerly produced milk are not doing so now, but on the other hand those who are producing have in many cases doubled their capacity, which would make up to a certain extent the loss, or part of it at least, from the non-producing farms. One of the largest producers of this town gave a general talk on the milk producing question at a farmers' club the other evening, and some things he said are worth noting. His advice on farm improvement is to do what is needed in a common sense way; always keep to the practical. A barn with a cellar can and should be kept so it is as healthy as any other, and the cows can be kept cleaner if anything than in a ground floor barn. It is not always, in fact seldom, good policy to follow wealthy people's ideas in barn building. Give plenty of space in all ways possible. A good handy trough is better than individual cups, and can be more easily kept clean and sweet. An important point is to allow no diseased cow in the barn, know that all the cows are healthy. Go high in building to give plenty of overhead space for hay and fodder.

It pays to raise your own stock and breed up. A good sire should be kept as long as possible. It pays to keep records of all cows and know just what they are doing. One bull, apparently a good one, did not produce good calves, as only one of this class was obtained from him; the rest all had some fault or other. As soon as this was discovered he was passed. Cow-testing associations are good things, and prove the cost of producing from the various cows. Including all feed, the association found for him that one produced her milk for 2½ cents per quart, while another cost four cents per quart. It was very important to know of this.

It is important to raise everything on the farm that is possible, both stock and feed. Corn silage is the best main feed for cheapness and results, but it should be good silage. A great saving is made by buying grain by car lots if possible. A good ration, also an economical one, is 200 pounds gluten, 100 pounds cotton-seed and 100 pounds bran. This is fed by the writer with good results also, only I feed a little cornmeal to some cows with it; that is, those that lose flesh when milking heavily. Clover and Alfalfa are the best kinds of roughage feed. oats and peas, one of the best green feeds; Winter rye is an excellent crop, both for feed and plowing under, and is used heavily for this purpose on the farm. Millet is also a good green feed, but Hungarian is better for hay than any of the others, and is also good feed for horses. However, the corn crop must be our standby, and sweet corn is raised to good advantage. Sell the ears if you have a market, if not feed them.

Several years ago a good profit could be made by retailing milk at five cents per quart, but at present, as conditions now are, this figure should be obtained at wholesale to make any headway whatever. An 18 or 20-quart cow must be fed 12 pounds of union or 10 pounds of heavier grain to keep up the flow. A cow should give 8,000 pounds per year to keep for profit. One cow gave a profit above feed of $173 in a year, another only $32. A cow which produced 12,000 pounds of milk per year cost 1½ cent per quart for feed. One that produced 6,000 per year cost three cents per quart. It was found that $9 per year was about the right figure for depreciation of a good cow. The above remarks contain both truth and common sense, and coming from a successful dairyman who runs his business at a profit and can be considered a successful farmer in the dairy line, he is a safe example to follow for hundreds of other milk producers of New England too many of whom are farming without profit, and consequently without common sense, as if the latter is used profit though perhaps small, must result, and if it does not result it is not common sense to stay in the business. The thing to do is find out if we are making any headway, and if not why not, as many times it is our own fault when we lay it to something else. Knowing our own conditions, studying the system and business ways of any successful person in the same business, may help us stop our leaks, improve our methods and place our balance on the right side of the sheet, and this is the thing we should do if we would continue in the business. A. E. P.

Carpitis.

I have a horse that is lame in the left forward knee, caused by an enlargement of the joint on the front side. The horse has been lame for about two years, sometimes quite lame and then again not very much. He is in good condition and apparently good health. The trouble is supposed to have been caused by either bumping or bruising the knee. Can anything be done to relieve him? B. A. Z.

New York.

There is little hope of relief in such a confirmed case; but we should clip the hair from the joint, tie the horse so that he will be unable to bump the knee and then rub in an ounce of cerate of cantharides. Rub the blister in for 15 minutes. Wash it off in two days and then apply lard daily. Repeat the blister in three or four weeks, if the first one did some good. A. S. A.

Scours.

I have a yearling bull, weaned last Spring. I gave him a good chance last Summer and had been feeding him on cut up corn part of the time, and when that got hard I fed him on cob meal, bran and cottonseed meal. He gets poorer every day; has a swelling under his chin and his bowels are not very good. I have been letting him run on sod, but have put him on dry food now entirely. I had two die last year this same way on another farm. The yearlings that died last year had scours very badly. I had this bull vaccinated last Fall to prevent trouble. J. F. J.

Have the young bull tested with tuberculin as the symptoms suggest tuberculosis. It is more likely, however, that Johne's disease is present, and it too is incurable. The latter disease is spread by manure. To make sure it is present it would be necessary to have microscopic examination made of manure and pinchings or scrapings from the rectum of the affected animal. Arrange to have this done by the experts of the veterinary department of your State agricultural experiment station. Meanwhile keep the animal separate. It may be added that the swelling under the jaw is dropsical and a characteristic symptom of bloodlessness and debility (anemia). A. S. A.

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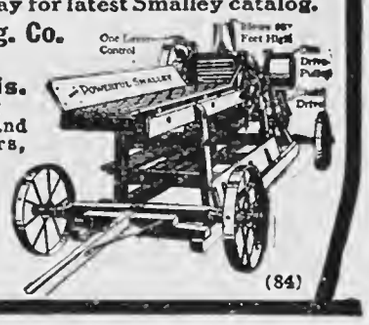
Manufacturers of Ensilage, Alfalfa and Hand Feed Cutters, Combination Ensilage and Snapping Machines, Drag and Circular Saw Machines, Champion Plows, Cob Grinders and Feed Mills.



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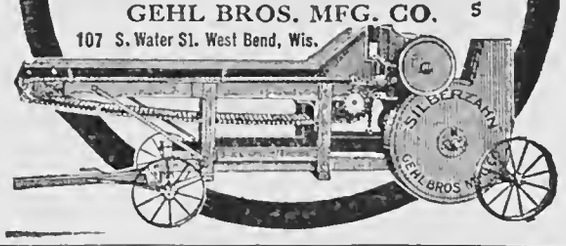

Cut Ensilage With The Light Running "Papec"

A 4 h. p. engine will run "The Wonderful Papec." It cuts and elevates the ensilage in a full steady stream to the top of the highest silo as fast as you can bring the corn to the machine. The

PAPEC PNEUMATIC ENSILAGE CUTTER

is simple in construction—easy to set up and take down—convenient to operate—gear driven—no lost power. Write today for illustrated catalog—sent free.

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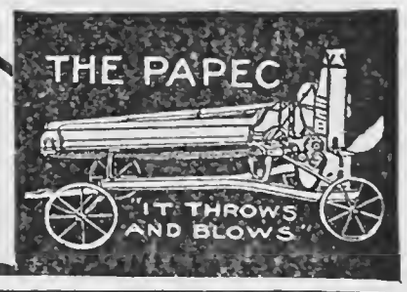
25 Convenient Distributing Points in U. S.



A regular work eater

"I never saw such a hungry thing as the Blizzard," writes a user. "I tried to clog it and couldn't," writes another. The corn will be put in the silo, fast as you can get it to the cutter, if you use a

BLIZZARD Ensilage Cutter

Makes big capacity possible with your regular farm engine of 5 to 12 h. p. No silos too high. Self-feed table. Absolutely safe. Simple, strong, durable. Cuts evenly. Lasts for many years. Write for Blizzard catalog and get all the facts.

The Jos. Dick Mfg. Co., Box 20 Canton, O.

SAFETY FIRST

SAFE SILAGE CUTTERS

GOOD DEALERS SELL THEM
CAREFUL MEN BUY THEM

ALL SIZES EQUIPPED TO SUIT

SEND FOR CATALOGUE

Robinson & Co.,

MONEY MAKER WITH SAFETY YOKE & GUARDS

Solid disk, straight knives—kept sharp—straight shear cut, three bearings, fast feed rolls, quick, fine adjustments, telescope pipe, strong construction.

225 Main St., Richmond, Ind.

The Henyard.

THE EGG-LAYING CONTEST.

THERE is quite a decided drop in egg production during the thirty-first week, the number laid being 3,440—12 dozen less than the previous week. White Leghorns are responsible for most of this loss, their output for the week being 111 eggs less than the week before. But the Leghorns make all the high scores again this week. A. B. Hall of Connecticut, taking first place with a score of 60. Four pens of Leghorns tie for second place with scores of 57 each. They are the Glenview Poultry Farm's pen, Chas. N. St. John's pen, Mrs. K. E. Woodruff's pen and P. G. Platt. Three pens of Leghorns tie for third place. They are Thomas W. Moore's pen, Chas. Heigl's pen, and Geo. A. Cosgrove's pen, each pen scoring 56. Three pens of White Leghorns also tie for fourth place with scores of 55 each. They are N. W. Hendryx's pen, Branford Farm's pen, and the "sour milk" pen from Storrs Agr. Station.

Of all the American breeds only one pen scored 50, or over; and that was Neale Bros. White Wyandottes which scored 52. The week's record is given below:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	47	752
F. L. Tuttle, Massachusetts	40	853
Wayeuy Farm, Connecticut	45	748
J. J. Francais, New York	36	936
White P. Rocks.		
Albert T. Lenzen, Massachusetts	46	860
F. H. Benton, Connecticut	41	872
Storrs Agr. Station, Connecticut	33	678
Storrs Agr. Station, Connecticut	36	721
Storrs Agr. Station, Connecticut	43	839
Storrs Agr. Station, Connecticut	28	720
Storrs Agr. Station, Connecticut	40	518
Buff P. Rocks.		
A. A. Hall, Connecticut	41	848
W. C. Morgan, Jr., Connecticut	35	623
White Wyandottes.		
Tom Barron, England	39	1,305
West Mt. Pltry. Yards, Connecticut	31	779
Merrythought Farm, Connecticut	36	1,117
Neale Bros., Rhode Island	52	1,128
D. J. Ryan & Son, Connecticut	39	889
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	39	859
Dr. N. W. Sanborn, Massachusetts	46	803
Am. Buff Wyandotte Club, New York	22	725
H. L. Hamilton, Connecticut	21	555
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	41	784
S. C. Reds.		
Robert Seaman, New York	32	635
J. S. Gillespie, Connecticut	36	842
Dr. J. C. Dingman, New York	36	744
Burnham Pltry. Farm, Massachusetts	34	632
H. P. Deming, Connecticut	39	736
Geo. P. Dearborn, Florida	28	918
Dr. J. A. Fritchey, Pa.	27	1,013
Ernest Underhill, New Jersey	38	665
W. H. Bumsted, Connecticut	38	480
Pinecrest Orchards, Massachusetts	40	958
Harry B. Cook, Connecticut	43	865
Colonial Farm, New Hampshire	35	870
A. B. Brundage, Connecticut	46	1,008
R. C. Reds.		
Glenview Pltry. Farm, Connecticut	17	847
C. S. Seoville, Connecticut	31	608
White Leghorns.		
Storrs Agr. Station, Connecticut	46	895
Storrs Agr. Station, Connecticut	52	974
Storrs Agr. Station, Connecticut	50	981
Storrs Agr. Station, Connecticut	55	1,228
Storrs Agr. Station, Connecticut	49	841
Braeside Pltry. Farm, Pennsylvania	45	813
Glenview Pltry. Farm, Connecticut	57	882
Manor Poultry Farm, New York	44	861
A. B. Hall, Connecticut	60	883
Marwood Poultry Farm, Pennsylvania	51	983
Geo. M. Harris, Connecticut	44	740
Bonnie Brook Farm, New York	54	940
N. W. Hendryx, Connecticut	55	809
J. J. Linehan, Massachusetts	48	756
F. F. Lincoln, Connecticut	49	1,209
Ceeil Guernsey, New York	45	1,032
T. W. Moore, Connecticut	56	803
C. N. St. John, New York	57	790
C. W. Sherwood, Connecticut	45	857
L. E. Sands, Pennsylvania	44	853
Tomoka Poultry Farm, Connecticut	48	768
Venture Poultry Farm, New York	46	735
Mrs. K. E. Woodruff, Connecticut	57	820
Windsweep Farm, Connecticut	46	753
C. H. Savage, Connecticut	51	820
P. G. Platt, Pennsylvania	57	936
Heneta Bone Co., New Jersey	33	246
F. M. Peasley, Connecticut	46	848
Chas. Heigl, Ohio	56	745
Tom Barron, England	53	1,051
Branford Farm, Connecticut	55	937
James Munn, Massachusetts	49	762
Geo. A. Cosgrove, Connecticut	56	751
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	51	898
Blue Andalusians.		
E. D. Bird, Connecticut	50	734
Buff Orpingtons.		
O. Wilson, W. Virginia	18	639
White Orpingtons.		
P. A. Deugar, New York	29	617
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	27	462
Silver Campines.		
W. J. H. Lobel, New Jersey	45	673
Dunghills.		
H. W. Collingwood, New Jersey	43	602
Daniel Hine, Connecticut	38	664
Daniel Hine, Connecticut	25	748
Mixed Breeds.		
Profitable Poultry, Massachusetts	23	765
Profitable Poultry, Massachusetts	35	751

Total to date, 66,661.

GEO. A. COSGROVE.

THE dull routine of the day in the bank was one day lightened by the receipt of the following communication: "Dear Bank: What interust would you give on a Depossit of 15 dollers? What interust per annium and allso (confidenshial) could my Husband draw it out without my signachure an is it the Law that I would have to have his Permission to Deposit it thare in your Bank. Please to ancer back an be sure to say what interust per annium an if he can draw it out. Yours with respeck."—New York Evening Post.

An "Innocent Purchaser" of Wyandottes.

BEING one of the "innocent purchasers," I think I have a right to enter this Wyandotte discussion. I hold no brief for Tom Barron, simply speak on behalf of fair play. Charges that cannot be proved will surely prove a boomerang.

Why is this rumpus anyhow? We're badly beaten, that's what! We feel bad over it, as we should; but that's no excuse for recriminations. More and worse, we are hoist by our own petard, (with a "furriner" doing the hoisting) for the White Wyandotte is of American origin. We are also again taught a needed lesson in thoroughness by the people of the older countries, and that stings also.

'Tis said the Barron Leghorns show Minorca also. What of it all anyhow? Who's posing either breed as show birds? Isn't it easily possible that Barron in choosing his breeding stock solely by trapnest egg records, chose thereby those having the particular types complained of, and by breeding from such, accentuated them? Wouldn't it be possible to take what are called the "sports" of any made breed, and by using them revert to a bird something like the original parents of the breed? Who is to say what was done in the way of crossing the stock before Barron got them originally? It seems to be a common practice. This fancy shape and feather folderol is about played the limit; we cannot "shape" or sell "feather," except to goops who hope to win, to sell to other goops who hope, etc. Fancy points haven't the slightest intrinsic value; people keep hens for eggs and meat at least 360 days in the year. Witness how few keep peacocks! But if a certain breed of fowls will lay double the ordinary output, that trait has value. Why did I import Barron White Wyandottes? To get a fowl laying heavily, furnishing a fair carcass for dressing to private trade at all stages, and, not least, able to reproduce in strong chicks.

If any American breeder could beat or even equal the record of the Barron White Wyandottes, with any breed, it would be shouted from Sandy Hook to Golden Gate, for anyone knows the value of his stock would be at least tripled, and the demand for them treble tripled. Yea, for the sake of the national honor, let such a one put them where the fact will be officially proven. Besides, a fortune awaits his taking.

Barron's Wyandottes will almost certainly have the greatest profits to their credit, even if beaten as to numbers. My first Barron White Wyandotte chicks, five weeks old, and the younger ones, are very uniform, and exceedingly lively. They resemble their parents as much as chickens possibly could. Every one is rose combed, which I don't recollect ever seeing in even one hatch of American-bred ones. Let those who know declare if these things would be true of the chickens from cross-bred stock. Not if I understand the Mendelian law!

But cheer up, fellers, we take the next trick; the 'boat races are coming and *they cannot lift that bloomin' mug!*

Orange Co., N. Y. LEO A. MAPES.

Shrink in Laying.

I have 11 pullets that began laying in January. They have laid well up to the present, although the yield has dropped off a little in the last two weeks. For some time the droppings have been very soft and in a few cases quite watery. I am feeding about two pounds of scratch feed a day with dry mash in a hopper; grit, shell and charcoal always handy. I feed some green stuff each day. Is the condition described natural, or should food be altered? W. M. B.

Massachusetts.

Most hens have passed the flush of laying and have begun to shrink a little in egg production so it is not strange that yours have done so. The soft droppings may indicate a little excess of green food or of meat in their rations, and unless so marked and persistent as to be evidently due to some inflammatory condition of the digestive tract, it need not cause you concern; should the droppings become green and bloody, however, it would be necessary to take son e remedial action. M. B. D.

Feeding Formula.

I have a flock of 40 hens and about 100 chicks. I feed them a dry mash consisting of 15 pounds wheat middlings; 15 pounds ground oats; 10 pounds gluten; 15 pounds cornmeal; 15 pounds Alfalfa meal; 10 pounds beef scrap. Do you consider this a good formula? If I can add or subtract something from this formula for their benefit I wish to. R. S.

Ohio.

This is a first-rate formula for a mash, though it might be made a little more bulky by the addition of as much wheat bran as there is middlings, and increasing the meat scrap sufficiently to keep the proportion of one-eighth part of the whole. With corn, oats, wheat and perhaps buckwheat as a whole grain ration in addition to the dry mash your little flock should give you good returns and make it well worth your while to give them the attention they need. I take it for granted that they have plenty of fresh water at all times as well as crushed oyster shells and grit. M. B. D.

Baby Chicks

S. C. W. LEGHORNS
R. & S. C. R. I. REDS, B. ROCKS

Thoroughbred, Strong, Livable. From heavy-laying, healthy, free range stock. Safe arrival guaranteed.

WESLEY GRINNELL, Sodus N. Y

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED

Send for catalogue.

DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

MATTITUCK WHITE LEGHORN FARM
CHICKS
GIVE SATISFACTION. TRY THEM. PRICES NOW, FOR IMMEDIATE DELIVERY

April hatched pullets.....60c each
Young's strain.....$ 9 per 100
Young's & Barron's cross.....10 per 100

Safe delivery guaranteed. Catalogue free.

A. H. PENNY, - Mattituck, New York

Single Comb White Leghorns Exclusively

D.W. Young's strain. The finest in the world. Bred or their great Winter-laying qualities. Over 2000 layers on free farm range. Largest plant of high-class breeders in the world at farmers' prices. Eggs for hatching now ready in any quantity @ $6 per 100, $50 per 1000. Quick shipments. Baby chicks $12 per 100—capacity, 8,000 weekly. The kind that live. My book—Profits in Poultry Keeping Solved—5th edition, given free with all $10 orders. Satisfaction Guaranteed. Descriptive circulars free. EDGAR BRIGGS, Box 141, Pleasant Valley, N.Y.

TOM BARRON'S
BEST STRAINS AND HIS
283-282-260-248
EGG STRAINS ARE AT
MORRIS-FARM, R. 4, Bridgeport, Conn.
"GREATEST LAYERS IN AMERICA"
BARRON LEGHORNS AND WYANDOTTES
BUFF ROCKS, REDS, DUCKS, GEESE

MAY and JUNE are pre-eminently the months that nature chooses for egg hatching. It is wise to have hatches late, as the late season makes May and June hatches safe investments. Stock is needed. We offer special our Black Beauty Minorcas, only $1.30 per 50, $5 per 100. Also following breeds at same price: White Leghorns, Brahmas and Reds. Pekin Ducks eggs, 10 for $1.50. Turkeys eggs, 50 cents and $1 each. Ribbons from all big shows. We ship in safe box, Express paid. Poultry Advice mailed free. Send orders at once. Telegraph office at Montgomery. Letters answered by return mail. W. L. Burnett, Prop., Coldenham Poultry Yards, Montgomery, N. Y.

LINCOLN'S LEGHORNS
Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

S. C. W. Leghorn Chicks & Eggs
Purebred, large, vigorous, true Leghorn type. Seven years' experience. Not how many, but how good. Circular. VANCREST POULTRY FARM, Salt Point, New York

S. C. W. Leghorn Chicks
Tom Barron and other heavy laying blood. W. Rock and W.W. Pullets for sale. John Lorton Lee, Carmel, N.Y

CHICKS 8c. C. O. D. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C.M. LAUVER Box 73, Richfield, Pa.

POULTRYMEN, ATTENTION—THE LAYING CONTEST proves our S. C. W. Leghorns are among the foremost. We have dozens of letters telling of the health and vigor of our baby chicks. We can deliver 2,000 weekly during June and July, $10, 100; $90, 1,000. Cash with order; safe delivery guaranteed. A. B. HALL, Wallingford, Conn.

WHITE LEGHORN CHICKS AND EGGS healthy business kind including Barron's strain that grow great layers, delivery guaranteed. For Circular write, HAMILTON FARM, Huntington, New York

S. C. BROWN & WHITE LEGHORNS, Dk. & Lt. BRAHMAS, R. I. REDS, W. Wyandottes & Barred Rocks. Show & Utility quality. Won 76 ribbons this season, including New York & Philadelphia. EGGS, Baby CHICKS, Breeders, Illustrated calalog free. Riverdale Poultry Farm, Riverdale, N. J

MAPLE COVE POULTRY YARDS—The best 14 varieties poultry; 200-egg strain; breeders and eggs. Send 2-cent stamp for illustrated catalogue. Route 24, Athens, Pa.

Parcel Post Egg Boxes—NEW FLATS AND FILLERS. H. K. BRUNNER, 45 Harrison St., New York

LEE'S LICE KILLER, Germozone, Louse Powder, Egg Maker and other Poultry remedies have a successful reputation of twenty years behind them. They have brought success to thousands of Poultry raisers and will to you. Lee's big "New Poultry Book", "Reading Symptoms of Disease" and "Poultry Pointers" free from all Lee's dealers, or write direct. The New Maudy Lee Incubator is a real automatic hatcher. Write for catalogue.
GEO. H. LEE CO., 972 HARNEY ST. OMAHA, NEB.

ORR'S POULTRY FEEDS
DISTINCTIVELY SUPERIOR

We make all our own mixtures, Always Fresh, and ship direct to customers. What is saved thru middlemon we put in extra quality, so send your orders to us. we have been in the feed business over 300 years and at Orr's Mills, since 1857. Square dealing and honest goods. Everything in the poultry feed line made and guaranteed by D. Lincoln Orr.

Send for booklet and prices

WM. ORR & SONS, Box I-R, Orr's Mills, N. Y.

MAKES HENS LAY MORE EGGS

IT INCREASES THE CAPACITY OF GOOD HENS, AND MAKES EVEN A POOR HEN DO HER LEVEL BEST

VIBERT REDS at Reduced Prices

We offer from our famous flock of rose and single comb brilliant red TRAPNESTED RHODE ISLAND REDS, splendid breeders at sharp reductions upon breaking up of some of our heaviest laying pens. This is a rare opportunity to obtain large, vigorous, hen hatched, free range, open front colony house TRAPNESTED STOCK, hens and cockerels. Some rarely fine utility stock. HATCHING EGGS FROM OUR BEST PENS AT ½ PRICE. Fertile eggs the year round. Honorable treatment, prompt shipment, safe delivery, and full value guaranteed.

VIBERT RED FARM, Box 1, Weston, N. J.

INT'L EGG-LAYING CONTEST

COLONIAL REDS WIN over every American entry of the American breeds. Our pen of Reds, single comb, best every American entry of the American breeds, each bird averaged for the year, 194 EGGS. Official record. We offer EGGS FOR HATCHING, from our pedigreed stock that we honestly believe are the strongest-laying lines produced to date. Our mating list will tell you details and prices, and will be sent on application. We promise honorable treatment. We are the breeders that furnish all the birds that the *Youth's Companion* ship out to their subscribers. Shipments made to forty-six States the past year. COLONIAL FARM, Box O, Temple, New Hampshire

Austin's 200 Egg Strain S. C. R. I. Reds

Standard bred: high record stock; red to the skin. Half prices on eggs for hatching. Booked up for season on chicks.
AUSTIN'S POULTRY FARM, Box 17, Centre Harbor, N. H.

R. I. Reds, Indian Runner Ducks

Eggs for hatching. Breeding stock.
Sinclair Smith, 602 5th St., Brooklyn, N. Y.

"They live to lay, The're bred that way"

ROSE COMB REDS. Strong chicks, 10c. Breeding stock, $1 to $2 Universal Rovers, $4.00. HILLVIEW POULTRY FARM, St. Albans, Vt

SPECIAL CLEARANCE SALE OF **S. C. Buff Orpington Breeders** including leading pen this variety at second International Egg-Laying Contest.
CHERRY LANE FARM CO., (Desk B), Oak Hill, West Virginia

THE FARMERS FAVORITE WINTER LAYERS—WHITE ORPINGTON EGGS AND CHICKS. Square Deal Guaranteed Catalogue free. W. R. STEVENS, Culver Road, Lyons, N.Y.

BARRED ROCKS

Eggs—$1 per 15; $3.50 per 100. Baby chicks.
B. H. HENION, - Brockport, New York

"Perfection" Barred Rocks—Every pen headed by prize-winners (Ringlet strain). Eggs, $2 per 15; 3 settings for $5. Utility eggs (free range) $1 per 15. Dr. HAYMAN, Box R 48, Doylestown, Pa

Superior Strains Poultry, Eggs, Fancy Pigeons; large squabbers specialty; Homers wanted. POULTRY-PIGEON FARM, Marietta, Pa.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H.A. SOUDER, Box 29, Sellersville, Pa.

DUCKLINGS, GUINEA CHICKS, LEGHORNS, etc.; hatching eggs all kinds; free circular. Tel. 98-2. F. S. KEITH, EASTON, MASS.

Indian Runner Duck Eggs—$1.25 per 12; $6 per 100, express paid. CRANDALL FARMS, Albion, New York

Indian Runner Duck Eggs

Fawn and white. Valentine's strain. Bred from prize-winning birds. White egg strain. Eggs, $1 per 13. ROBERT K. TWEDDLE, Montgomery, N.Y.

FOR SALE—60 1-year old Indian Runner Ducks. Fawn and white. Harshbarger white egg strain, guaranteed. No Draks. JOHN SCHMITT, Harold Farm, Montgomery, N.Y

Pearl Guinea Eggs THIRTY-FIVE $2
L. O. QUIGLEY, Goshen, Orange Co. N. Y.

HANDY BINDER

JUST the thing for preserving files of THE RURAL NEW-YORKER. Durable and cheap. Sent postpaid for 25 cents.

The Rural New-Yorker,
333 W. 30th St., N. Y. City.

PUBLISHER'S DESK

The attitude of THE R. N.-Y. towards fake ads. is only one of its commendable features. But that alone gives it a place in the very front rank of agricultural papers. By so doing it doubtless safeguards the pocketbooks of thousands who might otherwise be easily caught in the scheming nets of hosts of unprincipled rascals. For usually the most successful of those nets are set in newspapers. Most often it is the seductive advertisements in so-called respectable journals that enable these facile jugglers of other people's money to succeed in getting their hands in the pockets of the unwary. In many cases the most transparent devices for separating people from their cold cash would utterly fail if it was not for the apparent sanction given them by publications. Is there no newspaper standard of ethics? How long will the people support papers that underpin honesty? The fly is the carrier of disease and the cry is "Swat the fly." The mosquito spreads the deadly germ of yellow fever, and we are told to kill or screen him out. And when the newspaper becomes the medium of fraud, the chronicle of dishonesty, the vehicle of deception, the condemnation of the public conscience should fall upon it with frost-killing power. E. P.

Massachusetts.

This correspondent has found the responsible source of deceptive advertising—the publisher. We have pointed this out in print and in speech in public and in private, and no one has ever attempted to deny it, or to excuse the publisher who conspires with crooks to swindle his own customers and friends. I preached this gospel 25 years ago, when no one cared to listen. Everyone listens now, and responsible advertisers are coming to see that they cannot afford to associate with charlatans in the same paper. But the key to the whole situation is in the hands of the people. Refuse to let a paper into your home with an indecent or dishonest advertisement, and you will find the publisher will soon come to your way of thinking. If he does not he will have an early successor who will.

I do not know why I should be specially singled out by foreign lottery people, as I seem to get a copy of literature about once a month from the other side opening up to me an almost certain method of getting hold of any amount of wealth by simply sending from $1 to $5, as the case may be. I am enclosing herewith the latest chance in this line, which you will notice hails from Geneva, Switzerland. If you wish to do so you may give it a passing notice in your column of frauds and swindles. J. B. B.

Michigan.

People receiving these propositions through the mail should carefully preserve the envelope in which the literature is mailed and send it all to the Post Master General, Washington, D. C. This is the simplest way to dispose of it, as the matter is not legally mailable in the United States.

I wish you to help me out on one of the Good Housekeeping Building certificates. In June, 1913, they offered me $13 for it, but since that time they have discontinued to send me the magazine and now they write me they have nothing to do with the certificate, but to show good will offer me five years' subscription for the certificate. I will be satisfied with whatever you think is due on the certificate. If you are unable to adjust it, send the certificate and letters back to me. J. D.

Massachusetts.

This certificate was issued in May, 1908, by Herbert Myrick of Springfield, Mass., through the Phelps Publishing Company. In September of that year Mr. Myrick wrote J. D. telling him that he was then a co-owner in the magnificent building. This statement was untrue. Good Housekeeping Company did not own a single brick in the building referred to or an inch of the ground on which it stood. It never owned any ground or any building. Later on Mr. Myrick sold the magazine, and we understood the Good Housekeeping Company has no assets unless it be some contract or proceeds from the new owners of the magazine. It apparently has no business. It never was anything but a cloak to cover Herbert Myrick's schemes in connection with it and the magazine. As we figured it up there was due on the certificate $18.81. We made a demand on Mr. Myrick for this amount, and it has now been paid. The experience emphasizes again the danger of putting money into schemes promoted by publishers. This certificate was nothing but an acknowledgment for the remittance. As long as a promoter has other schemes to promote settlements may be effected; otherwise the chance of recovery is a matter of speculation with a high probable percentage of loss.

A full blood Guernsey cow—coming seven years; this cow is full blood, but not registered, good, size, splendid udder and teats, easy milker. Fresh last May and bred in July to "Langwater Puritan", the world's record Guernsey bull who is half brother to "Dotty Dimple", the world's record Guernsey cow, with a record under four years of age, of nearly 19000 pounds of milk, or to be exact, 18458.8 pounds milk; 906.89 pounds of butterfat at 3½ years of age. This cow will milk 55 pounds per day when fresh. Notwithstanding the extreme drought and dried up pastures she is milking 36 pounds per day now. She is very persistent milker. Has milked since May 15th; May, 700 pounds; June 1300 pounds; July 1175 pounds; August, 1090 pounds; or 4240 pounds in 3½ months. She will milk from 10000 pounds to 12000 pounds per year with an average fat test of 5.4%. Were this cow registered, I could get from $400 to $500 for her, carrying a calf as she does, of such breeding. If the calf was eligible to registry, it would be worth a great deal. I would like to buy this calf back from you whether it is a bull or a heifer, in case you buy the cow, and will give you $30 for the calf if a heifer, or $20 for it if a bull, to be shipped when two or three weeks old. Price for this cow, crated, f. o. b. $100, or I will sell you this cow for $75 crated f. o. b. but reserve the calf; calf to be shipped back to me by express at my expense when three weeks old. This cow will fill your requirements I am sure. I don't care about selling her, as I think a great deal of her and propose giving her an official test at next freshening. Of the two cows this one is the cheapest by $25. I will take her back off your hands after she freshens next Spring, and if she does not fill your expectations and my recommendations at $100, providing that she must be tuberculin tested before being shipped back. New York does not allow any animal over six months to enter State without an official tuberculin test. Next week is our State Fair week but have a crate on hand and can make prompt shipment.

Memphis, N. Y. G. S. BAGGETT.

The above is description of a cow made by the above named party at the time of the sale of her to Mr. J. R. Trotter of Morgantown, West Virginia. The following April the purchaser, Mr. Trotter, writes to THE R. N.-Y. as follows:

The cow arrived on the 28th of October. She never gave more than 12 pounds in a day and a test made by the Agricultural College of the University about the third day of November showed only 3.5% butterfat. The cow was fresh on March 15th and another test about the first of April showed 2.2% fat in the evening milk and 3% in the morning milk. I then asked Mr. Baggett for shipping directions to return the cow as per agreement.

In the meantime we have had a very unsatisfactory correspondence with Mr. Baggett over the transaction; he was always slow in making reply to our letters and sometimes we were obliged to write him three or four times before he would make reply at all. He finally consented to accept the return of the cow, and Mr. Trotter reshipped her by express. At first Mr. Baggett refused to accept the cow from the express company, because of delay in getting the certificate of the tuberculin test from the State Department. Mr. Baggett finally offered to refund $60 of the purchase price and let Mr. Trotter keep the calf, while it will be noted that in his letter describing the cow to the purchaser he only valued the calf at $20 to $30 at most. For obvious reasons, however, we finally consented to accept the $60, but we have been unable to get the remittance even for this amount. As the case now stands, Mr. Baggett has the cow and Mr. Trotter's $100; besides the purchaser went to the expense of $46.80 for freight charges, etc., to say nothing of the care and feed of the cow, which utterly failed to live up to the representations made for her. Mr. Baggett does not seem to be a member of any breeders' association, or we would be able to ask for an investigation of his methods. We, however, are not through with the case yet. We have placed the matter in the hands of our attorney, and if there is any way to compel Mr. Baggett to live up to his agreements, we propose to compel him to do so. He never advertised in THE R. N.-Y. and never could. Our only interest is particularly to protect this subscriber, and generally to protect the cattle industry. J. J. D.

BUFFALO MARKETS.

Unless there are still frosts there will be a big strawberry crop in the North. The Florida berries are now gone and they are coming from Tennessee. The supply will no doubt increase as soon as they come from Southern Ohio. There has as yet been no low-priced day in the strawberry trade, as is commonly the case. Consumers pay 15 to 28 cents a quart for good fruit, which is considered high. Egg prices have ranged from 13 to 18 cents at wholesale and not going above 23 cents to the consumer. There has been a limited supply of duck eggs offered, their semi-transparent appearance recommending them. They sell at a fourth to a third higher than other eggs. Live turkeys are down to 16 cents and dressed to 23, with fowls 17 to 18 cents on account of much demand for laying hens by non-raising fanciers. Few broilers bring 32 to 35 cents wholesale. Butter and cheese are firm, but there has been no late change in quotations. Best creamery print butter is from 29 cents down wholesale, fair to good crock, 20 to 21 cents. Cheese commands 18 cents for best domestic old and 13 to 14 for new. The consumer gets little that is really good for less than 20 cents. Apples are no longer plenty, but are going out of season and do not command more than $4.50 a barrel for fancy reds. There are still some fine-appearing western apples going at moderate prices, retailing at 15 cents a small measure. Lemon and oranges are a fourth higher than in early Spring. Oranges $2.50 to $3.75 per box; lemons $3 to $6 a box and grapefruit $2 to $3.75. Potatoes will be late, as often they were not planted till June. State grown do not go up, being 85 cents wholesale. There is a good supply of new Bermudas and some Floridas, at $5.25 per barrel, retailing at $2 a bushel. Cabbage is still high, but is in better quality, at $1.25 per arrel. Texas onions are $2.40 per crate; asparagus $1.75 per basket; string beans $1 to $1.75; per hamper; cucumbers 40 cents to $1.25 per dozen; rhubarb 15 cents per dozen bunches; spinach $1.25 per barrel; yellow turnips $2 per barrel; tomatoes $2.25 per carrier. Hay is weak and has declined lately, on account of flush pastures and the prospect of a big crop, best Timothy $15 per ton; No. 2 $13; No. 3 $10. Rye straw $9 a ton; wheat and oat straw $8. All sorts of millfeed are going down, wheat bran being $23.50, having been $25 a month ago. J. W. C.

May 30. The month of May has been unprecedented for the many days that land could not be worked, on account of the many showers and lack of sunshine. The ground has fitted very hard by being packed by the heavy rains. Oats were sown very late and some are not in yet. Corn just planted this week, which is unusual for this section. Late potatoes will follow as fast as work will allow. The prospects for apples are good, being a very good bloom. Bartlett pears are scarce. Sweet cherries are light; sour cherries bloomed heavily. Plums are good while peaches are an entire failure. Spraying is being very thoroughly done this season; some have sprayed three times already. Wheat and Alfalfa are making a very rank growth. Alfalfa will soon do to cut. Wheat $1; oats 40; corn 70; barley 70; potatoes 75 to 80. Wool has advanced since farmers have sold it.

Canandaigua, N. Y. E. T. B.

June 1. Weather dry and hot, no rain for more than three weeks. Pastures drying up; meadows and oat crop ruining for rain. Wheat a fair crop, but would have been better with rain. Prospects good for apples and peaches; cherries and strawberries ripe. Farmers are getting good prices for most products. Good milch cows $50 to $90; beef cattle six to eight cents; hogs eight to 10; horses $100 to $200. Corn $1.05; wheat $1; oats 70; potatoes $1; hay $15. Hens 12; chickens 20; eggs 15; butter 15. Growing corn crop is being kept clean of weeds, some being worked the second time. W. H.

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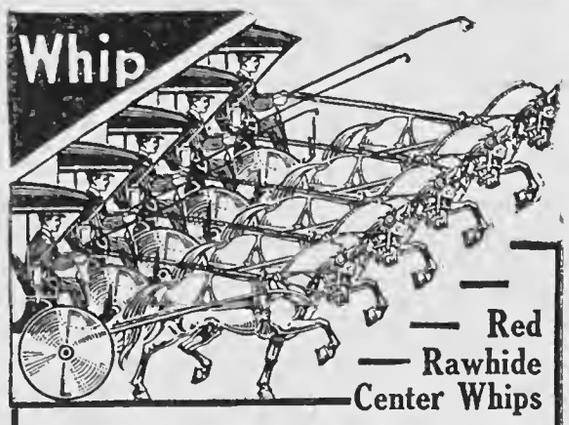

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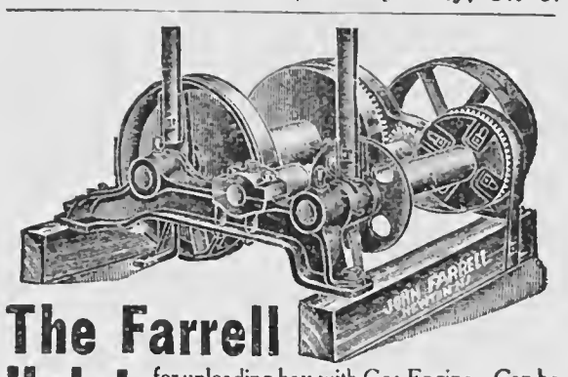

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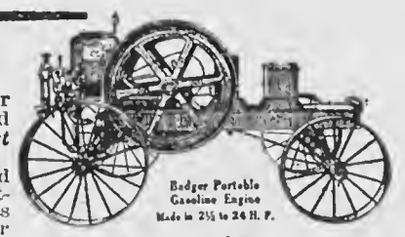

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending June 12, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows; April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4¾ to five cents per quart. The supply for New York trade is increasing, but the demand is good and no special price reductions noted.

BUTTER.

The week has shown a decline and advance and is closing one-half cent under last week's figures, with a fairly firm market. Considerable extra creamery was moved at 26½. Medium and lower grades are accumulating, lower figures evidently being needed to move them.

Creamery, extra, lb	26½	@	27
Good to Choice	23	@	25½
Lower Grades	20	@	22
State Dairy, best	25	@	25½
Common to Good	18	@	23
Factory	16	@	19
Packing Stock	15	@	17½

Elgin, Ill., butter market 25¾ cents.
Philadelphia, western creamery, 27 cents.

CHEESE.

There is a one-cent advance on the better grades of whole milk, and some desirable small sizes sell up to 15¾. The advance has checked trade to some extent but not enough to warrant cutting price on anything desirable.

Whole Milk, new, best	15	@	15½
Common to good	11	@	13
Skims	5	@	10

EGGS.

The market is in decidedly unsettled condition owing to the large proportion of heat-damaged and tested-out stock. The usual hot weather tales of chicks hatched on the way are going the rounds. The candler hears a faint "peep" down in the egg crate, and fishes out a young Legnorn or P. Rock, as the case may be. The writer found one instance of this sort that appeared to be authentic. Nearby fancy eggs are one to two cents higher. In the early part of the flush season, before hot weather begins, buyers who want a good grade are able to get satisfactory supplies from the western gathered stock, but now they run more or less off in quality, so that particular buyers are obliged to take the nearby eggs, and pay the consequent advance.

White, choice to fancy, large	24	@	25
Common to good	20	@	23
Mixed colors, best	22	@	23
Common to good	17	@	20
Western fresh, white	20	@	21
Lower grades	15	@	18

FRESH FRUITS.

The range of available fruits is widening, so that apples are the least desirable of market offerings. Western oranges have been better than last year and fairly reasonable in price, $2.50 to $4 per box. Strawberries continue very plentiful and are low, except for extra choice, free from sand and white ends. Gandy is always at the top when in good condition, and some Chesapeake, from Maryland, have shown up extremely well, selling at a premium. Receipts of cherries were heavy the latter part of the week, a good many going at disappointing prices because of irregular quality. The bell-shaped peach basket, so largely used is one of the poorest packages for cherries that are anywhere near ripe, as the weight on top is sure to crush those near the bottom. Eight-pound grape baskets are much better for this crop.

Apples—Russet, bbl.	2 25	@	3 00
Spy	3 00	@	5 00
Ben Davis	2 50	@	3 00
Newtown	5 00	@	6 00
Baldwin	2 50	@	3 00
Western, box	75	@	2 00
Strawberries, Up-river, qt.	7	@	12
Jersey	6	@	11
Maryland	5	@	10
Cherries, 8lb. bkt.	35	@	50
Peaches, 6-basket crate	2 00	@	3 00
Blackberries, Carolina, qt.	10	@	13
Huckleberries, qt.	8	@	13
Gooseberries, qt.	8	@	10
Muskmelons, Cal., crate	2 50	@	3 00
Watermelons, 100	30 00	@	60 00

BEANS.

Marrow, 100 lbs.	4 25	@	5 10
Medium	3 70	@	3 75
Pea	3 10	@	3 70
Red Kidney	4 75	@	5 80
White Kidney	5 65	@	5 75
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

Prime to choice	37	@	39
Common to good	33	@	36
Pacific Coast	17	@	20
Old stock	15	@	18
German crop	61	@	65

VEGETABLES.

Old potatoes, reasonably sound, are selling 25 cents higher than last week, but at interior markets they are lower, some Maine growers having sold at $1 per barrel to clear out their holdings. The market on new stock is weak, except for the best. Green peas in large supply and low. In commercial culture it is hard to get peas picked right. Of course there should be no empty pods, but over-ripe, whitish pods look worse and are sure to discount the price of the package. The bushel basket, either flat or bell-shaped is a much better package for peas in the pod than the burlap sack commonly used, as the pods get more or less bruised in the sacks and are likely to heat if piled together.

Potatoes—Maine, 180 lbs.	2 50	@	2 75
State, bulk, 180 lbs.	2 37	@	2 62
Bermuda, bbl.	2 00	@	4 25
Southern, new	1 75	@	5 00
Sweet Potatoes, bu.	40	@	1 25
Beets, 100 bunches	1 00	@	3 00
Carrots, bbl.	1 75	@	3 25
Cucumbers, bu.	25	@	1 00
Corn, Southern, 100	1 00	@	4 00
Asparagus, Green, doz.	1 25	@	2 50
White, doz.	1 00	@	1 25
Cabbage, New, bbl. crate	50	@	1 00
Kale, bbl.	25	@	50
Lettuce, half-bbl. basket	15	@	1 00
Onions—Southern, New, bu.	1 50	@	2 50
Okra, bu	2 00	@	3 00
Peppers, Southern, bu.	1 25	@	2 00
Peas, Southern, bu	50	@	1 00
Radishes, 100 bunches	50	@	75
Spinach, bbl.	50	@	75
String Beans, bu.	50	@	2 25
Squash, New, bu.	50	@	1 00
Egg Plants, Southern, bu.	1 00	@	2 00
Tomatoes, Southern, 6 bkt. crate	75	@	1 50

LIVE POULTRY.

Broilers, lb.	32	@	38
Fowls	16	@	17
Roosters	11	@	12
Ducks	13	@	14
Geese	10	@	11

DRESSED POULTRY.

Chickens, choice broilers, lb.	40	@	42
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	16
Ducks, Spring	15	@	16
Geese	9	@	14
Squabs, doz.	1 75	@	4 00

HAY AND STRAW.

No changes in price are noted. Business is dull in medium and low grades of Timothy and clover mixed.

The output of anthracite coal during the first five months of this year was 26,815,663 tons about 2,000,000 tons less than last year.

Hay, Timothy No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 00
No. 3	17 00	@	18 00
Clover mixed	15 00	@	20 50
Straw, Rye	16 00	@	16 50

LIVE STOCK.

Native Steers	6 75	@	8 90
Bulls	5 50	@	7 50
Cows	3 50	@	6 80
Calves, prime veal, 100 lbs.	8 50	@	11 50
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 00
Lambs	9 00	@	9 85
Hogs	8 50	@	8 75

GRAIN.

Wheat, No. 1, Northern Spring	1 03	@	..
No. 2, Red	93	@	..
No. 2, Hard Winter	1 03	@	..
Corn, as to quality, bush.	70	@	80
Oats, as to weight, bush.	43	@	47
Rye	70	@	73

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

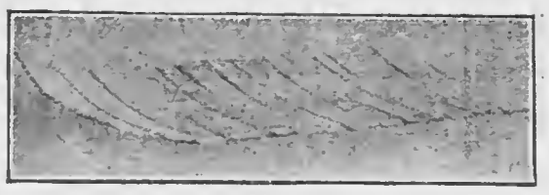
Eggs, fancy white, doz.	35	@	38
Mixed colors, new laid	25	@	30
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

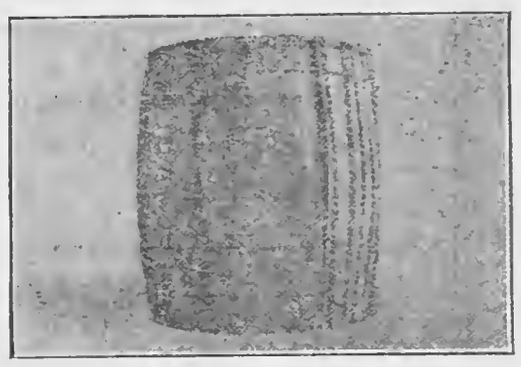
The price of new wool in both the Central States and the West has been on an unexpectedly high basis. From some points of view it seems unduly high as compared with foreign wools of similar grades. During the past month fine wool in Ohio has sold at 26 cents, and medium clips up to 27. In Montana choice wool has brought 21 cents, and 19 to 20 is reported from Texas. There are plenty of lower price prophecies in the near future, but some large holders show no disposition to sell at the present figures, stating that they expect another cent or two advance. W. W. H.

Collapsible Barrel.

THE price of apple barrels has increased so much that comparatively few are thrown away now. They are picked up here and there, and after going through package hospitals, are shipped back to the country for further use. The chief objection to this is the high freight on a package so bulky as an empty barrel. The pictures show a barrel called the Ideal, which can be taken apart and put together quickly, and shipped in knockdown form. Fig. 339 shows a barrel in the flat, wires stapled to the staves holding them in place.



A Barrel In The Flat. Fig. 339.



Ten Barrels Ready For Shipment. Fig 340.

Fig. 340 shows 10 of these flats rolled up for shipment, occupying about the same space as an empty barrel. The heads and hoops go in a separate package. The end hoops are adjustable and readily tightened with a key or wrench.

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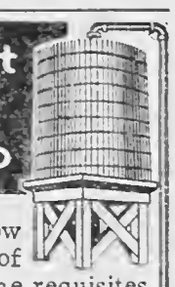

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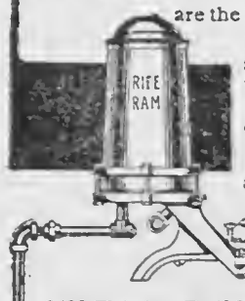

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

I WANT A GOOD HOUSEKEEPER FOR TWO. LEROY L. BOND, South Vernon, Mass.

FARMER, GARDENER, TRUCKER — Married man, one child, wants steady position; strictly temperate. BOX 296, Westwood, N. J.

EXPERIENCED FARMER AND GARDENER wants position; capable of taking charge; would lease if stocked. H. R. GILBERT, New Britain, Conn.

BOY WANTS PERMANENT PLACE ON FARM where he can learn farming; wages no object to start. CHAS. HOELSCHER, 707 Amsterdam Ave., New York.

POSITION WANTED by middle-aged married man, no family, as gardener and caretaker on private place. COMPETENT, care R. N.-Y., 333 West 30th St., N. Y.

WANTED BY JULY 1st or 15th, by sober, steady young man, work on New York fruit farm; wife, one child. E. V. MATTHEWS, Rockville, No. 3, Box 37, Montgomery Co., Md.

YOUNG MAN, single, native New York State, life experience general farming, desires position; farm or poultry work; state wages; give full information. RAYMOND C. WHEELER, Cuba, N. Y. R. D. No. 5.

WANTED SINGLE MAN for general farm work; must be sober and honest; good milker; owner absent all the time; wages $25, board and washing; send reference first letter. PETER MARGOLIN, 569 Broadway, New York.

FARMER WITH LONG EXPERIENCE and efficient manager, open for position to take charge of farm; expert agriculturist, dairyman and fruit grower; men, machinery and tools; American with small family. E. HOWE, Southbridge, Mass.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

HORSES THOROUGHLY AND CAREFULLY broken to saddle for the road or field; distance no object. L. HOWARTH, Mt. Freedom, N. J.

WANTED—Winter Vetch; mammoth, medium and alsike clover; also barley; state quantity, price, and enclose sample. W. A. HENRY & SON, Wallingford, Conn.

VERMONT MAPLE SYRUP @ $1.10 PER GAL. Choice fresh eggs in 30-dozen cases @ 26 cents per dozen. Potatoes in any quantity. JAY T. SMITH, Rupert, Vt.

EARLY RICHMOND CHERRIES—June 25th to July 5th; Morency's, July 5th to 10th; 6 cents pound in baskets; delivered express office. Canned on the farm in 2-pound enameled sanitary cans; syruped, with pits; $1.25 per dozen. SENECA FRUIT FARM, Waterloo, N. Y.

MAPLE SYRUP FOR SALE FROM THE MAPLE Grove; taking a first prize at the Centennial Exposition; guaranteed under the provisions of the Pure Food and Drug Act; in gallon cans, $1.25 for a gallon f.o.b Norwich, B. & M. R. R. Price of 50 gallons on application. GOVE HILL FARM, Donald MacKay, Supt., Thetford Center, Vt.

FOR SALE—Part of my farm, including buildings or whole farm, 36 acres; stock and tools. CHAS. CHRISTENSEN, Shelton, Conn.

IDEAL DUCK AND POULTRY FARM FOR SALE—19½ acres; close to town and railroad; good buildings; total equipment included for $2,800. LEO WILLIS, Cordova, Md.

FINE VILLAGE AND RIVER FARM FOR SALE—Fine house, water, fruit; good barn; keep 25 cows; 1½ miles to depot. BOX 24, Rockland, N. Y.

SMALL FARM FOR SALE—New bungalow, six rooms and bath; one-sixth acre land; part of large fruit farm; 1½ miles from village on trolley. BOX 154, Highland-on-Hudson, Ulster County, N. Y.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

FOR SALE—Fruit and poultry farm; 32 acres; excellent land; good water; cherries, plums, pears and apples for market; fully equipped poultry plant; 10 minutes walk to station; telephone and R. D. GEO. WHITENACK, Skillman, N. J.

FRUIT FARMING OPPORTUNITY—A gentleman wishing to take up fruit farming either as an investment on shares, or to purchase outright, farm near New York, should investigate by writing: FINE FRUITS, care R. N.-Y., 333 West 30th St., New York.

FOR SALE—Farm, 55 acres; nice, light land; 1,000 fruit trees; apple, peach, pear, cherry; new seven-room house; fine poultry and truck farm; large hen-house; good stables; close to school and town; will sell on easy terms if sold quick. CALEB BOGGS & SON, Cheswold, Del.

FOR SALE—330 acres; one-half rich bottom, the remainder half sandy with clay subsoil and other lime; good water, everlasting; 30 miles south of Montgomery, Ala.; half mile from L. & N. R.R.; in high state of cultivation; produced 90 bushels corn per acre; 50 bushels of oats; 1½ bales cotton; 3 to 4 tons cured hay; plenty labor; good stock farm; perfectly healthy. Owner, J. E. BISHOP, Ft. Deposit, Ala.

FOR SALE—The highly developed stock farm, Idle Hour Place, formerly owned by T. H. Russell; 275 acres, near Geneva, Ohio; impressive modern buildings; mansion house completely furnished; combination gentleman's estate and farm; up-to-date equipment; devoted for years to the breeding of Holstein-Friesian cattle. The property stands me over $75,000, but for business reasons must be sold and will take a loss. C. J. SCHEFFREEN, Owner, 1010 Old South Bldg., Boston, Mass.

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HUMOROUS

"Who can describe a caterpillar?" asked the teacher. "I can, teacher," shouted Tommy. "Well, Tommy, wha[t] is it?" "An upholstered worm."—Cred[it] Lost.

First Tramp: "After all, it pay[s] be perlite, pardner." Second T[ramp]: "Not always. The other day I wa[s] deaf and dumb when a man g[ave] sixpence. I says, 'Thank you, si[r]' he had me arrested!"—Credit Lost.

"Paw, what is an efficiency expert?" "An efficiency expert, my dear boy, is a man who is possessed of the idea that he can teach a hen a better way of laying an egg than the way she has been doing it for ages."—Credit Lost.

"Sam, I understand there's a schism in your church," said the jocular man to his colored man-of-all-work. "Kaint be, 'less'n somebody done made us a present of it, 'cause we done spent all ouah money foh a new ohgan."—Livingston Lance.

"Do you try to make home life pleasant for your son?" "Yes," replied Farmer Corntossel. "But it's mighty hard to live up to the refined ways he insists on. I'm annoyin' him terrible because when I'm workin' around the barn I keep forgettin' to refer to the hayloft as the mezzanine floor."—Washington Star.

Little Jimmy had spent his first day at school. "What did you learn?" he was asked on his return home. "Didn't learn anything." "Well what did you do?" "Didn't do anything." "Well, what happened?" "Oh, a woman wanted to know how to spell 'cat,' and I told her."—Detroit Free Press.

"The train struck the man, did it not?" asked the lawyer of the engineer at the trial. "It did, sir," said the engineer. "Was the man on the track, sir?" thundered the lawyer. "On the track?" asked the engineer. "Of course he was. No engineer worthy of his job would run his train into the woods after a man."—Chicago Record.

"Oh, thank you," said a lady to a laborer, who gave her his seat in a crowded car, "thank you very much." "That's all right, mum," was the cheerful rejoinder. As the lady seated herself he added, "Some men niver get up unless a woman's young, an' pretty, but you see, mum, it makes no difference to me."—Melbourne Australasian.

Two Washington youngsters were visiting their father's country place in Virginia. One of them observed: "Marie, I don't see how cows can eat grass. Do you?" Marie considered, and then replied: "I suppose it's like this: When the cows are young, the mother cow keeps saying to her children, 'If you don't eat grass you shan't have any pie.'"—Woman's Journal.

"Yes, sir," said Philip, "I've come to the conclusion that I amount to something after all. There have been times when I was disposed to believe that I was a mere cipher in the world, but I can never have so small an opinion of myself again." "What has caused this sudden change in your estimation of yourself?" "I have just been talking to a man who wants my vote."—Evening Post.

A clergyman was arguing with a friend of his on the desirability of attending church. At last he put the question squarely: "What is your personal reason for not attending?" The gentleman smiled in a quiet way as he replied: "The fact is, one finds so many hypocrites there." Returning the smile, the clergyman said: "Do not let that keep you away; there is always room for one more."—Melbourne Australasian.

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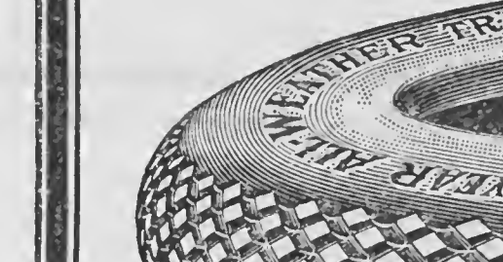

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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WHERE BOYS MAKE GOOD.

A School That Manufactures Manhood.

PART I.

THE BOYS AND THEIR HOME.—It so happened that my visit to the Lincoln Agricultural School, at Lincolndale, New York, which is an adjunct of the Catholic Protectory of New York, under the management of Brother Barnabas, was on the anniversary of the founder of the order of teachers to which Brother Barnabas belongs, and the boys were having a holiday on that account. I identified the school by a 10-acre lot full of boys playing ball. It is one of the best fields on the 600-acre farm, and Brother Barnabas pointed to it after the first salutation, and said, "That is my best crop." My first observation was that there was nothing institutional about the place or the boys. There were no fences, no guards, no uniforms. The boys were dressed after the fashion of their individual tastes, and the only thing that distinguished them from 250 other boys of same age that one would meet in a play field was their uniform alertness, cleanliness and courtesy.

THE BUILDINGS.—There is one main building with two dormitory wings, six cottages; three cow barns and one horse barn. I first went through the clean, well-lighted class-rooms, with individual seats and ample blackboard space. There are several of these where the boys are taught to read, write, spell, and make a living. The instruction is limited to these subjects and Christian Doctrine. Elementary grammar is taught in connection with letter-writing and simple composition.

THE KITCHEN.—As it approached lunch time we went through the kitchen, which was in charge of a chef in white duck. I have been through numerous high-class hotel kitchens, and I am frank to say I never found one that compared with the Lincoln School kitchen in point of order and cleanliness. Brother Barnabas explained that he had had the greatest trouble to find a satisfactory chef. Protest as he would, the cooks would grow careless with boys' food after they had been in the house a fortnight. They would willingly fix up dishes for himself, but insisted that anything was good enough for boys. So the first year there were many changes, and finally the man was found who could respect the rights of a boy.

THE COMMISSARY DEPARTMENT.—I was greatly interested in what at the school is called the commissary department, which includes the kitchen and dining-room work. Boys as a rule do not take kindly to this kind of work, but at Lincolndale service in this important department is assigned as a mark of merit. Only boys of good standing are assigned to it; and all understand the dignity of the position because of the privilege of serving others. It is the Lincoln spirit.

THE DINING-ROOMS.—The dining-rooms in charge of these boys were a delight. There is no general mess hall with long tables with oilcloth covers and backless chairs, as are found usually in such places. The rooms seat about 30 boys. They are light and well aired and steam heated. Small round tables, covered with clean white cloths, seat

THE LINCOLNDALE SCHOOL. BROTHER BARNABAS AND A GROUP OF HIS BOYS. FIG. 340.

four boys on regular dining-room chairs. Every table held a bouquet of wild-flowers. I inquired if this was by order of Brother Barnabas, and I was told no. The department is in charge of one of the high-merit boys, and at his own initiative he provided the flower decoration. They enjoyed the gathering of the flowers, he told me, quite as much as the cheerfulness of them in the room. I learned that there are no favorites and no special tables at Lincolndale. Every teacher, and every visitor, high or low, goes in with the boys, and eats just what the boys eat, nothing more and nothing less. I found myself escorted to one of the dining-rooms and seated courteously by one of the boys. The tasty milk soup was served in soup plates from the kitchen. The fish and vegetables were brought in in large dishes; and one of the boys, with all the plates before him, served the other boys and myself. We had fish, two vegetables, green onions and green radishes, wholesome wheat bread, coffee with milk and sugar, and plain cakes. No butter was served with this meal. We had napkins, silver and plate of the quality usually found in private families of culture and fair means. The boys at my table were probably 12 to 13 years of age. There was not a dull minute during the meal. The boys told me of the fire they had had, of the horses they drive, and their hopes of an auto in the future. They displayed intelligent, general information, and surprised me with their understanding of the Mexican situation and of the causes that led up to it. While frankly and promptly responding to any suggested lead, the boys did not show any anxiety to display their information. They showed reserve without timidity, and ready expression without boldness. I was so charmed with the conversation and deportment of the boys that I forgot my coffee and abandoned the cup half drank when the boys at other tables rose to depart.

THE COTTAGES.—After lunch the boys took me through their cottages. These are arranged to accommodate 30 boys each; but the two connected with the main buildings have two floors, equipped for 30 boys on each floor. Each floor has a large parlor with open fireplace, a large table covered with papers, and a closet of books. The room is provided with comfortable chairs and the walls are decorated with pictures. A corner of the veranda is screened in, and the boys furnish this with a table and chairs in favorable weather. In the sleeping-room each boy has an iron bed, clean and comfortable, and covered with a clean spread. He also has a chair and a chiffonier, in which he keeps his personal belongings, such as comb, brushes, collars, ties, etc. These were provided with locks, but the keys were not used. I marveled that 30 boys could sleep in one room with personal effects and trinkets exposed and find no need for locks. I was told that that was because of the Lincoln spirit. No boy would touch what belonged to another. Here were 30 boys living and sleeping in a cottage by themselves with no monitor, and not a scratch to mar wall or furniture after five years of service. I asked what stayed the hand of the careless or mischievous boy, and was again told, the Lincoln spirit. We went to the basement, where the boys practice indoor sports. The hard floor serves for roller skating, and each boy seems to have a pair of roller skates. The sides of the room are lined wth steel lockers, where the boys keep their skates, their farm clothes, and their baseball suits.

EVIDENCES OF CHARACTER.—During the afternoon the boys donned their uniforms and returned to the ball field determined to make the most of their holiday. I mingled with them. They had the baseball vocabulary and used it freely; but in all that field, with 10 or 12 games all going at one time, I did not hear a single dispute, and no protests against the umpires' decisions. I not only did not hear an oath, but I did not hear a vulgar or offensive expression of any kind. The girls of the female seminary might witness those games and mingle with the players without hearing anything objectionable to their sense of delicacy. To fully understand the significance of this, you must remember that these were boys from the New York streets. Some of them were destitute, with no one to look after them or care for them. Others were delinquents. When they went to the school they were probably no better nor worse than our own children or ourselves might have been under similar environment and like conditions. The future of a destitute or delinquent boy in New York City, if left to himself, is a mere matter of speculation, no matter who were his parents. On the street they learn slang, vulgar and profane speech. They are hunted from place to place, taught craft and deceit. The bold among them are constantly on the defensive; the timid develop a low cunning; and frankness and candor, to say the least, are not characteristic virtues. Disease and hunger and dissipation demand their share of such children when left to themselves. Of those who reach maturity in this environment, the dull would help swell the population of our almshouses, the bright among them would become criminals. There may be exceptions; there probably would be. This is the rule. As a resident of the city I am familiar with these conditions, and for that reason was able to apreciate the transformation of these boys at the Lincoln Agricultural School.

SYSTEM OF MANAGEMENT.—There was nothing to keep the boys from leaving the farm if they choose to do so. I asked my boy escort if they ever ran away. Only three I was told in all the experience of the school. Two came back the same day, and were promptly reinstalled. One tried to come back later, but was not allowed to do so. A place, however, was found for him. I asked my young escort how the new boys got on. "Oh, all right," I was told. "You see, the new boys are put in charge of a merit boy or a 35-boy. Brother Barnabas requests the monitor not to be too strict at first, but to lead the new boys gradually to see that the other boys would not stand for anything but good conduct. They are made to understand that no matter what the past has been, their standing at the school depends on what they do there. Every boy gets a show, and he is advanced in the merit roll as he deserves."

THE MERIT SYSTEM.—I was a little hazy about "35-boys" and "merit roll," and I asked for an explanation.

"Why, it is this way," explained my escort. "Every boy has some merit, so the new boys each get a seven mark. At the end of six months a new boy is permitted to write a letter to the council, asking to be advanced in merit, and giving the reasons why he thinks he should be advanced. If the council thinks he deserves it he is then given 14 points. After another six months, if he maintains his good record, he gets 21; then 28, and finally 35 points, which is the highest merit." If the boy then maintains his record for a year, on the following Lincoln's Birthday he gets a Lincoln diploma and becomes a member of the Lincoln Agricultural Society. Every boy is striving for this distinction. This was all plain enough. The "35-boys" were those who after some years of perseverance had attained the highest degree of merit. But their standing was defined by "the council."

"Does the 'council' mean the Brother teachers?"

"No, the 'council' is made up of the '35-boys.' Brother Barnabas would have the right to change the decision of the council, but he never has occasion to do so, because the boys are constantly in touch with one another, and know the records."

"When a boy is not advanced, does he often complain that he has not been justly treated?"

"No, because the 35-boys responsible for him tell him openly why he is not advanced. The other boys know the reason, too; so the boy knows he is justly rated. But he has a chance to redeem his record the next period." J. J. D.

THIS SOIL NEEDS LIME.

I OWN 50 acres of level bottom land along a river, on which I wish to raise hay crops year after year without rotation with any other crop. My present method of handling it is as follows: After the hay is cut I plow up about one-quarter of the tract each year, cultivate thoroughly, and harrow in about 1,000 pounds per acre of some commercial fertilizer, and seed it down with Timothy and Red-top, mixed. This will give a heavy crop, nearly all Timothy the next season. The second year, there will sometimes be a fair crop of Timothy and Red-top mixed, and sometimes there will be nothing but Red-top, the Timothy apparently having run out with one crop. The third year both Timothy and Red-top have nearly disappeared, and wild grasses and weeds have come in and the tract has a general run-out appearance. The soil is chiefly a black sandy loam of good depth. Is there any way of keeping up this land with commercial fertilizers so it will produce a good crop of good quality hay, for more than two years in succession, without reseeding? I do not have any manure, and cannot get it without buying city manure at $3 per ton. I have tried top-dressing with commercial fertilizer the third year, but could see no benefit from it. Are there any other grasses that will make good hay that would be more permanent than Timothy and Red-top? W. C.
Connecticut.

From your statement it seems to us that the trouble is a very sour soil. We should recommend the use of lime, at least one ton of burned and slaked lime to the acre when seeding down. The fact that the Timothy runs out so quickly, and that the wild grasses and weeds come in, indicates lack of lime as Red-top can stand a reasonably sour soil, while Timothy and clover are almost sure to be driven out of the land. On our own farm this trouble often occurs. We have frequently seeded Timothy and Red-top with a good dressing of fertilizer. The Timothy came in fairly well the first year, but soon died out; the Red-top survived perhaps a couple of years, and then disappeared. By the use of lime we have overcome this objection so that both Timothy and Red-top make a fair stand, and are able to use to advantage an application of fertilizer. We should not attempt seeding with other grasses. Timothy and Red-top are the most available grasses for your section, but you must feed the soil for them, and in your case lime will be necessary. Lime your soil properly and you can easily keep up its fertility for grass growing without the use of stable manure, but unless you use a fair amount of lime under your conditions, the grasses cannot make the proper use of the chemicals.

CLEANING OUT THE FLIES.

I AM anxious to eliminate, so far as possible, the flies from about the barns and house, and am looking for something with which to spray the manure piles and barns in order to kill the maggots. The spray material must be liquid and something that will not affect the fertilizer ingredients of the manure.
Middleport, N. Y. C. C. S.

A mixture of equal parts of acid phosphate and kainit is a good combination for the purpose. It is usually handled dry, scattered over the droppings in the stable, but it can be dissolved in water and used as a spray or put on with a sprinkling pot. These chemicals *repel* the flies, so that the eggs are not freely laid in the manure. The acid phosphate contains phosphoric acid, while the kainit carries potash, both of which go well with the manure as fertilizers. Yet the use of these chemicals will not entirely cure the fly pest, so long as manure piles are left where the flies can get at them. The *sure* plan for a house or hotel is to keep all the manure out of reach of the flies. This can be done by fitting up a shed or room with screened doors and windows so the flies cannot enter. The manure is wheeled into this room frequently and the doors kept shut. This keeps the flies away. While they may lay a few eggs in filth or other kinds of manure, there will not be enough to cause trouble if the manure is sprayed and then kept behind these screened doors. Any stable or manure pile nearby which is not thus protected will breed and supply a great stock of flies. The one thing to remember is that the eggs are laid and hatched in horse manure.

RYE IN A YOUNG ORCHARD.

WHEN I took possession of this place May 1, 1914, I found between apple trees, eight and 12 years old, Fall rye now (May 20) two feet high. I am told by some it would be bad to let it mature. It was put in for the hens (200). As the young trees are looking fine I do not want to set them back. Will the rye be too strong for them? The land is in good shape. I have 1,500 apple and 500 peach trees, and they have practiced the sod mulch system here. The question is what to do with the rye.
New Hampshire. C. C. P.

Our experience has been that one of the worst things you can do is to let a crop like rye go to full head in a young fruit orchard. The damage is much worse, of course, in a dry time than when there is an abundance of moisture, but in a dry season a crop of rye thus maturing will put the young trees back in their growth for at least two years. We have tried this several times, and never found it to fail. The rye is peculiar among grains in its ability to take the moisture out of the ground rapidly after it forms its head. We have now an instance of this ability which has worked out to our advantage. A crop of rye growing on a soggy and poorly drained field has taken the moisture out of the soil so rapidly that we were able to work it two weeks in advance of a field of the same type left bare through the Winter. We should either cut that rye after it forms the head, and rake and pile the material around the trees, or else plow the whole thing directly into the ground. Use a fair quantity of lime, pack the furrows down hard with a roller, and keep the upper surface thoroughly worked until it is fine and open. We should then plant corn between the young trees, or if some poultry food is desired we should plant a combination of buckwheat and clover, late in June, and turn the poultry in when the grain began to form. The rye will not amount to much as a poultry food. The hens are not fond of it, and will not usually eat the whole grain unless they are starved to it, while they will eat the buckwheat readily. If you have stock, and especially cows, the rye can be cut early and cured into hay. It does not make a high-class fodder, but the stock will eat part of it at least, and the remainder can be used for bedding, but at any rate do not let this rye go to maturity among those young trees. Cut it or plow it under as soon as you can. Either pile it around the trees, or cure it as a hay, but at any rate never let it grow beyond the head in a young orchard.

SCIENTIFIC PRODUCTION OF FINE APPLES.

From Plowing to Packing.

PART II.

THINNING.—Size of fruit is also decidedly affected by the amount of fruit borne. Even with the best of culture, pruning and spraying, apple trees frequently set more fruits than they can properly mature. This also is partly responsible for off years in cropping. These difficulties can be greatly reduced by proper thinning of fruit. The production of large numbers of seeds overtaxes the tree and detracts from its ability to produce size. In no case should fruits be allowed to stand closer than four to six inches. The proper time for thinning is during June, or after the usual "June drop." Frequently the removal of dwarfed, gnarled and insect-bitten fruit is sufficient, and hence it becomes a mere matter of sorting. —which is always necessary,—and at the same time enables the tree to produce better fruit as well as develop fruit buds for the next year's crop. Where thinning is necessary it is very seldom that the number of bushels is reduced owing to increased size, and the net returns are invariably increased because of improved quality, more regular crops, and simplified handling.

ADDING FERTILITY.—If the observance of the foregoing does not bring results or is not practicable, some form of fertilization may solve the difficulty. Barnyard manure used at the rate of eight to 12 tons per acre is highly satisfactory, although sometimes color may be reduced, but this is largely overcome by allowing the fruit to hang a little longer. Where manure is not available, commercial fertilizer can be safely used instead, and, in fact, is frequently more economical provided the supply of humus is properly maintained by use of cover-crops or other means. The character of the soil has much to do with systems of fertilization if maximum results are to be had, but this is determined only by local tests. In general, an application of 30 pounds actual nitrogen, 60 pounds actual phosphoric acid, and 25 to 50 pounds actual potash per acre of mature bearing trees seems to come nearest the average requirements. These amounts are approximately supplied by 500 pounds of a 6-10-5 mixture. For younger trees these quantities may be reduced according to the area covered. Where potash is known to be lacking the larger amount should be used, otherwise the smaller amount, according to Bulletin 121, Pennsylvania Experiment Station.

With respect to the application of fertilizer, our experience has been that surface dressings are perfectly satisfactory no matter in what form or under what system of culture they are used. There is no objection, however, to working the manure or fertilizer into the soil. Our system of application is to cover an area extending from within a short distance of the trunk to somewhat beyond the tips of the branches, making it heaviest under the outer two-thirds of the latter. The best time to apply these materials is possibly shortly after the fruit has set, as the rate of application can then be varied to correspond with the size of crop.

COLOR.—Of the many factors involved in producing color maturity and sunlight appear most important. It has been a common impression that anything which tended to produce abundant growth of tree or large size in fruit directly interfered with the production of color. Hence nitrogenous fertilizers were thought to be injurious in this regard and should be used with care. The most recent study, however, tends toward the conclusion that the difficulty is largely due to the lengthening of the season of maturity, and that by allowing the fruit to hang longer the trouble is largely overcome. At the same time excessive growth, particularly with mature bearing trees, from any source should be avoided, as it may not only interfere with color but actually reduce the quantity of fruit. As a matter of fact, however, nitrogen is very frequently a most important need in securing desirable size and yields, and if color should be a little tardy in developing this may be overcome by allowing the fruit to hang longer, by pruning so as to admit more light, and by fitting the system of soil management to these various needs and practices. Sod mulch appears to combine these two characters of yield and color in a very satisfactory manner.

"A CERTIFIED BOY" AT THE LINCOLNDALE SCHOOL.

THE OAK COTTAGE AT LINCOLN AGRICULTURAL SCHOOL. FIG. 342.

SPRAYING.—Excepting mechanical injury the freedom of fruit from blemishes is very largely a matter of spraying. Undoubtedly pruning, location of orchard and general sanitary conditions have a decided influence on insect and fungus troubles, yet we must look to spraying as the surest and most standard means of control. It is difficult to give specific directions for spraying that will fit all cases. One recommendation which comes nearest applying generally is to make one application of lime-sulphur in late Fall or, even better, just before the buds open in Spring. This material is intended primarily for the San José scale, but it has so many benefits in addition that the treatment is regarded by many as an annual "house cleaning," and therefore necessary even in the absence of scale.

The following table of treatments is designed to include the more common insect and fungus troubles of the apple, although it is seldom that these are all combined in a single orchard. In fact, for growers other than those engaged in commercial orcharding, the treatments numbered 1-4 are usually adequate. Where but two applications are possible, as may be true for the home orchard, and where scale is not present, treatments 3 and 4 will possibly be the least amount of spraying permissible, if the fruit is to be marketed or if decent fruit is desired for the home.

GENERAL SPRAY TREATMENT FOR APPLES.

1. Lime-sulphur sp. gr. 1.03 in Winter, or preferably just before buds open in Spring, for scale. For aphids add "black leaf 40" (1 pt. to 100 gal.) and apply when buds show a little green.

2. Lime-sulphur sp. gr. 1.01 when blossoms show pink, for scab. If canker worm or bud moth is present 2 lb. lead arsenate to 50 gal., and if aphids or red bugs, 1 pt. "black leaf 40" to 100 gal.

3. Same as No. 2, with 2 lb. arsenate lead, for curculio and Codling moth. Apply when 80 per cent of petals have fallen. If aphids or red bugs are present give same treatment as above.

4. Repeat No. 3 12 to 15 days later for scab and Codling moth.

5, 6 and 7. Beginning August 1, Bordeaux 3-3-5 every two weeks for bitter rot fruit and leaf spots, with 2 lbs. arsenate of lead to 50 gals. of No. 5 for second brood Codling moth, and if necessary, same quantity of arsenate to 6 and 7 for leaf-eating caterpillars.

There is hope that lime-sulphur may entirely replace Bordeaux and thus avoid the injury (russeting) caused by the latter. So far, however, Bordeaux appears most effective against the bitter rot and the fruit and leaf spots.

PRUNING.—From the standpoint of quality of fruit, pruning should aim at the development of low, open-headed trees, and thus permit of easy and thorough spraying, and admit an abundance of air and sunlight, which are so important in securing high color and freedom from fungus infection. Remember to "Let a little sunshine in."

R. H. BELL.

State College, Pa.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Oiling Tools; Pruning Tomatoes.

WILL you give me a formula for making an oil suitable for using on garden tools to prevent rust in the Winter? I believe this would pay in the longer service the tools would give. Could the same oil be used on guns? 2. Do you think pruning tomatoes would increase their quality to pay for the trouble? If so, please give me an idea of how it should be done. I want to get quality in preference to quantity if I can. H. B.
Memphis, Tenn.

I do not know anything better to preserve tools from rust than the ordinary coal oil product used for axle grease. But for guns you need a finer oil, such as is made and sold for sewing machines.

2. I do not think that pruning tomatoes increases the crop, in fact it rather diminishes it, but increases the quality. By training to single stems on stakes, we can plant closer and get more fruit of good quality from a given area. I plant in my garden tomatoes in rows three feet apart and two feet in the row, and train to a single stem, pinching out all side shoots or suckers that appear in the axils of the leaves, and stopping the plants at about six feet high or sometimes less. Where tomatoes are allowed to tumble on the ground it is almost impossible to keep them from being smothered by the crab grass after they cover the ground, and training to stakes enables us to keep them clean. I start the earliest tomatoes in the greenhouse and transfer to cold frames to get strong, and as these early plants depreciate in midsummer, I sow seed outside in early May to give me the late crop of good quality. These plants are now only a little over two inches high, and will be transplanted anytime in June to give us fruit till frost, and these can be kept clean of crab grass and are let tumble on the ground.

W. F. MASSEY.

Constructing a Root Cellar.

LAYING OUT PLANS.—Where there is a hill about the height one wishes his root cellar it is a very simple proposition, with lots of hard work. Just dig back in the hill the length you want the building, wide enough to admit of laying up the walls. Having dug out space enough build wall of stone, concrete or concrete blocks. If twelve feet wide you can arch over with concrete for roof. To get the form for arch take a one by two inch lath, bore a hole in end, put a half-inch bolt through, stick in the ground on some level place, and 12 feet from bolt bore a small hole a lead pencil will fit in. Lay boards 12 feet long so when moving pencil around it describes a part of a circle. Cut on this line and you have the form of arch. Put false work inside building to support forms, which you will make of sufficient number to support concrete until it gets set. Cover forms with smooth lumber and you are ready for the concrete.

PREPARING CONCRETE.—Mix concrete well, apply four inches over form, then lay strips of woven wire fencing over this, and put on four or more inches concrete, and in two weeks you can remove false work from the inside and later cover the whole structure with dirt removed in making the excavation. By building wall out at entrance and banking dirt in front except at door you will have a root cellar that will not freeze in the severest weather. Of course there are to be two doors, close fitting, one inside, the other a foot or more out, so enter first one, then the other.

BUILDING ABOVE GROUND.—Where one must build above ground it is a harder and more costly proposition. I will endeavor to describe one 12 by 20 feet inside, seven feet high. Digging a trench below frost line start foundation of concrete 20-inch wall to within eight inches of surface; four-inch hollow to surface, set 2x4x9 feet in hollow, two feet center to center. Board up with rough lumber seven feet six inches inside, eight feet outside, both sides covered with tar paper, strips running up and down, set 2x6x7 feet six inches inside boarded up with shiplap, 2x6, spiked across top to center studding, gaining in boarding to let down to seven feet in clear. Sawdust is now packed and tamped between 2x6, putting in a little at a time, dampen a little, tamp thoroughly. Put board floor over top, cover six inches with sawdust, set 2x6x8 feet six inches outside, board up with rough lumber and fill with sawdust as before. Spike two 2x4 on top of each other for plates. Spike 2x6 across building under plates. Lay on another floor and cover with sawdust, both floors; cover with tar paper before putting on sawdust. Proceed to put on roof, using close sheathing and galvanized iron. Put pressed steel brick siding on, and for window two 20x24 sash, gain in, on opposite side of sash set in another glass, one sash on inside of frame, other on outside of frame. Put door of good matched lumber on inside of frame, door of double thickness on outside of frame. A ventilator was put in center of roof, which could be closed in severe weather. If the work is well done it will stand the severest weather without freezing. The important point is to have the hollow wall, sides and top, for no solid wall, though it be two feet thick, will keep out frost. Care must be taken to pack the sawdust well, especially around window and door frame, or it will settle in time, and leave vacancies for the cold to get through, and the sashes with glass on either side are quite necessary in severe climates, using two sashes in the one frame, and the fewer windows the better. JACOB SHULL.
Wisconsin.

Rules of the Road.

IF an automobile comes up behind me have I got to turn to the right or left or can I stay in the wagon track, provided there is room enough to pass without getting his automobile in any out of the way place? 2. How many days is a child obliged to go to school between the ages of 12 and 14 and again between 14 and 16, and what grades must he pass before he is permitted to stay out of school and do labor? J. F. F.
New York.

1. You must turn to the right. You cannot stay in the middle of the road; you must give him half. The laws provide that a motor vehicle meeting any vehicle shall seasonably turn the car to the right of the center of such highway and that on overtaking any such vehicle, the automobile shall pass to the left side and the driver of the vehicle shall turn to the right so as to allow free passage on the left. It also provides that the driver of an automobile must give reasonable warning of its approach and to use every reasonable precaution to insure the safety of the person using the highway, and that the motor vehicle or motor cycle must, on request or on signal by putting up the hand from a person riding, leading or driving a restive horse or other animals, bring their machine to a stop and remain stationary as long as may be reasonable to allow such animals to pass and must also stop their engine when necessary.

2. Every child between eight and 14 years of age in proper and physical condition to attend school shall do so during the entire time that the school in the district shall be in session and so must each child between 14 and 16 years of age, not regularly and lawfully engaged in any useful employment or service. A pupil between the ages of 14 and 16, if he wishes to work, must have a school record certificate certifying that he has attended school regularly during the preceding year and that he is able to read and write, etc., and has completed the work prescribed for the first six years of the public elementary school. M. D.

Sea Crystals.

WHAT are the chemicals used to compose the "sea crystals" sold for use in open fires of logs? When thrown on the fire the crystals give various brilliant colors to the flames, such as are produced by a fire of driftwood.
E. R.

The colors which are noticed in the flames of burning driftwood are due to the presence in the wood of the sea salt. This salt is not pure sodium chloride, but contains also small amounts of calcium salts and potassium salts. The sodium salts give the yellow color, the calcium salts orange, and the potassium salts a sort of violet. Then most ships have much copper work about them, which is acted upon by the sea, forming copper salts, which impregnate the wood to some extent. These salts blaze with a greenish or bluish flame. These colors of flames are distinctive and used in chemical analysis to distinguish the presence of the various substances. Any "sea crystals" which give these various flames must be a mixture of the various substances named above. If you purchase any substances containing calcium, sodium, potassium and copper salts and mix them together you will get the fancied effect. The carbonates are the least desirable, for they do not show up as well in flames of low temperature. Throw a little table salt upon the flames and you will get the yellow color, and possibly, if it is not pure, some of the other colors. The sea salt sold for bathing purposes will give brilliant results. R. P. C.

Reducing Lumpy Fertilizer.

I AM using about four tons nitrate of soda and three tons sulphate of potash yearly and find the breaking up of the lumps quite a problem. These I now sift out with a moulder's riddle, one-quarter inch mesh, throw on mixing floor and scuff out with a pair of heavy shoes. Am looking for an easier and quicker way. Is there any hand-mill on the market which will do this work satisfactory, or some better way? D. A. R.
Florence, Mass.

We have frequently advertised an outfit of mills for crushing chemicals, soft bones and dried hen manure. Such a mill can be made very useful on the farm.

The Letter on the Dime.

WHAT is the significance of a small letter, on some dimes, placed close to the milled edge under the words "One Dime?" What letters are so placed on these coins? E. H.
Glenarm, Md.

Hundreds of letters are received each year by the Treasury Department asking this question. There are so many that a printed slip has been prepared by the U. S. Treasurer:

Coins struck at the Philadelphia Mint have no mint mark; those struck at all other mints of the United States are distinguishable by a small letter near the bottom of the coin. These letters are "C" for Charlotte, N. C., discontinued in 1861; "CC" for Carson City, Nev., discontinued in 1893; "D" for Dahlonega, Ga., discontinued in 1861, and Denver, Colo., since 1906; "O" for New Orleans, La., discontinued July 1, 1911; and "S" for San Francisco, Cal.

A Letter From Mexico.

WE are still alive and feel safe (myself and mother). We had a good surprise about three weeks ago. I had not been going to the post office for some time, and the postmaster stopped me on the street and told me there was a big bundle of mail for me. In the lot were two R. N.-Y.'s; one was only a week old and the other was November, 1913. It was just like hearing from home to get THE R. N.-Y. once more. Since then I have been getting three and four copies a week, some late and some old, but all good to read.

One thing about the paper was that it was not filled up with hair-raising yarns telling of the terrible things that were taking place here, as some of the daily papers were doing that were brought in by the automobiles carrying in guns, etc. We live about two miles out of Victoria and were there through the two-days' battle when the rebels took the town. We were bothered but very little. The rebel soldiers were coming and going from the house all the time, some for something to eat and some for water. All were very nice, all willing to pay for meals that we gave them. Since the fight every week or two someone comes in to see how we are getting along and to let the governor know if we are molested in any way. Things have been very dull here, but the last two weeks lots of the Mexican residents are coming back again. Business houses are being fixed up getting ready for business again. MARK V. JOHNSON.

Want to Know.

ONION SETS.—Will you kindly submit to the readers of your paper the following inquiries? I wish to plant onions for onion sets, and should like to hear from some of the readers the methods employed in planting, care and harvesting. Yellow Strasburg has been suggested as a good variety. R. G. C.

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PROTECTING RIVER BANKS.

REPLYING to request of John Alan Hamilton, Erie Co., N. Y., on page 743, relative to protecting banks of stream, would suggest that he build what we call, up in our Catskill country, a stone and timber "docking." This consists of a layer of water beech brush, butts up stream, saplings about 20 feet long, piled four feet thick, then a layer of rocks and a layer of tree trunks at least two feet in diameter as a backing and rock over it. Docking should run at an angle to stream and if properly constructed, will build up a bar the length of docking. I have built two, one 36 feet long, and one 40 feet long, 10 feet wide. Top of docking should be two feet above high water. I think if this docking was built from the shore to a point just beyond the point of this island, the stream will fill in solidly with sand and grass beyond the end of the docking. This is the way the Dutch do, to make the sea "keep itself out." My dockings cost $25 each. I shall build two more. Our farm is on Neversink River, Sullivan Co., N. Y., and while the Neversink is a limpid and beautiful stream, it is awful when on the rampage and terribly destructive to property.

HENRY C. COUSE.

John Alan Hamilton wants to know how to protect the bank of a stream from washing. Commence at the lower end of the space to be protected, pile brush or small trees, the butts against the bank and the tips extending out into the stream, pointing down stream somewhat. Build up to the top of the bank, then load the brush with large stones, the larger the better, to prevent the brush from washing away. Be sure that the protection extends up stream as far as there is danger of caving, so that the current may not eat in behind the brush and wash it out. It is well also to drive large stakes down through the brush into the earth below. If these stakes are of willow they will take root and afford additional protection. There are miles and miles of this kind of work along the river banks in Vermont. Another way is to place logs of any length in front of the caving bank, notched and built up with short logs reaching back to the banks after the style of a log dam or the side of a block house. The short logs must be loaded with stones to prevent washing away, and the space between the bank and the rampart had better be filled with brush and stones sufficiently at least to prevent any current passing that way. If the gentleman has not plenty of stones for the purpose we Vermonters would be glad to furnish them gratis. E. G. H.

New Haven, Vt.

Stakes and Brush Piling.

EVIDENTLY the cause is higher up the stream, where the opposite bank has been worn to an angle that throws the current against the crumbling bank. The trouble could be remedied by putting a line of sheet piling at the point above to direct the current into the old channel, or a line of the same across the new channel, or still, as a protection in front of the bank that is suffering. This would be an expensive job, and would require a great deal of labor or the rigging of some kind of pile driver. Doubtless this remedy will be recommended. I would suggest the practice of some of the government engineers in treating washes, which is not expensive, and the material is probably at hand:

Drive a line of piling, that is posts say six inches or over in diameter, setting them deeply in the bed of the stream so it would not eat them out, placing them a couple of feet apart, beginning a little above where the crumbling of the bank begins, and carrying them a little below where the worst of it ends, and putting them a couple of feet from the bank. If however there is a deep cut, it would be well to carry the line across it and then put a second line a couple of feet behind the first at that point. I should then cut any small growth of willow, hickory or in fact any kind of similar growth, or even brush, and tie it in bundles and throw it between the bank and the piling, and if rocks are handy after filling the space pile them on top to sink the bundles. If rocks are not at hand, bags filled with sand or pebbles will do as well, but loamy earth should be avoided as it will dissolve out. Should the stream undercut any in the bed, the bundles will sink and fill the place and keep the wash from touching the bank. The piling could be carried more above or below if it is seen the bank is caving at either or both points later. These bundles will never rot so long as they are under water. I believe this would be the most practical method, for it will

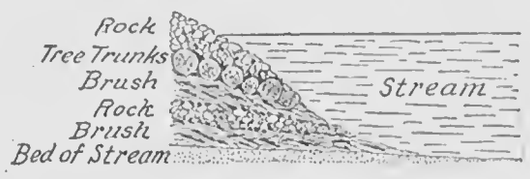

DIAGRAM OF DOCKING.

take the least outlay of cash. I have seen bad washes in gullies stopped by piling loose brush where the wash came down with heavy rains.

Alabama. MARSENA A. PARKER.

The only way Mr. Hamilton can permanently protect the banks of his stream is by straightening the channel and building walls of riprap, masonry or cement along both sides. To be really permanent this should be carried back to both sides of the valley at the upper end. Temporary relief may be secured by the building of concrete or masonry walls on the outside of each curve. This would be permanent if it were not for the fact that the curves of every stream are all the time moving or trying to move down the valley and sooner or later a wide curve is likely to get behind the retaining wall and leave it stranded. In times of freshet this may be done in a few hours and a large outlay of time and money be rendered useless. Retaining walls for this purpose should go well below the stream bed and be built with a flare out at the bottom to prevent the stream from cutting under them and letting them fall over. ALFRED C. WEED.

Wayne County, N. Y.

JACK: "Bridget, did my wife just come in?" Bridget: "No. sir. That's the parrot you hear a-hollering."—Judge.

Clarifying Maple Syrup.

WILL you advise me how to settle maple syrup after boiling down? New York. I. W.

The ordinary household method of clarifying maple syrup is to strain it while hot through muslin cloth and after it has cooled to add a little sweet milk or eggs beaten up. It is then returned to the fire and allowed to come to a boil. As it approaches the boiling point the coagulated albumen of the eggs or milk rises to the top with the finer particles of dirt entangled within it. This is quickly skimmed off, not being allowed to boil into the syrup. The amount to use varies, but will be learned after a trial or two; ordinarily, perhaps, one egg or a half pint of milk will be sufficient for a gallon of syrup. M. B. D.

Acetylene Waste.

FOR illuminating purposes I am using acetylene, until the disposal of the refuse has become a trouble. I saw an article referring to this, but I do not recall just what the directions were for its use on land. Is it advisable to spread this on land which needs lime in its liquid state as it goes from the generator, or must it stand a certain length of time before it is suitable to use on land?

Rochester, N. Y. W. W.

This refuse contains lime and nothing else of any particular fertilizing value. This lime is of about the quality of fine limestone, and is not equal in value to slaked lime. It is not a good plan to use the liquid as it comes from the generator, as this liquid may contain a principle which would injure certain crops. After exposure for a long time, however, this refuse is all right for use. Lime of that character would be most useful on very light soils, on soils that are sour or very heavy clay soil. It may be spread on after plowing and well harrowed or raked in.

SUBURBAN GARDENER: "This 'sure death to bugs' I purchased here doesn't seem to kill the pests at all." Salesman: "Ah! you see, sir, the properties of this preparation are not to kill the bugs at once, but to undermine their constitutions."—New York Evening Post.

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Wrought Iron Pipe—of sound, second-hand quality, with new threads and couplings, 14-foot lengths and up. Also pipe cut to sketch for fences, or drilled for irrigation purposes. We guarantee entire satisfaction or return money. PFAFF & KENDALL, 101 Foundry St., Newark, N. J.

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Reo the Fifth—Mr. Olds' great car—is not built by usual standards. It is built for men who want a super-car.

It is built for years of perfect service—built to withstand abnormal strains. It is built to bring troubles, upkeep and repairs down to the lowest notch.

The driving parts are one-half stronger than necessary. They meet the tests of a 50-horsepower engine. The steel is made to formula. The gears are tested for 75,000 pounds per tooth.

There are 15 roller bearings—190 drop forgings. There is a costly clutch to prevent gear clashing. There is a simple method of shifting gears.

We spend six weeks on each car to get utter exactness, and to properly test each part. No other car in this class was ever built so slowly, so carefully, in such a costly way.

The result soon shows. The parts stand the strains. There is freedom from trouble and repairs. The car stays new. It doesn't grow noisy. When lesser-built cars begin to show their shortcomings, Reo the Fifth shows its staunchness.

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Under normal conditions—on smooth roads—lesser cars may do. But the farmer, on the usual country road, needs a car like this. He needs these margins of safety, this vast over-capacity, this super-strength.

Men are finding this out. Every year, thousands of men who have owned other cars are buying Reo the Fifth. And every buyer tells other men to buy it.

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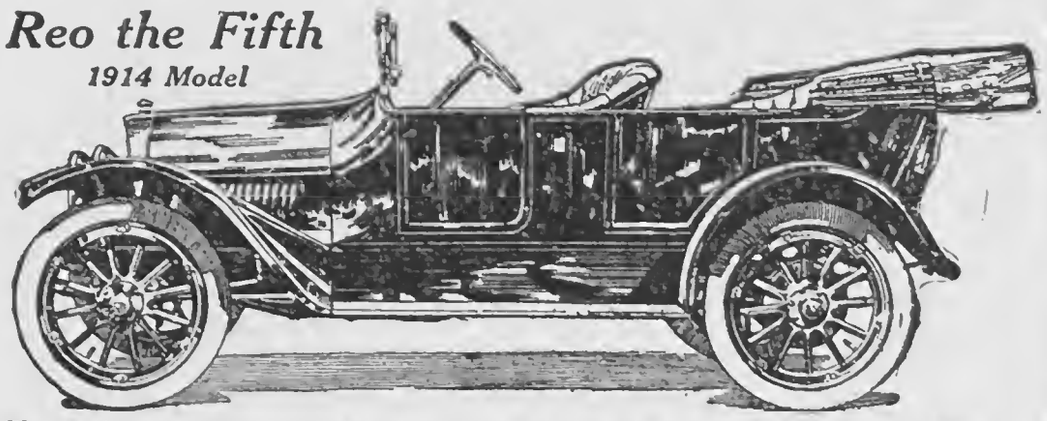
This year comes the new streamline body. There are many new ideas in equipment. The car excels in appearance now as it does in the hidden parts.

And there comes a new price—$220 less than last year with electric starter. So price no longer bars you from the utmost in a car.

A thousand dealers sell Reo the Fifth. Ask for our catalog and address of nearest dealer.

REO MOTOR CAR COMPANY, LANSING, MICH.
Canadian Factory, St. Catharines, Ont. Canadian Price, $1,575

Reo the Fifth
1914 Model



Electric Starter, Electric Lights, Mohair Top with full Side Curtains, Mohair Slip Cover, Clear Vision Ventilating Windshield, Speedometer, Electric Horn, Robe and Foot Rails, Extra Rim and Improved Tire Bracket, Pump, Jack, Complete Tool and Tire Outfit. Streamline Body—One-Rod Control—35 Horsepower—Tires 34 x 4
Also Handsome Roadster Body

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EVENTS OF THE WEEK.

DOMESTIC—The La Salle Street Trust and Savings Bank, of which William Lorimer, who was expelled from the United States Senate, is president suspended business at Chicago June 12, when Daniel V. Harkin, State Bank Examiner, took charge of it, and at the same time of its three subsidiaries—the Broadway State Bank, the Ashland-Twelfth Street Bank and the Illinois State Bank. All were closed pending a report by the examiner. The four banks were known as the Lorimer-Munday chain of banks. The La Salle Street Bank was the main institution, the others being outlying concerns, whose balances and reserves were carried to a great extent by it. Of their deposits, $966,000 consists of city funds. The bulk of this amount, $650,000, is on deposit with the La Salle Street Trust and Savings Bank. The sanitary district of Chicago has $75,000 in the La Salle Street Bank.

The American liner New York was rammed at 3:26 in the morning of June 13 by the Hamburg-American liner Pretoria, eastward bound, in a dense fog about 400 miles east of the Ambrose Channel light. Nobody was injured in the collision. There was no panic among the 655 passengers and crew aboard the New York, 25 of whom were little children, when the impact of the slow moving vessels routed the sleepers from their berths.

Five men are dead and ten are in hospitals with serious injuries as the result of a gas explosion in a trench at Columbus, O., June 14. Five other men also were burned, but only slightly. It is believed that a cap on a joint of gas pipe was blown off while the men were laying the main, and that the escaping gas was ignited by a lighted cigarette.

Adlai E. Stevenson, long a familiar figure in State and National politics, died at Bloomington, Ill., June 13. He was the son of a Scotch farmer in Christian County, Kentucky, where he was born on October 23, 1835, and where he received his early education. When he was 16 his family went to Bloomington, Ill., to live, and there young Stevenson hauled logs, taught school and saved money with which to go to college. Mr. Stevenson was a delegate to the Democratic National Convention of 1884 in Chicago, and after Cleveland's election was appointed First Assistant Postmaster-General. In 1892, during the efforts to bring about Cleveland's renomination. Mr. Stevenson's loyalty to Cleveland and his effectiveness as an organizer led to his nomination as Vice-President, and he was elected. Mr. Stevenson was a nominee for the Vice-Presidency on the ticket with Bryan in 1900, and in 1908 was a candidate for Governor of Illinois, but was defeated by Governor Dineen after a contest in the Legislature.

Steps were taken in the Senate at Washington, June 15, for an official investigation into the exploitation of a North Carolina gold mine through the letterheads of two of the Senate committees. Senator Overman of North Carolina and Senator Chilton of West Virginia, who own stock in the mine, and whose employees are blamed for the use of the Senate stationery, asked for an investigation. Senator Overman introduced a resolution authorizing the employment of a special committee of five senators. The inquiry will include not only the use of the Senate stationery, but also the sending of an employee of the Treasury Department at the Government's expense to the North Carolina property for the purpose of investigating the mine.

The cross-examination of Captain Kendall of the ill-fated Empress of Ireland by C. S. Haight of New York, counsel-in-chief for the owners of the collier Storstad; the statement by Captain Kendall that the Storstad changed her course after the fog had enveloped the two ships, and the counter hypothesis of Mr. Haight that the collier kept straight on, but that the Empress stopped across her bows, were the salient contributions at the first day's session of the official commission's inquiry at Quebec, June 16. Capt. Kendall, answering Mr. Haight, said he dropped his pilot at Father Point, a little more than a mile from the dock. After he sighted the Storstad he changed his course to north 72 east magnetic. When the fog came between the two vessels he stopped. The change would tend to take him nearer to the Storstad. He heard the whistles of the Storstad and thought he could rely upon his opinion that they came from the starboard, because there was no wind. Mr. Haight asked how it was that when he saw the green light of the Storstad and the Empress was showing her a green light he stopped. Captain Kendall said that when he saw the fog coming he thought it his duty to stop as a safeguard. The collier had evidently changed her course.

Mt. Lassen, California, which has been showing volcanic disturbance since May 30, was in active eruption June 14. One man was killed and one seriously injured. The height of the eruption has been reduced, it is believed, by the great enlargement of the crater in the sixth explosion. The entire snow-capped peak has been blanketed with a black covering of ashes. The new eruptions failed to deter scores of persons from scrambling up the mountain, taking pictures and venturing near the smoking craters.

Woman suffrage won a decisive victory in the Illinois Supreme Court June 13, when the court sustained the votes-for-women law passed by the Forty-eighth General Assembly. Judge Dunn wrote the opinion sustaining the law. Justices Vickers, Cartwright and Carter concur. The three Democratic members of the court—Justices Cooke, Farmer and Craig—dissent, the two latter filing dissenting opinions. The opinion of the majority of the court construes the section of the law regarding public policy questions to mean that women can vote only for such questions as are not specified in the constitution.

FARM AND GARDEN.—The United States Forestry Commission has purchased almost the entire Vanderbilt estate, consisting of about 86,700 acres of the Pisgah forest property in North Carolina for $433,851. The property will be turned into a national game preserve.

The twentieth annual convention of the International Apple Shippers' Association will be held at the Copley-Plaza Hotel, Boston, Mass., August 5, 6 and 7. Speakers of national prominence will address the convention and speak at the banquet. Among the subjects that will be discussed are the export problem and ocean transit, storage in transit, transportation, cold storage and general legislation, grading laws, publicity, international tariffs, National Apple Day, etc. The Associated Apple Advertisers of America are also planning to attend. One of the important features of the meeting will be the apple exhibit. Copies of the governing rules, classes and prizes may be had from R. G. Phillips, Secretary, 612 Mercantile Building, Rochester, N. Y.

An international conference of Governments on the protection of birds useful to agriculture was suggested at Paris, June 11, at the final meeting of the International Congress of Plume Dealers. Action was taken to seek to bring pressure to bear upon the various Governments for the calling of such a conference. Resolutions were adopted urging the repeal of the section of the United States tariff act prohibiting the importation of plumage and the similar legislation in Canada, and urging that the proposed legislation of the British Parliament along similar lines be killed.

The Summer meeting of the New Jersey State Horticultural Society will be held at the home of John H. Barclay, near Cranbury, Middlesex County, N. J., July 15. Trolleys will be met at Scott's Corner, about 15 minutes walk from the farm.

The Federal Grand Jury began an investigation June 12 at Chicago into the alleged combination of commission merchants throughout the country to control prices of fruits and vegetables. Criminal prosecution is sought by District Attorney Wilkerson. It was reported that the Attorney General had directed grand jury investigations in New York, Pittsburgh, Kansas City and Denver, as well as Chicago.

OBITUARY.—William T. Bassett, long known and highly esteemed in the nursery business, died at Hammonton, N. J., June 7, in his eighty-ninth year. Mr. Bassett was a native of Ashfield, Mass., and was engaged in general farming until 35 years old. In 1861 he engaged in business in Vineland, N. J., and from there moved to Hammonton, where he began to deal in small fruit plants. This laid the foundation of his extensive business, which, as it extended, included a great variety of flowering plants. He introduced many valuable new plants, including new varieties of Dahlias, which he grew extensively, being a large shipper of this flower to the Philadelphia cut-flower market. Mr. Bassett, who continued active in business until 1910, is survived by two sons, who were associated with him in his firm.

ADMINISTRATION. — The amended bill repealing the tolls exemption clause affecting coastwise shipping of the United States in the Panama Canal Act passed the Senate June 11 by a vote of 50 to 35. Eleven Democrats voted against the repeal, but this loss was more than offset by 13 Republicans who supported the President. As to the actual effects of the legislation, it will subject American coastwise vessels passing through the Panama Canal to tolls of $1.20 per net registered ton, which is the rate charged all other shipping. The opponents of the repeal legislation contend that it will discourage the development of American shipping and will result in an advantage to the transcontinental railroads in the matter of freight movements. It was not so much domestic as international considerations, however, that influenced President Wilson. He found that all the Powers of the world were practically unanimous in the belief that the United States was violating the Hay-Pauncefote treaty, which promised equal treatment to all nations in the use of the Panama Canal.

COMING FARMERS' MEETINGS.

School for Leadership in Country Life, New York State College of Agriculture, Cornell University, Ithaca, New York, June 23 to July 3, 1914.

Summer meeting, Virginia State Horticultural Society, Charlottesville, Va., July 15.

Summer meeting, New Jersey State Horticultural Society, farm of J. H. Barclay, Cranbury, N. J., July 15.

Summer school of agriculture and country life, Massachusetts Agricultural College, Amherst, June 30–July 28.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22-24.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August 5, 6, 7.

39th Annual Convention of the American Poultry Association to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Associations, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

ESTIMATING THE APPLE CROP.

WHAT Mr. Teator has to say on page 819 is timely, and should bring out some new ideas about estimating the apple crop. So far as I am personally concerned the estimates by the Fruit Growers' Association in late years have been of but little value, owing to this "per cent. method" of estimating on a crop. I think some members become confused on this point, and often carelessly put down figures that are mere guesswork. In estimating on a coming crop, why use the word per cent. at all? Along with the other questions let the secretary put these two to each member.

"How many barrels or boxes of apples do you expect to have the coming year?"

"How many barrels did you have last year?"

Then let the secretary publish the summary of these questions and each member could draw his own conclusions as to probable prices to come. Most apple growers of experience can estimate fairly accurate what the coming crop will be. A grower certainly can tell how many he had last year, and if we can get a response from each member this ought to give a fair idea of the coming crop. This association of something over 1,000 members ought to represent 90 per cent. of the important apple producers of the State. If we wished to go a little further we could give a comparative estimate on crops of neighbors not represented in the association. Our own crop this year will be two-thirds lighter than last year, as this is our off year for Greenings.

Seneca Co., N. Y. W. A. BASSETT.

CROP REPORTS.

REPORTS received by the Kansas State Horticultural Society indicate the prospects for the Kansas fruit crop to be as follows: For the State compared with the June prospects for the past five years:

	1914	1913	1912	1911	1910	1909
Apple	53	53	71	33	57	21
Pear	46	40	66	27	31	8
Peach	39	26	53	10	50	3
Plum	42	41	60	36	51	16
Cherry	58	64	70	63	21	26
Grape	68	79	73	69	60	58
Strawberry	53	70	68	37	40	45
Raspberry	69	70	54	46	39	50
Blackberry	67	69	46	54	51	61

June 10. Our products are mostly peaches, raspberries, blackberries, potatoes, sweet potatoes and other fruits and vegetables which go to market later. The weather has been so dry that strawberries were a very short crop, sold for about 10 cents per quart. Cows sell for $50 up. Milk all sold at retail, eight cents per quart. Some are changing their cows for goats for home supply of milk. Horses sell for from $150 to $250. None raised here for sale, but that is what farmers have paid for them.

Hammonton, N. J. M.

June 16. Horses and cows are very high. Calves, live, 10; sheep, live, five cents per pound; lambs, live, $5 to $5.50. Butter 24. Eggs 22. The wheat crop in this section is a failure, some fields not worth harvesting. Oats and corn look well, but need rain badly. Prospects for peaches very good. Apples and pears fair; cherries are selling for $1 to $1.25 per 16-quart basket. Hay crop is short due to the dry weather. J. A. W.

Lebanon, N. J.

WILLIS: "I am organizing a regiment for service in this war that will make them all sit up and take notice." Gillis: "Good men, eh?" Willis: "Regular blood-curdlers. It is composed entirely of men who have been stung on Mexican mining schemes.—Puck.

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Also Moneymaker Silo Fillers, Pumping Outfits, Pneumatic Water Systems, Feed Grinders, Saws, Pulleys, Belting, Shafting, etc. Write NOW for printed matter and information.

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600 ACRES—15-room, two-story house; 4 barns, 40x100; others, 30x40; hen house; hog house; granary; wood house; ice house; 5 miles to fine R.R. town. Fruit; water unsurpassed. Fine stock farm. Great hay and grass. $8,000; part cash. Mexico investment forces sale. Catalogue No. 110. HALL'S FARM AGENCY, Owego, Tioga County, New York

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All parts of the Provinces of Manitoba, Saskatchewan and Alberta, have produced wonderful yields of Wheat, Oats, Barley and Flax. Wheat graded from Contract to No. 1 Hard, weighed heavy and yielded from 20 to 45 bushels per acre; 22 bushels was about the total average. Mixed Farming may be considered fully as profitable an industry as grain raising. The excellent grasses full of nutrition, are the only food required either for beef or dairy purposes. In 1912, at Chicago, Western Canada carried off the Championship for beef steer. Good schools, markets convenient, climate excellent. For the homesteader, the man who wishes to farm extensively, or the investor, Canada offers the biggest opportunity of any place on the continent.

Apply for descriptive literature and reduced railway rates to Superintendent of Immigration, Ottawa, Canada, or to Canadian Government Agent.

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CITY UNEMPLOYED AND FARM HELP.

A Woman's Experience.

I BELIEVE myself to be the pioneer in this work, having operated at Pierpont Manor, Jefferson Co., N. Y., several years, but ill health and moving here among strangers in the hope of bettering it in a somewhat milder climate, has prevented the work for two years. I cooperated with the Joint Application Bureau (C. K. Blatchley), the Immigration Bureau (Mr. Green), the Jewish Association and Brace's Farm School, and the men were sent directly to our farm and either boarded until placed in the particular niche which they seemed the most adapted to, sent direct to the farmer who had advanced the railroad fare, or held until employer could arrive in answer to telephone or card, as the case might be. Every nationality except Italians and Orientals were represented, and they were picked men; no "roughs" or "scurfs" were supposed to be sent to our place, only fine, healthy, honest fellows, but sometimes a man would be sent for the season upon request of friends who wished him sent out of the way of temptation. These, however, never proved satisfactory, for if they were looking for temptation, it could be found readily enough in the country as well as the city. Always they seemed willing and anxious to get to the farm, but out of the hundreds of men, boys and women who were sent to me, only a comparatively few made good. Almost immediately upon their arrival the "wanderlust" seemed to possess them, and with one excuse or another and often with none at all, they would travel on. Some of them returned to me for a better position; in fact they called me—on account of my white hair I suppose—"the good mother," and they seemed to think I could and would look after them as I would a lot of little children. I tried to live up to their expectations, and even now I receive occasionally grateful and appreciative expressions of regard, but it certainly was frightfully trying and no ordinary woman could long endure the strain.

Many of these men, in fact the greater part of them, especially the New Yorker born and bred, only worked long enough to secure a little money, perhaps a month's pay, $15, $20 or $25, according to their competency, and then back to the city they would go, or if foreigners, on to some other city. Syracuse seemed to be the great Mecca. Some went West, but these in many instances, wrote me later, pitiful appeals for "another job East."

My boys—I called them "my boys" even if they were gray-headed—seemed to do much better when placed far apart, and even then they would somehow gravitate together, walking miles to see a "pal" or even a "New Yorker." If he had never seen or heard of him before it did not matter. Then always trouble would be forthcoming, and they would go marching on or beating their way back to the city; anything then seemed better to them than work on a farm. Their excuses were many and varied; too hard work; dearth of amusement; lack of companionship; not enough, or the right kind of food; and the irony of it, they would return to the city to stand in the "bread-line" again.

My experiences, many and varied, were often pathetic or were comedy with these men. Some wished to earn enough to bring their families from "the old country" and were really anxious to work. There were young inexperienced married couples and families of five or six, some with new-born babies. The memory of it is almost appalling, as I recall the work and the responsibility.

I could fill a book with amusing and pathetic experiences. For instance, a fine stalwart young New Yorker was sent to me upon his own request, that he might be free from the temptation of strong drink. He hired to a man who proved a hard master. He then came back to me, and after a few days I placed him with an Englishman upon a rented farm. He stayed faithfully by this kind employer a year; then he hired to another, where he was trusted to drive to town and transact business and one time he failed to return at the usual time. Two days passed, then his employer received a letter from him saying that he could not return; that he had fallen again and there was no hope for such as he, and that the farmer would find his team at a certain farmer shed. What, think you, did this farmer do, let him go? Indeed no; he sought him out and said: "John, come home with me. If you must fight such a temptation, why do it alone? Come and we will try to help you all we can." John came home, and for all I know to the contrary he is still at home at the old place. But this is only one instance out of a hundred. Lack of sympathy between employer and employee seems to be one great trouble.

One young man, a friendless foreigner (Russian), a thoroughly good, wholesome lad, came over to see me every Sunday. He complained that he was lonely, and I knew he craved the sympathy which I unstintedly gave. He said, in his broken English, that he was afraid to eat what he needed; that he knew his employer grudged him his food, and really from a full-blooded, red-faced fleshy boy, he grew or rather wasted to thinness, pallor and a half-frightened man, and fearing a breakdown I was compelled to place him with another farmer whom I knew to be exceptionally kind-hearted. The change was wonderful and in less than a month he was his own bright, jolly self again. All this goes to show that in the close and constant companionship of the farmer and his help, there must, of necessity, be much adjusting of things in general, but as the government has taken hold of this thing in earnest, with the efficient generalship of Governor Glynn, no doubt the good work may be made fairly successful; at least we will keep on hoping that it may.

MRS. F. W. COLE.

Coxsackie, N. Y.

Keeping Summer Boarders.

HUNDREDS of city people come to Dutchess County to spend their Summer vacation. The elevation is high, rising gradually from the Hudson; the highest point is reached at Stissing Mountain, 2,300 feet. The air is dry and healthful, water good, fruit plentiful, and many other attractions bring people here. There are some regular boarding houses, but many prefer the farmhouses.

Does it pay? This depends much on how much you have to hire or buy. I live on a large fruit farm and have taken boarders for 20 years. We do most of the work ourselves and raise fruit, vegetables, poultry, etc. Had there not been some financial benefit, I should have stopped long ago. It is not a get-rich-quick scheme or an easy job, but it gives a good home market for farm produce that you might otherwise not market at all.

While a good boarding place is largely "advertised by its loving friends," if one wishes to make it a business, it pays to advertise. Often it is better to have new people. One season with some guests, is enough. I have had guests from many stations in life; ministers, doctors, trained singers, newspaper men, etc., and I find that those who live the best at home, make the least trouble. In this as elsewhere "familiarity breeds contempt," and while one must be courteous to all, there is need of dignity that refuses to be "trodden on," self-control and an aptitude for meeting various phases of life—even hysterics.

I advertise good country board, and give it in the customary way. Breakfast at eight o'clock consists of fruit, cereals, eggs, milk, coffee and usually some sort of hot breakfast cakes; dinner at one o'clock and supper at six. I find it pays to give good fare and enough of it. It is astonishing how empty some of them are when they come. I know of no vegetable so universally liked as sweet corn. The people not only eat all they can, but carry quantities of it to the city. Some city people think all farmers are ignorant "jays," fit only to wait on them and furnish a mark for their wit (?).

One man who came here said he was surprised to find so much intelligence and refinement in the country. We did not tell him that we were surprised at his lack of them. Discreet silence is sometimes wisest. On the whole, taking Summer boarders has many pleasant features, wakes us up, and keeps us in touch with the busy city life.

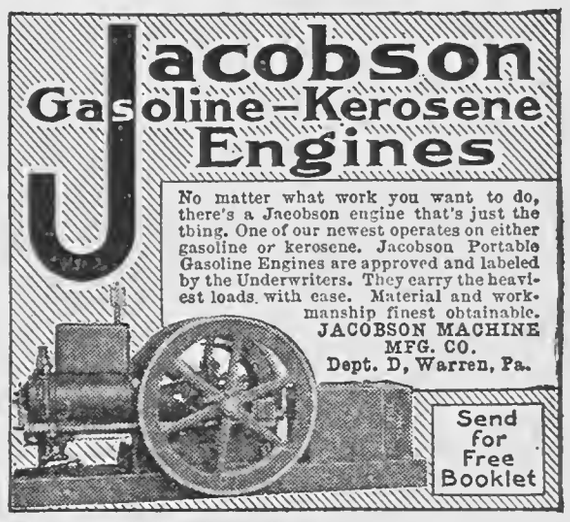
New York. MRS. FLORENCE HOAG.

Know What It Costs.

MUCH has been said about figuring cost of farm products. There are so many things produced on the farm where the price is arbitrarily established by outside and hostile influences, that it is very important that the farmer should make a fair profit wherever possible. There are many cases where farmers and farmers' wives sell for less than cost of production through ignorance of the real cost. In a recent number of THE R. N.-Y., under the head of "Farm Manufactured Foods," are some very useful hints. Think, however, of the harm a woman with the idea that she could make pure fruit jellies at a cost of five cents a glass for a nine-ounce tumbler, might do in a neighborhood where others were trying to help out the family pocketbook by making jellies. We have made from 50 to 100 dozen each season, and we find that a scant seven-ounce glass costs at the farm 10 cents to produce. This is for crab-apple jelly. We sell to the stores in lots of two to six dozen at a time, and find that exclusive of transportation to town they net us about 30 cents a dozen when sold at $1.50 per dozen. We might just as well have got $1.80 a dozen, but foolishly let a neighbor have a few of our tumblers, not understanding that they were to sell any. The result was that they rushed about four dozen in to the local grocers and sold them at $1.50, thereby enabling them to be retailed for 15 cents each. They made rather a poor lot, but being in our tumblers and a small town they established a price which we had to follow. All they ever made was four dozen, but we had to sell several hundred dozen at the price thus established for us. Currant jelly cannot be retailed for less than 20 or 25 cents a glass and show any profit to the maker. Pint jars of piccalilli should net the maker at least 20 cents. We sell considerable quantities of cottage cheese, put up in half-pound packages that retail for 10 cents a package.

C. H.

New Hampshire.



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Hope Farm Notes

HOW ARE THE HOPE FARM SCRUBS?

VERY well, thank you. I used to know an old man who had one reply to questions about his health. "I am able to get from the bed to the stove." Our scrubs seem to be able to get from the nest to the feed box. They started at the tail end of the procession—now there are 12 pens behind them, and they still seem to be climbing. The following table shows what the 10 scrubs did during the 31 days of May:

May Egg-Laying Record.

BIRD	BREEDING	EGGS
No. 1	B. Rock	21
No. 2	W. Leghorn	22
No. 3	B. Rock	23
No. 4	Mongrel	21
No. 5	B. Rock	28
No. 6	Mongrel	25
No. 7	B. Rock	13
No. 8	Mongrel	19
No. 9	W. Leghorn	22
No. 10	W. Leghorn	19

There were also eight eggs laid outside the trap-nests. These cannot be credited to any individual bird, but they make the total for the month 221 eggs.

Now let those gentlemen who laughed so heartily, when I entered these scrubs, let themselves out for a final roar. There are in this contest 82 pens, or 820 birds; 13 pens of "Rocks" of Barred, White and Buff, 10 pens of Wyandottes, 18 pens of Reds, 34 of Leghorns and so on. I have the owners of these birds on record as valuing their pens at from $40 to $100. My scrubs cost a little less than $10. Now, only two pens of Rocks outlaid the scrubs during May. Here is another table carrying food for laughter:

Record for May (31 Days).

	EGGS.
Hope Farm Scrubs	221
Best Barred Rock Pen	224
Best White Rock Pen	223
Best Buff Rock Pen	199
Average of all Rocks	186
Best White Wyandotte	212
Best Buff Wyandotte	195
Tom Barron's Wyandottes	208
Average All Wyandottes	190
Best R. I. Red Pen	218
Average All R. I. Reds	151
Silver Campine	215
Best W. Leghorn	258
Poorest W. Leghorn	106
Average W. Leghorn	220

Now gentlemen, all together, ha! ha! ha! How ridiculously funny these old scrubs or "culls" are. Out of 82 pens they actually stand No. 20 for May. They have beaten Tom Barron's Wyandottes and laid rings around every pen of Reds and Wyandottes in the contest. Out of 33 pens of White Leghorns only 16 beat them.

When it comes to individual records we have another laugh coming. No. 5 of the scrubs laid 28 eggs in 31 days. During the week following this performance she laid six more. Out of 820 birds only three beat No. 5 during May—two Barred Rocks and one Buff Leghorn. This bird was, and is, an undersized pullet with the Barred plumage. Judge Card scored her and gave 83 points! One of the best practical hen men I know told me in March that she would probably never lay an egg, since she was badly affected with "internal parasites"! It looks as if those parasites were eggs! The expert who picked her out of a crate of chickens in the live poultry market said she was a good one. She seemed so scrawny and inferior that I did not have the nerve to put her in the original pen, but sent her as a substitute. One of the original hens died and this one took her place. Thus I came near rejecting the cornerstone of the scrub record. Let us keep an eye on No. 5. No. 6 is still another good one. This bird seems to be a mixture of Red, Brown Leghorn and Wyandotte—just one of those calico birds you see running about the barnyard. The other mongrels show much the same mixture. No. 7 is something of a fizzle. Judge Card scored her at 87½, but her white ear lobes disqualify her as a B. Rock. She may come over yet with the eggs. At any rate this collection of birds has done far better than I ever expected and the end is not yet in sight. Remember, please, that they hardly began to lay before March 1. Some of those other pens were 250 ahead before the scrubs started. That was because my birds were not in good condition. They all had colds and most of them had been starved and mistreated and covered with vermin before we bought them. It required two months at least to get them fit. I have learned that half of the battle in these egg contests is having your birds in good condition, trained up to the day and all ready to start laying. Then they get going early and take a lead. On another trial I would buy pullets in September and train them carefully for two months at least. Of course these scrubs may peter out at any time now and quit laying. I am not bragging about them—simply giving their record. If they never lay another egg I shall find no fault, and I would make no estimate as to their final outcome. What they did in May however is now history. If they were purebred, now we might bank on their record, but for years we have been taught to believe that you cannot depend on a scrub. We will wait,

WHAT ABOUT IT?—I confess that I do not know. One man says it's the feed and care. He claims that a good feeder with scientific knowledge *"can make a wooden Indian lay eggs."* After this May record I am not much inclined to doubt it, but what about this? During this month of May, 11 of these pure blood birds never laid a single egg. I know that some of these zeros are held at $10 each. There were 63 that laid less than 10 eggs during the month. If it is a question of feed, what was the matter with these hens—some of them Leghorns? Then comes the old question of the possibility of selecting laying hens by their shape and appearance. Most poultry men hoot at any such suggestion about using a "system," but what about these scrubs—most of them selected in that way? I did not think it possible to tell from the looks of a hen how many eggs she will lay, but here are birds selected from about as inferior a lot as you can find anywhere! Stephen Francisco, the "certified milk" dairyman, says he can select a good dairy cow by looking at her face! Of course a man like Francisco who has studied thousands of cows comes to know a good one almost at a glance, but when you come to tell a cow's quality by looking her in the face you get it down to a fine point. Yet I think Mr. Francisco can come pretty close to doing it. I now believe that an expert hen man comes to know a laying hen by a sort of instinct, so that he can actually separate the workers from the drones. It seems evident to me that many very fine laying hens are sent to market and sold as meat because the owners are unable to detect them. Evidently some of the so-called experts do not know a laying hen when they meet her. We have evidence of that in the figures of this laying contest. There are a number of these 820 hens that have not yet laid an egg. Others have laid barely a dozen each—even with the care which has made my No. 5 shell out 34 eggs in 36 days! Again, I find that some of the pens have failed because two or three birds proved to be drones. The others are good but their mates fell down. Yet these birds all seem to be of much the same type. One would naturally expect that when a club representing a certain breed entered such a contest the birds would all be of a uniform and standard type, and much alike. Yet here is the May record for three such pens:

	EGGS.
American Buff Wyandotte Club	146
Nat'l Columbian Wyandotte Club	213
White Laced Cornish Club	128

One of these Buff Wyandottes laid 25 eggs while another gave only one. The Columbian Wyandottes varied from 10 to 26, and the Cornish from 0 to 16. Evidently no man can have much of a chance at an egg contest unless he knows how to select a uniform lot of hens without any misfits or drones. In one of the earlier contests a well-known hen man selected a uniform lot of birds as he supposed, but one of the best looking never laid an egg and this of course spoiled his record.

I find that several pens in this contest contain birds which have been bred from pedigreed stock. That is, the egg records of the mother and also of the grandmother on the male side are known. These pens stand well in total number of eggs, but the birds do not lay uniformly as one might expect them to do. It is evident that there are many things about a hen which the so-called wise men do not know. One of the pens of White Wyandottes at the Storrs contest is said to be made up of very high scoring birds very uniform by the "standard." This pen has a rather poor egg record, and while the hens are said to be very uniform in shape and plumage they vary greatly in performance. The most important thing I see about the egg business is for a man to devise some sure scheme for selecting layers, or else he will surely feed robbers and drones. No use talking trap-nest to the busy farmer—he cannot spend the time required to trap his hens.

I am going to find out what there is in egg pedigree in grading up hens. For example, take my No. 5 hen. Suppose I bred her to a cockerel whose mother had a record of 225 eggs in a year. That would be following the advice given dairymen to breed for milk or butter, but what proportion of improved pullets will I get, and how can I pick them out? Some of the experts say this is old—it has all been settled—but the records at these poultry contests tell us a different story. There are several pens valued at $100 or more. The eggs from such a pen would be valued at 50 cents or more each. Yet some of the birds, own sisters at that, may lay only half as many eggs as the others. The performance of my scrubs convinces me that it is possible to go into a flock of 50 hens and select 10 superior layers. I think poultry men, in order to succeed, must have something of this knowledge, for I believe that own sisters or half sisters in a flock of "improved" poultry will vary greatly in natural laying ability.

STRAWBERRIES.—Thus far this has been our best season. The Marshall demands an abundance of moisture. It is a large berry, and unless it can find water it will curl up. This Spring was wet, and the soil filled with moisture. The heavy mulch held this around the plants, and the berries have matured perfectly. They never were better. Some of them are quite as large as Astrachan apples and crimson red in color. Still, I cannot advise Marshall for general planting—in fact would not care to sell a large number of plants to anyone who expected great things from it. We keep on planting the variety because our trade demands it, and our soil seems just suited to it. Joe looks well this year and Chesapeake is an old-time favorite.

What would you recommend to sow for Summer pasture for cows during August, at this elevation (1,500 feet) and climate? How would rape do, and how much to the acre? When sown? I want something to help out my natural Summer pasture. A. O. C.
New York.

Rape will not do for a cow pasture. It gives the milk a "turnipy" taste. It is all right for hogs or beef cattle, but not for cows. I would not try to seed a pasture, but would prepare for soiling the cows. That means cutting green fodder and carrying it to the cattle. There is nothing better in most situations than corn fodder seeded thickly in drills. This makes a heavy crop. It can be cut and fed out in racks in the pasture or hauled to the barn. Japanese millet is another good one; also Soy beans. We usually depend on corn fodder, and it carries us through. H. W. C.

A Question of Land Title.

IN 1903 A sells a piece of woodland to B, who cuts the timber, but neglects to record his deed till 1908. In the meantime, A dies and his son (and executor), C, sells the same piece of land in 1907 to D, who promptly puts his warranty deed therefor on record. In 1914, when B wishes to sell, it is discovered that the same piece of land is on record as belonging to two different parties, B and D. D has paid taxes from 1907. What is the just solution of the tangle?
Massachusetts. H. H. P.

Every deed should be recorded as soon after it is executed as may be possible, and B should have had his deed recorded. D, not knowing that B held the title to the property, and being an innocent purchaser for value and having recorded his deed, is now the rightful owner of the property. Of course, A and his executor C have no right to benefit by the two sales of the same piece of property to different persons and B will have a right of action against C, as executor, for the damage he has sustained by the sale of his property. This takes for granted that D did not know of the sale of the land to B. M. D.

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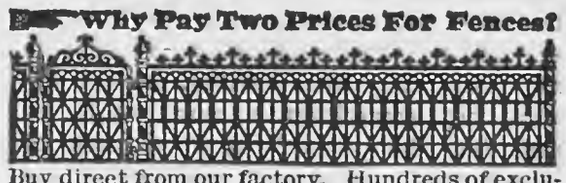

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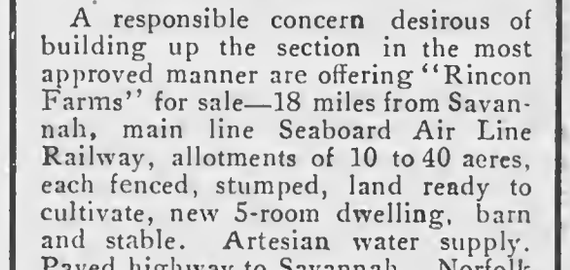

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Ruralisms

Job's Tears.

I PURCHASED a packet of Job's tears, and there were no directions as to planting and culture. Will you give care and culture of same? J. R.
Oregon.

Job's tears, Coix Lacryma-Jobi, is an annual Asiatic grass quite closely related to Indian corn, and may be treated in the same way. It grows two to three feet high, and has a curious nodding inflorescence. It is ordinarily grown for ornament or curiosity, but some of the hill tribes of India use it for grain. The pearly grayish white beads are much used for necklaces and rosaries, and old-fashioned mothers believed these beads had great prophylactic value, enabling a child to cut teeth painlessly.

THE ROSE-CHAFER POISONS CHICKENS.

DURING the month of June, about the blossoming time of the grapevine and garden rose, a long-legged, sprawly beetle of a yellowish brown color, called the rose-chafer or "rose bug" suddenly makes its appearance, and begins to feed upon the blossoms and foliage of the

ROSE CHAFER.

grape, rose, apple, Spiræa, daisy and Deutzia, and a large number of fruit trees and ornamental shrubs. The insect is particularly injurious in New York, New Jersey, Delaware and the New England States. Some years these beetles come in vast numbers, doing great damage to the vineyard, orchard and garden; during other years, while their numbers are not nearly as great, they are sure to be found so numerous that the farmer should learn to recognize them as a menace not only to his trees and shrubs but *to his chickens.*

Three or four years ago a letter was sent to this Station by a New York State poultry raiser saying that they had lost over one hundred chickens and nearly as many ducklings by feeding on some insect. The insect turned out to be the rose-chafer, and the crops of the chickens were full of the beetles. As many as 42 beetles were found in a single crop. Other poultry raisers sent chickens to the Station with rose-chafers filling their crops, and we learned to recognize in these insects what many poultrymen have found a serious menace, for the chickens are attracted to these sprawly, creeping things, and like the boys with their bags of peanuts, they eat on and on until they can eat no more. If the chicken is less than seven weeks old it is usually dead in from 10 to 24 hours after such a meal. If it is alive, however, after the 24 hours are up the chicken gets well in a comparatively short time. Older chickens and old hens are seldom if ever killed by the insects.

The chief reasons that have been advanced as to how these insects cause the death of the chickens were as follows: "crop-bound," but the chickens that are "crop-bound" sometimes live over two weeks; this did not seem to be a good reason. Others said that the sharp spines on the legs of the beetles punctured the crop and killed the chickens, but careful post-mortem examinations gave no proof of this. Some thought that the beetles had fed on leaves that had been sprayed with arsenicals. Beetles were collected away from any sprayed trees soon after they had emerged from the ground, for they pass their larval or "grub stage" in the ground feeding on the roots of grasses, and these beetles were crushed and the juices of the insects mixed with water fed to chickens with a medicine dropper, and it was found that a little less than two teaspoonfuls of this extract would kill chicken after chicken in from 10 to 24 hours. About 60 chickens were killed to prove that rose-chafters are poisonous, and that the amount of poison making a fatal dose depends on the weight of the chicken. The heavier the chicken the more poison necessary to cause its death.

There is a danger in the use of many flowering shrubs in the yards for shade, particularly the grapevines. The rose-chafers stay from four to six weeks, and it is best to keep the chickens away from any of the plants that are attractive to the rose-chafers during the time when they are about. When the beetles are very abundant, the method that is most efficient is hand picking into a can of kerosene. The rose-chafer is very slow to be affected by poisons, and may do great damage, particularly to the blossom, leaves and vines of the grape, before it is killed by the arsenical spray, but within the last few years growers have found that they can successfully control these insects when they are not too numerous by using five pounds of the arsenate of lead and 12 pounds of glucose to a barrel of water. GEO. H. LAMSON, JR.
Connecticut Exp. Station.

The Flavor of Muskmelons.

I HAVE satisfied myself by experiments that if you plant muskmelons close to squash, cucumber or eggplant they do lose flavor. This is apropos to a letter I wrote to you last June. W. T. R.
Ridgefield, Conn.

Growing near eggplant has not commonly been assigned as a cause for loss of quality in muskmelons, though melons have long been thought to hybridize when occasion offers, with squash, cucumber and other related plants, the seedlings from the crosses being naturally of poor edible quality. This idea is widespread, but appears erroneous, as there are no authentic instances of hybrids between muskmelons and other cucurbitaceous plants, though opportunities for cross pollination are endless in nature, and many attempts have been made by investigators in various countries to produce hybrids by artificial means. The writer has made many careful pollinations of muskmelon blooms with cucumber, squash and gourd pollen, using every precaution to exclude other pollen, both in the field and greenhouse, but never secured hybrid fruits. It has been noticed that certain muskmelon types, such as the Casaba and related hard-rinded varieties, are apparently not capable of crossing with other forms, and as they have very largely perfect blooms containing both stigmas and pollen-bearing anthers they may be regarded as practically self-fertilizing. No matter how often the Casaba types are grown near ordinary muskmelons and other cucurbits they appear to preserve their identity. The writer has grown muskmelon selections inter-planted with cucumbers, squash, watermelon and sometimes gourds for 15 consecutive seasons, and has had no falling off in quality, but instead marked improvement over the originals, though there have been some changes of appearance in fruit and vines, probably owing to repeated cross-pollination between the varieties themselves.

There are several well-understood causes for variation of quality in muskmelons even if we exclude contamination with the pollen of related vine fruits, chief of which probably is poor seeds. Even if saved from fruits of the highest flavor we cannot always be certain that the pollen was not from a vine bearing fruits of low quality, if such are growing nearby. Other causes are starvation, over-stimulation from nitrogenous manures, injuries from storms, insects, over crowding, and very commonly in recent years, leaf destruction from the prevalent Alternaria blight, which appears promptly to check sugar formation and render the melons, even of the best varieties, flat and insipid in quality. Thus any factor interfering with the normal development of the plant and fruit may cause loss of flavor aside from the inherited influence of adverse pollen.

Just how the companionship of the egg plant, which is a member of the widely diverse family of the Solanaceæ, can affect the flavor of a muskmelon, is a mystery. Eggplants demand rich soil and high culture, and it may be that the crowding and over-fertilization of the nearby melon has much to do with the lack of quality. Give your muskmelons plenty of space, just enough fertilizer to give the vine a good start—about a shovelful of composted manure to the hill—maintain your "dust mulch" by frequent cultivation, spray for fungus diseases and keep free from insect and crowding vegetation and you will probably have well flavored fruits regardless of nearby squashes and cucumbers, provided your seeds were good to start with.
V.

Asters and Sweet Peas for the Flower Market.

CAN you tell me how to pack sweet peas and asters to ship to Philadelphia and New York City, also could you give us some idea of what price to expect during August and September for good stock? R. W. B.
Schuyler Co., N. Y.

Sweet peas for market are bunched, 12 stalks in a bunch, and six bunches tied together in a bundle. Good clear colors are demanded. Asters are tied in bunches, about a dozen flowers, or flower stalks of the lesser ones, in a bunch. All cut flowers should stand with stems in water, in a cold place, for some hours before shipping. These flowers are not ordinarily iced for shipment in Summer, though roses often require this precaution. The bunches are laid flat in boxes or baskets, paper lined, packed closely enough in regular ranks so that they will not shake about but not jammed so as to cause any bruising, tissue paper being laid over them, any "slack" over the stems of the last rows being taken up with wadded paper. Fine flowers that are being shipped long distances are often held in place by cleats over the stems.

It is quite impossible to tell what the prices may be in August and September. No other line of trade is so uncertain as the flower business. Returns are likely to be better from Asters than sweet peas, as there is quite a steady demand for them, and the up-State Asters are usually very good. They will travel in better condition for long distances, too. June 2 sweet peas, greenhouse grown, were quoted in New York at 10 to 25 cents per dozen bunches, Spencers 25 to 35 cents per dozen bunches. No Asters were quoted at that time. Some extra choice peas went higher than these general quotations.

A FRUIT-GROWERS' OUTING.

THE New York State Fruit Growers' Association is planning one of the most extensive and interesting Summer meetings ever undertaken by an Association of this kind. It is to be a combination of field meeting and pleasure trip. A special train is to leave Rochester at 1 p. m. on July 28th, stopping the first night at Saratoga Springs, there it would pick up a section from the Hudson Valley and the Eastern part of New York. The following day there will be a steamer trip the entire length of Lake George and a trip through Ausable Chasm, reaching Plattsburg for the night. The forenoon of Thursday, July 30th, will be spent on Lake Champlain, with stops at Grand Isle and on the Vermont shore. In the afternoon there will be an automobile trip through this famous orchard section of the Champlain Valley and in the evening a meeting of the Association. That night sleepers will be taken, and in the morning the members will find themselves at the Thousand Islands. Through the forenoon there will be a trip through the Islands and in the evening the company will return to Rochester. This promises to be a great undertaking. The trip is not limited to members of the Association, but their friends may also attend. The Secretary, E. C. Gillette of Penn Yan, N. Y., will upon application furnish full particulars of the trip—a statement of the expenses and all other details. We hope there will be a large attendance from the Eastern part of New York State as a strong discussion of the new apple law and the marketing problem in general will be a part of the program.

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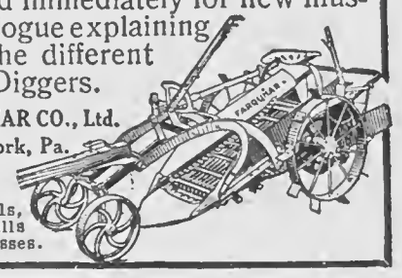

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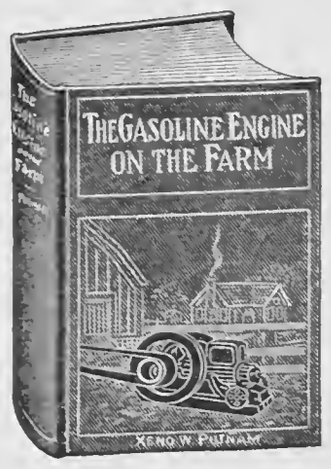

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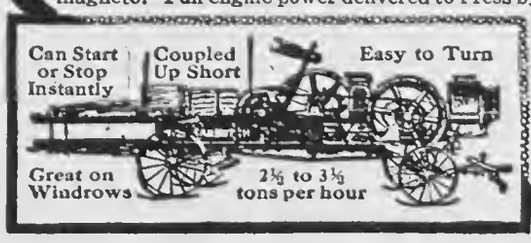

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER
A National Weekly Journal for Country and Suburban Homes
Established 1850

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We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

HERE is a new one from a poultry keeper—a woman at that:

It is recognized that hen people can't tell the exact truth about their fowls even if they try (and most of them don't try). There is something demoralizing about the hen game when it is entered into for big profits.

That may be one reason why the Hope Farm man keeps out of any "contest" where the flocks are kept on separate farms. He might have the utmost confidence in the other fellow too. But can anyone tell us why it is that sober and "esteemed" citizens become such blowhards whenever their hens do anything remarkable at egg-laying?

*

DURING the past few years the smaller types of gasoline engines have found a new use. They were once known as the metal hired man. Now we may also call them the tireless hired girl, for they have found their way into many a farm home to do much of the housework. Posted in some convenient place the tireless hired girl will run the washing machine and wringer, work the vacuum cleaner, play with the dishwasher and scrubber and do other hard jobs without complaining of headache or backache or demanding an "afternoon out." In some farmhouses these little engines have been harnessed to the housework with great ingenuity, and the work they do is even more remarkable than the barn work they have mastered. Many of our women readers are using the tireless hired girl. We would like to arrange with some of them to tell us what this "hired girl" does.

*

I HAVE always given you credit for any success I had, because of your criticism, given so that it encouraged instead of discouraged. C. E.

This note came like a memory out of the past. A young man was trying to write articles and to learn how to express himself clearly. The work was crude, but we thought we saw in it some evidence of power. All we did was to try to show this man that power without some polish would never take firm and lasting hold on the public mind. There are two sorts of criticism. One is destructive. It simply tears down by ridicule or denunciation, and makes no effort to build again on the ruin it has made. Another form of criticism is constructive, while it tears down what seems to be feeble or false it does not destroy the foundation, but suggests a better way to build the new edifice. We think all criticism should be constructive. If a man is not prepared to suggest a better plan than the one he seeks to destroy, he should wait until he can think out a substitute which can stand the test. The world would be far better off if the destructive critic were compelled to give a new and better way before opening his mouth to eat up the old one.

*

WE would call the attention of our women readers to the hen announcement on page 861. The egg-laying contests have already accomplished great things for the poultry industry, and they are sure to do more by helping to establish strains or families of hens which show superior laying power. Since our experience with the "scrubs" we have become convinced that there are to be found, on some of our farms, flocks of very superior poultry. Many of these have been developed by farmers' wives and daughters, who, without claiming to be expert breeders, have produced very superior stock. Now the egg-laying contests offer a method of testing such flocks in a way which no one can criticize. A record made at such a contest will stand unchallenged. These farm women cannot be expected to go to the expense of entering a full pen of birds, and so we will try to do it for them. Our plan is to enter one or more pens—made up of single hens or pullets from a number of different flocks. A woman who wishes to compete will notify us, stating the breed she keeps and a brief history of her flock. We wish, if possible, to confine this contest to women who are not what one may call poultry "experts," "authorities" or advertisers—but those who keep plain farm flocks of good quality. Such women will simply select their favorite hen, send her on at the proper time and we will do the rest. We shall have an article from Mrs. Tom Barron telling how to select the best hen and other articles from Mrs. Woodruff, Mrs. Haynes, Mrs. Cosgrove and others on training and fitting a hen for the contest. THE R. N.-Y. would like to prove that some of these farm flocks are superior layers, and our women readers can help do it and also help themselves into a good business if their hens can make a record. We would like to hear at once from women who wish to test a favorite hen.

*

A COMPANY of rich "sports" came from England to play polo. They brought a herd of fast ponies and an expensive lay-ont for knocking a ball about a field. A company of even richer American sports mounted their ponies and the game was on. Some 50,000 people paid to see these rich playthings of nobility and bank accounts try to hit that ball, while the daily papers printed page after page—for it was a great "society" event. The Englishmen hit the ball harder and straighter, and so England won. Not one American in half a million will ever play polo, and not one of us in 100,000 know what the game is, but it was a "glorious victory" for England—because the papers say so. In truth it was a useless performance which adds nothing to the wealth or comfort of the world; a rich man's idle sport which adds nothing to useful knowledge. Strange how in all departments of life the "fancy" is applauded while utility is ignored. On July 4 another Englishman will start for this country. He is a quiet, useful man who in his line is a master far more deserving of the nation's applause than any nobleman who ever punched a polo pony. This man is Tom Barron, the poultry "wizard," the man who has so gained the confidence of a hen that she has told him more of her secrets than other humans have learned. The man with the useless racehorse or polo pony comes across the Atlantic with bands playing and flags flying. Tom Barron comes unannounced and unrecognized. Yet what Barron has done for poultry will be worth to this nation 100 times as much as all the racehorses and "sports" who ever left England.

*

AT this season we are interested in reading the "baccalaureate" sermons which are preached at the colleges and universities. These sermons are supposed to be the last word of advice to young men and women who, while trained for command, have as yet no company of soldiers to lead. One of the best of these baccalaureate thoughts for this year we find in the sermon by President Hadley of Yale from this text:

"Covet earnestly the best gifts; and yet shew I unto you a more excellent way."

President Hadley spoke on what he called a fair measure of success.

Many a man of 50 whom the world counts successful is in his heart soured and disappointed—unnecessarily soured and disappointed—because at the age of 30 he shut his eyes to the other kinds of success which life had to offer besides professional distinction.

No doubt you can, within the limits of your acquaintance, name a dozen men of whom this may be said. At an age when a man should be mellow and cheerful and wise these men are sour and disappointed because they have lived one-sided lives and cut out sentiment, poetry and the humor of genuine human nature in their rush for the material things of life. We think the world is coming now to view such men with a clearer understanding of what their lives really mean, and why they are sour and unhappy, and that knowledge is one of the most hopeful indications of the future. For many years there ran all through books and lectures and sermons the thought or suggestion that the rich and "strong" man presented the ideal or model for college youth. No one can estimate the moral injury which this false idea has wrought in our public life. The reaction now seems to have set in when young men and women are directed to the sour and disappointed life of the "merchant prince" or the master of finance. As we write it occurs to us to name one man who has given us all a shining example of how to live a broad and consecrated life. That is Brother Barnabas, the head of the Lincolndale school. Here is a man strong and capable enough to have made his way into a high position in finance or business, who has chosen to employ his strength of character and great powers of organization in manufacturing manhood out of material which may have been thrown out and rejected by the social machinery which the captains of industry have built up. This is said to be a dull, prosaic age in which money is made a god, yet it is a hopeful age, with a world of good in it, when there are to be found men like Brother Barnabas and the thousands of men and women who in quiet and humble ways have "chosen that better part" of giving their lives that children may have a chance.

*

PRESIDENT WILSON is reported as saying that the present talk about hard times or fear of the business future is due to psychological influences. We have heard one learned gentleman go a little further and claim that what the President really meant to say was epistemological idealism! Another unlearned friend said these wise men got him out over his head but he understood the President to mean that the American people have been "seeing things at night"—thinking times ought to be "hard" and thus making them so. All the thinkers seem to agree that if our farmers would only feel contented and look for good times, prosperity would surely appear. For instance, President Wilson claims that there is a plot to delay the passage through Congress of what are known as the "trust" bills to regulate big business. In proof he publishes two letters which show that manufacturers and railroad men are trying to induce citizens to write Congressmen urging them to adjourn and let the present laws rest. One of those letters is from a St. Louis manufacturer who gives three reasons for the "psychological" trouble.

The first crop—Winter wheat—is unusually promising. A bumper crop is almost assured beyond any question of doubt—the harvesting of which has already begun in Oklahoma, and will be in full sway in Kansas within a week. The gathering of this crop, when finished, will be an inspiration and encouragement to the whole country. We are very anxious to take full benefit of that inspiration and help to accelerate this forward movement of better conditions.

You see these men all come back to the dear old farmer for their salvation. In time of war he must furnish food and soldiers and pay the largest share of war taxes. In time of peace he must keep up the vitality of the city, feed the nation and give prosperity by selling at what he can get and buying at what the other fellow charges. When it comes to a national attack of epistemological idealism he is expected to produce a bumper crop and give "inspiration and encouragement." The bankers and manufacturers and railroads with all their money and power confess their inability to induce the nation to "cheer up." They all go to the man in boots and overalls whose bumper crop will make everyone better off except himself. We notice that with every new favorable report the price of wheat drops while bread and flour remain the same as before! Now if these monied gentlemen want to give the nation real prosperity why do they not work together to give the farmer a fairer share of what his wheat finally brings? President Wilson quotes from another letter written by a newspaper publisher:

The granting of the petition of the Eastern railroads for a five per cent. freight increase will do more for the prosperity and development of the country than all legislation against unlawful restraint and monopolies.

The railroads are to haul 15 per cent. more wheat than last year and be paid five per cent. more per bushel for doing it while the farmers are to be paid 15 per cent. less per bushel as a penalty for producing a bumper crop! Suppose the farmers instead of the railroads were to receive a five per cent. increase! Every dollar of such increase would be spent promptly for manufactured articles which would start the factories and give employment to workmen. There would be nothing "psychological" about that but the hardest kind of business sense.

BREVITIES.

YOU may be entertaining an angel unawares among your pullets. The Hope Farm man's scrub which laid 34 eggs in 36 days is a discard—sold at about seven cents a pound.

The letter from Mexico on page 852, gives a little idea of the way THE R. N.-Y. family is scattered over the world. No matter where they go or where they live our people are glad to see the paper and glad to help it when they can.

THE Kansas Agricultural College has gone to prison. This means that 95 prisoners in the Federal prison at Fort Leavenworth are taking correspondence courses in agriculture. Let's hope these men will be educated into the true freedom of the farm.

Now the mathematicians are after the housefly. The latest figures from the Wisconsin Agricultural College: "Depending chiefly on the climate, there may be from eight to 14 broods a season, and the progeny of a single female fly, provided they all live, will be 14,067,792,000,000,000." Perhaps Tom Barron has been able to introduce the blood of a laying strain of flies into his Wyandottes!

WOMAN AND HOME

The Patent Churn

How the Agent Was Worked

By Enoch J. Mills

MRS. HAYS was busy with the Monday washing when there came a vigorous knock at the kitchen door. Opening it she faced a well-dressed man, who began talking before she could speak.

"Madam, I'm introducing the great, new, roller-bearing pedal-rocking pat-

A WELL-DRESSED MAN WHO BEGAN TALKING.

ented Royal churn. It works so easy that you don't realize you're working at all. Children quarrel for the fun of churning with it. It makes good butter with all the bother left out. It's sure, absolutely sure—cannot fail; no guessing and no failures with it. Saves over an hour's time every churning and that's about three hours a week—a day every month and nearly two weeks in a year. One week of your valuable time, lady, will pay for the churn; the other week will be your sensible profit."

The man had talked himself out of breath, and Mrs. Hays was speechless through sheer surprise at his volubility. She slowly shook her head; as that form of answer meant more just then than any other she could think of.

"No, no, madam; don't shake your head. You cannot understand what this wonderful new churn means to you poor, tired, over-worked women."

Mrs. Hays tried to speak; held up her hand in distress but the agent talked smoothly on, edging slowly inside the door under cover of his gatling gun conversation. The disorder of the room caught his eye, and he understood the disadvantages of trying to sell anything to a woman when her house is all torn up. Craftily he dropped the churn subject, and turned his attention to the clothes-wringer, which he manipulated skillfully for half an hour.

After he dropped the churn matter Mrs. Hays found him quite pleasant; occasionally he gave a hint about how hard ordinary things ran nowadays and compared them with the easy running Royal churn. While Mrs. Hays busied herself with getting dinner, the agent hung out the clothes, emptied the suds and put away the tubs. Meantime Mr. Hays came in from the field. He found the agent's fund of witty stories quite refreshing—though many of them brought in the new churn and how folks were afraid to take hold of anything new. Near the end of dinner Mrs. Hays admitted that she had the cream saved from Saturday to Monday, and that she had intended to churn it that evening after supper.

Again the agent became useful. This time he was even more at home. With a dairy thermometer he tested the cream, added hot water to bring it up to the proper temperature for churning, worked deftly and kept up a running fire of talk about the wonderful churn at the same time.

"See now; didn't I tell you it was simple? Just three minutes since you brought up the cream and I'm all ready to churn it. Do you mind if I look at this book a few minutes?" Mrs. Hays was surprised that he would stop talking long enough to look at anything, but she gladly gave her consent to his request. Settling himself in a comfortable pose the agent seemed lost in the book. With scarcely a glance at the churn he became absorbed in reading. With one foot he rocked the churn easily by means of the patent pedal arrangement. Through the little glass window at the top of the churn the butter grains showed clearly, and the glass cleared from milk white to a watery color. Mrs. Hays timidly called the agent's attention to the butter.

"What, so soon as all that?" he asked surprised. "Why I'd hardly got started reading. What time did you say it was when I began?" Mrs. Hays admitted that he had been but 11 minutes. At this the agent looked a bit disappointed. "Usually I churn in eight or nine," he said. "But then I got interested in the book and forgot my business." Through a patent, screened drain the agent drew off the buttermilk, leaving the butter collected in conspicuous grains, soft and yellow.

Washing the butter was a simple process, duly explained, because the screen let the water out and kept the butter in. After the washing the butter was ladled into a big wooden bowl and left on the table for working down and salting. The agent carried the churn to the waiting spring wagon by the gate and returned with some papers in his hand.

"Just sign here, Mrs. Hays, will you please." It was more of a command than a request. His tone was full of confidence. Mrs. Hays wiped her hands carefully on her apron and took the paper.

"Sign?" she asked. "What for?"

The agent was hurt. He showed it by his look.

"Most folks," he explained, "are willing to put their names down when they want anything."

"But we don't want anything," she protested, and there was a twinkle in her eyes.

"But madam—the churn, it is a great privilege I'm offering you. Not everyone will have the opportunity of getting one; the factory is nearly a year behind in its orders now. Only yesterday I got a letter from the manager saying that after this week we'd take no more orders for six months or so." He searched in vain for this letter. When he looked up Mrs. Hays was smiling understandingly.

"Now, Mrs. Hays, I don't want you behind times and have your neighbors talking about you. Just to show you that I'm sincere in the matter—" he lowered his voice and looked around, "I'm going to write the manager that you folks have been kind to me and ask him to ship you a churn freight paid; so that way it'll cost you only eight forty-five instead of what the others pay. I'll ask him to pick out the churn himself and you'll be sure to get a good one—not but what they're all good, but you know, sometimes, one's a wee bit better than the rest."

"Will next week be time enough for delivery?" Mrs. Hays shook her head decisively. "Then I'll wire the manager to ship yours right away by express, as a special favor to me."

"I guess we'll wait until the factory isn't so rushed," said Mrs. Hays and she entered the kitchen, quickly closing the door behind her.

"OFF CAME THE CHURN LID."

For a moment the agent looked disappointedly at the closed door. Then he glanced at his watch as though suddenly remembering something of importance, and drove hastily down the road.

Late Tuesday evening, just as Mrs. Hays was serving some invited neighbors supper on the lawn, the agent stopped at the gate. "I beg a thousand pardons, ladies and gentlemen, for interrupting, but my horse has gone lame and give clear out. I haven't the heart to drive him into town tonight. Thought maybe you folks would keep me overnight."

The agent's horse was truly lame; Mrs. Hays had noticed that the day before. Besides they were accommodating neighbors, and rarely refused anything reasonable to anyone.

Mr. Hays rose from the table. "Drive around to the barn," he called, "and I'll help put up your horse." Meekly the agent bowed and turned his tired horse in at the gate. Two of the neighbor men followed to the barn. From them the agent learned that it was the Hays' fifteenth wedding anniversary that was being celebrated by the supper. Further he learned that the neighbors had presented Mr. and Mrs. Hays a set of water glasses and a pitcher to match.

The agent was visibly disappointed. "What," said he, "give such fine folks a small thing like that?" The neighbors had not thought of it in that way and really felt a bit queer. "Why not all of us chip in and get them something handsome?" He was confidential now. Mr. Hays was just inside the barn and might hear. Cleverly he manipulated the conversation so that each neighbor was afraid to offer an objection for fear of being placed in the light of being opposed to giving his neighbors a decent present. "I'll throw off my profit on it—" Here one of the men interrupted to ask what it was they were to give. The agent told them in low tones. From the back kitchen window Mrs. Hays had watched the agent talking to her neighbors, and from their actions she suspected what was being said.

The agent was delighted. On the way to the house he suggested that he would show off the churn to the company. Then, when the proper climax came, one of the neighbors was to rise and present the churn. The agent planned it all. The two neighbors were ominously silent. The company seated themselves at the table out in the yard, the agent modestly refusing to sit down with them. Said he had something he wanted to show them.

Mrs. Hays had gone into the kitchen for the last of the hot things for the table before sitting down herself. At the door the agent met her and said something in an undertone. Mrs. Hays listened and when he had finished, she nodded.

The churn was placed where it would show to advantage a few feet from the table, and the agent carried the big jar from the cellar with a flourish. To anyone who would listen he explained the workings of the churn as he prepared the cream. Making sure of the temperature and testing the lid to see that it was down tight, he drew out of his pocket a worn paper, hitched forward an abandoned rocking chair and settled himself in a very unconcerned pose. He looked as much at ease as though churning was the most delightful thing in all the world.

Mrs. Hays whispered something to the neighbor who sat next her at the table. The man smothered a laugh and glanced quickly toward the agent, who sat calmly rocking and reading, and pedaling steadily away. Ten, 15, 20 minutes passed. A half hour. Still the agent was apparently absorbed in his paper. Frequently he cast furtive glances at the churn but never once lowered the paper.

"Say, Mr. Churn man," drawled the neighbor who sat next Mrs. Hays, "how long does it take that new fangled churn to do business, anyhow?" The agent looked up surprised.

Glancing at his watch the agent laughed outright. "You're right," he laughed, "I got interested in the paper and forgot all about the temperature."

Wiping off the thermometer he looked at it critically: "Just what I thought," he announced. "Temperature's gone way up while I been reading."

Cold water brought down the temperature and the agent again started churning. The company was near finishing the

HE URGED THE HORSE TO A FASTER PACE.

meal so the agent left off reading and devoted himself to the churn. Ten minutes, and he glanced appealingly toward Mrs. Hays, but she was busily talking. Another five minutes passed and the company arose.

"Come see my flower bed," invited Mrs. Hays and the company filed out of sight around the corner of the house; much

(*Concluded on page 867.*)

Dr. Eliot's Three Poems.

SOME years ago Dr. Charles W. Eliot, formerly president of Harvard University, declared that he could select 50 volumes which would contain the foundation for a liberal education. These volumes are known as a five-foot library. While Dr. Eliot's selections have been criticised by many, he has certainly gathered a wonderful store of the world's best literature. More recently Dr. Eliot stated that every American child should commit at least three poems to memory. These are Longfellow's "The Village Blacksmith," Hunt's "Abou Ben Adhem," and Bryant's "To a Waterfowl." Fifty to 60 years ago it would have been a rather strange child, in New England, who could not recite the first two poems. They were printed in every school reader, and who among the old boys and girls from the country school districts has not recited one or both of them? Bryant's poem is not so well known, yet it is the best of the three.

* * *

To a Waterfowl.

Whither, midst falling dew,
While glow the heavens with the last steps of day,
Far, through their rosy depths, dost thou pursue
Thy solitary way?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As, darkly seen against the crimson sky,
Thy figure floats along.

Seek'st thou the plashy brink
Of weedy lake, or marge of river wide,
Or where the rocking billows rise and sink
On the chafed ocean-side?

There is a power whose care
Teaches thy way along that pathless coast—
The desert and illimitable air—
Lone wandering, but not lost.

All day thy wings have fanned,
At that far height, the cold, thin atmosphere,
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon that toil shall end;
Soon shalt thou find a Summer home, and rest,
And scream among thy fellows; reeds shall bend,
Soon o'er thy sheltered nest.

Thou'rt gone, the abyss of heaven
Hath swallowed up thy form; yet, on my heart
Deeply has sunk the lesson thou hast given,
And shall not soon depart.

He who, from zone to zone,
Guides through the boundless sky thy certain flight,
In the long way that I must tread alone,
Will lead my steps aright.

—Wm. Cullen Bryant.

* * *

Very Valuable Property.

(Reprinted By Request.)

I ain't no hand to brag my children up
Above all others, but I'll tell you now,
That little girl of ours does win the cup—
In my own estimation, anyhow.
I'll guarantee a dozen folks have said,
"She looks jest like her mother"—don't it please
My wife to have 'em say so? She gits red
As fire, her heart's so full she has to sneeze.
An' smart? Why I'll bring folks to guarantee
They never saw her beat—I've heard 'em say
In *that* respect she sorter favors *me*.
Her smartness 'pears to trace right back, my way.
She don't weigh over 30 pounds, and yet,
Her little fist can pound away our care.
You bring a million dollars and I'll bet
That you can't buy that baby's smallest hair.

* * *

The Old Man.

Walt Mason.

Be kind to your daddy, O gamboling youth; his feet are now sluggish and cold; intent on your pleasures, you don't see the truth, which is that your dad's growing old. Ah, once he could whip forty bushels of snakes, but now he is spavined and lame; his joints are all rusty and tortured with aches, and weary and worn is his frame. He toiled and he slaved like a government mule to see that his kids had a chance; he fed them and clothed them and sent them to school, rejoiced when he marked their advance. The landscape is moist with the billows of sweat he cheerfully shed as he toiled, to bring up his children and keep out of debt, and see that the home kettle boiled. He dressed in old duds that his Mary and Jake might bloom like the roses in June, and oft when you swallowed your porterhouse steak, your daddy was chewing a prune. And now that he's worn by his burden of care, just show you are worth all he did; look out for his comfort, and hand him his chair, and hang up his slicker and lid.

A GROUP of young men were seated in a Western restaurant discussing ways of spending their vacation. One of them said, "I am going home to see the old folks. Father is getting a little old, he has worked hard, and may not be here long. I shall probably work while I am there, but that seems the best way to spend my vacation this year." A middle-aged man at the next table turned to the group of young men.

"I want to congratulate you," he said. "You are right. I went back last year where the old folks lived. They were both dead, but I fixed up the lot in the cemetery and paid to have it kept neat and tasty."

"That was all right," said the younger man, "but what did you do for them *before* they died?"

The older man looked at him for a moment, then he choked, pushed his food away, paid his bill and walked out of the restaurant without a word. Through all his days he will be haunted by the thought that he neglected the old people while they lived and while they needed him. It is an awful thought to haunt and chase a man throughout his life. There are rich men today who would give their gold if they could get away from it. In this great, busy, rushing world young people with life all ahead of them cannot always realize what it means to the old folks to see their busy children grow away from them. "Remember thy father and thy mother."

* * *

ALL sorts of "remedies" for the tramp hen have been suggested. These run from shooting the hen and fighting her owner to letting her alone to tear up your garden at will. Here is a new one. This means going by night into your neighbor's yard and scattering buckwheat and corn in his flower or kitchen garden. His hens will do the rest. Instead of coming upon your premises they will "follow the grain" and before the owner wakes up they will have his garden in great shape. Then his wife will enter the argument and the hens will be shut up.

* * *

LAST month a correspondent suggested advertising for teachers in the hope of obtaining a wider list to select from. The object of advertising is to enlarge the circle of people who know your wants or your offerings. Whether a man puts up a shingle in front of his farm or buys space in some expensive magazine the object is the same, whether he wants a teacher, a hired man, a horse or a piano.

* * *

YOUR writers on medical topics are orthodix, though orthodoxy is out of fashion, and, what is better, show common sense. Occasionally some one of your estimable correspondents gets worked up over the dangers of damp sheets, which no human being ever gets between if he can possibly help it, and attributes the origin of our infectious colds to that or some similar unessential or merely contributory factor. A knowledge of the infectiousness of common, and uncommon, colds, of their serious consequences and of the importance of as much quarantining of infected persons as possible, is a thing of vast importance to our welfare both in town and country. Infections, intemperance in eating and drinking, narcotics and stimulants, these are the ever present devils that assail us. We can tuck our heads under our wings like the birds and breathe CO2, limit our bathing to accidental plunges into the lake, and shiver in settles before a green wood fire, but if we keep the infections and the non-living poisons out of our insides we shall stand better chances of living out our alloted spans. W. E. D.

* * *

THE Canadian Farm has been conducting a discussion on "Do Women Influence Men to Leave the Farm?" All sides of the matter are being discussed, but here is one hopeful note:

I have failed to notice a case where a woman induced a man to leave the farm, against his will, but I do know of several cases where the wife has kept the husband on the farm. For most women love the freedom of the country life, where we can give our children plenty of plain, wholesome food and they can see the beauties of nature.

The writer of this says that on too many farms grandfather would come back and find himself unable to handle the labor-saving devices which the farmer now employs. Grandmother would come back and find herself entirely at home with the fixtures found in the kitchen! That was a good article last month from the woman who sat down and talked this matter over with her husband. See page 777.

THE BEGINNING OF FARM BOOKKEEPING.

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MRS. HELENE C. LOVEJOY, a woman who confesses to 50 years, has just completed the four years' course in horticulture at the Ohio Agricultural College. Mrs. Lovejoy graduated from the College of Arts in 1884, but came back to complete the horticultural course. In addition to her school work Mrs. Lovejoy kept house for a family of three.

* * *

THE girls of Gamma Pi Gamma, the honorary society at the Kansas Agricultural College, excludes all "flunkers." No person who has ever failed in a college study can belong to this society, which is confined to girls taking home economics. What housekeepers such girls ought to make!

* * *

LESLIE'S WEEKLY gives an article by a woman who instead of "living to eat" learned "eating to live." She brought her family within sight of debt by extravagant housekeeping and then saved the home through economical buying and saving. When she started to reform she says:

Again I turned to my cook books and magazines, this time in the search for hints on economy. I must admit that they were disappointing. I am convinced, by my own experience, that a great deal of the extravagance of our American housewives is chargeable to the women's magazines, which delight in stimulating every form of gastronomic extravagance. They delude the eye with pictures of extravagantly spread tables, excite the curiosity with recipes for strange and costly dishes, and when they pretend to teach economy, usually lead us into dreary wastes of tasteless and nutritionless menus. The housewife who would see her family well fed on the minimum expenditure must use her own common sense.

There is no question about the need of common sense. We have often thought we would like to locate some of the good ladies who prepare the wonderful food described in these magazines right in a farm kitchen, say when the thrashers were coming.

* * *

THE age of the cold storage egg is a favorite subject for jokes when the city imagination grows stale. This one will appear in time:

New York woman is suing for divorce because her husband wrote to a girl whose name he found on an egg. Foolish jealousy. The girl's a grandmother by this time.

Some of the "fresh-laid eggs" which city people eat are certainly old enough to have produced grandchildren. It would require only seven months or so for a Leghorn egg to fill that part of the programme. As for the girl, she would be foolish to trust her name with an egg until it was made into cake.

* * *

BROOKLYN, N. Y., has a Domestic Relations Court in which cases of "trouble in the family" are tried. The judges decided to learn, if they could, the underlying causes which led to these domestic troubles. They carefully investigated 750 cases and made the following report:

Cause.	*Number.*	*Per Cent.*
Drink	390	45.8
Other women	117	13.7
Laziness	79	9.2
Jealousy	76	8.9
Incompatibility	75	8.8
Gambling	33	3.8
Out of work	30	3.5
Lazy and untidy wives	20	2.3
Mother-in-law interference	12	1.4
Other men (accusations of husbands)	10	1.2
Cruel treatment	8	.9

Thus we see that drink and laziness are responsible for more than half these domestic troubles, while lazy wives were responsible for only a little more than two per cent. of the cases. And what becomes of the sad old joke about mother-in-law? On this showing there are nearly seven lazy husbands, 39 drunkards and 10 "other women," to one interfering mother-in-law. The fact is that this last-named character has long been used as a scarecrow or joke when in most cases she is a friend in need.

* * *

GO TO SCHOOL.—Elementary instruction is obligatory with a very large O in France. If a child absents itself from school four times a month, the father or guardian or person responsible for the child may be summoned to appear before a municipal school committee. If the party in question fails to put in an appearance, his or her name is posted at the entrance of the City Hall for a fortnight, together with the reasons for the summons. Upon a second offense the offending party may be brought before a justice of peace, and if satisfactory reasons are not assigned, he may be subjected to a fine of from 11 to 15 francs ($2.12 to $2.90) or to imprisonment from one to five days. If the child is insubordinate or refractory the father or other responsible party may call in the services of a constable

* * *

WE NEED "EDUCATION."—Last Summer a young man with a family of little folks, living on a rented farm, became ill. He cried unceasingly at first because of the inroads that must be made on the little sum he was saving up to buy a farm. Knowing by experience something of the difficulties that beset these men, perhaps my observations and conclusions may have some value. Drainage is at the bottom of most farming operations in this section. Alas, it is not at the bottom of much of the land; it has yet to be put there. Once there it is only the first step in the building up of run down land. We do not expect a man to win his L. L. D. and support himself and family at the same time, all without capital. Yet because a man fails to give his farm an L. L. D. and support a family with little or no capital, it is assumed by some that he needs educating. A year or so ago two countrymen at the State Fair were attracted by a placard. "Black Rot of The Grape." Pausing a moment, one of them said: "What is the use? If I found out what to do I couldn't do it." The weary-looking expert in charge said: "It is simple enough." As the women passed on the grape lover said: "Simple enough! To fight the black rot would take mind, muscle and money. It might be simple enough to furnish the mind, but the muscle and the money—that part is not simple." J. F. C.

"Short Stories"

All Sorts of Personal Experience With Food, Friends and Fixtures

Water Supply for Church.

WILL you help in solving the problem of water supply for a country church? There is a cemetery on the property, which makes a dug well out of the question, and an inside cistern has proved objectionable. Another feature of the problem is the infrequent use of the water; it being seldom used oftener than once a month, at times of social gatherings. Would a drilled well, or an outside cistern, sunken into the ground to keep from frost and a filter be advisable under the above conditions? If so, which would be preferable? If the cistern and filter, what would be the approximate cost? E. W. A.

New York.

This is a problem about which it is difficult to give specific advice without detailed knowledge of the surroundings. Owing to the infrequent and only partial use of a cistern supply, whether filtered or not, such a supply could hardly help but become stale and unpalatable, if not really unwholesome. It is very much more difficult, also, to prevent water stored in underground cisterns from becoming polluted than is generally supposed. Leaky walls and pervious covers are the rule rather than the exception.

A little investigation might discover a spring of sufficient capacity for the needs of a church, and available for its use, but, failing this, a well would have to be resorted to, and there are probably few country churches where a well may not safely be used. The depth at which water may be found, and the ease with which wells may be dug, drilled, or driven, vary, of course, with the locality, but neighboring wells will usually give some clue to these points. Shallow wells are comparatively liable to pollution, but deep wells—50 to 100 feet in depth—are usually safe, especially if a stratum of clay has been pierced. It is possible that a well may be driven at such a height above, or such a distance from, the cemetery upon this property as to render the presence of the cemetery a negligible factor, and, in my opinion the danger of pollution from this source is liable to be overestimated. A greater one, and one which should be guarded against, is having a privy vault in such position that surface or underground drainage from it might be carried into the well. The only suggestion that I feel able to make, at this distance, is that, if a flowing spring be not available, a deep well be drilled or driven, if possible, where the contour of the surface indicates that the underground flow is away from it and toward the cemetery; and further, that no privy be located where any part of its contents may be carried to the well by natural drainage or by the flushing of the ground from melting snows and heavy rains.

M. B. D.

NEXT TO GODLINESS.—Isn't this true story the limit for keeping a house clean? Miss Margaret is Uncle G.'s housekeeper. She is from the provinces, and a dear and valued friend of the whole family. One Summer, not long ago, she took a long vacation and visited an old school friend in New Brunswick. This friend was the last of her family and lived alone, having just property enough to live on and nothing to do but keep her house clean. Always the first thing in the morning she went over the kitchen and dining-room floor carefully with a dry mop, to see if by any chance there might be a hair anywhere. She wouldn't enter her house from outside at any time, or let Miss Margaret, without shaking her skirts. And on Monday afternoon she calmly laid her clothes on the kitchen floor to sprinkle them. In response to Miss Margaret's look of surprise, her friend said calmly: "I always do." K.

USE FOR "SOAP WEED."—Years ago I worked on a dairy ranch in Colorado. The cows fed on the range and during the season there was great complaint about the "soapy" taste to the milk. This was due to eating soapweed or Spanish bayonet. It was a great nuisance, but has now become an article of commerce. The Colorado Experiment Station tells how it is gathered and used for the manufacture of soap: All parts of the plant are utilized, both tops and roots. In Western Kansas manufacturers are paying $8 a ton for the plant baled and delivered at the railway station. The estimated cost of cutting, drying, baling, and hauling the material is $5 to $6. This gives a fair margin as wages, and, at the same time, encourages the eradication of this weed. The weed is usually allowed to dry two or three months after cutting. It is then baled by means of the broom corn baling machine.

STORING WINTER CLOTHES.—Miss Anabel Turner, instructor of home economics at Wisconsin University, tells how to put the Winter clothing away: "The prime requisites in putting away Winter clothes are: thorough brushing and cleansing; exposure to the air and bright sunlight for several hours; and tightly closing the bags in which they are placed. Sunshine is one of the best disinfectants known; direct sunlight has caused the death of many a germ and moth egg. If the clothes are well brushed and cleaned, with due attention to pockets and seams, then well exposed to bright sunlight, and tied up tightly in cotton bags, you may feel safe about them until the cold days bring them out again. Cedar chips may be put in the bags, but this is not necessary. Newspapers or tar paper may be used instead of cotton bags, but care must be taken to have the packages tightly sealed. Moth balls are undoubtedly effective, but the odor is disagreeable; camphor gum too is good, and not so disagreeable. In the case of clothing that will be needed occasionally, it may be remembered that moths seldom touch clothes that are frequently disturbed."

FIRE EXTINGUISHERS.—Some time ago there was a bit of discussion about "fire extinguishers," with opinion not exactly in their favor. We have had the sulphuric acid and soda extinguishers ready for use on our place for several years, and the time came when the one in the kitchen saved the house. It was in a dry spell and the fire was in the wood shed roof. By the time we could have had ladders and buckets on the job (there were only children and women here) it might have been beyond us. They gleefully told their father how quickly "Mother had that fire extinguisher going." To show his appreciation, he lost no time in getting it "loaded" again. This "extinguisher" will throw its stream on to any of our roofs. The extinguisher would be easier for fires within easy reach. It is scarcely more than a foot long and works like a piston syringe. Unlike the others, it stops when you stop. It will put out gasoline and sensible people carry one in the automobile. Also I believe it is frost-proof, which the other is not, unless salt is added to the solution, and I believe there is some objection to that. Perhaps it hastens deterioration in the machine. There is no doubt in my mind as to the efficacy of "fire extinguishers." I would not stay long without one where I could get it into action. I should think insurance companies would compel their policy-holders to keep them, but there have been some queer things brought out about insurance lately. All I can be real sure of is that I do not want a fire.

MRS. W. W. SHEPARD.

Genesee Co., N. Y.

GRAMMATICAL MISTAKES.—A local school-teacher says she started teaching with intention that no grammatical mistakes should be made in her room. She taught in a factory village, and had to correct the children so much that they soon were afraid to speak at all. Now she apparently notices only the most glaring, like "hain't got no." I labored hard one term with a girl only to hear her remark, "Won't I tell mamma what is wrong when I get home." I know a high-school principal whose slang needs translation. Book English is apt to be stiff; there is no harm in colloquialism. I don't want anyone to be over conspicuous in speech. By the way, when mother refused to let us say "Shut up" and we wanted to, we said: "Have the goodness to close that cavity in the lower part of your countenance intended solely for the mastication of food and continue to remain silent." E. S. K.

CARE OF A CANARY.—A good many years ago, when I was a very little girl, I was awakened one Christmas morning by a most unusual sound. Downstairs I rushed, expecting to see Santa himself, but found instead a canary bird in a cage. A friend of the family had left it for me the night before. The canary, which had been named "Bobby," and I became fast friends, and he lived until I had grown from a very little girl to a very big one, and he might have lived much longer, if he had not been accidentally killed by his cage falling to the floor. He was always healthy, and sang very much. We never had another bird with him, but he never pined or moped, and seemed very happy and well all the seven years we had him. We fed him seed, the commercial mixture, being careful that there was not too much hemp seed in it, as birds like this seed, and will eat too much of it, if allowed to do so. Canary, hemp, rape, and millet seed form a good mixture. A piece of cuttle fish bone was always kept in his cage. He was given fresh water twice a day, oftener in Summer. He was given a bath once a day, while his cage was being cleaned. A hard-boiled egg, a little piece of hard bread, and some green food, like the leaves of the common Wandering Jew, were given him from time to time.

He never would take a dust-bath, being accustomed to splash in the water every day to his heart's content. Poor "Bobby" knew no life but that in a cage, and was never happy out of it. He spent the Summer days out of doors, his cage hanging on the porch, seemingly as happy as the wren, who scolded him, or the cat bird, that mocked him, but of my own free will I would never cage a living thing, and I would say to one who asked—"The best way to keep a canary is where the Creator intended him to be, out in the free air. As Emerson said:

"I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home, in his nest, at even;
He sings his song, but it cheers not now,
For I did not bring home the river and sky,
He sang to my ear—they sang to my eye.

C. G. J.

"CITY HELP."—On page 792 I see the item of "City Boys as Helpers." May I tell my story? I have had five of them; two were all that was to be desired, two were fair help, but the last one was a bad egg. I can't find one good thing to say for the last one. Yet, the same mail that takes this to you, takes a letter to the same school I got the two good boys from.

H. E. VAN TASSEL.

KEEPING HAM THROUGH THE SUMMER.—For each ham from a hog weighing about 200 pounds use a pint of fine table salt, three tablespoonfuls brown sugar, two tablespoonfuls black pepper and one tablespoonful cayenne pepper. As soon as ham is trimmed in shape rub this mixture in thoroughly, especially around the bone. Wrap in paper folded closely about it, and tie. Put in cloth sack and hang up with small end down. Meat prepared in this way will keep perfectly for several months, and the lean does not get hard as it sometimes does when packed in brine. B. C. F.

BEESWAX.—J. A. G., on page 769, wishes to know how other farm women extract beeswax from the honey comb. An easy way to extract the wax from a small quantity of comb is as follows: Put the pieces of comb into a colander, set the colander into a deep pan containing a little water to prevent burning, and put the pan into the oven of your cook stove. The heat of the oven will do the rest. If a large quantity of wax is to be extracted, it is best to use one of the several excellent wax presses now on the market. F. R. H.

POOR PORK.—I would like to have some of the readers of THE R. N.-Y. tell me what is the matter with our pork. After keeping house for more than 35 years, and having the finest salt pork that could be asked for, now for three successive years it has spoiled. We have given it the same treatment that has heretofore been perfectly satisfactory, and after about two months or perhaps three, it becomes rather soft and smells badly, so we cannot use it. There remains quantities of salt in the jar and the brine seems to be exceedingly salt, but the meat is spoiled. Can THE R. N.-Y. solve the question? H. B. B.

Biscuit Without Waiting,

"YOU certainly are a master-hand to turn off work," said Mrs. Adams admiringly, as her friend slipped a pan of biscuit into the oven and set about arranging the table for lunch. "I always thought I was quick but you certainly have me 'beat a mile' as Bobby would say."

Mrs. Carson laughed. "I have half a notion to keep still, and accept your praise as a tribute to my ability, but the truth is, anybody can be just as quick. My biscuit-without-waiting recipe is the result of an accident, like bleaching sugar and making glass and a few hundred other things. Do you remember the supper we were going to give at our church last Fall?"

"For the Harvest Home? I should say I do. We had fried chicken, stewed chicken, chicken pie, chicken croquettes and chicken patties for a week. You know the creek raised so it washed away the bridge, and we couldn't get across. I had my chickens all dressed, so we just had to eat them."

"I think it was the worst storm I ever saw," returned Mrs. Adams. "Lizzie said it would have made Noah think of old times, you know what an irreverent thing she is. I was to supply the hot biscuit, so I had taken a sack of flour and measured it and added salt and baking powder and shortening, so there was nothing to do but the milk. Of course nobody came, so there I was with all that prepared flour on hand. I put it in a big can, and used it when I wanted biscuit, till it was all used up."

"But did it keep? I should have been afraid of the shortening," said Mrs. Carson.

"Yes it kept perfectly for several months," answered her hostess, "and since then I have never been without a similar can of flour on hand. It makes biscuit making a pleasure and about the easiest thing there is to get in a hurry."

Colorado. MRS. E. M.

The Hen With a Record

IS to be the bird of the future. She is the one most likely to take the job of mounting the American flag away from the Eagle. The record that counts is the one made at an authorized egg-laying contest.

Farm Women Raise the Business Hen

We believe that some of the most profitable flocks in the country are to be found on the farms—developed and kept by farm women. The egg-laying contests have thus far been used mostly by breeders of National reputation or by amateurs with whom poultry keeping is more or less of a plaything. We believe there are farm women who have the birds that can hold their own with the best. To prove it we offer

A Free Chance At An Egg-Laying Contest

THE R. N.-Y. will pay the entrance fee for one or more pens of birds to be made up from the flocks of farm women who care to furnish a hen for such a contest. Such women may send their best hen or pullet of any breed they prefer. We will make arrangements, pay the entrance fees and see that the hens are properly and fairly handled and fed and recorded.

Your Hen Will Be Tested

with a record that will be official and if she can make a good yield your flock from that time will be in the position of a herd of dairy cattle which have made large records for butter or milk. Mrs. Newly-rich said her Orpington hens *could* lay, but *they were not obliged to do so.* The farm woman's hens have got to lay to give her pin money and help pay the mortgage. Some of those *got to lay* hens will make things lively at an egg contest.

Will You Enter A Hen?

First of all, we want to know whether our women readers would like to enter a hen for a record. If so, please let us know at once and we will make all arrangements and give information about handling and training the hen.

Food That Tastes Good

Is What We Call For

The Farm Provides It

Brown Sugar and Hard-tack.

I HAVE been stirred up by your symposium on "eating." It recalls the gastronomical efforts of 75 years. Any healthy boy who has worked as all boys ought, will come to dinner with a ravenous and glorious desire to clean off the table, and a capacity that no figures involving height, length, breadth and thickness can account for. Indeed, where the solids are deposited is as unsoluble as was that of the Kansas farmer's pig which had eaten clean a pailful of buttermilk, and the awestricken owner took the pig by the tail and dropped him into the bucket; it was not full. So the circle around the waist of a healthy young man cannot be square.

In all regions in America I have eaten my way through or left a devastation. The natives have certain national and traditional dishes in which they excel. No people on earth can equal chicken pie, dried beef and cream, or baked beans put together by the real New England housewife. To my taste no cornbread, fried chicken and beaten biscuit quite reach the perfection attained by the old black mammy of the South. I have never seen so good oysters as along the Gulf of Mexico, where also I have found the best bread, spaghetti and gumbo. If I could be translated bodily to Boston I should call for fresh codfish, lobster and hulled corn and milk, and grumble at the parsimony of nature that gave me one mouth only to absorb them. After all, this proves nothing but my individual taste, and that each locality excels in its peculiar products which generations have brought to perfection. Many of our tastes are acquired and sweetened by youthful remembrances.

I observe some of your correspondents refer to the "best meal" they ever had, such gorgeous reminiscences probably emanating from the hunger of that particular period. Let me recall the "best meal" I ever had.

On the 17th day of May, 1863, I was a youth with good teeth, a splendid set of internal arrangements, sitting down beside the road near the Big Black River in Mississippi. A regiment in front was busy clearing away the skirmishers on the opposite side of the river, preparatory to laying down a pontoon bridge. It was the day after the great battle of Champion Hill, and the climax of the Vicksburg campaign. I was captain of a company in an Illinois regiment that left its dead in many States. The men were very short of provisions, trains far in rear and country cleaned up by those in advance with the usual diligence of the 15th Corps. One of my men had, fortunately, among the first comers, found a hogsbead of damp brown sugar in a little tumble-down shed near. He ran back to me and asked if I wanted some sugar. I loosed a two-quart pail from my belt, my entire cooking outfit, and handed it to him. I had eaten nothing since the day before but one "hard tack," for the good reason that I could get nothing else. He soon returned me the pail about half full of brown sugar. Just then some troops came marching up from a rear division and I bought from a private three hard crackers for $1. Just there and then I enjoyed the best meal of my life. The combination of hunger, good teeth and the appetite of youth gave to commonplace things all the luxuries I can recall. The sound of the cannon nor the whistle of rifle balls interrupted the enjoyment, as I began to feel the expansion press against my sword belt. The environment was such as historians write about and poets put such events into epics. No dramatic thoughts entered my brain. No romance thrilled me, but the satisfaction experienced while sitting there on the ground with no drink except a canteen of warm river water, tired and dusty, as I ate a quart of brown sugar and three hard-tack, has not been forgotten. This was 51 years ago, almost to a day, yet I recall it was the most enjoyable meal I ever surrounded—it was because I needed it more.

Illinois. L. B. CROOKER.

The Professor's Best Meal.

THE request for a description of my best meal raises an impossible situation, because I have eaten so many meals, in so many places, and so many of them have been so good. I have enjoyed my meals. It is one of the satisfactions of life to eat well and to sleep well. These are fundamental necessities and all the exotic interests that are coming to us with our increasing complexities of living do not take the place of them or make them less important. The greater the variety of our activities and the more numerous the kinds of our goods, the greater is the necessity that we eat well and sleep well; and to this should be added the great joy of working well.

But to eat well requires a simple and a substantial diet; and this is the diet that I have found at so many farmers' tables. It is a great source of satisfaction to have one's eatables in sight, with as many eatables as there are dishes, and with the eatables more important than the service. A person is able to plan his eating and to judge his meal as a whole. This is the farmer's meal. The members of the farm family undertake the meal with the same directness and simplicity that they undertake the work and the duties of the day. This is worth while, in these days of much indirectness and of many intermediaries.

The farmer's meal also has in it the close connection with the earth and with the locality. It is not all assembled from boxes, and bottles and tin packages. It partakes of the open fields and of the home oven, carrying a kind of personal quality. The regular hotel meals are about the same the world around, but every farmer's meal is of his farm and his household. It is with much satisfaction that I sit at a farmer's table.

L. H. BAILEY.

Baked Beans in Nebraska.

UNDER the circumstances, here is the bill of fare that I would like to sit up to. In fact, it is what I usually order when at a restaurant or hotel, if I can get it: Roast beef (well done) with brown gravy, baked potatoes, whole wheat bread, butter, cold or hot water, according to season; fruit, and a pleasant companion to share the meal. If that first item is not available, cold baked beans and some hot flour gravy for the potatoes makes a very good substitute. In fact, except for the roast beef with brown gravy I have simply given our regular dinner menu. It must be about a balanced ration, for I do lots of hard work on it nearly the year around, and am in fine health.

Nebraska. J. H. TUBBS

What a Veteran Would Use.

IF I could have the appetite of a boy or young man, and could have it fully satisfied, also the judgment as to what was best for me in view of the experience of a life of nearly 70 years, I would say the following: First of all, I would want good light bread, made from cream-colored flour, as the mainstay, with a change of whole wheat light bread, Graham gems or muffins, corn bread made of stone-ground meal, buttermilk and soda; an occasional mess of cream biscuits and pancakes made from buckwheat flour, whole wheat flour or cornmeal, or a mixture of the two latter, with plenty of butter and honey.

Vegetables and fruits of all kinds that can be grown, both cooked and raw, would come next. The cooked vegetables I would want boiled in nearly every case and very rarely fried. Smothered in cream, butter or olive oil would be a good way to cook them occasionally. Fruits cooked into plain sauce without much sugar, or baked, suit my taste and judgment best. Fresh berries and peaches, with cream and sugar, are always acceptable, and next to them in this form would be canned, with a little sugar, and served with plenty of cream.

"A FULL MEAL." THE BOY CANNOT BE TEMPTED, EVEN BY GRANDMOTHER'S MINCE PIE!

I would have but few pies, and these I would want thick, "fat" ones, stuffed full of fruit. As to meats, I would want some tender beef, mutton, pork, chicken and game of all kinds, boiled, baked, broiled or smothered, and never fried in grease, is the way to cook them. Fish fried in bacon grease or olive oil, baked or made into chowder is all right. Bacon or ham and fried eggs would be rarely indulged in, but soft-boiled and poached eggs I would want often for breakfast. Of cereals, give me plain rolled oats, wheat, rice and hominy for breakfast, with all the rich cream to go with them that can be afforded and a little soft brown sugar. Occasionally a full supper of old-fashioned cornmeal mush and whole milk would be wanted. Not one of the fancy cereals would come into the house, because they cost too much, and are no better in any way than the plain oat, wheat, corn and rice thoroughly cooked that cost about one-fourth as much. H. E. VAN DEMAN.

A Truck Grower's Feast.

I WOULD have first a heaping dish of asparagus, all extra large green stalks—no white, cooked until it was tender, and covered with a home-made dressing. This dressing is made by mixing flour with the water in which the asparagus was cooked, together with a good-sized lump of butter and a little salt. This dressing would be supplied in liberal amount. On the opposite side of the table there would be a dish of yellow Jersey home-grown sweet potatoes. I would have these sweets first boiled, then cut in halves, butter spread over them, sprinkled with a little sugar and browned in the oven before serving. Besides these two things I would have an abundant supply of mealy white potatoes, boiled, mashed, moistened with cream, and well beaten up until they looked like creamy white foam. I would also want a dish of sweet garden peas, picked while still young and tender, cooked just the proper length of time, and with a little butter mixed through them in the way of seasoning. They would be served swimming in their own essence. These four vegetables, together with good home-made bread and butter, would be the main part of the meal, and I would want all placed on the table at the beginning of the meal. There would be no side dishes. As a beverage, I would select good sweet new milk that had not been skimmed. For dessert, nothing could possibly suit me better than a large saucer of "Superb" or "Uncle Jim" strawberries together with sugar and cream. TRUCKER, JR.

A Good Farm Breakfast.

SINCE my good husband has been so extravagant in his praise of my cooking, I think I will get even with him by sending you his fancy breakfast which he can cook to a turn.

Whole Wheat Rolls.—Beat two eggs to a froth, beat in two cups of milk (sweet), a little salt, two tablespoonfuls of soft brown sugar and whole wheat flour to make a batter—thinner than pancakes, about like thick cream. Drop into gem irons that are hissing hot and bake quickly and thoroughly. To be eaten with butter and maple sugar cream which is made by boiling maple sugar and water till it will almost spin a thread, let cool and stir till it grains. The quantity of sugar and water is immaterial, and white sugar can be used with the maple, enough water to dissolve the sugar and boil rapidly to break up the grain. We make a quantity at a time as it keeps soft a long while.

With boiled eggs, good dried beef, fresh pineapple, strawberries and other fruits in season, it makes a breakfast easy to prepare and fit for a king.

MRS. CLARK ALLIS.

Saving By Process Canning.

IT seems to me one of the greatest needs of farmers today is to save all there is raised, especially about gardens. How often we see gardens with asparagus, string beans, peas and other things going to waste; yet all these may be successfully and easily canned so they will keep, forming a necessary addition to Winter diet. Years ago we found lima beans would not keep canned, yet by the process canning method they keep well, and are nicer than those we used to buy. Limas should be shelled, washed and boiled in salt water about 20 minutes, then place in glass jars; those with patent fasteners are preferable for this work. Fill the cans full and cover with hot water, add a teaspoonful of salt, cover loosely and place in an ordinary wash-boiler so they do not touch each other. The bottom of the boiler should be covered with a piece of wire cloth, which only costs a few cents, from the hardware man, and lasts years. Then add about two or three inches of warm, not hot water, and boil with the cover on one hour. Take cover off and set boiler where it will cool. Clamp covers on tightly, and the next day repeat; the last day fill the cans full of hot boiled water before putting on to boil. The cans need not be taken from the boiler until the work is finished, and one can do eight or 16 cans at once, according to size of boiler. Make sure to have good can rubbers and leave them on the cans. The first day's work will give any of the spores not ready to work a chance to do their fermenting, the third day catches them all and seldom indeed will a can spoil.

Tender dandelion and beet greens, in fact any of the vegetables we used to think impossible to keep, may be had in abundance all the year. In using peas, shell and boil with a generous amount of water in which the pods have been boiled, and the peas will be finer in flavor. Process three days. Pumpkin may also be used in the same way, as well as any kind of fresh fruit, although ordinary care will keep fruit without processing, but the flavor and color this way is unexcelled. Care must be taken to loosen the covers each time one boils the cans, and to tighten them soon as they are slightly cooled to prevent any of the spores entering the cans.

Ohio. MRS. JAMES LAMPMAN.

"WHAT is your alma mater, Mr. Nurich?" "Well, if you insist, I'll take a cigar."—Buffalo Express.

The Wild Flower Collector

New Business for Country Girls

By Ida M. Jackson

PART II.

PLANTS DESIRED.—All the early Spring flowers are listed except Erigenia bulbosa, popularly known in early days as "Turkey peas," "salt and pepper," and "Harbinger of Spring." This charming little umbel blooms very early, along with the little white Trillium nivale. There seem to be but few known stations for E. bulbosa any more, and if a collector finds a little plantation of it great care should be taken to preserve it. The flowers are delightfully fragrant, and its foliage, so airy and fern-like, lasts till mid-June. A collector may be called on for any of the following plants:

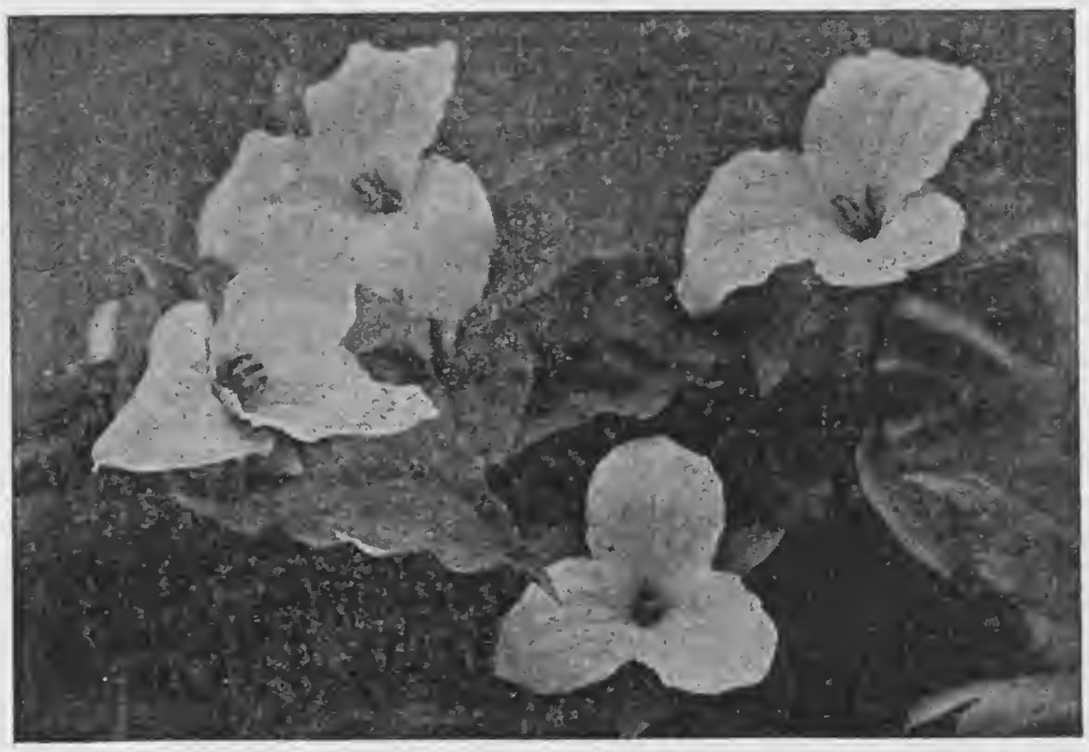
Hepatica, Spring beauty, bloodroot, Dutchman's breeches, buttercup, blue violets, rue anemone, false rue anemone, Wood anemone, blue vervain, Erythronium, Calamus, Greek valerian, marsh marigold, brown Trilliums, yellow violets, white violets, larkspur, sweet william, Oxalis violacea, Corydalis, blue-eyed grass, virgin's bower, Indian turnip, spider lily, cranesbill, blue flag, yellow puccoon, Indian pink, wake-robin, Collinsia, celandine poppy, shooting star, bluebells, star grass, lilies, mint.

About the middle of May those aristocrats of the forest the orchids, make their appearance. These are all listed. The insignificant little green-flowered Habenaria bracteata and the truly sweet and beautiful Orchis spectabilis are often found growing together on low rich ground well shaded by timber. Orchis spectabilis, when well-grown, is a splendid plant, and transplants as easily as a cabbage. I was so fortunate as to find a little colony of albino Orchis spectabilis. They are of waxy whiteness, and the most beautiful flower I ever saw. There is a white form of Camassia Fraseri and a lovely and very fragrant wild blush rose that are not mentioned in the botanies. The country girl must keep in mind that there is always a possibility of finding something new.

THE ORCHIDS.—A little later in May we find the splendid oriental looking yellow lady's-slipper with the barbaric purple and brown sepals hanging like corkscrew curls at each side of the "slipper." This plant does well in the wild garden. Late in June the beautiful pink and white lady's-slipper, Cypripedium spectabile, peeps out of her sheltering bower. A number of years ago the president of a Massachusetts college found a clump of pure white Cypripedium spectabile. It is thought he kept the locality a secret. Most of the orders for Cypripedium spectabile are filled in Michigan. Here they are dug by the hundred thousand. There should be a law against the indiscriminate slaughter of these innocents—for slaughter it is. No known plant, excepting Arethusa bulbosa, resents transplanting as does this queenly orchid. It languishes in captivity for a few short years and finally dies of a broken heart. Aplectrum hyemale (puttyroot or Adam-and-Eve) "the ugly duckling" of the orchid family, also blooms in June. It was once common enough but now it is considered rare. Its one large silky leaf is evergreen.

THE TRILLIUMS.—It is also in Michigan where Trillium grandiflorum grows so bountifully. There are three forms of this elegant plant; one blooms white and turns brown when withered, another blooms white and turns pink, and still another blooms pink and remains so. This last is the highest priced, bringing two dollars more per thousand. Trillium grandiflorum is shipped in large numbers to England, where it is prized above any other of our wild flowers. All the Trilliums seem to enjoy civilization, and are of great decorative value. The price is far too low for such desirable plants, Trillium recurvatum selling for three dollars per thousand and Trillium grandiflorum for five dollars per thousand. Last season a collector in Michigan, with two assistants, gathered and packed 25,000 Trillium grandiflorum in six days. The deal netted him nearly twelve dollars per day.

OTHER "BEST SELLERS."—Spring beauties sell for two dollars per thousand, and at first thought that seems very low priced, but they generally are found in such numbers that one could easily make ten dollars a day digging them. One more example: A man and boy got out 3,000 maidenhair ferns in two days. These were sold for $7.50 per thousand. The expenses were $3.00, which deducted from $22.50, leaves $19.50 profit. If such cases happened every day in the year collectors would soon be rich. More often they happen the other way. Sometimes we accept orders that do not pay us fifty cents per day; this may be on account of stock being scarcer than we anticipated, or too late to find the plants. There is always some one wanting something out of season. When the bloom is gone your chance of finding the plants is about one in a thousand. Last year a customer wanted snake-root in November.



TRILLIUM, WAKE-ROBIN OR BIRTHROOT.

PREPARING FOR ORDERS.—I would advise the country girl to start a bed of wild lilies, as they are always in demand. The wild tiger lilies (Lilium Canadense) and Lilium Philadelphicum are the commonest, and grow finely in low rich ground. A lily bed 200 feet square would hold 10,000 plants, and would be worth from $300 to $500. Besides these standard plants that have been mentioned there is often a call for something "queer"—like beechdrops, Indian pipe, lizard-tail, etc. When you locate any of these plants make a note of it, for they generally bring a good price. There is also another class of plants much in demand; these are mostly medicinal in character, though some few possess decorative value. Among these the most widely "hunted" plant is Hydrastis Canadensis, or golden seal. There are orders out sometimes for 10,000 plants, and not a single, solitary one forthcoming. A bed of golden seal is next thing to a gold mine.

SHOWY FLOWERS.—All in all, the most sought after plant is that tall, incomparable "primrose," Dodecatheon Meadia, commonly called "shooting star." Like the fringed gentian the shooting star must have rich muck soil—real peat is the best—to grow to its grandest proportions. "Shooting star" seeds abundantly, and when once started produces countless thousands in only a few years' time. Although there are several desirable gentians the blue fringed sort is the best. Gather the gentian seeds as soon as ripe and plant it very early the next Spring. In this way you can be reasonably sure to have gentians every year. They are a fickle flower. One year you have them and maybe the next year you don't. If the wild flower seeds were gathered and kept till early the next Spring and then planted it would be possible in a season or two to have fine beds of any of the desirable wild flowers of our locality. Of course there are exceptions to this rule; some seeds must be sown at once to insure germination.

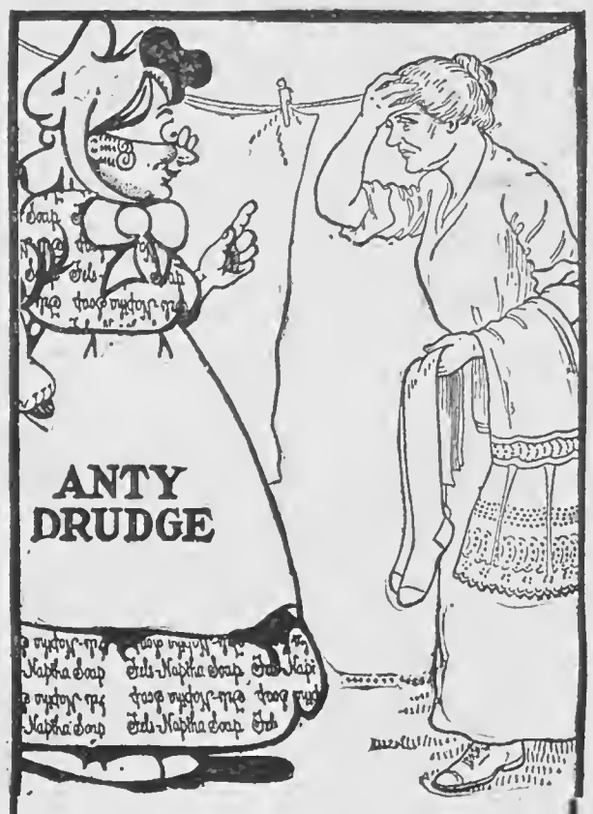
GROWING NATIVE PLANTS.—The country girl with a half acre of ground planted to 50 of the most popular wild flowers has not only a good living in sight, but can start a bank account. Every season a certain collector sells from a small plot of ground 2,000 roots of Oxalis violacea. Get your florist's catalogue and see how much they sell for at retail, and then calculate how much you could make from one square rod of ground planted to this dainty little blossom. You can grow 2,000 Oxalis roots to the square rod, and have room to spare. Many of our most beautiful wild flowers are fast disappearing. Those that are transferred to public parks and large private estates are sure of kind treatment. It is in accordance with our desire to protect the wild flowers to collect for the trade, provided it is done in moderation. It is not like caging an animal for the Zoo; on the contrary, many plants are greatly benefited by change of situation.

Pictures in the Home.

Last July I invested $1.15 in a way which has given me so much pleasure that I wish to pass it on to other readers of THE R. N.-Y. In June I sent to one of the firms which print reproductions of famous pictures for their catalogue. From it I selected 120 of their one-cent pictures, the number they would send for one dollar. I also bought a 10-cent tube of library paste, and got several sheets of unruled white paper. When the pictures came I sorted them, making two kinds, those which would go lengthwise and those which would go crosswise on a sheet of paper. I laid these pictures in piles face down.

I pasted my white sheets of paper in several places on the walls of my rooms, then put several dabs of paste on the back of a picture and placed it on the white paper. When I become acquainted with a picture thoroughly I remove it and substitute another. I see these while doing my daily work, and so without losing time become familiar with the world's greatest art treasures. It gives me a change of thought. Engravings come not only of pictures but statuary, architecture, etc. By having the pictures placed face downward one has pleasant surprises when changing and after a picture has been used I pass it on to a neighbor who uses it in the same way. The firm I patronized tells to what school each artist belonged in their catalogue, while on each picture, nearly, is given the date of the artist's birth and death, also in what museum or cathedral the picture is now. RUTH E. CLEMENT.

HERE are a few specimens of excuses actually received by teachers on behalf of scholars under their charge: "Dear sir, please excuse James for lateness, I kneaded him after brekfust." "Please forgive Billy for being tardy. I was mending his coat." "Mister sir, my John had to be late today. It is his bisness to milk our cow. She kicked John in the back today when he wasn't looking or thinking of her actin' so suddin. So he thot his back was broke, but it ain't. But it is black and blue, and the pane kept him late."—London Farm and Home.



Anty Drudge—"My goodness, Mrs. Careless, have you got neuralgia again? That's just what I told you would happen, washing the old way, with hot water. You have to rub the clothes so hard you get all overheated, and then you fill your kitchen with hot, sudsy steam while you boil your wash. No wonder you take cold, coming right out in the air. I haven't had a cold nor neuralgia since I started using Fels-Naptha Soap and cool or lukewarm water for my washing and all my housework."

Lots of women don't know how to do their work easily, quickly and better than it was ever done before—but there is a way.

It's the Fels-Naptha way.

Fels-Naptha Soap, in cool or lukewarm water, without hard rubbing or boiling, makes the dirtiest clothes clean and white. It's just as good for all kinds of housework and in the milkroom, and it's the *pleasant* way to do disagreeable work.

Buy it by the box or carton and follow directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

Selecting a Hat

Suitable for Portly Women

By Esther A. Cosse

DIFFERENCES IN STYLE.—It is easy in these days to study newspapers, magazines and fashion books and thus keep well informed as to the changes

HAT SUITABLE FOR A STOUT FIGURE.

in hair dressing, etc. The tall slender woman must not wear her hair too high, hence only certain hats become her. Those of medium size, or a little larger, trimmed low, are the most suitable, especially if her hair is fluffy about her face. The small hat will make her look taller and older, while the low, broad one will make her appear broader. When selecting a hat it is advisable to ask the saleswoman to put a pin in the center front, where it can be left until one gets home and tries it on and becomes accustomed to the shape. Or better still, put one in yourself, then you will be able to fit it to your head just as you saw it before making the purchase. Never be satisfied with a hat until it fits the head comfortably. There are several ways of having this done. If it sets too far down on the head, do not have a straight, or even a plain round band set in. It adds to the weight and is unnecessary.

FITTING THE HAT.—Always try to arrange the hair in the way women of your type wear it, since it has been fitted to a certain shaped head. Of course, some will have more hair than others, still in these days women with little hair can find a good substitute. But the headsize allows for those with little or much hair; thus the use of a band in some cases is a necessity. Before selecting a band see if the fault can be remedied by shirring the lining up tighter. If it is too long to shir up tight have it cut off, then shir it close. This will raise the hat considerably and save using a band. If the crown is too small, let out the lining and the hat will set down farther over the hair. If this will not do, then have a band with a wire outside covered with a bias strip of velvet and a piece of ribbon sewed in the inner edge which can be drawn up or let out at will. This must be made of velvet one-eighth of a yard wide and just large enough to sew into the crown. This band has been designed especially for women using applied hair. When they use it all the ribbon is let out, when they wear the hat without the extra hair, the ribbon is drawn up tighter, making the head size smaller. Another way to make the headsize smaller is to take a piece of stiff brown paper long enough to reach around the headsize; fold four times into a strip one inch wide and sew it around headsize just inside of the lining. If this makes it too small, fold paper twice and insert. In some hats there will be a space at the side, which, if left, makes the hat unsteady on the head. Take a piece of cotton batting as long as the space and cover with velvet or silk the color of the hat, sew it in either inside or on the outside of the lining. It is always advisable to sew paper in hats for children, especially where a hair ribbon is worn on the top of the hair, which causes the hat to be unsteady on the head.

SELECTING THE FRAME.—For the made hat it is very easy to change a wire frame. Loosen the hat lining, take a pair of nippers or pinchers and bend down over the head, making the head fit close to the top crown.

MAKING A HAT.—To make this shape one would need a piece of either black or white frame wire, depending upon whether the hat is dark or light, costing 20 cents; one spool of tie wire, costing five cents for uncovered and 20 cents for covered; or one could buy three yards in a millinery store, which would be sufficient for the hat; eight yards of straw braid, which retails from five cents a yard and up; one yard of covering, for 10 cents, two quills for 15 cents and two yards of No. 12 black velvet ribbon for 20 cents a yard. It can be lined with a small piece of silk, or piece of lawn, or of old ribbon which has been pressed. The hat would then cost you but $1.25. In making the frame you will need a pair of nippers or pinchers to cut and tighten the wires. Cut off four wires 23 inches long; one 38 inches; three 30 inches long; one 32 inches and another 10 inches. The headsize wire, or the one nearest the head, must be made large enough to slip over the head comfortably and then allowed an inch larger for the covering. It is impossible to say just what the headsize should be since it varies with every person, but it runs from 24 to 28 inches. Take one of the 23 inch wires and bend upward one inch from the edge, over two inches and fasten to headsize wire by twisting aronnd it; 3¼ inches, bend over, measure 8½ inches, bend downward: 3¼, bend and fasten to headsize same as the other side directly opposite; two inches, bend upward. Put each of the 23-inch wires on in this way, the only difference is with the direct side wire, which must measure 8¼ inches across the top of the crown. The wires must be fastened firmly and tightened with the nippers or pinchers. You next take one of the 30-inch lengths

MODIFIED TURBAN SUITABLE FOR WOMAN WITH A ROUND FACE.

would make her appear too short and display her figure to poor advantage. The small hat also makes her look broad and not well proportioned. Only medium-sized shapes should be worn. They may be trimmed very high (usually it is necessary) as it adds to the height and dignity of appearance of the stout woman.

COLORS AND SHAPES.—The woman with a round face should use round hats. If she desires longer shapes dress the hair full about the face and low in the neck, but the hair arranged moderately high is usually the best for the round-faced woman. Another very important thing is the selection of colors. Most women imagine they must wear black hats year in and year out. Why do they think that? It has been said many times that black looks well with any colored costume. This is not strictly true. Certain shades of blue, green and brown should never be worn with black, as the colors do not harmonize, but in many cases women follow this as a reason for their selection. The person with high color should not select hats with a facing of warm colors, leave that to those with no color, as they need it to strengthen and give expression to their features. Ostrich feathers are becoming to any type of woman, if the hat is used as a dress hat, but not for a hat which is used any time of day. Flowers are well, especially for the afternoon or dress hats, but quills and ribbons are the most practical.

STYLES IN TRIMMING.—One of the most popular trimmings put on the market this season is the cire, or stovepipe finish ribbon. This is very highly finished and makes a pretty trimming, but for one who does not have many hats, it is not very practical, since it is finished with very strong chemicals, and though soft and pretty when new, it will not wear as long as some of the old types, among which is the satin taffeta, taffeta or the pretty prints. Any of these will wash in alcohol and look as well after being pressed with a moderately hot iron as when they were new. One hat that is becoming to most types of women is the sailor, which this year is made straight, but with a large headsize, which slips

HAT BECOMING, BUT TRIMMING UNSUITABLE. A BOW OF THIS SIZE AND SHAPE ANNOYS ALL WHO ARE NEAR, AND STRIKES BACK OF CARRIAGE WHEN RIDING.

and put around the top of the crown, which is fastened with the tie wire. The outside wire is next put on. This is the largest wire and must measure 36 inches and must be lapped at least four inches, but it is better to have it lap more. It is fastened to the brace wires by twisting the braces around it and fastening firmly with nippers, or the frame will not be firm. The next largest wire is used for a brace around the inside, fastened with tie wire one inch from outside wire. One is put around the side crown and another around the center of the crown.

COVERING THE FRAME.—The frame is then ready to be covered with crinoline, which is stiff and quite heavy. This is pinned to the frame and fitted on the lower side. A pin is put in the covering at the center front and center back, then removed and put on the top, but the headsize must be cut out, which is done by slashing it up to the crown after cutting out a small circle in the center. The crown is next covered and all small plaits are drawn to the base of the crown. This covering must be pinned carefully as you go along. The facing is put in last and the edge is turned up on the top. You then bind the edge with a bias strip of the crinoline one inch wide. This will make the edge firm and when straw is attached will not draw the frame out of shape. Eight yards of braid will be needed. Start at the center back, which is the center of the piecing of the wire in the frame, and the center front is the wire directly opposite. After starting the braid at the back you sew it around, leaving it about half an inch over the edge. As you get to the back, and the brim is completed, draw the braid up to the crown and start at the crown and continue around and around until you reach the center of the crown. Then cut off the braid and turn it under and finish off neatly. If you look you will see that the braid contains a thread which you can draw up on the inside edge of the braid. It sets smooth if this thread is drawn up as it fits the braid to the shape. This must be done to the crown as it will pucker if the braid is left straight, and not look well. The facing is put in last and the outer edge is caught to the edge of the outside braid by slip stitching with invisible stitches.

TRIMMING.—It is trimmed with two quills laid on at the side and finished with a small bow with loops and ends six inches long; one loop and one end each way. When the bow is tacked over the place where the stitches show from tacking the quills, sew a piece representing a tight knot. A small bow is made and tacked at the right side back. The lining is then put in by holding the hat up to you and starting in the center back and sewing in with double stitches about one inch long on the wrong side. Turn the lining in after you get all around and shir up the other end, or run it with an ordinary running stitch and insert No. 1 ribbon to draw it up. This completes the hat, which if bought in a store would not cost less than five dollars and is practical for the woman who has but one hat, as it can be made in any color and the black trimming will make it appropriate to wear with any combination. The materials are always easy to get, and in these days of parcel post one may send even to the large cities, and it will cost but a few cents. Write your order thus:

One piece black (or white) frame wire	.20
One spool uncovered tie wire	.05
One yard black (or white) crinoline, (heavy)	.10
Eight yards ——— braid at 5c	.40
Two black quills at 15c	.30
Two yards black velvet ribbon at 20c	.40
	$1.45

A Girl's Summer Clothes.

I AM not a village dressmaker, but I am the mother of five married daughters, and I have always made their clothes with the exception of an occasional tailored coat or suit. I am very much interested in the question of young girls' clothes. It may be possible that I can help some one who has this problem before them at the present time. There are so many girls and young women who do not know how many pretty and inexpensive materials there are on sale this year. We will begin with a pretty, figured voile, at 25 cents a yard, and 40 inches wide; make with a two-piece skirt

METHOD OF HOLDING NIPPERS WHEN FASTENING THE WIRES.

and two circular flounces, kimono waist with vest, sleeve ruffles and collar ruffles of white net, at 25 cents a yard; three-fourths of a yard will be enough. Five yards of goods, at 25 cents, will cost $1.25, including net at 25 cents a yard, will be $1.50. This dress will be suitable for church, afternoon parties and afternoon teas. Another good, serviceable dress for riding or driving is linen-colored crash. It will cost from 35 to 75 cents, and 2½ yards will be enough for two-piece skirt, to be worn with "Middy" blouses and shirtwaists. MRS. W. W. S.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 763.*)

NORM found that while he could break but two acres a day with the oxen, with the new team he could break three acres; so it seemed to be a real, practical transaction—the buying of the team. The boys found little time to work at the polishing of the horns, and yet they felt such a deep necessity for the same that, utilizing every ounce of strength and every moment of time, by the 20th of October the second lot was shipped, and the check for ninety dollars looked like a veritable fortune to Nate and Norm. This money was immediately applied on the note, as it had been agreed that it might be lessened or taken up any time on or before the end of the six months' time. The days were constantly shortening, and the work in the field lessened, so there was more and more time for the horn polishing, and the third shipment was ready, when a letter came cancelling the order. A change in the management had taken place, and no more consignments could be made to the old firm, nor to the new, unless they should so order.

This was a terrible blow to the young enthusiasts. They had practically spent all their money, they were in debt sixty dollars on their team, and the supplies laid in would not last all Winter, and there seemed no outlook for any paid work anywhere. Norm became very despondent, but Nate was still gay and light-hearted. The glory of the new life had entered his soul, and it seemed as though he could never be unhappy again.

"Maybe we will find something else. Maybe we will get a better market, or something; who knows? It has seemed like a year of miracles to me all along, and I shall not be surprised at anything. That one curio firm isn't the only one in the world. We'll work anyway; we'll polish and scrub and rub and oil. There is lots of fun just working. The world is probably starving for buffalo horns, if we only knew just where the famine-stricken district might be." Nate laughed an infectious laugh, and Norm joined in, saying:

"You'd make a pretty good Christian, Nate, if faith were the chief requisite. Your optimism is pretty good dope to take, anyway. And here's to you. We'll work at everything we can find to do, and polish buffalo horns in the odd minutes."

So both boys rose above their discouragement temporarily, and went at their farm work with renewed vigor. The Fall was an open one and sunny away into November, but the soaking rain had kept the breaking possible. But little by little it grew colder and colder. The ground would be frozen a little in the morning, making breaking impossible until about 10 o'clock in the morning, and finally the freezing did not soften; and at last, with one hundred acres ready for the coming cropping, the boys accepted the dictum of Winter and ceased their efforts in the fields.

But there was work, work, work. The tar-paper was put on the shanties and on the little barn and hencoop, and many little conveniences made in the home places, for they maintained each his own place, although they were together the greater part of the time. They moved the grindstone and the bone-cutter to the shanty on the east of the creek, partly because they did their main cooking in the other one, and partly because they were less disturbed there. In this shack began the real work of bone-cutting. Failing on the horn business, Nate determined to make a venture at selling bone meal as a poultry accessory. He had ordered sacks with his bone-cutter, and these sacks he stenciled from a cutting made by himself on a piece of cracker-box cardboard. The sacks bore this legend:

"PURE BUFFALO BONE MEAL
FOR POULTRY. N. & N. CO."

After the sacks were ready, Nate printed on a large board, a sign reading:

"Buffalo Bone Meal for Poultry. The Only Buffalo Bone Meal Made. Produces the Biggest Eggs and the Best Poultry. Free Sample. Ask for it."

With this notice and prices printed in Nate's best lettering, on a clean, smooth board, the two boys stationed themselves upon a busy corner of the city street one Saturday afternoon in late November. Nate and Norm were good-looking boys, not so much from regularity of feature, but because they looked alert and alive, as though life were well worth living and work well worth doing, for the pleasure of the work as well as for its other rewards, the reward, of strong muscles, sound sleep, and good appetites. They wanted money, to be sure, but they wanted to give a full equivalent of work value for the money. They had no idea or thought of seeking a "soft snap," or an easy job. Both boys wore brown duck overalls and sheepskin-lined, brown duck coats, while fringed chaps, and felt sombreros added the picturesque touch, peculiarly Western. The boys had not stood there unnoticed, and here and there one paused to read the inscription on the board, and passed on. But although they had given away at least a fifth of their little sample sacks of the buffalo bone meal, no one had bought or ordered further.

Suddenly from out the throng, came a figure and face they knew, and with no thought of bone meal or of sales, Nate gave a cheery hail, which was answered by Tom Miller, the man for whom the boys had worked in thrashing. There was a vigorous shaking of hands and quick shot of question and reply. Finally Tom Miller espied the board and its legend: "What's this? Bone meal? Giving it away?" he said, alertly.

"Only giving away small packages," Nate admitted. "But we'd like to have you take a hundred pounds if you have any use for it."

"Sure," cried Tom. "Just what we need to set the hens to shelling out Winter eggs. Wife has been worrying about their not laying for sometime. I'll put a sack or two of oats in your wagon, when I get the meal. If you've got bone meal to give away I've got oats," and Tom laughed, one of his good, infectious guffaws. "Where's the oxen?"

"Oh, we're getting to be bloated bondholders," Nate chaffed. "We're driving a little real horseflesh now. We put them in the livery barn, for we expected to stay all day."

"Say, our boys think we never had such a cook on the thrasher. Don't you forget it, you're part of my crew another year—both of you. Now for the bone meal. Wife'll be tickled to death to get it. And fetch in about three hundred pounds when you come in, leave it at the mill for me."

A crowd had collected while Tom Miller had talked, and at once another man stepped up, to whom Nate presented the little gift sack of bone meal. The man looked at it questionly. "Say, this might look like a big feed to an Easterner, with six hens, but I reckon there wouldn't hardly be a chip apiece for my flock. I may's well take a full sack, and you give this to some little feller, with a pair of hens."

"This is only fed sparingly, and not for a full diet," Nate replied laughing joyously. "Where's your rig, we'll load a sack for you."

Before night the stock they had brought was exhausted, and the boys light-hearted as larks, were about to pick up their sign board and move homeward, fully intending to fetch in a few sacks of the bone meal each time they came and sell it on the streets.

"Come in, you chaps!" called a hearty voice from a butcher's shop near by. "Come in and set by. I see you've got a good thing there, now I'd like to handle your product."

After a little talk, it was agreed that the boys should sell to this man, Mr. Thompson, their meal, for three dollars a hundred, he would sell it for four dollars a hundred.

"I'll save all my scraps of meat and bone, for you, it will make it a more lively feed, and a better egg producer, and we might as well mix in a little red pepper, and Venetian red, these are both fine for poultry, and we'll have the best stuff on the market."

"We needn't worry any more about that note," Nate said happily as soon as they were again upon the street. "It's easier to grind bones and less fuss, than it is to polish buffalo horns."

"Did you have this in your head, when you picked those bones?" Norm asked admiringly.

"No, not a bit of it, I just thought I could help Jim and so pay for the use of his plow and things, and then when I saw how the hens ate the chiped bones, I thought maybe I could sell a little, but never any such amount as this: I had thought vaguely of shipping the bones to some fertilizing plant, but we're so far from a railroad it would take time to haul them, and the pay wouldn't be half what we'll make this way. I don't know but we ought to share with Jim."

"We will offer him a share if he wants to help grind," Norm said cheerfully, "but as for the other fellows, who just dumped on to us without so much as asking if they might, they can come and pick out their bones if they want to, and set up in competition."

"This is riding some." Norm volunteered, as he watched the fine dappled greys, trotting along as though they enjoyed it. "I can remember, when Red and Roan were the height of my ambition."

"I can remember, though it seems ages ago, when I envied you the possession of Red and Roan, and felt that you were about the whole partnership." Nate looked affectionately at Norm.

"Huh!" snorted Norm. "You're worth two of me, you find harvests, and make money out of things that seem too utterly worthless to be noticed by the rest of us. Say, kid, I believe I'm going to raise you after all!"

Nate struck his chest a resounding blow, and both boys laughed, for life seemed like a large adventure to them, although their days were filled with the most menial labor, it was not so to them, work was a pleasure, an excitement, a joy, and the great game of homesteading seemed to them the most fascinating in the world.

The Winter was open and delightful. The oxen ranged out all day long, coming up at night for shelter. The horses and the cow, too nibbled at the sweet, dry buffalo grass, and throve upon it, liking it even better than the slough hay, the boys had put up.

Everything prospered. Even the few hens furnished a full quota of eggs, and Nate fed them enough ground bone to make their eggs all shells, had Nature so designed the egg. Even the cat, which had left while the boys were away thrashing, came rubbing about Norm's knees one morning as he sat milking, and later on she was found with a family of six ensconced in the snuggest corner of the hay. This pleased the boys about as much as the accretion of six new calves could have done.

"She'll bring us good luck, sure," Norm said, "for it's the best luck in the world to have a cat stand by you."

And sure enough the cat seemed to have brought good luck, for when Jim returned from Wetasket late that day, he brought a letter, and an order for more polished horns, and offering to take the entire output, as fast as they could be furnished. And so the sale of the horns and the bone meal, tided them over the Winter, and furnished money to help out in the Spring.

All the settlers, busy and happy, were making preparations for Spring's work. The boys had broken a hundred acres of land in the Fall, and they had decided to sow 60 acres to Spring wheat, but they had many counsels about the cropping of the other 40 acres.

"Wheat will have to be our money crop," Norm argued wisely, for wheat was the money crop in those early days. "I have seen oats and flax growing, but I don't know anything about spelt and millet."

"They say millet, flax, and corn can all be put in late," Nate replied also with great solemnity. "I don't know one thing from another, but I'm trying to learn."

"Things are done on such a large scale out here," Norm ventured, "it seems as if the very people are bigger than they are in places where a 10-acre field is a monstrous crop. I believe we'd best have the sixty of wheat, and divide the other 40 amongst oat, rye, barley and spelt. This will give us a chance to try them out, then we'll know another year what will be the best crop for our land. We'll break more land for flax and corn, and potatoes."

(*To be continued next month.*)

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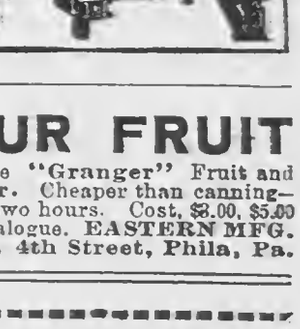

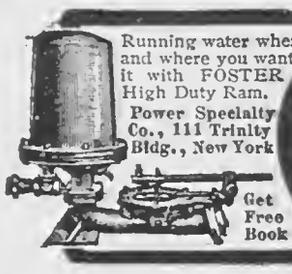

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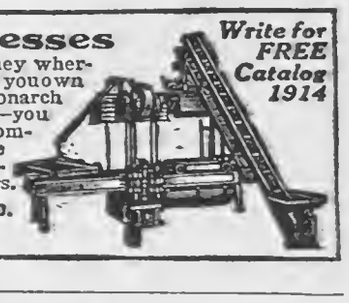

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Housekeeping Hints

Helps for the Home

The Last Half of the Dishes.

"IT'S the last half of the dishes that I dread to wash," sighed the oldest little daughter of a busy mother. Dear little maid, I expect we can all sympathize with her! And so, year in and year out, a vast army of dish-washers both old and young attack that last half of the dishes with main strength and the scraping knife. Is it any wonder that we dread it, and lose time and patience over the disagreeable task? Just a little prevention will work wonders in this instance, however, and is worth many of the proverbal pounds of cure. If the baking dishes cannot be washed at once, place them in a sink or a large pan and fill with water; even if they must stand for several hours before being washed, they will not be sticky or unpleasant.

When food is taken from the dish in which it is cooked, fill the emptied utensil with water, and when convenient place at the back of the stove where it will keep warm. If the dish is very greasy, add a little soap powder or soft soap to the water, or a few drops of ammonia, and keep the water moderately warm. When this is emptied, the dish will be in no way unpleasant to handle.

If food has burned in a utensil, a spoonful of wood ashes, kept in a convenient place for this purpose, added to the water and kept moderately hot will remove the burned particles.

A good kettle scraper can be found for a dime with which all particles can be removed without difficulty from these soaked pots and pans, and the washing is quickly over with a delightful absence of scraping on dried, discouraging surfaces. If the cleansed surface is not entirely smooth, rub with a little good scouring powder. Just a little forethought makes the washing of the last half of the dishes as agreeable as the first.

ALICE MARGARET ASHTON.

Housekeeper and Housekeeping.

I AM an old woman now, and as I look back over 40 years of housekeeping and home-making there are many times that I might have done better, many times just for lack of practical teaching. I see women often who are doing work in the hardest way because they really know no other. Here are a few things I have learned from experience. Remember I have lived on a farm where there has always been a shortage of ready money. I think if many farmers' wives should speak out their real thoughts I would not be lonesome for want of a crowd.

When you get up in the morning, as soon as you are dressed, do comb your hair. This seems an unnecessary thing to say, but I know several young wives who get the breakfast and appear at the table with their hair uncombed, and it seems to me a very untidy habit.

I have always found the best time to make my beds was before breakfast. I like to have them all out of the way. Of course, if there are small children let them sleep in the morning; it is good for them; but insist that they get up as soon as awake (this does not mean babies but older children). Perhaps some one will say, let your beds air. I say air your bedrooms and your beds will be aired. Don't fail to change beds often, taking off the under sheet and putting the top sheet in its place. Be sure to keep the sheets with the right sides together; then the same side is toward the bed, and where the person had lain will always be inside.

During the summer I use the sheets and pillow slips without ironing. I can almost smell the sunshine when I go to bed if they are taken from the line on a sunny day and put on the bed, which has also had a sun bath while I was doing the washing.

A good washing fluid is made of one pound of lime (such as you get in cans for whitewashing) and two pounds sal-soda. Dissolve in a gallon of water, let it settle, and keep in a jar, jug, or in glass cans. Add one-half teacupful to a boiler of clothes, or if you do not boil your clothes (I do not), put it in the machine to rub them in. Set the remainder of can of lime on an old plate in your fruit cupboard—you will not be troubled with mouldy or musty fruit—and although it is slaked, it will be just as good for the next mess of washing fluid.

I think one of the first things we should learn when we begin housekeeping is that there will be blue days, no matter how well you plan; days when "everything comes all in a heap." You just can't see through, and on just these days each man on the place needs something that makes it necessary for him to make frequent journeys through your kitchen, and be thankful if the sitting-room and chamber stairs are not included in their travels. Don't be cross; it isn't nice for a woman to get fretty. Candidly, it is far better not to add that to the other burdens you have to bear, for if you can keep a little sunshine inside and keep pegging with system you will (when night comes and your house is clean, your baking done and a good share of that awful accumulation of work straightened out) feel much more self-respect than you would if your nerves (otherwise temper) had got the best of you.

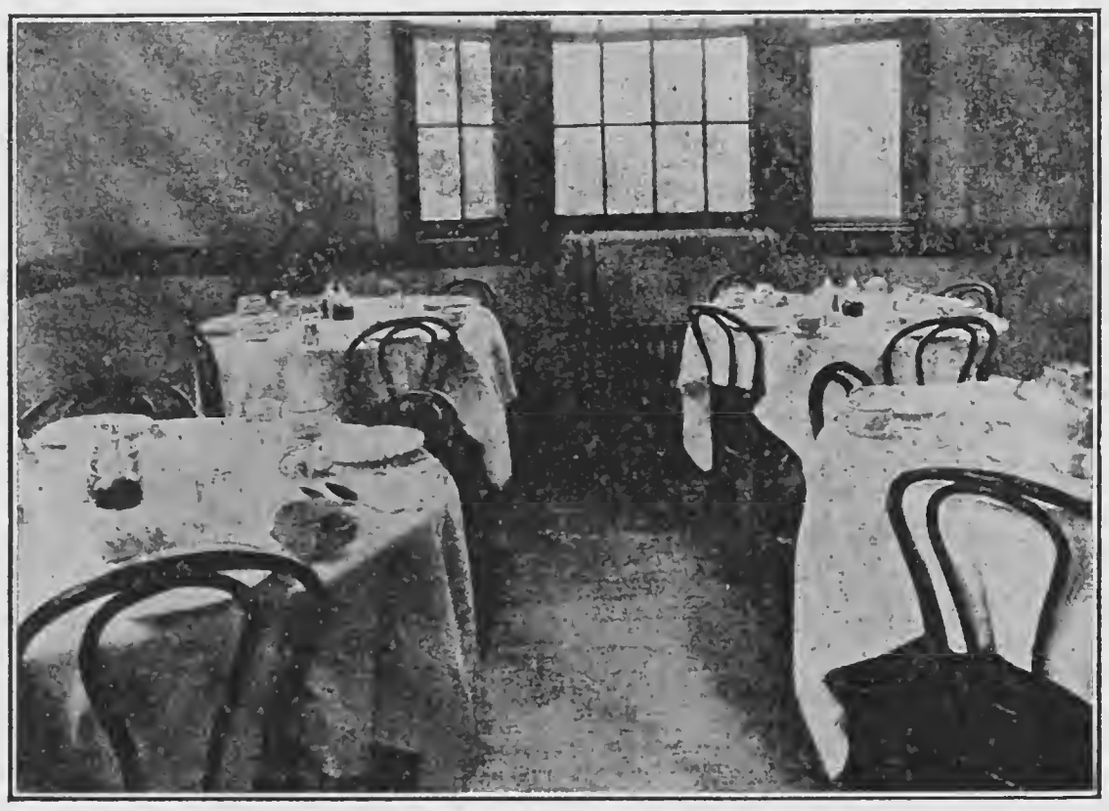
Now, don't think that in the 40 years of housekeeping I have always followed this golden rule. If there are any housewives who have they must be fitted for the skies. And if any gude mon can be found who doesn't add his mite to make you feel discouraged on such days I propose that he be carefully rolled in pink silk paper, then put in a glass case, and sent to the Panama Exposition.

MRS. VAN.

The Lame Housekeeper.

THIS is a dinner served recently, the work done without leaving my seat, a one-burner oil stove on one corner of the built-in kitchen cabinet. Our pantry workroom is smaller and more convenient by far than any I have ever seen described anywhere. We had boiled potatoes, boiled eggs 'carefully washed and put in with the potatoes at the last minute' lettuce, cold coffee, fresh rolls and apple pie. I had to have some one set and clear the table for me, but can manage the dishes, sitting down. For convenience to a lame person, Sister has found for me a really practical and inexpensive alcohol iron. Four bakers drive by here daily, and by buying the food fresh it seems wholesome. One man has food as good as we can bake at home. This is about the only labor-saving thing that comes to one's door in the country. The other is the opportunity to send one's flat wash to the laundry at a very reasonable rate, they wear it out rapidly, though.

E. S. K.



ONE OF THE DINING ROOMS AT THE LINCOLNDALE SCHOOL.

Destroying Black Ants.

How can I eradicate black ants from the house? I know of an ant hill not far away. R. D. U.
Pennsylvania.

If these ants come from the ant hill punch a hole with a crowbar down into it about two feet deep. Pour in half pint of bi-sulphide of carbon and immediately cover with a thick blanket—all over the ant hill. This liquid evaporates and forms a poisonous gas—death to all breathing things—which will penetrate through the "hill" and kill the ants.

Winter and Summer Screens.

I keep two sets of window screens, one that I have tacked cloth over, that I keep in the bedroom windows all Winter, even in zero weather; these I am just putting away for the Summer screen. F. W.

Your idea of cloth screens for the bedroom windows in Winter is a splendid one where a person cannot quite bear to have fully opened windows. If the cloth is sufficiently thin, with open mesh, considerable fresh air is secured without drafts. The idea of open windows in the sleeping room is fast gaining ground, and a screened window may be considered a semi-opened one. To one who becomes accustomed to plenty of fresh air at night, closed windows produce a feeling of intolerable stuffiness.

Thinning Peanut Butter.

Could you tell me whether there is any way to thin peanut butter that has become too dry? F. W.

Peanut butter may be thinned for table use by the addition of a little warm water, with, or without, the addition of salt, as desired. The writer much prefers peanut butter that has been thinned and salted in this way to the pure article, and it goes further with the children.

M. B. D.

Summer Milk and Egg Dishes.

WHILE the hens and cows are busy, with brimming pails and crowded nests "June Meals" are in order. Here are a few samples from the Wisconsin farmers' institute:

Cake Custard.—To use up any kind of layer or plain stale cake, crumble it with the hands into a dish; if you have two cups of crumbs, take juice of one lemon, add sugar and three-fourths of a cup of hot water, make rather sweet; when cold pour over cake. Make a custard with two eggs, one tablespoon corn starch and one pint of milk; cool, then pour over cake. Any kind of nuts chopped and sprinkled over the top is an improvement.

Milk Sherbet.—Four cups milk; juice of three lemons; 1½ cups sugar. Mix juice and sugar, stirring constantly while slowly adding milk; if added too rapidly mixture will have a curdled appearance, which is unsightly, but will not affect the quality of sherbet; freeze and serve.

Baked Eggs with Cream.—Scald a scant one-half cup thin cream or rich milk; break in three eggs, sprinkle a few grains of salt over the whites; set the dish in a pan of hot water and bake in a moderate oven. When the eggs begin to set, sprinkle with grated cheese and return to the oven to finish cooking.

A LAYER-CAKE SUGGESTION.—When layer cakes are taken from the oven, if turned upside down on a cloth and a damp cloth placed over them, they usually drop out unaided. MRS. F. W.

No Place Like Home.

We are all interested in knowing how "the other half lives." Dr. M. C. Tanquay of the Kansas Agricultural College is now in Crocker Land, that vast unexplored region in the Far North. A letter recently came from him—brought by Eskimos to the Greenland coast and sent by way of Denmark. The story of housekeeping in the snow will interest some of our people who find the temperature far above the melting point.

All members of the expedition are in good health and are having a wonderful time. I haven't even had a cold since we came. We are living in a large and comfortable house which we built last Fall. The main room is 18 feet by 20 feet. The room, in which Mr. Ekblaw and I live, is eight feet by 10 feet. He and I had a snow house built just outside in which we sleep part of the time, in our reindeer sleeping bags that the Eskimo women have made for us. The Eskimo women do all our sewing and they are good at it, too. One night my Eskimo and I stayed with a family composed of the man, his wife, and four children, the oldest being a girl of 14. They lived as most of these Eskimos do in Winter, in a rock igloo, which is something like a Kansas cyclone cellar. To get inside, you crawl on your hands and knees through a dark narrow passage, 20 to 30 feet in length. This ends in the igloo proper, which in this case was not larger than eight by 10 feet and scarcely high enough to stand in. You always encounter at least half a dozen dogs in the dark passageway. The fact that I stopped there overnight, being one of eight people in the room, that I didn't mind it in the least, that I slept well, that, if I did not relish it, I at least ate their raw meat for breakfast, tells you how near I am now to being a real Eskimo.

What They Say About It.

YOUR woman's department of May 30 was an extraordinary fine feast. Though only a poor masculine being I was as much interested in it as any could be, I think. J. F. CASS.
Washington.

I should be glad to help ever so little in making the magazine number, for I enjoy it very much. The new department, however, is all right. Women like to be entertained as well as "uplifted."
New York. MRS. ETHEL D. MCNICKLE.

I congratulate you on the great improvement of the Woman and Home Department. You have certainly made a very liberal advancement, for which the women will be pleased and give a generous patronage. A. M. H.
Ohio.

I agree with the subscriber who said it was worth every penny of two dollars instead of one. So here goes to back it up. I am much pleased with the new edition of Woman and Home that we receive once a month. It did seem that THE R. N.-Y. was only to be of interest to the men. But now, as it is, mother and daughter want it also, for the new edition has made it of interest to them also. MRS. FRED LE BRENZ.
Minnesota.

I sent you two subscriptions (trial) for the Ohio State Penitentiary, thinking it might help some poor creature when he should be liberated. Now the Governor, acting with the authorities, has provided a 1,500-acre farm, and men are there from the "pen"—trusties, etc., caring for cattle and crops. No bars, no walls! Their hearts are touched.
Cincinnati, O. W. M. A.

My wife was very much pleased with the ladies' hand bag you sent me. She did not expect it to be half as good as it is. Any time I can put in a good word for THE R. N.-Y. you can depend upon me doing it. LEWIS MYLES.
Texas.

What I like about this monthly women's number is that we can tell what we want discussed or talked about. Somehow most of the magazines I see appear to be conducted by people who never lived in the country at all. Farm women need some chance to earn a little money of their own to spend as they please. Show us how to earn it. MRS. J. C.
New York.

I am so glad we are to have a chance to help in this new Woman and Home. Farm women are just like other women. They do not like to be patronized. Naturally we resent having some city woman come and tell us about housekeeping when she could not possibly step into our home and hold it together economically.
Indiana. MRS. S. B. J.

I like the new magazine edition very much. I am glad you are discussing some of the house pets, for only those who have tried it can know what a bright little canary means to a lonely farm woman. MRS. H. G. K.
New Jersey.

We are just two old folks, never had children. We came here 13 years ago as old folks. This was new land, had been pinery, so we had the old stumps and windfalls. We had been in North Dakota as homesteaders; that is why I think that story in THE R. N.-Y. is just like old times. MRS. S. K. K.
Wisconsin.

Business For Women

Making Use of Parcel Post

Markets in Suburban Towns.

GOOD markets for parcel post trade for farm women that I have not heard mentioned, or rather I should say emphasized, are the suburbs of large cities. The conditions are radically different in regard to foodstuffs than what it is in the city proper in most cases.

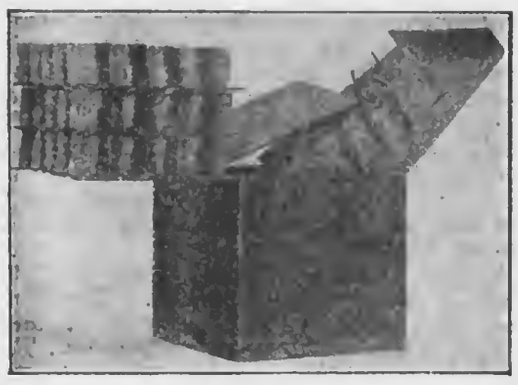
Very often there are only one or two grocers, sometimes only one butcher, and no bakery; consequently the prices of everything are higher than in the city where the same class of people live. The reasons for this are two; first they have extra cartage to pay, and secondly, as there is practically no competition, they put the prices of everything away up, and of course the people have to pay. Now if the farm women will raise more chickens and eggs it seems to me they could develop a fine trade, not only in chickens raw, but cooked chicken ready to be used for salad, sandwiches, etc. Then, outside of sending eggs in their natural state, there are certain kinds of cake and puddings and pastry that would stand shipment well. For instance, lady fingers, pound cake, molasses and spice cakes, etc., in fact any cakes that did not have a soft icing. And anyone who had butternuts or walnuts could make those delicious nut loaf cakes that everyone loves. Then there are several kinds of pastry and puddings for which I will gladly send the recipes on request.

Perhaps at first until a trade was established the grocer in the place could be asked to handle the goods, but in every case I would have the cakes wrapped in paraffin paper. Then in each package I would place a postal card (without the stamp) printed with the prices and names of things you have for sale, leaving space for the customer to indicate what articles they wanted to order. In a short time a direct trade could be established. Of course the quality of everything would have to be first-class and the prices reasonable. It would be better to have certain days for certain things, and sufficient variety from week to week, so that people would not get tired of the things. Here would be a good chance for farm and village women to coöperate—each taking the thing to make that they could do best, for very often a good pastry maker is not a good cake maker. Also one person would not be able to handle a trade like this after it was once started.

MRS. FLORENCE BELLE.

Mailing Packages for Eggs.

THE Department of Agriculture has issued Farmers' Bulletin No. 594 on shipping eggs by parcel post. This gives a full discussion of this interesting problem, takes up the care of the egg from the hen, tells how to use water glass, and other methods of preserving eggs, and then gives very full directions for shipping eggs and particularly handling them by parcel post. The arrangement of zones is given and full directions for handling, shipping and selling. It appears that in order to test the matter,



PACKAGE FOR 10 DOZEN EGGS.

9,131 eggs were sent through the mail in 466 shipments. The total breakage was 327 eggs, of which only 209 were so badly broken that they were beyond use. Of these 91 eggs were broken because the parcel was not properly handled. This shows the small loss resulting when eggs are properly handled and properly packed. Of course eggs with thin shells and out of the proper shape should not be used. Each egg is wrapped in sufficient paper to hold it tight in its own compartment and the package must be securely and strongly packed and tight. The department gives pictures of two containers which have operated well. Cut below shows the size which carried ten dozen, the eggs being placed in four layers of 30 each. Cut at right shows a compartment made of fibre board fitted with corrugated pasteboard lining and fillers. This size holds 15 eggs and has carried its contents securely. Anyone interested in the shipment of eggs by parcel post should by all means obtain this pamphlet and make a thorough study of it. Most people who report to us state that their first shipments were not very satisfactory as many were broken. In most cases where they continued to handle the eggs in this way and to study out the matter carefully, they have been able to improve greatly and most of them who studied up the proposition are now using the system with profit.

Rompers by Parcels Post.

I WOULD like to suggest to Mrs. E. S., page 637, that perhaps she could make money by taking orders for and making rompers for children from two to six years of age, according to the pattern shown in your issue of May 2, page 674. If she lives near a village or town perhaps she could get enough local orders to keep her busy. If not, a little advertising in THE R. N.-Y. and parcel post would solve the market problem. I would suggest that the rompers be made of dark blue and white ripplette (seersucker) as these would be easy to wash and require no ironing. If so requested the small size could be made to open at the bottom seam (inside from knee to knee) using buttons the same as on the back of the romper. I feel sure a good many mothers with young children would gladly buy these rompers, as they mean a great saving in the amount of washing necessary, because they protect the underwear and keep it clean. Some very well-to-do people I know keep their children in rompers all the time until they are five or six years old, having one or two of the white ripplette when they want them to look a little better than usual and generally one pique or heavy linen for very best. For Winter use they could be made of gray or blue Scotch flannel. The ripplette could be purchased by the piece, which would give a large profit. In soliciting orders I would suggest that the chest measure, also length of arm and length from base of neck to knee be asked for, as well as age of child, because there is quite a difference in patterns, and of course the mothers would not want to alter the rompers after they got them. MRS. F. B. T.

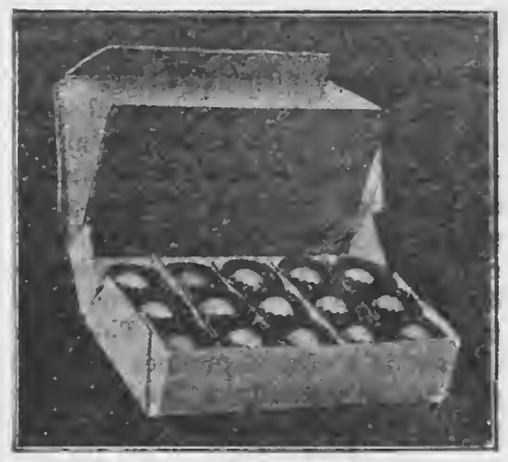
Shipping Eggs by Parcel Post.

I READ with interest the article on parcel post, on page 636, and likewise the letter of Mrs. P. T. R. on page 764, in which she tells of her trouble in shipping eggs by parcel post. In the interest of people who hope to get more than a 35-cent dollar through the medium of the parcel post, I would like to contribute my experience and a few thoughts on the subject.

I have been shipping eggs by parcel post to private customers since last November, during which time I had one egg broken, and which was my own fault. I get my customers by advertising in the Sunday papers. I am now getting 35 cents a dozen net for the eggs I ship, the customer paying the postage and cartons. In other words I get 41 cents a dozen for eggs shipped, six cents of which is for postage. Thirty-five cents a dozen is the lowest price I have reached this Summer. I felt sorry for Mrs. P. T. R., who seems to have had hard luck in her efforts to market her eggs by parcel post. If she be a woman who knows how to be particular she should start right over again, and be determined to make a success of it. This can be done, and possibly to a better advantage to herself than in my case. Where I live I can sell my eggs for a good price at the door, which possibly she cannot.

Now for a few pointed thoughts. It is useless in my opinion to try to ship eggs by parcel post unless the person making the shippings is particular in small things. There is a way to pack, and a time to ship, and unless these precautions are observed failure is sure to follow. I do not know whether all cartons are properly made to carry eggs. The kind I use are of double corrugated paper, and the boxes so made that there are two thicknesses of corrugated board on each side of the box. Inside are the usual compartments for each egg, made of the same material.

The secret of success lies in the wrapping of the egg, before being placed in the box. My method is to wrap each egg in soft tissue paper, cut to a proper size, and then wrap it again in soft brown paper, so as to fill the compartment, and not permit it to shake. Care should be taken to have the tissue paper cut so that it can be wrapped loosely around the sides of the egg, several wraps if possible, and then fold in the paper at the ends. The object sought is to form as much cushion over the sides of the egg, but be sure that no lumps or knots of paper are formed against the sides of the egg, which are likely to cause them to break. It is the side of the egg that must be protected, rather than the ends. The object of using heavy brown paper is to form additional cushion. The tissue paper is used first for sanitary reasons, preserving the egg and keeping it nice and clean. It is not sufficient to guarantee carrying without breakage. Paper is not all alike in its properties. A harsh brown paper does not make a good cushion for the egg to rest in. Use a soft paper, and wrap it loosely, and the egg will withstand the ordinary jarring it receives in transit. The eggs, of course, are placed in the box on ends. Eggs packed in this manner can go anywhere. I have taken a box of eggs and thrown them across the room to test out and failed to break any. I tried to pack them wrapped in tissue paper only, but stopped that practice when I found that an egg was broken in the second



MAILING PACKAGE FOR 15 EGGS.

lot sent out under such methods of packing. I have sent them from Philadelphia to Charlotte, N. C., and to Atlanta, Ga., all of which reached the destination safely. I shipped to my customers during the holiday rush and during the blizzard weather last Winter, and never lost an egg.

I ship Mondays and Thursdays, which gives deliveries in good time. Shipments collected Friday afternoon cannot be expected to reach the customer in the distant city until the following Monday. They should be started Thursday morning to make sure delivery. I have a record of all my shipments, having started the parcel post delivery method with a view of making the experiment. I expect to increase my egg output this Fall, and will follow the idea of advertising for parcel post customers. I am not interested in reducing the high cost of living, and do not believe that the parcel post is a factor in that direction, at least so far as eggs are concerned. It is a factor, however, to the city people in the reduction of the cost of high living. Anyone who has a poultry plant situated as the one described by Mrs. P. T. R., if they use good judgment, and care in packing, can beat the 35-cent dollar to a standstill. Such has been my experience from the seven months' trial of shipping eggs by parcel post. E. H. R.

Management of Work and Children

AS a question for discussion next month we may take the following letter. This will appeal to many a mother who finds it hard to get time for anything outside of housework:

The Woman and Home Department is fine. You ask us to tell you what we would like to see discussed in this department. Will not the mothers who have families of little ones, not one or two, but like myself, four or five, write and tell us how they manage their work or what system they use to get it done, as mine seems never done? I am sure it would help many farm mothers, beside myself, who are trying to do their work, take care of the children and help in the garden and poultry yard.

New York. MRS. W. B.

Principles of Home Management

Just now the farm thinkers and instructors are talking most about "efficiency" and "farm management." Some excellent advice is given, but mostly by people who are not obliged to practice their own preaching in order to make a living. Management of the home is just as important as that of the farm. We prefer advice and experience from women who day by day face the conditions suggested by Mrs. W. B. in the above letter. The farm mother who can keep her home, care for a family of children and save a little time for herself is a manager of high skill, and we want to know how she does it.

PEOPLE who are interested in children's industrial contests should read *The Extension*, published at the North Dakota Agricultural College, Fargo, N. D. No. 6 of this publication is called the "Industrial Extension Number," and contains rules for conducting contests with score cards, etc.

"ARE your friend's habits abstemious?" "Oh, no, sir, not a bit of it! He never takes a drop."—Baltimore American.

∴ The Patent Churn ∴

(*Continued from page 859.*)

to the relief of the agent at the churn. No sooner were they out of sight than off came the churn lid and an inquiring finger plunged inside. Lifting his dripping finger to his lips the agent tasted, his face reddened and he gave the churn a vicious kick sending its contents splattering. Ten minutes the company lingered at the flower bed. Suddenly a rig passed the house going toward town at a lively clip.

"Hey, what's yer hurry," hailed the man who had addressed the agent before. But the agent did not answer. Instead he urged the horse to a faster pace and the assembled neighbors caught sight of the patent churn dancing a mad jig behind the high seat and a moment later all was hidden by an enveloping dust cloud.

"Oh, Mrs. Hays, that scamp has run off with your butter," exclaimed one of the ladies as they turned the corner of the house. At this the neighbor who had hailed the agent laughed uproariously.

"Oh no he didn't," laughed Mrs. Hays. "I churned this morning; the butter's down cellar; he was churning on buttermilk."

Making Ice Cream

Fat of the Farm in Cool Comfort

By Bertha Betts

WHAT IT IS.—That which was a luxury has become the almost everyday food of all classes, poor as well as rich. There are two general classes of ice cream: Plain or Philadelphia, or New York, and French or Neapolitan. The plain ice cream is a raw product made simply of cream of varying fat content, sugar and flavoring. Commercially it generally contains some binder, but it rarely contains eggs. The French ice cream is a cooked product containing eggs, and is virtually a frozen custard. Ice cream is not generally considered a food, although its food value is rather high. It is mostly eaten for pleasure and considered a treat. Since it is eaten for this reason it is essential that flavor be made the first consideration. The choice of the kind of flavor is decidedly an individual privilege, but no matter what flavor may be chosen there are certain definite factors which may make or mar the character of the finished product. To obtain the best flavor the following factors must be considered:

1. The purity of the cream, whether free from all contamination and dirty odors as are likely to be collected in dirty stables or unsanitary methods of storage.

2. The richness of the cream; Cream with a high fat content possesses a decidedly better flavor than does a cream of low fat content.

3. The sanitary condition of the freezer can; it should be carefully washed, rinsed and aired before using.

4. Ripening; if ice cream is allowed to stand for several hours after freezing the flavors become more thoroughly blended.

5. A small amount of salt will help to bring out and enrich the flavor, but it must be added with care, one-eighth teaspoon per quart is about right.

BODY AND TEXTURE.—Next consider body and texture. These terms are often used synonymously but mean quite different things. When speaking of body we mean the whole mass as a unit, while texture means the arrangement of particles. The body should be firm, not mushy, nor on the other hand, rubbery. This characteristic is governed in part by the milk solids present. If cream is allowed to age, say 24 to 48 hours, keeping cool the while, it improves the body of the ice cream produced. Some substances known as fillers are used to produce a better body. Evaporated milk used with thin cream is quite effective, and far cheaper than butterfat in sufficient amount to produce a like result. Gelatin is frequently used, especially when the ice cream is to be kept for a considerable time. It decidedly aids its keeping quality. Flour, cornstarch and rennet are also often used; these make a pudding-like mixture which give a firm body.

SMOOTHNESS.—If the ice cream has a smooth and velvety texture it is far more pleasing than is a mass of coarse crystals. This characteristic is also largely influenced by the presence of butterfat, but the method of freezing is quite as important, for if ice cream is frozen too rapidly the cream will separate and coarse water crystals will result. Or if frozen without motion it will be coarse grained and spiny. During the process of freezing it is essential that enough air be whipped into the mixture to give it a light, smooth and yet velvety consistency. Of course the more butterfat present in the cream the more velvety will be the texture of the resulting ice cream, and the less will be the necessity for incorporating air. If the cream is whipped before mixing with the flavoring it may be allowed to freeze without stirring and a very desirable result be obtained. This type of frozen mixture is generally known as mousse. For very cold weather, when the mercury remains well below the freezing point during the day, such a mixture can be made at night, set out-of-doors and be in excellent condition to serve for dessert at dinner the following day. If ice cream is to be kept for some time, a binder such as gelatine, ice cream powders, etc., may be used to hold the texture and prevent the growth of water crystals.

EFFECT OF STIRRING.—As ice cream is freezing its volume increases. This is due to the incorporation of air into the mixture and to the expansion due to freezing, and is known as "*swell.*" If a viscous cream is used more air can be whipped into it. The viscosity of cream increases on holding; just why this is does not seem to be clearly known. One theory of this thickening phenomena likens it to the clotting of blood. The amount of swell is greatest just before the mixture freezes. If the ice cream is frozen slowly there is more time for whipping between the time when the cream becomes cool enough to whip and the time when it freezes. Thus, more air will be incorporated and a larger swell obtained. If the freezing is done too rapidly at first the cream will be liable to churn before it becomes sufficiently cool to whip and swell. Thus it is best to freeze slowly until the cream is cooled to the whipping point (about 34 deg. Fhr.) then to increase the speed of the dasher, reducing the speed again when it begins to thicken so as to prevent any possible loss of swell.

FREEZING.—To freeze ice cream, a mixture of ice and salt is used. The salt hastens the melting of the ice. When the ice melts it must absorb heat so it obtains this heat wherever possible, and this comes principally from the mixture in the freezer can. Thus the cream-sugar mixture loses its heat and becomes ice cream. A fine salt works more quickly than does a coarse salt, but it tends to form crusts and prevent the ice from settling about the freezer can. Added to that it is much more expensive than coarse salt, so the latter is generally used. The ice should be broken fine and, if the freezer is a large one, a little water poured over ice and salt at the start will hasten the freezing. Most directions given for the proportions of ice and salt call for three parts ice to one of salt. This is necessary for mixtures frozen without stirring, but for the average ice cream, frozen with stirring, much less salt can be used (say 10 parts ice to one part salt) provided the salt is not put into the freezer until it has been packed three-fourths full of ice. By so doing much less salt settles to the bottom of the freezer. When the freezer is emptied the undisolved salt can be drained, allowed to dry and used another time.

NEAPOLITAN ICE CREAM is generally made with thin cream or rich milk and six to 12 egg yolks per quart of liquid. One cup of sugar is allowed for each quart of liquid and another cup of sugar for each dozen of egg yolks used. This mixture is cooked exactly like a boiled custard, allowed to cool, flavoring added and then frozen.

PLAIN ICE CREAM is made of thick cream and sugar flavored as desired. For each quart of cream use three-quarters of a cup of sugar. If crushed fruit or fruit juice is used for flavor do not mix it with the cream before beginning to freeze. Put the cream into the freezer can and turn until it just begins to freeze, then open the can, add the fruit juice, made into a syrup with the sugar, and continue freezing until as stiff as desired.

Formula for plain ice cream made with fillers and binders: For one gallon of ice cream, cream two quarts; scalded milk one quart; filler three tablespoons flour or 1½ tablespoons cornstarch or one junket tablet, or ¾ tablespoon gelatin; cream one quart, scalded milk two quarts, one-quarter cup flour or two tablespoons cornstarch or two junket tablets or 1½ teaspoons gelatin.

For one gallon of ice cream use three cups of sugar and any flavoring desired.

The Bright Side of Life

THE best way to cure the "blues" in your own life is to make the life of some other fellow a little more rosy!

Mother's Afternoon Out.

Mother was at the mending basket.

Twins: "Mother! We've grown up!"

Mother (looking up at her tall daughters): "So I perceive."

AN INDIAN WOMAN AND HER BEAD WORK.

Twins: "We've been doing some real thinking and we've talked with Dad."

Bab: "You've been wearing all the old clothes and working hard and staying at home and it isn't fair."

Betty: "Every hired girl in town has two afternoons out and you haven't any time to yourself. This won't do, this family is going to reform."

Mother (meekly): "Yes, daughters. Honorably deign to mention how I am to reform." (Both girls hug her violently.)

Bab: "You don't need to reform but we do."

Betty: "We're going to give you two afternoons a week to do as you like."

Mother: "But you are busy with your school and your music and your clubs."

Bab (interrupting): "What afternoons do you want?"

Mother: "Wednesday is Ladies' Aid. I'd like to have that and Sunday so I can go home."

Father (entering): "All settled, girls?"

Mother: "Are you in this, Max?"

Father: "Yes, Mary, I am."

Mother: "With the whole family against me, I may as well yield. But what will you do about the meals?"

Father: "Oh, we can eat crackers and milk."

Twins: "We'll find something you know we can cook."

Bab (aside) "Who put ground coffee in the coffee cake?"

Betty (aside): "Who left the sugar out of the cranberry pie?"

Mother: "I'll trust you both to do better next time. Only at first I shan't know what to do with my free time. I've forgotten how to play."

Twins: "We'll teach you. Begin now, go for a walk with Dad, you look all right." (The mother rises slowly and goes with her husband. E. S. K.

An old man, bent and weather beaten, came to my door the other day asking for apple suckers to plant on his place. "But," I said, "it will be ten or fifteen years before those suckers bring fruit. You have no children and surely you do not expect to be here when they bear, so why do you plant them?"

"I'm plantin' 'em for posterity," he replied.

"But what did posterity ever do for you?" I asked.

"It's never had a chance, so I aim to do by it as I would wish it to do by me; if I was posterity an' it was me. If *somebody* hadn't done somethin' for posterity, I'd have been nigh 20 year old 'fore I'd tasted a Limbertwig." C. R.

North Carolina.

FARMER JONES, over the fence: "Does your cow give a lot of milk?"

Farmer Town, lately from the city: "Well, I think she would give a lot, but my wife and I agreed we would be saving of it, and I only milk a pint or a quart, or just what we want to use, so there won't be any wasted.

THE CORRECT SIZE.—Mrs. Newlywed fluttered into a high-class furnishing store and asked to be shown the latest styles in men's Spring hats.

"What size?" inquired the practical clerk.

"Eight and one-half."

"That's a rather unusual size, are you quite certain of it, madam?"

"Very certain. I heard my husband order shoes yesterday, and remember distinctly. Yes. Eight and one-half."

E. D. M.

You would have been amused could you have heard Mr. F. and I rise to the occasion recently upon being asked what was the best farm magazines. In chorus we exclaimed, "There is only one farm magazine." We made the inquirer write down name and address, and had I had a pistol about me, I should have seen that the subscription got off at once. J. D. F.

Carrying a pistol in New York State is against the law unless you have a license. No doubt the court would quickly issue a license for this worthy purpose, but how long would such readers stick? "Buying by sample" beats a shotgun.

ANOTHER HAIR RESTORER STORY.—The little hair-restorer story on page 769 of THE R. N.-Y., reminded me of a story I heard not long ago, the truthfulness of which the narrator was willing to vouch for, ran thus: Into the town of L——, came two men, William and James Selby, who rented a house and established themselves therein. It was soon discovered they were both perfectly bald, a fact that seemed to annoy them very much. They soon had the heart-felt sympathy of the whole town. One day an agent *chanced* to invade that town offering for sale a wonderful hair-restorer. He called on Sam Perkins who was slightly bald and failing to convince him of the wonderful powers of the specific asked: "Do you know of any one who might be in need of my remedy?" "There are two men in the house next door, you might call on them." replied Sam. Sam saw the Selby's later. They thanked him for sending the agent to them saying they were giving the medicine a fair trial and had great faith in it. "See," they said proudly showing their heads on which there was a fine growth of hair already in evidence. In a short time the demand for that particular compound was immense. Then one day it was discovered that the agent was a brother of the Selby's and that they had kept their heads closely shaved ever since they had moved to L——, and after buying the tonic had laid their razors away and simply let the hair grow. The demand for hair-restorer became a thing of the past.

M. B. DUTTON.

Indian Bead Work.

THE accompanying picture may serve to inspire women readers of THE R. N.-Y. to try their hand at bead work in forming saddle and bridle trimmings. Doubtless many patrons of the movies who sit and watch long reels of horseriding films have noticed some of the gorgeous designs that have been wrought in beads. It is safe to say that most of the work was done by the Indian women, but her pale-faced sister already has learned to indicate the red maiden closely. Indian girls who became students at the Indian schools carried this knowledge of bead work along with them. Many of them decorated their rooms at the schools with work of this kind, and some of them willingly gave lessons to white girls, with the result that such work is being done outside of the Indian reservations more than in earlier days.

Indian women charge more for this kind of work than formerly. The time was that such work was sold at such trivial prices as to seem ridiculous. The work was gobbled up as travel to the Indian country increased, and then the red workers began raising their prices, and in some instances they have soared almost out of reach. It used to be that the Indians made a water bottle that was considered a piece of real potter's art, and they were useful as well as ornamental. But water bottles doubled and trebled in prices until they reached fancy figures. And then the workers are said to have skimped their work until a water bottle wouldn't hold water or anything else that was poured into it.

J. L. GRAFF.

Unusual Farm Problems

What Can Be Done

THE R. N.-Y. is closer to its readers than any other paper in the country. We make that statement without reserve after having for years read the thousands of letters which come to us from troubled and puzzled readers. Most of these questions can be answered by individuals. There are others which require a discussion or a wider experience than any one person can give. We cannot print all such questions, but now and then there comes one covering a new line of thought, and we print it to develop a discussion.

A Prisoner as a Farm Hand.

I am interested in a man who is now in jail—soon to be set free. He is a highly educated man of naturally good character. When he is set free this man wants a place on some farm where he can work and learn fruit growing and poultry keeping, and thus make a new start. I am satisfied that he is sincere in this, and that if he could find such a place, removed from the temptation of drink, that he would do well. There ought to be a chance for such men to get a new hold on life. Do you know of anyone who would take him? W. A.

We do not. It is a hard case, for such a man ought to have his chance, but most people who live on lonely farms would be afraid of this record.

The Right Man Wanted.

I have a farm in a Southern State which I have tried for some time to handle satisfactorily by proxy. The natives are not very energetic and I have had one or two tenants who took little interest. Like many other land owners, I most desire to have the place kept up and pay expenses. Many of us think we have opportunities for middle-aged Northern people who would like a change of climate, but we do not know how to reach such people. R. H.

Schoolboys Want Work.

A number of the boys in our city school would like to work on farms this Summer—to earn something and learn practical farming. Where would they be most likely to find such employment? Are not farmers desirous of obtaining such help? CITY TEACHER.

Our experience is that most practical farmers do not desire this kind of help. It would be hard to place these boys on farms where they could really learn much about farming and be worth much more than their board. We know that some city people imagine these young men would relieve the labor situation, but as a rule they barely earn their board. There ought to be places where such boys could learn, but they must pay for other forms of knowledge.

A Home With Childless People.

I have been reading the letter of the lady with the two girls and $400, and I saw the answers in THE R. N.-Y. from the people. I have $500 and am alone. I would like to make myself a home in country too. I am not for sale in the marriage line. My age is 33. I would like to make my home with an old childless couple living on a farm, Christian people wanted; can furnish good recommendation. I will go South or West.
Pennsylvania. C. A. D.

We have had several letters from elderly people who would like a companion. No doubt there are others like the sensible woman who writes this note. The problem is to bring the two together and have them satisfied, yet if this could be done many a worthy person could find a home and many a farm home could be kept going.

Let Women Vote.

I FIND on page 773 an item on women voting, by W. L., which is headed "A Man's Sensible Opinion," but I fail to see the sense, if by sense is meant a reasonable argument. The writer says he is opposed to woman suffrage, but if it can be shown that a majority of women want to vote he will withdraw opposition and help them; also that he should consider it an outrageous injustice to compel them to do that which they do not want to do, because a minority want it done. Woman suffrage is either a good or a bad thing. If a good thing, then any woman who wants the privilege ought to have it. If it is bad numbers cannot make it good, only add to the evil. I do not understand that the extension of the election franchise to men ever depended upon proof that a majority of men wanted it. It was claimed to be a good and just thing to grant the privilege to those who wanted it, but *no one is compelled to vote if he does not want to do so.* All the women suffragists ask is that *those women who want to vote shall have the privilege.* The talk about compulsion is all *bosh.*
Massachusetts. MONROE MORSE.

BELLE OF THE BALL.—The little picture herewith, taken from the Chicago Tribune, comes near the political truth. Illinois women have the ballot. At the ball she is overrun by

BELLE OF THE BALL.

suitors—politicians who want her vote. Miss Ohio and her sisters Iowa, Michigan and the rest are wall flowers—no one paying attention to them.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards thier property and their children. There will be direct answers to actual questions and general statements of law.]

Selling Property Without Wife's Consent.

My husband sold some property a year ago without my consent, even though I had several hundreds invested in it. I have not learned any particulars about same and do not know what he got for it; he never tried to settle up my share nor have I seen one cent of it. He has left us now and also three minor children dependent upon strangers or my own people. Is there not a dower right after 10 years of married life, so that a wife should be entitled to a little? A. H.
Connecticut.

If you were married since 1877 you have no dower right in your husband's property, nor does he acquire a right of courtesy in yours, and neither must join in the deeds of the other. Although you have no dower right in the land sold by your husband and have no claim against the buyer, you would have the claim, of course, against your husband for the amount you contribute toward it.

Will as to Joint Property.

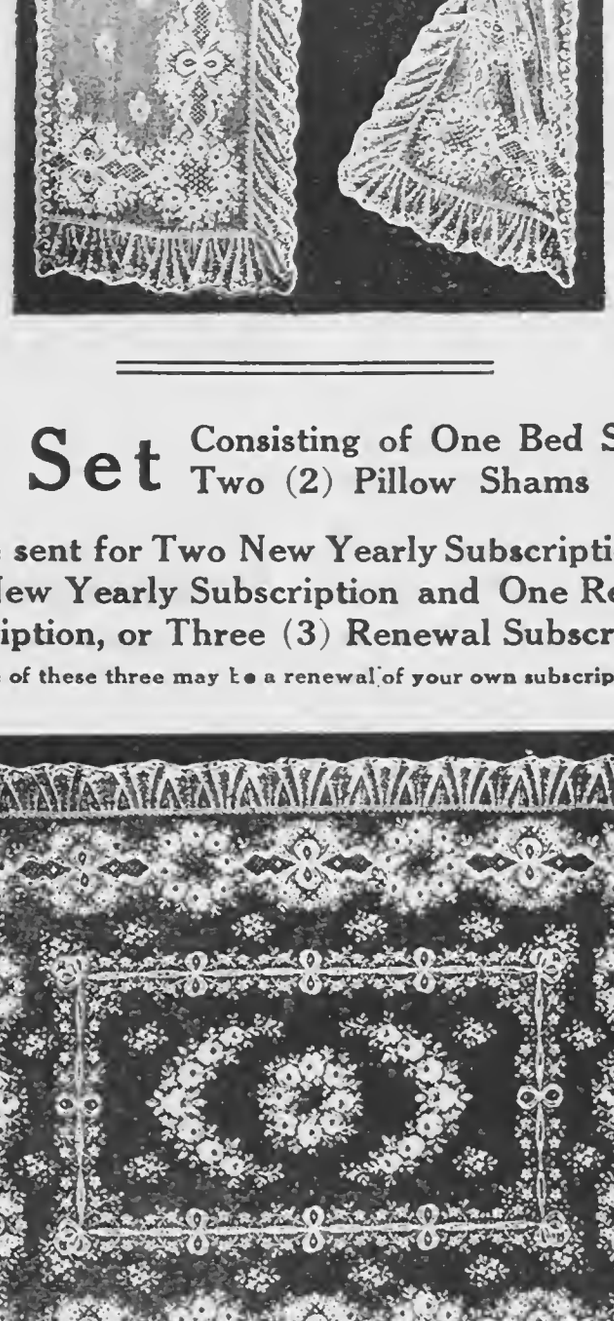
The deed to our property is a joint one, myself and wife, our savings bank account is a joint one, payable to either of us in case of death, my insurance policies are made out to my wife, our household furniture and personal effects are worth $1,000, free from debt. Is it necessary for me to have a will? Being fixed as it is would it be necessary for my wife to go through any process of law to hold this property? Will you give me the exact law on this question? G. B.
New York.

It does not seem necessary that you should have a will if you are sure that all the property of any value that you have is in the joint names of yourself and wife. This would seem to be the case with all the property you name except the household furniture, and it would be well in regard to this to give your wife a bill of sale, which, there being no creditors, you may do. This would take the form of a gift, and may legally and properly be done. Where there are no large creditors and no general active business is being done the procedure you have outlined above is a good one for a man and wife to pursue in regard to the disposition of their property, and in case of your death there is nothing your wife would have to do to retain possession of the property.

This Fine Saxony Net Split Lace Curtain With Throw-Over Top

will be sent for Two New Yearly Subscriptions, or One New Yearly and One Renewal Subscription, or Three Renewal Subscriptions

(One of these three may be a renewal of your own subscription)

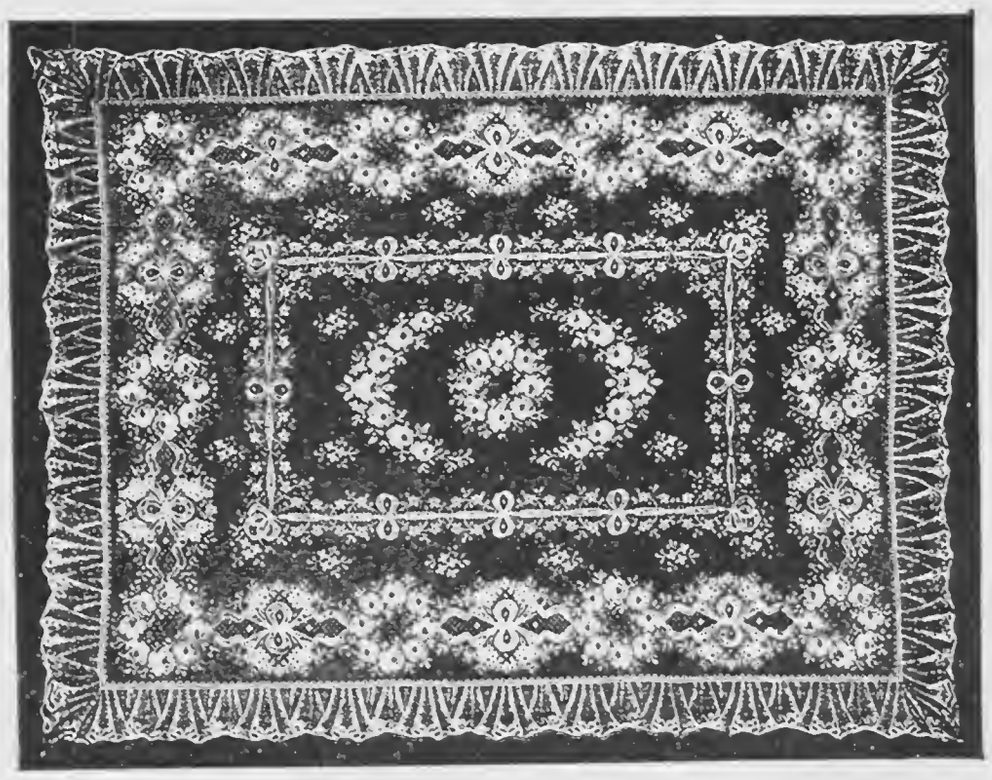


The design is known as the Brussels and Bow Knot. Size: 3 yards long, 60 inches wide. Throw-Over at top, 36 inches. The curtain is one piece, but presents the effect of a pair of curtains when draped. The curtains are of good material, well made, overlocked edge and will stand washing well.

Bed Set Consisting of One Bed Spread and Two (2) Pillow Shams . . .

will be sent for Two New Yearly Subscriptions, or One New Yearly Subscription and One Renewal Subscription, or Three (3) Renewal Subscriptions

(One of these three may be a renewal of your own subscription)



This Bed Set is of Saxony Net Lace, the Spread is 72 inches by 92 inches, the Two Pillow Shams are 36 inches square. The design is the famous Brussels and Bow Knot. The set is of good material, well made, overlocked edge and will wash well. The design matches the curtain.

A Complete Room Set of Curtain and Bed Set

above described, will be sent for Three New Yearly Subscriptions or Six (6) Renewal Subscriptions

(One of the six may be a renewal of your own subscription)

THE RURAL NEW-YORKER, 333 WEST 30TH ST., NEW YORK

Live Stock and Dairy

DAIRY CATTLE IN KANSAS.

[Newspaper reports have mentioned a development of the dairy business in Kansas—coöperative buying and breeding of improved stock. The following statement by Prof. A. T. Neale tells about it.]

I DO not know that we are doing anything new or startling here in Kansas, along the lines you mention. Kansas, as you know, has not been a dairy State. The industry is developing very rapidly, however, at the present time, and we are endeavoring to assist in a rational development. We are endeavoring to create community breeding centers in which only one breed of dairy cattle is kept. We have several of these started now, that will be heard from later on. At Mulvane we have the largest Holstein breeding community west of the Missouri River. The farmers there started breeding Holsteins about four years ago. A year ago they organized a Holstein Breeders' Association known as the Southwest Holstein Breeders' Association. This organization has a large number of members who are breeding purebred cattle. Several very high-class bulls have been introduced into the community.

There are two pronounced Jersey centers established, a few Guernsey centers, and in addition to Mulvane, several other places are starting the breeding of Holsteins. We have given assistance to a large number of farmers in the purchasing of purebred and grade dairy cattle. I have just returned from a trip to Wisconsin with a number of farmers in which 100 head of Guernseys and Holsteins were purchased for various parts of the State.

In purchasing stock we have insisted on buying a few high-class cattle rather than a large number of inferior grades. These have proven to be profitable in practically every case, and have served as an impetus to the business. I am hardly able to say just how many cattle we have assisted in buying altogether. As an example of the class of cattle which we have bought, I might say that our last shipment from Wisconsin includes a Holstein bull whose dam and sire's dam average 21,000 pounds of milk and 975 pounds butter each per year, semi-official record. This bull was purchased at a long price, but goes into a community where the Holstein industry is just starting. Along with him are going several very high-class cows, some of them with seven-day official records of almost 25 pounds of butter, and as high as 580 pounds of milk. Quite a number of young cows and heifers of excellent breeding that will be able to make good records were also secured.

Among the Guernseys of our last shipment are three daughters of Rhea's King of the May, the sire of the prize-winning young herd at all the big shows of 1912 and 1913. His daughters are not only of excellent type but several of them have made around 400 pounds of fat as two-year-olds with the first calf. One of the things that we are very particular about is that all the high-class cattle brought into the State are placed in good hands. We do not care to buy cattle for a man who is a poor feeder, and will not sell to a man of that sort if we know it. By placing cattle in the hands of good men, their work speaks for itself and is a recommendation of the improved breeds.

CROP-GROWING CLUB FOR YOUNG PEOPLE.

ONE of the most helpful and interesting pieces of work a community may do for its young people is to organize a corn, potato or canning club.

Anyone who has been associated with a boys' or girls' agricultural club or contest for one season, and has seen the awakened interest among these young people knows that it is worth while. The boys and girls who join one of these contests and pledge themselves to plant, care for and harvest, by their own labor, a crop of corn or potatoes or garden truck, and at the same time keep a cost account with their crop, are better boys and girls at the end of the season. They have learned what it means to work and produce results on their own responsibility. They have seen and studied their crop as it grew. A new world is opened to them so that when they look upon a crop of growing corn or potatoes they see something besides a green mass of foliage.

It is not difficult to start a corn or potato club, or contest. Rules are made out, printed and published in the local press. Registration in the club is invited. The funds can be easily raised. The Granges, boards of trade, and even interested individuals are always willing to contribute. For prizes commodities are as useful as cash. Such prizes as purebred calves, harnesses, tools, etc., are to be preferred to cash as a rule.

The most lasting value of this class of work is the awakening and encouragement that comes to boys and girls who by their own labors have accomplished a particular piece of work. In one corn contest last year a boy 14 years of age grew 68 bushels of shelled flint corn on an acre. He won a purebred bull calf as a prize. On being advised of the fact his father remarked: "I know of no one thing that has happened in my recent life that pleased me more than this." The

WINNER OF A CORN CONTEST AND HIS PRIZE.

picture shows the calf and his owner, Jason Evans, of Jefferson County, N. Y.

F. E. R.

OHIO HOLSTEIN MEETING.

THE regular meeting of the Western Reserve Holstein Breeders' Association was held May 28, at Cleveland's City Farm at Warrensville; about 200 were present. A. A. Hartshorn of New York, A. J. Glover, Prof. Oscar Erf and Dr. Colley made addresses. A basket lunch was enjoyed by those present. After an enthusiastic talk by the breeders, the meeting was called to order. It was decided to recommend G. A. Dimoc as the Association's representative at the National Board. Proxies were signed and given to those present who would attend the June meeting of the Holstein-Friesian meeting of America, in session June 1 and 2 at Chicago.

The Warrensville farm belongs to the City of Cleveland and comprises about 2,000 acres. Here is the tuberculosis tent colony, old people's home where they may live out their lives as nearly as possible among the conditions of home, the workhouse where the most unique treatment of prisoners is carried out, ministering rather to a diseased mind that needs care in setting up the right train of thinking, and the colony house. Purebred Holsteins of world-wide fame furnish milk for this great family and their beautiful surroundings are well worth going miles to see.

For some time Ohio has held the champion cow, but has not the honor at present. An effort will be made by the breeders to bring this about the coming year. In the meantime many are getting started with small herds, and still every available cow or heifer is picked up at the owner's price and at the stable, so well-known have the Holsteins of this section become. An association of this kind is a great benefit to those engaged in Holstein raising.

MRS. JAMES LAMPMAN.

LIVE STOCK NOTES.

The Ayrshire Cow.

HOW is this for cow to make the farm pay? The Ayrshire cow Yucca Douglas, 19504, gave 7,412 pounds milk as a two-year-old; three years old A. R. test, 9,045 pounds milk, 371 pounds butter; four years old, 9,739 pounds milk, 392.8 pounds butter; following freshening, 10,222 pounds milk, 403.88 pounds butter; next season, 10,994 pounds milk, 434 pounds butter. She gave 66 pounds in one day, 1,735 pounds in 30 days, under Advance Register test.

New Hampshire. CHAS. J. BELL.

R. N.-Y.—Surely the farm that would not respond to the advances of these Ayrshire ladies would hardly be worth living on.

NEARLY 450 cows, owned by 77 breeders living in 28 different counties of Wisconsin, are being tested to determine their milk and butterfat producing capabilities. According to official figures from the department of dairy tests at the College of Agriculture, University of Wisconsin, this is the largest number of cows ever under test at one time in this State. Each of the five dairy breeds popular with Wisconsin farmers are represented in the tests, 46 of the herds being Guernsey, 18 Holstein, eight Jersey, one Ayrshire, and one Brown Swiss.

ZEBU CATTLE IN BRAZIL.—Mr. P. H. Dorsett of the Department of Agriculture, writing to the Bureau of Plant Industry from Piropora, Brazil, February 8, is thus quoted in Bulletin 93:

"The Zebu cattle are good-looking animals, and have a good many points to recommend them for this country and this people. They are not, however, as I see it, strictly beef or milk cattle. But as general purpose animals in this country and under the conditions existing they appear to have many points to recommend them. The two Mr. Lomao's at Pratinha speak in the highest terms of these cattle. Mr. Pedro Lamao has a cow, 'Palinku,' that he refused 10 cantos, about $3,500, for. He sold his bull calf at weaning time for six cantos, about $3,000. This breed of cattle is praised by some and condemned by others. It no doubt has its place in this country and possibly in others."

WORK HORSE PARADE IN BOSTON.—The twelfth annual work-horse parade in Boston took place on Memorial Day, and proved to be the largest and biggest parade yet held. There were over 1,700 horses in line, and they ranged in age from an unweaned foal three months old to two champion old horses aged, respectively, 40 and 41 years. In the Old Horse Class there were 65 entries, and the gold medal was awarded to a little mare aged 34. She is owned by a family who also owned her dam, and the period of service covered by the two is 50 years. This Old Horse Class was started by the Boston Association and has proved to be a great success wherever it has been tried, and especially at county fairs. An old horse, in this sense is one who has been ten years or more in the service of the same person or concern. Other animals that figured in the parade, carried on the wagons, were dogs, goats, lambs and prize babies. Every dog received a special ribbon. Prizes were also awarded to drivers with a long term of service, and there were silver and gold badges for those who had showed the same horses for five or more years. Some interesting exhibitions of driving without reins, and of tricks by work-horses were given at the reviewing stand, and one horse went through the parade without any bridle.

H. C. M.

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Dairying in Florida.

WHILE reading your issue of June 13, I was impressed by the low price received for milk by your milk producers. Last week I made a trip around among some dairies in this county, looking at the cows and their equipment, and the prices for milk seem much higher here. One at Ocala, had been offered 40 cents per gallon for all he would produce, making a two-year contract, the milk to be delivered at a railroad depot, within two miles of the barn, but they preferred to bottle their milk and deliver to consumers in Ocala, about two miles. The farm is on the outskirts of the town, but within the corporate limits. Milk is delivered to consumers in Ocala at 12½ cents per quart and the dairyman could not supply the demand. I believe cows can be fed here as cheaply as in New York. Our good lands will produce the greater part of the feed. I shall fill my silo in July, and silage keeps just as well here as anywhere. We do not need the expensive barns and use none of our feed to generate body heat. There seems to me to be a much better profit here than in the North. Our towns and cities are growing so fast, it seems almost impossible to furnish and supply milk, cream, etc. A firm making ice cream in Jacksonville gets its cream from New York via Clyde Line boats. It can be made at less cost here than in New York. Not in all Florida land, but in any good hammock land. S. H. GAITSKILL.
Florida.

Fat Milk From Fat Cows.

I HAVE just noticed an inquiry in THE R. N.-Y. as to whether Holstein milk would be likely to pass the Massachusetts requirement of 12.15 per cent. total solids and 3.35 per cent. fat. Our herd at present consists of about two-thirds registered Holsteins and the rest high grades of the same breed. They are in all stages of lactation, and all in fair flesh. My son recently made a chemical analysis of a sample of the mixed milk from the herd and found 12.46 per cent. total solids, and 3.80 per cent. of fat.

While it is probably true that fat cannot be fed into milk, at the same time it is very certain that fat cows will give richer milk than poor cows. The way to get good milk from any cow is to keep her in good condition all the time. If one stops feeding his cows when they dry off, and they freshen in poor condition, they may give a good flow of milk at first, but it will be poor milk. Then if the owner feeds up his cows and gets them in good flesh their milk will increase in fat content. On the other hand, if the cow be fat at the time of freshening, and she is a deep milker her milk is likely to be at its richest at this time, for such cows will often milk themselves down in flesh in spite of the efforts of the herdsman to keep them up. Most of the official tests are made from fresh cows, and it is not at all unusual for these cows to test over 4 per cent. fat. J. GRANT MORSE.

Cover Crops for Pasturing.

COULD you advise me as to the best thing to sow in silage corn at last hoeing with the idea of producing some Fall feed after silage corn is taken off? This feed to be pastured off with milch cows. Soil good, well fertilized, with stable manure; usually get heavy crop corn. Turnips would be so shaded that they would not amount to anything. A discussion of best way to supply green feed to milch cows from July 15 to Oct. 1 would be interesting. This is a time of great shortage in milk every year, and a very trying time to keep up a supply of milk on account of the conditions which always exist at that time. Someone will at once suggest a Summer silo. This might do in some cases, but how about those who have no silo? E. S. L.
Connecticut.

From our own experience, without knowing more of the local conditions, we should advise a combination of rye, barley and Crimson clover, three pecks each of the two grains, and 12 pounds of Crimson clover seed to the acre. The grain will make only a light growth until the corn is cut away. Then if the soil is reasonably moist it will come on rapidly. Barley is the best grain we know of for providing Fall feed. In the South they have what is called Winter oats, which may be seeded like field grain. We have tried these in New Jersey, and found that they made a fair Fall growth, but they were all killed out through the Winter. While Crimson clover will not be likely to live through the Winter with you, if you have a moist Fall it would make fair growth for pasture, better we think than any other kinds of clover. The barley will give you a reasonable amount of pasture. We have seeded it early in September, and under favorable conditions get a fair growth of hay in late October. Rape or turnips would make considerable growth during the Fall, and would make fair pasture for sheep or hogs. We would not advise either, however, for milch cows, as they will give the milk a "turnipy" or bad taste. Probably the barley and Crimson clover in such a combination will fail to show up in Spring, but the rye will come on after Winter is over, and provide a good crop for turning under. The best way to supply grain fodder from middle July to frost, would be to sow patches of drilled fodder corn, and also Japanese millet. Make different seedings of the millet, so that it will come on in succession. There are, of course, several other crops which are recommended for this purpose, but thickly seeded fodder corn cut and carried to the cows is after all about the most economical soiling crop that can be tried in your section.

A Boy and a Cow.

THE following statement comes from the West Virginia Experiment Station:

George Sonda of Ohio County is only 12 years old, but he is feeding and milking a registered Guernsey cow during an official production test. George's father bought three Guernsey cows four years ago and with these as a start has raised a fine herd of 15 head. One of these cows, Imported Windflower III, produced 13,600 pounds of milk and 626 pounds of butterfat during an official test, as a five-year-old. A daughter of this cow, Lady Alice, at 23 months produced 12,000 pounds of milk and 600 pounds of butterfat in a year. The cow which young George is interested in is 21 months old and is now giving 35 pounds of milk, containing 4.7% butterfat, per day. He is taking full responsibility for the work and is proving himself a capable tester.

Indigestion.

I HAVE a horse 15 years old that has in the past six months seemed to get no benefit from his feed. He seems very sluggish in his movements, rough coat, his manure has very bad smell, and he seems to keep twitching his upper lip. I have given him worm remedies and seen no improvement nor sign of worms; tonics give no results. I am feeding three quarts of oats and two quarts of bran twice a day, and corn on cob once. I had his teeth filed last Fall, but it seems to make no difference. He does not seem to be shedding, and is very slow in movements. A rest seems to make no difference to him, as I have had him in the barn a week at a time, but he is just as slow and sluggish as if he is working every day. H. R.
New York.

Clip the horse, or at least clip the hair from the belly and from the legs above knees and hocks. Have a veterinarian give him a one ounce aloes ball, after feeding three bran mashes without hay. When the bowels are normal again feed a mixture of eight parts of whole oats and one part of wheat bran, allowing a pound of the mixture per hundred pounds of body weight as a day's ration and giving a like amount of hay. Do not feed corn. If he bolts his feed give it from a very large feed box on the bottom of which the feed will spread out thin. If he does not improve in condition give half an ounce of Fowler's solution of arsenic night and morning a week, then give three such doses a day and continue until a quart has been given; then gradually discontinue the medicine taking at least a week to the work. Carrots would be beneficial for this horse. A. S. A.

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A Trade in Small Cheese.

IS it practical for a cheese factory to make cheese in one or two-pound sizes? Do any of our American cheese makers put their product in one and two-pound sizes? The subject of manufacturing one and two-pound cheese is soon to be laid before one of the nearby coöperative creameries, the idea being to make small-sized cheese that may be advertised and sold through the parcel post. Can you give any advice? Do you think introduction and sale of foreign-style cheese, the soft kind, in tinfoil and glass jars, will interfere with the sale of small American cheeses? J. E. W.
Watervliet, N. Y.

I do not think anyone has been able to solve the pound cheese question satisfactorily. I spent considerable time myself in an effort to get these small cheeses into dealers' hands, but did not succeed. The main difficulty is, I think, so far as the regular standard Cheddar cheese is concerned, on account of the formation of such a large percentage of the cheese into rind. The present method of paraffining cheese when three to six days old partly at least does away with the trouble. If the consumer is not over fastidious he will not object to eating the rind as a part of the cheese. At the same time, a pound of cheese cut out of a 30 pound flat cheese will be more satisfactory than a pound pressed and cured independently, and another difficulty in the way is the fact that the margin which the grocer gets would probably make him a very sharp competitor as against independent or direct shipment. Furthermore the enormous amount of detail work which would be a necessary part of direct shipment would I am afraid be a very great drawback to the business. It would cost two cents to send the bill and two cents to return the pay, together a pretty good profit on a pound of cheese. So far as manufacturing is concerned it can be done. I should think the best way to press them would be say 10 pounds in flat form, about two inches thick, with a line in the bottom of the hoop and also in the follower directly opposite, indicating a pound in each section. The only objection to this plan would be the open face when the single pounds were cut apart, or on the other hand, each pound could be pressed separate.

The introduction and sale of various forms and types of small cheese both in glass jars and tinfoil satisfies the demand for small packages, and while these packages represent a pretty high cost for the nutrition which they carry, they are, however, very satisfactory to the consumer and are increasing in popularity. Nothing is more attractive than the direct from producer to consumer plan, but it is contrary to our past habits and methods, and will I am sure require a great many trials before it will become common. H. E. COOK.

Portable Pigpens.

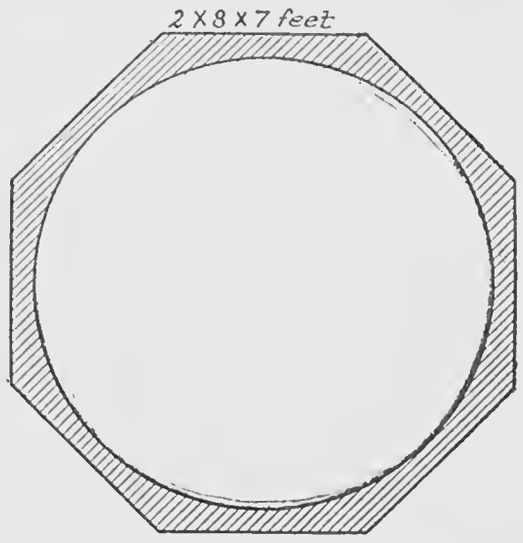
I HAVE five shotes about 75 pounds each, and would like to make a portable pen or yard for them, to be placed in orchard, and moved about once a week. Can such a run be made without placing posts in ground? How high would the wire have to be? How large must the enclosure be? The orchard has very strong, good sod. What other food should be given? L. D. M.

Portable fences are made in a dozen different ways. The theory is to make a set of panels or sections of the fence which can be carried here and there and fixed as desired. These panels are from 10 to 16 feet long, and must be laid strong enough to resist the hogs. The usual plan is to make a frame of some kind of light stuff with two uprights at the end and top and bottom pieces, the full length of the panel nailed to these ends. Generally in addition to these, strips are nailed diagonally across the panel from corner to corner so as to brace it and make it solid, then a strip of woven wire fence can be nailed on the outside of the panel and the thing is complete. They are fastened together in various ways, with strips of wire or hooks put at the corner. As good a form as any is to make the end pieces out of posts about six feet long. The lower end of these posts is sharpened off so that it can be driven down into the ground. Then the panel is made in the ordinary way. In setting this fence the stakes or end pieces are driven firmly into the ground close together, one panel touching the next. This makes a firm fence and the stakes can be pulled out when needed and the fence carried to a new place and driven into the ground again. This makes a firmer fence this way. The panels are hooked or fastened together, and it is probably as good and portable a fence as you could produce.

Octagonal Silo.

I HAVE read of the square silos and am sending a plan of one which I have thought of building. It is eight sided, using 2x8 for the girths and hollow them out in center to make a circle on the inside. I would like to hear from anyone who has built this way. Would No. 1 three-inch flooring, treated with creosote oil, do for the inside lining? Would use a cheap flooring outside.
North Dakota. L. Q. P.

The greatest objection to the silo you depict is that it takes a large amount of needless lumber out of which to make the frame and waste, if it is to be hollowed out on the inside to make it a semblance of being round. Such a silo



PLAN FOR OCTAGON SILO.

was built near me a few years ago. The width of the walls prevented them from drying out properly, and the 2x8 decayed in the center, so that it had to be taken down and a girthed, square silo built in its place. If you were to build the eight-square silo, I would have the girths sized, and as they were being put in place and well spiked, put a liberal amount of gas tar between each layer, and the laps, and make it airtight, avoiding the extra expense of lining up inside with rather costly pitch pine flooring. If you attempt to concave the inside, it will be difficult to get true walls, and will prevent perfect settling of the silage, and make lining up a necessity. I think if you build eight-square, it would be better to have the 2x8 sized to a width, lay them as true as possible to a straight edge. Paint well inside with gas tar and gasoline—I would not smoke while doing it—and you may have a silo to your heart's desire.
JOHN GOULD.

Ropy and Stringy Cream.

WHAT is the cause of stringy cream, or a ropy condition of cream? Our cows are fresh and on good pasture, but the cream does not look right. These cows are two-year-old heifers.
MRS. E. S. T.

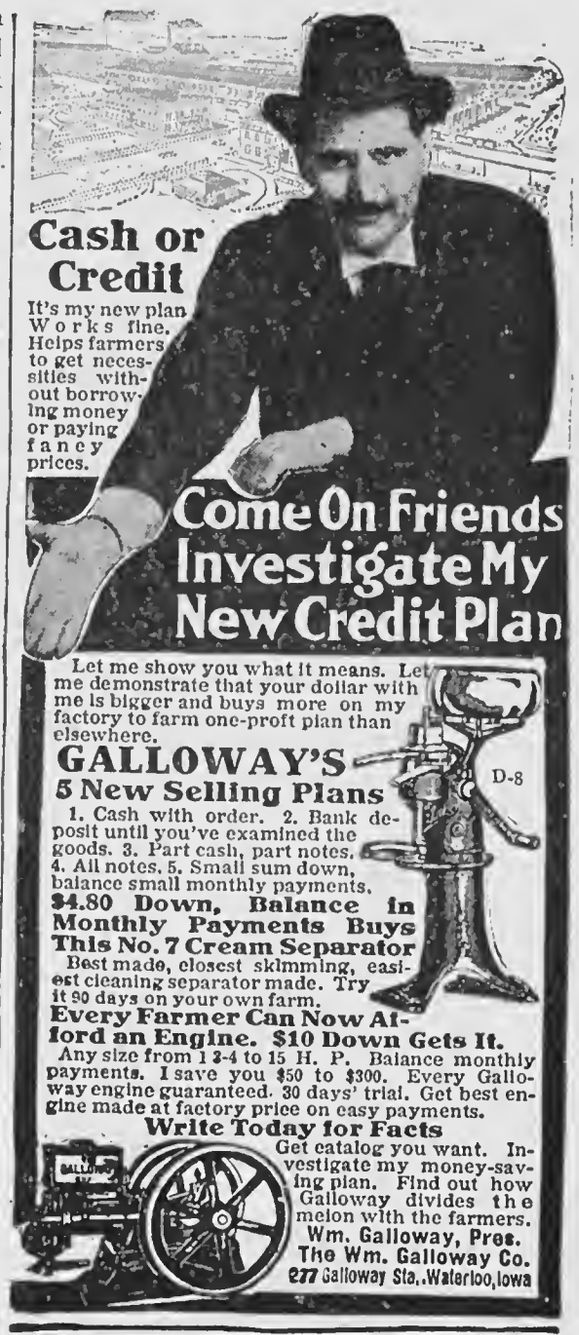
Every year this question comes up regarding milk or cream which turns ropy or stringy a few hours after being brought into the house. It seems to be quite a common complaint, and the scientific men agree that in most cases the trouble is caused by a germ which is found in the stable, on the cow and also upon the utensils which are used in handling the milk. This particular germ is generally found in the pails and pans and very frequently under the rim, where the metal has worked loose and a quantity of sour milk or cream worked in. The remedy is to clean up the stables and thoroughly boil the utensils that are used in handling the milk. We have known cases where farmers were absolutely sure that the pails and pans were kept perfectly clean. It was found that the strainers and dish cloths were merely washed out in warm water and soap and this germ was found in them. In most cases a thorough boiling of everything used in handling the milk and full exposure to the sun after washing will get rid of the germ. In one case, however, this was done with great care, and still the milk was affected. It was found that the pails and pans were rinsed out with water from the pump before they were used, and further investigation proved that an open drain running from the milk-room was so close to the well that the water from it had found its way to the pump. These germs were found in the milk drain and when this was dug up and cleaned the trouble disappeared. A thorough boiling therefore of the utensils will generally clean up the trouble. The Rhode Island Experiment Station at Kingston issued a bulletin on this subject which gave a very thorough discussion of it. In one case reported the cow and her feed were both blamed for the trouble, and farmers would not believe that there could be any other cause. The cow was bought as an experiment, taken away from her old surroundings, thoroughly cleaned up and the milk handled in the most cleanly manner. The trouble disappeared, and did not return, thus proving that the cow or her feed were not responsible for it.

Carbolic Acid as a Disinfectant.

WOULD a weak solution of carbolic acid be a good disinfectant to spray the interior of barn walls any time during the year? Would it have any effect in keeping flies down? Would it scent the milk which is cooled in barn, or affect cattle or horses when windows are out and air circulates freely? If this will not do under these conditions can you give me the name of a disinfectant that will? J. S. G.

A 5% solution of carbolic acid is an efficient disinfectant though it is doubtful if milk could be long exposed to its odor without becoming tainted. Its use on the walls would not keep flies from the stable, nor would it injure cattle. A better disinfectant for stable walls would be a coat of lime whitewash to which had been added four ounces of crude carbolic acid to the gallon. Even without the carbolic acid, the lime wash made with unslaked lime is a mild disinfectant and a very efficient means for sweatening the stable and making it light and sanitary. It should be applied twice yearly.
M. B. D.

"DOCTOR," said he, "I'm a victim of insomnia. I can't sleep if there's the least noise, such as cat on the back fence, for instance." "This powder will be effective," replied the physician, after compounding a prescription. "When do I take it, doctor?" "You give it to the cat in some milk."—Credit Lost.



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RAISING AN ORPHAN COLT.

SOME writers have said it is more difficult to raise an orphan colt than a calf. Of course there are differences in colts, as well as in calves. Some calves seem intelligent, and are easily and quickly taught to drink milk; others are "fool calves," stupid, stubborn, and hard to teach. The writer's experience (though not extensive) is that colts are more intelligent, tamer, and are more easily taught to drink cow's milk, than most calves. We had a young mare that foaled unexpectedly in the stable at night, and when found in the morning was suffering and rolling frequently with pain. The rollings were so frequent and violent, that the colt had not sucked, if indeed she had any milk. He had prudently left the stall to get out of danger of being hurt. A neighbor who came into the barn said: "You would better send over the river for old Ben, but I can tell you exactly what he will do. He will send for two quarts of whiskey, give the mare one quart, and drink the other himself." The mare died before night. The post-mortem showed in her stomach a spot as large as a man's hand where the bots had clustered together resembling bees on the outside of the hive before swarming. They were hooked fast to the inner coating of the stomach, which was perforated in places. Some veterinary surgeon may say I must be mistaken, as bots have no teeth. Be it so. I know what I saw, and others who were present, will corroborate me. The colt acted tame and hungry. It was fed some cow's milk, freshly drawn, undiluted, and unmixed with anything. It did not show any alarm at being handled, nor resist having my fingers placed in its mouth, and when the pail was raised to its lips, commenced sucking the milk from between my fingers and continued the operation until its appetite was satisfied. About the third feeding it drank the milk without the fingers, which was as well as any of our calves had done. It was fed whole milk fresh from the cow, for a week or more, and then skim-milk was gradually substituted warmed to a blood heat, and a handful of wheat middling mixed with it to compensate for loss of the cream—as had been our practice in raising calves. It was surprising how quickly the colt learned to eat oats, and nibble hay. Excepting the oats, it was fed and raised exactly as we raised our calves, and apparently was as healthy and grew as fast as if its mother had lived and supplied its natural food. In due time, it became a large, strong, healthy horse, willing to do all kinds of work required.

J. W. INGHAM.

GOATS AND POISON IVY.

HOW can I exterminate poison ivy? Large patches of it are coming in and spreading each year, low growing and also vines. I propose to buy two goats and tie them with chains on a patch, and water them daily. What do you think of this and where would you buy them? Or would brine from butcher do better, or crude oil, and how much to cover about one acre in the aggregate?

Rhode Island. W. B. W.

The following is reprinted from last year's volume of THE R. N.-Y.:

Crude carbolic acid is excellent for killing poison ivy. As it does not corrode metal it can be applied with a pump or sprayer, but the best method is to apply from an oil can to the crown and stem of each individual plant. If it is sprayed it should be diluted with 15 to 30 parts of water and kept well agitated. A strong solution of caustic soda is also effective; it should always be sprayed over the plants in hot dry weather. If you will mow the tops in June and July, and then pour caustic soda over the surface, you will do much to destroy the plants. The soda will render the ground sterile for some time, hence is not advised on arable land. Hot brine is also effective—three pounds of salt to a gallon of water. This kills the plant in about three applications. If the person who works with the ivy rubs pure olive oil over face, neck and hands before exposure to it, the risk of poisoning is much lessened. As the volatile oil that carries the poison usually clings to clothing, and may thus cause further poisoning, it is well to wear overalls that may be discarded or kept for such work only. After the work is done, sponging face, hands or other exposed flesh with grain alcohol is a useful precaution; the toxic oil is not soluble in water alone.

We have had a regular congress of poison ivy experts in THE R. N.-Y., and here are some of their remedies: Fresh leaves and stems of jewel-weed or touch-me-not, bruised and rubbed on (this weed is often found growing near poison ivy); bruised leaves of English plantain or ribgrass; tincture of grindelia; tincture of witch hazel applied hot; hot brine; solution of hyposulphate of soda; creolin, diluted to five per cent. strength, applied on absorbent cotton, and renewed as it dries out; sugar of lead in alcohol, saturated solution. This is poisonous, and must be used carefully. Pure olive oil is also very helpful. A poison ivy cure given by the Florists' Exchange is 90 per cent. of olive oil and 10 per cent. of carbolic acid. It must be mixed by a druggist who has appliances for making a perfect emulsion. Do not allow it to get into the eyes. This is said to give relief with the first application and complete cure with a little further treatment.

In destroying poison ivy, when dried vines are burned make the fire in an open place, and do not get to the windward of it, as the smoke is likely to cause poisoning. Stove wood to which the ivy clings is dangerous, too; its burning often causes inflamed eyes.

The use of goats is a new one to us. Much stock will not eat the plant. We have had reports of cows which cleaned it out along stone walls. On the other hand, there are reports of Ohio lambs which were killed by the ivy—their faces being badly poisoned. Most likely animals differ in their susceptibility to the poison as well as humans.

NEW YORK STATE NEWS.

RABIES BEING CHECKED.—The State Department of Agriculture is fighting rabies in several counties of the State. Westchester County has been quarantined and Rensselaer has several cases. These are being carefully watched to prevent further spread of the disease.

COÖPERATIVE SOCIETIES.—There are at this writing, 31 coöperative societies in this State, organized under the Cole Act. All are incorporated of course. The work of organizing these societies is being kept on a conservative basis because it is discovered that immediately after organization there is likely to be a slackening of effort on the part of members about going after business in a systematic way and it is to assist the new organization at this time that the Bureau finds its services most needed. There are numerous demands for speakers, many from the Granges of the State whose members want information on the subject of cooperation and the proper methods of cooperative organization.

GRANGE GROWTH.—There are now 850 Granges in this State, with an average membership of about 130, estimated. This would make the total membership in the State something over 110,000. There are four Granges that exceed 600 members. These are Webster Grange No. 436, of Monroe County, with a membership of 721; Newark Grange No. 366, of Wayne County, with 652; Fredonia No. 1, of Chautauqua County, with 640, and Jamestown of the same county with 632. There are 23 Granges with a membership exceeding 500.

ALLEGANY FARM BUREAU.—At the recent election of officers and directors of the Allegany Farm Bureau C. F. Moulton, of Cuba, was chosen president; J. R. Hodnett, of Belmont, vice-president; E. W. Barnes, of Wellsville, secretary, and Wm. Breneka, of Angelica, treasurer. F. C. Smith will continue as county agent. On August 4 a picnic and outing for the counties of Allegany, Cattaraugus, Wyoming and Erie will be held at Crystal Lake. The Granges of the county are coöperating in providing funds for the farm bureau, the Pomona Grange giving $50, and several of the subordinate Granges $10 or more each. There are at present about 180 members of the farm bureau association.

CORN AND POTATO CONTEST.—The Pomona Grange, the county Farm Bureau and the county school superintendents of Jefferson County are coöperating in a corn and potato-growing contest for boys and girls. There have been registered in this contest 40 boys each to grow one acre of corn; 35 boys who will grow and exhibit 10 ears of corn; 98 boys and girls each growing a quarter acre of potatoes; 30 boys and girls who will grow and exhibit a plate of 10 potatoes. The round-up will be held in December during the meeting of the Pomona Grange. The subordinate Granges of the county are raising the funds to pay the awards, each Grange contributing from $3 to $5. There will also be a corn growing contest "open to all comers" and all contestants must grow one acre of corn and exhibit 10 ears of the same at the annual Northern New York corn show to be held during Farmers' Week at the State school of agriculture at Camden. The Pomona Grange will hold its annual Field Day at City Park sometime in August and at the county fair in the Fall will have a booth containing exhibits.

FARM BROKERS MEET.—The farm brokers of the State had an interesting session in Ithaca last week. Col. C. A. Simmons, secretary of the Industrial Commission of Ithaca, told the brokers that the popular mind failed to appreciate the resources of this State when comparing its products with those of the prairies of the West. The State of New York, he said, produces four times as much wheat per acre as North Dakota, 7.6 bushels more than Nebraska and nearly 10 more than Missouri. The increased price to the New York farmer leaves him a net profit on a 10-acre wheat field of more than $110 above that of South Dakota. Marc W. Cole told the brokers that more pictures of actual farm scenes in the East should be published and distributed and that proofs of the reliability of the farm brokers such as were represented in the association should be placed before possible buyers of farms. The advertising committee adopted plans for giving eastern possibilities in farming greater publicity. Prof. Mann said that the College of Agriculture did a business last year of $125,000 in butter, ice cream and cheese and that an average of something like 30,000 pounds of milk are handled daily at the College.

GOV. GLYNN WIELDS AXE.—When the appropriation bills left the Governor's hands the other day the amounts were reduced by the sum of $1,508,000. This brings his total vetoes for the year up to $7,272,000 which is the record for the office. Accompanying the vetoes was a memorandum giving his reasons for the veto of each item. Some of them are interesting. Here are a few of particular interest to farmer readers: State Fair Commission for deficiency in appropriation for maintenance, care of grounds and buildings, etc., $15,000. "Revenue from the State Fair will provide." Conservation department $6,000 for printing syllabus of fish and game law. "No changes in law warranting it." Same department $10,000 for maintenance of fish hatcheries, traveling expenses of fish culturists, etc. "Funds available ought to be sufficient for this year." State architect for traveling expenses of officers and employees $10,000 and for furniture, blanks, etc., $6,000. "Unnecessary." State Agricultural Experiment Station $30,000 for improvements, etc. "Appropriation one of convenience and not necessity." Cornell Agricultural college several items including one of $40,000 for forestry land and timber to be used in instruction. "State not in position to expend so much for an entirely new enterprise." Syracuse College of Forestry $40,000 for equipment for new building. "Building will not be finished for a long time." State Training School at Hudson $3,500. "Appropriation for purposes which are mere guess work." The total appropriations for the year amount to $47,570,000 against $57,960,000 for 1913.

J. W. D.

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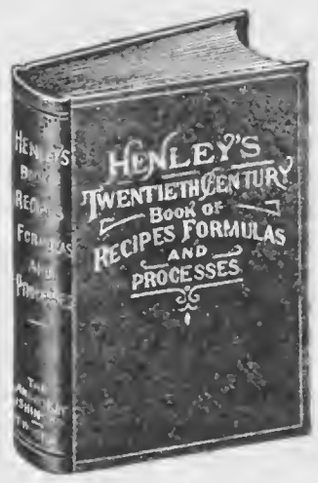

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The Henyard.

Trapping Troublesome Pigeons.

I NOTICED an inquiry from someone troubled by stray pigeons that come to his place and annoy him in several ways, but it has been about impossible to get rid of them by any known means. Poisoning has been suggested, and while this might be effective in some degree it would be very dangerous, for the poisoned food would be carried by sparrows or in some other way get where poultry or other useful birds or animals would get it and be killed. There need be but little trouble to catch the pigeons by trapping them in two ways, as I know by experience, for my son once kept pigeons and was troubled with strays eating the feed he had for his own. The strays will very readily go into any place where feed is put that they can enter and nest boxes are especially attractive to them. If the person being bothered will fix almost any kind of box or boxes and place them bottom upwards where they will look homelike to the pigeons, he can catch them easily. They may be fed in these inverted boxes or houses and even allowed to begin to build nests if they stay open long enough. The trapping is the easiest sort of thing. Make a swinging wire door, hinged at the top, to put just inside each opening by bending it like the letter "u" only with square instead of rounded corners. The length of the bent wire should be a little more than the height of the opening to be shut. Two small staples are driven over the wire door near the corners, which serve as hinges as well as to hold it in an inverted position. To the pigeons it looks *very open*, as it really is so far as *going in* is concerned, but in trying to *come out* the ends of the wire touched the floor of the box, and being near enough together to prevent the birds from passing between them, the trap is complete. It is then an easy matter to get the pigeons out and kill them. They are good to eat and put to this use they will pay well for the trouble of catching them.

Another kind of trap may be made by setting a big sieve or any sort of wire or slat covered box, inverted, and a stick with a string tied to it under one edge as a trigger. This should be set and baited with wheat or anything that pigeons like and allow them to come under the trap and eat and go out until they get familiar with it. Then bait well and hold the farther end of the string at some hidden place from which it can be pulled and the birds caught. The boys can have considerable fun and then all enjoy pigeon pot-pie.

H. E. VAN DEMAN.

Trouble With Chicks.

What is the matter with my young chicks? I had 125 chicks hatch out from the incubator; when they hatched they were very thrifty, but the chicks have been dying ever since. They seem to feel good till a couple of hours before they die, their eyes seem to swell and go shut so they cannot see. The throat seems to fill up and they cannot get their breath. Some of our laying hens' throats seem to fill up, but they seem to choke it down, only one laying hen has died. I would like to know how to care for young chicks and feed them after they come from the incubator.

Michigan. R. L. M.

Young chicks are subject to catarrhal inflammation of the eyes, due to exposure to cold, dampness, irritation from strong fumes, etc., and it may be that one of these conditions or a roupy infection from exposure to older fowls with a similar disease is responsible for the trouble in your flock; without knowing just the conditions under which they are kept it is impossible to say positively. As a matter of precaution against contagion young chicks should be kept away from older fowls and the quarters in which they are kept should be thoroughly cleaned and disinfected if they have previously been occupied by other fowls. Previously used drinking fountains, feed dishes, etc., should always be thoroughly scalded with *boiling* water before being placed before young chicks.

Do not feed chicks anything for from 24 to 36 hours after hatching; they need this time in which to absorb the undigested yolk still remaining within their bodies. For the first feed give stale bread crumbs which may be dipped into milk and squeezed dry, oat flakes, crumbled johnny cake made from cornmeal, a little fine chick grit and fresh water. This diet will do for a couple of days, during which time they should be fed five times daily, giving them only as much as they will quickly clean up. Then put them on the regular chick grain composed of pinhead oat meal, one part; finely cracked corn, two parts; and cracked wheat, three parts; the "One, two, three" mixture, or use one of the commercial chick foods, if preferred. Feed this twice daily and in addition keep before them, in a shallow box, a dry mash composed of equal parts by weight of cornmeal, wheat middlings, wheat bran, and sifted beef scrap. This mash may also be fed moistened with skim-milk two or three times daily in addition to the chick grain; some flocks of young chicks eat so much of the mash dry that little need be fed in a moist condition, others need more moistened food. Dry food is the safest and care should be taken not to overfeed upon wet mashes. As chicks increase in age the number of daily meals may be decreased and if they are upon range the dry mash and grain mixtures, consisting chiefly, or wholly, of cracked corn and wheat, may be kept always before them in hoppers. See that chicks at all ages have grit of suitable size and water always before them; crushed charcoal and oyster shell should also be available.

M. B. D.

Deficient Vigor.

I bought 15 day-old chicks hatched in an incubator three weeks ago, and put them with a hen. They did very nicely until a week ago. I noticed that one or two slept a great deal. I took one in and washed its eyes. I found some small dark brown spots on the eyelid, they were hard and all washed off and have not come back on that chicken, but the chicken sleeps just the same. More have the spots on the eyelids and their bills are dark next their combs. They eat well and do not look sickly. They have bread crumbs, sour milk, baby chick food as dry mash, fine ground grains.

Massachusetts. E. E. S.

Your description does not indicate any serious trouble with the eyes, but rather a lack of vigor which may have one of several causes and which makes the chicks sleepy and stupid. Lice or mites from the hen or from the nesting materials may be sapping the strength of the chicks. Examine the hen and chicks carefully and if any lice are found dust the hen thoroughly with a good lice powder and grease the chicks under the wings and on the head with a little lard or vaseline; repeat after a few days. See that the hen does not brood her chicks in dirty quarters where mites may abound. It is safe to assume that all hens are lousy; unless they have been specially and carefully treated, they are; and then they probably are. Some chicks are born with so little vitality that they succumb to bowel troubles of some nature after they reach the age of one to two weeks or a little more. Others may die at any age without showing evidences of serious bowel troubles though digestive disturbances may be present. The trouble here is apt to lie with the breeding stock and it is too late to remedy it after the chicks are hatched. Deficient vigor from artificial hatching is also probably responsible for many of the deaths of young chicks in which no definite disease can be found. There must, of course, be some definite cause for a death but behind this cause may be a weak organism unable to cope successfully with the ordinary ills of chickhood. M. B. D.

Hen Lice.

1. What can I use on hen lice? They are a light red, quite large. I also have trouble with a large louse on the chickens' heads; have used sulphur, lard and coal oil on them. 2. A large Plymouth Rock hen has a sore on lower part of body. What can I do for it? W. C. H.

Angola, N. Y.

The red lice that you see are probably red mites which are red only when gorged with their victims' blood. They seldom stay upon the fowls during the day but may be found in the cracks about the perches, nests and other places where the hens resort. To destroy them paint or spray all these places with kerosene or crude oil to which has been added one fourth part of crude carbolic acid. Search out all their hiding places behind nests, under perches, etc.; if you have never looked for them, a little close investigation will probably surprise you. Head lice may be killed by any grease but the addition of one-fourth part of blue ointment will add to the effectiveness of the ointment. 2. Treat the sore of which you speak with carbolized vaseline in 5% strength.

"The Business Hen," published by the Rural Publishing Co., has a chapter on the diseases of poultry, and is a good treatise on their general care. Farmers' Bulletin No. 530 from the U. S. Department of Agriculture, Washington, D. C., also treats of the common diseases of poultry and may be had upon application without charge. M. B. D.

Possible Limberneck,

I have a hen which had been sitting about 10 days when she developed something like limberneck. She has her head under her breast continuously, and does not care to eat anything. Give possible cause and remedy. J. D. H.

Kingston, N. Y.

I hardly think that this is a case of limberneck though I cannot say what it is. If the hen appears sick, give her a good big teaspoonful of castor oil, being sure to get more of it on the inside of her neck than on the outside, and if she has no fatal disease, she will probably respond to the treatment. M. B. D.

Tramp Hens.

I notice that you publish only one side of the damage by hens story. I believe that the damage, bad as it is, is caused by comparatively a few hens, and that if those who are troubled with the neighbors' hens would build trap coops to catch the hens that did the damage, the owners would be glad to sell them. When you ask a man to shut up 200 hens because a half dozen are getting over the line fence, well, he doesn't do it.

Skaneateles, N. Y. W. P.

R. N.-Y.—But why should he not be compelled to do so? Why must the man who suffers the loss be compelled to trap out the culprits in the flock? If a man keeps 100 hens and six of them do the damage, he should either select out the six himself or keep the 100 shut up.

Infertile Turkey Eggs.

Last Spring I bought two White Holland hen turkeys and a tom, claimed not to be related. They were hatched the first of last August. They were nice well-grown turkeys for their age. They mated well and began laying about the first of April. I took good care of the eggs, kept them in a box of wheat bran and turned them every day until I had 28 and then I set them. Not one of the eggs proved to be fertile. I would like to know the reason. Is the fault in me, or the turkeys, or the one who sold me the turkeys? F. C. K.

New York.

I cannot be positive as to the cause of the infertility of these eggs, but am inclined to lay it to the immaturity of all the turkeys concerned; it is possible, of course, that the male bird alone is at fault and should be discarded. Turkeys used in the breeding pen should all be at least one year old and well developed, vigorous, specimens; the hazards of turkey raising are too great, at best, to justify the use of immature parent stock. If another, and older, tom cannot be procured, it may be possible to take the hens to a neighbor's flock and allow them to run with it for a few days. One mating of turkeys is sufficient as a rule for the season. M. B. D.

More About Line Breeding.

On page 241 there is a chart of line-breeding from Felch. I am breeding for the male characteristics. I bred A plus B equals C, then C plus A equals D, then D plus A equals E. Am I right? Then if I get new blood from the same breeder that I got the first males from, shall I be line-breeding? For illustrate, I got a cock which equals A; then if I send to same breeder and get eggs and raise males and breed them to E, will that be line-breeding, and is that the proper place at which to introduce fresh blood? Should I introduce fresh blood next at G?

Groton, N. Y. N. E. K.

You are right, and when you get "E," which you may call a combination of daughter and great granddaughter, you have a fowl, or several fowls, containing seven-eighths of the blood of "A," whose blood you wished to perpetuate and intensify in his descendents. You may continue to line-breed according to the chart until you get "G" with 27-32 of the blood of "A," in other words, you have almost reproduced the original male "A," so far as blood goes. If, however, you mate "G" with some more or less distant relatives from the same breeder, you stop line-breeding from "A" and commence simply to inbreed or breed together closely related animals. In doing this you maintain the strain pure, but begin to dilute the blood of "A" in his descendents. This is proper if you wish to do it, as it is to be assumed that your original cock "A" was of such superiority that you wished to perpetuate his blood for breeding purposes. This form of line-breeding is close inbreeding and will perpetuate and intensify "A's" defects as well as his good qualities, and unless you select and cull "A's" progeny rigidly, you may find that "G" is an inferior specimen that should find no place in a breeding pen. There is no particular place at which fresh blood should be introduced; you may cross any of "A's" progeny with other fowls of the same strain, but the further you line-breed from "A," the more of his blood you will have in your new mating. I have used the terms line-breeding and inbreeding here as they are used in the chart, but it is only proper to say that you will find this meaning of these terms reversed by some writers upon animal breeding.

M. B. D.

Depluming Mites.

Can you give me a practical remedy for depluming mite on hens and also how to apply it? H. G. L.

Massachusetts.

A little grease of any kind well rubbed into the skin of the affected parts will kill these mites and permit new feathers to grow. The addition of one-fourth its bulk of blue, or mercurial, ointment will add to the effectiveness of the lard or other grease used. M. B. D.

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The Henyard.

THE EGG-LAYING CONTEST.

THE report for the month of May gives some interesting figures. The pen of English White Leghorns leads, with a score of 258 eggs, beating the English Wyandottes, about which so much has been said lately, by 50 eggs. The second best pen was the Buff Leghorns from Wolverine Poultry Farm, Michigan. They laid 252, one pullet laying 29 eggs in the 31 days. Mrs. K. E. Woodruff's pen of White Leghorns tied for third place with Marwood Poultry Farm, with scores of 242 each. P. G. Platt's pen laid 240, and three pens of White Leghorns laid 237 each They are Glenview Poultry Farm's pen, Francis F. Lincoln's pen, and Geo. A. Cosgrove's pen, all from Connecticut.

H. W. Collingwood's pen of "scrubs" laid 221, beating all the Rhode Island Reds, all the White Wyandottes, all the Buff Wyandottes, all the Barred Rocks but one pen, all the White Rocks but one pen, and all the Buff P. Rocks. In fact, there were only 13 pens in the contest that laid more eggs, in addition to the winning pens named above. There was some good individual records made, notably two pullets in A. B. Brundage's S. C. Reds. One laid 29 and one 28 eggs during the month. Two White Leghorn pullets from Glenview Poultry Farm laid 28 eggs each, and one of Mr. Collingwood's scrubs laid 28. The total number laid during the month was 15,895.

In the thirty-second week, ending June 12, 3,289 eggs were laid; this is 151 less than the previous week. White Leghorns again make all the high scores. Three pens tie for first place with scores of 57 each. They are Chas. N. St. John's pen, the English pen, and Geo. A. Cosgrove's pen. P. G. Platt's pen ties with Marwood Poultry Farm for second place, with scores of 55 each. A. B. Brundage's pen of S. C. Reds laid 54. They are the only pen outside of White Leghorns to get into the high scores this week. Four pens of White Leghorns laid 53 each. Below is the record:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	35	788
Frank L. Tuttle, Massachusetts	41	894
Waveny Farm, Connecticut	43	791
J. J. Francais, New York	43	1,019
White P. Rocks.		
Albert T. Lenzen, Massachusetts	43	843
F. H. Benton, Connecticut	37	909
Storrs Agr. Station, Connecticut	35	711
Storrs Agr. Station, Connecticut	33	754
Storrs Agr. Station, Connecticut	38	877
Storrs Agr. Station, Connecticut	32	752
Storrs Agr. Station, Connecticut	40	558
Buff P. Rocks.		
A. A. Hall, Connecticut	48	896
W. C. Morgan, Jr., Connecticut	33	666
White Wyandottes.		
Tom Barron, England	29	1,334
West. Mt. Poultry Yards, Connecticut	31	810
Merrythought Farm, Connecticut	48	1,165
Neale Bros., Rhode Island	39	1,167
D. J. Ryan & Son, Connecticut	36	925
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	32	891
Dr. N. W. Sanborn, Massachusetts	27	830
Am. Buff Wyan. Club, New York	27	752
H. L. Hamilton, Connecticut	16	571
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	30	814
S. C. Reds.		
Robert Seaman, New York	35	670
J. S. Gillespie, Connecticut	29	871
Dr. J. C. Dingman, New York	15	759
Burnham P'ltry Yard, Massachusetts	26	659
H. P. Deming, Connecticut	41	777
Geo. P. Dearborn, Florida	32	950
Dr. J. A. Fritchey, Pennsylvania	30	1,043
Ernest Underhill, New Jersey	39	704
W. H. Bumsted, Connecticut	39	519
Pinecrest Orchards, Massachusetts	44	1,002
Harry B. Cook, Connecticut	28	893
Colonial Farm, New Hampshire	24	914
A. B. Brundage, Connecticut	54	1,062
R. C. Reds.		
Glenview Poultry Farm, Connecticut	31	878
C. S. Scoville, Connecticut	28	636
White Leghorns.		
Storrs Agr. Station, Connecticut	51	946
Storrs Agr. Station, Connecticut	39	1,013
Storrs Agr. Station, Connecticut	49	1,030
Storrs Agr. Station, Connecticut	50	1,278
Storrs Agr. Station, Connecticut	44	885
Braeside Poultry Farm, Pennsylvania	41	854
Glenview Poultry Farm, Connecticut	50	932
Manor Poultry Farm, New York	41	902
A. B. Hall, Connecticut	53	936
Marwood Poultry Farm, Pennsylvania	55	1,038
Geo. M. Harris, Connecticut	41	781
Bounie Brook Farm, New York	52	992
N. W. Hendryx, Connecticut	51	860
J. J. Linehan, Massachusetts	44	800
F. F. Lincoln, Connecticut	49	1,258
Cecil Guernsey, New York	44	1,077
T. W. Moore, Connecticut	51	854
C. N. St. John, New York	57	847
C. W. Sherwood, Connecticut	45	902
L. C. Sands, Pennsylvania	50	903
Tomoka Poultry Farm, Connecticut	46	814
Venture Poultry Farm, New York	43	778
Mrs. K. E. Woodruff, Connecticut	50	870
Windsweep Farm, Connecticut	51	804
C. H. Savage, Connecticut	53	873
P. G. Platt, Pennsylvania	55	991
Heneta Bone Co., New Jersey	35	281
F. M. Peasley, Connecticut	47	895
Charles Helgl, Ohio	53	798
Tom Barron, England	57	1,108
Branford Farm, Connecticut	53	990
James Munn, Massachusetts	50	812
Geo. A. Cosgrove, Connecticut	57	808
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	41	939
Blue Andalusians.		
E. D. Bird, Connecticut	49	783
Buff Orpingtons.		
O. Wilson, West Virginia	33	672
White Orpingtons.		
P. A. Demgar, New York	20	637
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	20	432
Silver Campines.		
W. J. H. Lobel, New Jersey	43	716
Dunghills.		
H. W. Collingwood, New Jersey	43	705
Daniel Hine, Connecticut	33	697
Daniel Hine, Connecticut	20	768
Mixed Breeds.		
Profitable Poultry, Massachusetts	38	803
Profitable Poultry, Massachusetts	33	784

Total number laid 69,950.

GEO. A. COSGROVE.

Hen Lice.

I have for years used a remedy for destroying hen lice which has for many years proved efficient in my henhouse. I cut up gunny sacking into pieces to fit the bottom of my hens' nests; these pieces I saturate with coal oil, place them in the bottom of the nests and then complete the nests with clean straw. This operation I repeat several times during the Summer, and my chickens are not bothered with lice of any kind. I have tried several kinds of "lice killers"; this is the only one I have ever found reliable.

Ohio. GEO. W. RICE.

Interfering With Pigeons.

Is there any law in the State of New York protecting banded or registered pigeons while flying at large? If so what is the penalty for theft or shooting?

New York. J. B. C.

The law provides that no person shall take or interfere with any Antwerp or homing pigeon, if it have the name of its owner stamped upon its wing or tail, or wear a ring or seamless leg band with its registered number stamped thereon, or have any other distinguishing mark; nor shall any person remove any such distinguishing mark from any such pigeon, and the penalty for a violation of this act makes the party guilty of a misdemeanor.

Leghorns Untrue to Type.

Some years ago I had a purebred flock of White Leghorns and allowed one Plymouth Rock hen to run with them, but did not set any of her eggs. When the chickens came to maturity many of them were colored like the Plymouth Rock and I had to start again with new blood. Was this just a freak, or is it likely to occur again under the same conditions.

Vermont. E. H. B.

The presence of a hen of another breed in a flock of purebred fowls would not in any way affect the chicks of the latter. If the chicks from your White Leghorns showed the markings of a Plymouth Rock it was conclusive evidence either of an accidental cross or of the fact that the White Leghorns were not purebred. Some Plymouth Rock eggs are very light-colored and it may have been possible that you unintentionally mixed a few of the Plymouth Rock's eggs with those of the Leghorns. In any event, the explanation will have to be other than the presence of a Plymouth Rock hen in a flock of purebred Leghorns. M. B. D.

Hens Lay Stale Eggs.

What makes hens or pullets lay ill-smelling eggs? I have three that do this. I feed corn, oats, wheat, also scratch feed. Fowls have grit, shell and charcoal before them at all times. They are yarded so they do not get any stale stuff, only the table scraps off my own table. I also cut grass for them. The hens that lay these bad-smelling eggs are looking in the best of health. One of them has never been sick to my knowledge, the other two had a touch of the roup last Winter, but I cured them of it quick. I have talked with a number of poultrymen about these eggs but they all say they never heard of such a thing.

New York. H. B.

It is quite within the bounds of possibility for eggs to be retained in the oviduct of a laying hen until the heat of her body causes beginning putrefactive changes, in fact, one instance has been reported of a well-developed embryo being taken from an egg that was removed from a hen's body during an autopsy upon the fowl. It is evident, therefore, that a newly-laid egg is not necessarily a fresh egg, though fortunately they usually are. The condition that you speak of is certainly rare, but it is not unknown, and it is quite possible that these hens habitually retain their fully developed eggs long enough for decomposition to begin. If you can identify the hens responsible for these stale eggs will you not separate them from the rest and carefully note the frequency with which they lay and any conditions which seem to you unusual in their performance?

M. B. D.

Value of Poultry Manure.

Would you quote 10 experiment stations from the Eastern and New England States, giving their different values of poultry droppings from a Leghorn hen per year, which has been well fed, six months on range and six months confined in buildings? Also the value per bushel. The University of Wisconsin and New York quote poultry droppings very low per bushel compared with the New York Experiment Station, which values the poultry droppings at about 32 cents per hen. I would like to have some one who knows give its real value compared with other fertilizers. L. J. H.

Smithville Flats, N. Y.

No 10 experiment stations in the East have published the value of poultry droppings from one hen in a year. The New York State Poultry Department gives the value of the droppings produced in one year by Lady Cornell at 29 cents. Prof. H. R. Lewis of the New Jersey State Poultry Department in his book entitled "Productive Poultry Husbandry," gives the value of the droppings produced by the Belle of Jersey as 33 cents. Both of these hens were extra heavy producers, and hence of course, heavy consumers. If we put a value on poultry manure at $4 per ton, it is likely that the average White Leghorn hen will produce in one year from 15 to 20 cents worth. Poultry manure, as compared with other fertilizer and based on its actual food content, will show a valuation of about $3 or $3.50 per ton. The plant food content in poultry manure is largely nitrogen in a quickly available form. It is best used on grass or corn lands and should be spread broadcast and harrowed in. Much of its value depends upon how it has been kept since produced. By mixing some suitable absorbent with it when storing in a dry place, it will keep a long while without giving off any obnoxious odors. Dry earth is as good to mix with it as anything I know of. A. L. C.

Suspected Lumpy Jaw.

I have a good Jersey cow which will have her second calf early in July. Is good in butterfat, yielding about 350 pounds last year. Without any apparent cause she got a swelling on under side of jaw bones. She has been on pasture. It looks like big jaw (actinomycosis). The only symptom is that she slobbers somewhat which she never did before. We noticed the swelling on May 1 and at once began using the iodide of potassium and will also blister same. If the swelling does not get better, would you advise the services of a veterinarian? Do you think using the knife would be advisable? If the swelling does not get better would it be advisable to keep cow and run risk of getting worse or would it be best to fatten and butcher? Does this disease affect the milk? How can I tell whether she is getting worse or better? E. K.

Pennsylvania.

The first step in such a case should be to apply the tuberculin test. If she is not tubercular her milk may safely be used and she will be as healthy as ever if she recovers. Iodide of potash causes slobbering. So does actinomycosis of the tongue (wooden tongue). When the bones are badly involved treatment seldom proves profitable and the animal should go to the butcher. Recovery may take place where the tongue or other soft tissues are involved and the knife should be used, either to remove a tumor or split into it from the insertion of caustics. The operation or use of caustic and iodide of potash should be postponed until after calving. The drug is liable to cause abortion or kill the calf, or make the calf so weak that it cannot live.

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TRAINING A COLLIE DOG.

Cultivating His Brain.

FIRST PRINCIPLES.—On page 743, I notice an inquiry from J. M. L., Alwent, Pa., regarding the training of a collie dog. As I am a breeder of collies and have been very sueeessful in training them my experienee may be of some value. First of all, it must be remembered that a collie is both intelligent and sensitive, and that harsh measures will surely spoil him. Personally, I never use a whip exeept in ease of a grave offense, such as hen-killing and even then a few sharp strokes and a good seolding will generally be found sufficient. The best age to begin training is at three or four months. After a year the task will be much harder. The first thing any dog must learn is to obey the call or whistle, and in this great patienee is neeessary. I have found it a good plan to have ready a small piece of bread, eake, or biseuit, which I give to the pupil as soon as he eomes to me. It does not matter how slow he has been—he will be quieker next time, and before long he will have formed the habit of answering the eall and then the reward may be omitted. He must also be taught to lie down. This is done by pushing him firmly to the ground and repeating the eommand "lie down" or "eharge." Make the lesson short, and give a bit of bread each time that you push him down—do not wait till he does it of his own aeeord. In this way he will really enjoy the lesson and will be on the alert. This method should be used in teaching the tricks that every dog owner likes his pet to perform and also the more useful work about the farm.

FURTHER ACCOMPLISHMENTS.—The hardest thing to teach a collie is to retrieve. To do this take a bone, tease the dog with it and then throw it a short distance. The dog will run after it and pick it up. Do not eall him, as he will probably drop the bone and come to you. Instead, go quietly to him, take the bone away and throw it again. It may be weeks before he learns to bring it to you and then a ball may be substituted for the bone. Next, hold him while you throw the ball, and when he has learned to fetch it without ehasing it just place it in full view and send him after it. Then substitute a newspaper, a strap, a handkerchief, ete., using the name of the article over and over again when telling the dog to get it. I have a dog trained in this way who will not only carry a bundle or umbrella, but will piek up, without being told, anything I may drop or that may fall out of the earriage when I am driving. He will also earry messages or small articles to different members of the family, so that this accomplishment while diffieult to teach is well worth the time spent on it.

TRAINING FOR FARM WORK.—The training for a sheep or eattle dog is more complieated, but the main points are prompt obedience to the eommands "lie down," "stay there," "eome," ete., and quietness about his work. Make him stay close at your heels at first, and do not let him take any aetive part in the driving until his charges are quite used to his presenee. Puppies should always be kept in large yards unless they ean be watehed, or they will form bad habits. They will often chase a hen or chieken in play, and if they suceeed in eatehing and killing even one it is hard to break them of it. A good plan is to take the pup into the henhouse whenever you feed the hens. Make him keep elose to you and check at once any tendency to give chase. An older dog will probably give no trouble, and should be allowed his liberty in the day time, shutting him in a yard at night. He should never be chained. A collie needs lots of exercise, and if confined constantly he will run off on every opportunity.

THE "ONE-MAN" DOG.—It is rather hard to teach a dog not to take food from strangers, espeeially if he is over a year old. He should be fed a light meal in the morning and a full meal at night so that he will never be too hungry to resist temptation. He should be made, as far as possible, a "one-man" dog, and to do this it is necessary that the same person feed, train, and exercise him. He should never be allowed to toueh food offered him by another, even a friend, and he should be kept at home as mueh as possible. If I have made this rather long and detailed it is because I have seen many a good dog spoiled for lack of proper training, and when anyone asks for advice I like to give all the help I ean.

New Hampshire. GENEVIEVE TORREY.

AILING ANIMALS.

Horse Eats Bedding.

We have a horse that will eat his bedding, unless it is of leaves or shavings, and as he had a bad attaek of colie from overeating I am foreed to use shavings, which of eourse injures the manure. What ean one do to bring deeay, and eorreet aeidity of soil resulting from its use? H. H. P.

Massaehusetts.

Muzzle the horse if he has to stand on bedding when not working, or keep him in a box stall unbedded, when he is not at work; then put him into a bedded stall at night. The shavings do not materially injure the manure and no treatment is neeessary to prevent aeidity. A. S. A.

Scours.

On May 25 our old hog had 14 little ones. All eould not eat, so we brought two of the smallest to the house, and are feeding them on a bottle. We take them to the barn twiee a day, but think they do not get any milk. We are feeding one tablespoon eow's milk (unsealded) and one tablespoon rain water to eaeh every hour, exeept from nine at night till five in the morning. We have tried raising them by hand before but they always have diarrhœa and die. These are not affected that way yet. Can you tell us how to prepare cow's milk, and how often to feed, and anything else that we need to know? M. A. J.

New York.

Dilute the milk with hot water and add one ounee of limewater to the pint. Feed from a sterilized nursing bottle and nipple at first, allowing a little milk at least onee an hour. Gradually lengthen the times between meals and increase the amount of milk. As soon as possible let the pigs learn to drink from a elean trough and then gradually add middlings, oatmeal and eornmeal to the milk. Sweet skim-milk may be gradually substituted after the first three or four weeks of feeding. Add a little flaxseed meal if there is a tendeney to eonstipation. Cut the ration down a half if scours starts and give eaeh affeeted pig five grains of subnitrate of bismuth every four hours until seouring subsides. In bad cases give a dose of eastor oil in milk, before giving the first dose of bismuth. A. S. A.

Rickets.

Can you tell me what is the matter with my little pigs? I have seven and they are in their fifth week. There seems to be something wrong with their legs when they get up after resting; they seem to have a weakness in the joints of their knees. They have a niee eomfortable house raised a foot from the ground with a good board floor with sawdust and sand, and hay on top for their bed. They also have a good dry run to root in. They seem to be very lively and eat well.

Massaehusetts. J. B.

Allow the pigs free range on grass, clover or rape and feed mixed rations in form of slop, adding limewater at the rate of one ounee to the quart. The pigs have riekets from malnutrition. Do not make corn more than a very small part of the ration. As they improve add digester tankage to the slop to make 10 per eent. of the mixture. A. S. A.

Feeding a Brood Mare.

Will you make out a ration for a four-year-old Pereheron brood mare? The colt is four days old, large and strong. The mare is in just fair flesh; her weight is about 1600 pounds. She will not work, and I eould give her a little grass. I want to grow the colt as large as I can. G. S.

New York.

Turn the mare out on grass and in addition feed her half rations of hay and oats. That would mean eight pounds of each per day, or a little more if she fails to keep up her eondition. It would also be well to feed the mare eut corn fodder when the grass begins to get brown or dry. As soon as possible allow the foal to liek rolled oats, and when this is eaten well add wheat bran gradually. Set the foal's feed box where the mare cannot get at it. Wean the foal when six months old, after it has learned to eat hay and the grain and bran mixture, and can live on such feed without the mare's milk. After that feed it generously through Fall and Winter to get the maximum weight and development possible at 12 months old. From that time on most of the remaining growth will be made on grass, but a little additional feed can be given to keep the eolt growing perfeetly. A. S. A.

LITTLE SISTER: "Oh, mamma, Georgie has just upset the tea table an' broken my dolly an' all your nice dishes." Little Brother (badly frightened): "Yes, mamma, an' let's be sorry, but don't let's be mad!"—Harper's Magazine.

NEW ENGLAND MILK.

THE New England Milk News says the milk business in New England is unsatisfactory, unstable, and not too promising under present eonditions. I am sorry to say every word of the above is too true. The Mayor of Boston has in mind the establishment of milk distributing stations, and the Consumers' League is studying the matter, being ready to assist if this is possible. Our Lieut.-Governor, Mr. Barry, is also very much interested in this matter, and any other plan that will help the produeers and consumers get together, work together or do business with each other in a manner of mutual benefit and profit to each other. The general opinion, among all classes who have been or are interested in the situation, is that the produeers need no champion, but are able to eontrol the situation and make matters satisfaetory if they only get together and stick together. Mr. Barry says: "It is up to you who make the milk to say what we, the eonsumers, shall pay for it, but you let some one else do this and we let them tell us also what we must pay, and so it goes." Just how to remedy this is not clear, but it must and will be remedied. In three months' time, the farmers' organization has grown to a thousand members, most of these in New Hampshire. Work in Vermont and the other States will inerease this largely in the next few months and will be pushed aeeordingly. The H. P. Hood Milk Co., not being satisfied with the amount of milk signed for by register prior to April 1, after that date sent out eireulars stating they would buy any milk sent and pay all the market would allow, based on Chamber of Commeree quotations of butter, and also allow all the value they eould get out the skimmed milk for manufaeturing purposes. It is stated this company has now signed up praetieally all the supply they eould get on different agreements as suited the cases. This shows they want the milk.

This firm on the Newport-Wells River, Vt., car, pays $1.40 per hundred pounds, at a station on the Lunenburg line $1.41 per can, containing 85 pounds of milk. In the section about Whitefield, N. H., the following prices are stated: May, 23 cents per 8½-quart can; June, 21; July, 26; August, 31; September, 31; October, 31; average, 27 1/6 for season. Last year the average priee was 28 1/6 or one cent per ean higher. This difference in priees, however, has been got around by the eompany in this manner. The produeers are allowed the privilege of seoring themselves on this basis three quarters of a eent on eooling of milk, one-quarter on whitewashing barns; one-eighth on light and spaee in same, one-eighth on having milk-room away from stable, whieh would bring the priee up to 28 5/12, or one-quarter cent per ean better than last year's price.

Another interesting faet is that contraets as the rule in Northern New Hampshire and Vermont run from May 1 to November 1, while those in the southern seetions run from April 1 to Oetober 1. Compare the above prices with the offer of the Deerfoot Farm Co., of Massachusetts for nearby milk, whieh is what they wish to handle if possible altogether, if the consumers will appreeiate the same. This offer is not for all they buy, but is a new policy to be tested out to see if the idea is praetieal with a part of their supply, and if found successful with part will be used alltogether as soon as possible to aecomplish it. They say:

"We are willing to make a trade for your milk for one year at our Northboro Station at the following priee and under the following eonditions: April 35 cents per 8½-quart can; May and June, 29; July 34; August 36; September 36; October 40; November 42; December 42; January 40; February 38; Mareh 38. Average for Summer, 33 eents; for Winter 40. This applies to standard milk, clean and properly taken care of. We will pay a premium above this of two cents per ean for milk from stables seoring 60 pounds or better, and will average below 50,000 bacteria per eubie centimeter and test 3.80 per eent. butterfat or better, and we should like all our supply to be up to this grade. Further, for every dairy sending us as much milk in September as in April, as much in October as in May, and as much in November as in June, one cent per can extra for his whole produet. Or for an inerease in these months of 10 per eent. two cents per can, for a 20 per eent. inerease three cents per ean, and at the same rate up to five cents per can for a 40 per eent. increase."

This looks like a satisfactory and alluring offer, the test will show how it works out. The prices of the Whitings are reported very unsatisfaetory from all seetions heard from. One dairy in our own town, whieh sells to one of these firms, receives only 22 or 23 eents per can, I am told. Their price at Sunapee, N. H., is quoted as follows: April 28; May 22; June 22; July, August and September, 28; an average of 26 cents at the car. As some of these people pay four cents per can for delivery to station you ean see what the net priee is to this section. One of the Granges of this section bought a ean of milk from this company at the depot and was charged 56 eents per can. What a raise in value after reaching the contraetor's hands! A. E. P.

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THE VALUE OF A GOOD DOG.

NELLIE had already saved two lives, but she willingly gave up her own recently to rescue our two-year-old baby. Severely crippled, the plucky collie lay by the side of the railroad and wagged her tail at those who came to pat her on the head and praise her. Last Summer, when two little boys grew tired of wading in shallow water and decided to try the "old swimming hole," Nellie rendered prompt and efficient help. James and Ralph had been warned not to enter the deep water of the old mill pond, but they forgot the warning and entered. They soon found themselves in water beyond their depth and shouted for help. No other help was near at hand but our intelligent collie lying on the bank. Nellie seemed to realize the serious situation at once and plunged into the water. She bravely caught Ralph by the hair and swam near enough to James so that he caught hold of her long wooly hair, and so succeeded in dragging both boys from a watery grave. A neighbor on a distant hill also heard the shrill cry of danger, but he did not reach the scene until Nellie had the boys, out of danger and into shallow water.

Our little two-year-old baby recently wandered from its mother into the front yard, through the open gate and upon the tracks of the railroad that passes the house. She had found a piece of iron and began to play with it there on the track. A fast train was approaching and as soon as the engineer saw the baby, he made a determined effort to stop the train, but he was too close before he saw the little form. Nellie was near enough to see and realize the imminent danger of little Grace. She dragged the baby by her skirts from the track as the express shot by. In doing so, however, the pilot of the engine struck Nellie a most vicious blow, crippling her beyond help. As the conductor and several passengers ran back to the point where the child lay, crying but unhurt, they found the faithful dog slowly dying, yet she made a feeble effort to wag her tail as they patted her on the head. As the father came upon the scene, he caught his little baby from the arms of a stranger, kissed and hugged it to his breast, but as he stood and beheld the dying gasp of his faithful collie, he broke down and wept.

Most people, I believe, are agreed regarding the value of a good canine sentinel. And those of us who keep a good dog on the premises, never realize, perhaps, how often thieves pass us by because they know we have such a watchful dog about the place. Some years ago, chicken thieves made numerous raids in our county. They had come from a city 40 miles distant. It seemed strange at the time that they took all of Mr. A.'s poultry, but none from Mr. B. On investigation it was found that Mr. A. kept no dog, while Mr. B. had a good canine sentinel. In some mysterious way they had secured this information in advance and did not disturb the poultry on a farm where a good dog was kept. A certain widow kept a good lock on her poultry house but no dog. The strong lock proved no barrier for the thieves as they quickly drew the staple. Mr. K. considered his smokehouse close enough to his dwelling and so thought it unnecessary to lock it. Neither did he keep a watchful dog. Just after the holidays, some thief or thieves entered his smoke house and took all his meat and lard, leaving his scarcely a bite.

However, while we are keeping a dog, would it not be the part of wisdom to keep a good, purebred dog? It costs no more to feed a purebred dog than to feed a mongrel, while a purebred dog will bring in considerable revenue each year. During one year we have sold puppies to the value of $60 from one purebred collie. The writer recently placed this small eight-word advertisement one time in an agricultural paper: "Scotch collie pups, beautifully marked, price very reasonable," and 44 replies were quickly received. Hence, while you are keeping a dog, you might as well feed a purebred rather than a mongrel, for it will pay in many ways. P. C. H.

North Carolina.

FIGG: "The way of the transgressor is hard." Fogg: "Yes; but the trouble is it is generally hard on somebody else."—Boston Transcript.

Training a Dog.

WILL you tell me how to train a collie dog properly to work stock and be generally useful? S.

You have given me a hard "nut to crack," in fact it is a stone. The first thing that must be done in the the case of the inquirer is to train the trainer. No one but an experienced trainer can teach a dog to work rightly and successfully unless, as it sometimes happens, a man has an extra well-bred and sensible dog and has some natural ability in training, himself; then he can make a fairly good dog. The thing, however, for the inquirer to do is to locate a really good trainer and then hire him to take the dog and teach it to do what he wants it to do if he cannot do it himself. Asking how to teach him is a good deal like writing a linguist and asking him to tell you how to teach your child to speak Italian, Spanish, or some foreign language that you are unfamiliar with. I might be able to teach the man's dog to do most anything but talk and read, but I could not tell him how any quicker than I could tell the dog, and then unless he had some natural ability he would finish second to the dog.

There are several books published on training which might be of use, but I think the proper way would be to get a real trainer to teach the dog. You will find trainers advertised in sporting magazines, but I would insist on a man giving me reference as to his ability, for there are many men who are so-called trainers who know very little about it.

Illinois. R. F. JOHNSON.

AILING ANIMALS.

Poor Milking Sow.

Would you advise breeding an aged sow that has large litters, but last one, four weeks old now, she gave very little milk first week or so, lost all but seven pigs which are fine. I thought she caught cold. She is in good health and flesh. B. J. D.

It is a mistake to retain such a sow for breeding. She is a poor milker and will not be likely to prove a better milker at the second farrowing. One cannot afford to run chances, however, and it always is the best policy to breed from a sow that is known to be a good mother and good milker. The young sows bred for the first time should be from sows of established merit as breeders. A. S. A.

Knuckling.

Is there any cure for a horse that has a so-called cockle joint? The cord of its hind leg has so contracted that it cockles over badly. Some say that the cord can be partly cut and thus lengthened. Is this so? Will it do to feed a horse silage and how much? G. B. G.

Connecticut.

"Knuckling" or "cocked ankle" when confirmed can only be remedied by the operation of tenotomy, which consists in the severing of the flexor tendons. This can be only done by an expert graduate veterinarian. Other treatment will not be likely to help. The horse may take a little well-preserved silage daily, provided you feed it along with best Alfalfa or clover and Timothy hay. It must not be moldy, for moldy silage kills a horse as sure as a shotgun. Ten to 15 pounds may be fed daily while the horse is idle, but when he has hard work to do better omit silage. A. S. A.

Ailing Goat.

I have a goat eight years old. One month ago she had four kids. She does not seem well, eats little, and has an enlargement on right side between point of hip and last rib, which floats about when touched. What is it? E. S.

New York.

An enlargement that "floats about" when handled suggests an abscess containing pus, or possibly, a rupture. Without an examination we cannot say which is present, but if it is a rupture it should prove possible to work the bowel back into the abdominal cavity. If it is an abscess it will "pit" when pressed, like clay or dough, and will be painful when so handled. In an abscess a soft spot can be found and on pressure one can determine the presence of fluid under the skin. It would be well to have an examination made by a qualified veterinarian. A. S. A.

Collar Tumors.

A horse about eight or nine years old has a lump on his neck where the collar goes and it is getting sore. Can you tell me how to get rid of it? C. J. R.

Pennsylvania.

Have the tumor cut out and then treat as a common wound. That is the only successful treatment for such a condition. Also cut out the hard, horny center part of the sore on the top of the neck. That is called a "sitfast" and permanent healing will not take place unless it is removed. Wet the wounds several times a day with a lotion composed of one ounce of sugar of lead and six drams of sulphate of zinc in a pint of water. Label the bottle "poison" and shake well before use. A. S. A.

Swelling on Neck.

I have a valuable mare with a growth coming on her neck. Our veterinarian says it is on the gland, and he thinks it will kill her; he said the only remedy was to cut it out. It is about as big as a man's head; it extends from her ear down to her throat. She can swallow some; it affects her breathing. Could you tell me if there could be anything done? J. C.

Pennsylvania.

An abscess of the parotid gland no doubt is present and it should be opened by a graduate veterinarian for evacuation of the pus contained. This can be done without any special danger to the mare, if the operator is experienced and careful. After treatment will consist in keeping the cavity clean and injecting tincture of iodine two or three times a week, to stimulate healing and closing of the cavity. The cavity also should be packed with antiseptic gauze or oakum saturated in a mixture of equal parts of turpentine and raw linseed oil. We merely give these as suggestions, but our opinion cannot be quite confident without making an examination. A graduate veterinarian will know what to do. A. S. A.

Indigestion.

A horse purchased this Spring is a poor feeder; i. e., will not eat sufficient grain to keep her in good condition. When not working she eats fairly well although she will not clean up her feed at meal time. She seems to crave dirt, and I give her what she wants. I have been advised to feed molasses. Is that good, and if so what quantity should be fed? When given a hard drive or day's work she will not touch grain. Can you advise something to give an appetite? New York. J. P.

Have teeth attended to by a qualified veterinarian; then feed whole oats, wheat bran and mixed hay. Horses such as you describe usually are nervous, narrow, long coupled animals, and poor keepers, not to be helped by medicine. If not of that type mix in the feed twice daily a tablespoonful of a mixture of two parts of powdered wood charcoal, and one each of bicarbonate of soda and powdered nux, gentian root and fenugreek. Do not feed molasses. It is only used for thin, rundown horses. A. S. A.

Cough.

I have a Jersey cow about 13 or 14 years old; she is in good order and has never been dry since she was fresh, when two years old. She has something wrong with her breathing. I had her examined by a veterinarian; he said it was bronchitis, but left no medicine or prescription. She coughs some, but it seems to come only from the throat. She will be fresh in July; gives about five quarts milk a day. She eats well and is sleek-haired, but if driven fast she breathes like a person with asthma. Can you tell me anything to do for her? She has been fed on clover hay and fodder; oil meal, corn chop and bran in slop morning and evening. D. M.

Pennsylvania.

There is every reason to suspect that the cow has tuberculosis affecting her lungs or throat, and she should at once be tested with tuberculin. Any graduate veterinarian can properly apply the test which is absolutely harmless to a well cow, and is the only reliable method of determining the presence of tuberculosis. A. S. A.

Paralysis.

We have a sow a year old with her first litter of five pigs four weeks old. About three days before farrowing we put her in a barn with a board floor kept dry and clean, with plenty of ventilation. Two days ago we noticed her hind legs getting stiff, so we put her and pigs down in the pen. The next day she was in great pain and her hind legs are helpless. We feed bran and wheat middlings three times a day. We have heard of similar cases in this locality and no one seems to know the cause. We ask for your advice. G. C.

Ohio.

This condition is purely due to lack of exercise and overfeeding. Sows from breeding stock similarly pampered are most likely to suffer. Stuffing hogs on corn is most liable to cause the trouble. At all times growing and breeding hogs should be made to take abundant exercise and should be fed mixed rations. Adding 10 per cent. of tankage to the feed tends to prevent rickets and paralysis. Wean the pigs. Feed the sow light laxative slop and rub her loins with liniment. She possibly may recover, but the chances are poor. Kidney worms do not cause this condition. It is similar in nature to the disease known as parturient eclampsia in female dogs. A. S. A.

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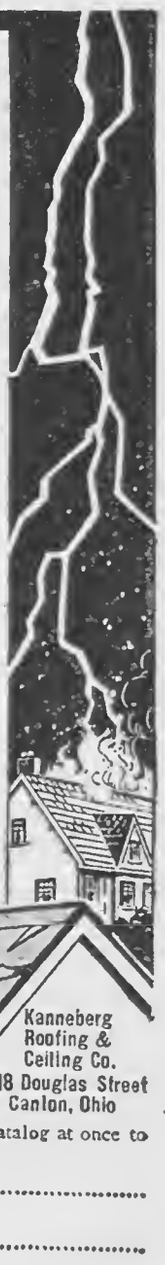

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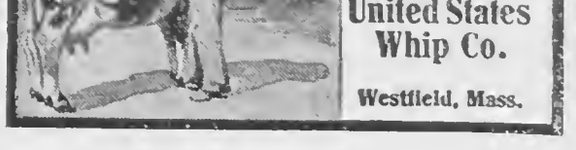

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PUBLISHER'S DESK

THE service we are able to render subscribers is appreciated more and more by them, as one after another gets in touch with it. Here is one:

I am calling on my old stand-by, as it seems you are the only one I can depend on to help. MRS. J. W. E.
West Virginia.

Here is another from the same mail:

As you seem to be about the best place I have yet found where good sensible advice without frills will be given without hesitation, I kindly ask for the following information. B. M. C.
Tennessee.

It is no conceit on our part to print these letters. Personally we may not be as wise or as sensible or as well informed as some of the people who ask for information; but we have a great big organization that stretches around the world. What we do not know ourselves we are in a position to find out. We can afford to get it because we get it for 160,000 people. No man could afford to go to the expense to gather it for himself. Our people come back to us for it because they have found our facilities are good to get what is reliable, and the latest and best to be had. You pay all we ask for it when you renew your subscription, and we are glad to have you call on us freely for it, at any time.

I note that you have mentioned the Luther Burbank Society. Some weeks ago I was elected an "Honorary Member" of said society, and was all "swelled up" until I was asked to contribute $81 for a set of books! Not me! M. J. G.
Iowa.

Whoever has engineered the Burbank game understands that element of human nature known as vanity. We have probably all got some of it; but it is so closely allied to honest pride and self respect that we may not accuse ourselves too severely provided we keep it within the $81 limit. Yet the success of the Burbank scheme depends on the number whose vanity exceeds the limit.

Please enroll me as a member of the Dr. Ulman Club. S. A. C.
New York.

The Anti-Fake Club is growing. We are now quite sure of being able to effect an organization. We believe it will have a great influence in promoting clean publications, and honest advertising.

The Postoffice Department has issued fraud orders against George Maurice and the Bond Certificates Club of Geneva, Switzerland, whose lottery literature has been addressed to some of our subscribers. We sent the literature promptly to the Department. No time has been lost in cutting them out of the U. S. mails. We are glad to see the "fraud order" in use again. It is about the only effective means to shut off crooks before they get the people's money.

Is this proposition from the Colonial Motion Picture Corporation a fake?
Connecticut. A. A. Y.

This subscriber received invitation number 615 with the information that only 30 citizens of his State may acquire the ownership in the corporation and receive the cash profits to be derived from them. Further particulars are promised on request; but we have enough. In our judgment the remainder of the citizens of Connecticut are fortunate that their vanity and avariee are secure from the allurements of the proposition. It is hard to prove that some things are fakes until they have had time to develop. The proof comes only after some one has lost his money; but we all have the privilege of an opinion based on experience; and to say the least, the proposition does not appeal to us.

The Monaton Realty Investing Company, New York City, was organized in 1907. Their methods were criticised in THE R. N.-Y. six years ago, and the nature of their paper securities explained. Two of its officers are now under bail for $2,500 on Federal indictments for alleged misuse of the mail. It is charged that the losses to small investors amounted to $1,000,000. The company is in the hands of a receiver, but it is alleged that the property held by the company is mortgaged for all it is worth. It is said that the most successful agents in selling the paper of the company were two ex-ministers. They were particularly successful with servant girls and other people of small income. While these operations were under way, the president of the company, now under indictment, was drawing a salary of $10,000 a year.

I received the inclosed letter from the Thwing Company, 141 West 45th Street, New York, today. I invested $50 in the Circle magazine when it first came out. Since the first failure, I have taken THE R. N.-Y.'s advice and have not sent an extra cent to Thwing, though he urges me frequently to do so. H. V. C.
Pennsylvania.

The Circle magazine died. The Success Magazine died. Its only success was in getting easy money from credulous people. An attempt is now being made to reinstate the two corpses into one publication. There is no great objection to that except the scheme to get the old victims to put in more money on the theory of getting back what is already lost. In this letter Mr. Thwing repeats the old E. G. Lewis scheme of one hundred founders; and promises them one hundred per cent profit. Our correspondent is wise in taking his $50 loss good-naturedly, and in resisting Mr. Thwing's allurements for further remittances.

You will find enclosed a contract of the Wheatley Heights Estates which was given to me for my signature, but I did not sign it; thought I would consult you first. Their plan is to give the party of the first part the land free of any charge, and the said party is to pay them $5 per front foot of each lots. The lots are 25 by 100 feet. Will you please answer this in the columns of THE R. N.-Y., so some one else won't get "bit."
New York. W. S. M.

This scheme of "giving away" one lot on condition that you buy one or more lots adjoining, and put up cash for alleged improvements, has been worn threadbare by Long Island promoters. No one need have any delusions but what they will pay a price covering the present value and any possible increase for 10 years to come for any lots bargained for with these promoters. A subscriber recently came to us for information regarding two Long Island lots purchased in 1908 for $1,000. The best estimate we could get shows the two lots are worth about $500 now. This, we believe, is a fair sample of the basis of value of most of the Long Island land schemes. A large percentage of the lots on Long Island sold by promoters are later taken over by the State for taxes.

If the present interest of farm women in their department of THE R. N.-Y. continues, Hope Farm, Publisher's Desk and other departments of the paper will all have to acknowledge the Woman and Home section as most popular. THE R. N.-Y. has always had loyal support from the good women of its visiting homes; but it never before received in a whole year the correspondence from women that now comes in a single month. It must be remembered that we are only just beginning the development of this work. We admit we do not know yet just what our women want; but we have an idea. We want this department of the paper to be just what the American farm woman wants; and as nearly as possible edited by herself. When you have finished reading this number, write us freely what about it you like or dislike and what it should have to interest and help you. We have talent enough in the Rural family to edit the best woman's magazine in the world; and we propose to find the talent, and to publish the magazine.

The farmers of Millville, Cumberland County, N. J., allege that they have been duped by a Philadelphia concern which last Spring signed an agreement with them to act as their commission agent in the city markets and eliminate the middlemen. The farmers claim that they paid $50 each to join the combination and agreed to turn over to the agent all their produce. The farmers who shipped to the commission men their strawberry crops have just learned that, instead of being sold at a good profit, the fruit was sold to canners in other parts of the county. Some of the farmers say that under the new system they received an average of $2.50 per crate, while in previous years their returns have been from $3.50 upward.—Local Paper.

We cautioned New Jersey farmers against a scheme of this kind during the past Winter. Marketing his products is the most difficult problem that the farmer has to solve. So long as he leaves this work to others, so long he may expect losses. When he undertakes the work in a modern way for himself he may expect some measure of success. When producers organize themselves for their own benefit, they can well afford to put up $50 or more to do business; but when farmers permit themselves to be organized by schemers for the benefit of schemers, and put up $50 to finance the scheme to swindle themselves, they must expect to reap the fruit of their own folly.

J. J. D.

Cleaning a Cistern.

ADVISE me about my cistern. It is cement and under ground, out of doors. The water is not used in Winter, and when the family comes back to the country in Spring the cistern is always full, but the water smells as though there were something dead in it. As a matter of fact every time it is cleaned there is something dead in it, usually a rat or two. Z. R. C.
Bernardston, Mass.

Cisterns for the storage of water to be used for drinking and cooking purposes are unsatisfactory, at best, as they are very liable to contamination through leaky walls, and always contain more or less organic matter and other impurities carried down from the lower layers of the air and from roofs, gutters, etc., by the rain water. Where the walls are of brick or concrete and are vermin proof, and the top is screened, vermin may find entrance through the inlet or outlet pipes, and these should be screened also. Cistern water may be greatly improved by filtering it through a wall of porous brick made to divide the cistern into two compartments, or it may be made to pass through an outside filter of sand before being admitted to the cistern. Certain chemicals are also added to impure water to purify it for domestic use; among them being alum (alumina sulphate) and potassium permanganate. About six grains of the former to the gallon of water are added and this results in a coagulation of the impurities which then settle to the bottom and permit the purified water to be drawn from above. A shunt by which the first rain falling upon the roof may be diverted from the cistern will also keep out a great deal of dirt. Underground cisterns should be well ventilated and the water may be aerated by churning it up and down, to its improvement. If you cannot filter the water of your cistern, I would suggest that you, at least, make arrangements with some trustworthy person to empty and thoroughly clean the cistern, and also to clean the roof and gutters supplying it, early enough in each season to insure your family a supply of comparatively clean and fresh water for the Summer. Care should be taken to have no privy vault near the cistern and slops should not be thrown upon the ground in its vicinity. Boiling the water from it for five minutes will render it safe from any disease germs which may have found access to it.

M. B. D.

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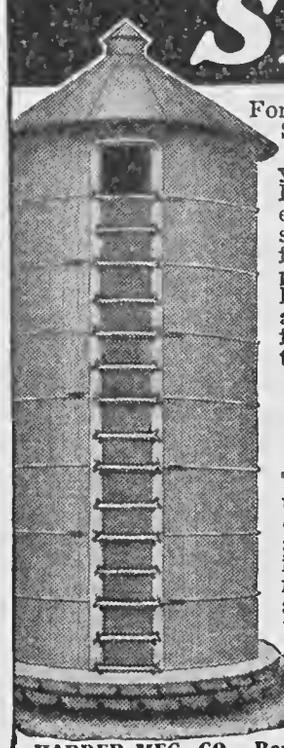

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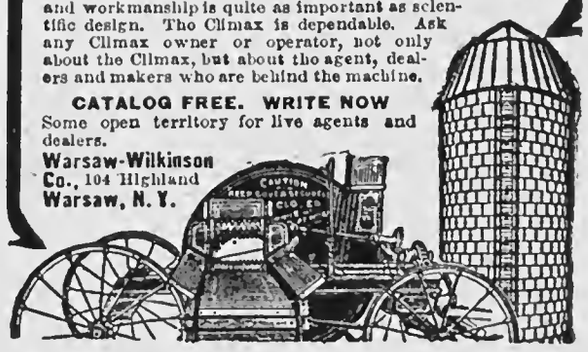

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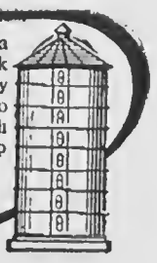

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Canada has made the following pure advertising amendment to the Criminal Code:

"Every person who knowingly publishes or causes to be published any advertisement for either directly or indirectly promoting the sale or disposal of any real or personable movable or immovable property or any interest therein, containing any false statement which is of a charaeter likely to or is intended to enhance the price or value of such property or any interest therein or to promote the sale or disposal thereof, shall be liable upon summary conviction to a fine not exceeding two hundred dollars or to six months' imprisonment, or to both fine and imprisonment."

Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending June 19, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01, September, 3.22.

Wholesale prices paid by New York dealers are running $1.41 and $1.31 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart

BUTTER.

An advance of one cent in top grades was made and held during the week. The lower grades are in very large supply and offered at cut prices to clear out the excess.

Creamery, extra, lb	27	@	28
Good to Choice	23	@	26
Lower Grades	20	@	22
State Dairy, best	25	@	25½
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	15	@	17½

Elgin, Ill., butter market 27½ cents.
Philadelphia, western creamery, 28 cents.

CHEESE.

Prices are unchanged from last week, though but a small amount of business has passed at the highest figures. Some exceptional prices have been paid for picnic and small sizes for special purposes in a few cases up to 16½.

Whole Milk, new, best	15	@	15½
Common to good	11	@	13
Skims	5	@	10

EGGS.

The range of prices is widening, as is usually the case in hot weather. Fancy nearby eggs are two cents higher than last week, a few reaching 27 cents. Ungraded stock goes at irregular prices and hard to sell.

White, choice to fancy, large	25	@	27
Common to good	20	@	23
Mixed colors, best	23	@	24
Common to good	17	@	20
Western fresh, white	20	@	21
Lower grades	15	@	18

FRESH FRUITS.

Apple trade is very dull, except for special qualities. Very few desirable peaches are arriving. Most of them are small and hard, going at $1.50 or a trifle more, per crate. Red June plums from Georgia are bringing $2 to $2.50 per crate. This is a desirable commercial variety. The choicest of nearby and up-river strawberries are on hand, 18 cents being the top price noted for Gandy and fancy varieties. The general run of fair quality sells between 10 and 12, and lower grades down to five. Cherries sell at a very wide range of price, from 30 cents to $1 per eight-pound basket.

Apples—Russet, bbl.	2 25	@	3 25
Spy	3 00	@	5 00
Ben Davis	2 50	@	3 00
Newtown	5 00	@	6 00
Baldwin	2 50	@	3 75
Western, box	1 00	@	2 25
Strawberries, Up-river, qt.	7	@	18
Jersey	6	@	12
Maryland	5	@	10
Cherries, 8lb. bkt.	35	@	50
Currants, qt.	12	@	14
Peaches, 6-basket crate	1 50	@	2 50
Blackberries, Carolina, qt.	7	@	11
Huckleberries, qt.	5	@	14
Gooseberries, qt.	5	@	9
Muskmelons, crate	1 50	@	2 00
Watermelons, 100	25 00	@	50 00

BEANS.

Marrow, 100 lbs.	4 25	@	5 10
Medium	3 70	@	3 75
Pea	3 10	@	3 65
Red Kidney	4 50	@	5 75
White Kidney	5 65	@	5 75
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

Prime to choice	36	@	38
Common to good	32	@	35
Pacific Coast	17	@	20
Old stock	15	@	18
German crop	60	@	64

VEGETABLES.

A few old potatoes have sold up to $3, with a quite active demand. Considerable of the new southern stock is running inferior in size or quality, some lots going as low as $1 to $1.50 per barrel. Onion market very firm and higher. Cabbage running small and inferior; good heads wanted at 50 cents per barrel more than last week.

Potatoes—Old, 180 lbs.	3 00	@	3 25
Bermuda, bbl.	2 00	@	3 25
Southern, new	1 75	@	4 50
Sweet Potatoes, bu.	40	@	1 25
Beets, 100 bunches	1 00	@	2 50
Carrots, bbl.	2 00	@	3 50
Cucumbers, bu.	50	@	1 50
Corn, Southern, 100	50	@	1 50
Asparagus, Green, doz.	1 25	@	2 25
White, doz.	1 00	@	1 25
Cabbage, bbl. crate	50	@	1 50
Lettuce, half-bbl. basket	25	@	50
Onions—Southern, New, bu.	3 00	@	3 50
Okra, bu.	2 00	@	3 00
Peppers, Southern, bu.	1 00	@	1 75
Peas, bu.	50	@	1 00
Radishes, 100 bunches	50	@	75
Spinach, bbl.	50	@	75
String Beans, bu.	50	@	2 25
Squash, New, bu.	50	@	1 00
Egg Plants, Southern, bu.	1 00	@	1 75
Tomatoes, Southern, 6 bkt. crate	75	@	2 25

LIVE POULTRY.

Going to war is a sedentary job compared with handling live poultry in New York. In the last few weeks there have been numerous riots and personal encounters in the railroad yards, auction rooms and other places where live poultry trade is carried on. In one case a high bid at an auction started a row resulting in more or less broken heads. But most of the trouble comes from the grafters and gangs that hang around the yards. There were three fights in one day, several men landing in the hospitals with wounds from coop slats and flying hatchets and scale weights. One man lost two teeth and had his head cut open. His offense was refusing to present fowls to several of the unloaders who expect a hand-out of this sort. In some cases they cripple or kill some of the birds when handling, throw them in the dead heap and get their graft in this way.

Broilers, lb.	32	@	33
Fowls	15	@	16
Roosters	11	@	12
Ducks	13	@	14
Geese	10	@	11

DRESSED POULTRY.

Chicken schoice broilers, lb.	36	@	33
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	18
Ducks, Spring	15	@	16
Geese	9	@	14
Squabs, doz.	1 50	@	3 75

HAY AND STRAW.

Receipts are heavy and most grades of hay are $1 per ton lower, demand being dull. Straw prices are unchanged but market easy.

Hay, Timothy No. 1, ton	20 00	@	21 00
No. 2	18 00	@	19 00
No. 3	16 00	@	17 00
Clover mixed	15 00	@	19 50
Straw, Rye	15 00	@	16 00

LIVE STOCK.

Native Steers	7 25	@	9 20
Bulls	5 50	@	7 35
Cows	3 50	@	6 75
Calves, prime veal, 100 lbs.	8 50	@	11 25
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 25
Lambs	9 00	@	9 75
Hogs	8 50	@	8 65

GRAIN.

Wheat, No. 1, Northern Spring	1 01	@	..
No. 2, Red	91	@	..
No. 2, Hard Winter	99	@	..
Corn, as to quality, bush.	70	@	78
Oats, as to weight, bush.	43	@	47
Rye	70	@	72

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	35	@	40
Mixed colors, new laid	25	@	32
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

The Georgia peach crop is expected to exceed 5,000 carloads.

*

The Montana wool crop will be about 26,000,000 pounds, or four-fifths that of the previous year.

*

Interest and dividend payments July 1, will amount to about $268,400,000. Of this amount $91,000,000 will be from industrials, and the bulk of the remainder from railroads.

Canadian Crops.

Winter wheat in Ontario is rather spotted owing to damage from heaving. Clover also suffered from the trying weather of April and Alfalfa has come out worse than clover. Peaches in the Niagara district are practically all frozen. In Essex, Kent and Lambton the injury has been less. Apples, pears, cherries and plums and small fruits are promising. There was a bad infestation of tent caterpillars in York and counties to the east.

June 9. Hay $17; straw $11; wheat 90; rye 65; corn 75; oats 50; butter 28; eggs 20. S. B.
Harlingen, N. J.

June 15. Cows from $50 to $80; milk 2¾ cents per quart; hogs high, 10 and 11 cents; wheat 95; rye 75; corn $1.50 per cwt., shelled; eggs 22; butter 30; chickens 30 cents per pound; potatoes $1.25.
Flanders, N. J. J. S. Y.

June 11. Frost has shortened the apple crop considerably in Nova Scotia. Along the river the whole crop seems blasted. On the side hills a fine crop will be obtained. Gravensteins will be short. Crop looked like 2,000,000 barrels, likely will be reduced to 1,250,000 barrels and perhaps less. J. B.
Berwick, N. S.

June 12. Good fat steers, 1,200 pounds and up, from seven to eight cents live weight; then a chuck roast from such cattle costs 17 cents a pound. Veals run from 13 to 15 and were 16 more than a month ago. Butter 16 to 25 according to quality. Eggs 20; hens 18; hay, loose, $10 to $13, baled $16.50; wheat $1. The fruit and garden crops in this locality are used on the farm. Our distance, and roads to market, prevent farmers from gardening. L. H. W.
Farmington, Pa.

June 15. Grass and oats are looking well, although rain is very much needed. Some farmers have just finished planting their silage corn. A good many are now planting potatoes. Some pieces of Orchard grass and clover will have to be cut soon, but the main hay crop will not be ready to harvest until after the first week in July. There will be considerable buckwheat sown this season. Butter brings 23 cents; eggs 20; veal, live, eight cents. P. S. S.
Maryville, N. Y.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here te enable RURAL NEW-YORKER readers to supply each other's wants. If yeu want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a werd, payable in advance. Tho name and address must be ceunted as part ef the advertisement. Copy must reach us not later than Friday te appear in the fellowing week. Ne display type used, and only Farm Products, Help and Pesitiens Wanted admitted. Fer subscribers enly. Dealers, jobbers and general manufacturers' announcements net admitted here. Poultry, Eggs and ether live steck advertisements will ge under preper headings en other pages. Seed and Nursery advertisements will not be accepted fer this column.

POULTRYMAN seeks respensible position, private or cemmercial; experience. LEWIS, 366 Ninth Ave., New York.

YOUNG MAN, 18, two Summers' experience general farming, wishes position. E. MARDFIN, 125 Fifth Ave., New Yerk City.

WANTED—Married man to werk farm; fruit, hegs, cows, hens; state salary and references. "A. B. C.," care R. N.-Y., 333 West 30th St., New York.

WANTED—Elderly woman fer housework; one who would appreciate good home with mederate wages; small family; Chemung County. "HOME," care R. N.-Y., 333 West 30th St., New Yerk.

A SOBER AND ENERGETIC YOUNG MAN, age 27, wishes a position as farm foreman. Have practical experience in any line ef farming and am a New Jersey State Agricultural College graduate in general and dairy farming. H. MAURER, Box 15, R. F. D. No. 2, Patersen, N. J.

EXPERT ORCHARDIST DESIRES POSITION with commercial preposition; eight years' experience raising and handling fruit in the Northwest; apples a specialty; now managing large orchard but desires to change; reasons and references given upon applicatien. Address N. W. VAN CLEVE, Grand Isle, Vermont.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Young pigs. FRED H. TUTTLE, Manlius, N. Y.

SEVERAL CYPHERS 400-EGG INCUBATORS to sell for want ef use. C. T. HAMILTON, Greenlawn, N. Y.

WANTED—Feur Internatienal Hovers. State condition and lowest price. JOHN H. GASSER, Bethel, Cenn.

HORSES THOROUGHLY AND CAREFULLY broken to saddle fer the read or field; distance no object. L. HOWARTH, Mt. Freedem, N. J.

WANTED—Winter Vetch; mammoth, medium and alsike clover; also barley; state quantity, price, and enclese sample. W. A. HENRY & SON, Wallingford, Conn.

HOME HAMPERS OF FRESH VEGETABLES and fruits, shipped direct to the consumer once er twice a week on Tuesdays and Fridays, for $1.50 each; express paid; further infermatien on request. THE KENNADAY FARM, Mendham, N. J.

TEN ACRES—All improved, good land; $650. M. RIGEL, Yellow Pine, Ala.

FINE VILLAGE AND RIVER FARM FOR SALE—Fine house, water, fruit; good barn; keep 25 cows; 1½ miles to depot. BOX 24, Rockland, N. Y.

GOOD FARM, GOOD BUILDINGS; feur miles frem good market; fruit; running water; 90 acres. Price, $2,800. Write ANDREW EVARTS, Waverly, N. Y.

HAVE THE IDEAL LOCATION FOR CRANberry farm, south side of Leng Island, with five-reem house, near station. Will sell or rent; a money-maker. W. C. HEIDELBERGER, 134 Keut St., Brooklyn, N. Y.

WANTED—Small farm; not exceed thirty miles frem New York; must be exceptional bargain; give description and cash price in first letter, etherwise no attentien paid. E. J. BONDY, Conesus, N. Y. S. R. D.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; geed buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertewn, Pa.

SHENANDOAH VALLEY FRUIT AND TRUCK Farm adjeining city with churches, high school, military academy, female college, public library, epera houses, etc.; 3,000 fruit trees. Address PRIVATE BOX, N. Kent St., Winchester, Va.

FOR SALE—Farm, 55 acres; nice, light land; 1,000 fruit trees; apple, peach, pear, cherry; new seven-reem heuse; fine poultry and truck farm; large hen-heuse; goed stables; clese to school and towu; will sell on easy terms if sold quick. CALEB BOGGS & SON, Chesweld, Del.

FOR SALE—Boarding house, established fifteen years; accommodates fifty guests; with 128-acre dairy farm; will keep ferty cows; milk station ou farm; everything in first-class shape. Price, lucluding growing creps, $11,000. Immediate possessiou; easy terms; phetes and particulars on applicatiou. Address WILLOW BROOK COTTAGE, Wallkill, N. Y.

FOR SALE—The highly developed steck farm, Idle Hour Place, formerly owned by T. H. Russell; 275 acres, uear Geneva, Ohio; impressive modern buildings; mansion house completely furnished; combinatien gentleman's estate and farm; up-to-date equipment; deveted fer years to the breeding ef Holstein-Friesian cattle. The property stands me ever $75,000, but for business reasons must be sold and will take a loss. C. J. SCHIEFFREEN, Owner, 1010 Old South Bldg., Beston, Mass.

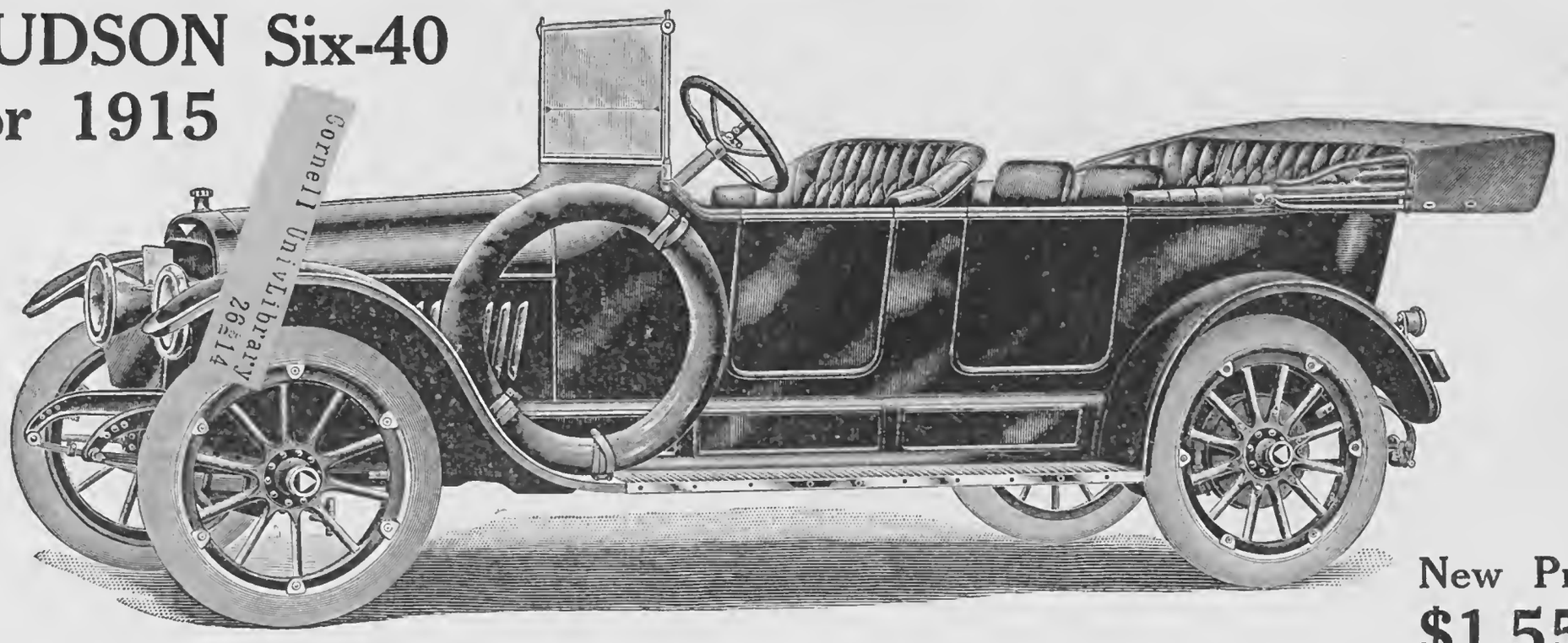
FARMERS' SECURITY BUREAU, NEW YORK Ageucy Famous for Reliable Farm Help. No Branch. SIDNEY SULLIVAN, Expert, 99 Nassau Street

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organizatiou and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.

HUDSON Six-40
For 1915



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New Price
$1,550

The Thoroughbred

We submit this new model of the HUDSON Six-40 as the typical modern car. It reveals the latest refinements in motor car building. In any group of high-grade cars it will seem the thoroughbred. No other car in so many ways meets present-day ideals.

Our Crowning Effort

The first HUDSON Six-40 came out last year. Our 48 engineers, headed by Howard E. Coffin, had devoted three years to the model. Their effort was to embody here the final conception of an ideal car.

They established new standards in Sixes. They brought quality Sixes, for the first time, into the price field of Fours.

They brought the weight under 3,000 pounds—for a roomy car with extra tonneau seats. That was 1,000 pounds less than average former weights on cars of like capacity. They did this by skilful designing and better materials, without sacrificing strength.

They reduced operative cost, for a car of this power, by from 15 to 30 per cent. They did this by employing a new-type motor and by building a light-weight car.

They made this car one of the handsomest, one of the best-equipped cars in the world. Then we fixed the price at $1,750—the lowest price that had ever been quoted on any type of quality car.

Last Year's Record 3,000 Oversold

That car was the year's sensation. Men flocked by the thousands to it. With the largest output in HUDSON history, the end of the season left us 3,000 unfilled orders. Men were offering premiums—as high as $200—for options on this HUDSON Six-40.

In a mechanical way the car proved itself the greatest of HUDSON successes. It has run for a season in thousands of hands, under all road conditions. And not a single shortcoming developed. So our whole engineering corps, during all last year, worked on nothing but refinements.

Now a New Model

Now comes a new model with all these refinements. There are 31 new features in comfort, convenience and beauty.

And there comes a new price—$1,550. This is due to the fact that the car's popularity has compelled us to treble our output. This trebled output reduces our cost about $200 per car.

Look back three years, when every Six cost over $3,000. When high-grade cars of any type cost around $2,000. Then look at this HUDSON Six-40—a better Six than men dreamed of then—priced at $1,550. You will realize then what HUDSON engineers have accomplished for motor car buyers.

This is just the car that tens of thousands want. It is a smooth-running Six, and men want that. In size and power it marks the sane medium. In quality, beauty, finish and equipment it reveals the best that's possible. In price, weight and operative cost it marks the bottom limit for this-class car.

As an ideal combination—as a typical modern, high-grade car—you will not find a rival in sight of it. Most men will concede this—all thing considered—the top place in the motor car field.

Hudson dealers everywhere now have these new cars on show. Our new catalog on request.

31 New Features Price $200 Less

Go see the new features—the 31 refinements—which our engineers have added in the past 12 months. Then note that, with all these, the price this year is $200 less—all because of our trebled output. These are some of the attractions which you will find embodied in this new-model HUDSON Six-40. And some of the best of them are not yet found in any other car.

A distinguished streamline body.
All hinges concealed.
Gasoline tank in dash.
Extra tires ahead of front door.
Seats for up to 7 passengers.
Extra tonneau seats, disappearing.
Hand-buffed leather upholstery.
20-coat finish on body.
123-inch wheelbase.
Wider seats—higher backs.
More room for the driver.
"One-Man" top, with quick-adjusting curtains attached.
Integral rain-vision windshield.
Dimming searchlights.
Simplified Delco starting, lighting and ignition system.
Simplified wiring in metal conduits.
Lock on ignition and lighting switch.
Far better carburetion.
Speedometer drives from transmission.
Automatic spark advance.
Tubular propeller shaft.
All instruments and gauges within reach of the driver.
Trunk rack on back.
Still less weight—2,900 pounds.

New price, $1,550 f. o. b. Detroit. Standard Roadster, same price.

Our Larger Six-54

The HUDSON Six-54—built on the same lines, with 135-inch wheel base and greater power—sells for $2,350. It is for men who want a big, impressive car.

HUDSON MOTOR CAR COMPANY, 8022 Jefferson Ave., Detroit, Mich.

CORNELL UNIVERSITY
JUL 6 1914

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII, No. 4262. NEW YORK, JULY 4, 1914. WEEKLY $1.00 PER YEAR.

THE NEW DEAN OF THE AGRICULTURAL COLLEGE.

Message of Dr. Beverly T. Galloway.

DR. GALLOWAY, the new Dean of the New York College of Agriculture, will take up the duties of his new office on August 1. He is not personally known to many of our farmers, and we felt that a note of introduction would be timely and appropriate at this time. So we asked Dr. Galloway if he cared to make an introductory statement upon taking up his new work, and offered the services of THE RURAL NEW-YORKER as a medium for the introduction. In response to this, Dr. Galloway prepared the following statement, which we take pleasure in putting before our readers:

TO THE FARMERS OF NEW YORK:

You have asked for a message to the farmers of the State of New York. I am pleased through you to give this message. I want it to be a message of hope and abounding faith as to what the future holds in store for agriculture. I want it also to be a message of appreciation of the efforts of those who have struggled long and earnestly for the betterment of agriculture. Men like Dr. Bailey and Dr. Jordan need no commendation from me. Their work stands a monument to their unselfish zeal and the ideals for which they have labored. They have had profound influence for good in New York State, and profound influence for good in the nation at large.

To all institutions within the State charged with the betterment of agriculture I extend greeting and the sincere hope and wish that the good work they are doing may be continued and broadened. The College of Agriculture of Cornell University will ever stand ready to coöperate with all institutions within the State to the end of co-ordinating agricultural activities so that the farmers and all others whom we serve may reap the fullest benefit, and may be led to still further aid the cause.

The world is in the midst of a mighty surge of public sentiment demanding all kinds of reforms and all kinds of action to advance the cause of the man on the land. Any consideration of the question as to what is to be done for agriculture in the State of New York must be visualized from the world's point of view. The world is suddenly waking up to the fact that food and clothing must be supplied to the teeming millions of its people. The world is also waking to the fact that with the growth of democracy the man who supplies the food and clothing from the soil will be content no longer with the life of the peasant or the serf. America has developed a type of farmer differing in many respects from any others found in the world. Intelligence and individualism are his marked characteristics. He is now beginning to feel the need of organization and combined effort in meeting the problems before him. The problems in New York State, or in any other State for that matter, are not those of mere production, or the mere disposal and distribution of the things produced. In a broad sense they have to do with socializing the man on the land, of bringing to bear all those forces which the State may properly bring to bear to give him an even chance with other men whose labors fall in different fields. Education is the key to the situation, but the education must be sound, otherwise our efforts will fail. No sane man would attempt at this time to blueprint a final plan of rural education. We can feel our way only as we get the ground swell coming from the millions of people demanding light and help.

I hope to see the State College of Agriculture in the forefront of every movement looking toward the training of leaders in rural affairs. No good work can go on without leadership. The College of Agriculture in a great university is the place to train them. They must be gifted with knowledge and experience for leadership, and enriched with the highest ideals of living. The atmosphere of a great university begets these things. The association of different classes of students makes for breadth of vision and appreciation of the work for the world at large. Obviously no college can hope to teach or train successfully for any great length of time unless it is developing a reservoir of knowledge from which to draw. Research creates this reservoir. Research is the steadying force that holds the earnest worker to the truth and the highest ideals in all things. But truth must be vitalized and used, and here again the college has an important duty to perform in bringing its work for agricultural betterment into every community and every farm home of the State. The farmers' needs are multiplying, and will continue to multiply with advancing civilization. The farmer wants a fair share of the profits of his labor. He wants home comforts, and he wants to be brought in touch and to keep in touch wtih the world's affairs. He is not a supplicant or a mendicant. He asks for nothing he is not entitled to receive. The college must appreciate all of these things and more, and to do so its leaders must get close to the heart of the people, and must never forget for an instant the interests of those they serve. BEVERLY T. GALLOWAY.

BEVERLY T. GALLOWAY,
DEAN OF THE NEW YORK AGRICULTURAL COLLEGE.

Beverly Thomas Galloway—His Work.

He was born in Millersburg, Mo., on October 16, 1863. His father, Robert M. Galloway, was a native of Kentucky, a farmer and miller. Soon after the Civil War young Galloway came with his parents to Columbia, Mo., the site of the State University and Agricultural College.

Galloway completed the usual minor school course, and began work with a view to qualifying as a pharmacist. In 1880 he gave up this work and secured a position on the horticultural grounds of the Agricultural College. He turned his attention especially to intensive lines of horticultural work, principally floriculture. In those early days there were no experiment stations and very little money for the conduct of any kind of experimental work. It was required of most of the agricultural and horticultural departments that they be self-supporting. This was the case at Columbia, and Galloway's early work was connected with organizing the forces of the institution, and shaping them so as to be financially successful. He spent four years at the institution, graduating from the College of Agriculture and specializing afterwards in several lines of work at the State University.

In 1884-85 he was selected to collect agricultural, botanical, and other material for the New Orleans Exposition. He spent the Winter of 1884-85 in New Orleans at the Exposition. In 1885 he came back to Columbia and entered the horticultural department, and was put in charge of the general greenhouse work. This time he began to specialize in plant pathology, securing what help he could from one or two outside institutions, the only ones of the kind doing this work in the United States. He began to prepare and present papers at State horticultural meetings and to publish practical instructions in the matter of preventing plant diseases in the local papers of the State. This work he continued until 1887, at which time Congress made a small appropriation for the study of plant diseases by the Department of Agriculture. He came to Washington in the Summer of 1887 as Assistant Pathologist in the Section of Mycology. This section had a small organization for the study of plant diseases, with an appropriation of $6,000 or $7,000. A year later the chief of the section resigned, and Norman J. Colman, the then Commissioner of Agriculture, appointed Galloway as his successor. Immediate steps were taken to place the work on a new basis, special attention being given to field demonstrations and experiments. About this time the State Experiment Stations were organized, and through coöperation with them and with farmers, fruit growers, vegetable growers, and others, there was rapidly brought up the science of plant pathology. The work grew and extended, and was rapidly developing when Secretary James Wilson came to the Department.

About 1900 it became evident that the Department should be reorganized if proper growth was to be secured. Galloway was instrumental in bringing this about through the organization of four large bureaus—Plant Industry, Forestry, Chemistry, and Soils. All of the plant work of the Department was brought into the Bureau of Plant Industry, and from that time the growth of the Department was rapid.

The Bureau of Plant Industry has grown from a comparatively small institution until it now has a force of something like three thousand men, and spends nearly three million dollars a year in its work. The work of the Bureau covers practically all fields of crop production, and more recently it has extended its activities into the field of economics, especially as affecting crop distribution and marketing.

In 1913 Galloway was asked to take the position of Assistant Secretary of Agriculture, although he was not an applicant for the place. There was no political significance whatever in the appointment. A great deal of the work of the Department during the past year has been redirected and a spirit of hearty coöperation developed. Special efforts have been made to bring the Department into closest sympathy and coöperation with the agricultural colleges and State experiment stations throughout the country. This spirit of friendliness and coöperation has resulted in the shaping up and final passage of the Smith-Lever Extension Bill.

SCIENTIFIC PRODUCTION OF FINE APPLES.

From Plowing to Packing.

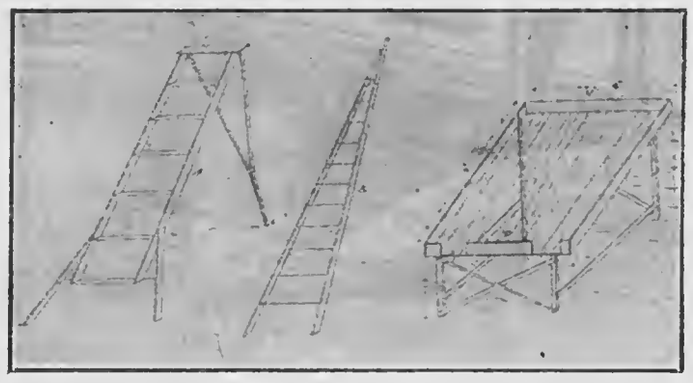
PART III.

BARRELING.—Apples may be barreled in the orchard or in the packing shed as they are picked, or else placed in temporary storage and barreled on bad days during the picking season or later as they are marketed. In any case success in the entire process depends largely on the care and attention given to the picking, handling, and grading of the fruit, the quality of the barrel used, and the neatness and honesty with which the fruit is packed. Failure to properly look after any one of these is quite sufficient to change success into failure.

PICKING THE FRUIT.—The proper degree of ripeness is the most important consideration in picking the fruit. With varieties which have more or less red, color is usually the main guide. That is, such varieties should have developed their full normal color and full normal size, unless for some unusual reason full size or full color is obviously impossible. A condition sometimes spoken of as hard ripe is quite expressive, and means that the fruit should have full color and full size, but with the flesh showing no sign of mellowness. With the Winter varieties the seeds are usually brown under the above conditions, and this, along with size, is usually the final test of maturity in Winter varieties having no red color. Fruit should also separate from the branch with comparative ease, for otherwise picking will be delayed and considerable injury will result from the breaking off of fruit spurs. Severe dropping sometimes occurs during seasons of drought, and may be sufficient cause for earlier picking, but when apples are properly grown and sprayed the amount of droppage is not likely to be a serious problem.

HARVESTING EQUIPMENT.—The character of ladder, picking baskets, packing tables and other necessary equipment is of much importance. Where the trees are not especially tall the three-legged step-ladder with side braces is the most practical. The four-legged type is unsatisfactory, because it is not adapted to uneven ground. Of the long ladders the style shown at B, in Fig. 362, is most satisfactory because it is easiest placed among the branches and is safer than the ladder commonly used. There are certain styles of step-ladders which permit of swinging the tongue over in line with the step portion, so that the whole may be used in the same manner as the long ladder. To my mind, a good substantial grade of the ordinary round half-bushel handle basket is the best utensil for picking into. It is all the better and, in fact, necessary, especially when fancy or tender varieties are being picked, to have this basket lined with burlap or some other form of padding. It is never advisable to pick fruit in a bag, because of the bruising which is bound to occur. This bruising may not show at picking time, or if the fruit is used within a short time thereafter, but it is sure to lead to inferior quality and reduced prices if the fruit is held for a later market. One Pennsylvania grower reports a loss of 50 cents per barrel due to the use of picking bags instead of baskets.

PICKING BASKETS.—A new style of picking basket, provided with a strap for about the neck and drop bottom, has recently been placed on the market. It is well padded and substantially built, and although we have not tested it thoroughly, it should prove of some value. One advantage should be that in emptying it need not be dumped—a fact which should promote careful handling, especially when emptying into barrels. If sufficient picking baskets are available they may be set aside as filled by the pickers, collected as promptly as possible and hauled to the packing table or packing house, and after being emptied returned to the pickers. Otherwise some form of crate should be provided, or in case the fruit is to be stored temporarily it may be emptied in the shipping barrels after first placing the loose heads face downward in the bottom. In any case the utmost care should be used in handling the fruit from the time it is being picked until it is finally packed in the barrels, and it should be



VARIOUS PICKING DEVICES. FIG. 362.

moved to a cool place as soon as possible. Piling in the orchard is seldom if ever advisable, because it usually leads to increased cost of handling and reduced quality.

R. H. BELL.

State College, Pa.

ARRANGING A COVER CROP.

AS to the article on cover crops, page 715, is it important that vetch seed grown in about the same latitude or climatic conditions, be selected for use? Would rape be preferable to Cow-horn turnip because of the probable survival of much of it during the Winter, producing a heavier growth to turn under in Spring? Would you advise plowing a thin sod in July, sowing the cover crop you suggest in the above noted article? Then next May turn down the cover crops, and proceed as you advise for a cover crop?

P. G.

Norristown, Pa.

We should prefer vetch seed grown in our own latitude, or in a more Northern section, if we could get it. This would be very difficult to obtain, however. Most of the vetch seed now on the market appears to be imported. The plan of growing your own seed year after year is the right one. In comparing rape with Cow-horn turnips, you must remember that the rape makes nearly all of its growth above ground. It may be called a turnip run to top. The Cow-horn turnip makes a deep, large root, which works down into the soil. Both crops die out in our Northern latitudes through the Winter. A few plants will be left alive, but not many. The roots or the turnips stand the Winter better than the tops of the rape, and there will be a larger bulk of the turnip left in the Spring. In a moist season, however, the rape will make a larger total growth, and will probably add more organic matter to the soil. Our plan of late years has been to sow half rape and half turnips, thus obtaining a double crop both above and below the ground. A

HARVESTING A TALL TREE. FIG. 363.

heavy seeding of the rape will be apt to smother out the rye and clover seeded with it, and for that reason the turnips are superior. In any combination of seeds for a cover crop, we advise the use of some rye. In cases where clover or turnips are killed out during the Fall the rye will be almost sure to remain and make a fair growth. The plan you speak of will work properly, provided you can get a fair growth on your cover crops. We should use rye, Crimson clover, and either rape or turnips as preferred. It will probably be wise to use a quantity of lime after turning that sod over, as such soil is likely to be sour. A small quantity of fertilizer, too, in connection with the cover crop will pay, by increasing the growth of this crop, and thus giving more bulk to turn under.

HARVESTING TIMOTHY AND CLOVER.

TWO things should be held constantly in mind by the farmer when he is making his hay. First, quality, which includes palatability and nutritive value; and second, yield. There is a time to cut clover when both maximum yield and highest quality can be secured at the same time. This is in the period of early bloom, when from 50 to 75 per cent of the heads are in blossom. With Timothy this is not the case, highest quality and greatest yields do not go hand in hand. The most palatable and nutritious Timothy hay is made before, or in, the blooming stage. If cut after bloom the yield of Timothy may increase as much as one-third in dry matter. With the clover, the yield is decreased about one-third in cut after early bloom, and the quality is likewise decreased.

The Timothy plant after blooming, continues to elaborate its own food, which it manufactures, part of which is stored in the seed and in the stems and leaves, all of which are retained when harvested. The total amount of its nutritive value is also increased, as the total amount of dry matter is increased, although its nutritive ratio is decreased. In other words, the total nutrients in a smaller amount of early-cut Timothy would be as great as the total nutrients in a larger amount of the later harvested hay. The market demand, however, seems to be for a somewhat coarser, stronger hay. Such is obtained by late harvesting. This is to the farmer's advantage who ships to the city market, because he can use the earlier and better hay, so far as his needs and wants are concerned, with best results at home, and obtain best prices for the later-cut hay which the market prefers. This assumes, of course, that at least 95 per cent Timothy is harvested, and not 50 to 75 per cent Timothy and the rest daisies, dock, sorrel, etc.

The clover not only loses in yield, but also in quality when cut after the early bloom period. Both the results are due practically to the same cause, namely, the great loss of the fine stems and leaves. Of the different parts of the clover plant, the leaves contain the highest per cent of protein, the fine stems contain the next highest, and the coarse stems the least protein. Inasmuch as it is the protein content of the clover hay that makes it most valuable, the loss of the most valuable parts, before and during late harvesting, consequently decreases its quality. Furthermore, the hay is not so palatable. The stock will not eat it so readily as the earlier harvested hay. There is another consideration of a practical nature, which must not be overlooked. It is not always possible to harvest the crop at the right moment on account of unfavorable weather conditions. Over this man has no control. However, other things being equal, the Timothy and clover hay may be so harvested as to give maximum yields or highest quality, and in the case of the clover, both yield and quality.

JOHN H. REISNER.

THE PURE FOOD EXPERT.

IT comes upon us how times have changed along sanitary lines when the local paper announced a permit to sell ice. A neighbor has a famous ice pond where for many years ice has been supplied to customers. Yet before he could sell this ice in the local town it was necessary to obtain a permit from the board of health. Experts came and examined the water and the surroundings before giving consent. Then the local "council" voted on it. Up to within five years no one ever questioned the quality of this ice. Some one came along and delivered a lecture on "germs" and a craze for inspection followed. A celebrated physician told us the other day that 70 per cent. of our farmers were using milk which would not pass sanitary inspection, and water which was "dangerous." It seems wonderful sometimes that there are any healthy people left in the country, and still more so that the city is still forced to rely upon fresh supplies of country people to keep up its vigor. No one can question the right of the city people to demand pure food if they are willing to pay the cost of purifying it. This cost should not all be saddled upon the producers, and the standard of what is "pure" should not be left entirely to men with a "fad" as their only source of income.

WHERE BOYS MAKE GOOD.

A School That Manufactures Manhood.

PART II.

THE AGRICULTURAL SOCIETY.—While on these explanations I wanted to get it all, so I asked:

"What is the Lincoln Agricultural Society, to which you refer?"

"Oh, that is the merit society of the school. The 35-boys are members. They have a meeting hall in the main building, and meet there weekly. They elect officers, and appoint committees, and conduct exercises. When the roll of members is called, each boy responds with some quotation taken during the week from an agricultural paper. They have debates and general discussions on farm subjects. Each member wears a society emblem, and the cultivation of the Lincoln spirit is one of the ideals of the society."

"Just what do you boys all mean by the Lincoln spirit?" I asked a promising boy.

"It means making good; that is, doing the best one can, learning to serve others."

"Serving others is certainly a Lincoln ideal," I said, "but in what way do you do that here?" The old institutional idea occurred to me, where the attendants were supposed to serve the inmates. Here were the wards with the ideal of service in themselves.

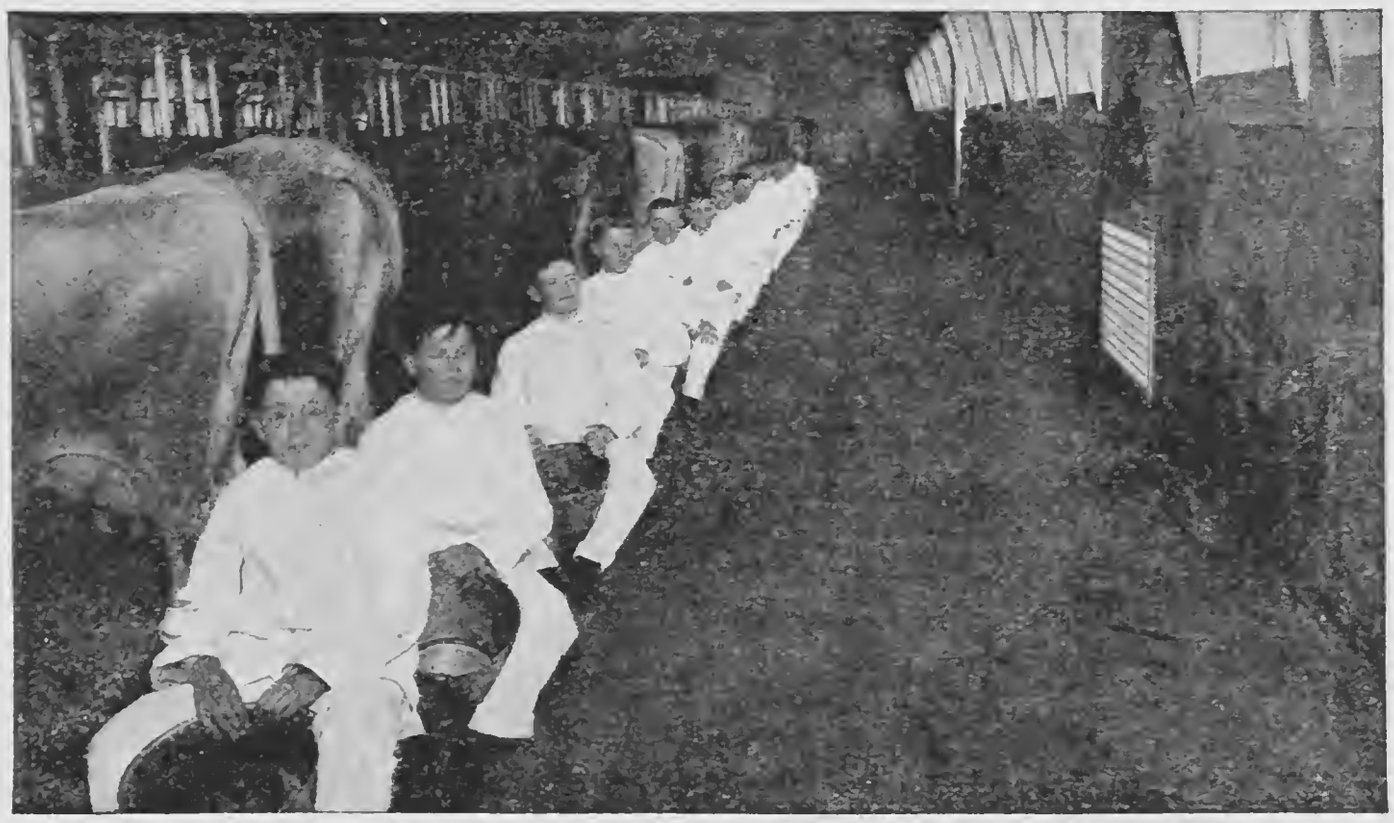
"We do it in the dairy," he replied. "We make clean milk; that is for the children. And we feed clean milk to the calves, so they will become healthy cows. When we learn to be good dairymen we can help farmers make more milk."

"That would certainly be a service. And do you hope some day to have a farm of your own and make milk?"

Three of the boys who heard the question brightened up, and two intimated that that was a possibility. Then I told them of the new Land Bank, and how a boy who worked for a time and saved his money could easily hope to own a farm, and that if he knew how to be a good dairyman he might be an important man in his neighborhood.

As we returned from the ball field I saw plots of ground lined off. In these plots the boys conducted their own gardens in spare time. No boy was obliged to keep a garden, but seed is furnished those who wanted it, and a medal is awarded to the boy who makes the most of his opportunity.

DAIRY TROUBLES.—When the Lincoln School was originally equipped some four or five years ago, it started off hopefully with a herd of Jerseys. In a short time the herd was tested and 80 per cent of them reacted, indicating a tuberculous condition. This was disheartening. Some friends of the school were disposed to give up the dairy feature, but Brother Barnabas saw his opportunity to apply the Lincoln ideal of service. He was familiar with the reports of the extent of tuberculous cows in the State and in the whole country. He knew the Bang system, and looked upon the situation as an opportunity to demonstrate how a healthy herd of dairy cattle could be built up out of a diseased herd. The Bang system is based on two demonstrated facts: First, that the pasteurized milk from cows which are in apparent good physical condition, but which react on tuberculin test, may be used without danger for human food. Second, that calves from such cows are not infected, and if separated from their mothers without any contact whatever after birth, may grow up to be perfectly healthy animals. The law in New York State provides that animals which show physical symptoms of tuberculosis must be slaughtered. If the disease has generalized—that is to say, appeared in different places—the animal must be killed and the carcass destroyed. If, however, the disease is localized—that is, appears only in one place, and so located as not to affect the flesh—the meat may be sold for food. Furthermore, the healthy-looking cows that react may be segregated from the rest of the herd, and from their own calves, the milk pasteurized and used for food. In this case the State enters into a contract with the dairyman equipped safely to do this business. By the contract the State brands the cows that react; pays for them, and retains possession of them, and reserves the right to inspect them frequently, to remove them or kill them, as conditions warrant. If killed, the proceeds for meat, if used, hide, etc., go to the State. When the State condemns a herd at a farm not equipped for the Bang system, the cows that show no physical sign of disease, but react, are sent to an equipped dairy with the view of maintaining the dairy cows of the State by raising healthy calves from these reacting cows.



MILKING TIME IN THE SANITARY STABLES AT LINCOLNDALE. FIG. 364.

YOUNG HERDSMEN WITH AYRSHIRE STOCK AT LINCOLNDALE. FIG. 365.

THE BANG SYSTEM.—Brother Barnabas at once ordered a pasteurizer, and designated the part of the farm south of the main road for the healthy cows and calves. The section north of the road was designated for the reacting cows. Mr. Myles Tierney, one of the trustees of the school, built a larger barn for the calves and healthy cows, at a cost of $5,000 as his donation to the project. To replace a barn that was destroyed by fire, a larger fireproof barn has been erected and equipped with every modern convenience for the care of cows and the production of pure, clean milk. When the calves of reacting cows are dropped in this new barn they are immediately removed to the barn on the other side of the farm, and there is no possible contact thereafter. The boys even who care for the reacting cows have nothing to do with the other cows or calves. These calves are fed on pasteurized milk. They never get raw milk. A portion of oil meal is dissolved in the milk to prevent constipation. Some of these calves have already grown into milking heifers, and have been tested, and show no reaction.

FEEDING THE CALVES.—At four o'clock the dairy boys left their game promptly for their work. At the new calf barn I first met the boys who do the work there. Pasted up in the barns I found printed rules for good dairying. One of these rules was that no calf should be fed out of a pail that was not clean enough for the boy to drink from. Every boy knew this rule by heart, and, what is more important, lived up to its teaching.

THE DAIRY WORK.—The work at the regular dairy farm would delight the heart of any man who cares for a cow. There are two wings to this barn, each wing containing four sections of 13 cows to a section. Four to five boys are assigned to each section with a 35-boy at the head of each section. From the beginning to the end each boy knew just what to do, and proceeded to do it with a vigor that was really inspiring. First the sawdust bedding was swept forward from the drop. The droppings were removed. Then a boy went over the cows with currycomb and brush. Then all traces of soil were washed from the legs, tail and flanks. The back and sides of the cow were rubbed down with a damp cloth. One boy then followed along with a pail of soft water, and gave the udder a thorough washing. Another boy followed with a second wash, and a third with still another pail of clean water gave it a third wash. Dry towels were then used all over the cow, including the udder. The brooms were then again used and all the water brushed down and out of the drop. This was sprinkled with dry shavings.

PREPARATION FOR MILKING.—The boys then repaired to the large washroom, which is provided with wash-basins and abundance of hot and cold water. After a thorough wash and a careful cleaning of the fingernails, the boys put on a white suit and cap, then came back to the wash-bowl. The faucets are arranged to turn on the water with a trip operated by the foot. The water flows, and the hands are washed as it flows. Then the patent pail and iron stool are carried without being touched, so that the first thing touched by the hand after the final wash is the cow's teat.

CARING FOR THE MILK.—As each cow is milked, her product is weighed, and one boy sits at the scale with a chart to credit the cow with the weight. Another boy does the straining. One strainer is supplied for each section. When the milking is over the strainers are inspected and the section is scored in accordance to the cleanliness of the strainer. The head boy is responsible for the section, and a new boy is required to bring his milking to him for inspection to make sure that it is clean. While the milking is going on another boy is preparing the feed, and the portions are based on the production of the cow. The boys were good milkers. I asked one how many he could milk at one milking. He said he had milked eight in an hour; but the boys seldom milk more than two or three cows each. I do not think it possible to get an equal number of men to take the pains that these boys observe to produce clean

(*Concluded on page 884.*)

Where Boys Make Good.

(*Concluded from page 883.*)

milk. I do not believe these boys will ever become careless dairymen. I asked a boy why he took all these pains to wash himself and the cows. The answer was in effect that it was not merely to be clean but to furnish clean, healthful milk for children.

AN INSPIRING INFLUENCE.—I confess that I was charmed with the enthusiasm and vigor, skill and ideals of those boys. Their conduct was edifying. Their work was inspiring. We complain of the congestion of cities and the difficulty of getting competent help at the farms. Here is a school making competent dairymen of city boys, and placing them on the farms of the State. We complain of the decrease of dairy cows. Here are boys practically trained to raise healthy dairy cows from reacting mothers. We hear complaint of unclean milk. Here is a school training boys how to produce clean milk by actually producing it, and inspiring them with the highest ideal of dairymen.

THE BOYS AND THEIR FUTURE.—When the boys are fit for service they are engaged to farmers who are willing to take them into their homes, make them members of the family, and pay them fairly for their services. The boys are placed in families of their own religious professions, the Catholic boys in Catholic families, Jewish boys with Jewish families, and Protestant boys with families of their particular denomination. Agents of the school are on the road constantly, finding places for the boys, and visiting them after they are placed. Brother Barnabas writes them a personal letter three times a year, and encourages correspondence from them.

I know no other school doing this kind of work; but there are millions of city boys who need just this kind of training. Millions of places await them on the farms, and millions of opportunities will be open for them in the future to become substantial farmers of their own lands. Hundreds of millions are now being spent by cities and States to care for boys and girls in charitable institutions without training them for any useful occupation or ideal in life. Churches of all denominations are doing their best with this difficult problem of the dependent and delinquent boy and girl; but somehow they have for the most part failed of satisfactory results. It seems to me that the Lincoln School affords a significant suggestion to the old charitable institutions. They must, however, bear in mind that a farm with suitable buildings and a dairy of cows is not enough. It will require a leader devoted to the education of boys, with a broad vision and with a heart palpitating with sympathy for humanity. All schools will not find teachers like Brother Barnabas, gifted to inspire boys with an ambition of usefulness and ideals of service to others; but he has produced a model, which men of lesser talent and zeal may follow with success. J. J. D.

Rye as a Cover Crop.

I SOWED rye after digging potatoes last year. I also sow it with buckwheat and find it dries out the land, so I must put on an extra horse to plow it under, and I am afraid it may prevent the rise of capillary water. How would wheat do to mix with buckwheat? Would it not rot easier? Would it make better pasturage for cows and swine (until it was plowed down)? When I sowed rye with buckwheat it was shoulder high early in June and I hired a man with a tractor plow to turn it under. Would you risk putting beans on that ground, or would you put in buckwheat again? I use basic slag as fertilizer. G. D. S.
Ovid, N. Y.

The wheat will make better pasture or hay than the rye, but not such a mass of growth. The wheat will also rot quicker than the rye. On our own farm with a moist season and the use of lime, the rye is rotting freely in the soil. If that rye is packed down hard and you use lime or slag we should plant beans.

Buckwheat and Sour Soil.

IN a recent issue of THE R. N.-Y. there was an article regarding the reaction of soils which certain kinds of plants require. The writer gathered from this article that buckwheat would thrive best on a soil giving an acid reaction. Am I correct in this? My experience in growing buckwheat here in California seems to indicate that it does require an acid soil. Last Summer we secured a much larger growth than we are securing this Summer. Last year the soil would give an acid reaction; the crushed limestone has begun to act, the soil now gives an alkaline reaction. Across the street from our grove is a grove over 30 years old. I know that the soil in this grove is acid to the extent of .07 of one per cent. acid expressed as calcium oxide. This man's buckwheat is making a very much better growth than we are getting. R. S. T.
Highland, Cal.

Both practice and scientific experiment show that buckwheat and rye can make a good growth on soils so acid that wheat, oats or barley would give partial failures. A small quantity of lime will sometimes help buckwheat, but heavy dressings—enough to sweeten the soil—would not pay with this crop.

Quinces for Profit.

HOW many quince trees on a farm of this size would you set, for commercial purposes, and of what varieties? Would you advise Fall planting? T. S.
Indiana.

From our own experience we would not set any. The quince is the most unprofitable fruit we have tried to raise. Unless the conditions of soil and climate are exactly suited to it the trees will bloom freely but set little or no fruit. There is a limited demand for quince. We would not plant over 100 trees if we knew they would thrive.

LEGAL QUESTIONS.

Distribution of Estate.

1. If a husband dies leaving no will, will all his property (real estate and personal) go to his wife, provided there are no children? 2. How much would fall to the wife if there were children, and no will? R. C. R.
New York.

1. Where there is no will, real and personal property are not distributed in the same manner nor proportion. Whether there are children or not makes no difference with the real estate. The wife's only interest in that would be her one-third dower interest for her life, and if there were no children, the balance would go to the husband's father, mother or brothers and sisters, according to which side of the house the property came from and which were living at his death. The personal property, if there were no children, would go, one-half to the widow, and the other half to the next-of-kin, that is, to the parents, brothers and sisters, etc.

2. If there were children, the wife's interest in the real property would be the same, that is, she would have her dower interest and the balance would go to the children. One third of the personal property would go to the widow and the balance in equal portions to the children. M. D.

Rights in Exchanged Property.

About 20 years ago my father bought a piece of property specified as a quarter of an acre more or less. The deed gives the usual boundary lines, but does not give the number of feet bounding on any of the properties or on the street. My father made a verbal agreement with one of the adjoining property holders giving him four feet in the road for two feet in front. A wall of stone was built on the line agreed to. This wall has stood for nearly 20 years. Last year our neighbor built a house on his property and the wall was torn down with our consent. Now he wants to claim the two feet he traded and holds as the agreement has not been recorded in writing he has a right to this two feet still. T. N.
Connecticut.

The boundary between your neighbor and yourself seems to have been definitely settled by the location of the boundary by your father and his neighbor, and you and your neighbor are bound by it now, especially so if he has acquieseed in the present boundary and keeps the four feet in rear. It would have been better, of course, if your father had had a complete survey of the land made after the exchange and then the neighbor had signed a deed containing the two-foot strip to your father and he in turn had signed one to the neighbor containing the four-foot strip so that there could be no dispute over the line. The boundaries should remain as settled, and your neighbor would not be entitled to change them now unless there are other equities intervening which you do not name.

Renewal of Demand Note.

Will you please tell me if, under the laws of Connecticut, a note like the following has to be renewed and how often? It reads: "For value received I promise to pay on demand $500 without interest." It is signed and dated. In this case a son lays out money on his mother's place. As there are other brothers and sisters he was given this note to secure himself, but he asked no interest, and does not expect to ask for the money during his mother's lifetime. E. W. H.
Connecticut.

The demand note which you set out does not have to be renewed, but is a binding obligation, and may be collected from the mother's estate.

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Five Gratuities of $1.00 each

B—FOR BEST PHOTOGRAPH OF POTATOES—
First Prize—$20.00 in Cash
Second Prize—$10.00 in Cash
Third Prize—$5.00 in Cash
Five Gratuities of $1.00 each

C—FOR BEST PHOTOGRAPH OF HAY—
First Prize—$20.00 in Cash
Second Prize—$10.00 in Cash
Third Prize—$5.00 in Cash
Five Gratuities of $1.00 each

D—FOR BEST PHOTOGRAPH OF WHEAT OR OTHER GRAINS—
First Prize—$20.00 in Cash
Second Prize—$10.00 in Cash
Third Prize $5.00 in Cash
Five Gratuities of $1.00 each

Photographs not receiving a prize or gratuity will either be returned or purchased by us at a price to be agreed upon. In the event of a tie between two or more pictures the prize will be equally divided. ¶ There is no red tape connected with this competition. The only stipulation that we make is that the crop photographed shall be raised with **E. Frank Coe Fertilizers.** The greatest freedom will be allowed in regard to choice of subjects. Crops may be shown growing in the field, while being harvested, or after harvesting.

The competition will close on OCTOBER 15, 1914, and all photographs should be in our hands not later than that date. ¶The prize-winning pictures will be published in the leading farm journals during the winter of 1914-1915, thus putting the results before a multitude of farmers.

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The photographs will not be judged by The Coe-Mortimer Company nor by any of its representatives. ¶The judging will be done solely by the following disinterested committee:—

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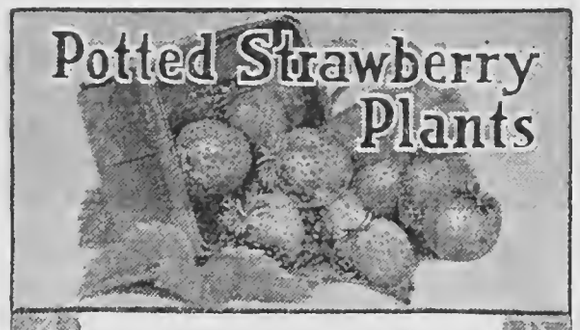

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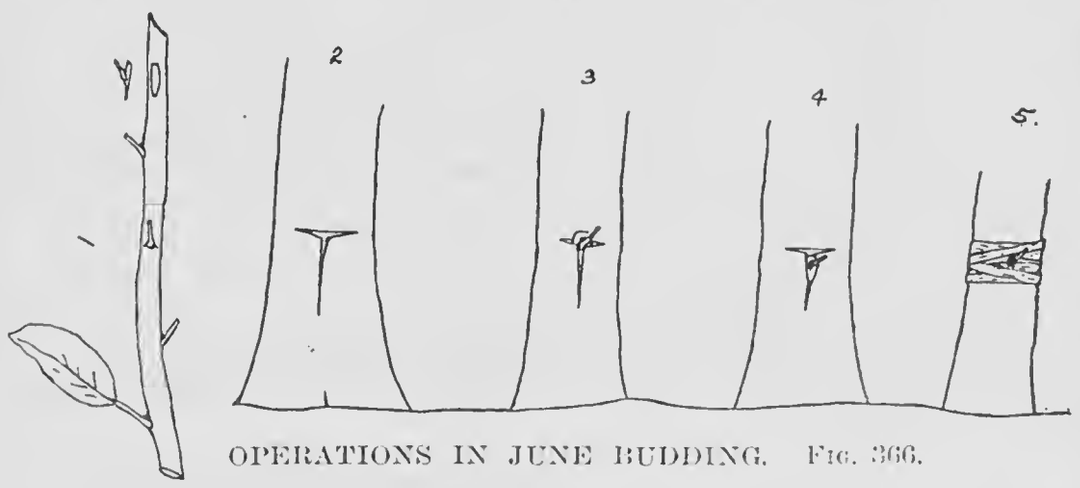
JUNE BUDDING.

PLEASE tell me how is June budding done on peach trees? Can it be done on apples? J. D. C.
Jewett, O.

June budding is adapted to both peach and apple trees. There are many factors to be considered if success is expected. The operation of budding is not a complicated one, though it requires patience and care. The bud is taken from a well-developed shoot of the current year's growth, as shown at Fig. 366. The bud is cut from the twig with a sharp knife. The cut should start about three-eighths of an inch below the bud, and pass under the bud deep enough to remove a small chip of the wood. Another cut is made across the twig above the bud, which removes the bud from the twig. Some propagators remove the chip of wood from the under part of the bud. Cherry buds will do better if this chip is not removed. After the bud is ready a T-shaped cut is made in the bark of the stock as near to the ground as convenient. This cut should be opened as at 3, Fig. 366. A regular budding knife has a thin handle for this purpose. The bud



OPERATIONS IN JUNE BUDDING. FIG. 366.

is then inserted as shown at 4, Fig. 366. About one-half inch of the stem of the leaf should be left on the bud to facilitate handling. When the bud is pulled down as shown at 4, it is ready for tying. This is done with raffia. About three turns are given above and below the bud so as to cover the cut, leaving only the bud exposed.

Do not leave the raffia on the tree after growth commences in the bud, or the bud may be killed. When the bud has advanced far enough to have leaves of its own, part of the stock should be removed. All the top should not be removed at one time as it would be too severe a check on the growth of the bud. Seed is usually planted in the Spring, and budding commences about the last of June. Care should be taken not to let the bud or cut on the stock become dry. Young trees may be top-worked by budding though the work must be done on the younger shoots. The buds should be taken from the best trees of the variety one desires to propagate, as the bud will perpetuate the character of the tree it is taken from. The best is none too good.

R. B. G.

RAISING SNAPPING TURTLES.

COULD you give me any information about the care and feeding of snapping and mud turtles? H. P. F.
Stamford, Conn.

Wild snapping turtles are probably almost entirely flesh eaters and are not at all particular to have their meat fresh. If they can catch fish, frogs, young ducks or any other water animals they eat them, and they can be found near any dead animal in the water. Old farmers in this region say their flavor is much improved if they are kept in the swill barrel for a few weeks before being killed. With the possible exception of a few terrapin growers the raising of turtles in this country is apparently confined to the experimental terrapin farm of the U. S. Bureau of Fisheries at Beaufort, N. C. There is a turtle farm in Japan which has been in successful operation since 1875. These two farms furnish the most reliable data we have on the care and feeding of turtles.

The food given turtles which are being grown commercially should be mainly meat of some kind; fish if that is available and cheap; liver and clean meat scrap can be given at times; and when no other is available they may be kept for a time on a cooked mash of cornmeal or wheat fed alone or mixed with meat. The feeding should be done always in the same place, to make it easier to clean up occasionally the refuse that is left.

There should be at least four pens in a commercial turtle farm: (1) a breeding pen with a large sand bed that is always above water where the eggs can be laid. Provision must be made to keep the young from getting into the water in this pen as they would be promptly eaten up by the old ones. (2) A pen for the young from the time of hatching until they become active the next Spring. (3) A pen for the young during the next year. (4) A pen for the turtles from the second Spring until they are sold or put into the breeding pen. These pens should have water two or three feet deep over most of the area, but should have some dry land where the turtles can crawl out to sun themselves. They should be so fenced as to keep in the turtles and keep out vermin. A suitable fence can be made of concrete or boards. It should be two feet or more high, with a cap of dressed lumber or sheet metal to keep the turtles in, and should extend two feet or more into the ground. It should be possible to draw off the water when it is necessary to clean the ponds. There should be a good layer of soft mud in the bottom and it will be well to encourage the growth of water plants in the pond and along the shores. In the Japanese turtle farm it has been found profitable to keep fish in the ponds to keep the water stirred up and muddy. Carp, eels and bullheads (horned pouts) would be suitable for this.

The enemies the young turtle has to fear are rats, skunks, larger turtles, muskrats, snakes, herons and kingfishers. Rats and skunks will dig up the nests and eat the eggs. Larger turtles will eat the young when they can catch them. Muskrats cause the most damage by making holes in the embankments and letting the turtles out or into ponds with larger ones. Snakes will eat the young when they can get them and herons and kingfishers are under suspicion. After the young get three or four inches long (length of upper shell) they have practically no enemies except man.

ALFRED C. WEED.
Wayne County, N. Y.

SHORT STORIES.

POISON IVY AGAIN.—The lime-sulphur application for poison ivy trouble is an easy and most likely a handy remedy for that poisoning. For those who do not spray or use lime-sulphur I would say dissolve a rounding teaspoonful of permanganate of potash crystals in a quart of water and apply. I wish anyone trying this would report results. It has cured two members of our household in 20 minutes on different occasions. E. H. A.
Connecticut.

CITY WORKERS.—Regarding positions on farms for students without practical knowledge of farming, the experience of farmers in this section with help of that kind has been most unsatisfactory. While we may enjoy association with these men, at best they are very expensive help, because they do not know the fundamentals of farm work. Each small detail has to be personally overseen. One drawback is that our busiest seasons are the early Spring and late Fall, when they cannot be with us. Of course there are exceptions, but for us the average man without any farm experience is worth little more than his board. ROY P. MCPHERSON.
Genoa Co., N. Y.

UNEVEN GROWTH OF OATS.—On page 618 C. W. B. writes that the oats on the northern incline of a field rusted, while the oats on the southern side did not. The oats on the northern slope, or incline, received the sun's rays more directly, and the dew became, before evaporation, hotter than on the southern slope; therefore the northern slope was more favorable to rust. The sun did it. B.

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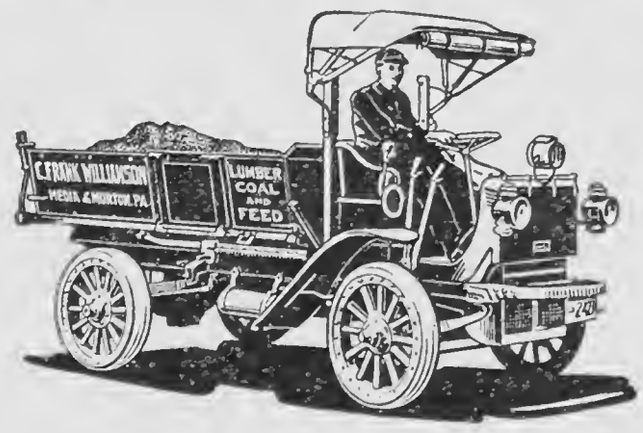

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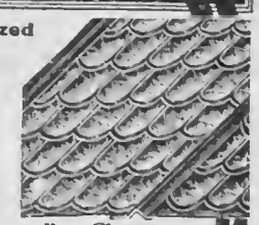
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EVENTS OF THE WEEK.

DOMESTIC.—An explosion of gas in the mine of the Hill Crest Colliery, Alberta, June 19, resulted in the death of 195 of the 225 men who were entombed. Twenty men were taken out alive. The explosion tore roofs off houses and wrecked buildings in the vicinity. The entrance of the mine was choked with debris. Thousands of tons of rocks crashed into the workings. The scene of the disaster is only a mile from Frank, Alberta, where a great disaster occurred ten years ago. The mines have been operated at intervals for twelve years, and at times there was considerable difficulty in getting men to work there. The main tunnel opens on the crest of the mountain and an incline railway takes the output to a railway track a mile away. The Hill Crest mines are under the same mountain as the Frank mines. The town of Hill Crest has a population of 600. This is the third great disaster which has fallen to the inhabitants of Crows Nest Pass. Four years ago thirty-five men were killed in the Bellevue mine by gas and ten years ago Frank was wiped out by a mountain slide, 125 persons being buried alive.

Inquiry into the Empress of Ireland wreck at Quebec continues to call out much conflicting testimony. The first officer of the collier admitted, June 17, that he had not obeyed instructions in failing to call his captain from below when the fog shut down just before the collision. He said he believed the Storstad had the right of way and that he was entitled to keep his course at reduced speed, even though he had signalled previously to the Empress that he had stopped. He blamed the current for swinging the ship, and said she had not sufficient headway to give quick response to her helm.

William Lorimer and Charles B. Munday are charged with looting the La Salle Trust and Savings Bank of Chicago of from $2,000,000 to $2,700,000, in the report filed June 17 by Bank Examiner Harkin with State Auditor Brady. Criminal prosecution of both was decided upon following a conference between Mr. Harkin and Attorney-General P. J. Lucey. It is the intention of the Attorney-General to base criminal action upon a general charge of conspiracy to loot the bank. Following is a list of some of the transactions which were called to the attention of the Attorney-General by Bank Examiner Harkin in his report: A $120,000 loan to William Lorimer & Co. on a note secured by Southern Traction Company bonds. A $100,000 loan to J. P. Gallagher, William Lorimer's partner in the firm of Lorimer & Gallagher, on a note secured by the same bonds. A $160,000 loan to the Southern Traction Company, in which William Lorimer was interested, on its unsecured notes. A purchase of $350,000 of the bonds of the same company. A $180,000 loan to Lorimer & Gallagher on the notes of the firm. A $203,000 purchase of the bonds of the Illinois and Louisiana Land Company, of which ex-Gov. J. Y. Sanders of Louisiana is the head.

June 18 the smoke and ashes from the eighth eruption of Mount Lassen since it became active May 30 were plainly visible from Redding, Cal. The eruption was a heavy one, the smoke showing plainly, although a thick haze prevented a view of the mountain, 50 miles away. There are two active craters now, the original vent near the summit and a smaller blow hole on the south slope.

Twelve persons, most of them women and children, were drowned in the Oswego Canal, just south of Mud Lock, Onondaga Lake, N. Y., June 21, when a passenger launch plying between Mud Lock and Liverpool struck a stump and capsized.

Violence broke out anew, June 23, in the struggle between factions of the Butte, Mont., miners' union; three men were shot, one being killed, by deputy sheriffs in clearing Miners' Hall. Attempts were made to dynamite Miners' Hall, but the charges failed to do any great damage. The explosions could be heard for blocks. Armed men went to the Stewart mine and carried down boxes of dynamite in their efforts to blow up the hall, but the guns of deputies prevented effective placing of the charges.

ADMINISTRATION.—The Senate has ordered a "thorough and complete" investigation into the use of Senate committees' stationery in the exploitation of the North Carolina gold mine promoted by Walter George Newman and into the sending of an employee of the United States Treasury to investigate the mine. The resolution was amended before its adoption, June 19, to provide that the investigation should be conducted by the Senate Committee on Privileges and Elections, of which Senator Kern is chairman, instead of by a special committee of five Senators. The resolution authorized the committee, acting as a body or through a sub-committee, to conduct the investigation.

A substitute for the La Follette seaman's bill, passed by the Senate some months ago, was reported to the House, June 19, by the Committee on Merchant Marine and Fisheries, of which Representative Alexander of Missouri is chairman. The bill is designed primarily to promote the safety of life and property at sea and to promote the welfare of American seamen. It provides for the use of a larger number of life craft on passenger vessels and reduces the hours of work of seamen. What are regarded as harsh measures in the treatment of seamen are prohibited. In an effort to improve the condition of seamen the bill provides that in all merchant vessels of the United States of more than 100 tons gross the sailors while at sea shall be divided into at least two watches, and the firemen, oilers and water tenders into at least three watches. The only exceptions made in the application of this rule are in the cases of vessels navigating rivers, harbors, bays or sounds exclusively and vessels whose routes between terminal ports do not exceed a run of thirteen hours.

COMING FARMERS' MEETINGS.

Summer meeting, Virginia State Horticultural Society, Charlottesville, Va., July 15.

Summer meeting, New Jersey State Horticultural Society, farm of J. H. Barclay, Cranbury, N. J., July 15.

Summer school of agricultural and country life, Massachusetts Agricultural College, Amherst, June 30-July 28.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22-24.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August, 5, 6, 7.

39th Annual Convention of the American Poultry Association to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

BUFFALO MARKETS.

The city markets begin to overflow with all sorts of home-grown produce, though the fruits, such as peaches, apricots, plums and cherries are still mostly from warmer parts of the country. Strawberries are becoming very plenty and the quality better than usual.

Beyond the slight decline in green stuff generally there is not much change in prices of late. Apples, the fruit that competes most directly with the Southern fruits, are still fairly plenty. Prices are declining, the range being $3 to $4.50, with Western apples $1 to $2 a box. They retail at 1 to 2 cents apiece in small measures, which is very low. Watermelons sell at 20 to 50 cents apiece by the hundred and muskmelons at $1.75 to $3.25 per crate. Potatoes are becoming scarce. They have been quoted for a long time at not over 85 cents a bushel wholesale, but are now not less than a dollar for good quality. The consumer is eager for new ones, but finds them selling at $4.50 a barrel for Southern, and close to $2 a bushel at retail. New Bermudas are plenty, selling at 50 cents a peck, retail. The local potato crop is promising, but will be very late, as the conditions early in the season were against either planting or growth. Butter, cheese and eggs are steady, with prices little changed. Butter is not quoted at more than 29 cents, and the markets are selling good grades at 28 cents. The sale of margarine is encouraged by the dealers in a way that gives the supposition that it nets them more than butter does. Chicago brands retail at 22 cents a pound. New cheese sells at 15 cents for best grades to the trade, and retails for 18 cents. Eggs are stronger in the higher grades. The wholesale price ranges from 20 to 24 cents; duck eggs, 28 cents retail. The vegetable list lengthens steadily, everything being at moderate prices, except cabbage, which is $1 to $1.50 per crate. Peas vary much in quality. Telephones being $2.25 per bag and low grades $1. Asparagus is plenty at 10 cents a small bunch, or $1.25 to $1.50 per basket wholesale. String beans are $1.25 to $1.75 per hamper, or at retail 10 cents a quart. New beets are 5 cents a bunch or 50 cents a dozen. Celery is about out of market, some Kalamazoo being offered at 20 to 65 cents a box. The dry, hot weather advanced the price of hay, which is now strong at $16 for No. 1 Timothy.

J. W. C.

CUTTING AND CURING WHEAT.

The Department of Agriculture makes the following statements about wheat harvesting:

"Wheat may be cut with safety when the straw has lost nearly all of its green color and the grains are not entirely hardened. If cut sooner than this, shriveled kernels will result; if left standing until fully ripe, a bleached appearance, due to the action of the elements, often results and loss from shattering may follow. Wheat that is fully ripe is also more difficult to handle.

"Wheat should be shocked in the field immediately after being cut and bound. A shock is begun by standing two bundles in a nearly upright position with heads together and butts sufficiently apart to prevent falling over. From 8 to 12, and sometimes more, bundles are then set up about these until a round shock of the proper size is formed. The number of bundles to place in a shock depends upon the degree of ripeness, the length of straw and the size of the bundle, fewer bundles being used where the straw is short or not fully ripe. In placing the bundles the butts should be jammed into the stubble to insure firmness, and the heads should lean inward sufficiently to prevent falling over. When this part of the shock is completed it should be covered as perfectly as possible with two bundles, the heads of which have been broken down at the band, to form a cap. This cap should be placed so as to protect the standing bundles from rain and sun as much as possible. If the heads of the cap are placed on the side of the shock toward the prevailing winds some protection against blowing off may be afforded.

"Stacking is particularly important when thrashing cannot be done soon after the cutting, because it affords better protection for the grain at once. When the wheat is in the stack a process called 'sweating' takes place which improves the color, condition, and test weight of the grain. It also improves its milling and baking qualities. A similar 'sweating' process may apparently take place in shock-thrashed wheat after it is placed in the bin."

Enlarged Liver.

One in a while I find one of my fowls dead with enlarged liver. What is the trouble? I feed wheat in the morning, corn at night, they are out all day in a large run. J. F. N.

New York.

Enlargement of the liver is not a disease in itself but rather a symptom of one of several diseases from which fowls suffer. It may be enlarged from congestion as the result of irritating or poisonous food, from the presence of parasites, the result of certain infectious diseases, particularly cholera, or from obstruction to the circulation in diseases of the heart. It is also found enlarged in fowls that are over fat as a result of having been heavily fed and closely confined. M. B. D.

POISONING PIGEONS.—On page 590 you advise poisoning pigeons. This is cruelty to pigeons, dangerous to other birds and poultry, a menace to some one's pet cat which might find a poison victim, and a waste of good food. Feed the pigeons regularly on the ground for a few days, prop up a large box or sieve with a stick over the feed for two or three days, then tie a long string to the stick and pull when the pigeons are under it. You can then transform a nuisance into a pot-pie.

Connecticut. D. H.

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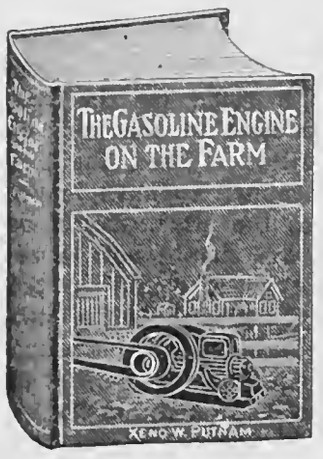

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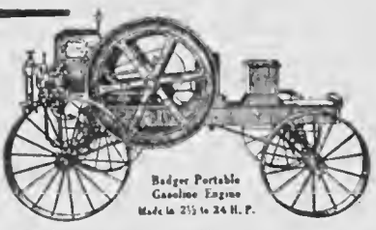

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RAINFALL AND THE SOD MULCH.

MY attention has been called by Prof. K. C. Livermore of the State College of Agriculture to the fact that in the recent bulletin from this Station on tillage and sod mulch in the Hitchings orchard there is no comparison of the rainfall in the Hitchings orchard, where the sod mulch method is successfully used, and in the apple counties farther west where the sod mulch method is a failure. Readers of the bulletin on the Hitchings orchard will call to mind that the chief cause assigned for the success of the sod mulch method is, the greater quantity of moisture available to the Hitchings trees from the deep soil acting as a reservoir and from seepage from nearby hills. It was not feasible in carrying on experimental work in this orchard to take rain records and, therefore, there was no discussion of the rainfall in the orchard.

Now Prof. Livermore comes with the statement that "The rainfall in the section about Mr. Hitchings' orchard is ordinarily 25 or 35 per cent. greater during the growing season than in Western New York." Asked for proofs, Prof. Livermore submitted a map showing the normal annual precipitation of New York as computed by the Weather Bureau of the United States Department of Agriculture. A study of this map shows that the rainfall in the part of Onondaga County in which the Hitchings orchard is located is about 10 inches, or 25 per cent. greater than an average for the five great apple counties of Western New York. Prof. Livermore has calculated the rainfall for May, June, July, August and September in the Hitchings locality and his calculations, taken from data in six different points in Onondaga County, show that there is about 25 per cent. greater rainfall during the growing season in Onondaga County than in Ontario, Wayne, Monroe, Orleans and Niagara—the apple counties of New York.

The writer is anxious to add this evidence to that submitted in his bulletin on the Hitchings orchard to show that moisture is the most important factor in influencing the results in sod-mulched orchards. This greater Summer and seasonal rainfall in the Hitchings orchard means that the trees in sod have a much better chance than those in orchards to the west, where the rainfall is a quarter less. It is evident that in Onondaga County apples can be grown in sod as in England and in localities along our Atlantic seaboard where the rainfall is heavy, much better than they can be grown under the same conditions in Western New York, in the Mississippi Valley or on the Pacific Coast, where the fall of rain is not so great.

Since Prof. Livermore has called my attention to this matter I have taken opportunity to study the maps and records showing the rainfall of New York, and am much surprised to find how greatly these records vary not only in different parts of the State but even within the limits of a single county. I am somewhat surprised to find that the apple belt of Western New York, both for the whole season and for the growing months, has the lowest rainfall of any section in the State. I am sure that fruit growers and farmers will be well repaid by a close study of the rainfall records of the State. These, if I am rightly informed, can be had by applying to Prof. W. M. Wilson of the State College of Agriculture at Ithaca. Beyond doubt, a careful study of other weather records would prove quite as profitable as those of the rainfall. There is no question but that differences in rainfall and temperatures should be given much more consideration than they now receive in dealing with all such farm problems as tillage, fertilizing, spraying and seeding, in selecting crops and in adopting farm practices to local conditions.

In closing, attention must be called however, to the fact that rain is not an unmixed blessing, as we who have suffered so much from drought rather universally think it to be. Unfortunately, wet Summers and wet localities in New York are almost invariably not only moist but cold as well, while dry Summers and dry localities are as a rule excessively warm. The condition most desirable is half way between the two extremes, and Summers of normal rainfall and localities where seasonable rainfall is the rule are those in the long run most to be desired. U. P. HEDRICK.

Geneva, N. Y. Agri. Station.

Mullein Foliage for Sale.

CAN you tell me where mullein foliage can be sold, and the price per pound, also how to prepare it for market? We have any amount of it, and it is about 18 inches high. F. E. B.

Pennsylvania.

There is a rather limited demand for mullein flowers and leaves by the large drug houses and concerns making a specialty of botanic drugs. The price is variable. The flowers sometimes bring 75 cents per pound and the leaves very much less, depending on how much they are wanted. It should be dried carefully in the shade, and packed in clean bags, free from stalks or trash of any kind.

CROP REPORTS.

THE drought is hitting us hard in Western New York, especially in hay. We shall not harvest 20 tons from 30 acres. Clover is ready now—six inches high! Those who sowed oats and peas for the canning factory will also suffer heavily. I am glad we cut out both crops this year. It was good judgment. We got our bean ground plowed early and now have 24 acres in fine shape—all the early moisture has been saved for use by good cultivation and preparation of seed bed. Peach trees are recovering from leaf-curl now. The apple set is not good, but will give a fair crop, as the blossom was exceptionally heavy. Pears are scarce and plums about average. I have a 20-acre wheat field which promises 30 bushels an acre.

Monroe Co., N. Y. M. C. B.

June 16. Corn on the ear is worth $1 a hundred; wheat $1.05; oats 50; potatoes from 90 to $1 a bushel. Butter 30 to 35; eggs 20. At this writing very little fruit and vegetables for sale. Many of our farmers are engaged in the dairy business, and are now receiving 2½ cents per quart. Very few cows or beef cattle for sale. H. M. B.

Hampton, N. J.

June 19. Everything here is late; hay crops on most fields very light, grain coming well, the chief grain raised here is oats, but some wheat, and barley; field crops all in good shape. The season started cold, frost as late as June 6, and dry; lately plenty of rain, but cool nights. The Brown-tail moth is not very bad here this year, but the tent caterpillars are everywhere. The Gypsy moth has not made much of an appearance around in this section as yet. Green horses, not first class, sell for from $200 to $275 in the Rockland market. Cows, new milch, sell from $60 to $90; four-weeks-old pigs $4 to $5. Pork $7 to $10.50 per cwt. Cornmeal and most mill feeds $1.60 per cwt.; oats 54 cents per bushel. Eggs 25; butter 26 to 29.

South Thomaston, Me. J. C. S.

June 16. These are local prices only; nothing is shipped out so far to amount to much except sweet potatoes. Beef cattle are sold to local butchers at from $15 to $25 per head (native stock, generally poor.) Milk retail 10 cents a quart, 30 to 35 per gallon. Butter 35; eggs now 20, Winter 30 to 40. Potatoes, Irish $1. Sweet $1.25 now—later 60 to 75. All sorts of gardening products generally sold by the local dealers for growers, getting 10% commission for trouble.

This is a Summer and Winter resort, and a good deal of truck is raised around here to supply the local demand. In a few years the pecan and Satsuma orange plantings will overshadow everything else. Land has risen in value from 50 cents to $1 per acre to $15 to $40 per acre according to location (cut over wild land), and near the coast is partly well sold out, no more to be had unless back from coast 10 miles or more.

The local truck grower realizes his 90 cents on the dollar right enough, though in the trucking centers—Long Branch, Miss., St. Elmo, Irvington, Grand Bay, etc., all in Alabama, the tale would read differently, as all of their truck goes North. Satsuma oranges and grapefruit brought fine prices to the growers, practically all sold to the consumer at from $3 to $4 per standard box. Pecans (fancy) are about all sold direct to the consumer and brought from 40 to 75 cents per pound by 100 pounds or barrel lots. So you see the grower of truck and fruits have no kick coming, unless against the express company; stealing of contents very common, and redress hard to get. C. E. P.

Ocean Springs, Miss.

June 15. The drought in the vicinity of Lawrence has been much worse than it was here last year up to the evening of the 11th, when we had a rain of more than three inches, and again last night of more than an inch, so that we are now well supplied with moisture. The dry weather cut short our strawberry crop and was beginning to tell on our raspberries, particularly our earliest blackcaps, which commenced to ripen one week ago. A wonderful change for the better has taken place within the past four days. We had a fair set of apples, peaches, pears and plums, but the report at our horticultural meeting was that the fruit had fallen off so much that at best we could have but a partial crop of the larger fruits. We have several varieties of raspberries, black, red and purple, and all now promise a full crop, also blackberries. Early Harvest and Mersereau, are as promising as ever. Also the Lucretia dewberry, but the McDonald blackberry, which seems to be a cross between the blackberry and the dewberry, does not suit me. If anyone wants 300 or 400 and will take them off my place they can have them. In strawberries Parker Earle and Dunlap are our leaders. Marshall is good, but does not give us fruit enough.

Lawrence, Kan. W. B.

In this section, the season has so far been quite favorable to the farmer. The wheat is all in head and promises to be a bumper crop, the Hessian fly bothering but little. Oats are doing well and corn is in some places knee high. The hay harvest is fast approaching, the crop promising well. The Medium Red clover is the principle grass grown for hay, and is usually sown in the wheat or rye in March. Alfalfa growers have already begun harvesting the first crop of the season. Owing to the droughts which often prevail during August, it is hardly possible to cut more than three crops in a season. Pasture is now about at its height and in consequence the milk flow is abundant. The price has fallen from $1.50 to $1.30 per cwt. with prospects that it may go still lower. Dairymen are not complaining, however. March pigs are scarce and it is believed that the supply of pork next Winter will be somewhat short. The strawberry harvest is in progress, and cherry picking will begin next week. Apple orchards are in poor shape. There will be some early apples but Fall and Winter apples will be scarce. The prices of farm produce are somewhat as follows: wheat 92; oats 37; rye 57; corn $1 per cwt.; hay, Timothy, $13.50; clover $13.50; dressed chicken 17; dressed veal 13; potatoes 75; eggs 17; butter 16. D. L.

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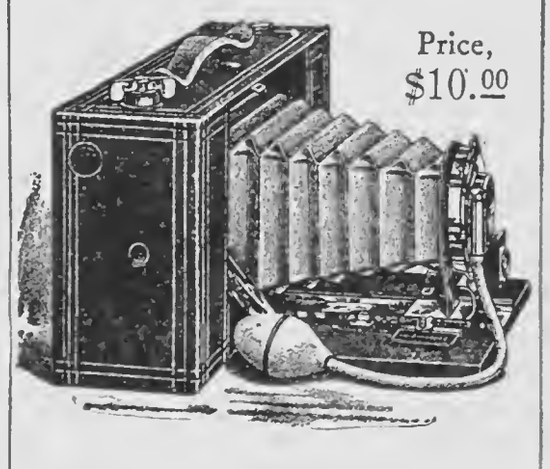

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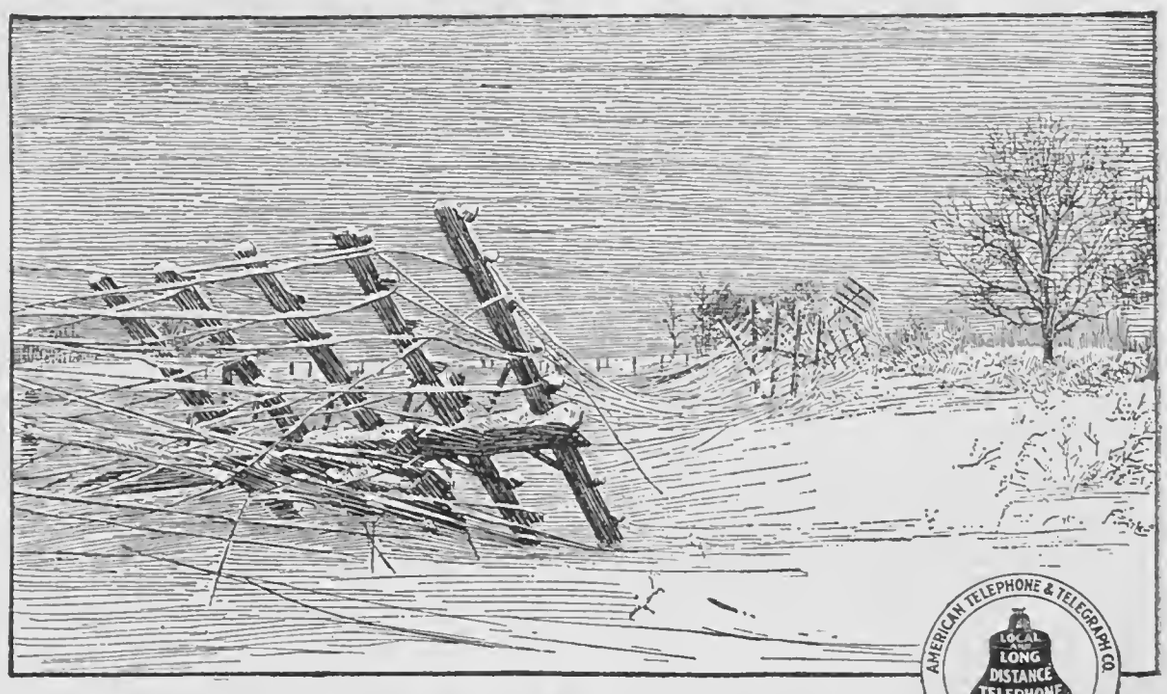

The Telephone Emergency

THE stoutest telephone line cannot stand against such a storm as that which swept the Middle Atlantic coast early in the year. Poles were broken off like wooden toothpicks, and wires were left useless in a tangled skein.

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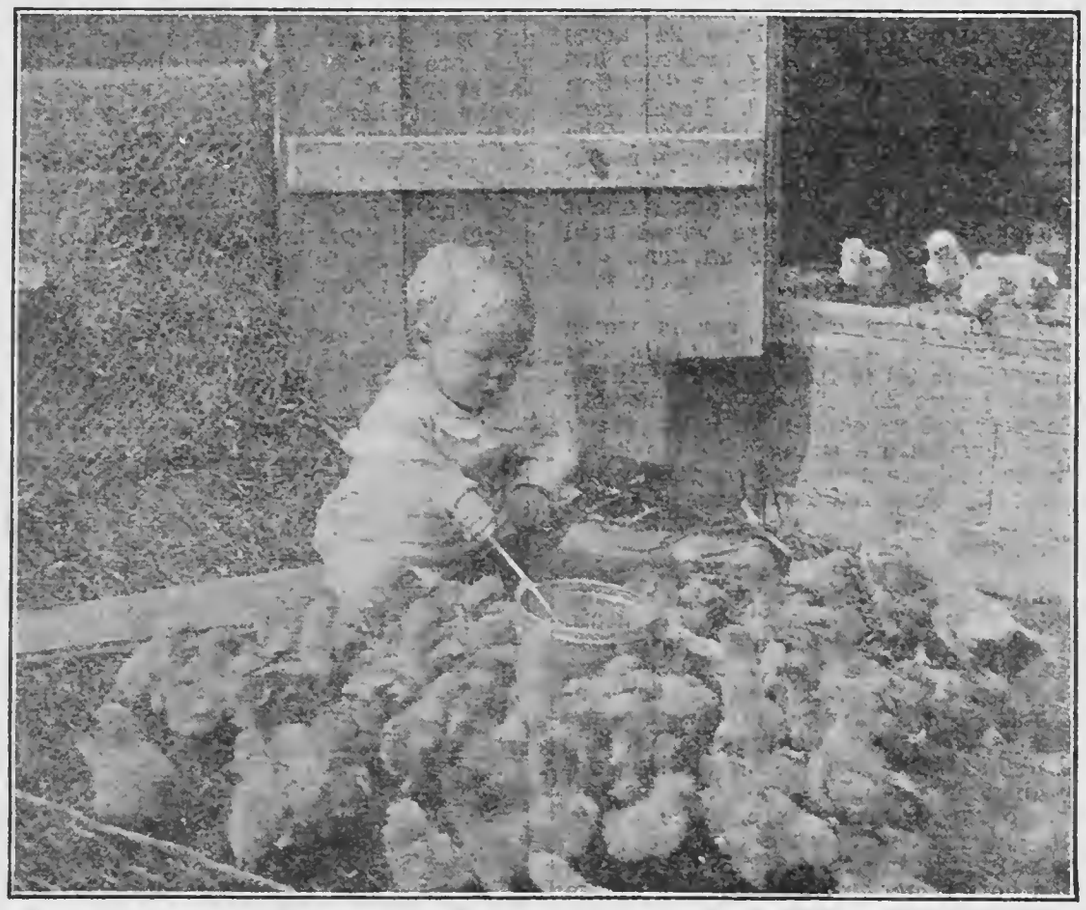
Hope Farm Notes

STRAWBERRIES.—The week beginning June 15 found us with about 2,000 quarts of Marshall berries to get off, and every part of farm work crowding. You may leave potatoes, corn or hay if you like and go to a funeral or even go fishing, but when the Marshalls turn crimson they must be attended to. By organizing our forces we got the berries picked and delivered and also kept the horses going fitting corn ground. When Saturday night came everyone on the farm could "see red" from having berries before their eyes for six days. The party that came rushing into the yard Saturday evening with the last order took the last boxes. Our crop this year is larger than ever before, and the berries on the whole seem finer. Only one patch disappointed us, and strange to say that was last year's planting, where we expected most. The four-year-old patch beat it out of sight. One reason is that most of this new bed was not mulched, and I have no doubt many of the fruit buds were killed. The four-year patch did so well that it will be fruited one year more at least.

Berries have been cheap this year in our local markets—six cents or a little more at wholesale. The crop was heavy and there can be no doubt that working people in the mill towns are short of money. We have sold at a uniform price of $3 per crate as the berries came from the field. By sorting and repacking we might have obtained more, but in the rush of such a season as this one I doubt if it would pay. I know that these berries do not cost us $3 per crate to raise. There is a small margin of profit at that price. With an apple crop which can be held for a while sorting and fancy packing will pay, but it is quite a different matter with a fragile crop like berries. As usual we have not been able fully to supply the demand, and we have not advertised or solicited for the sale of a single quart. Old customers came back and brought new ones. We have begun to do business with the Housewives' League in the county town. They wanted nearly 20 crates to start with. They buy at wholesale rates, have the berries sent to a central point and do their own distributing. Thus they can buy our berries and pay expressage at a trifle over 10 cents a quart, while the retail price of such fruit would be 15 to 18 cents. And every cent which is saved in this way will come back for more berries or peaches, apples or other produce. This plan of wholesale buying is a good one, and properly developed it will lead to a great direct trade. In some cities I understand that churches, clubs and labor associations are preparing to buy in this way. All sorts of plans for payment are suggested, but the most necessary thing is to find producers who are patient and willing to meet such buyers half way. We cannot expect to push such customers up to the highest notch or demand the pound of flesh. It will cost me no more to deal with such buying organizations than with wholesalers or dealers. There is no reason why these buying clubs should want to buy unless they can make a profit by doing so. I am willing to sell to them at the wholesale price or a little more for best quality. Every penny they save in this way will come back for more goods, and as this system of buying spreads we shall have a surer and more direct market. I hope farmers will see the point of this, and not expect to obtain retail prices when dealing with these buying clubs. We shall make far more in the end by being fair and showing such buyers that living is actually made cheaper by dealing with us. It is more and more evident that we must know about what things cost us to produce in order to know when our prices are fair.

WHAT FOLLOWS?—At least a dozen people have asked me to tell just what to do with the strawberry beds after fruiting. This has been told over and over—like the story of "Clark grass," but here goes once more. No use trying to lay down any fixed rule for all, since every berry patch should be specially handled. In a general way what you want to do is to force the old plants to make a new and healthy top and new runners and keep them all clean. There are various ways of doing that. Our plan usually is to run over the patch with the mowing machine as soon as picking is done. Let down the cutter bar and clip as close as you can. A sharp scythe or sickle would be even better. The theory of this is that Nature is a master hand at repairing damages. Cut off the top of a peach tree and a rush of new, healthy wood comes to repair the damage, and if we feed the tree properly we expect to find the fruit on this healthy new wood. Thus, when we cut off the top of the strawberry crop and keep the soil right the plant starts in to make a new top and this start gives it the energy to make new fruit buds and a newer root system. If you do not cut the old top off there will usually be but a languid new growth, and the old top will be much surer to hold and spread diseases or insects. Opinions vary as to what to do with the clippings from the old tops. Some advise letting them dry and then on a windy day running fire over the patch to destroy the old tops. The object of this is to destroy rust or other disease germs and also insect eggs. My experience is that this fire often injures the plants. I would not do it. If you know the tops are diseased rake them off and burn them in piles—away from the patch. As we have but little disease I leave the tops on the ground, working them into the soil to serve as humus.



AN EARLY START WITH CHICKENS. FIG. 367.

At the end of the season most beds are left in thick rows. Even where you start with hills by the time picking is over weeds and runners have pretty well filled up the field. Our plan is to take a small and sharp one-horse plow and work on either side of the row so as to leave a narrow strip containing the old parent plants in the center. Most of us plow *away* from the row on both sides. In this way two furrows are turned together in what was the alley between the rows, while a narrow strip of plants is left with furrows turned away from it. Others follow the exact reverse of this, plowing so as to throw the furrows *over* the row and leave a dead furrow in the alley. Under this plan most of the grass and weeds along the row are killed by being buried, while the berry plants work up through the soil. By using the weeder across the rows the ridges are broken down and the surface made level.

In reforming an old bed in this way we plan to use fertilizer while these furrows are open, scattering it along the rows. A mixture containing phosphoric acid and potash is best for this purpose—one part sulphate of potash and three parts either fine bone or acid phosphate. We consider that the heavy Winter mulch of stable manure gives us all the nitrogen we need. After putting on this fertilizer the cultivators are started to keep the middles clean and open. Then with a sharp hoe the men go in and chop out weeds and unnecessary plants. Here is where good judgment is required. As a rule the plan is to leave all the old parent plants and start new runners from them, but sometimes we find newer plants with such vigor that it pays to leave them and cut out the parents. This requires judgment which cannot be learned except by experience. Of course too, the treatment must vary somewhat as to whether the bed is to be formed in matted rows or left in hills. We start our beds in hills, yet after the second year we often find that a modified form of matted row pays best. At any rate after settling upon what you want the plan is to let enough young plants grow to give you the desired stand and then keep weeds and extra plants chopped out. Refitting old berry patches is much like keeping old hens. Some poultry men say pullets are the only profitable stock, so they sell out everything except a few breeders at the end of the season. Others keep the hens three or even four years. Many berry growers fruit a patch one year and then plow the ground and get a second crop of turnips or celery, or cabbage. Others as we do refit the patch and pick four or five seasons. Planting and cultivating in hills as we do, I do not think we can afford to pick one season and then plow up. At the same time I must admit that cleaning the old beds is expensive. This is one of the things which cannot be put into any cast-iron rule. You must use your brains and figure it out.

How are strawberry plants potted? Is a special soil required, size of pots, etc.?
Worthington, Ind. C. C. B.

This is the way we do it. No doubt some more experienced grower will tell us a better way. We use small two-inch pots, tin cans, paper pots or anything that will hold the soil. We make a good compost of one part fine manure or the dirt under the manure piles and three parts good soil. The pots are soaked in the brook and filled with this damp compost. We prefer the first runners from the parent plant, but this does not matter so much except that we get the pots earlier. The runner starts from the plant and at the end of a joint 10 inches or so long puts out little roots and leaves. With a trowel we dig a hole in the ground, put in one of our filled pots level with the surface, put the joint at the center of the pot and a small stone on top of it to hold it firmly down. The joint proceeds to grow into a little strawberry plant with its roots in the pot. Another joint grows out from it, and this can be potted in the same way. With favorable weather the roots of the little plant soon fill the pot, while the top makes a good growth. After soaking the pot in water a few gentle taps removes it and the plant is left with a round ball of soil held together by its roots. This can be sent long distances in good condition, and when set out and properly cultivated the plant makes a good start. We handle a good many of them, but caution our people not to believe the big stories told about their yield the following season after planting. As a rule one spray of fruit is all you can expect. H. W. C.

Plow Cover Crops Early.

MY soil is heavy, packed, lacks humus, and is sour. Our season is very short. I have in about 10 acres of corn for the silo. I wish to plant something to plow under. My plan is to put in Alsike clover, white turnips and rye at the last cultivation of the corn. This will be from the middle to the last of July. The corn is cut about the middle of September. Next Spring I wish to plow under this green crop. Our seasons being so short, would it be advisable to turn this under in time to put in corn, or would I better wait and secure a greater growth? I. J. D.
Wardsboro, Vt.

We should plan to plow this cover crop under early, in time for another corn crop. By waiting longer you will obtain a heavier growth of this green crop, but should the season prove to be dry, the rye will dry out your land so thoroughly that it will be difficult to plow, and you will feel the bad effects of it through the season. In a moist season the cover crop may remain longer, but in an average year it is better to plow early, rather than take the risk of drying out the soil. There have been a number of complaints this year from farmers who let the rye stand too long, so that the soil suffered. Good judgment must be used in handling these cover crops. Our opinion is that Dwarf Essex rape would pay you better in this combination than the white turnips. The rape will make a heavier growth, and probably provide more for plowing under.

Fraud in Vetch Seed.

LAST September I seeded a piece of "run-out" land with rye and Winter vetch—or I bought the seed for Winter vetch. I got a good stand of rye and fairly good of the vetch. The rye came through the Winter in good shape, but no vetch. We plowed in the rye with some manure, planted corn with fertilizer in the hill, went over it last week with cultivator harrow. Quite a few small vetch plants were noticeable at the time. I wish to sow some cover crop in the corn at proper time to plow in next Spring. What would you advise? I had a similar experience two years ago; though vetch did not "catch" as well as last year, the vetch now stands about two feet high in spots among the Herd's grass. Will it be of any use for hay if mowed and hayed with the Herd's grass?
Madison, Conn. F. C. D.

We have had very much the same trouble with the vetch seed, and concluded that when we bought the Winter or Hairy vetch the seedsman gave us the Spring vetch. The latter does not appear to survive the Winter. It is really a Spring crop, and some of the seed seems to winter over in the ground and sprout in the Spring, becoming more or less of a weed and a nuisance in cultivated fields. We should certainly cut the vetch which is growing in the grass, as it will make a good hay when mixed in with Timothy. Having failed several times to buy the true seed of Hairy vetch, we have concluded that the old reliable rye is the backbone of a cover crop. We should risk Crimson clover with the rye; although the clover frequently dies out during the Winter, it gives more than enough growth during the Fall to pay for seed and labor. Either rape or Cow-horn turnips, as already explained, may be used with the rye and clover. The sure thing about vetch is to raise your own seed.

Rye as a Cover Crop.

SPEAKING of cover crops, would it not be well to consider locality and climate? This Spring and many others, the ground here is too hard to plow under anything, and those who counted on using the land for something else are in a quandary. This is one of the sections where the land must be broken in Fall or Winter to be certain of using it for corn, peas, etc. J. L. W.
Albemarle Co., Va.

Yes—we have always tried to give the peculiar soil and condition in our own section when speaking of rye and other cover crops. We have had, now and then, the same trouble in having the rye grow so fast as to leave the soil hard and dry. In one orchard this year this happened, and we finally cut the rye and piled it around the trees, waiting for a shower to soften the ground before working it up with the cutaway. There are conditions under which late Fall plowing is best. In such cases we should sow the cover crop as usual and plow it under in late Fall. It will more than pay seed and labor.

Ruralisms

The Corn Ear-worm.

CAN you suggest anything to apply to sweet corn to prevent the ravages of a green worm? The mature worm is something over one inch long; begins at the small end of the ear and eats its way down. It may be found in all lengths from one-quarter to one inch or more. Would an application early in season, of hellebore or acetate of lead be of any use? Last year was the first that corn has been planted on this land (for many years at least). We had the same trouble and as I used seed from the same house (N. Y. State seed) in garden in Connecticut I cannot think the seed was infected. G. D. C.
Montgomery.

The insect in question is no doubt the corn ear-worm, which is variable in markings, but usually dull green or brownish in color, with a naked greasy-looking skin. It does a great deal of injury to a variety of garden and fruit crops, being also known, according to its host plants, as the cotton boll-worm, the tomato fruit-worm, and the tobacco false bud-worm. It is extremely destructive to sweet corn, less so to field corn. On tomatoes, they bore into the fruit, and in the South they begin to attack cotton-bolls when the corn gets too mature for them, and also tobacco. The adult is a small yellowish brown moth, and there are several broods in the season. The larva makes a peculiar galleried burrow in the ground, in which it pupates, and one of the best means of control is Fall plowing and cultivating, which breaks up these burrows. Early planted corn is more likely to escape injury but later broods of the insect are difficult to control. On tobacco buds the worms are poisoned with a mixture of dry cornmeal and arsenate of lead, one teaspoonful of the poison to a quart of meal, sprinkled on dry. The concealment of the worm while feeding, as well as the danger of using poison on the corn ears, prevents any idea of controlling the pest in this way, but Fall plowing, diversified planting, and the destruction of all caterpillars found should keep the insect under control. The late Dr. Smith says the worms are savage cannibals, too, and if more than one appears on a single corn ear, there is a fight which is only finished by one survivor devouring his competitors. Of course the seed was not infected; the insects were in the soil, and previous crops of cotton, tomatoes or tobacco would encourage them.

Bunching Vegetables.

CAN you advise me as to the number of vegetables put in bunches of the various kinds that are bunched, such as radishes, onions, rhubarb, etc.?
Delmar, N. Y. E. N. C.

When root and other vegetable crops that are usually bunched, and put up to retail at five cents per bunch, radishes should contain 10 to 12, onions five, carrots six to eight if small, beets five. Rhubarb at the opening of the season always produces the heaviest stalks and is usually bunched three to the bunch; later on when size is somewhat reduced, four, five and sometimes six stalks to the bunch. When intended for the wholesale market it is of considerable advantage to have these small bunches put up into other bunches containing one dozen and neatly tied; this will save counting when sales are made, and save much time and sometimes annoyance when the merchant is busy. K.

High Pressure for Spraying.

I BELIEVE I can thoroughly spray four-year-old trees in much less time and with less material with the pressure at 200 than at 100. I would like to get the opinion of some experienced man on that point. A. L. D.

I have talked with several people who used power sprayers, and I have myself sprayed with them. I would not attempt to grow fruit if I had to do the pumping by hand. First, because hand pumping is too hard work. Second, because more work can be done in a day with a power rig than by hand. The economy comes entirely in a man being able to do twice as much or more work in a day than with a hand pump. When using a barrel pump it will keep one man busy to supply one nozzle of the disk type, like the "misty" or "Winkle mist." If using a force pump, one man can supply two nozzles at 100 to 125 pounds pressure, but when night comes the pumper knows he has done a good day's work. When a power outfit is used at least two leads of hose can be used, the rod attached to each carrying two nozzles.

In Bulletin 248 of the Ohio Agricultural Experiment Station, (Wooster) is a list of 63 nozzles of different manufacture, and their sizes and capacities for delivering liquids. In nearly all instances, about one-half more liquid is shot through the nozzles at 200 pounds than at 100 pounds. For instance, at 100 pounds pressure the whirlpool nozzle with a disk having an aperture of 7/100 inch (.07) will pass 60 gallons of spray material in one hour, while at 200 pounds pressure 96 gallons can be forced through in the same time. An illustration of what a small power outfit enables a man to do can best be told by the experience of one grower. He used a hand outfit until last year, when he bought an engine and hooked it to his pump. By hand he put on six to seven barrels of spray material in a day. With his small power outfit and only one line of hose he is enabled to put on 20 barrels in the same time. So if a little material is wasted there is such a gain in time—the most expensive item in spraying—that the extra material is more than paid for by the greater amount of work accomplished.

I can see no economy of material in spraying with high pressure. In fact, I believe from my own experience that unless a man is very active there will be a waste of material, because of the tendency to hold the rod too long in one place, drenching the tree, and the added danger from burning of the foliage. There is an airtight outfit—a power outfit—on the market which throws such a misty spray that it is more economical of spray material than the other power outfits, but I think for the average farmer who has only 10 to 20 acres in fruit the added use he gets out of his engine more than makes up the economy of material. B.

Spittle Insects or Frog-hoppers.

OUR attention has been called to some white specks or bubbles of foam on the young Timothy stems, with small gold-colored insect in the center, this Spring. This was pretty general in the Eastern part of Erie County, N. Y. Will you let us know what this is, and if it is likely to do any harm? P. G.
Rochester, N. Y.

The "white specks" or "bubbles of foam" referred to are caused by what is known as the spittle insect or frog-hopper. If the mass of white foam be carefully brushed away a small wingless green or blackish insect will be found lying close to the stem and with its beak inserted in the stem of grass. In this position it sucks out the juices of the plant, and must interfere seriously, at times, with the growth of the grass or plant attacked.

Spittle insects are very abundant this season, and are seriously injuring pasture and meadow grasses, especially Timothy. In the tropics these insects are often injurious to sugar cane. Very little is known of the life history of the spittle insects. In Trinidad, West Indies, where certain ones attacking sugar cane have been more carefully studied, they seem to pass the Winter in the egg stage. The eggs are deposited in the leaves and hatch in the Spring, and the young bugs attack the cane, injuring it severely. There seem to be several generations during the season. Whether there is more than one generation of the species that occur on our grasses in New York the writer is unable to say.

There have been many theories advanced to explain the production of the frothy material. Some writers have said that the plant produced it, others that the cuckoo bird put it on the grass, others that the insect in the mass expelled the foam from its beak, while others believed the foam was expelled from the anal opening of the insect. Investigations at Cornell University made in 1908 show that a fluid is excreted by the insect from the anal opening, and that bubbles of air are then mixed with it by certain appendages on the abdomen. Added to this is a mucilaginous material secreted by certain glands of the body. This material stiffens the more watery fluid and just as gelatine is put in ice cream to give it body and stiffness. So far as the writer is able to find, no one has suggested a reason for the production of this frothy material. We would suggest that it may act as a protection from the heat and drying effect of the sun. It is a fact that spittle insects need moist conditions for their best development and are easily killed when exposed to the heat and drying effect of the sun.

We have very little to suggest in the way of control. There is no practicable method of destroying these insects in a meadow and still keep the grass standing. If the grass, however, is cut early before the insects become full grown they will be killed, and the crop protected from a vast horde of them the next year. To make this control most effective the grass along the roadsides and in the fence corners, and other neglected places should be carefully cut at the same time.

GLENN W. HERRICK.

Conditions in Colorado.

AFTER an unprecedented snowfall that remained till March, and an almost continuous spell of rain up to three weeks ago, that delayed farmwork considerably, we have upon us another spell of wet weather, which came in the form of hail and a two-inch rain following it. Although the rain was beneficial and needed; the icy stones destroyed many gardens in the eastern and northern part of Denver and suburbs. My own loss was a three-acre strawberry patch just ready to make the initial picking. The moist, frostless Spring was ideal for berries (though a little late) and the crop that was nearing maturity was enormous in quantity and extra large and clean up to this time.
University Park, Colo. G. W. H.

Pennsylvania Fruit Growers Hold Meeting.

THE Summer meeting of the State Horticultural Association of Pennsylvania was held last week (June 17 and 18) at State College. This gathering is the first public meeting to be held in the newly completed Horticultural building at the college. The principal features of the meeting were the inspection of the experimental work being done at the college in vegetable, fruit and flower growing. One inspection trip included discussions of the asparagus work being done with varieties and with crowns of various sizes. Palmetto is the most profitable variety by more than $100 an acre, and large-sized crowns are superior to small-sized by about $150 an acre. These experiments show that growers can profit by choosing Palmetto and large-sized crowns. The irrigation system was explained and shown to be a profitable investment for truckers, strawberry growers, and others. It costs about $100 an acre to install, but by its use sufficient returns may be secured, either by succession or companion arrangement of crops, to pay for the installation in two years, or even one.

The experimental orchard, where numerous soil treatments, such as sod mulch, cover crops, clean cultivation, fertilizer treatments and various combinations of these are being carried on, was probably the most interesting feature of the meeting. These are the most extensive experiments of the kind being conducted in the whole United States. They are planned on a 10-year basis and are now in their eighth year, so that results can be seen and progress reports made. An innovation was the moving picture show of chestnut culture by C. K. Sober, the most extensive grower in the State. All details of the work were shown in action, from the young growing trees to the final thrashing of the matured nuts. Colonel Sober has invented a machine for thrashing the burs, which are beaten from the trees and gathered by the wagonload for this purpose.

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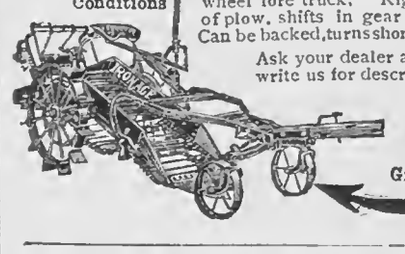
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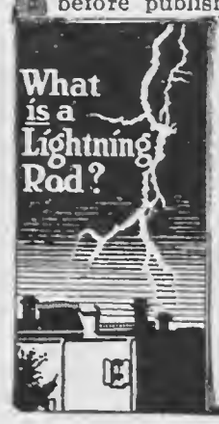

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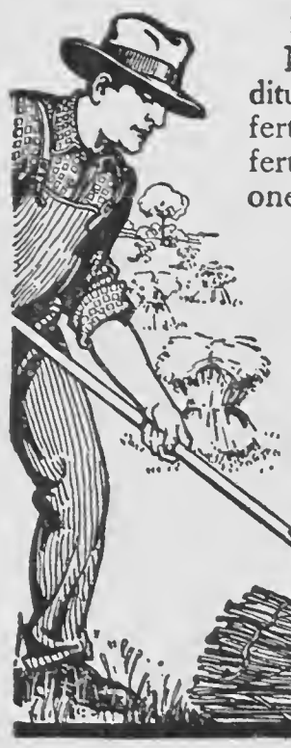
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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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WE have a friend who is interested in farming at two ends of the country. Not long ago it was necessary to sell some live hogs on the far Western farm. The price was 7½ cents per pound. On the very same day another bunch of hogs on a farm in the Hudson Valley was offered to a butcher. These hogs were rather better than the others, and were 1,700 miles nearer the real market for finished pork. Yet the price offered was just the same—7½ cents per pound! On the same day people in New York City paid 28 cents per pound for roasting pork, and 30 for ham and bacon. The Dakota man secured just as much for his live pork as the man in the Hudson Valley, while we see what the consumer paid. In many cases a comparison of prices paid for live beeves would be worse yet against the Eastern farmer. Yet there are men in Congress who want a law compelling every farmer to raise at least two steers every year!

*

THE big live stock event of this Summer will be the meeting of the Connecticut Poultry Association at Storrs on July 29, 30 and 31. There will be full opportunity for studying the egg-laying contest, and of course there will be a full programme of practical poultry discussion. In addition to this, Tom Barron, the English breeder, will be on hand and make several speeches. We do not understand that Mr. Barron pretends to be an orator, but he will be right there with his Wyandottes and Leghorns on hand. If anyone thinks these birds are hybrids he can get right up and see if he can prove it. We understand that Mr. Barron comes prepared to open his records and explain everything he knows about his birds. We believe this will be one of the most interesting poultry meetings ever held in this country. Let us all go and see if we can learn how these English Wyandottes are able to pull the tail feather out of the American Eagle!

*

THEY have now found another factor in the success of Mr. Hitchings and others who have succeeded with sod orchards. Prof. Hedrick on page 887 states that the annual rainfall in Onondaga Co., N. Y., is 25 per cent. or more greater than in the lake counties where intensive culture of orchards is properly advocated and practiced. Thus in the Hitching's orchard, Nature supplies an extra amount of water, so that the grass cut and left as a mulch will hold this moisture in place. In the lake counties Nature is more stingy with the water supply and therefore man must work to hold as much of it as possible in the soil. That is one reason why sod mulch may be an ideal system in one locality while thorough culture is the only safeguard in another. It is astonishing to see how the annual rainfall may vary in localities less than 100 miles apart, and this variation will make all the difference in the world with crops and methods.

*

THE Utica (N. Y.) Observer prints a good letter from a New York man who went to the Far West after "cheap" land. Among other things he says:

I know something of farms in Central New York. But especially have I knowledge of farms in Oneida and Herkimer counties. I would dare wager that if one of your 10-dollar-per-acre farms of Oneida County was placed in any part of this "last best West" there would be 1,000 men clamoring for possession of it at a figure five times greater than is now asked for it.

There is no question about the possibilities on a piece of New York State land, but are there really any 10-dollar-per-acre farms in the State? We do not know where they are, and if you found them there would be something about the soil or situation which made them expensive at that price. It is a mistake to convey the impression that farms in New York are to be given away or sold at such ridiculous prices. There is no sense in locating strangers upon soil which never should have been cleared of timber. Any New York farm which is capable of supporting a family is worth a fair price and will command it.

*

THE Wisconsin Experiment Station promises a new test for acidity in soil, which is said to be superior to the use of blue litmus paper.

The new method consists of the addition to a sample of soil to be examined of zinc sulphide with small amounts of calcium chloride and water, and boiling the mixture in a flask held over a small flame, preferably an alcohol lamp. Commercial lead acetate paper, which can be purchased at the drug store, when held in the fumes of the mixture for a few minutes, will turn from light brown to a shiny black, according to the degree of acidity present in the soil. The natural color of the lead acetate paper is white, hence the discoloration can be plainly seen and will more accurately gauge the acidity in a soil than will the litmus paper test, now in use.

This ought to be a good thing for the county agent and for all good farmers. Our judgment is that at least 80 per cent. of the soil on our Eastern farms is acid. In our own case we know that some of the fields are far more acid than others. A cheap and accurate test therefore will be useful to all of us. We find that this new test and its apparatus are not quite ready for distribution.

*

MASSACHUSETTS has a good thing in what is known as the reforestation law. It was enacted five years ago at the suggestion of the State Forester, F. W. Rane. Any farmer who has run-out pastures, waste lands or lands unadapted to other agricultural crops may turn over an acreage of from 10 to 80 acres by transferring the title of the land to the State through the State Forester, whereby the State Forester may accept it and plant it to young trees. The original owner has a proviso in the deed whereby he may regain the property by simply reimbursing the State for the cost of the trees and the labor in setting them out any time within 10 years. This law is working well. The principle is correct, for the State benefits from tree planting, while the farmer does not lose the increased value of his land. The land used for the tree planting would have very little value anyway unless the State took hold of it, and the farmer is not obliged to take it back and pay for the trees unless he thinks it will pay him to do so.

*

I AM told that in a recent issue you say that the bankers, the manufacturers and the railroads are unable to produce prosperity and "good times." Is it possible you made any such statement? Do not these classes control the country's finances? Who else can make "good times" if they cannot? S. B. R.

We certainly made the statement and now make it again. If these classes could make "prosperity" we should have it with us now. Ask the bankers and the manufacturers if they consider business good today. They have been filling the papers with a tale of woe for more than a year. Ask the railroads if we are having "good times." They answer that business is so poor that they must have an increase of freight rates or fail! Now all these classes have had a chance to give this country "prosperity," yet with all their money and all their organization they confess that they have failed to bring it. They are all waiting for the farmers to buy their goods, borrow their money to "move crops" and raise a bumper crop so that the railroads and the handlers may be kept busy. This is all so evident to anyone who will give any thought that the question seems a childish one. If the money and the power of bankers, manufacturers and railroads could have made "good times" should we not have had them long ago? There is no answer to it except that these classes of business desired to give us all an "object lesson" in hard times.

*

ON the first page we give place to a signed statement by Dr. Beverly T. Galloway, who on August 1 will take up the duties of dean of the New York College of Agriculture. When we find a man who has for many years, successfully conducted a large enterprise, we like to ask him to tell us in a few words the most important things which he has found in this service. We put this question to Dr. Galloway:

After 27 years in the Department of Agriculture at Washington, I look back with pleasure on two things which I trust will remain as a permanent record of what may be obtained by a recognition of the rights of men who have consecrated their lives to the cause of agriculture. First, the bringing together of a corps of men in the Bureau of Plant Industry whose loyalty to and faith in the American farmer has never wavered, and who through team work and coöperation have made the bureau a power for good in the Department and in the country at large. Second, the bringing about of a spirit of coöperation and friendliness between the Department workers and those in the agricultural colleges and experiment stations which I trust will go far toward unity and harmony of action in all matters affecting the farmer in the future.

Now our suggestion to farmers, the Cornell agricultural faculty, and all others who are interested in trying to improve the condition of New York agriculture is to get right into line, loyally and with whole-hearted energy, and give Dr. Galloway a fair chance to make good.

*

THE Supreme Court has just given two important decisions regarding transportation and the rights of carriers. The western railroads have discriminated against certain cities or sections charging more for a long haul of freight than for a shorter haul. The Interstate Commerce Commission attempted to correct this by establishing certain zones inside of which definite rates should prevail. The railroads appealed to the Commerce Court, which overruled the Commission, claiming it had no right to make rates. The Supreme Court has now decided in favor of the Commission and declared it the final power, under Congress, to regulate railroad rates and traffic. This is in line with the recent decision which gave the National Commission power over the State authorities to regulate rates. The court also decides that pipe lines for carrying oil are common carriers and thus subject to regulation, the same as railroads, by the Commerce Commission. This is a direct blow at the Standard Oil Company which must open up its lines to competition. These pipe lines have long been regarded as private property, and most lawyers expected that the Court would declare it such. The decision that these lines must be regulated is the most advanced step in asserting the right of Congress to regulate private business that the court has yet taken.

*

WE never before had so many complaints about buying weed seeds in grass and clover. Again and again people send weeds for identification. These are taken from fields of Timothy, clover or Alfalfa, and they were never known before this year. They evidently came in seed purchased from seedsmen and supposed to be clean. This has come to be a nuisance and a great menace. The present New York law is not, as it stands, of any particular help to farmers. As Director Jordan of the Geneva Experiment Station points out, the fertilizer law requires a guaranty, and to that extent is a help. The seed law requires no guaranty of the amount of pure seed, but merely requires a label which is to be used if the seeds contain more than 3% of foul seeds. Even with the yearly bulletin giving the record of seed inspection, this law is of little value to our farmers. The Station therefore will try to help make the law more effective by making personal examinations of samples for farmers. Any farmer who expects to seed clover, Alfalfa, Timothy or Red-top this year should write to the Station and make arrangements to have a sample of his seed examined. Our advice is to buy no seed except upon an examination by the Station. It is folly to put anything the seedsman sees fit to send you into the soil without a thorough test. The Station does good work in helping you with this investigation. On the next page is a little picture showing the shape and general appearance of several of those foul weeds.

BREVITIES.

STAND by your beguns!

How many eggs have you under the water-glass hen?

THE cow that comes fresh in Winter may be a profitable Summer boarder.

Now it is reported that Kansas farmers are anxious to hire college students. It does not seem to be so in New York.

THE world seems to be growing together when dried beet pulp is sent from Spain to this country for feeding American cattle!

WHAT do you think of this proposition—that cows will make richer milk when they are fat and plump than when they are thin?

IN Cleveland, Ohio, school children receive free medical inspection, and in extreme cases free glasses are given those whose eyes are defective.

CURRANT growers make great complaint about their fruit "shelling." The fruit gets about half size and then falls off. The trouble is not due to worms, poor culture or a lack of fertilizer. It seems to be an imperfect pollenization. Bee keepers claim that a few colonies of bees will help.

THE demand for veal has increased so fast that baby cows never had such value before. It seems that thousands of beef calves which in former years would have been kept for feeding are now vealed. Formerly most of our veal came from dairy calves. All this seems to us to indicate an increased demand for poultry in the future.

CO-OPERATIVE INSURANCE AND THE NEW YORK LAW.

IN New York State there are a number of coöperative fire insurance companies. When properly handled these companies have been generally successful. In many cases they have saved the insured a great deal of money in the fees for policies. There may be some few exceptions to this general rule, but in such cases it will be found that outsiders have organized the companies and manipulated them for their own benefit. In the true coöperative companies, where farmers and home owners have organized and carried on the business, they have been economically managed and generally successful. They must be successful if they are managed economically, because in a true coöperative concern the members simply make up their own losses, and nothing more except the cost of economical administration. The companies which are run for capitalistic benefit would require a considerable profit in addition to taking care of actual losses. During the past year, however, there has been some complaint from farmers who belong to these coöperative companies. The complaint has been that some of these companies were asking for additional premiums, when the farmers thought that the premium they paid at the beginning was to cover practically all their payment. For the benefit of farmers who have asked these questions, and others who are not familiar with the subject, we give below a statement made by Mr. W. T. Emmet, Superintendent of Insurance of the State of New York. This covers the ground carefully, and explains why some of these companies are now forced by the new law to change their plans of assessment. They have no choice in the matter, as their officers are obliged to conform to the laws.

Statement from the State Superintendent.

The characteristic feature of these companies is that in lieu of the capital and surplus of stock companies, coöperative companies possess the right to assess all members. The statute classifies these companies into two groups, viz.: 1. Assessment corporations. 2. Advance premium corporations. These groups of companies transact business on different plans, and the statute makes special provisions applicable to each group.

Assessment companies charge, at the time of the issue of their policies, only trivial fees, which are calculated merely to defray the expenses of inspection and placing the business on the companies' books. From time to time, either in accordance with the express provisions of their by-laws, or to meet accumulated obligations, these companies levy and collect regular assessments. In this way the policy holders receive the benefit of insurance practically at cost, and, although the assessments referred to vary in amount, the members become accustomed to the payment of such assessments.

Advance premium companies, on the other hand, collect at the time the policy is issued a premium which is calculated to pay all losses and expense of the insurance for the full term of the policy. Should a company meet with excessive losses, or should the premium collected prove to be too small for any other reason, the company must assess its policy holders for the deficiency unless, of course, it already has a surplus on hand, over and above its unearned premium liability, to meet such a contingency.

Prior to July 1, 1910, advance premium coöperative companies were not required to maintain, and as a matter of fact did not maintain, an unearned premium reserve. Chapter 328 of the Laws of 1910, however, imposed upon this class of corporations the obligation of accumulating and maintaining such a reserve.

In the case of the Tompkins County Coöperative Fire Insurance Company in particular, this requirement of the law in respect to the accumulation of the reserve was unusually severe. The company had been collecting in advance a portion of the premium charged for its three-year policies; and at the expiration of the first and second years levying an assessment at a rate calculated upon the basis of the company's losses and expenses for the preceding year, for the purpose of making good the guarantee fund so established. Under this plan it was necessary to maintain a large reserve, unusual losses being met merely by an increase in the rate of assessment. On the passage of the law in 1910, however, all companies were required to become either advance premium or assessment corporations. The Tompkins County Company elected to discontinue its policy of annual assessments and thereafter transact its business wholly upon the advance premium plan.

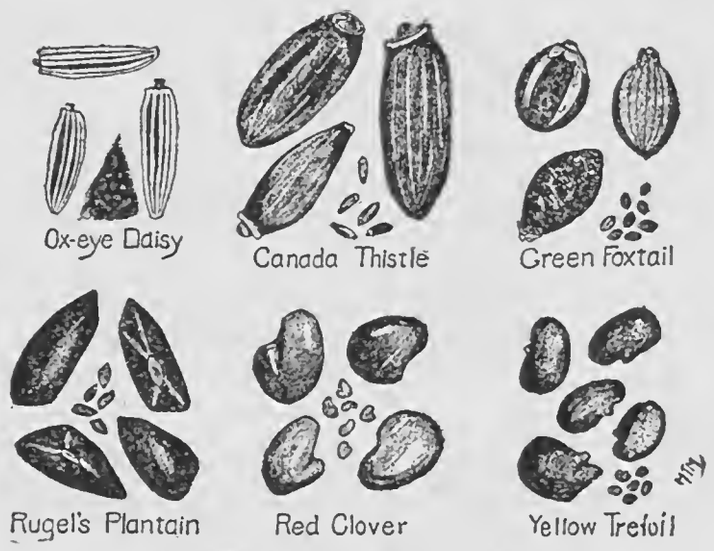
It thereupon became necessary for the company to accumulate the unearned premium reserve which, as pointed out before, was a radical change of policy. In 1911 the law was amended so as to allow advance premium corporations a period of seven years within which to accumulate the reserve. The law was further amended in 1912 with reference to the accumulation of such reserve. You will note that advance premium companies which did not possess the full unearned premium reserve on January 1, 1913, were required to make good the deficiency therein at the rate of 15 per cent. per annum. Upon failure to make the percentage of improvement required by law, the statute provides that "the Superintendent of Insurance may, in the absence of good cause shown why an assessment should not be made, direct such corporation to make good the entire amount of deficiency by assessment or otherwise within 60 days."

On December 31, 1912, the Tompkins County Company had a surplus of $79,422.05 and the unearned premium reserve to be accumulated amounted to $149,850.02. Had the company experienced a normal loss ratio it might possibly have accumulated the unearned premium reserve in the time allowed by law. For several years, however, the company's loss experience has been adverse, and by December 31, 1913, its surplus had decreased to $23,621.40, while the unearned premium reserve required by law amounted to $131,376.99, thus leaving a deficiency of $107,755.59 to be met.

By reason of the company's inability under the circumstances to accumulate funds from current premiums to make good the deficiency, we authorized the levy and collection of a single assessment of 35 per cent. for this purpose. The only alternative to this course would have been several smaller assessments at intervals, the expense of collecting which in small amounts from the company's 25,615 policy holders would have been much greater as well as more difficult, by reason of the insignificance of the amounts due upon the smaller policies.

We might add to the above statement that the purpose of the so-called "unearned premium reserve" is to protect the policy holders from the improvident use of premiums paid by them in advance. Whether the company is called upon to pay return premiums or fire losses, it is an essential of good business policy that premiums shall be applied or used only *pro rata* as the same is "earned."

W. T. EMMET,
Superintendent of Insurance.



FARM SEED IMPURITIES.

New York State News.

SUFFOLK COUNTY GRANGERS.—At the recent meeting of the Suffolk County Pomona Grange it was reported that premiums would be offered by the County Agricultural Society for Grange exhibits at the fair this Fall, three prizes of $100, $75 and $50. The movement to erect a Grange building on the fair grounds is getting under way and a resolution was adopted at the Pomona meeting to the effect that each of the 13 subordinate Granges in the county raise at least $100 for the purpose. It is expected that $5,000 will be raised by the Granges and through their influence. The September meeting of this Pomona will be held with the Port Jefferson Grange.

MEDICAL MEN DISCUSS MILK.—The eighth annual meeting of the American Association of Medical Milk Commissioners was held in Rochester last week. Nearly 100 delegates were present, among them being Dr. H. L. Coit, of Newark, N. J., who originated the certified milk system 20 years ago. Other noted men present were Dr. W. H. Park, director of the State Research Laboratories, New York City; Dr. T. C. McCleve, of Berkeley, Cal.; Dr. Henry Koplik, of New York City, and Dr. M. P. Ravenal of the University of Wisconsin. It is Dr. Ravenal who claims the essential sameness of bovine and human tubereulosis, and who opposed Dr. Koch's views in a controversy at the British Tuberculosis Congress in 1901.

FRUIT PROSPECTS IN WAYNE COUNTY.—Reports of a carefnl examination of the fruit orchards near Sodus by a party of 40 growers last week indicate that there will be a fine crop of apples, although the set has not been quite that indicated by the bloom. Kings and Baldwins never looked better, while Greenings are not quite so promising. Cherries and plums will produce well. Professor Herrick of Cornell has been making inspections for insects. Fire blight was found very prevalent on one farm, affecting both apple and pear orchards. The California apricot scale was found in one orchard, this being the second appearance that has come to the attention of the University this year. Very little is known of this scale, and Winter spraying is thought to be the best way to combat the pest.

STATE RECOVERS FOREST LANDS.—The Conservation Commission has recovered possession of 2,770 acres of forest lands in the Adirondacks as a result of decisions handed down last week by Hon. Irving Vann, official referee. These lands are located in Warren, Hamilton and Essex counties. The plaintiffs are given the right to redeem 880 acres upon the payment of approximately $5,000. Three other cases involving title to 600 acres are yet undecided, and 20 cases are yet to be tried.

FARM BUREAU WORK.—The report of the agent of the Allegany County Farm Bureau, submitted to the County Grange last week, relates some of the activities of the Bureau the past year. Among them are the organization of a cow-testing association at Fillmore, assisting in the organization of a Holstein breeders' ssociation, placed 75 to 100 carloads of lime at a saving to the county of the agent's salary, secured better rates on fertilizers, held six farm bureau institutes, made 481 farm calls, gave 73 lectures, planned 20 farms and 18 drainage systems, conducted 20 fertilizer experiments, renovated 12 orchards, and conducted several experiments in seed selection, Timothy fertilizing, testing value of ground rock prosphate, etc. F. C. Smith is manager of the farm bureau.

GRANGE LECTURERS TO MEET.—State Grange Lecturer F. E. Alexander, of Pulaski, has announced the dates for the meetings of the county and subordinate lecturers in various sections of the State. The dates follow: Aug. 11, Batavia; Aug. 12, Watkins; Aug. 13, Hornell; Aug. 14, Fredonia; Aug. 15, Batavia; Aug. 18, Cortland; Aug. 19, Oneonta; Aug. 20, Newburg; Aug. 21, Hudson; Aug. 22, Troy; Aug. 25, Watertown; Aug. 26, Malone; Aug. 27, Whallonsburg; Aug. 28, Fonda; Aug. 29, Syracuse. J. W. D.

Government Crop Report.

In the Southern Winter wheat sections the harvest is over. It is beginning under favorable weather conditions in the central part of the belt. The yield in Texas and Alabama was less than anticipated, but in other sections the favorable prospects were realized. Weather has been favorable for rapid growth in the Spring wheat regions.

Warm weather and showers in the corn belt have greatly improved the prospect, though there are still spots where the plant is suffering from drought.

Hay, oats and pasture are in good condition in the Western and Northern districts, but short in the Middle Mississippi and Ohio valleys and southward.

Weather in the cotton sections is the most favorable of the season. There have been good rains in both the Eastern and Western portions. Boll weevil very troublesome in Louisiana, Mississippi and Alabama.

In the Atlantic States there is severe drought, especially in Virginia, retarding corn and tobacco setting.

Foreign Crops.

Weather in northern portions of the Continent has been unseasonably cool, and this with drought in some sections has retarded the wheat crop. Spain, Italy and Portugal promise large grain yields. In France the area in wheat (16,045,000 acres) is less than the two preceding years, and present outlook is not favorable. Wheat harvest is finished in British India and Persia, yields being 313,000,000 and 14,000,000 bushels, respectively. European Russia is expected to have 297,041,000 bushels of wheat and 932,534,000 of rye. The total area under grain in Canada is thus reported: Wheat, 11,203,800 acres, or 188,800 acres more than in 1913; oats, 10,811,000 acres, compared with 10,434,000 aeres last year; barley, 1,604,000 acres, or 9,000 acres less than a year ago; and rye, 111,070 acres, against 119,300 acres in 1913. The condition of Spring wheat June 1 was 93, Winter wheat, 79.

Canadian Fruit Report.

The apple outlook is favorable, except in Nova Scotia, the Annapolis Valley being especially thin. In parts of Ontario tent caterpillar has reduced the crop. The Okanagan and Kootenay valleys of British Columbia will have a medium yield.

Pears are scarce in Quebec and Eastern Ontario. Nova Scotia will have about 50 per cent, and British Columbia very large.

Peaches are nearly a failure in Ontario, except the Essex Peninsula and a scattering in Lambton County. The Kootenay Valley will have no peaches.

Heavy plantings of tomatoes were made in Western Ontario to offset the peach shortage. The probability is that the supply will be exeessive.

Nova Scotia, the Niagara district, and southern and western counties of Ontario have large crops of cherries, Eastern Ontario is short.

The great grape section, the Niagara district, will have a large yield. In others parts of Ontario the scattering vineyards were considerably hurt by frost. Strawberries in the Dominion are below the average, owing to drought and Spring frosts.

Virginia Fruit Report.

Secretary Walter Whately states that Virginia expects to have a large apple crop, with the exception of Albemarle Pippins. The following percentages, based on full crops, are given for the various sections of the State:

PIEDMONT—POTOMAC TO JAMES RIVER: Pippin, 35 per cent; Winesap, 65; York, 52; Ben Davis, 70; Stayman, 55; M. B. Twig, 50; other Winter apples, 60; Fall varieties, 55; peaches, 65. James River southward: Pippin, 40; Winesap, 77; York, 52; Ben Davis, 55; Stayman, 65; M. B. Twig, 60; other Winter apples, 65; Fall, 55. Peaches, 60.

THE VALLEY: To south bonndary Rockingham county: Pippin 30; Winesap, 75; York, 80; Ben Davis, 82; Stayman, 78; M. B. Twig, 70; other Winter, 83; Fall, 82. Peaches, 70. South Rockingham county to southern boundary of Roanoke: Pippin, 33; Winesap, 75; York, 80; Ben Davis, 80; Stayman, 77; M. B. Twig, 73; other Winter, 77; Fall, 77. Peaches, 75.

SOUTHWEST VIRGINIA: South boundary of Roanoke county to North Carolina line: Pippin, 25; Winesap, 80; York, 75; Ben Davis, 77; Stayman, 65; M. B. Twig, 77; other Winter, 80; Fall, 80. Peaches, 80.

MIDDLE VIRGINIA: Pippin not grown; Winesap, 47; York, 25; Ben Davis, 35; Stayman, 25; M. B. Twig, 5; other Winter, 60; Fall, 35. Peaches, 50.

Woman and the Home

From Day to Day

The Voice of Peace.

Though now forever still
  Your voice of jubilee—
We hear—we hear, and ever will,
  The Bell of Liberty!
Clear as the voice to them
  In that far night agone
Pealed from the heavens o'er Bethlehem,
  The voice of Peace peals on!

Stir all your memories up,
  O Independence Bell,
And pour from your inverted cup
  The song we love so well.
As you rang in the dawn
  Of Freedom—tolled the knell
Of Tyranny—ring on—ring on!
  O Independence Bell!

Ring numb the wounds of wrong
  Unhealed in brain and breast;
With music like a slumber song
  Lull tearful eyes to rest.—
Ring! Independence Bell!
  Ring on till worlds to be
Shall listen to the tale you tell
  Of Love and Liberty!

—James Whitcomb Riley in The Reader Magazine.

*

A FAUCET cushion is a rubber protector that slips over the end of a faucet. It does not obstruct the flow of the water but saves breakage in dishwashing, for much of this loss comes by chipping against the faucets.

*

DO not forget that strawberry and pineapple is the most delicious of all preserves. Proportions are one quart of shredded pineapple, two quarts strawberry, three quarts sugar. Shred the pineapple and mix with sugar, let stand two hours, add the hulled strawberries, heat in the preserving kettle, and then let boil 20 minutes. Raspberries (red) may be mixed with pineapple in the same way.

*

COTTAGE cheese is usually quite plentiful on the farm, and we cannot have too many ways of serving it. One plan is to butter a platter, and press the cheese out flat like pie crust, after it has been mashed smooth and mixed with cream. It is then cut into squares with a sharp knife, and each piece lifted onto a salted cracker. A bit of olive or nut may be put on each piece, and the crackers arranged on a glass dish to serve with salad. Another method is to make the cheese into little balls, and press a nut meat or piece of stoned date into one side.

*

IF you should find among the old things stored away in attic or barn loft any of the old-fashioned lanterns made to hold candles, by all means revive them for use on the porch. We do not mean modern style with round globe, but the rectangular ones glazed with panes of glass. They are being imitated now in modern manufactures, largely to enclose electric lights; just such lanterns as one sees the Colonial watchman pictured with, and some of them carry their realism so far as to have panes of horn. A shabby old lantern may be rejuvenated by treating the metal with dull black paint. It will be noticed that city people of artistic taste make much use of candles in Summer homes among the mountains or by the sea, and any country housekeeper will find them a convenience. We do not use them to read or sew by, and often wonder how our grandmothers managed their dainty stitches by such dim light. We prefer stearic candles rather than paraffin, as they seem harder, and buy those called self-fitting, which have a tapered base that makes them fit different candlesticks. Candles are known as sixes, eights, twelves, etc., according to the number in a pound. Twelves are as thick as sixes, but only half the length, being intended for use in tall candelabra. We prefer eights, but very few dealers keep them. The sizes run all the way to forty-eights, which are tiny votive tapers. Ordinary candles are the same price whether sixes, eights or twelves, ranging in New York from 18 to 25 cents a pound. The most varied stock of candles is kept by grocers who have a large religious trade, or by dealers in church goods; many grocers do not keep them in stock at all.

The Rural Patterns.

When ordering patterns always give number of patterns and measurements desired. Prices of each pattern 10 cents.

8237 boy's suit with long or short sleeves. Cut in sizes 4, 6 and 8 years. Size 6 years requires 1½ yards for blouse and 1¼ yards for trousers, and trimming of 36 inch material. 8228 boy's box plaited suit. Cut in sizes 2, 4 and 6 years. Size 4 years requires 3 yards of 36 inch material and ⅞ of a yard 27 inches for collar, cuffs and belt. 8227 boy's one-piece bathing suit. Cut in sizes 4 to 12 years. Size 8 years requires

two yards of 36 inch material. 8249 child's rompers. Cut in sizes 2, 4 and 6 years. Size 4 years requires 2¼ yards 36 inch material and 1⅛ yards 27 inches for trimming. 7440 child's one-piece dress. Cut in sizes 2, 4 and 6 years. Size 4 years requires 1½ yards of 36 inch material for dress, and ⅞ of a yard for knickerbockers, with one yard of 27 inch material for trimming.

8288 ladies' plain blouse. Cut in sizes 34 to 40 bust measure. Size 36 requires 2¼ yards of 36 inch material. 8259 ladies' plain blouse. Cut in sizes 34 to 44 bust measure. Size 38 requires 2¾

yards of 36 inch material with ⅜ yard 27 inches for collar and cuffs. 8277 ladies' gown with tunic effect. Cut in sizes 34 to 42 bust measure. Size 38 requires 5¼ yards of 36 inch material with ⅝ yard 27 inches for chemisette and collar. 8239 ladies' one-piece straight skirt. Cut in sizes 22 to 32 waist measure. Size 26 requires 2⅝ yards of 36 inch material with 1¼ yards any width for circular ruffles. 7877 ladies two-piece skirt. Cut in sizes 22 to 32 waist measure. Size 26 requires 2⅝ yards of 36 inch material.

Asparagus Recipes.

WILL you print some recipes for cooking asparagus? O. S.

The customary method of serving plain boiled asparagus is to drain well, and then dress with hot melted butter or cream sauce. It is not cut into short lengths, though this is quite usual among old-fashioned American housekeepers, but left in the stalks, which may be laid on toast. We do not care for the toast, because it is either soddened or tough, and is thus wasted. At a luncheon recently, rings of toast were stamped out with a cutter, and each portion of asparagus stalks slipped through this ring, and then laid on an oval of toast, then dressed with hot melted butter. It gave the appearance of being in a toast basket.

Baked Asparagus.—Prepare the asparagus as usual for boiling, and boil until tender. Drain and cut in one-inch pieces. Arrange alternately in well buttered baking dish layers of the asparagus and layers of fine bread crumbs, pepper, salt and butter. Then add a cup of milk, in which one egg has been beaten, and a gill of cream, and grate over the top a generous amount of cheese. Bake a delicate brown in a moderate oven.

Cream of Asparagus Soup.—Wash, trim and scrape the stalks of one bunch, cut the "heads" one inch long and boil separately till done, then drain and set aside. Cut the rest into inch pieces, cover with 1½ pints of boiling water and cook until very tender, adding a pinch of salt and the juice of one small onion. Strain and mash through a sieve, add a pint of hot milk and half a pint of cream, thicken with butter and flour rubbed to a paste, add the asparagus heads, season to taste and serve with toasted croutons.

Asparagus With Egg Sauce.—Wash, trim and scrape one bunch of asparagus and tie into bundles of six or seven stalks. Cover with boiling water, add a little salt and boil evenly for 20 to 30 minutes until tender. Drain and arrange on buttered toast rounds on a platter or individual plates, and pour over an egg sauce made as follows: Place in a small earthen jug or pitcher the yolks of two eggs, one ounce of butter, a gill of cream, the juice of half a lemon, pepper and salt. Stand the jug in boiling water and whisk with a fork until the sauce is creamy.

Asparagus With Eggs.—Put boiled asparagus into a baking dish, season with butter, pepper and salt, then break eggs carefully and lay over the top as for ordinary baking. Season the eggs and put into the oven until the eggs are set. Another method is to prepare the eggs as for an omelet, or scrambled eggs, pour over the asparagus, and bake as before.

Asparagus Omelet.—Make a plain omelet, and when the eggs are firming lay over one-half of it boiled asparagus tips, hot and seasoned; then fold the omelet over them.

Asparagus and Green Peas.—This is a good way to serve asparagus when stalks are small, or when one has a limited dish of either vegetable. Cut the tips into small pieces and boil with green peas. There should be about equal proportions of the two vegetables. For one bunch of asparagus add half a cup of water and a tablespoonful of butter. This makes an excellent garnish for Spring lamb.

Canning Asparagus.—Straight-sided quart glass jars should be used for asparagus, so as to avoid breaking the stalks. Wash carefully, cut the right length to stand the whole stalk upright in the jar and pack in snugly, heads up; then pour in cold water slowly, until the jar is full to overflowing, and lay on the tops. Place straw or boards in the bottom of the wash-boiler, stand the jars on this, and pour in enough cold water to come half way up the jars; put the boiler over the fire, and when the water comes to a boil, boil steadily for three hours. Take up the jars, see that they are full to overflowing (if not fill up with boiling water) put on rubbers and screw or otherwise fasten the covers tight. Keep in a cool, dark place. Another recipe recommends boiling the asparagus for 15 minutes, then putting in the jar, and boiling in the wash-boiler for 1½ hours, but we think some of the stalks are very likely to be broken by this method.

Seen in New York Shops.

ONE famous glove shop, which has sold nothing but gloves for nearly half a century, makes a specialty of wedding gloves. For the bride's convenience, they will rip the seam of the ring finger in her glove, and resew it free of charge whenever desired. Their wrist-length gloves are $1.50, $2 and $2.25; eight button $2.50, 12-button $3, and 16-button $3.50 the pair. These prices are rather higher than the popular gloves of a department store, but they are of the highest quality, and of supreme excellence in cut; they are of course, made in France. Silk gloves at the same shop are 50 cents for short and $1 for long ones.

Snapping mottoes modeled after the absurd "Katzenjammer Kids" are shown among new favors. They are dolls about eight inches high with papier-maché heads, and clothed in red crape paper; each one contains 12 favors. They cost 39 cents each. Little "Kewpie" favors cost from 10 cents up, and include a great many different attitudes.

Some of the new furniture for Summer homes is painted pale gray; this is newer than white. This idea is worth copying when rejuvenating old furniture with enamel paint. Cretonne or chintz cushions in all colors are used with the gray furniture, a very cool effect being given by pale gray cretonne with shaded heliotrope flowers forming an irregular pattern. This furniture was placed upon a woven ragstyle rug of pale gray and heliotrope. Soft pink or old blue looks well with this gray furniture. Rather odd are black and white rugs, in large checks like marble tiling, and there are also black and white borders to some of the curtains, and black stripes in colored chintzes and cretonnes. Glazed English chintz is being used for window shades, such as narrow stripes of pink and white, green or blue, or even little wreaths and sprigs.

Horsehair braid, hand sewed, is being used in some of the newest hats, which are a little wider in brim than the hats of early Spring. One plain but very smart hat had a crown of white satin, slightly gathered at the top, and a brim of white braid, faced with satin. At either side of the crown was a bunch of bright red cherries.

A good many linen one-piece dresses are made with skeleton bodices, which, while a reminiscence of the discarded "jumper waists," are very different from them. In some of these the back of the skirt runs up to form part of the waist, meeting shoulder straps or close bretelles; others have a kimono effect. Of course a blouse of thin white material is worn underneath. Some of the one-piece linen dresses have a coat also, thus forming a jacket suit, the little kimono coat being very short, and cut away in front.

"Tiffin tables" from Hong-Kong have collapsible stands of basswood, stained brown, supporting two trays of split bamboo, one tray on top, one near the ground. They are very Oriental in appearance, and delightful for serving refreshments on the porch; they are very light, and may be folded up out of the way. Tables with 27-inch trays are $5; with 32-inch trays $6.

Lamb's wool quilts covered with Japanese silk in a great variety of shades are $12.50 each. They have the advantage of being extremely light, as well as warm. We have often thought that wool-filled comfortables of various grades might prove a salable product for sheep-keeping farms.

A wonderful little frock of white dotted swiss, which was priced, as an imported model, at $50, was quite simple enough for a very modest purse. The waist was one of the shirred models gathered along the edge of the V-neck; the sleeves, which were wrist length, were all in one with the waist, and were trimmed with a row of small jet buttons all the way from the shoulder to the wrist, which was finished with a net ruffle. The plain skirt was trimmed with a serpentine ruffle of the swiss, bordered with a narrow band of black net. The ruffle, which started at the waist line on one side, curved down across the front to the back, sweeping round to the middle of the front about a foot above the hem, where it was finished with a large black velvet bow.

Jelly Making Simplified.

THE new housewife usually hesitates about attempting making jelly. Even some older housewives do not know the scientific method of jellying. It is true that some things will "set" easier and better than others, but nearly all kinds of fruit can be made to jelly, provided the pectin, jellying principle, is present, and if it is not, no amount of sugar or cooking will make the product jelly. Currants, apples, quinces, and citron all contain pectin in large degree, and these may be combined with other fruits lacking this jellying quality. Not that the fruits mentioned are all that will jelly alone, by any means. Grapes are rich in pectin, and especially green or not very ripe ones. The green grapes' juice may be combined with other fruits as an aid to clear, solid jellying.

Now to take up a concrete example of jelly-making. We will begin with currant jelly, which is one of the most popular varieties, most delicious, and really very easily spoiled by long cooking. Do not be tempted to use the currants with the stems on. Some very good jelly makers advise that method, but I know by actual experience that the jelly made that way has a less delicate flavor and a much darker color. It does not take long to stem currants, and it pays in jellying. In selecting currants choose those that are a little green, although ripe ones will be all right, those that are at least a third green will jelly sooner, and make a better flavored, more beautiful colored jelly than those thoroughly ripened. Over-ripe fruit of any kind is not suited to jelly-making. Having stemmed the currants, put them into a granite or porcelain vessel and cover with water, that is not alkaline. In many districts the water is so alkaline it counteracts the acid in the fruit and jelly making is rendered difficult, if not impracticable. Rain water answers very well in case such water is the common household product. Do not make the mistake of using too much water, as the extra amount will have to be cooked out, and long cooking spoils the color and takes away the delicate, fresh flavor of the jelly.

Heat the currants rather slowly, and crush with a wooden potato masher, when well-heated so that the pulp is soft and juice exudes freely. Remove from the fire and pour into a jelly bag. A square of cheese cloth, sewed up diagonally makes a very good bag. Hang or place somewhere, where it can be held stationary and let the juice drain out. If your object is the very highest product then do not press or squeeze, but if you want the most jelly for the amount of fruit used, then press and squeeze until all the juice is crushed out. This might make the jelly a little cloudy, but if it is strained again through a thick bag, like flannel, it will be just as clear and transparent as that made from the liquid that merely drips out itself. In fact I have found that the jelly stiffens better if the fruit is pressed. It seems to be the pulp part that holds the greatest balance of the pectin. Having the juice extracted, measure and put over the fire. Measure an equal quantity of sugar and place in the oven. Do not let it get too hot, so that it either scorches or melts, but if such a thing should happen, do not let it worry you, because if it is candied or scorched it will merely rise on top of the jelly and can be skimmed or strained off. The sugar should get real hot however. Let the juice boil 20 minutes, no longer, then add the sugar, it will strike the boiling liquid with a hiss, and will dissolve almost immediately. When the sugar is dissolved skim the jelly till clear, then turn through a bag into the jelly glasses, or strain, and put in glasses after the straining. Do not let the jelly cook more than three minutes after the sugar is added, as it soon turns dark and the flavor is impaired.

To put this whole thing in a few words, wash and stem fruit, cover with cold water, bring to a boil, and mash, turn into a jelly bag and drain, measure your juice and the same quantity of sugar. Put the juice over the fire alone, and the sugar into a warm oven to heat. Boil juice just 20 minutes, add the sugar, and boil two minutes, skim well, and strain. Put in glasses. That is the recipe in a nutshell, but the explanations are needed by the unaccustomed jelly-maker. One need not worry, or test the liquid. It will jelly without any such bother. Frequently the jelly jellies on the spoon and edges of the utensil used, but even if it does not, do not cook longer than the time specified. Do not be tempted to use more than enough water to cover the fruit. If you want to experiment, then do so, but if you want jelly without experiment and with sure success try the above. I tested it more than 20 years ago, a little doubtful of the result, but the rule has been followed in all the succeeding years, and it does not fail. If the jelly does not solidify at once do not let that disturb you. In this case, put it in a sunny window, and cover with thin cheese cloth, to allow the action of sun and air upon it. Finally cover with melted paraffin. You will have a jelly the finest flavored, and something that will keep indefinitely, without crystallizing or moulding. The paraffin seals it tight, unless it is disturbed and loosened. Currant jelly can also be made without cooking at all. Currants are crushed and juice poured, or strained or pressed off. Add an equal amount of sugar, put into rather shallow glasses, cover with cheese cloth, and place directly in the sun and air. This will eventually form a jelly of the most ambrosial type. It should not be kept in too warm a place save for the action of the sun.

It is a good plan to can some currant juice to mix with other fruits later. Strawberries, not too ripe, even a little green, make a delicious jelly, but may be combined with a little currant juice to the betterment of the same. Let me say in passing that white currants make a jelly just about the same color as the red ones. Red raspberries make a fine jelly, and may either be used alone or with a little of the currant juice. Gooseberry jelly is made identically the same as the currant jelly, and I prefer the berries quite green. Pieplant is something that is difficult to jelly, but with a little pectin from some other fruit it jellies all right, and there is a time when it will jelly itself, alone, but this time is in August when the stalks are well-matured. Always select well-matured stalks of pieplant for jellying. Black raspberries, black currants, and blackberries all make delicious jelly but are used more for jams. The jellying is done by the first rule given, but in nearly all the Summer fruits a little of the currant juice adds piquancy and acidity and aids the jellying.

Pineapple juice does not jelly readily, but if this is canned in the season, and made into jelly with tart but very slightly flavored apples, it makes a jelly a little unusual. Wild plums, wild grapes, the buffalo-berry, all make fine jellies. Tame plums should be jellied while a little green, so also should tame grapes. Peaches will not jelly, nor apricots, but will form a most delicious product, combined with apples.

To make apple, or crab apple jelly, merely wash and cut up the fruit, excluding the seeds, cover with water and cook tender, press out the juice, and follow the regular rule as to time of cooking and amount of sugar used. These all jelly readily and look beautiful. Quinces, hold a large amount of pectin, and may be jellied alone or with apples. Usually the apples cost less, and the quince flavor is strong enough to supply half its own bulk of apple with the regular quince flavor. In using quinces for jellying, it is an economical plan to use the body of the fruit for preserving with sweet apples, and only the peelings for the jelly. Every seed must be excluded, as the seeds form a viscid, sticky substance which will never jelly, and is really unsuited for food. We usually use the peach skins the same way, for peach jelly. Some use the juice from canned peaches, but it is a poor plan, because one never knows just how much extra sugar to supply, and another thing, it is well to use only sufficient water or syrup to can the peaches properly, and fix your jellying liquid according to the right rule.

ROSE SEELYE-MILLER.

IT is better to admonish than to reproach; for the one is mild and friendly, the other harsh and offensive; the one corrects the faulty, the other only convicts them.—Epictetus.

Homemade Yeast.

HAVE you ever printed any recipes for homemade yeast, and will you repeat it? M. A. R.

The following recipes were given in THE R. N.-Y. several years ago, and have been tested with satisfaction by many readers:

HOMEMADE YEAST.—Pare and boil four good-sized potatoes; when done, mash them fine. Put half a cupful of dried hops into one quart of water, and boil 15 minutes. Put one pint of flour into a bowl, strain over it the boiling hop water, add the mashed potatoes, and beat until smooth, then add half a cup of sugar and two heaping tablespoonfuls of salt. Turn into a stone jar or bowl, and let it stand until lukewarm, cover and ferment three or four hours, stir it down every time it comes to the top of the vessel, then put it into a jar or large bottle, or something you can cover tightly, and stand in a place where it will keep very cold, but not freeze. It will keep two weeks. Save one cupful of this yeast to start with next time.

VIRGINIA DRY HOP YEAST.—Take as many hops as you can grasp in your hand out of a sack (or a few more won't hurt), put in a porcelain or granite pan, then add two quarts cold water; boil briskly for one-half hour; have boiling water ready to fill up pan as full as before boiling. Then have ready a gallon jar with 1½ cup wheat flour, one large spoonful of sugar, one teaspoonful of salt; mix all together and strain the hop tea in jar. Stir all lumps out, set away to cool. When lukewarm add a good yeast cake or any good raising to start it. Then let it stand one day and night, stir down once or twice during this standing; then pour in pan, take one part wheat flour, two parts cornmeal, make as stiff as dough for light wheat bread. Make in small cakes like those you buy; put on floured cloth on a board and dry, turning till real dry. Put in paper sack, keep tied tight. Keep where it will not freeze. This will last a family of seven or eight for five months.

More About Rose Beads.

ON page 800 you print an article on rose beads. The using of an old rusty kettle is very offensive to me, and I send you directions from "Young Folks," from which we made hundreds of beads last year of all sizes. We used the petals of the roses ready to fall, gathered them every morning and used a peck measure, pressed full of petals for one batch; added no perfume, their own fragrance is at the end of the year still scenting my bureau drawers. We used a new thin, black pan, the five-cent quality; I think they are called sheet iron, and can be purchased at any of the five and ten cent stores. Our beads have been greatly admired. This year we are going to make up all the rose petals we can gather. For uniform size we measured each one, by different size spoonfuls of pulp and rolled them between glass when partly dried, which made them glossy; do not use oil.

A large quantity of rose petals is required, even for a single string of beads. The petals may be of any or all kinds and colors, but care must be taken to remove all the stems, dried petals, leaves and other foreign substances. The petals are then ground to a fine pulp in an ordinary food chopper. It is necessary to run the pulp through the food chopper six times, so that it may be as fine and smooth as it is possible to make it. A surprising quantity of juice runs from the petals as they are reduced to pulp, but all of this is saved and well mixed with the mass.

The pulp is a dirty white or pink color. It is spread in a thin layer on sheet iron pans, when it soon begins to blacken by the oxidation of the iron. Every few hours it is turned and stirred, in order that the entire mass may become uniformly black. The blackening process may be greatly hastened by adding a few drops of tincture of iron. As a rule, a very little attar of roses is added to the pulp, so that the beads may be appropriately perfumed.

The next step is to mold the beads. As soon as the pulp has dried sufficiently to work easily and hold its shape small quantities are taken in the hands and rolled between the palms until perfectly round. Of course, the balls are made much larger than the finished beads are desired to be, as they shrink in drying to about one-third of their original size. Then they are placed upon plates or pans until partly dried, when they are again rolled to correct any irregularities of shape. Then they are pierced with large pins, and left upon these pins to dry. Those who are particularly skilled at bead making sometimes ornament each bead in any manner suggested by the individual taste and ingenuity. A. L. S.

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If your neighbors are not subscribers to the Rural New-Yorker, get their subscriptions. If they are subscribers, get their renewal.

Rural New-Yorker, 333 West 30th St., New York.

Live Stock and Dairy

Corn for Grain and Silage.

IT might be interesting to H. S., Union, N. Y., to know how farmers here meet the same problem which he has to solve. Most of us keep cows, and also need corn to feed to hens as he does, so we grow field corn of a flint variety, let it grow until the ears are well glazed, then break them off, throwing four rows together in small piles. The stalks are then cut by hand and put into the silo. If a harvester was used the corn would be crushed. We usually begin to husk on the broken-off ears right away, as I feed the softest ears at once, running them through hay cutter which shells some and cuts the soft cobs up so that the hens eat quite a little of it. It is usually quite late before all is husked but it keeps well in the husk and dries out quickly in the crib after husking. Of course it is not equal to grain that is ripened on stocked corn and stalks with good ears should be cut out while the corn is being picked off and stocked for seed corn. A corn husking crew operated in this section a few years ago, and a good many stocked their corn, had it husked by machine and the shredded fodder put into their silos; except where quantities of water were run into the silo with the fodder it was a failure as far as good feed was concerned.

Massachusetts. MRS. ELLA E. LUKE.

Building an Octagonal Silo.

WILL you give the specifications for building an octagonal wooden silo, large enough for a dairy of 24 cows? Would chestnut lumber be suitable for the same? I can get it sawed from my woods at a moderate cost. Would it need to be planed? E. A. P.

Chatham, Pa.

For some time there seems to have been very little inquiry about octagonal silos, the building of both cement and round ones having seemingly monopolized the inquiries. I think there is such a silo put out by a St. Paul firm, an iron frame in which the sides are held firm, and can be replaced when decayed. The octagonal silos about here, are built by half lapping 4x6 inch stuff at the ends, and as each layer is added, spiking them to the layer below with 30-penny nails. Chestnut lumber would be very durable, though it would take a large amount of lumber to erect a silo 60 feet in circumference, and 30 feet in height. For the size of silo you want, you will need to cut the pieces nine feet in length, so when half lapped at the ends, it will give you a clear eight feet to the inside. It will be better to have the stuff sized—not edged—so that in laying, you will not have layers of different thicknesses, as this would invite ingress of the air. Be sure to have the inside face perfectly true, so as to offer no obstacle to the settling silage. Between each layer, have a good liberal "streak" of gas tar to insure an airtight joint, and be sure to have enough at the joints of the half laps. About each seven feet you will want a man-hole in the side. One 18x30 inches will be ample. Better have a frame doorway with jambs, so the little doors will fit it snug, and the pressure of the silage will hold it in place. Possibly if the whole interior of the silo was painted with gas tar and gasoline, it would be a good thing, but do not paint the outside, as that would not let the timber dry out. A friend suggests when the silo is finished, that these little corners be rounded with a little good cement mortar, and then painted. One thing is certain; with such a silo. there will be no shrinking of staves, hoops dropping off, and collapses of the structure, or rats gnawing through the walls. JOHN GOULD.

Ohio.

Bull Beats the Hired Man.

THIS is not a joke, nor a newspaper fake; but a fact, and an unpatented idea which any dairyman is free to utilize. To J. W. Berry of British Columbia, an economist of local celebrity, is all credit due for this original idea, practically demonstrated. Mr. Berry is the owner of a 16-months-old bull of best "Bred in British Columbia" stock. The animal needed daily exercise, also shoulder development; so Mr. Berry set his wits to work on physical culture exercises for growing bulls, along lines which should prove both efficient and remunerative. A tread mill was constructed, and for one hour, night and morning, the young bull exercises therein. As he treads his endless path, shafting revolves, pulleys turn, and belting conveys power to the milking apparatus, and the herd of 40 cows is milked at no extra cost for labor. Mr. Berry says the exercise is a benefit to the health and development of the bull, and that he is laying on a pair of shoulders that will score points at the prize competitions at the Fall fairs.

British Columbia. E. R. C.

Hard Churning.

MY cream is hard to churn. It takes me from two to two and a half hours to do it. The cows have fresh pasture, part woodland and part open, fresh running water. They get plenty of salt, for it is in their manger all the time and we feed them mixed chop. We separate our milk with a hand separator and do not mix our cream until thoroughly cool, using a barrel churn which turns over and over. We have the Holstein cows and none has been milking long. I. S. K.

Batavia, N. Y.

I see nothing wrong in your treatment of cows or cream, so far as your information goes. The cream should be ripened as quickly as possible by the use of a starter, when ready to churn. Sour cream or buttermilk is all right for this purpose. A fairly sour cream churns better than one not thoroughly ripened. Too low temperature may also give trouble, though at this time of year the cream should not ordinarily be above 65 deg. Thick cream also churns better than thin. C. L. M.

Bacterial Content of Certified Milk.

PLEASE let me know what bacterial count is allowed in certified milk for New York City, Boston, Philadelphia and Washington. G. D. B.

Pennsylvania.

The New York, Boston and Philadelphia standards for certified milk require that the bacterial count shall not exceed 10,000 per cubic centimeter; with regard to Washington the health officer of the District of Columbia states:

I regret to advise you that there is no certified milk sold within the District of Columbia. A number of years ago a committee was appointed from the Medical Society of this jurisdiction to prepare rules and regulations governing the certification of milk products but, so far as I am aware, no such milk product has ever been certified by them nor have they any modern rules and regulations governing such certifications. My last information from the Secretary of the Medical Society was to the effect that this committee is not now in existence.

W. C. WOODWARD.

FEEDING QUESTIONS,

Dairy Ration.

WITH good mixed clover and Timothy hay, considerable Alfalfa, sufficient silage to give each cow 35 pounds per day, what in your mind, is the best of the following feeds to use, and best mixture of grain? Sugar feed $26 per ton; molasses feed $23; bran $29; corn chop $31; cottonseed meal $1.65 per cwt.; brewers' dried grains $23 per ton; gluten $30. W. B. G.

Pennsylvania.

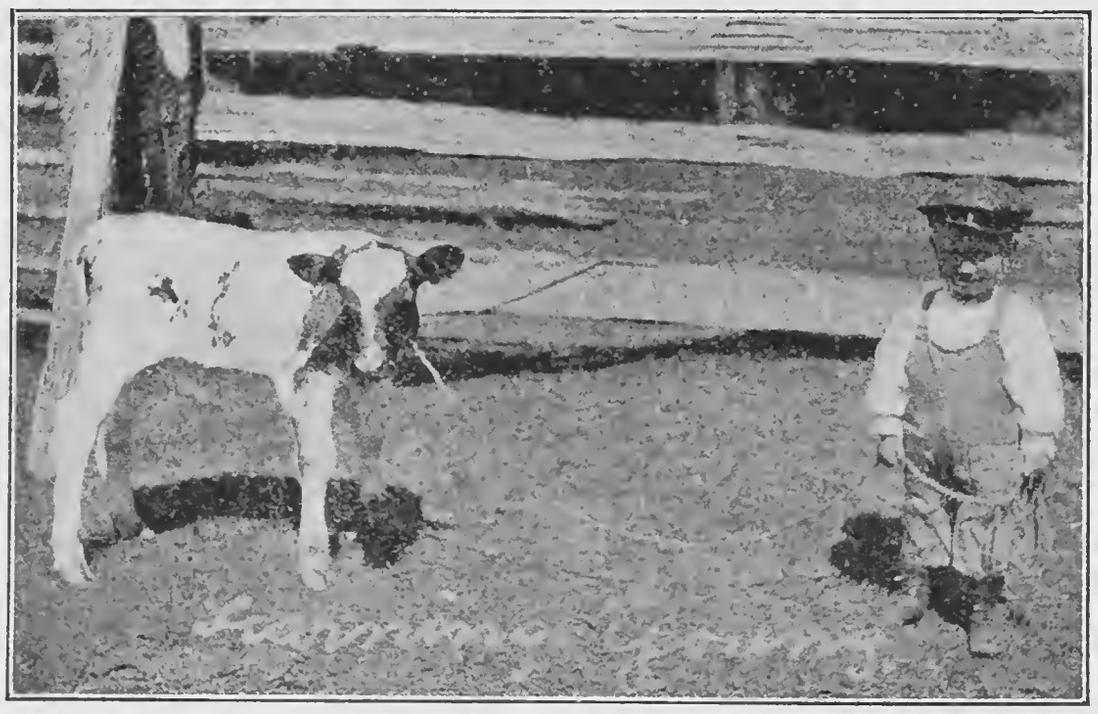
From the feeding stuffs mentioned I would select the following ingredients for milch cows: Five pounds dried brewers' grains; two pounds cottonseed meal; two pounds corn chop; one pound wheat bran. This will make a well-balanced ration which will be readily eaten after your cows get accustomed to it. This change, however, should be made gradually, extending over a period of a week or 10 days at least, as any sudden change in the composition of a ration is very apt to produce undesirable results for a short time. C. S. G.

Decreased Milk Flow.

WE have a Jersey cow, calved three months ago, and at present giving 16 quarts of milk. She is decreasing in the milk flow and by scientific feeding I expect to increase it again. Can you give me a balanced ration from the following feeds? Gluten, bran, cornmeal, middlings, and brewers' grains. Should this be fed wet or dry, before or after milking? How much should I feed at a time? The cow is let out on the pasture all day and after milking except in bad weather. J. A. L.

New York.

A mixture of equal parts of gluten, cornmeal and brewers' grains will help you to keep up the milk flow. This should be fed dry, twice daily, and preferably when you let the cow into the stable, though this is not of particular importance. Probably two or three pounds at a feeding will be sufficient at present, though as the pasture deteriorates you will have to increase the amount. C. L. M.



BEGINNERS IN THE DAIRY BUSINESS.

Ration for Freshening Cow.

WILL you give a well-balanced milk ration from following foodstuffs? Cow is about to calve. Cornmeal, bran, middlings, ground corn and oats, gluten, cottonseed meal, and hay for roughage? G. L.

For a warm weather ration the following will be excellent: Bran, two pounds; cottonseed meal, three pounds; corn and oats, two pounds, and gluten one pound. This is an average ration, the amount of which you may vary according to the production of the cow. For a cold weather ration add one or two pounds of corn meal. C. L. M.

HE: "You'll be sorry some day that you didn't marry me." She: "Well, I'd rather not be married and be sorry I wasn't married than be married and sorry I was married."—Judge.

BENEVOLENT OLD GENTLEMAN: "Don't you think fishing a cruel sport?" Fisherman: "I should think it was. I've been sitting here five hours and never had a single bite, I've got three wasp stings and been eaten up with flies, and the sun's taken all the skin off the back of my neck!"—London Farm and Home.

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In use over 50 years

NEGLECT Will Ruin Your Horse

Send to-day for only

PERMANENT CURE

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$3 Package will cure any case or money refunded

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Makes Hard Roads Easy

SOCONY PETROLEUM PRODUCTS

The Mica's the Reason

STANDARD OIL COMPANY of New York

New York Albany Buffalo Boston

KERRY CATTLE AS ECONOMICAL PRODUCERS.

BREEDERS of other than Kerry cattle question whether this little Irish cow, hardened through centuries of foraging on meagre pastures, will become a producer of such efficiency that she will prove profitable on the average American dairy farm. For economical use of feed she has a competitor in the Ayrshire, which has outdistanced the Kerry cow in numbers in America. The Ayrshire is a larger cow, has many champions in the United States and is being well advertised. There are scarcely more than two or three dozen breeders raising Kerry cattle, and these men are enthusiastic, regarding this as a breed which will afford efficient service on barren pastures and rocky hillsides.

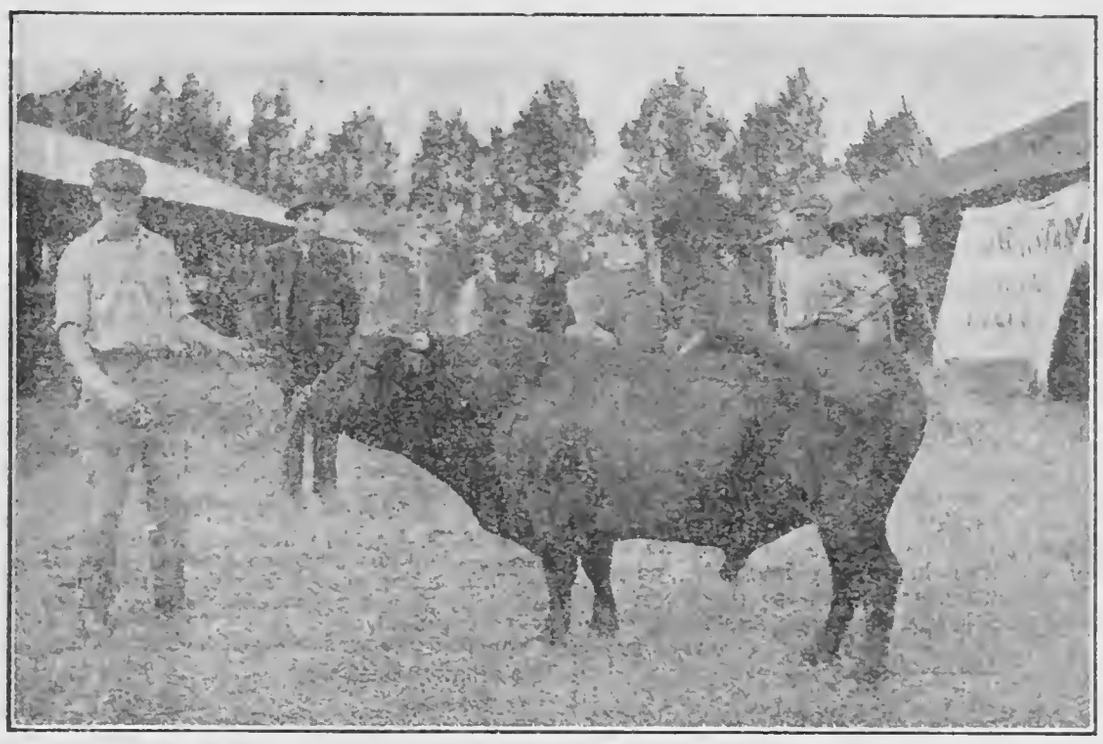
According to British ideals of the Kerry cow, she should not weigh over 900 pounds when in breeding condition, and the Kerry bull is allowed 1,000 pounds weight. This places her as to weight on the average with the Jersey, and from 500 to 600 pounds less than a mature Holstein cow. The English Kerry and Dexter Herd Book gives the following description of the cow: "She should be long, level and deep, her color black, her head long and fine, her horns fine at base, mottled or white tipped with black, upright and cocked, her eye soft and prominent, her bone fine, her coat in Summer like satin, in Winter long and thick, her udder should be soft and large, but not fleshy, protruding well under the belly, teats being placed square and well apart, the milk veins prominent and large, the tail should be well put on and have at the end long fine black hair. A small amount of white on the udder and underline need not disqualify. The bull should be whole black without a white hair, should have a long head, wide between the eyes, of masculine character, throat clean, horns medium length, mottled or white with black tips, turning backwards; withers fine, back straight from withers to setting on of tail which should be long, fine, tipped with black hairs."

There has been little systematic effort in the United States to ascertain the economy in milk production in the breed. In Ireland and England there are many herds, and very satisfactory results seem common. An Irish breeder says the average quantity is about 12 quarts daily while many cows producing 20 and 22 quarts are familiar to breeders. One Kerry produced 1,100 gallons milk in a year. This is about three times the amount produced by the average American farm cow. The Kerrys test from 3½% to 4½%, and some as high as 5%. A New York breeder stated several years ago that his Kerrys yielded 15 to 20 quarts daily and that none tested under 4½% fat.

The organization of the American Kerry and Dexter Cattle club four years ago was effected through correspondence. Prof. C. S. Plumb of Ohio State University started the movement. Any animal, according to the article of association, imported from Ireland or England up to January 1, 1912, from ancestry registered in the Royal Dublin Society's or the English Kerry and Dexter Cattle Society Herd Book, any American or imported animal from purebred unregistered ancestry, was accepted for registry until January 1st, 1912. Although the Kerry and Dexter cattle are registered by the same association they are separately classified, and no cross of Kerry and Dexter shall be registered.

In Britain the Ayrshire is termed the poor man's cow, the Kerry is considered the poor poor man's cow. The Kerry will even thrive on poorer land and on scantier pasture than the Ayrshire. The Kerry will produce results on poorer feed than any other breed, and with less care. She will withstand rigorous weather conditions which would deprive any cow of producing ability. The Kerry possesses abilities which in all probability would recommend her to the farm in cold locations, or on hilly and mountainous farms with scant vegetation and subject to extreme weather conditions.

W. J.



A WELL-BRED SPECIMEN OF THE KERRY CATTLE.

Azoturia.

I have a horse six years old that I use double for all kinds of hard work. Last week after standing in the barn five days I took him out; after driving for about half a mile he began to sweat and trembled so that I had to take him from the pole. By the time he was clear he went down three times, one after the other. I called a graduate veterinarian who called it black water. By the second day he seemed to be getting better, by the third day he was so stiff in his front legs that I could hardly get him out of the stall. I called the veterinarian again, who left me some medicine, but the horse does not get any better, lost all appetite and appears to be very lame in front legs; not able to get up alone. What is the trouble and what will cure him? F. F. F.

Massachusetts.

Azoturia (black water) certainly was to be suspected as the cause of the symptoms noted. It comes on after a period of one or more days of idleness in the stable. No horse ever should stand for a single day idle in the stable, and feed should be greatly reduced in amount of richness when there is no work for the horse to do. Support the horse with slings. Feed light, laxative rations. Rub liniment upon the affected parts once daily. Let the veterinarian give nux vomica in increasing doses. Azoturia sometimes affects the fore legs; but commonly the hind legs are attacked and often the muscles of the thigh waste away.

A. S. A.

Abnormal Breathing.

I have a bay horse seven years old that was very sick when he was brought here from the West about two years ago. Since that time he has breathed quite hard; has no cough or discharge from nose, but blows his nose very frequently. Can you advise me what to do for him?

B. M.

Have a graduate veterinarian examine the nostrils, as one of them may contain a tumor (polypus) which may be removed by means of an ecraseur. If no growth is there the lining membranes of the nose may be thickened, and for that there is no specific remedy. It is purely a case for treatment by the local qualified veterinarian, as we cannot prescribe confidently without making an examination. If the animal is a "roarer," from laryngeal hemiplegia (paralysis) the veterinarian will have to operate on the larynx.

A. S. A.

EMPLOYER: "Good morning, Robert. I hope all your family are well this morning." Office Boy (unsuspectingly): "Yes, sir, thank you." Employer: "I'm glad to hear it, Robert. There is to be a baseball game this afternoon, and I was afraid it might have a fatal effect on some of them."—Boston Transcript.

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Springbank Herd—Big Berkshires

I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
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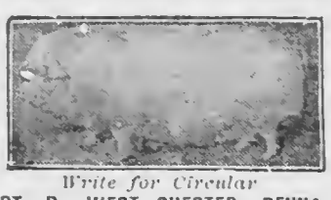

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GUERNSEY BULLS

One 15 months old; his dam made 620 lbs. fat and 14500 lbs. milk in one year. His sire has 3 A. R. daughters and 4 more under list. Price, $200. One 2 months old. His dam calved at 20 months and made 435 lbs. fat, besides calving again during the year her record was made. Its sire is from a 640 lb. daughter of May Rose King. Price, $100. These are high-class animals from high-class cows.
W. ROBERT DUNLOP, Fayetteville, N. Y.

FOR SALE—Registered Ayrshires of quality. A small herd consisting of cows, yearlings and heifer calves, headed by a son of Bargenoch Victor Hugo. Will sell as a herd or singly. A. F. Curtis, Ballardvale, Mass.

FOR SALE—1 Ayrshire Bull Calf 3 months old, dam registered giving 40 pounds of milk per day. Sire, Son of Bella Clockston and Howies Dairy King. None better bred. 2 months old dam registered, giving 45 pounds per day, has a four-year old daughter as good as she is. Sire same as above calf. Price low.
CASKEY FARMS, Richmondville, N. Y.

Brown Swiss Cattle—Bulls ready for service. Cows and Heifers. All animals descended from cows entered in or eligible for Registry of Production. GEORGE W. HARRIS, Wethersfield, Conn.

FOR SALE—1 Jersey Bull Calf. Born Sept. 11, 1913. Solid color; a beauty. Dam and Sire both registered. Also one born March 13, 1914; registered dam and sire. Slightly broken in color but from a cow testing 6%.
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FOR SALE—Jersey Bull Calf

Fine Pedigree; one year old.
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Fern Hill Farm—REGISTERED JERSEYS. Tuberculin tested. Cows, heifers and young bulls, by "His Majesty the King." Imported. FERN HILL FARM, West Chester, Pa.

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Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

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$100 to $325, according to blood.
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FOR SALE—4 year-old registered Holstein bull, Paul Mercena Beets de Kol. Perfectly clever. Price, $200.
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Sired by Colonel Korndyke De Kol, one of the best sons of Pontiac Korndyke. Also 4 grandsons of the King of the Butter Kings, from choice heavy-milking dams, at popular prices. Write me what you want. Donald F. McLennan, Syracuse, New York

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"A CHICKEN-MAN'S HONOR."

What Should He Do? Mark the Eggs.

MR. COSGROVE'S letter on "A Chicken Man's Honor" is interesting. His problem has been faced by most of us who sell hatching eggs. The only fair and square and sure course it seems to me is this: Mark every egg in some individual manner. Then notify your customer that you will make good every infertile egg that he returns to you. The mark must be something that a dishonest customer cannot copy, or he will send you back his own virgin eggs with your mark on them. But there are many ways of marking eggs so that nobody can fool you. W. E. KEYES.
Massachusetts.

Infertile Eggs Returned.

IN passing opinion on your article "A Chicken Man's Honor," page 790, you state "None hatched; all infertile." If the eggs were infertile they should not have been incubated longer than seven or eight days and returned to seller. The seller cannot guarantee any hatch, all he can do is to guarantee the fertility which he should do. He is certainly responsible for the eggs until they reach the customer and no matter how the loss, should there be any, should make it right. He should make a statement that eggs not fertile should be returned before 10 days (he can put some small mark of recognition on shell). He then has evidence of the state eggs reached customer if they are returned to him, at least in most cases it would be so, but how can a man be responsible for eggs that are put in an ice box or an oven or anything else that does no better for 20 days and do not hatch. FRED CARTER.
New York.

Duplicate the Eggs.

LET me suggest to Geo. A. Cosgrove that the fair thing to do with a customer who complains of a bad hatch, is that you stand ready to duplicate every egg returned to you, transportation prepaid. Any honest customer will be glad to pay the express both ways if you are willing to make good every bad egg. That is to say, if the hatch comes perilously near being a complete failure.
Vermont. J. H. LIVINGSTON.

Make Good and Say Nothing.

I THINK I am well qualified to answer this from both sides. I have shipped this season some 20,000 eggs for hatching to about 1,000 customers, and have had complaint of every egg infertile when I know positively that the eggs left my place highly fertile, as we are hatching from every mating the season through in a mammoth incubator, and know every week just how the eggs from every mating are running as to fertility and hatchability.

My practise is to duplicate the shipment without query, as I prefer to retain the customer's good will even if my eggs were not at fault. So many things can happen to fertile eggs after they leave my hands that the customer may be right; the eggs appear infertile to him and I hope by duplication to keep the customer for the future and also to do my part in seeing that he gets something for his money. Of course there are a few who deliberately swindle and ask for a duplicate setting when they had good results from the first, but I figure that such cases are so few as not to cut any figure in the year's business. I have investigated several complaints of every egg infertile and invariably found that the customer was a novice, and had set the eggs under a hen in the regular henhouse in the nest where she was accustomed to lay, and no wonder the eggs did not hatch. I have told the customer what the trouble was and how to get a good hatch, and to prove my statement have made him a present of a second setting, and invariably have received a good testimonial as the result.

From the buyer's side I occasionally purchase eggs for hatching, and at this moment have hens sitting on eggs that have cost me $10, $15 and $30 per setting respectively. I certainly expect to get my money's worth out of the investment, and if I do not get a 50 per cent. hatch from each setting I shall make complaint, as my customers make to me when they do not get a fair hatch. I sell hatching eggs to my customers expecting them to get a two-thirds hatch or better, and when they don't get it I invite them to let me know. I invariably make good to them with additional eggs. I calculate on a certain percentage of such claims every season. F. M. PRESCOTT.
New Jersey.

A Buyer's Experience.

I AM keeping S. C. White Leghorns, but my little boy wanted a few chicks "different from mother's," so I sent for 30 Mottled Ancona eggs for him. When the eggs arrived I was not pleased with them; they were not uniform in size, color or shape. However, I placed them in the incubator with some of my own eggs. At the first test (five days) 15 tested out infertile. At second (15 days) only six were left in the incubator and even these failed to hatch, so my little boy, to his great disappointment, did not get a single chick. It could not have been the fault of the incubator as my own eggs hatched 70 per cent. We wrote to the seller stating these facts, and he had not even the courtesy or business sense to answer our letter.

I offer a plan which I think is a solution, although perhaps older and wiser breeders than I may say it is not feasible. It is this: Every breeder should stamp with a small indelible stamp his name and address (or name only) on every egg he sends out for hatching, enclosing with them a card stating he will replace infertile eggs only if returned to him. Should a customer claim that the eggs are all "infertile," he must ship them back to the seller, who should pay all transportation charges if the eggs are as stated. In this way the seller can test the eggs himself and make sure the buyer has not mistaken (?) dead germs for infertile eggs. This seems to me to be fair to both sides. If the buyer should be so unfortunate as to get "all infertile" eggs, it would be very little trouble for him to replace the eggs in the case they were sent out in and ship back to the seller on the sixth day. The seller would, or should, be perfectly willing to replace such eggs and not have the uncomfortable feeling that he probably has been cheated. Of course everyone expects a certain percentage of infertility, differing according to the earliness or lateness of the season. EDITH GRATIAS.
Pennsylvania.

A TALK ABOUT BOSTON MILK.

A FEW truths spoken by Dr. Blodgett of Boston before the Medical Association a short time since are well worth noting. Pure milk, fresh and promptly delivered, is what the consumer wants; it should be and usually is what the middleman or contractor wishes to handle; it also should be and often is what the farmer wishes to produce. The farmer ought to understand that the consumer has a right to demand pure milk at a reasonable price which would properly pay the producer for his pains and trouble in producing this article under good conditions, which will satisfy the user. As the consumer loses confidence in the quality of his milk supply, his consumption decreases. Thus the farmer's business is injured as a whole by dirty milk from a few. The non-increase of milk consumption during the past five years, according to growth of population, is largely due to people's loss of confidence in the milk supply.

This loss of confidence has been caused by stories that milk four days old is delivered in Boston, also that milk from diseased cows and in some cases filthy barns is delivered, and also stories of epidemics due to use of milk from improper sources or where proper care and precautions were not used. For some of these complaints the farmers have been responsible, for others the contractor has been responsible, for still others mere rumor or some so-called investigation has been responsible. I believe I am safe in saying that if by some miracle, everybody in this city should suddenly become sure of receiving pure milk not over 24 hours old, the consumption of milk would increase enormously.

I believe the farmer who produces dirty milk or knows where such milk is produced and does not report the same, is hurting his own business, and also the business of others. Also the contractor who does not see that his milk is properly handled and promptly delivered, is injuring his own business and that of others. So important are these facts that certain associations of producers have been formed, and no producer can belong whose product does not come up to the required standard of purity. It is believed this policy will win back the confidence of consumers and increased demand for this product will follow.

The farmer's position is this: He is in most cases paid an inadequate price to produce first-class milk. His living depends on this product; he has too often found he gets the same price for a poor product as a good one; that is, no premium for improved quality. Every six months a dispute arises as to price to be paid for the coming six months. This lasts perhaps a month before he knows what he will get, a price below cost of producing a reasonable product. What can he do? In many cases all his property is the cows and equipment for milk production, no cash capital to try other lines, so he worries along for six months or more hoping conditions will change and price be better. Under these conditions, who can blame him for producing as cheap a product as possible? Can you blame him for not seeing the justice of some inspector's demand for improvement in conditions? At present less than one per cent. of the milk sold in Boston is a certified product. The rest is just milk, some produced under sanitary conditions, some not, all mixed together in many cases and sold as milk.

There seems nothing is gained by the farmer who produces a first-class article, except the self satisfaction that he is doing right; he generally receives no other reward. Under these conditions a man's conscience must be superior to the ordinary man's if he continues trying to supply a good article when his neighbor gets just as much for supplying a poor one. Further, the conscientious man is the more likely of the two to discontinue business and try something else, which does not improve the percentage in favor of the better supply; it works the other way. Almost any other commodity in the world is sold on its merits, different grades, different prices. Milk is sold mostly as one grade yet it varies greatly. In the city today you receive some of one man's, to-morrow some others, or two or three mixed as it happens, you do not receive your supply right along from the same dairy, unless in exceptional cases, yet at the month's end you pay the same price for all and the grade of supply may have varied greatly. Many producers do not know how to produce clean milk economically. Also, few physicians, boards of health or even bacteriologists, know as much about practical production of milk as many farmers do. Can the farmer be blamed for not obeying many of the foolish rules issued by this class? As the rule fault is found, but no practical suggestions are offered to remedy it.

The State inspector says unless some plan is found to encourage production in nearby New England territory, the present policy of extending the distance for obtaining the necessary amount must continue, and no improvement of supply is likely to result from the extension policy. There should be three grades of milk sold in Boston: First, pasteurized or cooked milk, which is perfectly good for cooking, can be used for drinking, and is sold frankly as milk not suitable to be used when raw, but which is rendered harmless by cooking. Second should come the great bulk of milk costing one cent per quart more and produced on a plan similar to Dr. Worth's idea of a central sterilization plant. Third, certified milk of high fat content, to be sold at extra price. The policy of financial encouragement for a good product instead of price and other punishment for a poor product, should be the policy to improve conditions and product. There has been over $100,000 spent on inspection each year in this State. Use half or more of this for premiums to producers who improve and supply a higher quality and the results would be more satisfactory. Some small dealers are now using auto trucks to collect milk and pay up to 10 cents per can extra for good quality fresh milk, and sell the same in two classes, a good quality at nine cents per quart, the other guaranteed to be not over 24 hours old at 10 cents per quart. The demand for the latter sometimes exceeds the supply.

Most producers are glad to adopt an innovation if a good reason is shown for doing so, or an increased price is the reward. There always will be some milk produced not fit to use in raw state, such must be properly treated before selling. The proposal put forth by some to sterilize all the milk supply is foolish, as that which can be safely sold as raw milk should be as this is much more beneficial to digestion than the cooked milk, as the latter process kills the bacteria which are beneficial and an aid to digestion as well as the kinds that are harmful.
A. E. P.

THE pupils in an Alabama school were asked to construct a sentence containing the word "amphibious." Quick as a flash the son of a local preacher gave the following: "Most fish stories am fibious."—Woman's Journal.

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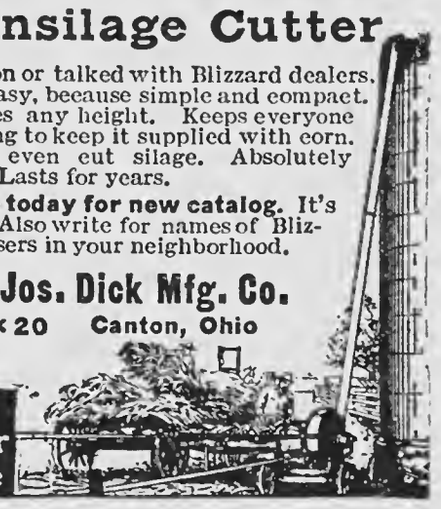

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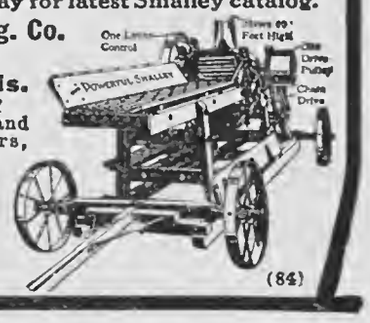

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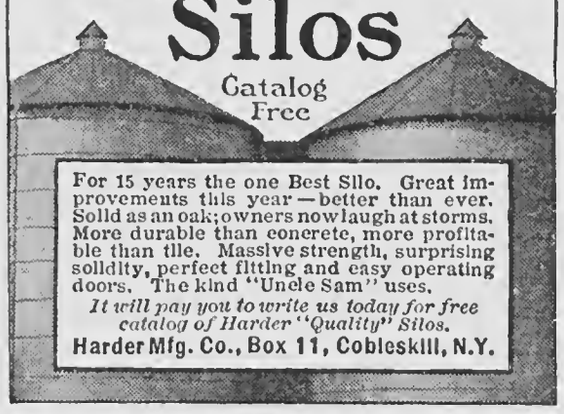

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The Henyard.

THE EGG-LAYING CONTEST.

Just 100 more eggs were laid in the thirty-third week than in the thirty-second, the output for the week being 3,309. Tom Barron's White Leghorns take first place for the week with a score of 61. Twice before this pen has scored 61, the highest number yet laid. Chas. N. St. John's pen ties with the pen of Geo. A. Cosgrove for second place, each scoring 57. If this last pen had laid one more egg on the thirty-first week it would make 57 each week for five weeks in succession. This is pretty even laying.

Three pens tie for third place with scores of 55 each. They are Glenview Poultry Farm, Manor Poultry Farm, and P. G. Platt's pen from Pennsylvania. Frederick M. Peasley's pen laid 53, as did the pen from Branford Farm, Conn. All the above winning pens are White Leghorns. The prospect of the White Leghorns winning the contest is very good. The "sour milk" pen from Storrs Agricultural Station is now only 43 eggs behind Barron's White Wyandottes. The Storrs pen is one of the "experimental" pens, and is not competing for the prize; but the pen of Francis F. Lincoln is only 67 eggs behind the White Wyandottes, and stand a fair chance to come out on top. The weekly record is below:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	28	816
Frank L. Tuttle, Massachusetts	30	924
Waveny Farm, Connecticut	42	833
J. J. Francais, New York	38	1,057
White P. Rocks.		
Albert T. Lenzen, Massachusetts	41	884
F. H. Benton, Connecticut	35	944
Storrs Agr. Station, Connecticut	32	743
Storrs Agr. Station, Connecticut	38	792
Storrs Agr. Station, Connecticut	44	921
Storrs Agr. Station, Connecticut	36	788
Storrs Agr. Station, Connecticut	47	605
Buff P. Rocks.		
A. A. Hall, Connecticut	47	943
W. C. Morgan, Jr., Connecticut	31	697
White Wyandottes.		
Tom Barron, England	39	1,373
West. Mt. Poultry Yards, Connecticut	30	840
Merrythought Farm, Connecticut	51	1,216
Neale Bros., Rhode Island	39	1,206
D. J. Ryan & Son, Connecticut	35	960
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	32	923
Dr. N. W. Sanborn, Massachusetts	28	858
Am. Buff Wyan. Club, New York	36	788
H. L. Hamilton, Connecticut	35	606
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	37	851
S. C. Reds.		
Robert Seaman, New York	35	705
J. S. Gillespie, Connecticut	34	905
Dr. J. C. Dingman, New York	23	782
Burnham Pltry. Farm, Massachusetts	32	691
H. P. Deming, Connecticut	37	814
Geo. P. Dearborn, Florida	35	985
Dr. J. A. Ritchie, Pennsylvania	45	1,088
Ernest Underhill, New Jersey	38	742
W. H. Bumsted, Connecticut	29	548
Pinecrest Orchards, Massachusetts	47	1,049
Harry B. Cook, Connecticut	24	917
Colonial Farm, New Hampshire	24	938
A. B. Brundage, Connecticut	49	1,111
R. C. Reds.		
Glenview P'try. Farm, Connecticut	37	915
C. S. Scoville, Connecticut	16	652
White Leghorns.		
Storrs Agr. Station, Connecticut	51	997
Storrs Agr. Station, Connecticut	48	1,061
Storrs Agr. Station, Connecticut	50	1,080
Storrs Agr. Station, Connecticut	52	1,330
Storrs Agr. Station, Connecticut	51	936
Braeside Pltry. Farm, Pennsylvania	41	895
Glenview Poultry Farm, Connecticut	55	987
Manor Poultry Farm, New York	55	957
A. B. Hall, Connecticut	32	968
Marwood Poultry Farm, Pennsylvania	41	1,079
Geo. M. Harris, Connecticut	40	821
Bonnie Brook Farm, New York	51	1,043
N. W. Hendryx, Connecticut	46	906
J. J. Linehan, Massachusetts	41	841
F. F. Lincoln, Connecticut	49	1,307
Cecil Guernsey, New York	42	1,119
T. W. Moore, Connecticut	51	905
Chas. N. St. John, New York	57	904
C. W. Sherwood, Connecticut	35	937
L. E. Sands, Pennsylvania	48	951
Tomoka Poultry Farm, Connecticut	45	859
Venture Poultry Farm, New York	43	821
Mrs. K. E. Woodruff, Connecticut	48	918
Windsweep Farm, Connecticut	46	850
C. H. Savage, Connecticut	49	922
P. G. Platt, Pennsylvania	55	1,046
Heneta Bone Co., New Jersey	34	315
F. M. Peasley, Connecticut	53	948
Chas. Heigl, Ohio	49	847
Tom Barron, England	61	1,169
Branford Farm, Connecticut	53	1,043
James Munn, Massachusetts	50	862
Geo. A. Cosgrove, Connecticut	57	865
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	44	983
Blue Andalusians.		
E. D. Bird, Connecticut	27	810
Buff Orpingtons.		
O. Wilson, West Virginia	36	708
White Orpingtons.		
P. A. Demgar, New York	24	661
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	26	508
Silver Campines.		
W. J. H. Lobel, New Jersey	45	761
Dunghills.		
H. W. Collingwood, New Jersey	46	751
Daniel Hine, Connecticut	26	723
Daniel Hine, Connecticut	20	788
Mixed Breeds.		
Profitable Poultry, Massachusetts	43	846
Profitable Poultry, Masachusetts	37	821

GEO. A. COSGROVE.

Possible Limberneck.

I LOST five hens out of 170 hens in May. Their combs turned blue and necks got twisted, and next day I found the hen dead in the morning. Is there any remedy for it? E. V. A.
New York.

Your description of symptoms is not sufficiently complete to enable one to make a positive diagnosis of the disease from which your hens died, but the twisting of the neck which you mention often accompanies serious digestive troubles or possibly the eating of spoiled or putrid food of some kind. I would suggest giving any fowl which shows signs of this trouble a full dose—two teaspoonfuls or more—of castor oil and after its operation feeding the fowl upon soft, easily digested food until recovery; or death.

M. B. D.

Bumblefoot.

WHAT ails my birds? Last week I killed one cockerel similarly affected and this week another has developed the same trouble, but because it is a valuable one I wish to save it if possible. The toes begin to swell, beginning at the nail, and progressing until the whole toe is swollen and hard. It is due to parasite or is it a disease, and what is the cure? M. N. G.
Brooklyn, N. Y.

The inflammation of the toes which you describe is probably due to infection through some abrasion of the skin of the foot. If continued, it may result in abscess of the foot, or bumblefoot. Soak the affected foot for a half hour in warm water and clean it thoroughly, remove any sharp splinters or other foreign matter that may be detected, if pus has formed, open to it with a clean sharp knife. Keep the foot anointed with five per cent. carbolized vaseline after having bathed it with a solution of carbolic acid in water, one teaspoonful to ten of water. Then keep the fowl upon clean soft grass or clean soft litter which will not irritate the foot. M. B. D.

Feather-eating Hens.

MY hens are eating their feathers, they are entirely nude under the neck. I have lost three in one day. I feed cracked corn, wet oats and scratch food, oyster shell, charcoal, plenty of water. They are getting thin and do not look well. Do you think they are fit to kill for table? What do you think I ought to do? When they see a feather they seem to crave for them as they run wild after it. F. R.

Feather-eating is the result of a depraved appetite, usually the result of close confinement and an insufficient variety or improper quality of food. When fowls have contracted the habit they should be given as much liberty as possible, and if the worst offenders can be detected they should be removed from the flock. See that they do not lack for grit, supply some animal food, such as meat meal, beef scrap or skim-milk, give green stuff if their yards are bare, and look carefully about the perches and nests for red mites which may be sapping the vitality of the fowls by the irritation and loss of blood which they cause. If mites are found, clean their quarters thoroughly, whitewash the interior, paint the perches, nest boxes, etc., with kerosene to which one-fourth its bulk of crude carbolic acid has been added and see that the fowls have opportunity to take dust baths to free themselves from large body lice. The habit of feather eating would not render the fowls unfit for the table.

M. B. D.

Dysentery.

WILL you give me a remedy for dysentery in chickens? We give them clean grain of various kinds, also plenty of pure water, and the coops are cleaned every day. M. H. V.
New York.

See that the fowls do not have access to spoiled food of any kind or an opportunity to drink stagnant, impure, water. Add sulphate of iron, copperas, to their drinking water; a dram to the pint. As individual treatment, if desired, give each fowl a teaspoonful or more of castor oil and feed soft easily digested food for a time to relieve the intestinal irritation causing the watery discharges. M. B. D.

Variation in Feathers.

I HAVE a dark rich-colored male bird of the Partridge Rock variety that has small splashes of white in his cycle feathers since molting—none until after molting. Can you give the scientific reason for white appearing with new feathers? T. O. M.
Bridgeton, Ind.

This is a very frequent occurence with poultry. The same is true with feathers on the legs. I have known of a pullet that won first prize and a special as best female in the whole show to develop feathers on the legs the second year and be disqualified the second show season. These are inherited characteristics. If T. O. M. desires to use this male bird in breeding pen he should place only such females with this male as do not show any signs of white anywhere, and so hope that the solid and partridge color patterns will predominate so strongly that the offspring will not inherit this tendency to throw white the second year. There are many such changes which occur in fowls as they age. Mediterranean males are likely to show white in the face, buff colored birds fade to lighter shades as they grow older. Breed and strain characteristics as established by inheritance are responsible. A. L. C.

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Fawn and white. Valentine's strain. Bred from prize-winning birds. White egg strain. Eggs, $1 per 13. **ROBERT K. TWEDDLE, Montgomery, N.Y.**

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FOR SALE by middle of July. 600 April hatched full grown birds apt to lay early September. Irving Cockerels and B. F. Morgan famous strain, Trio, $5.00. Five ducks, one drake, $8.00; Ten and two, $12.00. **FAIR VIEW POULTRY FARM, Mayville, New York**

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have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED
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BARRON LEGHORNS and BARRON WYANDOTTES, BUFF ROCKS, VIBERT-AUSTIN REDS, DUCKS, GEESE, HALF-BARRON LEGHORNS—A 200-EGG BIRD. REDUCED SUMMER PRICES
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Tom Barron's Strain ENGLISH LEGHORN COCKERELS
100—8-weeks old cockerels, $1.00 each
100—10-weeks old cockerels, 2.00 each
These cockerels were sired by the best cockerels money could buy of Barron, and dams are from a 257 egg hen of my own breeding.
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Special for June—Eggs $5 per 100
Imported direct from Tom Barron's Farm. Trapnested stock. 280-egg strain. The greatest laying strain in the world. Eggs, $1 per set; $5 per 100.
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CHICKS 8c. C. O. D. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. **C. M. LAUVER Box 73. Richfield, Pa.**

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Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

S. C. W. Leghorn Chicks
Tom Barron and other heavy laying blood. W. Rock and W.W. Pullets for sale. **John Lorton Lee, Carmel, N.Y**

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You will say the same thing. Write for Reward List.

Department "M"
The Rural New-Yorker
333 West 30th Street
New York City

24

PUBLISHER'S DESK

Last May I sent Jos. Blum & Co., Chatfield, Ohio, an order for 300 day-old chicks and enclosed check for $33, payment in advance for same. A few days thereafter I received acknowledgment and advice chicks would be shipped the latter part of the month. They did not come. I telegraphed asking what I could do to help trace them from my end, as I assumed they had been sent. I have never received any communication from them in any shape or form to this date. Will you look these people up and let me know what I can do to have my money returned? C. G. W. G.
New York.

In reply to our inquiry Blum & Company wrote us a sarcastic letter intimating they would take the matter up with the subscriber direct. This they did, sending him chicks the last of June. These chicks were in very bad condition, over a hundred dying. By the end of Summer just 10 chicks survived. This is the history of this subscriber's transaction. We had a similar report some time ago, and making late shipments seems to be the record in both cases.

It is with great pleasure that I enclose check for renewal, as I consider that you have saved me more than that by your exposure of that much-advertised remedy Sanatogen, as I had it in mind to give it a trial when I read the article in your "Publisher's Desk." Also I often meet old acquaintances there, such as Geo. F. Cole of Boston, who has solicited strawberry consignments in this vicinity. Your paper is worth more than the subscription price, for that one department alone. W. R. H.
Massachusetts.

The above letter came when we were paying out expense for the investigation of some crooks, and for the defense of some libel suits. It made the burden just a bit lighter. We would not wish to be misunderstood. We are human. Possibly we have our human vanities. Anyway we confess that we like a word of praise and approval of our work or efforts; but mere praise or approval, no matter how skillfully or ardently expressed, could not induce a continuation of this work, which involves hard careful work, and much expense. Besides we would not want publicly to criticise any man, no matter how bad he may be, except as a duty. But when this correspondent and others like him remind us of the service the work is to him we have in this service abundant justification for the criticisms, and no little compensation for the work and expense.

I have read with great interest in THE R. N.-Y. concerning the system of Land Banks to handle farm mortgages in New York. Now can you tell me if anyone is doing anything in this line for New Jersey? I am an experienced farmer and desire to own a farm, but as things are now, very hard to get any kind of a mortgage. Of course I could go into a building and loan association and get all the money I want, but the great trouble of a building and loan association of New Jersey is you are compelled to pay interest and principal every month, hence this keeps a farmer continually handicapped, as every month, instead of holding on to what little I take in on a farm, and turn it back on the farm, I mean money in form of receipts, I have to put in into a building and loan association. Hence how can an aggressive young farmer ever get started? If I could borrow money at 5% and pay interest every six months that would be O. K. But to pay both principal and interest every month keeps many farmers from owning or buying a farm.
New Jersey. W. P. A.

Building and Loan Associations have prospered nowhere more than in the State of New Jersey. Heretofore like other sections, they have been largely confined to towns and cities where steady weekly or monthly income make monthly payments desirable. In New Jersey they have yet no central association or Land Bank; but this will probably come later as their success in New York and other States is demonstrated. With a Land Bank connection the local associations could easily provide for semi-annual or yearly payments, but until that convenience comes, you might overcome the difficulty by arranging to pay the first quarterly dues in advance and then make the quarterly payments regularly thereafter. The rules of the savings and loan associations are elastic enough to cover any requirement, provided the money is available and the security sufficient to cover the loan required. The Land Banks, when established will supply the funds. The borrowing member must furnish the security.

I am sending you a communication I have received from the Lexington Chocolate Co., of Brooklyn, which explains itself. This is the third of the kind I have received, but this time the stock price is cut $2 per share. I seem to be fortunate in being one of 50 to 100 who has been selected to share in their wonderful prosperity. My wife is another. I am not thinking of buying any of the stock, but, what do you think of it?
Rhode Island. W. W.

These people are sure, so they say, that they can make 50 per cent. for you on your money. Why they select only 50 or 100 persons to so favor is more than we know. We do not even know why they should select even 50 or 100 strangers to so favor. We do not even know why they should need anybody's money. If we were so dead sure of making 50 per cent. on capital, we would not let man, woman or child, friend, foe or sucker, in on our sure thing. The only thing we are sure about in the proposition is that we would never expect again to see any money put into the alluring stock; and the further fact that we will not put any money into it.

I take a good many magazines and papers, but I always find time to read everything in THE R. N.-Y. Besides the great practical good it accomplishes it has such a pleasant, cheerful, personal way about it, that when I put out my hand to take it each week it seems like shaking hands with one of my best friends. H. C. M.
Michigan.

This has been our purpose and wish. It is gratifying to know that some one has caught the spirit of the paper Some one has said that other papers have done more for agriculture but that THE R. N.-Y. does most for the farmer. Whether this is true or not it expresses our ideal. Give the farmer a fair show and he will take care of agriculture.

On March 4, 1913, I mailed a check for $11 to the White Lily Poultry Farm, Minersville, Penn., for 200 eggs for hatching. The check has been cashed, signed by Paul Landeman, proprietor. No eggs have been shipped and no attention has been paid to several letters regarding the order. If there is anything you can do to procure a return of the amount it will be greatly appreciated.
Pennsylvania. H. M. C.

We could not collect this account. Our advice was that effort or money spent to collect the account through legal methods would be time and money wasted.

We have had an unsatisfactory dealing with the Acorn Refining Company of Cleveland, Ohio, having purchased in October, 1911, something over $112 worth of cement paint, guaranteed for five years, and proof against acid and water. We had this paint applied as per directions at a cost of over $100, and in a very few months it started to peel off. We have repeatedly written the home office, and, after much correspondence, receive only evasive replies. W. A.
Massachusetts.

We have been unable to get any redress for this complainant. It is evident they intend to ignore the five-year guarantee of their paint. Their commercial rating would indicate that redress might be secured through a suit; but a resident of Massachusetts does not want to go to Ohio to prosecute a claim for $250. There is, of course, one way to avoid the annoyance; that leads to the suggestion not to use the paint.

I should long ago have enrolled in Dr. Ulman's Anti-Fake Club. Please put me down now. DR. W. C. D.
Connecticut.

It looks now as if the Anti-Fake Club was sure to be organized. We have an exceptionally strong and intelligent list of charter members, and expect to make quacks, charlatans, and general rogues take notice when we are once open for business. Publishers who conspire with fraudulent advertisers will receive their just share of attention.

Enclosed find check for $1 for one year's subscription to THE R. N.-Y. Received check May 19 for case of eggs lost by Adams Express Company on October 7, 1912—one year, seven months and twelve days. L. Q.
New York.

It is freely admitted by railroad men that their delays are usually made to tire out the complainant. They attempt to justify it on the ground that sometimes they are forced to pay unjust claims; and they want to even up so the small shipper suffers. We hope to change this custom at least where our shippers are concerned. J. J. D.

Weak Horse.

Recently I purchased what I thought a fairly good big horse, eight years old, in good condition. I could not find any fault with him when receiving him, but the next day when he walked he acted as if going to sit down. At times he seemed as though he would sink to the ground with his hind parts. I have the privilege of returning him in 15 days if unsatisfactory. Can you tell me what is the matter? He has a good strong back, has no swelling and does not flinch when trying to find the trouble. What can I do for him to get him ready for Spring work, or is it incurable?
New Jersey. W. B. R.

The horse apparently is affected with what dealers term "jig back," which is a permanent condition; but it is possible that the trouble is azoturia, due to idleness and heavy feeding. If the latter disease has been the cause of the symptoms noted the urine would be dark brown at time of the attacks and if so the horse will be likely to recover in time if steadily, but lightly worked every day and not heavily fed on oats. If the urine was not dark in color better trade the horse back to the dealer. A. S. A.

Indigestion,

I have a calf seven weeks old. He will not eat any dry feed, and no grass or green clover; eats very little salt or fresh hay. He does not seem to be well, stands and lies around all day. Tries to eat boards. It was the first calf and is very small. Can you tell me what to do for him? R. R. W. S.
New Jersey.

Give the calf two ounces of castor oil shaken up in milk and repeat the dose in 10 days if seen to be necessary. If two ounces does not purge freely give a larger dose the second time. Afterwards feed whole oats in addition to other feed.
A. S. A.

Quinsy.

About March 20 I bought a hog weighing about 300 pounds, due to farrow the 8th of April. She had 11 pigs and seemed all right. A week later she refused food, and we noticed a swelling on both sides of her neck. After a day or two there was a discharge from the nose. After three weeks she died. Upon examination we found the throat inflamed, but the liver, lungs and intestines seemed all right. I do not think it was cholera, but a number of swine in the neighborhood are sick also. N. W.
New York.

The symptoms indicate sore throat (quinsy) rather than cholera, and it is an infectious disease. The throat should have been rubbed with turpentine or kerosene and lard daily, and internally sprayed with a one per cent. solution of permanganate of potash. Chlorate of potash in 10 grain doses might have been given two or three times a day in milk or water. Clean up, disinfect and whitewash the place occupied by the sow.
A. S. A.

PURE FEEDING MOLASSES
We are first hands and can quote you absolutely bottom prices, delivered your station, in lots of anywhere from one barrel to a trainload. Write for booklet.
THE MEADER-ATLAS CO.
N. Y. Office, 107 Hudson Street, New York City

BINDER TWINE 8½c lb. Want farmer agents. Circular and sample free. Theo. Burt & Sons, Melrose, Ohio

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C. D. ROSE Farm Agency sells farms, send for new bargain list. STATE & WARREN STS., TRENTON, N. J. ESTABLISHED 1908

TRUCK FARM—55 acres; market, Phila., N. Y.,—also 120 acres, $45 per acre, market, Youngstown, O. L. ABELL, Cortland, O.

To Settle Estate Quick—115 acres; 8-room house, basement barn, 40x60; two orchards; on main road; good land; must go; $2,300; $1,300 cash; balance, time. Catalogue No. 40. HALL'S FARM AGENCY, Owego, Tioga Co., N.Y.

WIDOW MUST SELL 200 ACRES 20 miles from Buffalo, ½ from bricked road to Buffalo; creamery, depot, churches, etc. Nearly new 9-room house, and barn 40 by 80. 10 acres timber, practically level, dark loam soil. Price, $6,500. Easy terms. Free List. ELLIS BROS., - Springville, New York

DE LAVAL SEPARATORS
Used exclusively by 98% of the World's Creameries

TEN YEARS AGO THERE WERE a dozen different makes of creamery or factory separators in use. Today over 98 per cent of the world's creameries use De Laval Separators exclusively.

IT MEANS A DIFFERENCE OF several thousand dollars a year whether a De Laval or some other make of separator is used in a creamery.

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NOW, IF YOU WERE IN NEED of legal advice, you would go to a lawyer." If you were sick you would consult a doctor. If you had the toothache you would call on a dentist. Why? Because these men are all specialists in their line, and you rely upon their judgment and skill.

WHEN IT COMES TO BUYING A separator why not profit by the experience of the creameryman which qualifies him to advise you correctly? He **knows** which separator will give you the best service and be the most economical for you to buy. That's why 98 per cent of the world's creameries and milk dealers use the De Laval exclusively.

THERE CAN BE NO BETTER recommendation for the De Laval than the fact that the men who make the separation of milk a business use the De Laval to the practical exclusion of all other makes of cream separators.

Your local De Laval agent will be glad to let you try a De Laval for yourself on your own place. If you don't know the nearest De Laval agency simply write the nearest main office, as below.

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending June 26, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.41 and $1.31 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart.

BUTTER.

But little speculative business is noted. The price asked for grades desirable for storage is too high to make a safe risk. In lower grades there is considerable accumulation. Poor butter is harder to sell than formerly, when practically all cheap restaurants used strong butter.

Creamery, extra, lb	27	@	27½
Good to Choice	23	@	26
Lower Grades	20	@	22
State Dairy, best	25	@	25½
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	15	@	17½

Elgin, Ill., butter market 27½ cents.
Philadelphia, western creamery, 27½ cents.

CHEESE.

Prices are one-eighth to one-fourth lower, business during the week being somewhat improved at the reduction.

Whole Milk, fresh, specials	14¾@		15
Average fancy	14½@		
Under grades	12½@		14¾
Daisies	15¾@		
Skims, specials	11½@		12¾
Good to choice	10¾@		11¾
Poor to fair	5	@	9½

EGGS.

Although receipts have been less, the accumulated stock has been sufficient to prevent an advance in price. Great complaints have been made about the Trunk Line Association's methods of handling egg damage claims. The Lackawanna Railroad is withdrawing from the association in this particular, and will make its own inspections and adjustments on eggs handled over its lines. Other railroads are considering the same move, with the purpose of lessening dissatisfaction with this branch of their business.

White, choice to fancy, large	25	@	27
Common to good	20	@	23
Mixed colors, best	24	@	25
Common to good	17	@	20
Western fresh, white	20	@	21
Lower grades	15	@	18

FRESH FRUITS.

The few apples remaining are selling slowly. Arrivals of Southern peaches are larger and quality much improved. Strawberries in excessive supply and prices very irregular, the proportion of fancy being small. A good many berries have dried up instead of ripening naturally, and others are very sandy from dashing rains in unmulched fields. Cherries are in surplus and lower, except on some stock shipped in strawberry quarts arriving in better condition. Supplies of currants are larger, but prices stay fairly high—10 to 13 cents wholesale. Muskmelons very plentiful and low.

Apples—Russet, bbl.	2 25	@	2 50
Spy	3 00	@	5 00
Ben Davis	2 50	@	3 50
Newtown	5 00	@	6 00
Baldwin	2 50	@	4 00
Western, box	1 00	@	2 25
Strawberries, Up-river, qt.	6	@	14
Jersey	6	@	12
Western N. Y.	8	@	12
Cherries, 8lb. bkt.	20	@	50
Currants, qt.	9	@	12
Plums, 6-bkt. carrier	1 50	@	2 00
Raspberries, red, pint	7	@	9
Black Caps, pint	6	@	7
Peaches, 6-basket crate	1 25	@	3 25
Blackberries, Jersey, qt.	15	@	16
Huckleberries, qt.	7	@	15
Gooseberries, qt.	5	@	11
Muskmelons, crate	1 00	@	1 75
Watermelons, 100	20 00	@	35 00

BEANS.

Marrow, 100 lbs.	4 25	@	5 10
Medium	3 70	@	3 75
Pea	3 10	@	3 65
Red Kidney	4 50	@	5 65
White Kidney	5 65	@	5 70
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

The crop outlook on the Western Coast is favorable, but growers are holding for high prices because of the poor prospect in Germany and England. A California expert figures that the State will get about $3,000,000 from the crop this year.

Prime to choice	36	@	38
Common to good	31	@	35
Pacific Coast	18	@	19
Old stock	10	@	15
German crop	60	@	63

VEGETABLES.

Old potatoes are higher, some selling up to $3.50, but the advance has come too late to help many producers; new stock running better in quality and high. Cabbage and lettuce in surplus and lower. Peas and string beans running better in quality and in good demand. Onion trade active and prices high except on some nearby stock, which is small. The Erie Railroad, handling from one-half to three-fourths of the domestic onions sold at New York, is removing its onion market from Piers 19-20, on the New York side, to the Pavonia avenue yards in Jersey City.

Potatoes—Old, 180 lbs.	3 25	@	3 50
Bermuda, bbl.	2 50	@	4 75
Southern, new	1 50	@	4 50
Sweet Potatoes, bu.	40	@	1 25
Beets, 100 bunches	1 00	@	2 50
Carrots, bbl.	2 00	@	3 50
Cucumbers, bu.	50	@	1 50
Corn, Southern, 100	50	@	1 50
Asparagus, Green, doz.	75	@	2 00
White, doz.	60	@	1 50
Cabbage, bbl. crate	15	@	60
Lettuce, half-bbl. basket	25	@	60
Onions—Southern, New, bu.	3 00	@	3 50
Okra, bu	3 00	@	6 00
Peppers, Southern, bu.	1 00	@	2 00
Peas, bu.	50	@	1 00
Radishes, 100 bunches	50	@	75
Spinach, bbl.	50	@	75
String Beans, bu.	50	@	1 50
Squash, New, bu.	1 00	@	2 75
Egg Plants, Southern, bu.	1 00	@	2 00
Tomatoes, Southern, 6 bkt. crate	75	@	2 00
Jersey, box	1 50	@	3 00

LIVE POULTRY.

Broilers, lb.	26	@	32
Fowls	18	@	19
Roosters	11	@	12
Ducks	13	@	14
Geese	10	@	11

DRESSED POULTRY.

Chicken schoice broilers, lb.	36	@	38
Squab broilers, pair	60	@	80
Broilers, common to good	30	@	35
Fowls	15	@	17½
Ducks, Spring	15	@	16
Geese	9	@	14
Squabs, doz.	1 50	@	3 75

HAY AND STRAW.

Receipts of medium grade hay are large and business very dull. Straw market practically unchanged.

Hay, Timothy No. 1, ton	19 50	@	20 00
No. 2	17 00	@	18 00
No. 3	15 00	@	16 00
Clover mixed	14 00	@	18 00
Straw, Rye	14 00	@	15 00

LIVE STOCK.

Native Steers	7 25	@	9 00
Bulls	5 50	@	7 35
Cows	3 50	@	6 75
Calves, prime veal, 100 lbs.	8 50	@	11 25
Culls	6 00	@	8 00
Sheep, 100 lbs	3 50	@	5 25
Lambs	9 50	@	9 75
Hogs	8 50	@	8 65

GRAIN.

This country had in storage the last of June: 7,921,000 bushels of corn, 18,933,000 wheat, 7,407,000 oats, rye 492,000, and barley 1,386,000 bushels. European interests are now buying heavily of American wheat, which is the lowest in eight years. Crop conditions in Europe are not favorable, and buyers are disposed to take the bargains at present available rather than risk waiting for further declines, which may not come. Steamer space for three and one-fourth million bushels has already been engaged, and nearly two million bushels more have been sold for shipment to England and the Continent. One thing made clear by this active foreign buying is that our apparent surplus is wanted in other parts of the world, and that there is no real basis for the "75-cent wheat" which newspapers with their "immense crop" stories have prophesied.

Wheat, No. 1, Northern Spring	97	@	..
No. 2, Red	88	@	..
No. 2, Hard Winter	99	@	..
Corn, as to quality, bush.	70	@	76
Oats, as to weight, bush.	43	@	45
Rye	70	@	72

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz.	35	@	40
Mixed colors, new laid	25	@	32
Ordinary grades	20	@	22
Butter, fancy prints, lb.	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb.	30	@	32
Fowls	25	@	28

*

The goods in bonded warehouses at the Port of New York, June 1, were valued at $62,196,139. Tobacco exceeded $25,000,000. Next came cane sugar, $4,278,000; wool manufactures, $3,373,295; and linens, $2,518,824.

*

Railroad and industrial paper maturing July 1 amounts to $114,370,000, or more than $80,000,000 in excess of last year. The largest items are the $30,000,000 note issue of Chicago Elevated, and $20,000,000 Baltimore & Ohio notes.

*

A cargo of dried beet pulp for cattle feeding, about 1,000 tons, was shipped from Almeria, in Southern Spain, to Boston the past Spring. This part of Spain formerly grew large quantities of beets for sugar, until the small mills were closed up by the large sugar interests.

*

The measurement of ships that intend to use the Panama Canal is now being done at New York and other domestic and foreign ports, having officers authorized to do this work and issue the proper certificates. Ships not thus certified will be held at the Canal while the work is done. Measuring a ship requires from one to two days for two men familiar with the work. The canal toll for vessels carrying passengers and cargo is $1.20 per 100 cubic feet of actual earning capacity.

W. W. H.

We had a wet late Spring followed by drought; have had but one shower in the last six weeks. Pastures drying up, meadows short, oats almost a failure; potatoes suffering, all berries and truck crops short and outlook discouraging. Many factories running on short time; quite a lot of unemployed men.

Blue Ash, Ohio. W. F. K.

June 16. The set of apples is worse than expected; Gravensteins badly cut, Starks decimated, and other apples cut off. Total crop may be 800,000 barrels and of this export may be 500,000 barrels. Every day the reports grow worse. Happily there is a hope that the Nova Scotian Ben Davis is badly struck from frost injury. I detest our prolific Ben.

Berwick, Nova Scotia. J. B.

Sore Neck.

My mare is afflicted with sore neck. Just as soon as she commences to work in the Spring, her neck gets sore and remains sore all Summer, or as long as she is being worked every day. It breaks out in pimples or bunches, and if the scab is picked off leaves little holes in her neck which sometimes bleed; the top of her neck cracks. I have tried healing powders, salt washes, pads, soft collars, etc., without effect. This sore neck causes her to kick while at work, and makes it very disagreeable for both of us. Could you advise a cure or preventive? T. R. K.

Ohio.

In such cases one sometimes finds patches of dead, horny skin present. These are called "sitfasts," and have to be cut out before permanent healing will take place. Twice daily wet the parts with a lotion composed of two ounces of turpentine and six ounces of extract of witch hazel. If they do well apply a little benzoated oxide of zinc ointment twice daily. It is a mistake to clip off the mane when the neck becomes sore. The short hairs are forced inward and aggravate the condition. Keep the collar clean. Adjust the draft so that the neck will not bear so much weight.

A. S. A.

Breeding an Old Mare.

Is a mare of about 14 years too old to breed? The mare is in good condition and weighs about 1,000 pounds. I believe she has had a colt, but do not know when. I am told that it might be unsafe to breed on account of age. W. G.

New York.

A mare should be bred when two or three years old and then bred yearly. While the old mare may breed she may have trouble at foaling time; but there is nothing certain about either. There is some danger in breeding the mare, but no one can predict the result. A. S. A.

HUSBAND: "Is this butter perfectly fresh?" Wife: "The dealer told me it was just from the creamatory."—Birmingham Age-Herald.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

BOY, 17, WANTS POSITION ON FARM; good home preferred to wages. CHARLES HEIN, Pallsades, N. Y.

WANTED—Married man to work farm; fruit, hogs, cows, hens; state salary and references. "A. B. C.," care R. N.-Y., 333 West 30th St., New York.

WANTED—By Cornell agricultural student, age 20, situation as farm hand on well-managed farm; one summer's experience; strong and willing. Address H. S. FISHER, 284 Clinton Place, Hackensack, N. J.

WANTED—Position by Cornell graduate as manager of a truck and fruit farm or estate; can organize a new up-to-date market garden or orchard; advanced theoretical training and considerable experience; permanent position considered only. Address I. G. M., care R. N.-Y., 333 West 30th St., New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

SEVERAL CYPHERS 400-EGG INCUBATORS to sell for want of use. C. T. HAMILTON, Greenlawn, N. Y.

WANTED—Four International Hovers. State condition and lowest price. JOHN H. GASSER, Bethel, Conn.

FOR SALE—Brand new "New Way" gasoline engines; one 1½, one 2½ H. P.; half price. D. J. MASON, Lowman, N. Y.

HORSES THOROUGHLY AND CAREFULLY broken to saddle for the road or field; distance no object. L. HOWARTH, Mt. Freedom, N. J.

FOR SALE—Matched pair chestnut geldings, weight about 2,800. Also 110-acre farm, fully equipped; good sugar place, 1,100 buckets. Price reasonable. CHAS. WESTON, East Fairfield, Vermont.

TIMBER LOTS AND POULTRY FARM for sale. M. W., care R. N.-Y., 333 West 30th St., New York.

FOR SALE—$2,500 new house, on shore of Fore River; or exchange for farm. LEWIS T. HOWE, Glendale Road, North Weymouth, Mass.

FINE VILLAGE AND RIVER FARM FOR SALE—Fine house, water, fruit; good barn; keep 25 cows; 1½ miles to depot. BOX 24, Rockland, N. Y.

FOR SALE—$4,000 244-acre improved farm for stock raising or general farming; good water, healthy climate. J. F. TORRENCE, owner, Rt. 4, Louisa, Va.

FOR SALE—Choice farm of 100 acres. Another of 50 acres. Near Wolcott, N. Y.; plenty of fruit. Come and see, or write to A. H. CREQUE, Wolcott, N. Y.

FOR SALE—Two farms; one up-to-date chicken farm, 30 acres; buildings for 1,000 hens. Also a sheep and dairy farm of 150 acres. Five camp lots on Otsego Lake. K. E. WHITE, Cooperstown, N. Y.

FRUIT, TRUCK, POULTRY FARM FOR SALE—36 acres, excellent location and market; good buildings; all kinds fruit; strong soil; with or without stock, etc.; buy direct, saving commission. HOMER TWEED, Quakertown, Pa.

FOR SALE — Fruit farm; 3,500 trees—apple, peach, pear, quince, cherry; 3 acres strawberries; all tillable; 10 minutes' walk to railroad station. Price, $7,500. E. D. HUFFMAN, owner, Marshall's Creek, Monroe County, Pa.

FOR SALE—Fruit and dairy farm; 140 acres; nine-room slate roof house; running water house and barns; good sugar orchard; 600 barrels apples last year; prospect as many this year. Price $4,000, including two acres corn, 1¼ acres potatoes and garden. C. G. ADAMS, Colerain, Mass.

FOR SALE—Poultry, fruit and truck farm; 65 acres; 1,000 fruit trees; half acre strawberries; new poultry house, for 1,000 layers; fine 12-room house; large barns, etc.; running water throughout; granary, garage, etc.; would make a fine gentleman's place; 1½ miles from station. BOX 48, Mountainville, N. Y.

FOR SALE—130 acres: 110 tillable, 50 suitable for gardening; 9-room stone house, remodeled with screened porch, 12 by 50 feet; good barn; 1½ miles from two stations; two miles boating and fishing; beautiful scenery. Will be sold with 40 acres of crops and immediate possession given if desired; photographs. W. G. KANE, Kyserike, Ulster County, N. Y.

FOR SALE—Boarding house, established fifteen years; accommodates fifty guests; with 128-acre dairy farm; will keep forty cows; milk station on farm; everything in first-class shape. Price, including growing crops, $11,000. Immediate possession; easy terms; photos and particulars on application. Address WILLOW BROOK COTTAGE, Wallkill, N. Y.

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HUMOROUS

A hen stood on the garden lot,
Whence all but her had fled,
And didn't leave a planted spot
In the early onion bed.
With vim she worked, both feet and legs,
And the gardener says he bets
She was trying to find the kind of eggs
On which the Onion sets.
—Credit Lost.

FARMER'S WIFE (to visitor): "Now, Johnny, will you go and collect the eggs, and don't take the china ones. I suppose you know what they're for?" Johnny: "Oh, yes, they're for a pattern to show them how to make the others."—Punch.

TOMMY arrived home one day with a nice new golf ball. "Look at the lost ball I found on the links, pa," he said. "But are you sure, Tommy," ask[illegible] father, "that it was a lost ball?" "[illegible]n, yes," said the boy. "I saw th[illegible] and his caddie looking for it."—[illegible]on Transcript.

"It's going to be w[illegible] the knife," declared the suburbanit[illegible] was feeding his chickens. "What [illegible]" asked the friend. "Why, Blink[illegible] me a box of axle grease and advi[illegible]e to use it on my lawn mower." [illegible]l?" "Well, I sent it back and told him to use it on his daughter's voice."—Lippincott's Magazine.

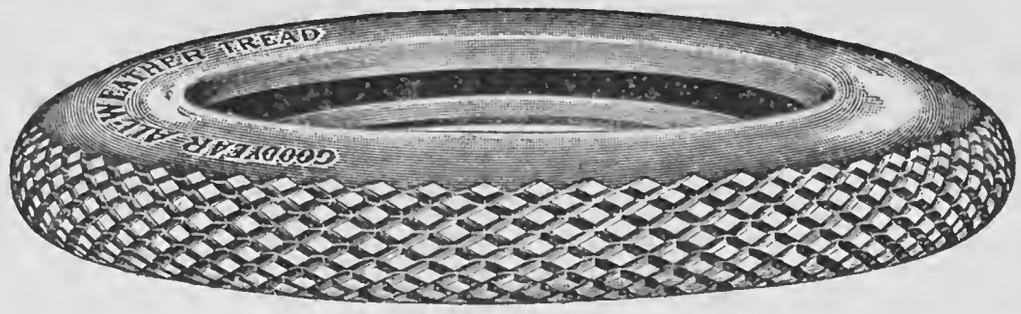
LITTLE Willie had been very naughty—so much so, in fact, that, after having reproved him several times, his mother was at last forced to severely punish him. When his father arrived home in the evening he at once perceived that Willie's eyes were suspiciously red. "What's the matter, sonny?" he cried. "Oh, nothing," responded Willie uncastly. "Come, don't be frightened," said the father, in coaxing tones. "Tell me all about it; I want to know." Willie remained silent for some time, then he suddenly burst out: "Well, if you must know, I've had a thundering row with your wife."—Pearson's Weekly.

AN English artist, while sketching in the Alps one day, was searching for a suitable background of dark pines for a picture he had planned. Finally, he found just the scene he was seeking, and best of all, there happened to be a pretty detail—the figure of an old woman in the foreground. The artist asked the old lady to remain seated until he made a sketch of her. She consented, but in a few minutes asked how long he would be. "Only about fifteen minutes," he replied. Three or four minutes later the old lady, with manifest anxiety in her voice, asked if he would be much longer. "Oh, no, only a very few minutes now," again the artist replied. "But why do you ask so anxiously?" "Oh, it's nothing," she answered, sadly, "only I'm sittin' on an ant-hill."—Woman's Journal.

A LAWYER for a railway company once had to defend his employers from the charge of negligence in the case of a farmer whose cart was demolished at a grade crossing. The accident happened at night, and the principal witness was an old colored man who was on guard armed with a lantern to signal the approach of trains. "Now, John," said the lawyer, "did you swing your lantern when you saw the cart coming?" "Yassir, I sut'nly did, suh, I done swing dat lantern right crost de road." On the strength of this testimony the lawyer won his case. He took occasion to thank the witness. "Much obleeged to yo', Marse Torm," replied that worthy. "I'se pow'ful glad I could he'p yo'. But I was plumb frightened dat other lawyer gwin ax me ef dat lantern was lit."—Credit Lost.

These Costly Tires

Now Undersell Nearly Every Make



The tables are turned. Goodyear No-Rim-Cut tires—once the costly tires—now sell below most others. There are 16 makes sold at higher prices—up to one-half higher.

Now these tires which rule Tiredom—the leading tires of the world—save you on first cost as well as on last cost. It is more important than ever to get them.

Reasons for Cost

No-Rim-Cut tires for a long time cost one-fifth more than other standard tires. That was due to four great features—costly features—found in no other tire.

They ended rim-cutting by a method we control. It has saved tire users millions.

They saved blow-outs—all the blow-outs due to wrinkled fabric. They did this through our "On-Air" cure—an extra process which costs us $1,500 per day.

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No other tire at any price has ever offered these four features.

Reasons for Price

The reasons for present Goodyear prices are just these:

New factories, new equipment, new machinery, new efficiency. A multiplied output, now the largest in the world. It has cut overhead cost 24 per cent and labor cost 25 per cent.

A modest profit. Last year our profit averaged only 6½ per cent.

No-Rim-Cut tires at present prices are even better than they were at high prices. They excel other tires just as far, and in just as many ways.

Up to now men bought these tires because of their hidden economies. They bought millions of them because of their known mileage records.

Now you have in addition this visible economy—this saving which comes at the start. You have a price from $5 to $15 lower than many other tires.

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THE RURAL NEW-YORKER

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BEES A-SWARMIN'.

Make Them Feel At Home.

IF you are watching out along in June when the flowers are in full bloom and the bees under the old apple tree are finding their Winter quarters crowded, so that the "old folks" are thinking seriously of hunting up a new flat and leaving the youngsters in possession of the old home, you may hear and see a commotion in the air about the hives that will warn you to be on hand lest your tenants arise and depart without your knowledge. Very likely scouts have been spying out the land for some days and when the Calebs and Joshuas of the hive return with reports of bounteous fields of bloom on the far-away hills and convenient hollow trees in neighboring woods, trunks are packed, good-byes are said and only a pleasant morning, with no threat of rain, is awaited for a general exodus to a new home where another family may be reared and the bee population assured of its proper increase.

But, if you are watching, the new swarm, which is really an old swarm, for it is the old queen with enough of her faithful retainers to establish her in a new kingdom, may usually be seen to alight in some nearby tree or shrub before finally quitting the scene of their old activities. And now is the time to secure them, for if they again take wing they may go miles before alighting and someone else may hive them, for the law of custom is that a stray swarm belongs to its captor.

If you are forehanded, and of course you are, you have already set an empty hive fitted up with frames and foundation, or clean old combs, in some convenient place, and your bee gloves, hat and veil are at hand where no time need be lost in getting into them. If you are an old timer, or a bit inclined to be vain of your fearlessness, you may dispense with these protectors; but don't, it is never safe and sometimes disastrous. Be thankful if the swarm has settled upon a shrub or low-hanging branch where it may be reached from the ground or a step-ladder; but if it hasn't, get a ladder and saw, or a basket, unless you have a swarm-catching device mounted upon a pole, and climbing to the bees, gently shake them into the basket held underneath, or saw off the limb upon which they are clustered and carry them to the empty hive where they may be dumped or shaken upon a cloth that has previously been spread before it.

The bees seem at once to recognize that here is a new home such as they started out to seek, and without the loss of a moment, they begin to pour into the entrance. If, in your awkwardness or timidity, you have not failed to secure the queen, they will probably stay, but a little artificial rain made with the aid of water bucket and dipper will tend to quench any wanderlust that they still possess and insure their remaining till night, after which they are not apt to leave. A spray of water thrown into the tree in which they are clustered will also help to hold them until their new quarters can be made ready or help secured. Bees are not inclined to wander in the face of what seems to them an approaching storm.

If you have not secured the queen, however, your work has been in vain, for as soon as the bees discover her absence out they will go in search of her. She may have dropped into the grass or be hidden in a small cluster of bees still in the tree. Wherever she is, if not disabled, the bees will find her and again cluster about her to give you probably another opportunity to secure the swarm. Now you will be less nervous, for you have discovered that swarming bees, each with its load of provisions for the new home, are not at all inclined to sting. You will be more careful to secure practically all the bees, including the queen, and unless their proposed home is in some way distasteful to them, you may count upon their ratifying your choice and settling down to housekeeping again. M. B. DEAN.

THE "UNEARNED INCREMENT" OF THE BEES. FIG. 370.

R. N.-Y.—Swarming bees seem a mystery to those unacquainted with their habits, and in past generations many quaint superstitions were connected with them. The custom of telling family news of birth, death or marriage to the bees, lest they desert their hive, still persists in some parts of England.

DECORATING THE CODLING MOTH.

FOR fully a week I had been trying to get at the job of spraying 40 Duchess apple trees. Being a business man in the city, and living on four acres just outside the city, I am not always able to get at my work on the four acres just at the proper time, but things shaped themselves so that Saturday (Decoration Day) found me with about 100 gallons of spray material prepared, two pounds arsenate of lead to 50 gallons of water. My spraying outfit consists of a small gasoline engine mounted on a three-wheeled triangular frame, one of the angles of the frame supporting a small barrel holding about 25 gallons of solution, the suction pipe and overflow or return pipe leading into this barrel, while the discharge pipe is about 25 feet of good tubing. The little engine gives a pressure of about 140 pounds, the whole outfit being drawn from one point to another by myself, as the spraying proceeds. It makes good, lively work from the moment the engine starts, and I fancy if a man kept at it, say 10 hours a day, he would not need to be rocked to sleep at night; but for a city man, and on such a day as Saturday, after a gentle rain on the previous afternoon, with the sun shining warm and bright, with a very gentle wind from the northwest, I do not ask for any better fun than the job of thoroughly spraying these 43 trees in just two hours and 30 minutes, actual time, which includes the time of drawing the outfit from tree to tree, or I should say from *four* trees to the next four trees, as I can nicely surround four trees with the spraying outfit located at a central point between them. Will some of you old spray men tell me whether this is good time or not for *one* man on 43 17-to-18-year Duchess apple trees? The question came to my mind after I had finished the job. I do not know how much time such a job should take, but I do know the trees were well sprayed, and that I used over 80 gallons of spray material, and that I did not loaf on the job after the little engine began snorting. J. B. B.

FACTS ABOUT HARDY CATALPA.

MANY parts of the Eastern States have been overrun by agents trying to sell trees of hardy Catalpa (Catalpa speciosa) for farm planting. They can tell large stories about what this Catalpa tree will do on the river bottom lands of the Central West, and they try to apply this experience to the thinner and unsuitable lands of the Eastern States. Here are the facts about it:

Because the hardy Catalpa is a specialized farm crop requiring good, heavy soil and a certain amount of care, it is not adapted for general farm planting. It is native to the rich bottom lands along the Wabash and other rivers in the Middle West, where it often reaches large size. However, it must have good, rich, fairly well-drained soil and there are few if any farms in the Eastern States the owners of which are willing to devote good soil to the growing of trees. Foresters are opposed to the use of agricultural soils for forestry purposes. Every rod of land in the Eastern States which is suited to agriculture should be in agricultural crops. There are, however, in nearly every farm in the East from one to 10 acres of land which is really non-agricultural and which should be covered with trees. However, this non-agricultural land as a rule is not fitted to the growing of hardy Catalpa, and anyone who plants the Catalpa upon poor ridge or hill or in swampy land may expect failure.

The hardy Catalpa is a very rapid grower when planted in good soil and the wood is durable in contact with soil. It is really a post and pole tree only, and here in the East is not a tree which will produce saw logs. If a land owner is willing to devote an acre of good land to the Catalpa, planting one-year seedlings about 6x6 feet each way and then cultivating the plantation two or three times during the first two seasons of growth, it will grow rapidly and produce fence posts in from eight to twelve years. However, the tree is not a straight grower and unless some attention is given to the pruning and care of the trees, they will show a tendency to the formation of a crooked trunk. Black or Yellow locust, which is a rapid grower and the wood of which is very durable, may be put in the same class as the hardy Catalpa. It is a good post tree, but it is so liable to be injured by a flat-headed boring insect that it is as a rule not a profitable tree to plant.

Creosote is now being used so generally for the prevention of decay of ties, posts and farm timbers generally that it will be better to put rapid growing evergreens onto hill or ridge lands, and then apply a coat or two of creosote with a brush or boil the lower 40 inches of the posts produced from evergreens in a simple open tank for a few hours. While posts from rapid growing evergreens are not very strong, as a rule, strength is not required in fence posts. There are a number of broad-leaved trees such as the White ash, basswood or linden, tulip or whitewood and the Red oak and others which are fairly rapid growing, and which are not liable to be injured by insects and the timber from which is very valuable. The ash especially is going to be valuable, because it is taking the place of hickory in the manufacture of automobiles and other vehicles. HUGH P. BAKER,

State College of Forestry.

FERTILIZER AND GRASS EXPERIMENTS.

UNDER the direction of the Jefferson County Farm Bureau several demonstrations have been made in the past two years with a home-mixed chemical fertilizer used as a top-dressing on old meadows. This year the practice has been widely extended with most gratifying results so far. It is thought that in many instances the hay yield will be doubled, and these evidences were not wanting before the recent rains appeared. F. E. Robertson, manager of the Farm Bureau, is highly pleased with the results achieved.

TWO DIFFERENT "STRAINS" OF TIMOTHY GRASS. SOME YIELDED TWICE AS MUCH AS OTHERS. Fig. 371.

Last year M. W. Casse gave the fertilizer a trial, using 200 pounds of nitrate of soda, 100 pounds of acid rock phosphate and 50 pounds of muriate of potash, sowing about 300 pounds on an acre of three-year-old meadow where the grass had nearly succumbed for want of plant food. This field of grass was cut last July in the presence of Mr. Robertson and several farmers, and from weighings made from fertilized and unfertilized plots it was found that the fertilized plots more than doubled the yield. This year Mr. Casse has increased the area brought under the stimulus of the home-mixed fertilizer, and has not only sown the mixture on his meadows, but also on a field of grain. Others who have noted an increased yield from the use of the fertilizer include Joseph Allen, Frank Arnold, Charles Powell, Gilbert Shannon, Andrew Fults, George Cross, A. W. Danforth, and William Plato.

SHOWING THE DIFFERENCE BETWEEN FERTILIZED AND UNFERTILIZED GRASS. CROP ON THREE SQUARE FEET. Fig. 372.

A. H. P.

FIELD STONES FOR BUILDING.

IN reply to C. W. B., on page 833, in regard to building from common field stone, will say that by getting the right kind of mason a very good, substantial and nice-appearing wall can be built. With these stones a much cheaper and certainly just as strong wall may be constructed as with concrete. Of course much depends on the size and shape of the stones and the man who is handling them. The wall supporting my barn contains about 70 cubic yards of stone and sand, and was laid up at a cost of about $90 for masons, mason tender and cement. Of course this does not include hauling of stone, cement or sand. I selected my stone and consequently have a very substantial as well as beautiful wall. However, this stone all came off the farm. I do not think it advisable to build a house or barn complete with stone for such a building is sure to be damp. With common selected field stone, such as found in Southern New York in large quantities, especially those that can be broken once or more, thereby getting a sharp and freshly broken surface, same to be laid "out," a very beautiful house porch or outside fireplace chimney can be constructed, and at a less cost than wood, and surely more substantial. However, the laying of stone is an art, but with a mason who understands such work a pleasing and attractive job may be had. Stones in this section (Tioga Co., N. Y.) are of a flat nature, and it is easy to get them and by selecting from these stones and breaking the larger ones as well as the chunky ones, thus getting fresh surface, a nice wall may be constructed.

In selecting stone care should be taken to get as near uniform thickness as possible. Farther East and in Southern New England, stones are more rounded in form, and even with these a mason who understands handling them can do wonders with them. Waterbury, Conn., contains many fine half basements and porches and even half stories constructed with these "round" stones. In that section the stones are about the shape of a foot-ball, only larger, and at first, to one in these parts it would seem impossible to make a wall of them, but seeing is believing and Waterbury certainly has many very beautiful porches and bungalows constructed from such stone. If one has his own team and plenty of stone at not too long a haul, a porch or any kind of a wall can be built cheaper than of concrete or any other material. F. J. HICKEY.

New York.

IS THE POULTRY BUSINESS DOOMED?

FROM looking over your paper every week, I have gained the impression that you still encourage poultry raising, and I must say I am more than astonished, as I thought your paper was a paper that had a conscience. You certainly ought to know that, with the duty removed, the "heathen Chinee" will very shortly make poultry raising a very expensive pastime in this country. I am told that eggs are purchased in China at six cents a dozen, and are landed in this country at something like 10 cents a dozen, all charges paid. True, I know that a concern in Spokane, or was it Seattle, was obliged to send a large number of crates of China eggs to the city crematory, but still, that would hardly happen again, and so I cannot see what American poultry raisers can do but give up. Honestly, what is there to this Chinese egg scare? The papers here were full of it, and I am told that if China doesn't ruin the business for us, Europe will. I have planned to spend about $1,000, more or less, in increasing my little plant this year, but if there is really any serious menace, I would naturally prefer to keep my money in the bank. Will you tell me what you know of the matter? A. E. B.

Virginia.

If you understand the poultry business and have the patience and courage to become a genuine hen man our advice is to stay in the business and develop your plant. If you do not know much about it, and are frightened by ghosts and shadows, you will be better off to put your money in the bank and keep it there.

There are people who profess to be frightened because the tariff has been removed from imported eggs. We do not share their fears. The Department of Agriculture reports that prices for farm eggs ruled a little higher this year than last. If you consider eggs as you would other farm products, the outlook never was better. Prices of meats have gone steadily up and we now know that the meat shortage is world-wide. The first and most available substitutes for meat are poultry and eggs. These will be used more and more as supplies of beef and mutton fall. This has been true in every country where the meat supplies have run short, and the future is sure to see a greatly increased demand for the hen and her fruit.

Eggs from China have for a considerable time been received in commercial quantities on the Pacific Coast, and some have got as far East as St. Louis. There is no probability that that the egg business in this country will be killed by supplies from either China or Europe. No doubt certain localities most accessible to imports will be affected, but such things are constantly happening in industrial and agricultural life, both here and in other countries. Even though eggs may be cheap in foreign countries, the risk of damage by long distance water shipment is great—not only breakage but destruction of the body of the egg by shaking in hard storms. When eggs reach a large market they have to be sold on the basis of appearance under the candle, and the average of damage through several years is likely to discourage importers. In any event the imported egg will not compete with the "fresh laid" or breakfast egg.

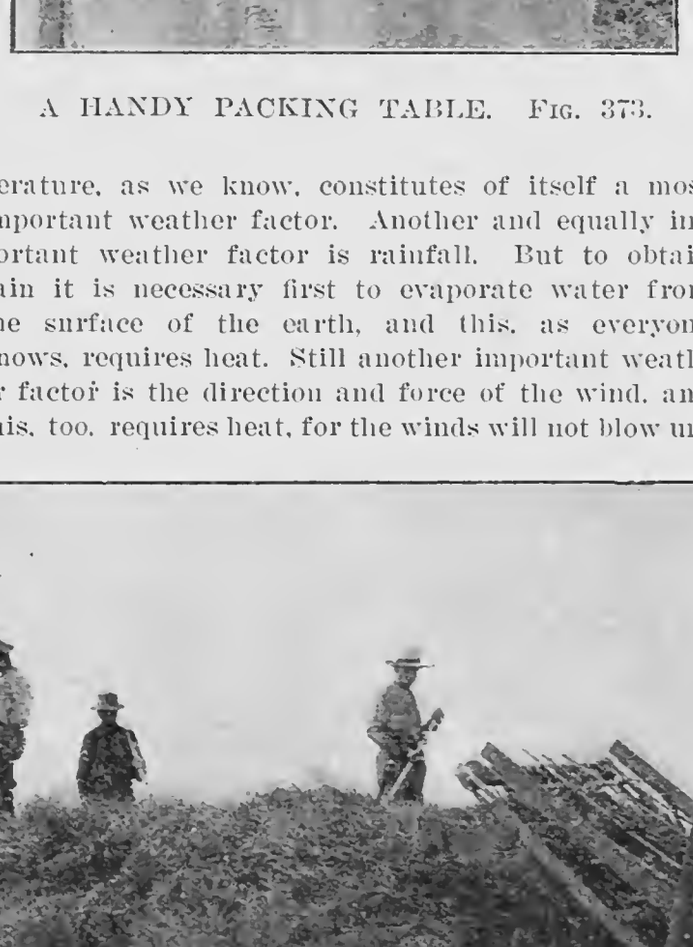
SCIENTIFIC PRODUCTION OF FINE APPLES.

From Plowing to Packing.

PART III.

GRADING TABLES AND GRADING.—There are two forms of grading or packing tables in more or less general use, namely, the horizontal and the sloping. The former consists of a canvas or burlap-covered wooden frame about four feet wide and six to eight feet long. In most cases the different grades are selected by persons standing along the sides, placed in baskets and emptied directly into the barrels. This form of grading possibly offers the least opportunity for injury to the fruit, but in general will not take care of as many bushels in a given time under the present general standards for grading barrel apples as is possible with the sloping table. The latter should have the same dimensions as the horizontal table, is elevated at one end, has six to eight-inch side and end walls, either a solid or slatted bottom, which should be padded, and a 10 to 12-inch opening at the lower end, through which the fruit passes to the barrel. It should be high enough so that a barrel will set under the lower end opposite the opening, with five to six inches to spare. The fruit is generally lowered into the barrel by means of a strip of burlap, which is fastened to the table and held across the open end of the barrel. With the table properly padded, and care in lowering the fruit into the barrel, this equipment will give very practical results. This table may be modified, as is shown at H of Fig. 362, page 882, so that both first and second grades can be barreled directly therefrom. A place is also provided for the "facers," which may be selected as grading proceeds.

GRADING.—Notwithstanding the urgent need of improvement in the standards of grading, the greater bulk of barreled apples are sorted into but two grades. For standard varieties like Baldwin, Greening and Spy, No. 1 or firsts, should include no fruit under 2½ inches in diameter; and No. 2, or seconds, no fruit under 2¼ inches in diameter. Exceptions to the above are found in the case of Romanite and varieties of similar size and shape where 2¼ inches is usually recognized as the minimum diameter for No. 1. A further exception sometimes occurs with varieties which have many specimens running over three inches in diameter, in which case a third or "fancy" grade might be made of all fruit over three inches. In any case, however, none of these grades should contain fruit which is infested by insects or fungus disease, or which bears any form of injury which would impair the keeping quality or general appearance. In addition, any specimens of No. 1 size which are very poorly colored or are especially ill-shaped, should go as No. 2, provided, of course, they are otherwise sound. All fruit which does not come up to the above standards should be sent to the canning factory, made into cider or fed to live stock. A sizing board should be used until the graders have the sizes of the different grades well in mind. Any thin board about five inches wide and two to three feet in length in which round holes of the proper size have been made, will answer the purpose. A further guide may be provided by keeping specimens of the proper size constantly before the graders.



A HANDY PACKING TABLE. FIG. 373.

THE HAY LOADER IN OPERATION. FIG. 374.

INCREASING EXACTNESS.—In case a grower has a special trade for strictly fancy barrel apples, grading to more exact uniformity in size and color will prove profitable. We are of the opinion, however, that the increasing demand for more exactness in the grading of all kinds of agricultural products will make such a practice imperative before many years. Recent legislation in the form of the so-called "Sulzer Bill" has laid down certain rules for the standardizing of barreled apples. All growers who sell apples in barrels should become familiar with this law even though they do not wish to sell their fruit under "United States standards." Copies of the bill may be secured from the Secretary of Agriculture, Washington, D. C., or from Senators or Representatives in Congress. R. H. BELL.

THE MOON AND WEATHER CHANGES.

EVERY season we have many letters from people who have been told that the moon has some direct influence upon crops or upon the weather. The Agricultural Department has now taken this matter up and gives the following opinion:

"As a matter of fact all weather changes depend ultimately upon temperature differences. The temperature, as we know, constitutes of itself a most important weather factor. Another and equally important weather factor is rainfall. But to obtain rain it is necessary first to evaporate water from the surface of the earth, and this, as everyone knows, requires heat. Still another important weather factor is the direction and force of the wind, and this, too, requires heat, for the winds will not blow unless the temperature is different at one place from what it is at another any more than the air will draw up a chimney when there is no fire in it.

"Since then the heating of different parts of the earth and its atmosphere to different temperatures is the real cause of the winds and of all weather changes it follows that the moon and the planets can affect the weather only so far as they supply heat.

"Now, according to accurate measurements made with the most delicate instruments, the amount of heat sent to the earth by all the planets and also by the moon is insignificant in comparison to the amount that comes from the sun. Hence we could not expect either the planets or the moon appreciably to affect the weather. They do not supply enough heat, the one thing that causes all our weather changes.

"To most people the above reasoning may seem quite sufficient and conclusive, but there is still another and an entirely different method of testing the whole question. We can observe the positions of the planets and the kind of weather during each position and see whether the same sort of weather always comes when the planets are in the same position. This kind of examination has often been made, both for the planets and for the moon, but not the slightest influence of either upon our weather has ever been found. To sum up: We have every reason to believe that neither the planets nor the moon can have any appreciable effect on the weather, because they furnish so little heat upon which all weather changes ultimately depend, and this belief is fully supported by weather records. The belief, still to be found in all countries, that the planets and the moon do affect the weather never had any scientific basis whatever; it is only a remnant of the many superstitions generated and fostered by that other and greater superstition, astrology."

COVER CROPS IN VIRGINIA.

I HAVE just read the article on page 812, entitled "Why Not Cover Crops?" and for the encouragement of T. W. K. and others will give a little experience to show what we may do with vetch and clover in Southern Virginia. We bought this farm January 1, 1912, at which time it was as badly run down as shiftless tenants could run it. In the Spring of 1912 a field of gray loam, underlaid with red clay, was lightly manured with stable manure; 300 pounds bone meal per acre applied broadcast, and corn planted. Crimson clover was sown at last working of corn in August. Corn made 40 bushels per acre, of shelled corn. Spring of 1913 clover was plowed down when about two feet high; 300 pounds per acre of 16 per cent acid phosphate was applied and corn planted again. One of the driest season on record ensued, and only 45 bushels of corn per acre was harvested. Crimson clover, Virginia gray oats and vetch were sown at last cultivation of corn, in August. May 30, when the vetch was in full bloom and the bloom just falling off the oats, it was cut for hay, and four two-horse loads of fine hay per acre was secured. The oats were not strong enough to hold up the vetch, and in consequence much of it was run over by the mower on account of being sprawled out so flat on the ground. I think close to one-third of the vetch was left on the ground.

Our county demonstration agent, D. D. Sizer, visited this field shortly before it was mowed, and we straightened up a number of vetch vines that were six feet or more in length. I also have vetch and rye growing in a young orchard in red clay land which has never received any manure and no fertilizer except an application of 300 pounds per acre of bone meal in the Spring of 1912, which is nearly as heavy as that described above. The first-mentioned field was plowed as soon as the hay was removed and again planted to corn, with an application of 400 pounds per acre of 16 per cent acid phosphate, and I see no reason why a bumper yield should not result. I believe the roots and part of this vetch crop which was too flat on the ground to be caught by the mower are equal to an application of manure. The soil was literally filled with the root nodules of the vetch.

JOHN B. LEWIS.

Brunswick County, Va.

The Home Acre.

NOTES FROM A MARYLAND GARDEN.

YEARS ago there was always a gap in the supply of sweet potatoes, but now, thanks to our curing houses, we have sweet potatoes all the year round. Now, the last of June, the sweet potatoes from last year's crop are retailing for 20 cents a peck, as the crop last year was unusually large and many have been kept over. Sweet potatoes of the Southern yam class are getting more popular every year. The most popular of these is the Nancy Hall, a potato with the pumpkin-colored flesh, like the Pumpkin yam of the South. When the Northern people learn to bake sweet potatoes instead of steaming or boiling them they will learn the greater sweetness of the soft southern sorts over the dry Jersey kinds. Of course growers have to cater to the demands of their market and hence the Big Stem Jersey is grown for northern shipment. There is a potato known in the Baltimore market as yam, but not a true member of the Southern yam family. This is the Hayman, or as some call it the Southern Queen. This potato was brought from Brazil many years ago to Virginia, and was renamed years ago by a Northern seedsman Southern Queen and sent out under that name. The original name of Hayman was from the name of the sea captain who brought it to this country. This is one of the earliest sweet potatoes. It is not of the best quality in the Fall and early Winter, but in late Spring and Summer its quality is very good, and we are eating them now with much pleasure. Its great fault is the tendency to grow too large, and hence it should be planted rather late. It is the easiest to keep of any sweet potato.

There is a sweet potato now much talked about in the South called the Early Triumph. I have never grown it, but those who have claim that it is simply the Nancy Hall renamed. The popular potato on the Raleigh, N. C., market is the White Barbados. This is a potato of the old Spanish type and a true representative of the Southern yam varieties. Baked in an oven the sugary sap will break through the skin, and it makes a delectable morsel. When I was a boy, in the old fireplace times, I thought that there was nothing finer than to put the old Spanish potatoes in ashes on the hearth and cover them with hot coals. A potato of this class baked in the ashes was something far ahead of the dry yellow Jerseys. If the Northern people ever learn how to cook the Southern varieties they will learn their superior sweetness, but the Southern soft potatoes will not abide the steaming or boiling that Northern people use in the cooking of sweet potatoes. It takes the dry Jerseys to stand that sort of treatment. In fact sweet potatoes of any sort are at their best only when roasted or baked.

Our first sweet corn was pulled June 26. This was from the variety called the Portland Market, the seed of which were sent me by an Oregon seedsman. Whether actually grown in Oregon I cannot of course say, but the variety is about as early as any I have ever grown. My standard early corn has been for years the Norfolk Market, an improved variety of the old Adams Early, but this Oregon corn, planted later than the Norfolk, has come in ahead of it.

Notwithstanding the intense drought, the Yellow Potato onions made a fine crop, and are now cured and housed. I plant these in September and after the Early green onions from sets of the Norfolk Queen have been used, we use the offsets from the potato onions as green onions.

Cucumbers also are on hand (June 27); our market growers have been shipping them for a week, and the price is said to be good. The great cantaloupe crop of this section will soon be on. This crop is later than usual owing to the long continued dry weather, but the melons are said to be forming finely.

My early peas were a complete failure, burnt up, but I have had a great surprise in the success of a later sort called Sharpe's Queen. This has withstood the dry heat, and has given us a fair crop of very fine and sweet peas, and here the last of June the vines are still green and making new bloom, something I never saw in peas in this hot soil and climate.

Crosby's Egyptian beets are unusually good this season. I must have struck a greatly improved strain, for a more perfect and early growth with small tops I have never seen. I have tried a number of varieties of the chard, some with pink leaf stalks and some with yellow, and two years ago I had a variety that grew so large that people thought it was rhubarb, but the leaf stalks were flat and thin and not good. Then I got the Lucullus. This variety makes leaves of a light yellowish green, and crumpled like Savoy spinach, and the stalks are round and long. We are now eating the young leaves of the thinnings and find them the best of all Summer substitutes for spinach. Later, when the leaf stalks are well developed we shall cook these like asparagus, and they make a fine dish. The Lucullus is certainly the best of the chards.

The John Baer tomato, which was advertised to make ripe fruit in 30 days after setting, has been out 60 days and has not yet made a ripe fruit, though well loaded with green fruit. The fruit seems to be uniformly very smooth, and one should not judge too hastily about its earliness this season of intense drought and heat, for we have not had rain enough more than to moisten the soil an inch or more since the first week in May; a little below the surface the soil is dust dry, and one wonders how plants live at all that are not watered heavily. The Brimmer, a late tomato, has fruit as large as the John Baer, and one of my neighbors has ripe Earlianas, though I have not.

W. F. MASSEY.

Maryland.

SOME HAYING NOTES.

THE picture at Fig. 374, page 903, shows a typical haying scene in the Middle West. Most of our readers can remember the time when all the hay was forked laboriously on the load by hand. Every pound of it had to be raised by the small of the back both in putting it on the wagon and in taking it off again. Many of our people, it is true, do the same thing now, but in a larger proportion of machinery comes to take the place of much of the old hand labor. As is shown in the picture the hay loader on many a farm takes the place of the fork. This machine runs behind the load, catches up the grass with its steel fingers and plays baseball with the bunches in a most effective way. The modern outfit, with a heavy team, can now drive into a field when the grass is ready and with fast walking horses gather up a load of this hay as rapidly as two men can well take care of it.

In many cases it is taken up so clean that it is not even necessary to go over the field with a rake. There are still many farms on which the hay-loader is not used. Some of them are too small and others are too rough or stony for the use of such improved machinery. On the smooth larger farms, however, this device is of great service and the scene pictured at Fig. 374 is a familiar one on many of our farms.

At this season of haying several old questions always come up for discussion. One is whether after a storage barn is filled with hay the building should be left open or closed in order to dry out the "sweat" which arises from the new hay. Some farmers believe that the doors should be left open in order to let in the air and thus cool and dry off the hay, while others declare that the doors and windows should be shut tight, with only a ventilator left at the top. We have heard some hot remarks over this question but the best authorities agree that it is better to close the barn after the hay is put in in order to get rid of the moisture. As the hay heats, vapor arises from it to the top of the barn. If the door is left open the cooler air from the outside and especially at night will be likely to condense the vapor into moisture to remain at the top of the hay. If the barn is closed this vapor will pass off at the top through the ventilators, and thus dry out the hay sooner than if the barn was left open.

Another question which frequently comes up at this time regards the use of salt in putting away damp or green hay, if it has been necessary to house the hay in advance of a storm or for some other reason hay not fully cured must be put into the house. With clover or Alfalfa hay there is danger in this from overheating or even spontaneous combustion, and farmers often use salt scattered over the hay as it is put in. There are several reasons for the use of salt under such conditions. The salt will absorb considerable moisture, and when scattered over the hay will draw water and to a large extent lessen the danger from fermentation. In another way the salt prevents trouble because of its chemical action in delaying or preventing certain ferments which might otherwise go on in the hay. The use of lime is also recommended for this purpose, and we have known farmers who scattered charcoal over green hay as it was put into the mow. Salt is the material generally used, and has been employed when the hay is not fully cured.

BOSTON MARKETS

Fruits and vegetables in Boston market have been fairly plentiful and reasonable in price as the rule. Strawberries are coming in very freely on account of hot, dry weather; quality is good, but size not as good as many wish in all cases; a few of these to fancy trade bring 40c. per box wholesale; good berries go at about 25c. per box, while other grades range from 8c. to 15c. per box, according to condition of fruit when it reaches the market. Pineapples, which have been plenty all Spring, are now short on account of drought in Florida, it is said; $3 to $4.50 per crate are the prices on these. Bananas and oranges are plenty and cheap for the season, the former selling at $1.25 to $3.25 for yellow, and up to $4.50 per bunch for reds, while the latter go at $2.50 to $3.50 per box. Southern watermelons 25c. to 40c. each and in fairly good supply. Cantaloupe about $2 per large crate. Blueberries coming in and sell at 13 to 15 cents per box; gooseberries about 10c. per box; currants about the same; raspberries 10c. per pint. A few Baldwin apples left go at $3.50 per box; Western fruit $3.50 and $4.

Onions and potatoes short and high; Texas stock about $4.50 per crate, Spanish $7.50, Southern sets $4.25 per basket. A few Maine potatoes left, bring $2.30 per bag at cars; new Southern $4.50 per barrel. Sweets from Carolina $4.50 per crate. Asparagus plenty and demand a little slow, yet prices are fair. Jersey and Pennsylvania stock $2.50 per dozen; native $3 and $4 per box. Southern string beans $2 per basket; Southern cabbage $1.50 per barrel. Cucumbers cheaper at $2 to $3.50 per box; lettuce 30 to 60 cents per 18 heads; bunch beets 50c. per dozen bunches; carrots 50c. to 75c.; white turnips 50c. to 75c.; yellow turnips $2.25 per box. Rhubarb 1½c. per pound; new green peas quite plenty at $1.75 to $2 for best per box; others around $1.50. Spinach about 40c.

Butter coming in very freely and prices breaking slightly. Prices range from 26c. to 32c. The same story applies to cheese, which brings 14½c. to 18½c., according to quality. Eggs coming in quite plenty, but demand is good, and prices incline up instead of down; 24c. to 32c. per dozen are the figures for different grades.

Live hens go at 16c. and broiler chickens 25c. Dressed poultry 15c. to 20c., according to size and quality; broilers 28c. to 30c. for native, while Western stock go 27c. Nice veal 15c. per pound; other grades 14c., 13c., 11c. and 9c. Best lamb 18c.; good 15c. and 16c. At Brighton dressed hogs 11c.; live weight 8½c.; live veals about 8c.; live steers about 8c.; good cows 6½c.; others 5c., 4c. and 3½c. Milch cows plenty but demand light; common milkers about $50 each.

General grain prices are lower at wholesale, but local dealers keep prices at high level of the past few weeks. Mixed feed goes at $28 and $29 per ton; bran $24; cotton-seed meal $33; gluten $30; cornmeal, per bag, $1.53; oats 36c. to 47c. per bushel.

Hay is firmer and inclined upward on account of poor promise of present year's crop; $22 and $23 per ton is easy to obtain for good horse hay; other grades $15 to $20 per ton. Dry weather has spoiled hay crop on any but low, moist fields or fresh seed land of good moisture-holding quality. Many have cut early fields that were drying up and turning yellow. Apple crop promises fair at present time; other fruit about medium or light.

A. E. P.

A SCOTCH servant shortly after her marriage met her former mistress, and on being asked how she was getting on, she replied: "I'm getting on fine, mem; but, ah, I canna bide the man."—Boston Transcript.

"LADY," said the unshaven man at the back door, "I'm on a hunger strike." "Well," said the general housework person sharply, "what do you want?" "Can't you hear? I'm on a hunger strike. I want to be forcibly fed."—Buffalo Express.

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COVER CROP QUESTIONS.

Value of Crimson Clover.

DOES it pay to sow Crimson clover for cover crop if it freezes out, or has no time to grow in Spring before plowing? Should I sow rye and clover in my corn if I want to plow early for potatoes? E. H.
Maryland.

Yes, we should sow Crimson clover in your latitude whether it was thrown out during the Winter or not. Our experience is that after 60 days of growth the clover will more than pay for the labor and seed, even though it is completely killed during the Winter. In your latitude there should be four months of growing season at least during the Fall, and you would gain a good profit on a growth of clover seed before Winter set in.

Preventing Soil Acidity.

HOW keep land from getting sour or acid? Some argue plowing green cover crops down should not be done for this reason. Would it be better to cut cover crop and dry it before turning under? Is this practical? E. H.

Any soil which contains a fair quantity of organic matter will become sour more or less slowly, and the use of lime at fair intervals is the best treatment for such soils. We know of a number of cases where farmers cut the cover crop with a mowing machine and let it dry into hay before plowing it under. This prevents some of the trouble from souring, but it is not the best way to handle these crops. We think that the process of fermentation which these green crops go through in the soil is of benefit, and we consider it more practical and cheaper in the end to plow the green crops directly under and pack the soil firmly and use lime frequently enough to prevent the soil from becoming too sour.

Fitting Land for Wheat.

I HAVE several acres of oats. I shall plow it as soon as grain is harvested to seed to wheat in Fall. Should the land lie idle in hot Summer to settle, or would it be better to sow to buckwheat and Cow-horn turnips to get more humus in soil? Would plowing down this crop a week or two before seeding injure wheat crop? E. H.

Personally we would not let that land stand idle. As soon as possible after harvesting the oats we should plow or harrow this land and seed to the buckwheat and turnips, and plow this crop under before fitting the ground for wheat. We think the humus added to the soil in this way would more than pay the cost of the plowing and seeding, and leave the soil in better shape for the wheat than if it were left idle through the Summer. It would be an economy to use a dressing of lime or limestone. Before putting in the wheat, we should plow this cover crop under and then roll or pack down firmly. Then harrow the upper soil as carefully as possible and make a good seed bed for the wheat.

Two Methods of Strawberry Culture.

MANY different systems and ideas of the same exist in different sections where strawberries are grown. The Massachusetts Fruit Growers held a field meeting June 17 at Mr. Gardner's place on the Marshfield hills, and two entirely different systems side by side are practiced right there. Mr. Gardner, having about 10 acres of beds on his place, including bearing beds and those set for next year's crops, uses one system, while his neighbor just below growing about four acres uses another. I believe both are very practical, good common sense systems, and will briefly go over them.

Mr. Gardner as the rule plants potatoes this year on the land he intends to set strawberries on next year, and uses a heavy dressing of stable manure and one ton of high-grade fertilizer per acre on this crop. The following Spring one-half ton of fertilizer is put on the land and the strawberry plants set. Necessary cultivation of course follows, and in the Fall Mr. Gardner takes his first crop off in the form of pot-grown plants which are sold in wholesale lots to the seedsmen, largely in Boston. The first and strongest runners are all used for this purpose, and the later runners are trained into matted rows of about three feet in width, perhaps more. A narrow path separates this from the next bed. These runners are not allowed to grow too thick in the beds, being placed so the sun can get at the berries. Under this system he gets two crops, one of plants and the other of berries. By this system he sacrifices his berries to a certain extent for the pot plants, but as these are his leader, and the berries a second consideration, the system works out in his case all right. He grows good berries, but of course not as good as he could from the first runners were they used to crop from. He fertilizes his bearing beds by using one ton per acre of special strawberry fertilizer put broadcast over the mulch early in the Spring, often during a late snowfall or early Spring rain.

The neighbor grows for berries only, and sets his plants in early Spring in rather narrow rows and trains the runners as he wishes them to grow. After these are well rooted he takes out the mother plants entirely, leaving a narrow path about the width of a hoe blade here. This leaves the beds in narrow rows of 12 to 20 inches in width, which are very handy to pick, without too much arm stretching. Every other path is used by the picker and is made wide enough to move in comfortably and pick from the beds on both sides. The plants in the beds are spaced about right to let in plenty of light to ripen up the berries properly. This man does not aim to grow too large a berry, believing the medium-sized berry that grows naturally without too much forcing stands up better after reaching the market, and also holds its place better, and his customers in Boston back him up in these claims. He grows Marshall only, and gets a bearing season of three to four weeks.

Now comes the exceptional part of the story. This man has about four acres of land, and has grown only strawberries on this for about 18 years, and uses nothing but commercial fertilizer, no stable manure, and less than one ton per acre as the rule, worked in between the rows a short time before the crop is ready to pick. This year's bed of two acres is plowed in after picking is over, to gather with the mulch between the rows, and this is the only fertilization beside the commercial fertilizer used the next year on the crop that the land received. The following Spring the new crop of plants is set. A mighty good crop of good berries of even size is being picked this year, and these beds of two acres of level or slightly sloping land on a high elevation are a sight worth seeing, and will long linger in memory. Strawberries are the main crop, in fact about the only crop grown in that section, and the growers are experts in their line. Pickers are mostly Portuguese men and large boys, who are paid by the day in many cases, the wages being $1.75 per day. Two cents per box is paid for box picking.
Massachusetts. A. E. P.

MAIL BAG.

Arsenic on Grass.

IS it safe to cut grass covered with arsenate of lead? The town sprayed the elms, also my grass for a considerable distance in, as the wind was quite strong and did not improve it.
Massachusetts. J. W. B.

Generally speaking and with ordinary spraying, such grass could safely be made into hay. It seems that in this case more spray than usual was used, and there would be a question about it. We would send a fair sample of the grass to the experiment station at Amherst and obtain a scientific opinion. No one could be sure without examining such grass.

Mixing Chemicals With Lime.

I HAVE a piece of land sown to buckwheat to plow under. Would it be all right when sowing lime to mix nitrate of soda, dried blood, potash and phosphoric acid with lime, and sow all with lime spreader? Which is better, hydrated lime or ground rock, for mixing this? O. H. C.
New York.

No, we would not mix fertilizer with lime or ground limestone. Better put the lime on alone and harrow in well, and then apply the chemicals separately.

Exploding Dynamite With Battery.

G. H. S., page 832, inquires regarding gas engine battery to fire dynamite. We have done it many times, and have never had a miss, using four dry cells without the spark coil being in the circuit. If a number of holes are to be fired at one charge, we have connected the caps parallel and also added several extra batteries, four being sufficient for one or two charges. An easy method of determining just how many charges a given number of cells will fire, is to connect as many plain caps together parallel as you wish to fire, and add till you get results. ELMER J. WEAVER.
Pennsylvania.

What Became of the Middleman?

I HAVE just read with great interest "Why Boys Leave the Farm," page 810. Mr. Green said some very good things in his article. Before I was through with my chores this morning I concluded to ask a question of you or your readers.

About that middleman, what are you going to do with him after he is eliminated? Or do you not care what becomes of him? True, the farmer being one of those who produce all that is desirable and good for man should get more out of that "35-cent dollar." But my heart goes out to that poor fellow called the middleman (I have been one of them). Now if he has only a small capital and pays rent, which he usually does, he has no easy row to hoe, it being on the contrary a long one and rocky. But to the question, what are you going to do with the middleman, after he has been compelled to move on? Will some of your readers answer this question? Or perhaps Mr. Green will, if not, call on your humble servant and he will try. I am interested in the boys myself, as I have several of them.
Washington. B. D. SWARTWOOD.

Recent Experiment Station Bulletins.

"ATTIC Dust and Treasures," issued as Bulletin No. 7 in the Rural Life Series from the College of Agriculture at Ithaca, N. Y., is an appeal to farmers' wives to search for and preserve valuable historical material in the way of papers or objects that may have been tucked away in old attics and be in danger of destruction at the annual house cleanings. Its illustrations and descriptions are interesting, and suggestive of other treasures which intelligent search might bring to light.

"Porto Rican Bee Keeping," which may be obtained as Bulletin No. 15 from the Superintendent of Documents, Government Printing Office, Washington, D. C., will interest those bee keepers who sometimes long for green fields far away. It is a description of the industry in Porto Rico by the superintendent in charge of the bee culture investigations of the U. S. Department of Agriculture.

"The Tennessee Wooden Hoop Silo," is the title of Bulletin No. 105 from the University of Tennessee at Knoxville. It illustrates and describes the construction of what is said to be the cheapest and one of the most satisfactory types of home made silos; costing from $60 to $100 according to size and quality of material used.

"Some Diseases of Nursery Stock," Circular 35, from the New Jersey Experiment Station at New Brunswick, describes, with excellent illustrations, some of the common fruit tree diseases, such as crown gall, hairy root, fire blight, apple and pear scab, peach yellows, little peach, etc. Circular 34 from the same Station is devoted to crown gall and hairy root alone. Grain smuts, their cause and treatment, are discussed in Circular 36.

The San José scale, Oyster-shell bark louse and Scurfy bark louse in Ohio are treated of in Circular No. 143 from the Agricultural Experiment Station at Wooster. Maps showing their distribution in the State are given and the recognized remedial measures are described. Circular No. 140 from the same station discusses Orchard bark beetles and pinhole borers, while Circular No. 142 is devoted to the Seventeen-year locust.

"Forage Crops" is the title of Bulletin 269 from the Ohio Station and "Forest Conditions in Ohio" are described in Bulletin 254. Both are profusely illustrated and may be obtained by addressing the Experiment Station at Wooster, O.

Orchardists will be interested in the third report of "A Comparison of Tillage and Sod Mulch in an Apple Orchard" from the Experiment Station at Geneva, N. Y. This report by Prof. U. P. Hedrick embodies a vigorous condemnation of sod in apple orchards.

Other bulletins from the same station are "The Cabbage Maggot"; No. 382; "A Test of Commercial Fertilizers for Grapes," No. 381; and "Analyses of Materials Sold as Insecticides and Fungicides," No. 384. M. B. D.

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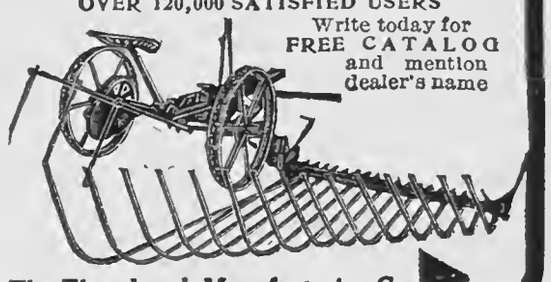

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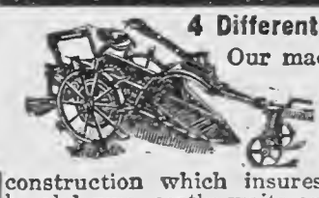

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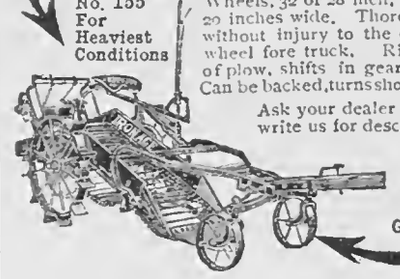

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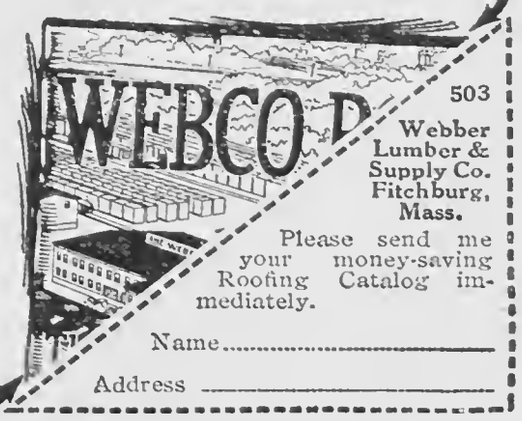

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EVENTS OF THE WEEK.

DOMESTIC.—Fire at Salem, Mass., June 25, swept over half the city, rendering 20,000 people homeless. At least six lives were lost, and the property loss is estimated at nearly $15,000,000. The burned area covered about two square miles. The fire, which started in the plant of the Karn Leather Company, was apparently caused by an explosion. The city was immediately put under martial law by Governor Walsh, food and tents being furnished by the State. Among historic buildings destroyed was the birthplace of Nathaniel Hawthorne, but the House of the Seven Gables escaped.

Heat, tornadoes and lightning descended upon various localities in the Middle West June 26, and claimed several lives. The storms resulted from the intense heat wave. Lightning started approximately fifty fires and killed one man at Aurora, Ill., and another at South Bend, Ind. A tornado swept through Wausau, Wis., and destroyed considerable property and killed two men. A cloudburst cut loose a dam and reservoir at Lanesboro, Minn., and flooded that town of 1,000 inhabitants.

The 30-acre plant of the Richardson & Boynton Company, manufacturers of stoves and ranges, at Dover, N. J., excepting the shipping department building, was destroyed by fire, supposedly of incendiary origin June 28. The loss is $500,000. Eleven hundred men were employed there before the works were shut down, temporarily, three weeks ago, on account of the heat and for repairs.

The Anchor Line steamship California, from New York for Glasgow by way of Londonderry, with 840 passengers aboard, went aground in a dense fog June 28 on the rocks of Tory Island, off the northwest coast of Ireland. The California's bow was badly damaged when she struck the rocks, but all on board were taken off in safety.

Stringent measures to prevent bubonic plague following the reports of one death and another case in New Orleans were admitted by Surgeon-General Blue on June 29. Two experts from the Department of Health were ordered to the afflicted city, and telegrams were sent to public health officials in every State bordering on the Atlantic and Gulf coasts and those fronting on the Mississippi River detailing preventive measures. Every port from New York to Galveston and up the Mississippi to St. Louis is to be urged to begin immediately a campaign of extermination against rats. Every ship from southern ports will be scrupulously examined by health officials at all ports to learn if possible the origin of the disease. All steamers, whether starting for coast, foreign or Mississippi River ports, will be thoroughly fumigated and then protected with rat guards. All freight, whether leaving New Orleans by steamer or rail, that a rat might hide in will be held up unless fumigated. In this way it is hoped to prevent the spread of the plague, which with the exception of a single case in California recently, has not been found in a human in the United States since the epidemic in cattle six years ago.

After an uninterrupted service of sixty years the United States Express Company retired June 30 from the transportation business, the close of its fiscal year, in accordance with the plan adopted last March. All the railroad contracts had been transferred to the other big express companies, and arrangements have been completed whereby Wells, Fargo & Co. will act as agents for the United States Express Company in carrying out the contract with the Government for the handling of money.

FARM AND GARDEN.—More than 1,500 farmers, their families and employes from all parts of Lake and Porter counties, Ind., were the guests of the city of Gary, the steel corporation, and the Gary Commercial Club, June 27. This was the annual farmers' day celebration, which is a movement to encourage farmers to trade in Gary and to bring their produce to the public market. Most of the visitors came in automobiles. On their arrival in the city they were addressed at the Commercial Club by Mayor Johnson. Following this the men marched to the Illinois steel works, where a special train of observation cars took them through the coke ovens, steel mills, tinplate plants and bridge plants. Meanwhile the women and children attended a concert at the Presbyterian Church and at Jefferson Park. At noon the visitors dined without cost in the hotels and restaurants of the city. In the afternoon a public reception was held for them at the Commercial Club, followed by a free concert, automobile ride, inspection of local stores and an exhibition drill by the fire department at night. The visitors received tickets that admitted them to any theater and "movie" theater in Gary.

Amendments to the regulations for the protection of migratory birds have been proposed by the United States Department of Agriculture to take effect as soon as the three months notice required by law has expired. This will be on October 1, 1914. Meantime copies of the regulations can be obtained from the biological survey of the Department. The effect of one of these changes is to permit on the Missouri and the upper waters of the Mississippi the shooting of all migratory game birds for which there is an open season from October 1, 1914, to January 1, 1915. After the latter date the prohibition will be in force again. The new regulations provide for a closed season in Zone No. 1 for all water fowl from December 1 to September 30, 1915. Exceptions to this rule are: In Massachusetts and Rhode Island the closed season shall be between January 1 and October 1; in Connecticut, New York, Pennsylvania, Idaho, Oregon and Washington between January 16 and October 1; in New Jersey between February 1 and November 1; in Minnesota, North Dakota, South Dakota and Wisconsin between December 1 and September 7. For Zone No. 2 the closed season is between January 16 and October 1, with the following exceptions: In Delaware, Maryland, the District of Columbia, Virginia, North Carolina, Alabama, Mississippi and Louisiana the closed season shall be between February 1 and November 1; in Florida, Georgia and South Carolina between February 16 and November 20; in Kansas, Missouri and Oklahoma between February 1 and September 15; in Texas, Arizona and California between February 1 and October 1.

CROP REPORTS.

June 30.—Splendid rains lately, bringing crops along nicely. Hay will be about half a crop; old meadows are quite poor. Alfalfa is quite good; not much grown here. Potatoes come up slowly on account of dry, cool weather. Corn of all kinds rather backward for this time of year, but looks quite healthy. Oats have good healthy appearance. Buckwheat nearly all sown. Potatoes all sold.
Elk Creek, N. Y. V. S. C.

June 27.—Prices on nearly all farm produce here are variable, and are a matter of quality, supply, and the person selling. Corn, native, is selling at 75 to 80 cents per bushel; oats 40 to 50; hay $12 to $15 per ton for baled native wild. Butter ranges from 20 to 35; milk 20 to 40 cents per gallon; eggs 15 to 20 cents per dozen. Young chickens, frying size, 30 to 40 cents each. Cows, fresh, sell at anywhere from $20 to $65 each. G. W. M.
Jackson, Miss.

My strawberries were ruined by the drought. Where I got 100 quarts a day last year (same patch), we did not sell a berry; just had enough for home use. Same with red raspberries. Sweet corn knee high and tasseling out and will not make seed. Farmers have no hay or pasture. We are feeding stock just as we do in January. Best wheat crop in years and farmers busy threshing; grain good quality. Gladiolus will not pay expense of planting and cultivation; have 10,000 bulbs to plant for late cutting, that ought to go out now, but can do nothing toward getting the ground in order, and they could not come up if planting for lack of moisture. E. T. F.
Belleville, Ill.

June 30.—The pastures through this section are in good condition, and with the amount of rain we have been having I think they will be in good condition for some time. Of course the drought we had last Summer hurt all our pastures, and we must not expect to have as good feed in them as we would had we had a better season last year. The market price for butter is lower this year than it has been for several years, and I understand that our creamery here is losing money even at the price, and at the price of feed there is no money in it for the farmer. Jerseys are mostly kept in this neighborhood; there are a few black and white, but not many, and most of our farmers are interested in keeping a purebred bull to build up their herds. You may be interested to know that we have about 375 head of purebred Jerseys here. We have sold 50 head since the first of January. We keep all our stock in the barn daytimes, and pasture them nights. We find with this practice we get more milk from our cows, and our young stock grows much better.
Delaware Co., N. Y. P. A. DUTTON.

June 22. The condition of crops in Jefferson Co., Nebr., is good, due of course to ample rainfall and generally favorable weather. A large crop of Alfalfa was cut the first week in June, much of which was more or less damaged by rain. The second cutting is now nearly ready, and will be heavy. Wheat is now about ready for harvesting, and will be in full swing this week. The crop is large but has been damaged to some extent by Hessian fly over the territory south of the Platte River from the Missouri River west 200 miles. The damage in this county is estimated at 10 per cent. Notwithstanding this, Nebraska is slated for the largest crop of wheat in her history. Oats too are very fine, but will not be ready for cutting this month. Corn was never in better condition at the time than now, but it has to run the risk of shortage of rain during July and August, which may come and may not. Prices of horses and mules continue good. Butcher cattle six cents live weight; hogs $7.50 per hundred; butter 15; eggs 15; wheat 75; corn 80; shipped in potatoes (old) $1.25; new potatoes just showing up and 50 cents a peck.
Fairbury, Nebr. H. M. R.

June 25. This is mostly a dairying section, making market milk for New York City. This month, June, the Bordens are paying a flat contract price of $1 per 100 pounds of milk, with a 10-cent per 100 pounds premium for a score of 68 or better, also an extra 10 cents per 100 pounds for milk testing 3.8 or better. The dairymen are dissatisfied with these prices, and I think I am safe in saying that there are not more than one half as many milch cows in this section as there were three years ago. Buyers are coming in here from the West and cleaning the country of cattle. Good young cows sell for from $75 to $100; young stock cannot be bought, as they are very few and the farmers are holding them. The Spring was very backward this season, but we have had fine weather lately and the farmers have nearly caught up with their work. There is a large acreage of Telephone peas in this country. The soil seems to be adopted to growing peas, but they are a very uncertain crop to raise, as we get anywhere from 25 cents to $2.50 per bushel, with the bulk selling from 50 to 75 cents. We were very much interested in the articles regarding late sowing of Telephone peas, and from my own experience can say that all who discussed this are right. We have had late sown peas grow and keep bearing till frost killed them and again we have had the blue mold and lice destroy the whole crop. We put in our last sowing of peas yesterday, the 24th of June. M. W. F.
Burlington, N. Y.

COMING FARMERS' MEETINGS.

Summer meeting, Virginia State Horticultural Society, Charlottesville, Va., July 15.

Summer meeting, New Jersey State Horticultural Society, farm of J. H. Barclay, Cranbury, N. J., July 15.

Summer School of Agricultural and Country Life, Massachusetts Agricultural College, Amherst, June 30–July 28.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22–24.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5–6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August 5, 6, 7.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

National Dairy Show, Chicago, Ill., October 22–31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18–21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18–24.

"WOULD George enlist?" "No, I don't think he would." "What's the reason. He comes of fighting stock." "That's the reason. He's soured on fighting. His grandmother is a Colonial Dame, his aunt is a D. A. R., and his mother is a militant."—Boston Globe.

A YOUNG lady took down the receiver and discovered that the telephone was in use. "I just put on a pan of beans for dinner," she heard one woman complacently informing another. She hung up the receiver and waited. Three times she waited, and then, exasperated, she broke into the conversation. "Madam, I smell your beans burning," she announced crisply. A horrified scream greeted the remark, and the young lady was able to put in her call.—Christian Endeavor World.

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IT'S ALWAYS READY

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Think it over. Figure it out. Compare it with my direct from factory to farm one-profit plan and you will know why your dollar spent with Galloway is larger and brings you more and how I can save the farmers of America over a million dollars every year.

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Here they are. Take your choice. 1--Cash with order. 2--Bank deposit. 3--Part cash, part notes. 4--All notes. 5--Monthly payments. One of these will please you and suit your pocket book.

5 H. P. Engine $99.50. Write for Catalog

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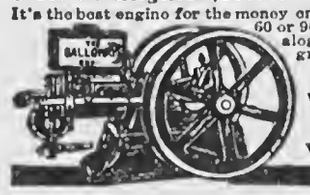

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270 ACRES—rich black loam soil, 170 acres level, 100 rolling, ¾ mile school, 3 miles station, churches, etc. Good 11-room house, 2 sets good barns, 40 acres valuable timber, 50 apple trees, living stream. Price, $6,200. Easy terms. See W. J. BEMENT, Sherman, Chautauqua County, New York. Free List.
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BEST THOROUGHBRED STOCK IN AMERICA—
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SEND FOR PREMIUM LIST
C. I. CAMPBELL, MANAGER, 5 Park Square, Boston, Mass.

WHAT WOULD YOU DO?

[Here are more comments on the case recently reported by Mr. Cosgrove where the eggs were claimed to be infertile.]

I would find out through his banker or some friend or acquaintance in his town whether or not the complainant was a novice, and whether or not he was telling the truth, or ask him to return the clear eggs. For obvious business reasons I would make him a satisfied customer.

New York. MONTICELLO EGG FARM.

It is odd that an experienced "hen man" like George A. Cosgrove has to ask whether he shall replace egg settings that his customers report not hatching. There should be a contract and lacking that, a settled practice in such matters. I believe that all a dealer in eggs or anything else should be required to do is to affirm that his goods are what they purport to be to the extent of his knowledge and belief, and he takes no further responsibility. Anything like a guaranty should be stated in so many words. However, if his own settings of eggs are found not to hatch he should then make good such of the same lots as he has sold. He is bound to take all reasonable measures to find what the quality is. Eggs have hatched badly in this section this season. The Spring was wet and cold. J. W. C.

Western New York.

If justice is to be done to both seller and buyer the matter should end just where it is. The seller knows about what per cent. of fertility his eggs are running and doubtless can produce witnesses to prove it. The buyer in this case has produced no proof that the eggs were "all infertile." But if he can show any reasonable proof that there were many infertile eggs, or that his hatch was poor it would be good business practice to allow him the benefit of the doubt and replace them on liberal terms. I believe the majority of purchasers are honest, but have known of instances when the claims of purchasers seemed to me unjust, as eggs incubated in large numbers a few days before and a few days later at our plant showed high fertility, while a claim of poor fertility was made for eggs sold in the meantime. I believe eggs should be fresher if shipped, than when incubated at home as the content becomes weaker with age and is liable to injury from jolting. At this farm we find it most satisfactory to guarantee a definite per cent. of fertility, and agree to replace all clear eggs returned within 10 days of shipment. As white eggs may be tested on the third day of incubation this is ample time, but for brown eggs it might be advisable to allow a little longer time.

New York. ERNEST C. BENEDICT.

It would seem that the answer to the questions asked by Mr. Cosgrove might be found in the dictum laid down by a man who was more than ordinarily successful in building up a business, i.e., "The buyer is always right." It will not pay to leave any buyer sore if it can be prevented by any possible means. The reason is, of course, one of policy. Duty need not be considered. In the case cited the buyer should have his money back, or more eggs, as he chooses. The rule should apply even when it is very evident that the buyer is dishonest. He'll boost you some day. G. A. W.

Shawnee, Okla.

I have bought eggs and I have sold them. I once paid $20 to a reputable breeder for 15 eggs and got seven chickens. Another time I paid $30 for 15 eggs that came halfway across the country and didn't get a chick. I sent no complaint in either case. I knew I was taking chances. The eggs were reasonably fertile. A combination of circumstances worked against me. If a poultry breeder advertises to replace infertile eggs free, or in case of a poor hatch duplicate the order at half price, and take the word of the customer, he should do as he agrees. Personally I think that when a breeder knows his stock is vigorous, and that the percentage of infertile eggs is small, he is justified in looking with suspicion at a complaint that all or nearly all the eggs were infertile. The same rules of honor and honesty apply in this as in all lines of business, but I hold that the purchaser assumes more or less risk whenever he sends for eggs. He should ascertain, if possible, the reliability of the party with whom he deals and then be sure that he does his part to insure success.

W. H. HUSE.

In an advertisement of eggs for hatching there is an assurance of the eggs producing chickens implied to the buyer sufficient to induce him to risk his money for the eggs. This implied assurance makes the seller responsible to a certain degree. He can send no eggs but such as of which, from proper production and test of similar eggs, he has good evidence that they are fertile. The sale also creates the relation of buyer and seller with its mutual rights. The seller, however, cannot be made responsible for the results of incubation in the hands of the buyer. Wrong conditions during hatching arising either from carelessness or lack of knowledge may destroy the fertility of the eggs. True, the seller's eggs should be tested at the end of a week's incubation, and the result reported to him. But the buyer may be a farmer. His crops—the main income—rush him daily, his mind is absorbed by these; or it may be his first experience in hatching eggs purchased from breeders and he naturally supposes from the advertisement that every egg will hatch, so that he gives them no further thought after setting them until on the twenty-first day he looks for his chickens. The seller should allow for these things and in order to "bear one another's burdens," in case of a just complaint, should replace the eggs at half price or half the eggs free of charge, and if the season of full rates is over, at half the reduced rates. This is the law of humanity.

This is where the buyer is an honest man and his complaint true and just. But there are many dishonest persons in the country, some among all classes of people, some who will report "None hatched; all infertile," when they had a full hatch, in order to obtain more eggs for nothing. The dealer cannot make good reported failures without investigation. Therefore let G. A. C. investigate his case. If the buyer is a reliable, honest man, he has standing in his community and will be glad to furnish references. Send to him for a reference of his standing from his pastor (he should be a member of some church) his banker, postmaster and groceryman. If these testify to his honesty and veracity his complaint is true. He failed somewhere in the hatching although the eggs were fertile. But after paying out his money for the eggs we may reasonably suppose he did the best he could to hatch them. Share his loss half and half. It is right and good to be generous. If he refuses to furnish reference he is a fraud.

Illinois. J. C. S.

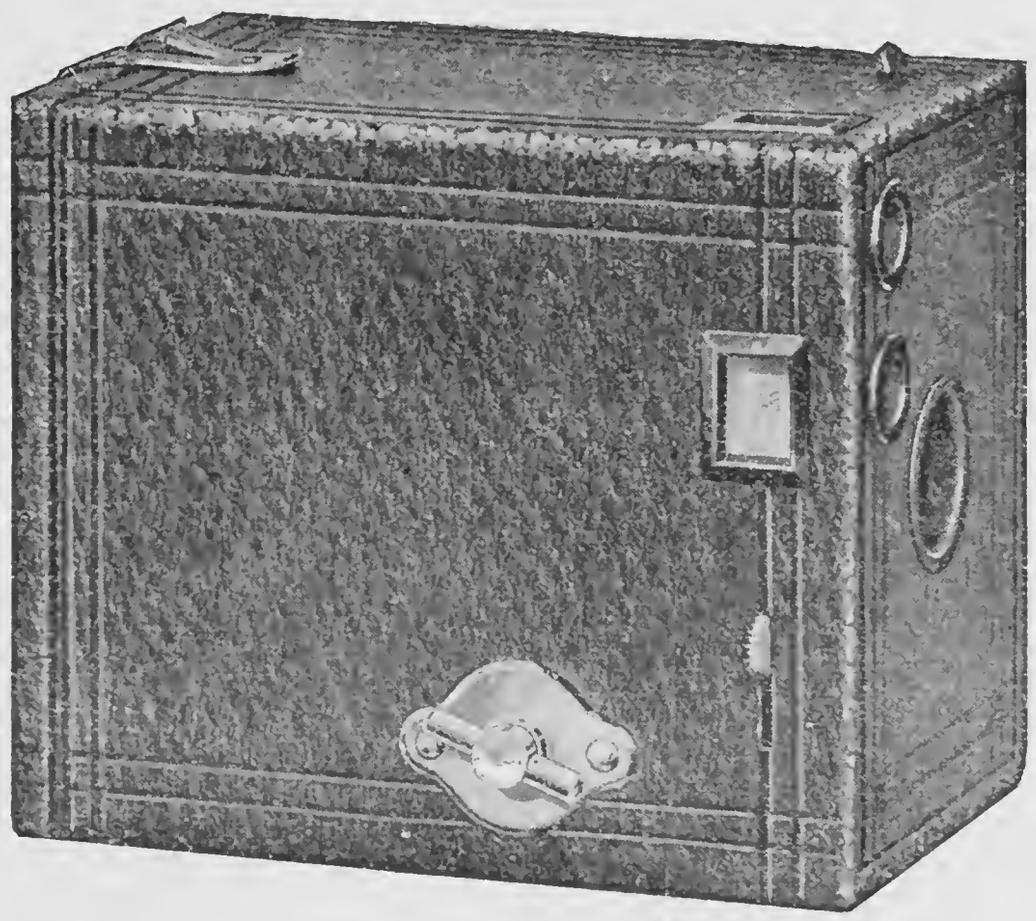
What Causes Crippled Chicks.

WILL you please let me know just how much influence the air in the incubator has upon the hatch? The hatch which I had a week ago was about 72 per cent. of the eggs set, and what I would expect this time of year. My hatch this week, however, was but 55 per cent. of the eggs set. Further, we had more cripples than at any previous time. As far as I can tell the only condition that differed from previous ones was the atmosphere of the cellar itself. We did not have as much air as there has been at other times. While the windows were open as far as they had been previously, it was enough warmer out of doors to make it rather "close" in the cellar. Can you tell me whether this would cause the difference in the two hatches, or can you offer any other explanation? C. W. H.

Homer, N. Y.

Regarding the crippling of the chicks, would say that in our experiment station work we have found the cellar air has comparatively no effect upon incubation. This air, with the exception possibly of the danger of the fumes from the kerosene oil, which may be vaporized by allowing too much kerosene oil on the lamps after filling, or the possibility of the proximity of the can or the spilling of the kerosene on the floor of the incubator cellar, has no effect on incubation. We are not altogether sure that the vaporized kerosene oil does not have some effect upon the development of the chicks. We are working on this problem at the present time. Otherwise the air is not of any importance, as the carbon dioxide in it is the chief factor and this never exceeds an amount that would be serious to incubation. I judge the trouble that this inquirer has had is one of temperature, for most of the crippling is caused by that factor and this is most likely to occur during the first five days of incubation. During these first five days the primordial cells, or the basement cells that go to form the tissues of the chick, are laid down during this time. Any excess temperature or any abnormal temperature at this time will multiply the number of these cells, and cause cripples more often than at any other period. I should suggest that C.W.H. have several thermometers in different parts of the incubator, to test out whether or not one part of her incubator was much hotter than the others; to see to it also that her incubator was level. With all types of incubators we strive to get at the factor that causes a certain condition, but it is difficult to identify the identical thing that does the damage. We all know that when we catch cold we are likely to remember we were sitting at a window some particular time, and usually connect a cold and the draught as the cause and effect, but I imagine a great many times we lose the real cause and lay it up to something that we guess, so with incubation, there is a danger with just that sort of thing. It is well to remember that the first five days of incubation are more dangerous than any other period during the hatch, and for that reason temperatures need to be watched very carefully during this time. E. H. LAMSON, JR.

Storrs Exp. Station, Conn.



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Hope Farm Notes

PART I.

A PATCHWORK DAY.—I went to bed Friday night determined to have one day as a purely theoretical farmer. I was to plant potatoes on June 28, against general advice and on a theory of my own. Why is it not a good thing sometimes for a man to kick over the traces, reject all advice and try his own way? When I awoke Saturday I knew one of those patchwork days had come—when you cannot do anything as you would like. The sky was dull and grey and full of tears. We had about two tons of hay as the mower left it on the ground and had planned to keep on cutting through the forenoon. How were we to know that Nature would cry when we wanted her to smile? First thing of all was ammunition, and that we got in a good bowl of oatmeal and milk, a R. I. Red egg and coffee. Then we went out to plan the day's patchwork.

PLENTY OF WORK.—The Italian army marched in early, for we had hired them by the day. Merrill had the cows in the pasture and the horses were ready. There was that hay on the ground, 20 acres of corn that might well taste the weeder, bugs getting at the potatoes, two acres of strawberries needing hoeing, the seedling asparagus plants alive with weeds, peas to be picked and the 'phone sounding with orders for strawberries. The sky broke loose into one of those mean, dripping showers, which make cultivating and hoeing just plain transplanting of weeds. As an opening skirmish Merrill led the Italians into the strawberry patch. We began picking Marshalls on June 1. After four weeks there were still big red berries in that four-year-old field. The vines are thick and high, and the weeds have come in so that the shower made it seem like a wet sponge. I kept out, but the Italians proved to be good swimmers, and the heaping boxes of red fruit soon began to show under the packing tree. Almost before we knew it the rain stopped and the sun popped out bright and clear. At the house the children were busy preparing vegetables for dinner, while Mother was organizing her forces for a job at canning strawberries.

PLOWING OLD FRIENDS.—That five-year-old patch was doomed. The vines were thick and strong and it was full of sorrel, but there was no use carrying it another year. It gave us the earliest fruit this year. On Friday two of a neighbor's boys gleaned a crate out of it, but the time had come to put our old friend under ground. So Philip hitched Tom and Broker to the plow and began working round and round the field. Tom and Broker are two gentlemen from Virginia, gray in color and great in weight and power. Hauling the big plow is usually play for them, but on this sultry day and in this solid field they found a full horse's job. The roots of a five-year strawberry field grab the plow about like Alfalfa roots, and the entire soil is stuffed with humus. To begin with, we plowed under a heavy growth of rye and clover, and year by year the cream of the farm has been going back for mulching. Little comes out, for 1,000 quarts of berries will take away less than three pounds of nitrogen, one pound of phosphoric acid and four pounds of potash. Everything else, including the vines and old roots, goes back to the soil. So, after five years, an old strawberry bed will be the richest and soundest spot on the farm. Philip put the plow down to the limit, and as Tom and Broker tumbled the fat furrows over they wondered who told them that strawberry culture was a soft job, and this was where I had my eye on potato culture.

"FRIENDSHIP."—There was a chance for an essay on friendship as we watched that old berry field turn upside down. These old veteran plants might well have bewailed the fate which turned them out of a bright and beautiful world in their old age, just because they needed more care than these young sprouts growing beside them. Had they not for years stood up and delivered the big berries on call? What friendship was this which cut them out right when they wanted to show what old folks can do when they try? Of course I could tell them what great things they were to do with my potato crop, but like the rest of the old timers these plants lacked faith in my new theory. Anyway, who remembers the dead? The potatoes might do wonders, but who would give any credit to these strawberry plants for growing potatoes? You see friendship has its sharp angles and teeth. I was reminded of this by a soft brush against my leg, and there was the Airedale terrier as usual at my heel, ready for business. This little dog has appointed herself a special protector for the Hope Farm man. She knows he does not hear well, and does not intend that any insurgent shall slip one over him. In several cases strangers have come to see me. When she sees me walking off over the farm with them the little Airedale drops everything else and follows like a shadow. In several cases these men have become interested in some discussion and taken hold of my arm in order to make me hear. In a flash, unless I can think to stop her with a word, the Airedale is upon them. It is somewhat embarrassing to have such friends. Shakespeare compared a "thankless child" to a serpent's tooth. Little Airedale's teeth are just as sharp, and she may produce "thankless friends." But here comes another shower. Philip and Merrill and the Italians are waterproof but the Hope Farm man is better under shelter. So it is "me for the house" with my faithful friend close at hand. She stands in the barnyard to see me safely across the lawn, and then lies under the shed with her watchful eye open.

A FRUIT TRADE.—On the cool front porch Mother and the girls look like the sanguinary picture of Liberty killing a whole batch of tyrants. Their hands and arms are red with strawberry juice and one might find a smear or two on their faces. They are cutting and trimming the fruit for the kettle which is bubbling on the kitchen stove. We must keep up our reputation for being able to pick Marshall berries every day in the year, and the girls want to enjoy a few college spreads next Winter—of bread or crackers and Hope Farm preserves. Some people seem to can the fruit which cannot be sold, but our folks want the best, and they trim and cut out every speck or hard place. But here is the sun once more, and though there is no wind the sky looks like the face of a child that has had its cry out. We picked off about 125 quarts of berries. There might have been two crates more, but with fair weather they will go until Monday to fill some orders. It is not a wise plan to stock up too heavily with berries on Saturday afternoon. So we vacate the berry field and hold a little council of war. No use touching that hay on the ground or cutting more down. No use cultivating. You would just dig a weed at one place and stick it in somewhere else. Much the same with hoeing in the beet field. There are three safe jobs until that strawberry field is ready—potting strawberry plants, cutting weeds and grass with a scythe, and cleaning out the asparagus seedlings. On the whole this latter promises most, so the Italians go down on their knees and finger out the weeds, while Merrill runs the scuffle hoe. I take the Redheads and go to picking peas to be sold on the wagon this afternoon. I would like to try an experiment with the weeder on the hill cornfield, but Bob will be needed for the wagon. Here comes another sprinkle, but the sharp-eared Redheads have heard the call for dinner, and here comes Philip down the lane with the big gray horses.

DINNER.—A combination of Saturday and canning day prompts the housewife to put up odds and ends for dinner. Under the shed the Italians munched their bread and cheese and onion. Tom and Broker recruited on hay and grain, and the little Airedale planted herself in sight of the kitchen door. When I took up my knife to carve I found the cold, fat remains of a ham bone. It required a mighty struggle to find any lean meat on this remnant, but that was no killing matter with an abundance of string beans, creamed potatoes, whole wheat bread and butter and about five quarts of big Marshall strawberries. As I figured it this made 79 meals since the berries began, and I think we have had them on the table at each meal. The ham bone was cleaned up, and there was nothing but a stain at the bottom of the berry dish when the Hope Farm family started for the afternoon campaign. The kitchen, in fact the entire house, was filled with the fragrance of cooking berries. "No water! No water!" It was a chorus from the women folks, for the tank had gone dry and the willing windmill had been deserted by his friend Mr. Breeze. A dry tank is a nuisance with a kitchen full of work and a squad of children coming on later for their bath. So Merrill got out the belt, rigged up the pumping jack and started the sprayer engine. It was remarkable how the gasoline hired man reached out his strong arm in aid of his friend the windmill. The cold water soon began pouring into the tank. Old Bob stepped into the wagon shafts and the boys drove off to sell their strawberries and peas. Philip and the grays went back to plowing, and I started cutting potato seed with the two little redheaded girls to "help."

PEDIGREED ASPARAGUS.—I can see the Italians down on their knees fingering out the "pusley" and red-root from the delicate little plants of asparagus. These weeds are all put into piles by the side of the patch and will be hauled to the hill and piled around the apple trees. As I cut my potato seed I try to guess what trap-nesting freak of history has sent these descendents of the old Romans down on their knees in my asparagus patch. Tom Barron tells us that the constant use of the trap-nest in his flock has developed a certain type or character of hens. Reputation would not do it, but performance did. Every Italian who comes to this country may carry the reputation of tracing back to the old Roman legions, but the trap-nest of life and work puts him in place. Yet these men may not realize it, but in working with this asparagus they are dealing with about the best pedigreed thing in New Jersey. This patch of Reading Giant has royal breeding for resisting rust. It will seem strange to many of us—this idea of breeding asparagus as we would breed prize animals, but it has been done. Out of something like a quarter of a million seedlings the experts found one strong male plant which *would not* rust. Then out of another great lot they found a rustless female plant. From these, what I call a royal strain of immune asparagus has been started. In my little patch are some 16,000 of these royal plants—better bred than anything else on the farm except it may be my little Airedale friend. No wonder we give this patch first choice for labor. It is worth the attention of any Roman army that ever cleaned out a province and scattered salt over the crops. Salt would not hurt the asparagus, but it would keep the weeds down. I could give some figures about the financial possibilities of this asparagus which would class me as a manufacturer of big stories.

POTATO PLANTING.—But here comes Philip with bad news. The plow has broken. I know not whether those tough old berry roots combined for a desperate effort, or whether they enlisted the sympathies of an apple tree root, but at any rate Tom and Broker put all their meat against some obstruction, and the plow handles smashed. There we were with a narrow strip of unplowed strawberry bed laughing at us, and no plow large enough to rip it over. Having started to plant potatoes I decided to do so on what had already been plowed. So Philip switched over to the Acme harrow and started to fit what he had plowed. Nine times out of ten I should have used the cutaway first and thus torn up the upper five inches of the field—then used the Acme to fit the surface. That is the plan for early planting, but the middle of Summer is unseasonable planting at best, and I wanted unseasonable preparation. The soil is moist and open, and my theory was to disturb it as little as possible after plowing—just smooth the surface over and put the potato seed right down into the undisturbed furrows. Right there among the vines and weeds I figure that the seed piece will have a better chance to make stem and roots during the hot dry days which are coming, and which make an end of our early planted crop. I might have used the planter or dug out furrows with the shovel plow, but I wanted to try out my theory about late-planted potatoes. Corn or cabbage would have been safer and we expected to plant out celery on this field, but instead of these we planted a theory.

H. W. C.

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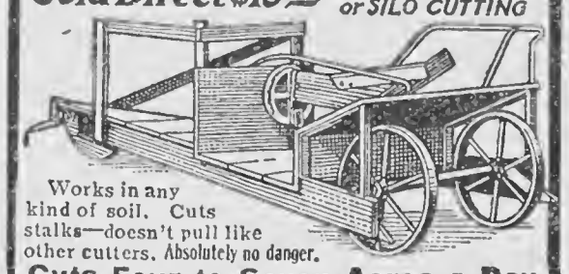

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with one man and one horse. Here is what one farmer says: Leraysville, Pa., Nov. 18, 1913.

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50 per cent. of this increase is due to the generous use of commercial fertilizers; 25 per cent. to better preparation of the soil; 15 per cent. to better seeds; and 10 per cent. to better crop rotation.

That the same and greater increases may be obtained in this country is shown by the following comparisons:

PENNSYLVANIA.—As an average of 24 years the wheat yields at Pennsylvania State College, when grown in a four-year rotation, varied as follows:

Unfertilized Land produced..... 10.1 bu. per acre
Farm Manure produced.....24.1 bu. per acre
Commercial Plant Food produced.....24.8 bu. per acre

OHIO.—An average of the wheat yield for 19 years at the Ohio Experiment Station (the wheat being grown in a five-year rotation with clover, Timothy, corn and oats on five different series of plots, so that every crop might be represented every year), shows:

Unfertilized Land produced.....10.2 bu. per acre
Farm Manure produced.....21.7 bu. per acre
Commercial Plant Food produced.....26.9 bu. per acre

NEW ENGLAND (a section of this country commonly spoken of as having an "exhausted soil"), is producing an average of 177 bushels of potatoes per acre. Maine averages 210 bushels, and Aroostook County, Maine (a county as large as the entire State of Massachusetts), averages 300 bushels; while yields of 450 to 500 bushels are by no means unusual.

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THE COE-MORTIMER COMPANY, 51 Chambers St., New York City

Ruralisms

Removing Spring Bulbs.

HOW soon should I dig up bulbs of hyacinth, tulip, etc., so that I can put other plants in their place?
Fulton, N. Y. P. G.

If the bulbs are to be used again they should remain until the leaves turn yellow and die down, showing that the bulb is ripened. It is during this period that the bulb is gathering, through roots and leaves, materials for the next season's bloom. If, however, it is necessary to remove the bulbs before they are ripe, for the purpose of setting bedding plants, lift them carefully with a spade, disturbing both roots and leaves as little as possible, and then heel them in, in a shallow trench, in some half-shaded out-of-the-way place. When the leaves have withered lift the bulbs, let them dry in the shade out of doors, and then store in a cool, dark airy place, putting them in baskets or slatted trays, so that air can circulate freely. We make a practice of using these bulbs in herbaceous borders, where they are permanent, being moved about once in three years; their companions, such as pinks, Phlox, columbines, rose campions, etc., come on after the bulbs, interfering with them very little and filling up the spaces after the bulbs die down. Another labor-saving method is to sow Summer annuals among the bulbs, such as Petunias, marigolds, Drummond's Phlox, etc., these occupying space as the bulbs die down, but where bedding plants are used the bulbs must, naturally, be lifted each year after flowering, and this plan is certainly desirable in controlling weeds and keeping the soil in good condition. The various sorts of Narcissi, however, should be left in the ground; we transplant seedling annuals among them from a nursery bed as they die down.

Gooseberries.

I HAVE been growing gooseberries for 50 years, aiming always to have the best. The advent of Houghton's Seedling was hailed as a great acquisition and this is still a useful variety. Then came Elliott's Pale Red, an English variety, so much like Houghton as to fail to obtain a permanent place. Then Downing, an improvement in Houghton in size, but not its equal in productiveness. Then a line of English varieties of fine size, but of little valu in America except to be exploited by the smooth-tongued agent. Later came Pearl, from Canada. If this is not identical with Downing it is so near like it as to be of no greater value. Early Orange is of Houghton type, a little larger, yellowish in color and decidedly earlier. Mountain Seedling, sent out by the Shakers of Mt. Lebanon, N. Y., is an extra strong upright grower, giving a few fruits an inch in diameter, but more one-third to one-half inch; in general not productive.

Fifteen years ago I obtained Champion, a variety originating in Oregon I find this the most satisfactory of any variety I have seen The plant, of the Houghton type, is a strong tall grower, and the fruits about one-half inch in diameter, hanging in ropes, so you can strip off a handful at a grab. The fruit has an unusually thin skin, nice on this account for culinary uses. E. Y. T.

Brazilian Forage Grasses.

BULLETIN No. 94, issued by the Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry, gives some interesting facts about forage plants in Brazil. The picture shown at Fig. 376 is reproduced from this bulletin. It shows a load of grass being carried into the town of Bom Fim from the adjacent valley where it is grown. In the State of Bahia Angola grass, or capim de Angola, as it is known in Portuguese, is one of the commonest and most highly esteemed forage crops. It is fed to both horses and cattle. While generally grown on low wet grounds near the coast, in the interior it is often seen on comparatively dry land. The bulletin also gives an interesting picture of the process of planting capim de Angola on the municipal farm at Bahia, Brazil. This is an especially wet piece of ground; instead of planting in the ordinary manner the soil is stirred up with hoes and the grass, after being scattered over the surface, is tramped in with the feet. Ditches are required to drain off the surface water, which accumulates rapidly. Ten days from planting the field is in active growth. This Angola grass is a Panicum, the family to which our familiar Barnyard grass belongs.

A LOAD OF ANGOLA GRASS. FIG. 376.

Another of the principal forage plants is jaragua grass, Andropogon rufus. It is a perennial grass growing to a height of six feet or more when not cut promptly, and said to be resistant to cold and prolonged rains. Another grass called Capim catingueiro, botanically Chloris elegans, is being tested, though described as rare; it is adapted to semi-arid regions, and is believed to be high in food value.

Asparagus, Salt and Chicks.

I HAVE over an acre of asparagus that I am cutting. I would like to put some salt on it to help kill the weeds and benefit the asparagus. I have young chicks running out on the field and am afraid that if I use the salt they will pick it up and cause their death. Would you advise me to use the salt as a top-dressing or to put it on and turn the soil over it, or would I best wait until the cutting season is over and the chicks removed before using salt? About how much is it advisable to use per acre? Can you give me any idea as to the average amount a thousand roots will cut at the age of six or eight years, and about what the average price per pound is for the season? G. S. T.
Westerly, R. I.

It is possible to give chickens enough salt in the feed to kill them, but I have never known of one voluntarily to eat enough salt to do it any harm. Chickens, like every other animal, will eat salt if they can get it, but are quickly and easily satisfied and will not eat more than is good for them, unless it is mixed with mash or some other soft feed; then there is a possibility of them eating too much. Apply this salt to the asparagus after you are through cutting; 700 to 800 pounds of coarse table salt to the acre will be sufficient. Spread broadcast as evenly as possible, and in a week or 10 days after applying, plow or cultivate the patch.

The number of bunches or pounds a six or seven-year-old patch of any number of plants will produce, depends much on the variety, the kind of soil, the fertilizing and cultivation they receive. When all things are favorable, 2,000 to 3,000 bunches weighing 2½ to three pounds each is considered a good yield. Most growers are well satisfied with 2,000 bunches per acre, which is the average yield, and consider the yield extra good when the number of bunches yielded goes much over the 2,000 mark. The price varies much according to the quality, the season and the condition of the market. Most growers grade the sprouts into three sizes, extra fancy primes and culls. At the opening of the season the price, of course, is much better than later on when the supply is more plentiful. In most markets the price averages about $2.50 per dozen bunches for extra fancy, $1.50 per dozen for primes and $1 per dozen for culls. K.

New Plant Introductions.

THE R. N.-Y. has already referred to the udo, a Japanese vegetable used like celery. It is, botanically, Aralia cordata. Bulletin 94 of the Office of Foreign Seed and Plant Introduction states that the Department of Agriculture has secured 10 of the best udo varieties from Japan, for purposes of comparison and selection. They will be distributed later.

Some Italian squashes received from a Californian collaborator are thus described: "Zucchetta nana 'Cerbero' and 'Romana.' Peculiar kinds of squashes. These squashes are eaten green, and while the flower is yet adherent to the fruit, and never when the fruit is ripe, at least I have never seen it eaten at that stage. Used stewed, fried, etc., in many different ways, like squash or green peas. It is most delicious when boiled in fresh butter and is fully equal to any other fresh vegetable in this country. Many eat the flowers when the fruit is between six to ten inches, always while green."

From Tientsin, China, come seeds of the Bonavist bean, a variety of Dolichos Lablab, thus described: "The common name is 'old woman's ear' and it is a specialty of the north. The ripe beans can be used like any other bean, but are generally used in the pod like string beans. As it grows readily and likes the cold weather, just so that it does not actually freeze the blossoms, it thus provides a green bean when the other string beans are gone. In cooking it the object is not to make it soft but just to plunge it into boiling hot water and not much more than seald it, so that it still remains crisp enough for a salad, then it is dressed with vinegar and oil. It should be grown on a trellis. The pods when full grown measure from four to six inches long and about a couple of inches across, but people generally do not wait until they are full grown, but begin to eat them when young so that the whole pod can be used."

Another bean from Tientsin is also described in Bulletin 94: "Lu to. This makes a better quality of starch than anything else. It is curious that in China the starch obtained from maize or wheat is not valued as much as that made of this bean for laundry purposes. They also make a vermicelli from the starch of this bean, and one can at once distinguish it from that made from ordinary starch by the fact that it keeps its clearness and shape much better no matter how much it is boiled. It also has a better flavor and good keeping qualities. Perhaps it might be an addition to the laundry starches of America, as I fancy it would take a much better gloss, as it is harder than ordinary starch and would not need so much paraffin added to make a gloss. I doubt if the American palate would care for the vermicelli, as it is clear like glass and the long strings are most terribly slippery to eat, worse than the round Italian spaghetti."

USEFUL COLLEGE STUDENTS.—Recent articles in THE R. N.-Y. mention experience with working students in no flattering terms. There is much difference in the character of such as are turned out from the agricultural schools; too many imagine that a four years' course in theory fits them for practical farm work, or else look for soft snaps to engage as experts and specialists, of which there is a surplus. On Fairview Farm we are fortunate in having one employed whose conceit has not reached that degree of importance, but is getting practical knowledge in diversified farming, where fruit, berries, dairying, poultry, bees, truck and general farm crops are produced and marketed. He is ready and willing to perform any sort of labor and learning the use of machinery, care of stock and performing all the duties devolving upon practical agriculture. That this young man will be successful if he follows the occupation laid out for himself is not doubted, with his inclination to learn the ups and downs of farm life. W. H. STOUT.
Pennsylvania.

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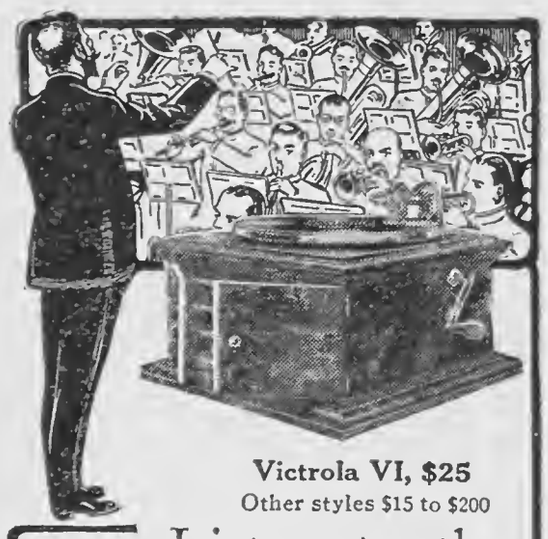

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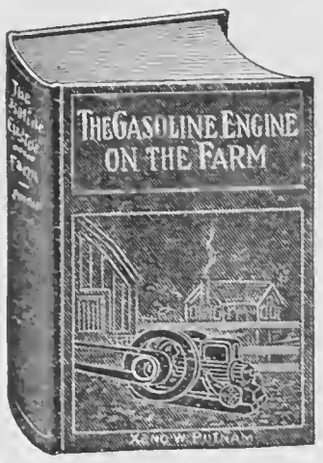

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

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BY general agreement among practical farmers the Fall is considered the most profitable time for seeding Timothy and Red-top, the two most popular grasses in this latitude. Fall is the *natural* time for such seeding, yet it would often be more convenient to seed in the Spring with oats or barley. Yet probably 80 per cent. of such seeding is done in September. We understand that a number of farmers have made very careful experiments at seeding grass in Spring. Will they tell us the results?

*

A GREAT poultry convention will be held at the Massachusetts Agricultural College at Amherst on July 22, 23 and 24. One of the most practical programmes ever suggested has been prepared. Among other important things D. J. Lambert of Rhode Island will tell how to select the 10 best hens or pullets from a flock of 100. It seems to be the general opinion that if Mr. Lambert cannot select the best hen there is no use asking anyone else to do it. The Business Hen is the coming farm food manufacturer for Massachusetts or New England. A hen convention is the place to learn and unlearn. The latter is hardest. Who likes to pull the tail feathers out of his own theories? Yet that is the way theories are made workable.

*

THE newspapers have recently printed lively stories about gold discoveries in Arkansas. Some of our people have talked of going to the new "diggings," while others have considered the plan of buying stock in Arkansas gold mines! The U. S. Geological Survey got on the job and took fair samples of ore for examination. Their report states:

Despite the high returns claimed, the gold shown by assay of these official samples in no case exceeds 52 cents a ton, and in most of the samples it is six cents or less. No more than a trace of silver was found in any of the samples. The material as shown by these assays is far from being ore, although it probably represents fairly well the average run of the veins.

Paying your money for stock in six-cent gold is surely buying a gold brick. If you want to dig gold out of the soil why not dig ditches through that wet spot on your own farm?

*

WE have hardly known a season when it was so difficult to obtain reliable facts about the peach crop. Never before in our memory has this crop been so "spotty"—good in one locality and light or poor in a section only a few miles away. The Southern crop has started to come North and here is a characteristic report from J. H. Hale in Georgia:

Just in from the orchard where the black boys and girls are happy chatting as they harvest the most beautiful peaches we have ever produced here, and I can't help wishing you were here to see what can be done in "dry farming." Up to last Friday practically no rain for over three months, yet culture, culture, culture, has kept trees and fruit growing and now that rains have come the crop is maturing in fine shape except about two weeks late. Just now well under way with Waddell and Carman; Hiley will be on next week. Belle of Georgia about July 12, and Elberta July 15 to 18 and run till August 1 this year.

*

WE have been waiting patiently for some one to come forward with proof that those English Wyandottes are cross-bred birds or not true to breed. Thus far there has been no evidence whatever except that these birds do not look like the "standard." Mr. Barron says he has simply selected as breeders the hens which gave best performance in the trap nest. The Wyandotte was originally a "made" breed produced by mixing several breeds together and then breeding to a certain type. The latest theory is that the process of trap-nesting which Mr. Barron has carried through has brought out the best egg-laying strain in the old Wyandotte mixture. But why are these birds not Wyandottes? Suppose you took the Dutch Belted cattle with their peculiar white marking. Through a series of generation you select for breeding the heifers which show the best milk production, paying no attention whatever to the white belt or its location. The chances are that you would have finally an improved dairy cow, but the white belt around her would be changed or spotted with black. Yet she would still be a Dutch Belted cow. Or take Jersey, Guernsey, Ayrshire and Swiss cows and breed for a number of generations, selecting only the best butter producers on both sides without much regard to other considerations. At the end of 10 generations the cows of the four breeds would be much alike except for color. Their general shape and type would be much the same, for no matter what her breed the superior butter making cow has a peculiar and characteristic shape or build. Yet all these cows would still be purebred, since we have not gone outside of their true "breed" to produce them. If these English Wyandottes have been selected and bred for performance why are they not still Wyandottes? This and the problems which we can all see sticking out of it is the big question in this case. Who is to tell us what a Wyandotte really is? Shall we accept his dictum even when we know that a bird of another type is better for our purpose?

*

WE have had high "authorities" say that the tariff on food stuff will have nothing to do with prices. Other "authorities" who rank even higher say tariffs have everything to do with high cost of living. Now what have these wise owls to say to the following from Julius D. Dreha, U. S. Consul at Toronto, Canada?

While Great Britain has to import most of its foodstuffs, Canada has a surplus for exportation, and yet the prices of foodstuffs are cheaper in England than in Ontario. It is asserted on good authority that bread made from Canadian wheat is sold at a lower price in London than in the larger cities of the Dominion. While the removal of the duty increased the exportation of cattle to the United States, it had the effect of raising the price of beef cattle in Ontario, so that the prices in Toronto became about as high as those prevailing in the Buffalo market, and all meats became dearer to housekeepers in Ontario.

Think of growing wheat in Canada, sending it 4,000 miles for grinding and then selling the bread for less than the Canadian people pay! In this country the price of meat has steadily increased. Thus the effect of free trade in Canadian cattle thus far has been to increase prices on both sides of the line. For some 40 years now the "statesmen" have kicked this tariff question about like a football. Now we begin to see what a small thing it really is compared with the 35-cent dollar of the farmer. We do not want more tariff tinkering—we do want a new system of distribution which will give the farmer a fairer share of the consumer's dollar.

*

"Many Men of Many Minds!"

WE may go a century from childhood and still find truth in the old nursery rhyme. We find evidence of it here every day. Not long since the following came from a reader who does not want his name printed:

I want to enter a protest against the horse pictures you have been publishing in your paper. White-faced horses are not desirable; a big per cent are soft horses. The Clydesdale colt, pictured recently in THE R. N.-Y., valued at $5,000, is worth about one per cent. of that sum. These big soft horses are many of them worn out at 12 years of age. There is one thing to be said in their favor; their bones are big and they are worth more for fertilizer and knife handles when no longer useful. Were I the editor of THE R. N.-Y. no white-faced horse pictures would be printed. Do not lend your influence in this direction; bar out such pictures along with the fakes not for publication.

We find that what various gentlemen would do if they were editor to be among the wonders of the world. We have a brewer who protests at every reference to temperance, and many who want three pages on Prohibition in each issue. At a fruit growers' meeting a well-known farmer cursed the dairy cow and never wanted to hear of her again. On the same day another man said he wanted nothing but cow. One man said his wife disliked THE R. N.-Y. because it contained the picture of a hog. Another woman said the hog had paid the mortgage on her farm. The fact seems to be that if all these would-be editors had their way there would be nothing at all printed in the paper. Our people are generally broad-minded and fair, ready to think and conduct a fair discussion. As for white-faced horses, we have three on the farm that are very satisfactory. Here in New York, out of about 500 colored horses examined, over 400 had a star, a stripe or a full white face. On referring the matter to Dr. Alexander, we received the following:

Since time immemorial white-faced, "bald" or "blazed" horses have been popular in Europe. It is characteristic of the heavy draft stock of Great Britain, founded with blood of the ancient "black horse" of Flanders, and it no doubt is the origin of the "star" or "stripe" and "snip" in horses of other breeds, notably the Percheron. All of the farm work and heavy hauling on the streets, and about the railroad stations and docks of England and Scotland, and most of the work of the same sort in Canada, is done by grand draft horses of this origin. The accusation of your correspondent is unjust, prejudiced and not based upon intimate knowledge of the facts. A few hours upon a street corner in Toronto, Melbourne, Glasgow, Liverpool, London or Dublin would be likely to change his opinions.

*

SOME great stories have been told about the motor-car as a jack of all trades. We hear how it carries the entire family to church, or business or pleasure in sober style, or how, in time of need, it flashes off for the doctor like a tireless race horse. Then it goes into the hayfield and crawls in front of the mower or hay loader, or pushes the load in through the barn door. Then it runs up to the feed grinder or saw or grindstone, kicks up its hind feet and turns the wheel which runs farm machinery. We are doubtful about these "jack of all trade" stunts, but they are constantly being reported. Here is a new one, however—the automobile as an insecticide—from Kansas:

Never in history has there been such a promise of a record-breaking wheat crop as in Kansas this year. Corn is also looking fine, especially as in the last few days good rains have fallen. The army worm, however, has in certain sections proved very destructive, and it remained for a Kansas farmer to devise a new method of killing them. One of his fields was paralleled by a public road and along this road he ran out a furrow or ditch with a plow. Army worms were crossing from one field into the next and dropping into the ditch. He brought out his automobile and kept it constantly running up and down the road, with two of the wheels in the ditch, and in this way millions of worms were killed. The ditch finally became so clogged that in places it had to be cleaned out, when the murderous procedure continued.

Those who have seen a horde of army worms march over a field and attack the crops will appreciate this story.

*

SOME men go to school to Prof. Adversity; others are instructed by Dr. Experience or Mr. Public Opinion. Now comes a new educator who has gathered a large school of "statesmen" and "thinkers." This new comer is the Hon. Bumper Crop, and he is turning some petrified and prejudiced brains inside out in a way that is miraculous! For example, here comes the Hon Sereno E. Payne of New York, author of the Payne tariff law. Mr. Payne is talking to the voters of his district:

We are now told that the bumper crops are to lift the cloud which hangs over the industries of the country and times are to be better. They seem to forget that bumper crops result in lower prices, and thus the farmer does not get much more money for what he sells and he will have substantially no more money with which to buy, especially under a tariff law which takes off practically all protection on agricultural crops.

No use talking, the Hon. Bumper Crop is a great educator. We can easily remember when such a crop was attributed, by the party in power, to their "wise statesmanship." In those days we never were told the truth, which was that a "bumper crop" gave every handler except the farmer better pay for his labor. If Mr. Payne and his friends were wise they would hardly admit this fact about the bumper crop. What is to prevent some critical farmer from asking this question: "If what you say is true, what have you been doing for the past 20 years to make the conditions which bump the farmer in this way. What do you offer as a remedy now?" There is the point in the entire discussion. It is not a question of producing more or selling more, but it is a question of handling and distributing farm products so that the producer will receive a larger share of the consumer's dollar. We hope the Hon. Bumper Crop will hold his pupils in school until they go through with the problem, and tell us how to increase that 35-cent dollar.

BREVITIES.

GIVE attention to the colt's feet.

Is there anyone left who thinks spraying does not pay a fruit grower?

NO—demanding interest on your money is not the highest principal of life.

THE "June bug" crop is reported heavy in Wisconsin This means a pest of white grubs next season. They can be partly cleaned out by Fall-plowing old meadows and clearing up brush and trash.

THE West Virginia Experiment Station will help farmers locate local deposits of lime. It is claimed that every county of the State contains lime ledges, while nine-tenths of the unproductive land is deficient in humus and lime.

THE Florists' Exchange tells of a swindler who recently cleared about $2,000 by selling four-leaved clover seed to hopeful Californians. The purchasers probably begin to doubt the efficiency of lucky signs.

IN Ontario, Canada, there is more than enough good land to support several times the present population. The government is paying money to induce foreigners to come in and take up land, while the present rural population is going to town to live! Here is a double problem which comes to every community after the pioneer generation.

A BUSHEL OF POTATOES AND WHAT HAPPENED TO IT.

THE quantity of potatoes involved in this story was something over 800 bushels, but for simplicity's sake we have taken a bushel as the unit. The question therefore, that we are setting out to answer is: What happened to this bushel, which represents the average of the 800 bushels involved?

The total cost of producing the bushel of potatoes was, omitting small fractions, 43 cents. The various items that entered into this 43 cents were as follows: Seed, eight cents; fertilizer, 20 cents; plowing, six mills; planting, two and two-fifths cents; cultivating, one and three-fifths cents; spraying, six and two-fifths cents; harvesting and sacking, four cents. The yield was at the rate of 125 bushels to the acre. The potatoes had to be hauled from the farm to the station, a distance of about a mile; shipped by rail a distance of 16 miles, then hauled from the station in the city to the commission man one mile. The cost of freight and drayage at both ends was seven cents, bringing the total cost of the bushel of potatoes to 50 cents.

The potatoes were sold by the commission man, who made returns for each shipment, but as a matter of fact it was definitely known that in some cases where the returns were made the potatoes had not actually been sold. The commission man allowed, as is the practice with commission men in some places, what he considered a fair price for the potatoes. In this particular case it was 60 cents, after his commission of five cents per bushel had been taken out. Thus, after we had actually paid out 50 cents in the production of the crop, had spent four months in growing it, had taken the risks of drought, insects, fungus diseases, and so forth, we had a profit of 10 cents per bushel.

As a matter of interest, we followed certain shipments of these potatoes which, while they may not fully represent the average, so nearly is this the case that the results are worthy of note. It was found that certain of the shipments upon which returns had been made at 60 cents a bushel were actually being sold to jobbers for one dollar per bushel, or three dollars per barrel. The jobbers in turn sold the potatoes to certain retailers at an advance of 25 cents per bushel. The retailers, who were men running small stores in the city, were retailing these same potatoes to their customers in small quantities at 10 cents a quarter of a peck, or at the rate of 40 cents a peck or $1.60 per bushel.

Here, then, is a difference in price between the producer and the consumer of one dollar per bushel; or, in other words, the crop after it leaves the grower's hands suddenly takes on a value of 40 cents per bushel to the commission man; 25 cents to the jobber, and 35 cents to the retailer.

Putting it in another way, the grower, after four months' effort, realized a profit on his investment of 20 per cent.; the commission man, who acted in the dual capacity of commission man and wholesaler, after holding the product an average of 48 hours, realized a profit of sixty-six and two-thirds per cent.; the jobber, on a short turn-over, 25 per cent., and the retailer, on an average holding of probably three days, 28 per cent.

These are statements of fact which in a more or less degree will be found to apply to nearly all of the perishable crops that the farmer produces. We make no comment at this time, being content with pointing out the necessity of organized, intelligent effort to bring the producer and the consumer a little closer together.

B. T. GALLOWAY.

New York State News.

COUNTY HIGHWAY SUPERINTENDENTS.—The semi-annual convention of county highway superintendents was held June 25 at Ithaca. There were about 400 present, the largest attendance in the history of the organization. Senator Geo. A. Blauvelt was one of the speakers. He remarked that too much time and money was spent on the elimination of grades and the construction of perfectly straight roads. He said that the highways already built cannot be maintained out of the appropriations made annually by the Legislature. Dr. E. Haskell was another speaker, and the superintendents generally entered into the informal discussions. A trip through the county for road inspection was made.

APPLE SPECIAL.—It is stated that the New York Central Railroad will run an "apple special" after the State Fair through the fruit sections of Western New York. The company will collect data showing the prices per barrel or box of all the principal grades of apples grown in that section, at every month of the year that apples are marketed, and comparisons will be made with prices in various cities. The data will cover 20 years. These data will be placed on a large chart and exhibited in one of the cars, and another chart will show the acreage of bearing orchards and the number of young trees set within the last five or ten years. It is expected that the figures will show that there is a smaller acreage in orchards now than there was 10 years ago.

$50,000 WORTH OF CHEESE.—The statement of the fact that on June 27 the sales of cheese on the Watertown Produce Exchange amounted to 10,385 boxes at 13½ and 13⅝ cents per pound, means little to the casual reader. But its real meaning is that for the 380,000 pounds of cheese sold the sum of $50,000 will be paid to the farmers of Jefferson County. A year ago the sales amounted to 11,160 boxes, at 14 to 14⅛ cents. At Gouverneur it is no uncommon thing to see of a Monday forenoon 30 to 40 teams loaded with 30 to 40 cheese each, averaging about 70 pounds, awaiting shipment. The shipments from January 1 to June 22 amounted to 12,930 boxes, weighing 985,000 pounds.

THE CANNERIES.—The canning plants in Wayne County are opening up for business; in fact, have already done considerable on peas and strawberries. One company has been canning from 2,000 to 2,500 quarts of strawberries daily. Spinach is also being tinned at Sodus. This crop is said to net the grower $20 per ton. It is put up in gallon tins.

CROP CONDITIONS.—According to the crop reports of the Department of Agriculture of this State, the large apple-growing counties of tthe Western part of the State will produce twice as many apples as last year, of the Winter varieties; but the Hudson Valley crop will be somewhat lighter. Outside the commercial apple-growing sections the apple crop will be notably smaller owing largely to the ravages of insects. Taking 100 as the maximum for the crop of 1913, all grains but wheat and barley rank this year from 101 to 116.

INSECTS IN APPLE BELT.—Late reports from the apple belt are to the effect that growers are showing considerable concern over the insect damage, owing to the dry weather of the first three weeks of the month. In Niagara County it is reported that the aphis is doing much injury. In Monroe County it is said that some of the finest orchards have been threatened by the fruit tree leaf roller. Like reports come from Oneida County owing to neglect in fighting the Codling moth and canker worm.

J. W. D.

Conditions in Ashtabula County, Ohio.

THERE will be no peaches in Northeastern Ohio along the lake shore. The grapes are setting well, and promise to be a better crop than last year. Strawberries were from one-half to two-thirds crop. This was due to dry weather the latter part of May and the first part of June. Some late strawberry patches yielded well after the appearance of rain the middle of June. Cherries are a fair crop, yet last year there were four times as many as this year. There will be but few apples, and scarcely any pears. Plums are almost a failure. The dry weather injured the hay crop. Rains which came the 18th of June gave the grass a fresh start. Many farmers were starting cutting their hay at this time. In Denmark township, where a large amount of hay is cut each year, this year the hay crop will be about 85 per cent. for the locality, while in other sections it will be only about 60 per cent. There is practically no hay left over.

Cheese factories paid for the month of May, hauling to be deducted, $1.08 to $1.12, the Ohio & Pittsburg Milk Company $1.23, hauling to be deducted, and the Rick factory at Jefferson $1.36, with bonus for high-testing milk. There seems to be more milk produced in the county this year than any other year for a decade. The manager of the factory at Leon declared that last year the total amount of milk produced in their territory and going to their and other factories and shippers totaled but half the amount received by them alone when they first invaded the territory ten years ago. This is due to many farmers from Western Ohio buying the dairy farms, and specializing more in crops and corn, and with a few hogs, than previously when dairy cows were kept. Many of the low-producing dairies and dairy cows have been sold, which reduces the cost of the milk. Milk inspection has had a tendency to improve the quality of milk, for one of the inspectors advises the farmers that he proposes to encourage them to produce better milk at a profit, rather than discourage the average farmer by insisting that he should comply with rigid inspection. There are more new barns being built and more barns remodeled than any two years heretofore. The number of silos to be erected this year will be one-third more than last year, which was a record year.

The acreage of rye planted last Fall was twice that of any previous year, and the crop looks good in all sections of the county. There is a larger acreage of wheat than in previous years, and it will be ready for cutting about July 5th. Oats were planted late, three-fourths of the acreage of the county having been planted between May 20th and June 1st. A larger part of the corn was planted after June 1st. Oats will be a fair crop, while corn promises to be good. Farmers are raising about one-third more calves to replenish their dairies than heretofore. Cows are selling around $60 and $70, veal calves are bringing eight cents at the farm, eggs about 17 cents, and butter 17 to 20 cents at the local stores. These prices are much lower than last year. Seed potatoes scarce at 50 cents, and eating potatoes are 75 cents and $1.00. There is more available farm help this Summer than at any time heretofore, yet there seems to be a shortage of efficient farm labor.

Farm machinery sales are greater than heretofore in the history of the county. There are more riding plows of the single bottom type being sold this year than heretofore. Three good heavy horses are used on the plows and the farmers are practicing deep plowing. Horses are selling from $160 to $225. The sale was pretty lively among farmers when Spring work opened, but at present sales are quiet. There is but little demand for drivers, and only the serviceable farm horses, from 1,200 pounds upward, are in demand. There were one-third more colts foaled this year than previous years. These are practically all draft bred. One owner states that he has recorded only 17 services to his trotting-bred stallion, while a nearby Percheron owner has booked about 100 mares. Real estate is moving slowly, farms are selling from $40 to $60 an acre in the interior of the county, while along the lake shore sales are quite lively, with farms bringing from $100 to $300 and even higher, depending on the condition, the amount of fruit and location. Bees have not done as well as in former years, according to several bee keepers, owing to the late, cold Spring, and a good many bee keepers and farmers report one-third of their swarms having been lost during the Winter. This year there will be no bee inspection in Ashtabula County. All the apiaries have been found in former inspections to be in healthy condition, and those which were infected with foul brood were put in healthy condition by the introduction of Italian queens, in compliance with the State Department.

There are between 40 and 50 dairies operated by the milking machine, and double this number of plants will be in operation before the present season is past, is the opinion of several dairymen. Three years ago was a banner corn year, and this year promises to produce nearly as good corn.

WALTER JACK.

New Jersey Crops Encouraging.

THE following report as to New Jersey crops is made from the summary of replies received by the State Board of Agriculture from the first call for crop information this Summer. Rain seems to have been abundant in the northern counties, while in the southern the drought has been very severe, causing a 50 per cent. reduction in the strawberry crop, a severe injury to early market garden crops. Asparagus is marked at 50 per cent. of a full yield, and there is a heavy reduction in the yield of grass for hay and pasture.

Atlantic County states: "Very hot and dry; no rain for six week."

Salem County reports: "No rain; so much corn has failed to germinate. Asparagus is the only market garden crop. Some beds have cut well, but the price has been lower. Other beds have not cut more than 50 per cent. Hay is not more than one-half a crop. Many farmers have not been able to plow their grounds for late tomatoes. No rain for about seven weeks."

Cape May: "Late, cold Spring; very dry now and unfavorable weather in general for any crop except peas for canning and late corn. Some few people are harvesting a fine yield of grass, while others are complaining of a very short crop."

Monmouth: "Potatoes looking extra fine. Ten per cent. increase in acreage over last year."

Union: "Unfavorable weather conditions and crops so backward as to give no prospects at this date for any reliable crop estimates. No planting of any amount done in this locality until May 18. Corn not all planted to date; nights too cold and weather conditions unfavorable for growth. The strawberry crop will be about one-half of what was expected two weeks ago. Season and crop conditions about four weeks behind."

Passaic: "The hay crop will be very good, season having been very favorable."

Morris rejoices as follows: "Crops never looked better at this time of season, with the exception of corn, which is not quite as forward as some other years. Present indications for hay were never better. Potatoes are unusually fine, with enough rain to mature the crop. Altogether the farmer's outlook is very encouraging. Alfalfa is not grown very extensively. Only a few have tried it to date."

Burlington: "Potato acreage about 10 per cent. less than formerly. A five weeks' drought is working havoc on many crops. Conditions were favorable for large crops generally until the present dry spell began. Unless relief comes soon most truck crops will be very light."

Somerset: "The prospect for fruit is said to be excellent. Wheat is very poor, owing to the fly and the wonderful growth of Timothy, which has choked the grain. Some will mow their harvest fields for hay. What we need most is rain."

Conditions whether favorable or unfavorable, as indicated by ten reports received, are: Corn, nine replies favorable; wheat, four favorable, four unfavorable; potatoes and market garden crops, favorable by counties. Seven report favorable on peaches and apples. Since the reports from which this summary is made were written a copious rain has visited Gloucester and other southern counties, which will help all unmatured crops. The general condition of the cranberry plantations is favorable for a good crop.

D. T. H.

Government Cotton Report.

THE Bureau of Statistics estimates the condition at the close of June as 79.6 per cent. of normal. This is an advance of 4.3 per cent. over one month previous, and 2.2 under last year. Acreage and percentages by States follow:

States.	Planted 1914.	
Virginia	46,000	86
North Carolina	1,589,000	82
South Carolina	2,826,000	81
Georgia	5,398,000	83
Florida	194,000	..
Alabama	3,912,000	88
Mississippi	3,148,000	81
Louisiana	1,389,000	81
Texas	12,052,000	74
Arkansas	2,527,000	80
Tennessee	866,000	79
Missouri	124,000	93
Oklahoma	2,854,000	79
California	35,000	..

Other Cotton Experts.

Jay, Boud & Co. estimate the crop at 77.7 of normal, with the following detailed percentages: North Carolina, 77.3; South Carolina, 77.3; Georgia, 82.3; Florida, 81.8; Alabama, 83.5; Mississippi, 84.5; Louisiana, 83.5; Texas, 72.1; Arkansas, 77.7; Tennessee, 81.6; Missouri, 85.3; Oklahoma, 75.6; various, 87.0.

A Norden & Co.'s estimate is 80.1, with these details: North Carolina, 78; South Carolina, 79; Georgia, 83; Alabama, 89; Mississippi, 80; Louisiana, 80; Texas, 77; Oklahoma, 80; Arkansas, 79; Tennessee, 82.

Other percentages given without details are: Clement, Curtis & Co.: 75.8. National Ginners' Association, 78.3. R. M. Giles, 79.

Kansas Grain Crops.

Secretary F. D. Coburn reports the Kansas wheat crop as 154,000,000 bushels, on an area of 8,873,000 acres. This is 60,000,000 bushels greater than any previous Kansas wheat yield. The condition of corn is 93.8 per cent., or 8.2 more than last year. About 5,500,000 acres are planted. There are 1,470,000 acres in oats; condition 87.1, or 37.8 better than a year ago.

Woman and the Home

From Day to Day

Too Late.

What silences we keep year after year
With those who are most near to us, and dear!
We live beside each other, day by day,
And speak of myriad things, but seldom say
The full sweet word that lies just in our reach,
Beneath the commonplace of common speech.

Then out of sight and out of reach they go,
Those close, familiar friends, that loved us so;
And sitting in the shadow they have left,
Alone with loneliness and sore bereft,
We think with fond regret of some fond word
That once we might have said and they have heard.

For weak and poor the love that we expressed
Now seems beside the vast, sweet, unexpressed,
And slight the deeds we did, to those undone,
And small the service spent to treasure won,
And undeserved the praise for word and deed
That should have overflowed the simple need.

This is the cruel cross of life—to be
Full-visioned when the ministry
Of death has been fulfilled, and in the place
Of some dear presence is but empty space.
What recollected services can then
Give consolation for the "might have been"? —Nora Perry.

*

JAPANNED trays which become dull with use should be washed with lukewarm water and white soap, then rinsed and dried with a soft towel. A little sweet oil on a soft cloth polishes them.

*

SEVERAL of our readers have told us of local clubs or societies that have brightened the social life of their district. Many of the old-time pleasures of the country have passed away, because they were associated with the industrial conditions of their period. In too many cases it seems as though few new pleasures have taken their place. There are many agencies now employed in bettering the conditions of rural life, but we think that the real impetus must come from the farm family itself, and this depends, first of all, on improved economic conditions. We should like to hear of any rural clubs or associations that are enlivening the social life, or otherwise increasing the pleasures of the country. The experience of one locality is often very interesting to another.

*

THE Federal Bureau of Education is now searching for American versions of old English and Scotch ballads, which were brought to this country by the early settlers. Prof. C. Alphonso Smith of the University of Virginia is to conduct the search. Modern conditions of life, and the vogue of popular songs, often trivial in character, have displaced these old ballads, which are often remarkable for simplicity, vigor of narrative, and intensity of feeling. Among the songs of this class which are being looked for are Barbara Allen, The Wife of Usher's Well, The Beggar Laddie, Johnny Armstrong, etc. It is most likely that early American forms of these ballads will be found among Southern mountaineers, in districts where there has been little or no foreign immigration for many generations.

*

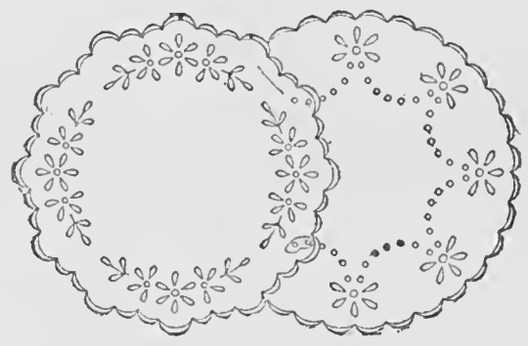
RIBS of beef in Spanish style is a savory method of cooking the ends of a rib roast, which are usually overcooked and still not tender, when roasted with the rest of the joint. Fry some of the beef fat in the bottom of a large cooking kettle, then slowly cook in this one large onion sliced and half a green pepper free from seeds. Draw the onion and pepper to one side of the pan when slightly colored, and brown the top and cut edges of the meat in the fat, until browned all over. Before this browning the meat should be wiped, sprinkled with pepper and salt, and dredged with flour. Then, leave the meat in the kettle, with the onion and pepper, add one cup of water and one cup of sliced tomato. Cover closely and cook slowly until the meat is very tender, adding more water if needed. When ready to serve, take out the meat, skim off the fat, and thicken with a little flour, letting the gravy boil up for five minutes to thicken. The same method of cooking is good for any of the cheaper cuts of meat, such as chuck or neck of mutton; the long slow cooking in the closed vessel makes it tender and develops excellence of flavor.

The Rural Patterns.

When ordering patterns always give number of patterns and measurement desired. Price of each pattern 10 cents.

8280A. Boy's Norfolk suit. Cut in sizes 4 to 10 years. Size 8 years requires

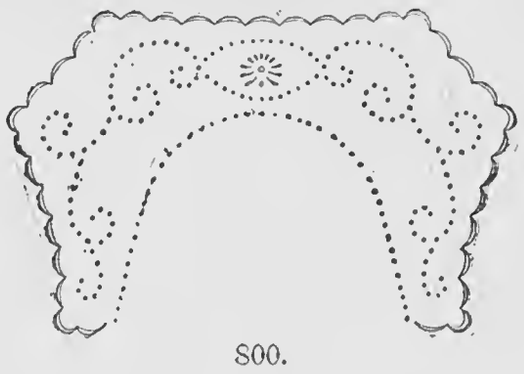
three yards of 36 material. 8270A, Girl's loose cost. Cut in sizes 8 to 14 years. Size 12 years requires three yards of 36 inch material. 8272, Misses' loose coat. Cut in sizes 16 and 18 years. Size 16 years requires 3⅝ yards of 36 inch material with one-half yard 27 inches for collar and cuffs. 8233, Girls' one-piece dress. Cut in sizes 6 to 10 years. Size



817.

8 years requires 2¼ yards of 36 inch material, with five-eighths yard of 27 inches for trimming. 8274A, Girl's dress. Cut in sizes 6 to 10 years. Size 8 years requires 2⅝ yards of 36 inch material.

No. 817. Designs for embroidering two nine-inch doylies. The scalloped edges are designed to be padded and buttonholed; the sprays of leaves to be worked



800.

either in solid embroidery or as eyelets; the stems are to be outlined, and the dots made as eyelets or in solid work. Stamped on best Scotch linen with mercerized floss to work, for the two 30 cents.

Set of six of each design $1.70.

No. 800. Design for embroidering a fancy collar. The scalloped edge is designed to be padded and buttonholed, the dots can be worked solidly, in satin stitch, or as eyelets. The figure at the back is designed for solid work.

Stamped on pure Irish linen with floss to work, 25 cents.

Seen in New York Shops.

A PRETTY hat for a litle girl was made of white dotted swiss; it had a large puffed crown and drooping brim which was lined with pink silk. Around the crown was a twist of white taffeta ribbon with a pink picot edge, the spreading bow at one side extending down on to the brim. This is a pretty style for a child when trimmed with pink, blue or pale yellow.

Smocking makes a desirable trimming for children's dresses, and is often used on those of a better class. A plain little dress of Alice blue chambray was almost as simple in cut as the old-time farmers' smock, and had in back and front, a narrow yoks of smocking with a double row of white crochet buttons down the center. Round collar and turn-back cuffs of white linen were finished with a picot edge of Irish crochet, and this was the only trimming.

Velvet hats were naturally scheduled to appear with the warm sticky days of mid-June. Among the first were some with black velvet crowns and white straw brims, but these were quickly followed by shapes entirely covered with velvet, both black and white. White velvet hats were especially displayed for the international polo match. One black velvet hat noted was a small sailor shape, trimmed with six white Gardenias, put around the crown half way up, and a fold of white satin at the base of the crown. It was $7.50. Another was trimmed with four small white wings, set irregularly at front, back and sides.

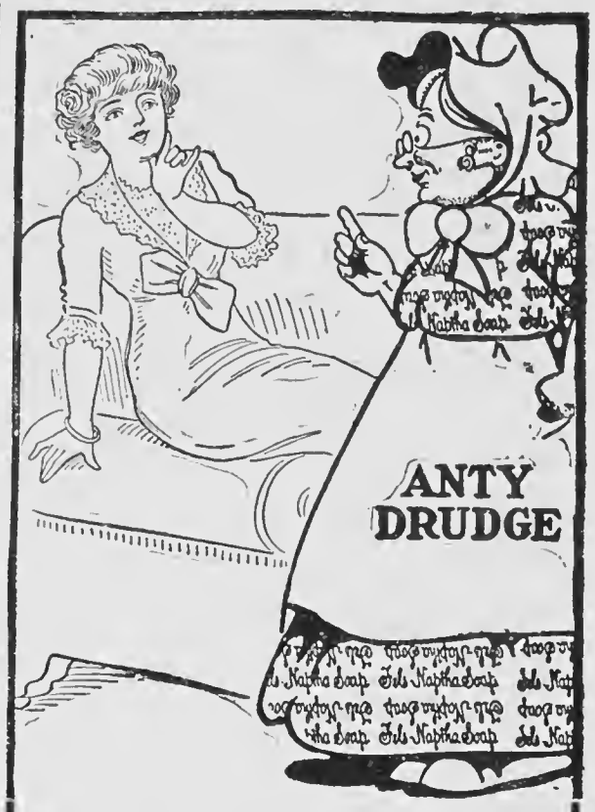
Bathing caps begin at 25 cents and go up to many dollars. There are really pretty caps at 50 cents, made of soft rubber cloth in a variety of colors, red, blue, green, etc.; they are mob-cap shape. A little higher are smart turbans, consisting of a close cap underneath, with a fold of the material that is twisted around the head and fastened with a snap fastener. The more expensive ones are made of rubberized satin to match the bathing suit. The cheaper bathing shoes are made of a sort of drilling, but better ones are of black satin, "tango" style, with cross laces that pass through eyelets in the high back; they cost $1.50. Some of the new bathing suits have plain drawers coming to the knee or just below, with a little skirt short enough to show about six inches of the drawers.

Tight-fitting basques buttoned all down the front are promised us with the Fall styles. Some already seen are what used to be called French or Gabrielle basques, fitted in the front by a long curving seam from the shoulder, instead of darts; they look just like the basques worn when Mrs. Rutherford B. Hayes presided over the White House; some are even edged with side-pleatings, the sleeves being finished in the same way. It is said that we shall see separate basques worn with odd skirts, a fashion that will be very helpful to women of small incomes. Why not? We have been wearing separate shirt waists ever since basques "went out."

"Shadow-proof" petticoats, offered for wearing under thin Summer dresses, are made of white pique or cotton poplin. They follow the narrow lines of the dress skirt, and, have no trimming except a frill of four-inch embroidery set on the lower edge. The waist line is faced, having no band, and it is closed with snap fasteners, there being no fullness at the top. Some very pretty ones are brocaded piqué. After seeing the radiograph effect produced by one thin muslin petticoat under a scant Summer gown one realizes the value of these opaque materials. More expensive ones are of white French percale of opaque quality, edged with hand-worked scallops.

Of course children are wearing capes, like their elders, and a favorite model is a circular shape with a hood, the regular Little Red Riding-hood type. A very pretty one was rose-colored corduroy lined with white china silk. Cotton corduroy, which comes in many colors and under many names, is suitable for these capes, also basket cloth, which is often quite inexpensive.

The law condemns the man or woman
Who steals the goose from off the common;
But lets the greater felon loose
Who steals the common from the goose.
—London Opinion.



Mrs. Gay—"Anty Drudge, I'm just delighted with Fels-Naptha Soap. My washing is all done without a bit of steam or smell, and it's such a comfort to know I've gotten rid of the sickening odor of boiling clothes. I use it for John's flannels, too. It leaves them so soft and white."

Anty Drudge—"My dear, you are the third who has said that to me this morning. I'm certainly glad I told you about Fels-Naptha Soap."

You *used* to have to boil your clothes to get them clean, but nowadays progressive women all over the country use Fels-Naptha Soap. Their clothes are clean and their work is done in half the time it used to take.

Fels-Naptha works best in cool or lukewarm water, without hard rubbing or boiling. It is especially good for woolens because hard rubbing ruins them, and Fels-Naptha does away with all hard rubbing.

Buy it by the carton or box and follow directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

"Best Yet" Lemon Pie.

I HAVE for years used a recipe, obtained from your paper, and called "best yet" lemon pie, but I have recently lost it and would like very much to get another copy of it. M. O. H.

This recipe was sent us in 1908 by Margaret Cavanaugh Daly, and has given great satisfaction. Beat together one cupful of sugar, one level tablespoonful of flour, juice and grated rind of one lemon, yolks of three eggs. Just before putting the filling in the crust add one and one-fourth cup of fresh milk. Bake carefully and not too long. Beat the whites stiff, add one-third cupful of sugar, cover pie with this meringue, and brown lightly in the oven.

Tomato Recipes.

WILL you give some different ways of using tomatoes? MRS. S. P.

We have given many ways of using tomatoes, but will repeat some of them, and add others, avoiding the familiar ones that "every woman knows."

Tomato Conserve.—This may be called condensed tomato sauce; it is sold by Italian grocers, and put up by Italian housekeepers, who use it in all sorts of cooking where tomato is desired. It may be diluted for sauce, added to soups and stews, etc. Put in an earthen stewpan as many sound ripe tomatoes as desired; cook over a very slow fire until the skin slides off; then strain through a hair sieve, pressing with a wooden spoon. Do not keep the first watery liquor that passes through the sieve. Replace in stewpan adding a dessertspoonful of mixed spice to each pound of tomatoes; salt to taste. Stir over a slow fire until very thick, then cool in an earthen basin. When cool put in wide-mouthed bottles, stand the bottles in a kettle of water, like any other preserves; boil for 15 minutes, then cool.

Italian Stuffed Tomatoes.—Required, six tomatoes, two ounces bread crumbs, one ounce cheese, four eggs, parsley. Cut the stem pieces off six tomatoes, remove cores and seeds and fill with the following mixture: Two ounces of bread crumbs soaked in vinegar and strained, one ounce grated cheese, two hard-boiled eggs finely chopped, a dessertspoonful finely chopped herbs (basil or savory), pepper and salt to taste. Mix well with two beaten eggs, and fill tomatoes with the mixture. Cover the top of each tomato with bread crumbs mixed with finely chopped parsley, put a small piece of butter on each, and put on a greased baking pan. Cook in a slow oven 20 minutes.

Panned Tomatoes.—These are excellent served with roast meats. Put in a pan with two ounces of butter six firm tomatoes that have been cut in halves. Cook slowly on the top of the range for 10 minutes, then brown quickly in the oven. Remove the tomatoes to a hot platter, and make a sauce by adding to the browned butter two tablespoonfuls of flour, and after it is rubbed smooth one pint of milk. Stir until boiling. Season well with salt and pepper and pour over the tomatoes. Garnish with parsley and points of toast.

Scallop of Tomatoes and Potatoes.—Season a pint of peeled and chopped tomatoes with salt, pepper and onion juice to suit the taste, and add enough potatoes to make a cupful when chopped fine. Butter a baking dish and sprinkle with bread crumbs and put in half of the tomatoes; then a layer of soft crackers, buttered and broken in coarse bits. Cover the crackers with two heaping tablespoonfuls of grated American cheese. Then add the remainder of the tomatoes, more cracker crumbs and bits of butter and place in a hot oven. Bake 20 minutes. Serve at once.

Fried Green Tomatoes.—Cut both stem and blossom end from large green tomatoes, cut in thin slices, roll in flour, and fry in hot butter. Sprinkle with salt, pepper and a little sugar, and cook until brown. A little onion may be fried with them if desired.

Tomatoes and Cheese.—Cut the stem end from large ripe tomatoes, and with a small spoon scoop out the inside. To each two tablespoonfuls of the pulp add one teaspoonful of bread crumbs and the same amount of cheese crumbled fine. Season, fill the tomatoes with this mixture, replace the stem ends, and bake for 20 minutes. Tomatoes may be stuffed with green corn, boiled rice, chopped meat or macaroni, and many tasty dishes may be made in this way.

Creamed Tomatoes.—Cut ripe tomatoes in thick slices, fry until tender in hot butter, and then set on a hot platter in the open oven. Stir a tablespoonful of flour into the butter in the pan, let it cook till well blended, and then stir in a cupful of milk in which a pinch of soda has been dissolved. Stir and cook to a smooth sauce, season and pour over the tomatoes. This may be varied by adding a teaspoonful of curry powder to the cream sauce.

Curried Tomatoes.—Put in the frying pan a heaping tablespoonful of butter and half a small onion, grated. Cook about two minutes, then stir in a scant teaspoonful of curry powder. Cut tomatoes in slices, fry brown in the seasoned butter, sprinkle with salt, and serve on a hot platter.

Cooling Drinks for Summer.

THE Summer drink should not only be daintily prepared, but attractively served; thin glasses, a pretty tray, or one neatly covered with a doily, straws with which to imbibe, a few flowers, and a plate of tempting sandwiches or dainty little cakes, are all pleasing and important accompaniment.

To make a delicious plain lemonade, wash and dry four large lemons. Cut them into halves, reserving four thin slices; squeeze the juice into a bowl, and strain; then add one cupful of sugar and four cupfuls of boiling water, and blend thoroughly. Cover closely, and allow it to stand until cold. Serve well iced, with one thin slice of lemon in each glass. Some like a dash of ginger or nutmeg added. Orangeade may be made in the same manner, with the exception of the juice of one-half lemon added to that of every four oranges, or if the oranges are tart a little less sugar. The water used boiling hot in the making of these drinks develops the fruit flavor far more deliciously than if used cold.

A delightful fruit punch is made by boiling three cupfuls of sugar, three pints of water, and the grated rind of three lemons and two oranges for eight minutes. In the meantime cook two cupfuls of grated pineapple in two pints of water for 20 minutes; then add the syrup and cool. When perfectly cold add one pint of raspberry or strawberry juice, with the juice of the three lemons and two oranges; blend well, and strain. Serve in tall glasses with cracked ice, and a thin slice of orange or a few tiny cubes of pineapple, added to each glass.

If one wishes a little nourishment in the form of cooling drink, iced chocolate, egg-nog, or any of the milk preparations are especially useful. A beaten egg added to a glass of lemon or orangeade not only improves it but makes it a nutritious drink.

Chocolate syrup is nice to have on hand as well as the lemon, make it in this way: Melt two squares of unsweetened chocolate with two tablespoonfuls of hot water, over hot water, then add two cupfuls of boiling water, and one cupful of sugar. Cook five minutes, add one tablespoonful of vanilla extract, strain, and bottle. Keep this also in a cool place until needed.

For a delicious egg-nog, particularly nice for children's lunches, beat the white and yolk of one egg separately, to the yolk add a speck of salt, and two teaspoonfuls of sugar, and one teaspoonful of crushed ice, and beat thoroughly; then add one cupful of ice-cold milk, three-fourths of the beaten white of egg, and one teaspoonful of vanilla. Mix well, and pour into glasses. Sweeten and flavor the remaining white of egg, and garnish the top with it. Egg-nog should be used at once after it is made, for the egg loses much of its freshness and lightness by being exposed to the air.

Kumiss is a beverage that can be enjoyed by the non-invalid as well as the invalid, it is partially predigested milk, containing carbonic acid and a little alcohol, both of which have a tonic effect. To prepare it: Dissolve one-fifth of a two-cent cake of compressed yeast in a little water and mix it with one quart of perfectly fresh milk, and one tablespoonful of sugar. Put the mixture into strong bottles—beer-bottles are best—cork tightly with well-fitting stoppers, and fasten down securely with a piece of picture wire or stout string. Shake the bottles well to mix the ingredients thoroughly, then place them on end in the ice-box, or some cool place, to ferment slowly. At the end of the third day lay the bottles on their sides, turning them occasionally. From four to five days is required to complete the fermentation; it is then ready for use. ROSAMOND LAMPMAN.

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Keep a pair of carpenter's clamps for use in the kitchen. By clamping the molding board to the end of your work table you may add much to the capacity of the table when baking is in progress. Use it also to clamp the ironing board to the table to avoid it slipping about; or the sleeve board to the larger board.

The leaky rubber water bottle may be made to do duty in an emergency by filling with hot salt. Fine gravel may be sifted and kept on hand for this purpose, either salt or gravel having the advantage over hot water that they retain the heat longer.

The funnel is a better egg separator than anything sold especially for the purpose because easier to clean. Break the egg carefully into the funnel, when the white will slip through leaving the yolk unbroken.

If you cannot get bitter oranges for your marmalade you may add to the bitter flavor of marmalade made from sweet oranges by the use of the seeds. Save both orange and lemon seeds when cutting up the fruit, cover with water and let stand overnight. This will develop into a jelly which, when added to the fruit, will greatly aid in the jellying process as well as add to the flavor of this imitation Scotch marmalade. M. E. S. H.

CANNED STRING BEANS.—Wash and cut the beans in inch pieces. Add water enough to cover, and to each quart of beans, add one teaspoonful cream of tartar. Boil 20 minutes and put in fruit cans. When using them pour off the water; rinse well in cold water. Cook in usual way, adding one teaspoonful baking soda to each quart of beans. This is a tested recipe and the beans are as nice as those that are boiled several hours in the cans. M. P.

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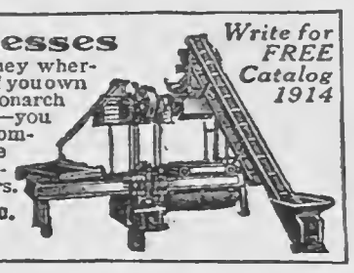

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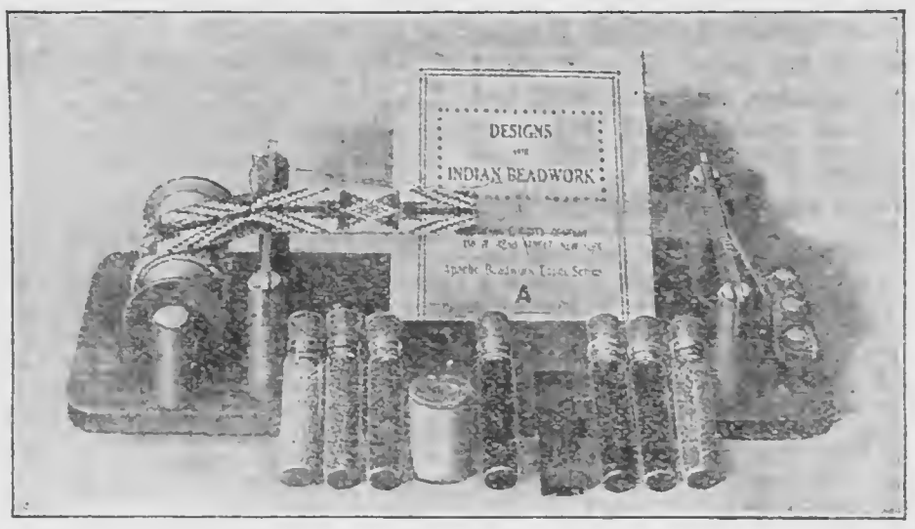

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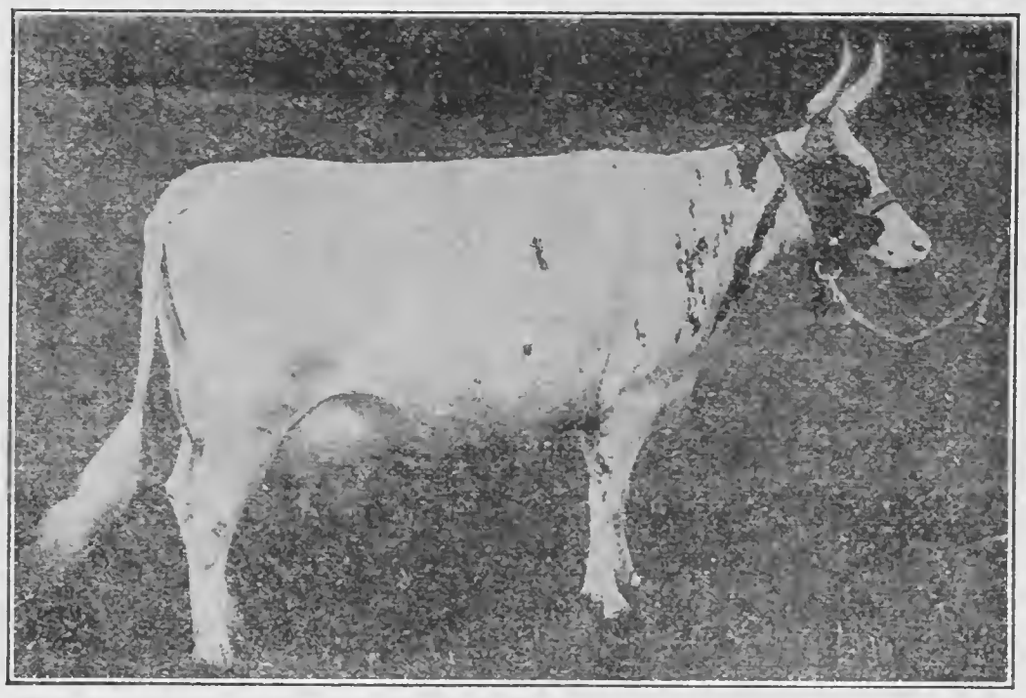
Live Stock and Dairy

SUCCEEDING WITH AYRSHIRE CATTLE.

[Read by E. J. Fletcher at the Farmers' Week Meeting at the Massachusetts Agricultural College.]

The Ayrshire breed is said by many to have originated from Channel Island breeds, and from white wild cattle of Scotland, but this the Scotchmen firmly deny. At any rate they originated in the county of Ayr, Scotland, and have been bred there for more than a century; the Ayrshire cow of today is a cow of medium size weighing from 1,000 pounds to 1,200, the bulls from 1,500 to 2,000 pounds.

The Ayrshire is a rather nervous cow and will use those nerves to support herself. They are always active in walking, eating, and chewing their cud, showing a nervous energy that should go well toward making milk. The first importation was made into the United States in 1822, the first into Massachusetts in 1837. At that time Ayrshires were little known, as no herd books had been published in this country or Scotland, but as the people become more acquainted with the breed and found them proving their worth as dairy animals, and becoming more interested in them, a herd book was established in Scotland in 1878, and in the U. S. in 1863. I think there were thirteen men to incorporate the Ayrshire Breeders' Association. I purchased my first Ayrshire animal, a bull four months old, about 22 years ago and



AYRSHIRE COW DALFIBBLE CRUMMIE IMP.

even went in debt for him. Afterwards when I asked the man I purchased him from, how he knew I would ever pay him, he replied: "If you knew enough to know you wanted Ayrshires I knew I was sure of my pay." I soon added more to my number, and as I bred and cared for them much myself, I became more and more interested in them, and always thought I would go to Scotland some day and see the Ayrshire in their native home.

Four years ago I had the great pleasure of doing so. While there I made a close study of the Scotchman's methods in caring for, breeding, and developing their animals. I found, too, that the women and girls look after the cattle as much as or more than the men, feeding and milking them, and they knew the pedigree of each animal as well as, if not better, than the men. In my estimation the Scotch people are the keenest and wisest breeders in the world, and have bred the Ayrshires almost to perfection. In the first place, his business is his life's ambition, and he watches it in every detail. His business is his pleasure, his theatre, his whole life's work, and some of the best Scotch breeders take more enjoyment in seeing the cattle they have developed look right, walk right, than we Americans at our various places of amusement, and satisfy their ambition in having such animals led out before them.

Mr. Osbone of Morton Mains, breeder of Nellie Osbone of Chicago World's Fair fame, had some of his animals led out before me, (his son was leading them out). One did not show just right, when his father said: "Alex, you ken better nor that, bring her back again." And Alex brought her back walking backwards holding her head well up and making her walk right. They will even spend a whole day at cattle shows, looking at the success of other breeders, and studying the way in which they can benefit themselves in their individual work. Let me say right here, the Scotchman, if he has an animal deficient in spring of rib, will feed cut hay and grain and spring those ribs out; if he has an animal with turned down horns he will put them in training and soon have them up where they will have a more attractive look. They will say the Ayrshire cow has everything, but is apt to have short teats. That has been carefully watched in this country and today I can show you whole herds, large herds, all with good teats, as good as any of the dairy breeds.

The Ayrshire cow has inherited a strong constitution and great dairy capacity, that fits her to endure the changes of our New England climate and to produce a large quantity of dairy products at the lowest cost. For example of this our Champion Ayrshire cow produced 23022 pounds milk at a cost of .0159 per quart; 1080 pounds butter. Our best four-year-old 17657 pounds milk, 966 pounds butter. Our best three-year-olds 14582 pounds milk, 754 pounds butter; 15122 pounds milk, 631 pounds butter; 15056 pounds milk; 693 pounds butter. Our best two-year-old 12773 pounds milk, 626 pounds butter. Our best 10 cows average 18737 pounds milk, 971 pounds butter; 419 entries mature class 10531 pounds milk, 479 pounds butter. 146 four-year-olds, 9599 pounds milk, 446 pounds butter; 179 three-year-olds, 8950 pounds milk, 415 pounds butter; 351 two-year-olds, 7866 pounds milk, 373 pounds butter; 1112 all classes, 9378 pounds milk, 435 pounds butter. Years ago when I won second in the home dairy test with a cow giving 10701 pounds milk and 506 pounds butter, it was considered a good record, but today the whole class going into advanced registry average nearly that, and more than our best records 15 years ago, showing the rapid advancement the Ayrshire breed has made in this very short period of time.

At the present time, with limited capital, I would advise a man to buy a purebred sire, always remembering that a sire is half the herd, study his breeding, become acquainted with him in every particular. Find out what his dam has done, also his grand-dam, see what the females have done on his sire's side, as a purebred sire is stronger blooded than a grade, you will get his blood stronger in your herd. If you buy a bull from a cow giving 30 pounds of milk a day and breed him to a herd of 30 pounds, how can you expect the results of better than a 30-pound cow? Buy a bull from a 60-pound cow and your breeding should be a 45-pound cow; a bull from a 30-pound cow bred to a 60-pound cow would most likely put you back to a 45-pound cow or less. We claim a good bull half the herd. A good cow may breed for 12 or 14 years, and if you get six or seven heifer calves you are lucky, but a good bull will leave that number from a small herd in one year, so you can see his worth. A bull should be tried and kept until you can see what his progeny can do; if an improvement over their dams you have started right; then purchase a few choice females. It is better to have a small number of choice animals than a large number of animals of inferior quality.

Success is bound to follow such careful study and thoughtful breeding. Watch the other man to see what he is doing to profit by another's success or failure; find out what to do to keep up with the procession. The breeder must not stay at home satisfied with his own doings, but go out among the other breeders, looking over their animals to see how they compare with his; join the clubs with the men breeding Ayrshires, and they will help you a whole lot in advancing. I think showing at fairs helps you by comparing your animals with the other man's. It also helps you to advertise. I remember the first time I showed I won first on bull and a first on a female and I thought all I had to do was breed them and raise prize winners forever. After showing your stock at fairs you are apt to sell some stock, and you want to sell to make a success. Become interested in all your customers, study their herds, and see where you can help them as much as possible, as you must remember that any good record they may make will help you as well as themselves. Help them to sales if possible, as that gives them more encouragement, and as they make sales you will find them making more purchases and telling their friends of their success, and more buyers follow.

You will sell many animals on description, and always try to describe them as nearly as they are as possible, so as not to disappoint the buyer. You must be a good care-taker, as care means profit, and your herd must have good care in order that you can have animals that will not disappoint the buyer. A man told me once if you can stand before a pen of calves, chew a straw and watch them grow and you enjoy it you will be a success. I like to see the many changes a calf from a few days old will make until it becomes mature. They are very interesting. Now after you have made some sales you feel you are getting back some of your first cost. I know I felt better over my first sale, a bull calf at $25, than I did years later when I sold a cow for $1,000. A farmer in New England cannot afford to keep poor stock. If he wants purebreds, he should choose the breed he likes the best and stick to it; he will never make a success of a breed he does not like, no matter how good it is.

Owned Her Foal Through Fright.

SEEING the question asked by A. R., page 822, reminds me of an experience we had, several years ago, with a mare, who would not own her foal. After several weeks of watching her constantly, to prevent injuring the foal, she became a little less vicious, and we turned her out, for a little while, to graze. The first day she was out, we forgot all about her, and there came up a severe thunderstorm. As soon as it passed we made haste to find the mare and foal. The storm had accomplished what we had found impossible. Whether it was fright, or the thorough ducking the foal had received in the storm I cannot say. We had no more trouble, as the mare owned it ever after, or till weaned. She had several foals and always owned them, with this one exception. I do not say this is a sure way to induce the mare to care for her foal, but it might be tried, under certain conditions, that are obvious, and if successful, would save considerable work, and a much better foal would result. M. K.

Massachusetts.

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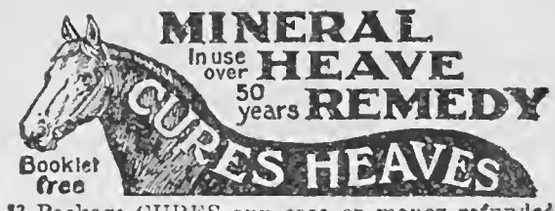

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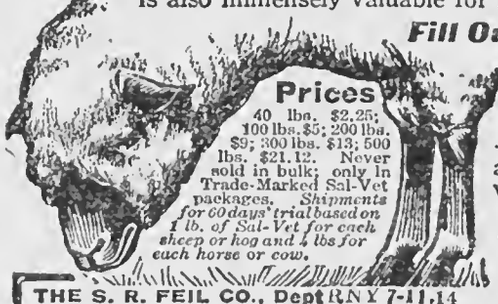

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Bloated Stock.

I SEE, on page 842, directions for tapping a bloated animal, by A. S. Alexander, M. D. C. I think I have a better and quicker cure for cattle than tapping. About 30 years ago a farmer told me if I ever had a bloated cow to get hold of the tongue and hold it out one side of the mouth. I never had any cattle to bloat until three years ago. Then I had a calf which was very bad. I took hold of the tongue and held it for about 15 minutes and the gas came out and gave instant relief. Then I gave a dose of Epsom salts and it was entirely cured. Last year I had a cow and cured her the same way. I told one of my neighbors, and last Fall he had a cow that was bloated very badly. He tried my cure and he said it worked to perfection. By holding the tongue out it lets the gas escape. You can fairly see it. You can cure a cow while you are getting ready to tap it. Of course it might not always work, but it has for me, and I have told all of my neighbors, as I think it is something everyone who has cattle should know, especially if raising Alfalfa or Red clover.

New Jersey. ELLIS TIGER.

Feeding Little Turkeys.

MRS. E. J. RIDER and Mrs. Grover tell how they raise turkeys and what they feed young turkeys. What kind of "pudding" do they make and how do they make it? I have a good number, they hatch well and are of good stock, and I would like to get the best results in raising them. J. B.

The first few years of my experience with turkeys I fed bread and milk and hard boiled egg with lots of black pepper. Results were not very satisfactory and finally I read of someone who fed wheat bran and sour milk. I resolved to try it, and did so with excellent success. Wheat bran is a bulky food, but will not pack and harden in the bowels, and the lactic acid of the sour milk is medicinal in that it kills any germs along the digestive tract. Turkeys in the wild state rear their young in the woods, and they must subsist almost entirely on insects for the first few weeks. In domestication they are more or less confined, and where there are so many to consume the insects on a small area it does not supply meat food enough for their needs. The most natural and easily digested meat food we can supply is raw egg.

The little turkeys are left in the nest two days or as long as the mother will sit quietly. From the nest they are put in a roomy coop having a detached floor, and given grit or fine sand or sifted oyster shells, and clean water. After two hours mix together about one pint wheat bran, one raw egg and enough sour milk to make a crumbly mash, and feed a few spoonfuls on a clean board. Grit in some form and clean water are kept before them, and the mash given four times a day. Never overfeed. Take out the board and any food left as soon as they are satisfied.

One Spring I took off a brood in April. It was still quite cold and wet and a snow squall visited us in a few days. I thought surely my poults would die, and I loaded their food with ginger and black pepper to keep them warm. I was not disappointed, most of them did die, but it was pepper and not cold that killed them. It set me thinking, and it looked only reasonable that the tender little stomachs could not stand such medicine. Now I give it only in case of sickness, and then red pepper, which is an aid to digestion.

In case of a wet spell I cover the front of coop with pieces of oil cloth, old rubber coats or whatever is at hand to keep out the rain; be sure they have dry bed and keep them in until rain is over. My coops are all made of good tight boards or matched lumber, painted and with back and top covered with roofing paper. Coal ashes are excellent to dry a wet coop. Everything must be clean as possible around turkeys. If free to choose their own quarters they will roost in a clean place always. Coop should be lifted from the floors and cleaned every other day, sometimes floors scalded and coops whitewashed. Drinking dishes and feeding boards should also be scalded.

The bran-sour-milk-egg mixture is the only food given for three or four weeks. Then very gradually, giving only once a day at first, work them onto oat flake and a good brand of fine chick feed. Cracked wheat and a little cracked corn are good and much relished. Continue the bran and sour milk once a day until cold weather, and give them any good grain such as wheat, buckwheat, oats, barley and corn, or better still a mixture, feeding only morning and night. Be sure they have plenty of grit and clean pure water, never letting them drink from a stagnant pool. One thing which greatly helps little poults is greens cut very fine with the scissors and mixed with other feed. Sour milk, which is too old and has become rancid of course cannot be fed, and I much prefer it uncooked, giving whey and all. Also be sure you are feeding a good grade of bran, preferably Winter bran, or what is commonly known as mixed feed, and good grains of all kinds, which are not sour or musty or false. Do not confine them too long in coop or yard, let them exercise, but keep from wet grass. There are many things in favor of this method of feeding. Bran and sour milk are both very inexpensive. Clear eggs tested from the incubator are as good as any; it is easily prepared and gives best results. I have not had a case of diarrhœa or leg weakness and no drooping wings since feeding this way and my turkeys have grown fine large frames, weighing heavier than ever before. I never feed puddings, johnny cake or other cooked food. Cornmeal can be added to the mash after poults are half grown.

MRS. NILES GROVER.

I feed my turkeys good sweet bread and milk until they are old enough to eat wheat, good wheat, not screenings. I feed the wheat until they are full grown. As they grow older I mix cracked corn with the wheat. Keep clean, fresh water where they can get it at all times. See that they do not get lousy. I scarcely ever lose a poult, only by accident. The wheat makes bone and muscle and keeps them growing. You may say wheat is expensive, so also is it to lose your poults.

MRS. E. J. RYDER.

White Diarrhœa and Germs.

I FEEL I must write you after reading the article on white diarrhœa in a recent issue. The author, like myself, was informed that germs did the work. Now I always get hot under the collar when these germ theories are advanced in the poultry business. I have been through epidemics of both white diarrhœa and roup, and have always tried to dig down and find the real fundamental cause of any trouble with my fowls, and I have proved to my own satisfaction that fowls kept under proper conditions and properly fed and bred are immune to these two diseases, which I used to consider the scourge of the poultry business. Now, instead of hunting for some germ with name a mile long, I have hunted for causes I was able to correct. I find by raising my chicks under hens I have entirely eliminated white diarrhœa, and by cutting out all meat and forcing foods I have entirely stopped roup, and hemorrhage of the spleen. This latter trouble used to take lots of hens in the Spring, and is a trouble you never read about, and I would never have found out what the trouble was had I not dissected the dead hens. U. D. SYDNOR.

Virginia.

I have had many arguments of this type put up to me. In the first place, did Mr. Sydnor's chickens have bacillary white diarrhœa, and would he know it if they had it; or did they have just plain bowel trouble caused by poor feeding, management, etc.? If it was plain bowel trouble caused by poor feeding, etc., going back to the old hen would in most cases stop the trouble, as it did with Mr. Sydnor's chicks. On the other hand if they had bacillary white diarrhœa (a germ disease that is in most cases inherited from the mother) as he claims, and understands artificial incubation and brooding, the difference either way in mortality between natural and artificial raised chicks would be too small to consider a factor. I feel sure Mr. Sydnor's chicks had some bowel or other trouble caused by poor feeding and management, and not bacillary white diarrhœa. If going back to natural incubation and brooding would cure this disease as Mr. Sydnor claims, why are all the leading experiment stations spending so much time on this disease?

Roup is another germ disease, and usually follows a cold in damp and badly ventilated houses, and in houses and yards that are not sanitary. Hens that are well fed and kept in properly ventilated, clean and dry houses, under sanitary conditions can in almost all cases by nature throw off or resist the germs of roup. The chances are Mr. Sydnor forced his hens by over-feeding meat and other forcing feeds until they were broken down or weak. In this condition they could not overcome or resist the germs of roup or colds, especially if the weather had been cold and wet, and the houses damp. EDWARD S. PARSONS.

CALVES AND SOUR MILK.—The Department of Agriculture reports experiments in feeding sour milk to calves: "Sour skim-milk was fed to 22 calves, Holsteins, Jerseys and Guernseys, at different seasons of the year. In no case did it cause digestive disturbances even when the change from sweet to sour milk was made abruptly when the calves were only a few days old. Moreover, no evil results followed the alternate use of sweet and sour. It seems, therefore, that the common idea that sour milk leads to scours is quite unfounded. The calves, it was found, did not like the sour milk as well as the sweet, but in the majority of cases soon became accustomed to it. The aversion, however, increased when the milk was fed them at a low temperature."

DOCTOR: "Well, Mr. McPherson, I'm glad to see you out again. You've had a long illness." McPherson: "Ay, Doctor, and verra expensive. I was wonderin' if it was worth while at ma time o' life."—Punch.

Notice to Cow Owners

U. S. Agricultural Department recommended Sterile Air for the Treatment of Milk Fever. Send and get one of Dr Myers Sterile Air Milk Fever Outfits. The only outfit made with a bulb for cleansing after using. Directions with outfit. Price, $3.00. Ex. paid. C. H. MYERS, D. V. S., 100 Berlin St., Middletown, Conn.

Pinehurst Shropshires

Best Breeding flock in America. Foundation stock for sale. Send for illustrated catalogue to H. L. WARDWELL
Box E Springfield Center, N. Y.

DAIRY CATTLE

FOR SALE—Registered Ayrshires of quality. A small herd consisting of cows, yearlings and heifer calves, headed by a son of Bargenoch Victor Hugo. Will sell as a herd or singly. A. F. Curtis, Ballardvale, Mass.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

YOUNG REGISTERED HOLSTEIN BULL

127791, now ready for sale. Well bred, handsome individual, even black and white. $135. We have two others more fashionably bred and higher priced. MOHEGAN FARM, Hudson Valley Headquarters for Purebred Stock. CHAS. H. BAKER, Owner, Peekskill, New York

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ready for heavy service; son of the Great Milk and Butter King; A. R. O. dam. Two choice cows due in August. Several male calves. One fine heifer calf. HILLHURST FARM, F. H. Rivenburgh, Prop., Munnsville, N. Y.

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100 cows served to calve in August, September and October, all served to registered bulls. STRICTLY DAIRY TYPE AND GUARANTEED. 60 yearling heifers. 40 two-year old heifers all sired by pure blooded bulls from high producing dams. 10 extra well-bred registered bulls, PONTIAC BREEDING, from A. R. O. DAMS. If you are looking for extra good dairy cows, visit the EAST RIVER HOLSTEINS. Special price for the next 30 days. WE TUBERCULIN TEST. JOHN B. WEBSTER, Dept. Y, Cortland, N. Y. Bell Phone 14, F.5.

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The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
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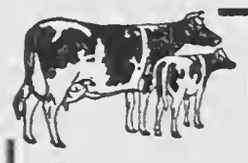

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and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
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Registered Imported Percheron Stallion

No. 84211 (84669) will be sold at less than half cost, due to slight injury, in no way affecting beauty or breeding power. 5 years old. Weight, 1 ton. Chestnut color. Present price, $1,100. Cost $2,300. MOHEGAN FARM, Hudson Valley Headquarters for Purebred Stock, Peekskill, N. Y.

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Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa

Poland-Chinas—The best breed of Hogs on earth. Choice Boar Pigs, 3 months old, $15.00 each, if sold before July 20th. Pedigree eligible with each one. Shipped C. O. D. Send along your order. They will please you. Sow pigs same price. Write me. G. S. HALL, Farmdale, Ohio

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, N. Y.

Pedigree Chester Whites out of excellent stock, from 8-weeks old. Either sex. SCOTT, Stone Ridge, N. Y.

FOR PURE BRED TAMWORTH SWINE

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Registered pigs of April and May farrow. Satisfaction guaranteed. ROLLO YOUNG, R. D. 4, Coatesville, Chester Co., Pa.

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fine, healthy stock, free from disease, 6 to 8 weeks old, @ $10 each, f. o. b. R. R. Station. For further particulars, address ARDMORE FARM, Glen Spey, Sullivan Co., N. Y. JAMES MAGNER, Manager

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LARGE BERKSHIRES AT HIGHWOOD

Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows. H. C. & H. B. HARPENDING, Dundee, N. Y.

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Choice boars old enough for service. Also 8 weeks-old pigs, both sexes. Good breeding.
JOHN W. COOPER, PINEVILLE, PA.

Springbank Herd—Big Berkshires

I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
J. E. WATSON, Proprietor, Marbledale, Ct.

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This beautiful Wall Map, size 25x39 inches. On one side we have a complete, up-to-the-minute map of the United States in bright colors, showing the Capitols, Railroads, Rivers, large cities, etc. It also shows portraits of our 27 Presidents, and gives their biographies.

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THE RURAL NEW-YORKER,
333 West 30th Street,
NEW YORK.

FATTENING WESTERN SHEEP.

BULLETIN 115 of the Missouri Station, gives the results of experiments in fattening 140 yearling sheep of uniform size and quality, raised on the range in Wyoming. The sheep were divided into seven lots of 20 each, and, excepting the last lot kept in the sheep barn in pens 6½x34 feet, each pen having a yard on the south side 6½x61 feet. Lot VII was fed in an open yard, with no shelter except the side of the barn, which gave protection from the west winds.

The rations used were: Lot I, shelled corn and Timothy hay; Lot II, shelled corn and clover hay; Lot III, six parts shelled corn, one linseed meal (by weight) and clover hay; Lot IV, six parts shelled corn, one cottonseed meal (by weight) clover hay; Lot V, shelled corn, corn silage and clover hay; Lot VI, shelled corn and clover hay, self feeder; Lot VII, shelled corn and clover hay without shelter. The feeding racks were 10-inch grain troughs with V-shaped hay rack, arranged so that the hay would feed down into the grain troughs. The rations were fed in two equal parts, half at 7.30 a. m. and remainder 4.30 p. m. All were started on one-fourth pound of grain each per day, gradually increased until in two weeks they got three-fourths pound and at the end of the third week were on full feed. Their appetites varied, and they were given as much grain as they would clean up. The hay which they left was saved and weighed back. The corn was good No. 2; the linseed and cottonseed meal the best that could be had and the hay choice native cut. The silage was free from mold. Salt was always before them and water in galvanized iron tubs.

A BUNCH OF FATTENING SHEEP.

The sheep cost $4.25 per 100 delivered at Columbia, Mo. Following are the weights at beginning and end of 98-day feeding period, and the price received per 100:

Lot I, average initial weight, 77.8, final 98.7; shrinkage in marketing 5.7 pounds; selling price per 100 $6.15; cost of feed $1.51; profit per head .514.

Lot II, average initial weight 78.15; final 101.25; shrinkage 5.75; selling price per 100 $6.35; cost of feed $1.73; profit per head .63.

Lot III, average initial weight 78.75; final 103.5; shrinkage six pounds; selling price per 100 $6.35; cost of feed $1.89; profit per head .572.

Lot IV, average initial weight 78.25; final 102; shrinkage 4.5; selling price per 100 $6.30; cost of feed $1.873; profit per head .561.

Lot V, average initial weight 78.35; final 105; shrinkage 6.5; selling price per 100 $6.35; cost of feed $1.644; profit per head .902.

Lot VI, average initial weight 77.95; final 102; shrinkage 5.2; selling price per 100 $6.40; cost of feed $1.688; profit per head .47.

Lot VII, average initial weight 78; final 97.6; shrinkage 4.6; selling price per 100 $6.30; feed cost $1.733; profit per head .335.

The average daily rations were: Lot I, grain, 1.17 pounds; hay 1.4; Lot II, grain 1.23; hay 1.72; Lot III, grain 1.23; hay 1.75; Lot IV, grain 1.23; hay 1.81; Lot V, grain 1.23; hay 1.33; silage .8. Lot VI, grain 1.55; hay 1.38. Lot VII, grain 1.23; hay 1.77.

As will be seen, the highest net profit was on Lot V, fed corn, clover hay and silage, .902.

A Brood of "Fireless" Chicks.

THIS is the story of an ordinary incubator hatch of chicks taken care of without artificially heated brooders. Besides a few weaklings and cripples which were killed upon removal from the incubator, 202 active chicks were taken from a 390-egg machine on April 30. A very ordinary hatch, but as good as the average where large numbers of eggs are artificially incubated. These 202 were placed in three small drygoods boxes and kept in the farm kitchen for a week; during this time most of those that were predestined to die young perished, and on May 8th, the 181 survivors were removed to a brooder three by six feet in size in the back yard. This brooder had two glass doors in front, a removable roof, and no heating apparatus; its interior had been painted with a kerosene and carbolic acid mixture, and a layer of chaff covered the floor.

The first weeks of May were wet and cold, so the chicks staid in the brooder and were covered at night with two thicknesses of bran sacking laid upon their backs and fastened at the edges by tacks pressed into the soft wood. On one specially cold day a lighted lantern was placed upon the floor of the brooder, and the cover was raised about an inch in front. This kept the brooder warm and the chicks were happy; it was the only artificial heat that they had had since leaving the kitchen. When a little more than two weeks of age the chicks began to assume the spindle-legged appearance of closely-housed youngsters and a small run was given them outside. The weather had become warmer and they needed but one cover at night. When this was tacked in place on three sides and the free edge lifted, the chicks ran beneath it as though called by a hen.

On May 24, when the chicks were a little more than three weeks old, the weather had become sultry, and it was decided to try them without any cover. There were a lot of them in a brooder originally designed for 50 chicks, and it was warm for bed covers. They had been reduced in numbers by the ordinary causes of chick mortality to 170, but had grown until they covered one half of the floor at night, even when packed together like figs in a box. This leaving so many chicks together at night without cover was an experiment, but the nights were warm and it was successful; they packed tightly but did not huddle, and were up in the morning before their owner. When he went out they were tapping on the windows for breakfast. Before this time their run had been removed and they had the liberty of the yard and garden through the day. They are now four weeks old; the weather is warm and they run all over the premises, returning to their coop at night or when a shower comes up. Cracked grains and dry mash are always at hand, they can help themselves to either loppered skimmilk or water at will; they season their food with dandelion or Alfalfa greens; form flying wedges to chase imaginary bugs; squeal loudly when the kittens chase them, and grow as fast as some of their high-toned cousins that have hen nurses and an ancestry with egg-laying records.

M. B. D.

Lessening Effect of Grass Feed.

1. What is paraffin oil and where can it be obtained? 2. Is there anything that can safely be given cows when on green grass that will lessen laxative properties, so that the manure will not be so disagreeable to handle?

S.

1. Paraffin oil is refined kerosene. Solid paraffin may be bought in cakes at the drugstore. 2. Feed each cow a pound of cottonseed meal or cake daily. This firms up the manure with certainty and at the same time is highly nutritious to the cow.

A. S. A.

Death of Calves.

For three years I have lost, by death, a number of my feeding calves. Can you tell the cause or suggest a remedy? The calves die at two or 2½ months of age; no appearance of bloat; will eat well and appear perfectly well at night or in morning when I feed them, and die in from 10 to 24 hours; do not usually seem to suffer much pain. I have sometimes noticed a slight discharge of mucus from the nose just before death. I have lost them on pasture and in the barn. I opened one and noticed nothing wrong except an enlarged gall bladder and dark spots on the liver. They are fed on freshly separated milk—froth removed—have a grain ration and grass or hay. The kind of grain fed has not been the same each year but has always included either bran or oil meal or both. I do not think they have ever suffered from constipation.

H. D. D.

Chautauqua Co., N. Y.

If you are sure that blackleg is not causing these deaths the most likely cause would be apoplexy from overfeeding and lack of exercise. It attacks calves that have rich feed and restricted exercise and is ushered in by a fit. Better reduce feed and regulate the bowels by dose of castor oil, or salts and make the calves take more exercise.

A. S. A.

DE LAVAL
CREAM
SEPARATORS
save much time and labor in summer

BESIDES GREATLY INcreasing the quantity and improving the quality of cream and butter De Laval Cream Separators save much valuable time and labor.

THIS GREAT SAVING OF time and labor counts for more in summer than at any other season and often alone saves the cost of a separator, aside from all its other advantages.

AS COMPARED WITH ANY kind of gravity setting the saving of man's time and labor and usually woman's drudgery with a De Laval is a big item in its favor.

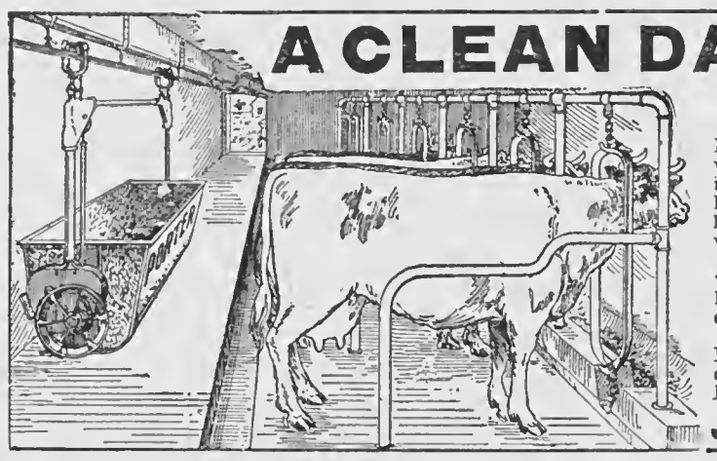
AS COMPARED WITH other Separators the De Laval saves much time and labor by its greater capacity, easier running, easier handling, easier cleaning and freedom from need of adjustment or repair.

THESE ARE MERELY SOME of the advantages which make a De Laval Cream Separator the best of all summer farm investments, as every De Laval agent will be glad to explain and demonstrate to any one at all interested.

SEE THE NEAREST De Laval agent at ONCE or if you do not know him write us direct for any desired information.

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



A CLEAN DAIRY BARN
With Half the Work

By using a Porter Litter Carrier. It works on our Columbian Steel track, is easy running and will carry heavy loads. Our Perfect Cow Stanchions line up the cows without interfering with their comfort.

Porter Steel Stalls give perfect ventilation and light throughout the barn and make it easy to keep the cows clean.

We also make the celebrated Porter Hay Carriers and Barn Door Hangers. Send for catalog of our Perfect Barn Equipment.

J. E. PORTER CO., Ottawa, Ill.

You apply Sirenia Oil with a cloth

Sirenia Oil keeps flies from Cattle and Horses; fleas from Hogs and Dogs; lice from Poultry; ticks from Sheep. It heals sores and scratches. Sirenia Oil is the product of pure oils, will not blister, and is harmless for external use. You apply it with a cloth—you don't need to buy a sprayer to use it.

YOUR COW cannot fight flies and produce the milk she ought.

Ask your dealer for a dollar can. Just ask him for "Sirenia Oil," and do not buy a substitute. If he doesn't handle, send us his name and a one dollar bill and we will send a one dollar can, postpaid.

We will refund your money if not satisfied.

Send a dollar now; or write us a card for the endorsements of users who wouldn't be without it.

UNITED STATES WHIP CO.
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ELECTRIC Steel Wheels Save YOUR Back

Save draft—save repairs. Don't rut roads or floods. Send today for free illustrated catalog of wheels and wagons.
Electric Wheel Co., 48 Elm St., Quincy, Ill.

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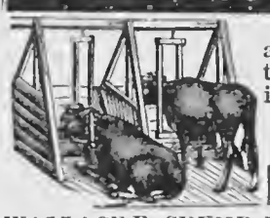

Send for my booklet and learn why these fasteners are being installed in the stables of many

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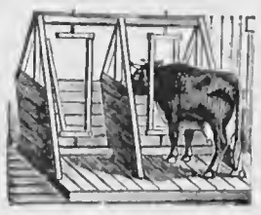
WALLACE B. CRUMB, Box M4, Forestville, Conn.



ROBERTSON'S CHAIN HANGING STANCHIONS

"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

O. H. ROBERTSON
Wash. St., Forestville, Conn.

Gentlemen:

In answer to yours of recent date, would say that I and my family are more than pleased with the Dinner Set sent as a reward for securing new subscriptions. It was perfectly satisfactory. Hoping to serve you again when opportunity affords me a chance, I remain, Yours truly,

Maurertown, Va. H. C. Rosenberger.

Let us tell you how to obtain one of these Sets of Dishes. A postal will do. ∴ ∴ ∴

Department "M"

The Rural New-Yorker
333 West 30th Street
New York City

25

The Henyard.

THE EGG-LAYING CONTEST.

The extremely hot weather of the last week has been very uncomfortable for hens, and the egg record for the thirty-fourth week shows it. The egg production at the Storrs contest was 244 eggs less than the previous week. When the hen has to stand and hold her wings ont away from her body, and breathe with her beak open, as many have dnring the last week, her appetite for food diminishes, and she cannot produce eggs nnless she eats and digests a good supply of food. Anything that makes a hen uncomfortable is sure to lessen the output of eggs.

The highest score made this week is 58, made by Francis F. Lincoln's White Leghorns. Chas. N. St. John's pen are second with a score of 57; Merrythought Farm's White Wyandottes, Tom Barron's White Leghorns, Thos. W. Moore's White Leghorns, and Pen No. 39 from Storrs Agricultural Station, all tie for third place with scores of 56. P. G. Platt's pen of White Leghorns tie with Geo. A. Cosgrove's pen of same breed for fourth place with scores of 55 each. Barron's White Wyandottes still lead all other pens with a total of 1,418, the next best pen being the White Leghorns from Storrs Agricultural Station, Pen No. 42, which have a total of 1,378. The week's record follows:

	Week	Total
Barred Rocks		
A. B. Hall, Connecticut	40	856
Frank L. Tuttle, Massachusetts	30	954
Waveny Farm, Connecticut	41	874
J. F. Francais, New York	38	1,095
White P. Rocks.		
Albert T. Lenzen, Massachusetts	47	931
Fred H. Benton, Connecticut	40	984
Storrs Agr. Station, Connecticut	37	780
Storrs Agr. Station, Connecticut	34	826
Storrs Agr. Station, Connecticut	36	957
Storrs Agr. Station, Connecticut	40	828
Storrs Agr. Station, Connecticut	41	646
Buff P. Rocks.		
A. A. Hall, Connecticut	30	973
W. C. Morgan, Jr., Connecticut	46	743
White Wyandottes.		
Tom Barron, England	45	1,418
West Mt. Poultry Yards, Connecticut	22	862
Merrythought Farm, Connecticut	56	1,272
Neale Bros., Rhode Island	39	1,245
D. J. Ryan & Son, Connecticut	30	990
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	40	963
Dr. N. W. Sanborn, Massachusetts	36	894
Am. Buff Wyan. Club, New York	39	827
H. L. Hamilton, Connecticut	40	646
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	45	896
S. C. Reds.		
Robert Seaman, New York	32	737
J. S. Gillespie, Connecticut	29	934
Dr. J. C. Dingman, New York	44	826
Burnham Pltry. Farm, Massachusetts	32	723
H. P. Deming, Connecticut	35	849
Geo. P. Dearborn, Florida	33	1,018
Dr. J. A. Fritchey, Pennsylvania	34	1,122
Ernest Underhill, New Jersey	42	784
W. H. Bumsted, Connecticut	23	571
Pinecrest Orchards, Massachusetts	42	1,091
Harry B. Cook, Connecticut	27	944
Colonial Farm, New Hampshire	32	970
A. B. Brundage, Connecticut	47	1,158
Rose Comb Reds.		
Glenview Poultry Farm, Connecticut	34	949
C. S. Scoville, Connecticut	20	672
White Leghorns.		
Storrs Agr. Station, Connecticut	56	1,053
Storrs Agr. Station, Connecticut	46	1,107
Storrs Agr. Station, Connecticut	50	1,130
Storrs Agr. Station, Connecticut	48	1,378
Storrs Agr. Station, Connecticut	48	984
Braeside Poultry Farm, Pennsylvania	37	932
Glenview Poultry Farm, Connecticut	51	1,038
Manor Poultry Farm, New York	30	987
A. B. Hall, Connecticut	21	989
Marwood Pltry. Farm, Pennsylvania	9	1,088
Geo. M. Harris, Connecticut	32	853
Bonnie Brook Farm, New York	45	1,088
N. W. Hendryx, Connecticut	45	951
J. J. Linehan, Massachusetts	43	884
F. F. Lincoln, Connecticut	58	1,365
Cecil Guernsey, New York	47	1,106
T. W. Moore, Connecticut	56	961
C. N. St. John, New York	57	961
C. W. Sherwood, Connecticut	22	959
L. E. Sands, Pennsylvania	39	990
Tomoka Poultry Farm, Connecticut	45	904
Venture Poultry Farm, New York	33	854
Mrs. K. E. Woodruff, Connecticut	48	966
Windsweep Farm, Connecticut	43	893
C. H. Savage, Connecticut	45	967
P. G. Platt, Pennsylvania	55	1,101
Heneta Bone Co., New Jersey	20	335
F. M. Peasley, Connecticut	43	991
Chas. Heigl, Ohio	39	886
Tom Barron, England	56	1,225
Branford Farm, Connecticut	51	1,094
James Munn, Massachusetts	47	909
Geo. A. Cosgrove, Connecticut	55	920
Buff Leghorns.		
Wolverine Poultry Farm, Michigan	31	1,014
Blue Andalusians.		
E. D. Bird, Connecticut	14	824
Buff Orpingtons.		
O. Wilson, West Virginia	15	723
White Orpingtons.		
P. A. Demgar, New York	27	688
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	29	537
Silver Campines.		
Wm. J. H. Lobel, New Jersey	43	804
Dunghills.		
W. H. Coltingwood, New Jersey	41	792
Daniel Hine, Connecticut	34	757
Daniel Hine, Connecticut	21	809
Mixed Breeds.		
Profitable Poultry, Massachusetts	30	876
Profitable Poultry, Masaschusetts	42	863

GEO. A. COSGROVE.

Poor Hatches.

WHAT is the matter with my eggs? I have set my incubator with 140 eggs twice, test out first time 35, second time 40 eggs. I hatched out first time 20 chicks, second time 25 plus five cripples. On examination of eggs I found that each time 25 eggs with full-grown chicks were ready to hatch and remainder with chickens half grown. The eggs I tested at end of 10 days were found to be stale, and all eggs were put in when a week old. I feed my hens six quarts of mixed grain evening and morning, with a wet mash of beet pulp and gluten. All they want to eat at noon, and beef scrap in front of them all the time. I have 100 hens with a male bird for every 15 hens. E. S.

Canaan.

There are a number of ways in which these poor results in hatching may be accounted for. If there is nothing wrong with your incubator or its management, the trouble probably lies in lack of vigor in your breeding pen. Close confinement with heavy feeding and laying through the Winter so lessens the vitality of a flock as to make hatching of the eggs in the Spring difficult, even though the eggs are fertile and the embryos develop to a greater or less degree before dying. If you can turn your flock out upon range for a week or 10 days before incubating any more eggs, you should find a marked improvement in the hatchability of the eggs. You have double the number of males in the flock that should be needed. M. B. D.

Chicks Die in Shell.

WHY do little chicks die in the egg just before they are ready to hatch? I lost so many that way last year and again this year. Barred Rocks and Light Brahmas, also some turkeys. L. H.

The chief cause of death of fully developed chicks within the shell is probably lack of vitality, due to a corresponding lack of vigor in the parent birds. Artificial methods of incubation also fail to bring forth chicks that under natural methods would probably have been able to have broken the shell and emerged. This simply means that artificial methods have not yet been made equal in efficiency to natural. Failure of turkey eggs to hatch, where there has been no fault with the sitters, should also be laid to deficient vigor in the embryo due to some defect in the care or condition of the breeding stock. M. B. D.

Goslings Going Blind.

I HAVE 18 goslings, and they were doing fine until a couple of days and two of them are blind now. I have been feeding them a pint of cornmeal with a teaspoonful of salt. A. M. C.

I do not know the cause of the blindness. They should have a more varied food. For the first few days one of the best feeds is rolled oats, slightly moistened, with a little fine grit and not more than half the salt you give. Change gradually to a mixture of as many kinds of ground grains as you can get. I am using growing feed for chicks, with a little bran and cornmeal added, always with the grit, and I find it very satisfactory. Keep them on grass, of which they are very fond. W. H. H.

Defective Hatch of Ducks.

I GAVE a custom hatcher 160 duck eggs. When tested on the eighteenth day there were only 10 eggs not fertile, leaving a total of good eggs 150. When these began to hatch only 11 ducks came out of the shell, and the remainder were all full grown. When I was notified it was three days after first ducks hatched and on investigation found that the remaining ducks in shell were alive. In breaking the shell there was a queer substance which would run out, and the lining which is directly under the shell was so tough and hard that it required considerable strength to tear it open. I also noticed one black spot on the shell which looked to me as if it had stayed in one position so long that it became roasted or partly burnt. One other peculiarity was that in some of them their gizzard was like a growth just below their rectum. It looks to me like lack of care in turning the eggs, in giving proper moisture, and over-heating incubator. I ask your honest opinion, not that I intend to try to make the hatcher pay for eggs, as I have all ready paid for hatching, nor do I intend to hatch more eggs until I find just cause for trouble. J. L. S.

Vermont.

Assuming your statements to give the whole case I should conclude that there was something wrong in the management of the eggs, either in turning, cooling or sprinkling. There are so many factors in the successful management of an incubator that few become expert without some such experience as you describe. The black spots you mention could not be the result of scorching. The growth was not, I think, the gizzard, but a growth about the navel where the yolk of the egg is absorbed. W. H. H.

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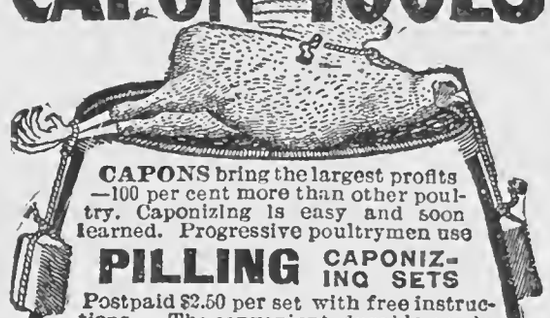

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333 W. 30th St., New York City

PUBLISHER'S DESK

If the complaints we receive are any indication, James Wilcox, 921 Sixth Avenue, New York, N. Y., is still soliciting shipments of eggs from farmers. Our records regarding him go back some six or seven years. They indicate that he does not pay for shipments. Various excuses are made and we have some half dozen letters from him stating he is going out of business, but the complaints continue. We recommend cash in advance or no eggs.

I would like to ask you how to proceed to get my money. On December 13, 1913, I shipped a box of greens to New York to a commission merchant. He never got them until after Christmas so would not accept them and wrote and told me I would better take it up with the railroad company, as they were shipped by freight. To whom should I apply, and is it too late now to do anything? B. B. S.
New York.

We were able to get adjustment of this claim in about two months' time. This is not a bad record and we hope the transportation companies generally will put their records in such shape that when a clear case of loss comes up it can be settled promptly. As a contrast here is a record established by an express company:

A subscriber shipped a barrel of syrup to a New York State dealer. It was sent to his station by a teamster who neglected to take a receipt. The barrel was marked to go by freight but this was overlooked by the agent and the shipment went forward by express. The charges were, of course, excessive but inasmuch as no receipt could be produced the express and railroad company could not be held responsible and we could get no refund on the charges, which took away all the profit in the transaction.

Another subscriber shipped a quantity of poultry for which he received returns considerably lower than he anticipated. Investigation showed that he had neglected to take a receipt from the boat company, the poultry house had lost or mislaid their records and there was no way to ascertain the exact weight, and he was at a loss that made the transaction particularly unprofitable for him.

Both these instances go to show the protection a receipt carries with it. You cannot hope to adjust a claim with an express or railroad, or with a business house if you cannot verify your claims, and in filing claims the receipt is necessary.

I would like to ask your assistance in collecting a debt against the Newark Produce Company, Newark, N. J., of $331.20 for a car of Baldwin apples. Have received no money to date but lots of promises. R. E. G.
New York.

There was some delay about the delivery of this car of apples but check was sent for $281.48 after we had taken the matter up. It was reported that there was a shortage of at least six barrels of apples, and considerable other damage, but we were unable to get sufficient information or verification from the produce company to enable us to take it up with the railroad. There may have been mistakes on both sides in this controversy, but there is no explanation given for the refusal to send particulars that would enable the shipper to get redress from the transportation company. In the majority of cases we find the responsible houses ready and willing to give what information and help they can.

Will you advise me whether or not stock in the Ozark Mining & Milling Company, Ltd., Lewiston, Idaho, is of any value? Their agent persuaded me to take stock in it. In 1906 I took 100 shares and in 1907 100 more shares. I have received nothing yet. Several of my neighbors took 1,000 shares. What is best to do in regard to the matter?
West Virginia. C. E. F.

We are unable to find this concern. Mail addressed to them at above address is returned unclaimed. The company was probably organized for the purpose of selling stock and with no idea of conducting a mining business. The stock is of course without value.

I send you specimens of a new seedling cherry grown by myself and named by the U. S. Pomologist, "Perry." The authorities at Washington, Department of Agriculture, are very much pleased with this new variety; it is very firm, of excellent quality, a good shipper and a most remarkable keeper. It has been kept in a refrigerator in good condition five weeks. The tree is an upright grower, very healthy and a very prolific bearer; it is about 10 years old; last year was the first time we discovered any valuable traits about it. I am not quite sure as to its time of ripening; the specimens were picked today, June 24. I will pick no more for one week yet, in order to find its time of ripening, or maturing.
Landisburg, Pa. WILLIAM STEWART.

The specimen arrived in good condition and seems to justify the above description. It is firm, with acid flavor, and should make a good shipper and be especially valuable for canning.

I enclose some "literature" which arrived in the mail this morning. As you will see, my wife has been awarded a large prize in the shape of a conpon toward a piano, and the delightful thing about it is that she never heard of these people, or their pianos, or competed in any "chicken contest." I was about to send the stuff back with a sharp letter, when it occurred to me that it might interest you and perhaps help some of your readers to smell a rat if they were to win a similar "prize." H. S. R.
Massachusetts.

The above letter referred to the literature of the Associate Advertising Co. of 328 Federal St., Chicago. The printed letter advises the recipient that she has won a prize through answering some chicken puzzle. Another subscriber sends us a similar set of literature, and neither of them has replied to any chicken puzzle whatever. Notwithstanding this, a coupon was enclosed alleging to have a cash purchasing value of $108 at the warerooms of Lord & Co., Salem, Mass., or Lawrence, Mass. This prize puzzle scheme is an old fake that has been worked to the limit. No serious-minded person would expect that a coupon sent out in this way has any value, as the amount of cash they would be obliged to pay in addition to the coupon to get the piano will represent the value of the piano with a good big profit for the promoters of this scheme and the piano dealer besides. We flatter ourselves that none of THE R. N.-Y. readers will get caught on such transparent bait.

I am writing you this morning to tell you that it is now the 24th of June, and I have not yet received the 200 pounds of chick food that the Cloverdale Farms of Ransomville, N. Y., wrote you that they had shipped to me. I finally wrote to the freight agent at Ransomville asking them to look it up on their books and the enclosed letter with his answer written on it speaks for itself. You see they have never sent it. I wish there was some way that I could compel them to return the money. I think perhaps I should sue them for damages. I have a lot of late chicks which will be hard to sell and which I do not want to keep instead of 400 nice April pullets which I should have. A. A. P.
New York.

Our information is that the Cloverdale Farm Co., of Ransomville, N. Y., referred to in the above subscriber's letter, is under the management of one Mr. E. E. Cooley, formerly of Frenchtown, N. J. The stationery of the Cloverdale Farm Co. however, does not bear the name of Mr. Cooley or any other individual. When located at Frenchtown we were obliged for the protection of our subscribers to warn our readers against Mr. Cooley's methods, and it would seem that the change of location has produced no change for the better. It is said that leopards can change their spots, but it is our experience that they rarely do. To get redress through the courts as the subscriber suggests would be expensive and no doubt cost more in time and money than is involved in the whole transaction. While this subscriber has suffered a severe loss and disappointment, his experience may be the means of saving others from a similar loss.

I have always been a crank on farm papers and, of course, have taken quite a number. I now receive regularly a dozen or more, but you have them all beaten to a frazzle when it comes to exposing fraudulent advertisers, and I am only too glad to join your Anti-Fake Club. I long ago dropped Myrick's publications, J. A. Everitt's "Up-To-Date," Lewis's "Woman's Magazine," and a few others, and now I propose that we cull them closer than ever; no matter how well we like them in an agricultural way, if they won't look out for their readers' interests by carrying only reliable advertisers, let us refuse to be concerned about their papers. W. F. K.
Ohio.

That anti-fake club promises to be an important institution. It will, if consistently and persistently followed up, drive every fake advertiser out of not only farm papers, but out of every paper that seeks the farmer's trade. The people have the right view of the matter. The trouble has been that they have not known how to get at it. An occasional protest would not suffice. It requires concert of action in large numbers. This we now promise to have. Why should any farmer permit a paper to come into his house, with an alluring scheme to swindle himself or one of his family? J. J. D.

Limberneck.

WE are having much trouble with our Brown Leghorns. They are apparently perfectly well, have a red comb and do their duty in laying, until all at once they tumble and fall, stick their heads under themselves and are seemingly unable to stand up any more nor to lift their head. They lie around in this condition for a few days and then die. We are thus losing three and four, even five a day. We are feeding them corn and vegetables and besides they have free run in the woods and field, and abundant fresh water. L. H.
Texas.

These fowls have apparently been poisoned by the eating of unsuitable food of some kind, very likely having found access to some decaying carcass in the woods or fields where they roam. Search should be made for dead animals within their reach and those showing symptoms of poisoning should be promptly treated by giving them a dose of castor oil; about two teaspoonfuls; and confining them until recovery. M. B. D.

Leg Weakness in Chicks.

WHAT is the cause and cure of week-old chicks having something similar to rheumatism in their legs and feet? They seem perfectly healthy otherwise, but soon die after being stricken. P. C. S.

Leg weakness in chicks is an evidence of low vitality or possibly in some cases of actual rheumatism. It is frequently seen in young chicks kept in overheated brooders, particularly in those in which the floor is warmed, and all chicks kept upon board floors for more than two or three weeks are very apt to develop it. The remedy in most cases is to get the chicks out upon the ground where contact with the earth may overcome the evil effects of too close housing. Care should be taken not to overheat chicks kept in brooders and to hatch from stock kept under conditions conducive to vigor in the offspring. M. B. D.

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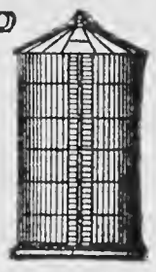
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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending July 3, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.41 and $1.31 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart.

BUTTER.

Receipts are large and trading only moderate. Some falling off in quality has been noted during the week, so that buyers for critical trade have more difficulty than usual in getting suitable supplies. There is a fair call, both for local and out of-town trade, in qualities ranging from 22 to 24 cents.

Creamery, extra, lb	27	@	27½
Good to Choice	23	@	26
Lower Grades	20	@	22
State Dairy, best	25	@	26
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	16	@	18

Elgin, Ill., butter market 26½ cents.
Philadelphia, western creamery, 27½ cents.

CHEESE.

Business is a little more active, and dealers less ready to move their choice stock at the top quoted price, except to regular customers.

Whole Milk, fresh, specials	14¼	@	14½
Average fancy	14	@	14¼
Under grades	10½	@	13¾
Daisies	15	@	15⅝
Skims, specials	11	@	11¾
Good to choice	10	@	11
Poor to fair	5	@	9½

EGGS.

The proportion of uniformly fine eggs continues small, even in receipts from sections reported to give more than ordinary care to candling and grading. In stock from nearby the same irregularity in quality is noted, the top figures representing but a small volume of business.

White, choice to fancy, large	27	@	28
Common to good	20	@	25
Mixed colors, best	25	@	26
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18

FRESH FRUITS.

New apples increasing in supply, selling mainly at 50 cents to $1 per bushel. The N. Y. State packing and grading law, in effect July 1 applies to all N. Y. State growers and dealers. Those unacquainted with it should get a copy from the Commissioner of Agriculture, Albany, N. Y. The boxed apple season, just ending, brought heavy loss to the holders. The fruit scalded badly in storage and kept so poorly when removed that retailers could handle it only at high prices. Large quantities of good varieties have wholesaled at New York below $1.50 per box. The evident lesson from this experience is that apple sales should be pushed to the limit during late Winter and early Spring, so that there will be no burden of holdings for June trade, when there is an abundance of fruit more attractive than old apples. Southern Le Conte pears are more plentiful selling at $4 to $6 per barrel. Some improvement in quality of peaches is noted, but few good enough to bring above $2.50 p crate. Strawberries from Western N. Y. are higher, a few bringing 20 cents, but most sales are between six and 14 cents. Muskmelons are a little higher. Prices for the last two weeks have been ruinous to growers.

Apples—New, bu	25	@	75
Ben Davis	2 00	@	3 00
Baldwin	2 50	@	3 50
Western, box	1 00	@	2 25
Strawberries, Up-river, qt	6	@	14
Jersey	6	@	12
Western N. Y	8	@	18
Cherries, 8lb. bkt	30	@	60
Pears, Le Conte, bbl	4 00	@	6 00
Currants, qt	5	@	8
Plums, 6-bkt. carrier	1 00	@	1 25
Raspberries, red, pint	6	@	10
Black Caps, pint	5	@	7
Peaches, 6-basket crate	1 25	@	3 25
Blackberries, Jersey, qt	8	@	12
Huckleberries, qt	6	@	12
Gooseberries, qt	4	@	11
Muskmelons, crate	1 25	@	2 75
Watermelons, 100	20 00	@	35 00

BEANS.

Marrow, 100 lbs	4 75	@	4 90
Medium	3 60	@	3 70
Pea	3 10	@	3 65
Red Kidney	1 50	@	5 50
White Kidney	5 50	@	5 55
Yellow Eye	5 25	@	5 50
Lima, California	7 30	@	7 35

HOPS.

Prime to choice	36	@	38
Common to good	31	@	35
Pacific Coast	18	@	19
Old stock	10	@	15
German crop	60	@	63

VEGETABLES.

Old potatoes are scarce selling up to $3.50 per barrel when sound. New from Virginia and Eastern Shore in large supply, but demand active. String beans in surplus and lower. Cabbage from nearby plentiful, and Southern neglected, some going at 10 cents per barrel. Lettuce very low. Onions in good demand and higher. Peas selling well when sound.

Potatoes—Old, 180 lbs	3 00	@	3 75
Bermuda, bbl	2 50	@	3 50
Southern, new	1 50	@	3 75
Sweet Potatoes, bu	40	@	1 25
Beets, 100 bunches	1 00	@	2 50
Carrots, bbl	2 00	@	3 25
Cucumbers, bu	50	@	1 50
Corn, Southern, 100	50	@	3 50
Asparagus, Green, doz	1 50	@	3 00
White, doz	75	@	2 00
Cabbage, bbl. crate	10	@	1 00
Lettuce, half-bbl. basket	15	@	50
Onions—Southern, New, bu	2 50	@	3 00
Nearby, bu	2 00	@	2 50
Okra, bu	3 00	@	6 00
Peppers, Southern, bu	1 00	@	2 00
Peas, bu	75	@	1 25
Radishes, 100 bunches	1 00	@	2 00
Spinach, bbl	50	@	75
String Beans, bu	25	@	1 00
Squash, New, bu	1 50	@	2 50
Egg Plants, Southern, bu	1 00	@	2 00
Tomatoes, Southern, 6 bkt. crate	50	@	1 50
Jersey, box	1 00	@	1 50

LIVE POULTRY.

Broilers, lb	23	@	26
Fowls	18	@	18½
Roosters	11	@	12
Ducks	13	@	14
Geese	10	@	11

DRESSED POULTRY.

Chicken scholce broilers, lb	35	@	37
Squab broilers, pair	60	@	80
Broilers, common to good	25	@	30
Fowls	15	@	17½
Ducks, Spring	15	@	16
Geese	9	@	14
Squabs, doz	1 50	@	3 75

HAY AND STRAW.

The market is dull on all hay, but the high grades of Timothy. Straw is plentiful, but unchanged in price.

Hay, Timothy No. 1, ton	19 50	@	20 50
No. 2	17 00	@	19 00
No. 3	15 00	@	16 00
Clover mixed	13 00	@	18 00
Straw, Rye	14 00	@	15 00

LIVE STOCK.

Native Steers	7 25	@	9 00
Bulls	5 50	@	7 35
Cows	3 50	@	6 75
Calves, prime veal, 100 lbs	8 50	@	11 25
Culls	6 00	@	8 00
Sheep, 100 lbs	3 50	@	5 25
Lambs	9 50	@	9 75
Hogs	8 50	@	8 65

GRAIN.

Wheat, No. 1, Northern Spring	97	@	..
No. 2, Red	88	@	..
No. 2, Hard Winter, new	88	@	..
Corn, as to quality, bush	72	@	78
Oats, as to weight, bush	42	@	44
Rye	68	@	69

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	40	@	42
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20

*

Statistics show that immigration was 180,000 less than the previous year and 70,000 have left during the year, making a labor total of 250,000 fewer than a year ago.

*

Ninety-five New England cotton mills have declared semi-annual dividends amounting to $2,809,954, on capitalization of $121,120,100, or approximately at the yearly rate of 4.64 per cent.

*

The Geological Survey gives our production of petroleum during 1913 as 248,446,230 barrels, or about 24,000,000 more than the previous year. The price advanced 95.4 cents per barrel, making a gain in value of the whole yield of 44.4 per cent.

*

One fact that is likely to help hold the present advanced prices of wool is the shortage in the Argentine clip. Great quantities of Argentine sheep have been slaughtered for meat. Throughout Northern Montana many of the largest clips of wool have been sold at 20 cents. Prices of domestic fleeces in Boston have ranged from 25 to 28 cents.

*

The last week in June, 24,000 quarters of beef and 2,000 carcasses of mutton were shipped from Argentina to the United States. Total shipments since Jan. 1 were 433,000 quarters of beef, 90,000 carcasses of mutton and 50,000 of lamb. In 1913 London received 1,996,105 quarters of beef, 8,339,114 carcasses of mutton and lamb, from Australia, New Zealand and South America.

Care of Indian Runner Ducks.

THOSE who have raised other breeds of ducks, with good success, sometimes fail utterly with Indian Runners, and complain of their being delicate. If a few rules are followed there is no trouble in raising a large per cent of the hatches. Of course it begins with the breeding stock. Select vigorous mature birds and mate those not akin, five ducks to one drake, and not too large a flock, so every one has a good chance at the feed and water. Let water be clean and shells kept before them always. Cracked corn is good for a night feed, especially in cold weather, but the main feed should be mash, never sloppy, but just to the crumbly state, and consisting of equal parts wheat bran and corn meal, one-fourth the bulk Alfalfa meal, one-fifth beef scrap, and one per cent. oil meal.

Confine them in a house or small yard at night, and do not let them go before 10 a. m., when all eggs will be laid and can be gathered, washed and put in the cellar. Duck eggs spoil very quickly, and must be kept cool. If to be used for hatching, turn every day and do not keep them over a week if a good hatch is expected. Indian Runners are excellent layers. If fed for it they will begin at 4½ months old and lay steadily a good part of the year.

The eggs bring as much as, or more, than fancy white hens' eggs in the city market. Duck eggs require much moisture during incubation. If placed under a hen, dip in warm water every fourth day and the twenty-eighth day wet nest thoroughly. If in incubator, sprinkle with warm water every other day. Ducklings pip the shell and then lie idle 24 hours or longer before coming out. When taken from the incubator place in a warm brooder or in a covered box in a warm room and never let them chill. If hatched with a hen do not let her raise them, she will kill more than she saves.

The first feed, given four or five times a day is equal parts dry bread and oat flake moistened with warm water. After three days omit bread and substitute equal parts bran and cornmeal. After three days more give the same feed as to laying ducks, except that one per cent. grit is added. Warm water is given with each feed in very shallow dishes. Hot sun, wind and wet are fatal. They grow rapidly and get their second feathers at about 12 weeks. Weight is about three pounds at 10 weeks and all culls and surplus drakes can be marketed at that time. Let it be understood the Runners are not market birds. They are called the Leghorn of the duck family, and are well worth raising for egg production. However they make fine meat and are much preferred by many to the larger breeds. A swimming pond is not necessary for them, but a bath once in a while greatly improves their appearance and is much enjoyed. MRS. NILES GROVER.

A LITTLE girl, finishing her breakfast hash, looked up quaintly: "Mother," she asked, "what is hash when it's alive?"—Chicago Record Herald.

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Reliable married man to run 100-acre farm in Berkshire Mountains; state salary and experience. FARM, P. O. BOX 206, Madison Square, New York.

WANTED—Young man, 20 years old, wishes work on farm, best references as to character; no experience, but willing to learn. CHAS. K. BROWNE, Kitzmiller, Md.

WANTED AT ONCE—Single, sober man, between 30 or 35 years, handy with tools, for general farm work; good milker and driver; $30 a month with board. L. E. PALMER, Supt., Warren Dairy Farms, Richfield Spa, N. Y.

POSITION WANTED—Young man of 22, on large stock farm or gentleman's estate; A1 hand around horses and cattle; can furnish A1 reference in regards to honesty, temperance and ability. JOHN T. HERRON, Arlington, N. Y. R. F. D. 5.

MARRIED FIRST-CLASS AMERICAN FARMER wishes position as caretaker on gentleman's estate, or would accept farm foreman's position; capable taking full charge of farm; one child; references furnished. LOCK BOX 424, Southington, Conn.

WANTED—Position by Cornell graduate as manager of a truck and fruit farm or estate; can organize a new up-to-date market garden or orchard; advanced theoretical training and considerable experience; permanent position considered only. Address I. G. M., care R. N.-Y., 333 West 30th St., New York.

POSITION WANTED—Take charge farm or country place; experienced farmer, gardener, poultryman; understand making, selling pure milk, cream, butter; raising purebred stock; wages reasonable for first-class service; American, 45; correspondence invited; references given and required. BOX 615, Litchfield, Conn.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

SEVERAL CYPHERS 400-EGG INCUBATORS to sell for want of use. C. T. HAMILTON, Greenlawn, N. Y.

FOR SALE—No. 10 De Laval Cream Separator, but little used and in first-class condition. Apply L. L. BROWNE, New Canaan, R. D. 32, Conn.

TIMBER LOTS AND POULTRY FARM for sale. M. W., care R. N.-Y., 333 West 30th St., New York.

FINE VILLAGE AND RIVER FARM FOR SALE—Fine house, water, fruit; good barn; keep 25 cows; 1½ miles to depot. BOX 24, Rockland, N. Y.

FOR SALE—Choice farm of 100 acres. Another of 50 acres. Near Wolcott, N. Y.; plenty of fruit. Come and see, or write to A. H. CREQUE, Wolcott, N. Y.

FOR SALE—Farm, 139 acres, all improved, well watered, good producer; house 11 rooms; three barns; other buildings; price low, easy terms. GEO. A. MATTESON, Rathbone, New York.

FOR SALE—Two farms; one up-to-date chicken farm, 30 acres; buildings for 1,000 hens. Also a sheep and dairy farm of 150 acres. Five camp lots on Otsego Lake. K. E. WHITE, Cooperstown, N. Y.

FOR SALE OR RENT—Immediate possession, 77-acre farm near Somerville, N. J.; new modern bank barn, farm and tenant house; good outbuildings; plenty fruit, etc.; commuting distance; details on request. A. B. CORNELL, Somerville, N. J.

FARM FOR SALE—Large, nice house; six other large buildings; 75 acres land; good farm or fine location for Summer home; reduced price if sold before August 1st; easy terms. MRS. MINNIE C. STANWOOD DUNN, Middletown, Conn. P. O. Box 911.

FARM OF EIGHTY ACRES, in Northern Pennsylvania; highly fertile; residence with all modern improvements; tenant house; on State highway, two miles from growing town of 2,000; churches, schools and public library. CHARLES E. BULLOCK, Canton, Pa.

FOR SALE—Boarding house, established fifteen years; accommodates fifty guests; with 128-acre dairy farm; will keep forty cows; milk station on farm; everything in first-class shape. Price, including growing crops, $11,000. Immediate possession; easy terms; photos and particulars on application. Address WILLOW BROOK COTTAGE, Wallkill, N. Y.

FOR SALE—Finest market garden in Central Massachusetts, five miles from Worcester; 24 acres in high state of cultivation; 12 under Skinner irrigation, two in asparagus, balance now in garden crops and hay; greenhouse 120 by 30; good variety fruit; house and barn in excellent condition; electricity throughout; new shed; ample room for all wagons and tools. BOX 188, West Boylston, Mass.

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HUMOROUS

POP: "Yes, all engines have cow-catchers. Sure, sonny." Sonny: "That's funny. I thought they only needed 'em on milk trains."—Life.

"WAITER, this knife is blunt and the steak is like leather." "Ow'd it do to strop the knife on the steak, sir?"—Boston Transcript.

"Is there anything deleterious in these pies, ma'am?" "Certainly there is. I put in my pies all the best things going."—Baltimore American.

INDIGNANT POLITICIAN: "Why didn't you print all of my speech?" Country editor: "Well, to tell the truth, boss, we ran clean out of capital I's."—Puck.

"Is your husband troubled with insomnia, Mrs. Nurich?" "No, indeed. He doesn't sleep very well, but otherwise his health is perfect."—Buffalo Express.

"QUICK, quick my dear—everybody else is in the lifeboat. The ship is sinking!" "Wait a moment. I cannot be seen like this. The life-belt makes my coat pucker."—The Bystander.

HOTEL WAITER: "Come, sir, you really must go off to bed, sir." (Yawns.) "Why, the dawn's a-breaking, sir." Late Reveller: "Let it break—and put it down in the bill, waiter."—Punch.

"DON'T you know that you ought to scatter seeds of kindness?" Aw, what's the use? My neighbor's chickens would get them all if I did."—Boston Evening Transcript.

A LITTLE nine-year-old was laboriously looking up his spelling words in the dictionary when he came upon one whose meaning was perfectly apparent to him. He dashed off a sentence containing the word "capsize" and passed to the next. Imagine the teacher's amusement when he recited glibly, "My cap size is No. 6."—Delineator.

LAWYER: "Madame, I'm sorry to say that I don't see the ghost of a chance for you to break your uncle's will." Client: "Well, to be frank with you, I don't see the ghost of a chance to pay you for what you've already done if the will isn't broken." Lawyer: "H'm! On second thought, madame, I think the will can be broken."—Boston Transcript.

OBSERVING an unfamiliar shrub by a country roadside a student of botany stopped to make an examination. "Are you acquainted with this flower, young man?" he asked of a passing yokel. "Yep," the boy laconically answered. "To what family do you think it belongs?" Indicating a near-by house with a pudgy thumb the boy answered: "Higginses."—Puck.

MRS WHANN, the weeping widow of a well-known man, requested that the words "My sorrow is greater than I can bear" be placed upon the marble slab of her dear departed. A few months later the lady returned and asked how much it would cost to have the inscription effaced and another substituted. "No need of that, marm," replied the man, soothingly, "you see, I left jes' enough room to add 'alone.'"—Current Opinion.

THE teacher wanted some plums in order to give an object lesson during school hours, and, calling one of the small boys, she gave him sixpence, and dispatched him to the fruit shop at the corner. "Before you buy the plums, Willie," she cautioned, "you had better pinch one or two to make sure they are ripe." Little Willie flitted away. Soon he came back and smilingly put the bag on the teacher's desk. "Oh, thank you, Willie," said the teacher. "Did you pinch one or two as I told you to do?" "Did I?" was the response. "I pinched the whole bagful, and here's your sixpence."—London Opinion.

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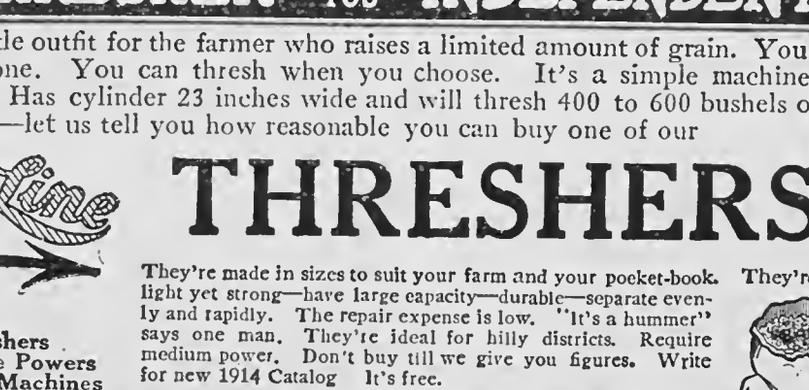

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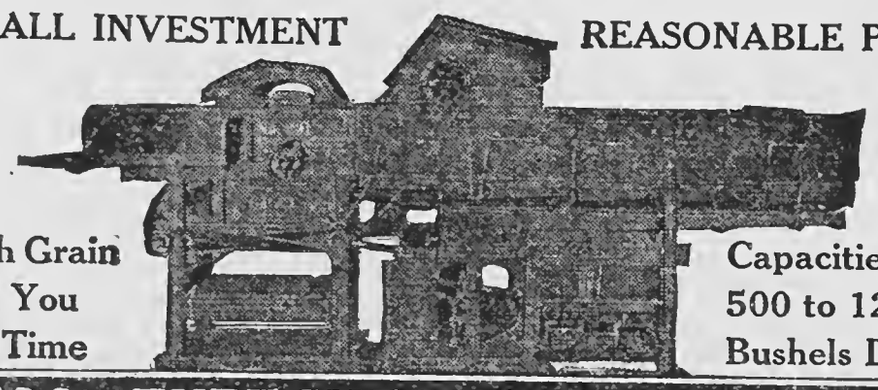

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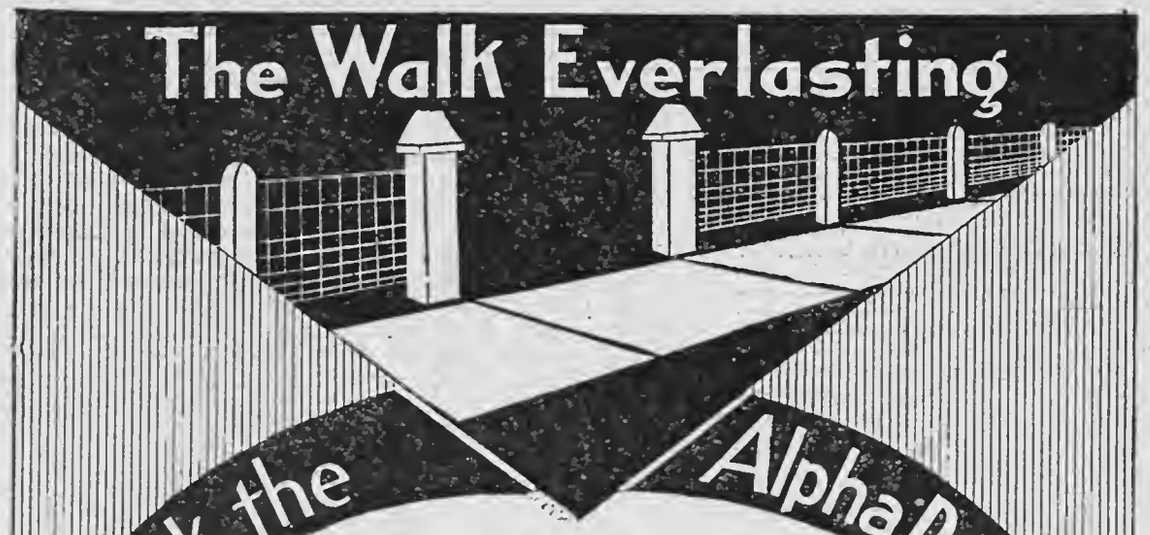

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Send me your book, "Concrete in the Country," and information about ALPHA, the Guaranteed Cement. I may build a_____
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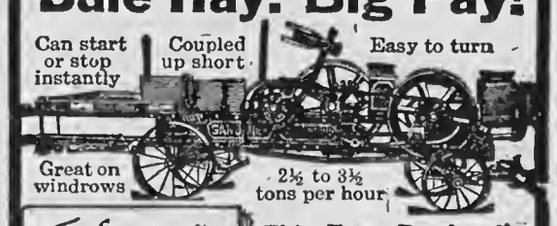

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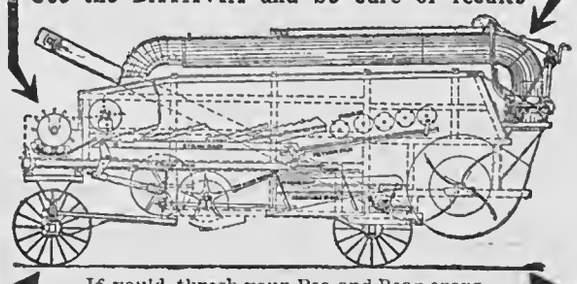

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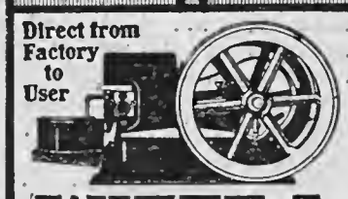

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

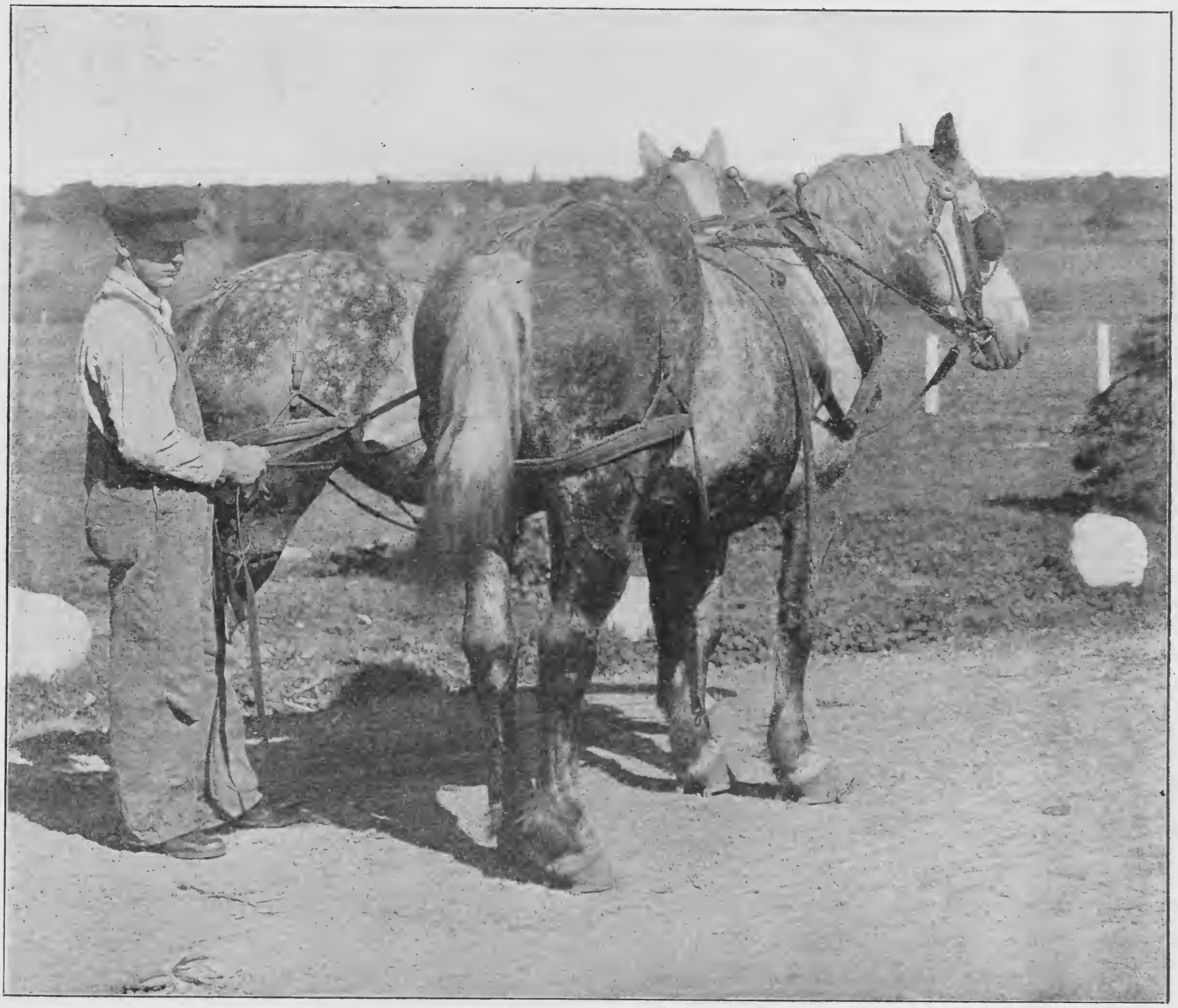
Vol. LXXIII. No. 4264. NEW YORK, JULY 18, 1914. WEEKLY $1.00 PER YEAR.

"DOUBLE CROPPING."

How Gardeners Keep Things Moving—Keeping Up a Succession.

I DO little of what may strictly be called companion cropping, or having different crops growing together, but I endeavor to have them following each other as closely as possible by starting other crops before the first planted ones are entirely out of the way. For instance, my earliest sweet corn was (June 24) ready for use. Between each row I have planted a row of Fordhook Lima beans as a succession to other rows planted elsewhere earlier. As soon as the corn is used the stalks will be pulled out of the ground, and the corn rows prepared and fertilized, and rows of green curled Scotch kale, Borecole, will be sown where the corn stood. These will be thinned out and the thinnings used as greens and the remaining plants given room to develop large heads that will be in their prime when the frost has killed the beans. As the corn rows were three and a half feet apart there will be plenty of room for the rows of beans and kale. I have usually four or five plantings of corn in succession. Between the rows of later corn, or the planting that will be in use early in August, I sow spinach broadcast and rake the seed in. This is sown about the last of July and is for Fall use. Then still later in September between either corn or some other crop I will put in spinach in rows to winter over for Spring use.

In early Spring, in late February, I usually make my first sowing of beets either Egyptian or Eclipse, and sow some radish seed with them of the early turnip-rooted varieties. These come up quickly and mark the rows where the beets are and are pulled out before the beets need the room. In planting the early beets a seed of chard is dropped every ten inches. The radishes come out first, and then the beets, and the chard holds the rows the rest of the season, the leaves being pulled like rhubarb for use. The vines of the early peas are turned under, and succession plantings of corn made on the land. Succession cabbages are set between the rows of the early string beans, and the bean tops are spaded under to help them as soon as the beans are used, and when these Succession cabbages are heading, onion sets are planted between the rows in Septem-



GOING TO THE FIELD. AN ILLINOIS BUSINESS FARMER AND HIS PARTNERS. Fig. 381.

ber, and the cabbages used and the onions cleaned and cultivated and the earth pulled to them as a Winter protection. The sets are grown from seed sown very thickly in late April, and they ripen in July. I use sets only for the production of early green onions in the Spring, and the sets are the Norfolk Queen, the earliest onion I have ever grown, as we usually here have them ready for use in late February. In September also I plant sets of the Yellow Potato onion to follow the Queen (which is not the Queen of the Northern Catalogues). The offsets of the potato onions are used as green onions and the main bulb ripens in June, and succession crops of string beans follow the onions.

Celery comes in after the early cabbages, and is grown after the Baltimore method in six foot beds, which are covered and stand where grown till used up. Between the latest corn, seeds of the Winter cabbage, the Late Flat Dutch, are planted in hills in July, and the plants thinned to one in the hill and the thinnings transplanted to any vacant space elsewhere. Plants that need the whole late season like salsify, parsnips, carrots and late beets are sown in June, for here I never sow parsnips and salsify early, as the roots get overgrown and poor. All these crops stand in the rows where they grew all Winter, and are given the full room after some earlier crop like the wrinkled peas which are over with us in June. Then in September any vacant place is utilized for Norfolk kale and spinach.

Between some of the later corn plantings the Fall turnips go in. In fact I endeavor to have something coming in at all times, Fall, Winter, Spring and Summer, and there is not a day in the year when we do not get some kinds of vegetables from the garden either outside or from the cold frames. Lettuce seed for the first Fall crop is scattered broadcast anywhere among other things that are worked out, as I want to get scattering plants and not plants crowded in rows for transplanting. This first lettuce sowing is made early in August and usually heads outside. Another sowing in September is set in the frames for Christmas. Some of these plants are set in open furrows to winter over for early heading in the Spring. These rows are between the rows of early cabbage plants from seed also sown in September, and if they winter well they head before the cabbages need the room. Then we sow lettuce seed outside in late February and transplant for a succession to those wintered over.

The frames in which the Christmas crop of lettuce is grown, are sown in beets and radishes in January in rows alternately six inches apart. I use the double glazed sashes, and these crops do very well. The radishes come out early and by the first of March, or a little later, the sashes are removed from the beets to cover the frames where the tomato plants from the greenhouse are set for hardening off. Then in late Spring or June, any vacant frames are filled with eggplants turned out of pots merely to keep the frames clean, two plants being set to each sash space. I keep my eggplants growing inside in pots till June and then have large ones to set out, and they generally go in between the rows of early lettuce that is cut out.

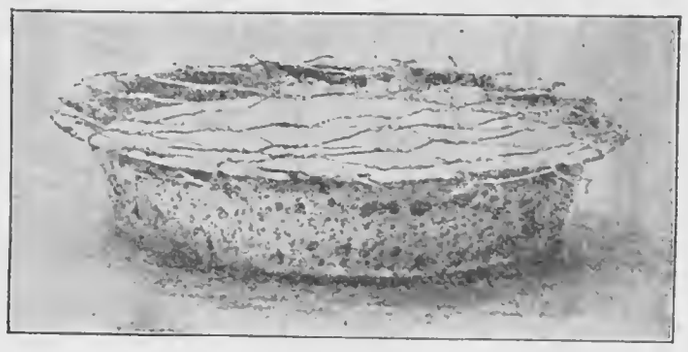
Maryland. W. F. MASSEY.

LATE CROP COMBINATIONS.

HERE we do nearly all cultivating with horses. No crops are planted in rows closer together than 2½ feet, and we cannot plant as close as gardeners operating on small areas and using wheel hoes. Neither do we intercrop to the extent practiced by such growers. Nevertheless we have found it profitable on different occasions to have two crops growing on the land at the same time.

We have often drilled in early peas in rows five feet apart and then started cantaloupes in hills between the rows of peas. The ground was marked for both at one operation. The peas were off before the cantaloupes required the entire space between the rows. We have also grown onions from sets in between rows of strawberries planted 4½ feet apart; the onions being marketed early in July, after which the strawberries had the entire space. There are a number of other combinations we could use for early planting but our experience is that the late crop combinations, of which there are a number, are best suited to our system of trucking. They pay well, and by using them the ground is kept busy the entire Summer; two and sometimes more crops are grown from the same piece of land and the soil is in good condition for early Spring planting.

Today (June 29) I have been plowing a three-year old strawberry bed. This will be harrowed tomorrow and in a few days will be planted in "Hoosier" white potatoes. These will mature here if planted as late as July 15. Last year we had over 1,400 five-eighth-bushel baskets on a five acre field, planted the first of July after berries. We get a crop of berries—then finish with a crop of white potatoes. The plot of ground which produced our early peas is now furrowed out in rows 7½ feet apart and will be planted soon in Boston Marrow squashes. If nothing happens they will mature before frost. Onions grown from sets are not yet out of the ground but we have Stone tomatoes set out



SOUR MILK VESSEL FOR CHICK FEEDING. Fig. 382.

four feet apart along the north side of every other row of onions. These were set out June 17, and are making a fine growth. The onions will be marketed in a few days, after which the tomatoes will be given a thorough cultivation and if all goes well will make a full crop before frost.

Another plot of ground from which a crop of wax beans has already been gathered will be planted in sugar corn for the Fall market. Early tomatoes on low ground can be followed by a crop of spinach, which will mature if planted before August 15. String beans, sugar corn, late tomatoes, late white potatoes, beets, spinach and a number of other crops can all be matured here if planted after July 1, and they can be arranged in so many different combinations that each grower can work out the one that suits him best. The beauty of them all lies in the fact that they can be grown with but little if any extra fertilization. Ground that has been well fed for early crops will have plant food going to waste during July, August and September, unless some crop is occupying the ground and making use of it. TRUCKER, JR.

New Jersey.

SCIENTIFIC PRODUCTION OF FINE APPLES.

From Plowing to Packing.

Part IV.

FACING THE BARREL.—Ordinarily the barrels will need some coopering before they are filled. Nails will need to be turned down, hoops tightened and bottoms removed. The smoothest and neatest head should be selected for the top ("head"), the head hoops driven down firmly and the bottom removed. A corrugated circular cardboard is first dropped into the empty barrel with corrugations next the wood. A lace ring or border of heavy white paper is sometimes placed on this disk, which adds to the appearance of the package when opened. "Facer" apples are then placed on this disk in concentric circles and with stems next the cardboard.

A PLANT OF BRUSSELS SPROUTS. Fig. 383.

Uniform fruit of good size and appearance should be used for this purpose, although it is not fair to use the choicest or largest specimens to be found. If the outer circle does not fit snugly, fruit of a different size should be used, but a mixture of sizes should not be used in order to make them fit. The second circle may consist of slightly larger fruit, but should also be uniform in size. Frequently three circles with a single center apple will complete the layer. If these different circles vary in size of fruit the increase should be toward the center, and where this is the case the "face" of the barrel will be a more exact representation of the quality throughout the package. Too many growers and apple packers have a faulty idea of proper facing, and it is not surprising that the name of the grower or those who are responsible for the packing fails to appear on the barrel.

FILLING THE BARREL.—After the barrel is properly faced the remainder of the filling is quickly done by basket, by allowing it to run in from the table, or otherwise. In the meantime the barrel is rocked so as to settle the fruit well into place. The crown layer should be made level, preferably with the stems upward, and the center slightly higher than the edges, which latter should stand about an inch above the stave ends. This will provide proper compression and insure a solid pack when the bottom is forced into place. Before placing the bottom, however, a corrugated disk—or better two—similar to the one used in the head is placed over the fruit. Either a screw or lever press is satisfactory for forcing the bottom into place. In case either is used the barrel should stand on a plank about 12 inches in width so as to permit of the arms of the press being promptly hooked over the chine. As soon as the press is in position the upper hoop is removed and the lower one loosened. As the press is operated the bottom pieces should be guided into place by the use of the flat side of the hammer, after which the hoops are driven down and fastened with 3d nails. Wooden strips or "liners" may then be nailed about the chine for additional security.

The head of the barrel should then be stenciled with at least the name of the grower, the variety, and the grade of fruit. These stencils may be secured of practically all firms dealing in fruit packages. Those made of sheet brass or copper are preferable. The barrel is now ready to be delivered to the dealer or storage, but if this is not possible at once it should be held in some cool place until delivery can be made. R. H. BELL.

MILKING TIME.

THE picture shown at Fig. 385 is said to be taken from life and certainly shows a new way of conducting a milking machine and raising hothouse lambs. We have had pictures of cows being milked by little pigs, goats and other animals and now and then there comes a man who claims that he saw a snake taking the milk from a cow. We have never seen that ourselves and doubt the possibilities of the story but it is a fact that some strange alliance are made with the good old cow, who is the mother among farm animals, ever ready to feed the hungry and take care of the thirsty.

SOUR MILK FOR POULTRY.

GREAT interest is being taken in the plan of feeding sour milk to chicks. We have had a number of articles about the beneficial effects of this, and the great success of our sour milk pen of Leghorns at the Storrs Egg Laying Contest has increased interest. This pen has been fed on sour milk from the first. It has made a remarkable record, and is now giving Tom Barron's White Wyandottes a great run for their money. We rather expect to see this sour milk pen beat out the English Wyandottes yet to the end of the contest. Many requests have come to us for information as to how this sour milk is fed. We therefore print the picture of a device used at the Connecticut Agricultural College. This is shown at Fig. 382, and the following remarks are printed concerning the feeding of this sour milk.

In the feeding of sour milk we have found it most desirable to keep milk before the chicks constantly, and in small shallow glazed or enameled pans. The chicks are prevented from getting into the pans by fastening a piece of coarse mesh wire screen over the pans. It is unnecessary to mix the milk with ordinary solid feed, like mash, in order to induce the chicks to eat it. If the milk has been soured in the right way, and if a new fresh supply is put before the chicks every day, or two or three times a day, it will be consumed as rapidly as is necessary. The broken bits of casein in the milk serve as objects of attraction; hence it is desirable from this standpoint alone, to fill the pans with the normal proportions of whey and coagulated casein. There are certain objections to mixing the milk with mash or other solid feed, one of the most significant being the fact that the milk-moistened food will tend to become mouldy, unless it is given in small amounts, and unless the pans or troughs are thoroughly and frequently cleaned. In all of our sour-milk feeding experiments there was not the least indication at any time that chicks suffered any injurious effects as the result of the milk diet. Since the milk was fed to chicks almost immediately after incubation, and many hundreds of them received this diet, the results clearly show that sour milk is not in the least unwholesome, but is an important agent in fostering growth and in reducing general mortality.

THREE BOYS AND $8,000.

Another Big Story of Apple Profits.

THE Boys World is supposed to be a publication for boys, and is published by the David C. Cook Publishing Company. At the head of its editorial page it prints the following very excellent statement:

"Before admitting any advertisement into the columns of this paper, we have been careful to investigate the responsibility and honesty of the advertiser."

A noble sentiment, and one which should be extended to the editorial parts of the paper as well as to the advertising. On the next page following this excellent resolution is an article on

"How Three Boys Are Earning $8,000 With An Apple Orchard."

This article is said to be by Sven T. Olson, of the U. S. Agricultural Department. As we have a family of boys at home who have not yet shown any such earning capacity, we were at once struck with the heading of this article, and we went on to read it. As nearly as we can make out, three boys in Michigan, who are now about 18 years old, have been for the last few years planting apple trees on several small parcels of land. It seems that these boys earned money at various kinds of work, and planted trees about 20 feet apart each way. The story goes on to tell how these boys took care of these trees until they have some 800 planted. The article is written in such a way that the author of it could get out through half a dozen holes in case he were obliged to stand up and face his statements. In order to make sure that this article was authorized in any way, we wrote to the Bureau of Plant Industry, at Washington, for information, and received the following letter:

Replying to yours of the 24th instant, with clipping from The Boys' World, headed "How Three Boys are Earning $8,000 with an Apple Orchard, by Sven T. Olson, of the United States Agricultural Department," I have to advise you that there is no record in this Department that Sven T. Olson was ever connected with the Department.

As to the accuracy of the statements in the article, we appear to have no information regarding the enterprise referred to. So many features of the article are contrary to general experience that the statements would need to be very fully authenticated to be accepted as true. The $8,000 return from the 800 trees that are said to compose the orchard is evidently a computation rather than an actuality, judging from the following statement in the article: "From what we already know of the orchard, and what authorities have written or told us, it should yield us in a very few years' time not less than $8,000 profit."

It would be interesting to know just what the facts are regarding it, and we are seeking information through several channels.

We are also conducting our own investigation, and if any one in Southwestern Michigan can give us any facts about this orchard, we would like to have it. If these boys are really making $8,000 they are most remarkable boys, and many of us who have good-sized families would be only too glad to know what these boys eat and live upon in order to acquire this wonderful power to make such wages. There are plenty of men who have grown fruit all their lives, who would be very glad indeed to make $8,000 a year. If there is any way of finding out the secret, we want to know what it is, and if this is a fake, we further want to know what the Boys' World means by printing such stuff as an inspiration for other boys.

A START WITH STRAWBERRIES.

WE want to set ont one or two acres of strawberries, but have never had any experience with them. We wish to put them in so that a good share of the work can be done with horses. We have no manure on hand now, but have a quantity of fertilizer; two grades, one lot of 10-8 and one of 10-4-6, that we can mix in any proportion. We are located in Otsego County, N. Y., about 1,700 feet above sea level and the soil is underlaid with hardpan. It heaves some in the Winter. We will have both oat and buckwheat straw this Fall that can be used for mulch. We would like to plow up old pasture that slopes to the southwest, if that would be suitable, and plant the kinds the best suited for our conditions. There is a good market here for the berries, for about all that are sold here are shipped in and are selling now for 15 cents per basket. The questions we wish to ask are: The location and preparation of the soil, the distance apart the plants should be set, the kind of fertilizer and quantity to use either with the plants or broadcast, the kinds of plants to get the best results, how often to cultivate and how deep to put on the mulch in the Fall.

New York. W. Z.

We would not think of plowing an old pasture and planting strawberries the first season. Such pastures are usually full of white grubs which would make quick work of the berry plants. Then again it would require too much hard work to keep such land clean. We should crop that land in corn first and if possible in potatoes before planting berries. The latter should go into the best and cleanest land you have. You cannot hope to plant strawberries now and have them yield a good crop next year. They should have been planted over two months ago for that. You can now set potted plants or layer plants from this year's runners and obtain a small crop next Spring, but it would not pay to buy enough potted plants to start your fields. It might pay you to buy 500 potted plants as soon as you can get them, put them out in rich soil and get as many

THE GRAIN HARVEST. FIG. 384.

runners as possible from them. You can transplant these runners where your crop is to be grown finally or you can plant them close together in some convenient place where they can be mulched and set out next Spring. Our advice is not to think of putting the old pasture land into strawberries. While we have set out plants in New Jersey all the way from April 1 to Thanksgiving and had them live, early Spring is the best time. As for varieties—that matter varies so with climate and conditions that we would rather hear from local growers in Otsego Co. On strong land not much nitrogen is needed for berries—potash and phosphoric acid with a small amount of dried blood will answer. We should apply the fertilizer on a wide strip along the row when the plants are set out. By planting three feet apart each way you can work with a horse both ways until the runners are active. Then let them run in rows one way so as to cultivate the other way and leave hills or a matted row as best suits the variety.

"FIVE MINUTES FOR REFRESHMENTS." FIG. 385.

AN expert pruner tells of this side of his work: "I am making about 70 cents per tree, and prune about eight trees per hour, so I don't have much rest for my right arm. All the cutting is done with hand shears (I have used the saw three times in two weeks), so you can judge the condition of the trees." Let's all go to "Summer pruning. This is only one side of it, for not one man in 1,000 could earn such wages.

SOME GARDEN CROPS

That Are Profitable in a Small Way.

OUR big brothers, the bonanza gardeners, who raise celery, and lettuce, and onions, in 10 and 20-acre fields, and ship their products in car lots only, probably have little love and appreciation for such things as Brussels sprouts, kohl-rabi, bunching onions, and some others as crops worthy of their consideration and efforts. Brussels sprouts, if successfully grown, are profitable in a small way, but the demand is limited and we cannot grow them by the acre with any hope of securing the 20 or 25 cents per quart of the tiny cabbage heads for the 5,000 or more quarts which a good gardener might grow with ease on the one acre. But the small market gardener who has a local trade, selling his vegetables directly to private consumers or to local stores, or who keeps a stand in the city market, will find good returns in the production of the limited quantity he can find or make sales for. A large proportion of Americans are wholly unacquaint with Brussels sprouts; many do not even know the name of this vegetable. But if it were more freely offered, more people would learn to like the little heads of refined cabbage flavor, and be willing to buy (or grow) it. I had many plants last Fall that gave a plump two quarts of sprouts per plant. When private consumers pay a quarter per quart, one cannot get a half a dollar much more easily than by picking off one of a plant that only requires two feet one way by three the other.

I have had my best success in growing Brussels sprouts when I sowed seed in Spring, and set the plants rather early for late cabbage plants, say middle of June or before. The seed I sowed came from Long Island. The pictures of the Brussels sprout plant as often found in seedsmen's catalogues probably represent the seedsman's ideal, or what he thinks the plant should look like. The camera, however, shows the thing as it is, not as we would like to have it. It is an interesting and attractive plant, even if it does not come up to the seedsman's ideal in regularity and productiveness.

Kohl-rabi is another of these vegetables, little in demand and not appreciated as it really deserves, but easily grown and profitable for the grower who finds customers knowing how good it is. It should be used while young and tender and succulent, and will then be sure to please the palate of people who like turnip, and especially-refined turnip flavor. Our garden books usually teach growing it like cabbages, namely starting plants in seed bed or under glass and transplanting to stand six inches or so apart in the rows. An easier and better way is to sow the seed thinly directly where the plants are to make the crop, and thinning to a few inches apart. We usually do this thinning when the first plants have already made some bulb (a ball-like thickening of the stem just a few inches above the surface of the ground). We gather the largest of these bulbs for use or for bunching, leaving the smaller ones to come on later. Seed may be sown very early in Spring (the plant being as hardy as a cabbage) and at intervals of a few weeks for succession.

T. GREINER.

NOT WOMAN'S WORK.

THE picture shown at Fig. 384 is like many others which attempt to represent the farmer's daughter or wife out in the harvest field doing a man's work at raking or shocking grain. Some people go on to preach a sermon on industry from these pictures. We are told how the farm woman can be of great service to her husband and brother by doing a man's work in this way.

The fact is that these pictures rarely if ever amount to more than a fancied presentment of some girl usually fresh from the city who wants to be pictured in some unusual way. It is a mistake for the average woman or girl to attempt to do hard farm labor. Some of them have been obliged to work in this way in order to help save the farm, but this kind of labor is not woman's work and the average woman will receive more damage than help from trying to do it. An occasional hour spent in the harvest field at such work is well enough but the modern American woman should not be expected to do a hired man's labor and those who expect her to do so will sooner or later regret it. Woman's work as a home builder is her greatest possible service to her family.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Raking Up Stones.

WILL you suggest a tool for clearing stones from about six acres? Stones are the size of a large hand, some bigger. C. K.
Rockaway, N. J.

We do not know of any special tool for the purpose. Several of our readers have reported use of a steel rail from a railroad track. With a team at each end this was dragged across the field and pushes the stones into windrows. We have known farmers to plow out deep ditches and then rake or throw the stones into them. One reader reports the successful use of oyster tongs such as fishermen use. Other use a heavy log with pins of wood or iron driven into it projecting forward so as to gather up the stones and push them on. A plank with such pins is hardly heavy enough. A tool made like a hay rake with heavier teeth would answer for small stones but probably a heavy scraper with spikes attached would be best.

The Peach Borer Once More.

I HAVE a peach tree in my yard on which I noticed a mass having the consistency of honey at the base of the tree and upon removing this mass I found that the bark was entirely gone. I removed all that I could and found a white worm under the bark at one spot and a red worm at another. I then painted the injured parts with ordinary paint containing lead. Will you tell me whether either of these worms was the damage maker and which one? What could I do to prevent the tree from being further attacked by these borers?
New York. M. L.

This is the peach borer which we have often described. The egg is laid at the base of the trunk by a moth in late June or July. The worm or borer hatches and works down toward the root under the bark. You will find the mass of gum which you noticed filled with sawdust or little chips which the borer has guawed out of the tree. The only way to make sure of this pest is to dig it out in the Fall and again in Spring. Scrape away the gum and find the passage which the borer has made with a sharp knife, cut *down* through the hole until you find the iusect at the bottom. Do not cut across the trunk but slit the bark *down*. Paints and smears will not prevent all the damage. They may prevent the moth from laying her eggs low down but there will be some borers at work in spite of these protectors. The best one we know of is a thick lime-sulphur mixture sprayed or wiped on the trunk. Lead paint often kills the tree. Digging out is the only sure remedy we know of.

Success With Rye and Vetch.

REFERRING to the article on "Fraud in Vetch Seed," page 888, having used rye and vetch as a cover crop for three years on poor sandy soil, and having at last succeeded in getting a splendid stand of the vetch, I am convinced that the lack of soil inoculation is responsible for the failure of the vetch to catch in more instances than poor seed. I started with imported seed aud sowed it on eight acres of the best land I had, but the soil was in such condition that I could not get a catch of clover or Timothy after three trials. We had lots of snow the following Winter and the vetch came through in good shape, but the plants were scattered and spiudling. However, it was vetch or nothing, so I again sowed it and it survived a cold Winter with but little snow, much to my surprise, and the crop was double that of the previous year. I cut the rye and vetch for hay, but did not get into the field early enough so that a lot of the seed shattered out. My third planting was last September, and being rushed with work, I broadcast the seed and disked it iu, leaving the ground rough on the theory that it would hold the snow better. This Spring I cut nearly eight tons of rye and vetch hay from six acres of the eight-acre field, leaviug the other two acres for seed. The vetch is more than half of the crop. I have had similar experience with other fields, that is a gradual increase in the vetch as the soil becomes inoculated. Had I turned the ripened vetch under the first season, no doubt the advance would have been more rapid, but I needed the feed. Our soil is like that of easteru New Jersey and Delaware—very sandy, and I would not be able to get along without vetch and rye, as a cover crop, to help out the corn fodder, and, when I can afford it, to turn uuder to add nitrogen and humus to a soil very much iu need of both. F. B.
Ottawa Co., Mich.

R. N.-Y.—No doubt inoculation pays but we believe that great quantities of Spring vetch are worked off for the more desirable Wiuter variety.

Sowing Buckwheat.

I HAVE a field of rye which I cut and fed to cows. I was thinking of plowing and sowing buckwheat to plow under this Fall. Would you advise me to do that or what would you advise? This field is very dry and sandy loam. Raised corn last year and used four cords manure per acre with some fertilizer. Will buckwheat grow on such dry land? What kind of buckwheat is best? How much per acre? How would it be to sow buckwheat in corn last cultivation, where witch grass is bad on same kind of soil as mentioned before? N. F. K.
Massachusetts.

It depends partly on what you will do with the land after the crop is plowed under. We would not plow in the Fall and leave the ground bare, but would keep something growing through the Fall and Winter, and plow under in the Spring. For this purpose our suggestion would be to sow two bushels of Japanese buckwheat, three pecks of rye, and two pounds Cow-horn turnip, all well worked into the soil. Then let the field alone until next Spring. The buckwheat and the turnips will be killed out during the Winter, but the rye will come on and give a good yield, to be plowed under next year. There may be some local reason for plowing this Fall, but if not we should not plow until next year when the new crop is to be put in.

Ownership of Property.

I OWN half of an undivided shore about half a mile long, and on that shore I have built a fish trap. I built this trap about six years ago, and got a license from the city to build into tidewaters. The man who owns the other half lives in California and is going to sell to a man living here. Can this man claim half of my fish trap, or can he charge me rent for the shore? Fish trap cost about $300 to build. J. A. D.
Maine.

You do not state whether you had the consent of the present owner to build the trap, and that it should remain your property. Then considerable would depend on how you affixed the trap to the land. If it is fixed securely to the soil so that it cannot be taken away without injuring the property, it becomes part of the realty, and the new owner would be entitled to his share, unless you had some arrangement to the contrary, and he could charge you rent for the use of the shore. Your best plan is ot write to the present owner and see if you can get a statement from him that you are the owner of the trap and ask to put a statement to this effect in his deed to the new owner and then get some writing from the new owner that he recognizes your owuership of the trap. M. D.

MAIL BAG.

Killing Dock.

I HAVE a piece of clover land quite full of dock. It lies in the low land so it is very wet and cannot be plowed in the Spring. Can you tell me any way to get rid of it? I am afraid it will spread. If the clover is cut before the dock seeds ripen do you think there is danger? E. H.
Massachusetts.

We do not know of any way of cleaning out dock except the laborious old fashioned plan of digging it. We have spent a good many days at this job. The tool for the purpose is a sharp spade, or what is known as a spud, which is really a narrow spade with a sharp edge at the end of a long stick. The spade or the spud is pushed down into the ground beside the dock so as to cut off the root five or six inches underground. Then the top of the dock is pulled out and turned up to the sun to be pastured. A small handful of salt dropped into the hole after the dock is cut off will help.

Hydrated Lime.

I BOUGHT hydrated lime at 75 cents per 100 pound bag from a large local dealer, but have been told that it is not good, that I should buy the quicklime, bury a lump in dry ground and in few days it would be perfectly slaked. Is that correct? A. W. P.

We prefer the hydrated lime to other kinds except that it costs too much. This form of lime is the lump or "quick" lime ground fine and then sprayed with just enough water to slake it perfectly. This makes it very fine and even and more comfortable to handle than other forms. A pound of lime in this form costs too much for ordinary use. Lump lime need not be buried in the ground in order to "slake" it. Left anywhere in moist air it will absorb moisture (which is slaking) and crumble to a powder when it is ready for use.

Experience With New York Help.

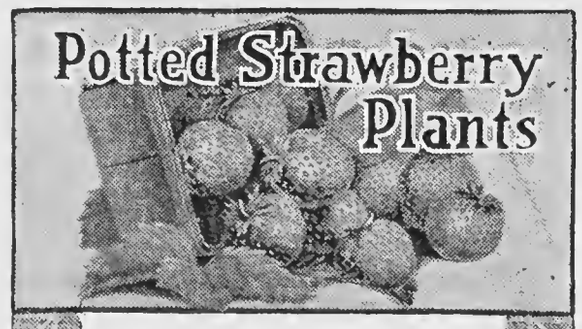
AFTER reading Mrs. F. W. Cole's article in your last number, we feel impelled to give our experience with the help received from the places named by Mrs. Cole. Last Spring we received a man from the Jewish association which proved to be a very intelligent German who wanted to get acquainted with farm work, but was entirely ignorant of auy kind of farm work. He had been a traveling salesman, but will say this, he did the best he could according to his knowledge of the work. About middle of July he went to New York to engage in a swimming contest which he was preparing himself for about all the time he was here and that was the last of him. The next one came from a farm school and a bigger fraud no man ever had. He staid about a month and then wanted to go, which we gladly assented to. At noon when my son went to his room his gold watch was gone; that is the last we have seen of mau or watch. We sent $5 to an agent this Spring to have him send us a man as he advertised that he had men for farm work. In a short time we received a letter from him saying that he had sent a man but the man never showed up, nor the $5 either. We do not consider we have got 33% on one dollar in work out of the money spent on N. Y. help. We have about made up our minds that we can't do business with the misfits of the city. It is about like all the rest of the farm business. We give out best of the men we raise and take the poorest of the city.
JOHN ANDERSON & SON.

WANT TO KNOW.

Growing Ever-bearing Raspberries.

CAN any reader report as to experiences with Ever-Bearing raspberries? There are reasons why, for me, they will be very useful if they produce enough fruit at last bearing to make it worth while. They have not, so far, but that may be my fault. For the ordinary red raspberries it is recommended to cut back the tops of the plants but it that is done on the ever bearing, will it not kill the new fruit buds? They seem on the tips. The bushes are slender and the weight of the berries brings them to the ground and there they lie iu the mud. I should like directions for getting results. I have in mind to run wires down each side of the row, supporting the wires by strong posts and thus hold the plants off the ground, but I am not convinced that the ever-bearing are worth the trouble as yet. M. P. L.
Maryland.

KEEPING DAMP OUT OF STONE WALL.—I saw an inquiry about field stones for building. I am just building one bungalow now, 30x36 feet, with all field stones and concrete. I would like to find out what to do to keep out the damp. Somebody has told me to put a good coat of asphalt on the walls. I don't know whether it is right or not.
New Jersey. C. P.



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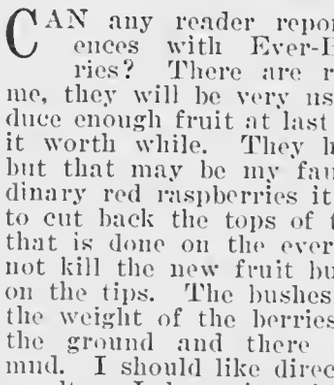

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COVER CROP NOTES.

Cover Crops in Peach Orchard.

I HAVE half an acre of oats and peas in a peach orchard that I shall cure for hay about the middle of July. What can I put in the ground after the oats and peas are off that will give me a crop of hay for next Summer? I generally sow rye, but thought you might suggest something else that I could put with the rye. You may think I am asking too much of the peach orchard, but Prof. Surface tells me the ground is too rich for the good of the trees. I also have half an acre of Evergreen sweet corn that I would like to seed with something that will give me early fodder, or cure it for hay and get off in time for corn again.
Factoryville, Pa. L. L.

In such a case we should work up the ground after harvesting the oats and peas with a cutaway or plow, fit the soil and sow fodder corn thickly in drills three feet apart. Give fair cultivation and if the season is at all favorable, you ought to have a heavy crop of corn fodder. This corn fodder makes a small thick stalk, which is usually very satisfactory as a substitute for hay. We have found it excellent for feeding all kinds of stock through the Winter. You can if you like sow rye at the last cultivation of this corn for a Fall and Winter cover crop. In the sweet corn we should sow equal parts of rye and barley. After the corn is taken out the barley will make a heavy growth, and may be cut in October for green fodder or hay. The rye will live through the Winter and give a Spring crop for fodder or for turning under.

Cover Crop for Orchard.

WHAT treatment do you recommend for a 25-year-old orchard that was neglected for the first 20 years, but is now in fine thrifty condition and bearing well? Past few years has been fertilized with nitrate of potash and slag with cover crops of rye turned in, and then cultivated between the rows. Many of these trees are growing too fast, and I would like to check growth about August first with cover crop that can hold over next Summer or be cut early for mulch. S.
Bolton, Mass.

In a case of this kind you need a crop or combination of crops which will make a quick rank growth during the Summer and Fall, when such land is active and most likely to be filled with nitrate. From our experience you should use for this purpose two bushels of buckwheat, three pecks of rye, two pounds of Dwarf Essex rape per acre. If this seed is well put in there will be a heavy growth during the late Summer and Fall. Buckwheat will be killed out by frost and the rape will die during the Winter. This will cover the ground like a mat, but the rye will come on and give a heavy growth for next year, which can be cut and piled around the trees. Or in place of the rape, if you desire a permanent mulch, you can use mixture of Timothy, Red-top, Blue grass and White clover.

Cover Crop for Blackberries.

I HAVE several acres of blackberries in full bearing, set in rows six feet apart and kept clear of grass and weeds between the rows. Would it be advisable to sow something between the rows before or after picking (which comes in the month of August with us) for a Winter cover crop for the ground that could be scraped up against the bushes in rows in the Spring for a mulch, with a snow-plow shaped scraper, and if so which would be best? I have read about vetch, rape, Cowhorn turnips, etc., as a cover crop and fertilizer, but have had no experience with them. I want something that will winter-kill, and am afraid vetch would grow in the berry rows in the Spring and have the effect of weeds or grass the following season.
Cortland, N. Y. A. S.

We have a number of calls from parties who desire a cover crop that will not live through the Winter. The object of this is to avoid plowing in the Spring. Rye is the foundation of most northern cover crops, but this is practically sure to live through the Winter and thus would not answer. In most cases vetch, after it becomes acclimated will live through the Winter and make a heavy growth in Spring. For a crop which is to be killed out through the Winter probably a combination of barley and Dwarf Essex rape will be as satisfactory as anything. The barley and rape will make a good growth during the Fall, covering the ground thickly. A few plants of the rape may be found in the Spring, but the great bulk of the crop will be killed. For this purpose we think the rape will be better than the Cow-horn turnips. The barley and the rape may be seeded after the middle of August by working the ground with a cultivator, and will add a good quantity of organic matter to the soil.

Bonding New Concrete to Old.

CLEAN off with clear water and stiff broom the surface of the old concrete. Mix one part commercial muriatic acid or hydrochloric acid and three parts water (or use bonsit or ransomite, mixed according to directions with hot water) make several applications one after another with a brush containing little or no metal. This will not injure the concrete, as the acid does not sink to a sufficient depth before it is neutralized. This will have the effect of removing the cement from the top surface of each grain of sand or piece of stone and the other aggregates that may have been used, exposing the clean surface of these aggregates in exactly the same condition as they were before being mixed. After applying the acid, wash the surface with clear water, scrubbing with stiff broom or brush removing all the dead particles. While the surface is still wet (and it should be thoroughly wet) apply the new concrete. Protect this new concrete by keeping it damp for at least a week. Do not let it dry out at any time during the first week. It will be found that the new concrete will bond to the old as strongly as if both had been mixed at the same time. C. B. L.

Roughing a Concrete Floor.

IN reply to inquiry regarding slippery concrete, on page 832, I would say that I have asked the same question many times. We never received an answer, and finally tried an idea of our own, and the experiment has proved satisfactory in every way. Apply to the floor a heavy coat of tar. The floor should be dry and clean, and the tar slightly warmed. Apply with an old broom. If a new broom is used, cut the splints off about half way to make a stiff brush. After the tar is applied, cover with very coarse, sharp sand—about one-half inch thick. Leave the sand on and use the floor, until the tar takes up all the sand it will. Then the floor may be swept. This can be repeated every year if necessary, as it is inexpensive and easy to apply. It takes the same color as cement, and is hardly noticeable, and does away entirely with the slipping. CLAUDE M. BULSON.
Otsego Co., N. Y.

Cold Storage Eggs.

IS there a limit provided by law for the length of time eggs shall remain in cold storage? M. S.
Florida.

On application to the Bureau of Chemistry at Washington we have the following:

No laws have been enacted regulating the length of time in which eggs may be held in cold storage. The sale of eggs which have been held in cold storage until they are unfit for food would, of course, be considered a violation of the Food and Drugs Act. It would also be considered a violation of the Act to sell storage eggs as fresh eggs.

Planer Shavings in Manure.

I LIVE in a suburban place where several acres are available for truck. The land is quite heavy, but can be kept in good condition if regularly worked. On this place there are kept 10 or 12 horses from which there would naturally be quite enough manure available for this piece of land, but the horses are bedded with planer shavings, principally of pine with some oak. I know from experience that the tendency of pine shavings is to sour the land, and I would like some advice as to how this manure could be treated in compost to overcome this defect. E. B. W.
Wilmington, Del.

We have frequently discussed this question of planer shavings. These shavings contain an acid and when used in large quantities will sour the land. There are two ways of overcoming this trouble. One is to use a ton of air-slaked lime to the acre, harrowed into the soil after plowing in the manure. This usually overcomes the effect of the acid. The other plan is thoroughly to soak the shavings in stable liquids before putting them into the manure pile, and then permitting these piles to stand until they are thoroughly fermented. Where the manure is put into a pit and watered to keep it moist these shavings are not troublesome, but when hauled from the stable as fast as the manure is made there will be trouble unless lime is freely used in connection with the manure.

Dissolving Bone Fertilizer.

CAN you give me a formula for dissolving bone with potash for a liquid fertilizer? It may not pay, but never mind that. W. G.
Brooklyn, N. Y.

It is good to be able to do things whether they pay or not. A fertilizer chemist and manufacturer gives the following directions:

I have made all kinds of fertilizers for a number of years but this is a new one. The best suggestion that I can give him is to make a box of suitable size of two-inch plank, line this with sheet lead, and in this mix the bone, which previously must be ground up very fine indeed, with ordinary commercial sulphuric acid (50 to 53 degrees Beaumé) at a temperature of 100 to 120 degrees Fahr., in the following proportion: 1,250 pounds of fine ground bone with 750 pounds of sulphuric acid. This should be mixed thoroughly but during the mixing he should tie a handkerchief or wet sponge over his mouth and nose to prevent his inhaling the fumes. This mixture should be allowed to stand about 48 hours and will then have the consistency of a stiff dough or half dried mud. To dry it further he can add 100 pounds more of ground bone or 100 pounds of fine ground carbonate of lime (ground limestone) then if he wishes for potash he can add the potash to the mixture in whatever proportion he desires, using either muriate or sulphate.

This will not however, give him a liquid fertilizer, but perhaps a quantity of this dissolved in water as far as it will would answer.

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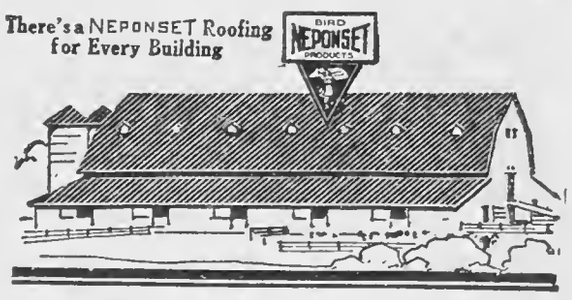

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Trouble With Young Turkeys.

IS the feeding of wild buckwheat harmful to young turkeys? My growing stock, which until they had attained pigeon size, had never been ailing, is dying fast. I find that lungs bear whitish spots, mostly round and some half an inch across; gizzards almost filled with undigested wild buckwheat seed, a small percentage of which is contained in the feed I get here. I have cut out this feed and secured wheat, which I am now feeding in connection with crumbly bran mash, sour milk, and bone meal. C. B.

Alabama.

I do not know of wild buckwheat seed proving fatal to turkeys, and think it more probable that your young turkeys are dying from some infection, very likely blackhead. In this disease, which is prevalent over the greater part of the country, the liver and "blind gut" of the intestines are found studded with such spots as you describe in the lungs and the latter organs may also contain them. Tuberculosis of the lungs would also produce such spots, but this is comparatively rare in fowls, the intestines being usually the seat of tuberculosis in feathered animals. There is no known cure for blackhead. The disease most frequently makes its appearance when the turkeys are from one-third to one-half grown; they become sleepy, stupid, emanciated, lag behind the rest of the flock and in a few days from the time they are observed to be markedly affected are found dead. This disease has practically put an end to turkey raising on a large scale in some of the Northern States, notably Rhode Island, which was once famous for its turkeys. Another infectious disease, aspergillosis, would also produce tubercles, such as you describe, in the lungs, but this also is comparatively rare.

M. B. D.

Ailing Chicks; Broody Hens; Soft Yolks.

I HATCHED, under a hen, seven chicks. Two did not become larger or grow new feathers. They refused to eat. We fed them every day by opening their mouths and dropping in sour milk with a medicine dropper and sometimes a little chick feed. After they were four or five days old we found one louse on each, but after that they seemed no better. One died on eighth day. The other still lives and slowly gains but is even now fed by hand. I would like to know the cause and prevention. 2. What is the best way to "break up" broody hens. 3. I have a neighbor who occasionally finds an egg with yolk and white together, resembling a rotten egg. The eggs are collected regular and are certainly fresh when found in this condition. Will you tell me how the hen laying these eggs can be found also the cause and prevention. H. F. S.

1. These chicks that did not develop properly were lacking in vigor, very likely as the result of the same lack in one or both parents. Such chicks should be killed for the good of the race. Only vigorous chicks are worth raising.

2. Place broody hens in a separate compartment, with no nests or place to make them. Water copiously, feed sparingly and wait patiently. A few days of isolation will usually "break up" Leghorns; some of the larger breeds require isolation, moral suasion, starvation, and finally decapitation.

3. These hens laying occasional eggs with soft yolks should have green stuff, including clover, if possible, animal food of some kind and as much range as possible. If one hen only is responsible, she is probably "out of condition" and may recover. I know of no way of detecting her without trap-nesting and breaking each egg laid until she is found.

M. B. D.

Trouble With Hatching.

I SET an incubator with 120 hen eggs and 38 duck eggs. I hatched out 5 chickens. The rest of the eggs formed chicks, all but three which were rotten. The incubator was kept at 102 degrees and the eggs were turned and sprinkled regularly. What was the trouble? Was it in having the hens and duck eggs set together in the incubator? 2. How many cockerels should there be in a flock of 60 hens? M.

New York.

1. Hen and duck eggs should not be incubated together, but you ran this machine at too low a temperature if you kept it at 102 degrees throughout the hatch. An incubator should be run at the temperature advised by the manufacturers, which is usually from 102 to 103 during the first week, and at 103, or a little above, for the remainder of the time. 2. Sixty hens of the smaller breeds should have two vigorous cockerels with them, and the same number of hens of the larger varieties would better have three, though two might be sufficient.

M. B. D.

Hens With Inflamed Eyes.

SEVERAL hens are taken with a running from the eye; it swells up and matter seems to force out. We seem unable to cure them. What is the trouble? W. L. B.

New York.

This is a catarrhal disease of the eye usually connected with a similar inflammation of the lining membrane of the nostrils, which membrane is continuous with that of the eyeball. It is due to exposure to dampness, drafts, etc., and in some cases is infectious spreading from one fowl to another. It is also one of the preliminary symptoms of roup. In simple inflammation of the eye, or conjunctivitis, is is usually sufficient to place the affected fowls by themselves in warm dry quarters, add permanganate of potash crystals, a teaspoonful to the quart, to their drinking water, and dip their heads into the same solution. If the disease shows a marked tendency to spread, promptly isolate all affected fowls, disinfect their quarters and utensils, use the permanganate of potash solution freely, and burn or bury any fowls that die from the disease. Simple inflammation shows a tendency to recover, the contagious or roupy form should be dealt with vigorously until eradicated from the flock; isolation and disinfection being the chief remedial measures. M. B. D.

Sprinkling Hatching Eggs.

I SET a hen and in the required length of time for her to hatch I could hear chicks in the shell, but they did not hatch. Some told me to sprinkle eggs with water, but I was doubtful as to results, and did not. Should I have sprinkled the eggs or not? N. T. B.

New York.

It is not necessary to sprinkle eggs set under hens, and the fact that the eggs did not hatch shows only that they did not contain germs of sufficient vitality to complete the process of development and emerge from the shell. This is pre-supposing of course, that the hen attended properly to her job. The writer recently hatched 44 chicks from 48 eggs set in crates of perfectly dry hay on a board floor over a basement. Not much chance for outside moisture to have reached them, and with the additional handicap of having been shipped several hundred miles by express. M. B. D.

English Leghorns Bred in America.

REGARDING Mr. Orr's query on page 810 as whether the progeny of Mr. Barron's birds can keep up the good work for American breeders, I wish to say I imported a pen of Mr. Barron's White Leghorns in March, 1913, the male in this pen being a brother to the pen that won at Storrs last year, the birds there being sisters. Ten daughters of the pen I imported are in the Missouri egg-laying contest, being pen 67. These 10 pullets were not especially selected. I took the 10 earliest I had, and they were not mature enough by two months. However, in April the 10 laid 240 eggs, taking third place in the contest for the month. In May they laid 227 eggs. In the April report pullet No. 675 had laid 116 eggs in five months, only three pullets in the entire contest laying more. These are all pure Barron strain, raised by me here in Missouri. I have been breeding pure-bred poultry for 13 years and have taken hundreds of ribbons at the smaller shows, and some at the larger ones in this State, and I find that the Barron line will breed as true to their type as any line of show birds I have ever handled will to standard type.

Mr. Barron's birds will not all produce like his winning pens last year, but they are bred right to produce, and I believe will prove a success under ordinary conditions in this country. If they had to have ideal conditions and be pampered and petted to lay well, they would not suit me, but under ordinary farm treatment they have laid better than any flock I have ever owned, and are giving me satisfaction. J. R. MOONEY.

EGGS AND TRAP NESTS.—George A. Cosgrove asked about "A Chicken Man's Honor." Why not sell eggs on understanding that they be properly tested, and if found infertile, returned to him prepaid for inspection, then if claim is proven, send prepaid for nothing or at one-half price a new setting. This system balances and seems fair to both sides. Long ago a woman asked how to make a trap-nest substitute. Divide the pen with wire or other partition. In this partition set nests which can be entered from one side only and can be left from the opposite side only. Leaving feed in litter both sides and water and dry mash so as to be reached from both sides. The hens go through nests to opposite side of partition. At convenient times count eggs in nests, hens who have passed through nests and you can tell which hens laid the eggs, but not which hen laid any particular egg. Once in a while a hen will go through a nest without paying toll, but generally—nine times out of ten—the person who is too busy to trap-nest properly can tell which hens do lay and of course they should be banded, note made of their number, and a pretty satisfactory record obtained.

Connecticut. GEORGE E. CROSBY JR.

BUFFALO MARKETS.

THE strawberry season is about ended. It has been only moderate as to supply, with prices rather higher than usual, really desirable fruit seldom selling for less than 10 cents a quart. More pains than usual has been taken to keep the fruit in marketable condition. Some city grocers have made a reputation for refusing to handle inferior fruit and in this way they have been able to compete with the market stall people, who will often offer fruit that looks well on top, but is soft below. As usual the local crop was not sold for any less than earlier southern fruit. Red raspberries are now coming in at 15 to 18 cents a quart, retail. Some peaches have appeared at fair prices and it is said that the failure of the home crop will not cut out the supply. Potatoes are higher. Retailers ask $1.75 for new southern, which are now crowding out the Bermudas. Dealers pay $4.85 for new Maryland Eastern Shore per barrel. Dry weather is holding back the late home crop. Cabbage and onions are still high. Small new home-grown cabbage retails at five cents and southern to retailers is $1.50 per crate. California onions are quoted at $3.85 per crate. The home-grown green supply is larger, retailing at three bunches for 10 cents, as are beets and carrots. Peas are now going to canning factories in quantity, a fair crop. The price to retailers is $2 to $2.50 per bag. Fine cucumbers retail at two for five cents or 50 cents a dozen to dealers, tomatoes $2 per box. String beans are five cents a quart or $2 per hamper. Cherries are in fair supply at 10 to 12 cents a quart or 40 cents a six-pound basket. Blackberries are temporarily out, but blueberries are arriving, retailing at 14 cents a quart; blackberries 10 to 12 cents; gooseberries 10 cents. There are new southern apples at $2 per hamper and a few cold-storage of fine appearance at about two cents each, though buyers say they are fast losing their taste. Melons are becoming plenty, small muskmelons retailing at two for five cents or $2.50 per crate wholesale and watermelons at 40 cents each retail and 30 cents wholesale. There are no squashes yet. Butter is in light demand at former prices. The highest retail price is 30 cents, with extra creamery prints touching 29 cents wholesale, down to 14 cents for all sorts of poor butter. Margarine is not regularly quoted, but Chicago brands sell at about 10 cents under butter. Eggs are strong and active, the wholesale range being 21 to 25 cents, with best fresh retailing at 25 to 27 cents. Poultry is scarce; wholesale prices are 15 to 17 cents for live turkey and 21 to 22 for dressed; fancy fowl, 16 to 17 cents, live; 17 to 18 cents dressed. Ducks are 14 to 16 cents live; dressed Spring 17 to 18 cents per pound. Fancy broiler chickens are down to 22 to 23 cents for 1½ to two pounds and two cents lower for heavier. J. W. C.

PEACHES are a total failure in this section this year. Apples are looking fine and promise about one-half or a little more of a crop; pears, one-half crop; cherries are a big crop here, prices low. Some hay crops are very light here. Wheat is looking fairly well. Oats and corn went in so late they are very backward but are growing fast because the recent nice rains. Considerable cabbage has been planted in this vicinity and is looking well. W. D. S.

Newfane, N. Y.

LONG ISLAND is looking its best and everything favorable for one of the bumper years. I just finished a tour out as far as Shelter Island on one side and back to New York the other and also through the center. Planting of potatoes seems about normal, and a good crop is in sight. Cauliflower planting is about over and that crop looks fine. The cabbage seed crop is bound to be good. The truck farmers on the west end have got the goods and they seem to get the price this year. It is gratifying to see in the sands of the central part how they are displacing the scrub pine with fine fruit trees and good crops. To make a little study of what one sees, in going over the central part of the Island he would be led to believe that the thousands of idle acres could be transformed into useful farms. But the real estate shark has killed the prospect for the farms. He can pay a high figure for cheap land when he buys and sells on paper. So we are bound to keep the idle acres for years to come. T. T.

For a Heavy Summer Growth

—of any legume—alfalfa, clover, vetch, peas, beans, etc.—there is nothing like inoculating the seed with

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The Bacteria gather Nitrogen—the plant food most soils lack—from the air, and store it on the roots of the plants in such quantities that only a part is used and the rest left to enrich the soil. The same bottle of Ferguson's contains all the varieties of Bacteria necessary for the inoculation of any legume.

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Grade for Open Ditch.

WILL a grade of one foot per 1,000 feet be enough for an open ditch? E. J.

If this four-foot ditch will run full in flood time a grade of one foot per thousand would be better than a heavier grade, because of the erosion of banks. But if the ditch will never run more than half full a heavier grade would help more toward making it partially self cleaning. Velocity of water is so accelerated by volume and depth that a mild running shallow stream is changed to a rushing torrent when at a flood depth of four feet. In open ditch construction we find natural limitations to grade that we can only partially adjust—hence many drainage canals as light as a foot to the mile. J. F. V. S.

Driving Off Rabbits.

CAN you give an effective remedy against rabbits, that eat the young blossoms and tender leaves from the top or tips of growing bush snap beans? Would spraying with lime-sulphur, or with sulphur alone, cause a disagreeable taste to these young shoots, or would a trap row, not to be marketed, sprayed with an arsenical poison reduce the marauders? R. W. C.
Pemberton, N. J.

We assume this refers to bean culture on a large scale. We doubt if spraying will prove a complete remedy. Weak solutions of some tobacco mixture would probably be better than lime-sulphur, though we have never tried either for this purpose. This is a case to submit to our readers for experience. If we had a large acreage and were greatly troubled in this way we should use a number of smart and noisy little dogs—keeping them in the field as much as possible, and employ some good marksman to shoot the rabbits.

Extent of Immigration.

COULD you tell me how many immigrants came into this country last year, and how much money each was required to have? W. A. M.
Ohio.

The report of the Commissioner of Immigrations shows that during 1913 there were 1,197,892 alien immigrants admitted to this country. The greater portion arrived at New York—892,653. The amount of money an alien must have is not fixed by law. The authorities use their jndgment regarding this, the points to be considered being that he shall have enough to provide for his reasonable wants and those dependent on him until he is likely to get work. When bound for an interior point he must have his railroad ticket or money enough to buy it.

Questions About Fish Culture.

JUST at present the "Fish Law" is not available. When is the open season for pike, pickerel and black bass. 2. In stocking a pond would the above game fish destroy such fish as bullheads, yellow perch and sunfish? The pond is one acre in size; half is nine feet deep, the other half gradually shallow. Bottom is muck and sandy, fed by numerous springs, and plenty of shade. 3. Is the mud turtle harmful to fish. If not, is it of any value? H. K.
Ulster Co., N. Y.

1. The "Fish Law" is still not available, so I cannot tell about the special exceptions, but the general season is open on all the fish named and will remain so until long after we should all receive copies of the new law. It is impossible to say when we *will* see the new law in print.

2. These fish would eat all the bullheads, yellow perch or sunfish they could catch and swallow, but would not be likely to destroy them all unless the pond was much overstocked. If "pike and pickerel" is used in the same sense as in the published game laws of New York State, these fish should do well in the pond described if the water is shallow and muddy with a growth of marsh plants at some part of the edge where they can spawn. Large-mouth black bass will also do well under these conditions but, Small-mouth bass need cooler water and gravelly bottom near shore where they can lay their eggs.

3. The common painted tortoise is probably the one meant by "mud turtle." If so, they are not likely to be harmful to fish as they would catch very few that were not diseased or injured. In Maryland and farther south all turtles are eaten more or less if they are large enough and do not have an unpleasant odor. This turtle seldom gets more than six inches long (length of upper shell) and is seldom seen in the markets of Washington and never, so far as I know in New York. If the "mud turtle" is one of the larger ones, known variously as "map turtles" or "sliders" there is a small demand, increasing southward, but the price is never so high as for the snapping turtle or terrapin.

The most important points to notice in deciding what fish to put into a pond are (1) the temperature at surface and bottom in the warmest weather of Summer. (2) The character of the bottom; whether stony, gravelly, sandy, muddy or very soft mud. (3) The character and amount of the water flowing in and out. Some failures to introduce fish into ponds have been apparently due to the fact that the water came from peat swamps and was too acid. In some experiments made at Washington it was found impossible to keep fish alive in water showing an acid reaction. ALFRED C. WEED.
Wayne County, N. Y.

Barley, Cow Peas or Soy Beans.

SHOULD I sow barley on last year's corn ground for plowing under next September, for seeding to grass, or sow Cow peas or Soy beans for the same purpose, and if either of the latter what would be the value above barley?
Connecticut. J. A. G.

It would not pay you to sow barley at this season as a cover crop. Barley is a plant for cooler weather. It would make a fair growth in the Fall, but not during the Summer. Either cow peas or Soy beans would be better, but a simple crop would be buckwheat with two or three pecks of field beans seeded with it per acre. Put that in broadcast, and that would make a fair growth which can be plowed under in September, so as to benefit the soil.

A Drainage Question.

A CERTAIN man states that one can ditch from a low wet spot in a field to a higher. He states that the hill will draw the water. What do you think about that? I have a wet spot in my field I would like to drain out. J. P. A.

We think that young man who expects that a hill will draw water through a ditch away from a low place will have his labor for his pains, unless he puts a pump of strong power on the hill and uses it to pump the water. There is nothing to such a proposition.

No Friend of a Cat.

IT is very seldom that I disagree with anything you publish but your advice in a recent issue as to what to do for a sick cat, instead of medical treatment, should have been either the ax or bullet.—With me this would apply to the majority of cats, sick or well. A good mouse-trap, with but little trouble, well placed, beats the cat 10 to one, and does not spread contagious diseases, neither cut short the life of the beneficial bird or chick.
Iowa. P. A. H.

Sweetening Cistern Water.

HOW can we sweeten a rain water cistern when the water has an unpleasant smell, and is not agreeable as water for bathing and for watering stock on the farm? J. D. M.
Albany, N. Y.

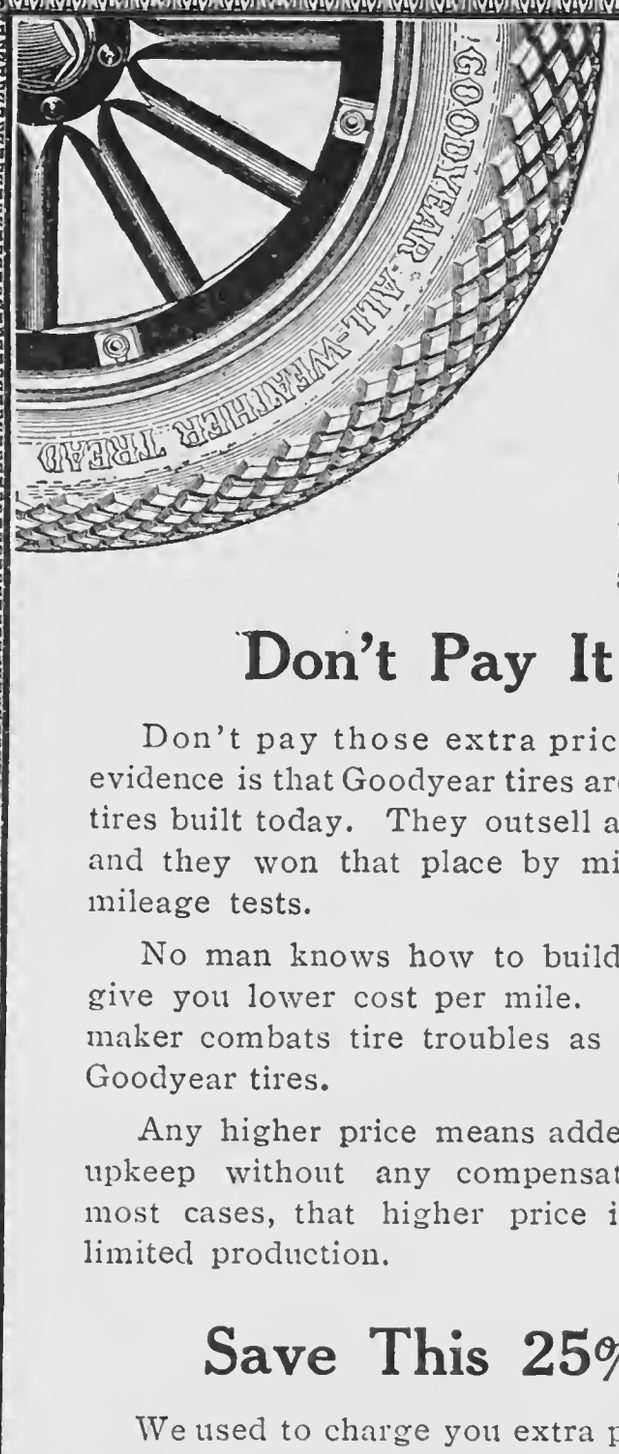
Cistern water which has a foul odor from being kept from the air, but is not polluted by foreign matter, may be sweetened by aerating it. The cistern should be opened to the air and the water agitated very much as the cream in a churn is during the operation of churning. Underground cisterns which cannot be adequately ventilated are subject to foul odors from the contained water becoming stale. M. B. D.

Exterminating Bats.

WHAT can be done to get rid of bats? They live in the attic by the hundreds and make it so foul that nothing can be kept there. L. S.
Sullivan Co., N. Y.

We have had no personal experience with bats. Can any reader tell us?

"HE'S a self-made man." "I know. He surely made a mistake in not consulting an expert."—Detroit Free Press.



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(1688)

Hope Farm Notes

A PATCH-WORK DAY.

PART II.

PLANTING THE POTATOES.—Hitch yourself to an Acme harrow with a healthy man sitting on it on a sultry, windless day, and you may imagine how Tom and Broker looked at me everytime they passed. I sat on the wheelbarrow at one end of the field cutting seed—the two little girls "helping" by passing the potatoes. The Italian army gladly raised the siege of asparagus, untied a few knots in their backs and came to the rescue of my theory. We ran two lines of twine across the field—the rows three feet apart. One man followed each line—the other between dropped seed for both. With a blow from a large hoe a hole or cut was made about four inches deep down into the buried sod. The seed was dropped into this, covered with soil and firmed by patting down with the hoe. As we cultivate I expect to hill up gradually. You may call this slow and tedious planting, but under all the circumstances I think it the best way to plant at this season. You would be surprised too if you could see how rapidly the men put the seed in after they were organized. I purposely cut the seed in large pieces, usually cutting a good-sized tuber in halves. We have often tried late planting before, but never with much success except once, when we used seed which was dug in Florida during April and shipped here. This gave us a fair crop of medium-sized tubers. I have always believed that in order to do well late potatoes must be put into damp soil, rich in organic matter, in a cool moist season—planted about as we put them in. Now having a chance to try my theory let us wait and see.

CLEARING UP.—There were still some 90 minutes of the day's work when the potatoes were in. The Italians went at the asparagus once more, and the little girls begged me to show them how to pot strawberry plants. So armed with a hoe, a trowel and a string of pots, we hunted through the newly set Marshalls for runners. Down in the dirt the little girls soon leaned to fill the pot with fine soil, sink it in the ground, bringing the roots of the runner over it and fasten it down with a little stone. I went ahead with a hoe and cleaned out the weeds. The girls were having a glorious time, fat and wet and dirty, when a stern figure with waving arms appeared in the barnyard.

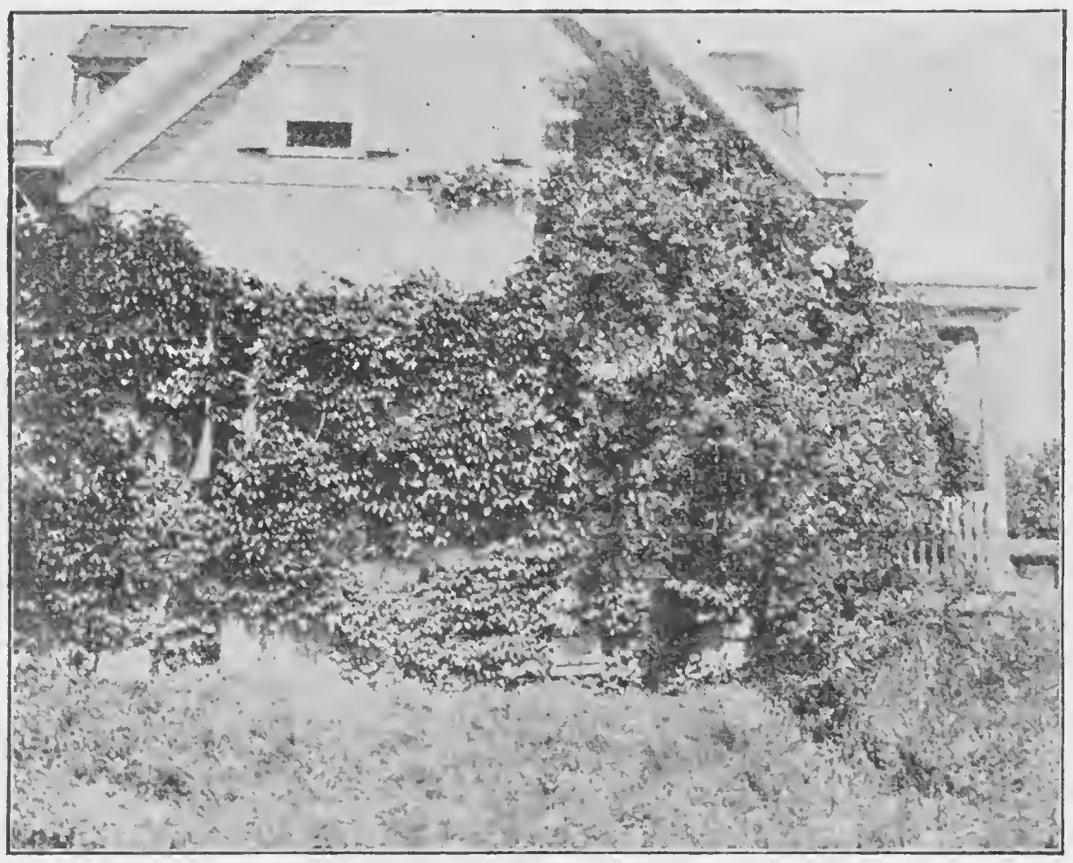
"Oh, ain't it awful!"

"We gotta go an' have our bath!"

Off they trotted, leaving me to finish the pots. The boys came, driving Bob into the yard. Every berry and pea had been sold. They even had to pick five quarts more for supper. I suppose I might have joined the Italians at their knee service, but somehow of late years my petitions to Nature seem a little more heartfelt when delivered standing at the end of a hoe. So I started in to clear up our potted plant nursery. But a sort of monitor on my back told me I had worked enough. Off in the west a small cloud was forming. It was even larger than a man's hand, and I confess that it formed a good excuse to see if supper was not nearly ready. It was, and in due time we lined up once more—as the Italians marched off with their share of the spoils.

END OF THE DAY.—The little girls were upstairs, pretending to be asleep if Mother came that way, but very much awake when I looked into the room. After a satisfying meal of baked beans and strawberries a man may well walk about and give a last look to the farm situation. Another of these mean little showers was forming in the west. I estimated the currant crop as nearly as possible—the fruit is red and picking will begin Monday. Then I found a dozen peach trees left from the last cultivating where the weeds have grown waist high. Twenty minutes with the scythe changed them from suckers to succorers. Then a spatter of rain drove us all to the front porch. There we sat and watched the belated automobiles rushing by on their way home. Of course they exceeded the speed limit, but one could forgive them on the homeward trip. It grew cooler as the damp darkness came upon us and the wind began moving the branches of the trees as night finally threw her blanket around the farm house. It was an untimely and unnecessary thing on a June night, but a little blaze in the fireplace made the night a little more cheerful. The hay was still wet and the grass is growing in the cornfields, and those berries in the wet, thick vines will be ruined if this keeps on. It was surely a patchwork day, but we did our best, and as the house grew still the Hope Farm man nodded off over his book before the fire.

POOR HAY.—This is the worst season for haying I have ever known in this country. Usually by the Fourth of July we have most of our hay in the barn or ready to house. This year only one load was under cover. There were three or four more on the ground waiting for one good hay day. The constant showers have prevented cutting and curing and the grass is old and seedy. It looks like a crop of poor discolored hay for us. The second crop will be heavy and this is a good season for top-dressing the meadows after the first cutting is off. The soil is moist now and it seems as if the showers are to continue, so that soluble chemicals put right on after the hay is off the field will whip up another growth and give some good hay. This is also a good season for such crops as Japanese millet, corn fodder or sorghum, and there ought to be a good chance to grow substitutes even if the hay crop is poor.



VINES AT THE END OF THE HOPE FARM HOUSE. FIG. 387.

"ORNAMENTS."—Our experiment at landscape gardening is turning out very satisfactory. This moist season has given the shrubs and trees a great start and as they grow they change the entire appearance of the place. The picture at Fig. 387 shows the eastern end of our old stone house. This house is jammed up close to the road and when this road was finally stoned, several feet were blasted out so that the house now stands on a rocky ledge. When we came here I planted Boston ivy at the end of this house and when THE R. N.-Y. sent out climbing roses to its readers we planted one of each and let them grow as they would. The great bush at the right is Crimson Rambler, about the largest one I have ever seen. At the left hand corner is Ruby Queen. This runs for many feet around the side of the house. When these roses are in bloom they present a magnificent mass of color and attract more attention than anything else for miles along the road. This old house dates back to before the Revolution—one of the old timers in this section. It is only occupied now for sleeping but we lived in it for some years when we first came to the farm.

POTATOES.—Our crop never looked better on July 4. It is all planted between the rows of fruit except that last planting on the old strawberry sod. The best field is at the back of the farm on soil which, so far as I can tell, never grew potatoes before. We started a young apple orchard there and this Spring plowed under a heavy growth of rye. Crimson clover grew well last Fall but most of it was killed out this Spring. The rye was all tucked under and packed down by weighting the Cutaway and then the Acme. As far as possible the seed pieces were put right down into the rye without ripping it out and the fertilizer was scattered along the furrows. There has been abundant moisture and as the result of this handling the plants of Irish Cobbler stood over two feet high by July 4 with a rich green and little potatoes as large as walnuts. Considering that these potatoes were not planted until late in May this suits us well. The field is very weedy. The potatoes were well cultivated and hoed—then a small plow was used to throw furrows from each side so as to smother out the next crop of weeds and grass. Not a bug has appeared in this field yet—in fact the bug crop is lighter this year than I have ever known before.

STRAWBERRIES.—On the Fourth of July we picked about eight quarts of Marshalls. This was 35 days from the first picking and it looked like five days more. This is, of course, an unusual season but I doubt if any other variety can equal Marshall for long continued fruiting. If it were only a heavier yielder it would stand at the head for rich heavy soil. It is a flat failure on the lighter soils or with poor culture. Our Spring set beds are looking well. Runners are starting and we are putting in the pots quite freely. I notice some large stories in the papers about yields from potted plants. I think they are largely guff, for the man who expects to grow a full crop next Spring from a potted plant set this Summer will be sadly disappointed. One case is reported to us where 200 potted Marshalls planted last August gave nearly a crate this year. These plants had the finest of care and the season was favorable. I would not guarantee the average purchaser of 200 plants 10 quarts, but he would have a bed well established and get a good outfit of plants. We have had a little experiment with lime and strawberries. In the middle of one of our plantings our folks burned a big brush pile and scattered the ashes. The field was all manured and plowed alike. Now a man with but one inferior eye could see the difference. Where the ashes were scattered the plants are dwarfed and some of them have already died. Outside of this space the plants are large and fine. There may have been something beside the lime in the ashes to cause this but I am satisfied that wood ashes and lime should never be put on berries. H. W. C.

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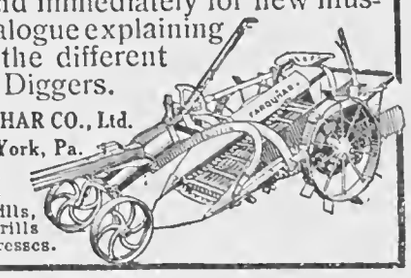

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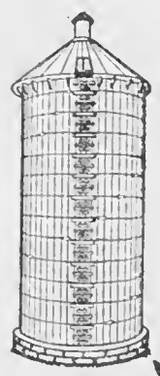

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Seeding to permanent mowings is best done late in August or early in September, without either Wheat or Rye. In this case use a heavier application of seed and a generous application of **E. Frank Coe Fertilizers.**

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Ruralisms

Transplanting Mountain Laurel.

WE have quantities of beautiful mountain laurel in our woods. Can you tell us when to put it out in clusters and hedges about the farmhouse? We have made some grow, but haven't been very successful. C. E. U.
Shelton, Conn.

Mountain laurel (Kalmia) should be transplanted in Spring or early Fall. It is wise to mulch it the first season; this protects the roots from both drying sun and frost. This shrub prefers a shady situation, but will grow in a sunny place if there is abundant moisture. It is often found in swamps, though it grows abundantly in hillside or mountain woods. It dislikes clay or limestone soils, and is at its best in peat, sand or loam.

Experience With Small Fruits.

THE strawberry season has come and gone. I would be glad to hear your report on the Joe, as you said you had ventured in setting out that variety. With me it is a plump failure; spreads out on the ground like a purslane plant, long pointed no-flavored small berries, shaped like the old Parker Earle, but nothing to compare with that good old kind under favorable conditions. Of Helen Davis, early, one trial is enough.

The raspberries are now coming on, Plum Farmer, Hoosier and Winfield. I have some new grapes (with me) coming into bearing this year and they all look fine now; Lutie, Campbell's Early, Brilliant, Barry, Herbert-Salem, Bacchus, Lucille, Brighton. Peaches a full crop; poor apple prospects; Corn looking well; rye harvest just began, all Fall grain fair; oats and Spring wheat rather short; hay crop one half, but this is more locally than generally, as it has been too dry in this county. A. J. MASTERS.
Iowa.

R. N.-Y.—Joe seems promising to us after a brief trial. It is not fair to judge a variety entirely by the behavior of Spring set plants. We were cautioned about planting Joe on rich soil which would be suitable for Marshall, but to put it on light soil. It makes good-sized berries of fair flavor and we shall try it further as a partner for Marshall.

Onions.

HAVE you ever succeeded in growing large onions of the Bermuda and Prizetaker varieties by planting them outdoors in the Autumn, or have what you raised of these onions, planted in the Fall, been small? 2. Have you ever been able to destroy grass which has become well started in an asparagus bed, and have you used salt to destroy the grass? B. R.
Maryland.

1. I have never transplanted the Bermuda onions, but have grown fine ones direct from the seed sown very early in Spring. Seed of the Prizetaker, Denia and Giant Gibraltar sown early in September here, and transplanted as soon as the plants are about the size of a lead pencil, will make large onions the following Summer. But I have made finer ones by sowing the seed in January in a cold frame, and transplanting them later into well-prepared soil. For the earliest green onions I plant sets of the Norfolk Queen, a different onion from the Queen of the Northern catalogues, in September. These are usually ready for the table here in late February. At the same time in September I plant sets of the Yellow Potato onion, and in May we can use the offsets of these for green onions, the Queen having been used up. The main bulb of the Potato onion is left to ripen, and they make fine large onions. I sow the seed of the Norfolk Queen very thickly in April and a single row 40 feet long makes me all the sets I need for the Autumn planting. I never plant sets of any sort for ripe onions except of the Yellow Potato onion. There is nothing more easily transplanted than a young seedling onion. I pinch the roots slightly and the top too and set in very shallow furrows. For a substitute for green onions in the early Winter I sow seed of the leek early in Spring and transplant them in July into open furrows, and draw the earth to them as they grow and finally hill a little so that we get a long white shank. Being perfectly hardy, these are left in Winter where they grew, along with the salsify, parsnips and late carrots, none of which we lift here. 2. I never had to clean an asparagus bed well set in grass, because I never let mine get in that condition. I keep the asparagus cleanly cultivated all the season through, and make the heaviest fertilization after cutting has ceased, so as to get a strong growth of crowns for the next season. I never use salt as salt, but do use kainit freely, and that carries a good deal of salt. You will never need to use salt to kill grass if you keep the crop well cultivated all the time.
Maryland. W. F. MASSEY.

Hawkweed or Paintbrush.

I AM taking so many papers and magazines that I had concluded to stop THE R. N.-Y. and then I made up mind that I could not get along without it, and I would stop some other paper instead. Enclosed find a flower I picked in my meadow. Please tell me the name of it and how to stop it spreading over the farm. Is it poisonous? J. L. B.
Bennington, Vt.

The plant sent is Orange hawkweed or paintbrush, Hieracium aurantiacum. It is a terrible perennial weed, damaging pastures in many localities. It spreads by seeds and creeping rootstocks. The roots are near the surface, so plowing and surface cultivation will destroy it. Infested pastures should be broken up and given a short rotation of hoed crops. On upland pastures which cannot be plowed Prof. Jones of Burlington, Vt., advises broadcasting dry salt over the patches. 18 pounds to the square rod (1½ ton to the acre). We have never heard that it possesses any poisonous qualities. Another Hieracium, the rattlesnake weed, H. venosum, is said to possess some medicinal qualities.

Grass Under Trees.

WHAT can I do to make the grass grow under my trees? Last Fall I dug up the soil about them and filled it full of organic matter and this Spring sowed it with shady lawn seed. It came up in great shape and has been cut too or three times, but it is thin and don't seem to make a sod. I have used nitrate of soda and last Fall and this Spring applied a liberal amount of bone meal. Can you suggest something?
Manayunk, Pa. J. H. J.

It requires time for the growing of turf from grass seed. Under very favorable conditions a fairly good sod will be formed in the first year, but as a rule it requires the second season's growth to make a good turf and under unfavorable conditions a longer period will be required. In dense shade it is sometimes quite out of the question to get a good sod formation. It would seem there had been sufficient fertilizer applied this season. At the beginning of Winter cover the grass lightly with partially decayed rough manure, this will afford Winter protection and the leechings of the manure will be quite a stimulant to the grass in the following Spring and Summer, and will very materially hasten the formation of sod. Early next Spring remove all the rough portion of the manure, but leave as much of the finer portion as possible on the grass. Do not cut the grass too frequently, nor very short during the heat of Summer. K.

Tools for Quack Grass.

I HAVE a considerable quantity of quack grass to contend with. It strikes me that somewhere in one of the back issues of THE R. N.-Y. you have mentioned an article or machine for gathering roots. Do you know of any such machine, and by whom is it manufactured? J. P. K.
Newfane, N. Y.

The two best implements we know of for getting out quack grass are the big cutaway harrow and the spring-tooth harrow. The first chops off the roots and tosses them to the surface. The spring-tooth drags them out and pulls them where they can be gathered. The Department of Agriculture at Washington issues a pamphlet on Johnson grass which will help all who are troubled by this sort of pest. In this pamphlet several forms of cultivators are described. They have slanting teeth or hooks in place of the ordinary teeth.

"DOESN'T that horrible noise your neighbor makes when he sharpens his lawn mower disturb you awfully in the morning?" "No. I go out and borrow it as soon as he gets it sharpened."—Cleveland Plain Dealer.

Growing Onion Sets.

WE have had good success in growing onion sets and for the benefit of R. G. C., page 852, and others who may be interested, we will give our experience. Land that will produce a good crop of ordinary onions, will grow a good crop of onion sets. The soil should not contain large quantities of raw nitrogenous matter. If stable manure is used as a fertilizer, it should be well rotted, and if possible, applied the Fall before planting. A liberal quantity of lime applied to the soil will show wonderful results. The Yellow Strasburg is a good variety, but we prefer the Yellow Globe Danvers. Almost all varieties do well, however. We sow the seed at the rate of from 50 to 60 pounds per acre. It is advisable to make the rows about 14 inches apart, running the seeder twice in the rows, as it is desirable to scatter the seed over as wide a space as possible in the rows. In order to have a good stand the seed should lay in the rows at the rate of at least 500 to the foot. The sets are usually kept clean with a handwheel hoe, unless they are grown on a large scale for commercial purposes, in which case the rows are made three feet apart so that a horse can be used in cultivation.

Onion sets are very sensitive to weeds and grass and for this reason the most dilligent care is necessary in cultivataion. In spite of all that can be done with weeding implements, there is always some hand weeding necessary, and the amount of this required will depend a great deal on the way the work of cultivating the crop is handled during the early part of the season. It should be the aim of the grower to secure a crop of very small bulbs as nearly uniform as possible. The ideal onion set is a round, plump little onion, the top being withered up to nothing. A bushel of the smallest sets will plant a greater area than the same quantity of the larger ones. Onion sets ripen in this section about the middle of August. Before harvesting we shear or cut the tops off with a scythe, and have found that a very good way to harvest them is by the use of a mason's trowel. After laying on the ground for a day or so we gather them and thinly spread them in a dry place. It is very important to dry and cure them thoroughly so that they will remain in an entirely dormant condition until wanted for planting. Storing them is often quite a hazardous matter, but we have had good success by storing in small baskets in a dry place, and also by freezing them as is often advised for wintering ordinary onions. If the latter method is used, care must be taken not to handle the sets while in a frozen, or even partly frozen condition.
Indiana. D. L.

A GALVESTON civil engineer was seeking support for a railroad in Honduras. During a conversation with one man, in attempting to put the necessity for a line clearly before him, the Texan asked: "How long does it take you to carry your goods to market by muleback?" "Two days." "Ah!" exclaimed the Texan "there's the point. With our road in operation you could take your goods to market and be back home in one day." "That is very well, senor," said the Honduran. "But what would we do with the other day?"—New York Evening Post.

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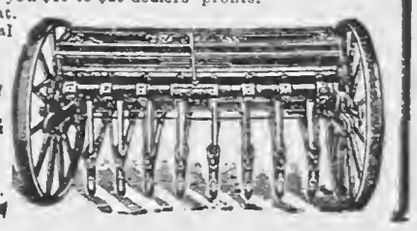

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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"THE FAVORITE HEN."

NO more entries for the hen contest can possibly be accepted. We already have nearly four times as many hens offered as we can utilize this year! We had no idea the suggestion would prove so popular. Within 10 days after the announcement we were fairly swamped with offers. Full particulars in the next magazine number of Woman and Home.

*

THERE has been some little mix-up regarding the Summer field meeting of the N. J. State Horticultural Society. It is to be held on the farm of John H. Barclay, at Cranbury on August 5 (Wednesday). It was first called for an earlier date but owing to a death in Mr. Barclay's family a change was made necessary. *Remember now that the meeting will be held on Wednesday, August 5.*

*

RUSSIA seems to be the great vetch country—where this crop has performed its greatest miracles as a soil improver. Large quantities of the seed sold in this country come from Russia. Thus far one great drawback to seed production here has been the difficulty in separating the vetch seed from rye or other grain grown with it. Now, we understand, a little separating device used in Russia is made in this country—giving good satisfaction. Such a machine will enable the farmers of a community to separate their own vetch seed and the result will be a great increase in this wonderful manurial crop.

*

WE judge that the meeting of the Connecticut Poultry Association at Storrs, on July 29-31, will be a storm center. The utility men and the fanciers are likely to have it out. We think the sparks will fly—and that is the chief mission of a spark. And by the way to do you notice how that "sour milk" pen of American Leghorns is crawling up on those English Wyandottes? They have steadily cut down the big lead of the English birds. We expect to see them win or come so close to it that there will be little margin. It is as interesting as a yacht race or a polo match and 50 times as useful. Good luck and many eggs to the American Leghorns.

*

REPORTS from France are that steam plowing is increasing quite rapidly in parts of that country. This will surprise many who have long been taught to understand that France is a nation of small farms on which hand labor is chiefly employed. It seems that even in France the labor problem and farm desertion are present and are changing the character of agriculture. In the old world thousands of boys and girls are bred to farming—through long generations of peasants. One would think such people would be "born farmers" and as such be fully content to remain on the farm. Yet it seems that even among this class the world-wide restless spirit is driving the best and more adventurous to the city. Thus French agriculture must change to a system which requires less hand labor. It would be impossible for the individual farmer to own a steam plow. Coöperative societies have been organized which buy these plows and rent them to the members. These societies combine and raise the money, buy the plowing outfit and charge a large enough rent to pay running expenses, a fair profit and a surplus large enough to pay for the plow in a few years. The charge for plowing six inches deep is about $3.50 per acre, while 10 inches or more deep costs $5.40. The fact that such rents will pay expenses, a profit and also pay for the plow is a mighty argument in farm coöperative work.

U. S. CONSUL WEDDELL reports from Athens a strange thing: "It is stated here that a committee representing a number of Greek families located at New York has addressed the Greek Ministry of Finance stating that they are prepared to return to their native land provided the Government will assist them and will also assign to each family a farming plot in Macedonia, say about 17 acres for each family. The settlers would be prepared to pay five per cent. of the purchase price of the land in advance and the balance in installments. It is believed that the Government is considering favorably the petition of the Greek committee."

These people came to this country in the hope of obtaining homes. Instead of getting out upon the land they were induced to remain in New York City where there is no possibility for them to secure land. Under the circumstances they will be better off to return to their own country. But what a singular outcome—going back to the old world to obtain land!

*

YOU see we stay right by this bumper wheat crop and its effect upon society. If we were living under a scientific combination of the golden rule and the law of supply and demand the bumper crop would jar the millenium a little nearer. The consumers would have cheaper bread while the producers would have far more money to spend for necessities or even luxuries. All this would start the wheels of trade and there would be a great business boom. The Hon. Bumper Crop would be elected unanimously as permanent president. That is a pleasant dream but the facts seem to be all against it. First, the price of wheat! Dean Jardine of the Kansas Agricultural College urges farmers to hold all the wheat they can away from the market:

> The present price, which is from 60 to 65 cents, is low, and is brought about largely because farmers are rushing their wheat to market faster than it can be taken care of, thus causing congestion at terminal points. The world's wheat crop is not unusually large, and there will be more wheat exported from the United States than in several years past, which is not likely to result in a low price for the coming year.

The price is expected to go even lower. Similar reports come to us from many wheat growing sections. On the reports of a "bumper crop" prices have fallen and the farmers who are obliged to sell are in many cases, receiving less for their crops than they did last year for fewer bushels of wheat. But, on the other hand what consumer has found his grocers' or bakers' bill any smaller because flour has fallen "in sympathy" with wheat? "Sympathy" in this case is good. It is like the quality of mercy which is strained to the breaking point. We repeat our statement that under present conditions of distribution and sale a "bumper crop" benefits every handler of the wheat except the farmer. We now see why the daily papers have been printing such wonderful crop stories. It was only a little of President Wilson's "psychological influence" to scare the farmers into dumping their grain upon the market.

*

A CERTAIN rich man, near New York, found that one of his boys wanted to become a farmer. So, very wisely, the young man was trained in practical farming. When it came to locating on the land the father expected to send the boy West, as that seemed to be the only land for large farming enterprises. Some friend took him to a section East of the Hudson river and pointed out the possibilities of the land for growing farm crops and the market possibilities as well. As a result a large tract of Eastern farmland was bought. It will be thrown together, smoothed, drained and organized—not as a gentleman's estate, but as a business-like farm. There is no question about the fact that for a man with capital the East today offers far better farm prospects than what we call the West. For example Rhode Island would not be called an agricultural State. Yet a man with capital and knowledge can go back from the railroads in that State and on 500 acres, more or less, make more clear profit at growing wheat, rye, corn, hay or any of the staple farm crops than he could in Kansas, Dakota or any of the so-called grain States. At growing potatoes, at dairying, fruit growing or other intensive crops, he can make far more than in the Western States, but we would let the Western farmers select the crops to suit them and then beat their record in the State of Rhode Island. In some of the deep level valleys of Vermont the difference would be still more striking. This does not mean that a man without capital or knowledge can take a small, unimproved place and make a fortune. Such a proposition is merely a dream. The East, however, has come to a time in its history where farmland offers good opportunities to the man with capital and practical knowledge. The strip of land 150 miles wide along the Atlantic is now, and will remain, headquarters for the best group of food buyers in the world.

*

VETCH growing for soil improvement is rapidly increasing on the thin, sandy soils of Western Michigan. This plant, when it can be made to grow, will solve the manurial problem in that section. It is often hard to get the vetch started on these thin soils but when once on the way it gives wonderful results. It seems as if each locality must develop its own plan of growing, and native or acclimated seed must be used. In a few localities machines for separating vetch from rye seed are being used and the seed crop is increasing. This is important because many of the failures with vetch are unquestionably the result of using the poor quality of foreign seed handled by most seedsmen. The outcome of the cover crop discussion seems to be for each section to find a particular crop which is best adapted to its condition. For example in some parts of the South nothing can be found superior to cow peas. In the upper South, Crimson clover gives superior results. North of Philadelphia those crops are uncertain and Soy beans, vetch, rape and turnips are better. On our own farm rye is the foundation of soil improvement. In Northern Vermont barley and rape are satisfactory. We cannot put down any sure "rule" for any man to follow. He must study out the truth for himself.

*

LAST year we had much to say about Mr. Shamel's work in California in finding the drone trees in orange and lemon orchards. The results showed a great difference in the producing power of trees growing side by side in the same orchard. These drone trees were worse than robber cows in a dairy herd in cutting down profit. It was proven that in the average grove a fair proportion of the trees do not pay for the labor and fertilizer spent on them. The same thing is more or less true of apple and peach orchards. Growers may deny it, but dairymen have denied that they fed robber cows when a test showed half of their animals were kept at a loss. But we can kill or sell the robber cow and buy another of better breeding. If the drone tree does not pay we can dig it out, but how can we make sure of a better one? Mr. Shamel claims that his work with citrus fruits has now gone far enough to show that bud selection from certain superior trees will enable us to cut the drone trees out. Most other scientists deny this and claim this is nonsense, but it must be said that each year brings new argument in favor of the theory. The Michigan Experiment Station has started some coöperative work in orchards in the State much like the work now being done in California. This will include apple and peach. There will be a careful test of each tree in the orchards for productiveness and buds for propagation will be taken from the best trees as well as from the drones. What we call a "drone" tree does not mean one which produces a poor crop because some natural soil defect or some disease affects it. We think a careful search will find trees naturally superior and naturally inferior and we feel confident that these naturally good or poor trees will carry much of this ability to produce through their buds.

BREVITIES.

HONEY production on the Bahama Islands is the latest scheme for organized farming.

AFTER a week of steady rain on the hay crop it becomes hard for us to believe some of these stories of drought.

KINDNESS means care. The milk of human kindness means cow's milk produced through the highest of human care and skill.

IF anyone tells you that the mulefoot hog is immune to cholera, tell him the mule has more sense than to believe fancy tales. The disease has killed many of this breed.

SOME people work for a public market, and then because it does not immediately change all trading conditions claim it is a failure. Stay by it and prove its value. You cannot hope to do it all at once.

PLEASE remember that sucking insects like plant lice cannot be killed by poisons. They do not eat like potato beetles or codling worms, but must be killed by some spray like oil or soap, which kills them by contact.

ANY Kansas farmer may have the name of his farm registered upon payment of one dollar to the county clerk. Farmers may then register a trade-mark name with the Federal Government, and this will protect the advertising of their products everywhere.

IT seems necessary to repeat again and again that the New York compensation law does not include liability for accidents in farm or household service. The laws in Connecticut and New Jersey *do* include these classes. Should a man live in New York, but conduct a farm in either of these other States, he would be liable to these State laws.

HOW CO-OPERATIVE BUYING IS DONE.

ON page 830 we printed a statement of the fertilizer business done by the Portage County organization in Ohio. This year these farmers distributed 20,000 tons at an estimated saving of $80,000. Whenever these figures are given they are severely criticized by manufacturers and dealers. We are repeatedly told that such trade would be impossible without a capital of $250,000 or $300,000. Where could farmers ever raise that or obtain credit for such an amount? Now THE R. N.-Y. does its best to obtain the truth for its readers, and it will not knowingly print any false or misleading statement. Is it true that these Ohio farmers are buying fertilizer in this way? If so, how are they able to do it? We have obtained the facts, fertilizer contracts and documents, which show that farmers are actually buying the goods. As to the way it is done, the following clear and concise statement ought to satisfy anyone:

The plan adopted is very simple and workable. In brief it is as follows: Men are selected who will handle the business at each shipping point in the organized territory. Farmers are requested to hand their order to these chosen agents. Each order is accompanied by a $2 advance payment as a guarantee of good faith. The agent forwards the orders to the company, and goods are shipped to the agent. Terms are simply sight draft attached to the bill of lading. This the agent must pay before the goods are delivered to him. Thus the company has the money to its credit before the farmers receive the goods. The farmers are pledged to pay cash so that the agent is out the use of his money not longer than 36 hours. For this and his time and trouble he is allowed a commission of 75 cents per ton. The only capital therefore necessary to swing the deal is money enough in the pocket of the farmer to pay for the goods he has ordered.

Thus far, we understand, the farmers have raised the cash and paid it when the goods arrived. The system is not a new one. It has been operated on Long Island, in New Jersey and elsewhere with some modification. The farmer's saving comes through a *large combined order direct*, and prompt cash payment. Another saving is made through the farmers' knowing just what their soil needs and buying chemicals to meet its requirements instead of guessing at it. The system is also a good thing, or can be made so, for the manufacturer who can make contracts with responsible people knows what his trade will be and receives prompt cash payments. At least, it seems to be true that manufacturers are competing for this trade.

New York State News.

AMENIA FIELD DAY.—The fifth annual field day at Amenia will occur on Saturday, August 15. The Amenia Field Day Association is now an incorporated society, and an effort will be made to have this the largest and best outing that the society has ever had. Men of national prominence will be secured as speakers, but their names are not yet announced. Besides making it a field day of the ordinary sort there will be an exhibit of farm produce and farm implements of a purely local nature. In this matter the Dutchess County Farm Bureau management will co-operate. The moving picture concerns have already made application to take pictures of the events.

STATE FAIR EXPENSES.—A policy of retrenchment in expenses has been adopted by the State Fair Commission whereby expenses in all departments will be limited to 15 per cent. of the amount expended last year. The situation was created by the fact that the Legislature appropriated only $30,000 for premiums instead of the $63,000 asked for by the Commission, and made no provision for maintenance of the grounds, an item in itself of $20,000. In adopting a retrenchment policy it is said that the members of the Commission were actuated to a certain extent by the fact that if appropriations exceeded and a deficit resulted they would be personally liable. But were this the case there is no doubt but that they would have been reimbursed by the next Legislature. It was decided, however, not to reduce the premium list from the $63,000 figure, as an opinion of the Attorney-General had been secured which was to the effect that the revenue from gate receipts could be used to make up any deficiency in the premium moneys. He bases his opinion on the statement in the supply bill which says: "For deficiency in appropriation for premiums for fair of 1914, $30,000." This, he says, would seem to contemplate an appropriation for a deficiency, and intimates the reception of funds from other sources available for the purpose. The Attorney-General also expresses the opinion that the commissioners would be personally liable to exhibitors should they become entitled to premiums under the advertisements of the Commission in that regard, should they exceed in expenses the amount appropriated by the Legislature and the net receipts available.

MONSTER GRANGE PICNIC.—It is planned by the State Fair Commission to have a monster Grange picnic one day at the State Fair this Fall. It will be held on Grange Day, and as we understand it, the Commission has offered reduced gate admissions on that day which should appeal to all members of the order who can attend. The plans are not yet announced but will be soon. In the large hickory grove on the fair grounds tables will be provided for Grange parties. It is said that two Granges in Yates County have already announced that they would guarantee an attendance of 500 from their jurisdiction.

COMPENSATION INSURANCE PREMIUMS.—It is announced that the workmen's compensation premiums amounted, up to July 6, to about $15,000,000 which has been paid into the State by manufacturers. This amount will be largely increased by the latter part of the week, as Friday is the time limit for the issuance of policies to manufacturers. These are the premiums paid for State policies, and of course there are many others in other companies. One concern filed its intention of carrying its own insurance, and also filed bonds amounting to $18,000.

STATE GRANGE SCHOLARSHIPS.—The following persons have been awarded scholarships of $50 each by the State Grange Scholarships Committee, for the short course at the State Agricultural College: George Ohlem, Ashville; Nellie Brainard, Ellington; Myron K. Morse, Halcott Center; Rollin Case, Frewsburg; William Stockham, Holley; Frank K. York, Smithville; R. M. Giles, Skaneateles; L. P. Poole, Manorville; Ray Thomas, East Bloomfield; E. R. Hall, Camillus; Earl McNulty, Java Center; Edith Brainard, Ellington. These awards have just been announced by the committee, consisting of W. H. Vary, W. N. Giles and George Warren.

OTHER GRANGE ITEMS.—Grange activities in Sullivan County are especially noteworthy this Summer. Last month a Pomona or county Grange was organized at Liberty, by State Secretary Giles, with D. H. Clements as master. A subordinate Grange was organized at Hortonville, the same county, on June 23, by County Deputy David Muirhead. A masters' and lecturers' association was also organized at Liberty on June 29.——A new Grange was organized at Brewster, Putnam County, on June 18.——The Depauville Grange dedicated its new hall on July 4, State Master Vary officiating.——There are now over 850 subordinate Granges in the State. Of this number there are 23 having a membership of more than 500 each, and four that exceed 600 each. The largest Grange in the State is Webster Grange with 725 members.

J. W. D.

Canadian Crops and Trade.

The Ottawa authorities report a great increase in export of Canadian wheat to South Africa. Total Canadian trade for the fiscal year exceeded $1,000,000,000, an increase of $26,697,554 over the previous year. Wheat and barley are making good progress. The area under Spring wheat is reported to be 10,230,500 acres—185,500 acres more than last year. The area of Fall wheat expected to be harvested is 924,300 acres—3,300 acres more than in 1913. The acreage of oats is placed at 10,811,000 acres, compared with 10,434,000 acres last year, an increase of 477,000 acres.

Wheat Shortage in France.

In a fairly favorable season France produces nearly enough wheat for home use. This year the crop is so poor that imports of 50,000,000 bushels or more are anticipated. The import records of previous unfavorable years, extending back 15 years, are: 52,000,000 bushels, 1897-98; 73,000,000 in 1910-11; 45,000,000 in 1913-14. The harvest of 1908-09 was large enough to bar imports. The past four years have all been short, though less than 10,000,000 bushels in some cases. North Africa has been one of the large sources of supply for France, the remainder coming from Australia, Central Europe and the United States. Our sales to France last year were about 4,700,000 bushels.

Potatoes from Maine.

THE U. S. Department of Agriculture has adopted new quarantine regulations for shipment of Maine potatoes. This is to prevent the spread of powdery scab. The new rules go into effect August 1. The regulations provide that no potatoes shall be moved from any quarantined area unless they are duly certified as fit for either table or seed use and are packed in accordance with certain specified rules. To obtain the necessary certificates for shipments, growers must apply for inspection by a Federal inspector, and all potatoes intended for seed use must be stored and handled according to certain prescribed methods. Lots in which any of the potatoes are found to be infected with powdery scab or any similar disease will not be certified under any circumstances for seed use. They may, however, be certified for table use after the diseased potatoes are removed and destroyed.

Delaware Conditions.

THE long drought was broken in the lower half of this county on June 27, when we had a heavy rain, which greatly benefited all growing crops. The upper part, however, is still dry, and crops suffering badly for rain. Wheat harvest is over, but thrashing is being delayed by light showers, which keeps the straw damp. Scarcely any wheat is stacked here, all being thrashed from the field. The dry weather cut the strawberry crop short, as it also did the pea crop for the canneries. Some growers did not realize enough from their pea crops to pay for the seed and fertilizer. Early apples are being picked and marketed in large quantities, and good prices are being realized for them. Some have received as high as $1.30 per bushel for their early Transparent apples. Pastures which were getting short have rapidly revived in the section where we had rain. Harvesting hay has just commenced. There is scarcely more than a half crop. The early white potato crop, which has suffered greatly by the drought, will soon be ready to dig. Eugene Shallcross, who has a 16-acre potato patch, purchased a pump with a capacity of 125 gallons per minute, and a four horsepower gasoline engine and is irrigating his potatoes. The experiment is being watched with much interest by his neighbors.

Dover, Del. C. H.

Government Crop Report.

IN the Winter wheat sections harvesting conditions have been favorable. Thrashing is under way except in parts of Kansas, where it is delayed by rain. In the Spring wheat States weather has been ideal for growth of the plant. The Western corn-growing States have had abundant rains, but the Ohio Valley and southward is suffering for rain. Drought continues serious in Texas, where the late cotton is being pinched. The Atlantic States have had good rains from Virginia northward. Apples promise a large yield in Michigan, Maryland, Colorado and North Carolina. West Virginia will have a large peach crop; Maryland and Delaware light.

The latest estimates of the Bureau of Statistics put the Winter wheat yield at 655,000,000 bushels, 32,000,000 more than last year; and Spring, 275,000,000, against 230,000,000. Winter wheat is yielding three bushels per acre more than the average.

The corn prediction is 2,868,000,000, or 421,012,000 ahead of last year; oats, 1,201,000,000, or 81,000,000 ahead of 1913.

Percentage conditions of immature crops July 1 were: Spring wheat, 92.1; corn, 85.8; oats, 84.5; barley, 92.6; rye, 92.9; hay, 80.8, or .3 more than last year; apples, 64.2, or 5.8 ahead of 1913. The planting of white potatoes is 3,708,000 acres, 140,000 more than last year; present condition, 83.6, which is 5.1 under the 10-year average; estimated yield, 356,000,000 bushels, or 24,000,000 in excess of 1913; sweet potatoes, acreage, 593,000, or 32,000 under 1913; condition 77.1 per cent., 9.4 under.

Co-operative Apple Selling in Nova Scotia.

I SEND some of the figures of the United Fruit Companies of Nova Scotia, Ltd., which now includes 39 companies working under special acts of the Nova Scotian local House of Parliament and pooling their apples of the same grades.

Total apples handled last year 274,000 barrels; potatoes, 38,700 barrels; apples graded, 79,531 No. 1, 36,459 No. 2, 158,000 No. 3. There were 170 different varieties.

The price was, including absolutely everything, $2.57 per barrel for No. 1, No. 2 and No. 3, but of course this was not the way the money was divided. Total expenses for the Central (not including the local packing), management, etc., of the different companies, $12,300 for apple and potato accounts, and $5,452.48 for supplies (expenses for purchasing): General manager, $2,500; secretary, $1,200; organizer and inspector, $1,200; European representative, $1,111.50; Halifax representative, $1,000; office salaries, $1,847.03. Total salaries, $8,858.53, and travelling expenses of $1,963.63.

In addition to this, other expenses—printing, etc., came to $3,831.32, or a cost of handling the apples and potatoes of four cents a barrel. This year, with twice the crop, the cost should be less than that, even.

JOHN BUCHANAN.

Farm Product Prices.

The Bureau of Statistics gives the following:

AVERAGES FOR THE UNITED STATES OF PRICES PAID TO PRODUCERS OF FARM PRODUCTS.

Products.	May 15, 1914.	May 15, 1913.	May 15, 1912.
Hogs, per 100 lbs.....	$7.60	$7.45	$6.79
Beef cattle, 100 lbs.....	6.33	6.01	5.36
Veal calves, 100 lbs.....	7.59	7.17	6.23
Sheep, 100 lbs.	4.87	4.91	4.74
Lambs, 100 lbs.....	6.49	6.66	6.16
Milch cows, per head.....	59.85	54.80	45.63
Horses, per head.....	139.00	145.00	144.00
Honey comb, per lb.....	.137	.138	.137
Apples, per bushel.....	1.46	.94	1.29
Peanuts, per lb.	.051	.047	.049
Beans (dry), per bu.....	2.31	2.18	2.52
Sweet potatoes, per bu....	.93	.93	1.19
Cabbages, per 100 lbs.....	2.05	1.58	2.98
Onions, per bushel.....	1.53	.87	1.77
Wool, unwashed, lb.....	.172	.163	.178
Clover seed, per bushel....	7.87	10.74	12.53
Timothy seed, per bushel..	2.38	1.76	7.16
Alfalfa seed, per bushel...	6.77	8.21	....
Broom corn, per ton.....	85.00	53.00	83.00
Cotton seed, per ton.....	23.56	21.88	19.21
Maple sugar, per lb.....	.123	.123	.116
Maple syrup, per gal.....	1.10	1.08	1.09
Hops, per lb.	.218	.134	.372
Paid by Farmers:			
Bran, per ton.....	28.08	24.59	30.18
Clover seed, per bu....	9.77	12.90	....
Timothy seed, per bu...	2.97	2.40	....
Alfalfa seed, per bu....	8.38	9.75	....

Woman and the Home

From Day to Day

It Couldn't Be Done.

Somebody said that it couldn't be done,
But he with a chuckle replied
That "maybe it couldn't," but he would be one
Who wouldn't say so till he'd tried.
So he buckled right in, with a trace of a grin
On his face. If he worried he hid it.
He started to sing as he tackled the thing
That couldn't be done—and he did it.

Somebody scoffed: "Oh, you'll never do that—
At least, no one ever has done it";
But he took off his coat, and he took off his hat,
And the first thing we knew he'd begun it.
With a lift of his chin and a bit of a grin,
Without any doubting or quiddit,
He started to sing as he tackled the thing
That couldn't be done—and he did it.

There are thousands who'll tell you it cannot be done,
There are thousands who prophesy failure;
There are thousands to point out to you, one by one,
The dangers that wait to assail you.
But just buckle in with a bit of a grin,
Then take off your coat and go to it.
Just start in to sing as you tackle the thing
That "cannot be done"—and you'll do it.

—Edgar A. Guest in Brockton School Helper.

*

AMONG household conveniences in wire is a dish drainer that has a compartment in the center in which flat silver is stood upright to drain. It costs 40 cents. Another convenience is a wire vegetable basket, to be used when draining vegetables after boiling; it comes in different sizes, at 12 and 18 cents. A wire lettuce washer or salad basket costs 40 cents.

*

REGULAR wear soils a light-colored raincoat as much as any other garment, but it should never be cleaned with naptha, chloroform, gasoline, or similar cleansing agents, because they injure the rubber in waterproof materials. Lay the garment flat and scrub it on both sides with abundant soap and water. Rinse with clear water, wipe off, and hang it up to dry. Of course wringing must not be attempted.

*

THE Philadelphia Record says that one afternoon a very stout woman was rambling along a country road when she suddenly noticed a little boy walking closely beside her. Not knowing the youngster, she was naturally somewhat surprised.

"Look here, little boy," she heatedly cried, "why are you following me along like that? Go away from me instantly."

"I ain't doin' nothin', lady," pleaded the little fellow. "Please don't send me away."

"You must go away at once," repeated the perplexed woman. "Why do you wish to follow me?"

"Because," was the startling rejoinder of the youngster, "you are the only shady spot along the whole road."

*

THE New York Child Labor Committee has been investigating the cases of children working in the tenements in this city. One case reported was a girl 14 years old, who made artificial violets. She had to make 576 of these flowers, and paste them into wreaths to earn 10 cents. Her average weekly earnings were under $2. Another family of flower makers consisted of a grandmother and three girls, aged eight, 13 and 15. These three children, working with their grandmother, were able to earn between $6 and $7 a week. They began as early as five in the morning, worked till school time, then began work again after school, continuing until late at night. Many children working in the tenements are five to eight years old, and the Child Labor Commission is anxious to do away with this class of labor entirely.

*

THE statement was once made by a famous general that an army is no stronger than its feet, and those who are forced to keep about, while suffering discomfort in those useful members, will appreciate this saying. A housekeeper who must be much on her feet, will find it worth while to remember this. Ill-fitting shoes, and especially old ones with worn soles and crooked heels, lead to endless troubles. The idea that "anything is good enough" for wear around the house is a sad mistake. Proper bathing and rubbing relieve foot troubles, and a careful rubbing down of calluses with manicure sandpaper often prevents troublesome corns. Frequent change of stockings is another help. Sea salt, baking soda and borax are all helpful to tired or aching feet. Often, after a long and busy morning's work, a woman who has no time for actual rest will find her fatigue wonderfully lessened if she can take a foot-bath and change shoes and stockings.

Seen in New York Shops.

THE dealers in lace and embroidery are complaining bitterly of dull trade, due to changes in fashion. Irish lace is quite out of style here, though it is said that Queen Mary's visit to Paris has induced its use there. A great deal of the finest underwear is now made up as lingerie sans garniture, entirely without lace, or is trimmed with Madeira work, directly on the fabric, instead of edgings and insertions. A great many of the most fashionable blouses have no lace or embroidery, also wash dresses. The disappearance of masses of coarse machine-made lace and embroidery certainly shows a refinement of public taste, and we should like it to continue. Manufacturers tell us that there is a great improvement in these machine-made trimmings, many of the better grade being "hand-finished," so that they resemble more closely the "real" laces.

Parasols take many strange shapes this year, some being veritable domes, while others have the spread of a Chinese pagoda; another style is very flat and shallow. The standard style is a moderate-sized rather flat coaching parasol. This is especially pretty in changeable taffeta; the more elaborate ones have shaped, not gathered circular flounces, forming a point at the tip of each rib. More showy are parasols covered with Roman stripes or checks; the latter are often black and white check with a deep satin border of some bright color. Velvet parasols are seen in some shops, very handsome and costly ones, but they seem absurdly incongruous. A striking feature in many new parasols is the length of the handle, 52 inches, which accommodates stick-up hat trimming.

A pretty little touch is given to the white vestee worn with a colored linen gown by sewing on the pearl buttons with a crow-foot of colored silk. Four-hole buttons are used; first the stitches are put across diagonally, then from each side to one hole already used. It is very simple, but gives the effect of a decorated center to the button.

Millinery foliage this year seems to take every color unknown to nature. Even where the flowers copy nature closely, the leaves are often some odd color, such as bronze, light brown, or blue gray. Leaves shading from pale yellow to deep orange were seen on one hat. With the vogue for white hats came pure white foliage; laurel sprays and wreaths, and bunches of "dusty miller," some of these creations resembling quite strongly the decorations of a wedding cake. White chip hats are very often trimmed with flowers or foliage entirely white. A very odd trimming on a sailor hat was a wreath of white leaves at the base of the crown, above this a wreath of yellow roses, and rising above the roses a ruche of orange tulle. A leghorn hat had a wreath of bright orange leaves with a bunch of brown roses at the back, while another had a wreath of yellow leaves and an oddly shaped bow of cobalt blue velvet. Hats of white rice straw are trimmed with pink foliage and roses, while oddest of all was pink roses with Canton blue leaves trimming a white hat. Wreaths of brown foliage are often combined with tiny flowers in bright shades of yellow, blue or pink.

Little handkerchiefs of very sheer linen had a picot edge crocheted over the narrow hem in colored thread, and a little design in colored cross-stitch in the corner. All the work was fairy-like in fineness.

White pique bedspreads printed in colored flowers vary in price from $1.50 up. The handsomer ones, ranging in price from $2 to $5.50, are block-printed in the old-fashioned way. They have borders and center designs of fruit and flowers in bright colors. These bedspreads are offered especially for Summer use in country homes.

Berry Puddings.

Blackberry Pudding.—Wash and drain large plump berries. Butter a drop cake tin or old deep cups and put in berries till half full. Cover with sugar and add a dot of butter about half as large as a small walnut. Cover with the batter given below and bake forty minutes in a moderate oven. Serve with sweetened cream.

Batter.—Beat together two eggs, two small cups of flour, pinch of salt and enough sweet milk to make a batter a trifle thicker than pancake dough. Lastly add two small teaspoons of baking powder. Nearly fill the cups with this mixture and bake.

Huckleberry Pudding.—Wash and drain the berries and place in a pudding dish to the depth of one and one half inch. Sprinkle lightly with flour and add one level tablespoon of butter cut in little bits. Make your batter by beating together two eggs, one cup of sugar, one and one half cups of flour, one and one-half teaspoons of baking powder and sweet milk to make rather a thick batter—not quite so thick as cake dough. Pour over the berries and bake in a steady oven. Over the top when half done put several pieces of butter. Serve with cream.

Mulberry Pudding.—Take two cups of mulberries and one cup of stoned cherries, as the mulberries are rather flat alone. Put in a baking dish and cover with a batter as for blackberry pudding. Omit the butter. Serve with whipped cream.

Red Raspberry Pudding.—Make a biscuit dough by any reliable recipe and roll it rather thin. Put half in the bottom of a buttered baking dish and cover with a one inch layer of crushed red raspberries sweetened to taste. Bake the other half of the dough in another pan and when done place on top of the berry layer. Cut and serve with cream. This is a "mussy" looking pudding, but very good.

Berry Tapioca.—Soak and cook the tapioca allowing as much tapioca as berries. Sweeten to taste and beat well to distribute the sugar. Have ready individual dishes half filled with strawberries, red raspberries or blackberries drained as dry as possible. Cover with the warm tapioca and serve warm or cold with or without whipped cream.

Old-Fashioned Berry Blanc Mange.—Make the blanc mange by any tested recipe and pour into individual cups to harden. Drop cake tins will answer or the little individual fancy tins most housekeepers have. Turn out on little fancy plates and add to each serving two tablespoons of crushed and sweetened berries. Red raspberries are perhaps the best for this with a dash of currant juice to impart a slightly tart flavor.

HILDA RICHMOND.

A Suggestion on Contentment.

WE read many articles in agricultural publications on two subjects, how to interest and keep the boys and girls on the farm, and life in our country towns. What is written on either of these subjects has a tendency to destroy the influence of the other until we are led to feel as Edward Everett Hale says, there has been so much said, and it has been so well said, that it is hardly necessary to say anything more. Yet there is one point that should be emphasized in capital letters, i.e., that we shall never succeed in interesting young people in the farm home, or teach them to love and respect their native town, its people, schools, churches, or public officers by running these things down. No, it is about time, if we would have the coming generation respect and love their surroundings to begin to boom them a little. Older people were never known to interest young people in things, in which they took no interest themselves. This is generally the reason why the boys leave the farm and why many girls often long to when they don't. As the little girl told her mother, they realize that "women have a hard time of it anyway." The older people often seem more discontented and grumble at the farm, and farm life more than the younger ones.

Young people should be taught to love their native town, and its people in their childhood. With some, this love is instinctive; while with others a continued course of grumbling on the part of their elders against everything and everybody in the township, has a strong tendency to alienate their affections, and make them long for new scenes and people of a more interesting mold. They eventually find that the world is the same the world over with the exception of climates, etc. And I will admit that our New England climate has its "drawbacks" but it has compensations as well. "Laugh and the world laughs with you," is as true of country as city. If we love our home and native town we are apt to be interested in it. Enthusiastic parents invariably have enthusiastic children. Unless you take an interest in bettering the conditions of farm life or town affairs you are hardly in a position to grumble at those conditions.

And often those conditions are not as bad as we try to make them appear. Many farmers of today engaged in the struggle for wealth are in the same condition as other people of different professions engaged in the same pursuit. They are unhappy not so much because they have no means of enjoyment, as because they cannot afford to take time to enjoy themselves. There is no place in the world where the environment is more suited to promote happiness than on the farm. Here you may have without an effort, the birds and flowers, green grass and beautiful trees, beautiful landscapes and sunset skies; and if you would command more pleasures, you may easily obtain them, if you will not make the childish mistake of wishing for all things on the land and sea at one and the same time.

Children who have too many pleasures are generally the most discontented, and this is sometimes the case with children of older growth. We must not live only for pleasure, though while doing our duties we may find it. In studying the great text book of nature country people may find not only profit but unlimited pleasure; unlimited because there is always something new to learn. There is no end to this volume and we need never throw it aside. There are no graduates in the study of botany, geology, ornithology, etc. They may be indefinitely pursued, always with interest. These are the pleasures which have been "added unto" the joys of farm life, and are very effective in interesting the boys and girls on the farm where they have been intelligently introduced. ALICE E. PINNEY.

Keeping a Stove Clean.

Will some of THE R. N.-Y. family tell me how to keep the kitchen stove clean where one room has to do duty for two, dining room and kitchen? We have always had two rooms, and I have washed my stove all over, so as to have *clean* pots and pans, and yet prefer a clean washed stove. But since moving here I must put my large cook-stove in the dining room, as the little kitchen is too small. I have the stove polished, but cannot scour the bottoms of the pots and pans every meal, so now I am disgusted with kitchen stove polished. This stove has been washed for 10 years, ever since we have had it, and was always clean if not so good looking. The lids were always red, as there is a continual fire in the stove whenever the weather permits. I thought you might know of a varnish or something that could be used, and would not smell so badly. MRS. W. H. G.

We should like to hear from others as to this problem. Personally, we have never approved of this plan of washing the stove. If it were a galvanized surface it would be different, but it is not; cast iron is not intended for water treatment, and oxidation must result. If the stove is well brushed we do not think that the cooking utensils are badly soiled, unless soft coal or wood is burned, and the soot resulting would soil kettles whether the stove was washed or polished. After 10 years of washing it will be difficult to give the stove a hard polish and we think part of the trouble comes from this, and there will be improvement if the stove takes a better polish. What do other housekeepers say to this problem? Have they tested any varnish that is desirable for a kitchen stove?

The Rural Patterns.

When ordering patterns always give number of patterns and measurements desired. Price of each pattern 10 cents.

8213, Girl's dress. Cut in sizes 10, 12 and 14 years. Size 12 years requires 4¼ yards of 36-inch material with 4½ yards of banding. 8158, Girl's dress. Cut in sizes 6 to 10 years. Size 8 requires 2½ yards of 36-inch material for dress and 1¼ yards any width for bloomers. 8257, Girl's costume. Cut in sizes 10, 12 and

14 years. Size 12 years requires 3¾ yards of 36-inch material with ⅜ yard 27 inches wide for trimming. 8044, Child's undershirt. Cut in sizes 1, 2 and 4 years. Size 2 years requires 1⅛ yards of 36-inch material. 8214, Child's petticoat. Cut in sizes 2, 4 and 6 years. Size 4 years requires 1½ yards of 36-inch material.

7555, Ladies' house jacket with peplum. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅜ yards of 36-inch material. 8103, Ladies' dressing jacket. Cut in sizes 34 to 44 bust measure. Size 38 requires 2¾ yards 36-inch material. 7896, Ladies' house gown. Cut

in sizes 34 to 44 bust measure. Size 38 requires 6 yards of 36-inch material with ½ yard 18 inches for collar and cuffs. 7626, Fancy work aprons. Cut in one size. No. 3 requires ⅞ yard of 36-inch material. 8118, Misses' aprons. Cut in sizes 14, 16 and 18 years. Size 16 requires 3¼ yards of 36-inch material with short sleeves.

MORALLY speaking, disaster and triumph are impostors. The cheers of the moment are not what a man ought to think about, but the verdict of his conscience and the consciences of mankind. —Woodrow Wilson.

Hot Weather Desserts.

FROZEN COFFEE.—Prepare a thick sugar syrup by boiling together a quart of water and two large cupfuls of sugar for fifteen minutes. Skim the syrup carefully, add a large cupful of the strongest black coffee and a tablespoonful of gelatine that has been softened in a little cold water. Cool and strain when the gelatine is dissolved, stir in the stiffly whipped whites of two eggs, and freeze to the consistency of soft snow. Serve in thin, tall glasses, each portion capped with a tablespoonful of sweetened whipped cream.

Raspberry Ice.—Make a syrup of four cupfuls of water and one and two-thirds cupfuls of sugar; boil for 15 minutes. Cool. Add two cupfuls of juice, strained from mashed raspberries through a cheese cloth, and two tablespoonfuls of lemon juice. Freeze.

Maple parfait.—Beat four eggs slightly; pour on slowly one cupful of hot maple syrup. Cook in double boiler, stirring constantly, until mixture coats the spoon. Cool. Add one pint of thick cream beaten until stiff. Mold; pack in ice and salt and let stand three hours.

Frozen Biscuit.—One pint of sweet cream, 24 macaroons, two-thirds of a cupful of pulverized sugar; whip the cream to its utmost consistency, then pulverize and add the macaroons, then the sugar and a scant teaspoonful of vanilla. Pack in a tin pail that has been rinsed with cold water, cover tight and pack in ice and salt. It will be ready to use in five or six hours, and will be found delicious.

Lemon Ginger Sherbet.—Wipe eight lemons thoroughly with a clean, soft cloth and from two of them shave off the very thin yellow peel which contains the flavoring oil, but be careful that you do not get any of the white, bitter part of the rind. Then cut all the lemons in half and press out the juice, strain it. Put four cups of granulated sugar in a saucepan with two quarts of boiling water and boil until clear, skimming off the scum as it forms; then add the lemon juice and strain all through a piece of cheesecloth. Beat the white of an egg until light and foamy, but not stiff, and pour the strained syrup over this; mix well and turn into a freezer; turn until the mixture is stiff; then stir in quarter of a pound of candied ginger sliced thin and let stand a little while before serving.

Peanut Brittie Cream.—Make a quart of vanilla cream by the usual rule. When this is half frozen take out the dasher and add a half pound of peanut brittle or two or three bars of peanut candy put through the meat-chopper; the result is a light brown cream tasting like caramel, with the nuts all through it; it may be served in glasses or put in a brick.

A Miner's Safe.

EVERY year we are asked for methods of keeping food without ice, during hot weather. The following advice was given us some time ago by a reader in Arizona:

The miner's safe has a light wood frame about four feet square and four feet high, running to a peak at the center of the top about six feet from the base. This frame stood on four legs about one and one-half or two feet above the ground. It was finished completely with wire fly-screen, had a shelf and a door. The whole thing was then covered with burlap. It stood in a shed at the rear of the shack and the ground underneath sloped gently toward the canyon below. At the top of the peak was a hose from which water dripped constantly onto the safe, and was absorbed by the burlap. The evaporation kept meat and other articles cool in the warmest weather and the extra water drained away. The water was piped from the mine above. These safes are used a great deal in the West by large contractors who have large numbers of men at work far away from cities and shipping points and who have to board their help.

There is also used a great deal in Southern California, a safe known as a "cool closet" or cupboard. It is the same as any other small cupboard, built in the house, but has no floor nor top. These are made of wire fly-screen. It has movable shelves of screen. The air circulates in through the cellar and out through the top through ventilators set in the floor or walls for the purpose. Each apartment in the large apartment houses of Los Angeles has its own cooling closet. Of course the screen shelves are stayed with slots and are movable. The door to this closet is solid.

Country Picnics.

COUNTRY picnics when held at the home of some one of a neighborhood usually mean a prodigious amount of work to be done by the receiving family, first in borrowing from the neighbors, dishes, plates, knives, forks, spoons, etc.; next in more or less cooking and in waiting on the assembled guests; and lastly the washing up of dishes and returning them to their respective owners. Let me tell you the way we do in our suburban neighborhood.

So far as the eating is concerned, the word is passed that a meeting will be held at neighbor Brown's, Jones' or Robinson's, as the case may be, and at the appointed time will be seen the members of the different families wending their way toward the designated home—each family bearing its usual supply of eatables for such an occasion, which have been previously cooked and prepared in each individual home, and also for every person—who expects to partake of the good things—is carried from each respective time home a generous-sized flat tin pan—usually a 12 to 14-inch milkpan—with knife, fork, spoon, and tea or coffee cup, and a plate may be added if wished. When the repast is served, all eatables are set on tables, pies and cake properly cut, etc., and each visitor with individual pan forms into line around the table and helps himself or herself to the viands, placing same in the pan and then carrying it to the place chosen for eating. Generally during Summer months we quickly arrange ourselves in groups on the grass under the trees, etc.

Hot coffee, lemonade or other suitable drinks are usually supplied by the host. After the eating each family gathers up their respective lot of pans and dishes and carries them away, as they are, washing them at home. In this way the work as well as the play becomes a community affair and no one family is burdened with a lot of hard work in order that the neighbors may have a good time. Just try it and you will very soon "get the habit." J. B. BARLOW.

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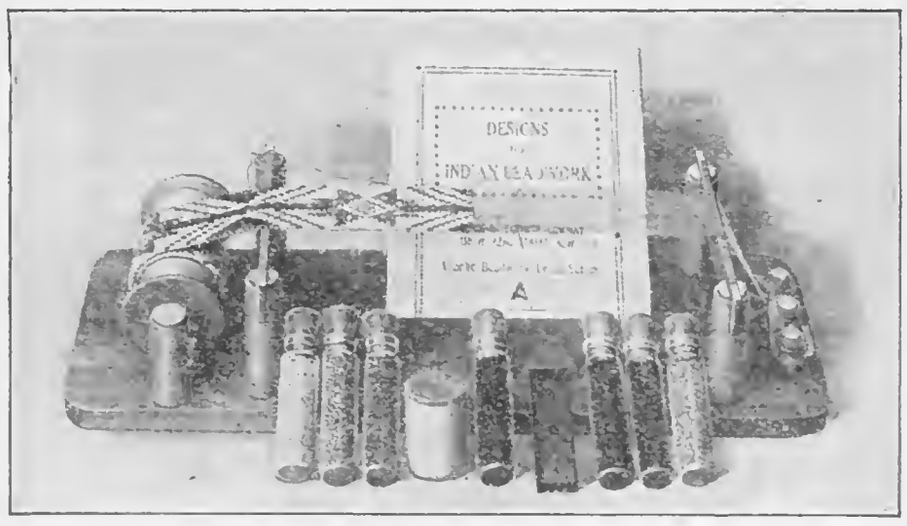

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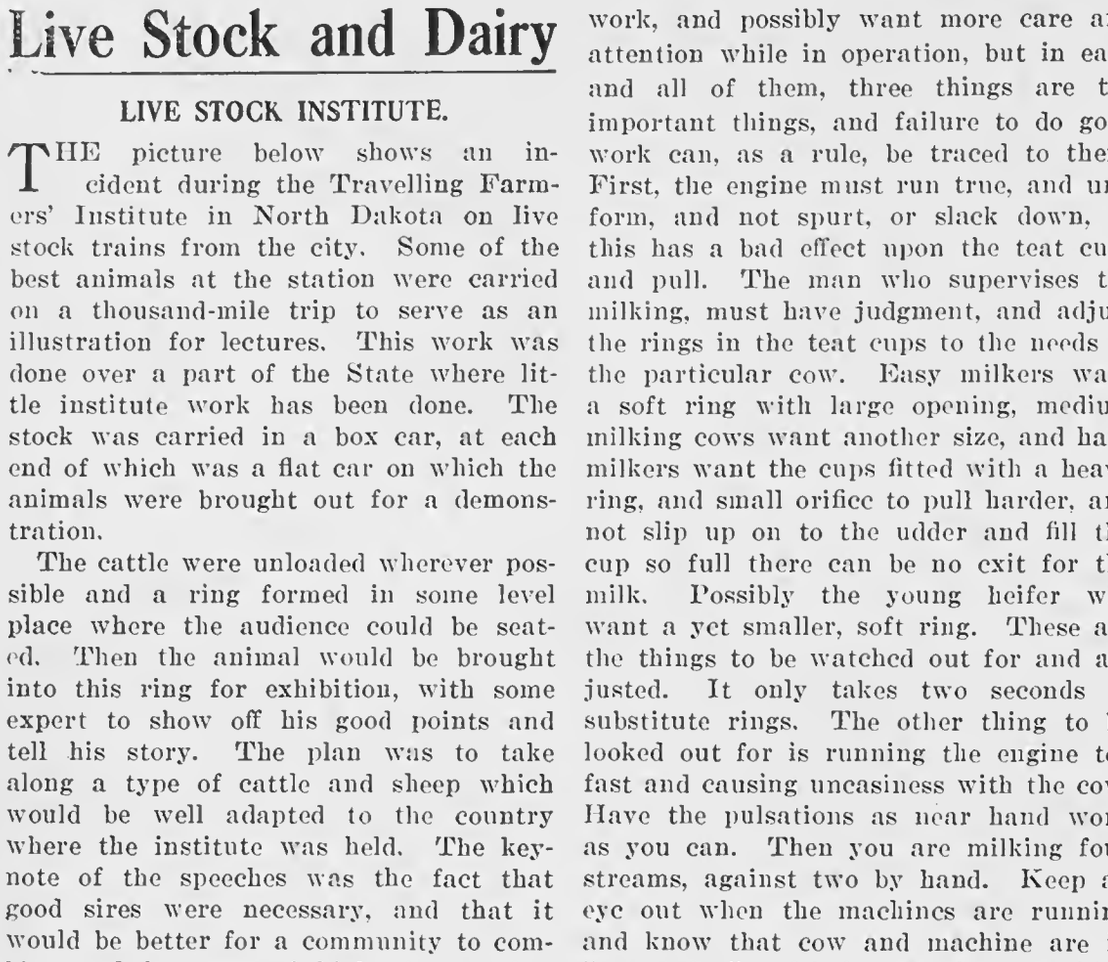
Live Stock and Dairy

LIVE STOCK INSTITUTE.

THE picture below shows an incident during the Travelling Farmers' Institute in North Dakota on live stock trains from the city. Some of the best animals at the station were carried on a thousand-mile trip to serve as an illustration for lectures. This work was done over a part of the State where little institute work has been done. The stock was carried in a box car, at each end of which was a flat car on which the animals were brought out for a demonstration.

The cattle were unloaded wherever possible and a ring formed in some level place where the audience could be seated. Then the animal would be brought into this ring for exhibition, with some expert to show off his good points and tell his story. The plan was to take along a type of cattle and sheep which would be well adapted to the country where the institute was held. The keynote of the speeches was the fact that good sires were necessary, and that it would be better for a community to combine and buy one of high class rather than take the same amount of money and



BEEF CATTLE AT A DAKOTA R. R. INSTITUTE.

purchase three or four of inferior breeding. The interest in pure live stock throughout North Dakota is growing constantly. After a long period of growing wheat and flax a Dakota farmer needs some form of live-stock husbandry for the sake of the soil: For a long time it was claimed that corn could not be successfully grown in North Dakota. Now varieties have been worked out which will ripen during the short season and hardy strains of Alfalfa can also be grown in the State. Thus with corn and Alfalfa, the live stock business becomes promising and the station is doing good work in carrying these facts up and out to the farmers.

THAT MILKING MACHINE.

I HAVE little new to add to a former article on page 418. The machines are still milking as in the past, and something like 1,000 new machines were set up in Northern Ohio during March. The sales indicate that many dairymen are seeking the once supposed impossible and now finding it not so impossible as it then appeared. For the last week I have been interviewing by 'phone and word o' mouth, the farmers who are using these machines daily, and my first question is "What are the weak points in the milking machine you use?" and the gist of the replies is, "The man who runs the machine." This must be taken into consideration, whatever kind or make of machine used. While not complicated, they are of necessity of fine adjustment, and the machine must be kept in order, its parts working smoothly. Men have all sorts of luck running farm machinery. Some men cannot run a farm wagon successfully. A milking machine will not go to the lot, get the cows, start itself, and do the operation of milking without some supervision and knowing that everything is working smoothly.

Some machines have many more parts than others, a different plan of doing the work, and possibly want more care and attention while in operation, but in each and all of them, three things are the important things, and failure to do good work can, as a rule, be traced to them. First, the engine must run true, and uniform, and not spurt, or slack down, as this has a bad effect upon the teat cups and pull. The man who supervises the milking, must have judgment, and adjust the rings in the teat cups to the needs of the particular cow. Easy milkers want a soft ring with large opening, medium milking cows want another size, and hard milkers want the cups fitted with a heavy ring, and small orifice to pull harder, and not slip up on to the udder and fill the cup so full there can be no exit for the milk. Possibly the young heifer will want a yet smaller, soft ring. These are the things to be watched out for and adjusted. It only takes two seconds to substitute rings. The other thing to be looked out for is running the engine too fast and causing uneasiness with the cow. Have the pulsations as near hand work as you can. Then you are milking four streams, against two by hand. Keep an eye out when the machines are running and know that cow and machine are in "sympathy," and before you let a machine loose, feel of the udder and see if it is slack, and if not, handle it a little and let the machine pull a half moment longer. I find that some men after milking go down the line with a pail and see if all the cows are clean milked, and now and then find a cow with a litle milk, possibly a pint, still back. Other men rely wholly upon the feeling of the udder when removing the cups. Now and then a cow will not give down, and hand milking does not always get it at that time. One cow in a hundred, possibly, will not become reconciled to the machine and has to be hand milked.

"You have to look sharp all the time," I said to a milker. "Yes, why shouldn't I? This four-milker is milking against six men. It pays me to look sharp. It is saving me money." This man was milking 36 cows alone, night and morning, and Neighbor Kent's two boys are milking over 50 cows.

Are these machine-milked cows holding out in milk yield? I was told by a strange dairyman that they were milking up to the freshening period, when all cows are dried, fully as well as they did in hand milking days and the yearly yields are as great. It is better to milk a heifer with the machine before the calf ever sucks. The machine then is her calf from the start. There is a belief that cows are better started in when fresh rather than farther along in lactation.

Are the machines short-lived? Not if taken care of, and kept in adjustment. There is very little wear. That all comes of cup rings, and pump packing and where vacuum pails and the like are used, see that the packing does not leak air. Otherwise a machine should last for years, whatever the make of machine. Do the cows break in easy to milk? As a rule yes. A cow always hand milked at the front may be disturbed some at the start to have the machine attached from the other side as must be when two machines are run in company. A kicker as a rule submits at once without protest or kick to the operation of the milker. JOHN GOULD.

The Law About Milk Cans.

I ENCLOSE letter from a Mr. Walsh, and was this morning served with summons made returnable in 20 days in Supreme Court of Kings County, N. Y. I do not understand just what the charge is, but believe that Walsh visits milk producers, and, if foreign cans are found, serves notice that they are liable to a fine. I understand that he gets his living from the fines or fees. What is the law about this? READER.
New York.

Section 270 to 274 of the General Business Law of New York provides that no person shall, without the consent of owner, shipper or his agent, use, sell, dispose of or traffic in any milk can which has the name or initial of the owner stamped, marked or fastened on it. If one does use, etc., any such can, it is presumptive evidence that its use is unlawful. The can may be taken posession of by the owner or his agent wherever found, and a violation subjects the offender to a forfeit of $50 for every violation. The action may be brought in the name of any agent without joining the owner of the cans.

These provisions appear to give the owner of marked bottles authority to follow the bottles and bring action in a county where the owner lives, which may be far from the place where the bottles are found.

The intent of the law is to prevent milk cans, which are expensive property, being diverted from their owners. There are a number of inspectors to look after this work. Mr. Walsh being one, and at least part of their pay comes from the fines collected. Possession with consent of previous owner is lawful, so any man who buys, trades or has milk cans bearing another man's initials given him should be sure to get written consent of the previous owner specifying the identical cans. This protects him against suit or annoyance.

Strong Butter.

WILL you give me information about separator butter? It gets strong within two weeks. G. M.
Williamson, N. Y.

There are several things which might cause butter to become strong or rancid. In the first place, the milk must be kept as clean and free from bacteria as possible until it goes into the separator. There is considerable probability, especially in warm weather, that the milk pails may carry bacteria. Utensils containing milk need more than an ordinary amount of scrubbing in order to keep them clean. Milk will dry into the seams and rough places unless the greatest care is used to prevent it, and it is sure to cause trouble. Thorough scalding of all milk utensils is advisable, but a good scouring powder, with plenty of elbow grease is most esential. The same is true of the separator. All separators have plenty of places for milk to collect, and in some separators there are lots of places hard to get at. The cream should be cooled immediately after separation, and not mixed with older cream until cold.

After churning it is necessary to wash the buttermilk from the butter quite completely or the buttermilk will soon develop objectionable flavors. In warm weather the butter is apt to "come soft," and then it is difficult to remove the buttermilk completely. Churning should be at a sufficiently low temperature so that the butter will come in shot-like granules, and when in this condition should be thoroughly washed with cold water. Then, of course, the butter should be kept in a place where it cannot absorb strong odors from outside. C. L. M.

Fly Blankets for Cows.

I AM informed that enterprising dairymen put fly blankets on their cows during the day while on pasture to spare them the annoyance of flies. Is this done from a humanitarian standpoint for the comfort of the cows, or from the standpoint of increased product?
Flemington, N. J. M. N. G.

Mostly because the cows do better when thus protected. Some dairymen do consider comfort first, but most of them are after more milk, and they find that the protected cow does better. This plan is sometimes tried with calves and young stock, and it pays.

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NEW FADS IN BREEDING.

HERE is something many of us are doing year after year, and we think we are on the right track. One dairyman in the Western Reserve in Ohio says that a number of his neighbors bred up good grade Holsteins for eight or 10 years. Their herds were good milk producers, did a little better than 3 per cent., but now those farmers are after the bonus offered for high-testing milk, and have turned in Jersey bulls in their herds. This breeder has been preaching to his farmer friends the idea of sticking to their breed and securing a purebred bull from high-testing ancestry. He tells his neighbors that they are going to be right back where they were a decade ago, when they try breeding an inferior grade Jersey bull, a yearling, on a large Holstein grade cow. He says, "When you feel like trying this out, just drive until you find the man who has, or look through your farm papers stacked away in the garret for years back, and you will get good, sensible advice against the idea. "I tried it," he remarked, "and seven chances out of 10 the inferior abilities of both breeds predominated, the small volume of the Jersey and the light test of the grade Holstein. I did have one which gave a creditable mess for a Holstein and tested 5 per cent. Don't try to break against the engine under high speed, or you are going to skid, which is true in breeding."

W. J.

CERTIFIED MILK PRODUCERS.

THE annual meeting of the Certified Milk Producers of America, held at the Copley Plaza Hotel, in Boston, June 25 and 26, was not the success it should have been, due to several causes, not the least of which was lack of knowledge of the affair by the people of Boston who are interested in improving the city's supply and improving conditions generally. Why the meeting was held in Boston, if not to boost the business here, I do not know. Certainly to have all these members from all over the country come to Boston instead of meeting in some other city in the centre of the country, which would be handier to reach than Boston, is something I do not understand. Boston is not a certified milk city, comparatively speaking, as I believe only about one per cent. of Boston's supply is in this class, although I believe much milk very near this class, and believed by many to be just as safe and good in every way, is sold here, produced by a system along the same lines, but perhaps not santioned or guaranteed by a medical association or commission as certified milk must be. At the same time thoroughly competent men, many of them doctors, chemical experts or bacteriologists, keep a careful oversight of the production of the same, and certainly the product is high-class, safe milk. Other producers also use a careful system of sanitation, test the cows—in fact, keep only tested cows—and have other arrangements according, and receive high prices for their product; yet they are not in the certified class, and perhaps do not care to be. It is claimed, and probably true, that Boston has as good and safe a milk supply as any other large city, and plenty of high-class milk to supply all who demand such and are willing to pay the price.

The various addresses were very good, and were along the right lines, but as no Boston people were there to hear them, or Massachusetts producers, either, for that matter, it looked to me as if the effort was wasted—certainly to a large extent—on instructing the public to use this class of milk and inducing a larger production and demand for same. The importance of closer relations between the certified milk producers and the medical milk commissions, and necessity of uniform standards, methods and requirements was thoroughly discussed, first by Dr. Pearson, of Iowa, and later by the members, and much difference of opinion was brought out. All believed this was very important, but how to bring it about was a hard question. The producers seemed to believe they should have equal voice in these matters, or if anything, the more important part in moulding these requirements, etc.

S. L. Stewart, of Newburgh, N. Y., gave the following advice to produce milk low in bacteria: First dry grooming, washing by disinfectant of flanks and other parts of cow, rest half hour, wash udder with germicide, then wash again with pure water, dry with towel, spray barn with clean water to lay dust. Wash and sterilize hands before milking, handle and strain each cow's milk separate, and use clean cheesecloth for each pail of milk. Take samples directly after straining through cloth. Send milk to milkroom by trolley. Then men wash after milking each cow. Only 50 to 60 bacteria per cubic centimeter should result by following along these lines.

A. E. P.

N. E. MILK CONDITION.

A MOVEMENT started and pushed by the Boston Chamber of Commerce through its agricultural committee, assisted by the U. S. Department of Agriculture, the departments of the several New England States, and the State Granges of the same, is on foot to investigate the production of milk for Boston market, the transportation of milk, the handling of milk and the consumption of milk for the same; to find if possible a remedy which will improve conditions along the line, and put this important industry back where it belongs at the head of all industries and on a paying basis for the milk producers of this market and in such shape that it will be a paying proposition for dairy farms now idle to restock and reproduce the needed supply of fresh milk and other dairy products and also beef cattle for the needs of our market. As one of the speakers at the meeting said if the shoe industry of New England were in such shape as the milk business appears to be, a howl would be heard that would awake the Nation. We must wake up to the importance of this milk industry as above even the shoe industry and if we cannot have this in shape to be proud of in 10 years' time we should be ashamed of ourselves and our State.

The plan sketched by the Chamber and accepted by the conference is to have hearings in each State by the Agricultural and Grange heads, gather all facts possible and work out a remedy to improve conditions all along the line; to find out as nearly as possible the exact cost of producing, hauling and handling milk—in short to go into all phases of the business thoroughly. Some of the facts brought out at this meeting will help open people's eyes and others will necessarily follow.

One of the U. S. Department men who has been working on dairy conditions in New England lately offered the following: A section containing 266 farms was examined and the following results of profit were obtained, that is the owner's profit after expenses were deducted. On 118 of these farms dairying was conducted and average profit to owner was $256 per year. On 40 of them poultry was the feature and $479 resulted as owner's profit. On nine which conducted a fruit business $1,150 profit to the owner resulted. On 99 farms where general farming was carried on $300 was the profit resulting. Dairying stands at the bottom of the list. I have stated the above as profits to the owner, it was rather the earnings and perhaps not all profit.

Another fact brought out was Connecticut is the only State of the six having as many cows today as five years ago. The average production per cow in New Hampshire is 6,000 pounds; cost of production 4 9/10 cents per quart. The average profit on a 4,800 in New Hampshire is $16.44. Vermont is the largest producing State of the six. This State produces more butter than all the rest and also has a larger percentage of milk producers than any of the others. Also has large percentage of dairies testing 60 per cent. Too many low producing cows are kept, it is true, but these can not be eliminated at this time as not nearly enough 8,000-pound cows are available to supply the milk for this market and the 4,000-pound cow must be used until a supply of the former can be raised to supply our demands.

We believe the proper authorities are taking these matters up, that is, the ones who will get results if profitable results to all interested parties can be got. The Chamber in accepting and placing the dairy business of New England on an equally important basis as the shoe business and other large industries of New England is a step ahead. It is putting an important industry where it belongs and good must come from this placing. At the same time farmers and producers must not expect all important results unless they take hold themselves and do things. In order to do a thing well do it yourself, applies in this case and we must take advantage of the help offered us in this case and do a lot ourselves. Our first duty is to organize and work together and with the help now offered and with conditions ripe to push forward and reap a reward and regain much of the lost ground. We are going to accept this help in the spirit it is offered and do our share in this good work. I am sure we have a secretary who is working hard for us. Let us back him to the limit and we can come into our own.

A. E. P.

DAIRYING IN MADISON CO., N. Y.

THE dairy conditions in this part of the country have changed greatly in the last few years, the old cheese factories, where butter and cream cheese were manufactured, are a thing of the past hardly any being left in our county. The milk shipping stations and Jew product factory, where butter and cream cheese quently the New York City health inspectors have visited us and their inspections and scorings have caused a great deal of dissatisfaction, especially among the better classes of dairymen. Many farms on which large dairies were formerly kept have only milch cows enough to supply the family. The high prices of dairy cattle have taken hundreds of cows from this part of the country in the last three years, the past year being the record breaker in shipping them out to other States. Our pastures are very lightly stocked and the feed is abundant and likely to continue so. Many of our farms have been sold to Western people and they are not practical dairymen like the men brought up on the dairy farms of the East and do not understand the science of making bossy pour out the milk. Regarding the price and the marketing of milk and its products I am not posted, but hear a great deal of complaint about the high prices of feed and the low price of milk. The kinds of cows kept in this section generally are grade Holsteins. Our farmers have been using mostly purebred sires for many years. Madison County has produced some of the best purebred Holstein cattle of the times and they have been shipped into many other States. We now have a Holstein breeders' association with sale stables at Earlville, Madison County, where annual and semi-annual sales will be held. We also have other sales in the county.

F. D. H.

New York.

FLY SPRAYING PAYS.—A farmer in Michigan said he leaned over his meadow fence and watched one of the liveliest races he ever saw between his yearly bull and one of his oldest cows. They chased round and round the field, and he figured on getting off easy that night when it came to milk that cow. He said it was nothing but flies which was worrying the stock, and the remainder of his herd were thrashing through underbrush in self-defense on the opposite side of the field. "Well," he said, "I know a lot of the good dairymen spray with fly dope, but I thought it wouldn't pay on my scrubs to give them a spraying each morning; but I tried it out, and it does pay. It only takes a few minutes to do the work, and the cattle are comfortable all day, and even at night when they are brought to the barn for milking I find there is little or no trouble arising from their fighting flies while I milk. I believe, although I have not reduced the observation to figures, that the cows give more than enough to pay for the spray and the time used in applying it. Besides, they are kept in better condition."

W. J.

DOGS

COLLIE PUPS—the intelligent kind. Also Bloodhounds. NELSON'S, Grove City, Pa.

THOROUGHBRED COLLIE PUPS—COW-DOG STRAIN Males, $4; Females $3. FRED CHENEY, GUILFORD, N. Y.

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Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

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YOUNG REGISTERED HOLSTEIN BULL 127791, now ready for sale. Well bred, handsome individual, even black and white. $135. We have two others more fashionably bredand higher priced. MOHEGAN FARM, Hudson Valley Headquarters for Purebred Stock. CHAS. H. BAKER, Owner, Peekskill, New York

Heart's Delight Farm DUTCHLAND COLANTHA SIR CHANGELING

Born August 17th, 1908

Sire: Colantha Johanna Lad—62 A R O daughters Dam: Changeling (29.23 lbs. butter in 7 days.) Average of dam and sire's dam 32.23 lbs. butter in 7 days. Will sell or exchange him for pure bred heifers or grade dairy cows. Our reason for selling is we have a number of his daughters.

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100 cows served to calve in August, September and October, all served to registered bulls. STRICTLY DAIRY TYPE AND GUARANTEED. 60 yearling heifers. 40 two-year old heifers all sired by pure blooded bulls from high producing dams. 10 extra well-bred registered bulls, PONTIAC BREEDING, from A. R. O. DAMS. If you are looking for extra good dairy cows, visit the EAST RIVER HOLSTEINS. Special price for the next 30 days. WE TUBERCULIN TEST. JOHN B. WEBSTER, Dept. Y, Cortland, N. Y. Bell Phone 14. F.5.

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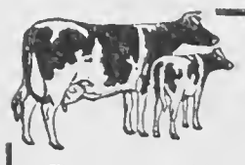

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Woodlynn Farm Berkshires Choice boars old enough for service. Also 8 weeks-old pigs, both sexes. Good breeding. JOHN W. COOPER, PINEVILLE, PA.

Springbank Herd—Big Berkshires I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs. J. E. WATSON, Proprietor, Marbledale, Ct.

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We have fifteen fine boars for sale, sired by Sepurbus, 136000 and Rivals Emblem 167700, the great sires of Gregory Farm, White Hall, Ill., the home of the famous Masterpiece. These boars are from seven to twelve months of age, are the heighth of breeding and type. Here is a fine chance to improve your herd. Write for prices and descriptions.

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Rural New-Yorker, 333 W. 30th St., New York

The Henyard.

"Swat the Rooster."

THIS was the advice disseminated all over the State of Missouri by the State Poultry Experiment Station and June 6 was set as the proper date to perform the act. Director Quisenberry of the Station reports that practically all of the buyers and wholesale dealers in eggs and poultry coöperated with the Station in this work, with the result that the estimated number of roosters killed in that week in the State of Missouri was over a quarter of a million. These 250,000 male birds killed by the farmers on "Rooster Day" mean an immense saving to the farmers of that State who produce eggs for market. Practically all the hatching for the season is now finished, and the male birds consume food and serve no useful purpose. But the saving of the food they would consume is a comparatively small matter; the great saving is in the condition of eggs that reach the eastern markets. It is estimated by various authorities that this saving for the State of Missouri alone will be from one million to three million dollars. In eggs that have been fertilized by the male bird it is almost impossible under ordinary conditions to keep the chick germ from developing more or less in hot weather. Later this germ dies, and we have the "rots and spots" so often referred to in the New York market.

Director Quisenberry states that he has some eggs on his desk that are over a year old. They have never decayed; simply dried up, by evaporation through the shell. What an immense saving would be made if every State that produced poultry would follow the example of Missouri. There is another feature worth considering too; the farmer who has had no male birds all Summer and Winter will be more likely to buy well-bred males of some good laying strain in the Spring, and thus increase the laying capacity of his flock, and also avoid the ills of inbreeding.

The report of the egg-laying contest in Missouri for the month of May shows 20,418 eggs laid, an average of about 20 eggs for each hen in the contest. The purebred hens in this contest, coming from all parts of the world, have averaged in six months about 15 eggs more than the ordinary farm hens lay in a year. The highest pen average has been made by the English White Leghorns, 133 eggs per hen, in six months. The English pen also broke the record for May by laying exactly the number they did in April, viz., 257. Three hens laid every day in May, 31 eggs in 31 days. They are No. 2 of Barron's White Leghorns; No. 592 of B. F. W. Thorpe's Barred Rocks, and No. 1009 of the Linfield Poultry Farm, New Zealand. This was a White Leghorn. The pen records of the different countries is as follows:

S. C. White Leghorns, best English record, 1,330 eggs; S. C. Reds, best American record, 1,152 eggs; S. C. Reds, best Missouri record, 1,152 eggs; S. C. White Leghorns, best Vancouver Island record, 980 eggs; White Wyandottes, best Ontario, Canada, record, 949 eggs; S. C. White Leghorns, best New Zealand record, 942 eggs; S. C. White Leghorns, best British Columbia record, 904 eggs; S. C. White Leghorns, best Australian record, 844 eggs; S. C. White Leghorns, best South African record, 797 eggs.

In the contest just closed in New Zealand the best pen of six pullets averaged 278 eggs each. They do not trap-nest; they give the pen record only.

GEO. A. COSGROVE.

Enlarging Henhouse.

I HAVE hatched out about 600 White Leghorns in incubators, ages range from 10 days to eight weeks; 450 of these I have in a house 10x30 feet with shed roof seven feet high front, five feet back, one square foot muslin and one square foot glass for each 10 square feet floor space. These 450 are four to eight weeks old and have open hopper before them containing a commercial scratch food and a dry mash consisting of 50 pounds bran, 50 pounds wheat middlings, 50 pounds cornmeal, 25 pounds meat scrap. They also have sour milk before them at all times. All are on large free range, and from appearances I shall have at least 400 pullets to keep for layers this Fall and Winter. How much floor space shall I require for this number, the increase to be added right on the present house and to be of the same relative dimensions? Are my muslin and glass proportions correct? Should the house when completed be partitioned, or can I safely house 400 or 450 together? Is my feeding method correct or what improvements would you suggest up to the time they attain their growth? They seem to thrive excellently on it, the larger ones crowing at seven weeks and weighing about one pound. Hatches averaged only 60% but losses only 7½% to date. What are the feeding values of the curds and whey in sour milk? I notice that the chicks will gorge themselves with the curd parts if the whey is strained off but being ignorant of its relative feeding values I have kept it stirred up but they would consume double the amount if strained. This is my first experience in chickens and I have practically taken all my information from your columns. I wish to endorse the sour milk (lactic acid) theory for white diarrhœa. I was of course compelled to purchase all my eggs, and one lot of 100 were badly infected, but having read the symptoms I immediately recognized it and filled the little chicks up twice daily with sour milk, using an eye dropper. Of 58 hatched I lost 17, but did not start treatment until they were four days old. Another lot of 124 I lost but one and they are now four weeks old, but these I treated immediately on removal from incubator and twice daily until they began to eat lots of it themselves. I have no doubt, however, that if treated as advised in a recent issue of THE R. N.-Y. losses could be reduced to a minimum. C. B. H.

Pattersonville, N. Y.

Your results in artificial hatching and rearing have been excellent, and there is nothing to criticise in your methods of feeding. The same mash moistened with skim-milk and fed once or twice daily, in addition to keeping it, dry, before them would hasten the development of the chicks if that seemed advisable; they will do well, however, on the dry mash alone. A flock of my own being fed in the same way are doing splendidly, though a smaller flock that is getting milk moistened mash twice daily is outstripping them. It is a question, though, whether the more rapid development is of any particular advantage, except in the case of late hatched chicks. Whey has about one half the feeding value of whole skimmed milk, containing most of the carbohydrates but practically none of the protein and fat. Where the supply is at all limited, I should feed whey and curds together. Chicks on free range with a pan of sour milk and an open hopper of dry mash constantly before them will eat a surprising amount of the latter.

Your new house may be in one compartment or divided, as you prefer. There is no reason why 500 fowls may not well run together if they have room enough, from three to four square feet of floor space per fowl. I would not build 10 feet deep; sixteen to twenty is better in every way and more economical. The more nearly square a building of given floor space, the less material required for the walls. A deep house with open front, with or without muslin curtains, is superior to a narrow one, and cheaper to build. Your results while feeding sour milk would seem to confirm the growing favorable impression of its value. M. B. D.

Poor Egg Yield.

WE have about 50 chickens, Plymouth Rock, and only get about five to seven eggs each day. They are from a good laying strain and did well for a while. We feed them all they can eat, but to no effect. L. W. H.

Iowa.

Without knowing anything about the methods of care and feeding used, it is difficult to suggest any reasons for the poor performance of a flock. They may be fed all that they will eat and yet not have a suitable ration for egg production. Their food should consist of mixed whole grains, not corn alone, and a mash of mixed ground grains, fed either wet or dry; to which should be added some animal product like meat meal, beef scrap, cut bone or skim milk. The large breeds, particularly, should be made to exercise, either by feeding their grain in deep litter or by being given free range; they should also have crushed oyster shells and grit, as well as fresh water, always before them. Some care needs to be taken that they be not overfed and allowed to become excessively fat and sluggish. M. B. D.

Early Moulting.

I HAVE about 800 Leghorn layers in one of the Corning type of houses. My hens have laid heavily all of the season, giving a 70% yield for several weeks. Just now and within the past 15 days they have fallen off to less than a 50% yield. I have 40 setters or over, shut up and a number do not keep to the nest permanently, but go clucking around. Also, and here is where I wish information, perhaps as many as 150 of the hens are molting. Is not this too early, or is it as it should be? Is it a good or bad thing? What effect will it have upon the Fall laying? C. E. S.

Pennsylvania.

Observations at the Cornell Agricultural Experiment Station have convinced the authorities there that the early molting fowls should be discarded as unprofitable, it being an indication of lack of sustained laying power. Such hens are apt to lay a few eggs during the natural reproductive season and then go into molt with a cessation of production. My advice would be to cull these out and dispose of them lest their sleek appearance in the Fall when the really good layers and late molters are ragged should lead to their retention as breeders. M. B. D.

White Diarrhœa.

IS there any remedy for white diarrhœa? I keep losing hens with it.

Maine. A. R. BODGE.

Questions of this kind are almost impossible to answer, without seeing the dead chickens, examining the ovaries and knowing something about the plant. I have never had any experience with old hens dying from this disease, but have been told by one of our State experts that hens do at times die of white diarrhœa. The only suggestion I can make is for Mr. Bodge to send to Storrs Agricultural Experiment Station, Storrs, Conn., for Bulletin No. 77, in which there is a very fine cut of an infected and normal ovary; cut open and examine the ovaries of a few dead hens, or send a few ovaries to some experiment station for a bacteriological examination; then he will know if he has white diarrhœa or some other trouble. As you know, there is no cure for hens that are affected at present.

EDWARD S. PARSONS.

A Lice Powder.

HEREWITH I enclose a sample package of "Absana," represented as the best possible "lice powder" on poultry; the price being 25 cents for 2½ pounds. M.

This material appears, from an examination, to be much the same thing as the Cornell lice powder. Here is the formula for making that powder, which costs about five cents a pound:

One-fourth pint of crude carbolic acid, mixed with three-fourths pint gasoline is thoroughly stirred into 2½ pounds plaster of paris. The whole is forced through a sieve to break up the lumps. It is then allowed to dry in the air and when dry is tightly bottled. The stock mixture remains effective indefinitely. To apply this powder, make nail holes in the top of a tin can and use the can as a shaker. The fowl should be held by the legs with its head down.

Chicks Poisoned by Salt.

HAVING recently lost a number of chickens from eating a mixture of corn starch and salt used for making beads, I would like to know if there is anything that can be done to save them, if the like should happen again. The first died in three hours after eating the mixture, and some lived two days and then died. Most of them died within 12 hours after eating. H. S. J.

Ohio.

In this, as in the case of having eaten any poisonous material, the proper remedy would be to administer a quickly acting cathartic to flush the deleterious matter from the intestines. Two teaspoonfuls of castor oil, given as soon as it became known that a considerable quantity of salt had been eaten, would probably be as efficient as anything. When sufficient poison of any kind has been absorbed from the digestive tract to cause death a cathartic would, of course, do no good, but given sufficiently early, it will save many cases. M. B. D.

A Louse Exterminator.

NOT long ago I received the circular of a "louse exterminator" for which great things are claimed. The price is $2.25 per pound. It has the appearance, to me, of being nothing more than the ordinary blue ointment or mercurial ointment, with a little red coloring matter to disguise it. They claim in their circular that one application of this the size of a pea, applied to the part directly below the vent will rid the bird of lice and keep them entirely free for six months. Last Summer I procured a 33⅓ per cent. solution of mercurial ointment and mixed it half and half with vaseline and applied it to some very lousy hens, and up to date they are entirely free from lice. I also applied it to my pullets before sending them to the contest, and while at Storrs sometime ago, looked my birds over and found them entirely free from body lice.

I have no doubt the claims are correct and that the salve sent out at $2.25 per pound will do what is claimed for it. However, I buy the blue ointment in five-pound lots at 50 cents per pound, and mix a pound of it with a pound of vaseline at 10 cents per pound, making two pounds cost 60 cents or one pound 30 cents. All of the vermin in the poultry business are not on the poultry; some of them are on the poultrymen, and while blue ointment is an admirable eradicator of vermin from the hen, THE R. N.-Y. is equally as good an eradicator of the vermin from the poultrymen.

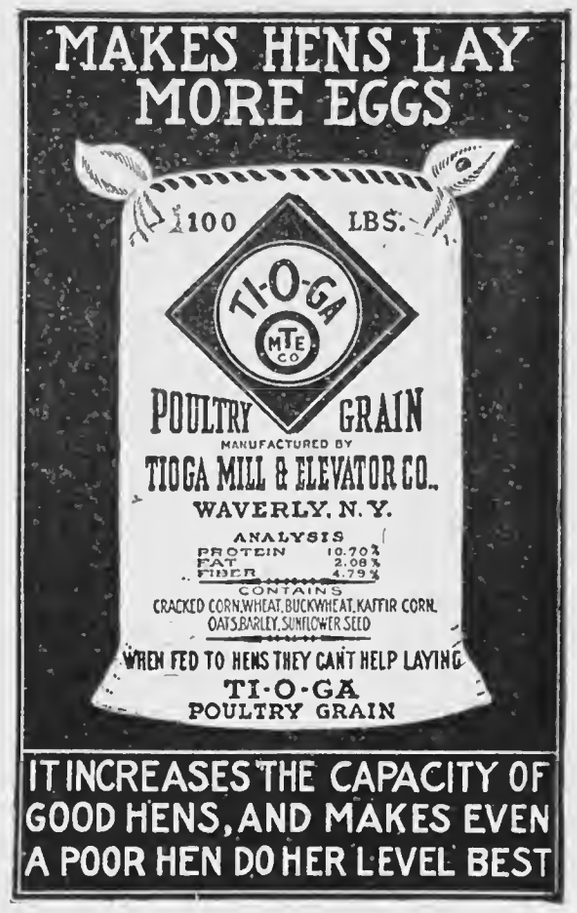
FRED'K M. PEASLEY.

Chicks Eating Droppings.

DO you know of anything to stop chicks from eating their droppings? The chicks are S. C. White Leghorns, two months old, and are fed growing mash and beef scrap mixed together with oil meal and bone meal; have plenty of green food thrown to them, also grit; sour milk twice a week and fresh water at all times. W. S. Y.

New York.

With plenty of litter on the floor of the brooders I have never known chicks to eat enough of their droppings to cause any trouble, though they will pick at them, more or less. I can only suggest that you use plenty of litter and give the chicks as much outdoor range as possible. Close confinement conduces to vicious habits of all kinds, many of which could be avoided if the chicks were given more liberty. M. B. D.



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26

The Henyard.

THE EGG-LAYING CONTEST.

JULY 3 ends the thirty-fifth week of the contest. Egg production holds up well, 3,143 eggs having been laid during the week, which is only two eggs less than the previous week.

A new high score was made this week, the English White Leghorns laying 63 eggs. The record is 6-7-7-6-6-6-5-7-6-6 and one egg laid on the floor. These birds did not do very well on the start, and I had a number of letters inquiring, "What is the matter with Barron's Leghorns this year." I wrote Mr. Barron about it, and his reply was, "Those birds are bred right, and they will come along all right." I was much impressed with his confidence in the ultimate results of his breeding; and the way they have been "coming along" lately shows that the confidence was warranted.

One of the "experimental pens" from Storrs Agricultural Station takes second place with a score of 56. Glenview Poultry Farm is third with a record of 53, and Branford Farm fourth with a score of 52. All the above are White Leghorns. Three pens laid 51 each, and five pens laid 50.

The week's record follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	43	899
Frank L. Tuttle, Massachusetts	39	993
Waveny Farm, Connecticut	40	914
J. J. Francais, New York	31	1,126
White P. Rocks.		
Albert T. Lenzen, Massachusetts	51	982
F. H. Benton, Connecticut	43	1,027
Storrs Agr. Station, Connecticut	43	823
Storrs Agr. Station, Connecticut	32	858
Storrs Agr. Station, Connecticut	37	994
Storrs Agr. Station, Connecticut	43	871
Storrs Agr. Station, Connecticut	44	690
Buff P. Rocks.		
A. A. Hall, Connecticut	42	1,015
W. C. Morgan, Jr., Connecticut	37	780
White Wyandottes.		
Tom Barron, England	45	1,463
West. Mt. Pltry. Yards, Connecticut	16	878
Merrythought Farm, Connecticut	37	1,309
Neale Bros., R. I.	46	1,291
D. J. Ryan & Son, Connecticut	38	1,028
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	39	1,002
Dr. N. W. Sanborn, Massachusetts	34	928
Am. Buff. Wyan. Club, New York	28	855
H. L. Hamilton, Connecticut	29	675
Columbian Wyanodttes.		
Nat'l Col. Wy. Club, Massachusetts	50	946
Single-Comb Reds.		
J. S. Gillespie, Connecticut	25	762
Dr. J. C. Dingman, New York	36	970
Burnham Pltry. Farm, Massachusetts	50	876
H. P. Deming, Connecticut	38	887
Geo. P. Dearborn, Florida	42	1,060
Dr. J. A. Fritchic, Pa.	32	1,154
Ernest Underhill, New Jersey	34	814
W. H. Bumsted, Connecticut	26	597
Pinecrest Orchards, Massachusetts	40	1,131
Harry B. Cook, Connecticut	45	989
Colonial Farm, New Hampshire	34	1,004
A. B. Brundage, Connecticut	47	1,205
Rosecomb Reds.		
Glenview Farm, Connecticut	19	968
C. S. Scoville, Connecticut	26	698
White Leghorns.		
Storrs Agr. Station, Connecticut	48	1,101
Storrs Agr. Station, Connecticut	51	1,158
Storrs Agr. Station, Connecticut	45	1,175
Storrs Agr. Station, Connecticut	50	1,428
Storrs Agr. Station, Connecticut	56	1,040
Braeside Pltry. Farm, Pennsylvania	35	967
Glenview Farm, Connecticut	53	1,091
Manor Poultry Farm, New York	18	1,005
A. B. Hall, Connecticut	31	1,020
Marwood Pltry. Farm, Pennsylvania	21	1,109
Geo. M. Harris, Connecticut	38	899
Bonnie Brook Farm, New York	44	1,132
N. W. Hendryx, Connecticut	48	999
J. J. Linehan, Massachusetts	44	928
F. F. Lincoln, Connecticut	51	1,416
Cecil Guernsey, New York	40	1,206
T. W. Moore, Connecticut	50	1,011
Chas. N. St. John, New York	49	1,010
C. W. Sherwood, Connecticut	32	991
L. E. Sands, Pennsylvania	35	1,025
Tonoka Pltry. Farm, Connecticut	30	934
Venture Poultry Farm, New York	33	887
Mrs. K. E. Woodruff, Connecticut	50	1,016
Windsweep Pltry. Farm, Connecticut	43	936
C. H. Savage, Connecticut	46	1,013
P. G. Platt, Pennsylvania	49	1,150
Heneta Bone Co., New Jersey	15	350
F. M. Peasley, Connecticut	37	1,028
Chas. Heigl, Ohio	49	935
Tom Barron, England	63	1,288
Branford Farm, Connecticut	52	1,146
James Munn, Massachusetts	48	957
Geo. A. Cosgrove, Connecticut	50	970
Buff Leghorns.		
Wolverine Pltry. Farm, Michigan	44	1,059
Blue Andalusians.		
E. D. Bird, Connecticut	29	853
Buff Orpingtons.		
O. Wilson, West Virginia	10	733
White Orpingtons.		
P. A. Demgar, New York	29	717
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	14	551
Silver Campines.		
W. J. H. Lobel, New Jersey	37	841
Dunghills.		
H. W. Collingwood, New Jersey	40	852
Daniel Hine, Connecticut	31	788
Daniel Hine, Connecticut	32	841
Mixed Breeds.		
Profitable Poultry	21	897
Profitable Poultry	35	898

The total number of eggs laid to date is 79,548. GEO. A. COSGROVE.

Pinioning Fowls.

WOULD you give directions for performing the operation of pinioning on fowls? I understand that it is done when the quill feathers come out on the wings, but don't know how to do it. T. J. W.

Washington.

The best way to pinion fowls is to pluck the primaries or flight feathers from one wing. These are the much stronger feathers which grow from the first joint of the wing. When these are plucked and the secondaries left intact, the bird shows no unnatural condition. The same results are obtained by using a heavy pair of shears and clipping these flight feathers two or three inches from their base. In the Winter time the feathers should be clipped. In the Summer time they may be pulled. By removing these feathers from only one wing, the bird, in trying to fly, only succeeds in going sideways and is unable to steer itself or fly to any extent. A. L. C.

A Custom-hatcher's Troubles.

NO HARD AND FAST RULES.—The writer has for a number of years done a limited business in custom hatching each Spring and pleads guilty to having been a poultry crank for many years. I have tried over and over to lay down certain rules of procedure in hatching, etc., only to have the next batch of eggs upset all rules and theories. Exactly similar treatment of eggs has produced great variations in results. One odd thing I have noted is that as yet I have been unable to get a successful hatch of White Plymouth Rock eggs though I have tried repeatedly from different breeding pens and in different years. This Spring I made four trials. The first 50 eggs produced 16 chicks, every egg fertile; the second 50 gave 24, all eggs fertile but two; the next two fifties were from the same pens, set just one week later, and 58 eggs tested infertile. I immediately took up the matter with the man who brought the eggs and he declared no change had been made in the pens as to feed or mating, there being two males in the pen at all times. Can some one explain this radical drop in fertility in one week? I got 24 strong chicks from the remainder of the eggs. With all other breeds I have had uniformly good hatches, though Leghorn eggs always seem to come through in larger numbers. Many incubator manufacturers tell you to keep machine tightly closed till hatch is over. Repeated experiments with my machines convince me that I get more chicks if the dry chicks are kept removed. In case it is necessary to keep cover off any length of time a light sprinkling of warm water will restore right conditions. I also watch the spot where the chick is pipping through. If dry, moisten it with the finger. The one big reason for taking out the dry chicks is that in struggling about over the eggs they turn so many pipped eggs over and the chick so turned very often smothers.

SAVING WEAK CHICKS.—Then too, it is said that a chick not strong enough to get out alone should be left to die. This I think is partly wrong. It never pays to take a chick from the shell, but poor shaped eggs, excessive dryness of the inner lining and other causes sometimes prevent a chick's getting away after the egg is pipped. Such eggs I crack clear around with the edge of the thermometer, breaking the outer shell only. If the chick remonstrates vigorously you may be sure it is worth saving. Generally nothing further need be done. However, if the chick still stays in the egg after four or five hours, the top or lid can be lifted off as bleeding will have then ceased. Again, you will find eggs pipped clear around but little pieces of the inner lining have been missed in the cutting around process and have dried so that the top of egg is firmly locked on. Such an egg should have the top removed at once or a crippled chick will result. And right here I might say that nearly all crippled chicks are caused by delayed hatching. It requires close watching and quite a little knowledge of the appearance of pipped eggs to tell whether help is needed and can profitably be given.

WARM WEATHER EGGS.—Beware of eggs saved in warm weather. I have just had a sitting of eggs from an Indian fancier, which on test showed many rotten eggs with well developed chicks in. This was a fifth day test. Another sitting from a Kentucky fancier who stated none of his eggs was over a week old when shipped, at the fourth day test showed nine eggs from 15 badly rotten with well developed chicks in. The Kentucky man stated the weather had run from 95 to 106 for the entire month during which the eggs were saved. Probably eggs were not collected till sundown and then kept in an ordinary living room or kitchen. In that case, with a weather mean even as low as 90, incubation was bound to start and continue for a number of days. I cite this because here are two instances which appear to give me a chance to get mad and demand satisfaction, but a little study of conditions shows that the sellers in both cases acted in perfect good faith and were supposedly sending perfectly good eggs. The only safe way in such weather is to gather the eggs hourly and get them into a cool cellar, turning them daily until ready to put into the machine. Along in May after the weather was quite warm, I had 30 eggs sent me from Indiana. These were all dated, showing some of them to to be at least three weeks old. Two tested out and 21 strong chicks hatched in the incubator. An inspection of unhatched eggs disclosed the fact that all the three-weeks-old eggs had hatched and those unhatched were fresh ones or nearly so when put in the machine. You never can tell, for according to rule and theory a poor hatch should have resulted from eggs of three weeks of age saved in very warm weather.

STOLEN NEST VS. INCUBATOR.—Just one more incident. A man brought me 300 Brown Leghorn eggs to hatch. Seventh day test showed 175 dead and infertile. When I talked with him he could not understand the matter, stating that several hens had stolen their nests and brought off nearly 100%. A little study reveals this situation; the weather was very warm. By his own statement he gathered eggs only at night, consequently eggs laid early in the morning had been under hens probably till three or four in the afternoon—and it is stated three hours will start incubation. The test revealed just such a condition. The eggs were not clear but looked as though the yolks were very dark, showing the germ had started and died. Now the hens that stole their nests and got the good hatches had a different set of conditions to work under. Biddy runs across the road in the morning, slips under a bush and in 20 to 40 minutes has laid an egg and is back with the flock. No other hen knows where this nest is. The shade of the bush keeps the egg cool all day. Next morning biddy comes back, settles down, turns around a few times, turns the egg or eggs over a few times, lays another and is gone. Here we have perfect care of the eggs from laying until the hen is ready to sit and explains the poor test of the eggs sent to the hatcher, and the good hatch of the stolen nests. Don't be too hasty to condemn your flock or the man who hatches your eggs. Look for causes and explanations and many problems will straighten themselves out. P. L. W.

Michigan.

Trouble With Ducks.

WE have been trying to raise several dozen ducks. The eggs hatched moderately well, but raising the young birds has been a failure. About half of them have died. They were started on chick feed and after a few weeks given wheat and corn. They have a pleasant, shady little run with a pond sufficiently large to give them good swimming room. They are being mothered by two hens. The ducklings seem to be weak and to feel the heat greatly. Every other day one dies. Some have trouble with their eyes, so that they are sore and closed up. Often one or two will seem too weak to walk. Could you give me some information regarding the care and feeding of young Pekin ducks?

Ohio. H. R.

I think the difficulty is in the feed. Ducks should not have hard grains till they are nearly mature. One of the best feeds for the first few days is bread crumbs and rolled oats, moistened with water or milk just enough to be crumbly. Mash for ducks should never be sloppy. In three or four days add bran and corn meal, and gradually change to a mash of as many kinds of ground feeds as you have. A splendid feed for growing and laying ducks is the following: Vegetables, one part; green stuff, one; beef scraps, one; low-grade flour, one; bran, two; cornmeal, three. Fine grit should be put in all mash for ducklings. Lack of it causes all sorts of digestive troubles. A pinch of salt in each mash helps make it a complete food, and a little ground charcoal once a week is thought by many to be good for them. Young ducklings are better off without water to swim in. Domestication has diminished their ability to indulge in promiscuous swimming without getting too wet and chilled. They should have drinking fountains into which they can not get, but with water deep enough to cover the entire bill. Wash the eyes gently with warm water till they can open them. Give them a grass run, a chance to get into the shade, and a warm dry place at night.

W. H. H.

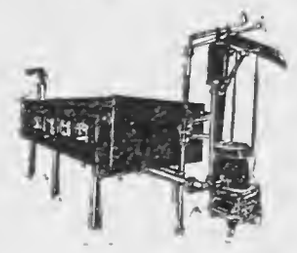
Hen Retains Eggs.

HAVING a hen so fat that she could only walk or rather waddle, and thinking she might have "leg weakness," and then be past any value I killed her. In her ovisac were six large soft-shelled eggs weighing 17¼ ounces besides the empty shell of another. The question arises in my mind, if these eggs had been fertile (I keep no roosters, so of course these were not) would there have been chicks in them? Would not the heat of the hen have started incubation? It is a peculiar case; has anyone had a similar one? F. T. J.

Rhode Island.

Fertile eggs retained too long in the oviduct may undergo partial development of the embryo and be anything but "fresh" when laid. One case is reported in which skin and feathers had partially formed upon an embryo within an egg that was removed from a hen after death. The bad odor of some new-laid eggs is also thought to be due to undue retention of the egg within the oviduct and the changes which it has undergone because of the high temperature. M. B. D.

"Do you drive your own car?" asked the expert motorist. "No," replied Mr. Chuggins, "I never drive it, I coax it."—Washington Star.



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CLOSING OUT the following stock on account of keeping White Leghorns exclusively **Rhode Island Reds, Black Minorcas, White Orpingtons, Lgt. Brahmas, White Plymouth Rocks, White Pekin Ducks, a few Yearling White Leghorns & White Leghorn Cockerels** First-Class Stock for sale cheap for want of room **SUSSEX FARMS, Middleville, Sussex Co., N. J.**

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FOR SALE by middle of July. 600 April hatched full grown birds apt to lay early September. Irving Cook's and B. F. Morgan famous strain. Trio, $5.00. Five ducks, one drake, $8.00; Ten and two, $12.00. **FAIR VIEW POULTRY FARM, Mayville, New York**

OWEN FARMS STRAIN of S. C. W. Orpingtons. COCKERELS
9 and 12 weeks old, $1.00 and $1.50 each. Wyckoff Strain of S. C. W. Leghorns—Cockerels, 8-weeks old, 50¢ each. My Orpingtons and Leghorns are prolific layers of large eggs.
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TOM BARRON'S ENGLISH WHITE LEGHORNS
Special for July—Eggs $5 per 100
Imported direct from Tom Barron's Farm. Trap-nested stock, 280-egg strain. The greatest laying strain in the world. Eggs, $1 per set; $5 per 100.
P. F. RAFFERTY, - Marlboro, Mass.

PUBLISHER'S DESK

On June 25, 1913, I shipped Mr. W. H. Ruffhead, Irvington, N. J., by Adams Express, C. O. D., five cases of eggs at 25 cents per dozen, by previous arrangement. On arrival he wired me that he would not accept them unless I released the C. O. D. I released them. He kept writing and wiring for three or four days for more shipments, but I sent no more. He kept promising to pay in a few days, but did not. After threatening a complaint to the post office he sent me a check for $5 and said if I would not notify the post office he would send the balance in a few days. I have been unable to get any more since. The balance due me in $34. Can you collect it for me? T. P.
New York.

The above complaint came to us in November last. In May Mr. Ruffhead wrote the shipper that he had a $100 note due in three months, the maker of which was worth $30,000 in real estate over and above his debts. If the shipper would send him a money order for $66 and a receipt in full he would send the note by registered letter. Needless to say this proposition was declined for the reason that if it was offered in good faith, we see no reason why he could not borrow $34 on it at his bank and meet the obligation. We now have a letter from Mr. Ruffhead in which he says he is going to file a petition in bankruptcy and offers us some gratuitous advice in language which does not seem to be entirely friendly. Some of these good people seem to think that when THE R. N.-Y. requests a settlement of a subscriber's account it is interfering with things that are none of its business. Mr. Ruffhead is evidently of this mind. It is necessary at times to remind these people that every subscriber has a personal interest in THE R. N.-Y., and is entitled to the service of the paper in any way that it can serve them. In this particular instance the service does not materialize to the subscriber in dollars and cents, but the experience may have a cash value for other subscribers who may have an opportunity to ship produce to Mr. Ruffhead or to others of his kind.

I am sending you some literature from the Lexington Chocolate Company, 12-14 Lexington Avenue, Brooklyn, N. Y. From confidential information received here I think you will find this company is mixed up with the old parties who conducted the Franklin Incorporated Candy Manufacturers, New York. They promised a profit of 60% for investment in the stocks of the company. J. B. B.
Michigan.

Our reports confirm the information of this subscriber to the effect that the promoters of the Franklin Incorporated are behind this Lexington Chocolate Company. Some of the officers of the candy company were indicted by the Grand Jury in March last for alleged fraudulent use of the mails, and are awaiting trial. They may have avoided any criminal responsibility in the literature of the Chocolate Company, but nobody may expect to make 60% profit on an investment in any kind of hot air. There is no law against expectations, but the investor who tried to borrow money in a bank on this stock as collateral would learn the difference between value in hand and promoter's expectations.

Can you collect $1,500 on a note given me by R. H. McCready of Ridgewood, N. J., due May 4, 1913, and remaining unpaid? Mr. McCready is an ex-minister. He came into this place three years ago to sell stock for the Manhattan Properties Company, 347 Fifth Avenue, New York City, which has since failed. Mr. McCready was personally known to me and my family, and we relied upon his representations that the investment was perfectly safe, paying 6% profit. He had preached in our midst and personally guaranteed the investment, saying that he was not coming among us to offer investments that were not reliable. He said he was worth $11,000 or $12,000, and that he would be responsible himself for my investment. He gave me his personal note as an assurance of his promise. When due the note went to protest. After he got me to invest the $1,500 he came back and told me that the stock was advancing in price and that he would let me have 50 shares at the old price if I would take it at once, so again I believed him and paid $500. For this he gave me no note. When he was here he hired me to take him around, and he now claims that I helped him get people to go into the scheme. He is now trying to get some of the old dupes to invest in the Land and Credit Corporation, 24 Liberty Street, New York. He claims great things for this, just as he did for the Manhattan Properties Company. I am a poor man and need the money. C. B.
New York.

After repeated demands on Mr. McCready for settlement of of this account he came to us with arguments to show that he was not responsible for this subscriber's money or loss. For once we are afraid we were not polite to our caller. He probably was not impressed with our sense of hospitality. We fully expressed, in view of Mr. McCready's explanations to us, things to him personally that we do not wish to print. The Manhattan Properties Company has failed and the investment is a complete loss. The subscriber has yet the privilege of suing on the note, but Mr. McCready would probably set up the defense that the note was mere accommodation given without receiving consideration, and is, therefore, void and it is quite probable the court would take this view of it. At best if a judgment were secured, with the attendant expenses, the judgment would only be valuable if the collections could be made from Mr. McCready, and on his representations, collection of the judgment would be extremely doubtful. In our own minds, under circumstances of this kind, we hold Mr. McCready morally blameable for the losses to his parishioners, but if any of them repeat the experience we would be inclined to feel that they merited the result of their second experience.

George F. Cole, Boston, Mass., wholesale and commission dealer in fruits, vegetables, poultry and eggs, was sentenced to a year and a day at Greenfield jail by Judge Morton in the United States District Court for using the mails in a scheme to defraud creditors. This is the second time he has been in court on a charge of this kind.—Press Dispatch.

In view of Mr. Cole's record, we think he got off with a very light sentence. Most commission men who swindle farmers out of their produce have a way of escaping the penalty they deserve. But a jail sentence does not cure rascals of this sort and we predict that as soon as free, Mr. Cole will use the same old bait in perhaps a little different form to entice shipments from farmers. New England farmers will do well to be on the lookout for his literature about a year from now.

Several days ago I received a package with three neckties from the Crane-Watson Mfg. Co., Equitable Bldg., Boston, Mass. It had no card or anything on it, but the address of the company. It happened to be near my birthday, either by strange coincidence, or by their plan, and I supposed some one sent them to me. Now, I have a letter from them which I am enclosing. The ties would be dear at three for 50 cents. I am going to ignore their letters and keep the ties, which I shall not use. What can they do? I think it is an imposition and it seems to me as if they should be stopped. If I return the ties I am out postage as well as trouble. I thank you for your advice if you can give it to me, although out of your line. B. W.
Massachusetts.

This is the method employed by vendors of cheap razors for some time back, but it is new to us where neckties are concerned. B. W. is under no obligation, moral or otherwise, to either return the neckties or pay for them. In fact he owes it to the public to do neither, as the only way to stop this sort of imposition is to make it unprofitable to the schemers. Just so long as these people can send out cheap goods in this way and bulldoze those to whom they send the goods to pay them it will continue. Make such methods unprofitable and then it will stop. J. J. D.

Catarrh.

A MARE about 17 years old, teeth all worn out, has had a cough for some time and lately it is worse. It is a snorting convulsive cough; runs a little thin watery fluid at nose. She has two lumps, hard and smooth on the inside of her lips, lumps are about three-quarter inch in diameter. The discharge in late Winter was more yellowish. She eats whole oats but does not grind her food very well; skin rather rough, partly due to poor grooming. She stood a good deal all Winter in barn and was only used for short drives this Spring; runs in sheltered pasture with light grain when not being driven. She seems alert; manure sometimes almost washy and comes out in a heap. Opinion is desired as to glanders. J. B.

Employ a graduate veterinarian to make an examination for glanders, and if he does not find it present he can give the teeth proper professional attention. In glanders ulcers will be found upon the lining membrane of the partition between the nostrils, and grapelike tumors under the jaws. A. S. A.

Kicking Heifer.

I HAVE a valuable heifer that kicks badly when she is milked. I have tried strapping her legs, and used every other method that I could think of. She does not seem to improve, but on the contrary grows worse. Can you tell us of any method or device that will help to overcome the trouble? H. C. H.

Such a heifer should be sold to the butcher, as she seems to be incorrigable. We know of no other plan than giving a relished feed at milking time, and if necessary putting a wide strap around the legs, just above the hocks. You might also try the effects of a strap or rope tied around the belly, in front of the udder and a board put under that, lengthwise of the body. A. S. A.

Shrink in Milk.

I HAVE a good Holstein cow in good condition. About ten days before I turned her on grass she commenced to shrink in milk flow, and in one week's time did not give more than one quart. She did not gain when turned on good feed. She freshened February 5, is five years old and has been good until now; eats well and shows no symptoms of disease. U. B.
New York.

Shrink in milk commonly is due to garget, or to indigestion, but may be associated with any disease or ailment. Without an examination we could not confidently assign the cause in this case, but on general principles it would be well to have the cow tested with tuberculin. If she proves to be free from tuberculosis all milk secretion should be dried off, or the cow if fat should be sold to the butcher. Medicinal treatment would not be likely to help. A. S. A.

Goat With Bloody Milk.

ABOUT three weeks ago I purchased a Toggenberg doe. Her kids were then six weeks old and just weaned. Her milk seemed good for a few days and then we noticed a settling of blood in the bottom of the pitcher. We stopped using the milk, but milked her night and morning. The flow of milk has decreased and the amount of blood in it has increased so that now it is pink in the pail. We give her good pasture, plenty of water, and oats twice a day. She seems contented and happy. Can you tell the cause of her condition and the cure for it? B. D. J.
New Jersey.

Foment the udder with warm water three times a day and each night rub in a mixture of one part each of fluid extracts of belladonna leaves and poke root and six parts of warm melted lard or sweet oil. A. S. A.

Tumors.

WILL you tell me how to treat two tumors on shoulder of horse arising from neglected collar-galls. Cold water doused on them frequently seems to be helping some. The horse is being used right along without any noticeable trouble. The swellings (not large) are quite firm, and exude now no matter. W. C.

It is best in such cases to cut out the tumors and then treat as common wounds until healed. If you cannot have this done at present, paint the tumors twice daily with a mixture of one ounce of tincture of iodine and three ounces of extract of witch hazel. A. S. A.

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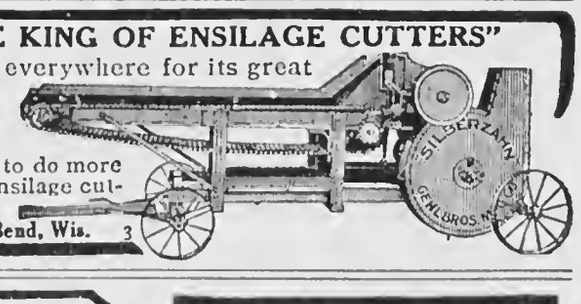

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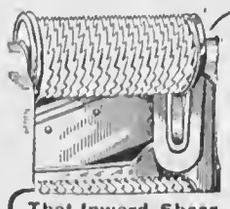

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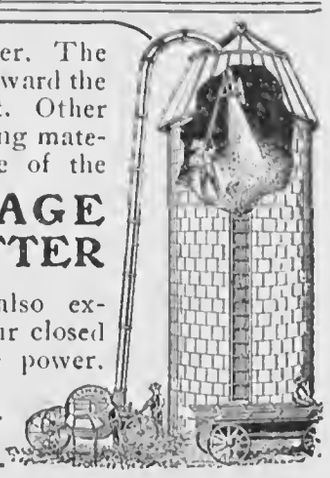

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending July 10, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.41 and $1.31 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart.

BUTTER.

Price on the better grades declined one-half cent, one result being a little increase in speculative trade. There has been a large volume of business in rather low scoring creamery at 24 to 25 cents. Demand for lower grades is slow, and prices cut freely to meet possible customers.

Creamery, extra, lb	26	@	27
Good to Choice	23	@	25
Lower Grades	20	@	22
State Dairy, best	25	@	26
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	16	@	18

Elgin, Ill., butter market 26 cents.
Philadelphia, western creamery, 27½ cents.

CHEESE.

The market in better grades of whole milk has been firm, with a decided scarcity of fancy white. Reports from the west indicate a weaker market, especially in Wisconsin, which we may feel the effect of in a few days. Skims are in surplus and very dull.

Whole Milk, fresh, specials	11¼	@	11¾
Average fancy	14	@	14¼
Under grades	10½	@	13¾
Dalsies	15	@	15¼
Skims, specials	11	@	11½
Good to choice	10	@	11
Poor to fair	5	@	9½

EGGS.

The market is considerably unsettled, owing to the large proportion of defective stock, even in choice marks. The week has brought a one-cent advance on best nearby-eggs, free from damage. Large quantities of supposedly candled and graded eggs have sold around 20 cents, a heavy disappointment to the shipper. Part of the damage may have been done on the road, but it is evident that more careful candling aand grading will pay at the shipping end. If the buyers here have to do the grading, they have an excuse to discount the price—usually more than conditions warrant. The high-class buyers who want eggs running as nearly 100 per cent. good as possible, instead of 75 or 90 per cent., will not consider the poorly graded lots, though they may contain as good eggs as those that bring higher prices. The writer has often heard it said that grading does not pay, as one man's ungraded eggs often bring as much as his neighbor's choice, but has not yet found a case where the apparent discrepancy could not be accounted for in some common sense way.

White, choice to fancy, large	28	@	29
Common to good	20	@	25
Mixed colors, best	25	@	26
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18

FRESH FRUITS.

Receipts of new apples are increasing, but many are poor, wormy and windfalls, so that prices run low, often 25 to 50 cents per bushel. Peaches are in very heavy supply and lower, fairly good Carman, Belle and Mountain Rose having wholesaled at $1 to $1.25 per crate, and $2 about the top for choice. The cherry market was bad but improved the latter part of the week; strawberries, blackberries and raspberries poor, damaged by rain. Muskmelons low, except for the choicest, running uniform in quality.

Apples—New, bu	25	@	75
Ben Davis, bbl	2 00	@	3 00
Baldwin	2 50	@	3 50
Western, box	1 00	@	2 25
Strawberries, Up-river, qt	6	@	15
Western N. Y	8	@	17
Cherries, 8lb. bkt	20	@	75
Pears, Le Conte, bbl	3 00	@	4 50
Currants, qt	5	@	9
Plums, 6-bkt. carrier	1 25	@	1 75
Raspberries, red, pint	5	@	8
Black Caps, pint	4	@	6
Peaches, 6-basket crate	1 25	@	3 25
16-qt. bkt.	50	@	75
Blackberries, Jersey, qt	4	@	9
Huckleberries, qt	6	@	15
Gooseberries, qt	4	@	12
Muskmelons, crate	1 25	@	2 50
Watermelons, 100	12 50	@	25 00

BEANS.

Marrow, 100 lbs	4 70	@	4 90
Medium	3 60	@	3 70
Pea	3 10	@	3 65
Red Kidney	4 50	@	5 50
White Kidney	5 50	@	5 55
Yellow Eye	5 25	@	5 50
Lima, California	7 35	@	7 40

HOPS.

Prime to choice	36	@	38
Common to good	31	@	35
Pacific Coast	18	@	19
Old stock	10	@	15
German crop	60	@	63

VEGETABLES.

New potatoes much higher, choice from Long Island bringing $4.50 to $5 per barrel, and Jersey only 25 to 50 cents less. Onions generally higher, except some from nearby, which were defective. Cabbage in excessive supply and low. Tomatoes low, except some from Jersey, which brought $1 to $1.25 to $1.50 per box. A small quantity of nearby sweet corn is on hand, bringing $2 per 100 when choice.

Potatoes—Old, 180 lbs	3 00	@	3 75
Long Island, bbl	4 00	@	4 25
Jersey, new	1 50	@	4 00
Sweet Potatoes, bu	40	@	1 15
Beets, 100 bunches	1 00	@	2 00
Carrots, 100 bunches	1 00	@	2 00
Cucumbers, bu	50	@	75
Corn, Jersey, 100	1 00	@	2 00
Asparagus, Green, doz	1 50	@	3 00
White, doz	1 00	@	2 00
Cabbage, bbl	75	@	1 00
Lettuce, half-bbl. basket	15	@	50
Onions—Southern, New, bu	2 50	@	3 00
Nearby, bu	2 00	@	2 50
Okra, bu	1 00	@	2 00
Peppers, Southern, bu	1 00	@	2 00
Jersey, box	1 25	@	1 50
Peas, bu	75	@	2 00
Radishes, 100 bunches	1 00	@	2 00
Spinach, bbl	50	@	75
String Beans, bu	25	@	75
Squash, New, bu	1 00	@	2 00
Egg Plants, Southern, bu	00	@	2 00
Tomatoes, Southern, 6 bkt. crate	50	@	1 25
Jersey, box	1 00	@	1 50

LIVE POULTRY.

Broilers, lb	18	@	20
Fowls	17	@	18
Roosters	11	@	12
Ducks	13	@	15
Geese	10	@	14

DRESSED POULTRY.

Chickens choice broilers, lb	30	@	32
Squab broilers, pair	60	@	65
Broilers, common to good	20	@	25
Fowls	15	@	19
Ducks, Spring	14	@	16
Geese	9	@	14
Squabs, doz	1 50	@	3 75

HAY AND STRAW.

There is a slight improvement in market for large bales of hay, both top quality and medium grades. Small bales very dull, often running $1.50 per ton under large. Straw selling fairly at unchanged prices.

Hay, Timothy No. 1, ton	19 50	@	20 00
No. 2	17 00	@	18 00
No. 3	15 00	@	16 00
Clover mixed	14 00	@	18 00
Straw, Rye	14 00	@	15 00

LIVE STOCK.

Native Steers	7 25	@	9 50
Bulls	5 50	@	7 35
Cows	3 50	@	6 75
Calves, prime veal, 100 lbs	8 50	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	3 50	@	5 00
Lambs	7 50	@	9 50
Hogs	8 50	@	8 60

GRAIN.

Wheat exporters are very active in the St. Louis market, 1,000,000 bushels having been bought in one recent week for delivery at seaboard points. The prices paid are 78 and 80 cents, respectively, for red and hard wheat, which is 10 to 12 cents lower than last year.

Wheat, No. 1, Northern Spring	99	@	..
No. 2, Red	88	@	..
No. 2, Hard Winter, new	89	@	..
Corn, as to quality, bush	72	@	76
Oats, as to weight, bush	42	@	44
Rye	65	@	68

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14

Cough.

We have a pig two months old that coughs nearly all the time; it is quite thin. We bought three, one is two weeks older than the rest. We feed only separator milk and buttermilk; they all eat and are always ready for their meal. They have a large lot to run in on grass.
Pennsylvania. S. T. T.

Cough in a pig of that age probably is due to lung worms and if so there is no successful treatment, and the other pigs may become affected. A well-fed pig generally survives and outgrows the ravages of the worms. On general principles it is well to give a teaspoonful of turpentine, per 80 pounds of body weight of pig, in slop for three days in succession and repeat the following week. Isolate the affected pig. Tuberculosis may be present and that is incurable, but it cannot be determined without a tuberculin test by an expert. A. S. A.

Bent Knees.

Will you tell me what to do to cure a horse that is knee sprung and weak in both his front legs? I bought the horse, nine years old, recently and the owner said that he has been in that condition about two months now. I rub his legs at night with warm water. When pulling on asphalt or cobbles he stumbles, but while pulling on soft ground he gets along well. Do you know of any remedies or cure for the case? He is a valuable horse if his legs would straighten and get stronger. M. J.
New Jersey.

The horse is foot sore as well as bent in the knees and the latter condition is chronic and incurable. He may stumble less if you have him shod with flat bar shoes put on over rubber pads, as he has to travel on asphalt. If he continues to stumble he may improve if you clip the hair from the hoof-heads of both fore feet and blister them, one at a time, at intervals of three or four weeks, using a mixture of one part of powdered cantharides and three parts of lard for the work. A. S. A.

Abnormal Breathing.

What ails my cow? She breathes like a wind-broken horse. She is driven from pasture, but after a time she breathes naturally. I turned her on grass two weeks ago. She is seven years old, eats heartily, holds up in the flow of milk. We physicked her and have been giving aconite 15 drops. She will get her breath hard, then cough. E. L. R.
New York.

The cow probably is afflicted with tuberculosis of the post-pharyngeal glands, and that is incurable. To determine the matter have her tested with tuberculin. Any graduate veterinarian can properly apply the test. Meanwhile isolate the cow and do not use her milk. If tuberculosis is not present there may be pressure from an abscess or tumor due to actinomycosis (lumpy jaw) and that would require an operation by an expert. A. S. A.

Wound.

I have a horse which stuck a fork in the side of his front ankle bone. This happened three weeks ago. I have had the best veterinarian around here. He keeps her foot in a hot creolin bath, one ounce of creolin to eight gallons of water. I keep it hot all the time. The leg is not swollen, only a little around the ankle. This sore is suppurating freely. He does not give me much hope of saving the horse. He is talking of putting on a hot blister. He thinks it will be an open joint. Have you any suggestions to offer? G. S.
Massachusetts.

If your veterinarian is a graduate you should depend upon his skill and judgment in such a case. The blister may have to be used when the wound closes and lameness still persists. Meanwhile the wound should be covered with a dry dressing such as a mixture of one part each of iodoform and tannic acid and six parts of boric acid, covered with absorbent cotton and clean bandages. Renew the dressing once daily. A. S. A.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN wants work on poultry farm; has had some experience. POULTRY, care R. N. Y., 333 West 30th St., New York.

SITUATION WANTED—Herdsman, single, specializing in Holstein cattle and certified milk, wants position; references. MARQUARDT, Westchester, N. Y.

POULTRYMAN, with years of practical experience, wants position where work and results are appreciated; triflers not wanted to answer. C. F. YAKE, Lebanon, Pa.

AN ENERGETIC, PRACTICAL MAN DESIRES position on poultry farm; desires to learn business; moderate wages. L. PHANEUF, 81 Hanson Place, Brooklyn, N. Y.

ORCHARDIST, experienced, desires position; apples a specialty; can begin work November 1st; best references. T. M. R., care R. N.-Y., 333 West 30th St., New York.

YOUNG MAN, graduate of Michigan Agricultural College, experienced, wishes position of manager or assistant of a truck and fruit farm or estate; can start at once; best of references. Address D. M. PURMELL, 18 Michigan Ave., Dorchester, Mass.

CITY MAN, bachelor, 41, some knowledge of horses but very limited, other country experience, wishes employment on scientifically managed farm; object, learn management details; small wages starting; reference; personal interview suggested. ECONOMY, P. O. Box 206, Madison Square, New York.

ALFALFA HAY. F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Stump or boulder blasting; charges reasonable. Address A. SIEBLS, care of A. J. Boyce, East Schodack, N. Y.

TIMBER LOTS AND POULTRY FARM for sale. M. W., care R. N.-Y., 333 West 30th St., New York.

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FOR SALE—Dairy farm of about 151 acres, on State road, five miles from city of Newburgh; large house and out-buildings; large apple orchard and other fruit; price reasonable. Address O, care R. N.-Y., 333 West 30th St., New York.

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HUMOROUS

"I SUPPOSE you are saving up for a rainy day?" "No," replied Farmer Corntossel. "Out this way we pray for rain. I'm saving up for a drought."—Washington Star.

"HE who puts his hand to the plow," screamed the cross-roads orator, "must not turn back!" "What is he to do when he gets to the end of a furrer?" asked the auditor in the blue jean overalls.—Christian Register.

"DON'T you know you ought to be spanked? What do you mean by holding my watch beneath the hydrant?" "Why, you told Mr. Smith just yesterday that you had to soak your watch every once in a while."—Houston Post.

MOTHER: "Sometimes there are rude boys in Sunday school who giggle and smile at little girls, and sometimes little girls smile back at them, but I hope my little girl does not behave like that." Small Daughter: "No, indeed, mamma; I always put out my tongue at 'em."—Boston Transcript.

ONE of the guests at a wedding seeing a dismal looking young man, who appeared to be on terms of familiarity with the principals, asked: "Are you related to the bride or to the bridegroom elect?" "No," was the gloomy reply. "Then," said the guest, "what interest have you in the ceremony?" "Well," replied the young man, "I'm the defeated candidate."—Ladies' Home Journal.

MEN who sit still in the street cars while women stand and give as their excuse the assertion that women do not thank them when they do offer their seats will like this story: The man arose and gave his seat to a girl. "Oh, thank you, most kindly, sir," she replied. "Don't mind her being polite," explained a sad-faced woman. "I'm taking her to a sanitarium."—Kansas City Star.

THEY had just finished taking a new film in a big German moving-picture studio near Berlin. Among the properties was a live stork which had been trained to reach out one of his long legs and shake hands with people. Everybody was gathered around the bird trying out his accomplishment. A little six-year-old girl was among them. The stork shook hands with her, too. Then she ran beaming to her mother crying, "Mamma! Mamma! he knew me again at once!"—New York Evening Post.

ROBERT had two little playfellows who were passing the afternoon with him. They finally began boasting about their parents and belongings. "My father," bragged Robert, "is going to build a fine house with a steeple on it." "That's nothing," exclaimed Louis, scornfully. "My father has just built a house with a flagpole on it." Sherman, who had been listening intently, was silent for a moment, then burst forth triumphantly: "Gee, that's nothing. My father is going to build a corking house with a mortgage on it."—Harper's Monthly.

SAM and Luke, browsing around, crossed the pasture. The Judge's bull saw them, and Sam beat him to the fence by a single stride with nothing to spare. Luke, a bad starter, didn't try for the fence; he stuck to the open. He led the bull around the field on the first lap, while Sam, from the fence, urged him to "a li'l bust er speed." On the second lap Sam exhorted him: "Run, niggeh—you ain' half runnin'!" The third time, Sam yelled: "Make has'e!" Luke risked all in his answer. "G'awn, man," he gasped, "you doan think Ah'm *throwin'* dis yer race, does yer?"—Credit Lost.

HUDSON Six-40 for 1915

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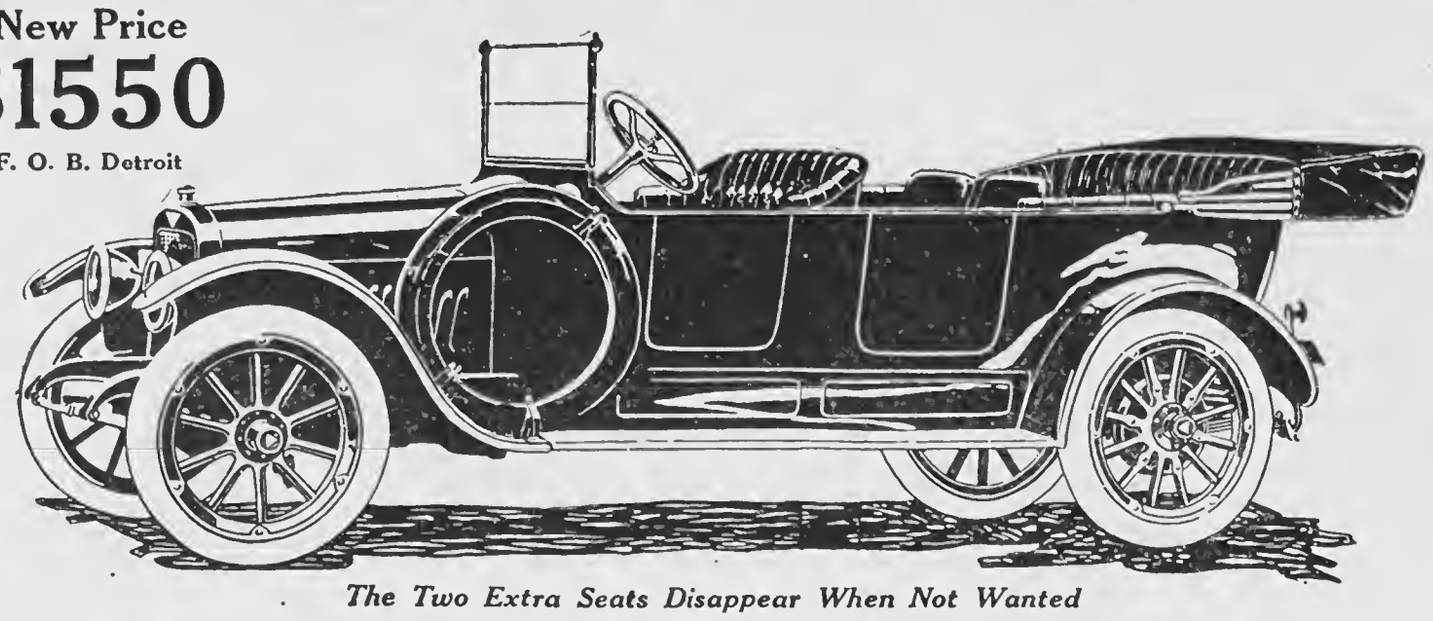

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It is our last season's success plus a year of refinements. It has 31 new features. And the price—due to trebled output—is $200 less.

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You have wanted a Six, but all Sixes were costly. Here is a Six of the finest type for $1,550.

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You wanted every convenience, every comfort, every new idea in equipment. We embody them all in this car.

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You have felt heretofore that quality cars had to be high-priced. You have found no low-priced car to compare with them.

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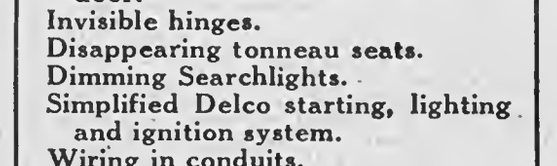

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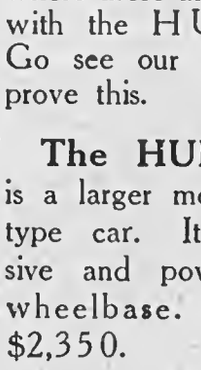

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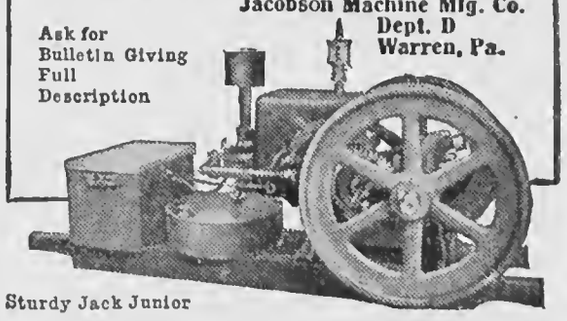


Sturdy Jack Junior

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII. No. 4265. NEW YORK, JULY 25, 1914 WEEKLY $1.00 PER YEAR.

THE PRIDE OF THE FARM. Fig. 391.

A PERMANENT TIMOTHY MEADOW.

The "Clark" System Once More.

PART I.

TELL us how to start a permanent Timothy meadow—one that will last? The land on which we propose starting the Timothy is not strictly sod ground but played-out Alfalfa land. Alfalfa has been seeded twice with poor results. It was plowed last in August, 1913. N. W. M.
New Jersey.

Annually for at least 15 years we have retold the story of Geo. M. Clark's method of growing Timothy. Each year there comes a new set of questions which seem to make a new telling necessary. If anyone ever raised more hay to the acre than Mr. Clark we do not know where the records are. At any rate Clark's theory was sound and with modifications to suit conditions it is the best one we know of. Clark lived in Connecticut. The soil he cultivated was naturally the hard stony land so often seen in New England, grown up to brush and huckleberries.

THOROUGH PREPARATION.—That is the first principle of the Clark method. Taking such a field as N. W. M. tells about the first thing would be to kill out every plant now growing on it. The object of this is to make a *permanent* meadow wherein the Timothy once seeded so that the plants are started will grow for years—fed and producing their crop year after year like trees. In order to do this the Timothy plant must be free. Unless the weeds and tough old grass growing on the soil before seeding are fully killed out they will come back, take possession of the land and crowd out the new seeding. We all know what happens when we let cultivated land "go back to nature." Weeds and trash of all sorts crowd out the cultivated grasses and change the character of the sod. The chief reason why many grass seedings are so short-lived is because the old sod is not fully killed out and the tough old tramps work in before the young Timothy plants can make a sod thick enough to crowd them out.

WORKING THE SOIL.—The usual plan was and is to use a turning plow and turn the old sod or other growth on the field completely over. This put the grass and weeds out of sight. The under soil was turned up and certainly looked brown and clean and fit for a seeding. It is strange how many farmers have been fooled by the bottom of a furrow slice. After a thorough harrowing this upturned soil looks mellow and fit and clean, but the farmer seems to forget that a few inches below this seed bed are to be found the entire mass of weeds and trash which ruined the old sod or made the field a nuisance. This foul stuff is not dead. It will come to life in all its vigor at about the time the young Timothy plants are growing well, and being stronger than the new-comers these old plants will make their way into the new sod, and cannot be kept out. Thus the only way to make sure of a permanent meadow of the desired grasses is thoroughly to kill out the old plants before putting in new seed. In a short rotation this work would not pay. It is meant for preparing permanent meadow.

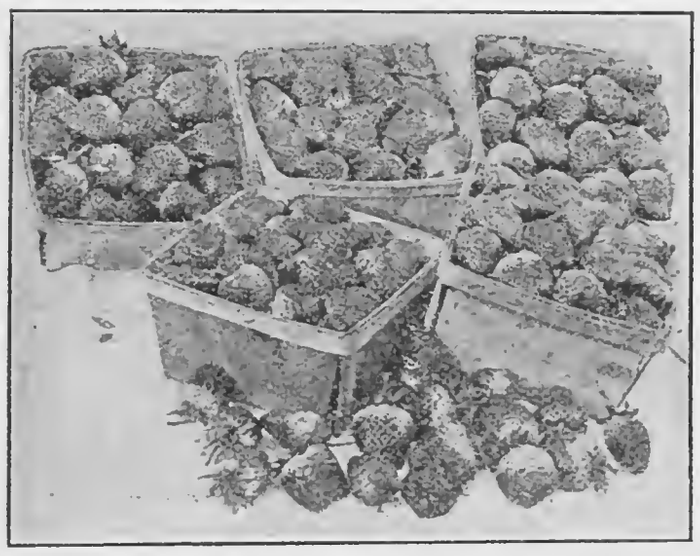
STIRRING THINGS UP.—That is what Clark tried to do. He said that grass and weed roots were not killed by burying them—they must be cut and thrown up and out where sun and air can get at them. This means a tillage tool which reverses the work of the turning or covering plow. The disk or Cutaway harrow does this. Imagine a steel pie plate flattened out to a disk. Cut out notches in the rim so as to leave saw-like teeth and you have the principle of the cutaway. Hold this disk solidly down into the ground and roll it along. The curved and notched rim will cut into the sod and as it turns lift out its narrow cut and give it a toss or shake instead of turning it over as the plow would do. Now we see what happens when a heavy Cutaway harrow with a number of these sharp disks is put on a sod with power enough in front of it to make it go at a good pace. These disks tear at the sod, cut out great chunks and toss them up and over instead of ripping over one long furrow slice. Often in working our own ground in this way the workmen have complained that the work was inferior to plowing because it did not look neat. The object is not so much to do a neat job as to put the sod up to the surface with its roots cut off. Plowing the sod over and fitting it for a seeding means perhaps five workings of the soil. The "Clark" method of tossing up the sod means from 15 to 20 workings and yet get the pay for your time at good wages when the grass starts. You chop it up one way and then go across the other way. Then you take a diagonal slant from one corner to the other and then try it from the other. As often as you see any green thing starting on that field you cut the surface up once more. July and August are the best months for doing this. The spring-tooth harrow is a good tool to help in this, but the lifting action of the disk or Cutaway is best.

DOUBLING UP THE CROP.

NEARLY all our market gardens have sufficient land to admit the planting of most crops in rows wide enough apart to enable the cultivation to be done mostly by horse power. The system of double cropping the land and rotation of crops as practiced by the most skillful and successful gardeners is about the same everywhere, and is as follows:

Beets and radishes may be sown together to advantage. As the beets require 60 to 75 days from the sowing of seed till ready for use, and radishes only 30 to 40 days, they can be cleared off before the beets crowd them very much. Sow the beets in rows 20 to 24 inches apart, and radishes between. This would make the rows of beets and radishes 10 or 12 inches apart. Sowing the seed of both first week in April, or as soon thereafter as possible, the crops will be cleared off by the first to the 10th of July, when a second crop can be planted. Of course, the crops are sold in an immature state—that is, before the roots have reached complete development. The land may be immediately replanted to celery, bush beans, or early sorts of sweet corn.

Sweet corn, muskmelons, cucumbers can be successfully grown together, and with considerable advantage to the melons and cucumbers. The ground should be furrowed, four feet apart one way. Make hills for the melons and cucumbers five feet apart, checker fashion. Plant two hills of sweet corn between the hills of melons and cucumbers. In the same row, and at the same time, either early or late corn may be used; and if it is desired to intensify, a little more radishes may be sown between the rows of corn and melons, etc. If the melon and



FLORIDA STRAWBERRIES PACKED FOR SHIPMENT. FIG. 392

cucumbers are not desired, bush beans can be grown between the hills of corn. To get the most out of the latter crops when grown together, the rows should not be over three feet apart for the dwarf corn and 3½ feet apart for the taller growing sorts. Plant two hills of bush beans between the hills of corn, planted at the same time. Radishes may also be grown between the rows of corn and beans.

Early peas may be followed by celery, or late planting of early sweet corn, beets, beans or turnips. Sweet corn, planted June 1, 4½ or five feet apart, with early celery between the rows, planted about the same time, can be handled to good advantage and with profit to the grower. Beans may also be grown between the hills of corn, making three money-making crops on the land at once. Soon as corn and beans have been marketed, clear off the stalks and vines, which will leave the land clear and in the proper shape for the cultivation and blanching of the celery.

Early cabbage and spinach may be grown together with profit, also lettuce and cabbage. One hundred to 120 days are required to bring early cabbage in, lettuce 65 to 90 days, and spinach 30 to 55 days, according to variety. The two latter crops can be cleared off before becoming crowded by the cabbage. Mark the ground out in rows 18 inches apart, plant early cabbage in every other row, and lettuce in the other rows. Beets and radishes may also be grown between the rows of cabbage. All may be cleared off by the time the cabbage is little more than half grown. Strawberry plants may also be grown between the cabbage rows, leaving the plantation in good shape for Summer growth of the plants when the cabbage is cleared off. Early cabbage may be followed by celery, bush beans, beets or an early maturing variety of sweet corn and beans.

Egg plant and tomatoes may have a late planting of lettuce grown between the hills or rows. Radishes may also be grown with these crops. Early plantings of lettuce and spinach should be followed by a root crop such as beets or carrots, or the ground may be planted to late tomatoes, or sweet corn and beans, or either one of the latter, as may be required. Lettuce can be grown to good advantage between the rows and hills of Spring-set strawberry plants to considerable advantage to the strawberry plants, as they will get more thorough cultivation during the growing period of the lettuce than they would be likely to receive if grown alone.

Early maturing cabbage, lettuce, radishes or beets may be grown between the hills or rows of pole Lima beans, and cleared off before danger of being injured by growth of bean vines. Radishes may be grown to advantage between the rows of bush Limas.

By procuring a kitchen garden seeding table, giving time of the various crops from the sowing of seed to the time they are ready for use, much can be learned as to how to get the most out of the land by double and triple cropping and by rotations. When the various crops are grown so closely together as outlined in the foregoing, it of course will be necessary to do all the cultivating with hand tools, such as garden hoes, rakes, weeders and wheel hoe. It is surprising how great a quantity of truck can be grown on an acre or two of well enriched soil when handled in the various crops in the manner suggested above.

Here is kitchen garden seeding table, showing about the number of days required from the sowing of seed, of the various vegetables until ready for use:

	Years		Days
Asparagus	3- 4	Beans, bush	45- 65
	Days	Beans, pole	65- 90
Beets, Table	60- 75	Cabbage, early	100-120
Brussels Sprouts	100-120	Cabbage, late	125-180
Carrots	75-120	Celery	125-150
Cauliflower	100-140	Cucumber	60- 85
Corn, Sweet	65-100	Endive	50- 75
Eggplant	150-160	Kohl-rabi	75- 80
Kale	100-120	Lettuce	65- 90
Leek	120-160	Melons, Water	125-140
Melons, Musk	115-135	Onions	135-150
Okra	90-120	Parsnip	125-150
Parsley	100	Pepper	140-150
Peas	50- 75	Radish	30- 50
Pumpkin	100-120	Spinach	35- 60
Salsify	125-140	Tomato	100-135
Squash, bush	60- 75	Turnip	60- 75
Squash, late	100-125		

K.

SUPPORT OF ADJACENT PROPERTY.

I HAVE a neighbor who has opened a sand-pit. The pit is now 25 feet deep and they are within 20 feet of my line. They have four acres of land, which is very low on the street, and runs up to my line, which is high and valuable for building lots. This pit has ruined their place and is greatly depreciating the value of my place. Can you tell me how near they can *legally* come to my line, and is the place responsible for damages if they sell out? We are friendly neighbors, and I would like to remain on friendly terms, but it worries me to see them destroying their place and depreciating the value of mine; when it caves in it will ruin my building lots. H. H. J.
New York.

The best discussion of this matter is found in Reeves' book on real property. He states that there exists by nature the right of every landowner to have his soil supported laterally, in its natural state, by the soil or structure of the neighboring proprietor. When, therefore, one makes an excavation upon his own land, in such a manner that the sand, clay, or other material of the adjoining land will fall into the pit or be disturbed if not artificially supported, and there is no special contract or statute authorizing him to so dig, he must shore up or otherwise support the other's soil, so as to retain it in its natural condition; or he will be liable in damage for the resulting injury. And this is true regardless of the location, contour, or constituent materials of the neighboring land, in so far as these exist in a state of nature. Thus, the lower owner upon a hillside must support the soil of the upper owner, to as great an extent as is necessary to retain it in its natural and undisturbed condition. And, whether the properties be on a hill or a plain, the amount of such support required will depend, of course, upon the quality of the soil, grading from nothing or almost nothing in rocky sections to a heavy burden in places where the soil is sandy or from any other cause readily movable. This right to the lateral support of natural soil is absolute, unless restricted by contract or statute; and when it is interfered with, all that its owner needs to prove, in order to establish a cause of action, is that he has suffered damage becaues of such disturbance. He need not show that the excavation which caused his soil to cave in was done in any careless, negligent, or unskillful manner. You should, therefore, notify your neighbor in a friendly manner that he is endangering your land and that you will look to him to pay any damage which may be caused by his negligent excavation. He would be liable and not the land. M. D.

"A DOOR that needed to be open and would slam has been fitted to a small staple and a hook put on the woodwork back of the door when open. Now it stays open when we want it to," says J.

THE ART OF HAY-MAKING.

Working to Advantage.

"MAKE hay while the sun shines" is a good adage, but, like many other such sayings, does not contain all the truth or lead to the very best practice. I want to present a few facts which have a bearing on the subject of hay-making. King says the amount of water evaporated through the leaves of the plant and necessary to produce one pound of dry matter in the crop is from 270 pounds in corn to 576 pounds in clover. If these figures are trustworthy, then a two-ton per acre clover crop has evaporated through its leaves 2,304,000 pounds, or 276,480 gallons of water. The crop has been grown in 60 days, and if we grant, for the sake of argument, that the use of water was equal in all stages of its growth, we have a daily evaporation of 38,400 pounds, or 4,608 gallons. This is more than two times the total weight of the green crop. If the power of the clover plant to discharge water could be preserved, three or four hours of sunshine would fit the greenest, heaviest clover for the mow. This large amount of water is given off mainly through numerous minute openings in the under side of the leaves, very little of it from the stem or stalk.

Again transpiration is much more rapid during the daytime than at night; in fact, may be almost totally checked in rainy weather or on dewy nights. The fact that plants acquire water during the night and lose it during the day is shown by the wilting and rolling of the corn leaves on hot, dry days, and their regaining freshness and turgidity during the night.

What of our common haying practice in the light of these facts? It is a common practice to mow in the morning, when the crop has the most water in it. The leaves, subject to the fierce heat of noonday, quickly wither and lose their power of exhaling moisture from the stems, and the crop must lie in the burning heat for hours while the moisture is slowly dried from the woody stalks. This makes the leaves so dry and brittle that they shatter off in handling, and the value of the crop is greatly impaired.

Now, suppose the mowing be done in the afternoon. The crop contains much less water, and the leaves, unburned by the noonday sun, retain their freshness and power to exhale moisture, and the hay is really making faster during the late afternoon than at midday when it seemed to be drying so rapidly. Grass cut in the afternoon will not get dry enough to be blackened by the dew, and once stirring the following morning with tedder will let the air through it and dry it so it can be taken up with the loader or windrowed before the leaves become dry and brittle in the scorching midday sun. There is a vast difference between air-dried and sun-burned hay. Many farmers burn the life out of their hay, and then wonder why their stock do not do well when they have all the hay they can eat. Much nutriment has been lost.

Many farmers with small acreage want to cure their hay in the cock. This method makes good hay, but it involves much extra work. Hay made as above outlined, by afternoon mowing and air drying, retains the nutritious leaves and preserves its flavor and goodness wtihout extra handling. While modern haying tools have greatly expedited and cheapened the heavy work of haying, they have not relieved the farmer from thonghtful planning of his work if he is to secure the best results. A good crop gains value through intelligent handling.

Ohio. F. L. ALLEN.

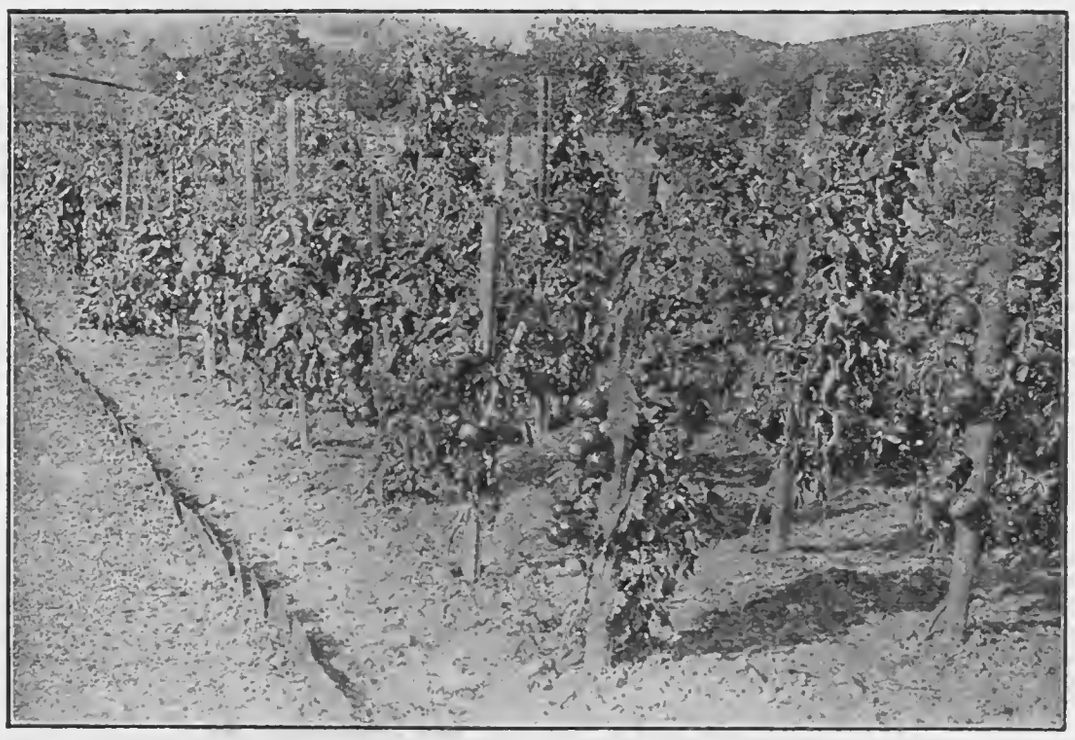
GIVE THE STOREKEEPER A SHOW.

IT may be that the consumer of the actual food stuffs pays $1, of which the actual grower gets but 35 cents; and it may be occasionally a reasonable thing to do to have only the parcel postage stamp between the one and the other, but occasionally, not often, I pay as a matter of convenience willingly a profit to a grocer who pays rent, or interest and taxes, because I can get everything at the store. A country store sells gloves, eggs, rope, flour, bananas, candy, stepladders, mowing machines, and the proprietor feels a sort of responsibility to have his goods all satisfactory. He sends for broken pieces of machinery for you, gets about anything one orders, from a white mouse to a white elephant. The middleman, so much criticized, slandered, vilified, etc., really is a man of great business ability, and gets often a scant living, for rent and interest on mortgage and taxes are large consumers of that 65 cents.

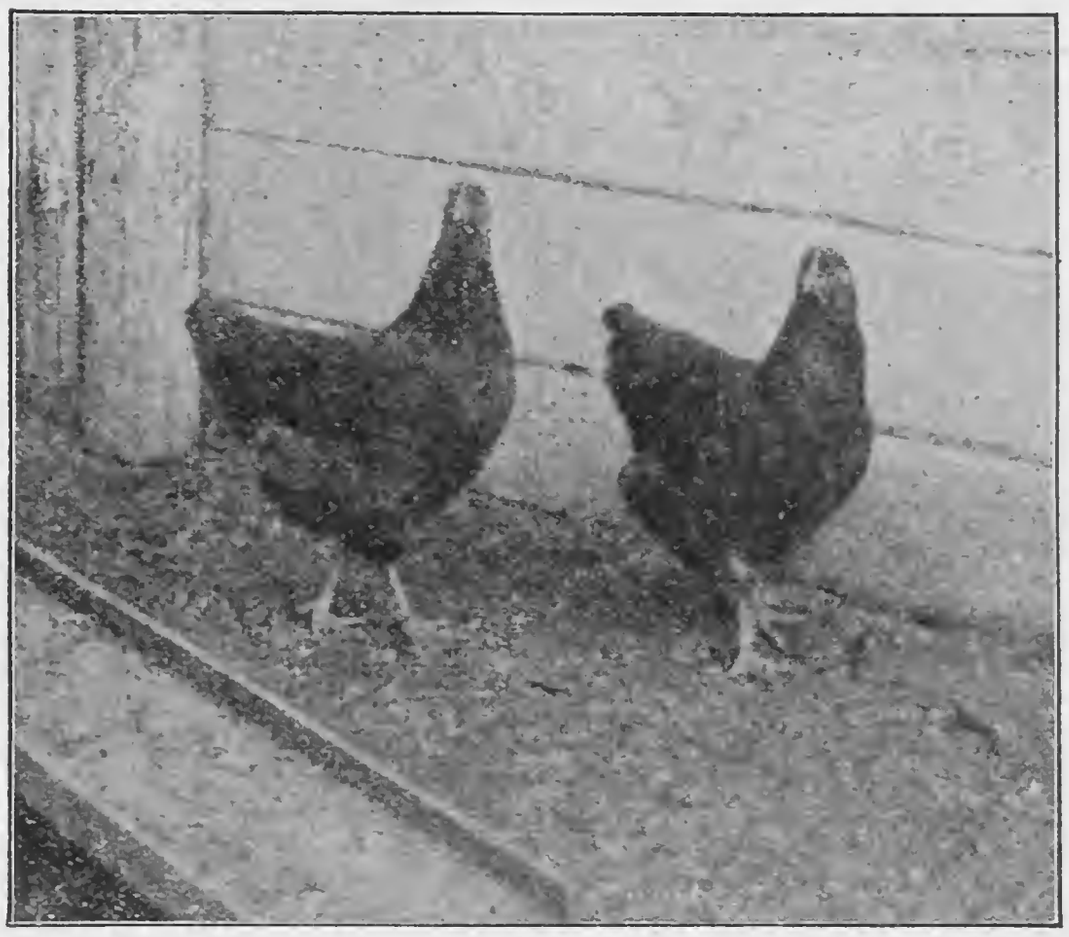
The man living on interest from mortgages is the one to rail about; some turn their mortgages every year so as to get as high as 25 per cent. The dividend getters of the railroads are clamoring for more. The owner notices every change in a rise in value to put on more rent, and the interest neither slumbers nor sleeps, but keeps steadily at it 24 hours a day and seven days a week. The mortgagee replaces the loan as often as he can for a consideration, having a broker to share a bonus with, and an attorney to search a title, which has been so well searched that it's as well known as New York on the map. Don't scold the grocer too hard; he has his worries and expenditures. The loafer living on an income is the absorber of 60 of the 65 cents. It is easy to overlook the other side of the middleman's business, which may not be a rosy one.

A housekeeper cannot easily write to Java for coffee, to Guiana for pepper, to Brazil for nuts, and Greenland for walrus shoe strings, and the mails would be overflooded with small packages. The distributing points are best, and the corner grocery. The fancy-goods shop next to it is even better to patronize than a department store requiring a half day's journey. ELBERT WAKEMAN.

Maryland.



A PATCH OF TOMATOES, WELL STAKED. FIG. 393.



R. I. REDS AT THE THORNDALE EGG-LAYING CONTEST. FIG. 394.

AN expert pruner tells of this side of his work: "I am making about 70 cents per tree, and prune about eight trees per hour, so I don't have much rest for my right arm. All the cutting is done with hand shears (I have used the saw three times in two weeks), so you can judge the condition of the trees." Let's all go to "Summer pruning. This is only one side of it, for not one man in 1,000 could earn such wages.

LIVE STOCK WITH ORCHARDING.

IN connection with our orchard interests we are planning to go into the dairy business for the purpose, largely, of manufacturing fertilizing for the fruit trees. We are not able to buy manure at all, so that if our herd of cows only pays expense of itself and gives us manure for profit we will consider it profitable. Our plan is to feed the whole year and save all manure, both liquid and heavy matter, using only a building for the exercise of the cows and where nothing of value can be lost. Do you think that a plan of this sort can be carried out to advantage or is it visionary? We have now over 30,000 fruit trees growing, and we are planning to plant about 5,000 more each year until we get our 800 acres well planted. The matter of fertilizing is the one hardest to solve. This plan I am working on I thought would not only solve that, but would give employment to the men we must keep during the Winter, saving some expense in that way. We can clear new land for hay ground and for corn for the silo. I thought this could be rotated with Alfalfa, clover and corn, so as to keep the ground right. A. A. L.

Traverse Bay, Mich.

Send to the experiment stations at East Lansing, Mich.; Madison, Wis.; Minneapolis, Minn.; Ames, Iowa, and Wooster, Ohio, for barn plans and bulletins on silo building and care and feeding of cattle. This plan of keeping live stock to fertilize the orchards is right for some conditions—not all. On most large orchards cover crops and chemicals are used to maintain fertility. Crops like rye, vetch, peas or clover are plowed under each year with the use of lime. On stony land such treatment will usually carry the orchard on to bearing age. After that some plant food—chiefly potash and phosphoric acid—will be needed. In some parts of Michigan wood ashes can be bought cheaply. This will give a good supply of potash. In some sections it is possible to buy waste bones at a fair price. These can be crushed in a bone mill and used with the wood ashes and with the cover crops, providing the cheapest food for the orchard.

Where live stock is kept we find usually a herd of dairy cows, a flock of sheep or a bunch of beef cattle. The dairy cows require most capital and most care. Milking and handling the milk will interfere with the orchard work. In order to keep up the herd you must keep a large number of young stock or buy fresh cows at a high figure. Dairying is a business by itself, and you will have to put in an expensive outfit and hire some high-priced men if you keep cows enough to eat up all your feed. The more common plan on large orchards is to buy sheep and steers in the Fall, fatten them through the Winter, and sell in Spring or Summer. This will provide a large amount of manure for the orchard, give Winter work for the men, yet not interfere with orchard work in Summer. On your large place, unless you have some special market for dairy goods, this feeding sheep and steers with cover crops will probably be better than dairying.

THE PICTURES.

FLORIDA STRAWBERRIES.—The picture at Fig. 392 shows the way strawberries are packed in Florida for Northern shipment. This photograph was taken at Elmer, in that State. These berries have a long, hard journey and the expense of packing, icing and transportation is considerable. It is therefore necessary to have them packed firmly so that they will make a solid bed in the box, and not shake about too much. When we see these berries taken out of the ice crate in this city it seems a wonder sometimes that they could make the long journey as they do. They must be handled with great skill at the start in order to carry them through.

EGG-LAYING "REDS."—The picture on this page, Fig. 394, shows two pullets entered in the Thorndale laying contest by Allen Jenkins of Virginia. This gives a good idea of the correct egg shape for Rhode Island Reds. These pullets are leading in the contest, and have made an excellent record, and are bred for egg pedigree. In addition to being excellent layers, they would also rank as show birds, and would probably score at least 92 points in the show ring. We hope to obtain from time to time good pictures of the leading pens in these contests, with a fair idea of their score, so that a reasonable comparison can be made.

STAKED TOMATOES.—A good method of staking tomatoes is shown at Fig. 393, this page. It is possible for any one to grow this crop after this plan, if proper pains are taken to select strong plants to begin with, and have the soil rich and strong. Thorough culture must be given, and proper pruning of the vine, so as to keep the lower limbs off the ground, and induce the vine to make a strong upward growth.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Asparagus Culture.

I HAVE a muck swamp, and I have been told asparagus will do well there. Will you tell me what soil needs to prepare it for asparagus? I have mangels on it this year, and was going to put potatoes next year.

Dutchess Co., N. Y. B. H. T.

Asparagus will grow on most any kind of soil, and will yield good crops on heavy soils. But for the production of asparagus for market, particularly on a large scale, a deep, sandy loam of good fertility is much to be preferred, as it is not only much more easily tilled but is warmer and earlier, which is quite important with this crop. Soils upon which pools of water will lie after a rain, or under which the subsurface water is near enough so that the roots of the plants are likely to penetrate it, are unfit for asparagus and must be avoided. Such a soil can of course be made fit for the growing of asparagus, provided it is suitable for the purpose in other respects. A thorough system of tile draining, at sufficient depth below the surface, will draw off the water so that there will be but a minimum of risk of damage to the roots. If the water has been well drawn off, so there is no danger of the roots becoming water-logged, and other conditions are favorable, this land should produce good crops of marketable asparagus.

K.

Market for Evaporated Apples.

CAN you give any information as to markets for evaporated apples, cores, skins, etc.? We understand that much of the refuse is exported and made into champagne. If this is correct, could you give us address of one or more firms that we can take the matter up with, as we are trying to put an evaporating plant in here this season? Can you tell us anything as to prices usually paid the farmer for his fruit? H. W. Z.

Pennsylvania.

The best markets for placing stocks of evaporated apples, cores, skins, etc., are found in Wayne County, N. Y., which is the leading section for this phase of the fruit industry, and in which many of the heaviest dealers have their warehouses. Sodus, Williamson, Ontario and Wolcott are much interested in this industry, Sodus heading the list with over 400 cars of this class of fruit released last year. All the dealers buy everything in the dried fruit line in any quantities. The chop apples are mostly exported and made into cheap wines and drinks. The cores and skins are made into cider and jelly. Germany also uses chops for a cheap drink, but not champagne. All the dealers in the fruit belt are direct exporters.

The farmer receives varying prices for his fruit, depending on the kind of season and grade of fruit. This year the prospects are that the grower will receive from 20 to 25 cents per hundred pounds for paring apples and 15 cents per hundredweight for chop stock. The prospects also are that the dealers in this section will pay about six cents per pound for prime quality evaporated fruit, with more for extra choice; $1.10 per hundred pounds for cores and skins, and one-half cent per pound for chops. These are estimates on the contingency that normal conditions ensue in the maturing and harvesting of the crop. Wayne County is perhaps the greatest county in the world for evaporators devoted to the dehydration of apples. A. H. P.

Rye on Poor Land.

I HAVE about three-quarters of an acre of rye, sown in light, sandy soil; has nothing put on it for years. The rye was sown without any manure, and is about up to my knees. Would you advise me to turn this under? I have three acres aside from this, all in poor condition, light, sandy soil. What would you advise me to sow in the Fall so as to turn it under for Spring? O. A. W.

Ulster Co., N. Y.

Probably this soil lacks both organic matter and lime. Plow this poor stand of rye under and use 1,500 pounds or more of slaked lime per acre. Then sow a combination of two bushels of buckwheat, three pecks of rye and two pounds of Cowhorn turnips per acre. The buckwheat and turnips will be killed during Winter, but the rye will come in for a Spring manurial crop. By plowing this under and using fertilizer you will get your land into fair condition.

COMING FARMERS' MEETINGS.

Summer School of Agricultural and Country Life, Massachusetts Agricultural College, Amherst, June 30-July 28.

Annual Poultrymen's convention, Massachusetts Agricultural College, Amherst, July 22-24.

Georgia State Horticultural Society, Summer meeting, Griffin, Ga., August 5-6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August 5, 6, 7.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

Northern Nut Growers' Association, annual convention, Evansville, Ind., August 20-21.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

"HE is the most tender-hearted man I ever saw." "Kind to animals?" "I should say so. Why, when he found the family cat insisted on sleeping in the coal bin, he immediately ordered a ton of soft coal."—Tit-Bits.

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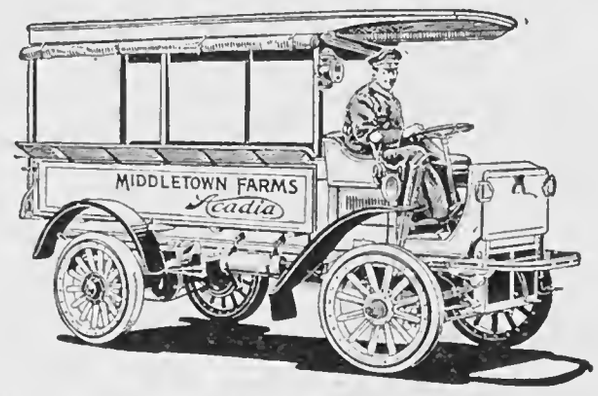

Middletown Farms Ship Products by *Autocar*

AS a quick and economical means of transportation, the *Autocar* Delivery Vehicle is now being used on farms all over the Eastern section of the United States. Dairy farms, truck farms, stock farms, fruit growers and farmers in general, have found that the *Autocar* brings old markets within easy reach and gives them new markets for their products which they could never reach with horses alone.

The Autocar

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An example of the value of the *Autocar* to the farmer is furnished by the experience of Middletown Farms, of Middletown, Del., who have used an *Autocar* for the past *four years*. They say:—

"We have run an *Autocar Delivery Vehicle* since October, 1910. This car has needed but few repairs and has given very satisfactory service.

"Before we bought our *Autocar* we used to ship all our products by rail from Middletown to Wilmington, Del., a distance of 25 miles. We make anywhere *from one to three trips every day, carrying 1½ tons each trip.* Of course we could never do this with horses.

"We have run our *Autocar* from 75 to 150 miles a day and its steady, reliable service has been of great value to our business. We now cover a route about as follows: leave Middletown at 7 A.M. and go to Earleville, Md., a distance of about 13 miles. It picks up the cream at that station and goes to Cecilton, gets the cream there and comes back to Middletown. Round trip 26 miles. We then go to Odessa, get cream and return. Round trip 7 or 8 miles. We then load the car and go to Wilmington, a distance of 25 miles each way. We get to Wilmington between 12 and 1 o'clock. We have made the run to Wilmington in 1 hour and 35 minutes with a full load."

What the Autocar has done for the Middletown Farms and is doing for other farmers it can do for you. Write today to Dept. R for the new Autocar book. It is worth reading.

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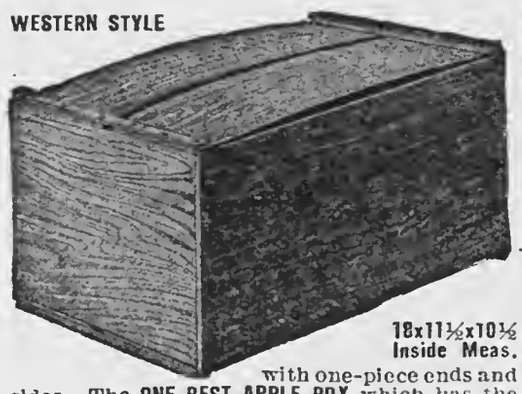

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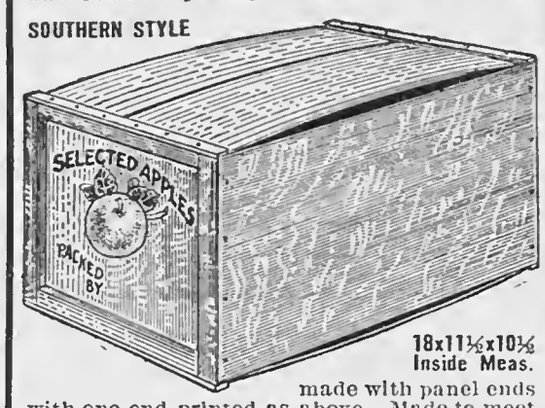

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AMERICUS, the leader of the fall-bearers, will give luscious, large, sweet Strawberries, equal to June fruit, if you set pot-grown plants in July and early August.

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Ask for our Mid-Summer Catalog of Strawberries, Vegetable and Flower Seeds, Plants and Bulbs. Mailed free.

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STRAWBERRY PLANTS FOR SALE August, September, October. Layer plants—well rooted. All leading varieties. Asparagus roots. Price list free. J. KEIFFORD HALL, Rhodesdale, Md.

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Suggestions For Hair Dressing

Becoming and Unbecoming Effects

By Edna S. Knapp

A LITTLE woman of six said the other day: "When my hair gets longer, mamma is going to do it a different way. I don't like it the same every day." Some people do, there is Marie who has worn her beautiful wavy hair practically the same way for years, with

THE WORST POSSIBLE EFFECT.

the coil high or low as fashion dictates. Floris likes variety, she tries all the new styles and can wear any of them. On my last visit to them, Floris, who is the housekeeper, spent three-quarters of an hour doing her hair in an elaborate and very becoming manner, while Marie, who worked in the post office, put breakfast on the table. Yet Floris was hurrying, for this new mode took her an hour and a half when she first learned it.

Do you want to know how to make the best arrangement of your tresses? This is what Nan has just done. First she took her hand mirror and, sitting down before her dresser, took account of stock. If you try it at night, be sure you have a good light at each side. Everything that goes to make up appearance has to be studied, one doesn't mind admitting defects just to herself, being known, they can be remedied. This was the result of her study: height, medium; look taller on account of a long neck; complexion, good but pale; face, oval, but looks large unless framed softly by her hair; profile poor, head flat, no one feature especially prominent; hair a little thin at the temples; forehead so high that it would be well to cover it a little. She especially likes a low coiffure, it looks well in front and in back, but a profile view of any she has tried, proves dreadfully unbecoming.

All the new styles call for a low coiffure with great quantities of curly hair arranged well over the face. They are charming but few have natural hair

AN IMPROVEMENT IN FRONT.

enough to get the right effect. Most of us have straight hair, while apparently there are no styles for straight-haired people. I wonder why.

Nan's next step was to study the catalog de luxe of a Fifth Avenue hairdresser. It is a beautiful book, about everything dealing with hair, countless beautiful arrangements of wavy hair are pictured. It tells the laws of becoming arrangement for seemingly all types of women. Nan spent a good deal of time with the catalog, then finally wrote for advice, which is given freely, giving a full description of herself. The answer came promptly, courteously advising her to study the catalog. Thus thrown on her own judgment, she did study the catalog some more, and at last made up her mind. She has been wearing a modified pompadour, the short hairs around her face curled back from her face, and a coil at the right height to give a good profile line to her head. The new arrangement called for brushing down and cutting in "bang" effect the troublesome short hairs about her face, these were to be curled down to cover her high forehead. A parted pompadour of waved hair with a soft "basket weave coil" suited her. To do this, it was necessary to get a three-stem switch. The hairdresser's prices were low for the quality of his wares, but Nan's purse was low, too. The "basket weave coil" proved rather troublesome to learn and arrange so on ordinary occasions, a "figure eight" twist looked well. This was kept rather flat and the top of the coil went high enough to give a good outline to her head.

Now, having decided to alter her style of hair-dressing, it was necessary to wash her hair to get it out of the way it had been going. Hair has habits of its own,

ARRANGED BY A HAIR DRESSER.

you know. Nan uses tar soap with a little borax in the rinsing water to make her hair fluffy. She made the mistake once of putting in too much borax, but will not do it again. Some of the new head washes are much easier and quicker to use. Nan gives her comb, brush, side combs and hairpins a bath when she washes her hair. Nan is able to keep her hair in order ordinarily by washing it once in two weeks, brushing it a few minutes at night and giving her scalp ten minutes of massage with her finger tips, using a circular motion. In the winter, once a month for washing the hair does very well, with a dry shampoo of talcum powder once in a while.

Straight hair has a beauty of its own, in my humble opinion, if it is well cared for. It can be made nearly wavy by careful brushing and arrangement in loose, soft effects. It is almost wonderful what a difference the style of hairdressing makes. I asked Vivian to pose for some photographs to show this. Vivian has about the prettiest straight hair I know, soft and lustrous and almost wavy. The photographer was not rushed at the time so took a good deal of pains to get the effect wanted. The first view shows the worst possible effect gained by straining the hair back into a tight coil. Not even house-cleaning would excuse any such arrangement.

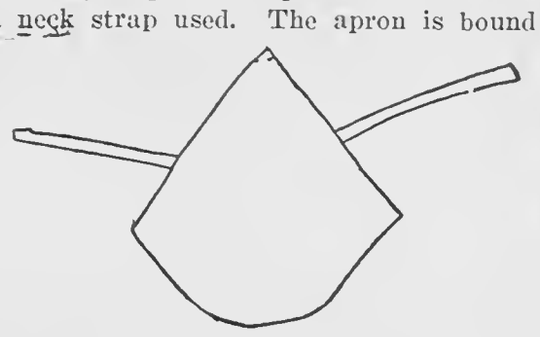
The second picture is the way she ordinarily wears her hair, and suits her exactly. This is the same hair and the same amount of hair as in the first view. The difference all lies in the way it is handled. Vivian's hair is long but it is not unusually thick. She is a past mistress of the art of making it look abundant. The third picture shows the arrangement a Boston hair-dresser preferred for her. The coiffure was the result of that lady's effort. It is more stylish according to present modes, but I do not like it as well as the second view. Although Vivian has straight hair, like the rest of the feminine world, at times she wears it curled. One is likely to look more intellectual with straight hair, but curly hair softens and changes the whole face.

Bangs are beginning to come in again, our English cousins call them "fringes." I suppose the reason is that the close hats and automobile bonnets of the day are so trying to many faces. You can buy a front-piece and wear it with a boudoir cap, if you don't get up in time to arrange your hair before breakfast and want to look as if you did. Seriously, boudoir caps have their uses. I noticed a beautiful elderly lady in the hospital one day this Spring; she was wearing a negligee of tan-colored flannel covered with rosebuds in Dresden effect. She had on a boudoir cap of lawn to match, trimmed with pink ribbon and lace. This seemed such a sensible fashion, you know how untidy your hair will get when you have to stay in bed.

You can even buy a wig to match your costume if you want the latest absurdity. Many of the styles of past years are in vogue, only arranged in lower effects. The mail-order houses carry in stock basket puffs, Psyche knots, two or three small puffs, and the coronet braid. Not nearly so many rolls are worn and nearly all the coiffures are moderate in size. Anyway, the extreme styles look like "her Thursday afternoon out." The style Janice Meredith wore is again popular for evenings. Very few evening arrangements of hair are worn without a headdress of some sort. Most show a band or bandeau of ribbon-covered lattice work worn either plain or with a chou of chiffon at one side. Some have a small ostrich feather at one side, others show feathers at each side. All match the dress as a rule. Some pretty headbands are of filagree. The general style of these accessories reminds one of an Indian maiden with headband and single feather. You can get hairpins now to match your hair. They are not expensive. The best are silk-covered. A well-dressed woman is supposed not to let her hairpins show.

EDNA S. KNAPP.

THE WELLESLEY APRON.—Has the Wellesley apron been described in your columns? It is pretty and practical and very easy to make. It consists of a square yard of unbleached drilling with one corner gracefully rounded. This is for the bottom. The opposite point is the bib, and may be pinned in place or cut off and a neck strap used. The apron is bound



all round with a contrasting color and has strings of the trimming. I made some once with stenciling as decoration. As it hangs on the bias it drapes gracefully and is the easiest to iron of any cover-all pattern I know. The picture is all the pattern one would need. K.

THE SIRE: "What would you think if I told you that at your age I never disobeyed my parents or teacher?" The Son: "You'd lick me if I told you what I thought."—Nashville Tennesseean.

∴ Hope Farm ∴

A FARMER should feel at peace with the world after supper on Sunday night. Fourth of July had come and gone, and the danger from fireworks had gone with it. The rain and fog had been bad for haying, and the crab grass and weeds had worked into our wet ground, yet thus far the season had been a good one for us. So, after supper, I was not disposed to fight with anyone. Very likely I should have come out better if there had been more desire for battle. I wanted to see how the beets were growing on the lower field, so with the little boys to follow and Fritz, the mongrel dog, to lead the way, we started across the road and down the little hill by the pasture. My little Airedale friend considered this mission so far from danger that she did not think the journey worth while, so she curled up in front of the house. We looked over the beet crop and examined our trees and then started back. Fritz went running across the field at the suspicion of a woodchuck. There is a wet spot in the field, so I climbed over the fence and walked along the stone wall in the pasture. The big black heifer raised her head and took a good look at me—then slowly moved my way. She is a big, heavy animal—the daughter of our old cow. We expected great things of her, but she has developed into a great beefy animal, unruly and mean. I should have remembered this, but she seemed good-natured enough as she approached, and I got off my guard. She came up slowly, and I put out my hand to see if the strap was on her neck. Quick as a flash she lowered her head and dived under my arm. Her head caught me on the side like a battering ram. I was standing on a round stone, and as I slipped my left leg curled under and my ankle twisted. Down I went flat between a post and a big stone. I could not get out, and my left leg was twisted. Then that big black brute seemed to know just what to do. She stamped with her front feet and tried to rip me with her horns. She seemed mad with rage, and came at me like a tiger, ripping, butting and stamping as if I were the "enemy." I thought that Florida cow that Uncle Ed and I bought was about the limit for fighting, but this New Jersey heifer was like Jack Johnson compared with a very ordinary citizen.

The Hope Farm man has faced several serious situation and had much time for reflection, but events never moved quite so rapidly through his mind as when he lay pinned between that post and rock with that maddened brute stamping and ripping at him. All I could do was to get her by the horns with both hands and try to hold her head away. On the ground near me lay a big stone. If I could get hold of this I could pound her over the jaw—but it was six inches beyond my fingers and if I let go my grip those horns would be free! If you want to know what people think of in such a situation I can give a few facts. First, there came into mind the absurdity of this fight. The heifer could gain nothing by killing or maiming me, as she was bent on doing. It was a foolish thing for me ever to trust such a creature, or give her the chance she had taken. As I lay there trying to hold her off I remembered that scene from "Quo Vadis" where the giant struggled with the bull until both were exhausted. It was hard for me to realize at first that the heifer was in earnest, but she grew fiercer as she fought, and I found my strength going! Then I suddenly realized that unless I could get help I was gone. On my feet I could have handled her, but she had me where I could not move. Then I thought of the little boys—one 10 and the other seven. Up to this moment I had not thought of risking them in such a battle, but it was now or never. So I called them to help, not knowing what they would do. Most boys and women and many men would have screamed or fainted or stood still—deprived of thought. My boys let out a call for the Airedale, picked up the first club they could find and came on. That heifer had wrenched one sharp horn loose and was slashing at me, when suddenly there came a sound such as an energetic man who seeks to please his wife makes when he beats a carpet. That sharp horn flashed within a couple of inches of my face. Out of the corner of my eye I saw Redhead and Towhead standing on the bars hammering that heifer with their war clubs. Perhaps you have read Rider Haggard's story of the African chief who stood at the head of the stairs with his battle axe and kept the great company at bay! Well, little Redhead had something of the same spirit as he balanced himself on that rail and made base hits on that heifer's neck! Flesh and blood could not stand that pounding long. The heifer finally backed out of range, bellowing and shaking her head, but before I could get on my feet she put down her head and came for another charge. Then there was a flash of gray color and little Airedale was at her throat, while Fritz had her by the heel. It is the blue blood that

A Redhead and a Box of Marshalls. Fig. 399.

goes to the seat of danger! The dogs soon had her in the center of the pasture and I got over the fence a little bruised and shaken, but very much wiser than I was before. The little boys went up to the house to receive congratulations and little Airedale sat with her wise head on one side only regretting that she did not have more of the fun.

The big heifer goes into beef. I have had two or three cows that picked up this habit of fighting, and they were always dangerous. One of them broke loose and got into the lane where our folks were walking. This brute attacked a woman and pinned her against a post. We cut the horns off, but as soon as her head was healed she resumed her hitting and crushing. On a farm like ours, where there are children at play, an animal with such habits and disposition is a constant danger. This big, plump heifer will make fine beef. One would think that some of these "white hopes" could eat a few steaks from her and then handle Jack Johnson with ease! At any rate she goes for beef, and here comes the singular thing about it. In spite of all this talk about a meat shortage it is a job to sell this big heifer. The local butcher will not touch her. There are no slaughter-houses left, and the dressed beef people will not bother with single animals. You can only sell to peddlers or "independents," and take what they see fit to offer. There are several silly Congressmen who, each year, introduce bills which would compel every farmer to raise two or more beef animals each year. Thousands of us would raise such animals at a loss, even at fair prices, and when we tried to sell them we should have to just about give them away. Wait and see what we actually get for my big heifer!

The Hope Farm Scrubs.—They did not do quite so well in June, but it is our duty to report progress without any complaint or apology. Here is the record:

	May	June		May	June
No. 1	21	7	No. 6	25	19
No. 2	22	19	No. 7	13	11
No. 3	23	22	No. 8	19	18
No. 4	21	19	No. 9	22	23
No. 5	28	21	No. 10.....	19	19

There were 15 eggs laid outside the trap-nests, so the total was 183. It is impossible to say which hens laid these 15 eggs. No. 1 may have laid some of them, or No. 5 may have laid several more than the record shows. I spend no time worrying about that. The scrubs laid 183 all told in June. Let us see how they compared with the blue bloods. Here is another table:

Record for June.

Hope Farm Scrubs.....	183
Average—all pens	170
Tom Barron's Wyandottes.....	166
Best P. Rocks (all breeds).....	192
Poorest P. Rocks (all breeds).....	146
Average all Rocks.....	165
Best Wyandotte (all breeds).....	202
Poorest Wyandotte (all breeds).....	115
Average Wyandotte (all breeds).....	153
Best R. I. Red.....	211
Poorest R. I. Red.....	97
Average R. I. Red (15 pens).....	146
Best Leghorn	249
Poorest Leghorn	117
Average Leghorn (34 pens).....	200

Thus the scrubs beat the average performance of every breed in the contest, except the Leghorns. There is one pen of Silver Campines. They laid 185 eggs—two more than the scrubs. Out of 82 pens there were 51 below the scrubs in the June total. Starting at the extreme tail end of the procession—there are now 12 pens behind them. On individual records they fell down a little. No. 5 laid 49 recorded eggs in 61 days, but this is behind several birds in the contest. No. 1 and No. 7 ought to be ashamed of their record unless those outside eggs belong to them, but we find no fault. These scrubs were in very bad condition when the contest started. They all had colds and most of them had been starved and jammed about in the live poultry market. Their egg record really starts from about March 1. They lost about 100 days at the start. I figured that the best they could do by July 1 would be 800 eggs. They actually laid 815. My figures are 950 by August 1. They have done far better than I ever expected, and the lesson I hope they will teach has hardly been started.

A Combination Crop.—The little picture at Fig. 399 shows a couple of Hope Farm crops—a Redhead and a box of Marshall strawberries. Both are high in color, with good foliage and healthy fruit. One helps grow the other. I think every farm should adapt itself to the best crop combination—suited to the soil and the temper of the farmer. Some soils are well adapted to fruit, but would fail with grain or potatoes, while others are not at all adapted to fruit or truck. Some farmers ought to be surrounded with children while in other cases it would be a mistake to let a child come on the farm! The best sort of farming is done when the crop combination is right. Redheads and Marshall berries suit us well.

H. W. C.

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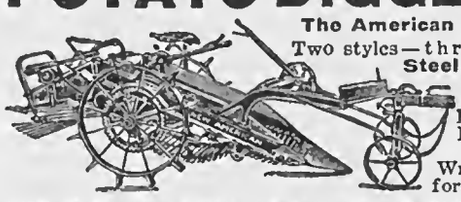

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Flower Growing For Women

Is It A Profitable Business?

Answered By Paul L. Ward

I READ an article on flower culture in THE R. N.-Y. and thought you could help me a little. Could you tell me where flower culture, for business, is most successfully carried on? I have grown Asters by thousands for four years or more, but find I can grow them easier than I can sell them. I have grown some fine large flowers and have been quite successful in my own way, but to grow flowers of perfection and specialize is quite another thing. I live in country and have read and know quite a little of hortieulture and general farm work. This is a sad country for gardens, corn patches or anything that wants to grow; we seem to be in a frost belt; every year from June 5-14 there are frost indieations and again August 21 to September 10 sometimes everything goes. Could you suggest any good locality that calls for market flowers, and is there a place where I could work and learn the ins and outs of flower culture in a business way. MISS E. L.

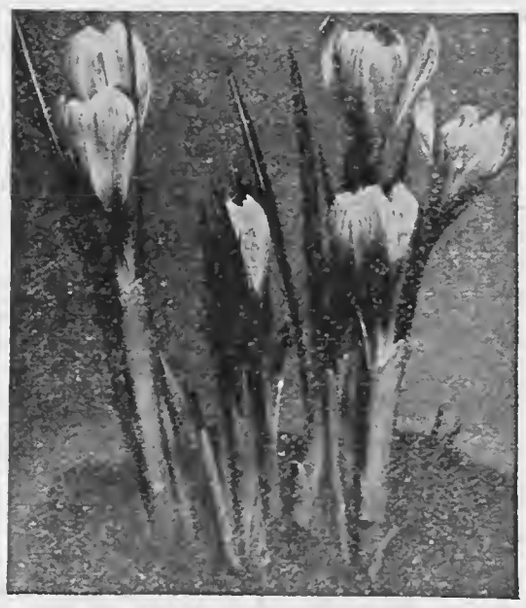
Western, New York.

THE PROFIT IN FLOWERS.—After handing a florist a dollar for a dozen fine carnations or making a similar expenditure for other flowers, the purchaser is likely to think how fine it would be to be the seller of those same flowers. The seemingly splendid prices received for almost everything in the floral world leads many to enter into the business of selling or producing market flowers, or both. In the first place, the prices paid for flowers are not high. They are extremely perishable products, expensive to grow in perfection and subject to all kinds of calamity. Such being the case, only one who has a great liking for flowers, a known ability to produce them and market them, should attempt to make a living thereby. Like poultry raising, the profits will come largely in proportion as the one engaged in the business loses sight of the almighty dollar and throws heart and soul into the work for the work's sake. It is a business you cannot turn over to a hireling and sit by and draw in the returns to the cash drawer, but you must be everlastingly on the job, and like it.

SELECTING LOCATION.—The beginner who wishes to make an independent start may well select a location in a town of 5,000 or upward, where he or she can obtain plenty of good land, preferably on the main road to the cemetery and as nearly central as possible. The factor of competition must be considered. If there are already local florists, it would be well to ascertain quietly if they were pleasing the people. If so, try another place, as I believe it is foolishness to try to build up such a business in competition with one who has the business and is giving satisfaction. On the other hand, if no competition exists or of a harmless sort, you can be reasonably sure of success.

CHOOSING SPECIALTIES.—Having chosen a location, choose the phase of floral work you will enter. The general florist trade requires some capital to start, at least a small greenhouse and some knowledge of designing, for funeral work, society functions, weddings, etc., are the main market for strictly flower work. If you lack the ability to do design work, the growing of potted plants can be taken up. This phase of the work is not so much in competition as the growing of cut flowers. A good idea for this is to make it a point to have some blooming plants in first-class condition every day of the year. From December 15 to March, primroses and Cinerarias are wonderfully salable at from 25 to 50 cents each; from January to Easter, all kinds of potted bulbs, hyacinths, tulips, Narcissi, etc., find ready sale. Specimen geranium plants are very popular. The single geranium, Mrs. E. G. Hill, is a splendid sort to grow into specimens, sometimes producing ten or more clusters at once, with nearly 100 flowers to a cluster, and the clusters measuring about 14 inches around. These go quickly at 50 cents each. Calla and Easter lilies are quite popular with the better class of buyers. For Summer potted plants there are always the geraniums, Verbenas, marigolds, Gloxinias, tuberous rooted Begonias, and Fuchsias, which can be easily grown and had in bloom during the warm months. For Fall, potted Chrysanthemums, Obeoniea primroses and ferns are popular. And we must not forget that grand plant, the Cyclamen, taking nearly 20 months to flower from seed but well worth the time and trouble. It sells from 25 cents for a plant with a single flower up to $3 each for plants literally smothered in bloom and in seven-inch pots. The list of potted plants is long, but the above are all popular, easy to grow and easy to sell.

HOW TO SELL.—Now for a selling campaign, having grown your plants and being ready to market them. First, get attractive stationery, the very best, for your product goes to a class that demands the best. Then write a personal letter to the teacher of every Sunday school class in the city, the chairman or chairwoman of all flower committees in different fraternal societies, each minister, and all persons who, for various reasons seem likely to be lovers of flowers. The giving of potted plants to the sick is a universal custom and it pays and pays well to cater to this demand both in price and quality. Many of these classes and societies are limited to 25 cents for each person who is sick. You can easily have a line of plants to sell at just that price. Lots of children will come in with ten or fifteen cents for a plant. Don't turn them away. A single Narcissus in a four-inch pot will make you a good profit even at 10 cents, and two in a pot for 15 cents. Cater to all comers in price but never lower your standard of quality. You have no idea what the advertising effect might be on your business to send out a bunch of sleepy carnations at half price just to keep them from being a total loss. Your entire florist business may be



A POT OF CROCUSES.

judged and found wanting by some one from that bunch of carnations. Throw all wilted and inferior stock into the furnace. Never sell a plant, no matter how well it looks, that you know will go to pieces the next day from having been in bloom too long. Your customer is entitled to at least a week of bloom, and except for funeral work only freshly opened flowers should be sold.

There are a lot of flower growers who have no greenhouses, who have no cold frames and little or no capital. These are the growers of Summer flowers, Gladiolus, Aster, monthly roses, pansies and many others, including a long list of perennials. It is much easier to produce these flowers than the greenhouse kinds, and correspondingly harder to find a market for them. Local demand will always take a certain percentage of them if they are first-class, but the large cities must be depended upon to consume the main crop, and it is practically useless to send anything but the very best to a city market and expect to get a living price. In certain flowers there is always a glut in season and only the best is used at all. Growers of the following three varieties of Gladioli find a good profit by getting fine stock onto an early market. They are, America, Augusta and Mrs. Frances King. Dahlias are coming into favor and when well grown, carefully packed and shipped are profitable. Asters, most widely grown of Summer flowers, never glut the market very badly because it is so hard to produce first-class flowers. The finest Asters are grown under glass by disbudding, where they are not injured by violent storms. The growing of Gladioli is increasing rapidly and as yet the gladiolus is little known to the general public. You can both sell the flower and produce an increase from the bulb so that they are doubly profitable, and they are as easily grown as potatoes. Yes, the growing of flowers and flowering plants for market is profitable if one is able to produce the finest quality and become known as a grower of fine stock.

Michigan. P. L. W.

Good Words.

I AM very much pleased with the issue of June 27 of your paper. It is a decided improvement on an already excellent paper. R. H. S.

Connecticut.

THE R. N.-Y. always was the best farm paper printed and since the Woman and Home Department has been enlarged it is almost perfect. I would be pleased if C. Allis or his wife would tell us just how she makes the curd for the cheese, and how long it can be kept before putting in the press. I tried with junket tablets and got it too soft. C. T.

New York.

Mrs. Allis tells about this on page 952.

THIS week's issue is absolutely "bung full" of good things and I have seldom enjoyed the contents more or desired so much information. A. F. A.

I HAVE taken your paper over a year and enjoy it very much. My husband never cared to read much, but now on Sunday he takes THE R. N.-Y. and reads it; says he thinks it a very good thing. MRS. P. S.

New York.

I WANT to say just a word of appreciation of THE R. N.-Y.; even in this western country it is more helpful than any other paper we have found. I only wish there were a paper dealing with Pacific Coast conditions, half as reliable and readable. MRS. R. W. WILLIAMS.

I WROTE you early in Spring in regard to fertilizer on an acre of good bottom land. You advised certain fertilizers. I followed to the letter, results so far best corn in the neighborhood, by 50 to 100 per cent. It is higher than I can reach and beginning to tassel and this in spite of the greatest drought ever known here. I have cultivated with one-horse cultivator, every 10 days. No rain on it since it came up, but one shower that just laid the dust. E. T. T.

Illinois.

R. N.-Y.—We gave you a sure combination of chemicals, though it might not pay a profit with low priced corn—one part dried blood, three parts fine bone, one part muriate of potash.

I DO appreciate THE R. N.-Y. and your straightforward course of exposing fraud, and the household department is a great addition. Among all the magazines I take THE R. N.-Y. comes first.

MRS. ALISON W. FALCONER.

Massachusetts.

The Bright Side.

WALT MASON, the prose poet, gets after the Ben Davis apple as follows:

Last Summer, when the hot winds blew, and wilted things on every hand, and when the sun, in skies of blue, shone down and blistered all the land, we mortals raised a bitter wail, and cried, "In this there is no sense, for all our cherished crops will fail! Oh, drouth disastrous, get thee hence!" Had any moral highbrow guys attempted to convince us then that back of all was purpose wise, we should have jeered and jeered again. But now that theory is fulfilled, for we're informed ten thousand score Ben Davis apple trees were killed, by that fierce drouth, to bear no more. Ben Davis trees are standing dead throughout this glad and fertile land, and we regret the things we said because we did not understand. So, let's be patient after this when trouble dogs us, close behind, for sorrow's but a cloak for bliss, and threat'ning clouds are silver-lined.

You have probably known people who have to be told exactly what to do. They are faithful as fate but have no imagination or initiative. Hearst's Magazine tells of a man who owned an animal show. One day, when the show was in New Jersey, I went out to Chicago to arrange some business. While I was having dinner, a telegram was handed me. It read: "The leopard has escaped. Prowling about the town. What shall I do? Peter." Pete was one of those fellows who had to have explicit directions to do anything, even in the emergency. He was always afraid of making a mistake. I rushed from the table and sent a reply. "Shoot him on the spot," I wired. Being unusually busy, I forgot all about the affair until about two hours later, when I returned to the hotel, and another telegram was handed me. It proved to be from careful, conscientious Pete, and asked: "Which spot?"

MY little girl is just beginning to go to school and does not know much about arithmetic yet. The other day the teacher gave her an example like this:

Teacher: "If you had $3 and I should give you $2 more, how much money would you have?"

Alta, aged six: "I should think I'd have four bushels." MRS. E. W. P.

Vermont.

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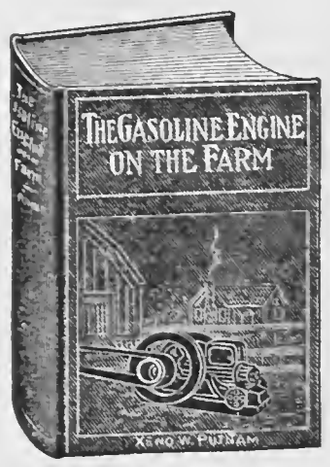

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We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

THE big rascals and their spineless creatures who wrecked the magnificent property of the N. Y., N. H. & H. Railroad have put their thieving fingers into thousands of homes where THE R. N.-Y. is read. This railroad's stock was a favorite investment in New England, and was bought largely by people who desired a solid and sure income. Few railroad stocks in the country were bought so freely as family investments, because the public had the utmost confidence in the men who were supposed to control the road's finances. It now appears that these respectable men sat like dummies and did just what J. P. Morgan told them to do. Instead of "directing" they merely ratified schemes of robbery which—the Interstate Commerce Commission says—cost the railroad at least $90,000,000! The Commission says of the present outlook:

The splendid property of the New Haven Railroad itself will be called upon for many a year to make up the drain upon its resources resulting from the unpardonable folly of the transactions outside the proper field in which its stockholders supposed their money was invested. But honesty and efficiency of management of this property of the railroad only will undoubtedly in time restore its former standing.

We hope that our friends who have suffered because of this rascality will finally save their property. But what of the men who have so shamelessly betrayed their trust? They ought to be compelled to replace what was stolen, and the ringleaders among them who are left alive should be put in jail and kept there.

*

ON page 890 you say that opportunities on Eastern farms are superior to those in the West. If this be true the natural questions are why are Eastern farms being abandoned? Why is the price of land less than half what it is here, and why are not your farmers taking advantage of some of these great opportunities? W. M. O.
Iowa.

To answer your last question first—they are; thousands of them. Some of the most productive and profitable farms in the country are within 100 miles of the Atlantic Coast. The soil of these productive farms has been worked steadily for more than 200 years. Acre for acre they will produce more corn, more wheat, more potatoes and more hay than Iowa soil, while these crops will sell for twice as much per bushel, or ton, as the Iowa products! No good farms at the East are being abandoned. There are some rocky and steep farms which never should have been cleared. They never would have been touched if the first settlers had known what lay beyond them. These naturally unprofitable farms are now going back to the forest, though many are still used for pasture. Some excellent farms are unoccupied but not abandoned. These farms in the past supported large families and made money for their owners. They will do the same for other farmers if they can be worked with spirit, and if the farmer can have fair capital. One difference between Western and Eastern farming is not well understood by the Western man. In the West farming is the main business and the chief dependence of the towns. Money is invested freely in farm land. This gives farming a solid character as the leading industry. The price of land goes up, loans are easily made, and farmers become the leading class. In the East through several generations manufacturing or other city enterprises have become the leaders. They absorb money for investments and draw interest and humanity away from farming. Thus farm values have fallen, and boys and girls have left the farm. When the old folks grow old or pass away the farm is unoccupied or in the hands of tenants. The tide has now turned, however, and Eastern farming is rapidly "coming back" as a business enterprise. With better facilities for obtaining working capital the Eastern farmer will have better opportunities than ever before.

SOME weeks ago a reader wrote asking quite an important question. He did not sign his name, and the postmark on the letter was badly blurred. As a rule we pay no attention to unsigned letters. This question seemed to be a personal one, but there was no way of answering it by mail. Now comes another letter in the same writing again unsigned and without postoffice being named. This time the writer scolds because he has not seen his former question answered in print. The question carries no point that would interest the public, but we will answer it promptly as soon as this man complies with our fair and simple rule of giving his name and address. This is a small matter, but we want to make it clear that no one need have the slightest fear that we will ever betray his confidence.

*

OF late years we have had more and more people say that there is no more spirit on Fourth of July celebrations. The holiday does not mean what it once did. One must have a new idea of the meaning of "Independence" in order to celebrate the "Fourth." Here is a new one, for example:

Waupaca, Wis., voted out the saloons last Spring, and July 4 we had a great big community picnic for a "celebration"; city and country combine and have a social center programme.

That celebration meant something because it stood for a new independence—freedom from the legalized curse which has held thousands of homes in slavery. Freedom from the legalized saloon meant happiness the best that life has to offer to thousands of women and children. That gives a new spirit to the "glorious Fourth," and such a celebration reaches beyond its locality in its effect upon the temperance question. There must be a nation-wide sentiment in order to drive out the saloon.

*

I AM anxious to have you express your opinion of the average agricultural bulletin of the past, and to offer helpful criticism upon it. I would like to have you indicate what you regard as the ability of the average person for whom these bulletins are prepared. How technical and scientific may the material be? Is it necessary that technical and scientific information be expressed largely in technical and scientific terms or may such information be presented in common everyday language in these bulletins? F. W. B.

These questions are seriously asked by a teacher at an agricultural college. We have heard much destructive criticism concerning the station bulletin—its limitations and failures. The most common criticism of this sort is that the average bulletin "does not get anywhere." It states a collection of facts without making any particular application—usually in a dry, rather uninteresting form, out of reach of the "average farmer." Another criticism is that the bulletin is usually aimed at a scientist or a farmer of superior intelligence—not at the plain uneducated man who most needs such help as science can give him. This is the sort of criticism usually heard. Much of it is justified, but the station people have had a good answer. Their work has thus far been along the line of research, and it has not been their business to popularize the work. Granting that this has been so in the past, it may be the part of constructive criticism to suggest that the future should bring a change. We would like to see two kinds of bulletins issued—much like the plan followed by the two stations in New York State. There should be a scientific bulletin in which the author states his facts in scientific language without attempting to interest farmers. This should be for distribution among scientific workers. There should also be a popular bulletin on the same subject when the facts warranted it. Instead of having this written by any scientific worker we would have it prepared by some intelligent farmer who had made a success of the line of farming discussed in the bulletin. The object of this would be to obtain the language and the point of view of an actual farmer. Such a man would be far more likely to know how to interest other farmers than the station worker. This would be especially true of the younger scientists who have graduated from high school to college and laboratory without any actual life upon the farm. The National Department has issued several good pamphlets of this sort. Why not have the station go further? Suppose they discover some new fact about incubation, or cattle feeding or the use of fertilizers. We would have a scientific bulletin for scientific men. Then we would let some successful farmer, who had the gift of language, make a popular story out of these facts, for general distribution. This suggestion is based upon the fact, which we have long observed, that the teacher or the scientist becomes absorbed in his work, and usually forgets that "universal language" which one must have in order to appeal to the plain people.

AS to the 35-cent dollar, I believe the farmer will always be willing to take it so long as he operates individually and not collectively, and until he learns what it costs him to produce each and every article he manufactures upon his farm and operates only so much land as he is capable of making produce to its fullest capacity. One-half production with lack of buying and selling efficiency keep down the real producers, and the possession of these fundamental essentials enrich the manufactures whose foundation is the farmer's efforts at production. E. A. P.
New Hampshire.

The farmers are not willing to accept the 35-cent dollar, but under present conditions most of them are obliged to do so. Our friend is right in saying that co-operation and organization are necessary if we ever are to enlarge that dollar. Some farmers say they have no need of co-operation since they are situated so that they can sell direct to the consumer and thus get the full dollar. They forget, however, that they may be paying a 175-cent dollar for many of the things they buy, and that this eats up much of the profit on what they sell. True co-operation means advantageous buying as well as selling. The trouble is that under our modern business methods everyone wants to sell by the 175-cent dollar and buy with the 35-center. Thorough organization is the only way to adjust things fairly.

*

THE House of Representatives has passed what is known as the Clayton bill, and it is now before the Senate. This bill, among other things, exempts, from the provisions of the anti-trust measure:

Consumers, agricultural or horticultural organizations and authorized associations instituted for the purpose of mutual help, and not having capital stock or conducted for profit.

This has been heralded as a great victory or advantage for farmers, but a brief study of it will show how little there is to it. What sort of a position will farmers be in if in their attempts at organizing they are restricted to "mutual help" and denied the privilege of combining for business profit? There is no need of any such clause in the bill. If there is to be any exemption at all it should broaden the farmer's opportunities rather than restrict them. The present high cost of living cannot be cut down until the cost of distributing food is reduced. This can only be done by bringing producer and consumer closer together—an impossible thing except through organization. In such a service men will not organize for "mutual help" alone. There must be the inducement of fair profit. Yet this proposed measure would not permit such organization if there is to be any business profit in it. The law should go further than mere permission—it should encourage farmers to combine so as to purchase their farm supplies at a lower cost and sell their products at a fair price. In European countries farmer organizations are authorized by law and encouraged. Government aid and direction are given because all recognize the absolute necessity of keeping the farmer prosperous rather than giving other classes the opportunity to exploit or rob him. In this country practically every business is organized except the business of farming. There is combination everywhere except among farmers. Instead of restricting the operation of farm organization—as this law on its face does—it ought to be considered a national duty to broaden the scope of such co-operative work in every fair way.

BREVITIES.

THE "uplift" is one thing—true lifting up is quite another.

ALL is not gold that glitters, and all is not plant food that smells.

TRYING to chain a boy to a farm is usually a good way to break the chain.

IF fresh air through the day is voted right—then why, my neighbor, shut it out at night?

A MERRY heart goes many a mile and it is my belief that honest fun is the fungicide that kills the germs of grief.

EVEN the island of Ceylon offers a market for American apples. The trade is limited, but every corner of the earth should be reached to provide its share.

ON the whole it is wiser for most people to use their heads as a dictionary rather than an encyclopædia. You cannot hope to carry all knowledge—but know where to go after it.

BUBONIC plague has been found in New Orleans. This disease is carried by rats which are transported in vessels or in cars from city to city. All along the Atlantic coast rat killing is being organized.

IT is time to consider the Hessian fly in wheatfields this Fall. Burning over the stubble will help, but late seeding is the best remedy. Good judgment is required in this—to delay as long as is safe and still get the plants well started before Winter.

THE road mirror is the latest plan for preventing accidents at bad road corners, or dangerous turns. Many English towns have these mirrors in use, but the largest one is reported from Bombay. This is 10x5 feet, so arranged that travellers going either way may see what is coming around the corner.

WOMAN AND HOME

Making a High Scoring Milk

Steps Up the Scale

CARELESS METHODS.—Several years ago, in company with another young man, I spent a few days at a farmhouse back upon the hills many miles from a railroad. This farmer kept about a dozen cows.

READY FOR DINNER.

As it was late in the Fall, and the cows nearly dry, the local creamery was running only every other day. I helped milk the first night. The milk was strained into the can, and the can left standing in the cow stable all night, all the next day, and the following night. The second morning it was duly delivered to the creamery. For 10 years I have been wondering how that buttermaker could make "fancy creamery butter" out of milk cared for in that way. This may have been an extreme case, but one thing is certain—that is, more care and attention is being given to the production of good, clean milk than ever before.

PRIMARY REQUISITES.—A good many farmers have the idea that it is absolutely necessary to have expensive stables, concrete floors, metal stanchions, etc., before they can get a high score. Of course these things all help, but in the milk business, as well as in other lines, it is the little things that count. To prove this, and with the hope that this article will be of some benefit to some other young farmers who, like ourselves, have bought a farm and run heavily in debt, I will give some of our dairy experiences of the past six years.

THE MILK INSPECTOR.—A short time after we moved here, one afternoon I happened to look out of the window and saw a dudish young fellow come out of the cows' stable and drive rapidly away. I looked around, and not finding anything gone, thought no more about it until a week or so later, when I received a letter from the secretary of the Board of Health informing us that unless we put in a concrete floor and gave each cow so many square feet of light and cubic feet of air, etc., our milk would be rejected by the city. I promptly threw the letter into the stove, and declared we would get a separator and make butter. But the good wife, who is nothing if not diplomatic, and moreover does not like to make butter, wrote a nice letter, explaining that we had just bought the place, and could not afford to make the improvements mentioned just then, but hoped to be able to do so later. That was the last we ever heard from the secretary.

CURRYING COWS.—A few months later, one night, after I had been cleaning off the horses, the idea somehow got into my head that it might possibly be a good plan to clean off the cows. I had been brought up on a farm and had worked for a good many different farmers, but I don't think I ever saw a currycomb used on a cow before. The next morning the cows were all alive, and I really thought they gave a little more milk. I have tested it thoroughly since, and am sure that the time spent in cleaning off a good cow is time well employed, even if you care nothing about the improvement in looks.

SOME IMPROVEMENTS.—When we moved here the hogpen was along one side of the barnyard, only a few feet from the cow stable. The inspector always cut us a point on this account, so I told the boy he could have it for a henhouse, and he must look to them for all his spending money. A couple of new windows made a nice henhouse that would accommodate 30 or 40 hens. The boy made more out of those hens than I ever had out of pigs. This has nothing to do with the milk business, only it shoved our score up another notch.

MORE INSPECTORS.—The second inspector was from the State Agricultural Department, and claimed to have been a farmer. He gave us a couple of points on account of the cows being clean. He also said it was all right to use horse-manure in the drop as an absorbent, a thing some of the city inspectors had been kicking about. He also showed me how I could fix the drop so as to keep the cows cleaner, and left a score card. Then I began to think that possibly an inspector might be of some use in the world. The following Spring inspector No. 3 came along. He seemed possessed of one single idea, and that was whitewash. He said he would try to get the company to buy a big sprayer and loan it to the farmers. The company did that very thing afterward.

WHITEWASH.—I reasoned that lime was cheap, and so one rainy day I went at it. The stable had never seen a drop of whitewash. When I had gone over one side with a brush, I decided to work with a hoe and trowel first. I dug, scraped and brushed until I had worked such a transformation that when the cows came in at night they did not know where they were. But a brush goes rather slowly, especially overhead; you get it in the eyes, and when the last spot was covered I was very glad.

"WHITEWASHING."

SPRAYING WHITEWASH. — The following Spring the worms threatened to destroy some choice fruit trees. We decided to get a small sprayer to save them. It cost about $4, and was recommended to put on whitewash. Since then twice a year we take some lumps of stone lime, put them in an old tub, pour on boiling water, cover with a sack until it stops boiling, then add cold water until we get it thin and cool enough not to spoil the hose of the sprayer. It doesn't take very long to do the work, but it counted three points on our score card.

THE MILK-HOUSE.—For some time the company had been urging all its patrons to put up milk-houses. I will tell you what decided me to do so. A few years before there had been a State inspector around looking for watered milk. When a certain man drove up water was found in his milk, and he had to settle. Now, I had always believed this man to be honest, and do yet. I also knew that there were some people living in his vicinity who were none too good to take out milk and put in water. This man told me he did not mind paying the fine as much as he did the fact that if he lived to be 80 years old he would be sure to hear of the water deal any time some one got provoked with him. I didn't want anyone meddling with our milk. As soon as we could afford it I commenced drawing stone, gravel and cement for the foundation of a little milk house. After we had the floor finished, and before the frame was started, another inspector came along. He was a Board of Health man, and the sharpest and best up to this time. Whenever I think of him I think of a little joke he experienced when visiting a back farmer. After looking around in the cow stable, he asked the farmer when he had whitewashed the stable. The farmer replied, "Three or four months ago." The German inspector quickly said: "Vhy then you no vhitevash over my name I wrote here two years ago?" The farmer had nothing to say. The inspector asked me how I intended to build the milk-house. I told him where I was going to put a door opening into the wagon-house. "Now, my friend," he said, "don't do that." He showed me where that would cut off one point; also said get a wash-dish, towel, soap and dipper to put in the milk-house when completed. We did so and I have washed my hands many times when I would not have taken the time to go to the house. By exchanging work with another farmer, who is a better carpenter than I am, the milk-house was finished, and all it cost us was the cement, siding and ceiling-up lumber and roofing paper. After I had painted it, and the paint well dried, I was well pleased as I snapped the lock that at last our milk was safe.

STRAINING THE MILK.—About this time the manager of the station tried out a little scheme that was rather cute. There was a little steam-heated vessel. A pint of each patron's milk was put in and allowed to filter through a small pad of cotton. This pad was then put on a pasteboard under that patron's number. The cardboard was then hung up, so every one could see his own and his neighbor's pad. Those pads showed up every bit of sediment in the milk, and there were some very brown samples the first time. This test proved two things. One was that milk from some of the best-scoring stables was no cleaner than the milk from some who had no concrete floors, etc. The other was, that cheesecloth strainers were no good. The manager advised us to get outing flannel and put the fuzzy side up. After we had done so, the little cotton pads began to look better.

SANITARY MILK PAILS.—I think the next step we took up the percentage column was when the company sent out a few sanitary milk pails with eight-inch opening for the farmers to try. The company would furnish them at cost if the farmers would buy and use them. The two points which this would give us on score tempted me to get one. However, I cannot say I have yet got to the point where I can say I really enjoy using it, although it does keep a lot of dirt out of the milk.

FURTHER INSPECTION. — The company next tried the plan of hiring a couple of young fellows who were graduates of a veterinary college, who were to inspect stables and examine the cows at the same time. I never happened to be at home when the first one called, but the neighbors all spoke very highly of him, declaring that he seemed to be well qualified for his position and a nice fellow to get along with. He must be working in another section, as he has not been here r a couple of years. The other young fellow has been here several times. At first I never cared to see a milk inspector drive up to the barn; now I can truthfully say I enjoy their visits. This one especially, if he has time, will sit on a milk-stool and talk over anything pertaining to the milk business. He has helped us by suggestions that have been worth many dollars to us, as I will try to show later.

CHANGING CONDITIONS.—Up to this time I will admit it had never seemed to me to be of any particular use to take any extra care with our milk, as I knew it was all thrown together at the station. Of course I wanted our milk to be as good as the average, but did not think it did any good to have it much better. After a talk with the company's inspector, it began to dawn upon me that a new order of things was about due in the dairy business in our section. The company had recently purchased another station at our place. The inspector told us they proposed to make a model station and make two grades of milk. All dairies that scored 25 per cent. in equipment and 43 per cent. in methods would be taken in at the new station as soon as it could be completed, and would be paid a premium of 10 cents per hundred pounds. Then samples would be taken and sent away to determine the number of bacteria in the milk. If found to be less than sixty thousand per cubic centimeter another 10 cents per hundred premium would be received.

IMPROVING QUALITY.—We now had enough points on the barn score to get the premium. The inspector told us we would have no trouble in getting the other 10 cents on the bacteria count if we would take a damp cloth and wipe the cows' udders and flanks, and milk a little out of each teat in the drop at first each time we milked. He also advised us to leave the covers on the cans after they were washed and steamed at the station; then after straining the milk into them, the covers should be put on tight and the cans set in ice-water, and it would be better to shake the cans a little than to use a milk stirrer. This doctrine was contrary to our previous ideas about airing cans and tipping up the covers to let the animal heat escape. However, we were willing to try out his ideas, and our bacteria test has been all right so far.

EFFECT OF REGULATIONS.—How this plan of the company worked out can best be illustrated by the case of a man that we will call Brown. Brown had inherited a good farm, some money, together with rather an antiquated stable and methods. He was always having trouble with the inspectors, and did just enough to keep his milk from being rejected. When the first checks came after the new plan went into effect, Brown met one of his neighbors who had received both the extra premiums. Brown asked him how much his milk had brought him for that month. They compared statements. While they both had the same test, Brown's was 20 cents a hundred less than the other man's. Of course he had heard of the new plan, but had paid no attention to it. That night, after supper,

"SAT DOWN AND TALKED IT OVER."

Brown took his pencil and paper and began to figure. His figures looked something like this: He was making about 500 pounds of milk a day. Five times 20 cents would make just one dollar, or 30 dollars a month. He would just about average that for 10 months. This meant $300 extra over what he was getting for

(*Concluded on page 951.*)

Woman and Home

The Sexton.

Nigh to a grave that was newly made,
Leaned a sexton old on his earthworn spade;
His work was done, and he paused to wait
The funeral train at the open gate.
A relic of bygone days was he,
And his locks were white as the foamy sea;
And these words came from his lips so thin:
"I gather them in; I gather them, in.

"I gather them in, for man and boy,
Year after year of grief and joy,
I've builded the houses that lie around,
In every nook of this burial ground;
Mother and daughter, father and son,
Come to my solitude, one by one;
But come they strangers or come they kin—
I gather them in, I gather then in.

"Many are with me, but still I'm alone,
I'm king of the dead—and I make my throne
On a monument slab or marble cold;
And my sceptre of rule is the spade I hold!
Come they from cottage or come they from hall,
Mankind are my subjects all, all, all.
Let them loiter in pleasure or toilfully spin—
I gather them in, I gather them in.

"I gather them in, and their final rest
Is here, down here, in the earth's dark breast!"
And the sexton ceased, for the funeral train
Wound mutely o'er that solemn plain.
And I said to my heart, when time is told,
A mightier voice than the sexton's old
Will sound o'er the last trump's dreadful din—
"I gather them in, I gather them in."

—Park Benjamin.

* * *

THE domestic unrest of to-day is due not to changed ideals of womanhood but to the maladjustment of the mediæval home to modern conditions.

That is what we hear from Mary Pierce Van Zile, "Dean of Home Economics." She is right, but those who are used to shorter words would put it this way, "A fight for a full wood-box and a sink."

* * *

WE are trying to locate some of the little gasoline engines which are doing duty *inside the farmhouse*. We find a number that are doing housework—running washing machines, cleaners and half a dozen other hard jobs. There are thousands of such engines doing great service at the barn or outside on the farm, but just now we want more particularly the record of the "tireless hired girl," or the small household gas engine.

* * *

WE are often told that there are elderly people who can show 50 or more of their living descendants through several generations. It isn't often that a baby can figure the other way. A woman in Montclair, N. J., however, at 88 years old became a great-grandmother. The child which came in time to give this lady her title has two living grandfathers, and two grandmothers, two great-grandfathers and two great-grandmothers and the great-great-grandmother, eleven granduneles, eight grandaunts and three great-grandaunts.

* * *

IN the last magazine issue of Woman and Home, Mr. L. B. Crooker said that the cooks of certain sections were able to prepare special dishes as they could not be found elsewhere. There is much in this, and, following up the suggestion THE R. N.-Y. has obtained some remarkable interviews with noted cooks. An old-time New England housewife, a black mammy of slavery times, a pioneer on the Western prairie, and a domestic science graduate, will tell us of their star kitchen performance in their own words.

* * *

ALL sorts of new things are happening. The latest is a School of Mothercraft, started in New York. This school graduated three young women recently, one of whom, Miss Marion Taylor, said that she is engaged to be married and took this course as a preparation for matrimony. The school was really intended originally for would-be brides. We wonder what some of the grandmothers who were such wonderful housekeepers, and to whom we owe so much, would have thought of the plan of going to school and obtaining a diploma as a preparation for getting married.

* * *

THE Illinois Supreme Court has upheld the law granting suffrage to women. This law states that all women who are citizens of the United States, and have resided in Illinois one year, in the county 90 days, and the election district 30 days, shall be allowed to vote. A case was brought by a tax-payer in Cook County, who demanded that the election commissioners of Chicago be forbidden to incur expense for providing facilities for women to vote. The object of this was to test the constitutionality of the law. The Supreme Court dismissed this case. An appeal was taken to the Supreme Court, which now decides by a vote of four to three that the law must stand.

* * *

IF compulsory attendance at school is good for the youngsters, what about compulsory supervision of the school by the grown up? This is the way Prof. E. C. Elliott of Wisconsin puts it:

It should be said to parents—much of the efforts of schools and teachers is wasted because the school and the teachers do not understand your children; your principal school business is to see that the teachers do understand your children; it is your duty to understand what the school is trying to do for each child, in order that your home may be able to coöperate for the accomplishment of these same ends.

There is a good deal of talk about our public school system—both praise and blame. Too many of us talk without ever putting our face inside the local schoolhouse.

* * *

CONSUL JEWETT of Baden gives a table showing salaries paid teachers in Germany. Salaries have been advanced about 20 per cent. in recent years:

Years of service.	Men teachers.	Women teachers.
1 to 3	$404.60	$357.00
4 to 6	452.20	404.60
7 to 9	523.60	452.20
10 to 12	595.00	499.80
13 to 15	666.40	547.40
16 to 18	737.80	595.00
19 to 21	833.00	642.60
22 to 24	904.40	666.40
25 to 27	952.00	690.20
28 to 29	999.60	714.00
30 and after	1,047.20	714.00

Thus such salaries advance every three years—as they should. In many parts of this country the older teachers are put aside, the preference being given to younger women.

* * *

IN the last magazine number we printed several unusual requests which appealed to farmers or their wives. Within two weeks after this paper was printed we received nearly 70 letters from women who desired to enter a hen in the poultry contest, 50 letters from people who asked about that tenant farm owned by R. H., 22 from elderly people who wished to know more about the women who desired a home, and one from a man who said he was willing to take that prisoner as a hired hand. All these have been attended to. There is nothing quite like the way our people take hold of such things. We have often said that THE R. N.-Y. has more personal friends and confidants among its readers than any other paper in the country, and every time this is put to the test we have renewed evidence of the truth of the statement.

* * *

ONE of our readers wants to know if we believe the following from the American Medical Association:

Dr. Sims Wallace, late dental surgeon to the London Hospital, states that there are in this country about 21,000,000 teeth in a state of ruin through eating sweets, and urges the adoption of a diet containing farinaceous food in a form which will stimulate mastication, as brown bread, and also the eating of fresh fruit at the conclusion of a meal. By means of the fruit the teeth are cleansed. The best fruit for this purpose is probably the apple, which, if eaten at the end of a meal, leaves the mouth fresh and physiologically clean.

We try to believe every good thing said about apple eating and this one seems sensible. When it comes to figuring we are lost when we get much above 100,000 and counting teeth by the million is beyond us. The apple as a toothbrush, however, seems good. Some of the people who advertise dental preparations so freely might well take the hint and prove that their stuff comes closest to the ideal toothbrush—the apple. There is no doubt as to the value of coarse brown bread as a "chewer."

* * *

WE like the good old Saxon one-syllabled names. They are short and strong, and mean something plain and practical. As between a man named Montmoreney and another named Smith we should view the former with the greater suspicion until we knew him fully. It is a pleasure to know how THE R. N.-Y. has gathered about it an army of these sound and practical people whose name goes through life like a short, sharp sword. Out of curiosity we went through the New York list and found that in this one State alone we have the following number of readers:

Mr. Jones	179	Mr. Smith	713
Mr. Brown	334	Mr. White	151
Mr. Black	27	Mr. Grey	62
Mr. Green	149	Mr. Blue	4
Mr. Bacon	28	Mr. Ham	21
Mr. Frost	37	Mr. Waters	11
Mr. Steele	21	Mr. Gold	4
Mr. Silver	1	Mr. Irons	2
Mr. Short	17	Mr. Long	17
Mr. Quick	22	Mr. Down	3
Mr. Ketcham	10		

In our entire list there are about 2,500 Smiths and nearly 2,000 Browns—all, as you might expect, plain, substantial people—every one of them, like all the rest, willing to help THE R. N.-Y. family if it is within their power.

* * *

A Woman's Back Yard Garden.

POSSIBLY some of your village readers who have small unused patches of land that might be made into a nice garden do not know of the possibilities thereof, so I am going to tell them what I have on a little plot 27x65 feet. 250 strawberry plants; 55 hills of sweet corn; 48 celery plants; 39 tomato plants; 14 currant bushes; 10 hills rhubarb; 10 hills cucumbers; 6 hills cantaloupes; 5 gooseberry bushes; 2 horseradish plants; 2 rows beans 60 feet long; 2 rows peas 60 feet long; 4 rows beets 35 feet long; 3 rows lettuce 35 feet long; 1 row sweet peas 15 feet long. Everything is looking fine. All the room is fully utilized, yet there is plenty of room for all to grow, and produce well. The garden is the admiration of the neighbors. There are never any weeds in it. Fact is, there's no room to grow them.

Maine. MRS. FANNIE F. HODGE.

* * *

Returns from Subscribers' Exchange.

THOSE four advertisements from farm women which were printed free last month all attracted attention and brought results. They have led to many sales already, and there will be many more. Here is a sample report from one of them:

From the little ad you inserted in Subscribers' Exchange, we have already taken orders for 10 dozen cans of Golden Bantam sweet corn at $1.75 per dozen, F. O. B. We received eight orders for sample cans. Will keep record and let you know just how many cans we sell from the advertisement.

MRS. W. A. SMITH.

We firmly believe that our readers are prepared to handle either end of any good bargain. Any useful article can be bought or sold if you can find the persons among our great family who need to buy or sell. This often requires time and patience, but so does anything that is worth while. Advertising is like seed sowing. It requires long and patient care to get full results.

* * *

The Most Important Thing.

WHAT do I think the farm women of my neighborhood need most? There are two things I would mention first, and I hardly know which I consider the more important. I think I will place first the matter of money. On many farms there is very little to use for anything except the necessities of life, and the man of the family usually has the spending of it. Now, there is no woman, whether she lives on the farm or in the city, who does not like to have some money to spend as she likes, without any questions asked. I am not speaking of any given amount, that is a small matter, but if she were allowed only $1 a month to do entirely as she liked with she would get more pleasure in spending it than with five dollars that she had to *beg* for or even *ask* for. If she had a chance to earn something in what little spare time there is on the farm, I believe it would give many a woman a new interest in life. If there is nothing for her to do to *earn* it, I believe every man ought to enter married life with the idea that his wife is his partner as well as his helpmate and that she should be given *some share* of the money that comes in for her own benefit, to use as she sees fit. Many times the woman has the better business head, and the money given her would go much further than in her husband's hands. She might spend it for the same things as he would, but she should have the privilege of saying how it should be spent.

MRS. S. C. DAMON.

* * *

Your Home to Yourself.

SINCE we sisters were babies and mother was ill we have never had a maid staying in the house. There has been a procession of women and girls coming in by the day or hour to do the harder work, and some of the girls we have trained have been among our warmest friends. During the past week we have had an elderly woman here for a week on trial. She is honest, neat and willing, but preternaturally slow, and likes to talk of her defunct relatives. Finding this annoyed me, she has made a brave attempt to stop, but has evidently lost her only pleasure in life. Father and I are agreed that we prefer having our house to ourselves. I have heard a good many say the same thing, but never had it come home to me so strongly before. At present the house doesn't seem really like ours. It is strange that an alien presence should so disturb the home atmosphere. I shall be so glad to go back to my cheerful young helper, who comes in on the rush, chatters about her girlish happenings and brings any bits of local news, does her work and sits with me a while if we both happen to feel like it. We hereby join the procession of people who prefer to get along anyhow if they can keep their homes to themselves. Beside the annoyance of a stranger's presence, there is the expense of food, more expense for fuel and more waste and the wages to consider. We have learned a lot from our week's experience.

THE LAME HOUSEKEEPER.

* * *

The Miserable Cockroach.

ONE of the meanest house insects is the cockroach. It is mean because it multiplies so rapidly, and can run about so actively. It is impossible to keep food of any kind from being devoured, unless closely covered. These insects not only eat leather and parchment, but linen and paper. They are night workers, and even bite people in their beds, especially children whose fingers are left greasy. During the Winter they lie torpid, but in Spring they rush out to their mischief. The Agricultural Department advises the use of traps. You mix one part of plaster of paris with three or four parts of flour. Put this dry mixture in a saucer on a flat piece of wood, where these roaches are numerous. Nearby put another flat plate containing pure water. Make it easy for the roaches to get to the water by putting small pieces of wood or cardboard where they can crawl to the edge of the plate, and float one or two different pieces of wood on the water, so they will touch the edge. The insects eat the plaster mixture to get the flour. They then become thirsty and drink. The water makes the plaster of paris set inside of them and kills the roach. Another trap has for its bait stale beer, of which it is said these roaches are very found. This stuff is put into a deep dish or jar. Flat pieces of rough wood are placed on an incline against the vessel, and bent over into it. The roaches climb up these sticks to get the beer, and slip off down into it. There are various other traps, made on the principle of inducing the roaches to get after some form of bait and fall down into a box so that they cannot get out. A liberal use of insect powder will destroy many of these insects, but not all. It is not a perfect insecticide, but the traps spoken of above are said to be far more effective.

Making a High Scoring Milk

(*Concluded from page 949.*)

the year. It would cost no more to feed the cows or any more men to milk them. Three hundred dollars was 10 per cent. interest on $3,000. That was better interest than he was getting on his money in the local bank. Before he went to sleep he resolved to go and see a couple of modern stables, and before night he had a good carpenter drawing plans for a new stable. About the time the stable was completed the inspector came around, and for the first time in his life Brown was anxious to see him.

"Hello! Put out your horse and stay for dinner," were his first words. The inspector, who had been there before, nearly fell out of the wagon. That 20 per cent. premium had done the business.

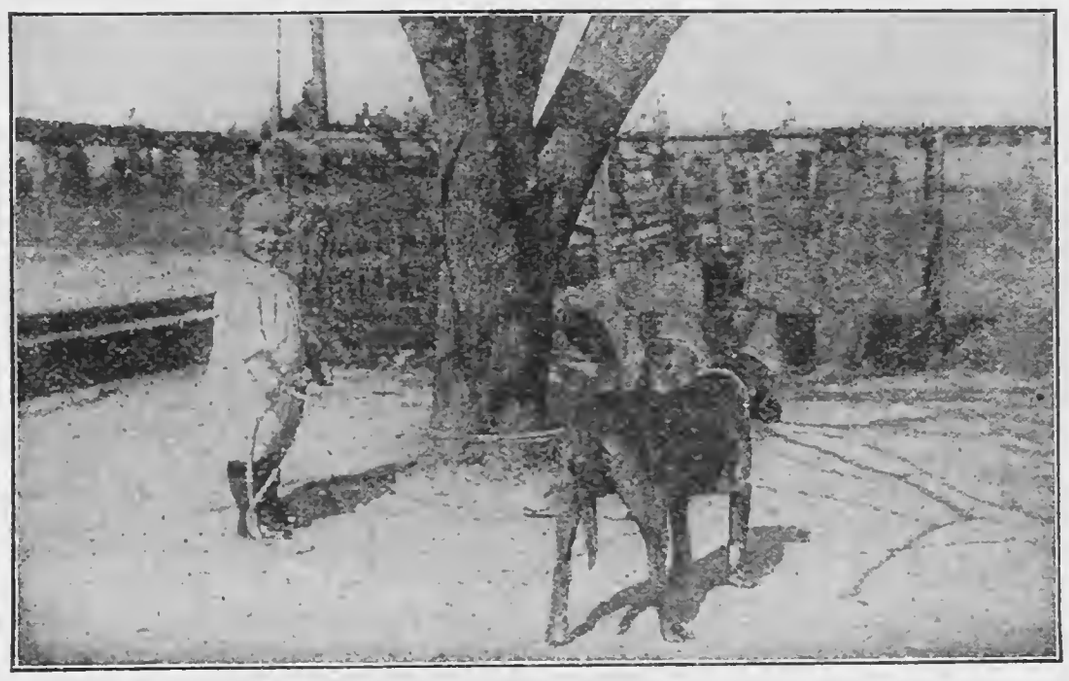
The last bait the company has thrown out is a 10 per cent. per hundred premium each month if the milk is cooled down to 50 degrees each day when delivered to the station. This went into effect April 1, 1914, and most of the farmers in this vicinity have laid in an extra supply of ice, hoping to succeed in getting that premium, too.

RETURNS FOR CARE.—Occasionally I hear some farmers long for the good days when milk was bought without regard to test, and inspectors were never seen. Now I, for one, am not at all anxious to go back to the old ways. I will tell you why. About 20 years ago, one Summer my father drew his milk to the nearest station for the large sum of 44 cents for a 40-quart can, a little less than 52 cents per hundred pounds. This I know to be a fact. During the present month (April) our milk is testing 5.3 per cent. or eight points above the standard. We receive four cents a point, or 32 cents premium on test. Then if we get 10 per cent. for cooling, and adding the 10 per cent. bacteria test, 10 per cent. barn score makes a total of 62 per cent. in premiums; that is 10 per cent. more than the first price my father received for his milk. As to the future of the milk business, I wish I could see 10 years ahead. It seems as if there would be an increasing demand for good milk, especially in July and August. Physicians have found that the acid in sour milk is very beneficial in certain diseases. We all know that good buttermilk is one of the most healthful drinks known. How much better in every way it would be if the millions that are spent each year for beer, wine and whisky could be spent for good milk, buttermilk and grape juice! If I can read the signs correctly that day is on the way. J. C. G.

Let Drunkeness "Cures" Alone.

MY friend came to me yesterday; she had read an advertisement about ———. Her husband has become a drinking man, and now that he is only working on half time, work being dull, he is drinking worse than ever. He is a nice man, but for this one thing. He has one child. Drink seems to make him extremely cross. The home is being ruined by his drinking. His wife is a nice woman, very intelligent. She read that ——— would cure the desire for drink. Will this stuff cure or even help this drinking habit; are these testimonials true? And secondly, will this treatment in any way injure the person to whom it is given, mentally or in any way? She would have to give him the treatment unknown to himself as he would not take it if he knew. MRS. S. P. S.

Among the most heartless of the cruel frauds perpetrated by medical quacks are those which appeal to the love of a mother or wife for one who has become a drunkard. This love and the helpless misery oftimes accompanying it are traded upon by those who advertise secret remedies for the drink habit, and the very fact of the necessity for secrecy is depended upon to save them from exposure at the hands of their dupes. As a type of these secret cures, the one named is one of the most widely-advertised. It has been investigated by the American Medical Association and its fraudulent nature exposed. In the advertisements of the concern behind this "cure" you are asked to write to a Mrs. Margaret Anderson, who professes to have cured husband, brother and several neighbors by a simple remedy which she is anxious to tell others of. If you write, you receive a letter in well imitated handwriting, assuring you of her heartfelt interest in you and telling you that she has asked the Physicians' Co-operative Association of Chicago to send you a trial treatment of the remedy that has worked such wonders in her own hands. Of course, you promptly receive this trial treatment, which consists of a number of variously colored tablets which you are to administer to the unfortunate victim of alcohol. You are also urged to send for a complete treatment, and if you do not respond promptly, you are bombarded by "follow up" letters in which the price of the treatment is gradually reduced with the hope of at least getting something out of you. An analysis of some of these tablets in the laboratory of the American Medical Association showed that their most active and dangerous constituents were strychnine and tartar emetic, drugs which, it is hardly necessary to say, could not possibly cure alcoholism, and which in the hands of the ignorant or careless are dangerous poisons. Until the time comes when all reputable journals refuse medical advertising, as the more conscientious among



"YOU GOTTA STOP KNOCKIN' MY DOG AROUND."

them already do, the miseries of humanity will furnish a field for exploitation by quacks, and among all their victims few, perhaps, are more to be pitied than the wretched sufferers from the drink and drug habits. M. B. D.

Meals Without Cooking.

IN the matter of getting meals, we have grown into an artificial way of life, which entails untold work on the women. Especially is this hard on the farm woman. Our horses and cows get the same feeds year in and year out, and they continue healthy and able to perform duties required of them. Horses have mainly oats and hay and water. Cows have bran, silage, grass and hay (sometimes only water and straw). These things for animals are supposed to furnish a balanced ration. We can have an equally well-balanced ration just as simply, but age old custom has decreed that we should put on a good deal of "fuss and feathers" in preparing "tempting" dishes. You don't have to "tempt" the appetite of a hungry, healthy man.

For myself, I can go out in the yard or garden and dig out large stones, spade, and do other heavy work without breakfast, and at 10 oclock, come in and eat two shredded wheat biscuits and apple sauce and cheese, and be satisfied until the next meal, at four o'clock, which may consist of another dish of apple sauce and some cold corn bread, with sour milk, or sweet milk, or buttermilk. On this diet, I can work hard, day after day, and at the same time, practice music and write.

But you will say, "How about your men folks? They, we imagine, would hardly be satisfied with a hunk of cold corn bread and some sour milk. Hogs might, but not men." Well, our man (that is, the head of our family), who is one of the strongest men in the neighborhood, as shown by his being able to outdo most of the others in muscular feats—our man eats for breakfast, two shredded wheat biscuits, some cheese, apple sauce and cream, and that is all. When I thought of writing this article, I asked him what kind of a meal he would like, if he had just what he wanted.

"One thing," he replied, "either peas, cooked with cream and bread and butter, or sweet corn, on the cob, or canned, with bread and butter, or cream tomato soup and bread and butter."

"Wouldn't you like anything more than that?" I asked.

"No, not if there was enough of it," he replied. So you see the man of the house wants something hot. Bnt you can also see that it ought not to be a very heavy burden to provide meals for him. And he gets up at five and works hard all day, and sometimes into the evening. I often have a lot of potato salad ready and if he has that at night, with bread and butter and an egg or two, he is more than satisfied. So all the trouble about his supper is to boil him two eggs.

I have stopped cooking for hired men. My life was frittered away over the cookstove for men, often rough, and often critical, who demanded more in the way of pies and cakes than we should ever care for, and for whom there always had to be a lot of fussing and cooking, which is almost entirely eliminated when we are alone. Life has become a different matter to me since this tri-daily recurring burden has been lifted from me. And we are never sick, not a day, and we were, before.

We have all kinds of vegetables and all kinds of fruits and melons. We use a great deal of fruit, also can it, and vegetables, having a steam canning outfit. We also can pork and beans in our steam outfit, and they are said to be equal to those which advertising has made so famous. Generally there is some one here, so we cannot always observe this primitive simplicity of diet, but we do when we can, and in Winter have only two meals a day. As the breakfast is always the same, and requires no cooking we have very little work. We simply shove a piece of ham or fresh pork, or sausage into the sitting-room stove, on the coals and warm up a few potatoes in the same place, and presto, all is ready! We now have a fine fireless cooker, so the work can be still more simplified.

ELLEN E. DE GRAFF.

Removing Surplus Hair.

WILL you inform me how to kill hair that is not needed? The hair on my neck is as thick as on my head. I want to remove the hair so it will not come back. S. A. R.

All sorts of questions come here. At about the time this question came we had a visit from a bald-headed man who was grieved because there was no hair growing on the top of his head. This man was grieved because certain ladies of his acquaintance seemed to dislike the appearance of his head. Another young man was grieved because he seems unable to grow a beard, and yet here comes one who wishes to get rid of surplus growth of hair. It is said that people with too much hair or those who have too little or those with the wrong color help to support an army of doctors. There are two classes of depilatories. Some of them are chemicals which remove the hair but do not destroy the roots. Many of these are sold under high-sounding names, and fortunes are made by the manufacturer, but the hair grows again. The effective treatment for killing out hair is the use of the electric needle. This is slow and painful, each separate hair root being treated by itself. The roots of the hair are destroyed and it will not grow again. Many people actually use a clipping machine or razor daily to keep such hair in check. The electric treatment appears to be the only really effective method.

Grease Trap in Septic Tank.

I AM planning to put in a septic tank, and in Circular 34 of the Wisconsin Experiment Station, find it stated that a grease trap is an essential part of a satisfactory system, giving instructions for its construction. For the body of the trap they use two 24-inch glazed sewer tile costing $2.50, but I find that here they would cost about $12. Is it necessary to have a glazed surface? I could make it much cheaper of cement. My fall is limited, so it will be necessary to build the tank as high as possible. There is no cellar under the kitchen, only a space about two feet high. Would it be safe (on account of sewer gas) to build this trap under the kitchen with the tank located outside the wall?

Brookfield, Mass. J. W. S.

As the principle upon which a grease trap operates is simply the providing of an accessible chamber in which the grease may rise to the surface of its contents and be removed before entering the septic tank, it may be built of any water-tight material. Except in connection with a dairy room or some other place where a very large amount of grease is discharged into the sewer they are not, I believe, often installed. As the type of grease trap you mention is in itself a trap for the sewer gas from the septic tank, I see no reason why one could not be safely placed under a kitchen floor.

M. B. D.

Poison Ivy Notes.

AS to goats eating poison ivy, I put my flock of Angoras in a field in which there was a log cabin which was about half covered with it. They ate it as high as they could stand on their hind feet and reach. I cut the big main stems through with ax and they kept the suckers eaten off till all was dead. It did not harm the Angoras, but there were so many they did not have much of it to eat. With two or three goats in a large patch of it, it might turn out differently, but anyway Angoras will eat it.

Arkansas. C. E. DEGROFF.

I HAVE an old place completely overrun with poison ivy, and when we get rid of it in one place it crops up in another. My doctor gave me the following remedy that is so simple and has proven so efficient in cases of ivy poisoning that I am glad to add it to your list. Add enough quinine to vaseline or lard to make a thick salve and apply to affected skin. Even in severe poisoning the curative effect is seen after a very few applications. MRS. DONALD WILSON.

North Carolina.

Canning Ear Corn.

MOST housewives are familiar with the process of canning sweet corn when cut off the cob. Of late years there has come a demand for corn preserved on the cob. The Department of Agriculture gives the following directions for preparing it:

"Blanch in boiling water five to 10 minutes, according to ripeness, size and freshness; plunge quickly in cold water. Pack, alternating butts and tips; add just a little boiling water and one level teaspoonful of salt to each quart. Place rubber and top and partially tighten. (Cap and tip tins.) Process 180 to 240 minutes in hot-water bath; 1½ hours water-seal outfit; 60 minutes under five or more pounds of steam; 40 minutes in aluminum pressure cooker. Remove jars, tighten covers, invert, and cool. Heat up for table use in steamer, not in water. If corn seems flat or water-logged, it has been over-cooked or allowed to stand in too much water. Use one or two-quart glass jars if not needed for other products. Quart jars will hold two ears, two-quart jars will hold from three to five ears, according to size of ear. Do not can large ears. Half-gallon or gallon tin cans with large openings should be used in the canning of ear corn when idle glass jars are not available. Gallon tin cans will hold from six to 12 ears. They should be graded to uniform size.

"One advantage of sweet corn canned on the cob over other canned corn, is that all the best food values are kept with the cob. In cutting corn off, the germ quality of the kernel, which keeps up its standard, is usually lost. This germ quality is the part of the corn that is sought by rats and mice when they look for food in the corn bin, and is the most vital part. Much of the corn is also rendered mushy when it is cut from the cob."

∴ A Woman Hay Farmer ∴

How She Handled the Crop

THE LAND.—When a lovely old mansion came to the family with 12 acres of intervale grass land attached, it seemed natural that I, who loved all outdoors, should be chosen to "run the farm," not with the expectation of making money, but with the modest hope of keeping the land in good condition and making it pay for itself. I went at it on a business basis. The land was valued at $1,000, so $72 was considered a fair rent, being approximately 7 per cent. on the money invested. I, as one of the joint owners, receive a third of this rent. "Ask everyone's advice," said an experienced member of the family, "and then do as you please." This valuable suggestion should be written in letters of gold, for out of it has come all my nuggets of wisdom gathered in three years' experience. The farming world is very kind, and will spend any amount of time, standing first on one foot, then on the other, giving neighborly information as to seeding down, rotary crops, and sweetening the land.

EARLY EXPERIENCE.—The first year, 1909, the haying was done by the job, at a cost of $45, and this, plus $72, was the whole outlay. The crop was light, for the land was rather "run out" in spots. I sold my hay for $146 in a lump. A pasturage of cows after haying brought $16 more. $146 plus $16 equals $162, income; $72 plus $45 equals $117, expense; $162 minus $117 equals $45, net profit. In 1910 four acres were seeded at an expense of $101.44; also two acres of sweet corn were planted at a cost of $109.12. The hay was sold for $110 "stumpage," and the corn brought $80 to the acre, being a little light owing to a raid of woodchucks. The year's work stood me as follows:

Hay sold	$110.00
Corn	160.00
Fodder plowed in	10.00
Total income	$280.00
Cost of seeding	$101.44
Planting corn and hauling same	109.12
Rent	72.00
Total expense	$282.56
	280.00
	$2.56

From a purely financial standpoint this result left much to be desired, but I knew my land was in much better condition, and the woodchucks looked so plump and

HANDLING THE SWEET CORN.

appreciative. 1911 was the banner year of my farming experience. I seeded down two acres. My hay was of excellent quality, perfectly cured, not a drop of rain coming upon it. With 24 tons crammed into my barn I felt at peace with all the world, and started for Boston in search of culture.

FINDING A MARKET.—One day, walking up Boylston street, this peace was disturbed by a male relative. (Male relatives are so plain-spoken.) "Have you sold your hay?" he demanded. "Why, no," said I, "not yet." "Not yet! What are you dreaming about? I should think it was up to you to get awake. I know of some one who has just sold a hundred tons for $27 a ton. Here it is the last of May. The thing for you to do is to find a market, then go home and press your hay and ship it before the new crop is ready." As he left me I actually panted with excitement. "Find a market" seemed as preposterous as to hunt for a pole, and the only pressing I knew anything about was the pressing of my clothes. But a remembrance flashed through my mind of a transaction highly cherished by my family, probably because it was the first occasion that I showed any business ability. This transaction was the sale in two hours, in a small village, of a hundred cords of wood. I nerved myself to sustain my reputation. The next hour was spent in inquiries concerning hay men in general and honest ones in particular, after which I boarded a Cambridge car and began my interviews with a calm face and wildly thumping heart. I learned that if the market could have just what it wanted, it would be Herd's-grass of a coarse quality, with a sprinkling of clover and Red-top, pressed in 200-pound bales, and, in order to get a good price, it must be shipped during the next three weeks.

ALL HANDS IN THE HAYFIELD.

PRESSING THE HAY.—Two days later found me at home telephoning hither and yon for a hay-press. The only thing available was one of the old-fashioned sort of two-horse power, and this seven miles away. It required six horses to bring it, and a proud day it was when this imposing chariot appeared and was set up in the barn, to be mine until honorably discharged. We started off in high feather, my four men and two horses. The first bale was turned out "in the shake of no time." The second, a little more slowly with discouraging creaks. The third bale groaned dismally and ended in a savage bang, which said as plain as day that something had broken. It was the big iron shaft. My men said there was a flaw, and they never saw such rotten iron. The blacksmith said there was no flaw at all. The owner said it was a "brand-new shaft," and I must pay for the mending. My men and horses went home. Fearing the shaft could not be mended, I telephoned for a new one, with the understanding that I should bear one-half of the expense. This came straggling along after four days. But in the meantime the old shaft was patched up, and with much telephoning and bicycle riding my industrial army was again assembled, and we started, fearful of the worst. But the expected did not happen, and we dragged on, taking six days for what should have been done in three. During these six days I learned a number of things, the most important of which was, that even I, the inexperienced presser of the hay, could help materially by being on the spot.

GETTING IT SHIPPED.—With the help of my wheel I made breakneck rides in all directions. There were cars to engage, bills of lading to understand, and a hundred and one unexpected happenings to settle. "He who would be well served must serve himself"; so it was the owner's eye that discovered the unswept cars and the careless packing of bales. A broom and shovel soon made the one right. The first layer of bales I turned on their broad sides, the others on their narrow sides, thus squeezing an extra bale in each tier, and filling the extra height in the car, which made a big difference in my profits, as a loosely packed car costs as much to transport as one filled to the limit. My cup of joy was full when I learned I was three tons better to the car than one of the, presumably, experienced "men folks" who shipped alongside of me. By dint of rushing, employing extra men and horses in its transportation, we just made connections. As the freight train steamed into the station and side-tracked itself to take on freight, the last bale was put in and the door locked. It reached its destination in time. My bales satisfied the buyer, and the trials of hay-pressing were forgotten in the gratification of receiving a substantial check.

RESULTS OF 1911.

EXPENSE.

Seeding 2 acres	$79.00
Haying	68.00
Rent of press	12.00
Transportation of same	12.00
Pressing 24 tons	88.22
Half new shaft	5.00
Mending old shaft	2.50
Telephoning, etc.	2.00
Two cars for transportation	50.00
Rent of land	72.00
Total expense	$390.72

INCOME.

24 tons of hay at $27	$644.96
Second crop	8.00
Total income	$652.96
	390.72
Net profit	$262.24

While I have been obliged to hire all labor done, I have looked after the essentials needed, ashes, manure, phosphates, etc. I have hired my men, paid my bills and fought my own battles, notwithstanding that I was much of the time actively employed in a distant city. The figures of this banner year show that financially I came out with flying colors; but more valuable even than the money made has been the experience in business and with human nature. But the most satisfying thing of all is my well-tilled land, stretching off towards the mountains, the tall, waving grass, the bees and butterflies that take toll from my clover-heads, and the swinging, gurgling bobolinks, to whom my little farm is a "joy forever."

Maine. HATTIE A. PIKE.

Homemade Cheese Making.

TWO months ago Mr. Clark Allis gave his wife great praise as a cook and housekeeper, mentioning particularly a certain kind of cheese. There have been several requests from readers for further information about this cheese, and so we are able to print the following:

I am sorry my husband has got me into trouble about cheese-making, for I have never seen a professional cheese-maker make cheese, and only know what I have learned from articles in agricultural papers and some hints which a Scotch woman gave me.

Get from a butcher a calf's rennet, fill and cover with salt, using plenty—a pint or more. Dry thoroughly and roll up in clean brown paper. When ready to make cheese cut from your rennet in half-inch slices about two inches; put into a pint glass can and fill two-thirds full of hot water, using the salt, and adding more salt if in keeping it shows signs of mold. Let stand over night. When the liquid has been used add more rennet and hot water. It will keep for months.

I have only tried making cheese from small quantities of milk in the Winter. Then I would save my skim-milk till I had about three gallons and a half. Heat the milk to 85 degrees, add one tablespoonful and a half of the liquid rennet and let it remain till solid, like thick, sour milk, usually about half an hour, sometimes longer. Cut the curd in squares with a long knife or spoon, and when the whey begins to separate carefully dip off with a saucer or shallow skimmer. Heat it to 90 degrees, pour over the curd until the whole mass is heated to 90 degrees, when the curd will settle in a mass to the bottom and all the whey can be turned off. We like this fresh curd, and eat it with salt or salt and cream. Make curd in this way three times, keeping it in a cool place, but not allowing it to freeze. The last time I put all the curd through the food chopper and salt to taste.

Mr. Allis had made a tin hoop nine inches in diameter and six inches high, with a row of small holes on one side to let the whey escape; two tin heavy galvanized iron circles and several wooden ones one inch thick, which fit loosely inside of the hoop. The galvanized iron circular pieces should be just as big as possible and go into the cheese hoop. The wooden ones can be a little smaller.

Place hoop on a board and take a cloth about the size of a flour sack and place inside of hoop. Put in one of the tin circles, which fits it to the hoop. Now fill in the curd and even it around, draw a corner of the cloth smoothly over the top and place on the other tin circle. Draw up all the loose edges of the cloth on top and put on as many wooden circles as you need. The cheese is now ready to press, and you can press it by placing a big stone on top, or in whatever kind of a press you can improvise.

When I make cheese of the whole milk I save the night's milk, and in the morning take off the thick cream, which would waste, and with the morning's milk make it into curd. If I want a larger cheese I keep the curd on ice till I have enough to press. The morning after I take the cheese from the hoop, remove cloth and rub all over with melted butter, and it is then ready to use as we like it. If you

A PAIR OF ALABAMA BOYS.

want to cure it longer, turn it every morning, rubbing it all over with butter as you need it. MRS. CLARK ALLIS.

NOTE.—Mrs. Allis has a heavy plank press, two planks, with a rod through each end, threaded nearly its length, and two big tail nuts to turn by hand; but I think a lever press with a weight at the end might be an improvement. Any kind of a press that will go down square and not make the cheese one-sided is best. The common lever apple presses might be used by hanging a weight on the lever.—C. A.

MRS. HIRAM OFFEN: "Your recommendations are rather poor, I must say." Maid: "Well, umm, yez weren't recommended very highly to me, ayther."—Boston Transcript.

The Summer Boarder

One of Them Talks

Suggestions By a Guest

FIRST REQUISITES.—On the comfort of the Summer boarder under your roof depends his return another year, and the only satisfactory way to carry on the business is to have the same people year after year. The standard of living everywhere has improved, and people ask more than they used to, but on the other hand they are willing to pay better prices than they did a few years ago. A houseful of boarders in the busiest season of the year involves a lot of hard work, but the material rewards are very considerable, and unlike many other ways of earning money, all the effort is on familiar lines. Three things are essential, good and abundant food, a clean and comfortable house and considerate treatment. And few country places have such advantages of scenery, tonic atmosphere, or facilities for amusement that people will overlook the lack of any one of these essentials.

THE TABLE.—The table in many country boarding houses suffers from the ambition of the hostess. People do not expect the variety of a restaurant, or even of a large city boarding house. In their own houses, well-to-do city people live simply, but everything served is the best of its kind. Such people, and they are the sort whom you wish to attract, will never miss layer cakes and pies from your menu, and they are satisfied with a breakfast of eggs and fruit. But they do expect good coffee, cream and butter that is above reproach. If the economic conditions of your house are such that every egg and every quart of milk has a marketable value, do not take boarders, but look about for some other way to earn money. If you do make the venture, impress upon your soul the fact that generosity pays, "is profitable for the life that now is." For breakfast, which need not vary from day to day, have fruit, a choice of cooked or uncooked cereal, either muffins or toast, and be prepared to cook eggs for each person as they are wanted. Have your fruit chilled, your coffee poured off from the grounds and kept boiling hot, and make up your mind to the necessity of plenty of cream for the coffee, and if not cream at least rich milk for the cereal.

CATERING SUGGESTIONS.—It is often difficult to get good meat in the country, but the larger cuts are sure to be better than steak. If you have six boarders, you should be able to have a roast three times a week, one dinner of lamb chops, cut thick and broiled, another of corned beef or ham, fish on Friday and chickens on Sunday. Let two of the roasts be beef, the other lamb, or have one each of beef, lamb and veal, but avoid pork as you would sin. A boiled dinner of a big piece of lean beef, with the vegetables cooked by themselves, is liked by a great many people, who would not touch it if meat and vegetables were cooked together. If you find any one person has a prejudice against it, it is easy to provide something else for him. Roast veal should also have an alternative. You cannot have fresh vegetables in too great quantity, two sorts besides potatoes are enough for one dinner, with perhaps cucumbers or raw tomatoes. Better save salads for supper. The saving of time in a Summer of baking the potatoes for dinner is very considerable. For dessert ring the changes on half a dozen cold puddings, apple pudding, bread pudding with fruit and fruit shortcakes. If possible have fresh fruit on the table, and a cup of tea should always be available with the dessert.

DINNER AND SUPPER.—With the dinners, variety from day to day is an important point. If you have roast beef on Monday one week carry it over till Wednesday the next, and have different vegetables with it. Do not give your boarders an opportunity to know what they are going to have for dinner before they enter the dining room. One reason living at restaurants is so popular is that people get tired of the deadly monotony of home and boarding house tables. Suppers should be dainty, but also substantial. Sliced cold meat, or simple hot dishes, meat heated in a brown sauce, creamed fish, spaghetti with cheese, or bacon and eggs, should be accompanied by some sort of a salad, fried or creamed potatoes. Warm bread is by no means essential, but always provide two kinds, brown, whole wheat or graham, as well as white. Add berries or stewed fruit, fresh, plain cake, or hot gingerbread, with the choice of tea, cocoa, or milk, and your guests will have nothing to complain of.

SERVING THE MEALS.—As to the hours at which meals are served, something depends upon the habits of your guests. Eight is a safe hour for breakfast and one for dinner. The six o'clock supper, which is the rule in country places, is often felt to be a great inconvenience by guests off for long walks or drives, or intent on enjoying daylight as long as possible. Seven o'clock in the early part of the Summer and half past six after the middle of August will be acceptable to most people. The goodness of the table depends very much on the goodness of the supplies. It pays in every way to buy groceries in the city, in sufficiently large quantities to secure free delivery, at least things like coffee, tea, cocoa and cereals. Lay in, also, a good brand of olive oil, in gallon cans, whether your own family uses it or not, and always have it on the table at dinner and supper.

COMFORTS AND CONVENIENCES.—In the matter of comfort, no one item counts for more than the thorough screening of the house. If you cannot afford movable screens, tack wire netting over the outside of the window frames, their entire length. Black mosquito netting, plain, not cross-barred, will answer perfectly well for the upper floors. Indeed this arrangement is much better for the bedrooms, as it enables people to have their windows lowered from the top, and guests are often irresponsible about screens. And the very first thing to do in the morning is to throw open all the windows on the lower floor, even if they must be closed later. Little conveniences in the bedrooms, abundant hooks for clothing, upholstered boxes under the windows in which all sorts of odds and ends can be tucked away, a shelf covered with gray blotting paper and bracketed below a window for writing, weights to hold doors open and wedges to tighten rattling windows, are trifles in themselves, and cost little, but mean much to guests.

BATHING AND LIGHTING.—The average country house has no bathroom, and some arrangement must be made for a supply of hot water, night and morning. This can be done by having a round tin wash boiler of the largest size, fitted with a cover, standing upon a single burner oil stove. On a shelf above it keep a row of the three-quart stoneware jugs sold for 10 cents each, one for each boarder. Light the stove an hour before bedtime and the first thing in the morning and there will be an ample supply for everyone. Another difficulty is lighting the bedrooms. Provide for this purpose the sort of lamp which is set inside a cylinder of tin, with a handle at the side. These are admirable for the people who want to read in bed, and are not expensive.

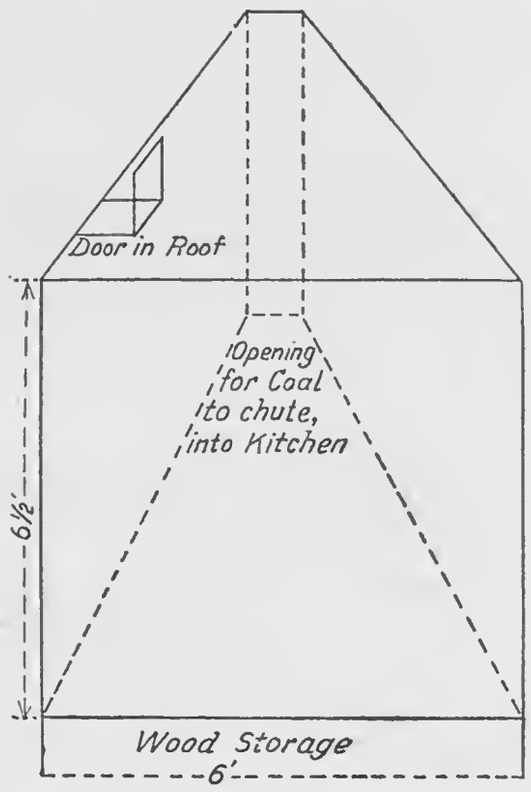
BUSINESS MANAGEMENT.—Consideration involves a good many things which are perfectly obvious, like charging a fair price and living up to all one's agreements. Something less obvious is an air of cheerful serenity on the part of the hostess. A willingness to go beyond the strict letter of the law is always appreciated. Meeting your guests on their arrival and getting them to the house as quickly as possible creates a favorable impression which is an auspicious beginning. People who have wandered around a strange town at twilight, hunting for a conveyance, and have reached their destination only in time to sit down to a cold and belated supper, are quite likely not to return. The old family ideal of the boarding house has disappeared. The more nearly impersonal you make your relations with your guests, the more likely you are to succeed. It is best to have the meals of your own family at a different hour, and to ask one of the guests to preside at their table. Above all things do not allow your children to inflict themselves upon your inmates. For one who enjoys juvenile society half a dozen will be bored by it. The question involved is not a social one. You and yours may be the equals of your boarders in education, in culture, in refinement, but it is no more material to them than it is to me to know that the clerk of whom I buy four yards of blue charmeuse shares my interest in old china. Our relation is purely a business one, and it is yours with your guest.

ELEANOR ALISON CUMMINS.

The City Boarder Saves Labor

"MRS. WARE," remarked the city boarder casually, "why do you keep the coal in the cellar?"

Of course, it was a direct, pertinent question and Mrs. Ware eyed the young man intently. "Where else could I store it?" she returned. Her manner was confusing, but not to a young man with a purpose in view.



LABOR SAVING COAL BIN.

"I can prove there is a more convenient place," he said, encouraged by her twinkling eyes.

"Where?"

"Outside the kitchen door, I——"

"And have it covered with snow in Winter and soppin' wet from Spring rains or burnt to a crisp by the Summer sun, eh?"

The young man laughed. "No, I'd build a coal bin outside the kitchen and get the coal inside the room."

Mrs. Ware glared; her hands akimbo on her hips. "Well!"

"I'll build it," he ventured. "It will overcome unnecessary labor and be a convenient requirement.

"I doubt it!"

"How many tons of coal do you generally buy at one time?" he asked, poising a pencil above a writing pad.

"Six!"

He figured a few seconds and paused apparently delighted. "Then you'll require a box six feet long, six wide and 6½ feet high."

"How do you know that?"

His manner and tone both were assuring. "Because there are 39 cubic feet in a ton of coal and you must divide 39 into the number of cubic feet in a bin to get the number of tons it will hold. Thus: 6x6x6½ equal 234 cubic feet and divided by 39 equals six tons."

"How will the coal run out of a square box?"

"Believe me, Mrs. Ware, I'll overcome every difficulty. First, I'll build the floor on a post foundation two feet above the ground. Wood can be stored under that. The floor will slant toward the house at an angle of 60 degrees. Then I'll cut a hole through the wall 12 inches high and eight wide for the coal to run through. I'll line that hole with planed boards. Then, I'll built sides slanting from the sidewall to the back edge of the floor and make it 6½ feet high. Put on the back and top, which will have a trap door to shoot in the coal. The inside of the coal bin will be 122 cubic feet and hold three ton. The difference in 234 and 122 feet is due to the triangles cut out by the slant of the floor and sides."

Mrs. Ware smiled her appreciation. "And how do I get my coal out of the bin?"

"On the inside of the room, I'll make a sliding door to lift and drop with a lever. Put the coal hod under the shute, lift the lever and presto! The hod is filled with no labor to speak of and little inconvenience."

A. L. ROAT.

Mrs. Swiftly—"I wish Johnny would hurry. I sent him to the village for some Fels-Naptha Soap because I used the last for my wash this morning. I can't get along without it. I use it for everything. Johnny came home at noon and said to me: 'Say, Ma, I got a hundred in two studies this morning,' and when I asked what, he said: '40 for 'rithmetic and 60 for geography.' Isn't he a case?"

Anty Drudge—"He's cute, all right. But why don't you buy Fels-Naptha by the box or carton—then you'll always have it on hand."

If you have Fels-Naptha on hand, you're ready for any kind of work—washing, housecleaning, dishwashing.

There is nothing better than Fels-Naptha for washing flannels or woolens. It leaves them soft, white and woolly. And it's fine for colored clothes, too, either wool or gingham.

Use it the right way, in cool or lukewarm water.

Full directions are on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA

Management in Housekeeping

"Efficiency" in the Farm Home

IF I had but two children, instead of a larger family, perhaps I might say something on system; as I have known the past few years what it is to care well for my family and do some outside work. Let me say to start with, I was 25 when married and had never done housework. I had worked as compositor in town and city printing offices for eight years before my marriage, so please don't think an office or shop girl can never make a good housekeeper or manager. I left a city office to become a farmer's wife. I told him he might be making a great mistake, but now, after 14 years of happy wedded life, the good man says he has always been satisfied and that I "make good."

I have always loved my home and family and been happy in doing for them. We have had some trouble financially, so I've tried to help, and it has taken some system to keep things going smoothly. I have raised from 400 to 600 chickens in one year, besides my other work, and some small fruit to see to. Now, as my husband is just a "hired man" after leaving our own place, I haven't the chickens and hens, but as we have been just 1½ miles from a village where a compositor was needed on the country paper I have worked for 19 months at this work, from two to four days a week (not real long days) and get two little girls off clean for school, make butter, do all my own work too, never buying baked goods.

I was pleased with what Mrs. Van said on page 866 about "do comb your hair" as soon as up in the morning. I can remember as a little girl my mother with her hair always combed as soon as she was up, then again, after dinner "clean up" with hair combed, dress changed and clean apron, ready for the afternoon's sewing. She had four little ones and often boarders too, to care for. When at home all day I aim to have housework done by two in the afternoon, unless in housecleaning or rush of fruit time.

Getting up early in the morning and rushing about all work that possibly can be done before children are up, is one big part of systematic housekeeping. When I had young chickens to care for they were all seen to before five in the morning. It did not interfere with the morning's work, and was better for the chickens, rather than keeping them shut up till late in stuffy coops. The only labor-saving device I have is a good washing machine. Water has to be carried in and out of the house, for no matter how hard an owner seems to want to get a good man no conveniences are usually thought of for the family. My machine saves time and back. Washdays I do up the regular work with the girls helping about dishes, dusting, preparing vegetables, etc., and by 11 o'clock washing is on the line and plenty of time to prepare dinner.

By having breakfast for two at six o'clock, on two other mornings at 6:30 I am ironing until eight o'clock and that work is out of the way ready for the children to help when their breakfast is over, with the dishes. They are little girls, so I let them sleep when not in school. As a sample of a Saturday's work, let me tell of last Saturday. Breakfast at six, separator was washed, butter churned and worked, jelly cake and rice pudding made, all by eight o'clock. The rest of the forenoon was devoted to the regular Saturday clean up ready for Sunday, as we do not work Sundays. The little girls are learning easy tasks and sewing without a continual scold from mother, and we try to keep our house all the time as if we were expecting guests. Too many farm women, I find, have such mussy-looking bedrooms and dirty dining tables. I have my table where it can remain set and always with white cloth and dishes on it. We all have days when we work hard and don't accomplish what we think we ought to; but with a regular system and eyes on the clock to keep us hustling we try to "keep ahead."

MRS. D. G.

Potatoes and Housework.

MANAGING the housework so as to save time requires forethought. This has been brought home to me forcibly this Spring in this wise. Summer drought for several years cut short our supply of potatoes, and we had to buy such as we could find, three different varieties. I found it took longer to prepare them for cooking than it did our own smooth, easy-peeling ones. One kind especially, said to be bug and blight proof, peeled about as hard as a green quince. The man of the house thought he would plant some of them, but the cook took good care he didn't get his hands on one of them. This Summer the cook is keeping a sharp eye on her seed potato patch which she personally conducts after the latest approved method. She began two years ago with one potato. She expects to have enough to plant the whole field next year. By the way, she gave us new potatoes for dinner June 28. Also green peas (wrinkled) both of her own planting. The cook has an inquiring mind. She wonders how many points palatability is allowed on the score card at potato shows, or are potatoes judged from a purely masculine standpoint? If you allow the women to tell what they want there is going to be ruction. The cook wants you to give the score as used in judging potatoes. She will be presuming to judge potatoes next.

C.

How Do They Manage?

DOWN in one side of our tenant house live Mr. and Mrs. Robertson. They have eight children but the one daughter (a capable girl and so good to the little ones) is married, and the oldest son is working away from home. That leaves the parents and six boys to live in six rooms, and a tent. Mrs. Robinson is not an exceptional housekeeper, by any means, and has limited means also. But she sits down to do everything possible, and she does every bit of work that can be done there out of doors. And though there is no fence between our grounds and the tenant house, in six years her boys have never annoyed us once.

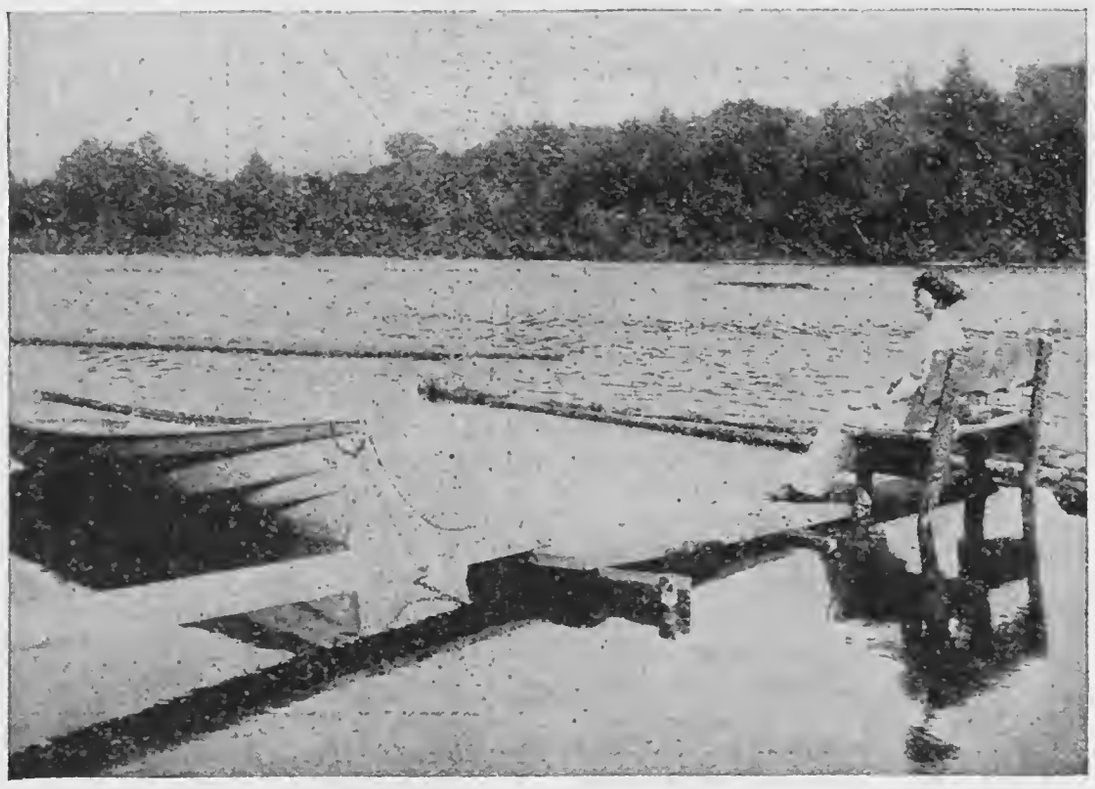
On the other side lives good Mrs. McNah. When her three sons were practically grown, she took five children of her cousin, when left orphans, to keep them from the State. Before these were grown up, a married daughter died and left five grandchildren to her care. The father is living and keeps a tenement where the older children sleep, but the oldest was twelve when their mother died. Mrs. McNab has a daughter who lives at home and helps with the work. Several of the boys work on the street railway, so are coming and going at all sorts of hours. The women keep everlastingly at it, and they all make mesh bags in their spare time out under the trees. Yet Mrs. McNab assures me that the only thing that really worries her is that we shall be troubled by the children's noise and hers because some days she has to "scold at them" so much. The question of housework by one for many seems to be a matter of the relative importance of things, separating the "must-be-dones" from the "ought-to-dos."

E. K.

Reflections of a Ruralist.

PARTNERS.—On page 777 is a little tale of partners. Here is another. A woman who had raised and lost a family, in her old age, broken in body and mind, went to live with a relative. After a year or more in the new home she astonished her caretaker by saying with much earnestness: "You are the only person who ever made a business of trying to find out what I want. Everybody else did what they thought I wanted or ought to want." The caretaker says it is difficult to get from this woman an expression of what she wants. The power to decide has perished from lack of use. For 45 years she was a man's partner. I fancy if the man mentioned on page 777 had tried to find out what his partner wanted instead of trying to convince her she wanted what he thought she ought to want, it would have been a different tale. In every true woman's heart is planted the spirit of self-sacrifice, the mother nature, but a true man will not take advantage of it. That story of excessive cleanliness reminded me of the Ohio woman who washed the pump handle whenever her husband used it.

C.



THE FRONT YARD OF A MAINE FARMHOUSE.

A Maine Front Yard.

All sorts of people take THE R. N.-Y., and they live under all sorts of conditions. Some of our housewives who live on the Western deserts have told us of roasting or broiling in the hot sun, obliged to economize in the use of even a thimbleful of water. The other extreme is shown in the picture herewith. This shows another R. N.-Y. home, or rather its front yard. This home is in Maine, the farm backing up or fronting on the Kennebec River, which flows on a roaring torrent in Spring, and a dignified stream in Summer. During the pleasant weather this river privilege is utilized by the housekeeper, as we notice in the picture. A little wharf has been built where the boats can be fastened, and there are rustic seats so that during the cool of a Summer's day the housekeeper, after her work is done, may sit on the river bank and watch the shadows and the passers-by. Those who are fortunate enough to live near a large river in this way will understand the great pleasure that comes to this household in its ability to utilize the water in this manner.

Cool Southern Housekeeping.

AS to keeping cool in Summer, I have a big back gallery, all latticed in, 12x30 feet, with a 12-foot ceiling, where we sleep except in rainy weather, In rainy weather we sleep in the house and eat on the gallery. In good weather we eat in regular scriptural fashion, in the yard, under our vine and our fig tree, as we have a good large native scuppernong grape running over an arbor about eight feet from the ground, and helped out by a couple of fig trees, and under the same arbor is a large lawn swing where the children play all day until they get tired and want a nap, when we put a light frame built like a wide ladder across the swing, pitch on a mattress and pile in the kids and let them snooze till they get tired.

But the cooking—that hot job. Well, we sport a coal stove, gas stove and fireless cooker, but the larger part of our Summer food is prepared on regular Old-Testament stoves, the brazier of coals. We don't call it that; we say a charcoal furnace, and have several, a couple of iron ones and a clay one; the latter exactly answers the description printed in THE R. N.-Y. some time ago of the cooking furnaces sed by the Armenians, Arabs or Persians, and is ahead of the iron ones in efficiency. It costs from 40 to 75 cents as to size, and sometimes we run a whole battery of furnaces, set around in the shade, and so avoid overheating either the cook or kitchen, cooking everything except cake or biscuits on them. The chickens do the housework by removing the scraps, and the children cannot spill food on the floor and grease it. Looks pretty lazy; well, maybe it is, but it is comfortable, and it looks more like efficiency than laziness, for the meals are prepared and cooked with half the work and double the comfort of a kitchen, and are fully as good or better cooked. We have learned how to be comfortable in hot weather, and save work, and it is worth trying.

M. B. P.

Mobile, Ala.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards thier property and their children. There will be direct answers to actual questions and general statements of law.]

Support of Children.

SINCE my husband will not agree to live in peace, rather leave than do so, I would like to know what he has to get on the property both personal and real, that is, what interest has my husband in both personal and real property where he leaves three minor children, one girl 19, one boy seven, one girl three, to be taken care and raised by me; leaving because he refuses to treat me right and leave me in peace.

S. B. B.

Virginia.

You do not give sufficient facts on which to base an answer. In the absence of any divorce or separation through the courts, the property rights of both on separating would be subject to contract between them. If the title to the property both real and personal is in either one of them individually, it would remain in that one even after separation, unless by contract they decided otherwise. The husband cannot leave his wife and children without being liable for their support. If you wish to separate, you should take into consideration that your husband must support the family, and this should be given due weight in a division of the property. If he leaves you with the care of the family, he should give you all of the property if it is not of great value, and a major portion if there is a good deal of it.

M. D.

To Take or Not to Take Under a Will

A man living in Pennsylvania makes a will, he having no children. After his death can the widow, not being satisfied with the will, break it, or must she accept it as made? What portion of a man's property in Pennsylvania can a widow hold by law, they having no children?

Pennsylvania.

G. M. K.

She cannot *break* the will unless her husband was incapable of making a will, but she can refuse to accept the provisions made for her by her husband's will and elect to take the property which would come to her if there had been no will, which, in this case where there are no children, the widow is entitled to the real or personal estate or both, to the aggregate value of $5,000 in addition to the widow's exemption ($300). If the value of the estate exceeds $5,000, the widow is entitled to such sum of $5,000 absolutely and in addition one-half the remaining real estate for life and one-half the remaining personal estate absolutely. If she elects to take against the will of her husband she must manifest her election by writing, signed, acknowledged and delivered to the executor or administrator, and recorded.

M. D.

Wages of Son.

1. Can a son get any wages for working over age? They claim they told him he could leave. 2. Was it legal for first cousins to marry about 28 years ago?

Pennsylvania.

A. S.

1. After the son becomes of age it is wholly a matter of contract between the parent and son as to whether the son is to get any wages. If the parents can prove that they told him he could leave, there might be a presumption that he remained and just worked for his board, and if the son wishes to prove that there was an agreement to pay him wages, he must show some express or implied contract to that effect. 2. Since January 1, 1902, it has been unlawful in Pennsylvania for first cousins to marry, and their marriage is void, but before that date there was no law against it.

M. D.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 865.*)

CHAPTER VII.

"We don't need any hay land with the prairie open all Winter long—and such sleek cattle and horses," Nate put in simply because he wanted to say something, and he knew so little about farming.

"We've got to have a harrow or a disk, or something of that kind, and Jim says we can use his drill when he doesn't want to use it," Norm suggested thoughtfully.

"I don't think that will work," Nate objected decidedly, "because you will want to seed just the same time Jim does. I thought folks just went out with an apronful of seed and flung it around promiscuously and that was the end of it."

"I could broadcast the seed," Norm admitted. "But to think of sowing a hundred acres by hand, and then too, they say it needs to be drilled in deep, so it will not dry out."

"Let's get out our books and our spondulix and see if we can't afford a drill," Nate suggested gaily. The investigation did not lessen the expenses, nor create a larger fund. There was scarce enough in the exchequer, to buy the other absolutely essential things. But the time came, when they could have Jim's drill, and it must be confessed that it took both boys to do the first day's seeding, for the glory and the grace of it were past resisting.

"To think that we are seeding virgin soil, soil never yet cropped, and probably never trod by the foot of a white man, until we took possession of it." Nate exulted as he strode by Norm's side, for they took turns in driving and in watching the seeder to see that it poured out its slow tide of grain into the rich soil, properly. But their delight in sowing was of short duration, for Jim needed his drill, so Norm decided to begin breaking on the other side of the creek. Nate intended to help, when a "land" had been struck out, but he was not yet accomplished enough to do that himself. Nate was standing for a moment in the warm Spring sunshine, watching Norm as he labored with the oxen, when suddenly Norm flung up his hands, and beckoned to Nate. The beckoning was followed by a shrill whistle, and Nate started for his comrade on a swift run.

"Will you look at this?" Norm said wrathfully as Nate approached. "Now see me turn a furrow," and Norm called to the oxen sharply, held the plow with his whole strength, and strove to strike a furrow, but the plow share, slid out upon the surface, striking but an inch or two of earth, just enough to scratch off the thin coating of grass, and revealing a subsoil of shale.

"What's the matter with the plow?" Nate inquired innocently.

"It isn't the plow, it's the land. Did you ever see dirt like this?" and Norm bent down and lifted a handful of bluish looking soil.

"It doesn't look much like the other breaking," Nate admitted, lifting up and dribbling through his fingers the crumbly blue stuff.

"I knew the banks of the valley were slaty, but I never dreamed the whole section, was nothing but refuse," Norm said bitterly.

"Oh, that hundred we broke last Fall is the richest, blackest land you ever saw," Nate comforted. "I suppose we can reckon, on having some waste land, on such a piece as we own."

"I don't know of anything on the face of the earth that will grow on slate," Norm exploded, and turned his plow into the land in different places. "This runs back at least half way across this side of the creek."

"Begin on our eastern boundary line and see how it is there," Nate suggested. "Maybe we can break a little there for flax and corn," he spoke cheerfully enough, but in his soul he felt bitterly disappointed. To think that such good-looking land should have such a slight veneer of soil.

"If we'd taken the stony land you hankered for, it would have been better than this, for the stones would have been good to build with, but this!" and the scorn in Norm's voice seemed almost tangible enough to be seen.

Everything else was forgotten as the two boys went over that part of the land. It seemed as though at least half of the land filed on by Nate was of that shale-like formation, slightly covered with earth. Finally to the far east of the land the plow struck home to good soil, deep and rich and satisfying.

"I do wish we had a drill of our own," Nate grumbled that afternoon. "We are just about wasting our time, and the old settlers say it is the early crop that gets the rain, and makes the crop." He was passing the diminishing heap of buffalo bones as he spoke, and he picked up an immense skull bone with the horns still firmly fixed upon it, too firmly fixed to be easily wrenched away, there were half a dozen such there that had been discarded when the work of polishing had been at its height. "Dry bones and shale," he scorned, but he lifted the buffalo skull and carrying it to the shanty, fastened it above the door.

"The bones have been a mighty good crop, just the same," Norm said more cheerfully. "Can't you think of something to do with the shale?"

"Oh, I'll make some pots and pans of it, like mud pies, I suppose we could slime our buildings over with it for warmth, another Winter if we wanted to."

Followed a three days' rain, and after the rain came the warmest days of the Spring. The fourth morning when the boys were getting ready to begin breaking again, on the remaining good land, Nate's quick eye, espied something peculiar about the acreage already sown to wheat. He stared at it and glared at it, and then bursting out in a discouraged cry, he said, "Norm, look, the grain has all gone mouldy, look it's just white with mould! Is that what they call smut?"

Both boys dashed towards the sown land. Nate bent down and picked a bit of fungus. "Why I never dreamed that smut looked like this, why this is the rankest kind of mold I ever saw!"

Norm selected a larger specimen, and looked at it carefully, pulled away the whitish film that covered the stem, revealing gills as pink as a mayflower. "Mushrooms!" ejaculated Norm triumphantly. "We'll have a change of diet for a few days anyway. Look at the acreage."

"I had an idea," Nate said skeptically, "that mushrooms were manufactured for rich folks."

"Why I've picked 'em by the pailful and sold them in town for 25 cents per that quantity. We could get a supply of groceries with these if we had them where they'd sell."

Norm gathered a hatful, and Nate did likewise, and they bore them back to the shanty. "We'll have a feast for dinner," Norm said cheerfully.

The breaking went well that morning, and the two teams were turning over the soil rapidly. It seemed like good soil too, and both boys felt much more cheerful than they had done a few days earlier. Norm cooked the mushrooms at noon, and the boys were gorging themselves upon their rich delicacy, when a sharp, "Halloo!" broke in upon the meal.

A surrey full of men stood near the open door.

"We saw a gingham apron on the line," said Mr. Mansfield, from his place beside the driver. "And we hoped it might mean a dinner—we're simply famished." And he looked inquiringly at Nate and Norm, evidently a little disappointed not to see a woman also.

"The gingham apron, is merely for looks," Nate said genially. "It's a little joke of ours, and it does seem sort of comforting to folks as they pass, for they often think that a woman wears it."

"You can have dinner, though," Norm said. "My pal here is the cook, and he wears the apron."

Both boys began to loosen the tugs and unhitch the team, and Nate later went into the shack with Mr. Mansfield.

"Say, could you get me a buffalo skull like the one you have over your door? I'd be willing to pay well for it, to take back to St. Paul as a souvenir."

"Why yes," Nate said cordially, as he sliced the bacon thin, "I'm pretty commercial, but I think I can donate one skull without impoverishing myself very much."

Mr. Mansfield smiled a little." How are you fixed for machinery? Everything you need to work with?"

"No we haven't, we want a grain drill the worst way, but—" Here Nate stopped confused. "I guess I forgot myself," he added. "We boys baching here, all talk our affairs over so freely, I forgot for a minute. I might mortgage the land, but we found out the other day, that it is a large part shale, no good for agriculture—and we don't want to take a mortgage on land that isn't much good." Nate spoke lamely enough. Mr. Mansfield was a hard-headed business man, but he was quite taken with Nate's frankness.

"I sell machinery, and I'll sell you a drill just as cheap as anybody, and I'll take this buffalo head as a first payment. I'll put it up in my office and if I find anyone interested—maybe you could be induced to part with still another one."

"I guess I could find half a dozen, but we've picked out all the best ones long ago."

"I'll take two now, and you go into Wetasket this afternoon, and fetch out the drill you want. I'll take the balance of the payment whenever you're ready to pay it," and Mr. Mansfield scribbled on a piece of paper which he handed to Nate.

"I'm afraid this isn't very good business for you," Nate demurred, but his face was shining.

"It wouldn't be good business with every man, but I think it will be all right with a boy, who's honest enough to admit that his land is too poor to mortgage." Nate still demurred but he folded the paper carefully and put it in his pocket.

The simple dinner was ready when the other men came in with Norm, and it was served upon the hinged shelf without apologies. The men ate heartily of the bread and bacon, drinking their coffee out of tin cups.

"Real cream," said Mr. Mansfield.

"We've got bushels of mushrooms, if any of you care for them," Norm informed hesitatingly.

"Mushrooms!" cried all of the men, and Nate and Norm began peeling the fungi rapidly, and meanwhile frying in hot butter as they peeled. The men seemed well night insatiable, but after a time, Mr. Mansfield pushed back from the table.

"You live in effete luxury on the plains," he said. "I'd like to come out and stay awhile when the prairie chickens are ripe."

"Come," both boys urged. "There's fine hunting.

"Are we coming back past here," Mr. Homer inquired of Mr. Mansfield. "If we are I want to get a crate of those mushrooms to take back to the city with me—if the boys have them to spare!"

"You can have a wagon load," Norm said generously.

"They are selling in St. Paul for thirty-six cents a pound." Mr. Homer declared concisely. "You could reap a pretty reasonable harvest off your land, if you had a market for your mushrooms."

"There wouldn't be any market, and we haven't time anyway to peddle them about Wetasket. I'll fix up some though for you to take with you," Norm said decrying the idea of a possible sale.

(*Continued Next Month.*)

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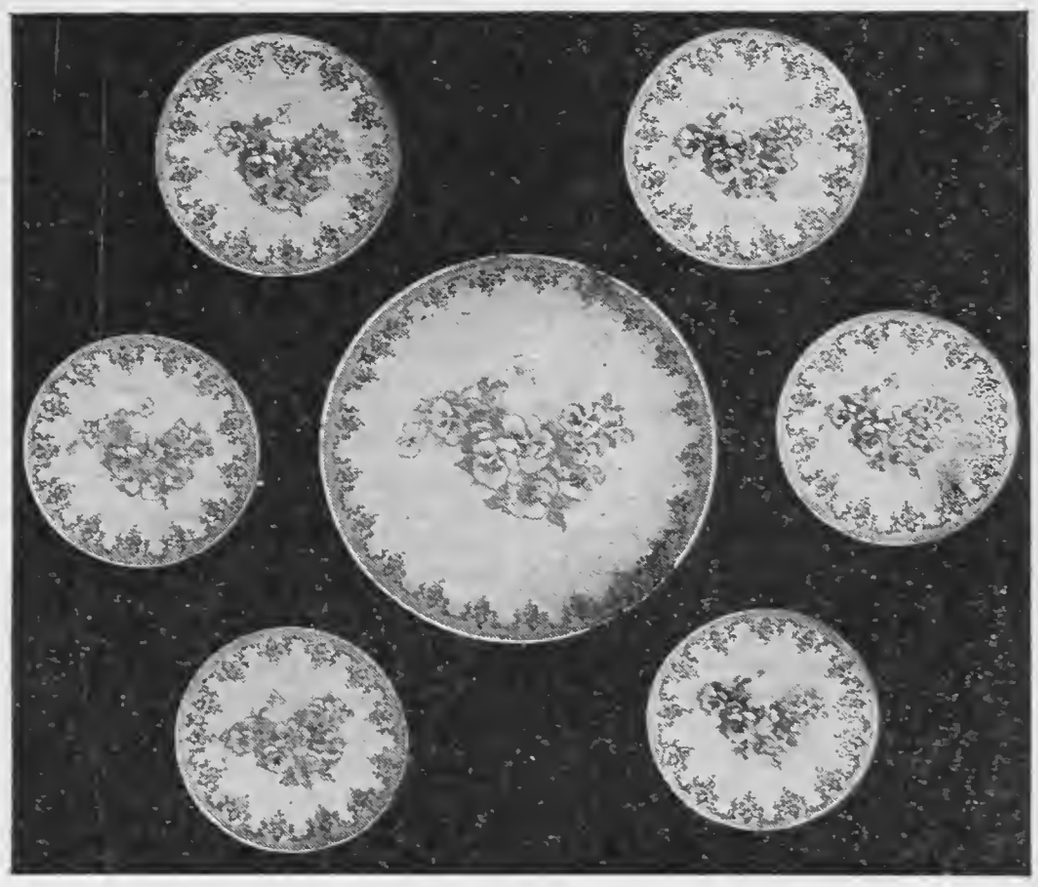

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Business

Actual Experience With Parcel Post.

THE following notes are from women who gave their address to the rural carriers as able to supply produce by mail:

I think the parcel post system is fine, and I will encourage and try to get others to make use of the privilege they have at their command. It has been so warm recently, and not having egg crates on hand suitable to ship in, has been one reason for my delay in sending eggs by parcel post. The merchants are paying better prices since they have been forced to do so. You can say to the merchant, "Now if you can't pay me the worth of my eggs, chickens and hams I can just send them by parcel post," and that has been a wonderful help to the producers. If we people in this community had a more direct mail route we could do better business. I hope to be of some help to you in the future. I would like to deal with reliable people, so there wouldn't be any delay.

Virginia. MRS. W. B. GENTRY.

I have done much business by parcel post with fine results. We have rural delivery by our yard gate, and a good carrier. I have never had any trouble with my parcel post matters. During the Winter months I sold lots of butter by parcel post to the first and second zones. I have almost all kind of products usually made on a farm, and I am very much interested in this business, and want to work up a better trade. But it seems hard to get in communication with the consumer, unless it is some friend or relative that you know in the city. I suppose they are the same as us—just haven't gotten acquainted with the matter. I have done more buying by parcel post than I do selling. Just think of it—we sit in our homes, do our shopping, and have the goods brought to the door for just a small sum.

Virginia. MRS. T. F. BOZE.

Lunches for Motorists.

THERE is much discontent evinced by the daughters of our farmers, due in a good measure to the lack of pin money or a certain allowance which might be used to buy the little extras so necessary to the dainty wardrobe. "Girls in town have a thousand chances to make pin money to our one," complained a farmer's daughter to a friend whom she was visiting in the city. The city woman was amused and frankly showed it.

"My child," she cried, "every farmer's daughter can have her private bank account if she so wishes. How about chickens, flowers, garden truck, canned fruits and even home needlework? Why the farm is alive with resources if you only wake up to them. Why don't you do what my niece Delia does? One day she was sitting on their big porch indulging in a fit of the blues because her father had refused her funds necessary for a course in the city school. Her interest was awakened by the approach of an automobile party who asked if they might have a glass of milk and some sandwiches. Hospitality was the rule of the farm, and she not only brought forth milk and sandwiches but also fresh berries and buns. She realized her guests' appreciation was genuine, and when one of the party slipped two silver dollars into her hand she shrank back as if to refuse. 'Take it, girl, and may you get many more ere the Summer is over.'

"The next morning Delia went to town and had a sign printed which read, 'Autoists' lunches served here.' Her home boasts a large lawn and a screened-in porch. She bought two hammocks, some lawn chairs, a wicker table and subscribed for many magazines. By taking a magazine agency she handled subscriptions of all her neighbors and got her own magazines at agent's prices. Besides paying her price for lunches many of her patrons left her a generous tip for the use of her magazines and porch, and she had not only been able to pay her way to school, but is building a bank account for herself. After a long trip, what is more refreshing than a fragrant cup of coffee or a cold glass of milk, accompanied by a tempting plate of sandwiches and cakes, and yet to the one who serves it it seems small indeed. Any ambitious girl can handle this work without assistance from her mother and without letting it interfere with her duties on the farm. I have been out with automobile parties many times when we would have been willing to pay 'most anything for a little lunch."

Wisconsin. M. G. DUNN.

Learn Your Husband's Business.

"I HAVE learned more about farming in the last two years," declares Mrs. E. S. Munger, of Crawford County, Pa., "than I did before in my life. My husband one day suggested the thought which comes to most of us when we get along past middle life. He said, 'You know little about farming, about crop rotation and about live stock, and what would you do in case I should drop out?' That started my thinking. It was true; I had given but little attention to farming, and with my children all but one married and away from the farm, and the youngest, a boy in his teens, still pretty young to have much practical experience, I wondered what we would do. I commenced reading, and THE R. N.-Y. was one of my first acquaintances. I now read every issue of the paper. My husband even declares that I know much more about systematic farming than he does, and we derive much more satisfaction and profit out of our farm work because of our planning it together on the basis of what we read."

A FARM WOMAN'S DAILY VACATION.

My attention has been called to a woman who had been a teacher, and she felt too proud to learn about the ordinary things of the farm when she married. A few years later her husband suddenly died; the valuable herd of registered Jersey and grade cows was sold at the price of the grades, for there was some question in matching registry papers to the animals. She tried a hired man, but he loafed and she failed renting. The good stock is now gone, and the farm appears a graveyard. With the woman's self-sufficient feelings there is no hope for her to return and continue the policy of the farm.

W. J.

Clarifying Beeswax.

I HAVE quantities of honeycomb or beeswax. Can you tell me how to clarify it, or prepare it for sale?

New York. MRS. F. A. M.

If you do not have sufficient comb and refuse wax to make investment in a mechanical extractor worth while, you can render small quantities satisfactorily in a wash boiler. Make a wooden rack of strips of hard wood of such size as to fit the bottom of your boiler and be held an inch or two above it; this to keep the bags of comb from touching the bottom of the boiler and burning. Place the comb to be rendered in burlap, or other loosely woven bags, fill the boiler nearly full of water, immerse the bags containing the comb in the water, cover them with a board upon which a heavy weight may be placed. Put the boiler upon the kitchen stove and let the water come to boiling. The wax will melt in the boiling water and rise to the surface, where it may be later taken off as a hard cake, or it may be dipped off and turned into any suitable dishes for cooling into cakes. As the wax cools, dirt settles to the bottom and may be later scraped from the cakes. The more pressure that can be put on the bags of comb while in the water the more nearly all the wax will be expressed but not as much can be obtained as by the use of a wax press, such as is sold by dealers in bee-keeper's supplies.

If you wish to refine this wax, as is done by manufacturers of comb foundation, the following directions are given in the "A. B. C. of Bee Culture": Fill a large iron kettle to about half its depth with water; add sulphuric acid to the water in the proportion of one part of acid to from 50 to 200 parts of water, the dirtier the wax the more sulphuric acid to be used. Place over a slow fire and when acidulated water is near to boiling add the wax that is to be refined. Keep hot for a few minutes and allow the fire to die down. As soon as all the particles of dirt have settled from the melted wax into the water, carefully dip off the clean wax from the top. It is not necessary to refine wax in this way to make it salable, and if it is done extreme care should be taken in handling the sulphuric acid; a most powerful corrosive poison.

M. B. D.

Discussion of Milk-room Wanted.

WE are making butter and find a good market, but are anxious to do away with some of the drudgery. I would like to see a discussion by people who have a milk room with power for churn and separator. We use dining room in Winter and cellar in Summer. Our well water is cold enough to use all Summer, but sometimes goes dry. We often have to put the cream in the well water over night this time of year. We have from eight to 12 cows, burn wood in stoves and so it seems a problem to plan a room that will be cool in Summer and warm in Winter. Some tell me to use the same power for washing machine, but I always object to having the wash anywhere near the buttermaking. We can use ice when necessary. MRS. A. J. S.

R. N.-Y.—This is a good question. Will our dairywomen tell us how to arrange such a room?

Market for Green Apples.

SOMEWHERE I have read that the confectioners who make candied fruits will buy the small apples that are culled to thin the apple trees in July. Can you tell me how I can find a market for them? M. W. A.

New York.

We know of no purpose for which the thinnings or green drops from apple trees can be sold. They are inedible and any candied fruit made from them would be condemned by the health authorities. Confectioners use fruit in various forms, sections of oranges and sometimes slices of apples being coated with candy, but this must be fruit of good quality.

Selling Holders and Good Nature.

"HOW far yon tiny candle throws its beams." As I was busy in the kitchen one morning there was a ring at the door. When I opened it, an old man, with his feet crippled from rheumatism, stood there, holding a box in his hands. With a smile he opened the box, and showed a pile of very neat gingham holders. He said he made them himself, and sold them because he did not want to go to the poorhouse yet.

"I go all through the White Mountains in Summer, and I make enough to keep me all Winter. Doctor says if I sat down in the chimney corner I'd get so cranky I couldn't live with myself."

"This is my kit," he continued, showing squares of gingham and of burlap, a spool of coarse thread, needles and a thimble.

When I had bought a holder he smiled the more, and went on to say, "Well, I meet a great many pleasant people on my travels, and if I do sometimes meet a sour one, the world is full of good folks just the same." He touched his cap, and with a parting smile said, "Good-bye."

I returned to the kitchen, feeling that I had met a gentleman and a philosopher. Moreover, I was encouraged to go on with my work in a more cheerful spirit. Who now dares to say of himself that he can have no influence for good in this world, even with strangers?

Vermont. ELIZA F. MILLER.

A Pippin that Traveled.

SOME years ago, while living in Virgina, I sent six Pippins to a friend in Panama City. This was before the days of parcel post. The six apples, with wrapping, pasteboard box and all, weighed just a fraction under 64 ounces (the limit for merchandise). The postage rate being one cent an ounce, it cost 64 cents. The apples arrived in Panama in good order, and attracted some attention, not because apples are unknown here—apples are on sale here nearly the whole year around, at prices ranging from five cents a pound to 10 cents apiece, but because these were different from any apples that had ever been seen here. The larger portion of the apples handled here are of the Ben Davis kind, that looks good in the show-window, and which will keep better than some varieties of good apples. Five of these lovely Pippins were eaten in Panama. The sixth one was forwarded to a person employed on the construction of the Madeiro-Mamora railroad, on the Amazon River, in South America. The mail route from here to the Amazon River is by way of New York, and the apple arrived there in perfect condition.

For distance traveled and variety of climate passed through, I think this is something unusual in the transporting of apples. Aside from the sentiment connected with this particular apple, this may serve as a practical lesson in what can be done with perfectly good fruit. The apples were perfectly ripe when picked. They were carefully wrapped separately in tissue paper, and laid in cotton batting in an ordinary pasteboard box. The distance traveled by this apple can be figured by referring to the map. The distance up the Amazon River alone is over a thousand miles.

Canal Zone. JUL JOHNSON.

TENDING CHILDREN.—I have tried several ways of making money at home—gardening, making butter, and raising poultry were some of the ways. They all turned out fairly successful, but there is more or less hard work and worry attached to each. The most successful thing I ever undertook was keeping children for mothers who wanted to go shopping or to some social affair. I lived on the car line between two good-sized cities three miles apart, and the car runs up and back every hour. So mothers had a good chance to drop me a line or call on the telephone, and I could be right at the depot to take the little ones, and they wouldn't need to get off the car. I charged 15 cents per hour during the Summer, and only keep them Saturdays and Sundays, except when there was a carnival, fair, or something of the sort going on; then I had regular hours, from eight in the morning until six at night I charged one dollar, and if later than that $1.50. But I never would keep any child later than 10 o'clock. The mothers were required to bring all the articles the children would need, and on rush days each baby's "bundle" was checked to correspond with the check on the baby. I always had plenty of toys to amuse them, and the older children were happy to run outdoors among the trees, where I had two big swings and tables and benches, where I always fixed lunch for them. Never a week passed but what I made from $2 to $5, and when there was something going on I have made as high as $25 a day. All the help I had was my little son, eight years old. He always liked to play with the little ones and keep them quiet. I always had all my work done up so I could give all of my attention to the children.

Butte Co., S. D. MRS. P. MUNTER.

OFFICER: "What's the matter with that soup you're turning up your nose at?" Private: "It's full of sand and grit sir." Officer: "Now look here, my man, did you come to camp to grumble or to serve your country?" Private: "Well, I did come to serve my country, sir, but not to eat it."—London Opinion.

"Short Stories"

All Sorts of Personal Experience With Food, Friends and Fixtures

Care of the Canary Bird.

THE canary for busy folks is no doubt what R. Y. N. is asking about. If most farm women would pretend that the canary was just a plain hen, and see that clean, mixed seed, grit in form of coarse sand, to be found on most farms, green food such as apple, celery, lettuce, chickweed or plantain, and fresh water were furnished the bird, all might keep these beautiful singers. They like a daily bath and clean cage but once a week will answer. But you cannot feed the canary to the cat and still keep it, for we tried it. They will endure quite an amount of cold, but draughts must be avoided. Any one who places the canary on the porch runs risk of both draughts and cats. In the Summer the birds moult like any common hen. A hard-boiled egg, mashed with a fork and fed mixed with cracker crumbs or alone will help at this time and also build up the bird for early Fall singing. Clean seed should be bought direct from bird store if that is possible, as the package goods are inferior. I learned these necessary hints in regard to the care of canaries from Germans who have bred them in their own country. I have raised canaries for ourselves and our friends for some years, and think any farm woman can do so. A. B. GILBERT.

New Jersey.

Women on Health Boards.

THE Woman's Journal comments on the fact that women should serve on boards of health. At Nutley, N. J., the report is that when Miss Annie L. Van Winkle was chosen a member of the local board three men resigned:

One choleric old gentleman in England declared that he would resign from a local Board of Poor Law Guardians if a woman were placed on the board, because, he said, no woman could understand accounts. But a woman was elected, and he had to submit. At the first board meeting that she attended, the accounts were rendered, as usual, and the lady's attention was attracted by an item of £5—about $25—which was set down as the price of a soup tureen bought for the paupers. The sum seemed to her excessive. She looked into the accounts, and unearthed a whole series of frauds. The board was being systematically overcharged for all the housekeeping supplies. When these facts were brought out, the choleric old gentleman said, with disgust. "How can you expect me to understand all these little domestic details?" The lady answered quietly: "I don't expect you to understand them. But, since you do not, isn't it well that there should be somebody on the board who does?"

Inexpensive Comforts.

IN the inevitable strenuous life on the farm, why not add a few holiday features for the Summer weather? With slight expense, a camper's tent, wire screened, could be put up under the trees near the working room, where the meals could be eaten, removed from the heat and the turmoil of the kitchen. This picnic life would rest and help the busy housewife, and the hard-worked farmer. Then, too, there is the old porch with the flat roof. Why not enclose the top with woven wire fencing, fill some ticks with straw, and use it for a hot weather sleeping porch—with or without an awning? Only those who have tried it, know the comfort and invigoration that come from sleeping in the open air. Don't get so busy with your work that you can't take a little holiday as you go along. I would also suggest, that the farmer's wife who wishes to attract Summer boarders, could find no more attractive "bait," than the "outdoor meals"—and the "sleeping porch."

H. E. FOULKE.

THE "CHRONIC KICKER."—Farmers who feel free to walk into the kitchen and tell mother what they want for dinner, should consider the case of William Morningstar, who got into trouble with a Buffalo Hotel. Mr. Morningstar it appears got tired of the hotel fare. He went out and bought some spareribs of pork, and gave them to the hotel chef, requesting him to cook them and send them up to the room. This was done, but the next Mr. Morningstar knew he was charged $1 for this service, in addition to his other hotel bill. The case went into court, and the jury decided against Mr. Morningstar, but as a matter of principle he carried the case up to the Court of Appeals, and this court has decided in his favor. The court decides that a hotel guest has a right to have spareribs cooked for him without being charged an excessive price, at least the court orders a new trial, chiefly on the ground that the jury decided the first case on evidence that Morningstar was what is known as "a chronic kicker." It evidently does not pay to have that kind of a reputation.

Plug the Melon and Eggs.

RELATIVE to Geo. A. Cosgrove's experience and inquiry on page 790, I would relate the following story my father tells. We had been using a bunch of boys hoeing corn—my father working with them. It had been his custom, when coming in from work, to stop at our melon patch nearby every evening and give each boy a melon. A few days after one of these occasions one of the smaller boys came over to where my father was milking one evening and after hanging around for some time with seemingly something on his mind finally blurted out: "Mr. Post you mind that watermelon you gave me the other day?" "Yes," said my father. "Well, that melon was green," replied the lad. Father hardly thought it could be, but as he had not plugged it he told the boy he supposed he owed him another then, so they went out to the patch and picked out another. A couple of days later the boy came back and after hanging around a little while finally said: "Mr. Post you mind that melon you gave me?" "Yes," said my father, "was that one all right?" "No," said the boy, "that melon was rotten." Well, my father took the boy out to the patch again, but he said, "Sonny, we'll just plug this one this time." If Mr. Cosgrove could only contrive some way to plug his eggs. By the way this boy's brother told me later that the little fellow didn't get to eat any of his melons—he had taken all three down town and sold them. C. H. POST.

Missouri.

ONE delightful day our Florida crowd were starting off for a day's outing. We were to drive to the boat landing. Four teams were full of happy people, and the driver of the first team had got in and spoke to the horse to start. Still he didn't move and every one wondered. On investigation he was still hitched to the post! B.

AUTOMOBILE NOTES.—Up in the hills of Western Massachusetts, back from the railroad, live a young married couple, special friends of ours. The man drives a mail and passenger route of 30 miles six times a week. Last Winter he kept three horses and it took all his time. This Spring he put on a five-passenger touring car and now has four hours a day at home to attend to his farm. Also he has taken a number of parties out in the evening. The local storekeeper has also purchased a similar car, as it will save so much time on his weekly trips to the nearest town. The storekeeper carried only a few standard articles in stock, but every Saturday makes a trip to the city where he will get without extra charge, whatever is wanted. The rural driver intends to buy horses next Fall, when they are cheap, use them during the Winter and sell them in the Spring. The hill roads are now filling during the Winter. S.

EXTRACTING BEESWAX.—I noticed inquiry how to extract beeswax. Here is the plan I have used several times: Pack the comb in a small flour sack as tight as possible. Put a rack made of lath in bottom of boiler, place sack on it, and weight down with flat stones. Put in water so that it stands two inches above rack, and boil for an hour. Set off and let cool till next morning. The wax will be in large cake on top of water. Break it up and put in small dish on back of stove to melt and then let cool again. If you wish some small cakes pour some in teacups while melted. C. E. DEGROFF.

Missouri.

A NEIGHBORHOOD GARDEN.—Mary Ann is a young factory girl nearly 20, she looks about 12. She is one of a family of five brothers and sisters whom a big-hearted Irish cousin of their mother's took in to keep them from "going on the State." Mary Ann has always worked very hard, and finds factory work easier than what she did at home. She wanted a garden, but had no money to spend on it. The fact being known, the next-door neighbor contributed Petunia and hollyhock plants, some Iris roots and lilies-of-the-valley. From the old Fairbanks homestead came periwinkle, day lilies, columbine and four kinds of old-fashioned roses, which all decided to live. Mrs. Cook gave Sweet William, some nasturtium seed and several kinds of hardy Phlox. Cousin Grace planted her first garden this year and put in the seed about 10 times too thick, she was very glad to contribute superfluous plants of Verbenas, Drummond's Phlox and Japan pinks. Mary Ann's brother got the ground ready, the neighbor who knows how showed her how to plant her gifts, and her garden is an established fact, with little time and trouble and no expense. Perhaps there are other Mary Ann's who would like a garden. K.

BEEF PIES.—Our family like little pies made of cold roast beef, chopped and thickened in a gravy. Make a rich biscuit dough, roll as thin as pie crust and cut in six-inch squares. Put one square into a gem or pastry pan, with the four corners hanging over, fill with the beef mixture, and fill the corners over to cover. These can be easily warmed over. B.

WHEN SILKS SPLIT.—The Wisconsin Station gives the following test for silk: "Why did your last year's silk split and crack? Because it was weighted. You might have tested it easily before purchasing and saved both money and worry. A bit of the silk and a match are all you need for a sure test. Light the match and apply it to the fabric. If it holds its shape the silk is adulterated with some of the various minerals so used. If it melts down in burning and runs together in a puffy mass the silk is pure."

KEEPING THE MILK.—One farmer has solved the problem of keeping his butter and milk cool in the hottest of weather though many miles from ice. From the pantry down to a depth of four feet below the cellar floor he built a dumbwaiter shaft. This hole below the cellar floor was cemented on the bottom and all the sides, and being below the surface of the cellar it was always very cool. Not only did this method keep things cool, but it was such a step saver to be able to put all the supplies on the dumbwaiter and simply lower it into its under-cellar.

Iowa. MRS. C. A. RHOADS.

COUNTY VOLUNTEERS.—In Massachusetts the Hampton County Improvement League has started what is called an Organization of County Volunteers. This means working among the boys and girls of Hampton County. The plan is to interest them in their homes, on the farms, and through the school and church, as a foundation for a larger organization. The League started with five towns as an experiment, but is spreading rapidly. The boys and girls will be taught to play as well as to work, and all that, and the present outlook is for a most successful organization among these volunteers.

FOR THE INVALID.—A strap or rope suspended from the ceiling or fastened to the foot of the bed is often a great help in enabling the patient to raise or to support himself if confined to the bed on account of a disabled limb. For the nurse it lightens the burden of the patient's weight in lifting him. A clean blotting-paper placed under cups, glasses and ice-pitcher on the invalid's table will keep the cloth fresh and tidy and lessen the laundry work. Mechanical puzzles often afford excellent entertainment to a convalescent whose eyes are not strong enough for reading or writing.

Wisconsin. JOSEPHINE E. TOAL.

MAIL BOX ON A WHEEL.—One ingenious farm woman who disliked to see her corner decorated by the unsightly row of mail boxes which were placed at all sorts of heights and angles, induced the man of the house to construct a new arrangement for them that would prove more attractive to the passerby. Horizontally on the top of a post he fastened an old wagon wheel, bolting it on so that it would revolve. The mail boxes were fastened on the rim of the wheel at certain intersections. From the spokes of the wheels were hung short straps with snap ends, so that parcel post packages could be snapped securely on. Boxes and wheel were painted red, with the owners' names put on in neat white letters. Beside being a good-looking arrangement it delighted the mail man, as he could sit in his buggy and turn the wheel to any box he desired. MRS. C. A. RHOADS.

Iowa.

TRAINING CHILDREN.—I think that a good study for the "Woman and Home Department" would be the care and management of home and children. I think perhaps it might be a help to some. A child should be taught from childhood—girls as well as boys—to be familiar with all kinds of work, both in the home and on the farm. They can attend to small duties while young, and what they are taught in childhood they never forget. They should have a small task set aside for them each day, and their mother should see that they do it right. Your home work can be planned to suit yourself a good deal, giving you days that you can spend with your children, and be young with them. There can be many interesting hours spent with your children right on the farm. And they are a good deal better right there with you than you not knowing where they are. I have a grandson and two granddaughters, and I sincerely hope they may be brought up on the farm as my two daughters and son were. MRS. C. W. C.

Rhode Island.

"The Favorite Hen"

When we offered to enter a number of hens at one of the egg-laying contests we had no idea that the suggestion would prove so popular. We were limited to 30 hens and a few substitutes, but within three weeks of the offer the following named women made application:

1. Mrs. Daniel Thomas, Cortland, N. Y.
2. Mrs. Carrie Chaffee, Sullivan, N. Y.
3. Miss M. E. Pierce, New Haven, Conn.
4. Mrs. S. O. Travis, Westchester, N. Y.
5. Mrs. K. H. Smith, Tioga, Pa.
6. Mrs. E. P. Andrews, Ontario, N. Y.
7. Mrs. F. M. Earl, Fairfield, Conn.
8. Mrs. C. F. Weaver, York, Pa.
9. Mrs. Lewis J. Happich, Chenango, N. Y.
10. Miss Mary B. Brooke, Montgomery, Md.
11. Mrs. Stephen Wilson, Steuben, N. Y.
12. Mrs. L. G. Robison, Otsego, N. Y.
13. Mrs. Alice G. Parsons, Hampshire, Mass.
14. Mrs. A. B. Thompson, Bergen, N. J.
15. Mrs. Clara Eddy, Ritchie, W. Va.
16. Mrs. Robert H. Wood, Herkimer, N. Y.
17. Mrs. Walter Fletcher, Madison, N. Y.
18. Mrs. Carrie M. Bliss, Loudonn, Va.
19. Mrs. Edwin Walker, Middlesex, Mass.
20. Mrs. W. R. Merrick, Norfolk, Mass.
21. Mrs. E. S. Marlatt, Warren, N. J.
22. Mrs. Josephine Hollenback, Berks, Pa.
23. Mrs. Theo. F. Lees, New Haven, Conn.
24. Mrs. W. E. Phelps, Bradford, Pa.
25. Mrs. R. W. Stevens, Saratoga, N. Y.
26. Mrs. Cecil Farnham, Hancock, Me.
27. Mrs. R. L. Predmore, Middlesex, N. J.
28. Mrs. A. J. Skellie, Otsego, N. Y.
29. Mrs. Eldin Landers, Oneida, N. Y.
30. Mrs. Edgar Chaffee, Orleans, N. Y.
31. Mrs. J. F. Kahl, Wexford, Mich.
32. Mrs. E. C. Gabriel, Suffolk, N. Y.
33. Mrs. Chas. Tlmerman, Cortland, N. Y.
34. Mrs. Joseph di Fabrizio, Atlantic, N. J.
35. Miss Elizabeth A. Woodman, Bucks, Pa.
36. Mrs. Andrew J. Wilson, Hartford, Conn.
37. Mrs. Edwin C. Smith, York, Me.
38. Mrs. N. D. Rand, Ulster, N. Y.
39. Miss Edna M. Porter, Niagara, N. Y.
40. Mrs. L. D. Prindle, Chittenden, Vt.
41. Miss Ethel A. Pierce, Sullivan, N. H.
42. Mrs. Emma H. Wood, Washington, N. Y.
43. Mrs. A. N. Conell, St. Lawrence, N. Y.
44. Mrs. J. Schwenk, New Haven, Conn.
45. Miss Jessie A. Close, Cayuga, N. Y.
46. Mrs. O. E. Leach, Fulton, N. Y.
47. Mrs. C. J. Leach, Fulton, N. Y.
48. Mrs. L. E. Hilborn, Steuben, N. Y.
49. Mrs. G. L. Rothgeb, Frederick, Va.
50. Mrs. W. S. Walters, Berrien, Mich.
51. Mrs. V. D. Miller, Geauga, Ohio.
52. Mrs. W. W. Shay, Haywood, N. C.
53. Mrs. J. N. Ludington, James City, Va.
54. Mrs. D. F. Hiler, Steuben, N. Y.
55. Mrs. C. D. Wood, Vigo, Ind.
56. Miss Martha A. Small, Waldo, Me.
57. Mrs. L. C. Litchfield, Addison, Vt.
58. Miss Tillie B. Cloud, Chester, Pa.
59. Misses Osler & Wilcox, Chemung, N. Y.
60. Mrs. W. A. Paust, Saint Clair, Ill.
61. Mrs. F. Hansen, Mercer, N. J.
62. Mrs. N. M. Congdon, Madison, N. Y.
63. Miss Julia Bartlett, Tolland, Conn.
64. Miss Althea M. Slter, Broome, N. Y.
65. Mrs. C. L. Todd, Henrico, Va.
66. Mrs. Herbert Hood, Caledonia, Vt.
67. Mrs. Effie Mann, Columbiana, Ohio.
68. Miss Lillie J. Babcock, Litchfield, Conn.
69. Mrs. Fred Millward, Mercer, N. J.
70. Mrs. H. G. McElheney, Allegany, N. Y.

Make a Fair Selection

Now we regret that we cannot accommodate all in this contest. It will be necessary to select 30 or a few more out of this number. We wish to make such selection as fair as possible, and it seems to us the wisest plan to ask the women who are here named to suggest a method which will prove satisfactory. Some of these women have already volunteered to withdraw. Others have made only a tentative application. We find that some may be classed as breeders or professional poultry women, while others are quite well-to-do. It was our original plan to limit these entrances to farm women who have developed good farm flocks, yet cannot be called professional breeders. We wish to be fair and just to all, and our regret is that we cannot find room for all the hens that are offered. In making a final selection we wish to be absolutely square and select the most deserving applicants, and so, ladies, we will leave it with you to select the requisite number. Will you please give us your suggestion?

Live Stock and Dairy

PROFIT IN PORK.

I AM interested in raising pigs. My estimate of the profit on eight pigs fed last year, from November 1 to July 15, was something over $100, the pigs being six weeks old November 1. As this seems too much to me, I ask you to estimate the amount of feed in pounds per day an average pig six weeks old will consume, beginning November 1, and ending July 15. I am now feeding bran, middlings, oil meal and tankage about as follows: November, one pound daily; December, two pounds daily; January, three pounds daily; March, four pounds daily. I expect to continue this ration until May 1, when I shall substitute hominy meal for the middlings, and a little later germ oil meal for the linseed oil meal. We also feed small potatoes and clover chaff. Will you advise me what you think of my ration and the amount I am feeding; also estimate the number of pounds daily for the months of April, May, June and July, at which time they should weigh 300 pounds each.

New York. G. C. B.

I do not think that you over-estimate the profits from eight pigs at $100. There are so many factors to consider in determining such net income, the results depending largely upon whether you have grown and fed your own waste products, or whether purchased food stuffs have been obtained at market prices. It would be difficult to determine accurately the number of pounds of feed required per day as is suggested, for hereto are a great many factors that should be considered. Henry's "Feeds and Feeding" gives the following standards for growing fattening swine:

PER DAY PER 1,000 LBS. LIVE WEIGHT.

ANIMAL.		Digestible Nutrients.					
Age in mos.	Av. live wt. per head lbs.:	Dry matter.	Crude protein.	Carbohydrates.	Fat.	Sum of nutrients.	Nutritive ratio, 1:
2- 3	50	44	7.6	28.0	1.0	38.0	4.0
3- 5	100	35	5.0	23.1	0.8	30.0	5.0
5- 6	150	33	4.3	22.3	0.6	28.0	5.5
6- 8	200	30	3.6	20.5	0.4	25.1	6.0
9-12	300	26	3.0	18.3	0.3	22.0	6.4

You will note from the above that the proportion of feed per 100 pounds live weight is greater in a younger animal than in an older individual, it varying from 4.4 pounds for the younger animals per 100 pounds live weight to 2.6 pounds for the 300-pound 10-months-old pig. A safe rule is to permit animals after they weigh 100 pounds to eat all that they will clean up with relish if it is desired to fatten them most economically and in the shortest period of time.

After the pigs have a well-grown frame and weigh, we will say, from 125 to 150 pounds, I doubt very much whether it pays to feed anything but corn and digester tankage. Certainly bran is too expensive, and tankage is a more economical source of protein than oil meal, and in my judgment corn or hominy will supply heat, fat and energy more economically than middlings at their present price. Therefore, I would suggest that when the animals are put in the fattening yard, or even if they are running out and have green forage available, that they be put strictly on a ration of ear corn and digester tankage, using from five to 10 pounds of the tankage for each 100 pounds of corn fed, and thus eliminate the bran and other ingredients suggested. It is well to have such a variety during the early stages of growth of the pigs, but it is not necessary to have such a variety during the time when the pig is putting on the last 150 pounds of his weight.

There is very little food value in potatoes, and they should preferably be cooked in order to decrease the amount of moisture before they are fed to swine. Clover chaff might take the place of a portion of the tankage, but it is rather bulky for fattening animals. It does very well for brood sows, growing pigs and breeding animals, but it is good judgment to supply a more concentrated ration for shotes that are being fattened for market. G. C. B. should bear in mind that he should keep before his animals a mineral mixture, and the following should be kept before the pigs at all time in an open trough.

Charcoal	5	lbs.
Salt	5	"
Bone Meal	5	"
Ferrous Sulphate	3	"
Sulphur	2	"
Air-slaked Lime	5	"

It is necessary to keep all the pigs in a herd growing daily, and at no time should a shote intended for market be marking time. At least a pound of gain per day should be secured, and even this increase does not satisfy our best feeders.

F. C. M.

DAIRYING OR BEEF MAKING.

EASTERN farmers will be interested in reading the following statement of the comparative claims of dairying and beef making in Kansas. The same thing would not be true of Eastern farmers.

REGISTERED HAMPSHIRE BOAR, BRED IN MAINE.

Where the work is done on a small scale, dairy cattle are more profitable than beef cattle, so said W. A. Cochel, head of the animal husbandry department at the Kansas State Agricultural College. One man can do all the work necessary to care for about 100 beef cattle, according to Professor Cochel, while 10 dairy cattle will keep one man busy. Investigations show that most of the dairying is done by men who are from 25 to 50 years old, and who have large families, while few beef breeders are less than 40. The same investigations show that most dairymen are men with families, and that many beef producers are bachelors. A bachelor would be at a disadvantage in trying to run a dairy farm in competition with a man with a large family, because the work on the dairy farm is such as to furnish occupation for every member of the family. On the other hand, production of beef gives a man an opportunity personally to supervise a much larger investment.

Another interesting fact mentioned by Professor Cochel is that the dairyman is always looking forward to the time when he can retire from active work and enjoy the profits he has made, while the man who grows beef cattle is planning for the time when he can feed an extra carload or two. The dairyman is tied down to a routine of work that does not allow him to mix with his fellows in the way that the beef man can.

Horse With Cold.

WHAT can I give a horse that has been shipped here from the West, and has a cold, or a shipping fever, as some people term it? R. E. B.

Pennsylvania.

Take no chances in such a case, as glanders may be present. For that reason we should not feel justified in prescribing treatment and a graduate veterinarian should be employed to make an examination and prescribe if glanders is not found present. We can only prescribe when symptoms are described in detail. A. S. A.

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To Keep Away Flies

Spray it on cows and horses to keep away flies; in hen-houses to keep away lice; in pools of water to destroy mosquito larvae.

It is cheap, quick and easy. The best and most effective cow spray and lice destroyer.

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Why Feed Flies

You can get more cow's milk, more horse strength, more hog fat, if you keep off flies.

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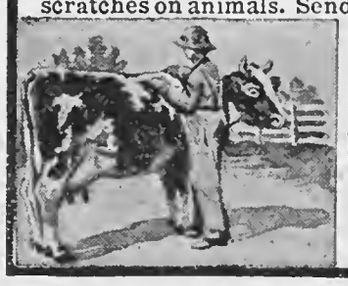
Sirenia Oil

It is feed economy and animal satisfaction. Sirenia is made of pure oils. Sirenia is applied with a cloth, no sprayer neeessary. Ask your dealer for a dollar can of it. Do not buy a substitute. There isn't any. If your dealer doesn't handle, send us his name and a one dollar bill and we will send a one dollar can, postpaid.

We Will Refund Your Money If Not Satisfied

Drives flies from cattle and horses, fleas from hogs and dogs, lice from poultry, ticks from sheep. It will also heal sores or scratches on animals. Send a dollar now; or write us a card for the endorsements of users who wouldn't be without it.



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Painless—safe—easy to apply—no scar. Horse can be worked. Use for splints, bog spavins, curbs, wind puffs, swelling of throat and glands and all other flesh enlargements. Excellent for wire cuts and old sores. Write for information. For sale at druggists or direct. Price, $1.00, delivered.

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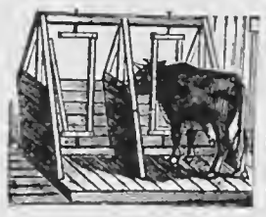

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"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

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Wash. St., Forestville, Conn.

CRUMB'S IMPROVED WARRINER STANCHION

"My barn that was BURNED was fitted with Crumb's Warriner Stanchions. If it had not been for the ease with which these fasteners were opened I should have lost my cows," writes Mr. Everett Gains, Bernardstown, Mass. Booklet Free.

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OR PAIN KILLER FOR THE HUMAN BODY

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IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

REMOVES THE SORENESS--STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle **Caustic Balsam** did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

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Removes **Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain;** Stops Spavin Lameness. Allays pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. **Book 1 K free.**

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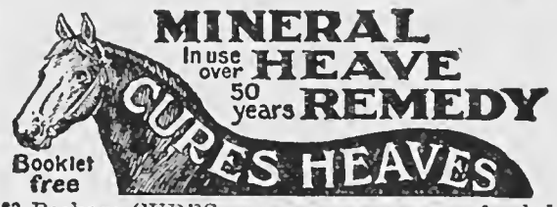

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$3 Package CURES any case or money refunded.
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Mineral Heave Remedy Co., 461 N. Fourth Ave. Pittsburgh, Pa

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A SOLID PROPOSITION to send fully guaranteed, a new, well made, easy running, perfect skimming separator for $15.95. Skims warm or cold milk; making heavy or light cream. The bowl is a sanitary marvel, easily cleaned.

Absolutely on Approval.

Gears thoroughly protected. Different from this picture, which illustrates our large capacity machines. Western orders filled from Western points. Whether your dairy is large or small write for our handsome free catalog. Address:

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Our patented lever device which *operates 2 to 50 Swinging Stanchions and Cowstops* at one throw of the lever, is the biggest improvement ever made in barn equipment. Only device in the world that will do it. Saves much time, trouble and labor in fastening and releasing cows. West Bend Equipment

REDUCES YOUR BARN WORK

Costs no more than others—yet has many superior features. We manufacture a complete line of stanchions, stalls, pens, feed and litter carriers, etc. Write for catalog showing complete line.

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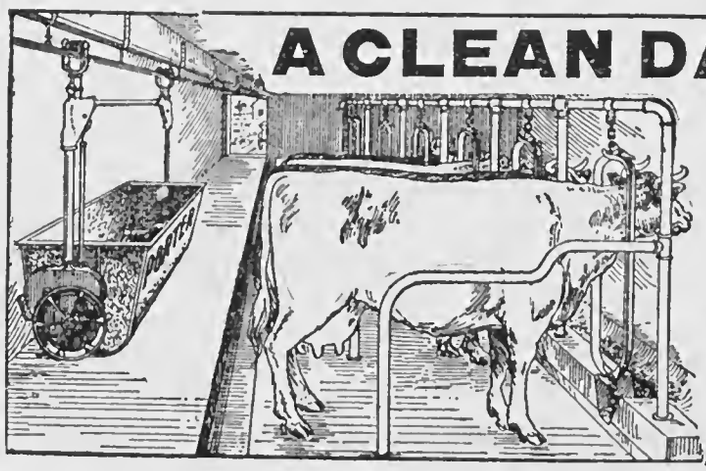
A CLEAN DAIRY BARN With Half the Work



By using a Porter Litter Carrier. It works on our Columbian Steel track, is easy running and will carry heavy loads. Our Perfect Cow Stanchions line up the cows without interfering with their comfort.

Porter Steel Stalls give perfect ventilation and light throughout the barn and make it easy to keep the cows clean.

We also make the celebrated Porter Hay Carriers and Barn Door Hangers. Send for catalog of our Perfect Barn Equipment.

J. E. PORTER CO., Ottawa, Ill.

SHORT DAIRY NOTES.

THE R. N.-Y. asks, on page 890, if fat cows give richer milk than thin ones? Yes, and no. If a very fleshy (fat) cow is taken very soon after freshening, and a test of her milk made, and then for a week about all of her food taken from her so to make her live "off from" herself and result in a feverish, abnormal condition, the amount of fat in her milk shows a very large gain in per cent., but as soon as the feed is restored, and normal conditions return, the fat drops back into its natural richness and there remains until the flow of milk in advance lactation slackens. The water in the milk shrinks in weight faster than do the solids. As was exemplified at the Missouri station, a fat cow can be starved for a few days into giving milk that is very largely cream.

In this section, several who have tread powers, use the herd bull as power, instead of gasoline. Near me, Mr. Frank Ruewee, a noted Holstein breeder, uses his $2,500 sire, not only to run the farm machinery, but the milking machine as well, and a capital "power" he is. By the time the milking is done, the separator ungeared, the water pumped, and the grindstone no longer needed, a well exercised bull goes to his stall, not only to take a rest, but with all thoughts of doing violence to anyone far from his mind. He is not only benefited, but his worth in the herd is greatly increased.

A neighbor who has a small gasoline engine to run his milking machine, conceived the idea of getting a small electric generator, storage battery, and wire his buildings for an electric light plant instead of buying a complete, sold-by-agent electric lighter. A man who was familiar with "wiring" was found, the needed supplies bought here and there of the manufacturers—Cleveland has scores of them—and the plant installed with 60 lights divided up between his own and the tenant house, the barns and milking stable, and in other buildings, and here and there a light about the grounds. It has been a marked success. He tells me that the expense was very moderate for the benefits received and the safety part, is not inconsiderable. Two other men have small streams where a water motor is installed, instead of the engine, and they too are confident that they "lead."

JOHN GOULD.

FAT COWS AND FAT MILK.

SOME of our practical dairymen feel sure that cows, when fat or in high-class condition, will naturally give richer milk than when thin or poor. These men do not claim that fat can be fed into the milk to any extent, but they feel sure that a fat cow or one that is smooth and plump will naturally put more fat in her milk. Will you tell us what you think of this proposition?

It's the Way She Is "Built."

THE old, old question as to whether or not it is possible to change the percentage of cow's milk by the character of her feed is still debatable in some ways. All carefully conducted experimental work, notably the classical data secured at Cornell some years ago, points to the same conclusion: viz., that the percentage of fat in a cow's milk is dependent upon her food supply to only a very slight degree. Abundant and correctly balanced rations will surely increase the amount of milk sometimes to an astonishing extent, but it is doubtful if the per cent. of fat will be regularly changed. Indeed, the better ration has not unfrequently been followed by slightly less per cent. of fat. On the other hand, the Holstein breeders, in their Advanced Registry testing, seem to have found that if a cow has stood dry a long time and accumulated a great surplus of fat stored in the body, she will unquestionably for at least a brief period following freshening, give milk containing a higher percentage of fat than her normal flow throughout the year. I think we might answer the question thus. If a cow is decently well fed and nourished, we may hope to greatly increase her milk yield by skillful feeding, but the per cent. of fat is as likely to decrease as it is to rise. But the very poorly fed or semi-starved cow will not give milk as rich as if she is very fat at calving. The truth seems to be this: The per cent. of fat in the milk of a cow is a question of the structures of the cells of the udder rather than nutrition. A cow gives milk with a certain fairly definitely fixed composition because she "is built that way."

JARED VAN WAGENEN, JR.

Keep the Ribs Covered.

I THINK it is a well-established fact that you cannot feed fat into milk to any appreciable extent, provided the cow is in a good, thrifty, normal condition and has been fed for some time on a good, balanced ration, but I believe all those conditions are necessary in order to have the cow give milk of normal richness. I think it has been shown, and it stands to reason, that a cow maintained on a poor ration, not properly balanced, changed to a plentiful amount, properly balanced, has shown an increase of fat in her milk, simply because she was not up to her normal productive capacity while on the poor ration. I believe too many dairymen are afraid of a little surplus fat on the cow's ribs, and I think most cows are so thin in flesh that they are not up to their normal ability. Some of the best producing cows I have ever known were cows that the average cow man would pronounce too fat, and these cows were noted as producers of high-testing milk. I do believe a cow kept good and fat will not only give more milk but richer milk.

Wisconsin. F. R. CONSTANCE.

A Thoroughly Nourished Cow Best.

IT is very difficult, indeed, to get accurate data upon this question. There are, however, some general indications that point very strongly to a positive answer to your question. The time during the lactation period when it seems to have the most marked influence is during the second and third months after parturition. I do not think it is altogether the amount of fat on the body which exerts an influence, but partly due to a system of feeding which maintains the cow during the last two months of gestation in a strong, thoroughly nourished condition. Parturition should be a mere incident in the yearly life of a cow, and will be if she is as well fed when dry as when in full milk. Of course the prospective mother, if full fed, will usually take on fat before freshening, and generally fat is an indication at that time of strength and vigor. It is probably safe to say that it always will be, if put on with the usual milk ration, or probably what is better and safer to use, either br .. or oats, to which is added one pound daily of oil meal. Very little danger of fever under such feeding if good hay and silage are judiciously fed.

If a cow freshens and is thin and not strong she will not give as rich milk, and usually not as much of it as a cow freshening under full feed. For a few days before freshening the mother should be put on less feed, but not enough to lessen her desire for water, which is the great equalizer or balance wheel for the system. Proof is abundant that a change of ration cannot suddenly improve the fat content; on the contrary, any radical change is likely to disturb the system and reduce the fat.

Some day we shall all learn what some have already learned—that a cow has no rest, and must be kept in prime condition every day from birth to finish, and that the ability to produce both quantity and quality must be first bred with the calf and then fed into her without a skip. Watch out among our most successful breeders, and you will discover with no exceptions whatsoever that they push every animal from birth to get a large, full development of body and digestive capacity. The ability to consume to advantage a large quantity of feed is no accident but as much a piece of education as to educate a boy or girl to digest big mental problems. They cannot do it if they are in and out of school to suit somebody's fancy; neither can a calf become a producer of much milk and much fat if she is fed on the installment plan. I hear it on every hand that it doesn't pay. If my observation is correct, those who feed steadily as a whole are the prosperous dairymen, because they will not continue to feed inferior cows. Yes, my experience and observation tends to prove the assertion that a thoroughly nourished cow will give a higher per cent. of fat than if not thoroughly nourished, and it is in harmony with every law of animal life.

New York. H. E. COOK.

DAIRY CATTLE

FOR SALE—Two Registered Jersey Cows due to freshen in September. One's test is 5%; other, 5.20%. A delivered price by express will be given. Also an extra fine Ayrshire cow, due to freshen in March, now giving 35 pounds of milk per day. THE CASKEY FARMS, Richmondville, N. Y.

HIGH GRADE HOLSTEINS
The best are the cheapest. Why not have that kind? We have 200 large, well bred cows that are heavy producers. Some fresh and others due within 60 days. Tuberculin tested. Come and see them.
F. P. SAUNDERS & SON, Cortland, N. Y.

JERSEY BULL CALVES FOR SALE
Sired by one of best sons of Financial King No. 57788, and from dams of exceptional merit. A special price will be made to farmers interested in the Jersey.
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DAIRY CATTLE

GUERNSEY BULL REGISTERED, ready for service, $75.00. Tuberculin tested, Reagan Bros., Tully, N. Y.

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HOLSTEIN BULL
ready for heavy service; son of the Great Milk and Butter King; A. R. O. dam. Two choice cows due in August. Several male calves. One fine heifer calf.
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Pedigree Chester Whites out of excellent stock, from 8-weeks old. Either sex. SCOTT, Stone Ridge, N. Y.

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Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa.

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Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows.
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Choice boars old enough for service. Also 8 weeks-old pigs, both sexes. Good breeding.
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I have for sale 5 Bred Gilts to farrow in March and April, and 5 young service Boars, weighing around 150 lbs. I will book orders for March and April pigs.
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Young Berkshire Boars and Sows
of the Famous Masterpiece Strain, tracing direct, on both sides, to the great Masterpiece. All registered.
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WOODBURY FARM BERKSHIRES
A few choice young boars and gilts of notably good breeding. Address
J. W. WEBB, Syosset, Long Island, New York

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FOR SALE—AIREDALE PUPPIES—Now ready for delivery. The kind of dog for farmers. Males, $10; Females $5.
H. B TAYLOR, R. F. D. 2, Box 48, Pittsford, New York

COLLIE PUPS—the intelligent kind. Also Bloodhounds. NELSON'S, Grove City, Pa.

Wanted—English Setter Bitch—broken to woodcock and partridge shooting in thick cover. State price, age, where hunted and other particulars.
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It is not what a cow can produce in 7, 14, or 30 days, even in a year that determines her value to the farmer, it is what she can do in a lifetime.
Brown Swiss Cows rank high in average production and are regular and persistent breeders and producers. Year in, year out, they make good records and raise good calves without any coaxing or pampering. If interested, we will send you an illustrated booklet.
The Brown Swiss Cattle Association
IRA INMAN, Secretary BELOIT, WISCONSIN

That Prize Baby of Yours

His Feeding and Care

Tender Young Stock

REFERRING to the article on page 641, entitled "The Significance of the Sign," while I must now profess ignorance as to what is meant by that, I should say from the facts presented that "Gertie" had brought her baby up according to the approved modern method, viz.: of weaning babies when they are nine or 10 months old. The reason she had no trouble in weaning him, and that he took to being fed with a spoon, was probably because he had been given water with a spoon regularly twice a day from the time he was a few days old. At any rate he had had it often enough to accustom him to it.

My doctor told me to accustom my children to a bottle by giving them hot water (as hot as a mother's milk) whenever they had colic, hiccoughs or indigestion. This they would take if starved into it, which is in no way as harsh as what "starved into it" would seem to express, for babies should not be fed while having any of the above mentioned things the matter with them. In giving hot water for those troubles there are no bad after effects as when medicines of different kinds are given. The advantage to be gained by getting them used to the bottle is that when they are weaned they can be put in their crib each time they are fed and the bottle propped up so the milk is always ready at the nipple, and no air will be drawn in to give them colic. Naturally this is a great saving of time to the mother besides being good for the baby, for when it is nap time and night time he will generally fall off to sleep as soon as he finishes his bottle. The nipple on the bottle should not have a large enough hole in it to allow the milk to come out except when the child sucks on it.

I would like to make a plea to farm mothers to give their babies more fresh air by putting them to sleep in the daytime, Summer and Winter (except in bitter weather) out of doors, and having the windows wide open at night in the bedrooms. They will be so much healthier and so much less care when teething and even beyond that age. Both my children were delicate at birth, but now they are strong and sturdy. This has just come from fresh air, plenty of sleep and proper food for their age. Up to the time they were five years old they went to bed at six o'clock, taking a nap in the morning, and I never allowed them to have pastry of any kind, nor pork in any form, until after they were seven. Tea and coffee they will not be allowed to have until they are 16. When anything outside of milk or buttermilk is wanted they are given cocoa, which is very healthful and nourishing.

If country mothers who have so much to do would train their babies to regular habits in the way of eating and sleeping, and would not carry them around in their arms so much just because they cry a little, they would find it much easier for them, for they could plan their work accordingly. I know this is so from both experience and observation.

MRS. FLORENCE BELLE.

Give the Baby a Chance.

I FIND many children in the country suffering cruelly from improper feeding and care. It is the result of ignorance rather than anything else. While at a picnic last Summer a woman had a 10-weeks-old baby that cried all day with colic. Yet that mother told, somewhat boastfully, I thought, how fond the tiny thing was of ice cream. She was not a young woman but a middle-aged, with six children older than the infant. Some of the children were married. Perhaps such a case is hopeless, but there are many in the country who never read any papers or magazines except the farm papers. Such women can be reached only by them. If the department could devote some space to the hygiene and rearing of children it would be fine. After all, they are the farmer's best crop. I read with much interest what has been printed on the subject, and would appreciate more. I have two little chaps of my own, and though they are husky little men I don't feel I know enough about them to rear them properly.

GERTRUDE JACK.

Milk, Eggs and Better Farm Children. Balanced Ration for Humans.

THE farmer goes through his herd, rubs his hands affectionately over the flanks, feels of the skin or inspects with his eye every creature in the long line. He stops—for he sees something wrong in skin or appetite! The diet of the ailing animal is changed.

The farmer goes to his house and finds his child is out of sorts. It is pale, anaemic, listless. It continues to eat the

ENJOYING A SUN BATH.

same food as its father—*but is given a dose of medicine.*

The farmer gives his cows and horses, his calves, pigs and chickens balanced rations. His child eats "just what we do." His cream is sent to the creamery, his skimmed milk is fed to calves and pigs, and his eggs are sold at the store. His calves and pigs flourish, his bank account grows but his child wilts.

Give your child an even chance with the pig, and see his cheeks grow red and feel his little muscles grow firm and elastic. Skimp the pig and give the youngster skimmed milk to drink. Do not scorn skimmed milk. The figures in the following table shows what a superior food milk is even when skimmed.

	Protein	Fat	Carb.
Skimmed milk	3.4%	.3%	5.1%
Whole milk	3.3%	4.0%	5.0%

Last Winter I had an unusual chance to see how the country child eats and I know that some parents need to be shocked into having as much solicitation about balanced rations for their children as they now have for calves and pigs and the proper kind of mixed feed to make the hens lay. "They don't like it"—"they won't touch it" is the common defence for depriving the children of milk. "We eat them when they get cheaper"—"we eat them *then* till we get tired of them" is the reason offered for sending all the eggs to the store. Whose fault is it that the children prefer coffee and tea to milk?

I had supper and breakfast with the Browns. At both meals two small boys, pale, listless little fellows, and I ate fried, dried-up meat, potato, pickles, cookies, cake, pie and doughnuts. Together we drank poor coffee and tea. For breakfast we had a tablespoonful of one of the most expensive and least nutritious ready-to-eat cereals with an infinitesimal amount of milk. In the pantry were big bowls of eggs *ready to go to the store.* In the separator room were 300 quarts of milk, but only two quarts a day and no cream came to the house. Meantime the blood of those little shavers was simply crying out for more red corpuscles which eggs will build better than anything else, and their bones and tissues were soft and flabby for want of lime, while milk contains more lime than saturated lime water.

Eggs should be used by the whole family every day, but if you honestly find that you can't afford them every day for yourselves, try to give at least one to your child. Rob the storekeeper and save out a few eggs for your child. It is poor economy to sell eggs and milk and buy meat. If you raise your own meat it is poor economy to feed it three times a day to yourself, for the body is burdened to get rid of harmful products which meat forms. If too much meat is bad for grown-ups think of the effect on your child.

Mrs. Brown said to me: "I don't like Winter. It seems as if we have so much more sickness then. Frank (the 16-year-old son) has had to lay off work for a couple of weeks on account of boils and the other two children have been sick off and on all Winter." She saw no connection between Winter diet and boils, Summer diet and health.

Vegetables and fruit are of the greatest importance in the development of children, and should be eaten freely by everyone. It would be better to bring the child up on a strictly vegetarian diet than on the present one of so much meat. If we limit the important sources of iron (fruit and vegetables) we cause a sluggish blood formation and an entire absence of reserve iron such as is usually found in healthy individuals. They neutralize acids and other harmful substances in the blood and tissues.

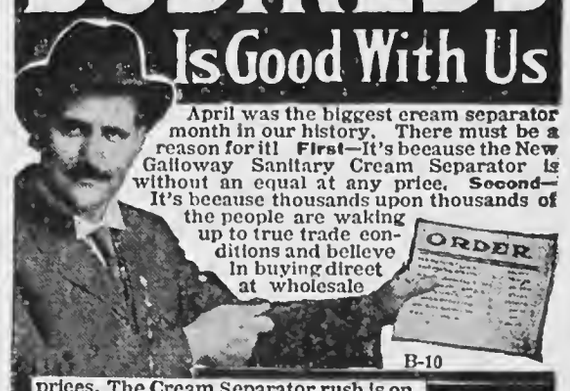
It is just as easy to plant the seeds of good health as of sickness, if you will take the pains to learn how. Usually the three meals a day are planned with entire reference to the *man's* need. They consist of meat, potatoes, bread, butter, pickles, pie, cake, cookies, doughnuts, coffee or tea. These things may be all right for the farmer and the woodsman, but they are *not all right for the child.*

The sweets for children at the end of the meal are, properly, jams, stewed fruits, cookies, puddings made of milk and eggs or fruit jellies. Children should never have pies or doughnuts, which contain too much cooked fat, neither should they have any fried foods. The child will never miss what it has never had. It is the mistaken kindness of giving "just a little taste" of grown-up's food that makes the mischief leading to abnormal cravings. You are kind to your child only if you feed him so that he will be well while he is growing and after he is grown.

Cream, milk and eggs are the best muscle building foods for children. Pork, pie, doughnuts, tea and coffee are the worst things which your child can have.

ANNETTE CHASE DIMOCK.

BUSINESS Is Good With Us



April was the biggest cream separator month in our history. There must be a reason for it! First—It's because the New Galloway Sanitary Cream Separator is without an equal at any price. Second—It's because thousands upon thousands of the people are waking up to true trade conditions and believe in buying direct at wholesale prices. The Cream Separator rush is on. Orders are coming in thicker and faster than ever. Write me today. This is your opportunity to get the best, neatest designed, closest skimming, easiest running separator made at a price that has competition on the run.

Galloway's New Credit Plan makes it easy to own a separator. Order now. Pay later. I'll trust you. Five different selling plans. The New Galloway Sanitary is a mechanical masterpiece, dust proof, enclosed gears, runs in a constant bath of oil, sold on 30 to 90 days trial. I'll back it against any make at any price and let you be the judge whether it is up to claims.

Wm. Galloway, Pres.
Wm. Galloway Co. 273 Galloway Station, Waterloo, Iowa.

The County Fairs Will Begin Next Month

and these fairs will be found a good source of subscription work for The Rural New-Yorker.

Write for details.

Department "M"

The Rural New-Yorker
333 West 30th Street
New York City

27

HOT WEATHER the ideal time to use a DE LAVAL SEPARATOR

THERE IS NO TIME WHEN the use of the De Laval Cream Separator is so indispensable to the profitable production of cream or butter as during the hot weather of midsummer.

THE USE OF THE SEPARATOR at this season usually means the difference between a profit and a loss in dairying. It accomplishes a great saving of butter-fat that goes to waste with any other method of separation and enables the production of a higher quality of cream than is otherwise possible.

MOREOVER WITH A DE LAVAL the advantages over other cream separators are greatest at this season because the separation is more complete and the cream heavier and more even in texture. De Laval machines turn more easily and the capacity is greater, doing the work more quickly.

IF YOU HAVEN'T A SEPARATOR you can scarcely afford to put off any longer the purchase of a De Laval, or if you have a separator which is not doing satisfactory work there is no better time to discard it in favor of a De Laval, first trying the machines side by side for your own satisfaction, which every De Laval agent will be glad to give you the opportunity to do.

See the nearest De Laval agent AT ONCE, or if you do not know him write direct to nearest office below for any desired information

The De Laval Separator Co., 165 Broadway, New York, 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

The Henyard.

THE EGG-LAYING CONTEST.

THE report for the month of June shows an egg production of 13,983 during the month. The largest number laid by any one pen was 249, by the English White Leghorns. This is an average of nearly 25 eggs by each pullet. One of these pullets laid 28, and two laid 27 each. Chas. N. St. John's White Leghorns laid 238, taking second place in the monthly score, and P. G. Platt's pen of same breed are third, with 236 to their credit. Geo. A. Cosgrove's pen laid 235. Thos. W. Moore's pen laid 227, and Branford Farm's pen laid 227. Glenview Poultry Farm's pen laid 225, and 12 other pens of White Leghorns laid 200 or over. Outside of White Leghorns there were only two pens that reached 200. One was the White Wyandottes of Merrythought Farm, 202; and the S. C. Reds of A. B. Brundage, which laid 211.

The report for the thirty-sixth week shows an output of 3,076, which is a drop of 76 eggs from the score of the previous week. The best laying months of the year are past, and we must expect a gradual decrease in the number of eggs laid. White Leghorns continue to make all the high scores; the highest for this week is 57, by P. G. Platt's pen. Chas. Heigl's pen from Ohio are second with a score of 55, and the English pen are third with a record of 54. Thos. W. Moore's pen tie with the "sour milk" pen from Storrs Agricultural Station, with scores of 53 each.

Outside of the Leghorns A. A. Hall's Buff Plymouth Rocks laid 51, tieing with C. H. Savage's, and Geo. A. Cosgrove's White Leghorns. Barron's White Wyandottes are now only 18 eggs ahead of pen number 42, the "sour milk" pen of White Leghorns from Storr's Agricultural Station; but as these are not in the contest for prizes, the real opponent is Francis T. Lincoln's Leghorns, which are now 33 eggs behind Barron's Wyandottes. But steadily climbing up is pen number 68; Barron's White Leghorns. As late as March they were in the tenth place, now they are fourth. But they are 124 eggs behind Lincoln's and in the 15 weeks left would have to gain over eight eggs a week to catch up, and this is too much to expect. As it looks now Connecticut is the winner. The week's record follows:

Barred Rocks.	Week	Total
A. A. Hall, Connecticut	40	939
Frank L. Tuttle, Massachusetts	35	1,028
Waveny Farm, Connecticut	36	950
J. J. Francals, New York	39	1,165
White P. Rocks.		
Albert T. Lenzen, Massachmsetts	46	1,082
F. H. Benton, Connecticut	39	1,066
Storrs Agr. Station, Connecticut	36	859
Storrs Agr. Station, Connecticut	27	885
Storrs Agr. Station, Connecticut	43	1,037
Storrs Agr. Station, Connecticut	40	911
Storrs Agr. Station, Connecticut	43	733
Buff P. Rocks.		
A. A. Hall, Connecticut	51	1,066
W. C. Morgan, Jr., Connecticut	18	798
White Wyandottes.		
Tom Barron, England	36	1,499
West Mt. Pltry. Yrds, Connecticut	23	901
Merrythought Farm, Connecticut	33	1,342
Neale Bros., Rhode Island	50	1,341
D. J. Ryan & Son, Connecticut	21	1,049
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachustts	36	1,038
Dr. N. W. Sanborn, Massachusetts	28	956
Am. Buff. Wyan. Club, New York	31	886
H. L. Hamilton, Connecticut	17	692
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	48	994
S. C. Reds.		
Robert Seaman, New York	27	789
J. S. Gillespie, Connecticut	42	1,012
Dr. J. C. Dingman, New York	34	910
Burnham Pltry. Farm, Massachusetts	24	785
H. P. Deming, Connecticut	36	923
Geo. P. Dearborn, Florida	38	1,098
Dr. J. A. Fritchie, Pennsylvania	23	1,177
Ernest Underhill, New Jersey	38	856
W. H. Bumsted, Connecticut	45	642
Pinecrest Orchards, Massachusetts	42	1,173
Harry B. Cook, Connecticut	38	1,027
Colonial Farm, New Hampshire	31	1,035
A. B. Brundage, Connecticut	37	1,242
Rosecomb Reds.		
Glenview Pltry. Farm, Connecticut	21	989
C. S. Scoville, Connecticut	27	725
White Leghorns.		
Storrs Agr. Station, Connecticut	39	1,140
Storrs Agr. Station, Connecticut	48	1,206
Storrs Agr. Station, Connecticut	46	1,221
Storrs Agr. Station, Connecticut	53	1,481
Storrs Agr. Station, Connecticut	45	1,085
Braeside Pltry. Farm, Pennsylvania	38	1,005
Glenview Pltry. Farm, Connecticut	43	1,134
Manor Pltry. Farm, New York	39	1,044
A. B. Hatl, Connecticut	35	1,055
Marwood Pltry. Farm, Pennsylvania	42	1,151
Geo. M. Harris, Connecticut	36	925
Bonnie Brook Farm, New York	43	1,175
N. W. Hendryx, Connecticut	45	1,044
J. J. Linehan, Massachusetts	48	976
F. F. Lincoln, Connecticut	50	1,466
Ceell Guernsey, New York	50	1,256
Thos. W. Moore, Connecticut	53	1,064
Chas. N. St. John, New York	50	1,060
Chas. W. Sherwood, Connecticut	42	1,033
L. E. Sands, Pennsylvania	40	1,065
Tomoka Pltry. Farm, Connecticut	21	955
Venture Pltry. Farm, New York	22	909
Mrs. K. E. Woodruff, Connecticut	47	1,063
Windsweep Farm, Connecticut	34	970
C. H. Savage, Connecticut	51	1,064
P. G. Platt, Pennsylvania	57	1,207
Heneta Bone Co., New Jersey	23	373
F. M. Peasley, Connecticut	45	1,073
Chas. Heigl, Ohio	55	990
Tom Barron, England	54	1,342
Branford Farm, Connecticut	48	1,194
James Munn, Massachusetts	41	998
Geo. A. Cosgrove, Connecticut	51	1,021
Buff Leghorns.		
Wolverine Pltry Farm, Michigan	46	1.105
Blue Andalusians.		
E. D. Bird, Connecticut	39	892
Buff Orpingtons.		
O. Wilson, West Virginia	30	763
White Orpingtons.		
P. A. Demgar, New York	28	745
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	5	556
Silver Campines.		
W. J. H. Lobel, New Jersey	33	874
Dunghills.		
H. W. Collingwood, New Jersey	34	866
Daniel Hine, Connecticut	26	814
Daniel Hine, Connecticut	30	871
Mixed Breeds.		
Profitable Poultry, Massachusetts	20	917
Profitable Poultry, Massachusetts	32	930

GEO. A. COSGROVE.

Eggs Versus Feathers.

IT would be decidedly interesting if we could take the winning birds of the utility breeds, at all our great poultry shows and enter them directly from the showroom into the egg-laying contests. But the fanciers, as a rule, haven't got the nerve to try it. Occasionally one does put in a pen, not of his show birds particularly, but of the breed he is interested in, and usually the showing they make is not one to be very proud of. Some years ago, when I was breeding White Wyandottes, I had in the flock an exceptionally good layer. From the Wyandotte Standard she was a disgrace to the yard; undersized, with a comb something like a Light Brahma, too long-bodied for a Wyandotte, she was so different from the general average of the flock that I could not use her to breed from at all. She laid all Summer, was broody for a few days, then began laying again, and kept it up until late in the Fall; she was the last one to molt and in 40 years' experience I never knew a hen to molt and get a new set of feathers so quickly. I did not set down dates, so have no means of knowing the exact length of time, but it did not seem to me that she took half the usual time. I remember with what surprise I saw her with a red face on the nest again laying. The point I want to make is this. Here was the very best hen I had raised in years; from the utility standpoint the most valuable hen on my farm; but I was so bound up in the theory that a Wyandotte must conform to the "Standard" and that no bird was fit to use as a breeder unless it did so conform, that I sold this best hen to a peddler to be killed for market. Breeding "Wyandottes," of course I must furnish eggs that would produce birds as close as possible to the Wyandotte standard.

The fanciers themselves are beginning to see the unwisdom of some of the standard requirements, and are not insisting on such shortness of body as formerly. I understand that there is a movement on foot now to change the standard in this respect. The effect of breeding to standard was well illustrated by the experience of Mr. N. J. of Connecticut. At the Springfield, Mass., Poultry Show he won first premium for the best pen of White Wyandottes. I was there and saw them, and they certainly were beauties, very short-bodied, and up to the "standard" in every way. I met Mr. J. in Hartford two years afterward and asked him how his Wyandottes were doing?

"Haven't got any," he replied. "I bred 'em just as the judges wanted them, but they wouldn't lay, and what eggs they did lay wouldn't hatch, so I got rid of the whole bunch." Mr. J.'s experience was an extreme one, but it clearly shows that the tendency of the fancier is to make a fad of some unimportant feature and run that to an extreme, regardless of its effect on the utility qualities of the fowl. Birds are disqualified by the "standard" for trifles that do not in any way affect their usefulness, and that should be cut as a defect, instead of disqualifying the fowl. The egg-laying contests are doing much to educate the American people away from the idea that any particular breed is always better for egg production than any other. We are learning that exceptional individuals exist in many breeds, and that what the commercial egg producers want is to select and breed from those that show the best performance, whether they conform to some arbitrary standard or not. This must be done with judgment, or results will not be what one might expect.

GEO. A. COSGROVE.

Loss of Feathers.

I HAVE a couple of R. I. Red hens that have lost the feathers on their heads, and a few Plymouth Rocks that have lost the feathers on the front of the neck. It does not affect the white hens. I have greased their heads with lard and kerosene but it does not seem to make any difference. Can you advise me what to do? I do not think it is mites, as the house is clean. E. S.

New York.

The mite which causes the loss of feathers from a fowl's head and neck is not the red mite found about the perches and nests, but another variety which burrows in the skin at the base of the feathers and remains continuously upon the fowl. If ordinary grease will not destroy this pest, add one-fourth its bulk of "blue ointment," obtainable at any drug store, to the lard or other grease used and rub in well over the affected spots. You will, of course, have to give new feathers time to grow before the appearance of the fowl is improved. M. B. D.

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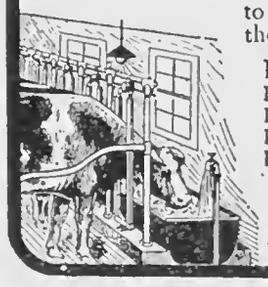

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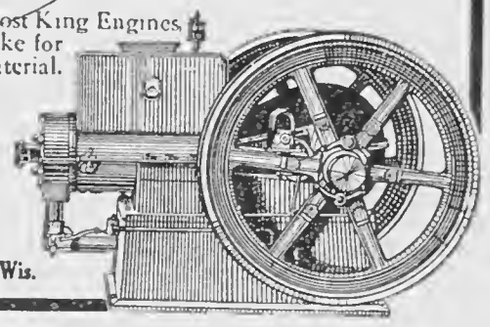

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PUBLISHER'S DESK

I am pleased to notice your exposure of the Cloverdale Farm Co., Ransomville, N. Y. They are the ones who deceived me last Winter and Spring and from whom I had so much difficulty in getting the clover ordered. G. P.
Massachusetts.

The above reference to the experience of another subscriber in Publisher's Desk of July 11 issue only emphasizes the necessity for the word of warning to our people. Anyone who contemplates any business transactions with the Cloverdale Farm Co. will do well to look up the record of Mr. E. E. Cooley, whom we understand to be the active member of this company, at Frenchtown, N. J., where he was engaged in the poultry business for a number of years.

In September, 1908, I took an installment contract from Wood, Harmon & Company, 261 Broadway, New York City, for a lot in Midwood Manor (a new subdivision in Brooklyn) at $1,635. I understood that in case of any emergency that I could not continue my payments, the money actually paid in without interest would be returned. After paying on my contract about $483 I was unable to continue on account of financial difficulties, and upon asking for a return of part of my money, I was put off from time to time, saying that they would carry my account and I need not be uneasy, or words to that effect. Finally last year they wanted all back payments at once or I would lose all. I was unable to pay same and petitioned the head of the firm for the return of some of my hard-earned money (if only half of what I paid them) but could get nothing from them. I would be very very thankful if you could get any return for me from said real estate firm if only half of what I paid them. P. C. H.

We took this complaint up with Wood, Harmon & Company; but they refuse to make any adjustment. They say the expense of selling the lot, and city taxes equal the amount paid on the contract. As to the purchaser's understanding that the money would be returned in case of his inability to keep up the payments, there seems to be nothing in writing to this effect and no claims on the part of the buyer that there was, but he quotes conversation with the agent to show definite verbal agreement to this effect. The company, however, prefers to accept the assurances of their agent to the effect that no such promise was made. So there you are. The buyer loses his $483.

We know nothing of the verbal representations made to induce this man to agree to purchase this lot, but we are satisfied that he did not enter the contract with a proper understanding of the situation or with a prudent estimate of the value of the property. We believe he was deceived by some influence. Some years ago, a Virginia subscriber asked our advice about the purchase of a Brooklyn lot promoted by Wood, Harmon & Company. We told him that such property is bought up in acreage plots, that streets are then laid out, and the lots are sold on the installment plan to small investors at prices very much in advance of our estimate of their value. Frequently such lots are abandoned after a few payments have been made, and the investor loses his money. Acres of such lots are sold every year on Long Island for taxes. Finally we told our Virginia subscriber to send $10 to a reliable real estate appraiser, if he wanted to know in advance how much he would be stuck on the purchase. The company felt very much grieved at the time that we should refer to the transaction in that language. For our part we consider the language mild. A candid expression of our opinion of these real estate transactions would probably include some words that ought not to appear in print.

Referring to Dr. Ulman's article on page 246 of your issue of February 14, 1914, and your comment on same, I would very much like to become a charter member of the Society for Suppressing Dishonesty and Frauds. This society will have a greater work before it than can be realized at first glance. In this connection I am reminded of that splendid editorial which appeared in your paper a few months ago, in which you gave your views and reasons for refusing advertisements for tobacco and cigars, even from reliable firms, for ethical reasons. When the greater part of reliable publications get to the point where you are in this respect the world will see a radical change in physical, mental and moral state of our lives. What an almost unbelievable gulf there exists between your position and the general run of literature. In the Y. M. C. A. club houses here on the Isthmus, and everywhere else for that matter, the library tables are covered with daily papers, weekly and monthly magazines, nearly every one of them with their full quota of tobacco, whiskey and patent medicine advertisements. This is one of the worst influences in existence today that helps towards making the use of tobacco and strong drinks popular, and leads young men, and I may as well include women, to drink and consequent ruin. The work before this society will not be accomplished in a day or a year. We are in for a prolonged siege, a campaign that must be planned and stuck to with the determination that characterized the siege of Troy.

Largely because my eyes have been opened by reading THE R. N.-Y. I have discontinued subscriptions to other publications I used to take. At present I have a monthly magazine for which I subscribed for a period of 10 years, and I am positively ashamed to have it in the house. It carries no whiskey ads, but such frauds as Sanatogen occupy whole pages, and by my paying for my subscription and patronizing that magazine I am made a partner in charging the credulous $2 for five cents worth of cottage cheese.

Now a final word about the Society for the Suppression of Dishonesty and Fraud. THE R. N.-Y. is entirely too modest. One hundred members!! What? If this society can't show a membership of ten thousand within three months I will lose faith in humanity. I hereby cast my vote for Dr. Ulman as the first president of the Society for the Suppression of Dishonesty and Frauds. If Dr. Ulman is a practicing physician, I am afraid he will, in course of time, have to give up his practice, because there will be so much work in his new position that he will not have time for anything else.
Canal Zone. J. J.

It was not our intention to limit the society to 100 members. We promised that we would help organize the society when 100 readers signified a purpose to become charter members. It will be a distinction to be one of the first hundred to found a society which ultimately in some form will include 80 per cent. of the people of the Western Hemisphere. We made the suggestion on the impulse of the moment. The responses have been prompt and enthusiastic. The list is growing, but the 100 are not yet filed. Where are the women? The membership so far are men. We believe the women are even more interested in this than the men.

I had the same experience as F. F. H. and J. D. S.. I sent the Cluthes nine dollars for a truss on trial. When I wrote them that I could not wear it and asked for my money back they wrote me a curt letter and refused to pay the money. T. C.
Ohio.

It is quite likely that many others had the same experience. From the language of the advertisements, we would expect that a purchaser could return the Cluthe's truss and get the money returned; but such seems not to be the case. We do not know whether the money could be recovered on suit or not. It does not matter. Anyone would rather lose the money than attempt to recover it through a suit at law. If everyone who had this experience complained to the Post Office Department, the abuse would probably be corrected.

Nearly a year ago I sent White Cross Anti Liquor Society, Kansas City, Mo., $7.50 for anti-liquor treatment. They advertised to guarantee a cure or refund the money. The medicine did no good and I have been unable to get my money back as promised. L. G.
New York.

We wrote the alleged society in the subscriber's behalf and it admitted that the remedy was sold on conditions that if it did not effect a cure the money would be refunded. Instead of refunding the money as agreed the society sent two more treatments as an offset to the refund guarantee, claiming they did so with consent of the customer, and therefore consider all obligation cancelled. The subscriber denies having agreed to the arrangement. However, this may be; we know that this plan is resorted to by many medicine advertisers to avoid making the refund as agreed at the time of sale and a few advertisers in other lines seem to be following the lead of the patent medicine men. It is important to understand that the apparently liberal propositions made by this class of advertisers in cheap publications have a string to them, and that the advertisers have no real intention of ever returning the money under any circumstances. J. J. D.

DAIRY REPORTS.

THE southeastern part of Ohio is the section that we gather cream from and there is a growing interest towards the dairy business in this section. The hilly country throughout this section is more adapted to dairying than to the tilling of the soil. Is there as good an opportunity in the future as in years gone by? I would say yes, better. In regard to the proportion of the cows in our locality that are well bred, or of the improved breed, it would be hard to say, but I judge that not one farmer in 20 has the improved breed. There is where I base the above answer to your question and where I see a greater chance for improvement. In regard to advising young men and women to take up the business of dairying as it stands today, with a fair hope of being successful, I would say yes, I think there are great opportunities in the dairy business. L. D. C.
Ohio.

IN regard to dairying, there is all kinds of stock except purebred. Very few of these are kept. Pastures are very poor and run out and burned out through the dry hot seasons we have had. As to purebred bulls, few farmers are able to own one. There are a few Holstein purebreds, but only the rich farmers can afford them. Prices of farm produce are very good. Butter 30 cents; cheese 16 to 18. Bought a small farm of 80 acres in fair cultivation; keep 10 cows, grade Jersey, Guernsey and black and white. Am hoping to improve them if I get able.
New York. O. E.

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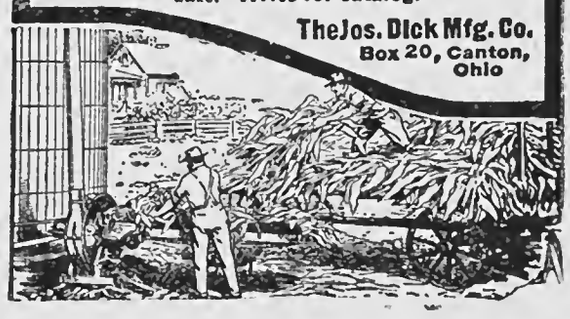

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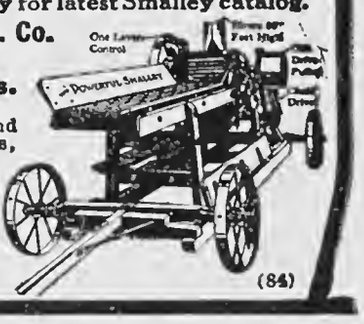
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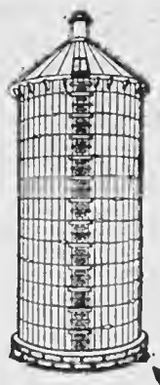
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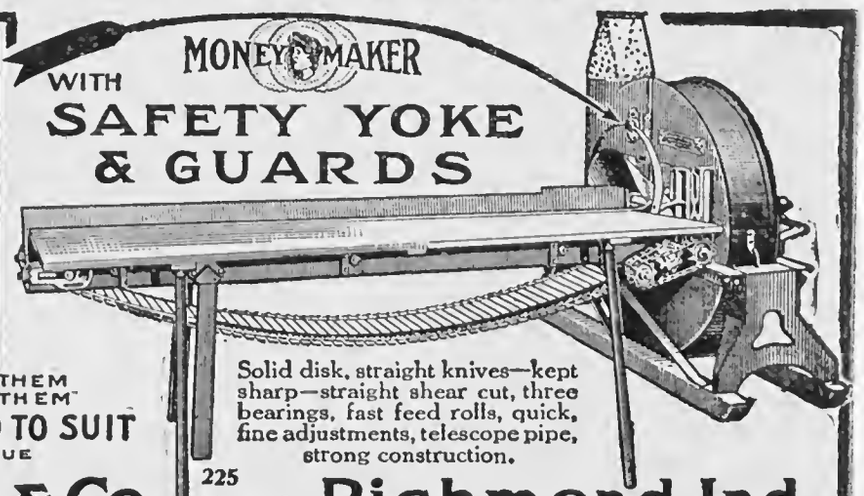
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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending July 17, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914	1913
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart.

BUTTER.

Prices have been both up and down during the week, closing one cent higher on the top grades, which form a much smaller percentage of the receipts than usual. Lots scoring above 93 are scarce. From 91 down is an abundance at prices favoring buyers.

Creamery, extra, lb	27½	@	28
Good to Choice	23	@	26
Lower Grades	20	@	22
State Dairy, best	25	@	26
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	16	@	19

Elgin, Ill., butter market 27½ cents.
Philadelphia, western creamery, 28½ cents.

CHEESE.

There has been an advance of one-half cent on the better grades of whole milk. Business is dull and speculative buying scarce. The tone of the market indicates a drop rather than further advances or even a holding of the present fractional premium over previous weeks.

Whole Milk, fresh, specials	14¾	@	15
Average fancy	14¼	@	14½
Under grades	10½	@	13¾
Daisies	15	@	15¼
Skims, specials	11¼	@	11½
Good to choice	10	@	11
Poor to fair	5	@	9½

EGGS.

A wide price range is needed to cover current business, though the top figure given, 29 cents, represents but a small volume of sales, mainly because those qualities are scarce. Ungraded lots, averaging fairly good, bring 17 to 20 cents. Grades under this are in considerable surplus.

White, choice to fancy, large	28	@	29
Common to good	20	@	25
Mixed colors, best	25	@	26
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18

FRESH FRUITS.

Most of the new apples offered are unattractive and selling at low figures. Choice hand-picked Astrachan and similar early varieties sell readily at the top figures quoted. Le Conte pears selling well, mainly on the basis of $3 per barrel. A few Southern Elberta peaches have sold up to $3 per crate, but most other varieties running under $2, many down to $1.25. Strawberries are practically gone, only a few Western New York arriving. Bush fruits considerably out of condition because of rain and muggy weather.

Apples—New, bu	25	@	75
Western, box	1 00	@	2 00
Strawberries, Western N. Y	8	@	16
Cherries, 8lb. bkt	35	@	50
Pears, Le Conte, bbl	2 50	@	4 50
Peaches, Del. and Md., crate	50	@	1 25
Southern Elberta	2 00	@	2 50
Southern Belle	1 25	@	2 00
Nearby, bkt	25	@	50
Currants, qt	4	@	6
Plums, 6-bkt. carrier	1 00	@	1 50
Raspberries, red, pint	4	@	8
Black Caps, pint	4	@	6
Blackberries, Jersey, qt	3	@	6
Huckleberries, qt	5	@	11
Gooseberries, qt	4	@	12
Muskmelons, Md., bu	1 50	@	2 25
Virginia, bbl	1 50	@	2 00
Carolina, bu	1 00	@	1 50
Georgia, bu	50	@	1 00
Arkansas, bu	1 50	@	1 75
Arizona, bu	3 00	@	3 50
California, bu	1 75	@	2 75
Watermelons, 100	10 00	@	20 00

BEANS.

Marrow, 100 lbs	4 70	@	4 90
Medium	3 60	@	3 70
Pea	3 10	@	3 65
Red Kidney	4 50	@	5 50
White Kidney	5 50	@	5 55
Yellow Eye	5 25	@	5 50
Lima, California	7 50	@	7 55

VEGETABLES.

Potatoes in considerably increased supply and 50 to 75 cents per barrel lower, $3 being the top for best Long Island. Onion market dull. Choice Jersey corn brings $2 or more per 100, small or poorly filled ears $1 to 75 cents. Cabbage plentiful and mainly low. The recent disastrous prices of lettuce have slackened shipments, so that there has been some price improvement. Peas and string beans very low.

Potatoes—Jersey, bbl	2 25	@	2 50
Long Island, bbl	2 50	@	3 00
Sweet Potatoes, bu	40	@	1 15
Beets, 100 bunches	1 00	@	1 50
Carrots, 100 bunches	1 00	@	3 00
Cucumbers, bu	15	@	25
Corn, Jersey, 100	1 00	@	2 00
Cabbage, bbl	50	@	1 00
Lettuce, half-bbl. basket	25	@	60
Onions—Southern, New, bu	1 50	@	1 75
Nearby, bu	1 50	@	2 00
Okra, bu	1 00	@	2 00
Peppers, Jersey, bu	1 25	@	1 50
Peas, bu	50	@	1 50
Radishes, 100 bunches	1 00	@	2 00
String Beans, bu	10	@	30
Squash, New, bu	1 00	@	2 00
Egg Plants, Southern, bu	50	@	1 25
Tomatoes, Jersey Acme, box	2 00	@	2 50
Jersey, stone	1 50	@	2 00
Del. and Md., 6-bkt. crate	75	@	1 25

LIVE POULTRY.

Broilers, lb	21	@	24
Fowls	16½	@	17
Roosters	12	@	12¼
Ducks	15	@	18
Geese	10	@	12

DRESSED POULTRY.

Chickens choice broilers, lb	32	@	34
Squab broilers, pair	60	@	65
Broilers, common to good	20	@	25
Fowls	15	@	18
Ducks, Spring	14	@	16
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Prices are unchanged, but market is rather firm on better grades of large baled Timothy; lower qualities and small bales weak. Demand for straw light.

Hay, Timothy No. 1, ton	20 00	@	21 50
No. 2	17 00	@	18 00
No. 3	15 00	@	16 00
Clover mixed	14 00	@	18 00
Straw, Rye	14 00	@	14 50

LIVE STOCK.

Native Steers	6 75	@	9 50
Bulls	5 25	@	6 95
Cows	3 50	@	7 00
Calves, prime veal, 100 lbs	9 50	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	3 50	@	5 00
Lambs	7 50	@	9 50
Hogs	8 00	@	8 75

GRAIN.

Very heavy movements of Winter wheat are noted at interior markets. The record for receipts was broken in Chicago July 15, when 1,153 cars arrived, nearly 1,250,000 bushels. Prevailing prices at Chicago for No. 2 red wheat, were 78 to 79 cents, 10 to 15 cents under prices paid to farmers in Kansas.

Wheat, No. 1, Northern Spring	1 00	@	..
No. 2, Red	87½	@	..
No. 2, Hard Winter	89	@	..
Corn, as to quality, bush	78	@	97
Oats, as to weight, bush	42	@	44
Rye	65	@	67

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	32	@	34
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14

WOOL.

Ohio fine unwashed	27½	@	28
Quarter blood combing	27	@	27½
New York Fleeces	23	@	23½

*

The Codfish aristocracy, long before the public, will now have to give way in prominence to the halibut trust, which has been indicted by the Government under the Sherman anti-trust law.

*

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A good, steady man for general farm work; must be able to drive a team; a steady job; $30 per month and board. M. N. ADAMS, Livonia, N. Y.

FARMER'S DAUGHTER, with hospital experience, wishes position as nurse or companion; physician's reference; please state compensation. LOCK BOX 75, Hanover, York Co., Pa.

POSITION WANTED BY YOUNG MAN as farm hand; agricultural and mechanical experience; wishes $20 per month. FRANK S. POSTMA, care of Nicholas Burenga, Grove St., Ridgewood, N. J.

WANTED—Single man for general farm work; must be strictly sober and honest; good milker; wages $25, board and washing; send reference in first letter. H. H. MEADER, Supt., Oakhurst Farm, Millerton, N. Y.

WANTED — Married man, with two strong, husky sons, for dairy and general farm work; no boozers or smokers need apply; give references and wages wanted; steady job for good parties. H. E. HULSHORT, Farmingdale, N. J.

FARM MANAGER'S POSITION WANTED by married American with long experience in all branches and handling men; place desired with modern equipment, progressive methods and intelligence required. E. HOWE, Southbridge, Mass.

WANTED—Board on farm for small family. Address "BOARD," care R. N.-Y., 333 West 30th St., New York.

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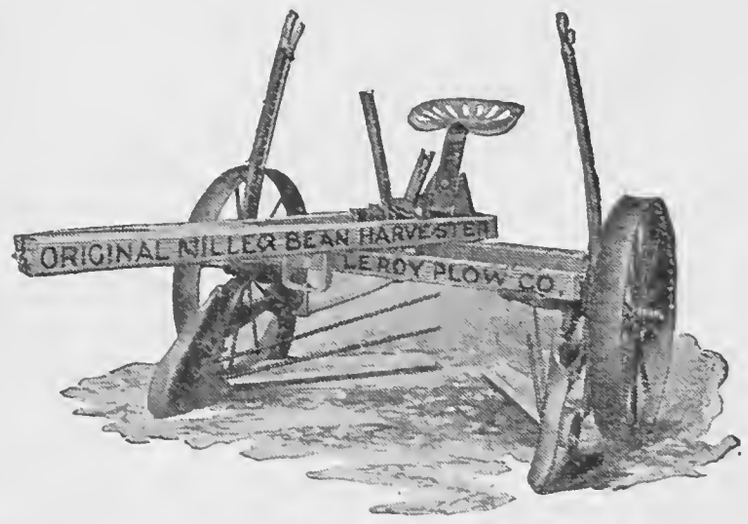

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HUMOROUS

"Is a ventriloqu[illegible] person who throws his voice?" [illegible]d Mr. Lobrow. "So to speak." "W[illegible]e've got one next door. She hasn't [illegible]n it yet, but she is giving it a ter[illegible] struggle."—Washington Star.

"In choosing his men," said the Sabbath school superintendent, "Gideon did not select those who laid aside their arms and thr[illegible]w themselves down to drink; he took those who watched with one eye and drank with the other."—Philadelphia Ledger.

"How are you going to explain your vote to the folks out home?" "I'm not going to explain," replied Senator Sorghum. "The people out my way are all fond of music. I'm going to have a rally and announce myself for a big speech. Then I'll hire a band to drown me out."—Washington Star.

"Well! Well!" said the farmer as he rushed to the gate, his hand extended and his face wreathed in smiles: "I'm glad to see you! Come right up on the porch and rest yourself in the rocker." "Thank you," replied the visitor. "I came around to see about Summer board." "Summer board! Why didn't you say so quick instead o' raisin' my hopes! I thought mebbe you was lookin' for work."—Washington Star.

Billy (who is putting in a long Sunday afternoon): "Let's play auto with the chairs, mummy, and you take a ride with me!" Mother (with an eye to the uplift): "I guess not, dear; I really don't approve of pleasure rides on Sunday." Billy (after a moment of earnest thought): "But this isn't a pleasure ride. We'll play I'm taking you to see a moving picture show of scenes from the Bible."—Life.

A presbyterian preacher stopped at a Kentucky mountain cabin one day, where a gaunt, ragged woman leaned on the dilapidated gate. "Where is your husband today?" inquired the preacher. "Out huntin'." "Any Presbyterians around here?" "Wal, now, thet I don't know, stranger, but the hide of every kind of animal thet my husband ever killed is tacked up yander on the back of the smoke-house. You might step thar an' look."—Credit Lost.

This open letter "To John," in the "personal" column of a weekly paper: "To John—If you'll come back home, John, I promise not to run for office—if I git a chanst—and not to search your pockets when you come home, as usual, in your cups; neither to find fault with you more'n what's necessary for your own good, and not to throw up to you any more 'bout me havin' to pay for the marriage license; and not to tell you my family is better'n your'n—though Lord knows it IS. So I close, hoping these few lines will find you on your way home, where any man with a grain o' common sense orter be."—Atlanta Constitution.

The second-grade teacher was a young, timid girl. Among her new class was Tommy, who, for naughty deeds, had been many times spanked by his first-grade teacher. "Send him to me any time you want him spanked," said the latter, "I can manage him.' One morning about a week later, Tommy appeared at the first-grade teacher's door. She dropped her work, seized him by the arm, dragged him to the dressing-room, turned him over her knee and did her duty. When she had finished she said: "Well, Tommy, what have you to say?" "Please, Miss, my teacher wants the scissors."—National Monthly.

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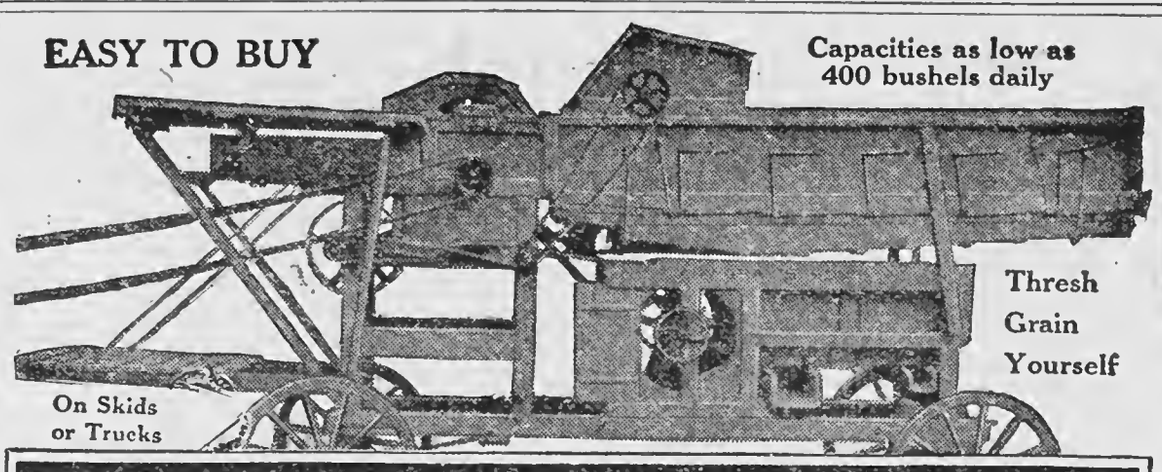
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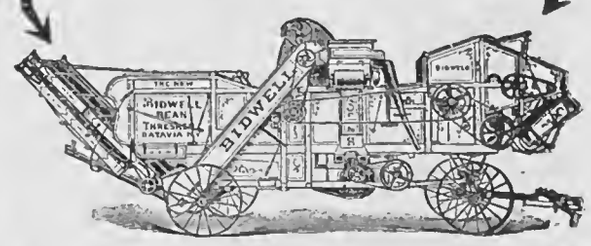

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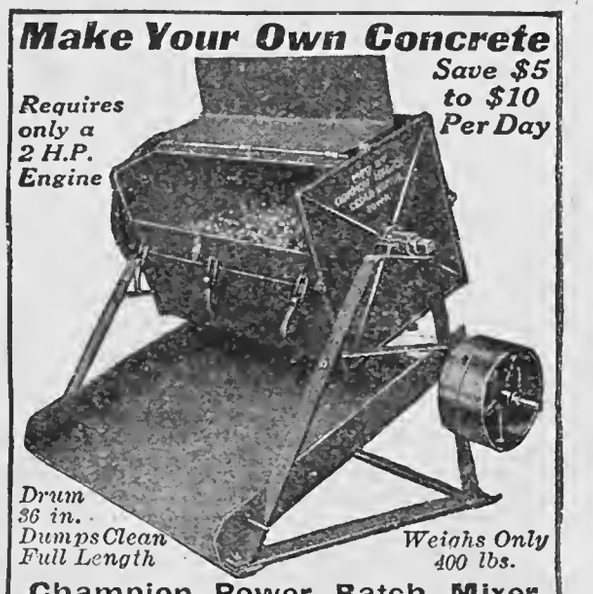
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII. No. 4266. NEW YORK, AUGUST 1, 1914. WEEKLY $1.00 PER YEAR.

COST OF APPLE PRODUCTION.

Spraying and Labor.

WILL some of your experts tell us the cost of growing an apple orchard to bearing age; cost of handling the crop and other figures regarding labor, tenant system, etc. We would like figures from various parts of the country if possible.

B. M.

VARIATIONS IN COST.—Of course, your correspondent understands that the cost of apple production, including all the items of labor, as well as material costs, varies according to conditions. The chief factors influencing cost are: The efficiency of labor, the rate per hour, the size of the farm and the orchard, and the relationship of the orchard enterprise to other farm enterprises, whether the orchard is cultivated or kept in sod, the number of sprayings, the age and size of the trees, etc. With these variations in cost in mind, I will give some actual figures of costs on one orchard. The inquirer must understand that these costs may not be his costs; they will simply give him an idea of what these costs are likely to be under normal conditions in a well-cared-for old orchard in Western New York.

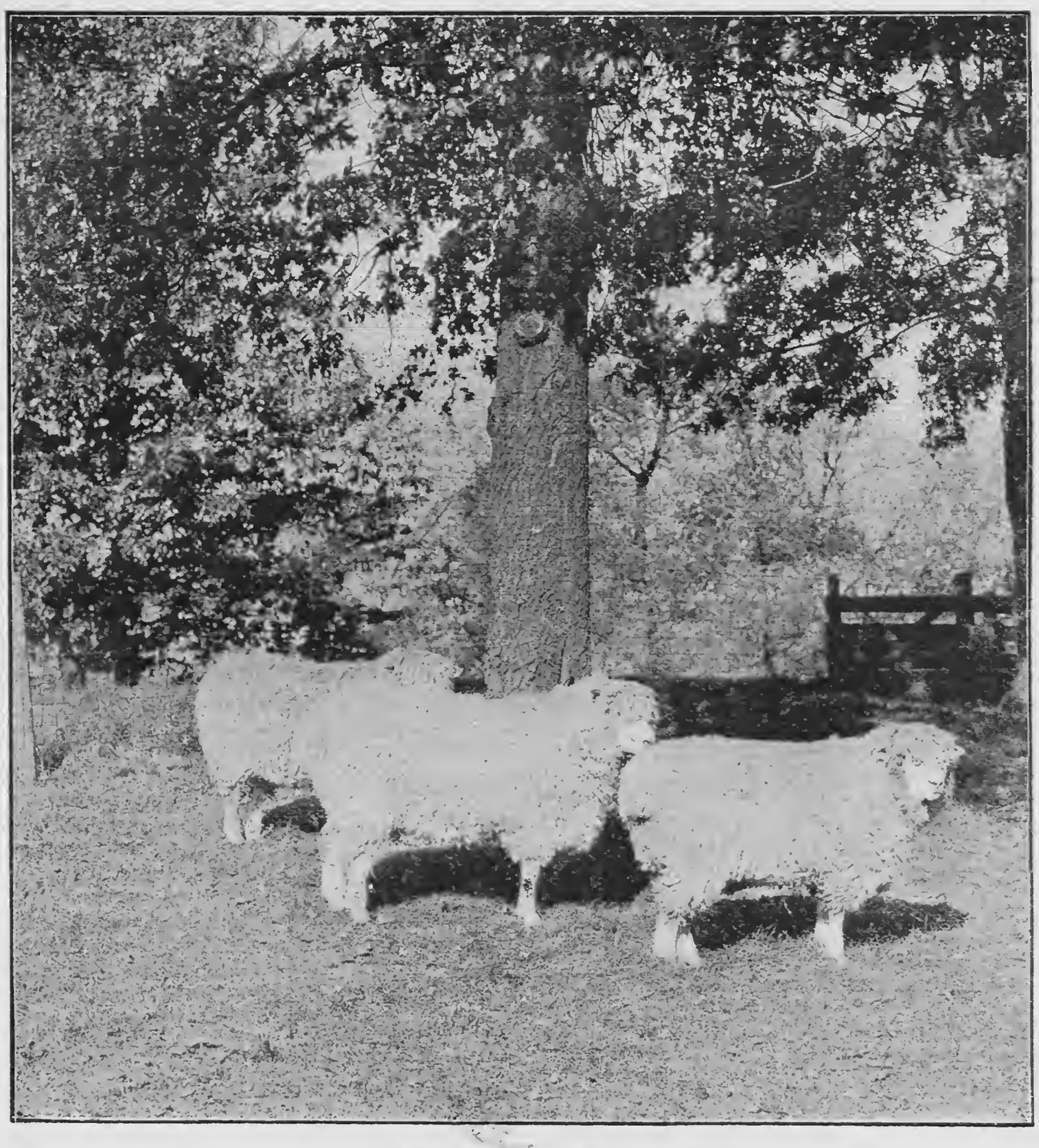
FIVE YEARS' RECORDS.—Table on next page shows five years of very accurate cost records on a six-acre apple orchard containing 230 trees. Part of this orchard is 40 years old and the rest nearly 60. The varieties are: Baldwin, Tompkins County King, and Twenty-Ounce. Some pruning is done every year. The orchard is plowed and thoroughly cultivated three years out of four. A cover crop of clover and buckwheat is used about every other year. It is usually sprayed with a power sprayer three times during the season. About one-quarter of the orchard is manured each year. The labor costs are given in man and horse hours and fractions for each operation. Man labor costs us 20 cents an hour, horse labor 15 cents an hour.

In answer to your request for information as to the variation in yield and price of fruit over a period of years, I give you figures for 12 years on the above orchard in barrel yield per acre and prices per barrel. In the total price per barrel is included value of drop apples and culls. This is also given on the following page, with the other table referred to.

CONTRACTS FOR RENTING.—The inquirer will readily understand that the terms of renting orchards must necessarily be based on the relationship of the orchard to the whole farm enterprise, and on the age, variety and condition of the trees. In my own case the orchards, which cover 25 acres in all, and which are of various ages, are a part of the general farm enterprise which totals 105 acres in area. After trying several less liberal leases, we have settled down on one which is quite satisfactory to both tenant and owner. In this lease the owner furnishes all the capital, including horses and machinery, and one-half of the materials, such as spraying material and fertilizers. The tenant furnishes all the labor (except such part of the horse labor costs, as are due to interest, depreciation, one-half the feed, etc.), and one-half of the cost of materials. As you will note from the above figures, the total labor costs of producing apples amount to about one-half of the entire cost. This total labor cost, however, includes a part of the horse labor cost which the owner bears. This just about offsets the material costs contributed by the tenant. Assuming that capital and labor are factors of approximately equal importance in apple production, and that they should, therefore, receive the same returns, the above form of lease would seem to be a satisfactory one. In effect, this lease provides for the deduction of all the expenses (including interest) from the returns from the orchard, and dividing the net profits equally.

VALUE OF ORCHARDS.—There are three ways of determining the value of an orchard: (1) What it can be sold for. (2) What it cost to grow the orchard. (3) The amount of money on which the orchard will return a fair rate of interest—six to 10 per cent. I do not believe that any one of these methods can be used exclusively; a combination of them must be employed. What the orchard can be sold for is really the best measure of its true worth, but if the buyer is a wise man he will base his offer for the orchard on the probable returns from the orchard over its probable lifetime. If the seller is a wise man he will fix the selling price at least as high as the cost of the orchard. Somewhere between these two factors the true value lies. Practically an apple orchard of good varieties, *sound trees in their prime,* is worth not less than $300 an acre, and may be worth as high as $800 or possibly $1,000 an acre. In Western New York $500 an acre is a fair valuation for a good orchard. The orchard on which the figures are given above is valued at $275 an acre. Many of the trees are missing and about one-half of them have passed their prime.

SPRAYING MACHINERY.—A 2½ to a 3½ horse-power engine is, in my opinion, the best size for spraying. The smaller size is sufficient to give the power needed, but not sufficient to do many other kinds of farm work for which it is desirable to use an engine. Hence we use a 3½ horse-power engine. The objection to this heavier engine is its weight, which sometimes makes it difficult to get on the land early in the Spring. This is more apt to be a difficulty in spraying peach orchards than apple orchards, however. Personally I like the "outside packed" style of pump, better than others. This is only a personal opinion, however, and not worth much at that, because I have not personally used the other kind. I think there is no doubt but



A BUNCH OF PRIZE-WINNING COTSWOLD SHEEP. FIG. 412.

what the simple swing dasher style of agitator is the best. If properly made so as to go the whole length of the tank and operate close to the bottom, it is very effective.

TYPES OF NOZZLE.—The kind of nozzle to be used depends partly on the time and the purpose of the spraying. A coarser spray may be used with the first spraying on the dormant trees, because there are many branches as well as the trunks of the trees to be covered, and some force to get into all the crevices is desirable. For this work the Bordeaux type of nozzle is, in my opinion, the best. When it comes to spraying on the foliage, however, and particularly in spraying for fungus diseases, the finer spray is much more desirable. If the material is properly strained and the tank is kept closed, there is very little danger of worry and delay from clogging. If a tower is used, as it should be with high trees, the range of these mist sprays is not too limited.

Five Years Accurate Cost Records on a Six Acre Apple Orchard, 40 to 60 Years Old.

Labor.	Costs per acre.		
	Man hours.	Horse hours.	Value.*
Operation.			
Pruning	13.16		
Hauling out brush	5.54	4.01	
Spraying	9.94	7.80	
Plowing and fitting	4.22	8.33	
Cultivating	6.52	12.70	
Manuring	.66	1.32	
Cover cropping	.92	.61	
Picking	76.15		
Packing	29.73	3.41	
Marketing	15.66	29.75	
Miscellaneous	2.92	.78	
Totals	165.42	68.71	$13.39
MATERIALS.			
Cover crop seed			$1.57
Manure			2.89
Spray material			3.95
Packages†			28.06
Total			$36.47
FIXED CHARGES.			
Use of equipment			$6.42
Taxes			1.58
Interest			13.75
Overhead charges			6.07
Management			5.00
Total			$32.82
Grand total			$112.68

* Man hours 20 cents, horse hours 15 cents.
† Average yield 1909-1913, inclusive, 78 barrels; cost per barrel, $1.44.

Year.	Yield barrels per acre.	Price per barrel including culls.
1902	102.6	$1.96
1903	71.1	2.23
1904	51.5	1.78
1905	48.5	2.68
1906	52.6	2.55
1907	84.4	4.10
1908	96.2	2.32
1909	92.0	3.38
1910	54.6	3.03
1911	101.2	2.38
1912	68.8	2.21
1913	72.3	2.73
Average for 12 years	70.5	$2.61

TRUCK AND HOSE.—In most cases it is desirable to have the front wheels of the truck turn under the tank so that short turns can be made at the end of the rows. In practice we use an ordinary wagon truck, with the spraying tank mounted high enough so that the wheels turn under easily. We use one line of hose from the tower or top of the tank, and one line from the ground. A 3½ horse-power engine would carry a third line of hose, but I do not think this necessary or practicable in a small orchard on a general farm. We use batteries instead of magnetos. Where there are only a few trees, as 30 to 50, if labor is plentiful and capital scarce, a "one-horse one-man" spraying outfit might be practicable. For any proposition involving 150 trees or more, I do not think that such a small outfit would be practicable. It would increase rather than decrease the cost of spraying. Spraying is not as troublesome and expensive as your correspondent has been led to believe. Before a man has done any of this work, it looks difficult and expensive. When he really gets at the job, if he tackles it just as he would any other important and worth while piece of business, he will find that it can be handled just as easily.

M. C. BURRITT.

A GOOD HAYRACK.—Fig. 413 shows the arrangement of a hayrack used by Ernest Hoke, of New York. With this rack on the wagon and a good hay loader at work a load can be put on in 20 minutes. There can be no sliding off or tipping over when a rack of this kind is used.

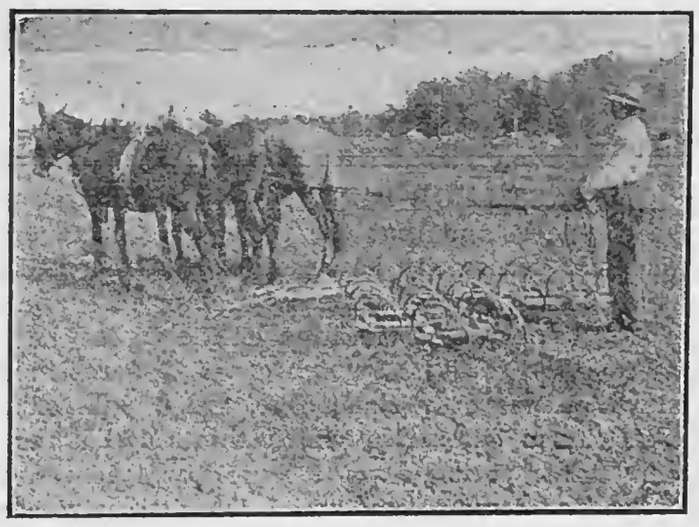
THE real test of farm management comes now when the crops are young, and a dozen things crowd at once.

FERTILIZING FOR A SECOND GRASS CROP.

I HEARD some time ago of a person up in Connecticut who was top-dressing his grass field after he had got his first crop, and by so doing obtained a very good second crop. I have had such very good success by the use of the nitrate of soda on my Timothy sod that I am tempted to try an experiment on my new grass field, where I just cut a very light crop owing to the dry weather. Since the recent rains the grass has revived wonderfully, and I have a notion of making an experiment by using a ton of fertilizer at the rate of say about 500 pounds to the acre. Have you had an experience along this line? If so, what has it been and, if not, what would you think of the idea? I don't think we half study the needs of the soil for the growing of our grass crops, especially in comparison with the way we study the needs for our potato crops, and after everything is said and done, don't we often get as large returns from a good field of grass as we do from many of the crops of potatoes?

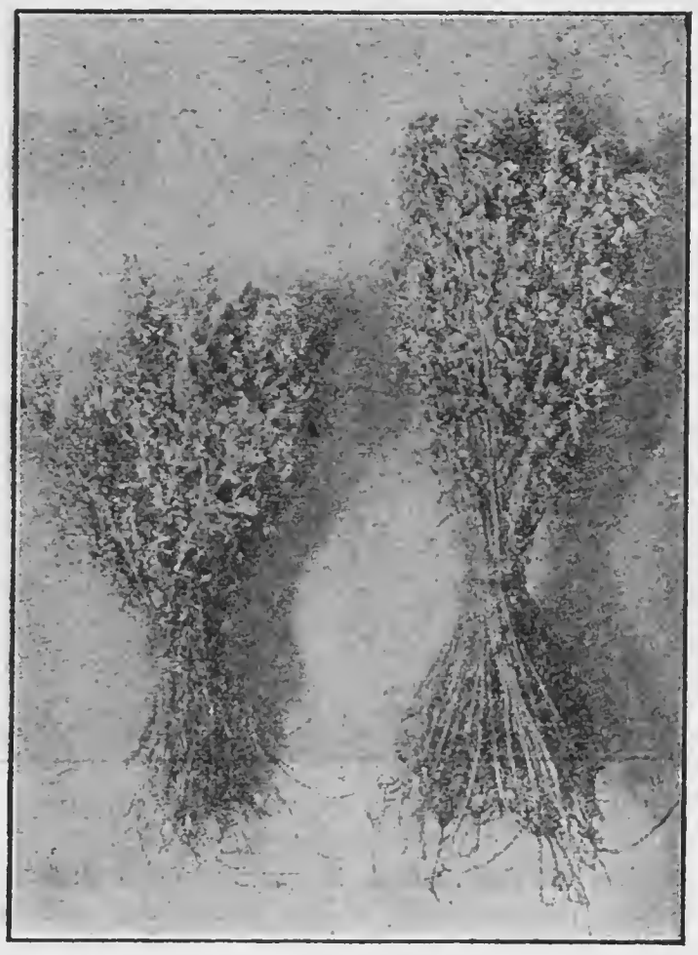
Grenloch, N. J. F. H. B.

Many experiments have been made with a top-dressing of nitrate of soda after the first cutting, in order to increase the second crop. The outcome



CULTIVATING AN ALFALFA FIELD. FIG. 413.

depends largely upon the season. It often happens that the grass is fertilized quite heavily in the early Spring with a mixture containing nitrogen, potash and phosphoric acid. There follows a dry April and May so that the grass crop is light. Then in July rains will start and continue for the Summer, as seems likely to be the case this year. In such a season and under these conditions the application of nitrate of soda alone will usually pay well. A quick growth of grass is started, and as potash and phosphoric acid were used freely in the Spring it is unnecessary to use more of these elements for the second crop. The hay grown by this use of nitrate of soda or sulphate of ammonia is usually of extra feeding value, and under the conditions here mentioned an application of nitrogen will pay well. It is a mistake, however, to use nitrate alone for such a crop, unless we are sure that the soil contains an abundance of potash and phosphoric acid. If there is any doubt whatever on that point, it would be far better to use more of a complete fertilizer containing all three elements of plant food. For this purpose it would be more economical to use all the nitrogen in soluble



UNLIMED AND LIMED ALFALFA. FIG. 414.

form, such as nitrate of soda or sulphate of ammonia, using acid phosphate and muriate of potash in addition. Under the conditions stated above such an application will undoubtedly pay, and this plan will be followed quite freely this year by a good many farmers who find their first crop greatly reduced by the drought. There is no question about the need of studying the soil conditions best adapted to grass culture. One of the first things to be understood in this connection is the fact that Timothy and clover must have neutral or alkaline soil conditions. Neither crop will do well in a soil that is acid or badly lacking in lime. In fact, thorough liming is the foundation to be laid in the production of such crops as Timothy, clover and Alfalfa. Red-top will make a fair growth on a soil that is quite acid, but Timothy must have an alkaline soil to do its best.

Another point to be observed in grass culture is the fact that the growth is made very rapidly, and the grass must therefore have a constant and available supply of nitrogen, which is the plant food element most responsible for growth. This means that the nitrogen should be supplied in a quickly available form, and not in organic forms, which require warm weather and considerable time to become available. On some of the famous English meadows the liquid manure from tanks or manure pits is sprinkled over the fields after the first cutting. This liquid contains nitrogen in a promptly available form, and such an application is not unlike the use of nitrate of soda or sulphate of ammonia, driving the grass into quick growth and giving a good crop of suitable hay. The soil also contains an abundance of both potash and phosphoric acid. A crop of grass forced into a rank and tender growth by nitrate of soda alone, and on a soil lacking in the other elements, would not be satisfactory either in its appearance or in its feeding quality.

QUESTIONS ABOUT MOON AND PHOSPHATE

IS it right to plant root crops by the old moon and top ground crops by the new moon? This is an old saying carried forward. I have never read anything about it in any paper. Does phosphate weaken the ground by regular use, so that you have to add more each year? All my crops are for garden purposes. Would like to use phosphate because it will not have so many weeds. H. S.

Wallkill, N. Y.

As to this moon proposition, it is right to plant root crops or top crops either when the soil is in good condition, and when danger of frost is past, whether the moon is old or young. We have frequently tried to explain this matter. So far as we can learn, there are no scientific facts to back up either side of the problem. We know some very good farmers who plant by the moon, either old or young, and they claim that this moon planting is responsible for their success. On the other hand there are just as good farmers who say there is nothing whatever to this moon planting. They put in their crops when they get the soil ready, regardless of the moon, and as they are just as good farmers, and get just as good results as the moon men, there seems to be no way of figuring the moon's influence. Personally we pay no attention whatever to the condition of the moon in planting, and we do not believe it has any influence upon the growth of crops. It has often been said that our scientific people ought to take this matter up and give it a test, but there are so many conditions connected with the soil and climate, and other particulars at the time of planting, that we can see no way in which the influence of the moon could be fairly compared. For instance, if one phase of the moon gave a soil plenty of moisture, while the other phase of the moon gave it a very dry time, there would be no way of making a fair comparison, while another year might see the exact reverse of these weather conditions.

We hardly know what you mean by suggesting that a phosphate will "weaken the ground." We presume by phosphate you mean a complete fertilizer containing nitrogen phosphoric acid, and potash. This would not weaken the ground by regular use, since it supplies the plant food which your crops require, and if the soil is poor and lacking in available plant food, it will be necessary to add something of the kind each year if you expect to produce crops. On some kinds of soils the use of a fertilizer alone year after year will not give the best of results, since the fertilizer does not add any organic matter or humus to the soil, and this humus is necessary in order to keep the soil in good condition. Where you use stable manure this organic matter is added, but the fertilizer used alone with the crops taken away year after year, and nothing added in the way of organic matter, would reduce the ability of that soil to hold moisture, or give its best returns. This would not mean that the phosphate had weakened the soil at all. It would mean that the soil had grown hard, and dried out too fast, so that the plants could not get water or a good chance to grow. If you use fertilizer, year after year, and also grow some "cover crops" like rye or clover, and plow it under, the soil will not "weaken" but will be kept up as well as with stable manure.

A PERMANENT TIMOTHY MEADOW.

The "Clark" System Once More.

PART II.

THE SEED BED.—If you can stay by this work to the end, September 1 will find your field as fine and loose as an ash bed. It will be full of pieces of dead roots where the disks have chopped them up. In some cases, particularly where quack grass abounds, it is necessary to rake off these roots to clear the land. We are so friendly to cover crops and humus that on general principles we would use such roots for manure or mulch. Quack grass has so many lives, however, that it will be safer to burn its roots. Not one field in 50 has a true grade or a smooth surface. There are little hollows or depressions in which the water will stand, and Timothy is neither a swimmer nor a duck. If you leave these hollows the grass will be killed out and trash will crowd in. During the last of August Clark went over his fields with a light board scraper filling in the little hollows. Then he used a light straight-tooth harrow to rake over the surface and level it for the seed. The Acme harrow, followed by a plank or brush drag, will do this work well so that by early September the ground is fit for the seed.

MODIFICATIONS.—That was the Clark method of preparing land for seeding. It did the business and the fields thus prepared gave from four to six tons of hay to the acre and kept this yield up, with good feeding for eight or 10 years! Few farmers can afford to fit land in this way, and not many would have the faith to stay by the work with bull-dog tenacity until the soil was fit. The best that most of us can do is to come as near to it as we can. A farmer with only one team or three horses will find a dozen jobs for them in late Summer, at haying, cultivating, or marketing crops and he cannot hope to work any large area 15 or 20 times over. Our experience is that he would be better off to take half the usual area and work it twice as much before seeding as he could the entire space. There can be no question about the effect of this intense culture on the yield of grass. Notice what happens when you sow grass seed on an onion or a potato field. These crops are well fed and we are obliged to keep them clean in order to obtain a yield. The grass which follows always shows the result of this feeding and cultivation. We have found that one disking or plowing followed by five or six workings with spring-tooth or Cutaway gives us a good seed bed. We would rather use the Cutaway to begin with but if it is not possible to carry out the Clark plan, plow deep and cover the furrows well and work all that is possible with a Cutaway going as deep into the ground as the horses can handle the job.

WHITE LEGHORNS "EATING OUT OF YOUR HAND." FIG. 415.

USE OF LIME.—At the time Clark made his experiments the modern facts regarding lime were not popularly known. Clark advocated occasional dressings with lime on the grass sod. We now understand that this is not good practice. In many cases the lime does not work down into the soil. We have known it to form a crust or mortar near the surface—out of the reach of the grass roots. The proper time for liming is when the soil is first turned over. The thorough working by the harrow mixes the lime all through the upper soil. That is just what is needed so that the upper soil may all be acted upon. Slaked lime is better for this purpose than ground limestone, for it gives a quicker action and will help to destroy the old weeds and grass which we are trying to clean out. Timothy must have a neutral or alkaline soil in which to make a quick start and a rapid growth. Thus lime and available fertilizers should be used at seeding. In trying to start a permanent meadow anywhere at the East we should assume that the soil needs lime (the crop does anywhere) and use at least one ton of slaked lime to the acre after plowing or disking the land.

FEEDING THE CROP.—Thus far we have tried to tell how to get the grass plants started so they will be as permanent as a peach orchard. Anyone who has grown peaches knows he may get the trees started if he works right but they will not keep on bearing year after year unless they are fed on plant food which they can take care of, and utilize at once. Consider how rapidly a crop of Timothy must grow. On April 15 in New England it is just turning a dark green where the snow lingered, yet by July 4 it should be cut for hay. This means lively growing and the plant food should be like a whip to drive it along. You may plow under big chunks of cow manure and plant corn expecting a fair crop. The corn does not make its best growth until July and August, at which time the soil is warm and the manure becomes available. The grass must make its rapid growth while the soil is cooler and soluble nitrogen is not being produced. Clark did not use stable manure. He said it brought in too many weed seeds, and unless it was well rotted and fine it was not the stuff to feed a Spring growing crop.

CHEMICAL FERTILIZERS.—Probably no crop is like grass in responding quickly to the right chemicals, and more slowly to the wrong kind. The right kind are quickly available, with a large proportion of nitrogen. One of the best grass growers we know of uses equal parts of nitrate of soda, fine ground bone and muriate of potash. This makes a very strong mixture, and where it is used the grass simply has to grow. Clark used a commercial brand which is much like the following mixture: 400 pounds nitrate of soda, 1,200 pounds fine bone, 400 pounds muriate of potash. There are many different combinations of nitrate of soda, sulphate of ammonia, bone or acid phosphate and potash. The various top-dressers and grass mixtures are made up of these chemicals. The first principle of all is to have the nitrogen in a soluble form so as to force the grass from the start. It would be a mistake to feed this kind of grass on the theory of returning to the soil what the hay crop removes. You must add that much and more in order always to have a surplus of plant food in the soil. There will be little if any loss on a crop like grass, which keeps the soil constantly filled with long roots. Clark used about 800 pounds of his mixture at seeding; mixing the chemicals thoroughly in before the seed was scattered. Thereafter he used 600 or more per acre in the Spring—which is the proper time for fertilizing grass. In some cases when the latter part of the Summer was wet another application was made after haying so as to force a heavy second crop of grass.

A RACK USED WITH A HAY LOADER. FIG. 416.

SEEDING.—Most farmers use grass seed with wheat or rye in the Fall or oats or barley in the Spring. They think the grass does better with a "nurse crop," and they need the grain. Such seeding is usually part of a rotation in which small grain finds a part, and where there is no desire to put down a permanent meadow. Such farmers expect one crop of wheat or rye, one of clover, and one of Timothy—then the soil is plowed for corn. What we are talking about now is a permanent meadow, where the grass will be cut eight or 10 years. We have such a meadow seeded on a modification of this Clark plan nine years ago, and still giving good crops of fair grass. Clark objected to the grain or "nurse" crop for several reasons.

LIME AND CULTIVATION FOR ALFALFA.

THE pictures shown on page 966 are taken from Bulletin 178, Kentucky Experiment Station at Lexington. A thorough study of the needs of the Alfalfa plant for Kentucky soils was made to give the basis for the figures shown in this bulletin. The picture, Fig. 414, shows the difference in the growth and appearance of Alfalfa on soil that was thoroughly limed and soil of much the same character which was not treated with lime. As a general proposition the use of ground limestone gave an increase of 3,220 pounds of Alfalfa in four cuttings. It was also noticed that on unlimed parts of the field the wheat growth was much heavier. The hay from the first cutting where the lime was not used was nearly half weeds. It was found that four tons of ground limestone per acre was the most profitable application for Alfalfa on this soil. The point to be made from this experiment is the fact that Alfalfa is a lime loving plant and cannot be expected to give a good account of itself except upon a natural lime soil or where heavy applications of lime are made. These facts would indicate that Alfalfa may not be the most profitable crop in many sections where soil is deficient in lime and where the lime must be hauled long distances and thus sold at a high price.

The other picture shows a device used for cultivating Alfalfa. This work is done on the farm of W. P. Givens, a well-known Kentucky farmer, who grows 100 acres of Alfalfa. Mr. Givens has been so successful with the Alfalfa that he finds it more profitable than tobacco, and has given up the latter crop. Immediately after each cutting Mr. Givens cultivates the Alfalfa soil with a spring-tooth harrow such as is shown in the picture. The teeth of this harrow are filed down to a sharp point. Thus it scratches and tears up the ground until, as Mr. Givens says, "it looks almost like a cornfield prepared for planting." The Alfalfa is not injured, however, by this treatment, but it comes up afresh and makes a new and better crop to pay for the cultivation.

SHALL WE PLOW THE SOY BEANS UNDER?

WE have two acres drilled to cowpeas, and two to Soy beans, side by side, to be plowed this Fall for raspberries, to be set next Spring. We wish to know whether lime should be added this Fall or next Spring, and how much would be best to use? C. L. A.

Ohio.

Unless there is some special reason for doing so we would not plow this Fall. In the case of the Soy beans we should sow rye and turnips in the Soy beans the same as in corn. Cultivate the seed in and let them alone. They will die down at frost and during the Winter mat on the ground. Some little manurial value may be lost by not plowing under, but not more than the cost of plowing, while the rye and turnips will more than make it up. If the cow peas are in drills, we would do the same with them. If they are broadcast, scatter the rye and turnips right among the vines while the ground is wet after the rain. In the Spring we would plow the dead vines and turnips and the living rye and use half a ton of ground limestone per acre. The raspberries do not respond freely to lime and we would not use slaked lime in preparing for them. We imagine your soil needs potash as well as phosphoric acid. We should use 400 pounds of acid phosphate and 125 pounds sulphate of potash per acre. The best time to use these chemicals is in late Summer—after picking—during late cultivation. At this time the plants are forming their fruit buds for the next crop.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Poisoning Army Worms.

THIS is the "bait" suggested by the Department of Agriculture for killing the army worm:

If the worms are already in the field the following mixture which will attract the worms and destroy them should be spread about. One pound of paris green (poisonous); 50 pounds of wheat bran; juice of one-half dozen oranges. Bring this mixture to a stiff dough by the use of dilute molasses and scatter it amongst the worms. Care should be taken to keep this dough from children or domestic animals.

Preventing Ivy Poisoning.

THE following treatment for poison ivy is, I think original with me. The poisonous principle is a volatile oil, hence aqueous liquids do not remove it, and alcohol only imperfectly. The following treatment is preventive, if taken in time. Take a bit of absorbent cotton, dip in common commercial ether, and brush over the affected place. Rub thoroughly, but with little pressure, repeat the process, using more pressure. I am positive that there will be no symptoms of poisoning. The reason is that ether is the best solvent we have for oils; and it removes the poisonous oil, obviating the trouble before it is beyond the itching stage. After removing the poison with the ether, any of the usual remedies will be much more efficacious. Personally I find a saturated solution of lead acetate (sugar of lead) in 60 per cent. to 70 per cent. alcohol gives the best results.

New York. IRA ULMAN, M. D.

Applying Commercial Fertilizer.

I WISH to try a little commercial fertilizer this season, plowing up a poor Alfalfa stand which was nicely topdressed last Fall, and am thinking after I finish planting I can sow broadcast some bone meal or dried blood, acid phosphate, and sulphate of potash and thoroughly harrow it in and get good results. I have never used any common fertilizer.

Wisconsin. F. R. C.

On our eastern farms, where chemicals are freely used, and where the soil does not contain so much organic matter, the usual advice would be to use one part dried blood, three parts fine ground bone and one part sulphate of potash—all by weight. This would surely give good results on late planted potatoes where a clover sod was turned under. Many farmers would feel that the dried blood was not needed, since the sod supplies a large quantity of organic nitrogen, yet the best farmers would probably use it in order to insure the crop. Where the manured Alfalfa sod has been plowed under there ought to be enough organic nitrogen to feed a heavy crop of late potatoes, and the theory would be to furnish potash and phosporic acid in abundance. This would be done by the bone and potash alone. As an experiment we should like to see the dried blood added for an acre or so to see if extra organic nitrogen would give results.

Bisulphide of Carbon for Squash Borer.

IS bisulphide of carbon an absolutely sure preventive of the squash vine borer? I planted some cucumber seed a month ago, and the vines are now about six inches high and beginning to spread. Would it be too late to apply some bisulphide of carbon? Ho close to the vines should it be put, and how much to each hill? Would it have any injurious effect on the vines?

Cleveland, O. H. N.

Bisulphide of carbon will exterminate any borers present in the soil around the vines, and in most cases those that have not buried themselves too deply in the vine stems, but the bisulphide being of an extremely volatile nature, it is effective for only a short period after application, and is therefore in no wise a preventive against the attack of a later brood of the borers. The bisulphide will not injure the plants in moderate applications; about a teaspoonful applied to each hill at each application will be sufficient. Take a broom handle or similar stick, and make a hole about four inches deep at one side of the hill two or three inches away from the plants, into which pour a measured teaspoonful of the bisulphide and immediately fill the hole with damp earth. In a few minutes the gas will penetrate all through the soil for some distance in every direction, and kill every insect with which it comes in contact. The application may be repeated in about a week or 10 days if it is thought necessary. Bisulphide is highly explosive, and great care must be taken when handling it that fire does not come in contact with it, or a serious accident might occur. K.

Blighted Cucumbers.

MY pickle plants are all dying. They seem to wither up and turn back from the root. What is it?

Englishtown, N. J. MRS. C. H. R.

Blight, mildew and stem borers are the three worst destructive agents the grower of cucumbers has to contend with, either one of which might be responsible for the condition of these plants, owing to the great amount of rain and cloudy weather which has prevailed all along the Jersey coast section for the past three weeks. I am strongly of the opinion these vines have an attack of mildew, but whatever the cause may be, whether mildew, blight or stem-borer, the trouble will be of considerable difficulty to combat successfully. Plants that have been attacked with mildew or blight are usually beyond recovery in a few hours after it is first noticeable, and are beyond the reach of remedial agents. All infected plants should be pulled up and destroyed, and as a preventive from further spread of the disease the remaining plants should be thoroughly sprayed every 10 days with Bordeaux, 3-6-50 formula, which can be purchased from dealers in insecticides and fungicides.

The stem-borer is not nearly as destructive as the mildew or blight, and may be combatted with success by soaking the ground around the stems of the plants thoroughly with a strong tea made from tobacco stems. This should be applied every week or ten days. Bisulphide of carbon may also be employed for the purpose, with a broomstick. Make a hole near the plants about four inches deep, into which pour a small teaspoonful of the bisulphide, and immediately cover up with damp soil. This quantity will be sufficient for each hill, and may be applied once in 10 days without injury to the plants. Bisulphide of carbon is highly inflammable, and must not be brought in close proximity to fire, or a serious accident may occur. K.

Stocking Pond With Bass.

I HAVE a small lake that I would like to stock with bass. Can I get any bass from the State hatcheries? If so what course would I have to take to get them? F. W. W.

Chappaqua, N. Y.

If there are trout in your lake it will be a violation of State law to put bass there. If not, you can get bass from the New York State hatcheries on application to the Conservation Commission, or your Congressman might get them for you from the U. S. Bureau of Fisheries, but that would make the lake public water so far as fishing is concerned, and you could not prevent anyone from taking the fish so long as they did not land on the shore of the lake or its outlet. If the lake or its outlet or inlet has been stocked with fish by the State since April 17, 1896, it is public water. You should write to the Conservation Commission for a copy of the Game Laws, and read the part beginning with Section 360, in regard to private parks.

I cannot tell from your letter which kind of bass would do well in your lake. The large-mouth is the better pond fish, but the small-mouth sometimes does well in spring ponds with stony or gravelly bottom. A lake well adapted to small-mouth bass would be likely to be fitted for trout, and I should advise planting them. A. C. W.

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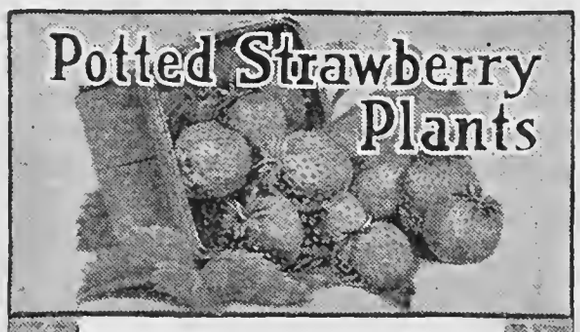

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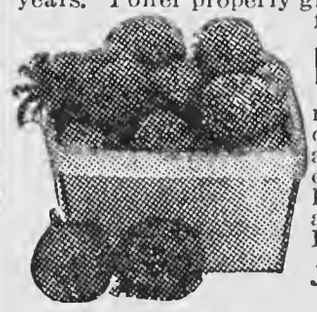

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Farm Engineering.

Foul Water.

COULD you advise what can be done as to the following? We have a dug well about 30-32 feet deep, in which we have a pump. Each year about this time the water seems to become contaminated; at any rate it develops a very bad, foul taste. Could you suggest what can be done to remedy that? What can be done to purify, etc? J. S.
New York.

It is possible that the fertilizing of the fields at the Spring time of year is responsible for the contamination of your well, particularly if the well is not walled up and plastered so as to positively prevent any water getting into the well without sinking through 20 feet of soil. Even then, if the fields or your barnyard are above the well or near to the well, the water may become contaminated. I would suggest that you send a sample to the Agricultural College at Ithaca for analysis. R. P. C.

A Cistern Filter.

I WISH to secure information in regard to the construction of a cheap cistern filter. Can you give me any assistance? G. M. T.
Monroe, Me.

The cheapest and best cistern filters are sand filters, described frequently in THE R. N.-Y. The whole object is to cause the water to sink through clean, fine sand. Usually, the bottom layer in the box or barrel used for a container, is six inches of coarse gravel, then a layer of lump charcoal about two or three inches thick, then a four-inch layer of fine gravel, a similar layer of coarse sand, a second layer of finer sand and a top layer of still finer sand. The sand and gravel must be washed free from loam and dirt. Each layer is laid individually and packed before another layer is put on. No extremely fine sand should be used, and the filter should not be disturbed more than perhaps twice a year, when the top layer should be carefully scraped off and replaced by a layer of clean sand. The water should be caused to flow into the filter without great force so that the sand will not be disturbed. R. P. C.

Fixed Oils in Concrete.

WHAT about mixing "fixed oils" with concrete? Will it make waterproof walls and floors warmer or colder? Will such mixed cement on wire lath make a waterproof wall? Will it alter the rot-producing tendency on wood in contact with such? Ordinary concrete is said to rot wood. S. H. S.
Deposit, N. Y.

We have been unable to determine what is meant by your term "fixed" oils. Many soap or oil emulsions are added to cement to form a jelly in the pores, plugging them up. Surface coatings of paraffin diluted in gasoline or xylol are frequently used. The effect on floors as regards heat or cold is not appreciable. Of course, a damp floor would appear to be colder because of its greater heat-conducting power. Wood imbedded in concrete does not, but it is usually dry rot. I should expect any waterproofing might increase this tendency slightly. R. P. C.

Raising Water With Ram.

I WISH to use a ram in a spring for half-inch pipe, 500 feet from house to spring, a three-foot fall. I would like to raise the water 15 feet upstairs for a bath room. W. H. R.
Tyler, Pa.

You can use a ram with a fall of three feet and readily raise the water to a height of 15 feet with even a small ram. A No. 4 standard ram will require three or four gallons a minute from the spring, and will deliver to a storage tank placed, say, 20 feet high, about 20 gallons per hour. The pipe from spring to ram should be 25 feet long (at least) and 1¼-inch diameter. The pipe from ram to tank can be ½-inch. The ram will cost about $7.50. The pipe (galvanized) will cost about 10 cents per foot for the large and five cents per foot for the small size.

The ram will work constantly day and night as long as there is a flow of water, so a storage tank will be needed. The water can flow from the storage tank to the house faucets by gravity. Place the ram in a pit a few feet deep and 25 or 30 feet from the spring. Lay a tile drain from the pit to take off the waste water thrown out by the ram. R. P. C.

Porch of Cement and Cobblestones.

WE intend to build a new porch 22 feet long, turning at corner and running 16 feet to side entrance; porch as planned to be eight feet wide and at least seven eight-foot columns 10 inches in diameter, which cost us about $3 each. Cobblestones are very plentiful with us. We wondered if we could not build a wall across front of porch using stones and cement, then build up from top of wall the columns of cobble and cement. Which would be cheaper? How much cement is required? Would eight feet wide be all right, or would you make it 10 feet? Would you use cement floor or matched flooring? We do most of the work ourselves. S.
Chenango Co., N. Y.

The wood floor will suit you better, and the cost will not greatly exceed the cement, if it exceeds it at all. The cobblestone-cement column would be very attractive and undoubtedly cheaper—how much cheaper it is not possible for us to figure. Eight feet is a good width. The extra two feet are not worth the extra cost. R. P. C.

CROPS

In a recent electrical storm (July 10-11), a large number of acres of corn, potatoes and buckwheat were badly cut up with the hail. In the bottom lands the large creeks were overflowing their banks, covering with gravel and sand crops of all kinds. This will make a shortage in this section. Otherwise everything will be about 30 per cent. better than last year. A. W. L.
Richmondville, N. Y.

The ground is very dry; rain is very much needed. Farmers have finished sowing buckwheat, and are now busy haying. Corn, potatoes and oats are looking well. The bulk of the hay crop is light; the average run of old meadows will cut only a little over half as much as in years past. New seeded meadows are fair. Farms are in good demand in the vicinity of Chautauqua Lake, a great many have been disposed of the past year.
Mayville, N. Y. P. S. S.

I note in your issue of July 11 that the peach crop is "spotted." The little spot around this town is full of peaches, the trees already bending nearly to the ground, and as there have already been sold 400,000 half-bushel peach baskets, prospects are that there will be nearly 700 cars shipped from this station. Room on the trees being limited, many double peaches have been formed. We need help to pick and pack this fruit, and most of all to reach as many consumers as possible. A. L. T.
Smithburg, Md.

June 29.—Pastures are better than in several years at this season, and showers are frequent so will probably continue good. Milk, which is the main money product in this section, is 10 cents per can of 85 pounds below the price of a year ago. The Holstein is kept almost exclusively, many purebred; 90 per cent. of the farmers using purebred sires. One sale has just been made by a neighbor of five cows and six yearling purebreds, for $28. Many cows, both pure and grade, are bought here and shipped West. There is great interest in Holsteins here, one boy of 19 years having a four-year-old grade giving 97 pounds a day, last January. The soil is limestone and much Alfalfa is grown, the first cutting being well taken care of now, a heavy yield, but not quite so good as last year, some raising nothing else. Oats and corn are looking fine. Prospects for apples are poor, worms of different kinds injuring the trees; small fruit plentiful. J. C.
Mannsville, N. Y.

July 13.—We are having a dry Summer here in Hillsdale Co., Mich. Our early potatoes are very small and few in a hill. I planted one acre, and a larger or a finer growth of vines I never saw, but no potatoes. They were on heavy gravel land, used for a hog lot for ten years, and very rich. They are Early Rose, very free from weeds or bugs. The ground is fine and loose and seems to be moist enough. Our oat crop is short straw, and thin on the ground. Hay is about one-half crop. Small fruits plentiful; apples, peaches and pears scarce. The scale has killed most of our apple trees. People here have commenced spraying their orchards, and this seems to check the scale. Stock of all kinds here is high and scarce. The automobile craze has taken a large amount of money out of the country, so it bothers the farmers to get enough to do general business. Labor is high and hard to get on the farm at any price, especially in the house. Our young men are going to the cities and leaving the farm. What the result will be is hard to tell, but I believe that the boy who stays on the farm will win out. The best proof of this is our bank deposits, which are largely made by the farmers. The only remedy I know of is to use more brain and muscle and be a producer instead of a kicker. J. A. P.
Camden, Mich.

There will be practically no fruit through the Schoharie Valley, due to the cold weather that prevailed through the latter part of April and the first part of May. Hay is the lightest crop that can be recollected, due to the drought through April and May. Rain came May 20, which was too late for hay, as it was nearly matured. Farmers have had a very poor catch of seeding for the past seven dry years. Corn came up very uneven, but the late rains have benefited it as well as oats, buckwheat and garden truck. A very small acreage of rye has been sown the last few years on account of the dry seasons that prohibited plowing. Much of our soil is clay or a sand loam with a heavy clay subsoil. Many farmers have turned their attention to dairying; most of the milk is sold to Bordens. They received $1.10 for June for a 3.8 test, with a premium of 10 cents for good stable and milk conditions. The creameries formerly were mostly co-operative, but Bordens have succeeded in buying nearly all of them. The farmers at Schoharie have become dissatisfied with selling to Bordens because they formerly got their skim-milk back, and have to have better stables and milk conditions. They called a meeting July 8 for the purpose of erecting a co-operative creamery. There was a small attendance because many of the farmers are busy in harvest; nevertheless a meeting will be called soon. It is reported nearly all are in favor of a co-operative creamery. Cows are selling from $50 to $75; calves, nine cents, live; eggs, 20 cents; butter at local stores, 25 cents. There is a shortage of farm laborers this Summer; wages range from $20 to $30 with board. Schoharie County has been a great hop country for years, but the percentage of yards now is small, due to the blue mold that gets all that are not sprayed several times with brimstone. Prices prevailed around 38 cents last Fall and Winter. Farm machinery sales have been small this season, due to the early drought, which discouraged the farmers. The bee-keepers report a light crop of honey, due to very little clover and basswood, but the prospect for buckwheat looks good to them. Farm sales are scarce, prices from $20 to $90 per acre. Schoharie County is the only county in the State that has no city. The tax rate is high on account of the numerous bridges on the Schoharie River. A. B.

West Kansas on the Boom.

The abundant rainfall which extended over the western third of Kansas from April 1 to July 15, has brought about the biggest crops known in the history of the State. The soil throughout this section of the country is remarkable for its natural richness (no fertilizers ever being used), and its capacity for retaining all the moisture received for long periods of time. Rainfall since April 1 has averaged 2½ inches per week. The potato crop is immense and a large per cent. of the farm folks are enjoying vegetables from thrifty home gardens. There is a large acreage of feed—cane, milo, millet and kaffir. Late rains have assured a large yield of these. Wheat harvest is on, the average fields making 30 bushels per acre. But little rye was sown. Oats made 40 bushels. Thousands of acres of corn are in tassel and with one more rain in early August will go 50 bushels to the acre. P. C.
Jennings, Kansas.

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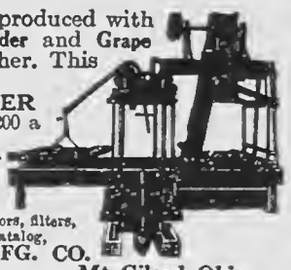

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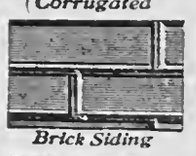

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It feeds the gas it makes—genuine Acetylene—direct to your kitchen range, and to stationary light fixtures, yielding handsome, brilliant, white light throughout your house and all the barns and outbuildings as well.

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EVENTS OF THE WEEK.

DOMESTIC.—Charles Purcell, who admits a long criminal record, was held in $10,000 bail July 16 for the grand jury by United States Commissioner Houghton, at New York, charged with using the mails to defraud. Purcell, alias Mason, was arrested at the Pennsylvania station by Post Office Inspectors O'Brien and Entemann, of Philadelphia, immediately after he had shaken hands with Albert W. Weblin and wife, who alighted from a train from Villanova, Penn. The Weblins, according to Inspectors O'Brien and Entemann, came over from England a few months ago to care for the estate of William Hepburn, of Villanova. They wanted another place, and soon after they had advertised in periodicals, they said, they got a letter from Purcell, signed "Charles Mason," asking them to care for the large estate of his sister in Westchester County, N. Y. They said he offered $80 a month and board, but as they would have to look out for considerable money he asked them to send him a $300 bond. The Weblins suspected something and got Purcell to send on his photograph. They took this to Philadelphia, and Inspectors O'Brien and Entemann arranged to trap Purcell. He was committed to the Tombs.

The fire on the Bronx side of the Harlem River, New York, July 16, destroyed the big plant of the New York Yacht, Engine and Launch Company, the coal pockets of the Olin J. Stephens Company, extending from 175th street to 177th street, and four yachts on the ways in the shipyard. The damage is placed at $200,000. Fifty horses in stables adjoining the burning buildings and boats moored in the shipyard were saved by the quick work of policemen.

After a pitched battle between several hundred striking coal miners and sympathizers and 100 guards stationed at the Prairie Creek mines of the Mammoth Vein Coal Company, near Fort Smith, Ark., July 17, which ended in the rout of the guards, tipples of three mines were destroyed by fire and dynamite. The property damage is estimated at $200,000.

Whipple, Sears & Ogden, representing minority stockholders, brought suit in the Supreme Court at Boston, July 17, for the appointment of a receiver to prosecute claims aggregating $206,000,000 against directors and estates of directors of the New York, New Haven and Hartford Railroad. It is set forth in the bill of complaint that these defendants, by authorizing the acquisition of the Boston and Maine Railroad and various trolley and steamship lines, wrongfully withdrew $162,000,000 from the New Haven company "ultra vires and for illegal purposes" and are therefore responsible for the return of this amonnt. It is further alleged that the losses resnlting from these aeqnisitions approximate $102,000,000, and that the railroad company is accordingly entitled to recover triple damages, or $306,000,000, under the terms of the Sherman anti-trust law.

After litigation that began 12 years ago in the New York Supreme Court and went to the United States Supreme Conrt, R. H. Macy & Co. entered judgment in the Snpreme Court July 17 for $140,000 against the American Publishers' Association and the American Booksellers' Association. The judgment was paid at once by certified check. The suit was the outgrowth of the defendants' rule which fixed the retail price of their productions. R. H. Macy & Co. resented the effort of the book pnblishers to compel them to adhere to this fixed price system.

The seventh case of bnbonic plague was annonnced at New Orleans July 17.

The premature explosion of a 4,800-ponnd dynamite charge at Cucaracha slide, Canal Zone, July 20, killed five workmen, four of them white, and severely injured one white man and seventeen negroes. The workmen were aboard the drill barge Teredo, which was wrecked and sank in the channel. The men had just completed charging the last of eight drill holes with 600 pounds of 60 per cent. dynamite, when the explosion occurred. The charge was to have removed the last stone in the channel cut.

Serious trouble occnrred at Vancouver, B. C., July 19-20, in the attempt to prevent Hindu immigrants from landing from the Japanese steamer Komogata Maru. The Vancouver authorities are determined to prevent the landing of any Asiatics.

FARM AND GARDEN.—Eight railroads were fined an aggregate of $30,000 by Judge Landis at Chicago, Jnly 17, for violation of the law providing that livestock in transit must be fed and watered at least once every 28 hours. The roads penalized were the Chicago, Rock Island & Pacific, the Chicago & Northwestern, the Chicago, Bnrlington & Quincy, the Illinois Central, the Baltimore & Ohio, the Chicago & Great Western, the Grand Trunk and the Chicago & Alton.

Third annual meeting of the Cumberland White-Egg Runner Club will be held September 1, at the Poultry Building, State Fair, Syracuse, N. Y. The first session will be held at 11 A. M. and another in the afternoon. Any new members will be welcomed and may then join. Initiation and first year's dues, $2. C. S. Valentine, Ridgewood, N. J., president.

Army worm invasion is reported from many different localities, including Philadelphia and Baltimore, as well as New York State. The grasshopper plagne is also severe in upper New York State.

An informal field meeting of the Northern Nut Growers' Assoeiation will be held on Tnesday, August 4, or on Friday, August 7, if Tuesday should be very inclement, at Merribrook Farm, the home of Dr. Robert T. Morris, Stamford, Connecticut. Methods of budding nut trees and Dr. Morris's new inareh method of grafting will be demonstrated, and the results of his past work in propagating and hybridizing nut trees may be seen.

The Delaware Valley Co-operation Assoeiation, which the farmers and milk producers of Belvidere, N. J., and vicinity have formed, is a very strong organization having at this time some 82 members. They have planned the ereetion of a modern sanitary ereamery in Belvidere, N. J. They are now waiting on some legal matters pertaining to their charter, when they will have the erection of their building pushed rapidly. The officers of the association are: A. Russell Paul, president; Levi C. Mackey, treasurer; Sam Fitts, secretary; Jay J. Hartung, W. A. Mackey, Henry Stahl, Geo. Hummer, viee-presidents; Albert Smith, Sheldon Bush, W. C. Hartung, Wm. Hess, Geo. R. Good and Erwin Butz are the directors. All of the officers have been very active in a reeent demand made for a better priee for their milk, whieh being refused by the Castanea Dairy Co., has awakened a feeling of greater activity among the producers. At the time they made their demand for a better price for their milk the creamery was paying them 2½c. per quart.

BUFFALO MARKETS.

ALL berries are plentiful, but raspberries are sometimes to be had as low as seven cents a quart, though that is their lowest regular wholesale quotation. Reds and creams are 10 to 13 cents. Cherries are also low, but they are so lean that the value is mostly small, quoted at five to nine eents a quart, with enrrants same, blackberries 10 cents and blueberries, not plenty, same. Plums, red and blue, retail at about a cent apieee. Currants are very plenty at 25 cents a basket or six cents a quart, gooseberries same. Currants are also rather small and not as attractive as they might be. Peaches are beginning to appear in quantity, though the big baskets are not here yet. They are qnoted at $1.50 to $2.50 per crate, coming chiefly from California. The quality is good for early specimens. There is no promise of nearby offerings. New apples have now about crowded old ones out, new Southern selling at 75 cents to $1.50 per hamper, reds selling for half more than greens. There is a good snpply of melons, bnt prices remain np, largest watermelons running as high as 40 cents and muskmelons $2 to $2.75 a crate. There is a variety of small muskmelons retailing at five cents each, of very good quality. Wax and green string beans are down to 50 to 65 cents a bushel, and lettuce, 20 cents a dozen. Some mammoth heads retail at five cents a head. Cucumbers are 15 to 50 cents a dozen, retailing at three for five cents, medium sizes. Cabbage continues at four to five cents a head at wholesale and homegrown onions are $1.20 a bushel; homegrown tomatoes, $2.25 a bushel; peppers, $1.50 per box. There is still a little celery at 20 to 35 cents a dozen. Beets are down to 10 to 15 cents a dozen bunches. Butter is not quoted above 50 cents, which is a cent up from a week ago. The retail price is somehow only a cent or two more. Cheese is a little lower, the range being 12 to 16 cents, wholesale. The egg supply is large and fancy wholesale at 27 eents. The lowest quotation is five cents lower. Poultry is firm at 21 to 22 cents for dressed turkey, and 15 to 17 cents live; fancy fowl, 18 to 19 cents dressed, 16 to 17 cents live; large broilers, live, 23 to 24 cents. J. W. C.

COMING FARMERS' MEETINGS.

Georgia State Horticultural Society, Snmmer meeting, Griffin, Ga., Augnst 5-6.

International Apple Shippers' Association, twentieth annual convention and apple exhibit, Copley-Plaza Hotel, Boston, Mass., August 5, 6, 7.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

Northern Nut Growers' Association, annual convention, Evansville, Ind., August 20-21.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Assoeiation of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. Amerieau Jersey Cattle Club, Oct. 28. National Association of Iee Cream Mannfacturers, Oct. 28, 29 and 30. International Assoeiation of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

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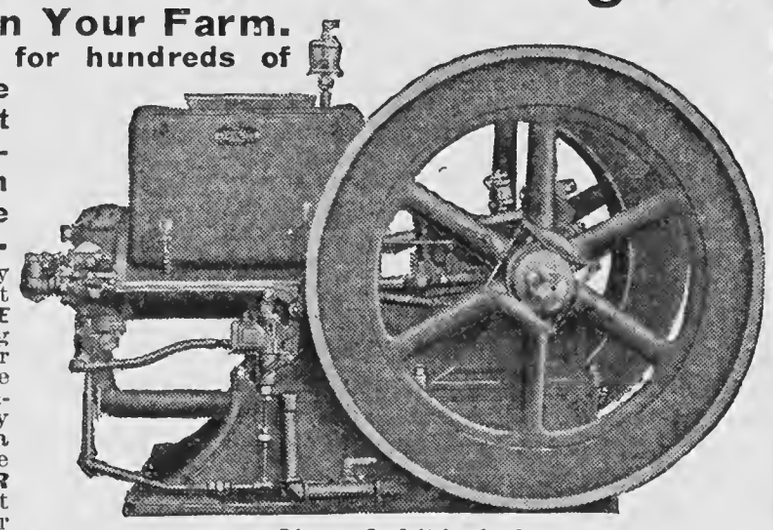
Do the Work on Your Farm.

It's making money for hundreds of farmers. It will make money for you. Get our special proposition to one farmer in each locality. We save you money.



MR. FARMER, YOU simply cannot afford to be without an ***EXCELSIOR GASOLINE ENGINE.*** They are willing workers, never ask for shorter hours or more money. They are the one engine that's always "Johnny on the Spot." There are a lot of gasoline engines on the market, but the ***EXCELSIOR LEADS THEM ALL.*** Let us prove this right on your own farm. Set the ***EXCELSIOR DOING WORK.*** If you find it is the best engine you ever saw or used, keep it; if you don't like it, send it back. You don't have to send any money in advance; you don't have to sign any notes; just take the engine and use it; buy it if you find it is what we say—the best engine made. ***BUT DON'T DELAY—WRITE NOW, TODAY.***

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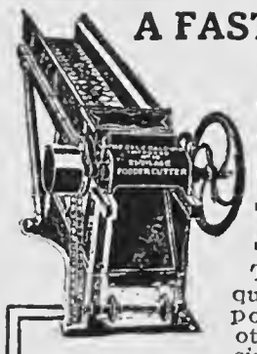

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has the widely known, 60-year, B. & T. reputation behind it. That's guarantee enough. Buy one this season, Mr. Dairyman and "thank your star" when silo-filling time comes.

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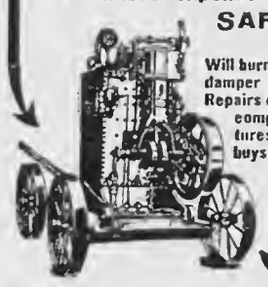
Burns Wood or Coal

For steam or hot water for any purpose or at any time without expense of crude oil or gasoline.



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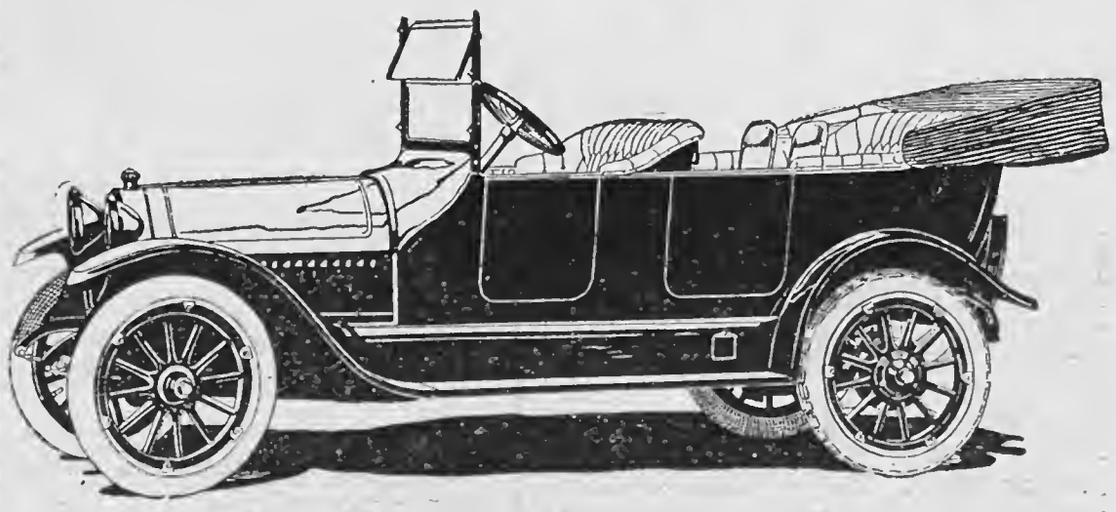
The New Studebaker Automobiles



The New SIX—5-Passenger $1385
(7-Passenger $1450)

Two body styles: Five-Passenger and Seven-Passenger Touring.
Wheelbase—121 inches.
Long-Stroke (5-inch), Small-Bore (3½-inch) Motor; Six Cylinders, en Bloc.
Smokeless, Non-Leaking Lubrication System.
Larger Valve Openings.
New, Exhaust-Silencing Muffler.
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15 x 2½ in. brakes.
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Roomier Front and Rear Compartments.
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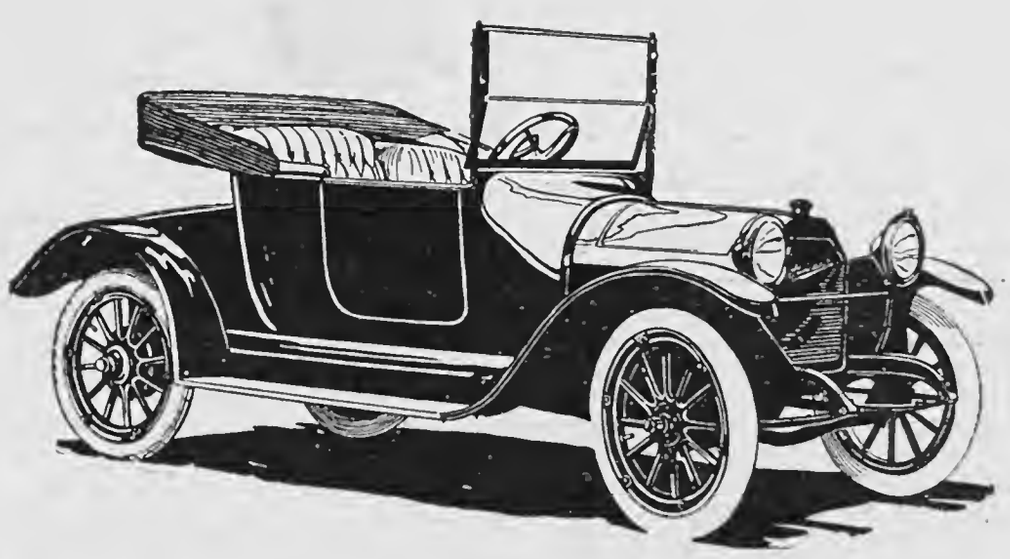
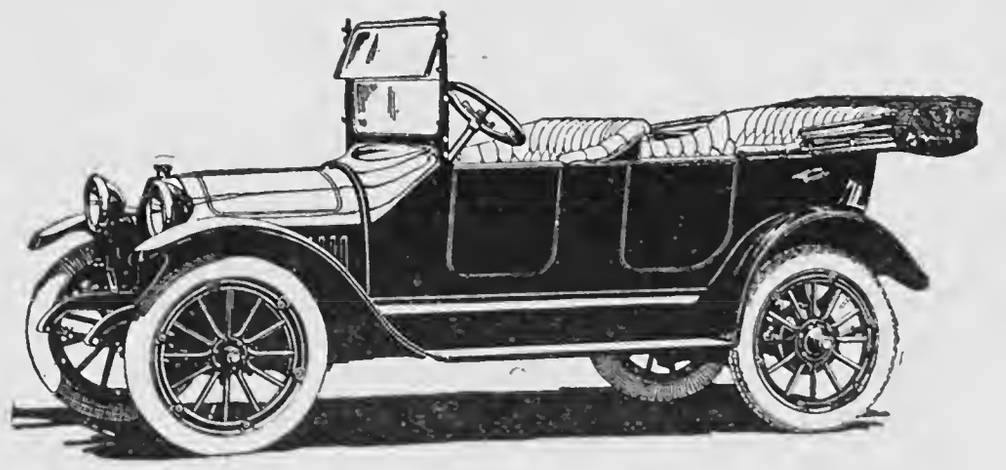
One-Man Type Top.
Built-in Rain and Clear Vision Ventilating Windshield, Attaching Rigidly to Top.
Scientific Anti-Rumble Gasoline Tank in Cowl.
Magnetic, Non-Leaking Gasoline Gauge, the only One Approved by Insurance Underwriters.
Full-Floating Rear Axle, Shaft Locking into Taper at Hub.
Full Equipment of 13 Timken Roller Bearings.
Irreversible Steering.
Inter-Locking Ignition and Lighting Switches.
24 Finishing Operations in Painting Bodies Studebaker Blue.



The New FOUR Roadster $985

A three-seated roadster that actually seats three grown persons in perfect comfort. Driver's seat set slightly forward. A special top, baggage compartment at rear, etc. Same general specifications as FOUR Touring Car.



The New FOUR Touring Car $985

Two Body Styles: Five-Passenger Touring Three-Passenger Roadster.
Wheelbase—108 inches.
Long-Stroke (5-inch), Small-Bore (3½-inch) Motor; Four Cylinders, en Bloc, Exhaust, Manifold Cast Separate.
Smokeless, Non-Leaking Lubrication System.
Larger Valve Openings.
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Tubular Radiator with Auxiliary Water Tank.
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100 Pounds Lighter.
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Generous Footroom in Both Compartments.
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Manufactured Cars on Which You Pay Only One Profit

The Studebaker dealer in your nearest town now has on hand samples of the new Studebaker cars—FOUR and SIX.

Go to him. See the cars.

Inspect them point by point, and your knowledge of automobile construction will impress upon you the splendid safety, strength, stability and comfort of these cars, their fine finish, their generous room, and their complete and liberal equipment.

Through scientific, up-to-date designing and motor refinements, these cars have power in excess of all requirements.

Remember, while you are making your inspection or taking your demonstration ride, that these cars are manufactured entirely—except tires, electrical equipment and a few minor items—by Studebaker, in Studebaker plants, and that no plant in the world is better equipped.

Remember also that their prices represent only one profit—the profit of the legitimate manufacturer who has eliminated the parts middleman from his business.

A motor car, to the farmer, is an economic necessity; not a luxury, as to the city man.

It saves his money; it saves his time; it helps him to get higher efficiency out of himself, his men and his land.

And it wipes out of his family forever the isolation and loneliness that are the dread of many farmers' wives, and that drive the boys and girls into the cities and towns early in life.

Just as the motor car is a good investment, so the Studebaker stands first in value among motor cars and we will tell you why.

For 65 years Studebaker has studied the farmers' needs, as a specialist in farm transportation, and the best way to supply them.

How well we have succeeded you can judge when you know that more than 40 per cent. of Studebaker cars are sold annually to farmers.

On Studebaker cars you pay only one profit, as we have said, and the money we save by our complete and thorough manufacturing and huge production goes into the cars themselves to make them better—

To make them last longer; to make them lighter yet stronger; to make them run farther on a gallon of gasoline and oil and on a set of tires.

One thing that adds excess value and life to a Studebaker car is the special steels we use, made to our own specifications especially for Studebaker cars.

Another is the scientific heat treatment of vital parts, like gears, axles, axle shafts, etc., which makes them stronger, longer-wearing, and permits lighter weight with increased strength.

A third is the absolute accuracy of our manufacturing processes, and the resulting perfect fit and alignment of parts, and perfect balance of the motor and the entire car, reducing friction and wear to the very lowest point.

Studebaker economy, in both FOUR and SIX, is known the land over.

Studebaker owners have found our cars peculiarly free from the necessity of repairs and frequent adjustment; all parts readily accessible and cared for with the least time and effort.

Ride in a Studebaker car—FOUR or SIX.

Note how it holds the road without weave or side-sway and know that this roadability is the direct result of Studebaker engineering and Studebaker complete manufacturing.

Equal economy, equal quality and equal roadability are not thus combined in any other "Four" or "Six."

Send for the Studebaker Proof Book which tells all about Studebaker manufacturing processes and illustrates them.

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No. 241

Hope Farm Notes

THE SUN SHINES.—When the sun finally chased the rain clouds and fog away it found one field with hay that had been on the ground 10 days. There had been one or more showers each day. We shook out this hay again and again only to have it soaked over and over. When the sun did come it brought a good breeze to help, and we finally tumbled that hay into the barn. The color was poor, but the stock all eat it well. It seems remarkable how much rain hay will stand and still make good feed. After this long experience with wet hay I begin to question whether it is better to leave it in cocks in rainy weather. That seems the general practice, but most of ours was spread out during the rains. I think it dried out quicker and was less inclined to ferment and sour than where it was kept in wet cocks. It looks now like clear weather for a while. No doubt in August we shall be complaining about dry weather. There will now come a great rush to finish haying, save the rye and clean up the weedy crops.

CATTLE BEETS AND CORN.—Our three acres of beets look better than I expected. On last year's potato field rye was seeded last Fall. This Spring, when the rye was shoulder high, it was turned under, and 1,000 pounds to the acre of slaked lime worked in. The potato crop last year was light, and I figured that the fertilizer we used on potatoes would help the beets. The crop started slowly, but is now making good progress. It has been cultivated twice, and now the slow job of hoeing and weeding has begun. In a country like ours where there are many small farms or backyard gardens, hundreds of people keep small flocks of hens and do not provide Winter green feed. Mangels are excellent for this, and there is a good demand for the roots at nearly the price of potatoes.

PRICE OF BEEF.—I got just $19 for that combative heifer. The local butcher could not handle her, but finally there came a trader and after much argument I let the heifer go. The only other thing to do was to keep her until Fall, fatten her, and then slaughter her at home and sell the meat as best we could. All things considered I decided to let her go. In talking with others I conclude that this price was up to the average. In the dairy districts where many cows are turned off, buyers can handle them in droves, and a good fat cow will bring a fair price. In ordinary farming or fruit districts a single cow can rarely be handled to advantage, for the butchers deal in dressed beef and rarely slaughter an animal. A man may kill such a cow and distribute the meat among his neighbors or peddle it out, but that is about all there is to it. You cannot raise a two-year-old heifer or steer in this country for less than $50. Yet some of these fool Congressmen would, if they could, compel us to raise at least two beef animals each year, and then give them away.

OILED ROADS.—Our township or borough has for the past few years used oil on the roads. I have had a number of questions from people who ask the cost of such oiling. Our people used the oil on about five miles of road in a track 12 to 14 feet wide. This required 6,900 gallons of petroleum road oil No. 5, which cost $3.96 per 100 gallons f. o. b. at our station. The cost of application by sprinkler was about $42. This makes a cost of about $63 per mile for the oiling. Our roads are well made and smooth, of stone. The chief object of the oiling is to prevent dust. The oil also, I think, prevents some wear by automobiles. During the driest part of Summer there is practically no dust, and the water runs off freely in wet times. In this section a part of the high land values depends on our roads and the convenience they give to motor parties. It is surprising how these people know the condition of the roads all over this country, and a smooth oiled road becomes the best advertisement for a town or neighborhood. Much the same thing is true of attractive lawns and grounds. With so much travel on our roads neatness pays, for an attractive front yard is sure to hold attention.

LATE PLANTED POTATOES.—I have received a good many notes from people who have tried late planting. I had no idea there was so much of it done.

I notice your remarks in "Hope Farm Notes" about your late potato planting. As you will spray to guard against blight, I predict the success of your experiment. Many years ago—before I knew THE R. N.-Y.—an old neighbor, who was doing some work for me, said he was going to take the Fourth of July for his own garden, among other things, plant some potatoes, a regular practice on his "swamp" garden. Last year I planted about 500 hills on wet land June 21. The seed was whole small potatoes that had been spread in a sunny window since the Spring planting, May 1. They grew and yielded fairly and kept perfectly. July 7, 1914, I planted 200 or more hills, the same way.

I do no spraying except with Paris green for bugs with powder gun. E. L. S.
Massachusetts.

Our late potatoes, planted June 28 and 30, were from six inches to a foot high by July 17. The color is good, but the vines are not very stocky. I have no prediction to make yet. This wet, "muggy" season is supposed to be about the worst thing that can happen to potatoes, but our crop is the best we have ever had thus far.

COLLEGE FARM HELPERS.—Here is a little contribution to the farm help problem which starts a line of thought:

Since then I have had experi nce which might interest you in regard to city help. I had an engineering school vacationer here who wasn't worth half his salt; now have a Harvard junior, who is the finest hired man I could ask for.

I have had various experiences with college boys, both as hired man and employer. It all goes past the college or the training to the man himself. On general principles you would think an engineer ought to make a better farm helper than a literary student, but it doesn't follow. The engineer may be a drone, or so trained that the most he is looking for is "a good time." The boy with a classical training may have ambition and natural industry to carry him through. It is in the man and his bringing up—not in his education.

THE HEN CONTEST.—I have had a number of letters somewhat like the following:

What has become of John H. Robinson and his proposed hen contest?

Mr. Robinson seems to be doing business at the same stand, but I have heard nothing more about the contest. I had a very pleasant letter from Mr. Robinson in which he said that he would not care to enter any of the official contests unless he knew that his hens would be fed and cared for just as he desired. In his paper Mr. Robinson gets after the Hope Farm man with a sharp stick. He seems to think we are slandering the fanciers and the American Poultry Association. Then he says as THE R. N.-Y. is printed every week we can sow four rows of errors to one row of his facts. Now Mr. Robinson need not worry about all these troubles. We are not going to give him or anyone else a lot of free advertising by spreading a bushel of words all around a subject without touching it. There is only one thing to do. We printed the picture of an "ideal" Wyandotte. I don't believe there ever was any such bird, but it is what the "standard" calls for. I claim that a hen shaped like this "ideal" will not excel as an egg layer. Now, if Brother Robinson thinks otherwise let him put a pen of these dumplings into one of the egg-laying contests, and show us. All this baby talk about "slandering" people and "sowing rows of errors" may cause the fanciers to straighten up their tail feathers, but it will never prove that the dumpling Wyandotte is a heavy layer. Brother Robinson may have all the word contests to himself. If he wants to prove anything let him come up to the rack with a pen of his dumplings.

I know that rye is your great hobby as a cover crop. I wonder what you would do with the following two-year-old apple orchard? It contains about five acres. I have kept it well harrowed up to this writing. Next year I wish to plant one-half of it in potatoes and the other half in corn. What cover crop shall I put in now? The land is inclined to be a little sour. H. M. E.
Connecticut.

As this land is sour I should sow rye and Dwarf Essex rape as the surest thing I know of. I doubt if Hairy vetch would amount to much the first season of sowing. Rye does better on a sour soil than any crop I have tried. I should sow a bushel of rye and three pounds of rape to the acre. It will be necessary to make two seedings—the rye first and then the rape—cover with a harrow or brush drag. The rape will mostly kill out in Winter. Plow the rye in early for the potatoes. For the corn let the rye grow till it heads, then plow under and use about 500 pounds of lime per acre. Now do not say that the Hope Farm man advises rye and rape for *all* situations. I do not. Each case requires some special study. There is no single combination for all. In this particular case I think rye and rape will pay. H. W. C.

Apple Pomace Around Trees.

I PUT a heavy coat of apple pomace under apple trees, with the immediate effect of apparently killing the grass and weeds, which is what I hoped for. But in two or three years a rank growth of Orchard grass came in, so that I knew that while the trees were helped for a time, the soil was not injured for other crops. G. S. P.
Maine.

We have explained how these vegetable acids in pomace or forest leaves act. Before decay they act to kill out most growing plants. Many of them, as decay proceeds, pass off as gases, and the leaves contain so much lime that after these acids disappear the soil actually becomes sweeter. The seeds of the Orchard grass were probably in the soil, and they sprouted and grew as the condition became favorable. Fresh sawdust would in time act much the same way, but it decays so slowly that the soil would be injured for some years.

OPENING a bazaar in Devonshire, Mrs. Dale-Doolette told a significant anecdote: "Last year I asked a man whom I met what he felt chiefly interested in. He answered, 'I am throwing my whole soul into pigs.'"—Woman's Journal.

WILLIS (in the cemetery): "This can't be Hardupp's grave. The inscripton reads 'Mrs. Hardupp.'" Gillis: "Yes, but you see he had his tombstone, like his other things, put in his wife's name."—Puck.

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Ruralisms

Apple Trees Fail to Bear.

CAN you tell me what I can do to make perfectly healthy apple trees bear? They are among others that bear year after year abundantly, but seem to refrain, although they are in excellent condition. G. W. P.
Massachusetts.

Such trees can often be forced into bearing by girdling them in early Summer. I fear it is too late this year to do this to be effective for the next crop, and it might injure the trees if done now or later. By this I mean to peel out a ring of bark about two inches wide all around the trunk of each unproductive tree. But this should be done late in May or in June, so that there will be time to form fruit buds. It might do good and would do no harm now to cut right through the bark, but not peel any of it out.

H. E. VAN DEMAN.

Mulch for Ginseng.

I WOULD like some information on what to use for making mulch for a ginseng bed. My experience is that it would require a more rich and substantial mulch than for culture of most other plants. C. J. R.
Pennsylvania.

The best mulch that I have ever tried or heard of for ginseng beds is old sawdust that has gone through the fermenting process. New sawdust has acids in it that will injure the ginseng. About two inches in depth is sufficient for keeping down most of the weeds and the ground moist. The soil should be made very rich in humus with old wood mold and coarse, rotted manure before planting the roots. A heavy dose of bone meal and acid phosphate is very beneficial also.

H. E. VAN DEMAN.

Grafting Chestnuts.

WILL you give me some information regarding the grafting of chestnut trees? I can successfully graft and bud any kind of fruit tree, but fail on the chestnut. I have a piece of land that has had the timber cut off, and there are lots of chestnut stumps growing sprouts five to 10 feet high. Can those sprouts be successfully grafted with some of our large varieties, and how and when should this work be done? D. S. M.
Pennsylvania.

Chestnut trees can be grafted very successfully if the proper way is followed, although it is not done so easily as with fruit trees. It has been done successfully in the ordinary way and at the same season as ordinary grafting, but far better results have followed doing it after growth has started in late Spring time. The scions should be cut before there is the slightest chance of the buds starting to swell, and be stored where they will be cool and moist. When the trees to be grafted have begun to start the grafting should be begun. At first the regular cleft and tongue or splice methods should be followed. Later, when the bark will peel easily, the bark graft is the proper method to use. This is done by trimming the scion all from one side, making a long, slim point. The wood is not split, but the bark slit on the stub and the point of the scion introduced in top of this slit, then forced down under the bark the full length of the wedge or trimmed surface. The scion so set should be tied firmly in place with a cotton string or raffia and the wound waxed over completely. It is a great benefit to the grafts to cover them wtih paper bags, by inverting one over each graft and tying a string over the lower part to hold it in place. This keeps the moisture from escaping while the union is taking place. After the growth is well started on the graft the paper bag should be removed or torn open at the top so the sprouts may have egress.

By applying to the State Experiment Station officials at State College, or to the Department of Agriculture at Harrisburg, a publication can be obtained that gives information about chestnut culture and grafting. H. E. V. D.

Tomatoes Not Setting Fruit.

WILL you explain the following? I am growing Ponderosa tomatoes; plants are 3½ feet high and very strong, and for about the last three weeks in bloom, but up to date there is no sign of any fruit setting on. The flowers, after blooming, seem to dry up and fall off, leaving the bare stem. Is there such a thing as male and female plants or flowers in tomatoes, as I can recognize only one kind of flowers on the bushes. The same happened last year with pole beans; plants grew up to be seven feet high, but failed to bloom. W. H.
Long Island, N. Y.

This question is rather difficult to answer, as the conditions of the soil and the weather they have been subjected to have not been stated. All tomatoes have bi-sexual blooms—that is, the blooms have both the male and female organs, and are almost invariably self-pollenizing. When the flower fails from any cause to develop stamens or pollen-bearing organs, fecundity fails to take place, and the flower withers and drops from the stems. This condition can be caused by one or more of several conditions the plant is subjected to, the most common of which is over-stimulation of the plant. If the soil is very rich in nitrogen the plant will be over-stimulated, resulting in a rank growth of vine and the setting of very little if any fruits until late in the season, when it will have used up the oversupply of nitrogen. By this time the plant will have nearly reached its normal size and the food supply available will be a more evenly balanced ration, when the plant will, as as a rule, set an abundance of fruit. Continuous wet, cloudy or foggy weather will also prove detrimental to a greater or lesser extent, and sometimes prevent the pollenizing of the blooms entirely, which, of course, will prevent the setting of fruits; but this condition is remedied as soon as the weather clears, and is therefore only temporary. Too much shade will also be detrimental to the setting and development of fruits, but when the plants are situated where they have the benefit of the full light of the sun, and fail to set any fruit, it is pretty certain they are over-stimulated. Tomatoes do not require a strong soil, and will always do better in a rather poor soil than in a strong soil.

Jarring the bloom with a small stick will sometimes prove helpful, provided there is a proper development of the blooms. The jarring of the blooms should be done between the hours of 10 and two o'clock. K.

Grapes Fail to Bear.

I BOUGHT six vines each from a reputable firm in Fall of 1911, Worden, Green's Early and Salem, said to be two years old. They were planted in November. In October, 1912, they were replanted and again showed nice shoots during the next Summer, 1913. These vines received no care during the Spring and Summer of 1913, but in the Fall were given a lot of rotted manure, placed over the roots. They look very fine and healthy, but only two vines show any evidence of bearing, a single bunch each. No insects, bugs, etc, have been at them. The ground has been cultivated regularly, the vines have had good care, are placed in a sunny position, planted north to south and have the sunshine all day long. R. R.

As a rule grapes do not bear much fruit until the third and in some localities the fourth year after transplanting to vineyard. I am of the opinion that these vines would have fruited satisfactorily this year, if they had not been removed to another location in 1912, provided the soil and climatic conditions were congenial to them and the vines not over stimulated by the application of too much nitrogenous manure. I think they will fruit satisfactorily next year.

A large and thrifty growth of vine is no sure indication that any variety of grape will bear satisfactorily or that they will produce any fruit at all. Some varieties are very capricious, bearing fruit only in certain localities specially suited to their requirements, this is partiealarly true of nearly all the Rogers hybrids, of which the Salem is one. Out of 30 or more varieties originated by Mr. Rogers, near Salem, Mass., only three or four of them proved of any real commercial value, and the territory in which they will succeed is quite limited. Green's Early, Brighton, Niagara and a number of others that are favorites in certain sections of the hill country in New York and Pennsylvania are utterly worthless in other sections of those States. In Western Pennsylvania, about 35 years ago, my father tested about all the varieties of grapes introduced up to that time, including all the Rogers hybrids. The only varieties that gave satisfactory crops were the Concord, Hartford, Ives, Martha, Isabella, and Blackhawk. The Brighton, and all the Rogers hybrids, were partial or total failures at fruiting, the vines would make a very strong growth and most of the sorts would set more or less fruit (some failing to set fruit at all) but they were so subject to mildew that we very seldom got enough ripe fruit to test them for flavor. The Worden, like its parent the Concord, succeeds well almost everywhere and in almost all kinds of soils, and when not over-supplied with nitrogen is a dependable cropper.

It might be well to withhold manures of all kinds from these vines for the next year, not applying any until the Fall of 1915—or Spring of 1916, as the strong growth the vines are making this season indicates they are well supplied with nitrogenous matter, perhaps with more than they should have. I think the Worden will prove suitable to your section and will bear a good crop next year, but Green's Early and Salem are rather uncertain, if the soil and climatic conditions are not to their exact liking. If conditions should prove to their liking they will reward you with large crops of most delicious fruit. If your soil is naturally rich, I would advise using manures very sparingly until the vines have reached some age. Coarse ground raw bone will give much better results, and can be applied in liberal quantities around the vines without danger of stimulating them to make abnormal wood growth. It will require at least another year, and perhaps two, to test these vines out thoroughly, but next year should show partly nearly what you can expect of them. K.

Through this part of the State adjacent to the State's capital, the peach crop promises to be large. I never had better prospects for a fine crop. We are well on with thriving fruit, and the fruit is very fine for this date. We have our first ripe peaches now. An early variety never worth very much anywhere, but its a peach for the folks that can't wait very well till good peaches come in. Our first really good peach is Carman, which ripen in this section about the middle of August. The usual varieties follow in regular order, and end up in September. We grow the largest, finest and best the world produces.
Pennsylvania. E. C. B.

AUNT Eliza came up the walk and said to her small nephew: "Good morning, Willie. Is your mother in?" "Sure she's in," replied Willie truculently. "D'yu s'pose I'd be workin' in the garden on Saturday morning if she wasn't?" —Ladies' Home Journal.

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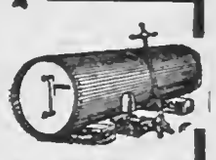
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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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HATS off for those American Leghorns in the Storrs egg-laying contest! After a long, uphill race they are within striking distance of the English Wyandottes, and with next week's record we expect to see them ahead. This may be called a double victory for American breeding and American sour milk, for this pen of birds has received sour milk as food almost from the shell. Polo games and yacht races may provide sport for millionaires, or rich idlers may strike at golf or tennis balls, but they should all take a back seat when the American hen lays her way up to the front. Hurrah for Mrs. A. Leghorn—a nest frequenter in white!

*

BUSINESS men in Saskatoon, Saskatchewan Territory, realized that their future depended upon the prosperity of farmers who traded in that town. Most of these farmers were growing wheat. This meant a one-crop income, dependent upon blight and frost, with half the year idle. The town was using butter brought all the way from New Zealand, while all around were rich pasture and hay lands. So a group of business men organized a creamery and began to encourage dairying. For a time it was slow work, but now, after two years, there is no more New Zealand butter sold in town, and the first carload has been shipped away. The farmers are receiving something like $16,000 per month for their milk. Neither the farmers nor the business men alone could have carried out this plan. By working together there has been a mutual advantage.

*

NEARLY every week we have letters from farmers who say they have a good supply of large, white eggs which they want to sell to some special customer. Readers have heard that certain hotels or high-class restaurants pay enormous prices. These men are sometimes disappointed in dealing with this high-class trade. They find such patrons very particular and very critical regarding size, color and quality. A farmer must, of course, understand that the buyer is the one to be satisfied, and that there is no use trying to make him take what does not suit him. Another reason why this kind of trade prefers to deal with middlemen is that very few producers can guarantee a definite number of eggs each week in the year. The supply will be intermittent, and this is just what the hotel *does not want*. When they buy from a city dealer they can hold him personally responsible for quality.

*

WE have received several letters from insurance men who attempt to argue that the new compensation law in New York makes farmers liable for accidents to their employees. We feel confident that there is nothing to this. The law expressly excludes farm labor and domestic servants from its operations, and also states that "employment" includes employment only in a trade, business or occupation carried on by the employer for pecuniary gain. Many good lawyers have been consulted regarding this, and they agree that farm laborers and domestic servants are not affected by this law. They stand in the same relation to their employer as they did before the law was passed. Under previous laws a farmer might, under some circumstances, be liable for an injury sustained by his hired man, but the chance for such liability would be remote. Of course all laws must be tested in the courts before a final decision is reached, but the best legal advice we can get is that farmers are not liable under this law.

I NOTE your reference to the field meeting of the New Jersey State Horticultural Society. Are strangers tolerated at such meetings? A friend and myself are much interested in apple-growing, and should like very much to see the Barclay orchard and hear the talks on the occasion of the meeting. A. C.

Tolerated? Strangers are made welcome at every true farmers' meeting. Go by all means. You will find a company of kindly hospitable farmers and fruit growers ready to tell you what they can. We grant that sometimes meetings are held in the name of agriculture by gentlemen who do not want practical farmers around. Farmers will dominate this field meeting, and you will be made to feel at home. Remember the date—August 5 at the farm of John H. Barclay, Cranbury, N. J.

*

NO man ever "tampered with nature's balance" without regretting it. You may try it with your own body or your farm, or with a nation. The result is the same. A curious instance of this comes from India, where the concerted campaign against tigers has resulted in an enormous increase of wild pigs—which do great damage to crops.

"The native farmers are forced to watch their fields carefully at an increased expense. This damage and increased expense must be t ken into consideration in fixing the new land tax, and thus the strange situation exists that by the destruction of the tigers the farmers may be out of pocket."

Charles Darwin pointed out the economic relations between old maids, cats and field mice. A war of extermination against moles and skunks would rid us of some annoyance, but bring about a plague of white grubs. Even mosquitoes and rats have their places in nature's economy.

*

RECENTLY 10 tons of fish were thrown into the Delaware River and thousands of bunches of bananas were similarly disposed of to avert a break in the market. This wanton waste of food that people are clamoring for will have no excuse for its practice, for the express company's order bureau will find a market in towns and villages remote from this market. This was accomplished in a recent glut when fish, sold in the Maryland peninsula at two cents a pound, was distributed among dealers up and down the State, who sold it at five cents.

That is taken from an article in the daily papers on the system which the express companies are now developing. Parcel post has spurred the express companies on to find markets for farm produce. Why did they wait until the people pulled their fingers away from the throat of Congress? If they had started any such scheme 20 years ago, when there was great need of it, the fight for parcel post would have been held up, and none of the present powerful movements for control of government utilities would have become strong enough to attract general attention. It was the hateful, dog-in-the-manger policy of the express companies which made parcel post possible. These companies are now trying to please and help the public. This growth in sentiment from Vanderbilt's reported opinion of that same public is good evidence of what may happen when the people learn how to get what belongs to them.

*

YOU talk about the use of cover crops. Why not let the weeds grow instead of sowing expensive seed? Some of these weeds will provide as much bulk to plow under as the crops you speak of.
J. B. H.

We keep talking "cover crops" because we know what such crops and lime have done for our own soil. When we know that nature will in this way make us a present of the equivalent of six tons or more of manure per acre and spread it for us we want to pass along a good thing. There are some cases where the weeds make a good cover crop. We have two fields where this has been tried for some years. The objections to letting the weeds grow are several. In most of our crops we must have clean culture. When weeds go to seed the labor of keeping crops clean is doubted. A cover crop of rye and vetch or rape smother out the weeds and thus helps clean culture. The broad-leaved weeds take more moisture from the soil than the narrow-leaved rye or vetch, and in ordinary seasons give the cultivated crops a better chance to mature. The weeds die at first, and thus provide no living crop to hold the soil through the Fall and Winter and give no live crop in the Spring. There is a heavy loss of nitrates from the soil in November at the North, and through the Winter at the South. The living cover crop saves this loss and also, in the Spring, gives a live crop to plow under which we believe is better for the soil. The cover crop also adds more organic matter. These and other reasons have convinced us that it is more profitable to sow a cover crop rather than to let the weeds grow. No one argues that it is better to let the soil lie bare through the Fall. In some orchards it may be better to let the weeds grow after cultivation is done. This saves the cost of seed and seeding, supplies a fair amount of organic matter, and makes easier working or plowing in the following Spring, since the weeds die during Winter.

SOME of the farmers on the Pacific Coast are much excited over the imports of cheap eggs under the new tariff. Eggs are now free, and millions of them are being brought from China and other Asiatic countries. One of our Washington readers tells the following story:

A prominent citizen of Portland, Ore., purchased a setting of the freshest of these eggs he could get, put them under a hen. Out of the entire setting only two of them hatched, and instead of being chickens they were sea gulls. W. H. P.

Unless this man is careful our wonderful laws will go still further and he will be prosecuted for importing game or plumage birds!

*

IN New Jersey every railroad company organized under the laws of that State, must erect and maintain fences on the side of its road the height and strength of the division fences which are required by law. One of our readers has been for some time trying to get the Pennsylvania Railroad to build a fence where the railroad property adjoins his farm. The company claims that their deed does not specify that they shall build any fence, and neither does the deed of the owner. The company wants this farmer to make them a proposition. On application to the Public Utilities Commission of New Jersey, we are informed that this Commission would not pass upon the question until a definite case is brought before it. Under the circumstances our advice to such a farmer is to make a direct complain to the Public Utilities Commission at Trenton. Make this in the form of a letter, and send a copy of this letter to the railroad company. The Commission will then set a date for an informal hearing, at which both the farm and the railroad people can be represented, and the facts brought out to settle the matter definitely.

*

A FAVORITE and impressive text from the Scriptures is:

"Take heed how ye hear!"

Hardly a day passes without a practical illustration of the danger in jumping at conclusions. In a recent case a farmer wanted to buy some purebred cattle. He bargained with a reputable breeder who stated in his circular that his farm was headquarters for stock bred on his neighbor's place. At the head of this breeder's stationery was a statement that the farm had been breeding stock 25 years or more, and that all animals were of this long-kept strain or family. In the bargain between farmer and breeder nothing was said about the cattle all being from this particular family. When the papers came it was found that the cattle were from the other farm—well bred, but not of this particular strain. Then the farmer claimed that he had been wronged because he said he had been promised a certain breeding which he never received. It seems that he read the heading on that stationery and assumed that it meant a guarantee. It was nothing of the sort, and was never intended to be. There are many cases like this where a man assumes on his own responsibility that words have a certain meaning which they were never intended to carry. This assumption of meaning makes no end of trouble when a question of fact arises. *"Take heed how ye hear!"*

BREVITIES.

THE apple rust disease cannot live in a locality where all the cedars are cut down.

EVEN the ancient Kingdom of Libia has its experiment station and agricultural expert.

GERMANY is to have a system of strike insurance, developed by employers' protective associations.

SOUTH AMERICA imports $18,000,000 worth of canned goods, yet the United States contributes only about $2,500,000—mostly salmon. Why can't we sell more cans?

SOME of our farmers complain that the scientific men may take a "vacation" just when they are most needed in the field. In business the time for vacation is when work is slack, or when there is least to do.

AN American farming colony has been started in the Philippines. It will start with about 100 colonists. The men are Americans mostly married to Filipino women. The government will help these colonists with small loans.

A GREAT many of the legal questions sent to us refer to differences over line fences. Recent reports from a locality in West Virginia tell of a feud arising from this cause, which resulted in the death of three men. It is wise to fix fences before they can lead to long-drawn-out disputes.

HERE is another one from New Jersey. The State has one mile of railroad to every three square miles of territory. This is the largest proportion of railroad mileage of any State in the country. As a consequence of this, New Jersey has a great number of railroad fires. It used to be said that 99 per cent. of these fires started from red-hot cinders puffed out through the locomotive. It is now claimed that this is too rough on the locomotive, and that many of these fires really start from glowing cigarettes which are thrown out through the window from the smoking cars as the trains rush on. Here is another bill of damage against the cigarette fiend.

LAND BANK ASSOCIATION FORMED.

THE work of organizing the Land Bank of the State of New York is progressing most favorably. Ten associations, by action of their board of directors, have enrolled themselves already. The total resources of the 10 enrolled associations is $4,000,000, and the subscribed capital, $42,000. Four of the 10 associations are directly represented on the organization committee. A number of associations have notified the committee that they will come in, but they are not enrolled until the Board of Directors has authorized the purchase of shares in the Land Bank, subject to ratification by by-law. This progress indicates that the Land Bank will be organized during the Fall. So far there is but one strictly farmers' association organized. This is the association formed recently by the Jewish farmers at Centreville, in Sullivan County.

THE R. N.-Y. office force and staff, however, are to have a local land bank. At the first suggestion 40 persons signified their intention to become members, and subscribed for shares to the matured value of $40,000. Its proposed charter and by-laws have been sent to the Superintendent of Banks, at Albany, N. Y., for approval. As soon as these are approved, a meeting will be held, and the Association will then be ready to receive the first dues on the shares. The Association may issue four kinds of shares, viz.: 1. Installment shares on which dues of 50 cents per share per month, or $1.50 per quarter, will be paid. 2. Paving shares, the dues on which may be paid in such amounts and at such times as the member may elect. 3. Accumulated shares on which the member will pay down $50 or more at the time of issue, and the dividends will be added until the share matures at $100. 4. Income shares, on which a payment of the face value of $100 will be paid at the time of issue; and the dividends paid semi-annually in cash. The funds will be loaned to members on first mortgage, on real estate situated within a radius of 50 miles from the place of business of the association. Loans may also be made to members on the security of his or her stock. The board of directors may accept membership anywhere; and loans may be made on shares of the association anywhere, but loans on real estate cannot be made outside of a radius of 50 miles from the principal office of the association, which will be in New York City.

This association will probably become a charter member of the Land Bank of the State of New York. Both of these new associations represent agricultural interests, and it is expected that several others will be organized and will become charter members of the Land Bank when organized towards the end of the year.

Any reader of THE R. N.-Y. is eligible to become a member of this association for saving purposes, and all members within 50 miles of New York will be eligible for loans. J. J. D.

A 35-CENT DOLLAR CONFERENCE.

THE 35-cent dollar was very much in evidence at the Co-operative Conference held at Utica, N. Y., on July 22. The conference was under the direction of Agricultural Commissioner Huson, and its object was to bring those interested in co-operative buying and selling together for a general discussion and organization. Gov. Glynn delivered an address and there were short talks and discussions by a large number of prominent men.

The spirit of the conference was excellent. All who attended were thoroughly convinced that the time has come for the consumer, through co-operative work, to come closer to the producer, and thus cut out a large share of the waste which now goes to the useless middleman. These shrewd and practical men understand of course that in our present scheme of distribution it is impossible to eliminate all the handlers and carriers who stand between food production and consumption. They also understand that there has grown up a system which embraces a large number of useless handlers, so that the cost of their handling is taken out of the share which ought to go to the producer. It is a big job to rearrange the present system of distribution, but this conference shows that thoughtful men now realize the significance of the movement and it is sure to develop and grow under the right direction.

All sorts of interests were represented at this conference. There were practical farmers who for years had been producing food as individuals, now thoroughly convinced that all these years they have obtained not more than 35 cents of the consumer's dollar. At the other extreme there were men who frankly admitted that they were not producers, but were consumers pure and simple. Yet they realized the great tax that they were paying for their supplies and the small proportion of their money which finally finds its way into the hands of the farmers. All sorts of plans were talked over, such as co-operative societies, advertising, and a dozen other methods which business men in other lines of work have successfully adopted. The whole spirit of the conference was hopeful, and without question it will lead to good results. The most hopeful and the most significant thing connected with it was the fact that no one any longer questions the existence of this 35-cent dollar, or the share which the farmer receives on the average for the price that his produce finally costs to the consumer. This conference has brought that question up into the minds of many who did not understand it before. This is the fundamental principle of all efforts to co-operate and give the producers a fairer share.

We shall give from time to time studies of what was developed in the discussions at this conference. It is new evidence of the great movement which is slowly gathering force to bring producers together in a business proposition which is destined to revolutionize our present system of distribution.

New York State News.

THE NEW EMPLOYMENT BUREAU.—On August 1 to be exact, the first of a chain of employment bureaus will be opened for business under the terms of a bill passed at the last session of the Legislature. Much is expected of the new bureau and it is to be hoped that the expectations may be realized. The thing is to bring the man and the job together and this the State proposes to do without cost to either employer or employe. Theoretically the plan looks good. If a machinist in Rochester needs men, and if the bureau has a list of men on its records who are capable of filling the need, then it is an easy matter to bring the two together. No fees are charged to anyone. Indeed, if it be found that anyone accepts a fee for any service he may render under the law, he will lay himself open to a fine of $500 or less or imprisonment for six months or less. Perhaps the greatest assistance that this bureau can render will be in the investigation of the causes of unemployment and applying remedies therefor. Each of the State employment offices will have an advisory board to be composed of representative employers and employes and there shall be an equality of voting power among them notwithstanding the absence of any member. The new bureau has a great big work to do. It will be watched with great interest.

ARMY WORMS AND HOPPERS.—The plagues seem to be descending upon us these last few days. No sooner had the grasshoppers got well under way in their invasion of certain localities of the State, than they were followed or "aided and abetted" in their work of destruction by the army worm. The fight is on. The Department of Agriculture and the Experiment Station and the Farm Bureaus, are all taking up the cudgel against these destructive enemies of the farmer with varying success. But the "poison squads" will win out in the end. The grasshoppers have spread over a much larger section of the State than they had covered last week. Both pests have cut down the growing crops in wide swaths. Farmers can aid the department in its fight by using the poisoned bait made as follows: "Fifty pounds of bran, thoroughly mixed while dry with 2½ pounds of paris green; add five quarts of cheap molasses diluted with about nine gallons of water and juice of eight lemons. Then chop the lemons up fine, rind and all, and mix with the above. This is to be sowed broadcast near where the pest will be attracted by it. In the case of army worms, a furrow can be plowed toward the insects, and when they gather in the trenches they can be crushed."

FARM SURVEYS IN GENESEE.—H. F. Dixon, a farm survey expert from the U. S. Department of Agriculture, is conducting farm surveys in Genesee and Madison counties, assisted by Director Burritt of the State Farm Bureau Department and several county agents. Over 50 farms will be surveyed in each of these counties, kinds of crops raised, methods of farming and many other particulars will be investigated. It will be a good opportunity also for farmers to discuss their problems with these experts.

STATE SEALER IN NEW ROLE.—It may not be known to many of our readers that a law was passed by the last Legislature making any person guilty of a misdemeanor who advertises in a newspaper, circular or form letter or makes any statement of fact as to the quantity, quality or value of goods or articles he has to sell, "which is untrue or calculated to mislead." State Sealer Farrell is now "watching out" for such advertisements and is reported as having some very good material to work upon already. He had some "warranted all-wool blankets" that were advertised, sent to a chemist who analyzed them and found 51 per cent. cotton. The State Sealer will need a vacation after he gets all the evidence in these cases.

FARM HANDS NOT UNDER NEW LAW.—Although farmers are specifically exempt from the provisions of the new workman's compensation law, yet there has been some uncertainty as to whether teamsters on highways and men employed in teaming on farms, came within the purview of the statute. The Compensation Commission says no. Therefore it is not necessary for farmers employing them to be insured against loss from any injury which the teamsters may receive. It is held that the relation of the teamster to the farmer for whom he works is not unlike that existing between the artisan and the private householder who may be employing him to make repairs to his domicile. We wouldn't wonder if the Compensation Commission would have some trouble with this feature of the new law when they come to adjudicate differences of opinion in the matter.

TREE AGENT LOSES AGAIN.—It will be remembered that early in the year the case of Bert Walton of Indianapolis, Ind., against James A. Pettibone of Alexander, N. Y., was tried in justice's court at Batavia and that the jury found no cause of action. Plaintiff had sued to recover $25, the purchase price of 1,000 Catalpa speciosa seedlings. Last week the case was up in county court, to which appeal had been taken, and the decision of the lower court was affirmed. The defense was "fraudulent representations." Hence, defendant refused to accept the trees. It is said that the case will now be taken to the Appellate Court by Walton. He had brought suit against several farmers in Genesee, Wyoming and Erie Counties who had repudiated the contract on the same grounds as did Pettibone and the Pettibone case is considered a test case in the matter.

HUDSON RIVER VALLEY FRUITS.—The Valley has just closed, or is closing, a most auspicious season in sour cherries, red berries and currants. Growers have had a shortage in crates, baskets and cups which at one time threatened to be quite serious. At Germantown, on the east side of the river, this was particularly true. A car arrived with 3,000 baskets and within three hours all were taken and some growers had to get along with 200 or 300 where they needed 1,000. From this town it is estimated that about 40,000 baskets of sweet cherries, 260,000 of the Montmorencies and 100,000 of Morellos, have been shipped, making a grand total of about 400,000 for this station alone. The sale averaged about 35 cents per basket according to reports. In Ulster County on the other side of the river, red berries, cherries and currants were of immense quantity. The currant crop is said to have been the best about ever known in the Highland district. There will be no peaches worth speaking of in this (Ulster) County. The grape crop will be the largest in years, if nothing prevents in the line of damage to which the crop may be exposed. A local grape juice factory will take about 50 per cent. of the crop.

CONVICT LABOR AGAIN.—The first permanent camp of convict laborers has been established in the Catskill Mountains, for work on the highways. Twenty men from Sing Sing are there and as many more will follow. It is said that the men work without restrictions, almost, leave and return to camp at will except during working and sleeping hours. A guard is with them but is said not to be armed. J. W. D.

Foreign Wheat Prospects.

A CONSIDERABLE proportion of the foreign wheat has not yet been harvested but from reports available it appears that the world crop of Winter wheat will be under normal. Winter wheat constitutes about three-fourths of the entire supply; and the Southern Hemisphere crops harvested last Spring were more than 100,000,000 bushels short of previous year. Only one country of Europe, Russia, will have more Winter wheat than last year. Austria-Hungary is expected to be 18,000,000 bushels short, and Italy nearly 35,000,000 bushels under. Taking everything into consideration there is no apparent warrant for ruinously low prices to the producers of our 1914 Winter wheat.

Government Crop Report.

WINTER wheat thrashing is under way with good yields, except in parts of Nebraska. In North Dakota Spring wheat conditions are the best in several years. Minnesota and South Dakota have considerable black rust.

Early planted corn in the southern part of the belt was greatly damaged by drought. Later plantings promise well. In Iowa, Kansas and Nebraska the outlook is favorable, and has improved in the Ohio Valley and eastward.

Haying is about completed, the crop being good in the northern, but poor in the southern sections. The tobacco plant is doing well, though there is some trouble from root rot in Wisconsin and drought in Tennessee and Kentucky.

The situation is considerably improved in the eastern and central parts of the cotton district. In the western part great damage from drought and excessive heat is noted. Garden truck conditions in the South and Atlantic States are improved. Harvest in the New England and Middle States has been hindered by rains and considerable injury done to grain and hay.

Canadian Fruit Report.

THE Canadian Commissioner of Agriculture gives the following report of conditions in the Dominion:

NEW BRUNSWICK.—The apple crop promises 70 per cent., a few orchards injured by frost. Scab showing very little. Summer and Fall varieties heavier than Winter. Size and quality good. Raspberries promising well.

NOVA SCOTIA.—Weather conditions favorable. Very little spot showing. Apple crop will be, at most, one million barrels. Spy, King, Russet, Wagener, Bellefleur, Baldwin and Ribston leading. Nonpareil, Bleuheim, Fallawater, Stark, Gravenstein and Ben Davis light. Crop last year, 650,000 barrels.

QUEBEC.—Most sections looking well. Fameuse and McIntosh dropped heavily, but sufficient left on trees for good crop. Cherries heavy crop. Bush fruits good.

ONTARIO—LAMBTON.—Apple crop 40 per cent. above 1913, and 15 per cent. below 1912. Weather has been hot and dry for six weeks with sufficient drop to prevent thinning. Favorable showers this week, and well sprayed orchards will have a good commercial crop of clean fruit. Plums and pears fair to good, but much lighter than last year. Grapes promise a good crop.

NORFOLK.—Crop one-third heavier than 1913, and one-third lighter than 1912. Fungus prevalent but quality is good in orchards that have been well sprayed.

HURON.—Crop about 25 per cent. heavier than 1913, in spite of heavy drop. Quality will be good. Plums light.

COUNTIES NORTH OF LAKE ONTARIO.—Prospects not so good as expected. Drop has been heavy. Crop will run about same as last year, or about 25 per cent. less than 1912. Fruit well distributed and all trees bearing. Weather conditions fair.

OKANAGAN VALLEY.—Long dry spell was broken by rain. Quality of apple crop excellent. Total crop will approximate 1,000 cars, which is equal to the crop of 1912 and 25 per cent. greater than 1913, with Wealthy, Jonathan, Wagener and McIntosh heaviest. Pears, 20 per cent. increase over 1913. Tomato acreage increased 25 per cent. Peaches a fair crop, totalling 50,000 twenty-pound boxes.

Special attention should be given by shippers to the hour at which tender fruits will reach their destination. Practically 75 per cent. of the fruit is sold in Canadian markets before noon, and where fruit is sold by auction after noon, prices are frequently 30 per cent. less than morning prices.

HONEY PACKING.—The Colorado Honey Producers' Association sends out the following statement to guide the members in packing:

"A honey section weighs approximately one ounce, therefore, to grade comb honey according to the Colorado grading rules and have same conform to the requirements of the Federal Net Weight Law, each packer must make sure that no section of Fancy White or Number One weighs less than 13½ ounces, gross. These must be stamped:

"'Net weight not less than 12½ oz.'

"No section of choice must weigh less than 12 ounces, and these must be stamped:

"'Net weight not less than 11 oz.'

"No section of number two honey must weigh less than 11 ounces, and these must be stamped:

"'Net weight not less than 10 oz.'

"The Colorado Honey Producers' Association, Denver, Colorado."

Woman and the Home

From Day to Day

A Dakota Wheat Field.

Like liquid gold the wheat field lies,
A marvel of yellow and russet and green,
That ripples and runs, that floats and flies,
With subtle shadows the change, the sheen
That plays in the golden hair of a girl—
A ripple of amber—a flare
Of light sweeping after—a curl
In the hollows like swirling feet
Of fairy waltzers, the colors run
To the western sun
Through the deeps of the ripening wheat.

Proud as the fleckless, soaring sky,
Mysterious, fair as the moon-led sea,
The vast plain flames on the dazzled eye
Under the fierce suns alchemy.
The slow hawk stoops
To his prey in the deeps;
The sunflower droops
To the lazy wave; the wind sleeps.
Then all in dazzling links and loops,
A riot of shadow and shine,
A glory of olive and amber and wine,
To the westering sun the colors run
Through the deeps of the ripening wheat.

O glorious land! My western land
Outspread beneath the setting sun.
Once more amid your swells I stand,
And cross your sod lands, dry and dun,
I hear the joeund calls of men
Who sweep amid the ripened grain
With swift, stern reapers, once again.
The evening splendor floods the plain.
The cricket's chime
Makes pauseless rhyme,
And toward the sun
The splendid colors romp and run
Before the wind's feet
In the wheat.

—Hamlin Garland.

*

HERE is a most delicious sherbet or fruit punch: To a pint of red currant juice add the juice of five oranges, three lemons, and a can of grated pineapple. Add cold water enough to dilute to proper strength, sweeten to taste and serve iced. Another delicious beverage is pineapple lemonade. Pare a pineapple, removing the eyes, and shred it fine. Put in a bowl, and add the juice of three lemons. Boil a pound of sugar in a pint of water, removing the scum; pour this syrup over the fruit, and let it stand two hours. Then dilute the mixture with water, and serve iced, straining if preferred.

*

MANY of our readers in this State will, of course, have that bulletin on "Attic Dust and Treasures," issued in the Farm Home Course from Cornell. One of the questions asked in the discussion paper is, "Is your attic warm and dry enough to work in during the Spring, and cool enough to read and work in during the Summer?" There are, of course, attics that answer this description, yet we fear that they are not common. A great many attics are uncomfortable to work in at any season, because of poor light or ventilation. However, two questions are asked in this discussion paper that give ample food for thought. These are as follows:

Would you like to aid in developing in your home community or town some by-industry that farmers' wives and daughters could undertake in addition to their regular work, doing this new work so well that it could be marketed as is the lace, embroidery, and weaving made by women of Deerfield, Massachusetts, of Battle Harbor, Labrador, and of various parts of Denmark and Ireland?

Would the women and the young girls of your community or of your club enjoy working as women used to work in the colonial quilting bees and corn-husking parties on some joint production of your handicraft that would have a market value if properly done?

Those two questions seem to offer a very live subject for discussion among rural women.

*

A POPULAR joke, which contained a sound moral, represented the doctor's wife asking him why he must hurry so excessively when he received a call from Mrs. Brown. "It isn't safe to delay," explained the doctor; "she's got a book on 'What to Do Before the Doctor Comes,' and if I don't hurry she'll do it!" We cannot appreciate this without seeing something of the danger that comes from indiscriminate dosing. Common-sense care of the sick, without professional aid, has helped many of us over hard places. On the other hand, a recent case came under observation where a neuritis patient, sleepless from constant pain, was advised by a friend to take a well-advertized proprietary remedy. The patient did so, without consulting the doctor who had treated her, and found that the medicine made her sleep comfortably, unconscious of her pain. After a week or so she told her doctor of the relief she enjoyed, to learn from him that she was taking a dangerous habit-forming drug, under the mask of curative medicine. Of course, she discarded the cure at once, and being a strong-minded woman she is not likely to lapse from her decision, but think how easily a person of weak will might be led away by such a medical wolf in sheep's clothing! One can learn much of this danger from a Farmers' Bulletin published a few years ago by the Department of Agriculture at Washington, termed "Habit-Forming Drugs."

Seen in New York Shops.

A WONDERFUL evening dress for Summer resort wear was cerise taffeta veiled with a flounced accordion-pleated tunic of cerise tulle. The bodice was a low-cut surplice shape draped with tulle, and the deep opening of the neck was edged with a garland of silver roses, and little silver roses outlined the edge of the narrow taffeta girdle.

A pretty collar of organdie was of the flaring stand-up shape, attached to a plain vestee of the same material. Both collar and vestee were edged with a hemstitched band of maize-colored linen, and the vestee was fastened with two maize-colored frogs. A little black moire tie was worn with it. Such a collar and vestee gives a smart look to a simple linen dress, and can be adapted in any color combination desired.

Victoria cases are little leather-covered boxes, of varying dimensions, usually four to six inches. The original forms opened with a fall-down top like a square kit bag; others open like a miniature suitcase. The little case is fitted with purse, scent bottle, mirror, powder box, comb, etc., leaving a little space in the center for a handkerchief. There is a strap handle at the top for carrying. These little cases are carried in place of a handbag, and are very smart. The first came over from England, but they are now made here, and cost from about $2 at a department store to any price the purchaser may wish to pay. There is a great variety in color and style. They are often called "party cases" or "beauty boxes," but the importers call them victorias.

Wrist watches for men sound like effeminate luxury to unaccustomed ears, but in reality they are a useful convenience, being made for horsemen in the hunting field, who would find it difficult to get at a watch worn in the ordinary manner. Wrist watches mounted in leather, of the utility type, cost about $6, while those for women's wear in gold, silver and platinum setting go up to imposing prices. The leather-set watch with a wrist strap is made for women as well as men, and is especially convenient when traveling or shopping.

Some of the prettiest hatpins to wear with the all-white hats are rhinestones set in silver in a mounting of white enamel; they cost from 50 to 95 cents. The heads are small, like all present hatpins of good style.

Leatherette gloves are a new fabric make giving a very close imitation of doeskin, white outside, yellow inside. They are cut as carefully as doeskin, with pique outer seams, in a mousquetaire gauntlet shape, tightened at the wrist by a strap passing through a slide. They are very smart-looking, and are washed more easily than doeskin or chamois; they must be washed with cold water, and laid flat, not hung up to dry. They are heavy enough for Winter as well as Summer wear, and cost $1 and $1.50 a pair.

Outing garments for women are sold by dealers in sporting goods. Very practical and inexpensive suits are made of olive-colored khaki. A Norfolk coat of this style is $3; a plain skirt with two pockets, $3; divided skirt, with buttoned panel in front, suitable for riding, cycling or rough walking, $4; bloomers to match, $2; leggings, $1. The same models, slightly more expensive, are made in cravenetted waterproof; in this material the coat costs $5; plain skirt, $5; divided skirt, $6; bloomers, $3, and leggings, $1.50.

Children's Kewpie handkerchiefs are a quaint little fancy; they are of fine linen printed in colors with a fancy border and a Kewpie in the corner. A box of three costs 24 cents.

The Rural Patterns.

When ordering patterns give number and size of pattern desired. Price of each pattern 10 cents.

8093, misses' surplice blouse. Cut in sizes 16 and 18 years. Size 16 requires 2½ yards of 36-inch material ½ yard

27 inches wide for collar, chemisette and cuffs. 8263, misses' middy blouse. Cut in sizes 14, 16 and 18 years. Size 16 requires 2¾ yards of 36-inch material, with ⅝ yard 27 inches for trimming. 8183, ladies' one-piece peg-top skirt. Cut in sizes 22 to 32 waist. Size 28 requires 2⅝ yards of 36-inch material. 8095, child's dress. Cut in sizes 2, 4 and 6 years. Size 4 requires 2¼ yards of 36-inch material. 8186, child's dress. Cut in sizes 6 months, 1 and 2 years. Size 2 years requires 1¾ yards of 36-inch material.

7325, ladies' five-gored petticoat. Cut in sizes 22 to 32 waist measure. Size 28 requires 3¾ yards of 36-inch material. 8128, misses' corset cover. Cut in sizes 16 and 18 years. Size 16 requires 1 yard of 36-inch material with 2¼ yards of

beading and 3 yards of edging. 7944, ladies' one-piece nightgown. Cut in sizes 34 to 44 bust measure. Size 38 requires 3¾ yards of 36-inch material. 7872, ladies' gathered blouse with square yoke. Cut in sizes 34 to 42 bust measure. Size 38 requires 2½ yards of 36-inch material with ⅜ yard 27 inches for collar and cuffs. 7588, ladies' shirt waist or blouse. Cut in sizes 34 to 40 bust measure. Size 36 requires 2¼ yards of 36-inch material with ⅝ yard 27 inches for collar and cuffs.

Vermont Olives.

Some time ago you gave a recipe for preparing green tomatoes so that they resembled olives. Will you repeat this?

H. M.

Take a bushel of green and half ripe tomatoes, wash clean, then pack in big jar or tub, using five pounds fine salt and one-half pound whole mixed spices. Weight down and cover with clear cold water. In two weeks they are fit to use, and will keep a year if kept under the pickle. They are used without further fixing, and you will find them a fine flavor of olives, but rather better and immensely cheaper, costing less than five cents a quart. The little plum or fig tomatoes are a nice size for using in this way.

Buttermilk Food.

This is a sure and simple remedy for indigestion and dyspepsia. If you have any trouble with your stomach you would better try it. Put yourself on a strict diet of this food and stick to it, and you will be cured. It is also good for babies, especially "bottle babies" with whom cow's milk and the prepared foods do not seem to agree. Let this food take the place of all others and they will soon laugh and grow fat.

Buttermilk Food.—Five cups fresh buttermilk; 3½ tablespoonfuls cane sugar; 2½ tablespoonfuls flour, browned. Mix the flour with a little of the milk as for gravy, mix all together, place on the stove and stir constantly until it has boiled three minutes. Keep in a glass jar in a cool place.

Barley Water.—Three even dessertspoonfuls of barley flour, a pinch of salt. Dissolve in a little water as for starch, then add five cups of boiling water. Keep in a glass jar in a cool place. Pearl barley boiled three hours and strained may be used in place of the barley flour. When ready to use mix the two ingredients, amount depending upon age. To start with use more barley water than buttermilk, but gradually decrease amount of barley water and increase buttermilk. "Grown-ups" should take it quite hot with a teaspoon, do not drink it.

E. M. S.

A Few Good Sandwiches.

SAUSAGE Surprise.—Fry some nice pork sausage to a delicate brown; drain, chop fine, then mix with enough smooth tart apple sauce to make a paste. Season with salt and pepper, and spread between thin buttered bread.

Cream Cheese and Liver.—Boil three chicken livers, then chop very fine with a small onion, one small pickle, three olives and a little green pepper. Add an equal bulk of cream cheese, season with celery salt and make into sandwiches with thin slices of rye bread.

Salad Sandwich.—Chop very fine two cucumbers, six green onions, six radishes and one mint leaf. Let it stand (marinate) in French dressing one hour. Drain carefully, then spread on white bread, add mayonnaise and make into neat sandwiches.

Salmon Sandwiches.—Drain canned salmon, flake carefully, removing skin and bone, then add tartar sauce to make a spreading paste, and make up with white bread. Tartar sauce is made like ordinary mayonnaise, but after stirring is finished one tablespoonful onion juice, one tablespoonful chopped capers and the same of chopped cucumber pickles are added to a two-egg mixing of mayonnaise. Chopped nasturtium pods may be used in place of the capers. This sauce is excellent with fish, or with cold jellied meat.

Cheese and Apple.—Mix half a cream cheese with one-third cup of tart apple sauce. Add chopped nuts if desired, and make into sandwiches with white bread.

Cheese and Horseradish.—Mix half a cup of grated cheese with half a cup of stiff apple sauce, and a tablespoonful of grated horseradish. Moisten with cream, either sweet or sour, season with salt and make up with graham bread.

Cheese and Pineapple.—Mix equal quantities of shredded pineapple and cream cheese, season with salt, pepper and lemon juice, and make up with white bread.

The Country Church in Colorado.

TWO miles from us is a small church, made of cement blocks. It has a small vestibule as entrance, an alcove for pulpit and organ. The windows are small, six lights to a sash, with green shades, common wood bottom chairs for seats. The floor is uncarpeted, but always looks clean. The platform where the choir and minister stand is carpeted. When the church was first built it was union, all denominations contributing to its cost, but after a short time it was thought best to put a vote for some one denomination. The meeting called out considerable feeling, but as the Methodists had the largest number of votes it was decided that way. Several families attend the church who did not join. As a church it has a small membership, but all seem to work together for a social center. The Women's Mission and Aid Society has started a meeting together of the people once in three months, at some one's house; take their dinners and have a real social time. The first was held last month at the house of the pastor, who lives on a homestead six miles from the church. They have but three rooms in their house, but one quite large, containing two beds, which were taken down, made room for the long table for dinner. At this meeting a very pretty silk and worsted crazy quilt was presented the pastor and wife from the church aid society with name of each donor worked on the blocks. It proved not only a great surprise, but a very happy one for the pastor and wife. The day was spent in friendly social enjoyment. It is the getting together, and mingling with others that gives one a feeling of interest and friendliness in others, also helps to break the monotony of life. We are all different; many are not congenial and not "our kind of people," but they are human.

In this Great Plains country one meets all sorts and conditions of life, although there is less of the foreign element than in some States. There are some young girls who take an active part in choir, church and Sunday school who are not only very nice looking and appearing, but modest as well; I am greatly charmed with them. One of the girls who is preparing for teaching, and very bright in her studies, asked me to come and see them in this manner: "Mrs. Johnson, we would love to have you come and see us, but we live in an old sod house, and it's a terror." I felt sorry for the poor girl; her father is one of the leading members in the church, a good man, I am told, but does not "get on in the world" financially very fast; has a large family of children and is trying to educate them so they can be of use in the world, a laudable ambition. We have some good singers, and a cabinet organ of very good tone. The young girl who plays just graduated from our county high school.

Very few have any flowers or shrubbery here on the plains, but a week ago Sunday a delightful surprise awaited us. On entering the church we saw large pitchers of lilacs on the platform steps. How beautiful they were, and brought to mind the great bush of lilacs by the window of my mother's room at the "old home on the hill" in New York State. There is no flower so "homey" as the lilac to me. It is like the robin among birds. We never had seen a robin since we came to Colorado until a few weeks ago, when I saw a big redbreast walking from the windmill towards the house. I almost held my breath, and tears came to my eyes at the sight of the "old home" bird. He flew away, did not sing one note, and I have never seen one since. In Wyoming there were lots of robins, but there were large trees and many of them.

The children are practising at Sunday school for "Children's Day;" that day usually draws a crowd. People who never attend church at any other time will go then. It is something out of the ordinary and attracts. They decorate the church as well as possible with what material can be had, mottoes and such like; all try to make the best of everything. The pastor is not an eloquent man by any means, but he preaches good helpful sermons. I never attended a Methodist communion until a short time ago, and I saw a great contrast in the little plain stand, with common ware pitcher and glasses with water colored with grape juice for the wine, from what I had been accustomed to in Nebraska, Kansas and the East. But it all meant the same. The presiding elder failing to come as expected the pastor served the bread and wine to the communicants who went to the altar. After service there is a general hand-shake and friendly intercourse which lasts some time. The people turn out well and 57 at Sunday school seemed a good number where the people are so scattered, and some so far away. There are whole sections where there is not a house. One cannot realize the conditions until she lives here and sees for herself. This Great Plains country has been settled twice before and abandoned by most. This third settlement is not nearly so thick as even the first, we are told. The superintendent of the Sunday school lives seven miles from the church, and some bring their children 10 or more miles. But riding over these prairies is very different from the rough, rocky roads of parts of Wyoming and Colorado I have seen. The little country church has a good mission to perform, and is a blessing in many ways to the people.

MRS. FREDERICK C. JOHNSON.

Sweet Cucumber Pickles.

WILL you give a recipe for making sweet cucumber pickles, such as we buy at grocery stores? I. B. W.

Soak four quarts of small green cucumbers in a strong brine for three days, then drain and cover with fresh water with one tablespoon of alum added, and let soak three days longer, then drain; wipe dry, and cover with weak vinegar; let them simmer in this two hours, then turn into the colander and drain. Make a spice-bag by tying in a piece of muslin one ounce each of cinnamon buds and allspice berries, and one-half ounce of celery seed. Put this in three quarts of vinegar, with one pint of brown sugar, and let heat until boiling hot; pour over the cucumbers, cover, and let stand until the next day, and repeat this for two mornings; the third day cook the liquor until syrupy, add the cucumbers and heat slowly until scalding hot, then pack in glass jars, pour the hot liquor over them and seal.

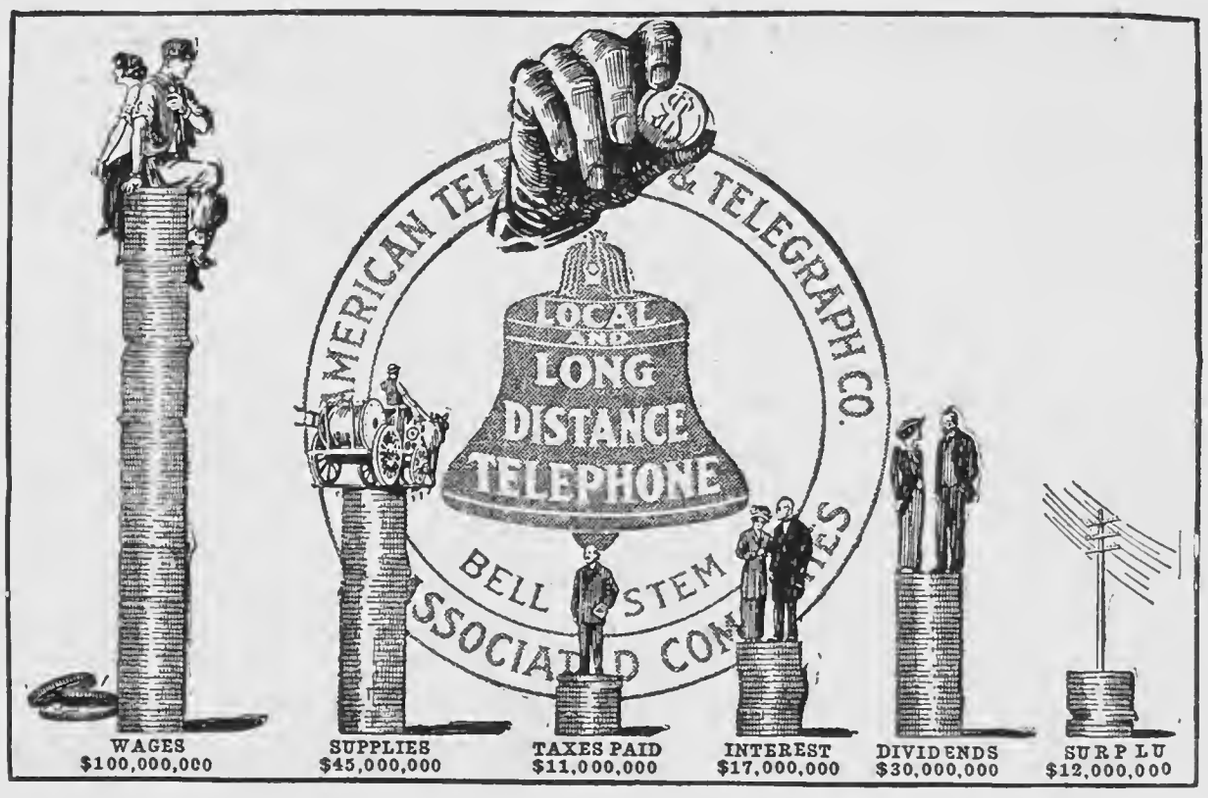
BOILING GREEN CORN.—The very best way to boil green corn, and I have tried a good many, is to put it into cold water to cover nicely, add one tablespoonful of salt for every half dozen ears, let it come to a boil, and boil five minutes. You will find it done and very palatable when cooked this way. I. M. B.

PEANUT BRITTLE.—Stir two cups of granulated sugar in a frying-pan over a hot fire until the sugar is changed to caramel. Pour at once over a cup of shelled peanuts, heated and turned into a shallow, buttered pan. When cold tap the pan, turn upside down, upon the table, to remove candy, then break into small pieces. The peanuts are at their best when fresh roasted. A. C.

The question of a night light for the sick room in a country home may be solved by borrowing one of the barn lanterns. Hang the lighted lantern outside the window; with the shade raised there will be plenty of light inside the room for most purposes, while the mere dropping of the shade will shut it out. There will be no unpleasant fumes inside the room, nor any absorption of the oxygen.
Michigan. M. E. S. H.

SWISS CHARD.—In your issue of March 21 you give a recipe for cooking Swiss chard. You say "the first young leaves are boiled," also "as the chard grows larger the leaf is stripped and only the mid-rib is used." I have grown Swiss chard for a number of years, the past two years the variety named Lucullus. This grows very large. We cut out the mid-rib and use the green leaves all Summer up to heavy frosts in the late Fall. Cook the same as spinach except that the large leaves may need cooking a little longer. F. A. C.

No great thing is created suddenly, any more than a bunch of grapes or a fig. If you tell me that you desire a fig, I answer you that there must be time. Let it first blossom, then bear fruit, then ripen.—Epictetus, about 60 A. D.



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For Supplies—$45,000,000

Paid to merchants, supply dealers and others for materials and apparatus, and for rent, light, heat, traveling, etc.

Tax Collector—$11,000,000

Taxes of more than $11,000,000 are paid to the Federal, state and local authorities. The people derive the benefit in better highways, schools and the like.

Bondholders—$17,000,000

Paid in interest to thousands or men and women, savings banks, insurance companies and other institutions owning bonds and notes.

Stockholders—$30,000,000

70,000 stockholders, about half of whom are women, receive $30,000,000.

(These payments to stockholders and bondholders who have put their savings into the telephone business represent 6.05% on the investment.)

Surplus—$12,000,000

This is invested in telephone plant and equipment, to furnish and keep telephone service always up to the Bell standard.

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Live Stock and Dairy

LARGER JERSEY CATTLE WANTED.

THERE is a tendency to breed Jersey cattle larger in the past few years. The average farmer has the impression that the "watch charm" size Jersey is typical of the breed, but this is not the practice nowadays. One Jersey man, Milo Fuller, of Ohio, declares that a good-sized Jersey cow should weigh 1,000 pounds, and there are many Jerseys which pass this mark. "Jersey breeders," he says, "are now considering the 900-pound cow small, and bulls frequently weigh from 1,700 pounds upward to a ton. Stoke Pogis III weighed 1,800 pounds, and one of the famous bulls of the breed approached the 2,100-pound mark. The reason for there having been so many small Jerseys scattered about the country is that the breeder chose a cow for a dooryard pet, rather than for capacity, and the billionaire farmer for years fancied the small cow. This fatal mistake in breeding small Jerseys was at its highest in the eighties. In the nineties the idea of breeding them larger took hold of those higher up in the Jersey business. The small Jerseys still persist on the average farm. The St. Lambert family are large cattle, the Island bred cattle are smaller than the American and English-bred cattle. Yet there has also been a tendency in the Islands to breed the cattle larger during the past five years.

"The farmer who has small cattle should improve them by breeding to a purebred registered bull. The weaker the stock, the better the sire should be. The average farmer with grade stock inclining toward the Jerseys should breed larger, and breed to better stock. Keep in sight the work of the prospective bull's dams. I would rather have an animal with a good mother, one that was tested and gave good results, than to go back three or four generations and find a half-dozen dams of high ability. There is a greater demand for high-testing milk. This demand is greater than in the old "cheese factory days," and the average farmer must either turn to high testing breeds, or if he has a low testing breed, look for bulls of high-testing families of that breed. All breeds are being perfected, and the demand for a good per cent. of butter fat, together with economical producing ability is what the farmer must secure.

"The points which the farmer should observe in selecting a Jersey, a Holstein, an Ayrshire, or any dairy cow are similar. We want the wedge shape, thickness through the hips, thin through the shoulders, thin thighs, well-balanced udder, long slim tail, a level back, a good intelligent head. I look for a good milk well, good-sized, and wandering milk vein. I look for intelligence in the animal. There are some animals that show intelligence in their countenances, and others have a stupid look. I believe stupidity is an evidence of incapacity in an animal as well as person. I like to see a bull formed like a cow, broad through the hips and narrow through the shoulder. I don't like surplus meat on an animal, for every extra pound throws that animal in the beef class. I look for rudimentary teats on the bull, the same as on a heifer. I like these rudimentaries wide between each other, as teats should be on a cow's udder. These principles seem to hold good in the dairy breeds, and the farmer should observe them."

O. Platt, of Ashtabula County, states he is not breeding his Jerseys under 22 months of age. This allows them to acquire size. He was unfortunate in having one freshen at 16 months, and her growth was seriously handicapped.

W. J.

SALTING THE COWS.

COW TESTING IN WISCONSIN.

THE State of Wisconsin is doing some remarkable work in organizing farmers into coöperative work. All sorts of things, from selecting seed potatoes to studying music, are organized and directed until Wisconsin is rapidly taking its place as the leading agricultural State in the Union. This is not due to the fact that Wisconsin has superior advantages of climate or soil, for other States in the same latitude have the same. Wisconsin's gain is due to the fact that farmers are organizing and concentrating their efforts along definite lines. As an illustration, take the following report of the record of 10 herds of cows in the Ellsworth Cow-testing Association. As we see, this is a high school test, the work in each herd being done by a boy in the agricultural course. Here they have found a robber cow which cost her owner over $5 per year, and another liberal worker which paid a profit of over $69. Very likely the robber was getting away with a reputation for paying a profit until the boy exposed her record. This chasing out the robber cows is what is to make Wisconsin the great dairy State rather than cheap bran or alfalfa soil.

RECORD OF 10 HERDS.

OWNER.	No. cows.	Milk	Test.	Butterfat.	Value of Butterfat.	Cost of feed.	Profit.	Av. profit per cow.
		Pounds.	*Per ct.*	*Pounds.*	*Dollars.*	*Dollars.*	*Dollars.*	*Dollars.*
W. M. Leonard	13	58,008	4.3	2,426.6	753 81	388 44	356 03	27.38
A. C. Buttner..	16	107,482	3.8	4,073.0	1,330 81	257 96	1,077 85	67.36
A. Thoreson...	10	49,383	3.5	1,808.2	593 92	144 30	488 52	48.85
F. C. Teubert..	19	95,679	4.3	4,033.7	1,300 75	534 15	733 28	38.59
O. Aamodt.....	18	88,817	4.1	3,534.8	1,088 03	345 10	742 93	41.27
F. M. Welch...	5	30,095	3.4	1,147.6	367 23	168 75	198 45	36.49
H. B. Lock.....	7	36,046	4.2	1,392.7	423 10	121 20	292 27	41 95
P. Shannon....	5	41,198	3.6	1,574.0	479 83	131 70	346 72	69.34
O. H. Olson....	6	40,300	4.7	1,473.2	441 85	99 79	342 06	57.01
E. J. Finn.....	5	17,573	3.6	729.3	233 43	146 75	86 68	17.33
Average...	.....	57,458.4	3.95	2,219.31	701 77	231 81	462 48	.....

Complete record of best cow, owned by F. C. Teubert, Beldenville, Wisconsin. Herd cow No. 79, grade Holstein.

Total milk.	Av. test.	Butterfat.	Value of butterfat.	Cost of feed.	Profit
Lbs. 8,276	4.2	370.84	119 85	*Dollars.* 50.85	*Dolls.* 69 48

Fourteen of 18-Short-horns were of beef type. During the testing year 11 cows were sold, one died, one sick. Two of the cows were old and hard milkers; two were kickers, two were hurt, and four were too small. One sucked herself.

Complete record of poorest cow, owned by W. M. Leonard, Ellsworth, Wisconsin. Herd Cow No. 78. Scrub.

Total milk	Av. test	Butterfat.	Value of butterfat.	Cost of feed.	Loss.
Lbs. 1,375	4.4	60	*Dollars.* 18 83	*Dollars.* 24 04	*Dolls.* 5 21

Out of the 87 cows in the 10 herds the following is their breed:

Scrub.	Grade Holstein.	Grade Shorthorn.	Red Polled.	Grade Jersey	Grade Guernsey.	Purebred Guernsey
44	11	18	1	6	1	6

This record was of the first 10 herds in the Ellsworth High School C. T. A. that finished the year's work. After all the records were in, the best cow shown here was beaten by a grade Holstein which gave nearly 400 pounds butter fat. There were nearly 25 herds in all, each one tested by a boy in the agricultural course.

RALPH LOCK.

AILING ANIMALS.

Chorea.

I HAVE a young sow about six months old that has apparently lost use of knee-joints in hind legs. It can walk fairly well without bending its knee-joints. When standing at the trough to eat slop its hind feet keep moving up to its body, first one and then the other alternately. It eats well and seems to be well otherwise although it is getting thin. I think it was caused by running along the wire fence biting at some little pigs outside. It has been in this condition now for several weeks without any apparent changes. What can be done for it? E. H.

Maryland.

We suspect that the pig has chorea (St. Vitus dance) which is incurable. She should not be used for breeding. Let her live an outdoor life so far as possible and feed mixed rations including 10 per cent. of digester tankage. A. S. A.

Catarrh.

MY horse has chronic catarrh, has had it for three months. He is in fair shape, weighs about 1,350, his weight when well is 1,500. Discharge is from one nostril and smells offensive; his teeth in good shape. I have had two veterinarians for him; they did him no good. He has no cough. W. F.

Maryland.

A diseased molar tooth is commonly the cause of a bad smelling discharge from one nostril, or there may be a collection of pus in a sinus, or the horse may have glanders. A graduate veterinarian should examine the horse and if he finds glanders absent the tooth should be removed by trephining or the sinus opened by trephining for removal of pus. Home treatment will not avail in such a case. A. S. A.

Depraved Appetite.

I HAVE a cow f ur years old; she is hardy, a good milker, and butter-maker, but she has a craving for bones, leather, meat, etc. She got in horse stable, ate up a set of lines and some other harness, swallowing buckles and all. She stays quite thin, has a good appetite, but will leave everything for a piece of leather or a bone. Can you tell me the cause and if anything will stop it? A. A. H.

New Jersey.

If you are sure by the tuberculin test that the cow is free from tuberculosis feed her bran freely at each meal and if this does not suffice mix a tablespoonful of precipitate phosphate of lime in her feed twice daily, or allow an equal amount of bone meal. Powdered charcoal may also be freely used and the cow should have access to rock salt. Feed a mixed ration. A. S. A.

Contracted Hoof.

MY horse is sore in one of his front feet; is not exactly lame, but he favors it a good deal, and after driving he acts as if it was sore. The frog is very hard and brittle and at the back part of the hoof it looks cracked. What can I do for it? J. F. N.

New York.

Poultice the foot for a week with hot flaxseed meal to which add a little bran to prevent sticking. Wash the hoof clean on discontinuing the poultices and then apply lanolin freely once a day. Keep the horse off board floor and have him worked or exercised every day. A. S. A.

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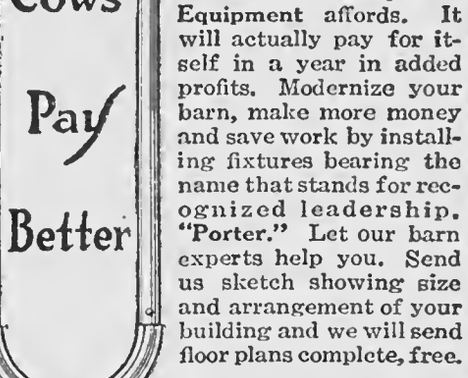

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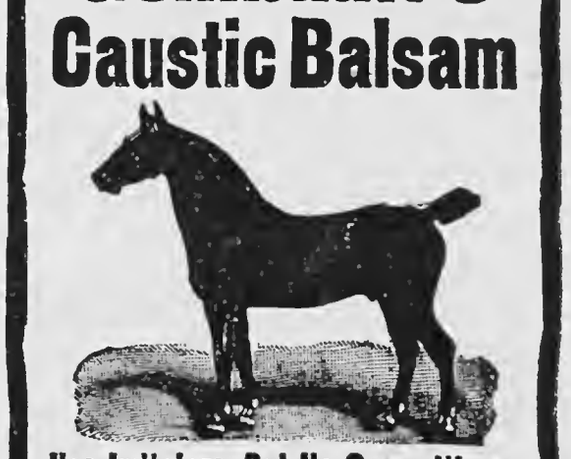

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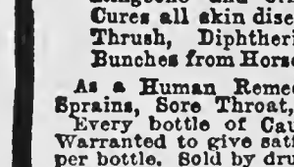

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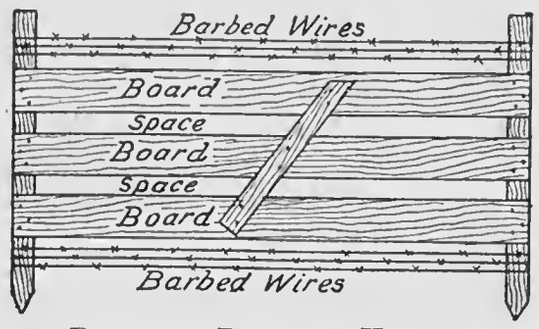
PORTABLE HOGPEN.

REFERRING to inquiry of L. D. M., on page 872, following is brief description of a simple, inexpensive and serviceable portable hogpen, which I made, and find entirely satisfactory for a few pigs or hogs, a calf, etc. With the materials on hand, it can be made by one person in half an hour or less.

For the corners use four 4x4s or 2x4s, three to five feet high as desired. To these posts nail, for each side, two or three one-inch boards, six inches wide, making a pen eight, 10, 12 or 14 feet square, as desired. Nail the bottom



PANEL OF PORTABLE HOGPEN.

boards three or four inches above the bottom of the posts, so that the board will not touch the ground where uneven, and cause the pen to tilt or teeter. Below the bottom board and above the top board stretch and nail two or three strands of barbed wire to discourage attempts to root under or climb over. To steady the sides, nail them together in the center with a cross piece. Leave a space of about two inches between the boards; this allows better circulation of air and is pleasanter for the pigs than being cooped up day after day within a tight fence through which they cannot see. For ease in transferring from one pen to another, etc., one corner may be fastened with hooks instead of nails; there will be enough "give" in the other three corners to allow for opening wide enough for hogs to pass through.

There are many advantages in such a pen for a few animals in Summer. It is so light that it may be readily carried or moved about by one man or a couple of boys, without removing the hogs. By shifting the pen every few days the ground does not become foul, the animals keep clean, and the manure may be left where wanted without handling. The pen may be set under a tree or any place where the ground needs loosening up, and the hogs will do a thorough job, and incidentally destroy every white grub within reach. C. B. LOOMIS.

Exhibiting Bull.

I HAVE a very fine Guernsey bull, 15 months old, and wish to exhibit him at the county fair. He is very gentle. Do you think the noise and publicity there would tend to make him start to be ugly and ill-tempered? Besides my bull, which is kept in a pasture by himself, I have a two-months-old purebred bull calf, just weaned, that I am keeping in a box stall. Could he go out to pasture with the 15-months-old bull, or would the latter injure him? I suppose it would be unwise to let him run with the cows. All the Guernseys I have ever heard of or seen pictured have horns. Would it detract from their value to be dehorned, or are even the bulls considered so tractable as not to need it? G. G. H.

The bull will not be likely to lose his gentle disposition if some of his regular human friends go along with him. If left to the care of strangers he might be teased or angered by careless treatment. A bull knows his friends and is usually safe with them. We would keep the young bull by himself in a small pasture, or tied on good grass with a long rope or chain. Do not let such a calf run with the cows. Except for exhibition purposes in the show ring the cows are better with their horns taken off. The judges will allow a few extra points for well-shaped horns, but safety is better than "points." L. M.

Relining Silo.

I HAVE a square silo which will have to be relined. Shall I have to take off all the old lining or would it do to leave it on? Which would you advise, a lining of wood or lath and cement?
Fabius, N. Y. J. R.

Unless the lining of the silo is so badly decayed that it will not hold nails, I would not remove it, as I am "guessing" that it is a single thickness of boards, but re-cover it, and so add to the strength of the walls. Now that lumber good enough to face a silo with has become so high in price, it may be that it would be the better plan to lath and cement it, provided the frame is of sufficient strength to hold the walls from springing and cracking the cement. When such a plan is pursued, you can add to the value by coating over the cement with a coat of gas tar (not coal tar) and gasoline, cold mixed—which will make the wall both air and moisture proof. If you cement, you have the choice of stripping up the walls, and using common lath, or get the solid grooved board lath, or metal lath, about which you can best choose by pricing the cost of labor. The cement plan at this distance appeals to me. JOHN GOULD.
Ohio.

Color in Dairy Products.

NOW comes the Department of Agriculture claiming that the food has more to do with coloring both milk and cream than the breed.

"Chemical tests show that the yellow pigment in milk consists of several well-known pigments found in green plants. Of these the principal one is carotin, so called because it constitutes a large part of the coloring matter of carrots. The other yellow pigments in the milk are known as xanthophylls. These are found in a number of plants including grass but are especially abundant in yellow Autumn leaves.

"These pigments pass directly from the feed into the milk. This explains the well-known fact that fresh green grass and carrots increase the yellowness of butter, the only standard by which the average person judges its richness. On the other hand, a large proportion of these pigments is deposited in the body fat and elsewhere in the cow. When the ration is changed to one containing fewer carotin and xanthophyll constituents, this hoarded store is gradually drawn upon and in consequence the yellowness of the milk does not diminish so rapidly as it otherwise would. This yellowness increases, however, the instant the necessary plant pigments are restored to the ration.

"Green grass is probably richer in carotin than any other dairy feed. Cows fed on it will therefore produce the highest colored butter. Green corn, in which xanthophylls constitute the chief pigment, will also produce a highly colored product. On the other hand a ration of bleached clover hay and yellow corn is practically devoid of yellow pigments and the milk from cows fed upon it will gradually lose its color. It is, of course, indisputably true that the breed does influence the color of the milk fat; but vary the ration and there will be a corresponding variation in the color of the milk fat in each breed."

At the same time all who have fed cows of the different breeds know that Guernseys and Jerseys certainly make a darker-colored milk than other breeds. The Guernseys are particularly noted for this. The Department admits this in the following:

"In cows of the Jersey and Guernsey breeds the body fat is frequently of such a deep yellow color that some butchers and consumers look with disfavor upon beef from these breeds. For this prejudice there is absolutely no justification. The yellowness of the fat springs from the same causes as the yellowness of the milk fat and there is no reason for objecting in one case to the very thing that is prized in the other."

What is Dairy Cleanliness?

I WAS much interested in J. J. D.'s account of the Lincolndale school, farm and dairy. The point I most wish to touch upon is the three washings given the cow's udder. Is this scientifically the thing to do? We never wash an udder except when milking begins immediately, and never leave a cow until finished. Any work on the udder causes the milk to start, and the muscles expand painfully if not at once released.

My father liked milk direct from the cow and lived beyond his four-score years, and I also have hidden many gallons of the warm fluid that the strainer never inspected. I also am certain my father's cattle were subject to cow ailments much more than any I have ever owned, on account of improved care I think. We have always had an enviable reputation from our farm dairy products, and yet we feel almost filthy compared with those everlasting washings, groomings and snow white garments of the milkers we frequently read about. Will someone please tell us if we are "horribly unclean?" The old ways of decent cleanliness taught us by our good butter-maker mothers seems like barbarous relics of the past compared with some of these certified methods of today. J. E. H.
Emporia, Kans.

"DOESN'T it give you a terrible feeling when you run over a man?" they asked him. "Well, if he's a large man," replied the automobilist, "it does give one a pretty rough jolt."—Ladies' Home Journal.

DAIRY CATTLE

GUERNSEY BULL REGISTERED, ready for service, $75.00. Tuberculin tested, Reagan Bros., Tully, N. Y.

FOR SALE—Two Registered Guernsey Bull Calves imported dams. Sire—Golden Secret of Follyland. JOHN JACOBS, New Baltimore, New York

For Sale—A fine Guernsey Bull. Three years old. Own son of the great Masher's Seqnel. Bargain. Address Stuart R. Mann, Derby, N. Y.

GUERNSEYS FOR SALE
Two cows fresh this Fall; also a few heifer and bull calves, Sired by Prides May King of Linda Vista No. 18617, ont of dams of best blood.
FOX RUN FARM
F. S. GILCHRIST, Superintendent - Peterboro, N. H.

FOR SALE—Trio registered Ayrshires. Three months old. First class. John M. Lewis, Alfred Station, N. Y.

FOUR REGISTERED AYRSHIRE BULL CALVES, two, three, six and seven months old. Beautifully marked. Offered by WORONOAKE HEIGHTS, WORONOCO, MASS.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

FOR SALE—Heifer calf, born May 29. Sire—Paul Oakhurst Mechtilde No. 106524. Dam—Lorinda Clothilde Posch No. 121245; large, well grown, more black than white. Price, $100.00. NEVIN FARM, EASTON, PA.

YOUNG REGISTERED HOLSTEIN BULL
127791, now ready for sale. Well bred, handsome individual, even black and white. $135. We have two others more fashionably bred and higher priced. MOHEGAN FARM, Hudson Valley Headquarters for Purebred Stock. CHAS. H. BAKER, Owner, Peekskill, New York

HOLSTEINS—Registered bull calves, $35.00 each. High grade Holstein heifer and bull calves 1-week old, $15.00 each. October shipment express paid in lots of 5. 100 High Grade Holstein Cows; 60 Yearlings and 2-year olds; 60 head of Registered Holsteins. Reference, 1st National Bank, Tully, N. Y. REAGAN BROS., -:- TULLY, N. Y.

Registered Holstein Yearling Bull
whose 12 nearest dams have official records that average over 500 lbs. milk and over 23 lbs. butter in 7 days, whose sire, Admiral Walker Gelsche, has 34 officially tested daughters, the only bull in New England that has a daughter with a record over 30 lbs. G. F. GREGORY, Dummerston Farms, Dummerston, Vermont

Holstein and Guernsey Heifers—A car-lot of yearlings from A. R. sires and dams. Prices reasonable quality guaranteed. Percheron stud colts, bull calves, Berkshire, Cheshire and Poland China pigs. Write at once for further description, prices, etc. Tompkins Co., Breeders Ass'n, C. Owen Carman, Sec'y, Trumansburg, N. Y.

East River Grade Holstein Cows For Sale
100 cows served to calve in August, September and October, all served to registered bulls. STRICTLY DAIRY TYPE AND GUARANTEED. 60 yearling heifers, 40 two-year old heifers all sired by pure blooded bulls from high producing dams. 10 extra well-bred registered bulls, PONTIAC BREEDING, from A. R. O. DAMS. If you are looking for extra good dairy cows, visit the EAST RIVER HOLSTEINS. Special price for the next 30 days. WE TUBERCULIN TEST. JOHN B. WEBSTER, Dept. Y, Cortland, N. Y. Bell Phone 14, F.5.

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Pedigree Chester Whites out of excellent stock, from 8-weeks old. Either sex. SCOTT, Stone Ridge, N. Y.

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Selected animals, all ages, for sale. We have the Large Berkshires with extreme length and our herd is noted for the prolificacy of its sows.
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I have a fine lot of March and April (1914) Boar Pigs fit for service this Fall; of high class conformation and good looks.
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SUMMER FEEDING OF DAIRY CATTLE.

THE favorable influence of early Spring pasture on the milk flow is very well known. As a rule, the cows will obtain enough food from pasture alone during the early part of pasture season to make large secretion of milk, but later in the season it is absolutely necessary to supplement the pasture, which can be done by feeding grain, silage, or crops that are green.

The flies are blamed for the marked falling off in milk during hot months of July and August. It is true that flies do worry the stock, but if the animals were given some succulent roughage, as green crops or silage, they would not have to graze for a long time over a large area on dry pasture in the hot sun to be pestered by the flies. A good spray of fly oil before going to pasture will save feed. Some dairymen stable their cows during hottest part of day, feeding them inside then with green forage crops.

Most cows will give more milk on grain in addition to pasture, but usually not enough to pay extra cost of grain and feeding it. Grain is only profitably fed to heavy milkers, which will make them produce a maximum amount of milk. Therefore, really the only methods of feeding are soiling or giving silage. Soiling consists of cutting crops and feeding them fresh and green. Soiling crops are succulent, palatable, easily digested, and stimulate a flow of milk. They are fed in large quantities, 60 pounds being fair allowance; grain only being fed to heavy milkers, in addition to pasture. While crops to be used may be varied, a good example is the rotation employed on the writer's farm. Oats and peas sown in April, cut and fed from middle of June to middle July. From middle July to August first green Alfalfa is fed to cows. From August to October green fodder corn is fed which is planted in succession in Spring. A change is made now and then from corn to Soy beans or cowpeas, or any crop as we happen to have.

While soiling has many advantages, the biggest drawback is the increased labor, such as seeding, cutting and hauling this heavy green food. The feeding of silage cuts out a great deal of this increased labor and at same time provides a succulent feed, stimulating a large milk flow. Therefore a good dairyman should have an extra silo filled with corn for Summer feeding, or have one large enough so he can supply his cows with succulence during Summer. The feeding of silage is the most economical method of supplying food for stock during hot, dry periods of Summer when pasture is short.

New Jersey. J. W. G.

THE HOG A DAIRY PARTNER.

"MANY of us dairy farmers are losing good cold cash by neglecting to keep a few hogs," says Edward Williams of Ohio. "I keep but a few cows, and am an average representative of the small dairy farmer of Eastern Ohio and of other States. I have learned the value of a good bunch of porkers, and I have $350 or $400 each year to my credit from hogs which supplement my small dairy.

"My milk brings only cheese factory prices. I have whey left. My neighbors are keeping but two or three hogs for family use. They are making poor use of the whey product which I am turning into hogs. I am not a scientific feeder; I do not practice pasturing or hogging down corn as is done in the corn sections. I have a hog pasture like other small farmers; I buy feed as they do, and I have my book here to show they have paid me and will pay other dairymen as well as myself. In fact a number of my neighbors would be pleased with a $400 annual income from a half a dozen scrub cows, while it comes my way easy from the hogs I sell annually.

"I sell 20 to 30 hogs each year. I aim to have them weigh about 175 or 200 pounds at five and one-half or six months of age. The hogs return me about $15 the head, sold to the local buyer. I do not keep careful account of interest on investment, or possible loss from disease, but what I have done is this: I have sold myself May 3, five pigs for $20. That is a pretty good figure. On September 7 I marketed four of the five pigs for $59.92, and have one left, which I value at $15. I purchased the feed stuff, paying $23.92 for hominy and shorts. After all I am about $51 ahead on this bunch at a total expense of about $24 for feed. A farm accountant might show me in dollars and cents that after computing labor I might be losing money, but a $51 margin is pretty good on this bunch. I do all my own work, and it pays me to keep a few hogs much better than a lot more scrub cows.

"Here is the point. There are farmers who have become disgusted with slow maturing hogs; they saw no profit in them, and quit. I know one instance where a tenant declared he had fed 14 acres of corn to seven hogs. They were two years old when butchered, and at every stage of the game they were a losing proposition. This is the way the average farmer has played with hogs, and it hasn't paid. It isn't paying me as well as should I sow rape for Autumn pasture, have some rye for Spring and Fall pasture and supplement my ration with tankage. I do feed green sweet corn on the stalk. There is but little difference in breeds. I have the O. I. C. and I find they mature quickly. Hogs nowadays mature more quickly than a score of years ago, yet there is too much of that old blood still kept on the average Eastern farm. Many farmers draw on their income from the farm to pay for the meat supply. Keep a few hogs, and they will increase the income materially. Keep two or three sows, have them farrow in March or April and in August or September, and they will pay."

W. J.

DO OLD HENS PAY?

CAN you print any figures showing the comparative egg yield of hens in their second year? Prof. James Dryden conducted some experiments along this line. Can you get his figures and tell us whether it pays to keep old hens for laying stock. E. J. S.

The Utah experiments which were made by the writer, and were conducted for a number of years, showed average pen results from Leghorns in the first year of 164 eggs, and in the second 126 eggs per hen. Of course, this refers to averages and it is not possible to give any figure that will represent the laying of all flocks, as you know they vary so much, even in the same breed. In exceptional individual cases, more eggs were laid in the second year than in the first. For instance, a hen laid 201 eggs the first year and 241 the second. Instances such as this might be given for a number of flocks. Forty-one hens of different breeds with individual records averaged 171 eggs the first year and 125 the second, or 40 per cent. more the first than the second.

At the Oregon Station later results were secured as follows: A flock of 50 Barred Plymouth Rocks laid 160 eggs the first year, and 105 eggs the second year. Fifty White Leghorns and crosses laid 151 eggs the first year and 130 eggs the second year. In these experiments the laying year began November first. Out of the 100 hens 17 laid more eggs the second year than the first.

The conditions as to time of hatching and kind of care and feeding have a good deal to do with the number of eggs laid the first and second years. Where the conditions are more favorable during the second year than the first a better egg yield will be secured in the second year. Again, where the period of maturity varied or where the laying year began in the Spring, the second year records were greater than the first, but where maturity is reached in the Fall and laying begins, then, the average flock results invariably showed that the first year is the most productive, and that there is a gradual decrease each succeeding year. When the first experiments were made at Utah the prices of eggs were very much lower than now. On the showing then made it looked on the face of it that it would be possible to renew the flock each year where eggs were produced for market purposes. Since then the prices have risen to a point where it seems that it will pay to keep the flock two years. While the production is very much greater the first year, the eggs weigh more the second year, and if one has a select trade this will figure some in the calculation.

Again, the cost of raising the pullet is considerable, in fact the business of hatching and raising the stock is probably the most troublesome part of the poultry industry. If a good pullet could always be raised at a cost not exceeding the price received for the old hen, then it might pay to renew the flock every year. But I think it is very doubtful, with present methods of hatching and rearing the chicks, whether this can be done. It is not a question merely of raising the pullet. It is a question of rearing one that will have equal vigor and laying qualities with the parent. The great danger in the frequent renewal of the flock is that through faulty methods of hatching and rearing the vitality of the old may not be preserved in the new flock. If the poultryman is very successful in the hatching and rearing of the chicks he will, I think, find profit in renewing the flock each year, taking the flocks as we find them as a whole. I hope some time that the productive period of the hen may be lengthened. I have had enough individual cases where the second and even third year's production was higher than the average of the first year, indicating that it is possible by proper breeding to lengthen the period of profitably laying. If this is done it will be a great boon to the poultry industry.

JAMES DRYDEN.

Uneven Span Henhouse Roof.

WOULD there be any disadvantage in a poultry house made with a gable, one side of the roof being shorter than the other, the side toward the south? If this short side of the roof were made partly of glass, or even entirely, I can see some important advantages, but don't care to build a house that way if experienced poultrymen have good reason for never doing it?

New York. F. W. B.

The points to be taken into consideration in building a poultry-house roof are economy, durability, and convenience, and the type of roof which will best serve these ends will vary with the size and proportions of the house. For a house which does not exceed 16 feet in width the single slope, or shed roof is usually preferred; it is easily built, throws all rain water to the rear, gives a high front for windows and sufficient head room. It is difficult to span a greater depth than 16 feet with single rafters and consequently a deeper house is best built with a gable roof, either the ordinary type with rafters of equal length or one having the rafters of one side shorter than those of the other, the latter being called a combination roof. With the same pitch of roof and area of ground covered, a shed roof, gable roof and combination roof require the same amount of material, but the combination roof requires less height of rear wall than the gable roof and less height in the front wall than the shed roof; it is, therefore, a favorite type in poultry-house construction. A half monitor roof is one in which the short front rafters do not meet the long rear rafters but are dropped some distance below them. This gives a saw tooth effect much used in modern factories, the vertical space between the ends of the two sets of rafters being provided with windows for light and ventilation. This is an excellent type for very deep buildings as it admits sunlight to the rear of the building. Monitor roofs, hip roofs and A-roofs are also used to advantage on buildings of special construction.

M. B. D.

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The Henyard.

THE EGG-LAYING CONTEST.

THE thirty-seventh week—ending July 17—shows an egg output of 3,102; 26 eggs more than were laid during the previous week. The top-notcher this week is pen number 42, score 58; the "sour milk" pen of White Leghorns from Storrs Agricultural Station. This pen has laid a total of 1,539 eggs, which is only five eggs less than Tom Barron's White Wyandottes. One week more and they will pass the Barron birds and take first place in the record; but as they are entered as an "experimental" pen, and do not contest for the prizes, Barron's real contestant is the pen of Francis F. Lincoln's White Leghorns from Mt. Carmel, Conn. This pen laid 51 eggs this week, and has a total of 1,517; only 27 eggs behind the Barron White Wyandottes. Chas. Heigl's White Leghorns from Ohio are second in the week's score with a record of 57; two Pennsylvania pens tie for third place with scores of 56 each; they are Marwood Poultry Farm, Butler, Pa., and P. G. Platt's pen from Wallingford, Pa. Tom Barron's Leghorns are fourth with 54 to their credit. Pen number 40, from Storrs Agricultural Station, laid 53, and Geo. A. Cosgrove's pen laid 52, N. W. Hendryx's pen laid 50, Thos. W. Moore's pen 50, and C. H. Savage's pen 50. In all 12 pens of White Leghorns laid 50 or over, and not a pen of any other breed reached that number, though H. P. Deming's S. C. Reds came within one of it, laying 49. Below is the week's record:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	38	977
Frank L. Tuttle, Massachusetts	27	1,055
Waveny Farm, Connecticut	32	982
J. J. Francais, New York	43	1,208
White P. Rocks.		
Albert T. Lenzen, Massachusetts	39	1,067
F. H. Bentou, Connecticut	36	1,102
Storrs Agr. Station, Connecticut	32	891
Storrs Agr. Station, Connecticut	42	927
Storrs Agr. Station, Connecticut	45	1,082
Storrs Agr. Station, Connecticut	32	943
Storrs Agr. Station, Connecticut	41	774
Buff P. Rocks.		
A. A. Hall, Connecticut	35	1,101
W. C. Morgan, Jr., Connecticut	28	826
White Wyandottes.		
Tom Barron, England	45	1,544
West Mt. Pity Yards, Connecticut	24	925
Merrythought Farm, Connecticut	42	1,384
Neale Bros., Rhode Island	48	1,389
D. J. Ryan & Son, Connecticut	13	1,062
Buff Wyandottes.		
Dr. N. W. Sauborn, Massachusetts	19	1,057
Dr. N. W. Sauborn, Massachusetts	35	991
Am. Buff Wyan. Club, New York	30	916
H. L. Hamilton, Connecticut	31	723
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, Massachusetts	35	1,029
Single Comb Reds.		
Robert Seaman, New York	30	819
J. S. Gillespie, Connecticut	34	1,046
Dr. J. C. Diugman, New York	19	929
Burnham Pity Farm, Massachusetts	18	803
H. P. Deming, Connecticut	49	972
Geo. P. Dearborn, Florida	22	1,120
Dr. J. A. Fritchey, Pennsylvania	34	1,211
Ernest Underhill, New Jersey	35	891
W. H. Bumsted, Connecticut	33	675
Pinecrest Orchards, Massachusetts	39	1,212
Harry B. Cook, Connecticut	15	1,042
Colonial Farm, New Hampshire	37	1,072
A. B. Brundage, Connecticut	43	1,285
Rose Comb Reds.		
Glenview Pity Farm, Connecticut	24	1,013
C. S. Scoville, Connecticut	28	753
White Leghorns.		
Storrs Agr. Station, Connecticut	42	1,182
Storrs Agr. Station, Connecticut	53	1,259
Storrs Agr. Station, Connecticut	45	1,256
Storrs Agr. Station, Connecticut	58	1,539
Storrs Agr. Station, Connecticut	48	1,133
Braeside Pity Farm, Pennsylvania	40	1,045
Glenview Pity Farm, Connecticut	45	1,179
Manor Pity Farm, New York	49	1,093
A. B. Hall, Connecticut	44	1,099
Marwood Pity Farm, Pennsylvania	56	1,207
Geo. M. Harris, Connecticut	37	962
Bounie Brook Farm, New York	46	1,221
N. W. Hendryx, Connecticut	50	1,094
J. J. Linehan, Massachusetts	43	1,019
F. F. Lincoln, Connecticut	51	1,517
Cecil Guernsey, New York	47	1,303
Thos. W. Moore, Connecticut	50	1,114
Chas. N. St. John, New York	51	1,111
C. W. Sherwood, Connecticut	32	1,065
L. E. Sands, Pennsylvania	44	1,109
Tomoka Pity Farm, Connecticut	29	984
Venture Pity Farm, New York	17	926
Mrs. K. E. Woodruff, Connecticut	44	1,107
Wludsweep Farm, Connecticut	40	1,010
C. H. Savage, Connecticut	50	1,114
P. G. Platt, Pennsylvania	56	1,253
Heneta Bone Co., New Jersey	25	398
F. M. Peasley, Connecticut	47	1,120
Chas. Heigl, Ohio	57	1,047
Tom Barron, England	54	1,396
Branford Farm, Connecticut	49	1,243
James Munn, Massachusetts	38	1,036
Geo. A. Cosgrove, Connecticut	52	1,073
Buff Loghorns.		
Wolverine Pity Farm, Michigan	46	1,151
Blue Andalusians.		
E. D. Bird, Connecticut	46	1,151
Buff Orpingtons.		
C. Wilson, West Virginia	44	936
White Orpingtons.		
P. A. Demgar, New York	14	759
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	22	578
Silver Campines.		
W. J. H. Lobel, New Jersey	29	903
Dunghills.		
H. W. Collingwood, New Jersey	40	906
Daniel Hine, Connecticut	29	843
Daniel Hine, Connecticut	31	902
Mixed Breeds.		
Profitable Poultry, Massachusetts	39	956
Profitable Poultry, Massachusetts	34	964

GEO. A. COSGROVE.

Tame Leghorns.

MOST people regard the White Leghorn as a high-strung, nervous fowl, flying out of her skin at the least disturbance and, as many people express it, "wilder than a hawk." Let such people consider the picture shown at Fig. 415, page 967. Here are White Leghorns about as tame as a hen can be. They are literally eating out of the hand, and no one could ask more friendly birds than this little group, and yet when these birds were entered in the egg-laying contest, they were wild as partridges. The night before they were sent to the contest they were picked out of a tree, had never been housed or petted, but had run free all their lives. When they came to the Storrs egg-laying contest, Prof. Kirkpatrick and his attendants became interested in them, and made an effort to tame these wild birds and make friends with them. We see the result in the picture. This pen of Leghorns was entered by C. H. Savage of Connecticut. They have made a fair record; up to July 17 the 10 birds laid 1,114 eggs, producing 50 during the last week. We print the picture to show what can be done with kindly treatment and thorough care. It certainly is far better to have Leghorns that will eat out of your hand rather than wild birds which are ready to throw a fit the moment you make a quick movement with one of your hands.

Brown or White Eggs.

Is there any difference except in external appearance between brown-shelled eggs and white ones? Do they differ chemically or in nutritive value, and if so how? F. S. D.

There is practically no difference in analysis between a brown-shelled Light Brahma egg and a white-shelled Leghorn. The feed may make some difference in color of egg, but an egg seems to be an egg.

Weight of Broilers.

CAN you tell me what broilers should weigh and about how much they will dress away? H. M.
New York.

Broilers should weigh from one and a half to two pounds, live weight, though early in the season somewhat lighter ones will be accepted at market rates. Many are sold at a pound and a quarter. I do not know what weight broilers lose in dressing but it could be easily ascertained by weighing one before and after dressing it. M. B. D.

An Egg Buyer Talks.

I HAVE had some experience in buying eggs, and so am interested in this egg controversy. I sent away for choice eggs and only three out of 15 hatched. I did not "set them in the ice box or oven," as one seller seems to think we do. I bought "purebred White Wyandotte" eggs and have three black chicks from the hatch. Is it because I did not set them right?

We who buy send cash for eggs, and just common sense would indicate that we are as anxious to get results as the seller. He has his money and we have nothing if the eggs don't hatch. Each seller sends different directions or none as to setting the eggs. I haven't a doubt that every buyer does his best to get a good hatch. What would we bother with them for, otherwise? Some of the eggs that I bought were broken when they arrived. Buyer's fault, of course.

There are two sides to this question, and there are just as many honest buyers as sellers. All buyers are not fools any more than all sellers are sharpers. It will not improve the egg trade for the sellers to sneer at and doubt the honesty of their patrons or question the existence of brains among them. They may settle down to raising just common barnyard fowls. FLORENCE HOAG.
New York.

BOSTON MARKET REVIEW.

THE supply of fruit and green stuff is plenty and prices of course rule low accordingly in most cases. This is the consumer's opportunity and is duly appreciated in most cases. The grower has had the inside track and is willing the other fellow should have an inning at this time, as a large crop which returns only a low price comparatively, however, if in demand, so as to be moved quickly when brought to market is many times a paying crop at that. String beans, cabbage and cucumbers are too plenty and in over supply, they demand 50 to 75 cents per box on the beans, 50 to 75 cents per barrel on the cabbage, and $1 to $2 per box on the cucumbers are about the prices. Most other stuff cleans up fairly well and tomatoes and squash are short. Native tomatoes bring $3.50 per box, hot-house, 12½c. per pound; Southern stock about $1 per crate. Summer squash, 75c. per dozen; Summer marrow, $3 per crate. Yellow turnips, $2 per barrel; white turnips, 50c. per dozen bunches; beets, 30c. per dozen; carrots, 60c. per dozen; radish, 50 to 75c. per box in bunches. Rhubarb, 65c. per box of about 40 pounds. Peas, $2.50 per box; sweet corn, 30c. per dozen. Cauliflower, $2 per dozen. Celery, $1.50 per dozen; spinach, 50c. per box; lettuce, 35c. per box. Onions are working down in price as the supply increases and native sets are being cut; these bring about $2 per bushel. Potatoes have been out of season in price, but are more plenty and working lower; $2.50 to $3 is the price now per barrel, with sweets going at $4 per crate.

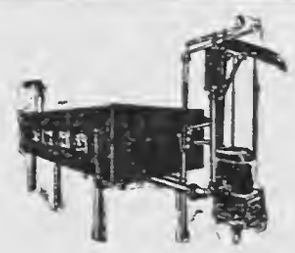
A few Southern apples bring $1.75 per basket, others $1, which is also the price for the few natives which appear. Yellow bananas, $1 to $3 per bunch, with reds going at $2 to $4.50. Blackberries, 14c. per box; blueberries, 15c.; gooseberries, 6 to 10c.; raspberries, 10c. per pint; strawberries, 15 and 18c. per box; currants, 5 and 10c. Canteloupes or muskmelons are not too plenty and bring $1.75 to $4 per crate. Sour preserving cherries, 6c. per pound; sweet cherries, 10 to 15c. per pound. Grapefruit, $3 and $4 per box; lemons, $5 per box; oranges, $2.50 to $5 per box. Pineapples, $3 to $5 per crate; peaches from California, $1 per box; from Georgia, $2 and $3 per carrier; plums, $1.50 per carrier; watermelons, 25c. and 30c. each.

Receipts of butter are not too heavy, especially of best grades, and prices rule up a little, yet some dealers say a decline is likely to follow as the recent rise will bring in heavier shipments from some points. Best tub creamery, 30c. and 31c. per pound, with boxes and prints, 1c. per pound higher; best Western creamery about 30c. is the price; good and fair creamery, 26c. and 28c. Cheese in good supply and demand not heavy yet prices rule about the same at 15, 16, 17 and 18c. per pound, according to grade.

Fresh eggs in demand, both in city and country centres, and supply not too plenty; price going slowly up. Young stock brings 34c.; good, fresh stock, 30 and 31c.; others from 24 to 28c.

Live and dressed poultry are in fair demand. Dressed fowls of best quality, 18, 19 and 20c.; medium, 16 and 17c.; broilers, 23 and 25c.; turkeys, 25 and 27c.; ducks, 16 and 17; live fowls at Brighton and Boston market, 16 and 17c.; broiler chickens, 19 and 20c. Beef cattle on hoof, $8.75 for best, per hundred; good, $6, $7 and $8; medium, $5 and $6; other poorer grades, $2.50 to $5 per hundred pounds. Dressed beef, 12 to 18c. for good and best; a few poor grades, $8 to $12. Hogs on hoof, 8½ to 9½; dressed, 11½; live veal calves, 9½ and 10½c. per pound.

Milch cows in fair supply and slow demand; common milch cows, $50 and $60 each; a few good ones brought about $90 each. Horses in demand and prices range from $325 to $425 for best heavy stock, $225 to $325 for medium, and $135 to $225 for light general purpose stock. A. E. P.



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Farmleigh Leghorns—Tom Barron, Young's Wyckoff blood Pullets and Cockerels in season. A few ready to lay W. & B. Rock Pullets for sale now. J. L. LEE, Carmel, N. Y.

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Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

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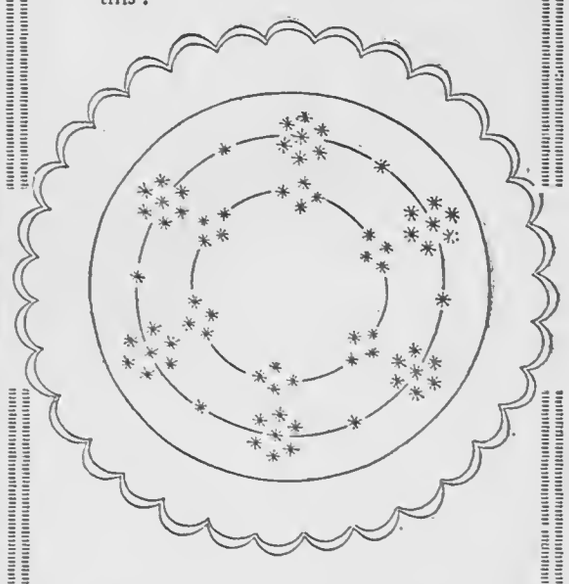

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PUBLISHER'S DESK

The receipt of several letters to this department without the signature of the writers causes us to notify subscribers again that such communications will not be printed. The full name and address of the writer must accompany every inquiry to secure attention. The name of the writer will not be printed, but no attention can be given to letters signed only by initials, "a subscriber," etc.

How will the enclosed do for your Publisher's Desk? This is one of about a dozen received. Why I should be one of the selected for this killing I do not know. Maybe you can save some of your subscribers from this. It looks like a fake.
New York. J. W. C.

The literature enclosed is an offer of the Thwing Co. of this city, offering what is represented to be a $600 lot in Garden Hill for $202.50. We do not know where Garden Hill is located, but we think our subscribers have had sufficient warning already regarding the Thwing Co. schemes that none of them will be tempted to jump at this piece of alluring bait. We hope that no one will be deceived by the seductive offers of the Thwing Co., which are requested to be kept strictly confidential.

Add my name to your list of fraud exposers. This duty of every honest citizen must not fail for lack of energy. The press is our business and social platform. Fraudulent advertisements represent holes in the platform and we can find a solid foundation or platform only in the papers that reject that kind of advertising. M. E.

The Anti-Fake Club is steadily growing in numbers and importance. The formal organization will be made early in the Fall. In the meantime those who want to register as charter members may send in their names. The purposes of the club will be fully outlined when the organization is perfected, but in a general way its functions will be to keep its members advised of fake advertisements and the papers that publish them; and to refuse to receive the papers that persist in carrying fraudulent or deceptive advertising.

I am renewing for another year. I hardly know my reason, as most of THE R. N.-Y.'s contents are foreign to my business, yet I have found much of general interest to my family and myself, and nothing to condemn. J. B. P.
Connecticut.

Unconsciously this letter expresses the success of an ideal we have had in mind for THE R. N.-Y. We refer to a breadth of information and discussion combined with a broad human int rest that would be of benefit and value to all classes of people, and particularly suited to the business requirements of the farmer, and the social and intellectual ne ls of himself and family. Perhaps this ideal of the paper has not been well sustained. We know that for many reasons which have been as yet beyond our control, it has fallen short of our ambition; but it is an encouragement to know that our purpose has met with some success; and we hope to make this feature more conspicuous as the years multiply on us and the means enable us to do so.

Mr. H. D. Braeutigam, who represents himself as a breeder of Barred Rocks, at Greenwood Lake, N. Y., but who wrote me from Newark, N. J., ordered 116 eggs for hatching during the month of February, enclosing check in payment of the eggs, with instructions to ship promptly. I wrote Mr. Braeutigam of the danger of shipping eggs at that season of the year, and as the weather was cold at that time I held the shipment for two days, when the weather moderated. The weather again turned suddenly cold after shipment was made, and Mr. Braeutigam claims that the eggs arrived at Newark in zero weather. He stopped payment on his check and has never reported on the fertility of eggs, which I guaranteed 75 per cent., and I have been unable to get any settlement in the meantime. Can you help me in the matter?
Virginia. MRS. W. D. D.

We took this complaint up with Mr. Braeutigam promptly and he makes an indefinite statement in reply to our letter that the effects of the cold weather destroyed or so weakened the fertility of the eggs that most of the chicks died in the shell. Mr. Braeutigam does not state how many chicks actually hatched from the eggs, but he goes on to say that the chicks had white diarrhœa and communicated the disease to his other chicks, causing him serious loss. Our reports show that Mr. Braeutigam is a minor, so that regardless of any other consideration no legal redress can be obtained. We have a great many complaints for one cause or another regarding transactions over eggs for hatching, and this case illustrates that all the cause for complaint is not on the side of the purchaser. Mrs. W. D. D.'s experience in this case also illustrates that it is not always safe for the seller to assume that he has his pay for the goods ordered when a check accompanies it; certified check or post office money order is better security.

In 1912 I purchased 10 shares of stock in the Union Motor Sales Co. of Dayton, Ohio, with the understanding that I was to take the agency for my territory, and receive 7 per cent. annual dividend from my investment, also that I was to get supplies for my individual use, at dealers' prices, and the goods to be delivered within a reasonable length of time. Soon after my investment in the company I gave them a small order for some repairs that I knew I would need from time to time. I had to write them a number of times before I got them to send them out, and when they did come they were marked C. O. D., notwithstanding that I sent them cash with the order. However, I got them to right this, and just supposed that it was the fault of some careless clerk. But, during the early part of this year (1913) I decided that I could get my repairs from a local dealer just as cheap and get them just when I needed them, so wrote the Union Motor Sales Co. and asked if they would buy my stock and give me in exchange for it some repairs that I was going to have, and they would not make me any reply, notwithstanding I wrote them several letters, registering some of them. After this I decided to try them with another order, so ordered a couple of tires from them; these they sent, after some delay, but on their arrival only one tire was according to order. The other, while I could not use it just then, I knew I could use later, so on June 27, 1913, I sent them another for two other tires. They wrote me that the make I ordered had advanced in price, and I would have to remit a certain amount more, or they could furnish me with other standard makes at the price I remitted (naming the makes), so I advised them to send either of the makes they had named, but to get them to me within a certain time or refund money. Thus I waited for nearly a month expecting every day that the tires would show up; finally I wrote them about it, but no reply came. This letter I followed with others, several of them being registered, but no reply came until I threatened to take legal steps; then they said they would look into the matter, but as yet I have gotten nothing out of them. I have, as best I can, explained the situation to you, so please advise me whether or not you can do anything with this matter. R. S.
Georgia.

After considerable correspondence with the Union Motor Sales Co., above referred to, we secured for the subscriber a check refunding the remittance he sent the firm for the tires, which, it was claimed, had been lost in transit. The check, however, was only signed by a rubber stamp. We returned it to the company for a proper signature, but have never been able to secure the proper signature of the company to the check. In the meantime the Motor Sales Co., which it is alleged was a Maine corporation, is in liquidation, and the Union Motor Co. of Dayton, Ohio, has been organized under the Ohio State laws to take over and carry out all contracts with the members and dealers of the Union Motor Sales Co. The new company proposes selling membership certificates, instead of stock certificates which were sold by the old concern. The experience of the above subscriber only bears out our experience with these stock selling and membership selling schemes generally. The stocks and memberships are sold with the idea that the investor can then buy goods from the company cheaper than elsewhere, but as this subscriber eventually found to be true, goods of an equal grade can easily be purchased in the open market at the same or a lower price. Eventually the money paid for the stock, or certificate, is usually lost, as in this case. It will be well for the readers of THE R. N.-Y. to remember this subscriber's experience when approached by a slick-tongued agent on a stock or membership scheme of this sort or when in receipt of literature of the promoters.

Small Pens; Beef Scrap.

I HAVE a henhouse 20x6 feet. I wish to make it into separate pens for 10 fowls each. I think usually houses are made wider, but if I make the house wider it leaves too much floor space, more than I wish to pay for, or make it too narrow on the front. Will my fowls get along just as well to divide the house up into four pens five feet wide and six deep? 2. I feed dry mash, but find that with beef scrap in it the fowls spoon out a lot and waste it looking for scrap, so I am feeding dry mash in hoppers and beef scrap separate. How much beef scrap should I allow for 100 hens per day? E. R. S.
Virginia.

Unless you have some reason for wishing to keep your fowls in small flocks, it would be better not to divide your little house into pens. With four pens, each fowl would have but 30 square feet of floor space to use, while with no partitions each one would have the liberty of 120 square feet. If they have the use of a good sized yard, the amount of floor space in their house is of less importance, but if they are confined, their quarters are pretty small.

2. A dry mash hopper should be so made that the fowls cannot spoon the feed from it. The opening through which the fowls feed should have an inwardly projecting lip to catch and hold the mash, or it should be guarded by slats or wire mesh in such a way that the fowls cannot flirt their beaks while eating. If the scraps are fed alone, there is nothing to prevent the fowls from eating too much scrap to the exclusion of other food.
M. B. D.

Chicks With Foreign Markings.

I RECENTLY bought 100 baby chicks. These chicks were advertised as purebred S. C. White Leghorns, Barron-Young cross. I notice these chicks have dark spots on them or black feathers. Is this possible with purebred White Leghorns? J. C. C.
Ohio.

Yes, it is possible for purebred animals of any kind to show markings foreign to their breed. At some more or less remote period in their ancestry they were all mixtures and with some breeds this period is not very remote. As a consequence, this ancestral blood will at times crop out, like an inherited taint, and those not acquainted with this possibility are sometimes led to accuse a breeder unjustly. The crossing of two separate strains of the same breed sometimes seems to intensify this liability to "throw back" to ancestral traits. M. B. D.

EGG-EATING HENS.—I have noticed articles of late about a cure for egg-eating by hens. My remedy, which has never failed me, is to make an opening carefully in large end of egg and mix in as much red pepper as possible. Put shell back carefully. If taken at the start there is usually just one guilty hen. Watch for her and when found put her in small coop with the treated egg. She will take just one taste and will never try to eat another egg.
New York. E. R. WATSON.

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Packs better—lasts better—makes better feed
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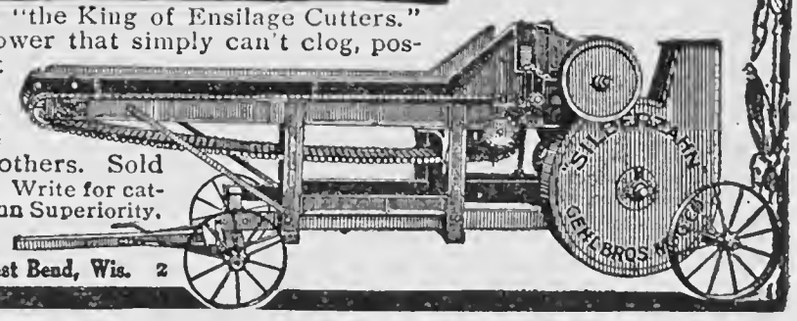
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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending July 24, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying 4½ to five cents per quart single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The price closes one cent above last week, with a fairly firm market on the better grades. A great many of the receipts show hot weather damage. This is the fault of both creamery patrons and the butter-makers, but the latter are helpless without co-operation of the patrons. Keeping the milk and cream in best condition during torrid weather makes a little more work, but the extra care is quite sure to be rewarded in improved price of the product and satisfaction of buyers. City butter, made from surplus milk, is selling at 20 cents or under.

Creamery, extra, lb	28	@	29
Good to Choice	23	@	27
Lower Grades	20	@	22
State Dairy, best	26	@	27
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	16	@	19

Elgin, Ill., butter market 27¼ cents.
Philadelphia, western creamery, 28½ cents.

CHEESE.

The demand for whole milk specials is active. Large quantities of undergrades and skims are going into cold storage because of surplus and unattractive prices. Some small sizes, Daisies and Young Americas, have sold up to 16½ cents, but the main range of prices runs the same as last week.

Whole Milk, fresh, specials	14¾	@	15
Average fancy	14¼	@	14½
Prime	13¾	@	14
Under grades	10½	@	13½
Daisies	15	@	15¼
Skims, specials	11¼	@	11½
Good to choice	9¾	@	10¾
Poor to fair	5	@	9½
Fancy Cheese, Sage	18	@	19
Swiss	17	@	20
Young America	17	@	18
Limburger	15	@	17
Roquefort	28	@	30
Stilton	46	@	48
Parmesan	25	@	28

EGGS.

The top grades have been down and up one cent, prices at end of week remaining on same basis as last reported. The threatened strike of New York egg candlers for shorter working periods and recognition of the union has not occurred, and is evidently more talk than powder. The egg candler is a necessity in large trade, but it is a business in which reasonable commercial efficiency can be learned quickly, so that a strike is likely to inconvenience the strikers more than the dealers.

White, choice to fancy, large	28	@	29
Common to good	20	@	25
Mixed colors, best	25	@	26
Common to good	17	@	20
Western fresh, white	24	@	28
Lower grades	20	@	22
Storage, best	24	@	25½
Seconds	22	@	23

FRESH FRUITS.

Some improvement is noted in the new apples received, good hand-picked bringing up to $3 per barrel, prices ranging from this figure down to 50 cents. Peaches remain low, $2 per crate being practically the top wholesale figure, and large quantities of fair quality going under $1.50. Currants in considerable surplus and low; other small fruits selling well unless damaged by weather or transit. Muskmelons going at a very wide range of prices—35 cents to $3.25 per bushel. The high priced ones are those running uniform in quality, the result of good cultural treatment and seed selections, mainly the latter. The late L. M. Lyon was a pioneer in educating melon producers to the importance of using best seed. His vigorous work in the Western fields, where he cut the best melons for seed, was at first startling waste to the growers, but they very soon saw the point and were glad to use the selected seed at high prices. Of course, blight can spoil any muskmelon, but some of the low quality laid to blight is the result of using seed from cull melons.

Apples—New, bu	25	@	1 25
Western, box	1 00	@	1 75
Cherries, 8lb. bkt.	20	@	40
Pears, Le Conte, bbl	3 00	@	5 00
Peaches, Del. and Md., crate	75	@	1 50
Southern Elberta	1 50	@	2 00
Southern Belle	1 37	@	2 00
Nearby, bkt	50	@	75
Currants, qt	3	@	5
Plums, 6-bkt. carrier	1 00	@	1 50
Raspberries, red, pint	4	@	10
Black Caps, pint	4	@	6
Blackberries, qt.	7	@	13
Huckleberries, qt.	5	@	11
Gooseberries, qt.	6	@	12
Muskmelons, Md., bu	1 50	@	3 00
Carolina, bu	75	@	1 50
Georgia, bu	75	@	1 50
Arkansas, bu	2 75	@	3 25
Arizona, bu	3 00	@	3 50
Watermelons, 100	12 50	@	22 00

HOPS.

Conditions on the Coast are favorable for the growing plant. In New York State considerable damage has been done by hail, battering the vines so that the harvest will be later than usual.

Prime to choice	36	@	38
Common to good	30	@	35
Pacific Coast	17	@	18
Old stock	10	@	15
German crop	59	@	62

HONEY.

Clover, comb, lb	14	@	16
Dark	12	@	14
Extracted, gallon	60	@	90

VEGETABLES.

Early in the week potatoes were in heavy surplus, but these were cleared out and prices improved somewhat at the close. Onion market unsettled because of heavy receipts of unripened stock from nearby. Receipts of string beans and peas excessive, and prices low except for the best. Corn plentiful and lower, good Hackensack wholesaling at $1.50 to $2 per 100. Lettuce again very low. Tomatoes higher, $2 to $2.25 per box being had for choice Jersey Acme and Stone. Nearby cucumbers selling well; Maryland and Delaware pickings low.

Potatoes—Jersey, bbl.	2 25	@	2 50
Long Island, bbl.	2 50	@	2 75
Sweet Potatoes, bu.	40	@	1 15
Beets, 100 bunches	75	@	1 00
Carrots, 100 bunches	1 00	@	2 25
Cucumbers, bu.	40	@	80
Corn, Jersey, 100	75	@	1 50
Cabbage, bbl.	50	@	60
Lettuce, half-bbl. basket	15	@	50
Onions—Southern, bu.	1 50	@	2 75
Nearby, bu	1 50	@	1 75
Okra, bu	75	@	1 00
Peppers, Jersey, bu.	1 00	@	1 25
Peas, bu	40	@	1 00
Radishes, 100 bunches	1 00	@	1 50
String Beans, bu	15	@	35
Squash, New, bu	1 00	@	2 00
Egg Plants, bu.	65	@	75
Tomatoes, Jersey Acme, box	2 00	@	2 25
Jersey, stone	1 50	@	2 00
Del. and Md., 6-bkt. crate	50	@	75

LIVE POULTRY.

Broilers more plentiful, and top quoted price rather high. Market active on fowls and roosters.

Broilers, lb.	21	@	23
Fowls	16½	@	17½
Roosters	12	@	12½
Ducks	15	@	17
Geese	12	@	13

DRESSED POULTRY.

Choice heavy fowls are scarce; broilers running irregular in quality and low, except for fancy. Spring ducks in slow demand, wholesaling mainly at 14 to 15 cents.

Chickens choice broilers, lb	28	@	30
Squab broilers, pair	60	@	65
Broilers, common to good	20	@	25
Fowls	15	@	19
Ducks, Spring	14	@	16
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Market is weak on all hay but large-baled Timothy. Small bales of all qualities very dull. Straw selling slowly at unchanged prices.

Hay, Timothy No. 1, ton	20 00	@	21 50
No. 2	18 00	@	19 00
No. 3	15 00	@	16 00
Clover mixed	14 00	@	18 00
Straw, Rye	14 00	@	14 50

LIVE STOCK.

Native Steers	7 25	@	8 85
Bulls	5 25	@	7 00
Cows	3 50	@	6 75
Calves, prime veal, 100 lbs	9 50	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	2 50	@	4 50
Lambs	6 00	@	8 75
Hogs	8 75	@	9 50

GRAIN.

Spring wheat advanced two cents owing to rust damage report, and unfavorable foreign crop outlook. Sales of toward 200,000 bushels were reported for delivery to Uruguay and Argentina, where the crop is inferior. At Buenos Aires wheat for September delivery is selling seven to eight cents above top prices here.

Wheat, No. 1, Northern Spring	1 04	@	..
No. 2, Red	92½	@	..
No. 2, Hard Winter	92	@	..
Corn, as to quality, bush	79	@	81
Oats, as to weight, bush	43	@	45
Rye	65	@	67

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	33	@	35
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14

WOOL.

Ohio fine unwashed	28	@	29
Quarter blood combing	27	@	27½
New York Fleeces	23	@	24

*

A steamer leaving Brisbane, East Australia, April 27, is unloading about 3,500 tons of beef, lamb and mutton at New York. The steamer stopped at Uruguay for a shipment of beef, but most of the meat came from Sydney and Melbourne, Australia. This is the third recent steamer with direct meat shipments from Australia to New York, more than 13,000 miles.

*

An item, about two stickfuls long, is making the rounds of a large number of newspapers. It is almost identical, both in statement and tone, with items seen last year and the year before, and the tenor of them all is that meat will be higher. Quite likely they will, as it is in the power of those controlling the meat situation to jack up prices. This little item is part of their "campaign of education." The consumer reads it, draws a long breath and prepares for the worst, and many jobbers and retailers take advantage of the suggestion to the limit. As will be noted in the quotations given above, it is possible to get good meats at moderate prices in New York if the buyer looks about a little and will carry his purchases home instead of having them delivered.

W. W. H.

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

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DO YOU NEED FARM HELP

We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.

Subscribers' Exchange

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

FOR SALE—Newtown Colony Brooders; demonstration machines, practically new; bargains. JUSTA POULTRY FARM, Southampton, L. I.

EARLY RICHMOND CHERRIES canned on the farm in No. 2 sanitary cans; $1.25 per doz.; syruped with pits. SENECA FRUIT FARM, Waterloo, N. Y.

FOR SALE—Power Greenbone Cutter; perfect condition, self feeder; also five International hovers; bargain; wanted, Climax box brooders. MONTICELLO EGG FARM, Monticello, N. Y.

FOR SALE—"Perry" Compressed Air Water system; consists of Fairbanks air compressor, new engine, one Perry pump, air tank and quantity of pipe; in first class condition; also one small size "Niagara" ram; price reasonable; might exchange. F. N. GIDDINGS, Baldwinsville, N. Y.

FARM FOR SALE—Four acres of strawberries, two grapes; nice chicken range. Box 1, North Emporia, Va.

TWELVE ACRES—Good land; house, barn and tools; $1,200; $400 cash; easy terms. E. BALCOM, Castile, N. Y.

FARM—For rent on shares, with some stock; possession at once. W. H., care R. N.-Y., 333 West 30th St., New York.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A good, steady man for general farm work; must be able to drive a team; a steady job; $30 per month and board. M. N. ADAMS, Livonia, N. Y.

WANTED—October 1, settled Protestant woman for general housework in small village, winter resort section; small family, good home. Drawer J., Aberdeen, North Carolina.

POSITION WANTED—On farm, by married man, 40; family; life experience; capable of taking any position, or taking charge; best of references. W. A. MAYOR, Jermyn, Pa., R 1.

WANTED—Situation on dairy farm; begin work August 20; good milker and teamster; understand farm machinery; references. F. C. V., care WM. SHORT, R. R. 3, Canajoharie, N. Y.

WANTED—Sober, industrious man, experienced with horses, milk two cows, help in garden; $50 per month; no graduate; must have references. WILLIAMSON, Lombardy St., Lancaster, N. Y.

WANTED—Single man for general farm work; must be strictly sober and honest; good milker; wages $25, board and washing; send reference in first letter. H. H. MEADER, Supt., Oakhurst Farm, Millerton, N. Y.

POSITION WANTED—As manager for farm or estate; would take good dairy farm on shares, thoroughly understand farm crops, up-to-date machinery, steam and gasoline engines, tractor plows, concrete work; New York State preferred; strictly sober, reliable, married American; small family; good references. Address Energetic, Care R. New-Yorker.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

WANTED to lease, with the privilege of purchase, small poultry farm; north Jersey preferred. C. B., Rural New-Yorker.

FOR SALE—Good, productive 160-acre farm; good buildings and location; fine lot of timber; a bargain. Address Box 65, Route 1, Oxford, N. Y.

FRUIT, TRUCK, POULTRY FARM—Will sell all or any portion of 36 acres; good buildings, excellent location; immediate possession; no agents. HOMER TWEED, Quakertown, Pa.

TO LET ON SHARES—A well-equipped farm of 165 acres, half of it in cultivation in Bergen County, N. J., adapted to dairying, pig raising or truck farming. M. N., Rural New-Yorker.

LARGE EGG FARM—Tributary to New York; equipped, stocked, doing large business; offered because of ill health; part cash, balance mortgage. Address JAMES MAXWELL, Fiuderne, New Jersey.

FOR SALE—Farm of 100 acres; another of 50 acres; one of 33 acres; near Wolcott, N. Y.; new buildings; large apple orchards and some muck land; come and see, or write to A. H. CREQUR, Wolcott, N. Y.

FOR SALE—265 acres A No. 1 land, for stock, fruit, or general farming; well watered; beautifully located; double house, three large barns and other buildings. C. H. HERENDEEN, owner, Shortsville, N. Y.

FOR SALE—Successful poultry plant, location convenient to market, modern equipped buildings housing 900 hens; must be seen to be appreciated; price reasonable; terms. Address BARGAIN, care Rural New-Yorker.

COMMUTERS DAIRY OR STOCK FARM; 31 miles N. Y. C.; express station; 114 acres; hill, rolling and wood, river; grand situation; large house, improvements, up-to-date barns, silo, stock, crops, machinery, complete $300 an acre; terms. H., care R. N.-Y.

POSITION WANTED—On fruit farm, 25 years experience in apples, from planting to marketing; understand and can operate all kinds farm machinery, gasoline and steam engines; total abstainer from all intoxicants and tobacco. Permanent position wanted where quality counts. Address L., 333 West 30th St., N. Y.

FOR SALE—Pleasant View Dairy, 130 acres; one of the best farms of its size in Bedford County; good buildings, lawn, splendid shade. Land lies well, is adapted to all kinds of fruit, vegetables and grass, convenient to high school, hotel, stores, churches, and the best of neighbors; good home market. Address owner, F. W. SHAW, Forest Depot, Va., R. F. D. No. 1.

A BARGAIN—112-acre Hudson River Valley farm, Ulster County, New York. One mile from West Shore Railroad station and village of 4,000; suitable for fruit, poultry or general farming; 2,000 fruit trees, 3 to 10 years in bearing; lots of small fruit; one acre of strawberries; old-fashioned 12-room house in good condition; barn, stabling 16 cows and 6 horses; poultry house, granary and all farm implements; springs and wells; to quick buyer, $4,000. Address MORTGAGEE, Box 97, Madison Square, P. O. New York.

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HUMOROUS

BOBBIE (who has been sent over for the fifth time to find out how Mrs. Brown is): "All right, ma; she's dead."—Baltimore American.

"HAVE you any taste for eugenics, Mrs. Comeup?" "I've never tried 'em. Do they taste best fried or boiled?"—Baltimore American.

JAIL VISITOR: "You say that a love for books brought you here, my poor man." Prisoner: "Yes, mum; pocketbooks."—Boston Transcript.

"WHERE do you live?" was asked of a childish newcomer to a quiet village. "Oh, I don't live," was the ingenuous answer. "I just board." Chicago Recor Herald.

"WHAT'S that new structure you hav put up on the hill there?" "Well," r plied Farmer Corntossel, "if I rent it, it a bungalow. If I don't, it's a barn."— Washington Star.

BIX: "Wasn't it Admiral Porter wh said, 'Take no quarter from the enemy'?' Dix: "Dunno! If it was, he's the onl porter that ever said such a thing."— Boston Transcript.

PASSENGER: That last station was my destination, sah. Why, sah, didn't you stop thar? Conductor: We don't stop there any more. The engineer's mad at the station agent.—Sacred Heart Review.

HE: "The President has given those mediators to understand that he can't recognize Huerta." She: "How stupid; why, I would recognize him anywhere from his pictures in the papers."—Birmingham Age-Herald.

HE (calling): "I fear I must seem like a Sahara of dullness this evening, Miss Edith." She: "Oh, no, Mr. Timmid, you are not at all like a desert; a desert has sand."—Boston Evening Transcript.

"YOU do not speak to him?" "No," replied the scholarly girl. "When I passed him I gave him the geological survey." "The geological survey!" "Yes. What is commonly known as the stony stare."—Washington Star.

THE fifth day drew to its close with the twelfth juryman still unconvinced. The Court was impatient. "Well, gentlemen," said the court officer, entering the jury room, "shall I, as usual, order twelve dinners?" "Make it," said the foreman, "eleven dinners and a bale of hay."—Credit-Lost.

"WHO are those two sad-looking women over there?" "They're a couple of neighborhood women who always get together to mourn." "Torn by some common sorrow?" "Yes, one's husband never comes home, and the other one's husband hangs around home all the time."—Houston Post.

OLD Uncle Andy was steering his master's boat down the bay. They passed an ocean liner. "Andy," said Mr. Blank, "just look how high that ship stands out of the water. I wonder why it is." "Why, boss," answered the old darky, "don't yu know? We ain't had no rain for nigh on three weeks now, and de water's gettin' low."—N. Y. Evening Post.

HARRY, a bright youngster, was told by his mother that she would give him five cents for a dozen pins rescued from the floors, thus preventing her year-old babe, who was just beginning to creep, from finding them. "What will you do with the money when you earn it, Harry?" he was asked by a neighbor. "With the first five cents," said Harry, "I will buy a paper of pins and scatter them all over the house."—National Monthly.

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Goodyear tires now undersell 16 other makes. That is due to mammoth output—the largest in the world.

Numerous tires cost one-third more. You can buy four Goodyears for what three of such tires cost. That means to you one extra tire in four.

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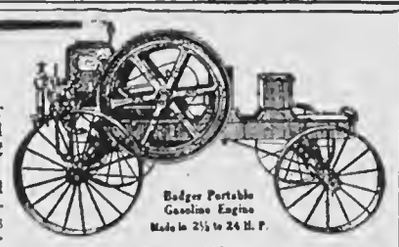

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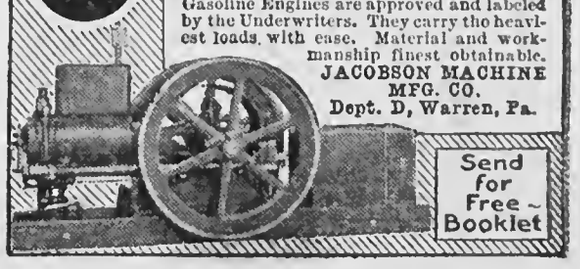

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MAKING COMMERCIAL POULTRY PAY.

Getting Rid of Drone Hens.

SELECTING LAYERS.—After the high Spring egg production on large commercial poultry plants where White Leghorns are kept, there are always a number of hens and laying pullets that are not paying their board. This is the time for the first selection of all laying stock. I usually make this selection about the first week in June. The hens culled out are either broody, starting to molt, or have just stopped laying, and should be sold at once for the following reasons: In April and May any hen that becomes broody is sold. Broodiness is a character not wanted on commercial poultry plants, as hens do not produce while broody. Also, no hen that has been broody should be used as a breeder. This character should be bred out as much as possible.

UNDESIRABLE CHARACTERISTICS.—Broody Leghorns may be cured, but the egg organs have become absorbed to such an extent that it would take three weeks or more to get the hens back in good laying condition, and after they are laying again, the profit from the Summer eggs they would lay will not, in most cases, pay for the food eaten while broody and labor curing broodiness.

EARLY MOLTING.—An early molting hen is always a poor producer. Early molting shows the hen has not the vitality that is necessary to make a high yearly egg production. As it takes a hen 80 to 104 days to complete the molt, she is being carried through the Summer at a loss. Any hen that starts to molt before the first of September should never be used as a breeder. Here at Broad Brook Farm I do not keep any hen that starts to molt before the last of September.

OTHER QUALITIES.—In all plants there are a number of hens that break down or just stop laying. These should be sold at once. Other very important factors in selecting and breeding are size, weight and shape of hens and cockerels. If one selects and breeds for egg production only, and does not consider these factors, he will in time defeat his own purpose. Here when I made my final selection of breeding stock, in November 1913, no hen that did not weigh 3½ pounds and over, or cockerel 4½ pounds and over was kept. This year I shall make the standard even higher, thus increasing weight.

SOME PROFITABLE YOUNG STOCK. FIG. 419.

HEAVY FOWLS DESIRABLE.—By raising only large and heavy Leghorns, the broody, molting and other cull hens can be sold at top market prices alive in New York City; whereas small hens sell considerably under top prices. This factor makes a great difference in the year's profit account. From my experience, the large Leghorns properly bred and selected will produce as well as the small ones, and they certainly are more profitable on a commercial plant.

SUMMER SELECTION.—Not only should all laying stock be gone over the first week in June, it also should be gone over in July, August, September, October, and the final selection of breeding stock be made in November. All cockerels should be sold just as soon as the breeding season is over, not only to save feed, but to have only sterile eggs to sell during the Summer.

RESULTS OBTAINED.—I will give you an example of the results of this method of constant selecting of laying stock: On June first we had here 1962 laying hens in our long house; egg production 927 eggs. Between June first and tenth we sold 410 hens; after the tenth 124 more, making a total culled out and sold of 534. To these must be added 15 that died in June, leaving in the long house, July 1, altogether 1413 laying hens. Total egg production for June 25,599; average daily production, June, 853 eggs. Egg production July first 910 eggs. Between July first and fifteenth sold 106 hens. The total egg production to July 20 was 15,619 eggs. Average daily 822 eggs. You see from the above that while the egg production has decreased each month as the Summer advances, the feed bills have decreased in proportion. Also, by selling so early in the season the price per pound was always two to three cents higher. This method I have used for a number of years with the same excellent results. Keeping down expenses is a most important factor in making a plant pay.

Egg production for 1914, January to July 20: On hand January 1, 1914, 750 selected, late-molting, breeding hens each weighing 3½ pounds and over. 1691 laying pullets. Total laying stock 2441 hens. 54 cockerels each weighing 4½ pounds and over.

DATE	LAYING STOCK	EGG PRODUCTION	DAILY AVERAGE	PER CENT.
January	2441 to 2398	10150	327.4	13.5
February	2398 to 2349	17574	627.6	26.4
March	2349 to 2298	36004	1161.4	49.9
April	2298 to 2196	41536	1384.5	61.6
May	2196 to 1962	38806	1251.8	60
June	1962 to 1413	25599	853.1	
July 1-20.....	1413 to 1307	15619	822	

The percentage of egg production is figured on the number of hens, half way between the largest and smallest number for the month. This shows as a discredit to the hens as most all were sold before the 15th of the month. Before June 10th over 400 were sold, so I have not figured the per cent of egg production for June.

E. H. PARSONS.

Westchester Co., N. Y.

A DISCUSSION OF LIGHTNING.

WHAT IT IS.—Nature furnishes few more awe-inspiring and spectacular demonstrations of her tremendous natural forces than in the zig-zag forks of lightning which dart across the clouds of a sultry Summer sky; nor is their awful effect lessened by the crashing and rolling of the thunder which accompanies them. The phenomena attending these discharges from nature's huge storage batteries are not yet fully understood, though they have been the subject of much study. Fortunately, however, we have a better understanding of the methods of control of electrical energy than we have of its essential nature and electrical engineers present the somewhat peculiar spectacle of workmen rearing great structures with tools which they have never seen and whose form they do not know. We know that electrical energy is a force which exists all about us in nature, and that bodies may be charged with it as a sponge may be saturated with water. The earth itself is one of these bodies, and the clouds floating above it are others. This electrical energy is a restless thing, ever in motion, and if it consents to remain stationary for the moment in some electrified body, it is always straining at its leash, ready to leap forth at the first opportunity.

MANNER OF DISCHARGE.—Several ingenious theories have been advanced to account for the storage of this energy in the clouds accompanying a thunder storm, and while none can be said to have been proven, we know that the energy is there; we know, also, that the earth is highly charged with the same element. Ordinarily these will be kept apart by the intervening atmosphere, for air is a poor conductor of electricity and it would prefer not to travel through it. The time may come, however, as it frequently does on a hot Summer afternoon, when the earth and overhanging clouds become so filled with this electric force that the tension of the stored energy becomes too great for the atmosphere to resist its passage, and seeking to restore the disturbed electrical balance between earth and sky, a charge of electricity of tremendous force darts from a black cloud to some point upon the earth's surface. As

the moisture laden atmosphere resists its passage terrific heat is developed, and the moisture, instantly converted into steam, produces a sudden expansion of the air which, as quickly returning, produces the sudden crash or long roll of thunder which we hear. Not all the lightning flashes which we see are directed toward the earth, for the black clouds frequently hurl their thunderbolts at each other. When they do, they show that the same electrical relation exists between them as also exists between the clouds and the earth. This interchange of electricity between clouds is productive of one of the most destructive forms of bolts which reach the earth. A low-hanging cloud charged to its full capacity sometimes receives a discharge from one above it; this releases a portion of the lower cloud's electrical energy, which then drops to the earth with an explosive force which no human agency can control. From the ordinary cloud discharge buildings may be largely protected, but the terrific force and erratic course of a thunderbolt thus generated is such that artificial conductors have no control over it.

COURSE OF ELECTRICITY.—An electric current, whatever its source, has this much in its nature akin to that of humans; if resisted in its course, it becomes heated. Permitted to flow freely through channels agreeable to it, no disturbance whatever is created, but if compelled to travel paths along which it must force its way a large portion of its energy is transformed into heat, and through the agency of this heat, it wreaks destruction. All known substances are conductors of electricity, but by some it is conveyed freely, while others resist its passage. These latter substances are termed non-conductors, and they are used to insulate or protect conducting bodies from loss of the current which it is desired that they shall carry. Water is a better conductor than wood, so that wood, though a good non-conductor when dry, carries an electric current freely when its pores are filled with water. When a bolt of lightning strikes a branch of a living tree it follows it to the ground, quickly changing the sap of the tree to steam by the intense heat generated, and the explosive force of this steam frequently shatters trunk and limbs. Similarly, the air and moisture contained within the bricks of a chimney are rapidly expanded when struck by lightning, and the chimney is burst apart. Air is a non-conductor, more or less of which may always be found between a person's feet and the ground. If a person is struck by lightning, the current must traverse this air space, and in doing this an explosive force is exerted which often tears the shoes from the feet.

POSITIONS OF DANGER.—The danger zone in a thunderstorm is directly beneath the storm cloud or a little in advance of it. Any object upon the earth's surface is liable to receive a lightning flash, but tall objects projecting toward the sky are in greatest danger. People in fields should not take refuge beneath trees, and proximity to wire fences should also be avoided. Such fences should be "grounded" by vertical wires at intervals of every few rods, crossing the fence wires and extending well into the ground. If generally observed, this precaution would save the lives of many cattle now killed by lightning flashes which travel along fence wires. While it is not necessary within the house to seek refuge beneath a feather bed during a thunderstorm, it is wise to keep away from stoves and fireplaces, for the column of heated air rising from a chimney furnishes a better conductor for a lightning flash than the colder atmosphere about it.

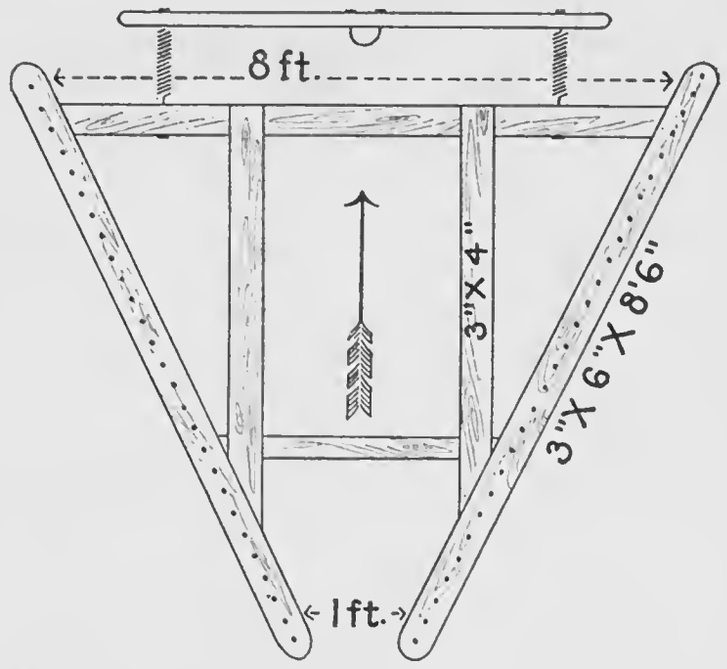
LIGHTNING RODS.—The use of lightning rods upon buildings has markedly decreased in the last 25 years, though it is recognized that when properly installed they furnish a considerable amount of protection. A No. 3 or No. 4 galvanized iron wire carried along the ridge of a building and properly connected with the ground at its sides will furnish a large amount of protection at small cost. This wire should be armed with sharpened points projecting about 20 inches toward the sky at intervals of 18 or 20 feet, and it should be thoroughly grounded by wires extending from it to terminals placed so far beneath the surface of the ground that they will always be in contact with moist earth. Galvanized iron has been found to be better than copper, for while not as good a conductor as the latter metal, it will dissipate the destructive energy of lightning with less danger from induced or side flashes which often set fires, or do other damage, after the main current has been safely disposed of. Such lightning rods not only take care of many direct flashes, but they often prevent them by furnishing a path by which atmospheric electricity may pass quietly into the ground before sufficient tension has developed to result in an explosion. Whether it pays to install a system of lightning conductors is an unsettled question. Good buildings are usually insured against loss from lightning, and most farmers seem to consider the protection of their policies sufficient. Certainly, the ubiquitous "lightning rod agent" is much less in evidence than in former years.

M. B. DEAN.

SOME COVER CROP QUESTIONS.

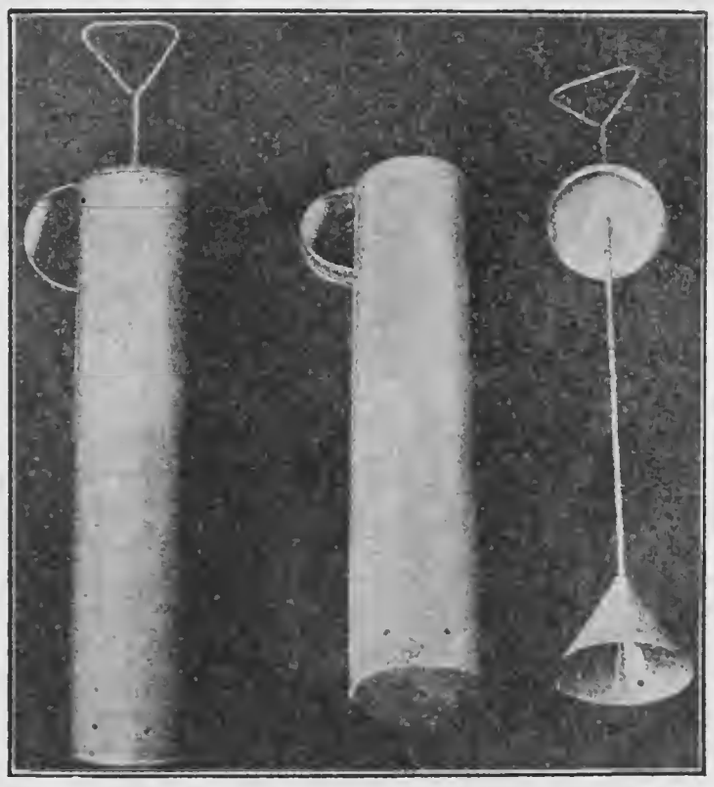
I HAVE a young orchard planted to late cabbage. When the cabbage is cut in the Fall I want to pasture the offal with hogs. I have been thinking of sowing either rye or rape at the last cultivation of the cabbage to make still more green feed. Which will be the better the rye or the rape? Do you think that either might hurt the crop of growing cabbage? S. H.
Ohio.

We should sow rye alone, or barley and rye together, in this orchard among the cabbage. Rape



A DEVICE FOR RAKING STONE. FIG. 420.

would make a heavy growth, and give considerable feed for the hogs, but it would take a good deal from the soil while the cabbage was heading, and we should hardly care to sow turnips, rape or other plants of the same family among the cabbage. A mixture of half and half barley and rye, cultivated in at the last cultivation, will make a heavy growth through the Fall. The barley grows well under such conditions, and would be eaten off by the hogs. They would pasture down the rye, but some of this would be left to make a fair growth in Spring for plowing under. This whole question of sowing a cover crop in among the cabbage depends much upon the season, and personal judgment is required in order to handle it properly. In a dry season, when there is evidently hardly enough moisture for the cabbage alone, it would be a mistake to sow any cover crop among the cabbage. You would simply rob the cabbage crop of moisture, and could not expect enough of a cover crop to make up this loss. In a moist or wet season, however, there will be water enough for both crops, and in such a case the cover crop will pay, as



OUTFIT FOR MAKING AN EMULSION. FIG. 421.

it would help instead of injure the cabbage crop, give a large amount of pasture for the hogs, and save the loss of nitrates from the soil.

I have another field of four acres. It is sandy land. It has been in truck crops, cabbage and potatoes for four years. It has produced abundantly. The land produces too well to sow to wheat, corn, oats or clover, if the fertility can be kept up. During the four years it has had three dressings of manure and considerable fertilizer. If I can harvest the crops early enough this Fall I wish to sow this field to rye to plow under next Spring. If I cannot sow it to rye this Fall how would it be to sow it to cow peas early next Spring to plow under in June for a crop of late potatoes? I wish to keep up the fertility of this field without having to plant it to field crops. Will my plan do? S. H.
Ohio.

We would sow this field to rye, even if we had to wait until the middle of October or later. It will be a mistake to sow cow peas early next Spring. The cow pea is not a Spring crop; it is a hot weather plant which makes its growth during the warmer part of the Summer. It is as tender as a bean, and if seeded in the early Spring it usually decays in the ground, and proves a failure. The crop that you want for early Spring seeding is the Canada field pea, which is a cool weather plant, and does well when seeded early. We should sow Canada peas and oats together, as is often recommended for producing a fodder crop. Let this grow until the middle of June, or until you want to plant your late potatoes. Then plow this crop under and fit the land. This will add a large quantity of organic matter, and also some nitrogen from the Canada field peas. For potato growing it will be necessary to use some fertilizer in addition to the cover crops.

MAKING AN EMULSION.

THE picture at Fig. 421, taken from Bulletin 106 of the Tennessee Experiment Station at Knoxville, Tenn., shows the appliances for making a kerosene emulsion or similar mixture which requires thorough mixing or churning. As will be seen, there is a tin vessel 18 inches long and four inches in diameter, with a plunger such as is used on some farms in washing machines. This plunger has a row of holes in it and is connected with an iron rod so that it may be churned up and down through the cover. The liquid to be mixed or emulsified is put into the tin cylinder, and then this plunger is put in and churned up and down until the mixture is made. This bulletin contains recipes for making applications to animals or plants. Among others is the following treatment for animal parasites such as ticks, hen lice and stable flies. This stuff is made by heating cottonseed oil, sulphur, potash and beeswax until the beeswax is melted. Then add three gallons of cottonseed oil or fish oil. Add one part of the sheep dip, dilute with six parts of water and thoroughly churn or mix before applying the wash to cattle or horses: Cottonseed oil (fish oil may be substituted) one gallon; sulphur, one pound; carbonate of potash, one pound; concentrated lye, three ounces; beeswax, one-half pound; sheep dip, one pint; water, three gallons.

BUYING WINTER VETCH SEED.

I AM so heartily in accord with almost all you say to us in the columns of THE R. N.-Y. that I am glad to have opportunity to take exception now and then. On page 888, in commenting on F. C. D.'s experience with Winter vetch, under the caption "Fraud in Vetch Seed," your last word is "The sure thing about vetch is to raise your own seed." Right here I wish to take exception to that statement, and offer something that may be of benefit to R. N.-Y. readers, and this from my own experience and observation.

For over 10 years now we have used vetches for cover crop purposes, and for the past three years for forage purposes as well. For southwestern Michigan we can find no crop that does as well for cover crop purposes so generally as does the vetch crop. In seeking a source of good seed for this crop we were led into buying seed for friends and neighbors, and have handled as high as 30,000 pounds of seed in a season.

Now as to the comparative merits of imported and home-grown seed: I know nothing of the kind of Winter vetch seed that can be grown in the East. I have never seen a sample of Michigan-grown seed that I would change for a good sample of imported seed. Home-grown seed is always undersized, usually containing a very large percentage of shrunken seeds as well. Several times we have tried home-grown seed alongside of the imported seed. Each time better results have followed the use of the imported seed. Here in Michigan our season is not right for maturing the seed of the vetch. We have had entire crops promise well without producing a single seed. It stands to reason that a seed below the normal size of that seed, if used continuously, will cause that crop to deteriorate.

Our experience with Winter vetch leads us to recommend its use with other plants rather than alone. As a Fall and Winter cover it is not as useful as some other plants. For producing a large, quick growth of highly nitrogenous green manure and quickly decomposing organic matter early in the season, we have yet to find its equal for Western Michigan. A bushel of oats or barley used with 20 to 25 pounds of Winter vetch seed per acre makes as nearly an ideal combination cover and green manuring crop as we have been able to find. If we wish to use the vetches for hay we add one-half bushel of rye or three-quarters of a bushel of wheat per acre. CHAS. H. HILTON.

CLEANING UP FIELD STONES.

A Systematic Campaign Against A Nuisance.

WORKING TOOLS.—How to get rid of surplus field stones with the least labor is a problem of vital interest to many eastern farmers. While clearing up a stony farm we have tried out many ways of handling the work. At one time we built a special tool for gathering up small stones. It was, in effect, an "A" drag, with the wide opening ahead (Fig. 420). The stones and clods are left in windrows about seven feet apart. When hauling away the windrows the wagons can be loaded from both sides. A few years ago we cleared an excessively stony field of seven acres at a cost of $35 for the time of the men employed. As made by us the tool was not entirely satisfactory; but the idea seems so well worth developing that we give full details. We found a 3½-inch clear space between teeth was too wide, and halving it by inserting more teeth made the teeth too close. A clear space of 2½ inches would be about right. The teeth should be heavy enough to be rigid. We used half-inch steel rods and had so much trouble with the teeth bending that we finally abandoned the use of the tool. The teeth should have a length of eight inches in the clear. We found trouble in adjusting the hitching to conform to varying conditions of soil, the drag tilting forward or backward too much. We believe that a drag made along the lines indicated and provided with wheels at the corners would be a good practical tool for clearing ground of small stones, provided the soil can be first put in good condition. It would be pretty expensive on lumpy ground.

THE LITTLE HOG FEEDER. FIG. 422.

GATHERING AND LOADING.—We find that a wagon box that dumps the load by pulling a lever saves much time in disposing of stone. To get the full benefit of the dump box we drive *over* the stone pile. Throwing the large stones to one side and occasionally adding loads of small stones and clods that have been raked up enables us to keep the drive over the pile passable. We have added to this pile until it is now several rods in diameter, seven to eight feet high, and contains over one thousand yards. Mechanical stone pickers have been patented and advertised. A few years ago we made diligent but unsuccessful search for such a machine. We hope that some inventive genius will yet devise a practical apparatus for gathering up loose stones and conveying them into a dump wagon. Such a machine would make farm life seem better worth the living to many a country boy. Getting scattering field stones into a wagon is an irksome and apparently a never-ending task. A coke fork is a convenient tool for handling small stones. The teeth are stiffer than those of a dung fork and the spaces between the teeth are about an inch and one-quarter.

DISPOSING OF THE STONES.—We like to use the surplus stone for building roadways and filling ditches; but when it comes to getting rid of old walls a faster method is called for. With plow and scraper we dig a "canal" as close to the wall as possible, so that the stone can be thrown in without rehandling. The most economical time to do this work is just before Winter closes in. During the slack time with our work, in midsummer, the subsoil is so hard that the cost of excavating is increased. When excavating long trenches it is well to make "sidings" at frequent intervals, to avoid moving the dirt too far. Where a wide trench was undesirable we have kept to the width of the ordinary bail scraper by using either one horse, or two horses driven tandem, for the plowing and scraping.

STONE DRAINAGE.—In one field we struck quicksand and excavated a "canal" that held the boulders from the base of a long line of stone wall. This has given good drainage to a corner that we had been unable to drain satisfactorily with tile. The overflow to this trench is necessarily very shallow, and we were in doubt as to the outcome. Since the first Spring, however, there has been no trouble, the water never standing at the level of the overflow as we feared it might. In the case of a few depressions that cannot be drained at a reasonable cost we are thinking of blowing out large holes with dynamite and filling the holes from nearby walls. To be effective we think heavy charges would be needed, so that we could get down about eight feet into the ground.

THE STONE NUISANCE.—Nothing about a farm is more discouraging than going over the same ground year after year, picking stones. They *seem* never to grow less, and many people believe that such is really the case. The old walls on this farm are, or were, a refutation of that idea. If the entire farm were hand raked to the depth of the furrow we could not get stone enough to replace the old stone walls. One thorough clearing of the seven-acre field above mentioned took it permanently out of the "excessively stony" class. Hand raking the same seedbed year after year, we now have less than one-tenth of the material to haul away that we had the first year. So we may say that the work of picking stone is tedious and expensive, but not altogether in vain. It is an investment that gives a large return in increased crop area, economy of labor and satisfaction at having got rid of the constant annoyance of working the stones over year after year.

PICKING A CROP OF SWEET PEPPERS. FIG. 423.

Monroe Co., N. Y. JAMES VICK'S SONS.

ONE duty of the Kansas County demonstration agent is to keep a list of all persons in that county who have purebred stock or seed for sale.

To show how people watch and read THE R. N.-Y. we may say that recently one woman advised another to make and advertise rompers for children as a means of earning money. Already we have a call from a busy mother who wants to know where these rompers can be bought!

POISONING THE CORN WORM.

A New Method for an Old Trouble.

THE hateful insect that eats into the end of the corn ear has had a sort of monopoly of life thus far. The entomologists had worked out schemes for destroying potato beetles, scale insects or cabbage worms, but it was thought impossible to get at the corn worm with any practical remedy. Recent experiments in New Jersey indicate that this rascal must stand up and take his dose of poison like the rest. The following statement from Prof. C. H. Richardson, Assistant Entomologist of New Jersey, will be good news to many corn growers.

"We found that a mixture of equal proportions of finely pulverized sulphur and dry arsenate of lead, when applied to the growing tip of the corn ear, would kill any of the worms attempting to enter there. As most of the eggs are deposited on the corn silk, the majority of the worms enter the ear at the tip and are thus poisoned. It is important to maintain a coating of the poison on the corn silks during the entire growing season, from the first appearance of the silk until maturity of the ear. The applications of the mixture were made with a small shaker; simply a baking powder can with holes punched in the bottom. A little of the powder was shaken on to the tip of each corn ear as the laborer passed along the row. One application will last about a week under ordinary weather conditions; but if the worms are very abundant should be more frequent, especially when the silk is young."

THE LOCAL STOREKEEPER.

I DO not think much of B. C. Wood's argument on page 830, relative to the local store. One writer, on page 618, states he can see no reason why the country storekeeper cannot sell as cheaply as anyone else. There are others of the same opinion. It is true that the mail order house can carry a much larger stock, but there is nothing to prevent the local merchant having catalogues available from the big supply houses from which he can order goods for his customers, and nine out of ten purchasers would rather let the merchant order goods for him if he could get them anywhere near the mail order prices. Probably the local merchant does not make an excessive profit on his sales, but if he does not buy right he cannot sell right. There is an army of drummers traveling up and down the country selling to merchants, and it costs money to keep them moving, but the mail order houses are not in on this expense. The man who makes his purchases over the country counter helps pay this enormous tax every time he buys anything. Mr. Wood says every country merchant carries his customers and has thousands tied up in accounts, some of which he never gets. The man who pays, however, settles with the merchant for these dead ones. Give the mail order house a five or ten per cent. advantage on this item. The remedy for this lies with merchants and their associations.

Your local bank extends credit, but bankers do business along business lines, and the average sucker doesn't put one over very often on these people, and through them on the man who does pay, by reason of a no-good business system. I believe the public prefers to trade at home, and local merchants should be progressive enough to get in a position to furnish anything the catalogue houses can at prices equally low; then the quarrel will end.

New York. C.

R. N.-Y.—It is understood by all that THE R. N.-Y. attempts to discuss these public matters in a fair and broad way, by giving all sides a fair hearing. It does not follow that because we give a person space to state his views, we fully agree with him. If his position is unsound, fair discussion will prove it so. We ask correspondents to be fair, honest, good-natured—and brief.

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FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Harvesting Sweet Potatoes.

WILL you state how sweet potatoes should be handled after they are taken from the ground to insure their preservation for at least a reasonable time? Is September 10 too early to take them from the ground? F. R. J.

Trenton, N. J.

September 10 is not too early to dig sweet potatoes for storage, but they are usually dug later so that the yield will be larger. Most growers claim that sweets are a trifle more resistant to rots in storage when dug early, and while still immature, than are the fully matured potatoes. In some sections cuttings are made of the ends of the vines in June and the small potatoes, called slip seed, grown from these vine cuttings or slips are very immature when dug but they invariably keep better in storage than the mature potatoes. In order to have sweets keep over Winter they must be free from disease, dug before the ground freezes, handled carefully to avoid bruising and placed in a room where plenty of ventilation can be given. When first stored a temperature of 80 to 90 degrees F. should be maintained, and all possible ventilation given until the potatoes have gone through the sweating stage, after which the temperature can be reduced and held at 45 or 55 degrees F. F. R. J. will find that he can keep sweet potatoes a reasonable length of time in an ordinary living room, provided he keeps them at a high temperature and gives plenty of ventilation for a few days until they have gone through their sweat. After they are once stored sweets should not be disturbed any more than is absolutely necessary.

TRUCKER, JR.

Utilizing the Cull Apples.

I LIVE here in Western Colorado in a mountain valley, elevation 6,200 feet. Our principal product is fruit, especially apples of high quality. The leading apple here is Jonathan, which ripens generally by October 10 and is of high color. But we have one drawback; we have no way to dispose of our culls or inferior apples, and every year a great many go to waste in the valley. The only profit we get is from our fancy box apples, as shipping the culls east the freight is too high and there is too much of the same stuff east, and cheaper, so we cannot compete with them. Another drawback, labor is high, 25 cents an hour is the cheapest you can get anybody. There have been several suggestions made to dispose of these apples here, but none has been tried. We shall have more culls than usual this Fall, as we had a hailstorm here which put them in bad shape. Some say an evaporator would pay well, some say vinegar, and one apple man thought an apple butter factory would pay well. What suggestion could you give? I would like some way of disposing of this waste; it would lighten our expenses on our high grade fruit. H. J. W.

Cedaredge, Colo.

R. N.-Y.—We will turn that over to our readers for discussion. In New York State many would say "evaporated apples" but they might not pay in Colorado.

The Illustrations.

THE two pictures shown at Fig. 422 and 423, page 987, give a wide contrast in methods and ideas of farming. On the Western plains far from the town, the farmer would be foolish to plant a crop of Italian peppers such as is shown at Fig. 423. In Southern New Jersey, however, this crop is frequently a very profitable one. The cultivation is much the same as that for tomatoes. The pepper crop can be picked through a series of weeks. It does not have to be taken off like the tomato, just when it is ripe, and therefore the picking may be extended over quite a long period. Within recent years the demand for peppers has increased remarkably, and when well cultivated on the light soils of Southern New Jersey the crop often gives excellent returns. The fact is that farming has now come to be a business of specialties, and a man who expects to make his living from a piece of land must know what that land is best able to produce and adapt his crop to the soil and also to his markets.

The other picture shows a scene on a hog farm in Western Iowa. The little girl has filled a pail with ear corn, and has gone out to offer some of these ears to the brood sow. This is a cunning picture as it shows the child. We consider it dangerous to put children in such a position, unless there are grown-up people close by. The sow in the picture may be entirely gentle and good-natured, but if she is hungry and takes a notion to get hold of that ear corn in the pail, it would be an easy matter for her to knock down and trample over the child. We never like this idea of putting children on the back of a cow or a bull to ride, or having them go among other live stock carrying food in this manner. No one could trust a hungry brute, and without showing a vicious or ugly disposition they would be quite likely to knock the child down while hunting for the food.

In the Gypsy Moth Country.

I WONDER how many of the R. N.-Y. family have orchards infested with the Gypsy moth? We have been fighting them for several years, but have not been able to exterminate them entirely. We have nearly 100 trees, mostly Baldwin apples, and we let the hens and chickens range in the orchard. We have been teaching the hens and growing stock to eat the Gypsy caterpillar and pupa, also the moth when we can catch it. All this month we are hunting for the caterpillar on the under part of limbs, under loose bank and in any cavity. We throw an old bag, fertilizer bag, over the crotch, or lower limb and trap them the same as burlaping. Every day or two we look under the bags and kill the caterpillar or pupa and the hens and chickens will follow me from tree to tree after them. The trees have never been scraped. I think it would be a benefit, but we never seem to have time to do a thorough good job. I took a scuffle-hoe and put in a long handle and somewhat straightened it. I find it a very handy tool to kill the caterpillars and to scrape off the loose old bark. The caterpillars will hide under the loose bark and go into the pupa stage. This transformation is very rapid and to catch them before they become moths you have to be "Tommy on the job." In the Winter we go over the trees and paint with creosote the Gypsy nest, but however carefully we look, some will get missed. In our spraying we use six pounds arsenate of lead to 50 gallons water, but still we have a good many left to fight. What with these and the Brown-tail moth, to say nothing of the germs and other fungus, that make war upon our fruit trees, it does seem as if about all a man's time is taken up, if he really expects to get any fruit worth while. M. T. W.

Massachusetts.

Spring vs. Fall Seeding.

MY reasons for Spring seeding are these: First, I am sure of a good catch by seeding grass with grain. Most of my land is clay and muck, and it is impossible to get seed in early enough for grass to get start enough so it will not heave out, as the land heaves badly in the Spring. Plowing has to be put off five seasons out of six until well into September, in order to have the soil moist enough. I have tried Fall seeding, but it is always a total failure. M. B.

Lewiston, Me.

Inoculated Peas.

LAST year I purchased some commercial bacteria from a seedsman and inoculated peas before planting. Those inoculated produced at least a third more peas and of better quality than a row that was not inoculated. This year I purchased another kind from another seedsman, but was unable to see any benefit from it. Can you tell me anything about the different brands of inoculation? A. S. A.

Alstead, N. H.

While we think some brands of these inoculating bacteria are more reliable than others, the incident you relate would not be definite proof. All these "inoculators" can be expected to do is to add the bacteria needed to enable the plant to take nitrogen from the air. In the first case there may not have been any of these bacteria on the peas or in the soil. Therefore the inoculated peas made better plants. In the last experiment the bacteria may have been in the soil. Then introduction through the commercial product was therefore not needed and there was no reason why these peas should do better than the others. This is just the thing we should keep in mind when figuring on these commercial bacteria. If the bacteria are already in the soil we do not need to buy them.

Fodder Corn.

I AM an amateur woman farmer, and have about one acre of meadow that has been used as a yard for cattle. Could it be plowed now and planted with any crop that would help feed young stock during the Winter? Of course it would need little fertilizing as 20 yearlings were on it most of the Fall and Spring, also during Winter were put there pleasant days. Is it too late to plant corn? If not tell me just how to treat it, as hay is scarce here this Summer. M. S.

New York.

Our plan would be to plow that sod at once, fit it properly and sow fodder corn. This means making furrows about three feet apart and sowing ordinary field corn thickly—about two bushels per acre. Cover lightly and give good culture. The corn will not mature grain, but it will give a large quantity of fine tender stalks, which when cured will make a good substitute for hay.

Recent Experiment Station Bulletins.

"BACILLARY White Diarrhœc," in young chicks is discussed in a fourth report upon this subject from the Experiment Station at Storrs, Conn. In Bulletin 77 the carrier problem, a test for determining the presence of infection in grown fowls and the effect of sour milk feeding upon growth and mortality of young chicks are treated at length.

"Constitutional Vigor in Poultry," is the subject of Bulletin 345 from the College of Agriculture at Ithaca, N. Y. The results of their further study of this subject confirm previous conclusions and show that selection of fowls for strong vitality increases the productive power of a flock.

The detection of infection with white diarrhœa through examination of the eggs laid is discussed in Bulletin 148 from the Massachusetts Experiment Station at Amherst. Owing to the irregularity of the appearance of the germs of this disease in eggs from infected fowls, the conclusion is reached that it is not practicable to detect diseased hens in this way.

"Beef Scrap and Cotton Seed Meal," as sources of protein in the ration of growing chicks are compared in Bulletin 156 from the R. I. State College at Kingston. It was found in a series of experiments that cotton-seed meal had no apparent deleterious effect when fed to chicks, and might be made to furnish part of the protein required. If the most rapid growth was desired, however, the beef scrap ration was found to be the most satisfactory.

"The Composition of Corn," at various stages of its growth, is given in Bulletin 175 from Purdue Experiment Station at Lafayette, Ind. A handsome colored chart accompanying this bulletin shows the amount of plant food in one acre of corn at five different stages of its growth.

"Experimental Work in Connection With Cranberries," is reported in Bulletin 150 from the Experiment Station at Amherst, Mass. This bulletin will interest cranberry growers.

"Classification of the Garden Varieties of the Sweet Pea," will interest professional growers and many amateurs. It is Bulletin 342 from the College of Agriculture at Ithaca, N. Y. This bulletin states that there are now almost a thousand variety names of sweet peas. M. B. D.

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WE have a well in front of our house that was always good until a month ago, when we noticed there was an odor to the water On opening it we found that some surface water had found its way into the well. We cleaned it all out and then cemented the wall down about four feet from top. The water is clean now, but still has the odor.
New York. J. W. M.

It may be that this well is being polluted by underground drainage from some cesspool, privy vault, or other source, or it may be that the surface water still finds its way down the well curbing to enter beneath the cemented portion of the curb. Without an examination of the premises it would be impossible for anyone to say definitely what the cause of the bad odor is, but, if the well is known to be clean, the source of the trouble should be looked for in possible entrance of surface water or in the proximity of some cesspool, privy vault, barnyard or other evident means of possible pollution. If the soil is of sandy or gravelly nature, it is probably for a cesspool 200 feet away to contaminate it, while if it is in a limestone formation, it may receive the contents of a cesspool or vault situated many times that distance from it.
M. B. D.

DOUBLE CROPPING VEGETABLES.

AS regards inter-cropping in Eastern Massachusetts, as the rule this is not practiced by the leading growers, as many of these believe the gain from the profit of the two crops will not make up for the loss the second crop will cause or take away from the first; in other words the crop grown alone needs all the benefit of the land and contents, and will respond to the same and use it so the result will be a larger crop both in bulk and character and also a more satisfactory crop of size and quick growth which insures tenderness, a very essential quality in many market crops, in fact nearly all. Many who formerly grew two crops on one piece of land now grow only one, and get more cash returns from this per acre than when two crops were grown, one perhaps at a loss, for many reasons. Condition of market at time crop was ready might be one, destruction by frost another, and so on. Take the squash crop for example. Formerly this was grown between some other and started between some other, and is yet in a few cases, but it has been found by our best growers that even this crop does better, gives larger returns per acre in actual cash, by planting alone and not crowding the hills too close, giving it the whole benefit of land it occupies and the season we have properly to mature it.

There are, of course, successful cases of growing two and even three crops on some of our farms. The Hitenger fruit farm of Belmont is the best example I could give of this, where practically every inch of the ground is occupied by a growing crop, and a large number of hired help used all the year to care for and harvest these, and a large and profitable income is secured. Very heavy manuring must be done in these cases, and a large supply a few miles away makes this possible. Were it not so handy this system would be impossible to carry out successfully and make it pay.

Spinach is a very important crop to Boston market growers, and is about the leading one. It requires heavy manuring, grows very quickly, requires little attention when growing, and is easily got ready for market. The price is many times very low, sometimes only 10 and 15 cents per bushel, at others perhaps 50 or 75 cents, and when the lucky grower gets this for a good share of his crop he is well satisfied, and ought to be. This crop is planted both in Spring and Fall, carried over Winter, and early in the Spring is ready to cut and sell in time to plow the land, get in another crop of almost any kind, and mature the same season and repeat the process over again. This crop is planted at all seasons of the year, but largely as I have stated, or early in the Spring, and in this case is soon ready to sell and another crop put on the ground. Lettuce is another Spring crop which can be followed by the second crop the same season.

Celery is the leading second crop, and is often set and started before the preceding crop is off the field. This crop requires much attention, and must be kept growing all the time. It returns usually a very satisfactory profit per acre to the grower.

Tomatoes are sometimes set between the rows of some early crop like peas or beans, and also a few other crops, but the practice is largely to grow them alone, as cultivation can be given easier, and really better results be obtained. It is possible to grow spinach, lettuce and celery on the same land in one season, and get good results, and this is done in a few cases. A few growers plant spinach, radish and lettuce between nearly all crops they grow, and get good results. The Cooledge farm on the edge of Cambridge does this to a large extent. Their location being only an hour's haul from the market, and their manure supply being about the same distance, is a large factor in their favor, as several loads per day can be placed on the market when necessity or demand requires it, and this is a great advantage; in fact, many times makes all the difference between a season's success or loss.

Formerly string and shell beans were largely grown between sweet corn. They are yet to some extent, but better results are obtained by separate planting. Nearly all crops need much sunlight, and if one shades the other more or less loss is the result. This may occur in many forms, growth, color or something else, and a spindling plant of any kind is not what we want.

Turnips and cabbage can be grown after spinach, lettuce, peas, beans and other early crops. The question of fertility of land is looked after in this way by most growers. They dress the land heavily with manure at each cropping if possible, using manure that has been piled and seasoned for some weeks if available. Very little fresh manure is used except that from hogpens, which is applied direct on most crops, but not all. Fresh horse manure as it comes from the stables is largely straw, and not fit to use to obtain quick results, so it is piled in heaps and let heat and rot until in suitable shape to apply. Of course much nitrogen is lost in this process, but gain in other forms may perhaps balance this.

To carry on the systems of inter-cropping successfully plenty of help must be had at just the right time; a day or two's delay means to lose a crop in many cases, as many of these crops will only grow when conditions are just right, and in order to get two and three crops in one season, everything must be done on time, no matter what the cost. No crop can be allowed to lag any more than the teams or men can. Everything must be kept moving every minute to insure success.
Massachusetts. A. E. P.

CROP REPORTS.

July 16. Old hay $14; buckwheat $1.80 per hundred; old potatoes 50 cents. Frosts injured peach crop, light production; wheat and oats good, apples fair.
Southern Cayuga Co., N. Y. J. W. P.

Hay quality fine and extra big crop. Corn, beans and potatoes late, but looking well, and growing fast, so have hope of an average crop. Old potatoes bringing $1.25 per bushel. Apples are looking well and prospects for an average crop. M. B.
Maine.

July 19. Hay $20 per ton (old hay); Holstein cows of good size that have dropped calf within one month, from $75 to $100; butter 28; eggs 30. Cream 30 cents per quart; milk five cents per quart. Potatoes are selling for 45 cents per peck or 60 cents per half bushel (these are new potatoes). E. K.
Ulster Co., N. Y.

July 13. Our milk the past week brought from the cheese factory $1.21 per 100 pounds for 13¾ cents cheese; the week before $1.28. I understand the milk stations are paying $1.10. Milch cows $50 to $100; bulls $5 per cwt.; yearling heifers $30 to $35; veal calves 10 cents per pound. J. S. M.
Edwardsville, N. Y.

July 20. Butterfat from 22 to 25; eggs 20; wheat, old, 85 (new will start at about 70); oats 45; more oats are bought than raised here. Corn 70; rye 75; hay $12 to $15. Cattle five cents to 7½; hogs, dressed, nine; milch cows, around $70 for good ones. Horses high, mostly shipped in; fairly good work horses at $450 to $500 per pair. Not nearly enough hay raised in this section to supply the need. More and more Alfalfa is being sown each year. It does better than other clover as our soil is open and naturally drained, the water table being down about 60 feet. We are too far from the lake for fruit to do its best, and orchards are small yet. Staples here are potatoes, beans, buckwheat, and corn. All these crops are looking exceptionally good. R. H. U.
Mancelona, Mich.

July 17. Hay $22, in small lot; straw $15; oats 60. Butter 35; milk seven to 10, certified 15; cream 50 per quart. Potatoes $1; eggs 30. Our place is not much of a farming district. We raise no fruit, only a very little corn. It is strictly a Summer resort. We have from 2,000 to 2,500 city people with us from June 1 to October 1, about the same number each year. No doubt this keeps prices rather high. W. E. T.
Lake Placid, N. Y.

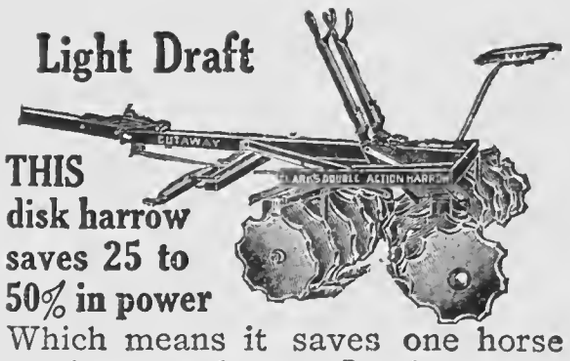
July 15. There is not much dairying or gardening done here. The leading crops are corn, wheat, oats and some live stock, horses, cattle, sheep and hogs. Nearly all grain (except wheat) and all hay is fed on our farms. Prices of horses $150 to $250; cows $50 to $80; fat steers seven to nine cents per pound; hogs eight to 8½; butter 25; potatoes $1.25; cabbage 2½ cents per pound retail, $1.75 per cwt. New wheat 76; oats 50; corn 77. R. W. M.
Fannettsburg, Pa.

July 13. Hot and dry, corn and gardens needing rain badly. Wheat mostly hauled; grass more than half cut. Plenty of fruit, early apples beginning to ripen. Oats about ready to harvest. Horses not selling quite so high as one year ago; all other live stock a little higher. Wool all sold at 25 and 28, mostly sacked and shipped. Early potatoes will be a short crop. Not much live stock selling this time of year. Corn 90; wheat 90; oats 50; butter 20; eggs 18; chickens, young, 20; old 12. W. B. H.
Morgan Co., Ohio.

July 20. The farmers are just beginning to cut their hay; the crop is light, for though near a lime center, hardly any use lime, even though it is on most fields, badly needed. Native strawberries have been in the market about two weeks, prices holding good, retailing for 15 cents. Blueberries ripening well and very plentiful, selling now in the stores for 15 cents a quart box. A little later they will be sold to the factory in larger lots, or shipped to Boston in crates. The gardens are doing well, for there has been no drought here this season, but hardly anyone has cow beets, for just as soon as they showed above the ground powder-bugs ate and killed them. Corn, and its prodnets retail for $1.70 per cwt.; bran and most mill feeds, $1.60 per cwt. Oats are 58 a bushel; wheat $2 per cwt. Old hay $10 to $14 per ton. J. C. S.
South Thomaston, Me.

Fruit prospects in Crawford County, Penna., are poor; few apples, part of a plum crop, and there will be no peaches. Hay will be 65 per cent. of crop with but little left over. Oats are short because of earlier need of rain. In many sections of the county wheat is considered better than any previous year in a score of years. No cows are being brought from the adjoining dairy section in Ohio owing to the necessity of testing cows brought into the State for tuberculosis. Formerly two-thirds of the cattle purchased in the western part of Crawford county, came from Ohio dairy farms. The State law requires 3.7% test, and for this test during the Summer the Rick factory, near Conneautville, is paying $1.30 per hundred, and deducting three cents a hundred for each one-tenth per cent. below the legal test. During Winter months this factory paid $1.80 a hundred and in April $1.60. Many farmers from the county shipped milk to Pittsburg during the Winter and Spring. They received $2 a hundred for Winter milk and $1.50 for Summer milk, net. Many of these shippers in the county and adjoining territory have been cut off owing to oversupply, and a shortage in demand owing to many people being unemployed and unable to buy milk. The amount of milk produced is the same as last year; and the Rick factory is installing a condensery plant to handle its surplus product. Good cows are selling from $75 to $125 and poor cows from $30 to $60. There is a live demand for purebred stock in the county. Butter has been selling at 20 and 22 cents at local store, and eggs 17 cents. Poultry breeders state this is a poor season for hatching. N. J.
Crawford Co., Pa.

Light Draft



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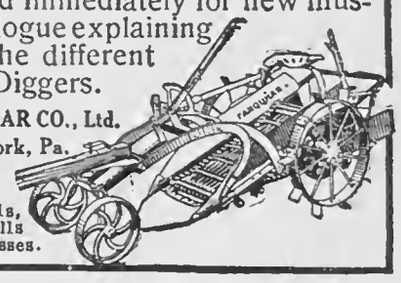

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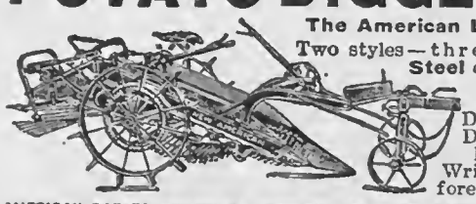

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OFFICE AND WORKS, PORTLAND, CONN.

EVENTS OF THE WEEK.

DOMESTIC.—One man was killed and several injured in an explosion at Jasonville, Ind., July 24, when dynamite was used in an effort to check flames that threatened to sweep the entire business section of this city. The damage is estimated at $400,000. Jasonville was practically without water supply because of the drought.

Three persons were killed in a terrific windstorm that swept down on Joliet, Ill., July 24. Seven persons were injured.

With dynamite and power drills nearly a thousand men, working in relays, saved the lives, July 28, of fifty workmen who were imprisoned by a cavein 4,500 feet from the east entrance to the St. Paul Railway's 12,000 foot tunnel under the Cascades at Snoqualmie Pass, Wash. The cavein cut off the power for the drills, leaving the crew helpless. Between the imprisoned men and the 7,500 foot bore at the eastern portal was a hundred and fifty foot rock barrier. All the crews at the western portal were put to work on double time in swift relays. For twelve hours they worked as fast as human endurance would permit, piercing the barrier four days ahead of the time set by the engineers. The imprisoned were rescued without injury.

Charges that government witnesses had been tampered with and important evidence had been destroyed were made in the Federal District Court at New York, July 28, against the Franklin Candy Company, Inc., the principal officers of which are on trial charged with using the mails to defraud investors. Kenneth M. Spence, Assistant United States Attorney, asserted that important cash books, ledgers and letters which were found by the government when the company's offices were raided a year ago were permitted to be taken away by John F. B. Atkins, who appeared for the defence. Mr. Atkins was called to the stand and was unable to tell what had become of the books and papers. The defence finally agreed to let the government introduce as evidence its statement made up from the missing documents before they disappeared.

The boldest holdup in the history of the West took place July 29, when two masked bandits held up 45 stage coaches in Yellowstone Park and robbed the 165 passengers of more than $4,000. The robbery occurred at Shoshone Point, which is on top of Continental Divide and midway between Old Faithful Geyser and the Thum lunch station.

Fire in the Morris lard factory, in the Chicago stock yards, July 25, destroyed the carcasses of 5,000 hogs, many tons of lard and other property; loss estimated at $500,000.

The factory of E. S. Parkhurst & Co., manufacturers of hair and woolen goods, Gloversville, N. Y., was destroyed by fire July 26, with a loss estimated at $300,000. No water was available, as the plant was outside the city.

Two persons were drowned, 50 families were rendered homeless and 15 business blocks, including one hundred buildings, were partially wrecked at Telluride, Col., July 27, when a wall of water ten feet high, originating in a cloudburst, decended through Cornet Canyon, broke through the dam and flooded the town. The damage is estimated at $150,000.

FARM AND GARDEN.—H. O. Havemeyer, whose estate at Mahwah, in the valley of the Ramapo Mountains, New Jersey, comprises about one-half of Hohokus Township, has sent a bill to the Hohokus Township committee for $769, representing the value placed upon five blue ducks, worth $75 each; two dozen pheasants, valued at $6 each, and half a dozen geese, worth $25 each. These fowl were killed by wild dogs, a number of which are said to infest the Ramapo Mountains. Mr. Havemeyer's lawyer holds that the township committee is responsible for permitting the dogs to run at large. The township committee realizes that $769 is a lot of money for dead ducks, pheasants and geese, so the bill was sent to the State Fish and Game Commission at Trenton.

The Farmers' Union of New Zealand passed a resolution, July 24, urging the government to watch the operations of the American meat combine and prevent it gaining the foothold in New Zealand it already has gained in Australia.

Considerable interest is being shown by farmers in a proposed visit to the farms of Middlesex, Mercer and Monmouth Counties, N. J., by a number of famous German plant pathologists, together with leading plant disease men of the Department of Agriculture at Washington. Although the time of the visit has not yet been definitely decided upon, it will probably be made during the early part of August. Included among the government officials who will be members of the party, will be Dr. W. A. Orten and Prof. William Stewart, both of whom are connected with the United States Department of Agriculture. The tour will be under the direction of Dr. Melvin T. Cook, plant pathologist of the New Jersey State Experiment Station at New Brunswick.

The new regulations governing the shipment of potatoes from Maine, which the presence of powdery scab in that State has necessitated, have now been promulgated by the U. S. Department of Agriculture and took effect on August 1. These regulations supersede the inspection hitherto carried on by the State authorities and are primarily designed to prevent the spread of powdery scab to other sections of the country. With this end in view the inspection is made especially strict for all seed stock. This must be grown from clean seed and in soil not infected with powdery scab, and have been free from contact with anything through which they might have become infected with the disease.

The schedule of premiums and awards for the Maryland Week exhibition, to be held under the auspices of the Maryland State Horticultural Society, Maryland Crop Improvement Ass'n., and the Beekeepers' and Dairymen's Ass'ns., has been published. The exhibition will be held Nov. 16-21 at the Fifth Regiment Armory, Baltimore. Copies of this may be obtained from T. B. Symons, College Pk., Md., secretary of the Maryland State Horticultural Society.

Health Commissioner Goldwater of this city wants more stringent ordinances for the control of dogs, owing to the spread of rabies. More than 40 cases of rabies have developed in Bronx borough since January 1, against nine in the same period in 1913. In all the other boroughs, except Brooklyn, there has been a rapid spread of the disease. The first five months of this year showed 73 cases in Manhattan, against 110 cases for all of 1913. Queens had 38 cases in 1913; this year the borough has already shown 27 cases. Richmond has already had two cases; last year there were four in all. In Brooklyn there have been only 19 cases thus far, against 71 for 1913. Only one person has died so far this year from the disease, against eight in 1913, six in 1912, and some very high records in other years, notably in 1908, when the high mortality of 28 deaths from rabies was recorded.

THE EUROPEAN WAR.—July 30 the dual Empire of Austria-Hungary declared war against Servia, and immediate invasion began, with the bombardment of Belgrade, the Servian capital. Great Britain had urged arbitration, but the influence of Germany was on the side of war. Great tension exists between Germany and Russia, and both countries are mobilizing their forces. Russia will not permit Servia to lose her identity. Both France and England are working for peace, their interests being thrown on the side of Russia. Italy, while neutral, is inimical to Austria, and an ally of Great Britain, Greece is believed to be ready to aid Servia. While all European nations are preparing for general war, the outcome was in doubt July 31. All of the Balkan States, Servia, Bosnia, Bulgaria, Albania, Herzegovina and Montenegro, were expected to unite against their common foe, and in this they would be backed by Russia.

OREGON NOTES.

MY experience with the Marshall strawberry is like the Hope Farm man's. July 20 I picked a pint of lovely big berries and they have been bearing since May 21. Everything was very early this year. A thrasher is setting up this morning in our vicinity. Usually this goes over until the end of August. Fourth of July people were saying the cherries were about gone. Everyone is in the milk business. Cows with first calf, or rather heifers, for they are barely two years old, bring $100. We were asked $125 for grade Durhams a few weeks ago, and they appeared to be only scrubs. The high prices that were put on lands are all gone. So many easterners went back to where they came from. Potatoes, new, are selling at $1.25 a sack; apples $1 a box and are over supply. There is a cabbage famine. Local peaches arrived last week and California stock is from 50 to 90 cents a box. There is a public market in Portland. A charge of 10 cents a day is made for stalls. One can buy anything in any quantity; it is in the down town district. Local corn was selling July 17 at 60 cents per dozen. C. J. H.

Beaverton, Ore.

FRUIT PROSPECTS IN NORTH CAROLINA

THOUGH early Spring prospects were very favorable for a bumper crop of nearly all kinds of fruits, the long-extended drought lengthened the season of the "June drop" and thereby subtracted proportionately from the final total. Orchards on which cultivation was started early and persistently followed through the dry spell suffered very little from the drop. There was however one advantage about the dry spell, if it was bad for fruit it was also bad for insects and especially fungus diseases. Early peaches showed practically no brown rot even when unsprayed. Apples, though a little small in size, are clean and free from scab and blotch. Bitter rot could scarcely survive the hot parching days. Blight seems to have been worse than usual this season on pears and especially so on apples. In the last week or so the drought has been broken in all parts of the State and all late fruits are coming on in fine shape. The averaging up of a large number of reports from growers gives the following percentages of crop: Apples 65% of a full crop; pears 55%; peaches 65%; grapes 92%.

W. N. HUTT,
State Horticulturist.

July 21. Crop conditions very favorable at present; good soaking rains on the 14th and 15th, which seemed to bring new life to the growing crops. Weather had been dry and hot for the past few weeks, and the rains were very much appreciated by the farmers. Wheat thrashing about done and crop unusually good. Oat crop not very good. Plenty of apples and peaches now ripe. Green bean scarce on the account of no rain. Corn $1.05; wheat 90; oats 50; potatoes $2; hens 10; Spring chickens 12½; eggs 13; butter 15. Good horses and good milch cows very high; hogs 7 to 8; stock cattle 5 to 8. W. H.

Washburn, Tenn.

July 21. Wheat 62; oats 36; wheat and oats fair crop. Corn 75, new crop drying up on account of drought. Potatoes $1 a bushel; Winter supply is shipped in from Colorado. No fruit and very little garden stuff, too dry. Hogs $8.40 to $8.50 a hundred; fat cows $5.50 a hundred to butcher. Cream 18 cents a pound, butterfat; butter 15; eggs 10.

Apache, Okla. E. H. G.

July 24. We are having an extremely bad drought in this section and all kinds of feed promise to be very high this coming Winter, particularly hay and other roughage. The drought is general but is worse locally than elsewhere. Corn is burned up, cotton must have rain pretty soon or there will be no crop, the second cutting of Alfalfa was either absent or very short. Eggs 12 cents per dozen; butter 20 to 22; hay, wild prairie, $10 per ton; hay, Alfalfa, $12; cows, dairy, $50 to $85, rather scarce. Horses, good work type, $100 to $150, rather slow sale at this season. Chickens, hens, 10 cents per pound; Springs, 12. Corn 80 cents per bushel; Kafir corn 75; oats 30; wheat 65. N. O. B.

Stillwater, Okla.

July 23. Conditions in this part of Nebraska are very good at this time. A large acreage of Winter wheat has been harvested, thrashed and a good share of it sold and shipped away. The crop is somewhat disappointing in yield, the average being about 20 bushels per acre. The slump in yield was probably due to Hessian fly, the damage done by the fly being more than was expected. Oats are very good, and the yield from 60 bushels per acre down. The weather has been ideal during cutting and thrashing, and the entire crop has been thrashed from the shock without being wet. Corn is now in tassel and silk, and is looking extra well, but is in need of rain. No rain has fallen in three weeks. Two good cuttings of Alfalfa have been harvested, but the third is a failure, and will barely pay for the cutting; which must be done. Whether we are to have a crop of corn or not depends on the coming of rain within a week or two. Trade seems to be fairly active and more farmers have bought automobiles this season than ever before. Prices for cows have been reduced somewhat, because of the low price of butter and butterfat. Good cows $60 down; hogs $8 per hundred; butcher cattle 6 to 7 cents. Spring chickens 18; hens 10; butter 17; eggs 16; butterfat 20 for sour and 30 for sweet. H. M. R.

Fairbury, Nebr.

COMING FARMERS' MEETINGS.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

Northern Nut Growers' Association, annual convention, Evansville, Ind., August 20-21.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Associations, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

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Farm Engineering.

Locating a Well.

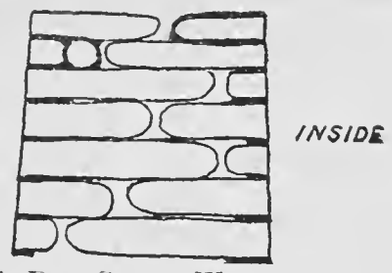
IT may be hard for some of us to believe it, but the geologists have the upper crust of this old earth well mapped out, both as to minerals and water. Most men seem to believe that all they need do is to dig a hole in the earth and take the water out.

The geologists and engineers of the Geologieal Survey know of many wells that have been drilled from 600 to 2,000 feet in depth in places where an expert eould have foretold with eertainty that little or no water would result. Not infrequently people write to the Survey that they have spent hundreds or perhaps thousands of dollars in drilling to great depths and inquire whether they shall go deeper. An examination of the geologic maps or data at hand has more than once brought the reply that the formation being drilled was not water-bearing.

Some "water witch" will probably elaim that he can beat the geologists in locating water; but at any rate some soils and locations are better supplied than others and it is worth money for us to know about it before we start.

Keeping Stone Wall Dry.

ON page 924, C. P. asks how to protect wall from damp. Fifteen years ago I put a basement under my barn, built of field stone mueh like the drawing shown, taking pains first that no stone went elear through the wall from outside to inside, and seeond, taking pains that the stones lapped onto each other, this for strength to bind the wall together. Third, I only put the mortar about three to five inches in from the outdoor side of the wall, and also from the indoors side of the wall, leaving the inside or center of the wall without mortar



A DRY STONE WALL.

for six to 10 inches. When the wall is properly pointed it will be warm as regards wind coming through. If the stones lap properly it will be strong if it has a proper foundation, and if no stones go clear through you will find no frost to speak of on the inside of wall; at least that has been my experience, but in one plaee in my basement a large round stone goes clear through, and that is always covered with frost in cold weather.

The cellar wall to my house on the east side bothered me by getting frosty on the inside in spite of a dirt banking. I wished to build a piazza on that side, and knew a dirt banking would be almost impossible to keep in order, and I tried the experiment of building a wall outside the cellar wall. Before the piazza was built I mortared the outside and top of the new wall but did not put any mortar between the two walls, thus leaving a dead air space between the two walls. It was a success; that dead air spaee did the trick. F. L. B.

Hamilton, N. Y.

Lifting Water With Siphon.

I AM digging a well and wish to ask some questions coneerning it. How high would a siphon lift water from a well? The distance from the buildings is about 550 feet; the level from top of the well is about 65 feet. B. F. L.

West Leesport, Pa.

A siphon, if every condition is perfect, will lift water about 34 feet over an obstruction or hill to a lower level on the other side. That is, it will not raise water to a tank or something of that kind, but, rather, the delivery pipe must be below the souree of the water. If a spring is on one side of a hill and you want water in a valley on the other side, a siphon will raise the water over the hill and down into the valley without pumping. It will lift water out of a well, over the curb and down to buildings at a lower level. This appears to be your case. Praetically, the surface of the water must not be more than about 32 feet below the eurb. Then, all that is necessary is to run a pipe from below the surface of the water in well to the buildings and fill the pipe full of water to exclude the air. Then open up your faueet and the water will flow. The pipe must be kept full of water. If it is airtight, it will remain so of its own accord. To fill the pipes at first, a suction pump at the faucet or a force pump at the well will do the work. If these cannot be obtained, you can pour enough water in to fill the pipes by stopping up the well end and opening up a joint at the well eurb, putting in a tee and raising a standpipe up a foot or so. In this standpipe plaee a valve. Open the valve, fill the pipes, close the valve, open a faucet at the buildings, and then open the well end of the pipe line without lifting it above the water surface. Be eareful, after filling the pipes with water, to allow no air to enter the pipes. A big siphon like this aets just the same as a small siphon made of rubber hose and used to empty a pail or jar of water. You have to fill the hose, stop up both ends, put one end beneath the surface and the other end below the level, but on the outside of the pail. Then when you let go of the ends the water will climb up over the rim of the pail and run out without pumping. R. P. C.

Running Water Up Hill.

I HAVE a 20-acre field which slopes generally to the north. The highest part of the field is about 25 feet above the lowest, which is a meadow. I wish to bring water to the highest part, but am in doubt as to the best and most eeonomieal way to do it. I would use this water for domestic purposes and also to irrigate the upland if possible. I am engaged in large and small fruit, and the high land suffers badly after two weeks of dry weather. J. P. C.

Salem, Mass.

You do not state where you will obtain the water supply you desire to use. If it is from a well or spring on the hillside I should say that a hydraulic ram is the thing to use. Put the ram below the well one foot for every 10 feet you want to elevate the water. Raise the water to a storage tank on the crest of the hill and let it run by gravity down to the house, as well as about the field. If the ram is high enough above the field to be irrigated, the waste water from the ram will do for irrigation purposes. If this is not advisable, pumping from wells or springs on the low lands to a conerete reservoir on the hill may be the best thing to do. It is hard to give details where so little information regarding your farm is furnished. Rams are cheap and reliable, will work day and night without eare or attention and without cost excepting wear and the waste water. A pump would require power, probably a gasoline or kerosene engine. R. P. C.

Deepening Old Ditch.

AN old diteh is to be re-dredged. It contains some water. Shall I take the levels along the edge of the water? Will figuring the amount of excavation be the same as for new work?

Havana, Ill. H.

In re-dredging an old ditch it is necessary to resort to cross-sectioning for computing the yardage of exeavation, in order that deduction may be made for the existing channel. After the center line has been run and elevation of grade line determined at each station, set up where the instrument will command a view of several stations, send the rodman an estimated distanee out, for setting slope stake, obtain the elevation of this trial point, from which subtraet grade line. The result, half the bottom width of ditch, will be correet distanee out from center to set the slope stake if a slope of one to one is desired. In any ease the distance out will be half the bottom width plus the produet of depth by rate of slope. After the slope stakes are set, levels should be taken between them and the eenter stake, that the end area of the seetion may be computed. The mean area of a given section will be one-half the sum of its two end areas; this multiplied by the length and divided by 27 will be the cubic yards in the section. J. F. V. S.

RAKING UP STONE.—Allow me to tell how I do it. I take a potato hook and rake in windrows, and do not make over three rakings in a row; take a team and manure fork, six tines, and fork them up into eart. Half an aere is a day's work if done well. I do it after seeding, then roll. It will be a pleasure to cut the grass on such a lot.

Vermont. J. A. BEERS.

THE MAIL BAG.

Corn Doing Poorly.

LAST harvest I had a field of Timothy and plowed it under intending to put it in wheat, but did not do it. This Spring I plowed it and planted White Cap eorn, but it is not doing well. I have yellow eorn planted in the same field which is doing nieely. Is plowing Timothy under a fertilizer or is it injurious to the soil? W. B. W.

Pennsylvania.

There is nothing about a Timothy sod whieh should injure corn. Part of the field may have been badly infested with grubs or wireworms or perhaps part was not as well fitted as the rest. Probably the difference in the eorn is due to inferior seed of the White Cap.

Bone or Tankage for Grass.

IN seeding down with Timothy and Redtop, would there be any advantage in using bone dust with tankage? Would the nitrogen in the bone last longer than in the tankage? F. C. C.

Maine.

The bone dust would help dry out the tankage, make a better mixture for distribution and add needed phosphoric aeid. Of eourse neither bone nor tankage contain any potash. The nitrogen in the bone is less available than that in the tankage, and would "last longer."

Thickening New Seeding.

I HAVE reeently moved on to a little place here. I find the meadows very light, even the new seeded. Would it be wise to sow more seed on the new seeding to get a better stand for another year? E. A. W.

Rhode Island.

It is doubtful if seattering seed on these old meadows will thieken the grass. Fertilizing will make what grass there is grow better, but we have not been able to thieken the sod without breaking up and reseeding.

Runners from Non-bearing Strawberries.

I HAVE a small patch of the Marshall strawberry whieh is giving me very good returns. I notieed this year that a few of the plants bore no fruit at all, but started in early to send out runners. These plants were two years old this Spring. I am told that runners from these plants will not be suitable to transplant, but must use runners from plants that bore fruit. Can you give me any information in regard to this? G. F. H.

Orleans, Mass.

In our own experience we have found little difference in the runners from such plants and those from fruiting plants. Usually the laek of fruit is due to some injury, and not to any natural habit of the plant. Many experiments have been made, and they usually show that these strong runners from non-bearing plants yield fruit the following season. Various opinions have been expressed but experience seems to be against the theory that runners from sueh plants are unproductive. We would like to have aetual experience from growers.

Time for Planting Cover Crops.

WHEN is the proper time to plant the Fall or Winter cover crops, such as Cow-horn turnips, rye, rape and veteh? If these are planted in July or August will they winter-kill? How early is it safe to plant and not winter-kill? S. J. E.

Fairport, N. Y.

About the middle of August is a good time to seed rye and veteh or turnips. After September 1 will be rather late for veteh seeding, but rye can be seeded up to Oetober.

Damage from Muskrats.

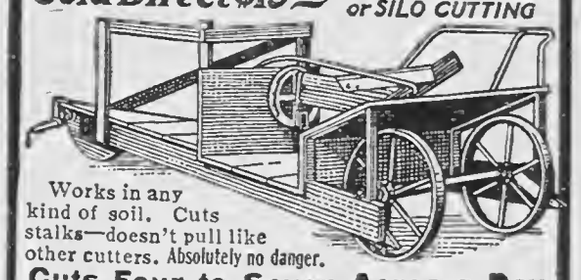
IS there any praetieal and legal way of preventing muskrats from destroying crops? I have some very fertile land along a ereek, and muskrats destroy a large part of the erops every year. Just now they are biting off lots of field eorn that is about a foot high, and carrying it into the ereek. M. F.

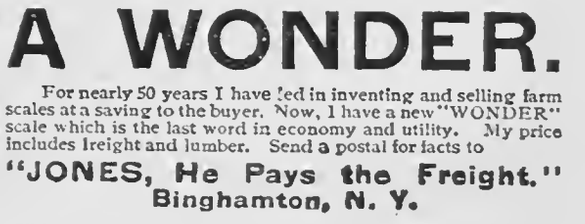
Waterford, N. Y.

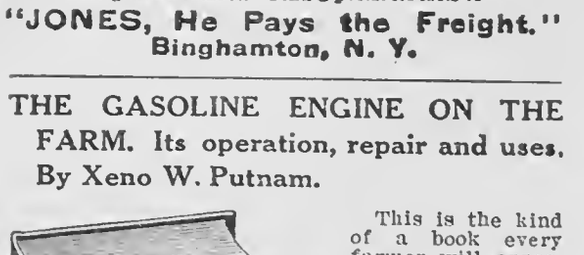
Section 158 of the Conservation Law of the State of New York for 1913, whieh I understand has not been ehanged, provides: "In the event that any species of birds proteeted by the provisions of Section 219 of this article, or quadrupeds protected by law, shall at any time, in any locality, beeome destructive of public or private property the Commission shall have power in its diseretion to direct any game proteetor, or issue a permit to any citizen of the State, to take such speeies of birds or quadrupeds and dispose of the same in such manner as the Commission may provide. Sueh permit shall expire within four months after the date of issuanee."

Under sueh a permit the muskrats eould be trapped or dug out of their holes so as to drive them away. If you do not own both sides of the ereek it would be necessary to get the consent of the adjoining owner or owners.

Poison might be used but the State law in regard to the exposing of poisoned substanees is rather vague, and might be construed to prohibit even the poisoning of rats or mice within a building. A. C. W.







Hope Farm Notes

CHILD BUSINESS.—The question of children and money is often discussed. Some people argue that the child should never be paid for the work it does, and have no individual property. Such people say the child should work (and they usually see that he does), but that he ought to work as a sort of obligation—receiving no money for his labor. At the other extreme I find people who say the child should not do any work, but receive an "allowance" for spending money. Personally I would reject both propositions. I think every child should be taught to do some work. The man who grows up without being obliged to do some sort of labor will be a drone or a parasite all his days. On the other hand, no child should be forced to work all the time. Everyone is entitled to a childhood. and that means a fair proportion of care-free play. The trouble with many a man of 50 today is that he never did know how to play, and he is now too old to learn. He may have reached the condition where he need not work hard if he does not care to, but he never knew how to *play*, and that lack of knowledge affects his life and cuts down its enjoyment.

I mean that our children shall both work and play in fair measure. As for telling a child that it is his duty to work all day to "pay for his board and clothing," I would not do it. You are responsible for the child's being there in one way or another. He is not responsible for his presence, and he is entitled to a fair chance. I think every child should have certain duties or chores to perform, and should be held up to them. He ought to do these things as his contribution to the home, and if it is put at him fairly he will do such work willingly.

When it comes to real labor I would pay the child for doing it, or give him some little business of his own. For example, in picking fruit, I pay our children as I do others. I do not expect the little things to pick all day long, but they do a fair job and get their money like the rest. Out of this money they are expected to buy a few things they need, and they bank the rest. Now I think it much better to pay these children and let them begin to think out business early rather than to have them work for nothing and provide all their necessities. When they see other children paid for picking or similar work while they get nothing, how can they take a full interest in the farm development? You may say that they will get their share later on—but will they get it? A dime in the fingers of a child is worth a dollar far off somewhere in the future.

Little sums of money earned in this way and cemented together by sweat make a little bank account that will not be easily broken up. J. H. Hale tells of one of his boys who worked in this way and wanted to buy a new shirt. He was cultivating corn on a hot day, and as he went on up and down the rows he figured out just how many hot steps there were in that shirt. There were many more steps than stitches. It was far better for him to earn it in that way than to work for nothing and have the shirt given him. Labor is to be a curse or a joy to the grown-up man, according to the way he was made to look upon it when he was a boy. I have started our three small boys in a little business of their own. They organized a company known as

The Hope Farm Boys

One is president, another secretary and the other treasurer and general manager. In the Spring they planted 500 Marshall strawberry plants three feet apart each way, with potatoes in between. Now they are digging the potatoes and potting plants for sale. They advertise in the local paper over their company name, keep their own accounts and do their own correspondence. The treasurer handles the money and divides with the others as often as he accumulates $3. They are likely to do a total business of $50 or more this season, as they own several apple trees which are well covered with fruit. This plan has worked out well thus far. These boys are not inclined to spend their money foolishly. They each have a bank account, and when they are a litle older I shall start them with a check book to make their payments by checks. They are interested in their little business and want to enlarge it. They have now come to one of the great problems of business. Thus far they have done their own work, with such help as I have given them at odd hours. Now they begin to see that in an hour at potting plants they may make $2. With that money they could hire an Italian to do far more hoeing than they ever could, while they kept at the far more profitable work of plant production! Thus this little company comes up against the problem of the ages—the relation of capital to labor. My plan is to encourage these little boys to increase their business slowly, keeping on a solid foundation, paying as they go and not attempting more than they can handle.

STILL RAINING.—The daily showers kept up through July. Hardly a pound of the hay in our neighborhood escaped a soaking. By August 1 large fields of grass were still uncut. There are some farmers who prefer letting the grass stand until it goes to seed. They ought to be well satisfied this year—in fact, this has been a record-breaker for rain. On our heavy soil the long continued wet has started a tremendous growth of weeds. As we could not work the ground properly these weeds got the start in some places, and we are up against a hard proposition. In some of the peach orchards these weeds are waist high. For the Summer this is as good a cover crop as we want. Cultivating or plowing now would be the worst thing we could do for the peach crop. It would be a direct invitation to brown rot and a lot of other diseases. In fact this growth of weeds has been about the best thing that could happen to some of our peach varieties, by stopping the rapid growth of wood. We shall cut around these trees with a scythe and let the cuttings lie on the ground. Then after picking, if it seems best, we can work up the soil with the Cutaway and seed to rye. The truth is that on a number of acres the balance of our hoeing and cultivating will be with a scythe. The soil is now well filled with moisture, and will mature its crops. With everything piling upon men and horses at once we cannot hope to clean up our fields completely. If we can cut off the weeds before seeding and let them lie on the ground we can work faster than with a hoe, save the crops and add something to the soil. Rather slovenly farming, you will say, but there will come times when it is necessary to do strange things in order to fit the weather.

POTATO AND RYE.—Those late planted potatoes are growing well thus far. They make tall upright stalks and grow faster than any potatoes I have seen before. They have been cultivated twice, and will now be hilled up. People who have tried this late planting tell me that small uncut potatoes are best. I took what was left over from the earlier seed. Our regular crop is the most promising we have ever grown. Two acres at the back of the farm, planted in a young apple orchard, are certainly hiding their talents in the earth in a way calculated to win a prize. We could not get all our rye cut before the rains flooded and some of it began to shell out. One big field at the back of the farm is in this condition. Instead of trying to cut dead-ripe grain we shall chop the whole thing right into the soil with the Cutaway heavily loaded down. This will re-seed the field and work in most of the straw. Next year the soil will be in good condition for planting a peach orchard of new varieties which I intend to try out.

LEADING A COW.—Here is a question which certainly appeals to me:

Can any of the readers of THE R. N.-Y. tell me how to lead a cow that never had a rope on her? J. A. D.
Eastport, Me.

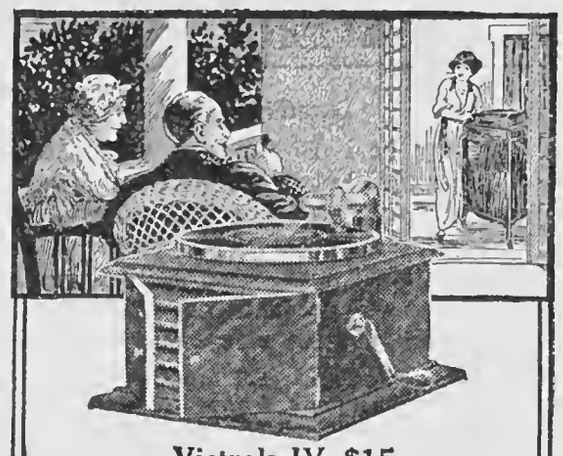
I had an experience trying to lead a Florida cow some years ago. We got the cow home, but I never claimed that we did the job in any scientific way. Since then a number of good cow men have told us how to do it. One way is to blindfold the cow. Tie a coat or blanket over her head and face. Unable to see she will follow the halter and rope. Another way is to use two ropes—one round her neck or horns. Make a slip noose of the other and put it around the cow's waist. Bring the end up between her front legs and fasten to the back of the wagon. When she tries to pull back she tightens the slip noose around her body and she will soon go ahead in order to slacken it. Still another scheme is a sort of harness used on horses that "back" when they are tied. This is a leather strap with sharp tacks driven through it put around behind the rump. It is held in place so that when the cow throws herself back she gets into these tacks. If I were starting with another cow I would put a rope around her horns, fasten a blanket over her eyes and tie her behind a wagon.

HILL STRAWBERRIES.—Here is a note from an Indiana man:

I tried your advice given last year about strawberries, and this year raised berries that made people open their eyes. Plants grew a foot high and held berries up off ground in a great many instances, but they got away from me and grew nearly solid. Will try to do better next time; the hill system for me. Our berries brought 15 cents when others sold for eight and 10 in Ft. Wayne. This market gets very few fancy berries. H. H.

The hill system of putting the plants wide apart and keeping the runners cut off works well with some varieties, but would not answer for all. Some varieties are very free plant-makers, and they ought to be grown in matted rows in order to obtain best results from them. I advise the hill system only for those varieties which naturally make few runners. Even with these it is a great job to keep the runners cut off and only a few patient growers will carry the system through. No doubt about it, this is the way to grow fancy fruit. H. W. C.

"AUNT Chloe, do you think you are a Christian?" asked a preacher of an old negro woman who was smoking a pipe. "Yes, brudder, I 'spects I is." "Do you believe in the Bible?" "Yes, brudder." "Do you know there is a passage in the Scriptures that declares that nothing unclean shall inherit the Kingdom of Heaven?" "Yes, I'se heard it." "Well, you smoke, and there is nothing so unclean as the breath of a smoker. So what do you say to that?" "Well, when I go dere I 'spects to leave my breff behind me."—New Orleans Picayune.



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Ruralisms

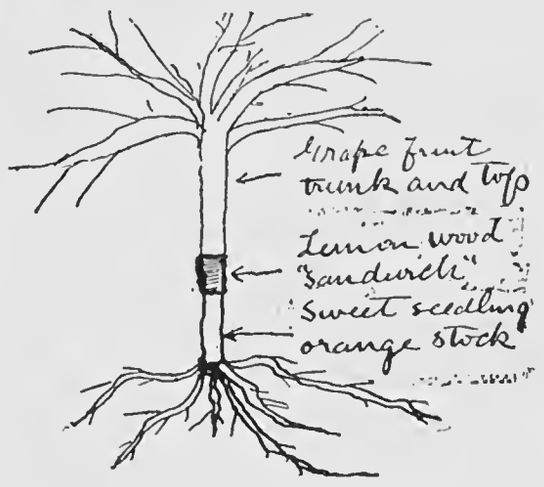
CITRUS TREE SANDWICHES.

THE term "sandwich" in my last report on the progress of our work in the improvement of Citrus fruits by bud selection was used to describe a tree condition more or less common in Citrus orchards. This condition might be illustrated by the following description of the method of propagation resulting in their condition.

For example a sweet or Mission orange seedling is budded to lemon, say the Eureka lemon, and the bud allowed to grow one or more years in the nursery. For some reason it becomes desirable to rebud this lemon tree to grapefruit. The grapefruit bud is inserted in the young lemon tree, usually several inches above the union of the lemon and orange seedling wood. The resultant tree then is made up of sweet seedling orange stock, a section several inches thick of Eureka lemon wood in the trunk, and the remainder grapefruit trunk and top of tree.

The section of Eureka lemon wood in a tree of this character was called "sandwich" in order to distinguish it from the normal tree condition, which would have been sweet seedling orange stock and grapefruit trunk and top of tree. This condition might be illustrated by the following diagram.

In some cases, such as Citrus varieties having characteristically different rates



of growth, the sandwich grows either more rapidly or on the contrary more slowly than the stock and top, in which case it can be seen protruding or receding from the horizontal lines of the grapefruit and seedling orange trunk, above and below the "sandwich."

In a navel orange orchard near Riverside in which we located a Citrus performance record plot in 1909, we found in 1912, such a condition. In this case sweet seedling orange stock was used, which had originally been budded to lemons about 1898. The young lemon trees were rebudded in 1899 to navel orange buds, about five or six inches above the point where the lemon buds had been inserted the year before.

This orchard in the period 1909 to 1912 deteriorated so rapidly in amount and character of fruit production as to become almost useless. While studying these decadent trees in our plot, I happened to notice one day lemon sprouts growing out of the tree trunk. On investigation I found that these lemon sprouts came from a lemon "sandwich" in the tree trunk as a result of the method of propagation mentioned above. A comparative orchard across the road, in which we had a performance record plot, did not deteriorate, and upon examination was found to be free from lemon "sandwiches."

The owners of the orchards became convinced that there was a relation between the decadence of the orchard with the lemon wood in the trunks and the presence of this lemon wood section or sandwich. They then cut back the orange trees, cutting off the trunks *below* the sandwiches, and inserting navel orange grafts in these sweet seedling orange stumps. In other words they eliminated the sandwiches.

It is too soon to report on the results of this experiment. However, acting on this hint, we have looked in many orchards, particularly decadent orchards, for the sandwich condition as shown by trunk sprouts or differences in rates of growth. We have enough evidence to say safely that in many cases it looks as though there might be a relation between tree condition and the sandwiches of other varieties in the tree trunks. This seems particularly true in the orchards examined of sandwiches of Valencia orange or lemon wood in navel orange trees.

Just how this condition might be responsible for tree conditions it is impossible for us to state. We might suggest the differences in hardiness of the "sandwich" and the tree, so that in cold weather the sandwich might be affected more than the fruit or tree. There is no doubt also that varieties of Citrus differ in their resistance to environmental conditions other than temperature, which might explain in some cases a possible correlation of "sandwich" condition and certain forms of orchard decadence.

In all studies of the relation of stock to scion this possible condition should be kept in mind. The practice of rebudding nursery trees is more or less common, changing from one variety to another as a result of fluctuating tree market conditions. It is possible that under certain conditions this practice might be dangerous, although we have no positive proof as yet that such is the case.

A. D. SHAMEL.

Grafting or Budding Roses.

WILL you explain the process of grafting or budding, a wild rose branch or root being used as the foundation? Some of my hybrid roses have died, but the roots have sent up wild roses. F. W. L.

Tuckerton, N. J.

The stock commonly used for Hybrid Remontant roses is the Manetti, a variety of the China or Bengal rose, with deep pink single or semi-double flowers, though brier stock is also used. In this country budding in the open air is done in June and July, a dormant shield bud being used. The stocks, which come from France, are trimmed back closely, both root and tops, planted in Spring, and budded the following Summer, whenever the bark peels readily. The process is similar to any other budding as to careful fitting and tying of the bud. The bud remains dormant that season, but starts into growth the following Spring, when the top of the stock is cut off. We infer that the inquirer wishes to bud upon stocks of his old plants, but we are unable to say whether this would be satisfactory, as we have never tried it. Evidently suckers or sprouts were permitted to grow, which being stronger than the budded plant have starved it out; such suckers should always be removed. We are often told of rose bushes that have "reverted to wild roses," when of course this is the trouble. We like to set our grafted roses with the ground level just above the union; then, as natural roots are formed, we have an own-root plant.

Root-grafting is very commonly employed under glass, either cleft or splice-grafting. Bits of root two or three inches long are united with scions of similar diameter. The grafts are covered with moist moss and left in a cool house or frame till united, when they are potted and grown on until planted out in May, the work being done, of course, in Winter.

Azaleas, Violets and Freesias.

I ENCLOSE a branch from a plant that I have which I would like identified. The plant in question is about 12 years old, a regular tree form, but never has any flowers. 2. When and how are sweet violets put in cold frames to get flowers in February and March? 3. How is the Azalea treated after flowering, and when re-potted? 4. Can I force Freesias in hotbeds made of brick? If I want them at Christmas, when are they put in?

Tarrytown, N. Y. T. W.

1. The plant sent was Crassula portulacea, a native of South Africa. It grows into a bush four or five feet high, and does not usually bloom under glass until it is older than the specimen named.

2. February and March are the natural flowering time for the violets grown under glass, and unless sunlight is very deficient it should be quite easy to get an abundance of flowers from plants set in the frames in September. Some growers set the young plants directly in the frames where they are to grow and bloom in Spring or early Summer, leaving the frames open all Summer, while others plant them in the open ground and put movable frames over them in the Fall, this being adapted to sections where the climate is less severe. The best place for violet frames is on ground sloping to the south, with some wind-break at the north.

3. The best time for re-potting Azaleas is after flowering, when new growth starts. Soil is a sandy compost of half peat and half leaf mold, with some good fibrous loam added. The plant must be potted firmly, the base of the stem just above the surface, and the soil well rammed down the side of the pot; ample drainage must be supplied. After flowering, the seed pods should be pinched off, and the plant treated as before until danger of frost is past, when it should be put outside in a frame or sheltered spot, the pot plunged in coal ashes to prevent drying out. In such a situation Azaleas should be well watered, vigorous spraying with cold water preventing red spider, and they make a very fine growth. In September they should be brought inside, and it is quite common to re-pot them at this time, though it may be done earlier. An open slatted shed of lath is a good shelter for Azaleas in Summer.

4. Freesias are very easily forced, but we have had no experience with their culture in hotbeds. As a brick hotbed is referred to, this inquiry may have reference to a heated frame; we do not think a hotbed heated with manure would produce Christmas Freesias at Tarrytown. Freesias for forcing are potted in succession from August till February, giving a period of bloom that lasts from Christmas until June. They are usually in bloom about six weeks after top growth starts. They need careful watering until the plants are in flower.

Grafting Old Apple Tree.

AT a farm which I have in the State of New York there was once a large Flemish Beauty apple tree. Some years ago, while overladen with fruit, one of the large limbs broke and the tree was neglected. Eventually worms gained access to the other branches and destroyed the tree. The stump left is about two feet in diameter and 6½ feet high, on the side of which there is a live strip running to the top of the stump. Out of this at the extreme top there is a perfect tree growing, which is about five feet high and 1½ to two inches thick at the butt. Can I save this new tree by cleft-grafting it to another stump, or would you suggest grafting the whips to some other tree? If possible I would like to keep this tree intact, as it is perfectly formed.

Staten Island. J. O. K.

There is no such variety of apple as Flemish Beauty but there is a pear by that name, but whether it be a pear or apple tree makes no difference. A sprout on the side of a stump two feet in diameter does not seem to be the beginning of a very substantial tree. The stump being dead it will rot away gradually and the sooner it is gone the better for the sprout. It might be well to cut out all of the dead wood and leave the living part in such condition as to grow into a healthy body, provided it will do this. A small post as a temporary support beside the trunk might do good until the growth made it substantial. If two young apple trees were planted beside the living part and grafted to it in a dexterous manner a sort of triple or tripod trunk might be formed that would be substantial and a curiosity as well. This would require skill and constant care that sound unions be made and the final cutting away of all dead wood from the old trunk. It would be a tree on crutches.

H. E. VAN DEMAN.

WANT TO KNOW.

OVERHEAD IRRIGATION FOR BERRIES.—I would like to know whether any of the readers of THE R. N.-Y. have ever used overhead irrigation on strawberries and bush fruits, and with what success. I have seen this method of applying water to all kinds of vegetables with splendid results, but am told that it will not do on berries as it will scald both fruit and foliage. My crops of berries were ruined both this year and last by drought and if I can find a system of irrigation that is successful and practical, I would like to know what it is. I am located so I can get city water and at a reasonable rate.

Indiana. S. D.

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A FARMER in Texas undertook to make his Congressman see a joke. So he wrote for some free seeds and suggested a package of macaroni seed. The solemn M. C. took this farmer right at his word and wrote back:

I have ordered the seed sent you from the Agricultural Department and wish to congratulate you in your efforts to grow this very valuable plant. It is the cultivation of macaroni that paid the war debt of Italy and has made it one of the wealthiest nations in the world. I do not see why the rich soils of Red River County would not grow this to the extent of making it, in connection with their long staple cotton, the wealthiest agricultural spot on the globe.

The Italians paid their war debt by eating macaroni rather than by planting the seeds—but what is a little thing like that to a Congressman? If he can plant a macaroni seed and raise a vote it is certainly a productive seed. But he cannot fool the farmers any more, or buy them with a 10-cent package of seeds!

*

THERE are hundreds of farmers who are feeding a well-balanced expensive ration, and are reducing the efficiency of this feed 25 per cent by swearing in the barn, and pounding home runs against the cow's ribs with the milking stool. The long and the short of such business is that it does not pay. When the discriminating farmer goes out to buy a cow, or when he retains one in his herd, he considers her intelligence. Bovine phrenologists say that a cow wide between the eyes is an intelligent one, and intelligence and nervousness go together in the dairy cow. The better the cow, the more marked the effect on her production will unkind treatment become. The farmer who wants to get out of the scrub class must treat his cows right. The farmer who is kind to the children, is considerate of his wife, and is willing to coöperate with his neighbors is the man who will make a success with the dairy herd. The man who stones his cows when he drives them to and from the barn would better keep out of the purebred business, for he will lose out.

*

THE Geneva Experiment Station has issued what seems to us a very sensible bulletin on purity of farm seeds. Among other sound advice in this bulletin is the following in reference to samples of seed which are adulterated with weed seed or trash.

If the seed appears to contain considerable amounts of such rubbish, the buyer should insist that it be cleaned before he takes it, secure a reduction in price proportionate to the amount of impurity, or look elsewhere for his supply.

That is sound common sense. If any farmer receives a sample of seeds loaded up with chaff or gravel or weed seeds, he ought not to accept it at all, or if he does take it he should not pay the price of pure seed. Yet in "Horticulture" Geo. C. Watson is reported as trying to ridicule this sound advice.

In other words, according to the authorities of the great State of New York, the cleaner the seed the smaller the price! The worst of it is, New York is eminently fair compared with some other States—and Washington. The foregoing extract is from Bulletin 378 of the Geneva Station. The same bulletin enlarges on the law not being drastic enough—like the fertilizer and foodstuff laws. As if seeds could comply with such conditions! Seeds are not a manufactured product, and attempts to apply such laws to them are unjust and ridiculous; and do more harm than good to the farmer and all concerned.

It is hard for us to believe that Mr. Watson ever made any such statement. The mixed and "loaded" samples of farm seeds which some of our readers have received are certainly "manufactured"—as much so as fertilizer. There is no reason why seeds should not be guaranteed the same as fertilizer. Our farmers are entitled to full inspection and protection. The Geneva Station is doing good work in this line and should be supported—not sneered at

CAN wheat be used at all for cow feed? We have a good crop of wheat with the usual low prices in prospect, and would like to feed it if possible. What could be mixed with it to feed milch cows with corn fodder and mixed Timothy and clover hay for roughage? C. D. H.
Ohio.

Letters are coming from all over the West asking about feeding wheat. The "bumper crop" talk has had the effect of pushing down prices. The authorities now say that the world's total supply is not large and that much of our surplus wheat will be needed in Europe. The "bumper crop" talk, however, has cut down the price to farmers, and thousands of bushels will be fed to stock. Wheat has much the same composition as corn. It does not make as good a feed as corn when crushed, as it is too sticky or pasty to feed alone. Many an old time farm boy will remember how hungry he was when he got up to milk and do the chores before breakfast. We often chewed a handful of whole wheat until it made a sticky paste of gluten in the mouth. Barley, oats or corn ground in equal parts with the wheat relieves this pasty condition and makes a good mixture to feed with Alfalfa or clover hay and silage. Should there be a war in Europe the price of flour and wheat for export will rise, but the "bumper crop" talk, as was intended, is getting the wheat out of farmers' hands at a low figure. You will find a full discussion of the feeding value of wheat in THE R. N.-Y.

*

WE have now waited for several months for the proof that those English Wyandottes at the egg-laying contest are hybrid or mixed breeds. No proof has been forthcoming. We have given illustration from the possible breeding of several breeds of cattle to show what might happen as the result of long-continued selection for dairy production. Now we have the following:

Your simile of Jersey cows is not fair. Barron started with a pen of Brahma-Hamburg-Leghorn hybrids bred to blocky shape, and in 15 years he has produced splendid layers of a very different shape. They are "Barrons," or "English" of a distinct type and are entitled to a name. BUCHANAN BURR.

How do you know what he started with? The Wyandotte is a "made" breed produced by mixing the blood of several distinct breeds and then selecting for a certain type. We presume that is what is meant. Now many years ago the Jersey breed was "made," as was the Short-horn or Ayrshire, and there are now several distinct types. We can easily find purebred Jersey cattle in Northern Canada and in Texas, which vary as far from the true Island type of Jerseys as those English Wyandottes do from the standard. In the far North or the far South these Jersey cattle have been adapted and selected so as best to meet the needs of climate or dairy practice, but no one thinks of saying they are not Jersey cattle, because such selection has taken them away from the Island standard. They are more useful animals because they have been changed. In speaking of the origin of the curious Egyptian race the historians say:

"It is said that the highly-developed greyhound was useless as a hunting dog till crossed with a strain of bulldog—an infusion of blood, which, while not marring the distinctive physical peculiarities of the hound, yet quite sufficed to supply the lacking stamina and courage."

We have heard speakers attempt to make an argument for special breeds of cattle by saying that men do not select a bulldog to hunt rabbits. It seems that they may select the spirit of the bulldog after all! We have no personal interest in these English Wyandottes. We think the American Leghorns will beat them out before the contest ends. The fact seems to be evident, however, that these English birds are very superior layers, since they have been bred definitely for the one point of egg production. It will be safer to breed this strain by itself rather than to attempt crossing it with the Wyandotte as usually found in this country, but we think it a rather narrow and small proposition to try to belittle or discredit Barron's work in developing this strain.

*

AGRICULTURAL college students as farm workmen! It is evident that many of our readers have tried these young men as managers or farm helpers, and we have received a number of reports. The great majority of them are unfavorable. It appears that a good proportion of these young men are willing to work and are energetic and honest. Too many of them have a very large idea of their own value. They lack experience and the ability to adapt themselves to local conditions. They have been trained at the college to do work in a certain way—usually with the aid of expensive and very complete fixtures. When they go to a practical farm which, being run for business, must cut out experiments or superficial things, many of these young men lack the power to adapt their college training to their new surroundings. In too many cases the trouble seems to be that the college teachers spoil these boys by giving them too large an idea of their own importance. We have heard of cases where teachers advised these untried young men never to accept a place for less than $75 per month, and never to touch any smaller job than that of managers. It would be hard to think of any more foolish advice than this. It will be clearly evident to any business farmer that what these boys need most of all is practical knowledge of real farm operation. How can anyone manage farm labor successfully unless he know *how to do the work* to the best advantage? It is not enough that the college has taught him *why* it should be done—he must know how if he is to make a farm pay—for only by knowing how can he learn to adapt his science to local conditions. The cool-headed and unprejudiced reports which come to us indicate that the training which many of these young men are receiving has given them too large an idea of their importance and value to a practical farmer. It would be far wiser for them to work as plain hired men for a year or so before attempting to "manage" a farm.

*

CALVIN J. HUSON, New York Commisioner of Agriculture, has written the officers of the county and town fairs advising against exhibits of swine. It is evident that last year hog cholera was spread through infected animals shown at the fairs.

I am reluctant to reach the conclusion, but I feel that we had better omit the swine exhibit at our fairs this year than run the risk of scattering the disease throughout the State. I therefore respectfully urge upon officers of agricultural societies the propriety of withdrawing their premium lists for swine, and to refrain from having an exhibit of swine at their fairs this year. Where fairs are held in communities where no cholera has existed within the past year, it might be safe to have an exhibit of swine, provided the entries were limited to such territory as is known to be free from the disease; but to permit an exhibit from infected territory is exceedingly dangerous, and might spread the germs of the disease into territory where the disease has not heretofore existed.

Hog cholera has never been very prevalent in New York State and every precaution should be taken to prevent its spread. Wherever it appears the disease should be stamped out, or it will prove a calamity, especially in our thickly settled farm districts.

*

ON January 1 of this year a new land law went into effect in Egypt:

The law renders properties of the area of five acres and under unattachable for debt. A land mortgage has heretofore been a source of easy credit for the small cultivator. There is no doubt that the funds borrowed by the Egyptian small cultivator on land security have for the most part not been spent for economic necessities, but rather for maintaining a relatively extravagant standard of living. The purpose of the law is to eliminate or at least to minimize this unproductive expenditure of borrowed funds and gradually to relieve the small farmer from his present excessive burden of high interest-bearing debt.

The farming of Egypt is peculiar because nearly all the agricultural wealth is represented by these small farmers. The entire system of farming would be upset if these small holdings should be taken from the present farmers and put together into large farms. In many cases the first chance to obtain easy credit leads farmers without much experience to borrow not to invest but to *spend*. Before they learn just what that means their credit is gone and their farms follow. This law in Egypt will make it harder to borrow for spending purposes. Since the creditor cannot take the farm in case of default he will be sure the money is to be spent for improvements before he lends it.

BREVITIES.

WE cannot see that the song birds have decreased in numbers.

WE know a number of persons afflicted with laziness who advocate the "rest cure."

HIGH living at low cost comes to the man with a good garden and a roost full of fat hens.

THAT was good farming to sow peas and oats. It suits farm stock from brood mares down to shotes.

IF you would have the waste of plant food stop through the wet Autumn—sow a cover crop.

LIGHTNING never strikes twice in the same place, because there usually isn't any place left.

THE disease known as pine rust lives part of its life on the domestic currant. The New York Experiment Station finds that the disease does not survive the Winter on the currant.

THERE has been quite a little discussion regarding the best material for filling the cavities in decayed trees. A mixture of one part asphaltum and three to four parts of sawdust has given good results in Ohio.

IT is said that American meat packers are reaching out as far as Manchuria after poultry. From October to March fowls can be purchased in that country at from 15 to 20 cents each. Dressing costs one-half cent. The plan is to buy such poultry, feed it for about three weeks, dress and freeze and then export.

OPENING OF THE CAPE COD CANAL.

LAST week witnessed the opening of the new canal dug across the neck of Cape Cod. For the past few years the work of digging this canal has gone on very quietly. Not much attention has been paid to it, since the Panama Canal was a much larger proposition, and one which had absorbed public attention. Yet this Cape Cod Canal is sure to have a great influence upon the commerce of the Atlantic coast, and will prove a great convenience and developer of business. Ever since the Pilgrims made their settlement at Plymouth, there have been dreams of such a canal. It is said that Miles Standish, the captain of the small Plymouth army, was something of an engineer, and that even in his day he saw the possibilities of this ditch across Cape Cod. The outside of Cape Cod is the most dangerous point along the Atlantic coast—worse even than Cape Hatteras. In time of storm it is a wild and dangerous trip past Cape Cod, and a very large proportion of the losses to shipping along the coast have occurred there. The opening of the canal marks the beginning of a protected water route between New England along the sound of Long Island to New York City. The distance is shortened by many miles, and vessels can travel in practically all kinds of weather. Looking beyond the present there are still greater possibilities. For the last century, wise men have seen the advantage of an inside water route all the way between New England and Florida or the Gulf of Mexico. Such a route would cross New Jersey and on to Chesapeake Bay, then down across Virginia and North and South Carolina to Savanuah or Jacksonville. A glance at the map will show the many rivers and inlets which may be utilized for such a route. Congress has started again and again to provide for such a passage, but for one reason and other it has always been given up. The present Congress is said to be in favor of such an enterprise, and in the course of time it will without question be worked out. In such an event a vessel can start from Portland, Me., or Boston, Mass., pass through the Cape Cod Canal and along Long Island Sound and then journey in safety, protected from severe storms, or from the ravages of a hostile fleet, down through the country to the Gulf of Mexico and if need be to the Panama Canal. Such an inside waterway would prove a great safety and convenience and a wonderful development of the Atlantic coast region. It is coming in time, and for that reason, if for no other, the opening of the Cape Cod Canal is a great event in the commercial history of New England and the Atlantic coast.

The Connecticut Poultry Meeting.

THE meeting of the Connecticut Poultry Association held last week at the Connecticut Agricultural College was probably the most interesting if not the largest gathering of poultrymen ever held in this country. The close egg contest between the English Wyandottes and the American Leghorns has created deep interest. Added to that was the fact that Tom Barron, the English poultry breeder, was to attend this meeting and make two or three addresses. There has been a great desire among poultrymen to see and hear Mr. Barron. The result was that all the hen men who could do so travelled out to Storrs. The Connecticut Agricultural College is a hard place to reach. It is located in a rough country, nestling among the hills far from the railroad. Still over 600 people gathered at this place, some coming in wagons, others in automobiles or in any conveyance possible. It is safe to say that a good proportion of these people came prepared to scoff and remained to pray. A good many of them have been sceptical regarding the value of these egg-laying contests, and a great many of them had somehow formed the idea that there was something wrong about Tom Barron and his birds. It is safe to say that all of these people went home impressed with the value of the contest, and agreeing that Mr. Barron is a plain, straight, honest man, whose knowledge of a hen and her ways has been learned by hard and patient experience. There was a fine program, but the best part of the whole meeting was the long trip through the egg-laying contest. The leading pens were visited, and Barron and others explained their methods of selecting hens in an effort to pick out the good layers from the drones. This was thoroughly interesting to the crowd, and all through the day there might be seen little groups of men and women scattered about the college grounds discussing this great question of throwing out the drones, and how to improve the laying qualities of the hens.

There was no building on the grounds large enough to contain the great crowd. Everyone was good-natured and happy in spite of the fearful weather. We shall try to give a full account of the meeting later, and a good synopsis of Mr. Barron's talk regarding the breeding and selecting of a laying hen. As is usnally the case, a talk by such a man is in a class by itself, and one must hear and see the man himself in order to get a fair idea of what it means. No printed report of such a thing could really do full justice to it.

New Jersey Organization.

THE new State Board of Trade and Commerce of New Jersey promises to be of great good to the farmers of the State. The objects of the new federation are to take concerted action on State-wide problems, to make the federation a clearing house for the latest thought and experience in civic and commercial work, to analyze and take constructive steps in regard to such matters as agricultural and industrial development, civic and social conditions, residential and recreative facilities, water-ways, city planning, good roads, municipal research, community publicity, vocational education, retail credits and many other lines of activity; to advance the prosperity and prestige of New Jersey through the increased efficiency of its several communities, and to build up public opinion that truly reflects sound economic principles. It is understood that steps will be taken at once to investigate such rural problems as consolidation of schools, transportation of pupils, purchase of school supplies, salaries and cost of living of country school teachers, marketing and transporting of farm produce, co-operative purchasing of fertilizers, seeds and farming utensils, farm and domestic help, libraries at convenient local centers, etc. This work of investigation will be done by trained experts.

D. T. H.

New York State News.

CONFERENCE OF CO-OPERATIVE SOCIETIES.—The chief event in farm circles the past week was the first annual conference of co-operative associations of the State, at Utica, called by Commissioner Huson, and presided over by Marc W. Cole, Superintendent of the Bureau of Co-operation. It was an informal meeting in respect to the program as there were no set speeches, but rather was it a comparing of notes on the work of the co-operative societies of the State, there being representatives from nearly all these associations as well as from other co-operative societies not organized under the new State law. The question box and the round table were important features of the meeting. Superintendent Cole stated the purpose of the meeting to be to crystallize into a brief statement to be made to the Legislature at its next session, some of the things thus far accomplished by the bureau of organization, and other things it hoped to do, in order that the Leliglature may be well informed as to the necessity of such a bureau and of the growing importance of co-operative societies. Certain amendments to the co-operative law were also to be considered. It is probable that at the next conference, which will be held in Utica in December, more definite information as to the working of the law and the need of its amendment in certain respects, will be available. The reports of the representatives of the various State co-operative societies will be included in the bulletin to be published in a few weeks which will contain a complete report of the proceedings of the conference.

FARM HORSES AT STATE FAIR.—It looks now as if the department of farm draft and breeding horses at the State Fair this Fall would break all records. Premiums aggregating something over $9,000 in the 194 classes will bring out a fine lot of animals. Besides the money premiums there are gold and silver medals offered champions by the Belgian Society of Brussels, the New York Belgian Society, and the Hackney Horse Society. The Percheron Society of America offers gold and silver medals. This show is of especial educational value to farmers and stockmen, for whom it was established some years ago.

STATE FLORAL CLUBS.—The annual meeting of the State Federation of Floral Clubs will be held at Syracuse, September 3, during State Fair week. It is probable that Dr. Beverly T. Galloway will be the chief speaker before the federation. Dr. Galloway was for many years chief of the Bureau of Plant Industry at Washington before becoming the head of the State Agricultural College at Ithaca. The federation is composed of all the professional and amateur flower clubs of the State.

BIG WEEK FOR THE CHEESE MEN.—The meetings of the Watertown Produce Exchange on Saturday, July 25, witnessed the big week's work of the season when 8,520 boxes of cheese were sold at 14 cents per pound, making an approximate total of $57,000.

OUR STATE MINES.—While New York has no gold mines it has a very considerable mining industry, as is shown by the report of the State Geologist, recently issued. The aggregate value of ores and mineral materials for the year 1913 was $41,704,020, an amount larger by several millions than the total reported for any preceding year. Iron ore was worth $3,870,841. There are two rock salt mines and about 25 evaporating plants in active operation which turned out 10,819,521 barrels of salt, valued at $2,856,664, the largest on record. Natural gas contributed $2,549,227 to the total and petroleum $2,255,508. Portland cement was produced to the amount of 5,146,782 barrels, valued at $4,873,807. Clay materials produced a value of $12,077,872, and stone products had a value of $6,763,054.

J. W. D.

Grasshoppers and Grandfathers.

A PRESENT PLAGUE.—We are receiving vigorous complaints of the injuries of grasshoppers and urgent requests for aid in checking the ravages of these hungry hordes of insects. All of the outbreaks of these locusts that we have investigated so far have been confined to regions having a sandy or gravelly soil. Yet the outbreaks are so widespread and so serious that the situation is worthy of some general consideration.

THE KIND DOING THE INJURY.—In the first place, we find that the species of grasshopper causing nearly all of the trouble is the lesser migratory locust (Melanoplus atlanis), a close relative to the notorious Rocky Mountain locust that devastated the fields of Kansas, Missouri and other Western States in the seventies. This locust is widely distributed over nearly the whole United States, and is apparently one of our common grasshoppers in New York State. We refer to this commonness of the insect in order to emphasize the fact that the injury being done now is not due to the work of any new or extraordinary pest, but is due rather to the unusual development of a common and well-known insect. Moreover, as we shall point out later, this unusnal development has probably been fostered by lax methods of farming. In order to understand the relation that exists betweeu the development and inerease of this insect and the usual methods of farming, it will be necessary to know something of its life history.

THE LESSER MIGRATORY LOCUST.—In the fields where the swarms of the locnsts are to be found at this time (June 26), a large number of them will be seen to possess wings. This means that such individuals are now full-grown. There are, however, many of them without wings. These are the young, immature individuals that we call nymphs. Probably by the first of July a majority of the locusts will be full-grown, with fully developed wings. They will then be capable of migrating from one field to another, in fact, for consuderable distances. It is not definitey known just how long before these adult locusts will begin to deposit their eggs. Observations indicate that they will be laying their eggs the latter part of July and first part of August.

METHODS OF CONTROL.—There are temporary methods of controlling an outbreak of these locusts that will furnish considerable relief and protection to the crops immediately menaced. One of the most successful methods of obtaining temporary relief from the injuries of grasshoppers is by killing them with poison baits. In Kansas, where locusts often become a plague, a new poisoned bait was used last year on a large scale, and with most gratifying success. Professors Dean and Hunter of Kansas give most interesting and enthusiastic reports of their use of this bait which is made up as follows: Bran, 20 pounds; paris green, one pound; syrup, two quarts; oranges or lemons, three fruits; water, 3½ gallons. The paris green and bran, while dry, are thoroughly mixed in a washtnb. The juice of the oranges or lemons is squeezed into the water and then the skin and pulp of the fruit is chopped up fine and added to the water. The syrup is also added and then the bran and paris green are thoroughly wet with this mixture. This bait seems to be very attractive to the locusts and succeeds in poisoning them in immense numbers. It is sown broadcast over the infested fields early in the morning. The locusts do not eat it readily after it becomes dry, hence the early morning applications. Some judgment must be used regarding the places in which the bait is to be scattered. For example, in Alfalfa fields it would be best to cut the crop first and then scatter the bait. The same would probably be true of meadows. In all cases the bait should be scattered where the insects are thickest or in their path if they are migrating to new fields. The amount of bait indicated by the formula given should be sufficient for about five acres. In the long run, however, one cannot afford to fight grasshoppers, at least, in New York State, by the use of poisoned baits. It is extremely desirable to employ a method that will permanently rid an infested area of these voracious pests.

GOOD FARMING A REMEDY.—We have emphasized the fact that the eggs of these grasshoppers are laid in the soil; that they are laid in ground that is fairly compact, for example, in old pastures and meadows, along fence rows, ditch banks, and similar places; and that the eggs lie over Winter in the ground. It is evident that a system of farming still carried on as our grandfathers carried it on, namely, one in which the pastures and meadows and fence rows are maintained world without end, is especially conducive to the welfare of grasshoppers. A run-out meadow, a century old fence or an old pasture bare of grass in a sandy region is an ideal place for grasshoppers to deposit their eggs and to increase in undisturbed tranquility and happy felicity until a season comes when their opportunity arrives and they appear in hordes. On the other hand, it has been shown that the eggs of grasshoppers can be destroyed by plowing and harrowing the land in which they are deposited in the late Fall or early Spring. Therefore, it happens that the man who practices a modern three or four-years' rotation, even in a sandy gravelly region, is largely protected from the ravages of these insects. This was brought most forcibly to the attention of the author in an investigation of an outbreak of grasshoppers in central New York. A small farm which the author visited had literally been cleaned of Alfalfa and other crops, while on an adjoining farm on which there had been in practice a modern rotation there was no serious injury. No object lesson could have been plainer or more convincing. The only practicable way for the owner whose crops have been destroyed, to obtain a permanent control over the locusts, is to plow and harrow every foot of land possible on his place this Fall or early next Spring before the eggs hatch. Fall and early Spring plowing and harrowing, then, is the most important method of permanently controlling locusts in New York State. In conclusion it may be said *that the more intensive a system of farming becomes the less extensive will be the outbreaks of insect pests.*

GLENN W. HERRICK.

N. Y. College of Agriculture.

Government Crop Report.

CONTINUED excessive heat, with deficient rainfall and more than the usual sunshine over the principal crop-growing sections, made this the most trying week of the season on crops now at critical stages of growth.

In the Winter wheat sections harvesting is largely completed, and dry weather favored thrashing which is under way in the central and northern portions. Plowing for next year's crop has begun.

In the Spring wheat States dry and hot weather were somewhat unfavorable in North Dakota, and damage from rust is reported from western Minnesota. In other sections the crop is generally suffering from heat and dronth.

In the corn belt the week was generally unfavorable in States to the eastward of the Mississippi, except in the more northern districts. Drouth still continues in Missouri and Oklahoma and it is getting dry in Kansas, Nebraska and Iowa, although the crop is generally in excellent condition in the last-named States.

In the Ohio Valley drouth is again severe and much damage has been done, while farther eastward in the Atlantic Coast States rain is now badly needed in many portions.

Harvesting of oats is nearing completion in the northern districts, with a poor yield. Damage from rust is reported in many localities.

In cotton-growing States showers over the eastern and central portions of the belt maintain a generally good condition of crop, but many localities were without sufficient rain and plant is now beginning to suffer.

In Texas and Oklahoma hot and dry weather the greater part of the week prevented any improvement in condition of cotton crop over large areas, and growth is generally at a standstill, with considerable deterioration in sections where drouth is severest.

Good showers in Florida improved conditions, and late crops are doing well in some other southern localities, but rain is very generally needed in all trucking districts.

Over the Atlantic Coast States, from Virginia northward, the week was hot and dry over the southern portion, and corn, tobacco and other crops are being seriously affected. In the more northern portion cooler weather prevailed, showers for present ueeds occurred very generally and crop growth progressed satisfactorily.

Over the Western plains region and the mountain and plateau districts the ranges continued in excellent condition, especially in the southern portion. Forage crops of all kinds are making satisfactory growth. The fruit outlook is good and water for irrigation continue plentiful.

Over the Pacific Coast States the weather was favorable for harvesting hay and Winter wheat in Washington and Oregon, but it continued too dry for spring wheat, which is now suffering for rain.

In California crops made satisfactory progress and the drying, canning and shipments of fruit progressed as usual.

Woman and the Home

From Day to Day

If We Had But a Day.

We should fill the hours with the sweetest things
If we had but a day;

We should drink alone at the purest springs
In our upward way;
We should love with a life-time's love in an hour
If the hours were few;
We should rest, not for dreams, but for fresher power
To be and to do.

We should guide our wayward or wearied wills
By the clearest light;
We should keep our eyes on the heavenly hills
If they lay in sight.
We should trample the pride and discontent
Beneath our feet;
We should take whatever a good God sent,
With a trust complete.

We should waste no moments in weak regret,
If the day were but one;
If what we remember and what we forget
Went out with the sun;
We should be from our clamorous selves set free,
To work or to pray,
And to be what the Father would have us be
If we had but a day.

—Mary Lowe Dickinson.

*

PERHAPS there is a little moral in the anecdote of Ben Foster related by the El Paso Times. Ben Foster was noted for his shiftlessness. If it had not been for his wife, he would not have done a stroke of work on his little farm and garden. It was all she could do to get him to work, for he preferred to sit and read all day. One evening, after he had been reading French history with deep interest, he closed the book and said to his wife: "Do you know, Maria, what I'd 'a' done if I had been Napoleon?"

"Oh, yes, I know well enough," his wife responded. "You'd have settled right down on a farm in Corsica and let it run to ruin, while you grumbled about your hard luck."

*

WHEN preparing to boil a ham whole it is often desirable to soak it overnight, especially if it has been cured rather hard. Wash it thoroughly, then put in a large granite kettle, covering with cold water, and adding a white onion stuck with four cloves, two bay leaves, a blade of mace and two stalks of celery. Let soak overnight, then put the kettle over a moderate fire, where it will heat slowly and when it comes to a boil, let it boil 15 minutes for each pound of ham. Let it simmer gently, not boil hard. When cooked, remove from the water, carefully cut off the rind, brush with egg and then cover with bread crumbs. Put in the oven to brown this crust.

*

MANY a woman spoils her appearance by deciding that she can "get one more wear out of it," and then putting on some garment so soiled or wrinkled that it really calls for laundry or pressing iron before appearing in public. This is especially true in the Summer, when a plain linen gown, becomingly made, will put the farmer's daughter on a level with the city guest, as far as clothes are concerned. Wash fabrics are within the reach of every purse, but they must be fresh and clean. Here in the city we see dozens of girls every day who have not learned this lesson, and who are on the way to store or office in dresses that can only be described as "mussy." Many of them have no facilities for proper laundry work—while in the country, with clear air and pure water, labor is often a serious question. Every family must decide for itself how far its feminine members may go in wearing light-colored wash dresses. Dark-colored linens, with the removable white vestees and collars now so fashionable, save washing, and are suitable for town and visiting. They can often be worn a whole Summer without laundering, but they must be pressed frequently. Mercerized lawns and cotton foulards, black, dark blue, green or brown, make up prettily, either plain or figured. A person in mourning will find black dotted swiss cool and very nice-looking, but a plain slip of black mercerized lawn, sleeveless and low-necked, should be worn under it. But all these dark-colored cotton or linen dresses must be pressed, whenever wrinkled, or they do not look well, and really it is this care, in both laundering and pressing, that makes a woman look well-dressed, whether her clothes are costly or inexpensive.

The Rural Patterns.

When ordering send number and size of patterns desired. Price of each pattern 10 cents.

7493, Blouse or shirt waist. Cut in sizes 34 to 44 bust measure. Size 38 requires two yards of 36-inch material.

8274, Fancy blouse. Cut in sizes 34 to 40 bust measure. Size 38 requires 3⅝ yards of 27 or 36-inch material with ⅜ yard of net for vestee and sleeve frills. 7448, Semi-princesse gown. Cut in sizes 34 to 44 bust measure. Size 38 requires 5¼ yards of 36-inch material with ½ yard 27 inch wide for collar and cuffs. 8079, Ladies' three-piece skirt. Cut in sizes 22 to 32 waist measure. Size 26 requires 2⅝ yards of 36-inch material. 8292a, Ladies' two-piece skirt. Cut in sizes 22 to 32 waist measure. Size 26 requires 2⅝ yards of 27, 36 or 44-inch material with ⅝ yard 36 or 44 for insets.

8342, Plain blouse for misses and small women. Cut in sizes 16 and 18 years.

Size 16 requires 2⅛ yards of 36-inch material. 8244, Blouse for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 1⅞ yards of 36-inch material. 8334, Semi-princesse dress for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 3¼ yards of 36-inch material with two yards of 36-inch for sleeves and shirred chemisette. 8313, Girl's dress. Cut in sizes 4 to 8 years. Size 6 requires 2¼ yards of 27 or 36-inch material. 8287, Girl's combination undergarment. Cut in sizes 4, 6 and 8 years. Size 6 requires 1¾ yards of 36-inch material with 1½ yards of embroidery, two yards of insertion and 2¼ yards of edging.

Seen in New York Shops.

FLARING gauntlet cuffs of stiff white linen, four to six inches deep, with rolling collar to match are among the newer coat sets, appearing with the "Salamander" styles. The cuffs are fastened with links.

A combination vestee and collar with girdle attached is made of white pique with a fine rib. The collar is the usual rolling one, with a little design in hand embroidery in the corners, and the vestee is fastened with crochet ball buttons and loops. The belt attached at the waist line is one of those waistcoat girdles that come down below the waist with a cutaway effect, and is fastened with the ball buttons; it is about six inches deep in front, sloping up to about two inches in the back, where the ends are lapped over and finished with two buttons.

Among new artificial flowers are velvet begonias, which appear to be taking the place of gardenias. The large flat flowers of the tuberous begonias are imitated, but natural colors are not sought, and they are quite as often black, mauve or green as the tints of the natural flower. White velvet begonias on a black plush hat formed one fashionable model. It is likely that these begonias will be worn on Winter hats. At present, with women wearing all sorts of plush and velvet hats in June and July, one wonders whether straw will be the proper mode for December.

Some pretty middy blouses for young girls were made of white drill with collar, cuffs and tie of Roman stripes. Kilted skirts of white drill are suitable to wear with these blouses, though any colored skirt may be used.

Belts naturally accompany the coming change of figure, which will have a well-defined waist. For the present, broad crush girdles with a large flat bow in front or back are popular. The bow is the same width as the girdle, often six to eight inches, and it is more favored in front than at the back, though it should not be worn in front by a large woman.

Furriers are already showing the new styles in furs. They include fur capes of all sizes and shapes, but mostly longer in the back than the front. There are many cape-shaped collars. Fur coats are three-quarter length, falling in loose rippling folds, instead of being draped as they were last Winter. The popularity of muskrat is to continue.

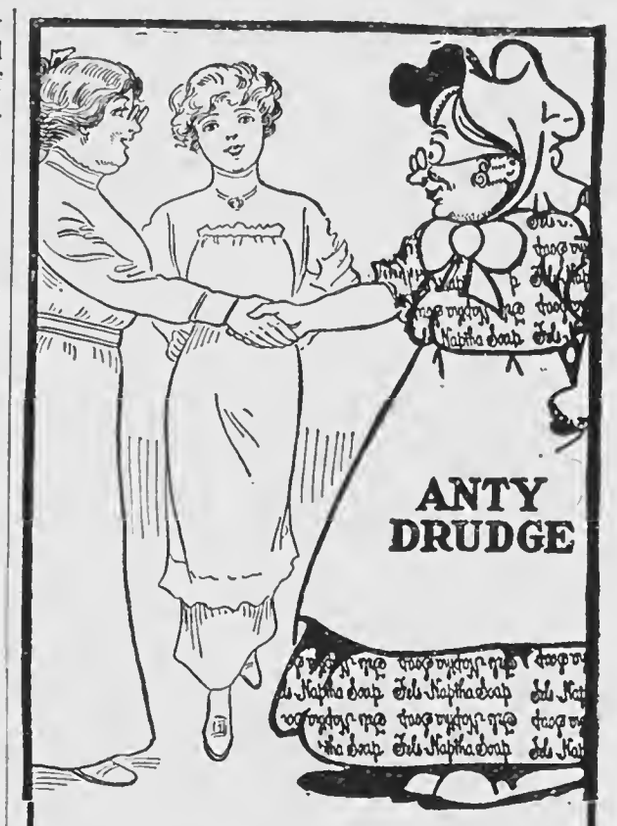
Some new basque costumes seen are strikingly like the jersey dresses of the early eighties. These consisted of kilted skirts and woven jersey basques that fitted without a wrinkle. The woven jersey has not yet appeared, but the basques have a decidedly jersey outline. These basques are made up at present chiefly with long tunic skirts, but pleated skirts are already appearing and are shown with kilt pleats attached to a tight-fitting yoke.

Separate round tunics of taffeta, edged with ruffles, are offered in black, white and several colors. They are intended to be worn over light Summer dresses, and as the fashion is now a waning one they are much reduced in price.

Skirt lengths of accordion pleating, with belt attached, are now offered in a variety of material, serge, taffeta, crepe de chine, etc. The pleating is of various depths, being intended for both tunics and skirts. Some of the tunic pleating is in points, the skirt length forming about four points.

White chinchilla coats are offered for seaside wear. They are medium length, full and loose, with belted back and deep patch pockets. A black velvet collar is the newest touch. They are pretty and becoming, but so quickly soiled that they are not at all practical.

Honey Gems.—Add one cup of honey gradually to one-half cup of butter, then the yolks of two eggs and half a cup of sour cream, two cups of flour with half a teaspoon of soda and a teaspoon of cream of tartar; stir well, flavor with lemon and fold in beaten whites of two eggs. Bake in gem pans in moderate oven.



Mrs. Goodsense—"Anty Drudge, my daughter has told me how kind you've been to her, and I'm glad to meet you. When I go back to the city I'm going to see that all my friends use Fels-Naptha Soap. Mary thinks it's the grandest thing she ever used. She says it's the greatest help she ever had for all kinds of work, and the directions are so easy to follow."

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FELS-NAPTHA

Catering for a Small Income.

WHILE the writer has in mind the middle-aged woman retired on a small income, this article is not based upon any special allowance, but instead it has to do with economic business principles which may be applied to general purveying by the housewife in town, or on the farm—anywhere the small income exists, and that is everywhere. It has been stated that the greater number of failures in the United States—bankruptcy—have been among men who have become involved financially, not in business adventures, but by general indebtedness for the necessities and the superfluities of life—by living beyond their income, by overestimating their ability to pay. If this statement is true the American homemakers should become systematic and apply economic principles to purveying for themselves.

In order to handle a small income judiciously, a housewife must know just what she needs, when she needs it and how much. To know how much is to know how long a special amount will last. The small income means buying in small amounts, if the income is weekly, but if monthly or quarterly, larger amounts are possible. With a known amount of money for the weekly food supply, a housewife should on Saturday evening of each week make out a list, an itemized bill of actual necessities for the coming week, with estimated costs, the footing of which must be made to harmonize with the cash in hand for that purpose, either by omitting one or more items, or by reducing the amount of one or more, and this can be easily done with supplies that are weighed, measured or counted. There must be constant oversight of the food supply kept in stock, in order to prevent too many items coming together—too great a dearth during any one week. For instance, 25 pounds of bread flour will make all of the bread, pie and cake that two people should eat during one month. Wheat flour in this amount should be the largest single cash item for any one week; that is, all other stock commodities such as lard, rice, beans, etc., should be in just sufficient amounts to last from two to three weeks, leaving one week for flour and the usual weekly necessities, such as the daily supply of milk, fresh eggs, fruit, vegetables, meat and butter. When possible to get good new butter once a week, there is little economy in getting a larger amount and taking chances on the butter and its keeping qualities, for on the average one pound and a half a week will suffice two people.

As soon as a housewife knows how much she needs of any one food commodity for one week and its cost then she can adjust amounts so that the total costs will harmonize with her weekly allowance. In adjusting an estimated food supply to a money allowance there should always be a cash margin held in reserve for the unexpected. Food, the kind and amount, for an individual, is a matter for personal regulation, and each one is free to experiment, although three temperate meals a day are recommended. To understand the comparative value of foods is a help—it helps one to be resigned if not satisfied with a quart and a half of milk, knowing that it contains as much nutriment as one quart of oysters costing from 35 to 40 cents per quart, although it might not help one to eat oatmeal and beans forever. The small income and the normal appetite should go hand in hand; the appetite that relishes good homemade breads—the small all-over browned loaves of wheat bread, white and brown, also corn bread; milk, eggs, the cheaper but nutritious cuts of meats for kettle roasts and stews; baked and boiled potatoes, apples and dried prunes, peaches and apricots. Apricots cost from 15 to 20 cents a pound, but one pound will—soaked over night and stewed slowly—make four stewings for two people. The lasting qualities of a given amount of food must always be considered in connection with its cost.

Women living and eating alone are in danger of extremes—undereating and then overeating. They have not the inclination to cook for themselves as they would for others, and after skipping one or more meals, or taking just enough to satisfy the pressing demand, they later in the day eat two meals at one sitting—put two feet into one shoe, so to speak. To feed a pig or a calf in that way would result in a one-sided development—undersized. The lone woman with a small income is in danger of undereating through her desire to avoid indebtedness, if she invests her money blindly. She has no occasion to despair and think herself doomed to slow starvation—malnutritions—if she will only be consistent in her selections and combinations of food.

MEDORA CORBETT.

Tomato Catsup and Preserve.

WILL you give a reliable catsup recipe, and also different ways of pickling and preserving red plum and yellow pear tomatoes? MRS. B. C.

The following recipes are from the Rural Cook Book:

Tomato Catsup.—Pare one-half bushel tomatoes and cook until very soft, sift them, taking all the seeds out. Then cook until as thick as you desire the catsup and then add one quart vinegar, one-half pint salt, and the following spices: One tablespoonful each of cloves, ginger and cinnamon, two tablespoonfuls each of mustard, black pepper and allspice, and one-half teaspoonful cayenne pepper. Let it cook 10 minutes, then bottle and cork tight, no further sealing is needed as it will keep for years simply corked.

Tomato Catsup No. 2.—Wash and cut in pieces a half peck of ripe tomatoes. Cook in a porcelain-lined or granite iron preserving kettle till soft enough to put through a sieve, which will remove skins and seeds. To the pulp add two tablespoonfuls of salt, two tablespoonfuls pepper, one-half tablespoon allspice, one-half tablespoon cloves and one-half pint vinegar. Let the tomato cook for several hours before adding the spices and vinegar. Mix the salt and spices dry in a bowl, and blend well before putting into the tomato. Cook till quite thick and put in bottles. Store in a cool cellar.

Uncooked Tomato Catsup.—Peel and chop a peek of ripe tomatoes and hang in bag, to drain for 24 hours. Add to the drained tomato four bunches of celery (chopped fine) and one large cupful of chopped onion. Mix the three vegetables thoroughly and then add one-fourth cup of salt; one-fourth cup sugar; two tablespoonfuls mustard seed; two tablespoonfuls ground cinnamon; one teaspoonful ground allspice, and two large red peppers, chopped fine. Mix very thoroughly; cover with good cider vinegar, and put in self-sealing cans.

Egg Tomatoes in Sweet Pickle.—Pour scalding water over seven pounds of the egg tomatoes, let them stand for a moment, then remove the skin. Cover them with vinegar much diluted with water and let them stand twelve hours. Put one-half cupful of weak vinegar in the preserving kettle and add part of the tomatoes, then some sugar and any whole spices, such as ginger, allspice, cinnamon, cloves and mace, using these or even more varieties according to taste. Add more of the tomatoes, more sugar and more spices, alternating the layers thus until all the tomatoes and five pounds of sugar have been used. Cook very gently, stirring just enough to prevent scorching without breaking the tomatoes. When these are quite clear and transparent, remove them carefully and boil down the syrup. When the syrup is thick strain it and add the tomatoes. Boil up once and pour into pint jars to be sealed at once.

Tomato Jam.—Select sound, ripe fruit and peel and quarter them. Then put them into the preserving kettle with an equal weight of loaf sugar, the strained juice and rind of a lemon for every four pounds of the fruit, and a little powdered ginger. Cook the mixture slowly until it jellies when tried on a spoon. Turn into jars and cover.

Tomato Marmalade.—Remove the skin from four quarts of ripe tomatoes and slice. Cut six large lemons in halves, lengthwise, and slice very thin. Seed one cup of raisins. Put the tomatoes, raisins and lemons into a preserving kettle, in layers, alternating with four pounds of granulated sugar. Cook one hour on the front of stove. Then set the kettle back, and allow contents to simmer until it is of the consistency of marmalade. Put up, while hot, as jelly. This recipe makes about two and one-half quarts. When properly prepared no one article will be recognizable. The small yellow tomatoes are nice for such use.

Tomato Marmalade No. 2.—For every two pounds of the tomatoes allow two pounds of sugar and the juice and grated rind of one lemon. Pour scalding water over the tomatoes to loosen the skins. After removing the skin, mix the tomatoes with the sugar and boil slowly for one hour, stirring and skimming frequently. At the end of that time add the lemon juice and rind and cook another hour or until the whole is a thick, smooth mass.

Tomato Mock-Orange Marmalade.—Scald and peel large-sized yellow tomatoes. Cut downward over each seed section, press open and remove all seeds with the thumb, leaving the pulp comparatively whole. To two parts of the prepared tomatoes allow one part of oranges, slicing thinly. Cover all with an equal quantity of sugar and let stand over night. In the morning pour off syrup and cook down about half, add the tomatoes and oranges and cook until the orange skins are transparent. Seal in jelly glasses. This is an original recipe, and is a delightful substitute for the genuine orange marmalade, though much cheaper.

Books for Boys.

THE Board of Education of this city has given out a list of books which, they say "no boy from 12 to 14 will go to sleep over." This list will no doubt be interesting to those who wish to select reading for boys. It is as follows:

1. Kipling—"Captains Courageous."
2. Moffett—"Careers of Danger and Daring."
3. Pyle—"Jack Ballister's Fortunes."
4. Bostock—"Training of Wild Animals."
5. "Famous Adventures and Prison Escapes of the Civil War."
6. Hill—"Fighting a Fire."
7. L. G. T.—"Three Years Behind the Guns."
8. Altsheler—"Young Trailers."
9. Barbour—"For the Honor of the School."
10. Barnes—"Yankee Ships and Yankee Sailors."
11. Brady—"Border Fights and Border Fighters."
12. Brooks, E. S.—"Master of Strong Hearts."
13. Carruth—"Track's End."
14. Kieffer—"Recollections of a Drummer Boy."
15. London—"Call of the Wild."
16. Macfarlane—"Redney McGraw."
17. Masefield—"Jim Davis."
18. Munroe—"Campmates."
19. Poe—"Gold Bug."
20. Stevenson—"Treasure Island."
21. Stockton—"Buccaneers and Pirates of Our Coast."
22. Stoddard—"Battle of New York."
23. Tomlinson—"Search for Andrew Field."
24. Twain—"Huckleberry Finn."
25. Verne—"Twenty Thousand Leagues Under the Sea."

It will be noted that Alger, Trowbridge, Henty and other who still thrill boy readers are not represented in this list. Our own favorites in this list are No. 1, No. 19, and No. 20.

To Darken the Stove.

TO darken the top of a cook stove form a piece of clean old cotton cloth into a pad, wet, squeeze and apply any yellow laundry soap and rub the top until the pad becomes too hot, then dip the soap into water, rub the cloth and the stove, and continue the process. If a stove is soaped twice a day or even once, just after dinner, it will be kept in a presentable condition during the afternoon. The soapy odor may be overcome by placing a pinch of ground coffee on the stove top. There is an old saying that a new stove rubbed daily with a soaped cloth will never need blackening on the top. M. C.

GREEN TOMATOE PICKLES.—Gather full grown green tomatoes; make a strong ginger tea (root is strongest) into which drop your fruit, scald well; to each pound tomatoes take one-half pound sugar, one-half pint vinegar, make a syrup of this and put tomatoes in, cook until perfectly clear, add cinnamon, mace and white ginger, cover well with syrup and tie up closely. Cut stems out so juice will penetrate. MRS. D. S. R.

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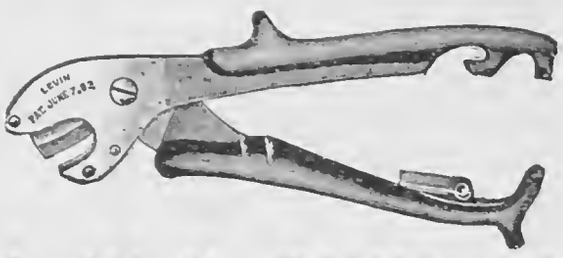

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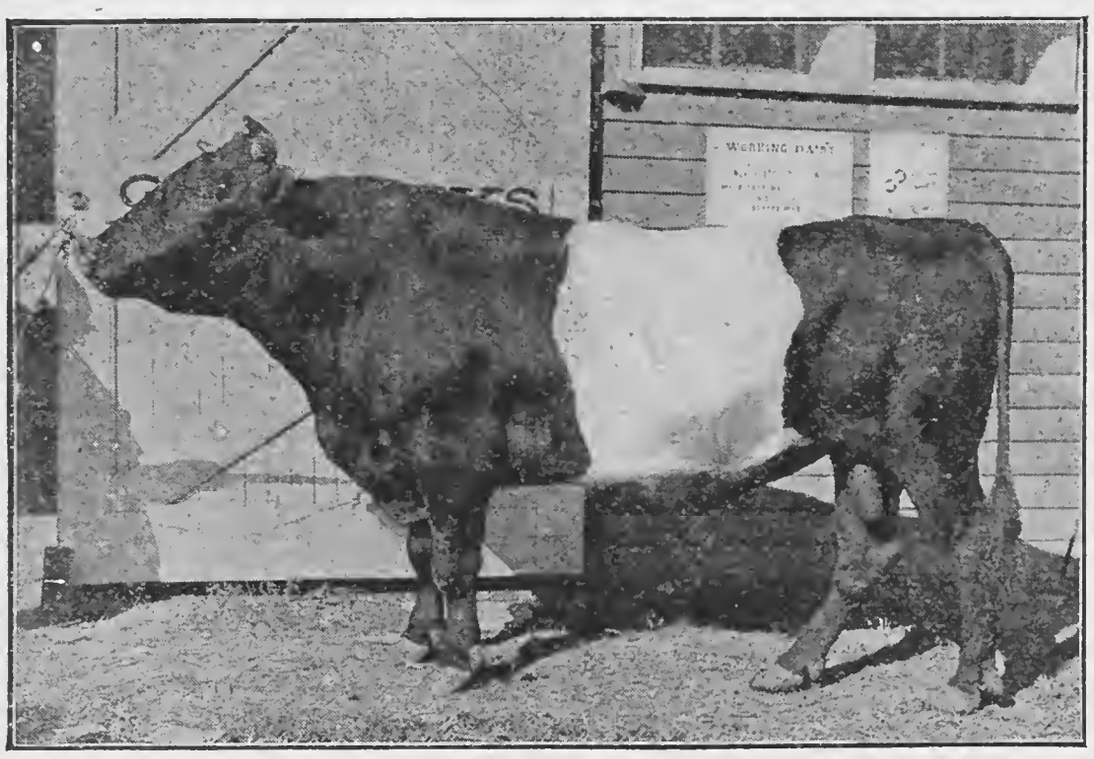
Live Stock and Dairy

RAISING CALVES WITHOUT SKIM-MILK.

IN those regions where market milk is produced, it is usually more profitable to sell it to a shipping station, than to dispose of it in any other way, unless it can be retailed. Even when otherwise disposed of in the Summer it is frequently shipped in the Winter. In such sections, therefore, the dairyman seldom has skim-milk when he wants it to raise calves. The result of this condition was, for a long time, to discourage the raising of calves in these sections. Until recently the price of cows was low anyway, and a good judge could pick out good cows as cheap as he could raise them. Conditions have now changed. Good grade cows now sell at from $75 to $100 in this neighborhood, yearlings at $25 or $30 and so on. The result has been so to stimulate the raising of calves, that it



DUTCH BELTED BULL.

is now difficult to buy a good heifer calf to raise.

As there is no skim-milk to be had, there have been numerous letters to the farm papers, inquiring as to methods of raising calves on substitutes. I have been through a good many methods, and have settled on one as satisfactory. As I have never seen this method given in any book, bulletin or article, I will give it here. The first calf I ever raised, was raised on the waste from the manufacture of powdered or dried milk, which is simply dried skim-milk. This method was successful, but owing to improved processes, there is now none of this waste to be had, and the dried milk itself is too expensive to use.

The next thing I tried was commercial calf meal. I had fair success with the two kinds I used, but they are expensive, and a great bother to prepare properly, and the results left considerable to be desired. One of these calf meals is a good deal better than the other, but a mixture of red dog, ground oats, with the hulls screened out, or flour middlings, and old process oil meal, is still better and much cheaper. These calf meals are scalded and fed in the form of a gruel.

The method which I now use, and which I prefer to all others is as follows: The calf is allowed to suck the first milk from the cow, and then taught to drink. They should never suck but once, as the longer they are allowed to suck, the harder they are to teach. After that they get one quart of milk mixed with one quart of cold water, just as it comes from the tank, twice a day. I like to let them run in a stall, but they may be tied if necessary. After a week hay and grain are kept before them. After each feeding, a little grain is put into their mouths, and in a surprisingly short time they are eating like old cows. If desired, the amount of milk fed may be increased from time to time, but it is not necessary. In a month or so, when the calf is growing well, and eating plenty of hay and grain, the milk can be gradually withdrawn. It is well to increase the amount of water given before this time, as the dry fodder consumed necessitates it.

Most people, when hearing of this method for the first time, imagine that the calves are starving, but if carefully fed, they are soon making rapid growth. The man from whom I learned the method is uniformly successful, as are others who practice the same methods. I have known him to sell calves that he started to raise, for veal at top notch prices. For grain, I fed straight bran last year. This year I am feeding a mixture of bran and ground oats, 100 pounds each, and old process oil meal 40 pounds. Bran is valuable for its bone making materials. Red dog and flour middlings are also good. Fall calves raised by this method, are ready to go out to grass in the Spring, and require no more attention except an occasional salting as long as the pasture is good. If the grass gets short they should receive additional feed of some kind, as it is poor policy to let them stop growing at any time. There are two precautions to be observed in starting calves by any method: First, absolute cleanliness of utensils, and second, care in weighing or measuring out the rations. If the ration is suddenly increased, the calf is likely to start scouring, which is always a setback. If it is desired to feed skim-milk, it should be first substituted for the water, and then gradually for the whole milk.

Jefferson Co., N. Y. A. H. DE GRAFF.

FEEDING CALVES SOUR MILK.

THE U. S. Department of Agriculture fed sour milk to 22 calves, and claims that in no case did it cause digestive disturbance, even when the calves were only a few days old, and asserts that the common idea that sour milk causes scours, is quite unfounded. It seems saucy to contradict such high authority, but it should be done. The common idea is true as the gospel. The Department of Agriculture is amazingly wrong. For 50 years I have taught a dozen calves, every year, to drink milk, and fed them personally afterwards with milk until they were old enough to do without it. A calf only a few days old will not *drink* sour milk, and ought not to drink it if it would. When three weeks old a small quantity—say two quarts at a feed—can be safely given continuously without fetching on the scours. Even sweet skim-milk will cause the scours if fed all they will drink. About five quarts at a mess, is as much as should be given. They should have all the water they will drink, especially after they have learned to eat wheat middlings, and nibble hay. Fresh buttermilk is relished by calves, and is safer to feed than sour skim-milk. The Department did not tell us how much sour milk was fed to each calf; how many times a day the calves were fed; and how long the experiment was continued.

Pennsylvania. J. W. INGHAM.

THE DUTCH BELTED BREED.

THE picture shows a Dutch Belted bull of good conformation. This breed was originated in Holland about 250 years ago, the peculiar belt about the body being the result of scientific breeding. The cows weigh from 900 to 1,250 pounds, and bulls from 1,500 to 2,000. In addition to their beauty the Dutch Belted cattle are creditable dairy and beef producers.

WISCONSIN COW-TESTING ASSOCIATION.

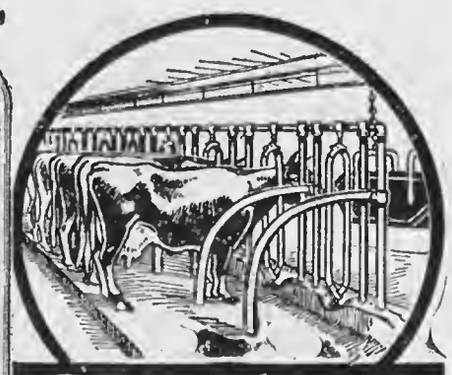
YOU ask the proportion of unprofitable cows in the average herd. That would be a very difficult thing to say, unless I was finishing the year, as this would enable me to say more clearly the exact number. But I do think without exaggerating a bit, out of the 485 cows in my association that two out of every 20 are not worth the feed and care they receive, and this association is classed as having some very fine herds, as this is its second year of work. The association has a large variety of breeds. The largest in number are the Guernseys, second Holsteins, third native and last the Jerseys. The best stand in butterfat I have obtained was from a herd of 10 during the month of May; they averaged 43.3 pounds of butterfat. From the whole 485 cows for the month of May the average amounts to 23 pounds of butterfat each. R. C. F.

Amherst Jct., Wis.

I COULD not tell very much about how many or what per cent. unprofitable cows I am testing now until the end of the year. In some herds I know all will make a good profit, while in other herds one-half are boarders. I should say the average would be three boarders to every herd of 12 cows. A part of my association was testing last year and weeded out a great many. But they also studied feeding more than ever, and fed more. This year the largest percentage of unprofitable cows are in the new part of the association, where testing was not done before. The largest record I have for one cow one month is 82.5 pounds fat. The average run is about 30 pounds fat. This is only an estimate, as I have not averaged it exactly to the pound. Half of my association, as I stated above, tested last year, or my average would be about 25 pounds fat per month. R. F. A.

Waupaca, Wis.

LITTLE Bertie had just been stung by a nettle. "Mother," he asked, "if a bee settled on a nettle, would the bee sting the nettle or would the nettle sting the bee?"—Melbourne Australasian.



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The Rural New-Yorker, 333 West 30th St., N. Y.

BEEF CATTLE FOR NEW JERSEY.

WE are in a section where it does not pay to produce milk or butter and have been thinking of raising prime beef cattle, such as are raised in the western part of the country to supply the cities. Our plan is to let the calf run with the cow continually until it weans itself, and in every way strive to get the quickest growth into beef possible. Will you give me the names of some of the largest breeds of beef cattle and an approximate estimate of the weights they attain at one, two and three years? Would it be a good plan to breed a bull of these large cattle to our cows, which are grade Holstein? A. C. K.

North Branch, N. J.

It would not be good practice for A. C. K. to breed his dairy cattle, which are grade Holsteins to a bull representative of one of the beef breeds, namely Shorthorn, Aberdeen-Angus or Hereford. In the first place such progeny would have neither milk-making nor beef-making propensities, and would be identified as cross-breds, and in all probability would bring no more for beef purposes than the progeny of a dairy cow in good flesh. It is doubtful whether beef production would be profitable in areas where dairy cattle properly handled have failed to show a profit. A dairy cow is a far more economical unit for converting food products into readily salable products, and it will be noted that in sections in the Middle West where beef production has engaged extensive development, that the dairy cow is pushing herself in, and in some cases replacing the beef animal. The great difficulty experienced by those who have endeavored to produce beef cattle in the East has been to persuade the local dealers to recognize its value. A very small percentage of the butchers in the East actually slaughter animals, preferring buying them on the block rather than on the hoof. It is not unusual to find localities where the buyers will pay no more for a prime steer than they will for a fat dairy cow, and naturally one cannot afford to supply this sort of a market. It is true that there is less labor involved in caring for beef animals than for the dairy cow, but it is necessary to have a silo, and to grow corn extensively even though the beef animals are fed. In the Western States where beef cattle are raised extensively, the silo is rapidly coming into use, and it is admitted quite generally, I believe, that silage materially reduces the cost of producing beef. A number of New Jersey farmers during the past two years have endeavored to bring on from the West market steers as feeders, but when the cost of transportation is considered, together with the lack of market facilities, it is doubtful whether market prices, for the grain consumed were received.

The chief beef breeds may be identified as the Short-horn, Aberdeen-Angus, Hereford and Galloway. The bulk of the feeders are marketed under two years of age. Choice to prime steers weighing from 1,500 to 1,600 pounds were quoted at the Chicago markets last week as bringing from nine to 10 cents per pound. The bulk of the yearling past stuff is marketed at a weight of from 1,250 pounds to 1,300 pounds, and the choicest of these at the Chicago markets are now selling for about 10 cents per pound. Under good conditions, and if liberally fed, Short-horn two-year-olds should be marketed when weighing from 1,250 to 1,500 pounds, and it is necessary to keep them growing from birth to maturity without marking time.

In my judgment I believe that the possibilities in the Eastern States today are in the marketing of cream, and the keeping of the skim-milk on the farm and feeding same to swine. If corn and Alfalfa can be grown successfully, it would seem that the dairy cow, supplemented by the fat hog, would be a sure source of profit to the Eastern farmer rather than the raising of beef cattle of any type or breed. F. C. MINKLER.

Green Feed for Horses.

ON the whole we have not found green feeds very satisfactory for horses. In Europe a great deal of green feed is fed but they can do so much better there on account of climatic conditions. However we have fed quite successfully some sugar cane and Alfalfa as soon as it was cut. We would not recommend even too much of this as it is liable to colic the animal. TAYLOR & JONES.

Illinois.

Paralysis.

WHAT is wrong with my sow? She weighs between 200 and 300 pounds. She had eight pigs, and the same day they were five weeks old she went down with hind part of body, is not able to stand on hind legs at all. I can help her so she gets on her front feet but is seems to cause her very much pain. She will drink out of bucket after she is on her front feet. I fed her a slop of bran middlings and hominy feed all she wanted. H. A. L.

This attacks sows that have been overfed and underexercised and that come from similarly pampered stock. Overfeeding on corn is most likely to produce the tendency to the trouble and it is brought on by the care and drain of nursing pigs. The pigs should be weaned at once; then feed the sow on light slop, adding 10 per cent. digester tankage. Also allow green feed and roots. If she improves so that she can walk turn her out on grass. The disease does not attack sows that are from naturally fed and exercised stock and that are themselves fed mixed rations from birth and made to run out daily. A. S. A.

Seedy Toe.

WHAT is dry canker and what causes it? We have a mare whose left fore foot is infected. The hoof has a cavity nearly to the bone, leaves the toe just a thin shell. It has been scraped or cut out and disinfected by a licensed veterinarian who tells us she will not be able to wear a shoe in two months. Will standing on the barn floor or wearing shoes too long before resetting cause the trouble, or is it infection or improper shoeing? She is a healthy little animal otherwise. Does not have any hard work, just light driving. Will she get over this trouble and not be lame? She is 19 years old this Summer and never been bred. Could we breed her with safety to her?

New York. E. E. F.

We do not recognize any condition of the hoof by the term "dry canker." The condition present is known as "seedy toe," and commonly is induced by the pressure of a tight toe clip; or it may come from failure to have the shoes reset once a month, or be due to a bruise upon the wall of the toe. Cut away all loose and under-run horn of sole and wall; then scrape out all powdery material and plug the cavity with oakum saturated in a mixture of one part each of turpentine and coal tar disinfectant and six parts of melted pine tar. Renew the dressing every three days. A bar shoe may be put on and held in place by means of side clips, instead of a toe clip. It would not be wise to have the old mare bred. A. S. A.

SPECIAL NOTICE TO EXHIBITORS

At the suggestion of the State Department of Agriculture all premiums offered in the Swine Department are withdrawn for the Poughkeepsie Fair to be held September 7-8-9-10-11 and 12, 1914.
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Carbolic Acid and Contagious Abortion.

IN what proportion should I feed crude carbolic acid in salt to prevent abortion in cattle? W. M. H.

Contagious abortion in cows is not treated by feeding crude carbolic acid with salt, but by administering carbolic acid in solution with water, usually of four per cent. strength, mixed with the cow's feed. The quantity used varies with the length of time that the cow has been in calf and with the stage of the treatment. It is best prescribed by a competent veterinarian who can have the cows taking it under observation.

M. B. D.

The Fat Cow and the Milk.

AT the present time, it seems to be pretty generally conceded that a cow may be fattened while she is dry, so that when she freshens and begins to secrete milk, she will use for this purpose not only the nutrients in her feed, but the fat from her body, the result being that she not only gives a large amount of milk, but it is often considerably higher in fat percentage than it is later on, the length of time during which this condition prevails seldom being over a month or six weeks. I know of no data that goes to show that a cow will give any richer milk merely because she is plump or fat than she will if she is thin, provided of course that the cow is not changing in condition; in other words, while a fat cow is becoming poor, she is likely to give not only more but richer milk, but a cow that is in a plump condition and continues so is not likely to give richer milk than she would if she were in a thinner condition.

Ithaca, N. Y. H. H. W.

Effects of Heavy Feeding.

MR. MORSE'S letter on fat milk from fat cows, on page 871, and your inquiry in next issue moves me to give my experience. Twelve years ago I drew milk to a large butter factory and some of us believed as Mr. Morse does. At the Spring factory meeting we put up a fight and got all the milk taken on butterfat test. The theory did not work out. The best fed cattle were the lowest in fat for the entire year. I milked 30 cows fresh in March and April, common scrub cows, as every dairy in the factory at that time was the same. My cows were well fed and freshened in a good healthy condition and as they decreased in quantity they increased in butterfat until in September they were turned into after feed and fed sweet corn ears, and all milk flow increased 150 pounds per day, butterfat decreasing in proportion.

As to the poor cows, the dairy that gave the largest fat test in the factory was 22 cows wintered on straw and beaver meadow hay and were in a disgraceful condition, still his check was nearly as large as mine, and this proved true for the four years I was a patron of the factory. The poorest fed cows gave the least milk and most fat.

Another thing I want to speak about is that our experts are advising too heavy feeding. It might work out right in expert hands, but here hundreds of our best cows are going to market every year from the effects of too much heavy feed. I see them every Saturday, udder gone, barren and fed out and struck with death. I wonder what they do with them down at New York? I am a dairy farmer and wish I could hear more from my dairy brothers. B. B.

Oneida Co., N. Y.

Octagonal Silo.

I HAVE been reading inquiries about building octagonal silos. I built one six years ago and have helped build a number since. I take 2x8 inch lumber and make an octagonal hoop, spiking the corners with 20-penny nails. I set these hoops two feet apart as high as I want silo. On the inside of these I use two thickness of inch boards, nailing them up and down, being careful to lap cracks with second thickness of boards. For the doors I leave an opening two feet wide the entire length of silo, which makes almost a continuous opening, with the exception of where hoops go around. I make the doors two feet square, so they will just fit from one hoop to the other. On the outside of these hoops most of them use matched timber ceiling up and down, and there are a number that have no protection on outside. I have built some that I furred up and down on hoops with 1½x4 inch strips and clapboarded outside, which makes a very neat job.

Cherry Valley, N. Y. A. H. B.

Round Silo.

ON page 872 L. Q. P. inquires about using 2x8x7 feet long, circled out to build up a circular frame for silo. Some valid objections were given in answer by John Gould. There are others. Eight pieces seven feet long would reach around a 17 foot circle and he would want pieces sawed to have a least four inches in narrowest place in circle. Such a circle would require 12-inch boards instead of eight-inches. Just think of the waste cut out of 12-inch stock. The inside sheathing will shrink and he cannot take up this shrinkage as is done with hoops on a round silo. He should not use creosote on inside of silo as the steaming silage will absorb it and the cows' stomach will be burned and their kidneys put in bad condition. G. B.

Massachusetts.

Raising Pheasants; Forest Land.

I AM raising a few pheasants. What is the best food for them when young and older? 2 Some one has told me that forest land in New York State is exempt from taxation. We use ours for forest puproses, i.e., stove wood and occasionally cutting for timber. Can it be exempt? If so, what are the conditions attached, if any? Does Connecticut have such a law? S. M. P.

Port Chester, N. Y.

1. Pheasants are very like turkeys in their habits, and I should expect that suitable food for one would be all right for the other. The superintendent of the New York State Game Farm at Sherbourne, Chenango Co., N. Y., could probably give more definite information on the subject.

2. Some classes of forest land in New York State may be exempt from taxation and others may have the tax reduced. Woodlots, under certain conditions, are to be assessed not higher than similar land bearing no trees, and in no case more than $10 per acre. To obtain this special classification and taxation the land must be:

Not more than 50 acres.

Not nearer than 20 miles to a city of the first class.

Not nearer than 10 miles to a city of the second class.

Not nearer than five miles to a city of the third class.

Not nearer than one mile to an incorporated village.

The owner must make application in suitable form to the Conservation Commission to have the land examined and classified.

No grazing or pasturage must be permitted on the land.

None of the timber may be cut except for firewood or domestic use on the farm unless 30 days' notice is given the Conservation Commission, and then only trees marked by the agent of the Commission may be taken. Before any timber which has been cut *except for firewood or domestic use* may be removed the owner must pay the tax collector of his town five per cent. of its stumpage value. This stumpage value is to be determined by the assessors. A. C. W.

AILING ANIMALS.

Leaking Teats.

I HAVE 15 cows, and about five of them lose milk before milking time. Is there any way to stop this?

New Jersey. C. E. S.

After milking soak the leaky teats in strong alum water. Try this for a time and if it does not suffice, paint the ends of the teas with flexible collodion, or put on wide, weak rubber bands, or tapes. A. S. A.

Disease of Cattle.

WE have lost five head of cattle in a short time. They get sick at once, get stiff and not one got over it. The one that was sick the longest died in just two days from the time it got sick. The quickest was Saturday last; it was well in the afternoon at three o'clock, with the rest of the cattle, and at 7.30 is dead. They all act the same way. We opened some and found nothing wrong with them. What is the trouble?

Pennsylvania. S. S. F.

You do not give sufficient details upon which to base a confident opinion. We should be told the age of the cattle and how fed. If they are under two years old they probably die of blackleg, which might be vaccinated against. In that disease swellings form on the neck or quarters and give out a crackling sound when handled. Anthrax kills cattle of any age. Blood issues from the natural orifices of the body after death. A graduate veterinarian should be employed at once to make an investigation. A. S. A.

Kittens With Distemper.

WE are having very bad luck with our kittens. When they are about two months old they begin to have sore eyes. They get red and run, stick shut and are all scabby. The kittens get thin and after a while die. Will you tell me what is the matter with them and what to do for them? G. B. R.

The kittens no doubt die of distemper, which may be vaccinated against, if you can employ qualified veterinarian. Otherwise it proves fatal in many cases. Wash the eyes twice daily with a 10 per cent. solution of boric acid. Put a pinch of sulphur in the milk or water. If fever runs high a drop of tincture of aconite may be added to a saucerful of water or milk. Give the next kittens a new sleeping place. A. S. A.

Garget.

I have a Jersey cow six years old, which was taken with milk fever about three days after she became fresh. I sent for a veterinary who gave her the air treatment. She seemed to get better at once, and was ready to eat in about a half day, but it was about two days before she could get up. Then after being around for about a day she got so that she would not eat. The veterinary then gave her nux vomica, and told me to bathe her udder with hot water. Before this we kept the udder well pumped with air, changing quite often. I have bathed the udder about six or eight times a day and milked her morning and night for about 10 days, and it is pretty well softened up except one hind quarter, which has a hard lump running up the back. She gives no milk at all but a yellowish, watery fluid and some thick yellow substance, which is quite tough and at first came quite freely in large chunks. She is now in good condition, except the udder, which does not seem to be coming back to milk. Do you think anything more can be done for her? B. H. P.

Ohio.

Only one inflation with sterilized air is necessary in a majority of cases of milk fever, and great care has to be taken to prevent infection by sterilization of the milking tube and injection syringe. Infection appears to have ruined the udder for dairying, and you might as well sell the cow to the butcher or fatten her for slaughter. A. S. A.

Skin Disease.

Will you inform me as to the proper course to follow to rid brood sow and two-months pigs of scurvy? H. B.

New York.

You should describe the symptoms of what you call "scurvy," as that is not a recognized disease of swine. Meanwhile dip and scrub them with a 1-100 solution of coal tar dip, applied hot. Then rub in flowers of sulphur. Repeat the treatment as often as found necessary. We take it for granted that a skin disease is present. A. S. A.

Saddle Sores.

I have a nice riding and driving horse that has saddle galls on her back. What should I put on them to cure them?

Lexington, Va. D. A. G.

In such cases it is common to find patches of dead horny skin in the sores. These are called "sitfasts" and have to be cut out before permanent healing will take place. Apply twice daily a lotion compound of one ounce of sugar of lead and six drams of dried sulphate zinc shaken up in a pint of soft water. Label the bottle "poison." If the sores do not heal readily stop using the lotion and apply three times a day an ointment composed of one dram each of tannic acid, boric acid and iodoform rubbed up in one ounce of lard. See that the saddle fits properly and that the padding is level and smooth. Keep it clean. Also use a clean saddle cloth. A. S. A.

Red Water.

Red water in cattle is very prevalent here. Can you give an outline of treatment and if anything is known as to cause of the disease? A common belief here is that it comes from cattle eating ferns (brakes) and the dust from the ferns in hay. Some lay the cause to feeding too many rutabagas and the authorities seem to be as much at variance as anyone else. B. E. M.

This is a vexed question, and one for the veterinarians of your State agricultural experiment station to handle. Write to them for information, as they no doubt have given it attention. Rutabagas do not cause red water; neither have we seen it caused by the eating of ferns (brake or bracken). It is more likely to be due to acrid matters in wild pasture in timber or low lands. It often is due to heated oats. Tablespoonful doses of alum given two or three times a day in water may be tried; or dram doses of dried sulphate of iron, or iodide of potash may be substituted, but not for cows in calf. Remove such causes as we have suggested. A. S. A.

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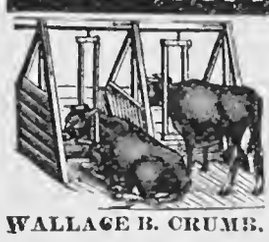

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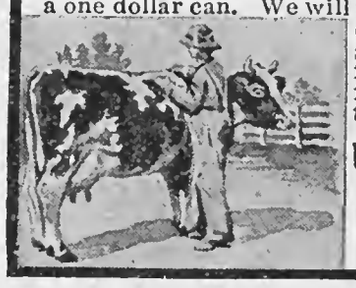

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The Henyard.

THE EGG-LAYING CONTEST.

THE thirty-eighth week, ending July 24, shows a drop of 148 in egg production, as compared with the previous week. At this time of the year the price of eggs begins to rise because fewer eggs are sent to market, the drop in egg production being practically universal. As was predicted last week the "sour milk" pen of White Leghorns from Storrs Agricultural Station has passed Tom Barron's White Wyandottes, and is now at the head of the procession. The totals are 1,592 for the Storrs Leghorns, and 1,591 for Barron's Wyandottes. Francis F. Lincoln's White Leghorns are third with a total of 1,564. All the high scores are made by the White Leghorns again this week. Tom Barron's pen leads with a record of 57. Thomas W. Moore's pen is second with a score of 56. Chas. Heigl's pen ties with Geo. A. Cosgrove's for third place with scores of 54 each. Pen No. 42, the "sour milk" pen from Storrs, laid 53. Marwood Poultry Farm ties with Chas. N. St. John's pen for fifth place, with scores of 52 each. P. G. Platt's pen laid 51, and A. B. Hall's pen laid 50. The highest number laid by any pen outside of White Leghorns was 47, laid by Tom Barron's White Wyandottes.

The actual progress being made in increasing egg production is illustrated by the fact that at the Thorndale contest, where there are but five birds in a pen, same as there were in the first two years at Storrs, the gain in egg production up to the thirty-seventh week was 11,518 eggs over the preceding year at that date. This represents an individual increase of 23 eggs per bird. Each year has shown an increase, and the rate of increase is higher this—the third year—than it was the second year. The egg-laying contests have amply justified themselves. The week's record follows:

	Week	Total
Barred P. Rocks.		
A. A. Hall, Connecticut	34	1,011
Frank L. Tuttle, Massachusetts	22	1,077
Waveny Farm, Connecticut	29	1,011
J. J. Francais, New York	36	1,244
White P. Rocks.		
Albert T. Lenzen, Massachusetts	36	1,103
F. H. Benton, Connecticut	30	1,132
Storrs Agr. Station, Connecticut	22	913
Storrs Agr. Station, Connecticut	33	960
Storrs Agr. Station, Connecticut	28	1,110
Storrs Agr. Station, Connecticut	29	972
Storrs Agr. Station, Connecticut	32	806
Buff P. Rocks.		
A. A. Hall, Connecticut	22	1,123
W. C. Morgan, Jr., Connecticut	44	870
White Wyandottes.		
Tom Barron, England	47	1,591
West Mt. Pity Yards, Connecticut	24	949
Merrythought Farm, Connecticut	40	1,424
Neale Bros., Rhode Island	36	1,425
D. J. Ryan & Son, Connecticut	21	1,083
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	14	1,071
Dr. N. W. Sanborn, Massachusetts	43	1,034
Am. Buff Wyan. Club, New York	33	949
H. L. Hamilton, Connecticut	33	756
Columbian Wyandottes.		
Nat'l Col. Wyan. Club, New York	23	1,052
Single Comb Reds.		
Robert Seaman, New York	26	845
J. S. Gillespie, Connecticut	21	1,067
Dr. J. C. Dingman, New York	30	959
Burnham Pity. Farm, Massachusetts	18	821
H. P. Deming, Connecticut	40	1,012
Geo. P. Dearborn, Florida	22	1,142
Dr. J. A. Ritchey, Pennsylvania	37	1,248
Ernest Underhill, New Jersey	32	923
W. H. Bumstead, Connecticut	24	699
Pinecrest Orchards, Massachusetts	26	1,238
Harry B. Cook, Connecticut	12	1,054
Colonial Farm, New Hampshire	29	1,101
A. B. Brundage, Connecticut	43	1,328
Rose Comb Reds.		
Glenview Pity. Farm, Connecticut	41	1,054
C. S. Scoville, Connecticut	24	777
White Leghorns.		
Storrs Agr. Station, Connecticut	41	1,223
Storrs Agr. Station, Connecticut	39	1,298
Storrs Agr. Station, Connecticut	44	1,310
Storrs Agr. Station, Connecticut	53	1,592
Storrs Agr. Station, Connecticut	45	1,178
Braeside Pity. Farm, Pennsylvania	44	1,089
Glenview Pity. Farm, Connecticut	47	1,226
Manor Pity. Farm, New York	47	1,140
A. B. Hall, Connecticut	50	1,149
Marwood Pity. Farm, Pennsylvania	52	1,259
Geo. M. Harris, Connecticut	37	999
Bonnie Brook Farm, New York	47	1,268
N. W. Hendryx, Connecticut	46	1,140
J. J. Linehan, Massachusetts	43	1,062
F. F. Lincoln, Connecticut	47	1,564
Cecil Guernsey, New York	41	1,344
Thos. W. Moore, Connecticut	56	1,176
Chas. N. St. John, New York	52	1,163
C. W. Sherwood, Connecticut	41	1,106
L. E. Sands, Pennsylvania	33	1,142
Tomoka Pity. Farm, Connecticut	34	1,018
Venture Pity. Farm, New York	32	958
Mrs. K. E. Woodruff, Connecticut	44	1,151
Windsweep Farm, Connecticut	42	1,052
C. H. Savage, Connecticut	47	1,161
P. G. Platt, Pennsylvania	51	1,314
Heneta Bons Co., New Jersey	14	412
F. M. Peasley, Connecticut	46	1,166
Chas. Heigl, Ohio	54	1,101
Tom Barron, England	57	1,453
Branford Farm, Connecticut	47	1,290
James Munn, Massachusetts	37	1,073
Geo. A. Cosgrove, Connecticut	54	1,127
Buff Leghorns.		
Wolverine Pity. Farm, Michigan	38	1,189
Blue Andalusians.		
E. D. Bird, Connecticut	41	977
Buff Orpingtons.		
O. Wilson, West Virginia	18	814
White Orpingtons.		
P. A. Demgar, New York	20	779
White-Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	33	611
Silver Campines.		
W. J. H. Lobel, New Jersey	35	938
Dunghills.		
H. W. Collingwood, New Jersey	39	945
Daniel Hine, Connecticut	31	874
Daniel Hine, Connecticut	25	927
Mixed Breeds.		
Profitable Poultry, Massachusetts	38	994
Profitable Poultry, Massachusetts	36	1,000

GEO. A. COSGROVE.

THE MISSOURI EGG-LAYING CONTEST.

THE June report of the Mountain Grove contest states some very interesting facts. The station has 50 or more pullets hatched this year that have begun to lay when four months old, or a few days over. In every case these early laying pullets were bred from heavy laying hens. The 13 which began laying first were three Buff Leghorns, two Barred Rocks, four White Leghorns, one Ancona, one Campine, one Rhinelander, and one White Orpington. The Barred Rocks and White Orpington weighed from 3½ to four pounds each; the others weighed from 2½ to 3¼ pounds each. The first two pullets to lay were a Buff Leghorn weighing 2¾ pounds, and a Barred Rock weighing 3¾ pounds. These laid when four months and five days old. They were fed cracked corn and wheat, equal parts, for grain feed, and a dry mash in hoppers consisting of equal parts of cornmeal, wheat bran and shorts, with one pound of fine salt to each hundred of mash. Sour milk or buttermilk was fed when it could be had; when not to be had 10 pounds of beef scrap was added to each hundred of mash. At about four o'clock in the afternoon a moistened mash was fed, just the dry mash wet with sour milk or water, giving them all they would eat in 20 minutes. Grit, oyster shell, and charcoal was fed either dry or sometimes mixed in the mash.

Mr. Quisenberry states that in culling 6,000 head of these young birds at the time some of them had begun to lay, only *two birds* seemed to be out of condition. Mr. Quisenberry makes a strong point of hatching in early Spring when the grass starts to grow, and all nature is putting on new life. A point he does not mention, but which is worthy of much consideration, is the further fact that the worms have come up, and the chick has plenty of the tenderest meat, which later in the season it does not have.

Director Quisenberry states that the fourth generation of fowls since the station was established, are now on the farm. The first year a pen of Buff Leghorn pullets was trapnested, which averaged between 90 and 100 eggs. The best layers were mated with a cockerel from the best hen, and that course followed since. Last year they had developed a pen of ten pullets that averaged nearly 200 eggs each, one laying 217 eggs; and this year a pullet from this lot is laying at four months and five days of age; the first to lay out of 6,000 chicks.

POULTRY SURGERY.—A Black Langshan hen remained on the nest most of the time; it was thought she was broody; but in taking her from the nest the caretaker could feel eggs in the abdomen and hear the shells grate on each other. It was a contest hen, but as she would die if left alone, it was decided to cut her open. It was done, and six full-sized normal eggs with hard shells, were taken out from the abdomen. The body cavity was filled with these eggs. The incision was sewn up, and at the present time the hen appears to be perfectly well and happy. This is the third time a similar case has happened among the Black Langshans. In the other two cases the bird died before it was known what the trouble was.

Of the 1,040 hens in this contest, 425 have been broody during some part of the month. This has cut down the egg output to 16,430, for the month of June. The total output is 106,579. Barron's White Leghorns from England are still gaining each month. They have ranked first, five of the seven months. The ten highest pens are:

	EGGS.
White Leghorns, England	1,569
S. C. Reds, Missouri	1,333
White Leghorns, Pennsylvania	1,309
White Leghorns, Missouri	1,277
White Wyandottes, Pennsylvania	1,271
White Leghorns, Missouri	1,248
White Leghorns, Pennsylvania	1,244
Barred Rocks, Illinois	1,201
White P. Rocks, Arkansas	1,196
White Orpingtons, Pennsylvania	1,192

One of the English Leghorns has the highest individual record, viz. 171; the next highest being a R. C. Red with 158 eggs.

GEO. A. COSGROVE.

Infectious Diarrhoea.

WHAT is the matter with my young chickens? They seem to do well until they are between three and four weeks old; then they begin to lose flesh and do not eat well. They keep getting weaker until they die. They eat their droppings at that time and leave their feed. MRS. P. J. H.

Broome Co., N. Y.

I am afraid that there is nothing that you can do to save the chicks already affected, as they are dying from an infectious diarrhœal disease that is preventable but not curable, so far as I know. The remedy is thorough cleansing and disinfection of the brooders, coops or other quarters used by the chicks and hatching, if possible, from other stock whose chickens have not shown similar symptoms. With a broom and hot, soapy, water scrub all brooders or chick coops until they are thoroughly cleaned, then expose the interiors to the sun to dry. Whitewashing with lime wash to which four ounces of crude carbolic acid to the gallon has been added is a further means of protection. Place the brooders upon new ground not previously used by affected chicks, and if you can obtain it, feed your chicks from the start upon all the soured skim-milk that they will drink; use this soured milk also in mixing any moist mash that you feed them. An excellent mash for your chicks may be made of equal parts of cornmeal, wheat bran, wheat middlings, and sifted beef scrap. Moisten this to a crumbly consistency with sour milk and feed your chicks grains in addition. Starting with healthy chicks and taking these precautions to avoid their becoming infected you should overcome your present trouble, but I know of nothing that will save such of the chicks that you now have as are already seriously diseased. They will probably continue to die until only the strongest are left. M. B. D.

Prevention of Lice and Mites.

WHILE I am using a good disinfectant and lice powder, I want to get something better if possible, or to last longer. By using the above in my poultry buildings once a month I am totally free from the pests, but I understand that if one paints his roosting quarters with mutton-tallow he will save one-half the labor that he uses when the spray disinfectants are used. I have heard that if a sheep were kept in a part of a poultry house, one would never see lice or mites. Is this so? F. T. H.

Adelphia, N. J.

Any kind of oil or grease is destructive to the parasites that prey upon poultry but the hard greases like mutton tallow have this advantage that when painted upon perches, etc., after being liquefied by heat they fill the pores of the wood and remain as a coating upon the surface for a considerable time. Beef tallow would be equally good and either may usually be obtained from local butchers. The natural oil of a sheep's fleece would probably protect it from poultry lice but I know of no reason for thinking that a sheep would be destructive to the lice in a building or a protection to hens, unless they roosted upon its back. M. B. D.

Feeding Dry Mash.

CAN you give experience with the dry mash system of feeding poultry, both young and old stock? I pursue that method but am suspicious of its desirability except as a means of forcing egg production. D. H. C.

Vineland, N. J.

I think that there is little question in the minds of most practical poultrymen that the dry method of feeding poultry is superior to any other. This does not mean that all solid food given chicks or hens should invariably be dry; a moist mash fed once or twice daily to growing chicks will hasten their growth and maturity and may well be used for this purpose. Laying hens will also eat more moist mash than dry and this fact may be taken advantage of to temporarily force egg laying. The labor saving in hopper feeding of dry mash is sufficient to counterbalance a considerable increase in production produced by using wet mashes and there is little doubt that the health of fowls is conserved, their longevity increased, and their total production fully maintained where they are given free access to ground grains and are fed sparingly, if at all, upon wet food. M. B. D.

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H. I. BURTON, - R. F. D. 5, Millsboro, Delaware

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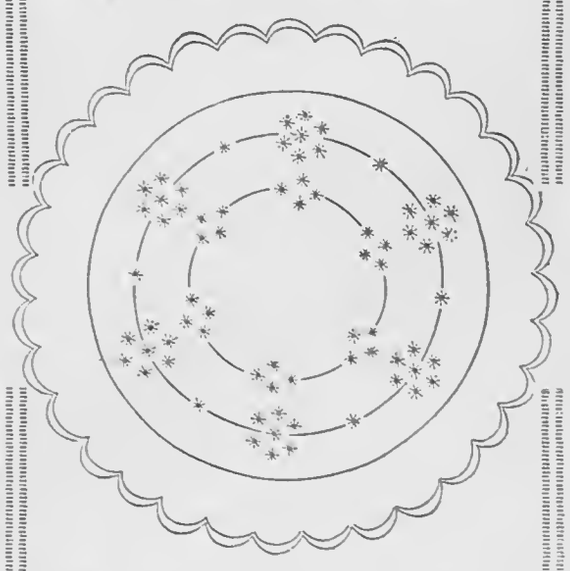

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Department "M"
The Rural New-Yorker
333 West 30th St., New York City

PUBLISHER'S DESK

I AM sending you my renewal. I wish I were able to renew for the rest of my life at one time. I am saving every copy to refer to, and I find them one of the greatest helps. The advertisements are worth money to me, because I always got honest dealing and quick action. I would not think of answering an advertisement in any other paper. I could keep on saying good things of you, but will not take your time. I hope that of all the good things that happen you will have an extra lot dropped at your door. J. T. L.
Indiana.

It is rather a severe indictment of the agricultural press that any farmer feels himself limited to one paper for the safe patronage of its advertisers. This correspondent gives us no intimation of the extent of his acquaintance with the press generally; and for this reason it may be said that he would feel an equal confidence in at least some other publications if he knew them equally well. We hope the time is not far distant when this may be truthfully said; but we have some acquaintance with the press, and some knowledge of the character of advertising, good, bad and medium, that is found in the publications of general circulation; and we are frank to say strictly speaking this correspondent is on safe ground. There is scarcely an issue of a farm paper or other publication of general circulation coming to our desk that does not carry one or more advertisements that we have rejected and refused. Many of them we have publicly criticised. Farmers who patronize these advertisements in other papers are constantly appealing to us for redress because the publishers who carry the objectionable advertisements neglect or refuse to protect the complainants. The strange part of it is that while we reject the advertising we are often able to get adjustments for the patron, after he has been turned down both by the advertiser and the publisher who carried the advertising. So while the indictment is a little severe, the publishers are themselves responsible for it. It is not enough to reject advertisements that are, as one farmer puts it, as "crooked as a rail fence." If they wish to enjoy the full confidence of the reader, they must reject everything that suggests an encroachment on a square deal.

Enclosed is correspondence to add to your collection of experiences. G. E. M.
New York.

The correspondence referred to extends from June 6, 1912, to March 27, 1913, between this subscriber and the Wisconsin Fur, Wool & Tanning Co. of Eau Claire, Wis., over a shipment of 38 fleeces of wool weighing 197 pounds, which according to the quotations at the time the shipper valued at 27 cents per pound, or $53.19. On July 24 and Sept. 13 the Wisconsin Fur, Wool & Tanning Co. reported to the shipper that the wool had not been received, whereupon the shipper made claim against the Delaware & Hudson Railroad Co. for the value of the shipment. The correspondence with the railroad company continued until Nov. 15, when the railroad company reported that the shipment in question had been delivered on July 28. The consignee contends that the shipment was delivered without the name of the shipper, and yet questions whether the wool came from our subscriber or not, but makes returns for 177 pounds at 15 cents per pound, which after deducting the freight charges, nets the shipper $23.88. This amount the shipper contends is about one-half what he might have received for the wool at home, had he not relied upon the representations of the Wisconsin concern, which induced him to send the shipment to them. We fear the subscriber will have to charge his loss up to experience. He sends us the record of the transaction for the benefit of other subscribers in the hope that they may be saved from a similar loss.

What do you think of the inclosed bunch of get-rich-quick schemes, especially the two gold mine ones? L. D. M.
New Hampshire.

The collection of literature referred to above includes that of Wm. G. Krane Inv. Co., Inc. of Denver, Colo., promoting the stock of the Crown Prince Consolidated Mines Co.; Cyrus W. Barnholt of Denver, Colo., who seems to be promoting an unnamed mining scheme; literature of a rheumatism cure, and a mail order proposition. The subscriber pretty accurately describes the collection himself when he calls them "get-rich-quick" schemes. Another subscriber accurately expressed our estimate of these mining propositions in this department sometime ago when saying that the only difference between them and pouring money into a rat hole is that it might be possible to dig up the rat hole and in that way get the money back, while there is no possible chance of ever seeing it again when the money is turned over to one of these promoters and schemers.

Here are four interesting, but most unsatisfactory records:

M. Rappaport, 2347 Nicholas St., Philadelphia, Pa. Check was sent in settlement but when it was returned for minor correction nothing further was heard from it: Mr. Rappaport conducts a butter and egg route and is out all day but he pays no attention to requests for settlement.

Fergus Ferguson, 14 Kosciusko Street, Brooklyn, N. Y., neglected to remit for egg shipments. He has now removed and left no address.

F. A. Slater & Co., 22 Clinton St., Newark, N. J., acknowledge receipt of a case of eggs but failed to pay for same. The report is now that they have disappeared and left no trace.

Wm. M. Manee, 5912 Utrecht Ave., Brooklyn, N. Y., solicited and received egg shipments, and paid for same up to a certain time. Two cases of eggs sent in May, 1913, and delivery proved by the express company, are still unpaid for and Mr. Manee fails to respond to requests for settlement.

We suggest that these records be kept for future reference. The usual thing is for men of this kind to change their address, and often their names and solicit shipments. Sometimes they solicit shipments under the old name and address from an entirely different section of the country. They never give up the game.

The case of the defunct Kornit Manufacturing Company that has been on the calendars of the criminal and civil courts for several years, ended yesterday when the Referee in Bankruptcy, Edwin G. Adams, filed a memorandum in Newark fixing the sum of $3,500 to be divided among the creditors while $6,000 was allowed to the lawyers in the case.

Through fraudulent representations the promoters of the Kornit concern obtained thousands of dollars from investors. As officers of the concern Charles E. Ellis and Erwin R. Graves were convicted in the Federal Courts and were sentenced to the Federal Prison at Atlanta.

The above from a local paper closes the record of the Kornit fraud. Ellis and Graves published several cheap mail order papers, among which were the Metropolitan and Rural Home, an alleged farm paper. This paper was originally published to advertise Warner's patent medicines in Rochester, N. Y. Later it fell into Ellis' hands. He claimed a half million or more subscribers for it. It did not cost the subscriber much directly to get the paper, but he afterwards paid rather liberally through the patronage of fake advertisements and the Ellis promotion schemes. At one time the business seemed most prosperous. Ellis had an elegant country home in one of the fashionable suburbs of New York, and had one of the largest and best stables in the place. He also made large investments in New York City property. Stock in the Kornit company was sold to the readers of the Ellis papers. To establish the confidence of the public, contributions on agricultural subjects were purchased and published over the names of some of the best known teachers and writers on farm subjects. These writers were simply used to secure an element of respectability for the paper, and to win the confidence of farmers for the Ellis schemes. Money poured in fast. Then came the announcement of a fire, and a request for more money and an assessment from those who first contributed. Following this came an indictment and trial. It was testified on trial that no record was kept of the money that came in. All went into the same till. Ellis and Graves got a little time at the Atlanta Federal prison: and of all the hundreds of thousands of money contributed, the creditors now get back $3,500. Farmers ought to realize that they have a responsibility in such matters not only to avoid the encouragement of such enterprises themselves, but to protect their less informed neighbors against them. Teachers in agricultural colleges and agricultural writers should also avoid turning the influence of their names over to help the promotion of such schemes. They have all had rather frequent reminders of the result of such influences. So long as publishers following the Ellis and Graves methods are able to secure a half million subscribers to their fake publications while publishers of legitimate papers must be content to struggle along with a few thousand readers, we shall have publishers to imitate the Ellis and Graves methods.

Sweeny.

I have a young horse that was sweenied last Winter working in the plow; have tried to cure it but so far have not been able to bring back the muscles to normal condition. I put in a seton and followed it with a blister but the result is not satisfactory. Can you tell me of a good remedy for a case like this?
California. H. A. S.

It requires a long time to restore the wasted muscles in such cases, and severe treatment rarely succeeds. It is much better practice to stimulate flow of blood to the parts by rubbing them thoroughly several times a day, and at the same time pulling the skin away from the bone. Many use corncob, instead of the hand, for the rubbings, as this gives more friction. In addition to the rubbing use a liniment composed of one part each of turpentine and aqua ammonia and six parts of raw linseed oil. Rub this in each night until the skin starts to get sore; then stop using liniment until the skin recovers. It is a mistake to blister severely with the liniment. If possible keep the horse at light daily labor in a heavy breast collar. If you cannot work him make him take lots of exercise every day. It may take a year for the muscles to grow in again. A. S. A.

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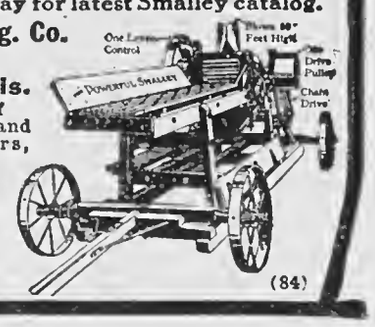

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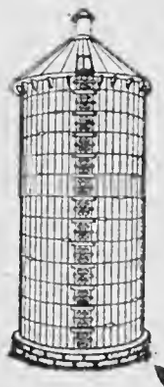

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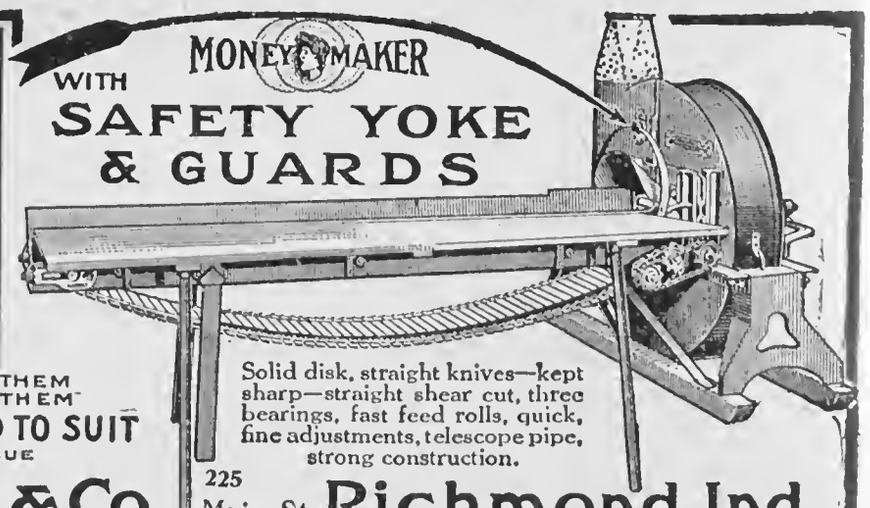

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending July 31, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.51 and $1.41 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The net price result for the week has been a half-cent advance on the better grades. Buyers for fancy trade found trouble in getting enough of the quality desired, the great majority being stock valued at 25 to 26 cents. Business in city-made butter and packing stock is quite good, mainly on basis of 18 to 20 cents.

Creamery, extra, lb	28	@	29½
Good to Choice	23	@	27
Lower Grades	20	@	22
State Dairy, best	27	@	27½
Common to Good	18	@	23
Factory	16	@	20
Packing Stock	16	@	19

Elgin, Ill., butter market 28 cents.
Philadelphia, western creamery, 30 cents.

CHEESE.

Market is in a strong position except on low grades and skims. There is considerable surplus of the latter going into storage.

Whole Milk, fresh, specials	14¾	@	15
Average fancy	14¼	@	14½
Prime	13¾	@	14
Under grades	10½	@	13½
Daisies	15	@	15¼
Skims, specials	11¾	@	11½
Good to choice	9¾	@	10¾
Poor to fair	5	@	9½
Fancy Cheese, Sage	18	@	19
Swiss	17	@	20
Young America	16	@	16½
Limburger	15	@	17
Roquefort	28	@	30
Stilton	46	@	48
Parmesan	25	@	28

EGGS.

This week has added another cent to the top qualities. The price range is now very wide, as the medium and low grades are in surplus and prices freely cut to make sales. Some of the egg candlers struck, but their places have been filled by non-union men and girls, the latter being quick to learn this work.

White, choice to fancy, large	29	@	30
Common to good	22	@	26
Mixed colors, best	26	@	28
Common to good	17	@	20
Western fresh, white	21	@	22
Lower grades	15	@	18
Storage, best	24	@	25
Seconds	22	@	23

FRESH FRUITS.

There is considerable surplus of windfall and cull apples. Good-sized hand-picked are selling well. Peach prices have improved slightly, though the increase applies to but a small proportion of receipts—fancy Elberta and Belle of Georgia. Currants and other small fruits damaged by rain. Muskmelons in heavy receipt and lower on all grades.

Apples—New, bu	50	@	1 50
Cherries, 8lb. bkt	10	@	45
Pears, Le Conte, bbl	2 00	@	5 00
Peaches, Del. and Md., crate	1 25	@	1 75
Southern Elberta	1 50	@	2 25
W. Va., crate	60	@	90
Nearby, bkt	50	@	85
Currants, qt	3	@	6
Plums, 6-bkt. carrier	1 00	@	1 50
Raspberries, red, pint	5	@	8
Black Caps, pint	5	@	8
Blackberries, qt.	5	@	12
Huckleberries, qt	8	@	12
Gooseberries, qt	6	@	12
Muskmelons, Md., bu	50	@	2 00
Carolina, bu	50	@	1 00
Arizona, bu	1 25	@	2 25
Watermelons, 100	12 50	@	25 00

HOPS.

Market is generally dull. Weather reports from Oregon are unfavorable, as the drought and heat are injuring the growing crop.

Prime to choice	35	@	37
Common to good	30	@	34
Pacific Coast	15	@	18
Old stock	10	@	15
German crop	58	@	61

HONEY.

Clover, comb, lb	14	@	16
Dark	12	@	14
Extracted, gallon	60	@	90

BEANS.

Marrow, 100 lbs	4 70	@	4 90
Medium	3 60	@	3 70
Pea	3 10	@	3 65
Red Kidney	4 50	@	5 50
White Kidney	5 00	@	5 50
Yellow Eye	5 50	@	6 00
Lima, California	7 10	@	7 75

VEGETABLES.

Potato receipts have increased so largely that prices are 50 to 75 cents per barrel lower. The nearby crop is good, both in size of tuber and quality. Jersey corn selling in wide range of price—$2 per 100 for best. Cucumbers in surplus and very low. Squash selling mainly at 50 to 75 cents per barrel. Tomatoes arriving in bad condition because of wet weather.

Potatoes—Jersey, bbl.	1 75	@	1 90
Long Island, bbl.	1 75	@	2 00
Sweet Potatoes, bu.	50	@	1 15
Beets, 100 bunches	50	@	1 00
Carrots, 100 bunches	50	@	90
Cucumbers, bu.	40	@	60
Corn, Jersey, 100	75	@	1 75
Cabbage, bbl.	40	@	60
Lettuce, half-bbl. basket	75	@	1 50
Onions—Southern, bu.	1 50	@	1 75
Nearby, bu.	1 50	@	2 00
Okra, bu	75	@	1 00
Peppers, Jersey, bbl.	1 25	@	1 75
Peas, bu.	60	@	1 25
Radishes, 100 bunches	1 00	@	1 50
String Beans, bu.	25	@	75
Squash, New, bbl.	50	@	1 00
Egg Plants, bu.	40	@	65
Tomatoes, Jersey Acme, box	1 00	@	1 50
Jersey, Stone	75	@	1 50
Del. and Md., 6-bkt. crate	50	@	75

LIVE POULTRY.

Broilers, lb.	18	@	21
Fowls	17½	@	18
Roosters	11½	@	12
Ducks	15	@	17
Geese	12	@	14

DRESSED POULTRY.

Chickens choice broilers, lb.	26	@	30
Squab broilers, pair	60	@	65
Broilers, common to good	20	@	25
Fowls	15	@	19
Ducks, Spring	14	@	16
Squabs, doz.	1 25	@	3 75

HAY AND STRAW.

Receipt of hay are light, and some sales made at $1 to $1.50 above previous figures. These prices, however, represent but little business. Some prime straw has sold 50 cents above last week.

Hay, Timothy No. 1, ton	21 50	@	22 50
No. 2	19 00	@	20 00
No. 3	15 00	@	18 00
Clover mixed	14 00	@	19 00
Straw, Rye	14 00	@	15 00

LIVE STOCK.

Native Steers	6 75	@	9 45
Bulls	5 25	@	7 00
Cows	3 50	@	6 50
Calves, prime veal, 100 lbs	9 50	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	2 50	@	4 25
Lambs	6 00	@	8 50
Hogs	8 75	@	9 75

GRAIN.

The high prices prevailing in the great markets this week are largely speculative, owing to war movements in Europe. Wheat is the first grain to be affected by a war scare, but the market on all other grains soon feels the pinch. There will be many "flurries" in wheat, as well as other products if the proposed crude, costly and altogether deplorable method of adjusting difficulties holds in this case. It would not be considered sensible for a farmer or business man to settle disputes with his hired man or partner in such blood and thunder fashion. The result might be profitable for menders of broken heads and vendors of arnica and sticking plaster, but bad for most others.

Wheat, No. 1, Northern Spring	1 09	@	..
No. 2, Red	98	@	..
No. 2, Hard Winter	1 00	@	..
Corn, as to quality, bush	79	@	81
Oats, as to weight, bush	43	@	45
Rye	68	@	70

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay;

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	33	@	35
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14

WOOL.

Ohio fine unwashed	28	@	29
Quarter blood combing	27	@	27½
New York Fleeces	23	@	24

July 22. The markets here are very unsatisfactory, as most of our produce has to go through the local merchants. Shipping facilities are poor, as the only railroad through this part of the State is the Great Northern at Kalispell, 20 miles away. Prices, when there is a chance to sell, are something like this: Butter 25; eggs 20; potatoes 50-75 per 100 pounds; wheat $1.50 per 100 pounds; oats $1.25; strawberries $1.75 to $2 per 24 quart crate; cherries 90 to $1 per 10 pound crate, $2 24-quart crate. Milch cows $50 to $75; hogs 8; baled hay $12 to $15. Apples in season $1 to $2 per box. Strawberries, and in places garden crops were cut short by late frost; grain fair crop. Quite a fruit industry is being developed, especially around Flathead Lake, such as apples, cherries and plums.
Bigfork, Mont. M. O. E.

Labor Agents in Nebraska.

I WAS very much interested in the article by John Anderson & Son in their effort to get help from New York and their putting up $5 to the labor agent. I am a labor agent, have been in the business for 28 years, and we make a specialty of farm help. We have over 100 farmers we furnish help for and some of them have been getting help from this office for 22 years. I have been sending out farm hands when the best wages were $20 per month on a farm where now it is $30 to $35 and even $40 per month. We have farmers who get one man and possibly two in a year. We also have farmers who get from 100 to 150 hands during the year, but of course these farmers have several thousand acres in grain. I am getting help for a farmer here now in Iowa, who has 3,100 acres of corn, 2,000 acres of grain and 1,600 of hay to care for. Instead of charging them $5, as the New York man does, we charge them nothing and we guarantee them good help, and then they come back again for help the next time; in fact we send out nothing but first-class farm help, and they have to pass an examination before we book them for any farm job. We send out no Italians, Greeks or negroes unless we have an order, but we have never had an order for one of these nationalities except one negro in 27 years. Our farm help in this part of the world consists of Americans, Swedes, Danes, Bohemians, Germans, Polish, Austrians a few. These farm hands all pay an office fee at the office; they also pay their own railroad fare to the work. But we guarantee them work and at the wages agreed upon at the office. H. E. W.
Nebraska.

Cellulitis.

MY horse suddenly became lame in left front foot; limped just a little all day; could not find anything at all wrong. The third morning it broke at top of hoof, and suppurated. Later it broke on back of leg just below second joint. Both places have been running badly since. It has a very bad smell; the sore is eating all the time and have failed to get anything to stop it. It now bleeds at times until horse is very weak. What can be done? J. W. E.
West Virginia.

Infection has spread in the connective tissue from the original wound, and it is unlikely that home treatment will avail. A qualified veterinarian should be employed and should give hypodermic injections of antistreptococcic serum. Bathe the sores twice daily with a 1-1000 solution of bichloride of mercury, then dust freely with a mixture of one part of iodoform and six parts of boric acid, covered with absorbent cotton, and clean bandages. A. S. A.

Indigestion.

LAST Summer my horse commenced to run down. I doctored him for pin worms with good results. The horse seems to be lifeless and very poor, but has a good appetite. A. T. C.
Massachusetts.

Have the teeth attended to by a qualified veterinarian. If the coat is long and rough have it clipped, work or abundantly exercise the horse every day. In feed night and morning mix a tablespoonful of a mixture of equal parts of dried sulphate of iron, powdered nux vomica, gentian root, fenugreek and saltpeter. Continue this medicine for 10 days; then skip 10 days and repeat the treatment if found necessary. A. S. A.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A housekeeper for small family. A. H. PENNY, Mattituck, N. Y.

EXPERIENCED MAN wishes position as farm foreman or herdsman; married; best references. K. E., care Rural New-Yorker.

WANTED—Reliable tenant for improved cotton and peach farm, Marion Co., Texas; terms will please. ROBT. ELSEA, Columbus, Ohio.

WANTED—A good, steady man for general farm work; must be able to drive a team; a steady job; $30 per month and board. M. N. ADAMS, Livonia, N. Y.

WANTED—Single man, under 35, for herdsman; must be clean, dry-hand milker; $35 and board; give experience and reference. GLENFREW FARM, Sewickley, Pa.

POSITION WANTED—On farm, by married man, 40; family; life experience; capable of taking any position or taking charge; best of reference. W. A. MAYOR, Jermyn, Pa. R. 1.

WANTED—Man and wife (no children), to work on small chicken farm; wife for housework; will give man interest in chickens; must have good references. R. O. KRIEBEL, Norristown, Pa., R. F. D. No. 1.

WANTED—A place with a Christian family for boy 16 years old; used to horses and cows; can run furnace; small wages; within 40 miles of New York City. Apply SUPERINTENDENT, The Jennie Clarson Home for Children, Valhalla, New York.

POSITION WANTED—By practical American man; age 32; married, and strictly temperate; thorough knowledge of dairying and dairy farming, modern machinery for dairy and farm, including steam and gasoline engines, Babcock test, refrigerating machinery, mechanical milkers, etc.; milk production for high-class bottle trade a specialty; can handle men without friction and get results; reference from present employer; reason for change sale of present business. H. G. TIBBETTS, Cambridge, Md., Algonquin Dairy.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

VERMONT MAPLE SYRUP, $1.10 gal.; fresh eggs in 30 doz. cases, 28c. dozen, F. O. B. Rupert, Vt. JAY T. SMITH.

FOR SALE—For want of use, cow-pea harvester, cuts, threshes, cleans, in one operation, horse driven; price, $70. W. LERCH, Supt., Scobeyville, N. J., via Eatontown.

FIG PRESERVES—Home made; a new delicacy for most people; made from choice fruit right from the tree; few people have ever tasted a fig as it ought to be; write for prices and sample to MRS. M. A. PARKER, Rickerly, near Dauphin way, Mobile, Ala.

105-ACRE FARM—Good buildings; 3 miles from county seat; will exchange for small farm. JOSEPH HAMPTON, Flemington, N. J.

WANTED—Southern Connecticut farm for fruit; 20 acres up; elevated above adjacent land; Western view; Colonial house preferred. HARLEY KENDALL, Norwalk, Conn.

FRUIT, TRUCK, POULTRY FARM—Will sell all or any portion of 36 acres; good buildings, excellent location; immediate possession; no agents. HOMER TWEED, Quakertown, Pa.

TO LET ON SHARES—A well-equipped farm of 165 acres, half of it in cultivation in Bergen County, N. J., adapted to dairying, pig raising or truck farming. M. N., Rural New-Yorker.

WILL SELL—Two sections timber land, oak, latitude 37; or exchange for farm near latitude 40, in Ohio; age of trees about 70 years. L. W., care Rural New-Yorker, 333 West 30th St., N. Y. City.

TWO FARMS FOR SALE—One of 67 acres, level; good 8-room house and other buildings; another of 63 acres, fruit and poultry farm, one-third set with peach, cherry and quince trees; part in bearing; write for particulars. G. W. BLAINE, Califon, Hunterdon Co., N. J.

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FOR SALE—Beautiful property, ¾ of a mile from station, post office and school in Village of Washingtonville, on the State road between Newburgh and Goshen; 230 feet front and 210 feet deep; house of 11 rooms with all modern improvements. Write or call on REV. JOHN TETREAU, Washingtonville, N. Y.

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HUMOROUS

FALLON (who has bought a small farm): "Tell me the truth, Mr. Carney, is the soil rich or poor?" Expert Gardener: "Well, sor, I should say it wor wanst rich, but it's now in raydooced circumstances."—Melbourne Leader.

THE SUPERIOR ONE (who has swanked into the village shop): "Do you sell puppy biscuits in this one-eyed little shop:" The Shopman (getting his own back): "Certainly, sir. Shall I put them in a bag for you to take home, or will you eat them here?"—The By-stander.

THE young wife came hurriedly into her husband's study one morning. "Herbert, dear." she said. "this recipe for apple pie tells you to sit on a hot stove and stir constantly." "Well, Alice," replied the mere male, "if you do sit on a hot stove, I think you will find that you will stir constantly."—N. Y. Evening Post.

WHEN the young physician's motor car reached the scene of the accident there was nothing to do; all the victims had been so slightly hurt that they were able to walk home. The young doctor was keenly disappointed, but his chauffeur spoke up cheeringly: "Never mind, doctor. I'll run down some business on the way home."—Credit Lost.

THE Sunday school teacher was making a review of the lessons. "Who was the wisest man, James?" "Solomon." "That's right. Now Frank. who was the strongest man?" "Jonah." "Wrong; but what reason have you for believing Jonah was the strongest man?" "'Cause the whale couldn't hold him after he got him down."—National Monthly.

"WHAT do you want with all those hammocks and phonograph records and fancy groceries?" asked the storekeeper. "Going to have Summer boarders?" "No," replied Farmer Corntossel. "I wouldn't waste all that on Summer boarders. I'm tryin' to make the place attractive enough to persuade a few farm hands to linger around an' help me out with the wheat crop."—Washington Star.

MRS. R. was an extremely careful mother, and had repeatedly cautioned her six-year-old daughter against handling any object that might contain germs. One day the little girl came in and said: "Mother, I am never going to play with my kitty any more, because she has germs on her." "Oh, no," replied her mother, "there are no germs on your kitten." "Yes, there are," insisted the child. "I saw one hop."—Harper's Monthly.

"YOUNG man." said the proud father. "in giving you my daughter I have entrusted you with the dearest treasure of my life!" The young man was duly impressed. Then, during the few minutes of impressive silence that followed. he heard the patter of rain against the window-pane. "Oh," he exclaimed. "It's raining, and I haven't my umbrella! May I borrow yours to get to the station?" "Young man," said the parent, "I wouldn't trust anybody on earth with my umbrella."—Australasian.

MRS. Flint came for a visit to her sister's home, and her little niece, Charlotte, was delighted to see her. "What became of the black kitten that you had when I was here before, dear?" asked Mrs. Flint. "Why, don't you know?" asked Charlotte, much surprised. "I haven't heard a word." replied the aunt. "Was he poisoned?" "No. ma'am," said Charlotte. "Drowned?" "Oh, no." "Stolen?" "No." "Hurt in any way?" "No, ma'am." "Well," said Mrs. Flint. "I can't guess, dear. What became of him?" "He growed into a cat," said Charlotte. —Credit Lost.

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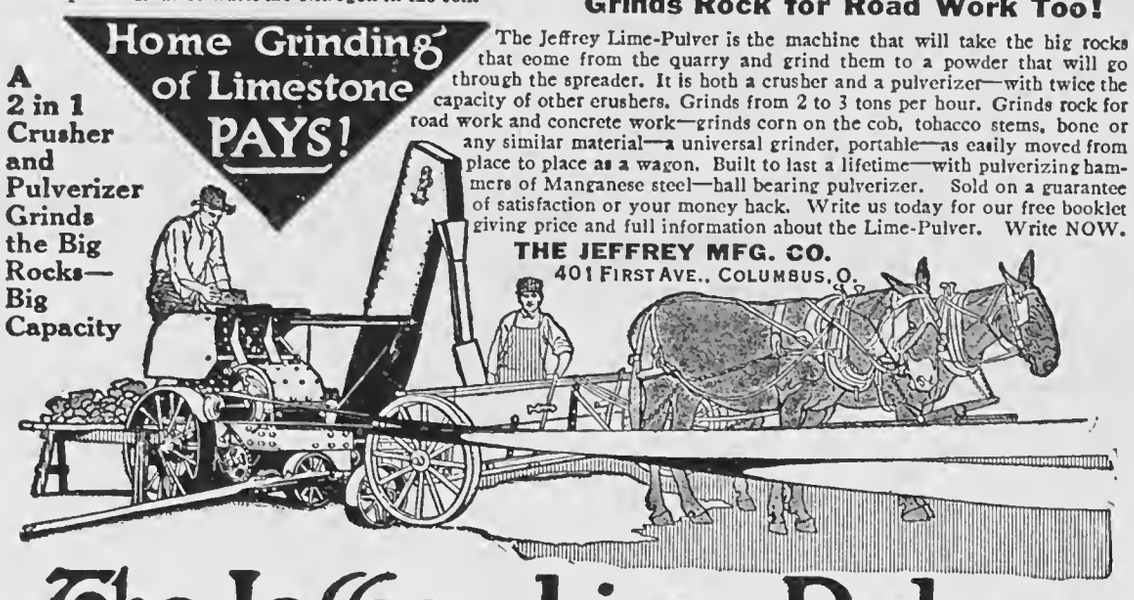

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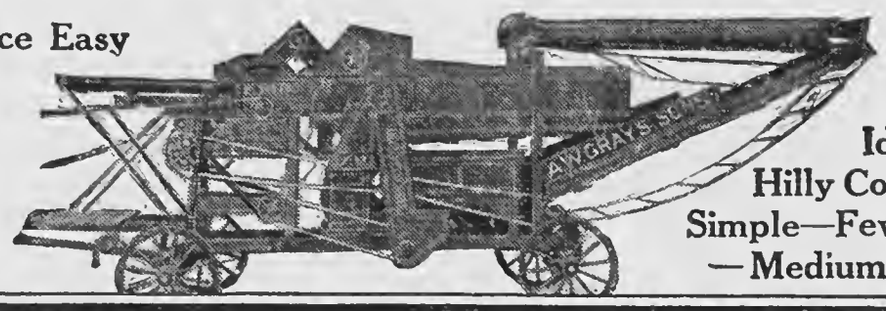

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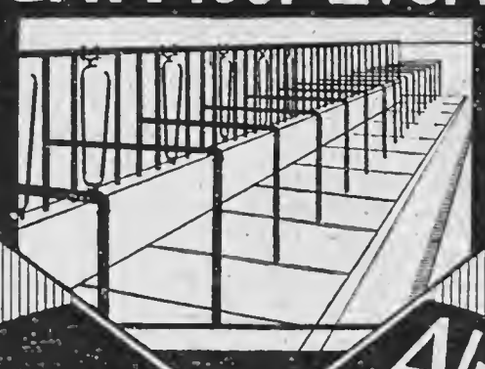

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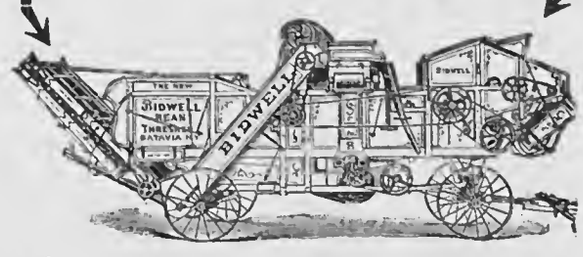

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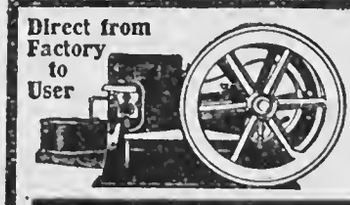

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AUG 14 1914
Cornell University

THE RURAL NEW YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII, No. 4268. NEW YORK, AUGUST 15, 1914. WEEKLY $1.00 PER YEAR.

A FINE EGG-LAYING RACE.

The American Leghorns Pictured.

IF in the coming yacht race between England and America the two boats come into the last mile before a good stiff breeze, and hardly a foot of distance between them, the two nations would about stand on their heads with excitement until it was over. The egg-laying contest at Storrs promises to give a finish nearly as exciting. For months the English Wyandottes have been far in the lead. The English Leghorns are now coming up at a lively pace, but they were too far behind before they began to catch up. Two pens of American Leghorns have made rapid gains, gradually crawling up to the English Wyandottes. At the end of July or the thirty-ninth week of the contest the record was as follows:

	EGGS
White Wyandottes (Tom Barron)	1,636
White Leghorns (Conn. Agri. College)	1,637
White Leghorns (Francis F. Lincoln)	1,615

The Leghorns from the college were entered to give an experiment in feeding, and thus are not considered in the contest. The real contenders with the Wyandottes are the Leghorns owned by Francis F. Lincoln. We have already pictured the Wyandottes, and so this week we show a picture of Lincoln's Leghorns, taken in their pen at the egg-laying contest. A brief statement of what these birds have done is given below—figured up to July 1 or eight months in all:

FEED CONSUMED.

Mash.	Grain.	Oyster shell.	Charcoal.	Grit.
Pounds. 208	*Pounds.* 427.4	*Pounds.* 20.88	*Pounds.* 2.66	*Pounds.* 10.25

COST OF FEED.

Mash.	Grain.	Oyster shell.	Charcoal.	Grit.
$3.59	$7.65	$0.15	$0.05	$0.08

Total number of eggs 1394. Total weight of eggs 164.22 lbs.

WEIGHTS OF BIRDS.

BIRD...	1	2	3	4	5	6	7	8	9	10
Nov. 1.....	3.0	3.6	3.8	3.2	3.2	3.6	4.5	3.2	3.7	3.2
Jan. 1.....	3.4	3.6	3.6	3.7	3.4	3.6	4.3	3.4	3.8	3.3
Mar. 1.....	3.4	3.6	3.5	3.6	3.2	3.5	4.5	3.6	4.3	3.5
May 1.....	3.5	3.8	3.75	3.6	3.4	3.2	4.5	3.5	4.1	3.6
July 1.....	3.25	4.0	3.75	3.5	3.5	2.8	4.25	3.7	4.25	3.3

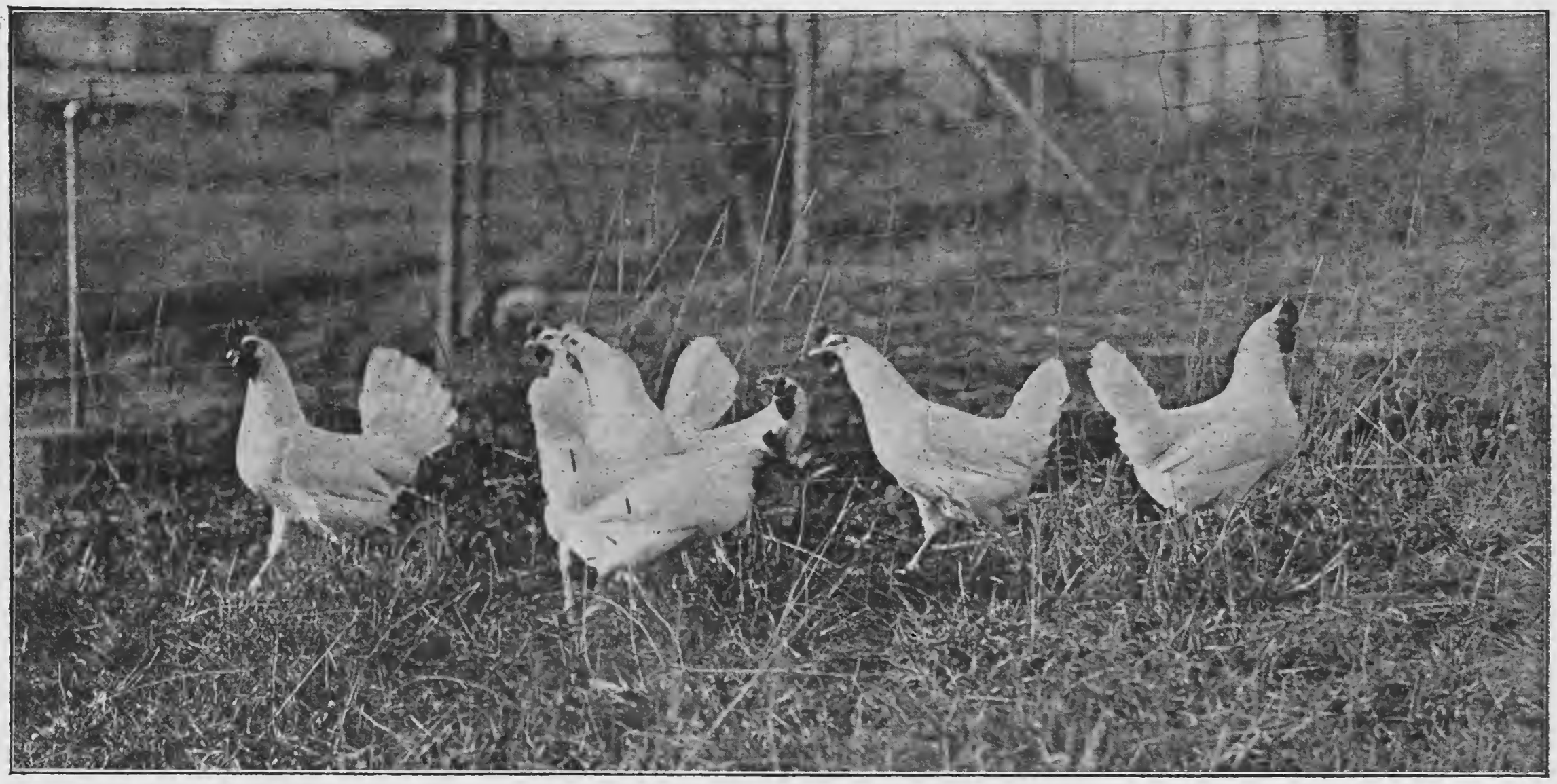
Thus it will be seen that the food for these hens cost $11.52. Mr. Lincoln has kept a careful record of the values of the 1,394 eggs, many of which were laid when the price was very high. This egg value is $47.74. Thus each hen averaged 139.4 eggs in eight months at an average food cost of $1.15 and an average earning value of $4.77. The average consumption of food per hen for eight months is 20.8 pounds of mash and 42.7 pounds of grain. This means 1.37 ounces of mash and 2.8 ounces of grain per day. Mr Lincoln gives us the following statement about his birds:

My birds are American Leghorns, bred for egg-laying for many years, though I haven't handled them long. My first males came from Merritt M. Clark, Connecticut, and I think are White and Rice blood; the females came from a farm in New York where the strain had been trap-nested for several years. Crossing this unrelated blood I think I have a strain of exceptional vigor and laying ability.

When I had entered a pen for the present egg-laying contest, my problem was to pick the best 10 from about 200 pullets, all of which would be in laying condition at least by November. I thought the pullet that used its food efficiently in growing would continue that efficiency when laying, so when, in early September we did our first selecting, we picked the 16 pullets that seemed nearer maturity than the rest, and it was a job. I like a layer to be pretty small, long-backed, deep in the back, with legs well apart and a short, sometimes almost stubby beak, and while the main point I looked for was the quickness with which a pullet approached maturity, the comb is a good signpost for this. I kept the type in mind and would do it again. The 16 were gradually culled and one was added later until we had the number required.

These pullets would ordinarily have started laying late in September, but I knew the probability of their molti-g if they had laid much at home before being shipped, so for a month and a half we moved them often enough so that they would never feel at home enough to lay. All beef scrap was taken from their mash, but I couldn't stop them entirely and the 10 birds did lay perhaps 30 eggs before they left home. When they reached the contest they spent a week getting settled, then started in hard, were the leading pen for November, second for December, have kept persistently at it ever since. FRANCIS F. LINCOLN.

The contest between these Leghorns and the English Wyandottes will be a close one. Mr. Barron thinks his birds have gained their second wind and will keep ahead while Mr. Lincoln says his birds "have lots of lay in them yet." It is a pretty race—may the best pen win!



PART OF THE LINCOLN LEGHORNS—SECOND PEN IN THE EGG-LAYING CONTEST. FIG. 427.

NOTES ON GLASSHOUSE GARDENING.

Brooder House as Greenhouse.

MY brooder house has windows in the entire length of its southern side; hotbed sash in the roof make it suitable for use as a greenhouse from September 1 to February 1, when it is not occupied by chicks. What is the best single crop or succession of single crops I can mature in that time? I wish a flower or vegetable crop that I could readily sell, and that would be suitable for a man having little greenhouse experience, but who thoroughly understands the handling of hotwater heaters and the importance of a constant temperature? J. L. L.
New York.

Here is a brooder house with windows in entire south side and hotbed sash in roof, that the owner wishes to use as a greenhouse from September 1 to February 1, either for flowers or vegetables. If the sash in roof are continuous on each side of ridge similar to a greenhouse roof, either tomatoes, rad-

ishes or lettuce could be grown. If sash are placed only at intervals at one side success would be problematical, and could only be determined by experiment, as very few plants make a growth that would be profitable commercially unless light in abundance strikes them from every angle, especially during the dark days of Winter. Tomatoes would be my preference for such a house. The seed should be sown July 1, and plants kept growing rapidly and finally placed in large pots, or boxes about 10 inches square and six to eight inches deep in good rich soil, trained to a shape, and all suckers kept off main stem. Bonny Best would be best variety to grow. A good crop of fruit would set outdoors, and some time during September the boxes could be placed in house where the fruit would mature during November and December. If the plants were to become root bound in pots or boxes they could be shifted to larger pots, or if in boxes the bottoms could be removed and boxes set on a few inches of fresh soil. If the roots are given too much liberty the fruit will ripen late; 56 to 60 degrees at night and 75 to 80 degrees day time would be good temperature. Water freely, or black rot at blossom end will develop.

The late varieties of Chysanthemums could also be experimented with by growing in pots out doors under canvas till frost, then placing indoors, though the success would be doubtful. The season would be too short to develop any other flower that I know of at present.

Chemical Fertilizer for Dahlias.

WILL you tell me what would be the proper amount of phosphoric acid and potash to use on Dahlias, per plant, and how to apply it? Is it possible to apply a sufficient quantity to be harmful? Give quantities in using acid phosphate or bone meal; sulphate of potash or wood ashes.
Massachusetts. W. H. J.

In sandy soil, which is the only type of soil in which the Dahlias can be profitably grown season after season, chemicals give very good results, and the formula generally used is a high-grade potato manure of about two to three nitrogen, eight to nine phosphoric acid and 10 potash. This formula can be used with advantage at rate of 1,200 to 1,500 pounds per acre, preferably in two applications of several weeks apart, when cultivating in Spring. If clay soil is used, it is possible that only phosphoric acid and potash would be sufficient, and not a great quantity of these, as with us the Dahlias make all plant and bulbs or roots and very few flowers, and these few are usually ruined in the bud by tarnished plant-bug. W. H. J. can figure amount per plant by number of plants he would set per acre, as he grows them.

Profit in Greenhouse Tomatoes.

I WOULD like to know whether tomatoes raised in a hothouse for the early Spring trade would be a paying proposition in this locality. Southern tomatoes that are picked almost green are shipped in here and retail at 12½ to 15 cents per pound. This seems to me as though it would be a good thing to take up if I had some facts about the extent of glass required to raise a certain amount of tomatoes, etc.
Kokomo, Ind. G. J. C.

There is no question about there being profit in a Spring crop of tomatoes in a greenhouse if properly managed, and other crops of a profitable nature can be grown while the tomato plant is maturing, like lettuce or radishes. The seed should be sown November 1 to 10, and plants kept growing in pots without crowding and planted out in beds or benches February 15 to March 1. By good culture you may possibly obtain four to five pounds per plant, and the plants can be set 16x18 inches or even 16x16 inches apart, so if you have any definite amount in view that you would like to produce, you can figure how much glass would be required to produce that many pounds. In our market greenhouse tomatoes always sell for three to six cents per pound more than the tough southern tomatoes that are picked green. If G. J. C. has a file of back issues of THE R. N.-Y. and will look up articles on a greenhouse for a small place, printed early last Spring, he will find detailed information regarding the handling of tomatoes under glass and several catch crops to utilize space while tomato plants are maturing.

ELMER J. WEAVER.

FITTING PASTURES FOR POTATOES.

WE have a number of acres of run-out pasture land, has not been turned for over 40 years, sod very mossy, soil rather dry gravelly loam, such as is usual in Northern Massachusetts; in places inclined to pack, southern and eastern exposure. In places this land will not grow buckwheat eight inches high. When heavily dressed with ground bone (we have but little stable manure) rye, buckwheat, beans, etc., show fine growth. Lime one ton to acre does not seem to improve crop growth. We wish to fit this land for potatoes in 1915 at least expense for fertilizers. E. A. C.
Massachusetts.

The fact that this land responds to an application of fine ground bone shows that phosphoric acid is the most needed element, and that the nitrogen in the bone also helps. In practically every case where we have tried to refit an old pasture land lime has proved useful, and we think in nine cases out of ten lime will benefit such soil. Even if the soil is not sour the lime will generally help give it a better mechanical condition. We have done considerable work with soils of this character and have followed about this plan:

If it is possible, plow in the late Fall and leave the furrows exposed through the Winter to the frost and weather. This helps to break up and subdue the old sod, and kills out many of the insects. In the Spring work up with a Cutaway harrow and use a spring-tooth also if possible. Fit the land by applying one pound of lime to the acre and plant some variety of flint corn which will do well in that locality. The flints do well on this rough land, and in our experience have responded better to an application of lime than the dents have done. They also mature early, and we are able to start a cover crop to good advantage. We give this corn good culture through the season, and at the last cultivation in August put in a cover crop. With us this means one bushel of rye, either 15 pounds of Crimson clover or 20 pounds of Hairy vetch and two pounds of Cowhorn turnip seed to the acre. This is scattered on the ground and worked in by the cultivator. In the Spring what remains of this cover crop is plowed under, and if the soil is thoroughly fitted it is then in fair condition for potatoes. Under ordinary conditions and with ordinary soil, we would not use lime so heavily one year in advance of the potato crop, but such pasture lands are usually very sour and the cover crop also plowed under seems to overcome to a large extent the effect of the lime. In your case it is now too late to plant flint corn, and we should simply try to put as much organic matter as possible into that soil to fit it for next year's potato crop. We should plow this land as soon as possible and use from 600 to 800 pounds of slaked lime per acre, then apply 500 pounds of a mixture containing three parts of fine ground bone, and one part muriate of potash. Then broadcast a combination of two bushels of buckwheat and three pecks of field beans or cow peas. Let this grow until late in August. Then plow it under and sow as soon as possible the cover crop which we have mentioned above, or any other combination which experience has shown better suited to the locality.

FERTILIZER FOR THE CORN CROP.

HAVE the experiment stations determined whether a complete fertilizer used on a green crop in the Fall to increase growth will pay? Will the increased growth decay in the Spring and Summer, and form nitrates to such an extent as to pay for the nitrates used in the Fall? Notwithstanding the good teachings of THE R. N.-Y. which I think are second to none among farm papers, I think Timothy sown after or among crops is far ahead of anything yet. I would not sow rye and wheat if I could buy Timothy if anyone gave me the other free, to be used to plow under. The Timothy makes a stronger sod, can be sown among any standing crop, and without any covering makes a fair stand; also it can be left to stand longer in the Spring before plowing under. W. S.
Matawan, N. J.

By a "complete" fertilizer we assume that you mean one containing nitrogen, potash and phosphoric acid. We do not think the stations have settled the matter. The plan of using the potash and phosphoric acid on the cover crops is a good one, particularly when this crop is a legume like peas, beans or clover. With such a crop the potash and phosphate give a larger growth and thus the crop obtains more nitrogen from the air. We know one very successful potato grower who had plenty of land and grew a potato crop once in two years. He seeded cow peas in May with a fair dressing of potash and acid phosphate. These peas made a good growth and were plowed under in early September when rye and Crimson clover followed. In the Spring this crop was plowed under, the soil fitted for potatoes—at which time nitrate of soda or a small amount of a special potato fertilizer was used. This gave a soil full of organic matter, and with the chemicals used the year before on the cow peas in an available form. After harvesting the potatoes rye was seeded—to be plowed under the following Spring for another cow pea crop. This system produced large crops of potatoes at a low cost of plant food.

Generally speaking it would not pay to use nitrogen on a Fall-seeded cover crop. One object of such a crop is to utilize the nitrates which are formed in the soil during late Summer and Fall. It would not be good economy to use nitrogen under such conditions, but the potash and phosphoric acid may well be used then. As for Timothy as a cover crop—from our experience we prefer rye, rape, turnips or vetch. One objection to Timothy with us is that it is about the worst weed in hoed crops that we know of. Seeding it ahead of potatoes or garden crops would increase the work of hoeing or weeding.

SHALL HE BUY A FARM TRACTOR?

I AM a young man of limited strength but unlimited determination to succeed; I have very little knack of handling large teams but have a natural mechanical turn. My farm (120 acres) is stony, but has no actual bed rock near the surface. The fields are gently rolling with no steep places. Then the labor problem is at its worst. There are 1,000 apple trees on the place. Would a good reliable farm and orchard tractor pay me as a business investment, considering that there is a large field for outside work, hauling, etc.? S. P. T.

This question ranks with what we often receive from crippled men or farmers with only one leg or arm—"*will it pay me to buy a milking machine?*" Anyone can see with a little thought what a serious thing it is for an outsider or stranger to give direct advice regarding an investment which might mean serious loss to the farm in case it did not turn out well. No one should tell such a man yes or no definitely unless he knows the man personally and has had a chance to study his character and ability. No one claims that farm tractors have yet been developed so that they rank with automobiles in efficiency. All of them must still be regarded as more or less of an experiment. Our friend might find one well adapted to his stony and rolling land, while others would fail when taken away from the level, smooth fields of the west. It would not pay, as a general proposition, to buy a tractor for the work on a 120-acre farm alone but if there is outside work to be done the investment may pay. There is no question but that more and more of the future farm work will be done by tractors when the machines are made more practical and better adapted to varied farm conditions. At present it must be admitted that the buyer is expected to pay for some of the work of experimenting with them. A farmer must expect to do this for some years yet. We think it will pay this farmer to try out a tractor on his farm. He should not pay for a machine until he has tried it long enough to understand what it will do under the usual conditions of soil and climate in his neighborhood. If he can find a machine in this way which will prove reasonably successful it will pay him.

THE MOON AND THE WEATHER.

IN regard to the article on page 903 entitled: "The Moon and Weather Changes," it seems to me that most people consider the weather as a local matter, and do not realize that it is a part of great air movements extending many thousand miles over the earth's surface. The cause of the different varieties of weather which we experience is the movement of areas of high and low atmospheric pressure. These areas move approximately from west to east, areas of low pressure being accompanied by unsettled or stormy weather, and those of high pressure by fair weather. Warm and cold waves are also caused by these same areas, those of high pressure being usually attended by cool weather and those of low pressure by warm weather. Within the boundaries of the United States there are frequently two or three centers of low pressure and stormy weather, and at the same time a similar number of centers of high pressure and fair weather. Such being the case how could such different varieties of weather prevailing in different sections of the country at the same time be caused by the moon? For example, how could fair weather in New England, rain in the Mississippi Valley, fair weather in the Rocky Mountain region and rain again upon the Pacific coast occuring simultaneously be explained by a change of the moon's phases? When New England has been experiencing some of the severe droughts of recent years the Gulf States have at the same time been receiving an excessive amount of rain. Both regions have, of course, been under the same lunar influence (if such influence existed) but with the widest variation in weather.

I have heard people speak of the moon driving a thunder shower "around to the north," naively assuming that the moon was a purely local affair that did not exist "up north." I have kept a daily record of the weather for 24 years and have thus had an opportunity to test many of the so-called "weather signs." In the early years of my record I gave attention to this matter of the moon's influence, using Herschel's table of the moon's changes and the various proverbs which I had heard relating to the matter, and came to the conclusion that absolutely nothing could be determined from that source. I think that any person who has the daily weather maps of the Weather Bureau available for examination and who will give them a careful and intelligent study will be forced to the conclusion that the changes of the weather cannot be ascribed to the moon or other heavenly bodies. A. B. ROBERTS.
Connecticut.

THE happy time of apple sauce and baked apple has come again. Baked sweet apple and milk is too good for the average King.

SPRING OR FALL SEEDING.

Some Experiences of a Maine Farmer.

GRASS seeding in late Summer or early Fall has but a short time to make good, and however even the catch, makes its start the next year in soil that is compact and hard, as with us. both April and May are likely to be dry and cold. Clover cannot be sown with it, as it winter-kills, and if added in the Spring, has a cold dry surface already occupied to start in. Sowing with grain, as early in Spring as the ground can be well worked, after Fall plowing, I seldom fail to get a good clover catch, succeeded by fine Timothy and Red-top.

But, as one man overpastures his fields, and proves that all pasturing is disastrous, while another pastures moderately, and keeps his meadows in good condition, so one man sows an excess of grain, and both loses his catch, and exhausts his land too quickly. Four bushels of oats to the acre is too much. I sow about two, and seldom fail to have, in the rather tall stubble I leave, a splendid growth of clover, which so protects the surface that the almost daily freezes and thaws of March and April have little effect upon it. The yield of oats is light—25 to 30 bushels—but the grain is heavy, and the many fine crops of Timothy and Red-top following are more profitable than a heavy crop of grain, and lighter hay. I sow half a bushel per acre of this mixture; a bushel of Timothy, 12 pounds of Red clover, eight of Alsike, and five of Red-top, lightly harrowed, or preferably put in with a horse rake or a plank drag, which also smoothes the ground.

Last year, all conditions being favorable for Summer seeding a piece of land which had been very thoroughly worked, I sowed the usual amount of seed, including clover, early in August, as an experiment, and having in mind the reported excellence of the Cowhorn turnip, I sowed about half an acre of it with this. As the turnips came up, they were greedily eaten by our poultry, which has free range, and only an occasional plant escaped, except a strip about 10 feet wide across one end, which the hens apparently hadn't time to finish. It was a disappointment, but this Spring I recovered from it, because where the hens took the turnips, there was a fine stand of grass, and on the narrow strip, none at all—it had been completely smothered. As no clover was in sight, I sowed it with clover alone, being the second clover seeding. Now, after haying, there is little clover to be seen. This confirms my opinion that Spring seeding with grain is the safer method for me. G. S. PAINE.

Kennebec Co., Maine.

ALFALFA AND SOIL FERTILITY.

WITH reference to the article by J. H. Reisner on pages 757-8, Mr. Reisner assumes that Alfalfa takes all its nitrogen from the air. Experiments and observations prove that this claim is too extravagant. It has been shown that Alfalfa will take its nitrogen from the soil if that element is in abundance, rather than obtaining it from the air. The attack of the nodule-forming bacteria on the Alfalfa root is identical with the infection of any other fungus on a plant. The bacterium really makes a sore on the plant, where it forms a nodule (which is simply a house for it to live in).

It is common observation that Alfalfa plants growing near a manure pile have a great many less nodules on their roots than have those which are growing in poorer soil. On one particular occasion I remember when this fact was demonstrated very forcibly. A neighbor wanted to get some soil from an old Alfalfa field to inoculate the soil in a new field which he was seeding. He drove into the field, and noticing that the Alfalfa plants near an old straw stack were much more vigorous than those in other parts of the field, he prepared to get his soil there. When the turf was shoveled off he was surprised to find very few nodules upon the plant roots. This was an eye-opener, and after digging in several places in the field, he found that the largest number of nodules and hence the best soil to sow for inoculation purposes was found where the Alfalfa growth was the sparest. It seems that where plant food is scanty, the Alfalfa plant must coöperate with the nodule-forming bacteria in order to exist, while if the soil is filled with an abundance of nitrogenous food, the Alfalfa can and does get along without the nodule-former.

ALFALFA IN THE EAST.—The claim that Alfalfa will prove profitable everywhere in the East is a doubtful one. There is no question but that it is a wonderful crop. In fact, I know of a little piece of ground in Alfalfa at the Michigan Experiment Station that gave four cuttings last season, the sum of the average lengths of each cutting being 9½ feet and making a yield of something like six tons per acre. This is big, but it is not proof that Alfalfa should be grown everywhere, although I may state that the ground upon which this Alfalfa grew was but little better than blow sand, and had not been fertilized recently. Where the conditions are such that a seeding of Alfalfa may be had without too much expense in labor and money, it may profitably be grown, but upon some of the Eastern soils which are highly acid in character, and where large amounts of lime must be applied in order to raise Alfalfa, it would not be policy to undertake it. We do know that corn is acid-tolerant, and the advice of the editor on page 766, where he says, "Plant corn! Plant corn!" cannot be improved upon, especially if your soil is very sour. I. J. MATHEWS.

Michigan.

LOOKING ACROSS THE BLACKBERRY FIELD. FIG. 428.

THE NEW METHOD OF GROWING BLACKBERRIES. FIG. 429.

COMFORTABLE DAYS AT CULTIVATING. FIG. 430.

GRAIN BAG AS FIRE EXTINGUISHER.

IN a dry Summer those whose fields adjoin a line of railroad are constantly menaced by the danger of fire running through the stubble, or even destroying standing crops. For whipping out a fire a wet grain bag has everything I have ever seen tried, "beaten to a frazzle." This method was learned in the short grass country, years ago, at a time when we burned miles of firebreaks each Fall to save Winter pasturage for the cattle. Grasping the bag by one end and swinging it overhead the free end comes down well flattened out, and the broad, moist surface blots out a good strip at every blow. A solid grain bag (a bran sack is too light), wetted every few minutes, is heavy enough to swing well and come down with a good whack. When the fire is simply brushed out or stamped out it breaks out again and again, and it takes lively work to get ahead of the creeping flames. The moistened bag discourages the fire from starting again where it has been beaten out and makes one's blows count for something.

One needs to "step lively" at such a time and make every blow count. It is usually impossible to work in front of a fire in standing crops and one has to make a flank attack, following up the sides until the head of the fire is overtaken. But in stubble one can whip out the very point of the advancing fire and then work back along the sides. The railroad people have urged farmers to maintain firebreaks along the railroad right-of-way. Having noticed that several fires running through a Timothy meadow stopped at a border of a field of Alfalfa, the idea of living firebreak suggested itself, and I am now trying to get a four-rod strip of Alfalfa established along my railroad boundary.

Monroe Co., N. Y. GEO. ARNOLD.

AGRICULTURAL EDUCATION.

SIR HORACE PLUNKETT, in his address at Dublin to the American Commission of Agriculture, said: "Today you have this paradox—you have provided education and useful information for your farmers in a degree and of a quality which cannot be surpassed in any European country. Yet American agriculture, by the test of the yield of the staple crops, is the least productive to be found in any civilized country except Russia." R. H.

There are two or three things to be said about that. A large share of this education and useful knowledge has never been filtered down to the people who most need it. Too many of our agricultural teachers lack the power to make their science practically available. Like most other forms of education it is getting to be considered something of a luxury for certain higher classes of farmers For 20 years the majority of our farm teachers could not see the absurdity of telling a man how to grow two blades of grass when he could not get a fair share of the price of one blade. Again, many of the average figures of crop yields are deceptive. This is a great country and an "average" covers a very wide range of territory. For example, take the oat crop. The average in the cooler climate of New England is over 30 bushels, while in the Southern States it goes to 10 or less. With wheat the more favorable localities go 20 bushels or more, while the Southern States fall to seven or less. Thus an "average" of this great country will be low because it will include figures from large areas where that particular crop is grown at a loss. Some of these critics like to talk "averages" about this great country. Yet we can take them to large areas in the Eastern States where yields and incomes are as high as any in Europe!

"WHEN the boy first takes the hoe in hand, see that the lower hand is thumb down. Otherwise he will never have the right grasp to use it efficiently," says E. F. D.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Spraying and Care of Mixed Orchard.

I HAVE about 20 peach trees, 10 cherry, 12 apple, only about one-fourth of which are in bearing this year. I wish to spray at the proper time. Will you give me necessary information? The orchard is in grass, on a gentle southern slope, and the soil is a sandy loam lying about 1,200 feet above sea level. I would like to know what should be done to make this orchard do its best next year. Peach trees are about 10 years old, and some are interlocking with the apple trees, now about eight years old, and three in bearing. The latter have a mass of foliage like wild trees, as the former owner had been ill for several years. How about plowing this orchard, and if so, when? C. D. B.
Connellsville, Pa.

It is now too late to spray these trees for any of the diseases or insect enemies, unless it might be some very late ones, that would help them this year. Spraying is a complicated job and covers a wide range of troubles, and should be thoroughly studied out before the next year's work is begun. As there are many publications that give detailed directions that may be obtained from the State Experiment Station, at State College Pennsylvania, and of the United States Department of Agriculture at Washington, they should be obtained and studied first of all. The sod should be turned over with a plow this Fall, and the ground sown to rye, which should be plowed under next Spring, and the soil kept well stirred all of the next growing season. As the peach trees are "interlocking with the apple trees," my advice is to dig them out or cut them back very severely. Evidently the trees are crowding each other, and the apple trees are suffering. If they are to be expected to flourish and bear well they must have room and good tillage or they cannot do it. H. E. VAN DEMAN.

Grafting Peaches.

I HAVE 200 peach trees from seed planted last Spring, 2½ to 3½ feet high, and now growing. I may not get them budded this Summer. Can I cut them off near the ground next Spring and graft the same as apples? I have a neighbor who grafted a peach last Spring that bore one fruit. What per cent. of seedling peach will be likely to come true to parent? I. W. B.
Rodeo, N. M.

These peach seedlings should be budded this year, if possible, before the growing season is over. If this cannot be done it is possible to graft them next Spring, but not with much hope of good results. Peach trees are not grafted with much success, so far as I have ever tried it or known of its being tried. In some climates it *may be done* in a practical way, *but I doubt it.* If it is tried the method I would follow would be to cut the scions about February, and store them in damp sphagnum moss and keep them very cool until the stocks begin to start, then graft by the bark method. H. E. VAN DEMAN.

A Potato-bug Destroyer.

I SEND a crude representation of a bug in this locality; it seems to be a species of squash bug. It is black trimmed with orange, and feeds upon potato bugs. It sticks its beak into them and sucks the life out of them. What do you know about them? A. D.
Howell, Mich.

The bug referred to in the foregoing letter may be called the potato-bug destroyer, for it lives very largely, at least, by devouring the worst enemy of Irish potatoes in this country, namely, the common Colorado potato bettle. We first found this predaceous bug (Perillus bioculatus) in New York in 1911. It had been known before in the Western States, and is apparently working its way eastward and probably will eventually spread over the whole territory now covered by the potato beetle. This bug is a welcome guest, for it is an efficient aid in checking this old enemy of the potato. It devours both the young grubs and the full grown beetles. Each bug will eat three or four grubs a day. It is an axiom that the forces of nature will ultimately establish an equilibrium. That is, no one plant or animal can long remain in the ascendency. Other plants or animals will eventually crowd out or devour the one that is dominant. When the Colorado potato beetle first began its eastward march in the sixties and seventies it created as much talk and consternation as the advent of the Mexican cotton boll-weevil has done in the South. Nowadays we think little of the potato beetle, and it is gradually being held in check and forced back into its normal proportions by its enemies. Welcome to all the bugs that will help us in our fights against our insect enemies!
GLENN W. HERRICK.

A Correction.

In my letter quoted at bottom of page 923 I am made to say 70 *cents* per tree. This should be *cuts*, not cents. I work by the hour and charge 30 cents per hour. I have been working on five-year-old Duchess apple trees and pruned 266 trees in 8½ hours—less than one cent per tree.
R B G.

CROP REPORTS.

July 31.—Up to this date Warwick County is experiencing another dry year, the worst in its history, and as a result all crops, except wheat, are being affected. Corn is almost burned up in some sections; no oats nor early potatoes. Tobacco, of which there was a large acreage put out, is badly damaged. Eggs, 14; butter, 14; fowls, 11; Spring chickens, 14; wheat, 80; corn, 85. R. S. K.
Boonville, Ind.

July 25.—Wheat, Turkey red, 68 per bushel; oats, 27; barley, 35; flax, $1.57; hogs, $7.25 per cwt.; Spring chickens, 15 cents a pound; butter fat, 22; butter, 25; eggs, 20; potatoes, 60; cherries, $2.25, case of 24 pints; currants, $2.25, case 24 pints; apples, early Summer varieties, $1 a bushel; onions, 75 to $1 per cwt. Sheep, dressed, 8 to 10 cents a pound; cattle, dressed, 10 to 12.
Columbus, Mont. W. D. J.

August 1.—Good strawberries sold from $4 at start of season down to $2.50 at close; black raspberries, $3 to $4.50 here at home, but I shipped the balance of my berries to Detroit and most of them sold for $4 per bushel. Red raspberries, $4 to $5 per bushel. Potatoes, 75 to $1; Harvest apples, $1. Cattle, best steers, $7.25; live weight; veal, $9; milch cows, $50 to $150. The creameries are paying 25 cents for butter fat. Wheat, oats, corn, potatoes and sugar beets are the staple crops, also hay. Hay, fair crop, wheat and oats a bumper crop, with the outlook for bumper crops in all other lines. New wheat is bringing at the elevators $21; oats, 32. Army worm just broke out in this county but doing little damage as yet. G. W. W.
Otisville, Mich.

July 30.—We have had very fine haying and harvesting weather. Both hay and wheat have been secured in fine condition. Wheat has been a heavy crop; one who has thrashed his crop, reports a yield of 48 bushels average on 45 acres, a pretty big story. Clover hay was light, while Timothy has been heavy as a rule. Alfalfa made a good growth. Our second crop has just been put in, in very fine shape. Buyers are offering $12 per ton for hay baled. Millers are paying 70 cents per bushel for new wheat. Corn is making a rank growth, and potatoes are doing finely. Oats and barley are doing well and will soon be ripe. Small fruits have been a good crop except strawberries. Gooseberries and currants have been good. Sour cherries were a very heavy crop. Plums seem to hang well, while Bartlett pears are a failure. Apples in this section are a good crop. Butter, 20; eggs, 21; potatoes, $1 per bushel.
Canandaigua, N. Y. E. T. B.

August 1.—We here in the central part of Missouri are having a destructive drought and very hot weather. There is no speck of green in the pastures; when cattle walk over it raises dust. Water is scarce and often hauled for quite a distance. There was no hay to speak of, and cattle must be fed as in late Fall or Winter. Corn will be a failure unless we have a soaking rain very early, which would help some of the latest planted. The plants of strawberries are mostly all dried out and everything is in bad shape. Garden stuff very scarce; out of five plantings of beans the first was picked over just once. Where to get feed for stock for the coming Winter is a puzzle, more so as we must now feed already, and only in August. But what gets me is when some salaried State or Government professor lets loose some articles which are gladly taken up by the big papers, saying there is no drought "with proper working no damage will result, the crops are no failures, etc." In many cases this is nothing but back-porch prophecy, and does not give true conditions. Glad to say that the north and south part of Missouri are in good condition to give a fair crop. C. P.
Jefferson City, Mo.

TOMMY was throwing stones, and his mother caught him at it. "Don't let me catch you throwing stones any more," she cautioned him. "Well, what will I do when the other fellows throw them at me?" demanded Tommy. "Just come and tell me." "Tell you!" he exclaimed. "Why, you couldn't hit the broad side of a barn!"—Everybody's.

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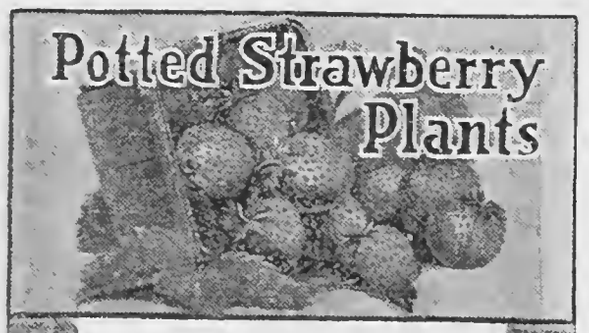

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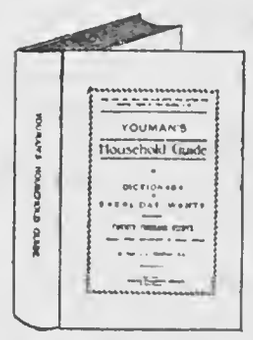

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These articles are not given with a subscription to the R. N.-Y., but are given to the agent as a reward, in place of cash, for extending the subscription list of the R. N.-Y.

The Rural New-Yorker, 333 W. 30th St., N. Y.

Thinning Wealthy Apples.

EXPERTS in orcharding advise thinning of apples to distance of four to six inches apart. Is this wide spacing advisable with the Wealthy apple? To remove so many would take three-fourths of the fruit from my Wealthy trees this season. E. F. D.
Billerica, Mass.

While it might seem wasteful to take off more than half the apples on a tree while they are growing it is certainly profitable to do so if the tree is overloaded. Wealthy is one of the varieties that is apt to set far more fruit than can be brought to good size, and the removal of one-half or more of it when small will generally pay well. If there is from four to six inches between the apples they will grow enough higger to make up for the lack of numbers. In actual weight there is little difference between the fruit at maturity on a tree that has been thinned in this way and one that was left to carry an overload. And when we consider the serious effects on future crops and the impaired vigor of the tree from allowing it to overbear there is no reason why the thinning should not be done. Even a little experience will give one a better idea of the benefit of thinning growing fruit than a lot of verbal or written advice. H. E. VAN DEMAN.

Pruning Quinces; Driving Away Bats.

THIS Spring I set a small quince orchard, and on account of the locust probability was warned not to cut back the trees at planting. The locust has come and gone, doing no damage to those trees. All the authorities at my hand say quinces should be pruned to an "inner bud." As the natural tendency of the quince is to grow somewhat to the center I am puzzled to understand why this tendency will not be promoted by pruning to an inner bud and thus making a congested and tangled cluster of branches in the center of the tree, the branches crossing each other in hopeless confusion. I know of no quince orchard near me where I can get assistance, and I am therefore appealing to you. 2. My home is an old-fashioned brick house, and I find myself annoyed with bats, which no effort of mine has been able to overcome. Can you suggest anything?
Wellston, O. R. E. K.

1. Quince trees do not need to be constantly pruned "to an inner bud," or in any other way that will cause them to grow compactly. The different varieties have forms or habits of tree that vary in some degree, but they generally make rather bushy tops if not trained differently. They need the same common sense used in their training that anything else needs, and the judgment of the owner should be used without any fancy notions. The branches should be low and trained so as to shade the trunk and make a fairly open head. Some of the inner branches will need cutting out when they are small and here and there one that is too rampant will need heading in.

2. As to what to do to keep bats away I cannot tell, for I never had much to do with them. They like dark places in which to to spend the daytime, and if they cannot have access to such places it would seem that they would go where they could find them.

H. E. VAN DEMAN.

Florida Peaches and Cherries.

COULD you tell me whether cherries would grow well in this part of Florida? Which are the best peaches for this sort of land? Will buckwheat grow here? Which is the best chicken feed to grow here? F. L.

Any and all parts of Florida are unsuitable for cherries because it is too warm a climate. Cherries, like other northern fruits need a cool season when they are dormant as well as a warm one when they are growing. Florida is rather far south for growing peaches, but there are varieties that are quite well suited there, especially those of the South China type. The nurseries of Florida have these varieties to sell and it would be well to get some of their catalogues and select the kinds that are recommended for the most southern sections. The Angel, Jewell, Imperial Hall, Bidwell, Dorothy and Luber are among those that should he planted. Buckwheat is a crop that requires a cool climate and will not do well in Florida. One of the best things to grow for feeding to chickens is the cowpea. It is well adapted to a warm region and yields a lot of pods that are filled with peas. Another tropical plant that is grown in south Florida and the West Indies is known as pigeon pea. It makes a sort of bush and bears pods that contain peas that are much liked by chickens. H. E. VAN DEMAN.

LEGAL QUESTIONS.

Hunting Privileges.

A LOCAL real estate agent called on me today saying he was requested by the Arden Hunt Club to obtain permission from the farmers of this vicinity to cross their farms and to have the privilege to send their carpenters ahead to build fences or rails to cross with their animals, etc. What would you do if placed in this position? Would it be likely, in any way, to interfere with rights or title in the future? No written consent given or asked. A. L. P.
New York.

It would certainly he advisable in this case to have a written understanding of the privileges which the Hunt Club is to obtain, which privileges should be revocable by the farmer at any time on giving notice, and should contain a provision for the payment by the club of all damages occasioned to the farm. This should clearly define the rights of both parties and would give the Hunt Club no rights which could not be terminated by notice or which would interfere with the title to the property.

Railroad Must Maintain Fence.

COULD yon advise me regarding the division line of railroads? The railroad company's property cuts through ours, and we have to cross their tracks to reach our barns. The fence they erected years ago is entirely gone, and some time ago I applied to the Department of Maintenance for another, stating I wished them to erect a woven wire fence to keep children from the tracks. Are they (the railroad) not obliged safely to fence their property, and what steps can I take should they put me off indefinitely?
New York. H. C. F.

Unless you or your grantor have received compensation for fencing along the railroad or have agreed to build and maintain a lawful fence along said line, the railroad company is obliged to erect and thereafter maintain fences on the sides of its road, of height and strength sufficient to prevent cattle, horses, sheep and hogs from going upon its road from the adjacent lands, with farm crossings with gates therein whenever and wherever reasonably necessary for the use of the owners, and so long as such fences are not made nor kept in good repair, the railroad shall he liable for all damages done to any domestic animals on the road. This fence shall not be of harbed wire. It may be that you could compel the railroad in proceedings in equity to build the fence, but this is an expensive proceeding, and the best procedure for you would be to complain to the Public Service Commission of the Second Department at Albany. M. D.

Public Nuisance.

A CHEESE factory is located up the road from my residence about 10 rods. They allow the excess whey, etc., to run down the ditch, along the roadside, past my house. This ditch is fairly filled with flies and other insects. We realize that it is a great breeding place for germs of various kinds. To whom can I make complaint so as to compel these factory people to dispose of their surplus whey in some other manner? I wish to avoid a lawsuit, for that is too expensive. My property here has cost me over $10,000 in cash, and this factory nuisance is of great damage as well as very dangerous, in the way of fever and other diseases. F. J. K.
New York.

You should make a complaint to the town Board of Health or the town Health Officer. The Board of Health is empowered to make such orders and regulations for the suppression of nuisances and concerning all other matters which in its judgment seem detrimental to the public health in special or individual cases, and serve copies of the orders upon the owner or occupant of any premises whereon such nuisances or other matters may exist. If the orders are not complied with, the Board or its servants may enter upon the premises to which such order relates and suppress or remove such nuisance. [Sections 21 and 31 of the Public Health Law.] M. D.

The Sun's Heat for Power.

SOME years ago we had a discussion of the use of sun heat in producing power. There were two general methods, neither of which proved entirely satisfactory. In one case a collection of mirrors were so arranged on a shaft that their combined reflection of the sun's rays were thrown upon a small boiler at the center of a large wheel. This wheel revolved or changed its position so as constantly to receive the sunlight. Every school boy knows how by concentrating light in this way with a mirror, or a bright piece of tin, he can cause an intense heat which will burn flesh, or even set fire to cloth or wood. In the Far West, where there is but little cold and rain, this method of utilizing the sun's rays would seem to be possible, yet after thorough trial the work was declared to be not much more than a scientific toy. Considerable time was required to get up steam in the boiler, and while some power was developed, the cost of the apparatus and other considerations put it out of competition with steam or gasoline power.

Another plan was tried on a small scale in New Jersey, and later on a much larger scale in Egypt. In this plan a device very much like a hotbed was selected, with double glass sash, and a series of iron pipes filled with water inside. All gardeners know what a heat is created inside the average hotbed on sunny days, with the top closed. In the experiments with this device, the water in the pipes was raised to boiling heat under the glass when the sun was hot, and this boiling water was used to run an engine for pumping and similar purposes. The only trouble was that this heat was only developed during a part of each sunny day, and, of course, the engine stood still on cloudy or rainy days. The device is now operating in Egypt, in a region where the sun shines most of the time, and is said to be giving quite fair results in that country for pumping and similar purposes. The Experiment Station of Arizona is now coming back with the proposition and thinks it entirely within the range of possibility, that within the next few years the sun will be employed practically for pumping and generating electricity. A new instrument called a recording pyrheliometer has been installed at the University of Arizona. This measures and records the energy given off by the sun. The object is to ascertain the amount of the sun's energy that is available for work, at pumping or driving a wheel. In connection with this knowledge of the amount of energy available from sun heat, several new types of sun motors have been devised. They are too costly now to permit their general use, but we should judge from the report that several of them at least are practical, and can develop considerable horse power. The proposition is made for the State of Arizona or one of the other arid States to offer a prize of $100,000 to the man who will first solve the problem of practically handling the energy of the sun. The arid States could well afford to give 10 times that sum, if they could obtain a machine to work by sun power, which was anywhere near as practical as windmills which handle the power of the wind so effectively. We believe that this problem will sooner or later be worked out, and that without question the sunshine of the Western States will be put to effective use in doing such work as pumping, generating electricity, or any other work which requires the turning of a wheel.

WANT TO KNOW.

QUACK GRASS IN ORCHARD.—Last Fall we plowed a piece of old meadow and planted a small orchard This Spring the land is covered with a heavy growth of quack grass. How can this be killed without injuring the trees? W. M. J.
Buffalo, N. Y.

BOBBY: Ma, you said that I shouldn't eat that piece of cake in the pantry—that it would make me sick. Mother: Yes, Bobby. Bobby (convincingly): But, ma, it hasn't made me sick.—Credit Lost.

"I HAVEN'T seen Pilkington for a week." "No; he hasn't been out of the house since his accident." "Was he seriously injured?" "No, but he feels the disgrace deeply." "Disgrace?" "Yes. After living in a city all his life, he went into the country, and was run over by a milk-cart!"—London Farm and Home.

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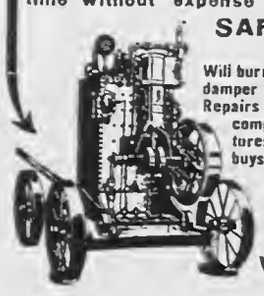
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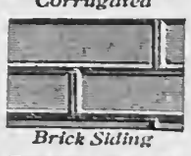
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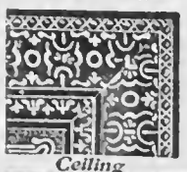
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EVENTS OF THE WEEK.

DOMESTIC.—The New York Stock Exchange, the last big exchange in the world to remain open in the face of a general European war, closed its doors July 31 for the first time since the panic of 1873. The Consolidated Exchange, the Cotton Exchange and the Curb quickly followed. The flood of selling orders by foreign security holders precipitated the action. Four failures were announced, two houses being members of the Stock Exchange and two of the Cotton Exchange.

The Interstate Commerce Commission, in a divided opinion, August 1, in the 5 per cent. freight rate increase, denied all advance of rates to the railroads between the Buffalo-Pittsburgh line and the Atlantic, including the New England and the trunk line freight territories, and allowed the 5 per cent. increase to the roads in the Central Freight Association territory, between the Buffalo-Pittsburgh line and the Mississippi River, except on certain commodities, such as coal, coke, iron ore, cement, brick, tile, clay, starch and plaster. The commission disallowed all increase of lake-and-rail routes and of rates between the Central Freight Association territory and other portions of the Official Classification territory. The commission suggests to the railways in the New England and the trunk line territories that they may increase their net incomes by abolishing various types of service now given to shippers without charge. Of the rates in the Central Association territory, the commission declares that they are not only lower than those in either of the other territories, but lower than those in any otl r section of the United States. The commission suggests that all railroads in the Official Classification territory examine carefully their freight rates, rules and regulations with a view to increasing rates found clearly unremunerative and modifying burdensome rules and regulations. The railroads which applied for the commission's permission to raise their freight rates 5 per cent. were the fifty-two lines east of the Mississippi and north of the Ohio and Potomac rivers. They asked for a 10 per cent. increase in 1910, and it was refused. Railroad managers contended that in the last three years the roads spent $600,000,000 in new capital, bnt that in 1913 the earnings were $16,000,000 less than in 1912; that higher wages, taxes and new investments caused the increase in expenses; that the New York Central was forced to lay off 23,000 men since September, 1913, and unless relief was granted government ownership of railroads might follow. Opposing contentions were that the railroads were constantly getting higher revenues; that they spent more on improvements last year than ever before in history; that one terminal cost $108,000,000; and, above all, that free service to big industrial concerns approximated in value $30,000,000 a year.

To protect the gold supply of the country Secretary William McAdoo announced at midnight August 2, that $100,000,000 of emergency currency will be issued to the banks of New York. At the same time he announced that emergency money would also be issued to banks in other parts of the country under the Aldrich-Vreeland law.

The city of Kingston, Jamaica, was shaken by an earthquake of terrific violence August 3. The shock was of greater intensity than that of 1907, which practically destroyed the city and suburbs. The disastrous circular motion of the previous seismic disturbance was absent, however, on the present occasion, and so far as is known no lives were lost and no great damage resulted. Some damage was done in Port Antonio and several other towns.

To prevent a raid upon the gold supply of the United States by international banking houses that had built up foreign credits totalling $85,000,000 within the past fortnight, the New York Clearing House, August 3, voted for the issue of Clearing House certificates. The action means the suspension of specie payments except under the supervision of the Clearing House, and is directed toward the conserving of the strong financial condition now existing by preventing the projected drain of our gold to Europe. New York savings banks put into force the requirement of sixty days' notice of withdrawals, but fixed weekly maximums of $100 or $50 that might be withdrawn without notice. Similar requirements were put into effect in Minneapolis, St. Louis, Memphis, Cincinnati, Cleveland, and New Orleans.

WASHINGTON.—Plans for the relief of Americans marooned in Europe were formally announced August 4. The United States cruiser Tennessee sailed from New York August 5 with $5,000,000 to $8,000,000 in gold and twenty-five army officers, who will superintend relief measures in Europe. Ships to carry Americans home will follow as fast as the War Department can procure them. Germany notified the State Department that no foreigners in that country will be permitted to leave during the mobilization. France may pursue a similar course. President Wilson sent another message to Congress asking for $2,500,000 for the relief of Americans in Europe.

By a unanimous vote the House, August 3, passed the Underwood bill prepared by Administration officials, providing for the admission to American registry of foreign built ships. The bill is designed to relieve as far as possible the tie-up in American commerce by the complications in Europe.

August 3 the House and Senate passed a bill removing technical restrictions on the issuance of $500,000,000 of reserve currency. President Wilson appealed to the people not to become alarmed, as this country was well prepared to withstand any financial crisis. The President was successful in his appeal to avert a tie-up in Western railroad traffic. The Senate voted to authorize the Secretary of the Navy to establish naval lines to carry passengers, mail and freight to South America and Europe. President Wilson summoned Senators Gallinger, Smoot and Brandegee, Republican leaders, to ask their aid in expediting all legislation so that Congress might adjourn at an early date and relieve uncertainty about pending anti-trust measnres.

August 5 President Wilson decided to place naval officers as censors at all wireless stations, to insure neutrality. There are foreign stations at Sayville, L. I., and Tuckerton, N. J.

SENDING MONEY ABROAD.—Sending money to relatives and friends marooned by the war in Europe is a simple procedure. Explaiued August 4 by Wilbur J. Carr, chief of the consular service, this is the "how": Send to the State Department a certified check, draft or postal money order payable to "Chief, Burean of Accounts, State Department." State plainly the name of the person (full name), city and address, if any, abroad. The money will be cabled immediately to the nearest American consul, who will issue local currency or a draft (United States warrant) upon the State Department, payable to the payee, who calls at the consulate.

THE EUROPEAN WAR.—The German Emperor declared war on Russia August 1, and August 2 began an invasion of France without waiting for a formal declaration of war. August 4 Germany declared war on Great Britain, three hours before the British Parliament made a declaration of war. The same day Germany declared war on Belgium, which had refused permission to violate Belgian neutrality, and began bombarding two important Belgian cities, Liege and Namur. The Germans have crossed into Swiss territory, which is neutral, the three German armies now invadiug France, entering by way of Basle, Switzerland, the Duchy of Luxemburg, and Arlon, Belgium. The three armies are said to comprise 1,000,000 meu, and in each case they have crossed ueutral territory to enter France. The Germans were repelled by the French at Petit Croix, near the Swiss frontier, August 3. German warships bombarded the Russian port of Libau, on the Baltic, August 3. All Europe is now in arms. On the one hand Austria-Hungary and Germany are opposed by Russia, France and Great Britain, Servia and Montenegro. Italy has declared her neutrality, but is mobilizing. Belgium, Holland and Switzerland have mobilized. The German demand that the Belgian government should permit the free passage of German troops through Belgium was answered by hasty preparations to resist such an advance across Belgian territory. Sweden has made no answer to inquiries from Russia and Germany as regards her attitude, but is preparing to defend ner neutrality. Japan is making ready to live up to her alliance with Great Britain in case of certain eventualities. Spain is reported to be preparing a proclamation of neutrality.

The British House of Commons has voted $525,000,000 for "emergency" purposes. A bill was introduced in the German Reichstag asking for an appropriation of $1,250,000,000 for the expenses of the war.

Germany, Great Britaiu, France and Austria have asked the United States to represent them in the warring capitals. On August 4 President Wilson issued a strong declaration of neutrality. There were reports August 4 that the Germans were entering Dutch territory, though the Netherlands had announced neutrality. Up to August 4, the Servians were repelling Anstrian invasion. August 4-5 German forces were repulsed in Belgium with heavy loss. August 6 Austria-Hungary declared war on Russia.

DEATH OF MRS. WILSON.—Mrs. Woodrow Wilson, wife of the President, died in the White House August 6. Her death resulted from Bright's disease, from which she had been a sufferer since she came to the White House. This trouble had been recently aggravated by a general nervous breakdown which began when she was injured by a fall on the marble floor of the White House in February and was accelerated by the strenuous social season and overexertiou in social betterment work and other humanitarian endeavors. Mrs. Ellen Louise Axson Wilson, wife of the twenty-eighth President of the United States, was born in Savannah, Ga., fifty years ago and in that city spent her childhood and her early girlhood. She was married to Mr. Wilson June 24, 1885. Like her husband, Mrs. Wilson was the child of a Presbyterian minister and also the granddaughter of one. Her parents were the Rev. Samuel Edward Axson and Margaret Jane (Hoyt) Axson. The Rev. and Mrs. Axson lived first in Madison, and then for a number of years in Rome, Ga., where the Rev. Mr. Axson had a church. Mrs. Wilson's earliest education was acquired in Savannah, and later she atteuded the Woman's College in Rome, Ga.

HE: "I suppose you think I'm a perfect idiot?" She: "Oh, dear, no; we're none of us perfect."—London Mail.

COMING FARMERS' MEETINGS.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

Northern Nut Growers' Association, annual convention, Evansville, Ind., August 20-21.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Marylaud Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Associations, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

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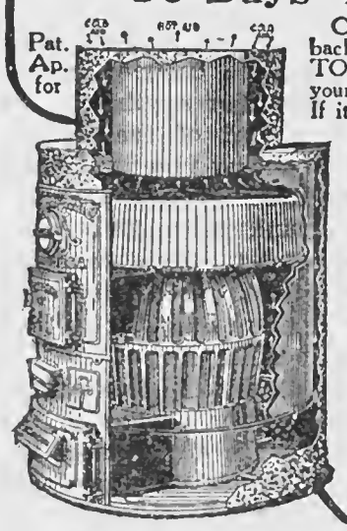

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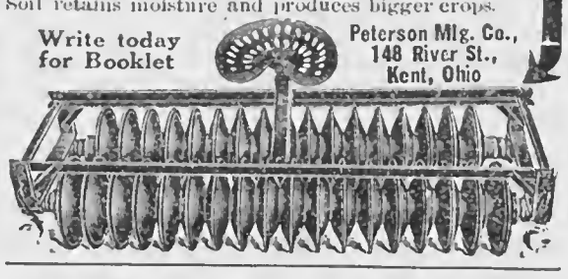

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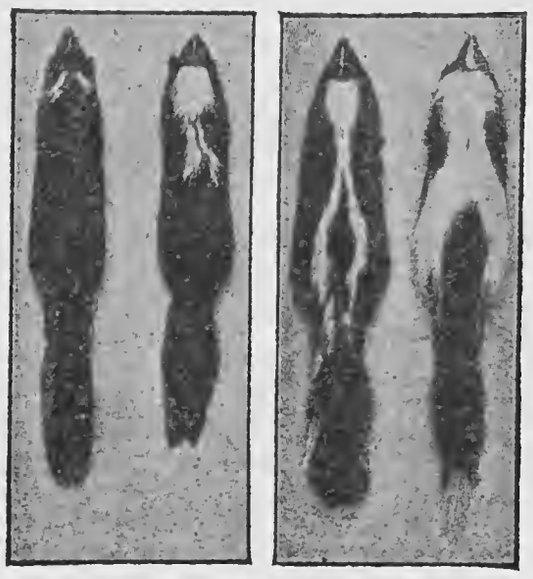
The Value of the Skunk.

FARMER'S Bulletin 587 deals with the "economie value of the skunk." A man who has buried a suit of Sunday clothes—the result of a chieken house encounter with one of these animals—on his return from evening church, is likely to feel doubtful about the economic value of the skunk, but robbing henroosts is practically his only vice. His virtues are the destruction of great quantities of insects, particularly white grubs, and the value of his hide as fur.

There are nine distinet species of large skunks and eight sub-species, 15 forms occurring in the United States. Of the lit-



COMMERCIAL GRADES OF SKUNK. Fig. 432.

tle spotted skunks found in the West, there are 14 species and six races, the smallest being the pygmy skunk of Mexico, only 9½ inches in length.

In northern climates skunks go through a partial hibernation in very cold weather. In Spring they pair and usually breed but onee a year. The young, litters running from six to 12, are born with eyes closed, like kittens, and require about six months to get full size.

To get a fair idea of what the skunk eats, 62 were killed at different times of the year, and the contents of their stomaehs carefully analyzed. Grasshoppers, crickets, beetles and their larvæ formed a large proportion of their food. Fifteen had eaten rats, mice, ground squirrels and pocket gophers; three carrion; three lizards and salamanders; three erawfish; two fungi; two earthworms; six berries or other fruit. One stomach had the feather of a bird; one, parts of a domestic fowl. Two contained eentipedes; one, sawflies; one, eicadas; and another the stem of a sueculent plant. The insects

SKIN PROPERLY "CASED." Fig. 433.

eaten were mainly of injurious types. In New Mexico, during an invasion of range caterpillars, skunks were abundant, and investigation showed that 60 to 95 per cent. of their food was the pupa of this insect. In 1887 the Nebraska agricultural authorities reported that skunks were eating the Colorado potato beetle. The small spotted skunks are great destroyers of rats and mice, and are sometimes domesticated for this purpose.

Skunks are now protected by law in 13 States. Open seasons are as follows: Maine, November 1-Mareh 1; New Hampshire, October 15-April 1; Vermont, November 1-May 1; New York, November 1-April 15; Delaware, December 1-March 10; Ohio, November 15-February 1; New Jersey, November 1-February 1; Indiana, Illinois and Michigan, November 1-April 1; Missouri, November 1-February 1; Kansas, November 15-March 15. The first protection secured was in parts of New York State 20 years ago, when the hop growers found that the skunk was active in destroying the grub or borer that worked at the base of the plant.

Of late skunk has been one of the most popular furs, 13,400,000 skins having been sold during the eight years ending with 1913. The value ranges from 25 cents to upwards of $2. The picture, Fig. 123, shows four commercial grades of skunk skins. No. 1, from left to right, is nearly all blaek, bringing the highest price; No. 2 is short stripe; No. 3, narrow stripe; and No. 4, broad stripe, the poorest from the furriers point of view. Northern skins are usually of finer quality and the black more intense than those from southern localities.

Skunk skins should be "cased" for market as shown in Fig. 433, and the following directions for skinning observed: Begin with the middle of the hind foot and with a sharp knife slit up the rear edge of the leg to the under side of the tail, being careful not to cut into the scent glands. Then cut the opposite leg in the same manner. No other cuts in the body of the animal are necessary. Cut around the heel of the feet and turn the skin back over the body. Strip the skin from the tail bone with the help of a split stick grasped in the hand while the thumb presses firmly against the back of the animal just above the tail. Continue to turn the skin baek over the body, using the knife only when neeessary to cut ligaments. Care should always be taken to cut around the nose, mouth, and eyes to avoid tearing the skin.

THE MAIL BAG.

Frost-proof Potato Cellar.

WE are putting a cement ceiling in a potato cellar. Is there any way to make it frost and damp proof?
Six Lakes, Mich. J. S.

I know of no way of making conerete frost-proof except through insulation by means of hollow walls, but there are waterproofing compositions which may be obtained through dealers in builders' and masons' supplies whieh would doubtless answer your purpose. If your local dealer cannot supply you, application to any of the cement manufacturing companies would bring information as to where your needs could be met. M. B. D.

Contaminated Water.

WHAT ean be done to clear the water in a driven well, 36 feet in depth?

A six-ineh heavy wrought iron pipe was used as casing, in which is a 1¼-inch galvanized suction pipe to within three feet of bottom. The well was driven in July, 1913, but thus far we have been unable to use the water on account of the taste of oil and rust. The water is clear and cold when first pumped, but after standing a short time turns to a rusty color and shows oily at the top. We made the mistake of using plain black pipe for the casing instead of galvanized, but a poreh is now built over the well and this pipe cannot be easily removed. I have tried roek salt, also charcoal, and have also pumped the well out on several oceasions, but without much improvement. B. A. L.
No. Tonawanda, N. Y.

You have evidently been unfortunate in striking a vein of water charged with mineral matter of an objectionable nature and the product of decomposed vegetable matter whieh gives it the oily appearance upon standing. I can offer no suggestions as to any method of improving this vein of water but it may be practicable to drill deeper and reach another source of supply which will be free from the impurities of this one. The pipe used is not responsible for the trouble and if a year's use of the well has not freed the water from its objectionable features it will probably be useless to expect good water from that source.
M. B. D.

Strawberries After Potatoes.

I HAVE a patch of strawberries about four years old. I wish to have a new patch next Summer. When is the best time to transplant the new patch, which is in potatoes this year? A. P.

At any time up to the middle of September, provided the ground is moist, you can set new plants. They will not give a full crop next year, but will begin bearing. We should dig the potatoes as soon as they are fit, put the ground in shape and set ont plants while the soil is moist.

Trimming Big Privet Hedge.

AT onr Summer home here we have a splendid privet hedge which needs trimming, but unfortunately it was not kept cut back as it should have been, and now it will be neeessary to saw off the top of it, as the trimming shears would not be strong enough for the work. Do you advise, under the cireumstances just mentioned, cutting it back during the Summer, or waiting until the Fall?
Brooklyn, N. Y. T. L. C.

It will not injure this hedge in the least to cut it back now. In fact this is a very favorable time for doing so, as the seeond flow of sap is just starting. Privet is one plant that shearing or cutting at anytime of year, no matter how severely it may be done, never seems to injure. It is one of the grossest feeders in existence, and its recuperative powers are almost unlimited. K.

Cistern Filter.

HOW is a brick filter built for a cistern? What kind of briek and size, ete.? J. I. H.

Ordinarily unglazed red brick is used to filter cistern water, a simple wall being built across the cistern to divide it into two compartments, the larger of whieh receives the water from the roofs and the smaller the filtered water that has passed through the pores of the bricks. I am unable to say how permanent these brick filters are, though they have been in quite common use in this vicinity; it would seem as though the pores of the bricks would become filled in a comparatively short time and render them useless for this purpose. Very likely the length of time that they would serve would depend largely upon the amount of fine dirt held in suspension in the water as it came from the roofs.
M. B. D.

Experience With Peat Muck.

LAST Spring I had occasion to write you of a piece of peat muek I have on my farm. Apparently the heavy growth of briars has done it a world of good. I have a magnifieent stand of corn, where 20 years ago positively nothing would ever grow. Advice given by you was to keep manure off. I did so on most of it. I placed some there, and also gave a good coating of air-slaked lime, and a liberal coat of muriate of potash as advised. Surely all this ought to make corn and apparently it will; growth about twice as large as where nothing was applied. Yet some years ago an oat crop was thrashed and straw left to decay, also a barrel of lime had been placed on the straw to hasten decay. Right there was a heavy coat of Blue grass, a real stiff sod, and when I plowed same appeared like leather as it came loose from peat muck underneath. While I believe that the briar root growth has done more for me than all else, yet lime and potash show good results. B. M.
Ligonier, Ind.

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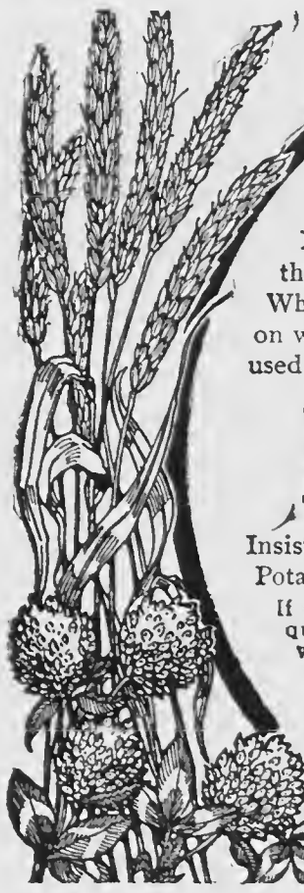

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Hope Farm Notes

THE CONNECTICUT POULTRY MEETING.

PART I.

A CROWD.—It is something like climbing a rocky road up Zion's hill to reach the little country church at the Connecticut Agricultural College. Nestling among the higher hills the church stands on a rocky ledge as if the original worshippers desired the deeper soil for more practical purposes. Mansfield Center, the nearby village, was settled in 1692, so this church is 150 years old, at least. Originally a larger building, it was rebuilt—smaller to suit the dwindling congregation. Strange how the factories of New England have grown larger and larger to suit expanding trade, while the churches have worked the other way. Yet the things which have given true strength and character to New England came out of the churches rather than the factories. There must have been some great gatherings in this old church in years gone by. Take the time when the news from Lexington was brought into this section. Only a few miles north of here old Israel Putnam left his oxen for the women folks to unyoke and rode off to battle. What a sermon the minister of this church must have preached. Then you have only to glance at the little flags fluttering over the graves in the country churchyard to imagine what a congregation toiled up the hill into this church when Lincoln called for volunteers! If the old church could speak what stories it could tell, and yet I doubt if it ever had more people than were packed into and around it on the night of July 29. The Connecticut Poultry Association had come home to roost, and without realizing it was making a part of that peaceful history which is to substitute the hen for the eagle on the American flag.

CROWDED QUARTERS.—It had been one of those cold, cheerless days which bring out the best and the meanest qualities of New England like a thick ham sandwich. Furious bursts of driving rain had washed the green hills. Now and then the sun would wipe away the tears and smile for a moment so that even old-timers were deceived into getting away from cover—only to be drenched. Looking over the rolling country the hills seemed like great unhappy animals, drenched through the skin and humped up in discomfort. Night closed in starless and black, with a cold drizzle of rain. As the darkness fell people came from all directions—walking out of the shadows to secure an early seat. They crowded the pews beyond the limit and gave themselves hardly half the space they allotted to a hen. They packed the gallery like sardines, filled the aisles and stood up at the back. The choir seats and the platform were crowded, and the standees looked with speculative eyes at the organ as a possible roosting place. Outside a double row of late comers peered in through the windows. Surely the star of the evening who was to address such a gathering might well say that he "played to full capacity." And the "star," plain Tom Barron, sitting on that crowded platform, had evidently began to wish he had never come inside the crowded church.

A HENMAN'S MESSAGE.—That was what it was all about. The master hen builder had come from England to tell how he makes an egg-laying machine. At the egg-laying contests in Connecticut, Pennsylvania, Minnesota, British Columbia and New Zealand the English birds had been laying rings around the others, and here was the master builder where the critics and the curious were to corner him if they could. It was a critical crowd, bristling with "show me," for it hurts your average hen man to admit that anyone can tell him about a hen. Right up in the deacon's pew sat our old friend, "Mapes the hen man," like a bird dog on the scent of a statement which opposed his conviction. Up where the choir usually made harmony sat that wise old veteran, A. F. Hunter—hero of a hundred battles. D. J. Lambert, Judge Card, Whitney, Prof. Graham, McGrew, and dozens of others who have for years directed poultry thought, were there with sharpened pencils and a shade more or less of prejudice against this new idea of making egg-laying machines. For within rifle shot of where they sat at the egg-laying contest was the unanswerable argument that "a hen's a hen for all that," without regard to her comb or wattles or tail feathers or other "fancy" points. Before the meeting I asked many of these men what they thought of Barron and his hens. The answer invariably was:

"The hens are all right. As for Barron I do not know—I came here to find out."

And up where the minister usually dignifies the chair sat Tom Barron. He knew he had an audience of cold-blooded critics full of pet theories and spurs. He acted like a man who would gladly be at home with 3,000 miles of salt water between himself and his audience. But out at the egg-contest houses 10 Leghorns and 10 Wyandottes were calmly sleeping with head under wing, after making a convincing speech on eggs. It was now up to their master to say a few words!

"Tom Barron!" The name "Tom" fits him like his skin. No one would ever think of calling him Thomas, unless possibly Mrs. Barron had some strong family admonition to communicate. You may have pictured some typical "John Bull"—thick, heavy and solid, with side whiskers and curling hair. Your mental picture is all wrong. If ever a man looked like an alert, well-bred Leghorn rooster Tom Barron is the man. Erect, alert, active, with long legs, compact body, black, straight hair, kindly eyes and a long prominent nose, it seemed to me as I studied him that the plastic part of Tom Barron's personality had gone into the trap-nest along with his birds. Through these long years of culling out the drones, he has put himself through a test of instinct and intelligence which has given him something of the sterling characteristics of the business Leghorn. It is true that a man cannot excel as a poultry keeper unless he is half hen. Barron is all hen or as near to it as a human can get. No higher compliment could be given. History shows how the British lion came growling over here years ago. This very old church sent out some of the men and some of the spirit which twisted his tail and sent him home. Now come the British Wyandottes and Leghorns to beat us at the peaceful battle of the trap-nest. In this same old church were the men who must learn how to beat the British hen as their ancestors handled the lion!

A PLAIN TALK.—These Connecticut hen men do not waste any time in getting on the nest. I have been at meetings where some word-spouting orator took half an hour to "welcome" the crowd, while another consumed as much time in response. President Beach, of the Agricultural College took possibly five minutes to tell the company to make themselves at home. Then Mr. Brundage took three minutes to say we were on hand. Then he introduced Tom Barron. There was not much applause for here was a gathering of "show me" people. They waited and reserved judgment. Mr. Barron is about the best hen builder in the world, but he is no orator, and it is his happy privilege to recognize the fact and admit it. He stood first on one foot and then on the other. He didn't know what to do with his hands. Happily they are big and strong, and scarred and hardened by work. Now and then he dropped an h or two, and like an economical Englishman he tacked them on at some more convenient place. He was just plain "Tom" Barron talking of what he had to say brightly, sincerely and simply as if he were sitting down and talking to a friend. I think this was what held and captured his hearers. Had he been a skilled orator, a polished speaker, most of those who listened would have felt that somehow he did not quite touch their business. They would have felt that Barron might be the "talker" of the family, but that Mrs. Barron or someone else was really responsible for those 20 hens out at the contest. These practical men came to know that up on the platform, trying to "tell about it," they too would shift from one foot to the other, and most likely forget the important things they wanted to say. Here was a plain man like themselves who talked about the common things they could all understand.

THE IMPORTANT THINGS.—Mr. Barron talked and showed pictures of his English hen plant for over an hour. Then he answered questions. Some of these were from people who make an effort to be "funny" and stagger a little under the burden. Barron made much of his use of the trap-nest, and this seemed to get on the nerves of some of his critics. They asked him if he trap-nested his cows, or if this English yacht which is coming over to race has been trap-nested! Barron took it all good-naturedly, and many of his replies pleased the people greatly. It was easy to see by this time what the dominant thought of this meeting was to be. Every poultry keeper knows that he feeds both drones and workers in his flock. The drone will eat as much as the worker, but the latter must not only pay a profit on her own food, but also pay the fare for her lazy sister. The great problem therefore is to cull out the drones before they get a chance at our feed. Is there any way of doing this with certainty, and can we improve our flocks by breeding improved stock as surely as we can improve a dairy herd by introducing new blood? The "standard" score card and the so-called contests at the poultry shows are of no value whatever in answering such a question. You and I may have a dairy of cows. The home and all it stands for may depend on our ability to increase the amount of butter per cow. We know what to do! Go and buy a Jersey or Guernsey bull of some "prepotent" family and put him at the head of our herd. If we can select a bull with a long line of ancestors noted for their dairy records, we are practically sure to raise a lot of heifers capable of beating their mother at butter production. We may accept that fact as demonstrated. Now can we do the same thing with our hens? If not why not? There you have the vital question in practical poultry culture. I do not wonder that the fanciers fly at Tom Barron, for the message of breeding and selecting which he brings is destined to make their "scale of points" look like a farce and a useless thing. Barron claims that through a long series of trap-nested females he secures males as prepotent and strong to transmit their mother's good qualities as the well-bred bull. I shall test his theory by obtaining one of his finest cockerels and breeding him to my "scrubs" next season. But this is away from our text. The next morning I saw Tom Barron in a more natural role of orator. This time he stood upon the housetops. Upon the roof of one of the henhouses at the poultry contest, Barron, with a hen in his hands, was showing how he cast out the drones, while hundreds of hen men gathered around to watch. But let us take that up next week. H. W. C.

Fertilizer for Strawberries.

I HAVE about two acres of land planted to corn, oats and potatoes. Next Spring I intend to plant strawberries on the same; before doing so I shall sow it down to rye and plow it under next Spring. I should like to buy my fertilizer and mix it myself this Winter. Could you inform me what would be best and about how much I should require; also the best way of applying the same? Could you inform me as to about the necessary number of plants it would require for two acres, the rows being four feet apart?

Rockland, Mass. D. R.

Your plan of seeding the potato land to rye for plowing under next Spring is good. After plowing under be sure to pack the rye down firmly. Then make the surface soil fine and set out the plants. If you wish to mix the chemicals we should use 400 pounds dried blood, 400 pounds sulphate of potash and 1,200 pounds acid phosphate to be used on the two acres. The best results for us have come from scattering the chemicals at the time of setting on a two-foot strip, where the plants are to go. Work it in well by running the cultivator back and forth. We shall set the plants two feet apart in the row. If the rows are four feet apart this will mean about 5,500 plants to the acre.

Wild Carrots.

WILL the Hope Farm man tells us if there is any merit in the wild carrot? It certainly has some good qualities, not the least of which is tenacity. I have been fighting it for many years and the end is not yet. One of the merits of the clover plant, according to many writers, is the amount of vegetable left in the soil by decaying roots. Is this not true of the carrot? Another good quality is productiveness or reproduction. The plants may be cut off time after time and in a few days you find another set of blossom or seed heads, each time with a shorter stem, saving its time here in order to ripen its crop of seed. If some of our plant wizards could in some way graft this quality into the Timothy plant he would certainly be the means of reducing the "high cost of living" in horses and cows. E. J. L.

Let us not wait for these "plant wizards" to "whiz" these qualities into Timothy. It is about as likely to happen as the report that they crossed the milkweed on the strawberry and grew berries and cream on the same plant! With us the wild carrot makes a fair quality of hay. Our horses are fond of it—particularly the older ones. This year there is a smaller crop than usual of wild carrot. Without doubt the root does open the soil and provide considerable organic matter.

EASTERN MASSACHUSETTS CROP NOTES

This has been so far a very peculiar season. While perhaps no more rain than is needed has fallen, yet it has been distributed over many days, as the rule a little each day, or at least, every other day, and to finish gathering the hay crop is a problem. Dog days started in about three weeks before their time, and bid fair to continue. Those that pushed their haying along early were lucky, and almost everyone reports a good crop, or better than last season. Corn is looking well, but is in most cases very backward and small, and unless frost holds off well will not probably be a full crop or mature properly. Potatoes on the contrary never looked better, and certainly promise a good crop if looks are worth anything. The past few weeks have been good growing and farming weather for them. Onions also look well, and if they bottom up well, will be a large crop. Various kinds of raspberries have turned out well, but picking weather has been bad, and many have dropped off the bushes. Prices have been low on these and currants, and other small fruits also. Apples now look like a good crop, especially the earlier varieties, some trees of which are loaded, in fact, too many on trees to insure best size. The Winter fruit hangs about right to turn out a good crop of fair-sized fruit. Insect pests have been and are now very troublesome, and will affect the quality of much of the fruit, except that which has received extra care, and this will probably pay those who were able properly to spray their fruit a good profit for so doing. Pears are a light crop in many cases. Cranberries now promise a good extra crop, but the next few weeks may change the outlook. A late Spring followed by a cool Summer, especially nights, has not been altogether favorable to most crops especially corn, and unless a fairly late Fall without serious early frosts helps us out we will not feel we have had a favored season. Strawberries, which promised a large crop early in the season, were seriously affected by the early dry spell, and in some towns were a very short crop or no crop at all. Blueberries, which last year in this section were a heavy crop, in fact the heaviest ever known about here by reason of the big forest fire a few years before, are way below the average this year, and many disappointed seekers go home with nearly empty pails. Wild grapes are not fruiting well this season, and will be short of the demand. Walnuts and chestnuts look like a good promise of a crop. A. E. P.

July 28.—The Peninsula Horticultural Society will hold its next meeting in Wilmington in January, when it expects to make its biggest and best exhibition of fruits, vegetables and home-canned goods, eclipsing, if possible, the fine display at Easton last Winter. Prizes amounting to $1,500 will be given, $300 in three prizes for the best general exhibit of fruit, $25 for the best single box of apples, $25 for the best five boxes, and $50 for the best 10 boxes of apples, with second and third prizes in each class. Every good commercial variety will be recognized in box packs, and $8 will be allotted to each variety, amounting to $200 in all for this class. Prizes for vegetables will be larger and more numerous than ever before, and home-canned goods will receive suitable recognition for the first time. There will be a prize of $15 for the best exhibit of canned fruits and vegetables canned by a housekeeper, $15 for the best exhibit of fruits canned by mother and daughters, the team work prize of $15 for the best exhibit of tomatoes by girls in the canning clubs. The Summer meeting of the Peninsula Horticultural Society will be held at Mulberry Hill orchard near Easton during August. All the fruit growers everywhere have been invited. Lunch will be served by the orchard owners assisted by the county Grange. Automobile trips will be made to surrounding orchards and other places of interest. Approximately 12,000,000 quarts of strawberries were carried by the Delaware Railroad during the berry season. This shipment falls below that of last year, and is ascribed to the drought. It is estimated that 100,000 hampers of apples have been shipped to market during the last fortnight. Wheat thrashing is almost over. Some phenomenal yields of wheat have been reported. Many claim to have received a yield of 30 bushels per acre, others 40, and some even as high as 50 bushels to the acre. We are having plenty of rain now, which has greatly benefited growing crops, but is delaying wheat thrashing where it has not already been thrashed. A severe hail storm visited some portions of this county on July 25, almost totally destroying growing corn, tomatoes and fruit. C. H.

Dover, Del.

The Home Acre.

NOTES FROM A MARYLAND GARDEN.

I OFTEN wonder whether our Northern friends have the bother with crab grass (Panicum sanguinale) that we have here and southward. It never gets too dry for the crab grass, but of course it flourishes more with favorable weather. You may hoe it out, but if you do not rake it out it catches hold of the soil again and is smiling and happy in a few days, and clean it all out well, and in a day or so you will find a young crop starting and if now cultivated down at once will soon be as strong as ever. Where tomatoes are let tumble on the ground, and cultivation has to stop, the crab grass soon gets higher than the tomatoes, so that it is absolutely necessary in the gardens to train the tomatoes up so that the grass can be kept down.

Earliana tomatoes have been plentiful since late June, but the John Baer, now the last week in July, is just beginning to ripen a few. It seems to be identical with Chalk's Jewell, except that it is later. And yet we were told that it would make ripe fruit in 30 days after setting good plants. Mine were strong plants, started in the greenhouse and spotted out in frames and were set in the open ground the last of April, and did not show a ripe tomato till the 16th of July. I paid a dollar for a packet of the seed, and have that now charged to experience. The Brimmer, a big tomato of the Ponderosa type, has been giving some very fine fruit, and is much smoother than Ponderosa. My late tomatoes to come in just ahead of frost have now been set. These are mainly Globe, and I find the Globe excellent outside, while it is now largely grown under glass too.

My plot of 2,000 Gladioli is now in full glory. Niagara is not white as claimed, but a very pale canary color, and as I have it beside the Blue Jay the contrast is very pretty. I get a few of the best Groff mixtures every season, and am sure to find some fine ones in the lot, which I propagate to themselves. One crimson with a white blot on the lower petals bloomed this year flowers as large as Princeps. Then there was an exact counterpart of America, but with a taller and longer spike, and not so closely packed flowers as those of America. Sulphur King is a good yellow, but very slow to increase. Eucharis is the best nearly white of any I have. Heliotrope is a better purple than Blue Jay, in fact almost a navy blue, and about as near blue as will probably ever be found in the Gladiolus. For cutting there is nothing better than the compactly arranged flowers of America.

One plant in my shrubbery border that attracts most attention now is the Bignonia grandiflora, the Chinese trumpet flower. Trained up by the side of the porch it is now covered with its great heads of big orange-colored flowers. This plant is grafted on our native B. radicans, and I have to keep the sprouts cut out, but it seeds freely, and I have this Spring raised over 100 seedling plants from last year's seed, and as it is a pure species there is no doubt that the plants will be true to type.

A row of Meehan's Marvel mallows, planted to hide an ugly board fence, is now as tall as the fence and flaunting its great blooms of crimson, pink and white, each flower almost as large as a dinner plate. Like the morning-glories, they close up in the evening. They make a fine background to a bed of perennial Phlox of various colors, of which I have 250 plants in 11 varieties growing in nursery rows, and now making a mass of bloom.

The Cardinal climber, a cross between the cypress vine and the scarlet morning-glory, is now covering a wire fence 50 feet long with its pretty cut leaves, and brilliant scarlet flowers. These too close in the afternoon, but the plant is a rampant grower and the foliage is handsome. Unlike the morning-glory and the quamoclit, its parents, it makes very few seeds, and one has to watch very closely to get any. Last year this same fence was covered with moonflowers which made a wonderful display, and to my surprise I find this season many volunteer moonflower plants from seed dropped and left all Winter. This suggests the idea that it may be best to plant the hard seed of the moonflower in the late Fall, and I will try it. W. F. MASSEY.

Maryland.

ASPARAGUS FOR HOME USE.

WILL you tell me about setting out and caring for an asparagus bed in the family garden? Would a mulch grown in the Fall on the bed be good for a cover, and what would you recommend? B. M.

Washington, R. I.

PLANTING.—Asparagus being a hardy perennial, of long life, lasting under favorable conditions 20 years or more, it pays to give special attention to the preparation of the soil where it is to remain permanently. The bed should receive an application of two or three inches of well-rotted manure and be either spaded or plowed in as deeply as possible, mixing the manure with the soil as thoroughly as it can be done, and in addition a liberal quantity of raw bone meal may be used in the furrow at time of planting with considerable advantage. On account of the soft spongy nature of the roots and their tendency to decay when bruised or broken in the Fall, it is not considered good practice by most of the successful growers to plant asparagus at that time, as almost invariably much of the planting is lost through root decay in the Winter following, whereas the Spring-set plants seldom if ever are lost from this cause. The planting may be successfully done any time in Spring from the time the ground is in condition to work up to the time growth starts, but the sooner it is planted after the ground is in good condition for working the better the results. When planted in a small way for private use, and particularly when it is necessary to economize on ground space, plant in beds or strips, say six feet wide in which three rows are to be planted, a row on each side about 12 inches from the edge and one in the middle of the bed, setting the plants 12 to 14 inches apart in the row. When the plants are set care should be taken to spread the roots out so that the soil may be easily worked in among them, covering the crowns about three inches deep. By going over the bed every few days with a steel rake, we destroy germinating weeds and keep the beds clean until the sprouts appear above ground, when hoe cultivation will be necessary. If two beds or more are made running parallel to each other, walks 24 to 30 inches wide should be left between them. This method of culture is of course only suitable for the production of green asparagus. When white sprouts are desired the plants should be set in rows three feet apart and 12 to 14 inches apart in the row. This distance between the rows will be sufficient to admit of ridging. Good clean cultivation is necessary during the growing season and should in no wise be neglected if good grass is to be grown.

FERTILIZING.—This is quite important, and for the best results must be applied twice each season, early in the Spring and at the close of the cutting season, and may be varied with great benefit to the plants. I find that a good coat of fine well-rotted manure applied in early Spring and worked into the soil with a spading fork (care being taken not to injure the crowns of the plants), and a coat of raw bone meal applied at the rate of half a ton to the acre and worked into the soil at the close of the cutting season, will give most excellent results. This method of manuring supplies the plants with all the manurial constituents they need for vigor and the production of first-class sprouts.

WINTER PROTECTION.—While the asparagus is perfectly hardy in nearly all sections, yet where the ground freezes deeply, it will be quite a benefit to the plants if thy recive a mulching of forest leaves or strawy manure at the beginning of Winter, the plants will go through the Winter in better condition and start earlier and with greater vigor in the Spring than if they have no protection. This mulching should be removed early so that the Spring fertilizing may be done before growth starts. K.

White Ants in Flower Beds.

CAN you tell me how to destroy white ants that infest my flower beds? Last year they destroyed my geraniums. This year the geraniums were unmolested but they attack the pansies nearby. The ants work up through the center of the stalk, sometimes cutting them off like a cutworm; they come about the first week in June and are gone by the middle of July. M. V. C.

Seymour, Conn.

The species of white ants that occur in this country are blind and live within decaying logs, stumps, and roots and occasionally in the woody stems of living plants, like geraniums and nursery trees. In every case in which the author has observed these insects injuring living plants he has found them abundant in the near vicinity in decaying wood of some kind. Moreover, when the decaying wood that served as the home of the ants was removed, they quit injuring the living plants. I venture the opinion with a good deal of confidence that M. V. C. will find some decaying log, stump, roots, rails, or other pieces of wood near or in the garden in which the white ants have found a home and from which they have migrated and have become troublesome to the geraniums. If these pieces of wood are removed the trouble will soon cease.

GLENN W. HERRICK.

Machine for Barn Thrashing.

WHICH will give the best satisfaction for barn thrashing, a separator with wind stacker and self-feeder, or one fed by hand, with raddle carrier?

Jamestown, N. Y. N. B.

I would advise that you use a self-feeder and wind stacker. The wind stacker will place straw almost anywhere within the building with little assistance from a pitchfork. The air separates straw, dirt and grain, so that the operator knows just how well the riddles are working by the amount of grain thrown out of the stacker. In the old belt stackers the grain was so mixed with straw that its presence could not be detected; but the heavy growth of young plants around the base of the pile bore eloquent testimony to its presence. L. E. HAZEN.

REGROUND FERTILIZERS.—On page 852 D. A. R., Florence, Mass., complains of lumps in nitrate of soda and potash. In placing his order he should order the goods reground, which I always do, and have no trouble along this line.

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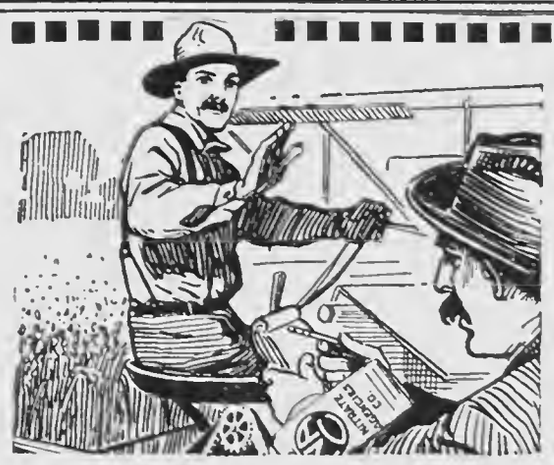

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WE have had many requests for information as to building a good vegetable cellar. The greatest trouble seems to be over ventilation. It seems that conditions of climate, soil and convenience vary so that general rules are not of great value. We would like reports from people who have operated such cellars successfully. Tell us how you would make another to improve upon any you have seen.

*

THE country storekeeper has many troubles, and earns most of the money he gets. What I object to is the method of charging cash customers with the interest on investment, bookkeeping, and frequent losses from the credit customers' accounts. The mail order house enables the cash payers to put into their pockets what would otherwise go to the "slow pays" and dead beats. In a discussion with three merchants in a neighboring town two admitted that they could sell for 10 per cent. less if all sales were for cash, and the third said that the figure would be between five and 10. D.

There is pretty much the whole thing. It will be hard to convince me that it is my duty to pay my neighbor's bills or the interest on them. Yet that is what I do when I pay cash promptly at most country stores. The price charged is large enough to cover losses from bad debts or delayed payments. Merchants have often admitted this. None of them will be likely to deny it if you offer cash and ask for a fair discount on their prices. In their own buying they know they can do better when paying cash.

*

ON page 948 we suggested that two kinds of station bulletins might be issued—one of a popular nature written by practical and successful farmers. Some of our station workers do not seem to take kindly to the suggestion. We meant it merely as a constructive criticism and we think the plan worth a trial. Some of our scientific men do not seem to realize the wide gulf which stretches between their knowledge and the thought of busy farmers. A reader in a Western State sends us an important question—and writes:

I have sent to the Experiment Station of this State, but their answer, which I enclose, is so patched up that I have no faith in it, thinking it was done by the office boy.

The answer is sound and accurate but written in scientific or "class room" language so that the farmer may well be excused for not understanding it. The agricultural scientist will tell you that his chief work should be "research." We might suggest that the careful search of a good old volume will reveal the following:

"Thou thyself art a guide to the blind, a light of them which are in darkness."

*

LET us talk to you once more about the danger of signing contracts or leases which you do not understand. Some people rarely read over a paper before signing it. Later they find that they have bound themselves to impossible conditions. We have a case where a man in the West signed a five-year contract to pay $50 a month for a farm in New Jersey. This man knew nothing about the farm, and when he moved on found that he could not possibly make a living on it. Hardly a week passes without a letter from some one who has signed a paper he did not understand and now finds himself tied to a hard bargain. In the majority of these cases there was no good reason why these papers ever should have been signed without an investigation. On the other hand trouble usually comes when two people agree to do a certain thing in partnership, but have no papers at all to show what the agreement is. Trusting to memory in such cases is a sure introduction to trouble. The safe way is to have some good lawyer draw up an agreement which both parties understand, and have both sign it.

I UNDERSTAND you have stated that all wealth in this country came from the farmers. Where is your proof for such a ridiculous statement, when we all know that the cities contain most of the nation's wealth? S. J. K.

What we have said and what we repeat is that every cent's worth of property upon which this great city wealth is based came originally out of the land. It was produced by farmer, miner and forester! If our friend thinks otherwise we challenge him to name any legitimate form of wealth which is not originally based upon some crop or mined product. Let him take up the burden of proof. He ought to be able to do this easily if, as he says, the statement is ridiculous. Come forward and show us some form of wealth which did not originally come out of the soil. No wonder the wealth of the land is accumulating in town and city when 65 cents of each consumer's dollar goes to the handlers who may mostly be classed as city men. In addition to this a good share of the farmer's 35 cents also goes back to the city to pay interest and other similar expenses. This unequal division of the dollar, received through many years for farm and mine products, is what piles up the city's wealth. We wait with interest for our friend to name the wealth which did not originally come from the land.

*

THE European war is too young to have had much definite effect on prices of farm products. Usually, war, with its consequent waste and stoppage of production, increases all prices of what we consider necessities. At the first intimation of war speculators here advanced wheat prices 10 to 15 cents per bushel, and other grains in less proportion. But in this case all of the great ship-owning nations are involved and afraid to use their merchant ships for commerce, lest they be seized as prizes by the enemy. So grain prices dropped to nearly their former level, but are now advancing again on the probability of some ships being transferred to the American Flag and others guarded by armed escorts on the way across. Europe needs our surplus grain, and will have it if there are any ships to carry it.

Fifty million bushels of wheat are tied up at American seaboard points. With cotton growers the situation is more serious. The crop is large and the industries using our raw material in England and Germany, paralyzed or nearly so. Cotton speculators have it in their power to squeeze planters who must sell at once to a very low figure, unless, as is intimated, the Government takes some means to protect the planters.

Fruit growers on the Pacific Coast are alarmed at the outlook, as they depend on Europe to take a large amount of their finest apples, as well as some other fruits. Dairy and poultry products are but little affected yet, except the item of imported cheese, which goes to a limited trade. The cheese market in Canada, where exports are heavy, is upset. Our potato crop is so large that the stoppage of possible European shipments is not likely to be noticeable. Refined sugar is up one-half cent, the German supply of beet sugar being cut off. Beans have advanced upwards of $1 per hundred, and flour is 50 cents or more per barrel higher. Of course it is to be hoped that the trouble will soon pass over and the world be spared the deplorable weariness and burden of industrial and financial exhaustion, and the grief of the "widows and fatherless" always resultant from a long war.

*

THE farmers of Southern New Jersey greatly need a bridge across the Delaware River so that produce can be hauled direct to Philadelphia. The present system of ferry transportation is slow and out of date. What is needed is a system of quick direct transportation, so that loaded wagons may be hauled across a good bridge direct from farm to market. Such a plan would help reduce the "high cost of living" by increasing direct trade and making an easier path from producer to consumer. There should also be a similar bridge across the Hudson from New Jersey to New York City. This would enable farmers and gardeners to load a wagon or a truck at the farm and drive direct to New York for distribution. As it is, such loads must be ferried over the river—a slow and expensive method of reaching market, and one which prevents direct trade. The problem of delivering food to New York is complicated because the city is on an island, so that approaches to it are restricted. A bridge over the river would make easier shipments and also help to increase the food supply. New plans for farming would be organized, and auto-truck service would be developed for quick distribution. New land along the marshes would be brought under cultivation. Such a bridge is a necessity now and must be built in the future.

WHEN we expressed the opinion that a Wyandotte hen of the dumpling-like shape shown in the "Standard of Perfection" will not prove a heavy layer we had no idea how hard the fanciers were hit. A prolonged howl about "slandering a worthy breed" and "a rude slap" is going through the poultry press. Well gentlemen, your words will never settle it. There is one final test—that is a pen at one of the recognized egg-laying contests. It is time to stop this childish scolding. Why not play a man's part, if you believe these dumpling-shaped birds can make a heavy record, and come forward with 10 of your "ideals?" Of course you know THE R. N.-Y. is not "slandering" Wyandottes or their breeders. We are for the most useful hen that can be found, regardless of her shape. The next contest starts November 1. Will you get into it with a pen of your dumplings, or do you just want to *talk?*

*

FRESH from school, I absolutely refused to live on a farm. Then it meant to me hard work, little spending money and being deprived of all the things I considered most needed for happiness. Now I have come around to Washington's view of agriculture. More sense, considerable time spent in teaching in comfortable farm homes and regular reading of THE R. N.-Y. account for the change. E. S.

We think more and more city people are taking a sensible view of farm life and country living. At one time the "hayseed" idea predominated. Then came the "back-to-the-lander" nonsense of making a fortune on a farm, whether prepared for farming or not. Both of these have blown out, and sensible town people realize the limitations and the possibilities of the farm home. Those of us who live in the country realize that there are drawbacks and inconveniences. It is not all a world of sunshine and pleasant dreams, this living on a farm! Yet after a fair analysis and honest consideration of advantages and discomforts, we become more and more attached to farm life, and would not be separated from it.

*

IN parts of Western New York there has been a scourge of plant lice this season. Our reports indicate that nothing like it was ever known before. Many growers did not realize the serious nature of the trouble until their trees were covered and all ordinary remedies failed. We have received some criticisms of the experiment station because it has not devised or suggested a sure remedy. It must be admitted that the aphis is a difficult insect to control. It seems that last season the insect was not abundant, and as a result few orchardists sprayed, this year, as advised by the station. As a result in a season favorable to the work of plant lice the insect multiplied enormously and in many cases reached a point beyond help from sprays before fruit growers realized it. Early in May the station sent out a letter of warning, and gave the best treatment known at that time. Here is part of the advice then given:

Efforts to protect bearing apple orchards from plant lice are, as a rule, failures. These are due mostly to the manner of spraying and the lateness of making the applications. Most orchardists do not spray until the insects are abundant and the leaves are curled. Little benefit is derived from treatments under such circumstances as not many of the lice are destroyed, and besides there is always great danger that the most of the injury by the insects is done. The foliage on which the lice have been feeding becomes weakened and may prove susceptible to further injuries from spraying mixtures. Instead of waiting until injuries begin to show, the grower should spray before many of the leaves have curled and the lice have developed to formidable numbers.

Those who are inclined to criticize the station should be fair. Did they follow the advice to spray early? The present scourge of lice seems hopeless with our present knowledge, but the scientists are still working at the problem.

BREVITIES.

YOU may still seed barley for a Fall hay or fodder crop.

NOW get your eye on those pullets for the next year's layers.

CAN you not plan to run water into the house before Winter comes?

SEPTEMBER 1 is about the limit for seeding Hairy vetch north of New York.

A SWEDISH engineer has devised a scheme for burning dry powdered peat on railroad engines, which gives to the peat about 80 per cent. of the heating value of coal.

A CITY ordinance in New York prohibits the use of public watering troughs for horses. This is to prevent the spread of glanders and similar diseases. Private buckets must be used.

"DOG days" has nothing to do with dogs. "The term, borrowed from the Romans, who called Sirius, the brightest of the fixed stars, the dog-star. At one time during the Roman epoch, the rising of this star coincided with the rising of the sun in the latter part of July."

THE EUROPEAN WAR.

IT is impossible to give accurate details regarding the European war. Events travel at lightning speed, and all news from Europe is carefully censored. It seems to most of us incredible that in this age all of a sudden, so-called civilized nations should fly at each other's throats and pass back into an age of barbarism. Few of us in this country really know what the fighting is about. It may be at bottom one of those undying conflicts of race hatred, or a battle between militarism and the growth of Socialism which has been so evident of late in Europe. For centuries it has been a favorite trick of military leaders to start a "war scare," or even to provoke a war, when the common people began really to think logically about their condition.

Powerless to prevent or stop such a war, our people are interested in estimating its effect upon American conditions. Morally the effect cannot be good. One would think that the fearful loss and grief which must follow this cruel destruction of life and property would show our people the sin and folly of war. On the other hand there has always been a "war party" in our public life. This party demands a larger army and navy, and a national policy based on the actions of a boy who goes about with a chip on his shoulder seeking a fight. The European war will give such politicians a new text from which to inflame the public mind and pull it away from the study of needed reforms. It will also kindle race hatreds between those of our people who have ties of blood with the old countries.

Industrially a war in Europe will have a varied effect upon business in this country. It does not seem possible that such a gigantic struggle can last long. The cost in money is tremendous, and modern weapons are so horribly deadly that the end must come soon. Yet the enormous loss of property will be felt in all parts of the world. Vast sums of money will be taken out of circulation here and sent abroad. One reason for enforcing the 60-days limit for withdrawals from savings banks is to prevent such a drain. One branch of business which will be directly affected is the fertilizer trade. Practically all the potash used here comes from Germany. Both potash and nitrate of soda are used to some extent for making explosives and thus would probably be considered "contraband of war" and subject to capture if shipped. At first thought it would appear that if several million men stop producing and go to destroying property there will be a greater demand for the labor of those who remain at work. Upon that theory this nation ought to profit by a European war, since the market for our food and manufactured goods ought to be improved. Under the blockade sure to be established, it will be difficult to get our products into European ports, and there are comparatively few vessels left free to carry merchandise. Thus with cotton and wheat to sell we find ourselves without means of carrying our goods to market. At the opening of the Civil War this country did its share of the world's carrying trade. Our commerce was destroyed and we have depended on foreign vessels since then. This war, if prolonged, will enable us to build up our shipping industry once more. For years, following such a war, the European nations must come to us for our surplus food, while they cannot send us large quantities of manufactured goods. They must also return and sell at a low figure many American securities, such as stocks and bonds, and this will mean less money sent over each year to pay interest and other debts. In its effect upon industry the war will probably be beneficial to this country if we can remain neutral, but in its larger and final effect upon the general progress of civilization it is a curse and a menace.

FARM BUREAU WORK.—The farmers along the southern tier of counties in New York State seem to be making good use of the farm bureaus where these organizations have been started. Recently two counties in Southwestern New York united for a picnic, with over 2,000 persons present. On August 6 the Broome County Farm Improvement Association held its picnic at the county home near Binghamton. It was a pleasant day, and about 600 people came to enjoy the outing on the pleasant grounds of the home. Addresses were made by M. Quinn, president of the association; H. W. Collingwood, and E. R. Mimms, the County Advisor. It was an excellent gathering of progressive and intelligent farmers, who are giving much thought to industrial questions in their vicinity. These farmers clearly understand the economic question involved in the 35-cent dollar. They are trying to work out plans for coöperative work, which will give them more varied crops, and greater variety of work, and better market facilities. One excellent feature of the prospect in this part of New York State is the fact that these farmers realized the importance of working out their own problems in this way, without asking other classes or other industries to come and do the work for them. The situation all through this territory is very encouraging, and the outlook for farming is good.

New York Fruit Growers' Outing.

THE LAKE TRIP.—The writer was with the members of the New York State Fruit Growers' Association when they were the guests for one day of the Champlain Valley Fruit Growers' Association, and the Plattsburgh Chamber of Commerce, and can say some good words about the courtesies extended to the visiting fruit growers, in opportunities to see their beautiful lake and thriving city, and to learn about their progressive orcharding. In coming to Plattsburgh on the excursion planned by Secretary Gillett, the Western New York Fruit Growers enjoyed one of the best outing trips of their lives. They went for a good time, many of them taking their wives, the total number on the chartered train being close to 300. Their scheduled route was to leave Rochester at 1 p. m. Tuesday, arriving at Saratoga in the evening. The party was luxuriously entertained at the United States Hotel, and took their train the next morning for Lake George. A large part of the day was spent on the steamer on the lake, enjoying the scenery of perhaps the most beautiful of New York's small lakes. Leaving the lake in the afternoon the party boarded their train, and their route was along the shore of lake Champlain to Plattsburgh.

ENTERTAINMENT AT PLATTSBURGH.—The Chamber of Commerce and Fruit Growers had arranged for a steamer trip Thursday morning on Lake Champlain, and at 8:30 the members of both associations with some citizens of Plattsburgh were on the steamer. A most interesting route was taken, going up the lake on one side of its three large islands, South Hero, North Hero and the Isle of Monte, and then down on the other side close to the Vermont shore. There was a session of the two Associations held in the new High School building in Plattsburgh on returning, the main topic for discussion being the new apple grading law, which will be enforced this Fall, and about which many apple shippers have not taken pains to learn. They may not pack their apples according to its requirements, and so be ready for the inspectors whom the State Department of Agriculture may send out to inspect their shipments of apples, and there is reason to believe that the Commissioner of Agriculture will try to enforce the law.

THE NEW GRADING LAW.—It may be well to give some brief quotations from this law, as read at the meeting at Plattsburgh, followed by the expression of feeling towards it by the president of the New York State Fruit Growers' Association, L. L. Morrell.

"New York standard fancy grade or classes for apples of one variety, which are well-grown specimens, hand-picked, properly packed, of good color for the variety, normal shape, free from dirt, diseases, insect and fungus injury, bruises and other defects except such as are necessarily caused in the operation of packing.

"New York standard (A) grade shall consist of apples of one variety which are well-grown specimens, hand-picked, of good color for the variety, normal shape, practically free from dirt, diseases, insect and fungus injury, bruises and other defects except such as are necessarily caused in the operation of packing; or apples of one variety which are not more than ten per centum below the foregoing specifications, on a combination of all defects or five per centum on any single defect.

"New York standard (B) grade shall consist of apples of one variety which are well matured, hand-picked, properly packed, practically normal shape, perfectly free from dirt, diseases, insect and fungus injury, and which may be of medium or less than medium color for the variety; or apples of one variety which are not more than 10 per centum below the foregoing specifications on a combination of all defects or five per centum on any single defect.

"Apples not conforming to the foregoing specifications of grade, or, if conforming, are not branded in accordance therewith, shall be classed as unclassified and so branded. The minimum size of the fruit in the package shall also be branded upon it as hereinafter specified and in addition to the other marks hereinafter required.

"Any person who knowingly misbrands or adulterates apples within the meaning of this act, or who knowingly violates any of the provisions of this act, shall be deemed guilty of a misdemeanor and, upon conviction, shall be punished for the first offense by a fine not exceeding twenty-five dollars and not less than ten dollars; for the second offense by a fine not exceeding fifty dollars and not less than twenty-five dollars, and for the third and each subsequent offense by a fine not exceeding two hundred dollars and not less than fifty dollars, together, in all cases, with the costs of prosecution."

President Morrell did not think the enforcement of the law would be a burden to commercial apple growers, but rather a benefit. A brand on packages that is guaranteed as to class and quality mutually aids both the shipper and buyer, and there should be no need of compelling an honest pack by law. Mr. Morrell had used a private brand on his best fancy pack for years, and guarantees all fruit with this brand. It has obtained for him the best markets and profitable prices. He could see some defects in the new law, but fruit growers will now do well to coöperate with the State Department of Agriculture, that its intention to benefit all parties may be carried out.

CROP PROSPECTS.—Members from all parts of the State reported the prospects of the fruit crop in their section. Reports from the Hudson River Valley indicated that there is a large crop of apples there, probably 50% more than last year. The crop of apples in Western New York is reduced this year somewhat because it is not the bearing year for Baldwins. Most other varieties are generally bearing heavily, and probably the crop on the whole is 33% larger than last year.

CHAMPLAIN VALLEY FRUIT.—The Champlain Valley apple growers have been under the direction of their farm bureau agent, and the past year have had with them a fruit expert from Cornell University, and are working out some of the problems of the orchard very successfully. These orchardists are not trying to grow the late Winter apples very extensively. One reason is they lack cold storage facilities for handling large crops, and another is that late Fall and early Winter apples are especially adapted to Clinton County. The two that attain to the highest perfection are Famense and McIntosh Red. These, picked and shipped at once to New York and Boston sell for good prices, and as no other section of the country is growing these apples quite so well there is little danger of competition. The Champlain Valley orchardists are mostly dairy farmers, some of them beside are engaged in commercial potato growing. They say that all these together can be practiced more economically than one alone. The same teams and equipment of tools needed for one can be used for the others, with small additions. On the dairy farm the young orchard can be started with small extra cost, and a common practice is to plant the trees with the silage corn after the field has been prepared and manured for it, as about all the extra work is involved in planting the trees, as they are cultivated with little trouble.

ORCHARD AND DAIRY.—One dairy farmer the writer visited when on the auto trip makes a dairy of 40 high grade Holstein cows profitable, and also has 50 acres of apple orchards. He showed us six acres from which he had harvested 1,500 barrels of apples that sold for $3,500. The Secretary of the Champlain Valley Fruit Growers' Association also showed our party his fine orchards that were loaded with Fameuse and McIntosh apples. He had sown in them a cover crop of oats and peas, and vetch. The oats and peas he would cut for his cows and leave the vetch to grow and plow under in the Spring to fertilize the trees. One tree which he pointed out he said had produced 10 barrels of apples in one year and the profit was greater on it than on one of his cows.

ORCHARD INTER-CROPPING.—In this orchard other methods practiced which are worth considering are that no fertilizers are used but the clover intercrop, which is alternated with potatoes. When an orchard is planted potatoes may be planted for an intercrop and very thorough cultivation given both the potatoes and the trees. In this rotation the clover crop is sown the following Spring. After the clover is sown a strip of a few feet wide close to the trees is kept well cultivated, and I think all or part of the clover is left on the ground to fertilize it after being mown. By this way the cash cost of feeding the trees is mostly saved, and the potatoes largely pay expenses of maintaining the orchards before they come into full bearing.

Thursday evening the excursion party took sleeping cars for Thousand Islands where they arrived Friday morning. During the forenoon the party went for a steamer trip on the St. Lawrence River, and in the afternoon resumed their journey by rail via Richland and North Rose, where a stop of two hours gave time to see some good orchards there. The train arrived at Rochester late in the afternoon, all feeling that the excursion trip to the Champlain Valley was well worth while.

W. J.

New York State News.

HYDRO-ELECTRIC BONDS.—The Up-State Public Service Commission has authorized the issue of $300,000 of the five per cent. 40-year first mortgage bonds of the Salmon River Power Company, to be sold at not less than 85, to net $255,000. This sum is needed to discharge the obligations arising out of the construction of the company's hydro-electric plant and transmission lines, not heretofore provided for, and to continue the work of construction on the plant. This makes a total bond issue for this project of $3,535,000.

THE "APPLE CAR."—The Hudson River district has not been so well cared for, heretofore, in the matter of "farm specials" as have other parts of the State. But the "apple car" begins its itinerary on August 21 at Marlborough, Ulster Park and Saugerties. It is at Coxsackie, Ravena and Albany on the 22nd; then goes down the eastern side of the river to Schodack Landing, Stuyvesant and Hudson for August 24; and reaches Germantown and Poughkeepsie on the 25th. Thence it goes to Rochester, Spencerport, Brockport, Albion for the 26th and to Medina and Lockport for the 27th. The car will then be moved to the State fair grounds where the exhibits will be unloaded. On September 7 the car will again be loaded and start on another journey being at Fulton and Oswego on that date; at Hannibal, Sodus and Red Creek on the 8th. On the 9th it will reach Williamson, Webster and Charlotte; on the 10th Hilton and Morton; on the 11th, Lyndonville and Barker and on the 12th, the last date of the itinerary, at Burt and Ransomville. The purpose of the special car is to enable the Department of Agriculture and the State College of Agriculture to give instruction in apple packing under the new law.

MILLIONAIRE ROAD WORKER.—The millionaire chairman of the State commission on prison reform, Thomas M. Osborne of Auburn, worked incognito as a laborer among prison convicts on the highway near Meridian, a short time ago. He wielded the pick and handled the shovel like one of the gang, his purpose being to gain more first hand information about the life of a convict. After the day's work was over he carried his tools to the shed and partook of the prisoners' fare that was supplied at a tenement house nearby where the convicts are confined when not at work on the roads. Mr. Osborne visited several convict camps on other days studying conditions and problems in connection with prison reform, a subject in which he is greatly interested.

EDUCATIONAL EXHIBIT FOR FAIRS.—A general agricultural exhibit has been prepared by the College of Agriculture which will be available for town and county fairs this Fall. The exhibit covers a large variety of subjects. The local fair association is required to meet one half of the cost of transportation of the exhibit and one half the expense of the person in charge. Requests for this exhibit must be made of the Department of Extension Teaching, College of Agriculture, Ithaca, N. Y.

PROCEEDINGS PUBLISHED.—The Proceedings of the 74th annual meeting of the New York State Agricultural Society have just been published by the State Department of Agriculture as Bulletin 60. It is a well printed volume of over 200 pages, illustrated, and contains the addresses and papers complete that were given at the annual meeting in January of this year.

J. W. D.

New York State Crops.

The State Department of Agriculture gives the following summary of crops:

The hay crop will not be as large as last year, but larger than the average for a term of years. Corn, wheat, rye and oats, are generally good. Small fruits are generally good, cherries, grapes and currants much larger in yield than in 1913. Peaches will show a very small crop. Apples for commercial purposes will be far below last year's crop but the local crops will be much larger.

A brief summary of crop conditions in the State at this time, based upon last year's crop as 100, is shown in the following table:

Fall apples, 129; Winter apples, 139; Baldwin apples, 127; Greening apples, 116; Bartlett pears, 61; Kieffer pears, 54; Other varieties, 69; Plums, 67; Peaches, 24; Quinces, 62; Grapes, 101; Cherries, 121; Currants, 112; Gooseberries, 95; Strawberries, 115; Potatoes, early, 106; Potatoes, late, 106; Beans, 100; Cabbage, 96; Hay, 91; Corn, 102, 102; Wheat, 99; Rye, 99; Oats, 102; Barley, 97; Buckwheat, 105; Hops, 95; Alfalfa, 105; Tobacco, 102.

Woman and the Home

From Day to Day

Midsummer.

Around this lovely valley rise
The purple hills of Paradise.

O, softly on yon banks or haze,
Her rosy face the Summer lays!

Becalmed along the azure sky,
The argosies of cloudland lie,
Whose shores, with many a shining rift,
Far off their pearl-white peaks uplift.

Through all the long midsummer day
The meadow sides are sweet with hay.
I seek the coolest sheltered seat,
Just where the field and forest meet—
Where grow the pine trees tall and bland,
The ancient oaks austere and grand,
And fringy roots and pebbles fret
The ripples of the rivulet.

I watch the mowers, as they go
Through the tall grass, a white-sleeved row
With even stroke their scythes they swing,
In tune their merry whetstones ring.
Behind the nimble youngsters run,
And toss the thick swaths in the sun.
The cattle graze, while, warm and still,
Slopes the broad pasture, basks the hill.
And bright, where Summer breezes break,
The green wheat crinkles like a lake.

The butterfly and bumblebee
Come to the pleasant woods with me;
Quickly before me runs the quail,
Her chickens skulk behind the rail;
High up the lone wood pigeon sits,
And the woodpecker pecks and flits.
Sweet woodland music sinks and swells,
The brooklet rings its tinkling bells,
The swarming insects drone and hum,
The partridge beats its throbbing drum.
The squirrel leaps among the boughs,
And chatters in his leafy house.
The oriole flashes by, and, look!
Into the mirror of the brook,
Where the vain bluebird trims his coat,
Two tiny feathers fall and float.

As silently, as tenderly,
The down of peace descends on me.
O, this is peace! I have no need
Of friend to talk, of book to read:
A dear companion here abides;
Close to my thrilling heart He hides;
The holy silence is His voice;
I lie and listen and rejoice.

—John Townsend Trowbridge.

*

AMONG new fancywork we find filet crochet in wool. Baby's crib covers are made of this, in designs of flowers and animals. There are also filet sacques crocheted in princess or Pompadour wool, which has a silk thread running through it. It costs nearly double as much as ordinary wool.

*

RASPBERRY charlotte calls for one pint of raspberries, half a pint of bread crumbs, two eggs, one pint of milk, two ounces of powdered sugar and one ounce of butter. Butter a pie dish, sprinkle with bread crumbs, then put in a layer of raspberies and sprinkle with sugar. Repeat the alternate layers of crumbs, raspberries and sugar until the dish is full, then beat up the eggs and add to the milk, pour over the pudding, dot bits of butter on top, and bake in a moderate oven.

*

MINOR accidents—cuts or contused wounds—are quite frequent on the farm. It should be remembered that such injuries, when trifling in themselves, may become serious, and even fatal, as the result of infection, hence the necessity for strict cleanliness and aseptic treatment. A Wisconsin labor report, referring to the proportion—four or five per cent.—of small factory injuries that proved serious through infection, states that these injuries, during one year, would cost employers about $40,000 for wages and compensation. Aseptic treatment is cheap in first cost, and any family physician will give advice to his patients as to methods and materials.

*

A COMBINATION preserve new to us in muskmelon and red plum. It calls for four pounds of melons, four pounds of red plums, and five pounds of sugar. Halve and stone the plums, and mix with about half the sugar. Peel the melons, remove seeds, and cut the flesh into half-inch dice, and add the remainder of the sugar. Cover the melon seeds with their adhering pulp and the plum stones with water, boil half an hour and then strain, cracking the plum stones and mixing the kernels with the fruit. Let the fruit stand in separate dishes for several hours, then pour the boiled liquid over the melon, cook slowly for 40 minutes, then add the plums, and boil slowly for 30 to 40 minutes longer, or until it will set like a marmalade. Another combination, cooked in the same way, is two pounds of melon, two pounds of red currants, three pounds of sugar, and two lemons, grated rind and juice. The lemon juice is not added until the jam is almost done.

*

A RECENT magazine story told of two elderly spinsters who, unable to take a trip on which they had set their hearts took their needed change by crossing the street—Maria into Selma's house, Selma into Maria's. Thus each one could look across the street at her own house, instead of at her neighbor's; Selma took care of Maria's goldfish, and Maria of Selma's chickens. It sounds rather absurd, and yet how much such a change might mean to a woman condemned to the same monotonous round. Very few could change into another house, like the two contented spinsters, but many could get a certain rest and refreshment by changing their rut, even in trifling ways. We have heard people speak rather contemptuously of the various forms of fancywork, as an amusement for hard-working women. It is true that some of it is quite futile, and some is deficient in beauty, but that is because the worker's industry has not been directed aright. So long as a woman has this interest, her mind will be alert to learn new things, and she will remain receptive. Let us be thankful for any influence that keeps us in touch with others, and delivers us from the possibility of an ossified mind.

Seen in New York Shops.

ONE pretty black velvet hat seen was trimmed with begonia flowers of white Brussels net. These consisted of the usual four round petals, each about four inches across, made by drawing net over a piece of white milliner's wire, and gathering the ends firmly together, so as to make a round petal shirred together at base, where the center of the flower was finished by a disk of yellow stamens. Such flowers are easily made, and are used for dress trimming as well as hats; they take the place of the butterflies that were used for trimming last year.

Fall blouses, which are now being displayed, show a preference for white Japanese wash silk—Habutai. They still show the rolling collar and drooping shoulder. Such waists, in good quality, cost around $3 and up readymade.

Some pretty new underwear is of sheer nainsook piped with flat bands of delft blue. There is no lace or embroidery; the garments have the beauty of fine material and good cut, without extra trimming.

Beach coats of terry cloth are made to slip on over a bathing suit. These are loose, three-quarters length, and belted; the material absorbs the water like a Turkish towel, and protects against sunburn.

English coats for country wear are intended for driving, motoring, golfing and other sports. Many of them are of tweed woven on hand looms—real wool, carefully dyed, and woven just as similar fabrics were made by our great-grandmothers. Short coats of Cumberland tweed cost $18.50; they come in white, bright colors, and also dull heather mixtures; three-quarter lengths, with patch pockets and leather buttons, are $27.50. We wish such handloom cloths could be woven in country districts here, providing an outlet for wool, and home work for the farm family.

Coat dresses of linen after French models look very much like little girls' Gabrielle dresses of about 1872. They hang in straight lines, hardly touching the figure from the shoulder down; the sash or belt is loosely draped around the hips. They combine all the virtues urged by dress reformers, and are very stylish, but very odd in unaccustomed eyes.

New Fall suits are shown in redingote models. There is a plain tight skirt, and the long loose coat of cassock shape. This cassock coat has a high plain collar and deep cuffs of caracul cloth, the suit being made of broadcloth. Colors shown are the very dark brown called tete de negre, midnight blue, Russian green and black.

Separate basques are already offered readymade in satin, black, white and navy blue. They are straight, semi-fitting, and trimmed with fancy buttons, some having a deep waistcoat girdle, collar and vest of moiré.

Shirred ribbon elastic bands finished with a big white satin poppy are meant to hold together sets of lingerie or dozens of towels or napkins. They make an acceptable gift for an engaged girl's "shower."

Little towels and wash cloths of soft crash are offered for baby's use. The towels have an edging of crocheted lace, and the word "Baby" cross-stitched above it in delicate colors. The wash cloths have a narrow crocheted edge and a stork cross-stitched in the corner. These are suitable little gifts for the new baby.

The Rural Patterns.

In ordering patterns always give number and size desired. Price of each pattern 10 cents.

7525, Plain blouse or guimpe. Cut in sizes 34 to 44 bust measure. Size 38 re-

quires two yards of 36 or 44-inch material with one-half yard 36 for peplum. 8302, Ladies' yoke blouse. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅝ yards of 36-inch material. 7839, House gown or nurse's costume. Cut in sizes 34 to 46 bust measure. Size 38 requires 5¾ yards of 36-inch material with three-eighths yard 27-inch wide for collar and cuffs. 8022, Three-piece skirt. Cut in sizes 22 to 30 waist measure. Size 26

requires 3⅜ yards of 36 or 44-inch material. 7768, Four-gored skirt for misses and small women. Cut in sizes 14, 16 and 18 years. Size 16 requires 3¾ yards of 36-inch material.

8283, Boy's blouse. Cut in sizes four, six and eight years. Size six requires 1⅝ yards of 36-inch material with three-eighths yard 27-inch wide for trimming. 7412. Boy's Russian suit. Cut in sizes two to six years. Size four requires 2½ yards of 36-inch material with three-quarters yard 27 for collar, cuffs and belt. 7164, Men's outing or negligee shirt. Cut in sizes 34 to 46 breast measure. Size 40 requires three yards of 36-inch material. 6599, Boy's baseball suit. Cut in sizes eight to 14 years. Size 12 years requires 4¼ yards of 36-inch material with one-half yards 27 for bands. 7485, boy's blouse. Cut in sizes four to 12 years. Size 10 requires two yards of 36-inch material.

Morning Cooking.

IN the cool of the morning I try to make my desserts and prepare many of my dinner and supper dishes in hot weather, and I find that I can accomplish more at sewing or housework with the knowledge that all these things are ready. If company comes unexpectedly, or callers or business calls take up part of the morning I do not get uneasy, for I know that 40 minutes' quick work in the kitchen will make matters all right and insure dinner on time.

Shortcake made with berries, cherries or ripe peaches is one of my standbys. I make the cake early in the morning and set it in a cool place so the baking powder will lie dormant until needed. We have an early dinner, so I make a quick fire, pop my cake into the oven, bring out the washed berries and in 20 minutes the cake is ready for the table. Rice custard, tapioca custard, fruit custard and other soft puddings are baked at breakfast time and merely warmed over, if I serve them warm. Apple sauce is treated in the same manner and all kinds of stewed fruits. I put the fruit in a crock and set in the oven out of the way. It will cook and keep hot till dinner is served. Rhubarb sauce is excellent in this way.

We like cold roast or boiled meats for dinner in the very hottest weather, so I cook the meat in the early morning. If we want it hot I put it in a big stoneware crock and cover closely. In this way it is hot at dinner time and we can have hot gravy. Stewed chicken is a favorite dish, but for this I keep a low fire and simmer it till noon, as we use the fat old hens for stews. Most of the cooking is done before breakfast, and the oil stove will finish it gradually.

Most people do not like warmed over vegetables, and our folks are among the number, but it isn't necessary to warm them over. I shell my peas and mix up the cream sauce in the morning, so that 20 minutes' cooking will finish them. Beans take longer, so I start them at breakfast and finish at noon. Tomatoes need little cooking, and cabbage we usually serve in the form of slaw. The green corn is picked, but not husked, in the early morning, and, then plunged into boiling water just before needed.

Bread, pies, cookies and all doughnuts are manufactured in the early morning. I know a berry pie is not quite so good made and left to stand, but we mostly use berries alone or in shortcakes. The pies I make and allow to stand are those not injured by a wait of five or six hours. Lemon, apple, peach and grape pie are really better to our tastes when cold than warm on a hot day. When I am forced to eat in town at a restaurant I know the pie was made the day before, so I consider that pies allowed to stand a few hours will not injure anyone.

One can hardly count it cooking to make frozen desserts in the morning, yet most of my recipes involve more or less cooking. When I can have ice I make up a big freezer of ice cream in the early morning and go on my way serenely with little fire either at dinner or supper. Ice cream is an ideal dessert if made at home, and we are very fond of it. It is really the easiest dessert of all, but not having ice always handicaps me.

Then there are baked beans, succotash, brown bread and a dozen and one other things that can be made in the morning before it gets very hot. These served cold or warm for dinner and supper lighten my work and give me more time to rest and enjoy life. The men like the cool dishes better and they are more wholesome. The time was when I thought it shiftless to use these makeshifts but I am bravely over that notion and glad of it. HILDA RICHMOND.

The Canning of Vegetables in the Home.

IT is quite as important for a healthful diet, as well as from an economical point of view, that the farmer's wife have on hand as goodly a supply of canned vegetables for her table during the Winter months as she has preserves, pickles, and jellies. But usually, aside from tomatoes, a wealth of tender young vegetables are annually allowed to ripen or go to waste in garden and field, under the impression that they are difficult to keep. Perhaps some of you, back in your early days of housekeeping, did attempt to can a few jars of beans or corn, and failed, all your precious time and labor in the undertaking resulting in your dumping a disgusting mass in the garbage pail, but that was simply because you did not apply the proper methods, it is just as easy to keep string beans or corn as it is peaches or berries when once you know how.

Of course you all know the secret of successful canning of fruit lies in cleanliness, a careful sterilization of jars and utensils used in the operation, as well as perfect fruit, and the same rule must be applied to the canning of vegetables, except that the latter are a better medium for the growth of bacteria, mold or germs, therefore it is necessary to cook or sterilize a vegetable longer. In order to sterilize a vegetable completely it must be heated to the boiling point and allowed to remain at this temperature for at least five hours, or one hour for three successive days. The latter method has been proved by the Department of Agriculture to be the most satisfactory for the killing of bacteria and its spores or seeds.

For the successful canning of vegetables as well as fruit good jars are indispensable. The glass ones are preferable to those of tin. Jars with wide mouths, and glass tops held in place by a wire spring, are the very best. These can be secured from almost any dealer, the better grades usually retailing at $1 to $1.25 a dozen, and if carefully handled they will last for years. Do not use old rubber rings, always buy new ones each season; a defective rubber has been the cause of many a can of fruit or vegetable spoiling. As a rule the black ones are better than the white ones, they are more firm, therefore less likly to stretch or become porous.

With jars carefully selected, the next step is the choosing and preparation of the vegetables. Do not attempt to can more than one variety at a time. Young vegetables are preferable to those more matured, their flavor is more delicate and the texture tender and crisp. They should be gathered early in the morning and prepared as soon as possible afterward, or after the sun has gone down, then put in cold water or in a cool damp place until morning. All vegetables to be canned should be firm and crisp when first put into the jars.

For sterilizing the vegetables, especially if you intend to do a number of jars at one time, there is no receptacle better, and one that is within the easy reach of every housewife, than the ordinary clothes boiler, either tin, copper, round or oblong, it will not matter so long as it has a close fitting cover. Have a piece of heavy galvanized wire, with rather a small mesh, cut to fit inside this, so the jars will not rest on the bottom. Narrow strips of wood, small stones, or straw is sometimes used for this purpose, but the wire netting is more convenient and sanitary, then too, it can be set away and used the next season.

CANNING STRING BEANS.—String fresh young beans, and break or cut into inch lengths. Add one teaspoonful of salt to each quart, and pack firmly into jars, and cover with cold water. Place on the rubber rings and covers without pressing down the wire spring at the side of the jar. Place the boiler on the range, put in the false bottom, and set in as many jars, taking care that they do not touch each other, as it will hold. Pour in three or four inches of cold water, it is not necessary to have the water reach up to the necks of the jars as was once supposed, it is the steam that will do the sterilizing. Place on the boiler cover, and bring the water to a boil, and keep it at this point for one hour. At the end of this time take off the cover and allow the steam to escape. Lift out each jar separately, and push down the spring at the side as for sealing, and set aside, or return to the boiler for the next days boiling. On the second day raise the spring at the side of the jar, place boiler over the fire and boil for another hour as before. Again remove jars, push down the spring, and allow them to stand in the same manner as the preceding day, and repeat this process the third day. At the end of this time remove the jars, clamp down the tops, and let them stand in the closet for two or three days, then test. This is best accomplished by first releasing the spring, and picking up the jar by the top, if there has been the least bit of fermentation, or the sterilization is not perfect, the top will come off. In this case the jar should be returned to the boiler and resterilized, but it is safer to throw out the contents and refill with fresh vegetable. If, however, the top is secure you may be sure your vegetable is properly sterilized and will keep as long as you wish.

CORN.—Corn should be prepared for canning as soon as possible after the ears have been pulled from their stalks. There is no vegetable that loses its original sweetness and good flavor so quickly as corn after it has been gathered. Choose only the ears with full clean grains, rejecting any defected with black spots or rust. Husk, and with a stiff hand brush remove all the silks, then shave off the grains with a sharp knife, and pack the jars full, adding one teaspoonful of salt to every quart of vegetable, and fill up the jars with cold water, then proceed to sterilize in precisely the same manner as string beans.

ASPARAGUS, PEAS AND LIMA BEANS are put up in the same way as string beans or corn. Succotash is perhaps the most difficult to keep, the two vegetables, corn and lima beans, combined seem to furnish an excellent medium for bacteria development, so the utmost care must be taken in canning it, it is safer to boil the jars containing the mixture two hours each day instead of one hour.

BEETS canned while young and tender are far superior to the matured ones we keep in the cellar during the Winter months, as also are young turnips, carrots and parsnips. These vegetables are first prepared as for the table, cooked until tender, then sliced and packed into jars, filled up with cold water, and sterilized. Cauliflower may be canned in the same manner. Summer squash should first be steamed until tender, then packed into jars and sterilized for one and one-half hours for the three successive days.

TOMATOES.—Tomatoes are easily kept owing to the acid they contain. Peel perfectly ripe but firm tomatoes, cut them into halves, press out the seeds, then divide each piece into smaller ones. Put them in a preserving kettle, and cook slowly for 30 minutes, then transfer to perfectly clean jars and seal. Should you wish to can them whole, choose only the small round ones, put them into a colander or wire frying basket, and plunge them into boiling water, drain, and remove the skins, then pack in wide mouth jars, fill up with cold water and sterilize in the same way as you would for string beans. ROSAMOND LAMPMAN.

Keeping Stove Clean.

THE best way to keep the stove clean is to have the top polished at a foundry or machine shop. This gives a permanent, bright, smooth, surface and is easily cleaned. As it becomes spotted or dull, scour with emery cloth paper wrapped around a block of wood. Then wipe off with damp cloth. It always looks nice and is easily washed. I believe it is worth the trouble. Enamels or paints burn and peel off. MRS. A. F. K.

Three Trouble Savers.

IT frequently chances that one wants a tubed cake pan either larger or smaller than the ones available. Any pan may be made into a tubed pan, by making a cylinder of stiff paper, and placing this in the centre of the pan, let someone hold the paper cylinder in place, and pour the cake batter around it, you will find that this makes a very satisfactory makeshift in time of need.

The kitten struck a playful claw through the invalid's hot-water bottle, and behold, a leak in a very good cloth-lined rubber bag resulted. We had a patch of rubber vulcanized on the orifice, but after one day's use the patch loosened at one corner and the water still oozed out. The girl who thinks of things mended the bag and after it had been well-tested she told the secret. Her father applied flexible collodion to cracked thumbs, and she thought it might apply to rubber tissue. The bottle has been used and used hard for some time since, and still that little patch holds with its unique and impromptu "stickum." Although we stumbled on to this method, we certainly did not "fall down" on it, as the saying goes.

Chewing-gum may be a pernicious product, and its legitimate use much to be deplored, but it has come in very handy in the house. A leaking gas pipe has been plastered over with chewing gum, and the gas been held in proper place until a delinquent plumber could attend to the matter. A small leak in a water pipe was similarly stopped, temporarily. A bit of cloth could be wound around to hold the gum-moulding intact if needs be. In fact many small leaks are mended temporarily with this small and inexpensive medium. ROSE SEELYE-MILLER.

Old-fashioned Apple Dumpling.

Slice apples in a baking dish, getting it heaping full. Then stir up a batter made as follows: One teacupful of buttermilk, or more according to the size of the dish; stir in flour, very, very thick, half teaspoonful soda and one or two tablespoonfuls cream. Cover the apple entirely with this mixture and bake. I like to turn a basin over it a few minutes before serving. Serve just as it is. If batter be too thin it would be likely to run over in oven. E. C. C.

R. N.-Y.—In the Middle West we met this dish under the names of pan dowdy and also apple cobbler.

BEEF GOULASH.—Two pounds of lean beef cut into inch squares. Three large onions, sliced. Two tablespoons of drippings, one cup of chopped cabbage, eight small potatoes, one teaspoon of salt, one teaspoon of paprika, one cup of water and one-half cup of milk. Place the dripping in a kettle. When smoking hot add the meat. When the meat is brown remove from the kettle and put in the onions and cabbage. Then put in the meat. Add the seasonings and the water. Cook very slowly until the meat is getting tender. Then add the potatoes. When they are done add the milk. Boil up once and serve.

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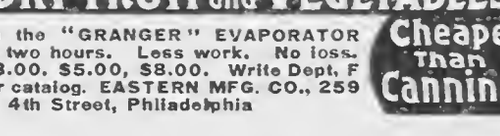

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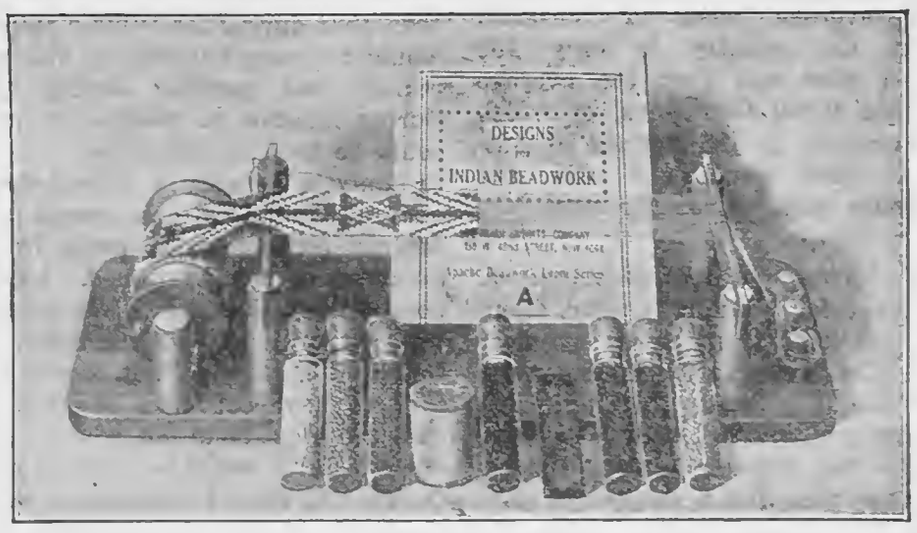

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Live Stock and Dairy

THE BROWN SWISS BREED.

MUCH has been written concerning this well-known breed, and there has been some discussion as to whether it should be rated as a dairy or dual-purpose breed. The Brown Swiss cattle are rated as dual-purpose animals only by Americans. The cows have always been regarded as dairy animals by the Swiss people, and nothing is more distasteful to them than to know that their favorite dairy breed is considered only mediocre as milk producers by American authorities. In all fairness, it should be stated that this rating is given on account of the inability of the Brown Swiss breed to present the form demanded by the American standard in judging dairy cattle.

RECORDS AS A DAIRY BREED.—I am like our editor in that I do not believe the milk-producing capacity of a cow or the egg-laying ability of a hen can be told by an external examination alone. The measure of the spring of rib, size of barrel, width of hip, length of tail, diameter of milk wells or texture and capacity of the udder are important points, but no system of lineal measurements will tell the number of pounds of butterfat a cow will produce in a year. When the Brown Swiss form is compared with that of the commonly accepted dairy breeds, the comparison is so unfavorable that the Brown Swiss is called "dual-purpose," if there be such an animal. However, when this breed is judged by the milk and butterfat production of the individual animals, it becomes a dairy breed. Some years ago, when Mr. F. H. Mason was United States consul in Switzerland, he reported that at Cham, where the Anglo-Swiss Condensed Milk Company was supplied by 6,000 cows, the average nine months yield was 5,315 pounds. This was obtained by feeding only grass and hay.

Before me I have a report by Ira Inman, Secretary Registry of Production for the Brown Swiss breed, in which he gives some of the recent records which were completed the first of June. Of the mature cows, the lowest record is 9,016.3 pounds of milk and 328.51 pounds of butterfat, while the highest record is 14,145.9 pounds of milk and 575.29 pounds of fat. In the two-year-old class, the lowest record is 6,223.8 pounds of milk containing 259.11 pounds of fat while the highest record is 11,312.2 pounds of milk containing 477.10 pounds of fat. Added to these, the fact that old College Bravura 2nd produced over 19,000 pounds of milk in a year has become a matter of history, and unlike so many cows after they have made the world's record, she is a good cow yet. When we consider that the average yield of butterfat throughout the country is only 150 pounds per cow and that the average yield for the 2,800 Guernseys, of which we have records, is 425 pounds of butterfat and 8,500 pounds of milk, the Brown Swiss rank favorably with the other dairy breeds.

BROWN SWISS CHARACTERISTICS.—A dark mouse color shading lighter along the back and head is preferred by most breeders. The conformation is somewhat blocky, while the head and neck are rather large and covered with long hair. This makes the animals appear coarse, and taken together with a sleepy eye, they present a temperament which is usually called "lymphatic." The limbs are particularly straight. The cows range between 1,400 and 1,500 pounds in weight usually and the one great point of dairy excellence, as judged by the score-card, is the udder. It is usually well hung, ample, and decorated with well-placed, good-sized teats, one at each corner. The Brown Swiss is a dairy breed. However, the number of purebred individuals in this country is very limited and will necessarily remain so as the government has issued a quarantine against their importation on account of the prevalence of the foot-and-mouth disease in Switzerland. I. J. MATHEWS.

Ingham Co., Michigan.

CYNICUS: "I once knew a fellow who gave a girl an engagement ring of opals." Sillicus: "Gracious! Wasn't it unlucky?" Cynicus: "You bet it was! She married him."—Judge.

A BUNCH OF DAIRY QUESTIONS.

WOULD it be possible to go into the market and purchase 25 or 30 cows (grades) that, with a ration of corn silage and Alfalfa hay, would yield a gross income for a year of $60, with good care and pasture in Summer? 2. About what would these cows cost per head? 3. How many pigs could be grown and fattened from the skim-milk of 30 cows, and what would it be necessary to add in order to balance the ration for the pigs? 4. Would it be just as profitable to feed the skim-milk back to the cows as it is to feed it to the pigs? 5. What is the proportion of corn silage and Alfalfa hay to feed to a cow in milk when no grain ration accompanies it? 6. If a cow is fed all she will eat of a ration of corn silage and Alfalfa, we know the flow of milk is not so great as it would be where there is grain or something similar added, but will the difference in the amount of milk or butterfat pay for the additional grain ration? 7. Are the present day milking machines entirely practical where one has to depend upon help to operate and care for same, with a personal supervision of only once a week, but with telephone connection? A. F. G.

Pennsylvania.

1. It would be quite possible to go into a dairy district and purchase the cows as suggested that would yield a gross income of dairy products amounting to $60 per year. It might be good judgment to add a small amount of grain to the silage and Alfalfa ration, but if uniformly good individuals were selected they ought to meet this condition without much effort.

2. Grade cows of good age, tuberculin-tested, would cost from $90 to $135 each, the price varying with the individuals, somewhat with the breed selected, and also depending upon their stage of lactation. It is not uncommon to pay $150 for a grade cow of known usefulness.

3. Assuming that the 30 cows would yield an average of 10 quarts of milk per day, which would indeed be high, it would mean the yielding of approximately 250 quarts or let us say, 500 pounds of skim-milk a day. This amount of skim-milk could be used to advantage in the feeding of a herd of 25 brood sows and their progeny. It is assumed, however, that during the Winter months there would be some animals on the place fattening, and possibly during the early Spring months, in which case more milk could be used to advantage. A safe rule to apply in general is to feed five pounds of milk for each one pound of grain, slightly increasing the grain in case the animals are being fattened. In this proportion they should be given all that they will eat or drink with relish. In addition to the skim-milk it would be necessary to have ear corn, digester tankage and red dog flour or wheat middlings. Some Alfalfa could be used to advantage during the Winter months, in which case it would require only ear corn, and this hay to balance the ration for the brood sows, provided some digester tankage was added to the ration as farrowing time approached.

4. It would not be profitable, in fact the system is not practiced by successful dairymen of feeding back to the cows the skim-milk. It can be used to advantage in feeding calves, but is not a safe nor an economical practice to use in the herd.

5. If the animals are fed only corn silage and Alfalfa hay they should be permitted to consume all that they will eat with relish of both products.

6. I have oftentimes claimed that there are a great many dairy cows that might yield 50 pounds of milk per day at a loss when they would give 40 pounds of milk at a profit. This difference results from the cost of the extra amount of feed, and oftentimes is not keenly appreciated by the dairymen. For instance, if a cow is fed eight pounds of grain per day, and gives 40 pounds of milk, and the ration is increased to 12 pounds of grain per day, and the milk flow increased by only five or six pounds, it is plain to be seen that the added amount of grain is not properly utilized. It is true that cows will not give as much milk on Alfalfa and silage, but it is very probable that the cost per unit would be less, and the net profit greater. Whether the difference in the amount of milk or butterfat produced would pay would depend upon a number of factors. In the first place silage and Alfalfa are both bulky feeds, and the animal would be able to digest and assimilate a larger amount of food nutrients than she would consume of these bulky feeds in case there was any question about their condition or palatability. In other words she would consume a maintenance ration, but whether or not she would consume a maximum amount would be the question. Undoubtedly she would last much longer if she was fed in this way than if fed concentrated feeds, and less difficulty would be experienced when being mated. It would be good judgment to try under one's conditions the addition of a small amount of grain, and determine by such means the extent of the profit.

7. I think it must be admitted that the milking machine is as yet in the experimental stage. Instances can be cited where the machines have been used to a distinct advantage, and with entire satisfaction to the owner, and again they have been used tentatively and discarded and condemned by the owner. Machinists usually do not apply for positions on dairy farms, and it must be admitted that it requires considerable skill to operate the milking machine, and keep it in good working order and repair. It would depend largely on the kind of help that your correspondent is employing. This argument has been met, however, with the statement that in large dairies they have no more trouble in operating the milking machines than exists in their endeavor to get responsible milkers. F. C. MINKLER.

BROWN SWISS BULL, CARL 3577.

PUREBREDS FOR CHEESE DAIRYMEN.

"I AM $10,000 ahead by breeding purebreds for the past seven years," declares James Haynes of Ashtabula County, Ohio. "Purebreds for the man who receives cheese factory and creamery prices for his milk are the best profit producers. I am not looking for my income from market milk, but my stock put my returns on the right side of the ledger. That is why I want to give the dairyman who only gets an ordinary price, the hint to get into good stock. Get the good, and breed better. When I first started in the purebred business, my father-in-law drove over to inspect my 'fool' buy, and he gave me the laugh. I bought just one cow, and here is where I made a mistake. I would have been a year ahead had I bought more than one. My first calf was a bull calf. Well, in spite of what my father-in-law said about the black and white stock, and my brother's assurance that in two years the best would not demand more than $10 above that of the grade, I rolled up my sleeves and went into the game. I sold the scrubs at public sale, and invested in good stock. Then whenever I happened on a couple of neighbors visiting they looked cheap, seemed to have side-tracked their conversation, and I know they had been talking 'fools not dead yet.' I am just an ordinary farmer, and many farmers, not all, can do as well as I. First select your breed, and stick to it, whether it be Holstein, Guernsey, Jersey or Ayrshire. Feel satisfied with your breed, read about your breed and advertise your stock, and your breed. The breeds are all good, and the competition among the breeds is what is keeping interest and prices alive.

"Another proposition is to get the best bull you can. That is where I first made a failure, in the belief that one registered bull is as good as another. Here is where I was wrong. I did some breeding to ordinary registered animals when I was in the primary class in registered stock. Now I have learned through experience and reading that that is the wrong system. Breed to a bull which is better than your best cow, and follow that practice. If I had to breed one of my good cows to an inferior bull I would hesitate a long time, for the live stock end of my dairy is the profit producing end, while my neighbors are vealing calves for $10 or $12, with close, if any profit over cheese factory milk prices. I have a liking to older bulls, for, in my experience, they produce more heifer calves. Every time I have changed bulls, I found that I had more bull calves when a young animal is introduced.

"I would advise in selecting a bull to get one with a history behind him. Get one whose ancestry not only has transmitting ability, milk production, but butter fat as well, and breed for better stock. Buy the best bull you can and if you are short the cash, try to co-operate with some of the breeders within a dozen miles of your home and buy a bull that is right. That is what I am trying to encourage some of my breeder friends to do.

"There are some men whom I would not advise to engage in high-bred stock, and those men are poor feeders. They are men who are gruff in their homes, and who are unkind in their families and herd. They are poor feeders, and the purebred animal will not stand the grief that a dung-hill is able to withstand. When I look back and see that I have paid my original $1,700 investment, and nearly $2,500 besides, and have now conservatively figuring $6,000 in stock, while the income from the dairy products have gone further in maintaining the family and improving the farm than a greater number of scrubs, I feel that I have accumulated over $1,400 each year for the past seven years in the form of live stock pretty easily, and I find that the man who keeps pure-bred stock is on the right trail."

Mr. Haynes is only milking a dozen cows, four of which are in the A. R. O. class, and he intends putting the remainder of his herd under test for advanced registry the coming Winter.

W. J.

Mare With Bruise.

I have a 12-year-old mare, weight about 1,150 pounds. A large soft, swelling or tumor has appeared on her chest, between the shoulder blades. It is swelling farther down between fore legs. It has a slight fever. In no possible manner could collar have caused the swelling, as it is too far below. Her health otherwise is in good condition. What can be done for it?

Pennsylvania. H. D.

The swelling no doubt comes from bruising on the manger or floor, or from striking by the neck yoke. Tie her up short in a stall so that she cannot lie down, then bathe the swelling with hot water three times a day. When heat and pain subside the swollen lump remaining may be painted with tincture of iodine each other day. If a serious abscess (cyst) forms, it may have to be opened by a veterinarian. A. S. A.

Depraved Appetite.

I HAVE a cow that freshened October 15, and after taking the calf from her in December, she formed the habit of eating droppings in the henhouse, and even picks them up on the yard when turned out to water. I have to keep her in the stall all day. She is rather thin, but eats well. I also have a young sow which farrowed February 6, since which time she has also taken up the same habit. Please tell me what I can do for them? D. J. D.

Virginia.

Feed plenty of wholesome feed to cow and sow and they will not waste time eating hen manure. Make them take abundant exercise out of doors every day. Add roots or silage to the rations, and make bran one of the chief feeds of the cow. Bran fed generously soon stops depraved appetite in cattle. Possibly the reason is that bran contains a lot of phosphorus. Phosphate of lime, or ground bone, may also be given when cows pick up bones, earth and other foreign matters. Indigestion is present in such cases as you describe. Add 10 per cent. of digester tankage to the rations of the sow.

A. S. A.

IS THE BERKSHIRE DISQUALIFIED?

WE purchased a Berkshire pig from a breeder, a show hog. He has one front leg white, a white spot behind his leg, and a white spot on his shoulder. Wouldn't this disqualify him in any show ring? G. B.
Greenwich, N. Y.

Irregular white markings on a Berkshire do not disqualify an animal from registration nor from competing in the show ring. Color is largely a matter of individual preference, some breeders preferring Berkshires with six white points, as the score card calls for, namely a spot in the forehead, four white feet, and white switch. Others do not object to white markings appearing on the flank, or even on the body. Occasionally one finds what is known among breeders and show-yard exhibitors as a "swirl," that is, a patch of white hairs seemingly growing or pointing in the wrong direction. With some judges this might disqualify from consideration, but in my judgment it would be foolish to discard a perfectly good animal as far as conformation and quality is concerned, simply because his color markings were not just as desired. By way of comparison a great many Guernsey breeders object seriously to what is known as a dark nose. Their official score card gives one point, on a basis of 100 to the color of the nose, and yet it is often recorded that certain judges would not under any circumstances consider an animal whose nose happened to be other than flesh color. The color of the milk is far more important than the color of the nose, and while it is important to adhere to a definite and carefully established type, in my judgment it is a mistake to consider such points so seriously.

In case of the Berkshire referred to if he has the characteristic Berkshire conformation about the head and neck, evidences development of back, ham and rib that is desired from a butcher's standpoint, if he shows thrift and an abundance of vigor and vitality, his color would be no objection. Of course, there are instances where a great deal of white would evidence a lack of pure breeding, and might indicate a dash of blood from some white-haired breed, and of course, such instances should immediately disqualify an animal if there is an abundance of evidence that the animal is not of pure breeding or properly registered. It is not uncommon to find among Berkshires hair of a sandy color in spots over the body .in fact a great many of the very best Berkshires are splashed with white or sandy color.

Value of the sire depends upon what he is able to do or leave behind him, and not what he presents in the way of color and conformation, and while it is always good judgment to stay if possible within the bounds of the score card established by the various breeders' associations for the different breeds, utility should be the dominating factor, and trivial fads or fancies should not be catered to. To me the development of those parts of the animal's carcass that add to his utility value is far more important than trifling variations in color. I do not think that any reasonable judge would fail to consider the animal referred to if he was properly fitted, and of suitable conformation, and evidenced quality to the extent that is desired in the modern pig. F. C. M.

HANDLING A KICKIMG COW.

I NOTE that H. C. H. is having trouble with a kicking heifer (page 938). I have yet to make the acquaintance of the heifer or cow which cannot be restrained or cured by the following methods. Put the animal with kicking proclivities in a good stanchion. In the wall on the other side of the passage in front of the cows put a good strong staple and ring, about 3½ or four feet from the floor, and directly in front of the cow to be dealt with. If the subject has horns tie a rope (*strong one*) around them and make a loop in it close up in front of her head. If she has no horns use a good stout halter and make the loop close to her nose. Take a pair of light tackle blocks, and hook one in your ring in the wall and the other in your halter or rope. Pull good and taut, and fasten with a slip hitch where you can readily loosen your rope (don't use ratchet or self-locking tackles). Sit down and milk. Your confirmed kicker will in all probability "start something" and land in a heap, on the floor. Loosen up, get her up, and tighten up and start in again. A very few tumbles with her neck fairly well stretched will usually teach even a cow that it is best to keep all four feet on the stable floor and stand quiet. If your kicker begins to yield to treatment it may work well to bring your rope back and tie it so that it will pass over your head and in reach of your right hand. Now don't make your hitch quite so taut and if your patient begins to fight take hold and pull firmly and quickly. Such a reminder of past experiences will sometimes work wonders.

Always remember that in handling cows, and especially kickers, you need to be quick to act, slow to wrath, very slow, and never use the "rawhide" except in extreme cases, and then it should be in the hands of a man of strong will but good judgment. We have handled some bad cases in the above manner, and when I tell you that we make a business of buying young heifers, keeping them until they freshen and are well broken and then sell them off to make room for more, you will understand that I have had a chance to give the method described a good "tryout." P. C. D.
New York.

I SEE that H. C. H. asks about a kicking heifer. I send my remedy; it has been successful a number of times. Take a strap with a buckle or a rope with a loop in it, put it around the body just in front of the udder, and cinch it tight. Then when she kicks, it will throw her. Have it in a bow-knot or a buckle so it can be easily loosened. She cannot get up with it tight. After a few trials she will give it up. I have had some cases where I would have to lay the rope or strap across the back for a while, or put it on loose until they got over the habit. A. N. G.
Tennessee.

ON page 938 an inquirer asks how to cure a kicking heifer. Fasten her head up so she cannot move it much. Tie a rope to her left hind foot, then make a hitch around the right foot, so that it may be pulled back a little further than a good milking position, then fasten to a ring in the floor or the partition back of the stall. If this is done right she will not be able to move, and I have seen two very bad kickers cured by this trick.
New York. N. W. B.

OUR Ayrshire would look at the milker, and if her large black eyes discovered that he needed a change, she would land the milk pail against the rear wall, and that bucket never recovered; the milker too was lucky if he escaped a thump. She was young and a large milker, and we hardly wished to almost give her away. We tried this plan: First she was treated kindly and given feed or salt; was stanchioned in the old wood stanchion and we put a blanket on her. Ours is duck, about 9x6 feet. We milk carefully, and if she kicks, use a strap and use it on her leg she kicks with. Our strap is a part of our old halter; don't spare the rod and spoil the child, put it on. That one was completely cured, and this year we have cured another promising heifer and the two operations, making good cows from those, is worth more than $100 to us. D. C. K.

A MILKING FAMILY.—Prof G. G. White of the Connecticut Agricultural College reports a Holstein family: De Kol Hubbard Pietertje now has a great grand-daughter. It will be remembered that De Kol Hubbard Pietertje made the State record by producing in one year 23,175 pounds milk and 1,038 pounds butter. Her daughter, De Kol Hubbard Pietertje 2nd produced in March this year 2,038 pounds milk, in April 1,835 pounds, in May 1,959 pounds and in June 1,767 pounds. The grand-daughter, Minnie Hubbard De Kol, freshened at 28 months of age and in less than a week after freshening milked up to 38 pounds in a day. The great grand-daughter is now only a few days old.

SOUR MILK AND CALVES.—On page 915, you say: "The Department of Agriculture reports experiments in feeding sour milk to calves and that in no case did it cause digestive disturbance." While we have successfully raised calves on sour milk, we have also lost them by bloat. We once had a calf that would invariably drink so fast as to cause it to choke. One morning in drinking, it choked worse than ever, and frothing from the mouth. Someone advised giving it soda, saying that was highly recommended. In my desperation I administered a dose, and had I taken a hammer and knocked that calf down, it could not have dropped any quicker—dying immediately at my feet. Moral, don't give soda with sour milk.
F. M. W.

DAIRY CATTLE

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

Holstein Calves—3 to 5 weeks old, 15-16ths pure, well marked, $20 each, crated for shipment anywhere. Edgewood Farm, Whitewater, Wis.

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DAIRY CATTLE

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Piltsburgh, Pa.

For Sale—ONE TWO-YEAR-OLD —ONE YEARLING PUREBRED Jersey Bulls Registered. Solid color. Price reasonable. DOE BROTHERS, - Bradford, Vermont

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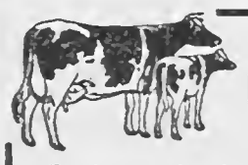

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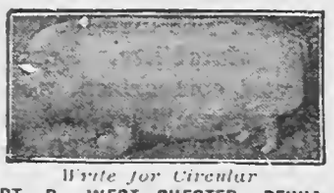

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FEEDING PROBLEMS.

Feeding Value of Wheat.

CAN we afford to feed wheat to growing shotes or feeding hogs? At current prices, wheat 71; corn 80 cents a bushel and hominy meal $28 per ton, it seems wheat could be fed cheaper than corn. I have an idea a ration of half wheat and half hominy meal, wheat either being ground or soaked, would make a good ration. C. V. E.
Clayton, Ind.

There is very little difference between the feeding value of whole wheat and whole corn for use with swine. The wheat if soaked or ground and fed alone in the form of a slop is very apt to cause disorders of the digestive system, it being rather doughy in its nature, and at the price quoted, namely wheat at 71 and corn at 80, I would suggest equal parts of corn and wheat to which 10 per cent. of digester tankage has been added. The hominy at $28 per ton could be substituted safely for the corn, yet I would prefer feeding the ground wheat and tankage in the form of a slop, and let them have the corn on the cob. I do not think that it pays to grind corn for pigs unless they are very small, and even at this age they should not be given large amounts of soaked or shelled corn. Your suggestion of a ration of equal parts of ground wheat and hominy would do very well in case you fed in addition some digester tankage. The comparative analysis of wheat, corn and hominy feed is given below:

	Water.	Ash.	Crude Protein.	Carbohydrates. Fiber.	Carbohydrates. N-Free extract.	Fat.
Cornmeal....	15.0	1.4	9.2	1.9	68.7	3.8
Hominy feed	9.6	2.7	10.5	4.9	64.3	8.0
Wheat.....	10.5	1.8	11.9	1.8	71.9	2.1

You will note that there is not a great deal of difference between the wheat and the corn, it being a question of palatability. The digester tankage will increase the palatability. Furthermore, by means of cost comparison, wheat at 71 cents per bushel would be at the rate of $23.66 per ton, while corn at 80 cents per bushel, figuring 60 pounds to the bushel, would be at the rate of $26.66 per ton. F. C. M.

Question About Feeding Wheat.

"DO you consider wheat of equal value with corn for feeding hogs?"

Experimental work indicates that wheat and corn are about equal pound for pound as a hog feed. Both corn and wheat have about the same composition. The wheat is considered a little better ration for growing animals, corn on the other hand being preferred as a fattening feeding stuff. Since wheat and corn have about the same composition, being high in carbohydrates and fat, or energy building nutrients, and low in protein, or muscle-building nutrients, they should both be supplemented with some other feed such as tankage, linseed oil meal, skim-milk and the like. In other words, when wheat is added to the ration it should be considered a substitute for corn rather than a supplement to corn.

"Is there danger in feeding a single wheat ration on account of digestive troubles?"

Data on the above subjects is rather conflicting. The results of some experiments say that such is the case, while that of other experiments do not record this difficulty. The Missouri station last Winter fed straight wheat to shotes for 120 days without any bad results along this line.

"In feeding wheat to hogs, should it be crushed, ground fine or fed whole, and should it be fed dry or soaked, and if soaked, will it injure it to sour it or should it be fed sweet? The cost of grinding is about five cents a bushel in this State."

Among other things, Henry in his Feeds and Feeding, has the following to say upon this question:

Rommel, summarizing nine trials at five stations where whole or ground grains—peas, wheat, rye, oats and barley—were fed, either dry or soaked, to fattening pigs, found that it required approximately 473 pounds of whole grain or 415 pounds of ground grain to produce 100 pounds of gain—a saving of 12 per cent. by grinding.

The above does not apply to corn, but to the small grains like wheat. The Nebraska Station has unpublished data which indicates that better results may be expected with soaked ground wheat than with whole wheat which has been soaked. They found that even when the whole wheat was soaked, much of it passed through the hogs. In their experiment the increased gains made by grinding more than paid for their cost of grinding, which was estimated at four cents per bushel. While I know of no data on the subject it is usually considered that crushed or coarsely ground wheat is to be preferred to that which has been finely ground, since it does not form such a sticky mass in the hog's mouth. There is no data to show that any advantage is to be had by soaking the wheat after grinding. Most men in practice, however, prefer to feed it wet rather than dry, since there is not so much danger of its being wasted. If not allowed to become too sour, souring will perhaps give as good results as sweet feed. However, there is no advantage in feeding it sour. It should always be fed one way or the other, i.e., sweet feed should not be fed once and sour feed another, since this kind of feeding is apt to cause indigestion.

"Would you expect better gains by feeding wheat and corn mixed than when either is fed alone?"

Experimental work indicates that a mixture of corn and wheat is more efficient than when either of these feeds are fed alone. I should advise, however, that the ration also include a small amount of some feed such as tankage or linseed oil meal.

"When corn is worth 75 cents and wheat 65, in what proportion would you feed it to pigs weighing from 75 to 150 pounds, and to hogs in the fattening period, 150 to 250 pounds?"

A good ration for the lighter weight shote would be corn five parts, wheat five parts, tankage one part by weight. For the heavier shotes the amount of wheat and corn might be increased until the corn and wheat would make up from 12 to 16 parts of the ration. The younger the shotes the larger the amount of tankage required.

"With corn at 65 cents and wheat at 70, and hogs at seven cents, will it not pay better to feed wheat to hogs than it will to sell it?"

With feeds at the above prices it would pay better to sell the wheat than to feed it, since the ration of corn and tankage would be more economical than a ration of corn, wheat and tankage, or wheat and tankage.

"What do you think of wheat as a ration for brood sows?"

There is little of any data available showing the value of wheat when fed to brood sows. There is somewhat a prevailing opinion in sections where wheat is used to a large extent for this purpose that the wheat will cause barrenness in brood sows. As stated above, however, there is no definite data to show that this is the case. Wheat in limited amounts is to be recommended and the price of wheat as compared with corn makes the feeding of wheat economical.

"What is the best way to feed wheat, on a feeding floor, or in troughs?"

Since it is recommended that wheat be fed ground and wet, it would be best, of course, to feed it in troughs. The Missouri Experiment Station has some unpublished data along these lines and is planning to conduct further tests and hopes to have data available for distribution along this line in the near future.
Mo. Exp. Station. L. A. WEAVER.

Feeding Young Bull.

I AM raising a purebred Holstein bull. He is now 11 months old. I do not need him for service until June, when he will be 16 months old. I am told by a number of farmers that if I grain him too heavily to grow him I will spoil him for breeding purposes. Let me know your opinion on this. I am feeding corn and oats (ground) equal parts in weight. They claim they have known dairies to go farrow by using such a bull. C. W. M.
Rossburg, N. Y.

The bull calf designed for breeding purposes should be handled and fed in such a manner that it is certain he reaches his full natural development. Ground oats and corn, equal parts, makes a good grain mixture, and should be fed liberally. While there is no advantage in getting the bull calf fat while young, there is no special harm done if he appears a little smooth and beefy at this age. An underfed animal remains undersized, and while his progeny will not necessarily be smaller on account of a characteristic caused in this way, it is impossible to know whether his undersize has been caused by inheritance or under feeding, and he is always looked upon unfavorably. F. C. MINKLER.

LIVE STOCK NOTES.

THE present dairy conditions in this section are very good. Pastures are in good condition, with the prospect that they will continue so for some time. The hay crop will be from one-third to one-quarter better than last year. The treasurer of the North Pitcher Creamery informs me that the price patrons have received for their milk thus far in 1914 is a trifle better than for the same period last year. While most herds kept in this neighborhood are grade Jerseys and Holstein, some of our farmers are working into registered stock. Most of our thrifty farmers are interested in improving their herds by using purebred bulls. "Is there any profit in the dairy business at present prices?" That depends on who the man is. In support of this conclusion I will relate a bit of information at hand and leave you to draw your own conclusions. Within a short distance of where I write there lives a dairyman, who in addition to his dairy keeps several hundred hens. A few years ago his farm was covered with a heavy mortgage, but by hard work and the exercise of good judgment he has not only lifted the mortgage, built a large barn and house with modern improvements, besides has accumulated a substantial bank account, and after accomplishing this he invested in an automobile, and while he is still on his job and sees to it that nothing goes to waste, he occasionally has a day off and takes a spin about country. I am told of another man in a nearby town, whose worldly goods consisted of a hundred-acre farm, stocked with a herd of 10 cows, the income from which he depended upon to support his family of seven; recently he sold his 10 cows for $750 and invested the money in an automobile. Granting this to be true; we may reasonably expect that at least one of three things will happen; either he will wear out his automobile going about the country trying to make himself and others believe that dairying does not pay, or dispose of his farm and retire to some city and join the vast army of kickers; or else the transaction will teach him a lesson, which in after years may be well worth the price of an automobile.
Chenango Co., N. Y. H. D. F.

Value of Hay Caps.

HOARD'S Dairyman gives the following testimony for hay crops:

"The excessive rains during nearly the whole of June have produced very serious loss to the first cutting of Alfalfa in Wisconsin. Where hay caps were not used, in many instances there has resulted an almost total loss of the cutting, and even when a portion was saved the damage to its feeding value may be fairly estimated to exceed 66⅔ per cent. where no hay caps were used. On the Hoard's Dairyman Farm, for example, we have had nearly 40 acres standing in the cock under caps from two to three weeks. The result is that all of the bottom of the cocks on a considerable portion had to be thrown aside and drawn to the manure heap. The balance comes out in very fair feeding condition. There has also been serious injury through the smothering of the roots under the cocks as it was impossible to pull them over upon fresh ground often enough to prevent this injury. Without the hay-caps we would have lost about the whole of the first cutting. As it is, we have saved and put into the mow in the last few days, in fair condition the entire crop with a loss not to exceed 10 to 15 per cent. When we consider the high feeding value of Alfalfa it is amazing to us to see how many farmers there are who attempt to grow it without making any provision for safe curing with hay-caps.

AN exceedingly fat man approached the Pullman window and asked for a lower berth. He was told that there were none left. "Gimme an upper, then." "Pardon me," said the ticket seller, as he took a glance at the Falstaffian proportions of the man, "but you'll never be able to get into an upper." The fat person smiled grimly. "I won't have to," quoth he. "When the man who has the lower berth has a look at me he'll be glad to change."—Chicago Live Stock World.

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The Henyard.

THE EGG-LAYING CONTEST.

WHITE LEGHORNS continue to make all the high scores. Seven pens of the White Leghorns laid 50 eggs or more during the week. The highest number reached by any of the 14 other breeds represented in the contest, was 46, laid by Albert T. Lenzen's White Plymouth Rocks.

The great event at Storrs this week was the three-day meeting of the Connecticut Poultry Association, and presence of, and three lectures delivered by, Mr. Tom Barron; also Mr. Barron's demonstration at the contest plant of his ability to pick out the birds that were good or poor layers. It is not in my power to give a synopsis of these "talks" of Mr. Barron, but they were taken down by a stenographer, and will be published in full later. It was Mr. Barron's first attempt to address an audience from a public platform, but the simple, straightforward, honest personality of the man, "captured" the audience at once; and he could not appear after that without being greeted with a round of hearty applause. He told how he got his first Wyandottes, and how he had bred them since, and all the talk there has been in this country about his cross breeding, was dissipated into thin air, and there was no need of his hearty denial, to get that thought entirely out of the minds of his hearers. The attendance at the meetings was about double that of any previous meeting, and poultry notabilities from far and near were present.

The report for this, the thirty-ninth week, shows Mr. Barron's pen of White Leghorns leading the week's record with a score of 58; Glenview Poultry Farm taking second place, with a score of 56. Marwood Poultry Farm, from Butler, Pa., is third, with a record of 54. Francis F. Lincoln's pen tied with A. B. Hall's pen for fourth place, with scores of 51 each. P. G. Platt's pen laid 50, as did A. B. Hall's pen. The week's record follows:

Barred Rocks.	Week	Total
A. B. Hall, Connecticut	39	1,050
Frank L. Tuttle, Massachusetts	27	1,104
Waveny Farm, Connecticut	33	1,044
J. F. Francais, New York	33	1,277
White P. Rocks.		
Albert T. Lenzen, Massachusetts	46	1,149
F. H. Benton, Connecticut	32	1,164
Storrs Agr. Station, Connecticut	29	942
Storrs Agr. Station, Connecticut	33	993
Storrs Agr. Station, Connecticut	25	1,135
Storrs Agr. Station, Connecticut	24	996
Storrs Agr. Station, Connecticut	29	835
Buff P. Rocks.		
A. A. Hall, Connecticut	32	1,155
W. C. Morgan, Jr., Connecticut	32	902
White Wyandottes.		
Tom Barron, England	45	1,636
West Mt. Plty. Yards, Connecticut	18	967
Merrythought Farm, Connecticut	43	1,467
Neale Bros., Rhode Island	36	1,461
D. J. Ryan & Son, Connecticut	22	1,105
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	22	1,093
Dr. N. W. Sanborn, Massachusetts	40	1,074
Am. Buff Wyan. Club, New York	25	974
H. L. Hamilton, Connecticut	33	789
Columbian Wyandottes.		
Natl. C. Wyan. Club, Massachusetts	17	1,069
Single Comb Reds.		
Robert Seaman, New York	20	865
J. S. Gillespie, Connecticut	19	1,086
Dr. J. C. Dingman, New York	34	993
Burnham Plty. Farm, Massachusetts	27	848
H. P. Deming, Connecticut	31	1,043
Geo. P. Dearborn, Florida	41	1,183
Dr. J. A. Ritchie, Pennsylvania	29	1,277
Ernest Underhill, New Jersey	37	969
W. H. Bumsted, Connecticut	17	716
Pinecrest Orchards, Massachusetts	14	1,252
Harry B. Cook, Connecticut	24	1,078
Colonial Farm, New Hampshire	27	1,128
A. B. Brundage, Connecticut	45	1,373
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	39	1,093
C. S. Scoville, Connecticut	31	808
White Leghorns.		
Storrs Agr. Station, Connecticut	46	1,269
Storrs Agr. Station, Connecticut	38	1,336
Storrs Agr. Station, Connecticut	38	1,348
Storrs Agr. Station, Connecticut	45	1,637
Storrs Agr. Station, Connecticut	42	1,220
Braeside Plty. Farm, Pennsylvania	34	1,123
Glenview Plty. Farm, Connecticut	56	1,282
Manor Plty. Farm, New York	35	1,175
A. B. Hall, Connecticut	51	1,200
Marwood Plty. Farm, Pennsylvania	54	1,313
Geo. M. Harris, Connecticut	33	1,032
Bonnie Brook Farm, New York	50	1,318
N. W. Hendryx, Connecticut	49	1,189
J. J. Linehan, Massachusetts	37	1,099
F. F. Lincoln, Connecticut	51	1,615
Cecil Guernsey, New York	34	1,378
Thos. W. Moore, Connecticut	47	1,217
Chas. N. St. John, New York	47	1,210
Chas. W. Sherwood, Connecticut	42	1,148
L. E. Sands, Pennsylvania	28	1,170
Tomoka Plty. Farm, Connecticut	32	1,050
Venture Plty. Farm, New York	33	991
Mrs. K. E. Woodruff, Connecticut	42	1,193
Windsweep Farm, Connecticut	32	1,084
C. H. Savage, Connecticut	44	1,205
P. G. Platt, Pennsylvania	50	1,364
Heneta Bone Co., New Jersey	19	431
F. M. Peasley, Connecticut	42	1,298
Chas. Heigl, Ohio	42	1,143
Tom Barron, England	58	1,511
Branford Farm, Connecticut	43	1,333
James Munn, Massachusetts	38	1,111
Geo. A. Cosgrove, Connecticut	47	1,174
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	32	1,221
Blue Andalusians.		
E. D. Bird, Connecticut	40	1,017
Buff Orpingtons.		
O. Wilson, West Virginia	15	829
White Orpingtons.		
P. A. Demgar, New York	35	814
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	18	629
Silver Campines.		
W. J. H. Lobel, New Jersey	37	975
Dunghills.		
H. W. Collingwood, New Jersey	43	988
Daniel Hine, Connecticut	35	909
Daniel Hine, Connecticut	24	951
Mixed Breeds.		
Profitable Poultry, Massachusetts	34	1,028
Profitable Poultry, Massachusetts	37	1,037

GEO. A. COSGROVE.

Sick Turkeys.

IN April, 1913, we started turkey raising. We had five turkeys, but all except one hen died last Summer, the one being saved by the use of one-tenth grain calomel tablets. This turkey hen started to lay April 3 of this year, and has laid up to June 26, about 55 or 60 eggs, all of which were infertile, as we could not find a purebred tom. June 20 the turkey ate a great deal of wheat, which caused her to become ill, as it is now fermenting in her crop. We have been doctoring her with calomel, but have been giving her three-grain quinine capsules, as we thought that too much calomel would kill the turkey. Would you advise us as how to treat this turkey?

Jefferson Barracks, Mo. F. M. H.

I would not depend too much upon drugs in the case of sick turkeys, or humans either; there are comparatively few whose action we fully understand, and they should be used as adjunets to hygienic and other care rather than as the sole dependence in sickness. The calomel, given in moderate dosage and for short periods of time, was very likely beneficial to this turkey, and about one grain of quinine per day would be of some value as a bitter tonic. Their value and the beneficial results of their use are likely to be very much overestimated, however, especially by those whose knowledge of the action of drugs is limited. It is not at all unlikely that your other turkeys died of that great scourge of turkeydom, blackhead, and that this one survived either by reason of a milder infection or of greater constitutional vigor. This disease has rendered turkey raising a most precarious occupation, not only in your State, but in most others of the union. No real preventive or cure has yet been found though much study is being given to it. I would suggest a full dose of castor oil—about a tablespoonful—to this sick turkey and after its action a limited diet in which soured skim-milk forms an important part. This latter should also be fed to the poults from the start in the hope that it will exert the same beneficial action that it shows when given to chicks subject to infectious bacterial diseases.

M. B. D.

Weak-legged Cockerel.

I HAVE a young rooster about 14 weeks old, weighs three pounds 14 ounces. He seems to be so weak in his legs he can hardly stand. Can it be he is growing beyond his strength? Could you tell me what it is and what to do for him? I feed crushed oats, cornmeal, oatmeal and beef scraps, also whole corn.

New Jersey. M. S.

Common causes of leg weakness in fowls at any age are heavy feeding with too little exercise and rheumatism from confinement to damp quarters. I would give this cockerel free range upon dry ground and feed him sufficiently sparingly to induce active exercise upon his part. If he does not recover under this care, he should be discarded and not used in a breeding pen.

M. B. D.

Black Yolks.

WHY do eggs from healthy hens have black yolks? Eggs are gathered three times a day. For two weeks I fed rye and oats, equal parts and bran, all they can eat; they have free range. No cockerels run with them. I have one-half acre of rape close to henhouse; chickens eat lots of it. F. J. Y.

Ohio.

The only explanation of black yolks in eggs that I can offer is the presence of blood clots, which usually are found in the white of the egg but may occur either upon or within the yolk. Blood clots are caused by over congestion of the egg-making organs, with occasional rupture of a small blood vessel and consequent formation of a clot which is included within the egg as it forms. Heavy feeding, especially upon meat food, and the use of condiments is believed to contribute to it. The remedy is more green food and less food of a stimulating nature, plenty of exercise and no attempts to unduly force egg production. It may be that you have several hens that are especially subject to this trouble and if you can detect them they should be removed from the flock. If your hens are all affected, I can offer no explanation of the phenomenen.

M. B. D.

Sour Milk and White Diarrhœa.

I AM pleased to read, on page 936, that C. B. H. has been able to raise so high a percentage of chicks infected with white diarrhœa, after using my method of squirting a pen dropper full of sour milk (lactic acid) down the throat as soon as dry, or described in my article on page 790. C. B. H.'s experience is the same as other poultrymen who have tried it.

Here at Broad Brook Farm all chicks are on range and growing fast and strong, some of the pullets are laying. Of 5,013 chicks put in the brooders, total loss to date is 1,181, chicks or 23.1 per cent. All this goes to prove the great value of this method of filling the chicks' crops with sour skimmed milk (lactic acid) as soon as they are dry enough to take from the incubator. It also proves that sour skimmed milk given at this time will overcome the disease and make it possible to raise a high percentage of chicks hatched from eggs laid by infected hens. One dose at this time has more value as a preventive and cure than all the sour skimmed milk fed as soon as the chicks are able to drink it themselves.

New York. EDWARD S. PARSONS.

Droopy Chicks.

CHICKENS four weeks old stand around droopy, will not eat. They act like that a day or two and die. They have been having chick feed, scratch feed, wheat, whole corn, mash made dry of mixed feed and sour milk. Can you suggest a remedy? W. H. C.

New York.

Chicks that reach the age of three to four weeks and then droop and die are usually suffering from intestinal disease due to infection and ordinarily show more or less diarrhœa. There is little or nothing to be done for them after they show symptoms of disease, and the proper course is to prevent infection by hatching only from vigorous, healthy stock; keep the chicks upon clean, uninfected, ground; ground that has not been used before by sick chicks; clean and disinfect all brooders before using; and finally, feed an abundance of sour skim-milk from the start. This latter food seems to have a markedly beneficial influence in preventing the development of diarrhœal diseases. In a flock showing these symptoms, all affected chicks should be promptly removed and their careasses buried; the quarters of the flock should be thoroughly cleaned, new, fresh, litter used, eating and drinking utensils scalded with boiling water; sour milk added to their diet. If the greater part of a flock are affected, it may be well to discontinue the use of hatching eggs from the same stock, some diarrhœal diseases are transmitted from hens to chicks. M. B. D.

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Department "M"

The Rural New-Yorker
333 West 30th St., New York City

PUBLISHER'S DESK

I SHIPPED four cases of eggs and four coops of broilers to F. Ehrenkranz, 565 Orange Street, Newark, N. J., for which he agreed to pay 30 cents per pound for broilers and top New York price for eggs. This was three weeks ago, and at that time broilers were 28 cents. By the time he received them they had dropped to 25 cents. He received them the 7th of July and wrote me they were too small and had no feathers, and wanted to know what to do with them. He dated his letter the 8th; it was postmarked in Newark on the 10th and delivered out here on the 13th. I wired him at once to ship them to Hance Brothers, New York. He stated in his letter that the eggs were O. K. Saturday, July 18, he sent me a check and letter stating a lot of the broilers were dead and Hance Bros. refused them, and that he got $12 for them. He gave me 28 cents for two cases of eggs and 23½ cents for the other two cases, saying they were very poor. It is very evident to me that the man is trying to cheat me. I am just getting started here and I feel the loss. The goods were all of my own production and I know they were first-class. R. W. H.

New York.

During the past Winter we have had considerable complaint from our subscribers about Mr. Ehrenkranz of the Orange Butter & Egg Co. When we took the matters up with him he disputed each and every item, and it was only by the most persistent dunning we were able to get some of the accounts adjusted. Others are still open. He made various offers for settlement some time in the future, which were not kept. There is little encouragement in this record that future shippers to this party can look for satisfactory settlements if payment is secured at all.

From time to time I have noticed articles referring to a Dr. Ulman's society for suppressing dishonesty and frauds. As I subscribed for your paper since the article appeared first, I must have missed the editorial, but have gathered from the little articles that have been published enough to convince me that I should become a member. Will you explain what is necessary to become such? I take no paper or magazine that prints liquor, patent medicine or what I believe to be fraudulent advertisements. All publishers should be compelled to stand back of their advertisers, and the subscribers are the ones to compel such an act. You are right; where are the women? A large per cent. of the women's magazines of today are full of patent medicine advertisements. There is going to be some hair-pulling before long, and a chance to give that "editor" who allowed one to be swindled, something he won't forget in a minute. N. S.

Maine.

This friend already qualifies as a charter member of the Anti-Fake Club. All that is necessary for anyone to become a member is to send in name and address, and signify intention to report to the club objectionable or deceptive advertising, and the papers in which it appears. The plan will be to first protest to the publisher; and if he persists to refuse to receive the paper. The above correspondent is correct. The subscribers of such papers are the sufferers, and they should compel the publisher to respect their interests. Now that they have an opportunity, we believe they will do it.

Three women have asked to see the next woman's number; we pass ours on anyway, so please may I have three samples of the Woman's Magazine? At least one wants to see it with a view to subscribing. E. S. K.

We shall be pleased to send all the sample copies any of our friends want for themselves, their neighbors and friends anywhere. They may be sent in a bundle to the old subscriber or separately direct to the persons for whom they are intended, if the names and addresses are sent us. We propose to make this woman's number the best magazine in this country for country women. We just want to learn direct from these women what they want, and they shall have it without regard to the work or cost. In other words, we propose to make it equal to the other features of the paper.

Last September, my father bought of the Wauchula Development Co., Wauchula, Fla., 20 acres of land, sending them $20 for the first payment, the price being $40 per acre, one dollar per acre to be paid per month until paid for. A few days later the president of the company wrote us that they were just opening up a new tract of land (the finest in Florida), and why not change our holdings to it. My father then sent $20 more for 20 additional acres of land—10 acres for myself and 10 for my mother, all the land to be in a body if practical to do so. They wrote us that they had selected an ideal tract of combination land suitable for both truck and oranges. In November my father went to Florida, (we were living at Culpeper, Va.,) to inspect the land and to locate permanently, as we had sold our holdings in Virginia. My father arrived in Wauchula about 10 a. m., was taken out to Vandolah (which is eight miles west of Wauchula) to inspect the property allotted to him. He did not like the looks of it, as there were about five acres of water on it, (in several ponds) but their agent, Mr. Vandolah, assured him that "it was fine truck land and that truck land was more valuable than orange land."

My father was rushed back to Wauchula in an auto and up into their office. He was there presented with a card to sign; a card of acceptance for the land, which he signed upon the assurance of Mr. Vandolah that it was fine land. My father stayed for several days around Wauchula, and asked the farmers about the land around Vandolah, and they all said it was no good, being what is called "flat woods pine." He also walked out to Vandolah to inspect it more closely, and he decided he did not want it, so he did not pay any more money out for it. I then wrote the company in December that my father had inspected the land and found it unsatisfactory and asked that they return our money per their guarantee of July 21, 1913. The terms provided that any time within a year we have the right to demand our money back, together with six per cent. interest, if we were not thoroughly satisfied with the investment.

This is the dry season in Florida and I have been told by the natives that this land is covered three and four feet deep with water in the Summer. Mother and I have tried to get our money ($40) back but they refused on the ground that father signed a card of acceptance for it. He did sign the card for his 20 acres but not for ours. They also claim that not having paid up we have also forfeited our rights. They were willing to give us credit for what we had paid if we would take other land, but not to give money back. Now I wish you would see if we could get any of our money back from them—$80 is what we have paid them. The people who are buyers of this land are mostly poor people from all over the country. The company advertises very extensively, but not in THE R. N.-Y. They make much of their bankers' guarantee. R. F. H.

Florida.

We let this young man tell his story for the benefit of people who go to Florida or other places to buy lands promoted by companies and agents. As he says it is poor people who take up such propositions. They have no money and no information to go to law to recover their money. It would cost them more to get it back than the face of it. The promoters know this, and the investors are helpless. No man should buy land anywhere until after he has inspected it, and spent time enough in the neighborhood to become familiar with the condition of the land and the character of the neighborhood. No man should ever sign a contract of purchase while under the influence of one of these land promoters. Spend several days or weeks in the vicinity, interview the natives and the business men, then if you are satisfied, go back to the agent and make your purchase; but you will usually find that you can buy better land from others for less money, and in 99 cases out of a hundred you will keep your money in your pocket and go home satisfied with your prudence and your providence.

Your work of securing, when possible, payment of delinquent accounts for your subscribers and fearlessly exposing fakes is a matter which cannot be passed without special commendation. Surely it is "worth while."

Will you, sometime when you can spare the space, kindly set forth, briefly, in your paper, the purposes and aims of the Anti-Fake Club, what constitutes membership, etc? Wishing you every success, I remain, W. K.

Wisconsin.

The purpose of the Anti-Fake Club is simply to discourage fake and fraudulent advertising; and to protect one another from their illusive schemes and deceptive advertisements. The idea is simply that the members report any deceptive or misleading advertisements that they find in papers or in circulars through the mail. They will protest to publishers who print such advertisements in their papers, and if any publisher persists in carying the objectionable advertisements, then the members of the club would all refuse to receive the paper into their homes.

"WHAT a polished talker Jobson is." "Isn't he? I suppose that's the reason he slips up on so many of his arguments."—Boston Evening Transcript.

Abscess.

WHAT is the matter with my horse? He is a gelding, nine years old, and is troubled with a swelling on the point and side of his right shoulder. It does not seem to bother him while working, but if he rests a few days it gets larger, and finally comes to a head and bursts. Even after it bursts a hard lump remains. It has done this three times within the last six months. The man I got him of used a very poorly fitting collar. Just before it bursts it seems to affect his muscles for several inches each way. Makes him drag his right foot in walking. W. B.

Greenacres, Wash.

Clip off the hair and then open the abscess freely. Evacuate pus or serum, inject a little tincture of iodine, and then pack the cavity once daily with oakum saturated in a mixture of equal parts of turpentine and raw linseed oil.

A. S. A.

Indigestion.

MY driving mare, seven years old has always been a g and roadster, a very free driver and never tires. This Spring she had little pimples over her body in several places. Our doctor said he thought she had been stung with bees some time and it would last in her system for years. He told me to feed her a teaspoonful of sulphur each day for six days and wash her with disinfected water. When driven she is all right till she gets warm, then she becomes nervous and drives badly. I have changed different parts of the harness and used her very easily with no result. I am going to breed her, but I do not want to turn her into pasture. T. H.

New York.

Clip the mare and wash the affected parts twice a week with a 1-100 solution of coal tar disinfectant. Rub in sulphur while skin is damp. The dose of sulphur would be a tablespoonful once daily, with a like amount of salt; but we should prefer to give her half an ounce of granular hyposulphite of soda night and morning until her skin is in good condition. Do not feed corn or grass. Feed a light ration of whole oats, wheat bran and good hay. Work or exercise her every day and let her occupy a box stall when in the stable. Groom her twice a day. Bees had nothing to do with the trouble. She would not be liable to lose her colt if fed as you suggest. If she switches tie a strand of tail hair to her breeching strap on each side of hind quarters. A. S. A.

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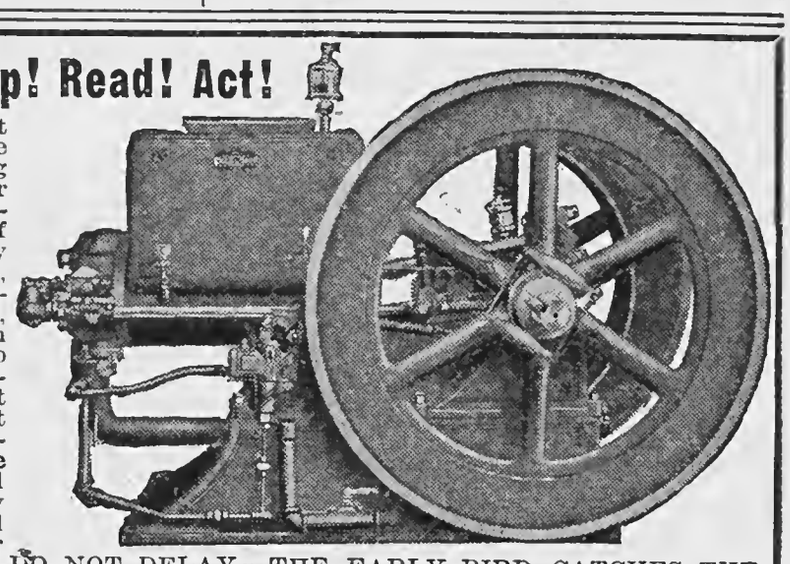

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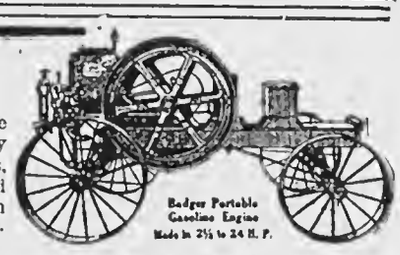

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Aug. 7, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.01 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

During the week there has been an advance of one-half cent and a decline of one cent on the top grades of butter. Receipts of these grades are not excessive, but business very dull. City-made butter is in good demand; packing stock scarce and one to two cents higher, some sales being made at 21 cents.

Creamery, extra, lb	28	@	29
Good to Choice	23	@	27
Lower Grades	20	@	22
State Dairy, best	27	@	28
Common to Good	18	@	24
Factory	18	@	21
Packing Stock	18	@	21

Elgin, Ill., butter market 28 cents.
Philadelphia, western creamery, 30 cents.

CHEESE.

Market is very firm and one-fourth cent higher on most grades. Imports of special cheese are practically at a standstill, and prices quoted rather nominal, with probability of a substantial increase at next report.

Whole Milk, fresh, specials	15¼	@	15⅜
Average fancy	14¾	@	15
Primo	14	@	14⅛
Under grades	10½	@	13⅛
Daisies	15	@	15¾
Skims, specials	11¼	@	12
Good to choice	10	@	11
Poor to fair	5	@	9⅛
Fancy Cheese, Sage	18	@	19
Swiss	17	@	20
Young America	16	@	16½
Limburger	15	@	17
Roquefort	28	@	30
Stilton	46	@	48
Parmesan	25	@	28

EGGS.

The best new-laid are two to three cents higher, but this refers to only a small proportion of receipts. The demand is slow. Receipts from the West are showing irregular quality, close candling being needed to meet the needs of even fairly good trade. There are frequently complaints of strange flavors in eggs, which can be traced to excessive use of condimental foods. The writer has tasted eggs strongly flavored with fenugreek, an ingredient of many foods and "condition powders." Any strong or aromatic flavor is quite sure to make trouble with the eggs. Beef scrap, oil meal, etc., should be looked after carefully. Bad beef scrap is an especially pernicious flavoring for eggs.

White, choice to fancy, large	32	@	33
Common to good	25	@	30
Mixed colors, best	28	@	30
Common to good	18	@	22
Western fresh, white	23	@	26
Lower grades	18	@	20
Storage, best	25	@	26
Lower grades	19	@	24

FRESH FRUITS.

Receipts of ordinary apples are heavy and prices low; some scarcely bringing charges. Unless apples are very scarce there is more profit in giving such culls to the pigs. A few hand-picked Astrachan have been good enough to bring $3 per barrel. Receipts of pears are much larger. Clapp's Favorite from nearby has sold at $3 to $5 per barrel. Many make the mistake of leaving this pear on the tree too long, in which case it rots at the core. Peaches are lower, arrivals being very large. Practically nothing is selling above $2 per crate, and many going at $1.25 to $1.50. Baskets 30 to 75 cents, according to quality. Small fruits mainly low. Muskmelons very plentiful and low.

Apples—New, bu	25	@	1 25
Cherries, 8lb. bkt	10	@	45
Pears, Le Conte, bbl	2 00	@	4 00
Clapp's Favorite	3 00	@	5 00
Early Bell	2 00	@	3 50
Peaches, Del. and Md., crate	75	@	1 50
Southern Elberta	1 50	@	2 00
W. Va., crate	1 25	@	1 75
Nearby, bkt	30	@	75
Currants, qt	3	@	6
Plums, 6-bkt. carrier	1 00	@	1 50
Raspberries, red, pint	5	@	8
Blackberries, qt	5	@	11
Huckleberries, qt	8	@	12
Muskmelons, Md., bu	50	@	1 50
Arizona, bu	50	@	1 00
Jersey, bu	1 00	@	1 50
Watermelons, 100	12 50	@	25 00

HOPS.

Very little business is noted. Crop conditions in N. Y. State are favorable because of the frequent rains and scarcity of insect pests. Hail has done some damage in Madison County.

Prime to choice	35	@	37
Common to good	30	@	34
Pacific Coast	15	@	17
Old stock	10	@	15

HONEY.

But little comb stock is arriving, and the market is dull on both comb and extracted.

Clover, comb, lb	15	@	16
Dark	13	@	15
Extracted, gallon	60	@	90

BEANS.

Heavy advances, from $1 to $2 per hundred, are noted in all varieties, buyers taking hold actively.

Marrow, 100 lbs	6 25	@	6 90
Medium	4 50	@	4 60
Pea	4 15	@	4 50
Red Kidney	5 00	@	6 60
White Kidney	6 00	@	6 25
Lima, California	8 00	@	8 10

VEGETABLES.

Potato prices are low, receipts from Jersey being heavy. The abundant rains on Long Island and nearby have increased the crop beyond expectations. Onion market weak except on the best white. Peppers and tomatoes selling well; cucumbers and squash dull. A few Western N. Y. peas sold up to $1 per bushel, but mainly from 75 cents down.

Potatoes—Jersey, bbl.	1 65	@	2 00
Long Island, bbl	1 85	@	2 25
Sweet Potatoes, bbl	3 00	@	4 25
Beets, 100 bunches	50	@	1 00
Carrots, 100 bunches	50	@	90
Cucumbers, bu	40	@	55
Corn, Jersey, 100	75	@	1 75
Cabbage, bbl	25	@	50
Lettuce, half-bbl. basket	10	@	85
Onions—Southern, bu	1 50	@	1 75
Nearby, bu	1 50	@	2 50
Okra, bu	1 00	@	1 12
Peppers, Jersey, bbl	1 25	@	1 75
Peas, bu	50	@	1 00
Radishes, 100 bunches	50	@	75
String Beans, bu	20	@	75
Squash, New, bbl	25	@	1 00
Egg Plants, bu	40	@	75
Tomatoes, Jersey Acme, box	1 00	@	1 50
Jersey, Stone	75	@	1 75
Del. and Md., 6-bkt. crate	50	@	1 00

LIVE POULTRY.

Broilers, lb	17	@	19
Fowls	17	@	17½
Roosters	12	@	12½
Ducks	15	@	16
Geese	12	@	14

DRESSED POULTRY.

Chickens, choice broilers, lb	26	@	28
Squab broilers, pair	60	@	65
Broilers, common to good	20	@	25
Fowls	15	@	19
Ducks, Spring	14	@	16
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Some new hay is arriving, selling from $19 to $22. A special caution is needed to make sure that the new hay is out of the sweat before pressing, otherwise it is sure to reach market in bad condition. Old hay is running generally $1.50 to $2 above last week's prices. Old rye straw is $1 higher.

Hay, Timothy No. 1, ton	23 00	@	24 00
No. 2	21 00	@	22 00
No. 3	18 00	@	20 00
Clover mixed	18 00	@	22 00
New Hay, as to quality	19 00	@	22 00
Straw, Rye	15 00	@	16 00

LIVE STOCK.

Native Steers	6 75	@	9 50
Bulls	5 25	@	7 00
Cows	3 50	@	6 50
Calves, prime veal, 100 lbs	9 50	@	13 00
Culls	6 00	@	8 00
Sheep, 100 lbs	2 50	@	5 00
Lambs	8 50	@	9 25
Hogs	9 00	@	9 45

GRAIN.

The market is in very unsettled condition, owing to the European trouble. Great quantities of wheat are being held at seaboard points because of the tie-up of merchant ships, liable to seizure on the sea as prizes of war. Some risks are being taken now, and doubtless other ships will follow if these reach port safely. There seem to be other than speculative reasons for the advance in corn, crop reports indicating considerable damage, possibly a loss of 200,000,000 bushels from the expected yield of 2,700,000,000 bushels.

Wheat, No. 1, Northern Spring	1 13	@	..
No. 2, Red	95	@	..
No. 2, Hard Winter	95	@	..
Corn, as to quality, bush	88	@	90
Oats, as to weight, bush	43	@	45
Rye	70	@	75

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest current prices, but are fairly representative of what the majority of New York consumers pay:

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	30	@	35
Ordinary grades	20	@	25
Butter, fancy prints, lb	33	@	35
Tub, choice	27	@	29
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14

WOOL.

Ohio fine unwashed	28	@	29
Quarter blood combing	27	@	27½
New York Fleeces	23	@	24

BUFFALO MARKETS.

THE arrival of green corn is the feature of the produce market. It is of better quality than usual to begin with, and retails at 20 cents a dozen cars. Muskmelons are at five to 15 cents each and of very good quality. Watermelons rather scarce and retailing at 50 cents each for large sizes. Wholesale prices are 15 to 40 cents for watermelons and $1.50 to $2 a crate for muskmelons. Cabbage is low again, especially with the promise of a good crop; beets, eight to 12 cents a dozen bunches; celery, scarce, at 10 to 35 cents a dozen; cucumbers, 20 to 40 cents a dozen, or two for five cents retail; lettuce, 25 to 40 cents a dozen or two medium heads five cents; pease, 75 cents to $1 a bag or 10 cents a two-quart measure; tomatoes, 25 to 40 cents a basket; onions, $1 to $1.25 a bushel, or 15 cents a two-quart measure retail; Summer squash two for five cents retail; eggplant, 15 to 20 cents each, retail. Small fruits are rather plenty and low priced. Currants, red, white and black, 20 to 35 cents a basket wholesale; cherries, six to 10 cents a quart; raspberries, red, 13 cents; black, 11 cents; purple, 10 cents wholesale; blueberries, 14 cents retail. Plums are scarce temporarily, five to 10 cents a quart, sour to sweet. Peaches are of prime quality at $2 to $2.35 wholesale for fine Georgia Elbertas. Bartlett pears retail 10 cents a quart. The home crop promises good. Apples are in great variety. Southern new are $1 per hamper for green and $1.50 for red. There are a few new sweet potatoes, retailing at 60 cents a peck. New white potatoes are rather scarce at $1 a bushel retail. It will be some time before there are many of them for sale by farmers. The growing crop is backward as almost never before, on account of late planting and lack of rain. Poultry is scarce; 15 to 17 cents for live turkey; 16 to 18 cents for fowl; broilers, 20 to 24 cents; dressed, 21 to 22 cents for turkey, 17 to 19 cents for fowl, 24 to 28 cents per pound wholesale. J. W. C.

Subscribers' Exchange

FRUIT, TRUCK, POULTRY FARM—Will sell all or any portion of 36 acres; good buildings, excellent location; immediate possession; no agents. HOMER TWEED, Quakertown, Pa.

FOR SALE—The Mattituck White Leghorn Farm. A new plant, fully stocked and equipped. Will net annually 25 per cent. of purchase price—$8,000. ARTHUR H. PENNY, Mattituck, N. Y.

HOME FARM—Two hundred and twenty-three acres, for sale; with or without stock; extra good place; price reasonable; part cash; or would take active partner. H. C. W., care Rural New-Yorker.

A WOMAN owning a well-established (50 acre) poultry farm (in Connecticut) desires to exchange for a two-family house in or near New York, or will take a partner with small capital. M. E. M., Danbury, Conn., R. D. 18.

VALUABLE FRUIT and grazing land to be sold in Virginia on Sept. 8th, 1914; 475 acres well watered, well located, near railroad, school, churches, modern dwelling and out buildings; no land better for peaches and apples. Owner leaving to practice in town. For particulars address owner, DR. W. C. MOOMAW, Leesville, Campbell Co., Va.

ON POCOMOKE SOUND, Eastern Shore of Maryland, mild, healthy climate, 500 acres fertile soil, beautiful home and buildings; salt water front; oysters, fish, crabs, clams and game plentiful. Will sell at a bargain, or would lease to a party that would buy the crops, stock and farming machinery. Address OWNER, Box 23, R. F. D. No. 2, Marion Station, Somerset Co., Maryland.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A housekeeper for small family. A. H. PENNY, Mattituck, N. Y.

JEWISH YOUNG MAN would rent few acres for poultry and board with family; particulars. F. D., R. N.-Y.

WANTED—Position by practical poultryman as manager or poultryman on commercial egg farm. A. J. LUTESINGER, Auburn, N. Y.

AMERICAN—Single, first-class carpenter and painter; also experienced gardener, wants position on gentleman's place or institution. E. C. care R. N.-Y.

SITUATION WANTED—Position, sober married man, either farm work or teaming; capable carrying on farm; no children; references. Box 169 B, Lee, Mass.

REFINER, sober young man (28) wants position on truck or poultry farm; has agricultural experience; wishes good home; state salary. Box 23, 245 East 57th St., N. Y.

WANTED—Position as general farmer or dairyman; would take farm on shares; life experience; best reference; married, Swiss-German, one child. X Z, care R. N.-Y.

POSITION WANTED—On farm, by married man, 40; family; life experience; capable of taking any position or taking charge; best of reference. W. A. MAYOR, Jermyn, Pa. R. 1.

POSITION WANTED—As superintendent or foreman on large farm or estate; lifetime experience in all branches; can handle any proposition; best of references; American; married, one child. Address L. R. F., Rural New-Yorker.

POULTRYMAN—Single, honest, industrious, wishes to take charge of small plant on private place; over 2 years' experience. Open after Sept. 1; references furnished. HERMAN COHEN, R. D. 27, Box 21, Round Hill, Greenwich, Ct.

WANTED POSITION—As repair man on farm or estate, understands steam, gasoline engines, tractor plows, concrete work; can also fill position as herdsman, buttermaker; capable of taking charge; married; small family. Address SOBER, care Rural New Yorker.

POSITION WANTED—By experienced single man; understands creamery work, testing, production, sanitary milk, care and feeding cattle, general farming; first-class buttermaker; college training; practical and sensible; references. Address DAIRYMAN, care Rural New-Yorker.

POSITION WANTED—As manager for farm or estate; would take good dairy farm on shares, thoroughly understand farm crops, up-to-date machinery, steam and gasoline engines, tractor plows, concrete work; New York State preferred; strictly sober, reliable, married American; small family; good refereuces. Address Euergetic, Care R. New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

EARLY RICHMOND CHERRIES canned on the farm in No. 2 sanitary cans; $1.25 per doz.; syrnped with pits. SENECA FRUIT FARM, Waterloo, N. Y.

FOR SALE—For want of use, cow-pea harvester, cuts, threshes, cleans, in one operation, horse driven; price, $70. W. LERCH, Supt., Scobeyville, N. J., via Eatontown.

SOUR CHERRIES in No. 2 cans, syruped with pits, $1.25 per doz.; Clapp's favorite and Bartlett pears in No. 2½ cans, with syrup $1.50 per dozen. SENECA FRUIT FARM, Waterloo, N. Y.

FIG PRESERVES—Home made; a new delicacy for most people; made from choice fruit right from the tree; few people have ever tasted a fig as it ought to be; write for prices and sample to MRS. M. A. PARKER, Rickerly, near Danphin way, Mobile, Ala.

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FOR SALE—Fruit and poultry farm; 15 acres; annual income $3,000 to $5,000. Price, $6,000. My age, the reason. Z. T. TURNER, Elcroy, Ill.

FOR SALE—Farm in Warren Co., N. J., 150 acres of fine land with good buildings; one mile from station; price $3,800, part cash. J. VASBINDER, Blairstown, N. J.

10 ACRES on main road; house, barn, orchard; fine location, $400 cash; opportunity to co-operate in poultry business at extra profits. ENOCH HAIGHT, Long Eddy, N. Y.

FARM—Rent or sale, easy terms; 220 acres, situated 42 miles from New York City on the main line Lehigh Valley and Central Railroad New Jersey. J. C. W. RANKIN, Crauford, N. J.

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We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.

The FARMERS' BUREAU an agency exclusively for agricultural help. Only first class farm help and positions solicited. References investigated. Scientific advice on farm problems. Dept. R, 150 Nassau St., N. Y. Phone, 5565 Beekman

Farmers! SEE HERE! 50% sacrifice to close estate. 195 acres best valley land in New Jersey; all under cultivation; two miles from two railroad stations; on macadam road. Cost deceased owner $136 an acre; $68 an acre will buy it, with buildings. E. E. SLOCUM, 141 Broadway, New York

BOOKS WORTH READING

How Crops Grow, Johnson.... 1.50
Celery Culture, Beattle.... .50
Greenhouse Construction, Taft.... 1.50

The Rural New-Yorker, 333 W. 30th St., N. Y.

HUMOROUS

MR. LOBSTOCK: "Has yo' any faith in banks, sah?" Mr. Bentover: "Yassah! I has plenty o' faith in 'em, but I's done got muh money buried in de ground."—Judge.

POSTMAN: "Bad luck, Mr. Doolan! Here's a black-edged letter for you." Mr. Doolan: "It's me poor brother Pat, dead. Oi'd know his handwritin' anywhere!"—Melbourne Australasian.

OWNER OF BULLDOG: "Excuse me, sir. but would you like to buy a dawg?" "No, thanks very much. He looks as though he would bite." "'E won't bite yer if you buy 'im, Guv'ner."—Punch.

BLOBBS: "Which do you prefer—life in the country or in the city?" Dobbs: "I'm not sure. It depends on whether I am in a mood to be attacked by a cow or a motor-car."—London Farm and Home.

WILLIE (rushing into old Dr. Sawbone's consulting room): Say, doctor, mother says please yer to come quick. Baby's swallowed the latchkey an' we can't get in the house.—Melbourne Leader.

CUSTOMER (irascibly): "Your hair restorer has made my hair come out more than ever." Barber: "Ah, you must have put too much on, sir! Made the hair come right out, instead of only half way."—Melbourne Leader.

THE YOUNG BRIDE: "I didn't accept Jim the first time he proposed." Miss Ryval, (slightly envious): "I know you didn't dear." The Young Bride: "How do you know?" Miss Ryval: "You weren't there."—London Sketch.

"OH, George, before you get your razor I must tell you that I—I borrowed it yesterday." "What, again!" "Y-yes. I had to do some ripping. But it's just as good as ever. You'll never notice the difference. I sharpened it on the stove pipe."—Cleveland Plain Dealer.

UNCLE EZRA: How did your automobile accident happen?" Uncle Eben: "Well. you see, there's one thing you keep your eye on, and another one you keep your foot on. and another one you keep your hand on, and I guess I got my anatomy in the wrong places."—Judge.

"How much is radium worth an ounce?" asked the man with an arithmetical mind. "That," replies the praetical person, "is an idle question. After you get through imagining an ounce of radium you haven't imagination enough left to imagine the price."—Washington Star.

"POOH!" said the one scornfully. "The idea of your being afraid of a poor old house dog! Why, he eats out of my hand!" "I don't doubt it," replied the other, dubiously, "but what I am afraid of is that he may take a notion to eat out of my leg."—London Farm and Home.

"AH!" sighed the boarder who was given to rhapsodies, as they sat down to the Christmas dinner, "if we could only have one of those turkeys that we used to raise on the farm when I was a boy!" "Oh, well," said the pessimistic boarder, "perhaps it is one. You never can tell."—Puck.

"MR. Smith, won't you please talk to me?" "Why, certainly, my little girl. But what do you want me to say?" "Won't you please talk like you did when you were talking to yourself in the library when the dog jumped at you? Mine's so straight, and mamma said the way you talked made her hair curl."—Baltimore American.

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COLUMBUS

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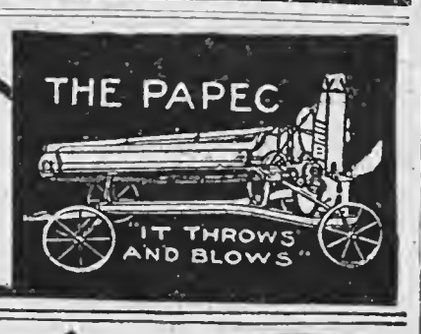

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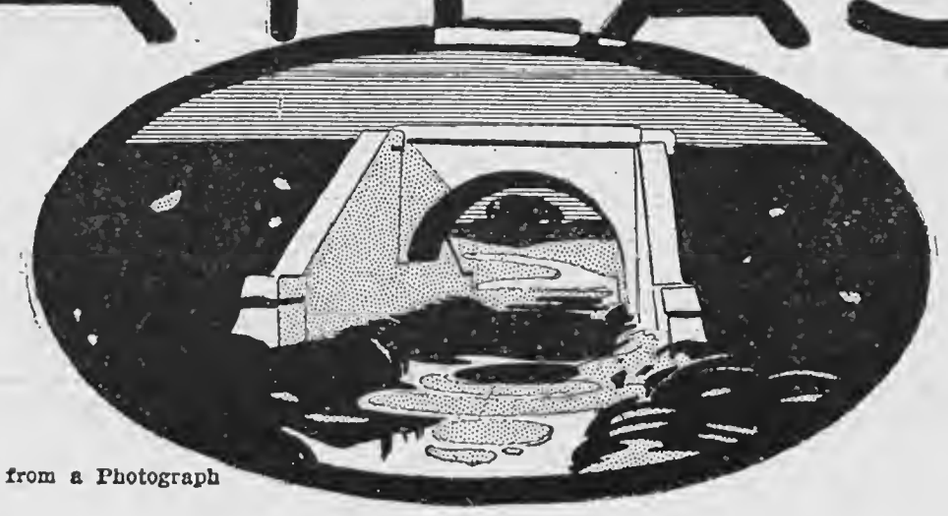

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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ROOT DISEASES OR SOIL "SICKNESS" OF WHEAT.

Low Yields Not Always Due to Poor Soil.

FUNGUS TROUBLES.—The wheat yield and the price of wheat in this country, at least in the corn belt, have been so low for many years that its production is conducted on a very narrow margin of profit. In addition to this, the yield is so variable as to introduce much uncertainty into the crop, since an actual deficit often results in a poor year. Various attempts have been made to locate the trouble and devise remedies; but while some improved practices have given results that are really remarkable, it has not been possible up to the present time to put wheat growing in the corn belt in the clear money-making position which so important a crop should occupy. Recently, however, some studies have been made of crop-limiting factors as applied to wheat which give promise of enabling an increase in yield at a small expense to the farmer. These studies have to do with some inconspicuous blight diseases caused by a number of seed and soil-borne fungi. This discussion will be limited to a consideration of this phase of wheat production; not, however, with the idea of minimizing the importance of other and longer studied factors.

INVESTIGATING THE FUNGI.—The work on these diseases has, directly or indirectly, been carried on in a large number of places. In this country the Ohio Experiment Station, the Bureau of Plant Industry of the U. S. Department of Agriculture, and the North Dakota Experiment Station have been most active in investigating them. The investigations at the last named station have probably included more field observations and trials than any of the others. This work (reported in North Dakota Bulletin 107) coupled with laboratory work done there and at other places, has shown that at least six species of fungi aside from the well-known smuts and rusts operate to produce disease in wheat, or at least regularly accompany it. Most of these fungi are harder to fight than are the smut fungi, too, not only because they and their work are not so easily detected, but also because they are able to live, grow, and fruit on dead matter and can, therefore, maintain themselves for some time in the soil without their host plants. They occur and do damage throughout the range of wheat culture, but they are most abundant and their ravages are most severe where wheat is the main crop and is therefore often raised year after year on the same soil, as in the Northwest and in Canada.

SYMPTOMS.—The symptoms of attack by these fungi vary considerably, but are usually sufficiently definite to indicate the disease. Infected seedlings are usually stunted, the leaves may turn yellow or brown so that they are described as having "tip-burn," "sunscald," etc., and many of them may die. The root system is smaller than in normal plants and many of the roots are in various stages of destruction by one or more of the fungi. Often they are so thoroughly destroyed as to give the impression that they have been eaten by insects. The infected roots may be black or pinkish. Normal roots vary from pure white to greenish. The stooling of such plants is seriously checked. Many times from one to a few stalks mark the limit of a plant in this matter. The straw is often soft and breaks over easily. It often has deformations at the joints which are usually taken for insect attacks. The heads do not fill properly. In many cases only the lower half of the head is filled, the upper half being empty or filled with shrivelled light grain. The quality of the grain itself is poor. Instead of being dark in color and hard and horny in texture it is light and soft—distinctly inferior in milling quality. Many grains are black at the stem end and others are pinkish all over. Many others are shrivelled or curiously puffed up or blistered and light in weight. Such is a brief statement of the chief symptoms visible to the unaided eye. With laboratory facilities it is possible without much difficulty to examine the spores which occur on the outside of the grains and from the kind and relative numbers present come to some conclusion as to disease conditions.

SOURCES OF INFECTION.—The chief sources

THE FIRST LESSON IN MILKING. FIG. 437.

of infection for the crop are two, the seed and the soil, although doubtless infection does occur otherwise. The work at the Ohio Station, for instance, shows that the scab organism will infect plants at blossoming time and cause the typical disease. The amount of damage done as a result of this type of inoculation is relatively small as compared with that from earlier infection, however. The diseases are usually carried to new regions by the seed, partly by means of spores clinging to the surface of the grains and partly by means of infected seeds which contain the living threads of the fungus within. Once established in the soil, they can maintain themselves on the organic matter there at least for a year or so. If wheat be planted on this same soil year after year, they are constantly present to attack it; and if, as is usually the case, the seed wheat used each time is infected, the soil receives a fresh inoculation each year. In a few years such soil becomes so "sick" that the production of a large crop of first-class wheat on it is out of the question. That such unproductive soil is not exhausted of its plant food materials has been proved by Prof. Bolley by sterilizing a small patch of it with steam. After this treatment the patch produced high grade wheat season after season until the fungi crept in again. It is only fair, however, at this point to say that many scientists have conducted soil sterilization experiments and a good number of them think that the beneficial results of sterilizing soil are due at least partly to other things than the destruction of parasitic fungi. At any rate they demonstrate that the plant food materials are not always exhausted when poor yields result.

REMEDIES.—Remedial measures should be directed toward getting seed and soil which are as clean as possible, and then planting under conditions favorable to the growth of the wheat and unfavorable to the growth of the fungi.

SECURING CLEAN SEED.—The first thing to do is to get a single variety suited to your conditions and save your own seed, because seed raised on your own farm is better adapted to your conditions than any other can be. If your variety is mixed and there is no suitable pure one in your vicinity, you can purify it by selecting heads of the kind you want from your field and planting the wheat so harvested by itself in a multiplying plot. Since wheat is self-fertilized, the crop in the plot will be pure. When selecting seed for the main crop, pick out the best part of the field, or have a special patch and harvest it without letting it get wet in the shock. Use canvas shock covers if necessary. If it gets wet, the fungi present as spores or in diseased kernels will grow over the sound kernels and infect them. The next precautionary measure is to fan the seed. Screening is not so important, although it will do some good and certainly no harm. The essential thing, however, is to get rid of the light weight grains; and screening will not suffice, because such grains are often bulkier than the heavy ones. Use a fanning mill and see that the blast is good and strong. After fanning, use the formaldehyde treatment in order to kill all spores clinging to the outside of the grains. Spread the grain on the floor or canvas and sprinkle with a solution of a pint of formaldehyde to fifty gallons of water until all is thoroughly moist, shoveling over repeatedly in the meantime in order to distribute the moisture thoroughly and evenly. Shovel into a pile and cover with sacks or canvas for at least two hours. A longer time is better and it will not hurt to leave twelve or fourteen hours, but after that time, the grain should be dried thoroughly or planted at once, for the grains are apt to start germination. Where large amounts are to be treated it is advisable to use a machine, several makes of which are now on the market and do satisfactory work.

GETTING CLEAN SOIL.—There is no paying method of disinfecting soil on a large scale. For getting clean soil, therefore, we must depend on general sanitary measures. (1) Rotate, using crops not related to wheat, and kill all quack grass. It harbors the wheat parasites. If you are already rotating perhaps you can lengthen your rotation a year or two. In a good many sections of the corn belt, rotations of corn, oats, wheat, clover, and corn, wheat, clover are followed. If now, instead of the clover, one year of clover and Timothy followed by a year of Timothy be introduced, the rotation is made a year longer. At present prices of Timothy hay this should be a paying change aside from the effect on the wheat crop, especially as it reduces the amount of plowing one-fourth or one-fifth. (2) If wheat straw is used for bedding, compost the manure well before applying to the wheat crop. If it is desirable to haul manure direct from the stable, let it be applied just as far ahead of the wheat crop as possible—the best place is on the wheat stubble. If scattered thinly, it will not prove as great a bother in the hay crop as would be expected, and it certainly stimulates the clover and Timothy. (3) Have the soil well worked so that it is compact below but mellow on top. A soil which has cavities near the bottom of the furrow slice, furnishes a number of moist chambers, which are ideal for the growth of fungi. A well packed soil does not furnish this condition. At the surface the sunshine, the aeration, and the alternate wetting and drying of frequently worked soil tend to kill off the fungi.

FAVORING THE PLANTS.—Sow thinly. Prof. Bolley states that a good plant every three inches in the row is enough. When seed containing infected kernels is seeded thickly, the fungi from them quickly infect the normal seedlings near. "The root diseases spread most rapidly along the drill row in thickly seeded grain." Use fertilizers where trial shows that it pays. Usually phosphatic fertilizers increase the yield and improve the quality of product by making the plants more tolerant of disease. They do *not* purify the soil. Nitrogenous fertilizers usually weaken the straw, and make the plants more susceptible to attack, this reducing quality and yield, although increasing the yield of straw. Drain wet places. Wetness of soil tends to produce rankness and softness of straw and added susceptibility to disease.

CONCLUSION.—Several of these practices advised for the control of soil and seed-borne diseases of wheat have not yet been put to the test of actual extensive farm use, although most of the experimental work has been done. Prof. Bolley has been accumulating results for several years; other workers have secured results which corroborate his; and there seems to be no reasonable doubt that his results are reliable and his conclusions correct for his conditions. But most of Prof. Bolley's work was done in North Dakota, where the ravages of these fungi are extreme. Further east and south, where the attacks are less serious, some of the measures advocated may not be so important. In Indiana, for instance, the advice given by the Experiment Station and the personal observations of the writer indicate that top-dressing wheat lightly with manure in the Winter and Spring may be profitable in spite of the fungus infection. Also, very thin seeding is apt to prove unprofitable, due to Winter-killing. The correct farm practice will vary considerably in the different sections of the wheat producing regions. It will depend on a proper adjustment to the relative importance of the diseases, the fertility of the soil, the climate, etc.; and must be worked out for each section separately. Such precautions, however, as proper rotations, thorough soil preparation, careful seed selection, and the disinfection of the outside of the seed can hardly be overemphasized, because they are important in all regions, oftentimes doubly so due to their beneficial effect for other reasons than disease control. C. A. LUDWIG.

WET OR DRY TREE PLANTING.

I WOULD like your opinion on two methods of orcharding employed by some growers in this section. One is the planting of young trees in heavy sod, with no working around them. The other is planting trees in holes dynamited in solid limestone ledge, with only one or two feet of surface soil. This method is being extensively used on one large commercial orchard, the manager of which claims to be an orchardist, and is selling stock in the company. I have had over eight years' practical experience in commercial orchard work in the Pacific Northwest, and have just lately come East to go into the same line of work and it may be that I do not know enough about eastern conditions to pass judgment on such practices. However, I cannot reconcile planting young trees in shallow soil in solid ledge, no matter what preliminary treatment is given, to my experience and knowledge of trees. On the other hand if there are any virtues in the practice which recommend it to commercial orcharding, I would like to know it, as I can buy this character of land cheap and start a paying venture with little money, or I can buy stock in some orchard company following this method. A. W. V.

Vermont.

As a general proposition we advise you not to buy stock in a commercial orchard, either the "unit" system or as a general company. There may be local exceptions to this advice, but without knowing definitely about them our advice is keep out. The plan of planting trees right in a sod without culture succeeds under favorable conditions. Mr. Hitchings in New York and Mr. Vergon in Ohio have clearly demonstrated the possibilities of this method. On our own farm we have one block of trees in sod that has developed into a fine orchard. Within 1,000 feet of this block are trees which were at the verge of failure until we plowed the sod and gave good culture. The successful block stands at the bottom of a hillside which is underlaid by springs. The water works down the hill and waters the ground where the sod trees stand. On the other location there is none of this seepage water; the soil is shallow and thin, and the trees suffer from drought. The cultivator was needed to hold the moisture. This sod culture will not be likely to pay unless the trees are put in *natural grass land*, deep and naturally moist, and in a region where the rainfall is heavy. From our experience we should consider it poor practice to set trees in sod on thin dry land, unless large quantities of mulching material can be cut and piled around the trees. We know of cases where thin rocky hillsides are planted in this way. These hills are not plowed or cultivated except in strips along the tree rows. In the swamps and valleys near these hills there is usually a rank growth of grass and weeds. This is cut, hauled out and piled about the trees, and in this way a fair growth is obtained. As for the plan of blasting holes in a ledge and planting trees in a shallow soil, our experience shows that in this way you can obtain a somewhat under-sized tree coming into bearing early and yielding fruit of very high color and fine quality. We cannot imagine a man selecting such soil from choice. We should think he would be driven to it through necessity—for deeper, moister soil is far better.

RENTS FOR POST OFFICE BOXES.

THE box rents at our post office have just been raised. Is the postmaster permitted to do this? Who has control of this matter, and have these rents been raised all over the country? J. S.

To settle this matter we wrote the Postmaster General and received the following letter:

In reply to your letter, I have to state that for the purpose of securing uniformity, box rent rates are based upon the gross receipts of the post offices and the size and style of the boxes rented. The schedule of rates adopted by the Department is enclosed for your information. If rates in excess of those by the Department are exacted at any particular post office and report thereof be submitted to this office, investigation will be immediately instituted to correct the rates.

A. M. DOCKERY,
Third Ass't Postmaster-General.

The schedule of rates fixed by the department is printed below. If higher rates are charged in your post office the thing to do is to send a report to Washington at once.

Box rent rates have been fixed heretofore upon no established basis, with the result that at certain large post offices rates are lower than at many small offices; that the charge for small boxes is in many cases higher than that which should be made for large boxes; that rents are sometimes collected at the same rate for boxes of all sizes; and that at post offices of like class, in the same vicinity, equipped with similar boxes, rents are collected at widely different rates. In order to remedy these conditions and to provide a definite and satisfactory rule for the collection of box rents the following schedule, based upon the kind and capacity of boxes and the gross receipts at post offices, has been adopted and will be strictly adhered to by the Department in the establishment of all box rent rates, from and after Jan. 1, 1907:

Gross receipts of post office.	Rate per quarter.					
	Call boxes small. (*)	Call boxes large. (†)	Lock boxes small. (*)	Lock boxes medium. (‡)	Lock boxes large. (§)	Lock boxes extra large. (‖)
Less than 500	$ .10	$ .15	$ .20	$ .25	$ .35	$ .45
$500 and less than $1,900	.15	.20	.25	.35	.45	.60
$1,900 and less than $5,000	.20	.25	.35	.45	.60	.75
$5,000 and less than $10,000	.25	.35	.45	.60	.75	1.00
$10,000 and less than $40,000	.35	.45	.60	.75	1.00	1.50
$40,000 and less than $100,000	.45	.60	.75	1.00	1.50	2.00
$100,000 and less than $300,000	.60	.75	1.00	1.50	2.00	3.00
$300,000 and less than $1,000,000	.75	1.00	1.50	2.00	3 00	4.00
$1,000,000 and less than $5,000,000	1.00	1.50	2.00	3.00	4.00	5.00
$5,000,000, and less than $15,000,000	1.50	2.00	3.00	4.00	5.00	6.00
$15,000,000 and upwards	2.00	3.00	4.00	5.00	6.00	7.00

* Less than 200 cubic inches in capacity.
† Capacity 200 cubic inches and upwards.
‡ Capacity 200 cubic inches and less than 500 cubic inches.
§ Capacity 500 cubic inches and less than 900 cubic inches.
‖ Capacity 900 cubic inches and upwards.

A Business Cow.

THE picture, Fig. 442, shows a good grade Holstein cow owned by D. G. Heigerd, of Rockland County, N. Y. In speaking of her Mr. Heigerd says:

"She is just plain Bess, without a number or pedigree, but producing 480 pounds of milk in seven days."

State Testing Soy Beans.

THE New Jersey Experiment Station believes that the Soy bean is one of the most valuable forage plants. It makes a hay that is nearly as rich in protein as Alfalfa. Some disappointment with this new legume has been due to the use of varieties that were not adopted to soil and climate. John H. Voorhees of the extension department is conducting 48 experiments in various parts of the State to determine adaptability of the leading varieties. Mammoth Yellow, Medium Green, Wilson, Ito San and Swan are being used in this experiment. Some of them doubtless are best adapted to southern Jersey and others to the northern half of the State. It is hoped that the results obtained next Fall will enable the station to advise farmers safely regarding the varieties that they should grow. D. T. H.

To make "big pumpkins" you must first have a variety which grows large naturally. Then pinch off all but one flower, so as to throw the full strength of the plant into one fruit. Then be sure the plant is fully supplied *at the hill* with plenty of water and available food.

THE ARMY WORM.

Its Life Habits and Distribution. Fight It!

PART I.

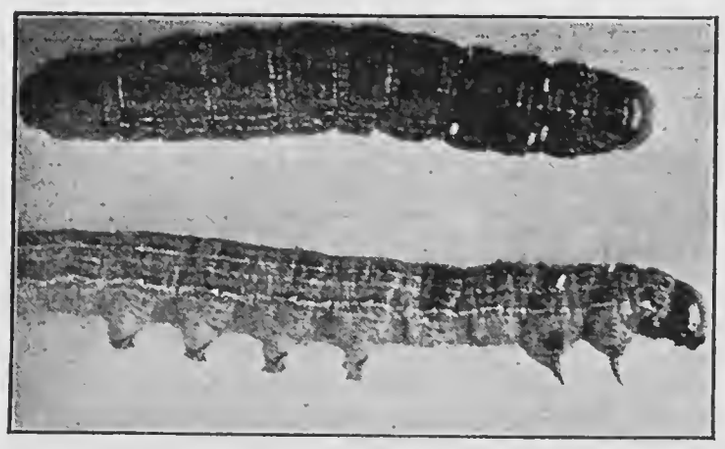
ACCURATE records regarding distribution in the present army-worm outbreak are not now at hand, but according to newspaper clippings examined, it has occurred in Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Maryland and Michigan. It was reported as being particularly severe on Long Island, in Maryland, and in Michigan, and no doubt it has caused greater or less damage throughout all of the Northeastern

FEMALE ARMY WORM MOTH, NATURAL SIZE. FIG. 438.

States and the Middle West. According to one newspaper, the damage in Michigan was estimated at a million dollars.

FOOD PLANTS AND DAMAGE.—The chief damage is done to crops of the grass family, including the cereals and corn. The worms eat the leaf-blades and often the heads of the grass or grain, leaving only the stalks. Many oat fields in Connecticut this season, were thus stripped of their leaves; the heads were also eaten off and fell to the ground. The writer saw a five-acre oat field similarly injured in 1896, at Hartford; the caterpillars in marching to the adjoining field, literally covered the ground over an area perhaps twenty feet wide and more than a hundred feet long. Within this area it was impossible to walk without crushing a dozen or more caterpillars at each step. One could actually hear them crawl upon the ground. Thus when in search of food, army worms will attack fields of corn and many kinds of garden vegetables, which are not ordinarily, their first choice. In some places cranberries have been severely injured by them. Clover and Alfalfa are not often greatly damaged, yet in New Jersey in 1880, there were cases where the army worms seemed to prefer clover. They seldom attack trees and have only once been recorded as eating the leaves of fruit tres. The present season, at least in Connecticut, they were not sufficiently abundant to cause them to migrate from one field to another in large numbers; they were able to get plenty of food in the fields where they were hatched, and in most cases without eating all of it. Oats, barley, rye, wheat, grass, corn and millet were the principal crops damaged. Like cutworms, army worms feed mostly at night, and hide under something near the ground, during the day. When the worms are numerous and their food scarce, they are not able to satisfy themselves at night and therefore feed during the daytime.

WHAT IS THE ARMY WORM?—The army worm is the larvæ or caterpillar of an inconspicuous brown moth, belonging to a group known as owlet or Noctuid moths which includes the cutworms. Its Latin or scientific name is Heliophila unipuncta Haw., but for many years it has been called Leucania unipuncta, this name appearing in most of the pub-



ARMY WORMS SHOWING EGGS OF PARASITE TACHINID FLY, TWICE ENLARGED. FIG. 439.

lished accounts of the insect. The name unipuncta was probably given to the species because of the small white spot near the center of each fore wing. The common name "army worm" doubtless comes from the habit of the caterpillars when abundant; after devastating one field they march onward en masse, seeking another to devour. But whatever the name, the army worm is the same old pest, which for nearly two hundred years has exhibited occasional and destructive outbreaks. The Rev. Thomas Smith, of Falmouth, Me., wrote in his diary, June 27, 1743: "There are millions of worms, in armies, appearing and threatening to cut off every green thing; people are exceedingly alarmed." This was the first outbreak of which we have a record. Others have occurred in the years 1762, 1770, 1790, 1817, 1825, 1861, 1875, 1880, 1882, 1885, 1890 and 1896. There are two other kinds of army worms, the "wheat head army worm," Heliophila albilinea Hbn., and the "Fall army worm," Laphygma frugiperda S. & A.

WHY DO THESE OUTBREAKS OCCUR?—Where is the army worm, and what is it doing in all the years between these outbreaks? These are fair questions. The army worm is here all the time. It feeds as usual on the native grasses. We find a few moths around electric lights, in other years. But it does no damage because the caterpillars are few, and they are seldom noticed. It is only when extraordinarily abundant that they attack and injure cultivated crops. "But why are they abundant?" you will ask. It is the old and somewhat complicated question of weather conditions, and natural enemies. These factors, though existing in variable and uncertain ratios each year, occasionally form such a combination as to permit an outbreak. No one has yet been able to manipulate or control these conditions, like members of the stock exchange, in order to corner the market, to prevent an outbreak, or even to predict with any degree of accuracy when an outbreak may occur.

DISTRIBUTION.—Dyar's "List of North American Lepidoptera" gives H. unipuncta as occurring in

ARMY WORM FEEDING ON CORN, NATURAL SIZE. FIG. 440.

the Atlantic States. This publication also lists thirty-six other species of the genus Heliophila, 15 of which occur along the Atlantic seaboard. Slingerland states in Cornell Bulletin No. 133, that although a native of North America, the army worm is now known to occur in South America, England, Australia, New Zealand, India, Java and Madeira, but is not destructive in these countries.

Connecticut Exp. Station. W. E. BRITTON.

ARE MILK INSPECTORS STRAIGHT?

IN our vicinity there has been an almost complete cessation of complaint regarding inspection of cow stables by city milk inspectors for some time. The reason at first was that we got in touch with dealers in other cities, and the New York inspectors had little to do with us. Later, when New York got in competition, there was a discussion on as to whether the city or the State should do the inspecting, and farmers have an idea that this discussion held inspection somewhat in fear. Then the New York folks made charges against the State Department of Agriculture, charges which many believe were for the purpose of holding off the change to State inspection. I do not say that these are established facts, but there seems to be much reason for such conclusions. Whether this diagnosis of the case be correct or not, there is little doubt that we are having more trouble from inspection than for some time. It does not yet seem to be equal to that of earlier times, but is thought to be unfair in some cases. That State inspection appears to be now in abeyance, and no appearance of pressing the charges against the Department, goes to indicate that the object of the city has been accomplished. Those charges were serious, although answered by the Department, but they should not be dropped without some definite conclusions. If the city made the charges for a purpose, as some think, other than the one apparent on the face, then the Department should be exonerated and blame applied where it belongs. But it is not of any disagreement between the Department and certain city interests that I wish particularly to speak, but of some acts of inspection that are recent.

My own suspicion was aroused early in the Spring when in the office of one of the big milk concerns. An inspector happened to be there when I went in, although I did not know his identity at the time.

CHRYSALIDS OF ARMY WORM, NATURAL SIZE. FIG. 441.

He soon went out, and as he departed he remarked to the manager that if he needed any assistance let him know. The manager soon explained to me that inspection is now as it should be, and remarked that the inspector who just went out was a mighty fine fellow. If inspection is for the exclusive benefit of the dealer it is not as it should be. These remarks do not prove that it is for the exclusive benefit of the dealer, to enable him to buy milk at a lower price where he ought to pay for increased care and attention on the part of the farmer, but they set one to thinking. Along in June, when milk was flush, it is stated that a certain concern sent for an inspector to come. He came and scored down nearly all the dairies in one neighborhood, so that the 10-cent bonus could be withheld. At the same time the test went down, so as to save the other 10 cents that the company contracted to pay if the test met the requirements. Here was a saving of 20 cents a hundred to the dealer. This is as it appeared and is believed by the farmers. They found that they did not have to stand such a cut, and commenced preparations to leave the concern. This took till well towards July, or into the month. Then the manager found what was up and immediately took his horse and drove about to the patrons, offering to pay them from that time on both the test and the score. Most of the patrons stayed on but a few left. It does not leave a friendly feeling either toward the concern or the inspection.

I will mention one other instance. It has been claimed all along that inspection is more severe in the case of a coöperative creamery. I have never traced this out, but here is an instance that goes a way toward establishing the claim. At a certain coöperative creamery there was one patron who lived on a rented farm and refused to come up to the requirements of the coöperative, even when they were engaged in making butter. He was dropped, and went to a milk shipping station in the same town. The inspector came and gave him a fine score, although he had done nothing to clean up.

BESS, A GOOD GRADE HOLSTEIN. FIG. 442.

A few days later the farm changed hands and the new tenant fixed up what he could do readily, and was taken on by the coöperative. At about the same time the coöperative commenced to ship cream to the city, and the same inspector came back and inspected the patrons of the coöperative. All agreed that the inspection was much more severe, and in the case of the new man who had cleaned up, he was scored over 25 points below his predecessor in the same stable, but who patronized the big dealer who operated the shipping station.

H. H. L.

NEW YORK STATE NEWS.

FARM MANAGERS BUSY MEN.—There are 25 farm bureau managers in the State at this time and during the last six months, according to statistics recently published, they have visited 4,848 farmers. Of this number of farmers 864 are conducting some kind of experiments. Farm help has been secured through these bureaus for 112 farmers this Spring aud Summer. Survey records to the number of 111 have been taken. On 222 farms records and accounts of the farm bnsiness is being kept with the manager's assistance. The 25 farm managers have addressed over 300 farmers' meetings. In connection with the Department of Agriculture 25 cow-testing associations have been organized or are being conducted, in which over 15,000 cows are being tested. The business done by the coöperative associations, prompted by the bureaus, during the past six months amounts to $14,765. But it is difficult to set down in figures or estimate on paper the value of leadership and initiative exercised in rural affairs by these expert farmers.

CORTLAND FAIR AND SWINE EXHIBITS.—Having in view the recent communication from Commissioner Huson relative to the withdrawal of swine exhibits at the fairs, the Cortland County Agricultural society has set a very sensible example to other county fair associations by deciding to admit to competition such swine as has been vaccinated for hog cholera or are shown to be free and immune from the disease. A certificate to this effect from a veterinarian must accompany all entries of swine. Some societies are admitting only local animals known to be free from the disease while others will shut down on these exhibits entirely.

THE HOP GROWERS.—While the prospect for a good crop of hops in Schoharie County, still holds, yet the outlook is not quite as good as a week ago on account of insect depredations. Blue mold, lice, and honeydew are responsible for the changed situation. The vines have been sprayed but rains have made it less effective than is desirable.

NEW PUBLICITY BUREAU.—It is announced that Dean Galloway of the State Agricultural College will adopt a plan of publicity for the College similar to that used by the U. S. Department of Agriculture. The idea is to use the newspapers more largely, instead of bulletins.

CONFERENCE ON NEW APPLE-PACKING LAW.—There were but few present at the conference called by Commissioner Huson on Aug. 11, to discnss some of the features of the new apple-packing law. But there were lots of questions. What about the application of the law? How many inspectors will be necessary? Where shall they do their work? Shall they inspect while picking and packing is going on? Shall they inspect only at shipping stations, or at terminals and city docks? Can 50 competent inspectors be found, readily, who can interpret and apply the law? Will the law be stringently enforced? Is it permissible under the law to plate barrel or box? Who is the party to be held responsible for the quality conforming to the mark? Is it packer or seller? Must fruit sent to cold storage be stenciled according to the law the same as when sold for immediate distribution? What if the buyer lives in another State? Shall the grower guarantee the pack or the buyer? Would an iuspector have any right to inspect fruit at a shipping station or terminal that was packed under the United States law? Will marking a barrel 'Unclassified" be likely to secure for it a lower price? These are some of the questions that came up for discussion, and they will serve to show the uncertainty surrounding some of the provisions of the law.

L. L. Morrell of Kinderhook was chosen chairman of the conference aud said in opening the discussion that he believed the more the law was studied the more satisfactory it appeared, and that it seemed to him that it would work out greatly to the advantage of the apple business. He had found some who would pack under the United States law and some will mark the fruit "Unclassified," this owing largely to the uncertainty of just what the new law demands in some of its provisions. On the whole he considered the law the best thing that "had ever happened to our fruit growers." Mr. Morrell was asked if the law permitted a man, if he cared so to do, to plate his barrel with the finest fruit allowable in the barrel under the classification of "A" or "B." He believed that the law permits it, and that is one thing he did not like about it. Not all present shared this opinion, as to the permission of the law on this point. As to who is to become responsible for the pack, it was conceded that the packer or agent or buyer, was the responsible man. If a grower packs his own fruit he must put his name on the barrel. If buyer or agent for another packs it, or if it is packed by his authority, then his name must go on the package. It makes no difference if the fruit is to be shipped to a purchaser residing in another State. The law applies. The problems which the Commissioner of Agriculture particularly desired an opinion upon was the inspection of the fruit to ascertain if the packing was done in accordance with the law. It was suggested by one that the inspectors should visit the orchards when the paekiug was under way, but this would necessitate a large number of inspectors to cover all orchards in the State. However, it was not considered wholly impracticable. Another suggested that the inspection should take place at the shipping station where one inspector could do the work of many in the orchards. This idea appealed to all present. No doubt but that inspectors will be found at the larger shipping stations. Also at terminals, particularly steamer docks. In the absence of a legal opinion on the subject, it was the consensus of opinion that an inspector could make no inspection of fruit packed under the United States apple grading law. But apart from that exception all apples must be packed under one of the classifications called for by the new law, namely: New York Standard Fancy grade; New York Standard "A" grade; New York Staudard "B" grade or, lastly, "Unclassified." It was stated by representatives of the Department of Agriculture that it had been reported that buyers in the cities had advised growers and dealers that the new law would not be enforced and to pack "just as they always had." We would not advise growers and buyers to bank too much on that statement. While injustice will be done no honest packer or grower who tries to conform to the law until he fully understands it, we imagine that the dishonest grower, if there be such, or the dishonest packer, if there be such, will find an inspector camping out very near to his place of operations and will undertake to see that the law is euforced to the letter.

J. W. D.

CROP REPORTS.

Dairy cows sell for from $60 to $100; steers (fat) from 7 to 8 cents a pound; hogs 8½ cents; poultry 12½. Hay $10; wheat 83; oats 32 to 38; butter 25; eggs 18. Milk sold to condensery, $1.30 for July. Apples usually sell for $1 aud $1.50 a barrel; peaches $1.25 to $1.50 a bushel; plums $1.50 to $2. Strawberries sold for 10 cents a quart and raspberries for 12½. Potatoes sell in the Fall for from 35 to 50 cents a bushel. Very little gardening done in this vicinity.

Michigan. J. A. W.

August 6. Haying all done, crops about one-third larger than for several years; have had frequent showers and pastures are good. Corn, potatoes, oats and buckwheat are looking well. Apples, pears and small fruits are full crops, except plums. No late frosts last Spring to kill blossoms. Early potatoes $1.25 per bushel at the stores; eggs 26 for white, 24 for brown; butterfat for June 28¼ cents net; broilers 18; old hens 14. This is one of the largest poultry sections in the State, several thousand pullets being sold from here each year. B. H. G.

Jefferson, N. Y.

Fresh cows, in my neighborhood, $50 to $85; in western Washington, $80 to $150, net cash price $50 to $150; veal, per pound, deduct 35 cents freight, per animal, commission paid by storekeeper, 12 cents; fresh milk, in my neighborhood, for navy yard and adjacent towns, 18 to 20 cents a gallon at the condenseries, no freight paid on milk to navy yard towns; collected by dealers who retail milk at 12 quarts for $1; $1.40 to $1.60 at condenseries. Potatoes, cash or trade, at local store, 1½ cents per pound; eggs, local store, 25 cents; butter, local store, 30. Old hens, deduct 35 cents freight, per crate; commission paid by storekeeper, 15 cents per pound; Spring chickens, 16 cents. Poultry to meat market, Seattle, where storekeeper buys meat. Pork, dressed, nine cents; apples, bushel box costs 13 cents, commission 15%, 50 cents to $1.50 gross. Pears $1 gross. Loganberries 90 cents gross, crate of 24 pint costs 18 cents, commission 15%, 75 cents to $1.25 gross; rapsberries $1 gross, 75 cents to $1.25 gross. Strawberries 75 cents to $1.25 gross. Bran $26; shorts $28; middlings $35; rolled barley $26; oats $31; corn, whole, $39; corn, cracked, $40; wheat $34; Alfalfa $16; Timothy $20; straw, wheat or oat $12. (Quotations from local storekeeper) not produced here. Great quantities of poultry produced here; the leading local industry. Question to local storekeeper, "Anybody really making money on poultry?" Answer: "No." S. E. P.

Kitsap Co., Wash.

COMING FARMERS' MEETINGS.

Thirty-ninth Annual Convention of the American Poultry Association, to be held at Chicago, Ill., August 8th to 15th, 1914, inclusive.

Northern Nut Growers' Association, annual convention, Evansville, Ind., August 20-21.

National Paving Brick Manufacturers' Association, eleventh annual convention and paving conference Buffalo, N. Y., September 9, 10, 11, 1914. Secretary Will P. Blair, 832 B. of L. E. Bldg., Cleveland, Ohio.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 aud 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29, Milk Producers' Association, Oct. 30.

New England Fruit Show, in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12, secretary A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Associations, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary Thomas Deans, 39 Hoyt St., Danbury, Coun.

LITTLE TOMMY, of the city, visiting his country aunt and uncle, declined to be satisfied until he had fished in the near-by stream. To this end he made the life of his uncle a veritable burden by coutinued coaxing to procure him the necessary bait. One afternoon Tommy spied him plowing diligently. With a whoop of joy the would-be sportsman rushed forward to his uncle's side, but here grew suddenly thoughtful. "Gosh, Uncle," he exclaimed, gazing speculatively up the long stretch of furrowed ground, "ain't that about enough worms?"—Everybody's.

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SYRACUSE, AUG. 31-SEPT. 1, 2, 3, 4, 5
DAY AND NIGHT
NEW YORK STATE FAIR
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Manure for Currants; Cabbage Maggot.

ON page 925 appeared an article on "Cover Crop for Blackberries," which I shall try this year. I have about 100 currant bushes, from which we picked 112 quarts, this, their third bearing year. Land is a sandy dry soil, inclined to be gravelly and pack hard, unless it is frequently cultivated. These bushes have had a shovelful of hen manure each Fall, worked in around the bush. Part of the bushes are thriving, and some, about 30, during the dry spell in June, were yellow, and had but few berries. Would you advise me as to the treatment for them all? They were sprayed with soluble oil in the Spring and all dead wood and too thick branches were cut out. Many branches, laden with fruit would wither and die and the stalk would be all eaten away near the ground. 2. A neighbor of mine lost over half of his early cabbage. When good size, they would die, and on pulling up the plant, white worms or grubs would be in clusters on each root. Will you tell me the cause, and cure? P. T. B.

West Springfield, Mass.

It is a mistake to apply manures to bush fruits in the Fall with the idea of getting the best, and in many cases even any results from it, particularly if the soil is sandy, or gravelly, or both, as the leachings are carried below and beyond the reach of the feeding roots long before Spring. Currants do not root deeply, most of the fibrous or feeding roots being quite near the surface, and whatever is applied in the way of manures, should be given them in early Spring, and during the fruiting season. Hen manure is an excellent fertilizer for currants, but should always be applied in March, as early in the month as it is possible to work it into the soil, and only in limited quantity. A small shovelful will be ample for a three or four-year-old bush. After the fruit has set, a mulching three or four inches deep of coarse stable manure around the plants will be very helpful in carrying the crop through to maturity, particularly if the weather is dry. Do not apply much hen manure to these sickly plants next Spring, but give them a liberal supply of raw bone meal and a little muriate of potash, say a small handful scattered around each bush worked into this soil, and before hot weather sets in mulch the plants well with coarse stable manure. The branches that died were killed by the stem borer. Every plantation suffers more or less from them, and the weakly or sickly plants seem to be the favorite objects of this borers' attack. All branches showing their presence should be cut out and burned as soon as noticed or the borers should be hunted out and killed.

2. This cabbage was infested with cabbage maggot; this insect is found in almost every part of the country, wherever cabbage is grown and is one of the worst and most destructive enemies the cabbage is subject to. It being an underground insect its presence is never suspected until the leaves begin to wilt. Many remedies have been recommended but none of them have proven very successful. The insect is always present in greater numbers in ground that has been heavily manured with stable manure, the mature insect, or fly, selecting fermenting manure as a favorite breeding ground. Many cabbage growers have dispensed with the use of stable manure in the production of this crop, relying altogether on chemical fertilizers, and consequently have but very little loss from the maggot. Heavy liming will very materially assist in reducing the damage from maggot. It will be quite helpful in most cases to remove the soil from around the stems of the plants and apply a small handful of fine lime around them, three or four weeks after they have been set out. Early planting will also be of advantage, as the plants will be too large to suffer much injury, by the time this maggot arrives. Rotation of crops will be helpful in lessening the extent of damage from the root maggot and other damaging agents to the cabbage. K.

Scientific Bulletins.

YOUR July 25 issue contains a number of very good things. The point that farmers will quickly and gladly furnish better milk *if they are paid to do so* is something that needs to be impressed on city people. Your idea of a double series of bulletins, page 948, looks good. I have in my desk one I have been looking over from a professor. He had accumulated a fine lot of material, but it was not presented in a way to appeal directly to the farmer who needs most to be reached, the one at or below the average.

New York. DANIEL DEAN.

Cleaning Out Bats.

ON page 927 L. S. complains of bats in his garret. I should, if troubled, go after the bats just as the health officers do the rats in vessels; kill them with fumes and bury the remains. If he will close the windows in his attic and stuff the chimney full of rags or paste a newspaper over the opening, it will be ready to get busy with. Operate by daylight so you are sure all the bats are inside, and rig up a line to two windows so they can be opened from the ground to let the fumes out when the job is done. The cannon to do the shooting should consist of a tub with a little water in it, and an island made of stones or bricks in the middle. On this Robinson Crusoe habitation, put an old iron pot and some live coals, and put in a good liberal supply of sulphur, then "git a move on yourself," and exercise a little patience. If the pot turns over, the water will put out the fire, so it is safe. At the end of, say an hour, pull the two windows open and allow the fumes to escape, but not directly into any pet tree or you will ruin the foliage. What few bats may not be dead will be so near it that they can be gathered up and buried with the rest. It will also kill the bugs, which probably make life miserable for L. S., as that is the way with a bats' roost; they are always full thing that has lice on it, plant or breathing creatures, and will do the work. of bedbugs. The sulphur will kill every-

If for any reason the sulphur is objected to, I believe, a sprayer with a good charge of caustic potash or concentrated lye solution made very strong, or even a very strong lime-sulphur solution, applied liberally to the batty festoons would kill them or run them off.

Alabama. M. A. P.

STOP the holes where they get in and clean up the attic. I knew a man who got two wagon-loads of Peruvian guano out of his attic, made by leatherwing bats. The house had not been occupied for a long time, and the excrement was up to the top of the upper joists. The stench was so great that he could not stay in the house. They can get through a very small hole. G. Q. P.

Virginia.

I AM interested in answers to L. S., Sullivan Co., N. Y., who asks: "What can be done to get rid of bats?" We live in an old-fashioned house, with attic in middle of upper story—bedrooms partitioned off north and south of it. We cannot use them in the Summer as the bats take full possesion and in Winter the foul odor sticks in spite of old-fashioned whitewash. H. T.

Rhinebeck, N. Y.

A New Grass for Louisiana.

A BULLETIN from the Louisiana Experiment Station at Baton Rouge gives an interesting account of the Paille Finine grass, which promises great things for Louisiana farming. This pamphlet is written by Prof. F. M. Tracy, a special agent for the U. S. Department of Agriculture. It seems that this Paille Finine grass, Panicum henitonum, is distributed over most of the open prairies of Southern Louisiana. It is rare on the salt marshes and timber lands, and also rare on lands which are high enough to be cultivated in sugar cane. Its best growth appears to be made on land which is from one to three feet above the ordinary water level. The grass seldom produces seed and its spread is almost wholly by means of long rootstocks. Prof. Tracy estimates that there are in the State of Louisiana close to two million acres under this grass, most of it being found in the parishes of Cameron, Terrebonne, and Lafourche. The grass ranks very high in feeding value, specimens grown at the Experiment Station running close to 10% in protein, 42% carbo-hydrates and something over 2% fat with 5% of ash. The following statement shows how this grass is used in Louisiana:

"Planters at Lockport and Morgan City who have used the hay extensively in the feeding of mules were emphatic in their statements that they preferred the hay to that made from Timothy, as less is needed to keep the animals in good condition. At Houma, in Terrebonne parish, I found one planter who cuts a large acreage, and who uses the hay in making balanced rations for his mules. The freshly cut grass is taken to the central station where it is run through an ordinary feed cutter, and then through a steam-heated, revolving cylinder which dries it thoroughly in about an hour. It is then ground, mixed with 'blackstrap' or some other carbonaceous concentrate so proportioned as to give a properly balanced ration. In proportioning the materials used he finds the paille finine grass to be nearly equal to Alfalfa in nutritive value, and makes his mixture accordingly. He has about four hundred mules on his plantation, and they were in decidedly the best condition of any which I saw on the entire trip. He also finds a ready sale at satisfactory prices, for all the feed he is able to prepare."

This is certainly a novel scheme for handling forage but there seems to be a large demand for the grass, and when fed in connection with the waste molasses from the Louisiana mills it seems to give promise for a business in stock food production.

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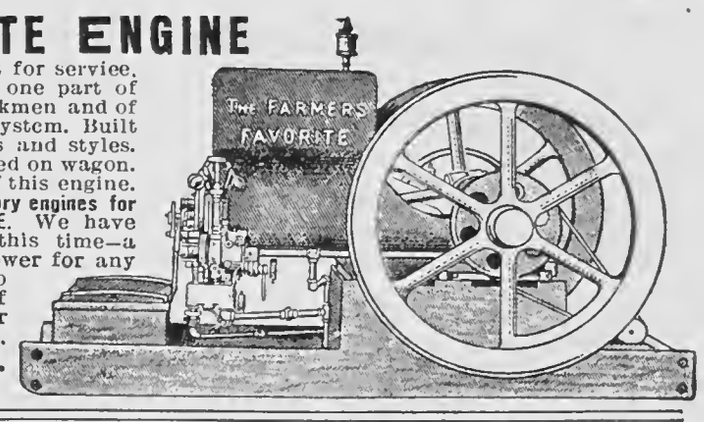

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Hope Farm Notes

THE CONNECTICUT POULTRY MEETING.

PART II.

THE CONTEST.—The picture on page 1041 shows how the egg- laying contest is laid out. The hens are kept in double houses, two pens of 10 each to the house. Each pen of birds has a small yard, and on pleasant days they come and go as they like. My "scrubs" are in the house with the Silver Campines—the two pens have been having a close race. The hens help themselves at will to a dry mash and shells, water, charcoal and grit are before them. A self-feeder for grain makes them work for that part of their ration. They are all handled alike, except a few pens which are fed in various ways as an experiment. The houses are kept clean and the hens are carefully watched for injury or disease. At such a contest it is necessary to devise a plan which will be reasonably fair to all in feeding and care, and enable one man to care for a large number of pens. In each house are five trap-nests. When the hen goes on to lay the nest closes and shuts her in until the attendant comes and releases her. As each hen wears a metal band on her leg, carrying her number, the egg is marked and the record made at once on a printed slip tacked up in each house. Sometimes the nests are all occupied when a hen wants to lay, or the hen may be lazy. In that case the egg may be laid on the floor. It is credited to the pen, but of course the individual bird has no credit.

IS IT FAIR?—I do not see why not. Some breeders complain that this system of feeding favors the Leghorn too much. The strange thing about it is that the same complaint has been made by Leghorn men, who say this scheme favors the Wyandottes. It seems to me this plan is as fair as any one could well devise. The contest is located at the top of a high, windy hill, very cold in Winter and in all respects a Spartan test for Mrs. Egg Layer. A hen that can make a good record under the conditions at Storrs is a first-class practical hen, tested and tried not only for egg production but for endurance. That, I take it, is what we want rather than some condition where hens are pampered and petted for enormous records. For example, some of the standard Wyandotte men seem to think the contests are not fair because their birds must be fed and handled in a certain peculiar way in order to do their best. Yet in all contests from a horse race to a legal battle between lawyers, the contestant must take conditions as he finds them. When you sell a man a sitting of eggs you can hardly expect to send a man along with the eggs to explain how to feed the chicks. In this world all things must take their chance without special favors if they are to continue true and strong. Therefore I think this contest is the fairest place to test the true qualities of a laying hen. I think the time is coming when a performance at such a contest will be demanded by shrewd buyers. I do not care so much what a hen does at home under petted conditions. Let her get out in competition with other hens, and show her qualities without any "special privilege."

CASTING OUT DRONES.—The picture shows a typical scene in the contest enclosure. Little groups of people formed in front of the houses and discussed the hens. Each one had the last week's laying record, and as the houses are all plainly marked it was easy to study any particular pen. Tom Barron had agreed to give exhibitions of his method of selecting layers. A great crowd followed him about—so great that it was impossible for half of the people to watch Barron at work. So he climbed upon the roof of the henhouse, and the hens were passed up to him. Immediately the roofs of nearby houses were crowded with hen men, who thus secured a reserved seat. When Tom Barron made his speech at the church he surely did not know what to do with his hands. Up on that henhouse roof, however, those hands were mighty eloquent. As one man put it.

"Barron took a bird in his hands, gave her a twist or two, ran his fingers over her, held her up for a good look, and told nine times out of 10 where she stood in her pen record. He can make those hands of his hear and feel and see and talk. Mine can hardly *feel*—let alone the rest!"

Mr. Barron seemed to look at the toes and legs first, apparently to get an idea of their color. He noted whether the legs were placed wide apart. Then he studied the head, comb and eye. Then his hands ran all over the hen, back, front and at the side, testing the lines at the back, the shape of the breast bone, the length and breadth of the back. Then he held her up for one last wise inspection, after which he told with surprising accuracy how the bird stood in her pen record. When he looked over my "scrubs" I notice that he got down to notice how the hens walked and how they stood naturally on their feet. This seemed to be an essential part of his plan, and he was at a disadvantage up on the roof where he could not see the hens walk. At any rate it was a remarkable performance, and proved most effective with the company. For here was a man actually casting out drones—yet having had no chance to study them or know of their pedigree. In half the contest pens the record had been kept down by drones. About half the birds had laid well, but a few lazy drones had ruined the chance for any show for the prize. If these drones had been cast out by some master's hand the pen record would have been increased by 25 per cent. in many cases. This fact came home forcibly to this crowd of hen men. Profit lies not alone in breeding and feeding, but in casting out drones!

DRONE BIRDS.—I think one reason for the success of Mr. Barron's birds in this contest is the fact that they have laid uniformly with no individuals which can be called drones. My understanding is that the Wyandottes are sisters or half-sisters from pedigreed utility stock carefully selected by exterior tests. Evidently true sisters of the same breeding may vary in their egg-laying ability—due to peculiarity of growth or development. Mr. J. F. Francais has a pen of Barred Rocks, which contains three or four remarkable layers. If all the birds in this pen were as good as the three best ones there would be no stopping them from taking the lead. There are a number of fine-looking birds in the contest which thus far have not laid an egg, while others have laid less than a dozen. I asked several owners of leading pens how many of their birds they would select for next year's breeding. The replies ran all the way from two to five. Not one that I talked with expected to use the entire pen, for the trap-nesting had developed several drones or near drones that showed no superior qualities to hand on to their daughters. This presence of drone birds in nearly every pen was the thing which caused most thought and comment at the meeting. For the first time, I think, at a gathering of this sort it became the dominant question. Mr. Barron evidently knows how to cast out a drone. With him it is the same sort of instinct which enables a good banker to reject a poor risk, a good carpenter to select the right lumber, the shrewd lawyer to go right to the vital part of his case, or the good editor to know quickly whether "copy" is suitable or not. No man can teach instinct to another. The most skillful anatomist in the world might name every bone, joint and muscle in Barron's wonderful hands, but he never could tell how he separate the drones from the layers. I found other men in the crowd who could do much the same work—each having his peculiar system. I find that they did not agree as to the particular form of a superior layer, but they seemed to select the bird through some *instinct* or long-formed habit of observation. Evidently a man must know how to do it if he expects to excel with hens.

BREEDING UP.—I am sure that Mr. Barron convinced everyone who heard him that he is giving an entirely straight game with his Wyandottes and Leghorns. Starting with American Wyandottes, he has simply been guided by what the trap-nest told him, and what his hands corroborated. Unquestionably the English Wyandottes are of a different type from the American standard, but this is not due to bringing in new blood, but simply to the development of the egg-laying quality. It seemed to be the conviction of most people. I talked with that it would be better to breed these English strains of Leghorns and Wyandottes by themselves, and not mix them with the best American blood. The latter is a different type, and the two may not mix well. The meeting developed a new value for the egg contest aside from the pen or individual records. Men went from one pen to another comparing the egg records—one high, another low—and began to ask themselves:

"Why this difference?"

What is there about this pen or this hen which makes this evident difference in egg value per year? This thing was never brought home to some of these people so forcibly before. They cannot forget it, and it will force them on to study out the principles of breeding and selecting. Another future that I see in these egg-laying contests is in making them the exchange for buying and selling high-class utility stock. I expect to see the time when breeders of utility stock will go to such a contest and bargain for pens or individuals on the strength of their egg records. This will be following the course of fairs and tests where cattle are sold on their record. These things are sure to come as soon as "men can be convinced" that "breeding up" a flock of poultry by using pedigreed stock is anywhere near as sure a thing as the use of pure blood in cattle breeding.

THE SCRUBS.—No, we have not forgotten them. They were right there, happy as larks and very much more productive. They laid seven eggs in honor of the day. They had outlaid their house companions, the Silver Campines, by 13 eggs at the end of July. Various people told me they are not "scrubs" at all. I have explained several times where I got them, but these critics do not seem to agree as to what a "scrub" is. If they will only agree and tell me what they mean I will enter a pen which ought to satisfy them.

H. W. C.

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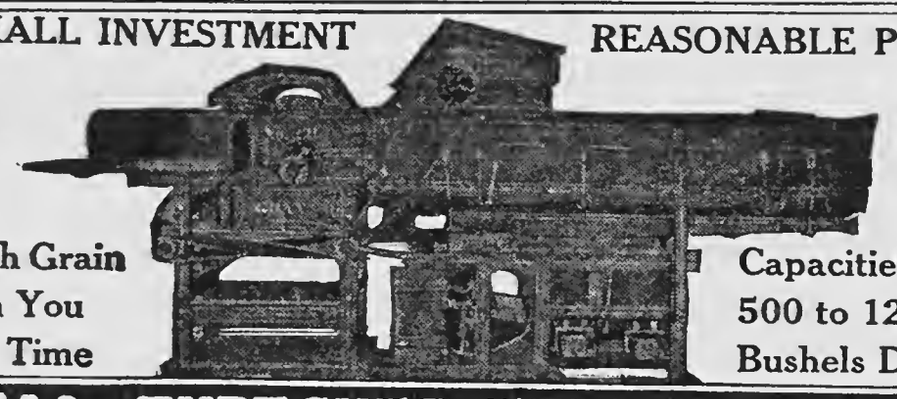

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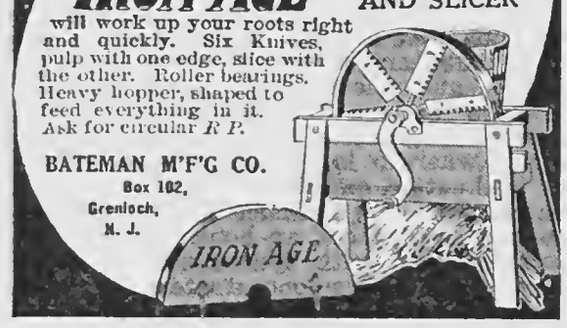

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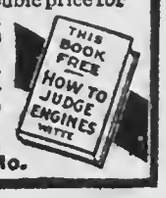

The Home Acre.

NOTES FROM A MARYLAND GARDEN.

THE John Baer tomato, which I mentioned in my last notes, is the monumental fake in seeds this season. It was claimed to be the earliest ever. In fact I picked the first ripe fruit the same day that I picked the first from the Brimmer, one of the large Ponderosa type. The Louisiana Station says that it is simply Chalk's Jewell renamed, but with me, while it does look like Chalk's Jewell, it is a much later tomato. Having paid $1 for a paper of the seed I gave it more space than other really early tomatoes. The Earliana was ripe two weeks ahead of it, and I would have been better off without the John Baer, if the space had been occupied with Earliana.

I have always had a fancy for testing new tomatoes, and have tried nearly all of them from the time when I paid Col. Waring $5 for 20 seeds of the Trophy, the forerunner of all the modern tomatoes. Before the Trophy came out the best smooth tomato we had was the Tilden. This was smooth, but with great seed cavities, and not meaty, as the best tomatoes now are. The Trophy was the first successful effort to get the big Monmouth Chihuahua tomato inside a smooth skin, and gave us the meaty character of the Mexican tomato without its creases, and this meatiness and small seed cavities have been the aim of all tomato breeders, until now there is hardly a really new feature that can be added to the tomato of any of the good strains. The object now should be to eliminate any of the hard core.

Among the tomatoes I have tried I give the preference among the pink sorts to the Globe, and of the red the Success. While it is interesting to have a few of the Monmouth or Ponderosa type, the medium-sized and smooth fruits give the larger number per plant than the mammoths. In fact it seems to be a law in nature that when we increase the size of fruits we invariably decrease the number on the plant. The little pear, plum and cherry tomatoes will make 10 times as many as Ponderosa. The Big Susquehanna peach never makes a great crop of fruit, and the Montreal Market cantaloupe will not make near as many as the Rocky Ford.

One of the most useful of the cabbages in my garden is the Succession. The first sowing of these is now coming into head right after the disappearance of the Charleston Wakefield and the Copenhagen, and a second sowing promises to come in in August. The Copenhagen Market cabbage is a fine second early, but it will not answer for Fall sowing and setting, as it runs to seed too badly. But sown in a frame in February it comes in very nicely with the Charleston Wakefield sown at same time, makes a fine head, and is as good a second early as one could wish for.

The Portland Market corn from an Oregon seedsman was the earliest corn I have ever grown, but it was more affected with smut than any corn I have ever grown. Nearly half the crop was ruined by smut, while I seldom have smut in my garden on other any later sorts. Country Gentleman and Stowell's Evergreen are still the standard varieties for the table in this climate. It is very nice to have a few extra early ears, but for quality and good size the two sorts named have never been excelled in my experience. Of course we can get rather large ears with the Mammoth and the Egyptian, but in quality they do not compare with the Country Gentleman especially.

Berger's Green Pod bean is now giving us a plentiful supply of string beans of large size and great tenderness. It is a great improvement on the old Dutch Caseknife, and as I give it a five-foot width of chicken wire netting to climb on it seems to run a little higher than the Caseknife, and the dry beans are as good as the navy beans, which do not thrive well here. W. F. MASSEY.

Maryland.

These Trees Rob Crops.

MUCH of my land lies beside a neighbor's woodland. This timber shades my fields and keeps me from raising a paying crop for many feet. How can I overcome such a condition? Perhaps roots rob soil of all fertility and moisture. Do the trees do more harm through the roots than by shading? I think they do, and propose to dig a ditch along the line fence and cut the tree roots. How deep should the ditch be? Would the scheme be practical financially? I do not know the cost of digging a ditch where there are many roots. E. H.

Maryland.

We should say that such timber operates in three ways to injure crops growing within a rod of it. The roots come out into the soil and take moisture and plant food. The trees shade the land and prevent air circulation or drainage. We should say that the timber roots are responsible for about 40 per cent. of this damage. A ditch four feet deep will help somewhat, but some timber roots will run down under it. If the ditch can be dug so as to act as a drain it may pay aside from cutting off the roots. It will not prevent all the trouble, however.

Moving Bees.

HOW can I change bees from one hive to another? A swarm came to me, and I put them in the only hive in the neighborhood. It is a poor one; would like to put them in a new one, but do not know how or when. They are my first bees. MRS. F. G. S.

Skaneateles, N. Y.

First, fit up your new hive with frames and foundation, or full sheets of brood comb; then, after smoking the bees in the old hive on any bright day, remove the cover of the old hive and set your new hive, without its bottom, on the old hive in the place of the cover. If it does not fit bee-tight, use some narrow strips of wood about the edges to make it fit temporarily. With a stick drum on the sides of the old hive until you have driven practically all the bees up into the new one; then remove the old hive, putting the new one in its place on its own bottom board. Set the old hive a few feet to one side, turning its entrance in another direction from that it originally had, and after three weeks drum its bees up again into an empty box placed over it as your new hive was at the first drumming. This will get the bees that have hatched after your first drumming. After getting them into the box, smoke the bees lightly in the new hive and dump those from the box in front of the entrance; they will run in and join the colony in the new hive. The old hive can now be broken up and its honey removed. If in your first drumming you have secured the queen in the new hive, the bees will probably stay in their new home; if you have not, they will return to the old hive and you will have to repeat the operation; take plenty of time and do a thorough job. If you prefer, you can set the old hive to one side, place the new one in its place after having put frames and foundation in it and drum the bees from the old hive into a box inverted over it in place of the cover. Carry the bees in the box to the new hive and dump them in front of the entrance. Repeat the drumming after three weeks as before to get the newly hatched bees. M. B. D.

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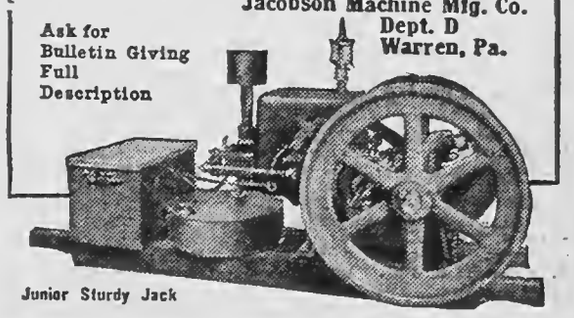

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prevent damage to eggs, garden truck, fruits or live stock on road to market. Make any wagon a spring wagon. Soon save cost—produce brings bigger prices—wagon lasts longer—horses benefited. Thousands in use. "My wagon rides like auto" says one user.

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HARVEY SPRING CO., 716 17th Street, Racine, Wis.

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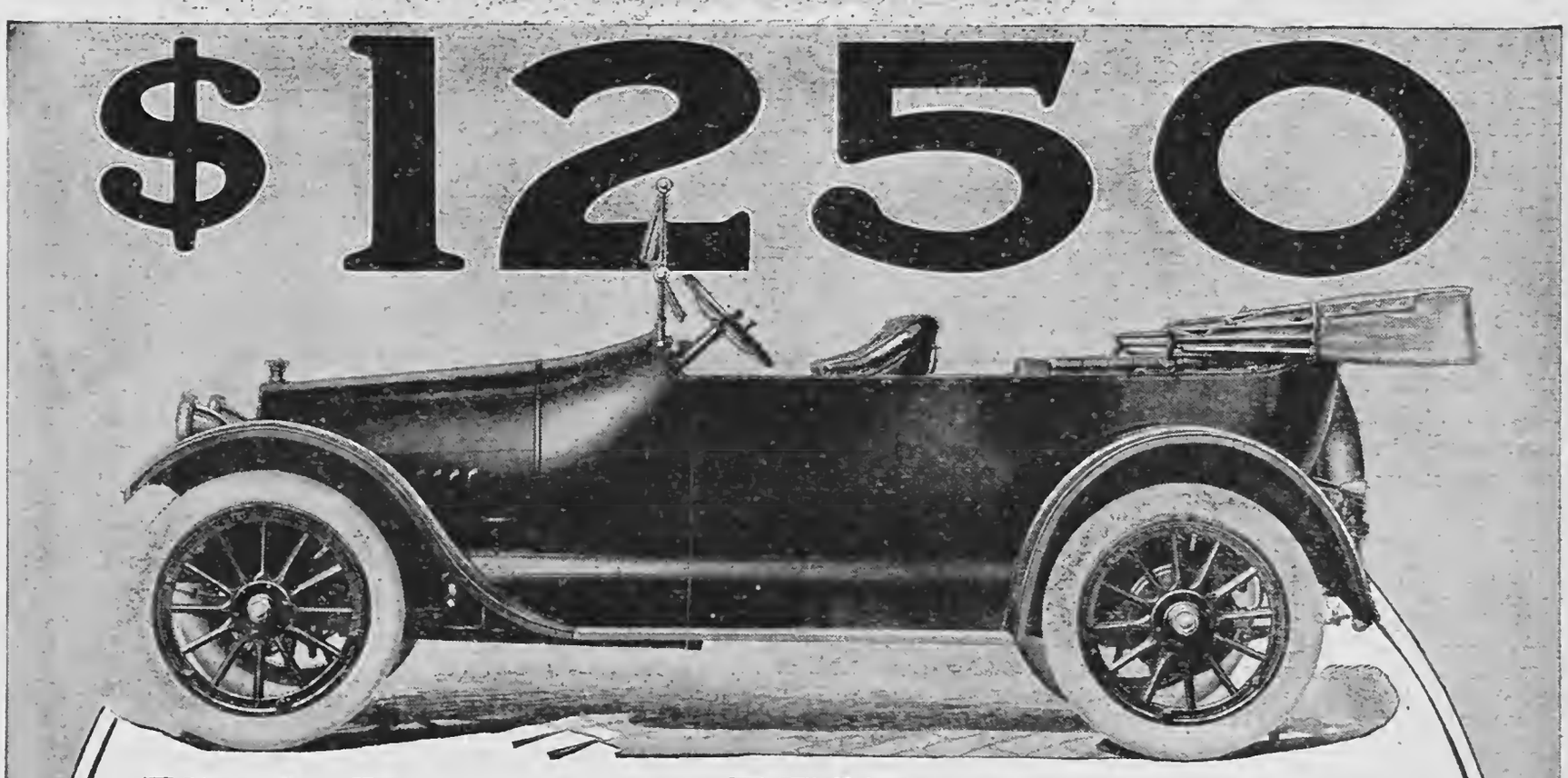

Will Buy the BEST Four Cylinder Motor Car Made for 1915

Fully equipped in every respect, Electric Self Starter, Electric Lighting, Power Tire Pump, and every one of the latest devices to secure comfort, accessibility and reliability.

The year 1915 will not only be a Mitchell year, but it will be famous as a year in which the Mitchell establishes another standard of values in automobile building.

Those who have seen the new model — especially dealers — are not only enthusiastic, but are clamoring for the first cars from the factory.

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The result is a car that beats them all—at a price $500.00 less than anything approaching it.

In fact there is no comfort, no "safety first" appliance, no accessory that adds to the enjoyment of automobile riding that will not be found in this car.

Over 95% of the car is made right in Mitchell shops which cover acres upon acres of space.

No detail is skimped — everything is weighed, judged, measured, tested with critical correctnes which gives the great *service* quality for which the Mitchell is famous.

Read the specifications in another column.

Compare them with any other car and you will find the most in the Mitchell. But after all don't judge the new Mitchell until you've sat at the wheel of the new model—until you get the **personal touch.**

We invite you to get this **personal touch** at our expense. We'll put a car at your disposal.

In the meantime send for the new literature which tells the whole story. Ask for Book 121.

Read These Remarkable Features:

- Light Weight
- Accessibility
- Economy
- Chrome Vanadium Steel Construction
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- Three-point Motor Suspension
- Full Floating Rear Axle
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- Electric Lights
- Silent Chain Drive Shaft to Generator and Distributor
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Mitchell Light Four—two and five passengers—4 cylinders—35 horse power—116 inch wheel base—34x4 tires, $1,250
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Mitchell Special Six—6 passengers—same as above.....$1,995
Mitchell Six De Luxe—7 passengers—6 cylinders—144 in. wheel base—60 horse power—37x5 tires, $2,350
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Mitchell-Lewis Motor Co.
Racine, Wis, U.S.A.

Mitchell
Light Four
5 Passenger
35 H.P. 116 in. Wheel Base

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York
HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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Entered at New York Post Office as Second Class Matter.

Advertising rates, 75 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

THE New England Fruit Show will be held this year at Providence, R. I., on Nov. 9-12. The local fruit growers' association will help. Rhode Island has made some splendid fruit exhibits in former years, and the display this year will be finer than ever. When you come to think of it the Southeastern part of New England has given the world a group of the finest apples now grown. These varieties are grown to perfection at home, and the Providence show will bring out some remarkable fruit. We have for years claimed that New England can produce finer apples than ever were seen on the Pacific Coast. Providence will prove it!

*

A WISE old farmer who has followed the discussion about the value of the station bulletins sends us a clipping from an old magazine. This states that there is more knowledge now in the world than can well be handled, but what is lacking is a method of spreading it out where people can use it. It is something like the distribution of food. There is plenty of it produced, yet through faulty distribution there may be hungry people in the city, while 100 miles away food is wasting because the price offered for it is too small to pay the cost of gathering and shipping. No one will deny that our colleges and stations have added greatly to the knowledge of agricultural science. Yet the shortest trip out where farmers work for a practical living will show how little of this knowledge has been made available. What can be done to get this knowledge out to the people? There you have one of the big problems of agricultural education. As you know, our suggestion is to let practical farmers write some of the bulletins.

*

IN a quiet way, and without organization thus far, efforts are being made to increase the wheat crop in the New England States. Years ago the New England people produced most of their own flour. In 1879 the New England States grew 1,227,037 bushels of wheat. In 1909 this yield had fallen to 114,998 bushels. Vermont and Maine have been the wheat States—the two producing 99,206 bushels in 1909. There are two reasons for the new interest in wheat growing. The poultry industry has increased rapidly of late, and wheat is a necessary food. Most henmen have large farms with considerable waste or unproductive land. Why cannot this be utilized for growing wheat? It is also true that many farmers believe that this country is approaching a period of very high grain prices. The European war will, finally, bring the world to our doors for food, and there is a general feeling that now is the time to increase our crops of bread-making grains. Our own opinion is that there will be greater profit in growing the native flint varieties of corn on the New England hills—rather than in sowing wheat.

*

THERE is good work to be done through the farm bureaus, improvement societies or whatever name you may call them. The theory of securing the aid of some expert in scientific farming to act as adviser is sound, as is the theory of organization. There is but one way, however, as we see it, for these organizations to succeed. That is for the farmers themselves to take hold of the organization, finance it fairly, and then control it for practical purposes. Young men, untried in practical farming, however bright and well read they may be, cannot be expected, by their own efforts, greatly to change the character of agriculture. Yet, working as the true agent or investigator of a group of good farmers they may become of great service to the country. We think the great majority of these young men desire to work as true agent or representative rather than to try to force their opinions upon practical men. We can see a dozen ways in which such a young man can be very useful to an organization of farmers. Such farmers could not, as individuals, spend the time to investigate problems, but the county agent can do it for them when they agree upon what they want. Thus this farm bureau will give the farmers a chance to have certain important work done which they could hardly do themselves. The safety of the farm bureau lies in self-help—the farmers themselves to control the movement and keep it free.

*

"THERE'S a shadow on the White House
Death's hand is at the door,
With a message that comes ever
Alike to rich and poor!"

It is one of the horrors of war that it drives the mind from its duty toward the living and the dead. The war news from Europe has so absorbed public attention that comparatively few of our people have fairly considered the fearful sorrow which has fallen upon President Wilson in the death of his wife. Mrs. Wilson was a gentle and unassuming woman, yet of strong character and influence. She was a home woman, absorbed in her efforts to be helpful to her husband and daughters. Few people knew that she was ill, but we may now realize the load of private care and grief which our President has carried silently and uncomplainingly through the hard public experiences of the past year. The warm, human heart of the nation goes out to President Wilson in these sad days with the earnest prayer that he may be sustained by a higher power in the tremendous tasks now before him.

*

DURING this frightful European war the policy of this nation should be one of strict and rigid neutrality. Every citizen should support the Administration in its efforts to avoid any official expression of sympathy for one side or the other. In a general way we all have our ideas as to the merits of the dispute, but not one in 10,000 can really understand what it is all about. The conditions in this country are such that most of us cannot comprehend the real feeling of the European people. Thus it would be the part of nonsense for this nation to enter any such controversy. Again, millions of our people came originally from Europe, and are tied by blood and by memory to the "Fatherland" or the "home land." We may respect their feelings, but they came here to make their home and help develop this nation on newer and more liberal lines. For this nation to adopt any policy except that of strict neutrality would be like mixing race hatreds together so as to form a political explosive. This nation should in this great struggle stand as the friend of peace and the world's great provider. In spite of all its horrors, this war will bring ultimate good to humanity. Who will say that the frightful slaughter of Napoleon's wars did not, in the end, give the masses of Europe a fairer chance? Before this war is over there will be less of autocratic, stern military government in the world. Some part of the loss and sorrow is sure to be felt in America, but if we can keep our heads and as a nation practice wisdom and self-restraint the future gain will be sure. We shall be in a position to secure the vast trade with South America which thus far we have failed to obtain. As a neutral nation, strong and honorable in its dealings with Europe, this nation will be expected, in time, to help settle terms of peace, finance the world's business and feed and provide for Europe's millions for years after the war closes. We have before us an unexampled period of national honor and prosperity which may be obtained through strict neutrality and fair dealing.

*

THE article by Mr. Ludwig calls attention to what we regard as one of the most important questions of soil culture. It is called "soil sanitation" for short. There seems to be no question that many of our grain soils are filled with the germs of plant diseases which reduce or injure the grain crop as seriously as potato scab, tomato blight or leaf-curl do the crops which they infest. We have become familiar with a disease like scab or blight and we recognize the folly of cultivating or fertilizing potatoes unless we are willing to soak the seed or spray the vines. Such treatment of the seed and the crop is as important as the use of fertilizers. More so in fact, for the plant afflicted with disease cannot make profitable use of its food. We believe that some if not many western soils have failed to give profitable yields of grain—not because they were "worn out" but because they were "sick"—that is, filled with germs of grain diseases. Applications of soluble fertilizers may give increased yields by stimulating the sick plants on such soils, but clean seed and sanitary treatment would double the effect of such fertilizers. This is one of the big, new problems which both our scientists and practical men must work out. A farmer would not knowingly feed good grain and hay to swine or cattle so sick that they could only make half a normal growth. Yet that is what he is doing when he puts sick seed into a sick soil.

*

ONE of our New York readers was induced to take out an insurance policy to cover accidents to a farm hand. Some of the insurance agents are trying to make farmers believe they are liable under the compensation law even when that law expressly exempts them. At any rate this farm hand was insured. He fell off a load of hay and was laid up for a few days. The insurance company was notified and sent the following:

We beg to acknowlege the receipt of your report of accident in the above case. The facts are as follows: "Lost control of horses going into barn with load of hay." Also injured's occupation is given as "farming."

Section 3 of the Workmen's Compensation Law, subdivision 4, which defines the meaning of the word "employee" ends with the following language: "and shall not include farm laborers or domestic servants." In view of this language of the law injured will not be entitled to any compensation. Should he, however, make a claim for such please notify us immediately. Also if any forms are sent you by the Commission to be filled out kindly send them to us, and we will instruct you in the matter. Likewise should the Commission serve any papers or subpoenaes upon you please mail them to us at this office at once. Kindly incur no expense on our account in connection with this case, except the doctor's bill which has already been incurred. Please do not pay this but send the bill to us.

Yours truly,
THE FIDELITY & CASUALTY CO.

To this the farmer made reply.

I have read your letter over carefully. It would seem to me if what you say is so, and you must know what you are talking about, I do not need any insurance. Please tell me briefly what I do get for my money.

You will see the point of all this. The farmer pays for the insurance, being told that he is liable in spite of the law's wording. The man is hurt, but the company now states that under the law the man is not "entitled to any compensation." The farmer has the experience, the hired man has the bruises and the insurance company has the money! Why did they take the farmer's money if they knew the law exempted him from liability?

*

GIVE us the power to make men and women *think* sanely and seriously about their problems, and we will make history. It is hard for the average man to think. It means hard work and dog-like concentration of mind, and it leads a man to a point where he must face the truth with moral courage or else go through life trying to make excuses to himself. Thus the majority of men are content with thinking that they think, while they actually wear the readymade thoughts of others much as they wear clothing. He is the greatest benefactor of the human race who can make his fellow man *think* liberally and broadly. He is the oppressor of his kind who substitutes prejudice, superstition or partisan hatred for thought, and makes weaker minds think it is the true article. The new word "scatter-mindedness" expresses the condition which prevents many from thinking. This trouble starts from childhood. In a discussion of what to do with our dull children, Prof. O'Shea of Wisconsin says:

One cause of dullness is due wholly to the way in which children are trained from the second or third year up to maturity. This is lack of mental concentration. No child can get along very well in the home or in the school unless he can keep his mind on the thing which is being said to him, or the task which has been assigned him, or the work he is trying to accomplish. If he is distracted by everything that is happening around him, he will be certain to fall behind in the school; and he will be a cause of annoyance in the home, because he cannot readily get the directions which are given him, and he cannot command his attention so as to do what is expected of him.

This habit of mental concentration is one of the most important essentials of success in any enterprise. Without it no man can think through a subject, and unless a man can do that the subject is master of the man.

BREVITIES.

A VERY interesting account of garbage-fed hogs and cholera on page 1038.

A DRESSING for sores on horses—one part standard carbolic acid and three parts sweet oil.

A PAINT for houses or nests where vermin abound—one part crude carbolic acid and three parts kerosene. Swab it on well.

No use waiting for the South American trade to be developed. Right in your own town people are sending 100 miles away for food which you can supply.

DR. CLINTON of Connecticut reports injury to leaves of Lima beans which could not be identified until it was traced to Paris green used with bran as a bait for cutworms.

THE Hope Farm man has had much sympathy and good advice as the outcome of his adventure with the heifer. Here is a sample: "Mighty glad heifer did you no harm; should not advise bull-fighting as an exercise for you. Try golf, it is more fashionable." What about hoeing strawberries?

THE WAR AND COMMERCE.

DEFINITE price advances have now been made in a large number of staple products. Flour is up $1.35 per barrel; wheat, 15 to 20 cents per bushel; corn, 15 cents (part of this rise being due to drought damage); sugar $1.60 per 100 pounds; beans, $1.50 to $2 per 100 pounds; coffee, two cents per pound; and tea, four cents. There is a general rise in the price of chemicals. Many of them come from Germany, and that source is entirely cut off. Others are used in explosives, for which there is increased demand. Carbolic acid is 25 cents per pound higher; benzoate of soda, 15 cents per pound; menthol, $1.50 per pound; saltpetre, two cents higher; and potash, used in glass making, 13 cents per pound advanced.

Domestic meats are all two to three cents per pound higher, partly owing to the alleged scarcity which the "meat trust" is continually harping on. It is difficult to understand how a two cent advance in price can increase the supply of meat, but that is the way it works with products that are kept in secret storage.

Our supply of Egyptian cotton, used in making high-grade yarns, is getting short; raw silk is scarce, and the same is true of some grades of foreign wool. Domestic cotton is low, because of the foreign demand being dead, and there has been practically no change in price of the home wool crop.

The war has as yet made no appreciable change in butter and egg prices at New York. Canada reports a higher market on both of these staples. Horses and mules suitable for war purposes are expected to advance heavily.

Great efforts are being made to move wheat to Europe. Ships for British and Belgian points are expected to renew sailings soon. Belgium has offered to insure wheat shipments sent there. German ports are closed and will doubtless remain so until the war ceases or Germany wins a naval victory decisive enough to make the North Sea and waters adjacent to the Atlantic safe for her merchant vessels. At present nearly 120 merchant vessels of commercial importance are tied up, among them the immense Hamburg-American and North German Lloyd lines. In the loss of revenue from all this shipping, and the stagnation of business in many lines, the industrial world is paying its allotment for the horrid luxury of war.

NEW JERSEY HORTICULTURAL MEETING.

ORCHARDSIDE, the home of Mr. and Mrs. John H. Barclay, was the goal for the members of the New Jersey State Horticultural Society and their friends from Pennsylvania and Maryland as well as New Jersey. The threatening weather of the early morning delayed, but did little else in hindering the getting together from all points in the State in one of the largest Summer meetings so far held. The farm was in its best trim, with barns filled to overflowing and grain in a score and more of well-made stacks, a fine field of potatoes waiting for the diggers to get busy, which all told of the successful work of the season. But to mention the Barclays always brings to mind the blue ribbon apples we have been seeing at Trenton, New Brunswick, Freehold, in our own State, to say nothing of the boxes sent to Rochester, Pittsburgh and other State meetings. To see the trees on which this fruit has been grown so successfully and to see the young orchards just showing what they will do in a few years was the great attraction, and the loaded mature trees, propped and thinned, well repaid the journey by rail, trolley, and auto.

President Hendrickson called on Mr. Barclay first, and he cordially welcomed the assembled guests and told them the farm was for inspection for their benefit, and that he was ready to explain all he could, that might need some explanation. As the promised speakers failed to arrive, Prof. Blake entered at once into a discussion of some of the leading peach questions of the hour, again emphasizing the importance of thinning the heavy crops of this year. Packing the carriers was then fully treated, and men were there to show how they should be filled. Winter injury is still with the peach growers, and some trees are going this Summer. The newer varieties were shown from the Vineland orchard, giving us a chance to see some of the widely advertised kinds that sometimes prove old friends under new names. After extending a cordial invitation for the next Winter meeting to be held in the new Agricultural building at New Brunswick, he told of the crowded condition of the Agricultural courses and needs of the young men of our State, who should be taught in New Jersey what they will need to practice here to be successful. He made an earnest appeal to the farmers present, to see that these wants are properly looked after.

Dr. Cook told of the rapid increase in the inquiries received by his department and the great number of complaints of diseases of farm crops; 135 complaints of different diseases were received last season. It shows that the work of the Experiment Station is being recognized by the farmers, and the necessity of having enough men at New Brunswick to investigate these diseases and learn how to combat them promptly.

In answer to numerous questions along his line, Dr. Headlee again told of the great efficiency of "Black Leaf 40" in fighting lice of various kinds. If properly used he thinks we need fear but little from these attacks. Keeping the trunks clean on our pear trees and using Black Leaf 40 at the proper times, he thinks will keep that great pest pear psylla in check. It looks now as if we would find a help against the peach borer in a soft grade of asphaltum that has shown no injury after being on the tested trees a year. There were many less borers where the tree trunks have been covered from early June till October, but the knife must still be used. For greenhouse work a stronger solution of nicotine has been found necessary and we are told that a leading nursery firm has kept the lice from their roses with one application of an extra strong nicotine solution. To overcome the bark beetle that injures the trees weakened by Winter injury, careful trimming out of all dead wood and keeping the trees vigorous as possible was advised. After lunch the crowds separated and were seen in all parts of the farm as well as enjoying the social opportunities, not the least valuable part of these Summer meetings, as we get better acquainted with our individual brothers, and perhaps can aid a fellow grower in solving some trouble. H. G. T.

EVENTS OF THE WEEK.

DOMESTIC.—William H. Cooper, the convicted head of the New York Central Realty Company, was sentenced by Judge Grubb in the United States District Court, August 7, to serve three years in Atlanta penitentiary for fraudulent use of the mails in the sale of about $500,000 of the bonds of his company. Cooper was indicted with Claude J. Van Slyke, James A. Robinson and Ernest Sharp. Van Slyke and Robinson pleaded guilty and turned Government witnesses.

New Jersey factories are beginning to feel the effects of the European war in their shortage of raw material. Hat factories in the Orange Valley get all their supplies from Europe, and are said to have only enough on hand to last through the Fall. Electrical works, pharmaceutical supplies, dyers, and textiles, including silks and towelings, are seriously affected.

Under the ordinance passed by the New York City Board of Aldermen June 23, all horse-watering troughs in the city have been closed. The Society for the Prevention of Cruelty to Animals is installing faucets so that drivers can fill their pails. Every commercial vehicle to which a horse is attached must now be provided with a pail, under penalty of fine or imprisonment. This order is due to the prevalence of glanders.

To reëstablish the salmon fishing industry on the New England coast, the Federal Bureau of Fisheries has begun the work of introducing the humpback salmon of the Pacific Coast into the littoral waters of Maine. This native salmon of New England has become very scarce, and, realizing the impossibility of ever reëstablishing the species, the Bureau has selected the humpback as a substitute. In 1913 the humpback run in Puget Sound was valued at $4,000,000.

Owing to the fear of German vessels being seized until peace had been restored in Europe, no more potash will be shipped to this country. The Kali Syndicate controls 53 potash mines in Germany, which furnish the potash to the world. Over one million tons of potash are shipped annually to the United States.

The Bank of England has made plans to send shipments of gold to Ottawa, Canada, to be deposited with the Treasurer-General to the bank's credit. The plan, in the opinion of persons best informed as to the situation, will cause a speedy reduction in the rate of exchange and resumption of commodity shipments to England. It will also cause the shipment to Canada of at least $5,000,000 of the $10,600,000 gold brought back by the Kronprinzessen Cecilie. Such a step will not only strengthen the reserves of England's great financial institution but will also tend to liquidate the enormous debts which this country now owes on the other side of the Atlantic, owing to the extensive security liquidation of the last few days of trading in the stock market and the swinging against this country of the balance of trade. Such a step will also reduce the exorbitant rates existing in foreign exchange, according to high authorities, and will undoubtedly open the way for shipments of American grain and other commodities to England at least, and perhaps France. The Bank of England can issue notes against a supply of gold placed to its credit in the vaults of the Treasurer-General at Ottawa just as well as it could against gold in its own vaults in London. Not only does the Bank propose to have gold from this country placed to its credit in Canada, but it has laid all plans for the establishment of another depositary in South Africa. This will further increase the reserves and actual gold supply of the Bank, in that it will have at its command all the gold it wishes from the gold mines of the Transvaal. The depositing of gold from this country in the vaults of the Canadian Government at Ottawa to the credit of the Bank of England is also considered as a strategic move on the part of that institution to prevent its having to assume war risks on the precious metal.

WASHINGTON.—Instructions to collectors of customs regarding foreign bound vessels were issued August 8 by the secretaries of the Treasury and Commerce, following a conference of department officials, the most important order bearing on the European war being to the effect that any vessel "whose character as a merchant vessel is established to your satisfaction is entitled to clearance, no matter what the character of her cargo or what her destination." Another order is that the collectors shall not refuse clearance to merchant vessels, whether of the United States or other neutral power, or whether of a belligerent power, "solely on the ground that the cargo contains contraband of war."

The Austrian ambassador has called the attention of the State Department to the inconvenience, loss and trouble which would result because of the interruption of direct mail shipping between the United States on the one hand and Austria and Germany on the other. If given to English lines, the Austrian Ambassador said, the mails to Austria and Germany would be held in England. The Postmaster-General replied that the Department had already issued orders that all mail going to Austria-Hungary and Germany, addressed via Rotterdam, be despatched by Dutch liners unless it could be more expeditiously sent by other liners. Since the declaration of war between Germany and Great Britain neither German nor Austro-Hungarian mail has been sent on British ships.

Two measures designed particularly to aid the cotton producers of the South in the emergency brought about by the European war were introduced in the Senate, August 11. One amended the banking and currency act so that emergency currency may be issued upon notes, drafts and bills of exchange, secured by staple agricultural products, having not more than four months to run. It provides that such securities shall be classed as "prime commercial paper" within the meaning of the act and that emergency currency may be issued against them to the extent of 75 per cent. of their face value. The other measure authorized the Secretary of the Treasury to withhold from the banks of nine cotton growing States—North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Texas, Oklahoma and Arkansas—50 per cent. of the emergency currency which could be issued to them. The Secretary of the Treasury is further authorized to advance upon notes secured by warehouse receipts for lint cotton in bales for a term not to exceed twelve months Treasury notes to an amount equal to 50 per cent. of the emergency currency to which the banks of these States were entitled under the law.

THE EUROPEAN WAR.—August 8 it was reported that Great Britain had seized German colonies in Africa, Port Lome on the Gold Coast, and South Togoland, where a high-power wireless station had been established. The German forces entered the town of Liege, Belgium, but the forts were still held by the Belgians. The German losses at Liege were very heavy, but reports as to number were contradictory, some going as high as 31,000, others 8,000 or less. British troops were landed at Calais August 9, and were reported, August 12, to be entrenched at Namur, Belgium. August 9-12 French troops were in contact with the Germans in Upper Alsace, but were checked in their invasion of that province. Very little was known as to British naval movements, but the Canadian Government announced August 11 that the North Atlantic was safe for Canadian shipping, and sailings were to be resumed without delay. August 11 the British Admiral announced that the North Sea was closed to merchant vessels; having being planted with contact mines by the Germans, the British intended to mine it further. No reports of the British naval forces were given out, except that the cruiser Amphion was destroyed with 136 men by a mine, after sinking the German mine-laying vessel Konigin Luise. Italy and Holland remain neutral; Portugal has announced herself as an ally of England. Both England and France announced war August 13 with Austria. It was announced August 12 that the Russian invasion of Austria had begun. It was reported that the Austrians had been driven out of Servia, but Servia and Montenegro had united against Bosnia, while Roumania was siding with Austria. It was believed August 12 that Japan was preparing to attack the German port at Tsing-tao, China. It was evident, August 12, that Holland feared German invasion, as a state of war was proclaimed in the provinces of Limburg, North Brabant, Zeeland and Gelderland.

HARVESTER TRUST DECISION.—The International Harvester Company was declared to be a monopoly in restraint of interstate and foreign trade, and was ordered dissolved by a majority decision in the United States District Court, August 12. Unless the $140,000,000 corporation submits a plan for the dissolution of the combination into at least three independent concerns within ninety days, or in case of appeal within ninety days of the issuance of an appeal mandate from the United States Supreme Court, the decision announces that the court will entertain an application for the appointment of a receiver for all the properties of the corporation. The decision of the court was given by Circuit Judge Walter I. Smith, of Iowa, with which Judge William C. Hook, of Kansas agreed, and from which Judge Walter A. Sanborn, of Minnesota dissented. The majority opinion held that the International Harvester Company was from its organization in 1902 in violation of the Sherman law. The original corporation, formed of five concerns, violated the first section of the Sherman act by restraining competition among themselves. The combined organization also tended to monopolize trade in contravention of the second section of this law. The decision declares that while the International Harvester Company and its selling organization, the International Harvester Company of America, control from 80 to 85 per cent. of the trade in agricultural implements manufactured by them, their treatment of smaller competitors in general has been fair and just. The court finds fault with the actions of the corporation, aside from the technical violation of the Sherman law, for only two actions. The opinion declares that there was no excuse for the advertising of the products of D. M. Osborne & Co. as independent for two years after it had virtually entered the International Harvester Company. This advertising was to induce purchasers, the court finds, from those who were opposed to buying from the combination. The other act censured by the decision was the manner in which the five original concerns were turned over to the International company by William C. Lane, a New York banker, who contended that he had purchased the properties.

GOVERNMENT CROP REPORT.

The growing condition of the various crops on August 1, expressed in percentages of their ten-year average (not the normal) on August 1.

Wheat	118.7
Apples	113.3
Lemons	105.4
Grapes	104.7
Raspberries	104.7
Barley	103.9
Kaffir corn	103.8
Sugar beets	103.4
Alfalfa	103.4
Hay (all)	103.3
Peaches	102.9
Oranges	102.2
Beans (drying)	101.8
Cantaloupes	101.2
Millet	100.8
Hops	100.0
Broom corn	100.0
Buckwheat	99.7
Pears	99.7
Flax	99.4
Rice	99.1
Oats	98.1
Peanuts	97.1
Cotton	95.5
Cabbages	95.2
Potatoes	95.1
Tomatoes	93.5
Onions	93.4
Timothy	91.6
Blackberries	91.4
Sorghum	91.4
Pastures	91.3
Corn	91.3
Clover	91.2
Lima beans	90.9
Sweet potatoes	87.3
Sugar cane	85.3
Hemp	82.2
Tobacco	81.6

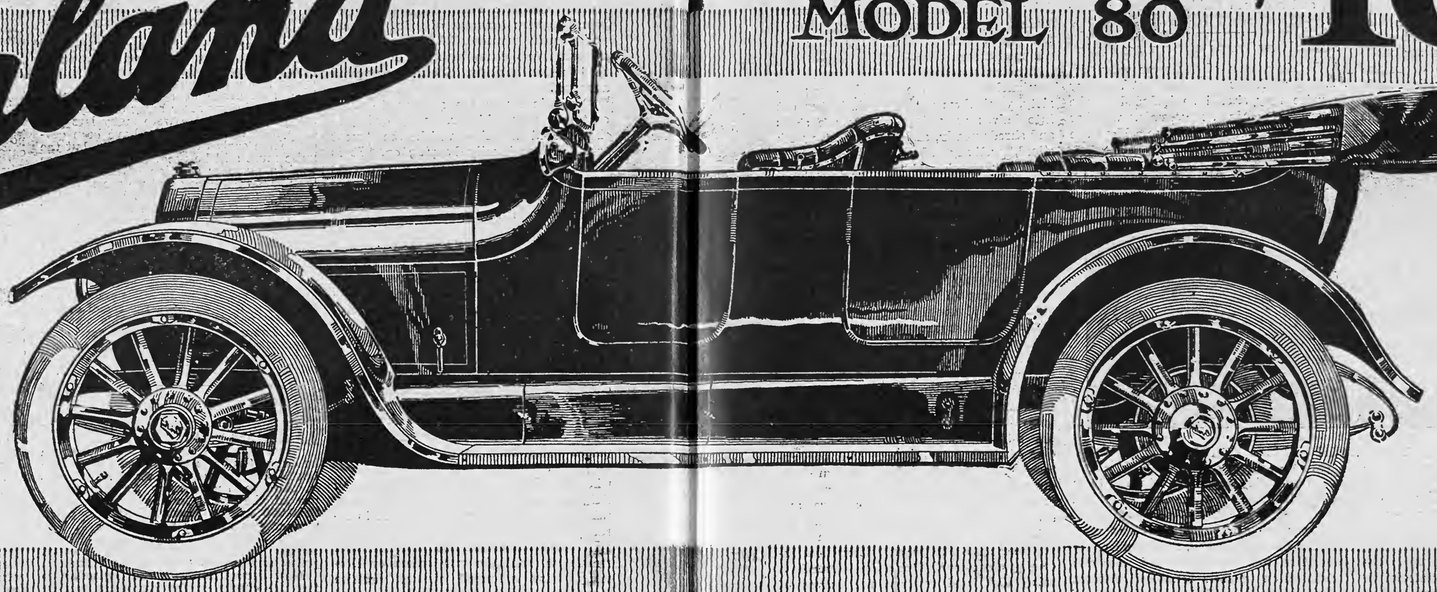
The average price to producers of the United States of important products on dates indicated were:

Product—	Aug. 1, 1914	Aug. 1, 1913
Corn, bush.	$0.768	$0.654
Wheat, bush.	.765	.771
Oats, bush.	.367	.376
Barley, bush.	.451	.508
Rye, bush.	.610	.607
Buckwheat, bush.	.812	.724
Flax, bush.	1.51	1.19
Hay, ton	11.52	11.16
Potatoes, bush.	.871	.692
Sweet potatoes, bush.	.975	....
Cotton, lb.	.124	.115
Butter, lb.	.237	.249
Chickens, lb.	.128	.124
Eggs, doz.	.182	.172

Product—	July 15, 1914	July 15, 1913
Hogs, 100 lbs.	$7.72	$7.81
Beef cattle, 100 lbs.	6.38	3.98
Veal calves, 100 lbs.	7.80	7.46
Sheep, 100 lbs.	4.75	4.20
Lambs, 100 lbs.	6.55	6.05
Milch cows, each	59.67	54.80
Horses, each	137.00	143.00
Wool, unwashed, lb.	.185	.159
Honey, comb, lb.	.135	.139
Beans, bush.	2.22	2.22
Clover seed, bush.	8.12	9.78
Timothy seed, bush.	2.32	1.94
Alfalfa seed, bush.	6.92	8.20
Cottonseed, ton	22.80	21.40
Broom corn, ton	87.90	56.60
Cabbages, 100 lbs.	2.66	2.64
Onions, bush.	1.70	1.02
Tomatoes, bush.	1.67	1.61
Apples, bush.	.91	.86
Peaches, bush.	1.20	1.30

Overland

1915 MODEL 80 $1075



BY INVITATION MEMBER OF

This is the car selected by the Rice Leaders of the World Association as prizes for the leading salesmen of the world.

The Greatest Motor Car Value Ever Offered

WE have always given more car for less money than any other motor car manufacturer in the world.

We have always given a superior car, a more powerful car, a more practical car and the most economical car.

That is why more Overlands have been bought than any other similar type of car ever produced.

Now, with pride, we announce our latest car—Model 80—the greatest value this factory has ever placed on the market.

We wish particularly to call your attention to the fact that while this 1915 model has innumerable improvements, enlargements and refinements, *the price has not been advanced.*

This season we shall build 75,000 cars! This enormous increase in production again places us in the enviable and supreme position of being able to give still more value for still less money than any other manufacturer.

Following are the facts! Read each paragraph carefully!

Model 80 has a brand-new stream-line body. Its full sweeping stream-lines blend and harmonize perfectly with the balance of the symmetrical design. All visible lines are absolutely clean, unbroken and uninterrupted.

The new crowned moulded fenders, new rounded radiator, new hood slightly sloped, and flush U doors with disappearing hinges, contributing the additional touches of exterior grace and modishness which distinguish costly imported cars.

The new tonneau is much larger—both in width and in depth.

The new cushioned upholstery is also considerably deeper and softer.

This model is equipped with the finest electric starting and electric lighting system. All switches, in a compact switch box, are conveniently located on the steering column. Thus in the driving position, without stretching forward or bending down, you start the car, drive the car and control the electric horn and all head, side, tail, and dash lights.

This car has left-hand drive and center control.

The tires are larger this year, being 34 inch by 4 inch all around. These tires can be quickly detached from the rims which are demountable. One extra rim furnished.

Ignition is high tension magneto, independent of starting and lighting system. It requires no dry cells

Fundamentally the chassis remains as before. The front axle is larger; the wheels are larger; the frame is heavier and stouter; gears are made of 3½% nickel steel; there are integral grease cups in spring bolts; and other mechanical refinements which are described in detail in our new catalogue.

But otherwise in no possible way could we improve the splendid Overland chassis that is giving such satisfactory service to 50,000 nineteen fourteen owners.

This new Overland rides with remarkable smoothness, taking the ruts and rough spots with the ease of the highest priced cars.

There is the famous, powerful, speedy, snappy, economical and quiet 35 horsepower Overland motor; and a long wheelbase of 114 inches.

This car comes complete. Electric starter, electric lights, built-in windshield, mohair top and boot, extra rim, jeweled magnetic speedometer, electric horn, robe rail, foot rest and curtain box.

This new model is ready for your inspection in practically every city and town in the country.

Dealers are now taking orders. Make arrangements now for your demonstration.

A Few of the 1915 Model 80 Features

Motor 35 h. p.
New full stream-line body
Instrument board in cowl dash
Individual front seats, high backs
Tonneau, longer and wider
Upholstery, deeper and softer
Windshield, rain vision, ventilating type, built-in
Crowned fenders
Electric starter
Electric lights
High-tension ignition
Thermo-syphon cooling
Five-bearing crankshaft
Rear axle, floating type
Spring, rear, 3-4 eliptic, extra long, underslung
Wheel base, 114 inches
Larger tires, 34" x 4"
Demountable rims—one extra
Left-hand drive
Beautiful new Brewster green body finish
Complete equipment

Send Coupon For 1915 Catalogue—FREE

We have just published our new catalog. There is one for everybody—one for you. This new book describes and pictures in detail our model 80—the greatest Overland. Every one should have a copy of this new, interesting and instructive book. It is an authority. Send the coupon for your copy right now. It is free.

The Willys-Overland Company,
Dep't. 127, Toledo, Ohio.

Please send me your 1915 catalogue.

Name .....

Address (or R. F. D.) .....

Town ..... State .....

The Willys-Overland Company, Toledo, Ohio

Two passenger Roadster $1050 **The Willys-Overland of Canada, Limited, Hamilton, Ont.** *Prices f. o. b. Toledo, Ohio*

Woman and the Home

From Day to Day

The Glory of War.

Hoof beat and trumpet blast
  And banners in the dawn!
And what of the grain in the fallow field
  When the husbandman has gone?

Sword song and battle roar,
  And the great grim fighting line!
And what of the woman in the door
  And the blown grape on the vine?

Drum beat and draped flag
  And he beneath his shield—
And what of the woman weeping low,
  And the dead grain in the field?

—Dana Burnet in the New York Sun.

*

CORRESPONDENTS sending inquiries to this department are requested, in all cases, to give full name and address. This will not be published but is required as a guarantee of good faith. It also enables us to reply by letter, where this seems advisable. We are often asked, by a hurried correspondent, to reply in the next issue of the paper, at a time when that issue is already on the press. Some questions, too, while of vital importance to the inquirer, are not of general interest, and we feel unable to print them, though very glad of an opportunity to answer by letter.

*

THE Children's Bureau of the Department of Labor has issued a bulletin on "Laws Relating to Mothers' Pensions in the United States, Denmark and New Zealand." From this we learn that Missouri was the first State to pass a law providing such pensions. In 1913, of the 42 State Legislatures then in session, 27 had before them bills providing for the support of dependent children in their own homes out of public funds. The bulletin includes a list of references on "mothers' pensions," which will be helpful to anyone making a study of this subject.

*

A RECIPE index file is much handier than a book for keeping one's collected recipes. Such a file consists of a well-finished little cabinet of oak or beech, containing 100 ruled cards, 5x5 inches, with 23 guide cards to classify the recipes. It is very easy to slip a card into its place, arranging alphabetically, and it is taken out, and may be pinned up, or otherwise conveniently arranged, while being consulted. We all know the bother of flattening out a bulky recipe book, and making it stay put, while we get together the materials needed. The recipe file described costs 80 cents.

*

HOURLY nursing service for persons who do not need to go to a hospital, but who require the skilled attention of a trained nurse, is to be established by the Nurses' Registry Association of this City. The charge is to be 75 cents an hour. There are many patients who cannot afford to pay a weekly salary to a trained nurse, yet who need skilled attention at intervals, and this service will be of enormous benefit to them. We think very often of the need for such skill in isolated country places, and we hope, some time, to learn of a rural nursing system, similar to the Australian Plunkitt nurses. Why could not some strong Grange send one of its own farm girls to a good nurses' training school, to return, after finishing the course of instruction, to take up this work in her home district?

Seen in New York Shops.

JOCKEY caps have appeared as a new mode in millinery. They are exactly like the real jockey's headgear, a round cap put together in sections, with a projecting visor; the only trimming is a flat button on top, and a ribbon band with a small bow at the back. Some are made entirely of black velvet, some are black and white striped satin with black satin visor, and others are of white serge. Some of them have soft draped balloon crowns. They are likely to be worn a good deal by those who like extreme models, but they give the wearer a sort of bold jauntiness that is not admirable. Prices of the caps run from $2.75 to $4.50.

Blouses of polka-dot lawn are pretty and new. They are made of fine lawn, with pink or blue dots, the sleeves being set in with hemstitched white lawn; the rolling collar and turn-back cuffs being of the white hemstitched lawn. Ready-made, they cost $3, but this is a style which might well be copied by the home dressmaker; there are few localities where polka-dot dawn is not obtainable.

Among little girls' dresses we see a greater tendency to do away with petticoats, and substitute bloomers of the same material as the dress. These bloomers are attached to a sleeveless underwaist. Some beautiful little frocks are made of homespun linen decorated with colored embroidery worked like the peasant embroidery of Roumania and other Balkan States. Such dresses are made like plain slips with kimono or raglan sleeves, the embroidery decorating neck, sleeves and hem.

Many new Fall skirts are of side pleating, attached to a deep yoke. These yokes are often outlined with braid and finished with buttons. Anyone who has saved a separate skirt in good preservation from the time when pleats were "in" can remodel it by cutting off the top, which used to be pleated right up to the belt, and using some of this material to form a plain yoke. Skirts are not as long as they have been; indeed, some of them are short enough to look rather awkward, according to recent standards.

Jet ear-rings are extremely popular, especially hoops and long pendants. Of course they are made with the screw loops that obviate the necessity for piercing the ears. A regular 1870 effect is given by long jet ear-rings where the wearer has her hair drawn high, a little flat hat perched on one side, and a long-waisted basque over a pleated skirt. Another old fashion revived is the wearing of a band of black velvet high up around the throat. Jet bangle bracelets and necklets are also much worn. The handsome cut jet is quite expensive, but there are many cheaper imitations.

Infants' diapers of soft absorbent paper cost 10 cents a dozen. They are placed inside the ordinary diaper.

Many white satin hats are seen in small close shapes. The new styles in hairdressing are very close to the head, the hair being drawn up to the top, hence new hats are quite small in the crown, though some new models are wider in the brim. The little white satin hats are trimmed entirely in white, many with wreaths of wheat. The wheat used in millinery, which comes in all sorts of colors unknown to normal cereals, is always of the bearded variety, and gives a very odd effect when the wreath is used to edge the brim, the wearer's face being surrounded by an aureole of bristles.

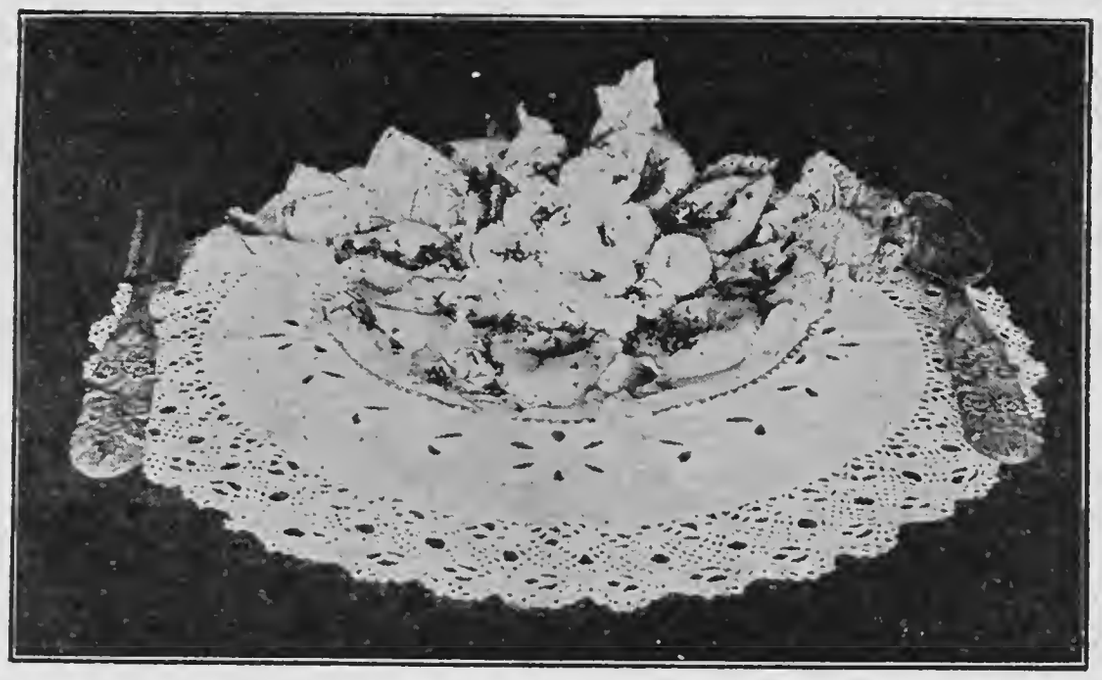
The vogue of the V-shaped neck continues, though some waists show square necks with odd flaring collars. The long popular "Dutch" neck is absolutely obsolete. The round collars of baby Irish worn two years ago would mark the wearer as old-fashioned, for baby Irish is obsolete too, but such things may be laid away carefully; "real" lace always has value, and these out of date shapes will all come in again. In the meantime, flaring collars of organdie cost next to nothing, and are both fashionable and becoming.

MUSKMELONS SERVED WITH SLICED PEACHES.

Some New Ways of Serving Fruit.

AT this season of the year when delicious fruits are abundant and low in price they should be included in the dietary as often as possible, whether eaten au naturel or otherwise. Here are some fascinating new ways of using them which will appeal to those tired of the old ones.

Grapes are always delightful no matter how they are served, and wonderfully decorative, too, when arranged with due consideration to their beautiful coloring. A tall glass dish filled with clusters of green and red ones, with a few of their silvery leaves and dainty tendrils falling over the edge, will rival the most elaborate of floral pieces as a table centrepiece, or, for a more simple picture of lusciousness heap a low basket of rough, brown bark high with Concords and Niagaras, and you will be charmed with the effect. Peaches, pears, plums, and apples, as well as the golden cantaloupe, have an ornamental value, either used along with their own green leaves, or when arranged with other fruit.



SALAD OF PEARS, CREAM CHEESE AND LETTUCE.

For a delicious dessert, nice to make while grapes are plentiful, extract the juice from three quarts of Concords, by first separating the skin from the pulp, and heating all slowly together until the juice begins to flow, and drain through cheesecloth. To the juice add an equal amount of water, the juice of two oranges, and one-half lemon, then strain again, and sweeten to taste. Soften two tablespoonfuls of gelatine in a little cold water, and dissolve, then stir it into the fruit mixture; turn into the freezer, and when partly frozen add one pint of well whipped cream, and continue freezing until firm.

Peach delight is a nice simple dessert suitable for a company luncheon, or at any time when a frozen sweet might be used. Bake a simple one egg cake in a thin sheet, or a stale sponge cake may be used. Cut the cake into squares or rounds; pour over each piece a little orange juice if you like, although this is not necessary. Pare and halve perfectly ripe peaches; remove the stones, and dispose one-half on each piece of cake; dust with powdered sugar, and surmount with a spoonful of sweetened whipped cream.

For a variation of this dish cut the cake into short, narrow strips, a little shorter than lady fingers. Line glass serving dishes with the strips of cake. Pare mellow peaches; stone, and mash them to a smooth pulp, then add a little lemon juice, and one-fourth cupful of crushed walnut meats; sweeten and chill. Fill the dishes with this, and top with the whipped cream.

Peaches are specially nice served with muskmelon. Use the small nutmeg variety, wash them well, and chill, then cut into halves crosswise; remove the seeds and shreds neatly, and fill the centre with sliced, well-sugared peaches. Even a plain cornstarch pudding will look elaborate, and taste delicious, if molded, then turned out on a pretty plate, and surrounded with whipped cream and halves of fresh peaches.

For an excellent peach ice cream, easily made, crush the fruit, and to each cup of the pulp add one-half cup of sugar, and one cup of thin cream, and freeze stiff. Or, if one likes the fruit frozen without the cream, add the unbeaten whites of six eggs to each quart of pulp, and freeze. This is exquisite served in the muskmelons with whipped cream.

Pears are usually considered only fit for canning and pickling, yet there are many pleasing ways of utilizing them for the table outside the preserving kettle. One of these is in the form of a particularly pretty salad. Wipe and pare medium-sized Bartlett pears and cut into halves lengthwise; remove the core, and drop each piece when finished into ice cold water to which a little lemon juice has been added, to prevent them from becoming discolored. Put crisp lettuce in a salad dish, and arrange the halves of fruit around the edge. Have ready some fresh cream cheese, seasoned and moistened with a little French salad dressing, made up into tiny balls, about the size of a walnut, pile these in the centre, and sprinkle them over with a little very finely chopped parsley, then moisten the whole with the simple dressing of oil and vinegar.

Pear fritters make a nice luncheon or supper dish, to make them, pare not too ripe pears, cut into halves and core. Make a batter of one cup of flour, two teaspoonfuls of baking powder, a speck of salt, one tablespoonful of sugar, and one-half cup of milk, and the beaten white of an egg. Dip each piece of pear in this, and fry in deep, hot fat. Drain on a napkin, or a piece of soft paper, and sprinkle with a little powdered sugar. Reserve the stems of the pears, and insert one in the pointed end of each fritter.

Pears are delicious baked. For this the small old-fashioned Seckels are best; wipe them, and put into a granite baking dish, pour a little molasses over them, and add one cup of boiling water; cover closely, and bake until tender. Serve either warm or cold.

ROSAMOND LAMPMAN.

Hominy Croquettes, With Cheese Sauce.—This is savory and nourishing for a meal served without meat. Mix three cupfuls of boiled hominy with two eggs, form into croquettes and fry a golden brown. Serve with this sauce: Put four tablespoonfuls of butter in a saucepan, and when melted, make smooth with three tablespoonfuls of flour; add a dash of paprika, salt and celery salt, and cook slowly while adding half a cupful of milk. When this has boiled for three minutes turn in a cupful of grated cheese.

Marlboro Pie.—Into two cupfuls of stewed and sifted apple sauce stir, while still hot, two tablespoonfuls of butter. Beat the yolks of two eggs, add one cupful of sugar, the juice of one lemon and the grated rind, a pinch of salt and half a cupful of fine cracker crumbs. Mix thoroughly and turn into a plate lined and bordered with rich pastry. Bake, and when done whip the whites of three eggs, four tablespoonfuls of sugar and half a tablespoonful of chopped candied orange peel. Pile it lightly over the pie and serve very cold.

A Wise Woman Says:

"THERE are some mighty queer things in human nature," said Mrs. Sage, after spending a busy morning working and thinking. "The people who are most determined to boss aren't always most capable of directing others. Yet they do most of the planning and deciding in this world. Others give way to them because there is no living with them on any other terms. A natural boss will say things have got to be so and so, and by sheer force of will bring it to pass. It may be good or bad in result, but it is accomplished, and others have to stand back and say it is excellent and couldn't be beat or there's no comfortable existence with the boss. And it is usually better than nothing, and the long-suffering ones can usually take it and make very comfortable shift to accept it as the best thing possible. Nothing of man's make is perfect, and in a year or so some other idea will sprout in the mind of the boss, and perhaps the whole thing may be made over, or tossed in the junk heap. Then the meek ones will say, 'What a wonderful mind for planning! What ability!'

"Yes. I know that I have admitted there is nothing of human arrangement that is perfect, but there are good things and poor things. And the meek person is more likely to have good ideas than the bossy one is, in many cases. Why, I have seen a quiet, unassuming man who could lay out the day's work for hired people, week in and week out, and make nearly every hour tell and nothing much neglected. And I have seen the man who bossed him not able to direct a piece of work so that the teams would not stand idle half the time, or the men soldier around filling in time with pretense at work because there was nowhere to take hold.

"Yet I own that the bossy man was after all the one who made the money and the meek one worked at day's wages. Left to himself the meek man dreaded responsibility. Knowing how much depended upon right management he could not sleep nights if burdened with the whole weight of care. He knew how, but he knew too much. He saw too clearly the outcome of bad planning, and faulty work. He had not the dash and daring that could say: 'Oh, hang the mistakes! If this doesn't go right we'll try some other way. If the men buck and aren't respectful, pitch them out and hire others. Right or wrong the thing has got to go now. Later we'll count the costs. Try another plan next time if this one doesn't make good.'

"Perhaps once in a while, nature puts both sorts of ability into one person, and the result is a captain of industry. But I suspect that more people succeed because able to select and keep efficient helpers than because fitted with extraordinary powers in several directions. It takes a certain share of generosity and forbearance on the part of the boss to get and keep a useful subordinate. Even the woman who keeps kitchen help knows that. In fact the meek people and the bossy ones need each other, but they don't always know it. The relatious of the meek ones very seldom know it. They say, 'But my son (or mayhe it is my husband) does all the work. His boss couldn't keep on a year if left to himself. Yet he takes all the profit, all the credit, all the leisure and all the satisfaction. It makes me mad, and I can't help it.'

"No, she can't help it, the woman who loves the meek man. Margaret Fuller told some great man of letters that she had become reconciled to the universe. We will skip his funny remark and advise all women to become reconciled to the universe. They can't alter human nature, but they can count their mercies. Often one they do not consider is that they do not have to live with the boss they are so tempted to hate. They love the meek man and feel tender of him for the very qualities that make him a contrast to his boss. They wouldn't have him different in any of his endearing qualities, but they would have him gentle and compassionate and patient at home, and a lion for boldness toward other men and the world's affairs.

"Here and there one sees a pair of brothers, a boss and a meek one, and they get on most successfully in business. They accumulate money, if they share equally. If one works for wages, the other has a growing bank account. Usually such a pair of brothers must have remarkable wives. At least the wife of the meek one must have unusual self-control and sagacity. If there are children in both households and the partnership goes on peacefully there is a miracle somewhere, very great generosity and forbearance in both households. For one discontented wife will upset even the most prosperous business arrangement.

"How queer we all are. Or rather, as the old Quaker said, 'Every one except thee and me is queer, and sometimes wife, I think thee is a little queer.'"

A. T. S.

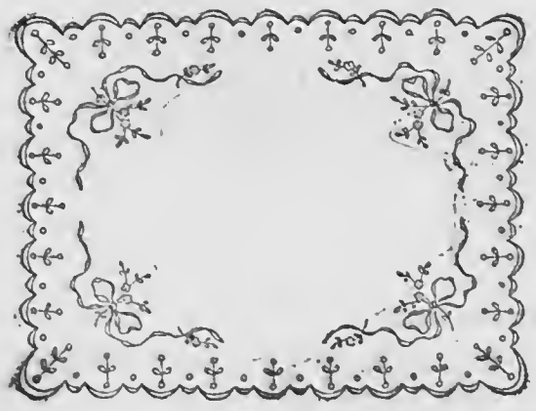
The Rural Patterns.

When ordering always give number and size of patterns desired. Price of each pattern 10 cents.

8185 Middy blouse for misses and small women. Cut in sizes 16 and 18 years. size 16 requires 2⅝ yards of 36 or 44-inch material with two yards 27-inch for trimming. 8310 Plain blouse.

Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅜ yards of 36-inch material. 7907 Semi-princesse dress for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 3¾ yards of 36-inch material. 8174 Seven-gored skirt. Cut in sizes 26 to 36 waist measure. Size 30 requires 5 yards of 27 or 36-inch material if it has figure or nap, or 3¼ yards of 36-inch material which has neither figure or nap. 8203 Two-piece skirt. Cut in sizes 22 to 30 waist measure. Size 26 requires 2⅝ yards of 27 or 44-inch material with 3 yards 27-inch for long tunic.

No. 778. A design for embroidering an infant's pillow. The scalloped edges are to be padded and button-holed. The dots and ovals within the scallops can be



worked either solidly or as eyelets; the ribbon, flowers and leaves are to be worked solidly and the stems are to be outlined. Stamped on 21x16 white pure Irish linen, with mercerized floss to work, 60 cents.

Two Good Relishes.

TOMATO RELISH.—12 large tomatoes (green); four onions; six peppers, green and red; small cup of salt. Let stand over night, drain. Then add two bunches of celery, chopped; one-half cup sugar; one pint vinegar; spices to taste.

CUCUMBER RELISH.—One quart sliced cucumbers; one onion sliced fine; one green pepper; sprinkle with salt, let stand three hours, drain well and add one cup sugar; one teaspoonful white mustard seed; a little pepper, 20 cloves. Add vinegar to cover, scald, not boil, put in cans and seal. MRS. A. R.

The Front Porch Philosopher.

MY "front-porch philosopher" comes to me every Summer, pays her board, praises my efforts, brings me breezes from the big world where she works and travels, and leaves behind her some inspiration and much advice. At other seasons of the year she is a professor of household arts in one of our big universities. She has won me over to an oil range, simpler wall decorations and floor coverings; she has shown me how to fill my emergency cupboard, and many other helpful things; but just when I think she has a really intimate understanding of things, she disappoints me. Last Summer she came to me quite excitedly. She had been making a study of my kitchen, of its inconveniences, and how to remedy them. She had plans on paper for remodeling it at an expense of $75 (Oh, that $75!). In order to follow out her plans, to have the water-back of the stove nearer the pantry, she had deliberately moved the range, without thought of the chimney! Gas-stove theories.

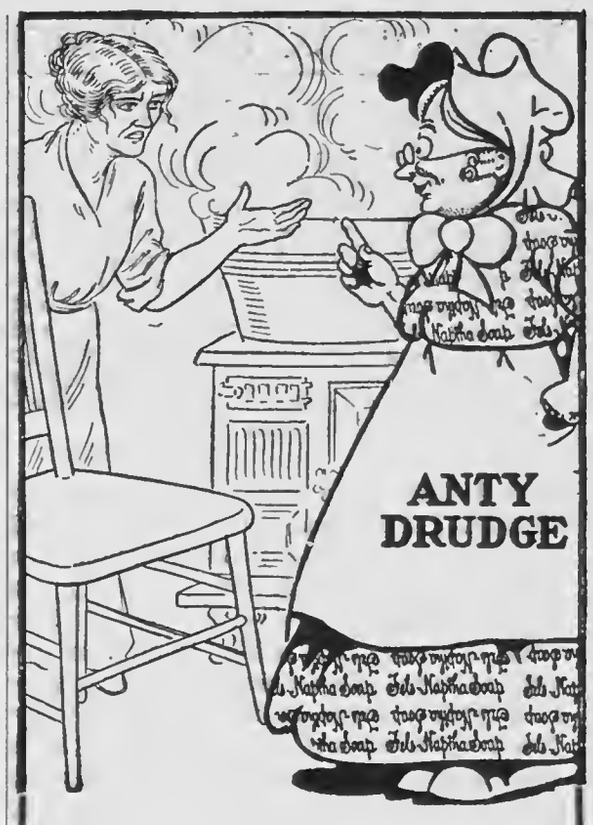
While she was here, I thought I would ask a mutual friend, a professional man and his wife, to a Sunday supper with us. I asked her for some suggestions for my menu. She was in her glory. She wrote it all down—a menu for an elaborate course dinner. There was work enough on it for two women a whole day. And I had said a Sunday night supper, and myself the only woman. At first I felt some resentment, and thought that I should tell her that I knew what a course dinner was, and what a farmhouse supper was, and of some of the simple, delightful meals which my friends and myself had exchanged. But I refrained. My friend meant well. No doubt she could have prepared that meal beautifully, without even soiling her white linen, but she would not have expected to gather all the vegetables required, tend the chickens from the cradle to the grave, fix the help's table, see that the children were still presentable, meanwhile cooking and then serving the meal.

I do not resent her possession of my cool porch. She may as well enjoy it; for the time I spend there is scarcely sufficient excuse for its existence. She knows it. She says she had always envied farm women their porch spaces and shady nooks; now she knows how little they count in a farm woman's life. (Isn't it a pity that she has measured us right in this respect?) It is her business to take pad and pencil, and outline plans to make it possible for us to find more time for those porch chairs. I grant that she and her kind have jarred us up somewhat and I do think we are moving forward a little.

I do not disapprove of courses in household arts; I should like to take one myself. But women of her type fill many columns in domestic papers, and farm women can always detect the lack of familiarity with their needs. We want more farm women to take such domestic courses, and write for us. They will find us responsive. L. S.

TOMATOES STUFFED WITH CORN.—Here is another recipe which I think is deserving of a place among those delicious recipes you printed two weeks ago for tomatoes, as it is a universal favorite with everybody who comes to the house. Scoop out the centers of round, smooth tomatoes and fill the cavities with corn cut from cob, same having been previously cooked. The corn is put through the fine knife of the meat grinder, and a little sugar, pepper and salt added. A teaspoon of melted butter is poured on the top of each tomato just before putting in the oven. Bake in a hot oven 15 minutes, or until tomatoes are soft. F. B.

Concord Cream.—Mix one pint of cream, one and a quarter cupfuls of grape juice and one-third cupful of sugar. Add lemon or fresh lime juice until palatably acid. Freeze, and serve in glasses. Garnish each glass with a tablespoonful of sweetened heavy cream beaten until stiff, and delicately flavored with vanilla. Sprinkle the top of cream with a pinch of pistachio nuts, finely chopped.



Mrs. Peevish—"I declare, I'm ashamed to ask you into this smelly place, Anty Drudge, but you know how it is on washday, with boiling clothes filling the room with steam. I'm just sick with the odor, and I'm about ready to give up."

Anty Drudge—"I think it's time you *did* give up your old-fashioned notions. Nobody up to date boils their clothes these days. They use Fels-Naptha Soap in cool or lukewarm water. There's no chance for disagreeable smell then. The only smell to Fels-Naptha is *clean* smell."

When you wash with Fels-Naptha Soap and cool or lukewarm water, you don't breathe in sudsy steam, nor fill your house with the smell of boiling clothes—and you get your work done easier, better and in half the time than ever before.

Fels-Naptha dissolves grease and makes dirt and stains vanish. It's just as good for all kinds of housework as it is for washing clothes.

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Live Stock and Dairy

GARBAGE-FED HOGS AND CHOLERA.

NOTE that the mule-foot hog is not immune to cholera. This is a disease that science seems to have made little headway against. Has no one developed a resistant type of hog? Have experiments been made in sour-milk feeding? Sour milk is so effective against bacillary white diarrhœa in hens and against intestinal infection generally in the lower animals and in man, that it would seem as though it might be effective against the cholera bacillus.

A. COCHRAN.

Mule-foot hogs are not immune to cholera. This has been demonstrated time and again, and it is ridiculous for any one to advertise mule-foot hogs as immune from hog cholera unless they have been simultaneously treated or recovered from the disease. The only animals that I know of that are seemingly immune to cholera are those that have been treated with the double treatment, namely virus and serum simultaneously, and in addition those that we term "garbage-fed hogs," that is, animals that have been fed extensively on garbage refuse from cities and kept continuously under such conditions for a considerable length of time. This condition of garbage-fed pigs exists in certain localities, and the only way that we can account for this immunity is by assuming that in the garbage they have been fed scraps from pork products that have contained the cholera bacillus. This fact suggests that there is a possibility of getting animals naturally immune to the disease.

It is interesting to note that in sections around Barren Island they have endeavored to bring in breeding animals from outside of the district, but in every case they have succumbed to the disease, while natives not subjected to any serum treatment whatsoever apparently thrive, and show wonderful vitality. In fact at one of the large serum plants it is stated that when garbage-fed pigs are used for the production of serum, and injected with large amounts of virus without any protective serum whatsoever, very seldom is a loss reported.

Research and investigation during the past three or four years relating to hog cholera has put forward the serum treatment as well as the simultaneous treatment, the former establishing immunity only for a short period, and the latter in case reactions are secured, immunizes permanently, or for life. It would seem that effort should be directed toward establishing immunity by increasing the resistance of the animals, and to this end it is my judgment that in the future larger amounts of serum may be used, and smaller amounts of virus, which would result in greater security to the swine grower. The use of the serum and virus is past the experimental stage, and is extensively used in the Western States. It must be admitted, however, that hog cholera has been introduced into herds by means of using virus in case the serum accompanied its use did not protect, and to this end government regulation as well as State supervision has had the effect of putting the serum manufacturers on a more careful basis. In any event the serum must protect or havoc will prevail where the virus is used. It is claimed that in some cases hogs treated simultaneously are carriers or distributors of the disease. This is not probable unless the animals actually contract the disease or show an unusual re-action following injection.

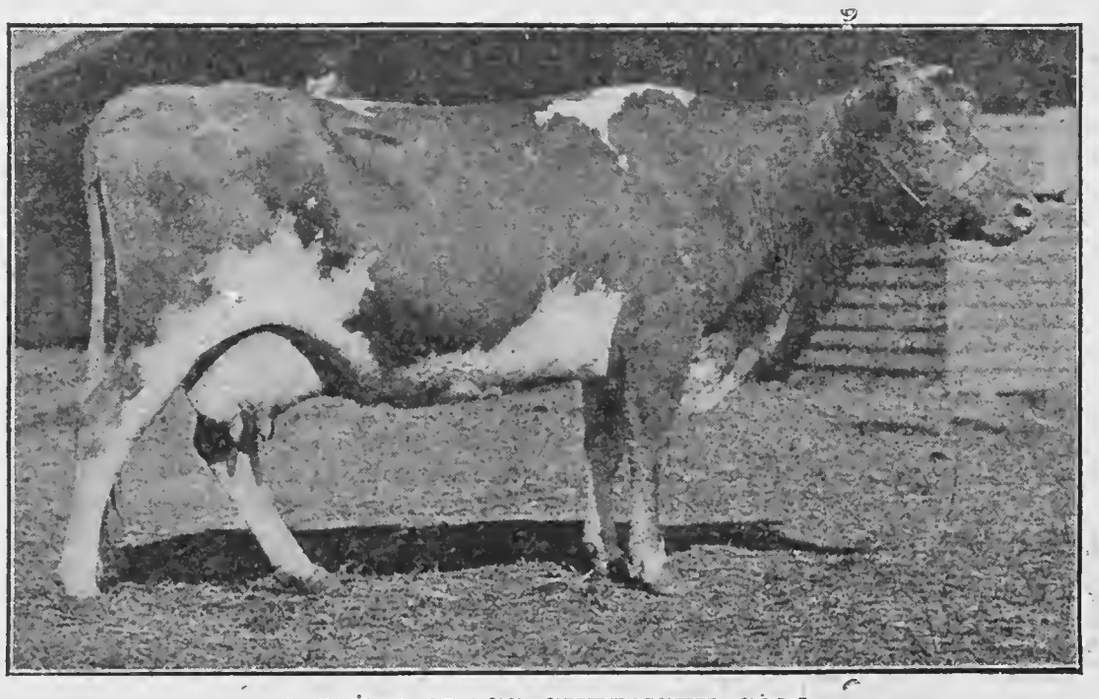
F. C. MINKLER.

A DAIRYMAN ON MILK PRICES.

The 35-cent Dollar.

IN a recent issue of THE R. N.-Y., F. D. H. writes that the past year has been a record-breaker for shipping dairy cattle out of the State, and I want to state that dairy cows will go out faster even in the future than in the past, unless there is a decided change in conditions, especially price. As a Madison Co., N. Y., dairy farmer, milking 50 cows the year around, I feel that I am in a position to state with authority that from a market milk standpoint, there is nothing in it.

Our cows are a heavy milking strain of purebred Holsteins, producing from 10,000 to 14,000 pounds of milk among the mature animals, and we figure, considering the price of feed and labor also, the price of milk to pay expenses only, but get our profit in sale of stock. There are about three months in the year when there is a profit in milk, these being January, February and June. January and February the price is usually 4¼ or 4½ cents per quart, which is somewhat reasonable for grain-feeding months, but why in the name of common sense the price then begins to decrease is more than I was ever able to figure out, as there is no surplus to any great extent in New York City, dealers, jobbers and retailers receive the same price from consumers as in January and February, and it also costs as much to produce milk as in those months. Still we have to take as low as 2⅞ cents in April, which is an actual loss of about one cent per quart. What is the result? I'll tell you the result, dairymen sell some of their stock to pay their November, December, March and



A HIGH CLASS GUERNSEY COW.

April feed bills. This is being done in Madison County by dairymen considered to be up-to-date and practical.

A good sensible price of milk to the producer is 4½ cents per quart in November, December, January, February, March and April, and 3½ cents the remaining months of the year. If a respectable price is not forthcoming I can conscientiously say that in a few years the consumer will pay considerably more for milk than at present, caused by the dealer giving no incentive to the farmer to produce milk. I do not blame the middleman nor the retailer in particular, but I do blame the whole system, i.e., I don't think the entire responsibility of price-fixing should rest in the hands of the middleman, a condition which now exists. If prices are to be *fixed* months ahead a reliable honest commission should do it, composed of two producers, two dealers and one disinterested person who is a good mathematician to figure out a price that will be of mutual benefit to all and not have such a one-sided affair. Right here I want to ask a question: Is the price of milk controlled by competition and supply and demand, when the price is fixed six months ahead by a large corporation fast becoming a monopoly? Perhaps some of our trust experts can answer this satisfactorily.

I heard from good authority not long ago that one milk dealer who controls only one station, paying Borden prices, cleaned up over $15,000 last year from 52 milk station patrons, or more than the combined net earnings of the dairymen.

Now let's figure here: The patrons will average an investment of at least $5,000 each, which totals $260,000, which means an income of 5.7%, taking it for granted that the dairymen total a net income of $15,000. This dealer, I happen to know, does not have an investment of $7,500 in horses, cans, etc., but to make figuring less confusing we will call it that amount, which shows that his investment netted him 200% last year. Is it any wonder that a large milk concern paid a dividend recently of something like 50%, besides putting 20 millions in new business? Of course I was told that milk dealers had bad debts, sour milk, etc., but don't dairymen also have losses in the way of cattle diseases, dried-up pastures, crop failures, etc.?

The Dairymen's League, properly handled will remedy the situation in time, but it is too bad that in a Christian nation one part of a business is forced to band together to fight the other part in order to get its just dues, instead of all hands getting together and figuring the thing out, each taking a good livable income and living in peace with each other and the world.

S. B. JACKSON.

Madison Co., N. Y.

AILING ANIMALS.

Fleas on Cat.

WILL you tell me what we can do to kill fleas on a cat? A. R.

New York.

Put some Dalmatian insect powder into a gunny sack, then insert the cat, leaving its head outside, hold the mouth of the sack around the cat's neck and shake to get the powder among the hair of the animal. Repeat the treatment as often as found necessary. A. S. A.

Abnormal Breathing.

I HAVE a bay horse six years old that was very sick when he was brought here from the West two years ago. Since that time he has breathed quite hard, especially when being driven or hauling a heavy load. The trouble seems to be in his nose or nasal passage as he blows his nose frequently although there is no discharge from it. Would you advise using Fowler's solution? If so when and how much? O. S.

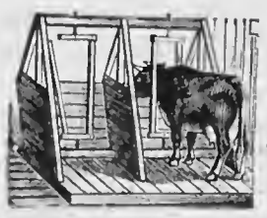
Give the solution if the horse is in thin condition. The difficulty in breathing probably is due to the pressure of a polypus (tumor) in nostril. If so the growth could be removed by a skilled surgeon. A. S. A.

Suspected Heaves.

A mare recently purchased seems to have a touch of the heaves now. When she works there seems to be a little too much of a movement in her flanks; she is a little nervous and has an occasional coughing spell. I know of several things that are said to be good to relieve heaves in old horses, and I also know what A. S. A. usually recommends, Fowler's solution, damp feed and other good care. It seems to me there ought to be something better than Fowler's solution. I know there are lots of horses working that have the heaves badly; some are using Fowler's solution, and I also know that the ones who are having the best results are using something else. F. T. S.

Pennsylvania.

We have no way of making sure that heaves is present in this case, and if it were we should prescribe Fowler's solution, as it is quite effective, one of the best remedies known for the disease and comparatively safe, while other remedies, such as lobelia, digitalis, stramonium, chloral, etc., are too dangerous to prescribe through a paper for general use by laymen. We cannot do better than advise you to treat the mare as if heaves were known to be present; for the feeding and management we prescribe are far more important in every case that the use of drugs. If our correspondent has any objection to the use of Fowler's solution, let him use proprietary heaves powders, such as his other friends no doubt are using. They temporarily allay heaves. A. S. A.



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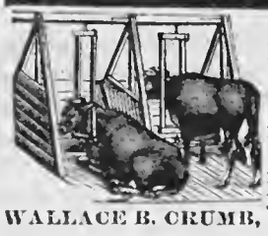
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Decrease in Butter Fat.

THE man at the creamery where I take my milk says cows do not test as high in butterfat when they are shedding their hair. Is that so? When a cow is giving 40 pounds a day and is milked six months and drops to 20 pounds a day will it test more? I do not get any more when the cows drop; I always thought it would test more. P. S.
Pennsburg, Pa.

It is common experience among dairymen to have the butterfat content of the milk decrease during the season of the year when the cows are shedding their coats; especially is this true where animals are maintained under farm conditions and not regularly groomed nor fed with a liberal grain ration. This factor is a negative one, however, where the animals are more carefully cared for, and where their coats are kept in a sleek condition during the entire season.

There should be a slight difference in the test of the cow's milk referred to, when comparison is made with the period of her lactation when she is giving 40 pounds of milk per day with a period six months later when she is giving only 20 pounds per day. With some breeds it would be as much as 1%, and possibly more, but this would further depend upon the physical condition of the cow, and the amount of flesh that she was carrying when she freshened. If she was in extremely good health and carried considerable flesh, her test would be undoubtedly high, and if she was milked down and would lose this flesh six months later, it might be possible that the milk would not show a greater percentage of butterfat. With the average herd, however, there should be noted a difference, even though with cows in the herd freshening from time it is doubtful whether the variation would amount to much. F. C. M.

Trespassing Bulls.

WILL you tell me the law of New Jersey regarding bulls running at pasture or at large? I rented pasture last Summer for yearling heifers with the understanding that they would not accept any bulls for pasture. One neighbor had a scrub bull adjoining pasture. I asked him twice to keep up the bull, or keep him out of the pasture which he refused to do. Two of the heifers are with calf by his being in the pasture with them and will freshen this Spring. What damage can we get? M. S.
New Jersey.

As far as I can determine the only course to pursue in this instance is to sue the owner of the animal for trespass. The general law respecting trespassing by such animals is to be found in pamphlet law 1883, page 82, and pamphlet laws 1877, page 413, relating to animals breaking through fences. Of course, those laws confine the penalties therein imposed to where fences, known as lawful fences have been broken down. If the identity of the bull doing such damage could be definitely established, it would be an easy matter to establish the difference in value between a scrub and one sired by a purebred male, and it would seem that in any court of justice the difference in this amount could be recovered in case damage was claimed for trespass. F. C. M.

Contagious Abortion.

I LATELY had two cows that lost their calves by abortion. Carried calf about seven to eight months. I want method of treatment and care so they may breed again after disease may be cured. Is this disease spread by the bull? If so, should I get a veterinarian to examine the bull? The disease seems very prevalent in this vicinity. E. H.
Glenarm, Md.

If abortion becomes epidemic in a herd there is reason to suspect that it is due to a contagious infection and if the services of a trained veterinarian can be secured to direct treatment this would better be done. The treatment of contagious abortion is largely that of disinfection of animals, using a one to two per cent. solution of carbolic acid in water or some other standard disinfectant in proper strength. The stables should also be disinfected if cows are kept in them. Carbolic acid administered internally and methylene blue given in the food have both been strongly advocated as remedies for contagious abortion, though neither seems as yet to have gained the full confidence of the veterinary profession. Bulletin No. 90 from the Montana Station at Bozeman, Mont., describes the carbolic acid treatment and Bulletin 74 from the Vermont Station at Burlington, Vt., that with methylene blue. These may be obtained and their directions followed if you wish to treat your cattle yourself, but in most cases it would be better to secure the services of a graduate veterinarian. A bull may carry the infection from one cow to another and must be included in the treatment. M. B. D.

Mapes on the Poultry Meeting.

TOM BARRON has come and gone, and the Connecticut Poultry Association has held an epoch-making meeting, the occasion being the annual midsummer gathering at Storrs Agricultural College. The attendance was all that could be desired, taxing the college to its limit to provide accommodations for the crowd. The secretary, George V. Smith, handled the crowd with his usual dexterity, and to him belongs much of the credit for the success of the meeting. Most of the prominent poultrymen of the East were on hand, some motoring 500 miles or more in order to be there.

Mr. Barron who captured first place in the egg-laying contest last year, and who is still holding first place in the contesting pens this year, was the magnet. Pen 42, the sour milk pen belonging to Storrs, was one or two eggs ahead of him most of the time during the meeting, but this pen is not competing. Mr. Barron captured the crowd at the outset and held it to the last. Keen, good-natured, jolly and gentlemanly he met those Yankees half way every time. The climax was probably reached when he was induced to mount the roof of one of the pens on the contest grounds where the vast crowd could see him, handle a pen of birds he had never seen before, and try to pick out the best layer, just as cows are sometimes scored by points. He met this test three times, with R. I. Reds, with White Wyandottes, and with White Leghorns. While he did not succeed every time in picking the hen with the very highest score he came so near to it that everybody seemed satisfied, in view of the fact that he had no chance to see them on the ground in a natural position.

Before the meeting was over the utility men and the exhibition men, having come to the meeting in fear of a clash, found out seemingly, as far as I could judge, that their interests run so nearly in parallel lines that it is going to be easy to bind them together with the cords of brotherly love. From what I could learn on the ground I believe that some pens of the finest exhibition birds will be entered in the contest next year in an effort to prove that high-scoring birds are not necessarily poor layers, while utility breeders will try to pick good layers having the nearest possible resemblance to standard requirements.

My own impression is that we have something to learn from such English breeders as Mr. Barron, while possibly he has just as much to learn from America. The main points as I see them, in which he is ahead of us is that he has been studying his birds as individuals for 25 years, trap-nesting and selecting with reference to laying rather than standard requirements, and using skim-milk largely in the rations for both laying hens and young birds. He keeps about 7,000 head of poultry and 10 milking cows on a 20-acre farm. In addition to these he keeps two horses and a few young cattle, generally having some surplus hay to sell each year. It is a coincidence that while I have been advocating a combination of cows and poultry for the past three years, it remained for this man from England to clinch the lesson home by telling us that he has been putting the combination in practice so successfully for the past 20 years. He churns the cream into butter and feeds the skim-milk to the hens. In my opinion he is behind his American brothers in that he still sticks to the wet mash, and the small units both of chicks and laying hens. He admits that "my birds seem to do pretty well in America" where they are fed on dry mash.
O. W. MAPES.

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NEW ENGLAND MILK PROBLEMS.

ONE of the lines of investigation conducted by the agricultural committee of the Boston Chamber of Commerce is a trip by Secretary Orcutt and others over all railroad routes bringing milk into Boston and other New England cities supplied by car milk. All possible information in regard to cost conditions and all other things that affect the business in any way will be studied and looked into thoroughly. Railroad transportation is an important part of the business, and some of the truth of the matter should be got in this way. If the city end of the milk business is looked into as thoroughly as the country end apparently will be, we shall certainly know more about the whole situation than we ever did before. Conditions are changing all over New England all the time, and changing fast. As an illustration of this change our minister made a social call a few days ago and told the following in regard to a town he formerly preached in: In his time about 400 people, mostly farmers (as this was a farming town in the main) attended church the year around. Now 40 to 45 are the most to go at present time in the Winter season. Why this falling off? Simply because the former people have got sick of farming conditions in many cases. A few of course died and the places have been put on the market and purchased by the class of people who do not farm to produce anything, except mostly for their own wants in the short Summer season, while they are there, as in the Winter they return to the city. They are mostly Summer people from Springfield, New York, etc. These people of course have improved these homes and increased the taxes to a certain extent, but social life is dead a good part of the year; not a good live community as was formerly the case. The same thing is going on more or less all over many sections of New England, and in many cases it is largely former milk producers who by reason of past and present bad conditions are selling out or changing from a large farm to a small one, or turning entirely to depend on fruit, mainly apples, for their future income.

In the light of their true conditions here stated, something must be done without delay to better conditions along the line of milk production, and I believe good will come from the work now started and to be continued along these and other lines. Another illustration of the unstable and constantly changing milk conditions is the following: A certain milk collector, that is a man who gathers the milk for a contractor from the neighborhood farmers and carries it daily to the Boston shipping station, gives these figures for the past five years of collecting: His average load for the first six months was 45 cans per day; the following six months 30 cans; then new dairies were bought up, and 60 to 70 cans were carried for a period. Then one or more dairies were dropped by inspectors for some reason, perhaps a good reason, perhaps not; then one or two more sold out or went out of business, and the route was back to 40 cans per day. Then it dropped in a few months to about 30 cans or less. A year later a slight gain was made, then another contractor bought part of this milk and two teams had to be run to collect this small amount of milk, as one contractor would not let his milk be carried by the team of the other contractor and so it went first up, then down. Finally one of these contractors gave up, and it all went to the new contractor. At present time by getting a new dairy or two the route is up to from 60 to 70 cans in the flush time, and down to 50 or lower at others. Prices varied during this time from 23 cents in Summer to 28 in Winter, up to 35 in Summer and 45 in Winter, and then again down to 23 cents per can in some cases the present Summer in the low months, and about 37 or 38 cents last Winter.

Until we can have a standard price and an average supply these changes will keep on, and this is one of the big problems we must work out, to have conditions stable and know about what we shall produce and price we shall receive a few months ahead, and plan our business to meet what is coming. The day of doing business on guesswork is largely past. Formerly in the milk producing sections about every farm therein sold more or less milk, and a load was obtained within driving distance. Now half of these farms, in some cases more, in others less, are producing market milk, and the amount now produced does not pay to own a team in many cases, so the result is those who make enough milk to pay and who live not far from the point of delivery, carry their own and perhaps a few of the neighbors' milk; the others have no way to get their milk to this point, and not being able to deliver it themselves drop out. These are some of the reasons why the contractor has to go back much farther to get his supply.

A. E. P.

Value of Skim-milk.

WHAT is the value of skim-milk for poultry food, and what is it worth for pig food as compared with commercial feed stuffs? E. V. F.
Liberty, N. Y.

Skim-milk is a valuable poultry food, especially when fed soured. It is usually considered worth from 25 to 30 cents per hundred weight. Hoard's rule for finding the value of skim-milk fed to fattening hogs, as quoted by Henry, is: Multiply the market value of live hogs in cents per pound by five to find the value of skim-milk fed alone. If fed with corn or barley, it is worth more and the multiplier should be six. This gives the value of 100 pounds of skim-milk. Thus, if hogs are worth five cents per pound, live weight, skim-milk is worth 25 cents per hundred fed alone or 30 cents if fed with grain. Another rule is, the value of skim-milk when fed with corn to fattening hogs is half the price of corn per bushel. In feeding skim-milk to any animals, whether fed sweet or sour, the utensils used should be kept clean. Sour milk should not mean milk that has been kept under filthy conditions until it has become putrid. M. B. D.

The Milk-can Law.

ON page 934 I read of the complaint of one of your subscribers who has been sued for a penalty growing out of his use of a milk can. About 10 years ago, a firm of lawyers with whom I then had an office, had a similar case. The facts as I recollect them were these: A restaurant keeper was using an old milk can as a garbage receptacle. The same Mr. Walsh that you refer to in your article was the complainant, and agreeable to his usual practice, he brought suit in Orange County. Not caring to submit to such tactics, we defended the suit and I went up to Newburgh to try the case. Mr. Walsh sent some attorney to court with some excuse for delay, and upon my explanation of the facts, the judge granted the adjournment only on condition that Walsh would consent to transfer the case to Kings County. Some time thereafter the case came on for trial, Walsh defaulted and we took judgment against him for the costs. I do not believe that the judgment was ever paid. There is a case in the early Appellate Division Reports which at that time, in our opinion, precluded a recovery by Walsh. Of course I do not know the merits of your subscriber's case, but I am very sure that it would repay a little investigation on your part, and if your subscriber has some old-fashioned American blood in his veins, I think that he would derive considerable satisfaction from defending the suit, even though it might cost him more than to pay up. The law in question may be a just law, but the provision that a man can be sued for a penalty hundreds of miles from a county in which he lives is more conducive to blackmail than it is to the proper administration of justice.
New York. WALTER E. WARNER.

THE enclosed clipping taken from a Provincetown paper may have some bearing on your correspondent "A. E. P.'s" letter on milk production in Massachusetts. As a matter of fact it is difficult to overrate the decrease in the amount of milk prdouced in this part of Massachusetts.

"The number of cows in Truro has decreased 50 or more during the past year, and a milk famine is in sight during July and August. If you have not engaged a regular supply, do so at once—or you may be obliged to go without. Ten years ago there were over 230 cows in Truro, now there are 100 or less. Unless the farmer receives a radical increase in the price of milk in the near future, it will be only a few years when Truro will consume all the milk it produces." E. C. M.
North Truro, Mass.

FEEDING PROBLEMS.

Methods of Horse Feeding.

IS it best to give horses their grain first and hay afterwards or hay first and grain an hour or so afterwards? I give them hay at 5 a. m. and grain at 6 a. m., grain at 12 noon, no hay, and then give hay at 6 p. m., and grain last thing at night. What is the best system?
Danville, Pa. I. W. H.

You are feeding just right. Hay is not digested to any great extent in the stomach, which holds only three and one-half gallons. It passes along the small intestine (72 feet) and lodges in the large intestine (colon). Grain and concentrates, on the other hand, are mostly digested in the stomach and must not be pressed out of the stomach by hay, or washed out with water. Water first, hay second, grain third, is the theoretical rule of feeding. You might improve your method by allowing one or two pounds of hay at noon, when the horses are cooling off, then allow grain. If the horse cannot be left long in the stable at noon, in hot weather, better not feed any hay.
A. S. A.

Ration for Pigs.

WILL you advise on feeding my five pigs? I have but little skim-milk; am feeding a slop of mixed feed six quarts a day and three quarts of whole corn, also oat and pea fodder, cut green and thrown to them. They do not seem to grow very fast. H. B. F.

Although you do not state the age of your pigs I should judge from your description of the way you are feeding them that you started to feed whole corn before they had reached the proper age to digest it thoroughly. When this is done indigestion usually results and a gradually weakened condition follows. The remedy is to discontinue feeding the whole corn and substitute about 10 per cent. of fine ground cornmeal mixed with the slop of mixed feed. Continue feeding the oats and peas as long as they are tender enough to be eaten with a relish and give free access to good drinking water every day. A little pulverized charcoal mixed with the feed will help to correct the trouble. C. S. G.

Ration for Milk.

WILL you advise a balanced ration for a Jersey cow that will insure a good flow of milk? I have plenty of Alfalfa hay, but no silage, and wish to feed a right proportioned grain ration with it. T. W.

Unfortunately, no balanced ration can insure a good flow of milk; it can only insure that the cow shall have the necessary materials from which to make milk to good advantage if the ability to do so is bred and born in her. With plenty of Alfalfa hay, it is not necessary to feed as "narrow" a grain ration, or one rich in protein, as is usually recommended. This is an advantage as the high protein grains are the most expensive ones. Equal parts of cornmeal; mixed wheat feed and gluten feed would make a good grain ration for this cow, to be fed in the quantity of one pound per day to every three or three and a half pounds of milk that she is giving. Ground oats, corn and cob meal, or dried beet pulp might be substituted, in whole or in part, for the corn meal; wheat bran for the mixed wheat feed, and brewer's dried grains, malt sprouts or buckwheat middlings for the gluten feed. There is no one best ration and the relative prices of the different available grains should govern the choice to a certain degree. If a cow loses flesh too markedly while in milk, cornmeal should form part of her rations, and if she has no succulent vegetable food, the dried beet pulp is helpful. M. B. D.

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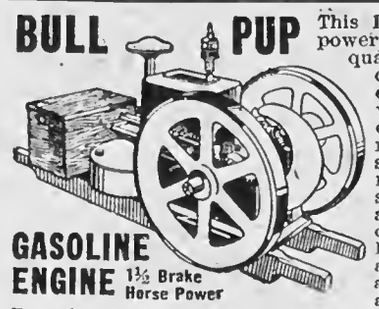
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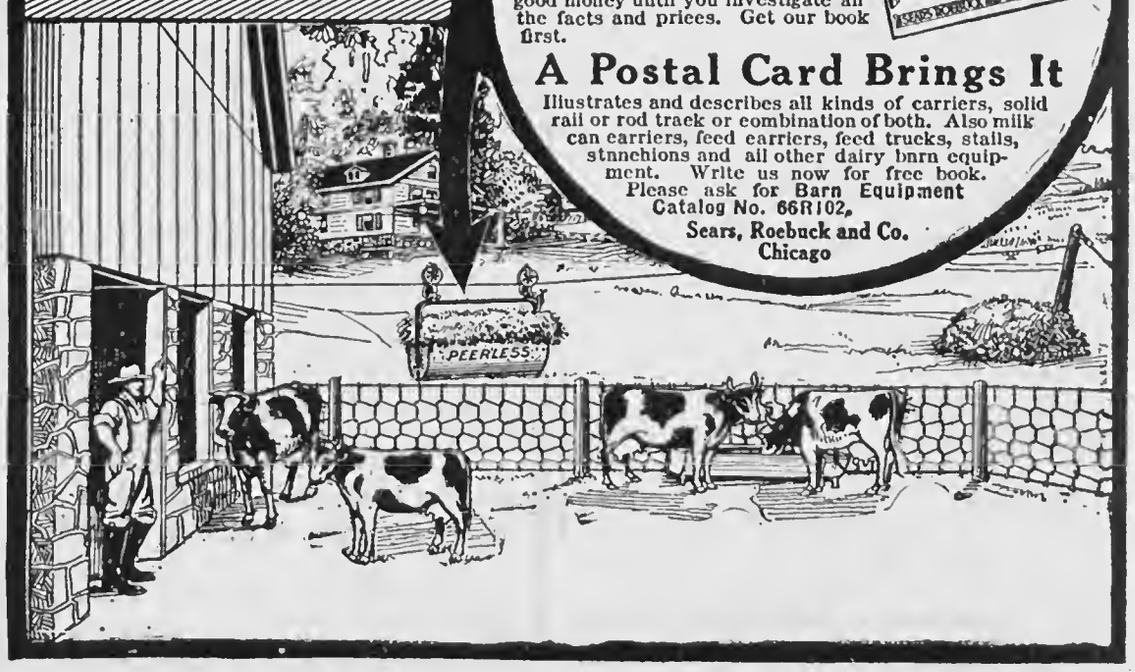

The Henyard.

THE EGG-LAYING CONTEST.

CONTRARY to expectations, and notwithstanding that molting has begun—nine Leghorn pens have molting birds—the fortieth week shows a gain of 71 eggs as compared with the previous week. English White Leghorns again lead all other pens, with a score of 59 eggs. Bonnie Brook Farm's White Leghorns tie with A. B. Hall's Barred Rocks for second place in the week's record, each pen laying 53. The "sour milk" pen of Leghorns from Storrs Agricultural Station takes third place, with a score of 52. This pen is now the leading pen in the total score, having laid 1,689 eggs, Barron's White Wyandottes scoring a total of 1,676. Francis F. Lincoln's pen of Leghorns are third with a score of 1,665. Mr. Barron thinks that his Wyandottes will lay enough better than the Leghorns toward the close of the contest, still to give them a fair show of winning. For the first time in several weeks two breeds besides White Leghorns have laid 50 or over. A. B. Hall's Barred Rocks laid 53, and Merrythought Farm's White Wyandottes laid 51. The total score now is 94,510. The week's record follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	53	1,103
Frank L. Tuttle, Massachusetts	43	1,147
Waveny Farm, Connecticut	35	1,079
Jules F. Franeais, New York	42	1,319
White P. Rocks.		
Albert T. Lenzen, Massachusetts	45	1,194
F. H. Benton, Connecticut	29	1,193
Storrs Agr. Station, Connecticut	29	971
Storrs Agr. Station, Connecticut	36	1,029
Storrs Agr. Station, Connecticut	22	1,157
Storrs Agr. Station, Connecticut	23	1,019
Storrs Agr. Station, Connecticut	29	864
Buff P. Rocks.		
A. A. Hall, Connecticut	42	1,197
W. C. Morgan, Jr., Connecticut	18	920
White Wyandottes.		
Tom Barron, England	40	1,676
West Mt. Plty. Yards, Connecticut	27	994
Merrythought Farm, Connecticut	51	1,518
Neale Bros., Rhode Island	39	1,500
D. J. Ryan & Son, Connecticut	22	1,127
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	34	1,127
Dr. N. W. Sanborn, Massachusetts	31	1,105
Am. Buff Wyan. Club, New York	25	999
H. L. Hamilton, Connecticut	21	810
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	28	1,097
Single Comb Reds.		
Robert Seaman, New York	27	892
J. S. Gillespie, Connecticut	17	1,103
Dr. J. C. Dingman, New York	32	1,025
Burnham Plty. Farm, Massachusetts	34	882
H. P. Deming, Connecticut	31	1,074
Geo. P. Dearborn, Florida	41	1,224
Dr. J. A. Fritchey, Pennsylvania	32	1,309
Ernest Underhill, New Jersey	36	996
W. H. Bunnsted, Connecticut	21	737
Pinecrest Orchards, Massachusetts	27	1,280
Harry B. Cook, Connecticut	36	1,114
Colonial Farm, New Hampshire	23	1,151
A. B. Brundage, Connecticut	46	1,419
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	27	1,120
C. S. Scoville, Connecticut	22	830
White Leghorns.		
Storrs Agr. Station, Connecticut	38	1,307
Storrs Agr. Station, Connecticut	44	1,380
Storrs Agr. Station, Connecticut	38	1,386
Storrs Agr. Station, Connecticut	52	1,689
Storrs Agr. Station, Connecticut	43	1,263
Bracside Plty. Farm, Pennsylvania	35	1,158
Glenview Plty. Farm, Connecticut	49	1,331
Manor Plty. Farm, New York	33	1,208
A. B. Hall, Connecticut	49	1,249
Marwood Plty. Farm, Pennsylvania	51	1,364
Geo. M. Harris, Connecticut	28	1,060
Bonnie Brook Farm, New York	53	1,371
N. W. Hendryx, Connecticut	50	1,239
J. J. Linehan, Massachusetts	40	1,139
F. F. Lincoln, Connecticut	50	1,665
Cecil Guernsey, New York	33	1,411
Thos. W. Moore, Connecticut	50	1,267
Chas. N. St. John, New York	49	1,259
Chas. W. Sherwood, Connecticut	45	1,193
L. E. Sands, Pennsylvania	45	1,215
Tomoka Plty. Farm, Connecticut	37	1,087
Venture Plty. Farm, New York	31	1,022
Mrs. K. E. Woodruff, Connecticut	39	1,232
Windsweep Farm, Connecticut	32	1,116
C. H. Savage, Connecticut	44	1,249
P. G. Platt, Pennsylvania	46	1,440
Heneta Bone Co., New Jersey	13	444
F. M. Peasley, Connecticut	45	1,253
Chas. Helgl, Ohio	41	1,184
Tom Barron, England	59	1,570
Branford Farm, Connecticut	39	1,372
James Munn, Massachusetts	38	1,149
Geo. A. Cosgrove, Connecticut	42	1,216
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	40	1,261
Blue Andalusians.		
E. D. Bird, Connecticut	34	1,051
Buff Orpingtons.		
O. Wilson, West Virginia	28	857
White Orpingtons.		
P. A. Demgar, New York	35	849
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	19	648
Silver Campines.		
W. J. H. Lobel, New Jersey	41	1,016
Dunghills.		
H. W. Collingwood, New Jersey	36	1,024
Daniel Hine, Connecticut	38	947
Daniel Hine, Connecticut	23	974
Mixed Breeds.		
Profitable Poultry, Massachusetts	24	1,052
Profitable Poultry, Massachusetts	35	1,072

GEO. A. COSGROVE.

"Do you keep a pistol in your house?" "Yes. I've had one for twenty years." "Ever need it?" "No." "Then why keep it?" "It comes in handy. Sometimes ma uses it to drive tacks."—Detroit Free Press.

Breeding the "Egg Type" in Hens.

I WANT to give you my opinion of Tom Barron's Wyandottes. Mr. Barron says his smaller birds were always the best layers, and I think his Wyandottes are smaller than ours. We have three classes of fowls, very large ones like Brahmas and Cochins, which are kept principally for meat, medium-sized ones, like B. P. Rocks, Wyandottes and R. I. Reds, and the smaller ones, like Leghorns, the medium-sized ones kept for general purpose fowls and smaller ones for eggs. The same is true of cattle. We have beef cattle, general-purpose medium-sized cattle, and small Jerseys for butter. Supposing a breeder of beef cattle should pick out his best butter and milk cows and breed from them. They would be smaller or at least of dairy type, and after a few years his Angus or Shorthorn cattle would be as small as Jerseys, and Jersey or dairy type. What has he gained? He has spent years of time making a Jersey from a Short-horn when he could have bought a Jersey at first better than he has made. I think Barron has done this with his fowls; he has selected from good-sized Wyandottes for

POULTRY ENTHUSIASTS AT THE CONNECTICUT EGG-LAYING CONTEST.

eggs, which meant small birds, and if he keeps selecting in that way will have eventually a bird the same size as the Rose Comb Leghorn, which will be to all intents and purposes Leghorns, when he could have saved all the time and labor by getting R. C. W. Leghorns in the first place. I always think of the Wyandottes as a broiler fowl, and if they are bred for eggs we get away from that type and to layer or egg type.

I think breeders have done us good service in having a standard for both cattle and fowls, and in keeping as near to it as possible. We must have some kind of distinction between large and small fowls, and then take whichever we prefer, and line-breed it as near standard as possible. If we want eggs take the Leghorn, and if we want a nice fowl to sit and for a good table fowl take a Wyandotte. Butchers have told me that the rounded compact White Wyandotte was the best table fowl they knew of. If we want a very heavy table fowl the Light Brahmas or Cochins will fill the bill. I cannot see any gain in breeding one smaller or the other larger, or mixing breeds. I think Mr. Barron's Leghorns will beat his Wyandottes after a while anyway.

Virginia. EUGENE R. SKIDMORE.

Destroying Hen Lice.

HOW can I rid a henhouse of lice? We just bought a new sprayer holding eight gallons, sprayed the henhouse all over, nests and all, with whitewash, using about 30 gallons, but it seems to have done no good. The floor is dirt and it is alive with lice; our feet are covered with them every time we go to the henhouse. R. W. F.

Orwell, N. Y.

The loose litter upon this floor should be removed and burned and after scraping the floor it may be well covered with fine road dust or ashes or sprinkled with air slaked lime. Lice will not survive contact with fine dust of any kind and sifted coal ashes make an excellent application to floors, droppings boards and other places where lice congregate. The addition of from four to six ounces of crude carbolic acid to each gallon of whitewash, added while it is hot, makes it a more effective insecticide for use in the poultry house. M. B. D.

Trouble With Chickens.

I HAVE a new trouble with chickens; I have never noticed it before this season. They seem to lose use of their legs, walk short distances and tumble over on side and are unable to get up. If set up on feet then walk all right and fall over again. What is the trouble and remedy? They eat heartily, comb red, seem healthy in every other respect. Those attacked are about size of partridges, some smaller. They are in dry clean quarters and have fine range.

Elk Hill, Va. J. E. E.

These fowls are probably suffering from attacks of vertigo induced by attacks of indigestion, the presence of intestinal parasites, or possibly by exposure to the hot sun and overfeeding. They should be given plenty of shade and fed more sparingly if it is thought that they are overeating. One or two teaspoonfuls of castor oil administered to any bird showing symptoms of the trouble is good individual treatment, and if intestinal parasites are thought to be present a teaspoonful of oil of turpentine may be mixed with the oil. M. B. D.

Indian Runners for Eggs.

HOW long can Indian Runner ducks be kept without having their laying qualities impaired? If properly taken care of do they compare favorably with chickens for profit in the matter of egg production? R. S.

Pennsylvania.

A vigorous Runner duck ought to lay well till six years old or older. They vary like individuals of other species. Ducks' eggs contain more nutriment than hens' eggs, principally on account of the greater size, and bring a higher price with those who appreciate them, but the market for them is limited. There is a prejudice against them on the part of many American women. Raising show birds and selling eggs for hatching is more or less profitable. Producing eggs for the general market is a different proposition. If you are near a sure market and like ducks there would not be much risk in trying them. It should be borne in mind that exceptionally good layers are scarce among ducks as among hens. It costs more to feed a duck than a hen. On general principles I would advise sticking to hens. W. H. H.

Washed Eggs.

WE have had letters from a number of egg dealers, who urge us to tell our readers not to wash their eggs, especially during the warm weather. It would seem that some shippers who are eager to make a good showing with eggs scrubb them with a brush and then ship. The dealers claim that this is just the thing that they ought not to do as this hard washing takes off the enamel or polish from the outside of the shell where Nature put it as a precaution. The stains, of course, should be wiped off the egg, but the plan of scrubbing the egg all over is a bad one to follow, and especially in warm weather.

PLEASE tell the woman whose turkey eggs will not hatch that I have found that when the turkeys are too fat that eggs will not hatch. I have reduced the feed of turkeys and had the next clutch hatch. L. E. W.

New York.

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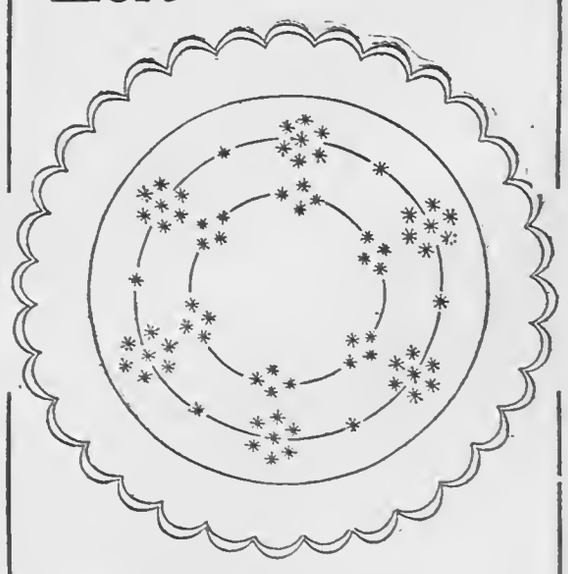

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PUBLISHER'S DESK

The various transportation companies are standing rather firmly upon that clause of their receipts pertaining to filing claims for loss and damage within four months after a reasonable time of delivery has elapsed. It will be well to bear this in mind, and see that claims are entered within the prescribed time. Make prompt investigation if returns fail to reach you from houses to whom you are shipping, and ask your agent to trace the claim promptly. This will act as a waiver, and when formal claim is entered the companies cannot fall back upon the time limit as a technicality for declining the claim. Losses prior to February 9, 1914, will not be considered by transportation companies if no notice was given of the loss prior to April 1, 1914.

A jury in the United States District Court acquitted Nova Adolphus Brown, Floyd N. Franklin and seven other defendants who were charged with using the mails to defraud in the sale of $650,000 of the stock of Franklin's Inc., a candy making concern, with headquarters in Long Island City. The jury had been out 27 hours and had twice reported its inability to arrive at a verdict, only to be sent back to its room by the judge. At first, it is said, only one juror held out for the acquittal of all the defendants. Judge Russell had the jury locked up for the night and the defendants sent to the Tombs. Until an hour or so before the verdict it was rumored that three jurymen were voting for a general acquittal. The trial lasted for three weeks.—Local Paper.

The promoters will probably point to this verdict as a justification of themselves; but the victims of the schemes have lost their money, and no verdict of a jury, either for conviction or acquittal, will alter their sad position. A failure to convict is by no means a clean bill of health for the scheme. It may be that one or more of the jury are in sympathy with crooks, or it may be that the evidence is such that honest jurymen have a doubt as to the fraudulent intent of the promoters. No matter how foolish and impractical a scheme may be, if the jury thinks the promoter might have believed that it would be successful, they must vote for acquittal, no matter if he humbugged every investor in the scheme. Their lawyers frankly admit the failure of the scheme. Sometimes they call it the vision of a dreamer, but insist that it is no crime to dream. Juries often become very squeamish on this argument and it has kept a good many promoters out of jail. The only help for the victim must be administered before he parts with his money. After it once leaves his hands the case is hopeless. That is why we try to sound the warning to our people in advance.

On July 9, 1914, after considerable correspondence I sent W. O. Chase of "the Edgemont Poultry Farms" of Hillsboro, Ill. $15 for 100 R. C. Black Minorca day-old chicks which were to be sent me at once. I have written him at least a dozen times since then and demanded that he either return the money or send me chicks. Sometimes he has answered with excuses and promises but nothing else has been forthcoming. I wrote the local banker there, and he said Chase was slow. If you could get anything I would be very glad, and if not, you might show him up for the benefit of your subscribers. H. E. H.

Pennsylvania.

We also have complaint from a New York State subscriber who sent this same W. O. Chase of the Edgemont Poultry Farms, Hillsboro, Ill., $15 for a pen of poultry last Spring. Mr. Chase failed to ship the poultry as agreed, and our efforts to get any adjustment in either case has been fruitless. Mr. Chase seems to be in the same class of poultrymen as E. E. Cooley of Ransomville, N. Y., and E. F. McAvoy of Cambridge, N. Y. We trust THE R. N.-Y. readers will give all three a wide berth in the future.

I am sending you literature which rather puzzles me. I don't know whether I have a good friend who wants to make money for me, or has my name on his sucker list. However, I did not send any money. It is a new one to me. If you think it a swindle please expose it. If all right, why give the gentleman due credit for his generosity in wanting to help a farmer. Having read the contract carefully, it looks very one-sided. C. S.

Indiana.

The literature enclosed is from the Ozark Hog Ranch Co., of St. Louis, Mo., which appears to be a scheme to sell two brood sows in connection with 10 acres of land for $225. It might be called a sale of land with the brood sows thrown in or a sale of the brood sows with a bonus of the land. It would not be so much a surprise if the scheme appealed to city men who have no knowledge of farm operations or stock raising, but we doubt if such bait will catch many farmers.

Dwight B. Cornell of the Cornell real estate agency of Great Barrington, and the head of that institution, was arrested Friday and placed under $500 bonds to answer to a charge of false pretences, brought by T. S. James of Austerlitz, N. Y. The substance of the complaint is that Dwight B. Cornell obtained the signature of T. S. James to a written instrument designedly and with intent to defraud Elmer C. Herrick of Great Barrington. It seems that Mr. Herrick was the owner of a farm at Austerlitz, N. Y. Mr. James was the proposed buyer and Cornell acted as agent. On Oct. 17, 1911, it is alleged, Cornell agreed with Mr. James for the purchase of the farm for $1,600; but on the next day wrote Mr. Herrick that he had been offered only $900 in cash or $1,000 in credit.—New York Local Paper.

Of this particular transaction we know only what is reported above; but we have had occasion to refer to Mr. Cornell's operations in the past on different occasions; and the practice of some agents in selling farms at 20 to 70 per cent. above the owner's price and keeping the excess as commissions or profits, has been quite freely discussed in these columns. Several civil actions have resulted in the courts; but this is the first criminal action that has come to our attention. The precedent established by this action will be important; but it is usually difficult to convict in such cases on criminal charges. The people however will find some way to reach the agents who persist in these practices. The civil courts do not afford a remedy because they are too expensive for the class of people who are deceived. If the criminal courts do not reach them, statutes will have to be enacted to regulate the sale of farm property through agents, and they will limit the commission to the agent and prescribe the form of contract to be used.

I have watched THE R. N.-Y. closely for the past year, and I find you are a real protector of your subscribers. I am in trouble with the Verde Grand Copper Company of Arizona. The leading men are trying to freeze the stockholders out. I have 1,250 shares non-assessable. I never refused to do my part. They fixed a mortgage for $4,000; placed it in the Jerome Bank to come due February 15, 1915, in this way trying to take the mining outfit, which has cost at least a few hundred thousands. What can I do to protect myself? I was told by a man, who knows all that country, that the mine was O. K. Could you collect $10,000 from the officers for my claim? G. W. S.

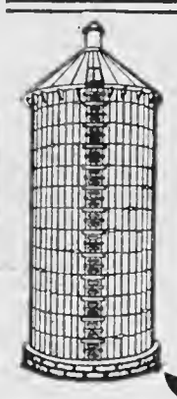
California.

In 1910 one of our subscribers reported a sad experience with this same Verde Grand Copper Company. We wrote the president of the company in regard to the present complaint and he advises us that the stock has but little value in the market—one-half to one cent per share, and there is but little sale for it at any price. The stockholder simply owns a fractional part of the business of the company. The other stockholders have as much legal right to collect their original investments from him as he has from them. Of course, really the promoters usually manipulate things for their own advantage, and by a control of the company get all the benefits. In mining enterprises there is seldom any attempt to develop the business; but when there is, and the mine becomes valuable, the small investors are usually frozen out. We are powerless to help in such a situation.

The inclosed card gives address of the Associated Farm Products Co., Herald Square Building, N. Y. City, that has a representative soliciting shipments of eggs and offering attractive prices for same. They are anxious for immediate shipments. Do you know anything about them? Do you consider them a safe consignee? E. E. R.

Manorville, N. Y.

Several shippers have inquired about the Associated Farm Products Co., which according to the best information we can get is the name assumed by a Chas. A. Boyle. He is reported to have desk room at the address given and to be engaged in selling eggs to private families. He carries no stock and we are unable to learn through the regular channels that he has any financial responsibility. The only safety for shippers therefore will be to insist on advance payment or some tangible form of security before parting with their produce.



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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Aug. 14, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The market on all grades of creamery is firm and one to two cents higher. Business is better than last week. The packing stock arriving is mainly poor.

Creamery, extra, lb	29½	@	30½
Good to Choice	25	@	29
Lower Grades	20	@	22
State Dairy, best	28	@	29
Common to Good	18	@	25
Factory	19	@	22
Packing Stock	18	@	21

Elgin, Ill., butter market 28½ cents.
Philadelphia, western creamery, 31 cents.

CHEESE.

Prices on imported stock will be dropped for the present, as supplies are scarce and practically nothing new arriving. Domestic cheese of most grades is one cent higher than last week, the market for white being less firm than colored.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15	@	15½
Prime	14¾	@	15¼
Under grades	10½	@	14½
Dalsies	15¾	@	16½
Skims, specials	11¾	@	12¾
Good to choice	10	@	11½
Poor to fair	5	@	10

EGGS.

A limited trade is noted in fancy white eggs at one cent above last report. Qualities below this are in ample supply, showing a considerable proportion of heat damage. A few eggs are being shipped to England this week, upwards of 15,000 dozen.

White, choice to fancy, large	33	@	34
Common to good	25	@	32
Mixed colors, best	28	@	30
Common to good	18	@	22
Western fresh, white	24	@	28
Lower grades	18	@	20
Storage, best	26	@	27
Lower grades	19	@	24

FRESH FRUITS.

The market has been overstocked with windfall and low-grade apples. Hand-picked Yellow Transparent and Duchess bring $1.50 to $3 per barrel, the latter price rather exceptional. Peaches selling well and slightly higher for fairly colored sound fruit. Some shipments of windfall peaches have been seen. They may seem of some value when picked up, but are sure to spoil on the way. Blackberries, huckleberries going at improved prices, some of the latter arriving from Nova Scotia, wholesaling at 16 cents per quart.

Apples—Alexander, bbl	1 50	@	3 00
Yellow Transparent	1 50	@	3 00
Duchess	1 50	@	2 50
Astrachan	1 50	@	2 50
Bongh	1 50	@	2 25
Pears, Le Conte, bbl	1 00	@	3 50
Clapp's Favorite	3 00	@	5 00
Bartlett	3 50	@	4 50
Peaches, Del. and Md., crate	75	@	1 75
Southern Elberta	75	@	2 50
W. Va., crate	1 25	@	1 75
Nearby, bkt	25	@	75
Currants, qt	3	@	5
Plums, 6-bkt. carrier	75	@	1 50
Raspberries, red, pint	5	@	8
Blackberries, qt	6	@	12
Huckleberries, qt	6	@	16
Muskmelons, Md., bu	25	@	1 25
Texas, bu	25	@	50
Jersey, bu	35	@	75
Watermelons, 100	20 00	@	35 00

HOPS.

Prime to choice	35	@	37
Common to good	30	@	34
Pacific Coast	17	@	18
Old stock	10	@	15

HONEY.

Clver, comb, lb	15	@	16
Dark	13	@	15
Extracted, gallon	60	@	90

BEANS.

There have been some further price advances, and the market is very firm. Supplies, both here and at country points, are scarce, and holders asking more than the figures quoted.

Marrow, 100 lbs	6 85	@	7 25
Medium	5 10	@	5 15
Pea	4 90	@	5 10
Red Kidney	5 75	@	6 85
White Kidney	6 27	@	7 00
Lima, California	8 00	@	8 25

VEGETABLES.

Potato market very weak, many having sold at $1.75 per barrel, and $2 the top for best Long Island. Green beans, cucumbers and peppers in large supply and low. Tomatoes running poor in quality. Sweet corn plentiful and lower.

Potatoes—Jersey, bbl	1 50	@	1 90
Long Island, bbl	1 75	@	2 00
Sweet Potatoes, bbl	3 00	@	4 25
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Cucumbers, bu	20	@	50
Corn, Jersey, 100	25	@	1 00
Cabbage, bbl	25	@	50
Lettuce, half-bbl. basket	25	@	50
Onions—Southern, bu	1 50	@	2 00
Nearby, bu	1 50	@	2 50
Okra, bu	1 00	@	1 50
Peppers, Jersey, bbl	1 00	@	1 50
Peas, bu	50	@	1 00
Radishes, 100 bunches	50	@	75
String Beans, bu	20	@	75
Squash, Hubbard, bbl	1 00	@	1 50
Crook Neck	25	@	75
Egg Plants, bu	40	@	75
Tomatoes, Jersey Acme, box	50	@	1 00
Jersey, Stone	25	@	60

LIVE POULTRY.

Broilers, lb	17	@	18½
Fowls	16	@	16½
Roosters	11½	@	12
Ducks	15	@	17
Geese	12	@	13½

DRESSED POULTRY.

Chickens choice broilers, lb	26	@	28
Squab broilers, pair	50	@	65
Broilers, common to good	20	@	25
Fowls	15	@	19
Ducks, Spring	14	@	16
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Receipts moderate and business fairly active on the same price basis as last week.

Hay, Timothy No. 1, ton	23 00	@	24 00
No. 2	21 00	@	22 00
No. 3	18 00	@	20 00
Clover mixed	17 00	@	22 00
New Hay, as to quality	19 00	@	22 00
Straw, Rye	15 00	@	16 00

LIVE STOCK.

Native Steers	6 85	@	10 00
Bulls	5 25	@	7 60
Cows	3 50	@	6 75
Calves, prime veal, 100 lb	9 50	@	13 00
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 25
Lambs	7 00	@	9 25
Hogs	9 00	@	10 45

GRAIN.

The wheat market has had some wild advances and drops during the week, based on the probabilities of shipments to Europe being resumed. It appears quite certain that sales to the other side can be financed by exchange through gold deposits in Canadian banks, but sellers are uncertain as to insurance of cargoes even where ships are to be had. It seems probable that within a week or two some satisfactory arrangement will be made.

Wheat, No. 1, Northern Spring	1 07	@	..
No. 2, Red	97	@	..
No. 2, Hard Winter	94	@	..
Corn, as to quality, bush	90	@	92
Oats, as to weight, bush	45	@	47
Rye	80	@	85

RETAIL PRICES AT NEW YORK.

The figures given here are not the highest or lowest, but fairly representative of many thousand sales in New York where the buyer takes the goods home instead of having them delivered. Fruits and vegetables at New York are retailing lower than for many years, as there has been a large supply throughout the season. Meats of the same quality vary widely in price, depending on the expenses of the retailer and his ideas as to profits, some being ready to do business on a much lower percentage than others.

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	35	@	38
Ordinary grades	20	@	25
Butter, fancy prints, lb	35	@	37
Tub, choice	28	@	32
Chickens, roasting, lb	30	@	32
Fowls	25	@	28
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14
Pork Chops	16	@	18
Fresh Cod	14	@	15
Porgies	10	@	12
Eels	15	@	16
Halibut	18	@	20
Butterfish	7	@	8
Tomatoes, qt	3	@	5
Cucumbers, each	1	@	3
Lettuce, each	1	@	3
Corn, doz	12	@	20
Potatoes, peck	30	@	40

August 6. We have had an abundance of rainfall in this section this year. Crops are looking the best they have in several years. Haying is nearly all done, with a little larger tonnage than last year. Pastures are holding out well, and cows have kept up the milk flow better than commonly. The milk companies are riding the country looking for more milk; they say the milk has dropped off nearly one-half in quantity since the flush of feed. If they would advance the price a little that would encourage the dairymen to feed more grain, and more grain means more milk. Pea picking is at its height just now and prices are running very low, mostly selling around 50 and 60 cents, with a few sales running $1 per bushel. We would like to know what the consumer is paying for them. It is estimated that this county has produced 300,000 cases of eggs in the last 12 months with prices a little better than a year ago. Hog cholera has broken out in several places in the county, and it is advised not to exhibit swine at the fairs this Fall. M. W. F.

Otsego Co., N. Y.

BOSTON MARKETS.

BOSTON market is in a slump, various causes have brought this about. The shutting off of our export trade at this time, just as our apples are coming on the market, is very bad, especially as there is practically no other outlet for these as all other markets are supplied by the general good crop all over the country. Native stock, mostly drops, brings 50 cents to $1 per box, a few good ones $1.50 or better. The market is flooded with cantaloupes, and these are sold at whatever is offered, in many cases from $2.50 down to $1 per crate, and are retailed out at three for 25 cents in most cases, but many are offering them at five for 25 cents to catch trade. California pears $2.50 per box, natives not yet ready. Peaches plenty from Southern sections and are selling at $2 per bushel basket for best, in other cases good fair fruit goes at $1 per bushel basket and around $2 per crate. Oranges a little short and bring $3.50 and better per box. Lemons about $7; watermelons 25 and 35 cents each. Blueberries in fair supply at 10 to 15 cents per box, other berries in scattering lots sell at 14 for blackberries, 5 and 10 per box for currants, and 10 cents per pint for raspberries. All kinds of vegetables plenty and in most cases low in price. Local grocers complain of too heavy shipment from Connecticut as one of the chief causes of the surplus and low prices. Green corn is cheaper than usual at this time of year, only bringing 50 to 75 cents per box in most cases; quality fair and size rather small. String beans bring any price from 25 to 50 as the rule. Cabbage about 60 cents per barrel. Good cucumbers about $1 per box; beets 1¼ and 1½ cent per bunch; lettuce 15 cents per box in many cases. Onions dropping from the $2 price of a short time ago to $1.50 and $1 per box. Potatoes a little more plentiful and price getting reasonable, $1.50 to $1.75 per barrel and 80 to 90 cents per box. Sweets $4.50 per barrel. Tomatoes, outdoor, $3.50 per box, indoor 10 cents per pound. Squash $2 per pound for marrow; Summer about 60 cents per box.

All meats are being held at higher prices and consumption of these is falling off, eggs being used freely. Beef, dressed, brings 14 to 18 for best cuts, others 10 to 12. Best lamb 18, others 9 to 15. Dressed hogs 11½. Live beef or native stock at Brighton 7 to 9 for good, others 5 to 7. Live hogs 9½, live veal 9½ per pound.

Hay is not offered freely and brings $25 for best per ton, other grades down to $15 per ton. Grain on the jump. $1.80 per bag for meal and corn; cottonseed $33 per ton; gluten $30; linseed $32 to $34; bran $28; mixed feed $30; oats 50 cents per bushel. A. E. P.

Subscribers' Exchange

WANTED—Farm of about 80 acres, 40 acres tillable; must have orchard, running water, woodland, pasture, dwelling and outbuildings, about 100 miles of New York City; no agencies. Address F. E. SCHEEL, 433 West 46th St., New York City.

FOR SALE—3,500 acres ranch, 400 acres in farm, 3 sets improvements, 4 silos, 1,526 acres deeded, balance leased; deeded land, $14 per acre, lease thrown in; crop, live stock and equipment put in at reasonable price. E. D. HUNT, Owner, Childress, Tex.

FOR SALE—Good 80 acre farm, fair building, 50 acres improved, balance good timber and pasture; telephone and R. D.; good neighbors; ¾ mile from school, 2½ miles from two small town and Erie R. R.; price, $2,400; reason for selling, other business. Address the owner, WALTER BEERS, Cameron Mills, N. Y.

FOR SALE—A seventy-acre dairy farm, located in West Brookfield, Mass.; near first-class markets, schools and churches; twelve-room house, 65-foot barn with basement, carriage house, orchard, running water to house and barn; year's supply of stove wood; large flock hens, two shotes, seven cows, two horses, necessary farm machinery in good condition. This is a splendid farm and would make a nice summer or all-the-year-round home; plenty of fine shade trees, sightly; American neighbors; a good place to live; been in the family over sixty years. Terms easy. Price $6,000; no dealers. Write or see H. W. KING, East Longmeadow, Mass.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

POSITION WANTED—By married dairyman, milker and butter maker. Has small family. Reference. PATRICK DONOVAN, Hope, R. I.

AMERICAN—Single, first-class carpenter and painter; also experienced gardener, wants position on gentleman's place or institution. E. C., care R. N.-Y.

YOUNG MAN—Some experience with cows, horses, garden truck, etc., wants position on practical farm, with good home. Address SULLIVAN, 7 W. 92nd St., N. Y. C.

POSITION WANTED—On private or commercial poultry farm, by single man, 27; 4 years experience; can run incubators and brooders; good on winter egg production; best of reference. A. E. EDWARDS, Jermyn, Pa., R. 1.

PRACTICAL FARMER—Wants position as manager; capable of, and to be trusted with, entire charge of gentleman's estate; married; acquainted with up-to-date methods and machinery; references exchanged. P. S. H., care of Rural New-Yorker.

POSITION WANTED—By experienced single man; understands creamery work, testing, production, sanitary milk, care and feeding cattle, general farming; first-class buttermaker; college training; practical and sensible; references. Address DAIRYMAN, care Rural New-Yorker.

FARMER—Young married man, with life experience in general farming and dairy, wishes to correspond with parties in need of a reliable man; have been employed as foreman of an up-to-date business dairy on Long Island for two years, where my services have been absolutely satisfactory. Address BENJ. DAVIS, Roslyn, L. I. Box 116.

POSITION WANTED—As manager for farm or estate; would take good dairy farm on shares, thoroughly understand farm crops, up-to-date machinery, steam and gasoline engines, tractor plows, concrete work; New York State preferred; strictly sober, reliable, married American; small family; good references. Address Energetic, Care R. New-Yorker.

WANTED—Man and wife; man must be feeder and milker, and do general farm work. Wife to work in house. Farm just outside city of Poughkeepsie. Modern improvements. House left in entire charge of couple from October to May. Give names and addresses of persons who know your ability to fill position and wages expected, in first letter. JOHN G. PHEIL, 52 Broadway, New York City.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

FOR SALE—For want of use, cow-pea harvester, cuts, threshes, cleans, in one operation, horse driven; price, $70. W. LERCH, Supt., Scobeyville, N. J., via Eatontown.

SOUR CHERRIES in No. 2 cans, syruped with pits, $1.25 per doz.; Clapp's favorite and Bartlett pears in No. 2½ cans, with syrup $1.50 per dozen. SENECA FRUIT FARM, Waterloo, N. Y.

FIG PRESERVES—Home made; a new delicacy for most people; made from choice fruit right from the tree; few people have ever tasted a fig as it ought to be; write for prices and sample to MRS. M. A. PARKER, Rickerly, near Dauphin way, Mobile, Ala.

FARM WANTED—Columbia County; must be bargain; fullest information. Address C. R. H., care R. N.-Y.

10 ACRES—House, barn, hen houses, outbuildings, orchard; price reasonable. W. P. TAYLOR Oradell, N. J.

FOR SALE—235 acres, good soil and buildings, fruit and stock farm in fine condition, $35 acre. Inquire T. S. PAGE, Cohocton, N. Y., R3.

FRUIT, TRUCK, POULTRY FARM—Will sell all or any portion of 36 acres; good buildings, excellent location; immediate possession; no agents. HOMER TWEED, Quakertown, Pa.

FOR SALE—The Mattituck White Leghorn Farm. A new plant, fully stocked and equipped. Will net annually 25 per cent. of purchase price—$8,000. ARTHUR H. PENNY, Mattituck, N. Y.

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REAL ESTATE FOR SALE—Massachusetts—A bargain—Farm and mill, 200 acres in lovely valley, 2 two-story houses, 2 barns and outbuildings, 80 acres wood, 20 acres pine, crops in; farming tools, 80 apple trees, 16 cattle, 2 horses, fowls, bees, mill complete, circular saw, shingle machine, planer, matcher, rip saw and wood splitter; 3 miles from town. Boston & Albany railroad station; 2 lines of trolley. Inquire of BOX 413, West Brookfield, Mass.

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We have many able-bodied young men both with and without farming experience, who wish to work on farms. If you need a good, steady, sober man, write for an order blank. Ours is a philanthropic organization and we make no charge to employer or employee. Our object is the encouragement of farming among Jews. THE JEWISH AGRICULTURAL SOCIETY, 176 Second Avenue, New York City.

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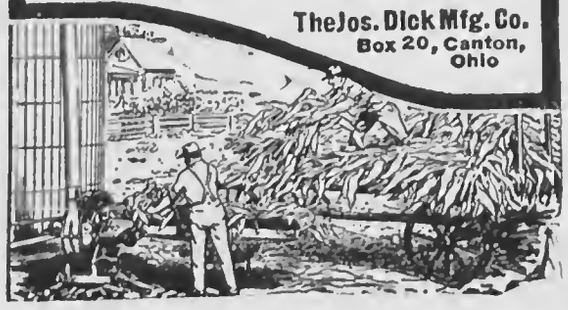

The New-Day Car

The HUDSON Six-40 for 1915 is the finest example you will find today of the new-type high-grade car. Go see how many advances it shows over the cars you know.

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The greatest late-year advance in motor construction has been the adoption of Sixes. That means continuous power. HUDSON engineers have done most to this end by making the Six economical.

They have made it light. This new HUDSON Six-40 weighs 2,890 pounds. Old-type cars of this power and capacity weighed around 4,000 pounds. We save you this difference, yet this car has proved itself one of the staunchest cars built.

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The new-style streamline body is here brought to perfection. And here are many new refinements, new ideas in equipment, new comforts and conveniences. Some of the best HUDSON features are not yet found in any other car.

The New Price

This car also sets a new price standard for high-grade cars. Last year's model sold for $1,750. This year, to meet the demand, we shall build three times as many. Now this new model with 31 improvements is sold for $1,550, because of this trebled output.

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HUDSON SIX-40 for 1915

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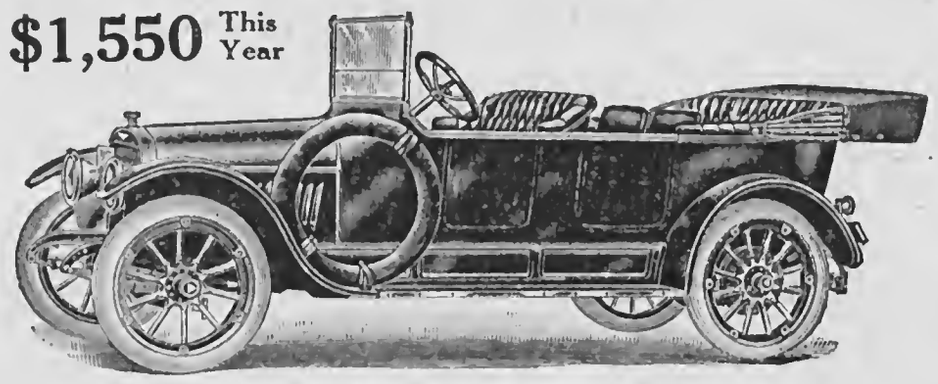

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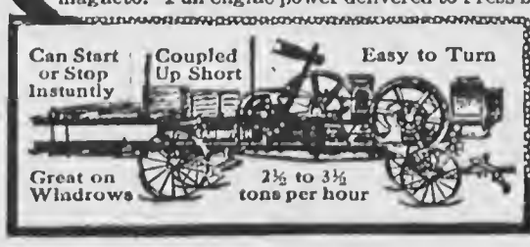

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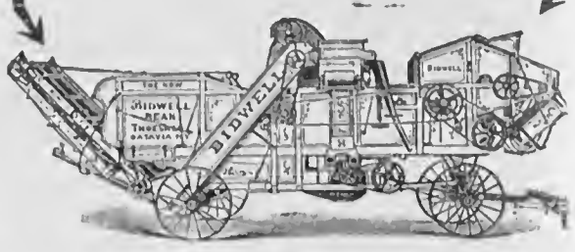

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CO-OPERATIVE SILO FILLING

Working in Groups of Farmers

PLANNING THE LABOR.—Silo filling is one of the rush jobs of the year. Where the silo has been in vogue so long as is the case in my community the "bunch" labor question has nicely adjusted itself. We work co-operatively. For several miles down the road and up the side lines as well practically every farmer has a silo. We have gathered into groups for silo filling sufficiently large to allow four teams in the field, two or three extra men to help the teamsters load in the field, a couple of men to feed the cutting machine, and from one to two men in the silo. These same groups of men have been working together so long now that everything at silo filling time moves like oiled machinery. We have proven in a small way that farmers can co-operate.

LIGHTENING HOUSEHOLD WORK.—Another feature about our silo filling that is worth mentioning is the fact that we have done away with the elaborate suppers that a few years ago always completed the day's work at both silo filling and thrashing. I can remember how the housewives in this section used to vie with each other to see who could put up the best meal for the visiting farmers or farm hands. These meals always represented a considerable monetary outlay, were a needless extravagance, and worst of all, they were a needless amount of labor for the farm women. Nowadays we stop work in plenty of time so that we can go home and get the chores done in good time, and we have our supper at our own tables. We have not yet cut out the friendly meeting around the neighbor's dining table at the noon hour. But cutting out the supper is easy.

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"CANDIDATES FOR THE LADY'S HAND." FIG. 447.

WHEN TO CUT.—I want to give some pointers that I have learned from experience on the filling of the silo. The first point is the stage at which the corn is to be cut. Most of us used to have the idea that corn for silage did not need to be particularly mature. In fact the first corn that I ever put in a silo had not reached the milk stage. It was green watery stuff, and in the Winter it was so sour and the stock showed such a dislike for it that I was almost inclined to dub the silo a "frost." I now value maturity in the corn for the silo. For some reason or other the cows milk better on mature silage, and it goes farther. The professors tell us that mature corn has much more food value, and they must be right. We used to cut the corn with corn knives, but for the last few years I and two of my neighbors have owned a corn binder co-operatively, and we would not be without it. In up-standing corn it does its work with neatness and dispatch. The corn is bound into bundles convenient for handling and for feeding into silage cutter. Even where the corn is blown down or lodged the modern binder has devices that enable it to do creditable work. I would advise every corn grower either to have a corn binder himself or a share in one.

CUTTING THE CORN.—In the field we plan to start the corn harvester half a day before the engine and cutting machine arrive and the binder is kept going all next day. In our silo filling circle the man on whose farm we are working supplies the horses and the driver for the binder. While we consider it advisable to be well ahead with the cutting there is always the danger of getting too much corn down. In case of wet and consequently muddy weather men don't like to go into the fields with their teams or to handle the muddy bundles of corn. And yet if the corn is to be gotten into the silo in the best condition it must be put in soon after being cut. One little point I would note here. Occasionally due to very unfavorable weather it is impossible to get the corn planted until very late in the season. When silo filling time comes around the corn has altogether too large a water content to go into the silo immediately after cutting. I would cut such corn and allow it to lie a while to dry out.

SHARP KNIVES NEEDED.—The point in the management of the cutting box on which I would lay most importance is in keeping the knives sharp. This reduces the amount of power required and the machine is able to make a clean cut at every revolution. The knives should be sharp enough to cut the husks of the ears. When the knives begin to get dull the husks will be blown up uncut although the ears and stalks will be cut all right. I mentioned that we have two men apportioned to feed the cutting box. It is hard active work to feed fast and properly, too hard for one man to stand for any length of time. According to our system the two men take turn about at the feeding, and while one is doing the main work the other gathers up the loose stalks and trash and feeds it into the cutter, and with the help of a boy to turn the grindstone or some kind of power to do it keeps the knives sharp. Another point in the cutting is to have a good powerful engine. With insufficient power the blower will be continually choking, and it is poor economy to have several teams and a big bunch of men standing idle while a clogged blower tube is being cleared or repairs are being made. The customary length for cutting the corn stalks is about half an inch and this is about right. If cut in longer lengths the mass of corn cannot be tramped so compactly, the air is not excluded as well and the corn will not keep as long. As a gen-

eral rule we feed the cornstalks to the silage cutter tassel end first. The only exception to this rule is when the men in the field make a mistake and load the wagon the wrong way.

FILLING.—The place where we put the best man in the outfit is in the silo. One good active man can usually handle the distribution and packing of the silage properly, but he must be good and active, otherwise another man is put in to help handle this end of the filling. We have a distributor fixed at the end of the blower tube. With this distributor the silage can be directed to any part of the silo. With the best distributor, however, there is a tendency for the heavier portions of the corn to pile up together while the lighter portions are blown to one side. Were this corn not forked over properly and mixed the silage would be of uneven quality and would settle unevenly. The way we do things in our circle each man's corn is all cut and put in the silo at the one operation. We never go to the same farm twice in the season. As all who have silos know, however, the silage will settle several feet after the first filling and that much storage capacity is wasted. Where one has twin silos this difficulty may be overcome to a certain extent by shifting the blower back to the first silo after the second one has been filled. Most of us, however, myself among the number, have only one silo. I have gotten around the difficulty by building a cheap wooden top on my cement silo, extending to a height of six feet above the cement. This top is cheaply constructed without any attempt to make it airtight. The corn is filled in right to the top of the superstructure, and in a few days it has settled down within the bounds of the cement silo. To prevent the surface of the silage from decaying I soak the corn with a solution of common salt and water, almost concentrated. Following this method there is practically no decay.

STAVE SILOS.—I have had no experience with the stave silo, but some of my neighbors have and consider them very satisfactory. One point on which they lay great stress is in watching the silo carefully after it has been filled. Silage is apt to heat or sweat and thus expand the staves. Unless the hoops are loosened slightly at this time they may burst. Particular attention should be given to the hoops at the bottom of the silo. I like the cement silo mighty well and will build another one this Fall. The main point I would emphasize about our silo filling plans is the co-operative methods of supplying the labor. It is best not to change around among different neighbors each year. Work in gronps year after year and the work will go much more smoothly.

Illinois. H. U. W.

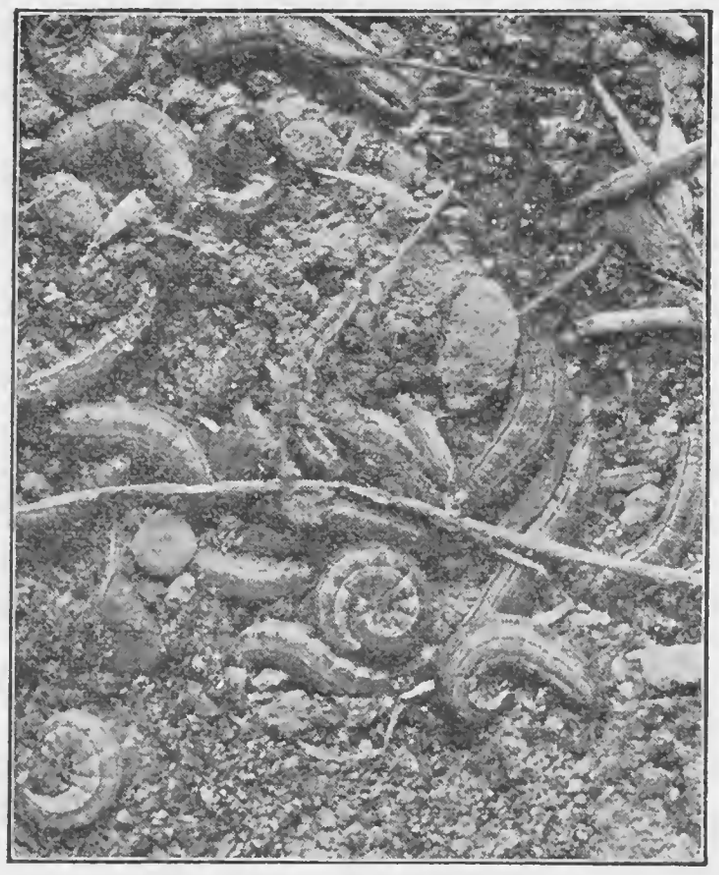
BIG STORIES WHITTLED DOWN.

WHAT is there in the raising of Dahlias? Is all true that is told in the *Country Gentleman* of recent date? Seems to me if it were every one would be in it. H. N. F.

The possibilities of making easy money in a short time, and apparently unlimited quantities, were outlined in the *Country Gentleman* in a recent issue by Maurice Fuld, who advises farmers very strongly to plant Cannas, Gladioli, Dahlias, etc., by the acre, and watch them grow into money so fast that in one instance he dare not compute the acre value of the crop. Too bad he did not figure this out, as the figures he does give are interesting, as they range in returns from $5,000 per acre to $10,000 on Gladioli, and $5,000 to $6,000 per acre on Dahlias. We find the kernel of the nut in this statement: "In all these instances the purchasing of the initial stock is practically the total investment necessary, for all these varieties increase rapidly. Occasionally there are additional expenses for labor and fertilizer."

Mr. Fuld is interested in a company supplying the initial stock. Take Gladioli as an instance. It is advised to plant 250,000 per acre. Figure this out and compute how much hand weeding would be necessary, and any farmer knows that occasional labor bill is not going to be a small item, as they must be planted first thing in Spring and kept free from weeds till frost. It is possible to sell the cut blooms for $20 per 1,000 and sometimes more, but last season many of the variety America shipped from here did not bring as much as the bulbs cost, and we sold through our regular merchants, who have a large trade and are able to dispose of flowers when the farmer, who is not a regular shipper, would probably not be able to dispose of any, unless by working up a trade in a nearby town or village, and even this would likely prove difficult, as most small town residents have gardens of their own and do not purchase many flowers.

Mention is also made of each large bulb having 25 or more small ones that attain marketable size rapidly and are ready for sale third season. In our soil very few of these small bulbs ever mature. Another quotation follows: "The lowest wholesale price quoted on this variety (America) to-day is $20 per 1,000 bulbs, so that the root crop alone is worth $5,000 per acre." This leaves the reader



ARMY WORM ON OAT STUBBLE. Fig. 448.

under the impression that you buy a bulb in Spring, plant it, grow a flower and sell it, and later have a bulb to sell at what you paid for the bulb in Spring. The old root makes one large corm ready to dig just before frost, which you must store for next season's planting, so you have no bulbs to sell the first season nor the second, unless you are fortunate in getting a good growth from the small cluster of cormels attached to each large one; but these small cormels require two seasons' growth and attention before they will flower, and the past Winter salesmen from Holland were travelling the country over selling America at just a trifle over half the figure Mr. Fuld states as the lowest wholesale price. Suppose an individual farmer had a few thousand surplus bulbs to sell. Would not the expense of selling in the face of this strong foreign competition add quite an item to the expense of growing?

The Dahlia is another flower held out as a veritable Aladdin's lamp, that only needs to be planted and the genie will bring us fabulous riches. In locations where the soil is warm and sandy the Dahlia grows very well, and is a crop that gives a fair

ARMY WORM ON CORNSTALK. Fig. 449.

return for the money and labor invested. There are large quantities grown in southern New Jersey and shipped from there in large quantities to the large cities each season. Where the soil is heavy and of a clay nature the newer and expensive varieties make very few flowers. The plants are subject to leaf spot disease, and in a dry season nearly all leaves fall off. The tarnished plant-bug also punctures the heads, which checks the growth, causing a lot of short stems to start out so late that the flowers do not mature before frost. Some of these troubles could probably be overcome by spraying and irrigating, but the tarnished plant-bug apparently cannot be successfully combated. Some commercial growers here have only the small increase of bulbs or roots to offset their investment and have quit the business, as our soil is heavy and the Dahlia will not bloom enough to pay for work put on same. The market for Dahlias in the large cities after the first few weeks becomes very badly glutted, and many thousands that are shipped in do not find a purchaser.

It is unfortunate indeed that such roseate visions of easily earned wealth are apparently endorsed by one of our widely circulated horticultural papers, as everyone who tills the soil knows there is no crop that we can put in the ground that does not require constant care and attention.

Lancaster Co., Pa. ELMER J. WEAVER.

VERBAL CONTRACT FOR LIME.

A BURNS and sells lime. B has an orchard of four acres in a good sod, using the mulch system. A comes to B in November, 1913, to see if he can sell B some lime. B tells A if he could get some one to plow and fit the ground for seeding in the Spring for oats and grass he would buy some lime. A agrees to do all the work at a given price per day, and to deliver the lime at a certain price per ton. B tells A to go ahead and do the work, feeling satisfied that A would do as he agreed. A plows B's orchard in December, 1913, and delivers the lime in January, 1914, and lets it lie for slaking three weeks. B goes to A and requests A to distribute the lime and harrow the land, as B has told A he wanted it harrowed three times before seeding. A tells B there is plenty of time and to be in no hurry. B requests A at four different times to complete the job. Finally, A tells B that he is unable to finish the job, claiming short of help and horses in foal, and advises B to get others to complete work, which B did without success. A sends his bill for lime and B refuses to pay before A completes his agreement (plowing had been paid for). A sues B for lime. B enters an offset claim for damages, for loss of oat crop and bad condition of land being left in open furrows since December, 1913, up to date. A gets judgment against B for price of lime. B's offset claim is set aside. Amount involved $28. Would you have appealed in such a case? I have paid it. J. M. V.

This is another instance where the rights of the parties could better have been preserved by a written contract instead of a verbal agreement. By no means are all written contracts void of ambignity, but where the intentions of the parties are written down and agreed upon between them, there is less danger later of a misunderstanding. In your case A's version of the contract was interpreted by the court as the true one, and he was given the judgment, and we think you did the wise thing in not appealing the case. It seems to be a case of an interpretation of the terms of the agreement between A and B, and without any writing to help the court must do its best in finding out what that agreement was.

M. D.

NOVA SCOTIA APPLE FIGURES.

IN addition to keeping records of individual tree yields, it is useful to know how different varieties of apples are affected when frost has cut down the general crop. Nova Scotia in 1909 had about 700,000 barrels; (frost) 1910, 400,000 barrels; 1911, 1,500,000 barrels; 1912, 750,000 barrels; (frost) 1913, 450,000 barrels. My yearly crops of certain varieties were:

Year.	Spy.	Gravenstein.	Stark.	King.	Baldwin.	Ben Davis.
1908	36	147	114	114	52	126
1909	57	119	147	168	64	131
1910	65	99	99	26	49	98
1911	77	240	205	207	88	229
1912	107	403	403	175	82	257
1913	55	79	97	125	76	150
Total	397	1087	1065	815	411	991
Taking the year 1911 as 100%	85%	75%	85%	65%	77%	71%

The percentage of fruit for each year on same basis runs:

Year.	Spy.	Gravenstein.	Stark.	King.	Baldwin.	Ben Davis.
1908	46%	61%	55%	55%	59%	55%
1909	74	49	71	81	72	57
1910 (frost)	84	41	48	12	55	42
1911	100	100	100	100	100	100
1912	138	167	196	84	93	112
1913 (frost)	71	32	47	60	86	65
Average yearly set	85%	75%	86%	65%	77%	71%

The only feature which may occasion a little trouble is that the 196 barrels of Stark in 1912 included about 20 to 30 barrels off young trees. The soil is light, sandy loam.

The United Fruit Company, Ltd., of Nova Scotia, is sending a special sales agent to South America.

Nova Scotia. JOHN BUCHANAN.

THE NEED OF POTASH FERTILIZER.

Rendering Insoluble Compounds Available.

THE heavier soils of the Eastern States, like those of the Middle West and the farther West, contain very large proportions of potash. The red shale soils of New Jersey and Pennsylvania usually contain more than 1½ per cent. of total potash and often as much as two or even 2½ per cent. of this constituent. The slate and silt loam soils of the East and the Middle West seldom contain less than 1½ per cent. of total potash. In view of this fact, and in view of the fact, also, that the subsoils are even richer in potash than the corresponding surface soils, there is really no danger of exhausting the supply of potash in our heavier soils in many centuries. It happens, however, that, notwithstanding this large proportion of potash in our heavier soils, the amounts that become available from day to day during the growing season may not be sufficient to provide for the needs of maximum crops. This applies particularly to conditions where intensive methods of farming are followed, and where certain potash-loving crops, like potatoes, tobacco and sugar beets, are produced. In order, therefore, to provide for the needs also of the crops grown under intensive conditions, it becomes necessary either to stimulate the chemical and biological changes in the soil which serve to liberate large amounts of available potash, or to add directly quantities of soluble potash salts as is done by progressive farmers who use potassic fertilizers.

It is legitimate, and even desirable, for progressive farmers to utilize the large stores of potash present in our heavier soils, provided this can be done economically. The use of lime and the maintaining of a large proportion of readily decomposable vegetable and animal matter in the soil may provide quite fully for supplying the maximum needs of the growing crops for potash under any given climatic conditions. Hence, the shutting off of the supply of potash salts from Germany may compel the American farmer to utilize in a larger measure than he is now utilizing the potash resources of his own soil. Should it become impossible to purchase potash salts at any reasonable price, it will be necessary for those farming our heavier soils to use larger amounts of lime, and to utilize to a far greater extent than is now being done crops like clover, vetches, Soy beans and cow peas as green manures. There is no doubt that the quality or quantity of our crops grown on the heavier soils will not depreciate under these conditions for at least a year or two even though no potash salts be applied for that length of time.

THE MODERN WAY OF CUTTING CORN IN ILLINOIS. FIG. 450.

There are other ways in which the enormous stores of inert potash compounds in our heavier lands may be utilized to advantage. It is well known that sodium salts, like common table salt, known as sodium chloride, or another sodium salt known as sodium sulphate, which is a by-product and can be had at a reasonable cost, can be used as indirect potash manures. These soluble sodium compounds, when applied in any considerable quantity, will react on the insoluble potash compounds in the soil and will render them available to a marked extent. Hence, should we be driven to get along without the potash fertilizers derived from German mines, we may legitimately utilize our soil potash by rendering them available through the use of sodium salts.

The problem of maintaining an adequate supply of potash on the lighter soils is a more difficult one to solve. Sandy loams may contain as much as 1 per cent. of total potash; sandy soils of the poorer grades not infrequently contain only ½ per cent. of this constituent. Hence, the using up of the soil potash by means of lime, green manures and sodium salts cannot be carried on as far nor as successfully. Nevertheless, even in the case of these soils, especially where potash fertilizers have been used for a number of years, there is a possibility of producing maximum crops for at least one or two seasons without the addition of soluble potash fertilizers. Some of the asparagus growers on the lighter soils of New Jersey appreciate the value of common salt as an aid in the growing of asparagus. The value of common salt has also been recognized by the growers of mangels and of other root crops. If forced to it, we can manage to maintain maximum production even on the lighter soils of the Coastal Plain without the use of potash salts. Beyond one or two seasons, however, it is doubtful whether maximum production will be attainable without applications of available potash compounds. Should this emergency arise, we shall find a way to utilize the vast stores of potash found in certain of our rocks. Indeed, several chemical processes are now available for making available potash fertilizers out of feldspar. These processes have not found, thus far, commercial application because of the difficulty, or even impossibility, of competing with the product of the German mines at existing prices, but, should the war shut off the supply from these mines, American chemists and manufacturers will find a way to make available large quantities of potash from home sources at a relatively reasonable cost.

Everything considered, no alarm need be felt by the American farmers as to any possible potash famine and the falling off of crop yields because of the temporary discontinuance of potash shipments from Germany. Meanwhile, it would be well for American farmers, especially those who use large quantities of potash in mixed fertilizers, to reduce the proportion of this ingredient, or to utilize in so far as may be possible lime and green manures so as to eliminate temporarily the need for potash fertilizers.

Director N. J. Exp. Station. J. G. LIPMAN.

THE ARMY WORM.

PART II.

LIFE OF AN ARMY WORM.—Like other insects of its class, the army worm has a life cycle consisting of four distinct stages, viz.: egg, caterpillar, chrysalis, and adult. The army worm, then, hatches from an egg, feeds about four weeks or until fully grown, then changes to a chrysalis, from which, two weeks later, the moth emerges. The Winter is passed by the half-grown caterpillar, which continues to feed in the Spring, becoming mature in May and forming its chrysalis or pupa in a cell in the ground. The moth comes forth about two weeks later, mates and the female lays upwards of 700 eggs on blades of grass. From eight to 10 days are required for the eggs to hatch, and it is this brood of caterpillars which cause most of the damage. In Connecticut this year, most of the caterpillars had transformed to the chrysalis stage by August 1. The moths emerging this month will lay eggs for another brood of caterpillars, which will appear in September.

DESCRIPTION.—The egg is less than a millimeter in diameter, nearly spherical, almost smooth, but marked with fine ridges, and white or pale yellow. Eggs are laid in rows in the unfolded sheath of the leaf-blade, and are covered with a transparent gelatinous substance. The caterpillars molt five times, and when about full-grown, they are from one to one and one-half inches in length, generally brown in color (though varying greatly) and usually showing tints of green or red; they are darker above than beneath, and are marked longitudinally with fine lines of white, yellow, or lighter brown. A broader yellow stripe runs along each side, and includes the spiracles or breathing pores. The chrysalis is a naked pupa nearly three-quarters of an inch in length and of a light reddish-brown color. The female moth has a wing-spread of about one and three-fourths inches. Fore wings are light brown, more or less mottled, with a white dot just beyond the center of each, and with a dark streak nearly bi-secting the apical angle. The rear wings are usually lighter in color at the base and darker on the outer margin, than the fore wings. The male is smaller, of a lighter brown color, and uniform on fore and rear wings, without prominent markings. All but the egg stage were shown on page 1027.

NATURAL ENEMIES.—All domestic fowls and many other kinds of birds will eat army worms. Blackbirds, starlings, robins, thrushes, catbirds, barn swallows and even English sparrows have been observed devouring them. Among other vertebrate animals, hogs, skunks, frogs and toads feed upon them. Certain predaceous insects like ground beetles and soldier bugs destroy army worms, but it is upon the parasitic insects that we must depend to keep them down. A two-winged Tachinid fly, Winthemia quadripustulata Fabr., and another closely related species, are among the most important of these. Their white, oval eggs, are found fastened to the backs of the army worms, usually near the head, as shown on page 1027. In one Connecticut field this Summer, 40 per cent. of the caterpillars gathered at random, had these eggs on their backs. Several species of small four-winged flies, are parasites of army worms, and in the grain fields this season, their clusters of woolly cocoons (the species not yet identified) were found in great numbers under the cocks and windrows. A bacterial disease called "wilt" also kills many of the caterpillars, which we find dead and shriveled, hanging to the stalks.

CONTROL MEASURES. — Local conditions must be considered in adopting control measures, several of which are recommended. Some will fit one place, some another, and often various combinations of two or more of them must be used to bring about the best results. Some of these methods follow: In small infestations near the house, the hens, turkeys, ducks and geese may be utilized to eat the worms. Small areas in the field, and especially lawns, may be gone over with a heavy roller to crush the caterpillars. Army worms, like cutworms, will eat bran mash, if placed upon the ground. To 25 pounds of wheat bran add one pound of dry lead arsenate or Paris green, and thoroughly mix; then add two quarts of cheap molasses, and enough water to make a fairly stiff mash which can be poured upon the ground. This method is well adapted to prevent damage in the vegetable garden and around the edges of the corn field, but, of course, poultry must be kept away from it.

SPRAYING AND POISON BARRIERS.—Strips of grass, grain, or corn may be sprayed with lead arsenate (six pounds of the paste in 50 gallons of water) to check the advance of the on-coming worms. Uninfested fields may thus be protected, if surrounded by such a strip of poisoned vegetation. We can often take advantage of existing walls, highways and ditches, to check the advancing army of worms, and concentrate our efforts toward their destruction at these points. We can also plow deep furrows across their line of march, or around fields to be protected. In such cases the furrow should be at

(*Concluded on Next Page.*)

THE ARMY WORM.

(*Continued from page 1047.*)

least six inches deep, with the perpendicular or land side straight and clean, and away from the worms or next the crop to be protected. Deep holes 10 or 15 feet apart in the bottom of the furrow will often help, because the worms in their attempts to get out will crawl along the furrow and collect in the holes. As with all other barriers, this furrow is not a permanent bar, but a temporary check, and we can easily kill the worms in it by crushing, by sprinkling with kerosene, or by covering with hay or straw and burning. In certain cases a log drawn back and forth in the furrow was found to be an excellent method of crushing the caterpillars. One Connecticut Yankee this year saved his corn by plowing a furrow around it, and spreading a layer of poisoned bran mash in the bottom of the furrow. It has been noticed that the worms will not cross a road which has just been treated with asphaltum oil. They can often be deflected from their line of march by sprinkling kerosene along the ground; but it is usually advisable to put the kerosene on the caterpillars if you can get at them.

CULTURAL METHODS.—Fall plowing is usually advisable for the control of army worms. Even immediate plowing and thorough harrowing of badly infested fields, will destroy many worms and chrysalids by crushing, and by bringing them to the surface where birds can eat them. Grain, if ready to cut when the worms first attack it, may be saved by promptly reaping, binding and carting it to a field not infested, to be cured. As soon as it has partially dried, the worms will not eat the leaves or pedicels.

FUTURE PROSPECTS.—Seldom, if ever, does the army worm cause serious damage for two consecutive seasons, in the same locality. There will be another brood of worms this Fall, which may cause some injury to rowen, rye, or late vegetables in some localities. But the very severe parasitism leads us to believe, that in Connecticut, at least, there will be only slight damage from the next brood, and that it will be difficult to find any army worms next season.

Conn. Exp. Sta. W. E. BRITTON.

THE WAR AND COMMERCE.

THE movement of shipping to British and French ports has increased materially during the week, nearly 1,000,000 bushels of wheat having been sent from Galveston, and 3,600,000 bushels of wheat and 75,000 barrels of flour from other ports. Grain speculators have again been active, buying back the holdings they sold when shipping stopped. Wheat prices are erratic, up five cents per bushel one day and down the next, as the speculative hysteria chances to run. Oats and corn are three to five cents higher, corn mainly because of drought, and oats on account of sales for war purposes. Flour has made further advances of 25 to 35 cents per barrel on practically all grades, the jobbing price on carlots of patent from city mills being $6.85.

Sugar has made a net advance of three cents per pound since the war began, granulated now wholesaling at $7 to $7.50 per 100 pounds. The Continent of Europe usually produces about 4,000,000 tons of beet sugar. The cane sugar crop of the West Indies and Hawaiian Islands is reported large, five shiploads being now on the way from Atlantic ports via the Panama canal.

The cotton export trade is looking a trifle better. Europe is expected to take 3,000,000 bales less than normally, but will doubtless use much more of our manufactured goods. Japan will probably take 2,000,000 bales of our raw cotton, as they are working actively to supply the extensive cotton cloth trade of China.

The advance on meats previously reported has been only partially held. Public sentiment quickly gets after rises in meat prices, believing that they are usually manipulated rather than necessary, and so much less meat is used that the dealers notice the lessened trade at once. There is no doubt, however, that all meat products will remain on a higher basis if the war continues for several months.

Some of the tied-up German merchant ships now in New York harbor are supposed to be for sale. If this country buys them, as now seems probable, our commerce will be greatly increased, particularly with South America, a promising field that we have not been able to do much with because of having no merchant marine. Even though the seas may be fairly clear and ships running regularly to Europe, exports will not be normal so long as the war hangs in the balance, as at present, as there is too much delay and uncertainty about financing the shipments. War is a world habit. It would be difficult to find in historic times any 50-year period without some war that could be called great, to which business has to adjust itself, yet the conditions vary so widely that the industrial adjustments of one war are not adapted to the next.

COMING FARMERS' MEETINGS.

National Paving Brick Manufacturers' Association, eleventh annual convention and paving conference Buffalo, N. Y., September 9, 10, 11, 1914. Secretary, Will P. Blair, 832 B. of L. E. Bldg., Cleveland, Ohio.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show, in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Associations, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Hillsdale County was visited with splendid rains the week of August 10, and much good has resulted to pastures. Corn was helped, but much of the corn was too far gone to be saved and some had already been cut for fodder. Late potatoes are little hurt by drought. Butter and eggs have risen some two cents in the past week. Some wheat is being held by the farmers and town people are feeling the high war prices when buying chicken feed. Shelled corn sells at 90, wheat at $1, prepared scratch feeds $2.25 a hundred. Poultry is good and quite plentiful, about 10% more being raised in southern Michigan and northern Indiana than last year. P. L. W.

Michigan.

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On some of the best wheat land the crop runs to straw. This is because there are not enough available mineral foods to balance the manure or clover.

A field test on such land showed that Potash increased the grain from 20 bushels on unfertilized soil to 31 bushels where

POTASH

was used, and to 37 bushels where Potash and phosphate were used. Both were profitable. Supplement the humus of such land with 200 lbs. acid phosphate and 30 lbs. Muriate of Potash or 125 lbs. Kainit per acre. **Potash Pays.**

If your dealer does not sell Potash, write us for prices, stating quantities required, and ask for our free book on "Fall Fertilizers." Study of the fertilizer question means saving and profit to you.

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Saving Seed Beans.

WILL you tell me how to handle green snap beans to save them for seed? What treatment is given them to prevent weevil infesting them? I have an acre of fine beans just ready to pick; early drought delayed them. New York market is now 25 cents per bushel. I think I can get some value as seed. What do you suggest? I have never saved any for seed before. F. C.
Vineland, N. J.

Gather the pods when nearly ripe, or in other words, before they become thoroughly dried on the vines. Dry them well in the shade of some outbuilding, and bag them in the pod. Do not shell them until they are wanted for use. Corn, peas and beans will not suffer much from the attack of weevil if nature's covering is not removed, but if this cover of protection is removed, the weevil will quite often destroy the whole crop. This is particularly true in the Southern States and in some sections of the North. In the South, corn is always cribbed with the shuck on, and thus escapes the weevil's attack for quite a long time, whereas if it was shucked before cribbing the grain would probably be entirely destroyed before Spring. I have kept beans and peas in the pod for two years or more, without being attacked by weevil. Good clean bean seed should not be difficult to dispose of to seed dealers at a fair price, but before gathering the crop, I would advise that you write some of the reliable seed firms and find out what they will be willing to pay for a first-grade article. You will then get an idea if it will pay you to harvest the crop for seed purposes. K.

Slitting the Bark for Blight.

TWO years ago I had a Yellow Transparent tree that was badly affected with twig blight. All dead wood was trimmed out carefully, but last Summer it was worse than ever. While visiting a friend's orchard I noticed long slits down the bark of all trees of this variety and he explained them by saying it was a preventive for blight. I laughed at him, and he said he had laughed too when told about it. My tree looked so bad last July that I gave it a few slashes and then gave it some more for good measure. No blight this year, and a lot of new wood is ripening up nicely at the present time, and we have picked three baskets of the most beautiful fruit I ever saw of this variety. It does not seem possible that this cutting did the work, but something did, for other trees are showing as much blight as last year. Is it a freak of nature that both my friend and I should hit the off year in blight on trees, or is it possible that young trees are benefited by the treatment? WALTER C. BLACK.
New Jersey.

R. N.-Y.—We will turn this over to the wise men for a discussion!

School Health Law.

IS it the law that a school trustee shall oblige each child to be vaccinated before he can come to school? Many parents do not want their children vaccinated, and I wish to know if it is law. We had a doctor examine school last Fall; he charged ten dollars and I do not see where it did any good. We had the school closed last Winter by health doctors; we had to pay teacher for time closed, also for time to be made up. Is that law? W. H. B.
Saratoga Co., N. Y.

The law in New York State has required the vaccination of all children previous to their admission to the public schools since 1893. Until recently this law has been permitted to become very much a dead letter but, owing, doubtless, to the general prevalence of smallpox of a mild form in recent years, this law is now being enforced with some vigor, and trustees or other school authorities upon whom the duty of seeing that the law is enforced has been placed are giving the matter their attention. The law has repeatedly been held constitutional and the school authorities have no option in the matter; the only way in which the law can be evaded by those opposed to it is by sending their children to private schools where they will obtain the instruction made compulsory by the State education laws and where they will not be subject to the compulsory vaccination law.

My opinion is that a public school teacher is legally entitled to pay for his services during the time that his school is closed by the health authorities even though these services are not rendered by reason of the action of the health authorities. Not having looked up the law on this matter I give this as opinion only based upon general knowledge of the health laws. M. B. D.

Destroying Cockroaches in Grain Bin.

HOW may cockroaches in a grain bin be exterminated? A. P.
Oswego, N. Y.

Any insects in stored grain may be destroyed with bisulphide of carbon. The allowance is one pound of the liquid to each 100 cubic feet of space, or if grain is being fumigated, one pound to 100 bushels; in small quantities about two drams to the bushel. The bisulphide is exposed in shallow dishes, on top of the material to be fumigated; the bin is then tightly closed, preferably with a canvas or blanket thrown over the top, and then left for 24 hours. Always remember that the bisulphide is highly inflammable and explosive; no light, fire, cigar or pipe must be allowed near it until all fumes have passed away. The liquid evaporates rapidly on exposure to air, giving off a heavy gas which floats downward, as it is heavier than air. There is no danger if proper care is taken, but where there is risk of fire another chemical, carbon tetrachloride, is advised, as this is non-explosive. It is less active than the bisulphide, and double the quantity must be used.

THE MAIL BAG.

Legal Bushel of Walnuts.

IS there any legal weight for a bushel of black walnuts? If not, are they sold by a standard weight, or in bulk? They are always quoted "bushel," no weight mentioned, as with shagbarks.
Willimantic, Conn. J. H. W.

There may be legal weights per bushel in some States for the wild or Black walnuts, but as they are usually sold by the bushel and there is no very large quantities handled it is not deemed a matter of much consequence. Their actual weight is 40 pounds per bushel. H. E. V. D.

Spraying Trees Against Sheep.

WHAT spray can I use on my young peach and apple trees, so as to prevent sheep from browsing on foliage? The trees are only a year old, and I do not want to wire them in. It has occurred to me that from your experience you may have learned of some application that could be made to the tree, which would be offensive to sheep.
Easton, Pa. G. F. C.

We have never heard of such a scheme being successfully worked out. There have been calls for a wash to spray on dormant trees to repel deer and vermin, but we have found nothing practical. A spray for trees in full foliage would be too weak to have much repelling power. We doubt if the scheme is practical.

Alfalfa in Minnesota.

PUSH Alfalfa. Any location that grows Sweet clover will grow Alfalfa. This is a limestone country, no inoculation of soil. I could have cut my first crop last of May, but continuous rains held us back until first week in July. Now the new growth is 18 inches high, will cut it next week. Seed was sown two years this month, Grimm variety. I have five acres, last year we cut 12 big loads June 10, 15, July 9. They were hindered by rains until September, three cuttings. First cutting this year 20 big loads, delayed cuttings causes lower leaves to drop.
Mankato, Minn. W. M. S.

We think this Alfalfa pushing has come to the point where fair discrimination should be used. A wonderful plant where conditions suit it. There are some cases where it will cost too much to change or fit the soil properly. In such cases Red clover or Soy beans will pay better. Everyone should make a fair effort to grow Alfalfa without plunging too heavily on cost.

Permanganate of Potash for Ivy Poisoning.

JULY 4 issue, page 885, E. H. A. asks for reports on the use of permanganate of potash for poison ivy. He may be assured of one grateful appreciation; it affords relief in a few moments, either by rubbing in well, or by two or three applications one after another as soon as dry, and I believe it would relieve hives also, and possibly insect stings. I tried almost everything except dynamite and came near to committing assault and battery upon one physician who told me the only cure was to let it run its course about six days and keep cool and not get overheated. This to farmers in haying time! E. H. A., we have you as a public benefactor, how did you "get next?"
New Jersey. S. FRIEDLANDER.

Drain Heads vs. Tile.

CAN you tell me whether drain heads are a better system of draining wet lands, etc., than the old style of draining, ditching with stone, tiling, etc.
Hamden, Conn. W. J.

The "drain head" is practically a deep well with a system of drains running into it. The theory is that the water runs into this well and then passes off at the bottom, thus relieving the field even when there is no natural surface outlet. In cases where there is a stratum of open porous gravel below the subsoil this plan may work, but on most of our Eastern soils these wells would give just the condition we *do not want*. They would not drain off at the bottom, but would simply hold the water or flood it back into the land. In nine cases out of 10 the old plan of running off the water through tile or stone drains to some natural outlet will pay better on our Eastern soils.

Roughing a Concrete Floor.

I THINK if persons who are troubled with slippery floors will try the following, they will find the method both better and cheaper, and withal more easily applied than other plans. For each stall, say 4x8 feet, procure one quart of cement and two quarts of sharp sand. Mix the cement and sand thoroughly, dry. Now sweep and wash the floor clean, then spread the cement and sand evenly over the stall floor by means of a piece of lath, having a couple of shoe nails projecting about three-eighths inch from one edge. Should the cement and sand run short, drive the nails in a little and beginning at the front always, go over again. After getting an even surface to the floor you proceed to wet it; for this purpose a fine sprinkler is needed. Too much water will displace the sand while wetting. When the cement is well wetted give it a reasonable time to set and it is ready for use. OSAGE.
Fairfax Co., Va.

GREENSBORO PEACH.—I wish the many readers of THE R. N.-Y. in Northern N. J. could see tree of the Greensboro peach which I planted in May, 1911. It is one of the most beautiful sights I have seen this season, and they were ripe enough to use on July 28, earlier than I ever had peaches before, though I have 15 kinds in my orchard. Every house owner should have one or more trees of the Greensboro. A. C. WORTH.

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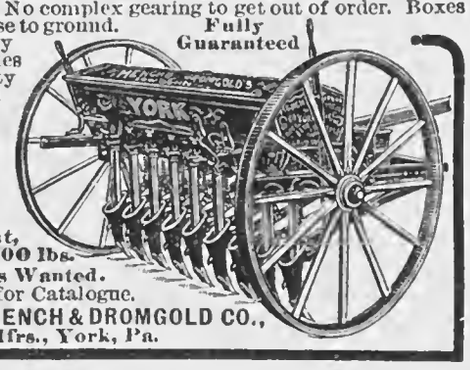

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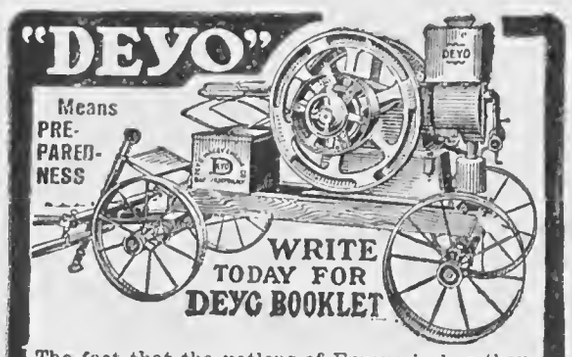

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EVENTS OF THE WEEK.

DOMESTIC.—The chase after the five bandits at Williamson, W. Va., who on August 14 killed Joseph Shaler, paymaster of the Glen Alum Fuel Company, and his two companions and stole the company payroll of $8,000, ended August 16, when the mountain cave into which the desperadoes had retreated was dynamited and the men were killed. The deaths of the bandits brought the fatalities to eleven. The bandits were Italians.

The United States War Department steamship Ancon made the passage through the Panama Canal, August 15, and transit through the waterway is now officially open to the traffic of the world.

At a meeting of the New York Chamber of Commerce, August 13, a resolution was adopted unanimously to request the United States Government to establish a bureau of war risk insurance to be administered under the direction of the Secretary of the Treasury. This bureau would assume the risks of war on American vessels and American cargoes shipped thereon whenever it shall appear that the American vessels are unable to compete on equal terms with foreign vessels by reason of protection afforded to them by their Governments.

The Dutch steamer Nieuw Amsterdam, and the Cunard steamer Laconia, arrived in New York August 17 with about 3,000 American tourists, while a Scandinavian liner arrived August 18 with 1,000 more. The North German Lloyd Company admits that its vessels are for sale.

Subpoenas were placed August 18 in the hands of United States marshals requiring the presence of ten of the leaders in the Chicago packing industry before the federal grand jury examining into the recent increase in meat prices. The same day Robert O'Dearn, American sugar beet man and A. A. Brown, of the California-Hawaiian Sugar Refining Company, were served with subpoenas at San Francisco, directing them to appear before the federal grand jury which is investigating the rise in price of foods. Managers of hotels will bring their books and bills to show what increased prices they have paid since August 1.

WASHINGTON.—The unusual proposal that the government shall enter the business of marine insurance during the continuation of the European war and the congestion of oversea traffic is contained in a bill introduced August 12 by Representative Lewis, a Maryland Democrat, who came into notice as the co-author of the parcel post law. The Lewis bill proposes the creation in the Department of Commerce of a "Bureau of Marine Insurance," which shall undertake the insurance of vessels carrying exports from the United States to foreign countries. The Secretary of Commerce is to have authority to make rates and regulations, and the premiums received would go into a "marine insurance fund."

Mr. Lewis says that in 1911 the premiums from marine insurance amounted to $4,500,000 and the losses to only $1,500,000. The bill provides that the United States shall have a monopoly of the marine insurance business after the promulgation of its rates covering war risks.

The Senate ratified August 13, eighteen of the peace treaties sent to that body recently by Secretary Bryan. All of the treaties except two were approved and action on these was postponed. The treaties postponed were with Santo Domingo and Panama. Postponement was due to the fact that local conditions exist in each of the two countries which it was thought would make it inconsistent for the United States at this time to conclude treaties of that character with them. The eighteen countries with which peace treaties were to-day confirmed are: Norway, Netherlands, Portugal, Switzerland, Denmark, Italy, Salvador, Guatemala, Honduras, Nicaragua, Bolivia, Persia, Costa Rica, Venezuela, Uruguay, Argentina, Brazil and Chili.

August 13, President Wilson ordered a Federal investigation of the recent abrupt increases in the price of foodstuffs.

Two bills were offered in the House August 18, designed to prevent the exportation of foodstuffs as a means of steadying or reducing the prices of household necessities. One, by Representative Vare of Pennsylvania, authorizes the President to stop the exportation of foodstuffs, clothing and arms and ammunition in time of war. The other, introduced by Representative Keating of Colorado, proposes an amendment to the Constitution whereby Congress may levy a tax on exports.

FARM AND GARDEN.—Albert J. Rice of Dayton was convicted August 13, before Judge Peter F. Daly in the Middlesex County Court at New Brunswick, N. J., of selling millet seed to farmers for A1 clover seed and was sentenced to two months in jail and fined $200. Harvey R. Dey, a farmer, became suspicious of the real character of the A1 clover seed because some new Japan clover seed he had previously bought from Rice had failed to sprout. He sent the seed to the State agricultural experiment station, where it was analyzed and found to be 82 to 92 per cent. millet seed, the balance being clover. Millet seed sells for $1.75 a bushel. Rice asked $10 a bushel for his A1 clover seed.

Pleas of not guilty, with the right to substitute demurrers or different pleas, were entered in the Federal Court at Providence, R. I., August 11, by William J. Higgins and Jeremiah Hall, charged with conspiracy to defraud the Government of $400,000 in oleomargarine taxes. They were held in $15,000 each. The New England Manufacturing Company, of which they are officers, entered a similar plea. Five other individuals and two other corporations have been indicted.

The Smith-Lever Bill which recently passed Congress provides federal funds for the Pennsylvania State College with which to carry on Extension work in agriculture and home economics. The Extension Department of the College will place exhibits at the following fairs: Sept. 7—11, Towanda, Bradford County, and Youngwood, Westmoreland County; Sept. 14—18, Montrose, Susquehanna County, and Mercer, Mercer County; Sept. 21—25, Lewisburg, Union County, and Dayton, Armstrong County; Sept. 28—Oct. 2, Milton, Northumberland County, and Duncanville, Blair County; Oct. 5—9, Bloomsburg, Columbia County, and Bedford, Bedford County; Oct. 12—16, Hughesville, Lycoming County, and Newport, Perry County.

THE EUROPEAN WAR.—All news is still strictly censored. The whereabouts of the British North Sea Fleet was unknown August 21, but as Scandinavian merchantmen were taking cargoes of foodstuffs to England, and English, Belgian and Dutch shipping crossing the Atlantic, it would appear that the main German fleet was unable to prey on shipping. No information was given out as to the whereabouts of British troops in France or Belgium, but it was officially stated August 18, that 140,000 men had been landed on the Continent. During 24 hours, August 19—20, it is stated that 97,000 recruits joined the British army, being the world's record for a single day's enlistments. August 17 Japan sent an ultimatum to the Kaiser, giving Germany one week to withdraw from the Far East. It is officially announced in London that Japan's move against Germany in the Far East was taken with the full knowledge and approval of the British Government, following assurances by Japan that she would abide by the letter of the Anglo-Japanese agreement and that she contemplated no hostile action against any of the German possessions on the Pacific except Kiaochow. Thus the possibility of a Japanese move toward Samoa or other quarters in which the interests of the United States would be affected is eliminated. A copy of the official announcement by the British Government that the operations of Japan will be confined to the China Sea and the mainland of China was handed to Secretary of State Bryan by the Japanese Ambassador in Washington August 18. It had a noticeable effect in relieving uneasiness in official circles. One significant fact in the statement by Japan was that the Tokio Government will insist on being made a party to any negotiations between Germany and China for the return of Kiao-chow to China. The result of five days' fighting between French and German troops in the Vosges Mountains appeared generally favorable to France and the French troops were nearing Strassburg August 18. On that date it was reported that the Germans had retreated from Saarburg. August 18 the Belgian authorities removed the capital to Antwerp, which is protected by forts considered impregnable. Great devastation has been inflicted on towns first occupied and then evacuated by German troops, which occupied Brussels August 20. The two German cruisers in the Mediterranean, the Goeben and Breslau, have been sold to Turkey. All the powers resent this, and the Allies have notified the Ottoman Government that the German officers and crews must be repatriated. These vessels were trapped by Gibraltar and the Dardanelles. It was stated August 17 that Turkish troops were crossing Bulgarian territory to attack Greece. Russia has notified Turkey that if the Black Sea Fleet is not given permission to go through the Dardanelles it will go through without. The Czar of Russia has issued a proclamation offering autonomy to Poland and it is reported that Jews in Russia will soon be given civil and political rights. Reports from Servia August 18 announced that an Austrian army which tried to penetrate the Sabatz Mountaines was routed and 15,000 men killed, wounded or captured. A strong Servian detachment supported by machine guns trapped the Austrians in a mountain valley. The Austrians were unable to form a battle line and retreated in confusion, leaving fourteen cannon. The Austrian army corps withdrawn from the Servian border have assumed the offensive against Russia, and Austrian cavalry has penetrated Russia. A dispatch from Port Said August 18 stated that through traffic in the Suez Canal has practically ceased. The port is crammed with ships of all nations, the captains of which are afraid to proceed on their journeys. Besides, there is a colossal fleet of German merchantmen under seizure that have been deprived of essential pieces of their engines, likewise their wireless installations. The whole of Germany's seaborne commerce with Australia, Asia and East Africa is absolutely paralyzed, and the only vessels passing through the canal are those flying the Italian flag. These are besieged by hordes of foreigners anxious to get away from Egypt, among whom were many German and Austrian officers, who have been arrested by British authorities while attempting, under disguise, to get away.

DEATH OF POPE PIUS X.—August 20 the Pope succumbed to a bronchial attack. Giuseppe Melchiore Sarto was born June 2, 1835, in the small hamlet of Riese, in the province and diocese of Treviso, Venice. His father was a postman, and his early life was among the humble. He was ordained in 1858, became Archbishop of Salzano in 1867, and Bishop of Mantua in 1884; made Cardinal and Patriarch of Venice in 1893, and became Pope in 1903. The last message given out by Pius X was an earnest appeal to pray for peace, and the anxiety over the great war is believed to have hastened his end.

NEW YORK STATE NEWS.

HAY DEALERS CONVENE.—The ninth annual convention of the State Hay Dealers' Association was held in Syracuse last week, with about 300 delegates in attendance. The European war was a dominating subject of discussion and there was a general belief that it would bring a higher level of values for the hay crop although the problem of exporting the crop was a pressing one. Although the crop is a good one and would not denote high prices, yet hay is now worth $12 to $15 per ton despite the abundant yield. Commissioner Huson, in an address before the convention, called attention to the fact that the hay crop in this State average in value more than $75,000,000 per year and constitutes more than 30 per cent. of the value of our farm crops. Among other speakers were Prof. Clyde H. Myers of the State Agricultural College, H. C. Jones of Baltimore and Jacob Ginder of Schenectady.

FINE CATTLE FOR STATE FAIR. There will be 80 exhibitors of cattle this year as against 50 last year and the housing capacity of 1,080 will be exhausted, and more room needed. Two or three stock farms will enter over 50 head each. This year beef animals from the Middle West will be much in evidence.

GRANGE PICNIC.—When every Grange county in the State has its Grange picnic and many subordinate Granges have field days on their own account, no one can be selected for special mention. The Grange day gathering at Chautauqua is one of the most notable and Jefferson County is always wide-awake to the picnic issue. This year more than 1,000 were present at Watertown on the annual Grange field day. State Master Vary, State Secretary Giles and Senator Elon R. Brown were the speakers.

AMENIA FIELD DAY.—This "play festival," as it has been styled, which has attracted much attention, was attended by about 8,000 persons this year on Saturday, Aug. 15. Among the speakers were Prof. J. E. Spingarn, who is the originator of the field day idea as applied to this particular undertaking; Hon. Hamilton Fish, Jr.; Congressman Edmund Platt of Poughkeepsie, Commissioner C. J. Huson, Gilbert M. Tucker and Mrs. Raymond Brown. Athletic events followed the speaking.

KEEPING FOOD PRICES DOWN.—Attorney General Carmody is behind a sweeping prosecution of all combines that tend to boost food prices without cause. Ample power is given him by statute to prosecute all illegal combinations working to this end. For six months an investigation has been going on in his department, in conjunction with the State Department of Health and Federal authorities, and a mass of evidence has been collected bearing directly on the present situation. Gov. Glynn has also directed the State Department of Agriculture "to exert every effort to prevent the abnormal condition of the world's markets from working unnecessary hardships on the consumers of New York." The Commissioner of Weights and Measures of New York City is also carrying on an investigation with the same end in view and it has had a good effect on prices. Acting Mayor McAneny has said that he would favor the plan to have the city appropriate money without delay to establish municipal markets.

CONFERENCE AT KENOTIN FARM.—This farm is owned by Mr. F. W. Sessions of Utica and is a model dairy farm. It was here that an important conference was held last week which was attended by about 175 interested people. Short talks were made by Deputy Commissioner Harry B. Winters of Albany, G. W. Bush of the Oneida County Farm Bureau and Dr. T. Wood Clarke of the committee on milk supply of the Municipal League. The spirit of the speeches was to arouse the public to the pressing need for milk that is known to be pure, by test. Mr. Sessions produces milk that is 100 per cent. pure by analysis made twice a month. It does not fall below that standard. The secret lies in milking from properly cared for cows into covered pails, the rapid straining of milk through cheese cloth and quick cooling to a low temperature. At the conference Mr. Sessions offered his guests milk to drink which, he said, was "four days old." It was as fresh apparently, as when first drawn, and it is said it could be shipped to California and back without spoiling. It is free from bacteria and will keep its purity for a week. J. W. D.

ARMCO—Rust-Resisting Iron

Its Discovery Confirms What the Ancients Guessed

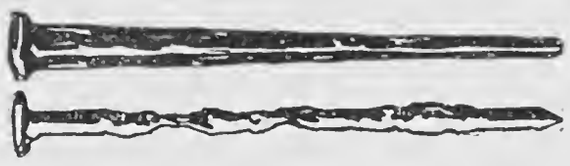
THE rust-resisting qualities of pure iron were ignored for ages. The ancients made pure iron, though they may not have known the great value of it. Thousands of years ago men made tools out of iron. Possibly they used steel, too. But, if they did, the articles have long since gone up in rust. Rust is the great enemy of steel. For many uses where great strength or hardness is required, steel is necessary—but it rusts rapidly. The very things that are mixed into iron to make it steel cause it to crumble away in rust.

The more nearly iron is free from all impurities the greater its rust-resisting power. The iron that has lasted since the Pyramids were built is mighty free from impurities. The pure iron in the sacred pillar at Delhi, India, has stood through twenty-eight centuries of weather.

America furnishes her own instances of the long life of iron. In 1910 an old iron link suspension bridge was torn down at Newburyport, Mass. After a hundred years of exposure the rust on those links was scarcely as thick as a coat of varnish.

But you've seen proof on your own farm of the superiority of iron over steel.

Look at these two nails



The iron nail has seen thirty-eight years of service while the round steel nail is gone with only eleven years' use. You have seen many such comparisons. Did you ever wonder why there is such a difference in their rust-resisting qualities?

We did. And we set to work to find out why most metals rusted, though some did not.

The iron that has lasted we found to be almost pure. But pure iron is hard to make. You add more impurities to already impure iron to make steel. Impurities must be taken out to make pure iron. It never had been done on a profitable commercial basis. The links at Newburyport were from iron purified by crude methods and wrought by hand.

Ideal iron commercialized

Iron made by hand couldn't compete with steel. We knew that. But we were determined to make pure iron. We have done so. And we are continually making more and more. We have commercialized an ideal.

Pure iron is Armco—American Ingot Iron

That is the name of our product. When we first began to make pure iron we called it American Ingot Iron. That name is still widely used. Remember, Armco and American Ingot Iron are the same, mean the same, pure iron. Armco is the purest iron commercially manufactured in the world. Armco Iron is purer in content and more uniform in texture than the iron pillar at Delhi, the links at Newburyport, or the iron nails that served your fathers so well.

Armco Iron is guaranteed to be 99 84/100% pure iron

Not a batch of molten iron leaves our furnaces until chemical tests in our laboratory show 99 84/100% — or higher — purity. American Ingot Iron may be higher than 99 84/100% pure. It is never lower. We guarantee that.

Pure iron roofs last seventy years

You've heard of the good tin roofs that were laid a hundred years ago. Did you know that the core, the sheets that were tinned, was of pure iron? And today you can get the same grade roof—or higher—made of American Ingot Iron.

You can now have pure iron shingles, iron sheet roofings and sidings, metal lath, iron gutters, flashings and drain pipes that will last as long as your buildings.

There's a second reason—in addition to its pure iron base—why American Ingot Iron roofing is better than ordinary sheet metal. The galvanizing on Armco roofs is better.

Steel dissolves in galvanizing much faster than Armco Iron

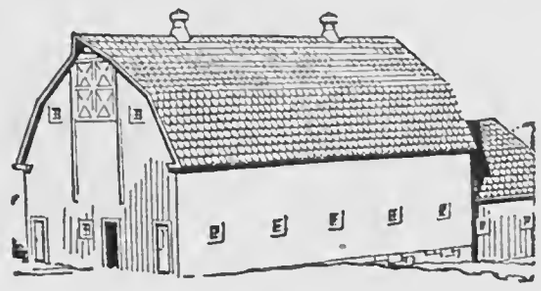
When a sheet of steel is dipped in the galvanizer it begins instantly to dissolve. American Ingot Iron, because of its purity, shows practically no dissolution when the zinc galvanizing is applied. Therefore the zinc coating is purer and will last many times as long as the galvanizing on ordinary, impure material.

Armco Old Style Terne plate, with its Armco Iron base, is made by the Morewood hand dipped, old style, pure palm oil process. Absolutely no acids are used in the process. The coating is pure lead and tin—two almost indestructible metals.

There are seven operations. No higher grade metal roofing is made in the whole world. Each shingle is stamped Armco

Thousands of farmers demand iron roofing

Write for booklet on Armco Iron Roofing

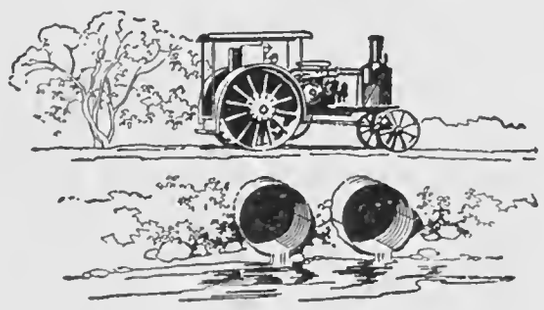


A canvass of farmers showed us the way iron roofing is taking high place among roofings. Out of 8000 farmers using metal roofings 5000 had bought iron. Your metal roof should be Armco—the only 99 84/100% pure iron roof. Every sheet, flat or corrugated, bears the Armco trade mark. Take no other. Write today for Armco Roofing Booklet.

Who pays your road tax?

That's just a suggestive question—a suggestion that you have some right to say what that road tax is spent for. If it's culverts your roads need, here are a few reasons why you should urge your supervisor to install Armco—American Ingot Iron Corrugated Culverts. Their durability is insured by the purity of Armco Iron —its rust-resisting power—and the quality of the galvanizing.

The deep corrugations give strength to

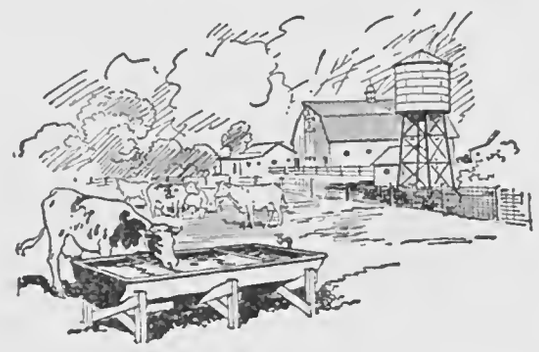


carry the heaviest loads and deepest fills. Armco Culverts have an enormous resistance to external strains. Armco American Ingot Iron Culverts are quickest to install. And because no machinery nor cementing is necessary, they are cheapest to install.

If you need a culvert on your farm we will gladly tell you where you can secure an Armco American Ingot Iron of desired size.

Water tanks need not rust

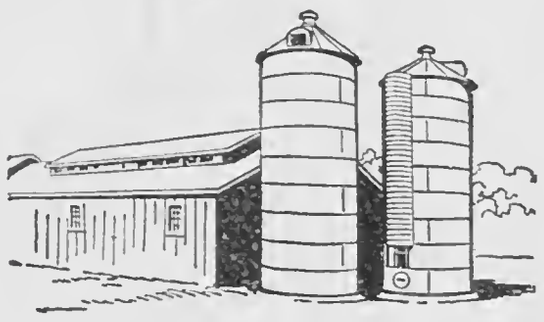
Write for names of tank manufacturers using American Ingot Iron



You can secure storage tanks, pressure tanks or stock watering tanks of Armco Iron. A tank like the one shown here will last as long as its heavy supports of steel. These supports are made of steel so that they will carry the heavy weight. The tank itself should be Armco Iron.

Silos are built of Armco Iron

Write for names of silo manufacturers who use Armco Iron



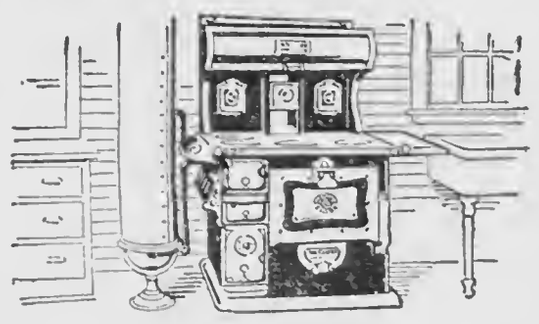
The buildings on a dairy farm can well be made of Armco Iron. The roof on the cow stable, the ventilators, the window frames, and finally the silo can be built of rust-resisting, almost everlasting Armco Iron.

Handsome and durable fencing—Armco Iron Woven Wire Fencing—is made by the Page Woven Wire Fence Company.

Things under shelter rust quickly, too

Write for names of stoves and ranges made from Armco Iron

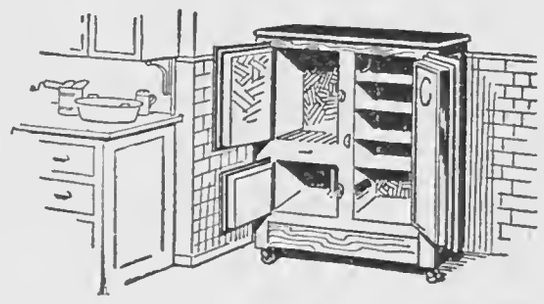
There's the gasoline stove, the water heater, the kitchen range. They rapidly



rust out unless made of pure iron. Alternate heating and cooling hurry the process. The gases of combustion quickly eat into low grade iron and ordinary sheet steel. But Armco Iron resists such attacks. Enthusiastic stove manufacturers, using Armco Iron, guarantee against rust for twenty-five years.

Ice box and furnace can be of Armco Iron

Write for list of furnace and refrigerator manufacturers using American Ingot Iron



Your ice box, especially if it is enameled, should have a base of Armco Iron. Certain manufacturers use it for all enameling purposes. Armco takes a smoother coat, is free from pin holes and bubbles, and—is slow to rust.

And if there's anything that should stand against rust it's a furnace. You can have a furnace with its vital parts made of Armco Iron. We'll tell you the furnace manufacturers who use Armco Iron if your dealer doesn't show you the Armco trade mark on the furnace he tried to sell you.

AMERICAN ARMCO INGOT IRON

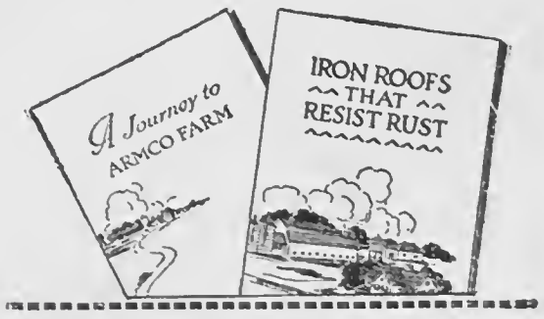
You'll find this Armco triangle in blue on all American Ingot Iron sheet roofing, culverts, silos and water tanks. It is your guarantee of iron—rust-resisting iron—99 84/100% pure.

When you see it you are safe in buying the article as being of pure iron. If it isn't marked Armco, ask for proof that the iron used is Armco—the pure iron.

Write for free copy of these illustrated Books!

Every page contains interesting news about one of the most important subjects before you today. By words and by picture, these books tell you the big money-saving facts—the real truth about sheet metal, why you should buy Armco, pure iron.

Fill in your name and address, tell us for what use you are interested in sheet metal, and we will help you.



The American Rolling Mill Company
Box 523 Middletown, Ohio

I am especially interested in Armco Iron for

.....

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Name .....

Address .....

THE AMERICAN ROLLING MILL CO., MIDDLETOWN OHIO

Licensed Manufacturers under Patents granted International Metal Products Company

:: Hope Farm ::

FOR the benefit of a number of your readers, tell us briefly what were the causes of the war in Europe? It is hard to get it from the daily papers.

INQUIRER.

I wish I knew. I have tried to read history with care, and the history of Germany and France are specially interesting. Yet it seems difficult for Americans really to understand the point of view of most Europeans. The essay on Germany by Tacitus, written over 1800 years ago, shows that even the Romans who conquered the world had a mighty respect for this slow, methodical, obstinate and unimaginative people. On the other hand, books like Watson's "Story of France," make it clear that the French have ever been an emotional, imaginative people. There is evidence of this in the way they have kept alive the feeling regarding Alsace-Lorraine, the two provinces which they lost 43 years ago in the former war. In some way the French people have been able to keep alive the poetry and national sorrow over the loss of these provinces in spite of all the years. Thus, it will be as hard for the busy American to understand the troubles of Europe as it was for the European to understand our politics or public questions. During our Civil War there were Englishmen, thought to be well informed, who insisted that it was a fight between North and South America. They could not understand the idea of a single nation being split apart. I have talked with a number of educated Europeans and asked them *why* the nations are fighting. Many reasons are given as follows:

These are what may be called basic or foundation causes for wars. Our Civil War, for example, was fought over the slavery question, which meant the industrial competition between free and slave labor. The war in Mexico is at the bottom a struggle over the land question.

"THE YELLOW PERIL."—It is said that the Kaiser and a large part of the German people really believe that Europe is in danger of being overrun by Asiatics led by Russia. Personally I know of many worthy men who fully believe this danger is a real one. They claim that the Bible shows this danger. They say our present white races are failing in both physical and moral strength, and unless some powerful man or nation can arise to give battle, the people of Asia will pour into Europe and spread over this country, and dominate civilization for centuries. The Kaiser, according to this theory, believes that he is the man, and that Germany is the nation to prevent this "Yellow Peril."

A RELIGIOUS WAR.—Several Europeans tell me that at heart this war is essentially a conflict over the Greek Church. The people who live in the mountains of Southwestern Europe are dreamers, as all mountaineers are. The Greeks, as a nation, have little except dreams of a glorious past. These people, with the Russians to a less extent, dream of the time when the Greek Church will once more have its headquarters at Constantinople which Mahomet captured in 1453. The ordinary personal dream is made of very flimsy stuff, but when a great religious dream enters the hearts of millions of very stubborn people there is no such thing as changing it. But think how this war has mixed up the nations. There is Protestant Germany tied up to Austria. On the other side are Protestant England, Catholic France and Belgium, Greek Russia and Servia and pagan Japan.

A GRAB FOR TERRITORY.—Another reason given for the war is the German need of colonies and a new outlet to the ocean. Germany has developed wonderfully as a manufacturing nation. Their ideas of development are too large for her territory. She needs new markets and new trade, and therefore must control the sea. She needs colonies abroad, such as England and France have established, and in order to carry out her schemes must have an outlet nearer to the Atlantic Ocean and also on the Mediterranean Sea. Belgium and a slice at the south of France would doubtless suit her well. This would give her a chance at England, a direct shipping port like Antwerp in Belgium, and reduce France to the condition of a second-class nation. On the other hand, England sees how her prosperity and national life would be menaced if Germany reached the North Sea. France realizes that she is no match for Germany alone, but reasons that her only chance of gaining back her lost territory is to unite with England and Russia, when the time is ripe.

SOLDIER OR SOCIALIST.—Napoleon gave Europe a century to become as he put it, "all Cossack or all Republican." What he meant to say was that Russia was the type of brutal autocratic government, and that there could be finally no compromise between that and radical republicanism. It has got to be the autocrat or a self-governed people. Think what a strange mocking of fate it is to now find Russia on the side of the forces which stand against what Napoleon called the "Cossack." For the past few years all Europe has been in a ferment over what we may call the "manhood" question. For many centuries the woman who gave birth to a son was taught to rejoice because she had given a man child to the king to fight or be killed as a soldier. The woman came to think that was practically all she was in the world for! What I call the "manhood" issue is the idea which has slowly grown, from the mere thought which frightened the thinker, that plain, common men and women have higher duties to perform than merely to produce food and raise children to be fed to the cannon and the sword. It is a part of Napoleon's prophesy slowly worked out. It has been helped by the millions of Europeans who have come to this country to work or find homes. Some of these take the money they have earned back to the old country. Others send for their relatives. I know of one big American farm where practically all the workmen come from a village near the Danube River. During the war between Greece and Turkey a shipload of American tourists went through Athens. A regiment of Greek soldiers were lined up to salute them. As the Americans passed by those "Greeks" called out in excellent English

"How is America?"

"What news from Broadway?"

"Will be back soon!"

They were "reservists" who were working in America when the war broke out, and were called home to serve in the army. This mixing-up process has been going on all over Europe, and it is like the leaven in the loaf. Men began to see that they were not born to be machines or cogs in a great, cruel military system, but that they have certain human rights. They are still kept down with an iron hand, and the trouble is that for centuries they have been bred and trained to do what they are told, and never think. It is part of an autocratic government from the ruling of a great nation down to the petty political bossing for the masses to work and for the ruler to do their thinking for them. When after years of such training an, breeding the common people really try to do their own thinking, of course it is clumsy and often childish or narrow. It means growth, however, and beneath the iron rule of the monarchies, Europe is growing into self-government.

THE WAR.—All these things and many more have helped start this war. For years they have all been simmering away, but not until a half-crazy student shot down the Austrian prince and his wife did they all flare up together. That tragedy fanned the religious feeling into a flame. Austria was forced by this excitement to make demands on Servia. Both Germany and Austria are honeycombed with intellectual revolt—that is what I have called the "manhood" issue—a fairer chance for the common people. If you will read that old essay in Germany by Tacitus, you will see that the German people have always been noted for their strong, blind, unwavering devotion for the "Fatherland." A war, or an appeal to patriotism, is the last resort of a strong military government, and both Austria and Germany had come to the point where such an appeal was needed to stop people from thinking for themselves. The moment the flame was started by that student's pistol in Servia it found Europe like a tinder-box all ready for a blaze. France saw her only chance of regaining her lost provinces. Belgium saw her national integrity going. England saw her sea power menaced and treaty obligations in danger. Russia saw her chance to gain territory and keep her subjects satisfied, the Balkan States and Greece saw their chance to strike at an old enemy, and even Japan in the Far East, saw that she might, perhaps, put England under obligation to her. So all of a sudden the fighting began. They had all prepared for it, for they knew it was coming. It had to come, as we see when we look over the things which have led up to it. Now it will probably be fought out to a finish, and not even the wisest student of history will attempt to say what that finish will be. The questions involved do not touch this country except that a good proportion of our people come from Europe and have brought some of their race feelings and national devotion with them. We should keep out of it.

FARM PROSPECTS.—While Europe has been plunged into war, the American farmer is engaged in the peaceful occupation of harvesting his earlier crops and cleaning up his late ones. This is not always as peaceful as the poet would have us believe. Bug and blight, drought or wet, and may put up a good battle. The middle of August finds us picking the Carman peaches and the early apples, beginning to seed the cover crops, potting strawberry plants and thinning the beets. There is plenty of work. There is a fair peach crop. The Carmans are brick red on the sunny side, and of fine flavor. There is a good local demand for them. The early apples have been slow of sale. No sale at all for the sweets. Our potato crop is the best we have ever had, and the corn looks well. The late apples promise a great crop, but we all understand that they must be handled with great care this year to get anything like a fair price. On the whole, our season promises to be a good one.

H. W. C.

Cut a clean smooth thread on that old battered bolt in 2 minutes

Don't lose the time to go to the blacksmith shop. Don't keep your team and hired hands idle. Don't let your work suffer.

Think how many bolts there are in your farm machinery and auto. Think how easy a thread gets battered-up so the nut won't go on.

Be ready for emergencies. Be ready to save time and money by getting at once a set of

Little Giant

Hexagon Dies

This set takes care of any size bolt from ¼" to ¾". All you need is a monkey wrench or pliers to turn the die. Two minutes does the trick and one thread recut may save you twice the price of the set.

The man who makes money at the end of the year is the man with the foresight. Get a set of Little Giant Hexagon Dies for your tool bench at once.

Send $5 for set of 8 dies, ¼"—5/16"—⅜"—7/16"—½"—9/16"—⅝"—¾".

Sent prepaid parcels post. Your money refunded if in any way unsatisfactory.

GREENFIELD TAP & DIE CORP.

WELLS BROTHERS COMPANY DIV.

Stores—NEW YORK, 107 Lafayette St. GREENFIELD, MASS. CHICAGO, 13 So. Clinton St.

DEALERS—You should carry Little Giant Hexagon Dies—Write for our liberal trade proposition.

NEW-WAY AUTOMOBILE SCHOOL

REGULAR FALL and WINTER COURSES OPEN SEPTEMBER 1st. A third more cars used this year than last. A third more men needed in all lines of the automobile business. The same will be true next year. Now is the time to prepare for next Spring's demand for chauffeurs, truck-drivers, salesmen, garage managers, repairmen, etc. Write for details.

1016 Broadway, Brooklyn, N. Y.

C. D. ROSE Farm Agency sells farms, send for new bargain list.
STATE & WARREN STS., TRENTON, N. J. ESTABLISHED 1908

FERTILE FARMS—BEAUTIFUL PERKIOMEN VALLEY; fruit, truck, dairy. Catalog. W. M. STEVENS, Perkasie, Pa.

WAR IN EUROPE AGENTS WANTED

GREATEST SELLING BOOK OF GENERATION. "Modern Europe and the Causes of the Great War." Thrilling illustrations Low price Best terms. Extraordinary money-making opportunity. Splendid sample book free. UNIVERSAL HOUSE, 402 Winston Bldg, Philadelphia

HANDY BINDER Just the thing for preserving files of THE RURAL NEW YORKER. Durable and cheap. Sent postpaid for 25 cents.
The Rural New-Yorker, 333 West 30th St., N. Y.

Quick Delivery Over Long Distances

80-Mile Daily Runs Prove Value of *Autocar* to Wyncote Concern

LITTLE conception of the immense area the *Autocar* will cover is held by the average man who sticks to old methods of delivery and hauling.

A first-class pair of horses, if the roads are good, can travel 20 to 30 miles in a day with a loaded wagon, but the next day has to be laid off to rest up. An *Autocar* covers 50 miles a day without exerting itself and fully two-thirds of our customers run their cars 70 to 80 miles day by day and 90 to 100 miles in emergencies.

Joseph Heacock & Company, of Wyncote, Pa., recently gave us the following information about the work of their *Autocar:*

" We have greenhouses at Wyncote and a dairy and rose-growing industry at Roelofs, Pa. Every day, both week days and Sundays, our *Autocar* starts out about 5 o'clock in the morning for Roelofs and takes on a load of milk which it carries to Philadelphia. Then it comes back to Wyncote, arriving about noon, completing a route of 60 miles. In the afternoon, the car loads up with plants for Philadelphia or elsewhere and averages 20 to 30 miles on its afternoon trips, thus traveling in all 80 to 90 miles a day.

"Formerly, we carried our milk from Roelofs to Philadelphia by train. The *Autocar* service is a great improvement over this as the milk requires less handling and we can depend on its arriving more promptly."

The Autocar

"Used in Every Line of Business"

There are more than 1,700 *Autocar* owners many of them possessing from 10 to 270 *Autocars* each. Write today for the new *Autocar* book and information concerning the *Autocar* on the farm. Address Dep't R

THE AUTOCAR COMPANY, Ardmore, Pa.

Established 1897 *Motor Delivery Car Specialists*

:: Ruralisms ::

Pot Bulbs in the House.

WE are well supplied with outdoor flowers now; French and African marigolds, Calendulas, Zinnias, Phlox and Dahlias are plentiful enough for lavish cutting, but it is time to prepare for the lean months when outside flowers are gone. We find nothing more satisfactory for Winter flowers than bulbs in pots, which provide us with bloom from the end of November until the first Siberian squills and Glory-of-the-snow appear out of doors. The cost is not large, the most expensive bulbs we buy being a few extra choice hyacinths, costing in Holland from 10 to 18 cents each.

THE SOIL for all forcing bulbs should be rich loam. Fresh manure should never be used; a little bone meal may be added to advantage. If the soil is a stiff clay some sand and leaf mold should be worked in. Abundant drainage should be given in the form of broken crocks, stones or bits of charcoal in the bottom of the pots. When the soil is put in the pots it must be shaken down, but not packed hard, or the roots will often raise the bulb out of the pot. After the potting is finished the soil should be a full half inch below the brim of the pot, so as to allow room for watering. Plant the bulb just deep enough so that its top will not show. After potting the bulbs are watered moderately and then stored away to make roots in a cool dark place. An unheated cellar is good; so is a pit or cold frame, or even a dark woodshed, so long as they do not freeze, and are not allowed to dry out. A suitable temperature range is 40 degrees for roots, 50 for foliage, and 60 degrees for developing bloom.

STARTING GROWTH.—When freezing weather begins the bulbs are removed from their cold starting place to the house cellar, where they remain in the dark, watered at intervals, with some sacking thrown over them to prevent rapid drying out. They are filling their pots with strong roots, but by and by top growth begins, and they are then brought to the light, in a cool room, and grown on until the flower spikes push out, when they are brought into the living room. Sometimes the flower spike is very slow in making height, and seems disposed to open its flowers while still very short. This can be remedied by making a tube of stiff paper and setting over the plant for a few days; it naturally draws up to reach the light, and a day or two of this treatment makes a surprising change in growth. One may begin potting bulbs by the middle of September, thus providing for a succession, especially in Roman hyacinths, but the majority are potted from the first to the middle of October.

ROMAN HYACINTHS.—First to bloom, and quite indispensable, are the Roman hyacinths; these are small, but usually produce several spikes to the bulb, and we expect to have them in flower at Thanksgiving. These are usually set one bulb in a four-inch pot, but are also very attractive when several are set in a flat bulb pan. If a number are planted they can be brought on by degrees, holding some back in the lower temperature. "Romans" may be purchased in three colors, blue, rose and white, but we only grow the white.

DUTCH HYACINTHS.—We advise first size bulbs of these, for the big specimen spikes are worth the small extra price. The second size are quite satisfactory for bedding out. Among the earliest sorts are L'Innocence, white, General Pelissier, dark red, Lady Derby, rose, and Schotel, pale blue. Other excellent single sorts are Czar Peter, light blue, Lord Derby, light blue, La Grandesse, the finest white, Charles Dickens, dark purplish blue, Cardinal Wiseman, deep rose, Lord Macaulay, rose and flesh stripes, King of the Yellows, pure yellow. The double hyacinths are very fine, but under house conditions not quite as satisfactory as the singles, though we get some very fine spikes. Garrick, deep lilac blue, Lord Nelson, pale blue, very fine, La Tour d'Auvergne, pure white, very early, Leo, pale carmine, Bloksberg, pale blue, and Othello, very dark blue, are all good double varieties. There are also miniature Dutch hyacinths, strong and sturdy, but making spikes only about six or seven inches high; they are very attractive planted in pans.

TULIPS.—We do not expect our tulips to blooom till after the holidays; the earliest of all are Duc Van Thol and Pottebakker which give us several colors, and are of great value to florists, and for bedding, because of their earliness and the ease with which they are forced. But for use in the house we prefer some others, whose flowers we like better. Among these in single sorts are Cottage Maid, pink and white, one of the most satisfactory for commercial forcing; Bacchus, deep red, and Artis, bright scarlet; Joost von Vondel, deep crimson penciled white; Proserpine, deep rose; Rose Grisdelin, dwarf, rose and white; Vermilion Brilliant, bright scarlet; Belle Alliance, scarlet; Cramoisi Brilliant, very fine, vivid red; Couleur Cardinal, orange scarlet shading outside to purple, late; Chrysolora, yellow, very good. Double tulips that force well are Couronne d' Or, yellow; Gloria Solis, brown and yellow; Murillo, rose and white very fine; Tournesol, red and yellow; Salvator Rosa, dark rose and white.

PARROT OR DRAGON TULIPS.— These always excite admiration, because of their crimped and slashed petals, and strangely streaked and flamed coloring. They are admirable for house forcing, because they must be brought out slowly, without strong heat. They come into bloom late. The following varieties have given us good results Café Brun, deep yellow feathered with red; Lutea Major, yellow; Markgraaf von Baden, golden orange striped scarlet, very large.

OTHER FORCING BULBS.—Many varieties of Narcissus are excellent for pot culture in the house. The Chinese Sacred lily is usually grown in water, but it does very well in soil, while the familiar Paper White so much forced commercially is very easily grown. Van Sion is the standard yellow forcing daffodil but most of the trumpet sorts are good. The little Crocuses are charming set in a flat pan, but they must not be hurried in any way. Allium Neapolitanum, though a near relation of the savory onion, is excellent for forcing. Freesias are very easily flowered in the house. The whole theory of bulb forcing is to get a strong growth of roots before the top starts, and this makes their culture especially easy and satisfactory for the amateur.

E. T. R.

BOOKS WORTH READING

How Crops Grow, Johnson..... 1.50
Celery Culture, Beattie..... .50
Greenhouse Construction, Taft.... 1.50

The Rural New-Yorker, 333 W. 30th St., N. Y.

No War Prices

On Goodyear Tires. All advances—due to doubled cost of rubber—were withdrawn on August 19th. This applies to dealers and consumers.

We have secured from abroad sufficient rubber at former prices to warrant this announcement. Goodyear prices are now everywhere the same as they were before the war.

Sturdier Tires

In These Four Ways Excelling All the Rest

The tires which rule in Tiredom now are Goodyear tires—by long odds.

After men have used four millions of them, they lead in prestige and in sales.

The only reason is that motorists—hundreds of thousands of them—have proved these the sturdiest tires. They use them and tell other men to use them.

Where They Excel

Back of that super-service lie four exclusive features. They are these:

Our No-Rim-Cut feature. Time has proved it the only satisfactory way to completely wipe out rim-cutting.

Our "On-Air" cure. This exclusive process costs us $1,500 daily, but it ends the chief cause of blow-outs.

Our rubber rivets. By a patent method, hundreds of these are formed in each tire to combat tread separation. They reduce this risk sixty per cent.

All-Weather treads—the matchless anti-skids. They are tough, double-thick and enduring. Resistless on wet roads with their deep, sharp grips; yet flat and smooth, so they run like a plain tread.

Upper Class Tires How to Get Them

These things make Goodyears the upper class tires. No other maker employs them. And no other method combats one of these troubles in an equally efficient way.

These things mean safety, sturdiness and strength. They mean maximum mileage and minimum trouble.

When one tire gives them—and others don't—you should get the tire that does.

Any dealer will supply you if you say you want this tire. He will sell it to you at a price impossible were it not for our mammoth output.

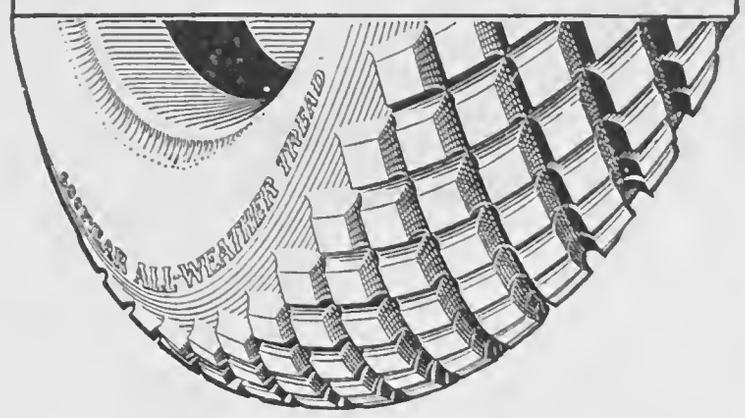
It is up to you. Note again these extra features. Then ask some Goodyear user what it means to have such tires.

Find out why Goodyear leads.

GOODYEAR
AKRON, OHIO

No-Rim-Cut Tires

With All-Weather Treads or Smooth



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(1852)

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York
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WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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Advertising rates, 75 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

OUR advice to farmers north of New York City has been to sow Hairy vetch before September 1. We now have letters from people as far north as Syracuse asking if it will be safe to seed the vetch as late as October? No, we would not advise it. Rye alone would be safer.

*

IN parts of New York peddlers are now going about with bulk shipment apples. The wagons are built high with side boards, and the apples dumped in like a farmer going to cider mill. This fruit was shipped here in box cars and sold for what it would bring. It is peddled at a low price so that thousands are eating apples who otherwise would not touch them. This works both ways. It hurts the sale of barreled stock while the rush lasts, but it is the greatest advertisement for apple eating that could be thought of.

*

SOME of the daily papers have begun a systematic campaign in praise of the express companies and their work. They make a special point of the free collection and delivery service. They must remember that these city conditions are not found in the country. About one-half of the people in this country cannot have any such express service. They must go to the town or the railroad station to send or receive packages. The parcel post delivery at the farm house does save many a long trip during the year. The city man must remember that "there are others." The very convenience of his express service has been forced by the competition of parcel post.

*

THE study of this potash situation will lead to increased uses of lime. The scientists do not fully agree as to the value of lime in making soil potash available, but it is true that the use of lime will enable many crops to make a more vigorous growth. Therefore, we think more lime than ever before will be used. Let us understand that "ground limestone" is the raw lime rock as taken from the quarry, crushed or ground to a powder. "Slaked" lime is the lime rock first burned and then "slaked" by the addition of water. This water causes the burnt or lump lime to crumble into powder. On the great majority of our Eastern soils our advice would be to use the slaked lime rather than the ground limestone. In some cases lime can be bought in one form cheaper than in another. We should figure to buy the cheapest pound of lime and remember that two pounds of ground limestone must be used to obtain the effect of one pound of burned lime.

*

AT this time it seems to be without question that the war in Europe will prevent shipments of potash from Germany. At present there is no other source of potash for the greater proportion of our fertilizers. Small quantities of wood ashes and nitrate of potash are used, but with the German supply cut off our manufacturers cannot make what has been considered in the past a "complete fertilizer." There is, of course, a small quantity of potash now in the country, but naturally the supplies for next year's crop would have been shipped here during the Fall and Winter, and are now held up. There is no use considering the potash deposits in this country. They are mostly in the form of rocks and minerals, and so unavailable that the expense of preparing them for plant food will put them out of reach. Certain kinds of seaweed, particularly kelp on the Pacific Coast, will provide some potash, and, of course, all ashes from wood fuel should be saved. In general, however, it is a case of using a small quantity of potash or none at all, and trying to utilize the stores of this element now in the soil. The first of a series of articles discussing this question is found on page 1047. Dr. Lipman outlines some of the things which may be done to make the soil give up its potash more freely. What he says is a new argument for the cover crop and for lime. Clover, vetch, rye, turnips or any of the others should be seeded on land that would otherwise be bare through the Fall. All of these crops will take up more or less potash. Turnips and rape in particular will utilize forms of potash which some other crops could not use. This will all go back to the soil when these cover crops are plowed under in the Spring. Then when lime is used this organic matter will decay rapidly and the lime will also have an effect upon the soil. The first lesson which this threatened potash "famine" teaches us is to make sure of our cover crops this Fall, as the most effective way of forcing our soils to give back some of the potash which we have applied during the past years. We have no fear but that this potash problem will work itself out. There are millions of tons of granite rocks in New England and elsewhere which contain potash. Necessity may drive some of our inventors and chemists to the point of discovering a process by means of which this crude potash may be made available at a reasonable price. We shall give a thorough study of the situation from all sides. But be sure of one thing! The fakes and the half-fakes will probably seize this opportunity for offering "potash substitutes" or "new forms of potash." We warn our readers promptly and earnestly to pay no attention to such offers. Do not buy any form of potash until the chemists at our experiment stations write their O. K. on it.

*

PRESIDENT WILSON gives the American people wise and timely advice when he urges them to avoid passionate discussion of the European war, or of partisanship in taking sides with one nation or another:

> My thought is of America. I am speaking, I feel sure, the earnest wish and purpose of every thoughtful American that this great country of ours, which is, of course, the first in our thoughts and in our hearts, should show herself in this time of peculiar trial a nation fit beyond others to exhibit the fine poise of undisturbed judgment, the dignity of self-control, the efficiency of dispassionate action; a nation that neither sits in judgment upon others nor is disturbed in her own counsels and which keeps herself fit and free to do what is honest and disinterested and truly serviceable for the peace of the world. Shall we not resolve to put upon ourselves the restraints which will bring to our people the happiness and the great and lasting influence for peace we covet for them.

THE R. N.-Y. most heartily says *Amen!* We shall take this advice just as President Wilson gives it and we hope all our readers will do the same. Let us understand as well as we can the causes which have led to this war, and let us have as accurate news as possible regarding its progress. Beyond that we have confidence in the ability of the Administration to handle any situation in which our National interests are involved. We shall spend no time trying to tell President Wilson what to do. He knows what is necessary and he will do his duty. Nor do we intend to make the problems of the Administration harder by stirring up race prejudices or hatreds. This is a time for self-restraint. We all have our individual opinions or convictions, but the issues or conditions which provoked this war are essentially European and do not concern us directly. Let this country attend strictly to its own business. In this great crisis that business is to make all Europe understood that we stand fairly and impartially for peace and honorable dealing, and also to do our share toward feeding and clothing the world. In all the history of the world no nation ever had a better opportunity to gain, both moral and material advantage, than is now offered America. Let us all do our share to rise above petty hatreds or political prejudices, and make the world see that America is not a mere collection of European immigrants, but a compact great nation with ideals and vision and self-restraint of its own.

*

WE want our readers to understand all sides of this food distribution problem. There are many sides to it, all of which country housewive have not experienced. On page 1059 we give some statements regarding food wastes in this great city. The author goes on with this indictment of many city women:

> The moving picture shows and theatres, while entertaining and educational, are the greatest blight that has struck the household since the first century; women with three or four children will repair to the "movies" and stay there until they expect their husbands home, when the delicatessen store is the base of supply for the family. With housewives refusing to prepare the family meals and feeding their children on poorly cooked, inferior food from the delicatessen store, what kind of an army could be raised 25 years hence in this country?

This is probably true of a certain class of city women, but it is not true of all. There are many who are buying food economically and using it without waste. There are to be found false ideas of economy and of life in general everywhere. They can only be removed by patient education and good example. Let us all understand that wastes of food are like war—economic crimes which always fall hardest upon the producers.

*

NOTING communication of S. J. K. on page 1014, taking exception to your statement that all wealth in the country comes from farmers, I think that you are hedging when you repeat the statement, but add to it the miner and forester. We presume by giving the matter a little further thought you will add the fisherman, and there may be others that you might want to add as you go along. I am only too glad to admit the great part the farmer plays in our civilization, but I agree with S. J. K. that your statement that all the wealth of the country comes from the farmer is ridiculous. J. M.

We have never claimed that all wealth came from the farmer. There is no "hedging." S. J. K. tried to change what we did say. We do claim that it all came originally from the soil. Our friend speaks of the fisherman. Will he tell us of any value in the water which was not originally washed out of the land? What do fish live upon if not from the land's products? You might name ice as a commercial product, which does not originally trace back to the land, but where do you find another? We are not "hedging" but have stated distinctly that all wealth comes from the land. So it does!

*

THERE are many calls for "Grimm" Alfalfa seed. This is a superior variety grown in the Northwest. Last year there was much complaint over frauds in selling this seed. Some of the seedsmen advertised early that they wanted to buy the "Grimm," and then later offered the seed for sale. They had little of it, but the buyer usually receives some inferior seed with a little of the "Grimm" mixed with it. The Department of Agriculture gives us the following statement about this seed:

> There is now a considerable quantity of seed of this variety being produced in the western part of the United States. It is true, of course, that there is being offered on the market a large quantity of seed of common Alfalfa under the name of Grimm; but if reasonable precaution is exercised, the true variety can be procured at a cost of from 25 to 75 cents per pound. There will doubtless be several hundred thousand pounds in the market. The production of Grimm Alfalfa is being taken up quite extensively in South Dakota, Montana, and Idaho, and so far as we are able to determine there is no material difference in the results from the seed produced in these States.

*

ON page 1015 I find a statement that the New York State hay crop will not be as large as last year, and on the day I received THE R. N.-Y. the Syracuse *Post-Standard* contained a statement that the hay crop was 2,000,000 tons greater than last year. Where does the misleading statement come from, for certainly one is misleading. O. L. B.
Canton, N. Y.

The first statement referred to the New York hay crop, which, according to the New York State Department of Agriculture, is smaller than last year, though larger than for several previous years. The clipping from the *Post-Standard* was a report of the New York State Hay Dealers' meeting at Syracuse, where it was said that the State crop is 2,000,000 tons above last year. At this season buyers of farm products see very large crops of their specialties, and are sure that the price to the producer should be low. The National Government report, the result of unbiased investigation, gives the hay yield for the entire country as 1.1 per cent. less than last year, and the crop condition 4.9 per cent. better. The dealers' estimate of 2,000,000 tons excess in New York State certainly needs discounting.

BREVITIES.

VERY likely your word box needs clearing out.

WE never had so many people writing to ask where they can buy wheat direct from farmers.

ALFALFA meal is all right, but why pay the miller $10 a ton for grinding it when the cow will do her own grinding if you give her the hay?

THE United States Department of Agriculture will fully examine specimens of wheat plants to see if they have been attacked by the Hessian fly.

THE South Dakota Experiment Station has developed a "60-day oat" which is said to ripen so early that it can be harvested before barley or wheat.

THE latest is an organization known as the Farmers' Congressional League. It aims to candidates for office who are farmers or editors of farm papers.

THE Belgians have certainly shown great spirit and energy in the present war. One of our readers says he has some Belgian potatoes growing on his farm. He adds: "I am going to feed them to my boys."

HERE'S a kindly spirit—there might be more of it: "Hope your crop will beat mine every way. That will not reduce mine any in size or quality. Better weather for them here this year than last, but it remains to be seen whether the mangels will do better. F. B. D."

HERE is one we would like to have answered: "Last year I canned a basket of peaches brought from the hills in an automobile truck. They were beautiful big peaches, very ripe, but most terribly bruised all over, and clingstone beside. The canned fruit looked as if it had been chopped. Is that always the result of fruit marketed in an auto truck?"

WOMAN AND HOME

:: John Henry Buys a Horse ::

By Mrs. Cora Hamilton

:: No More Stove Wood ::

A Treatment That Worked

John Henry Buys a New Horse.

JOHN HENRY had to buy a new horse, that was certain. He had lost one of his horses the Summer before, and the one he bought to replace it had turned out to be balky, so he sold it in the Fall. One horse was enough during the Winter to drive to town or go visiting with. But now Spring was here, and "How could a man plow, drag and do the other work on a farm in the Spring?" he asked Mrs. John Henry.

"Of course you must have a new horse," she replied (as he knew she

THEY STAYED RIGHT THERE.

would), so John Henry interviewed every one he met as to where he could get "a good horse cheap." He was told of many different bargains and after looking around for a week or more decided to buy one offered to him by a friend (?) in the city. "A fine looking horse, good worker, anywhere you put him, just what you need, I am sure," said his friend.

Proudly John Henry drove him home and called all the family out to see his splendid bargain.

"I tell you it takes the old man to tell a good horse," he remarked complacently.

Next day John Henry decided to draw a load of straw to market. Hitching the team to the hay wagon he drove around to the shed and proceeded to load the straw. Then with a flourish of the whip and a cheery "Git ap boys," he drove round in front of the house, climbed down off the load, went in and changed his old hat for his Sunday best one, got his coat and getting back on the load waved his hand at mother and the kids and with another flourish of the whip and cheery "Git ap boys," *stayed right where he was.* In vain he shouted, in vain he cracked the whip, and finally got down off the load, took the splendid bargain (?) by the bridle, pulled, coaxed, talked, whipped and shouted. Mr. Horse merely stood there as if he never intended to go again.

After alternately waiting, coaxing and whipping he finally unhitched the horses and sadly took his way back to the barn, saying to himself as he went, "Who would have thunk him a balker?" Returning to the house he called his friend up on

"THIS IS OUR OLD BOB."

the telephone and told him his experience and said:

"I want you to come and git him jest as quick as you can."

The friend protested, was sure the horse was all right, couldn't believe it possible that he would balk, but finally said:

"I will bring you another one, that I will positively guarantee will not balk with you."

After dark that night he drove up leading a horse behind his wagon.

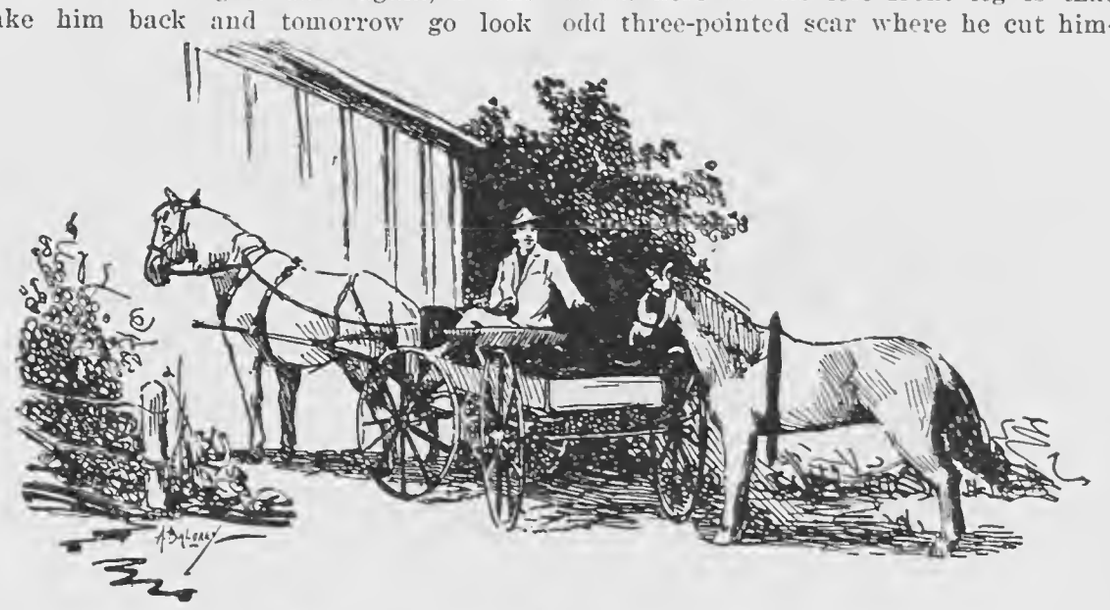
"There, John Henry," he said, "is a horse I know will not balk." So taking horse No. 1 with him he went back home. John Henry gazed rather doubtfully at horse No. 2. But as he remarked to Mrs. John Henry, "perhaps he will work better than he looks."

Next day he harnessed him up with Old Faithful and started to plow the garden, Mrs. John Henry and all the little John Henrys standing in a row to watch Daddy plow Maw's garden. But the new horse could scarcely travel, let alone drawing the plow. He limped in front, he limped behind, he even limped sideways.

"If there is one leg he limps on more than the other, it would be hard to find which one it is," said John Henry in deep disgust, as he put the poor animal back in the barn.

"No wonder Mr. Jones waited till dark to bring him here," said Mrs. John Henry.

"And when it gets dark again, I will take him back and tomorrow go look



IT TAKES THE OLD MAN TO BUY A HORSE.

somewhere else for a horse," said John Henry savagely, so that night he tied him behind the wagon and returned him to Mr. Jones.

"If you had turned him out to pasture you wouldn't take twice what I asked you for him next Fall," said Mr. Jones.

"I am not looking for a horse to pasture but one to work," answered John Henry. The next day John Henry went to a sales stable where there were a number of horses for sale, telling the man in charge what he wanted. The man said: "Yes, sir, I have some splendid work horses, and am sure you can find just what you are looking for." John Henry looked the different horses over carefully.

"Better let me sell you this pair of iron grays," said the stableman.

"No," said John Henry, "I only want one to put with Old Faithful."

"Well here are several, all good ones, take your pick."

John Henry looked them over several times very carefully, finally deciding on a large fine-looking horse that had just been clipped.

"You certainly know a good horse when you see one," said the salesman. "The man that brought that horse here to be sold, said he was one of the best horses he ever owned."

John Henry hitched the new horse, who was called Pete to the buggy, tied Old Faithful behind and started home.

"How strange," thought John Henry as he reached home and Pete turned into the lane leading to the house before he pulled on the rein. "Seems to know just where he is going, must be a mighty smart hoss all right, all right; knows jest where I want him to go before I tell him."

Stopping in front of the kitchen door he hollered:

"Hey, Maw, come out and see if your old man ain't some pumpkins, when it comes to picking out a good hoss."

Mrs. John Henry came to the door, stared at the horse for several minutes without saying a word. Finally she went around and looked at him from the other side, and then stood in front of him; looked him over once more and said: "John Henry, what in the world did you go and buy Old Bob back for after all the trouble you had with him balking so much with you last Summer?"

"Old Bob nothing," angrily exclaimed John Henry, "this horse is a different color than Old Bob was and fatter too.

"I don't care," said Mrs. John Henry, "if he is it is because he has just been clipped, and it is Old Bob just the same. Look, here on his left front leg is that odd three-pointed scar where he cut himself on the barb wire fence, and the two little spots where that old collar made his neck sore in haying."

"Well, I'll be switched," finally exclaimed John Henry, "next time I buy a hoss I'll take you along, or no knowing what I'll get next time, and say Maw, I get you that new dress down to Palmer's you wanted if you will promise not to tell what an old fool I be, going and paying a fancy price for a hoss I pretty near give away last Fall to git rid of him."

No More Stove Wood.

I DO know if men folks ain't the most provokin' animals that live on this farm! Here it is 10 o'clock, and not a stick of wood cut to make a fire in the cooking stove. But dinner's got to be on the table at 12 o'clock or something terrible would happen. Talk about the Egyptians, my men folks do certainly expect me to make bricks without straw! Seems to me if I loved to eat like some folks do, I could remember to leave enough wood cut to cook something, every day of my life I've got to pick up enough chips and pieces of bark to start a fire in the stove, and chop of as much wood as I can keep it going, I tell you I'm tired, and what's more I ain't going to do it another day, I'm going to cure them once for all, I bet I'll give them one surprise."

Mrs. Coward, who for more than 35 years had carried all the water from a spring at the foot of a steep hill, and had eked out a meager pile of stove wood by hacking away at a hand log with a heavy ax, in order to have three piping hot meals ready for the exacting farmer, her husband, the boys and the hired man, made up her mind to rebel. Grimly she

MOTHER ISN'T DINNER READY.

took down the big tin dishpan and put on her old sun-bonnet, for this was no joke for a patient pack-horse suddenly to get balky, and went out to the garden to gather the vegetables for dinner.

City people who get their vegetables from a huckster's wagon at the front door, or order their meals over the telephone, sentimentalize over the supreme joy of having home grown vegetables—and they are fresh and delicious. But Mrs. Coward had been up since half past four, had cooked an ample breakfast that was necessary to satisfy the appetites of her farmer men, had swept the big old-fashioned rooms and porches, had churned five gallons of milk, worked several pounds of golden butter, then carried it all down into the dairy, which instead of having a few strong steps, was reached by two jumps from one puncheon to another, with the pleasant prospect of landing on a snake at the second jump. So she was a little tired when she went out to gather the delicious vegetables which grew in such profusion as the result of her faithful hoeing and weeding, for the garden on some farms is the "woman's work."

Down the long rows of peas she travelled, picking the fine fat pods, full of pride that they had filled out so well. Then she gathered her apron full of snap beans, crisp and tender, then pulled up several bunches of beautiful onions. Over into the potato patch she plodded, the sun was beating down relentlessly on the old sunbonnet as she dug into the baked ground with an old two-tined fork and brought out the splendid "Early Rose" beauties, surely they were worth the trouble. It was like finding gold nuggets in the Klondike, and it was very exciting to see how many one could find in a hill, and whether they will be close to the top, or deep in the ground. It is interesting work, digging potatoes with an old kitchen fork, even though the sun is hot, and nobody has left enough wood to get dinner with.

Wagging along with her full dishpan, Mrs. Coward must go by the apple tree at the far end of the garden and get a few apples to make some dumplings, for farmer men must have a pie or something sweet to finish off with, and they liked nothing so well as the crisp, brown dumplings, with nutmeg and a butter on top, and a generous ladleful of rich yellow cream, even if they did always forget to leave enough stove wood to cook them.

Back in the house once more, she set about preparing the vegetables for cooking. The peas were shelled, the beans "snapped," the potatoes scraped, the onions sliced, and the apples peeled. All of the vegetables she put in pans and cov-

(*Concluded on page 1057.*)

Woman and Home

Waiting.

Serene, I fold my hands and wait,
Nor care for wind, or tide, or sea;
I rave no more 'gainst time or fate,
For lo, my own shall come to me.

I stay my haste, I make delays,
For what avails this eager place?
I stand amid the eternal ways,
And what is mine shall know my face.

Asleep, awake, by night or day,
The friends I seek are seeking me;
No wind can drive my bark astray,
Nor change the tide of destiny.

What matter if I stand alone?
I wait with joy the coming years;
My heart shall reap where it has sown,
And garner up its fruit of tears.

The waters know their own and draw
The brook that springs in yonder height;
So flows the good with equal law
Unto the soul of pure delight.

The stars come nightly to the sky;
The tidal wave unto the sea;
Nor time, nor space, nor deep, nor high,
Can keep my own away from me.

—John Burroughs.

*

The Crickets.

Pipe, little minstrel of the waning year;
In gentle concert pipe:
Pipe the warm noons; the mellow harvest near;
The apples dropping ripe.

The tempered sunshine, and the softened shade;
The trill of lonely bird:
The sweet, sad hush on Nature's gladness laid;
The sounds through silence heard.

Pipe tenderly the passing of the year:
The Summer's brief reprieve;
The dry husk rustling round the yellow ear;
The chill of morn and eve.

Pipe the untroubled trouble of the year:
Pipe low the painless pain;
Pipe your unceasing melancholy cheer:
The year is in the wane.

—Harriet M. Kimball.

*

"Unseen."

At the spring of an arch in the great north tower,
High up on the wall, is an angel's head;
And beneath it is a lily flower,
With delicate wings at the side outspread.

They say that the sculptor wrought from the face
Of his youth's lost love, of his promised bride,
And when he had added the last sad grace
To the features, he dropped his chisel and died.

And the worshippers throng to the shrine below,
And the sight-seers come with their curious eyes,
But deep in the shadow, where none may know
Its beauty, the gem of his carving lies.

Yet at early morn on a midsummer's day,
When the sun is far to the north, for the space
Of a few short minutes, there falls a ray
Through an amber pane on the angel's face.

It was wrought for the eye of God, and it seems
That he blesses the work of the dead man's hand
With a ray of the golden light that streams
On the lost that are found in the deathless land.

—Author Unknown.

*

Milking Machines.

AS a rule there is not much poetry about machinery, but we have received the following little poem to accompany the picture given here. As a good companion to it we print the statement of the crippled milker which follows. Machinery which enables defectives to do a full job may be said to have brains and sentiment.

The Machine Milk Kids.

Us kids is raised on "machinery" milk,
An' we guess it 'grees wif us,
For Pa he says we're slick as silk,
An' free from all bacterius.

When out to the barn with Pa we go
It's the mostest an' bestest fun
To hear our Pa say, "So-Boss-So,"
An' get the "machinery" already to run.

The bossies stan' as still as can be,
An' never widdle an ear or a hoof,
An' Pa he looks roun' to see,
If the engine's a runnin' wif a woofity-woof.

An' when we come back to the house from the barn
An' the separator "chine" 'mences to hum,
I tell you we're glad that we live on a farm,
It's the greatest and most bestest of fun.

The Hosley Twins, John and Kate, and their baby brother Truxton.

*

Machine for Disabled Man.

FEBRUARY 13, 1912, while feeding a corn-husking machine, I was unfortunate enough in getting my left hand caught in the rollers, crushing it so badly it had to be taken off back almost to the wrist joint, leaving only a stump. At that time I was caring for 16 head of cattle, doing my own milking, as competent help was hard to get. While in the hospital I decided to sell my cows as soon as I could, but while there noticed a milking machine advertised. I wrote for price and all particulars. Finding this machine reasonable and the firm agreeing to stand behind it, I decided to have one installed and by the last day of April,

ALL RAISED ON MACHINE MILK.

1912, had one working. I have been running one ever since without any trouble and very little repair, and have cared for more cattle since having the machine than ever before. Being slightly afflicted is no reason why a person cannot continue with the dairy much easier than the old-fashioned way of hand milking.

OTTO G. NEWMAN.

*

THE greatest advantage that life can ever give you is the knowledge that you have never taken an unfair advantage of any human being.

*

WABAUNSEE CO., Kansas, gives school credit for "sleeping with the windows open and going to bed before 9 o'clock." The school superintendent of that county is a woman—Annie G. Crouch. If this is a sample of her superintendence we would like more of it. Why should not the office of school superintendent naturally fall to a woman?

*

"THE high places now occupied in the minds of the American people by the warrior, the politician, and the literary man are due to the prejudices of Greek culture of 2,500 years ago." That is what a Columbia college professor told the students at the Kansas Agriculture College. We knew the prejudice was old and deep rooted, but it is slowly wearing out. Every mother and every teacher who puts truer ideals before the children helps "change the subject."

*

WE find the following in an English paper:

A scarecrow of the ordinary type placed in Mr. Howard Wilson's cornfields having failed to frighten the birds, was replaced by a feminine figure with a low-necked blonse, slit skirt, and plumed hat. Crows have now ceased to haunt the locality.

Those crows were wise, but the farmer did not know his business. It was not necessary to involve the higher household law in this way, for tar or arsenate of lead on the seed would have more than satisfied Mr. Crow.

"MAN works from sun to sun but woman's work is never done." How many hours does the farmer woman work? In California the Farmers' Protective League has figured the following from the records of 145,154 male workers:

1,675 or 1.5 per cent. worked 12 hours.
950 or 0.9 per cent. worked 11 hours.
18,115 or 16.8 per cent. worked 10 hours.
46,627 or 43.2 per cent. worked 9 hours.
39,532 or 36.6 per cent. worked 8 hours.
1,051 or 1.0 per cent. worked less than 8 hours.

Now we would like to know how much of a working day the woman on the farm puts in. Will you give us a report of your own hours of labor and also of your neighbors?

*

THERE was something of a flurry in Kansas over the "age question" for women who desired to register. Kansas women now have the right to vote. When they came to register some of the officers insisted upon asking their age—probably as part of a plan to keep them from registering. The Attorney-General of Kansas came to the aid of the women with an opinion in which he says:

"All the Constitution says on the question of the age of voters is that they must be '21 years old and upward,' and where that venerable instrument exacts no further particularity an election officer need not let his zeal run away with his courtesy nor forget that registration of voters is only to prevent fraud and not to give some official factotum the right to embarrass the new voters with irrelevant questions.

"Perhaps I ought to add that even if the voter has not yet attained the age of 21 years but will reach that age on or before the November election day such voter is entitled to registration for the primary. Only in such cases need the registration officer particularize as to the age of any person seeking registration further than to set it down that she is over 21."

*

AS respects suffrage, would it be fair or desirable that women, unable to serve as soldiers or police to enforce the laws, should have an equal franchise with men, who are able? E. S.

One of the arguments raised against giving the vote to woman is the statement that she could not fight as a soldier in case of war. France is now at war with Germany, and every able-bodied man has been called into the army. The harvest was left ungathered. Now the premier of France issues the following appeal:

"The grain stands unreaped, and the time of vintage approaches. I appeal to your hardihood and to that of your children, whose age alone, not their courage, withholds them from the fighting line.

"I ask you to maintain the lives of our fields, to finish this year's harvest and to prepare for that of next year. You cannot render greater service to your country."

This work of the women will be as helpful to France as that of the soldiers at the front. There is a famous old painting entitled "War." In a retired valley an old, white-haired man is holding a rude plow which six women and girls are pulling at the end of a rope. The girls show terror on their faces—the old man a dumb sort of despair. It is a fearful presentment of the hideous side of war which is thrust into the home. The burdens of such brutal strife are always hardest for the women to bear.

HERE is a sample of many notes which we receive:

Will you tell me the address of the girl in Fig. 391? I think I know her, and would like to write to her if I could get her name and address through THE R. N.-Y. F. J. H.

Now imagine for a moment what this means. The picture mentioned came to us from an entire stranger. We do not know "F. J. H." or where he lives, for he neglects to give his address. We could not print the girl's address, nor would we give it, if we had it, to any unknown correspondent. In cases where such addresses are desired our plan is to send the request right to the persons interested and leave them free to answer or not as they see fit. In one case more than 50 people wrote for such an address. We followed the plan mentioned above, but some of these questioners were inclined to find fault because they did not receive an immediate reply. They could not reasonably expect a man who had only one thing to offer to take time from a busy life to answer 50 letters at once. THE R. N.-Y. tries to answer letters promptly. The editorial department alone answered 12,342 questions up to August 15, but our plan is to leave our reporters and friends free to handle their own mail.

*

ONE of the best points made by Tom Barron in his talk before the Connecticut Poultry Association, was the tribute he paid to his wife. It seems that Mr. Barron, 20 years ago, was a shoemaker, and that when he was married he had but a very small income. He found that this income was not large enough to take care of a family as he wanted to care for his wife, so he went to Mrs. Barron and talked over with her his plans for developing his hen business. He said it is very largely due to her sound advice, and practical help, that he was ever able to make his start. It means a great deal for an English workman to start with nothing and accumulate enough to buy 20 acres of good land. That can be done with reasonable ease in this country, but in England the job is very much harder, and Tom Barron took pleasure on the platform in giving a large share of the credit for his success to Mrs. Barron. The people in the audience were greatly pleased with this statement, for you cannot get a group of successful American farmers together without finding a large proportion of them who know that their success is also due to the wise counsel and practical help of their wives. Some men know this, yet do not like to admit it. It was a great satisfaction and pleasure to have Mr. Barron so clearly present this family obligation to the silent worker at home.

*

The Horrors of War,

PROF. THOS. H. DICKINSON, of Wisconsin, would use the motion picture show to make the people realize the horrors of war:

"In the hands of the producers there is to-day this great social opportunity. You motion picture men, tell us not only the latest news from the front, but tell us the awful truth of War. Stop 'The Adventures of Matilda,' and 'The Romance of the Handsomest Star.' Let us see on the film the actual horrors of war, the devastation, the ruined homes, the retarded plans, the harvest fields laid waste. Let us know by seeing before our eyes that war is not ideal glory; it is murder and maiming of men; it is rapine and theft. It is not glorious crime; it is the multiplication of individual sordid crimes; it makes citizens murderers, and men into brutes. Let us see these things before our eyes that we be no longer misled with heroic lies. You can dispel the illusion of war among the millions of America."

*

A STRANGE ACCIDENT.—The newspapers report that in early April a woman in New York took her baby up to the top of a high building, put it in a baby carriage, and tied the carriage as she thought securely to the post. Then having provided this fine sun bath for baby, she went back to her work. A high wind arose and swept down through the street and across the top of this building with great power. It blew so hard that it broke the rope with which the carriage was tied, and blew the carriage with the baby off the roof. It fell six stories, and was instantly killed. The best place for a baby, as well as for most of the rest of us, is down closer to the ground.

No More Stove Wood.

(*Continued from page 1055.*)

ered them with water, exactly as if she were going to cook them, and then she set them all on a table in the sun, for there was no stove wood to make a fire to cook them with. She then set the dining table, filled the pitchers with milk, cut the bread, and sat down to wait for 12 o'clock. In the field the work was going on also, the mowing machine whirred, the hired man clucked cheerfully to the horses as he drove the plow down the straight rows of corn, "laying it by," and all the time breakfast became a thing of the past, and dinner a fast approaching reality the sun climbed higher and beamed hotter, and the farmer men listened longingly for the summons to take out the horses for dinner—even though there was no stove wood left to cook it with.

Twelve o'clock came and Mrs. Coward blew a blast on the dinner-horn that sent the waves of hungry anticipation rippling all over the farm. Machinery stopped, chains rattled, horses were driven merrily up to the barn and fed, and up to the house trooped the hungry farmer men ready for one of Mother's big dinners—even if there was no wood cut to cook it with.

Into the kitchen strode Mr. Coward to get the "washpan" in which the farmer men are accustomed to bathe their sunburned faces, and something strange and chill struck him. No fragrant odors of boiling beans, of stewing peas, of baking apples greeted him, only a placid old lady, whose heart was quaking, and whose knees were shaking beneath her "wrapper," at the enormity of her revolt.

"Why Nancy, what's the matter, where's the dinner, I thought you blowed the horn, ain't it twelve o'clock? Where's the dinner?"

Mrs. Coward lead her gaping astonished "man" to the table in the back yard where the sun beamed down on the uncooked vegetables, and mildly said, "I set it in the hottest place that I could find, Jim, there was no wood cut to cook with."

Mr. Coward said never a word, nor smiled a smile; it is a dangerous thing to fool with a hungry man. That was the quietest meal that was ever eaten in that house. The hungry men made out the best they could on bread, and butter and milk, and Mrs. Coward's heart almost misgave her as she thought of their disappointment, but she made no apology, the situation was a serious one.

Before those men went back to the field, there was a generous pile of wood in the box behind the stove, and there was such a supper that night as loosened the

MOTIVE POWER FOR DINNER.

tongues that were tied at dinner time. And never again did Mrs. Coward have to pick up chips, or cut a stick of stove wood to cook a dinner. Her men folks could take a hint when it was shouted at them.

Woman's Work.

THERE seem to be queer ideas in some places on the man's part in the home; some fathers seem rather useless except to pay bills. I have always thought it was a man's part to do the heaviest, hardest things about the home, when he was there. Father always does and has. Yet my maid (on a week's trial) was seriously disturbed and came to me about father's filling the woodbox.

"It doesn't seem right to see your father carrying wood. It seems as if I ought to take it right away from him," she said. "My father never liked to see the woodbox empty or the water pail either when he got home."

Father is a natural born gentleman and his women folks have never been strong. Over at the tenant house on washing days, I have sometimes seen the mother of eight carrying her own water from the well, with most of her seven sons lounging around. As the sons range in age from two to 22, not much can be expected of the younger three. Yet when the well went dry, water was carried by the mother and daughter from a distant brook. The tenant-house sons are doing just what they have always been doing, and apparently it never occurs to them to do anything else. S.

"Good Reading"

Stories and Studies

The Two-legged Peter.

LULA BENT, aged 20 years, boarded cats, and her mother, a widow, left with little money but a large country house and a family of six, boarded anybody. Mrs. Boucher, a city dame of

"HE STAYS OUT NIGHTS."

French descent, motored out to see the Bents, and asked them to board her cat, Peter, and her grown son, as she was going to Paris for the Summer.

"Now, Miss Bent," she said, "you must kiss Peter every night before you put him to bed, for he always kisses me, and I do not wish him to break off that affectionate habit. He must have ice cream occasionally, salads, baked beans, and cream of tartar biscuit only."

There were many other instructions regarding Peter, his nap, his bath, and so forth. All that she said about her son was that he was queer and literary and difficult to understand. Mrs. Boucher then bade her cat a tearful good-bye and coldly took leave of her son. The younger members of the Bent family heard her address the latter as Peter. When she had gone, Peter, the son, overheard these children say to Lula:

"Are you going to kiss that homely thing every night?"

"I'll kiss the other Peter first," she answered. And Peter, the son, was amused, and did not blame Lula a bit, for he did not share his mother's inordinate love for cats.

At the end of the Summer Mrs. Boucher, having returned from Paris, motored again to the Bents to get Peter. Her sister accompanied her. Everybody at Bents had gone out but little weak-minded Mary, aged five, who sat rocking herself upon the veranda. Mrs. Boucher and her sister were glad to take seats in the pleasant, breezy spot.

"How's Peter?" inquired the former of Mary.

"He's fine," was the reply.

"Do he and Miss Bent get along well?"

"Oh, yes," said Mary; "she loves him and he loves her."

"What's Peter had to eat?"

"Oh, Lula makes everything he likes," said Mary, "leap-year cake, diplomatic pudding, angel cake, and all these things."

"Oh!" ejaculated Mrs. Boucher. "Well, I'm glad she's been so good to him. I always give Peter a taste of everything that I have."

"Where does he sleep?"

"In the guest chamber." (Mrs. Boucher manifested some surprise.)

"Does she give him a bath?"

"No; he takes it himself, but she gives him the towels."

Mrs. Boucher and her sister exchanged looks, and the latter remarked:

"I guess it's the two-legged Peter she's talking about. You'd better inquire about the other and see if he's fared as well."

"Where's my cat Peter?" inquired Mrs. Boucher.

"I don't know. I guess he's on a spree. He stays out nights, and he goes into Mrs. McCarty's garbage-can—they have scarlet fever there; and he eats grasshoppers and kills snakes, and he eats cockroaches, too. I guess I can get him if you want him."

"Well, I want him."

Mrs. Boucher and her sister indulged in a *tête-a-tête* when she was gone. They helped themselves to some newspapers lying on a table in the corner of the veranda, so that they could wrap them around Peter, who had been frequenting such questionable places.

"My poor Snooky-ookums!" said Mrs. Boucher when Mary appeared with Peter. He had a black nose, acquired by searching in somebody's coalbin, paint on his legs, a knot in his tail for bad behavior, and instead of his pretty red collar, a string, with an old cigarette picture for a bangle around his neck. She managed to carry him to the automobile, and away he went, back to his aristocratic home. After their arrival, and Peter had been bathed and fumigated, and made to realize that his wild life was at an end, Mrs. Boucher sent the following note to Lula Bent:

"DEAR MISS BENT: It does not seem to me that my cat has received just the treatment that I desired, but I believe that you have done well by the two-legged Peter. Please tell him to pay the bill.

"Sincerly yours,

"CONSUELO BOUCHER."

She received in reply a note from her son:

"DEAR MOTHER: What you term 'neglect' of Peter—but which, I dare say, he realized was freedom, delectable—has certainly been made up for by the treatment accorded the 'two-legged Peter,' who, for the first time in his life has been shown some consideration. I'll gladly pay the bill, and Lula's going to keep me.

"Yours ever lovingly, PETER."

J. C. M'BAIN.

Neighborly Chat.

"THAT is the most delicious cherry pie; how do you get such a fine pastry?" asked Mrs. Barnes, as they cleared the table.

"Oh, I always make the crust the day before I need it, and put it in the ice box. It really is an improvement. No, Mrs. Barnes you'll not help with the dishes. I am going to enjoy your visit—we'll go on the veranda. The dishes will not run away," she laughed.

"Have you been reading anything especially interesting, Mrs. Hayden?"

"Well, really not much, other than the papers. Do you know I am interested in the English women's fight!"

"Are you? I attended a lecture a few weeks ago, and the speaker said he

COOKING (?) DINNER IN THE SUN.

thought it not so much a 'woman's question,' as a fight for liberty—the same old struggle that has marked English history from the days of the barons. As we were coming out of the hall, a few boys shouted: 'Look at the old hens.'"

"Well," laughed the listener, that was not such a bad name either. I made $150 last season on eggs and young fry. No, I don't sell by pound; just charge 50 cents apiece, and 10 cents extra if I dress them."

"That is Aunt Emma's method, too. By the way, I wish you could have seen her lawn this Spring. Last Fall she tried a new way of setting out her tulip and hyacinth bulbs. Instead of putting them in regular flowerbeds, she scattered them over the lawn. You can scarcely imagine how beautiful was the effect. The lawn dotted with the various colors. Of course, when they were through blooming, you could not tell that the grass had been 'flowered' at all. Aunt Emma said that all Spring she felt that the fairies were hiding in the tulips!"

"I am certain the effect was lovely. I think I'll try that method next Spring. I must go, though I do wish I could remain longer." M. E. D.

Antidote for Snake Bite.

CONSUL-GENERAL JAMES A. SMITH sends from Calcutta, India, an account of a treatment for snake bite. In 25 years venomous snakes killed 543,991 humans and 187,436 cattle.

"The mortality from snake bite among the poorer inhabitants of India is due in part to their habits and mode of life. Many sleep on the ground in their houses, the walls and floors of which often give cover to snakes. Persons are sometimes bitten by serpents which crawl over their bodies in the dark and are perhaps irritated by some unconscious movement of the limbs during sleep. In such cases the reptile is seldom seen, and there is a dreadful doubt as to whether a rat, a mongoose, or a deadly snake has caused the wound. During the great heat of the plains in Summer scanty clothing is worn and many people go barefooted, while those who do wear shoes seldom wear hose, thus leaving the ankle and instep exposed. Many fatal cases of snake bite occur among natives engaged in cutting grass when the vegetation is dense and capable of concealing even a panther. The native squats down on his heels, grasps a handful of grass, and cuts it off near the roots with a curved hand scythe, and often touches and irritates hidden reptiles."

An antidote for the poison is now made from the snake's venom, and the plan is thus described:

"A couple of Indian assistants dragged forth a tin box, the lid was lifted up, and an angry cobra disclosed. It expanded its hood and swayed its wicked little head from side to side, hissing like a steam engine. One of the Indians with remarkable dexterity seized it firmly at the back of the neck, at the same time placing his foot on the end of its tail to prevent it from coiling. The cobra, being thus harmless, was carried forward, and a wine glass with a piece of American cloth covering the top was placed near its head close to its darting tongue and glittering eyes. At once it struck, its two sharp upper fangs pierced the cloth, and the deadly poison dropped into the glass. There was perhaps half a teaspoonful in the glass, sufficient to kill half a dozen human beings. The cobra was then forcibly fed with egg flip through a tube and put back in his box hissing ferociously, and was then left for 10 days to mediate on the indignity he had suffered. The venom is extracted only once in 10 days. The venom is dried over lime and sent to Kasauli, where it is dissolved in a salt solution. It is then put into a horse, only a small dose being given at first. This is gradually increased until at the end of two years the animal can stand a dose 200 times the original one, since it acquires immunity from the poison."

As Others See Us.

TOWN LADY: (fanning languidly while waiting for dinner at the boarding house): "Is it really true that farmers' wives have such a hard time? It seems like an ideal way to live. No cost, you know."

LITTLE COUNTRY SCHOOL TEACHER (attending the institute and boarding for the week): "Only two classes of farm women have a very hard time."

TOWN LADY: "I thought so. I believe all this talk is greatly exaggerated. I don't see what our women's magazines give space to such stuff for. What two classes do reely have a hard time, Miss Gray? You know I find it real interesting to get your point of view?"

L. C. S. T.: "Those whose husbands are ambitious and therefore prosperous, and those whose husbands for various reasons are not prosperous, but who are ambitious themselves."

T. L.: "Ambitious! My land! I didn't know ambition applied to low pursuits like farming."

L. C. S. T. (a little exasperated): "The point is that those two classes take in every farm woman. Whether they have a right to be ambitious——"

T. L. (interrupting): "Oh, la, don't get excited. I'm sure I don't know anything about it. There's the dinner bell. Isn't the fare here the poorest?"

IDA EARLE FOWLER.

:: Household Management ::

How Busy Women Plan

How Busy Women Plan.

STANDARDIZING THE WORK.—Not being very strong and having a great deal to do, with four children from one to nine years old to care for, besides the regular work of a farmer's wife, it has been necessary for me to arrange my work so as to get it done as quickly as possible with the least amount of effort. I have my work systematized, for that is the only way to accomplish a good deal in a little time, I think, having certain days for doing certain things. Of course sometimes sickness or other things prevent certain work being done at the time planned, but usually it only takes a little time to get caught up to the old schedule.

How It Is Planned.—In order to show you how I plan my day's work I will have to begin with the night before. I put the two younger children to bed right after supper, which we have at half past five, wash the supper dishes, put the other two to bed at seven o'clock (they have been taught to undress themselves since they were four years old, with mother unbuttoning them down the back) so it only takes a few minutes to listen to their prayers and tuck them in bed. I then set the table for breakfast, putting the cereal on to cook in fireless cooker, if it is in the Summer-time (for all raw cereals are better for being cooked over night as my doctor told me when I first began to feed my children). We burn wood in Summer; if it is in the Winter cereal is put in the double boiler on back of kitchen range and is all ready to use in the morning. The coffee is measured and put into the coffee pot with cold water, and when my husband goes down in the morning he opens the draft, if it is a coal fire, starts a wood fire, as the case may be, and sets the coffee on to boil. The children generally wake up about the time we do and all are dressed before breakfast, except baby, who has a little wrapper slipped on over his night clothes, until after breakfast.

The Breakfast.—I do not bother with meat and potatoes for breakfast, but generally have bread rolls heated in the oven, or toast, with soft boiled or poached eggs— these being good for the children and quick to fix—the two important considerations, for as everybody knows, an hour in the morning seems worth two in the afternoon to get things done.

Wash-day.—Monday, as soon as I go downstairs, I fill boiler with cold water and a full bar of borax soap shaved up fine and put in the clothes. By the time breakfast is cleared away, dishes washed and baby attended to, the clothes have boiled enough and are about ready to put into rinsing water. Clothes done this way require practically no rubbing, as I poke them well while boiling. They are put into washing machine, which is turned three minutes, then the water drained off and the machine filled with clean water. There is a wringer attached to machine, so that it does not take long to finish the washing. Doing it this way white clothes are easier to wash than colored, so the children and I wear white ripplette nightdresses and petticoats in Summer, and white outing flannel in Winter. The other underwear for myself and the girls is gauze and the boys and my husband balbriggan, as that is the cheapest and the easiest to wash. I say "cheapest" because I think it gives the most comfort and wears the longest. Of course underwear made at home might cost less, but I would rather take the time it would take to make the underwear to work in the garden and with my chickens, for the returns are greater both in money and in health.

We use bath towels (Turkish toweling) upstairs and for the kitchen brown homespun linen (that is the name they go by and they are only 12 cents apiece and last longer than any other towel I ever had) as they don't require any ironing, but are folded as taken from the line.

Other Labor Savers.—I use sheets instead of spreads for the beds, as they are so much lighter to wash. So many people use a colored quilt instead of a spread, but I do not like to do this, as I think it is much healthier to have all the bedclothes as clean as possible, and of course spreads are much easier to wash than quilts. For six or seven months in the year I do my washing on back porch, which is toward the south. I have a large tin funnel (costing 10 cents) fastened to the end of a piece of garden hose with wire, which I tie to the pump at kitchen sink, so that I can fill the tubs without carrying the cold water. The two older children think it great fun to fill the tubs with water, which helps me quite a little. The drain for emptying the water is put at the end of the porch. My cooking I make as simple and easy as possible by using my fireless cooker and in the Summer an oil stove.

Caring For The Babies.—Except in the coldest Winter weather I give the two younger children their nap out of doors, one in the hammock and the other in what I call his daytime crib, which is really a big packing box on castors, lined with denim, with a folded heavy quilt in the bottom. This crib saves more steps and time than any other one thing, for the baby spends practically all his time in it. Two sides of the box have window screening set into it so that when he is sitting up he can watch the other children playing. I also give him a few things to play with. This keeps the house from being cluttered up so, as well as keeping the baby's clothes much cleaner than if he was creeping around the floor. Then when I have a few minutes to spare I can run up and make the beds, which always have a good airing.

The Children Help.—Another thing, I have always insisted on the children helping me in the house, the boy as well as the girl, and it certainly is surprising how many steps they save mother. It is all done for love, and sometimes when they grumble about having to do so much more than some of the neighbors' children a little talk about the part they can take in the world when they are big, and about some of the well-known men who started in as farmers' boys, will renew their interest and make the work go easier. The two older children help in the garden and with the chickens, these latter being very little trouble except for the first two months, and even then I have everything arranged in the most convenient way so that it does not take long. I have always had good luck with my chickens, and make considerable money from the few I have, but I will not go into my methods here, as it would take too much space. MRS. F. B. T.

THE YOUNG GARDENER SHOWING MANAGEMENT.

A Few Good Stews.

THAT delectable vegetable stew.—Did you ever eat one? Then you don't know what you have missed, for they are certainly delicious as well as wholesome, and will help reduce your meat bills, for if you have one of these stews for dinner you will not need any meat. There are a great many combinations that can be made, depending chiefly upon what you have in the garden or can get. I will give some of the combinations which I have tried: Potatoes, onions, carrots, tomatoes, parsley, string beans, thyme and peas. Cut all but the last named vegetable in small pieces and put them together in one large kettle, covering them with hot water, allowing the usual time for cooking the various vegetables, so that they will be properly cooked at the end. Fifteen minutes before dinner time put in salt and pepper and a large lump of butter, and then thicken the water (which should have slightly boiled down) in the pot with flour, so that it makes a rather thick gravy. This is then served on a large platter.

Other combinations are as follows: Tomatoes, onions, Lima beans, peas, parsley, corn (cut off the cob—that left from the previous dinner will do), lettuce and a little sage and rice—this latter, of course, being first cooked in a double boiler until soft, and then added to the other vegetables when you add the butter and flour.

Another is cabbage, beets (these are cooked separately and added at the last) tomatoes, onions, corn, turnips, celery and barley—this latter is cooked the same as the rice. Sometimes I add a couple of teaspoonfuls of Worcestershire sauce to the stew to give a little different flavor to it, and nearly always I put a greater portion of tomatoes to that of any other vegetable.

Occasionally I make dumplings to go with the stew, or put in noodles or macaroni. The former are made as follows: Two cups flour, two teaspoons baking powder, one-half teaspoon salt sifted together; then add enough milk to make a stiff batter. Drop a tablespoonful at a time on the top of the vegetables, put on the cover and let cook *without raising the cover* for 20 minutes or half an hour. Of course, when you make the dumplings you have to put the butter and flour in half an hour before dinner, so as to allow time for the dumplings to cook. I always put an asbestos mat under the kettle so that the vegetables will not burn while the dumplings are cooking.

If it is desired to make the stews more hearty a little meat can also be used. Bacon or salt pork cut in small pieces and fried, then put into the stew and their grease used instead of butter is very good. Beef may be used, but, of course, should be put on in hot water over a slow fire, for at least two hours before the vegetables are put in.

While on the subject of stews I might tell you about macaroni stew, of which my husband and children are very fond, as I have never met anyone who made it exactly as we do. I get two pounds of beef, soup meat, as in our town that is three or four cents cheaper than stewing meat and answers the purpose just as well, and put it on in hot water where it will cook slowly for two or three hours (I always do the latter as it makes the meat more tender). Cut up three or four onions and a few sprigs of parsley if you have it and put in with the meat. Cook half a package of macaroni in salt water for 20 minutes, drain, and half an hour before dinnertime put in with the meat, also adding half a can of tomatoes. Let this all cook together for a short time; then thicken the gravy with flour. Serve all together on a large platter.

MRS. A. E. T.

A Woman's Home Management.

MRS. W. B.'s problem is mine also; to manage the home successfully, care for a family of small children and find time for poultry and garden. I have not solved the problem—has anyone?—but there are "short cuts" I have learned from trying and will suggest these while I wait to hear from others.

My greatest saving of time and labor comes on the ironing. Every garment possible is taken from the line, folded and put directly away. This includes towels, sheets, pillow slips, nightgowns, stockings, knit underwear, etc. Only such as cannot be used without are ironed. They are very sweet and clean this way, and need offend no one. Most especially is this a saving with the wee folks who get soiled so remarkably often.

My next greatest saving is on hand sewing. Garments are made and mended just as far as possible on the machine. Children's underwear can be made entirely without hand sewing. Measure the band and pin in three or four places. Lay tiny pleats in the garment and hold with one hand, stitch the band first on the wrong side and then turn and stitch down neatly on the right. For buttonholes, stitch around three times and cut through the center. They will outlast the band. Several small garments can be made in this way in a short time. Choose simple patterns, they are always prettiest, and simple trimmings. Here again one saves on the ironing.

Sweeping and dusting can be cut in half by having painted floors with small rugs and by packing away unnecessary dust catchers. A chicken wing is nice to dust with and works faster than a cloth.

For cooking choose simple recipes that are liked by all the family. Save the more elaborate dishes for holidays, birthdays, etc. They will be much better enjoyed too, if served only occasionally.

I find it best to do my sewing as far as possible in the Winter months when gardens cannot be worked and poultry does not need so much care. On rainy days through the busy season I mend and bake, on very hot days I "go slowly," and bright, cool days which stir one's ambition, I devote to outdoor work. There are a few things we must learn to overlook. One is the housekeeping of our neighbor who has no wee folk. Let us not take it to heart because her house is so "spick and span," her work always done up early and herself cleaned up and working eyelets on the porch. If we can keep our little ones well, our home comfortable and every one happy and help a little with the income, we need not worry. Let the children play on the floor, the cat lie in the chair, and "John's" wet boots and mittens repose in peace on the kitchen stove.

New York. MRS. NILES GROVER.

Sewing on a Button.—It seems that science has crawled through the button hole. Miss Annabell Turner, instructor in home economics at Wisconsin tells hows to do it. "Take a small stitch, bringing the knot on the right side. Run up through one hole of the button and draw it down just over the knot. Lay a pin across the button and work the stitches over the pin. When the button is firmly sewed on remove the pin. Pull the button out from the material and wind the thread around the threads between the button and the cloth several times to form a shank. Pass the needle through to the wrong side and fasten the thread with several small stitches. The shank formed makes buttoning easier and lessens the strain on the cloth. The knot is brought up on the right side and under the button to keep it from being worn off."

The City Housewife's Problem.

THE food question does not greatly trouble the farm housekeeper who has access to a good garden and orchard, a cow and a yardful of chickens. It does loom large to the city housekeeper, and her country sister will be interested in knowing what becomes of the floods of food which start for the city. A writer in the New York *Sun* speaks of the outcry over the high cost of meat:

Yet there are hundreds of tons of the finest vegetables grown that are selling for less than freight charges, and consumers don't seem to want them, or else they don't know that present conditions exist. Just think of it, green peas are selling at 10 to 30 cents a bushel bag. These peas will shell out at least six quarts to the bag. Jersey tomatoes are selling at 30 to 40 cents a bushel crate; cantaloupes are 30 to 60 cents a crate of 45 to 60 count, while the crates containing 100 melons are seldom bringing over 75 cents. The writer pays 20 cents for half of one of these melons in a small restaurant in the very centre of the market. Assuming that these cantaloupes cost $1 a crate the restaurant gets a profit of $16 to $18 on one crate of melons with an investment of $1.

Much the same is true of beans, lettuce and other foods. When it comes to poultry this correspondent says:

We have an abundance of dressed poultry, frozen last year, at a cost of 18 to 22 cents a pound, and now wholesaled at three to four cents less than the cost price last Fall and Winter. We received and unloaded 116 carloads of live chickens, numbering fully 650,000 head. These broilers and fricassee fowl are used almost entirely by the Hebrew housewives. The wholesale market on broilers was 17 to 18½ cents, while fowl sold at 14⅞ to 16 cents. Consumers get this poultry at two cents per pound over wholesale price.

This fearful waste goes on week after week largely because the machinery of distribution is defective.

If there was some agency by which intelligent housekeepers could find out what is being produced and on the present market the high cost of living would be the least of their troubles. Newspapers are teeming with accounts of the high cost of foodstuffs, and at the same time hundreds of tons are going to waste because consumers don's ask for it. Consumers pay no attention to anything until they read it in the newspapers.

It is a fact that most city buyers rarely think and investigate for themselves. They are guided almost entirely by what the newspapers tell them. If half the space now given to guessing at the war news were devoted to telling city people how and what to buy as food both the consumers and the producers would be far better off.

Odd Things About Poison Ivy.

YOU say it's a new one to you anent goats and poison oak or ivy. Perhaps it may further surprise you to learn that the omnivorous goat is not the only animal with an appetite for that vicious plant. At least it did me when I first came to the camp. The dairyman, who is an expert stockman, said that horses considered the tender leaves and sprouts a great delicacy, as did other stock; that it was a remedy for colic in horses and that when colicky if on range they would hunt out and eat the plant more than at other times; furthermore, that lumbermen in this section and also stockmen and others who are liable to come in contact with it secure immunity from the poison by occasionally eating a handful of the tender leaves of the plant. Proving his words he reached up into a wayside tree and brought down in his bare hand some sprays of the poison and passed them to his team.

Our camp, as a part of the great redwood timber country of the State, is headquarters for poison oak. It seems to take a fiendish and almost human delight in "soaking it to" the city tenderfoot who overruns the solitudes each season. Here near-tragedies are enacted. Two Summers ago a couple of nature-hungry youths from the city took in the camp. One of them became so badly poisoned that from the top of his head to the sole of his feet his flesh was like a boil. He couldn't bear even a light garment and for several days, naked and suffering, swearing and groaning, he was a prisoner in his room. There are as many remedies as victims and if used in time any of them will prove effective; but after the poison gets into the blood it will run its course and the best one can do is to apply some palliative to ease the intolerable itching and burning. For this purpose the hot water treatment is most effective, followed by a thick dusting of medicated powder or baking soda while the skin is wet. Wormwood tea used internally as a tonic and externally as a hot application is said to be very efficacious. It is an excellent practice to fortify the skin by an application of cold cream or any sort of grease with a dusting of talcum powder or starch before going on a tramp. This also protects the skin from insect bites and sunburn. A rind of bacon is good to take along in case of contact with poison. I would suggest to your inquirer who wants something to kill the poison plant on his acre, that lacking a goat the best plan is to grub out the roots himself, or if he has not time, to go over the ground frequently with the hoe and cut down the sprouts. In that way I have about exterminated the pest from a wooded corner of my grounds.

California. M. RUSSEL JAMES.

Life Insurance Policy.

WHEN a man holds a life insurance policy, "Self" being the beneficiary, at death of insured, what claim would wife have on policy if there are no children living?

Where the insured himself is named as beneficiary, the insurance money becomes a part of his estate in the hands of his executor or administrator, and would be used in the payment of debts, etc., and be distributed the same as other personal property. The wife would have the same interest in it as she would have in respect of the rest of his personal estate, which in New York, if there were no children, would go, after the payment of debts, etc., one-half to the widow and the other half to the next of kin, such as brothers, sisters, nephews, etc., or if none of these, all to the widow. M. D.

Who Has the Title?

WHAT can be done to acquire possession of property of which no deed can be found on record, a son having lived on same until death and the widow continuing to occupy and pay taxes, having paid the taxes for 50 years? The other sons and daughters being all dead, can it be held by quiet possession or a bill for the taxes and interest? I am very anxious to get a title to same.

Maine. B. L. E.

You do not give the name of the person who last had a deed to the property. Presumably it is the father of the son whose widow is now on the property and the property, on the death of the father, descended to his wife, if then living, and his children, and they, and their wives and children are now the legal owners. If this presumption is correct, the way for your inquirer to get legal title is to buy out the interest of these heirs, or to get them to sign a quit-claim deed to her. Their interests would not be large, as they would have to pay their share of the taxes for the past 50 years. If the heirs can be got hold of they ought to give a quit-claim deed without any trouble or expense. If they cannot be found, there appears to be no harm in the present occupant giving a deed to a purchaser, although the purchaser would not have a legal marketable title. In a few words then, the present occupant, who has paid the taxes for 50 years, must acquire in herself the interest which the other heirs of the former owner now have, and the quit-claim deed signed by all of them would seem to be the simplest method. Inasmuch as she has occupied the premises claiming title as against all the world for 50 years, she may claim ownership by adverse possession, and might start an action joining all the heirs of the former owner as parties defendant, but this is quite an expensive proceeding and the former method is more simple. M. D.

A TRAVELLING TABLE.—Passing through furniture stores we note among modern conveniences tea-tables on rubber-tired wheels. These, although very convenient in some homes, did not seem to fit our need, which was to set table, serve meals, and handle dishes with the fewest steps and in the shortest time for a very large family, and besides they were expensive. We studied on it for some time, when the handy man of the family evolved the following: We had an old-fashioned table, which was originally a drop-leaf, but being choice wood had parted with its leaves for bracket shelves, leaving the bed and four legs. He took the top off, nailing three-eighths inch hard pine matched boards beneath the frame crosswise. The hollow bed thus made was then lined with zinc, reaching over edges to make waterproof, fitted, soldered and smoothed down at the corners. A fine set of ball-bearing castors with fibre cover, to prevent scratching, were added, then a coat of paint was applied to the wood surface. Now we have a table that can be moved by a touch of the finger. It will carry the whole dinner or dessert for a large family from kitchen to dining-room at one trip, or carry a bushel of soiled dishes from the table. CLARA T. SISSON.

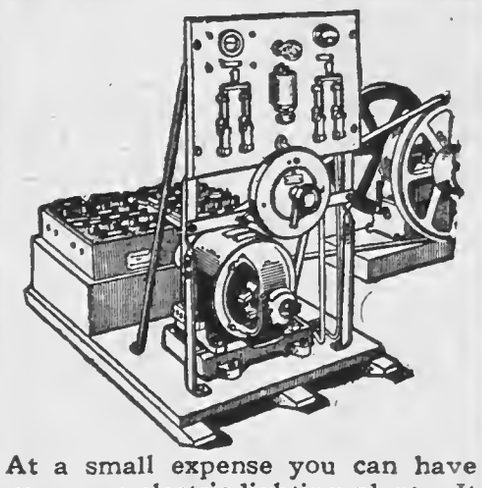
"IT NEVER RAINS BUT IT POURS."

About the best joke on Jim Crow, and it is true, too. We have a one-eyed farmer whose young chicks the black crows were catching for meals faster than was at all profitable. So, as it was doubtful if he could shoot a crow, he took down his trusty gun and went over to his grain barn, and sighting a common barn pigeon he blazed away, and down came the pigeon. When secured he next hunted up his good wife's stove brush and blacking. Soon the pigeon was as black as a veritable crow. This transformed dove-crow was then hung up in the chicken yard to scare away the chicken thieves—the crows—and proved to be efficacious. This is the first instance coming to my observation where a barn dove was used to scare away crows. It is well known that a dead crow hung up in a cornfield or chicken yard will keep crows away, and is a practice we often resort to.

New York. F. M. P.

R. N.-Y.—We have long heard of the "dove of peace." Here is a new use for her. She usually is a scarecrow.

Electric Lights In Your Home and Barns



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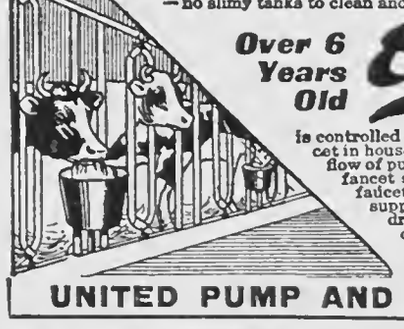

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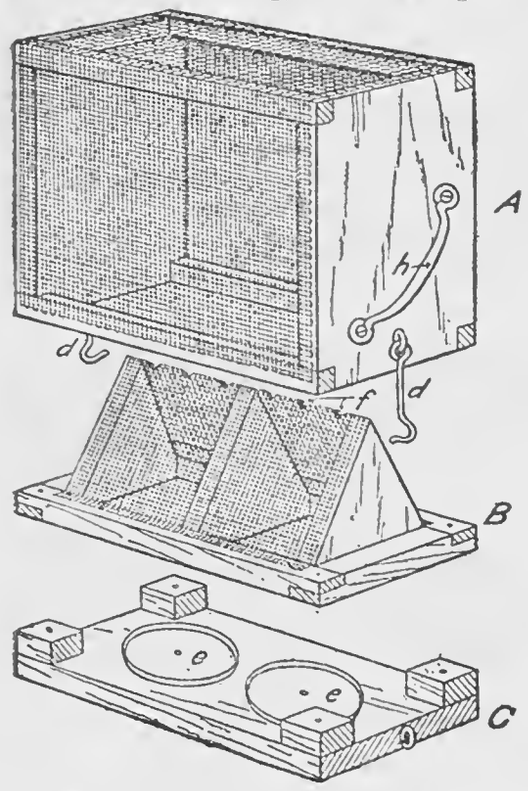
Business

A Home-made Fly Trap.

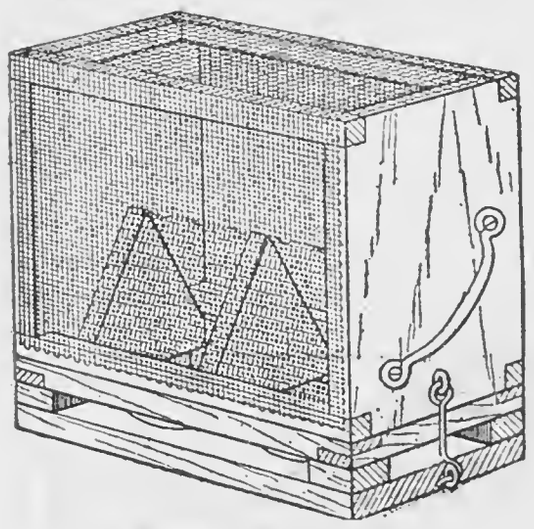
THE Department of Agriculture at Washington has issued a circular telling how to make a fly-trap for 20 cents or less. This trap was originally made in South Carolina, and was sent to the Department by one of its farm demonstrators. The picture shows what the trap looks like when complete, and the following statement is made of its manufacture. We should judge that this trap will give as good results as many of those for which 50 cents or a dollar may be charged. In connection with the use of chemicals in the horse manure, a number of these traps about the house will be quite sure to help. It is said that the Department's agents go about carrying several of these traps. They are set up in a farmhouse and the housewife sees at once what they will do and has the men folks make one or more. Here is a chance for some bright boy to make these traps and sell them:

These traps can be made any size to suit, but the most popular size in my work is 16 inches long, 12 inches high and



SECTION OF THE FLY-TRAP.

eight inches wide. Some are made as large as 24 inches long, 18 inches high, and 12 inches wide. The material for these traps costs from 10 to 20 cents, and can be put together by anyone handy with tools in a short while. The trap may be baited with sour milk, a piece of banana, a fruit skin, or similar substance. This should be removed at night or it will attract ants. At the same time the flies which have been caught should be killed by pouring hot water over the trap or leaving it immersed in water until the flies are dead. The flytrap is made in three distinct parts (A, B, and



THE COMPLETE FLY-TRAP.

C) that may be detached from one another by unfastening the hooks (d) that hold them together at either end. The trap is unhooked in order to place the bait on the bottom section (c). The bait is placed on two pieces of tin (e) tached to this bottom section. In the sample trap that was forwarded to the department these pieces of tin were circular tops of paint or milk cans, which can be removed by prying up with a knife. The middle section (B) of the trap consists of a screen-covered frame that resembles a small gable roof through which there are six holes (f) to let the flies into the uppermost section (A), which is merely the screened-in cage that is set down over the other two parts (B and C). The handle (h), of course, is unnecessary, but will be found convenient when the trap is immersed in water to kill the flies.

Toy Making at Home.

GERMANY has been supplying this country with a large share of the toys used by our children. Some of the German toy-makers have been bred to the business for many generations. The war will stop most of this toy trade, for though toys (even figures of soldiers) could hardly be called "contraband of war," most imports from the war countries will be held up. While millions of toys are made in this country there will be a shortage if the German supply is kept out. This will give opportunity for some skillful women to develop a little business. Children will demand playthings and dolls. Animal figures and many others can be made at home by women with quick fingers and good eyes. Twenty years ago we knew a family of women who made a good living and more at making such toys. Business developed in such a way that European toy-makers took up this business and made it unprofitable for the women. This destructive war may bring back part of this home trade.

The Business Gas Engine.

IN a recent issue you said you would like to locate some little gasoline engines that are doing work in the house. There are at least eight in this vicinity. I will tell of ours, as I believe it is doing more than any of the others. It is a two horse-power, costing about $45 with freight. We installed it 2½ years ago to run the cream separator and churn, also the washing machine, then we put a pulley on the ice cream freezer so as to run that by power, and next we rigged the sausage grinder to be run by it. We make about 140 pounds in the Winter and grind it through twice, which was hard work; now it is fun. The last thing we gave it to do was to run a generator connected with storage batteries, by which means we have a perfect electric light plant. The generator is always run when the separator and other work are being done, so have had to run the engine very little extra for the electricity. We haven't thought of any more work we can give it yet, but when we do we know it will do it. We think our little gasoline engine the best by far of any piece of machinery on the farm.

(MRS.) C. H. ELLINWOOD.

Different Grades of Goods.

I NOTE the letter by C., page 987, title, "The Local Storekeeper." There are so many grades and prices including genuine imitation, first, second, and third grades in goods under the same name that the local retail dealer cannot keep them all. Therefore he usually confines his purchases to firsts and mediums, hence a house which depends on a printer's ink description instead of sight and use can quote lower prices. He can claim that an article is steel, yet steel has values in different grades from four cents to 32 cents per pound or outing flannel, which has a value commencing at five cents, rising one cent to 18 cents, making 17 grades, or ladies' hats which have a retail value commencing at five cents, costing at wholesale 45 cents per dozen, made from peanut straw, and advancing according to grade to $125 per dozen for one grade of fine panama which retails for $15 each. Or eggs, which are quoted in a New York paper today at 28, 26, 25½, 24½, 22, 20, 32, 33 and 31 cents, making altogether nine grades. Butter is quoted at 29, 28, 27½, 25½, 24, 23, 22½ and 22 cents. It cannot be expected that a man who does a business of perhaps $5,000 per year can carry as many grades as the firm which does $100,000 a year, yet when you do buy from your local dealer you get full value for money or barter without paying in advance.

STOREKEEPER.

Co-operative Household Work.

A FRIEND of mine, who is a busy farmer's wife in Wisconsin, was unable to find anyone to help her with the housework. She had six hired men boarding in the family, which consisted of three children besides herself and her husband. She explained the situation to all the men, and proposed that while she was alone each one could do some part of the housework every day. They were all anxious to coöperate, especially as her plan in no way interfered with their regular work, but merely required a little thoughtfulness and care each day. She allotted certain tasks, so there was no confusion or delay. As each man passed through the kitchen on his way to a meal, he carried something to its place on the table. John took the butter and milk from the refrigerator, Max carried in the vegetables, Henry filled the water pitcher at the well, and Sam saw that the children were presentable and had their bibs adjusted, and helped them at the table. Filling the woodbox, and all the little chores that are quickly done by themselves but entail so many extra steps when one is all alone, were put on schedule the same way. The men knew that the housekeeper never failed to lend a hand when matters crowded outside and she could help in any way. Of course these men were not tramps or green immigrants, but young fellows with a sense of fair play. But my friend believes that she could get the same good will from any man who would be satisfactory on the farm, even though some might be more awkward than her present crew.

EFFIE M. HOWLETT.

The Boon of Parcel Post.

OWING to a long-continued drought in this vicinity, the berries were cut off, but a small quantity of cherries, (none fit for shipping) the damson crop is not promising, neither is the quince and apple crop. I have been greatly disappointed in not being able to supply the applications I have had for farm products by parcel post, but of course I would not sell or offer products of inferior quality. Though not the abundance of rose bloom, as in seasonable years, I have gathered rose leaves for several rose jars, and rose bags, and have the rose jars in preparation. Hope soon to offer the jars for sale, at ten dollars per jar, regular price for the jars, prepared as I prepare them, using attar of rose and other sweet perfumes. I shall not want to ask exorbitant prices for farm products; will give a just weight and try to do unto others as I would have them to do unto me. I believe the parcel post to be one of the greatest boons of the age, helping farmers and farmers' wives, and also city people. Through my 85 years I have not seen the opportunity that it offers, and I hope it will long continue. I have been a widow many years, with no sons at home and it has been hard to make two ends meet, much less overlap, but a fairer prospect opens with the advantage of parcel post. I will let you hear further when I become more established in the business of shipping. I hope to have products later in the season. Chestnuts are coming and I have had application for that commodity.

MRS. N. A. MC MANAWAY.

Virginia.

Flowing Water For the House.

IT is evident that all farmer's wives cannot have a "tireless hired girl" in the shape of a small gas engine. An Illinois farmer struck a happy middle ground in this matter, and it has worked out fine. In his backyard he was lucky enough to strike an artesian well that proved to be soft water. Close to this flowing well and also close to his kitchen he built an auto shelter of an attractive style of architecture, the foundation walls four feet above the ground being of concrete blocks, stained shingles the rest of the way up, with a pretty little hip-roof and dormer window. One half of the shelter house, the side nearest the kitchen he rigged up with a gasoline engine, and then hooked its power to a washing machine and wringer, and he turned the whole over to his wife. There is room enough in the little laundry to do other kinds of work, including ironing. Few gasoline engines are noiseless, the smell of gas sticks to them, and when one is able to locate the power outside but so close to the house it is found to be far more desirable than to have any kind of such contrivance indoors. J. L. GRAFF.

R. N.-Y.—Should we be asked why we put these items under "Business" our answer is that there is no better development of the farm business possible than making the women folks comfortable.

A Small Plant Business.

"HOW many dollars did you receive from the sale of plants?" was the question asked a blacksmith who supplemented his shop income with a hotbed, garden and apiary. As he counted out a hundred plants for a customer, he said:

"I have sold $10 or $12 from this bed. I sold plants very cheap and supplied my own garden, all from a little bed three or four feet wide and about 25 feet long. I just put in my spare time on it and placed horse droppings from the shop in the bottom of the bed. I use no window sash as you see, but just covered it with chicken netting. There is sufficient demand at every cross roads to pay some one to raise a few plants. This is particularly true in communities where general farming is done."

The writer is acquainted with a young man who yearly supplements his income from school teaching by selling plants to farmers in two or three townships. It pays him from a net income of $4 to $6 the day after paying for his plants. It requires no salesmanship, and he uses an old wagon and very ordinary farm horse. Think this plan over for next year, but don't sacrifice your farm work to peddle plants.

W. J.

Boarding and Caring For Invalids.

WHEN new lines of farm business or new farm problems are suggested we try them out with our readers. Here is a new proposition which may appeal to some one, who can make use of it. Our object in printing such things is to suggest possible new lines of business for farm women, and perhaps find some one who may fit the particular case.

My husband and I are living at present on a village homestead caring for the aged and somewhat invalid owner. This is a Summer resort and the house being large I am able to rent the rooms to the Summer people. When they are gone we shall be very quietly situated until another season opens, and I would like to learn of some persons (aged or a little past middle age) who would appreciate a pleasant home in the country. We are but five minutes walk from center, trolley passes door connecting towns along shore. I have known of young persons who had the responsibility of caring for aged persons who would be glad to pay a nominal sum for their care for the sake of being at liberty to enjoy social life in their own set. To persons who would not require special care and were able to eat at the table I could offer a good home for $5 per week. This includes board and room but not laundry. To such, if satisfaction was mutual, the home would not be for Winter season, but for year round. Maybe I am foolish to think that you might reach such through THE R. N.-Y., but I thought no harm in asking. MRS. A. L. M.

Connecticut.

A Business of Meat Canning.

I SHOULD like to know if any of THE R. N.-Y. family ever can fresh pork, and if so, how? Would it be better roasted than boiled? What do they pour over it, stock or lard? Do they use glass cans, and would it keep in warm weather, in a cool cellar? I have tried frying and packing in jars with lard over it, but that in the bottom of the jar will get an old taste before it is gone in warm weather.

H. A. E.

I cannot give satisfactory answers to these questions. C. Canfield, the neighbor I wrote of, puts up hundreds of cans, and it is fine. He puts up in tin cans and cooks, after packing in cans, four hours, but does not like to give specific directions as they would have to answer so many questions. They do custom work at from 65 to 75 cents a dozen cans and many in this community practice killing hogs in the Spring for Summer use, taking hams nad shoulders to Canfields for canning. Sometimes we smoke part of our hams and then get them canned, and they are good, and always ready for any emergency when quick meals are needed. Perhaps it would not be safe to try canning pork without knowing the whole formula and I believe there are books on canning giving directions. Canfield puts up thousands of cans of beef during a year and also poultry, rabbits, etc. E. A. B.

BOILING CORN.—I must disagree with your correspondent, J. M. B., about how to boil sweet corn. As I have 10 children, who all love it, and use from 20 to 30 ears a day, we have tried every method, and find the best result from dropping the corn into boiling water, over a hot fire, and when the water comes to a boil again, the corn is ready to serve. Try it. A. C. W.

"The Favorite Hen."

[The women who have entered hens in the egg-laying contest have sent us histories of their flocks and in many cases, have told us how they came into the business. Here is a sample history.]

THE history of my flock of chickens began seven years ago. At that time to help along with the family expenses I sewed pants at home for a woman who distributed this work for a Philadelphia firm. The work was so poorly paid that it was almost a starvation job. Being tired of working at a sewing machine for almost nothing, my thoughts turned to chickens, and I reasoned out that if I could earn as much with chickens as I did with sewing I would be satisfied, for then I would be out in the fresh air and not be tied down to a sewing machine. We had plenty of wild land, so with some old boards we fixed up a small house and began with 14 hens that I had raised, to keep account, to see if chickens really paid. I had heard so many discouraging reports from people around that I felt rather timid until I found out for myself. At the end of the year, after paying for all the feed, I had $20 profit. This encouraged me, and I kept increasing my flock slowly every year. Last Fall I had 450 hens. My general profit during seven years has been about $1 per hen. The breed is Black Minoreas, and it began this way: My original birds were obtained from eggs that I had bought from an old bachelor who had a flock of Barred Rocks which he said were mixed with Black Spanish. Strangely enough my birds were black-feathered and ever after that I bred these birds with purebred Black Minorea males. Lately I have become interested in the Leghorns and bought 18 hens, S. C. White Leghorns, from a neighbor who moved away, and sent last Fall through Mr. Cosgrove for a cockerel from Tom Barron. From this mating I now have some fine pullets which I am going to compare this year with some of my Black Minorca pullets. Our general farming is with berries and in 20 years we have not yet been able to lift the mortgage off our place. My husband and I now feel that we can do better with chickens, but we can only go slow on account of lack of capital. Of course my husband has to help with the work around the chickens now; after I reached the hundred mark the work was getting too much for me.

MRS. JOSEPH DI FABRIZIO.

New Jersey.

My Mother-in-law's Ways.

MY mother-in-law was years ahead of her time because, more than any housekeeper I ever worked with, she always studied out the best way to do things. The idea of most value to me, was her way of washing dishes. She never wiped them. After washing them she passed them through a hot rinsing water, and stacked them loosely in a large pan with a cloth laid folded in the bottom. They soon dry and one can put them away, or leave them in the pan until the next meal. This saves wiping towels, and the dishes will shine. Then she used to do up collars and cuffs so nicely. She would put a teaspoon of starch in a pint bowl, a half teaspoonful of powdered borax, a drop of liquid bluing added to starch and fill up the bowl with cold water. The collars and cuffs were dipped in this and then rubbed between the hands until the starch was well rubbed in. Then she took a clean sheet and moderately hot irons, and ironed the collars and cuffs first while they were still quite damp. They looked, when done, like the dull finished laundry work of today and beautifully white. Her recipe for apple pudding I've never seen given. She took one quart of flour, tablespoon shortening, one teaspoonful baking powder, salt, and enough milk to make a soft dough. Into this she stirred slices of quick cooking apples, two large ones at least. Put into well greased pan, and bake in quick oven one-half hour. To be eaten with cream and sugar or thin syrup. The apple flavors the whole pudding and tasted so "different." R. M. B.

Two Household Inventions.

THE Colorado Agricultural College News announces two inventions which, if proved practical, should help:

CLEANING CLOTHES BY VACUUM.—The vacuum clothes cleaner, a piece of apparatus consisting of a circular brush with an opening in the center, is placed in front of an electrically operated fan for suction, and a dust catcher. The whole is held in the hand and the brush passed over the clothes. As the dust is loosened by the brush the fan draws it in and deposits it in the catcher.

AN ELECTRICALLY HEATED GLOVE.—A valuable addition for the auto driver's Winter dress is an electrically heated glove. This is made flexible, and contains a number of resistance wires in the wrist and back of the glove so that the heat is applied to the back and fingers of the hand. The current furnishing the heat is turned on when the gloves grasp the metallic parts of the steering apparatus, which is in electrical connection with the battery furnishing current for the lights.

A Dead Owl Scarecrow.

APROPOS of that picture of a cherry tree covered with mosquito netting, I found a scarecrow this year that worked well. I have a nice batch of White Leghorn pullets hatched in March and April, and although they have good roosting quarters provided, and notwithstanding the fact that they are high-bred birds, having the blood of the Barron, Niagara, White and Rice, and other good strains, still they persist in heeding the call of the wild and roosting in the trees, there being several cheerry, pear and apple trees near their quarters. As a result of this habit an owl became a visitor at their roosting place. I set a trap on a high post nearby, and in a few nights caught Mr. Owl, a big one with a wing spread of four feet and four inches. About this time the robins and woodpeckers became very numerous in my cherry trees, so I hung the owl (dead, of course), in the highest trees, so that he would swing back and forth in the breeze. The birds disappeared as if by magic. I cannot say that this plan would always work. If it would it might pay to get a stuffed owl and be ready for them, for one might not always be able to catch an owl at cherry time. This is not a tested remedy, but I offer it for what it is worth. CHESTER L. MILLS.

New York.

:: "Short Stories" ::

Rag Mittens.

"MRS WHEELER, what is it you are knitting those mittens out of?" said Mrs. Bloye.

"I am knitting them out of carpet rags. I take black cotton cloth and plain white or red cotton cloth and tear it in strips about one-fourth of an inch wide and sew them together as you would carpet rags, then knit just as if you were knitting yarn mittens."

"They look like striped yarn mittens. I should not have known the difference at a little distance."

"That is what every one says. I made Mr. Wheeler a pair of them the first Winter we were married. I did not have any yarn, and we had no money to buy any with, or mittens either. So I took cotton rags and made him a pair like these. He wore them for driving all Winter. He said they were the warmest mittens he ever wore. They lasted him two years and they were all the mittens he had then."

"I should think they would be fine for boys, they wear out yarn mittens so fast."

"They are. I have knit a number of pairs for the neighbor's boys, and knit some for men and sold them for 75 cents a pair."

"I would not be surprised if my son should want you to knit him a pair when he sees them," said Mrs. Bloye.

New York. MRS. H. A. B.

A Backyard Fruit Garden.

ONE of our problems has been the subduing of weeds in the backyard. By actual count, there were 29 species in that 30x40 foot space, all doing their prettiest to get head and shoulders above their neighbors. As the starting of grass seemed a hopeless proposition, some effort was made to establish strong-growing, native plants, such as the wild sunflower and red-flowered raspberry, but they were soon crowded out by the weeds. At last, a small quince tree was planted in the center of the plot. No special care was given it, except to pile the weeds as they were cut around it. Sometimes, in dry weather, the water from the weekly wash was poured about its roots. It flourished mightily but, in its second year, met with a mishap which twisted its trunk sideways so that it almost reclines upon the ground. This would have caused some trees to give up the ghost, but not the sturdy quince. In its third year, it gave us the first fruit, several great, golden globes as fine as one could wish for. This set us thinking, why not more fruit? By degrees, we have added three more quince trees, an Early Richmond cherry, and a peach tree. As there are also two old rose bushes and a large lilac, our space is full, but we intend to squeeze in a Reine Claude plum next the peach tree to take the place of that short-lived individual when it dies. The trees are all too young to bear full crops, but last Fall, after making what jelly we wanted, we canned 30 quarts of quinces, using half sweet apples. There was still a basket of fine fruit for which the grocer paid us 75 cents. This pleased us for it looks as though we shall soon be receiving interest on our investment. As for the weeds, they are doomed, for, now that we are interested in our experiment, their eradication is no longer an irksome task.

M. E. C.

"THE FAVORITE HEN"

LAST month we stated the situation regarding the hen contest. There were nearly 90 entries while we are limited to 33 hens—that is, three pens of 10 hens each and three substitutes.. We asked the women who entered these hens to suggest a way of settling the matter. They have been very nice about it. Some promptly withdrew their entries. They all agree that the fairest way will be for The Rural New-Yorker to select the hens, and they all state that they will be fully satisfied with our decision.

Should Have Uniform Pens

These hens are to be entered at the next egg-laying contest at Storrs, Conn. There will be 10 hens to the pen, and the managers desire, if possible, to have a uniform outfit. It will be much better, for example, to have a straight pen of Leghorn or of "Rocks" than to have pens made up of different breeds. We agree with that, though it will be necessary to have one mixed pen of these "favorite hens"

White Leghorn and Rhode Island Red

We find that about one-third of these farm women entered R. I. Red hens and nearly another third White Leghorns. The balance includes hens of 8 or 10 other breeds. There are more Barred Rocks than of any other of these breeds, but not enough of any one to make a full pen of 10. We have therefore decided to make up one pen of Leghorns, one of R. I. Reds and, if the managers of the contest agree, one of four Rocks, three Wyandottes, two Orpingtons and one Black Minorca. This will give all breeds a showing in proportion to their entries. In selecting the Leghorns and Reds we have obtained histories of the flocks and tried, whenever possible, to give the choice to typical farm women who are not professional breeders or advertisers, but who own what may be called a good farm flock. As soon as we have arranged with the contest managers names and addresses will be printed.

SWEETENING A CISTERN.—J. D. M., Albany, can make his cistern sweet in a few minutes by dropping in a stone tied to a rubber tub , which will go to the bottom, and pumping air through it with any kind of an air pump. This will also work in any well, where a dead mole or robin has made the water foul. It is so simple that people overlook it. A. C. W.

CONVENIENT MILK-ROOM.—I have seen a very good milk-room of brick, almost ssuare with cement floor. If I build one it will be of conerete (cement up to the windows, the remainder of lumber). There is an engine and a long shaft from another room, in fact it reaches across four or five rooms, and actuates separator and churn. It also passes through the wood house, cuts the wood; turns the grindstone and silage cutter. A rope that winds on a drum does a lot of lifting at the barn. Those four or five rooms are the long building between the house and barn, with shed roof on one side and cement walk. That milk-room has a large box, a refrigerator on wheels. The churn and shelves too have castors.

D. C. K.

BLACKENING TOP F STOVE.—Tell Mrs. W. H. G. that as her stove has been washed so long, but little polish will stick on. I have had some experience with the same trouble, and find that if the stove is greased with some kind of grease mixed with half its size of lamp-black it stays black. This is the way I did it: One cup of melted grease, one-half cup lamp-black, stir thoroughly and apply with a brush. This will not shine very much, but will make it black. Build a good fire in stove after putting it on. One can also buy enamel at any drug store but this is costly. Here is a hint: Grease new tins or any iron you use around stove and bake them in a hot or warm oven for three hours or more according to heat in stove; they will not rust then.

MRS. MARY SEALY.

TO KEEP COMFORTER CLEAN.—I did housework for a lady once, who was very neat and had some good ways of saving herself extra work. She always put what she called a collar on her bed comforter. She took a piece of cloth like the comforter, the full width of the calico and as long as the comforter was wide, and sewed it on the right side of the comforter at the top, then turned it over and sewed it down by hand on the wrong side. When it became soiled (for the top of a comforter always gets soiled first) she ripped it off and washed it, then sewed it back on again. By doing so she saved herself work in washing a heavy comforter, and it kept it from wearing out so soon. MRS. H. A. B.

Cattaraugus Co., N. Y.

DANDELION COFFEE.—A good healthful substitute for coffee in the Spring, or even at other times, is dandelion coffee. It is made as follows: Dig the roots (or they can be bought ready dried at a drug store) wash them clean, (I use a vegetable brush to clean them) and cut up in thin slices about an eighth of an inch thick. Spread them out in a large tin and put in the oven to dry, let them brown well but do not burn them. When well dried put away in a sack to use when needed. Allow one tablespoonful of the dried roots to a person, putting them in a coffee pot with cold water on them, let it come to a boil and boil a little while. Drink with cream and sugar. Our family and others that I have known of drinking it think it delicious.

New York. MRS. H. A. B.

CLEANING WASTE PIPE.—Henry Doerner of the Colorado Agriculture College gives the following directions: "One of the most trying annoyances of housekeeping is the obstructions to the free, quick outlet of waste water of the washstand, bathtub, or kitchen sink. This is caused by the gradual accumulation of small bits of refuse material which check and finally entirely stop the outflow of waste water. A simple, inexpensive method of cleaning the pipe is as follows: Just before retiring at night, pour into the pipe enough liquid potash (not soda) lye of about 36 per cent. strength to fill the "trap," as it is called, or bent portion of the pipe just below the outlet. The amount necessary will be from one to two pints. Be sure that no water runs into it until the next morning. During the night the lye will convert all of the fat or grease into soft soap and the first current of water in the morning will remove it entirely and leave the pipe as clean as new."

What Dishwashing Is.

DISHWASHING is a process which normally takes place in the household three times a day and yet how little the housewife realizes that the whole scheme of procedure is based on scientific principles. The aim of the housewife is to remove dirt. Now this dirt is of two kinds, biological and chemical. The biological dirt is invisible, and is in the form of minute bacteria, or as they are popularly called "germs." The danger from this kind of dirt can only be done away with through "boiling" (or scientifically speaking "sterilization"). In the average family, except in cases of sickness, this form of cleaning is sufficiently taken care of by rinsing the dishes with boiling hot water. But in institutions, hotels, boarding houses and the like, where large numbers of people are banded together, longer and more thorough sterilization is absolutely necessary. In large dishwashing machines it is generally done by running live steam through the water in which the dishes are being washed.

The chemical cleaning process is the one used in the home. Chemical dirt can be seen. It is the residue from our food and needs no further explanation. The first thing the housewife does is to remove all such material possible by scraping. This is easy, and should be thoroughly done, as it greatly facilitates the rest of the process.

Next stage is the hot soapy-water bath. Soap is used primarily to "cut" the grease. As almost all animal food contains grease in varying proportions, and by the hardening of this grease adheres to the dishes, this is a very essential part of the dishwashing process. Soap is made from grease and an alkali which are boiled together until they chemically combine, with soap as the product. This product when put into water chemically reacts with the water and liberates some of the alkali. The liberated alkali then combines with the grease on the dishes and forms a "soapy-like" product which is soluble in water and "dissolves" off the dishes, leaving them clean when removed from the soapy bath. If too many greasy dishes are washed in the same soap bath there is not enough liberated alkali to react with all of the grease, and consequently the grease is not all removed from the dishes and the water becomes greasy.

The stickiness of most vegetable foods is due to cooked starch. This is soluble in water and could be soaked off without the use of soap. Such foods dry ont very quickly if the dishes are allowed to stand without soaking and are then very difficult to remove. Hot water is best for three reasons; first because the heat partially melts the grease on the dishes, second because the chemical action of soap is greater in hot than in cold water, and third because the starch is more soluble in hot water.

Soap is not a pleasant flavor when mixed with food, therefore it is necessary that the dishes be carefully rinsed to remove all traces of it. The ideal way of doing this is to arrange them in a wire dish drainer. (These can be bought and are very inexpensive.) Stand the drainer full of dishes on a drain-board, in the sink, or if no sink is available, in a large pan, and pour boiling hot water over them. Then allow the dishes to air dry in the drainer. If thoroughly rinsed, dishes thus dried are fully as clean and "polished" as those laboriously dried by hand and the whole process is very much shortened. Besides the necessity of washing out dish towels is eliminated.

If the housekeeper does her own work and prefers to spend her whole evening with her husband, rather than to take time after the evening meal for dishwashing, it is perfectly easy to carefully scrape the dishes, pile them in a large pan and cover with water to which has been added a little washing soda. In the morning it takes but a few minutes longer to wash them with those from breakfast, and thus accomplish the day's dishwashing in two rather than in three lots.

Housewives' Handy Table.

The following list of weight and measures equivalents will be found very handy. It is especially valuable when ordering supplies for the family or for special occasions. Mount it on card board and fasten it up in some convenient spot in either kitchen or pantry. You will be surprised how many times you will refer to it.

Bacon, 30-35 thin slices in one pound.

Baking powder, 2½ cups in one pound.

Beans—(Navy, kidney or lima) 2½ cups in one pound.

Butter, 2 cups in one pound.

Cocoa, 3½ cups in one pound.

Coffee, (ground) 5 cups in one pound.

Cornmeal, 2⅔ cups in one pound.

Dates, 45-48 small or 30 large in one pound.

Eggs, 8-9 medium size in one pound.

Flour, 4 cups in one pound.

Lemon, juice of one generally measures three tablespoons.

Meat, (finely chopped) 2 cups in one pound.

Oats, (rolled) 5 cups in one pound.

Onions, 8 medium size in one pound.

Orange, juice of one generally measures ½ to ¾ cup.

Peanuts, 1 pound will give one cup of shelled nuts.

Prunes, 40 large or 60 small in one pound.

Potatoes, 4 medium size in one pound.

Rice, 2 cups in one pound; 1 cup of raw rice will make 4 cups cooked.

Saltines, from 100 to 120 in a pound, depending upon shape.

Soda, 2 cups in a pound.

Spices, (ground) one cup weighs 4 ounces.

Sugar, granulated, 2 cups in one pound; powdered 2 2-3; brown 2 2-3; loaf, 75 pieces; domino, 56.

English walnuts, 70; one pound will yield one cup of meat.

Any housewife can see how such a list could be added to indefinitely.

:: Simple Kitchen Chemistry ::

The Science of Common Things

By Bertha Betts

Sugar in Canned Fruit.

The fruit, pulp and juice, is generally "put up" in two ways by the average housekeeper. It is either canned with a small amount of sugar, just sufficient to give a pleasant sweetness, or it is preserved with a large amount of sugar. In the latter method enough sugar is used to preserve the fruit without as thorough sterilization of fruits and receptacle as must be done when canning with a small amount of sugar. Sugar is a preservative when used in large quantities. In preserving, the fruit is boiled for considerable time, then sugar added and boiling continued until the proper concentration of thick fruity syrup has been reached. During this boiling the fruit loses its shape and the mixture becomes jam-like. Fruit loses its shape and becomes dark in color when cooked in a syrup.

In canning, if the aim of the housewife is to preserve the fruit in as near its original form as possible, the sugar must not be added until the fruit has been, at least partially cooked in water or by steaming. Then the water in which it was cooked may be boiled down, sugar added and the resulting syrup poured over the fruit which has been previously placed in sterilized jars. Or the raw fruit may be packed in the jars, sugar and water added and the whole sterilized in a steam bath, oven or fireless cooker. This method does not produce as rich a product as the first, and neither of these methods produces as rich a product as can be obtained when a sugar and water syrup is made at first and the fruit cooked in the syrup until tender. Care must be taken that the syrup is not too "strong" or concentrated. If too concentrated the fruit juices will, by a process of osmosis, pass through the containing cell walls of the pulp into the syrup, (popularly speaking "be drawn out") and leave the fruit shriveled and toughened.

Acid fruits so canned will need a larger amount of sugar than will slightly acid fruits to produce the same degree of sweetness in the finished product. The reason for this is that when granulated sugar is boiled with an acid a chemical change takes place and the sugar is hydrolized or changed into a "simpler" sugar which is very much less sweet to the taste.

Sugar added after the fruit has been cooked insures a natural shaped fruit of nearly natural color surrounded by a clear fluid, and is liable to taste insipid, unless the syrup has been sufficiently concentrated by boiling. On the other hand if the sugar is at once made into a syrup and the fruit cooked therein the fruit is liable to be darker in color and less perfect in shape, but more rich as to flavor. The keeping quality is the same in all methods. In either case the jars and all utensils used must be thoroughly sterilized.

Why Are "New" Potatoes Best?

DEALERS make a great point in advertising early potatoes, that they are *new* potatoes. The question is, why do they make a point of this? Have early potatoes a better flavor? Do they contain something of food value not in old potatoes? In short is there anything about new potatoes that should give them an increased value or make them more in demand? F. I. C.

New potatoes are in demand because at this time of year the old potatoes have deteriorated as to cooking value as well as in flavor. The early potatoes, although not as good as those which will come later in the season, are still superior to partly sprouted and wilted old potatoes. There is a chemical reason. Nature uses the potato tuber as a storehouse for the food elaborated by the potato plant. This stored food is designed as nourishment for the new potato plant which will be forthcoming as its successor. The food used by the plant is sugar, but it is stored in the form of starch. The potato when harvested is rich in starch, it lies dormant all Winter, its starch content remaining nearly constant, but when Spring comes a chemical change takes place. The potato begins to sprout, and its starch content begins to be converted into sugar as food for the growing sprouts. Gradually the starch disappears as sugar into the new growth, and the potato tuber becomes shriveled. This chemical change begins before the sprouts grow, and therefore in the Spring a potato which appears perfect in every outward respect will still have a much smaller starch content than it had in the preceding Fall. A mealy potato is one of high starch content. The standard of good cooking potatoes, in this country, is that of mealiness. A soggy potato is of little value here except for certain varieties of fried potatoes. In France and Germany potatoes are more extensively served fried or in salads, therefore the soggy potato is preferred. Personally I prefer an old potato of good variety, one in which the starch content was originally high, and which has been carefully kept so as to prevent sprouting, to a new one of poor variety and low original starch content. B. B.

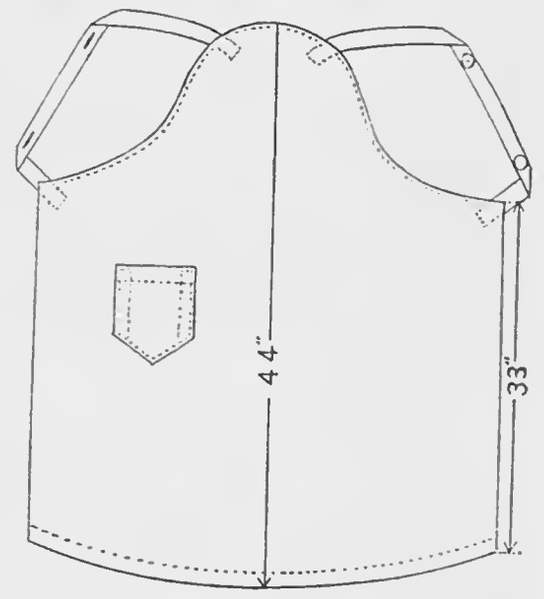
When Children Crave Meat.

WE often see the statement that meat is bad for children, but lack of meat is the cause of weakness and ill-health when the meat elements are not supplied by an abundance of milk, eggs and fresh fish. Parents often refuse meat to their children who seem to crave it, but being unable to afford a pint of milk and an egg every day for each child, the children are given too great a proportion of starchy food and sweets. They often lack the vitality to digest the cereals, are listless and tired, and liable to contract many diseases whose cause is poor digestion and under-nourishment. The craving for meat is a right one, and can be satisfied if the meat is served with some simple non-nourishing vegetable of a salad nature. Tell Johnny he may have a piece of fresh meat if he will eat a dozen lettuce leaves or a few stalks of celery or a large helping of cooked spinach or other greens, or the same quantity of raw cucumber, each served without fancy dressing.

My two little boys, aged five and three, will eat lettuce by the plateful without anything on it, and I find I can give them meat, even fresh lean pork, with good results if combined in this way. I never use vinegar for them, preferring that they should learn the natural flavor of each vegetable. Tomatoes and fresh fruits are also valuable, but many mothers do not appreciate the value or understand the office of the salad vegetable in carrying away waste and purifying the system. If a mother will furnish these combinations she need not fear the bad effect of a generous meat allowance, and a delicate child will soon show the effects of new blood in the bright eyes, rosy cheeks and strong nerves which only meat can supply. MRS. L. V. COOK.

My Kitchen Apron.

WHEN I set about designing a kitchen apron I had three things in mind. I wanted an apron that would protect the front of my waist as well as my skirt, that would be easy to make, and that could be laundered in the shortest possible time. The pattern here described I have used for three years, and like it, because it fulfills all these conditions.



KITCHEN APRON.

The apron is made as wide as the percale, thus giving a selvage at each edge and saving hemming. The length I need is 44 inches from the top of the bib to the bottom of the hem. The length of the selvage edges is 33 inches, the width of the bib at the top is 12 inches. The simplicity of laundering this apron is a great recommendation, for it has no gathers or seams to dry.

It took some time to perfect the straps. I started with tie strings at the corners and a neck strap attached to the bib. This, however, I soon discarded because

ADJUSTMENT OF STRAPS IN BACK.

it pressed uncomfortably on the back of my neck. I now cut two straight strips of percale, 27 inches long and 1½ inches wide, which I fold and stitch together, making two double straps. One end of each strap I stitch to the upper corners of the bib. Eleven inches from these corners I make a turn, and 12 inches farther down I make another turn. This leaves a short end of a strap which can be stitched to the corners of the apron at proper adjustment to fit the hips of the person to wear the apron. One strap has two buttons on the second section, one near each turn, and the other has buttonholes to correspond. When worn, the second sections of the two straps lie together straight down the back.

ANNIE E. HARRIS.

A Chapter on Dress Collars

How to Obtain A Variety

By Esther A. Cosse

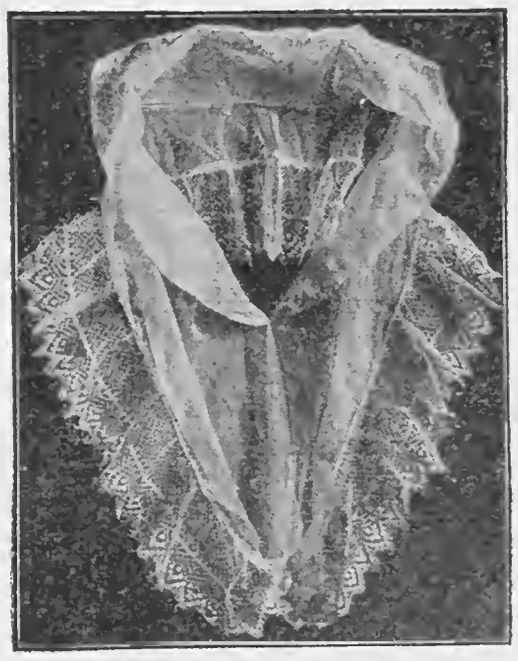
ALTERING A DRESS.—Have you a dress that you have purchased and feel that the waist looks a little different from what others do this season? Well, if you have one such and desire to have it look a little more modern, the remedy is very simple. It is difficult to keep our clothes, as we term, "up-to-date" since new things are introduced every week, or, in fact, every day, and pray who can change the costume every week, much less every day? Even though we have dresses or suits for every day in the week and every occasion it is impossible to keep up with the changes. But there has been one change recently, which, it seems to me has greatly improved women's waists. That is the use of fancy collars. By this means, one can have a perfectly plain shirt-waist suit, either with the skirt and waist attached, or separate, baste on one of these collars, and have a dress suitable to wear for any occasion. Of course much depends upon the material of the garment, some would have a dainty organdie, which when viewed now looks a little plain. Procure a little net and lace, make one of the collars, and your costume is suitable for even the most dressy occasion, or for one that is worn to church, etc.

USING UP ODDMENTS.—Many times, if we would but look about the house we will discover in a box stored away in the attic or store-room some pieces of silk, either in a color or white, and some pieces of lace, varying in width and texture. Again we find that some aunt or relative has in the past made us a pretty lace collar of Irish crochet or some other design. What is the reason these things can't be used in these days that collars of every description and color are used? Then we may run across a piece of organdie, fine lawn, silk, chiffon or some such cloth, and these can very easily be made into a vest and collar. Any of these varieties will add much to the appearance of the dress. Sometimes we have a plain shirtwaist and we want to make it a little fancy for a certain occasion. If one of these collars is added to it, one would find the waist vastly improved. Women must not imagine they can't make these pretty collars. They may have seen one on some one else and wished they had one like it. Did you ever try to cut a pattern for one after you have reached home? Well, if you had done, you would have seen that it is an easy thing to cut. Of course everyone knows how large a collar must be for the neck, yet in these days when tight necks are not used, it is difficult for a woman to remember what size she would need, as many have grown larger since they used neck bands last.

BECOMING STYLES.—A large woman must by all means avoid a high collar, or one that is large, even though it may roll, as it makes her appear round-shouldered. There are many styles with soft lace about the neck, that is wired, but not to stand too high, that are suitable without the use of the rolling collar. I know all women like the rolling collar, especially in the Summer, but the stout woman does not look well with any fullness about the neck. If one would notice that all artists take away all fullness from the shoulders of a woman before they start to make pictures. If left there, the only thing one would be able to see in the picture would be the full collar. As I said before there are many styles that are becoming and they need not worry over things they can't have, but take advantage of the good things they can have that will be suitable. These collars are very inexpensive even though we have to secure the material for the whole thing. The one shown in the first illustration is made of net and requires one half yard of yard-wide net and two yards of lace three inches wide.

MAKING THE COLLAR.—To make it first cut a sailor collar 11 inches wide across the back and four inches deep, with a piece 11½ inches from the back to the front point. Next cut a back yoke to which is attached a strip of net 15 inches long and 7½ inches wide. Sew two collars together, then attach to the yoke and after sewing on the front pieces, gather the lower points of front together and sew the lace all around the yoke and front, as shown in illustration. Secure one yard of wire for collars and sew in four pieces, one at each side and the other two one and a half inches from the center back, on both sides. Trim with dainty little buttons down the front and catch with very small hooks and eyes or small clasps. Baste this collar to the back of the waist, at base of yoke and pin at the bottom of the front. Any style of girdle is used with it. It will trim any dress and can easily be removed and laundered, neither is the net perishable and can be worn any number of times without fear of being ruined.

ANOTHER STYLE. — Another collar, which is made very much different, but equally as pretty and dressy, is made from a piece of white silk and shadow



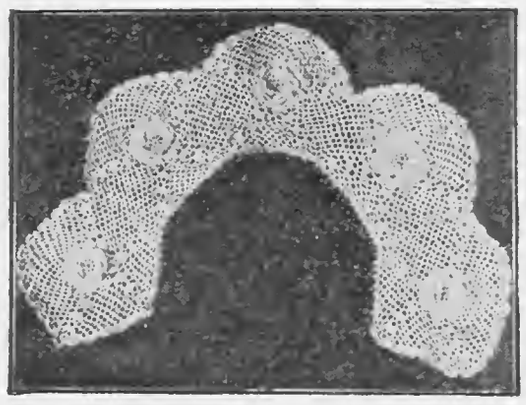
COLLAR MADE OF LACE AND NET.

lace. This is made quickly, even in less time than the first one, as there are very few rough edges to cover. Find among your patterns a waist that has a sailor collar and a yoke in order to get the proper shape about the neck, then cut the collar as small as you desire. The one shown in the second illustration is but three inches wide, and is especially becoming to the stout woman. The points measure 4¾ inches, and from front point to back 6¼ inches. The neck measures 15 inches around. The yoke is 2½ inches wide and the vest the same width and 10 inches long. Pearl buttons are attached over small hooks and eyes. It requires one yard of shadow lace 11 inches wide. Half is sewed to each front of the yoke. The collar is made double and attached to neck. Small tucks are sewed in each corner and up the center back and the wire is run through. The

COLLAR OF SILK AND SHADOW LACE.

wire is very soft, and resembles covered tie wire, such as is used to tie wire frames for hats. This is attached the same as the first one. The ends are gathered and fastened to the waist.

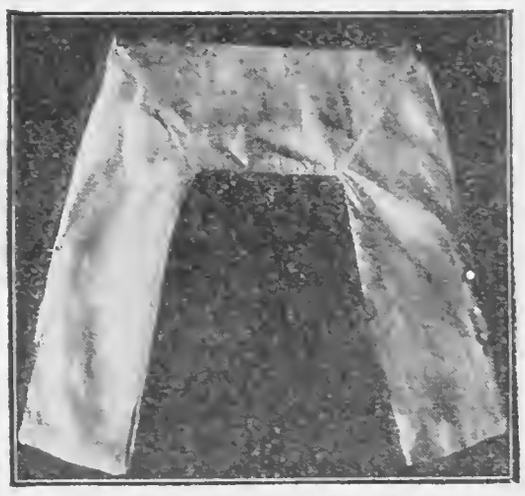
AN ORGANDIE COLLAR.—One made of organdie and suitaable for a shirtwaist suit is simple in design; made double and sewed to a waist that needs a small vest. The collar is rolling and needs no wire, but when it is laundered it is advisable to run it through a thin starch. Like all the others it is cut from a sailor-collar pattern, but when it comes to the front, the strips are made straight 18 inches long. The collar measures 13½ inches across the back, and the points are 6½ inches deep. The straight width of the collar is five inches. These pieces are sewed together and in the illustration are hemstitched up the points, which was done by using a very coarse needle on the machine and running it through on card board. It is sewed to the back of the neck for four inches across the center back, then when the collar is put on, the end is turned over and drawn to the front. The front edge is trimmed with buttons, and the other side as the under part of the



ROUND COLLAR OF IRISH CROCHET.

clasps, as can be seen in illustration below. When this is put on, the lower edges must be pinned to the underwaist in order to keep the waist from slipping down the back and the collar in place. It requires half a yard of organdie or fine lawn and four buttons.

IRISH CROCHET COLLAR.—Another collar which is crocheted, in fact called Irish crochet, is very simple in design, but makes a big improvement in a dress with which it is worn. It is wired much the same as the other collars, but falls soft about the neck. The same wiring can be done with any lace collar which many people have had given them. The rose is made first. It requires a little more than one ball of D. M. C. No. 50. It is made: Chain six and make a circle by slipstitching it together. Chain 15, one double crochet, chain three, one double and continue to end of row when you will have eight spaces. Join by slipstitching last double to chain. 2d Row—One single crochet, six doubles, one single, into each of the eight spaces, for first row of petals. 3d Row—Chain five and turn work to wrong side and catch into first single of last petal on the back. Continue until you have eight spaces. Turn



AN ORGANDIE COLLAR.

to other side. 4th Row—One single, nine doubles, one single in each space around rose. Turn. 5th Row—Chain seven and make like 3d row. Turn back. 6th Row—One single, 12 doubles one single in each space. Turn. 7th Row—Chain nine and make like 5th row. Turn. 8th Row—One single, 15 doubles, one single in each space. Rose is now completed. 9th Row—Chain five and go in the fifth stitch with a single crochet; chain five and go into 10th stitch; chain five and go into 15th stitch and so on. 10th Row—Same as the ninth only going into third stitch of each space. 11th Row—Slipstitch forward to third stitch of chain, chain five and make 10 doubles in next space. Chain five and make three spaces by catching into third chain of previous row in each space with a single crochet; chain five and make 10 doubles in next space; chain five and make two spaces; chain five and make 10 doubles in next space. Make three spaces and chain five and go into next space with 10 doubles. You now have 12 spaces. Chain five and slipstitch. 12th Row—Chain five and go into fifth stitch with single; chain five and go in last stitch; chain five and go in third stitch of next space with single, and so on to end of row. Slip stitch to join. Shells must be made directly over the first. 13th Row—Chain five and go in the third stitch of every space. 14th Row—Make the same as 11th row, putting the double crochets directly over those of the 11th row, as you are making a medallion and widening on each row. 15th Row—Made same as 12th row. 16th Row—Same as 13th row. 17th Row—Same as 14th row. 18th Row—Same as 15th row. 19th Row—Same as 16th row. 20th Row—Same as 16th row. Break thread and make five medallions for the collar.

JOINING AND EDGE.—The narrow part is the neck. Take two medallions and join from one to the other by chaining three and catching into third stitch of each space with a single crochet. Fasten thread and make three single crochets in each space around the neck. When you reach end go on down front and make one double in first space; chain five, make a picot by going into third stitch of chain with a slipstitch; chain three and go into same space with double. Make four picots in each space, one single crochet in next space, then one double, etc., all the way around until neck is reached. Then chain five, make a picot, chain two and go in every third stitch.

Handling the Bird.

GENERAL DIRECTIONS.—I have a bird, a beautiful singer, and have had other birds—always with great success in caring for them. Always keep the cage clean. At least every other day scald with boiling water tin bottom of cage, perches and drinking cup. Take a feather, clean inside of drinking cup; this is really very necessary, as water sometimes settles, and a scum will get in corners unless cleaned with a feather. Give fresh water every day, and keep seed cup full. Don't buy cheap mixtures of seed; always buy the best mixtures, so that there is no hemp. Once a week give a small dish of raw grated carrot, a sprig of water cress, or a little lettuce. They are all fond of these, and will eat quite a lot. Be sure these green things are perfectly clean, and don't give a big quantity. Keep a cuttle bone in reach. Don't feed sugar, pastry or sweets of any kind, as this makes them fat, and a fat bird sings very little. Let him bathe often.

SPECIAL NEEDS.—I do not think it good to hang them out in Summer. They are sure to get cold some time, and if a bird has once a bad cold it never sings much again. A little bread and ground red pepper is good for slight cold. Be careful of cats. Canaries will die of fright without being caught. Keep the top of cage clean, where the knob that holds the ring is, as this is a great place for lice. Take a cloth wet with kerosene oil, put a little bird manna in seed. Some say to put this in the cage, for it comes fixed to hang, but I find they will eat it all up at once this way.

I always keep my bird in Winter in a sunny south window, with some sunshine. I put my bird in another cage and clean the brass one with some good cleaner. Do this once in a while; it keeps the cage so bright. For lice, put a little sulphur on top of head, under wings and tail. Use only a pinch. I find this will drive them away. Perhaps this will help some one with a canary bird who is inexperienced. J.

"FARMHOUSE Amusements For Boys and Girls" is the title of No. 9, Rural Life Series, issued by the New York College of Agriculture at Ithaca. The object of this pamphlet, as stated, is to help girls and boys to "lay in a stock of ideas for Winter enjoyment." The Winter evenings are often dull unless amusement as well as work can be planned. It will pay to read and study this bulletin.

Mother's Sewing Room

Farm Dressmaker's Work Shop

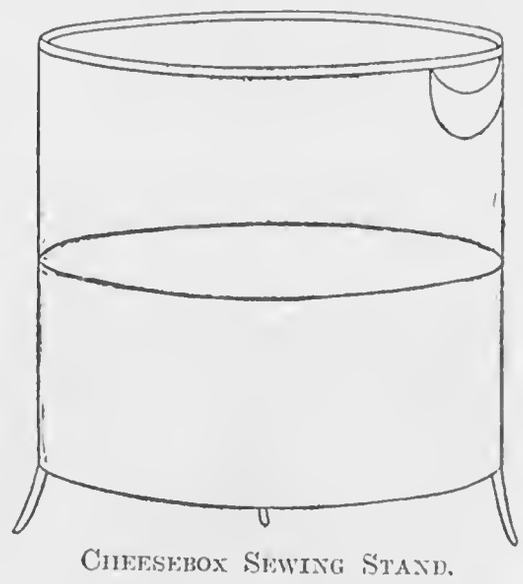
"By a Farmer's Wife"

PART I.

HOW IT STARTED.—For a number of years my sewing machine migrated from sitting-room to dining-room, and on to sleeping room, thence back to starting place, to begin the trip over again. This was a source of annoyance, as it, together with the work which necessarily accompanied it, was always in the way. At last relief came through taking a small bedroom adjoining kitchen for a regular sewing room. My husband put a shelf three feet wide across one side of the room, just high enough for a cutting table and another two feet wide across the other side and higher up. This latter shelf was used for storage purposes. This room was a great comfort and convenience, only it was too small. As the years passed and the older sons began to establish homes of their own, I found we had vacant rooms upstairs and realizing that the men needed the room I was using I had the sewing machine taken to one of the rooms above, where it has remained ever since. This is a good-sized, well-lighted room with large clothes room connecting with it. Here I can store everything that pertains to sewing, as well as many other articles. Nothing is ever disturbed by the rest of the family. My work can be dropped at any time, left indefinitely, and will be just as it was laid down when I return. It creates a feeling of comfort to know that it isn't in anyone's way. The only drawback is that the room is in the second floor, for with the passing years I find it a little more difficult to climb the stairs, and I cannot help an occasional sigh of regret for the little room down stairs off the kitchen.

CONVENIENCES AND ARRANGEMENT.—As we did not wish to build broad shelves in this room, my husband bought a cutting table measuring 48x28 inches. This is large enough to cut a skirt nicely, but is not quite so convenient as the wide shelf which I had below. This cutting table stands next to the machine in order that the materials upon it can be easily reached when doing machine work. Upon it are kept a 60-inch tape measure, a pair of shears, a spool of basting thread and some milliner's needles, also a piece of chalk and plenty of pins. The needles mentioned are especially good for basting. Back of the machine hangs a little cupboard made of a shallow box, where are kept a sort of reserve supply of thread, buttons, buttonmoulds, hooks and eyes, silk and twist, etc. Tacked to the right end of the machine is a scrap bag into which are pushed pieces of thread, empty spools, etc. Another scrap bag is tacked to the wall near the cutting table, and a peach basket does duty for waste papers. Another table holds a large box of patterns also fashion magazines of which I take two; this table is also a good place upon which to lay extra work. Still another table, which is an especially convenient article for this particular room, measures 42x21 inches. My husband sawed off the bottoms of the legs so it stands 24 inches high. As it was a homemade affair in the first place, the framework underneath was quite bulky, by cutting away a part of this on one side, it enables the sewer to use this table as a lapboard when needed. A covering of oilcloth securely tacked renders it very convenient from which to pick up the different articles in use. On it are kept a couple of box covers, which contain hooks and eyes, snap fasteners, collar supports, thread and bastings and many other little articles, a nut-pick for removing basting threads, also a half-pound box of dressmaker's pins, which cost 35 cents, and which is a very convenient article for any home sewer. This table has no stationary place in the room, but is moved around wherever needed most. These items, together with a dress form and yard stick, constitute my sewing equipment used exclusively in this room.

A WORKSTAND.—I have a workstand which is so convenient I will add a description of it also. This is made of a cheese box and cover. The cover, inverted, makes a very handy tray for holding similar articles to those already mentioned, also darning ball, cottons, tape needles, etc., and a little bag is fastened to it for holding scraps. In the box below are kept pieces of the garments in use, so that patches will be convenient, also a box of tapes, and there is



CHEESEBOX SEWING STAND.

room left to hold many articles to be mended. This stand is usually downstairs and saves many trips to the regular sewing room.

EXTRA SUPPLIES.—In the clothes room connecting with the sewing room are a series of shelves, upon which are kept boxes of materials used in sewing, one each for ribbons, laces, nets, featherbone, belts and belting, collar supports and foundations, braids and tapes, discarded yokes, linings, new goods, patches, and left-over pieces. In the lining box are kept some crinoline both black and white, tailor's canvas, percaline in black and gray, buckram, India linon and white lawn. I have found that by keeping these things on hand it makes it quite easy to rearrange a dress, as well as make a new one. One shelf in the clothes room is devoted to odds and ends that do not pertain to sewing. A card upon which each article is listed hangs near. I hope that other women are not afflicted as I am by putting things away and then forgetting where they are. For this reason I make an effort to keep each kind of material in separate labeled boxes, and I find it saves me a vast amount of time.

CLASS OF WORK DONE.—Years have brought about quite a change in the character of my sewing; formerly it was mostly children's apparel and household items, now it is largely dressmaking for myself, household articles, with a generous amount of shirts, nightshirts and pajamas added by way of variety. The question of getting a dress made had come to be quite a problem. It required a number of trips to the village, and a great amount of fortitude to keep from "saying things" to the dressmaker when after I reached there, I was told that the garment was not ready and "would not be before next week." Added to this was the rapid increase in prices which were fast getting prohibitive.

THE DRESS FORM.—I talked the matter over with the dressmaker and she suggested that I get a dress form and then I could make my everyday dresses easier. I followed her advice, sending to New York for a form which cost $1.98 besides the freight. This was adjustable to different heights. I fitted a lining to myself and put it upon the form. The effect was anything but complimentary to me but after a while with patience and plenty of cotton "Mary Jane" began to assume my proportions. Then I found I had made a mistake. I had sent for the same sized form that I used patterns, and in places "Mary Jane" was larger than I, and I could not make her smaller. However I managed with this form until I had an opportunity to sell it, and then I got another two sizes smaller. This needed still more building, but now I have a form over which I can make a dress and feel assured that I shall get a reasonably good fit. Three other women sent for forms the last time, thus reducing the freight charges for each of us. From making the everyday dresses I have gradually come to the point where I now do all my dressmaking and even attempt an occasional coat. A number of years ago a little rhyme caught and held my attention so persistently that I committed it to memory and have since found it an ever present source of help and inspiration. I insert it here hoping that it may do as much good for at least one reader as it has done for me.

"Are you in earnest? Seize this very minute
What you can do—or think you can.—Begin it!
Boldness has power, magic, genius in it.
Only engage and the mind grows heated;
Begin, and then the work will be completed."

THE TAILORED SUIT.—If a suit is needed a blue serge, at $1.25 a yard, is very serviceable. Five yards of serge and 1½ yard of messaline, at $1 a yard, will be required. The two-piece skirts with flounces and the little jackets they are wearing this year are very easy to make, as they do not require the careful tailoring that the plainer ones do. This suit, made at home, will cost about $8. If a long coat is needed, a black and white shepherd's check with black trimmings and buttons, or a medium shade of gray does not show the dust. All girls like pretty gloves. One can get such nice, long chamoisette gloves for 50 cents. With a medium-sized black hat, trimmed with band of ribbon and "stick-up" of ribbon or flowers, two gingham dresses at 15 cents a yard, any young girl would be well-dressed, either for town or country.

MRS. W. W. S.

EDISON, the inventor, being hard of hearing, is obliged to see with his eyes. On a recent trip Mr. Edison saw a bumble-bee in flight, and watched it carefully. He said later that he had obtained an idea for a new form of flying machine. We shall have a real heavier-than-air machine when we obtain something that will beat the air at the rate of 200 times per second.

That bumble-bee was one inch long, three-eighths of an inch in diameter, with a wing one-quarter inch wide and five-eighths of an inch long. The wings weighed a milligram. That bee weighed 7,000 times more than his wings. If we can only get to that, get to that—the greatest thing for the smallest wing—that is the thing. The bee's wings beat the air 300 times a second. A bee works on sound waves. Remember the air is rigid as steel if the pressure is only sudden enough. Give us something that beats the air 200 times a second and we will have a real plane.

AUNT: "Why, Tommy, when I was your age a lie never passed my lips." Tommy: "When did you begin, auntie?"—Boston Evening Transcript.

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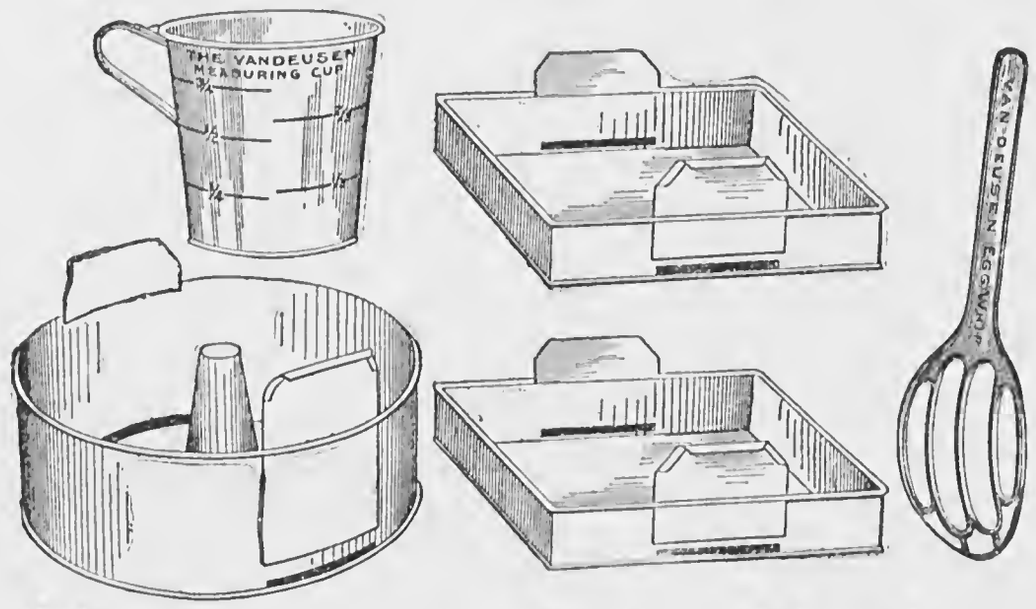

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Gentlemen:
The cake moulds were received. I am pleased with them for all kinds of cake made without butter or cream. When using butter, or cream I butter the moulds and have better satisfaction, and that, too, with less fleur. Sincerely yours,
MRS. WALLACE TRAVER, Rhinebeck, N. Y.

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The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 865.*)

CHAPTER VIII.

THE CROP OF A NIGHT.

"If we had room in the surrey, I'd take as many crates as you could make up," said Mr. Homer, one of their guests after a meal, in which mushrooms took a leading part.

"I'm going to Wetasket this afternoon," Nate put in eagerly. "We'll fix up as many crates as you think you'll want, and I'll take them in, and leave them wherever you say."

"Take them to the express office and address them to me, in St. Paul," and he handed Nate a card. "I like to see you young fellows out here roughing it, and making the best of things," for some way the whole of the boys' story had leaked out to these kindly strangers. Maybe they were hard business men in the city, but on the plains they had dropped their self-centrement, and had opened their hearts to the new country, the New West.

"I'll dispose of these mushrooms, and if you have further to sell, ship them and I'll see to the sale. If they'd rather have them in baskets or any special way I'll let you know."

"I wish you'd just take the mushrooms and use them; they haven't cost us a cent, and we've had just wonderful luck ever since we came, turning off the most unexpected things, buffalo bones, and horns, and——"

"The rest of the settlers haven't had any such 'luck,'" put in Mr. Mansfield. "It isn't luck; it's just the spirit to see a chance and grasp it and cling to it, and wrench every ounce of help out of it. I see a future for you fellows. You let Homer sell your mushrooms. He's no philanthropist."

A general laugh followed, and with a general handshaking the men drove away.

"This is the queerest country," Nate remarked for the 'steenth time, since he had first set foot on it. "If our expected crops turn as well proportionally as our unexpected ones—" Nate paused and helped Norm to collect baskets, and pails in which to gather the mushroom product.

"I knew mushrooms were profitable, but I never dreamed of a market. It only takes 12 hours for them to reach St. Paul, and the dew will hardly be off them."

"Was the mushroom seed in that wheat we sowed?" Nate inquired innocently.

Norm laughed immoderately.

"Nate, you are the gumpiest gump, when you set out to be. I suppose the spawn of these mushrooms has been lying here years—ten, maybe a hundred or a thousand—waiting for the upturning of the sod, and the rain, and the heat." The boys bent to the work gaily, but no day in the field had ever left them readier to stop than this one did. They made ten light boxes and packed about ten pounds of mushrooms in each box, and Nate drove off gaily for the 20-mile distant city. He had borrowed Hank Jones' light market wagon, and the horses covered the distance in less than three hours, reaching the express office only in time to turn his crates over and send them on their journey. He caught sight of Mr. Homer as he boarded the train, but there was no time for more than a wave of the hand.

The seeding went steadily forward, and by the middle of May the crop was all in, even to the sod corn. The land was yet to be broken for flax, but with the ox team and the horse team that did not seem a very strenuous operation. Arrow heads of flint and steel, stone hammers and bits of pipe were picked up, and went to adorn the shanties on the plains. The finding of each one seemed a romance and a revelation, for the Indians, like the buffalo, were driven from their hunting grounds, and either extinguished or shut up in government stations. The rains came as needed to force the crop, and the sun shone gloriously between whiles. The immense fields of grain all around and about upon the face of the plains lifted high heads to the blue, and made the prairie a billow of beauty. To Nate, who had hardly seen the country in his life, every rippling change was fraught with enchantment. He worked and toiled at whatever he found to do, and yet he had eyes for every beauteous change of the wind-swept grain.

"Heaven has come down to earth," Nate said solemnly one morning as he looked out across the field of blooming flax.

"It's there in all its color," replied Norm, standing reverently by Nate's side.

"How could I ever have preferred to work in the dingy city?" Nate sighed. "And yet it nearly broke my heart to leave that acid-fumed work-place."

"And I hated to leave my little garden patch in the woods," Norm mused dreamily.

"I s'pose it was because we never had known anything larger."

"It is *big* here," Norm agreed.

"It seems to me," said Nate, "as though one could almost see God's hand at work out here. Yesterday that flax was nothing but a mass of green, but with the touch of the morning—God's morning—upon it, it is transformed into a fruitful thing. I'm going to get a Bible to lay on the shelf," Nate said reverently.

"It would seem as homelike as the gingham aprons, and who knows, perhaps our lives are being wrought upon as wonderfully as that field of flax?"

"It is curious how we were wrenched away from the old things and brought to this."

"It is strange and mysterious; but we, who were content with our weekly or monthly wages, are now looking forward to help feed the world. It's a great work, a glorious and honorable work to plow, and sow, and reap."

The days swung by and the first of August burned upon the land. The grain that had been erect so long now stood with heavy heads hung down, laden with the richness of the Summer. The lower leaves had long since yellowed, and the stalks were being burnished like gold. Nate, Norm, Jim Maynard, Hank Jones and some others had bought, on time, a wonderful new machine called a header, and they were going to harvest their crops together. The oats, the barley, had been cut with a binder, and were standing in rich shocks over the fields. The time for the wheat harvest had come, and this harvest was to be begun on the field first sown by Nate and Norm, as that field, while not quite as heavy as Jim Maynard's, had seemed to ripen a little earlier.

"It will be our wheat to-morrow," exulted Nate as the two boys hurried through the evening chores, after a hard day's work in the barley field.

"I'm afraid it has shelled some already," Norm said, anxiously. "I hope it is still, for a wind now would thrash it out considerably."

"This is the dry season," said Nate easily. "It's been as hot as an oven to-day, and it's breathless to-night. There's no likelihood of a wind."

"We can't tell," Norm replied, vaguely prophetic. "It's often as still as death before a storm. But we'll hope. Let's turn in now; come, you'll rub the hide all off those horses, you curry them so much."

Nate gave a look of pride at his team, gave one more stroke of the brush, and turned away with Norm. A cool plunge in the creek refreshed them unspeakably, and they lay down on their blankets outside the shanty and fell asleep. Both were awakened about three o'clock by a dash of rain in their upturned faces. They gathered up their blankets and made a dive for the house, which seemed hot and breathless after the clear elixir outside. There came a roar of thunder and a flash of lightning, and then as the two boys stood, dazed, almost paralyzed with fear for their precious crop, there came a thump-thump-thump upon the roof of the low shanty.

"Hail!" gasped Norm.

"Hail!" re-echoed Nate, white-lipped and wide-eyed. "I wish the One who made the plains would protect them a little longer. Oh, Lord!" cried Nate.

There was no irreverence in the boy's heart or on his lips, and if the desire of the heart is prayer, then Nate prayed truly in that moment; and whatever the cause, the storm cloud drifted over with only a little rain to freshen up the burnt-out atmosphere. The grain waved its golden beauty in the morning, and the harvest went merrily forward to its complete end.

The glory and the gladness of those days to the settlers on the plains! They saw the fruition of their hopes and plans, and reaped some thirty, some sixty, and some an hundred fold for their sowing. Many a horny-handed young settler drove twenty miles to Wetasket, and went solemnly into the church there, to listen to the Harvest Home service, and dimly, unknowingly, perhaps, to render thanks for the splendor of the year.

After the steam thrasher had poured out its largess of bushels of grain, the boys found that, although the wheat price was low, it still netted them enough to pay all incurred expenses, and leave a goodly surplus for added machinery and other things for the coming year. The plows used for breaking would not answer for backsetting or real plowing, so a gang plow seemed essential, and with the coming of the gang plow more horses must be had, for little of the farm machinery is run with fewer than from four to six horses.

"I used to think that any fool could run a farm, and that it didn't cost anything, either," said Nate reflectively. "But it takes both mind and money."

All the Fall the boys worked steadily, plowing for early Spring seeding, enlarging their stable, and even fixed up the shanties, banking up around them and adding siding and real shingles over the tar paper, which had done good service the previous year. The straw stacks were burned in the fields to leave them clean for the plow, and the small stacks of hay which had been made seemed almost a foolish waste of time, as the previous Winter the stock had hardly touched hay, preferring the crisp buffalo grass on the open plains.

(*Continued Next Month.*)

This Fine Saxony Net Split Lace Curtain With Throw-Over Top

will be sent for Two New Yearly Subscriptions, or One New Yearly and One Renewal Subscription, or Three Renewal Subscriptions

(One of these three may be a renewal of your own subscription)

The design is known as the Brussels and Bow Knot. Size: 3 yards long, 60 inches wide. Throw-Over at top, 36 inches. The curtain is one piece, but presents the effect of a pair of curtains when draped. The curtains are of good material, well made, overlocked edge and will stand washing well.

Bed Set Consisting of One Bed Spread and Two (2) Pillow Shams

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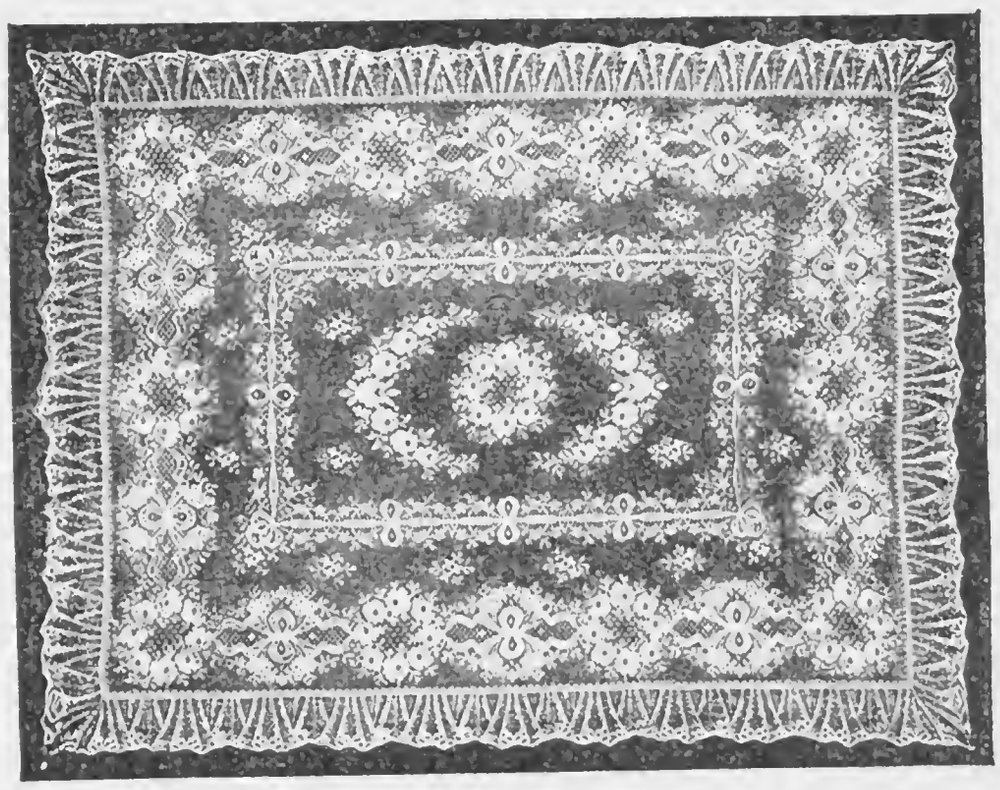
(One of these three may be a renewal of your own subscription)



This Bed Set is of Saxony Net Lace, the Spread is 72 inches by 92 inches, the Two Pillow Shams are 36 inches square. The design is the famous Brussels and Bow Knot. The set is of good material, well made, overlocked edge and will wash well. The design matches the curtain.

A Complete Room Set of Curtain and Bed Set

above described, will be sent for Three New Yearly Subscriptions or Six (6) Renewal Subscriptions

(One of the six may be a renewal of your own subscription)

THE RURAL NEW-YORKER, 333 WEST 30TH ST., NEW YORK

Live Stock and Dairy

MILKING MACHINE.

"HERE is what the milking machine is doing for us," declared Earl Sparling, of Ashtabula County, Ohio, as he leaned over the hoe handle. "Father was able to get along without me while I attended Ohio State, and work is going along so nicely I believe I can get away and canvass this Summer and things will do pretty well without me. We used to keep an extra hired man, paying him $30 a month, when I was at home, then there was my father and my kid brother, besides. Now this hired man has been eliminated and we are using a deaf and dumb fellow at $12 a month, and getting along better. Father this year added to our farm about 60 acres, did a lot of tiling, planted 20 acres each of corn and oats, and we are getting ready for 20 acres of buckwheat. The work is running more smoothly than ever before just because the milking machine has enabled us to reduce our work to a system.

"This is the way we have planned our work. The kid brother, now 16 years, gets up the cows, has them in the barn at exactly five o'clock. Then he starts the milker. He milks the herd alone in an hour and empties the milk. Previously

A BUNCH OF WHITE-FACED BEEF CATTLE.

it required three of us to do this. While he is getting the cows and milking I get the horses from the pasture, feed and harness them, and have them ready for the field at six o'clock. We have breakfast at that time. While we are caring for the herd and the horses, father and the boy are doing other chores. Sometimes the man helps my brother strip the cows, but one does the milking all alone, and he has no trouble with the machine. It seems to be so simple there can be no trouble. In the evening the brother comes from his work early, has the cows in the barn at five o'clock and at six o'clock we are all ready for supper. The horses are cared for and the chores are done. There is not the drudgery about the dairy that there used to be. I just tried out milking the other morning and I handled the 20 cows myself and ate a hasty breakfast in one hour. I had my brother there to show me a little and help empty the milk, but I found the changing of pails, the moving about of the small individual suction pumps and the attachment of the teat cups not very difficult yet, though I was clumsy about handling the teat cups. The machine milks the cows practically dry, although we do check over the work with the pail. Father and brother think the cows are doing better than heretofore when they milked by hand. The machine cost us $182, including the engine, which is 1½ horse power. This is ample for the three units, one cow to the unit, and we have an extra pail with which to change. We had our driving rod sawed at the local mill, which slightly reduced the expense of the installation.

"When I graduated at the high school I was mighty tired of the farm, because I did not like milking, but now father and I have been talking over a proposition of putting on about 40 cows, read up the men who advertise purebreds, and when I am out of college next year we will make the milking machine serve us to its capacity."

Just then the "kid brother" came from the field, and he approved his brother's statements, and added: "I had no trouble with the machine from the first night. I like to milk by hand yet I would rather milk 40 cows with the machine than five by hand. We have had no expense on the machine, no trouble and our cows which are grade Holsteins, seemed to like the machine as well as I do. We have had the milker about four months and see no reason why it should not last for years. There is nothing to it, it is mighty simple, and for washing we have sisters, and they find it no hard work to wash the machine in connection with the milk things. We keep the parts in brine water after flushing, and twice a week give a thorough washing.

The father was asked his opinion of the machine: "Well, it is the greatest thing for the dairy farmer that was ever invented; it lets me out of milking, and I guess it has paid for itself."

WALTER JACK.

Transmission of Bovine Tuberculosis.

HAS it ever been shown that bovine tuberculosis has been, or can be, transferred from the animal to the human by using the milk from a tuberculous cow? L. V. D.

Indiana.

It is generally accepted among scientists best qualified to judge that bovine, or animal tuberculosis can be and is transmitted to humans, especially to children, through milk. The best evidence of this seems to be the finding of the germs of tuberculosis of the animal type in human beings, and this has frequently been done. It is, of course, impossible to inoculate human beings with the germs of tuberculosis from cattle for the sake of demonstrating the possibility of doing so, but when these germs which originate and belong in cattle are found in the tuberculosis areas within human beings, it is a fair assumption that they came from cattle, and this they could do only through the milk used as food. It is now believed that many, if not the majority, of cases of tuberculosis in adults owe their origin to germs which have been taken in with the food in infancy or childhood and have remained latent, or inactive, until later in life. There can be no absolute proof of this but the history of many cases seems to show the probability, at least, of it. M. B. D.

Increasing Butter Fat.

WHAT is the matter with my cows that they do not give better butterfat? I am milking four Jerseys and four Holsteins. Some have been fresh since October, 1913, some three or four months. I feed stock feed, two quarts to a cow, and have been feeding gluten feed one quart. Test fell below 3% and flavor was bad. J. E. D.

Orange Co., N. Y.

The feeding and care of your cows has little or nothing to do with the richness of their milk. The amount of butterfat in a cow's milk is determined by the nature of the cow and cannot be materially changed by any method of feeding or by any kind or quantity of feed. It seems strange that a mixture of Jersey and Holstein milk should drop below 3% in butterfat as the Holstein milk alone should equal that percentage and the Jersey milk should exceed it. With such cows as you describe, I should be very suspicious of the accuracy of a test that registered below 3% in butterfat. Can you not have a fair sample of the mixed milk tested at some other creamery or by entirely disinterested parties? The milk should be mixed immediately after milking and the sample taken before any cream had separated. I agree with you that your milk should test 4% or better, and it should test fully as much on pasture alone as with grain feed. A bad odor to the milk is evidence of something in the food tainting it, of lack of cleanliness in the utensils used or of absorption from bad odors in the air. If your cows cannot obtain access to tainting food the cause of the odor must be looked for in the care of the milk or the utensils containing it. Only a careful investigation can determine the cause of the trouble. With cows on good pasture the probabilities are that this milk absorbs its odor from something with which it comes in contact. M. B. D.

EMERGENCY FARM HARNESS.—Every farmer needs an extra harness, and there are few farms without old hames, straps, and enough parts to more than build a harness, but the most serious question is that of tugs. Chain tugs are cheap, about 65 cents a pair at the local hardware, but then comes the question of how to protect the horse from the tugs rubbing the animal. That's easy. There probably is an old bicycle tire in the granary, and if not, a neighbor boy has one that has been discarded. Just chop the tire in two equal lengths with an axe. Slip each half over the chain and fasten the part by passing a cord through the tire and a link, and let the tire extend back past where it will rub the horse's sides. I know a farmer who made a harness of an old set of hames, some old straps, chain tugs and a bicycle tire. This harness has done efficient service for several years.

QUIET DRIVING.—It is not always the man who crowds the team to the limit who gets the most work done. There is a young man in the neighborhood who does much day work. He is particularly popular with one farmer because he drives the horses to and from the field on the gallop. He is continually yelling at the animals, and when he is using a team everything is on the jump, and the excitement is about as keen as it is on a Wild West reel in a motion picture theatre. We have used the young man, and comparing him with the hired hand we now have find that with all of his useless "hollering," his running the team, tearing to pieces wagons and sleds, he does much less than the present hired man. The team accomplishes more work with greater ease and on less feed than under the day hand. W. J.

Ohio.

Fur-producing Sheep.

IT will be surprising to learn that an American agricultural college is willing to go to war for the sake of sheep. The Kansas Agricultural College has sent one of its experts, Dr. R. K. Nobours, into the heart of Central Asia. He will be accompanied by a guard of Russian Cossacks, as the journey is one involving danger and privation. Dr. Nobours is sent to Asia to study fur farming. The object is to learn how to make fur grow on a sheep's back in the place of wool. The Karakule breed of sheep produces such a fur, and when these sheep are crossed upon our native breeds we have a sheepskin which when properly handled will take the place of some of the wild furs, which have long been used as Winter garment for human beings. Two years ago we had a series of articles on this fur farming as started in Texas. The business has developed well, and it has been demonstrated that crosses of the Karakule sheep on some of our improved breeds would really give us a substitute for Persian lamb and astrachan fur. It is well worth the expense and danger of such a trip to learn how these fur-bearing sheep are handled, and to bring some of them home.

As all know, the wild fur-bearing animals are being rapidly exterminated, while the demand for fur garments grows faster than ever before. The result is inevitable Fur-bearing animals must be grown in captivity, or, at least, under human control in order to keep pace with the demand for high-class furs. Thus we have reports of skunk farming, fox farming, and mink farming, for the purpose of breeding and rearing these fur-bearing animals. We also hear of cat farming, in moist and cool countries where pure black cats can be raised to produce a thick and heavy fur. The future promises fair returns in this fur farming, and we shall probably be obliged to look to cross-bred sheep for a large proportion of fur garments of moderate cost in the future. It is remarkable how the demand for furs is increasing. In describing the costume worn by a party of rich and beautiful women at a reception in New York recently, it is said that one of them wore a magnificent skunk-trimmed cloak, which, of course, meant a cloak trimmed with the finer fur from skunks. Thus we have an animal degraded and despised in the country, forming a part of the most beautiful costume which the city belle could think of.

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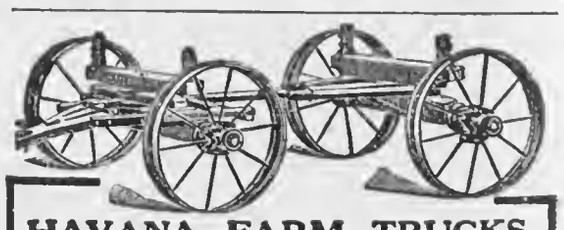

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New Jersey Pigs Sold Abroad.

TWO little pigs tell a fine story of New Jersey's high place in the development of anmial industry. They were members of the handsome herd of Duroc-Jerseys at the State Experiment Station, New Brunswick, until D. Nikitin, of the Russian Imperial Department of Agriculture and S. K. Lissogosky, chief of the Russian Station of Animal Husbandry, saw them and bought them for the Czar's special farm. These Russian officials have been on a tour of the various State experiment stations in the United States, obtaining data for use in Russia in establishing similar stations there. They were especially impressed with the work on the New Jersey State Farm, and particularly with the departments of swine and poultry. The two little Duroc-Jerseys sailed July 4th, and will be followed later by several specimens of poultry. From this it appears that while Europe raises much more per acre of cultivated land than we do, our animals and poultry are of such superior quality that they are imported for breeding purposes. We do not know all that is known in Europe, but we excel in some things that are of great agricultural value and importance. D. T. H.

New Jersey Cattle Breeders Incorporate.

ARTICLES of incorporation have been filed at Trenton by the Somerset Holstein Breders' Corporation, a concern cern formed by stockmen of that county to breed and sell Holstein cattle. The corporation is capitalized at $500,000. The corporation has taken over six large farms along the Raritan River, comprising almost 1,000 acres, together with several herds, numbering about 200 head of registered cattle. Included in these herds are several record-holding Holsteins. The corporation's charter also provides for the promotion of manufacturing and power interests in connection with water rights. The officers of the corporation are: President, Albert A. Cortelyou; vice-president, Bernard Meyer; secretary, Jacob Todd. Judge Clarence E. Case is also interested in the concern.

When to Cut Ensilage Corn.

WILL you inform me how a person of limited experience can determine just the proper time for cutting silage corn for the silo, and also if such corn where juicy should be wetted, and how much? My silo has no drain in the bottom. J. W. V.

Schenectady, N. Y.

Usually the best time to cut corn for the silo is when it would be cut for shocking and husking. That means when the ears are well formed and the kernels are well glazed over. It is not always possible to wait until any particular time. An early frost may threaten or the silo filling machinery may be ready at a certain time when the work must be done. We would rather wait until the ears are well filled with kernels, but in your latitude the corn may well be in the silo by September 15. "Juicy" or green stalks will not need water.

Bog Spavin.

I HAVE a colt three months old; he has a rather large swelling on one of his hind feet at the knee. It is very soft. I have used two bottles of liniment, but it does not make much of a change. Is there anything that can be done for it? P. M.

New York.

This condition is a distension of the capsular ligament of the hock with synovia (joint oil,) or it may have came from infection of the navel at birth. Paint the joint with pine tar and let the colt run out on grass. Renew the application as soon as it wears off, but do not use the tar too often, or it will take the hair off clean. This may lead to reabsorption of the excessive fluid by the time the colt is a year old, but such conditions are obstinate and unpromising. A. S. A.

Eczema.

I HAVE a cow, a Jersey, four years old, due to come fresh in September; am milking her now. The skin on the udder has become thick in spots, and afterwards it comes scaly, then scales peel off, leaving bright patches; and still hard. Can you give me a remedy?

Virginia. B. S. D.

Cleanse the affected spots once and when dry paint with tincture of iodine; then apply lanolin twice a day to soften the skin. If the trouble persists use benzoated oxide of zinc ointment once a day. Keep the cow off dirty floors or places where she may infect her udder. A. S. A.

Splint.

I have a driving horse, weighing about 1,100 pounds that has a bump on each front leg that I think is a splint. He is not lame on the left side, but limps some on the right leg when he trots. Could you advise me what to do, and whether he could be left in the pasture or would have to be tied in the barn? L. E. B.

Wiscousin.

Clip the hair from the splint and around it. Then blister the splint by rubbing in a mixture of one dram of biniodide of mercury and one ounce of lard. In three days rub lard on the blistered part and repeat the application of lard daily until the skin is sound. The blister may be used again in three or four weeks, if the lameness persists. The horse should be rested while under treatment. A. S. A.

Brittle Hoof; Eczema.

WHAT do you advise for a horse's hoof that is dry and brittle? 2. What can be done for a mare four years old which every Spring, about the time she is turned to pasture, swells up along the abdomen about a foot long and as thick as one's arm? It gets pimply and yellow water runs out. If it requires internal remedies, can they be given to a mare in foal? W. M.

Ohio.

1. For brittle hoof give the following treatment: Mix together two parts of oil of tar and one part of oil of balsam of fir and apply to the juncture of the horn and hair of hoof every other night. In six weeks the hoof should hold nails; then apply twice a week. 2. Keep the mare off grass, as it disagrees with her and causes eczema. Keep the mare at steady work and feed light laxative rations, without grass or corn. A. S. A.

This is not a dairy section, being mainly devoted to what is called general farming. Several, however, make milk production their main object; one selling direct to customers gets eight cents per quart, and one selling direct to a hotel 4½; a third selling to a peddler 3½; others selling to a creamery receive 2½, all of which offers a splendid illnstration of the lack of coöperation and organization among farmers. Compared with previous years there is very little difference in these prices. Pastures are very short, and have been all Summer; cows having to be fed as about in the Winter. The cows are mostly grade, with a tendency to weed out the poor ones and substitute Holsteins. There is no noticeable interest in any effort to improve herds by using purebred bulls. Personally, I do not believe there is any profit in producing milk at these prices under these conditions; but, as it brings in a steady income the process is continued without going into the details of cost. The severe droughts of the past five or six years have practically ruined the pastures and made reseeding almost impossible; in many cases the work having to be done over and over again, and still no catch. The hay which has just been gathered was exceedingly thin; a smaller crop even than last year.

Lake Katrine, N. Y. W. T.

Markets in this vicinity are generally local and not influenced by outside values except where produce is shipped out in car lots. This applies to fruits, such as apples, pears, prunes (dried) and an occasional car of hogs, all of which are subject to values as found in the open market. Garden products have a very limited market, mostly disposed of in "trade" with the storekeepers, hence have no established rule of prices, not even the "supply and demand" rule, as the storekeeper usually pays what he thinks he can sell for, in a community where the majority grow their own vegetables. If one has for disposal produce grown exceptionally early, like elsewhere, he can get a fair to good price therefor. Horses sell all the way from $40 for a plug to $400 for a well-matched team. Milch cows from $40 to $65 each. Sheep from $3 to $4.50 per head; pigs $1.50 at weaning, except where purebreds only are handled, which bring about $10 each. Larger seven to eight cents per pound on foot. Butterfat 25 to 26 cents per pound at the creameries, which pay expressage at these prices. As elsewhere these prices vary at different seasons of the year. Hens (fat) 14 to 15 cents per pound. Wheat, barley and oats not yet on the market. F. P.

Canyonville, Ore.

A SCHOOLBOY recently wrote: "Much butter is imported from Denmark, because Danish cows have greater enterprise and superior technical education to ours."—London Farm and Home.

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IRA INMAN, Secretary BELOIT, WISCONSIN

That Child of Yours

What Training Is He Having

The Hen With One Chicken.

Do you remember, in one of the school readers, about the white turkey that died and left her orphaned child to the tenderness of a cruel world? The old Dorking hen with her brood of 11, and the duck, and goose, all offered to accept the little poult; but the hen with one chicken was too busy by far, and bitterly resented the attitude of the others because they seemed to think she had little to do. That fable did not appeal to me until I had a brood of four. Then I began to see that if any woman was fitted to raise a family by receiving the divine gift of perfect child-knowledge, it was the "hen with one chicken," or else the one with none at all. The only difference I have been able to discover is that the mother will admit that mistakes can be made, and the childless woman candidly tells you that everything you do is a mistake! Why these female founts of wisdom are not entrusted with 10 or 12 children, remains one of the mysteries. No doubt there is one of the causes of social degeneracy.

Have we not all heard the childless woman say: "If that was *my* young one, it would act differently!" or "I never in my life saw a creature so little fitted to raise a child as that Blake woman!" The funny part about it is that she is sincere in her ignorance, and sometimes becomes so exasperated at the shortcomings of women in general, that she adopts some foundling and proceeds to theorize. Then, if she makes mistakes, it can be laid to the criminal tendencies of the unknown parents. Very comfortable arrangement.

The first baby in a family is usually a sort of experiment, for young parents are anxious to do the right thing. Having done their best, they credit themselves with the baby's growth and good nature. Therefore if the one child is the only one as well, it is natural for the mother to consider herself an authority on child culture, for she never finds out that a second child's disposition demands an entirely new set of ideas.

It is said that children invariably reflect home training. This may be true in some cases, but most children have a very generous touch of Adam in their make-up, and even the most well-trained youngster turns to and upsets the universe, leaving its parent weak with amazement. One such child was heard pattering down the stairs one night after bedtime, and the mother with a rapt look, said: "Here comes Billy, people; just listen what he says, for a sleepy baby is so near the angels, that their bedtime messages are almost sacred!" The door burst open to admit Billy, starry-eyed and flushed with the wonderful news, and he shouted, "Mamma, Mary found a bed-bug!" We considered that a matter of house-cleaning, rather than child-training.

One thing is very certain: The more children a mother has to train, the less assurance she has of her own ability, and she rarely offers advice to other mothers; but the hours a childless woman preaches advice, and the reams she writes on the subject, might lead the unsuspecting to believe that mothers are the most senseless creatures on earth. Our little ones must endure the knocks and blows of the foundling, their morals may be tainted, and school-going made a nightmare to both pupils and parents, yet no word of disapproval dare leave our lips, because the woman who has theories, has also a tongue particularly adapted to quoting Scripture about the persecution of "the fatherless and weak."

Many a good woman longs for children, though physical defects bar her from the joy of having a child. To those unselfish hearts have prompted to give a home and love to some unfortunate child, or children, must come life's richest blessings. The woman who voluntarily takes the responsibility of a tiny baby to raise as she would her own, for love's sake is one that never finds fault with the flesh and blood mother. It is also noticeable that such children grow into the useful citizens in later years, when the child that was taken at six, or eight years (after the bothersome age!) to theorize on, is enjoying the distinction of being the village hoodlum. If we real mothers could only have a little less condemnation, and a greater amount of praise for the honest efforts we make toward raising our children right, it would lighten many a grief and be a much more comfortable way to dwell together in unity. MABEL B. CASTOR.

Fear Not the Face of Man.

TEACH COURAGE.—The woman who has no children is said to be the one who always knows how to bring them up, so here is a suggestion from "one who knows how." The suggestion is prompted by observing the feelings of two elderly people during a thunderstorm. To one, any electrical storm brings fear. To the other, such a storm has no terrors, unless it is very severe, and even then, the fear is largely controlled, and thus is not increased by its indulgence. Now why is this? There may be some difference in temperament, but a knowledge of the up-bringing of these two people

A PROMINENT MEMBER OF THE APPLE CONSUMER'S LEAGUE.

would seem to give the key. The mother of the first was afraid in a thunderstorm, and freely expressed her fear in the presence of her child. The mother of the other never expressed any fear, as far as can be remembered, except in two instances, when the storm was of intense severity, and even then, there was no outburst of alarm. The result of these two methods naturally shows in the lives of the children, even to old age, giving much suffering to one, and much comfort to the other. A mother and daughter were sitting together during a heavy thunderstorm, and on speaking of it afterwards, the daughter said, "I began to be afraid, but I saw that mother wasn't, so I thought it wasn't worth while." As a matter of fact, the mother *was* afraid, but did not think best to allow herself to show it. To a mere on-looker, it seems cruel to a child to bring him or her up to be afraid of anything, more than is absolutely necessary. Fear can be controlled until, as the years pass, it ceases to exist, except in extreme danger, or it may be indulged until it is a source of untold suffering throughout a long lifetime. ELIZA F. MILLER.

Children and Property Rights.

There are too many children nowadays who have very little, if any respect for the rights of others, and I believe it is the fault of the mother. We find in the homes, mothers who have assumed the full burden of household duties, causing the children to feel that mother has no rights of her own, but is there to wait on, and slave for her family. The new clothes are bought in many a home for the children, while mother wears the old. The good times are all planned for the children, and by them if they are young men and women, and in these homes, they seldom think that mother might like to get away from the everyday drudgery of household cares. Shall we teach our children that because we are not known by the other people in a train or public place, they may have full liberty to make as much noise as they wish, to run or push or crowd others? It has seemed to me this was the attitude of some mothers I have seen. I was traveling with my two little girls one day, and amusing them with stories and a picture book for the four hours' ride. A little child about four, sitting two seats in front kept running the whole length of the car, grabbing the arms of the seats and jumping until all in the car were tired of it. At last she stopped at our seat, where I tried to amuse her for a few minutes, but she pinched my baby until she cried, and annoyed us so much, that I asked her to go to her own seat for a little while. She only stayed a few minutes when back she came, and I was very glad when we reached our destination. Through it all the father and mother sat in their seat asleep.

Let us, mothers and fathers, start early with our little ones to teach them to practice the golden rule, no matter where they may be. As soon as the little ones can have things to play with they should be taught that some are their own, and others belong to brother or sister. Each member of the family should have a place for his or her things, and no other member should use them without asking the owner. Begin when they are tiny and steadily day by day, train them to respect the rights of each one in the home. Slipshod methods will never bring results, and deceit may easily be taught unless one is very careful. Sometimes mothers say to a child, "You may take sister's things while she is gone," and if some time you find your own things have been molested while you were away, you have only yourself to blame.

There are some people who seem to think this earth was made for the benefit of their children. They are allowed to meddle with other's things, even to take things to pieces to see how they are made, picking up to look at fragile bric-a-brac, and generally snooping in other's homes. If children are taught in home to leave other's things alone, it will have much influence on their whole lives.

In teaching that each must have his or her own things, we must guard against selfishness, but in the beginning we may teach them easily, to divide or lend and each feel happier for it. Where the parents are living very close to their children, they are ever guiding by precept and example. It is the children who are pushed off, left to care for and amuse themselves constantly, who are lawless and a source of trouble to everyone around, or have no respect for the rights of others. A MOTHER.

Burned Bone for Children.

FIFTY years ago I lived in Argentina, 50 miles west of Buenos Aires, for six years. I noticed that the farmers had very fine teeth and hair, hardly any bald heads. The reason? They lived nearly exclusively on meat, mostly mutton, boiled or roasted on the open fire; seldom vegetables, never potatoes, sometimes twice a day a biscuit weighing one ounce. The water contained much lime. I supposed that this water made the strong, healthy teeth and hair, as both are related creations. I thought I was justified to recommend the use of burned, pulverized bone to use for little children, to be given in mush, rolled oats, or otherwise. I would like to know whether powder made out of burned bones could hurt a baby when given with the food, and if it will be digested in the stomach? Are not they using bone meal to cure young, growing animals that are weak in the legs and bones? M. V.
Oregon.

The only practical result of administering pulverized, burned bone to children would probably be to upset the digestion, if given in any considerable quantity. We are not dependent upon the lime in drinking water for our supply of lime salts, as these are abundant in the common foods and, except in certain morbid states, as in the disease called rickets, growing bones are supplied with all these elements that they need. In rickets certain lime salts are administered in very small quantities in connection with other drugs which stimulate bone formation, but even in this disease, correction of faulty hygienic conditions is more relied upon than administration of lime directly. M. B. D.

CITY life is full of comedy and tragedy. Here is a bit of the latter which is not an unusual occurrence. A policeman walking through a New York street at noon saw a baby climbing on the window sill of a five-story house. This policeman was about 40 feet away when the child lost its grasp and fell. The policeman ran with all his speed, but he missed the little fellow by two feet, and the child was instantly killed upon the pavement. It appeared that the child's mother had gone into another room for a moment, to get her pocketbook to pay a bill, and during her absence the baby climbed over the window sill to its death. That little one would have been far happier and safer, could he have spent his life playing in a garden or in some green field on the farm.

WHAT TO KNOW.—Down in the village there is a little lad of seven or eight who cares for nothing in life except "jogger-fry." He reads constantly and everything he can get on the subject, and goes about asking busy mothers, for instance, such questions as, "How much of the earth was known at the beginning of the seventeenth century?" Could you answer that question point blank? I couldn't. The wise woman says there are two ways of knowing things, to remember what you need to know and to know where to find the other things. The highest practical wisdom seems to be to know what is necessary to carry in your head. The more I think of her words, the wiser they seem to me. It isn't necessary to one's work to know how "much of the world was known at the beginning of the seventeenth century" if there is a book on your library shelf to tell you in case of need. Far better to know how to give first aid in a drowning accident when occasion offers. K.

AT THE FAIR THIS YEAR

WHEN the inviting shade of the big SHARPLES tent beckons you inside, slip into the welcome arm of a big, comfy chair in a cool corner—and while you rest your tired feet, watch the SHARPLES MILKER milk your neighbor's cows.

Smoke if you want to—the ladies don't mind. Relax and get all the good out of your little recreation trip. Feel that this big exhibit is *your* show—because we have gone to a lot of trouble to make these exhibits both interesting and instructive—but, after all, comfort is the thing which intensifies all our pleasures.

If you are interested in dairying—and everyone is nowadays—here you will find food for thought. Cows strange to the machine will be milked at regular intervals. Here you will learn, in a few minutes, why the SHARPLES MILKER is now milking a quarter million cows. You can see the reason for its remarkable success instantly. Better still, you can talk with farmers and dealers who have shared in the upbuilding of that success—undisturbed.

The things a man finds out for himself are the ones most worth while to him. People learn—they are not taught nowadays. Farmers have a way of doing their own thinking. And if an article does not possess merit you cannot make them believe that it does. And, on the other hand, if it does possess that merit, you can't keep them from finding it out. We investigate and "*buy*" things in this progressive age. Farm implements are no longer "sold."

Every member of the family is interested in the MILKER, it seems. And it is right that they should be; because if a man can use a MILKER and it will do him good, the sooner he knows about it the better. We cannot put off the inevitable—and why, then, should we try? If a man can't use a MILKER it won't hurt him to know about it, because it is a big, new idea. But if he can use it, now or any time, why deny himself so good an opportunity of seeing it?

Clarifiers will be shown, too, and gasoline engines. And Separators, Whey Machines, and much else which interests the dairy fraternity.

Something Happens Every Minute at the Sharples Milker Show. It's really interesting! You will be delighted with your visit—and so will we.

FAIRS AND EXPOSITIONS—1914

Name	Location	Date
California State Fair	Sacramento, Cal	Sept. 12-19.
Connecticut State Fair	Hartford, Conn	Sept. 7-11.
Illinois State Fair	Springfield, Ill	Sept. 18-26.
Indiana State Fair	Indianapolis, Ind	Sept. 7-11.
Iowa State Fair and Exposition	Des Moines, Ia	Aug. 26-Sept. 3.
Kansas State Fair	Hutchinson, Kans	Sept. 12-19.
Michigan State Fair	Detroit, Mich	Sept. 7-18.
Minnesota State Fair and Exposition	Hamline, Minn	Sept. 7-12.
Missouri State Fair	Sedalia, Mo	Sept. 26-Oct. 2.
Nebraska State Fair	Lincoln, Nebr	Sept. 7-11.
New York State Fair	Syracuse, N. Y	Aug. 31-Sept. 5.
Ohio State Fair	Columbus, O	Aug. 31-Sept. 4.
Oregon State Fair	Salem, Ore	Sept. 28-Oct. 3.
The Allentown Fair	Allentown, Pa	Sept. 22-25.
Tennessee State Fair	Nashville, Tenn	Sept. 21-26.
Utah State Fair	Salt Lake City, Utah	Oct. 5-10.
Vermont State Fair	White River Junction, Vt	Sept. 15-18.
Virginia State Fair	Richmond, Va	Oct. 5-10.
Wisconsin State Fair	Milwaukee, Wis	Sept. 14-18.
Interstate Live Stock Fair	Sioux City, Ia	Sept. 21-26.
New Jersey-Penna. Interstate Fair	Trenton, N. J	Sept. 28-Oct. 2.
Spokane Interstate Fair	Spokane, Wash	Sept. 12-20.
Pacific International Live Stock	Portland, Ore	Dec. 7-12.
Dairy Cattle Congress	Waterloo, Ia	Oct. 12-18.
National Dairy Show	Chicago, Ill	Oct. 22-31.
Maine State Fair	Waterville, Me	Sept. 1-4.
New Hampshire State Fair	Salem, N. H	Sept. 1-5.
Rochester Industrial Exposition	Rochester, N. Y	Sept. 7-19.
Maryland Interstate Fair	Hagerstown, Md	Oct. 13-16.

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AGENCIES EVERYWHERE

CATS AS FARM STOCK.

OCCASIONALLY I see in THE R. N.-Y. a discussion of cats. As is usual in a discussion of any subject, some persons are strongly pro and some are strongly con. Personally I am for the cat, not that I dearly love a cat, though the cats and I are upon nice friendly terms, but largely because they are useful to me. For instance, we have a large three-story barn. When the mows are full of hay and straw, the loft covered with corn stover, the granary containing oats, rye, buckwheat, etc., and finally perhaps the barn floor and all available space stuffed with shocks of corn brought in from the field to await their turn to be husked, then, you see, we have a lovely place for rats and mice, and, I assure you, the "varmints" do not fail to discover such excellent quarters. If left long undisturbed I fully believe these pests would actually "eat the barn down!" At any rate the rats once gnawed several holes through the shingles of our barn roof, and were in a fair way to spoil the foundation of a large silo. Since then we try to keep at all times four to six grown cats. These cats are fed with moderate liberality *at the barn* and are encouraged to stay there. These cats have the same care as any of our farm animals and are regarded by us as farm stock, as a part of the necessary farm equipment. Any dog found bothering these cats is promptly dealt with. This includes our own dog. Neighbor or strange children who do not know our views upon the subject are carefully but pointedly told that there is to be no stone throwing or other abuse of this stock, just as we would show them that running the cattle or throwing apples at the colts is not good business. More than that, our own children are at no time, from babyhood up, allowed to maul or pester the cats, or any other animal, but are carefully taught to talk to them, stroke them and be at all times friendly and kind to them. This we consider good business, because it is good for the cats and, what is more important, is excellent for the children. As to results, we have cats that come to meet us at any time, literally with smiles upon their faces. They come with tails erect, mewing, purring and telling us as well as they can that we have been good to them, that they like us and are glad to see us. This, coming from even a cat, is to me a pleasant thing, and fully repays me all kindness shown them.

As to their board and lodging I could not say how many times over it is paid, but I know this: At no time for years have we had rats or mice in our houses or barn to any serious or near serious extent, and, as a rule, it is at intervals of weeks, even months, that I see a rat or mouse or even evidence of one, now and then I find the hide of a rat lying some place and that is about all. Moreover, our cats give attention to fields outlying the barn for a good distance, and bring in literally hundreds of the short-tailed meadow mice. This, I feel sure, is a splendid service, since we mulch young fruit trees as fast as set out, also small fruits, grapevines, etc.

There are some objections made to cats. They kill chicks. In 40 years life on the farm I have known *one* cat to do this. The gun promptly cured him of the fault and he has had no successor in 25 years. Again, they kill birds. I am reluctant to admit that they sometimes do this, and I am sorry for it, since I am also strongly for the birds. Upon that point I have this to say: For over 20 years I have been an observer of birds as found in my home locality, being more or less familiar with some sixty varieties. This being the case, I should be likely to notice if cats were making any bad inroads upon birds. This is the sense of my observations. In the early months of the Summer, when young birds are maturing and leaving the nests, now and then something will frighten the young and cause them to flutter from the nest before they are fledged enough to fly. Cats are likely to get these as they have little to do but pick them up. I might say that such birds would in many cases perish anyway. As to adult birds, it is rarely that my cats get one. Considering the numbers of birds that are about all the Summer months I should say that the per cent. killed by the usual cat would, to compute, take you deep into the fractions of one per cent. I suspect that by catching an occasional pine or red squirrel the cats of my region save many more birds than they destroy. And finally (I fear I shall say something a little "mean" now) those persons who condemn cats as bird-killers, have they, perhaps, some boys? Have these boys any kind of guns? Have those persons seen to it that these boys do not in a Summer shoot more good birds than the cats will kill in a lifetime? Further, it is declared, cats carry disease, upon this point I have observed nothing, considering that disease, largely speaking, may be conveyed in almost any way, I suppose it might be carried by a cat, but when a half dozen reasonably thrifty cats make their home at a barn in the country, and seldom or perhaps never go beyond the bounds of the home farm, they may carry disease, but I will have to be shown. Therefore, as a matter of good business keep some cats.

F. A. M.

Lame Shotes.

I HAVE 51 head of shotes on Alfalfa and Alsike clover pasture, four to five months old, 40 to 85 or 90 pounds apiece; lime and charcoal at all times before them. We feed one basket ear corn morning, a small feed of middlings at noon, with a gallon and a half of 60 per cent. tankage mixed with water, and one basket corn at night. I see two or three of the hogs go lame in their hind legs and limp; they have always been thrifty and hearty to eat. What is the trouble? F. A. L.

Frankford, Del.

It would seem that F. A. L. is feeding a well-balanced ration to his pigs, for ear corn with 10 per cent. of digester tankage, and a small amount of middlings as a supplement should supply the necessary food nutrients. It is my judgment that lameness of the three animals can be traced to an injury, and not to the feed. Oftentimes animals running at pasture are quarrelsome, and do more or less scrapping, and we have found that such lameness can be traced to one or more individuals that are especially ugly, and inclined to rule the ranch. It would be well to make sure that the sleeping quarters are easily accessible, that there are no deep wallow holes for them to climb out of or step into, that the colony houses, if they are in use, are not overcrowded, and in addition add some bone meal, to the charcoal-lime mineral mixture that you are feeding. F. C. MINKLER.

Cutting Down Roughage.

I AM buying dried brewers' grain at $1.10, and am feeding it straight with the exception of a little bran. Good clover and Alfalfa hay cost me about $1.20, and it is hard to get it good, so I try to feed a little heavily on grain, swelling it before feeding to save hay. Grain is cheaper for me, bran $1, middlings $1.20; oil meal, $1.90; hominy feed, $1. Will you advise a ration?

Illinois. W. A. P.

A mixture of two parts by weight of brewers' dried grains and one part hominy feed will give you good results during warm weather, and while your cows will need some hay, the grains will be very bulky and can take the place of hay to a considerable extent. I think you can cut down the roughage to half what the cows would ordinarily eat, if you increase the grain proportionately. During cold weather, or if the cows do not keep in good flesh, increase the amount of hominy feed. C. L. M.

Preparing Corn for Hogs.

IS there any difference in the value of corn that is fed to hogs, whether whole, ground, cooked, or cooked and fermented? J. J. D.

Vermont.

For feeding swine weighing more than 50 pounds there is no advantage in any method of its preparation sufficient to justify the cost of such preparation. The best results will follow where the corn is fed on the ear, provided it is supplemented with some protein carrier, preferably digester tankage. It has been demonstrated by experiments that it is a disadvantage to cook or ferment corn, and grinding does not justify cost. Shelled corn soaked for 12 hours will increase its palatability for young pigs, although it should not be soaked longer than this period for fear of souring, which would decrease its palatability. The tankage suggested as a supplement with corn can be fed to the extent of 10 per cent. of the ration, and given to the animals in the form of a thin slop, previous to the time of feeding the ear corn. Some one has said that pigs like to hear the "crackle of the corn," and that their grinding machines are far superior to those manufactured commercially.

F. C. MINKLER.

AILING ANIMALS.

Cow With Cough.

WILL you advise me with regard to a Jersey cow we purchased last Spring? She had a slight cough, which seems to have become rather worse. We have had her tested for tuberculosis, but she tested out all right. She is in the pasture all day and in the barnyard at night with a chance to get under cover if it rains. I think the irritation is in her throat, as she begins to cough nearly every time she is lead by the strap around her neck. S. E. S.

Massachusetts.

Halter the cow and lead her by a halter rope which does not irritate the throat. Tuberculosis is strongly to be suspected in such a case, but actinomycosis of the glands of the throat possibly is present. Have her tested again, with a double dose of tuberculin, when the weather becomes cool. If she does not then react we should advise blistering her throat and administer two or three times daily a cough paste to be had from the local graduate veterinarian. A. S. A.

Lump Jaw.

A COW has had a hard swelling on the left side of the jaw, about the size of an egg, at the largest, and also a swelling of the lower eyelid on the same side. Both came about the same time and have been of about four weeks duration. The swelling on the jaw has broken lately and is much reduced. Cow is perfectly well otherwise. What can be done for her? T. R. H.

Maine.

Actinomycosis (lump jaw) probably is present and if the bones of the head become badly involved the case will scarcely prove profitable to treat. The diseased mass should be cut out and the wound cauterized; afterward applying tincture of iodine once daily until healed. Apply the tincture to the swelling under the eye, every other day and do not use the knife unless a considerable growth forms and discharges. If the cow is not in calf she may have a dram of iodide of potash in water twice daily for several periods of 10 days with 10 day intervals between periods of treatment; but this medicine dries up milk flow and causes emaciation and scurfy skin. A. S. A.

Sheep Grubs.

WE have recently lost one sheep with what is known as "grub in the head" and fear that others in the flock may be similarly affected. Is there any cure for this? If so will you give, in your columns, method of treatment and medicine to be used? M. E. B.

New York.

By "grubs" we take it you mean those of the sheep gadfly which inhabit the nasal passages and sinuses of the head. If so they rarely if ever cause death; but they may occur along with other ailments and the combination proves deadly. For instance one finds sheep infested with stomach worms or tapeworms, nodular disease of the intestines and gadfly grubs at the same time. There is no specific cure for grubs. They grow from small larvæ deposited in the nostrils of sheep in Summer and the flies may be prevented from this pestiferous work by daubing pine tar on the noses of sheep during fly time. Some shepherds claim to get good results from pouring medicine into each nostril in turn, the sheep being laid on its side and the nose turned upward during the operation. For this purpose they use a mixture of equal parts of kerosene or turpentine and sweet oil. It also is possible to operate for the removal of grubs, but the operation scarcely pays. A line is drawn down the middle of the forehead and one intersecting it from eyebrow to eyebrow. By means of a trephine a disk of bone is cut out in each of the upper angles formed by the crossing of the two lines and through these grubs sometimes may be extracted by means of forceps. Grubs often can be removed from the cavities made by the close cutting off of a sheep's horns.

A. S. A.

Atrophy of Udder.

I have a young Jersey heifer, milking 12 months, that shows shrinkage in right front quarter. Is there any remedy for this. She is a registered Jersey, about 30 months old, and I place a high valuation on her. S. J. C.

Virginia.

Patient massage of the affected quarter, applied twice daily, may improve matters, but the tuberculin test should be applied in all such cases, as tuberculosis is sometimes the cause of gradual painless enlargement or wasting (atrophy) of the udder. A. S. A.

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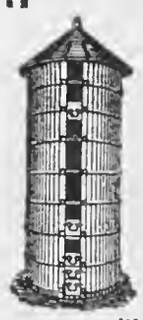

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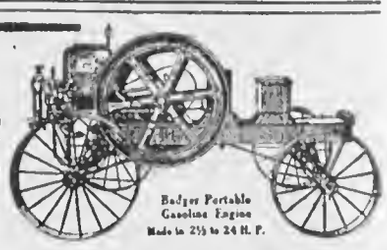

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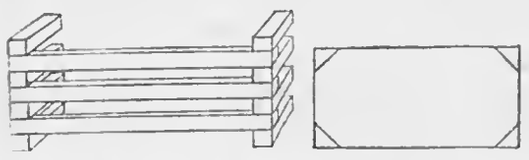
Cob-House Silo.

I HAVE in my barn directly adjacent to my cattle stable a hay mow which is not in use for hay, and which I would like to use for a silo. It is a corner so that two sides are the sides of the barn. I have a space 12x15 feet square and 25 feet high that I can utilize. I have seen coal bins or storage pockets built of two-inch stuff cob-house style, and it occurred to me that I could build a silo on the same plan, lining it with three-inch hard pine flooring which gives a very smooth, tight finish, and could make corners eight-square, see diagram. Can you advise me if this is practical, and if so, what size timber should I use, 2x4, 2x5 or 2x6? I expect the bottom would need be stronger than the top. I am not able to figure the pressure, and so do not know size of plank needed. M. O. B.
Massachusetts.

If timber is plenty and cheap you can build a cob-house silo very well by using 2x4, 2x5 and 2x6, halving on the corners, and using lots of 20-penny spikes and gas tar to make airtight walls. For the first third of the way up use the 2x6, the next third the 2x5, and the last of the way 2x4. I would have them sized and edged on one edge, the one that comes inside, and in laying see that they are made plumb so as to present a smooth and perpendicular face. Do some good carpenter work in halving the ends. In laying them up, get plenty of gas tar and put a liberal coat of it on the surface to



come between the layers, most in the center of the layer so in nailing not to come to the inside edge too much. Use a lot of it at the angles. If you can get some very fine hand saw sawdust thicken up the tar some with it to make body. Do not economize 20-penny nails. When the walls are up corner saw an 8x8-inch timber and spike them in the corners with a tar filler behind it.

As you go up, cut out a 20x20-inch manhole now and then, nail in jambs, make a door to fit in from inside. Paint the whole inside with the tar thinned with gasoline. Whitewash the outside with Portland cement. Put on any kind of roof you desire, anchor it so it will not blow over.

If you do not want it square, cut your stuff nine feet long and make it eight-square, and build the same, only you will not need to fill in the corners, only put in more of your cheap black paint. If you can build in your barn and can have the frame to back strengthen the walls you can use 2x4's all the way up, and will not need roof or outside paint.

JOHN GOULD.

Streaked Butter; Bees by the Pound.

WHAT can I do to get my butter uniform color? It tastes all right but it is all streaked with white. The cow is in pasture, the feed is all right. After it is churned I wash in three different waters, then salt it and work it in the salt. 2. An advertisement offers bees by the pound. Do you think this advertisement is all right? H. U.
Torrington, Conn.

1. Streaked butter is caused by insufficient or improper working, the salt not being thoroughly incorporated and the buttermilk removed. Butter need not be worked through three waters; churn the cream at a sufficiently low temperature to bring the butter in large granules rather than as a soft mass; stop the churning before these granules become united in a solid mass; drain off the buttermilk; add *cold* water to the butter in the churn and rinse by using the ladle in a dash churn or by giving a barrel churn a few turns; drain off the rinse water, remove the butter to a bowl and tilt the latter allowing the butter to drain for 20 minutes or so. After the free water has drained off, cover the butter in the bowl with the proper amount of salt, work it in lightly with the ladle and set the butter aside in a cool place for a few hours to allow the salt to dissolve and enter the butter. Then work the butter again, cutting and pressing it until the streaks caused by the buttermilk disappear. Tilt the bowl frequently to drain off the buttermilk as it works out. This should take but a few minutes; overworking the butter causes it to become salvy. Work the butter by cutting and pressure, never draw the ladle over the butter with a sliding motion, this breaks the grain. When packing the pressure of the ladle will also remove buttermilk and brine, drain this off. Avoid working butter more than necessary to incorporate the salt and remove the buttermilk and excess of brine.

2. Bees are bought and sold by the pound, it being necessary for the purchaser to have a hive fitted up with frames and foundation for their reception. Under favorable conditions a small number of bees with a good queen will soon increase into a good colony.

M. B. D.

Hygroma.

I HAVE a cow that has had one calf, and now has a soft bunch on her front knees. It does not seem to trouble her in getting up or down, but I do not like the looks of it. What could I do for it? Would it do to lance it? A. P.
Massachusetts.

A large cyst or sac contains serum and this has come from bruising upon the floor or manger. The usual treatment, among farmers, is to run a tape seton (rowel) down through the sac and move the tape up and down twice daily to cause the serum to flow out. A graduate veterinarian operates by opening the sac at its lowest part, evacuating the fluid, injecting tincture of iodine and then packing the cavity daily with antiseptic gauze or oakum saturated with an iodine solution.

A. S. A.

Jack Sores.

I HAVE a mule four years old which has some kind of an itch. He breaks out in little lumps and rubs all the time. The mule is in good shape and is working every day; seems to feel good every way but that. What is this, and what can be done for it? C. F. S.
Virginia.

See that the stall is kept clean and freshly bedded. Jack sores, and sores such as you describe as affecting your mule, are supposed to be due to germs in the dust of a badly cared-for stable. Do not feed corn or green grass. Feed whole oats, wheat bran and hay. Wash the affected parts once with a 1-50 solution of coal tar dip and afterward do not wash, as that tends to aggravate such sores. Twice daily apply a little of a mixture of one dram of iodoform and one ounce of oleate of mercury, well rubbed in. This ointment cannot safely be applied to large surfaces, but is fine for the sores on the legs. If the body is affected widely use an ointment of one part of iodoform and two parts of sulphur to the ounce of lard.

A. S. A.

Chorea.

MY five-year-old mare, a high-bred road horse, has a parrot mouth or over-shot jaw. She has what the veterinarian calls an involuntary twitch, jerking head to one side; she also shies, and is very excitable. The veterinarians wish to unnerve the head, but I doubt the success of the operation. What do you advise? W. H. S.
New York.

Nothing can be done for the over-shot jaw, and if you mean that "chorea" (St. Vitus' dance) is present, that also is incurable. We take "involuntary twitch" to mean chorea. If the graduate veterinarians consider that there is a fair chance of success from an unnerving operation that should be done; but without seeing the horse, we should suspect that the chances of perfect recovery are poor. A personal examination might change our opinion and under the circumstances you will have to abide by the judgment and experience of the local experts. A. S. A.

Foot Lameness; Cowpox; Ringworm.

WE have a cow which has a soreness in the hind feet. The trouble starts with a crack just over each quarter. The crack widens into a raw sore which suppurates and which we are unable to heal. The hoof at each quarter seems to crack away from the foot. Ground limestone is scattered over the floor after cleaning the stables. This was used all through the Winter. Cows run in pasture of which part is swampy. 2. Another cow has very sore teats. The trouble seems to start with a puffy swollen place which is extremely painful when the cow is milked. The swollen places gradually decrease in size and a crust forms. Generally when the crusts drop off the sore has healed but in some cases a little matter is seen. The sores are, in the crust stage, about the size of a pea and are thickly sprinkled over the teats, but do not extend to the bag. 3. A heifer, two years old, coming three, has some sort of a scaly affection on her neck. At the top the hair is nearly all off. The scaly part seems to follow the wrinkles along the top of her neck, but along the sides and extending up to her head are round patches the size of a 10-cent piece. She is running in a pasture with other young stock and steers, and none of the others are affected. A. C. C.
New Hampshire.

1. Scratches or abrasures of the skin become infected in the mud or filth through which the cattle travel. Do away with the cause. Cleanse affected parts and then bathe with a hot, saturated solution of sulphate of copper. Do not repeat this treatment. Cover the sores with oakum or cotton saturated in a 10 per cent. solution of coal tar disinfectant and renew the dressing once daily. If any sore is obstinate in healing swab it with tincture of iodine each other day, as well as using the wet dressing. 2. The cow has "cowpox." Isolate her and have her milked by one who does not go near the other cows. Twice daily wash her udder with a solution of one ounce of granular hyposulphite of soda and one quart of soft water. Apply glycerite of tannin to the sores as often as found necessary. 3. Ringworm is present. Scrub the spots clean and then rub in iodine ointment every other day.

A. S. A.

Warts.

How can I remove a large wart from my colt, on breast? The wart is three inches across and 1½ inch at base.

H. H.

Tie a fine cord very tightly around the base of the wart and then saturate the wart once daily with glacial acetic acid, applied drop by drop. The better way of treating such a wart would be to have it removed by operation. A. S. A.

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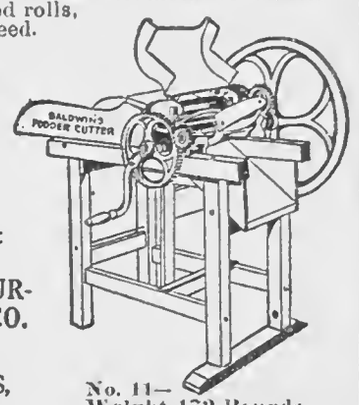

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The Henyard

Drooping Chicks.

I HAVE a flock of about 300 White Leghorn chicks; they were hatched about June 1 and grew well until about a week ago, when some of them would drop their wings and sit around with their eyes closed and in a day or two die. I feed them the Cornell ration and they are free from lice. What is the trouble?
Roscoe, N. Y. L. S.

There is nothing that can be done for these chicks in the way of curative treatment; the least vigorous of them will die from the effects of the intestinal infection while the more vigorous will survive, some of the latter to the detriment of the mature flock and subsequent broods of chicks. Sour milk, fed early and continuously, seems to have a very definite beneficial influence in preventing intestinal infection and promoting growth and vigor; this, in connection with care to hatch only from vigorous fowls whose progeny has not shown marked tendency to diarrhœal infections, and clean, sanitary, surroundings with proper feeding and general care comprises about all that can be done to guard against serious losses from this source. Chicks that are evidently affected, and yet which survive, should not be allowed to enter breeding pens next year; they are apt to transmit their weakened vitality if nothing more and may perpetuate the trouble. True white diarrhœa is directly transmitted by hens whose ovaries contain the germs of this disease and while your chicks may not have this particular form of infection, the others are so closely related to it as to require much the same treatment.
M. B. D.

Tom Barron and "Practical" White Wyandottes

THE controversy over the great-laying White Wyandottes which Mr. Barron has in the international egg-laying contest, at Storrs, Conn., is very amusing to those who have long noted (and disapproved), the purely artificial qualifications called for by the American Standard in "show" birds, and the claim made by some extremists that Barron's birds are not purebred White Wyandottes, with his straightforward and manly defence of them, will help to clear the air. It certainly is true that Mr. Barron's White Wyandottes at Storrs are not "standard" White Wyandottes, are not the "dumplings" which you describe the show Wyandottes as being; but that they are purebred White Wyandottes, and bred from straight American stock birds, every one who met Mr. Barron at the Storrs meeting, and heard his plain statement of how he became interested in White Wyandottes, and how he selects and breeds them for great egg production, will readily believe.

Mr. Barron's first White Wyandotte hen was given to him by a friend but she was so ragged from the molt and so dirty he took a dislike to her, and asked another friend to take her off his hands. This friend put the ragged, dirty hen in with a pen of Minorca pullets, and a few days later asked Mr. Barron: "Do Minorcas lay tinted eggs, Tom?" Mr. Barron told him: "No. Minorcas lay white eggs, but those pullets of yours are not laying yet, anyway." A little while later the friend was at him again: "That dirty white hen you gave me laid us six eggs last week!" And then Tom went over and shamefacedly asked the friend: "Will you kindly let me have that white hen back again?" He had begun to "sit up and take notice!"

Tracing up the history of this dirty, ragged-looking hen he found that she was a straight American-bred bird, of Arthur Duston's stock; Barron bought 10 other White Wyandotte hens, of another American strain, and bought a male bird of still another American strain. "And," said Mr. Barron, "there has never been one drop of blood of any other strain or stock introduced into my strain of White Wyandottes."

The lengthening of the body of Tom Barron's birds is entirely due to his breeding them for egg production only; he breeds from his best layers, mated to sons of his greatest layers, with never a thought of the artificial requirements of the American Standard, and, furthermore, this lengthening of the body of White Wyandottes by trap-nest testing for great egg production is nothing new. That is the most amusing part of the matter.

Other White Wyandotte breeders who breed for egg production only have done the same thing, as witness the birds of Mr. Richardson, of Massachusetts, told about on page 709 of the *Reliable Poultry Journal* for August. And the undersigned noted the same result in the trap-nest tested White Wyandottes bred by Mr. Candee, of New York, and told of the lengthened bodies of Candee's birds in an article written for the *American Poultry Advocate* about eight years ago. All of this discussion of Tom Barron's White Wyandottes is a good thing for the "practical" side of the poultry business—for those poultrymen who are working for greater egg production. It will help to clear the air!

"Let the heathen (standard makers) rage, and imagine vain things!" They are simply beating the air! Utility poultry is steadily gaining ground; it is surely coming into its own. A. F. HUNTER.

Ailing Chicks.

ON June 1 I hatched 56 chicks with hens, since then have lost 10 with the following symptoms: They seem to be taken suddenly with drowsiness, sit around for a day or two with eyes shut, and die. They were fed on chick feed for the first two weeks, then changed to commercial scratch feed and dry mash and sour milk, with all the green food they will eat, such as lettuce, Swiss chard and clippings; are confined to a yard 26x40, coops strictly clean and not a louse in sight. G. R. F.
New York.

These chicks have succumbed to some infection, very likely of a diarrhœal nature, to which they have been exposed, and which they did not have vitality enough to resist. Late hatched chicks seem less able to resist infectious diseases than those hatched earlier and from hens whose vigor has not been depleted by long continued laying. Of these diseases, white diarrhœa is the most prevalent and serious but other infections abound and take their toll yearly from the flocks of young chicks. There is no cure after the trouble has developed; losses from this source should be prevented by hatching only from vigorous stock and giving proper care to the young chicks. Early and continuous feeding of soured skim milk does much to prevent the inroads of various infections and contributes to the growth and vigor of young stock. True "bacillary white diarrhœa" is transmitted from parent hens through the eggs and any flock whose chicks show marked tendency to this disease should be discarded as breeders. M. B. D.

Shall We "Swat the Rooster?"

WHAT is your opinion of this "Swat the rooster" crusade now being given so much publicity by the poultry press and the Federal Government? Personally I am convinced it will, if not moderated, mean the end of farm poultry and the building of a race of degenerate fowls. Only today I read of 250,000 roosters being killed in one day in one State. How many of the owners kept a year-old male for a breeder next Spring? Mighty few, I bet. Of the 250,000 fully 75 per cent. were breeders, as the buyers are not going to pay market prices for senile wrecks. It all sums up to me the fact of pullet and cockerel matings next Spring and the resulting poor fertility, dead-in-the-shell chicks and weaklings. It will be a heyday for that old nightmare "white diarrhœa."

Much better if we would plan a swat one and save the other policy. It will pay any farmer to keep a year-old male for breeding, even if he has to place him in a separate yard and spend a few minutes each day attending his wants. My plan is a suggestion to keep a mated breeding pen all the year around. I find after careful experiment a male kept from his mates for a period of two or three months is not as active as when left with them. When yarded by himself a male will take on flesh or else worry himself into a state of physical debility, unless he is carefully attended, and few farmers are going to give him the care a fancier or real poultry breeder would. Separation is against the laws of nature. A male takes a rest during the molting period and then nature repairs his vitality. If you will notice at the molt a male seldoms mates, and fertility during this period is always bad, at least that has been my observation over a period of four years. Fads and fancies go at times, but I think all breeders should be warned against some of the ideas of theorists. Fertile eggs must be had to reproduce the race, and while infertile eggs can be had only by separation of sex, yet the farmer should be taught the value of a breeding pen and educated to care for it. I am against a wholesale swatting of the rooster, and hope to have the support of other breeders. ALLEN JENKINS.
Virginia.

R. N.-Y.—We do not believe this compaign for killing off the surplus rooster will cause any such trouble as Mr. Jenkins fears. Anyone who would be interested enough to "swat" would be intelligent enough to use improved males in his flock. We think this "swatting" will develop a better business for the breeder of improved stock. Only a very small proportion of the useless roosters will be killed, and we think their loss will be a gain to the poultry industry. The fact is some of the scientists now find that sterile eggs are as subject to some forms of "rot" as are the fertile eggs. What Mr. Jenkins says about the breeding pen is all right, but killing off the drones would not interfere with that.

Trap Nest; Broody Hens; Sour Milk.

IT seems to me there should be some rule-of-thumb method whereby the busy farmer-poultryman could pick his best laying hens for breeders. My idea is that there ought to be some characteristic traits and habits of good layers, although it seems to be disproved that there is any uniform physical type. I wish you would submit the following points to some of the observant trap-nest operators, for comparison with their findings according to the records. If anything definite along these lines can be determined, it would be valuable to many of us. I believe that a hen having these traits should be an extra good layer, or at least extra profitable.

(1) A hen that lays during Fall and early Winter. (2) A late molter. (3) One that lays during molt. (4) One that is active and always next to the feed pail. Good eater. (5) Not much given to broodiness. (6) One late to roost.

Likewise, that these traits indicate a poor one:

(1) A poor eater. (2) One lazy or sluggish. (3) A wild one. One that scoots around the farthest corner when you appear. (4) One frequently broody. (5) One not laying in Fall or early Winter. (6) One going early to roost and not coming at the feed call. All these points with due allowance for the breed and condition at different seasons.

Here is the very best method of breaking up broody hens. Put in a strange pen, without nests, with a lively young cockerel to keep them stirred up (the kind that digs you in the leg when you pick up a hen, if you have such a one.) Feed plenty, and make them work for it, and water. Starvation is most illogical. You want the hen to make eggs; then give her the "makin's." She is fortified to starve by the week if necessary, anyhow. If a week of this doesn't change her conduct, then ax her to lay; she's not worth keeping.

I must protest against this comparing of the sour milk pen in the contest at Storr's with the other pens. To anyone who has fed sour milk to poultry, and knows how the egg record bounds up (and also how it slumps when discontinued) it is most absurd. Why, the poorest pen in the lot would have laid at least 100 more eggs by now, if they had all the sour milk they wanted. Compare them with their own four check pens, from 260 to 396 eggs behind them, and you will see what a handicap the rest of the pens work under. Where might any of the 10 pens that have passed 1,200 now be if they had the sour milk? There is no basis of comparison without a handicap.
New York. LEO A. MAPES.

EARLY MOULTING.—We read with interest, last Fall and Winter, the many reports of pullets moulting as we had 150 White Leghorns, hatched principally in May, drag through a four month moult. These pullets are again moulting—the building is full of feathers. Would you feed heavy of bran, bone meal, etc., or keep them on their regular laying ration? They are on free range with running water. Maine formula of dry mash always before them with wheat, oats and corn twice daily. F. B. N.
Ohio.

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THE EGG-LAYING CONTEST.

TO the surprise of everybody the forty-first week shows a gain of 145 eggs over the previous week. Of this gain the White Leghorns contributed but nine eggs; the other breeds being responsible for nearly all of it. This shows that broodiness is subsiding and the birds are getting down to business again. The Leghorns, however, continue to make all the high records, as they have for many weeks. Bonnie Brook Farm's pen take first place for the week, with a score of 61. Five birds in this pen laid every day in the week. Three pens tied for second place with scores of 55 each. They are the "sour milk" pen from Storrs Agricultural Station, Marwood Poultry Farm's pen, and Francis F. Lincoln's pen. Tom Barron's Leghorns laid 53; this pen is now third in the competitive pens. Pen number 42—the sour milk pen—from Storrs, has the highest total score, viz., 1,744; but they are not competing. Tom Barron's White Wyandottes still lead the competing pens, but they are only one egg ahead of Francis F. Lincoln's pen of White Leghorns, and in all probability Lincoln's birds will be the leaders by next week. In my opinion the American birds will win the contest at Storrs this year, though Tom Barron's birds are putting up a bully fight and they will probably win at Thorndale and at Mountain Grove, Mo. The week's record follows:

	Week.	Total
Barred Rocks.		
A. A. Hall, Connecticut	48	1,151
Frank L. Tuttle, Massachusetts	38	1,185
Waveny Farm, Connecticut	48	1,127
Jules F. Francais, New York	42	1,361
White P. Rocks.		
Albert T. Lenzen, Massachusetts	39	1,233
F. H. Benton, Connecticut	45	1,238
Storrs Agr. Station, Connecticut	37	1,008
Storrs Agr. Station, Connecticut	39	1,068
Storrs Agr. Station, Connecticut	38	1,195
Storrs Agr. Station, Connecticut	36	1,055
Storrs Agr. Station, Connecticut	44	908
Buff P. Rocks.		
A. A. Hall, Connecticut	43	1,240
W. C. Morgan, Jr., Connecticut	30	950
White Wyandottes.		
Tom Barron, England	45	1,721
West Mt. Pltv. Yards, Connecticut	34	1,028
Merrythought Farm, Connecticut	47	1,565
Neale Bros., Rhode Island	36	1,536
D. J. Ryan & Son, Connecticut	23	1,150
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	41	1,168
Dr. N. W. Sanborn, Massachusetts	33	1,138
Am. Buff Wyan. Club, New York	22	1,021
H. L. Hamilton, Connecticut	12	832
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	48	1,145
Single Comb Reds.		
Robert Seaman, New York	40	932
J. S. Gillespie, Connecticut	24	1,127
Dr. J. C. Dingman, New York	26	1,051
Barnham Pltv. Farm, Massachusetts	23	905
H. P. Deming, Connecticut	31	1,105
Geo. P. Dearborn, Florida	28	1,252
Dr. J. A. Fritchey, Pennsylvania	29	1,338
Ernest Underhill, New Jersey	35	1,031
W. H. Bunnsted, Connecticut	35	772
Pinecrest Orchards, Massachusetts	42	1,322
Harry B. Cook, Connecticut	41	1,155
Colonial Farm, New Hampshire	28	1,179
A. B. Brundage, Connecticut	38	1,457
Rose Comb Reds.		
Glenview Pltv. Farm, Connecticut	18	1,138
C. S. Scoville, Connecticut	21	851
White Leghorns.		
Storrs Agr. Station, Connecticut	32	1,339
Storrs Agr. Station, Connecticut	45	1,425
Storrs Agr. Station, Connecticut	38	1,424
Storrs Agr. Station, Connecticut	55	1,744
Storrs Agr. Station, Connecticut	43	1,306
Braeside Pltv. Farm, Pennsylvania	41	1,199
Glenview Pltv. Farm, Connecticut	51	1,382
Manor Pltv. Farm, New York	40	1,248
A. B. Hall, Connecticut	38	1,287
Marwood Pltv. Farm, Pennsylvania	55	1,419
Geo. M. Harris, Connecticut	29	1,089
Bonnie Brook Farm, New York	61	1,432
N. W. Hendryx, Connecticut	41	1,280
J. J. Linehan, Massachusetts	43	1,182
F. F. Lincoln, Connecticut	55	1,720
Cecil Guernsey, New York	39	1,450
Thos. W. Moore, Connecticut	48	1,315
Chas. N. St. John, New York	44	1,303
Chas. W. Sherwood, Connecticut	48	1,241
L. E. Sands, Pennsylvania	44	1,259
Tonoka Pltv. Farm, Connecticut	31	1,118
Venture Pltv. Farm, New York	32	1,054
Mrs. K. E. Woodruff, Connecticut	45	1,277
Windsweep Farm, Connecticut	27	1,143
C. H. Savage, Connecticut	41	1,290
P. G. Platt, Pennsylvania	52	1,462
Heneta Bone Co., New Jersey	20	464
F. M. Pensley, Connecticut	43	1,296
Chas. Helgi, Ohio	41	1,225
Tom Barron, England	53	1,623
Branford Farm, Connecticut	42	1,414
James Munn, Massachusetts	32	1,181
Geo. A. Cosgrove, Connecticut	41	1,257
Buff Leghorns.		
Wolverine Pltv. Farm, Michigan	49	1,310
Blue Andalusians.		
E. H. Bird, Connecticut	36	1,087
Buff Orpingtons.		
O. Wilson, West Virginia	42	899
White Orpingtons.		
P. A. Demgar, New York	19	868
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	36	684
Silver Campines.		
W. J. H. Lobel, New Jersey	36	1,052
Dunghills.		
H. W. Collingwood, New Jersey	37	1,061
Daniel Hine, Connecticut	26	973
Daniel Hine, Connecticut	31	1,005
Mixed Breeds.		
Profitable Poultry, Massachusetts	23	1,075
Profitable Poultry, Massachusetts	33	1,105

GEO. A. COSGROVE.

Molting and Breeding Ration.

WHAT is the best ration to feed hens during the molting season? What ration should I feed breeders through this Fall and Winter? T. W. K.
Cavendish, Vt.

No special formulas are needed for feeding fowls through the molting season, but the rations should not consist of fattening foods, such as corn and buckwheat, exclusively. While growing new feathers the protein element of food is needed as much as while producing eggs, and this should be furnished in the form of meat meal or scrap, skim-milk and the grains of good protein content. The wheat products, oats, gluten feed, oil meal, Alfalfa and clover are all good. In short, feed the fowls as well as though they were laying. Neither are any special formulas necessary for breeders, but if they can be induced to eat them, either whole or ground, oats may well form a considerable proportion of their grain food. They should have ample range and not be forced for laying through the Fall and early Winter; to this end but little meat should be given. M. B. D.

Prolapse of Oviduct.

I CARRIED a flock of 12 Leghorn pullets and 23 Reds through the Winter. In December, January and February they laid an average of about six eggs a day. In February, finding it difficult to get meat scrap delivered to the house, I changed over to cottonseed meal, using three parts of this for two of meat scrap, and cutting down one part on the cracked corn. After feeding for two months with the new ration I had a case of prolapsus of the oviduct, from which a Red died. The hens were laying about 20 eggs a day then. I was advised by a poultry expert to cut down on the protein, as the prolapsus was due to too heavy laying. At the same time 13 of the hens began to stand around in a corner, close their eyes, and slowly sink their heads. I gave them castor oil and a tonic, and it seemed to cure all but one, which kept it up until it died. The poultry expert thought that the sleepiness might be due to an excess of carbohydrate in the food. I discontinued the cottonseed meal in the beginning of June and substituted meat scrap, after I had lost six hens through prolapsus or hemorrhage of the oviduct. Now, after a month of absence of prolapsus, I have two cases again. My hens get cracked corn and wheat, half and half, and a dry mash of bran, gluten, and beef scrap. They have all the grit and green food they want, have a fairly large yard, an open front dry house, and fresh water twice a day. How can I prevent prolapsus? A. G.
New Jersey.

As prolapse of the oviduct is consequent upon inflammation, due probably to overstimulation of the egg-producing organs, the obvious remedy is to feed a less forcing ration and be content with fewer eggs and healthier fowls. Cottonseed meal has never had an enviable reputation as a poultry food and its use may have had something to do with the condition of your flock. Moderately favorable reports from its use as a source of protein in poultry rations have been received from some of the experiment stations, but in the present state of our knowledge concerning it, it is probably best to use it sparingly. It may well be that some high-bred fowls are more subject to inflammation of the egg producing organs than their more rugged and less productive sisters, and this tendency to inflammation and prolapse may perhaps be inherited. M. B. D.

Poor Feathering.

I HAVE chicks that are almost big enough to kill but almost unde, except the soft down such as all chicks have when hatched, except two or three wing feathers, and they turn right up over the back, similar to a fantailed pigeon. It is mostly the cockerels that are that way, the pullets seem to feather up better. They all run together and have free range of an 80-acre farm. What is the cause, what the cure, if any? I have noticed the same before this season but not to the extent that it is this season. I notice too that some of the old birds have what seems to be an imperfect wing, or wings, by spreading the wing feathers there seems to be a few wing feathers lacking right in middle of wing; have noticed same on other people's chickens. A. C. G.
Pennsylvania.

It is not uncommon to see chicks which fail to develop their plumage with the growth of the body and remain bare until pretty well grown. I do not know that the cause of this has been, or can be, explained; it is doubtless due to some nutritional disturbance and does not often affect a sufficient number of chicks in a flock to make it a matter of any great concern. The only remedy that I can suggest is plenty of food and time enough for the belated feathers to make their appearance. M. B. D.

Chicks Fail to Grow.

WHY do chicks stay about the same size and are all naked? They do not grow at all. A. P.
Orange Co., N. Y.

An occasional chick in a flock will fail to develop with its mates and even fail to develop feathers as it should from some lack of vitality which it would be hard to explain. If a whole flock fails in ordinary development there is reason to think that it is not being sufficiently fed or that lack of vigor in the parent birds is responsible for such a poor start in life that its effects are slowly, if ever, overcome. This, of course, if there is no evident disease that is stunting the chicks. Chicks that show marked slowness in developing should be discarded at once or so marked that there will be no danger of their ever being used for breeders. M. B. D.

Peas for Poultry.

ARE peas a good food for poultry when mixed with grains, such as cracked corn, wheat and oats? These are dried peas which have become worm-eaten and we can purchase them at less than $1 per 100 pounds. In what proportion would you mix these grains to feed morning and night to hens that have dry mash before them at all times? K. M. K.
Demarest, N. J.

Cracked or crushed peas are used to a considerable extent in commercial chick feeds, and I know of no reason why whole peas should not be equally good for fowls, provided that they will eat them; on this point I should assume myself by actual trial before purchasing any considerable quantity. Peas have a nutritive ratio of about that of wheat bran; if relished by the fowls they might probably be fed to advantage in the proportion of one-sixth to one-fourth part of the entire whole grain ration. So far as I know whole peas are not commonly used as poultry food, and it would be advisable to ascertain their acceptability to the fowls by actual test before investing much in them. M. B. D.

Drooping Chicks.

WE have some incubator chicks about four weeks old that are dying at the rate of five and more per day. They go around with their wings drooping and act as though nearly asleep until they drop down and die slowly. They eat until nearly the last. No signs whatever of bowel trouble. I feed them on broken rice and just a little dry middlings occasionally. Plenty of fresh water.
New York. J.

Broken rice with an occasional feed of wheat middlings is not a suitable diet for young chicks, as it does not furnish the needed elements for growth and development. Corn, oats, and wheat as well as ground grains in the form of mash and some animal product such as skim-milk or meat scrap are all needed. Chicks of little vitality, such as late-hatched chicks are apt to have, often succumb at three or four weeks of age to infections which stronger chicks resist. Some of these infections are accompanied by diarrhœa and some are not. Prevention rather than cure must be depended upon to avoid these losses, and prevention can only come by hatching from vigorous stock that has not lost vitality from prolonged laying, cleanliness in the care of the chicks with disinfection of utensils and quarters when needed, avoidance of contact with other diseased chicks or the quarters in which they are housed, and healthful surroundings in which they are reared. Correct methods of hatching and brooding have also a great deal to do with the stock of resistance to infections diseases with which chicks start out in life. The early and continuous feeding of soured milk appears to exert a very favorable influence both in preventing intestinal infections and promoting growth and vigor. M. B. D.

"TELL me, old man," said the perennial seeker after knowledge, "why is your hair gray and your beard brown?" "Easy!" answered the facetious a. m. "My hair is twenty years older than my beard."—Credit Lost.

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Publisher's Desk

I AM enclosing you one dollar for a year's subscription to your magazine. The 10 weeks I have received it has proved it to be a very satisfying weekly visitor. While all of its departments are good the caleium from the "Publisher's Desk" is particularly pleasing to me, as the times demand that some paper should have a good straight stiff backbone instead of the usual one shaped like the $ mark and of the consistency of fresh putty, as is all to common. E. A. P.
New Hampshire.

We are particularly proud of the renewals from these 10 weeks' subscriptions. Farm paper publishers for the most part have abandoned them on the ground that they do not pay. It is true that there is an actual money loss on every 10 weeks subscription. The clerical work alone is as much as on a yearly subscription, and actually exceeds the 10 cents. The only way to make 10 weeks subscriptions profitable is to give a service that farmers do not find in other papers, so that they renew for a year and become regular patrons of the paper afterwards. This and similar correspondence coming to us in every mail shows that the farmer realizes the situation and appreciates a real service in his interest. The prompt renewal of annual as well as 10 weeks subscriptions speaks with even more convincing evidence than the special letters like the above. Some years back, when we formulated this service into a department of the paper, it was criticised and ridiculed. Even yet we occasionally see a scoff and a sneer from the advertisers who are not permitted to use our columns, and from publishers who are obliged to defend them. Of late there have been a few feeble attempts at imitation, but these serve only to emphasize the dollar mark backbone referred to above. An occasional show of a petty weakling or the boisterous criticism of an already discredited concern will not constitute a service of any great benefit to the public. It is easy enough to turn down a $2 advertisement, but few publishers can refuse a $2,000 order with equal indifference, and until he gets so that he can do so, the dollar sign will be his mark of perfidy. No man can serve two masters. The publisher who knowingly takes advertising money from a dishonest or deceitful advertiser cannot render a faithful service to his subscriber. None of us can hope to be perfect, but the reader will excuse the errors if they know the purpose is right. The publisher is, however, under constant and intelligent review. Thirty years ago bluster and bray and pretense went a long way. They do not go far now. Today the farmer can read between the lines, and he knows the difference between service and palaver.

I would be willing to join Dr. Ulman's Anti-Fake Association if you will kindly send my name to that department. I certainly am willing to do my part in scaring out the fraudulent advertisers.
Pennsylvania. A. C.

The Anti-Fake Club is growing nicely. Every name that comes in now will be charter members. The permanent organization will be formed in the Fall; and every person who is willing to report deceptive advertising and to protest to publishers against them, and if the publishers persist, to refuse to accept the paper, will be eligible for membership.

Enclosed find pamphlet of the Electro-Chemical Ring Co., Toledo, O., that was handed to me by a business man of a nearby town. After looking at a page or two I concluded it was another "fake." I would like to know your views of the subject, expressed through the columns of THE R. N.-Y. C. H. A.
Ohio.

The booklet enclosed proposes to cure anything from cancer, paralysis or rheumatism to loss of hair by the use of this electro chemical ring, which seems to rival the magic wand of fairy tales. This is too palpable a fake to require further comment.

About the middle of September, 1913, an agent of the Syracuse Portrait Co., Syracuse, called at my home and my daughter gave him a cabinet picture to be enlarged. She also signed a contract with them which stated that the portrait would be delivered about October 15. We did not receive it, so wrote to the company Nov. 1, and received a letter stating that it would be delivered November 16: have written to them since and asked them to send me the cabinet picture or the enlarged portrait but have had no reply. The picture was very valuable to me. Can you help me? G. S. B.
Massachusetts.

The above is the usual experience of those giving orders to agents of the so-called portrait houses. They are as much to be avoided as the smooth-tongued tree agent. We have written several letters to the Syracuse Portrait Co. in behalf of the subscriber, but have been entirely ignored. Farmers will do well to show agents of this kind the door as soon as they begin to talk and if the agent delays taking his departure call the dog.

April 8th, 1914, I shipped to E. G. Fisher, Oakwood Heights, Staten Island, N. Y., two baskets containing 36 I. R. duck eggs for which Mr. Fisher paid me $3. April 12 Mr. Fiisher wrote me the card herewith enclosed to the effect that he has received but one basket. In reply to his card I shipped him on April 16th another basket containing 18 duck eggs instead of the one supposed to be lost, and entered claim against the Express Co. for the same. The Express Co. show that both baskets of the first shipment were delivered on the 10th and 11th of April. See papers herewith enclosed. I have requested Mr. Fisher to pay for the extra basket of eggs but can get no satisfaction from him. Will you kindly take the matter up with Mr. Fisher and see what you can do for me?
Pennsylvania. H. J. V. D.

The express company's receipts accompanying leaves little doubt that all the shipments of eggs were delivered, but Mr. Fisher ignores our appeals to his sense of fairness and honesty in H. J. V. D.'s behalf. This is another poultry case where the seller gets the short end of the deal.

I am greatly obliged to you for your endeavor in my behalf. Truly your paper is a public benefactor, and deserves every recognition. I had given up hope and am the more grateful. A. O.
Massachusetts.

This refers to the collection of $6.40 from Adams Express Company for egg breakage in three shipments. Claim was declined to shipper and at first to us, but was just and clear proof of the loss, and we were in position to insist on settlement.

We received our eggs to-day (July 3) ordered from R. J. Gibbons, Mt. Holly, N. J., June 5. Some look like duck eggs, some bantam, some R. I. Reds and others had the appearance of having been in a nest for a week. What do you think of that for "Young's strain S. C. W. Leghorns" advertised by Mr. Gibbons?
Maryland. W. H. W.

I sent $4 to R. J. Gibbons, of Mt. Holly, N. J., for 100 Young's strain S. C. W. Leghorn eggs, advertised in your issue of May 30. Did not receive the eggs for about three weeks. Some of the eggs were quite highly colored, something I have never seen in Leghorn eggs. Mr. Gibbons, in his advertisement, agreed to deliver the eggs, but I had to pay 66 cents express. He also advertised free valuable instructions for feeding, forcing and getting eggs, but I failed to receive any such. I wrote Mr. Gibbons in regard to this shipment, and I am enclosing the card I received in reply. Under the circumstances I do not feel at all sure whether I have Young's strain of Leghorns or simply eggs. E. J. C.
Connecticut.

On July 28 E. J. C. reported as follows:

Those eggs purchased from Mr. Gibbons have hatched, and they are an interesting looking lot of mongrels. Very few of them are clear white, some almost entirely black, some with black dots, some resemble Black Orpingtons and some R. I. Reds.

In the case of W. H. W. the eggs were returned and Mr. Gibbons refunded one-half the purchase price. He also refunded $2 of the purchase price to E. J. C., and makes the excuse that being short of eggs he "let the order out." We have report from Mr. Gibbons' neighborhood that his flock of hens consists of various breeds all running together, so that the eggs received by the complainants are just what might be expected from their own hens. The record Mr. Gibbons has made in the above cases puts him in the class with E. E. Cooley, of Ransomville, N. Y., and E. F. McAvoy, Cambridge, N. Y. Whether due to deliberate and wilful misrepresentation and fraud, or merely Mr. Gibbons' carelessness and indifference, the annoyance and loss to the complainants in question is such that we do not hesitate to advise our people to avoid Mr. Gibbons in the future.

The Jeffrey Lime-Pulver

Grinds Limestone on the Farm 2 to 3 Tons Per Hour

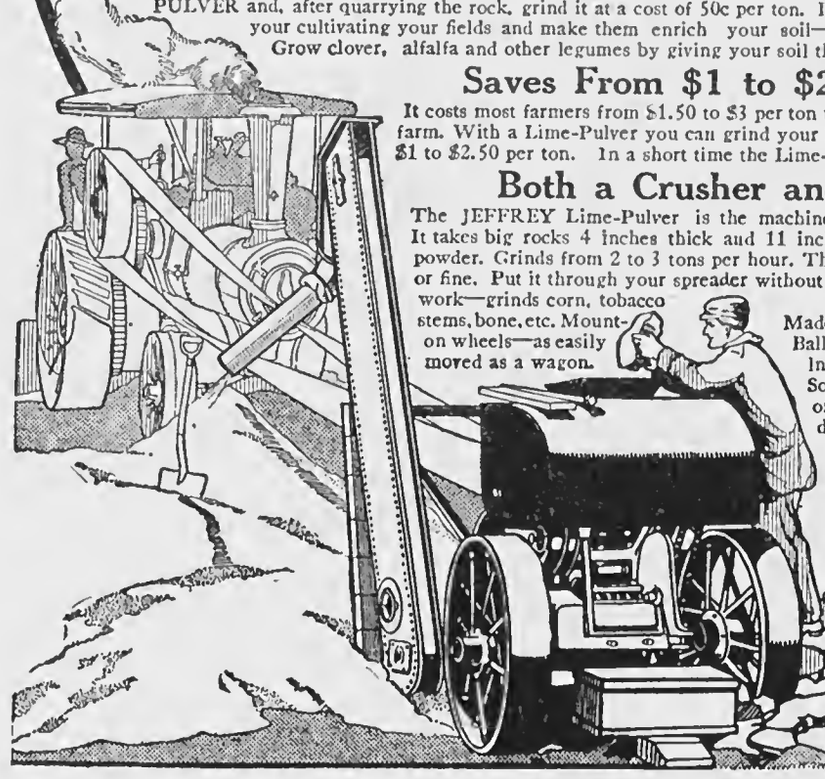
The day of cheaper lime is here. If you have lime rock available you can make fertile fields of land that is now sick and sour. No need to buy burnt lime at high prices that burns up the humus and wastes the Nitrogen in the soil. No need to buy ground limestone and pay for freight and hauling. Get a JEFFREY LIME-PULVER and, after quarrying the rock, grind it at a cost of 50c per ton. Dig out those rocks that prevent your cultivating your fields and make them enrich your soil—turn the stones into dollars! Grow clover, alfalfa and other legumes by giving your soil the lime it needs.

Saves From $1 to $2.50 Per Ton

It costs most farmers from $1.50 to $3 per ton to get ground limestone on their farm. With a Lime-Pulver you can grind your limestone for 50c and save from $1 to $2.50 per ton. In a short time the Lime-Pulver pays for itself.

Both a Crusher and Pulverizer

The JEFFREY Lime-Pulver is the machine that crushes and pulverizes. It takes big rocks 4 inches thick and 11 inches long and reduces them to powder. Grinds from 2 to 3 tons per hour. The product can be ground coarse or fine. Put it through your spreader without trouble. Crushes rock for road work—grinds corn, tobacco stems, bone, etc. Mounted on wheels—as easily moved as a wagon.



Made in the famous Jeffrey shops. Ball-bearing pulverizer—Pulverizing hammers of manganese steel. Sold on a guarantee of satisfaction or your money back. Write today for valuable booklet, price and let us analyze the lime-rock on your farm for you without cost.

The Jeffrey Mfg. Co.
402 First Ave.
Columbus, O.

The Machine That's Made Lime CHEAP! 2

This Wheeling Lime Stone Crusher Costs 15 % Less Than Last Year

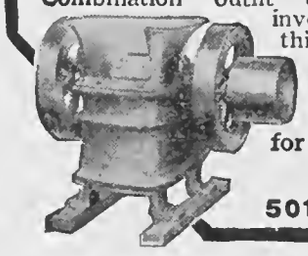
because of larger output due to increased demand for Wheeling Crushers. The Wheeling is steel built—like a battleship—lighter than cast iron, stronger, runs on less power, using your own engine if desired.

WHEELING LIME STONE CRUSHER

After it pays for itself crushing limestone for you, earn money crushing for neighbors. Only successful crusher with jaws adjustable to crush any size—equally valuable for liming, road or concrete work. Sizes for all needs.

The Profits Pay For It—

Combination outfit enables you to add capacity as wanted. No need to invest a lot of money until you make a lot. Investigate this exclusive Wheeling advantage.



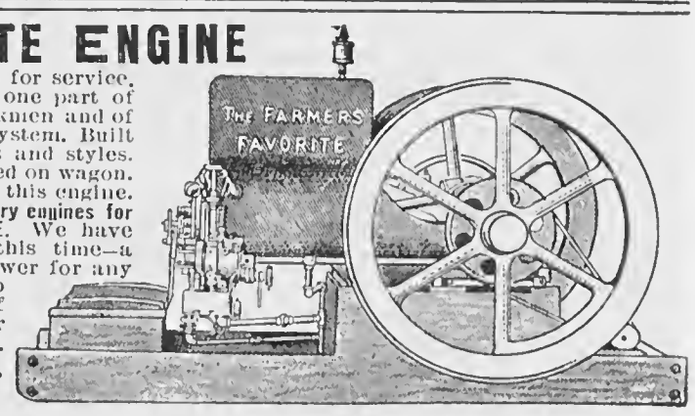
Write For This FREE Book

"Mixing Brains with Farming." Tells what you ought to know about liming, how a Wheeling pays for itself and why it's the only crusher to buy.

WHEELING MOLD & FOUNDRY CO.
Pioneers In the Manufacture of Limestone Crushers
501 Raymond Street Wheeling, W. Va.

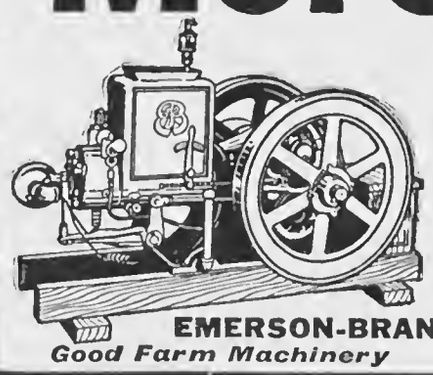
FARMERS' FAVORITE ENGINE

Is all that the name implies. It is built for service. Light in weight. Easy to move from one part of farm to another. Built by skillful workmen and of best material. Perfect Hopper Cooling System. Built in sizes 6 to 10 horsepower. Other sizes and styles. Equipped with magneto. Can be mounted on wagon. Lack of vibration is a notable feature of this engine. 20 YEARS of experience in building satisfactory engines for farmers is behind every FARMERS' FAVORITE. We have never had a dissatisfied customer in this time—a record to be proud of. If you need power for any kind of farm work, it will pay you to investigate the merits and economy of FARMERS' FAVORITE ENGINE. Write us for further information and prices TODAY.



GEO. D. POHL MFG. CO.
Vernon, N. Y.

More Power PER GALLON

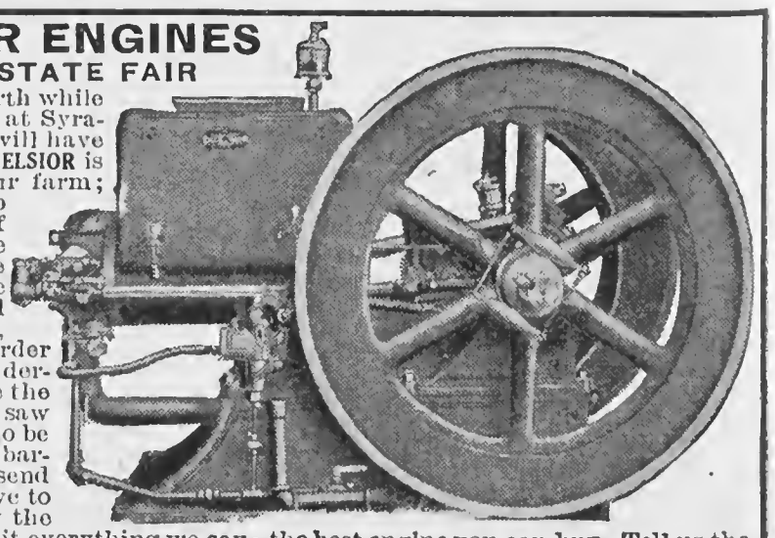


Emerson Type S Engines have an entirely new arrangement of valves and spark. On a given quantity of fuel they develop *more* power than other engines of the same bore stroke and speed. Write today for *FREE* book proving the above seemingly extravagant claims of superiority. A size for every farm.

EMERSON-BRANTINGHAM IMPLEMENT CO. (Inc.) 40916
Good Farm Machinery
919 West Iron St., Rockford, Ill.

See EXCELSIOR ENGINES AT NEW YORK STATE FAIR

FARMERS: You will find it worth while to see the EXCELSIOR engine at Syracuse, at the State Fair. You will have a chance to see that the EXCELSIOR is the engine you need on your farm; you will have a chance to compare it with hundreds of other engines. Do not take our word for it that the EXCELSIOR is the best engine made. Go to Syracuse and BE SURE OF IT. If, however, you cannot go to the Fair, order an EXCELSIOR with the understanding that it has got to be the best working engine you ever saw or used, that you have got to be satisfied that it is the best bargain on the market, or you send it back; and you do not have to pay a cent in advance. Try the engine first. Pay if you find it everything we say—the best engine you can buy. Tell us the size engine you want and when you want it and get a SPECIAL OFFER, but if you possibly can, SEE THE EXCELSIOR AT THE STATE FAIR, and when you see it side by side with all the other engines, you will agree with us, that the EXCELSIOR IS THE ENGINE YOU NEED ON YOUR FARM.



R. CONSOLIDATED GASOLINE ENGINE CO., 202 Fulton St., NEW YORK CITY

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Aug. 21, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Best creamery has advanced one-half cent. Other grades are unchanged and market rather weak. There is considerable surplus of undergrade butter which is hard to dispose of. Restaurants which formerly used butter greasy in texture or ill flavored have found that good butter is a profitable means of advertising their places. Many moderate priced restaurants now buy the best grades of creamery.

Creamery, extra, lb	30½@ 31
Good to Choice	25 @ 29
Lower Grades	20 @ 22
State Dairy, best	28 @ 29½
Common to Good	18 @ 25
Factory	19 @ 22
Packing Stock	18 @ 21

Elgin, Ill., butter market 30 cents.
Philadelphia, western creamery, 31 cents.

CHEESE.

Prices have advanced one-half cent, and many holders not ready to sell at this figure. The retail demand has dropped considerably and will slacken still more at further advances. The retailer who pays 16½ cents, charges his customers upwards of 20 cents, the difference being not all profit. There is some shrinkage and he must give up weight with every pound or half pound sale, besides cutting a good many sample slices.

Whole Milk, fresh, specials	16½@ 16¾
Average fancy	16 @ 16¼
Prime	15¼@ 15¾
Under grades	11 @ 15
Daisies	16¼@ 16½
Skims, specials	13 @ 13½
Good to choice	11½@ 12½
Poor to fair	5 @ 10

EGGS.

Another one cent advance has been made in nearby white eggs. The market is burdened with mixed and lower grades, and because of the irregular quality of current receipts, there is considerable demand for storage stock. Some further shipments to Europe are noted this week—about 20,000 dozen.

White, choice to fancy, large	34 @ 35
Common to good	25 @ 32
Mixed colors, best	28 @ 30
Common to good	18 @ 22
Western fresh, white	24 @ 28
Lower grades	18 @ 20
Storage, best	26 @ 27
Lower grades	19 @ 24

FRESH FRUITS.

There is a good demand for choice apples of standard Fall varieties, like Alexander, Yellow Transparent and Duchess, the best selling up to $3 per barrel. The market is still loaded down with windfalls and culls. A few carloads are going to Europe this week. Usually they take a considerable quantity of our best Fall varieties from the Hudson River section. Peaches continue low, except for the best. Now and then a lot is found good enough to go above $2 per crate, but $1.50 is nearer an average of sales, and a great many have wholesaled for $1. Basket stock runs from 25 to 75 cents for 16 quarts. Small sizes are in surplus, the result of overloaded trees or drought. The pear market is weak, especially on nearby Bartlett, which are small and lacking in color compared with the heavy receipts of this variety from the West. The earlier varieties of grapes, Champion and Moore's Early are on hand from nearby points, but selling slowly because of the abundance of peaches.

Apples—Alexander, bbl	1 50 @ 3 00
Yellow Transparent	1 50 @ 3 00
Duchess	1 50 @ 2 50
Astrachan	1 50 @ 2 50
Bough	1 50 @ 2 25
Pears, Le Conte, bbl	1 00 @ 2 50
Clapp's Favorite	3 00 @ 5 00
Bartlett	3 50 @ 4 50
Peaches, Del. and Md., crate	75 @ 1 75
W. Va., crate	1 25 @ 1 75
Nearby, bkt	25 @ 75
Grapes, 18lb case	30 @ 60
Plums, 6-bkt. carrier	85 @ 1 25
Raspberries, red, pint	5 @ 8
Blackberries, qt	6 @ 11
Huckleberries, qt	6 @ 14
Muskmelons, Md., bu	25 @ 1 25
Jersey, bu	35 @ 85
Watermelons, 100	10 00 @25 00

HOPS.

Prime to choice	35 @ 37
Common to good	30 @ 34
Pacific Coast	17 @ 20
Old stock	10 @ 15

HONEY.

Clver, comb, lb	15 @ 16
Dark	13 @ 15
Extracted, gallon	60 @ 90

BEANS.

The top notch of prices has evidently been reached, and the market is now at a standstill, with some sales under quotations by holders anxious to move their supply.

Marrow, 100 lbs	7 00 @ 7 30
Medium	5 30 @ 5 40
Pea	4 90 @ 5 15
Red Kidney	5 95 @ 6 85
White Kidney	6 75 @ 7 00
Lima, California	8 00 @ 8 25

VEGETABLES.

Potatoes are in very heavy supply, large quantities wholesaling at 50 cents per bushel or a trifle more. Best Long Island go above $2 per barrel. Sweet potatoes are scarce and higher. Onions are in surplus and all grades lower. String beans and peas low, except for a few fancy. Sweet corn, market weak, averaging 50 cents per 100, except best Hackensack, which brings $1.25. Tomatoes extremely low, many selling at 25 to 30 cents per bushel.

Potatoes—Jersey, bbl	1 50 @ 1 90
Long Island, bbl	1 75 @ 2 25
Sweet Potatoes, bbl	2 50 @ 3 00
Beets, 100 bunches	50 @ 1 00
Carrots, bbl	75 @ 1 00
Cucumbers, bu	20 @ 50
Corn, Jersey, 100	25 @ 1 25
Cabbage, bbl	25 @ 50
Lettuce, half-bbl. basket	25 @ 40
Onions—Southern, bu	1 00 @ 1 50
Nearby, bu	75 @ 1 25
Okra, bu	1 00 @ 1 50
Peppers, Jersey, bbl	35 @ 75
Peas, bu	50 @ 1 00
Radishes, 100 bunches	75 @ 1 00
String Beans, bu	15 @ 75
Squash, Hubbard, bbl	1 00 @ 1 50
Crook Neck	25 @ 75
Egg Plants, bu	40 @ 75
Tomatoes, Jersey, box	10 @ 40

LIVE POULTRY.

Broilers, lb	19 @ 21
Fowls	15½@ 16
Roosters	12 @ 12¼
Ducks	15 @ 17
Geese	13 @ 14¼

DRESSED POULTRY.

Chickens choice broilers, lb	26 @ 28
Squab broilers, pair	50 @ 60
Broilers, common to good	20 @ 22
Fowls	15 @ 19
Ducks, Spring	15 @ 15½
Squabs, doz	1 25 @ 3 50

HAY AND STRAW.

New Hay is now arriving freely. Some exceptional lots have sold up to $24, but $22 is the top for most business. The market on straw is critical, only a small proportion of long rye bringing the top quotations.

Hay, Timothy, new, No. 1, ton	22 00 @23 00
No. 2	20 00 @21 00
No. 3	18 00 @19 50
Clover mixed	17 00 @19 50
Straw, Rye	13 50 @16 00

LIVE STOCK.

Native Steers	6 60 @ 9 75
Bulls	5 25 @ 6 55
Cows	3 50 @ 6 85
Calves, prime veal, 100 lb	9 50 @12 50
Culls	6 00 @ 8 00
Sheep, 100 lbs	3 00 @ 5 00
Lambs	6 75 @ 8 75
Hogs	9 00 @ 9 50

GRAIN.

After several sharp speculative advances and drops, the week closes from one to four cents higher on wheat; oats two cents higher; and corn, a cent lower, because of last minute reports of rains in parts of the belt which had been suffering.

Wheat, No. 1, Northern Spring	1 08 @ ..
No. 2, Red	1 01 @ ..
No. 2, Hard Winter	98 @ ..
Corn, as to quality, bush	90 @ 92
Oats, as to weight, bush	47 @ 49
Rye	82 @ 86

RETAIL PRICES AT NEW YORK.

The quotations given are not the top or lowest figures but fairly represent many thousand sales of goods that are not delivered. Fruits and vegetables are low and used freely. Meats of the same quality vary widely in price, depending on the expenses of the retailer and his ideas as to profits, some being ready to do business on a much lower percentage than others.

Eggs, fancy white, doz	40 @ 45
Mixed colors, new laid	35 @ 38
Ordinary grades	20 @ 25
Butter, fancy prints, lb	36 @ 38
Tub, choice	28 @ 32
Chickens, roasting, lb	30 @ 32
Squab broilers, pair	1 00 @ 1 50
Broilers, common to good, lb	30 @ 40
Fricassee, lb	25 @ 28
Fowls	25 @ 28
Leg of lamb	16 @ 18
Lamb chops	18 @ 20
Roasting beef	18 @ 20
Stewing beef	12 @ 14
Pork Chops	16 @ 18
Loin of Pork	15 @ 16
Round Steak	18 @ 20
Fresh Cod	14 @ 15
Porgies	10 @ 12
Eels	15 @ 16
Halibut	18 @ 20
Butterfish	6 @ 7
Tomatoes, qt	3 @ 5
Cucumbers, each	1 @ 3
Lettuce, each	1 @ 3
Corn, doz	12 @ 20
Potatoes, peck	30 @ 35
String Beans, qt	5 @ 00
Green Peas, qt	6 @ 00
Lima Beans, in pod, qt	5 @ 00
Peaches, 16 qt. bkt	50 @ 1 25

The pastures in this section are very poor, and likely to continue so, as there has been very little rain in the past six weeks. Milk prices abut the same as in former years. Every farmer keeps from three to 12 cows, grade Holstein as a rule. There is no particular effect made to improve the herd by keeping a pure-bred sire. In past years calves three days old could be bought for from $1 to $2 per head. This season the price is $5, and scarce at that. More calves are being raised as cows sell from $50 to $80 per head.

W. M.

Le Roy, N. Y.

Subscribers' Exchange

WANTED—To buy or rent small farm within 50 miles from New York City. HERBERT HOOS, West Second, Peru, Ind.

FOR SALE—235 acres, good soil and buildings, fruit and stock farm in fine condition, $35 acre. Inquire T. S. PAGE, Cohocton, N. Y., R3.

FOR RENT—Well equipped poultry and general farm, for term of years; nearby retail market with good will. Box 6, Barnstable, Mass.

GENERAL PURPOSE or dairy farm of 80 acres with crops and stock. Full description and terms upon application. ROBERT GREGORY, Grantou, N. Y.

FOR SALE—Village poultry farm, near Putnam, Conn.; good buildings, poultry houses for 400 chickens; $1,500; $600 cash. Box No. 76, R. D. No. 1, Putnam, Conn.

WANTED—Farm of about 80 acres, 40 acres tillable; must have orchard, running water, woodland, pasture, dwelling and outbuildings, about 100 miles of New York City; no agencies. Address F. E. SCHEEL, 433 West 46th St., New York City.

FOR SALE—3,500 acres ranch, 400 acres in farm, 3 sets improvements, 4 silos, 1,526 acres deeded, balance leased; deeded land, $14 per acre, lease thrown in; crop, live stock and equipment put in at reasonable price. E. D. HUNT, Owner, Childress, Tex.

FOR SALE—1,621 acres, farming, grazing and timber land in Allegheny Co., Md., 11 miles from Cumberland, on North Branch River, C. & O. Canal, and West Maryland R. R. runs through property; near churches and school. Will sell in one parcel or divide in sections. Liberal terms. R. M. W., care R. N.-Y.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

SITUATION WANTED by married American man as herdsman or farmer. GEO. RYDER, Yantic, Ct.

FARM PARTNER WANTED to work with owner on shares; New York State; married man preferred; particulars exchanged. OWNER, care Rural New-Yorker.

TEAMSTERS and Farm Laborers wanted to work in an Institution; salary, $32 a month and maintenance to begin with. Address SUPERINTENDENT, Letchworth Village, Thiells, N. Y.

WANTED SINGLE MAN—Must be good milker, who wants to learn advanced registry feeding and work; state nationality, age, wages wanted and reference. New York State, care Rural New-Yorker.

AMERICAN—Single; offered a good steady position at $35 per month, room and board, with American family; to take charge of private stable and care of lawn and do chores about the house. W. H. PITKIN, Congers, N. Y., near New York City.

A PRACTICAL HERDSMAN seeks position; am Scotch, married, 1 child, age 28 years; have been in this country several years and have held positions as herdsman and dairyman on some of the largest estates in the East; am well qualified and can give highest credentials. Address A. D. STEVENSON, Grillin Farm, Portchester, N. Y.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Pair (heavy draft) fillies. C. H. SEIFERT, West Nyack, N. Y.

FOR SALE—Bartlett and other Pears by tree or bushel. ANTIETAM FARM, Landing Road, Smithtown, L. I.

CEMENT BLOCK MACHINE—Nearly new; will exchange for registered Ayrshire calf or cash. Write W. D. HAMMOND, Marathon, N. Y.

BARTLETT and Clapp's Favorite Pears, $1.50 per doz.; Early Richmond Cherries, $1.25 per doz.; sample can prepaid, 20c. SENECA FRUIT FARM, Waterloo, N. Y.

FIG PRESERVES—Home made; a new delicacy for most people; made from choice fruit right from the tree; few people have ever tasted a fig as it ought to be; write for prices and sample to MRS. M. A. PARKER, Rickerly, near Dauphin way, Mobile, Ala.

PORTER

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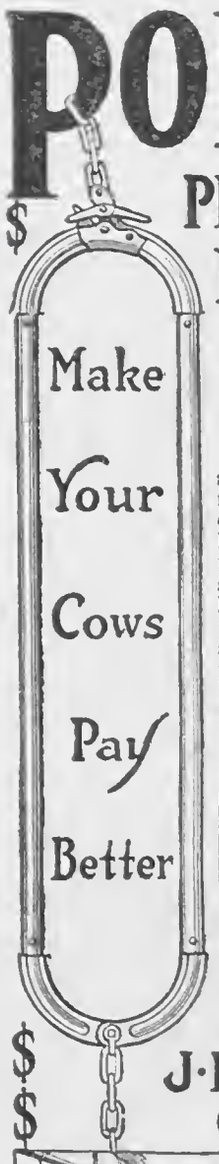

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More Milk
Added Profits
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are results where Porter fixtures are used. Any cow, to do her best, must have the comfort, cleanliness and contentment such as Porter Dairy Barn Equipment affords. It will actually pay for itself in a year in added profits. Modernize your barn, make more money and save work by installing fixtures bearing the name that stands for recognized leadership, "Porter."

We manufacture the best litter-carrier, hay carrier, barn door hangers, etc. on the market.

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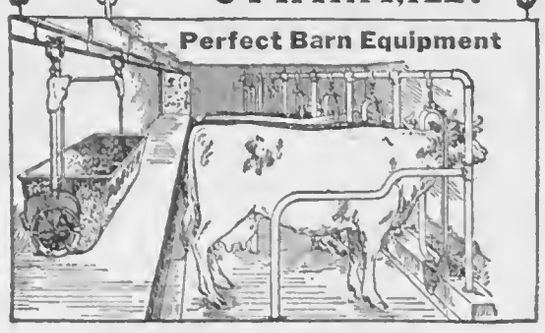

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The remarkable first strength of Lehigh increases year after year. If you specify it, your concrete buildings will gain greater power to resist the elements as time passes.

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We want every man or woman who reads this to write for our valuable book, "The Modern Farmer." It is beautifully illustrated. It will help you in building concrete houses, barns, silos, walks, driveways, gutters, floors, feeding troughs, manure pits, cisterns, corn cribs, hog wallows, mangers, fence posts, etc. A postal brings it to you. Send for your copy today.

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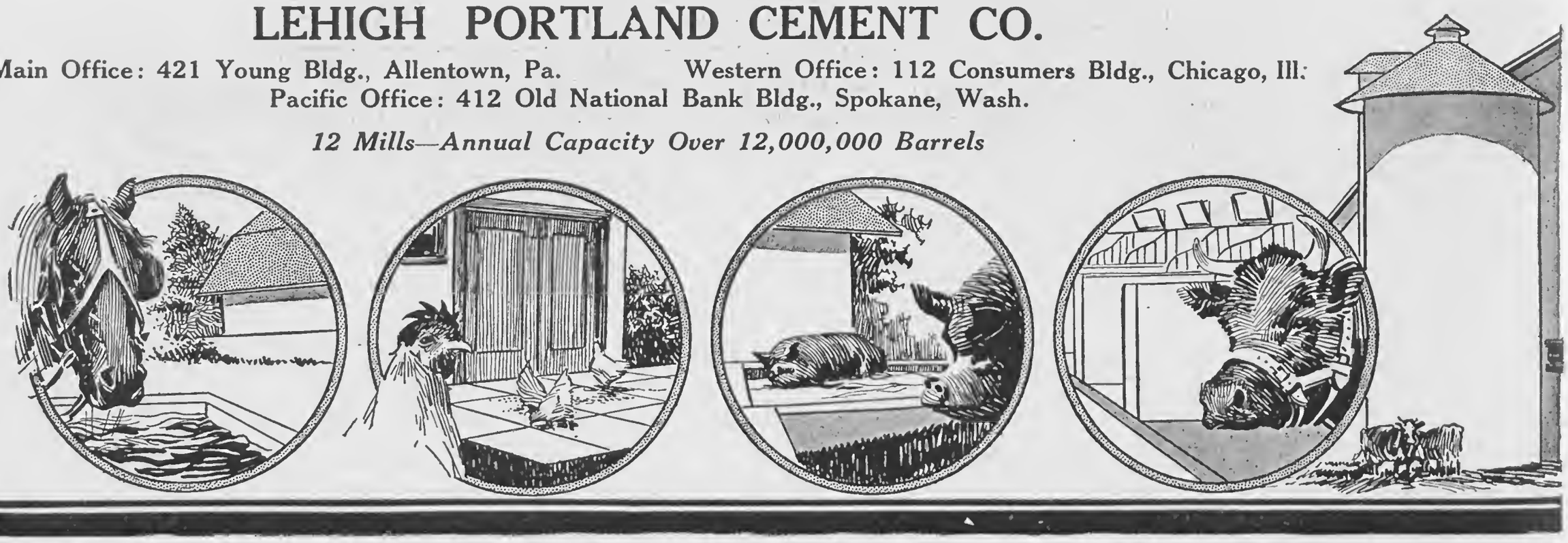


THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

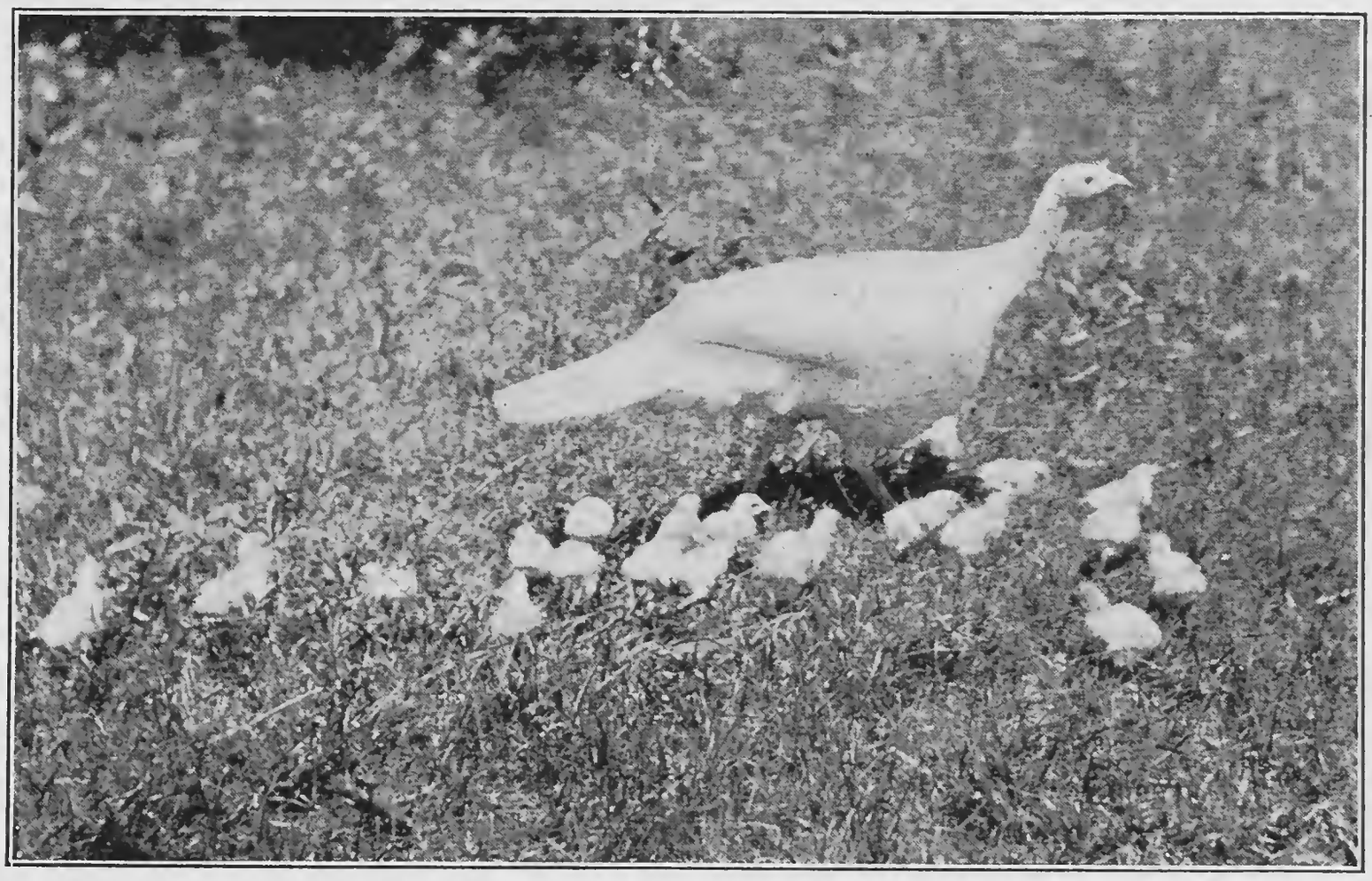
VOL. LXXIII, No. 4271. NEW YORK SEPTEMBER 5, 1914. WEEKLY $1.00 PER YEAR.

THE BUSINESS OF TURKEY RAISING.

Depends Largely on "Good Luck."

TWENTY years of experience in raising poultry on our old home farm, and in other localities, convinces the writer that there are three cardinal rules which must be followed. The first is have healthy stock for breeding purposes; next have clean quarters; the third and last is a joint rule, and embraces the subjects of regular feeding, also a steady and liberal supply of fresh water. These rules may be applied to the raising of all kinds of domestic poultry. Follow them, and barring epidemics, your success is fairly assured. Neglect them and the probabilities are that you will exclaim in disgust that there is no money in poultry raising. In the end, purebred fowls pay best. This has been my experience and I have tried both purebreds and grades.

HIGH PRICES FOR TURKEYS.—When you can get from 20 to 23 cents per pound for turkeys, you can readily see that you are making exceedingly good returns on the capital invested, and at the same time allowing fair remuneration for your time and feed. Say your hens weigh, on the average, 10 pounds and your toms 20 pounds (not extravagant figures). It is plain that you are in a profitable business for the amount of money it stands you. Twenty years ago you could buy a turkey hen for from 75 cents to $1, and a gobbler or tom for from $1.10 to $1.50, say $1.25 on an average. They have more than doubled in price since then, but the cost of raising them has not increased proportionately by any means. The prices I quote are wholesale, or those obtained from good commission merchants, should your birds be shipped in to the big city markets.



THE WHITE MOTHER AND HER BROOD. FIG. 474.

A GOOD RANGE NECESSARY.—In the matter of successful turkey-raising, you must be provided with good range, as these birds do not thrive in confinement. The White Holland does well on limited feeding grounds, and the color is much in its favor, as the most ignorant sportsman, either white or colored, cannot in any way mistake one of these pure white birds for a wild turkey, therefore he can give no reasonable excuse for firing at a White Holland, but can, and often does, put up a good excuse for killing the ordinary domestic turkey, when he is out for his wild brother on the same range.

FEED AND CARE.—On our home farm the rule was to feed the baby poults the yolk of hard-boiled eggs (after the first 24 hours) for the first few days when they had "cheeped" their way out of their speckled shells; then stale loaf bread, soaked in sweet milk, squeezed as dry as possible; later on cracked wheat, cracked corn, or rolled oats. The flock was kept up each morning till the dew was off the grass. There was generally a stir among us when a big Summer storm was brewing, and all hands, sometimes including the cook, were out in field, lot or orchard first to find, and then drive up the hens with their precious broods of poults. These were hurried to the big hovels, as fast as possible, for it was traditionary, that rain did not agree with a young turkey until he was at least 10 weeks old, and he could stand it much better if he was kept out of it until he was three months old; after that he was able to brave the elements. It was a pretty sight to see a flock of young turkeys after their infantile troubles were over, and they had reached the age when they could practically take care of themselves, as they ranged over the wheat or oat stubble, spread out in quest of grasshoppers and other insect pests. In watching them, you could figure on many fine dinners during the Winter season, and in addition to this some cash, when Thanksgiving, and later on Christmas arrived, meaning that the city folks would want to remember these historic occasions by the purchase of a high-priced turkey gobbler or hen. In New York Thanksgiving is usually a better market than Christmas.

ONE MAN'S SUCCESS.—The writer had a neighbor who, although not considered a poultry fancier, showed his ability as a turkey raiser by the following results: Starting out in February with 16 hens and two toms, he by careful and judicious methods, managed to raise to maturity, 216 full-grown turkeys that season, and sold them at the following prices: $1.25 for the hens and $1.50 for the gobblers (this was some years ago). These turkeys were raised on an old-time Virginia plantation, where the acreage in small grain probably averaged from 150 to 200, including wheat and oats, making fine feeding grounds for young turkeys. My friend's mode of procedure was as follows: When the birds began to mate, he let one tom run with the hens for a short while, then putting him up, turned out the other one. In this way the toms did not fight and a much larger number of fertile eggs was assured. When the hens showed a disposition to begin laying, they were placed in a large pen constructed of fence rails. The pen was covered to keep out the rain. Inside, comfortable nests were arranged. Gravel was hauled and a pile put in the pen, then quite a lot of half-burned oyster shells from an old lime pit were put in one corner of the pen. The hens were fed screened wheat and corn, and were kept in this inclosure, all through the laying and sitting period. As the young poults appeared in sufficient numbers, they were apportioned to the hens in good-sized flocks. During the day the poults were put out in triangular pens made of boards, and arranged so the hens were at liberty, but the poults could not get out. Each night all were put back into the big pen. Their feed was corn bread fed cold and with onion tops cooked in the bread. This feed was given till the young ones were about 10 weeks old, and then they were given dry cornmeal dough with cut-up red pepper mixed in it, and by the time they were 12 weeks of age they were given wheat screenings. Until they were about the size of an ordinary pullet, they were kept up at night, and never let out in the mornings until the dew was off the grass.

During the first two or three weeks, the young poults began to die, but it was found by putting copperas in their drinking water that they immediately began to improve, and after using this remedy for a few days there were no more deaths in the flock. The copperas was tied up in a piece of cloth, then placed under the water and the cloth tacked to the lower side of the trough. This simple remedy prevented any more sickness, and by the Fall of the year there was, as before stated, a splendid flock of 216 fine young turkeys. It was naturally robust stock.

RAISING SHOW BIRDS.—The writer was at one time interested in White Hollands, and exhibited them at the Virginia poultry shows, and State Fair, winning several ribbons. This season a neighbor, a young girl, sold six of her purebred White Holland toms for $5 apiece, and could have disposed of many more at the same good price, if she had been provided with more to sell. The fact of exhibiting your best birds, say a pen of three or four, will give you a much better chance to obtain higher prices for your best individuals, and will serve as an incentive not only to breed purebred birds, but also to encourage you to keep up the high standard of your regular flock of breeding stock. You also have a good chance to sell sittings of eggs during the breeding season. I sold over 150 one season at 25 cents each.

J. M. BELL.

R. N.-Y.—The great drawback to turkey raising in many localities is the prevalence of the disease called blackhead. The stock described above is evidently free from disease.

THE DENATURED ALCOHOL SITUATION.

TELL that Hope Farm man to cut his philanthropy talk and tell us how to make denatured alcohol. You told us a year or so ago that if the tax was only removed we could use all our wastes and run a gas-engine for less than nothing. But since the tax has been removed you have forgotten it all.

New York. T. W. ROGERS.

The Hope Farm man will do almost anything to help things along, but this is a little too much for him. We have told a dozen times all there is to tell about this alcohol tax matter. Some years ago a group of manufacturers worked up a nice little scheme to remove the tax on denatured alcohol; that is, grain alcohol to which wood alcohol is added. They were not strong enough to induce Congress to do this so, as is usual, they worked "the dear old farmer" for the job. Certain lobbyists connected with the National Grange got busy and worked up a great sentiment for denatured alcohol. The money used in working this up evidently came from these manufacturers, and it was a good investment! The papers were full of articles, showing how this cheap alcohol was to revolutionize methods of heating and lighting. A farmer could use his small pototoes, rotten apples and surplus corn fodder for providing alcohol and thus save coal and kerosene bills. Didn't they do all this in Germany and France?

No one could deny it! Are we to admit that Europeans are smarter than we are? Perish the thought! All we had to do was to "lick a stamp" and make Congress pass the denatured alcohol bill. The farmer followed these Grange "leaders," and did it, and the bill was passed. We have been waiting ever since for cheap alcohol for lighting and heating. It has never come, but those manufacturers got what they wanted for their manufacturing purposes. We pay as much or more for the goods which they make with the cheaper alcohol, and now see that the farmers simply acted as the cat's-paw to pull the chestnuts out of the fire.

Now why cannot farmers in this country make alcohol in small lots as is done in France and Germany? This Government has spent considerable money in trying to find out, and the following reply by the Chief of the Bureau of Chemistry tells the story as we understand it:

Cheap Alcohol from Small Stills.

Referring to your letter requesting information as to how to make alcohol on a small scale out of farm refuse, and pointing out the fact that this has been more successfully worked out in France and Germany than in America, you are informed that it undoubtedly is true that alcohol is being sold cheaper in Germany than in America in spite of the fact that it is made there in plants of small capacity. The difference between German and American prices is plainly due to various causes.

1. In the first place, the low price in Germany is partly due to the German system of governmental regulation of the alcohol industry, which by means of a kind of preferential bounty favors the agricultural distilleries, and especially those which use potatoes for a raw material at the expense of the commercial distilleries and such as use other raw materials.

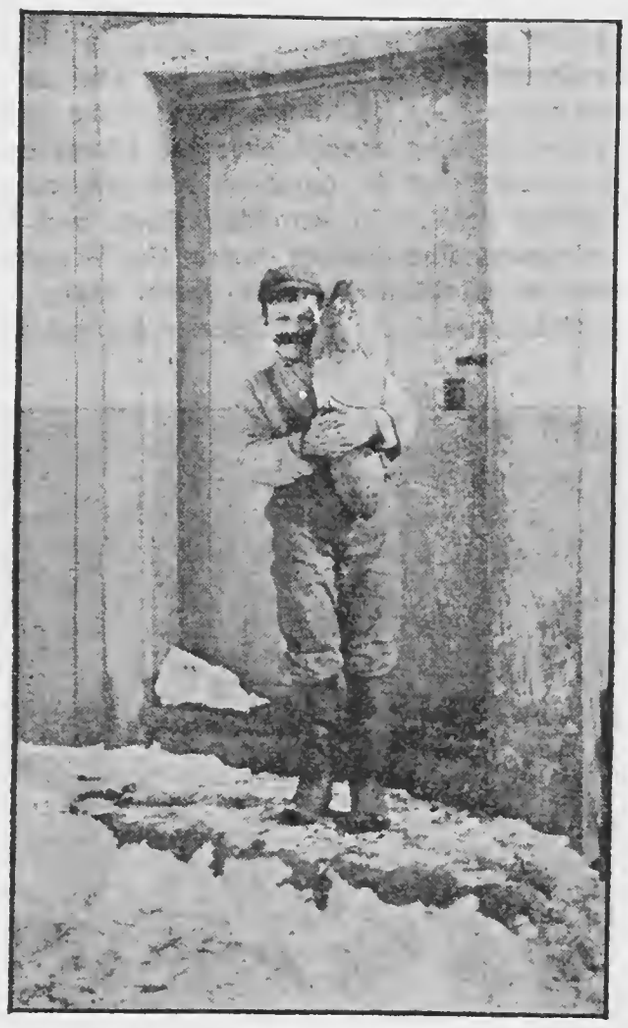
2. In addition, the low price in Germany is due in part to the operation of the Centrale fur Spiritus Verwerthung, which distributes about 90 per cent. of all the spirit made in Germany, and secures to the consumer a low price in that country in consequence of minimum distributing expenses.

3. A further explanation of the differences between the cost of producing alcohol in Germany and this country is to be found in the fact that labor is lower paid abroad than here, in consequence of which the initial expense of the distillery, the cost of raw material, and the operating expenses all are lower in Germany than in the United States. It is well recognized in all lines of manufacture that with equally good business management the cost of manufacture or production is always less in a large plant than in a small one. In Germany, however, the small distillery has this disadvantage very materially offset by the fact that the governmental regulations favor the small distiller at the expense of the larger one.

4. The manufacture of alcohol requires the use of ferment organisms, known as yeasts, which in order to produce satisfactory results must be used in fairly pure cultures. These organisms turn sugars, present in the fruits and other waste products, into alcohol. In order to succeed with this project, the farmer would be obliged to carry on fermentation processes under favorable conditions of temperature to give the yeast its opportunity to transform the sugar into alcohol. Any starchy material in the farm refuse could not be fermented without the prior change of these starches into sugars. This change is brought about by the use of malt, which the farmer would certainly find difficulty in preparing for himself, and which he might perhaps find difficulty in purchasing. Assuming an abundance of refuse containing starches and sugars, and assuming that the farmer could have access to malt and yeast, he would have to carry on the fermentation under favorable temperature conditions. He would then be obliged to distill the fermented material. If a cheap still were used the alcohol obtained would run about 50 per cent. strength, being too low to use for light, heat or power. If he were to obtain alcohol of the necessary commercial strength (90 to 95 per cent.), it would be necessary to have a much more complicated distilling apparatus, which would cost several hundred dollars, and which, being very complicated, would require a skilled man to assume responsibility for its operation and care. C. H. ALSBERG, Chief.

A CROP OF MANGELS.

THIS mangel (shown at Fig. 475), is one from a small lot raised on my farm in Massachusetts. I do not claim to be a mangel expert—in fact these are the first I ever raised. But I am trying another lot this year, and hope to raise larger and better ones as I gain experience. I did not raise mangels because of the nutritious qualities of the roots, for men of science tell us they are lacking. They can tell us how much of this or that ingredient a mangel or other feed contains, and also what sort of matter is required to make milk, eggs, etc., but I believe that they cannot tell us just how a



A MASSACHUSETTS MANGEL. FIG. 475.

cow's stomach or a hen's gizzard work on different articles of feed. It has seemed to me that these creatures require some kind of green feed in the Winter along with their hay or other dry fodder, and that a variety of feed is as desirable for them as for people. It was this notion that prompted me to try mangels in a small way, and if the experience gained can be made of benefit to others I shall be very glad of it.

The land on which this mangel grew was a deep light loam sloping to the south. Previous to this crop I had raised potatoes on it one year. I had then owned the land only one year, and it had not been plowed or fertilized for several years, and bore only a small crop of grass and a very fair crop of weeds. I plowed this piece deep, one Fall, and in the Spring I planted potatoes after harrowing, fertilizing and plowing again. The next Spring I plowed again just as deep as I could get down with the biggest plow and the heaviest team I could hitch up, disk-harrowed it lengthways, crossways, cornerways and every other way that would seem to work it up fine. I believe in grinding things up for any crop, and especially for mangels. Then I spread on a liberal dressing of barnyard fertilizer from the cow department. After that I harrowed some more. I presume the harrow went over this piece at least a dozen times all told. Next I limed the piece well and worked in with the smoothing harrow. It was planted in rows about two and one-half feet apart, a liberal amount of seed being used. Later on it was thinned out so that the mangels were at least 18 inches apart in the rows. Unfavorable weather soon after planting prevented many of the seed from coming up, so that there was much irregularity as to spacing in the rows, but I intended that no mangel should be nearer than 18 or 20 inches to any other mangel, and some were farther apart. The largest ones were the farthest apart, and I believe that I can raise more tons to the acre two feet apart than 18 inches. So many of this lot failed to come up that a second planting was made, causing unevenness.

The cultivator was kept running and the weeds were pulled out until the mangels were well along, when the cultivator alone was sufficient to keep them clean. Some experience in raising other root crops, as parsnips, for instance, had convinced me that plenty of room sideways as well as up and down was necessary in order to get size and length, and I believe that more weight to the acre will be had by giving it to them than by crowding. The entire crop was not weighed, which I now regret, but estimates by men more competent than myself place the weight at about 30 tons to the acre. But for unfavorable weather early in the Spring, the yield would have been much larger. These mangels were all very smooth, which I attribute to the lime. The mangel shown in the picture was one of the largest grown, but not larger than many others. It did, however, set down into the ground more than most of them, which depth may be seen by the rim in the illustration. F. B. DODGE.

Massachusetts.

THE MOON AND WEATHER CHANGES.

AT least one of your readers does not think that the question of the moon and the weather changes is finally settled, even though the Agricultural Department has settled it. One who has lived on the seashore and has seen the powerful influences of the moon on the water of the ocean, as shown in the various phases of the tides, cannot think it unreasonable to suppose that some influence may be exerted by the moon on the water in the earth's atmosphere. If the moon can attract a certain amount of sea water to a certain place at a certain time, it may also attract a sufficient amount of atmospheric water to a certain place at a certain time to combine with other necessary conditions to produce a rainfall. The varying relative positions of the earth, sun and moon which produce the varying phases of the moon and of the tides may produce varying effects on the water in the atmosphere. Even the slightly varying relative positions which produce the varying slant of the new moon may have sufficient influence on the sensitive vapor in the air to affect in some way the precipitation of rain. The moon's influence on the weather is still a "superstition" because it has not been reduced to a science.

Cuba. ELMER E. HUBBARD.

As to the above from Mr. Elmer E. Hubbard, in which the writer suggests a possible tidal effect upon the moisture in the atmosphere as a factor in determining the weather, atmospheric moisture occurs in two forms, viz.: (1) water vapor, which is an invisible gas, and (2) minute drops of water and crystals of ice, constituting clouds, haze, fog, rain, and snow.

Water, in a gaseous form is, like everything else upon the earth, and like the earth itself, subject to the laws of gravitation. The atmosphere, of which water vapor is one of the constituents, undergoes the tidal effect of the varying directions of the sun and moon. Atmospheric tides exist, but both theory and observation show them to be excessively minute. It should, moreover, be understood that a tide does not involve any considerable transportation either of water or air in a horizontal direction, but merely a gentle rise and fall. Thus, although the semi-diurnal tidal wave in the open sea, in the equatorial regions, moves westward at the rate of about 1,000 miles an hour, the speed of vessels traveling east or west is not affected thereby. Hence, the atmospheric tide could not, as Mr. Hubbard seems to suggest, cause a displacement of the water vapor in the atmosphere horizontally from one part of the world to another. On the other hand, the vertical displacement of the water vapor and other atmospheric gases, due to the atmospheric tide, is not only too small to have any appreciable effect on the weather, but—what is much more important—it is insignificant in comparison with the vertical movements of the atmosphere, due to the temperature contrasts such as those between night and day, and between clear and cloudy weather. The barometer, especially within the tropics, shows a very marked semidiurnal rise and fall, which, in appearance only, is analogous to the tides, but is really the result of the diurnal contrasts of temperature.

The same considerations apply to the movements of the particles of water, in solid or liquid form, occurring as clouds, etc., since these particles partake of the motion of the atmosphere in which they are suspended. In a perfectly still atmosphere they fall —very slowly, on account of the resistance of the air—but a slight upward component in the movement of the atmosphere suffices to buoy them up. As a rule their movement is mainly horizontal, under the effects of air currents, and these currents are

due almost wholly to two causes, viz., (1) temperature contrasts, and (2) the rotation of the earth on its axis.

The foregoing indicates the deductive method of attacking this problem, and evidently leads to a negative result. The inductive method would seek in the meteorological records maintained in all parts of the world some evidence of weather periodicities corresponding to the diurnal, monthly, or other periods of the moon's motion, or of the combined motions of sun and moon. This method has been applied by a great number of able students, using the refined mathematical analysis which is necessary to single out any lunar period, if such exists, from the periods due to known terrestrial causes—as, for example, the diurnal and seasonal fluctuations of temperature at the earth's surface. These studies have led to conflicting results. Many investigators claim to have found some indication of a lunar period in certain weather phenomena, and these have been variously attributed to the gravitational, thermal, or magnetic influence of the moon. The all-important fact, however, in connection with these alleged discoveries is that the effects in question are, if they exist at all, exceedingly small and, especially, that they are exceedingly small in comparison with the effects of ordinary terrestrial causes. They are, therefore, mainly of academic interest, and lie beyond the purview of the layman's observation and comprehension.

C. F. MARVIN,
Chief of U. S. Weather Bureau.

CARE OF FARM MACHINERY.

WHAT DETERIORATION COSTS.—According to the census of 1910 the farmer of the United States is buying yearly over $149,000,000 worth of farm machinery, an amount equal to over 3 1-3 per cent. of the total crop values as ascertained by that census. Much of this outlay represents the replacement of worn and discarded machinery rather than adding to the equipment. Probably not over nine-tenths of this amount is expended for new equipment, leaving $14,900,000 spent yearly for repairs and replacements alone. Any system that will reduce this repair expense seems to be worthy of careful study. Farm field machinery is always called upon to work under adverse conditions. Grit, storm, and sunshine, three enemies of the field machine, cannot be eliminated. The only course left open to the operator is to lessen their effect as much as possible.

CAUSES OF DAMAGE.—While grit might be considered by some as being the most potent factor governing the life of a machine, its action can be largely controlled by proper adjustment of the bearings and by the use of dry lubricants as graphite, on the parts of the machine most exposed to its action. Then too the parts worn by grit are usually the small parts of the machine, as boxes, etc., and they can be easily replaced, making the machine as good as new if the main parts of the outfit are still in good condition.

WEATHER CONDITIONS.—The weather is one of the most potent factors affecting the life of a machine. Storm and sunshine are at work every minute that the machine is out of doors, whether it is being used or not. Practically all farm machinery is painted by dipping, leaving a thick, inelastic coat of cheap paint. The heat of the sun on the metal parts of the machine causes them to expand, cracking the paint, which flakes off, leaving the metal beneath it to be attacked by rust. The wooden parts suffer to even a greater extent than the metal from the weather. They are made from the ordinary slash-sawed stock, and it is a well-known fact that this type of lumber shrinks, swells, checks and warps much worse than quarter-sawed material. Also much of the woodwork to field machinery is of a kind that has little ability to withstand weather conditions. The machine gets a soaking, the wooden parts swell, crushing bolt heads and other metal parts into them, then in drying out the parts warp, checks develop, and the material shrinking, causes the bolt to be loose, and it loses its holding power. Winter conditions affect the machine mainly by water running into the crevices and freezing there, forcing the adjacent parts away from each other. Housing then, it would seem, is one of the principal things to look to in prolonging the life of a farm machine. The shed need not be expensive, the only requirement being that it protects the machine from the weather.

A MACHINE SHED.—The shed illustrated is 24 feet deep by 20 feet wide. It cost less than $50 and will protect over $500 worth of field machinery and implements. It is not an ideal shed by any means, as the depth is too great, making it necessary to use some forethought when storing the machinery so that the implement wanted will be at the front of the shed, but it shows what can be done with a small amount of money. The cost of material was as follows:

Sheathing for roof, sides, and one end, 1,250 feet at $15 per M.	$18.75
Roofing paper, 7 rolls, at $1.25	8.75
8 planks, 12 foot x 8 inches x 2 inches, for plates, 128 feet B.M.	
18 planks, 14 foot x 6 inches x 2 inches, for rafters, 212 feet B.M.	
8 boards, 12 foot x 6 inches x 1 inch, for collar beams, 48 feet B.M.	
Total 388 Ft. B.M.	
388 Ft. at $20 per M.	7.76
50 pounds nails and spikes at 2½	1.25
Total cost for material	$36.51

The cost of the posts is not included in the above,

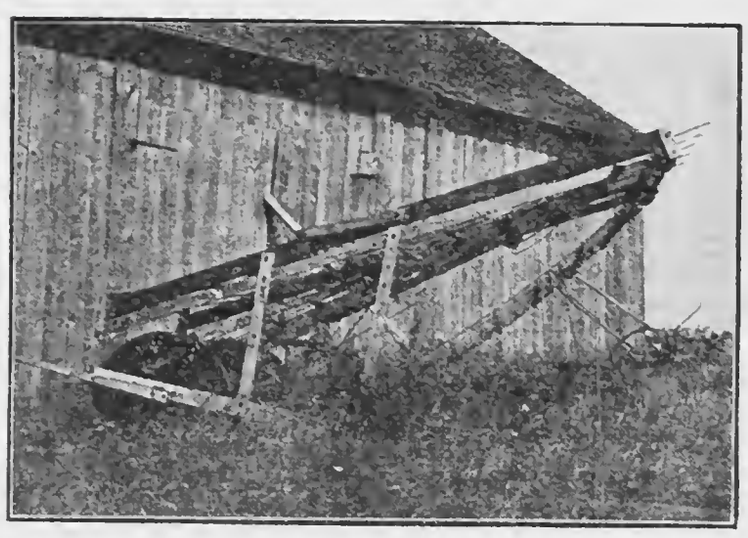
POOR SUMMER STORAGE FOR THE SLEDS. FIG. 476.

for the seven posts used were made from round cedar rails found on the place. Neither was the labor cost included, for it was built with ordinary farm help during slack times. In fact the shed shown was much lower than the above in price, for all of the lumber used was made from material found on the farm. The plates were made from elm planks, and the siding and roofing from cull pine obtained from down trees. On a large farm it is far from convenient to bring the field tools to the buildings every night and a few of these sheds, built at

CHEAP, EFFICIENT TOOL HOUSE. FIG. 477.

points where most of the work is carried on are a great convenience as well as saving. At night, when through with the machine, run it into the nearest shed, then if conditions are such that you do not return to the field the next morning the machine is protected.

GENERAL CARE.—When in use take time to oil your machinery occasionally. The judicious use of machine oil saves horse feed as well as repair bills. Generally speaking a medium thick oil, one having a considerable body, is best for farm machinery. It is seldom that their bearings are very finely finished



SHORT LIFE FOR THE HAY LOADER. FIG. 478.

and this oil is needed to fill the little irregularities in them and keep them from grating on each other. Graphite is fine for this purpose and an application to the chains and gears of mowers and binders helps much toward a light running machine. The ordinary stick stove polish can be used for this purpose.

REPAIRS.—Keep a note book for the purpose, and when a machine is to be laid up until the next season, go over it carefully and note the repairs needed. It can be done more easily then than at any other time, the machine is accessible and the weak places are fresh in mind. Order these repairs, and during stormy weather they can be fitted and the machine will be ready for use when the season opens, instead of having to wait at this time for repairs to be ordered. Keep the machine painted. A good coat of paint is a protection from the weather, acting as a portable covering for the machine. Asphaltum varnish makes a cheap and good covering for the metal parts, while red lead paint is equally as good for the wood. The red and black make a good color combination as well. This painting can be done during the slack season, and does much to insure better care for the machine, for there is no man that will not take pride in a well-painted machine, and try and keep it in as good condition as possible.

ROBERT H. SMITH.
New York.

MAKING SAND HOLD WATER.

CAN anything be put on sandy soil to make it stand the drought? Things in garden literally dry up sometimes.

E. B. W.
New York.

First let us think what makes a soil dry out so rapidly. There may be in the same township a sandy, open soil, and another which we would call a clay loam. Each receives the same rainfall, yet after three weeks of dry weather the sand is as dry as powder, while if we dig or kick into the other we turn up dark-colored moist soil. Why? One soil is able to hold its moisture better than the other. A soil loses its moisture through drainage and evaporation. Naturally in the coarse, open sand the water will run away freely, while in the more compact loam the drainage cannot be so rapid. The same is true of evaporation. The air, warm and dry, works freely into the open sand and carries off the moisture better. The problem therefore is to change the character of the sandy soil if we can, and make it more like the loam. The particles of the sand are coarse and held loosely together. The loam particles are smaller, some of them so small that they bind the larger ones together and fill in between them. The sand is light-colored and contains but little if any organic matter or humus. The loam is darker in color, and contains a good share of this organic matter, which holds the moisture somewhat like a sponge. A garden or small space of sand can be made more compact by working into it a good quantity of fine, sifted wood ashes. This ash will work in between the particles of sand and help hold them together. A good dressing of air-slaked lime will act somewhat like mortar to compact the sand. Air cannot enter it so readily and thus the water is not taken out so fast. Heavy dressings of stable manure worked into the soil year after year will increase the amount of organic matter, and weeds, wastes of crops and cover crops should all be plowed or spaded under. Such soils should never be left bare through the Fall or Winter. There should always be left growing a crop of rye, turnips, clover, vetch—anything that will make a growth that can be worked into the soil. This constant addition of organic matter will finally change the sand to a loam which will have the ability to hold moisture and thus withstand drought. There is no quicker way of doing it except the expensive method of using stable manure heavily. On the peninsulas of Delaware and Maryland are many instances where land miracles have been performed by using lime and chemicals and plowing under cow peas, Soy beans and Crimson clover. Starting with dry, leachy sand, farmers have in a few seasons been able to build up dark-colored loam soils which hold water well and produce large crops.

Registering Farm Names.

THE State of Missouri has the following law governing the registration of farm names:

Any farm owner in this State may, upon the payment of one dollar to the clerk of the county court in the county in which said farm owner may reside, have the name of his farm duly recorded in a register which the county clerk shall keep for said purpose, and shall be furnished a certificate, issued under seal, and setting forth the name and location of the farm and the name of the owner: Provided, that when any name shall have been recorded as the name of any farm, such name shall not be recorded as the name of any other farm in the same county, except by prefixing or adding designating words thereto.

That is a good law for any State. It is a pleasant thing to name the farm, and a good thing to have a trade mark. It leads every member of the family to think more of the farm. When the farm is about all you have it should have most of your thought.

THE Kansas Agricultural College has started tests to show the value of Alfalfa as silage. In small experimental silos are being preserved respectively, Alfalfa alone, Alfalfa with corn chop, Alfalfa with molasses, Alfalfa with molasses feed, Alfalfa with straw, Alfalfa with rye, and rye alone.

CROP REPORTS.

August 21. We are just getting the first good rains since last May; think there has been a greater fall in August to date than in June and July together. The season has been a peculiar one, the early part so wet that all Spring crops were got in very late, then came a long dry spell with a good deal of very hot weather. I think we have more days with high humidity than any Summer in years. Crops as we see them run about as follows: Wheat the best in a good many years, in fact a poor piece was the exception. Price now $1 and possibly a little more. Hay a good crop; offering $13 per ton in the barns for baling to ship. Meadows are very much burned and pasture is short. One man we know with a large milk dairy is feeding hay now to keep his stock up. Oats are poor in spots; on the whole about an average crop; around Rochester they are much poorer than in other parts of Western New York. Barley better than oats, dry weather did not seem to hit this crop so badly, possibly because barley is usually sown earlier than oats. Corn is below the average, many very poor pieces, came up spotted and the drought hit it hard; on the whole about one-half to two-thirds crop. Beans below the average, but the price is soaring so that on the whole think the grower will get much more for the crop than any year for the past five. Potatoes in this section do not come anywhere near the government average as we read it in the papers. They came up poorly, are spotted. We saw pieces last week that will not bring the grower $5 per acre. One thing is very plain to be seen this season, viz.: the farmer who took the time to roll down his ground every night after plowing is getting the best crop. There seems to be no failure to this. Another thing the man who took pains with his seed is going to have the best crop. We were in one field last week and the grower pointed out where he took pains to sort his seed carefully throwing out every potato that seemed to be diseased in any way, and the result is that where he did this he has an almost perfect stand, while on the rest of the field it is safe to say there are 10 to 15 per cent. of missed hills. Bugs have not bothered at all in many places. Walking through several pieces we did not see one bug. This is a very unusual thing. On the whole we should say the crop was 10 per cent. below the ten year average. Cabbage not looking good, and the acreage seems to be less than for a number of years. Apples show well in every orchard, although we have not been through the best orchard sections, so our observations hardly count for much. Is the war going to affect the price unfavorably? To us it would seem so. The export of green fruit to England must be curtailed and of evaporated fruit almost entirely to the Continent. I have been talking with a grape grower who has a vineyard on Canandaigua Lake. He thinks his crop is nearly three times as large as a year ago, and the prospect seems to be good for the wineries taking all they have at good prices, as the importation of wines, etc., must be entirely stopped, and the shortage will be made up by wine manufacturing in this country. As a result they are expecting to have to pay much higher prices. C. I.

Monroe Co., N. Y.

August 19.—The market for nearly all produce is steadily rising. Wheat 90; corn 74; oats 34; rye 70; barley, per cwt., $1-$1.20; beans $2.50 per bushel; Timothy hay $10. Hogs 8; lambs 6½ to 7; good steers about 7½; chickens 14; broilers 18. Potatoes about $1 per bushel. Butter 25; eggs 19; cream (by butterfat) 26. H. D. B.

Bath, Mich.

Our local markets are paying for eggs 22; dairy butter 25; creamery for butterfat 29½; wheat 90; navy beans $2.25; apples 40 to 60 for early varieties. Beef cattle six to eight cents per pound live weight; feeding cattle seven cents and scarce. Cows, new milch with any quality, $60 to $80 per head; hogs 8½; lambs 5 to 7; chicken 13; hens 11. Best wheat crop in years, average 30 bushels per acre. Corn good, oats fair; beans fair; Winter varieties of apples good. This is a late potato section and our market does not open up until October 1. Prospects for crop are good. In fact this is the most favorable season so far that we have had in years. J. S.

Belding, Mich.

Organization for Distribution.

AS a movement for the securing of better facilities for the distribution and marketing of fruits and produce the growers of Sodus, N. Y., have organized a branch of the Eastern Fruit and Produce Exchange. President Seth J. T. Bush of the central exchange at Rochester recently appeared before a gathering of Sodus growers, and in an address along coöperative lines enumerated the advantages of organization for the growers. Mr. Bush pointed out that under the present method of distribution only about 35 cents of the consumer's dollar returned to the grower. He declared that the new movement was "a deliberate attempt on the part of the growers of New York to obtain every cent of legitimate profit for themselves." No dealers are permitted to hold stock in the association and no commission men have a hand in any part of the transactions between growers and the final dealers. Through the North American Fruit Exchange of New York the State association will conduct much of its business. Representatives are located in all centers to protect shipments and all claims are collected by the exchange. Mr. Bush is a resident of Morton and last year a branch of the exchange was organized there with sixty members. When the branch opened the local dealers were paying one and one-half cents per pound for peaches. The members of the coöperative system realized nearly double this amount with the result that the Morton exchange is getting the bulk of the forwarding business.

A. H. P.

COMING FARMERS' MEETINGS.

National Paving Brick Manufacturers' Association, eleventh annual convention and paving conference Buffalo, N. Y., September 9, 10, 11, 1914. Secretary, Will P. Blair, 832 B. of L. E. Bldg., Cleveland, Ohio.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

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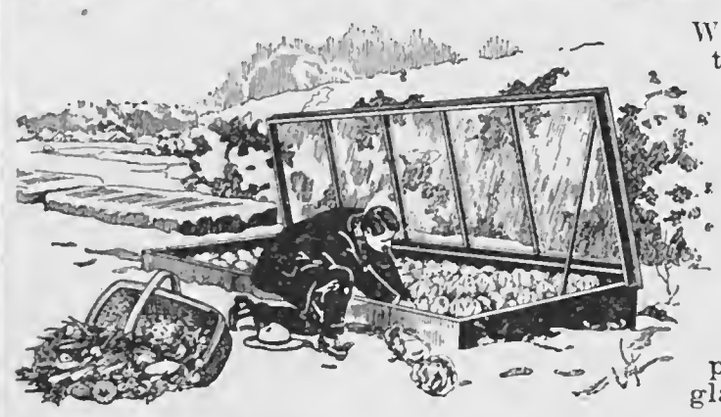

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Fall Lettuce.

COULD Grand Rapids and Big Boston lettuce be grown in the open as late as November 15 if mulched with straw about frost time? If so, when should the seed of each of these varieties be sown? I wish to grow the plants in a seed bed and transplant. H. N.
Cleveland, Ohio.

Seed of Grand Rapids lettuce for transplanting into plant houses and cold frames to be marketed from Thanksgiving to middle of January is being sown today (August 18) in the open ground by myself and other gardeners in this section about 40 miles north of Cleveland. The season at Cleveland is longer than here, and it is barely possible that H. N. might get sufficient growth on Grand Rapids lettuce to make it marketable, but it would depend entirely on having a very warm Autumn. If he could transplant into a frame sheltered from cold north winds and cover with muslin sheeting his chances for success would be much better. Head lettuce cannot be grown under the conditions mentioned. It goes without saying with a low November sun there would be little warmth in the open ground after frosty nights. L. B. P.

The Pearl Strawberry.

WILL you give experience with the Pearl strawberry? Is the variety suitable for either hedge-row or hills? Is it productive enough to warrant growing it for market. G. W. H.
University Park, Colo.

This variety is one of the later or newer introductions, and has not been under trial in a general way throughout the country. In Northern New Jersey, on rather heavy sandy loam, it has proven quite successful. The plant seems entirely healthy, is a strong grower, a good cropper and a good plant maker. It seems well adapted to growing in hedge or matted row. It is supposed to be a seedling of Gandy, but is of more robust growth, much more prolific and somewhat later. The berries average quite large, which are irregular in form, and lighter in color than the Gandy. Not firm enough for long shipment, but the high quality makes it a desirable variety for the home garden or nearby market. Scarcely any variety of strawberry will succeed in all kinds of soil and in all sections of the country, and it is therefore never advisable to plant largely of any untried sort. K.

Root-maggot in Turnips.

WILL you tell us what to do to rid turnips of a small white worm which is eating the roots? O. A.
Sullivan, Me.

This insect is the larva of a small black fly that lays its eggs around the stems of the plants at the surface of the ground, varying in number from a dozen to 20 or more at each laying. In a few days the young larvæ hatch out and immediately penetrate the soil around the plant and commence feeding on the root stems. They are more or less prevalent in all sections of the country where any members of the Brassica family are extensively grown, especially cabbage and its near related species. No other insect attacking the Brassica family is as destructive nor as difficult to combat successfully as the root maggot. Its operations being confined entirely to the underground portion of the plant, its presence is seldom, if ever, suspected until the plant begins to wilt, when in most instances the plant is beyond recovery, particularly in dry weather. Unfortunately there is no known remedy that is reliable. Heavy liming around the stems of the plants has in some instances proven quite successful when applied to cabbage or cauliflower, but its application to turnips would be impossible and unprofitable even if it was an infallible remedy. The mature insect or fly breeds in manure and the use of stable manures on lands used for growing cabbages, turnips, etc., is almost certain to result in root maggot, with more or less damage and loss resulting from their attack on the root system of the plants. Many growers of these crops are abandoning the use of stable manures and instead grow soiling crops for humus and use chemical fertilizers in the making of the crop. In consequence there is very little trouble from root maggot. Rotation of crops is advisable, and is to be specially recommended for soils that have long been cropped to cabbage and its related species. K.

APPLE SHIPPERS' MEETING.

THE International Apple Shippers' annual meeting at the Copley-Plaza Hotel, Boston, August 5, 6, and 7, was a very successful affair. The apple display was good for this season of the year, when most varieties of apples are not yet matured, yet some fully matured were seen side by side with half-grown specimens of the same variety. Of course these came from widely different sections of the country; in fact the exhibits came from all the apple growing sections of our country. Some special features of this display were a box of last year's Baldwins in apparently perfect condition, at least on the outside, and were very attractive in color; in fact they looked as good as any of the fresh picked on exhibition. These were shown by J. H. Hale. Another was several pecks of nice apples packed in paper packages ready to ship by parcel post; these were shown by a local grower. The display of apple products was the largest I have ever seen, and was especially attractive.

I was pleased to see a few specimens of perfect Flemish Beauty pears, as I had never, that I remember, seen any before, as they will not grow in New England anywhere near perfect, but I am told they did years ago. On the morning of the second day ex-Gov. Guild gave a very nice talk on the history of the apple, and placed it by many references of past and present appreciation at the head of all fruits, both as a luxury and a stand-by and health-giver, and for food value. The origin of this fruit is unknown but is believed to have been first heard of in Palestine, and traveled from there to Greece, then to France, then to England, to America in New England, thence to the Middle West, and Pacific coast, across the water again to the Philippines, and from there are shipped to Asia, thus completing a journey around the world. A very interesting discussion was indulged in as to how to boom the National Apple Day, which is set for October 20.

Members from Chicago, Cincinnati, Rochester and other cities told how merchants and growers gave free apples to newspaper men, editors and even the newsboys, to hospitals, schools and even in some cases to horses on the streets. These methods tends to bring out much free advertising in the daily papers, and are very helpful in increasing consumption and consequently later and larger sales. One man in Chicago sold at a small profit all the apples he could on a certain day, and disposed on that day of 128 barrels and 86 bushels. This helped sell other stock in the store, and 1,000 barrels of poultry extra had been ordered late in the afternoon of that day to supply the trade. This year Pittsburgh intends to give away a carload of apples, on this day largely to newsboys, etc., and it is intended they shall have a generous supply. One produce man told of selling apples at $3 per barrel and $1 per bushel to a retailer who charged $1 to $1.50 per peck for these and $8 per barrel. He believed as any sensible man would, that this was unreasonable, and also tends largely to discourage buying and consuming very largely, and is a poor policy to follow. Sell at a reasonable profit and your sales will increase much faster than by the other plan.

Secretary Phillips reported 560 paid members, a slight increase over a year ago. These members were from 212 cities; $11,000.54 was collected the past year and balance on hand is $4,900.70. A very hot discussion was held on the topic of ocean freight charges and losses by delays on the passage across. A lower rate is very essential, but cannot be obtained, or any satisfaction from losses, because nearly all this is carried in ships not under the American flag, and consequently not liable to American laws. One shipper lost $8,000 on one shipment because the ship was unnecessarily delayed seven days over time in a hot spell. He carried the case to an English court of law, but got no satisfaction or damages. This is a strong argument for more American vessels and the establishment of an American merchant marine, and a committee was appointed to confer with President Wilson and Congress as to the urgency of this without delay. It was stated as important that our inland water ways be improved and new ones opened, as these do the work five to seven times cheaper than the steam roads; also the improvement of country highways is very necessary in many States, and should receive the attention of this association. Producers can work with us in many ways to improve conditions, and we should ask their help and work with them in all possible ways. A. E. P.

Fall Cover Crop.

WHAT cover crop should be used for a field to be planted to cabbage next year, and when should it be sown? It is now planted to corn, but I should not like to sow and cultivate in because I should like to pick off stones first, Fall plow, sow cover crop, then plow in next Spring. H. O.
New York.

In such case about all you can do is to sow rye after you have fitted the ground. The rye can be seeded up to the middle of October and give a fair crop to plow under the following Spring.

Now is the time to paint!

Right Now! In the Fall Is the Best Time

EXPERIENCE has proved that the best season for painting is in the fall. The wood is much drier after exposure to the hot summer sun. Hence there is better penetration. The chance of rain to interrupt the job is less in the fall. There are fewer bugs at this season to get into the paint. Then a fall job of painting puts the building in prime condition for winter — closing up the cracks and crevices and keeping out the penetrating winds.

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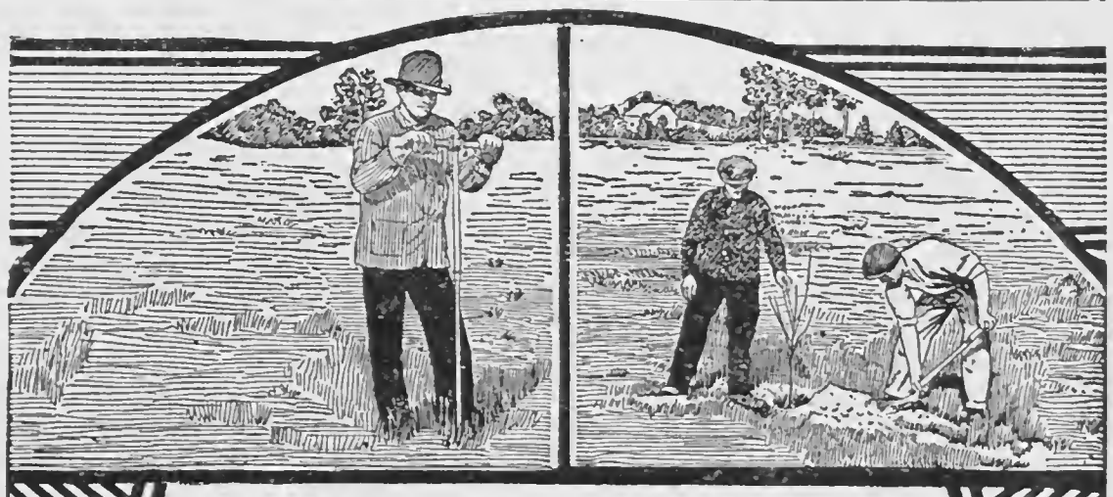

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Put your soil this fall into prime condition for fruit trees next spring. Punch a hole and explode a half-charge of Atlas Farm Powder where each tree is to stand. The subsoil will be broken up for yards, and the frost, air and moisture will mellow it all winter. The cost will be little, and by using

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you can have healthy, vigorous trees that will bear two years earlier than trees in spade-dug holes. The deeper the roots go, the better the trees will be, and roots of trees planted the Atlas way go down deep and spread out far.

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EVENTS OF THE WEEK.

DOMESTIC.—Five persons were killed, seven seriously injured and twenty-five others less painfully hurt in Wilkes-Barre, Pa., August 20, in a severe electrical storm.

August 23 fire destroyed the plant of the Excelsior Brick Company at Haverstraw, N. Y., entailing a loss of more than $75,000.

With the close of business up to August 22, 16 ships had passed through the Panama Canal, and it had earned, during its first week of service, approximately $55,000, which does not include the revenues collected from barge service and payments made in advance for ships on their way to go through the canal. The Ancon, heavily loaded, passed through the canal on the day of its opening, a week ago. Of the ships that have used the canal this week 14 were American, one British and one Peruvian.

It was announced at St. Paul, Minn., August 24, that a motion for a modification of the decree filed in the United States District Court on August 12 in the International Harvester Company case has been filed by its solicitors. It is asked that the decree shall not include in its provision the business done by the company in foreign countries, and that limitations as to plan for carrying out the decree be removed.

The Guaranty Trust Company of New York has begun suit against the North German Lloyd Steamship Company for $1,040,467, charging failure to deliver $5,000,000 in gold shipped on July 27 by the trust company in accordance with a contract of transportation as embodied in the bill of lading. In connection with the suit the trust company, August 24, libelled the Kronprinzessin Cecilie of the North German Lloyd Line, now at Bar Harbor, and on which the gold was shipped for delivery in Europe.

The Goldschmidt German wireless station at Tuckerton, N. J., which has been doing business by courtesy of the Government since it was opened early in August without a license, was closed, August 24, by order of acting Secretary of Commerce Sweet. As the Hague agreement prohibits the licensing to a belligerent of a wireless plant on neutral territory the company has not been able to get a license. But by the courtesy of the Government a permit was granted to the Goldschmidt company, under which, it had transmitted commercial messages in plain English. A censor has been at the plant to see that this privilege was not abused. The notification to Theodore R. Lemke, manager of the Goldschmidt company, from acting Secretary Sweet said, however, that the station had been operating illegally and that confiscation of the apparatus would be the penalty. At the Sayville, L. I., station of the Atlantic Communication Company, Berlin despatches announcing German victories near Metz were received August 24. It was admitted that the station has been in communication with the German War Office almost daily since the outbreak of hostilities. Only the messages sent to Germany are censored. The station has not been in communication with any of the German battleships since the censor arrived at the station.

The findings of the courts-martial which tried twenty-two officers and men of militia, at Denver, on charges growing out of the Ludlow strike battle of April 20 were made public, August 26. All the defendants were acquitted. The militiamen were charged with murder, manslaughter, arson and larceny.

Ten persons lost their lives when the Canadian Pacific steamship Princess Victoria rammed and sank the Pacific-Alaska liner Admiral Sampson, August 26, off Point No Point, eighteen miles from Seattle, Wash. The Admiral Sampson, with 56 passengers and a heavy cargo, was bound for Alaska, while the Princess Victoria was en route to Seattle. A large hole was torn in the side of the former vessel and she filled and sank in four minutes. The Princess Victoria's bow was badly stove in, but she remained afloat and was towed to Seattle.

FARM AND GARDEN.—By vote of the Executive Committee the next biennial session of the American Pomological Society will be held in Berkeley, California, September 1, 2, 3, 1915.

One thousand farmers met at Dublin, Ga., August 25, and adopted resolutions urging the Federal Government to put a production tax on the 1915 cotton crop in order to reduce the yield.

The annual convention of the Society of American Florists and Ornamental Horticulturists was held at Boston, August 18-21. Nearly every State in the Union, and also Canada was represented. The following officers were elected: President, Patrick Welch, Boston, Mass.; Vice-President, Daniel MacRorie, San Francisco, Cal.; Secretary, John Young, New York, N. Y.; Treasurer, William F. Kasting, Buffalo, N. Y. San Francisco was selected for the next convention. The membership of this society is now 2,004, and it is in a strong financial condition. The Florists' Hail Association reported insurance upon 39,303,677 feet of glass, and total receipts during the year of $53,764.75.

At the meeting of the American Gladiolus Society in Boston, August 19, the following officers were elected: Charles F. Fairbanks, president; Henry Youell, secretary; A. E. Kunderd, treasurer; Maurice Fuld, I. S. Hendrickson and T. A. Havemeyer, executive committee; Prof. A. C. Beal, A. C. Hoddis and L. M. Gage, nomenclature committee.

The Massachusetts Agricultural College has prepared an extensive exhibit to be displayed at a number of fairs this Fall, and will give a number of educational demonstrations. These include live stock, horticultural and home economic subjects.

THE EUROPEAN WAR.—A great battle between Germans and Allies began south of Brussels, August 22, the line extending 20 miles from Namur to Charleroi. August 24 the Allies were driven back by the German forces. Terrific losses are reported. It was said that the Belgian dead numbered 16,000, the total wounded 50,000, while 2,000 British casualties were reported.....The Germans demand from the city of Brussels a war contribution of $40,000,000 and $10,000,000 from Liege. It was announced by the French Foreign Office, August 23, that France and England would unite in supplying a loan of $100,000,000 to Belgium, each power contributing one-half. Extremely painful stories of misery and destitution come from Belgium, where many small villages have been destroyed, the men killed or taken captive, and the women and children left destitute and without shelter. The forts at Liege were still holding out, August 26, and were reported to be hampering the Germans in building pontoon bridges across the Meuse. The forts at Namur, reported fallen, were holding out, August 27, and Belgians were holding back the Germans at Malines.....August 23 it was announced that Austria had ceased operations in Servia, the Austrians now uniting their effective forces with Germany against Russia. Austrian losses have been heavy in Servia. August 25 Austria declared war on Japan. It was stated that fortifications at Cattaro, an Austrian port on the Dalmatian Coast, had been destroyed by French-British bombardment..... The Russian advance in Eastern Prussia continued, August 18-27, heavy German losses being reported. The Russians then occupied a strip of German territory 50 miles wide, their front extending 130 miles. August 27 the Germans near the Vistula River were reported in retreat westward.....The British Admiralty stated, August 22, that about seven per cent. of the total German merchant marine is now in British hands, while another 30 per cent. is sheltered in harbors and unable to get out.....August 24, after dark, a Zeppelin airship dropped bombs into the city of Antwerp, destroying a number of houses, one of which was only 300 yards from the palace of King Albert. Seven persons were killed. One bomb fell in a hospital. The airship was brought down by Belgian artillery fire six miles outside of Antwerp..... August 26 Americans were warned to leave Italy by the American Embassy, as the country was then mobilizing troops and it was feared that Italian neutrality would be abandoned.....August 23 Japan declared war against Germany, and August 24 began the bombardment of the German base at Tsing-tao. August 25 British ships shelled Tsing-tao, China, to locate the German batteries and cover the landing of the Japanese troops. Three thousand Russians have left Vladivostok to join in the assault. The Austrian cruisers attempted to run blockade from Tsing-tao harbor, but were driven back.

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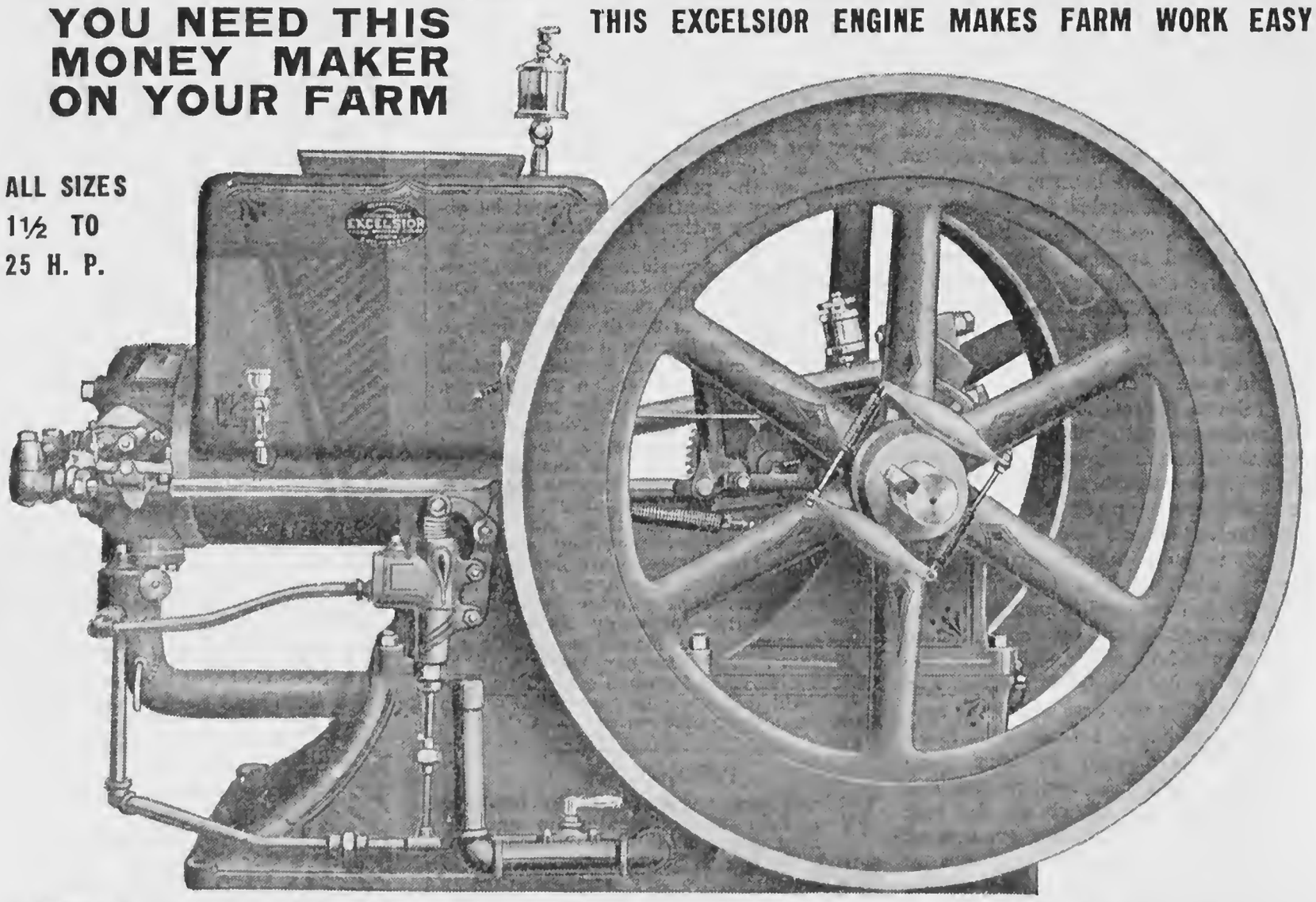

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BACTERIAL LEAF SPOT OF PEACH.

LAST Summer peach growers about Hammonton, N. J., complained that the foliage of their trees was being injured by some sort of a leaf-spot which finally caused the foliage to drop from the trees. The variety Elberta appeared to be affected more seriously than other varieties. This leaf-spot trouble began to appear again in June of the present year. Samples of the foliage were sent to Dr. M. T. Cook of the New Jersey Experiment Station, and he identified the disease as the bacterial leaf-spot of the peach.

BACTERIAL LEAF SPOT ON PEACHES.

This disease has been more or less common for some time in southern peach districts and has also been reported from Connecticut. It has undoubtedly occurred in New Jersey for some years, but never caused serious damage.

The disease first attacks the leaves upon the northwest side of the tree, gradually spreading to the southeast side and in severe cases causes almost complete defoliation. The fruit upon trees thus affected fails to mature properly and is a loss to the grower. In severe attacks the fruit is also affected and is distinguished from the disease known as peach scab by irregular cracks in the skin of the fruit.

Connett's Early was found to be seriously attacked both in leaf and fruit in one orchard. At Hammonton the most susceptible varieties are Elberta, Connett's, Carman, Reeves' Favorite, and Mountain Rose; while Belle of Georgia and Maule's Early appeared to be resistant. In the State Experiment Orchard at Vineland, Globe and Susquehanna have appeared to be susceptible varieties. As this is a bacterial disease there is no satisfactory remedy known for its control. In general it is seldom serious for more than a single season. It is evident, however, from the injury to the peach industry about Hammonton last season that further study of the disease is imperative and it is hoped that means will be provided so that the Department of Plant Pathology of the New Jersey Experiment Station may be able to carry out some investigations next year.

Canadian Fruit Report.

THE Dominion Department of Agriculture makes the following statement of crops:—

Quebec.—All varieties of apples more abundant than last year. Wealthy and Alexander, full crop. Fameuse and McIntosh 60 to 70%. Dry spell broken by rain on the 14th.

Okanagan Valley, B. C.—Dry weather ripening late peach crop three weeks earlier than last year—same applies to pears, plums and prunes. Plums very heavy. Bartlett pears, 100% increase over 1913. Apples 30% increase, and of high quality. Ideal weather.

Annapolis Valley, N. S.—Apple crop 80-90% clean, which is same percentage as spotted fruit in 1913. Crop increased 30% and fruit of larger size. Heavy drop in Baldwins and Ben Davis. Weather very favorable. Market very gloomy as buyers will not offer.

North-West States.—Increase over 1913 is 20%. Quality extra fine—60% "extra fancy." Markets uncertain.

New Brunswick.—Apple crop promises to be double that of 1913. Free from scab. Local markets good. Weather fine and dry.

Ontario—Georgian Bay.—Apple crop 60 to 70% full and exceptionally clean. Winter varieties in Barrie and Orillia (Lake Simcoe) district, less than 25% and Fall varieties 50%.

Norfolk.—Baldwins 80%, Greenings 50 per cent., Spies 40 per cent. Total apple crop 50 to 60 per cent of full crop. Dry weather not affecting size. Fruit generally clean.

Essex.—Recent rains ensure heavy crop of Fall fruits. Apple crop same as last year, fewer Baldwins but more Kings and Greenings. Peaches full crop. St. Johns ripening next week. Plums good. Pears heavy.

Lake Ontario (North).—Dry weather broken August 14. Apples clean in sprayed orchards. Early varieties ready to move. Buyers not operating. Ontario county fair to light. Northumberland heavier but undersized.

Wharton Valley in Otsego Co., N. Y., is a beautiful location. The farms in this valley are mostly owned by the people who inhabit them. Therefore more interest is taken. The buildings in most instances are kept well painted with large spacious lawns which are kept well mown and give an appearance of a village or city home. The crops are good in most cases; hay especially was of a very fine quality and a large crop. Most farmers cutting more than in previous years. The oat and corn crops are exceptionally good. Dairying is the principal occupation, the black and white cattle predominating, and many are running wholly to purebred. One of the largest bottling plants of the Borden Condensed Milk Co. is located at Edmeston, N. Y. where most of the farmers carry their milk. Much poultry is kept generally the White Leghorns. The eggs are mostly shipped to the city. One of the best organized and working Granges in the State is also located at Edmeston, N. Y. The meetings are regularly and largely attended. The degree work is exemplified by the young ladies of the Grange in a manner that does credit to themselves and the Grange. H. E.

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BINDER ATTACHMENT with corn harvester cuts and throws in piles on harvester or in winrows Man and horse cut and shock equal with a corn binder Sold in every state. Price only $20.00 with fodder binder. J. D. Borne, Haswell, Colo., writes: **"Your corn harvester is all you claim for it; cut, tied and shocked 65 acres milo, cane and corn last year."** Testimonials and catalog free, showing pictures of harvester. Address **PROCESS MANUFACTURING CO., Salina, Kansas.**

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This HUDSON Six-40 for 1915 is a car for every man to consider.

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It is large enough. There is ample room for seven. It has power enough—47 horsepower—for any possible requirement.

It weighs 2,890 pounds. Cars of this capacity, built in cruder ways, used to weigh around 4,000 pounds. By better materials and better designing we have saved that needless over-weight—that heavy tax on tires. Yet there never was a sturdier car.

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These things mean enormous savings. They mean that men no longer need to suffer over-tax.

New Attractions

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There are many new ideas in equipment. There are comforts and conveniences found in no other car as yet. A study of this car will reveal sources of attractions which you haven't seen before.

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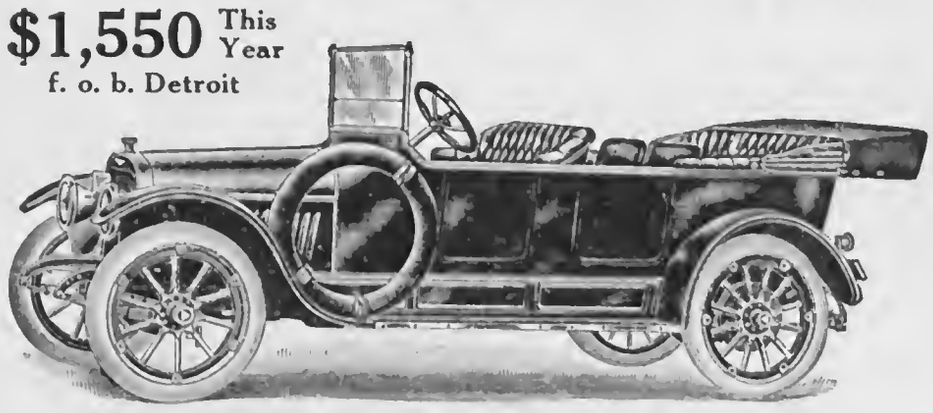

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(172)

Hope Farm Notes

THE article on child labor is one all mothers are deeply interested in. I believe in the weekly allowance if paid regnlarly, but this I find if spent rapidly causes expensive habits. Now Mr. Philosopher, how can the boy be made to save a certain amount? I have tried several methods with indifferent success. E. W. S.

New York.

It will depend on the boy. Right in the same family I have seen natural spendthrifts, while their brothers and sisters were saving in habit. We started small bank accounts for our children when they were little things, and tried to explain how their money works for them and draws interest. They have all been quite willing to invest their money and see their account grow. Money which they earn means far more to them than any "allowance" or gift. When I lived in Colorado I met some "remittance men." These were second or third sons of well-bred English families. The first son seemed to inherit the estate and those others seemed to expect a regular "allowance" for their support. A more useless, lazy set of men I never saw. From boyhood they had been brought up to expect someone to pay them money regularly without any eqnivalent on their part. That was the "allowance" carried out to its final conclusion, and I have never believed in it. I would bring a child up to understand that he mnst give some return in labor or service for the money he receives.

There are two reasons why some people cannot start their children at a bank account. One is they never start one themselves, or at least do not make an effort to keep it up. Most children will do what their parents do, and if some of the family talk is abont fair saving for a wise purpose they will want to do like the rest. I do not mean talking about money as if it were the only desirable thing in the world, but a fair idea of economy and the need of saving. Sometimes a boy will want something badly. It is not a necessity but he sets his heart on it. I would tell him he must save the money for it—bank it until he has enough. If after he earns the money and banks it, he is still willing to buy the thing he had in mind he will most likely make a good investment. After the child gets a few dollars in the savings bank it may be a good plan to have him buy one or two shares in a local building and loan association. The demand for prompt monthly payments will give him good habits of meeting his bills, and the money will come back to him in a lump when he is ready for college or business.

I have observed one thing, however, which is quite true of human nature. No child is likely to start any bank account when he comes up with the idea that he does not need to do so. Once let him get the idea that father and mother have plenty, or that they think it degrading for him to work, and the chances are that you will be training a "remittance man" for life. Children of the rich can feel no particular incentive to save their money or bank it. Why should they? Put yourself in their place. Or take the case of a family where father and mother try hard to "keep up appearances" and imitate their rich neighbors. Who can expect their children to practice self-denial or see the need of saving? The best way I can think of to start a child is to let him understand early that all he can reasonably expect from you is good body and brain and home and education. Beyond that he must work his own way. I am sure that our children understand that fully.

HOPE FARM "SCRUBS."—They are still on deck at the laying contest, and doing far better than I ever expected. When they were entered I asked a number of good hen men how many eggs they would probably lay during the year. The average of these estimates was 75 eggs each. Up to August 14 they had averaged 106 and "still going strong." I fignred that they might possibly lay 950 by August 1. The actual record was 988. My estimate for September 1 is 1100! The record of the scrubs for July is given below:

HOPE FARM SCRUBS.

	May	June	July
No. 1	21	7	18
No. 2	22	19	21
No. 3	23	22	20
No. 4	21	10	18
No. 5	28	21	12
No. 6	25	19	15
No. 7	13	11	4
No. 8	19	18	10
No. 9	22	23	25
No. 10	19	19	22

Including the eggs laid on the floor and not credited to individual hens they laid 173 in July.

Of conrse I understand that a dozen henmen will start up at once and scoff at this record. They have hens which averaged 25 or more eggs in July. All I can do is to invite some of these gentlement to pnt 10 of these wonderful hens right into the egg-laying contest. With the fnllest confidence in what these men claim I have graduated into the "show me" class, and I want to see before giving them fnll credit. There are some fine pnre-blood hens in this contest. Snppose we see how the scrubs stood up to them in July:

JULY RECORD—10 HENS.

Hope Farm Scrubs	173
Best Plymouth Rock	188
Poorest Plymouth Rock	129
Average Plymouth Rock (13 pens)	154
Best Wyandotte	192
Poorest Wyandotte	93
Average Wyandotte (10 pens)	140
Best R. I. Red	188
Poorest R. I. Red	103
Average R. I. Red (15 pens)	137
Best Leghorn	250
Poorest Leghorn	90
Average Leghorn (34 pens)	187
Average all pens (82)	163

The Orpingtons averaged 105 and the Campines 149. There are four other pens called "hens." These averaged 138. The "scrubs" beat seven pens of the Leghorns. Of the 48 pens outside of the Leghorns the "scrubs" beat 43 pens! I am well satisfied with this record, in fact I would not complain if the scrnbs were tail-enders. That No. 7 is a poor performer, and she is the one I picked as the best of the lot at that. She started in to molt the first week in August, but thonght better of it and came back with two eggs during the second week. I find no fault with any of them. It appears that if they could have started with the others they would now be higher up. They were a hard-looking lot of birds when they entered. Most of them had hard colds, and seven of them had received no training whatever for such a contest. The old complaint that these birds are not "scrubs" now comes np again. I thought that in buying them as I did in the live poultry market I should surely get cast off or rejected hens which were considered not worth keeping. However, these birds were so poor that before they started laying most of the experts hooted at them and wondered why they were ever selected. It was not until these "scrubs" began climbing over a lot of the pure-bloods that we heard any complaint. I think they represent the type of hen to be found on the majority of our farms. They will certainly show whether the introdnction of purebred blood will pay. H. W. C.

FOUR-YEAR-OLD Josephine was greatly pleased to have a garden bed of her own, and worked faithfully planting and weeding. One day she ran in and annonnced triumphantly: "O, muvvy, my onions have got they little tails stickin' up!"—Woman's Journal.

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Ruralisms

UP-TO-DATE POINTS IN GARDENING.

MULCHING.—In late cabbage setting time it was quite dry, and those who did not take special precautions lost a large part of the plants put out. One gardener (a man from West Virginia) took a novel way of insuring dampness. After the ground was marked one way he distributed rotten manure from the hotbeds along the marks about a foot wide and three inches deep. This was two weeks previous to planting. In planting a line was stretched across the rows and the plants set with a dibble after opening a small place in the manure. The ground was damp and in good condition, and not a plant died. In a few days the manure between the plants was collected around them with a rake and the cultivating and hoeing buried most of it in the soil. Others imitated this man and where rotted manure was not available, manure fresh from the stables was used with equally good results. In another instance a gardener, after sowing turnips where early potatoes had been grown, scattered litter from the stable thinly over the surface, and this conserved moisture enough so the turnips started while his neighbor's sowing grew only in spots accidently moist. Near Cleveland is a section where gardeners are very successfully growing celery as a second crop after early peas upon upland gravelly soil. After planting they mulch with fine stable manure where shavings were used for bedding, to the depth of two inches and then water thoroughly with a hose under pressure. The result is that the celery starts at once and makes rapid growth. The celery is planted close, the plants being set at six inches in rows 26 inches apart. Boards or paper are used in blanching, and this season some will try the new patented tubes which are sprung around the plant and retain their place without tieing.

TRANSPLANTING.—This Spring I had a quantity of onions to transplant, and when the time came to do it the plot of ground was quite dry, with no sign of rain. It was near the greenhouse where I could get an abundance of water by turning a stop, and so after raking the ground nicely one evening I watered it at the rate of three gallons per square yard, putting it on with a sprinkling can and going over several times so as to permit the water to soak in. The next morning was cloudy, and I set the plants in ground that was moist clear down. Disturbing the ground in transplanting prevented baking, and a rain coming the next day not a plant died. A friend who is very successful in growing early tomatoes and melons told me how he got a quick and vigorous growth on newly set plants which are started in pots or dirt bands. After the land is marked a man goes ahead and opens places with a light spade, one side of the opening being left smooth and nearly perpendicular. The plants are turned out and distributed, when the planter with a box of manure taken from a spare hotbed follows, dragging the box along with him. He takes a plant and presses it against the straight side of the hole, and then slaps a big handful of the rotted manure against the exposed side of the ball of roots. The loose earth thrown out with the spade is then gathered into the hole but not so much but there is left a slight depression.

CONSERVING MOISTURE.—If the ground is not moist a pint of water is given to each plant. The next day the plants are hoed, filling the depression, and the plants start at once into vigorous growth. By this method the roots which grow in a spiral when confined in a pot come in contact with both soil and manure, and the effects of too strong a dose of fertilizer is neutralized. In late or mid-summer transplanting I have found double transplanting a very good way to secure a good result. Probably most of my readers have had occasion to lay cabbage or sweet potato plants in the cellar to await the evening or next day for planting out. If these plants are in a close damp bunch it will be noticed that tiny white roots have formed all through the bunch. These are the feeding mouths for the plants and if placed in moist ground begin at once to carry on the growth arrested by digging up.

METHODS OF PROTECTION.—Plants vary greatly in their ability to recover in transplanting, succulent plants like onions and cabbage receiving little shock and set-back under favorable conditions, as they retain sufficient moisture in themselves to prevent excessive drying while the feeding rootlets are being renewed. To preserve the proper conditions in the heat of Summer is necessary, and various methods are used and have been for centuries, such as covering with dock leaves or straw, or sticking green boughs beside them. In home gardens I have often seen boards propped up over celery rows. Now double transplanting enables one to carry plants by the first shock of removal more easily and with more certainty than any other way. The plants are planted as close as may be convenient in short rows a few inches apart, kept thoroughly watered and shaded with something which may be removed toward night and replaced late in the morning. The result is that the roots commence growth at once, and soon bind to themselves a mass of earth which stays by and nourishes the plant when finally planted out a few days later. The saving comes in the fact that the watering and shading can all be done in a very small space, and where the wants of the plants can be attended to without ranging over a wide field. At this writing I am using exactly this plan in putting out a new strawberry bed. The plants are dug from the spaces between rows, and replanted in the garden in close rows, where they will be encouraged by shading and watering to an immediate new growth, and along toward September the plants will be removed to a permanent bed. It makes but little difference how old the plants are, as I know by experiment that old plants will renew their youth and produce next year. As the plants will make no increase I set in triple rows six inches each way at intervals of five feet, expecting to clean out and allow them to spread after fruiting.

Northern Ohio. L. B. PIERCE.

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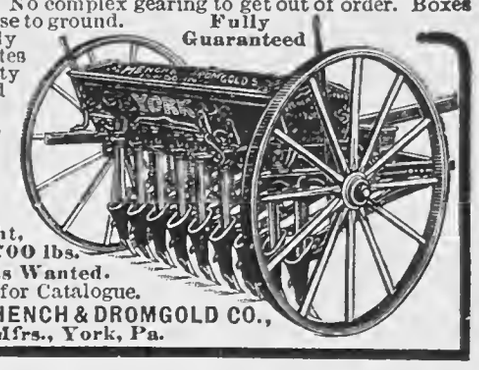

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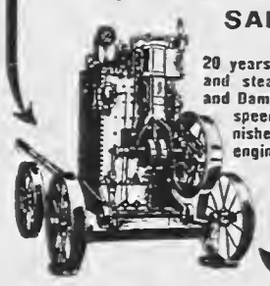

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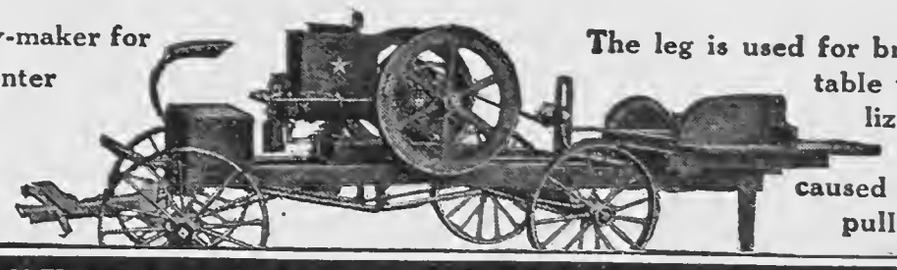

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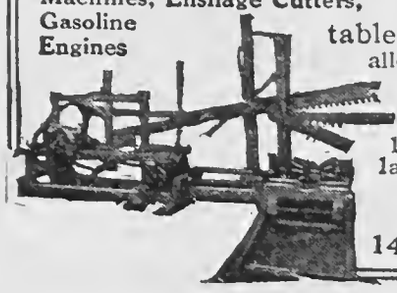

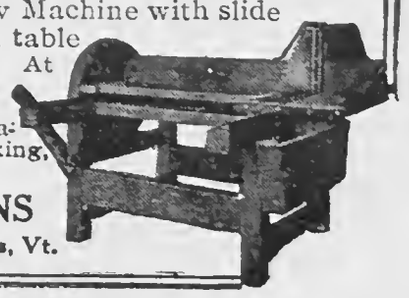

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NOW comes the season for proving the nurseryman—running his trees through a Babcock test! Some of them will come into bearing this year. A very large proportion will be true to name, but there will be "misfits" or cases where the label does not fit the tree. Then there may be older trees which we want to identify. The way to be absolutely sure about these things is to send a fair sample of fruit to the United States Pomologist, Department of Agriculture, Washington, D. C. This official makes it his business to identify and name fruits. He has laboratory, models, pictures and books complete, and his word will be final. He will, on application, send you boxes in which your fruit will be mailed free of charge. Our advice is to go direct to headquarters with your samples. We make use of this service and find it true.

*

WILL not the European War cause a shortage in next year's grain crop in Europe? If so would you not advise American farmers to turn over every acre they can this Fall and put in Fall grain crops? I. N. B.

No one can tell how long the war will last. It may be all over by Thanksgiving, or it may last a year or more. Thus far the fighting has not seriously interfered with the harvests. The grain in both Germany and France has been cut by women and old men, and the same workers will put in a new crop as best they can. There will be a shortage, of course, and Europe must look to Africa, Australia, South America and this country for part of its food. It is not likely that the English grain crops will be smaller. They may be larger. To the second question, as it is put, we answer No! It will never pay to turn over old or unsuitable land, give it a hasty fitting and then sow grain just for the sake of obtaining a large acreage. The thing to do is to increase the grain acreage a little, and work the land just as well as you possibly can before putting in the seed. Try to grow more grain to the acre rather than to scratch over more acres. Time spent in war talk at the village store raises no wheat. The same time spent in one extra harrowing will mean more grain, and Europe will need every bushel of it.

*

IT is maddening to think a handful of individuals can set all Europe at each other's throats. It is also intensely irritating to realize how much we here are at the mercy of a comparatively few commercial autocrats of the brigand type, men who produce nothing, who render no service except that which could be better given at much less cost in other ways, and yet who exact in toll twice the value of the product as it leaves the farm of the producer.

This from the Bristol (Conn.) *Press* expresses the opinion of millions of our people in the Eastern States. With the largest crops on record, and Europe shut off from export trade, a gang of food pirates proceeded to boost the price of flour, sugar, meat and other necessities. No one thinks of claiming that farmers gained a penny by this rise in the price of necessities. They lost money as a whole, for the robbery of the public, through these hold-up prices, injured the trade in fruit, vegetables and similar goods. The Government is trying to probe into this outrage and find the rascals who are responsible for it. Each time this bold robbery is attempted we become more and more convinced that the Government must step in and protect the people by regulating prices. Through the Interstate Commerce Commission it regulates the price of transportation of freight and passenger traffic on the railroads. The price of food is of far more importance than the price of transportation. A commission with power to investigate and fairly regulate food prices to consumers would quickly prove that the 35-cent dollar is a reality and it would shut off the food sharks and useless middlemen through its exposures. Can anyone give a sound reason why such a commission should not be created?

ON page 1032 we printed a statement from an insurance company regarding an accident to a farm laborer. After accepting a premium to cover such insurance the company appeared to argue that it was not liable because the new law exempts farm laborers. One of our readers makes this point:

I carry a compensation policy on my farm labor, and as I understand the point in question, while the law does not compel a farmer to carry compensation insurance on his labor, at the same time there is a rate issued for same, and anyone who wishes can voluntarily place his employees under this protection, and that any insurance company accepting his premium for same is bound to pay in case of an accident on the same basis as would be paid on other classes of employees on which the law demands insurance.

That seems to be common sense no matter what the law may be. If the insurance company agrees to pay in case of accident to a man the agreement ought to be kept regardless of the exemption in this new law.

*

I HAVE seen a good many "hen stories" in THE R. N.-Y., and I know many claim that $1 per hen per year is about the best you can expect. What would they say of making $1,000 a year from 50 hens? We have a man here who wants to wager $100 that he can make $1,000 per year from 50 hens. If this wager could be made and successfully carried out, wouldn't it be a great "eye opener" to the poultry business? This man stands ready, so he says, to place the $100, and cost of supervision to fall on the one who loses. S. J. V.

Vermont.

We must not let this egg-laying contest run away with us. The air is full of these propositions. One man offers to bet $1,000 that 10 of his hens can outlay any other 10 in the country. When this gentleman is asked to get into the next poultry contest he makes it clear that his $1,000 is hung up on the home henhouse—not in public! We have had several propositions like the one mentioned by S. J. V. Usually the plan is to take a flock of high-class hens and feed and keep their record at home. It is expected that the advertising gained through public announcements of the contest will develop a high price for hatching eggs and baby chicks. Such a trial would not represent the conditions under which the average henkeeper must work, and would really do more harm than good to the general poultry business. It would develop into another "big story," and every man with a "system" or some other scheme for making a hen lay golden eggs would use it as "sucker bait." We have one reply to these poultry bluffers—"*Get into an egg-laying contest!*" Let such a man select 10 hens which he will bank on and enter them on even terms with the other pens. He may be the most honorable person on earth, but the public will never accept his word for a record as it will an official statement from one of the regular contests. It will, of course, be answered that the official contest does not give the hen *man* a chance to show his skill as a feeder and seller. That is true, but the public cannot buy skill and business ability in eggs and stock. The foundation of success in the poultry business must ever be the *hen*. If a man will prove by the official figures that his hens are what he claims for them the public will be likely to accept his other statements.

*

THE Board of Trade of Gainesville, Florida, is doing great work in trying to head off the land swindlers. A letter is being sent to the papers which starts off as follows:

In a few weeks the fake land companies who advertised five, 10 and 20-acre get-rich-quick tracts of Florida lands will begin sending their people down. These swindling concerns usually start their advertising and circular work in the Fall of the year, just about the time the Northern and Eastern crops begin to move. Every class of people is caught in this systematized dragnet that is thrown out by unscrupulous individuals operating under the name of land companies. Countless thousands of small wage earners, men and women, have been induced to buy acreage in our State, believing that they have only to move down, plant themselves in a portable bungalow, and sit under the shade of a live oak tree while watching the soil produce a stream of golden dollars. It is both a pity and a shame that these Northern syndicates have been permitted to rob a class of people who can least afford to separate themselves from their savings.

F. M. Runnells, the secretary of this Board of Trade, says Florida people are constantly being called upon to take care of families who have bought small patches of land, and who found themselves cheated and abandoned.

These people have our greatest compassion and our people cheerfully contribute to their relief, but always with a feeling of outrage that these unsuspecting men and women have had such unfair advantage taken of them. Florida is a land of golden sunshine and promise, but, as in every State in the Union, it takes brains and some capital to get results.

We have long claimed that the people of Florida are the ones to rise up and smite these land sharks. None can do it more effectually, and none can be more interested because these land frauds do great injustice to Florida and her people. We have for years fought and denounced these land schemes almost alone among Northern papers. Some of our Florida friends have grieved because we drove the knife into these fakes without reserve. We had to. There was no other way when the honest people of Florida did not take effective steps to shut off and punish the land liars who will steal a man's home. Now the Florida people are awake, and they can do effective work.

*

LAST week a woman told of her "table on wheels." She can wheel this table close to or into the kitchen, put the food on it, and then wheel the entire thing to her dining room. Formerly she made probably 50 trips; walking perhaps one-fifth of a mile to carry the food and the dishes back and forth. Similar contrivances can be thought out on many a farm by which crude labor is saved. There may have been times in the past when crude labor seemed hardly worth saving. That time has now gone. We have come to a time when about the only profit comes through saving labor. The man who can do this is called "efficient."

*

OUT in the Dakotas the agricultural teachers as well as the thinking farmers, are advocating live stock and dairy farming to take the place of grain growing. Among other arguments the following is presented by Prof. C. Larson. He says it will cost a day's wages for man or team to haul a load of grain or hay to the railroad. The freight to Chicago will be $3.40 per ton for grain and $4 for hay.

During the Winter months a dairy cow will eat about three tons of hay and one ton of grain. To get this feed for one cow from the farm to Chicago market costs:

Hauling from farm to shipping point, three loads of hay, at $4 per load	$12.00
Hauling from farm to shipping point, one load of grain	4.00
Freight on three tons of hay from shipping point to Chicago at 20c. per cwt.	12.00
Freight on one ton of grain from shipping point to Chicago at 17c. per cwt.	3.40
Total	$31.40

A fairly good dairy cow is able to change this feed into 300 pounds of butter. Shipping 300 pounds of butter to Chicago costs about $1.35. Adding $2 for hauling, makes a total cost of $3.35. The dairy cow has reduced the cost of marketing from $31.40 to $3.35, or to about one-ninth as much.

Putting the thing in this forcible way makes a strong mental picture for the average farmer. Why should he work to provide freight for the railroads, when the cow will stand as a machine to give him a home factory? If he says that dairying is too confining there are beef cattle, sheep and hogs to consume the feed at home and do most of the work of taking care of themselves. Take it any way you will, live stock offers these farmers a chance to be more independent. In addition to this is the fact that the plant food in the hay and grain is kept at home, where it is needed, when these crops are fed to stock. The Dakota farmers have only to consider the history of Wisconsin's agriculture to see what the change from grain growing to dairying has done for a great State. The substitution of the cow for the grain sack has had more to do with Wisconsin prosperity than any other one thing.

BREVITIES.

POULTRY need shade—as sheep do.

CASES of club-foot disease on Brussels sprouts have been found.

WHEN beef and mutton climb up the scale of prices Mrs. Business Hen becomes a great farm companion.

THE high cost of meat should teach us not to worry off our own flesh. It will cost too much to put it back.

THIS thing is older than the hills, if you, sir, only knew it; the way to go and do anything is just to go and do it.

"DON'T rock the boat," they tell us. Good advice, but a few solid rocks in the bottom of the boat as ballast will steady it.

THE man who would try to "stovepipe" apples or work off poor stock this year ought to go to an asylum—in addition to jail!

WHEN a man, knowing nothing of farming, takes a farm and expects to get rich quick the lines of his territory enclose a graveyard of big schemes.

SOY beans! They make great feed for the stock. We think it will pay better to feed them dry with corn silage rather than put them into the silo.

THE best time to cut corn into the silo is when the ears are "glazed." That means when the kernels are firm and solid, with a glazed covering, but not dry and hard.

THE value of grindstones produced last year in the United States was $855,627—which was $60,712 less than the year before. Have you met fewer people "with an ax to grind?"

AMONG other things increased in expense by the European War is cost of educational institutions in this country. Scientific instruments and chemicals are mostly imported.

WE think it pays to let all farm animals have access to powdered charcoal. They will usually eat it freely. Most of the so-called stock foods contain charcoal as one of the most useful ingredients.

ORGANIZING THE LAND BANK.

THE preparations for the organization of the Land Bank of the State of New York are progressing rapidly. Thirty-five of the local associations have applied for membership, bringing resources of over $25,000,000. The requirements of the law for organizing the Land Bank have now been completed, but it is short a part of the capital necessary to be subscribed before the bank may begin business. This is, however, being subscribed and those locations which wish to become charter members in the Bank, and help elect directors and complete the working organization should send in their applications at once. The sub-committee are now preparing draft of by-laws, and the organization will probably become a reality within a few weeks. It will then be ready to do business as soon as the full limit of $100,000 capital has been subscribed. It is not at all necessary that farmers have separate local associations from the towns and cities. They may associate themselves with associations already existing, or associate with town and city people in the organization of new associations. Of course, where no opportunity exists for such association farmers may organize local associations among themselves. The Jewish farmers at Centreville, Sullivan County, have already so organized. The Rural Savings and Loan Association has been organized by THE R. N.-Y. force and is now ready for business, and charter membership in the Land Bank. Shares in this association may be subscribed by any person, male or female, and they share in all the benefits, except that loans on mortgages are restricted by law to 50 miles from the office. Loans on the stock of the Company may, however, be made to members, wherever located. Installment shares may be taken on which 50 cents a share is paid in monthly until the accumulations with dividends amount to $100. This usually takes about 12 years and the amount paid in amounts to about $70. The dividends amount to the balance. Savings shares may also be selected. On these the member may begin with $1 or more and pay in more or less from time to time as suits his convenience until the sums paid and the dividends on same amount to $100.

Income shares are still another choice. In these the member pays in $100 for each share and his dividends are paid in cash semi-annually. Any of the shares may be withdrawn at any time on due notice.

Our hope is to see one of these associations in every neighborhood of the State. The State is ready to send instructors to explain the system, and to organize the associations if one is desired, and the Banking Department believes it has the requisite elements of success. We should be glad to have farmers become members of the Rural Association, with a view to becoming familiar with the system and then organizing in their own neighborhood and transferring membership to their own location.

It is hoped that the Granges and local farmers' clubs will take up this work; and organize associations. There is no possibility of loss, and great promise of gain to all. Intelligent and progressive business and professional men in every community will encourage these associations, because they realize that anything that improves the conditions of a neighborhood, helps them. Local banks also find them the source of increased business for themselves. THE R. N.-Y. will gladly coöperate with any community which is desirous of forming a local association of this Land Bank of the State of New York.

THE WAR AND COMMERCE.

WHEAT speculation has been active, December delivery now being 25 cents above the low mark in mid-July. Cash wheat advanced 10 to 12 cents during the week and held most of this rise. England and France are heavy buyers of oats, which are five cents higher than last week. Orders are far in excess of available supplies. Flour is 25 to 50 cents per barrel higher, the domestic as well as foreign demand being heavy. In some sections millers report that they are unable to get wheat, as the farmers are holding for $2 per bushel. Householders here have been buying flour considerably in excess of present needs, thus helping raise the price.

Tin has advanced from 30 to 65 cents per pound, and the scarcity of tin plate is so serious that many canners will evidently have to use glass or lesser their output. The high price of sugar is another hit at the fruit canners. Sugar has dropped one-fourth to one-half cent in some sections, but is still upwards of seven cents wholesale. Our exports of sugar during three weeks of August were 70,000,000 pounds, nearly 40 times the amount exported in July. Sugar is now retailing in Great Britain at the same price charged here.

Chemicals used in photography are all higher, as most of them come from Germany. The greatest rise is in the developing agent hydrochinon, which in two weeks went from 90 cents to $15 per pound. Germany has sold us $125,000 worth of arsenic yearly and England about the same amount. The industry will doubtless be developed here now.

The rubber trust is out with an elaborate explanation of increase in price of their wares. Rubber is not grown in the war zone of Europe, but it is claimed that the crude material is financed and transported by Germany and England. One excuse will be as satisfactory as another to consumers of galoshes and rubber coats when they hand out their 25 or 50 per cent. addition to the normal price.

Glass for window, plate and optical purposes is expected to be considerably higher. Belgium, France and Germany have been large sources of supply.

Gremany's exports to the United States have run about $190,000,000 per year. The largest item is cotton manufactures $16,000,000. Next in order are: Chemicals, $15,500,000; iron and steel, $12,800,000; fertilizers, $11,430,000; paper manufactures, $10,300,000; furs and skins, $8,300,000; hides, $7,650,000; toys, $6,870,000; wool manufactures $4,250,000.

In a full crop year, Europe takes about 4,000,000 barrels of our apples, three-fourths of them going to England, and Germany handling 15 per cent. England may use half the quantity ordinarily sent there, but it seems probable that 2,500,000 barrels which we expected Europe to take will have to be used at home or go elsewhere. This will be a poor year to market culls or "stovepiped" or poorly packed apples.

New York State News.

FORESTRY COLLEGE PROFESSORS.—Prof. J. F. Baker and Dr. C. C. Adams are the two new forestry college professors to be added to the faculty of the State College of Forestry at Syracuse. The former will be given the title of Director of Forest Experimental work and the latter will teach Forest Zoology. Prof. Baker, who is a brother of Dean Baker of the college, has spent the last 15 months in the University of Munich studying methods of reforestation.

CREAMERIES TO TEST LAW.—Does a milk collecting station have to give its men one day a week off, under the new law, is the question that the Sheffield Farms-Slawson-Decker Co. is seeking to find out through the courts. The section of the law that is in dispute says in effect that an employer, under certain conditions, must give each employe 22 consecutive hours off each seven days. Certain establishments to which this section shall apply are enumerated in the Act, but the milk company claims that it is not included in that list. Complaint has been filed at Pawling, Dutchess County, and as there are a number of such establishments in the State this case is looked upon as a test case as to the application of this section of the law.

WAYNE CO. APPLE GROWERS.—A branch of the Eastern Fruit and Product Exchange has just been formed at Sodus, in Wayne County, an organization of growers affiliating with the North American Fruit Exchange of New York. This association cuts out the middleman and places the fruit direct after the manner of the California fruit exchange. Wayne growers are not elated over the outlook for the export apple trade this year. With a bumper crop on the trees, rated at 75 per cent of a crop as compared with a 54 per cent last year, a serious problem seems to be confronting State apple growers.

CO-OPERATIVE ASSOCIATION.—A meeting was held in Grange Hall at Potsdam, this week, which was attended by about 40 farmers, to discuss the organization of a co-operative society under the State law. The meeting was addressed by Mr. Cole of Albany. After the discussion it was decided to organize for the marketing of milk products and the purchase of supplies. The capital stock will be $2000, of which $500 was raised at the meeting.

FARM BOYS' CAMP.—Commissioner Huson has made his selection of farm boys for the camp at the State Fair, and there will be 86 of them. One from each of the agricultural counties is selected on the recommendation of the Pomona Grange master of the county. They will be under the military supervision of Adjutant General Hamilton, and Dean Baker of Syracuse will have charge of their instruction. The boys will be uniformed in khaki.

NEW FAIR IDEA.—It has been left for the Cambridge Fair people to introduce a new feature into their fair attractions. They have arranged with the Granges for marching teams of from 10 to 20 young persons who are to contest for honors before the grand stand to see which can give the best 15 minutes' drill and march. One team will drill on each day of the fair. The prizes are $300.

A PREDICTION.—Commissioner Carlisle of the State Highway Department was one of the speakers at the Ontario County Grange picnic at Geneva. He made the prediction that within 10 years the horse would be completely superseded on the highways by motor-propelled vehicles, and that within that time a satisfactory car will be built which can be sold for $200 or $300, so that practically every farmer can own one. This growth must be taken into consideration in the building of our highways. The Commissioner also made this significant confession.. "I have had more trouble with the kind of politics which endeavors to get a road built past a certain man's place, just because he has a political pull, than anything else."

ABOUT THE FRUIT TRAIN.—The New York Central's apple car special started at Marlborough on schedule time, and about 150 growers visited it. They were specially interested in the operations of the apple grading machine which was operated by a small gas engine. The new grading law was discussed, and Mr. Van Buren of the Department stated that the law would be enforced and yet ample leeway will be given for any misunderstandings or lack of understanding of the law on the part of growers. Notices will first be sent to those not observing it, and they will be closely watched. Prof. H. B. Knapp spoke on marketing, showing the prices that different varieties had brought through a series of years, and recommended the varieties it would pay best to put in storage. Mr. F. S. Welsh of the Central talked on the car supply and showed that for the period from Nov. 1, 1912 to March 31, 1913, 7½ per cent. of the cars ordered were cancelled before being placed, and that this, with the detention of cars while loading, caused a serious reduction in the available car supply. Between Marlborough and Albany about 700 growers and others visited the car. J. W. D.

Government Crop Report.

IN the Atlantic States from Virginia northward, drought persists in Virginia and has extended into Maryland, causing all crops to deteriorate. Over the remaining portions of this district the weather is favorable, and crops made satisfactory progress.

Over the mountainand plateau districts, including the great range country of the Southwest, the weather is mostly favorable. Pastures and forage crops continue in good condition over the southern portions, and in the north the weather was generally favorable for harvesting.

Over the Pacific Coast States drought continues. In Washington and Oregon all growing crops are suffering, and water is getting scarce, but the weather is favorable for harvesting and thrashing. In California, water continues plentiful.

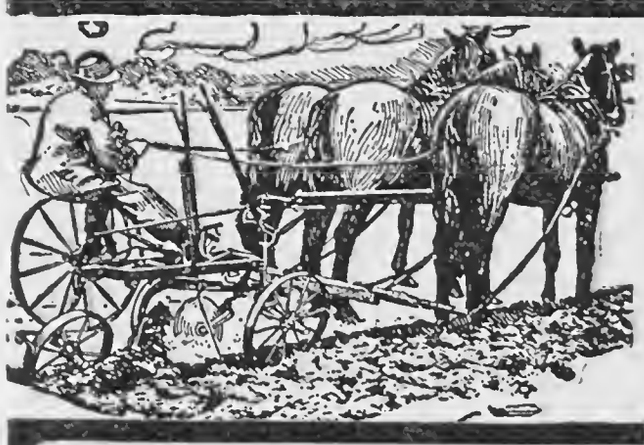
Nearly continuous high temperatures over the central and northern districts to the eastward of the Rocky Mountains, with beneficial rains over the cotton region and continued drought in portions of the western corn belt, were marked features of the weather of the past week. In the corn belt to the west of the Mississippi drought prevails in Iowa and portions of adjoining States, causing still further damage to corn and other late crops.

To the eastward of the Mississippi, except in the middle Atlantic States and over the South, favorable showers occurred and late corn and other crops were greatly benefited. Plowing for wheat is in progress over much of the country to eastward of the Mississippi, with the soil in good condition.

To westward of the Mississippi plowing is proceeding to some extent, but the ground is too dry for satisfactory progress. In this section water is becoming scarce, especially in Iowa, and pastures are badly in need of rain.

In the Spring wheat belt harvest is nearing completion, and the weather continues favorable for thrashing. General showers improved pastures and benefited corn and other late crops.

Lightest Draft—Easiest Handled



Wherever foot lift plows are used the Emerson leads for lightness of draft, ease of handling and length of service. The

Emerson Foot Lift Plow

is the *lightest draft* plow made and the most durable. Load is close to the team and carried on the wheels. A boy can easily operate the Emerson.

The Emerson Foot Lift Feature Made a New Era in Plowing Efficiency

Send for free book telling you how your feet handle the plow, leaving your hands free to manage the team.

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Plows, Harrows, Pulverizers, Listers, Spreaders, Planters, Drills, Cultivators, Mowers, Hay Tools, Baling Presses, Corn Shellers, Gas Engines, Farm Tractors, Steam Traction Engines, Threshing Machines, Road Rollers, Wagons and Vehicles.
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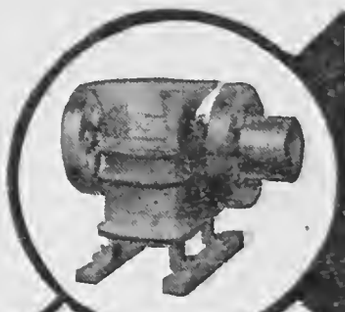


Lime Doubles Crops Costs But Little Crushed With

WHEELING LIME STONE CRUSHER
"BUILT LIKE A BATTLESHIP"

READ WHAT EXPERTS SAY

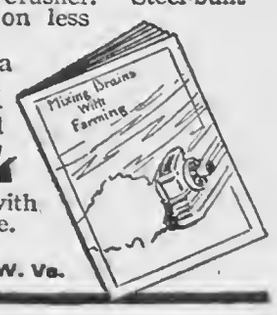
Chas. E. Thorne, Director Ohio Agri. Exp. Sta. writes: "We find it necessary to use either burnt lime or gronnd limestone before either manure or fertilizing materials will produce a full crop."

Dr. Cyril G. Hopkins, Illinois Experiment Station, says: "The amount of limestone used in soil improvement in this state should be rapidly increased until it reaches more than a hundred times the present demand, for the reason that limestone is one of the necessary materials that must always be supplied for the highest improvement and permanent maintenance of Illinois soils, and also because that at reasonable prices for limestone and farm produce it can be used with great profit and justifies its application."

B. H. Hite, Chemist, W. Va. Agri. Exp. Sta.: "The effect of lime on worn out meadows and pastures is most encouraging."

Compare cost with burnt lime or any other soil food. Why pay $3 to $5 a ton when the rocks on your farm can be crushed for about one-tenth? A Wheeling Crusher will pay for itself grinding limestone for you—will make money working for neighbors—is adaptable to crush any size and you can add capacity as needed—two advantages you can't get in any other crusher. Steel-built—stronger than cast iron and lighter—runs on less power using your regular engine.

Learn ALL the advantages of owning a Wheeling and profits crushing for others—a business with a future greater than the threshing business. Ask for full information and



Write for this Book

"Mixing Brains with Farming"—packed with valuable facts for business farmers. Free.

WHEELING MOLD & FOUNDRY CO.
502 Raymond Street Wheeling, W. Va.

Woman and the Home

From Day to Day

THE NEUTRAL LANDS.

God's pity on the neutral lands
That had no wish to fight,
The little lands of fruitful peace
Now given to the blight.
The meeting ground of deadly hosts,
Their burning cities smoke,
Their trampled fields are drenched with blood,
Their streams with corpses choke.

God's pity on the women's hearts
That had no wish for war,
The women's hearts that bear all men
And bloody strife abhor.
Now they may only wait and fear
And weep the brave and true,
Each bursting shell must lay them waste,
Each sword must pierce them through.

—McLandburgh Wilson in the New York Sun.

*

THREE farm hands who received prizes for long service in the same employ at an agricultural show in Devonshire, England recently had each worked for one employer for over 46 years.

*

WELFARE workers in Liverpool, England, have started a plan for giving hard-working mothers a weekly half-day off. It is stated, with reason, that there are a great many difficulties in the way of the plan. Since the subject has been brought up, we wonder how many farm housewives take a weekly half-day off? Why shouldn't the household factory shut down long enough for mother to catch her breath?

*

EMBROIDERY cotton, the soft-finished sort, is just right for darning table linen, which is difficult to mend with twisted sewing cotton. The same kind of embroidery cotton is often a convenience for darning fine colored stockings; it is not always possible to match the fancy colors now worn with ordinary darning cotton. Another use for the soft twisted embroidery cotton is to make buttonholes in cotton or linen garments. One gets a better effect than with sewing cotton, and the work is more quickly done.

*

ROAST pigeons are prepared as follows: Select plump pigeons, pluck and draw. Rub the inside and outside lightly with salt and pepper. Make a stuffing of equal parts of chopped celery and bread crumbs, seasoned with a little minced onion and a pinch of powdered sage. Moisten this stuffing with milk and melted butter. Stuff the pigeons with teaspoonfuls of this mixture, dropped in lightly. Place a thin slice of fat bacon over the breast of each bird, securing it with a small metal or wooden skewer. Lay them in a buttered pan, breast upward, and roast in a moderate oven. Cook the giblets in a little salted water, chop fine and add to the drippings in the roasting pan. Thicken with flour and add water sufficient to make the gravy.

*

MOST of us have seen some of the elaborate old-time patchwork quilts which had cut-out patterns in colored calico applied on a white foundation. This style of work is now quite fashionable, not only for quilts, but also for cushions, table covers, curtains, etc. The designs, cut out, the raw edge turned under, are felled with tiny stitches to the foundation. Some put the work in an embroidery hoop, which enables one to hold it in position better, but this is not really necessary. Each separate piece of the design is cut out carefully. A cardboard pattern may be laid on the fabric, and then the outline marked in pencil; it should be cut a little larger, so as to give turning. Solid colored chambray is often used for the colored design. One elaborate piece of this applied patchwork was a pair of portieres of unbleached crash with a design of tall hollyhocks across the bottom, the flowers and buds being varying shades from pale pink to deep red. A wreath of ivy in different shades of green decorated a cushion, while another pretty design was a wreath of morning-glories, pink, blue and lavender. The materials for this work are very inexpensive, and yet it offers great possibilities if the work is neat and the maker displays good taste. We once saw a beautiful quilt, made before the Civil War, that was a fine example of applied patchwork; each block had a lattice basket of brown filled with pink tulips and their green foliage. The materials were colored calico on a white ground, and yet the accurate regularity of the design and the exquisite stitchery made it a work of art.

The Rural Patterns.

When ordering always give number and size of patterns desired. Price of each pattern 10 cents.

7820, Girl's dress in Russian style. Cut in sizes 10 to 12 years. Size 12 requires 3½ yards of 36 inch material with 1½ yards 27 inches for trimming. 8269, Girl's guimpe dress. Cut in sizes 4 to 8 years. Size 6 requires 2 yards of 27 or 36 inch material for dress, ⅞ yard 36 for guimpe, with ¼ yard 18 inches for yoke. 7479, Semi-princess dress for misses and

small women. Cut in sizes 16 and 18 years. Size 16 requires 4 yards of 36 or 44 inch material and ⅝ yard 18 inch wide for collar and cuffs. 7429, Girl's guimpe, with kimono sleeves. Cut in sizes 4 to 12 years. Size 18 requires 1 yard of 36 or 44 inch material with 1½ yards of banding. 7495, Girl's box plait dress. Cut in sizes 6 to 12 years. Size 8 requires 3 yards of 36 inch material with ⅜ yard of 27 inch for trimming.

8223, Plain guimpe. Cut in sizes 34 to 42 bust. Size 38 requires 1¼ yards of 27 or 36 inch material for guimpe without sleeves and 1¾ yards 36 inches with sleeves. 8288, Blouse with yoke and sleeves in one. Cut in sizes 34 to 40

bust. Size 36 requires 2¼ yards of 36 inch material. 8247, Semi-princesse gown. Cut in sizes 34 to 44 bust measure. Size 38 requires 4½ yards of 36 or 44 inch material with ⅜ yard 27 inch for collar and cuffs. 7784, Four-gored skirt. Cut in sizes 22 to 34 waist measure. Size 28 requires 4 yards of 36 inch material. 8010, Deep yoke skirt for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 4¾ of 36 inch material with ½ yard for yoke.

Trouble With Starch Beads:

I noticed in your paper rules for making salt and starch beads. I have never tried making beads, but a friend of mine made some that I thought very pretty, but when the damp, warm Summer weather came the beads became very soft and out of shape. I suppose the dampness in the air had dissolved the salt. Can you tell me if others have the same trouble with salt and starch beads that my friend has had, and if so do you know of anything to prevent this trouble?

A. G. W.

R. N.-Y.—We should like experience from others on this subject.

TOMATO EGGS.—Cut some thick slices of tomato, dip each into flour seasoned with salt and pepper, and fry. Make some rounds of toast; butter these, lay the tomatoes on them, and put a poached egg on each; sprinkle with chopped parsley.

SPANISH EGGS.—Cook two cups of raw tomatoes with a chopped up sweet pepper, frying the two in a tablespoonful of butter. Add paprika, salt and a teaspoonful of finely minced chives and reduce to half the quantity, which will take about ten or fifteen minutes. Toast slices of white bread, put poached eggs on top and pour over the tomato and pepper sauce. Serve at once. Chopped onion may be substituted for the chives.

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Mrs. Gruff—Mrs. Funmaker has just been here asking me to join the afternoon literary club! As though I had time or strength to waste over books. I told her I spent all my time over the washtubs, dishpans, and scrubbing floors.

Anty Drudge—You're a foolish woman. Get some Fels-Naptha Soap, let it do the hard part of your work, and join the ladies in their pleasure. Fels-Naptha will give you the time to enjoy yourself.

Fels-Naptha will do these things: It will cut your work in half, and double your time for rest and pleasure; will wash clothes clean, sweet and white in cool or lukewarm water without hard rubbing or boiling; will dissolve grease on pots and pans, and make china and glassware shine; clean porcelain tubs, woodwork, linoleum—your whole house, and do all the **hard** part of the work for you.

Full directions are on the Red and Green Wrapper.

Better buy it by the box or carton.

Fels & Co., Philadelphia

FELS-NAPTHA

Seen in New York Shops.

Bungalow lunch sets consist of a centerpiece and plate doilies of heavy unbleached cotton, the scalloped edges buttonholed in red or blue, and a few sprays worked in to match. Such sets of 13 pieces have been reduced to $1.25. There are scarves and separate centerpieces to match. All the linens and draperies offered for "bungalow" use are very suitable for farm homes, especially in the Summer.

A piece of furniture that would delight any woman is a Martha Washington sewing table of mahogany. It has sliding trays, spool racks, and three drawers, and looks like a quaint old Colonial piece. Such a sewing table costs from $15 to $18.

Small tight-fitting toques of black velvet, trimmed with flaring wings, bows or quills curved at the top into interrogation points, are among unreasonable August fashions. They are entirely without brim, and the wearers look most uncomfortable under the hot August sun. White beaver hats are also appearing. Many draped toques, which are usually becoming, are offered for the Fall. They are not large but fit down low over the head, both in front and back, arranged slanting down on one side. One very picturesque toque was of violet satin, trimmed with upstanding bows of rose color.

Blue serge is always suitable for young girls, and this color and material comes to us for Fall wear with the stamp of foreign fashion. A favorite model is a basque buttoned down the front, long waisted, and joined to a pleated skirt, the join being covered with a serge sash having a bow in the back. Black satin is often used to trim blue serge. Redingote dresses are made of this material, opening in the front over a pleated underskirt.

Some new blouses have Sarah Bernhardt collars—a high collar topped with a sheer pleating. When the collar is open in V-shape in front this frill falls into the new fan shape at the back.

A new basque meant to take the place of a separate blouse, is of black satin, buttoned all down the front with jet buttons. It has long set-in sleeves finished with pointed cuffs, and a sash that ties at the back. A high flaring white organdie collar finishes the neck. Wear this basque over a pleated skirt, and one may feel really up to the times, although it looks like 1885.

Among some of the new jewelry seen are very pretty ornaments of black enamel with rhinestones or pearls, set in sterling silver. The velvet neckbands now fashionable are trimmed with slides of this style, and there are also very attractive circle brooches. Among jet ornaments, we see necklaces of jet beads finished with an old-fashioned jet locket with a raised design cut like a cameo. Such things have been old-fashioned for a generation, but are now new again. A very pretty and unusual bead necklace was of large round cut crystal beads, separated by two-inch spaces of jet bugles alternating with small round cut jet beads.

Some of the shops now selling table linens call attention to the fact that much of the flax used is grown in Russia, "rendered" in Belgium, and then woven in Germany, Ireland and Scotland. This naturally presages higher prices on linen, although we have broad prairies to grow the flax, and busy industrial cities to weave it. Some pretty lunch sets seen were unbleached damask, not creamy, but the regular silvery brown of unbleached flax. The cloths were round, with scalloped edges. For lunch sets, colored and unbleached linen is very much in vogue. Some of these sets are white damask with colored borders, pink, red, blue or yellow, while some are damask in the solid color. Such a set in delft blue damask would be especially pretty with white and gold china. Among bath towels, the handsomest we have seen were made in Spain, a country we do not ordinarily associate with that class of textiles; they are Turkish toweling almost as soft and fine as plush, with handsome colored borders.

Freshening Salty Meat.

ONE Winter when we were not at home we entrusted the curing of our pork to the hired man, and as a result the meat was so salty that we could hardly use it. We allow two weeks for bacon and four or five for ham, with an extra week if the pieces are very large, but this meat was in strong brine exactly 11 weeks. The hired man's excuse was that the brine froze so solid that he could not get the meat out till it thawed of its own accord. Be that as it may, that meat, when smoked was crusted with salt. We did not feel so disappointed about the bacon, as we like it best with beans, green and dry, succotash and other dishes that could take up the salt, but for frying the ham we were blue indeed. No housekeeper likes to have her hams bitter with brine, and very few want to boil every pound of ham and shoulder, so we had to find ways and means to freshen that meat.

We tried hot water and cold water, long soaking and short soaking, sweet milk and buttermilk, mild boiling and various other things people told us, but among all these cure-alls, we decided on a combination. Perhaps there are better ways than we evolved out of the mass of directions, but if any woman is searching for a plan to freshen salt pork and still have the pork taste fairly good, I can recommend the following. The trouble with many of the things we tried was that they left the meat tasting very much like old leather or something equally tasteless.

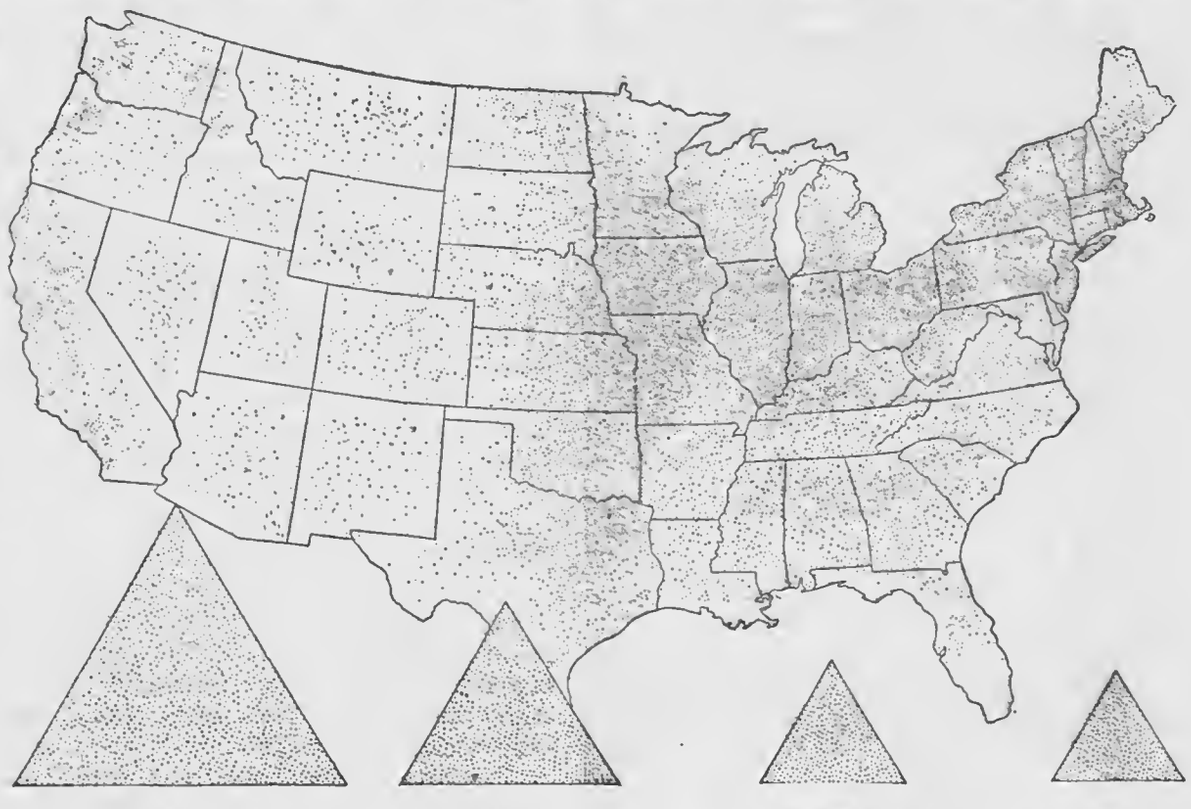
Soak your meat all morning if you want it for dinner, in cold well water, changing at least three times. About one hour before dinner cover with sweet milk and allow it to stand in a moderately warm place. When ready to cook wash well and put in a frying pan with a little fryings and butter mixed. Fry carefully and it will brown as well as ham that never was soaked. I cannot truly say this is as good as ham that is not salted too much in the start, but it is far better than many people are accustomed to when they have oversalted their meat. We were overjoyed to make the meat as good as it proved by this method, for we felt sure we never could dispose of it in its first state.

HILDA RICHMOND.

Creole Toast.—Beat up four eggs and add to them the same number of tomatoes, free from skin and seed and finely chopped; also a small teaspoonful of chopped green chili, gherkin or capers, half a cupful of milk and a little salt. Melt one and a half tablespoonfuls of butter in a saucepan, mix all the other ingredients together, pour into the pan and stir over the fire till thoroughly hot. It may then be served at once on pieces of toast, or may be allowed to cook gently by the side of the fire for five or ten minutes as preferred. Serve very hot. The above mixture might also be baked in the over for 20 minutes and then garnished with small pieces of toast. In preparing it, one egg and one tomato may be cooked for each person served.

SEE that boat rowed by two men; when they keep time in rowing it goes smoothly over the rough waters; but if not, each wave gives its shock and any stroke of the oar wrongly applied may capsize the frail skiff. Marriage is the bark, the rowers the wedded pair on the sea of life. Only by pulling together can they lessen the dangers of the voyage.—Duc de Livis.

What the Telephone Map Shows



56.8% Exchanges Bell-connected, but not Bell-owned.

23.5% Exchanges Bell-owned.

10.5% Exchanges not Bell-owned or connected.

9.2% Places served by two companies.

EVERY dot on the map marks a town where there is a telephone exchange, the same sized dot being used for a large city as for a small village. Some of these exchanges are owned by the Associated Bell companies and some by independent companies. Where joined together in one system they meet the needs of each community and, with their suburban lines, reach 70,000 places and over 8,000,000 subscribers.

The pyramids show that only a minority of the exchanges are Bell-owned, and that the greater majority of the exchanges are owned by independent companies and connected with the Bell System.

At comparatively few points are there two telephone companies, and there are comparatively few exchanges, chiefly rural, which do not have outside connections.

The recent agreement between the Attorney General of the United States and the Bell System will facilitate connections between all telephone subscribers regardless of who owns the exchanges.

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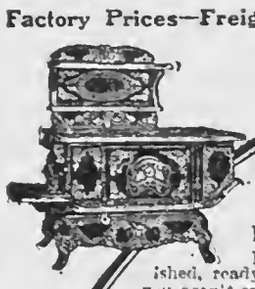

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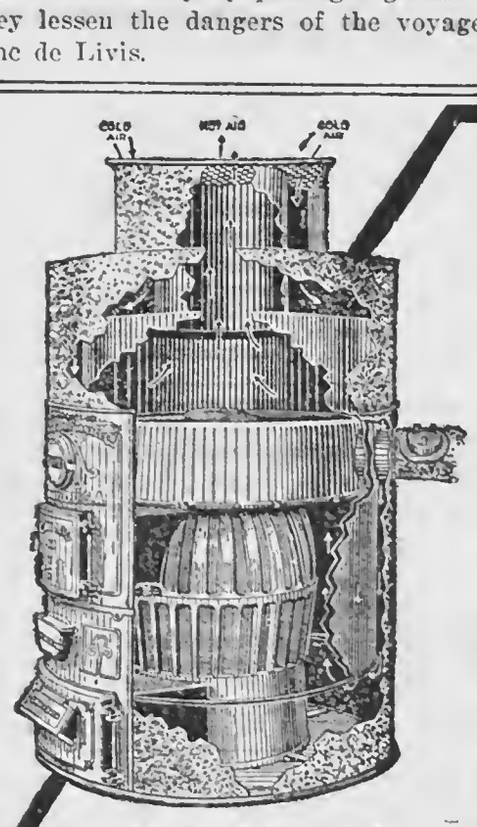

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I AM interested in line-breeding of hogs. Would you tell me how it is done?
E. S. R.

Line-breeding of animals consists in mating close relatives for the purpose of perpetuating and intensifying the blood of a certain individual or family. It is not done for the purpose of line-breeding, which in itself is essentially disadvantageous, but for the purpose of retaining certain desirable characters which otherwise would become scattered and lost. There is, therefore, no special method of line breeding hogs; if you have an individual of merit whose blood you wish to perpetuate and intensify in his progeny you can mate him to his direct descendants, or you can breed less closely by confining your matings to members of the same strain or family. To line or inbreed successfully one must be acquainted with the general laws of breeding and have a close acquaintance with the merits and defects of the family with which he is dealing. This cannot be taught in a few paragraphs but is the result of experience, observation and study. For the amateur breeder to resort to close line breeding would probably result in deterioration rather than in improvement in his herd. There are many books devoted to the science of breeding, of which Davenport's "Principles of Breeding" is considered one of the best.
M. B. D.

REVIVE THE LOCAL SLAUGHTER HOUSE.

THE high cost of living has its foundations laid deep. The farmer, as a class, will never succeed in getting his proper share of the value of the produce which he raises until he looks for, and finds the reason, which blocks the wheels of trade in the goods his farm produces. Instead of striving to form clubs to buy supplies in wholesale quantities he may better seek for the obstacle which blocks his opportunities. Unless I am deceived, the sanitary rules adopted in his own community are the bowlders which prevents his having a market in his home village for every beef, sheep or hog which he can get ready for food. Take the sanitary rules and read what is required in and about a slaughter house, and then inquire why your local butcher abandoned the one which formerly was used, and why another is not established.

Your local butcher does not want beef alive because those sanitary rules are the slickest means for the restraint of trade which have ever been devised. A head might remain in a secluded corner for more than 24 hours, waiting for the bone picker, he being delayed by some breakage of harness or wagon; no matter, a rule is broken, fine and costs to pay. The profits of a week gone and no one but the justice, constable and lawyer benefited. The constitution gives fines to the justice. The people pay the constable and justice, while defendant pays the lawyer more than the legal fees of the others. Can it be wondered at that a market man prefers to buy meat all ready for his block?

What the farmer needs is liberty. What the people need is liberty, not a liberty to do wrong to others but a liberty to be just with all their neighbors. A slaughter house is not a parlor, and those who have one cannot be expected to use it for the community, under rules which are virtual blackmail, are unreasonable, excessive and useless. One remedy would be a law that each town shall provide a slaughter-house, and as the people are taxed 10 cents each for the health officer, let it be his duty to inspect such house once each week.

New York. MILES H. DELONG.

Failing Cow.

A cow six years old has been failing in health for several months. She freshened four weeks ago, and has never gained in strength. She is thin, has an occasional dry cough, and droops her head. What do you advise. R. D. K.

Maine.

Tuberculosis probably is present in this case and we should not feel justified in prescribing treatment. Have her tested with tuberculin and meanwhile do not use the milk. Any graduate veterinarian can apply the test. A. S. A.

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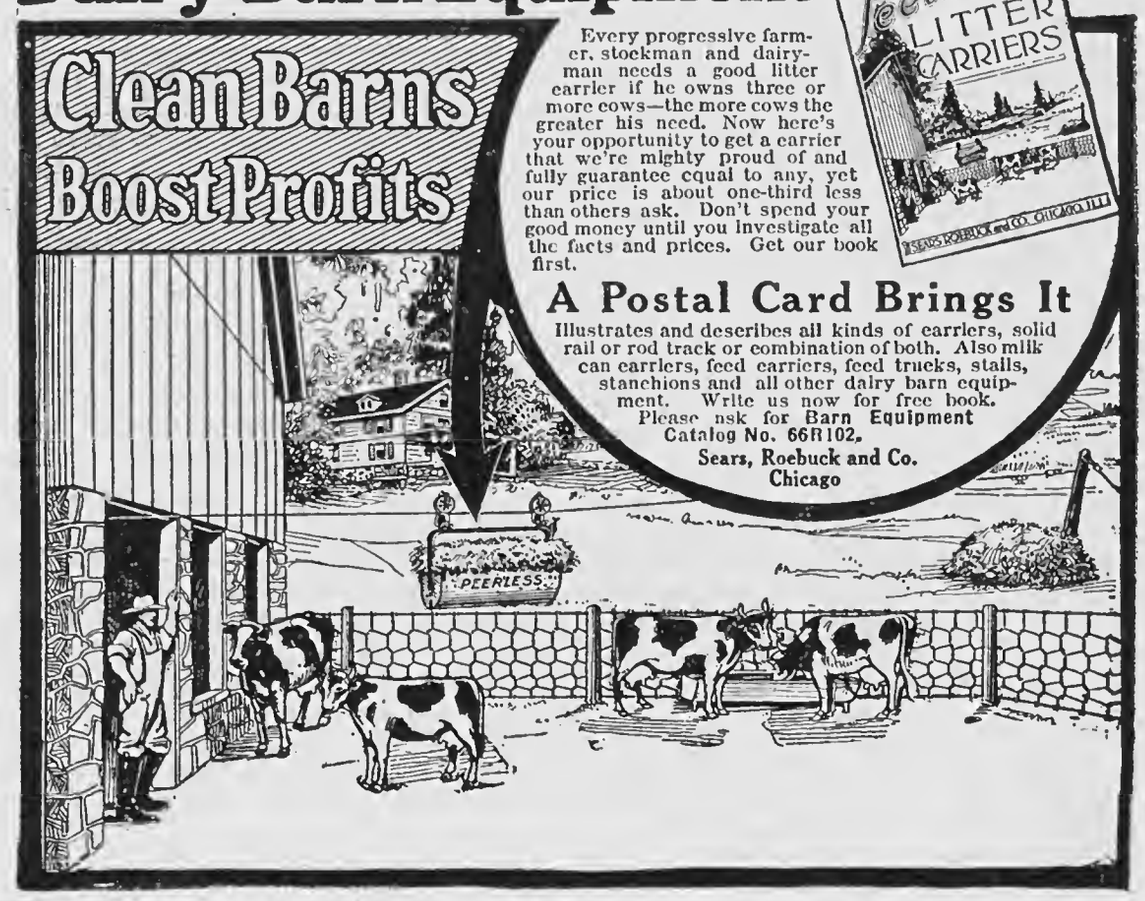

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H. C. & H. B. HARPENDING, Dundee, N. Y.

BERKSHIRES—RARE BREEDING TRIOS! Aline bred Lord Premier Boar, with two sows that should "nick." All of spring farrow.
R. Y. BUCKLEY, Woodrow Farm, Broad Axe, Pa.

Springbank Herd Big Berkshires
I have a fine lot of March and April (1914) Boar Pigs fit for service this Fall; of high class conformation and good looks.
J. E. WATSON, MARBLEDALE, CONN.

NEW ENGLAND MILK SITUATION.

IN the July 31 issue of Hoard's Dairyman, Mr. Webster in his brief report of the proceedings at the meeting of the milk conference at the Boston Chamber of Commerce on July 1, states that the farmers' representatives had a hazy idea of the situation, and that many did not seem to understand it at all. This at least is what anyone would think after reading his article. I differ very much on this question. In the first place there were few or no practical farmers or milk producers there. About all present were theorists, and no more represent the milk producers of New England than a gathering of railroad officials would represent the labor organization of the men employed on their roads. By the general tone of his report one would gather that this conference was to teach the farmer how to make cheaper milk, or rather to make milk more cheaply than is done at present. Apparently this is the only issue of the whole affair, to teach the farmer to improve and reduce his cost of production. Now this is a wrong idea. There are many other sides to the question besides the farmers' that need teaching and something more. There is no doubt in the mind of those who know the true situation and condition of the New England milk producers that the kind of milk wanted and demanded cannot be produced any cheaper than at present, and in many cases price received does not cover cost of production. There are of course individual cases where there could be a saving made in different ways by better cows, better handling, etc., but the majority of New England milk producers know their business, know their conditions, in fact are up-to-date business men, and to state that there is room for large improvement and better cows and such tales show the utter ignorance and lack of understanding of anyone who makes such a statement. Ask any of the leading producers whether they would care to or would under any circumstances produce milk for Boston market or any other at the price the general farmers are receiving for wholesale Boston milk. These are undoubtedly making money out of the production of milk. How are they doing it? By marketing their product to special customers who are willing and able to pay a reasonable price for a good product. These and some others are in the position to conduct their whole business themselves from cow to customer, and while even they have their troubles they get 100 cents out of the dollar, not 25 or 35 and some one else get the rest.

I am pretty well posted as to how much money can be made in ordinary milk production both by personal experience and the experience of all dairymen about this section, and of all I know I can at this time recall but two who have made money on making wholesale milk for Boston market and both of these had other products which paid better and thus helped much in the general result. One of these made his money some years ago when conditions were different, and is not just now making a can of milk for market, but will later do a little along this line. Another case is a man who has kept a large dairy, that is 20 to 30 cows, for many years, and no one has any better cows or knows a cow much better than he does. He has made money, but not all out of cows. He has bought and sold three different farms and made a good figure on each sale. He has also kept poultry on a fairly large scale, raised chickens to sell and made good profit out of these; in fact he said he made more out of these at different times than from his cows. On one of these farms he had a large house on a high sightly location, and took Summer boarders at $1 per day each. This was some years ago when general prices on food, etc., were low, and he made money on this venture, so really only a small part of his present accumulation came from profit on keeping cows for market milk. One very intelligent man, well read and wideawake, has a grown son who has been through the Massachusetts Agricultural College to assist him; both are hard workers, keep a good-sized herd of grade Ayrshires, know what it costs to feed, understand all about rations, etc.; yet both will tell you there is really no profit in the milk end of the business, but they do well on apples and small fruits, getting, by far, their best income from these. A. E. P.

Jumping Steer.

I HAVE a steer which jumps fences; we have tried a board over the eyes; also a yoke with no success. Please let me know some way to stop jumping as steer is very valuable and I do not want it to get out. S. I.

Will some of our readers answer this? How can we cure a jumping steer?

SOILING HOGS.—You have had some discussion about soiling hogs. I think you will be interested to know that I have kept a number of brood sows in fine condition for five or six weeks on nothing but freshly cut peas and oats, fed twice daily. J. C. S.

BERKSHIRE SWINE FOR ARGENTINA.—H. C. and H. B. Harpending of Dundee, N. Y., have just sold to the Argentine government a herd of 11 breeding hogs, which will be shipped to that country in the present month. William Riis, director of the Government Agricultural Station at Buenos Aires, recently visited and inspected Messrs. Harpendings' large yard.

DAIRY CATTLE

FOR SALE AT A BARGAIN A **GUERNSEY BULL** 3 years old, Dam and Sire in Advanced Registry, Excellent Show Animal, for particulars address ROBERT DOUGLAS, Mgr., Beacon Farms, Northport, L. I., N. Y

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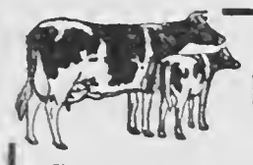

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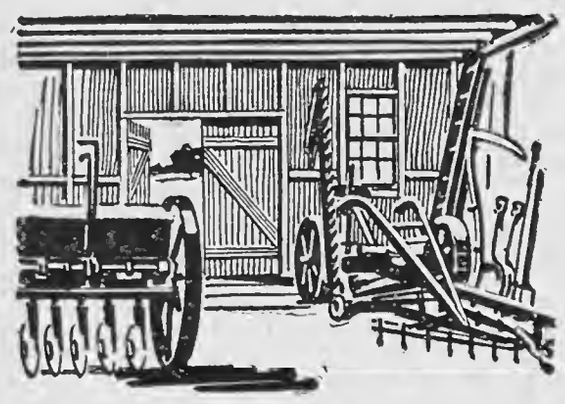

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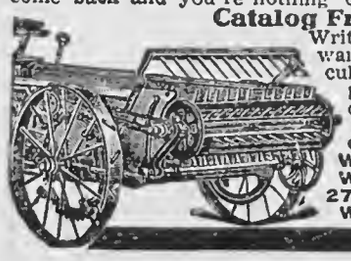

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RE-WORKING BUTTER.

OFTEN it is necessary to rework butter because it has not been sufficiently worked to distribute the salt uniformly. This lack of uniform distribution of the salt causes uneven color, which is usually known as streaks and mottles.

The first step in the re-working of butter is to get it in the proper plastic condition. If too cold and hard, too much working is required, too much moisture is expressed and the body becomes tallowy. If the temperature is high, a greasy condition is obtained. The writer has used two methods of obtaining the proper condition of the butter for re-working.

First, if the butter is in prints of one-half to four or five pound packages, it may be set in a room of say 60 to 70 degrees Fahr. to soften, or if the packages are larger the butter may be cut in small pieces. The room temperature method may require from a few to many hours.

Secondly, the warm water plan may be used as follows: If there is not sufficient time to use the room temperatures, place the butter which has been cut in pieces of only a few ounces in water at approximately 60 degrees Fahr. In an hour or two the butter will become soft. In this case some of the salt will be taken from the butter, thus making it desirable to add salt when re-working.

If the butter is from different churnings and varies in shade of color to any great extent, there is little use of the average butter-maker attempting to make a uniform color. It is always well to mark butter that is handled in this manner "Re-worked Butter," so that the butter dealer may not make a mistake of putting it out with the rest of the shipment. The completion of the re-working process is determined by appearance, and this can best be learned by experience. The butter should be worked until it becomes waxy. If mottles appear after the butter has been in the refrigerator over night, they are significant of the fact that the working process should have been continued. The re-working of butter is usually to simply finish an unfinished process in order to obtain a butter of a reasonably well distributed salt, and therefore a uniform color. E. S. GUTHRIE.

Ithaca, N. Y.

KINDNESS FOR STOCK.

ONE of the intense examples of a scrub herd that has come to my attention was one owned by a partially insane man. He had but few fences, and they were only landmarks. The cows would break in the corn, and he would drive them to the stable and lambaste the cows with a fence rail for all in him. The cows were so poor they were shadowless. I know another farmer who dogs his cows to and from the pasture, and every night and morning in the barn he has a fence stake handy to help them in their places. The cows are in the half a pint a day class, the buildings are tumbling down, and the interest on the mortgage has gone unpaid for the past two or three years.

I know another dairyman, a keeper of grade cows. He permits no loud talk in his barn. He is a quiet and gentle man. He coaxes his cows. His animals are all good producers because their nervous energy is not burned up by fear. They are all contented animals, they pay him a profit. I know still another farmer who keeps purebred stock. He will not allow any profanity in his barn, not because of his piety, but because profanity goes with loud talk. He carefully selects his hired men on the basis of their gentleness about the barn and with the herd. It pays him dividends to do it. W. J.

LEADING THAT COW.—Years ago THE R. N.-Y. gave a method for leading a cow which I have found to work on all but one; that was an old one that had a habit of bolting, when nothing could hold her. Unfortunately it can only be used with a cow with horns. In the end of a rope make a knot a little larger than the horn, slip it over one, pass it to the other, and take a half hitch, then back to the first horn, pass a loop through it, one part above the horn and the other below and catch the ear in with it. Standing off five or six feet pull on the rope until quite a pressure is upon it. If the cow yields, loosen it and again step back, keeping it up until she yields without force. If a cow is very stubborn it is often well, instead of trying to make her come to you while keeping the pressure up, to approach her slowly and loosen the rope. My experience is that there are very few cows that cannot be taught to lead in a few lessons of from five to 10 minutes. S.

Oregon.

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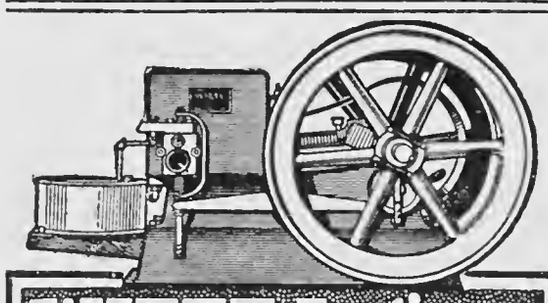

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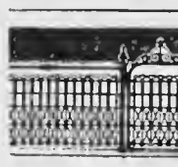

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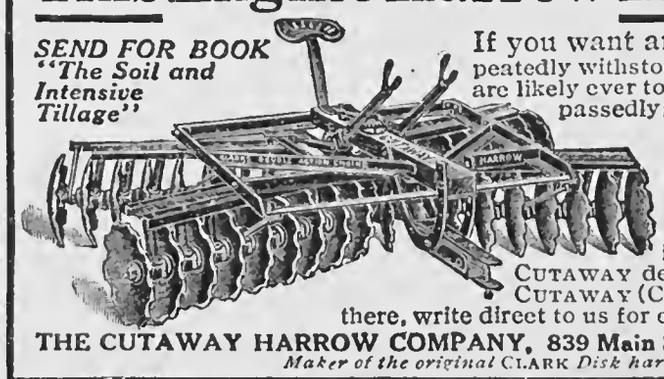

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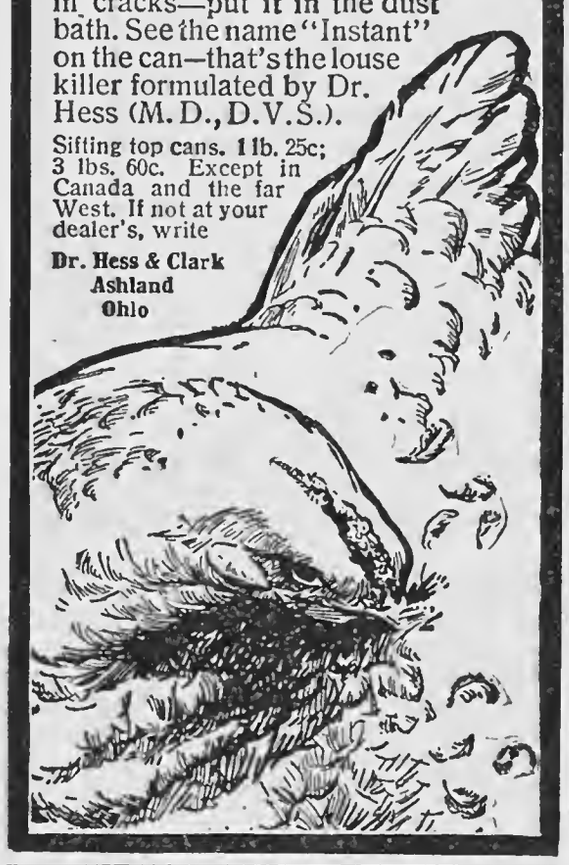


The Henyard.

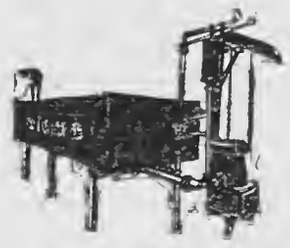
THE EGG-LAYING CONTEST.

THE forty-second week shows an egg production of 3,065; 30 eggs less than were laid during last week, but last week's gain over the previous week was 145, showing that most of this gain is still retained. Bonnie Brook Poultry Farm's Leghorns led the procession last week with 61 eggs; they lead again this week with 56 eggs to their credit. Tom Barron's Leghorns are second, with a score of 55 eggs. This pen is steadily crawling up on the leaders, and is 89 eggs behind Francis F. Lincoln's pen, which is now the leader of the contestants, being four eggs ahead of Barron's White Wyandottes. Pen number 42, the "sour milk" pen from Storrs Agricultural Station, has a score of 1,794, beating them all, but this is an experimental pen, and is not contesting for the prize. Manor Poultry Farm's pen comes in third for the week with a score of 54. Marwood Poultry Farm is fourth, with a record of 51, and pen 42 is fifth, with a score of 50. All of these pens are White Leghorns.

That these egg-laying contests are resulting in a great gain in egg production is beyond dispute. At the Thorndale contest the figures show a gain over last year of 8,752 eggs in the 41 weeks; and last year there was a heavy gain over the previous year. The introduction of new blood from the yards of breeders whose birds make the highest records, is spreading this gain all over the country; and the result can hardly be other than a decided improvement to American poultry keeping. The week's record follows:

Barred Rocks.	Week	Total
A. B. Hall, Connecticut	40	1,191
Frank L. Tuttle, Massachusetts	35	1,220
Waveny Farm, Connecticut	39	1,166
Jules F. Francais, New York	45	1,406
White P. Rocks.		
Albert T. Lenzen, Massachusetts	36	1,269
F. H. Benton, Connecticut	38	1,276
Storrs Agr. Station, Connecticut	39	1,047
Storrs Agr. Station, Connecticut	46	1,114
Storrs Agr. Station, Connecticut	42	1,237
Storrs Agr. Station, Connecticut	34	1,089
Storrs Agr. Station, Connecticut	35	943
Buff Rocks.		
A. A. Hall, Connecticut	35	1,275
W. C. Morgan, Jr., Connecticut	47	997
White Wyandottes.		
Tom Barron, England	42	1,763
West Mt. Pity. Yards, Connecticut	30	1,058
Merrythought Farm, Connecticut	35	1,600
Neale Bros., Rhode Island	46	1,582
D. J. Ryan & Son, Connecticut	36	1,186
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	31	1,199
Dr. N. W. Sanborn, Massachusetts	30	1,168
Am. Buff Wyan. Club, New York	31	1,052
H. L. Hamilton, Connecticut	34	866
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	39	1,184
Single Comb Reds.		
Robert Seaman, New York	38	970
J. S. Gillespie, Connecticut	37	1,164
Dr. J. C. Dingman, New York	20	1,071
Burnham Plty. Farm, Massachusetts	18	923
H. P. Deming, Connecticut	32	1,137
Geo. P. Dearborn, Florida	26	1,278
Dr. J. A. Fritchey, Pennsylvania	30	1,368
Ernest Underhill, New Jersey	30	1,061
W. H. Binnsted, Connecticut	49	821
Pinecrest Orchards, Massachusetts	38	1,360
Harry B. Cook, Connecticut	21	1,176
Colonial Farm, New Hampshire	36	1,215
A. B. Brundage, Connecticut	36	1,493
Rose Comb Reds.		
Glenview Farm, Connecticut	30	1,168
C. S. Scoville, Connecticut	33	884
White Leghorns.		
Storrs Agr. Station, Connecticut	39	1,378
Storrs Agr. Station, Connecticut	44	1,469
Storrs Agr. Station, Connecticut	40	1,464
Storrs Agr. Station, Connecticut	50	1,794
Storrs Agr. Station, Connecticut	40	1,346
Braeside Plty. Farm, Pennsylvania	41	1,240
Glenview Plty. Farm, Connecticut	46	1,428
Manor Plty. Farm, New York	54	1,302
A. B. Hall, Connecticut	35	1,322
Marwood Plty. Farm, Pennsylvania	51	1,470
Geo. M. Harris, Connecticut	35	1,124
Bonnie Brook Farm, New York	56	1,488
N. W. Hendryx, Connecticut	45	1,325
J. J. Linehan, Massachusetts	41	1,223
F. F. Lincoln, Connecticut	47	1,767
Cecil Guernsey, New York	36	1,486
Thos. W. Moore, Connecticut	40	1,355
Chas. N. St. John, New York	45	1,348
Chas. W. Sherwood, Connecticut	41	1,282
L. E. Sands, Pennsylvania	37	1,296
Tomoka Plty. Farm, Connecticut	37	1,155
Venture Plty. Farm, New York	26	1,080
Mrs. K. E. Woodruff, Connecticut	47	1,324
Windsweep Farm, Connecticut	25	1,168
C. H. Savage, Connecticut	38	1,328
P. G. Platt, Pennsylvania	49	1,511
Heneta Bone Co., New Jersey	35	499
F. M. Peasley, Connecticut	32	1,328
Chas. Heigl, Ohio	47	1,272
Tom Barron, England	55	1,678
Branford Farm, Connecticut	45	1,459
James Munn, Massachusetts	32	1,213
Geo. A. Cosgrove, Connecticut	45	1,302
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	43	1,353
Blue Andalusians.		
E. D. Bird, Connecticut	39	1,126
Buff Orpingtons.		
O. Wilson, West Virginia	30	929
White Orpingtons.		
P. A. Demgar, New York	19	886
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	49	724
Silver Campines.		
W. J. H. Lobel, New Jersey	33	1,085
"Hens."		
H. W. Collingwood, New Jersey	43	1,104
Daniel Hine, Connecticut	26	999
Daniel Hine, Connecticut	18	1,023
Mixed Breeds.		
Profitable Poultry, Massachusetts	32	1,107
Profitable Poultry, Massachusetts	28	1,133

GEO. A. COSGROVE.



Capacities, 1,200 to 20,100 Eggs
(Sectional Construction)

Hall users make money. They are far more successful than the average in the poultry business.

Re-orders indicate satisfaction. The Hall leads in new sales as well as in selling old customers over and over again. There is security in Hall Equipments.

The reason. Bigger hatches of bigger, better chicks or ducks that grow into money quickest with least trouble and expense. Extra chicks of extra vigor pay for the Hall. It is the original and standard.

Small users write just as enthusiastically as this best known poultry plant:

Pittsfield Poultry Farms Company
Pittsfield, Maine Holliston, Mass.
July 7, 1914.
We can speak only words of satisfaction of the efficiency of *Hall Equipment.* The 100,000 capacity that we have gives us excellent service. *We would not think of installing any other machine that is now on the market.* You will probably receive an order from us for 65,000 additional capacity before fall.
Pittsfield Poultry Farms Co.
F. W. Briggs, Treas.

What size can you use? Write us in detail and ask for information. Would you like our SERVICE SPECIALIST to call and help you to get the right equipment and results?

The Hall Mammoth Incubator Company
(Founded 1876)
192 Southern Ave. Little Falls, New York

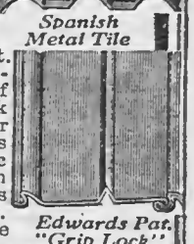
Lowest Prices Ever Made on World's Best Roofing

Lightning-proof, Fire-proof, Rust-proof, Rot-proof, Galvanized Steel Roofing Lasts as Long as Building Stands
Once you have purchased and laid EdwardsTightcoteGalvanizedSteel Roofing your roofing expense for that building is at an end. Its cost per square is the lowest ever made. It has no upkeep cost. Always beautiful in appearance. Reducing cost of fire insurance.

Reo Cluster Steel Shingles

EDWARDS Exclusive Tightcote Process
Makes Rust-Proof Roofing. The zinc spelter becomes practically one piece with the steel. No ordinary galvanizing can compare with it. Each and every Edwards Metal Shingle, Metal Spanish Tile, each sheet of Edwards Reo Steel Shingle, Grip-Lock Roofing, Pressed Standing Seam or Roll Roofing, Ceiling, Siding, etc., is dipped in a bath of molten zinc, one at a time after the metal has been stamped and resquared. The edges are galvanized as heavily as the sides. Not the space of a pin-point on the steel is exposed to the weather.

Spanish Metal Tile



Edwards Pat. "Grip Lock"

How To Test Galvanizing
Take a piece of any other galvanized steel, bend it back and forth several times, hammering it down each time. You will then be able to flake off great scales of the galvanizing with your finger nail. Apply this test to a piece of Edwards Tightcote Galvanized Steel Roofing—you'll find no flaking.

Corrugated

EDWARDS Patent Interlocking Device
Prevents Warping, Buckling or Breaking. Protects Nail Holes. Roof never warps, buckles or breaks—nails are driven through the *under* layer not exposed to weather—cannot rust. No special tools or experience needed to lay EDWARDS Galvanized Steel Roofing; anyone can do the work—lay over old shingles if you wish.

Brick Siding

Reo Steel Shingles
Cost Less, Outwear 3 Ordinary Roofs and are your joy and pride forever. No matter what kind of a building you have in mind there is a style of EDWARDS *Tightcote Galvanized Roofing* exactly suited to your needs.

Ceiling

GARAGE $49.50
Lowest prices ever made on Ready-Made Fire-Proof Steel Garages. Set up any place. Postal brings illustrated 64-page catalog *free.*

FREIGHT PREPAID
Lowest Factory Prices
Greatest roofing proposition ever made. We sell direct to you and *save you all in-between dealers' profits.*

FREE Roofing Book
No matter what your building is, we simply ask the right to prove to you that our prices *are* lowest ever made for World's Best Roofing. Postal or coupon brings free RoofingBookNo. 973

TheEdwardsMfg.Co.
923-973 Pike St.,
Cincinnati, Ohio

Note construction of Edwards Patent Interlocking Device—no nail holes exposed to the weather.

World's Greatest Roofing Book

Special Offer Coupon
The Edwards Mfg. Co.,
923-973 Pike St.,
Cincinnati, Ohio
Please send FREE samples, Freight-Paid Prices and World's Greatest Roofing Book No. 973

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ADDRESS .....

We are the Largest Makers of Sheet Metal Products in the World

Barred Rocks
500 Barred Rock cockerels and pullets for sale, 4 and 5 months old; splendidly barred and marked; big, husky specimens. All free-range stock and guaranteed satisfactory, at $1.50 each. **1,000 S. C. WHITE LEGHORN COCKERELS AND PULLETS,** 3 and 4 months old; good, big snappy bird, free ranged; Young and Barron strains. Fine Leghorn type, at $1 each. Address **W. H. MOORE, R. 2, Rome, New York**

Barred Plymouth Rock Pullets
(Genuine Park's Bred to-Lay 200-egg strain) Heavy Winter layers. Closely related to world's champions. $1.50 to $3.00 each.
W. A. RODNEY, - Gilboa, New York

Parker's Golden Nuggets, Buff Rocks
Fancy, utility stock, great Winter layers; no better table fowl. Grand sire won first Buffalo, Rochester and Elmira, 1912. Cockerels, pairs, trios for sale, one dollar head and up. Beautiful solid buff, April-hatched birds. Satisfaction guaranteed.
W. D. PARKER, - Mayville, New York

CHICKS 7c. C. O. D. S. C. W. Leghorns. Money back for dead ones. Pamphlet free. **C. M. LAUVER Box 73, Richfield, Pa.**

BRED TO LAY S. C. WHITE LEGHORNS
A fine lot of cockerels and a few yearling hens.
P. G. PLATT - WALLINGFORD, PA.

LINCOLN'S LEGHORNS
Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

S. C. WHITE LEGHORN HENS—$75 net hundred.
COLUMBIA POULTRY FARM, Toms River, N. J.

Utility S. C. White Leghorns—Selected yearling hens, $1 each. $90 per 100. **GEO. FROST, Levanna, Cayuga Co., New York**

Single Comb White Leghorns for Sale
Buy your breeding stock now and save money. We need the room and will sacrifice 200 fine Cockerels at $1.50. Also a few high-record yearling hens at $2 each, if taken at once.
BINGHAM EGG FARM, North Bingham, Pa.

HENS 500 BULLY GOOD WHITE LEGHORN yearlings, 80c. each; small lots, $1; two-year-olds, 65c.; 75c. will stand return expressage any lot not satisfactory. Circular.
GEORGE PHILLIPS, - R. 22, Seymour, Conn.

FOR SALE—S. C. White Leghorn Cockerels & Pullets from best utility strains in the World. Write for descriptions. Prices range from three to ten dollars each. **HAPPICH & DANKS, Smithville Flats, New York**

AUSTIN'S 200-EGG STRAIN SINGLE COMB Rhode Island Reds standard bred, high record stock, red to the skin. Old and young stock for sale. **AUSTIN'S POULTRY FARM, Box 17, Centre Harbor, N. H.**

Pullets, Yearling Hens, Cocks & Cockerels
in lots to suit purchasers at attractive prices.
MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.

WANTED—500 Pullets, any size. KOUTZAHN, Biglerville, Pa.

Pekin Ducks for breeding, also baby "Guinea" chicks. Circular. **F. S. KEITH, EASTON, MASS.**

500 MAY HATCH, GUARANTEED WHITE EGG STRAIN WHITE INDIAN RUNNER **DUCKS**
$4.50 per Trio. FRED S. DEYOE, Hunter, N. Y.

DUCK DOLLARS Tiffany's Superior Mammoth Pekin and Giant Rouen Ducks are bred to lay, weigh and win. Stock for sale. Write for prices. **F. A. TIFFANY, R. 3, Phoenixville, Pa.**

Superior Strains Poultry, Eggs, fancy Pigeons; (Madison Square Winners) Large squabbers. **POULTRY-PIGEON FARM, Marietta, Pa.**

The Celebrated Hungarian and English **PARTRIDGES AND PHEASANTS**
Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. **WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.**

Dune Alpin Heavy Laying S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED
Send for catalogue.
DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

TOM BARRON'S
283-282-260-248 Egg
LEGHORNS and WYANDOTTES
Contest Pens; guaranteed leaders. Storrs' Buff Rocks, Vibert-Austin Reds, Waltons' Penc. Ducks, Geese.
MORRIS-FARM, R. 4, Bridgeport, Conn.

TOM BARRON'S S. C. WHITE LEGHORNS AND WHITE WYANDOTTE COCKERELS
out of direct importation. Raised on free range. I guarantee these cockerels to be equal to any American-grown stock. $1.50 to $3 each.
BROOKFIELD POULTRY FARM, - R. D. 3, Versailles, Ohio

PEDIGREED BARRON COCKERELS
Sire's mother laid 258 eggs; Grandsire's mother 248 eggs. Have raised nearly 600 birds from this male this year. **HARRY B. COOK, Orange, Conn.**

Tom Barron LEGHORN COCKERELS
Pure Bred—Stock Imported—May Hatched
E. GIESER - - COSCOB, CONN.

Barron Cockerels, White Leghorns—Laying and breeding hens. Prices reasonable. **Hamilton Farm, Huntington, N. Y.**

SUSSEX FOWL
Red, Speckled and Light. 1914 stock. Nearly matured. $10 per trio and up.
LINWOOD FARMS, Linwood Ave., Ridgewood, N. J.

FOR SALE—THREE HUNDRED FULL GROWN FAWN AND WHITE Indian Runner Ducks
Layers of strictly white eggs at Farmers' prices.
FAIRVIEW POULTRY FARM, Mayville, N. Y.

Poultry Netting—Write for bargain prices
BARBED WIRE EXCELSIOR WIRE MFG CO., 5 Cortlandt St., N. Y.

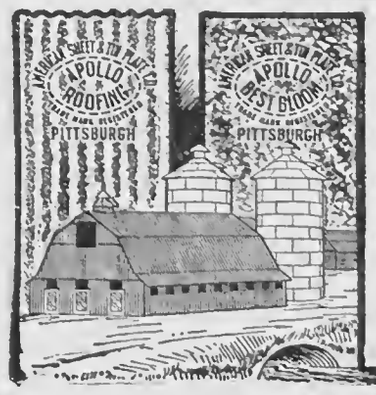
Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
H. K. BRUNNER, 45 Harrison Street, N. Y.

Our English Strain PAYS DIVIDENDS
S. C. White Leghorns
White Wyandottes
Buff Orpingtons
S. C. R. I. Reds
BREEDING HENS & EARLY HATCHED COCKERELS
Every Layer Trapnested

Splendid, sturdy stock from champion egg-layers. Winners in 1913 N. A. & Mo. Contests—leading in current contests.
Buy to advantage—now! Booklet tells all about the most profitable poultry in America.
PENNA. POULTRY FARM
2029 Pearl St., Lancaster, Pa.

MAKE HENS LAY
more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.
MANN'S LATEST MODEL BONE CUTTER
cuts fast, easy, fine; never clogs.
10 Days' Free Trial. No money in advance. Book free.
F. W. MANN CO., Box 15, MILFORD, MASS.

TOM BARRON'S
PURE ENGLISH WHITE LEGHORNS
Imported direct from Tom Barron's Farm. 280-egg strain. Breeding stock for sale. Cockerels, $1 and $2; cocks, $2; yearling hens, $1.50. Eggs, $1 per set; $5 per 100.
P. F. RAFFERTY, - Marlboro, Mass.



YOUR CULVERTS, SILOS, ROOFING AND SHEET METAL WORK will give splendid satisfaction with unexcelled durability, if you use

APOLLO
BEST BLOOM
GALVANIZED SHEETS

Careful manufacture and good galvanizing insure maximum service from APOLLO Sheets. APOLLO Roofing and Siding Products are sold by weight by leading dealers. Send for "Better Buildings" booklet.
AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

PUBLISHER'S DESK

We are making some progress. Last March the Board of Aldermen of New York City passed an ordinance, or law, imposing a fine of not less than $25 nor more than $250, or imprisonment of not less than five days or more than six months, or both such fine and imprisonment, on any person convicted of selling or attempting to sell goods through fraudulent, deceptive or dishonest advertising of any kind, whether in papers, on signs, on billboards or in letters or circulars. Last week a clothing merchant was convicted under this law on a suit brought by the vigilance committee of a local association of business men. This being the first conviction the offender was let off easy; but the court publicly announced that hereafter, all offenders would feel the full punch of the law.

Regarding the Mecca Co-operative Co., of Philadelphia, Pa., will say that I purchased stock through two agents, one of whose name is on the enclosed slip. Their agreement was that no one could ship produce, etc., to the company without being a member, and that the company was to have its own distributing house, its own teams and operate a number of stores (they claim to have 25 or more in Philadelphia), to dispose of the produce, and that they would save the members the commission and cartage, and pay them equal to or above Philadelphia record quotations for anything they shipped. Also, they agreed to return all crates, coops, hampers, barrels, baskets, packages, etc., in which goods were shipped, and that they would pay a yearly dividend of 6 per cent. at least on the investment. Any member becoming dissatisfied at the end of one year could, upon surrender of his certificate, claim his money as stated per conditions on the certificate. We shipped this company some early apples. They sent us a card saying they brought from 75 cents to $1.15 per hamper. They sent us the returns for only 60 cents. I wrote and asked them why they sent us only 60 cents, and they sent us an itemized bill, taking out so much for freight, cartage and commission. This same thing happened to all our shipments to them before, and they do not return the crates, hampers, etc. This seems to be the general complaint of all the members around here. S. B. C.
Delaware.

The above letter from a member of the Mecca Co-operative Co. may prove of interest to those approached to invest money in the scheme in the hope of finding a better market for their produce. It will also serve as a public reply to the inquirers who have written us for advice regarding this proposition. Notice was sent to members August 13, that the Philadelphia branch would be closed on the following day. S. B. C. holds two shares of the preferred stock. If there is still anyone who has faith in the scheme the stock can undoubtedly be purchased at a substantial discount.

The Rex Co., Chicago, Ill.
Gentlemen:—

I have this day received a razor, which you have sent to me without any authority whatever. I am perfectly sane and competent, if I wish to buy a razor, to order it. Evidently you have my name on your "sucker list," but it is too late for suckers to bite for this year at least. As I have not ordered it I am under no obligations to return it, it will be here any time you call for it. C. A. B.
New York.

The above letter might well be taken as a model for country people who are sent razors or other goods that have not been ordered by them. The only way to stop this nefarious business is to make it unprofitable and if everyone receiving goods in this way would take the same attitude as C. A. B. the annoyance should soon cease.

Mail addressed to George H. Brinkler, the style specialist of Washington, D. C., is returned by order of the Post Master General marked fraudulent. The Post Office Department is doing the people a real service in barring the literature of quacks of this sort from the United States mail.

Having some 20 years' experience in mechanical and electrical work, and desiring a better position, which is impossible at present employment, I saw an advertisement calling for skilled men with some money. In answering same I received the letter and blank enclosed with this. Kindly advise me what you think of this undertaking. E. E.
Connecticut.

The literature forwarded is from the Meador Power Company (being incorporated) of Crockett, California, offering positions to skilled mechanics at a salary of $3,000 per year with board and lodging, and double pay for overtime work. It is provided, however, that the company shall have the option of paying this salary in six per cent. preferred stock. As the company is apparently not yet organized, it is purely a matter of speculation as to whether the stock ever will have any value. Another condition specified to secure the employment is that the applicant invest $250 on a yearly contract or $125 if the employment is to be for six months. It has been our experience that any offer of a position that carries with it the investment of stock in the company results eventually in the loss of the money invested, and in many cases promoters have offered what appear to be lucrative positions for the sole purpose of making a stock sale. This scheme is so transparent that we hardly think any of our people will be inclined to entertain it, but so many propositions of a similar nature are being sent to country people, that a word of warning is not out of place.

June 29th and July 2 respectively we shipped a case of eggs to the Standard Poultry Farms of 215 Sutter Ave., Brooklyn, N. Y. We cannot get any word from them. I have traced the eggs and find they were delivered, and have written them twice. If they are swindlers, will you expose them? We have their agreement to take the eggs at 30 cents per dozen. We wish to have the account put in the hands of a collector. K. B.
New York.

The Standard Poultry Farms make no reply to our letters in behalf of our subscribers, so we can only conclude that the failure of the firm to settle for the shipment of eggs was not due to any accident or oversight. We publish so many cases of where shippers lose their produce through shipping to parties with regard to whose reliability they know nothing, that it ought not be necessary to repeat the warning that shippers should investigate the reliability of the individuals or houses soliciting shipments of produce before instead of after the shipment has been made.

What helps the quality of your cured meats? *Flavor.* What salt brings out the full flavor? *Worcester Salt.*

Use it. Worcester Salt makes the clean, sparkling brine which stays free from slime and "ropiness." It gives to your hams, bacon and salt pork, that sweet flavor prized by epicures.

WORCESTER SALT

The Salt with the Savor

The fine even crystals of Worcester Salt also make it best for butter making. Our patent process frees it from bitterness that spoils flavor.

For farm and dairy use, Worcester Salt is put up in 14 lb. muslin bags and in 28 and 56 lb., Irish linen bags. Get a bag from your grocer.

Write for booklet "Curing Meats on the Farm." Sent free on request.

Worcester Salt Co.
Largest Producers of High Grade Salt in the World
NEW YORK

Amatite ROOFING

It needs no painting

Put Amatite on your farm buildings and you need never worry, for you have a *good* roof.

It is a comfort also to know that you won't have to paint these roofs, for frequent painting costs almost as much as a new roof.

Amatite is waterproofed with Coal Tar Pitch, the best waterproofing material known, and it has a *real mineral surface.*

Write today for sample.

BARRETT MFG. COMPANY
New York Chicago Philadelphia Boston
St. Louis Cleveland
Pittsburgh Cincinnati
Kansas City Minneapolis
Seattle Birmingham
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Galvanized or Painted Roofing

Made of high grade open hearth metal. All galvanized Roofing and Siding have an extra heavy tight coating of galvanize. Write today for free sample and mill price list No. 204. Send size of building, length of ridge, length of rafters and we will furnish free complete estimate of cost--without obligation on your part to buy--then make comparison and see the big saving. Also makers of galvanized shingles for houses.

30 Year Guaranteed Galvanized Roofing

Made of selected best grade No. 24 gauge open hearth metal with DOUBLE COATING of GALVANIZE and PURE TIN. Write today for price list No. 60. When you buy from us you buy from the manufacturer.

Established 1877
THE SYKES METAL LATH & ROOFING CO.
516 Walnut Street, Niles, Ohio
DIRECT FROM MILL AT MILL PRICES

Handy Farm Tool

A labor saver on your farm. Used every day. Stretches fence; pulls posts, etc.; lifts or pulls three tons; weighs 24 pounds.

Automatic Combination Tool

Absolutely guaranteed for one year. Splendid opportunity for agents—no experience necessary. Write today for our big circular and full particulars.

HARRAH MFG. CO.
Drawer B Bloomfield, Ind.

1 Year Guaranty

12 Tools in One

Is Your Corn Safe?

Is it protected against vermin, fire and theft? Is it well-cured, ready for the highest market price? You can answer all these questions with yes after installing a

Marshall Corn Crib

Made of heavy galvanized iron that lasts a lifetime. Perforated body and ventilating shaft insure perfectly cured corn. Built along scientific lines, easy to erect, all sizes. Write today for free illustrated catalog, showing all styles.

Iron Crib & Bin Co.,
Box 25 Wooster, Ohio

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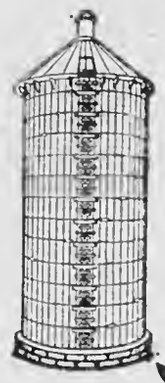

Are GOOD Silos. It has been our persistent purpose for fourteen years to make a perfect Silo. Every DIRIGO SILO is sold by mail. We want to mail a catalog and price list to every farmer who keeps stock. A postal card will bring our Low Prices delivered at your nearest station. Prompt shipments.

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Law for the American Farmer, Green 1.50
Insects of Farm and Garden, Treat. 1.50
Black's Medical Dictionary..... 2.50
The Rural New-Yorker, 333 West 30th St., N. Y.

It is NOT Too Late to order a Green Mountain Silo

The long life, dipped in preservative, silo.

The Creamery Package Mfg. Company
338 West Street, Rutland, Vt.

For Concrete Walks—Lehigh

Be guided by the experience of the big contractors who specify Lehigh Cement for concrete walks. Thousands of miles of Lehigh Cement Concrete walks, in rural districts, are giving durable service.

You will not feel disturbed over concrete results if you specify

LEHIGH PORTLAND CEMENT

Our special scientific process endows it with an unusually high strength. This strength increases with age and imparts a greater strength to the structure as time goes on. Lehigh Cement is a dependable safeguard for good concrete structural work.

You should send for "The Modern Farmer"—our book that explains "Lehigh" quality and gives full instructions on building with concrete. It tells how to lay concrete walks and how to build concrete farm buildings.

LEHIGH PORTLAND CEMENT COMPANY
801 Young Bldg., Allentown, Pa.
108 Consumers Bldg., Chicago, Ill.

You know the value of concrete walks. There is no wear out to them. They are easy to keep clean and never need repairs. Build your walks of concrete and use "Lehigh"

119A

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Aug. 28, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.15	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

There has been an advance of one to two cents on practically all grades, but this slackened business and the market was decidedly weak toward the close. Considerable improvement in quality of fresh receipts is noted. There is some business in storage creamery at nearly the top quotation for fresh. City made is selling well; packing stock scarce.

Creamery, extra, lb	31	@	32
Good to Choice	26	@	30
Lower Grades	20	@	23
State Dairy, best	29	@	30
Common to Good	18	@	25
Factory	19	@	23
Packing Stock	19	@	22

Elgin, Ill., butter market 30 cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

Receipts have been large. Prices still hold to last week's high mark, but demand is so light that some cutting of price seems probable to encourage buying.

Whole Milk, fresh, specials	16½	@	16¾
Average fancy	16	@	16¼
Prime	15¼	@	15¾
Under grades	11	@	15
Daisies	16¼	@	16½
Skims, specials	13	@	14
Good to choice	11½	@	12⅜
Poor to fair	5	@	10

EGGS.

Receipts have been lighter than the previous week, with considerable proportion of defective stock. Fancy white eggs from nearby are scarce, but business is slow and critical. Very little doing in storage eggs.

White, choice to fancy, large	34	@	35
Common to good	25	@	32
Mixed colors, best	29	@	30
Common to good	22	@	25
Western fresh, white	24	@	28
Lower grades	18	@	20
Storage, best	26	@	27
Lower grades	19	@	24

FRESH FRUITS.

Apple market is in poor condition, there being a heavy surplus of low grades. Some Alexander and Yellow Transparent have brought $3, but $2.50 is the top for most other Fall varieties. Pears selling well when good to choice, a few Bartlett and Clapp's Favorite bringing $4.50 per barrel. Peaches are low, but in fairly good demand. Choice from West Virginia bring up to $1.75 per crate. Plums in moderate supply, selling at 25 cents down, for eight-pound baskets. Grape market somewhat improved. Fresh figs from Virginia bring 10 to 12 cents per quart. Berries mainly poor and in little demand. Muskmelons plentiful but so uncertain in quality that the bulk go below 75 cents per bushel crate.

Apples—Alexander, bbl	1 50	@	3 00
Yellow Transparent	1 50	@	3 00
Duchess	1 50	@	2 50
Wealthy	1 50	@	2 50
Fall Pippin	1 50	@	2 25
Bough	1 25	@	2 00
Pears, Le Conte, bbl	1 00	@	2 00
Clapp's Favorite	3 00	@	4 50
Bartlett	3 50	@	4 00
Peaches, Del. and Md., crate	50	@	1 50
W. Va., crate	50	@	1 75
Nearby, bkt	25	@	75
Grapes, 18lb case	50	@	75
Plums, 6-bkt. carrier	85	@	1 25
Raspberries, red, pint	5	@	8
Blackberries, qt.	6	@	11
Huckleberries, qt.	6	@	13
Muskmelons, Md., bu	25	@	1 00
Jersey, bu	35	@	75
Watermelons, 100	6 00	@	15 00

HOPS.

Prime to choice	35	@	37
Common to good	30	@	34
Pacific Coast	20	@	21
Old stock	10	@	15

HONEY.

Clover, comb, lb	15	@	16
Dark	13	@	15
Extracted, gallon	60	@	90

BEANS.

There has been a slight decline, about five cents per 100 pounds on most varieties except California Limas.

Marrow, 100 lbs	7 00	@	7 25
Medium	5 20	@	5 35
Pea	4 80	@	4 90
Red Kidney	5 95	@	6 80
White Kidney	6 75	@	7 00
Lima, California	8 00	@	8 25

VEGETABLES.

Potatoes have been in large supply the whole week, practically nothing bringing above $2 per barrel and many going at 50 cents per bushel. Onions in very heavy surplus, but largely of inferior quality. Peas lower, many selling at 25 cents per bushel. Cabbage, lettuce and eggplants very low.

Potatoes—Jersey, bbl	1 50	@	1 90
Long Island, bbl	1 75	@	2 00
Sweet Potatoes, bbl	1 50	@	2 50
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Cucumbers, bu	40	@	85
Corn, Jersey, 100	25	@	1 25
Cabbage, bbl	40	@	50
Lettuce, half-bbl. basket	50	@	75
Onions—Orange Co., bag	75	@	1 25
Conn. Yellow, 100 lbs	1 00	@	1 50
Okra, bu	1 00	@	1 50
Peppers, Jersey, bbl	35	@	75
Peas, bu	25	@	1 00
Radishes, 100 bunches	75	@	1 00
String Beans, bu	25	@	90
Squash, Hubbard, bbl	75	@	1 00
Crook Neck	75	@	1 00
Egg Plants, bu	25	@	50
Tomatoes, Jersey, box	25	@	1 00

LIVE POULTRY.

Broilers, lb	18	@	21
Fowls	15½	@	16
Roosters	13	@	13¼
Ducks	15	@	17
Geese	13	@	14¼

DRESSED POULTRY.

Chickens choice broilers, lb	26	@	28
Squab broilers, pair	50	@	60
Broilers, common to good	20	@	22
Fowls	15	@	19
Ducks, Spring	15	@	15½
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay prices are about 50 cents per ton lower, except old of good quality, some of which brings $24. Straw of high grades is scarce, bringing above quotations in some cases.

Hay, Timothy, new, No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 00
No. 3	17 50	@	18 50
Clover mixed	17 00	@	19 00
Straw, Rye	14 00	@	16 00

LIVE STOCK.

Native Steers	7 75	@	9 75
Bulls	5 25	@	7 50
Cows	3 50	@	6 75
Calves, prime veal, 100 lb	9 50	@	12 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 00	@	8 85
Hogs	9 00	@	9 50

GRAIN.

Wheat has made a net gain of 15 to 18 cents during the week. Oats five cents higher because of heavy European buying. Corn remains the same on good crop reports.

Wheat, No. 1, Northern Spring	1 25	@	..
No. 2, Red	1 16	@	..
No. 2, Hard Winter	1 12	@	..
Corn, as to quality, bush	90	@	92
Oats, as to weight, bush	52	@	55
Rye	1 00	@	1 05

RETAIL PRICES AT NEW YORK.

These figures are not the top or lowest prices, but fairly represent a large number of sales where the goods are not delivered. Fruits and vegetables continue low.

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	20	@	25
Butter, fancy prints, lb	36	@	38
Tub, choice	28	@	32
Chickens, roasting, lb	30	@	32
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	30	@	40
Fricassee, lb	25	@	28
Fowls	24	@	26
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14
Pork Chops	16	@	18
Loin of Pork	15	@	16
Round Steak	18	@	20
Tomatoes, qt	3	@	5
Cucumbers, each	1	@	3
Lettuce, each	1	@	3
Corn, doz	12	@	20
Potatoes, peck	30	@	35
String Beans, qt	5	@	00
Green Peas, qt	5	@	00
Lima Beans, in pod, qt	5	@	00
Peaches, 16 qt. bkt	50	@	1 25

BUFFALO MARKETS.

APPLES are very cheap and picked fruit is now the rule; they are Astrachans, Duchess and Sweet and Sour Boughs mostly, and retail at five cents the two-quart measure or 40 cents a third-bushel basket. Bartlett pears are of good quality, retailing at about two cents each. The prices of cherries and berries have not changed of late, being 25 cents for a six-pound basket at wholesale for late sour cherries, with berries red raspberries 16 cents; black, 12 cents; purple, 11 cents; blackberries, 14 cents for highest wholesale price. There are a few currants at 25 to 40 cents a basket, both red and black.

Potatoes are stronger and there are quotations as high as $1.25 per bushel, wholesale, but it is still possible to get fair ones at $1 retail. Sweet potatoes are not generally to be had. Onions are $1.25 to $1.50 per bushel, wholesale and cabbage is not quoted above $3.50 per hundred. A few bunched white turnips are coming in at low prices, as the quality is poor. Bunched vegetables, beets, carrots, retail at three to four bunches for five cents. Beans are five cents and peas eight cents per two-quart measure. Tomatoes are not plenty yet, retailing at 40 cents a basket. A few peppers bring 75 cents a box. There is a fine lot of celery in, very long and white, but only 25 cents a dozen, wholesale. Fine cucumbers wholesale at 30 cents a dozen or $1.50 a bushel, retailing at three for 10 cents. The largest lettuce heads recalled are appearing, some of them retailing at 10 cents a head. The regular wholesale price being 60 to 80 cents a dozen. The melon crop is at its best, small watermelons wholesaling as low as 15 cents each by the hundred and not above 40 cents. Muskmelons are mostly five cents each, the wholesale price running from $1 to $2 per crate.

Butter is quoted at 32 cents down, but market retailers still post 31 cents as their top price, retail. Eggs rule firm at 28 to 31 cents for fancy white, western candled being 23 to 24 cents. Cheese is rather quiet at 17 cents for top grade, retailers generally asking 20 cents. The report that foreign cheese would soon be out of reach has not affected the market yet. Dressed poultry is much scarcer than live, on account of the hot weather; 17 to 22 cents for turkey, live; 18 cents for choice fowl; 25 to 26 cents for broilers, 17 to 18 cents for duck, dressed; and 15 to 17 cents for turkey, 15 to 16 cents for fowl, 16 to 19 cents for broilers, and 13 to 16 cents for duck, live, all at wholesale.

J. W. C.

A GLASGOW merchant, famous for his stinginess, came into his office one morning and found a young clerk writing a letter in rather a flourishing hand. "My man," he observed, "dinna mak' the tails o' yer g's and y's quite so long. I want the ink to last the quarter oot."—London Evening Standard.

Subscribers' Exchange

THE CANTON CULVERT CO., Canton, Ohio, manufacturer of "Zyro" Metal Silos, wants an experienced traveling silo salesman to travel New York State, commencing January 1, 1915. Apply now.

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BARTLETT and Clapp's Favorite Pears, $1.50 per doz.; Early Richmond Cherries, $1.25 per doz.; sample can prepaid, 20c. SENECA FRUIT FARM, Waterloo, N. Y.

FOR EXCHANGE for White Leghorn Hens or Pullets three Incubators, one outdoor Brooder, three International Hovers. M. E. PHELPS, R. D. No. 2, Ellicott City, Md.

FIG PRESERVES—Home made; a new delicacy for most people; made from choice fruit right from the tree; few people have ever tasted a fig as it ought to be; write for prices and sample to MRS. M. A. PARKER, Rickerly, near Danphin way, Mobile, Ala.

MARYLAND FARM FOR SALE—58 acres on Chester River; soil light loam; ideal for poultry. Apply D. BAMBERGER, Millington, Md.

176 ACRE Poultry and Stock Farm, $3,500; three miles from station; 25 miles from Baltimore, Md. HARRY ROBERTS, Parkton, Md.

FOR RENT—400 acres farm, Michigan; long term; fortune for right man teams and capital to handle. McKIM, Irvington, Ind.

GENERAL PURPOSE or dairy farm of 80 acres with crops and stock. Full description and terms upon application. ROBERT GREGORY, Granton, N. Y.

FARM in Sunny Tennessee for Sale; ninety acres; well improved; adjoining good small railroad town. Price $1,800. Fine climate, fine crops. ALEX. ADAMS, Owner, Oakdale, Tenn.

FOR SALE OR LEASE—Ten acres good land, story and half bungalow; new; heat and water, barn, chicken houses for seven hundred layers. Excellent neighbors, macadamized roads, mile and half to Freehold. ARCHER CROOKS, Freehold, N. J.

FOR SALE—3,500 acres ranch, 400 acres in farm, 3 sets improvements, 4 silos, 1,526 acres deeded, balance leased; deeded land, $14 per acre, lease thrown in; crop, live stock and equipment put in at reasonable price. E. D. HUNT, Owner, Childress, Tex.

NOTICE—A fine farm of 160 acres in Ingham County, Michigan, 5 miles east of the City of Mason, will be sold at public sale on said premises by administrator, pursuant to order of Probate Court of said county Sept. 26th, A. D. 1914, 30 acres of fine timber. MERRITT HICKS, Administrator. Business address, Dansville, Mich.

SPLENDID Commercial Apple Orchard, located in the famous Apple and Tomato Belt—Morgan County, West Virginia; consists of ten thousand trees; portion ten years old. Tomatoes will maintain property. Best of management now on property. Best of reasons for selling. For particulars write immediately, R. R., Care R. New-Yorker.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN wants work on farm; can't milk. J. LLOYD DAVIS, Buffalo, N. Y. (Gen. Del.)

SINGLE MAN—Wishes position on up-to-date hog or dairy farm; sober and steady. POSITION, R. N.-Y.

UNMARRIED MAN—Wants work on commercial poultry farm; can furnish references. COMMERCIAL, R. N.-Y.

WANTED—Sober, industrious, married man understands farming, teaming, milking; good pay. JAMES TORRANT, Norfolk, Conn.

WANTED—Work on poultry or small farm by young man; wages no object; best references. Care of C. W. DENSMORE, Springville, N. Y.

POSITION WANTED—By young married farmer, dairy or general farming; strictly temperate; good worker. H. H., Care Rural New-Yorker.

FARM PARTNER WANTED to work with owner on shares; New York State; married man preferred; particulars exchanged. OWNER, care Rural New-Yorker.

YOUNG MAN—Experienced in general farming and gardening, strictly temperate, references, wants position. JOS. ROSENTHAL, Box 52, North Scituate, R. I.

TEAMSTERS and Farm Laborers wanted to work in an Institution; salary, $32 a month and maintenance to begin with. Address SUPERINTENDENT, Letchworth Village, Thiells, N. Y.

POSITION WANTED—As manager of farm or country estate by reliable practical man; married; can furnish good references as to character and ability. Address F. M. B., care R. N.Y.

CHAUFFEUR and handy man wants position; single, Irish-American, willing to run gasoline or kerosene engine, or traction engine; can furnish references. Address T. F. M., care of Rural New-Yorker.

POSITION WANTED—By an A1 school graduate or herdsman on private estate; experience in all branches of farming; expert poultryman, A1 butter maker; single; best of references. Box M. B., Care Rural New-Yorker.

WANTED—Experienced poultry man, married, large plant; private and commercial man, must be up on modern methods; Cornell man preferred. Must have best of references. Address F. W., care of Rural New-Yorker.

A PRACTICAL HERDSMAN seeks position; am Scotch, married, 1 child, age 28 years; have been in this country several years and have held positions as herdsman and dairyman on some of the largest estates in the East; am well qualified and can give highest credentials. Address A. D. STEVENSON, Griffin Farm, Portchester, N. Y.

A PRACTICAL POULTRYMAN desires a position; capable of laying out a new plant or placing an old one on paying basis; successful raising chicks and handling layers in large numbers; understand Mammoth incubators and brooders; agricultural school graduate, 1910; single; best of references. Box B. C. H., Care Rural New-Yorker.

WANTED—Herdsman, unmarried, well recommended, for 200 cows; well experienced with feeding, breeding, accustomed to handle bulls; must be a sober, strong, energetic man, capable to handle twenty milkers and keep upright strict order; good wages, steady position. Send full particulars and references in your first letter. Address L. F., Care Rural New-Yorker.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

FOR SALE—Ideal farm of one hundred acres; the land is deep, rich soil, capable of producing anything; good fourteen-room house; good barns; has been in family forty years; owner must sell. Address Box 165, Cazenovia, N. Y.

FOR SALE—1,621 acres, farming, grazing and timber land in Allegheny Co., Md., 11 miles from Cumberland, on North Branch River, C. & O. Canal, and West Maryland R. R. runs through property; near churches and school. Will sell in one parcel or divide in sections. Liberal terms. R. M. W., care R. N.-Y.

NEW ENGLAND FARM FOR SALE—To Close Estate—Forty acres cultivated land; eighty acres of pasturage and good apple orchard; high ground; good view; four miles from Atlantic Ocean, in the town of North Stonington, Conn. Modern thirteen-room house and small barn; good water; one and one-half miles from trolley, and near State Road. Address ALLYN L. BROWN, Admr., Norwich, Conn.

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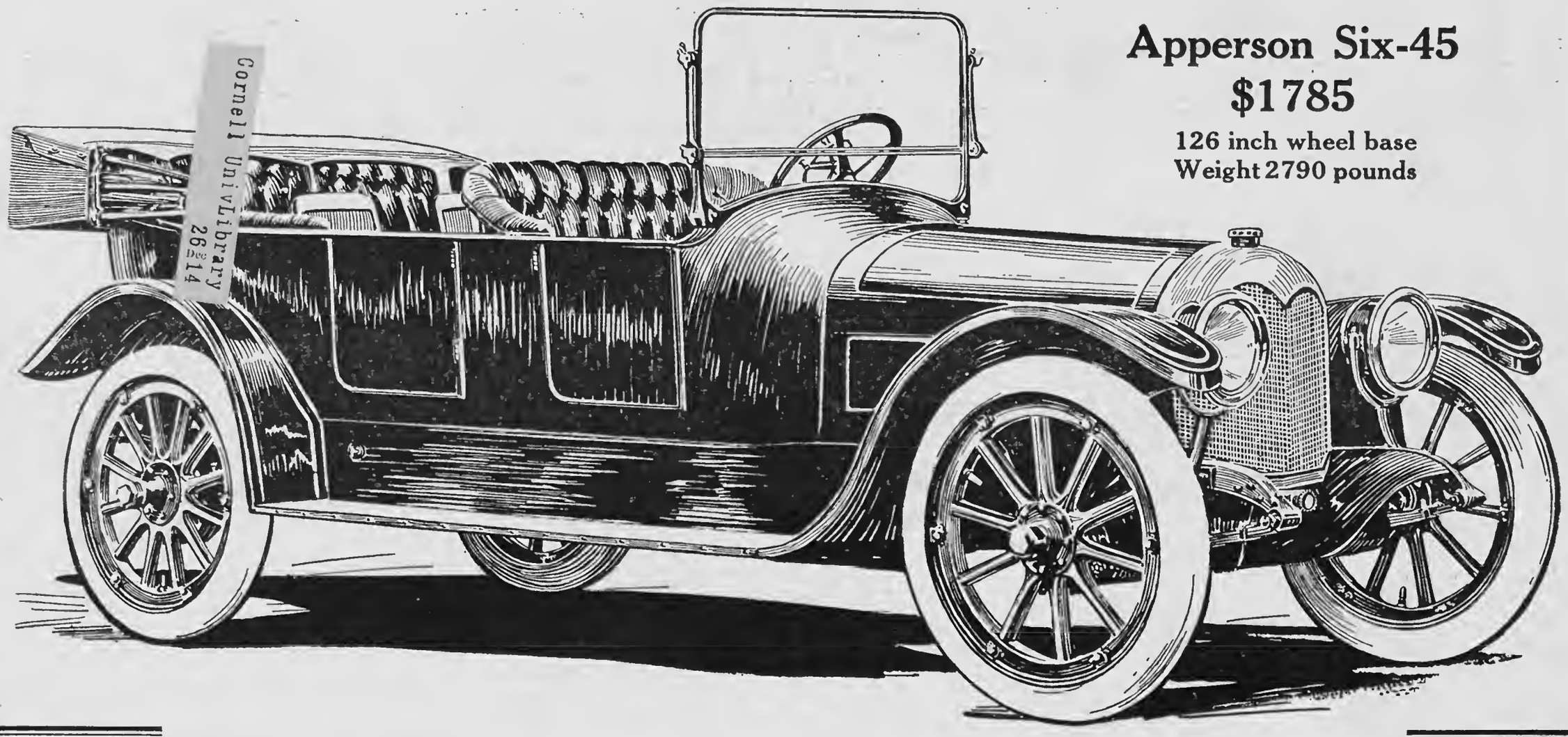

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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THE FIGHT WITH QUACK GRASS.

How to Battle With the Pest.

PART I.

IN THE ORCHARD.—I noticed on page 1009 an inquiry by W. M. J. of Buffalo, N. Y., as to how quack grass may be eradicated from a young orchard without injuring the trees. It surely is unfortunate that this weed has a hold in the young orchard, for it is very troublesome, indeed, even when it is out in the open, and will be much harder to eradicate, being, as it must be by this time, in among the roots of the young trees. It seems that there must have been some patches of quack grass on the land before the trees were planted and when the meadow was plowed up and the land fitted for the trees, some of the roots were dragged around, and now the whole young orchard is well seeded. In order to eradicate quack grass or any other noxious weed successfully it is necessary to know the nature and habits of the weed and the principles of plant growth. We must know whether the weed is annual, biennial or perennial in order to know how to best combat it. There are so many ways of weed eradication, suited as they are to particular classes of weeds, that this knowledge is essential. For instance, it would be folly to pull out Canada thistles, thinking in this manner to eradicate them. Similarly, fields which are well seeded with wild mustard should not be cleaned up by Summer fallowing—it would be time and money thrown away to do this. The wild mustard is an annual plant, is propagated by its seeds and not roots, and hence the simple pulling of the plants before the seed has ripened is sufficient to eradicate them. It is only necessary to keep any plants from maturing seed in order to finally eradicate wild mustard. But with quack grass, pulling or keeping the seed from maturing would be useless because this weed has other methods of propagating itself than by the seeds.

Wm. Pickering, Photo

HARVESTING A FIELD OF EUREKA SILAGE CORN GROWN ON LONG ISLAND. FIG. 480.

NATURE OF QUACK GRASS.—In its different stages of growth, quack grass may be very easily confused with some other common grasses, namely, Canada blue grass, Red-top, or English rye grass. According to the land upon which it is growing, quack grass grows from one to five feet in height. The leaves are from three to 12 inches long and usually about a fourth of an inch wide. There is one mark on the leaf which will usually distinguish quack grass from any other grasses. About an inch back from the tip of the leaf, there is a constriction running crosswise of the midrib. This cannot always be plainly seen unless the leaf is held up to the sunlight, when the constriction appears darker than the other parts of the leaf. This is regarded by botanists as a sure identification of quack grass, but I have seen leaves upon which it was pretty hard to find this constriction. Another distinguishing feature of the leaves is that they are rough to the touch above and smooth below. The parts of the leaf which clasp the stem (sheaths) are shorter than the distances between the joints—that is, one can always see the joint above the leaf sheath below. The quack grass head is from three to eight inches long and usually one-fourth to one-half inch wide. It is a spike which is hard to distinguish from the

bead of the English rye grass. The distinguishing feature of the two grasses is that the small divisions (containing three or four seeds and called spikelets) on the quack grass are turned flatwise to the main stem, while in the English rye grass, the spikelets are turned edgewise to the main stem. The seeds of quack grass are seldom seen unless one is looking for them. They are rather inconspicuous, being about one-half inch long and only one-sixteenth of an inch wide. They look very much like a miniature oat when ripe, being of a light brown or yellowish color. A close examination of a quack grass seed will disclose a difference between it and an oat; that difference being that the furrow of the oat is more closed than that of the quack grass seed. The roots of the "quacko desperado" are fine and fibrous, and these are sent out from each joint on the underground stem. The roots themselves do not help the plant to spread and they are so fine that they are seldom seen unless the plant is dug quite carefully.

HOW IT SPREADS.—What most people call a quack grass root is really a stem. Take up the so-called root if you will and examine the joints. Joints are seldom found on a true root. Notice the joint carefully and note that a scale is over it. Pull the scale off and underneath will be found a true bud so large that it can be easily seen with the naked eye. Now, if your eyes are good enough, you can pull this bud apart with a pin and will see that it is made up of various miniature leaves. This shows us why a stem always shoots up from one of these nodes on the underground root-stalk. A true bud is there. We expect each bud that we graft into a peach seedling to grow and so the bud that is on the quack grass underground stem, grows whether we expect it to or not. The principle is the same, the bud is the embryonic stem of next year, and is nature's way of stem growth. Quack grass seeds mature early, usually some time in July, and may be cut with the hay or grain and thus the plant may be scattered by the seeds. I have known quack grass to spring up suddenly on a field and cover almost the entire surface in a single season, which showed that the seed must have been in the seeds of the wheat or oats sown on the land. However, probably the majority of the quack grass is propagated by dragging the underground stems around in working the land.

ERADICATION BY SUMMER FALLOWING.—Of the various methods of killing noxious weeds; pulling, spraying with chemicals, cutting, smothering, or Summer fallowing, Summer fallowing is the one which is the surest of eradication of quack grass. This grass stands so thick on the ground that it is impractical to spray with a poisonous spray. This would only kill the top growth and not the roots. It is well nigh impossible to kill a field of quack grass without giving up the crops on the field for at least a single season. In three or four years' time, thorough cultivation in tilled crops will usually nearly kill it, but it would seem best in a young orchard such as W. M. J. has to Summer-fallow the piece. It ought to be plowed this Fall. In an old sod, such as he describes, the roots probably do not grow deeper than two or three inches, or they may grow to the depth of the plowing of last Fall. The depth of growth should be determined and then the plow adjusted so that the bulk of the roots will be turned on the surface. This plowing should be done at once and then the rest of the season cultivate or harrow so that not a leaf can show itself above the surface. Be sure to keep the leaves down around the trees. I should get after it at once, when I can plow pretty close to the trees without injuring them, and there will be less quack to keep down with hand tools. If this orchard is left for three or four years, quite a growth will have been made. This will necessitate working with horse power farther away from the trees and so a larger amount of hand labor will be required to keep the grass down, but worst of all, the quack grass roots will be so grown in around the tree roots that it will take two or three seasons entirely to kill them out. J. J. MATHEWS.

CONCRETE BOXES.

THE concrete boxes shown in Fig. 485, are handy for many uses about barn and henhouse. The forms used for making such receptacles are two second-hand store boxes, one several inches smaller than the other. The smaller box has two wooden strips nailed across the top, long enough to project across the larger or outside box, thus suspending the inside form so that it will not sink into the fresh concrete at the bottom.

After this first or bottom layer of concrete is placed, the space between the sides and ends of the two boxes is filled with concrete and the result will be a box of concrete of the dimensions represented by this space. If great strength is required, wire or small steel rods may be imbedded in the concrete as it is built up, which will reinforce it to the degree that it will be very much stronger than plain concrete. On the other hand, if a porous concrete is required, that is to say one which will admit moisture, it may be made of cinders with the quantity of cement and sand somewhat reduced. This is known as a lean mixture. A satisfactory mixture for work of this kind would be a concrete composed of one part Portland cement, two parts sand and four parts stone or gravel. When placed in the forms it should be thoroughly tamped and worked from side to side with a flat paddle. This will bring the richer mortar to the sides of the form, making a smoother surface than would otherwise result. The concrete should

Wm. Pickering, Photo

LONG ISLAND CORN THREE STORIES HIGH. FIG. 481.

be of "sloppy wet" consistency. It should be protected from the hot sun and wind and kept in the forms several days, after which it should be sprinkled twice a day, or, if the object is small, immersed in water for the period of a week.

By the use of a dense and impervious concrete, reinforced as described above, but especially at the corners, the forms will answer for a small tank or watering trough. Where tanks are to be placed in exposed situations subject to freezing, it would be well to slope the inside form by making it a little smaller at the bottom than at the top, thus providing an inclined interior surface upon which the ice will tend to slide upward, thereby preventing the destruction of the tank. It is said, however, that the placing of a stick in an upright position in a receptacle of this character will prevent it from bursting in cold weather. With pipe openings established, these box forms are available for the construction of a kitchen sink or slop drain, as well as a drain for an outside pump or faucet. It would not be a difficult matter to establish them in the horse or cow stalls for mangers or small watering troughs.

In using old boxes in the manner described it must be understood that the chief object in view is to do the work as cheaply as possible. In a majority of cases, unless the boxes were perfectly smooth and oiled or soaped before the concrete is put in, it would be necessary to destroy them in removing them from the concrete.

A LONG ISLAND CORN FOREST.

WHERE is the man who has said that Long Island cannot be made into a dairy section, or that the Long Island soil is so poor that it cannot produce good crops of corn? We have heard men talk in that way. We would like to get hold of one of them this Fall and lead him into the cornfield which is pictured at Fig. 480. We would make him change his mind, in case he had any mind which had growth enough in it to make such a change possible. The photographs were taken on the Old Brick Farm at Roslyn, L. I. Mr. Taber-Willetts brought us these photographs to show what Long Island soil can do when properly fed and cared for. The corn is Eureka. It was planted in drills about three feet apart, and has been given the most thorough culture possible. Of course Mr. Willetts did not pick out a sand bank, or a piece of beach sand thrown up by the sea, and plant this corn without any manure or fertilizer. He has a large dairy farm where high-class milk is produced. The soil is typical of Western Long Island. It has been farmed for many years, and was producing good crops when the soil in the Mississippi Valley was doing nothing but supporting buffaloes and other wild animals for the benefit of the Indians, or a few wandering white trappers.

The corn was planted on an old Alfalfa field. This Alfalfa was reseeded last year, but the crop was not very satisfactory, or as good as they wanted, and so this Spring they plowed the new seeding under. First they put on a thick coating of cow manure. When we asked Mr. Willetts how many tons they used, he said they just opened the manure spreader wide and let it go. This manure with the Alfalfa sod was plowed under, the ground well fitted, and the corn drilled in, using 400 to 500 pounds of corn fertilizer in addition to the manure. As is well known, such a corn fertilizer is usually not high in nitrogen, but is rich in phosphoric acid and potash. In fact the object of such a fertilizer is to act as reinforcement for the manure. As the corn came up it was kept clean of weeds, and the surface was kept thoroughly stirred with cultivator and hoe. We see the result of all this work and feeding in the mighty forest which is shown in the picture. The single stalk pictured with men beside it gives a good comparative idea of the way this corn has grown, and do not get the idea that there is only a small back yard or playground piece of this corn. Mr. Willetts has about 70 acres of it, which would put the cornfield right in the same class with the big Western growers through the Middle West.

This corn will be used to fill the silos, while the over-run will be stacked for feeding as dry fodder through the Winter. There are not silos enough on the farm to contain it. The argument between farmers who grow this immense corn like Eureka, and those who grow the smaller corn with a larger mature ear, is an old one. The big corn men want a silo filler,—the others want quality, as they say, rather than quantity. A silo filler can be helped out with cottonseed or linseed meal, while the quality corn does not require so much grain. It is an old argument which we need not take up here, but the point we want to bring out now is the fact that Long Island soil when properly handled in this way, becomes as productive in corn culture as any other soil on the Western Hemisphere. There are so many people who seem to have an idea that Long Island is a dry, barren desert, that we are very glad to show this forest of corn as evidence of what comes out of the desert when man knows how to make it come.

THE POTASH SITUATION.

IN view of the impossibility of importing potash from Germany while the war lasts, what advice can be given Eastern farmers about the use of fertilizers? Is it not probable that most of our soils contain enough potash so that a failure to use it for one or more years will not seriously affect crops?

Of course, no one definite answer can be given with safety. On soils which are of a marked clay type, I should imagine the potash could be omitted or lessened for a few years without very serious difficulty; indeed, there are those who hold that we are now overdoing the use of potash. However, on some sandy soils, and particularly for such crops as tobacco and potatoes, and some of the root crops, I should expect that a potash shortage would be evidenced rather promptly by decreased yields. Of course, as you suggest, lime might be used temporarily to set free potash, provided the crop was of such a character that lime would not work an injury. The situation is certainly a serious one, and

there seems no ready solution. I imagine it will result in our fertilizer manufacturers this coming year reducing to a minimum the potash content of their goods. It is interesting to notice in this connection that the commercial fertilizers as sold in the early days contained little or no potash. I have in my hands an article by Peter Collier, issued in the Vermont Agricultural Report for 1872. This article discusses commercial fertilizers and contains the

A COVER CROP OF RYE. FIG. 482.

analyses of 28 samples drawn that year. They were apparently all the commercial fertilizers then sold in Vermont. The analyses were made before there was any State fertilizer law. Now the particular point is right here: that only three of these contained potash—two of them containing less than 1 per cent. potash and one (a tobacco fertilizer), 3½ per cent.; three of them were fakes; the rest of them were all fairly good materials. Furthermore, our records, running back consecutively as far as 1884, show the average fertilizer sold in Vermont prior to 1887 carried less than 3 per cent. potash; and that in only three years, between 1887 and 1894, did its average exceed 3 per cent. and then only by one-fourth of 1 per cent. Now our farmers in those days grew crops, and without very large artificial potash feeding. In the last 20 years there has been a great deal of potash put in Vermont soils; much of it has been used, some of it has probably passed into drainage waters, but I am inclined to believe our soils have as much available potash as they had in the 80s and 90s, and that Vermont farmers won't suffer frightfully if the potash rations for their plants are for the time being lessened. J. L. HILLS.

Vermont Exp. Station.

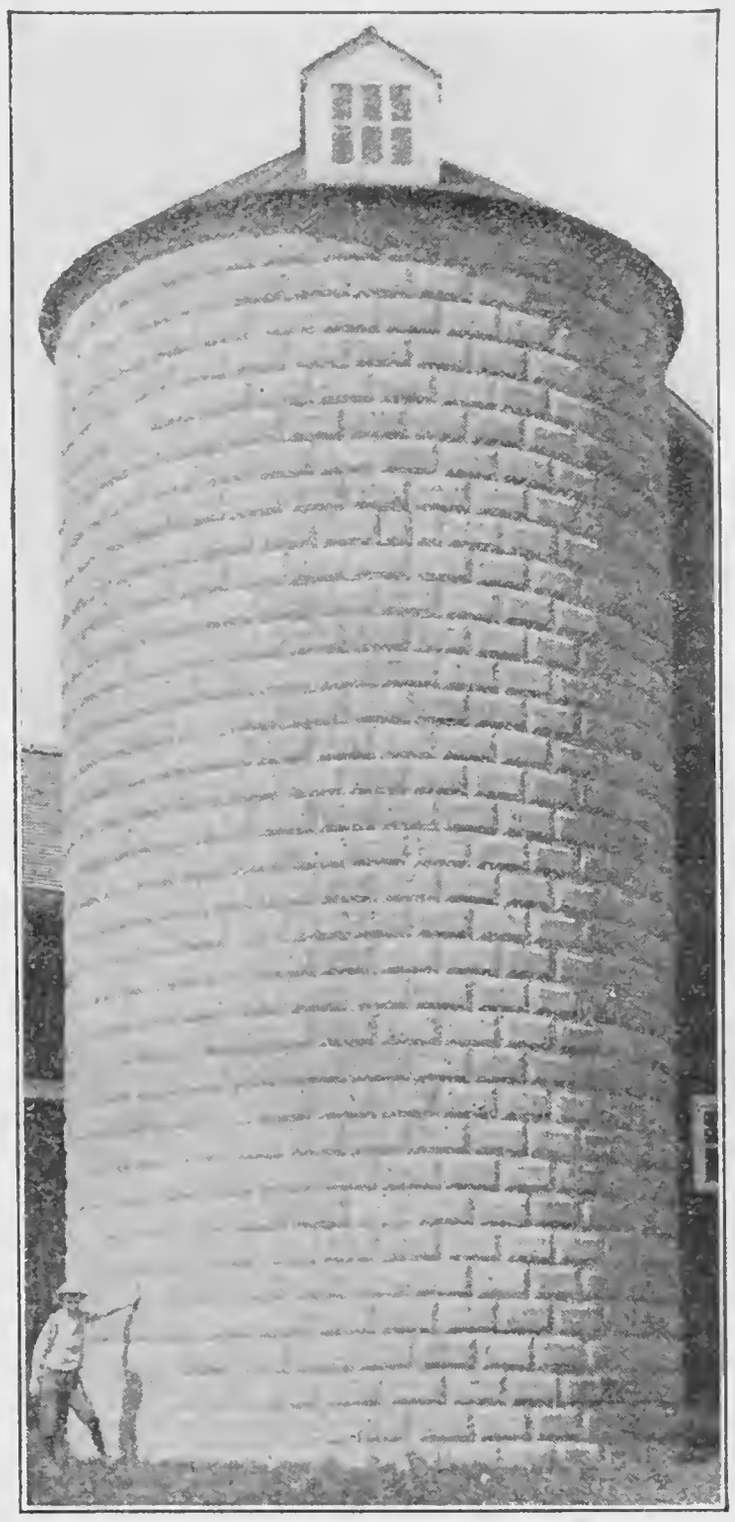
PLOWING UNDER GREEN CROPS.

CAN you tell me how to attach chain to plow, in order to turn under a green crop? I have buckwheat to turn under and wish to try the chain, but am at a loss to know how to attach chain to make it do what it is theoretically intended to do. If you answer this inquiry please give explicit details, as to length of chain, size of links and a sketch of how chain is applied to plow. In these days we read in farm papers about how to farm, written by those who have never been off Manhattan Island, like articles on how to raise and train children are written by old maids. C. E. C.

Wallkill, N. Y.

We agree with the statement that people who have least experience with children are the ones who tell us most about how to bring them up. That seem to be one of the privileges which belong to the childless character. Very likely much the same thing is true in giving farm advice. We know that rarely a day passes that we do not receive a letter from some man who says that he has seen certain advice in a farm paper, but before he spends his money in following it, he would like to know whether it is sensible or not.

The best we can do with this plow and chain proposition is to print a set of photographs showing how we do it on our own farm. Fig. 482 shows a growth of rye in a peach orchard. Each year we have a growth of rye, or rye and vetch, as a cover crop. We let it grow shoulder or head high before turning it under. It was a dull day when the photograph was taken, but the comparative height of the rye is indicated in the picture. Fig. 483 shows as well as we could with a photograph how this rye was turned under. As will be seen, a heavy chain is fastened with one end at the whiffletree, and the other end at the back of the plow beam. This chain is long enough to drag over the ground in the form of a loop, and it is large enough to give a heavy weight. This chain dragged the rye down flat, and held it there until the furrow slice was turned over upon it. The chain must be regulated in length so as to give the proper drag or twist to the rye, and a



CONCRETE BLOCK SILO IN NEW YORK. FIG. 484.

little experimenting will be necessary to adjust it properly. If the chain is too short some of the rye will spring up before the furrow slice is turned over upon it, while if it is left too long the soil tumbles over upon the chain and does not fully cover the rye which stands in front of it. This is a matter for adjustment to suit the plowman, as a chain of a different length would be necessary in plowing under buckwheat, since that crop is shorter than this tall rye. Fig 485 shows the appearance of the field after this rye was turned under. There is practically nothing of the rye to be seen above ground; in fact one who has never seen a crop turned under in this way would be surprised to see what a thoroughly clean job a good plowman can make. It all comes in the study of the chain, and having it lengthened or shortened so that it turns with just exactly the right kind of loop to bend down the crop a trifle in advance of the turned over furrow.

CHAIN ADJUSTED FOR TURNING UNDER. FIG. 483.

A TEMPERANCE wave has struck some sections of rural England and there is opposition to the beer or hard cider formerly served in the harvest field. Tea and bread and butter are substituted.

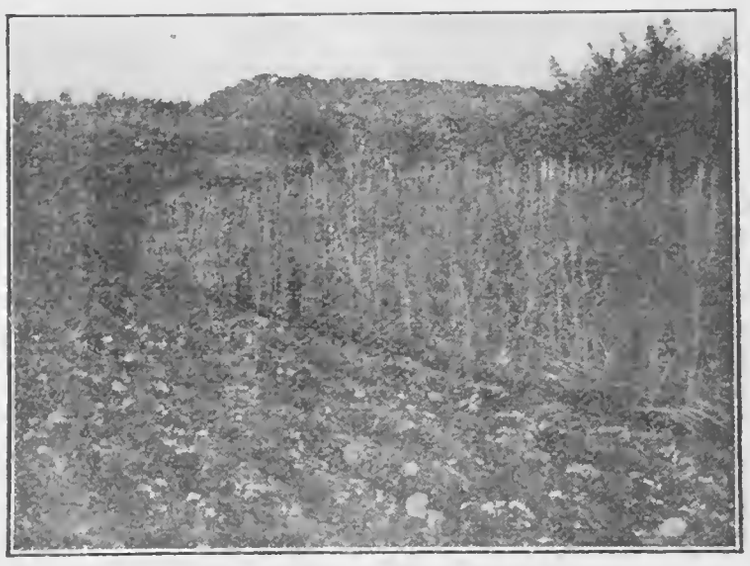
A CUBIC foot of corn silage will average about 40 pounds in weight. Remember this in figuring the size of a silo. Figure 30 pounds per feeding day for a cow and allow for 10% waste.

SWEET CLOVER IN MARYLAND.

I FREQUENTLY see articles in the papers giving enthusiastic accounts of success with Sweet clover. One would think to read such articles that this Sweet clover will change the farm like a miracle. Before we plunge on such things we want cold advice. What does this clover really amount to in Maryland?

J. M.

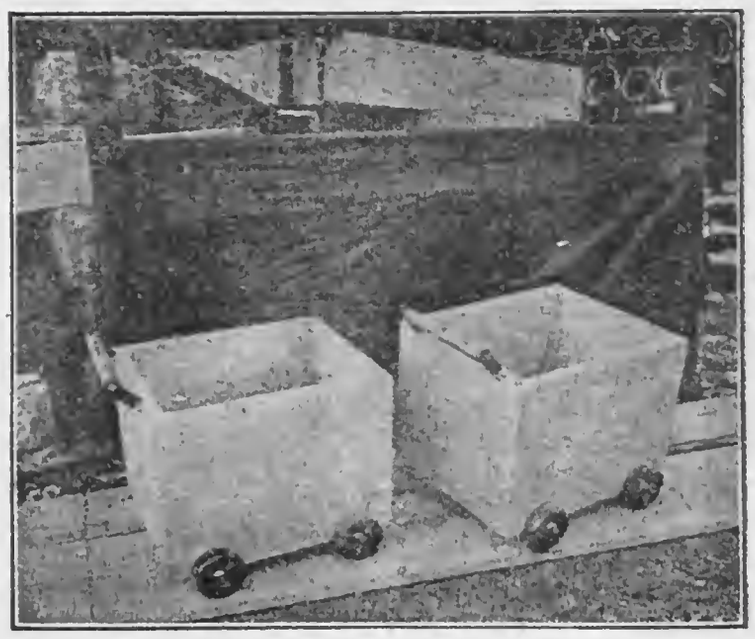
As to the value of Sweet clover for pasture, hay and silage in this State, I have seen a number of articles describing at length, the value of Sweet clover, including one in Hoard's Dairyman. No doubt, a number of these accounts are founded on facts, and in some sections, I believe that Sweet



RYE UNDER OUT OF SIGHT. FIG. 485.

clover has proven a useful dairy feed. Our experience in this State, however, indicates that Sweet clover requires more than ordinary care to secure a perfect stand. The argument is offered that we see Sweet clover growing on the sides of railroad cuts and on rough pieces of land where apparently nothing else will grow. For some reason or other, certain stretches of land of this sort as well as those of more productive character, seem well adapted to the growth of Sweet clover. However, when we come down to trying it as a commercial crop, we find that, like other crops of the same sort, it requires certain favorable conditions, including the proper inoculation of the soil.

The writer attempted to seed Sweet clover three successive years on a small patch of poor land on his place, without any attempt at inoculation or special preparation, beyond getting the ground in fair condition. As a result, owing in one case to a severe drought, the clover failed to make a good stand, and in only one field does it appear to be making any special growth. In consequence, I am inclined to think that it requires the same care and inoculation to seed Sweet clover that it does to put in Alfalfa and other leguminous crops, and that a dairyman would better seed his land to either Alfalfa or some more improved crop, as long as he must go to the same amount of trouble to get a good stand of Sweet clover. I have not as yet found that cattle like it as well as Alfalfa or some of our other clovers, and the hay is coarser than is desirable for getting the most out of it. I do not believe that it is going to work any miracle in regard to dairying or any other branch of production in which improved hay is a necessity. I believe that in some localities where it is well adapted to conditions, it may prove valuable as a supplementary crop, and also where it can be grown on an otherwise unused piece of land as pasture for bees. One point is certain, Sweet clover is no better than our other leguminous crops for a dairy feed, and except in certain localities, is just as hard to seed successfully and get a good stand. REUBEN BRIGHAM.



CONCRETE BOXES. FIG. 486.

THIS stern command must come to all—a hard unyielding fact—"*Stand up and take your medicine—don't play the baby act.*"

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Peaches for Massachusetts.

I HAVE about three acres I would like to plant in peaches next Spring. The land lies high, soil stony clay loam, medium crop of oats was taken off this Spring. The land has a gentle slope to south and west, well drained and has good air drainage, partially protected on north by wind-break; location southern Massachusetts. What varieties of peaches will do well here? There are about a dozen peach trees near by that appear to be affected with yellows and borers. Would it be economy to dynamite when planting? How much dynamite should be used? L. W. J.

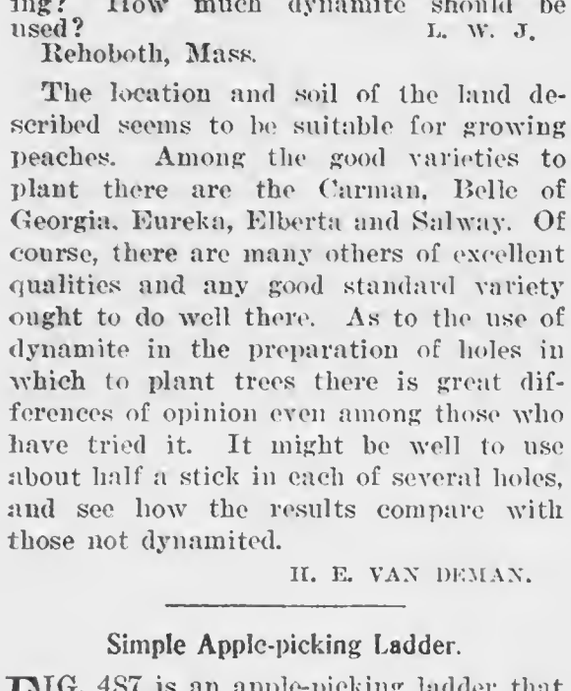
Rehoboth, Mass.

The location and soil of the land described seems to be suitable for growing peaches. Among the good varieties to plant there are the Carman, Belle of Georgia, Eureka, Elberta and Salway. Of course, there are many others of excellent qualities and any good standard variety ought to do well there. As to the use of dynamite in the preparation of holes in which to plant trees there is great differences of opinion even among those who have tried it. It might be well to use about half a stick in each of several holes, and see how the results compare with those not dynamited.

H. E. VAN DEMAN.

Simple Apple-picking Ladder.

FIG. 487 is an apple-picking ladder that is simple in construction and satisfactory to use. The chief difference between this ladder and the ordinary step-ladder



FRUIT PICKING LADDER. Fig. 487.

lies in the fact that the single back brace swings from side to side, thus allowing its use against a hillside where the ordinary ladder will not stand up. This is accomplished by bolting this back brace loose to cross piece B, which turns freely at the ends, thereby allowing the ladder to be set at any angle to suit the user. This back brace is also from eight inches to a foot or more longer than the main part of the ladder. This makes it possible to use this ladder on the upper side of a tree which is not possible with the ordinary step ladder. All the timber used in making this ladder is 2½ or three inches wide by one inch thick, thus making its manufacture very simple and inexpensive. No feature of this ladder is patented, so they can be made and sold by anyone. The first one made so far as I know, was made by H. L. Hill of Washington Co., Va. I have used this ladder on rough land, and urge growers to make up a sample and note its advantage. It can be made of any desired length up to probably 10 feet, and may be used as an ordinary ladder by simply unbolting E from B. G. C. STARCHER.

Virginia.

Michigan-grown Vetch Seed.

ON page 986 H. C. Hilton of Southwestern Michigan, claims that sand vetch grown for seed in his part of the State does not do well; that it is shrunken and not good for seed. Herewith I am sending you a sample of some vetch seed grown about 40 miles from Mr. Hilton's place. This seed is from that grown three or four years on the same farm, and if there is any deterioration it should be evident in this seed. This is a sample of that grown over an area of 60 or 70 acres which was raised expressly to sell for seed. It is possible that Mr. Hilton's observations of this crop may have been limited. It may be regarded as unusual that a plant that maintains the qualities of a weed, remaining in the ground and reproducing in a wheat crop for years, should be lacking in vitality. It is for this very reason that growing it on farms where wheat is a part of the rotation is discouraged. The writer is acquainted with an orchard where vetch was introduced over a narrow strip of ground for a cover crop, and in the course of three or four years was spread over the entire orchard of several acres. The ground was plowed each Spring, but enough vetch remained above the furrows to go to seed, and was spread by the harrow until the whole was thoroughly seeded.

It is frequently, perhaps generally, the case that vetch does not do its best on a piece of ground the first or second year. Vetch is a legume, and in order to reach its highest development must have its peculiar nitrogen-gathering bacteria present in the soil in order to thrive as it should. These may be expected to be lacking in ground which has never grown a vetch crop, and unless supplied artificially do not at first gain access to the soil and vetch roots, and some little time may be required for these to become sufficiently abundant so that the vetch plants may become supplied with them. This will no doubt require a longer time in ground that is lacking in fertility than in that which is richer in the elements of plant food. Vetch more readily gathers its specific bacteria naturally than some of the legumes, such as Alfalfa or the clovers, but it is probable that where first sown on a piece of ground better success would be gained from the start if the seed were artificially inoculated. It is possible that Mr. Hilton's observations may have covered some fields which had not become sufficiently inoculated to permit of the highest development of the plants.

Allegan Co., Mich. EDWARD HUTCHINS.

R. N.-Y.—The seed enclosed was certainly plump and good. We should call it high quality.

Tomato John Baer.

W. F. MASSEY states that John Baer tomato was the monumental humbug of the season. While I do not hold any brief for John Baer or the distributors of the seed, nevertheless I wish Prof. Massey could have seen the 6,000 plants of the variety I had growing. The seed was sown four weeks later than our Bonny Best and Earliana. The tomatoes started ripening about four days later than Earliana and same time as Bonny Best. The crop was just about half again as heavy per plant as either of the other two varieties, and the fruit infinitely superior to Earliana, and larger in circumference, though not quite as deep as Bonny Best. Our soil is a heavy clay underlaid with limestone, which may account for the difference, though this experience, or rather diversity of results, only emphasizes the fact that no one is justified in giving either unqualified approval, or disapproval to any novelty upon one trial in one place.

ELMER J. WEAVER.

Dwarf Peach and Pear Trees.

I HAVE a few standard peach trees that are being gradually destroyed by borers. Try as I will they go, one by one. I am now thinking about replacing them with dwarfs (peaches on plum stocks). Can you tell me if dwarfs are fairly productive and long lived? For home use what varieties are preferable, say about three sorts, early, medium and late freestone? 2. Do the Bartlett and Sheldon pears do well as dwarfs? My space is very limited. J. F.

New Rochelle, N. Y.

1. There is no really good excuse for letting the borers destroy a few peach trees on a town lot, for they can be dug out in a few minutes if given timely attention. Or they can be kept out entirely by the use of a wire gauze collar about the base of each tree, which would cost but little. There is no such thing as a really successful dwarf peach tree. Those on plum stocks are not practical because the two woods are not congenial and the tops often break off after they get large. Three good varieties of the peach in order of ripening, for family use are the Triumph, Carman and Salway. I would get good trees on peach roots and take care of them faithfully and there need be no fear of failure. 2. The Bartlett and Sheldon pears succeed very well as dwarfs, and will bear at an early age, but by planting so deep that roots will form above the point of union with the quince stock the vigor of the trees will be increased. However, this may not be desirable in a small place.

H. E. VAN DEMAN.

TRANSFERRING BEES.—If Mrs. F. G. S. lives in a locality like ours and would take M. B. D.'s advice regarding the transferring of a swarm of bees, I feel pretty confident there would be no live bees next Spring. That method would be satisfactory where there is a Fall flow from buckwheat or some other Fall flowers, but we must depend entirely on clover, which usually ends July 1 to 15. In transferring we have usually turned the old box upside down before drumming the bees out, as the old hives usually have only a few small holes in the top, while the whole bottom is easily removed, and bees, including the queen, are much easier to get started into the new hive. After drumming the bees into the new hive a queen-excluding honey board is fitted under the new hive, and then it is placed on top of the old one and left on the old stand. At the end of 21 days break the old hive up and place the mutilated combs, so bees can have access to them at night as they will need all that honey to Winter on. When you remove the old hive do not remove the queen excluder from under the new hive until you are sure there was no virgin queen hatched in the old hive. Try to find her and kill her. This occurs quite often, and a virgin entering a hive will usually kill the laying queen. There may be occasions where the old queen would best be killed, but a virgin reared under above conditions would usually be worth very little. If foundation were used in the frames of new hive and no honey coming in, heavy feeding would have to be resorted to, using sugar and water in equal portions. The better plan would be to wait till the start of a honey flow. Allow 25 to 30 pounds honey November 1 to winter on. ELMER J. WEAVER.

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NOTES FROM A MARYLAND GARDEN.

IT is rather discouraging to write about gardening under present conditions. May and June were intensely dry, but the first week in July gave us some nice showers, and we thought that the worst was over. But here is August 20, and we have had no rain to amount to more than a good dew since July 7. The soil is dry through and through, and it is useless to put seed in this sun-baked soil. I have a piece of ground stuffed with manure in which I intended to sow seed for the Fall crop of spinach early this month. But the seed is still in the sack, for it would simply cook it to put it in the soil. The early tomatoes have finally played out, and while the late ones still manage to keep green they are setting small fruits stunted for lack of moisture.

The last planting of sugar corn tasseled out in its piped-up leaves when two feet high, and is now drying up. By sowing in a frame and covering with a gunny sack I have managed to get some lettuce plants started by using the hose on the sack. For this Fall crop I use home-grown seed of the May King, which heads more quickly than the Big Boston, which I sow later for the frames. We manage to keep the lawn green and the flower beds watered with the hose, but it is a hopeless task to drag a hose all over the garden, even if it was long enough. The fact is that these dry seasons seem annually to grow worse, and we must adopt some reliable system of irrigation, for we are now as dry as California. I am planning to put in the Skinner system of overhead watering for another season if the city water company will allow me water at a reasonable cost. If not, we can drive a well about 20 feet and get all the water we want with a gasoline engine or a windmill and tank. On our low lands it is easy to get a flowing well at about 100 feet, but whether we could get a well to flow on the higher land is doubtful. One bored recently on the low land to a depth of 107 feet flowed 16 feet above the surface, and it may be possible by going deeper to get one to flow on the uplands which are not here many feet above this.

We had a splendid bloom on the Gladioli, of which I have a plot of 2,000, but it looks as though the corms are ripening up untimely. The greatest show bed I have now is one of the feathered cockscomb called Pride of Castle Gould. These are wonderfully gay, and being in reach of the hose, are kept flourishing. The scarlet sage too is showy. I have the variety called Zurich, which is dwarfer and more early and prolific in bloom than any Salvia I have yet tried. I formerly grew the Bonfire variety, but find the Zurich better. While the plants are comparatively dwarf, the flower spikes are unusually long.

In the shrubbery border the only thing now giving bloom is the Rose of Sharon, Hibiscus Syriacus. I have the double-flowered one with bloom of the old rose color, a double white with purple base to the petals, and one pure white. In spite of the drought these are covered with bloom.

Meehan's Marvel mallows made a wonderful bloom, but are now about done, but the foliage still answers to hide an ugly board fence. Perennial Phlox are blooming, but look as though it is to be their last, for there is little new growth starting from the base of the plants set this year. I have 250 of these planted last Spring, and I fear that there will be many of them lost entirely, simply exhausted in blooming and no new growth starting.

Having over 100 plants, seedlings of Asparagus Sprengeri, I planted some as a border to a flower bed, and of all the things in the garden these have withstood the drought best. In a porch box I planted these along the front and filled back of them with Begonia Vulcan, and the box has been a wonderful show all Summer, as the porch awnings shelter it from the direct sun and we water it of course. The asparagus plants in the border I intend to leave out, and find out whether these ornamental kinds of asparagus are hardy like our edible sort. If they are we will have found out something valuable. It has been a hard Summer on the Cannas, and if one should try to give the height of the varieties from this season's growth he would class all of them as dwarfs.

As soon as we have rain enough I shall sow seed of the Phlox Drummondii for next Summer's flowers. I find that they winter well and bloom earlier and fully as long as those sown in Spring. In fact I once had a plant to bloom in a mild January.

The new Cardinal Climber I have on a wire fence 50 feet long, and it is gay with its scarlet flowers in the morning, closing up in the afternoon. One has to look very closely to find any seed pods, for unlike its parents, the Cypress vine and the scarlet morning-glory, it is a very shy seeder, and the seedsmen have been putting only 17 seeds in a 25-cent paper. I hope to spare them some seed this Summer.

An order for some thousands of small bulbs of Candidum lilies from the North of France have not come, and I fear will not get here, and I shall have to depend on my own stock alone, and as the Northern seedsmen took the bulk of my bulbs last year I have been running short. We grow this lily here as well as the imported ones, and it is only a question of time when they will all be grown here.

Maryland. W. F. MASSEY.

Runners from Non-bearing Strawberries.

REPLYING to G. F. H., page 991, he will be perfectly safe in using runners from non-bearing plants. Forty-four years ago I planted an acre of strawberries in a bearing orchard that had been in sod 15 years. When plowed the sod ws so tough that there was a hollow place under each furrow except where it was closed by the horses' feet in harrowing. All the runners that rooted over those hollow places failed to blossom the next year, as such always do. From this bed I took up a large number of plants the following Spring when the bed was in bloom, and, as a matter of economy, the non-bearing plants were chosen. These were all planted for hill culture and it proved to be one of the most productive beds I ever raised. Runners produced so late in the Fall that they go into Winter quarters with roots only an inch or two in length usually fail to bear the following season, but they make plants in abundance—and good ones, too.

Summit Co., Ohio. M. CRAWFORD.

Winter Onions.

I HAVE a piece of ground about 100 feet long, 50 feet wide, which I would like to put to onions for early Spring market. Let me know when and how to plant, variety and Winter protection.

Hazel Green, Wis. E. K.

In South Jersey the Egyptian top onion makes the best bunching sort for early Spring. Sets are planted from one to two inches apart in rows 12 to 18 inches asunder and they should be planted six to eight weeks before the ground freezes. Here no Winter protection is required. Where Winters are severe a mulch of straw or preferably strawy manure should be applied after the ground freezes. For Southern growers the white or yellow Multiplier onions would be best. These Multipliers are quite generally used in the South, while the Egyptian is given first place in the North for Fall planting. The Multipliers should be planted at least six weeks before freezing. Ground is usually furrowed out four or five inches deep and the bulbs set three to four inches apart in the row. Where Winters are severe a mulch should be used as described above. TRUCKER, JR.

IRRIGATING STRAWBERRIES.—On page 993, S. B., Indiana, asks about a system of irrigation that is successful and practical in raising strawberries. We grow fine strawberries by surface irrigation in a country where there is but little rainfall. Make shallow ditches between the rows and allow the water to seep to the roots of the plants. Flooding must be avoided, as it would cause the soil to crust and do more harm than good. Gooseberries, raspberries and currants are a success when irrigated in this way. MRS. B. C. FAY.

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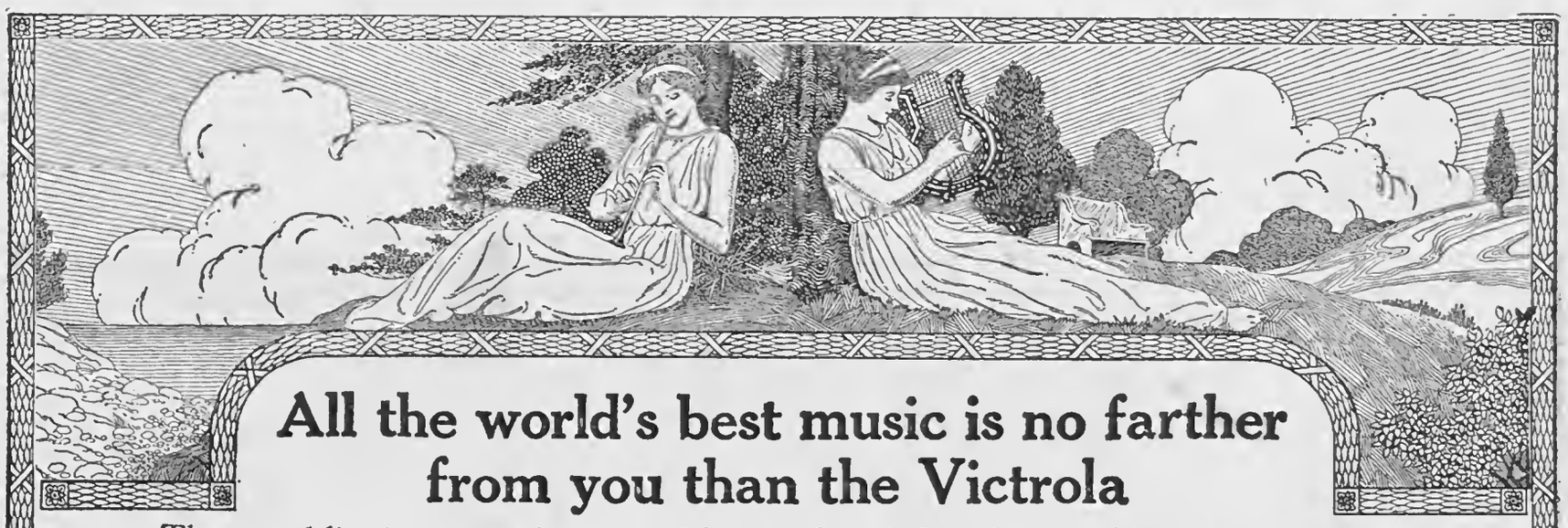

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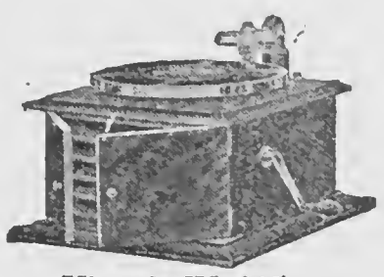

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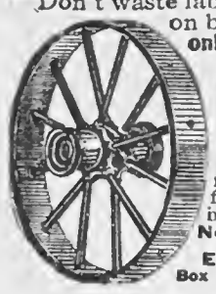

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333 WEST 30th ST., NEW YORK.

EVENTS OF THE WEEK.

DOMESTIC.—Although information reached the War Department August 31 that the employment office of the Anaconda Mining Company at Butte, Mont., had been dynamited, Gen. Wotherspoon, Chief of Staff and Acting Secretary of War, sent a definite refusal to the request of Gov. Stewart of Montana for Federal troops to be sent to preserve order in the mining district. Gov. Stewart also forwarded the request for the Federal soldiers to President Wilson at Cornish, N. H. The Governor is alarmed because of kidnapping alleged against certain leaders of miners, and information that has come to him that the miners are heavily armed and are ready to raze the city if the State interferes. Gen. Wotherspoon's reply to Gov. Stewart's appeal was that he did not believe it would be expedient to send Federal troops until the State had exhausted its own means. The trouble is a fight between rival labor organizations—the Butte Mine Workers' Union seeking to sweep the old organization, the Western Federation of Miners, out of the Butte district.

Tolls of the Panama Canal during the first week of its operation amounted to only about $15,000. The cause is said to be the European war. The amount received not only fell below the expenses of operating the canal for the week, but was not sufficient to pay the interest on the capital invested. The officers of the canal are not disappointed at the showing and predict that with the reopening of commerce, which has been interfered with by the war, business will boom and receipts will mount up to a point that will be satisfactory. Prof. Emory Johnson estimated that the tolls would yield near $25,000,000 in the first two years of the canal's operation. Canal officers believe that soon much commerce will be passing through the canal under the American flag and under the flags of other neutral countries.

Dr. Arthur Mudra, German Consul at Philadelphia, called the attention of William H. Berry, Collector of Customs at that port, September 1, to the fact that the American Line steamship Merion, which flies the British flag and arrived there from Liverpool and Queenstown, had four six-inch guns mounted on her decks. Collector Berry has referred the question to Washington.

Seven miners, including Peter R. Stewart, former president of the Arkansas, Oklahoma and Texas district union, United Mine Workers of America, were found guilty of contempt of court by Judge Youmans in the Federal Court at Fort Smith, Ark., September 1, and sentenced to serve from 30 days to four months in jail. Stewart received a four months' sentence. The men were charged with being implicated in the riots which occurred in the coal fields near there several months ago after the operators had obtained an injunction to prevent their interference with the operation of the mines.

The main plant of the Carstens Packing Company was destroyed by fire at Tacoma, Wash., September 1, entailing a loss estimated at $700,000 to $1,000,000. Hundreds of cattle, sheep and hogs were run out of pens and saved.

The National Highways Protective Society's report issued September 1, states that 53 persons lost their lives by vehicular accidents in New York streets in August. Twenty-six were children under 16. Automobiles killed 29, wagons 13 and trolleys 11. Of the children killed, 14 met death by automobiles, 10 by wagons and two by trolleys. Most of the fatalities occurred on Sundays. Fourteen persons were killed at railroad grade crossings in the city and vicinity in August.

Six arrests were made at Trinidad, Col., September 1, on indictments returned by the Grand Jury investigating coal strike disorders. Those arrested are William Diamond, International Organizer of the United Mine Workers; three saloon men and two strikers. The six are charged with murder on several counts growing out of the battles between strikers and mine guards in last October and April.

WASHINGTON.—The armored cruiser North Carolina, now at Falmouth, England, has been ordered to Turkish waters to relieve the Americans stranded there and also to guarantee their personal safety in case Turkey becomes involved in the present European conflict.

The seaman's bill was passed August 27. This bill, in a more drastic form, passed the Senate a year ago. In order to frustrate efforts made to strengthen the restrictive features of the measures the leaders were obliged to bring it in under conditions that prohibited the offering of amendments.

Great Britain, France and Russia have advised the United States informally that they would look with disfavor on the purchase by this government of German merchant steamers to relieve conditions growing out of the European war and also to build up an American merchant marine. While not conveyed in any diplomatic correspondence, their position, nevertheless, has been vigorously set forth to President Wilson and Secretary Bryan.

FARM AND GARDEN.—The National Association of Live Stock Insurance Companies, organized at a meeting of representatives of 10 live stock concerns at the Hotel Severin, Indianapolis, recently, elected J. W. Newman, of Louisville, Ky., president, and John B. Rice, of Bloomington, Ill., secretary and treasurer. Newman is president of the Kentucky Live Stock Association. Rice is secretary of the Granite Live Stock Insurance Company.

The heavy demand for horses and mules suitable for army purposes for nations engaged in the European war, has caused prices to advance until they are from $5 to $100 a head higher than a year ago, it was said at the Chicago stockyards September 1.

Apple-growers of the Valley of Virginia are planning to organize a co-operative marketing association to be operated along the lines of the Georgia Fruit Exchange, which has proved such a great success in enabling the Georgia peach-growers to get the best prices for their fruit through scientific marketing methods. On account of the uncertainty as to the export market which has formerly taken a large portion of the Virginia crop, the valley growers are looking to the Southern markets, and the Southern Railway, through its marketing department, is endeavoring to aid them in getting in touch with reliable dealers, and in every other possible way. It is expected that 1,150 cars of apples will be shipped from the valley this season.

THE EUROPEAN WAR.—August 28 the Germans captured Longwy, on the Luxembourg frontier. It is asserted that the Germans practically destroyed the Belgian city of Louvain, famous for its art treasures and architecture, in reprisal for alleged attacks by non-combatants. Shocking accounts are given of the slaughter of the inhabitants. August 29-September 3, the Allies were pushed back by the Germans, who continued to advance, and Paris was being prepared for a state of siege. The Germans had not then succeeded in breaking through the Allies' line, and were making a crushing onslaught on the British forces. The Germans were then within 27 miles of Paris. There were further reports of bombs from German airships dropping in Paris. September 2 the capital of France was moved to Bordeaux, 358 miles southwest of Paris. In a battle at Compiegne the British captured 10 German guns. Reports from Eastern Prussia continued to be conflicting August 28-September 2, the Russians claiming successes, which were denied by the Germans. Russia has so many men that she is ordering some of them home. The Czar has given a six weeks' leave of absence to 500,000 reservists of the 1907 class. Serious trouble seems imminent in the Balkans. It is stated officially that the Bulgarian Government is pledged to join with Greece, Roumania, Servia and Montenegro as allies of Russia, and against Turkey should the latter decide to become an ally of Germany and Austria. The Bulgarian army is partly mobilized and is to be put into the field at once. Messages from Constantinople say that the Turkish army and navy are ready for action and that on most of the Turkish warships are strong contingents of German sailors and officers. August 28 it was announced that the German cruiser Kaiser Wilhelm der Grosse, formerly a North German Lloyd liner, had been captured off the West African coast by the British cruiser Highflyer. August 28 a British squadron from the North Sea entered the Bight of Heligoland and after a fight of several hours sunk two German cruisers and two destroyers, leaving a third cruiser burning. No British ship was lost, and their loss was small. The same day the British destroyer Welland sunk the German destroyer S-90 off the Chinese coast. August 20 an expeditionary force from New Zealand seized Apia, German Samoa. Ambassador Chinda issued a statement August 28 saying Japan would not take part in the war in Europe. A Japanese expeditionary force has occupied the island of Tsi-chien, in Kiao-chow Bay, facing the German forts of Tsing-tao, according to a Shanghai dispatch. A Japanese destroyer, which had gone aground on the Lien-tau island, was destroyed by the German gunboat Jaguar. Reports from Vienna September 2 stated that along the Russian-Prussian-Austrian border 3,000,000 men are engaged and that the battle line extends for 400 miles. Lemberg was captured by the Russians September 2, after a seven-days' battle. Appalling slaughter is reported. September 2 it was stated that the Germans were strongly fortifying Brussels, evidently fearing an uprising of the people. They have issued an order that in case of any effort to resist the German authorities they will train their guns upon the city. Antwerp is being prepared for a state of siege and the military governor has ordered all people who have not been domiciled there a month to leave.

THE NEW POPE.—Cardinal Della Chiesa, archbishop of Bologna, was elected Pope September 3. He will assume the name of Benedict XV. Cardinal Farley of New York, was the only American taking part in the conclave. Cardinal Giacomo Della Chiesa was created a cardinal May 21, 1914. He is the son of an Italian marquis. He was born at Pegli in the diocese of Genoa, November 21, 1854, making one of the youngest popes ever elected. He was ordained a priest December 21, 1878. He served as secretary of the Nunciature in Spain from 1883 to 1887, in which year he was appointed secretary to the late Cardinal Rampolla. He was appointed substitute secretary of state in 1901 and in 1907 he was elected to the post of advisor to the Holy Office. It is 174 years since the last Pope Benedict.

CROP REPORTS.

August 17. The drought which has lasted about two months was broken a week ago by some fine showers which have made all crops look better. Hay was put up in good shape. The oat crop is nearly all cut. Potatoes are small, with but a few in a hill, but some later pieces may do better. Cows are shrinking badly. Corn is doing well. The buying and selling of cattle seems to be at a standstill. Butter is 28; eggs 21. P. S. S.
Mayville, N. Y.

August 17. The main money crop in this part of Michigan is milk, with Detroit for a market. The price runs from 12 cents to 22 cents per gallon, according to test. Good cows are selling at $75 to $110; poor or common cows go to the butcher, milkmen won't have them. Beef cattle from five to nine cents per pound; hogs $9.35 per hundred live; no sheep in this neighborhood. Corn 90; oats 45; wheat 92; beans $3. J. L. H.
Birmingham, Mich.

August 29. Apples here are but part of crop, and the State over about the same as last year, a half crop. Northwestern Ohio has a good crop of peaches, although there are many small ones on the market. Northeastern Ohio, east of Cleveland, has practically no peaches. Ottawa County growers are anticipating one of the largest peach yields in the history of the county. Lucas County will have a good crop. Grapes, pears and plums good. Corn is good, oats are fully an average crop. We had dry spells, one in June and again the last of July and the first of August, and this dry weather occasioned the small peaches which now are on the market. W. J.
Waterville, O.

August 21. Hay all in; grain just coming, along, good crop. Gardens looking well, and now plenty of rain, though from the middle of July until the middle of August it was quite dry. Potatoes good, new ones selling at $1 per bushel. Peas about 30 cents a peck. Grain corn $2 per cwt.; oat 60; feeds $1.65-$175. Milk seven cents a quart; butter 34 and eggs 28 to 39. The army worm is reported at a few farms around, but in all so far the crops have not been injured by any of common kinds, though the tent caterpillar and Brown-tail moths are quite prevalent. J. C. H.
South Thomaston, Me.

COMING FARMERS' MEETINGS.

National Apple Day, October 20.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

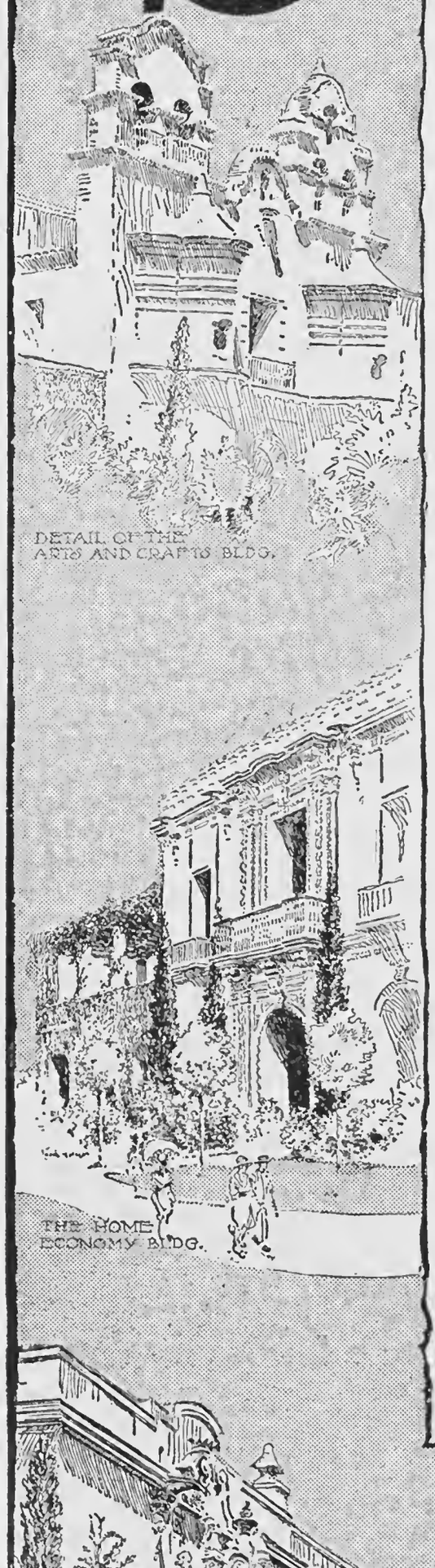
Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

New York State Potato Association will hold two field meetings, one at Victor, N. Y., September 12. Potato fields will be visited in the forenoon. Basket dinner at 12, at Nathan Baker's farm. Prof. M. F. Barrus will speak on "Potato Diseases." Geneva Experiment Station representative will speak on "Increasing Profits by Seed Selection." Discussions by Daniel Dean, president of the association, and others. M. F. Webster, Victor, N. Y., is in charge of local arrangements. The other meeting will be at Malone, N. Y., on Saturday, September 19, in the fields of H. W. Spencer. Prof. Barrus will speak on "Potato Diseases," and Prof. C. H. Myers of Cornell, and Daniel Dean of Nichols, will speak on "The Profits of Seed Selection," and Prof. E. V. Hardenburg, of Cornell and Mr. W. M. Peacock of Cornell, will speak on "The Profits of Seed Selection." Mr. O. F. Ross, Franklin County Farm Bureau agent, is in charge of the local arrangements.

HUSBAND: "Come along! Keeping me here standing like a fool!" Wife: "Do be reasonable, dear. Can I really help the way you stand?"—London Mail.

San Diego Panama California Exposition



California's Great Exposition, Celebrating the Opening of the Panama Canal

What ails your farm?

IT is no uncommon event for a city man to discover that downtown property which his father bought for $100 is now worth $100,000. That is largely luck. But do you often hear of farm land selling at $1.88 an acre and sixty years later selling at $57—on an average, with big tracts selling above $1,000 an acre simply on merit as farming property?

The United States census shows that is what California land has done. It has not been luck, but energy. Man has found a waste place. He diverted water to it, expended a little labor, and desert has been changed to garden of the most amazing fertility.

That land is in the great Southwest—8,000,000 acres now under cultivation. There is land exactly like it waiting for the same sort of treatment—44,000,000 acres of land waiting for water and labor. The water is accessible. Who will supply the labor—and reap the benefit?

San Diego, California, the first port of call north of the Panama Canal, will celebrate the opening of the canal on January 1, 1915, by opening the Exposition Beautiful. San Diego's Panama Canal Exposition. Its makers have dared to do new things. In the whole exhibit space, the largest space any exposition ever contained, there is not one exhibit that is lifeless. Everything moves.

You wish to know the methods of large scale farming? Look at them. You will not see standing, idle machinery. You will see machinery in operation on a big tract sown to different crops.

You wish to see intensive farming? Look at it. You will not see charts. You will see a model 5-acre farm with its neat rows of fruit trees and the ground between covered and growing vegetable plants, the vineyard beyond, the poultry yard in the rear—the whole producing on an extraordinary scale, a scale which allows a single family to profit by single acre farming. You have a little tract at home that you don't know what to do with. See this model intensive farm and you'll find out.

You wish to see how oranges are grown. Look. You don't see a crate or two of fruit. You see orange and lemon and grape-fruit growing in the model citrus orchard—producing fruit within reach of your hand. Down the Alameda you see little brown men from Ceylon cultivating the tea plantation whose tea saplings were transplanted here from Colombo. You see the young plants started, you see the leaves being stripped and cured, you see the tea brewed and served to you by Singalese girls.

Solve the question at San Diego

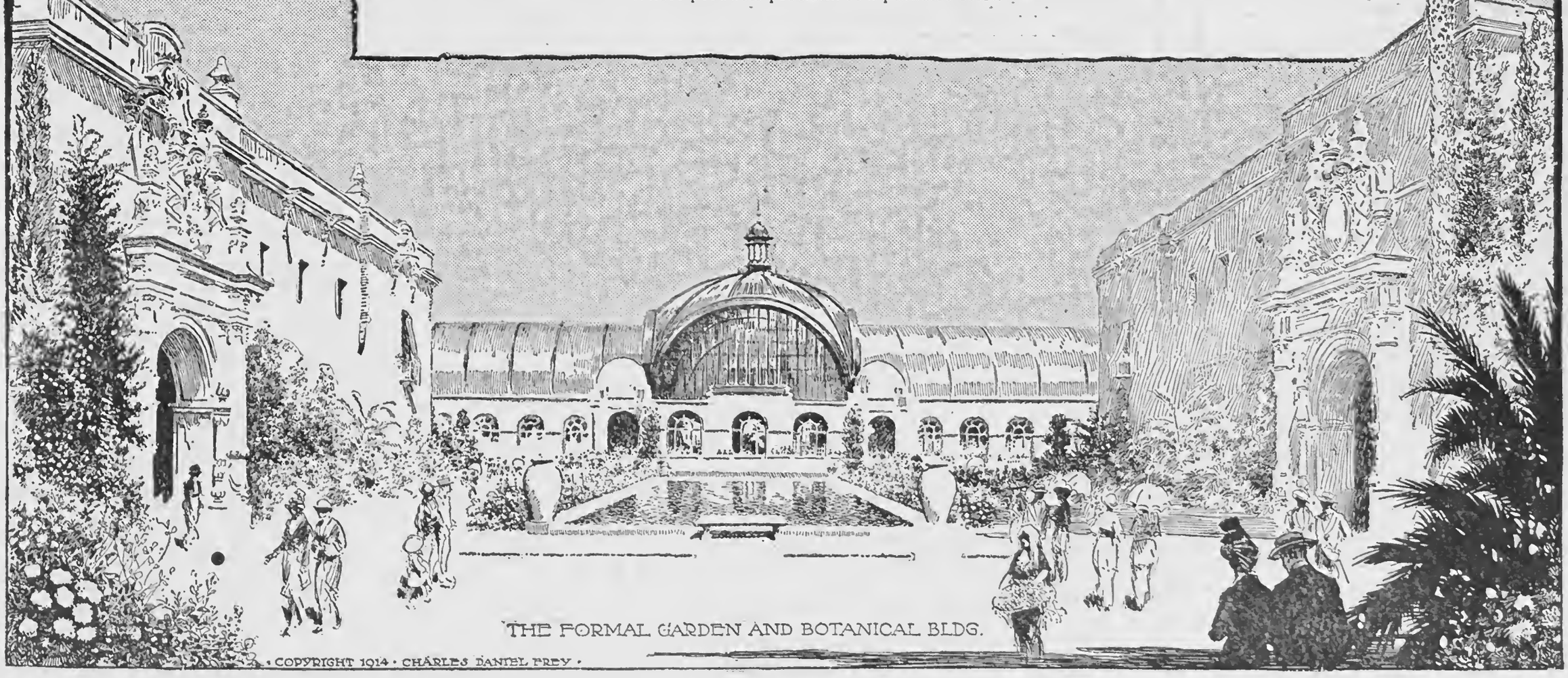
What ails your farm? Well, if anything ails it, you are the one to decide. Find out what's the matter. Visit the Exposition Beautiful at the furthest south of Uncle Sam's Pacific ports, then figure out how the lesson may be applied to your own life work. See why it is that the model farm is able to make a big profit, why the women and children as well as the men find the farm life pleasant and profitable. This is opportunity.

Pick the time of year you please. San Diego's Exposition Beautiful opens on January 1st and closes on December 31st. No other Exposition could do it, for here there is never frost nor stifling heat, nor protracted rainy season. It has won its title, the Exposition Beautiful.

But more important than beauty, more important than the quaint charm of Spanish architecture and Spanish costumes of the men and women who will people the grounds, is the mighty message of the new type of agriculture, a message that is not confined to the southwest.

1915 **Get your ticket to San Diego All the year** **1915**

Solo los productos del terrenal Paraiso no tendran
que envidiar los de esta nueva Sevilla de Occidente.
"A new Seville in the land of the west
Whose products proclaim it a paradise blest."



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FARM MANAGEMENT.

ORGANIZATION is the foundation of all business methods. To succeed in the management of a farm, one must be able to organize, reorganize, organize again, and then organize in detail. A young man starts out to manage a general farm for himself, a period of years. He begins by looking into the future and making organized plans of crop rotation and crop adaptability to those particular soil conditions which he has to deal with. As the time of putting the crops in approaches he will find places where his first plans are weak and will reorganize them. Weather conditions may cause him to organize again. As he actually sows and plants he will need to organize in detail. This process of organization will induce strength of character and of purpose, and will insure better crop returns.

Given a hundred-acre farm with some fruit, stock it according to your pocketbook, and the tillable land. Hire the best man you can get at a reasonable wage. Go slow in the purchase of new tools. Buy only those that you are sure will return a good dividend on the money invested. If old tools are available, repair and use as long as practical. The newness of a tool does not measure its efficiency.

In stocking the farm let quality be the standard rather than quantity. Then breed for better quality and cull the quantity. But even a second grade brood mare, bred right, may help you to solve the power question. Plow deeply and thoroughly and think as you plow. Harrow once more than you think it needs rather than once less. Cultivate thoroughly and keep continually at it. Cultivation is cheap fertilization. Use all available home fertilizers and go slow in the use of commercial fertilizers. Money is easily thrown away at this point.

If land needs under-drainage and capital is lacking plow in lands to aid surface drainage until drains can be put in. Aim to put in some under-drains each year.

If a silo is not at hand, plan for one at once. If a man is justified in going in debt for any improvement, the silo is that improvement. Now plan for a good corn crop to put in the silo, but do not put all of the barnyard manure on the corn crop. Put part on a meadow that needs coaxing, and make up to the corn by better tillage.

A four or five-year rotation works satisfactorily; corn, oats, rye or wheat, and hay one or two years. This may be varied by putting part of the corn stubble into potatoes and cabbage, seeding with peas and oats after this, bringing the rotation out the same. (The cabbage is worth all it costs to raise to feed to the dairy.) Remember good seed plays an important part in the production of a good crop. Buy the best seed and raise better. Save your own seed wherever practical. Give the fruit the best care you can without neglect to the general farm crops. Spraying pays, but can be overdone on a general farm.

Be cautious of hiring extra help unless you see cash returns to warrant it. Plan for cash returns from dairy, live stock, fruit, potatoes, cabbage, and wheat. If farm is yours spend surplus on permanent improvements to the home, buildings, stock, and land.

Think and plan while you work, and yet find time to lift up your head and enjoy the fruits of your labor. Manage to see and know what the other fellow is doing, but, if he is watching you on a new venture and laughs, wait; if it fails laugh with him and try again; if it succeeds laugh last, but do not brag. Accept all fair-minded criticism with a spirit of good fellowship and remember "Eternal vigilance is the price of liberty." UNCLE ERNEST.

Plowing Under Soy Beans.

I WAS greatly interested in your reply to C. L. A. on page 967. Perhaps my experience will be of value. In the Summer of 1913 I drilled in about two acres of Soy beans, securing a fine crop, which I partly harvested with the help of the poultry, allowing the residue to die down, supposing that to be the end of them, but in plowing and harrowing the land this Spring I found the stalks a perfect nuisance, only exceeded in degree by corn or sunflower stalks. Upon proceeding to plant a Summer crop, I discovered the Soy beans, which I had supposed winter-killed, sprouting furiously. Of course all further operations were suspended and the beans allowed full swing, with the result that I have had a most beautiful time keeping my fruit trees clear of the growth. This will all be turned under this Fall, and a cover crop of rye or wheat sown. No more Spring plowing of Soy beans for me. D. H. COBB.
New Jersey.

Fall Plowing Peach Orchard.

I PLANTED 200 peach and apple trees in the Spring on rather poor ground. Last month I sowed buckwheat with the intention of plowing under this Fall. I have been told since by some local authorities that this is not a good plan, as it forces the growth of the trees at a time when the sap is liable to be frozen. Let me have your opinion as to whether I should harvest or plow under. T. B.
Orange Co., N. Y.

It is a mistake, in your latitude, to plow or cultivate peach orchards in the Fall. Such working of the soil stimulates a late growth of wood. This does not mature, and a hard Winter is likely to injure it by freezing. One object of the "cover crop" is to prevent late growth by taking moisture from the trees. Such trees with a crop growing around them are more likely to stop growing and ripen their wood and fruit. In this case we should cut the buckwheat or let it decay on the ground. It would have been better to sow clover with the buckwheat. This would have given a crop to grow on through the Fall after the buckwheat had been cut.

Avoiding Surface Water.

WHAT right has our neighbor below when digging an open ditch along our line fence to make a bank about a foot high so surface water cannot go through as it always has, and in one place where a lot runs in a wet time he has driven posts and made a dam of planks, dirt and stones. If holding the water back drowns our crops out, is he liable for the damages? Also what can he do if we make a bank up and down the hill at right angles to his so when water enough comes it will cut through his dam or bank. His open ditch will carry all water that goes there unless at time of Spring thaws; it never has washed his field or damaged his crops to any extent, and was built on purpose so we could not run a ditch there to dry a wet place above. A. T.
New York.

New York, as well as most of the States, follows the common law principle in this regard that surface waters are a common enemy which every farm owner can get rid of as best he can, provided he does not use it directly for the injury of his neighbor. The owner of the upper land may keep it on his property or let it flow to the lower level, and the lower owner may either receive it upon his land or ward it off by filling in and making his land higher, or by means of embankments or other obstructions. But this right is qualified by the requirements that he shall not converge it into a stream and pour it in a flood upon the land of the adjoining owner. So if the lower owner fills up his land so that the natural flow of the water is reversed and it creates an artificial channel or current upon the adjacent land, it imposes upon it an unnecessary burden and he would be liable for damages.

HOW TO TRAP SQUIRRELS.—Could you tell me the best way to get rid of the red squirrels? They are in the house, and as the house has tile on the roof, there is no way to keep them from going up under them, and they are taking all the apples off the trees, chewing up the pine cones and so on. I can not use poison. If I should use a trap, what would be the best bait to use? W. H. E. S.
Massachusetts.

"Now tell us," sternly demanded the young legal luminary whose brow overhung like the back of a snapping-turtle, addressing the cowering witness, "what was the weather, if any, upon the afternoon in question?"—Puck.

A SCHOOL TEACHER in one of the counties of New York State recently received the following note from the mother of one of her pupils: "Dear Mis, you writ me about whipping Sammy. I hereby give you permission to beet him up eny time it is necessary to learn him lessons. He is juste like his father—you have to learn him with a clubb. Pound nolege into him. I wante him to git it and don't pay no atenshion to what his father says, I'll handle him."—Everybody's.

Your Enemies

as a Tire User are

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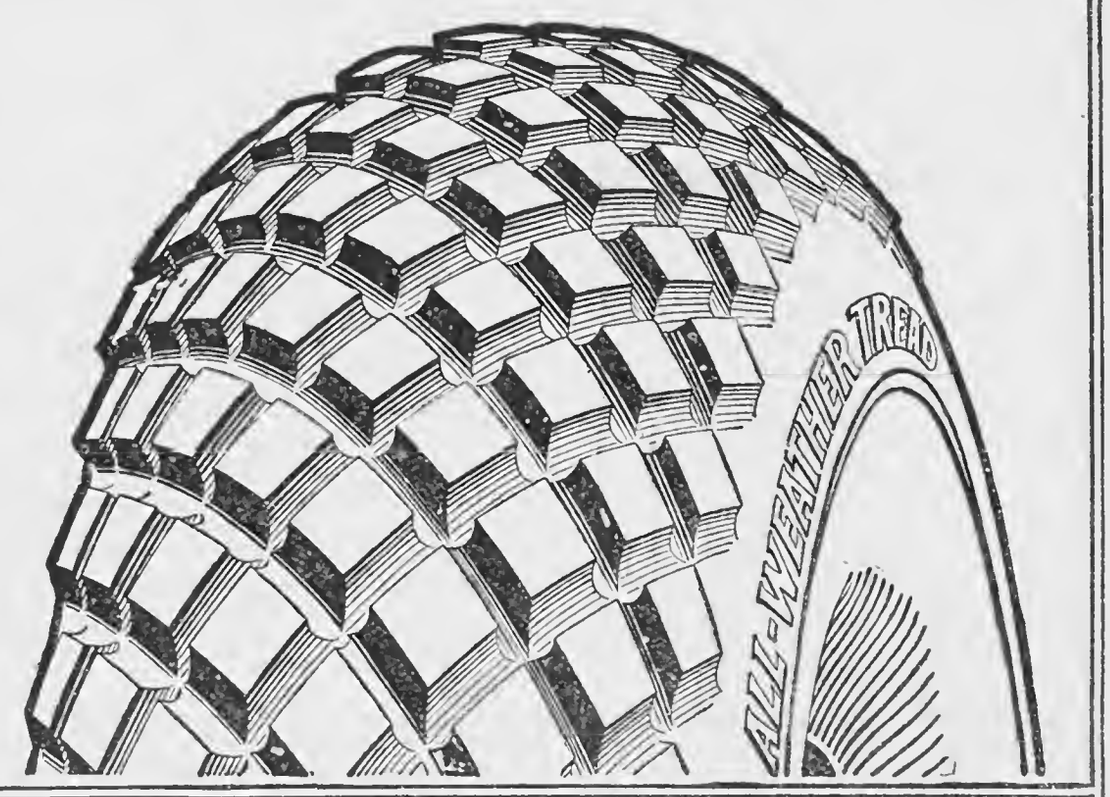
Blow-Outs
Loose Treads
Punctures
Skidding

Note How we Combat them in

No-Rim-Cut Tires



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Skidding is best combated by this same exclusive tread. The grips are sharp, deep, resistless. Yet the tread is flat and regular. It runs as smoothly as a plain tread.

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Save the avoidable troubles. Get all the safety, strength and mileage that you can. Then you have the utmost in a tire.

That is what Goodyear gives you. In the five ways cited, no other maker offers what we give.

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Construction of Cesspool.

HOW far must a cesspool be from the house in order to comply with the State's demand? Should it be constructed of concrete? G. P. D.
Honesdale, Pa.

Any regulations with regard to the position of a cesspool are likely to be those of your local health authorities, and may be ascertained by application to your board of health. In the absence of such regulations, you should construct a cesspool as far as possible from any well or spring supplying water for household purposes. The exact distance necessary for safety varies with the character of the soil; from 100 to 200 feet is not too far. A cesspool is not constructed of concrete, as its purpose is to permit of gradual soaking away of the contents into the soil through the interstices in its wall and from the bottom. It should be laid up with stone without mortar and covered with earth. Where a common cesspool is not desirable, or permitted, a septic tank of concrete may be constructed. This is a more expensive method of disposing of house wastes, but safer, and to be preferred. M. B. D.

A Thrashing Flail and Sweet Clover.

LAST year on the subject of thrashing beans, the flail was referred to, and that implement accused of breaking the beans. If so, it is the fault of the man doing the work, hitting the bare floor. Always strike a deep layer of straw. If more convenient, a canvas may be spread in the open field in a very dry time, and a small amount of beans, peas, rye, Sweet clover, or almost any grass or cereal may be thrashed in the field and winnowed in the breeze by holding the scoop high over a metal tub or basket and pouring the seed two or three times. A screen of proper size will take out the large stuff still contained and a second one the small stuff. In this way I have repeatedly prepared premium-getting rye and beans for the fair in a few minutes, and freshly thrashed cereals will look bright and fresh. I consider the flail a necessity on every place for saving small bits of grains and grasses for seed.

As good a flail as I have ever seen, with a swivel head, is easily made if you have or can obtain good tools to work with. I made my own as cheaply as I could borrow one, as I have all needed tools but a wood-working lathe. It needs but a few. A four-foot stick for the handle the size of a hoe handle may be made or appropriated. Into the outer end bore a hole with a sharp half-inch bit about five inches deep. Turn or whittle a pin to fit a hole made by the same bit, and leave a head one inch in diameter for the outer end. Make a bar of heavy wood 20 inches long by two or 2½ inches in diameter, with a hole at one end to connect with the handle. A piece of strong leather two inches by five with corners slightly rounded and a half inch hole near each end is so bent that the pin shall pierce both holes, with the grain or hair side of the leather both facing the same way, making the swivel. The pin is then inserted into the hole in the handle till it presses the leather against the handle. With a bradawl, make a hole through both pin and handle, near the end of the pin opposite to the head and insert a wood screw to hold it in place. With a leather thong tie the swingle to the leather swivel. If you have tools and materials handy, all but the pin can be made and put together in a few minutes. I have a wad cutter for a shotgun, with which I made the holes in the swivel leather, but a penknife would also easily make them.

Perhaps you wonder why I referred to thrashing Sweet clover. So many have spoken of the value of Sweet clover as forerunner of Alfalfa, and to fertilize the soil itself, that two years ago I sowed an acre, and this year planted corn on the ground, and on adjoining ground that did not have Sweet clover. The result on the growing corn crop convinced me of the value of Sweet clover, neither did my cattle have to be starved to force them to eat the young Sweet clover with avidity last year. E. W. A.
Michigan.

"I PUT my reliance in the wisdom of the plain people," said Senator Sorghum. "But suppose the plain people do not happen to agree with you?" "Then I refuse to be influenced by the clamor of the thoughtless crowd."—Washington Star.

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7 Bargains for the Farm!

Buffalo Farm Set: Pruning Shear, Steel Trowel, Steel Hoe and Champion Grape Picker . . **98c**	Buffalo 8-Piece Carpenter Set: Draw Knife, Hammer, Saw, Ratchet Brace, Chisel, 3 Bits . . **$2.63**	100 Solid Steel Bell-Faced Hammers.. **17c**	25,000 Squares 2½ Painted Corrugated Sheets, any length to 10 feet, full 28 gauge, per sqnare . . **$1.75**	250 Buffalo Sure-Grip Pipe Wrenches; hold up to 1 inch; something new . . **60c**	Buffalo Little Giant Tackle Block and Wire Stretcher **78c**	Buffalo One-Horse Farm Harness, extra heavy and well trimmed. **$16.50**

7 Bargains for the Man!

King Kole Men's Black Sateen Shirt	Men's Blue Denim Overalls	Men's Raincoat	Men's Corduroy Trousers	Men's Flannelette Night Robe	Wool Sweater Coat	Men's Heavy Cotton Sox
Double-stitched throughout, 36 inches long, faced sleeves, pearl buttons, extension neckband, and all other improvements. This garment is made of extra high-grade luster sateen, each.... **43c**	This garment is made with banded bib and swinging pocket, double-stitched throughout, made of high-grade double and twist, fast color, blue denim, sizes 32 to 50 (give waist measure and length when ordering) at..... **48c**	This garment is made of tan Canton, full cemented and double-stitched, guaranteed waterproof, extra well tailored, full size garment, all sizes from 34 to 50.... **$2.85**	Either in drab or brown color. This is a special thick-set corduroy, every pair guaranteed not to rip, sizes 32 to 42 (give waist measure and inseam when ordering) at..... **$1.95**	This is made of an extra good quality flannelette in assorted stripes, small military collar, mercerized braid and silk frogs, trimmed pocket. Sizes 15 to 19 (state size) at..... **89c**	Storm collar, sizes 34 to 46; colors, Oxford, Maroon and Navy, each... **92c**	Black and tan; this sock is suitable for workingmen and will give good wear. Per dozen pairs... **$1.38**

7 Bargains for His Wife!

No. 2609 Ladies' Umbrella	No. 602 W. T. Corset	No. 107 Ladies' Fine Linen Hemstitched Handkerchiefs	No. 770 Ladies' Fast Black Cotton Hose	No. 1411 Serviceable House Dress	No. 92 Cover-All Kimono Sleeve Apron	No. 1055 Ladies' Muslin Gown
26-inch, American Taffeta Top, Paragon Steel Frame and Rod, in Mission and Boxwood Handle, case and tassel, each.... **89c**	Having medium low bust, long hips, 3 bone stripping, wide solid web, cloth covered hose supporters, and made of strong coutil, each.... **88c**	⅛ inch hem, size 12½ inch, finished, one dozen in box, per dozen.. **$1.35**	Seamless, but with shaped leg, medium weight, suitable for every-day wear, per dozen.. **$2.45**	Made of Amoskeag check dress gingham, collar made of Kings' blue chambray, set-in sleeves, breast pocket; seams and cuffs piped with Kings' blue to match collar. Sizes, 34 to 46, at. **86c**	Made of Amoskeag apron gingham. Patterns come in blue checks, plain blue and grey stripe. Sizes: length 54 inches, bust, medium and large, at..... **44c**	Made of fine soft cambric, V-shaped neck, long sleeves, flare cuffs trimmed with fine imported embroidery, deep front yoke with alternate embroidery insertion, and ten fine tucks, and dainty bow of ribbon. Sizes 15, 16 and 17 at... **85c**

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Hope Farm Notes

COVER CROPS.—I have talked cover crops so much that there may be little more to say. This year, however, in the Eastern States at least, the cover crop question is more important than ever before. This crop growing through the Fall will not only prevent the loss of nitrates from the soil and add organic matter, but it will help us with the potash problem. These Fall-growing crops and particularly such as rape and turnips, have the power to take up large quantities of potash. Not only this, but their action upon the soil in decaying after they are plowed under helps to set free more plant food. Next year, when practically all fertilizers will be low in potash, we shall be obliged to look to the soil for our supply, and these cover crops will help us find it. Thus more than ever before it will pay to keep the cultivated fields covered with some growing crop this Fall. It is now too late to sow Crimson clover or vetch in our latitude. Rye is our old standby, with equal parts of Cow-horn turnips and rape seed along with it. This combination has gone into our corn. Ragweed is another "crop" which helps the potash supply. From the analysis of its ashes I believe this to be a very useful potash plant. It grows abundantly with us whenever cultivation stops, and we cut it and pile around the trees.

LIVING COVER CROPS.—Questions about sowing oats among the strawberries at this season—to serve as a Winter mulch—are beginning to come. I have often explained about this, but people do not remember or have not read it. Barley is a better grain than oats for the purpose, but a combination (half and half of each) will make a closer mat than either alone. The plan is to sow the grain about the middle of September when the ground is moist and after the crop has been well cleaned out. A thick seeding is made. On rich ground and in a wet Fall the grain makes a heavy, short growth among and around the plants. Frost usually kills the grain crop by December, and it mats down over the berry plants giving a partial protection and holding the snow. We never knew the grain to give enough protection to take the place of a good coat of manure or straw. In our own case we think it a mistake to interfere with the growth of the plants during the Fall. They are then forming their fruit buds for next season, and need good culture and the entire ground. In a peach or apple orchard the object is to stop cultivation and start a crop which will prevent growth on the trees. I want just the reverse of this on the berry plants, and instead of seeding something to hold them back I would crowd them along.

APPLE PROSPECTS.—We have a good crop of fine fruit this year, and the problem of disposing of it to advantage becomes a hard one. The early apples have been very low thus far. No one has made any money shipping culls or windfalls—in fact I think the time spent in picking such stuff has been wasted. There is no doubt as to the size of the country's apple crop this year. The European War will shut off a large foreign demand. There seems no way of getting the fruit into Germany, and the English people can hardly be expected to buy apples while the nation is under such a fearful expense for conducting the war. Some shipments have already been made, but the future trade will depend on what these earlier shipments bring. The Pacific coast fruit has been shipped freely to Europe the past few years, but the export trade will be small this season, and if this trade comes east at all it will go into competition with our local fruit. If the Western growers can receive the cost of package, packing and shipping and part of the cost of growing they will do well this year.

WHAT TO DO.—In the face of all these facts the Eastern apple grower must do some high living and quick thinking. Any man who will deliberately try to put poor fruit or careless packing on such a market as we have this year is worse than a dunce. Far better give such fruit away as an advertisement—not of what you have to sell, but of what an apple tastes like. Personally I expect to put my apples down to a fair price and work them off promptly in our retail market. What is a fair price? The cost of production and the packing and 15 to 20 per cent. above to cover shrinkage and losses. When I can get that I let my stuff go. I should regard the plan of holding fruit for a rise this year as a good gamble and no more. I am not trying to depress prices, but simply giving what I think to be the facts. I think this is one of the years when we can well afford to sell our apples close to cost in order to advertise them. The orchard business is one for a long series of years. We are sure to have, now and then, a season like this one, when, through a combination of circumstances, there is a heavy production and a curtailed market. That comes as a hard lesson for us to standardize and do better packing and use our surplus for advertising purposes. Sell the high-class fruit at the best figure we can obtain and

A HOPE FARM PLANT GROWER.

let the culls go for what they will bring to people who do not usually eat apples. This will make new customers, and another year they will all come back for more.

FARM NOTES.—I call it rather strange—this prejudice in favor of a yellow peach. The white peaches, like Carman or Belle of Georgia, are very much finer than Elberta, yet most people will hardly look at a white peach when "Ben Davis with a pit" comes along. That seems to me a good name for the Elberta peach, Yet most people still eat with their eyes and the yellow flesh is what gets them. Our Carmans gave a good crop this year. The older trees produced more small fruit than we like, but we still regard Carman as the best of its season for a local market. Many people sniff at the idea of using Carman for canning, but for those who are not color crazy the thick creamy preserve which Carman makes is about the top-notch. The best canning peach I know of, all things considered, is Crosby. A rather small peach, firm and solid, it comes out of the can in great gold nuggets of the highest quality. There can be no doubt that the war has hurt the market for peaches. Prices have ranged very low, but our own crop has sold freely at a profit to us..... Several people ask why we put manure or grass and weeds around the apple trees at this season. We usually plan to clean up the manure piles and cut the weeds and trash in late August. All this is carted out and spread around the older apple trees. Just at this season such trees are maturing fruit buds or finishing a crop of fruit. That is when they need most encouragement and help. I would not manure young trees at this time if they had made a proper wood growth, but the older trees need reinforcements right now. If a woman had prevailed upon her husband to beat the carpet, when would she go out with the cup of coffee and the plate of doughnuts? Right at the beginning of the end of the job when the man was prepared to quit and say "That's good enough!" when he knew there was dust still left in the carpet.....Those late planted potatoes are still green and growing. It looks as if we should get a fair crop after all—but I make no guess until the vines are dead. If we can work this scheme in our latitude it will prove a great help. Our regular potato crop is good—the best we ever had. You remember that we plowed under a big crop of green rye, packed it firmly, then opened furrows with a shovel plow, dropped the seed pieces right into the green mass and covered with a cultivator. We have had sufficient moisture to decay this rye and keep the soil fairly wet, and this has proved ideal handling for the potatoes. They were planted in a young apple orchard. As the potato vines die there comes in a great mat of ragweed and smartweed. This will be cut and piled around the trees and the potato ground harrowed and seeded to rye for another crop. H. W. C.

The Soil Under Trees.

WILL you give your opinion as to what caused my potatoes and corn to grow much larger in the portions of the lots where I cut down, last Winter, a large oak and a large hard maple tree? One of my neighbors claims the leaves have added fiber to the soil, but as our soil is shallow and underlying a heavy handpan, I believe the roots from these trees have broken up the hardpan and allowed the moisture to be stored up, and the crops mentioned have had the benefit. L. H. A.

Half a dozen or more reasons can be given. The leaves, or a good share of them, have for years fallen on the ground around these trees. This has added large quantities of plant food and organic matter to the soil. A good share of this added plant food was taken out of the lower soil, or from parts of the surface soil 100 feet or more away, as the trees, feeding roots run far. It was like bringing plant food and organic matter and spreading it around the tree. For years little of this was taken away, since the shade of these trees prevented crops from making a full growth. Very likely the feed has been used as a pasture in years past. The live stock sought the shade of these trees, and a good share of the manure was deposited there. The roots dug deep into the soil and brought up some plant food from the subsoil, and also made better drainage. Other reasons might be given to explain why this soil contained extra plant food, and was also in fine physical and chemical condition. Anyone who has ever cleared up an old stone wall or fence row, and planted trees or other crops, knows how all these things have combined to make the soil productive.

Rye in Silage.

I HAVE a field of rye which I am cutting now, and intend to shock. Can I mix this load for load with corn in the Fall, and fill silo without danger of spoiling silage? I would rather do this than have it thrashed. J. E. B.

Our own advice would be against cutting the rye in with the corn. Rye straw is very hard and tough. Cut into the silo it would carry quite a little air, and unless wet and packed down hard it would increase the danger of fermentation and rot. This plan of cutting straw in with the corn has been tried a number of times, but we understand the general opinion is against the practice. What we want is actual experience. Can anyone give it?

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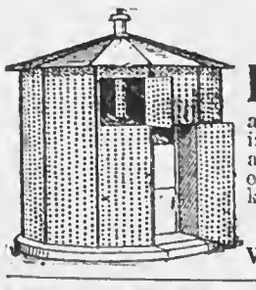

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Ruralisms

Propagating the Grape.

I HAVE a grapevine which bears very fine fruit, but I do not know the name. Would you tell me how to propagate and when to do it? W. W.
Olympia, Ky.

It is very easy to propagate most varieties of grapes, and others are very difficult. The ordinary way is from cuttings. These are made from mature wood of the last year's growth, cut from the vines almost any time when there are no leaves on them or from November to April. The wood should be of strong vigorous growth. The cuttings should be about eight to 10 inches long and with a bud near each end. They are best buried in the ground after being tied in small bundles and left until the time for making early garden, when they should be set in nursery rows in good soil. They can be set by a spade or set in a trench made with a plow and filled in with a hoe, leaving one bud above ground. In any case the ground should be packed very firmly about them, at the bottom especially. Good cultivation should be given. Varieties that will not root from cuttings are layered, that is done by covering a part of a living vine with soil and leaving it so during the growing season.

H. E. VAN DEMAN.

Varieties of Rhubarb.

IS there any difference between the rhubarb roots Myatt's Victoria and Myatt's Linnæus? Is one as good as the other? T. W. B.
Whippany, N. J.

The varieties Victoria and Linnæus are perhaps the most popular sorts and the most largely grown by market gardeners and for private use. The Victoria is very seldom catalogued by seedsmen under the name of Myatt's Victoria, and it is a question in the minds of many whether Myatt had anything to do with its origin. The Linnæus is a strong grower, producing long stalks of most excellent quality, early and productive. The Victoria is perhaps a little heavier producer than the Linnæus, is later and not considered of as high quality. Both are fine sorts and one will not go amiss in planting either or both of them. The Victoria is preferred by some, and the Linnæus is preferred by other growers, the friends of both claiming their favorite as being the better.

K.

Drone Trees in Orchards.

ON page 930 drone trees are discussed on your editorial page. Every orchardist has them unless exceptionally fortunate. My own share of them has been more than liberal, and since they are usually of strong and vigorous growth, my plan has been to put new tops on them by selecting buds from trees that were satisfactory producers. The method used has been to prune severely in Spring and force out a liberal growth of shoots on the stem of the tree. These shoots are budded during the ensuing Summer and allowed to start into growth the same season, and continue such growth during the following year. Then the top of the tree is sawed off just above the strongest budshoot, which is usually one of the uppermost. From six to a dozen buds are usually put in, and the new shoots are from three to six feet in length when the top is taken off. After that growth is rapid and bearing soon begins. A number of trees on my place, peach, pear, plum, persimmon and pecan, have been treated in this way, and in every instance subsequent fruitage has met expectation. A season seldom passes that one or more trees are not worked in this way. No longer ago than last April a lusty young persimmon and strong growing eight year old Mobile pecan were worked with dormant buds, not because they were drones, for they were both exceedingly prolific; but their fruitage was inferior. The stems of these trees are now bristling with budshoots two to four feet in length, while about one-fourth of the original top is still growing and fruiting above. When the remainder of these tops is taken off next Spring those bud-shoots will grow surprisingly fast and new fruits will be expected a season later. Then if the new persimmons and new pecans are not approximately equal in quality to those produced by the mother trees from which the buds were taken, it will be the first failure in a long experience.

To dig up or cut out a healthy, strong-growing drone tree is a waste. Why, indeed, may they not be budded as readily and with as good results as an ordinary, small seedling? The "scientists" who deny this have gone foul on their science. On the drone tree proposition, I am prepared to show the goods in quantity sufficient to convince the most obtuse or incredulous Missourian.

Texas. CHARLES. L. EDWARDS.

Tomatoes Dropping Fruit.

CAN you tell me the cause of young tomatoes falling off, at the point next to the fruit? The plants seem to be healthy, also plenty of blossoms. The plants are Ponderosa. O. B. A.
Southbridge, Mass.

This trouble is most usually caused by failure of the blooms to pollenize properly, which condition may be due to damp cloudy weather or too rank growth of the plants, or both. If either or both of these conditions are responsible, the plants will set fruit freely as soon as the adverse conditions have passed. Tomatoes should not be manured very heavily, one or two small shovelfuls of well-rotted stable manure to the hill is sufficient, even on the poorest soils. Any manures with a high percentage of nitrogen should not be applied in quantity to tomatoes, as the over stimulation will force an abnormal vine growth, which at the beginning of the season is likely to prevent the setting of fruits altogether, or cause many small fruits to drop, by reason of being insufficiently pollenized. This is almost sure to be the case in a wet season. The Ponderosa seems to suffer more in this way than any of the other standard varieties.

K.

Trapping Moles.

I WONDER if any of the Rural family can teach me how to catch moles? I have a good trap and follow instructions as closely as I can, but don't get the moles. Sometimes they burrow around the trap, or the trap is sprung and the animal not caught, but most of the time they seem to avoid the run altogether. How can I tell on which particular run to set the trap, and how set it to insure success? Beetles and drought have done us great damage and now to have the ground honeycombed with mole runs, is a last straw. L. W. R.
Michigan.

There are several makes of mole-traps in the market, constructed on the same general principle, all of which are very successful when properly handled. I have used the one make of trap for years and during that time have caught large numbers of moles, catching as many as seven in the same spot. The mole usually makes his headquarters along the fence or some other part of the grounds that is not disturbed by cultivation, and the best place to set the trap is at the point of entrance to the cultivated ground. The mole feeds twice daily, morning and evening, and seldom passes through the runs during the day, except in damp cloudy weather, when they sometimes work during the day. When the spot at which the trap is to be set is selected, take the hand and fill in the run with soil, pressing it down gently, making the soil in the run level with the surrounding surface. Place the trap in position over the filled-in run as fairly as possible, and push the standards into the ground until the treadle comes within about one-fourth inch of the ground. Now hold the trap in position with one hand and with the other catch hold of the part that contains the pins, pull it up and release it allowing the pins to jab into the ground with the full force of the spring. Repeat this operation three or four times. This will make an easy passage way for the pins, and go far toward success in the trapping of the moles. I find it a good idea to slip a thin piece of wood or stone under the treadle, this should be no larger than the treadle. By doing this the mole will spring the trap more readily and in fully 75 per cent. of springing the trap, catches the mole. Place half a brick on top of the trap; this additional force will drive the sharp pins through the mole, and in some instances prevent it from getting away after being caught, particularly when the pin has only pierced the skin of the body or foot.

K.

"WIL-YUM, what can you tell us about Columbus?" "It's next to last in the American Association."—Buffalo Express.

DON'T PAY WARTIME PRICES

Notwithstanding the European War the American People Need Not Pay Advances for General Merchandise

In spite of the great European war which has been used as an excuse by some catalog houses, manufacturers, jobbers and retail dealers for advancing prices here in America, we will not raise our prices on a single one of the more than 125,000 articles listed in our great catalog so long as our present enormous stocks last and our big contracts for merchandise of every description remain in effect.

No matter what other firms may do, no matter how much they increase their prices, remember you do not have to pay these increases if you will send your orders to The Charles William Stores, New York.

At the time this advertisement is written, that part of the business community engaged in the manufacture and sale of merchandise in America seems to have a bad case of rattles. Notwithstanding the fact that we are not in any way involved in the terrible struggle now going on between the great nations of Europe, notwithstanding the fact that America will have the most tremendous crops in all history, notwithstanding the fact that our mines are yielding their usual quota to be added to the world's wealth, notwithstanding the fact that we are at peace with all the world and conditions throughout the United States are fundamentally sound, manufacturers and producers, jobbers and retail dealers seem to have become fearful that somewhere now unknown to them, our supply of raw materials will be diminished, our supply of food stuffs will be inadequate and there will be a greater demand than we will be able to supply. Already there have been enormous advances in many lines of merchandise, particularly those lines which are produced in whole or in part by European workmen in European factories, or produced in American factories by American workmen with materials in whole or in part imported from the other side.

Dye stuffs, which are produced principally in Germany, have already been advanced in price 1,000 per cent. Just think of it! Dyes which could be purchased a few days ago at a fair price, are now sold at ten times the price they brought on the first day of August! Dye stuffs are used in the manufacture of all American fabrics, whether cotton or wool. Therefore, notwithstanding the fact that American manufacturers have not been compelled to lay in any additional stocks of dyes because most of them are fully supplied for months to come, cotton fabrics and woolen fabrics *have already been advanced in price from ½ cent to 12 cents and 15 cents a yard.* Our prices have not been and will not be advanced a single penny during the life of our present Fall and Winter catalog which is just now coming from the printers ready for free distribution. We have thousands upon thousands of yards of the finest cotton, woolen and silk fabrics in stock ready to take care of the needs of our customers. Therefore you need not be at all alarmed over this situation. We are ready to take care of you at prices even lower than the prices which we quoted in our Spring and Summer Catalog, so long as our big supply holds out. If you pay a penny more than our prices, therefore, you are simply throwing money away.

Swiss watches, jewelry novelties, most of the settings used in rings, lockets, lavallieres, bracelets, etc., come from Europe, but long before the war broke out our stocks were completed. But notwithstanding our enormous stocks on hand and our big contracts for all these goods, our buyers went into the New York market the moment the war cloud came upon the horizon, with instructions to sweep the market clean of anything needed to protect our customers, and we believe we can take care of every order you send us. We certainly will do so as long as we have the goods on hand.

While the linen weavers of Ireland and Scotland are still manufacturing these fabrics and it is possible to import them from Ireland and Scotland, unfortunately most of the flax used by our Irish and Scotch friends is purchased by them in Russia. If the war lasts any length of time it may become impossible for them to get their new supply of raw materials and under such conditions a scarcity of linens will force the prices up, but that will come, if it comes at all, in the Spring of 1915. Taking advantage of this situation many importers, jobbers and retail dealers are already advancing their prices, tho' they have not had to pay a penny more for the goods they have on hand at present. We have enormous stocks of linens, we have an enormous supply in reserve and we feel sure we can take care of every demand between now and the first of January at least. Not a penny of advance do we ask for any of these goods we now own and offer at our present catalog price.

Most of the tin used in America comes from Wales. There are large stocks in America and the miners are still at work in the Welsh mines. Boats are still plying their trade between England and America, but notwithstanding this fact, manufacturers, producers, jobbers and retailers are taking advantage of this situation to increase the price of everything in which tin is a component part. Block tin, tinware, enamelware, galvanized iron of every description, all are being affected by this arbitrary increase in price, which we feel is unwarranted. Our prices remain the same and our contracts, we believe, protect us for months to come. As long as we have the goods and our contracts are in force you can have what you want without a penny advance in price.

As you know, most of the finer laces and embroideries used in the manufacture of dainty gowns and lingerie are imported from Switzerland and France. Dresses made of lace and net and embroideries have therefore suddenly gone upward. Manufacturers have become panic stricken for fear that they will not be able to renew their present stocks when they are exhausted. Our stocks of dresses and lingerie made up of laces and net and embroidery are enormous. We have big contracts placed with responsible manufacturers for other tremendous supplies. Our shelves bulge with the new goods for Fall and Winter which were brought into our enormous stores before the war clouds broke. Our prices were fixed before the war commenced. Our merchandise was purchased long in advance and so long as our present great stocks last, and we think they are adequate to take care of the orders we receive until the first of January, we will continue to sell at the old prices.

Gloves, novelties, notions, low priced shot guns any many other lines which are produced in France and Germany, Belgium and Holland have also been arbitrarily advanced in price by importers and jobbers and retail dealers, but our prices remain on the same low level because we have enormous stocks, we have iron clad contracts with responsible people and we are prepared as never before to take care of all of the business which will come our way.

This situation ought to be a revelation to the American people as to the tremendous savings they can make by patronizing The Charles William Stores, the organization with foresight, with enormous financial resources, with tremendous warehouses where almost unlimited stocks are put away and held in reserve for just such emergencies as this.

Of course the little retail dealer with his few thousand dollars worth of merchandise is absolutely at the mercy of manufacturers, producers and jobbers when collectively they decide arbitrarily to raise prices. What can the little distributor of merchandise do under such conditions but pay the price demanded by those who supply his stocks of merchandise? This action is not confined to the little fellows, by any means. Even big dealers, with generous stocks of merchandise, are taking advantage of this present war time scare, we regret to say, to wring extra dollars, added profits, from their customers. We are anxious in this emergency to prove to the American people that ours is a store operated on a high plane of business ethics, that we have swept the world's markets for the best things that money can buy, that we have assembled this merchandise in our great warehouses on a cost basis below that of almost any other merchandise organization in America and we are ready now to pass this merchandise along to you with just one small profit added, which means that the price we name in our catalogs will make 50 cents to 80 cents buy as much high class, dependable merchandise as you can get anywhere else in America for one dollar.

If you have never purchased merchandise from The Charles William Stores, if you have never experienced the satisfaction which comes as a result of purchasing goods from us, sit down now and write us a letter or a postal card and say "send me a copy of your Big Free Catalog," and the day your request is received, we will mail a copy of our great catalog free and postpaid. Then as you study its pages, as you look through it leaf by leaf, you will realize what a tremendous factor we will be in helping you save money if you take advantage of the wonderful prices we quote, the splendid service we give and our offer to deliver your necessities to your nearest railway station or your doorway, all charges prepaid by us.

We regret more than we can say that in this enlightened age, such a conflict as that now raging in Europe should make a message like this address to the American people necessary. We hope that by the time these lines reach you, or very soon thereafter, all the warring nations will lay down their arms and that peace may again prevail. But, in the meantime, please remember that we do not feel there is the slightest reason for levying tribute on the American people for anything they use or wear because misguided nations in Europe are flying at each other's throats.

514 STORES BLDG.
The Charles William Stores, NEW YORK CITY

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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JOHN J. DILLON, Treasurer and General Manager.
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"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

IT is true that every now and then some good farmer comes up with a good argument for cutting Soy beans, cow peas, sunflowers, clover or some other crop into the silo with the corn. We do not question the claims made by such farmers, but we think it safer generally to fill the silo with corn alone, and cure the Soy beans or cow peas into hay. In theory the beans and corn together make a "sandwich" for the cows. Yet the corn silage and the dry legume fodder also make a sandwich, and in some respects a better one than when both parts of it are fermented in the silo. A cow certainly does better with some dry fodder along with the silage. In theory beans and corn put into the silo together may make a balanced ration, but it is too bulky to give results without grain and dry fodder. Our advice is to fill the silo with corn alone, and to cure the other crops to feed as hay.

*

ALL sorts of people are organizing these days. The latest poultry society is composed of the men and women who have entered hens at the Storrs egg-laying contest. The wives or husbands of the hen owners are eligible to membership. Judge F. M. Peasley is the first president, but hereafter the society will have a most original way of electing this officer. On November 1 of each year the winner of the contest automatically becomes president. Thus the president is elected not by humans, but by hens! You may possibly bribe or influence a human being so he will use the ballot box as a trap-nest for laying a bad egg, but you cannot fool or bribe or bulldoze a good hen. When she votes with her eggs you may be sure of an honest ballot. This new organization is a fine thing, for we venture the prediction that egg-laying contests will lay the foundation for a wonderful trade in utility stock. But what if in the future well bred daughters of the Hope Farm man's "scrubs" should elect their owner president?

*

THE European war has brought up a new discussion of the thought that this nation is a collection of European immigrants and their children and descendants. How many foreigners are there in the country? The census of 1910 found 13,515,886 persons who were born in other countries. This was 14.7 per cent. of total population. If we were to include the children of these people—born in this country—we should have about 35 per cent. The following table shows where the larger number of these people came from:

Germany	2,501,181
Russia	1,602,752
Italy	1,342,070
Ireland	1,353,155
Great Britain	1,159,968
Austria	1,174,924
Norway and Sweden	1,069,041
Hungary	495,600

Out of this number there were 6,646,817 males of voting age, of whom 3,034,117 had been naturalized. With this large foreign born population it is but natural that there should be strong national feeling if not race prejudice. Many of our readers have relatives and friends fighting on one side or the other, or suffering hardships in the war zone. It is but natural that they should feel deep sympathy for their native land. Let them, however, remember this: We or our parents came to this country seeking freer and fairer opportunity. We cannot expect such opportunity here for ourselves or our children unless we can keep this nation absolutely free from old world complications and quarrels. Once drag this country into European politics and we do not help Europe, while we do complicate and cripple our own future. Every citizen, no matter where he comes from, should help to keep our country safely neutral in this conflict. Most of us can help most by silence and self restraint.

I NOTICE, on page 1054, you say that to relieve the potash situation more lime will have to be used to release the soil potash. This is true where "burned lime" is used, but you will never get results of that kind from ground limestone. S.

We believe that is true. A sharp chemical action will be needed. Ground limestone is more gentle in its action. We should not, however, place too much dependence on this action of lime to supply potash. Some of the scientists think there is but little power in the lime to make potash available in the average soil. It will be most likely to do so on the heavy clays. Do not expect too much from lime on a sandy or light soil, and do not let anyone convince you that his particular brand of lime is superior.

*

THE New York State Fair passed into the "Exposition" class last year, and this year it went further along the way. Could some old timer have come back to the Exposition this year after an absence of 10 years he would hardly have known where he was. Many of the old faces are missed, but younger and energetic men have come in charge of departments, and there is more and more of a tendency to make the exhibits "educational" in character. At this great show it is possible for a farmer to see and study any variety or breed or any implement or farm product in which he is interested. There was an enormous exhibit of fruit and vegetables. The very size and beauty of this exhibit served to bring out the great, glaring defect in this exposition. This is the dreadful building devoted to the horticultural exhibits. They are now crowded into a poorly arranged, dark place with a roof which admits water like a sieve. On Wednesday there was a sudden and fierce shower, and hundreds songht shelter in this building. They might as well have secured their soaking outside. The rain came down through the roof in streams. Great pools formed on the floor; there was no dry place to be found in all the dark building. It was a disgraceful thing that these great industries of fruit and vegetable growing should be obliged to swim for their lives in a State building!

*

THE opening of public markets in New York City gives a good opportunity to farmers within 50 miles of the city. Housekeepers here are eager to buy produce at a fair bargain. They will go after the goods when convinced that it is profitable to do so. New York is built on a long narrow island, not easy of access with wagons as is the case at Boston, Baltimore or Rochester. That is why in former years the public market plan has not succeeded. To the west there are wide marshes and steep hills to cross before you come to the river, so that the average farmer, with one or two teams, cannot hope to take long daily trips to the city. To make these markets successful coöperative organization must be started. While one farmer may not be able to utilize this market he, with a dozen of his neighbors can do so. A large auto truck with two or three men could transport the produce which now requires 25 horses to move. These horses and at least 10 men would be left free for other work. This truck, running over the fine roads which are found in Northern New Jersey, would move this produce into the city market where the organization of farmers could maintain a store or stall, and obtain retail prices for their goods. That is what many individual farmers near Boston are doing, because they can drive directly into that city with their wagons. New York is so hard to reach from the west side that few individual farmers can hope to use the new markets permanently. A group of them, say 12 or more, within 60 miles of the city, can combine their labor and their capital and more than double the 35-cent dollar, which they must expect to receive as individuals.

*

THERE is one thing about this horrid European War which all people who are able to think ought to consider. Whenever a nation moves nearer to a republic or a more liberal form of government the military spirit weakens, and with it the desire for fighting. How could it be otherwise as men learn more and more how to govern themselves? For centuries the plain, common people were kept poor and subservient by strong military governments. There was nothing for them to do but to produce children and food to build up and feed the army. And what did they get in return? Protection from their enemies! Who were these "enemies?" Plain, common people like themselves who had the same life purposes and desires that they had, and who naturally should be their friends and partners. A few strong men for purposes of their own quarreled among themselves and kept up the fiction that the plain people who did the fighting needed to be "protected." This is the false and cruel proposition which has kept the autocratic military governments in power. Under democracy, where men come nearer and near to governing themselves, about the first thing which intelligent men realize is the folly of spending vast sums of money upon standing armies or war preparations. Democracy brings a sense of personal responsibility and men come to understand that they need no such protection when they can fairly reach men of their own class in other countries. When Norway decided to separate from Sweden there was no war because the working men in both nations agreed that there was nothing to fight about. Yet a few centuries ago a little group of "rulers" in each nation would have started a bloody war in order that their people might be "protected." Now, all this being so, Democracy faces a serious danger in this war. The autocratic, military government is always prepared to fight and strike hard. The more liberal a government becomes the less it is prepared for war, because the very idea of a liberal government is based on the common rights of men and not upon standing armies or ability to fight. The strong warlike nation can trample over the peaceful country before the people can prepare themselves for the fight. Herein lies the greatest test thus far presented to Democracy or popular government. If the republic must stand constantly with sword in hand prepared to fight a brutal and unscrupulous autocratic nation Democracy is in danger as never before, because the world has seen its blessings. These blessings of freedom may actually become a menace if the brutal power of war is to settle national dispute.

*

LAST year the daily papers printed sad stories of disease and death from eating chestnuts from trees affected with the blight disease. Gray squirrels were said to be dying and an epidemic among humans was reported. Careful investigation has been made by scientific men, and the results prove that such stories are simply fakes and nothing more. Not one case could be found where the blighted chestnuts were any more injurious to health than perfectly healthy nuts.

*

A SEED house in Indiana makes a glowing offer of "Marvelous" wheat. The statements are very cunning and plausible, and would lead a farmer to think the wheat is sure to yield 50 bushels per acre from little more than a peck of seed. We have had many letters from farmers asking about this wheat. We have it on the best authority that this "Marvelous" is the old "Miracle" wheat which was boomed so freely a few years ago. It is a good wheat—probably a strain of Fulcaster—but it is incapable of making the great yields which are claimed for it, by this firm. It is sold by reputable seed growers at a fair price, but buyers are told that it is nothing more than a good wheat, and that they should use at least one bushel of seed per acre. The advice to use one peck only is nonsense under general conditions. If you ask how it is possible to induce farmers to pay $3 and $5 per bushel for this wheat we give the answer in this letter from an expert grower:

"It is only on account of the assistance of the so called high-grade farm papers that———is able to get the extraordinary prices he is charging for this wheat!"

You have an entire sermon on the ethics of advertising and the responsibility of journalism in those few lines.

BREVITIES.

THE silent example will spread the sound idea.

A GOOD stockman is known by the culls he gets rid of.

THE balanced ration talk is good, but this idea is best. It isn't the amount you eat but what you can digest.

AS we expected, "feelers" are appearing in some of the papers about wonderful new fertilizers or sources of fertility. Pay no attention to them until the experiment stations give them an O. K.

THE seedsmen will have their troubles this year, for many of the best seeds and bulbs are imported. This year they cannot be sent in large numbers. It will be interesting to see what the seedsmen claim in their catalogues.

IT surely pays on our soil to sow Alsike clover seed. We use half Alsike and half Red. The Alsike will do better on sour or wet places. It might well be Alsike and Red-top for wet sour soils, and Red clover and Timothy for well-drained sweet soils.

MANY cattle are killed each year by lightning—usually when near wire fences. The wires of such a fence should be grounded to prevent such loss. The Wisconsin Station says: "To secure the best results ground wires ought to be placed about 100 feet apart and closely stapled to the post, so as to form a contact with every one of the fence wires. The ground wires should also extend slightly above the fence post, and like a lightning rod, should penetrate the soil far enough to reach moist earth. No. 8 or 9 wire is most satisfactory for this purpose."

NEW YORK'S NEW RETAIL MARKETS.

NEW YORK has for a long time been far behind other large cities in retail market facilities. The present city administration is attempting to remedy this, and on September 1 four localities in various parts of the city were set apart as free public markets. One is at the Fort Lee Ferry, 130th St. and Hudson River. This is convenient for New Jersey farmers and has a large consuming population reasonably near. The second is at 129th St. and Third Avenue; third, under the Queensboro Bridge, 59th St. and First Avenue; and the fourth, under the Manhattan Bridge, near Canal Street and Second Avenue. The last three are accessible to an immense number of people and can be reached by farmers from Long Island and Westchester County.

These markets are for the sale of foodstuffs only. No charge is made for space, which is open to farmers, peddlers and grocers. Police and other city officials are on hand to see that everything is orderly and weights and measures honest.

On the first day business was a little late in starting but developed considerable proportions before noon. There were plenty of push carts and peddler's wagons, but only a few farmers, though it is expected that more will be on hand later. Many farmers near New York are specialists, hauling solid loads of one kind—7,000 ears of sweet corn, 1,200 cabbages, etc. They usually sell such loads to grocers in large quantities or deliver to commission houses in a lump There are, however, farmers who can make up mixed loads suitable for retail trade, and no doubt they will take advantage of this opportunity for direct selling.

West Street, New York, from 12th to Cortlandt, is another locality specially adapted to retail market business. This is a very wide street where wholesalers are given large amounts of space for piling their goods, trucks are stored over night and Sundays, and there are spaces big enough for ball games. Yet there is still room for several retail market sheds. This place is accessible to New Jersey and Long Island farmers, but its chief advantage is that produce can be unloaded from the docks to the retail stands with hand trucks, thus cutting out one of the heaviest middleman's expenses, trucking.

This movement for more and better markets is a most hopeful sign. The old Washington Market is being built over according to the most modern ideas of convenience and sanitation, and with a large number of curb markets like those just established, where produce can be sold at the smallest possible handling expense, all classes of consumers in New York should be in conditions to keep the "cost of living" to the lowest consistent figure.

NEW YORK STATE NEWS.

FARM BUREAU NEWS.—Nassau County has just been added to the list of counties having farm bureaus. L. R. Simons is the manager. For the past three years he has been teaching agriculture in the Gowanda high school. What is styled as the largest farm bureau meeting ever held was that at Crystal Lake last month, when the bureaus of Allegany, Cattaraugus and Erie Counties united in a field meeting and picnic which was attended by more than 3,000 people. The Erie County Bureau has established, by privately raised funds, a home economics department and Katherine H. Mills, a Cornell graduate, conducts it. The Jefferson Bureau has become much interested in the growing of Timothy hay, and on August 25-28 the first annual Timothy hay show was held at Watertown. The farm bureau manager has interested many farmers in the growing of improved types of heavy yielding Timothy. Each grower brought to the show his 10 best individual plants of Timothy which were judged by competent men and prizes were awarded. H. M. Doyle has resigned as manager of the Oswego County Farm Bureau and on Sept. 1 his place was taken by E. V. Underwood, a former teacher in the Moravia high school.

NEW LAWS IN EFFECT.—Eighteen new laws went into effect on Sept. 1. Nine amend the code of civil procedure, four the penal law, three the code of criminal procedure, and one each the educational and agricultural laws. Hereafter all exceptions of criminals must take place at Sing Sing prison. It is made a misdemeanor to wear the badge or button of the Grand Army of the Republic or other organizations unless entitled to use such emblem. The educational law pertains to the registry of municipal bonds and the agricultural law provides that a certificate of inspection by the State Agricultural Department must be attached to every shipment of fruit-bearing trees, together with a label specifying the name or variety of the trees. Agents selling trees must carry a certificate showing their authority to act.

STATE GAME FARM.—The conservation commission has purchased, subject to a good title, the so-called Tamblin property in the town of Brownville, Jefferson County, as a site for a new State game farm. It consists of 240 acres and the purchase price is $7,000. The remainder of the appropriation of $25,000 will be used in the erection of suitable buildings and equipping the place with game birds.

IN COLD STORAGE.—The State Department of Health is in charge of the administration of the cold storage law which was enacted in 1911 to prevent the storage of improper food and the maintenance of a supply in storage beyond a definite period of time. The law allows butter to be kept in storage for 12 months, but any other article of food with the exception of fruit, nuts, cheese and vegetables, cannot be kept in storage for a longer period than 10 calender months. On August 1 the following articles of food were in cold storage in this State: Eggs 20,441,667 dozens; butter 10,883,018 pounds; fresh meats 10,609,352 pounds; poultry 7,621,305 pounds; pickled, salted and smoked meats 3,370,692 pounds. These figures indicate a very large increase in storage products such as named since May 1, except in poultry which shows a large decrease.

HOLSTEIN BREEDERS ORGANIZE.—The Eastern New York Holstein Breeders' Association was organized at Pawling, Dutchess County, recently. A large membership is anticipated as the Holsteins are very popular in that county. The officers are L. L. Lawson, LaGrangeville, president; Paul T. Brady, Patterson, vice-president; Towner Kent, Patterson, secretary-treasurer.

COMMISSIONER HUSON ON THE GRANGE.—In an address to the boys in camp at the State Fair Commissioner Huson emphasized the importance of farmers' organizing and said of the Grange that it exerts more influence than all of the other farmers in the State combined. The members are persistently watching all legislation that might affect the farmers of the State in the slightest degree. The members stand together for their mutual benefit. He further said that although the Grange has a membership in the State of more than 115,000 yet only about eight per cent. of the farmers of the State are members.

ALTON HAS FRUIT EXCHANGE.—Another branch of the Eastern Fruit and Produce Exchange has been organized at Alton, Wayne County, which will cooperate with the one recently organized at Sodus. The officers of the Alton Exchange are, president, Arthur Sill; vice-president, Arthur Gatchell; secretary and treasurer, M. F. Shannon; manager, Isaac Wagemaker. Packing houses will probably have to be erected at both places above named to accommodate both fruit growers and vegetable farmers at shipping time.

DAIRY AWARDS AT N. Y. STATE FAIR.

IT is the custom of the management of the New York State Fair to have the awards on butter and cheese all placed before the Fair opens its gates, and this work was completed on Saturday night preceding the opening. Each exhibit of butter and cheese is marked with a card on which is inscribed the number of points scored in the competition. The gold medal for the best butter exhibited in all classes was won by the Richardson-Beebe Company of East Aurora, with a score of 97. The silver medal went to the Rosemary Creamery Company of Adams, Jefferson County, with a score of 96¾. H. L. Smith of Crittenden won a special cash prize of $10 for having the highest average score in the three creamery butter classes.

In the cheese classes the highest honor—a gold medal—was carried off by John Lonkow of East Otto, Cattaraugus County, with a score of 99⅛. Carl Bolander of Falconer, gave Lonkow a close race with a score of 99 which won for him the silver medal. For the highest average in the cheddar, young American and sage cheese classes C. Gray of Omar, Jefferson County, took the special cash prize of $10. The Shefford Cheese Company of Syracuse won the $25 prize in the class for

FIXING THE BLAME.

THE MIDDLEMAN'S EXCUSE.

From the New York World.

cheese made by one concern, variety and attractiveness considered. H. S. Sweetland of South Dayton, Cattaraugus County, took the second prize of $10.

All competitors in the butter classes scoring above 90 share in the pro rata cash prizes in the ratio of the number of points in excess of these figures. In the cheese department the contestants must score above 92. There are a large number in each class. The pro rata prize in Class I (butter) $150; in class 5 (same) $75. J. W. D.

A SUCCESSFUL FARMERS' CO-OPERATION.

The Way to Combine is to Get Together.

PART I.

LARGE RETURNS.—If an incorporated stock company were to advertise stock and promise returns of nearly 500 per cent. profit annually, it would be branded immediately as a "get-rich-quick" scheme. Farseeing financiers would say that such an investment was neither practical nor possible under existing conditions. However, it is actually a fact that nearly 500 farmers in Chautauqua County, New York, have purchased less than $2,500 worth of stock in the South Shore Growers' and Shippers' Association and have realized almost $25,000 of profits in two years. Startling statement to those who do not believe in cooperation, but here is the story of such a venture. And after you have read it, you may be converted to the idea that where there is a will there is a way—especially among this class of farmers.

CONDITIONS INVOLVED.—Chautauqua County farmers are composed of three separate classes, as regards occupations. Dairying is almost the sole business among the farmers of southern Chautauqua, while fruit raising and gardening is left almost entirely to the region along the southern shore of Lake Erie. This is a strip of land about four miles wide, and running back from the edge of the water to a range of hills that is the divide between the Saint Lawrence and the Mississippi basins. Here is found the great Chautauqua grape belt that produces two million dollars worth of Concord grapes annually. This is the home of the unfermented grape juice industry and over four million gallons of the "national drink" were manufactured in this section last year. Three railroads skirt the shore of the lake and along the railroads are found more than a dozen thriving towns. In five of these, at Farnham, Irving, Silver Creek, Fredonia and Forestville, are found canning factories. Surrounding these factory towns is naturally found the gardening section, where for 25 years, the farmers have grown vegetables for the canneries. Tomatoes seemed to be the principal crop, although other produce was grown in smaller quantities. There was very little chance to market produce except to the canneries, and both farmer and canner knew this, but the advantage was all with the canner. The farmers were practically compelled to contract, during the Spring, for all the produce they expected to grow that season. The contracts offered were very unsatisfactory to the grower in many ways. Payment for produce was not made until December first or even later. The canner agreed to furnish baskets and containers for all produce, but failed miserably, generally, with the result that tons of produce rotted in the field at a total loss to the grower. If the grower protested or kicked about the conditions the canner simply annulled the contract which left the farmer without any market for his product.

TROUBLE WITH CANNERIES.—The average American farmer will permit himself to be imposed on for a certain length of time, and then will turn and fight with a vengeance for his natural rights, and the Chautauqua County vegetable growers are no exception to the rule. In 1911 a very large acreage of tomatoes was contracted with the canneries. During tomato harvest that Autumn the canneries failed, as usual, to furnish the grower with enough baskets. And to this fact might be traced directly the beginning of the South Shore Growers' and Shippers' Association. One day in September when tomatoes were ripening by the ton and baskets were scarcer than discontent, two large tomato growers were discussing the situation. One said to the other: "Cook, we ought to have an association to handle this tomato deal with the canneries. We've got to do something pretty soon or quit the business." Other growers joined in the discussion, and the cooperative idea spread so rapidly that it resulted in a meeting being called in Silver Creek. Fifty large tomato growers were present and it was the unanimous opinion of those present that a farmers' association would be a good thing for the community. A second meeting was held, this time at Sheridan, and the outcome was the organization of the South Shore Growers' and Shippers' Association.

FORMATION OF THE ASSOCIATION.—The new association was incorporated on December 28, 1911, with a capital stock of 1,000 shares of $5 each. The office was in Silver Creek and the officers were: President, F. M. Cockburn; secretary and treasurer, H. K. Palmer, who was also manager. A board of five directors was also chosen. The only salaried office was the manager. The first certificate of stock was issued January 16, 1912. During the next 30 days 110 shares were issued. The stock money paid in was used to purchase the necessary office equipment, and the association immediately began business.

THE TOMATO QUESTION.—Tomatoes were the one important issue. The canners had been paying $7 and $8 per ton. When the new association started negotiations with the canneries it demanded a more satisfactory contract, better basket conditions and an increase to $9 per ton. It was claimed with good cause that the crop was not profitable at $7 and $8 a ton. It was claimed that it actually cost $55 to raise an acre of tomatoes that would produce an average crop of eleven tons. The land was worth $150 to $250 per acre and a net profit of less than $40 was not considered very satisfactory. The canners gave little thought to the new factor, and absolutely refused to do business with the association, regardless of the price per ton. Furthermore they consistently kept signing up tomatoes with private farmers who had not joined the association. Consequently, the manager began hunting elsewhere for a tomato market. It was found that there were many firms using an immense tonnage of tomatoes annually, but few of these concerns seemed willing to depend on an association unknown, and of only recent existence, for their supply of tomatoes. However, at the last moment, a large Pittsburg pickling and canning concern agreed to purchase 500 acres of tomatoes at $9 per ton. The news of this large contract spread rapidly, and caused the new association to be looked upon as a factor of no mean proportion by the canning interests. Meanwhile the secretary and treasurer, Mr. Palmer, had moved from the vicinity, and Mr. S. J. Cook, one of the first promoters of the association, was elected to the office and made sole manager. C. R. BERGER.

THE WAR AND COMMERCE.

MAKERS of white glass are in difficulty because of the scarcity of oxide of manganese, made in Germany. The price has gone from $28 to $210 per ton. One ton is required for every 20 of the glass. Because of the danger to shipping in the North Sea, there is getting to be a shortage of wood pulp from Sweden, which furnishes two-thirds of the imports into the United States. Wood pulp prices have doubled, unbleached now selling at 2½ cents and bleached 3¾. All paper except newsprint has advanced. The news print concerns make their own pulp here. The foreign pulp is used in wrapping paper of various kinds, and the best grade bleached, which comes mainly from Germany, in ledger, bond and other high quality writing paper.

Jute used in baling cotton has become so scarce that cotton may be put up in its own fiber this year. The jute comes from India and the Far East.

Germany's exports to Great Britain have amounted to about $400,000,000 per year. Some items during 1913 were: Timber, $230,000; clocks, $180,000; steel girders, $160,000; steel bars, $700,000; woolen rags, $130,000; silk manufactures, $600,000; paper, $620,000, leather, $600,000.

The following nations have decreed a moratorium, or suspension of debt collection by legal process, for periods of one to two months to prevent undue pressure on debtors who, because of the war, are unable to meet their obligations as would be possible normally: Great Britain, France, Norway, Russia, Bulgaria, Egypt, Italy, Sweden, Switzerland, Turkey, Brazil, Argentina, Ecuador.

The market on grains was less active during the week, the prices being so high as to check buying. Wheat declined from two to five cents. There are now ample shipping facilities to Europe, particularly from gulf ports, where boats are usually crowded with cotton at this season. Foreign buying of oats is very heavy at full last week's prices. Demand for flour has slackened owing to the high prices demanded by the mills.

Important exports from New York from August 1 to 20 were: Sugar, 27,234,539 pounds; wheat, 755,681 bushels; flour, 139,931 barrels; lard, 6,641,644 pounds; bacon, 4,422,500 pounds. The total value of all items was $6,193,632. Great Britain was the heaviest buyer, taking 26,371,234 pounds of sugar, 4,377,695 of lard, 457,348 bushels of wheat, 26,424 barrels of flour, 3,861,263 pounds of bacon. The Netherlands took 1,332,015 pounds of lard; Denmark, 148,700; and West Indies, 197,359.

Woman and the Home

From Day to Day

COURAGE.

Because I hold it sinful to despond,
And will not let the bitterness of life
Blind me with burning tears, but look beyond
Its tumult and its strife;

Because I lift my head above the mist
Where the sun shines and the broad breezes blow,
By every ray and every raindrop kissed
That God's love doth bestow;

Think you I find no bitterness at all,
No burden to be borne, like Christian's pack?
Think you there are no ready tears to fall
Because I keep them back?

Why should I hug life's ills with cold reserve,
To curse myself and all who love me? Nay!
A thousand times more good than I deserve,
God gives me every day.

And in each one of those rebellious tears
Kept bravely back, He makes a rainbow shine;
Grateful I take his slightest gift, no fears
Nor any doubts are mine.

Dark skies must clear, and when the clouds are past,
Our golden day redeems a weary year;
Patient I listen, sure that sweet at last
Will sound his voice of cheer.

Then vex me not with chiding. Let me be.
I must be glad and grateful to the end,
I grudge you not your cold and darkness—me
The powers of light befriend.

Celia Thaxter.

*

HUCKLEBERRY tarts are delicious. Line pattypans with good pie crust. Beat two eggs with 2½ tablespoonfuls of sugar, stir in enough ripe huckleberries to make the mixture stiff, and add a little nutmeg or other spice. Fill the patties with this mixture, and bake.

*

THERE is a little girl in Springfield, Massachusetts, says the Youth's Companion, who, like many of her sex, resents the imputation that the feminine mind is not so strong as the masculine. One day her mother remarked on the apparent lack of intelligence in a hen. "You can't teach a hen anything," she said. "They have done more harm to the garden than a drove of cattle would. You can teach a cat, a dog or a pig something, but a hen—never!"

"H'm!" exclaimed the child, indignantly. "I think they know just as much as the roosters."

*

RECENT newspaper dispatches state that owing to the anticipated shortage of flour in Holland, bakers are already making bread from a mixture of equal parts of wheat, cornmeal, and potato meal, to which is added a small quantity of albumen. It is said that this bread is of good color and flavor, though rather close in texture. We infer that the potato meal referred to is what we buy as potato flour, from which we make our most delicate cake. This potato flour is made in Sweden, and sponge cake made from it is, as one appreciative person declares, light enough to fly right off the plate. It would be a good thing for American farmers if we could have this potato flour made here, instead of importing it.

*

WE are getting so much war literature these days that when we read for recreation we like to get as far away from it as possible. However, among recent novels there are three that will give a vivid idea of the people and the countries now involved in Europe; they are "The Children of Alsace," by René Bazin, which gives modern conditions in Alsace from the French point of view; "The Iron Year," by Walter Bloem, a German novel of the Franco-Prussian War, and "Red Wrath," by John Oxenham, an English story of the same war. "The Last Shot," by Frederick Palmer, and "Midstream," by Will Levington Comfort, both books by American war correspondents, give painful pictures of real war. In hideous realism, however, they are all exceeded by a new English book called "War," by W. Douglas Newton, which describes, in narrative form, the slaughter of scientific warfare, and the sufferings of a conquered people.

The Rural Patterns.

In ordering patterns always give number and size desired. Price of each pattern 10 cents.

7867, Girl's dress. Cut in sizes 6 to 12 years. Size 8 requires 2 yards of 36 or 44 inch material with ⅜ yard 27 inches wide for trimming and ⅝ yard for belt. 8208, Girl's long-waisted dress. Cut in sizes 4, 6 and 8 years. Size 6 requires 2 yards of 36 or 44 inch material for dress, with 1 yard 27 inches for trim-

ming and 1⅛ yards for bloomers. 7545, Middy costume for misses and small women. Cut in sizes 14, 16 and 18 years. Size 16 requires 5¾ yards of 36 or 44 inch material, with ⅝ yard 27 inches for collar and cuffs. 7478, Child's princesse slip or petticoat. Cut in sizes 2, 4 and 6 years. Size 4 requires 1½ yards of 36 or 44 inch material with 2 yards of embroidery; 2¼ yards of insertion and 1½ yards of edging. 7891, Child's dress. Cut in sizes 2, 4 and 6 years. Size 4 requires 2½ yards of 36 inch material.

8298, Ladies' surplus blouse. Cut in sizes 34 to 42 bust measure. Size 38 requires 1⅞ yards of 36 or 44 inch plain material. 8358, Basque with sash extensions. Cut in sizes 34 to 44 bust measure. Size 40 requires 3⅜ yards of 36 inch material with ⅜ yard 27 for collar and cuffs. 8145, Semi-princesse gown. Cut

in sizes 34 to 42 bust measure. Size 38 requires 4½ yards of 27 or 36 inch material. 8363, Two-piece skirt with tunic for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 2¼ yards of 27, 36 or 44 inch material for skirt with 2¼ yards 36 inch for tunic. 7877, Ladies' two-piece skirt. Cut in sizes 22 to 32 waist measure. Size 26 requires 2⅝ yards of 36 inch material.

No. 818. Design for embroidering an oval doyley twenty-three inches in length by sixteen inches in width. The scalloped edge is to be padded and buttonholed. The roses are to be worked in long and short stitch with the stamens of the flowers outlined and the centers of the

flowers in French knots. The leaves may be worked either solidly or in long and short stitch with the veins outlined and the buds and calyces are to be worked in solid embroidery. Stamped on pure white linen 18x24 inches, with mercerized floss to work, 35 cents.

Grapes Without Sugar.

WILL some of your correspondents tell me whether grapes can be canned without sugar? I have canned huckleberries and currants and had them keep perfectly, but have never tried grapes. I have quantities of them this year, but sugar is very high and my pocketbook is very thin. J. M. R.

Connecticut.

Most of us feel that our pocketbooks are thin when it comes to buying sugar this year, but a private letter from a little town in Holland received the end of August stated that the writer had to pay 25 cents a pound for salt, 50 cents a pound for sugar, and $1.50 a pound for butter. We have never canned grapes without sugar, and believe very careful sterilization would be necessary to avoid fermentation. No doubt some one who has experimented can give us her experience. The following method of canning grapes is quite economical of sugar, and gives good results, the flavor being very fresh: Stem the grapes carefully, without breaking the skin, and pack solid in jars. Make a syrup of one-half cup sugar and one cup water for each jar; if this does not flush it full, add more water. Lay tops on jars, without screwing down; set in large kettle, standing on rack or folded cloths, pour in hot water, until it is within three inches of the top of boiler, then bring to a boil, and let boil for one hour. Draw back and remove the jars, screw down tops, and when cool store in a dark cool place.

Drying Mushrooms.

CAN you advise me how to dry field mushrooms? MRS. M. C. C.

Mrs. Rorer gives the following instructions for drying mushrooms: Wipe and peel the mushrooms. Cover pie plates with white paper, lay the mushrooms on them, and put in a cool oven until dry. When quite dry and shriveled store in paper bags. We think it is wise to put the mushrooms on the warming shelf over the range, covered to keep off flies, until quite sure they are fully dry, as they are very succulent. They should be very fresh, and picked over carefully before drying, to avoid insects. Mushrooms are very largely dried in Europe both commercially and in domestic use.

APPLE SAUCE CAKE.—One cup of sugar, two cups of sifted flour, one-half cup of shortening, one teaspoon of cinnamon, one teaspoon of soda (strictly level), one-half teaspoon each of cloves and nutmeg, one cup of chopped and seeded raisins, sprinkled with flour, one cup of unsweetened, very sour apple sauce beaten smooth. Note that no liquid, baking powder or eggs are used. If the apples are not very acid, add to them one level teaspoon of cream of tartar. Sift together the dry ingredients except the soda. Cream the shortening, beat until light with the sugar, add the soda dissolved in one tablespoonful of warm (not boiling) water. Beat in the apple sauce, add the raisins, then the dry ingredients. May be baked in layers with an apple or raisin filling or bake in loaf and frost with a plain white frosting, or it may be served as a pudding with sweet sauce or whipped cream. MRS. E. M. S.

GOOD looks are not at our command; they are a gift of the gods; but good, straightforward manly appearance, and appearance without self-consciousness—which is the most disagreeable feature perhaps of all appearance—is within the command of every boy.—Lord Rosebery.

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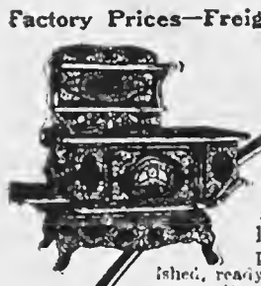

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Kalamazoo, Michigan

Tomato Relish.

I WOULD suggest that the recipe for tomato relish, page 1037, should also contain horseradish to make it keep without cooking. I enclose one which will keep in a crock, and which requires no cooking: One peck ripe tomatoes chop fine, skinned; add one-half cup salt and let stand over night. Drain out juices (which can be boiled down and added to soup); add three onions chopped, three green peppers and three roots of celery, use stalks also: two ounces white mustard seed, one ounce cinnamon, 1½ pints vinegar, grated horseradish, one cupful sugar to taste.

MRS. R. E.

Canning Corn.

I SHOULD like to tell the readers, some of whom, perhaps, have not tried this way, how I can my sweet corn. It always keeps well for me, and is nearly as good as new corn. To 10 cups of corn add one cup sugar and one-half cup salt. Do not add much water if any, and cook in a kettle till it is heated all through; let it bubble up, but keep it stirred so that it will not scorch on the bottom of the kettle. When thoroughly heated through, pack it in glass cans, with new rubbers, and seal, and it will keep the year round. It does not need freshening when you open a can, just add sufficient milk to cook, or rather to heat it up in and it is ready for the table, with the addition of a little cream and butter.

D. N.

Seen in New York Shops.

AMONG the new blouses for Autumn wear are some of white chiffon with colored coin spots; they have high lace collars wired at the back. Hand-painted chiffon with sheer lace, and hand-painted lace with chiffon cost from $6.50 up; they are not very striking, and are extremely perishable. A beautiful but simple blouse that costs $10 is white crepe meteor with long tight-fitting sleeves, Napoleon revers and a vest of fine lace. Another handsome model costing $8 is dark striped crepe de chine with a white collar and waistcoat, fastened with very large pearl buttons. These are all new French models, which are likely to be largely copied.

Some very attractive materials are new challis having a dark background with a pattern in tiny colored flowers, very similar to the patterns shown in flowered silks. They are all wool and 50 cents a yard.

Long transparent sleeves were a sudden variation in the basque dresses; some of the sleeves were of lace, others of net or chiffon. The lace sleeves are perfectly plain and tight-fitting; the net sleeves are sometimes tucked, or rather loose, and gathered into a cuff. Some of the basques have a dropped shoulder, the transparent sleeves seamed to this with a piping, while in other cases there is a large armhole, the transparent sleeve forming part of a guimpe which makes a vest in front. Some of these transparencies are so extremely diaphanous as to be rather startling. Then there are net over-blouses of the kimono shape, which are worn over plain waists, very often, it must be confessed, with a somewhat scrappy effect. These over-blouses are plain kimono shape, V-neck back and front, and loose elbow sleeves; those of white net are often edged with narrow black net pleatings. Their proper use is over a slip of silk or crepe de chine, but unfortunately a great many women seem to think they can freshen up any rather shabby waist with this net covering, and the effect is not happy.

Ribbon trimming is seen on many new gowns, some of the tunics being trimmed with five to seven bands of ribbon in graduated widths. Both satin and velvet ribbons are used. This is a revival of an old style which is always pretty.

Some pretty little rompers were of pink or blue chambray. They are made with a full-length closing down the back, and also open across the bottom edge, underneath, from one knee to the other. There is a wide belt and little patch pocket on one side, a round collar and cuffs of piqué, and a dog worked in colored cross-stitch on the left side. This makes a very pretty garment, as well as a serviceable one.

Corduroy and other velvety materials are likely to be very popular for Fall and Winter, both for gowns and suits. They are in rather dark shades as a rule, pheasant and prune being two fashionable corduroy colors, also a variety of grays. We have seen a number of beautiful costumes of mouse-colored velours or plush. Some of these have a velour Russian blouse edged with squirrel fur.

Cheese as a Meat Substitute.

WHILE meat is so high priced cheese may be used in many ways as a substitute. It is very nourishing, but many people find it rather hard of digestion. However, we usually find that when mixed with milk, bread, etc., and made into cooked dishes, it is more readily digested than when served uncooked.

French Rabbit.—Butter a baking dish and cover with broken bread. Over this sprinkle grated cheese, then another layer of broken bread and so on until the dish is full, having cheese on top. Pour over this one cup of cold milk into which has been beaten one egg, also two dessert spoons of hot water. Bake in a moderate oven.

Cheese Turbot.—Prepare a cream dressing of one pint of milk, one ounce of butter and one-half ounce of flour. Season with one saltspoonful of salt, two or three dashes of pepper and a pinch of mace. Into this dressing turn four ounces of grated cheese. Butter a pudding dish, then fill with alternate layers of this mixture and bread crumbs. Bake a golden brown. Serve hot.

Cheese Scallop.—Soak one cup of bread crumbs in fresh milk; beat into it three eggs, one tablespoonful butter and one-half pound of cheese. Strew the top with sifted bread crumbs, and bake in the oven a delicate brown.

Molded Macaroni and Cheese.—Cook three-fourths of a cup of macaroni, broken in small pieces, in rapidly boiling salted water half an hour. (Add a teaspoon of salt to a quart of water). Drain, then add a cup of milk and cook until the milk is absorbed; then stir into one cup of seasoned white sauce (use three tablespoons of flour in the making), add two tablespoons or more of grated cheese, and when cooled a little, a beaten egg. (Two are better). Turn into a buttered border mold sprinkled with bread crumbs and poach, standing in a pan of hot water, about twenty-five minutes. Turn from the mold and fill the center with stewed tomatoes.

Pepper and Cheese Custards.—Scald one cup of milk, add six tablespoons of grated cheese, and stir until the cheese is melted, then add two eggs slightly beaten and season with salt and paprika. Butter six individual molds generously and sprinkle with chopped red or green pepper, fill with custard, set in a pan of hot water and cook until firm.

Honey Drop Cookies.—Take one cup of sugar, one cup honey, one cup buttermilk, one-half cup sour cream and flour to thicken, with one teaspoon of soda. Drop by spoonfuls in cooky pan and bake in hot oven.

M. D. B.

SWISS CHARD.—Boil the leaves until tender, let drain, run through food chopper, put in kettle and cook for 10 minutes in any gravy. If chicken is the meat for the meal use chicken gravy, if pot roast use the gravy from the pot roast, or if roast lamb or mutton or pork use the gravy from any of them. We prefer this to spinach. We also can it for Winter use and we have greens as good as fresh greens any time during Winter.

K. A. C.

IRISH potato scones are very good; the secret of making them is to prepare them quickly, with very little handling, and have a good oven ready to receive them as soon as molded. Sift together two cupfuls of flour, half a teaspoonful of salt, and 1½ teaspoonful of baking powder. Then rub in lightly two tablespoonfuls of cold mashed potatoes and a teaspoonful of butter. Moisten to a soft dough with very cold milk, turn quickly out on the bread board, roll lightly to half an inch in thickness, cut into biscuits, and lay on a well-greased baking sheet or pan. Brush over with beaten egg, and bake in a quick oven for 15 minutes.

THE first lesson of life is to burn our own smoke, that is, not to inflict on outsiders our personal sorrows and petty morbidness, not to keep thinking of ourselves as exceptional cases.—James Russell Lowell.

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11A73—This is the very new and very fashionable Russian Tunic Skirt—and a genuine bargain at the "NATIONAL'S" low price of $2.98. It is made of "NATIONAL" All Wool Worsted Serge, chemically tostod for quality, color and serviceability, and the workmanship is up to tho "NATIONAL'S" usual high standard. It displays a stylish girdle-top and is smooth-fitting around the waist and hips. Tho tunic hangs in graceful lines and overlaps a fashionable plaited section, which gives comfortable width to the lower edge. Percaline foundation under the tunic. Invisiblo side closing.

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15A73—Boys' new style Norfolk Suit. Coat has yoke and plaits to waist-line, front and back alike. Twill lining. Full-cut knickers lined throughout. Navy blue All Wool Serge; also All Wool Choviot in medium grey mixture or medium brown mixture. SIZES: 5 to 14 years. Order it today. *Postpaid,* **$2.98**

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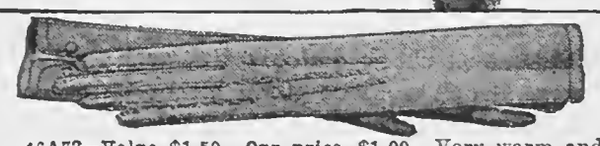

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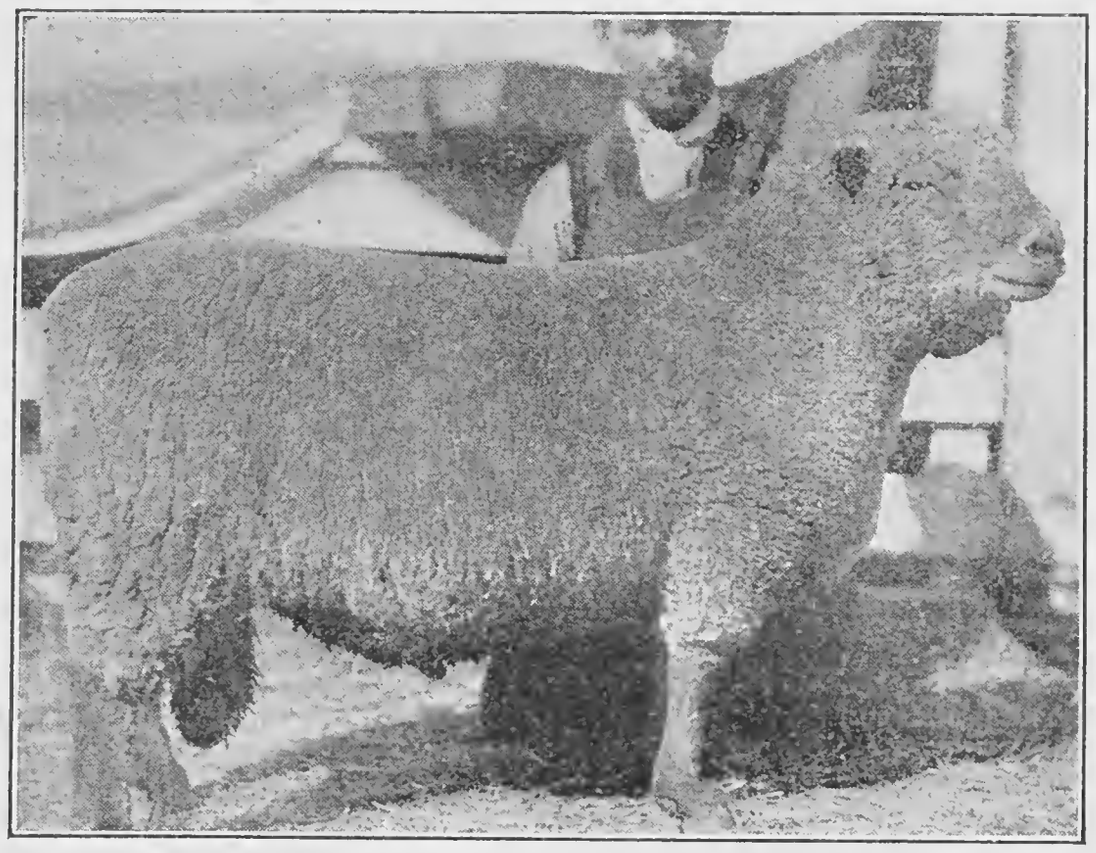
SOME BREEDING MYTHS EXPLODED.

IF memory serves us aright we have previously stated in these columns that there are no such diseases as "hollow-horn" or "wolf-in-the-tail" of cattle, and that the signs of the zodiac have no influence, good or bad, upon man and his mundane affairs. There are other myths, believed in by many farmers, which need "exploding" here.

Two of them are well brought to our attention by inquiries received by the writer. A New York State horseman writes: "Will you kindly inform me if any injury is likely to result from the use of an overhead check when driving a brood mare that is in foal? *Will the foal be marked?*" The other anxious inquirer writes that his English Shire stallion has a white face, which is highly objectionable to his patrons, and wants to know



A GOOD SPECIMEN OF SHROPSHIRE.

if we can tell him how to dye the white face black to prevent the colts from being marked with white faces. He adds that meanwhile he is careful to *blindfold the mares* mated with this horse so that they will not see his white face.

The writer of the first inquiry evidently believes that anything accidentally injuring or unnaturally affecting a mare in foal may have an injurious effect upon the offspring. The second man believes that foals unborn may be marked by things seen by the dam. Both of these beliefs are erroneous.

The tight over-check distorts the neck it tortures. Such a check strap is cruel, unnecessary and certainly detrimental to the mare; but the distorted "ewe neck," caused by the check, will not be reproduced in her foal. The foal may be injured to a certain degree, as regards nutrition and development, if constant wearing of the check impairs the appetite and thrift of the mare, so that she frets, weakens and loses spirit and flesh. The development and health of the fetus (unborn young), apart from the influences of heredity, are largely dependent upon the nourishment and health of the dam. Lack of feed, over-feeding, damaged feed, unsuitable feed, indigestion, constipation, or the reverse, and sickness or disease causing fever or undermining the strength, irritating the nerves and leading to emaciation may lead to the death and expulsion of the fetus (abortion), or malnutrition indicated by smallness and weakness or rickets of the offspring at birth. Distortion of the neck is an accidental condition; not hereditary. Accidental or induced distortions or mutilations are not hereditary, and are not transmitted to the offspring. For example, dishorning of cattle and docking of dogs do not induce hornless calves or curtailed dogs. This is equally true of docked Hackney horses and domesticated sheep. In the same way a sire is not hereditarily injured for breeding purposes by a fracture which causes distortion of a limb, or by an accident which causes lameness and wasting of the tissues of a foot, joint or muscle. These are acquired blemishes, and are not transmissible.

The man who keeps mares from seeing the white face of his Shire stallion believes in a very ancient myth. It was first suggested in the Biblical account of Jacob with his peeled rods and ring-straked, speckled and spotted sheep and goats (Gen. xxx:32-43). It is said to have been believed in by that old-time successful breeder of Aberdeen-Angus cattle, William McCombie of Tillyfour, Scotland, and that he therefore had all of his fences and farm buildings painted coal black so that his "bonnie black doddies" (mulleys) might not become off colored, or rather, might be influenced to remain black in color. The Shire stallion marks his progeny with white faces because that marking is a hereditary feature and characteristic of the breed, just as the exuberantly "feathered" (haired) legs of this noted draft breed are characteristic. One could no more prevent Shire foals from coming with white faces by enveloping the stallion's or mare's head in a gunny sack, or painting it red or blue, than he could prevent "feathered" legs by lopping off a limb or clipping the legs of a Shire mare or stallion. Offspring is not marked by what the sire or dam sees. There is no danger in that respect to a Jersey herd from pasturing "over the fence" from a Holstein herd.

At one time it was commonly believed that mating with a certain sire leaves a temporary or indelible impression upon the mind of the female or "taints" her womb so that subsequent offspring from a different sire will "favor" or be "marked for" the previous mate. We find that this myth still has many believers, so that a word on the subject will not be out of place in this article. The theory referred to is technically termed "telegony" and it has been perfectly disproved by prolonged, exhaustive and conclusive experiments made by Prof. J. Cossar Ewart of Scotland. He mated pony mares with zebra sires and obtained striped hybrid foals. The same mares were next mated with pony sires of their own breed and color. Every possible combination of breeding of this sort was tried, but not in a single instance did any foal from a pony sire and pony dam show the slightest trace, at birth or maturity, of the zebra sire previously used. This proves conclusively that when a mare has a mule foal to a jack and is subsequently bred to a horse the offspring from the latter mating is not in any way influenced or marked by the previous jack sire. No impression or "taint" remains with the female. The characters and markings of her offspring, by sires of her own breed, are wholly determined by heredity. This is true of all the animals from which we breed, therefore the man whose purebred Guernsey cow has had a calf to the service of a roaming scrub bull is injured only to the extent of the difference in market value of the scrub calf and the calf that would have resulted from mating with a purebred Guernsey bull. He cannot obtain "damages" for mythical injury to the future reproducing qualities of the purebred cow. Thousands of instances have been advanced by breeders in seeming disproof of these asser-

(*Concluded on page 1113.*)

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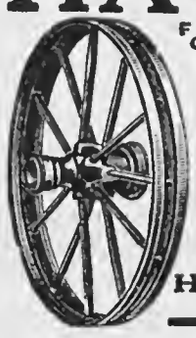

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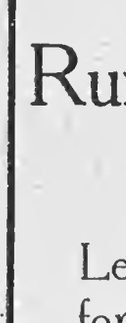

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tions; but all of them are susceptible of explanation on the basis of atavism or reversion, by which is meant harking back to the lost characters of some remote (atavism) or comparatively recent (reversion) ancestor. In conclusion it may be added that the myths mentioned here no longer are believed in by scientists who have made a special study of the subject. A. S. ALEXANDER, M. D. C.

University of Wisconsin.

JUSTICE TO THE RAZORBACK.

THE razorback hog is generally personified as the essence of all that goes to make up the unregenerate scrub. His long snout, his bristly back and gaunt unlovely frame, have furnished theme for unbroken satire and ridicule. He appears doomed to go down in history as a synonym of intractability and general worthlessness. And yet when we look critically into the life of the razorback and the conditions under which he was required to live, we find many redeeming features and are driven to conclude that his personality was, after all, only a case of the adaptation of an animal to its environment. The razorback, like certain restless human characters flourished only on the frontiers of civilization. Originally found throughout the Ohio River Valley States, he has gradually retreated into the uncleared swampy bottoms and canebrakes of the Southwest. Here he can still be found, but in constantly diminishing numbers as his domains are contracted by ax and plow. The razorback was the natural logical product of his wild environments. The modern farmer with his sleek Berkshires and Poland Chinas, from whom all straight lines and angles have been eliminated, is prone to regard not only the razorzack, but the man who claimed his ownership with contempt as a case of scrub and a master who lacked the energy and thrift to improve his stock, but such a view would be quite unjust. The purebred hog of today would have been as glaring a misfit on the frontier as the razorback would be in a show pen at the International. The razorback was a veteran ranger of forest and swamp. He knew nothing of fat cornecribs, balanced rations and fine pens. His body was seasoned by exposure against Summer heat and Winter frost. His master, if he were laid claim to at all, was master only in a mildly nominal sense. In storm and drought and flood he was left to root out his own destiny. The reptiles and carnivora of the forest menaced our fearless Berserker, but he shunned none of them. One night around the fire grandfather talked.

"I have seen," said he, "the razorback in all stages of civilization, in dense canebrakes, as fierce and untamed as the savage peccaries of South America and also as scavengers on the outskirts of frontier hamlets. One day I saw on the back steps of a house a large cat lying comfortably asleep. A hungry razorback came sauntering along. The back gate was open as he came abreast of it and 10 feet away lay the cat. With a rush the hog seized the sleeping animal, planted its sharp hoof upon it and with crunching of bone tore its body asunder. A few seconds more and the cat had disappeared, leaving not even a scrap of fur behind it. Early one morning while breakfasting with a pioneer, the harsh grunting barks of a drove of razorbacks drew us from the table. Following the sound through the woods, we found the hogs collected around the upturned roots of a large tree where a sow had been sheltering her litter of pigs. On the top of the roots, six or eight feet from the ground, stood a wolf, treed while trying to carry off a pig and not daring to jump down into that mass of frothing jaws and clashing tushes. Suddenly with fierce grunts, an old sow was seen coming up with lightning speed. Comprehending the situation, without a pause she rushes at the roots and her momentum carried her high enough to seize the wolf by the foot. In a moment he was dragged down, covered with the raging drove, torn to shreds and eaten bodily up."

A note of alarm from a razorback was always sufficient to call to its assistance everyone of its tribe within hearing, and woe betake the intruder if there were no means of escape. Not only did the razorback flourish without care, but it did an invaluable service in ridding the forests and swamps of snakes, poisonous and otherwise. Hogs are immune to snake venom, and they regard the reptile as a tidbit. Therefore there was enmity between the razorback and snake.

"One day," continued grandfather, "our camp cook set out a pot of mush to cool. An inquisitive razorback came along and thrust his long snout into it. In some way the vessel became fastened to the hog's head and off it ran squealing with pain from the hot mush, while hard behind panted the cook intent on saving his precious kitchen utensil that he could not afford to lose." It requires indeed no epicure to distinguish the ham of a razorback from that of a well-cured Tamworth, but nevertheless as the frontiersman annually replenished his rude smokehouse with the flesh of the hardy porcine ranger of the forest, his keen appetite found a satisfying relish in its nutriment and a strength to subdue the wilderness and prepare the way for the advent of the aristocratic purebred of today.

L. R. JOHNSON.

Cape Girardeau Co., Mo.

Eastern Beef Making.

THE Troy Times prints a statement from George Hills, a farmer in Rensselaer Co., N. Y., who has been experimenting at beef making. We would like to know where Mr. Hills sells his live cattle?

"Many of my neighbors have gone in for dairying. Selling milk brings a weekly income, but I am afraid most of the money goes for feed and labor, and in this section, where competent farm help is scarce, dairying is not as attractive as it looks. Cows must be attended to twice a day every day in the year, and there is never any let-up in the work. Raising beef is not so confining. Raising beef requires no large amount of money. At the age of six months the calf is weaned and then turned out. The first Winter the calf is fed a small quantity of meal once a day and the second Winter double the quantity of meal. The calf eats roughage grass in Summer and hay and other coarse fodder in Winter. The dairy cow has to be constantly fed on grain, but the beef cattle needs no such expensive food.

"I find that raising beef is as profitable as anything the New York State farmer can go into. Certainly land in New York is not as high-priced as Western land, and that should be considered in counting the cost. Counting my own work, the interest on the money invested and the saving in hired help and in feed bills, I believe New York State farmers will find raising beef is a business proposition and a good one. My neighbor, 'Case' Cottrell, told me he is going in for beef."

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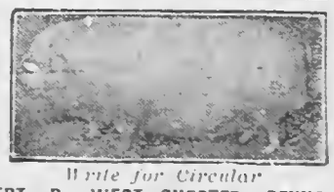

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The Henyard.

THE MOLTING HEN.

I HAVE heard a good deal about throwing hens into a molt lately. Is it a wise thing to do, and how is it done? Does it have any tendency to weaken the hen, thereby lessening the number of eggs? M. C.
Portchester, N. Y.

The molting period is the most critical time in a hen's life, as this time she replaces all her feathers and practically makes over her entire system. This is a great drain on her vitality. The molting period normally comes after a season of productiveness. Two factors have to be considered with the molting hen, inheritance and management. Under natural conditions, early or late molting is an inherited trait. While the inherited tendency of a hen is to molt at about the same time each year, the environment and management can change the time of molting, such as forcing an early molt. At present I do not know of any means of retarding the molt. Forcing an early molt is usually done as follows: Gradually reduce the ration fed, so that at the end of 10 days the hen is getting only one-third of her regular ration. Keep her on this low ration for about a week or 10 days. For the next week, gradually increase the ration so that by the end of the week the hen will be getting all she will eat. The object of starving is to stop egg production, and loosen the old feathers; then the heavy feeding of a rich ration gives the hen sufficient nourishment to start new feathers, etc.

Let us now consider the normal or natural molt before taking up the advantages and disadvantages of forcing an early molt. A hen that naturally starts to molt early shows by so doing that she has not the high constitutional vigor that is absolutely necessary to make a high yearly egg production. Some hens will lay a few eggs in Summer during a partial molt, but it is very rare for a hen to lay during the general or complete molt. The earlier a hen starts to molt the longer it will take her to complete the molt, especially if the Summer is very hot.

Over-feeding of a rich forcing ration will very often cause a partial molt in hens; also if pullets are put on a too forcing ration, when they are first put into the laying house; it will, in many cases, cause a partial molt.

As many people prefer a hen that naturally starts to molt early, let us take a pullet that begins to lay in October, 1912, and starts molting in June or July, 1913. She has been laying eight or nine months. It takes the average Leghorn hen from 80 to 104 days to complete the natural molt, and then she does not start laying for some time after the molt is completed. It will be late in the month of September or October before she can be expected to resume laying. All experienced poultrymen know that Leghorn hens (yearlings or two years old), do not lay enough eggs during November and December to pay for food consumed and labor. So you see the early molting hen is carried at a loss for five or six months. An early molting hen should never be used as a breeder.

A hen that molts late shows that she has the high constitutional vigor necessary to make a high yearly egg production. A very late molting hen is in most cases a high producer. For example again: A pullet that starts laying October, 1912, and does not begin molting before the middle of September or October, 1913, has been laying 11 or 12 months. Hens starting to molt in September or October complete their molt in much less time. The cooler weather seems to shorten the molting period. The hen does not have to resist the Summer heat and grow new feathers at the same time. These late molting hens will in most cases complete their molt in December, some even earlier. In January there will be very little difference in egg production, either way, between the late and early molting hens. After January I have found the late molting hen always out-laid the early molting one. You see the late molting hens are carried a much shorter time at a loss, their period of productiveness is much longer, their yearly egg production is higher, and most important of all, the profit per hen is greater. For breeding use only late molting hens, and cockerels or cocks from late molting hens.

Forcing an early molt has many advocates; they claim that by forcing a naturally late molting hen into a general molt early, she will complete her molt early in the Fall and lay at the time eggs bring the highest price—November and December. It is true that a late molting hen that is forced to molt early will lay a very few more eggs during these months, but the net profits from the large number of eggs laid during the Summer, by the late molting hen, will be much greater than the profits, if any, from the few high-priced eggs laid by the forced molting hen. If a late molting hen is starved, and forced to molt early one year, the next year (if she is not forced to molt early) she will molt at her natural time.

Anything as drastic as forcing an early molt, and going against nature, must have some effect on the hen's vitality, for hens that are forced to molt lost more weight during the first part of the molt than hens that molt naturally. Also the forced molting hens lay fewer eggs during the year than the naturally late molting. From my experience the natural late molting Leghorn hen pays the largest net profits, and it does not pay to force an early molt with Leghorns.

EDWARD S. PARSONS.

THE MISSOURI EGG-LAYING CONTEST.

Mr. T. E. Quisenberry, director of the egg-laying contest at Mountain Grove, Mo., tells how Tom Barron undertook to select the poor layers in several of the contest pens:

"We looked up the records of each case and found that the hens which he claimed were of poor type and poor producers were among the poorest layers according to the records. In one case we had a White Orpington hen that had not laid an egg, and she was in a pen with 11 other hens. The hens were driven before him, and at first glance he picked out this hen; the hen was in good health and to the ordinary observer looked as good as any of the flock. He pointed out the good and bad layers in other flocks and the trapnest records verified his statements."

Mr. Quisenberry states that Mr. Barron did this "*without handling a single hen.*" The type of hen which Mr. Barron thinks indicates the best layers, is "a bird that stands high in front, the body sloping toward the rear. They usually have large combs and high tails, and a prominent large bright eye." Upon handling the birds he finds that the best layers have thin, straight, pelvic bones, wide apart, and that there is quite a distance between the pelvic bones and the rear point of the breast bone or keel. This indicates capacity, and lots of room for the egg organs. He likes the wedge shape, rather narrow in front but wide at the rear, and wide between the legs. Mr. Barron makes a strong point of having all the males bred from high producing hens, also of breeding from unrelated birds. His breeding pens contain two cockerels—own brothers—one of which is confined in ontside coop, and birds changed about every five days. Mr. Barron thinks the eggs are more fertile and the chicks stronger as the result of this five-day rest which the cockerel has.

As broodiness lowers the egg record Mr. Barron tried to eliminate this as much as possible, breeding preferably from those which never show broodiness. He thinks that the earliest laying pullets are likely to make the best layers. He thinks we could increase the egg production by feeding more wet mashes. A hen will eat more of a wet mash, and she has to be a big eater if she is to lay many eggs.

In the contest for the month of July a Missouri pen of White Leghorns wins the silver cup with a record of 239 eggs. (In the contest at Storrs the English pen laid 250 eggs.) All 10 of the highest pens for this month are White Leghorns. The 10 leading pens since the contest commenced are as follows:

	Eggs
White Leghorns, England	1,772
S. C. Red, Missouri	1,523
White Wyandottes, Pennsylvania	1,439
White Leghorns, Pennsylvania	1,427
White Wyandottes, England	1,356
Barred Rocks, Ohio	1,342
Barred Rocks, Illinois	1,341
White Rocks, Arkansas	1,338
Black Minorcas, Missouri	1,331
Black Minorcas, Missouri	1,317

This shows the English White Leghorns 249 eggs ahead of any other pen. The highest hens in this part of the contest are five of the English birds, with record of from 178 to 194 eggs; with three months yet to add to those figures. Mr. Quisenberry states that entries enough have been received for the next contest commencing November 1, practically to fill all the pens. Only a few are left to be filled. GEO. A. COSGROVE.

Pullets or Hens.

I READ in your book "The Business Hen," that one should not buy eggs for hatching without a guarantee from the seller that they were from old hens and not from pullets. I would like to ask where is the dividing line between pullets and old hens? Are eggs from pullets hatched May and June this year suitable for incubating next Spring? J. C. C.
Little Hocking, O.

The eggs from pullets in their first laying year would be considered "pullets' eggs"; pullets becoming hens after one year of age. The age of hens more than a year old are usually larger than those from pullets, and produce larger chicks; old hens have also demonstrated their longevity, as pullets have not. Aside from these reasons I can see no reason why the eggs from well developed and mature pullets should not be used for hatching and it is my practice to use them. April, May, and perhaps early June pullets can safely be used in breeding pens next year providing that their care and feeding has been such as to bring them well toward maturity and the individuals are of good size and abundant vigor. The use of immature pullets in the breeding pen could only result in deterioration in the flocks. I have some mid-May hatched pullets from which I expect to hatch every chick possible next Spring; these pullets are being cared for in such a way, however, as to fit them for their maternal duties when these are required of them. M. B. D.

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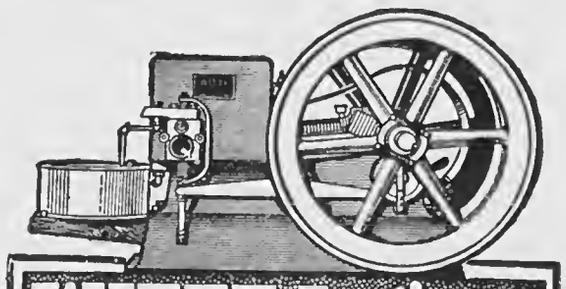

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Carbolic Acid for Abortion.

I NOTICE on page 1039 the inquiry of E. H., Maryland, as to abortion, and such calls for help are frequent. Perhaps the experience of myself and neighbors may be useful to our brother dairymen. In Spring of 1897, most of my cattle were killed because of tuberculosis, and in filling up the stables again a cow was purchased from a herd where abortion had prevailed. She aborted, and the next season half the herd aborted, and there was plenty of trouble. My next neighbor's bull became infected, and the next year he also had a lot of trouble. He used no remedy at first, and I spent many dollars for advertised remedies, but our results were alike—the trouble continued.

A stranger moved to our town who told us of the carbolic acid treatment, which, he said, had been used with complete success in his brother's herd in New Hampshire. We gave it a trial, and were well satisfied with the results. Later, others used it, and we were conquering the disease, years before I ever read of this treatment. The usual formula for abortion is "Isolation, disinfection, veterinary," which things we have tried and found to be expensive, useless and entirely unnecessary.

Get carbolic acid in crystal form. Dissolve by putting the bottle in hot water, use 10 parts of water to one of the liquid acid, or about a pint of water to each ounce bottle of crystals. Shake well before using. Dose, small tablespoonful once a day to all cows carrying calf, also the bull. Continue two or three weeks; then skip same length of time, and so on till near calving time. I have claimed that no treatment of bull was necessary but it was insisted on by the one who first told me of the remedy. In my herd, no cow was bred till six months after aborting, and I had little trouble with farrow cows, though without any treatment, many cows fail to breed.

Dump the spoonful of medicine in a feed of meal of any kind. Just a little bran, if no grain is being fed, and though the smell of carbolic acid is to most people quite disagreeable, I never knew a cow to refuse it. In some herds it has been found necessary to treat all heifers carrying first calf, or abortions would now and then occur, even two or three years after all old cows were breeding regularly. This remedy will not stop the disease in a case far advanced, but so far as I know is a sure preventive if used in season. When a cow has once aborted ten chances to one she will fail to breed or abort again. With this treatment she will not abort again and in a majority of cases will breed regularly.

Vermont. D. A. KNEELAND.

Land Plaster for Heaves.

I FEEL it a duty to help one in trouble when I can, as I have been a practicing veterinarian for nearly 30 years and have had many remedies for horses, but I somewhere saw in some paper or magazine that a heaping tablespoonful of common land plaster put in the feed and well mixed with it each night for four or five nights, or till relieved and then omitted for a few nights, then repeated as necessary, would relieve horses so troubled. I have used it in a number of exceedingly bad cases with uniformly good results, making the animals quite comfortable and useful in their work. It is based, I believe, on the fact that asthma and heaves are due to indigestion and the plaster or gypsum acts as a disinfectant to the alimentary tract. It is so simple and cheap and so easily given, and there have been no restrictions or change in manner of feeding, which is an item. Of course the evening feed would have to be such that the plaster could be well mixed with it. I have seen very bad cases so relieved that they were scarcely perceptible even to an experienced eye. Tell F. T. S., on page 1038, to try it and report the results, or anyone else who has a horse so affected. VETERINARIAN.

R. N.-Y.—This comes from a friend who has treated horses for many years. Land plaster or gypsum or sulphate of lime is often used on the soil or in stables and manure piles. Plaster of Paris is the land plaster calcined or heated so as to remove its water. *Do not use plaster of Paris* for this remedy. When this is mixed with water it "sets" or forms a hard mass. Small quantities mixed with the feed would not cause much trouble unless the stomach or bowels contained hard substances like stones or nails. The plaster of Paris might collect on these and make trouble. Veterinarians sometimes find such "stones" in the stomach of horses. The use of land plaster or gypsum as advised above would not cause trouble. The doses should be given only long enough to make the horse comfortable and then discontinued until he shows trouble again.

Malt Sprouts for Pigs.

WOULD malt sprouts be good to feed Spring pigs, and how much? Would they be good to feed a brood sow before and after she has pigs? A. J. L.
Clyde, N. Y.

Malt sprouts are not particularly useful for feeding Spring pigs, since they are rather bulky, and not concentrated enough for pigs. Furthermore, they are not easily digested by the young pigs, and animals fed on this material would not evidence thrift or great vigor. A better mixture would be made up of 100 pounds of red dog flour and 100 pounds ground oats, to which ten pounds of digester tankage has been added. A very good ration for brood sows nursing pigs would be as follows: 100 pounds of ear corn, 15 pounds of wheat bran, 10 pounds of digester tankage, five pounds of oil meal, two pounds of bone meal. Just previous to farrowing I would suggest using the same ingredients, but fed to the animal in smaller quantities; that is by means of using additional water, or feeding a thin slop. The consistency of this mixture as fed to the sow nursing pigs three weeks old, should be about the thickness of good buttermilk. The addition of some Alfalfa leaves to the ration at farrowing time increases its bulk and has given good results.

The brood sow should be fed all that she would clean up with a relish, and our experience shows that they can be fed liberally after the pigs are three or four weeks old; up until this date and age of the pigs the amount should be governed by their appetites, and also keeping their digestive systems free from irregularities or disorders. F. C. MINKLER.

Maine Law on Straying Cattle.

I HAVE a neighbor whose cattle have run at large more or less for the last eight years, and particularly so for the last two years and have caused a great deal of trouble in our neighborhood. Is there any law for putting them in the pound? M. A. D.

The laws in Maine require every owner of live stock of any kind to keep them on his own land or under proper subjection. No one has a right to allow his animals to annoy or injure his neighbors, and every owner is liable for all damage done by said animals, either in an action for trespass or in a lien on the animals. I should judge that in this case the trouble comes from the animals being allowed to run at large rather than that they get out of the enclosure. That being the case, the aggrieved party has as good right to recompense as though they strayed from a pasture.

No man is obliged to enclose his fields, or to build road fences. The highways are for legitimate use and not for the pasturage of any live stock. If, perchance, a drove of cattle or other animals do damage to crops, the owners thereof would not be liable if it could be shown that they used due diligence in trying to restrain them, otherwise they would have to pay all damages, as they would if the animals had strayed. M. A. D. should see to it that his line fences are in good repair and that they conform to the State law relating to division fences, which is as follows:

"All fences four feet high and in good repair, consisting of rails, timber, boards, stone walls, iron or wire; and brooks, rivers, ponds, creeks, ditches and hedges,

Removing Garlic Flavor from Milk.

THE disagreeable flavor and odor left in milk when cows eat wild onion or garlic within four hours before milking, can be removed by blowing filtered and washed air through the milk for 30 to 60 minutes, according to the strength of the garlic flavor. This conclusion, which is published in U. S. Department of Agriculture Farmers' Bulletin 608, shortly to be issued, is the result of a series of experiments made by the Dairy Division on methods of removing the garlic flavor which greatly lessens the commercial value of milk and cream. To remove the garlic flavor successfully, however, the milk must be raised to a temperature of 145 deg. and a method devised to keep the milk from foaming when the air is blown through it. To do this, the investigators constructed a special apparatus. The temperature of the milk is very important, as air blown into cold milk does not remove the garlic flavor, and also has a tendency to churn the fat. This may make a thin layer of butterfat form on the surface of the milk when bottled. It was found that in raising the milk to 145 deg., which was the best temperature for the removal of the flavor, it was best to stir the milk by some mechanical means. The stirring, however, should not be too violent or it may churn the fat.

Purchase of Cow.

I BOUGHT a Guernsey cow in October from a man who distinctly told me she was in calf and wrote me that she was bred in July and due in April. I told him I did not care for the milk last Winter but did want it in the Spring, and he said that was just the cow for me and even made me an offer for the calf when born. With this understanding I bought the cow only to find later that she was not with calf at all. When I notified the seller of this he wrote he thought I must be mistaken, that he would not have sold her had he thought she was not with calf, but that as several months had passed he did not feel responsible, and that other cattle men assured him he was not responsible. I feel that the cow was not as represented, and that the seller should take her back and refund my money or make it right in some way. K. W. M.
Connecticut.

From the facts stated in your letter it would seem to be indi ated pretty clearly that the seller warranted the cow to be with calf, and that this was not merely an expression of his inion, and the breach of this warranty gave you the right to return the cow immediately on your discovery that it was not with calf. Inasmuch as you have held it from April until this late day you have probably waived the right to return the cow, but you still have an action for damages against the seller and should recover the difference in value between the cow if she had been with calf and as she is, without. M. D.

Millet Hay.

I HAVE been informed by farmers that if German millet is allowed to go into heads to make dried fodder for stock that it is not as good as when cut before heading. Is this true? S. H.
Pierce, Pa.

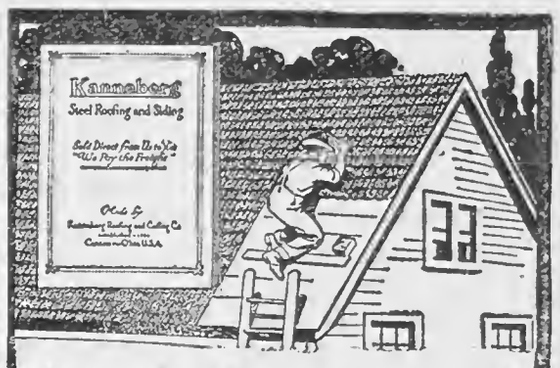
Millet hay made after the plant has formed its seed is all right for cattle, but should not be fed to horses. Such hay has a bad effect upon the horse, giving trouble with kidneys, and also trouble with the joints and legs. A number of cases are reported where horses fed on this hay have died. The fodder is all right for cows, but the wise plan will be not to feed millet hay to horses at all.

STIRRING WATER-COOLED MILK.—The Department of Agriculture has issued a note on this subject regarding their experiments in cooling milk. In experiments made with cans where the top of the milk was above the water level, it was found that the milk above that level remains from five to six degrees warmer than the portion below the level. Bacteria consequently will develop at a higher rate in the top of the milk, and when later the milk is mixed, the souring of the whole canful will be hastened both by reducing the temperature of the whole and also by the increased number of bacteria in the warmer portion. In the experiments all the cans were cooled by the same method. The milk in some of the cans was stirred every 15 minutes while that in others was not. The water in the cooling tank was 62.6 deg. Fahr. The milk that was stirred cooled from nearly 90 deg. to slightly above 60 deg. in three hours. The unstirred milk did not get down to a similar temperature for four hours and 15 minutes. Meanwhile, in the unstirred milk all the milk above the water level in the running water was five to six degrees warmer. The comparatively rapid decrease in temperature when the milk was thoroughly stirred at intervals of fifteen minutes demonstrates the advantage of agitating the milk while cooling.

Leaking Teats; Lame Calf.

FOR the benefit of C. E. S. of New Jersey, who asks for remedy for leaking teat, I use a quick blister just at the opening of teat, when dry is best. The healing contracts. Let entirely alone after blister is applied. We never used it while milking. We have tried collodion and alum water, no luck with either; the blister never fails us. 2. We have a bull calf six months old, stiff and lame in his joints; lies down quite a lot. I think he was overfed on oil meal when about three months old. What can we do for him? C. H.
New York.

1. We advised use of flexible collodion, alum solutions, etc., while a cow was giving milk and leaking from her teats. Blistering may be all right when a cow is dry, but it cannot be done when the cow is giving milk. In our experience, too, the leaking may not occur when a cow has her next calf. We have no objection, however, to use of a mild blister on a dry cow. 2. Physic the calf with castor oil; then give him 10 grains of salol twice daily and feed light, laxative feed. Let him have some exercise on grass. A. S. A.



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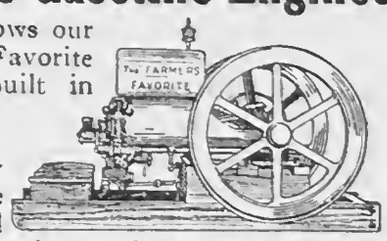

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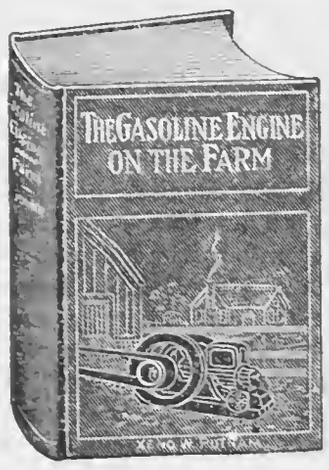

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WORKING OVER STALE BUTTER.

AS a storekeeper I take hutter in trade —some of it very poor in quality. Other storekeepers do the same, and it would be possihle to get hold of large quantities of this poor stuff. Would it pay to work this butter over and ship it after cleaning it up? S. B. J.

I doubt whether it is a practical proposition for the people who run small grocery stores in farming districts to rework country butter and get it in such shape that they could sell it for enough more when it came to market to pay them for the expense incurred. It would he necessary to have a combined churn and worker, which would call for a considerahle outlay at the start. The man who would do the work should also have a good understanding of hutter making. If the storekeeper himself has had no experience in this line of work, I question whether he would he able to improve the product very much. If one has the equipment and experience in hutter-making to warrant the undertaking, the general process would be as follows:

Fill the comhined churn and worker about half full of water at 55 or 60 degrees F., depending on the solidity and general character of the butter. Put the butter to be reworked into the churn and revolve the churn several times with the workers in gear so that the hutter may be well washed. Draw off the water and again fill the churn approximately half full of water. Repeat this process three or four times until any bad odors have been washed away. This washing will remove most of the salt from the butter and likewise a large amount of the color. In order to restore the salt content and color to the butter the rewashed hutter should be salted heavily enough so that the completed product will have at least 3 per cent. of salt. The butter should he salted rather heavily in order to ohscure any lingering traces of bad flavors. No more salt should he employed than will dissolve. The coloring should he thoroughly mixed with the salt before the latter is added. When the colored salt has been thoroughly distributed over the hutter the color also will he uniform throughout. A. A. BORLAND,

Professor of Dairy Husbandry.
Vermont College.

A Concrete Block Silo.

IN regard to my silo shown, at Fig. 484, it cost all told $430. In places where good gravel can be obtained easily this same silo can be made much less; two good men can make 100 blocks a day and the mold to make them in cost $15. My blocks are 8x15 and there are 1200 in my silo. The silo is girded with ⅝-inch steel rods, every three feet, laid inside the hlocks in a groove made on purpose. I have the best material I could get; clear pine doors. My silo is very heavily plastered inside with cement and a little lime, just enough to make it stick well. My silage came out perfectly clean up to the very wall. There is no douht that these silos are an ornament to any farm. We usually cut our corn when the lower leaves hecome dead. We cut and hind corn and as soon as wilted begin to fill silo hy cutting and hlowing it in with an ordinary corn hlower, keeping corn as it comes into silo slightly higher in center and tread down well around the sides. If you have good rich silage, the kind that makes the cows laugh, raise corn that ears heavily; it saves buying extra amount of grains and cows will actually shell out the milk to surprise you. With good sweet silage you can make milk just as cheap in Winter as in Summer, and get double the price for it.

Lewis Co., N. Y. WM. S. GOUTREMONT.

Live Stock on Grain Stubble.

TOM BARRON, the English poultryman, gave us all an idea of "intensive meat production" with his experience. On 20 acres Mr. Barron keeps 7,000 head of poultry and 10 cows and "has some hay to sell!" It is necessary to utilize "every grain and every bug" in order to reach such results. We do not, in this country, half begin to utilize our farm resources. For example, the stubble of grain fields. Such fields are usually left to grow up to clover and weeds, yet here is what English "Farm and Home" advises:

It is nowadays neither advisable nor convenient to send our pigs out as a herd for the purpose of saving the fallen corn under present conditions, for the energy wasted would probably be almost as costly as the food which was saved. There is, however, no reason why a large flock of turkeys should not be kept on a corn farm, and fed during the harvest month in the stuhhles, as, although the same principle applies, it does so in quite a minor degree. While the turkey is far less excitable and determined a feeder, not expending his energy so freely, he takes much longer to matnre, and therefore can be trusted to waste very little, and not to diminish his growth by this means. Although I hold the opinion that a wellhred turkey will pay as well as a sheep, I am conscious of the value of the flock on the stubbles, consuming, as they do, seed-hearing weeds, and, while finding food for themselves, maintaining the cleanly condition of the land. If we omit thistles, nettles, and docks, there are few weeds which the sheep will refuse, and as many species produce hundreds, and some thousands, of seeds on one plant, it is not difficult to appreciate the economy of the practice.

Live Stock on Fruit Farm.

"LIVE stock feeding in addition to our fruit growing keeps our force busy nearly the entire year,' says W. W. Farnsworth of Lucas County, Ohio. "We allow hogs to run with our steers, and the manure pays for lahor, and we make some profit. The profit lies in supplanting the steers with hogs. When we no longer can feed at a profit, we will use cover crops and commercial fertilizers. We generally feed about 60 steers, and intend to feed a larger number this year. Our ration is made up of silage, corn and cotton seed. We purchase most of our feed, and last year we bought considerahle clover hay. When clover hay is too high we feed straw and fodder and increase the cottonseed to balance the ration. It is our aim to pay original cost, pay interest, risk, feed and labor, and have the manure net. A year ago, owing to having less hogs we did not do that well, and the year previous we did hetter. We allow about two-thirds as many hogs run with the steers as there are steers. More hogs may he kept, where corn is fed in shock, than when ground. We give the hogs tankage and skim-milk, and we pay 10 and 15 cents the hundred for skim-milk. We sometimes raise pigs and at times huy our hogs, in any event, we like to have them weigh 75 or 80 pounds, when we put them with the steers. We try to secure 350 pounds gain on the steers in six months. Last year we bought a little early and paid 7½ cents, and sold for 8½ cents. In huying at times we visit the Chicago market, and sometimes of a local buyer, and we sell to a local buyer when our stock is ready to market. Our feeding is done in sheds and small yard, and haul to orchards and fields as fast as the manure accumulates. The profit largely lies in the hogs, for they get most of their feed from the droppings." W. J.

AILING ANIMALS.

Wart on Goat.

I HAVE a valuable Angora buck that has a bloody wart about one inch across on top of neck near horns. I have been using peroxide on it, which keeps it down hut does not cure it. There is no veterinary near me. Can you give me a cure I can use myself? C. E. D'G.

Notch, Mo.

Peroxide of hydrogen is practically useless in such cases. It would be best to cut the wart out and then stop the bleeding by application of a hot iron, or Monsel's solution or powder. If you do not care to operate paint the wart twice a week with dilute nitric acid, after smearing lard around the part. A. S. A.

Cat With Worms.

We have a cat that has worms; he is very thin. What remedy is advised?

Delaware. A. N. J.

Two or three grains of santonin may be given, according to size of cat, after starving the animal for 12 hours. Give a dose of castor oil three hours after administering santonin. Worm medicine for dogs and cats may be bought in any drug store, ready for use. A. S. A.

Navicular Disease.

COULD you tell me about navicular disease in horses? What is the cause of it, and can anything be done except unnerving? I had a horse unnerved for this trouble a month ago. He is free from lameness, but people tell me his foot will he dropping off before long. Will it come off if properly cared for, kept growing and free from disease or bruises? The horse is 18 years old, weighs 1,050, travels with high hackney action. If his foot comes off, will it grow again, and how long would it take before horse could he used again? R. A. D.

Massachusetts.

Any veterinarian capable of properly unnerving a horse for navicular disease should be trusted to give the information asked for in this letter. Sloughing of the foot is comparatively rare, following the "low" operation. In an 18-year-old horse it would necessitate destruction of the animal. If the operation was properly done, and you allowed the veterinarian to care for the horse sloughing will not be likely to occur. A. S. A.

Goitre.

I HAVE three goat kids, horn in May, one huck and two does. Ahout three weeks ago the buck had some hunches come on his throat—each side of the throat just hack of the jaws. He did not seem sick, ate and played as the rest, so I let it go, thinking he had caught cold perhaps and would soon be well again. Since then the bunches have grown, until now his neck seems thick all the way down. The bunches are separated and one is larger than the other. Now the other kids seem to have bunches starting on their necks. They do not act sick, and are fat and in good health otherwise. Can you tell me what is the trouble, and what I shall do to cure it? L. B. C.

New York.

The thyroid glands are enlarged, constituting "goitre," which indicates constitutional weakness, the tendency to which is hereditary. If the kids are well nourished and allowed to live a natural life, without pampering, they may outgrow the trouhle. To hasten recovery clip the hair from the swellings and paint them with tincture of iodine every other day until the skin becomes irritated; then stop the treatment until the skin recovers, when it may be repeated, if seen to be necessary. If the enlargement softens from formation of pus it will have to be opened. A. S. A.

Indigestion.

I HAVE a colt foaled June, 1911, which was in fine condition and apparently normal till ahout January or Fehruary, 1913, when the hair began to drop from the face and spots on the body. She also seemed to crave more food, but rather lost than gained in flesh. I treated for lice. She was turned out to pasture early, some distance from home, brought her hack in July; hair was gone from mane and tail, body looked about the same, hair off and small spots elsewhere. I consulted veterinarian of good reputation and he said skin disease, gave medicine and wash; hair started a little on tail. She was boarded out from December 1 till middle of May; general appearance improved; body quite well covered, mane about as good as her mother's (not long) but only the lower half of the tail has hairs, averaging perhaps five inches long. What do you advise? M. I. K.

New York.

Indigestion explains the entire trouble and still is present. Feed on whole oats and one-ninth part of wheat hran, along with dry hay. Do not feed grass. Give the drinking water hefore feeding. Work or exercise the horse every day. Once daily wash all hairless parts with plain cold water. Give half an ounce of Fowler's solution of arsenic night and morning. Gradually discontinue the medicine when the colt is in good condition, taking at least ten days to the work. A. S. A.

"THE woman threw herself into the river," read the teacher. "Her husband rushed to the bank. Now, tell me why her husband rushed to the bank?" "To get the insurance money," yelled the class.—Cincinnati Enquirer.

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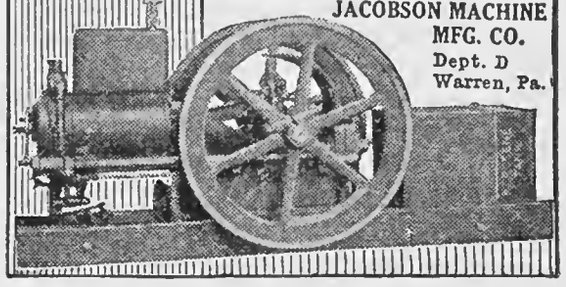

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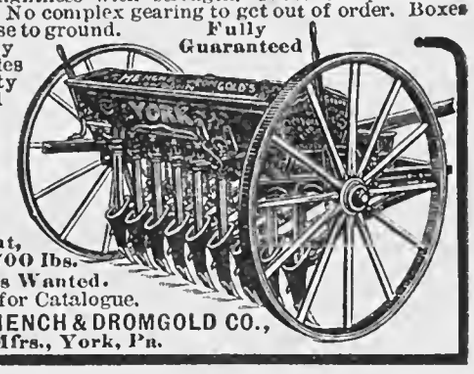

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The Henyard.

THE EGG-LAYING CONTEST.

THE forty-third week shows a big drop in egg production, the output for the week was 2,866, as against 3,065 the previous week—a drop of 199 eggs. Tom Barron's White Leghorns make the highest score, viz., 53. A. B. Brundage's S. C. Reds take second place, with a score of 52, and Francis F. Lincoln's White Leghorns are third, with a record of 50 for the week. W. C. Morgan's Buff Plymouth Rocks are fourth, scoring 48; two hens in this pen laid every day in the week. The average output of all the pens this week is a trifle less than 34½ eggs each. In the total score Francis F. Lincoln's White Leghorns are 16 eggs ahead of Barron's White Wyandottes, and it looks now as if the Connecticut pen would win, though Mr. Barron still thinks that Wyandottes may lay well enough in the last few weeks to more than even up the score. Storrs pen No. 42 has laid more than any other pen, their total being now 1,841; but they are not competing, being fed differently.

There are five experimental pens of White Leghorns from Storrs Agricultural Station, and it is worthy of note that pen No. 42, which has been fed sour milk ever since they were hatched, is now 327 eggs ahead of the best of its sister pens. If sour milk feeding is wholly responsible for this great gain, then it seems that dairying and poultry keeping ought to be combined. Below is the record for the week at Storrs:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	28	1,219
F. L. Tuttle, Massachusetts	18	1,238
Waveny Farm, Connecticut	36	1,202
J. F. Francals, New York	33	1,439
White P. Rocks.		
Albert T. Lenzen, Massachusetts	33	1,302
F. H. Benton, Connecticut	32	1,308
Storrs Agr. Station, Connecticut	34	1,081
Storrs Agr. Station, Connecticut	35	1,149
Storrs Agr. Station, Connecticut	36	1,273
Storrs Agr. Station, Connecticut	36	1,125
Storrs Agr. Station, Connecticut	29	972
Buff P. Rocks.		
A. A. Hall, Connecticut	38	1,313
W. C. Morgan, Jr., Connecticut	48	1,045
White Wyandottes.		
Tom Barron, England	38	1,801
West Mt. Pity. Yards, Connecticut	22	1,080
Merrythought Farm, Connecticut	35	1,635
Neale Bros., Rhode Island	47	1,629
D. J. Ryan & Son, Connecticut	40	1,226
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	40	1,239
Dr. N. W. Sanborn, Massachusetts	28	1,196
Am. Buff Wyan. Club, New York	41	1,093
H. L. Hamilton, Connecticut	40	906
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts	39	1,223
Single Comb Reds.		
Robert Seaman, New York	25	995
J. S. Gillespie, Connecticut	42	1,206
Dr. J. C. Dingman, New York	28	1,099
Burnham Plty. Farm, Massachusetts	21	944
H. P. Deming, Connecticut	37	1,174
Geo. P. Dearborn, Florida	26	1,304
Dr. J. A. Fritchey, Pennsylvania	29	1,397
Ernest Underhill, New Jersey	24	1,085
W. H. Bumsted, Connecticut	35	856
Pinecrest Orchards, Massachusetts	36	1,396
Harry B. Cook, Connecticut	12	1,188
Colonial Farm, New Hampshire	25	1,240
A. B. Brundage, Connecticut	52	1,545
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	34	1,202
C. S. Scoville, Connecticut	20	904
White Leghorns.		
Storrs Agr. Station, Connecticut	36	1,414
Storrs Agr. Station, Connecticut	37	1,506
Storrs Agr. Station, Connecticut	31	1,495
Storrs Agr. Sttion, Connecticut	47	1,841
Storrs Agr. Station, Connecticut	28	1,374
Braeside Plty. Farm, Pennsylvania	42	1,282
Glenview Plty. Farm, Connecticut	38	1,466
Manor Plty. Farm, New York	43	1,345
A. B. Hall, Connecticut	33	1,355
Marwood Plty. Farm, Pennsylvania	45	1,515
Geo. M. Harris, Connecticut	25	1,149
Bonnie Brook Farm, New York	44	1,532
N. W. Hendryx, Connecticut	36	1,361
J. J. Linehan, Massachusetts	41	1,264
F. F. Lincoln, Connecticut	50	1,817
Ceeil Guernsey, New York	36	1,522
Thos. W. Moore, Connecticut	44	1,399
Chas. N. St. John New York	44	1,392
Chas. W. Sherwood, Connecticut	41	1,323
L. E. Sands, Pennsylvania	40	1,336
Tomoka Plty. Farm, Connecticut	40	1,195
Venture Plty. Farm, New York	24	1,104
Mrs. K. E. Woodruff, Connecticut	45	1,369
Windsweep Farm, Connecticut	19	1,187
C. H. Savage, Connecticut	31	1,359
P. G. Platt, Pennsylvania	44	1,555
Heneta Bone Co., New Jersey	28	527
F. M. Peasley, Connecticut	41	1,369
Chas. Heigl, Ohio	42	1,314
Tom Barron, England	53	1,731
Branford Farm, Connecticut	44	1,503
James Munn, Massachusetts	35	1,248
Geo. A. Cosgrove, Connecticut	45	1,347
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	42	1,395
Blue Andalusians.		
E. D. Bird, Connecticut	42	1,168
Buff Orpingtons.		
O. Wilson, West Virginia	15	944
White Orpingtons.		
P. A. Demgar, New York	27	913
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	25	749
Silver Campines.		
W. J. H. Lobel, New Jersey	41	1,126
"Hens."		
H. W. Collingwood, New Jersey	40	1,144
Daniel Hine, Connecticut	30	1,029
Daniel Hine, Connecticut	13	1,036
Mixed Breeds.		
Profitable Poultry, Massachusetts	37	1,144
Profitable Poultry, Massachusetts	30	1,163

GEO. A. COSGROVE.

TRAINING FOR THE CONTEST.

SUPPLEMENTING my article on page 1041, let me say that the real meat or kernel came out of Barron's message to America when he told us how he has been in the habit of preparing his birds for a contest. It has long been known that in what is called the "pullet year" it is often possible to get a full 12 months of continuous work without any check from molting. In the case of non-sitters it is possible to get 12 months' work without interruption by either broodiness or molt. It is these birds that make the high records. He has been sharp enough to take advantage of this. He told us that he plans to have them all ready to lay their first egg just as soon as they reach the contest grounds.

If they seem inclined to lay before, he holds them back, as is quite possible to do by means of scanty rations, frequent removals to new quarters, etc. Then when they reach the full rations and permanent home of the contest grounds they get right to work and secure a full 12 months' work. He succeeded in doing it this year with his Wyandottes, but failed with his Leghorns.

Mr. Lincoln beat him at his own game with his Leghorns, and it looks now as though Barron cannot overcome the handicap which was placed on his Leghorns during the early days of the contest. Should Lincoln's Leghorns conclude to molt much before the close of the contest year, or Barron's Wyandottes get their second wind, we shall see a very exciting close of a very pretty contest.

When the Hope Farm man, with his scrubs, and the show bird man with his show bird type, take the same care in preparing a pen for the race which Mr. Barron and Mr. Lincoln have taken, we will find that there is not so much difference as now appears. I am frank to admit that heredity can be taken advantage of to some extent by the use of the trapnest, but it is not "the whole push" by any means. O. W. MAPES.

WYANDOTTES AS LAYERS.

I WRITE you in behalf of the White Wyandotte, which you have been hitting so hard of late. Naturally, we breeders should resent it a little. You say that that dumpling Wyandotte will not lay as many eggs as the longer-bodied birds do. Now we will take the six leading breeds in the contest, and see how they line up. First then we will average them up. First we will take the four pens of Wyandottes (not counting in Barron's) and the five leading breeds:

White Wyandottes, 4 pens	4,760
White Rocks, 4 pens	4,194
Barred Rocks	3,222
S. C. Reds, 4 pens	4,828
S. C. Leghorns, 4 pens	5,755

Out of 13 pens of S. C. Reds you find four pens to beat the dumplings, 68 eggs. Out of 33 pens of S. C. Leghorns you find four pens to beat the dumplings' 995 eggs. Now we will see what these different breeds average: W. Wyandottes, average per pen, 1,260 4-5; S. C. Leghorns, 1,127 23-33; S. C. Reds, 1,005 12-13; Barred Rocks, 1,055½; White Rocks, 969 3-7. You see the dumpling is not so far behind, and it stands a good chance of going farther ahead yet before the contest closes, so please don't hit the dumpling quite so hard yet awhile.

New Jersey. SIDNEY WEBSTER.

R. N.-Y.—But how do you know these pens are what we call "dumplings?" Most of these birds are "utility" Wyandottes and not "dumplings" at all. Some of the breeders seem to be trying to put us in the position of attacking the Wyandotte as a breed. Of course, they know better but it suits their purpose to try it. Our invariable answer is that words count for little—bring a pen of the "dumplings" right up to an egg-laying contest.

JULY RECORD AT EGG CONTEST.

THE laying record at Storrs, Conn., for the month of July, was 12,334 eggs. The largest number of eggs laid by any pen was 250, by Tom Barron's White Leghorns. The number laid by each individual in the pen is, 26-26-28-26-26-27-14-24-24-26, and three laid on the floor. P. G. Platt's White Leghorns are second with a total of 234 for the month. Pen number 42—the "sour milk" pen—is third with a score of 231; Charles Heigl's pen from Ohio are fourth, laying 228, and Geo. A. Cosgrove's pen is fifth with 227 to their credit for the month. Thos. W. Moore's pen laid 226, Chas. N. St. John's pen laid 222, Francis F. Lincoln's pen laid 221, Glenview Poultry Farm's pen laid 216, Marwood Poultry Farm 215, C. H. Savage's pen 211, N. W. Hendryx's pen 210, and four other pens laid 200 or over. All the above are White Leghorns; none of the other breeds reached 200. The greatest number laid by any other breed was 192, by Tom Barron's pen of White Wyandottes. H. W. Collingwood's "scrubs" laid 173, beating 49 out of the 82 pens. They laid more eggs in the month than any pen of Barred Rocks, or any pen of White P. Rocks, except one pen. They beat all the Buff Wyandottes, all the Buff Rocks, all the Rhode Island Reds, single or rose comb, except two pens, and they outlaid all the dunghills and mixed breeds; that is, during the month of July. In the grand totals they are exceeded by 59 pens.

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Dune Alpin Heavy Laying S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
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Send for catalogue.
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Tom Barron Cockerels
Strong, vigorous, egg-type cockerels, either Barron White Leghorns or Barron White Wyandottes, three months old, $2 each.
BARRED AND WHITE ROCKS
bred for heavy egg-production, same prices.
No time for correspondence at those figures. Order now direct from this advertisement, as it will not appear again. If not fully satisfied with stock, we will refund your money and pay return transportation.
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283-282-260-248 Egg
LEGHORNS and WYANDOTTES
Contest Pens; guaranteed leaders. Storrs' Buff Rocks, Vibert-Austin Reds, Waltons' Penc. Ducks, Geese.
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TOM BARRON'S
PURE ENGLISH WHITE LEGHORNS
Imported direct from Tom Barron's Farm. 280-egg strain. Breeding stock for sale. Cockerels, $1 and $2; cocks, $2; yearling hens, $1.50. Eggs, $1 per set; $5 per 100.
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TOM BARRON'S S. C. WHITE LEGHORNS AND WHITE WYANDOTTE COCKERELS
out of direct importation. Raised on free range. I guarantee these cockerels to be equal to any American-grown stock. 75 cts. to $2.60 each.
BROOKFIELD POULTRY FARM, - R. D. 3, Versailles, Ohio

Tom Barron S. C. White Leghorn Cockerels
from stock imported direct from his best-laying yards. April hatched, range grown vigorous fellows. Now only $2.50 each. Yearling hens, Wyckoff strain, 85 cents; Wyckoff cockerels, from record-laying stock, $1. Choice cocks, now $2.
R. T. EWING, - - Atlantic, Pa

PEDIGREED BARRON COCKERELS
Sire's mother laid 258 eggs; Grandsire's mother 248 eggs. Have raised nearly 600 birds from this male this year. HARRY B. COOK, Orange, Conn.

TOM BARRON COCKERELS
Leghorns from extra special imported pens 282-Egg, Wyandottes, 283-Egg, from imported pen. (Sisters to leading pen at Storrs.) C. W. TURNER, West Hartford, Conn.

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Pure Bred—Stock Imported—May Hatched
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The business kind. Yearlings, 90 cents; two-year-olds, 75 cents. No culls—all good birds.
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Buy your breeding stock now and save money. We need the room and will sacrifice 200 fine Cockerels at $1.50. Also a few high-record yearling hens at $2 each, if taken at once.
BINGHAM EGG FARM, North Bingham, Pa.

W. Leghorn PULLETS
11 to 17 weeks old, 35c. to 85c. each. Indian Runner Ducks, 14 weeks old, $1 each.
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A fine lot of cockerels and a few yearling hens.
P. G. PLATT - WALLINGFORD, PA.

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Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

Pullets, Yearling Hens, Cocks & Cockerels
in lots to suit purchasers at attractive prices.
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Hens, Pullets and Cockerels—none better layers—Write. - J. M. CASE, Gilboa, New York

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S. C. WHITE LEGHORN HENS—$75 net hundred.
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Utility S. C. White Leghorns—Selected yearling hens, $1 each, $90 per 100. GEO. FROST, Levanna, Cayuga Co., New York

Rose Comb Brown Leghorn Cockerels
from the two leading strains in America. $1 each until Oct. 1. CLAUDIA BETTS, Hillsdale, Michigan

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.

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Red, Speckled and Light. 1914 stock. Nearly matured. $10 per trio and up.
LINWOOD FARMS, Linwood Ave., Ridgewood, N. J.

DUCK DOLLARS Tiffany's Superior Mammoth Pekin and Giant Rouen
Ducks are bred to lay, weigh and win. Stock for sale. Write for prices. F. A. TIFFANY, R. 3, Phoenixville, Pa.

FOR SALE—THREE HUNDRED FULL GROWN FAWN AND WHITE **Indian Runner Ducks**
Layers of strictly white eggs at Farmers' prices.
FAIRVIEW POULTRY FARM, Mayville, N. Y.

500 MAY HATCH, GUARANTEED WHITE EGG STRAIN WHITE INDIAN RUNNER **DUCKS**
$4.50 per Trio. FRED S. DEYOE, Hunter, N. Y.

INDIAN RUNNER, PEKIN AND BUFF ORPINGTON DUCKS for sale reasonable. GEO. WILLIAMSON, Flanders, N. J.

Barred Rocks
500 Barred Rock cockerels and pullets for sale, 4 and 5 months old; splendidly barred and marked; big, husky specimens. All free-range stock and guaranteed satisfactory, at $1.50 each. 1,000 S. C. WHITE LEGHORN COCKERELS AND PULLETS, 3 and 4 months old; good, big snappy bird, free ranged; Young and Barron strains. Fine Leghorn type, at $1 each. Address W. H. MOORE, R. 2, Rome, New York

FOR SALE—BARRED ROCK PULLETS
hatched, December, 1913. Well developed birds, now laying. Price, $1.75 each. JOHN LORTON LEE, Carmel, N. Y.

FOR SALE—30 Fawn and White RUNNER DUCKS AND DRAKES. May hatch, Cook strain, white eggers. Write PATTERSON POULTRY FARM, Clayton, New York

INDIAN RUNNER DRAKES FOR SALE—Valentine strain, April hatched. Price, for one, $1.50; two, $2.75; three, $4; four, $5.25. ROBERT TWEDDLE, Montgomery, N. Y.

EARLY WHITE WYANDOTTE PULLETS—Cockerels from Barron stock. W. J. THOMSON, Delhi, New York

SPECIAL CLEARANCE SALE OF **S. C. Buff Orpington Breeders** including leading pen this variety at second International Egg-Laying Contest.
CHERRY LANE FARM CO., (Desk B), Oak Hill, West Virginia

FOR SALE— **S. C. ANCONAS**
Large, dark, vigorous cockerels, pullets, and yearling hens. Winter layers. Select exhibition and utility stock. Satisfaction guaranteed. I pay express. C. W. SIMONDS, Homestead, Pa.

April Leghorn Pullets—Ranecas heavy-laying strain, $1; cockerels, 75c. Yearling, laying hens, Corning strain, $1. ALTAVISTA FARM, Darlington, Md.

FOR SALE—100 FINE BRED
Single Comb WHITE LEGHORN COCKERELS
75c. and $1 each. Also 100 yearling hens, $1 each if taken before Nov. 1. GEO. L. FERRIS & SON, Atwater, N. Y.

Poultry Netting—Write for bargain prices
BARBED WIRE
EXCELSIOR WIRE MFG. CO., 5 Cortlandt St., N. Y.

Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
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MAKE HENS LAY
more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.
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cuts fast, easy, fine; never clogs.
10 Days' Free Trial. No money in advance. Book free.
F. W. MANN CO., Box 15, MILFORD, MASS.

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CAPON TOOLS

MORE THAN DOUBLE YOUR COCKEREL PROFITS
Capons grow twice as large on the same amount of feed and bring twice the price per pound.
Capons bring 30c per lb. Roosters 15c
Complete set of reliable, practical, easy-to-use Capon Tools . . $2.50 —full, illustrated instructions included. Parcel Post prepaid.
G. P. PILLING & SON CO., Phila., Pa.
Send for FREE Capon Book

For Two New Yearly Subscriptions, or Twenty 10-Week Trial Subscriptions, or Four Renewal Subscriptions. (One of the four may be a renewal of your own subscription.)

THE CELEBRATED BABY BUMPS DOLL.

The doll with the grown-up grin. Has Unbreakable Head and Hands, Jointed Limbs, and stuffed with Cork. Dressed in Rompers, with a bell rattle.

The Rural New-Yorker, 333 W. 30th St., N. Y.

PUBLISHER'S DESK

I sent Chas. Dodge, proprietor of the Wisconsin Gin-Seal Co. of Albany, Wis., 15,000 golden seal plants, for which he was to pay me $10 per thousand. He sent me $100 and refuses to pay the remaining $50. I sent him a few samples previously and wrote him that the majority of the plants would average between the middle size and two or three times as large as the smallest size, which was very small. He wrote me, "If the remainder of the roots you have are anywhere near like the samples, they will be entirely satisfactory." They surely did average better than I told him they would. I wrote him last Fall if he would send me $35 inside of 10 days, we would be even, but he would not, so he yet owes me $50. He wrote me this Spring that there were only about 10,000 stubs in all, and before that he said "The roots you send are sound enough, it appears, but are lacking in size badly." I have witnesses as to the quality and number of plants. If you can collect this or influence him to pay it I will greatly appreciate it.

Tennessee. C. D. R.

We took this claim up by correspondence with the Wisconsin Gin-Seal Co., and the firm contends that they only received 10,000 instead of 15,000 plants as claimed, and they were inferior quality besides. The subscriber claims to be in position to prove by disinterested witnesses his contentions as to the number and quality of the plants shipped, but a farmer in Tennessee cannot afford to go to Wisconsin to bring suit on account of $50 worth of plants. The loss of time and expense in doing so would perhaps amount to more than the value of the whole shipment. Without regard to the merits of this particular controversy, the claim of inferior goods and shortage of quantity is worn threadbare by receivers of farm produce who are willing to take advantage of helpless shippers at a distance. Our records show that another feature of the business methods of this concern was referred to in this department about a year ago, and we submit the experience of this subscriber for the guidance of shippers generally.

Kindly permit me to join the Anti Fake Club. I hope that the membership (like the R. N.-Y. family) may extend across the continent. Long ago I cut my subscription to one of the leading New England farm papers on account of their dishonest advertisers. I have had occasion to deal with several advertisers in THE R. N.-Y. and got a square deal each and every time. You may count me an active member of the club, willing to perform my part in making this club a "terror" to the class of advertisers who are not giving a square deal. They are parasites, preying on their fellow humans. I consider it a duty to help guard the unsuspecting widow or orphan against these unscrupulous "hot air" dealers. J. L. F.

Vermont.

We can see a great promise in the activities of the Anti-Fake Club. Up to four or five years ago THE R. N.-Y. was practically the only influence sincerely working for the protection of the public against fake and fraudulent concerns. Only three years ago the arch faker of America had no difficulty in buying page after page for the advertising of his swindling schemes in the publications, which, then as now, were making some pretense at a censorship of their advertising columns. It is easy enough to be virtuous in the face of a small order; but when orders for five pages come in dull months the publishers who make pretenses cannot resist the temptation. Such incidents test principles and sincerity. While the general movement for honest advertising is comparatively recent, it is now active. Vigilance committees are at work all over the country and are working earnestly to make advertising dependable and reliable. These men realize that deception destroys the efficiency of advertising, and makes it less valuable than it otherwise would be to honest houses. But they have not yet attacked the real source of the evil. They secure the passage of new laws, and occasionally prosecute and convict an offender, but the publisher who makes the fraud possible goes without so much as a reprimand. But the publisher is the key to the situation. If he honestly strives to exclude schemers from his columns, in three months the writing of deceptive advertising would be a lost art. This is the opportunity for our club. We will go straight to the fountain head. We will ask the publishers politely but firmly to exclude the advertisements that are found to be deceptive. If they comply, well and good. If they refuse, we will notify them that we want their publications no longer and we will refuse to accept them into our homes. When a publisher persists we may go to the extent of telling honest advertisers what our experience and our positions are in respect to such publications. We would have the co-operation of many of them. If the readers of THE R. N.-Y. alone, who are now probably 800,000 people all told, should follow this policy, they would rid the agricultural and literary publications of objectionable advertising in six months. We do not expect such a spontaneous demonstration; but we do expect practical results.

February 25 I found this advertisement in N. Y. American. I sent the $10 and about the last of May received a letter saying that no oil had been found so far, although a well had been drilled, but that they were looking at oil fields in Oklahoma. In June I got a letter and yellow slip for my name and address, stating that I was to have an interest in the Oklahoma fields. In July I got a letter asking me to buy shares in Oklahoma oil fields at 50 cents a share. (Later they will be $1). Is this a fraud or not?

New York. M. B.

The advertisement enclosed is a very clever appeal for $10 for investment in an oil scheme by Phebus & McCoy, Inc., Denver, Colo. It is about as alluring a piece of sucker bait as we have seen in some time. The advertisement paints all the prospects for becoming rich through the small investment and then cleverly explains that oil isn't always struck and the investor's money may go in a "hole in the ground." This apparent frankness is well intended to throw the prospective victim off his guard and it serves another purpose of giving the Government officials no grounds for prosecution on an alleged fraudulent use of the mails. Those who send promoters money on a pure gamble of this kind have no good cause to complain when they lose their money. The root of the evil is the publishers who accept advertising designed to extract money from inexperienced people.

I just bought from the U. S. Pheasantry, at Poughkeepsie, N. Y., 16 pheasant eggs, for which I paid $7; 14 of the eggs "rattle," the contents being loose, and the air space sometimes on the small end, sometimes on the side, as the eggs are turned about. The other two eggs seem to show birds when held up against the light. I wrote to the U. S. Pheasantry and am told they will do nothing about it, as the eggs are all right. I think the eggs are an unsuccessful hatch taken from some hen of their own. I have not put them under a hen, and have witnesses to prove that they were received in this condition. Will you let me know what you think of such eggs? Do good eggs ever rattle? MRS. M. G. D.

New Jersey.

We have never seen fresh eggs that "rattle" in the way this subscriber describes. Our subscriber for some years back may remember that this is not the first complaint that has appeared in these columns with regard to the U. S. Pheasantry of Poughkeepsie, N. Y., the proprietor of which is Mr. F. J. Sudow. We have given Mr. Sudow an opportunity to make adjustment with this subscriber, but he refuses to do so. The loss of Mrs. M. G. D. may be the means of saving some other subscribers from a similar experience.

I have never received payment for a case of eggs sent to B. Friedlander, 187 Duane Street, New York. Express company shows delivery. Can you collect?

New York. C. O. O.

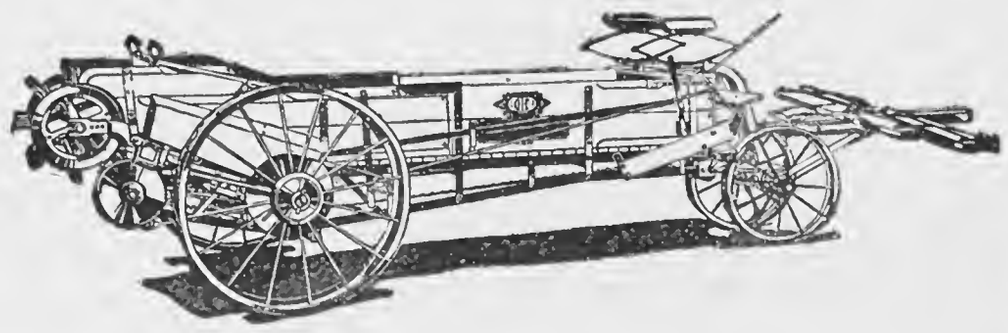
We could not induce Mr. Friedlander to send remittance and our attorney was also unsuccessful. Mr. Friedlander seems to be manager of a store at 1231 Stebbins Avenue at the present time, but he makes no effort to adjust this bill.

Can you give me any information about the Nassau Sales Company, 150 Nassau Street, New York? I received a circular of their solder. I sent for a sample. It came and was fine. I sent for one dozen, which came. I sold out and sent for a larger quantity first part of May, sending them a money order. I have never heard anything from them; have written three times and get no reply. See if you can trace them up as you do all frauds, and get my money back. My next order would have been for a gross, and I would have been robbed of $7.20 had they waited a little longer. J. C. F.

Louisiana.

Our advice is that they have moved and present address is unknown. Unless you have satisfactory reference or rating for foreign concerns, it is best to have goods sent C. O. D.

International Harvester Manure Spreaders



YOU cannot point to one detail in International Harvester spreaders that will not do its work well in actual field and yard service. Every part is strong and durable, built for long life and good, even spreading.

Among the features that will interest you are these: Simple protected beater driving mechanism, all of steel; load carried on rear axle, insuring traction; reversible gear and worm; low, easily loaded box, with ample clearance underneath; end gate, preventing clogging of beater while driving to the field, etc.

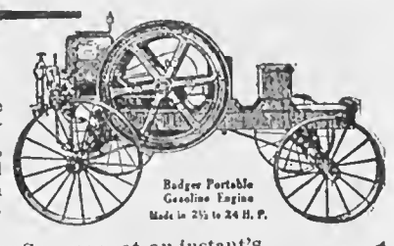
All styles are in the I H C spreader line, high and low, endless and reverse apron, and various sizes for small and large farms. Our catalogues will tell you more. Write for them and let us tell you also where you may see I H C manure spreaders.

The I H C Line
GRAIN AND HAY MACHINES
Binders, Reapers
Headers, Mowers
Rakes, Stackers
Hay Loaders
Hay Presses
CORN MACHINES
Planters, Pickers
Binders, Cultivators
Ensilage Cutters
Shellers, Shredders
TILLAGE
Peg, Spring-Tooth, and Disk Harrows
Cultivators
GENERAL LINE
Oil and Gas Engines
Oil Tractors
Manure Spreaders
Cream Separators
Farm Wagons
Motor Trucks
Threshers
Grain Drills
Feed Grinders
Knife Grinders
Binder Twine

International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

For Threshing and Ensilage Cutting

The "Badger" gasoline engine is the best power plant for the big jobs, like threshing and ensilage cutting. Reliability, plenty of power, steadiness and readiness, required for these big jobs, typify the "Badger." Made of the best materials; speed and parts made adjustable; the engine develops more speed than rated at less cost of fuel. Runs by gas, gasoline or kerosene. Consumes no fuel which is not turned into power.



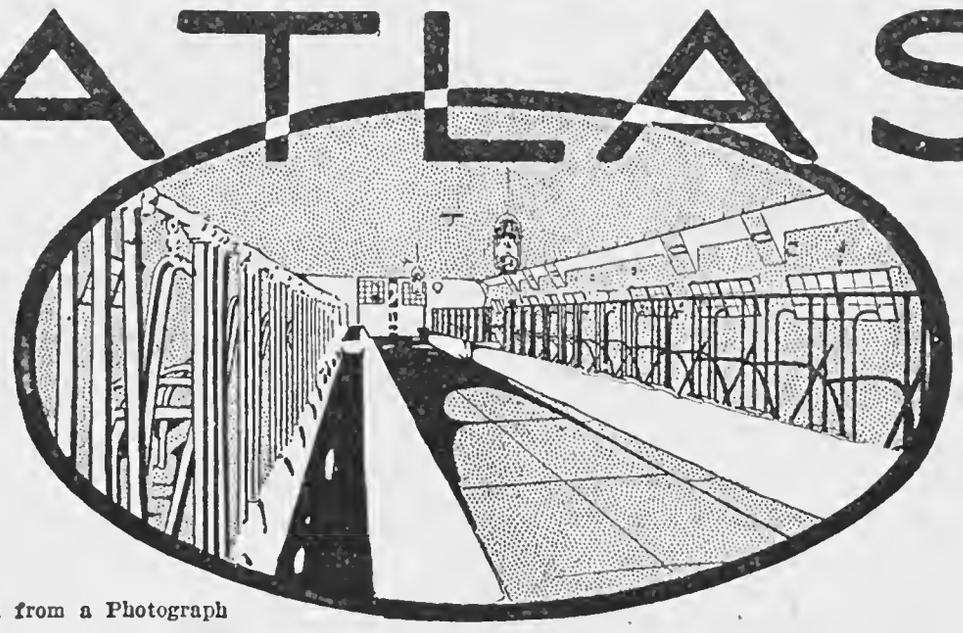
Badger

The "Badger" is always ready to run—Winter or Summer—at an instant's notice. Every part guaranteed for five years unconditionally.

Send for Catalog. Free Engineering lessons sent on receipt of dealer's name.
Address. The Christenson Engineering Co., Milwaukee, Wis
Or J. B. NORTON CO., Inc., Distributors, 209 Elizabeth St., Utica, N.Y.

GASOLINE ENGINES

ATLAS



Drawn from a Photograph

The dairy barn troughs, floor and walls are three places where Atlas Cement concrete is practically a necessity. The best dairy farms have proved this.

The man who asks for "Atlas" knows Portland cement.

PORTLAND ATLAS CEMENT
THE ATLAS PORTLAND CEMENT CO. PORTLAND ATLAS CEMENT 30 BROAD ST. NEW YORK

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Products, Prices and Trade.

Wholesale Prices at New York,
Week Ending Sept. 4, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.50	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

There have been no material price changes during the week, but the market is dull and weak, there being few sales at the top figures. Packing stock is comparatively scarce, with a fair demand for grades worth 21 to 22 cents.

Creamery, extra, lb	31	@	32
Good to Choice	26	@	30
Lower Grades	20	@	25
State Dairy, best	29	@	30
Common to Good	18	@	25
Factory	19	@	25
Packing Stock	19	@	22

Elgin, Ill., butter market 30½ cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

The local market is dull and one-fourth to one-half cent lower. Reports from interior markets are rather more favorable, which may check further declines here.

Whole Milk, fresh, specials	16¼	@	16½
Average fancy	16	@	00
Prime	15¼	@	15¾
Under grades	11	@	15
Dalsies	16½	@	16¾
Skims, specials	13	@	14
Good to choice	11½	@	12½
Poor to fair	7	@	11

EGGS.

Qualities running choice to fancy are very scarce, and prices are one to two cents higher on these grades. Medium qualities are selling slowly at previous prices or lower.

White, choice to fancy, large	35	@	37
Common to good	25	@	32
Mixed colors, best	30	@	32
Common to good	22	@	25
Western fresh, white	25	@	30
Lower grades	18	@	20
Storage, best	26	@	27
Lower grades	19	@	24

FRESH FRUITS.

The apple market is still overloaded with windfalls and inferior Fall varieties. Choice McIntosh and Transparent sell up to $3 per barrel. Pears in rather heavy supply, except choice Bartlett. Peaches in great surplus, practically nothing going above $1.50 per crate. Grapes lower, good Moore's Early selling at 3½ to four cents per pound.

Apples—Alexander, bbl	1 50	@	3 00
Yellow Transparent	1 50	@	3 00
Duchess	1 50	@	2 75
Wealthy	1 50	@	2 25
Fall Pippin	1 50	@	2 75
McIntosh	2 00	@	3 00
Pears, Anjou, bbl	2 00	@	2 50
Clapp's Favorite	3 00	@	4 50
Bartlett	3 50	@	5 00
Peaches, Del. and Md., crate	40	@	1 50
W. Va., crate	50	@	1 05
Nearby, bkt	25	@	65
Grapes, 18lb case	50	@	65
Plums, 6-bkt. carrier	50	@	1 00
Muskmelons, Md., bu	25	@	1 00
Jersey, bu	35	@	75
Watermelons, 100	6 00	@	15 00

HOPS.

Prime to choice	35	@	37
Common to good	30	@	34
Pacific Coast	20	@	21
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	60	@	90

BEANS.

Marrow, 100 lbs	7 00	@	7 20
Medium	5 15	@	5 25
Pea	4 80	@	4 90
Red Kidney	5 95	@	6 70
White Kidney	6 75	@	7 00
Lima, California	8 00	@	8 15

VEGETABLES.

Potato prices remain as before, but the market has a stronger tone. Onions in considerable surplus, selling mainly at one cent per pound or lower. Peppers very low, except for red. Some extra fine Cauliflowers are arriving from up the State. Parts of Delaware County, about Margaretville, grow this crop to perfection very large, snow-white heads, protected with paper and packed so that they arrive undamaged. Flowers of this type have brought $4 per barrel, or four times the price of ordinary.

Potatoes—Jersey, bbl	1 50	@	1 85
Long Island, bbl	1 75	@	2 00
Sweet Potatoes, bbl	2 50	@	3 00
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Cucumbers, bu	40	@	75
Corn, Jersey, 100	35	@	1 50
Cabbage, bbl	40	@	50
Lettuce, half-bbl. basket	50	@	75
Onions—Orange Co., bag	75		1 00
Conn. Yellow, 100 lbs	1 00	@	1 50
Okra, bu	1 00	@	1 50
Peppers, Jersey, bbl	35	@	75
Peas, bu	25	@	1 25
Radishes, 100 bunches	75	@	1 00
String Beans, bu	25	@	1 25
Squash, Hubbard, bbl	75	@	1 00
Crook Neck	50	@	75
Egg Plants, bu	25	@	50
Tomatoes, Jersey, box	25	@	1 00

LIVE POULTRY.

Broilers, lb	17	@	18½
Fowls	17½	@	18
Roosters	12½	@	13
Ducks	14	@	16½
Geese	13	@	14½

DRESSED POULTRY.

Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	20	@	22
Fowls	17	@	18½
Ducks, Spring	15	@	15½
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay market is weak, though prices are unchanged. Straw is rather scarce, the new arriving averaging poor.

Hay, Timothy, new, No. 1, ton	21 50	@	22 00
No. 2	19 00	@	20 00
No. 3	17 50	@	18 50
Clover mixed	17 00	@	19 00
Straw, Rye, choice	16 00	@	17 00
Short and tangled	13 00	@	15 00

LIVE STOCK.

Native Steers	7 90	@	9 50
Bulls	5 50	@	7 25
Cows	3 50	@	7 00
Calves, prime veal, 100 lb	9 00	@	13 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 00	@	8 50
Hogs	8 50	@	10 00

GRAIN.

The past week's market has been the quietest of any since the war began. Wheat and corn have dropped two cents. Oats are a trifle higher because of heavy export demand.

Wheat, No. 1, Northern Spring	1 21	@	..
No. 2, Red	1 15	@	..
No. 2, Hard Winter	1 14	@	
Corn, as to quality, bush	87	@	88
Oats, as to weight, bush	54	@	56
Rye	1 00	@	1 02

RETAIL PRICES AT NEW YORK.

These figures are not the top or lowest prices, but fairly represent a large number of sales where the goods are not delivered. Fruits and vegetables continue low.

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	20	@	25
Butter, fancy prints, lb	36	@	38
Tub, choice	28	@	32
Chickens, roasting, lb	30	@	32
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	30	@	40
Fricassee, lb	25	@	28
Fowls	24	@	26
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14
Pork Chops	16	@	18
Loin of Pork	15	@	16
Round Steak	18	@	20
Tomatoes, qt	3	@	5
Cucumbers, each	1	@	3
Lettuce, each	1	@	3
Corn, doz	12	@	20
Potatoes, peck	30	@	35
Lima Beans, in pod, qt	5	@	00
Peaches, 16 qt. bkt	50	@	1 25

COMMERCIAL APPLES.

IN issue of August 15, under heading of "New York State Crops," you state: "apples for commercial purposes will be far below last year's crop, but the local crop will be made larger." Can you tell me just what this means? What is the government report on potatoes in the United States? A. K.
New York.

The intended meaning in N. Y. State apple report is that the proportion good enough for commercial use, will be much less than the entire crop, many of which will go to evaporators and vinegar factories or be sold at a low price locally. The apple branding law in effect in N. Y. State this year will probably lessen the amount of commercial apples, as many that would previously have been sold as good or unbranded will have to be labelled "unclassified," a term that will discount their value in market. The Government report puts potatoes at 79 per cent, one per cent. above last year and 4.1 per cent. below the 10-year average. W. W. H.

BUFFALO MARKETS.

I BOUGHT last week for 40 cents half a dozen ears of corn (eight cents), a head of lettuce (two cents), two muskmelons (10 cents), a quart of tomatoes (five cents), three cucumbers (five cents), a bunch of beets (five cents), and two quarts of string beans (five cents), though I had to pay $1 for a bushel of potatoes. Some of this produce is still cheaper now. The big rains have helped the potato crop, and the wholesale price is not above 90 cents. About the only leading crop that is higher than usual is peaches, which are above $2 a bushel wholesale for fancy, the few home-grown ones offering being of mostly low quality, wholesaling at 75 cents to $1 a third-bushel basket. Apples are going down, being very plenty and quoted at from 20 to 75 cents a bushel for poor to fancy. The quality is better than usual. Pears are becoming plenty at $1 a bushel for Clapp's Favorite and Flemish Beauty, and $1 to $1.50 for Bartletts. Plums are plenty at 10 to 18 cents for six-pound basket. Huckleberries retail for 12 cents a quart; elderberries, 75 cents a bushel. Cabbage is plenty at five cents for large heads. Eggplant is five cents for small and 10 cents for large. Celery continues to be plenty, ranging from 10 to 35 cents a dozen. Cucumbers are 25 to 40 cents a bushel; green peas, $1 per bag; shelled lima beans, 20 cents per quart; string beans, 40 to 90 cents per bushel; tomatoes, 40 cents per bushel. The melon crop is large, watermelons wholesaling at 15 to 35 cents, according to size, and muskmelons, home grown, at 25 to 30 cents per basket. The Western New York field bean crop promises to be very light, from drought, and prices are up to $4.25 for marrow and $3 for medium and pea. Onions are dull at 90 cents to $1.15 per bushel for home grown. Sweet potatoes are fine appearing and at about last season's prices, $1.50 per hamper to $4.50 per barrel. Butter is about four cents up from a month ago, but reported quiet, at 34 cents for extra, to 27 cents for fair crock butter. Retailers are not asking over 35 cents at the city markets. The cheese trade is steady at 15 to 18 cents, fair to extra. Eggs are also up to 33 cents for white fancy and 26 cents for Western candled. J. W. C.

TIOGA CO., N. Y., which in common with many other sections of the State has suffered from a series of droughts in the past few years that have made seedtime a hope but harvest a disappointment, has apparently entered upon a new era of abundance. Copious rains have fallen all Summer, and the hillsides of late August are as green as those of June. More rain has fallen in the third week of August than the entire month has averaged in the past. But little hay was stored without having been the recipient of at least a shower, though the crop was large and the quality of the best. Oat harvest is extremely difficult, and some will be spoiled before the most strenuous efforts can get it under shelter. Potatoes have not as yet been blighted though conditions for the fungus have been ideal; no rot is reported and the fields are a solid mass of green, many of them presenting the unusual appearance of full bloom. Buckwheat growth is rank and corn is the wonder of the natives. Moisture in excess and continued hot weather have furnished this semi-tropical plant with just the conditions it needed for its full development and many fields look as if they would have to be cut with an axe. Ordinary "State" corn is frequently seen with stalks over 15 feet in height and a forest-like density of foliage. Silos will not hold the corn intended for them this year and much will be fed dry. Pastures have remained lush all Summer and the hillside springs have not failed.
M. B. D.

Cattle 11; veal 11; hogs 10; butter 32½; eggs 25; wheat 80; oats 32; potatoes 1½ cent per pound; onions two cents per pound; tomatoes five cents per pound; beans 2½ cents per pound; cucumbers 30 cents per dozen; cabbage three cents per pound; rhubarb 1½ cents per pound. Strawberries four cents per quart box; raspberries, blackberries and Loganberries the same; peaches 50-60's, 45 cents per box; 80-90's, 30 cents. Gooseberries five cents per pound; currants six; cherries four cents. J. H. J.
Forest Grove, Ore.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Job picking and packing apples on modern fruit farm. Address GEORGE DOWD, Madison, Conn.

HERDSMAN wanted; registered Jerseys; married man preferred; state experience, age, etc. CUPOLA FARM, West Claremont, N. H.

FARM PARTNER WANTED to work with owner on shares; New York State; married man preferred; particulars exchanged. OWNER, care Rural New-Yorker.

WANTED—Working manager or foreman on small farm, general farming, fruit a specialty; must be experienced; single preferred; state wages expected; answer Box K, care Rural New-Yorker.

WANTED—Married man, strictly temperate; understands poultry breeding and production of fancy eggs; market poultry; also take charge of piggery; wife to assist in housework; good cook, no children. Box 15, Stevensville, Sullivan Co.

WANTED—Boy or young man for barn work and help in creamery, modern equipment throughout, run small route, experience not necessary; ability to learn and willingness to work only required; also man for cow barn. Box 86, Elmhurst, Pa.

WANTED—Position as farm or estate superintendent; practical experience in farming, fruit growing, dairying, poultry, incubators, farm machinery and building construction; experienced carpenter, plumber, etc.; married; best references. N. K., care Rural New-Yorker.

FARM MANAGER—Married; must be able to raise truck, chickens and fruit, and be able to dispose of same at market prices; to a man of this standing I am willing to pay one-half of the profits. Farm is located at North Water Gap, Pa. Address all correspondence to F. A. MARON, 94 Chambers St., New York city.

A PRACTICAL HERDSMAN seeks position; am Scotch, married, 1 child, age 28 years; have been in this country several years and have held positions as herdsman and dairyman on some of the largest estates in the East; am well qualified and can give highest credentials. Address A. D. STEVENSON, Griffin Farm, Portchester, N. Y.

WANTED—Herdsman, unmarried, well recommended, for 200 cows; well experienced with feeding, breeding, accustomed to handle bulls; must be a sober, strong, energetic man, capable to handle twenty milkers and keep upright strict order; good wages, steady position. Send full particulars and references in your first letter. Address L. F., Care Rural New-Yorker.

FARMER WANTED—Exceptional chance; on shares or percentage of profits; married; small family; on 20-acre Jersey farm, 6-room house, near Philadelphia; berries; 1,000 peach trees, grapes and early garden truck; must furnish horses, harness and wagons; no barn; all else; give age, size and age of family; references, experience and all details in first letter or no attention will be given. JAMES R. GWILLIAM, Merchantville, N. J.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

FOR SALE—Farmers' cement drain tile machine; nearly new. W. VANDERVEER, Port Ewen, N. Y.

FOR SALE—A 1½ horse power steam boiler, steam turbine bottle washer, wash trays, etc., for a bottling milk plant; also a Bowsher feed grinder. CHARLES H. EVANS, Gaylordsville, Conn.

250-ACRE stock and potato farm near Buffalo; $50 an acre. ALBERT D. JAMIESON, 844 Ellicott Square Building, Buffalo, N. Y.

WANT TO RENT, option purchase, truck, fruit, poultry farm; Pennsylvania preferred; desirable marketing facilities. GERALD STANLEY, South West Harbor, Maine.

FOR SALE—100 acres in Central Ohio; good grain or stock farm; would take live stock as part payment; registered preferred; for description write R. T. LAIRD, Marysville, O.

FOR SALE—85-acre farm near macadam road; five minutes' walk to trolley; good land; good buildings, good orchard; plenty water; price reasonable. H. FREDERICK, Brunswick, Maine.

FOR SALE—Dairy farm 170 acres; good buildings, good water; under good cultivation; keeps 40 head; four miles from village; three from two creameries. JAMES M. BONTON, Roxbury, Del. Co., N. Y.

FOR SALE—Ideal farm of one hundred acres; the land is deep, rich soil, capable of producing anything; good fourteen-room house; good barns; has been in family forty years; owner must sell. Address Box 165, Cazenovia, N. Y.

FOR SALE OR LEASE—Ten acres good land, story and half bungalow; new; heat and water, barn, chicken houses for seven hundred layers. Excellent neighbors, macadamized roads, mile and half to Freehold. ARCHER CROOKS, Freehold, N. J.

NOTICE—A fine farm of 160 acres in Ingham County, Michigan, 5 miles east of the City of Mason, will be sold at public sale on said premises by administrator, pursuant to order of Probate Court of said county Sept. 26th, A. D. 1914, 30 acres of fine timber. MERRITT HICKS, Administrator. Business address, Dansville, Mich.

FOR SALE—1,621 acres, farming, grazing and timber land in Allegheny Co., Md., 11 miles from Cumberland, on North Branch River, C. & O. Canal, and West Maryland R. R. runs through property; near churches and school. Will sell in one parcel or divide in sections. Liberal terms. R. M. W., care R. N.-Y.

NEW ENGLAND FARM FOR SALE—To Close Estate—Forty acres cultivated land; eight acres of pasturage and good apple orchard; high ground; good view; four miles from Atlantic Ocean, in the town of North Stonington, Conn. Modern thirteen-room house and small barn; good water; one and one-half miles from trolley, and near State Road. Address ALLYN L. BROWN, Admr., Norwich, Conn.

TO "RURAL NEW YORKER" READERS: EASTERN HOME BUILDERS AND BUILDING MATERIAL BUYERS Never Had a Better Chance Than GORDON-VAN TINE OFFER RIGHT NOW—Write

To Rural New Yorker Readers

I just returned from a ten days trip to the East. I find that the lumber and Millwork sold by Wholesalers and Lumber Yards down in that territory is pretty poor material compared to the Graded Up Highest Qualities we are shipping. Our eastern customers certainly ought to be pleased with the quality of lumber and Millwork they get from us.

All this leads me to believe that as we advertise more strongly in the east, particularly in New York state and Pennsylvania and bring home to the customer still more strongly, the fact that our lumber is surfaced and not rough, that it is even in width, and not uneven, that it is high grade, instead of knotty and crooked, that our plans are complete and easily followed, and that they are up-to-date and not ancient, we should greatly increase our eastern business.

I find that in sections of the East that I was in, the old costly methods of buying and building and selling lumber and all building materials is still in vogue with the lumber dealers.

I have come to this conclusion after talking to men in all lines of business from the saw mill, right through the planning mill, the local dealers, the farmer, and the carpenter.

Our lumber is all well surfaced, true to size, bright, new stock, uniformly better than that sold in the eastern states.

Instead of using various kinds of wood and mixed grades, we standardize our grades and use the very best soft short leaf yellow pine for all framing lumber, boards, etc. with high grade cypress and cedar products, where exposed to the weather.

Our shipping facilities are such that we can ship into all eastern states to great advantage and actually show a nice saving to eastern customers.

Our plan service is unexcelled and the average farmer in the East, if he realized it, would be only too glad to take advantage of the service which our architectural department offers both on stock house plans and on special plans for houses and outbuildings.

Yours truly,

Sales Manager.

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Save $200 to $500 or More

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Our plans are complete, correctly made. Latest exclusive designs shown in $10,000 Plan Book of "Quality" Homes. Easily followed specifications.

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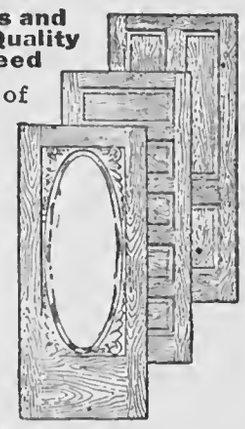

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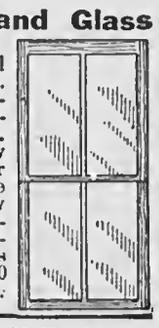

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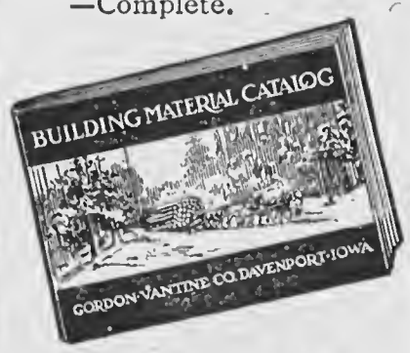

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII, No. 4273. NEW YORK, SEPTEMBER 19, 1914. WEEKLY $1.00 PER YEAR.

MARKETING THE TIMBER CROP.

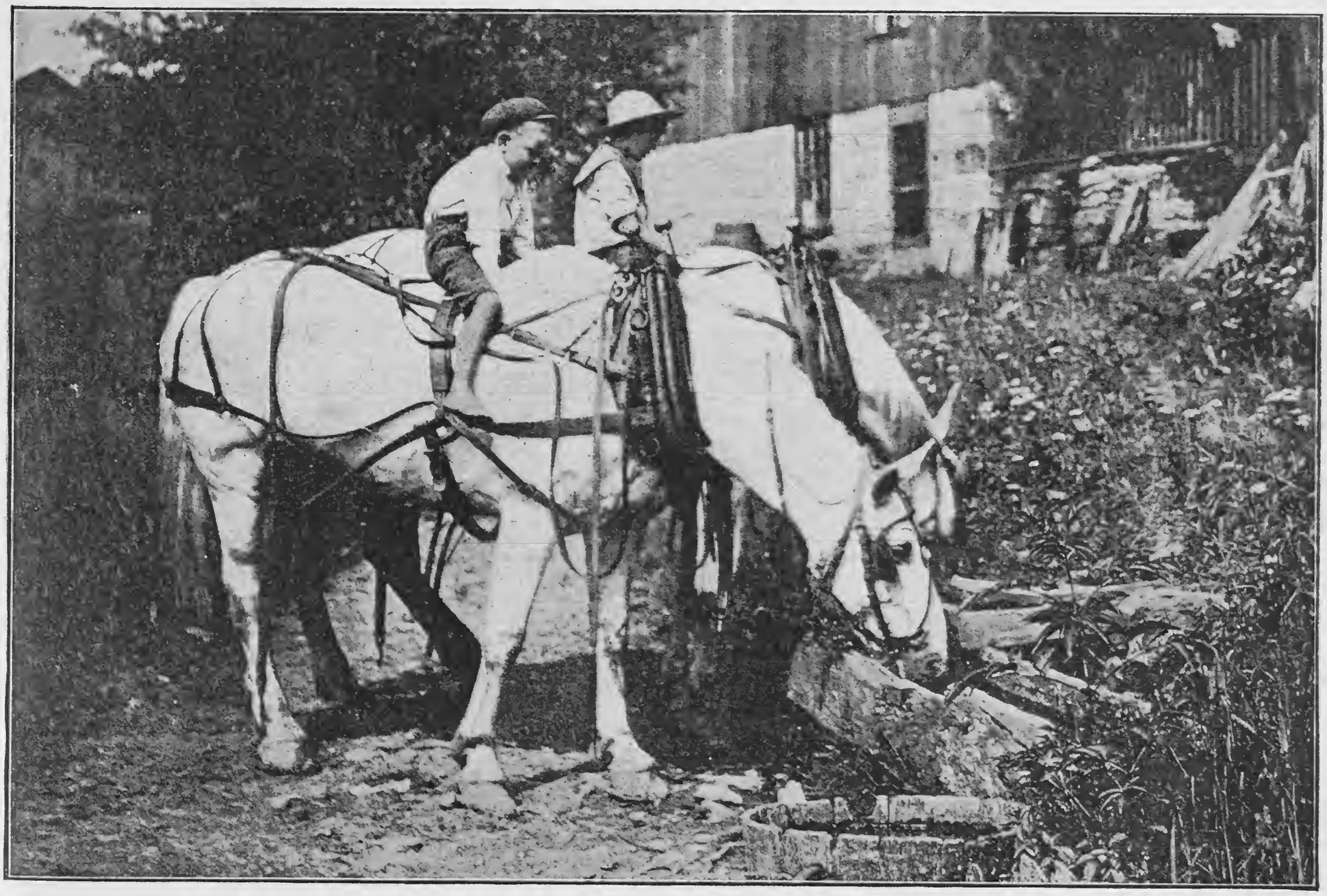
A Farmer's Actual Experience.

CONDITIONS INVOLVED.—I notice that the sale of timber is a matter that is interesting some of THE R. N.-Y. family. I have a little experience along this line; while I am by no means qualified to speak as an expert on this subject, still I discovered a few of the ins and outs of the business. When I purchased my farm it contained two small tracts of timber, one of which, containing about 15 acres, was an old sugar bush. This sugar bush consisted of old trees, tall and straight of trunk, which had reached their prime, and in many cases, had begun to deteriorate. I had no outfit for sugar-making, and furthermore, had not the capital available for its purchase. In view of the condition of the trees it did not seem advisable to go in debt for tools, and it was evident that the value of the woods for timber was not increasing. But marketing a crop of timber is an altogether different proposition from marketing most crops. To hear all the talk about the increasing scarcity of timber, and the necessity for its conservation, one would believe that timber buyers would be falling over each other to get a good tract. I did not find this to be the case.

GETTING AT TIMBER VALUE.—My first step was to put a price on my trees. I confess that I had a very meager idea as to the value of standing timber, nor do I know much about lumbering, and almost nothing in regard to the lumber trade. Plainly, I needed expert advice, so I wrote to the College of Forestry at Cornell for help. They advised me to sell the timber on the stump, rather than to try to market the lumber myself, saying that the condition of the hardwood lumber trade and the system of grading was such that an amateur was almost sure to be beaten. However, they of course could not give me an idea of the stumpage value without inspection, and that was at that time impracticable. I suppose it is good business to buy as cheaply as possible, and this rule seems to be worked to its utmost in the purchase of timber. The fact that most people, like myself, do not know how to estimate either the amount or the quality of timber makes it easy for the buyer to make a purchase at a figure little short of a gift.

LUMBERMAN'S ADVICE.—Not being able to get practical advice from the College of Forestry, the only course left was to get some experienced lumberman or timber dealer *who did not want to buy my timber*. Now it happened that in our town was a man who had had considerable experience in buying woodland and marketing the finished product, but who had retired from active business. I asked his advice, and he said he would be very glad to look over my timber. So a day was appointed and we went over the ground as thoroughly as possible in half a day. He estimated the timber at 250,000 feet, mostly maple, with some beech, elm, basswood and Black cherry. The value lay, he said, between $1,500 and $2,000. He advised me strongly against trying to market the product myself. "They will beat you on scoring," was the way he put the same advice the college had given me. "Moreover," he said, "it needed an expert to superintend the job, from cutting the trees to sawing the lumber."

THE HOME MARKET.—Then I began writing to lumber dealers, far and near. Not all of them even replied, but most of them wanted the particulars *and the price*. Then they faded away. I kept it up, however, and at last got a man to look at the timber. He was favorably impressed with the better part of the maple, but his factory was so situated that the logs must be hauled on two railroads, and the freight would have cost more than the timber. He wanted stuff for veneering, and therefore could not use sawed lumber, which would make freight and handling charges higher. He wanted me to set a price on the choice of 300 trees, but that would leave me a lot of unsalable culls, and I let the matter drop. For several months nothing more was done. I had exhausted the list of purchasers, and had to quit. Then I found I had committed a fault which I believe is too common with us farmers. I had overlooked the home market. I had cut some



HAPPY DAYS! GIVING THE TEAM A DRINK. FIG. 490.

logs for home use, and while drawing them on the logway at our home mill the owner asked me if I had any more like that to sell. I immediately set forth the facts of the case, and he said he would be up to see me in a few days. At about the same time I ran across another timber buyer, and soon had the two making a careful examination of the woods, though not at the same time, for I did not want the two parties to go in partnership on the deal. The best offer either would make was $1600, and after some bickering I concluded I could do no better and closed the deal with the local mill owners. The terms were $500 cash and the balance in two months, with two years in which to remove the timber. It is well to have all the agreement in the written contract, then there is no chance for contention. Also specify the right of way, so that the lumberman cannot drive all over your farm. The sawing timber was removed this last Winter, and it has turned out of rather poorer quality than expected, so that while the buyers will make a good profit, yet they could scarcely have paid more and come out with a profit. And my friend's estimate of the quantity of timber has proved just about correct, though none of the prospective buyers would admit it first.

POINTS FOR CONSIDERATION.—There are a great many factors to be taken into consideration in determining the value of a piece of timber. Freight rates are of great importance in this matter, also the distance from the railroad. A few years ago a survey was made across the corner of my timber lot, and if the railroad had taken this route it would have added several hundred dollars to the value of the timber. However, the road took a different route. Then the cost of cutting, hauling and sawing timber is considerable, under the most favorable conditions, and with unfavorable conditions such as rough hilly land for lumbering, bad roads and bad weather, the expense is still further increased. Probably the people who bought my timber handled it much cheaper than I could have done. They were experienced lumbermen, with several big teams and all the necessary paraphernalia, which I should have had to buy, and which would have been useless to me after the job was done. The lowest estimate I could get on cutting was $1.25 per thousand, but they got it done for one dollar. Probably the man who took the job lost money on it, or at least failed to make anything, but that was his lookout. If I had tried to hire teams to draw logs it would have cost $4 per thousand. The lumbermen were wiser than I should have been, and paid one dollar per trip, loading the logs themselves and providing help to unload. A man could make four or five trips daily, and as it was all the way down grade and good sleighing, they drew very large loads. The record load was 2,100 feet, a large elm tree. However, it was not a profitable trip, as the sleighs were broken by the load. The lumbermen saw to it that the drifts were kept shoveled out and the thin spots covered with snow, so that as large loads as possible could be drawn. They also provided a team to double up some small grades in the woods at some of the skidways. If I had put in a mill on my own premises it would have meant considerable capital tied up before the lumber would be ready for sale, besides taking a lot of my time until the timber could all be sold, and I find it hard enough to keep my farm work up without a lumber yard to look after.

THE BUYER'S RISK.—Lawyers have a Latin expression which freely translated means that the buyer must take the risk. This may be law, but in practice this does not always apply. The timber buyer goes over a tract of timber quite carefully, counting and measuring the trees and noting their condition. They say a tree is no better than it looks. A smooth nice shell may cover rotten wood, but a tree that is knotty, crooked and full of holes has nothing of value inside unless it be 'coons or honey. So the buyer discounts his total enough to make up for the hypocrite trees. Thus the buyer gives himself the benefit of the doubt. If the trees are not as good as they look he is safe. If they are better, he wins. Of course a man sometimes loses money in buying timber, but it is generally because he is an amateur. In conclusion, I would advise the man who is unfamiliar with lumbering and the lumber business to let it alone. If you sell your timber on the stump you can put the money in your pocket, or wherever you like, and go on about your business. If you market it yourself you have a lot to learn. This of course applies to considerable quantities. If you can cut it a little at a time until you get into the business the thing is different. But at any rate, go carefully. If you make a blunder in marketing a crop of potatoes you perhaps may do better next year, but having disposed of your timber it will be many years before you have another crop.

New York. CHESTER L. MILLS.

WHEN TO SPREAD MANURE.

I HAVE several carloads of horse and cow manure, and would like to keep my man busy hauling it out, but do not know just where to put it so it will produce the best results. Would it be advisable to use the manure spreader and put it on top of old meadow, then plow it under this Fall, or would you plow and spread it on after plowing? Part of the land to be plowed is of a gravelly formation, the remainder is sandy, no gravel at all. Do you think once over enough to go with the manure spreader? In this section most farmers spread manure by hand, and their fields look as though they put it on thicker than my spreader does.

Sheffield, Pa. C. W. E.

If your land is reasonably level, so that the water does not run over it in a flood, we should put out the manure at once, or at any time when convenient, and spread it over the whole meadow to be plowed under next Spring. On the whole we think this is a better plan than to plow in the Fall when corn is to be planted on this sod. This plan is followed largely through central New Jersey as a part of the rotation known as chemicals and clover. In this rotation all the farm manure is spread upon the sod, usually in late Summer or during the Fall. In the Spring this sod which was manured in this way is plowed under for corn planting. Experience shows that the manure spread at this time and left on top of the sod through the Winter does not lose its plant food, while it does give an increased Fall growth of grass to be plowed under in Spring. This matter of applying manure whenever convenient, or holding it under cover in the barn, in order to be hauled out in the Spring, is very largely a matter of convenience and farm management. On level grass land there will be very little loss if the manure is hauled out day by day, or whenever the teams would otherwise be idle. In the Spring the work usually crowds too much, for a dozen jobs ought to be done at once. Our own plan is to leave the manure on top of the ground on the grass, and put it under just before corn planting time. It is probable that once over with your manure reader, if the feeding attachment is left wide open, will be enough. Where the manure is spread by hand it is not as fine as when it comes from the spreader, and the larger chunks may make it appear that more manure is going on, but this is not the case with the finer manure from the spreader and probably you are putting on enough when you go once over with a good machine.

SHALL WE USE POTASH?

THE farmer who thinks, may learn a good deal by the possible potash pinch. For one thing, I am perfectly sure that most tobacco land which has been liberally dressed with potash year after year will yield good crops for two years or more with no potash added. I know of two of our best growers who dropped potash out of their formulas entirely for at least three years, and had as good quality of leaf as ever. Why should not the same thing hold with other crops? If potash has been used in a niggardly way for years, of course to cut it off entirely will cut down the crops. But if it has been used liberally I do not believe that cutting it out one year will make nearly as much difference as the vagaries of our seasons make.

If potash prices soar I shall put none on my orchard, for there is where I think it will be least necessary to use it every year. The tree roots I have spread wide by broadcasting all my fertilizer, and they have got six or seven months in which to feed. If prices increase by one-half I will not use potash *anywhere except* on potatoes, and I will use at least 75 pounds of actual potash per acre on them if I undertake to grow them. But what I should ordinarily spend in potash at normal rates I will spend in acid phosphate and basic phosphate, and I think a man who trims his potash but puts on all the more phosphates will think seriously of revising his formulas in that way, even when potash resumes its normal price.

Many even of our experienced market gardeners would be agreeably surprised at the result of using 500 pounds of lime and 300 extra pounds of acid phosphate on cabbage and turnips next year. I fully believe the teaching that we need to use more phosphates than we are using. I also am sure that on such soils as we have in this State the use of raw phosphate rock is much less profitable than the use of acid phosphate, fine bone or basic phosphate. Applications of slaked lime in Winter or very early Spring will help to make the soil potash more soluble, to be sure. I believe in liming rationally at any time, but I doubt the wisdom of a specially heavy dressing of it to *squeeze out* potash.

I see no present prospect of a potash substitute. The street urchin wrote in his Sunday-school teacher's autograph book, "Keep cool, 't won't last. Nothin' does." Let's keep cool. Seed time and harvest are going right on. Emperors cannot stop them. Neither can a temporary shortage of potash cut the yield much where the land has been properly fed in past years. What we don't spend for potash let us spend for phosphates and perhaps nitrogen.

Conn. Exp. Station. E. H. JENKINS.

THE GOVERNMENT CROP SERVICE.

How Statistics Are Gathered.

We have had a number of letters from persons who say that they do not know how the Government obtains its figures showing the reported conditions of crops. How are these figures developed and what is the basis for figuring? Some of our correspondents tell us that they did not know that there was any reporter in their township or county, and therefore they want to find out how these figures are made up. Following these requests we have obtained a report from the Bureau of Statistics at the United States Department of Agriculture, and this interesting statement follows.

TWO STATES DISCUSSED.—I will review the basis of information for the States of New York and Pennsylvania. This Bureau has in New York 1,187, and in Pennsylvania 955 township correspondents who report to it monthly upon printed schedules of inquiry, furnished them for that purpose, concerning crop conditions in their respective communities. It has also a county correspondent in each county of both States who responds monthly to the same inquiries. The county correspondent is assisted in making his estimates by several aids who report to him from different parts of the county.

AGENCIES EMPLOYED.—A State Agent is employed in each State who maintains an independent list of selected correspondents, numbering about 300 in New York, and about 200 in Pennsylvania, who report direct to him and upon whose reports, supplemented by his own observations and personal inquiry, he bases a monthly report to the Bureau for the State as a whole. A traveling field agent also makes similar reports basing his estimates partly upon reports from a smaller list of aids, many of whom have knowledge of conditions over considerable portions of the State, and partly upon the results of his own personal observations and inquiries gained through careful travel throughout his territory each month. These agents' territories include from one to four States, usually two, and they report separately for each State. Reports from these four sources of information are identical as to the questions asked, and include all of the general questions regarding acreage, condition and yield of farm crops; numbers, condition and values of farm animals.

SPECIAL CORRESPONDENTS.—Supplementing these sources of information, the Bureau maintains special lists of correspondents to whom inquiries are addressed regarding special crops. For instance, in making its general acreage and yield estimates it has the additional reports of about 700 representative farmers not included on its usual list for the State of New York, and about 450 in Pennsylvania. For acreage and yield of wheat it has reports from a list of 150 mills and elevators in New York, and about 250 in Pennsylvania. Its live stock reports are supplemented by estimates from about 200 special live stock correspondents, including veterinarians and live stock dealers in New York, and about half that number in Pennsylvania.

ACREAGE ESTIMATES.—The basis of the Bureau's estimates of acreage are found in the Census enumerations. This Bureau accepts the figures established by the Census for the census year, and by applying to this its estimated percentage of increase or decrease based upon reports of its correspondents and the investigations of its special agents, estimates the approximate change in acreage from year to year. By applying to this estimated acreage its estimate of yield per acre, it determines the estimated total production for the State. Similar methods are followed in arriving at the numbers and values of farm animals. By observing the relation of average conditions from month to month to average yields for a series of years, it computes and publishes a monthly forecast of probable final production provided growing conditions for the remainder of the season conform to average.

VALUE OF REPORTS.—The value of these reports to the community at large, and to farmers in particular, is that they furnish a crop estimate based upon the opinion of those in immediate touch with and best informed on the subject, supplemented and checked by the investigations of trained traveling agents. Without this report, the producer, the consumer, the manufacturer, the railroad manager, and business men generally, all of whom are vitally affected by the harvest, would be compelled to depend largely upon crop estimates issued by private interests. Information of crop prospects and outturn is imperative and such information will always be forthcoming though not always dependable. The value of the government report resides not alone in its substantial accuracy and dependability, but largely also upon the fact that it is a government report carrying thereby the assurance that it is prepared without bias. That this information, assembled with so much care and thoroughness, may be received with confidence by all concerned and thus render a maximum of benefit, the handling of the data received at Washington is surrounded by every safeguard to prevent any wrong interpretation of the figures or unfair use of the valuable information.

PREPARING ESTIMATES.—The estimates are prepared by a board composed of several trained statisticians attached to the headquarters of the crop reporting service at Washington, with the assistance of two crop experts from among the traveling field agents who are ordered to Washington each month for service on this board. The custom has recently been inaugurated of calling to the assistance of the Board from month to month census experts or specialists from the technical Bureaus of the Agricultural Department, who may possess special knowledge of the important subjects of inquiry for the particular month. For instance, in January, in connection with the live stock report, the Board included the Chief of the Division of Animal Husbandry of this Department; for the March report, in connection with the estimates of grain reserves, it had the assistance of the Cerealist of the Department. The information upon which the Board acts is not assembled until the morning of the report. Before the reports from the different sources are examined, the doors to the Bureau are locked, the telephones disconnected, and all other means of intercourse with the outside suspended until the report has been prepared and given to the press. The report is made public at a time announced beforehand, in order that all desiring the information may receive it at the same moment.

LEON M. ESTABROOK.
Chief of Bureau.

THE FIGHT WITH QUACK GRASS.

How to Battle With the Pest.

PART II.

HOW PLANT GROWTH TAKES PLACE.—The principles of plant growth that should be known in this case are: The purpose of the plant food stored in the nnderground stem is to mature the seed of the plant, and second, that the plant cannot make any more food for itself unless it can get some green surface above the ground. The sole aim of plant life is to reproduce itself. The wild flower does not grow with beautiful petals to dazzle man but rather to attract some insect which may pollenize it and thus help in maturing the seeds. The plant food stored in the quack grass stem is for the purpose of multiplying the plant through mature seeds. Now, as long as the plant cannot get any green parts above ground, no more plant food can be made and all that the plant has to nse is that which has been previously stored in the root. There are very few plants which can make their food in the absence of green leaves and sunlight. The chlorophyll or green portion of the leaf is simply a mill in which carbon dioxide from the air and water from the soil is united and starch is formed. In the case of the quack grass, this starch is conducted down the above-ground stem and stored in the underground stem. If the mill is destroyed, there is no starch to conduct.

BRINGING ROOTS TO SURFACE.—The aim of Summer fallowing is to bring the roots of the weed to the surface and to kill them by the sun's rays and exposure to the winds and also, to keep the plant from getting any green portions above ground. This makes the plant continually draw upon the supply of plant food which is stored below the ground. When this is exhausted, there is nothing more for the plant but to die. After death the roots decay and go to make humns. The tools to use after the plow in keeping the quack grass down are the spring-tooth harrow and the barley fork. Do not use the disk harrow. It cuts the roots up fine, and we have seen before why one of these pieces of roots having a bud on it will grow again. The spring-tooth harrow serves two purposes, it rakes the roots out where they can be gathered up in piles with a barley fork, and it keeps the green parts from developing above ground.

POLE ATTACHMENT FOR SPRAYING A MELON FIELD. FIG. 491.

COMPLETING THE WORK.—The remainder of this season and next season will surely eradicate the quack grass in W. M. J.'s orchard, that is, between the rows of trees. He should go over the orchard carefully every little while, and hoe the quack grass out that is around the trees. I. J. MATHEWS.

ENTERING THE EGG CONTEST.

CAN you tell me why some of the poultry keepers—particularly those who claim most for their stock as layers—do not enter one of the egg-laying contests? J. K. L.

"He is of age—ask him!" We can think of no better way of finding out. THE R. N.-Y. is not a mind reader and we find that some knowledge of mind-reading is necessary in order to obtain some kinds of information. Various reasons have been given us. 1. The cost. At Storrs, entrance fees for 10 birds are $20. We think that if a man is to continue in the poultry business and claim to sell pedigreed utility stock, $2 per hen is a small price to pay for a certified record. 2. Hens do not have suitable care. Many breeders claim that the success of their hens is due to the personal care which can only be given them at home. That is probably true, but the buyers cannot take this personal care along with the hen. We think the average buyer wants to know what the hen can do out in a fair contest with other hens. When a man buys a motor car he judges it by its work out on the regular streets and roads, not on some private track where the conditions are ideal. Very likely if we were to get at the real reason we should find that a good many hen men, like other characters of history, "fear to put it to the test." It is very much safer to rely upon private claims or upon some particular "system" for praising the stock. Suppose some man who for years has claimed superiority for his stock were to select 10 hens and enter them in a contest. If they made a good record all his claims would be officially corroborated and it would be impossible for him to obtain a higher endorsement. On the other hand suppose the 10 hens flattened out and made but a poor record. There might be a dozen fair reasons for it, yet the record would stick like a leech to the large stories which the hen man had been telling! We think the time is coming when these egg-laying contests will play as large a part in the reputation and sale of utility poultry as the official milk and butter tests now do in the sale of cattle.

THE STOREKEEPER'S SIDE.

IT is our desire to give all sides of a public question a fair hearing. Since parcel post was started there have been many letters about the middleman and the country store-keeper, most of them arguing that the latter is not needed. It is fair to give the store-keeper's side as we do in the following letter. This will end the discussion, as all the arguments have now been presented.

THE FARMER'S DISADVANTAGES.—May I have the space to present my version of C's reply, page 987, to my letter on page 830. It is not my wish to start an argument, but I do desire to make very plain the facts, and as anyone without prejudice can readily see if he will but stop to reason, before making wild assertions about a business he has not even had a rudimentary experience in. The trouble with the farmer is he has had to fight his own battles with droughts, floods, cyclones, fire, with every conceivable kind of plant and animal disease, tree agents, and gold-brick men. At the end of the season he hauled to market (often many miles over impassable roads), what he was able to salvage of his year's endeavors and received what the buyer chose to offer, in fact, the 35-cent dollar. After paying interest, taxes, insurance, hired help, doctor bills and "forty-eleven" other bills, he applied what was left (provided there was any) on the merchant's bill for goods he had purchased at the merchant's own price. Many generations of this sort of existence without the broadening influence that has come with plenty of good reading, rural delivery, telephone, good roads, etc., has produced a race that, as a class, is resourceful and independent, but also predjudiced and pemrious, bordering on narrow-mindedness. I know, for I am one of them, hence they were ripe when the mail-order houses opened up their campaign and had no compunction in kicking the merchant's foot off their neck, notwithstanding they owed him for value received, and every dollar they sent away was gone for keeps. Eventually the storekeeper must curtail his stock in proportion, thus making a poorer selection of goods, from which to choose his immediate, daily necessities and injuring the community generally. What would any town be with the much-abused store obliterated?

THE STORE-KEEPER AND CATALOGUES.—C suggests we keep catalogues from which nine out of 10 would be glad to avail themselves, paying us a small profit. I have been doing this for some time, and in order to encourage people to use this method have sold at the smallest profit consistent, but the thorn in this fine theory is that only about one in 30 will avail themselves of the opportunity. Approximately one in one thousand will pay with order; about one out of 10 will "come across" when they get the goods. Therefore, may I ask how we can be expected to cope with the city establishment that has your money before they ship your goods? Mind you, the bulk of your order comes direct from factory, not from their stock, so they are out nothing for cartage, freight, interest on investment or insurance, besides, their volume of business enables them to buy as jobbers while we must buy of jobbers.

CASH BUYING.—There are a few merchants so situated they have a monopoly on their line, and can demand spot cash, but the average have just so many customers, and the limits of territory are such he can draw no more. It is imperative he retain these customers in order to keep business moving. It is inevitable he take some chances; for instance, an honest, industrious fellow purchases or works a farm. You give him credit against the sale of his produce. Through no fault of his crops fail or prices are low, barn burns or there is sickness in the family. You are compelled to carry him another year or lose his trade for all future time. Or on the other hand, a wealthy farmer will run up a large account, and then become indifferent as to payment, while if you are persistent with your statements he will get sore and trade elsewhere. I presume this is what our brother terms a no-good business system. Will he give a remedy?

POOR CREDITS.—Practically every one can tell us how to run a store, but mighty few have the courage of their convictions to put their theory into practice. It is not just the dead beat that adds the tax, for we can usually protect ourselves against them, but also the worthy, but unfortunate, and those who are able to pay but don't; also the uncertainty and long intervals of farm returns, and the fact customers will not observe the same consideration in meeting the store obligations that they will of a bank. It is unfair to compare the country mercantile with the banking business. Contrary to C's assertion, the suckers *do* eat their way through the supposedly impregnable banking system to the tune of many millions yearly. We all know of some who have lost their life savings, and of banks that blew up because their collateral was no good. Cassie Chadwick "put over a few" on the big fellows. If the country merchants ever organize and form an ironclad cash-on-the-spot system, an awful wail will go up from the consumers (rich and poor alike) and clerks will be a luxury. It is utter nonsense to intimate that the country retail merchant can ever sell on an equal footing with the city house, not while he is compelled to take his pay in poor butter and dirty eggs at top-notch prices. You will always have to pay something for service and the accommodation.

WHAT EXPERIENCE SHOWS.—To sum it up, there can be no mutual improvement in the present unsatisfactory mode of barter, till the fortunes and the indifference of the consumer undergo a drastic change, for we use as good a system, buy to as good advantage and sell as cheaply as our customers will allow. Nearly all up-to-date storekeepers allow a 5 per cent. discount for cash sales, either in money or trade slips. Personally we give a money discount, which is the most satisfactory. That should be sufficient inducement to pay cash even though one must borrow it. It is ridiculous to assert "a cash customer should not help pay for interest on investment and bookkeeping." He must also pay for rent, heating, lighting, clerks, insurance, depreciation, etc. If the people will take a broad view of the situation they will see that when everything is taken into consideration, such as convenient mode of paying, etc., they are getting just as good value for their money in the long run as when they send to the city. R. C. WOOD.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Pole Attachment for Spraying.

THE picture shown at Fig. 491, page 1123, was taken in a melon field in South Jersey, and shows an attachment for spraying the vines when the melons have reached fair size. It is often necessary to spray quite late in the season in order to save the crop either from disease or plant lice. In such cases there is frequently more harm than good done by driving through with a heavy sprayer with a narrow attachment at the side, as the horses and the wheels of the sprayer break down the vines and crush the fruit. To avoid this trouble some of the South Jersey growers use such a device as is shown in the picture. Here as we see the sprayer is driven through the field, and a good hose attached, with a pole fastened so that a wide stretch may be covered by the nozzle, and thus the sprayer can be driven on some central track through the field without great injury to the vine, while the long hose and the pole may be used, if need be, on either side, or around the sprayer, so as to cover a wide space at each stand of the machine. Certainly when we think of the old days when crude work was done by hand pumping, we realize what great progress has been made during recent years in doctoring our crops.

Burning Bones.

IN a recent issue of the *Country Gentleman* some reader asks about handling bones for fertilizer. He is told to burn them and the following statement is thrown in.

"They are then brittle and easy to crush fine. Burning destroys the organic matter of bones, which includes some nitrogen, but since this nitrogen in raw bones is not available, its loss is not important. The phosphorus is unchanged, being calcium phosphate both before and after burning. Its availability is probably about half that of acid phosphate, if the phosphoric acid of each is compared pound for pound."

What do you think of this advice? It is contrary to my experience and study.

J. L.

We showed this to our expert manufacturing chemist and he said:

"Great Scott! Such bones contain about three per cent. of nitrogen worth at least $3 per unit! Yet this man would have the farmer throw all that away."

Not only does burning drive off the nitrogen, but the phosphoric acid in bone ash is less available than in ground bone. In raw ground bone about one-third of the phosphoric acid is available while in bone ash the proportion is but little over 10 per cent. The softer bones can be buried beside trees or vines with profit. Packing the bones in barrels or boxes between layers of wood ashes—the whole thing to be kept moist with stable liquids, will soften most bones in about three months so they can be crushed with a spade or sledge. Burning is resorted to in some cases, but it is a wasteful plan and should not be advised without reserve.

Prices for Grimm Alfalfa Seed.

I NOTE, on page 1054, your comment on Grimm Alfalfa, and the statement that this seed can probably be bought this year at from 25 to 75 cents per pound. I try to keep in close touch with anything pertaining to Alfalfa, and have just returned from a trip through the West looking the matter up. I assure you that you can probably buy seed that will be called Grimm at 25 cents, some of it may be Grimm and most of it may not. I question at this writing whether any pure seed of this variety will be sold even at wholesale this year as low as 25 cents, 50 cents would be more like it, and I happen to know that one of the largest and most reliable growers recently priced around a carload to the government at 60 cents wholesale. I venture the statement that there will probably be between four and 10 times as much Grimm sold this year as was produced, and I would be extremely suspicious of any lot that was offered for anywhere around 25 cents. I make this suggestion to you merely because I know your feeling for honesty and fair play, and feared that somebody might misunderstand your statement and bite on some of the very low-priced seed which will unquestionably be offered. CHAS. B. WING.

Ohio.

R. N.-Y.—The statement which we printed came from the Department of Agriculture. There can be no doubt about the folly of biting at the bait of low prices for seeds.

Vetch or Crimson Clover With Rye.

I HAVE a five-acre field of oat stubble that I am plowing for rye, to be cut for hay next Spring and then plowed for silage corn. I have been thinking of sowing a mixture of one peck Winter vetch to eight pecks rye. Would this be enough vetch, and would the returns justify the expense of more seed at $6 per bushel? Would Crimson clover have any value as a substitute for vetch? I have been offered air-slaked lime at the kiln at half price. This had been accumulating for some length of time. Would this be a profitable investment? W. P. B.

Quarryville, Pa.

We consider it too late to sow Winter vetch in your latitude after the 10th of September. In our own latitude we should want to sow the vetch by the middle of August in order to obtain its best yield. It is much the same with Crimson clover. Either crop seeded so late will not be likely to appear in the Spring, especially if the Winter is an open one with the ground unprotected by snow. Of the two we should expect rather better results the first year of seeding from the Crimson clover at this late date. Vetch does not usually start well on the first trial without inoculation. With a long Fall, open and fairly moist, there would be a large Fall growth of the clover, which will more than pay the cost of labor and seed. In our own case this year with a late seeding in the corn, we have left out vetch and clover and used equal parts of Cow-horn turnips and Dwarf Essex rape with the rye. Farmers must remember that if they expect to get the most out of their cover crop, they must sow it early. Rye is about the only crop which will stand a late seeding. If the lime you speak of is reasonably fine so that it can be spread fairly well, it ought to make a good bargain at half price.

Cover Crops in Garden.

IN the matter of cover crops, you recommend clover, rye and turnips. The small area of my garden precludes the use of a plow and I am wondering if in spading operations a growth of rye or turnips could be conveniently turned under. Would it not be better in a small garden to confine cover crops to lower growing material like clover, and if so, is there anything that could be sown with or in substitution of clover? E. A. B.

New York.

This is a good suggestion. A large plow is required to put a full rye crop under. We have known cases where the rye was cut with a scythe, wilted on the ground, and then spaded under. Barley or oats can be seeded in place of the rye. These grains will make a good Fall growth, but will be killed during the Winter and the mat which they leave on the ground can be spaded under in Spring. The main consideration is to have some rank-growing crop on the soil during the Fall. Hairy vetch would be the best substitute for clover if it is spaded early in Spring—before it gets too large.

Killed the Peach Trees.

IN the Spring I wrote you and also the Connecticut Experiment Station about a remedy for peach tree borers. The station suggested the use of arsenate of lead, painting the trees around the ground line with it. We did this and, of course, that was all right, but a week later we put a handful of nitrate of soda around trees and hoed it in. A week after applying nitrate I saw a good many trees dying, and couldn't find the trouble, so called up the Experiment Station and asked them to send a man up to look at them. They examined them and said that the chemical action of the nitrate on the arsenate of lead had drawn the true arsenate out and burned the tree. As we have lost fully 40 per cent. of trees we call it a dear lesson, and have put this on file: Never use arsenate of lead in or near nitrate on a peach or apple tree. R. B. OWEN.

Connecticut.

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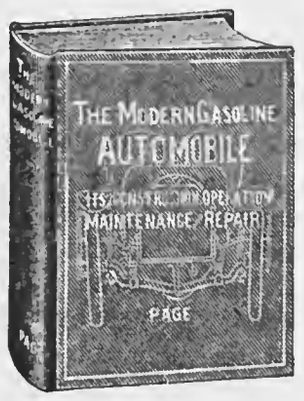

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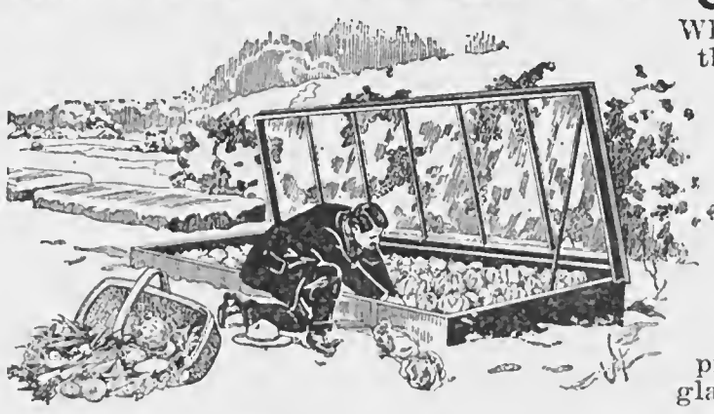

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WHAT TO DO WITH YOUNG CLOVER.

ONE of our readers says he has a new seeding of clover this year, which has made quite a heavy growth. He wants to know what he can do with it to get the most out of it. Should he clip it and leave the clippings on the ground for a mulch, let it alone just as it is, or turn in the stock for a pasture? This man is located in Tioga Co., New York. Will you give your own practice in handling the clover crop?

If feed is as high and pasturage as short up in Tioga County as it is here in Orange, I would lose no time in converting it into milk. You do not say whether this clover is in bloom or not. If in bloom, I would take a mowing machine, and after the dew has disappeared, mow enough every other day for four feeds, rake up and draw in after two in the afternoon. I find my cattle relish Alfalfa and clover much more after the sun wilts it, and it also makes the idea of cutting every other day more practical. Give one-half ration the first feeding, and if the supply is plentiful, all they will eat up clean twice a day thereafter. Not later than September 10 cut all that remains, and cure in cocks in the field, using as wanted, and taken to the barn when dry should any remain at that period.

Assuming it will not mature to the point of blooming, but has made a luxuriant growth, turn the cows in one-half hour the first day, an hour the second and all day thereafter, until they have hogged it off to a length of two inches above the ground. This will leave some stubble for protection through the Winter. In soiling with Alfalfa and clover I am between cuttings, confronted with intervals when some other entertainment must be provided. I have prepared a piece of ground with a convenient barway leading into the road, which will be sown with rye this Fall; one part with a full seeding, the remainder lightly, which in the Spring will be sown to oats and peas.

When the rye is cut a coat of manuring will be applied, and a heavy earing variety of sweet corn will be planted on the ground. It is not profitable to buy feed to make milk in the Summer time. A variety of soiling crops to eke out the supply of clover and Alfalfa will keep down the feed bill. It is a very pleasant feeling on a hot day in a dry time to know one's cattle have access to water, and a good liberal feed of green fodder awaiting them in the barn. GEO. E. HOWELL.

New York.

WESTERN NEW YORK HORTICULTURAL HAPPENINGS.

SCALE DISAPPEARING.—Evidently in this section the scale, after having wiped out many apple and pear orchards, and seriously damaged thousands of apple, pear and other trees in orchards still standing as such, has received a sudden check, and some of the once infested trees are gradually recovering, and show only slight infestation now. This I report about trees that have not been sprayed at all, or at least not regularly or thoroughly. I am not in the situation, however, to tell for a certainty what is the real cause, whether atmospheric (Winter's cold, etc.) or the newly discovered parasite. I first noted the gradual disappearance of the dreaded pest last year. The San José scale may have been of untold benefit to the fruit-growing industry as a business; but we would not mourn over its disappearance as a serious factor in fruit production. Insects come, and insects go. This is shown in several other instances.

THE BLACK SQUASH BUG.—A dozen or 15 years ago the black squash bug was present every season in large numbers, and compelled us to watch the pumpkin, squash and similar vines persistently, and hunt up the ill-smelling depredator every few days. In the Fall the late broods would often by hundreds of young bugs cover the vines and fruits, and I have often sprayed the vines, after the fruits were gathered, with kerosene, covered them with a little straw and set fire to it, thus destroying the young bugs with the vines. Then came an unusually severe Winter, and not a bug was seen for years. Even now I only find an occasional one in Winter quarters, in some crack or crevice, or hidden under some rubbish, and we have not suffered any loss or inconvenience from this pest for years.

POTATO AND FLEA BEETLE.—That "insects come and insects go" is also shown in the practical disappearance of the potato beetle this season, and of the negligible number of flea beetles that we found on all our garden crops and potatoes this year. The cause of the potato bug's non-appearance must be climatic or atmospheric. I have seen none of the natural insect enemies of the potato beetle in unusual numbers this year; in fact, there were but few. The potato beetles simply failed to show up. I have patches of potatoes in my grounds here and there, some planted earlier and some later, but in some of these patches not a single potato beetle could be found, and in only one or two a few of the less vigorous plants were attacked by the usually so numerous beetles and somewhat injured. All these patches were close to or even on the identical spots were potatoes had been grown last year, when potato bugs were more plentiful. I did not have to use any poison this year.

THE UNEVEN BARTLETT CROP.—The Bartlett pear has the reputation of being self-sterile. In this county this pear is often found in solid blocks, or planted singly far away from other pear trees. Yet in most years every tree seems to bear a full crop. The present is one of the years when we have a partial failure. Some trees have no fruit at all; others have a few, and still others bear a full crop. In previous seasons of partial Bartlett failure I have observed that the Bartlett trees standing not far from other pear varieties, such as Duchesse (Angouleme), Clapp's Favorite, Seckel, Sheldon, etc., were the ones that had the most and best pears, while the lone trees, and the trees standing outside of the influence of the other varieties, were mostly wholly barren, or had only few and crippled, lop-sided specimens. As a rule, this is true again this year; but occasionally we come across a lone tree, or trees, standing at considerable distance from other varieties, which are well set with fruit. Some of such happenings are not so easily explained. However, if I were to set a new orchard of Bartlett pears, I would feel a good deal safer, even, in this blessed Bartlett pear section, if a few Duchesse, Seckel, Clapp, Anjou, Sheldon, etc., were set intermixed with the Bartletts.

WATER IN THE GARDEN.—A little water used in the garden may often be the turning point of failure to success. On July 31 I sowed two little patches of Silverskin and other onions for green or bunching onions (for early Spring). The ground was rather dry, as it frequently is at that time of the year. In one of these patches water was applied from the village water works, by means of ¾-inch hose and a good lawn sprinkler, for nearly a day, under a pressure of about 60 pounds, and the sprinkling device moved every two hours or so. This gave the upper two or three inches of the soil a fairly good wetting. A rod or two at one end of the patch was left without watering. The plants came up promptly in a little over a week's time, except on the end not reached by the sprinkler. Rains came at about this time, making the ground plenty wet enough. But it has taken nearly three weeks' time for the young onion plants at the end, as also in the other patch that had no water (being too far from the supply) to break ground and show enough to admit the use of the wheel hoe. In the meantime, in this patch, the weeds have taken such a start that it is uphill work to get them out of the rows, and we may even be forced to give up the job if weather should continue wet. People living in the suburbs of cities and villages, who have a little garden, and a ready supply of water under pressure of thirty or more pounds from a near tap, have an opportunity for garden making which few of them fully appreciate. It is water that makes the garden grow, of course, with due applications of plant foods. But with irrigation it is often possible to grow on a quarter acre what an acre would not produce without it. Plan to make full use of the water when you have the chance!

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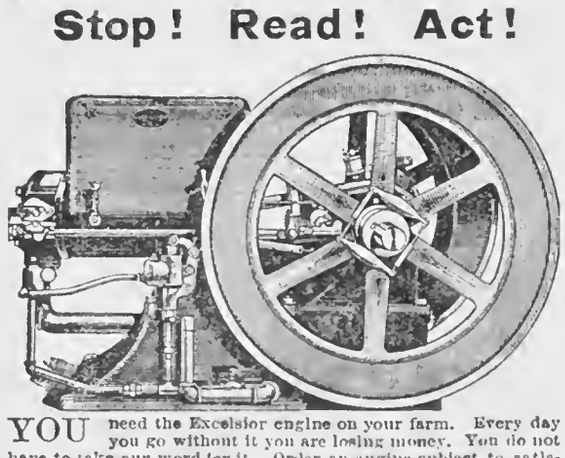

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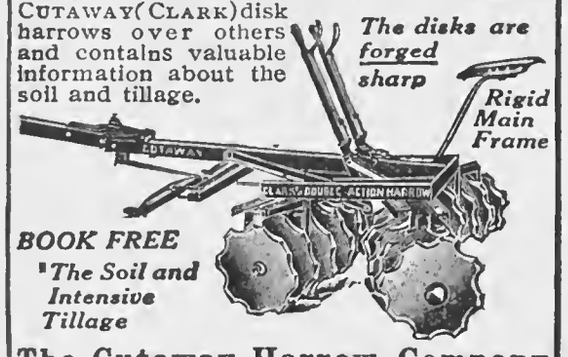

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EVENTS OF THE WEEK.

DOMESTIC.—Flames swept through two buildings of the Lister Agricultural Chemical Company on the Passaic River at Newark, N. J., Sept. 2, entailing a loss estimated at $100,000.

The Women's Coöperating Farming Community, near Morristown, N. J., received a blow, Sept. 3, when its promoter, Edward Hart of 106 West Seventy-ninth Street, New York, was arraigned in the Yorkville police court on a charge of getting money under false pretences. The complaint was made by Miss Mary Keelan of 164 West Ninety-eighth Street and her sister Elizabeth, who said in July of last year they gave Hart $750 for three acres of land on which they were to raise mushrooms. He told them, they said, that he had purchased 1,000 acres from Dr. Duncan Dobie of Morristown and would sell the land in lots of three and six acres to New York women who wanted to get back to country life. After paying their money and not being able to get a deed for the land, they said, they learned that Hart did not own the land.

Newark, N. J., opened its municipal fish markets, Sept. 3, under the auspices of Mayor Jacob Haussling in an effort to force down the price to consumers. They did a rushing business. Markets were established in three of the most populous districts of the city and were manned by city employes. Porgies, weakfish, lafayette, fluke, flounder and small bluefish were all at the flat rate of six cents a pound. The markets will be open every Thursday and Friday.

A decrease of more than $7,000,000 in the duties collected in the New York district for the month of August, as compared with the same month last year, is shown in figures now available at the Custom House. While the war has cut heavily into the revenues, the new tariff also has had much to do with the reduction. The effect of the war is shown clearly, however, in a comparison of the revenues of July and August of this year, the decrease in August having been approximately $3,000,000. The severe cut is shown in tangible form by a comparison of the withdrawals from warehouses. The duties collected from this source in July were $4,516,630. In August they jumped to $6,077,429. The New York district includes the custom houses at Albany, Newark and Perth Amboy. The decrease in customs receipts for the eight months ended August 31 is approximately $10,000,000. The big decrease in August, however, indicates that the war has played havoc with our revenues, far more than the new tariff, which, of course, is also responsible for a part of the decrease.

The first ship to carry a cargo through the Panama Canal, the Nebraskan, of the American-Hawaiian Line, laden with California fruit and wines, came into port at New York, Sept. 8, and was welcomed by Acting Mayor McAneny and other city officials as California's officially designated pioneer ship of the new transisthmian trade. The voyage was made in 27 days.

The United States government has taken charge of the radio station at Tuckerton, N. J., and messages will be received from all belligerent and neutral stations.

More than 450 men were thrown out of employment at Paterson, N. J., Sept. 8, when fire destroyed the plant of the East Jersey Pipe Company, entailing a loss of between $250,000 and $300,000.

September 10 Dr. M. S. Borden of New York and three other persons were killed near Palermo, N. J., when their automobile was struck by a freight train at a railway crossing, a fifth person being badly hurt. The car was traveling at high speed when hit. Two months ago Dr. Borden, when running his car in Greater New York ran down and killed a mounted policeman.

Orders received, Sept. 9, by General Pershing, commanding American troops on the American border at El Paso, Tex., to lift the embargo on arms to Mexico will, in the opinion of army men, mean the withdrawal from the border of the United States patrol. The lifting of the embargo is regarded as a victory for Villa.

Two expeditions have gone in search of the missing thirty men of the Karluk, Stefansson's vessel, which was wrecked in the Arctic Ocean on September 4, 1913. The United States revenue cutter Bear has started from Nome on her second attempt to reach Wrangel Island, where the sailors are believed to be marooned. The second boat, the Corwin, has been chartered for the trip by Jafet Lindenberg, the founder of Nome, and a personal friend of Stefansson. This is the last rush before the Winter ice closes in. The Mary Sadio left Herschel Island on August 11 for Banks Land to establish depots for Stefansson, should he succeed in landing there from his floating island of ice.

The United States Steel Corporation, through the Steel Produce Company, its export subsidiary, applied, Sept. 9, to have 10 vessels flying the British flag transferred to American registry. At the same time the United Fruit Company took the first step for the transfer of 25 of its ships from various flags by applying for incorporation papers for each ship at Albany.

THE EUROPEAN WAR.—Paris was declared in a state of siege September 3; the Bank of France had then sent specie and securities to Bordeaux. Rheims was then occupied by the Germans. An enormous battle, extending over a line of 150 miles, was in progress Sept. 5-11. Sept. 8 the Allies began to drive the Germans back, and Sept. 11 they had retreated about 37 miles, the Allies taking a strong offensive movement. It was then believed Paris was out of danger. .....It was asserted Sept. 9 that Emperor William had sent a dispatch to President Wilson in which he protests against the participation of the Belgian people in the war, and expresses deep regret at the destruction of interesting places in that country. He makes a strong protest against the alleged use by the French of dumdum bullets. The belief is held in Washington that this is merely an opening wedge for an effort on the part of the Germans to bring about peace. The British Foreign Office has already stated that it will not consider any peace terms that do not include full indemnity for all injury suffered by Belgium.....September 8 Ghent surrendered to the Germans, to avoid bombardment. It was then reported that the Germans had destroyed the ancient city of Dinant. At Termonde the Belgians inflicted a loss of 5,000 upon the Germans. It is said that indemnities to the total of $140,560,000 have already been demanded by the Germans from the towns and districts they have occupied in Belgium. The demands are as follows: Brussels, $40,000,000; Liege, $10,000,000; Louvain, $20,000; Province of Brabant, $90,000,000; Lille, $140,000; Amiens, $200,000; Roubaix and Turcoing, $200,000. A number of less important towns have also been fined various small sums.....The Austrian defeat at Lemberg, which ended a three days' battle was followed by the flight of three army corps, with enormous loss of men and equipments. September 7 the Russians took possession of the Province of Galicia and Russian victories were reported at several points.....September 4 Premier Asquith announced that between 250,000 and 300,000 men had responded to Lord Kitchener's call for recruits.....September 5 a convention between France, Russia and England was signed at London, by which it was agreed that no one of these powers should agree to peace with Germany unless all three agreed to it. Later Japan united in this agreement.....The British cruiser Pathfinder was blown up by a torpedo off the coast of Scotland September 4, with a loss of 248.....September 4 the Wilson line steamer Runo, from Hull, for Russian ports with passengers, struck a mine in the North Sea; 26 passengers were lost, but more than 300 were rescued by British fishermen.....Vessels arriving at Manila bring reports indicating that Philippine waters are being constantly patrolled by British, French, Russian and Japanese warships to intercept German merchantmen. The Hampshire is west of Luzon, a Russian cruiser with seven destroyers is patrolling to the north, while the French armored cruisers Kleber and Dupleix are to the southward, and the Japanese warships are off San Barnardino. .....Sept. 8 the British battleship Glory arrived at Halifax, N. S., convoying the Spanish steamer Montserrat, which was seized on the high seas with 150 German reservists on board. The Montserrat had sailed from New York two days before.....Since the war began 16 English fishing vessels from Grimsby have been sunk in the North Sea. Many trawlers are now engaged in collecting floating mines, for which the Admiralty pays them about $10 apiece. .....Accompanying the 30,000 soldiers from British India now in France are a number of Indian potentates; the Maharajah of Mysore has contributed to British war funds 50 laks of rupees. The Dalai Lama of Tibet has offered 1,000 soldiers.....Sept. 9 the Holland-America liner Noordam, from New York with German reservists and a general cargo for Germany, was captured by a British vessel and taken to Queenstown..... Great Britain is preparing to receive 60,000 homeless Belgians, chiefly women and children but also men unfit for military service. Special boats are being sent to Ostend for them, and 52 towns and cities are ready to receive them. Many of these people, who are entirely destitute, will be taken into the homes of charitable people.

WASHINGTON.—The first definite results of the Federal Government's crusade against alleged conspiracies to manipulate food prices came Sept. 4, when 31 persons, including well-known provision and commission merchants of Washington, were indicted by the Grand Jury on a charge of unlawfully engaging in a combination in restraint of trade in violation of the Sherman anti-trust law. It is charged that they had daily meetings at which the prices which they paid for farm products were fixed and that they obtained a monopoly of the local market in foodstuffs, which permitted the members of the alleged conspiracy to fix arbitrary and excessive prices.

President Wilson submitted a plan, Sept. 7, for a three years truce to all parties in the Colorado mining strike. This action by the President will again necessitate a decision by the Rockefeller interests as to whether or not they will make concessions in the vital principles involved in the strike. The President points out that there are important public interests involved in the existing controversy aside from those of the two contending parties. The plan he submits was evolved by two representatives of the Government who have studied the issues in the strike for several months with a view to finding a solution. The plan contemplates establishment of a truce for three years, during which the State mining and labor laws shall be enforced, and the restoration to employment of all striking miners who have not been found guilty of violation of the laws. Intimidation of non-union or union men is to be prohibited and wage scales are to be posted at each mine. A grievance committee is to be chosen by the employees of each mine, which shall be entrusted with treating with the employer when trouble arises. A commission of three, to be appointed by the President, is to be the appeal body to which grievances that cannot be otherwise settled are to be taken.

The Merchant Marine Committee reported to the House, Sept. 8, the administration bill for the creation of a government controlled corporation to purchase or build ships to enter the foreign shipping trade while traffic is demoralized because of the European War. The report puts at rest fears that the neutrality of this country may be violated by a government operated steamship line, and assurance is given that the proposed shipping board to control the project, with the advice of the President and State Department, will avoid international pitfalls.

An outline of the new taxation was given September 8, this is to provide for falling revenues due in part to the European War. It contemplates increased rates on beer, wine and spirits, and a probable tax on Pullman tickets, gasoline, playing cards and cigarettes.

CROP REPORTS.

Sept. 1. Conditions here are good. It has been a fat year, and good prospects are ahead. The hay crop is 150% or better, both in yield and quality. Some of my neighbors with stump meadows actually ceased making hay because they lacked barn storage. Oats are poor, but are grown mainly as a nurse crop, and the new seedings are fine. Other grains are fair. Corn is about 80 to 85%, but is slow maturing. Pastures have been good all Summer, and cattle have done well and are in good condition. Farmers will carry over more stock than ever before with better feed for them. Prices are good, the best grade Jerseys being quoted $90 to $110, with good ones at $65 to $85. Beef prices control the rest.
Irma, Wis. G. G. C.

Sept. 4.—Wheat, $1.08; oats, 43; corn, 80; rye, 80; barley, 70; clover seed, $9.25; Timothy seed, $2; steers, 8; cows, 4 to 6; calves, 9 to 10; hogs, 8½; lambs, 5 to 7; sheep, 3 to 4; a little more for extra good stuff. Hay, Timothy, $12; mixed, $11; clover, $10; straw, no demand. Potatoes, 75 to 90c.; spring chicken, 14; eggs, 21; butter, 22 to 30 and none to be had. I never saw country butter so scarce; pasture is good, but both country stores and those in the city are selling creamery butter. H. H.
New Haven, Ind.

Sept. 3. Prevailing prices which a farmer could obtain on following commodities at this point are as follows: Wheat 90; oats 40; shelled corn 68; ear corn 65; barley 52; hogs $8.60; fat cattle nine cents. Butter, country made, 25; creamery 30; eggs 18; grapes four cents pound; tomatoes $1 bushel; potatoes 75; wild hay $8.50; Alfalfa hay $11. In addition to above we have regular gardeners who canvass the town daily, selling cabbage, melons, carrots, etc., but our supply in that line is very limited, and prices fluctuate. W. A.
Tekamah, Nebr.

The principal crops grown in Kern County are fruit, grain, hay and Alfalfa. The prices this year are away below cost of raising it, and at the price there is no sale for it. A neighbor of mine was offered $8 per ton for fine wheat hay, $4 per ton for Alfalfa, on the car. Out of that there would be $2 for baling, $1 for hauling and 25 cents for siding charges. Good cows sell at $80 to $125. Horses are cheaper than they were on account of so many autos in use. Chickens, old and young, any size, 16 cents live weight. Creamery butter 30; ranch butter 20; eggs 20 to the farmer at the store.
Bakersfield, Cal. G. A. H.

Sept. 1. Peaches are a total failure in Monroe County, N. Y. One grower congratulates himself on having 400 baskets where he should have had from 4,000 to 6,000 in an ordinary year. Apples are heavy crop; Bartlett pears about 20% of a crop, and other kinds about 75% of a crop. Grapes will be a heavy crop. The Rochester market consumes nearly all grown in the county, and the anticipated price is two to 2½ cents the pound. Tomatoes are selling for 20 cents the basket, apples from 25 to 50 cents the bushel, melons from 75 cents to $1 the dozen, and potatoes about 80 cents the bushel. Corn is good but a little late. Oats were good but damaged by weather. It was the poorest time in the history of the county to care for the crop. Wheat is a good crop, hay fair, and the farmers are holding it for higher prices, with indications of the prices reaching $15 or $16 a ton. Last year the best was sold for $11. W. J.

"Do you always acknowledge it when you know you are wrong?" "No; only when other people know it."—Boston Transcript.

Studebaker

The Report Is True—Here Are The Prices

UNDOUBTEDLY—along with the whole country—you have been amazed at the prices for the new Studebaker car—$985 for a big, roomy touring car and $1385 for a Studebaker "Six."

These would be extraordinary prices for just a "good" car.

What, then, can be said of these prices for a Studebaker car?

What, then, can be said of these prices when they carry with them the Studebaker name, the Studebaker reputation, the Studebaker character, the Studebaker guarantee—and Studebaker Quality?

It is too little to say they are extraordinary.

We believe these prices with Studebaker Quality are unprecedented.

Our fathers and grandfathers know the name Studebaker. For sixty-two years it has meant American vehicles, honestly, sturdily made. For sixty-two years farm and city homes have known Studebaker as the name for dollar-for-dollar value.

These sixty-two years Studebaker has grown enormously—in reputation, in production, in prosperity.

Today Studebaker means—in city and country—the acme of elegance as well as the acme of money-worth.

Today we give Studebaker owners and Studebaker buyers the benefit of sixty-five years of Studebaker growth.

That growth has made possible Studebaker Quality at Studebaker prices—and has made them possible for these reasons:

First, there is the huge volume of Studebaker production.

During the last eighteen months 55,000 Studebaker cars have been manufactured and sold.

This is the largest number of cars of one make, selling at or above the Studebaker price, ever produced in the same period by any manufacturer.

Second, Studebaker cars are manufactured cars—manufactured in the Studebaker plants.

Studebaker motors, springs, bodies, tops, drop forgings are made in Studebaker plants.

Special formulae for Studebaker steels are worked out and the steels are tested and analyzed in Studebaker laboratories, probably the largest and most completely equipped in the motor car industry.

Studebaker gears, axle-shafts, front axles, all vital parts are manufactured and hea treated in Studebaker plants.

Studebaker, we believe, manufactures a larger proportion of motor car parts than does any other motor car producer in this country.

The completeness of Studebaker manufacture of Studebaker cars means better, stronger, longer wearing materials—consequently Studebaker Quality.

But in addition, it means the saving of the parts-maker's profit, the waste and extravagance of the "assembled" or semi-manufactured car.

And that, in turn, means the economies that make possible Studebaker prices.

The volume of Studebaker production and the completeness of Studebaker manufacture mean the Quality and the Profit that go back into the Studebaker car you buy.

The Studebaker has the double distinction—Unique in Quality and Unique in Price.

The Studebaker Car of 1915 is an impressive example of what square-dealing, good building and right-thinking among the American people can do in sixty-five years.

Today the American people in town and country "Buy it Because It's a Studebaker."

The Studebaker Corporation of America
105 Piquette Ave., Detroit, Mich.

Specifications

The New SIX—5-Passenger and 7-Passenger

Electric Starter, Electric Lights.
Two body styles: Five-Passenger and Seven-Passenger Touring.
Wheelbase—121 inches.
Long-Stroke (5-inch), Small-Bore (3½-inch) Motor; Six Cylinders, en Bloc.
Special Dimming Headlights.
Smokeless, Non-Leaking Lubrication System.
New Exhaust-Silencing Muffler.
Annular Piston Rings.
Cellular Radiator.
Crowned Fenders.
15 x 2½ in. brakes.
34 x 4-in. Goodrich Tires on Q. D. Demonntable Rims; Safety Tread on Rear.
Extra Rim and Locking Tire Carrier.
Roomier Front and Rear Compartments.
Continuous Aluminum Footboard.
One-Man Type Top.
Built-in Rain and Clear Vision Ventilating Windshield, Attaching Rigidly to Top.
Scientific Anti-Rumble Gasoline Tank in Cowl.
Magnetic, Non-Leaking Gasoline Gauge, the only One Approved by Insurance Underwriters.
Full Floating Rear Axle, Shaft Locking into Taper at Hub. Timken Bearings.
Full Equipment of 13 Timken Roller Bearings.
Irreversible Steering Gear.
Inter-Locking Ignition and Lighting Switches.
20 Operations in Painting Bodies.

The New FOUR Roadster and Touring Car

Electric Starter, Electric Lights.
Two Body Styles: Five-Passenger Touring; Three-Passenger Roadster.
Wheelbase—108 inches.
Long-Stroke (5-inch), Small Bore (3½-inch) Motor; Four Cylinders, en Bloc, Exhaust Manifold Cast Separate.
Smokeless, Non-Leaking Lubrication System.
Special Dimming Headlights.
Pressed Steel Push-Rods.
Annular Piston Rings.
Tubular Radiator with Auxiliary Water Tank.
Crowned Fenders.
12 x 2½-in. Brakes.
Hot-Jacketed Schebler Carburetor Bolted to Cylinders.
Magnetic, Non-Leaking Gasoline Gauge, the Only One Approved by Insurance Underwriters.
Generous Footroom in Both Compartments.
33 x 4-in. Goodrich Tires on Q. D. Demountable Rims; Safety Tread on Rear.
One-Man Type Top.
Built-in Rain and Clear Vision Ventilating Windshield, Attaching Rigidly to Top.
Full Floating Rear Axle, Shaft Locking into Taper at Hub. Timken Bearings.
Full Equipment of 13 Timken Roller Bearings.
Irreversible Steering Gear.
Flush Dash Equipment.
Extra Rim and Locking Tire Carrier.
20 Operations in Painting Bodies.

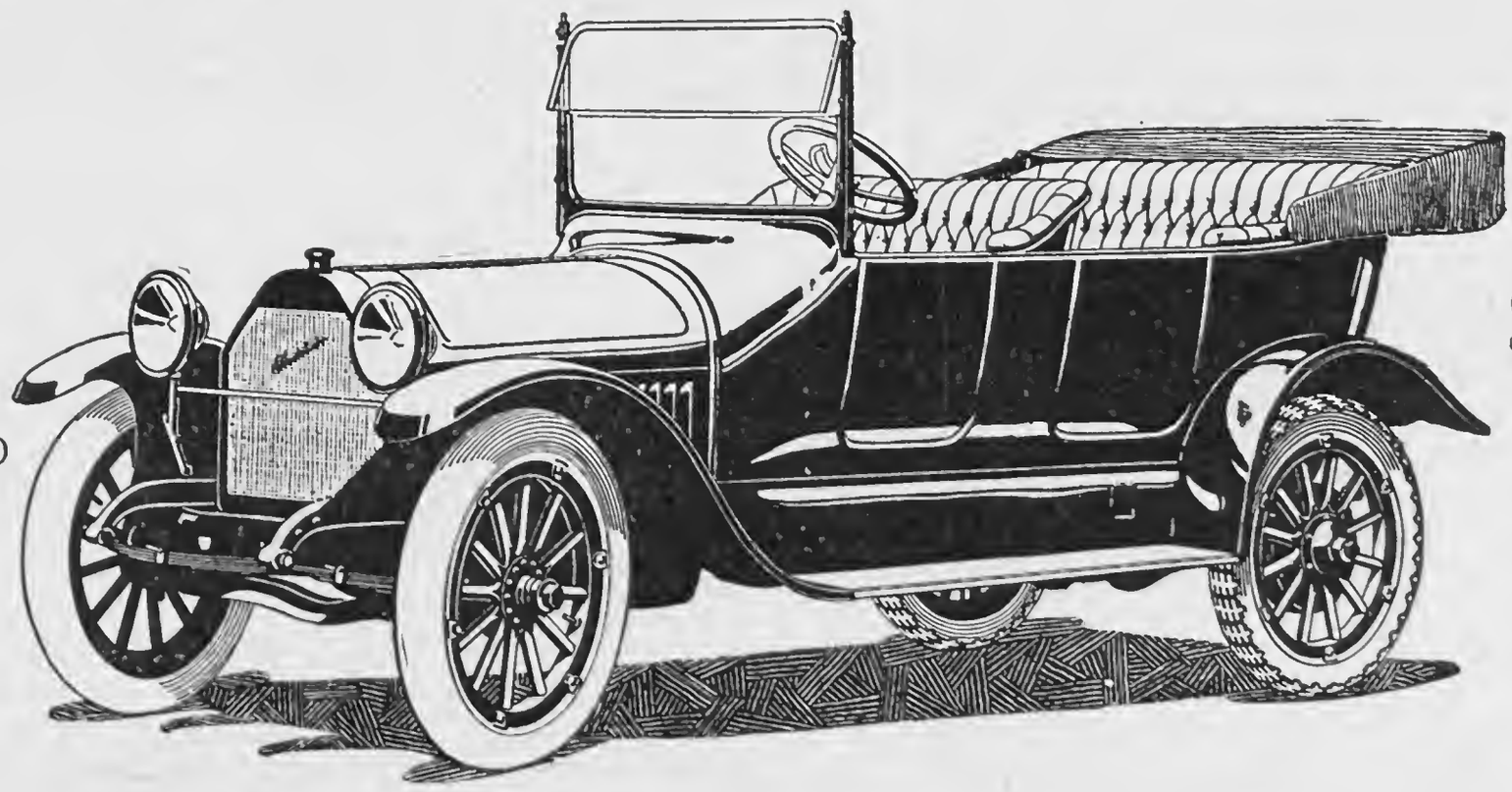
FOUR Touring Car

$985

(Three-Passenger FOUR Roadster $985)

Electric Starter and Electric Lights

Extra Size Tires



SIX Five-Passenger

$1385

(Seven-Passenger $1450)

Electric Starter and Electric Lights

Completely Equipped

NEW YORK STATE FAIR NOTES.

MACHINERY.—The gasoline engine, the motor truck, the litter carrier, the manure spreader, the milking machine, the riding plow and the tractor attracted the business farmer at the fair at Syracuse this year. The farmer is becoming a mechanic, and his appreciation of machinery in lightening his tasks would have astonished the mechanician of a score years ago. Farm machinery is as keenly an interesting feature of the fair as the horse race and the live stock. The exhibits evidence what farmers are buying. The silo men declare there were one-third more inquiries for silos than last year. The prospects were more interested than heretofore, and the indications point to the sale of one-third more silos the coming year than heretofore in the State. The tractor for a score years was considered at home in the West. One tractor representative declared fruit men are more deeply interested in the machine for orchard tilling, farmers in this power for hauling, road men for grading, and the side hill orchards of New York and New England will apply the tractor to their farm work on nearly 40 per cent. increase in number of machines in use. Farmers are turning attention to the use of concrete on the farm. The old back-breaking method of mixing cement with hoe, and pouring in water from a pail and shoveling the mixture in a bucket is yielding to the concrete mixer. The machines are inexpensive, compared with efficiency, and several were shown which could be operated by hand or the small horsepower engine and cost about $35.

"Now is the age of gasoline," a farmer remarked as he observed a display in which there were a half dozen engines in operation. "There will be more engines sold in the East than heretofore," remarked a representative. "In the dairy sections we are placing the large horsepower engine, 10, 12 and even larger for silo filling. Many farmers are buying smaller engines for pumping and household work." "We are adding the magneto to our engine and the low price of gasoline and fuel has quickened the demand for power plants." The patent right promoter has disappeared from the fairs and is no longer offering a new "fence idea." The wire men are telling the New York farmers the secret of fencing. The farmers are not buying barbed wire as they did a dozen years ago. The farmer who is seeking good fencing finds No. 9 wire is the fencing which is most profitable, the increased life is a sensible investment, and the critical buyers are asking for fencing with stay wires spaced six inches apart. The fence men will sell nearly double the fencing in New York State the coming year. We must provide more sanitary milk and do it profitably, dairymen agree, and the milking machine is a means of sanitary milk production. Four different milking machines were exhibited at the State Fair.

POULTRY EXHIBITS.—The grandeur of display and the comfortable quarters in which the poultry is located are the features of the poultry exhibit at the State Fair, in the opinion of one of the visitors and exhibitors. The practical as well as show stock is the kind that were exhibited at the fair. Exhibitors not only from New York State, but from Canada and as far west as Kansas battled for prizes. The Rhode Island Reds were more numerous than heretofore. This is an evidence of their popularity as a serviceable fowl. Leghorns have been popular at the New York State Fair, and they have maintained their stand in spite of other birds bidding for popular favor on the basis of efficiency. The varieties, even including the more rare Silver Duckling Leghorn were shown, and all in good numbers. The Anconas and the Campines deserved recommendation. There are not as many Barred Rocks exhibited as previously. This was probably due to the lack of the get-together spirit among the breeders. Special inducements were offered the Minoreas, and the breeders responded by sending remarkable fowls. The popularity of the Anconas and Campines as egg machines was evidenced by the numerous exhibits. These birds not only are the kind which will satisfy the egg producer but the fancy breeder. The array of the Campines was declared the best outside of any great city show. The presence of the Sicilian Buttercups evidenced their being a practical and efficient bird. Turkeys were shy this year, the only breed shown being White Hollands. The special prizes on Indian Runner ducks stimulated very lively competition among breeders in New York and surrounding States. Among the geese Toulouse and Embden, and a large number of Africans were shown. Even the migratory wild goose had been made to feel at home, and evidenced pride in the attention given him. A multitude of bantams which came from far west Kansas, were at home among their many competitors, and although some attempt showing efficiency in bantams, yet the number of exhibits show interest of fanciers in the small fowl, as show and pet bird. "The Minorcas have nothing over the Leghorns in size of egg," remarked one poultryman as he leaned over the railing, and inspected the eggs shown. The egg exhibit was one of the interesting little features of the show.

VEGETABLE AND FRUIT EXHIBITS.

IN view of activity of the Vegetable Growers' Association during the past Winter, in which it was decided to bring to the attention of the Fair Association the need of improvement in existing conditions, Henry Greffrath, a large commercial grower, was appointed superintendent, and the premium list was doubled. The prizes, particularly in onions, potatoes, tomatoes, and other vegetables, were secured by commercial growers rather than fanciers. The Grange and the county exhibits had fallen off in the past two years. This is due to the effort required to collect material for these exhibits. It was suggested that men should be hired to collect these county exhibits, they should be paid, and should visit orchards with the view to selecting fruit for exhibition purposes. Others proposed that the Granges should hold preliminary fairs and from the winning exhibits, the county exhibits should be selected for the State Fair. In fruit, prizes were offered to packs, and it was suggested that much of the fruit shown would be in boxes and baskets and barrels, and the plate displays would be left to the Granges. In the volume of the exhibits, owing to the peach shortage, the peaches shown were less than previous years. There are more apples being shown than last year, and about the same number as two years before. The grape exhibits are the best shown in several years. Many prizes were awarded the Hudson Valley and Long Island grapes, because of their being well advanced in maturity compared with the western and the lake vineyards.

LEGAL FARM MATTERS

Private Water Supply.

HOW long can a lease be obtained in this State for putting a reservoir for water on a hill above the house, and could I supply my neighbors with the running water and fix our rates without the permission of some other official? Whose property would the pipe be that ran from the reservoir to my place if I paid for the installing of it in the beginning? D. M.

The right you desire in the spring would be more in the form of an easement than a lease, but if you wish to lease the right to get water from the spring, the term could be for any length of time you wish. The lease should also contain the provision for carrying the water over your neighbor's property. Unless you protected your right in the pipe by contract, it would revert to the owner of the property on which it was laid after your lease expired. You can supply your neighbors up to the number of 10 with the running water and fix your rates without the permission of any public official, but if it got over this number you probably would have to consult the Public Service Commission.

Payment of Taxes.

A PURCHASED a farm in New Hampshire for $800, paying one-half down and securing a mortgage for $400 from B, the first owner of the farm. A agrees to pay B $100 down each year at the rate of 6% on the $400. A claims that as long as the rate of interest is 6% he has no taxes to pay and that B is obliged to pay the taxes, but if the rate of interest were 5%, A would have to pay the taxes. D. M.

New Hampshire.

The rate of interest has nothing to do with the taxes. The taxes must be paid by the party who has the legal title to the land. If A has been given a deed and he has recorded it, he must pay the taxes, unless by contract A and B have decided otherwise.

Damages for Change of Grade of Railway.

OUR buildings are situated on the lower side of the highway and are so situated that we have quite a steep incline to drive up to get into the highway. Now the State authorities are building an improved highway which cause a fill in front of our driveway and house of some eight to 10 feet which makes it impossible to drive on to road or make a reasonable drive in the old place. We have had to move our road fence and drive along parallel with road for some distance before we can get on. It is quite a damage to us as a matter of convenience, and more so if we were to sell off farm. It is considered a very serious damage by the best men of this community; some have estimated the damage around $1,000. Are you of the opinion that I could get damage from the State? Is there any law protecting people in this respect? R. S. H.

New York.

Section 59 of the State Highway Law, which does not seem to have been amended lately, provides that in any town in which a town highway shall be repaired or graded from curb to curb by the authorities of the town the owner of the land adjacent to the State highway shall be entitled to recover from the town the damages resulting from any change of grade. This claim should be verified and presented to the town board within 60 days after such change of grade is effected. The town board may agree with the owner upon the amount of damages, but if no agreement is made within 30 days the property owner may apply to the Supreme Court.

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D. T. Bohon

Don't waste your money paying double profit on high priced buggies. I save you $25 to $50—factory price—and send you my luxurious storm buggy on 30-day road test. Unlimited guarantee backed by $30,000 Bond.

I have saved thousands of dollars for farmers and will save you money. Get my new proposition now.

Bohon's Famous "Blue Grass" Storm Buggy, Built for Hard Knocks

All gear parts and braces Norway wrought iron and steel. Wheels are STRAIGHT GRAIN SECOND GROWTH HICKORY. Body and seat are air-dried yellow poplar. Water-proof roof. Warp-proof doors. Double strength glass in windows and doors. Easy riding; light running.

FREE Bohon's Foot Warmer Write for Details Today

Extra zero driving comfort. Costs you nothing. You don't even have to buy a buggy. Full particulars together with my big Buggy Bargain Book sent on request. The supply of free foot warmers is limited. Write at once.

D. T. BOHON

2440 Main St. Harrodsburg, Ky.

Hardwood Ashes BEST FERTILIZER IN USE. GEO. L. MUNROE & SONS, Oswego, N. Y.

Free Box of Samples

sent to your station charges prepaid. Delivered prices quoted on request. All sizes, 2 inches to 20 inches.

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Are these your buildings?

Yours may be of a different style, but have they this look of thrift? Good painting has more to do with appearance than any other one thing.

White-leaded buildings suggest prosperity and a share of the good things, as well as good taste.

Dutch Boy White Lead

and Dutch Boy linseed oil make the paint that sticks to the building and sticks to its color. You can tint this farmers' paint any color you wish.

You can now get red lead in paste form, same as white lead. Doesn't harden in the can. Fine for painting resinous wood; best by all odds for implements and metal work. Ask your dealer.

Write for Farmers' Paint Helps No. 2513 FREE

Gives full instructions for mixing all colors for all surfaces and weather conditions and shows how to estimate amount of paint needed.

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GALVANIZED ROOFING $2.90 Per Sq.

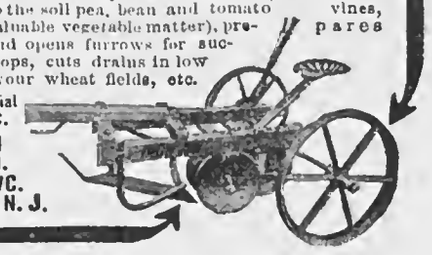
Write for Cat. "C" and price del. your station. GRIFFIN LUMBER CO., Box 99, Hudson Falls, New York

SAVE YOUR HUMUS

Make the most now of your corn and cabbage stubs and refuse—they are valuable as humus and vegetable fertilizer. Cut them up fine—make them immediately available. Plow them under where they will do their work but won't interfere with cultivation.

IRON AGE STUB and VINE CUTTER

Cuts corn stubs in 5 pieces, makes cabbage stubs fly apart, levels ridges so you can dress better, cuts up and returns to the soil pea, bean and tomato vines, etc. (all valuable vegetable matter), prepares ground and opens furrows for succession crops, cuts drains in low spots of your wheat fields, etc.



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Our new illustrated book, "Better Farming," shows how to increase the fertility of the soil, protect crops from drouth, make your land more valuable, and increase farm profits by using Atlas Farm Powder, the Safest Explosive. Mail the coupon and get it FREE.

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VAN DEMAN'S FRUIT NOTES.

Dying Apple Trees.

WILL you tell me what ails my apple trees? They are old Bellflower trees; the leaves turn yellow and drop off and the limbs seem to be dead. I have sawed a lot of limbs out but more are going the same way. L. F.
Eastport, Me.

There might be one or more of many troubles affecting these apple trees. It may be old age and starvation. There may be canker on the branches or borers at the base of the trunks. It would be a mere guess to say what is the real cause of the trouble. The surest way to know is to look over the trees carefully for borers and canker and if there are any of the former there, dig them out at once. If there are diseased places on the branches, cut out sections and send to the experiment station at Orono for examination by the experts there. It will cost nothing but the mailing charges. There is far too little use made of these advantages that are afforded by the experiment stations.

Walnut Blight.

I HAVE charge of English walnut grove of 11 acres, 18 years old. It has borne a few nuts. Trees are affected with some kind of blight, leaves turning yellow and edges curling, and about this time of year dropping and leaving about one to two feet of dead wood. I would like some information in regard to treatment. Situated one-half mile from Lake Erie, gravel soil and very fertile, cultivated up to August 1. W. M. J.
North East, Pa.

Walnut blight is a disease similar to pear blight and has a distinct bacterial germ that is the cause. It is very prevalent in many of the walnut orchards of California and has done a great deal of damage, not only to the foliage and young wood, but to the nuts. There is great difficulty in stopping this disease. Spraying in the most thorough manner has proved about useless in the California orchards. Cutting out every sign of it as soon as seen is the way to fight the disease. It may be that it is not blight in this case, but the description is quite clear to me of the truth of its presence. I would send specimens to the State Experiment Station and to the U. S. Department of Agriculture for examination.

Fall Pruning of Peaches.

I HAVE a lot of peach trees planted in the Spring of 1912. They have made a fine growth this Summer, and are in a very thrifty condition. I have been advised to cut back this year's growth somewhat to encourage fruit buds. Would it be good practive, and would September be the proper time? J. K.
Detroit, Mich.

It is very likely that some cutting back of these peach trees would be a benefit to them but this should not be done until next Spring after all the severe freezing is over. To cut them back or prune them in any way this Fall would be wrong. It is too late to have any effect whatever in the formation of fruit buds, for they were set in the early part of the Summer, and are now all ready to develop next Spring into bloom. They are always on the new growth, and are usually very abundant on trees three years from time of planting. It will be well to cut back the branches that are very strong and show a tendency to make the trees too tall and spreading for convenient gathering of the fruit. Some of the branches may need to be taken out entirely to prevent too dense a growth. An evenly balanced and rather compact head open enough for good light on all parts of it is the ideal, in my opinion. Do not remove the small interior branches for they will bear good fruit. Don't prune to clean shanky main branches.

Barren Plum Trees.

I HAVE about 50 Burbank plum trees that do not bear. Most of them are in henyards. They are eight years old and have never borne a full crop. They are all handsome spreading trees, and I keep them sprayed and looking fine. They are loaded with masses of fruit buds every Winter, but drop off in the Spring. The other plums, such as Red June and Abundance, that are planted beside them, bear very heavily. Is there anything I can do to make them bear? I have never pruned them much. They grow so handsome they don't seem to need it.
Billerica, Mass. F. S. M.

It is not a common failing of the Burbank plum to be unproductive from failing to set its fruit or dropping it afterwards, except in cases where rot is very bad. The flowers are generally considered self-fertile. It is possible that the inquirer is mistaken in the trees that he has, and that they are some other variety than Burbank. It is quite easy to distingnish the trees of the Burbank plum from about all others that I know because of the peculiar spreading habit. The branches are very vigorous and grow horizontally to a considerable degree, making a tree of distinct shape. Most of the trees of the Japanese species are quite upright in habit and some of them are remarkably so. I know of nothing to advise for making these trees productive unless it is to top-graft them to some variety of the same class that is known to bear well in that region.

H. E. VAN DEMAN.

THE WAR AND SEEDS AND BULBS.

IT may seem strange at this time to learn that even one commodity is not going up on account of the existing chaos in Europe, but on the contrary has taken a big drop in price, about 25%.

Holland produces a large share of the Winter flowering bulbs, tulips, hyacinths, Narcissi, etc., and the crop is now harvested and ready for export. The warring countries of Europe are looked to by Holland to consume two-thirds at least of the annual output, and this market is now closed. United States takes one-sixth and other countries one-sixth. Holland must now look to us and the other neutral countries to care for the two-thirds now in her warerooms. The effect of this was shown last week in a florist trade paper where prices on all such bulbs were quoted from 25% to 50% below ordinary rates—if deliveries can be made, which remains to be seen. Florists hope the bulbs will come through all right, as it will work something of a hardship on them not to have this staple flowering article for Winter sales, as potted, blooming bulbs are one of the good sources of income to them in the Winter and Spring months.

Seed harvests of European countries either ripe or nearly so. Most of the great seed producing countries are those now at war, Germany being one of the greatest, what is known as the Quedlinburg and Erfurt districts producing almost unbelievable quantities of seed annually. Only women, children and men above 45 years are left to harvest, sort, pack and ship this crop, and when ready it is doubtful if it can be gotten out of the country.

The United States is said to produce about $1,500,000 of the annual consumption of some $18,000,000 worth of seed, the balance coming from abroad, and some $15,000,000 from the countries now closed to commerce. If the war should continue four months and over, the seed proposition for farmer and gardener would assume a very serious aspect, not only on account of price, but extreme scarcity. Some of the kinds coming from Europe in large amounts are beet, carrot, cucumber, cabbage, cauliflower, chard, mangel and flower seeds, with practically everything else in more or less large amounts.
Michigan. P. L. W.

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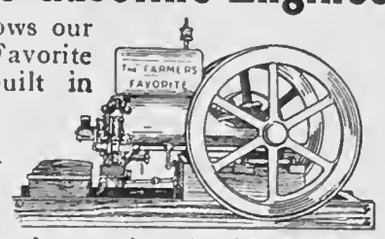
This cut shows our Farmers' Favorite Engine, built in sizes 6 H. P. to 10 H. P. Stationary and Portable —A Solid



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Howard E. Coffin's Crowning Six

The new HUDSON Six-40 holds first place today because Howard E. Coffin designed it.

He is final authority on motor car engineering. For many years he has led the most important advances. Most men today will concede his supremacy.

This car is his masterpiece. He has worked for four years on it, with 47 other HUDSON engineers. And this latest Six-40 is their final conception of the ideal new-day Six.

The Typical Car

The HUDSON Six-40 is simply the climax of an almost universal trend. It shows the goal which the ablest designers are aiming at today.

HUDSON Six-40 $1,550 This Year f.o.b. Detroit

Most cars are being built lighter. But the HUDSON Six-40 is the first car of similar passenger and road capacity to reach 2,890 pounds.

All seek lower operative cost. —by a new-type motor—we have accomplished economy before unknown. In body beauty we have simply excelled along the lines in vogue. So also in equipment, comfort and convenience. We have added unique attractions.

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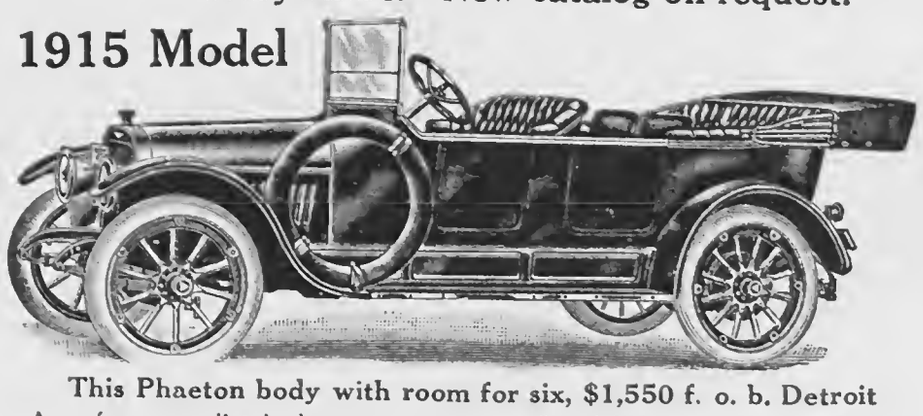

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Hope Farm Notes

AT the New York State Fair you meet all sorts of people—most of them with a message. This message is a condensed report of what life has taught them during the past year. If you question them a little you will obtain a clear statement of the best thought of agricultural New York. I talked with many farmers this year, and what follows may be accepted as a fair statement of what they are considering.

ALFALFA.—All along the limestone soils in Central New York Alfalfa is working out farm miracles. Wherever its culture becomes general all crops improve, land values rise, incomes increase and prosperity mellows the farmer and makes his life happier and better. It looks as if Holstein cattle follow the Alfalfa. Some of the sections where this crop does well have become famous for the production of black and white cattle. A few years ago when I said that an acre of Alfalfa in central New York was like a free ticket at a mill for four tons of wheat bran some people called it a wild statement. History has proved it true—and more.

SELLING HAY.—Most of the arguments for growing Alfalfa are based on the plan of feeding the crop to dairy cows at home. There is another side to this. Our old friend Hamlet Worker of Onondaga County sells the hay. Mr. Worker was formerly in the dairy business, but sold his cows. He has 35 acres or more of Alfalfa which this year will give four to five tons of hay per acre. This will average $16 or more per ton. Perhaps two months of labor are required to handle the crops. In that country a field well started in Alfalfa will last eight years or more—perhaps 25 cuttings. Mr. Worker has tried lime and phosphate on the Alfalfa, but could not see any improvement where they were used. The strong soil of that section grows more and more productive as the result of growing Alfalfa and plowing under its sod.

OTHER CONSIDERATION.—It was the universal comment that Alfalfa growing increased all crops and enlarged business. One man said that 12 years ago he had one mower, one horse rake, and pitched all the hay by hand. Now as a result of Alfalfa growing he has three mowers, several rakes, hay loaders, hay slings and a gasoline engine to lift the hay into the barn. With this improved machinery a boy could do the work of at least two strong men working with the old-time tools. There were men from certain sections of the State who had tried Alfalfa and failed. It might do fairly well one year, but then it faded away. The soil was not naturally adapted to it—being very shallow or wet, with a hardpan. The lime supply was too far away and freight rates too high. These and other reasons made Alfalfa too short-lived or too expensive. It is quite a problem with these men whether they shall try to overcome the natural soil difficulties or give up Alfalfa and try crops which are better suited to sour soils. Certainly the man on an Alfalfa soil has a great advantage.

MOTOR TRUCKS.—Farmers are studying the transportation question as never before. Grant Hitchings, the apple man with the mulched orchards, tells me he has about 25,000 bushels this year. I went out to the Hitchings orchard years ago when the crop was less than 1,000 bushels and all the experts laughed at the plan. For years Mr. Hitchings hauled his fruit in a wagon over the hills to Syracuse—the load averaging perhaps 30 bushels. Now he has an auto truck which will take 105 bushels at a load and probably go in less than half the time the horses took. These horses are left at home for farm work. All over the State farmers are studying this transportation problem. Many of the larger farmers and fruit growers have auto trucks for road work, while in some cases several farmers combine and organize a trucking service.

AUTOMOBILES.—It is astonishing how many farmers own and drive their cars. I heard a conversation between two farmers—one middle-aged—the other older. The younger man said that 75 per cent. of the farmers in his section owned cars.

"Did they mortgage their farms?" asked the older man.

"No They are well-to-do farmers who have paid for their farms and have a surplus!"

"What good does the car do them?"

"Well, they see more of life! They have worked hard and deserve an easier time. They can take the women folks and get out around 50 miles from home and see old friends and make new ones Most of them did not buy these cars for business, but for social and mental benefit. Life looks better to them through the power of getting away from home—and back again quickly."

"They better save their money!"

"The money belongs to them and they figure that it is better for them to have some enjoyment out of it. Why should they not use their money for such a purpose instead of leaving it for their children to quarrel over? Most boys would be far better off if their parents used the fruits of their own labor to make their lives more enjoyable."

"Down our way when a man buys an auto he neglects his farm!"

"That is not so with us. As the farmer gets out more and sees how others are doing he studies new ways and new crops, and take more pride in keeping things up. Then he learns more about markets and prices and the value of things and he comes to be a better business man."

"But he may neglect his home!"

"I do not think so. One trouble with the telephone was that it was keeping people too much at home. When you can call up the neighbor and talk to them over the wire you do not feel so much inclined to go out to meetings where people gather. The same was true of rural mail delivery. People quit going to town, where they could talk to their friends and visit. The auto car comes to mix people up and get them together where they can learn what is going on."

GASOLINE ENGINES.—They are working in everywhere and doing all kinds of work. The little engines are used to some extent on potato diggers or manure spreaders to work the machinery so that the horses have only the weight of the implement to haul. Thousands of these little engines are going into the house to serve as "tireless hired girls," where they run the churn, the washing machine, cleaner and a dozen other things which formerly demanded the best or the worst of hand and back. Farmers also told about putting heating and water fixtures into their houses. More of this is being done than ever before. I am sure there never was a time before when thrifty farmers were doing more and spending their money more freely to make themselves comfortable and save the women folks.

OLD-TIME FARMER.—One of the Syracuse papers stated that the old-time, or real farmer, has disappeared. It could not find a man "chewing straw and with overalls tucked into his boots" and therefore claimed there were no longer any "farmers." The fact is you could not pick the farmers from the town people by any external evidence. To prove this, Frank Rupert, one of the fruit judges, approached a group of well-dressed men and asked each one if he was a farmer. They were all farmers, not one having any other business. They were dressed just like town business men, talked even more intelligently, carried themselves in a dignified way, and gave just as good a business impression. A dozen things may be said to have led up to this, but the thing most responsible for it is the fact that farmers are reading and thinking more than ever before. They have learned that a large proportion of the people *eat with their eyes*—that is, select the fruit or other food that "looks nice." They also find that the world is inclined to give men place in society by the way they look and act. This may not always be fair, but the farmers find it a fact, and as they mix up more and more with other people they learn how to pass with the best business people, and you cannot separate them. Who will say that this is not a desirable thing?

THE WAR.—People discuss it intelligently—that is they do not pretend to know just what it is about, but they have a clear idea of its effect upon this nation. It is a sobering effect, for these farmers fear that out of it may come a weakened faith in the real power of democracy. It may mean a demand for a U. S. standing army of half a million or more, with military drill for every man! The general fear is that so long as there are autocratic military governments in the world the peaceful nations are at their mercy. The man who goes about his peaceful business—no matter how large and strong he may be—would always be at a disadvantage beside his prizefighting neighbor who spent most of his time training to fight while his wife and the boys supported the family. That is what these intelligent farmers feel may be the comparison between the successful insolent military power and a peaceful democracy! In a business way our farmers, except for the fruit growers, are very optimistic over the future. They argue that six or eight million men in Europe are taken from food production or manufacturing. There is never a year's supply on hand—usually not over six months. If the war continues it seems clear to our farmers that America must be expected to feed and clothe the fighting nations. The farmers expect to get their share of what this demand means and they are preparing to get it through organization. This general feeling that the export trade will be adjusted so as to help the home demand makes farmers on the whole more hopeful for the future than I have known them in some years. It is a fact that what we call "good times" will depend as much upon spirit and hope as upon actual production and sale.

FRUIT AND VEGETABLES.—Evidently the production of these crops is growing like a snowball in New York State. As Rochester was once the flour city and is now the city of flowers, so in New York State, horticulture is now coming to the head. It is not generally known that several counties in Western New York are richer and more prosperous than any other fruit counties in this country or in Europe. There is even greater wealth in several sections where vegetables are grown. The Hudson Valley too is growing beautiful fruit. The Clintondale Grange of Ulster County won first prize for their fruit collection, and it certainly was a fine display. Then Long Island is coming as an apple section. Peter Elbert Nostrand, the man who put Long Island on the fruit map, was at the fair with a fine display. The grain farmers and the dairymen are doing great things, and they show well in the figures with Alfalfa to help them, but with each decade all suitable land within 150 miles of the Atlantic must go more and more into intensive culture of fruits and vegetables. There can be no escape from this. Eastern land must increase in value in proportion as it is suited to producing food. No man can afford to practice low-class methods on high-priced land. None but the wealthy can ever keep "boarders" in crops or animals. In fact the entire lesson from the State Fair this year is one of good cheer. A young man with a piece of land never had a better opportunity.

H. W. C.

EVERY year we have a good many questions from readers who ask about the culture of flax. It would seem as if many of our people are interested in this crop. For the benefit of these inquirers we will say that the North Dakota Experiment Station has issued a bulletin on "Flax Cropping and Harvesting Methods." This gives an excellent story of the way flax is grown in North Dakota, particularly with regard to methods of harvesting the crop and taking care of the seed. It is an excellent pamphlet, well illustrated, and gives just the information that so many of our people have called for.

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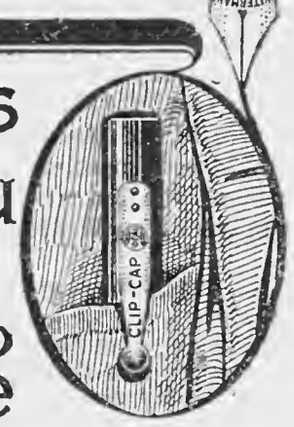

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Ruralisms

GARDEN NOTES FROM NORTHERN OHIO.

RADISHES AFTER BEETS AND CARROTS.—The following questions come to me from a gardener near Cleveland, Ohio:

"I have often read of radishes being a companion crop with beets and carrots. How would they be for a succession crop? Would they become affected with club-root if the beets and carrots were not?"

In answer I should say no, on general principles, but I have not had any experience with club-root, as I have bought very little manure, and having plenty of land have not been obliged to crop the same ground continuously. This inquiring gardener has the means of obtaining first hand information in unlimited quantity if he goes on to the Cleveland market. In the Akron market, which I attend, more than 100 gardeners may be found at 3 A. M., and they get together in small groups and hold very interesting experience meetings. There are a few who have short memories and forget the names of vegetables they market and the seedsman they bought from, as well as time of sowing, but as a rule gardeners answer questions freely and honestly and seem anxious to help their fellows.

THE IDLE HOTBED.—I presume there are 50,000 hotbeds owned by rural readers which have not been thought of from a business standpoint since about the middle of June. Some paid their way no doubt, but all are loafing at present, whether they paid or did not. Now is the time to get busy with these and the cold frames as well. Pull out the weeds, loosen up the soil, add a little rich compost well mixed in, and then spank down until the soil is compact. Mark off some rows six inches apart with the edge of a thin board, and sow with the earliest button forcing radish. Then mark off more rows four inches apart and sow to the Early Curled (Silesian lettuce of some catalogs). Do not sow very much of the radishes, as they do not thrive as well as lettuce under Autumn conditions. If the bed is a large one part of the lettuce sown may be of the Grand Rapids variety. As soon as large enough the lettuce should be thinned for eating, and if properly managed the Grand Rapids will continue until Christmas or later, according to the exposure and latitude. The sash should be put on at sowing and shaded until the plants are well started, when the glass may be taken off and left off until it is needed to keep up a growing temperature. In the latitude north of Philadelphia the sashes may be kept on after September 25 without injury, giving very free ventilation in warm sunny days.

L. B. PIERCE.

White Fly; Potting Hydrangea.

IS there anything that will control the small white fly in greenhouses? It is troublesome on plants, especially on Pelargoniums, Verbenas, tomatoes and eggplants. They are fairly covered with them. 2. What is the best time to repot Hydranges hortensis? J. M. L.
Long Island.

The most effective remedy for greenhouse white fly is fumigation with hydrocyanic acid gas. Some benefit is derived from spraying with whale-oil soap, 1½ ounce to one gallon of water. While hydrocyanic acid gas is a certain remedy for this pest, and also for mealy-bug and violet aphis, it should never be used except with all possible care and precaution. The gas is a deadly poison to man as well as to insects, and we have heard at least one report of the death of a florist who did not understand the deadly nature of the insecticide. The materials used are cyanide of potassium, sulphuric acid and water, in the proportion of one ounce 98 per cent. cyanide, two ounces commercial sulphuric acid and four ounces of water. Put the water in a good-sized crock, pour the acid in slowly, stirring the mixture. Never pour the water into the acid, or dangerous spattering, which may be fatal to eyesight, will result. Place the proper amount of cyanide in a paper bag and suspend the bag over the crock with a string so arranged that it may be lowered into the fluid from the door just as the operator goes out. The reason for this is the sudden and deadly flow of the gas; in the one greenhouse fatality reported the operator put the cyanide in the liquid and then started to walk to the door, but was overcome before he reached it. Of course all ventilators are closed. The exact amount of poison for a greenhouse must be ascertained by trial; much depends on the tightness of the house, while some plants are injuriously affected by the gas. It is advised by Prof. O'Kane to begin with one-fourth to one-half ounce of cyanide to 1,000 cubic feet. Keep the house closed for two hours, then open and air, and note results. If the plants are uninjured and the insects not all killed, a little stronger application may be used. Do the fumigation at night, when leaf surfaces are dry; airing may be done the same night, or early the next morning. Do not enter the house to open ventilators until open doors have liberated gas; enter cautiously, and never forget the dangerous nature of this fumigation. 2. Young plants of Hydrangea hortensis for Easter blooming, from cuttings taken in February and March, are repotted in eight-inch pots the end of September, kept shaded until established, then exposed to sun. Older plants, that have been kept dormant through the Winter, are repotted in Spring, the old growth being cut back to one or two pairs of buds.

Pruning Cane Fruits.

I HAVE just bought a suburban home where the former owner has set out blackberries, red raspberries, black raspberries and strawberries. When should I trim out the old canes; that is, those that had fruit on this year? The grass has become a sod in between the rows. Should I plow this up this Fall or wait till Spring? How may I start young black raspberry roots? In the blackberries, young shoots have come up all over and they are a solid mass. Should I cut out those in between the rows now or in the Spring? A. B.
McGraw, N. Y.

The old canes that have fruited this year should be removed as soon after fruiting as possible. This permits the young shoots to get the full benefit of air and sunshine, and stronger canes for next year's fruiting will be the result. I would plow the old sod that has come in between the rows of plants this Fall, after growth has stopped. The action of frost and weather this Winter will help to break it up and make it more workable next Spring. Any shoots left after plowing can be cut out this Winter. It would also be an advantage to cut out all weeds and sod in the row of plants. This can be done in late Fall or early Spring. If the material is available, a mulch of straw or strawy manure along the rows of plants, covering the space between the row and the cultivated area, will be quite an aid in holding moisture and keeping down weeds.

Black-cap raspberries are grown mostly from root-tips. When the cane reaches a certain stage in its growth it is bent over and covered with a little soil. If necessary a stone is put on it to hold it in place. In order to get the best plants there should be at least six weeks of growing weather after the tip of the cane is laid down. These rooted tips can be cut from the old cane next Spring and if desired they can be put in a nursery row in order to obtain additional size and vigor before being set out in the permanent plantation. Such plants are known as "transplants." TRUCKER, JR.

Preparing Catnip for Market.

WILL you tell me how to prepare catnip for the market? I have raised a large quantity and would like to know how to prepare it for sale. What part is used, is it just blossoms, or blossoms and leaves? Are any small stems allowed, and what are the size and weight of the package? F. A. H.
Pomfret, Vt.

Catnip and similar herbs for market purposes, are cut, when in full bloom, high enough above the soil to avoid most of the coarse, bare lower stems, and after partially curing in the swath, the drying is finished in an airy shed or loft in order to retain the natural green color as far as possible. When thoroughly dry, the herb is best pressed in bales of 100 to 200 pounds weigh. If in smaller quantity, it may be tightly pressed in burlap sacks or ventilated boxes. In packing throw out all coarse and bare stems, retaining only the leafy shoots and blooms. Dried herbs keep and travel best when tightly pressed, but with provision for ample ventilation. The prices received by growers for catnip usually range from three to five cents the pound. V.

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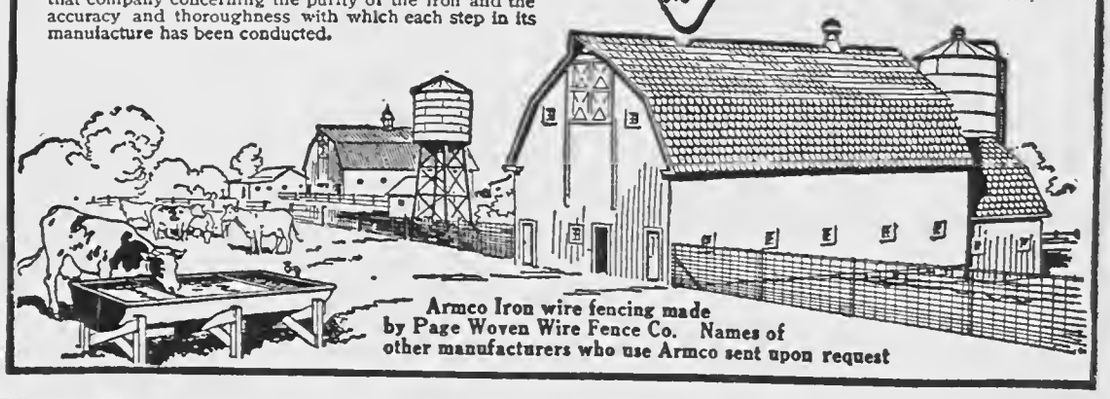

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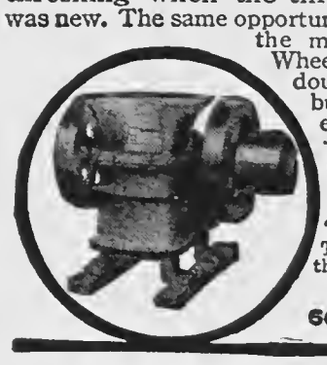

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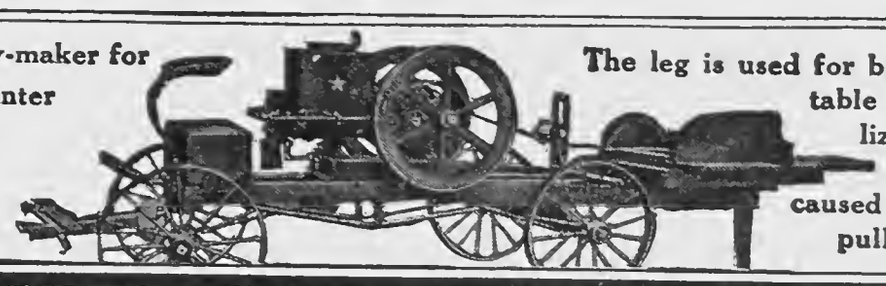

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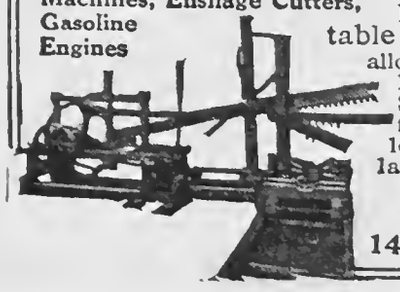

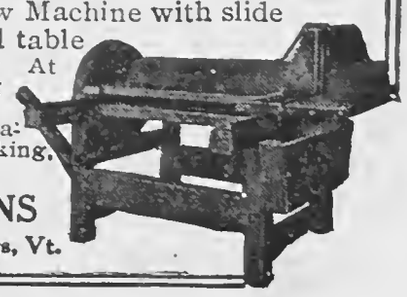

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Advertising rates, 75 cents per agate line—7 words. References required for advertisers unknown to us; and cash must accompany transient orders.

"A SQUARE DEAL"

We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

IN all this talk about cover crops we have tried to make it clear that vetch and Crimson clover must be seeded early if we expect them to pay. Some of our readers north of New York are even now getting ready to seed these crops. They are too late. Our advice is to use rye alone at this late season. Rape and turnips may, even now, make a profitable growth before Winter, but the sure crop now is rye. We regret to see people try vetch and Crimson clover so late in the season and then condemn them for failure.

*

THERE is no question about the bad mix-up in many lots of potatoes supposed to be Irish Cobbler. This popular variety is often so badly adulterated that when the true Cobblers are ready to dig, there is a good proportion of late varieties left in the field unripe and unprofitable. Another variety badly mixed is Rural New-Yorker. This has been mixed with Green Mountain so that it is difficult to find the pure seed. Growers do not want to abandon these fine varieties, but they will be forced to do so unless some one can guarantee pure seed and live up to the guarantee.

*

THERE were 2,200 automobiles in one day on the State Fair grounds at Syracuse. This indicates New York farmers' prosperity, and that the machine is becoming a necessity in rural life. It was thought that the parking space would be sufficient to care for the machines, but on Grange day the overflow was sent to the infield at the race track. The larger part of these machines belonged to farmers who came distances ranging from few to many miles. These machines placed the State Fair grounds in the limits of a pleasant drive, whereas with the family horse and carriage even the trip to the railroad would have been more irksome. Every machine owner is also a booster for better New York roads.

*

AS we have stated already, the U. S. Pomologist at Washington will identify fruit varieties if samples are sent him. Growers in New Jersey may send fruit samples to the State Experiment Station, where they will be identified free of charge. Address Prof. M. A. Blake, New Brunswick, N. J. It is very important to have varieties properly named. Peach varieties in particular are badly mixed up. In one trial orchard, planted by the New Jersey Experiment Station, six so-called distinct varieties are all alike. Evidently these are "misfits"—six different labels fitted to the same kind of a tree! This work of identification is very important. It costs nothing but a little time.

*

OUR readers are making good use of their education in advertising. One of those concerns offering "humus" for sale, sent their confidential circulars to one of our people. This is part of what they got back:

Your favor to hand inclosing printed form letter and catalogue, offering us 35% discount on cash orders. Before taking up with same desire to know what is the analysis of your fertilizer, how much available plant food it contains, also as to the class of periodicals carrying your advertisements, as thus far they have not been brought to my attention in the farm papers we take.

Those people charge $20 for a ton of "humus"—probably dried swamp muck worth about $2.50 per ton. This farmer has a swamp on his farm, lime within easy reach and acres of rye to be plowed under. Think of offering an intelligent man with such an outfit, "humus" at $20 a ton and the chance to fake his neighbors by taking a commission of $7! But this farmer wants to be shown the class of publications which print such offers! That is getting to be the final acid test, for any paper that will print such advertisements is either a bluff, a stuff or a pure fake! Neither one is a safe adviser.

MOST farmers are poor speculators. Unless they are unusually keen or have some inside information they rarely make much money by holding their crops. It requires good judgment to know just when to sell. When a man buys a lot of goods he knows what they cost, and knowing how the selling price compares with that cost, he can use his judgment about selling. When a farmer produces the goods it is as necessary to know what they cost as it is when he buys them. Knowing that he can sell when price enables him to get this cost back with a fair profit. The trouble is that most of us have little idea what our crops cost per bushel or pound, and therefore we do not know whether the selling price gives us a profit or not. Thus the very first principle of good farm management is to know what our crops cost. We cannot always figure it out to a dollar, but we ought to know at least whether we can pay ourselves fair wages at the price offered for our produce.

*

WE shall be obliged to repeat the sermon on *"Take heed how ye hear!"* Now we have the following note:

"You have told several times how such crops as turnips and ragweed take potash out of the air. If this is so why worry about the German potash situation?" S. J. R.

We never said any such thing. There is no potash "in the air" and of course plants could not take it out. We have said that certain pod-bearing plants like clover, Alfalfa, peas and beans are able to take nitrogen from the air by means of tiny forms of life called bacteria which live upon their roots. We also believe that certain cultivated plants like turnips and rape and certain weeds like ragweed are able to take large amounts of potash *from the soil*. You have mixed up the *facts* about the legumes or pod bearers with the *belief* about the potash gatherers. All soils contain more or less potash, but it is the *available* supply which we depend on for feeding our crops. There might be enough potash in an acre to produce 500 crops, yet in such a crude or insoluble form that an ordinary cultivated crop could not use it. Now the plants we have mentioned, and others seem to have some power of utilizing forms of potash which other plants do not have. We are sure from our own experience that a crop of turnips or rape plowed into the ground add *available* potash to the crops which follow. They seem to do this by utilizing crude forms of potash and then as they decay giving this potash up to other plants which do not have the same power of using the unavailable forms in the soil. In much the same way we think such plants as buckwheat or the common smart-weed have power to use phosphoric acid in the soil and make it more available. We cannot yet expect to depend on such plants for our supplies of fertilizer, but they will all help, and at this time of potash scarcity they give an additional argument for cover crops. But do not think there is potash *in the air*, or that we ever advised going there for it.

*

AMONG other things this European war is starting a new boom in back-to-the-landing. Here is a typical letter from a young man who thinks of renting a farm for about $50 a month:—

It seems to me that on account of this war, farming is going to be very profitable in the next few years. If so, and this is where I want your opinion, I will make every effort to get the farm and run it myself. If wheat and corn continue high, with advances in all other lines which would naturally follow, I think I could make a good living on it and possibly make enough to make a payment toward buying the place.

This man now has a good position at a cash salary and is doing well. Like many others he seems to think that in some way this war is to make farming very prosperous. There will be a rush to buy or rent farms and put all available land into grain. We can offer little encouragement to such people. Farming is a business requiring experience and good judgment. You cannot rush out into the country, take any land and plant wheat, rye or corn and expect a great yield in the first crop. It will require several years to fit such land as you could rent so it will produce profitable yields of grain. The chances now are that prices for grain and meat will rule high for a year or two, or until the war is over and Europe can once more adjust its business. It will not be all profit, however, for there cannot be such an enormous destruction of life and property in one part of the world without having something of the loss felt in all other parts. We think the farmers who know their business and are wise enough to cultivate their present acres better rather than to rush new land into cultivation are surely coming to a time of prosperity. It is no time, however, for the city man to rush in without experience or capital and expect to make a fortune on a farm.

WE have seen letters from seedsmen who say that owing to the European War prices of Timothy seed have greatly advanced! The farmers who get such letters are not "hayseeds" by a good margin, and they want to know what the European War can have to do with Timothy seed. There has been no reply. Some of the war reasons for advancing prices are certainly the limit. They remind us of the storekeeper in Colorado years ago who charged 25 cents for an old-fashioned watch key. When asked why, his excuse was, "Freight rates are very high." The freight on a watch key is about as good an excuse as the European War for high-priced Timothy seed. We suggest the reading of verse 5, chapter 2, of the Second Epistle to Timothy:

"And, if a man also strive for mastery, yet is he not crowned except he strive lawfully!"

*

PRICES for Hairy vetch and Crimson clover seed have jumped since the European War started. In most cases prices have doubled, and at the present figures it is doubtful whether buying these seeds will pay. It is too late to sow them anyway except in the South. The Agricultural Department makes what we consider a good suggestion:

Under such conditions they point out that it will be better practice to sow rye this Fall and use the difference in price in adding nitrogen to the soil in the form of nitrate of soda or some other highly nitrogenous fertilizer. The rye will afford a Winter cover preventing washing and leaching, and can be plowed under in the Spring to add humus to the soil.

We have, for years, advocated the use of rye as a cover crop. It has slowly changed our own farm from a tough brick-like mass to a mellow soil. We think the above advice is good, and we urge farmers to follow it wherever cover crops will pay. No one will claim that rye fully takes the place of clover; some nitrogen must be added to give equal results, but at any rate our advice for the Fall is *sow rye on all the bare ground.*

*

YOUR editorial on page 994 exactly voices my opinion in regard to the trouble with agricultural college students as farm laborers. I have had students working for me here on the ranch, and have observed much of their work in other places, and their general attitude in the matter, and there is no doubt that the worst trouble with them is an exaggerated sense of their own importance. Many of them are city bred, without a particle of practical experience, but after a year or two at the college, imagine they are capable farm managers. You will do us splendid service by hammering away at our college authorities on this point. W. K. NEWELL.
Oregon.

We have received many letters like the above. Most of them are kindly and written in good spirit representing what we call *constructive* criticism. The writer worked out as a college boy years ago, and cannot therefore be accused of prejudice or of not knowing the subject from both ends. The trouble is that some of these college boys think they can substitute book or class-room learning for that farm instinct which can only come through practical labor. We do not blame them particularly. The trouble comes from their teachers, who often give them too large an idea of the value of book knowledge. It is true that most of our wisdom is carried in books, but let our teachers remember that it was put there and must be taken out again for useful application through the hands.

BREVITIES.

CO-OPERATION, like charity, should begin at home and make good growth.

"KILL the grade bull" is the warlike proclamation printed at the head of a dairyman's letter.

A BLOCK of commercial greenhouses recently pictured by the Florists' Review included 24 houses, each 60x500 feet. The cost of the range, complete, was estimated at $450,000.

SOME of the housewives argue that they will not put up preserves because the price of sugar is so high. But what about the low price of fruit? There never was a better time to make preserves.

THE European War has stopped the talk of feeding wheat to stock in place of corn or oats. The outlook now is for such prices for wheat as human food that the live stock will take what they can get.

CORN in some districts of the Colorado plains had a hard time in August, with a temperature of 108 degrees and no rain for a month. Winter wheat and all Spring grain was said to be the best ever known on the Great Plains.

THE leading French horticultural paper, the Revue Horticole, recently announced that it would cease publication for the present, as its whole staff, editors, correspondents, clerks and printers, had been called to the front.

SASKATOON in Saskatchewan, recently celebrated "hog day" in an effort to make stock growing popular. Western Canada, like the Gulf States, has been buying its pork products from the outside when it is abundantly able to raise them all at home.

IT seems that South Africa has never been troubled with the warbles or grubs which infest the backs of cattle. The insect is brought in on imported cattle, but it is thought that the reversal of the seasons—Summer in South Africa while Winter rages in the north—is unfavorable to the spread of the insect.

THE LAND BANK.

THE work of organizing the Land Bank of the State of New York is progressing most favorably; 30 associations with resources of $16,000,000 have signified their intention to become charter members. About $63,000 has been subscribed to the capital by these associations, and others are only waiting formal meetings to authorize their membership. Hon. Walter L. Durack has been assigned by the Agricultural Department to fill engagements with local associations which require definite information on the subject. He already has the following appointments:

Newburgh	September	21,	Monday
Kingston	"	22,	Tuesday
Troy	"	23,	Wednesday
Glens Falls	"	24,	Thursday
Utica	"	25,	Friday
Watertown	"	28,	Monday
Ogdensburg	"	29,	Tuesday
Syracuse	"	30,	Wednesday
Geneva	October	1,	Thursday
Rochester	"	2,	Friday
Batavia	"	5,	Monday
Albion	"	6,	Tuesday
Buffalo	"	7,	Wednesday
Dunkirk	"	8,	Thursday
Gowanda	"	9,	Friday
Salamanca	"	12,	Monday
Alfred	"	13,	Tuesday
Corning	"	14,	Wednesday
Elmira	"	15,	Thursday
Oneonta	"	16,	Friday
Port Jervis	"	17,	Saturday

The time would be just right for Granges and farm clubs and other farm organizations to get the benefit of Judge Durack's itinerary. If any of these organizations in the State would like to hold a meeting and hear Judge Durack, applications could be made at THE R. N.-Y. office or at the State Agricultural Department; and dates can be arranged. The expense of this organization work is being paid out of the appropriation secured by Governor Glynn during the last session of the Legislature for coöperation in the State. The Land Bank will soon be organized and we should have several farm associations as charter members. As yet we have only two. Farmers should make a point of attending the above meetings as individuals or in a body of their organizations. In other sections the farmers' organizations may arrange meetings of their own; and we shall be glad to coöperate in making the arrangements. If the people of the State fully appreciated the value of this system of realty credits, there would be an association in every neighborhood. This will come in the future, but the sooner the organizations are made the sooner we shall get the benefits; and the larger the number of associations, the greater will be the benefits. When all the people of the State who want mortgage credit are registered under this system, the bonds of the Land Bank will sell at as low a rate of interest as National bonds, and they will be as good an investment, and in some features better.

THE NEW OPEN MARKETS.

ENCOURAGING progress has been made in the development of New York's free markets for the sale of foods. Other sections of the city are now asking for markets similar to the four referred to last week. More farmers have brought in loads during the week, and it is expected that, as the markets become more widely known as a feature of the city's business, many other farmers will make arrangements to come, as they will be practically sure of selling out within a reasonable time.

Meats have been added to the products sold, prices running two to four cents under the regular butcher shops, and fish from New Jersey coast points will probably be offered soon. Fishermen promise to sell the standard sorts caught at this season for eight to 12 cents per pound, or one cent per pound less if not cleaned. A large fresh fish trade could be worked up at such prices, as the majority of buyers are unable to get anything but cold storage fish, which carries more or less risk of ptomaine poisoning.

The situation in the city is developing nicely for the handling of produce direct from farmers' coöperative associations of the State through the new Market Commission provided for in the Food and Market law of this year. The organization of this department has been necessarily delayed in order to give producers an opportunity to form their local associations and be in a position to take up aggressive work in the selling markets. Again this measure was put through in record time, and the opposition to the successful operation of it has been persistent and determined from some of the old influences of distribution, and some time was necessary to study the situation so as to frustrate the opposition and start the work on a plan that would promise permanent success. Governor Glynn is greatly interested in the success of this new department. It was his interest in the measure that secured its adoption by the last Legislature, and he is deeply concerned about its successful organization. The City of New York has now made a small beginning along this line of distributing farm food products direct from the farm to consumers with the least possible delay, and cost of handling. Efforts, however, so far have been confined to inducing local producers to bring their products to the markets in wagons. This is well enough as far as it goes, but such means can never fully supply the New York markets. Provision must be made to receive shipments by water and rail from distant points. This will only require terminal and cold storage facilities and opportunities of the farmers' coöperative associations will then be complete. Now that the Summer rush of farm work is over in the country, and the Summer vacation period is past in the city, these plans will be pushed vigorously. Governor Glynn, the State Agricultural Department and the State Coöperative Committee are all anxious for the organization of the work, and are devoting their best energies to its success. If the city does its part, as now seems likely, in providing facilities, the producer's 35-cent dollar will pass into history as far as the New York market is concerned. Farm food products will flow direct from the farms through these open markets to the tables of the city consumer, and the legitimate and economic cost of distribution will be the only cost of the service.

"WAR TAXES."

THE war in Europe will prevent heavy imports into this country, and thus reduce the revenue obtained from the tariff. It will be necessary to raise money for national expenses to meet this deficit, and President Wilson suggested a system of war taxes. At the outbreak of the Spanish War taxes of this kind were levied very largely in the form of stamp taxes. This proved unpopular and inconvenient, although it gave immediate revenues. The taxing power rests with Congress, and the party in power will be expected to devise a system of taxation and be made responsible for it. It was at first proposed to increase the revenues from the income tax. At present incomes under $4,000 a year are not taxed, and the first suggestion was to tax incomes of $2,000 per year for single men, and $3,000 per year for married men. The balance of the revenue was to be obtained very largely by increasing the tax on liquors. President Wilson, however, objected to the increase of this income tax, because it would fall hard upon the salaried class, and because such revenues would not be immediately available. The party is disposed to do what Mr. Wilson tells them, and it is now expected that the increased income tax will be given up, and larger revenue obtained from liquors by including whiskey and other spirits, while the balance will be levied on tickets for amusements, toilet articles, possibly soft drinks, and other articles of wide distribution which cannot be called necessities. It has also been proposed to levy a tax of 2% on the freight carried by railroads. The exact scheme has not yet been worked out, but it now seems definitely settled that neither the old stamp tax, nor the increased income tax will be levied.

THE WAR AND COMMERCE.

UNDER the amended shipping laws about 40 vessels will be registered under the American Flag during the coming week. These will be used mainly in South American trade, which merchants in this country are working actively to increase. Norway has several merchant ships that will be offered for sale to this country in case the plan for Governmental ownership is adopted.

Since last week wheat advanced to the highest point of the season, $1.29, but dropped three cents later. Buying of oats for war purposes has continued heavy, with price advances of one to two cents per bushel. Sales of flour have been smaller and prices on a generally lower basis.

Various plans are being worked out to save the cotton growers from the clutches of the speculators this year. Citizens in Memphis, Atlanta and some other sections are contributing to build warehouses where cotton can be stored until prices advance to somewhere near its normal value. The growers can store in these places and get money when necessary on warehouse receipts. Where this plan is used the patrons will have to make agreements to reduce the acreage of next year's planting.

All is uncertainty so far as European demand for our raw cotton is concerned. Some increased business in the Liverpool cotton market is noted, but Europe as a whole is too busy with other things to pay much attention to industry.

NEW YORK STATE NEWS.

UNIVERSITY CONVOCATION.—The State University convocation will be held in the auditorium of the State Education Building October 22-23. The program will include Prof. Geo. R. Palmer, of Harvard on "What is a Profession?" Herbert Quick, of Springfield, O., on "Rural Schools"; Mrs. E. M. Harriman is expected to lead in the discussion on this subject. Otis E. Hall, of Crawfordsville, Ind., will treat "Rural School Consolidation." "Educational Efficiency" will be the topic of Prof. C. W. Kent, of the University of Virginia. Brief addresses will be delivered by Gov. Glynn and Commissioner Finley.

STATE FAIR INCOME.—There was a marked decrease in gate receipts at the State Fair this year as compared with last. However, owing to the lessened expenses, the Fair Commission will be enabled to turn over to the State a considerable fund. The gate receipts were about $8,000 less than last year. In addition to making up the deficiency of $20,000 between the $50,000 to be paid out in premiums and the legislative appropriation of $30,000, it is probable that somewhere between $5,000 and $10,000 will be turned back to the State. The total attendance of the week was 161,082 as against 177,823 last year. The total gate receipts were $72,037.50 as against $80,550 last year.

COLUMBIA COUNTY FAIR.—The Columbia County Fair, at Chatham, was one of the most successful exhibitions in its recent history. Opening on Labor Day, the attendance was very large and the following day, being Governor's Day, drew a good crowd. The exhibits were excellent in nearly every class. This fair has a reputation of having the greatest poultry show of any county and this year there were more exhibitors and more birds. The fruit display was hardly up to the average, while in vegetables it exceeded past years.

SANITARY OFFICERS TO MEET.—The 14th annual conference of the sanitary officers of the State will be held at Saratoga Springs on September 15-17. It is expected that about 750 health officers will attend. The conference will be opened by State Commissioner of Health, Dr. Herman M. Biggs, who will introduce Gov. Glynn and he will take for his topic the "Health Department and the State." Among the other speakers on the program are Geo. Foster Peabody, Dr. Albert W. Ferris, Miss Julia C. Lathrop, of Washington, D. C., Dr. Leonard P. Ayres, of the Russell Sage Foundation, Dr. S. Josephine Baker, of the New York City Health Department, Prof. A. C. Abbott, of the University of Pennsylvania, Prof. Geo. C. Whipple, of Harvard, Dr. John W. Trask of the U. S. public health service, Washington, D. C. Prof. Henry N. Ogden, of Cornell on "Farm Sanitation," and Dr. S. A. Knopf, of New York on "Tuberculosis in Rural Communities." One afternoon will be devoted to the discussion of the new milk regulations of the public health council which go into effect Nov. 1. J. W. D.

A SUCCESSFUL FARMERS' CO-OPERATION.

The Way to Combine is to Get Together.

PART II.

SAVING IN FERTILIZERS.—Commercial fertilizer is used in large quantities by truck growers, and the association succeeded in purchasing about 200 tons for its members, at a great saving over local agent's prices. This was partly due to the fact that all fertilizer was paid for when unloaded at the cars. A commission of two per cent., for handling the fertilizer, was charged the grower but it was found at the end of the year that this was not enough to defray all expenses. So the board of directors voted to thereafter charge a commission of five per cent. on all fertilizer handled.

WORK WITH FRUITS.—Although tomatoes were the main cause of the organization, its energies were directed toward other products. When cherries, currants, etc., began to ripen the real worth of the association became apparent. The canneries were buying all cherries they needed at 4½ cents per pound, but Mr. Cook for the association, sold three cars at five cents per pound plus the cost of packages. The canneries paid 11 cents per quart for red raspberries, but the association sold several cars at an average price of 13 cents per quart. Tomatoes in 20-pound baskets were shipped as far south as New Orleans, and netted the growers $15 per ton. With these results the members became highly elated over the success of their organization, but their enthusiasm was dampened somewhat later when three cars of tomatoes shipped south resulted in a total loss. On all produce sold the Association charged a commission of five per cent., except on bulk tomatoes, on which the commission was two per cent. and it also endeavored as far as possible to mail checks to members within ten days after shipment.

EARNINGS OF THE ASSOCIATION.—At the end of 1912 it was found that 607 cars of produce had been disposed of, and a year's business had been done that amounted to $101,138.86. The report showed sales of three cars cherries, one car currants, 21 cars berries, 32 cars apples, 29 cars basket tomatoes, 45 cars mixed produce, 476 cars bulk tomatoes, of which 436 cars went to the one Pittsburg firm. The net earnings for 1912 were $2,403.24. The operating expenses, salaries of manager, stenographer, bookkeeper and day labor, and losses were $2,570.78. This showed a deficit of $167.54. However, at the first annual meeting in December, 1912, with 200 members present, it was unanimously voted to continue the association. On January first, 1913, the stock book showed that 284 shares of stock had been issued. At a directors' meeting in January, 1913, the president, secretary and treasurer and manager were re-elected.

A BRANCH ESTABLISHED.—In February Portland Grange voted to petition the association to establish a branch at Portland. This town is almost 30 miles west of Silver Creek and it was feared that the main office of the association would be too far distant to aid the farmers of Portland materially. But after a couple of meetings had been held more than 30 Portland farmers joined the association, and during 1913 these growers received all the benefits of the organization. During last year over 600 tons of fertilizer were purchased and distributed to the members at a saving, over local fertilizer agent's prices, of $5 or more per ton. This meant a saving of over $3,000 to the members on fertilizer alone in 1913, and a total of over $4,000 in the two years of 1912 and 1913. This amounted to practically $10 per member, or twice the amount each had paid for his share of stock in the association.

EFFECT ON CANNERIES.—Nine hundred acres of tomatoes were grown last year for canneries and preserving firms. Of this amount 700 acres were for the Pittsburg firm that had given the association its first contract for 500 acres. The price last year was increased to $9.18 per ton, which netted the grower $9 per ton after the association's commission of two per cent. was deducted. By this time the local canneries had begun to feel the effect of the growing organization and were compelled to pay $9 per ton for tomatoes, and in a couple of instances the canneries condescended to contract part of their supply from the association, mainly because they were compelled to, in order to secure all they wanted. During September and October last year the tomato business of the association was almost stupendous. The Pennsylvania Railroad ran entire trains of tomatoes to Pittsburg daily, and at times these trains were composed of from 25 to 35 cars, all of them being loaded by the association. To show the growth of the association I will give the report of the amount of business done in 1913 as follows:

MATERIALS PURCHASED FOR MEMBERS.

30 Cars fertilizer	$12,562.62
2 Cars sheep manure	797.95
2 Cars baskets	879.26
1 Car crates	298.80
2 Cars lime	410.50
Seed	718.36
Spraying materials	253.66
Paint	154.24
Tomato plants	5,961.44
Total	$22,036.83

PRODUCE SOLD.

8	Cars grapes
5	Cars cabbage
1	Car corn
7	Cars berries
6	Cars cherries
2	Mixed cars currants and cherries
4	Mixed cars carrots, beets and parsnips
24	Mixed cars currants, plums and gooseberries
47	Mixed cars pears, tomatoes, grapes and corn
47	Cars basket tomatoes
667	Cars bulk tomatoes
818	Cars, amounting to	$128,846.17
Total		$150,883.00

The profits for the year were $5,396.37. The operating expenses, salaries, losses, etc., were $4,522.95. This left a net profit of $873.42.

January first, 1914, the assets were	$3,211.85
The liabilities were	2,505.97
The surplus being	$705.88

There are now practically 500 members, which means that $2,500 of capital stock is paid in. With a surplus of over $700 a five-dollar share is actually worth about $6.30.

Woman and the Home

From Day to Day

THE LITTLE THINGS.

If you are sighing for a lofty work.
  If great ambitions dominate your mind
Just watch yourself and see you do not shirk
  The common little ways of being kind.

If you are dreaming of a future goal.
  When, crowned with glory, men shall own your power,
Be careful that you let no struggling soul
  Go by unaided in the present hour.

If you are moved to pity for the earth.
  And long to aid it, do not look so high
You pass some poor, dumb creature faint with thirst;
  All life is equal in the eternal eye.

If you would help to make the wrong things right
  Begin at home; there lies a lifetime toil.
Weed your own garden fair for all men's sight
  Before you plan to till another's soil.
—Ella Wheeler Wilcox.

*

THE following Winter relish is sent to us with a strong recommendation: Two quarts of white onions, two heads of cabbage, six green peppers, six heads of celery, two heads of cauliflower, two quarts of green tomatoes, six red peppers and one ounce of celery seed. Sprinkle with salt and let stand over night. In the morning drain and cook until tender in a sauce made by mixing two cupfuls of flour with three pounds of brown sugar, an ounce of tumeric and a gallon of vinegar. Be careful to see that the flour forms no lumps.

*

AMONG new knit goods we see military capes. They come a little below the waist, and are close, without any ripple, knitted in the same plain ridge as sweaters. They are seamed down each side, having armholes which are closed by flat dark buttons. There is a close military collar of contrasting color, and four flat brass buttons at the neck. The favorite style is dark blue with dark red collar. This is a very warm and comfortable garment to use like a sweater, and not difficult to make. The new sweaters this Fall are shaped to the figure more than last year.

*

THE Atchison Globe says that swindlers have begun to use the C. O. D. of the parcel post. A package is offered a victim, marked like this: "Two dollars paid, collect $3." The money is paid and the package opened it is found to contain a pair of worthless spectacles, or something of the sort. Authorities are after the swindlers. This is a thing to be borne in mind on rural routes, for country people are very likely to be selected as victims. Of course the swindler must get the address first, and this is often secured through a response to an advertisement in some irresponsible paper.

*

AT a children's party held on the porch one Summer day, each child, on arriving, was taken to a shady place where a number of flower pots were spread out like a flower bed. They were filled with dry moss, and each one had a fancy label bearing the name of a little guest, who was asked to sow a seed in the pot. After games and refreshments the children went to look at their flower pots, to find each one displaying a make-believe plant, formed by "planting" a spray of paper flowers in each pot. At the root of each make-believe plant was a little fancy box containing candy.

*

AMONG the hundreds of women who marched with emblems of mourning in New York recently, as a protest against war, was one young French girl. She explained to a neighboring marcher, as they waited for the signal to fall in, that she "just had to march," to express her feelings towards war. She was alone in New York, her father and mother both dying here within a few months. Her two brothers were both in the French army; she was unable to communicate with them in any way, and did not even know whether they still lived. So she had secured the privilege of a few hours off, for she was a girl who had to earn her daily bread and, clad in her mourning garments, marched as a living protest against the blind force that had entangled her hard-working life in its net.

Home Canning.

THERE is an increasing interest in commercial canning at home. The U. S. Department of Agriculture has been instrumental in forming canning clubs among farm women and girls, and in a "News Letter to Crop Correspondents" issued August 26 they give a table which tells how long different products must be cooked in the cans. The Department recommends the use of commercial canning outfits, and on application to the Office of Farm Management, U. S. Department of Agriculture, Washington, D. C., will give a list of reliable firms that make different kinds of commercial canners. It is admitted that good results are obtained with nothing more ambitious than the customary wash boiler, but one valuable feature of these commercial portable canning outfits is that they may be handled by children as well as by older persons, and young girls who are trying to learn how to can may use them out of doors without interfering with the routine kitchen work. There is also a commercial portable hot-water bath outfit which may be purchased to take the place of the home-made outfit.

CANNING TIME TABLE.

[In "Size of can" column, No. 2 and No. 3 are standard sizes, about equivalent to 1 pint and 1 quart, respectively.]

Products to be canned.	Size of cans, No. 2, pint, No. 3, quart.	I. Home-made hot-water bath outfits, at 212°.	II. Water-seal outfits, 214°.	III. Steam pressure cooker, 5 pounds or more.	IV. Pressure cooker, 10 pounds, or more.
		Minutes.	*Minutes.*	*Minutes.*	*Minutes.*
Apples, whole or sliced, for pie filling	3	15	15	12	6
Apricots	3	15	12	12	6
Asparagus and other greens	2 or 3	60	60	45	35
Apple cider	2 or 3	20	15	12	10
Beans, lima or string	2 or 3	90	60	60	30
Blackberries, dewberries	2 or 3	12	10	6	3
Cherries, peaches	2	15	12	10	5
Corn (without acids)	2	240	180	60	40
Grapes, pears, plums	2	15	15	10	6
Hominy	3	60	50	40	35
Huckleberries	2	10	8	6	3
Okra and tomatoes combined	2 or 3	50	50	40	30
Peas, beets, carrots, etc	2	60	60	45	35
Pineapple	2 or 3	30	25	10	10
Raspberries	2 or 3	15	12	8	5
Sauerkraut	3	50	50	40	25
Sweet potatoes	3	80	70	60	40
Strawberries	3	15	12	8	5
Tomatoes	2 or 3	22	20	10	6
Tomatoes and corn	2	80	70	60	40
Grape juice	2	15	15	10	5
Quince	3	30	25	15	10
Tomato juice	2	20	20	15	10
Pumpkin and squash	3	60	60	45	35
Fish, pork	2	200	200	120	60
Chicken, beef	3	250	240	180	40
Figs	3	30	20	10	5
Rhubarb	3	15	15	10	5

In the table column No. I refers to the home-made outfit, which is nothing more than a washboiler. No. II is a water-seal outfit, hot water and steam combined. This shortens the time of boiling. The third or fourth canning outfits (Nos. III and IV), depend entirely on steam rather than hot water for cooking the fruit or vegetables and are called "steam-pressure cookers." The cooker with five pound pressure (No. III) does the work in much quicker time than the water-seal outfit, and the cooker with a pressure of 10 pounds or more (No. IV) in some instances will accomplish the work in half the time needed for the five-pound-pressure cooker. For example, corn may be satisfactorily prepared in the five-pound-pressure cooker in 60 minutes and in the 10-pound-pressure cooker in 40 minutes.

For altitudes of 4,000 feet or more above sea level add about 25 per cent. time to this schedule.

Canning Meat.

I HAVE canned pork, beef, corned beef and fresh. Cook the same as for the table, season and take out all the bone and pack in glass cans same as you use for fruit. Fill to overflowing with the meat and liquid, seal up and put in a dark place. I have known many other women to can meat also. Be very sure that you pack it solid and have no air bubbles left. MRS. J. W. H.

Green Tomato Preserves.

LAST Fall you printed a recipe for green tomato preserve with ginger. I have lost the paper and valued the recipe very much. Would you repeat it?
MRS. C. E. M.

We printed two recipes for green tomato preserves last Fall, which we repeat, together with a third from the Rural Cook Book which has been popular.

Green Tomato Jam.—Four pounds green tomatoes, four pounds granulated sugar, one cup water, two ounces preserved ginger. Wash tomatoes and cut in pieces, add remainder of ingredients, and cook two hours, or until clear. Strain through a coarse strainer to remove seeds. Put into sterilized jars and seal.

Green Tomato Conserve.—For one peck of green tomatoes, slice six lemons without removing the skin, but taking out the seeds. Put to this quantity six pounds of sugar and boil until transparent and the syrup is thick. Ginger root may be added if desired.

Green Tomato Preserves.—Required, eight pounds of smooth green tomatoes, seven pounds of sugar, one ounce of ginger and mace mixed and the juice of four lemons. Pierce each of the tomatoes with a fork and put them in the preserving kettle with all the other ingredients. Heat slowly, then boil until the tomatoes are clear, then skim them out and boil the syrup until thick. Put the tomatoes into jars and pour in the hot syrup.

In hope and fear persistent more and more . . .
Whilst day and night I carry in my hand
  The golden key to ope the golden door
Of golden home.
—Christina G. Rossetti.

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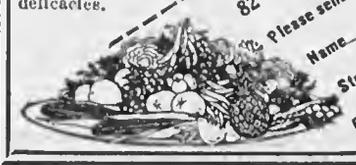

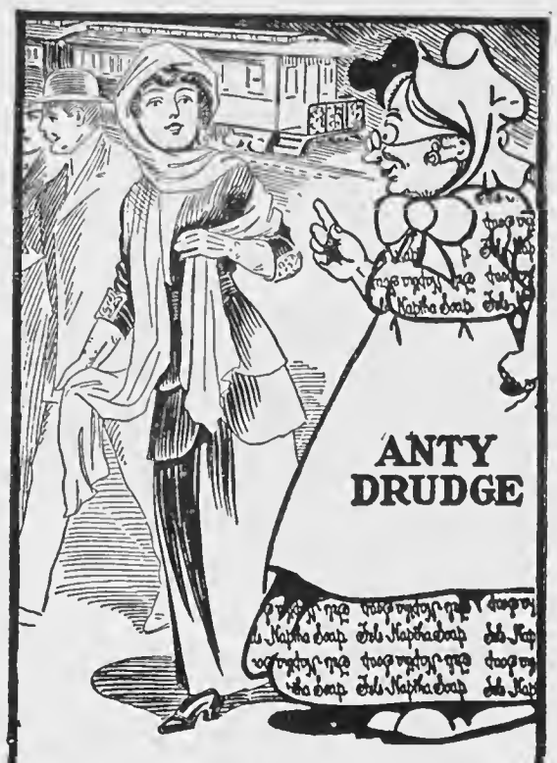

Mrs. Suburbs:—Oh, Anty Drudge were you on this late train, too? I've worried all the way home for fear I'll oversleep to-morrow. I want to wash all my blankets, and I'll have to get up before five or I won't get them done.

Anty Drudge:—If you do them my way you needn't worry about getting up so early. I'll step around to-morrow about nine o'clock, and show you how easily and quickly Fels-Naptha Soap will do them for you. You'll be buying it by the box, like I do, after to-morrow!

Fels-Naptha Soap makes blankets, flannels and woolens as soft and wooly as when new, because there is no hard rubbing to harden them and soaking is not necessary. Clothes washed with Fels-Naptha are sweet, clean and white and last twice as long. Just soak for about thirty minutes, in cool water and Fels-Naptha, give a rub or two, rinse and hang on the line.

All your housework can be done as easily and quickly. Dirt disappears, and grease dissolves.

Fels-Naptha cleans porcelain tubs perfectly.

Buy it by the box or carton and follow the directions on the Red and Green wrapper.

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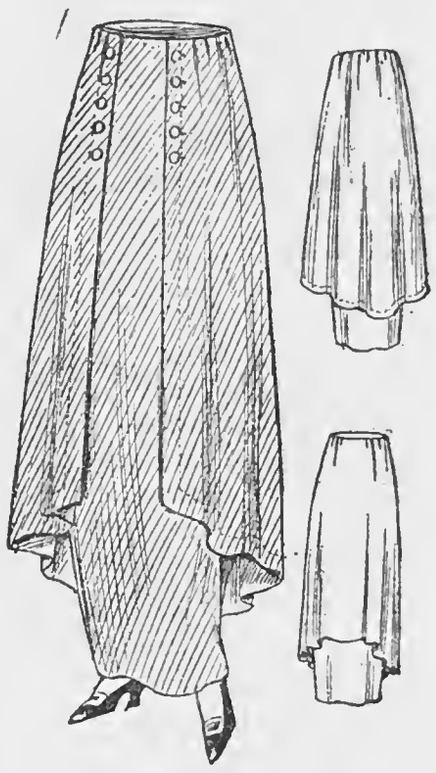
A DRESSMAKING LESSON.

Making a Tunic Skirt.

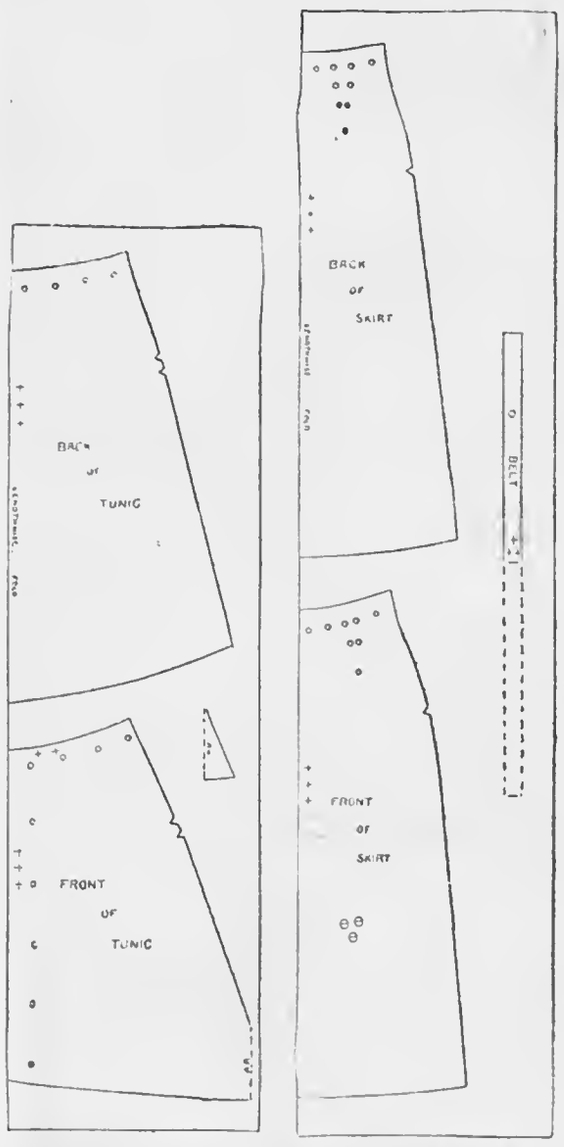
MANY amateur dressmakers seem to find the tunic skirt a problem, so we asked May Manton to give us a practical lesson on it. This is a very useful pattern for making two old dresses into one new one, as different materials may be



8341 Russian Tunic Skirt.

used for skirt and tunic, the waist being combined to correspond, sleeves or trimming being of the one material, bodice of the other. The lesson tells how to make the skirt from 44-inch material. With the open tunic the entire skirt should be of one material, but with the closed tunic it is wiser to reduce both the weight of the skirt and the cost by using lining material for the skirt and facing it to a sufficient depth above the edge of the tunic.

In the diagram at right are shown the two portions of the skirt and the belt, in the left, the two portions of the tunic; all laid on material 44 inches wide folded



The Pattern on 44 Inch Material.

lengthwise. Note that in the case of the tunic there is a tiny little section separate from the main portion of the front. The section must be cut separately and seamed to the side edges because the material is not wide enough to cut the entire tunic in one piece, but when the seams are well stitched and carefully pressed they will not be noticed. If you use narrower material, it will be necessary to make larger piecings of this sort. This skirt can be made with either a high or a natural waistline, but we will first consider the high waistline shown in the illustration.

First, smooth out the different pieces and pin them carefully into place, as indicated, with the edges marked by the triple crosses on the fold. The group of three large perforations indicates the front of the skirt and it is important to bear this in mind since the two pieces are much alike.

Mark all around the outside edges with a tracing wheel or tailor's chalk and mark the various notches and perforations. Mark through to the other side with tailor's tacks. Then cut your materials as far beyond the traced outline as is necessary to make a good seam. For broadcloth or other closely woven material a narrow seam will suffice, but if you are using loosely woven material that will fray readily a wider seam will be needed. Baste on the traced line and the perfect contour will be preserved.

To make the skirt, close the seams, leaving an opening at the left side above the notches. Under-face the front edge of the opening and finish back with an extension underlap. Take up the darts in the back of the skirt only, bringing the perforations together.

Close the portions of the tunic, leaving an opening at the left seam above the notches and finish as directed for the skirt. If you like the open edges, cut the tunic through at the center front and turn the edges under on the lines of perforations. Then finish the lower edge. If the closed tunic is to be used, finish the lower edge in the way best adapted to the material. Gather the tunic at the upper edge between the double crosses and arrange it over the skirt with the center backs, seams and edges of the plackets exactly together, with the front edges of the open tunic two inches within the center of the skirt or the center of the closed tunic exactly at the center of the skirt. Arrange both skirt and tunic over webbing or belting one and one-half inches wide, and close invisibly.

For the natural waistline, mark the double crosses in the tunic below the perforations at the uper edge: then cut all portions of the pattern off on the perforations nearest the upper edges and proceed exactly as directed, but take up the darts in the front as well as in the back of the skirt. Join both the skirt and the tunic to the belt with the center backs together, the center fronts at the large perforation in the belt, and cut the left side of the belt off at the edge of the opening.

For the skirt will be needed 3¼ yards of material 27, 2⅝ yards 44, 2⅜ yards 50 inches wide, and for the tunic 3½ yards 27, 2⅛ yards 44, 50 inches wide. If remodeling is in process and there is already a two-piece skirt on hand, the tunic can be adjusted over that quite as well as the one in the pattern. If one has a blue serge suit, the addition of a tunic of black taffeta or black moire bengaline with coat trimming of the same would make a new costume at very little cost.

Concerning Preserving Powders.

ONE August day, my neighbor came calling. She brought a parcel which she carefully placed upon the table. After a while, when greetings had been exchanged and we were comfortably settled for a good chat, she undid the wrappings, disclosing a glass jar of canned corn which she held up for my inspection.

"I brought this over for you to try, Marie," she said. "I know you prepare your Winter supply of corn, and use the tedious, long-boiling process. Sister and I have been doing ours a new way. You add this powder to the corn, cook 20 minutes, and put into the cans. It keeps splendidly. I'm sure you'll like it, for it's so much easier."

Forewarned is forearmed; I knew that injurious substances are usually found in such preparations, so was not attracted by the bait, but it annoyed me to find my friend, a frail woman past middle age, so easily misled.

"Now, Henrietta Brown," I scolded, "do you know what that stuff is made of? Of course not, neither do I, and that is a good and sufficient reason why I will not use it. The Department of Agriculture has sown bulletins broadcast over the country, explaining to the housewives how to preserve their vegetables and save money. Their way is to sterilize by heat. Do you think if there was a safe short cut they wouldn't mention it? The stuff which is put into those proprietary preparations is the very same that has been forbidden to the manufacturers by the pure food laws—boric acid, salicylic acid, saccharin, and others. It amounts to this: The men who prepare canned goods are no longer allowed to poison us wholesale, so we buy the same ingredients and poison ourselves, because it's so much easier. Let me show you what the authorities say about it."

I hunted for the bulletins from which I had gleaned my little store of information and soon found what I wanted. Then I read extracts, telling of careful experiments, made by chemists employed by the government, to determine whether these preservatives were harmful, and of the results obtained; also other extracts, warning the housewife against so-called preserving powders which, in small quantities, may not injure a person in normal health, but which may produce effects of a serious nature in a child or invalid. It was all plain and convincing, and Henrietta's face was very sober when I finished. She didn't say much, just thanked me, put on her hat, and went home.

"She wants to consult with her sister," I said to myself, "but she'll do the right thing in the end. One may trust Henrietta for that."

The same evening I was summoned to the telephone and found my neighbor on the line.

"Sister and I have talked it over," she said, "and we've decided to write to the Bureau of Food and Drug Inspection, in Washington, D. C., and find out about that preparation. You see we don't like to throw away all that good material unless we really know that it is harmful."

I warmly applauded this decision, for it shifted a load of responsibility from my shoulders. A week later, Henrietta called me again by telephone.

"Well, it has turned out as you predicted," she said. "We wrote to the chemists and sent a sample, though we didn't need to, for they knew all about it. The answer came yesterday. The preparation is mostly boric acid. I've just made a clean sweep, and dumped all that corn in the pig-trough. I guess now I'll stick to the good old way."

"Never mind," I consoled her, "it's better than poisoning John and the children. I'll come over any day you say, and help you can another lot."

Then I hung up the receiver with a sigh of relief, for it was plain that my neighbor was a wiser, if also a sadder woman.

M. E. COLEGROVE.

THE following is a tested recipe for preparing tomato figs: Select six pounds of small pear yellow and red tomatoes that are fully ripe, or use the little peach tomatoes. Put them in a basket, plunge them into boiling water for a moment and remove the skins; do not break the tomatoes. Cover the bottom of a porcelain-lined kettle with a portion of three pounds of sugar; put over a layer of tomatoes and the remainder of the sugar. Do not have more than two layers of tomatoes; in fact, it is better to do one layer at a time. Cook over a moderate fire slowly until the sugar penetrates to the very center. Dip tomatoes out with a skimmer; spread on platters and set in the hot sun for one or two days. Take in at night before the dew. While they are drying sprinkle several times with granulated sugar. When perfectly dry put between layers of waxed paper in tin boxes. They keep well, and are very dainty.

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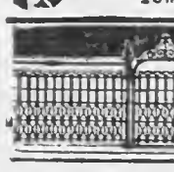

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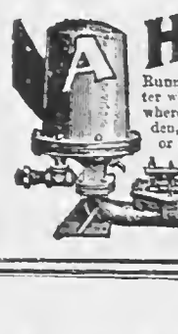

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Live Stock and Dairy

A HAMPSHIRE HOG.

MR. BEN B. HUNT of Barry County, Michigan, sends us the picture which is shown on this page. He calls it a picture of a Michigan-bred Hampshire boar, and also a Michigan-bred boy on his back. Mr. Hunt says he has 51 of these belted pigs, and he is very much pleased with this breed. It would be interesting to know in what way, aside from the belt and the peculiar appearance, this breed is superior to others, such as Berkshire or Poland China. Sometimes a man who takes a fancy to a particular breed of live stock will have something of a job in telling why he considers it better than any other. It might be a good plan to develop a discussion along this line, and see how many of us can really give sound and convincing reasons to prove

GOOD NATURED HAMPSHIRE BOAR.

that our favorite breed is better than the one kept by the neighbor. At any rate, this Hampshire is a good-natured hog, and the boy seems to be having a comfortable ride on his back. Generally speaking, however, we think it is a mistake for children to play very much with these barnyard brutes, as no one can tell when they will turn and take advantage of you for an attack.

HAMPSHIRE SWINE.

I HAVE only been a breeder of Hampshires for two years. In my opinion these hogs develop faster than any other breed, and we have had them all. I sold nine last year on the market that weighed 202½ pounds each at 173 days old. They are a distinct bacon and ham hog. At the International Fat Stock Show they did not win the prize, but they sold for 75 cents above what the prize winners sold for. As for rustlers they are the best and they are not always looking for a hole in the fence. Some of this breed will weigh 1100 pounds at two years old. The stock hog pictured will not be a year old until September 27, and he weighs close to 350 pounds. The sows are kind and gentle and you can do anything with their pigs, also the boars, My boy drives this one as he would a dog. The sows raise large litters, from nine to 16. I have used my boar on about 12 sows and they will average about 10 apiece; some of the sows are not a year old yet. I have bred to a number of different breeds, and half of the pigs are belted. I would not have any other breed on the place. I can get $10 for every six-weeks-old pig I raise that is well belted. The Hampshire Breeders' Association takes the best of care of its members.

Michigan. BEN B. HUNT.

TREATMENT OF HOG CHOLERA.

ON page 1038 F. C. Minkler, of the New Jersey Experiment Station, makes a statement that I think may be misleading to many of your readers, and I am sure that he would not wish to be misunderstood. The phrasing would seem to indicate that he thinks animals fed on garbage will become immune to cholera, and while this may be true of the garbage-fed hogs of a certain locality, that is, there may be some hogs in a certain locality that are fed solely on garbage and have become immune to the disease, I know from the experience of contractors for the removal of garbage in Philadelphia, that cholera is as much of a menace to their herds as to any other. I know of one such man who lost practically his entire herd from the disease. Moreover, when piggeries in "the neck" were prohibited and the animals disposed of to farmers, many herds and places hitherto uninfected, were infected, both the imported and the resident animals being affected.

I quite agree with him that something should be done to eradicate this disease as soon as may be. This State, New York and New Jersey, are as yet practically free from the disease, but if the prohibition of immunization by the virus-serum method is continued for long by the different live stock sanitary boards, sane business men cannot be induced to take the chances of extermination of their herds, particularly when the herds are purebred and their value large. The loss of one animal to a constructive breeder may undo the work of years, and be a loss to the community that is impossible to measure in dollars.

Cholera is menacing the meat market of the future. With the present world-wide shortage of all meat-producing animals, and the present possibility that several cattle-raising countries will be prevented, for some time to come, from supplying their own needs, every facility should be given to cattle and stockmen in every part of this country to safeguard their interests, and thus guard against a meat famine all over the world. Scientists admit their ignorance of the disease. Practical men have found a practical safeguard against it. Why do some authorities deny in some States the right to use a method or practice universally accepted in every country in Europe, all the States of the corn belt, where cholera has raged and been checked, and in many other States less afflicted by this scourge than Pennsylvania, New York, or New Jersey? D. BUCKLEY,

Secretary Pa. Berkshire Breeders Association.

IT was far from my intention in making a reply to inquiry on page 1038 even to infer that the feeding of garbage was a means toward the end of immunizing hogs against cholera. I only cited the instance which was given me by a prominent serum-producing concern, in which they stated that they had been able to utilize garbage-fed hogs in the production of serum to great advantage, as they found it possible to inject into these animals large amounts of virus without the use of protective serum. I am well aware of the difficulty experienced by swine raisers adjacent to cities who utilize garbage as a source of feed for pigs. Of course, the serum treatment is by all odds the safest, and since scientists do not seem to tell us exactly why certain exclusively garbage fed pigs have this immunity, I merely advanced the suggestion that this condition might be due to the fact that such animals were naturally immune as results of obtaining in the garbage, residue pork products containing the cholera bacillus. There is no such law in New Jersey as prevails in Pennsylvania prohibiting the use of simultaneous treatment. We use virus in this State to establish permanent immunity with good results. It is exceedingly difficult to take the view-point of prohibiting the use of virus and not prohibiting the importation of hogs from other States that have been simultaneously treated. Just what the Pennsylvania authorities could do in case simultaneously treated animals were shipped into the State, I do not know.

The cheapest insurance that I know of against hog cholera is the simultaneous treatment, provided of course, the serum protects. On the other hand, unless I was sure that cholera was in the neighborhood, I would not use the double treatment, but rather rely on the serum alone treatment as the first means of protection, if cholera did break out in the herd, this to be followed in 10 days with the double treatment with such animals as are in the proper condition.

Seemingly I overlooked that part of Mr. Cochran's inquiry relating to the use of sour milk in swine feeding. Our experience goes to show that in case the milk can be obtained sweet every day, there is no advantage in souring it before feeding it to the pigs; on the other hand, if there is any irregularity in the delivery of the milk so that one day it would be sour and the next day sweet, I would by all means sour all the milk and feed it to them in this same condition every day. It is the change from the sweet to sour, off and on, that causes disorder with the pigs' digestive system.

There is another phase of the hog cholera question that seems important. If the proper officials were given authority to go in any neighborhood where cholera prevails and establish strict quarantine measures, cleaning up the premises where the disease prevailed, and using serum alone in all adjoining herds, I am satisfied that the outbreak could be conquered without the use of virus. It is a common practice in any neighborhood, that when one farmer commences to lose his hogs, his neighbor is apt to visit the farm, go into the hog lot and inadvertently carry away with him on his boots, the germs that are eventually responsible for the outbreak in his own herd. Strict and prompt measures of quarantine would, without doubt, be the best means of localizing and eradicating the disease in any community. The use of virus should not be prohibited, but strictly supervised and regulated. FREDERICK C. MINKLER.

N. J. Experiment Station.

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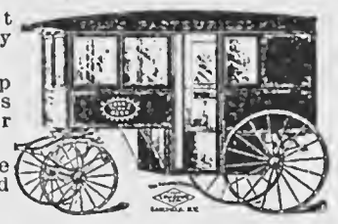

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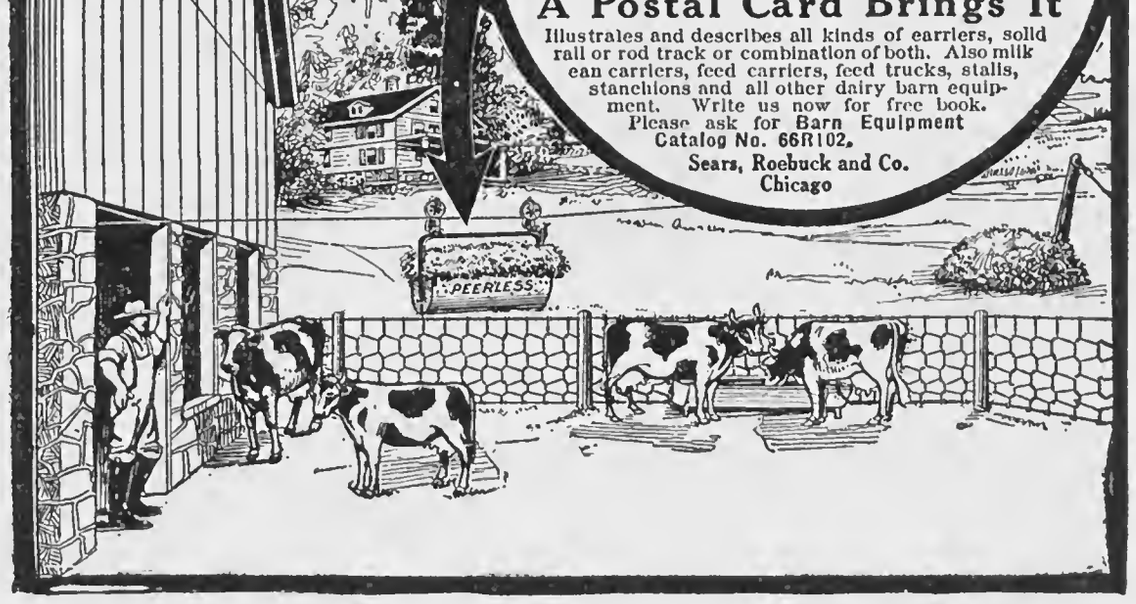

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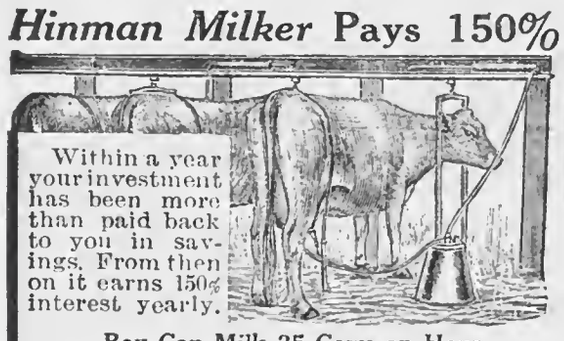

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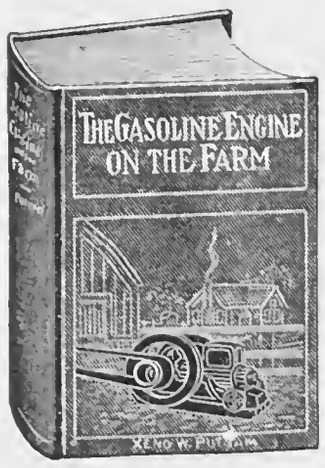

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STATEMENT FROM THE DAIRYMEN'S LEAGUE.

THE sales committee appointed at a recent meeting of the directors of the Dairymen's League to endeavor to market the milk for the Winter months, have thus far been unable to arrange any terms for the sale of the league milk. The Borden's Condensed Milk Co. refuse to confer with the committee in any way. Other dealers who have been approached treated the committee more considerately, but hesitate upon agreeing to give any definite price unless Borden's and other principal dealers do the same. The unsettled conditions in Europe and the effect upon the cost of dairy feeds, and the price of foods in general, offers a very difficult problem for the committee and they feel uncertain as to the advisability of making or agreeing to accept a schedule of prices for so long a period as six months. It has been decided to suggest that members not sign any contracts should the dealers in conformity to their usual custom ask the producers to sign them about September 15.

A meeting of the directors has been called for Friday, September 18, at 10 a. m. at the Agricultural Department, Albany, N. Y. It is requested that each branch call a special meeting of all members and select a delegate to attend this meeting, bringing the sentiment of their branches as to their willingness to accept the price which the dealers offer, or whether they shall contest for a league price, and, if so, what percentage of their membership will positively stand for such price to the extent of manufacturing their milk for a period of 30 days, should it be necessary. If not possible to be represented by a delegate, advise us by mail just your position.

The directors feel it is becoming more and more apparent that each branch or locality should be prepared with a plant to care for their milk in time of necessity or surplus. A success in contest is but a temporary advantage.

There are now 187,000 cows subscribed for in stock, about 5,000 of which have gone out of business. 137,000 cows are subscribed for in agreements. We especially urge at this time that each branch strengthen their position by securing new stock subscribers, and have all subscribers sign agreements.

ALBERT MANNING, Secretary.

Milk Yield of Goats.

WHAT is the average quantity of milk from a milch goat? What is the period of normal milk flow?
New Jersey. E. J. O.

A good milch goat should give from one to two quarts of milk daily, much less than the latter amount from a mature doe not being considered profitable. A doe with her first kid is not expected to yield as much, three pints being a fair amount, and these yields should be maintained for six or eight months. Goats are reported as giving milk continuously over a period of several years without renewed gestation. M. B. D.

WE prefer Ayrshire and Holstein bred cattle, for the reason we are satisfied. They will produce better results than other breeds. Especially for larger quantities of milk. They are proven by my experience to be very healthy and rugged animals, also good heifers. A. S. E.
Connecticut.

LEADING A COW.—On page 992, J. A. D., Eastport, Me., wants to know how to lead a cow. Don't lead her, but drive her; tie one end of a 15 or 20-foot rope to a hind leg just above the dew hoofs. Hold the rope so tight that she can't take a full step with that foot. Before you have gone 20 rods she will go so quietly that it will surprise you.
Westfield, N. Y. J. M. S.

THE DOG PROBLEM.—I believe the only solution of the dog problem, mentioned so often in connection with sheep-raising, will be to make every dog wear his tax receipt, in the form of a tag attached to his collar, and put the others "under the ban of the empire." Without such a mark it is hard to distinguish the taxed from the untaxed, and probably the untaxed do the most damage. This is the essential part of the Maine law as described by Mr. McKean some time ago in THE R. N.-Y. W. J. M.
Ohio.

SHEEP AT THE N. Y. STATE FAIR.—Owing to prevalence of hog cholera last year it was thought advisable not to show swine this year. The sheep exhibits at the fair were less than former years, owing to the Toronto and the Ohio State Fair dates conflicting with those of the New York State. The Dorsets were the strongest they have ever been on the grounds. The exhibits were from New York, New Jersey and flocks from farther east, and some Canadian stock was shown. Special prizes were offered by the Shropshire, the Southdown and the Hampshire associations. The improvement in quality is good evidence that the farmers are becoming more interested in good sheep in New York and Eastern States, and are breeding from stock selected from well-known herds. At the fair there were a number of sales made by the large exhibitors to farmers who use the new blood in improving their flocks. It is necessary that more sheep should be raised in New York State to produce profit from waste land and further supply the demand for meat.

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HIGH-CLASS Shropshire and Southdown sheep for sale. NIAGARA STOCK FARM, J. C. Duncan, Mgr., Lewiston, N. Y.

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The Brown Swiss Cattle Association
IRA INMAN, Secretary BELOIT, WISCONSIN

SWEET CLOVER FOR HOG PASTURE.

I WOULD like your advice regarding the sowing of Sweet clover. I would like to sow it in an apple orchard as pasture for hogs, and later, when inoculated, sow pasture in Alfalfa. It is now in sod except where it has been rooted up by the hogs. Soil is stony, but level and in good condition. Would it be advisable to sow the Sweet clover alone or with rye, and let the hogs harvest the rye next Summer? J. R. C.
Pittstown, N. J.

Sweet clover is rapidly gaining in popularity as a forage crop suitable for use for cattle and swine, and it would seem that it is very well adapted as a source of green forage for swine, it being undoubtedly hardier than Alfalfa and probably more resistant. Our experience has been limited to its use in combination with rape and Soy beans. Early in April we seeded a small area utilizing the following mixture: Oats 30 pounds; Canada field peas 30 pounds; Dwarf Essex rape 6 pounds; Sweet clover 15 pounds. The oats and peas furnished early forage, but during late June, July and August the rape and Sweet clover has furnished an abundance of forage. I am satisfied that a combination of Soy beans, rape and Sweet clover forms the basis of one of the very best forage crops available for swine. To our surprise the Sweet clover was extremely palatable, and unlike Alfalfa, can be safely pastured the first year. It it necessary to keep the plants fairly well pastured down, and not allow them to branch out with their woody stems. I do not know how the Sweet clover will winter in this section, but if the vigor and vitality of stray plants along the roadside forms any criterion, it is safe to assume that the plants will be extremely hardy and vigorous. One of the strongest features of this rape-Soy beans-Sweet clover combination is the fact that the mixtures can be seeded any time from early Spring until the first of August, and furnishes a feed extremely rich in protein and unusually palatable. The mixture that we have used this year is made up as follows: Soy beans one bushel; Dwarf Essex rape six pounds; Sweet clover 18 pounds.

The Soy beans were drilled by themselves, while the rape and Sweet clover were mixed in this proportion and seeded with a press drill. We shall have some very interesting facts later in the season to show the comparative value of this combination, for all our brood sows have been feeding in this field since early in July, and have not been fed any grain in addition whatsover. They are gaining from three-quarters to a pound a day and are evidencing unusual thrift and vigor.

At the present time we have about 20 brood sows, averaging about 300 pounds each, and 20 Spring gilts averaging about 100 pounds each, that are pasturing in a four-acre field, the former obtaining their maintenance exclusively from the forage plants. Rather than seeding the Sweet clover and rye mixture as suggested, I would prefer to utilize rye and vetch as a full mixture, reserving the Sweet clover to be seeded early in the Spring, with rape, following rye and vetch, which can be used as an early grazing crop or plowed under as a cover crop. F. C. M.
N. J. Experiment Station.

SOY BEANS AND CORN.

IT is my own opinion that as a general proposition, corn is the king of silage crops. Personally, I have had no experience with other crops except Soy beans. I am very sure that while the beans may help to balance the ration the yield is so much less than that of corn that I can balance the ration more cheaply with cottonseed meal or other concentrate. However, I believe it worth the time and expense to mix a few medium green Soy beans with the seed corn. Under favorable conditions the beans will make a considerable growth, apparently, without hurting the corn at all, and if inoculated they undoubtedly add some nitrogen to the soil. If the weather is rather dry the corn will swamp the beans, and if there are many woodchucks they, will eat most of them.

This year my Soy bean seed did not germinate well, but despite the fact that the corn is very thick and rank, and that up to three weeks ago the weather was exceedingly dry, the few beans that came up have made considerable growth, and had the seed grown well would have made considerable silage. In case of a short corn crop or wet weather at silo filling time it might be advisable to mix other crops with corn in the silo, but generally speaking I should prefer to hay the other crops, and make silage of corn, and so far as my observation goes, that is the experience of others.

In regard to mixing Soy beans and seed corn, I might state that one must not treat the Soy beans with arsenate of lead, as is sometimes done with corn to keep crows away. It will not hurt the corn, but the beans will not germinate when so treated. Last year I treated the mixed seed with arsenate of lead and planted where the planter had skipped a couple of rows, and while the untreated corn germinated almost perfectly, every treated Soy bean rotted. And the crows pulled most of the corn, too. CHESTER L. MILLS.

AILING ANIMALS.

Cribbing.

IS there any remedy for cribbing? I have a fine, young colt that is a cribber, and would like to cure him of it if I can. C. B. C.

Cribbing is incurable when confirmed. Keep the colt in a box stall from which everything has been removed on which the teeth or chin could be set to practice the vice. Windsucking may be stopped temporarily by buckling a wide strap fairly tight around the neck just back of the throat-latch. Another plan of stopping the vice is to tie one end of a small rope to one r' " of the halter or bridle, pass the other end under and across the incisor teeth of the upper jaw, under the lip and after drawing fairly tight tie the free end to the other ring.
A. S. A.

As to Rye for Horses.

WHAT do you say about rye feed for horses? We are feeding ground rye and oats mixed half and half by weight, 15 quarts to each horse daily. How could that ration be bettered for heavy work nine hours per day? It is a fact that our horses shrink more than others. We do not grow wheat or oats. Has rye ever been known to kill fowls?
New York. C. E. B.

There is only one more unsuitable grain than rye for horses, and that is wheat. If a horse breaks loose and gorges on either rye or wheat acute founder or death commonly results. Stop feeding rye and add one ninth part of wheat bran to the whole oats. Do not feed ground feed to a horse that has good teeth. Ergot often present in rye might kill poultry, if taken in large quantities, but we have no record of such an experience. A. S. A.

Hard-milking Cow.

I HAVE a Jersey cow that just had a calf, but I am unable to get any milk from her. The calf can get no milk, as no milk comes down into the teats. She has an extra large udder, looks as though she should give at least 20 liters of milk. The cow seems to be in good health, very little fever if any in udder, and very little caked. I know nothing of the cow's past life as I got her with some other cattle when she was dry. She is about eight years old,. Do you think using a milk fever outfit and pumping air into her udder would help any? I have sent for one; have no veterinary to go to here, although .. town close to 40,000. M. V. J.
Mexico.

It will not pay you to fuss with this cow's udder as interference will be likely to do more harm than good. Better let the calf nurse, if you find that it is getting enough milk, and when it is weaned fatten the cow for slaughter. A. S. A.

Roaring.

A YOUNG horse, about 5½ years old, is suffering from throat trouble. When he was three he had the tonsils, as horses are liable to at that age; something grew in his throat, so that he cannot breathe freely when he runs or works hard. There is a noise in the throat. A veterinarian suggests putting a tube in the trachea. Will that be any good? A. B.
Massachusetts.

By "tonsils" we understand you to mean that the horse had an attack of strangles (colt distemper) which has resulted in "roaring" (laryngeal hemiplegia). The insertion of a permanent silver trachea tube would enable the horse to breath without roaring; but it would not cure the condition given rise to roaring. That might be remedied by the operation of arytenotomy to be performed by a qualified surgeon. Treatment other than this would not be likely to do any good. A. S. A.

"DOES my practicing make you nervous?" asked the man who is learning to play the cornet. "It did when I first heard the neighbors discussing it," replied the sympathetic person. "But now I'm getting so I don't care what happens to you."—Washington Star.

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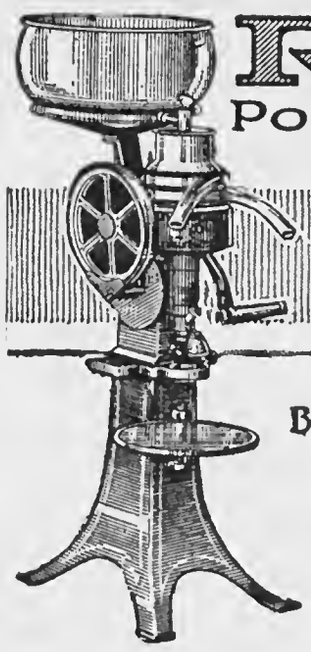

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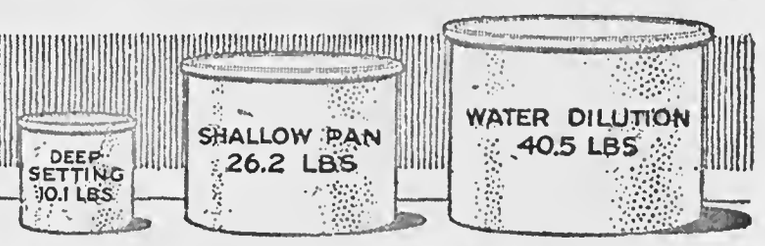

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THE DAIRY COW SITUATION.

LAST Fall I wrote you concerning the dairy situation in this locality, and especially about the supply of dairy cows and the prices that they were bringing. At that time I made the prediction that the Spring of 1914 would see dairy cows selling at a higher price than ever before, and on the strength of that belief, I bought a number of young cows with the idea of carrying them through the Winter and selling them again in the Spring.

We had a long hard Winter, and the cows ate a great deal of high-priced feed—but they did not bring the anticipated high price. Why? Well, when the Bordens announced the price that they would pay for milk the next six months, that price was below that of last year, and therefore there was no incentive for the dairymen to stock up with more cows. Funny situation, isn't it? Cows scarce, feed high and every prospect of good prices. Yet the Bordens calmly say, "We can't pay as much as last year." So the price goes down.

In this immediate neighborhood there have been pastures without a foot of stock on them because the owners say that they don't like to milk well enough to do it just for fun. At present there are but few cows for sale, and these are being picked up as they near freshening at about $100 a head for the good ones. The poorer ones sell for less, and the best ones go higher. For the past few years but few heifer calves have gone for veal, but this past season a reaction has set in and fewer heifers are being raised.

This of course does not apply to the purebreds. Madison and Chenango Counties contain more registered Holsteins to the square mile than any other section of equal size in the country. The desire to own purebreds has got hold of most of the farmers, mainly, I suppose, because more money is to be made from the purebreds if rightly handled. But I also think that a good many buy purebreds just because it is the fashion to do so, just as Smith buys an automobile because his neighbor Brown has bought one. A few years ago plenty of registered Holstein heifer calves could be bought for $50 each, but now it is hard to find one at less than $100, and those from good A. R. O. dams go at higher prices.

Last Spring the Madison-Chenango Holstein-Friesian Club organized an auction sale, and about 200 head of cattle changed hands, but the greater part of them never left the two counties. There were plenty of farmers waiting for a chance to make a start in purebreds. There were some excellent cattle in this sale, one bull calf selling for $3500 and at least two cows at $2000 each. J. GRANT MORSE.

WHAT CROPS FOR THE SILO?

THE question is asked as to mixing crops for silage, and the drift of opinion about this plan. In my own section, the corn plant has proved so eminently successful and superior for silage, that mixing other crops in with the corn as it goes into the silo, practically using a "filler" with the corn, is seldom if ever heard of now. The idea is to get, by the mixing, a larger proportion of protein from the added crop to balance up the corn part. North of the Ohio River, the difficulty is to get two crops to mature at the same time, so to make a good quality of silage or even "harmonize" in the fermenting stage in the silo, and the result is, as corn "cooks" at a much lower temperature than the proteins, one get a flavor and taste that it not well relished by the cows, and possibly rejected in part, and roundly berated by the milk inspector. In the droughty sections of country, silage can be made with more success when Kaffir corn, sorghum, and beans are used, but even then the advice is to silo them separate. Any of our larger protein producing crops, when siloed with corn, cause a great loss of digestible matter in the latter, and the waste is far greater, and more than counterbalances the advantage of mixture.

Cow peas, Soy beans, and the like make good silage when pitted each by itself, but great care must be taken in putting them in, or the ferments will go too far, and the silage will be a close approach to decay, filling stables with an odor that is not "passed in silence" by the milk inspectors. All of these protein crops if siloed, need especial care in putting into the silo. They must not be too mature, they must be cut into the pits, the finer the better, and well distributed, and unlike corn, the more it is packed and tramped to force the air out the better. Do not rely upon its own settling to expel it fully, as it will not pack down by the heating, as will corn.

Now and then one hears of some one who tried cutting in Soy beans with the corn, and the plan was liked, but is never heard of more; the dry curing of the clovers and beans goes on as before. With the advent of Alfalfa, its perfect blending as cured material with the silage, and the great amount of protein it affords to the acre, it does not seem that there is longer any reason why the raising of uncertain protein crops should be continued, or even fabulous prices paid for mill feed to balance up with. It may be in more southern sections, and may yet be the better way to raise them instead, but it is far from proved, that mixing them in the silo pits, with the corn, is the better, or even a more profitable way.

Ohio. JOHN GOULD.

LIVE STOCK NOTES AND PRICES.

Sept. 1. Good rains ended the drought here Aug. 10 and all last week was rainy; is too wet to plow stubble land. The creeks, branches and ponds were full for the first time since February. The prospects are good for tobacco, late corn and potatoes. A great deal of Alfalfa is being started. Pastures are good, stock looking better. A large acreage of wheat will be sown this Fall. Several new silos are being built. Plenty of peaches and apples seling at from 25 to 75 cents a bushel; wheat $1.03; corn 90; hogs $9; hens 11; Spring chickens 12; butter 18 to 25; eggs 19. E. S. K.

Boonville, Ind.

Sept. 1. We are in the Pittsburg market milk territory, and the tendency is toward higher prices each season, with more and more restrictions laid down by the city inspectors. There is some butter and some cheese made around us, but the amount of milk available at butter and cheese prices is growing less each year. Good grade cows have sold as high as $125 at public sales. This high point was about two years ago. Now the best grades usually sell at $80 to $100. There are not very many for sale just now at any price; almost everybody is wondering how matters are going to shape up for Winter. Prices are changing so rapidly that it is a decided gamble when you buy more than a day's supplies. Our people depend very largely on mill feeds, and if feed goes up while milk does not, a large proportion of our dairymen will talk sell, and some may actually cut down. We have now quite a large number of registered Holsteins around us. They seem to sell well, and at reasonable prices there is always a market.

Orwell, O. W. H. P.

The hay crop in my immediate vicinity was very large, but I hear it was below the average in many places. The crop was put in good condition although the weather was very uncertain. The outlook for the oat crop is exceedingly bad. Although the crop promised to be very heavy the weather has been so uncertain and rainy that many farmers have not been able to bring their crop from the fields since cutting, and in many fields the oats are beginning to grow in the bundles. I do not know how widespread this wet weather has been, but if it is very extensive I believe oats will be a very expensive feed this Winter. Corn bids fair to be a very good crop, and the farmers in this district will not lack for fine silage unless the crop is spoiled by an early frost. Potatoes are looking well and a fine crop is expected. Milk is selling at $1.40 per hundred this month. The prices for the coming six months will appear soon and they are expected to be higher than those of the corresponding time last year. Both beef and dairy cattle are selling well. Beef cattle run from $50 to $65 per head and milch cows from $75 to $100 per head. Grain rose a little a short time ago, but is steady at present.

Bainbridge, N. Y. C. P.

August 31.—The dairy business in Southern Missouri is on a firm basis and growing. All the milk on the Iron Mountain R. R. goes as milk to St. Louis. Southwestern Missouri puts it into cream. The future for the dairy interest in Southern Missouri is very encouraging; in fact it is better adapted for that than grain. Cows have been shipped out for the last two years, on account of drought, so that there will be a shortage of cows in the Spring, and I expect good ones will bring a good price. Just now they are down to bed rock, as Southeastern Missouri, Southern Illinois and Northeastern Arkansas have had almost a total failure in corn, meadows, oats and pastures. This drought has hit us harder than the drought of 1891, as there is no surplus left over from last year. Last Spring cows sold at $40 to $100. According to quality, and today ordinary cows go at $30 to $40. Of course good cows would bring more. I do not think that there are many cows for sale that you would call good. W. R.

Potosi, Mo.

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The Henyard.

Colds and Roup in Fowls.

THE season of the year is approaching when cold rains and equally cold, raw winds will bring about catarrhal attacks in fowls exposed to their influence. Many newly constructed poultry houses will not be finished in time to get their interiors dry and their occupants housed before the raw chill of November has penetrated the bones of the feathered folk now roosting in trees and open sheds and before the delicate mucous membranes lining the air passages and eyes of these pullets and cockerels have succumbed to the catarrhal attacks to which they are so subject. A mucous membrane is a membrane lining one of the body cavities which opens to the outside world, and catarrh is inflammation of one of these membranes. This inflammation may be brought about by exposure to irritating dust or vapors or by the action of certain disease germs or, still more frequently, by exposure to cold and wet until the body is chilled and the natural resistance of its tissues is lowered below the safety point.

The symptoms of catarrh of the air passages of fowls are very like those of "colds" in humans. The fowls sneeze; their eyes and nose run with a thin watery discharge; their heads droop; their feathers are ruffled as easily as those of a human with a hard cold and they wear the same air of dejected miserableness. In very severe cases, these symptoms increase in severity, the discharge becomes thickened, the eyelids are glued together, breathing is difficult and through the mouth and accompanied by wheezing, a thin discharge may come from the mouth and the bird dies from exhaustion. Roup resembles a very severe case of catarrh in its symptoms and it is sometimes difficult to distinguish between them. Catarrh may, and often does, precede roup, so that the latter disease is grafted upon the first. True roup, however, has a specific cause of its own in the nature of a disease germ which germ may be transferred from one fowl and from one flock to another. It is accordingly a contagious disease. This germ of roup is found in the discharges of a roupy fowl and is easily transferred by contact or through the common use of eating and drinking utensils to healthy ones. If the resistance of the healthy fowls has been lowered by an attack of simple catarrh or by underfeeding and unwholesome surroundings they are all the more likely to succumb to the attack of the roup germs. In addition to the greater severity of the catarrhal symptoms in roup there is frequently a peculiarly disagreeable odor accompanying the discharges, the mucous membranes become ulcerated, the eyeballs are almost crowded from the head by the accumulated, thick, secretion and breathing becomes exceedingly difficult. This later stage of the disease is quickly followed by death.

The treatment of simple catarrh, or colds, in fowls consists chiefly in placing the birds in dry warm quarters where they will not be subject to drafts while on the perches and in adding some simple disinfectant, like permanganate of potash, to their drinking water. About one teaspoonful of the crystals of this drug to the quart of water makes a sufficiently strong solution. The fowls should not be housed in a tight, unventilated building but in one which is kept dry by free circulation of pure air. Buildings of the open front type are the best. When the fowls are placed under favorable conditions, ordinary colds are usually quickly recovered from.

True roup is a much more serious matter and requires vigorous treatment to rid the flock and the premises of its germs. Diseased fowls should be promptly isolated or killed and their carcasses burned or deeply buried. It is not worth while to attempt to cure a fowl with true roup; if cured, it is likely to remain unprofitable and a possible source of contagion to other members of the flock.

All utensils used by the flock in which roup has appeared must be frequently disinfected, as by boiling water, and the building should be thoroughly whitewashed with lime wash to which four ounces of crude carbolic acid to the gallon has been added. Individual treatment, if attempted, may be by syringing out the nostrils and eyes with mild disinfectant solutions like permanganate of potash, a grain to the ounce of water, boric acid solution, fifteen grains to the ounce or peroxide of hydrogen. A few drops of kerosene in each nostril and the cleft of the palate is often used in mild cases. The bunches which form below the eyes may be opened with a sharp blade, their contents pressed out and the cavity filled with some antiseptic powder like aristol or iodoform. While even severe colds may be profitably treated individually if the fowls are of sufficient value, when true roup makes its appearance it is better to use the axe freely and depend upon general cleanliness and thorough disinfection to eradicate the disease. M. B. D.

Feeding Milk to Hens.

CONCERNING the feeding of milk to chickens, for the past three years we have fed from 600 to 1,000 Leghorn hens. During all this time they have had from 12 to 24 gallons of milk and buttermilk daily. Our method has been to feed a wet mash at noon of ground grain, bran and middlings, this wetted well with milk which takes about half of the milk, and the remainder of the milk is given the chickens to drink. Our egg yield has been good, averaging between 140 and 150 eggs per hen last year for the whole flock, with the hens of all ages from one year old to four years old. But our loss of hens has been too heavy, being 170 during the year. The largest loss has been in two ways; some would become inactive, lose appetite and finally dwindle away. Others, large strong, healthy-looking, would die within a few hours' time sometimes with half-filled crops, just almost drop dead on the roosts or in the lots. We have often opened these hens and invariably found an exceedingly large liver and gall. We had wondered whether the wet mash had anything to do with this, and this season our young birds are being brought up with a dry mash before them so that we can form our own conclusions from results with this lot of pullets. We are near a creamery where we can buy buttermilk at 1 and one-third cents per gallon. When a 10-gallon can of buttermilk sets a few hours (this time varies as to sourness of cream and temperature), we can pour off from one-third to two-fifths which is like whey or water. The question is, is this really water used in the churning, or is it whey from the cream, or is it both and of what proportion? Another question, what is the food value for chickens of both buttermilk and skimmed milk as compared with best grades of beef scrap or fish, meat or meal.

California. W. H. M

Milk and its products are considered to be of great benefit to old as well as young chickens. Probably the trouble in this flock has been due to heavy feeding. The average given, of 140 to 150 eggs a year for such a mixed flock, is extraordinary. Undoubtedly this method of feeding has produced the eggs, but proved a heavy drain on the fowls' vitality. The feeding of wet mash requires much more care and attention than other methods. If W. H. M. wishes to continue this way he should be careful not to feed his breeding flock the wet mash. Let him push his pullets this way as far as he can without too great a mortality, but every Fall he should select his next year's breeders from among his most vigorous old hens, and allow them to regain their vigor and rest up so that when Spring comes they will be in that condition to reproduce strong germs and quick growing, vigorous chicks. Personally I would strongly recommend that he introduce the dry mash method of feeding with about 10 per cent. meat scrap in the mash, and give the buttermilk or sour skim-milk to them to drink. I am sure he will get good results in egg production

The watery portion which can be found in the buttermilk is whey, and analyzes from four to seven per cent. dry matter, of which less than one per cent. is digestible protein, and the balance, digestible carbohydrates. Skim-milk has about 3 per cent. digestible protein and buttermilk about 4 per cent. compared with meat scrap, with from 40 to 55 per cent. There is something else, however, in the milk products that the chemists have not explained, that seems to have a decidedly good effect on young chickens. It may be that in the sour form the lactic acid is responsible, or perhaps the protein is in a form that readily builds up the chick's body. All authorities agree that skim-milk or buttermilk are most excellent for young chickens and fine for laying hens.

With 50 per cent. meat scrap costing $2.50 per hundred pounds the protein costs five cents per pound. With three per cent. protein in skim-milk we should pay about 15 cents per hundred for it if we are going to get the protein as cheaply. As I said, poultry experts are yearly valuing skim-milk more highly as a feed. I think most will agree that it should be purchased for 50 cents a hundred at most. If I could not get it for less, however, I should be willing to pay $1.50 per hundred for feeding young chicks, and I should always give it to them in a thick clabbered form. A. L. C.

Guinea Pigs and Rats.

IS it true that guinea pigs will drive rats away from a poultry house?

B. K.

I can answer this question with absolute certainty that no one can prove my answer incorrect. Guinea pigs positively will not drive away rats. Rats will kill and eat guinea pigs until about half grown, and are very fond of living with the grown pigs and sleeping among them, if they have the chance. No doubt somebody, sometime heard of some animal that could be let out to drive rats, and forgot just what it was and said it was a guinea pig. And with the astonishing tenacity with which an error survives in the public mind the story went from mouth to mouth, and as guinea pigs are more often seen by people unfamiliar with small animals than are ferrets, and as few people know for what they are used, they recall having heard they drive rats, and so go on thinking it is true and tell others. A. E. C. LATHROP.

Now is the Time Your Hens Need a Tonic

Moulting weakens a hen—it brings her vitality down to low ebb. To help the hen over this period you ought to feed her a tonic to keep her system vigorous, well able to force out the old quills, grow a new feather crop and get back on the job laying eggs well before the winter sets in. Keep your hens toned up.

What your hens need right now is Dr. Hess Poultry Pan-a-ce-a. This splendid tonic is the result of my lifetime experience as a doctor of veterinary science, a doctor of medicine and a successful poultry raiser. It tones up the dormant egg organs, offsets the weakening effects of moulting, quickens quill shedding, makes for a new feather growth and makes hens lay.

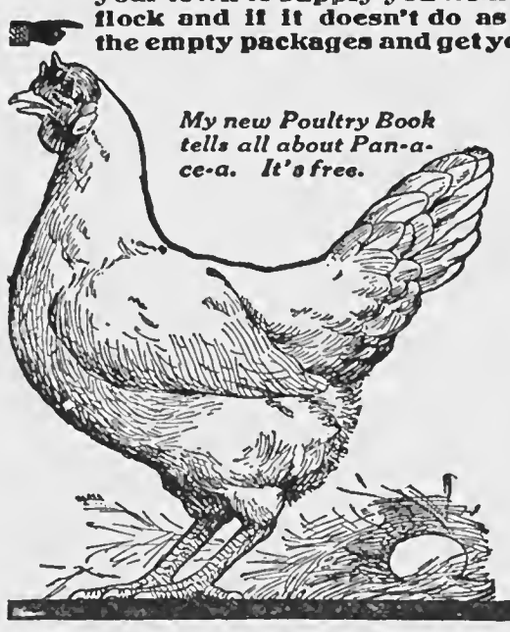
Dr. Hess Poultry Pan-a-ce-a

Not a Stimulant, but a Tonic

Shortens Moulting Period—Makes Hens Lay

This is also a splendid tonic for fattening poultry for market. It helps the birds digest the maximum amount of their ration and convert it into flesh. It keeps poultry healthy and fit while cooped up. Besides, my Poultry Pan-a-ce-a is an excellent constitutional remedy for roup.

So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy, make hens lay, help chicks grow and shorten the moulting period, that I have authorized my dealer in your town to supply you with enough for your flock and if it doesn't do as I claim, return the empty packages and get your money back.



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1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Pan-a-ce-a costs only 1c per day for thirty fowl.

Dr. Hess Stock Tonic

Taken off pasture, put on dry feed and closely confined, your stock are apt to get out of fix during winter. Some are liable to get constipation, dropsicalswellings, stocky legs, but most common and dreaded of all diseases, especially among hogs, is worms—worms. Dr. Hess Stock Tonic will keep your stock toned up, enrich their blood, keep their bowels regular and will rid them of worms. 25-lb. pail $1.60; 100-lb. sack $5.00. Smaller packages as low as 50c. Except in Canada, the far West and the South.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or keep it in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

DR. HESS & CLARK, Ashland, Ohio.

Our English Strain PAYS DIVIDENDS

S. C. White Leghorns, White Wyandottes, Buff Orpingtons, S. C. R. I. Reds

Breeding Hens, Early-Hatched Pullets and Cockerels

WE TRAP-NEST EVERY LAYER

Splendid, sturdy stock from champion egg-layers. Winners in 1913 N. A. & Mo. Contests—leading in current contests.

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2029 Pearl St., Lancaster, Pa.

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS
PRICES LOW, QUALITY CONSIDERED

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Easthampton, L. I., N. Y.

TOM BARRON'S
283-282-260-248 Egg
LEGHORNS and WYANDOTTES
Contest Pens; guaranteed leaders, Storrs' Buff Rocks, Vibert-Austin Reds, Waltons' Pens. Ducks, Geese.
MORRIS-FARM, R. 4, Bridgeport, Conn.

FOR SALE—S. C. White Leghorn Cockerels & Pullets from best utility strains in the World. Write for descriptions. Prices range from three to ten dollars each. HAPPICH & DANKS, Smithville Flats, New York

Utility S. C White Leghorns—Selected yearling hens, $1 each, $90 per 100. GEO FROST, Levanna, Cayuga Co., New York

White Leghorns—YESTERLAID Strain. Pullets lay at 4½ months. Bought by 20 Experiment Stations. All sire males grandam record of more than 440 eggs in 2 years. Prices very reasonable. Our methods bring success. *Details free.* YESTERLAID EGG FARMS COMPANY, Dept. 62, Pacific, Mo.

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The business kind. Yearlings, 90 cents; two-year-olds, 75 cents. No culls—all good birds.
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FOR SALE—100 FINE BRED Single Comb WHITE LEGHORN COCKERELS
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Hens, Pullets and Cockerels—none better layers—Write, - J. M. CASE, Gilboa, New York

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A fine lot of cockerels and a few yearling hens.
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Growing S. C. W. Leghorn Cockerels for sale.
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Red, Speckled and Light. 1914 stock. Nearly matured. $10 per trio and up.
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Large, dark, vigorous cockerels, pullets, and yearling hens. Winter layers. Select exhibition and utility stock. Satisfaction guaranteed. I pay express. C. W. SIMONDS, Homestead, Pa.

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Leghorns from extra special imported pens 282-Egg. Wyandottes, 283-Egg, from imported pen. (Sisters to leading pen at Storrs.) C. W. TURNER, West Hartford, Conn.

Barron Cockerels, White Leghorns—Laying and breeding hens. Prices reasonable. Hamilton Farm, Huntington, N.Y.

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Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.

The Henyard.

THE EGG-LAYING CONTEST.

THE feature of this, the forty-fourth week, is the decided drop in egg production. Only 2,238 eggs were laid, as against 2,866 the previous week. This is a drop of 528 eggs in one week. But there have been some exceedingly hot days. Here on this breezy Willington Hill, the thermometer marked 90 degrees on the north side of the house, and the hens stood around with open mouths and wings held out from the body, panting for breath. The heat does seem to affect my home flock of Leghorns, as to egg production; they are averaging about 60 per cent, and the pen of English Leghorns laid 90.9 per cent. one day; 10 eggs from 11 birds. This pen lays 6, 7, 8 eggs a day, sometimes eight for two or three successive days.

At the contest all the breeds were concerned in this loss of egg production, the Leghorns being responsible for a loss of 285, or more than half of the loss. For the first time in many weeks no pen scored as high as 50. The highest number laid was 47; Francis F. Lincoln's White Leghorns tieing with A. B. Brundage's S. C. Reds, with that number. Merrythought Farm's White Wyandottes laid 46. The high totals are:

Storrs pen No. 42, White Leghorns	1,881
F. F. Lincoln's White Leghorns...	1,864
Tom Barron's White Wyandottes..	1,835
Tom Barron's White Leghorns....	1,775

The week's score follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	21	1,240
Frank L. Tuttle, Massachusetts	6	1,244
Waveny Farm, Connecticut	31	1,233
J. F. Francais, New York	22	1,461
White P. Rocks.		
Albert T. Lenzen, Massachusetts	38	1,340
F. H. Benton, Connecticut	33	1,341
Storrs Agr. Station, Connecticut	24	1,105
Storrs Agr. Station, Connecticut	17	1,166
Storrs Agr. Station, Connecticut	26	1,299
Storrs Agr. Station, Connecticut	22	1,147
Storrs Agr. Station, Connecticut	26	998
Buff P. Rocks.		
A. A. Hall, Connecticut	37	1,350
W. C. Morgan, Jr., Connecticut	24	1,069
White Wyandottes.		
Tom Barron, England	34	1,835
West Mt. Pity. Yards, Connecticut.	21	1,101
Merrythought Farm, Connecticut	46	1,681
Neale Bros., Rhode Island	42	1,671
D. J. Ryan & Son, Connecticut	33	1,259
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	41	1,280
Dr. N. W. Sanborn, Massachusetts	32	1,228
Am. Buff Wyan. Club, New York	37	1,130
H. L. Hamilton, Connecticut	27	933
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	33	1,256
Single Comb Reds.		
Robert Seaman, New York	23	1,008
J. S. Gillespie, Connecticut	21	1,227
Dr. J. C. Dingman, New York	33	1,132
Burnham Pity. Farm, Massachusetts	15	959
H. P. Deming, Connecticut	30	1,204
Geo. P. Dearborn, Florida	23	1,327
Dr. J. A. Fritchey, Pennsylvania	20	1,417
Ernest Underhill, New Jersey	25	1,110
W. H. Bunsted Connecticut	17	873
Pinecrest Orchards, Massachusetts	31	1,427
Harry B. Cook, Connecticut	10	1,198
Colonial Farm, New Hampshire	23	1,263
A. B. Brundage, Connecticut	47	1,592
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	37	1,239
C. S. Scoville, Connecticut	14	918
White Leghorns.		
Storrs Agr. Station, Connecticut	34	1,448
Storrs Agr. Station, Connecticut	24	1,530
Storrs Agr. Station, Connecticut	21	1,516
Storrs Agr. Station, Connecticut	40	1,881
Storrs Agr. Station, Connecticut	27	1,401
Braeside Plty. Farm, Pennsylvania	34	1,316
Glenview Plty. Farm, Connecticut	23	1,489
Manor Plty. Farm, New York	30	1,375
A. B. Hall, Connecticut	22	1,377
Marwood Pity. Farm, Pennsylvania	30	1,545
Geo. M. Harris, Connecticut	14	1,163
Bonnie Brook Farm, New York	35	1,567
N. W. Hendryx, Connecticut	18	1,379
J. J. Linehan, Massachusetts	20	1,284
F. F. Lincoln, Connecticut	47	1,864
Cecil Guernsey, New York	34	1,556
Thos. W. Moore, Connecticut	36	1,435
Chas. N. St. John, New York	37	1,429
C. W. Sherwood, Connecticut	30	1,353
L. E. Sands, Pennsylvania	36	1,372
Tomoka Plty. Farm, Connecticut	32	1,227
Venture Plty. Farm, New York	16	1,120
Mrs. K. E. Woodruff, Connecticut	42	1,411
Windsweep Farm, Connecticut	11	1,202
C. H. Savage, Connecticut	27	1,386
P. G. Platt, Pennsylvania	33	1,588
Heucta Bone Co., New Jersey	14	541
F. M. Peasley, Connecticut	35	1,404
Chas. Heigl, Ohio	34	1,348
Tom Barron, England	44	1,775
Branford Farm, Connecticut	42	1,545
James Munn, Massachusetts	20	1,268
Geo. A. Cosgrove, Connecticut	44	1,391
Buff Leghorns.		
Wolverine Pity. Farm, Michigan	35	1,430
Blue Andalusians.		
E. D. Bird, Connecticut	35	1,203
Buff Orpingtons.		
O. Wilson, West Virginia	4	948
White Orpingtons.		
P. A. Demgar, New York	25	938
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	17	766
Silver Campines.		
W. J. H. Lobel, New Jersey	42	1,168
"Hens."		
H. W. Collingwood, New Jersey	34	1,178
Daniel Hine, Connecticut	30	1,059
Daniel Hine, Connecticut	14	1,050
Mixed Breeds.		
Profitable Poultry, Massachusetts	35	1,179
Profitable Poultry, Massachusetts	35	1,198

Total eggs laid to date, 105,874.

GEO. A. COSGROVE.

Chicks Shedding Feathers.

CAN you tell me why young stock shed their feathers? The chicks are from three to four months old, vigorous and have free range. I am feeding a grain ration of oats, wheat and corn, and there is a dry mash before them all the time composed of bran, middlings, cornmeal and beef scraps. Every morning when I clean out the colony houses the dropping boards are covered with feathers. I have raised chicks for several years, and this is my first experience of this kind. A. E.

New Hampshire.

These are doubtless their baby feathers that the chicks are molting and the process need cause no uneasiness on their owner's part. Like milk teeth, the first feathers have to be discarded to make room for the dress of maturity and the ground underneath the perches of a flock of growing chickens sometimes looks in the morning as if a snowfall had occurred. M. B. D.

Laying House.

I WISH to build a henhouse for 200 White Leghorn pullets for laying. I wish to keep them in the house all the time. What size of building would you advise me to use? M. A. A.

Staten Island.

If you intend to keep your fowls confined to the house all the time, you should give them more floor space than would be required if they had the liberty of a run. From three to four square feet of floor space is usually considered essential for each fowl as they are ordinarily kept and may be increased to any extent that you feel inclined to pay for. The more room they have the better. Do not make the mistake of building a henhouse very narrow and long; a depth of 16 to 20 feet is none too much, with such length as is required to give the necessary floor area. M. B. D.

Breeding for Eggs.

I HAVE a flock of about 40 S. C. W. Leghorn hens which are very good layers. These two-year old hens were mated to the sons of a male which was purchased from a well-known breeder. Which should I do, mate the best of these hens and this year's pullets to their sons and brothers, or send to this same breeder and get another male so they will not be related? I am breeding to fill the egg basket with fancy large white eggs.

New York. G. D. G.

Using the males of your own flock in next year's breeding pen would be inbreeding, but so would be the use of a male from the flock of the original owner of your strain, only not so closely. There is no objection to either plan, provided that you select your breeding pens from the most vigorous and well-developed birds of the type that you wish to perpetuate. To breed for increased egg production it is necessary to use males from the highest producing hens, this characteristic being transmitted through the male rather than through the female line. There is no way of knowing which your best layers are without trap-nesting, though close observation will reveal certain characteristics which accompany good laying and help in selection where trap-nests are not used. For the ordinary, non-professional, poultryman who cannot trap-nest selection will necessarily be confined to egg type, in so far as it can be ascertained, and to size, vigor and such superiority in prolificacy as it is possible to recognize from observation. Inbreeding in itself need not be feared if such selection is made. M. B. D.

Indian Runners in Large Flocks.

DO you know of anyone keeping large flocks of Indian Runner ducks? How many may be kept together? I have done well with six, but I do not see why more would not pay as well. W. J.

New York.

Theoretically there is no limit to the number of Runner ducks that one may keep, but it is not advisable to keep more than 30 or 40 in one pen or yard. Ducks are very timid birds, and when frightened, especially at night, they are inclined to "mill," that is, run around in a circle, and many are killed. One drake should be supplied to six or seven ducks.

W. H. H.

A GOOD WORD FOR BATS.—If L. S. will drive out the bats and screen all openings to his attic he will have no further trouble. Around here we never kill a bat, as they catch so many mosquitoes and other night flying bugs that we think of them as friends, and have never been troubled by their getting into the house. P. A. H. expresses himself strongly against the cat. I wonder if he keeps a dog? A good mouser is just as valuable as a good watchdog, and eats far less. I have no use for the parlor brand of cats, nor lap dogs, but think that some cats are very useful. M. H. S.

Harding, Mass.

A SUBURBAN minister, during his discourse one Sunday morning said: "In each blade of grass there is a sermon." The following day one of his flock discovered the good man pushing a lawn-mower about, and paused to say: "Well, parson, I'm glad to see you engaged in cutting your sermons short."—Philadelphia Public Ledger.

The General says:-

There are many *plausible* "tests" of roofing, but there is only one *true* test—the proof on the roof.

Therefore, roof your buildings—every building on the farm—with

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ROOFING

—the roofing with a 15-year-service-guarantee. The three biggest roofing mills in the world are behind it, to make that guarantee good.

Your dealer can furnish *Certain-teed* Roofing in rolls and shingles—made by the General Roofing Mfg. Co., *world's largest roofing manufacturers*, East St. Louis, Ill., Marseilles, Ill., York, Pa.

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Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

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more eggs; larger, more vigorous chicks; heavier fowls, by feeding cut bone.

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cuts fast, easy, fine; never clogs.

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SEND 15 CENTS FOR SAMPLE

New Flats and Fillers and Egg Cases

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For Sale 400 S. C. W. Leghorn Yearling Hens (Wycoff, Young strain) large fowls, good layers, 75 cents each. F. O. B. Stamford, N. Y. **BROOKSIDE POULTRY FARM, North Harpersfield, N.Y**

500 Single Comb White Leghorn

Yearling Hens, 75 cents apiece. **SUNNYSIDE POULTRY FARM,** SIDNEY, OHIO

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Pullets, Yearling Hens, Cocks & Cockerels

In lots to suit purchasers at attractive prices. **MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.**

100 BREEDING HENS, 75c each. S. C. W. Leghorns. Barred Rock Pullets hatched December 1913—$1.25 each. **John Lorton Lee, Carmel, N. Y.**

FOR SALE—Choice lot yearling Leghorn hens. Address, **WILPEN POULTRY FARM, Sewickley, Pa.**

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. **AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.**

EARLY WHITE WYANDOTTE PULLETS—Cockerels from Barron stock. **W. J. THOMSON, Delhi, New York**

FOR SALE—Purebred Young Plymouth Rock Roosters, 3 dollars each, C. O. D. **Mrs. L. Gilchrist, Waterville, N.Y.**

INDIAN RUNNER, PEKIN AND BUFF ORPINGTON DUCKS for sale reasonable. **GEO. WILLIAMSON, Flanders, N. J.**

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INDIAN RUNNER DRAKES FOR SALE—Valentine strain, April hatched. Price, for one, $1.50; two, $2.75; three, $4; four, $5.25. **ROBERT TWEDDLE, Montgomery, N.Y.**

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Take a piece of any other galvanized steel, bend it back and forth several times, hammering it down each time. You will then be able to flake off great scales of the galvanizing with your finger nail. Apply this test to a piece of Edwards Tightcote Galvanized Steel Roofing—you'll find no flaking.

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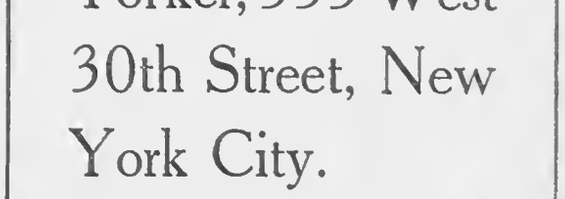

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PUBLISHER'S DESK

YOU may wonder what I, a principal of schools, am doing as a yearly subscriber to your paper. I would like to tell you that in all the nine or 10 periodicals that visit our home monthly, weekly or daily, none receives a warmer welcome. Also that among them all there is none that bring us more real usefulness and pleasure. One of the big points conducive to our pleasure is the fact we feel assured that news or advertisements we find in it are not rumors but truth.

New Jersey. R. L. P.

No paper of any class enjoys a more intelligent, cultured or distinguished class of readers than THE R. N.-Y. Teachers, lawyers, doctors, statesmen and distinguished jurists are among its steady patrons. We not only have legislators and executives of this country, but patrons among the crowned heads of Europe and Asia, yet the fondest ambition of the paper is to be a real service to the farmer, no matter what his position, in those things, which a paper may be helpful. The favored and powerful are able to help themselves, and naturally it would seem that the service would fall more to a class who were unable to protect themselves. For a large part it does. But to be efficient this service has to be reliable. This does not imply that there could never be a mistake. No one expects human perfection; but it does require that the purpose be sincere, and truth the ideal. We realize now what we candidly did not anticipate at the beginning, that an honest service to the working farmer, embraces principles and functions that appeal to all men with an interest in agriculture. So that in an effort to serve where a paper could be most helpful, we receive reward and support from those who need service less, but who have learned to appreciate the human element in the affairs of mankind.

By reading the letters in your issue of August 29, I see that I am not the only one that got "let down" by dealing with R. J. Gibbins of Mt. Holly, N. J. Having seen his advertisement advertising White Wyandottes at $8 per dozen, on August 4, I ordered six pullets, which I received August 16. They were a sorry looking sight. Three had plumage belonging to Barred Rocks; four single combs and white shanks which resemble White Orpingtons; and one had a partially red back and wings. W. L. T.

Ohio.

The above letter is corroborating evidence of the complaints of the two readers published in our issue of August 29. Further comment on Mr. Gibbins' stock or his business methods seem unnecessary.

The case of D. B. Cornell, real estate broker, charged with false pretenses, was brought up in the district court in Great Barrington today. The case was dismissed. The case was brought by True S. James, a New York actor, who purchased a farm in Austerlitz, N. Y., from Mr. Cornell. Mr. Cornell held a mortgage on the farm and was about to foreclose when the criminal action was brought against him. The court stated that the action was not a proper one for a criminal court.—Local Paper.

We are glad to give Mr. Cornell the benefit of the above statement in which it appears he was released from the criminal charge, as reported in this column on August 22. The report would indicate that redress for the alleged fraud should be obtained in the civil instead of the criminal courts. Aside from the alleged deception on the buyer in this case we have numerous reports from farmers to the effect that the D. B. Cornell Co., Great Barrington, Mass., is sending agents through the country inducing farm owners to pay an advance fee for listing their property. This was the scheme worked by Ostrander of Philadelphia a number of years ago. A number of real estate concerns have made use of the scheme since in some veiled form or other; but Cornell seems to be the only agent so far as we know to appropriate the plan in all its nakedness. R. N.-Y readers who are approached by realty agents are in no danger of taking any Ostrander variety of sucker bait and they can do their neighbors a service by warning them against its allurements.

WATERTOWN, N. Y., Sept. 2.—Max M. Hart of New York, a promoter and speculator with a criminal record, was sentenced today to serve five years in the Federal prison at Atlanta, Ga., for fraudulently using the mails in connection with the Oneida Milling Company. Adolph Wupperman, also of New York, a business associate of Hart, was fined $2,500. Andrew S. Work of Chicago and Frank M. Fowler of Oneida were released under suspended sentences. In addition to the prison sentence Hart, who has figured in many shady transactions, was fined $1,500. He and Wupperman have appealed. The Grand Jury has indicted Wupperman, Arthur L. Fuber of New York and William Trimborn and Mortimer Bartlett, private detectives of New York, accusing them of having tampered with the jury that tried Hart and the others. The charge of jury tampering was made on July 18 to Federal Judge George W. Ray. Hart denied knowledge of this, but Judge Ray ordered him locked up during the trial.—Local Paper.

This Oneida Milling Co. scheme bore all the earmarks of the "get-rich-quick" promoter. In the first place the prospectus promised 7% interest *guaranteed.* A bonus of common was offered with the preferred, which it was represented would bring the earnings on the investment up to 10%. Then every investor could buy his flour or feed at a discount. This is the inducement that catches the largest number. It is an old game that has been worked by professional stock promoters as long as we have known about their schemes. If the subscribers who asked our advice, at the time this stock was being boomed, were guided by it, they are to be congratulated on having escaped the wiles of these swindlers.

"But where are the women?" Here I am, if you please, running so hard I'm all out of breath! It is such an unusual thing that woman should be included when favors are granted, that the poor dear naturally stays in the background! Yes, sir, please put my name down on that list to discourage dishonest business concerns. Well, I'll just hang around your desk till it's done. Here are my reasons: I lost $150 through an advertisement in a farm journal six years ago, and it is pretty tough for a poor schoolmarm to lose money. (MISS) L. F.

We regret the reason that inspired this membership in the Anti-Fake Club; but we rejoice to have it. This seems to be the first membership registered by women, but ultimately we expect that they will equal or outnumber the men. No matter whether the fraud on a family comes through her own transactions or through the men, the woman of the household usually suffers from the loss. She is therefore interested in any case; but often the deception is directed directly to her. Of the estimated ten or twelve millions collected and squandered by E. G. Lewis, the larger portion of it seems to have been contributed by women, and few of them ever have or ever will get back a cent. However unusual it may be for her to be asked to share in the favors that are passed around she is certainly not slighted when gold-brick allurements are on the table. The average women have been even more helpless than men because their experience and field of activities have been more limited, and they have not had the information that would enable them to recognize deception in the schemes worked out to deceive them. This club membership will give them the information required and we have every confidence that they will eagerly avail themselves of it. Come, ladies, send in your names for membership in the Anti-Fake Club.

Last Fall I saw the advertisement of J. R. Cain, Washington, Pa., in another publication, and sent him an order for a dog, paying $25 for him. The dog I received did not correspond with the description in the advertisement. The dog was 17 pounds lighter in weight and while I ordered a male I received a female. The dog sent was entirely worthless. I have written Mr. Cain two or three times and fail to receive any reply to my letters. If you can get any satisfaction for me, I shall appreciate it. E. A. F.

New York.

Our letters in the subscriber's behalf were also ignored by Mr. Cain, and the record in the transaction is not one that would encourage others to entrust this party with dog orders. We hope that Mr. Cain may not be a reader of THE R. N.-Y., but perhaps some of his neighbors may bring to his attention the record, in cold type, he made in the transaction.

I shipped to Harrington & Co., 170 Summer Street, Boston, Mass., one cow hide which was delivered and signed for, but I cannot get them to pay for it. I wish you would see what you can do for me, as I see from your paper you bring lots of them to time. The hide was worth $4.58 according to the record on their book, which was shown me by their bookkeeper when I called. D. W. H.

Massachusetts.

We were unable to get any redress whatever from this firm, but it is reported that they do not have an office at the address any longer but call there for the mail. The inference for other shippers is obvious; but all such cases should be reported by the shipper to the post office department at Washington, D. C.

The check arrived this morning in payment of claim against Adams Express for the lost case of eggs, that you so kindly had adjusted for me. It was quick work—less than a week, while I have waited since January. Thank you very much. In return I shall try to steer some subscribers your way as soon as possible.

New Jersey. C. G. W.

The subscriber had never received even an acknowledgment of this claim until he received the remittance, after our filing of the complaint.

Questions About Pigeons.

I HAVE about 100 pigeons in a wire enclosure which is about 100 feet long, 50 feet wide and about 30 feet high, with a house for them in the centre which is about 15 feet square and about same in height, with any amount of nesting places. I feed them with a mixture of four quarts of cracked corn, rye, buckwheat and a little oats; the latter they do not eat. They are not producing a satisfactory number of squabs, maybe getting 60 in the course of a year. I cannot tell a male from a female. Is it necessary to have as many males as females? How can they be distinguished? How many should a pair produce in a year? How long is a pair useful for production? Will they lay the first year? What kind of food is necessary? How much would you feed per 100 birds? The yard is seeded down to grass, and they have plenty of fresh, running water and shells.

Massachusetts. J. M.

The wire enclosure you have for your pigeons is satisfactory, the house is large enough, your feed mixture should be changed some and the pigeons should be mated male to female in every case. A pair of satisfactory breeding pigeons should give you six or eight pairs of squabs per year. The usefulness for breeding purposes of a pair of pigeons is from four to eight years. Pigeons will lay and produce young their first year. In feeding pigeons they should be supplied with all that they will eat readily of a mixture something like this, equal parts of whole hard wheat, small size whole corn and Canada field peas. Once a week a little millet and a little hemp seed may be given them. Charcoal and ground oyster shell should be provided for them in a small dish. The house should be well ventilated and kept as free from vermin as possible. The greatest amount of work in producing squabs (young pigeons), is to keep the old birds mated and breeding. It is quite difficult to distinguish males from females until one has become quite used to the characteristics actions and appearance. A good way for you to do with your pigeons is to place them in small, temporary quarters, where they can be watched and as soon as a male is found driving a female, that is, following her around and giving every appearance of courting her, it may be assured that they are mated and they should then be placed in their permanent quarters. They will need considerable watching, but in time you will be able to find the greater part of them mated and transferred. With young birds that do not seem to mate readily you should have small wire cages made about two feet long and one foot wide, divided in the middle with wire. By placing in such cages two birds, one in either end, you can soon tell whether they are male and female and whether they will mate or not. Pigeons, like eagles, mate for life, and when once they become attached to each other, seldom give up their mates. A. L. C.

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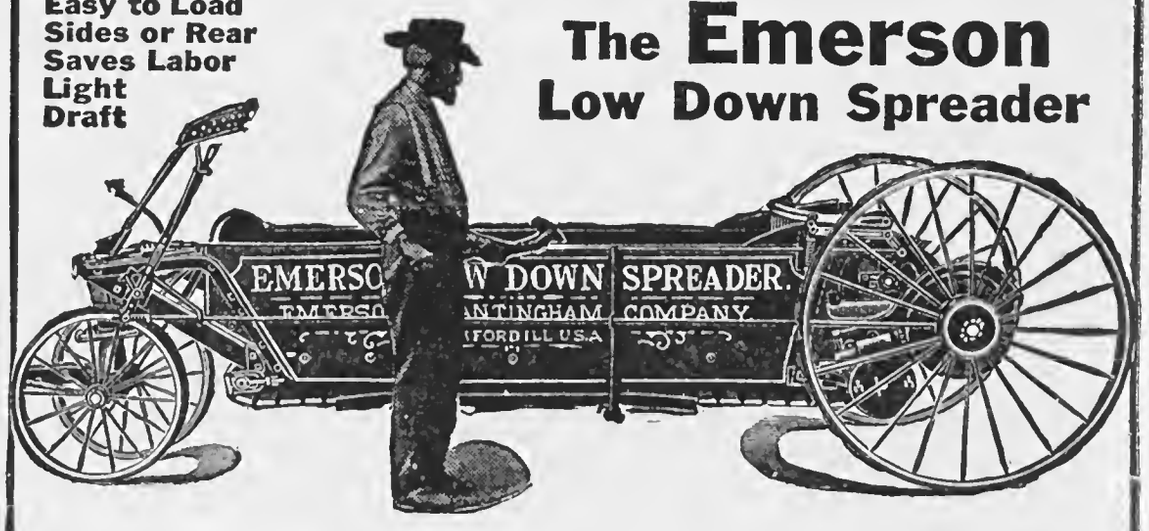

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Sept. 11, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.50	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.61 and $1.51 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5¼ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Some improvement in quality of the current make is noted. There has been an advance of one-half cent on the highest grades, but business is not active at this figure. Receipts of seconds and lower grades are large and selling slowly. There is some call for storage creamery at nearly the top price for fresh goods.

Creamery, extra, lb	32	@	32½
Good to Choice	26	@	29
Lower Grades	22	@	25
State Dairy, best	29	@	30
Common to Good	20	@	23
Factory	21	@	23
Packing Stock	19	@	22

Elgin, Ill., butter market 30 cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

The market is one-half cent lower and generally unsettled, especially on the lower grades of whole milk.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15½	@	00
Prime	15	@	15¼
Under grades	11	@	14¾
Daisies	16	@	16¼
Skims, specials	13	@	14
Good to choice	11½	@	12½
Poor to fair	7	@	11

EGGS.

There is a great scarcity of fancy white, which in some cases are selling three cents above last week. Medium and mixed lots of fresh gathered are as a rule held too high for prompt sale and going much more slowly than lower grades used in cooking, for which there is a good demand at 25 cents and under. Closer grading would be profitable to a great many shippers, as it is useless to expect a few choice eggs to bring up the price of lower grades mixed with them. It works just the other way.

White, choice to fancy, large	38	@	40
Common to good	30	@	35
Mixed colors, best	33	@	37
Common to good	22	@	25
Western fresh, white	26	@	32
Lower grades	18	@	20
Storage, best	26	@	27
Lower grades	19	@	24

FRESH FRUITS.

The market is less burdened with inferior apples and the general tone of business better. Choice Fall varieties selling up to $3. Bartlett and Clapp's Favorite pears in good demand, though the latter have to be examined closely for core rot. Peaches selling in a very wide range of prices from 50 cents to $2 per carrier. There has been a heavy surplus of small and medium grade. Plum market firm, up to $1.50 per bushel. Muskmelons running largely poor.

Apples—Alexander, bbl	1 50	@	3 00
Yellow Transparent	1 50	@	2 75
Duchess	1 50	@	2 50
Wealthy	1 50	@	2 50
Fall Pippin	1 50	@	2 75
McIntosh	2 00	@	3 00
Pears, Anjou, bbl	2 00	@	3 00
Clapp's Favorite	2 50	@	4 50
Bartlett	3 50	@	4 50
Peaches, Del. and Md., crate	50	@	1 75
W. Va., crate	75	@	1 75
Nearby, bkt	50	@	90
Grapes, 18lb case	50	@	60
Plums, 6-bkt. carrier	50	@	1 00
Muskmelons, Md., bu	25	@	1 00
Jersey, bu	40	@	1 00
Watermelons, 100	6 00	@	15 00

HOPS.

Prime to choice	35	@	40
Common to good	30	@	34
Pacific Coast	20	@	21
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	60	@	90

BEANS.

Marrow, 100 lbs	7 00	@	7 15
Medium	5 10	@	5 15
Pea	4 75	@	4 90
Red Kidney	5 95	@	6 65
White Kidney	6 60	@	6 65
Lima, California	7 90	@	8 00

VEGETABLES.

The potato market has been dull during the week, but slightly improved at the close, with advances of 15 to 25 cents per barrel. Onion outlook somewhat better, though prices unimproved. Cucumbers, lettuce and tomatoes low.

Potatoes—Jersey, bbl	1 85	@	2 00
Long Island, bbl	1 75	@	2 25
Sweet Potatoes, bbl	1 75	@	2 50
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Cucumbers, bu	40	@	75
Corn, Jersey, 100	50	@	1 50
Cabbage, bbl	50	@	75
Lettuce, half-bbl, basket	50	@	1 00
Onions—Orange Co., bag	75		1 12
Conn. Yellow, 100 lbs	1 00	@	1 25
Okra, bu	1 00	@	1 50
Peppers, Jersey, bbl	75	@	1 50
Peas, bu	25	@	1 25
Radishes, 100 bunches	75	@	1 00
String Beans, bu	25	@	1 25
Squash, Hubbard, bbl	75	@	1 00
Crook Neck	50	@	75
Egg Plants, bu	25	@	50
Tomatoes, Jersey, box	15	@	50

LIVE POULTRY.

Broilers, lb	16	@	17
Fowls	17½	@	18
Roosters	13	@	13½
Ducks	14	@	17½
Geese	14	@	15¼

DRESSED POULTRY.

Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	20	@	22
Fowls	17	@	19
Ducks, Spring	15	@	15½
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay market very dull, with considerable accumulation at receiving points. Best demand is for clover mixed. Straw selling slowly.

Hay, Timothy, new, No. 1, ton	20 50	@	21 00
No. 2	18 50	@	19 50
No. 3	17 50	@	18 50
Clover mixed	18 00	@	19 00
Straw, Rye, choice	16 50	@	17 00
Short and tangled	11 00	@	14 00

LIVE STOCK.

Native Steers	7 90	@	9 60
Bulls	5 50	@	7 25
Cows	3 50	@	7 00
Calves, prime veal, 100 lb	9 00	@	13 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 00	@	8 75
Hogs	8 50	@	9 50

GRAIN.

Wheat and oats which advanced heavily early in the week had a decided drop at the close, though prices are now above last week's figures.

Wheat, No. 1, Northern Spring	1 19	@	..
No. 2, Red	1 25	@	..
No. 2, Hard Winter	1 16	@	..
Corn, as to quality, bush	85	@	87
Oats, as to weight, bush	54	@	56
Rye	1 00	@	1 01

RETAIL PRICES AT NEW YORK.

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	20	@	25
Butter, fancy prints, lb	36	@	38
Tub, choice	28	@	32
Chickens, roasting, lb	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	30	@	35
Frieassee, lb	23	@	25
Fowls	24	@	26
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14
Pork Chops	16	@	18
Loin of Pork	15	@	16
Round Steak	18	@	20

All our crops look well except peaches, which will not be five per cent. of a crop in Niagara County. Apples about an average crop, and plums 50 per cent. It has been so wet and cold it is almost impossible to get our oats dry even by unbinding and spreading out a load or two at a time. H. M. J.

Lockport, N. Y.

MISS FLUFF: "Mr. Deepthought, do you think marriage is a failure?" Mr. Deepthought: "Well, the bride never gets the best man."—Judge.

GOVERNMENT CROP REPORT.

THE Bureau of Statistics gives the following estimated yields of staple crops. The two first columns of figures refer to acreage yields this year and the average of five years previous, and the third to the total production in bushels, pounds, etc., for 1914.

CROP	YIELD 1914	YIELD 1909-1913 Average	1914 Forecast
Wheat—			
Winter	19.1	15.6	675,000,000
Spring	12.2	13.3	221,000,000
All	16.8	14.7	896,000,000
Corn	24.9	25.9	2,598,000,000
Oats	29.1	30.6	1,116,000,000
Barley	26.3	24.3	200,000,000
Rye	16.8	16.1	43,000,000
Buckwheat	21.5	20.5	17,000,000
Potatoes—			
White	98.0	97.1	371,000,000
Sweet	93.0	92.7	55,000,000
Tobacco, lbs.	729.0	815.1	862,000,000
Flax	8.0	7.8	15,000,000
Rice	34.5	33.3	24,000,000
Hay—			
Tame, ton	1.42	1.34	69,000,000
Apples	....	....	220,000,000

Hog Cholera.

MY hogs were infected with cholera last February. It was in a very mild form. Some had sore eyes, very little appetite, and gradually wasted away. They were so different from any cholera that I had seen that I got a veterinarian. After about two weeks of observation and two post mortem examinations he decided it was cholera, so I got rid of every one in May and started in afresh, putting them in a big lot over in pasture, have had no trouble since. When Winter comes I shall have to bring them up to their old quarters. Will the germs still be there? Can I inoculate them with cholera serum and do it myself? Is the serum expensive? L. P. B.

Massachusets.

It will be necessary to immunize the hogs with serum, as the infection will be likely to remain in the infected area and contaminate hogs that have not already had the disease. The dose of immunizing serum, where virus is not to be used and where the disease is not present at the time of vaccination, runs from 10 cubic centimeters for little pigs to 50 or 60 cubic centimeters for a hog weighing over 300 pounds. Hogs weighing 150-200 pounds require 30 cubic centimeters of serum. Where serum is made at the State experiment station and sold at a cost not to exceed that of production it costs about one and one-half cents per cubic centimeters. The writer is not informed as to the cost in your State. Take the matter up at once with the veterinarian of the State experiment station, or with the State veterinarian. The vaccination should be done by a qualified and authorized graduate veterinarian. A. S. A.

Nailprick.

MY family cow ran a small roofing nail in foot about a month ago which was extracted with a pair of pliers. Nothing further was done for it at the time. The cow has been more or less lame ever since, but there is no swelling and very little sensitiveness on pressing and no indication of point of entrance. What is the proper treatment in such a case? O. F. C.

District of Columbia.

The wound in the horn has closed and probably retained pus which should be liberated by cutting; or deep tissues have been injured by the foreign body. Open up the wound and apply a wet dressing of 1-500 solution of bichloride of mercury and absorbent cotton to be renewed daily. There is danger of tetanus in such cases and the opening up of the wound may obviate the attack. A. S. A.

"I HAVE read every book on agriculture that I can find," said the amateur farmer, "and still I don't manage to get crops." "There's the trouble," replied Farmer Corntossel. "You're putting all the cultivation on yourself instead of on the land."—Washington Star.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

MARRIED COUPLE—Want position on farm; can do any work; two children, long experience; best reference; state salary. NESNADNY, Care Dr. Kueher, Riverdale, N. J.

WANTED—Married man for general farm work and to assist with poultry on commercial poultry farm; house, fuel, vegetables and milk supplied; state age, nationality, experience and wages expected. Box 243, St. James, L. I.

WANTED—Young, experienced man on 50-acre farm, Western N. Y.; mostly poultry; few cows; must be good milker and handle team; steady job year round for right one; $25 per month; give references. P. S. L., Care R. N.-Y.

INDUSTRIOUS, competent, married farmer, with grown son, to work on shares, nice Maryland farm, 125 miles of Philadelphia; possession given at early date. Also two smaller places to rent. DR. BELL, Salisbury, Maryland.

WANTED—Position as farm or estate superintendent; practical experience in farming, fruit growing, dairying, poultry, incubators, farm machinery and building construction; experienced carpenter, plumber, etc.; married; best references. N. K., care Rural New-Yorker.

POSITION WANTED—By practical American, aged 30; married and strictly temperate; understands fruit, poultry and dairy farming; also concrete and wood construction. Can handle men without friction. Best of references. Present employer selling out. Box 31, Harrington Park, N. J.

A METHODICAL, practical, scientific and successful general farm and dairy manager covering years of extensive and varied experience in exacting operations, will be open for engagement Sept. 1. Eminent credentials will be furnished and nothing short of a first-class, responsible and remunerative position will be considered. If desirous, might consider cash proposition of lease of entire property. Address T. J. A., care Rural New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—One carload of Alfalfa. ARTHUR CHENEY, Castleton, N. Y.

WILL have a nice bunch of Winter apples for sale, mostly Baldwins. J. S. MILLER, Grantsville, Md.

WANTED—Quantity of high bush cranberry seed. E. A. MORGAN, City National Bank Bldg., Dayton, Ohio.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—Choice sprayed Fall and Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

FOR SALE—20 acres, 2 grapes, 4 strawberries, balance corn, peanuts and young pine. W. W. ARTHUR, N. Emporia, Va.

FOR SALE—Truck farm, 25 acres; all tools; 8-room house; good markets at seashore; soil light loam. Price $3,750. Write. I. B. HALSTEAD, Belmar, N. J., Route 1.

I WANT to buy or rent, with option of buying, a farm, 20 to 30 acres, in New Jersey, within 100 miles of New York City. What have you to offer? F. S. W., Care R. N.-Y.

FOR SALE—100 acres in Central Ohio; good grain or stock farm; would take live stock as part payment; registered preferred; for description write R. T. LAIRD, Marysville, O.

FOR SALE—85-acre farm near macadam road; five minutes' walk to trolley; good land; good buildings, good orchard; plenty water; price reasonable. H. FREDERICK, Brunswick, Maine.

FOR SALE—Dairy farm 170 acres; good buildings, good water; under good cultivation; keeps 40 head; four miles from village; three from two creameries. JAMES M. BONTON, Roxbury, Del. Co., N. Y.

FOR SALE OR LEASE—Ten acres good land, story and half bungalow; new; heat and water, barn, chicken houses for seven hundred layers. Excellent neighbors, macadamized roads, mile and half to Freehold. ARCHER CROOKS, Freehold, N. J.

NOTICE—A fine farm of 160 acres in Ingham County, Michigan, 5 miles east of the City of Mason, will be sold at public sale on said premises by administrator, pursuant to order of Probate Court of said county Sept. 26th, A. D. 1914, 30 acres of fine timber. MERRITT HICKS, Administrator. Business address, Dansville, Mich.

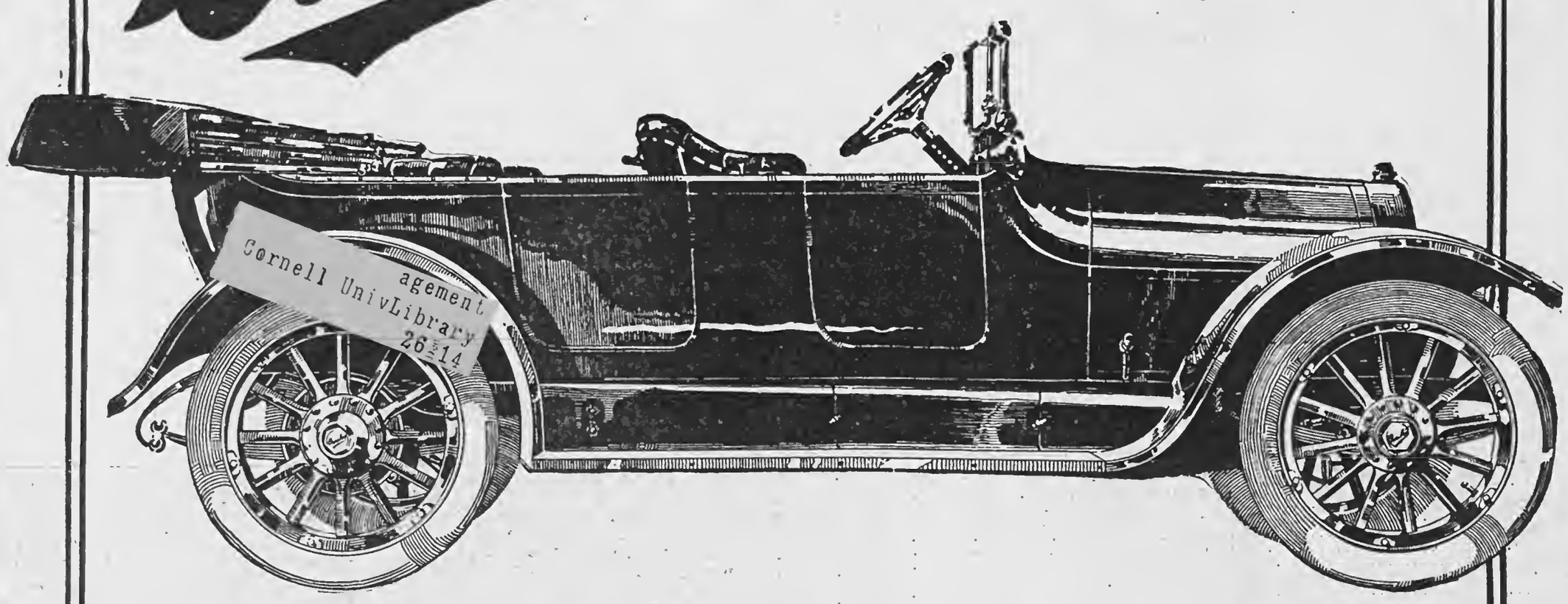
SPLENDID Commercial Apple Orchard, located in the famous Apple and Tomato Belt, Morgan County, West Va., consists of ten thousand trees, ten years old; tomatoes will maintain property. Best of management now on property. Best of reasons for selling. For particulars write immediately. R. R., care Rural New-Yorker.

NEW ENGLAND FARM FOR SALE—To Close Estate—Forty acres cultivated land; eighty acres of pasturage and good apple orchard; high ground; good view; four miles from Atlantic Ocean, in the town of North Stonington, Conn. Modern thirteen-room house and small barn; good water; one and one-half miles from trolley, and near State Road. Address ALLYN L. BROWN, Admr., Norwich, Conn.

WANTED BIG DAIRY FARM—Farm manager, 42 years old, with 2 full grown sons, all wide experience; Dutch nationality; wants dairy farm of at least 30 or more cows, on shares or to rent for cash; also will rent farm and buy stock; must be near big town; opportunity to produce certified milk and build up a retail milk route; very best private and bank references. B. L., Care Rural New-Yorker.

Overland $1075

MODEL 80



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The Latest and Greatest Overland of All

Motor 35 h. p.
New full stream-line body
Instrument board in cowl dash
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Tonneau, longer and wider
Upholstery, deeper and softer
Windshield, rain vision, ventilating type, built-in
Crowned fenders
Electric starter
Electric lights
High-tension magneto
Thermo-syphon cooling
Five-bearing crankshaft
Rear axle, floating type
Springs, rear, 3-4 elliptic, extra long, underslung
Wheel base, 114 inches
Larger tires, 34 inch x 4 inch
Demountable rims—one extra
Left-hand drive
Beautiful Brewster green body finish
Complete equipment

Again we have made expensive improvements, costly enlargements and incorporated numerous, high-priced refinements.

But we have not advanced the price.

The body is brand-new—the full stream-line type, with new crowned fenders, new rounded radiator and new sloping hood.

The electrical equipment is the finest and most reliable we could get.

The rear springs are new—for the 1915 springs are not only improved but are longer and underslung which makes the Overland one of the easiest riding cars in the world.

The luxurious new, softer and deeper cushioned upholstery insures solid comfort at all times.

The tonneau, this year, has all kinds of room being considerably longer and wider.

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Larger tires (34" x 4" all around) and the long wheel base of 114 inches mean smooth, jarless riding.

The big, snappy and powerful 35 h. p. Overland motor is regarded and referred to as the world's most highly developed four cylinder power plant.

Demountable rims (with one extra) are another expensive addition.

This car comes complete. Electric starter, electric lights, built-in windshield, mohair top and boot, extra rim, jeweled magnetic speedometer, electric horn, robe rail, foot rest and curtain box.

There does not exist another automobile manufacturer who can give such big value at such a low figure.

If we were not the world's largest producers of this type of car neither could we.

Our dealers are making deliveries now. Get in touch with the nearest one at once. Order your new Overland today.

Handsome 1915 catalogue on request. Please address Dept. **127**

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Two passenger Roadster $1050 *Prices, f. o. b. Toledo, Ohio*

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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SMALL FARM PROFITS.

Started From the Wife's Experiment.

LAST Spring we had a discussion about the relative profits of small or large farms. One set of farmers claimed that "the little farm well tilled" is best, while others wanted a large piece of ground, so that labor-saving tools, etc., can be used. This discussion reached the eye of Mr. Alfred Fuller, of Cattaraugus Co., N. Y., and he sends his experience with a small place:

GREENHOUSE WORK. — If people on a large farm would put in the same number of hours of hard labor, and practice the same economy and saving that I do with my greenhouse business they would make more than they do. Anyone to work a greenhouse successfully must have perseverance, courage, and bulldog grit. It looks like an easy task when the plants are on the wagon for delivery, but before that time there have been months of hard work, care, and sleepless nights. I will start with my beginning and try to show how the business has developed.

HOW IT BEGAN. — About 40 years ago my wife sowed a package of Acme tomato seed. I do not know by what special reason, but I never saw nicer plants, and people who saw them offered a big price for just one plant. I did not let any go, but I conceived the idea that the next year I would sow more seed and have some plants to sell. I had some lumber sawed, part ⅛-inch and ⅜-inch for boxes, and I had that for my "knitting work." Every time I had a little time I would rip and saw on those boards, and it makes a chill go over me now to think how hard I worked on that box material. At this time I was working on the railroad as sectionhand. I finally cut out stuff for 50 boxes, and made a rack something like a milk rack, and placed it in a sunny window. I sowed my seed and had good success. The plants did not look as they do now, but they answered for the times, and sold readily. The next year I made some hotbeds covered with glass, and some cold frames. After I had worked that way for a few years I took my father's farm with the understanding that I could raise plants if it did not interfere

"GRANDMOTHER'S POSY BED." THE END OF THE SEASON. FIG. 493.

with the farm business. On the farm I made two greenhouses, besides several beds, and worked the farm for 16 years. Then my father died and four years later my mother died; then the farm went into other hands, and I bought the farm of 26 acres where I now reside. Here I have two large greenhouses heated with wood stoves, with pipe going the length of the building. Then I have several large beds covered with canvas.

Until about three years ago I shipped cabbage, tomatoes, celery, peppers and other plants to Buffalo, Olean, Bradford, Eldred and Reading, besides delivering to towns by wagons from six to 15 miles away. My business increased and my age, too, so my son-in-law, who is an operator on the Pennsylvania Railroad, put up an up-to-date greenhouse made of cement blocks, with a perfect system of hot-water heating, and now he raises a large number of boxes of plants and supplies the shipping trade.

SOME OF THE DIFFICULTIES.—So far there does not seem to be anything but success, but there is a mixture of joy and sorrow in most affairs. It is sorrow when you think you have a fine lot of plants and the last thing when you close up at night you can almost count the dollars, and then go out in the morning to find thousands of your beautiful plants damped off. This trouble discourages a great many, and they give up the business. Another trouble is the little black bug that will spoil the looks of the plants in a very short time. There are the wireworm, cutworm, snail, mice, heat and cold; these all destroy, but can be overcome if you have the grit that I spoke of in the beginning. I have had one fire that destroyed some plants. One year, the 30th of May, there was a hard freeze that did considerable damage, and on April 30, 1903, a whirlwind passed over this place. It went between the greenhouses and scooped out the glass from both houses. It turned colder right away, and we had to hustle to get the roofs covered to prevent freezing. One year there was a sudden cold wave, April 19, and before we could guard against it we lost 200 boxes. So it is a constant watch for these different obstacles. One seedsman says all of these difficulties are the plant raisers' friend. If it were not for these troubles everyone could raise his own and there would be no sale for the plants.

PLEASURES OF SUCCESS.—Now comes the joyful part, to get up early on beautiful May and June mornings, hitch a good team, or teams as the case may be, load up our wagons and drive through the country. Fuller's tomato plants are known for miles around, and although I have no patent on the way of raising them, no one has yet raised any like them, unless they have learned of Fuller. My son-in-law and myself raise a good many thousand boxes. We retail the plants at 25 cents per box, one dozen plants in a box, and make a special price to dealers. My largest sale in one day was $40. I kept five Holstein cows when I came to this place, but I have already passed the time alloted to man, so I only keep two cows, 100 White S. C. Leghorn hens, some ducks, three pigs and my team. All of my life I have been a liberal supporter of the Gospel, and I firmly believe this is why I have been so well blessed. I could cite a number of men who have had large farms, or the price of a big farm given them, who are now not worth the clothes they wear, and they have been just living for themselves and their own pleasure. I have always lived a temperate life and never use tobacco. I think if there is anyone worthy of praise for overcoming obstacles and rising from nothing to wealth it is my neighbor, Henry Mathewson. He began just as poor as a boy could be by taking a few calves on a wagon to Buffalo, 40 miles away, and he has built up a business so that he has several large farms in the best kind of condition, a stockholder in a bank, has an auto, gave his son a college course, and is what you could call wealthy, and he knows how he came by every dollar. There must be some brain to succeed on a large or small piece of land. ALFRED FULLER.

THE VACCINATION QUESTION AGAIN.

THROUGHOUT New York State, as well as some others, there has come a renewal of the violent attacks upon vaccination as a preventive of smallpox. This treatment has been accepted by the great majority of people as a necessity. Yet the recurring outbreaks of opposition show that nothing of human knowledge can be so well settled as to defy contradiction. As a contribution to the discussion we print the following from a country doctor:

"My knowledge of smallpox is limited; the old-fashioned malignant type, which, if history doesn't lie about the matter, once devastated the world and annually slaughtered its thousands and made hideous wrecks of other thousands has disappeared from civilized countries. The type which we now see is much modified and can scarcely be classed as a serious disease. If it were not for its terrible possibilities, as shown by its history, no one would fear it. Up to a few years ago I had never seen smallpox, as the great majority of the present generation of physicians never have. One day I was asked to investigate a few cases of "chickenpox," which had occurred in a family living back in the hills a long way from the village, and a considerable distance from neighbors. I visited the family and became satisfied that they were really suffering from smallpox, though I had to depend upon an acquaintance with that disease gained from reading only. My diagnosis raised an uproar, of course, but subsequent events proved it correct. A small epidemic started from those cases, and I saw perhaps 30 cases of the disease within a few weeks. Two or three of the victims were seriously sick, and presented typical pictures of the "real thing"; most of them were only more or less indisposed, however. Many refused to believe that the disease could be smallpox, though so pronounced by the State health authorities. Before we got through with it I became pretty well acquainted with present-day smallpox, and saw some cases that made it easy for me to believe the stories of its old-time malignancy. I also had a good opportunity to observe the protective effects of vaccination, as in one family of four, of which the mother only had been vaccinated, and she in her childhood. The father had a typical case of smallpox of considerable severity; he was a disgusting sight for several weeks. The two children caught it from him and had milder attacks. The mother cared for them all, being at all times in closest contact with the disease, but did not take it. One swallow doesn't make a Summer, of course, but it seems to me that there is no fact better demonstrated than that Jenner's proof of a milkmaid's discovery gave the world a boon the value of which no man can begin to estimate."

BEAR TRAP FOR FRUIT THIEVES.

I HAVE an orchard three miles from a city of 75,000 inhabitants, and a trolley line running within 10 minutes' walk of it. I work in the city, and have to be up at five in the morning, and start for my work at six, returning home at seven at night. In the Summer season I work on my land as long as I can see, and then am tired enough to go to bed, so I cannot sit up and watch my property. There is a class that never has any regular occupation and can lie around and sleep all day, and when night comes are fresh and ready to start out and scour the country for whatever they can find to pick up. Last Fall I had trees completely gathered in a night, and in some cases fine young trees broken down and nearly destroyed by the thieves climbing into them. One day a man to whom I had sold some apples on the trees, started down into the orchard and met 15 young scalawags, each with a bran sack sewed up at both ends and a hole left in the middle in which to fill in the fruit, and then swing them across their shoulders and march off with them. He gave chase and caught one of them, giving him a good drubbing and letting him go. He should have held him and had him taken before a court, but did not think of that. The boy brought no suit for damages, and I rather imagine was mighty glad to get off as easy as he did. Now I am thinking seriously of buying two or three good bear-traps and making use of them this season, and if I do I am pretty sure I will get some good-sized two-legged game. Would I be liable for damages if I caught a good, lusty thief in a padded-jawed trap, so there would be no danger of breaking any limbs or bruising him seriously? Will you tell me what you think of that plan of inducing them to "wait a bit"? Z. C. B.

R. N.-Y.—The danger with this would be in catching some child or innocent person who had no idea of stealing. In our own country groups of children often walk through the woods and fields with women or girls attending them. They have no thought of committing any damage, but if a child or woman were to be caught in such a trap it might mean serious injury. The owner might not be held legally responsible, but the public would be very bitter over such an accident. A padded trap might catch one of the larger thieves, but they usually work in gangs, and his comrades would set him free.

LABOR AND LAND CONTRACTS.

DURING the year we have dozens of questions about arranging contracts between the owner of a piece of land and the tenant or party who works it. Sometimes the tenant furnishes part of the capital—sometimes not, and sometimes the owner does part of the work. There are complications over the contract, and we are asked to help settle. In making such a contract the simplest plan is to assume that real estate, personal property and labor are about equal, and entitled to an equal division of proceeds. This will not be true of all cases, but it is generally a safe rule to start with. If one man furnish the real estate and the other does the work they would, under such an arrangement, each be entitled to one-third. The other third would be divided between them in proportion to the amount of stock, implements, money or other personal property each provided. We do not know of any better foundation principle for basing such a contract. It should be modified to suit conditions of character, labor or methods. For example, here is a case of intensive gardening:

In the case of celery the cost of production and labor is so great that I think the share of proceeds should be smaller to the owner of the land, as the worker furnishes all else. Plants alone are 75 cents per 1,000; fertilizer, 1,000 pounds, $15; nitrate of soda, $6; 10 hours' work every fair day; 5,000 plants growing. On a crop costing as this one does the proceeds should be proportionately greater than its cost to produce over ordinary farm crops. Therefore, if it costs $400 to produce, $100 goes to the land owner, if it sells for $400. If it sells for $1,200 there is $300 for owner of land, which is $150 per acre for its use. With your idea of its use for one-third it would be still greater, which seems unreasonable. I am sure you know of or can find a satisfactory instance to advise me of. W.

Usually we think these questions will settle themselves on this one-third basis. Land suitable for celery is worth more than ordinary farm land, and the labor required to produce $100 worth of celery is not as great as would be the case with $100 worth of wheat or corn. As this contract proposition is complicated by such conditions we would like to have reports of experience showing what parties have actually received under such a division of proceeds.

A SUCCESSFUL FARMERS' CO-OPERATION.

PART III.

INCREASING MEMBERSHIP.—Since the annual report of 1913 was published the membership has been increasing on an average of one member daily, and before 1915, the association is very likely to have 800 or more members. It is only a matter of another year until the entire capital stock of one thousand shares will be sold. The stock is non-assessable and all losses are paid out of the profits of the association. This means that the shipper is never at a direct loss. The membership now covers practically eight townships and the board of directors consists of nine members. In the contracts which the members make with the Association there are four articles that are the foundation of the success of the association. I give them herewith:

"The party of the first part (the member) agrees that the party of the second part (the association) shall be his exclusive agent for the sale of the produce herein mentioned.

"The party of the first part further agrees that he will not contract for the raising and sale, or sell or contract to sell any tomatoes with or to any canner or preserver during the term of this contract. The party of the second part agrees to act as agent for the party of the first part and to receive and sell the said produce at the best obtainable price, either to a cannery or in the open market and to make returns to the first party of the full amount of the net price received for said produce less the commission established by the by-laws of the said second party, within 10 days after the receipt thereof by the party of the second part.

"It is further agreed that all produce marketed at canneries shall conform to the standard and conditions as set forth in the contracts made between said canneries and the party of the second part and that the party of the first part shall grade and pack all produce sold in the open market in such manner as shall be prescribed by the party of the second part."

In two years this Association grew to a membership of 500 members and did a total business of over a quarter of a million dollars. It saved its members over $4,000 on fertilizers. It sold over 15,000 tons of tomatoes at a price of one dollar more per ton than the farmers had been securing before the association was started. It secured better prices, amounting to several thousand dollars, for berries, fruits and vegetables other than tomatoes. Now, 500 farmers invested $2,500 in the stock of a coöperative association. On this investment they saved over $4,000 on fertilizers and received over $20,000 more for produce than they would have done had the association not existed. Practically $25,000 profit on an investment of $2,500 or in percent it means a profit of 1,000 percent in two years, and it means that a $5 investment made a profit of $50 in two years. A record and an achievement to be proud of. The association now has two rooms in the best business block in Silver Creek. Mr. Cook, the manager, to whom can be largely credited its success, was re-elected this year at an increase in salary. Mr. Cockburn was also re-elected president. C. R. BERGER.

THE number of questions sent us as to the wellbeing of favorite rose bushes shows the increasing interest in this queen of the garden. This is especially true as regards climbing varieties.

"SOIL SANITATION" ON A LARGE SCALE.

Experiments in North Dakota.

A FEW weeks ago, on page 1025, we printed the facts about the new proposition of "soil sanitation." Our scientific men now fully understand that many of our wheat lands are well filled with disease germs, so that seed put into them, except under the best of conditions, will be obliged to run the gauntlet, with the chances of being seriously injured. Since this article was printed we have had many letters from people who want to know if it is not possible to disinfect the soil by the use of chemicals, so as to kill these disease germs out. As is well known, market gardeners frequently sterilize the soil of their hotbed or glass houses, either baking it or treating it with live steam. The object of this is to destroy disease germs in that soil, so that their young plants will receive a fair start. The farmers who burn a pile of brush, or build a bonfire on land where they are to plant their cabbage or tobacco seed, have the same purpose in mind. It is possible to sterilize these small tracts of land. Now we have a class of people who think it may be possible to handle acres of wheat land so as to sterilize it fully. One man proposes to have a tank attachment on the plow. This tank is to be filled with a solution of formalin, so that as the land is turned over this solution is sprayed upon the soil. This man asked us to find out for him, if possible, whether such a plan would be useful and practical. We wrote to Prof. H. L. Bolley of the North Dakota Experiment Station about this. Prof. Bolley probably knows more about it than any other man in the country, and his reply, which follows, does not give much encouragement for the scheme:

"I can very definitely say to you that it is entirely too expensive a process. I have for a number of years been using formaldehyde as a disinfectant, and have been using it consistently and persistently year after year on the same soil for the purpose of finding out if it is possible by any sort of disinfecting means to control the organisms which destroy the roots of flax, potatoes and wheat, particularly flax and wheat. On a piece of wheat-sick soil and a piece of flax-sick soil I have used as high as 40 pounds of formaldehyde per year during the last 10 years, applying at the same time nine barrels of water, to have the soil thoroughly touched with the formaldehyde. This is a very strong strength, and as you will see, the cost would be entirely beyond that which any farmer could make use of. It does not control or prevent the development of the disease known as flax wilt. The crop will make a good growth on such land for a period of five or six weeks, but then immediately the fungus spreads from the deeper lying regions and occupies the land. This is also true of wheat."

HOUSEHOLD CONVENIENCES AT THE STATE FAIR.

WHILE many farmers were studying exhibits of harvesters, riding plows, milking machinery and tractors, the housewives were investigating equipment which will eliminate the word drudgery from the farm woman's every-day task. "Mamma, it is so easy, I can do it myself," was the remark of a little girl as she operated a dishwasher by a to-and-fro movement of a handle. Three dishwashing machines were exhibited, and the machines shown were adapted to hand and electrical power. One dealer declared the gasoline engine could be attached to his machine. The dishwasher with hand power equipped is priced between $20 and $25. The machine is simple in construction and operation. A wire basket holds the plates and cups, and the silverware is stood in a smaller wire basket in the center. Water is dashed through the dishes by a fan-shaped device, after which it may be removed from an opening in the bottom of the washer. Rinsing water may then be dashed in the machine, and the dishes may be removed to the cupboard or allowed to dry. More efficient and lower-priced power washing machines were exhibited than at any previous fair. At least two machines with power equipment, moveable and reversible power wringer, and long stand carrying two galvanized tubs were shown for $35. Several other machines for power were shown at lower and higher prices. The self-heating flat-iron, inexpensive, and costing but $3.50 or $4, heated by gasoline, will relieve the farmer's wife of many hard days of slavery to a red-hot stove in a stuffy kitchen. The little iron is heated with gasoline, is generated similar to the gasoline stove, is safe, and a penny or two will go a long way in doing the ironing.

Lighting and heat have been matters which have interested farmers. Accidents which have formerly occurred when these devices were in earlier stages of development, occasioned the disfavor in which the acetylene plant has been held. These plants were exhibited at the State Fair, and although not absolutely fool-proof, when a plant is established outside the building they are considered unquestionably safe. The old wood stove, the soft coal heater and even the hard coal burner are giving way to the hot-air furnace, the steam and hot-water heat, and these require little more expense in maintenance than does the hard coal burner. They do away with the dread of early rising on cold Winter mornings, have the house warm, the temperature even, and are more healthful than the old methods of heating the home.

The kitchen cabinet is an efficiency system applied to the home. The popular cabinet exhibited at the fair was made of steel, enameled perfectly white, and with compartments so arranged that the housewife could perform the larger part of her duties without leaving the cabinet, and could also be seated while engaged in her work. This cabinet does away with the trip to the pantry, another to the cupboard, another to the flour sack, and another to the spice boxes. Flour, spices, utensils, knives and groceries are all within reach, and for $25 or $30 the housewife can cut in two much of the labor required in preparing the meal.

Running water piped from the spring may be very handy in the house, yet but few people are blessed with the convenience. However, for from $60 to several hundred dollars a hand or power outfit may be installed. The small gasoline engine will operate the pressure tank, water can be forced to any part of the house, and even the barn may be supplied from the same tank. One farmer's wife who had water convenience in the form of a cistern in voicing her appreciation of such equipment declared that she knew nothing of convenience in water supply until the pressure tank was installed on the farm. Their installation, she declared, cost in the vicinity of $200, water was piped to the barn, to the bathroom, and to the kitchen, the farmer doing his own plumbing, the power was supplied by a small horse-power engine, and the satisfaction and convenience in having the equipment had paid for itself in a year, and five times its cost would not remove it from the home.

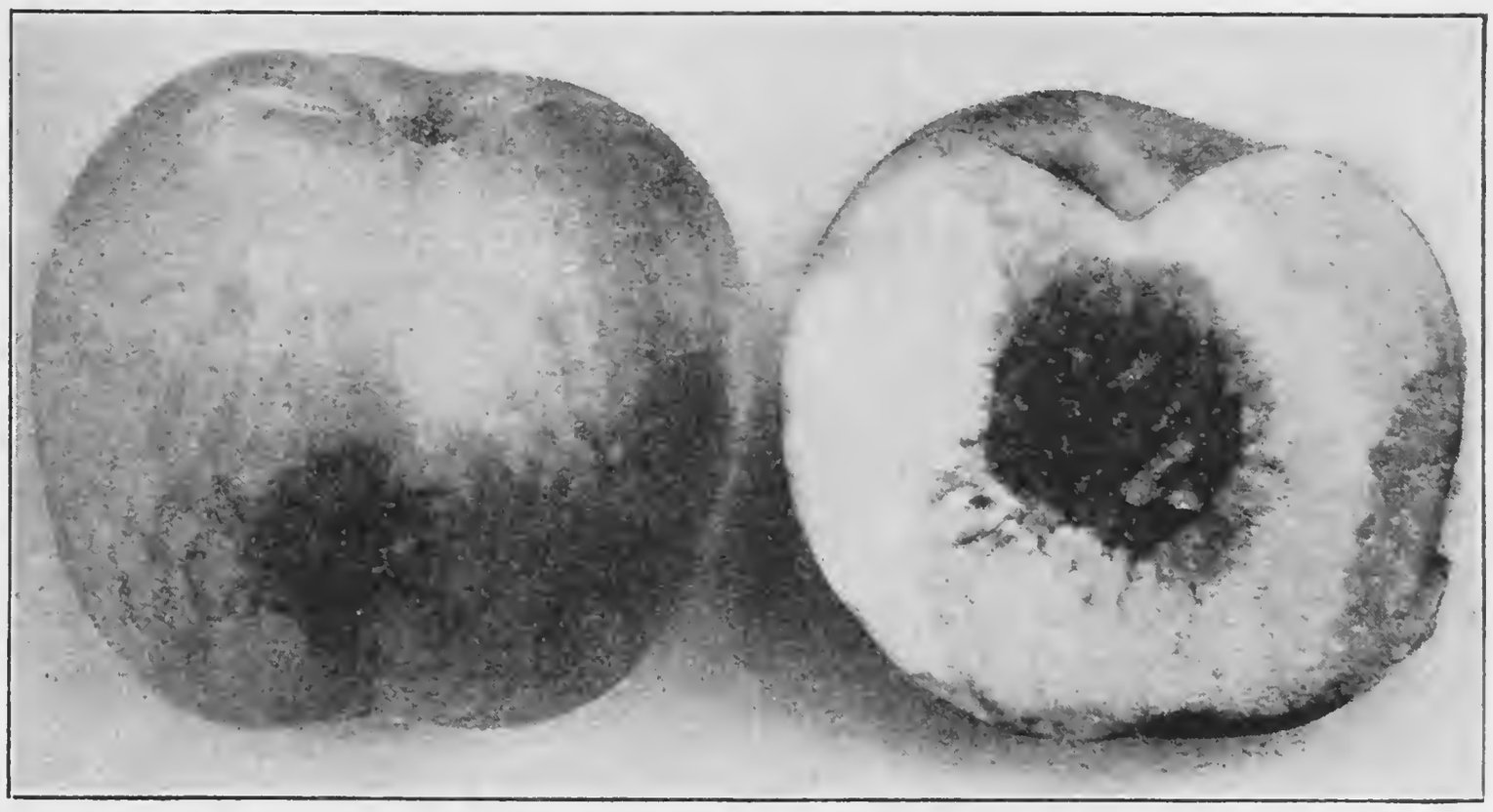
The small horse-power gasoline engine was shown at the fair. Many farm women are afraid of the engine. The little gasoline engine is absolutely safe, far more safe than the gasoline stove; it is quite easily started. One woman upwards of 60 years of age starts and stops a 1½ horse-power engine, and experiences no difficulty. The adjustments are simple and the husband or the hired man can keep the machine in proper running order. Stopping the engine is as easy a matter as turning the dampers on the kitchen stove. Some of the engines are mounted on small trucks and can be hauled about. These engines, however, can be established in the cellar or some convenient place. The odor is not displeasing after one has become familiar with one, and the exhaust may be piped outside the building. The little engines are muffled, but the noise is but partly subdued, yet when they are doing the duty of a hired woman or man about the farm at comparatively no cost, the noise is forgotten. These engines cost from $30 to $50, and may be purchased for even less than $30. W. J.

R. N.-Y.—This brings to mind the combination of water system and lighting we referred to last year, where a gasoline engine operated a compressed air system that forced fresh well water over the house, at the same time storing electricity for lighting.

BUSY DAYS AT GRAPE PICKING. FIG. 494.

GRAPE PICKING IN WESTERN NEW YORK.

THE picture at Fig. 494 is taken from a commercial vineyard in Western New York at the time of picking. When the grapes are ripe there is nothing to do but get them off, and all through the vineyard sections there is a great demand for help. Women and girls are especially useful at work of this kind. They are naturally neat and clean, and show good judgment in the selection of clusters. As a result they are much esteemed as pickers, and find ready employment in the vineyards. Some of them are very expert, and can make excellent wages at picking. At any event it is a clean and healthy occupation, and in the grape regions, at least, one that commands respect.



EXACT SIZE OF CARMAN PEACH GROWN AT HOPE FARM. FIG. 495.

THE GOOD OLD CARMAN PEACH.

THE picture at Fig. 495 shows a fair sample of the Carman peach grown this year at Hope Farm. This peach is familiar enough to most fruit growers, yet every year we have many calls for a description of it. As is well known, the Carman ranks as a white peach, with a very high-colored, brick red cheek when ripe and properly grown. The majority of people seem to regard it as a "cling." When perfectly ripe with us, it breaks quite freely from the pit, although when green it is hard to separate. Its reputation as a "cling" may have come from the fact that many Carmans grown in the South are picked when quite green, and left to ripen as best they can during the shipment. In our own case the Carmans are sold to a nearby trade, so that they may be picked when fully ripe and ready for eating. It therefore ranks with us as a "freestone." We began picking the peach in Northern New Jersey this year the first week in August. On the 15th of September we found a few Carman peaches in a shady place just ready to pick. It would not be safe to say, however, that this long-continued season is characteristic of the variety, as only a few specimens will ever be found after two or three weeks from the beginning of picking. We

(*Continued on next page.*)

regard Carman as one of the finest of eating peaches. It is delicate and high-flavored, and greatly admired by those who know its real value. Most people, however, greatly prefer a yellow peach, and Carman does not sell to advantage with popular trade after Elberta and similar peaches begin to come upon the market. Most housewives unite in demanding a yellow peach for canning. A few of our own customers have tried Carman for this purpose, and prefer it to others. Unless the peach is rather green when put into the can, it does not hold its shape well in canning; but for delicate flavor and general satisfaction, except to those who eat yellow with their eyes, Carman is a magnificent preserving peach. We find it one of our most profitable varieties, although we would not advise too heavy a planting for any shipment in a locality where the yellow peaches are greatly preferred.

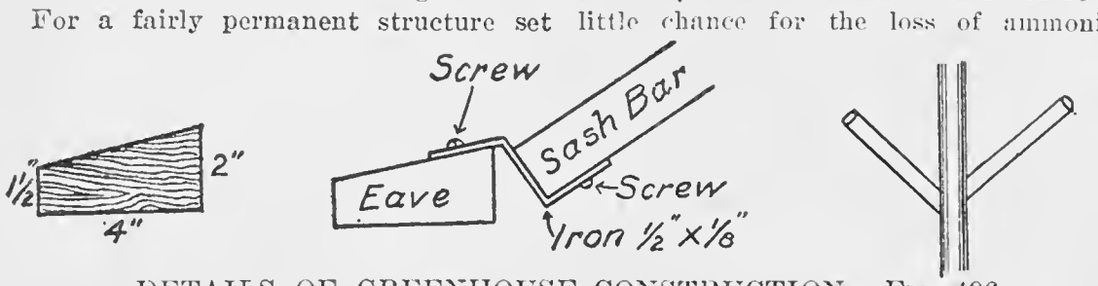
Specifications for Small Greenhouse.

WILL you give me the best proportions and plans for a hothouse containing about 700 square feet, also plans for hot water system with estimated cost? House to be used for raising plants.

Blooming Grove, N. Y. J. S. D.

A house containing 700 square feet could be most economically built to contain one bed in center about 5½ feet wide and side beds three feet wide each side, with two walks about 18 inches wide, or 20 would give more space and convenience for handling plants. This would approximate 15 feet inside and would require sash bars about 9½ to 10 feet long on each side of ridge, according to pitch desired. The house could be 48 feet long, using three 16-foot lengths of cypress about 1¾x5¾ inch for ridge and three lengths in each side for eaves about 2x4-inches on inside of house, and 1½x4 inches outside, as shown in Fig. 496.

For a fairly permanent structure set



DETAILS OF GREENHOUSE CONSTRUCTION. FIG. 496.

1½ inch wrought iron pipe in concrete at intervals of eight feet for posts. On top of each post screw a floor plate and screw the four-inch eave plate on top. The walls can be made of concrete four inches to five inches thick, using bituminous coal ashes nine parts to one Portland cement. Allow about two feet of glass in each side wall under eaves. Have a blacksmith bend a small piece of iron for lower end of each sash bar, ½x⅛-inch being right, as shown in sketch, at center, to fasten bar to eaves. This method of fastening gives longer life to bar and eaves than nailing together would do. Space one-inch pipe at intervals of eight feet under ridge for supports, and about 3½ feet from ridge on each side place a one-inch purlin, fastening each sash bar to same with a pipe strap and running a pipe to each center post, making a double support. Fasten the one-inch pipe to upright posts with an axle clip and flat piece of iron bent so each brace pipe will slip over end. A row of either continuous or intermittent ventilator sash must be placed on one side of ridge about 24 inches wide up and down roof. These sashes can be six or eight feet long if desired, though a sash containing three lights of 16x24-inch glass could be more easily lifted with a rod placed in center than one of greater dimensions. Glass should be 16x24 inch double strength B; this is an excellent size to use. Place the back of each light, or convex side up, and lay the glass in putty, lapping each light over the lower one about 3-16 inch and using a zinc nail or brass point listed by most seedsmen.

The cost of such a house would be very near $200 without heating system. The most economical heating system would be two good-sized stoves placed one near each end, encircled with a sheet-iron shield about a foot from stove extending to within six or eight inches of ground at base and several feet above stove at top. A hot-water system would be expensive to install on account of the many fittings and cuts required on the job, which would exactly equal the same work on a house 150 feet long. Nor would you find a small hot-water boiler that would be as economical in use of fuel as the stove would be, though the hot-water plant would possibly run a little longer without attention. ELMER J. WEAVER.

Foolish Talk About Hen Manure.

I ENCLOSE copy of portion of article published in *The Fruit Belt* for January 1914, and as the fertilizing value of poultry manure seems very high according to this article please advise as to the correctness of the figures given. On a 1,000-hen plant about how many tons of poultry manure would be available for fertilizer each year? S. C.

Bay City, Mich.

The article follows:

Prof. Clairborne says, "Poultry manure is equal as a fertilizer to the best article of Peruvian guano, and if properly cared for under cover, is worth as much as Pacific guano, which is usually worth from $40 to $50 per ton." Prof. Norton says that "300 pounds of well-kept hen manure are equal in value to 14 to 18 two-horse-loads of stable manure." Science in Farming says, "100 pounds of fresh hen manure contains 32.8 pounds of nitrogen, 30.8 pounds of phosphoric acid, and 17 pounds of potash."

With all due respect for Prof. Clairborne and Prof. Norton, this is as rank nonsense as has yet been printed about manures or fertilizers. The New Jersey Experiment Station has printed the figures showing average dry hen manure. Here is a comparison with guano.

	Pounds In One Ton		
	Nitrogen	Phos. Acid	Potash
Hen Manure.....	25	16	8
Peruvian Guano...	110	300	55

The hen manure will vary more or less according to the food, the amount of litter and the way it has been handled, but it is utter nonsense to say it is equal to guano. How can it be when we consider what guano is, the dried manure of sea fowl which feed almost entirely upon fish. The dead bodies of the birds are mixed with the manure, and all are deposited in a dry rainless climate where there is little chance for the loss of ammonia. This dry material is crushed or ground fine. Of course this is superior to coarse hen manure obtained from poultry fed mostly on grain and usually kept under conditions which mean a loss of ammonia. The statement that 300 pounds of hen manure equal 16 to 18 loads of stable manure is too ridiculous to notice. To show the wretched folly of the last statement just remember that nitrate of soda contains only 16 pounds of nitrogen in 100, while these figures make hen manure carry twice as much. Including litter and material used as absorbents 1,000 hens should give above 15 tons of manure in a year—each ton worth from two to three times as much as stable manure!

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A Weed Cover Crop.

I PLANTED a small orchard of about 3½ acres in apples and peaches last Spring in the triangular style, apples 40 feet apart and peaches in between, leaving a distance of 20 feet between trees. This ground I have permitted to grow up in weeds, according to an article I read in one of your issues, as being a method employed by a southern grower. Should I plow the weeds under, or cut off the tops and plow the roots and stubble? As I purpose to plant potatoes between the rows next year, what cover crop do you advise? How would you plow? Should I go either east to west, or north to south? To take up the space between the other trees I would have to cross-plow, and that would not be advisable, as I would uncover part of the other furrows. K.

Bound Brook, N. J.

You probably refer to the account we have given of the famous Repp orchard at Glassboro, N. J. This orchard is on light, quick land. It is plowed early and given very thorough culture up to the middle of July. By this time the trees have made enough wood growth, and have started fruit to good size. Experience has shown that if culture were kept up longer there would be more wood growth, with great danger from blight or other disease, and that the fruit would not ripen properly. So the Repp plan is to stop cultivating and let the weeds grow at will and they *do* grow in many cases up above the lower branches of the trees. The usual advice is to seed a cover crop when cultivation stops. We prefer to do this but Mr. Repp lets the weeds grow—and he is a successful fruit grower. This plan is not adapted to all conditions. We do not know the kind of soil you have or how much growth the trees have made. It is a sure thing that he who lets weeds go to seed the year before he grows potatoes is making great trouble for himself. We should plow or disk these weeds under and sow rye. Plow this rye under in the Spring and plant the potatoes in deep furrows—down into the rye. Our plan in such cases is to plow east and west one year and north and south the next. By working across the furrows with a disk harrow you can chop up the strips on the tree rows enough to plant on them. Unless you mark both ways we would not plant on these strips.

Crab Grass in Lawn.

LAST Spring I sowed a lawn, first digging some manure into the land. The grass came up well, but during the Summer, crab grass showed itself very thickly throughout the complete area, and kept coming so rapidly that it was impossible for us to keep ahead of it, and now if we weeded it out, very little lawn would remain. I had decided to dig it over this Fall, but upon reconsideration though perhaps that might only make matters worse, as the manure which was dug under in the Spring, would then be brought to the top; and if I am right in thinking that the crab grass seeds in this manure caused all our trouble, they would (as I believe they live over the season) only be brought to the surface more thickly than ever, and give us a second failure next year. Do you know how long these crab grass seeds remain viable underground? Would it be safe to dig and reseed the lawn a year from now, or must we wait longer? B. R.

Oradell, N. J.

You see from the recent article on crab grass that the seeds are not to be feared as much as the underground stems or buds. The grass spreads underground, and the way to get rid of it is to rip out these roots and destroy them. Thus, if the lawn is not too large, it may be spaded or plowed now. Then follow, on a small scale, the operations described in the recent article on grass seeding. The plan is to stir and dig up the soil constantly so as to rip out the crab grass roots, rake them up and burn them. With a thorough job this Fall the crab grass can be taken out. Then a heavy seeding to lawn grass this Fall will start a thick mat which will cover the ground.

Small Plot Fertilizer Experiment.

TO determine the question of how far I could go at a profit with commercial fertilizer in raising potatoes, I tried an experiment this season. I planted 10 rows across my garden, each row being 1-109th part of an acre. The fertilizer was a standard potato fertilizer with 11 per cent. potash, price $40 per ton. The rows were 32 inches apart and the potatoes planted nine inches apart in the rows. I have reduced all the figures to the acre basis in the attached schedule, and was somewhat surprised at the final results. For all expenses per acre, except fertilizer, I allowed $45 per acre, and charged the fertilizer and land plaster at actual cost. The variety planted was the Cobbler and the blight killed the vines before the tubers had fully grown. We sprayed several times, but got busy with other work that seemed more important, but I doubt if it was. You will note that the addition of 3,000 pounds of land plaster to the acre in the fifth row at an expense of $10 per acre added nothing to the yield, the sixth row, with the same amount of fertilizer per acre, giving a better yield. The seventh row happened to come on the same spot where last year I plowed out a double furrow and filled in with well-rotted manure for squash, and I suspect that the increased yield in this row is thus explained.

Rows	Amount and cost of fertilizer per acre	Marketable Potatoes per acre	No. 2 Potatoes per acre	Total bushels per acre	Tot'l value per acre: No. 1 @ 75c. bu. No. 2 @ 25c. bu.	All other cost per acre	Total cost per acre	Net profit per acre
		BU.	BU.	BU.	$	$	$	$
1	1000 lbs. fr. Cost $20	133	80	213	120	45	65	55
2	1500 lbs. fr. Cost $30	151	80	231	133	45	75	58
3	2000 lbs. fr. Cost $40	158	66	224	135	45	85	50
4	2500 lbs. fr. Cost $50	169	63½	232	143	45	95	48
5	3000 lbs. fr. 3000 l. plas. Cost $70	167	69	236	142	45	115	27
6	3000 lbs. fr. Cost $60	172	68	240	146	45	105	41
7	3500 lbs. fr. Cost $70	217	60	277	178	45	115	63
8	4000 lbs. fr. Cost $80	196	43	239	158	45	125	33
9	4500 lbs. fr. Cost $90	208	50	258	168	45	135	33
10	5000 lbs. fr. Cost $100	229	47	276	184	45	145	39

I am now sorry I did not leave one row unfertilized for a check. With my land and this kind of a season, this experiment seems to show that 1,500 pounds to the acre is the most profitable amount to use. I shall now disk this land and sow it to buckwheat with plenty of hen manure and October 1 turn it under and sow to rye, to plow under in the Spring for another try at potatoes. I hope to get a better acre yield on my next experiment. FREDK. M. PEASLEY.

Connecticut.

R. N.-Y.—There should have been several rows with no fertilizer at all in order to test the true capacity of the soil. Small plot tests of this sort are not entirely safe for large figuring, but they give something of an idea of possible profit, and in this case the lesson seems quite clear that 1,500 pounds of chemicals per acre is about the limit. We are surprised that the plaster did not give better results. With the buckwheat and rye plowed under next year we feel sure this soil will give better results with 1,500 pounds of fertilizer, and the best spots will be where the plaster and the heavier dressings of fertilizer were used this year!

WANT TO KNOW.

I WOULD like to have information, actual experience, regarding putting shredded corn stored in silo direct from corn husked by adding water.

Furniss, Pa. W. F. M.

R. N.-Y.—Let us have experience. In former discussions it seemed to be concluded that shredded fodder in the silo did not pay.

PURIFYING A WELL.—If your M. R. D. will pump air into his well with a bicycle pump and a rubber tube, dropped to the bottom, he can purify the water in 15 minutes, but if the smell returns, after a few days, he would better fill up that well. Any well or cistern can be purified in short order, in this simple way, and yet how few people seem to know it? A. C. W.

WELL GOES DRY.—Have any of your readers ever had the following experience? I have a well 25 feet in depth that always furnished plenty of water, never got very low even during a drought. For the last 15 years we have had no use for it, and it has been covered up. Upon opening it recently we found it to be entirely dry, although we have had rains nearly every day for the last three weeks. Could anyone tell me the cause of all this? J. I. C.

Farmers Using Autocars Save Freight on Produce

R. J. Sutton, a Burlington, N. J., User Tells How He Saves Money

FARMERS who use the *Autocar Delivery Vehicle* have discovered several things. First, that it gets them new markets for their produce which they could not reach with horses. Second, that it gets them better prices because they can deliver the goods where the highest prices prevail. R. J. Sutton, a large produce farmer of Burlington, N. J., tells an interesting story of another feature of *Autocar* saving. He says:

"My place is three miles above Burlington. I raise all kinds of produce. Before I bought my *Autocar Delivery Vehicle* last June, I used to haul my produce to Burlington, where it was shipped by steamer to the market at Philadelphia. The freight was 6 cents a basket and I had frequent losses from rough handling, loss by theft and delay in getting my produce to market.

"Since getting my *Autocar*, I make the round trip to Philadelphia—a distance of 60 odd miles—in 5 hours and make the run every day or night I have produce to ship. I usually load from 120 to 125 baskets and on the freight alone I make a good saving this way because on such a load my freight bill would be $7.50 while the cost of my gasoline and oil for 60 miles is only about $1.21.

"Not only that, but by delivering myself, I can often get better prices and can see that my load gets there in good condition and on time.

"You can see that during the year this cuts down my costs of delivery a good deal and I can get better service beside. I am very much satisfied with the work my *Autocar* is doing."

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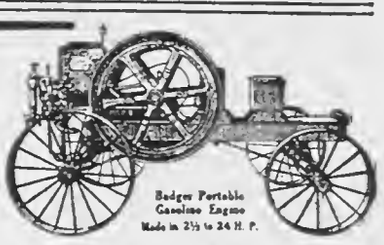
For Threshing and Ensilage Cutting



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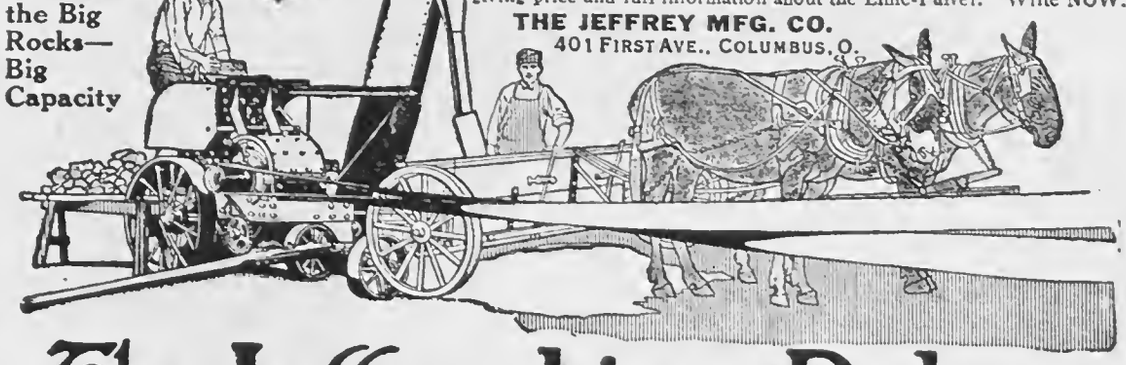

The Jeffrey Lime-Pulver

NEW YORK STATE NEWS.

THE HOP HARVEST.—The hop harvest is practically completed in Schoharie County and the yards are being cleaned up for the Winter. As a whole the crop has been a good one, in some sections better than last year. This is not saying that it has been good everywhere, for black mold and blue mold and lice have absolutely destroyed the crop in some yards. Several fields which ordinarily would have harvested several thousand boxes had to be abandoned as a total loss. On one farm a crop of 3,500 pounds was left on the poles as there were no marketable hops to be found. Quite in contrast with this is the immense crop on the farm of H. V. Pindar of Middleburg, which, according to reports, will yield 120,000 pounds which at the prices now offered, and they may go higher, is worth $60,000. A conservative estimate places the yield of Schoharie yards at 750,000 pounds with a present market value of $375,000.

SEASON FOR WILD FOWL.—The tang of Autumn make the hunter think of his gun and his dog and his game. In relation to the conflict between the State and the Federal laws governing the shooting of wild fowl the State game protector has issued a statement that his protective force has been instructed to enforce the State law and, not being unfriendly to the Federal statute, he also advises that the hunter comply with the Federal law also as the Department of Justice at Washington intends to prosecute all known violations of the Federal law. Under the State law the open season for ducks, geese and brant is from September 16 to January 10, except on Long Island where it begins a month later. Rabbits may be taken from October 1 to January 31, not more than six in one day, and ferrets must not be used. Mink and muskrat, from November 10 to February 10. Skunks same. Squirrels October 10 to November 15, not more than five in one day. Partridges October 10 to November 30.

APPLE CROP STATISTICS.—The State Fruit Growers' Association, collated from 300 replies to a list of questions the facts that the five counties bordering on Lake Ontario produce over half the apples grown in the State. From this section the average was found to be 99.6 per cent. The Hudson River counties produce the next largest quantities, with an average of 70 per cent. for this year. The Baldwin and Ben Davis will go especially heavy.

BIG SHIPMENT OF CATTLE.—The largest shipment of high bred cattle ever sent out of Cortland County went from the Miles J. Peck farm, near Cortland, September 14. It consisted of 75 Holsteins and 26 Guernseys, which made up the first installment, it is said, of 300 cattle. They were shipped by express and were purchased for the Willis Coal and Mining Company of St. Louis, to be placed on a 2,500 acre dairy farm.

NEW BUILDING AT CORNELL.—The two new buildings which will be opened at the State Agricultural College this Fall, are the animal husbandry building and the stock judging building. The institution now has about 20 buildings, the majority of which are completed. The new agronomy building is nearing completion and will be opened about December 1.

CANNING CLUBS.—Cortland County has numerous canning clubs. These have recently federated and Mrs. E. H. Foristall has been chosen the first president. It is looked upon as one of the most important meetings in the interest of home makers that has ever been held in that county. At the recent meeting there were present Mrs. Freeman of Manteno, Ill., who is president of a club of 500 girls. Miss Clara B. Nye, in charge of the canning club work of this State, and Miss Bertha Tittsworth of Cornell university.

COMMISSIONER HUSON ON STATE FAIR.—In a recent newspaper interview Commissioner Huson outlined his views relative to the improvement of the State Fair in some important particulars. He is quoted as saying that the night shows have proven a failure as far as attracting people to the grounds is concerned. He would welcome a return of the carnival parades in Syracuse. The running races failed as a drawing card although liberal purses were offered. In place of the runners he suggests steeple chase attractions and a fox hunt to sandwich the circuit races or supplement them in case the fair is carried over a week. Concerning opening the fair on Labor Day the commissioner is said to favor the plan and to reduce the admission price on that day to 25 cents. He would have a monster Labor Day demonstration on the grounds. The railroad rates are not low enough to warrant the largest attendance of people. Outside a 100-mile radius the rate has been almost prohibitive for the attendance of the farmer and his family.

HEALTH OFFICERS IN SESSION.—There were about 600 health officers of one rank or another at the opening session of the sanitary conference at Saratoga Springs on the 15th. Gov. Glynn addressed the conference and he was followed by Dr. Albert W. Ferris, medical director of the State reservation and Geo. Foster Peabody. An interesting discussion on the vaccination law and the relation of the Department of Education to it, was led by Dr. Thomas E. Finnegan, assistant commissioner of education. Miss Julia C. Lathrop, chief of the Children's Bureau of Washington, spoke on the Physical Examination of School Children.

J. W. D.

CROP NOTES.

OWING to the extreme drought in our county (Mason) it is not in as good condition as in former years, and consequently the dairymen have not been very enthusiastic, and are disposing of their stock to a considerable extent, owing to the scarcity of feed and the high price of food products. Consequently the outlook is not very flattering. J. G.
Ashton, W. Va.

Eggs 25; butter, dairy, 30; potatoes 75; pork, live, nine cents; beef five to six cents; veals 10 cents per pound, live; chickens 13; hay $14 per ton. S. A. W.
Alba, Pa.

Sept. 14. The hustle and bustle of the peach and cantaloupe season has given way to tomatoes, pears and sugar corn. Notwithstanding the fact that the canners contracted for large acreages of tomatoes, owing to a light yield many of them are not running on full time. The contract price for tomatoes was 14 cents per basket while the price to those who did not contract has ranged around 20 cents. Kieffer pears are bringing 20 cents per basket and sugar corn $9 per ton. Hog cholera has made its appearance in some sections and many valuable porkers have been lost by hog raisers. Fodder saving and corn cutting is causing the farmers to hustle. The crop of both corn and fodder is better than for several seasons past. It is estimated that 20,000 baskets of peaches have been taken from the Chandlier orchards near Milton. It was figured out that the price realized was about $1 per basket which will make the total amount reach the $20,000 mark. No other man in lower Delaware is so successful in raising fruit. It is thought his yields are made possible only by the running of smudge fires in the early Spring when there are threatening freezes and heavy frosts. Mr. Chandlier has demonstrated within the past few seasons that the peach industry can be revived in this State and made a paying proposition. Labels on produce shipped this season showing that the fruit or truck has been properly packed and the grower's name has brought much higher prices than the unmarked. The cantaloupe growers in the Williamsville district were the first to take up the idea. C. H.

COMING FARMERS' MEETINGS.

National Apple Day, October 20.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29, American Guernsey Cattle Club, Oct. 29, Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

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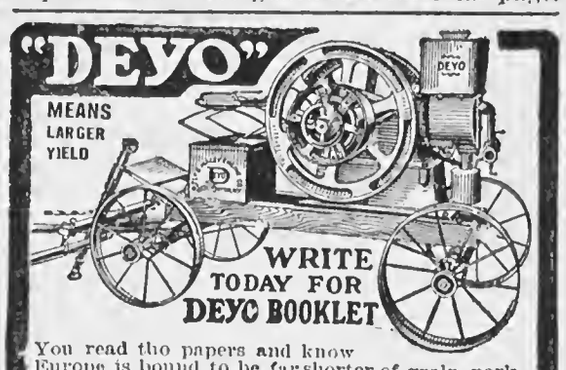

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Cleaning a New England Pasture.

WHAT would you advise in the following matter? I have about 20 acres in pasture, all hill land, soil very good. It has a very rank growth of brush, sprouts from tree stumps and wild berry bushes, etc. What would be the cheapest way to clear this land in order to make it fit to plow? Some people advise sheep, others goats or pigs, blasting powder, hooks to pull out, but as I have never seen land of this kind cleared I am at a loss to know what to choose. I intend to plant 10 acres of the 20 in apple orchard just as soon as I can get the land ready. W. B. R.

Marlboro, Mass.

On general principles goats would probably be the cheapest way, provided one has the goats, but to buy them might be an expensive proposition. In any case these would be slow and probably two or more years lost before the land would be in shape to handle. Pigs with a little help and proper handling would do the job, but would be expensive, as one would either have to keep a lot of pigs to do the job quickly, or keep a few and do a small part at a time, which would mean a long time to wait before really getting down to business. The same arguments would more or less apply to sheep. If W. B. R. has a good or fair team, either horses or oxen, he can get the job done quickest and probably as cheap in the end, counting time, by tackling the job at once or during any spare time he has from now until Spring. However, if obliged to hire a team it will be pretty expensive this way, as a hired team does not always accomplish as much as we think they should. It means hard work, but one has the satisfaction of seeing something gained, and this is a big satisfaction to anyone. Unless the big stumps are thick and of some hard wood like oak, it can be plowed all right with a good strong plow with a good cutter. Birch, alder and such like can be pulled out by a chain or hook if not large; if large can be cut and worked up to pretty close, having an ax or two handy to cut any big roots you cannot break with the plow. Berry bushes can be easily plowed or pulled up if not too thick; if so can be done just the same only requires a harder effort. If one has two teams or a team and an extra horse and man to use him or even a boy, the horse or extra team can be pulling bushes, small trees, or rocks as the case requires, while the first team is plowing.

It will require one or two men with the plow; if one man can handle the team and hold the plow also so much the better, and he can do a better job than having one drive and the other hold the plow, and the second man can use an ax or grub-hoe to good advantage in the meantime, or give any such assistance as may be needed. The man who handles his own team and holds the plow also can stop or start the team just about the second he wishes, while if some one drives for him he has to tell when to do these things and much time is lost. The only time a driver is any use is when one has an uneven team, one always ahead of the other or stopping and starting in the same fashion. With such a team a driver is sometimes useful. Whatever part of the land is plowed this Fall may be used next season to grow a crop, or the trees could be set if owner was in a hurry, but personally I should prefer to work the land a year or two first.

Possibly it could be got in shape this Fall to sow a crop of rye, but if so should be sown by October first, before would be better, so as to handle as early as possible next Spring. This could be cut green or turned under as seemed best to owner. I have a rich neighbor who is doing a lot of this kind of work, only instead of pasture it is mostly young woodland he is reclaiming. He has tried dynamite; this rips out the big stumps all right, but leaves many small roots, and it requires about as much time to clean up after it as to do the job without it, and many of these small roots left, sprout again and cause trouble, while those pulled out by a team do not bother to any extent in this way. If this man's land is not very rocky I should think the plow, etc., would be the cheapest and quickest way, but if very rocky perhaps the slower way with goats, sheep or pigs would be cheaper and better. It is a question the owner must decide himself, as he knows just what time and expense he can put into this better than anyone else. A. E. P.

Potash on Maryland Soils.

WHAT is it that we need, nitrogen, phosphoric acid, or potash, or do we need all? We shall take a field that has been manured and a good sod plowed under, or any other cornfield. We shall put half in field corn and half in sweet corn (pull the ears off sweet corn for market). The part with sweet corn will bring from three to six bushels more wheat to the acre. You can see to the very drill track where the sweet corn was. Of course I want one part of the field as good as the other. Hence what shall I do? A. R. R.

Westminster, Md.

As I understand the question, the field you have in mind for seeding in wheat has been part in sweet corn and part in field corn, the former being cut green and the latter when fully matured. That accounts fully for a difference in the yield of wheat following the two crops in the same field. What you need is more phosphoric acid and potash where you had the field corn. More nitrogen you will not need, if as you say you had a heavily manured sod to start with. The reason is this: It takes much more phosphoric acid and also a certain amount of extra potash to bring a seed crop to maturity. Your sweet corn you harvested green, so that it did not take up the extra amounts of phosphoric acid and potash that the matured field corn used. Both crops on the other hand, used about the same amount of nitrogen, as this element enters largely into the growing of the plant and foliage rather the maturing of the seed.

You can remedy the difference by making more liberal application of an 8-4 or 8-5 acid phosphate and muriate of potash mixture on the part you grew your field corn on. A good mixture would be 1250 pounds of 16% acid phosphate and 200 pounds muriate of potash, which should cost you about $12. This I would apply on the part that had sweet corn at the rate of 250 pounds to the acre and on the part where I had field corn at the rate of 400 pounds. The threatened scarcity of potash may make it unprofitable to buy the muriate for the above mixture, in which case, the next best thing to do would be to make an application of lime at the rate of one ton of burned lime, or two tons of ground limestone, which will help to liberate the soil potash for use as a plant food. As most Maryland lands are well supplied with this soil potash, which lime will free, I would rather depend on liming than on paying a stiff price for any form of commercial potash. R. B.

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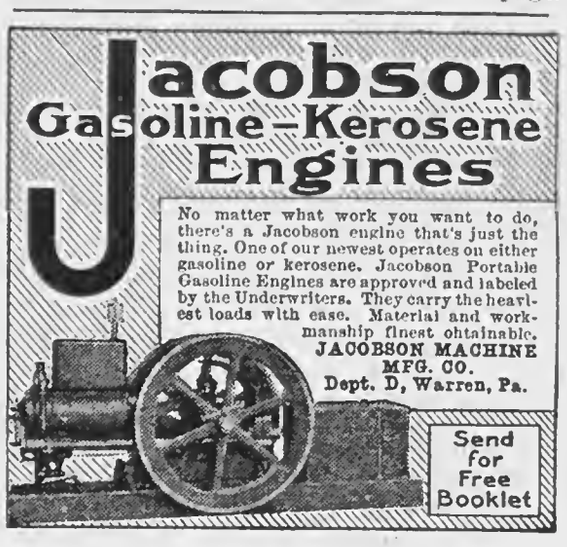

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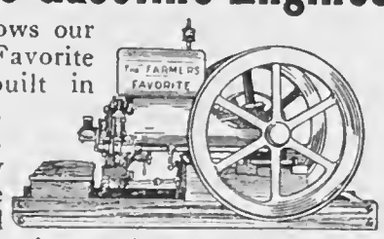

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(1866)

:: Hope Farm ::

"OUR STREET."

MANY of us live in lonely places where there are few neighbors or passers-by. I once lived on a farm off on a side road where only five teams went by in one month. There was no other house in sight. On still mornings in Winter we could see a thin curl of smoke at the end of the valley, and when the leaves were off the trees we could sometimes see a light at night. There were no telephones in those days, and the roads were bad. Those of us who lived in such places were obliged to find society in "the beauties of nature," and I fear they are not fully appreciated until you are shut away from them rather than shut in with them. I was thinking of this the other day as I looked out into West 30th St., from THE R. N.-Y. window.

BLASTING.—It is a scene of destruction just now—rivalling the battlefield of Europe. There must be a drain to take the overflow from the big subway, so they are blasting a big trench 40 feet or more deep, and nearly a mile long through this street. Scrape off a few feet of the upper soil of Manhattan Island and you strike solid rock, and the new ditch must be blasted out foot by foot. The whine and "chug" of the steam drills is constant. Every now and then the workmen will come climbing like ants out of the hole waving red flags to keep the people back. Then there will be an explosion that makes you think the enemy has brought the big siege guns within shot of New York. There is no sign of the effect upon the surface, but the men crawl back into the hole, and great chunks of rock begin to come up. Far down the street stands a steam engine under its little shelter, and steel cables reach away from it like long arms. The big fingers reach down into the hole and bring up great masses of rock or loads of earth and dump them upon waiting wagons.

AN OLD NURSE.—Through the roar and battle of this great project human life flows on in its regular course. Stand on the street corner and look in four directions and you have within the sweep of your eye the homes of 30,000 people—more than are to be found in many entire rural counties. And the human flood which sweeps past you carries all types of humanity—the good, the bad, the weak, the strong, the miserable the contented, the desperate and the hopeful. Here comes our old friend the "nurse," an old man with a white beard who takes care of the family baby. He limps a little as he wheels the little one through the bright sunshine up and down the street. This is his job, and he does it well. Very likely the child's mother is out at work to help support the family, and grandfather, no longer able to do hard work, plays the part of home defender. I have seen old soldiers who, in their young manhood, helped wheel the cannon into line, now serving the home by wheeling the family baby. And the family baby is ever present, for as soon as one climbs out of the carriage to stand on his own legs there is another to be put in. And no child ever had more faithful care than these old veterans give. You should see them on some cool, sunny day when they have wheeled the baby into some bright, protected corner and sit down beside their little charge to rest. They seem to think that if the ending of their own life is not all they hoped for the beginning of the baby shall be right at least.

WORKING DINNERS.—At noon the engine and the steam drills stop for rest, and the workmen get at their dinner. Labor groups itself into classes. The engineers and drillers and higher class workmen are mostly Americans with a good-sized dash of German and Irish blood. There was a time when all such work was done by hand labor—drilling and lifting by brute force of hand and back. Now when steam or electric power does this hard work the men with brains find work directing this mighty power. The crude work is done by newer immigrants—stout fellows just from Italy or Austria. The trap-nest of time will sort them out, and some will be doing the superior work of the future. At dinner time the engineers and head men usually go to some nearby restaurant for food. The laborers curl up at the pleasant side of some building and eat what they have brought from home. Bread is the foundation of their meal. Up to October most of them will have two fried eggs to eat with their bread. When eggs go higher in price it will be cheese or an occasional piece of meat. These men know how to buy the most muscle-making food for a dollar, and they look for it in unexpected places. I often see a big husky man eating bread and onions or a stalk of celery or a tomato, and doing a full job at lifting stones or shoveling dirt. As these men become "Americanized" they will probably come to realize that this is not "a balanced ration."

CHILDREN.—There are troops of them on our street. They come running out of the houses to play upon the sidewalks and pavements. The babies sleep in their carriages out in the air, and the older ones play ball in the street, dodging about among the wagons like little rabbits. They never seem to be hurt. The usual picture of the city child is a thin bloodless little creature starved for fresh air and food. The little ones who play in front of our building are rosy and bright-eyed—full of vitality and mischief. It takes but a short time to get dirty on the pavements, but it must be said that these little scamps are hard-fleshed, sound-limbed and hearty. They rarely see the bare ground or a growing plant, but they are certainly healthy and strong. The city looks after the health of school children—their ears and eyes and teeth and throats are examined and cared for before disease gets too far. So here they are—healthy little animals playing and dancing in the true joy of youth. If country children could have the medical inspection and care which these city youngsters enjoy what a generation of giants would be prepared for us. Down the street comes an old woman on crutches. She has but one foot, but limps about playing the violin at convenient places. It is but poor music, but as she plays the children gather about her and dance. The crutch leading the light, fantastic toe is only one of the curious things in our street.

SELLING FOOD.—A terrible cry comes ringing down the street—rising above the whine of the steam drills and the puff of the engine. *"Ber-r-r-ah-r-r-r!"* But who can put such a sound into letters? There has been nothing more frightful since centuries ago when the Indian tribe which held this part of the island caught some poor fellow from the "enemy" and did their duty as they saw it. Here comes a man with fruit to sell. He has bought a crate of late berries. They were probably sorted over in some dusty corner. Now the boxes are spread out on a board and he goes yelling his cry for customers. "Our Street" does not respond. You cannot break up old friendship with a yell. A wagon soon rattles into the street and our old friend the Italian huckster has come. Here is a man who knows human nature as you know farming and he never harrows it. See him talking with that woman who runs the boarding house? They have got to have their quarrel and argument, but, sooner or later, as sure as fate, she will walk up to the wagon and buy her vegetables for tomorrow. Everything on that wagon has slowly dried for a week or more since it left the vine, and our folks at home would not look at it, but this woman, after much bargaining, buys a cabbage, a few handfuls of stringbeans, a "measure" of potatoes, some suspicious looking peaches. My friend the Italian pockets 75 cents for what you would pick out of the garden and looks around for his next customer. First he twists the tops off two bunches of carrots and feeds them to his faithful friend the horse. Down the street a few doors below the old soldier is sitting on the steps. His folks are good customers, and the Italian goes that way.

WARFARE.—You can see as he sits on the steps to talk that he is discussing the European War. What he really knows about it is probably as far from headquarters as his vegetables are from the vine, but it is a good topic for the old soldier—with friends and comrades gone. There is a little bronze badge at his buttonhole. I do not know how it happened, but as he talked the afternoon sun got at just the right angle to make that little badge gleam like a star. The old man is raising his stick, pointing it out like a sword, and we know without listening that he is fighting his battles over again. It is Gettysburg or Cold Harbor brought down to date in "Our Street." The Italian knows when to stop talking. He knows that attentive listening to these old war stories will sell more goods than any information about Europe that he can give.

PEACE.—There are great contrasts in our street. A few doors below this war-like display lies a dead man waiting for burial. It is only a plain boarding house. The man was only one of the thousands of humble units who go about their work in this great city. Out of the millions here they have perhaps attracted half a dozen friends. They fill no important place in the world's economy. They drop and the machine runs over them. A few friends come to their funeral—out of the boarding house door into our street they carry the coffin much as if it were a trunk that was going upon a journey. The young black-coated minister with the sad, serious face halts on the steps and glances up the street as if he saw something of the awful loneliness in the roar and bustle of our street. There are two women draped in black. Mother, sister, sweetheart, who can tell, and who in our street cares as the carriage turns the corner and is lost in the crowded avenue? The dead man has found peace, but in finding it he has exposed the great difference that lies between our street and the lonely country road. Here the battle of life is so fierce that there is no time even for sympathy when the dead are carried from the ranks. There in the calm country sympathy and neighborly feeling are a part of life, and the dead are not forgotten.

HOPE.—And yet, even as the old soldier discusses his battle and the lonely man is carried to his rest two who carry the great hope of life come walking up our street. The young man, strong and clean-hearted, with a firm place in the world's work, and the young woman, useful, ambitious and fair, are soon to have a home of their own. The old soldier has had his day of glory, the dead man has had his day of toil, but these happy young people are having their day of romance. Who can blame them for not feeling the sorrow or the apprehension as they pass on through the glory which hope and love have painted upon our street? H. W. C.

MRS. HOMESPUN: "What'll we contribute to the minister's donation party?" Farmer Homespun: "Wal, I dunno, Hannah! Taters is 'way up, pork is 'way up, fowl is 'way up—we'll save money by giving him money."—Daily News.

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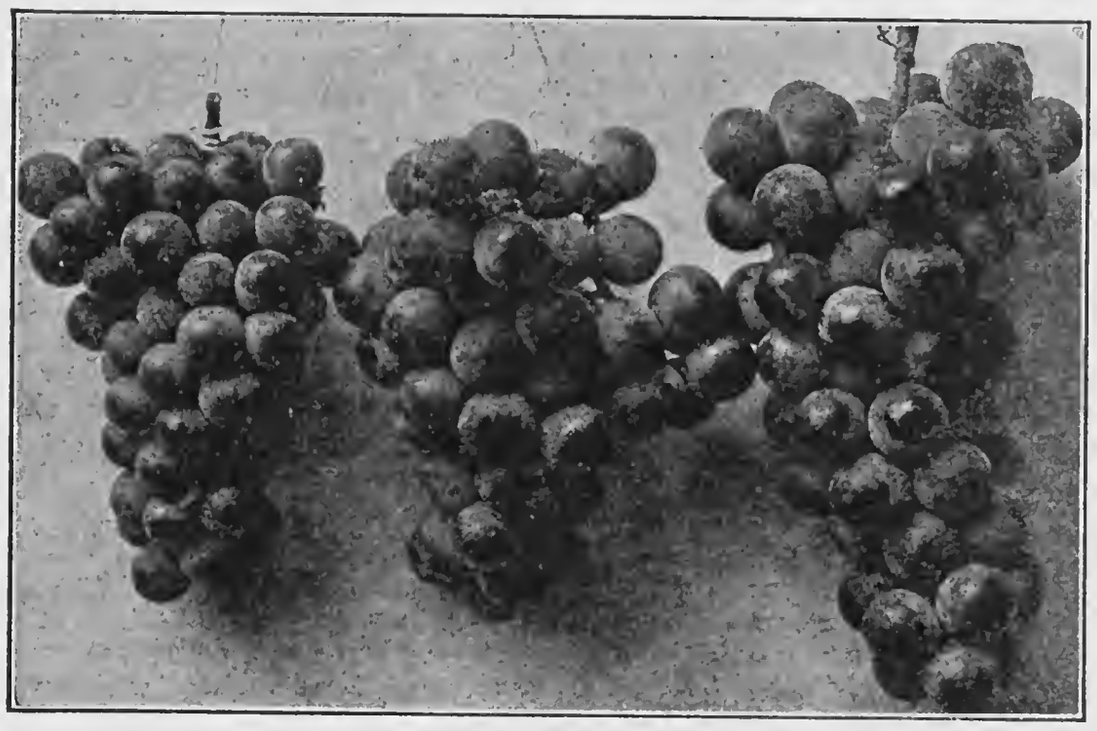
:: Ruralisms ::

FRUIT NOTES FROM MISSOURI.

WINTER VETCH.—I regret that the Hope Farm man is not able to give a report complimentary to Winter vetch. He attributes his ill-success partly to the substitution of Spring for Winter vetch. I buy seed each year through local or St. Louis houses and have never been deceived in the character of the seed. It seems well proven that in some localities, at least, inoculation is essential for best success but on my soil vetch succeeds without it. Several years ago when in central Michigan I found vetch with rye to be a universal cover crop in the extensive peach orchards where the soil was very sandy. No inoculation was practiced, yet I can well believe that on some soils it might be an essential. I hold vetch of the highest value, filling a gap that no other legume is able to fill here in the central valley where Crimson clover does not succeed. It demands rye as a support and supplements it by storing nitrogen. Nothing equals it in number and size of root tubercles. I have found them half an inch long and a third in thickness. It makes a fine quality of hay as early as May 15 to 20, or as late as June 20, when it is ripening its seed, or provides an enormous mass of organic matter to turn under and feed a corn crop. I tried it this year between rows of grapes and blackberries and with success.



ECLIPSE CAMPBELL MOORE

EARLY GRAPES GROWN IN MISSOURI.

JOE STRAWBERRY.—I note that the Joe strawberry has been put on trial at Hope Farm with the understanding that it requires a thin soil. As an old champion of that berry I enter an energetic protest against such a belief. The Joe belongs to the general class of midseason to late varieties which all require soil of the very highest fertility to mature their heavy yields of large berries. For such kinds anything approaching a thin soil means a crop inferior in size and quality. For 10 years I have grown the Joe alongside all the best-known standards and find it has few equals in producing berries of the largest size combined with beauty and quality. But my experience is that the character of the fruit is in direct ratio with the amount of fertility. I have seen the Joe produce many ounce berries and one that weighed more than two ounces, and it is certainly more prolific and vigorous than the Marshall.

EARLY GRAPES.—A drought since May first has persisted in the South Central States, prevailing through the Ohio Valley and on west to Oklahoma. Just now, this middle of August, we are receiving grateful showers. The fruit crop has been uniformly good. Just as serious damage from drought was imminent, a short rain would providentially fall and carry the plants along for a few more weeks. Never was the advantage of a soil stocked with humus and its surface kept stirred with a fine-toothed cultivator better demonstrated. At present we are in the five or six days before Moore's, thus commanding a high price. This year it was not over two days ahead, and there is little comparison in size of bunch and berry. With Campbell the difference is even more marked. Moore's Early is the standard early grape on the St. Louis market. Its culture is extending as its profits become better known. It has indeed many fine qualities. It is hardy, vigorous in vine and productive and rarely sets fruit in excess of its capacity to ripen perfectly. Its clusters are more compact and larger in berry than the Concord with a heavy bloom combining to make them very showy in the basket. Its chief weakness is a thin skin that will crack in wet weather, and, some might add, a deficiency in productiveness. The last of the trio of early black grapes worthy of mention is Campbell's Early, a variety I have previously proclaimed as the most valuable of all the kinds ever tested here, regardless of season. The present crop again confirms this opinion. It is larger both in bunch and berry than Moore's, better in quality, more productive, never cracks and as a keeper, is unexcelled. It develops just one defect; many imperfect bunches apparently due to lack of pollination, but this is largely offset by size and beauty.

L. R. JOHNSON.

Cape Girardeau Co., Mo.

R. N.-Y.—Regarding the Joe strawberry we have the following letter from the introducers, J. H. Black, Son & Co.:

We were the originators of this variety of strawberries, and had fruited it on every source of conditions of soil. In all localities where it has been grown for years, it has been found that the lighter soil gives a better colored berry, more even in shape and less green tip. It is very susceptible to damp weather conditions when on heavy soil which do not occur of course on light soil. The locality where this variety is grown to greatest perfection is in that section of New Jersey known as the pine land, or along the edge of these pine lands like around Perrineville, Manchester, Lakewood and that section of the country, which as you know is the lightest kind of sandy soil. We have had much larger berries from very very heavy soil, as Mr. Johnson says, but when it comes to fine quality, quantity of berry and beauty of berry there is no place like the sand for this variety, and we think that you will find it so. The greatest crop that we ever saw was on ground where it was so light and so dry that it was too dry for anything in the vegetation line except melons, and this was the greatest and most beautiful crop of berries that we have ever seen of any variety anywhere. In picking them the quarts set so close together that there was not any room between each quart for another one. There were two pickings almost as heavy as this, and three other light pickings, and it is from this very patch that its reputation as a light soil berry first started. To the oldest strawberry growers in this section it was a revelation, and you can hear them talking of it even after nine years have passed by.

JOS. H. BLACK, SON & CO.

Hasn't been under shed for twenty years but this forty year old Studebaker is still working

SOUND, air dried timber, tested iron, exceptionally good workmanship must have been built into a Studebaker Farm Wagon bought by Mr. A. D. Wilson, of Austin, Ind., away back in 1873, for in a letter to Studebaker Mr. Wilson writes:

"I have a Studebaker Farm Wagon purchased in the spring of 1873 from L. E. Carpenter of Seymour, Ind.
"The first 20 years it had fair care taken of it; the remaining time my Studebaker has had rough use. It has stood out of doors in all sorts of weather, and it is a good wagon yet."

FORTY YEARS OF EVIDENCE

—are behind Mr. Wilson's statement. Twenty years of good care and twenty years of neglect failed to impair the usefulness of this Studebaker wagon.

And we have thousands of letters telling about the records of Studebaker Farm Wagons that are just as remarkable as this.

Studebaker Farm Wagons, are just as well built today as they were sixty years ago. Better, in fact, because improved machinery has made better construction possible.

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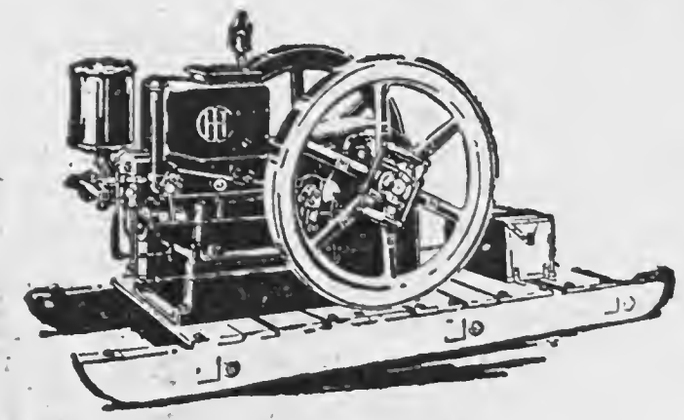

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

YOUR story in editorial column of August 8 about the macaroni seed reminds me of an incident that occurred here last week. A traveling man, ignorant of farming, has through a mortgage acquired 80 acres near here, and asked me to look it over with him. One field of beans was so weedy that I intimated he would hardly be able to use a bean puller. "Well, that's all right," he rejoined, "don't they pay more for hand-picked beans anyway?" E. H. B.

These back-to-the-landers have their troubles and their illusions, but they are pretty good "sports" and many of them will finally make good. Forced "hand-picking" of weeds to make up for poor horse culture early in the season is a good way to impress the value of improved agriculture upon anyone. The back-to-the-landers will learn in time, or shall we say unlearn?

*

PENNSYLVANIA, like New York, has gone into the real estate business. A list has been made of the abandoned or unoccupied farms in that State. There are only 106 of them, and localities and descriptions are given in a pamphlet just issued by the Agricultural Department at Harrisburg. There has been much talk about the thousands of abandoned farms at the East, but when you actually hunt them up you find a handful of them. Only 106 in the great State of Pennsylvania! There is, however, much cheap land in that State which might well provide homes for good farmers. In fact today Pennsylvania offers very superior advantages of soil, climate and markets to men with reasonable capital who know how to run a farm.

*

MANY complaints come to us from New York State farmers regarding the way road building is carried on. It is claimed that again and again the contractors open long stretches of road, shutting farmers off from the entire distance, and then take their time, and a good deal more, in making the repairs. In many cases it would be just as easy for them to handle this road in short stretches at a time, and thus save the people great inconvenience and trouble. Instead of this they tear up or shut off the entire distance, and often act in a most arbitrary and offensive way in driving people off the highway, and preventing its use for travel. In some parts of the State this has come to be a nuisance, and strong protests have been made to headquarters at Albany. Apparently no notice is taken of such protests, and the contractors seem to be left to do just about as they please in this matter. It is high time whoever is supposed to regulate this matter got busy and stopped this nuisance and outrage upon the public.

*

IN discussing the potash situation as it affects commercial fertilizers, we do not wish to discourage the use of that element or disparage its value. It is one of the three elements of plant food which are absolutely necessary, particularly on our lighter or muck soils and for certain crops, like potatoes or fruit. If it were possible to obtain full supplies of the potash we should advocate the standard mixtures of chemicals which have proved reliable and profitable. The truth is that the European War has shut off the needed potash supplies and in this emergency farmers must do the best they can. That is why we have obtained and printed the best expert advice which this country affords. At this moment we can see little chance for an early ending of the war; nor can we see any American substitute for potash in sight. We advise the use of lime, cover crops and other means we have stated for utilizing the potash now in our soils until peace in Europe makes the potash supplies possible, or some process is discovered for making the American potash available. As soon as we can get potash at a fair price we advise its free use once more.

THIS year, for the first time, we have had a good supply of bees at the farm. We have long desired to test the oft-repeated argument that the bees aid in fertilizing the apple bloom and thus increase the crop. After careful study this year we are convinced that this argument is sound. The bees have, without question, increased our crop and given a larger proportion of strong, well-shaped fruit. With the Baldwin apples in particular this effect is very noticeable. Even if there were no honey crop at all it would pay well to keep the bees. We think also that they help fertilize the currant bloom. All through the Eastern States there is great complaint that the currants begin to form fruit and then shell it off. The trouble is largely due to poor pollenization of the flowers, and we believe that the bees would help as they have certainly helped with our apples.

*

WHO IS THE TRUE TEACHER?

WHAT does it mean to be a good teacher? Very likely most of us in looking back over life can classify the various people who had to do with our education as good, bad, or indifferent teachers. Some of the most highly educated of them would rank in the last class. The best teacher we ever knew was not highly educated in the ordinary sense of the term. One of the leading American scientists, a man whose name is known wherever farmers are interested in improving agriculture, has told us about the best teacher he ever knew. During the Civil War he was a boy attending school in a country district in New England. The teacher was a young woman, new to the district and untried in the school room. No doubt there were people who felt that she was lacking in the education which would fit her to teach properly. During the war political feeling ran high, and the boys and girls of that time were intense partisans. One day, just after the news of a great battle, during the noon hour, the boys saw a speckled hen coming out from behind the fence of the school-yard and walking across the road. They immediately conceived the idea that this was a spy. They chased her and caught her and then decided that there was only one just punishment for a spy. That was hanging, so they secured a rope and without trial or without hearing evidence, prepared to hang that hen. While they were gathered around her preparing for the execution, the teacher appeared. A few inquiries from her brought out the facts about the hanging. Instead of punishing them or taking them into the school room at once, this woman began to ask questions about that hen. Did they know she was a spy? Who could prove that she was there for any illegal purpose? If they were caught in a similar position, what would they think of passing judgment without any chance to be heard or the right to give any evidence? By talking to them in that way this woman changed the entire attitude of those boys in relation to the hen. They saw the point of what she said and the result was a fair trial. The most active of those who had been seeking to hang her tried to prove that she was a spy. The result was that the boys were finally convinced that there was no case against the hen and she was freed after a fair trial! The man who tells this story said that that woman was a great teacher, because she used that simple incident, just at that time, to impress upon the minds of those boys the great Anglo-Saxon principle of a fair trial for all and a respect for civil rights. In the teaching of youth just such things as these are of far greater importance than anything that can ever be learned from the text-book. The ordinary child can be best approached along the line of his understanding. The things which appeal to his childish imagination or reason are the best to take as illustrations for his education. Such training will stick in his mind for life, and the teacher who can do this is the best teacher of all, as those of us who look back and search through life will testify. The year's education for the farm child is now starting. He needs real *teaching* rather than text-book instruction.

*

JERSEY CITY, N. J., is working hard to make public markets succeed. The energetic city government will do all it can to provide a place where farmers may deal direct with consumers. The city people are ready to buy and will come with their money for the goods, but it is a harder problem to induce the farmers to drive in for a retail business. Most of the larger Jersey farmers have become accustomed to doing a wholesale business—driving directly to a commission man and selling a full load. Those who trade in this way are able to give personal attention to collecting and selling. Their wagons and their entire outfits are arranged for this wholesale work. Naturally it will take some time to change properly to retailing. Then there is another consideration. On all the farms within 50 miles of Jersey City hundreds of bushels of farm produce are lost through lack of transportation. Some of it is not first-class, but all would be bought by town consumers if it could be put before them. Horses and men are all busy at harvesting and hauling, and thus this produce is wasted. Now, if some one in Jersey City could organize an auto-truck system to run out among the farms picking up this surplus produce for sale in the public markets, a double purpose would be served. Thousands of tons of produce would be saved from destruction and used for cheap food, and farmers would get into coöperation with the markets as never before. There is a chance to supply the markets and relieve the farmers.

*

NOT much real news gets through from Europe. When 75,000 men can be carried around the North of Europe through Great Britain and across the Channel without the world's knowledge we can realize how little that is worth while leaks out into the newspapers. It does seem to be true, however, that the German harvest is short and that food will soon be scarce. The manufacture of alcoholic drinks is to be reduced and potato flour made in place of alcohol. All sorts of food substitutes will be devised by the painstaking Germans. The necessities of the siege of Paris produced the original oleomargarine. For the past 25 years the chemists have been saying that under the spur of famine, science will find new ways of preparing food—at least substitutes which will sustain human life. The awful waste of the present war will create a demand for the American surplus for years to come, but do not for an instant imagine that any careless or haphazard methods of farming will pay in the future.

*

THE details of the new war taxes are still undecided. It was proposed to tax freight receipts, but President Wilson interfered and advised against it. The argument was that this tax would certainly be shifted entirely upon the buying public, with much more added. The railroads, too, are still crying for higher rates. If the freight tax is abandoned most of the money will probably be raised by increased taxes on liquors. There has been considerable criticism because the tax on whisky was not increased, as with wines and beer. The explanation is that if this were done the immense stores of whiskey now in bonded warehouses would be taken out, and the great sums of money needed to do this would cripple or embarrass the banks! Congress has no longer any great fear or respect for the liquor business. We are told on good authority that a majority of Congressmen favor the submission of an amendment to the constitution prohibiting the liquor traffic. It lacks the necessary two-third vote, but has a majority!

*

I AM sending you under separate cover sample of John Lewis Childs' tree cranberry. If Mr. Childs can eat fruit like that he can do better than we can. The tree looks like a snowball bush and the flowers look like elderberry. MISS C. E. ALLEN.
Ohio.

When it comes to the question of Mr. Childs and eating his own "novelties" we shall have to go back to our favorite old test:

"*He is of age—ask him!*"

We do not care for this "tree cranberry" ourselves. Sour grapes seem to us of better quality. Mr. Childs may enjoy the cranberry sauce which grows on trees for all we know. During the controversy over the old "wonderberry" Mr. Childs stated that he ate the berries freely and seemed to be very fond of them. After eating this wonderberry in pies and sauce and pudding we were forced to conclude, with all due respect for Mr. Childs, that he had a very abnormal taste or else felt much the same affection for his "novelty" that most of us do for our own offspring. Therefore even if Mr. Childs, in reply to Miss Allen's question, says that he will eat tree cranberries with his Thanksgiving turkey we shall still use the berry which grows closer to the ground!

BREVITIES.

THE cur is the curse of sheep raising.

SCRUB bulls are good runners—they run the herd down.

"TABLE scraps" between father and mother make poor feed for the young stock.

THE *dairy* business is surely going to the dogs when the curs drive the cows home.

CANNING fresh meat is becoming a great farm industry—in many cases taking the place of salting and smoking the meat. A supply of this fresh meat is always appreciated. We are told how to do it on page 1161.

WOMAN AND HOME

:: That Pantry of Mandy's ::

Respectfully Dedicated to All the Other Ephraims

THE new house was going to be built in the Spring. For years it had been planned for and dreamed over. Nearly every Winter for the past 10 years, Ephraim had drawn logs to the mill to be worked up into lumber, until now, there were several large piles of it, under the long shed at the south side of the big barn. The lumber was in all shades of seasoning, from the bright yellow of newness to silver gray of age. This Winter the material for framework was fast filling all extra space under the shed. The general plan of the house had been settled long ago. It would be a square two-story affair with a large hall upstairs, extending the whole width of the house, so that the quilting frame could be set up and left until a quilt was done, with no trouble about being in the way. At each corner of the hall a door would open into a bedroom and Mandy had the rolls of rag carpeting all ready for those rooms. Downstairs there was to be a

SHE HAD PAINTED WHAT LITTLE WOODWORK THERE WAS.

parlor and parlor bedroom in the north end; a long narrow dining room and pantry were to fill the center portion, and the kitchen and kitchen bedroom were to be in the south end. Doors were to open on the front porch from the parlor and dining room. The end of the dining room next the pantry was to have cupboard doors opening into both dining room and pantry "like they had up at Silas Endicott's new house."

Mandy had but to close her eyes to see how the whole house would look when done. There was one place, however, that seemed to be always in her thoughts, and that was the pantry. In the old house convenience had been completely disregarded. The pantry was nearly as large as the kitchen, and was situated at the farther side of the sitting room. This had been a sore trial to Mandy ever since she had come as a bride to the little house. In those first years there was too much to be done outside to leave much time for making changes in the house. Once, when Mandy had asked if they couldn't take the tiny box of a kitchen bedroom and turn it into a pantry and tear out the shelves of the much larger room for a bedroom, Ephraim had said:

"Now don't you get in a hurry for changes in the old house, Mandy. Just you hold your horses a while longer and when we build the new house you can have all the pantries you want, and just where you want 'em."

It wouldn't have been nearly so bad, but Ephraim and the boys used the pantry as a storage for all sorts of their things. The top shelves were always filled with tools, bits of board, pieces of wood for ax and hammer handles, oil cans and even parts of their farm tools. Nails, bolts, hooks and staples were everywhere. Back of the door, there hung nearly always an assortment of harness straps and pieces of reins that for some reason or other could not stay at the barn. At any time Mandy was liable to find a hammer or a bottle of horse liniment on one of her lower shelves, where it had been hastily left, for her to put away and produce again at any time of day or night, that it might be wanted.

"Where's the hammer, Mandy?" had long been a familiar demand, and had she not been the peaceable soul she was, there would have been trouble long ago.

That was a busy Spring and Summer for everyone, but by the first of November the new house was practically done. Of course there was the papering and painting to be done, but Mandy would manage to do that somehow before Spring.

Ephraim took no sort of a fancy to stained and varnished woodwork.

"All right for style, mabbe," he said, "but ye can't beat Mandy's paintin' for good hard wear."

For Mandy the Summer had been especially burdensome, and when November came she was tired, as she said, to the very marrow of her bones. Extra help meant extra work for her, and as no one had any time to spend on the garden except to plow it, she had worked early and late, with occasional help from the two boys, when they were not needed by their father. There was but one room really finished to Mandy's satisfaction, and that was her pantry. She had painted what little woodwork there was, a soft yellow. The walls and ceiling she had papered with washable wallpaper of a tile design in green and cream color. The only thing in the little room was an old kitchen table with a white oilcloth cover. It stood at the right of the cupboards, that opened through into the dining room. She had had the carpenter build a lower cupboard under the others for her tins, kettles and such things. But best of all there wasn't a nail or a hook anywhere in sight in the room.

Sometime when Ephraim had purchased the gasoline engine and had put the water into the barn perhaps she would have a sink with the water in the house. She would have it where the old table stood now, and in the dim distance—she hardly dared let herself think of it at all—there would be one of those glorious kitchen cabinets standing in that free space opposite the cupboard. Once, when she and Ephraim had been to town, she had seen one in the window of a furniture store. She had called his attention to it saying that "they must be grand things," but Ephraim had said decidedly:

"They may be all right for style, Mandy, but it strikes me a thing like that would look a lot better in a settin' room than stuck off out of sight in a kitchen."

One day near the middle of November, Mandy received a card from the woman in Constable, who was to weave the new yarn carpet for the parlor, asking her to come, if possible, that week. There was some question about the shading of the wide red stripe that must be settled before she began to weave.

The yarn for that carpet had taken months to prepare and color, and was Mandy's especial pride. She decided to see to it at once and by 10 o'clock the next forenoon, Mandy, driving old Billy, was traveling down the Belmont hills toward Malone with her mind intent on that red stripe.

After she had gone Ephraim thought of a loose plank in Billy's stall, and thinking this would be a good time to mend it, he went to the old house to get his tools. The little house had been left where it stood, a little back and to the right of the new one. In the Spring it would be moved to the barn and the frame used for part of a new cowshed. Ephraim found his hammer, and with some difficulty sorted out some long spikes from an assortment of odds and ends on one of the shelves of the deserted pantry. With both pockets full, he went back to warm up a while before going to the barn.

Standing beside the open oven door he tossed his mittens on the stove shelf to warm and began shifting the spikes so that they would all be in one pocket.

"What in time, did I take so many for," he grumbled, "don't need more'n half as many to fix that stall. Guess I'll lay part of 'em up so 't they won't get lost up 't the barn."

He started for the pantry, pulling them out as he went, but at the door he stopped and stared as if he had seen the room for the first time only. Not a shelf in sight! He went in and opened a cupboard door. The top shelves held the neat stacks of Mandy's best dishes, the lower ones, the everyday dishes, with not a bit of extra space.

He opened the lower cupboard. One shelf, but at one end were the piles of bread and cake tins, and at the other the bluing bottle, a few bars of soap, a box of stove blackening and the cleanser box. Around the sides of the cupboard hung graniteware dishes, and a row of kettles stood on folded papers in the bottom. One other cupboard remained, but here on the lower shelf was the bread jar, the doughnut jar, and the cookie can. On the upper one there were a couple of Mandy's custard pies, a maple-sugar cake and some other eatables. The four small drawers held knives and forks, dish towels and such things.

Ephraim straightened up: "Well, if that wouldn't jest take ye to the fair!" He opened the top cupboard again, carefully deposited the spikes in the top platter of Mandy's best "set," and went back to the oven door to think it over.

"I haven't felt more'n half at home in this new house since 'twas done," he mused, "and I never knew what the trouble was 'til this minute. It's that blamed pantry. Guess I'd better fix it today while she's away an' give her a surprise. Don't see how in time she's got along with it in the shape it's in."

The door opened and the elder boy came in.

"I thought you were going to fix Billy's stall," he said. "I've been waiting for you 'til I got sick of it."

"Billy's stall can wait, Lant," said Ephraim. "I'm going to put the shelves in that pantry today. 'Taint my fault it hasn't been done before, but when I offered to do it, yer ma said 'never mind the shelves' and so I sort of let it hang on."

"But, pa," cried Lant, "she told me she liked it just the way it was and she said we boys have got to——"

"See here," broke in Ephraim, "I saw pantries long before you was born, and I

"SAY, MANDY, JEST GIVE ME THE HAMMER AND A TACK."

know what I'm talking about. That don't look no more like a pantry than I do, an' I'm going to fix it. All you have to do is to step lively and do as yer told. We'll have to work if we get it done before she comes back."

It was nearly four o'clock, and Mandy was nearly home when old Billy, throwing up his head to make his customary dash for home, broke his check rein and went trotting gayly up the driveway with the broken check flying wildly. The pantry was done and they had just finished putting "the things" into it when they saw Mandy drive in.

"There," said Ephraim, "when yer ma once gets the papers on those shelves it will be as slick as a whistle."

Ephraim saw the broken check and hurried out so that he was not there to see the look of utter dismay on Mandy's face when she saw what had been going on. The table had been taken out and placed in the kitchen, and the entire wall space to within two feet of the ceiling and the floor was covered by those detestable shelves. Worst of all, there before her lay the same old collection of tools, nails, bolts and every thing just as it had been before, and left for her to arrange and care for of course. She was just turning away sick to her very soul, when Ephraim came in with a rush.

"Say, Mandy, jest gim me the hammer and a tack and I think I can fix this check rein so's twill be all right." But Mandy turned suddenly into the dining room and went upstairs.

Ephraim stared a minute, and then went to fumble away after the tacks himself.

"Blame the things anyway; he knew he brought them in and put them somewhere. "Queer," he said to himself, "how

(*Concluded on Page* 1163.)

WHEN THEY BUILT THE NEW FARMHOUSE.

Woman and Home

In Prison.

A GOLDEN EAGLE.

I saw him, nobly poised, imprisoned there,
In a poor place, housed in a narrow cage;
That royal spirit, lord of the upper air,
With great wings folded, mute in sullen rage.
And all the luster of the golden noons,
And all the splendor of the scattered stars,
And the fair glory of unclouded moons,
Met in that lightning glance, behind the bars.
Those untamed eyes that answered to the sun,
Now glittering in the dimness, turned on me;
I shall remember till my race is run
The still, proud anguish of that voiceless plea.

THE MONKEYS.

I, who laughed at first at the little solemn sages,
Quaint and smileless creatures, wrinkled as with years,
Felt the sudden weight of the sorrow of the ages—
Saw the weird, small faces through a mist of tears.

A BLACK PANTHER.

In dumb, unwearied protest, to and fro,
He paces, pausing but for food and sleep.
Oh, for a song to voice the hidden woe
Of those wild souls that cannot plead nor weep.

—Marion Couthouy Smith in the Youth's Companion.

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A Little Parable.

I made the cross myself whose weight
Was later laid on me.
This thought is torture as I toil
Up life's steep Calvary.

To think mine own hands drove the nails!
I sang a merry song,
And chose the heaviest wood I had
To build it firm and strong.

If I had guessed—if I had dreamed
Its weight was meant for me,
I should have made a lighter cross
To bear up Calvary.

—Anne Reeve Aldrich.

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"It Can't Be Done."

The man who misses all the fun
Is he who says, "It can't be done!"
In solemn pride he stands aloof
And greets each venture with reproof,
Had he the power, he'd efface
The history of the human race;
We'd have no steam nor trolley cars,
No streets lit by electric stars;
No telegraph nor telephone.
We'd linger in the age of stone,
Where when some keen barbaric brain
Of life's conditions dared complain,
And planned a wheel on which to roll
The load his arms could not control,
Sneers rose from all the mighty crew
That ever scoffs at what is new.
The world would sleep if things were run
By men who say, "It can't be done!"

—Washington Star.

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Home Economics in New Jersey.

ONE thing you may say for New Jersey—when the State goes out to do a thing it is done solidly and well. In educational matters the State takes high rank—particularly in lines of agricultural education. Not showy but sound is the keynote of development in New Jersey. The N. J. Agricultural College is now to organize a department of home economics with Miss M. A. Hauser at the head. A picture of Miss Hauser is shown on this page. Miss Hauser's previous education, training and experience should insure her success in the work in New Jersey. She attended the York Collegiate Institute of York, Pa., and was later graduated from the Pennsylvania State Normal School at Millersville, Pa. Previous to taking up work in college she taught in the rural schools for three years and for six years in the city of York. Subsequently she entered and graduated from the Pennsylvania State College in the course in home economics. Following her junior year at college, she taught home economies in the Summer teachers' session at the institution and was also engaged in this work during the Summer of 1914.

The home economics extension work in New Jersey has not as yet been thoroughly organized, but Miss Hauser plans to coöperate in canning demonstrations and other phases of her work with the women's clubs and rural organizations of the State, and is endeavoring to outline a definite line of action as the work opens up. Miss Hauser took charge September first.

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SOME country girls are taking up the plan of spending their vacation in the city instead of going to some "resort." City people go to the country for a rest and change. Why not the reverse of this plan for the country girl? We have reports from several who worked out this plan with satisfaction. Through the Y. W. C. A. or some similar organization they obtained rooms at a fair price, and took their meals where they pleased—living quietly and without fuss in the great city.

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I SAW an article where some one, L. S., was pestered with bats in the attic. I once lived in a place which was the same, and this is what I did and got rid of them by using twice. I fumigated with sulphur and gave a good cleaning afterward. If the opening is small, make

PROF. M. ANNA HAUSER.

it large enough for them to get out, even if you take out a small window. This is what we did and went outside and the bats were glad to get out; they came out as fast as they could. If they come back give them another dose, this is what we did and were never bothered any more. MRS. J. C.

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IN both France and Germany and also in Belgium, practically all men capable of carrying arms have joined the army. The work at home, and particularly on the farms, is being done by women who are making most remarkable sacrifices for their country. During our Civil War both in New England and in parts of the South, practically every strong man in entire townships went to the front, while the farming and much of the town business was carried on by women. It has ever been both the penalty and the privilege of woman to endure the hardships of war without glory or proper credit.

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WE probably all know people who are guided in their daily conduct very largely by their emotions. It may be joy, affection, grief or hate, but in any event the emotions are not guided by reason or experience but simply turned loose. Leaving action to be guided by the emotions is much like giving the reins to a spirited team and letting them take the road as they will. Many of the sad human failures which come to manhood and womanhood unprepared to take any serious part in the work of life are just the result of leaving the emotions unrestrained in training children. Without restraint and self-denial men and women do far more harm through mistaken kindness than through fair severity.

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THE pupils at a Brooklyn school got out a program to announce their field day events, and hired an agent to obtain local advertising for them. When the program appeared they found the advertisement of a liquor dealer, and a great commotion ensued. Parents, teachers, and all made universal protests against any such advertising in a child's program. This shows the way public sentiment is developing on the liquor questions. Liquor advertising is being steadily driven out of the columns of all reputable newspapers. No worse thing could be done for children than to admit for an instant that the liquor business has any legitimate right in a church or educational program.

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THE young women students of the Kansas Agricultural College are to have a new course of study this Fall. This is a course in costume designing. The teacher will be Miss Nellie Hunt, who has been trained at a fine art school in New York. The object of this study will be to develop what is called a "spirit of individuality in selecting costumes." At the present time a great majority of young women apparently imitate some one they see on the street, or something they see in a shop window when they select a dress. They would often appear to far better advantage if they could show some originality in the selection of hats or dresses, or general costumes, rather than to follow some ordinary style. We think this is the first attempt to teach such things in an agricultural college. If these young women can be taught something of art and good sense in designing their clothing, it would be a good thing.

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THIS is the season when our boys and girls leave us for school or college. It makes a large hole in the home when they go, and we all have the feeling that John and Mary can never be quite the same again. It is something of a speculation, too, for this thing we call "education" may turn our children into masterful men and women, or make them the slaves of habit or what is known as "canned thought." After all, it is the way the child has been brought up that counts and the hold the home has upon him, which will steer him right through college. You can hardly expect to begin the college education now. It should have been started at the cradle. We hope you will read and study the article by Dr. E. H. Jenkins which begins in this issue. It is for you as well as for your children.

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THE Christmas custom of shopping and gift giving is rapidly gaining ground in India. It is not a Christian country, and there is a very small minority of Europeans, yet the Christmas spirit seems to pervade all classes of people. What is known as the "Purdah" system has excluded all high-class Hindoo women from appearing in public. They are not supposed to be viewed by any man except their husbands or their own relatives. This system is now fast breaking down, and such women are visiting the stores either in person or purchasing through their husbands. This Christmas spirit of buying and presenting gifts has its commercial side, for it has greatly increased the demand for a large number of goods. Here is human nature too, for it is the desire to follow the world's prevailing style which has induced these Hindoo women to break out of their "Purdah" system and go shopping.

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LAST month a New England woman wrote about boarding elderly people or invalids. The plan seemed sensible, and it is probable that there are a number of people who would pay a reasonable sum to be cared for. Something like a dozen letters have already come in regard to this plan. One woman wants to obtain some elderly people to board, who will pay her a lump sum at first. She naively says that she needs this money at once, and expects to get it in this way. Just consider the situation a moment. No one would think of sending their relatives or friends to board unless they were entirely satisfied with the conditions. People who solicit such business must expect to give the best of references, and prove their character and capability. Taking the aged or the sick to board is no holiday programme if you do your full duty to the boarders. Unless you are willing to do that it is far better not to try such work. It will be no sinecure or easy job at best, and the friends of your boarder have the right to make the most careful investigation before they make a bargain.

The other side is to be considered too. We have a case where a lawyer and a minister put their old mother out to board with a farmer making a contract to pay him $2 per week! The woman became nearly helpless and her sons repudiated the contract—leaving the farmer with a loss of nearly $100. Thus there are two sides to such a business—for it is a business and not a philanthropic plan.

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THERE is one thing quite sure in New York politics. The question of votes for women is to be submitted to the people. All the political parties have declared in favor of such submission. As things are now the men will decide it. Unquestionably the cause has been gaining ground of late, particularly in the cities. Here in New York City it is now a common thing to see crowds of people gathered at street corners listening to talks by women. These meetings appear to grow larger, and the cause is undoubtedly making converts. Women now have the right to vote in Kansas. We wrote a number of our women readers in Kansas asking for a fair statement. The first reply—typical of others—follows:

My acquaintance is not large, but as far as it goes am sorry to say the women are not much interested in voting, regarding it as a joke. However, I think they will now become more and more interested as time passes. As it is, perhaps they are about as fit to vote as their husbands, as the average man knows little and seems to care less what he is voting for. You must remember this is the most unprogressive part of the State, the southeastern mining district.

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The most encouraging feature of progress in the country today, is the rights of the child. This is the century of the child, and the study of its needs and requirements, so as to safeguard it physically, mentally and morally, has become a science. We are hearing and reading daily of labor and pure food laws, sanitary conditions are demanded where the youth are employed, and all for the betterment of the child in its formative period. It is well for future generations that this is so, for statistics tell us three million children are born every year in the United States, and the trained teachers which are employed annually for the education of the youth exceeds all other professions. Every child is joint heir to all the vast sums of money which is spent, the scientific research constantly going on, the moral safeguarding in city and town which means so much to the youth.

The question in THE R. N.-Y. is, why do employers say: "No children wanted?" We might ask, why should they be wanted? The employee has children of his own to do the little jobs a child can do and as it has been proven many times, two sets of children do not agree very well at all times. The average child is something of an explorer; if not well curbed, he wants to prowl through the barn and test the disposition of the setting hen, and if there is an animal which he is told to leave alone as dangerous, that is the one, like Mother Eve, he wants to get acquainted with, and at a distance to insure his own safety, he likes to prod and throw stones at. Of course cherries, plums and apples are free plunder; they just grow on trees without any labor to anyone, and if there is a reserved garret in the house sacred to relics of by-gone days, why that is just "rubbish" for children to play with and to destroy. That is the dark side of the question, for there are many children who come with the hired man to childless homes and who are well brought up and taught to respect the property of others, and are obedient and industrious, and they are welcomed and thought much of, and grow up to become citizens of the place. The solution of the problem is this: If the home coöperates with the school, church, and the laws, looks as carefully after the company the child keeps, the books they read, sees they are in school every day they are sent, gets in close touch with the growing boy and girl, and spends as much time that way as in feeding and dressing them, they will grow up self-respecting men and women whom the country needs. A. F.

Business

Farm Women As Earners

Beginning a Farm Business.

AFTER my husband died I had visions of a time, perhaps 15 years distant, when my girlie would be ready for high school, our bank account would be gone, and no funds forthcoming with which to pay expenses, unless I could build well for the future. I had formerly been a teacher, but couldn't teach now without leaving my baby. I had no idea of leaving her, and therefore must make a living in my own home. I finally purchased five acres of good level land with a nine-room house, poultry house, etc., and between 50 and 60 bearing apple trees. I knew nothing of the business side of farming so must necessarily go very carefully for I knew I could easily "sink" all I had. It seemed best to devote the first Summer exclusively to studying the business—I won't say learning it, for a lifetime could easily be devoted to that. Practically everything thus far has been experimental, the aim being to get my bearings, as it were, and decide on my work for next year, when my baby will be less trouble and I can get more time to look after details. As she will not be two years old for nearly three months she is pretty small to "farm" with very successfully.

With the object in mind of finding the thing with which I should be most succesful I planted a mixed garden and berry patch, consisting of nearly all common vegetables and berries. I bought less than 500 berry plants, including strawberries, blackberries, red and black raspberries, and gooseberries. I also took care to have as many varieties of each kind as possible for the money invested. My Columbian black raspberries all died, but nearly all the other plants are doing finely, and I expect a fair crop from them next year. Raspberries bring from 15 to 17 cents per quart here, and all berries are usually high all Summer, so we shall put out a good many more next Spring. My immediate profits came as great discoveries are said to do—by accident. I put in two packages of tomato seed with the idea that if I had a money crop that would be the one, but it has been such a poor year for tomatoes that I find myself with a wilderness of vines and worlds of tomatoes, but very few salable ones, though I did sell a few plants, and may sell a few tomatoes later. Peas, however, which were planted in where other seed failed to come, and put out entirely as an afterthought, sold readily for $1.50 per bushel. Right there a valuable lesson was learned. The same time and labor spent on peas instead of tomatoes would bring a hundred times greater profit. Next year there will be about four plantings of peas, about two quarts of seed to each planting, which will give a good succession, and the amount will be about what I can pick and market without help.

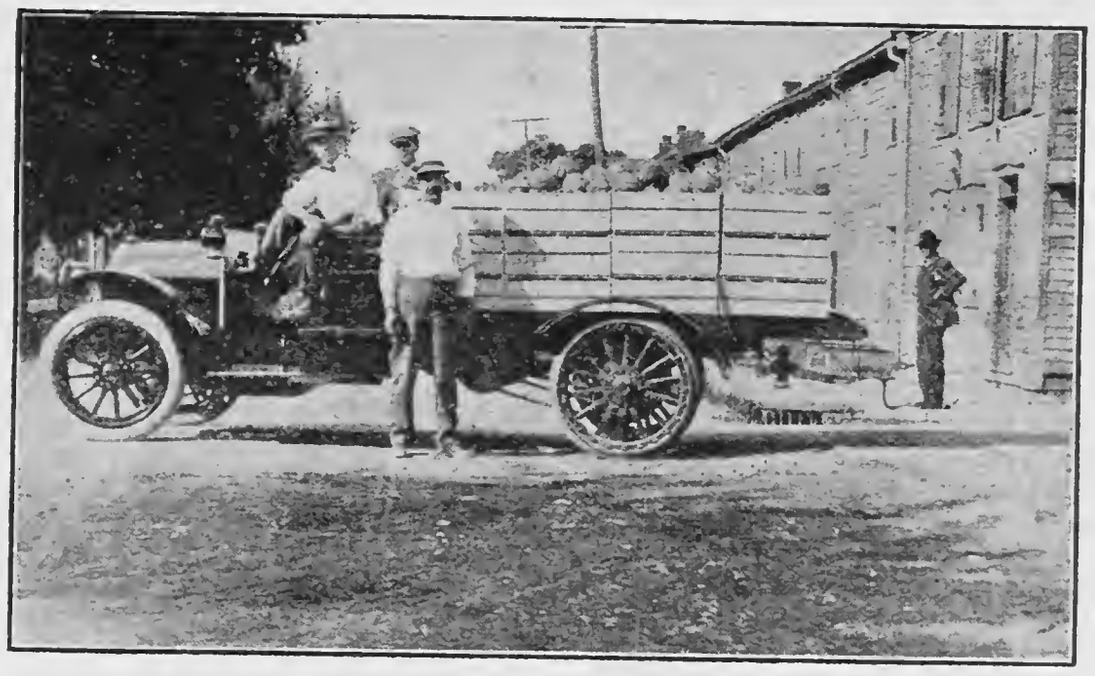
Cucumbers were planted in a waste corner to prevent the weeds from taking possession and these sold for slicers at 20 cents per dozen. I took my baby girl, went to the nearest city and called on a prominent grocer, where I found a ready market for horseradish of which I have plenty. It brings 90 cents per dozen wholesale or 10 cents per bottle retail. After consulting my neighbor, who is a fruit man, I bought 24 new fruit trees—apple, pear, and cherry—direct from a reliable nursery, paying less than $3. Every one grew and is doing nicely. We have more vegetables of all kinds than we shall use, but gardening requires a wheel hoe, and next year one will be added to the equipment of the farm.

Knowing nothing about raising poultry I knew I might easily fail, and the failure *mustn't* be a big one, so I bought 30 day-old chicks and 40 yearling hens. It isn't scientific, I know, to buy old hens, but pullets aren't for sale in Spring or Summer, and would cost $1.50 each if they were, whereas I bought hens at 16 cents per pound, making an average of less than 50 cents each. Even now while they are molting I get a crate of eggs in 11 or 12 days, which bring 28 cents per dozen. From my chicks I raised all but three and have about 18 nice pullets which ought to lay in November, but as a hen has no sense of duty they probably won't. However I have cleared much more on my investment than the bank would have given me, have a comfortable home for myself and my baby ,and have learned lots of things to apply next year. We are four miles from a big Summer resort and 14 miles from a city of 30,000 inhabitants, so our markets are good, but no one could have known less of business than I did. I'm simply feeling my way and learning as I go along.

MRS. E. M. ANDERSON.

A Business in Pickles.

THE Department of Agriculture tells of a woman at Richmond, Virginia, who has made a national reputation putting up and selling pickles. She began in a small way with so fine a product that her goods advertised themselves, and the sales spread all over the country. There is opportunity here for many a farmer's wife and daughter to develop a good business. Many people are exceedingly fond of pickles and sauces, and they will buy them in large quantities where they probably would not purchase the ordinary canned goods. The price of the pickles also is higher than that of canned fruit and vegetables, so that a better price may be charged for them. The farm woman should first practice until she knows how to put up products entirely satisfactory for home use. Having done this, she may look about for her market. A woman who goes into this business must be thoroughly careful, and also be possessed of infinite patience and determination, for it may be a long time before she can hope to establish herself in a permanent business. There is a good opportunity in this, however, for some persistent woman who can make a good product and has the determination to stay by the business until it has been developed. The Department gives some good advice about putting these goods upon the market. The time has come when the farmer's wife can make good use of printers ink and parcel post in developing a business. Such a business would be a benefit to the farm in a number of ways. It will give the farm woman a more independent position, with an income of her own, and what is even better—give her something new to think about. The interest she will take in the development of her business, and the correspondence with distant people, will help her greatly and broaden out her life as well as adding money to her purse.



A BUSINESS AUTO-TRUCK ON A VEGETABLE FARM.

Always Make a Written Contract.

TWO years ago my relative and I decided to go into the poultry business, so we bought the eggs, each paying half. We have built two houses and other things to carry on the business, and in all I have paid for half. In this way I have kept my share of the profits, which I claim as mine, also I claim half the stock. I have done all the chicken work, besides working on the place. I have drawn monthly wages. Now my relative claims that all I am entitled to is my wages. Do I own half the stock and am I entitled to half the profit? I am willing to allow a fair interest on the investment for my share for rent, as he runs the place. If I am right in my claim have I a right to sell half of the stock? There was no written agreement. I never thought that he would not do as we agreed to without having it in writing. He does all the business, handles all the money for the place.

HEN MAN.

R. N.-Y.—Our only reason for airing this sad family trouble is to impress upon our people the need of making a definite written contract whenever they start to do business. Do not trust to verbal agreements or what you think the other party will do. Have it put in writing, using a regular legal form and then you will know just what to expect. In the above mentioned case the relatives ought to get together and divide fairly if they cannot agree. As it is with the misunderstanding a legal battle may be necessary.

What Direct Trade Does.

BEING engaged as a market gardener who sells vegetables, fruit, butter, buttermilk and eggs directly to customers on regular route from a wagon, I give below a memorandum of a load marketed on my one-horse wagon on July 10, this year:

28	heads cabbage at 5c	$1.40
34	cucumbers (slicers) at 5c	1.70
23	bunches onions at 5c	1.15
16	bunches beets at 5c	.80
13	bunches radishes at 5c	.65
15	quarts beans at 10c	1.50
10	quarts peas at 10c	1.00
18	pounds tomatoes at 10c	1.80
15	pounds lettuce at 5c	.75
3	bushels apples at 30c per peck.	3.60
18	pounds butter at 30c	5.40
30	quarts buttermilk at 10c	3.00
26	dozen eggs at 24c	6.24
		$28.99

This was one of the best loads of the season. Loads are taken every day except on Sunday during the Summer, and two days out of the week during Winter. We never use more than one horse unless the roads are bad, when we put a tongue in the wagon for two light horses. The best days for marketing are Friday and Saturday, and the best month in the year is July. In September and October the market is often glutted and prices are low. In March and April we often carry some valuable loads from the greenhouse. The only article in the above load that was forced was the tomatoes, as the outdoor crop had not yet matured. Of course, the above memorandum is nothing remarkable, as it could no doubt be duplicated by many gardeners.

D. L.

Indiana.

The 35-cent Dollar.

AS the following statement concerns the labor of a farmer's wife as well as the labor of hired man and farmer we give it here as sent to us:

56 baskets plums, Damson		$8.60
Express	$4.71	
Commission	86	
		5.57
Net proceeds		$3.03
56 baskets at $25 per M.	$1.40	
Picking, one man one day and board	2.00	
		3.40
Net loss		$0.37

My wife packed the plums and delivered at express office four miles. Where does she get her pay? I have done the pruning, spraying, once for scale and once for curculio, and have to pay the interest at 5% on $100 per acre land. The commission man got his which was perhaps none too much. The express company got theirs, which waas five times too much. The consumer will get his when he buys the plums and sugar and then kick because the farmer is getting rich. He will also kick because the farmer cannot sell wheat at 80 cents per bushel.

Query: Where does the farmer get his?

F. A. SEELEY.

Woman's Work in Business.

A and B, two young men, are about to buy a farm and form a partnership in the raising of chickens and other farm products. A is married and has four children, B is single. A thinks B ought to hire a girl to help with the housework, and that B should pay the girl. B thinks, being the house is run out of the proceeds of the sales before the profit is divided, that the girl should be paid the same way. Will somebody please give us some light on this as to the kind of contract that should be made?

Pennsylvania. F. G. B.

R. N.-Y.—As this has to do with woman's work we will ask some of our women readers to give an opinion. A must remember that if his wife and four children receive their board and lodging out of the partnership arrangement B is helping to pay for it. There are six in A's family to be fed against one in B's. On the other hand, what allowance is made for the work which A's wife performs? Here is a good question for women to discuss. It is probable that A's wife is wise in bringing up this point in the partnership.

Board Near College Town.

WE live in a college town, and thought that through THE R. N.-Y. I might learn of a girl who would appreciate a pleasant home in the country. We are only a half mile from the village and the trolley passes the door. We have good schools here. I should prefer a girl within the ages of nine to 14. I would offer a good home for $4 per week. This includes board and room, also some laundry. She would be required to pick up her room and help some with the work when out of school (meaning Saturday and Sunday). Knowing that there are men who are left with children, who would be glad to pay to have a woman look after their daughter, I thought that THE R. N.-Y. might reach such.

Massachusetts. MRS. A. F. T.

R. N.-Y.—We print this, following our plan of giving in this way the first statement of a suggestion for a new business for farmer's wives. This is something of a new idea. We have had several calls from women who live in college towns and would take young women students to help at housework. There are dozens of ways in which women may help themselves to business or companionship, and we desire to tell our readers about them. We print the first new suggestion—others should go in "Subscribers' Exchange."

An Auto Truck Gardener.

THE picture above is that of a new auto truck recently purchased by one of the most successful truckers in Central Pennsylvania, to haul his crops to market. The man by the side of the truck is Charles M. Smith. Nine years ago this man gave up a job in railroad shops to take up trucking on 10 acres of ground, and to say that he has been successful is putting it mildly. He is the man whose strawberry crop yields $500 an acre. Last year he raised a cantaloupe crop that brought over $800. People who know Mr. Smith and the number of acres of ground that he farms, wonder how he ever gets such immense crops off such a few acres of land. This man is a hustler; he studies everything new in horticulture and agriculture, and he is an authority on these topics. His goods are always in demand, and he is unable at present to supply all the trade that wants his produce. He has taken a course at State College; he has burned the midnight oil many a night studying; he is a good citizen interested in every good move for the interest of his community. His little farm is a model, and every inch of it is being made to yield fine vegetables or fruit. He raises big crops; he is raising a big family, and he is laying money away for a rainy day.

Mifflin County, Pa. E. E. CLAPSBY.

:: The Slender Woman's Hat ::

Good Taste in Head Dress

By Esther A. Cosse

FITTING THE HAT.—Little do large women imagine the difficulty slender women have in selecting their clothes, and they have more trouble with their hats than with any other part of their apparel. All women know that slender people have no trouble in securing articles to make them appear larger, or to make their clothes fit them better, yet, it is impossible to procure anything to make the head look larger, though one can procure extra hair, which will permit a woman to arrange her own hair full about her face, and to use the extra hair for decoration. Some wear it braided and pinned about the head in a coronet, while others prefer different styles. Any of these are suitable for a woman or a girl. The more hair she has the better a hat will fit. This is especially true of the woman approaching middle age, whose hair has started to fall out, and it is necessary to wear it very plain. But if such is the case, don't do it. Send your combings to a hair worker and have it made into either a switch or transformation. This will improve your appearance and cause your hats to be more becoming. Usually a small woman has a small head, and the shapes purchased have often been fitted to the head of a larger woman, in order to make it fit comfortably the average sized head. For the use of such people bands have been invented, but I do not agree with one who might say to use them in all cases where the headsize is too large. Of course, there are cases where it is necessary, but that is rare, and, in most instances there are better and easier remedies.

BANDS AND LINING.—To replace these bands several things can be done. One way which is especially good for the person with thin hair is to take cotton and cover it loosely with a piece of either black or white thin material, depending upon the color of the hat, black if dark; white, if light; sewing it to the crown one inch up from the headsize. The lining is then sewed in and the hat will rest on the cotton band. This should extend part way round for some, while for others, it is necessary to make it large enough to go all around the headsize. If the headsize is too large on either side, or both, and causes the hat to move from one side to the other, especially making it tilt the wrong way on the side carrying the trimming, cotton should be used in a different form. Make one piece two inches long and cover with material to correspond with outside of hat. Tack this outside of lining and to extend low enough to relieve the uncomfortable strain. Sometimes it is necessary to put one in on each side. Have you ever had a hat that when pinned with a hatpin seemed to draw just one or two hairs and if kept on any length of time, would cause headache? Many times I have had that trouble. To change that, rip the drawstring of the lining, and put in a running stitch, but leave it open and let the head slip to the top of the crown. Thus you will need but one good-sized pin, about two inches long to hold it at the back of the head where the hair is thick. This is a simple thing to do, but many would find it would not only make the hat look better, but it would feel very much more comfortable.

SIDE BANDS.—If one wishes to raise the left side it must be done by what we call a side band. This is made from a piece of stiffening, crinoline or buckram. Cut a band eight inches long and two inches wide. Shape it off on the ends, making the lower part round and the part sewed to the hat straight. Wire this all the way around. Pin the band to a double piece of material and cut out, leaving it half an inch larger all the way around; stitch across the bottom; fit to band; and slip stitch it across. Fasten firmly to the left side and side back of hat and trim with ribbon, flowers, or material corresponding with trimming. These bands are used for an under-brim trimming of feathers, such as is shown in illustration. Feathers are sewn firmly to brim and ends in some cases are stuck through brim and those left exposed are covered with a trimming of some description, but very little of it, as it will make the hat too heavy on the left side.

CHOOSING THE HAT.—In selecting a hat the first thing to be considered is the type of features. Is the face round or long? If round, use all round hats and odd shapes with points at different angles might be selected. If the face is long

SIDE TRIMMING OF FEATHERS.

choose long and broad shapes, but avoid angular lines. Trimming for all slender people must not be too tall, especially if the person is tall, and, in that case, it must be very broad. The slender woman has a huge advantage over the large woman in selecting shapes, as practically any odd shape, provided it be on right lines is usually becoming, while the stout woman must wear hats extremely plain, always looking her best in a tailored shape and style of trimming. Furthermore, the slender woman can and does wear fancy hats. By that, I mean, those elaborately trimmed with feathers, or shapes covered with fancy materials, such as lace, maline, chiffon, etc., while the more unfortunate stout sister must adhere to the rules and wear those made very plain, of straw braid, lace or maline, never daring to allow herself the pleasure of wearing a little lace ruffle, or a full trimming of any kind; but must use feather and flower stick-ups, or a trimming of ribbon with a few flowers.

A MODEL HAT.—A hat for a slender woman as shown in illustration No. 2, which I designed especially for a slender woman with a round face, is made of blue straw braid requiring one-half roll of black frame wire and pair of nippers or pinchers to make the following frame: Headsize 25 inches; cross crown nine

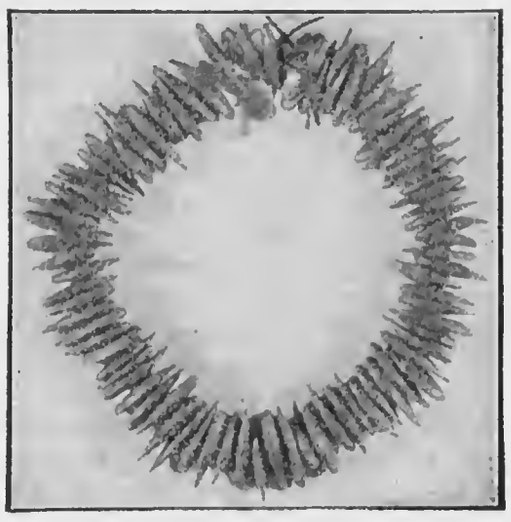
TOQUE OF STRAW BRAID.

inches; side crown 3½ inches; outside 36 inches; second bend 37½ inches; front of coronet ¾-4-5½ inches; left side front, side, side back, right side back, side, side front and back, the same. The coronet is made by bending wires straight up, or in other words in a cuff. In measuring off the brim dimensions, the first measurement is for the brim, the second for straight coronet and the third for the curve which is bent toward the outside. It doesn't mean that where first figures read ¾-4-5 inches, that each bend must be measured separately, but the tape must not be taken from the wire after starting to measure each wire. The distance between three-quarter and four is but 3¼ and 5½ inches but 2¼ inches. The frame is covered with crinoline, fitted smoothly, cutting crinoline to take out plaits wherever they occur; and, as one can see from illustration, the braid runs up and down the brim, but only over the curve. The wreath can be made at home by wiring small pink roses, blue forget-me-nots and small rose foliage, alternately. The crown is not fitted, but top is brought right to brim and sewed below second bend. It is covered with a piece of blue silk then with chiffon of same color, as is the loop made. The wire ear is made, and after sewing up loop on one edge, wire is slipped in and sewed on other edge then attached to the hat. The wreaths, if left long enough to extend upon the loop, adds much to the artistic appearance of shape. If the color is a little trying to the complexion, loop a row of black velvet ribbon, No. 22, around the brim. It is a beautiful hat, and, one making one like it would be very much pleased with it. It is one especially designed for a slender woman of round face, and when making it one would find the shape perfectly round, but it should be bent so it is a trifle longer than wide: To make it one would require:

One half roll frame wire	$ .10
One spool tie wire	.10
One yard crinoline	.10
5 yards braid at 8c	.40
½ yard of silk, 59c	.30
½ yard of chiffon, 59c	.30
2 bunches pink roses, 19c	.38
2 bunches forgetmenots, 15c	.30
2 bunches foliage, 19c	.38
	$2.51

A Melon-Seed Chain.

I WISH to pass on to the children of THE R. N.-Y. family a discovery my 10-year-old daughter made. For a very



MELON-SEED CHAIN.

pretty chain, take muskmelon seeds, wash and spread on paper until partly dry, then, with a needle and double thread string them irregularly until long enough to tie and slip over the head. Then dye any shade desired. We had pink dye in the house and used it, making it look not unlike coral. Children any age enjoy doing this, as we found by interesting the children in our neighborhood. A sample of the chain is shown above.

Conn. MRS. CHARLES TURNER.

"The Woman We Like."

The woman we like feels that a story told to hurt another's feelings or air failings is very bad form so she avoids it herself and discourages it in others.

She is very mindful of the little courtesies to the old, enjoys a laugh with the young and is a good listener as well as interesting conversationalist.

She does not judge people by their clothes but by their actions, yet is not a critic, seeing noble traits of character as readily in the washwoman as in her most fastidious caller.

She is very sympathetic to children, enjoying their joys and helping them through their troubles.

She by these acts brings out the good side of our nature and makes the worst of us, quite companionable so we are lifted up from a lower to a higher plane, and that is why we love her.

Virginia. MRS. J. N. LUDINGTON.

The Rural Patterns.

When ordering patterns give number of pattern and size desired. Price of each pattern, 10 cents.

7608, Housejacket with fitted back; sizes 34 to 44 bust measure. 7607 Kimono with set-in sleeves for misses and small women; sizes 14, 16 and 18 years. 7163, Long or short kimono, small 34 or

36, medium 38 or 40, large 42 or 44. 7595, Child's pointed yoke dress, sizes 1, 2 and 4 years. 7778, Child's tucked and plain guimpe, sizes 2, 4 and 6 years.

8050, Semi-princesse gown, 34 to 42 bust measure. 8369, Gown with long cir-

cular tunic, sizes 34 to 42 bust measure. 8266, Raglan coat, sizes 34 to 44 bust measure. 8283, Boy's blouse, sizes 4, 6 and 8 years. 8291, Infant's set, one size, dress and two petticoats.

7501, Girl's five-gored petticoat, sizes 8, 10 and 12 years. 8043, Child's one-piece nightgown, sizes 2, 4 and 6 years. 7088, Work Apron, sizes 34 to 44 bust measure. 7577, seven-gored petticoat, sizes 22 to 32 waist measure. 7248, Work or studio apron for misses and small women, sizes 14, 16 and 18 years.

From the Home Dressmaker.

FORTUNATE indeed is the woman who can buy new clothes this year, for there is a decided change in both waists, skirts and coats. By having things made in the very latest fashion one will be able to wear them the second season and be perfectly up-to-date; and if necessary, the third season by a little judicious change in the trimming or accessories.

WAIST.—First in importance is the corset, for if the old-fashioned corset, which curves in at the waistline, is used it will be impossible to make a dress or coat look up-to-date for the waist is larger than ever before, so that it is almost a straight line from the arm down to the hip. There are no more "flopping" full waists and sleeves, but the plain, straight basque, opening either down the front or back, this latter being the latest. They are apparently fastened with buttons and buttonholes, but in a great many cases the buttonholes are only simulated, and the fastening is really made with hooks and eyes. In other cases the buttonholes are bound with a contrasting material, as for instance satin, when the dress is of serge or cashmere. Buttons are used on everything, and they are of all kinds and description. Also all kinds of beads and bead trimmings are used even on broadcloth, serges, etc.

BASQUES.—To return to the basques. These are sometimes made separate and other times they are fastened to the skirt. In the latter case very often a narrow sash from four to six inches wide is used and just tied once with long ends hanging down. Plain velvet basques with skirts of other material, though generally of the same color, will be worn, and right here is a chance for the economical woman who has an old velvet or velveteen skirt laid away, for there should be enough in one of them to make one of these basques, for the sleeves could be made of some other material like chiffon, net or satin, and the length of the basque helped out by a broad sash or girdle. The sleeves are generally the long, close-fitting, set-in variety, when of heavy material, and slightly fulled when of net or chiffon; the former being finished with some kind of a cuff and the latter a frill. The new basques are more difficult to make than when basques were in style before, for the reason that the latter were tight and boned, so that if once buttoned they would stay in place but these new basques this year are made with only a thin lining to hang straight from the shoulders *without* any bones at all, but when they are made separate from the skirt weights are used to keep them down. It is needless to say that they must be perfectly cut in the first place to insure their keeping in shape, for they are only semi-fitting and must in no case look tight anywhere, but just as if you were wearing a very comfortable dress that had been made for just you and not for somebody perhaps half a size smaller than you. To be sure clothes should always look like that, and that is the stamp of the first-class tailor or dressmaker, but when things are made fancy or full and "floppy" as they have been for the last few years (I mean the waists in particular) you do not notice readily mistakes in cutting and fitting. The other dominant note about waists is that everything outside of the plain basque has a wide girdle, the newest ones being perfectly plain—that is not wrinkled and crushed—and they start in just below the bust and go down well over the hips.

SKIRTS.—The three or four-gored circular skirt is the newest and I was told by one of the leading New York authorities on dress, that no skirt to be in style this Winter should be less than two and three-quarter yards around. Two of the well-known French houses, it is reported, have made their models four and five yards around. But of course those are rather extreme. If the skirts are made perfectly plain, they usually ripple around the feet, but for a stout person those with side or front plaits stitched down to give a yoke effect and the plaits well pressed are much more becoming. Box plaits of all widths are used on skirts in all sorts of ways, but when the skirt is plaited all around it is made with a plain yoke at the top.

COATS.—The coats are very long and tight fitting until just below the broadest part of the hips when they begin to ripple, being very full at the bottom. Some of the coats reach to within a few inches of the bottom of the dress skirt.

MATERIALS.—Broadcloth is *the* favored material for dresses and suits this Fall, and velvets, velveteens, plush and cashmere and serge will also be used. Plaids and Roman striped materials continue to be very popular, but will probably not last beyond the Spring. Braid has come back into its own again and will be seen on all the new suits and wraps. The favorite is black silk braid, which is often used to bind the revers, collar, cuffs and edges of the coats.

MRS. B. B.

The Scientific Buttonhole.

THIS is the scientific process of making a buttonhole as told by Miss Annabel Turner of the Wisconsin University:

Buttonholes should be worked on the right side of double material, at least one-fourth of an inch from the edge of the garment. The distance between them is regulated by the material and by the size and location of the buttons. The beauty of the buttonhole depends largely upon the straightness of the cut, the regularity of distance between the stitches and the evenness of the stitches in depth. Make buttonholes firm, with a fan at the end receiving the strain, and finish with a bar on the other end. A vertical buttonhole with strain at either end should be finished with a bar at each end. Use thread to correspond with the weight of the material. Let the thread be long enough to work the entire buttonhole.

To make a buttonhole cut a slit the required length through both thicknesses of cloth, being careful to cut between two threads. Knot the thread, insert the needle half an inch above the right end of the slit, bring it out three or four threads below the right end of slit; insert the needle three or four threads below the left end of the slit, bring it out three or four threads above; insert again above the right end, coming out at starting point, three or four threads below the right end of the slit. If the material frays easily the slit should be overcast before attempting to buttonhole. Begin the buttonholing by bringing the needle about half way out at the lower right end just below the long stitch. Throw the double thread from the eye of the needle to the left and under the point of the needle with a circular movement to form a loop; draw the needle through the loop formed and pull up the thread away from you at right angles to the edge of the buttonhole, thus forming a double knot on the edge called a purl. Form the following stitches in the same way, leaving a thread of the cloth between each stitch and bringing the needle out under the same thread of the cloth each time to make the stitches the same length. In making a horizontal buttonhole spread the stitches at the left end in fan shape, continue down the other side, and at the right end make two stitches the length of the width of the buttonhole, drawing the two sides together. Wind the thread spirally around these long stitches until completely covered, carry the thread through to the under side and fasten.

BATHING SUITS IN LOUISIANA.—Having a large family to sew for my pet "saver" is the making of one-piece garments. All gowns, aprons, middies, little boy's suits, princess slips, etc., are made in one-piece patterns; they fit very nicely, are cool, comfortable and best of all pretty. It takes less goods to make them and is an economy of time, strength and money. Another successful experiment of mine this Summer, that I must pass along to the mothers who have plenty of sewing, is, instead of making rompers, a tiresome job, for the little four and six-year-old, buy the little navy blue, sleeveless bathing suits, all in one and let them wear in the mornings. Although miles from a beach, mine are dressed in their bathing suits every morning. They are easily rubbed out in a basin and are fresh and clean without ironing. I bought six at 25 cents each, and the saving in wear and tear, washing and ironing, sewing and mending, health and happiness, has been tenfold. Try this, busy mothers, next Summer, and I am sure the result will prove a delight. MRS. S. P. V.

Patterson, La.

MOTHER: "Gerald, a little bird has just told me that you have been a very naughty boy this afternoon." Gerald: "Don't you believe him, Mummy. I'll bet he's the one that steals our raspberries."—Punch.

Three for $1.00

42A73—Three garments for $1.00. Madam, it is just such bargains as this that have made the "NATIONAL" famous. This bargain offer includes one Dress of cadet blue Plaid Percale trimmed with solid color percale; one Dress of medium grey Striped Outing Flannel trimmed with cadet blue percale; and one cadet blue Chambray Apron. SIZES: 2 to 6 years. Sold only in sets of three—one of each kind and all one size. Order today.

Postpaid, **Three for $1.00**

We Take All the Risk

Don't hesitate to order these bargains from the "NATIONAL," because we take all the risk of your being pleased. We pay all transportation charges and refund your money if you are not satisfied.

12A73—Here is a money-saving opportunity for you—one of Winter's newest and warmest Coats—handsome in appearance and very serviceable—and the "NATIONAL'S" money-saving price is only $4.98. It is a becoming, loose-fitting model of Astrakhan Cloth, with smart raglan sleeves, and the fashionable collar of self-material is trimmed with rich black seal plush. The graceful lapels and deep cuffs are of self-material and large black plush buttons trim the cuffs and effect the closing. Lined throughout with durable sateen. COLORS: black or navy blue, each lined with black sateen; also medium brown lined with self-color sateen. SIZES: 32 to 44 bust; 48 inches long in back. Order this coat today and see for yourself its value.....*Postpaid*, **$4.98**

13A73—Same as 12A73, but made 52 inches long in back.

Postpaid, **$4.98**

1A73—Make this handsome Dress your dress—enjoy its smart style and beauty and becomingness and enjoy the cash saving it offers—for dresses of equal quality are priced at $8.50 elsewhere. Lustrous Satin Messaline is the material used, and dainty cream-white shadow lace is used for the standing collar and vest, the turned-down collar and sleeve frills. Full-length sleeves and girdle of self-material. Invisible front closing. White lawn waist lining; inner belt and shields. Fashionable box-plaited Russian tunic and comfortably wide underskirt on lawn foundation. COLORS: black, navy blue, Copenhagen blue, taupe grey, or medium brown. SIZES: 32 to 46 bust; skirt length 39 to 41 inches, with three-inch basted hem. In ordering, give bust, waist, hip measure and front skirt length. Here's a cash saving of at least $2.50 for you. Order today.....*Postpaid*, **$5.98**

Your money back if you want it

A Glove Bargain

46A73—Value $1.50—our price, $1.00. Very warm and serviceable Gloves of Fleece-Lined Suede. Half-pique sewn and three rows of stitching on back. COLORS: tan, or grey. SIZES: 6 to 8½—in half sizes. Perfect-fitting and very serviceable. Order today.....*Postpaid*, **$1.00**

NATIONAL CLOAK and SUIT CO.

273 WEST 24TH STREET, NEW YORK CITY

Mother's Sewing Room

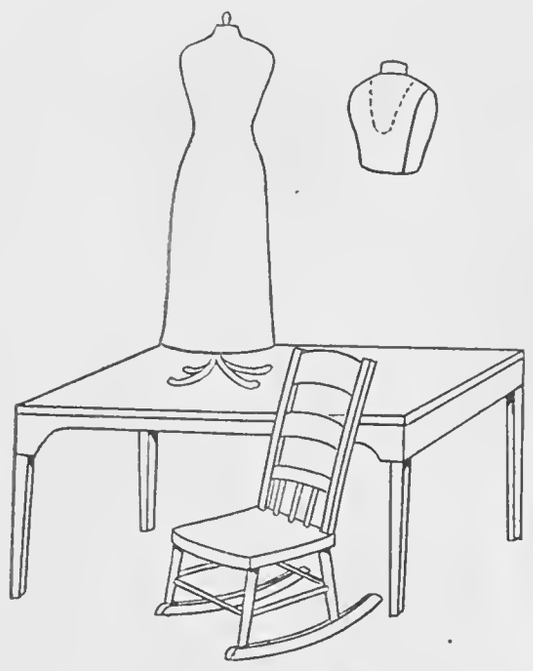
Farm Dressmaker's Work Shop

"By a Farmer's Wife"

PART II.

SHRINKING GOODS.—At first I was quite suspicious of silks and wool goods. However I find that textiles are very much like people—the more durable and better the quality, the more one likes them upon acquaintance. At first when buying woolens I had them shrunk at the tailors, this cost 25 cents, but I soon learned that I could do this at home by wringing two or three old sheets out of water, and spreading upon the floor, then laying the goods out full length upon them, and beginning at one end and rolling up the whole piece and letting it lie over night, possibly longer. I found the goods would be nicely shrunk. I usually press a little under a cloth afterwards. I find it better to shrink all wools and nearly all wash goods before cutting into them. Ginghams and shirtings are put into a tub of water, then hung on the line to dry, after which the cloth is dampened for ironing, this makes a second shrinkage for these before making up.

USE OF PATTERNS.—I always choose the simpler patterns and when about to make a nice dress, usually make a cotton from that pattern first. I am then familiar with it, and find it not only easier



"MARY JANE" THE FORM IN PLACE.

but often can save material. The same waist or skirt patterns are sometimes used several times with variations. I find I can work far more rapidly with the pattern that I have used before. When in doubt concerning anything I often write the editors of the fashion magazines, enclosing a stamped and addressed envelope for reply. I find they are very willing to help me. I judge this by the length of the replies which they send. I have come to do the larger part of my shopping by mail. This is much easier than going to the village and one gets a better assortment by sending to the cities for samples of goods, and especially trimmings, than are usually kept in small places.

BUYING TRIMMINGS.—It is well to send a piece of the goods to be made up to two or three different stores asking for samples of trimmings to match or harmonize; the result will be very satisfactory. In making up a cloth dress, a nice finish is produced by sending a piece of the goods to a merchant tailor and having buttons made to match the dress. These buttons can be had in two styles and any number of sizes. One style is plain and the other has a rubber ring around the outside. These latter in two sizes make a very desirable trimming for a plain heavy goods.

CAREFUL WORK.—In making up almost any goods, it is well to do a generous amount of pressing, and in a heavy wool dress or coat one needs to press, press, press, each step. This gives a neat tailored effect. I am hoping to have a gasoline iron, which will be a great addition to my sewing room equipment. After cutting out the dress I have found it best to baste and fit the waist and get this pretty well done, then putting it on the form a belt is pinned in place and the skirt adjusted to this, after which "Mary Jane" is lifted to the low table where, by taking the sewing chair, I can easily turn the hem. I use different sized spools, according to the length of skirt desired, a large spool for shorter lengths and vice versa. In adjusting darts, I pin them to fit on the right side; after removing from the form the garment is turned and chalked on the wrong side, when the pins can be removed and darts basted in without difficulty. For holding skirts fast to waist, the wide hooks and bars which are used upon the front of men's trousers, are the best of anything I have found as yet. All boys in our family have given me a generous supply from the cast-off garments, but these could undoubtedly be bought from any tailor. Much of the elaborate effect of dresses is produced by a combination of trimmings upon a rather plain foundation. Nothing gives the amateur dressmaker away more than an ill-fitting, loose guimpe or yoke, one that is always pulling out somewhere. To prevent this it is a good plan to make a foundation of white lawn, long enough to come to the bottom of the waist both back and front, where it can be securely fastened with a tape. The yoke material can then be put upon this, the lawn cut away underneath and a lining of thin silk or silk and cotton substituted. A narrow strip of canvas (bias) put underneath facing of the dress insures a smooth fit around the opening and this is where the little snap fasteners are desirable in attaching the dress to this yoke. An easy way to adjust them is to mark both dress and yoke with a piece of chalk. A fresh yoke and perhaps buttons will brighten a dress very perceptibly; that is why it is well to keep some netting and button moulds on hand. Often an old guimpe can be cleaned and retrimmed with very little effort, producing a very pleasing effect.

SMALL DETAILS.—By beginning at one side of a sleeve and stitching across the bottom, then on around and across the bottom again to the other side, one will strengthen the wearing qualities of the sleeve very materially. Another help is to baste where a buttonhole is to be cut and then stitch around it, thus holding the goods in place while working. When sewing on silks, if thin, it is a good plan to put a paper underneath when stitching; this will tear away and it makes the stitching look so much better on the right side. All selvage edges are clipped about two inches apart, this prevents that drawn look sometimes noticed on seams. All braids, taped and finished braids, should be shrunk before using; it is well to do this before they are put away as sometimes one wants only a little piece and that in a hurry. Fine needles should be used for pinning silks, as these leave no mark. Rubber mending tissue, used by tailors to fasten hems around the bottoms of men's trousers, is a very necessary article to keep in hand; 10 cents worth will last a long time for repairing little rents in dresses and coats.

OTHER HELPS.—The fashion magazines print a good many lessons in dressmaking designed especially for the home sewer. These are very helpful; however, I find it necessary to re-read several times before I fully understand their meaning, but it is time well spent. The catalogues issued by many of the city houses are a great help also.

ECONOMY IN APRONS.—Several years ago I had just enough dress ginghams to make seven aprons; these were reinforced underneath across the front, and were used alternately, the clean ones always being placed on the bottom of the pile. These seven aprons lasted three years for constant everyday service, when, much like "The deacon's one hoss shay, which was built in a logical way," they nearly all went to pieces in a day. Then I made another set of seven, this time from a nice quality of shirting (so-called apron gingham is not worth while, as it shrinks and fades so much). This set will soon complete its third year and will last longer than that, as they are all good yet. Reinforcing across the front with the same goods is a great promoter of long life for an apron. I also made an apron of table oilcloth, for dishwashing, the same way as the others; this is one of the best investments I ever made. I always watch for helpful hints in all magazines and papers, finding much that I can appropriate for my personal use, and I trust the reader may have gained a hint or two from this.

FARMER'S WIFE.

My Experience With Wash Goods.

"THAT gingham-veiling-crépy kind of stuff is rather pretty," said the guest as she looked over a fat envelope of samples. Other samples from other cities showed variations of the same goods most in demand this Summer, crépes, voiles and ratines. There were a few

THE YOUNG POTATO GROWER.

samples of tissue, a fabric thicker than batiste and thinner than gingham. What my guest admired was a crépe voile in Copenhagen and white. I much admired a plain ratine in rhubarb pink. One fabric that is very attractive and combines the three popular weaves is a ratine-striped crépe voile. This is not expensive, drapes prettily, but a beautiful gown of it shows a tendency to break close to the ratine stripes. The silk and cotton crépes are the prettiest things I ever saw at 50 cents per yard, so soft and clinging. They seem to wash and wear well. Some of the daintiest old-fashioned patterns are reproduced, such as little stiff bunches of impossible roses.

A whity-brown suiting linen pleased me, the natural color is harsh and white soils so quickly. There was one dainty crépe at only 15 cents per yard, plain white with a tiny blue forget-me-not on it. One weird sample showed stiff lavender roses on a tango ground. In the tissues, at 25 cents, were the prettiest assortment of gray and white, plain gray and black and white fabrics for elderly women I have ever seen. I had no idea it was so hard to get attractive goods in these colors until I spent much time shopping with a dear old lady who wanted a

"MUSIC HATH CHARMS."

waist for everyday housewear. We visited many stores in several places before finding anything passable.

Eden cloth may now be had in good plain colors; it looks like French flannel and washes and irons easily, but shrinks a little, so one must allow for this in the length of skirts. It makes good sailor suits and house dresses for cool weather and costs 15 cents per yard. Serpentine crepe wears finely but stretches out of shape badly. Dresses made of it have to be pulled into shape while drying and skirts need rehanging about every time they are washed. Tissue crepe is pretty and moderately satisfactory; this shrinks in length and gains in breadth with each visit to the tub. Nurse's cloth is an English fabric that one cannot always get. It is yardwide at 50 cents per yard. It does not fade nor shrink and wears forever. There is one exception, the red turns brick color after one washing. For children's cool weather dresses, house gowns and little boy's suits, it cannot be beaten, if you are lucky enough to get it. The real Indian head linene is substantial but very hard to iron at first, as warm as thin wool and never wears out. Linene launders more easily than linen but only imitates the real thing. Percale is very successful in the light colors. In plain white, at 25 cents, it makes very satisfactory blouses. In gray, it makes the most practical and best-wearing kitchen aprons we have ever had. Galatea wears like iron, shrinks a good deal and the outside wears off with hard usage. It is too warm for any but cool days. The prettiest coat and skirt suit I ever had was made of white galatea with a little black stripe. It was known as my "serge" suit and admired by people of wealth. With ripplette, after washing it dries harsh and the ruffled stripe is hard to get clean. Figured crépe is apt to look untidy unless very lightly pressed after washing.

Flaxon is about the daintiest fabric there is for thin goods and wears splendidly. Don't make the mistake of buying wash dresses too small and do try to keep the skirts an even length. It pays to shrink all goods before using. Our method is to pour boiling water over the goods, let stand all night, hang out dripping wet and dry in the shade. The wise woman merely has her lengths of goods put through the family washing, then hung out dripping. Still with all this, some goods will shrink a little the first few washings. Remember that one can often save laundering a thin dress that is only crushed by sponging it lightly on the wrong side with warm water and borax, then pressing it.

If you can't match your dress in canvas shoes, mix a little dye with some of your white dressing and make your white shoes the color you want. Camisole lace can be bought with beading at top and bottom and only needs ribbon matching your dress to be ready to wear. The new V-pins are pretty to wear with V-neck waists, and I like the wide soft suede belts. But the ribbon sautoirs to wear a watch around the neck do not strike my fancy.

EDNA S. KNAPP.

A Coming Potato Grower.

THE picture here shows a little farm boy and a part of his crop of potatoes. Some of the potatoes appear to be almost as large as the boy's head, and we can see how proud the little fellow is of his crop. It is a great thing to have a child interested in work of this kind. No one expects a little fellow to do a full man's work. Many a time he will want to stop and play before the job is done, and unless some one can keep after him in a kindly way, the child will be sure to neglect part of his work or let the weeds grow where the plants ought to be. It is a fine thing to be able to organize the work of these little fellows and get them to feel that they have really accomplished something without being made so tired that they feel that all work is disagreeable. All farm children should do their share of the work, but they should be made to do it in a kindly way, not driven to it like little slaves. This boy looks as though he would make a farmer some day and he is certainly on the right track.

"Music Hath Charms."

THE little picture here shows a pair of musicians who are certainly making fun and making music. This was probably taken after supper, and that is a good time to make music on the farm. The little fellow, who is riding horse on the man's knee is trying to keep up with the music, and while he may not be in time or tune, the chances are that the man would rather hear him play than to listen to the finest musician who ever came across the water from Europe. It is a beautiful thing to have the confidence and the affection of a little child. There really ought to be three broods of children on every farm. Probably the second and third brood would have to be adopted, but many a farmhouse stands cheerless and out of use today because there are no children in it to make music and fill it with joy.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 1065.*)

Nate and Norm had plenty of ideas and plans of work that would keep them busy till Christmas, but on the 30th day of October a little snow fell. It kept on falling from day to day, until the ground was too well covered to make continuous ranging possible for the stock.

Each day the horses and oxen were turned out, and each night they were stabled with comfortable mangers of hay and grain in their feed boxes.

No anxiety was felt, for even the old settlers agreed that they had never seen a snowy Winter. A little flurry now and then, but no heavy falls, and it was prophesied that the snow already accumulated would soon go off, when a thaw should come, which was daily expected. But the snow did not go, nor a thaw come; instead the snow kept falling more and still more. It drifted into the valley space heavily. The chicken coop, built there for shelter, had to be dug out each time it stormed. The hay, too—what little there was—had been stacked as made in the valley plat, and this, too, had to be dug out each time a fresh load was needed.

"If this should keep on," Norm said, breathlessly, resting a moment from his shovelling about the haystack, "I'm wondering where we'll get hay to keep the stock alive through the Winter. I don't see why I hadn't sense enough to put up more. This valley would have fed 50 horses, and the few we have will starve long before Spring."

"I haven't any sense about things like that," Nate admitted. "But I wish we had put up more hay."

"Even if we hadn't burned the straw," Norm wailed. "Last year I looked for Winter, and was ready for it, but no Winter came; and here in November we are covered up with snow, and no sign of a let-up."

"What are we going to do?" Jim Maynard asked one morning, standing near one of Nate's shivering horses. "My critters are half frozen, and I haven't enough hay for them into the bargain. They eat as much again when it's so cold to keep their heat up. I—I'd hate to shoot 'em; but it seems to me I can't stand by and see 'em freeze and starve."

"We haven't half enough hay, either," Norm said, sympathetically, "and we haven't stock enough in the barn to keep it warm. I wonder if we could crowd your stock and ours in together, at night, anyway, and so keep them warm by their own heat." So the livestock were sheltered together, but the hay in the valley dwindled and dwindled away, to such a degree that the oxen were turned out to rustle as best they might, and the hay was doled out to the horses and cow sparingly.

Then came another serious problem. The fuel laid in for Winter had seemed generously adequate in the Fall, but much more fire had been needed than the previous Winter, and the fuel, too, dwindled away rapidly. The climax was reached when Norm came home from a trip to Wetasket after coal, without it. A coal famine was on the land, as well as the hardest Winter ever experienced by the oldest settlers.

"We'll have to bunk in the barn with the cattle or live in the cellar," Nate said cheerfully; and when Norm had gone out to take care of his team, Nate went down into the cellar, which was warm and dry. The shale beneath made it as dry as cement, and Nate, looking into the hole Hank had dug, remembered the stone ovens used by the Dagoes when they were doing railroad work. He believed that he could build a small fire in the hole, which would not only cook the needful food, but also make a sufficient warmth for comfort, for the shale would hold the heat like a vast soapstone footwarmer. Nate took the top off of a small laundry stove—a variety much affected by the early settlers, as giving a maximum of heat and top surface. This he fitted over the smal hole in the cellar, and from the stove top he run a length of pipe to the room above, and thence out through the roof, for this, too, was the only chimney the settlers' cabins had—a length of pipe run through the roof. Nate started a small fire in the little shale pit, and in a few minutes the small cellar was as comfortable as need be, and Nate felt that the fuel problem was solved for the time being, for very little would be needed in this basement kitchen, as he was pleased to call it.

Norm came in growling: "What! no fire and no supper?"

"'Will you walk into my basement, said the cook unto the crowd,'" parodied Nate, and he led the way to the piping hot supper below, laid out on a box, which was spread with a clean paper.

"What dido are you up to now?" inquired Norm, somewhat appeased by the savory odors and the comforting warmth.

"I'm just playing Dago," Nate replied. "I've seen their fire pits a hundred times, and their good sense, too. We can heat this cellar, and it will hold heat for hours and hours and hours."

"You must be a descendant of Robinson Crusoe, for you have a scheme for everything. Now, if you can find some substitute for hay."

But no substitute was found, and the feeding problem loomed large and larger.

"I believe I've scraped up the last forkful of hay," said Norm one morning, as he tossed his pitchfork on to the hay rack on the sleds. "Now we've got to do something. Somebody must have been provident, and somebody must have hay. I'm going to start out and travel till I find some. They ought to be shipping in to Wetasket."

"Couldn't the stock get along with just plenty of grain?" Nate asked with his lack of farming wisdom.

"They must have roughage. But we'd try to keep them alive on grain for awhile if we had to."

"I'll go along, too, then, after I've put a kettle of beans to cook in the pit." In doing this Nate managed to slop a good deal of water, but it only hissed on the hot shale and did not put the fire out. Taking some bread and meat in a paper sack, and buttoning his sheepskin-lined coat up well, Nate was ready when Norm drove up with the team and the hay rack. They made haste but slowly, for the roads were full of snow, and practically unbroken. More than once the shovel was brought into requisition. Inquiries were made all along the way for hay—if the settlers had any, or if they knew where it could be had; but none could be found to sell. Some had enough to pull through and some had not burned their straw, but the majority were about as anxious as were Nate and Norm. Norm went about to livery barns and feed dealers and to farmers, but he found no hay for sale.

"Why don't some blamed money-grabber ship in some hay?" Norm asked in disgust as his last hope failed.

"Why don't they?" cried Nate. "Why don't we? We'll wire Mansfield. He knows all about the country travelling as he does for machinery. He'll tell us where to hunt for hay, and we can ship it in ourselves."

"And we've been worrying over that!" Norm's face lit up with a smile, brighter than it had worn for a great while. So the wire was sent, and the reply came, cheering, inspiring.

When the telegram was at last handed out Nate tore the envelope off and read:

"Hay in Edmonds County. Bale and ship. Good money.

"MANSFIELD, St. Paul, Minn."

"You'd better go, Norm. You are worth a dozen like me." And Norm took the first train to Edmonds County, and travelled until he came to a region abounding in generous haystacks.

"Yes, we've got hay and straw in plenty," one old settler told Norm, "for we've lived in Dakota long enough to know we do have Winter sometimes. This is a new country right here, but I've lived in Dakota for a good many years." So Norm bought and baled hay, and Nate canvassed the country for buyers, until all were supplied.

There was no money in it, for neither one of the boys wanted to make money of people who were just as limited in circumstances as they were themselves. Still the expenses were all paid and the situation saved. When at last enough hay had been shipped, and Norm was ready for home, he felt that he was leaving a place of very pleasant people and much comfort. Still he was glad to get home again, and Nate held a jubilee of welcome for him. The coal famine had lifted, and the rest of the Winter passed uneventfully enough. To be sure, Norm had been absent from his claims for some weeks, and Nate, too, had been absent from his, for he had lived most of that time of coal famine and hay scarcity right in Norm's shack, because it was much better fitted up than was his own, besides being much nearer the stables, while the valley was so filled with the snow the usual access to his own shack had long been blocked and his shanty practically snowed under. Still there was no anxiety regarding the matter, as when the weather moderated the boys shoveled through the snow, and made Nate's habitation possible of access and comfortable to live in. The boys had part of their meals there, and Nate slept there, for the sake of holding his land by actual residence.

With the breaking up of the snow the creek, that had never been more than a rod wide and from four to six feet in depth, began to fill up. But so gradual was the melting of the snow, and so deep had the Winter's fleece drifted into the valley that the water seemed to make little difference in the creek itself, until there suddenly came a warm rain and a rapidly rising temperature.

"If this warmth lasts we shall get into the fields before long," Norm said jubilantly, as he parted from Nate at night.

I can hardly wait," Nate replied joyously. "I'd like to wake up and find the ground bare in the morning."

"Oh, I don't know as that would be as much of a blessing as you think. Better have it thaw slow, and soak the ground, than run in a stream into the valley and creek. Why, there's snow enough now in the valley almost to flood the land if it melted fast."

"And the water has been dribbling in there, too, for days. There's no telling how much water there is beneath that white crust," Nate agreed, quietly. "Well, we'll have to take it as it comes. I can't help but wish the chicken coop was on the top of the bluff, instead of in the low place."

"It has been a good warm place for the Winter, but if the rain holds and the weather is warm to-morrow we will move the chickens to the barn until the danger of the creek overflowing its banks is over."

It was grey morning when Nate awoke and looked out of his small window, to find the snow sodden and black with rot, the whole aspect of the country so changed he hardly recognized it. A strange, sullen, roaring smote his ears, and the noise seemed to grow louder and louder as he listened. Suddenly remembering the prophesy of Norm, and the peril of the chickens, he thrust himself into his overalls and rushed outside, to discover that the creek which had been such a peaceful stream, almost unrippled in its course, was swollen to a roaring torrent. It had overswept its banks by far, and had crept up over the valley in a flooding depth. Nate looked at the sullen darkness of the waters in amazement, and as he watched he saw the chicken coop caught on the swirling tide and swept past him. While Nate stood perplexed on the bank Norm appeared on the other side.

"Our garden patch is getting a good irrigating," Norm shouted above the noise of the waters.

"So are our chickens," Nate shouted back, pointing to the coop careening on the flood. "Get a picket rope," he cried, "get all the rope you can." And while Norm dashed away for the rope, Nate flung off his coat and boots, and cautiously essayed to descend the slippery shale of the high bank. Norm caught sight of him as he disappeared around a curve of the very crooked stream, and he ran swiftly along the bank, keeping Nate well in sight. When he had come abreast of the coop, Nate threw himself into the water, intending to catch hold of it and fasten it with the rope Norm had brought. The force of the stream was much more than he had reckoned for, and he found that his ability for swimming came into no requisition save to keep him in line with the floating coop. This object of his rescue seemed constantly to elude him. The water was icy cold, and Nate was so unpractised in the art of swimming that his chase after an ever-vanishing thing began to wear on him. Norm, running along the bank, saw the suddenly relaxing powers of his comrade, made a slip noose in the rope, and with a wild fling tried to lassoo him, but he had not been quick enough. Without a word, or cry, a sound, Nate went down into the surging, crashing flood. Norm thought wildly of the jutting stones in the bottom of the creek, of the sharp out-cropping of the shale, and he grew sick and faint, but this did not prevent him from flinging off his own coat and boots, and almost as quick as Nate had gone down Norm was in the water, waiting for the reappearance of his friend. But when he did come up it was at such a distance that Norm could not reach him, strong swimmer though he was. Almost he could reach him, almost he could catch and save him, but too late, too late, did his strong arm shoot out to grasp the sinking boy. With a quick indrawing of his breath Norm dashed up the bank; he did not know how he scaled the slippery steep, but he caught the rope he had discarded and crashed down the bank again to the very verge of the boiling water. With straining eyes and suffocating heart he waited, and he prayed—not that Norm knew himself to be praying, but his heart went up in a wild cry of anguish, "Lord, save him! Lord, save him!"

(*Continued next month.*)

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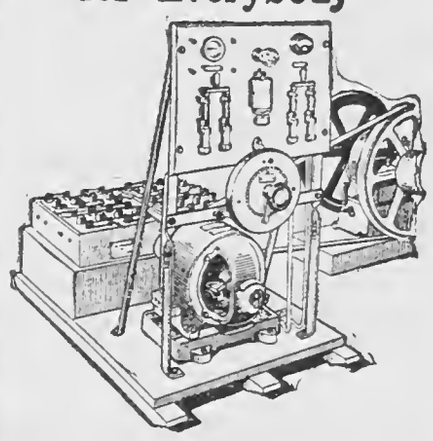

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Economy.

THERE are three meanings commonly applied to the word economy. First, going without; second, using sparingly; and third, using to the best advantage. Transpose the letters of this word into two groups and you have *co-*(with) and *money!* Plainly economy means—with money! Remember there can be no economy where there is nothing to economize. Living from hand to mouth may, in some cases be a necessity, but it is never economy. Many believe that in order to be economical they must be stingy, buying and using only the smallest possible part of the things that would make their lives happier and more complete. There are those who have an abundance of means by which they might enrich their lives and the lives of their family, but through false ideas of economy they save here, there and everywhere, stinting themselves on everything, narrowing their hearts and lives and losing the joy and contentment which might be theirs. A shining contrast to these are the persons who having a limited income lay aside a small portion for the rainy day and use the larger portion for the brightening and ennobling of their own lives, and the lives of others. These are the truly economical people and the truly happy ones.

New York. ETHEL D. MC NICKLE.

The Housekeeper's Creed.

I WILL conserve my own resources of energy and time by having dry mop, duster, brush and dustpan on each floor: having matches and receptacles for burnt ones in each room; having no dirt gatherers under a mistaken ideal of decoration; having pencil and paper in each living room, to save a fleeting thought; having list in kitchen on which to jot articles to be bought, things to be attended to later, et cetera; having plenty of soft paper at hand in kitchen for wiping out greasy dishes, for lamps, and so on. The paper will do for lighting fires too.

Putting my dishes away so that in order to get one I do not have to lift or move two or three.

I will hang clothes on line to dry smooth, and will fold, when dampened by dew, as taken from line. Those that are not to be ironed I will take from the line while dry in the sun and put away.

I will sort clothes on the horse as I iron, and keep those needing mending by themselves. This saves one handling.

Will keep white and colored buttons in separate boxes with threaded needle and thimble in each box. This is a great convenience.

Will put my spools of thread away number side up.

Will label every box and bag as to contents, from attic to cellar.

So far as possible will follow the same order each day in doing the duties of the day. The time thus saved will be spent in reading, music, or resting and thus preserve my disposition from being frayed by nervous strain. So shall I "serve with joyfulness and with gladness of heart for the abundance of all things, as the Lord thy God" directed. DORA MORRELL.

Maryland.

Moving Made Easy.

EVERY Spring and Fall a large percentage of our "great American family" undergo what is frequently called the "agony of moving." Whether this moving is simply from flat to flat in the city, or from farm to farm in the country, the hard work and discomfort are much the same. But moving may be greatly simplified if you will try this "work reducer." Instead of getting all the furniture into a jumble in the old house, and moving it helter skelter only to leave it in wild disarray in the downstairs room of the new home, use this orderly method: On each door of the new house tack or paste a good-sized number, as No. 1, living room; No. 2 on the dining room door, etc. Then before mixing up the furniture which is to be moved from the old house paste or tie a numbered tag on each piece. All living room furniture will be No. 1 and will be placed in Room 1 in the new house; dining room furniture will be numbered 2 and placed accordingly. With this method each article will "arrive" in the right room and will therefore only need arranging. If the numbers are pasted on

Household Management

Head Work to Save Steps

use a flour paste so that the paper can be easily removed from the woodwork by using hot water. MRS. G. O. VOLOVIC.

New York.

Saving in Time.

Many women waste hours in churning; in Summer the temperature is too high and Winter too low for the cream. We have learned to avoid this waste of time by using a dairy thermometer and thus have the cream just the right temperature before operating the churn.

When making lye hominy we always use the washboard for rubbing the black end off the corn, but having a brass board this year we used the horseradish grater and found the work was accomplished in less time. A food chopper will grind a pint of horseradish in a fraction of the time it takes to do this work with the grater.

When time is lost in hunting the work gloves sew a brass ring in the wrist and hang on a hook when not in use.

A cup of kerosene in a pail of hot soapsuds will save time when washing windows, walls or floors. Dirty overalls, wristbands and other articles that require extra rubbing can be quickly cleaned with a five-cent vegetable brush. The brush is also a time saver in washing all kinds of vegetables and dairy utensils. When getting a meal put a pan of hot soapsuds in a convenient place and wash every utensil when used.

It often saves time to make the pie crust the day before using and when chilled it is even better. Baking powder biscuits can also be chilled.

Dustless dust cloths and mops save much time as no dust is scattered. They can be made at home by soaking a flannel cloth in paraffin oil over night, then hang out to dry. These can be washed many times in hot soap suds without fresh oil. Equal parts of coal oil and turpentine also make good dustless dusters.

To save time on washday without injuring the clothes the following recipe needs only a trial to convince even the most skeptical. One ounce of powdered ammonia, one ounce of powdered borax, one ounce of salts of tartar, one pound of potash to one gallon of water. Place in a jug and use one half cupful to nine gallons of water for white clothes, boil 20 minutes, rinse well and only badly soiled articles will need rubbing. After white clothes boil towels, etc. This water will not fade the colored clothes. Neither will it injure any fabric or the hands. The ounce of powdered borax is often omitted as the other ingredients are sufficient for the purpose. M. C. B.

SOUND MANAGEMENT IN THE SCHOOLROOM.

THE BATHROOM IN THE FARMHOUSE.—If it is impossible for you to have a modern bathroom in your farmhouse at present, then do the next best thing. Just set aside a room wherein each one in the house can wash the entire body at least once a week. If you can't get water piped into it perhaps you can get drainage for water out of it. When necessary you can do without either, but a tub you must have. An enameled tub new or secondhand is best, but tin will do or even a wash tub. Be sure to have a stove in the bathroom. If the room is small perhaps an oil stove will do. With a warm room and plenty of water the bath will become a pleasure. It is well to have the bathroom as near the kitchen as possible, so as to be close to the hot water. It can then be used for the hand washing room so necessary to men on the farm. The walls may be painted or enameled some desirable color, and table oil cloth placed where the splatter comes.

Nebraska. MRS. A. B. WALKER.

CHEAP KINDLING.—We have solved the kindling question by putting into operation a plan which at once includes economy and tidiness; it is by making burnt match sticks kindle our fires. We use a number of matches, for various things, and while keeping them off the floor, out of the waste basket and places where they might otherwise kindle an unwelcome fire, we accumulate them and make a proper use of them. Underneath or beside each match safe in the house we have a tin receptacle into which the burnt match, after we have taken the precaution of seeing that the fire is extinct, is placed. About once a week some one makes the rounds and empties each tin box; the match sticks being placed in a paper bag and tied with string. This bag of kindling is then put into a larger tin box for safe keeping. In making a fire progress is enhanced by having one or two of these bags of match sticks as a starter. A. P. W.

Farm Women's Problems.

ONE of the problems of a farmer's wife is to find the time to do many things she would be glad to. Truly I cannot think of any special problems we have. I was brought up in a small village, in Vermont, then lived for five years in a small city, then for three years in Boston, where I found the other half, a city man born and bred. We left the city 19 years ago for the farm up here in the Vermont mountains, and I have never regretted coming. We have both poor health, had when we left there, but so much better than we would have been in the city. A farm is the place to bring up boys. We have had many losses, but none of our family. So our greatest problem is how to escape such losses, when they come so suddenly there is no escape. Truly I think the same problems confront village and city women, even harder than farmers. Giving health, wisdom to do the right thing at the right time, and our fair share of the ever needful (which THE R. N.-Y. is trying to get for us) and in my own private opinion there is no place like a farm. We are near a village, good library, schools (there is my greatest problem; I wish the schools were different, but as they suit the rest I suppose my say would have little weight) telephones, auto's, all the "city comforts" in fact why should we complain? MRS. W. H. L.

Vermont.

"WHAT in my judgment do the farm women in our neighborhood most need?" I should say first, and foremost they should read more, or take more of the leading women's magazines, or THE R. N.-Y., all of which give in recipes, ways and means of cooking and serving everyday foods and their values, which so many women do not know how to cook and serve in a palatable way. All around us here, some have hot biscuits, coffee ham or bacon and pies every day through the Summer, hardly ever have much of a garden, because the men haven't the time to make garden as it should be, as it takes constant work, which is too much on women. By far the most important means to get farmers' wives out of the old rut is to make the men over entirely, so they may see women's needs in the way of conveniences, in kitchen, bathroom, running water in house and washhouse, etc. Then again "Uncle Sam" might do well sending, or having a teacher, where needed in neighborhood, teaching farmers' wives how to make good bread and cooking the proper foods which must nourish the women, children and men. Lots and lots of them do not know how to make bread, and buy baker's bread, not knowing of its little food value. I have asked many of them why not make their own whole-wheat bread: they would say "Oh, I can't make bread." If they only knew that in eating or having their families eat whole-wheat bread every day, there would be less doctor's bills! By far what is most needed is that they read more, many of them not having a single magazine or paper coming into the home.

Missouri. MRS. K.

SEVERAL things come up to perplex us here, and the most alarming thing seems to be the scarcity, of domestic help. My idea of this is that the complicated ways of living will have to be simplified and that if a crusade is made against this and we can be helped to systematize and simplify our housekeeping operations, one great step has been made. We, as a class, do not understand food values, nor do we practice sanitation as thoroughly as we should. We do not give enough attention to ventilation, particularly in bedrooms during cold weather. Personally, domestic help and food values are my troublesome questions. We live on a large farm and I have three and four men to cook for, making a family of five or six; a large house to care for and am not very strong. I put out washing and ironing, buy bread and yet can't do it alone more than half the time. Help at $5 per week seems a luxury not desired. I know there should be some more satisfactory way. If there were a crusade against this complex system of housekeeping it seems to me it would be of general benefit to the great army of farm women. MRS. B. L. C.

Ohio.

That Pantry of Mandy's

(Continued from page 1155)

Mandy flopped off so sudden, but it's that everlasting carpet; funny thing how a woman, once she gets carpet on the brain, can't seem to think of nothing else until it's home and tacked down."

As Mandy changed her dress her mind was one wild jumble.

"Tacks!" she cried. "I don't know where they are, and I don't want to know."

It was some time before she came down, but they were at the barn doing chores so she set about getting supper. Her mind was as busy as her hands, and once she almost smiled. One thing was certain; she wasn't going to give up a dream of years without a struggle.

"How do you like yer pantry, Mandy?" asked Ephraim later, as he sat down to a steaming supper. "I sort of finished it for you today."

"I see you did," said Mandy calmly and Ephraim never noticed.

The next day Ephraim had to take a load of hay to Chateaugay, and it would be mid-afternoon before they were back. Lant was going with his father. Mandy hurried the younger boy off to school, waited impatiently until the load of hay went down the road, then she fairly flew at the pantry.

In the depths of her soul she longed for an ax, but she knew she would do more effective work with the despised hammer. She began by carrying back to the old house all the old truck that had been piled on the shelves. The top shelf was the worst of course; it was hard to reach and Ephraim had put the knives of his mowing machine up there so that they would not rust. Every little while she would stop and pull a paper clipping out from the pile of tools and lay it carefully aside. She longed to lift the lid of the stove and tuck them all in but she knew she might as well burn the insurance papers. In every case they were farm paper clippings. When the last harness buckle was out she began on the shelves and long before the last nail was pulled, Mandy was almost too tired to stand. It was after two o'clock when the job was done. Her pretty new paper was ruined and the wall was jabbed full of holes, but there was a look of grim satisfaction on Mandy's face as she cleared things up.

At half past three she saw them coming down the road, and as they came up the driveway she saw Billy's check rein swinging again, and an amused smile lighted up her tired face.

"Guess Ephraim's tacks didn't hold," she mused.

Leaving Lant to unharness the team, Ephraim yanked off Billy's bridle and started for the house. Mandy saw him coming and knew just what he would say when he came in. She also knew just what her answer would be. Taking up the last magazine she was apparently deep in it when Ephraim suddenly opened the door.

"Gimme the hammer and a couple of rivets, Mandy, and I'll fix this check rein so's it 'll stay this time."

"You'll find them out in the old pantry—in the old house, Ephraim—that's where they belong and where they stay hereafter."

Ephraim stared at her a moment and then marched to the new pantry door and looked in. His shelves were gone and all the truck which he had so carefully laid away had disappeared.

"Why Mandy—where's the pantry?"

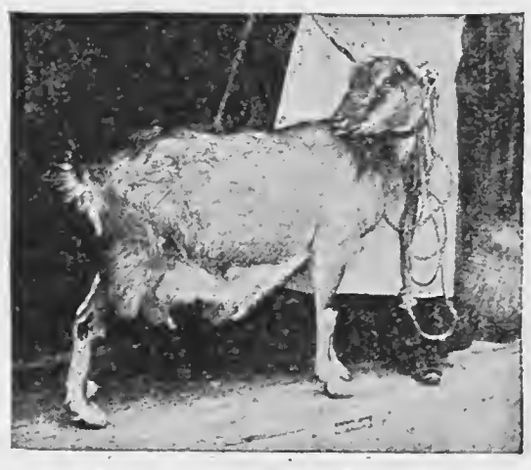
"It's right there where I want it. It belongs to me, or ought to. I've struck for my own pantry—to have it just as I want it. That's my right the same as you have the barn to suit you. If you bring that stuff in here again I'll just take it right out again!"

Mandy wasn't angry, it was just cold, justified assertion of a household right, and as Ephraim looked at her he saw Mandy at last meant business. Ephraim was at heart a just man and he knew Mandy. He stood holding the bridle in his hand.

"Why, Mandy, I didn't know you was so set on havin' things your own way! That ain't no way to have a pantry fixed up, but if it suits you—well let it go for now."

Producing Goat's Milk.

A USEFUL farm lady is shown in the picture. This is the milch goat, Jennie, belonging to Mrs. C. B. Dreyer. This goat is four years old and gave three quarts of milk a day when fresh. This milk analyzed 5.8% fat, and 9.6% solids not fat, and total solids 15.46. Jennie gave two quarts a day, four months after she was fresh. She is not a purebred goat, but what we would call among cows a grade, probably a mixture of several of the definite pure breeds, but she is a good one and above the average as a milch goat. It is evident that great interest is being taken in goat breeding. Several of our women readers have started good flocks and are doing a fair business in selling the milk. It has a fair sale as food for invalids, and where its qualities are known, it commands a high price. In almost any city or town the better class of physicians would prescribe goats' milk for certain diseases, if they were sure of obtaining a stated supply. The



"JENNIE" THE MILCH GOAT.

business seems to offer a fair opportunity for some farm women to establish a good business, but it would not pay to breed goats except in places where a constant demand for the milk can be created, but there is unquestionably a good call for milch goats of fair quality. Every year we have 50 or more letters from our people who want to buy such a goat, and it is almost impossible to find good animals for them. A business of this kind would seem to be especially adapted to farm women who have made a success of raising sheep or calves.

Canning Pork and Beef.

WHILE in attendance at the Ohio State Fair at Columbus last week my husband subscribed for your paper. On looking over our sample copy almost the first article I read was H. A. E.'s question about canning meat. Now I am very proud of my success in the canning of both pork and beef. I can the strip of tender loin which is found down both sides of backbone as well as hams, shoulder and sides. Cut in slices convenient to pack in cans, salt and pepper as for immediate table use. Having cans sterilized and tested to know that lids are all right I begin packing into glass quart cans, using a round ended stick—I use the top sawed from an old broom handle—to pack the pieces in as tightly as possible. I always use small bits to fill in the chinks. When I have eight or 10 cans filled I put *old* rubbers on and place lids on cans so they will hold, but not real tight, put a board in bottom of washboiler, place cans on that and then fill with cold water until almost up to ring or top. Place on stove and from the time water begins to boil I keep at the boiling point one hour for pork and two hours for beef. The age of the beef may call for a half hour longer. When the time is up, draw boiler to back of stove, with a cloth remove cans from water. This is the only unpleasant part to me, for the cans are very hot. Take off tops, remove old rubbers, replace with new and tighten lids as one would for anything else to be kept airtght. This will keep until used; one year or two. The juices are all retained in a jelly-like form around the meat.

The pork I have always prepared for the table by browning in butter or lard, then making a milk gravy to which one must add the jelly-like juice. This is certainly an excellent meat dish. The beef can be used in the same way, substituting water for milk, or more water may be added and a stew with dumplings or biscuit prepared. One reason this way of canning beef appeals to the housewife is that no matter how old the animal is if boiled sufficiently it comes out as tender as that of a yearling, and in fact from experience I believe the older the animal the better the jelly-like juice will be. be.

So to H. A. E.'s questions I would say fresh pork can be canned. It is better boiled directly in the cans, no water touching it, glass cans to be used. It will keep through warm weather in a cool cellar. I want to add that the juices from the meat will not fill the can, but that does not matter; the meat not covered will be just as good as that at the bottom of can. As butchering season approaches I do hope this will be of benefit to many housewives as it has been to me. KATH. C. WIVEL.

Ohio.

Pack sausage seasoned as for the table, tight in tin cans, then put cans without lids in a bread pan in the oven, so the grease will not run out on the oven floor. Cook three to four hours, or until a brown skim comes on the top of the gravy in the can. Take out, be sure to wipe all the grease off the top of the can, put on the lids and seal. On opening, cut the bottom of the can out, and your sausage will come out in a nice roll ready for use. The fat around it is fine for frying and the jelly makes nice seasoning for an omelet. MRS. E. C. K.

Take lean meat for canning, leaving a small portion of fat on some of the meat, and cut into pieces just small enough to go in a quart glass jar. First put one teaspoonful of salt and a little pepper in the bottom of the jar, then put in the meat, pressing it down until the jar is full. Do *not* add any water, lard, or stock, for the meat itself makes stock in jar while cooking. Now put on the covers, but do not screw tightly, then put the jars in a boiler with warm water enough to come half way up the jars. Let it come to a boil and boil for about two hours. Take out jars, screw the covers down tight, put back into the boiler and completely cover them with hot, or better, boiling water, and boil two hours longer. Take boiler from stove, letting jars remain in water until cool enough to handle. Take out and see that the tops are all tight. When cold put away in a cool cellar and the meat will keep indefinitely. This process has been used in my family for 20 years, and has always been found to be perfectly satisfactory and a great convenience when unexpected guests arrive.

New York. JESSIE W. RUST.

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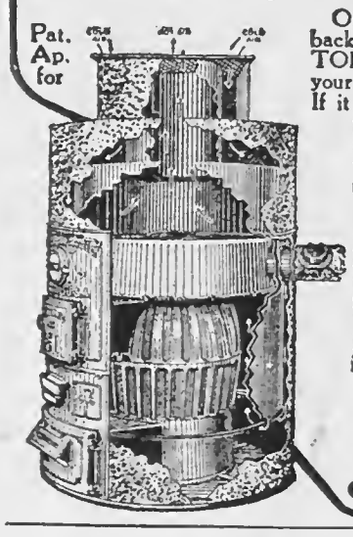

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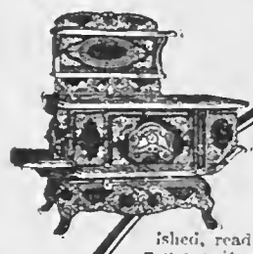

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THE RURAL NEW-YORKER, 333 W. 30th St., NEW YORK CITY

A Boy Wanted.

HERE is another problem which appeals to many country people. Possibly some reader can help solve it.

For the last three years we have been reading about the redheads. I suppose you have none to spare. We haven't any —i.e., boys. Providence has sent us two girls, but we cannot look forward to their being farmers when the wife and I are too old to continue active farm work. We dislike to consider the possibility of being compelled to sell the farm and move to town. I wonder if any of THE R. N.-Y. readers know a redhead or a towhead who needs a good comfortable home? We are not rich, but we have a good farm, make a fair living and hope to educate our children and that includes the boy. G. B. P.

Pennsylvania.

A Bunch of Suggestions.

THE old theory that baking powder mixtures must be baked at once has been abolished. A cake may be mixed, put into the pan and put into a cold place, if it is not convenient to bake it immediately. The action of baking powder is not immediate and very slight in a cold place.

Bayberry candles are quite difficult to make. Still one loves the odor of bayberries. Here is something new and easy to make of bayberries. Put the berries in a flat little bag and use these bags in place of ironing wax. The scent when the iron passes over this little bag is very pleasing.

Lettuce which has been pulled by the roots may be kept fresh a long time by placing the roots in water.

A CONTRIBUTOR.

Lost: Ten Minutes.

CUSTOMER: "Milk five cents a pint and 10 cents a quart! How outrageous! You country people must all be rolling in money. Isn't there any limit?"

Dairyman (apologetically): "Well, our milk is clean. We hire high-priced help and try to handle it right. Then our feed is higher than it was last year. Pastures are dry, and the price of everything is high."

Customer: "Indeed! Now what I say is, why don't you farmers raise your feed and not all the time complain of high prices?"

Dairyman: "We have to let the mill man make the bran, madam, and the other mill feeds, while cottonseed don't grow in Kentucky, so we can't make the meal."

Customer (very knowingly): "Yes, but there's substitutes and all the papers say there are bumper crops. So why do you feel obliged to charge *me* 10 cents a quart for the same milk I can't see."

Dairyman: "The bumper crop report, Mrs. Smith, is to induce the farmer to sell cheap. The fact is there's very little hay in the country. And we barely make expenses."

Customer: "Oh, the same old story. All I say is, and I say it again, you ought to raise your own feed and your expenses wouldn't be so much."

Dairyman: "If we do raise it ourselves, Madam, it is worth the market price just the same. May I have the week's collection of bottles? I am half an hour behind now?"

IDA EARLE FOWLER.

Unfermented Grape Juice.

WITHIN the past few years the use of unfermented grape juice has increased to a great extent, and it is probable that since Secretary Bryan has set the seal of his approval upon the use of it, it will be even more popular. It is invaluable in the case of fevers, and is considered by physicians to be one of the best of tonics, especially in cases of nervous prostration and after surgical operations or a debilitated condition of the system, especially for anæmic children. I often put a small bottle in my little daughter's lunch pail, and it always pleases. I have had so many requests from strangers as well as my friends, for my recipe, that I wondered if the Rural sisters would be interested in my way of making it. If you want a clear, bright crimson juice, use the grapes before they are fully ripe, grapes that are entirely ripe will give a purple color and a different flavor. I like a mixture of purple and white grapes, not too ripe, this gives a good color and a fine flavor. Pick the grapes from the stems, being careful not to use any green ones, wash, and place in an aluminum or porcelain lined kettle, cover with boiling water and cook until soft, so the seeds will separate readily from the pulp, mash with a wire potato masher, and place in a jelly bag to drain. Do not squeeze the juice out, but hang on a nail to drain. If you wish to get as much as possible from your fruit, after most of the juice has drained from the pulp, it can be put through a sieve, and the seeds and skins removed from the pulp, sugar can then be added, and all cooked until thick, and this makes an excellent marmalade. Place the clear juice in a clean aluminum or porcelain lined kettle, add about a cupful of sugar to each quart of juice, some tastes like it sweeter than others, and if the grapes are very ripe it will require less sugar than when they first ripen. Bring quickly to the boiling point, skim, and put immediately in sterilized cans, being careful to fill the can slowly at first and shake the hot juice up onto the sides of the can, as the cans break much more readily than with canned fruit. Seal quickly and you will seldom have a can work or mold. I usually fill all the bottles I can get, to give away, as a bottle of grape juice seems to be appreciated more than almost anything I can give to a sick friend. I have the bottles clean, dry and hot when I fill them, though I never feel quite as certain of their keeping perfectly as I do that put in cans, though I use new corks and push the cork as far as possible into the neck of the bottle, then cover with paraffin or sealing wax.

Michigan. CLAUDIA BETTS.

DOWN in a Southern mission school was a young Northern teacher who was over-anxious for her share of what good things there were. "A little of the escalloped potato, I *like* the brown top, please," she would say. "It is strange how the brown part of her helping always slid off the spoon," remarked the principal in speaking of the incident.

POISON IVY AND ANTS.—W. B. W. inquires how to rid a place of poison ivy. I succeeded in clearing a badly infested place by allowing cows to graze where it grew. The cows seemed to relish it and no bad results were noted. If R. D. U. will sprinkle tartar emetic mixed with sugar wherever ants congregate, whether indors or out, it will surely eradicate them. In some cases it may be well to add sweetened water in dishes, placed on shelves in pantries, but I prefer the dry method. In either case it is a certain remedy for the pests. It must and roses and clove pinks. The sun is shining and the birds are singing, and every day for a whole week I've been well enough to get outdoors to sit on the lawn seat near the back door. For several weeks I haven't had strength enough to. S.

PAINTING BLINDS.—Father has been painting blinds, a job he has not attempted for 40 years. The first one took him 55 minutes, and he said it made his back ache to stoop so many times to dip his paint brush into the pail on the ground. I suggested a board across the horses where he put the blind. The second blind he did in half an hour. S.

COOK BOOKS.—That bit about cooking recipes in paper was very good. Do you know a single woman who ever uses the average recipe in the average paper? I don't, although we have used a number from THE R. N.-Y. The best and most practical cook book for the country home that I ever saw is one that cost a quarter and was got out by the ladies of a little church in this State. It is just the daily recipes they use, and the things they need to know, with a few dainty desserts added by the minister's wife. A college woman, who is companion housekeeper in an exclusive Summer resort took that book with her as the only one she would need. K.

DESTROYING MICE.—Regarding the cat and mouse article on page 927, would say a mound of concentrated lye placed in a shallow dish, such as a tea saucer, hollowed out at the top and a little molasses in the hollow is a good rat and mouse trap. They get enough lye in eating the molasses to kill them. Care must be taken that cats and chickens do not have access to it. To purify stale cistern water tie a pail to a rope, till it with water and churn or plunge it up and down in the cistern for a few minutes. H. H.

Michigan.

:: "Short Stories" ::

WE WANT

A great many things. Some of them may have to wait for slow growth, but not all. Here are two of these things which we expect to have on time:

A Good Thanksgiving Story!
A Fine Christmas Story!

Do not spend time tracing out nice distinctions between "good" and "fine." We want the best stories possible. One is to be printed in our Thanksgiving number—the other at Christmas. We want stories of farm life—the best of farm life—and we prefer to have them written by farm people. We will pay a fair price for a suitable story.

Do Not Make It Long

It should be from 1,000 to 2,500 words, boiled down, suggestive, strong and true to life. The Thanksgiving story should be here by November 1 anyway. The invitation is to all, but we should prefer to have the story right out of the heart of some farm woman to whom life has given, through experience, the true Thanksgiving and Christmas spirit. Of course we cannot agree to use all the stories which may be sent us. Those not found suitable will be promptly returned. Now, let the story writers put on their thinking caps and see what they can do.

THE INVALID.—My neighbor's oatfield is full of wild mustard, and it irritates me to see it there. Yet I can look above it to the blue sky, or beyond it to the pine grove, or at the roses in our garden. Out of doors is sweet now with pine odor be remembered this is poisonous, and must be placed out of reach of children. Five cents worth cleared my house of them in one season, and they were very numerous. R. H. S.

Connecticut.

SWEEPING COMPOUND.—My grandmother used to save all her tea-leaves from one sweeping day to the next and then wet them, and either pressed out superfluous water or else allowed them to drain for a few moments in a strainer. She then sprinkled them over the carpets to be swept and they certainly made the carpet look a great deal brighter as well as prevented a great deal of dust rising in the air to settle on the furniture, which necessitated more work in dusting. F. B. T.

AUTOGRAPH ADDRESS BOOK.—Something new has come to me recently, an autograph address book. It is something on the line of the old autograph album, but has several spaces on its daintily decorated pages, and you write your name so it will give your correct address, as Miss Mary Strong, 341 Essex street, Boston. There is an attractive verse on the cover. S.

"THE MISERABLE COCKROACH."—Some years ago our house became infested with them to such an extent we almost had to leave. I asked an old storekeeper if he knew a remedy. He said he surely did; that they had them in their store once, and after trying many things tried scattering borax about their shelves and on floor or wherever they went, and they left. We used it; they went for us also and at once. The remedy is clean, sanitary and will harm nothing. W. W., JR.

ABOUT BANANAS.—Strawberries and bananas are good together. Try them for a shortcake early or late in the season, when strawberries are scarce. Crush the berries and slice the bananas thin. A farmer my uncle knows buys bananas by the bunch, and always keeps a bunch hanging where he and the hired men can get at it. The men like fruit as a lunch between meals, and the farmer says this is the cheapest thing he can furnish. A health expert says that anybody can eat bananas if the fruit is sliced very thin or eaten slowly. S.

A USEFUL MINISTER.—Have you seen an item that was in the "Boston Globe" a couple of weeks ago about the Connecticut minister who was making himself so useful in his district, and being upheld by his bishop? The minister even cuts the boys' hair in the vestry after church, he takes the farmers' supplies to market, and brings back what they want. My sister has seen his church, she taught a few miles from there at one time. The church is a tiny place at a cross road, three-quarters of a mile from any house, and seven or eight from village or railroad. E. S.

SANITARY FLOORS.—I beg of every woman to clear the floor of her dining room and have her husband or some one to paint it (preferably a light color), perhaps give it two coats of paint if it is an old ugly floor. When the paint is dry use a coat of marnot; this not only gives a beautiful gloss but makes a hard surface, which will not show heel prints, etc. A few small rugs or pretty pieces of carpet put down where the most walking is done, will make the cleaning easier. Gather up the rugs and take the dirt out with them, then put an onting flannel cover, partly saturated with kerosene on your broom, and go over the floor; it will look as clean and pretty as a polished table. Of course houses are built with the expectation of bare floors now-a-days, carpets are so unsanitary. Modern floors need only a coat of varnish, but do have bare floors in Summer if you have to fill and paint old floors to get them. CORA JUNE SHEPPARD.

SHUT CELLAR WINDOW.—I am often surprised to see the cellar windows of country houses standing wide open in mid-summer, though I can remember that for years I did not know any better myself. From the first of April I never open my cellar windows unless the temperature outside is, say five degrees lower than that indicated by my cellar thermometer, and I am exceedingly careful not to leave the windows open after the temperature rises outside. The result of this is a dry cellar, and at no time up to now has the temperature been above 60 degrees, while on Tuesday morning, before I closed the windows, it was 55 degrees. We keep our milk, butter, meat, etc., in a safe, and have had no use for ice up to 90 degrees or above, we think 65 degrees very cool, and milk brought from the cellar is very refreshing and probably more healthful than when iced. The warm air entering a cellar when the windows are open causes the dampness, so general in house cellars, and very little attention to opening and closing the windows will prevent this. I feel that many housekepers would be glad to know this, hence this letter. A. C. WORTH.

A MAN in New York went fishing on one of the Brooklyn piers, his little daughter, four years old, went along with him, on condition that he would look out for her. The man became so interested in his fishing that he forgot his child, and she fell off the pier and was drowned.

THIS question of taking a "dare" has serious consequences. In England recently a rich young man was challenged by his companion to jump off a boat into the river. He jumped to his death. A New York girl recently swam across the Hudson River. A 15-year-old boy was dared to equal her record. He plunged into the river, started the mile trip, became exhausted, and was drowned. There are too many people in this country who are afraid to get left. There is a good old saying, "Dare to be left, where to be left is right."

:: Heating the Farmhouse ::

The Hot Air Furnace

[Note—Hot water and steam for house heating will be considered later]

No. 1.

CONDITIONS INVOLVED.—Our farmhouse was probably built nearly, or quite, one hundred years ago. The walls are of plank placed vertically from sills to plate and clapboarded on the outside, without sheathing or paper, and lathed and plastered on the inside. Like many old houses, the ceilings are low, only a little over seven feet in height, but the rooms are large, and after one loses his fear of bumping his head seem homelike and cosy. For seven Winters we have tried to keep the house comfortable by using two heating stoves, and a range in the kitchen but, as a matter of fact, we have lived in about three rooms and abandoned the rest to Jack Frost for a season. This required the use of eight tons of hard coal, and we decided that before the eighth Winter came upon us we would install a furnace and have the use of the whole house, Winter and Summer alike. The cellar was dug only under the "upright," but was deep and commodious, and we could use either hot air, hot water or steam, the choice being left to our fancy and pocketbook. All three systems were considered and neighbors who had the various kinds were interviewed as to their efficiency and economy. We quickly learned that those who had hot water were very sure that hot water was the only system and that those who had steam wouldn't think of using anything else. Those who used hot air furnaces couldn't be persuaded to exchange them for any other kind. Such is the pride of ownership. It was evident that all three are eminently satisfactory and that the choice must be made on other grounds than efficiency.

REQUIREMENTS.—Our house is surrounded by large maples which, while furnishing delightful shade, tend to keep the rooms damp, and we find it necessary to have some artificial heat in the house early in September and to continue it late into the Spring. But we don't want much heat for at least three months of the year; just enough to take the dampness and chill out of the air, any more is wasted. We found that our neighbors with modern steam-heating plants were forced to burn enough coal to generate steam if they had any heat at all; that this required considerable fuel; and that they were frequently compelled to open their doors to get rid of the surplus heat. That seemed wasteful. Those who had hot-water fared better during the chilly months; they could get a circulation of moderately hot water with but little fuel; no need to boil the water to obtain heat. But a hot water system was expensive; the most expensive of the three. If the heat from a few chunks of burning wood could be utilized it would be all that was required on many days of the year. These few chunks of wood would not raise steam in a boiler, however, and it is doubtful whether they would start a circulation of hot water. But in a hot air furnace they would accomplish their mission; air is easily warmed and made to flow through pipes to the place where it is needed, and more than this, wood is a product of the farm, its use as fuel is economy. Still further, a hot air furnace can be installed at practically half the cost of hot water or steam. These things being considered, the choice fell upon hot air.

EXPENSE OF HOT AIR.—The good fortune of having a relative in a business with hardware connections enabled us to obtain our furnace and fittings at trade prices. A high-grade furnace of ample capacity cost us but $65, a little more than the cost of an equally high-grade stove. As the large sitting room had a cold bay window in which house plants are kept we purchased a hot-water radiator also, and placed it next to this window and connected it with a water coil in the furnace. This cost about $15 extra, inclusive of an unnecessarily expensive expansion tank and water gauge.

HOW INSTALLED.—The minimizing of expenses being a necessity on this, as on most farms, led the owner to attempt the installation of the furnace practically alone. After all, a furnace is nothing but a big stove enclosed in a jacket and connected to the rooms to be heated by means of tin pipes. It was decided that five hot-air pipes, one being large enough to heat two bedrooms, would be sufficient. The furnace could be placed so that they would all be very short and with a good pitch throughout their length. Three were nine inches in diameter and two 12 inches, one of these latter going to the big sitting room and the other by means of a Y connection being made to heat two bedrooms. From the cold northwest corner of the big parlor a wooden cold air shaft, made of matched flooring, was carried to the cellar bottom and here connected with the concrete conduit leading to the concrete pit beneath the furnace. A sand bed behind the barn furnished the material for this concrete work and the muscle of the owner the labor. If a few general principles of concrete work are understood, it can be well done by any husky man.

INSIDE "THE LITTLE RED SCHOOLHOUSE."

POINTS FROM EXPERIENCE.—Every farmer must be at least an amateur carpenter; he should be also something of a mason and it would be well if he were handy with the tinsmith's tools. The proprietor of this farm dabbles in all trades but the tinsmith's. He hasn't learned to use the soldering iron. But the furnace was set up, the registers put in place, and the concrete work done before the local tinsmith was called in to connect the register boxes with the furnace jacket and the radiator with the water coil; many farmers would have done this equally well and much quicker than the local "expert" did. Professional plumbers have a way of keeping very busy and accomplishing very little when it suits them to do so. The eight-inch smoke-pipe had to be carried up through two floors to a short chimney in an upstairs bedroom. This pipe is made of the best quality Russian iron and a liberal use was made of asbestos sheathing wherever it came near the old pine in floors and joists. Asbestos is cheap, but it would cost considerable to replace the old house. The hot-air pipes are also well covered with asbestos, and hot-water pipes will be wound with old burlap sacks. All pipes were made as short, and given as much pitch as possible; hot air likes to go straight up. The cold air will be taken from the house instead from out of doors; this helps the hot air from the furnace to enter the rooms and saves heating the icy outdoor blasts in zero weather. Well; the job is done in first class shape and required a money outlay of practically $150. If you know of anyone who wants to buy two heating stoves, we have them for sale; and we kind o' wish that Winter would come. M. B. D.

The School Lunch.

The subject of school lunches is always one of interest to the mother whose children are obliged to take a cold luncheon, and she cannot give the subject too much attention, for the child's health depends very largely upon what the lunch box contains. It must not only be nourishing, but it must be tempting in appearance. Nothing adds more to the daintiness of the lunch than to have the sandwiches, cake, etc., wrapped separately in paraffin or parchment paper; this costs but a trifle, as do paper napkins also, and they are certainly worth all they cost as the food is kept moist and looks so much more appetizing, a fact that is of no small importance to the average child. Of course, the sandwich is the main part of every lunch, and there is no end to the variety of these. The bread must be sliced thinly and evenly; if meat is used it is more appetizing if run through the food chopper and for a variety a bit of mustard or cayenne is sometimes added. Sardines minced fine are good, also hard boiled eggs, mashed fine, and melted butter, salt and bit of mustard or cayenne added, and sometimes nasturtium or celery leaves chopped fine. If a cottage cheese is liked, that makes a good filling—most children like peanut butter, and as it costs only a little more than half the price of cream butter, it is really more economical. Cold chicken is always good, also slices of beef loaf with plain bread and butter.

Little individual pies are much more appetizing and also easier to keep from becoming mussy than an ordinary piece. Little cakes iced with plain icing, then a little chocolate or cocoa added to a bit of the remainder and placed on the cake to form a "brownie" face always delight the little ones, and sometimes even the older ones, as well. A little surprise usually goes a long way with children and I usually keep some dates, figs, etc., for this purpose and a few are added occasionally, also a little pure candy; if homemade, all the better. Nuts are now considered a valuable food, and a few added to the lunch box are a most wholesome addition; the children can pick them out and they can be kept for this purpose.

A large-mouthed bottle with a screw top, such as vaseline or cold cream is sold in, is nice in which to send canned fruit, custard, etc. Fruit should always accompany the school lunch, and occasionally a banana or some fruit not quite as common to the country child, as an apple is appreciated. CLAUDIA BETTS.

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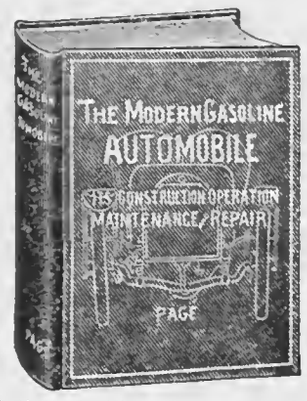

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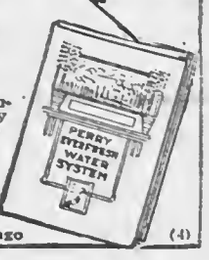

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Live Stock and Dairy

THE HOTHOUSE LAMB.

IT is time now to begin to have a talk about the hothouse lamb. Those who know how to produce this expensive morsel of food have a good business which prospers from year to year. The picture shown on this page was sent us by J. J. Ross & Sons, of Delaware. The little lambs shown in the picture were handfed, the smaller one being the smallest of triplets, and the other being deserted by its mother. The grandchildren of the senior Mr. Ross took delight in feeding these little lambs, and they prospered abundantly at the business. Delaware is making a good record at the lamb business. The mild weather, and the abundance of cheap fodder, give a good opportunity for those who know how. It has often been suggested that this raising of hothouse lambs would prove a good business for women, and a small flock of ewes properly handled would give a nice income, with probably a more agreeable work than that of running a dairy herd. The objection which we have had urged

LAMB BROUGHT UP BY HAND.

against lamb-raising for women, is the fact that whoever raises these little creatures gets to love them so that it is almost like breaking home ties to see the fat little creatures finally go to the slaughter. It is quite a problem sometimes to advise women as to the best kind of stock for them to raise in case they take up stock breeding in any way. Most of them appear to take poultry of some favorite breed as best suited to their capacity. Several women that we know have done very well with pigs, and we have a number of readers who tell us that their milch goats are quite satisfactory as money makers. Several of our women readers, however, are actually raising lambs for sale, and we would like to hear from them regarding the profit in their enterprise.

LIVE STOCK IN EAST TENNESSEE.

THE country adjacent to the line of railroad from Knoxville to Chattanooga is specially adapted to dairy farming, and has for years been the best dairy section of the South. Upper Eastern Tennessee is coming to the front along dairy lines rapidly. The milk within hauling distance of railroad has been shipped to Knoxville and Chattanooga and then retailed and made into ice cream. Nearly every village and hamlet along our railroad has a knitting mill or woolen mill, and many of them two or more, hence the ice cream trade is something immense, and we have a good market for all our milk or cream. It is all sold by fat test. We get 40 cents per pound for fat in milk from April to September and 45 cents the remainder of year, 36 cents per pound in cream. Probably a majority sell cream. Farther back from railroad many men keep large herds and make butter.

The dairy cattle are almost exclusively Jerseys and Jersey grades; we have many very fine herds of registered Jerseys. The demand for good dairy cows is very satisfactory. I sold a carload of registered cows a few weeks ago at $125 per head. Well-bred unrecorded cows bring $50 to $70 each. Owing to lack of help many men are selling their dairy cows and going in beef raising. We have been breeding Jerseys for 20 years, but for the above reason have quit the dairy business and many others are doing the same, but all farmers here grow cattle or mules. You never pass a farm without some line of live stock, and the quality is being steadily improved. It is the exception to find a farmer who will use a grade sire of any kind, horses, hogs or cattle.

We are having plenty of rain and pastures are extra good. All lines of stock are doing well. The beef raisers are feeling good at the outlook for this Fall's sales, but as most of them depend on buying to replace, they are finding it hard to buy suitable stockers to carry over. Since selling our dairy cows we purpose to grow beef, pork and mules, and all our farmers are trying to carry the maximum of live stock of some sort, especially beef cattle. The black Angus seem to have the lead in popularity just now. This region has as many good Jersey cattle as any equal extent of country I know of. There is a market here in Eastern Tennessee for all the dairy output at the prices mentioned. Cows are in good demand at fair prices as buyers from Illinois, Indiana and Ohio come here each year to replenish their herds. While some of us are going out of the business for lack of help, others who have the help are going in, as it is fairly profitable and builds up our lands rapidly. As a whole the stock growers of all kinds are feeling enthusiastic, and are all trying to do a little better each year.

Loudon, Tenn. C. L. G.

Hog Growing on the Pacific Coast.

I AM on a small farm of 10 acres. I expect to keep 20 brood sows. Is that too many to keep on a small farm? I can dispose of all pigs at six to eight weeks old, for $3.50 to $4 apiece. I can raise potatoes and root crop to make about two-thirds of my feed bill. The other third I shall have to buy, which will average about $30 a ton for wheat, corn, oats, barley, and Alfalfa meal. Would a silo in my case be a good investment for me and what size would it require for 20 hogs? What is the best mixture for brood sows if I built silo?

Washington. W. T. J.

Twenty brood sows should produce you at least 240 pigs a year, which at $3.50 or $4 each, at two months old would figure close to $1,000. Ten acres should keep the 20 brood sows easily. But you may find it more profitable to keep a few head of good cows along with the hogs, as you undoubtedly will find it more profitable to feed most of the mill feed to the cows and keep your pigs growing with the skim-milk. A few head of well-bred Jerseys would be just the thing on such a hog ranch. As for a silo for storing hog feed I believe it would be very good, although we have not fed silage to our hogs to any great extent. For such a place I would not advise a silo over eight feet across, but put them up as high as you can. As for a mixture for the silo, we are growing less stalks and more ears. Much of the corn we grow for the silo is sweet corn, especially when we mix it with sunflowers. We tried sunflowers last year for the first time and were well pleased with it. The cows would not eat so much of it, but seemed to do as well as, or better than, they did on corn straight and kept up in better flesh. Yes,

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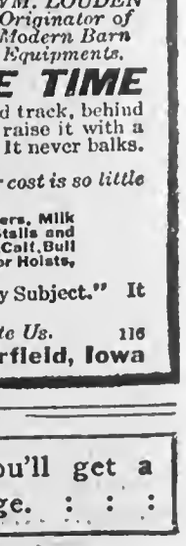

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Now I've done it. I can hear some of your readers saying, "But you cannot feed cream into milk." Very well, that is what the experiment stations will tell you, but my experience tells me that I can and do. Hogs are very fond of sunflower seed when they learn to know what it is, and I believe a mixture of sweet corn and sunflower silage would make great hog feed. If you buy mill feeds for your hogs do not leave out oil meal to feed with your roots and milk, as it is the cheapest feed we have on the coast today. Vetch sown early in the Fall will be ready to put in the silo by the fifteenth of May or first of June, and unless we have a very dry season you can get a good crop of corn or kale off the vetch ground that same year. Vetch makes fine silage to feed any kind of stock and you will find kale a great growing feed for hogs. CHAS. H. HAYS.

Oregon.

TALKS WITH PRACTICAL FARMERS.

Hogs in an Orchard.

T. B. WILSON of Ontario Co., N. Y., said: "We allow hogs access to our orchard. We leave the rings from their noses, and I am satisfied they can be allowed the run of the orchard to advantage up to the time the fruit is well matured. There may be objections to the practice in some cases owing to packing the soil, but our farm is well underdrained. In fact I would not consider planting an orchard without thorough underdrainage. Apples are like Alfalfa and many other crops, the orchard will not do well with wet feet. Of course, one does not want too many hogs in an orchard, and there is danger of their rubbing the trees and in this way injuring them. The practice I follow is to sow shelled corn broadcast on the ground, allowing the hogs to root around and hunt it up. I do this in orchards where the trees are large, and I find the hogs dig up the soil. Most of my orchard is cultivated and I allow hogs access to this part as well as that which is in sod. I use as a cover crop two pounds of Cowhorn turnips, six pounds of Mammoth clover and a bushel of barley or oats."

W. J.

Buy Springers in the Fall.

"I AM not a cow man, and I would not follow dairying," said Mr. O. J. Burley of Monroe County, N. Y., "but last Fall, hay was very cheap, and I tried out the idea of buying some cows, keeping them and selling them to dairymen in the Spring. I visited a dealer near Rochester and asked for springers. The dealer is reliable and I based my purchase not only on his guarantee, but on what looked good to me. I could not buy high-priced animals; could not go as heavy as $75 or $80, which our dairymen did. The first purchase was eight cows and I kept this number constant, until the first of March. We paid $45 each for the first eight cows, then we sold five of these at the end of three weeks. Of these I sold two for $105. I figured that we made $7.50 each on the first five and made quick sales. I went to the same dealers and secured five more, and I sold these in March to dairymen for about $75 the head with calf at the side. These cows paid for hay, grain, all bran for six horses, and all other feed for the horses except oats, the manure paid for the labor, and I had one cow left out of eight for profit. The cows were not at first good lookers, but they responded nicely to feed, and the prices received measured up with the prices which good milch cows brought. I could have gone to auctions and made some money had I been a cow man, but I bought from a dealer and put up the proposition that they must be guaranteed with calf, have good teeth and good udders, and I was allowed privilege of return or exchange. I based my judgment on the proposition that almost any kind of cow that had size and would calve in the Spring, and could be bought for $45 or $50 in the Fall, in the Spring when fresh would sell to dairymen from $75 upward if she could be put in good condition. I could have paid more for possibly better stock, but that would be narrowing my margin of profit, and secured this class of stock, which I considered would afford opportunity to realize not only on feed, but allow profit. This provided Winter labor, and afforded a good lot of manure which I applied to an old peach orchard. This manure was hauled out as fast as made and the results are striking between those trees unmanured, and those which are given the manure. In fact the trees manured doubled in growth over their neighbors. This is just a little business deal, but we must be wide awake to opportunities to turn dollars our way. It is only business, and farmers must become keen business men."

W. J.

Fighting Animals; Dogs.

I READ with much interest the Hope Farm man's account of an encounter with a savage heifer. I had a similar experience just two years ago, though mine was with a 1,600-pound Holstein bull. I had been grooming him preparatory to exhibiting at our Winchester Fair, and one morning, after completing one side, started around to opposite side. He turned and pinioned me in the corner of the stall, getting his head against my thighs. I thought at first he was playing, and tried to drive him off, but this seemed to encourage him, and he pressed harder. Considering myself in a perilous position I yelled, and our dog—half shepherd, half bull—came to my rescue through the door, which was fortunately open, and jumped over the manger driving the bull in a corner. It was several minutes before my son arrived in response to my call, and had it not been for my faithful friend I'd no doubt have been a goner. It was fortunate that he did not have his head higher, else I might have been injured internally. He was fortunately dishorned. I believe every farm has a place for a good dog, though some correspondents condemn all dog kind. On a previous occasion this dog began scratching at the door about time we retired. After we had retired he ran around the house barking and finally stopped under my bedroom window and barked. Thinking something wrong I got up and went to the window and saw a reflection causing me to think the barn was on fire. I ran downstairs and out and found a wind that had risen had kindled a supposedly dormant fire under the wash kettle. After putting out the fire there was no more noise from Billy that night. Can I be blamed for thinking lots of Billy? G. L. R.

Virginia.

UNCLE Zeke Howell had spent all his life on a farm. One day a nephew of his visited the farm and during the conversation that ensued the old man learned that the youth was attending college. "An' so ye go ter college, Sam?" queried Uncle Zeke. "What might they learn ye there?" "Lots of things, Uncle," answered the young man. "Latin, Greek, and also German and algebra." "Ye don't say?" returned Uncle with a surprised look. "Well, now, what might be algebra for turnips?"—Everybody's.

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Partitioning a Silo.

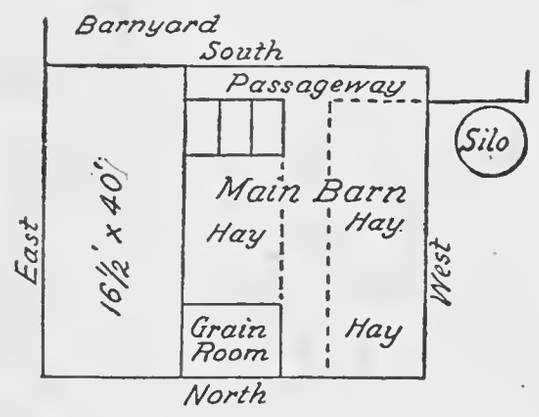
I HAVE a silo that is too big for me, and I have been thinking of putting a partition in it. I would like your advice about it. Some thought the corners would not settle well enough, but I would pack it well there. Do you think if I make it airtight every way it will do? I cannot keep cows enough for the one I have now, so I thought if I could make two of it I could feed them Winter and Summer. E. H. A.
Woodstock, Va.

Certainly it is feasible to divide the silo, making two pits out of the one. My understanding is that you will continue to fill it, but want to save half for Summer feeding. These narrow pits would have more proportionate wall friction than a large silo, and would require more care in filling to make it compact along the walls. You can easily make it airtight by using matched flooring nailed to the 2x4's for the partition frame. In the corners, nail half of an 8x8 sawed cornerwise, well painted in with gas tar. As you would fill in both sides with the silage at the same filling, the pressure would keep the partition in place, but when feeding out one side, should you notice it springing out, it will be easy to stay it across the silo to the other side with light timbers of some kind. I am inclined to believe that if you feed through the Summer, you will not need a partition, as the removal of two layers a day, will keep ahead of any loss by fermentation, and that the loss at best would not approach the cost of a partition. If you will in the Summer—after each removal of silage—sprinkle a pail of fresh water with a garden sprinkler over the silage surface, it is probable you would have no trouble, of course being careful not to disturb the remaining silage more than possible. An old canvas spread over the silage between feeding, would be a considerable help.
JOHN GOULD.

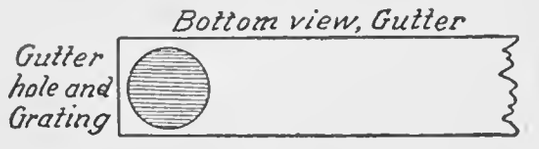
Plans for Cow Barn.

WILL you give me plans for ventilating, lighting and arranging floor space for cowbarn I am going to make in a part of my farm? Floor space 16½x45 feet. I want 12 cows. Is it too many? Cement floor; planks for cows to stand on, solid cement gutter; cement feed trough, water turned into feed trough for cows. How much room for each cow? How long a cow platform? How deep and how wide gutter? Is this plan feasible? To slant the gutter slightly toward one end and have at the lower end a drain of four-inch tile to collect and carry to manure pit the excess liquid?
Would this trap catch loose manure and if cleaned out when necessary prevent tile pipe from becoming clogged? It would be a great saving in absorbent material. Please tell me how to make a manure pit for 20 head. C. C.
Massachusetts.

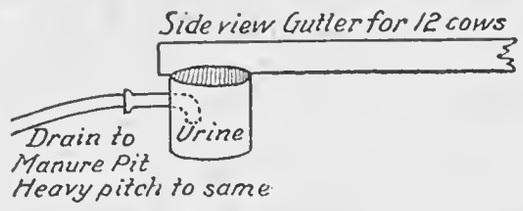
A stable 45 feet in length will accommodate 12 cows and give needed passage way at the side. Cows should be given from 3½ to four feet of platform each,



and this platform should be from four to five feet in depth from stanchion to gutter, the depth depending upon the size of the cow. When standing in natural position, the cow's hind feet should be close to the edge of the gutter. The gutter should be wide enough to admit readily the ordinary stable shovel; 15 inches being a good width; and a depth of eight inches in front and six inches at the rear is a convenient one. The walk behind the gutter and the cows should be about four feet in width and two inches lower than the standing platform of



the cows. This slight elevation of the cows gives them a better appearance to an observer behind them; 16½ feet will provide sufficient room for cows and the feeding alley in front of them; this latter should be from four to five feet in width for convenience. I see no reason why your plan for carrying the liquid manure to a pit is not feasible, though if the horse manure or some other good absorbent can be used in the gutters such a drain is not needed. Manure pits are simply reservoirs of the required size with water-tight sides and bottom to hold the liquids. They are usually rectangular in shape and not more than four feet in depth; two feet of the pit may well be above ground if the walls are built of concrete, as they usually are. The bottom may be of concrete or puddled clay. If placed where a wagon may be loaded



from either side of the pit some labor is saved. The size will depend upon the number of cattle and the length of time that will intervene between the removals of the manure to the fields. M. B. D.

Turnips in Silage.

WHEN I planted my corn I mixed some Swedish turnip seeds in with the fertilizer, and now they are quite thick and heavy in places. I am thinking of cutting them up, roots and all, together with the corn into the silo. If I do, what will be the effect on the silage? Will they hurt the keeping quality. A. S.
New York.

We have had reports from farmers who mixed mangels in with the corn. The mangels were put right into the cutter, chopped or pulped and blown into the silo. They made a wet pulp which mixed in with the corn and made a good feed. We do not know of cases where turnips have been used in this way. We think they would give a bad taste to the silage. Has anyone tried it?

Fencing in Sheep.

I AM keeping sheep and our neighbor refuses to fix his fence. I notified him when I got the sheep. Am I responsible for damages done by sheep on his farm when they go through his fence? Is he obliged to fence against sheep? If so, how should I proceed to make him fix the fence? S. W. W.
New York.

If the electors of your town have some rule as to what shall be deemed a sufficient division fence in your town and your neighbor is not complying with the rule, he could not recover against you for damage done by your sheep. In the absence of any such rule, and if your neighbor maintains a fence of the height or strength of division fences generally in that town, you would be liable for the damage done by your sheep if they escape on to his land. Division fences are not generally of a character to keep sheep out, and if you wish to keep sheep, you will have to fence them in or be liable for damage, unless, as said before, the electors of the town have made a rule in regard to fences. M. D.

Ration for Milch Cow.

WILL you advise me whether the following feed for a cow is calculated to secure the largest yield of milk? Morning and night two pounds bran, two pounds stock feed. Cow is on pasture during day, gives about 10 pounds milk at morning milking and eight pounds at night. Milk very rich in cream. Cow is about size of Jersey; six years old, and called a "dark Jersey." I am aware that 18 to 20 pounds milk per day is not large, and trust you can suggest a feed formula that will tend toward an increased yield.
Massachusetts. J. W. C.

I am not familiar with the stock feed you mention, but assuming it to be like most of the compounded feeds on the market, I believe the following will give better results: Bran, one pound; brewers' or distillers' dried grains two pounds; cornmeal one pound. Feed at morning and night, as at present. Eighteen to 20 pounds daily, it is true, is not a large production, yet if the milk is very rich it is by no means a bad performance for a small cow, and as you are feeding very well at present you can hardly expect a large increase of milk by a change of ration. C. L. M.

AILING ANIMALS.

Horse Walks to One Side.

WHAT is the matter with a horse when he persistently walks to one side? Mine walks to the left on the farm and on the road. Is it an indication of pain or weakness that might be remedied? L. W. R.
Michigan.

A horse tends to walk away from the shoulder that is sore; but if no such soreness exists one may conclude that persistent abnormality in walking is a matter determined by the brain or spinal column and that such an abnormality is incurable. A. S. A.

Locomotor Ataxia.

I HAVE a colt about 15 months old. He has developed nicely and grows rapidly. About five weeks ago I noticed that he did not travel right. He drags his hind feet, staggers one way and another and blunders along. He appears to have lost part control of his legs. In the pasture he stands with his head down much of the time. His eye is a little dull at present, but much brighter than it has been. His appetite is good and his hair looks well. His mouth, tongue, and teeth look stained much as a boy's after he has been eating choke-cherries. What is the trouble with the colt and tell me the remedy, if any? L. P. H.
New York.

Ineo-ordination of motion indicates disease of the spinal cord, or pressure from an abscess, or collection of serum; or it might come from lightning shock, or osteo-porosis (big head). Without an examination we are unable to confidently prescribe treatment in such a case, hence we should advise you to consult a local expert. A. S. A.

Controlling Dogs.

MY ideas of controlling the dog nuisance are as follows: First I would bell the dogs in place of sheep. Let the State furnish the bells to the trustees of each township. Charge all dog owners say $2 for first bell $4 for second and for female $5. Have the law to compel every constable to kill all dogs not belled. Also anybody may kill them if he wishes to; only protect the dog that is properly belled. Have good shrill-sounding bells, so they can be heard a long way. Then if the dog gets after sheep you can hear the bell and go to the sheep's rescue. Also the dog owner can tell where his dog is by the bell. Yours for better sheep husbandry. A. D. WOLVERTON.
Indiana.

Sore.

MY horse in some way knocked off a patch of skin the size of a quarter on the inside of his right foreleg just at the knee; this was about six weeks ago. I have washed it with disinfectant, and peroxide of hydrogen, but it does not heal, exuding bloody matter almost continually. What can I do for it? There seems to be no single opening, for the matter to exude from; it exudes all over its surface. The flies bother it, and the horse rubs it and starts fresh bleeding quite often. This horse also has round bunches come under the skin about the size of a cent or smaller; these remain for a time and then disappear, to be replaced by others. They do not fester or break except under collar, then they will bleed a little, scab over and finally heal.
Massachusetts. W. G. F.

Once daily swab the sore with tincture of iodine and as often as found necessary to keep it dry and keep flies away dust it with a mixture of one part of iodoform to two parts each of powdered charcoal, sulphur and slaked lime. Tie the horse so that he will be unable to bite or rub the sore. The "bunches" might indicate farcy, the skin form of glanders, and on that account it would be well to have the horse examined by a graduate veterinarian, or they may be due to derangement of the digestive organs and skin. Reduce rich feed. Increase exercise. A. S. A.

Spavin.

CAN a bone spavin on a horse be cured? If so, how? If not, what will take the lameness out? E. R.
New Jersey.

The bone spavin cannot be removed, but the lameness may subside if you have the spavin and entire hock joint fired and blistered by a graduate veterinarian, and then tie him up short in a narrow stall for a six weeks' rest. Better postpone the operation until late Fall, when flies are gone. A. S. A.

Supernumerary Teat.

ONE of our four cows (a heifer) when she freshened milked from five teats. The fifth one is about one-half size, and I have milked it for several months. It is a great nuisance, taking as long as the other four sometimes. Will it be all right to let it dry up? 2. Another heifer sometimes is slow in urinating. One day she will pass off a good stream and the next it will be slow and scanty. What is the matter with her? She is in good flesh and large size. One of her teats seems closing up; what causes that? R. B.

1. The extra gland may be dried up now, by leaving milk in it daily and rubbing well with camphorated oil twice daily, or may be obliterated by cauterization when she is dry. It would even be possible to amputate the teat, as well as do away with the secreting function of the gland, if you can employ a graduate veterinarian for the work. 2. An examination will have to be made as some obstruction probably is present in the vagina, urinary passage or bladder and may be removable by operation. Closing of the teat duct likely is due to a warty growth which should be removed or slit through in four directions by means of a sterilized teat bistoury, or you might try the effect of dilators (teat plugs) to be bought from a dealer in veterinary instruments. A. S. A.

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Cuts corn stubs in 5 pieces, makes cabbage stubs fly apart, levels ridges so you can disc better, cuts up and returns to the soil pea, bean and tomato vines, etc. (all valuable vegetable matter), prepares ground and opens furrows for succession crops, cuts drains in low spots of your wheat fields, etc.
Ask for special folder S. C.
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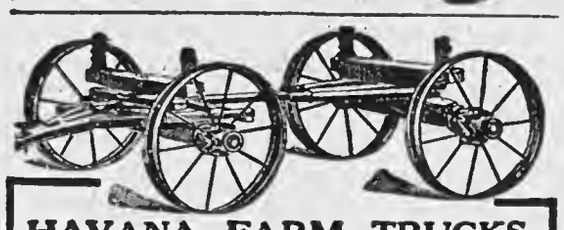
Box 102-VC.
Grenloch, N. J.



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Both Steel or Wood Wheel.
Especially adapted for farm purposes and coming into more general use every day on the roads, because of the wide tire. You will appreciate our free catalog.
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From cobs to coal, yet gives all the steam and power you can use on your farm—it's our
SAFE STEAM ENGINE AND BOILER
20 years record as most economical power and steamer known. Governor, Water—and Damper-Regulator—all automatic. High speed. All fittings and fixtures furnished. 3 to 15 H. P. With or without engine. Pays 100% interest yearly.
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EMPIRE, Jr.
Great Big Wires
Open Hearth Steel
Heavily Galvanized
Tells why they last longest—why they do not rot nor sag—why they stay hog-tight and cattle-tight—why they are by far the least expensive fences to buy in the long run. Farmers, everywhere, are investigating fence quality. Users insist on knowing the quality underneath, just as they know how to judge a horse. You cannot fool an experienced buyer with an old horse doped up—polished up—to look like a good horse. You cannot fool an experienced buyer with a poor fence doped up to look like a good fence. A penny postal brings you the money-saving book. Write today.
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Made by American Steel & Wire Company
High-class steel, heavily coated with zinc. Strong enough to hold up any wire fence and furnish all necessary resistance. End and corner posts so strong that they will maintain any wire fence made.
Cheaper than Wood and More Durable
Adapted to all conditions and absolutely satisfactory, no matter how heavy the fence nor how hard the usage after the fence is erected. Give better service than wood post, and you get the benefit of every post in the fence from year to year, while wood posts burn, rot and decay from the start. Have been in service since 1898, in every section of the United States, and the oldest posts now as good as when set. Adapted to all fences. Increases the life of a fence. A wire fence on wooden posts is like building a brick house on a wood foundation. For sale by dealers everywhere. Big picture catalog FREE.
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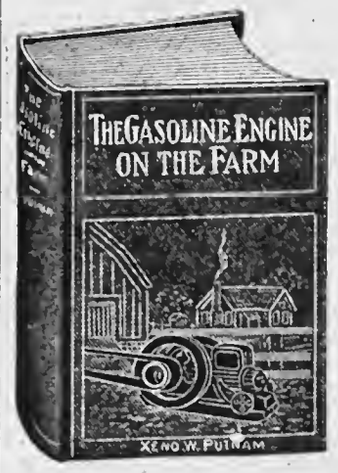
THE GASOLINE ENGINE ON THE FARM. Its operation, repair and uses. By Xeno W. Putnam.



This is the kind of a book every farmer will appreciate and every farm home ought to have. Includes selecting the most suitable engine for farm work, its most convenient and effieient installation, with chapters on troubles, their remedies, and how to avoid them. The care and management of the farm tractor in plowing, harrowing, harvesting and road grading are fully covered; also plain directions are given for handling the tractor on the road. 530 pages. Nearly 180 engravings.
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SMALL GRAIN
It will pay you back in six months. Buy the mill that will grind your crops coarse or fine in less time, with less power and at less cost. A trial will prove that the most money can be saved and the best results obtained with the
SUPERIOR FEED GRINDERS
Built for service. Can't get out of order. Largest capacity for power used. Self sharpening. Automatic force feed prevents choking. ible grinding rings. Money back if you say so. Write today for Free Catal R samples
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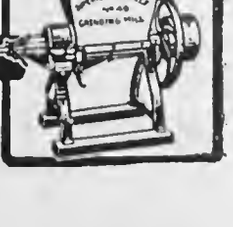

EVENTS OF THE WEEK.

DOMESTIC.—The American Express Company is going to invate the South American field. Its aim is to provide better transportation and financial facilities for American manufacturers who want to share in the increased trade relations between the United States and South American countries.

A despatch received by the revenue cutter service, Sept. 13, from Capt. Cochran of the revenue cutter Bear brings the news that the cutter has rescued eight members of the Stefansson expedition, a part of which was caught in the ice floes of the Far Northwest about a year ago. Since then the members of the party who have survived held out on Wrangell Island. The names of two members of the party who died are given, and another was accidentally killed. Eight others are missing. Stefansson himself became separated from part of his expedition, who were on the steamship. He is still in the Far North, conducting his explorations on behalf of the Canadian Government. Messages have been received from him which show that he and others of the original party are alive.

Reports have been received confirming the reports of a remarkable gold discovery in Broad Pass on the Sustina River, Alaska. The discovery, it is predicted, will create a new era of prosperity in this country and already has started another rush of prospectors to Alaska. According to reports from the regions in the Northwest, the strike was made where there are gold ledges 100 to 2,000 feet wide. The discovery is said to surpass any yet made in South Africa. The least valuable of the ledges are said to eclipse the Treadwell and other Juneau ledges.

It is expected that inside information of the manipulation and the alleged fraudulent action in connection with the foreclosure proceeding against the Newark Meadows Improvement Company will be revealed when several of the defendants in the suit brought by W. Russell Root, a bondholder, are examined before trial. John T. Hettrick, attorney for Root and numerous other bondholders, obtained the order at New York, Sept. 14, from Justice Guy for the examination of the defendants. Among the latter are Wilbur C. Fisk, member of the banking firm of Harvey Fisk & Sons, Albert A. Tilney, William C. Lane, Albert H. Wiggins, Charles H. Keep and the Guaranty Trust Company. The individuals named are directors of the Newark Meadows Improvement Company, and it is alleged that they wasted and dissipated the assets of the corporation through their official neglect.

James Bottenus, a former advertising man of 2095 Webster Avenue, New York, was arrested by Post Office Inspectors Barber and Shaeffer, Sept. 14, on a charge of using the mails to defraud in the operation of a real estate scheme in which a number of inaccessible lots in the Watchung Mountains, in New Jersey, were bought at $2 each and sold at from $35 to $50 each. Mrs. Rose Stack, said by the post office inspectors to be the defendant's chief agent, was also placed under arrest in Bluffton, Ind. Amos W. Jones, another salesman, was sentenced by Judge Ray in the Federal Court at Watertown, N. Y., recently to five years in the Federal penitentiary at Atlanta. Bottenus operated as the James Realty Company, with headquarters at 2095 Webster Avenue. In the advertising columns of rural publications all over the country, according to the charges against him, he inserted a simple puzzle. All those who submitted a solution to the puzzle got a deed to a lot 20x100 feet. They were then informed that since the insertion of the advertisement laws had been passed to prohibit the building of houses on any lot less than 25x100 feet in size. In this way, the post office authorities say, the prize winner was usually induced to buy another lot at from $35 to $50.

Twenty-seven persons were drowned, Sept. 15, when a St. Louis & San Francisco westbound passenger train plunged into a cloudburst two miles west of Lebanon, Mo., and two passenger cars toppled into a deep gully swollen with water. Eighteen persons were injured, but none of them was hurt seriously. Ninety-nine persons, including the train crew, were on the train.

The United Mine Workers of America accepted, Sept. 15, President Wilson's proposal for a settlement of the Colorado strike. It now remains with the operators, including the Rockefeller interests, to say whether or not they will accept the plan and end the conditions which have broken down civil government in Colorado and resulted in much bloodshed.

FARM AND GARDEN.—Representative Cullop, of Indiana, has introduced in the House of Representatives a bill to make it unlawful to ship in commerce between the States any grain or seed for the purposes of sale or barter for use in agriculture which is falsely labeled or branded or falsely represented, and to fix a penalty therefor. The bill makes it unlawful for any firm, person, corporation or association of individuals to ship, mail or otherwise convey in commerce between the States for the purposes of sale or barter any seed or grain falsely labeled or branded or falsely represented as to grade, character or name. Violation of the act will be punishable by a fine of not less than $500.

Mr. Charles M. Arthur has been appointed specialist in markets in the extension division in agriculture and home economics of the New Jersey State Agricultural College. Mr. Arthur was graduated from the Pennsylvania State College one year ago. He will devote part of his time to a study of market methods and to assistance of producers who want information regarding the best methods of putting their products upon the market. Mr. Arthur will also have charge of a news letter to be sent to all papers circulating within the State which will carry recent information of Experiment Station results and of means used to assist the farmers of New Jersey.

To place on display 140 different kinds of agricultural products in a single season is the task Charles Hardin, a farmer near Belleville, Kans., did at the Republic County fair. Of this season's display there were 72 varieties of corn and vegetables and 68 different kinds of grasses, all taken from Mr. Hardin's 160 acre farm. His premiums on the collection amounted to $24.

As a war measure the Canadian government will endeavor to have the wheat acreage doubled next year. There has been a conference between the Dominion Minister of Agriculture and experts in wheat production to devise means to enlarge the wheat acreage of Canada for the coming crop. Through agricultural papers and lecturers farmers will be advised that it will be good business and good patriotism to seed every acre at their disposal to wheat. The British government has asked the Dominion to cooperate in the work of increasing production so that the food shortage in Europe resulting from the employment of men in war may be met.

THE EUROPEAN WAR.—The battle of the Marne, occurring September 7-12, was followed by a general German retreat. This may be called the greatest battle in history as far as number is concerned, more than 2,000,000 men being engaged. The British reported the capture of 6,000 men and 15 guns, while the French are said to have captured 160 guns and many prisoners. No data is given as to casualties on either side, though it is said this equals 20 per cent., but German losses are much heavier than those of the Allies, owing to the massed formation in which they still fight. It is admitted that German losses in Belgium were fully 50,000, but apparently little news of casualties is given out to Germany by its government. Sept. 15 the Germans were taking up strong positions along the River Aisne, and another great battle was beginning. The new line of battle extends along the region of Noyon, through Soissons, Laon, the heights north and west of Reims, through Ville-sur-Tourbe, north of Varennes, and along the Meuse to the forest of Forges. This line is about 100 miles long, and throughout its length the Germans are acting on the defensive. The Crown Prince was compelled to abandon his position at Varennes and was then moving northward through the rough country between the Argonne and the Meuse.....Sept. 13 it was stated that the Russians had again defeated the Austrians in Galicia, Austria's loss being 60,000 men in killed, wounded and prisoners. Reports from Petrograd, Sept. 14, asserted that during 17 days' fighting 280,000 Austrians were taken prisoners. It is said that much distress exists in Austria. The Russians are administering the conquered districts, but disclaim any idea of annexing it. They assert they will capture Berlin. .....Sept. 15-16 a naval battle was in progress in the Baltic, between German and Russian fleets.....Sept. 16 the Germans had concentrated in East Prussia a force of 750,000 men. This is believed to be a larger force than is necessary for the defence of the province and it is believed that it may be used for the invasion of Russian Poland and the capture of Warsaw.....Sept. 14 the British War Office denied that any Russians had been landed in France, although reports to this effect have been brought over by many returning tourists. It was asserted that the men had been brought from Archangel, on the White Sea, by British transports, landed in Scotland and trans-shipped to the Continent..... Italy continues neutral, but pressure is being exerted by both Germany and Austria to alter this attitude. The people generally are making demonstrations of hostility against Austria.....Hostilities continue in Belgium. Commandant Meune, of the Landsturm, who was commander at Louvain, is a prisoner, and is to be court-martialled by the Belgians. The Belgians refuse to treat him as a prisoner of war and will try him upon the charge of destruction of public and private buildings. A German force of 60,000 men was rushed into Belgium, Sept. 15-16. It is considered doubtful, however, if they will make an attempt to capture Antwerp, as the dikes have been opened and the surrounding country has been flooded.....The Servians were marching on Hungary, Sept. 15, with a force of 150,000.....Turkey has decided to remain neutral in spite of pressure from Germany.....Sept. 15 it was announced officially that Great Britain's expense for the 43 days of war was $165,500,000.....The British have captured German possessions in Polynesia, and have defeated German forces in South Africa. Much German shipping has been seized in various parts of the world, and the German cruiser Hela was sunk by a British torpedo boat in the North Sea, Sept. 13. There have been some further casualties from mines in the North Sea, among them the British tramp steamer Ottawa with a crew of 26.

One Moment, Please! It Will Pay You

L. S. and P. Co. Fifth Consignment Sale

October 12 and 13, 1914

New Sale Pavilion, Syracuse, N. Y.

GLANCE OVER THIS LIST OF CONSIGNORS:

Irwin J. Schoonmaker, Kyserike, N. Y.
F. B. Loren, Central Square, N. Y.
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Allen R. Owen, Goshen, N. Y.
Sanford R. Clark, Onondaga Valley, N. Y.
Stevens & More, Lacona, N. Y.
E. C. Brill, Stewartsville, N. J.
N. V. Lasher, Fultonville, N. Y.
R. E. Davis, Mexico, N. Y.
E. A. Vandervort, Sidney, N. Y.
H. M. Dunham & Sons, Marcellus, N. Y.
C. F. Hunt, Oran, N. Y.
O. A. Thomas, Rutland, Vt.
J. A. Leach, Cortland, N. Y.

It is not necessary for us to go into further details, because you know the class of animals that these breeders have. The majority of the females are just fresh or will freshen soon. These are the kinds that you want NOW.

The sooner you start, the sooner you get results

LIVERPOOL SALE AND PEDIGREE CO., Inc.
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Stone Crusher
The finest machine made for crushing all kinds of rock for road making or concrete work. Easiest running and most durable. *Equipped with Pulverizer to grind rock fine for building and land purposes.* A money maker for contractors or farmers having 4 to 12 h. p. A chance to increase value of your own farm and *establish a big money making business.* Write today for catalog, facts as to value of raw limestone on land, and *free trial offer.*

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Maple Syrup Makers

With our evaporator you will make better syrup with less fuel and labor than with any other system. Will last lifetime. Made in 23 different sizes. Write for catalog and state number of trees you tap.
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FOR SALE—First-class farms, from 150 to 450 acres. Write for descriptions. F. E. BASSETT, Walton, N. Y.

Profitable Burlington Co., N. J., Farms—All sizes, all purposes. Established 1898. A. W. DRESSER, Burlington, N. J.

$10,000.00
BACKS THIS SAW. IT IS THE BEST AND CHEAPEST SAW MADE.
As low as $10

HERTZLER & ZOOK Portable Wood SAW
is easy to operate. Only $10 saw made to which ripping table can be added. Guaranteed 1 year. Money refunded if not satisfactory. Send for catalog.
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Save Work, Time, Money
By using our low down steel wheel wagon

Electric Handy Wagons
saves high lifting, lighten draft, don't rut roads. Spokes don't loosen—wheels don't dry out or rot. Write for free book on Wagons and Wheels.
Electric Wheel Co., 48 Elm Street, Quincy, Ill.

150 Farms FOR SALE—near Phila. and Trenton markets; good railroad and trolley facilities. New catalogue. Established 25 years. Horace G. Reeder, Newtown, Penna.

Farms in Delaware—All sizes, productive soil, genial climate, close to markets, fair prices, free booklet. Address STATE BOARD OF AGRICULTURE, - DOVER, DELAWARE

121½ ACRES—21 Acres Timber
wire fenced; 8-roomed, two-story house; large basement barn; ice, hen and wood house; plenty fruit; insurance, $2,300. School, church, ½ mile. Creamery; 14 head of cattle; pair horses; brood sow; wagons; grain drill; 4½ horse power gasolene engine, mowers, rake, plows, harrows, buggies, harnesses, hay fork, everything goes for $5,000. HALL'S FARM AGENCY, Owego, Tioga Co., N. Y.

WILL SELL FARM
440 acres. One of the best farms in Southeast Virginia. Suitable for one to four farms. Large Colonial buildings; grand location; excellent water and climate; adapted to hay, wheat, oats, corn, peas, beans, tobacco. 200 acres creek-watered pasture, 100 acres oak and pine, 240 acres improved. Large stock. For full particulars address BOX 56, Blackstone, Virginia

Roof Protection at a low cost against Fire, Storm and Lightning
The danger from lightning can be avoided, roof fires never occur, and the weather is kept out when your buildings are roofed with
Kanneberg
Metal Shingles
"We Pay the Freight"
Lightning never damaged a Kanneberg shingled roof, because they are fire-resisting. Rain, snow, heat and cold stay outside. Kanneberg Shingles need no repairs, because they resist rust, don't rot, crack, buckle, curl, nor fall off. Can be laid on low-pitch roofs and always look well. Give clean cistern water.
FREE—Send for our big catalog at once and you'll SAVE BIG MONEY on roofing and you get the best protection. Take advantage of our LOW FACTORY PRICES. Catalog shows many designs and sizes.
Kanneberg Shingles come singly, 8 to a sheet, or in clusters 2 feet by any length from 5 to 10 feet. You can put them on quickly. Easy to lay.
Write for catalog and give dimensions of roof, so we can show you how little it will cost to get perfect roof protection for years.
Kanneberg Roofing & Ceiling Co.
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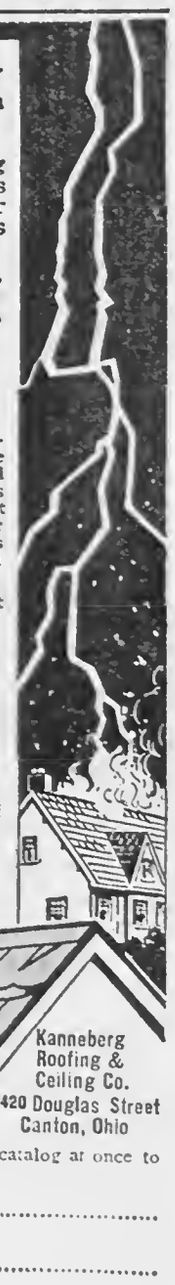

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Canton, Ohio
Send catalog at once to
Name .....
Address .....

:: The Favorite Hen ::

Thirty Women Enter Birds

WE have done our best to make a fair selection of entries from the 90 women who offered a hen for the egg-laying contest. We could only enter three pens of 10 birds each, and when it came to making a fair selection of one-third of the entries we found ourselves facing a hard problem. We put the case fairly before these women and they unanimously agreed that they were satisfied to let us decide. Many of them suggested that the names be put in a box and the "Hope Farm Redheads" draw 30 names at random. Instead of trying any plan of chance we obtained, as far as we could, a history of the various flocks and the conditions of their owners. We wanted good hens and of course responsible people. Then we wanted representatives of genuine farm flocks—not birds from commercial plants which have been advertised freely or bred expensively. The object of this contest is to encourage genuine farm women to show what their hens can do, and to let the public know something of the ability of the *genuine farm hen*. We based our selection partly upon the history of the flock from which the hen was taken. We also tried to consider the conditions of the women who enter the hens—seeking to encourage those who could not otherwise enter such a contest. We have made the best selection possible under the circumstances. We hope to give those who could not enter this year another opportunity at some future time. It was finally decided to make up one pen of White Leghorns, one of R. I. Reds and one of mixed breeds. The Leghorns will be contributed as follows:

WHITE LEGHORNS.

1. Mrs. N. D. Rand, New York.
2. Mrs. Lewis J. Happich, New York.
3. Mrs. V. D. Miller, Ohio.
4. Mrs. A. J. Skellie, New York.
5. Mrs. C. L. Todd, Virginia.
6. Mrs. Walter Fletcher, Pennsylvania.
7. Miss Tillie B. Cloud, Pennsylvania.
8. Mrs. Josephine Hollenbach, Pennsylvania.
9. Mrs. W. E. Phelps, Pennsylvania.
10. Mrs. L. E. Hilborn, New York.

There were more R. I. Reds entered than of any other breed. After a long examination we selected the following:

RHODE ISLAND REDS.

1. Mrs. Carrie Bliss, Virginia.
2. Mrs. E. S. Marlatt, New Jersey.
3. Mrs. T. Schwenk, Connecticut.
4. Miss Ethel A. Pierce, New Hampshire.
5. Mrs. Samuel O. Travis, New York.
6. Mrs. W. R. Merrick, Massachusetts.
7. Miss Edna M. Porter, New York.
8. Mrs. Andrew J. Wilson, Connecticut.
9. Mrs. E. P. Andrews, New York.
10. Mrs. Cecil Farnham, Maine.

As for the other breeds we finally decided to enter the following as it seemed to be a fair selection from all.

THE MIXED BREED.

1. Mrs. F. M. Earl, Connecticut. White Wyandotte.
2. Mrs. A. N. Conell, New York. White Wyandotte.
3. Mrs. R. W. Stevens, New York, White Wyandotte.
4. Mrs. W. S. Walters, Michigan, Barred Rock.
5. Mrs. G. L. Rothgeb, Virginia, Barred Rock.
6. Misses Osler & Wilcox, New York, Barred Rock.
7. Mrs. Robert H. Wood, New York, White Rock.
8. Mrs. Joseph di Fabrizio, New Jersey, Black Minorca.
9. Mrs. Emma H. Wood, New York, Buff Orpington.
10. Mrs. Edwin Walker, Massachusetts, Buff Orpington.

All possible precaution will be taken to preserve the identity of these birds. Legbands properly numbered will be sent to the owners so that when the hens arrive at the contest they will be properly marked. Full shipping directions will be sent in time and great care will be taken to handle the hens properly.

SELECTING THE BIRDS.

These women are left free to send either a pullet or a hen as they prefer. They will use their best judgment, but it will be well to select a strong and vigorous bird, free from disease and naturally vigorous. In spite of the best of care some hens at the egg-laying contest die or meet with accidents, and none but the strong, healthy birds should ever be sent. Have them clean and free from vermin. Most of the women have told us how they intend to select their hen, and it is evident from what they write that they will use a sort o' instinct which cannot well be put on paper. Few, if any, will be trap-nested birds. We have asked Mr. Geo. A. Cosgrove to give such advice as he can and what he has written follows:

As there are differences of breed with their varying shapes, to be considered, only general instructions can be given; but these will apply, as a rule, to most of the breeds that are likely to be entered. Length of body is one of the first

WHICH IS THE FAVORITE HEN?

things to look for. Some years ago Prof. Chas. K. Graham, then of Storrs College, gave a series of illustrated lectures in which he showed the pictures of 200-egg hens of 10 or a dozen different breeds. The most noticeable feature was, that no matter what the breed, the birds seemed extra long bodied for that breed. A long breast bone is very desirable. A short breast bone can easily be noticed by the rear line of the body sloping from the root of the tail towards the legs in almost a straight line. The rear outline should drop from the root of the tail almost or quite perpendicularly to the base line of the keel. The bottom outline should slope from the front toward the rear; giving a good distance from the pubic bones (the small bones on each side of the vent) to the end of the breast bone.

If the bird is also wide across the back, standing with legs wide apart, then she has plenty of room for her internal organs. She should also have a bright, full, round, eye. This varies greatly in different breeds; most of the Asiatics have rather sunken eyes, the skull bone projecting over the eye. In the Leghorns a large comb, but of fine texture, is an indication of vigor and of a good layer. Mr. Barron says he has tried for years to breed smaller combs, but the trap-nest generally selects the big-combed ones. He also says that he finds the high-tailed birds are the better layers as a rule. The American fancier breeds for a low tail, the tail forming a very obtuse angle with the line of the back and squirrel-tailed birds are disqualified by the standard for show birds. The good layer is a busy bird; does not mope around; is first off the roost in the morning and the last on the roost at night. In picking out birds for the contest it is better to send those which have not yet laid, but which you expect every day will lay; rather than to send those which have been laying for a month or so. The change of quarters may stop the laying and start the birds to molting. If it is a complete molt, it takes 60 to 90 days to get the new feathers and begin laying again.

GEO. A. COSGROVE.

Leghorns as Mothers.

LEGHORNS are usually considered non-sitters, and the large majority of them never show any indication of broodiness; but where they will sit and hatch out broods, they make most excellent mothers. The writer has used hens for incubation as far as possible for many years, in connection with incubators; but this year has used hens exclusively, as nothing has been hatched but English White Leghorn eggs. With about a hundred American Leghorns kept in two 20x20 feet houses, all the birds that wanted to sit were utilized, and every one has faithfully kept to her nest and hatched a larger per cent. of the eggs put under her than heavier fowls usually do. For the first time in many years *not a single chick has been killed by being trampled upon*. When on my farm, raising Wyandottes and Orpingtons, the loss from the above cause was quite a serious one, the chicks themselves not being as quick in getting out of the way, or as able to take care of themselves, as the Leghorn chicks. As careful and watchful mothers, and industrious scratchers, certainly the Leghorn cannot be excelled; and I doubt if even Games would be braver in defense of the chicks. Catching a little chick a few days ago, before I could straighten up there were three Leghorn hens on top of me, picking and striking at me and returning to the fight when I threw them off. The vigor and vitality of these English Leghorn chicks is remarkable. In June and July I have hatched out between 100 and 200, and until a week ago could truthfully say that not a chick had died after they were taken from the nest and put out in the brood houses. But every chick had its beak dipped into some loppered milk when taken from the nest, except the last brood. Not having any loppered milk at that time I let that brood go without any, and found one dead chick in that yard two days after. That is the only dead chick I have found, out of the whole two months hatches. There has not been a single chick "pasted up behind," nor a case of "big wings." G. A. C.

DR. HESS Instant Louse Killer

Kills Lice on Poultry and Farm Stock

It kills them as soon as it gets to them—that's why it's called *Instant*. Sprinkle it on the hens, roosts and in cracks—put it in the dust bath. See the name "Instant" on the can—that's the louse killer formulated by Dr. Hess (M. D., D. V. S.).

Sifting top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. If not at your dealer's, write

Dr. Hess & Clark
Ashland
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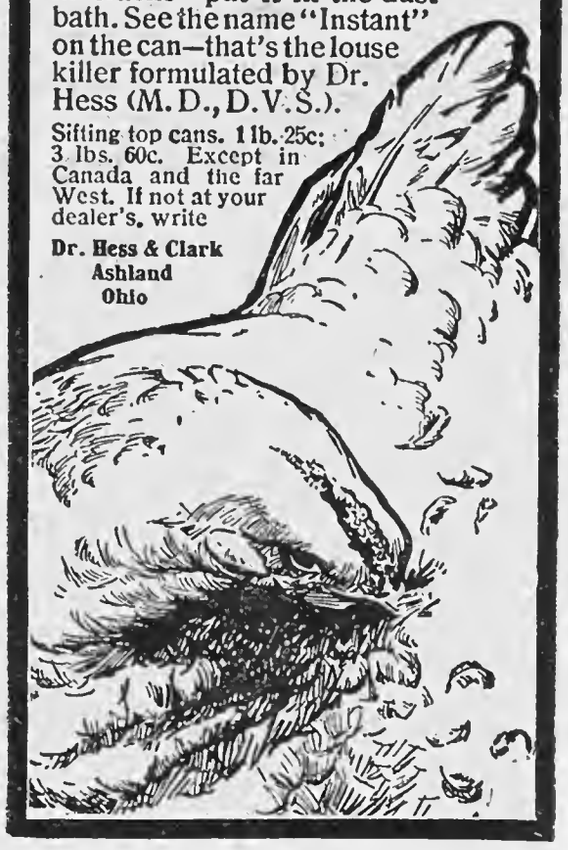

Dune Alpin Heavy Laying S. C. White Leghorns

have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.

HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED

Send for catalogue.

DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

TOM BARRON'S
PURE ENGLISH WHITE LEGHORNS
Imported direct from Tom Barron's Farm. 280-egg strain. Breeding stock for sale. Cockerels, $1 and $2; cocks, $2; yearling hens, $1.50. Eggs, $1 per set; $5 per 100.
P. F. RAFFERTY, - Marlboro, Mass.

TOM BARRON'S
283-282-260-248 Egg
LEGHORNS and WYANDOTTES
Contest Pens; guaranteed leaders. Storrs' Buff Rocks, Vibert-Austin Reds, Waltons' Pens. Ducks, Geese.
MORRIS-FARM, R. 4, Bridgeport, Conn.

White Leghorns—YESTERLAID Strain. Pullets lay at 4½ months. Bought by 20 Experiment Stations. All stud males grandam record of more than 440 eggs in 2 years. Prices very reasonable. Our methods bring success. *Details free.* YESTERLAID EGG FARMS COMPANY, Dept. 62, Pacific, Mo.

Tom Barron S. C. White Leghorn Cockerels
from stock imported direct from his best-laying yards. April hatched, range grown vigorous fellows. Now only $2.50 each. Yearling hens, Wyckoff strain, 85 cents; Wyckoff cockerels, from record-laying stock, $1. Choice cocks, now $2.
R. T. EWING, - - Atlantic, Pa

IF IN NEED OF A LARGE AND HEAVY-LAYING STRAIN OF **S. C. W. LEGHORNS**
Hens, Pullets and Cockerels—none better layers—Write, - J. M. CASE, Gilboa, New York

FOR SALE—100 FINE BRED
Single Comb WHITE LEGHORN COCKERELS
75c. and $1 each. Also 100 yearling hens, $1 each if taken before Nov. 1. GEO. L. FERRIS & SON, Atwater, N.Y.

S. C. White Leghorn Hens—$60 per hundred. Two years old. March and April hatched. Pullets, $1.25 each. In 100 lots, $1. Raised on Free range.
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Barron Cockerels, White Leghorns—Laying and breeding hens. Prices reasonable. Hamilton Farm, Huntington, N.Y.

FOR SALE—**S. C. White Leghorn Cockerels & Pullets** from best utility strains in the World. Write for descriptions. Prices range from three to ten dollars each. HAPPICH & DANKS, Smithville Flats, New York

LINCOLN'S LEGHORNS
Growing S. C. W. Leghorn Cockerels for sale.
FRANCIS F. LINCOLN, Mt. Carmel, Conn.

BRED TO LAY S. C. WHITE LEGHORNS
A fine lot of cockerels and a few yearling hens.
P. G. PLATT - WALLINGFORD, PA.

500 Single Comb White Leghorn
Yearling Hens, 75 cents apiece. SUNNYSIDE POULTRY FARM, SIDNEY, OHIO

S. C. White Leghorns—300 Yearling Hens for sale. Famous Kulp 242-egg strain, $90.00 per hundred. Cockerels $2.00 each. H. BACON, Hillcrest Poultry Farm, Berwyn, Md.

Utility S. C. White Leghorns—Selected yearling hens, $1 each, $90 per 100. GEO. FROST, Levanna, Cayuga Co., New York

The Henyard

THE EGG-LAYING CONTEST.

THE forty-fifth week of the contest closed September 11 with an egg production of 2,092. This is 246 less than the previous week, and 774 less than two weeks ago. For the first time in many weeks the White Leghorns have to take second place. A. B. Brundage's pen of S. C. Reds make the highest record this week, scoring 52 eggs; being the only pen in the whole contest that reached 50 or over. This pen has a higher total record than any other pen of the Reds, and is only exceeded by six pens in the whole contest. Mr. Brundage is president of the Connecticut Poultry Association, and his Reds are so proud of that fact that they are putting in their best licks to do him honor. Tom Barron's White Leghorns tie with Francis F. Lincoln's pen of the same breed, for second place, with scores of 45 each; and Albert T. Lenzen's White P. Rocks are third with a score of 43. Merrythought Farm's White Wyandottes laid 42, the Silver Campines of W. J. H. Lobel laying the same number. It is a pretty safe bet that Francis F. Lincoln's White Leghorns will win this contest; their total now is 1,909 eggs; only one egg less than the famous "sour milk" pen from Storrs Agricultural Station, and 48 eggs ahead of Barron's White Wyandottes, which held the lead so long. The week's report follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	24	1,264
Frank L. Tuttle, Massachusetts	31	1,275
Waveny Farm, Connecticut	39	1,272
J. F. Francais, New York	28	1,489
White P. Rocks.		
Albert T. Lenzen, Massachusetts	43	1,383
F. H. Benton, Connecticut	28	1,369
Storrs Agr. Station, Connecticut	14	1,119
Storrs Agr. Station, Connecticut	19	1,185
Storrs Agr. Station, Connecticut	24	1,323
Storrs Agr. Station, Cinnecticut	20	1,167
Storrs Agr. Station, Connecticut	28	1,026
Buff P. Rocks.		
A. A. Hall, Connecticut	25	1,375
W. C. Morgan, Jr., Connecticut	18	1,087
White Wyandottes.		
Tom Barron, England	26	1,861
West Mt. Plty. Yards, Connecticut	18	1,119
Merrythought Farm, Connecticut	42	1,723
Neale Bros., Rhode Island	40	1,711
D. J. Ryan & Son, Connecticut	23	1,282
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	31	1,311
Dr. N. W. Sanborn, Massachusetts	35	1,263
Am. Buff Wyan. Club, New York	26	1,156
H. L. Hamilton, Connecticut	30	963
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts	27	1,283
Single Comb Reds.		
Robert Seaman, New York	20	1,038
J. S. Gillespie, Connecticut	17	1,244
Dr. J. C. Dingman, New York	34	1,166
Burnham Plty. Farm, Massachusetts	9	968
H. P. Deming, Connecticut	35	1,239
Geo. F. Dearborn, Florida	26	1,353
Dr. J. A. Fritchey, Pennsylvania	28	1,445
Ernest Underhill, New Jersey	23	1,133
W. H. Bumsted, Connecticut	18	891
Pinecrest Orchards, Massachusetts	35	1,462
Harry B. Cook, Connecticut	21	1,219
Colonial Farm, New Hampshire	30	1,293
A. B. Brundage, Connecticut	52	1,644
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	32	1,271
C. S. Scoville, Connecticut	14	932
White Leghorns.		
Storrs Agr. Station, Connecticut	22	1,470
Storrs Agr. Station, Connecticut	19	1,549
Storrs Agr. Station, Connecticut	16	1,532
Storrs Agr. Station, Connecticut	29	1,910
Storrs Agr. Station, Connecticut	25	1,426
Braeside Plty. Farm, Pennsylvania	28	1,344
Glenview Plty. Farm, Connecticut	24	1,513
Manor Plty. Farm, New York	21	1,396
A. B. Hall, Connecticut	16	1,393
Marwood Plty. Farm, Pennsylvania	26	1,571
Geo. M. Harris, Connecticut	13	1,176
Bonnie Brook Farm, New York	32	1,599
N. W. Hendryx, Connecticut	16	1,395
J. J. Linehan, Massachusetts	14	1,298
F. F. Lincoln, Connecticut	45	1,909
Cecil Guernsey, New York	31	1,587
Thos. W. Moore, Connecticut	29	1,464
Chas. N. St. John, New York	37	1,463
Chas. W. Sherwood, Connecticut	30	1,373
L. E. Sands, Pennsylvania	22	1,394
Tomoka Plty. Farm, Connecticut	21	1,248
Venture Plty. Farm, New York	9	1,129
Mrs. K. E. Woodruff, Connecticut	41	1,452
Windsweep Farm, Connecticut	8	1,210
C. H. Savage, Connecticut	19	1,405
P. G. Platt, Pennsylvania	23	1,611
Heneta Bone Co., New Jersey	9	550
F. M. Peasley, Connecticut	26	1,430
Chas. Heigl, Ohio	18	1,366
Tom Barron, England	45	1,820
Branford Farm, Connecticut	28	1,573
James Munn, Massachusetts	14	1,282
Geo. A. Cosgrove, Connecticut	34	1,425
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	26	1,456
Blue Andalusians.		
E. D. Bird, Connecticut	27	1,230
Buff Orpingtons.		
O. Wilson, West Virginia	12	960
White Orpingtons.		
P. A. Demgar, New York	26	964
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	16	782
Silver Campines.		
W. J. H. Lobel, New Jersey	42	1,210
"Hens."		
H. W. Collingwood, New Jersey	23	1,201
Daniel Hine, Connecticut	24	1,083
Daniel Hine, Connecticut	14	1,064
Mixed Breeds.		
Profitable Poultry, Massachusetts	33	1,212
Profitable Poultry, Massachusetts	36	1,234

GEO. A. COSGROVE.

Grains for Poultry.

I HAVE 30 S. C. White Leghorns and seven Rocks, to which I wish to feed wheat, oats and barley at present and corn later. In what amount should they be fed to get the best results? How much should they have at a feed?

Maryland. F. W. S.

You do not say whether you intend to feed these whole grains alone, without mashes, or not and it is accordingly impossible to say how much grain the 37 fowls will require. Your flock will do better if part of their rations is given in the form of ground grain mashes, either wet or dry, and the balance in two feedings daily of whole grains. If a dry mash is kept constantly before them, the better way, or a moist mash is given at noon, they may be given a handful each of the mixed whole grains morning and night. A little observation will teach you how much to give; the exact amount will depend upon their appetites and will vary from time to time. Give them all that they evidently want but not so much that part of it will be wasted. With a dry mash constantly before a flock they cannot be underfed and there is little danger of overfeeding if ordinary judgment is used. M. B. D.

Trouble With Ducks.

A YEAR ago last Spring I bought five Rouen ducks, four young ducks and one drake. I bred them with fair success. This Spring I mated the same four ducks with a drake I raised last year. I had about 40 young ducks that I hatched and thought I could raise. At present I have 16 left and do not think I shall have any in a little while. I fed on bran, cornmeal, and ground oats for mash, gave them fresh drinking water three times a day, no water to swim in, also mixed a little grit in mash. Kept them indoors nights on dry board floor, sprinkled with lime almost daily. They appeared to grow but very little; had a run on grass plot 12 by 20 feet. Every morning some of them would have their eyes closed, be very weak and drop over and die, also would get lame. Will you give information as to raising Rouen ducks, also let me know the fault of my ducks if possible? W. M.

New York.

It is difficult without seeing the situation to say just what is the trouble. The mash is good if they have grass on which to run. One of the largest duck breeders in the East feeds bread-crumbs and rolled oats slightly moistened at first, gradually changing to vegetables 1 part, green stuff one, beef scraps one, low-grade flour two, bran two, cornmeal three, with a little grit and oyster shells and a pinch of salt in each mess. Once a week a little ground charcoal is added. Adult ducks may be fed whole corn for one meal. The drinking water should be deep enough to cover the bills without allowing them to get in all over. A chance to get into the shade during the day and dry quarters at night ought to insure success. Shavings make one of the best coverings for the floor. W. H. H.

Experiment With Sweet Clover.

I AM trying an experiment with five acres of Sweet clover seeded with Spring wheat on some worn-out land that was abandoned by my predecessor in title. I encouraged this Spring wheat and clover with a light sprinkling of hen manure and litter from the hen houses, supplemented by a little potash, bone, and lime. The wheat is the "Marquis" and clover the white variety. At this date it looks like "pay dirt." I intend to use the Sweet clover for litter in the laying houses to see if it will help about solving the Winter egg problem. I enclose two samples that grew side by side.

Connecticut. FRED'K M. PEASLEY.

R. N.-Y.—We are glad to receive any experience with Sweet clover. Thus far reports are varied—some good, others negative. This idea of figuring out suitable farm crops for poultry farming is a new one. Spring wheat is not usually recommended for New England, and a "litter crop" for hens is new. Let us have all such experience.

Lice and Mites.

SMALL and insignificant as these vermin appear to the naked eye, they boast of book names that would put to blush the wooden labels in a botanical garden, and under a glass they are startling monsters of ferocious ugliness. Occupying a world of their own, they are divided into clans and families as distinct as those of any of our domestic animals, and each variety has its own preferred location and its own life habits which distingnish it from all others. Fortunately, it is not necessary for the practical poultryman to be able to identify each variety or to know all about their life habits in order to combat them successfully. Lice obtain air through breathing pores in their bodies, and anything with which they come into contact small enough or of such nature as to obstruct these pores kills them. Fine dust of any kind or greases and oils stop these pores and shut off their supply of air.

For practical purposes lice and mites may be divided into three classes, according to their life habits and the best means of destroying them. The first and least harmful class is that made up of the large body lice which live upon the skin of adult fowls and annoy them chiefly by the irritation of their presence. These are comparatively easily killed by lice powders sifted through the feathers, or by the dust baths which all fowls enjoy if given opportunity to take them. Given opportunity to take these dust baths, adult fowls will need little help in combating this class of parasites; young chicks, however, cannot protect themselves and if hatched under hens they must be greased about the head and perhaps under the wings when a few days old and the mother hen must be at least temporarily freed from the pests by the use of insect powder. Young chicks cannot thrive, or even live, under lousy hens.

The second class is composed of those which burrow into the skin or beneath the scales of the fowl's body and legs. The depluming mite which burrows into the skin at the base of the feathers and causes these to drop out, and the mite which causes scaly leg by burrowing beneath the scales of the feet and shanks belong to this class. These cannot be reached by dusting powders and must be attacked with some grease or oil that can penetrate to their habitations. Any non-irritating grease or oil may be used, ordinary lard being as good as anything, though it sometimes needs reinforcing with mercurial, or blue, ointment in the proportion of about one fourth part of the latter. This can be rubbed in and reaches the pests. As a liquid dip for legs, kerosene or coal oil is efficient and handy. The mercurialized lard also may be used about the vent or on the head of young chicks to kill the large lice, but it should be used sparingly on these.

The third and most destructive class of parasites is represented by the common red mite. These mites do not stay upon the fowls during the day, but live in cracks and behind loose boards about the nests and perches and come out at night to feast upon the blood of their victims. Careful search will find them in any neglected hen house and no fowls can thrive where they are present. These are to be killed by the lice paints or sprays and by whitewash. For painting perches and small surfaces kerosene to which has been added one fourth part of crude carbolic acid is cheap and effective. Carbolineum is also good but expensive. Any hard grease like tallow may be melted and applied to perches by means of a brush; this will fill the pores of the wood and lasts longer than the liquid paints.

Will Double-yolked Eggs Hatch?

WILL double yolked eggs hatch? If not, why not? If not, how are abnormal chickens (two heads, four legs, etc.) accounted for? L. A. R.

Cassopolis, Mich.

Without pretense of being an authority on embryology, I may say that I doubt if anyone knows why double-yolked eggs do not hatch; if, indeed, they never do. Lack of room and nourishment would explain why two chicks could not reach full development in one shell, but it would not explain why development should not begin. Personally, I can see no reason why two yolks should not each be fertilized by the male element swarming within the oviduct and begin development when placed under favorable conditions, even though enclosed within one shell. The existence of two yolks within one shell need not be invoked to explain such abnormalities as two heads, four legs, etc. This variation in the number and orderly arrangement of multiple parts, such as legs, wings, etc., is known to biologists as meristic variation, and is explained by the fact that all parts of an animal are produced by the multiplication of certain cells, each part being made from its own kind of cell—a cell is a small bit of living matter enclosed in its own membrane and uniting with its fellows to make up a tissue as bricks unite to make up a wall. By the slipping of a cog in nature's machinery, these cells sometimes fail to stop multiplying when just enough have been produced to form the part which they are to build and a duplicate part is formed; then we have a freak like the two-headed calf, or the four-legged chicken. M. B. D.

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April Pullets —to lay in October
In lots of 100 $2.00 per head
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Bargain—April Leghorn Pullets, $1
breeding pen Wyandottes, $12.
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FOR SALE—1,000 S. C. White Leghorn Pullets
First of May hatched, from selected stock, at $1 25 each. Cash must accompany all orders, or first-class roforenees. A. S. PERSONS, Mt. Vision, New York

FOR SALE—C. W. SHERWOOD'S HEAVY-LAYING S. C. WHITE LEGHORNS—2,000 Pullets ready to lay. 1,000 Breeding Hens. 500 Cockerels. Inspection invited. C.W. Sherwood, Saybrook Point, Conn.

100 BREEDING HENS, 75c each. S. C. W. Leghorns. Barred Rock Pullets hatched December 1913—$1.25 each. John Lorton Lee, Carmel, N. Y.

April Leghorn Pullets—Rancocas heavy-laying strain, $1; cockerels, 50c.; yearling hens, $1. ALTAVISTA FARM, Darlington, Maryland

FOR A REAL BARGAIN IN S. C. W. LEGHORN PULLETS, yearlings or cockerels, write RATHBUNCROFT, Cincinnatus, N. Y.

FOR SALE—Choice lot yearling Leghorn hens. Address. WILPEN POULTRY FARM, Sewickley, Pa.

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Leghorns from extra special imported pens 282-Egg. Wyandottes, 283-Egg, from imported pen. (Sisters to leading pen at Storrs.) C.W. TURNER, West Hartford, Conn.

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in lots to suit purchasers at attractive prices.
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Large, dark, vigorous cockerels, pullets, and yearling hens. Winter layers. Select exhibition and utility stock. Satisfaction guaranteed. I pay express. C. W. SIMONDS, Homestead, Pa.

SUSSEX FOWL
Red, Speckled and Light. 1914 stock. Nearly matured. $10 per trio and up.
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500 Barred Rock cockerels and pullets for sale, 4 and 5 months old; splendidly barred and marked; big, husky specimens. All free-range stock and guaranteed satisfactory, at $1.50 each. 1,000 S. C. WHITE LEGHORN COCKERELS AND PULLETS, 3 and 4 months old; good, big snappy bird, free ranged; Young and Barron strains. Fine Leghorn type, at $1 each. Address W. H. MOORE, R. 2, Rome, New York

BARRED ROCKS
bred to lay well and look well. We have an extra fine lot of husky, vigorous cockerels, on free range, at $3 each. GEO. FALCONER, R.F.D., Milford, New Hampshire

Park Strain Barred Rocks—Six pullets and cockerel, not related. $10. E. CLAUDE JONES, Hillsdale, N. Y.

PULLETS—Tested for white diarrhea by Storrs' Station, $1.50. March hatched Pittsfield Barred Rock cockerels, $2, $3. A. B. HALL, Wallingford, Conn.

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N.H.

EARLY WHITE WYANDOTTE PULLETS—Cockerels from Barron stock. W. J. THOMSON, Delhi, New York

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BUFF ORPINGTON COCKERELS—four months old, and yearling hens, $1.25 each, while they last. H. G. McCREADY, New Bedford, Pa.

DUCK DOLLARS Tiffany's Superior Mammoth Pekin and Giant Rouen
Ducks are bred to lay, weigh and win. Stock for sale. Write for prices. F. A. TIFFANY, R. 3, Phoenixville, Pa.

FOR SALE—3D Fawn and White RUNNER DUCKS AND DRAKES. May hatch, Cook strain, white eggers. Write PATTERSON POULTRY FARM, Clayton, New York

500 MAY HATCH, GUARANTEED WHITE EGG STRAIN WHITE INDIAN RUNNER **DUCKS**
$4.50 per Trio. FRED S. DEYOE, Hunter, N. Y.

INDIAN RUNNER DRAKES FOR SALE—Valentine strain, April hatched. Price, for one, $1.50; two, $2.75; three, $4; four, $5.25. ROBERT TWEDDLE, Montgomery, N.Y.

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Handbook for Dairymen, Woll	1.50
Milk and Its Products, Wing	1.50

THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

What Is an Education?

Need of Imagination to Practical Men

By Dr. E. H. Jenkins

PART I.

We regard Dr. E. H. Jenkins, Director of the Connecticut Experiment Station, as one of the wisest men ever connected with agricultural education. The following notes are made from an address delivered by Dr. Jenkins before the students of the Pennsylvania State College.

A CONTRAST OF RESULTS.—I shall say something about college education, *not* as a teacher or expert but as an outsider. For I am not an educator. I have not talked to a body of students more than two or three times in my life and have never conducted a recitation but once. I speak therefore as a rank outsider, but one who in almost 40 years of experience in the work of an agricultural experiment station and among farmers has had a chance to see the results of education and contrast sound mental training and habits of thought with the faulty, superficial kind. *Practical* results I mean, both in the business of farming and in the work of research. Now education I take to be the handing down from one generation to another, for its use, the Heritage of the Past, just as a faithful public officer not only hands over to his successor the public property in his charge but its heritage. He explains the office routine, the methods which have served him best, the tradition of the office, so that the newcomer may be saved from mistakes and the public better served. Just as the sailor on the sea, before going below after his trick at the wheel, says to the man who relieves him: "Keep her S. E. by S. half E. and call the cap'n at seven bells. The barometer is going down a little." He does it for the safety of the ship and all aboard her. Just so before our generation goes below to rest from its labors it must give to you what it can of the course to be held and the watch to be kept, both for the sake of you and of this dear old world itself.

WHAT MAY BE GAINED.—No man, of course, can gather to himself anything but an insignificant fraction of this heritage. No teacher can hold or impart more than a tithe of our small department of the store of human knowledge. All that the teachers in this or any other college can do is to give you a *taste*—a sample—of this store, a longing for more of it, and to show you how to get at the sources of it from which you may draw more, both now and through your whole life. For education is not a thing of course A or B of so many hours a week for so many semesters, with a degree at the end of it, like a period in punctuation which marks a full stop. Education should be to each man a continuous performance, a matter for all time, if not for eternity. Your course here should be only a start, and its chief importance is in making the right start, and in *that* you have the same responsibility as your teachers.

THE HERITAGE OF THE PAST.—What is it? A part of it is very obvious. There is the great body of established facts regarding the properties and relations of material things; surest of all, the facts of mathematics. There are all the great facts of physics (celestial and terrestrial), of chemistry and of the other natural sciences. There are other things which are more or less in the nature of hypotheses, like the existence, the nature and properties of atoms, which have so greatly helped to explain the facts of the physical universe and have so advanced our knowledge in many directions that we feel the theories must have truth in them though it seems likely that our statements of them still have a good deal of occluded error. The essential essence of many of these things we do not know, but of the phenomena of their action and interaction we have a good deal of knowledge. Electricity is a striking example. Very few physicists, I think, would feel confidence in any definition of it, but how much we have learned regarding its applications to the work of the world. Within the memory of some of us it has risen from its lowly place as a lecture-room curiosity to an indispensable servant of civilization. With this knowledge of the properties and uses and interaction of material things is closely associated the establishment of certain great laws or rules of conduct in the material universe.

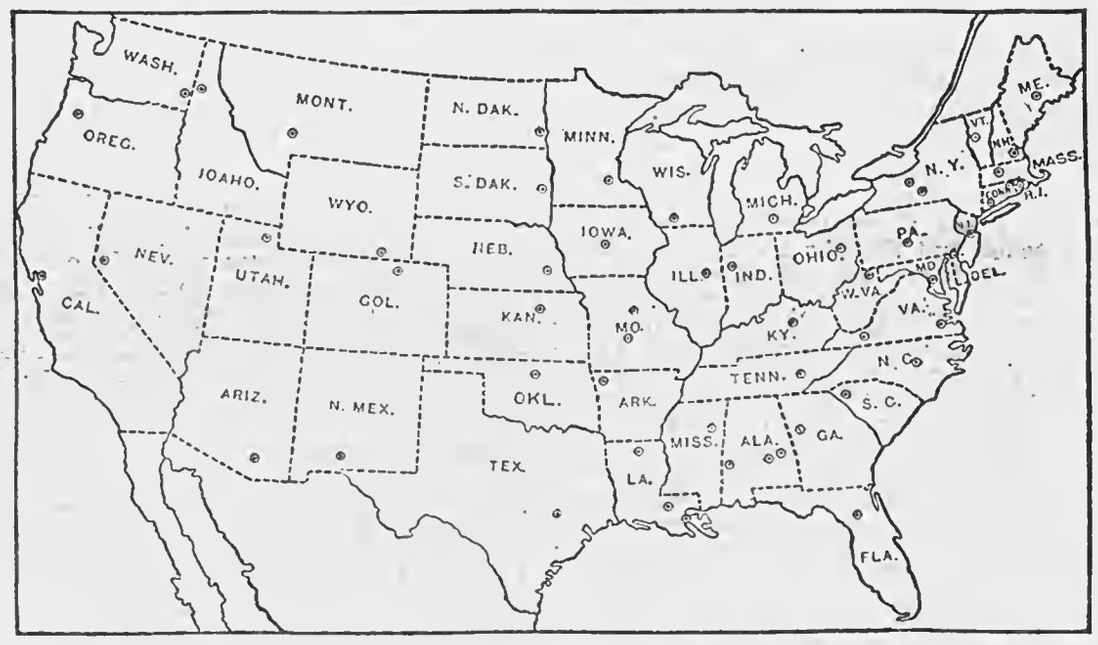
PRACTICAL TRAINING.—Now there is a widespread feeling that these things which I have mentioned are really the essentials of education, at least, of what is called "practical" education, "vocational" education, education while you wait, or by whatever other name it goes. There is a valid distinction to be made between cultural and vocational courses. But the thought I want to leave with you—and this is the gist of what I have to say—is this: Culture is "vocational," culture is practical, and cultural study contributes to business success, to pecuniary profit. By cultural study I mean that which relates to the working of the mind on matters not visibly or immediately concerned with technical training for a given calling, such as the humanities, as they are called, the study of history, of literature, of philosophy and ethics. These are certainly a part of our heritage of the past. There is the history of peoples, the channels in which human thought and endeavor has flowed, the experiments in human government and their results, the literature, the philosophy and the religion of the past. I believe all these have had their effect on the agriculture of this country. Some comprehension of them makes the farmer and the experimenter a better man of affairs, a better "practical" farmer and a better citizen than he can be if his whole time and thought has been spent on the details of his own specialty. I have not time, nor ability, adequately to set forth the particular ways in which these things minister to the life and work of investigators such as I hope some of you will be, or of farmers which I hope more of you will be. But I am sure that they have a very practical use in every life.

THOUGHT AND KNOWLEDGE.—No man can have any comprehensive knowledge of all the heritage of the past. No educated man should be without some little knowledge or comprehension of the different departments of it. Such knowledge opens his mind to receive impressions from all sides, it enlarges his field of thought and it brings in unexpected ways help for the solving of any special problem of whatever kind it is. The efficient research man does his work quite as much by brooding as by working; by considering the relations of facts and their probable meaning; yes, by imagining in the first instance what may be the explanation of a phenomenon. Education—some knowledge of the heritage of the past—results in an attitude of mind which is pliable, receptive, judicial, imaginative and, as Lowell says, of "unsullied temper." It is a mind which can handle and apply general principles, and without this thinking, brooding mind a string of facts "practical" in themselves are of little practical use. The storeroom of a manufacturing plant, with its supply of nuts, bolts and all the machinery parts, is only a junkshop without a mind which knows the place and purpose of each one of them and has before it the vision of a complete and perfect machine. Just so without the power to see the use and the application of each, the facts learned in the class-room are mere educational junk. I get several thousand letters every year from farmers. From the kind of questions asked I can tell pretty well whether a man has had some kind of decent college training or not. The uneducated man wants some kind of a receipt for success in growing his crops. The other wants rather a guiding principle.

(Concluded next week.)

AGRICULTURAL EXPERIMENT STATIONS

WE have many calls for a list of the Agricultural Experiment Stations in this country, and therefore we print a list of the stations herewith. There is also a map showing where these stations are located, so that our readers may understand what part of the State is represented. There are many bulletins issued by these stations which would prove of great value to our readers. Many of them issue lists giving the titles of their bulletins, and very likely you will find in such a list a discussion of just what you would like to know. As a rule, the stations are willing to send their bulletins to all who ask for them. Preference is given to citizens of the State in which the station is located, yet if they have a good supply of the bulletins on hand they are generally willing to supply outsiders.



MAP SHOWING LOCATION OF EXPERIMENT STATIONS.

Alabama—College Station: Auburn; Canebrake Station: Uniontown; Tuskegee Station: Tuskegee Institute.
Alaska—Sitka.
Arizona—Tucson.
Arkansas—Fayetteville.
California—Berkeley.
Colorado—Fort Collins.
Connecticut—State Station: New Haven; Storrs Station: Storrs.
Delaware—Newark.
Florida—Gainesville.
Georgia—Experiment.
Guam—Island of Guam.
Hawaii—Federal Station: Honolulu; Sugar Planters' Station: Honolulu.
Idaho—Moscow.
Illinois—Urbana.
Indiana—La Fayette.
Iowa—Ames.
Kansas—Manhattan.
Kentucky—Lexington.
Louisiana—State Station: Baton Rouge; Sugar Station: Audubon Park, New Orleans; North La. Station: Calhoun.
Maine—Orono.
Maryland—College Park.
Massachusetts—Amherst.
Michigan—East Lansing.
Minnesota—University Farm, St. Paul.
Mississippi—Agricultural College.
Missouri—College Station: Columbia; Fruit Station: Mountain Grove.
Montana—Bozeman.
Nebraska—Lincoln.
Nevada—Reno.
New Hampshire—Durham.
New Jersey—New Brunswick.
New Mexico—State College.
New York—State Station: Geneva; Cornell Station: Ithaca.
North Carolina—College Station: West Raleigh; State Station: Raleigh.
North Dakota—Agricultural College.
Ohio—Wooster.
Oklahoma—Stillwater.
Oregon—Corvallis.
Pennsylvania—State College.
Porto Rico—Federal Station: Mayaguez; Sugar Planters' Station: Rio Piedras.
Rhode Island—Kingston.
South Carolina—Clemson College.
South Dakota—Brookings.
Tennessee—Knoxville.
Texas—College Station.
Utah—Logan.
Vermont—Burlington.
Virginia—Blacksburg; Norfolk: Truck Station.
Washington—Pullman.
West Virginia—Morgantown.
Wisconsin—Madison.
Wyoming—Laramie.

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The Rural New-Yorker, 333 W. 30th St., N. Y.

:: The New Public Markets ::

What A Housekeeper Found

WOMEN of all ages, kinds and descriptions, coming and going, some laden with paper bags or various kinds of shopping bags, from the black oilcloth one to be had for 10 cents, to the pigskin leather suit case or Gladstone; others without packages but intent on getting some as soon as possible, is the sight that greets one as you go towards the market. And when you reach the market itself, what a busy scene it is! But the surprising part of it was to see so many men there of the better class, who went evidently to help their wives carry the bundles home, though some of them did not like it very well, as I could tell by their talk. Many mothers were there with babies in carriages and other children pulling at their skirts, and all had to do their share of carrying parcels home, for baby was almost out of sight from the packages piled around him by the time mother could tear herself away from all the bargains in fruits, vegetables and eggs "right from the farm." There were also chickens—cold storage and freshly killed—so the man said who was selling them. When asked if they were direct from the farm he said yes, he had bought them from a farmer, but I must say his manner was not convincing and I think he had bought them in the regular way from a commission merchant. The fricassee chickens were 16 cents per pound and broilers and roasters 20 cents per pound, being a few cents cheaper than at the regular stores.

PRICES.—There was a great difference in prices, some of the farmers charging as much for their goods as one had to pay at stores where orders are called for and delivered, and they had very inferior goods too. It is needless to say that most people looked further for their bargains, for women will not take the time to go to a market and carry things home unless the farmers make it worth their while. Peaches were from 60 and 80 cents for nice large ones to $1 for very small ones, reversing the usual order of things, small baskets were sold in proportion. Speaking of small baskets, I never knew there were so many kinds of little baskets made as I saw there Saturday, so that it is rather difficult to give prices, as you really had to see them to get an idea of how much they held, as some were heaped and others were skimped. Onions were two cents per pound; apples five to seven pounds for 10 cents for little bits of inferior fruit, and 10 cents per quart for nice Greenings. Soup greens, a large bunch five cents; egg plants four to eight cents; tomatoes from five cents for one of the little grape baskets heaped to five cents for a quart basket full, the man offering the former selling a crate for 65 cents, 10 cents being charged if the box was taken away. They were lovely, big round tomatoes without a spot, and the crowd was about three deep around them; the man and his helper were working just as fast as they could go. This was equally true of the other good things—wherever the crowd was biggest you could rest assured the stuff was the best for the money.

Cucumbers, small, were 10 cents per dozen; peppers, red and green 10 cents a dozen; corn 20 and 25 cents per dozen; small cauliflowers eight cents; string beans eight cents per quart; potatoes seven pounds for 10 cents. Lima beans five cents a quart basket; cabbage five cents for large and small heads, depending on seller; beets and carrots two bunches (about five in bunch) each for five cents; grapes, small baskets, 10 cents, but there was quite a difference in the amount in each basket; cantaloupes, five to eight cents each; plums 25 to 40 cents a square basket; celery five cents per stalk for large and two stalks for five cents of the small; bacon 25 cents per pound; legs of lamb, 18 cents; ribs of beef 18; eggs 35 to 43 cents per dozen. The lowest of the above mentioned prices on vegetables are just about half the regular store prices, and on fruit about two-thirds the regular price. If country housekeepers had to go just once to one of these markets to buy, they would realize how fortunate they are to be able to go out into their own garden and pick fresh vegetables in abundance, and they can have chickens and fresh eggs whenever they want to, while the city housekeeper who is at all practical (outside of really wealthy people) can only afford to have chicken on state occasions; for four or five pounds of chickens do not go as far as the same quantity of beef, lamb or pork.

THE COUNTRY WOMAN'S CHANCE.—Now it certainly seems to me that here is a chance for the women near these markets to make some money, for no matter how much or how little of any one product you may have you can sell it. If a great many more chickens were raised and the price lowered so that they would be the cheapest meat it would be good for both parties. Everbody is fond of apple jelly, spiced or plain, and this year when apples are so plentiful even though sugar is a little high it seems as though there ought to be good money in it. Homemade pies, cakes, doughnuts or crullers, plum pudding, conserves, pickles, relishes, —also I think cottage cheese could all be disposed of *provided* they were packed and handled in a sanitary way. Assuredly it will not be the woman's fault if the markets are not a success, for on Saturday there were women there of all classes, except possibly the very wealthy, although quite a good many expensive autos were there with large baskets of fruit and vegetables in the back. It is up to the farmers who live near enough to reach these markets to capture more than a 35-cent dollar by offering good goods at moderate prices.

MRS. T.

The Wild Flower Collector.

LISTING PLANTS.—The country girl who has decided to engage in the business of wild flower collecting must first make out a list of all the available plants in her locality. This list is the basis of all her future operations, for if she have rare and valuable species her list will "take" at once with the dealer. Every dealer has his price, which varies but little from any other dealer's price. Send for his price list and if you have plants plentiful enough you can underbid the other collectors and thus get the lion's share of the orders. The list that you send in to the dealer must give price per 10, 100, 1,000, and tell when the plants are ripe and ready to dig. Right here you will see that you must be very well acquainted with the habits of every flower on your list, otherwise you cannot furnish this information and must put in a whole year studying these things before you are ready for work. Of course if you are working for a near-by nurseryman it will be different, for he knows the blooming season of the plants in that locality. The dealer has to be well informed about the blooming time in different localities, too. If he is late getting his collectors lined up for work on a certain item he will be short on that particular species when he comes to filling the orders.

COLLECTING AND STORING.—You can see what it means to be forehanded in this business—that is, to dig the plants at the proper time and store them away ready for the order that is likely to come. There is nothing that gives a collector greater satisfaction than to receive an order for, say 2,000 Spring beauties, after they are all "out of sight," and be able to write the dealer that he has that number stored in his cellar. One of the first aids to this business is a cool moist cellar; in fact it is positively necessary. As fast as you gather the plants place them carefully in the cellar till you have enough to fill an order. When starting out to work provide yourself with a basket that will accommodate the length of the plants, if they are to be sent in bloom; otherwise cut off the stems immediately and drop the roots in the basket.

CONDITION OF STOCK.—Of late customers are demanding that all stock be matured before digging. This is all right. The packing is much simpler and more speedily done, the postage is less and there is a better chance of growing if the shipment is for long distance. Many people say they never lose a plant when dug at blooming time and transplanted in their wild gardens. There is no doubt of that, but suppose the plants must make a long journey in the fierce heat of Summer; even though well packed they have not the chance they would have were they matured and dormant. This necessarily means that you mark the beds of each kind of flower—a most tedious operation sometimes—or keep them in cultivated beds. The latter is by all means the best, not only for you but for the plants. You would say I was first cousin to Ananias if I were to tell you how wonderfully the wild flowers thrive under good cultivation. Anne McCall, in July Woman's Home Companion, tells her childish experience in cultivating the common blue violet. You will strike a responsive chord in the heart of every flower by giving it kind treatment, i.e., protecting it from the "wild beasts" of the plant world and giving it good rich victuals.

PACKING FOR SHIPMENT.—When packing for shipment use a stout pasteboard box well lined with wax paper, with damp moss scattered over the bottom. Pack the roots in carefully and compactly, cover with more moss, fold the ends of the wax paper over smoothly, put on the label giving name and number. Then put on lid and tie *securely*, and lastly wrap in strong paper and tie again. This is the safest way. Write name and address on a piece of white paper and paste in position. Put your name and address in upper left corner. Keep a bottle of library paste on hand. The dealer will supply you with wooden labels and tags. Send by parcel post, and be sure to fill all the requirements. If you are shipping plants in bloom or plants with tops on, divide them into bunches of 10 (if not too large) mass the roots well, wrap tightly in wax paper, then in tough brown paper and tie *securely* just above the roots, leaving the tops exposed. A small bundle can be rolled in pasteboard with both ends open, but long enough to protect the plants. All growing plants must be so packed that the tops have air and the roots are kept moist. This is the reason for tieing tightly above the roots. You must prevent the moisture escaping from the moss. When shipping growing ferns they are to be treated the same way, literally planting them in a shallow box as tightly as they can be packed and crating the upper part of box to allow free circulation of air. For long distance shipment soak the moss overnight, wring out rather tightly and use liberally, making sure that every root is in a veritable nest of moss. Then be just as careful about the wrapping; use double sheets of wax paper, and see to it that every bundle is so wrapped and tied as to be really airtight. These bundles can be placed in pasteboard boxes, well lined with wax paper, and crushed newspaper can be tucked in here and there to hold the tops firmly and prevent injury to leaves and flowers. When shipping dormant ferns cut off the tops, pack the roots in a strong wooden box, or barrel, well lined with newspaper. Scatter some damp moss over the bottom, pack the roots in very closely, with a little damp moss over them, put in label with name and number, cover well with newspaper and nail on cover. With very small brush, paint on name and address. You can do this with a pointed piece of cork and ink.

BUSINESS DETAILS.—The dealer always returns the "carriage fare," so when you send in the bill let the postage or freight be included. If sending by express it is just as well to have them billed "collect." When you receive the check the bill will come with it for receipting. Write the words, "Received payment." on it, and return it to him for filing. When writing to a dealer always remember that time is money in every office, and make your letters as brief and to the point as possible. If he has any special pet way of doing things do them his way. This is one way of pleasing him. Then some day, when sending you an order, he will take time to say: "We like to do business with you."

IDA M. JACKSON.

"DOES your dog love you, little boy?" "Well, I guess he loves me, mister. He knows I'd lick him if he didn't."—Judge.

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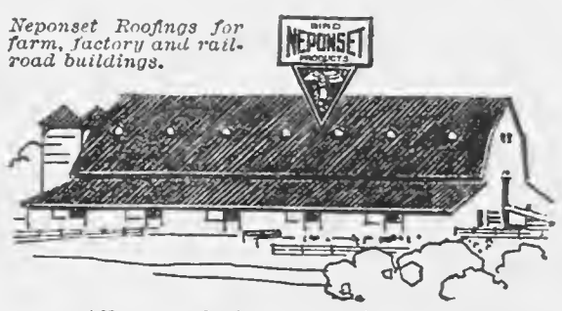

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Publisher's Desk

I AM enclosing you some papers from the International Stock Food Company of Minneapolis, Minn. I purchased some stock food from the above named company some three years ago, and we were to be the judge of it whether it was a benefit or not. We wrote them about it, saying we could see no benefit to the stock. We had on hand one pail of their stock food, and we offered to return it to them. They said for us to continue using it, and did so, and they extended our time. Ever since we used it they have sent us dunning letters, and there are several others here who are in the same boat as I. T. E.

The papers referred to by this subscriber included the blank contract which he signed when ordering the feed. The order blank signed by T. E. which constituted the contract read as follows:

Please ship me at once by freight, 100 pounds of International Stock Food Tonic, in four 25-pound pails, on your four *months' free trial offer*—with one 25-pound pail extra and absolutely free. Also send me absolutely free, Premium No.....I am to have the privilege of using the entire shipment for my stock. If I am perfectly satisfied with my four months' free trial results, then I am to remit the regular price, of $14, for the 100 pounds, in four months, or write you, asking an extension of time. You are also to send me extra and free, enough International Poultry Food Tonic—your remarkable preparation to double egg production, and International Pheno, the dependable disinfectant and germicide that helps save hogs from the terrible hog cholera—to pay all freight charges on my entire shipment.

A SPECIAL AGREEMENT IN MY ACCEPTANCE, is that if I am satisfied and it is not convenient for me to remit in FOUR MONTHS, that I am to have an EXTENSION OF TIME, beyond this if I write you and request it. If I am not satisfied, it will NOT cost me a cent for the entire 125 pounds or for the valuable free premium. ALL WILL BE FREE.

It is a part of my order that if I have not received paying results, after my four months' usings test, ON MY OWN STOCK, I am NOT to pay you a cent for the four 25-pound pails of International Stock Food Tonic or for the premium I select, and you are to accept my own personal written letter, which I agree to write you in specified details as to results I obtained in my four months' free using test. In my written letter I hereby agree to tell you how I used it and for how long a time, how many times per day, what size amounts I used for each animal, for what kind of stock, for how many head of stock, for what purpose and what results I obtained, and you are to accept my written statement as final and CREDIT ME IN FULL.

Now the above contract appears on the face of it so fair and liberal that it is inconceivable that any business concern would attempt to force collection for the goods after the customer had reported unfavorably from the use of the stock food as T. E. alleges he did. Notwithstanding the contract, however, and the unfavorable report from the use of the stock food, the International Stock Food Company has written the subscriber several letters demanding payment, and finally placed the claim in the hands of collection agencies, who are threatening to bring suit to recover the price of the goods and to report the farmer as unworthy of credit. The International Stock Food Company and their attorneys realize well enough that no court would render a verdict in their favor under the terms of the above contract, provided the customer complied with the conditions as T. E. claims to have done.

During the month of September, 1913, I shipped the Richmond Produce Company of Richmond, Va., two consignments of apples. They sent return for the first lot, but have not returned for the second lot. Will you try to get a settlement from this firm? R. D. C.
Virginia.

In response to our first request the Richmond Produce Company promised to adjust the matter in a few days, claiming delay was due to the fact that the fruit was green and they held it, but it began to decay very rapidly; at the same time they hoped to allow the shipper a fair price. The returns were then four or five months overdue. Green apples are hardly held so long. But no returns of any kind have as yet been received.

Your check in payment of my Canadian Express Company claim received and I wish to express my thanks for the interest you took in looking after it. I had tried for a long time to get the claim adjusted but could do nothing with them. It is a good thing that some one will champion the cause of those who are helpless in such matters as this. I have been a reader of THE R. N.-Y. for a good many years and think I shall continue.
Michigan. E. P.

This refers to a tub of butter, valued at $4.95, which was lost in transit March 13, 1912. We received the remittance for the claim on August 12, 1914.

William H. Cooper, a former vice-president of the Siegel-Cooper Company and head of the bankrupt New York Central Realty Company, convicted after a long trial of using the mails to defraud investors to the amount of $460,000 in the stock of the realty company, was sentenced yesterday by Judge Grubb, in the Federal District Court, to serve three years in the penitentiary at Atlanta, Ga. After passing judgment Judge Grubb, on motion of Cooper's lawyer, stayed the sentence pending an appeal. Cooper was released on a bond of $25,000.—Daily Press.

Penitentiary sentences to a few more real estate operators of this sort ought to have a discouraging effect on their kind. The publicity given the trial and conviction will undoubtedly act as a warning to those who may be tempted to put their savings into such schemes in the future.

I am putting out the samples sent me wherever there might be a chance for a new subscriber. I have done this before, and am ready at any time to testify to the worth of THE R. N.-Y., and the service it has done me in advice, and the collection of the Old Dominion Steamship Co. claim. If this has resulted, or eventually results, in new subscribers, I do not wish any premium or other reward. That incentive is not needed. I give out the subscription envelopes wherever there might be a chance for results. Please understand that while I am not working for any premium and will not accept any, I overlook no occasion to give you a hearty boost, and this with the idea of helping other farmers to a good friend.
Virginia. E. P. L.

If the above were an isolated sentiment it would not be significant or important. But it is not an isolated expression. It is the expression of a very general sentiment among our friends. He instances one service. The Old Dominion Steamship Company, received his perishable products when it was not in position to handle them because of an accident to a boat. The shipper lost his goods. The company refused him any adjustment. They first refused us; but we finally induced them to adjust the claim. At that the shipper did not get more than 50 per cent. of the loss. This incident alone would not influence a man of this type to canvass his neighbors for subscriptions any more than his influence in his neighborhood could induce the paper to attempt the collection of his claim. The men who do this work are impelled by a sense of coöperation, and an impulse to support a service to agricultural interests without regard of personal benefits. Without such a spirit, a paper like THE R. N.-Y. could not exist. That spirit has doubled the circulation of the paper three times in less than 20 years. The publishers and editors direct its forces; but it is the farmers themselves who furnish the energy that makes it powerful to champion their cause.

My wife gave a photograph of her deceased mother to an agent of the Colonial Art Company, Utica, N. Y., who called here with the understanding that he would make an enlarged picture for $1.15 and return the original photograph. She gave him 50 cents, and the balance was to be paid when the picture was delivered. Now they refuse to deliver the picture or return the photograph, until we pay $2 or more for a frame, which we refuse to do. He has worked the same scheme on many others around here, and some have paid as high as $14 before they could get the pictures. Can you get the original photograph back for us? T. W.
Greene County, N. Y.

It is doubtful if we can get the photograph returned, or anything else; but we will try. Twenty-five years ago fake picture concerns were numerous, and complaints were frequent. We are having a renewal of the complaints from various sources now. The general plan is to get the photograph of some deceased relative, usually the only one in existence, and with it an order for the enlarged picture at a trifling cost. They then refuse to deliver picture or return the photograph until you buy a cheap frame and pay a big price for it. The sentimental value attached to the photograph often induces relatives to pay what is demanded rather than lose it. This the concerns well know and they make the most of it. The only protection is to refuse to have anything to do with them.

Tenant's Right to Crop.

I HAVE received notice to vacate the premises that I now occupy by the first of next month. I have lived here 13 months, and my rent is paid monthly in advance. I have gone to some expense and considerable hard labor to get in a fair-sized garden, which is just now beginning to yield. It will be all of two months before I can clean it all up. Must I go and leave the garden (and I would hate to destroy it), or can I still claim the produce from it, or transfer the same to some other party not a tenant of the premises, should I move? How soon must I leave the place? Have I a certain length of time to vacate, or must I take the landlord's stated time? I have not spoken with the landlord as yet. He is not the owner of the property, only the agent. Has he all the power to evict of the owner? J. T. S.
Massachusetts.

Your rights would depend upon the terms of a written lease, if there is one; failing that, the landlord should give you at least one month's notice to quit. The general proposition is that the tenant should be, and is, entitled to emblements (the growth out of the earth produced annually by labor and industry, such as beans, corn, potatoes, etc.) when, without any fault or concurrence on his part, it is unexpectedly ended. Thus, if the lease for a designated number of years provides that either party may terminate it on giving notice and after the tenant has a crop growing, the lessors serve the notice which will expire before the crop can mature, the lessee will be entitled to emblements. In some States there is a custom which retains for a tenant the ownership of the annual crops which he has growing on the land at the time of the termination of his estate. So it would seem, in your case, that if you did not know when your landlord would terminate the lease, you would be entitled to the garden crop and may transfer your interest in it to some other party. You should have an understanding with the landlord or his agent immediately and he will probably recognize your right to the garden crop. The agent usually has all the power to evict possessed by the landlord. M. D.

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2 H-P, $34.90
4 H-P, 69.75
6 H-P, 99.35
8 H-P, 139.65
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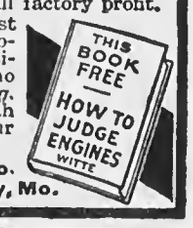

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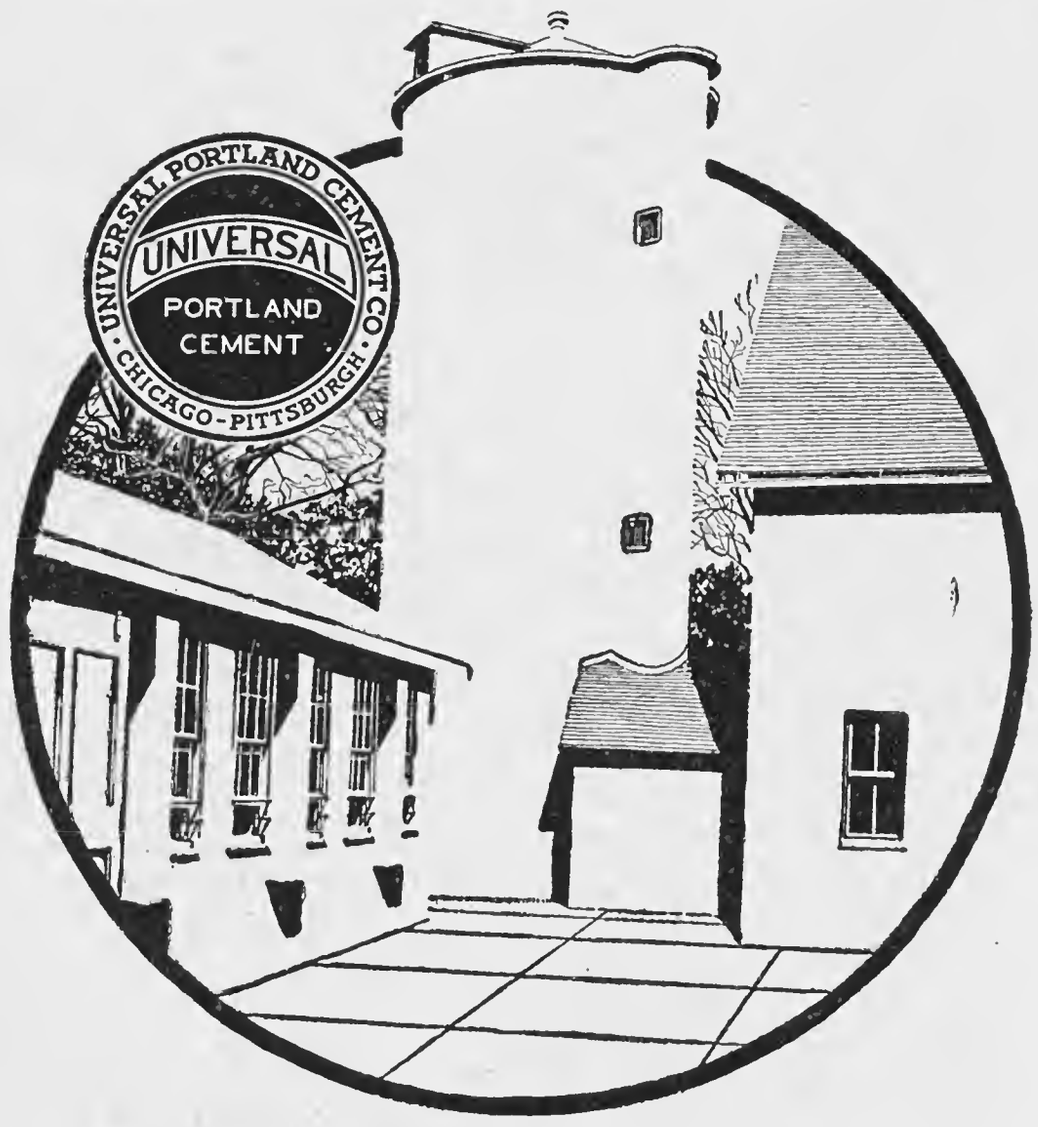

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Sept. 18, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with April is as follows, compared with last year. This is per 100 pounds in the 26-cent zone. For the 29 and 32-cent zones the schedule is 10 cents less for all months:

	1914.	1913.
April	$1.40	$1.50
May	1.50	1.25
June	1.10	1.10
July	1.25	1.35
August	1.40	1.45
September	1.50	1.55

Figuring 86 pounds to the 40-quart can the per quart price is as follows: April, 3.10 cents; May, 2.47; June, 2.36; July, 2.68; August, 3.01; September, 3.22.

Wholesale prices paid by New York dealers are running $1.81 and $1.61 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5½ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Business has been on a moderate scale during the week, without much pressure to sell, except on the lower grades. Packing stock and city made are very dull.

Creamery, extra, lb	32	@	32½
Good to Choice	26	@	30
Lower Grades	22	@	25
State Dairy, best	29	@	30
Common to Good	20	@	23
Factory	21	@	23
Packing Stock	19	@	22

Elgin, Ill., butter market 30½ cents.
Philadelphia, western creamery, 32 cents.

CHEESE.

The market is one-fourth cent lower on nearby grades and trade quiet, with considerable stock going into storage.

Whole Milk, fresh, specials	15½	@	15¾
Average fancy	15	@	15¼
Prime	14½	@	14¾
Under grades	11	@	14
Daisies	16	@	16¼
Skims, specials	13	@	14
Good to choice	11½	@	12½
Poor to fair	7	@	11

EGGS.

Business is unsettled. Receipts are quite heavy, but running medium or below in quality, very few being good enough to meet the top quotations.

White, choice to fancy, large	38	@	40
Common to good	30	@	35
Mixed colors, best	32	@	33
Common to good	22	@	25
Western fresh, white	26	@	32
Lower grades	18	@	20
Storage, best	24	@	25
Lower grades	20	@	24

FRESH FRUITS.

Apple prices on the better grades of picked fruit have improved. Pears are with a large proportion bruised or small. top qualities. Peaches are still very low, with a large proportion bruised on small. Grape market dull and lower. Cranberry quotations are low because of the poor quality of the receipts.

Apples—Alexander, bbl.	2 25	@	3 00
Gravenstein	2 00	@	3 00
Duchess	1 75	@	2 75
Wealthy	2 00	@	2 75
Fall Pippin	2 00	@	3 00
McIntosh	2 00	@	3 25
Pears, Anjou, bbl.	2 00	@	3 25
Clapp's Favorite	3 00	@	6 00
Bartlett	4 00	@	6 00
Peaches, Penn., crate	75	@	1 50
W. Va., crate	60	@	1 50
Nearby, bkt.	30	@	90
Grapes, 18lb case	40	@	60
Plums, 6lb.-bkt	10	@	25
Muskmelons, Md., bu	25	@	1 00
Jersey, bu	25	@	1 00
Watermelons, 100	6 00	@	15 00

HOPS.

Prime to choice	45	@	47
Common to good	40	@	44
Pacific Coast	22	@	23
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	60	@	90

BEANS.

There is a decline of 10 cents per hundred on all kinds except California Lima, which are 10 cents higher.

Marrow, 100 lbs	6 80	@	7 00
Medium	4 95	@	5 05
Pea	4 40	@	4 75
Red Kidney	5 90	@	6 40
White Kidney	6 50	@	6 55
Lima, California	7 75	@	7 90

VEGETABLES.

Potato prices are unchanged, at present they are proportionately lower here than at primary markets. Cabbage in surplus and dull, best nearby not exceeding $10 per ton. Sweet corn getting scarce, some bringing $1.50 per 100. Onion market weak and lower on all grades. String beans from Maryland bringing good prices, in some cases $1.50 per bushel.

Potatoes—Jersey, bbl.	2 00	@	2 25
Long Island, bbl.	2 00	@	2 25
Sweet Potatoes, bbl.	1 75	@	3 25
Beets, 100 bunches	50	@	1 00
Carrots, bbl.	75	@	1 00
Cucumbers, bu.	40	@	75
Corn, Jersey, 100	50	@	1 50
Cabbage, bbl.	50	@	75
Lettuce, half-bbl. basket	50	@	1 00
Onions—Orange Co., bag	75		1 00
Conn. Yellow, 100 lbs.	1 00	@	1 12
Okra, bu.	1 00	@	1 50
Peppers, Jersey, bbl.	75	@	1 50
Peas, bu.	50	@	1 50
Radishes, 100 bunches	75	@	1 00
String Beans, bu.	50	@	1 25
Squash, Hubbard, bbl.	75	@	1 00
Crook Neck	50	@	75
Egg Plants, bu.	25	@	50
Tomatoes, Jersey, box	15	@	50

LIVE POULTRY.

Broilers, lb.	16½	@	17½
Fowls	17½	@	19
Roosters	13	@	13½
Ducks	17	@	19
Geese	15	@	15

DRESSED POULTRY.

Chickens choice broilers, lb.	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	20	@	22
Fowls	17	@	19
Ducks, Spring	15	@	16
Squabs, doz.	1 25	@	3 50

HAY AND STRAW.

Market is extremely quiet and warehouses getting crowded. Very little demand except for clover mixed. Straw 50 cents per ton lower.

Hay, Timothy, new, No. 1, ton	20 50	@	21 00
No. 2	17 50	@	19 00
No. 3	15 50	@	16 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	15 00	@	16 00
Short and tangled	10 00	@	13 00

LIVE STOCK.

Native Steers	7 90	@	10 25
Bulls	5 50	@	7 50
Cows	3 50	@	7 00
Calves, prime veal, 100 lb	9 00	@	13 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 75
Lambs	7 00	@	9 25
Hogs	8 50	@	9 50

GRAIN.

Wheat has dropped three to six cents during the week. The heavy speculative movement is slackening. Corn and oats are a cent or two lower, in sympathy with the wheat market.

Wheat, No. 1, Northern Spring	1 16	@	..
No. 2, Red	1 19	@	..
No. 2, Hard Winter	1 11	@	..
Corn, as to quality, bush.	85	@	86
Oats, as to weight, bush.	52	@	54
Rye	97	@	98

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz.	40	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	20	@	25
Butter, fancy prints, lb.	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb.	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb.	30	@	35
Fricassee, lb.	23	@	25
Fowls	24	@	26
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	14
Pork Chops	16	@	18
Loin of Pork	15	@	16
Round Steak	18	@	20

BUFFALO MARKETS.

POTATOES, which retailed for $1 a bushel last month, are down to 90 cents and not quoted above 80 cents wholesale. Beans remain high, on account of the partial failure of the crop, quotations to retailers being $4.25 for marrows and $3 for pea beans. Cabbage and onions are low, cabbage, $2.50 to $3 per 100 heads, and onions, $1 per bushel. Peaches are not above $2 per bushel, and good third-bushel baskets sell at 65 cents, retail. Butter runs as high as 34 cents wholesale and nothing being quoted lower than 22 cents. Cheese has not advanced, the highest regular quotation being 18 cents. Eggs are 26 to 33 cents wholesale. Poultry, 21 to 23 cents for dressed turkey, 15 to 17 cents for live; fowl, 18 to 19 cents for fancy dressed, and 17 to 18 cents live. The apple market is in an uncertain condition, buyers not being able to fix a price they would call safe which will be accepted by farmers. Summer apples are plenty at 30 cents to $1 per bushel, retail. The quality is much better than common. Pears are not a large crop. Bartletts wholesaling at $1.50 per bushel down and Clapp's favorite a little lower. Plums are scarce at 10 to 12 cents per six-pound basket for small blue, to 15 to 18 cents for large green. Home-grown grapes are coming in at 17 to 20 cents for seven-pound basket of blues and a trifle more for other colors. Melons are cheap, watermelons not being quoted above 35 cents wholesale and muskmelons at $1 per bushel. The season has been favorable to the crop. Corn is lower than it has been in some years, being eight cents per dozen, retail, for Golden Bantam and 10 cents for Evergreen. The quality is excellent. Cucumbers are more plenty than common, selling for 25 to 35 cents per bushel, or 15 to 25 cents per 100 for pickles. Cauliflower wholesales at 75 to $1 per bushel. Lettuce wholesales at 15 to 25 cents per dozen and retails at two heads for five cents. Celery is plenty at 40 to 45 cents per dozen for fancy. String beans are 50 cents to $1 per bushel, peppers $1.50 per barrel, tomatoes 35 to 45 cents per half bushel basket. J. C.

Sept. 7. Plenty of rain. Grass looking green; second cutting of clover about completed. Plowing for wheat mostly done; corn about ready for the silos. Potatoes will be a short crop; peaches full crop, selling at 50 cents to $1.25 per bushel. Brood ewes $2.50 to $3.50 per head; not much change in cattle prices. Corn, 90; wheat, $1; potatoes, $1; chickens, 12; hens, 10; butter, 20; eggs, 24. Sugar declining a little; no cause at the present time for it to be so high.
Morgan Co., Ohio. W. B. H.

Cattle most grade Holstein around here; good grades $85 to $115; cattle of other breeds $15-20 less apiece. Butter, creamery, 35, dairy 30; milk shipped to Buffalo, 15 cents a gallon, f.o.b. At ice cream plant price varies from $1.10 per hundred to $2, usually $2 for one month, November. Pears very scarce; selling for $1 per bushel. Apples large crop. No silos made as yet in this section. Wheat $1.10; beans quoted at $3.25. L. J. K.
Akron, N. Y.

We had dry weather until about three weeks ago, since that we had abundance of rain, so much so that it bothered cutting oats. The potatoes are growing nicely, but many of them are rotting. There is a good crop of apples, Bartlett pears are shy, the pear crop is not over half a crop. It is said that in the Keuka belt the grapes are doing nicely. Hay is not an extra crop, but little clover, and there is considerable Alfalfa which is very good. There will be some steers fed for the Buffalo market. There are not many silos, but more will be established than heretofore. T. B. H.
Ontario Co., N. Y.

"WHY would not Jiggs patronize the fortune-teller? Was he afraid to have his future told?" "Oh, no; he said he didn't care what she said about his future, but she threatened also to tell his past."—Buffalo Express.

FARM HANDS WANTED—We always have good places, in Dutchess Co., for men who can milk and do general farm work; wages dependds upon capabilities. The Dutchess Employment Bureau, No. 11 Washington Street, Poughkeepsie, N. Y.

Subscribers' Exchange

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I WILL EXCHANGE first-class apples for sweet potatoes. L. I. WALDOCK, Cuba, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

WANTED—Young family cow, giving eighteen quarts 5 per cent. milk, Jersey preferred; give particulars and price delivered. Box 56, Little Falls, N. J.

FOR SALE—Valley farm 190 acres; fine buildings; beautiful location. Address LARSON FARM, Willseyville, N. Y.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Position as manager or foreman on a first-class fruit farm, 25 years' experience; references furnished. Address W. H. SCHWERK, East Otto, N. Y.

WANTED—By ambitious man, 25 years of age, steady position on farm; have some knowledge; state salary, etc. Address W. E. S., Rural New-Yorker.

YOUNG AMERICAN—Wishes position on country place; experienced about house, garden, horses, poultry, stock; references; state wages. P. R. J., Care R. N.-Y.

MARRIED COUPLE—Want position on farm; can do any work; two children; long experience; best reference; state salary. NESNADNY, Care Dr. Kucher, Rivervale, N. J.

POSITION WANTED—As farmer or herdsman by practical man, life experience with cattle, sanitary dairying, college training, good reference; small family; state wages. Address B. B., care of R. N.-Y.

WANTED—A reliable farm barn foreman by Oct. 1; must understand care of farm horses, repairing harness, and be generally useful; steady position, good wages for right party. Address Box 212, Greenwich, Ct.

FARMER WANTED—Married man as working farm foreman on Long Island milk farm; wages, $50, with house, fuel, vegetables, etc. State age, experience, nationality, size of family. S., Box 171 Saint James, L. I.

TWO STRONG CITY BOYS, aged 18 years, want place on farm for two years to get practical experience preparatory for agricultural college; salary not important. Address ROBT. P. KEHOE, 98 Morningside Ave., New York.

FARMER—Experienced in modern methods of dairying, efficient with purebred cattle, poultry and swine; a very useful, all-round man; married, but could accept good position as single man for a certain length of time. Address BENJ. H. DAVIS, Roslyn, L. I.

HOUSEKEEPER WANTED—Middle-aged woman, accustomed to farm work and butter; able to make and appreciate comfortable Christian home for owner. No objection to child if right sort. References required and given. Address "Housekeeper," care Rural New-Yorker.

WANTED—Steady, energetic young man to take charge of the poultry; must understand the running of incubators and care of young chickens; able to milk and assist in dairy; wages, $35 and board; must have references from similar positions. Apply Supt. Harkness Estate, Waterford, Conn.

POSITION WANTED—As superintendent or manager of a poultry plant, highest references as to ability, thoroughly experienced in modern methods; capable of planning or remodeling a plant on scientific principles, also experienced in general farm and orchard culture. G. H. SOMERS, Long Branch, N. J.

A PRACTICAL, successful farm superintendent desires position on an up-to-date dairy farm; understands producing sanitary milk, also care and breeding of Holstein stock and feeding for A. R. O. records, and can produce results; highest credentials; no liquors. Address N. X. Y., Care Rural New-Yorker.

WANTED—Position as manager of commercial Agricultural Enterprise on large farm to be run on a business basis; scientific knowledge and practical experience in North and South; silos, crops, breeding, feeding; unquestionable evidence of ability and integrity; at liberty Oct. 1, or sooner; will not consider proposition paying less than $1,800; or might consider taking under lease a good farm all furnished. Address B. D., Care R. N.-Y.

FARMER WANTED—Exceptional chance; on shares or percentage of profits, married, small family, on 20-acre Jersey farm, 6-room house, near Philadelphia; berries; 1,000 peach trees, grapes and early garden truck; must furnish horses, harness and wagons. We have all else. Give age, size and age of family; references, experience and all details in first letter or no attention will be given. JAMES R. GWILLIAM, Merchantville, N. J.

DAIRY FARM AND STOCK FOR SALE—One of the best opportunities in the South to-day; write for particulars. L. DILLON, Bedford City, Va. Route 2.

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FOR SALE—Dairy farm of 214 acres, located one mile from Dryden village, Tompkins Co., N. Y.; farm has two houses, three barns, silo, and other buildings; would take a mortgage for part of the consideration price, if desired. Price $30 per acre. Address owner, Box 356, Groton, Tompkins Co., N. Y.

NEW ENGLAND FARM FOR SALE—To Close Estate—Forty acres cultivated land; eighty acres of pasturage and good apple orchard; high ground; good view; four miles from Atlantic Ocean, in the town of North Stonington, Conn. Modern thirteen-room house and small barn; good water; one and one-half miles from trolley, and near State Road. Address ALLYN L. BROWN, Admr., Norwich, Conn.

FOR SALE—A 209-acre farm, in first-class condition, 8 acres in wood and timber, value $1,000; level fields; one mile to Blooming Glen, mill, stores, etc.; 3 miles to Perkasie, R. R. and trolley, one-half to creamery and school, 30 from Philadelphia; attractive brick house of 12 rooms, slated roof; about 140 apples, pears and cherry and grapes trees, and 100 bearing peach trees; barn and other outbuildings, also in good condition; price, $80 per acre; $4,000 may remain on easy terms; no agents. Address S. A. SCHILSTRA, Perkasie, Pa., R. 3.

CONCRETE BLOCK outfit; mixer, etc., complete. O. REDFIELD, Salisbury, Md.

MILKING MACHINE FOR SALE—Having quit dairying have a Hinman Milker for sale; a bargain. F. E. BROWN, Newfield, N. Y.

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Geo. A. Bottger,
President.
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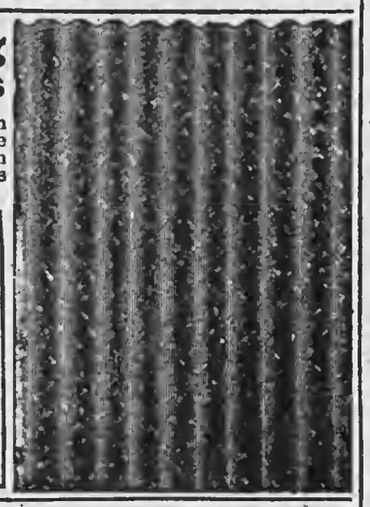

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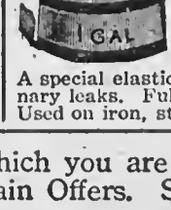

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII. No. 4275. NEW YORK, OCTOBER 3, 1914. WEEKLY $1.00 PER YEAR.

SELECTING THE LAYING HEN.

How To Look For Breeders.

A RULE-OF-THUMB METHOD.—In THE R. N.-Y. of August 29 Mr. Leo A. Mapes asks an important question, the answer to which may be of decided help to busy farmers. He writes:

It seems to me that there should be some rule-of-thumb method whereby the busy farmer-poultryman could pick out his best laying hens for breeders. My idea is that there ought to be some characteristic traits and habits of good layers, although it seems to be disproved that there is any uniform physical type. I wish you would submit the following points to some of the observant trap-nest operators, for comparison with their findings according to the records. If anything definite along these lines can be determined, it would be valuable to many of us. I believe that a hen having these traits should be an extra good layer, or, at least, extra profitable.

(1) A hen that lays during Fall and Early Winter. (2) A late molter. (3) One that lays during molt. (4) One that is active and always next to the feed pail. Good eater. (5) Not much given to broodiness. (6) One late to roost.

Likewise, that these traits indicate a poor one:

(1) A poor eater. (2) One lazy and sluggish. (3) A wild one. One that scoots around the farthest corner when you appear. (4) One frequently broody. (5) One not laying in Fall and early Winter. (6) One going early to roost and not coming at the feed call. All of these points with due allowance for the breed and condition at different seasons.

The phrase, "rule-of-thumb," is unfortunate in this connection, as its meaning is somewhat like that of "main strength and stupidness," which my father was apt to apply to certain ways of doing things, and both imply the use of physical strength rather than applying intelligence and common sense. In the handling of such live stock as hens and cows, whose product depends so largely upon right conditions and right foods rightly used, there *must be* intelligence and common sense applied for best results; just simple rule-of-thumb won't do! It needs science

HURRAH! MY SISTERS ARE AHEAD AT THE EGG-LAYING CONTEST! FIG. 519.

RULES OF SELECTION.—There are three methods of selecting the best layers, to be used later as breeders, and the first and best is the intelligent use of the trap-nest all the year around: the trap-nest record is dependable, it is absolutely certain. There is no doubt whatever about the trap-nest being the best method of selecting the greatest layers. The second method is to use the trap-nest for six or seven months of Fall and Winter, and that use of the trap-nest for the first half of the poultry year gives us a pretty good showing of a hen's laying ability. This point wasn't given due consideration when the question was put up to Mr. Barron at Storrs. Mr. Barron is so thorough himself, in his trap nesting and leg-banding, that any half-way measures don't appeal to him. The question had to be repeated in order to get his consideration, and when repeated he hesitatingly answered. "Why, of course, a six-months' trap-nesting is better than not trap-nesting at all, but the whole year's record is so much better, is so much safer. No, I wouldn't advise the six-months' trap-nesting!"

TRAP-NESTING SIX MONTHS.—That means that he did not give the question consideration from the busy farmer-poultry man's standpoint; he considered it solely from the standpoint of the poultryman. Now, there are very good reasons why a six-months' trap-nesting is decidedly helpful in selecting the great layers for future breeders. The birds which are the great layers are certain to be late Fall and Winter layers, and it is equally certain that the birds which are not late Fall and Winter layers are not great layers at all, hence the six or seven months' use of the trap-nest pretty well tells us which birds to select for breeders. So true is it that the great layers are cer

tain to be late Fall and Winter layers that I long ago adopted the slogan: "Take care to get eggs in late Fall and Winter, and the rest of the year can safely be left to take care of itself." This is a paraphrase of the familiar saying: "Take care of the cents and the dollars will take care of themselves"; and both sayings are eminently true.

ADVANTAGE OF THE PLAN.—A great advantage of the six or seven months' trap-nesting is that it exactly fits the busy farmer-poultryman's need. The five extra-busy months on the farm are May, June, July, August and September, and those are the months in which trap-nesting can best be foregone: the other seven months the farmer-poultryman can find the half-hours four or five times a day to give to the trap-nests and keeping the records, and great will be his reward. We urge the use of trap-nests for seven months instead of six months, because it is essential to the best late Fall and Winter egg yield that the birds come to laying maturity early in October, and they will then be in fairly full lay in November and December. It is the November and December eggs that fetch the greatest prices, so that the best profit comes from those eggs, but the vital point is that if the birds do not come to maturity until later they are overtaken by the cold weather, are slow in beginning to lay and do not get into the full flood of laying until well towards Spring! Just here the egg-contest people have slipped a cog, in that they do not have the contests begin until November first; the contests should begin October first, then they would be really valuable. True, that would throw out the birds of people who hatch their chicks so late that their pullets do not come to laying maturity till late Fall or Winter. Never mind that! What the contests should teach is the method of making the best profit from egg production, and that method unquestionably is to have the chicks hatched out sufficiently early that the pullets may be brought to laying maturity early in October, and then kept steadily laying. That is the keynote to profitable egg production, as was strongly emphasized by Mr. Barron at Storrs.

A THIRD METHOD.—The third method of selecting the best layers for breeders would be the examining of each bird, as Mr. Barron demonstrated to us. This examination would tell us the *probably* good layers. Mr. Barron's method of selecting was much like the examination a score-card judge gives to birds he is judging. It is noteworthy that Mr. Barron gives little importance to the familiar pelvic-bone method of determining a good layer, although he does estimate the probable time of a bird's beginning to lay by the position of the pelvic bones. His method might not apply to all pullets, and the evident bodily maturity of a bird would need to be considered. We need to keep in mind the fact that Mr. Barron is used to estimating pullets that have been bred for egg production for many generations, and have *the laying habit bred into them*, and such birds could be depended upon to lay at once they have reached maturity. With such pullets the pelvic bones being one finger's width apart, indicates that the bird will lay in about six weeks' time, two fingers' width apart indicates that she will lay in about four weeks, three fingers' width apart indicates that she will lay directly, if not already laying; and that is all the importance that he gives to these bones.

LAYING POINTS.—In taking a bird in his hands to examine her the first attention was given to the head and comb. The head should be full and broad, the beak should be short and stout, the eye should be full, clear and bright, and the comb should be of fine texture; it should be soft, smooth and fine to the touch, not feel coarse and hard. The back should have good breadth and be long; the great layers are long-bodied. The breast should be full, round and deep. There should be good width between the legs, to allow plenty of room for the digestive organs, and the rear part of the body should be full (but not "baggy"), and the general shape of the bird should be of good size, not small and thin; there must be "a good understanding" for the active, vigorous, great-laying bird. Mr. Barron desired to see the birds on the ground and walking around, so that he could better estimate their appearance: an erect carriage, and the look of being "up-to-and-good-for-anything" is essential. And the great-laying hen, he said, "will not be clean and tidy looking; she will be rather dirty looking, and ragged, and her shanks will be white—not yellow!"

WHEN TO JUDGE.—These points would be decidedly helpful to the busy farmer-poultryman in selecting his best layers for breeders, but they should be applied in late Fall and Winter, not in the early Spring, when *all* the birds are laying if they have any lay in them! These points are not much like those Mr. Mapes suggests, but they would be much easier to apply. I confess to being puzzled as to how Mr. Mapes would apply his points: how mark (or catch for leg-banding) the birds he notes as having the desired points. Apparently he would depend upon glancing at the birds as he is with them in the pen. No, Mr. Mapes, I think your rule-of-thumb method of selecting the best layers to be used for breeders won't do! It would be better than not selecting at all, would be better than the hit-or-miss breeding followed by the great majority of farmer-poultrymen, but when a really good selection can be made by going a step farther, why not take that added step? A. F. HUNTER.

WHEN TO KILL BRUSH.

I AM told that there are two months late in the season (August and November, I believe), when, if brush is cut off, it will not sprout or grow. Farmers cut in the dormant season to prevent regrowth. Is this method reliable? W. W.
Litchfield, Conn.

The best time to cut brush and small trees in clearing a field is during August and September, or before cold weather fully sets in. Many farmers will tell you that this is due to certain changes in the moon, but the moon has little if anything to do with it. You attack the brush at this season for much the same reason that you would from choice tackle a good-sized man when he was completely tired out, rather than wait until he was thoroughly rested and had just had a good-sized meal. The shrubs and

FOUR MONTHS' GROWTH OF APPLE GRAFT. FIG. 520.

trees grow fast during the Summer. A great deal of this growth comes directly from the large, fleshy roots, which feed the plant somewhat like the roots of the asparagus plants. At the close of the season these shrubs and trees stop growing, and their roots are well nigh exhausted by the growth they have made through the Summer. The plant then, if left to itself, will make no further growth above ground, but spends the rest of the season in replenishing its root system, storing up the food and energy for next year's growth. Now if the plant is cut off above ground while in this weakened condition at the end of the season, nature drives it into making a new growth to repair the damage; thus instead of refitting and strengthening the root system, these shrubs or trees proceed to send up a new growth above ground. It will be weak and feeble, as the roots are exhausted, but it leaves the root without power to strengthen itself, and the chances are that it will die through the Winter, or come out in the Spring badly exhausted. This is the theory upon which the destruction of brush is based. Trying to kill out the brush in Spring or Summer makes a very much harder job, because then such cutting acts like pruning a tree during the growing season, as this drives it into extra growth.

The best tool that we have found for chopping up such brush land, after it has been cut over in this way, is a disk plow, which is a large disk, either plain or with cutaway edges, mounted on wheels, so that it can be put down into the soil for a reasonable depth. This works better than a plow, as it chops and turns the roots over, while the plow catches under them and is often unable to break them off.

MODIFIED CULTURE FOR ORCHARDS.

LEARNING from Dr. Bailey's book on "Fruit Culture" that the roots of pear trees extend much farther than the branches, would it be a good way to plow, cultivate, fertilize or sow a cover crop in the center of the space between the rows, leaving sod next to the trees, this sod to be cut and used as mulch around the trees? S. E. T.
Cornwall, N. Y.

We follow this plan with most of our own orchards. A strip five or six feet wide is left unplowed along the rows of trees, while the middles or centers are plowed north and south one year and east and west the next. In young orchards we grow a variety of flint corn in these centers, using a small quantity of fertilizer, and sowing a cover crop at the last cultivation of the corn. This cover crop is left to grow until the early part of May, and then plowed under, repeating the plan of planting the corn. This has given us a good orchard, while the corn practically pays the expense of cultivation and fertilizing. If it was not your desire to raise corn or other crops, these cultivated middles should be kept thoroughly harrowed through the season and a cover crop put on in August. This crop should be plowed under thoroughly the next year, and the operation repeated. The plan is a sensible one in many localities, and has given us good results. There are a number of modifications which can be worked out.

FOUR MONTHS' GROWTH OF APPLE GRAFT

A LIVELY GRAFT.—We often have reports showing remarkable growth of grafted fruits. The picture at Fig. 520, shows what came from an apple scion in about 16 weeks. Mr. John N. Emery sends us this note about it:

"The scion was Fall Pippin; the tree was Summer Transparent of very vigorous growth. The graft was made about the 15th of May, and the actual time was about sixteen weeks when photographed. The owner, who appears in the picture, is Mr. E. B. Dunkerton, of Syracuse. When photographed the graft was three feet, three inches in length."

FRUITS IN CENTRAL NEW YORK.

OUR representative recently ran upon Grant Hitchings, of Onondaga Co., N. Y. Mr. Hitchings would hardly like to be called an "Apple king," but he has travelled the royal road to success. This is the way he talks:

"If you are to command the best prices for an article, that article must be good. If you wish to destroy the appetite of customers for a product, just mix in a few culls in your package, and you will see the popularity of your brand slip away. Do anything with your No. 3 and No. 4 fruit and your culls, but don't sell them under your own label for good fruit, don't sell them at all, let them go to the cider mill, to the hogyard or anywhere, but don't hurt the business of growing and marketing good fruit by shattering the confidence of buyers with an inferior article sandwiched in with attractive fruit. There are men who are growing high-grade goods for the market: these men are in a class by themselves. People are becoming acquainted with their quality as the people are becoming acquainted with the high-grade article of merchandise. The good buyers are calling for the products of these growers, and they will not be satisfied without their fruit. These producers who appeal and hold the high-class trade have good varieties, produce good fruit, and high quality.

"I would advise succession in fruit, as follows: Red Astrachan, Williams Favorite, Oldenburg, Gravenstein, Wealthy, Twenty Ounce, King, McIntosh, Northern Spy, Rhode Island Greening, Rome Beauty, and if you want any more plant McIntosh. There is no limit to its demand. The more of these which are grown the better will be the appetite of the consumer. These are good yielders, and satisfy the trade. In addition they cover the season from early season. The Spy and McIntosh are good yielders, and the more planted the better.

"The Eastern man is not harmed by the advertising of the Western grower. There are thousands and thousands of orchards coming in bearing. The products of these orchards do not glut the markets of the Middle West and the East: they are stimulating the market, continuing the taste for apples, and have demanded of the Eastern grower the good pack. We must do as the Western grower is doing, educate the customer up to the point that to enjoy good fruit he must pay a good price for it. We must have this price, for there is interest on investment to be figured against our orchards, the cost of maintenance, of fighting insects and scale, the harvesting and marketing of the crop. All this demands that we have good prices. The time has gone by when things just grow, and all that is necessary to secure returns is to pick the fruit and hand it over to the buyer at any price."

FARM EVENERS AND HITCHES.

Planning to Equalize the Draft.

METHODS AND PURPOSES.—Notwithstanding the increased use of the tractor in farming operations, the horse still furnishes the greater part of the tractive force used by the farmer. The evener always furnishes the link between the horse and his load, and a knowledge of its use and adjustments is essential to secure best results. Its purpose is to furnish a flexible hitch, place the horses composing the team so that they can work advantageously, and so to equalize the load that each horse draws his proportionate share. Among the desirable features are strength, lightness, simplicity and shortness of hitch. The evener is governed by a few simple laws which, when once understood, will enable one to devise hitches for a varying number of horses to suit his needs. The evener is a lever and comes under the laws of physics governing the same. This states that the power arm times the power is equal to the weight arm times the weight, expressed by the formula PA X P equals WA X W. The length of the arm is always taken as the perpendicular distance from the line in which the force is acting to the fulcrum or point upon which the lever swings. This law is probably illustrated as well by the seesaw as by any other common object. Every boy knows that to balance two of his companions on the seesaw he must sit just twice as far from the center as they do, provided, of course, that they are all of the same size.

ARRANGEMENT OF HITCH.—Practically every wooden evener has the center hole placed well toward the front and the two end holes placed well back. This is for the purpose of strength and is desirable as it shortens the hitch. However, it has one undesirable feature; it divides the load equally, only so long as the horses remain even. As soon as one goes ahead of the other it lengthens his lever arm as shown by Fig. 523, and gives him the advantage. The mount of advantage secured, of course, depends on the amount that the holes are out of line, and the distance one horse is in advance of the other. If one has a team, one horse of which habitually travels ahead of the other, I would recommend attaching his whiffletree nearer the center to equalize the load when at work. With eveners having a D, or clevis, to which a chain may be attached, the reverse is true: the horse behind has the advantage, for in this case the middle hitch is behind. This, however, adjusts itself, for, as soon as a horse drops behind he gains an advantage over the other and is enabled to catch up. This explains why a team will sometimes work evenly on a chain, that on a tongue are very uneven workers. The usual wagon evener is from 42 to 48 inches in length. Of course, the shorter the evener the greater the advantage gained by the horse going ahead.

EXPLANATION OF DIAGRAM.—Fig. 523 shows an evener 48 inches long over all; the end holes being placed 44 inches apart from center to center. A straight line passing through the centers of the two end holes will pass 3¼ inches back of the center of the middle hole. This is not an unusual condition, in fact many eveners have the holes for the clevis pins more out of line than this. A glance at the diagram will show that if the "nigh" horse travels 12 inches ahead of the other he will have a considerable advantage over his mate. No one would think of working an evenly matched team with one of them "bored up" 1½ inches, yet this is what this condition amounts to. On an evener of this description the end to which the leading horse is attached would have to be shortened approximately 1½ inches to equalize the load when working under these conditions.

DIVIDING THE LOAD.—There is no definite rule for dividing the load between two horses of unequal weight. Different factors enter, such as age, condition, temperament, and muscular development that call for judgment rather than the application of a fixed rule. However, it has been pretty well established that, other things being equal, each horse should draw a portion of the total load equal to a fraction whose numerator is his weight, and denominator the combined weight of the team. For example: suppose a team weighing 2,800 is composed of two horses, one of which weighs 1,300 and the other 1,500. The small horse should draw 1,300-2,800, and the larger one 1,500-2,800.

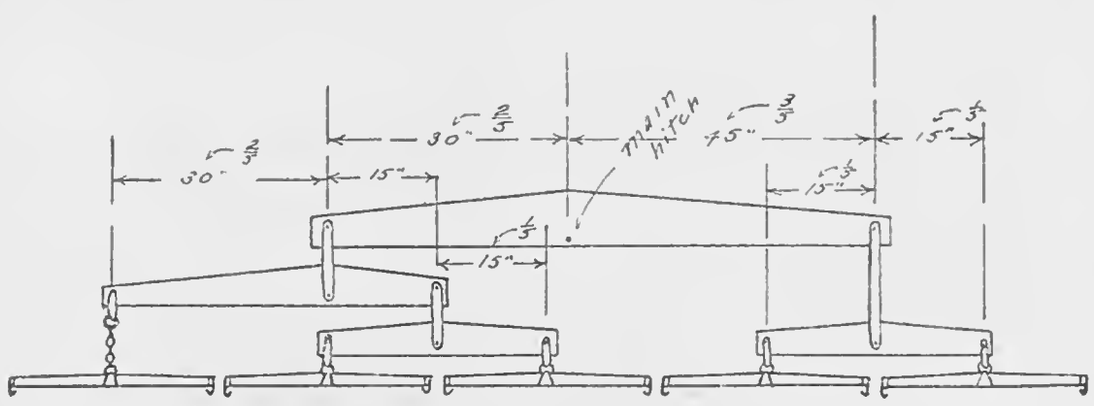
PLANNING DIVISION OF LABOR.—Referring to our law of the lever we find that the weight times the weight arm is equal to the power times the power arm. By thinking of one horse as the weight and the other as the power it is an easy matter to work out the position of the holes so that the load is equalized. Suppose that we have an evener 44 inches from center to center of the end holes to be adjusted for the above team. Each arm of the evener as it now stands will be 22 inches long (measuring from the center hole out). It is evident that the heavier horse should have the shorter end, therefore we will move the hole in his end of the evener toward the center. To get the proper distance to move it multiply the weight of the small horse by the length of the unaltered end (22x1,300, equals 28,600) and divide this product by the weight of the heavier horse (28,600 divided by 1,500 equals 19.066 inches), practically 19 inches the length of his evener arm, or 3 inches, the distance that his hitch should be moved toward the center. There are other methods of doing this such as moving the center hole or lengthening the end to which the small horse is attached, but this is the most practical.

UNEQUAL EVENERS.—With the advent of gang plows the farmer has many pieces of work requiring the use of three, four and five-horse teams. The three-horse evener is easily solved by dividing the distance between centers of the end holes into three equal parts and placing the hitch at one of these points. The two horses are attached to the short end and the single horse to the long end. The four-horse evener is even more simple as it resolves itself into a large doubletree with the hitch in the middle and two horses attached at each end. The five-horse evener is somewhat more complicated, but can easily be arranged by remembering the laws applied to the two-horse evener when adjusting it.

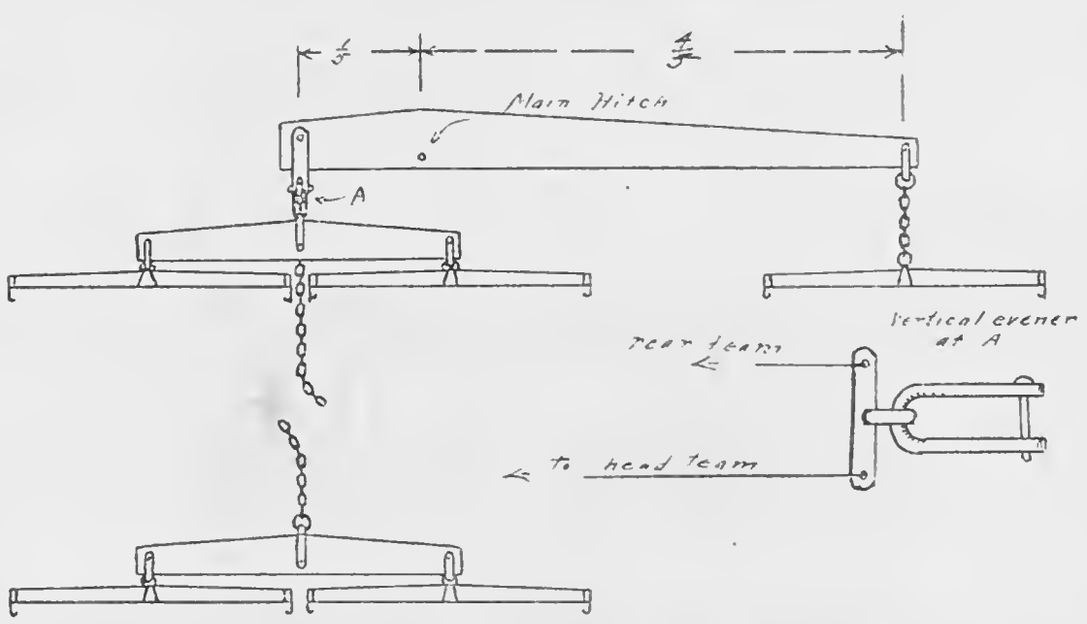
FIVE-HORSE HITCH.—When the five horses are to be used abreast the main evener is divided into five equal parts between the centers of the end holes and the hitch applied as indicated in the drawing, two of these divisions being on one side and three on the other. A three-horse evener is then attached to the short end and a two-horse to the long. In some work, as plowing with a heavy gang plow, it is not desirable for the five horses to walk abreast: it either necessitates travel on the plowed ground or causes too much side draft. This can be remedied by letting one horse work against the other four, placing two teams tandem on the short end of the main evener. The hitch will then come on the main evener one-fifth of its length from the point where the four horses are attached. A short vertical evener with equal arms at "A" equalizes the load between the two teams in tandem.

QUALITY OF WOOD.—Eveners should be made with their greatest thickness in the direction of the pull. A 2-inch x 4-inch will support a much greater load when on edge than when flat. Second growth hickory, white ash, red elm, oak and long leaf Southern pine are used in evener construction. The woods first named when they can be obtained in clear lengths make the best eveners, and when they contain a portion of sapwood will be stronger if made up with the sap to the back as it usually has greater tensile strength than the heart wood. Close, fine grained, heavy pieces are the strongest. The easiest material to get, however, is the pine, as the local lumber yard is more likely to have a good grade of it on hand. Select a piece that is slash sawed, i. e.: one in which the grain runs across the end diagonally, for greatest strength. Keep eveners and whiffletrees painted or oiled, and they will reward you with extra service. ROBERT H. SMITH.

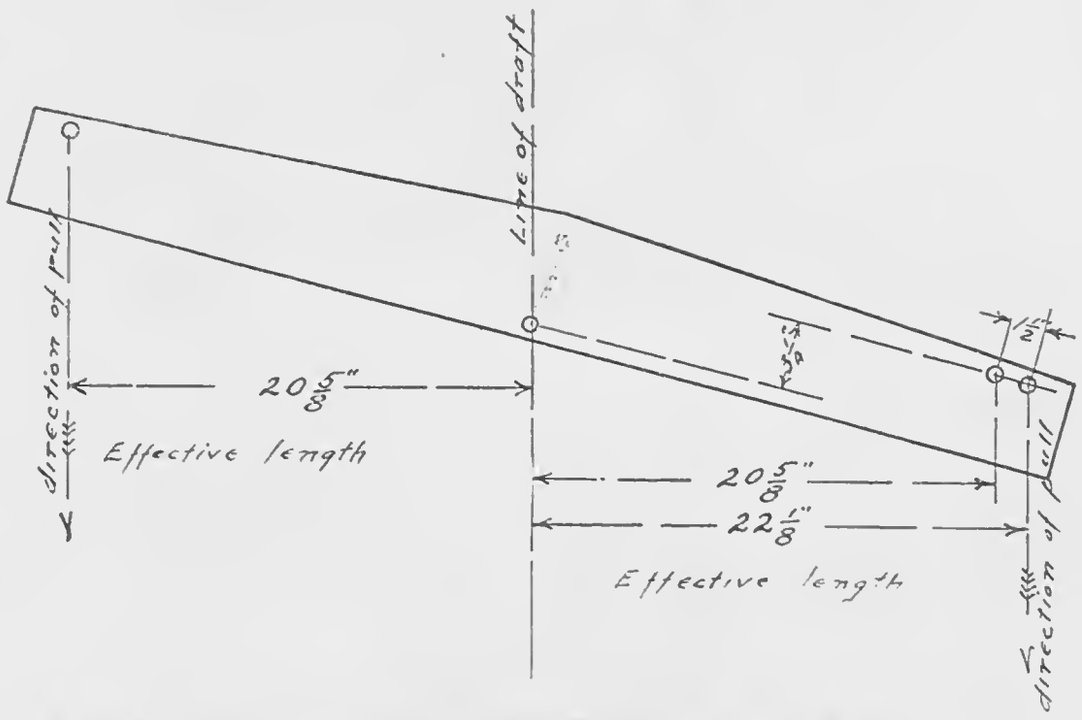
New York.



EVENER FOR FIVE HORSES ABREAST. FIG. 521.



FIVE HORSE EVENER WORKING TWO TEAMS TANDEM. FIG. 522.



WHEN ONE HORSE GETS AHEAD OF THE OTHER. FIG. 523.

ORCHARD QUACK GRASS; TAR PAPER MULCH.

I HAVE just read the interesting article on page 1097, entitled "The Fight With Quack Grass." Mr. Mathews' plan is an excellent one, and probably more efficient than the one I have tried now for the past two years, and found very effective in growing young trees in a small orchard badly infested with quack grass.

A few years ago I planted an orchard on my farm, 25 miles west of Chicago, the orchard consisting of about five acres adjoining a two-acre patch that was so infested with quack grass that I felt that I did not dare to attempt to plant it. Outside of that condition, it was one of the most desirable locations on the farm for an orchard: it was high and dry and rolling, with a gravelly clay loam, north and east exposure, and lay between the edge of my orchard and the highway. I wrote to members of my State Horticultural Society, who I knew to be successful orchardists, also sought the counsel of a member of the Wisconsin Horticultural Society, who has won considerable fame for successfully raising the Wealthy apple. They all said: "Don't do it;" but at last I accepted the challenge of that quack grass field, and three years ago I planted this patch, mostly with Wealthy and Duchess apple trees. A great many of those trees were killed by the awful freeze of 1911 and 1912, which was partly on account of condition of trees as sent by nursery. Then I should not have planted that Fall, as ground was so dry it could not be plowed, but I replanted next Spring and insisted on my tenant planting corn in that field, so he could cultivate both ways, and I kept quack grass away from trees by hoeing about them. They got a fair but not satisfactory growth that first season, so in the Spring of 1912 I hoed about the trees till June 1, and then placed about them a piece of tar paper about three feet square, held this paper down with clods of dirt and left paper there till September 1, when I removed the paper so the trees could get the benefit of the Fall rains. I got a splendid growth

(Continued on next page)

ORCHARD QUACK GRASS; TAR PAPER MULCH.

(*Continued from page 1179.*)

from all the trees when I used the tar paper and the roots of the quack grass had died and were rotten, so that I could raise them up with a hoe. My trees all did so well that I repeated that remedy this year with excellent results, some of my trees making nearly a three-foot growth. Next year I shall place a larger piece of tar paper around them and will continue this until trees are five or six years old, when I shall depend upon cultivation alone, which will insure a cover crop from the quack grass which will grow after I cease cultivation each year.

Wherever quack grass grows, corn and potatoes will do well if given clean cultivation, owing to the fertility from the decaying roots and its value as a mulch. This plan I have suggested may not be practicable for a larger acreage of orchard, but for one or two acres I believe from my experience that it is probably the best method to grow a young orchard, but of course it does not entirely eradicate the quack grass. I would also like to ask Mr. Mathews if there is not some danger in this climate from constantly stirring the ground from now on until freezing and would that not encourage young trees to continue growing too late if we should have a wet Fall, and thereby jeopardize them if next Winter should be unusually severe? I am glad to see the quack grass grow about my trees after Sept. 1, as that takes away moisture and plant food from the trees, and lets them mature for the Winter, besides acts as a cover crop, although not the most desirable one.

Illinois. DR. C. E. GREENFIELD.

Cutting Asparagus Tops.

I HAVE about two acres of Palmetto asparagus. I have always practiced the plan of mowing the stalks off after they turned yellow, and burnt them on the ground. I have recently been told that it was not good to do so, as the water during Winter went down the cut stub to the crown and hurt it. Will you inform me whether this is so? If left till Spring they become very hard, almost like wood. S. G. W.

Staten Island, N. Y.

The idea that mowing off the dying stalks of asparagus in the Fall will injure the crowns by water finding its way to them in Winter is not borne out by facts, but is purely the result of some one's imagination. Mowing off the stalks in the Fall has been a common practice with many growers for many years. If the crowns have ever suffered injury from cause stated it has not been observed by any of the large growers who have always made a practice of cutting the stalks down in the Fall.

What to do with New Clover.

A READER in Southern New York says he has a new seeding of clover this year which has made quite a heavy growth. He wants to know what he can do with it to get the most out of it. Should he clip it and leave the clippings on the ground for a mulch, let it alone just as it is, or turn in the stock for a pasture?

I consider it better to clip a new seeding and leave as a mulch, as injury may result from pasturing by the stock treading upon and pulling the young grass roots before having sufficient roothold to withstand the same. If growth is quite heavy and not clipped, or pastured, injury results from the matted covering of dead material over the grass roots during Winter and Spring. Clip not too closely as soon as possible, in order that a new growth start may be made. L. C. B.

Regarding the question of how one should handle the heavy growth of newly seeded clover will say that I should prefer to turn the stock on it for a short time every day and let them nip it down to a moderate length, but I would by no means allow them to eat it down close. This clover is one of the very best of cattle foods, and is surely worth much more as such than it is for fertilizer. A fraction of the value of the clover spent in stable manure and used as a top-dressing will keep the field in better shape than the dead clover would by rotting on the field. The only objection to feeding down the clover lies in its liability to cause bloat in cattle, so never turn on the cows when it is wet, and then do not leave them in the field until they have stuffed themselves. J. GRANT MORSE.

COMING FARMERS' MEETINGS.

National Apple Day, October 20.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Sept. 22. Grape crop is better than last year, which was very small, perhaps 30% more. The quality is good, and the demand beyond expectations, especially by the sour juice people who secured last year but a small percentage of their usual requirements. Juice factories here will not pay less than $35 for contracted grapes and we look for a price of about $30 on the open market for bulk. Picking has just commenced on the basket trade and they are bringing 14 cents wholesale. Apples here are a big crop, fruit is smaller than usual but good. Size probably occasioned by the drought in the early Summer. Pears are a small crop and not raised extensively in a commercial way. We had no peaches this year for the reason of extremely warm weather in December and January starting the fruit buds which were killed later by cold weather in February and March. First time in the history of the belt, that we have had an utter failure. Tomatoes are raised extensively, are heavily cropped of excellent quality and bring $9 per ton at the canning factory and on the Erie market from 20 to 30 cents per splint basket. Early tomatoes are also raised extensively for the Erie and adjacent markets, selling anywhere from 75 cents per eight-pound basket to 50 cents per splint later in the season. R. C. M.

North East, Pa.

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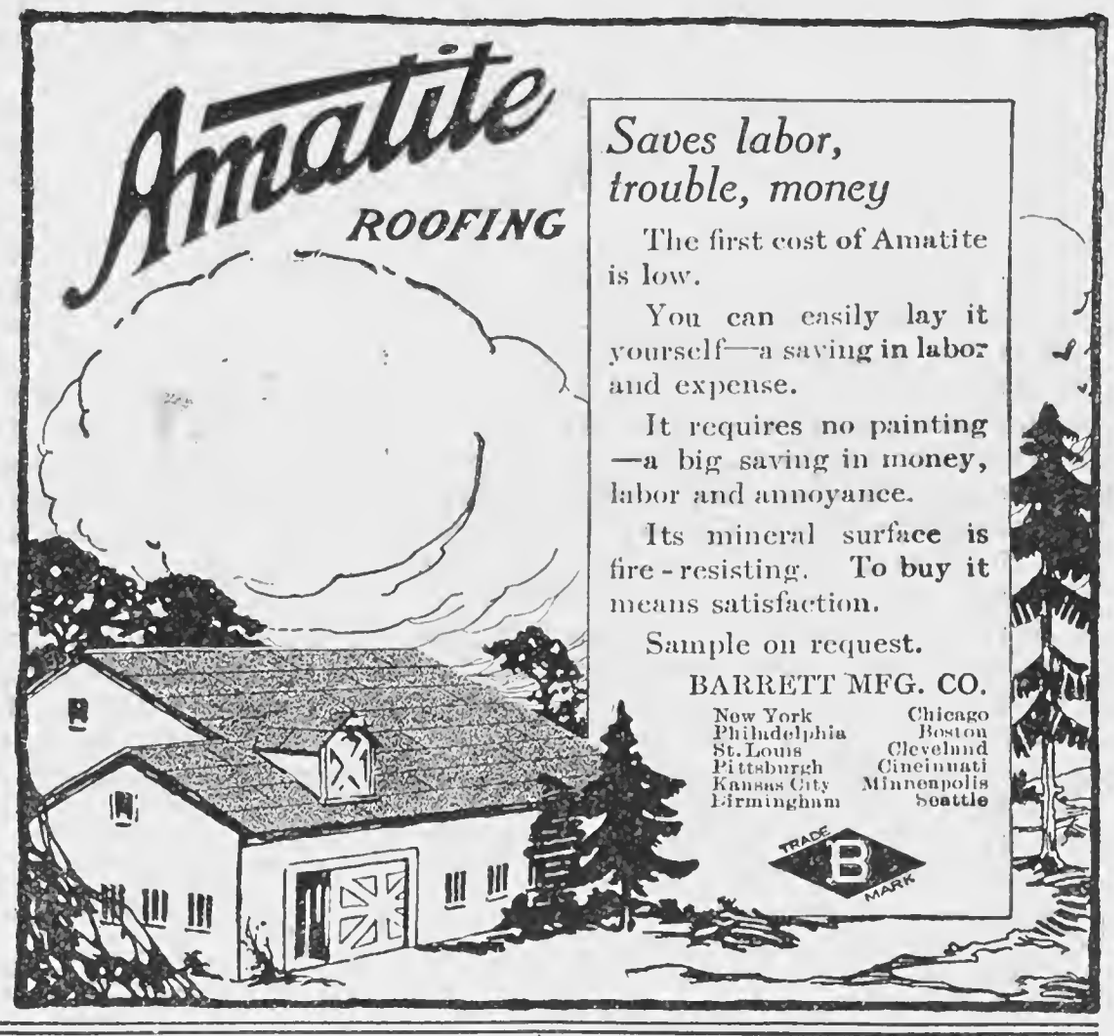

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GIRDLING FRUIT TREES.

DURING the last few months I have read in THE R. N.-Y., as well as in other papers, advice where apple trees were not bearing to girdle the limbs. I have several Pippins about 18 years of age in a healthy condition, but producing little fruit. I girdled some of the limbs during latter part of June by removing about a quarter of an inch of the bark from some of the limbs of half a dozen trees. At present the leaves on the girdled limbs have a yellowish cast and some have fallen to the ground. The ungirdled limbs are not affected. Would you advise grafting in feeders before Spring or would an application of white lead and raw linseed oil prove beneficial? Do you think limbs will die from present indications? C. B. R.

Crozet, Va.

I note your suggestion of girdling apple trees to bring them to bearing. Why does not such girdling kill the tree? If a mouse did the work the tree would die. Why not when man does it? C. J. F.

Burlington, Vt.

Replying to these two notes from those who are interested in the matter of girdling fruit trees to make them bear, I will say that it should only be done in the most stubborn cases, and then only on apple and pear trees, for peach and all other stone fruit trees would be killed outright. I have repeatedly tried it on apple and pear trees and never with any serious effects, and it did cause them to bear. Of course it is a slight injury, but if done during the flush of the growing season, June being the best time, and the greatest care used to leave the slimy coating of cambium on the wood untouched, there will be nothing but a checking of the flow of sap downward. This is what causes an abnormal development of fruit buds from the retention of the plant food in the rich sap *above* the wound. New bark will form over the peeled surface very soon, and in a year the healing will be quite complete, unless the cambium and wood were injured by the operation. This is always done by mice when they gnaw off the bark, for they go entirely through the cambium, and their work is usually done in Winter, which is a fatal time for the trees.

I wrote to C. B. R. asking him whether new bark had formed over the wounds, and he has replied that it has in part and that "the girdled limbs are looking fine, except one and that has lost most of its foliage. It has but a slight connection of bark." It is probable that there was not the proper care used in removing the bark last June, and the exposed surfaces were marred, and if so that is why the new bark is not completely covering the wound now. The final result of the operation is what we should know about, that is, has it induced the formation of fruit buds on the girdled branches, and will the wounds heal over safely? I do not recommend girdling to any considerable degree, nor is it often needed, and when it is done it should be with intelligence and extreme care.

H. E. VAN DEMAN.

Strawberry Leaf-roller

A MAN in this place is likely to lose his strawberries on account of a little yellow worm. Apparently some kind of insect lays an egg on the leaf and weaves a web around it, and eventually from the pupa the yellow worm hatches out. Can you tell me how to get rid of this pest? I do not think my strawberries have been attacked yet, but probably they soon will be. Practically every one of this man's plants have these worms on them, both old and new beds.

Remsenburg, N. Y. H. L. S.

I judge the insect is the common strawberry leaf-roller or folder. This insect is often destructive to this plant and is sometimes hard to control. Probably the best thing to do is to mow your field of strawberries, if the insects attack it, about as close as you think it will do and then rake up the leaves at once, before they dry, and burn them as soon as they will burn. This grass will destroy all of the caterpillars. Some growers mow their plants and burn them without raking. If you have read the Hope Farm Notes in THE R. N.-Y. you will recall that the writer of these notes mows his strawberry field every season. I do not believe you can effectively poison the pest. It folds the leaves so that you cannot get poison where it will eat it. At the same time, if the pest becomes serious it would be advisable to spray the plants with arsenate of lead at the rate of three pounds to 50 gallons of water to supplement the mowing. G. W. HERRICK.

LEGAL FARM MATTERS.

Private Lighting Plant.

IF I should desire to install an electric light plant on my farm at the brook which runs through the farm (an expert has informed me that there is enough fall for the required power) and should desire to supply my neighbors with light at prices to be fixed by themselves and myself, would I be required to get permission from some officials "higher up" in this State, or could I manage the plant as I desire regardless of other outside opposition? B.

If you supply no more than 10 neighbors and get the permission of the property owners, to whom you sell the light, to cross their land with your wires, you do not need the permission of any official. This is merely a personal enterprise and no one can interfere. If, on the other hand, you incorporate and exercise the privileges of a lighting corporation which is given the power under certain restrictions of condemning land, you would have to comply with all the requirements of law. This being an individual enterprise you cannot cross any person's land without their consent.

Locating Division Fences.

HOW is the law about the section line? My neighbor wants to move the fence on my land about 24 feet. He says that line is not straight. My land was cultivated 40 years ago, and this fence was made about 30 years ago. My land is all cultivated and his land is cultivated about one-fifth and rest is woodland. Can he move the fence? K. V. L.

New York.

The principle that controls in a case like this which is supported by most of the decisions is that if a division fence be wrongly placed by mistake of the parties, there being at the time no dispute and no representation by either to induce the act of the other, neither one is estopped to have it corrected; but when one acts in reliance and on the representation of the other or each upon that of the other, as when for instance the structure is fixed in settlement of a dispute or there is a "practical location" of the boundary in reliance on which one or both make improvement an estoppel arises and each of them may insist against the other that the fence is rightly placed. The rights of your neighbor, however, would depend upon the question of how the present line was established. If it is the result of agreement he cannot move it now and you should take all necessary means to prevent it, and do not let him move the fence anyhow until you are sure of your facts and your rights. M. D.

Tenants and the Lime Question.

WHEN I came into possession of some farms in Delaware I found the following agreement existing between landlord (my father) and tenant. Landlord had one half of all crops—corn, wheat, tomatoes, a four years' rotation, one field corn, two wheat, one clover for one of tenant as pasture. Landlord paid one-half of fertilizer for wheat and corn, and all for tomatoes. Tenant furnished all seed for wheat and half of clover. No lime was used and there were no cover crops; the one-year clover always closely pastured. I concluded, after a few years, that the farms were deteriorating, meaning less income for tenant and landlord. I then talked the situation over with the tenants, and for two years have been making them acquainted with the ideas of THE R. N.-Y. as to the importance of manure saving, the value of cover crops, the necessity of liming, etc. I propose now to revise our rental agreement and shall offer the following: Landlord to pay for half of all fertilizer, tenant same; landlord to furnish half of all seed—corn, wheat, tomato and clover, tenant same. Landlord to pay for half the lime and seed for cover crop, tenant the same, each to have half of all crops. I would like you to consider this last proposition from the tenant's viewpoint, as well as that of the landlord. I am sure tenants will make one of the old, old arguments—that lime is a permanent improver of land, and as the tenant only holds his tenantcy by the year; he is not willing to pay money (for lime) for the benefit of his probable successor. The same for cover crops—perhaps in a less degree. Why should any tenant refuse to pay for half of lime, or cover crop seed, when they willingly pay for commercial fertilizers, and then again if this plan is universally adopted in a neighborhood, would not each one get the benefit of the other's outlay, no matter how frequent the removal? FARMER.

Maryland.

Your proposed change of the rental agreement would seem to be fair to the tenant. The old argument that lime is a permanent improvement of the land has no standing when we realize that there is really no plant food in lime, but that it merely acts on the soil in such a manner that the plant foods already there are made available. With this knowledge, there seems to be no reason why the tenant should not pay half of the cost of the lime, because by the use of lime the plant food already in the soil is used up faster than it otherwise would be and it really is taking substance from the farm and therefore from the owner quicker than it would without the use of lime. M. D.

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WILL you give me information in regard to cutting Alfalfa for seed?
Derby, N. Y. C. J. S.

The Alfalfa seed crop should be handled in about the same way as the clover seed crop. The crop should be cut when three-fourths of the pods are brown. If left any longer many of the earliest and best pods are lost. The self-rake reaper is commonly used in cutting the crop, and the self-binder is sometimes used. The crop is gathered from the piles with barley forks and thrown into a header box, or into a hay rack, the bottom of which is covered with heavy duck. It is usually thrashed directly from the load, for the crop should be handled as little as possible. It may be put in small stacks and thrashed later. The regular clover huller is very suitable for Alfalfa seed. It is run at a lower speed than is required for clover seed, because the stems are brittle and are broken up unduly. A grain separator may be used. Three or four bushels to the acre is a fair crop.
R. P. L.

Massachusetts Asparagus Growers.

THE meeting of the Massachusetts Asparagus Growers' Association held at the Concord Experiment Station on September 9 was a very pleasant affair. The main work at present carried on there is breeding of new improved types and trying to discover what fertilizer and cover crop gives the best practical results in place of stable manure, which is considered too expensive in most cases for the average grower to use. Crimson clover and vetch are ideal cover crops to use where possible, but rye is very good also to sow later than the others, and if a growth of six to eight inches is obtained, it is of much benefit as a soil holder through the Winter, and to disk in next Spring. Some present had thought the proper way to dispose of the growth of old tops in the Spring was to cut and burn, but were emphatically informed they were burning up money by this practice, as the soil needs these very much, and to disk them in without any cutting is the way the up-to-date growers do with these.

Careful study of the breeding of this plant has produced an almost, if not quite, rust-proof variety in the Reading Giant, and the Giant Argenteuil is probably second to this in this respect. Either this fact is positive, or else something of another nature has assisted in destroying the rust, as none is present on the grounds or in the growing section about except a single row kept for the purpose of proving the new sorts immune after being associated with and exposed to this rust.

President C. W. Prescott was re-elected, as were also Wilfrid Wheeler, secretary and treasurer, and Frank Wheeler, vice-president. The black and red beetles were discussed: the latter feeds chiefly on the seed, but does some damage to the plants. The black may be controlled by use of arsenate of lead put on in a very fine mist.

Dr. William P. Brooks of Amherst gave a very good talk on fertilizer experiments carried on in the past years. He stated no fertilizer has any effect in any manner in preventing or reducing rust. 300 pounds of nitrate soda is enough to use per acre, any above this amount does not pay in dollars and cents, although a larger amount might not harm the crop. Acid phosphate does not do much good, as 8,000 pounds per acre was produced without any, but by using 300 pounds, costing $1.80, 500 bunches extra were grown, yet any above that amount would not probably give a corresponding gain. Muriate of potash at rate of 2,000 pounds per acre gave a gain of 820 pounds of crop; 300 pounds gave gain of 2,240 pounds per acre, while 400 pounds did not produce as much, showing 300 pounds was enough, and more if used was wasted, at least for that crop.

Prof. Wilkinson of Cornell gave some facts about New York growers and about the markets of the various large cities of his State. He stated that no large plots of 10, 20, and 30 acres are grown there as is the case in this section here, but mostly consist of two to five acres to each grower. They do not have a uniform package or bunch them either; they mostly sell by the dozen and pack in any kind of package, some holding one dozen others several dozen. Their bunches weigh a little over two pounds and have different lengths of stalks in same bunch, and bunches also vary in length. Here bunches are of uniform length and weight, 1¼ pounds being the weight, and the package a bushel box, each holding the same number of bunches. Prof. Norton who has charge of the Concord Station explained very fully the methods of feeding and matters along these lines, and is thoroughly at home on all subjects pertaining to asparagus and its enemies. President Prescott, on whose farm the station is located, is also thoroughly posted on matters of asparagus, and certainly deserves the hearty thanks of all growers for the work he has done and assisted in doing, and also made possible for others, by furnishing a place for them to do it.
A. E. P.

Slitting Bark for Blight.

THE question asked by Walter C. Black, relating to slitting the bark on trees to prevent blight, I notice you have left to wise men for solution. I do not consider myself in that class, but an observation from me I am certain will do no harm. I have kept in mind for many years that there could be no effect without a specific and absolute cause. Now if slitting the bark produces the effect of eliminating blight, then the blight must be caused by the bark around the tree being too tight. If this be true might it not be that the sap flow was obstructed by this pressure, and the end of the twig the furthest from the source of supply would suffer to such an extent that it would die of starvation?
West Virginia. T. F. L.

Treating Wheat for Smut.

Having had many requests for the method of treating seed wheat to prevent the stinking smut disease we print the following advice from a Cornell note:

1. Select as clean seed as possible.
2. Treat seed as follows: (a) Pour into a washtub or other large shallow container, until it is two-thirds full, a solution of formaldehyde made by diluting one pint of standard formaldehyde in 45 gallons of water. (b) Pour seed into tub and stir it thoroughly. (c) As this process is going on skim off all smut balls, chaff, and light kernels that rise to surface. (d) Remove grain and spread it out to dry, after which it is ready to sow.

The loose smut of wheat which destroys the entire head and changes it to a smutty mass cannot be controlled by this treatment.

Tree Surgery.

IS there such a tool made as a "hook gauge" used for removing fungus from heart of decayed apple trees? In cases where *all* rot cannot be removed what is the proper way to proceed? I find some farmers clean out what they can and then fill cavity with cement. It strikes me in such cases the rot will continue. T. R.
Manchester, N. H.

The Ohio Experiment Station has issued a good bulletin on this subject. It will give you much information. After cutting out the decayed wood the cavity is sterilized by washing with an antiseptic.

SELECTING SEED POTATOES.—The South Dakota Experimental Station sums up the principle of selecting good seed as follows: "Seed selection may best be practiced in the field as follows: When digging the potatoes in the Fall, take a bundle of small stakes to the field. When a hill having an exceptional number, say five or more, even sized tubers is found, set a stake to mark it. Let the picker pick up these seed hills first. When a sufficient amount of seed selected in this manner is found the hand digging may be discontinued. The hand digging is really about the only extra work involved in this method of selection. The Ohio Experiment Station has found that this method of selection increases the yield. The South Dakota Station reported in Bulletin No. 140, a gain of 28 per cent. in yield from simple selection of seed tubers and use of resulting large seed pieces.

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The HUDSON Six-40 now outsells any car in the world with a price above $1,200.

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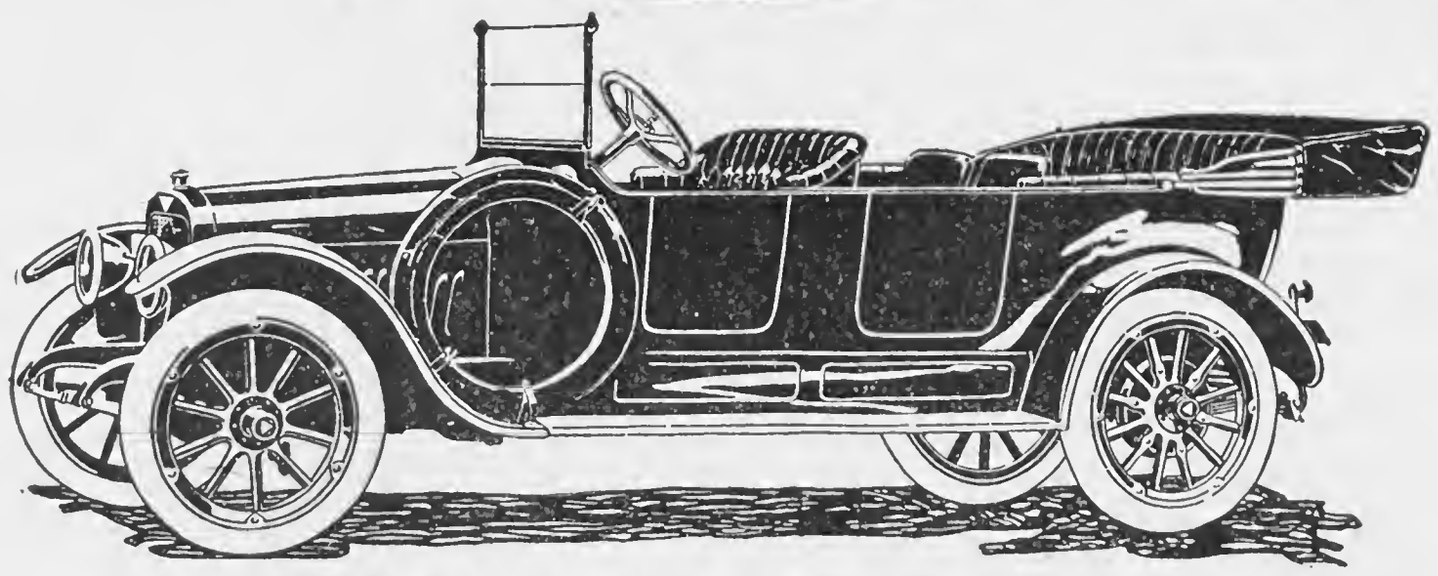

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Potatoes on Old Soil.

WOULD plowing sod land this Fall, sowing Winter rye, then turning it under in the Spring prepare the land for potatoes? We have a moist, rich soil, and all crops have done well this Summer. If this would not answer, would further preparation make it fit for potatoes, or must another crop precede them? H. L. C.

Medway, Mass.

It will depend upon the character of that sod. Old pasture land which has not been plowed for some years usually contains large numbers of grubs and similar insects which might injure the potatoes. It would be a mistake to plant potatoes directly upon such land, as the white grub would give much trouble. Such sod would be better if turned over in the Fall and left through the Winter in rough furrow, so that the air would work through and help to break up the sod. We should prefer therefore to plant corn on such a sod. If the sod is not well stocked with grubs and other insects, the plan you speak of will answer very well, but do it as soon as you can and seed rye. Next Spring plow this rye under and plant the potato seed deep. In our own experience this method of culture has given us better results than any other. It is a mistake to assume that the old sod and the rye will supply all the needs of a good potato crop; 600 pounds or more of a good potato fertilizer should be used for best results.

Vaccination Law.

IS the law compelling vaccination before children can attend school constitutional? What can be done to the parents if they do not have children vaccinated? I know of instances where children have died from vaccination, and but few die from smallpox nowadays. I heard a doctor say that he would as soon care for smallpox as measles. How do they figure this out? They say that if a child comes to school unvaccinated they will send him home, yet if he does not go to school they will compel it. C. I. M.

Yes; the compulsory vaccination law has repeatedly been held constitutional by the courts as a proper exercise of the police powers of the State. The only alternative for those who object to vaccination is to provide such educational facilities for their children as will meet the educational requirements of the State and excuse the children from attendance upon public schools. As a public health officer for many years, the writer has seen much of vaccination and has had a considerable number of smallpox cases under observation I have never personally seen or known of any serious results following vaccination, though I am well aware that lack of cleanliness during, or after, the operation or the use of impure virus might cause trouble. Such accidents are absolutely preventable, however, and cannot be charged against vaccination. So little fear of any accident have I that I have repeatedly vaccinated myself, and would do so again were I exposed to an outbreak of smallpox. The protection afforded by vaccination is a variable one, particularly as to the time that it holds good, but no one who is at all likely to be exposed to this loathsome disease can afford not to avail himself of it. No one with the slightest acquaintance with the history of smallpox and its control by vaccination could fail to recognize the indebtedness of humanity to this method of prevention. It is only because vaccination has placed such a check upon the disease that the present generation knows it only in its present mild form and has largely lost fear of it. The reappearance of a malignant type of smallpox, such as may come at any moment, would quickly banish all opposition to vaccination and cause the world to again recall the untold horrors of the disease in pre-vaccination times. M. B. D.

THE AGRICULTURAL DEPARTMENT at Washington is recommending Sudan grass as a forage crop for the Central Plains and the Southern States. This grass is closely related to the sorghums. It looks something like Johnson grass, but unlike that grass it does not propagate from root-stocks. Thus it will not overrun the entire farm and become a weed like quack grass, as Johnson grass does. It gives several cuttings a year, amounting to a heavy crop. The hay is of about the same quality as Johnson grass or Timothy. It has many advantages where it will do well. It is thought that this Sudan grass will take the place of the millet in many parts of the country, and is said to be worth trying all through the West and South, but it is not likely that it will prove very useful along the upper Atlantic Coast.

THE MAIL BAG.

Harrowing Timothy Sod.

MY farm is in Connecticut. I cut my Timothy late this Summer, a great per cent. of seed had ripened and fell to the ground. If I should harrow over this ground would that help falling seed to re-seed the ground, or would such operation loosen roots of Timothy now standing, causing it to freeze out in Winter? Would I gain anything by such an operation? My ground has a very good stand, but is thinning each year. J. W. R.

We doubt if you would gain much by this harrowing. It might quicken up the old grass a little, but would not hurt it seriously. It is very doubtful if this new seed will thicken the stand of grass. We have not been able to improve such a stand except by breaking up and reseeding. If the stand is still good topdressing in Spring with a good fertilizer would be the most practical way of geting more grass.

Cover Crop for Orchard.

MY young orchard, four years old, has been in raspberries, which I want to take out. Would you advise taking them ont right away to plow and get in shape for rye for cover crop, or would it start too much wood growth on peach trees? The orchard is apple, with peach as fillers. I have not had a crop of peaches yet. There was lots of bloom on them and they set well, but later dried up and dropped off. The trees have grown fast and are large and healthy-looking, the soil is not very rich, I think lacks humus; it is hard and cracked open. I. R.

Columbiana. O.

We should try and get the berry vines out at once and seed to rye and turnips or rape. This crop growing through the Fall will probably offset the effect of cultivation to get the ground ready for seeding.

Yellow Wash for Buildings.

WILL you tell me how to mix a good yellow wash suitable for outhouses on my plantation, which are exposed to a tropical sun? R. B.

Vego Alta, P. R.

For every 20 gallons desired, one bushel good hard burned lime, one gallon raw linseed oil, five pounds common table salt, five pounds (approximately) dry yellow ochre. Put sufficient water into a barrel, add lime slowly, keeping same well stirred, that it does not burn. When lime is boiling well add the ochre, which you have before hand-mixed to a very thin paste in a separate vessel. The amount of ochre will vary according to the depth of color desired. You must govern yourself. When ochre is mixed in, dump in oil; when oil is mixed in, then add salt. The life of this mixture is dependent on the length of time it takes to mix same. The object is to get the color, the oil, and salt, each thoroughly mixed into the lime separately and have all in before the lime stops boiling; then to take a piece of cheese-cloth or wire fly netting and strain wash through into another barrel before it is cold. I know of a barn I helped coat as an apprentice 22 years ago with above mixture and it still wears on the sheltered side. My neighbor next door to me coated his barn last Winter with same mixture, and not a trace remains of it. Just understand what you are to do, and when bubbling time comes, do it. I have used this wash (not always yellow, different colors) 22 years, and never had it go back on me. I have had employees mix same and more often than not, it turns out badly, because they will not attend to business at bubbling time. When adding ochre remember that the wash dries 50% lighter than when wet; make it twice as dark in the barrel as color you desire. A. F. R.

Use of Bromo-Seltzer.

IS Bromo-seltzer, the commonly used remedy for headache, regarded as a habit-forming drug by the medical profession? What are the common effects when used in excess? G. S. T.

Cornwall Bridge, Conn.

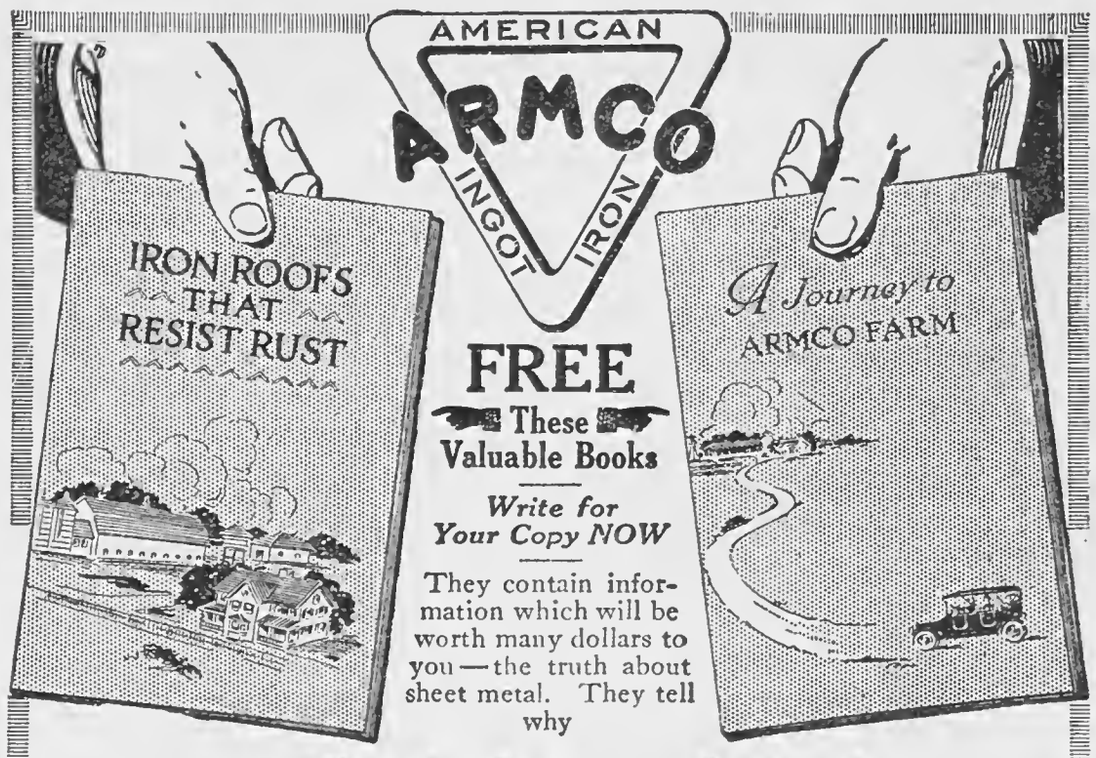
An analysis of "Bromo-seltzer," made by the American Medical Association showed it to contain potassium bromide, acetanilid and caffein; none of these drugs are considered habit forming in the usual sense of that phrase but the acetanilid is a heart depressant and in overdose dangerous. Several deaths have been reported from use of this nostrum and it would be well for those using it to assure themselves that they have no inherent weakness of the heart rendering them especially susceptible to drugs of the nature of acetanilid. M. B. D.

Destroying Poison Ivy.

DO you know anything that will kill poison ivy? J. F. R.

East Hartford, Conn.

Grubbing out with the hoe and burning, and frequent cutting of the tops, will exterminate the pest. Free application of hot brine to the tender young growth is destructive to it, but also destroys other vegetation. Concentrated sulphuric acid, a small quantity applied to the crown of each plant destroys it, but is dangerous to use. We are told that some stock browses on it quite freely.



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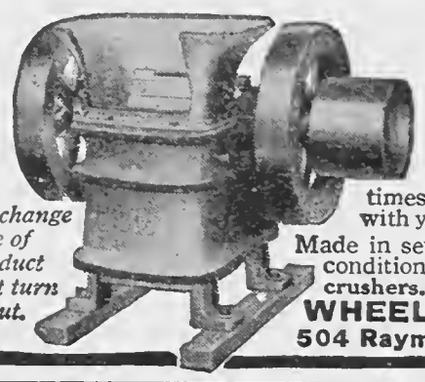

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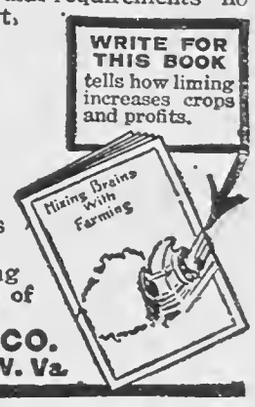

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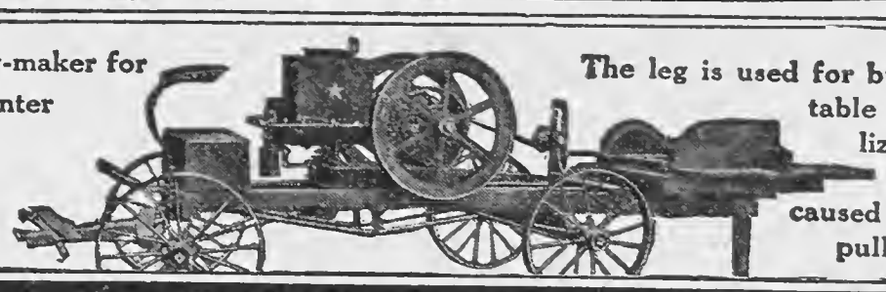

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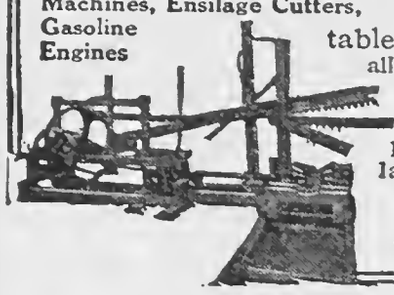

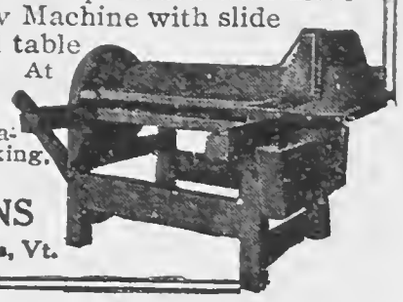

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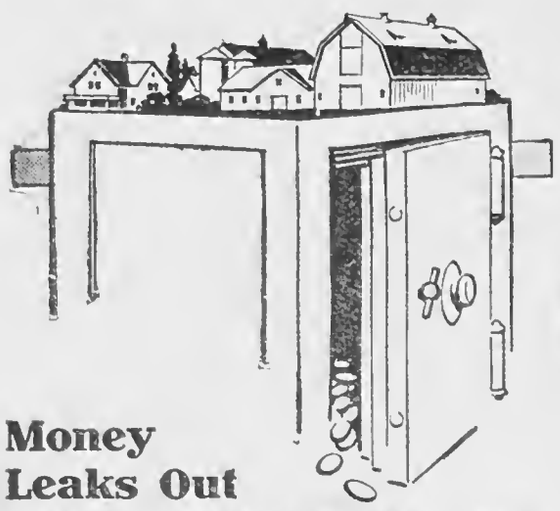

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EVENTS OF THE WEEK.

DOMESTIC.—Justice Joseph Morschauser, in the Supreme Court, has gone on record at Nyack, N. Y., as saying that a farmer does not stand a chance of getting justice in a legal contest in New York City. The justice advises against John J. Thornton transferring his suit against the Nassau Electric Railroad Company from Orange County, where the plaintiff lives, to Kings County, New York City. Thornton asks $2,000 damages for a broken arm suffered by his wife and injuries to himself in an accident in Brooklyn. "If I were a farmer I wouldn't try a case in New York," said the court, "if they gave me a verdict in advance. The farmer does not stand a chance in New York, and I know it. He cannot get square compensation, and you know it." A motion for the plaintiff for a change of venue was therefore denied.

Fourteen persons, including one woman and four children, perished when the Black Diamond collier Lingan rammed and sank the Canadian Government steamer Montmagny, Sept. 18, off the Beaujen banks in the St. Lawrence River, about 26 miles from Quebec. On board the Montmagny were the families of two lighthouse keepers at Belle Isle and Flower Island.

The engineer and conductor of a Philadelphia and Reading Railway train were suffocated and seven passengers were overcome when the train was halted in the middle of a tunnel near Phœnixville, Pa., after running down and killing a woman at the tunnel entrance, Sept. 21. The sudden application of the emergency brakes brought the train to a stop well inside the tunnel, throwing many passengers from their seats. The train crew and several of the men passengers ran forward, but they were met by a wave of gas and smoke, which had accumulated in the tunnel. Three of the men dropped alongside the track and the others returned for help. Later the air became clearer and another advance was made. The engineer and conductor were found dead beside the engine.

September 18 the steam schooner Francis H. Leggett foundered off the Oregon coast with the loss of 72 persons.

The Colorado mine operators have demurred against accepting in its entirety President Wilson's plan for ending the big strike in that State. In this stand the officers of the Colorado Fuel and Iron Company are backed up publicly by John D. Rockefeller, Jr., who is supposed to represent a controlling stock interest in the company. The portions of the plan rejected by the mine operators are regarded here as the vital ones and there is little likelihood of any settlement as the result of President Wilson's suggestions, unless a compromise is reached on the points of difference.

THE EUROPEAN WAR.—The tenth day of the battle of the Aisne, Sept. 22, it was reckoned that the casualties had reached 180,000. The forces engaged were said to number 2,600,000. The Germans were intrenched on the heights, and supplied with heavy guns, with which they bombarded Rheims. The great cathedral, one of the most wonderful examples of Gothic art, and endeared to France by its historic associations, was the special target of the bombardment. Ambassador Jusserand filed a protest with acting Secretary of State Lansing at Washington against the destruction of the cathedral of Rheims, and President Poincare directed a formal protest to be made to all neutral Powers against the destruction of this historic structure. Germany expresses regret, but defends the vandalism as a military necessity. Sept. 23, the eleventh day of the battle of the Aisne, the Allies continued to gain ground; the Germans were still hurling masses against the center. The main battle line from Lassigny to the ridge of the Argonne, 100 miles, is a double row of fortresses, from which Allies and Germans sally in attack and counter attack, while great guns devastate by day and night. East of the Argonne and in the Vosges and Lorraine the French armies are a little more than holding their ground.....Sept. 18 six nuns in a convent at Nancy were mentioned in army orders for devotion with which they nursed 1,000 wounded during the German bombardment which has lasted since August 24.....The senate of Cambridge University has invited the Catholic University of Louvain, Belgium, to move to Cambridge, there to continue its own separate studies, grant degrees and generally to pursue its activities as at its own foundation. Cambridge University would supply the technical facilities for carrying out this work.....The Russians announced, Sept. 22, that they had captured Jaroslav, and were pressing on towards Cracow.....The Turkish government is partially demobilizing its troops and withdrawing them from the frontier. .....The English cruiser Pegasus was destroyed in the harbor at Zanzibar by a German cruiser, and it is said three British merchantmen were destroyed by the German cruiser Emden in the Indian Ocean. Sept. 21, the Hamburg-American liner Heina, employed as a collier, was captured by a French cruiser and taken into Martinique.....Sept. 22 three British cruisers, the Cressy, the Aboukir and the Hogue, were sunk in the North Sea by German submarines, about 1,000 men were saved, but the loss of life is said to be 1,163. Two of the submarines were reported destroyed.

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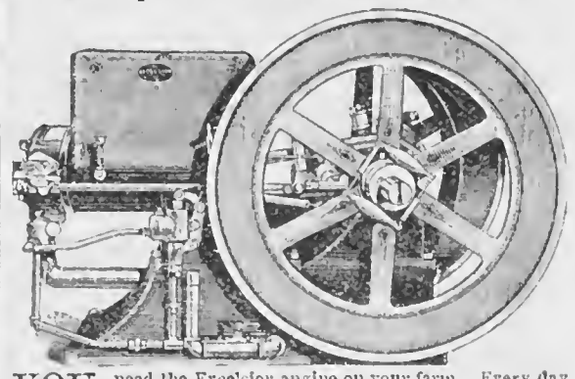

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The Home Acre

NOTES FROM A MARYLAND GARDEN.

THE long-deferred rain came August 25, and we got some spinach seed sown, and are hoping that the favorable weather may continue. The rain came too late to save any of the early tomatoes, and the plants seem completely exhausted from the heavy fruiting. The late ones, from seed sown late in the open ground, have flourished in spite of the drought, and not being exhausted by fruiting, are now setting a good crop. I always try to have a good lot of well-grown tomatoes when frost arrives. The green tomatoes that have attained their growth are then gathered and each wrapped in paper and packed in strawberry crates, and put in a cool cellar. Then we take out a few at a time and ripen them in the kitchen window, and in this way have had tomatoes for slicing till January. It is also very handy to have a fresh crop of string beans just about frost time. These can be gathered and put in a strong brine in stone jars, and during the Winter we can take them out and soak in fresh water overnight, and the next day they cook very like fresh snaps.

Just now I am busy planting my Candidum lily bulbs. These must go in the ground early, so that they can make their rosettes of green Winter leaves, without which they would not bloom well next Summer. I had intended to increase my planting of these, and ordered 2,000 from the North of France, and now cannot say whether I shall get them or not.

The next thing in order is the planting of onion sets for the early green crop. The earliest of these is the Queen, sold by Norfolk seedsmen. This is a different onion from the Queen of the Northern catalogues, and is more like what is called the Pearl, but it is earlier and better than Pearl. In some Winters I get these large enough for use the last of February, and always in March. At same time, usually the middle of September, I plant sets of the Yellow Potato onion. After the Queens are used up, the offsets on the Potato onions come in very nicely for green onions, while the main bulbs are left to ripen, which they do here in late June, and always bring a good price, as ripe onions are usually scarce at that time. This year I got $2 a bushel for them.

My crop of grapes was cut short this Summer by the swarm of Rose chafers that settled on the blooms before I noticed them. I saved part of the crop by spraying at once with a solution of lead arsenate and glucose, and could have saved all had I been more watchful. We are apt to have this swarm here every season, and when the spraying is done in time can save the grapes, for they attack the blooms first of all. Our sandy soil here seems to be especially suited to the Niagara and Delaware grapes, and I seldom see finer clusters of these anywhere. Empire State does well and also Salem and Vergennes, and of course the Concord thrives. We are about on the northern limit of the Scuppernong. One of my neighbors has an arbor of the Scuppernong from which he gets good crops every Fall, and I know of a Scuppernong vine in one of the counties north of us where it gets killed back every Winter and fails to fruit.

I have found that horizontal training on arbors, which is universal with the Scuppernong, is also as good for the Labrusca and other grape species. In North Carolina I had a grape arbor over a garden walk, and experimented with it without spraying. The vines were trained on the vertical sides of the arbor and overhead. On the vertical sides the grapes rotted badly, while overhead there was no rot. On the Experiment Station ground there I had a long row of grapes of various kinds which had been trained on a vertical trellis. Half of this trellis I boarded up on the west side, and placed a coping over the top extending 2½ feet to the east. That part of the trellis was not sprayed. The other half was carefully sprayed. The vines on the sheltered part were not sprayed, and there was no rot there, not a particle, while there was a little on the sprayed part. I planted an experiment vineyard largely for testing the value of different fertilizers. This was trained on a modification of the Munson trellis, posts were set eight feet along the line of vines six feet tall. On the top of these posts cross bars 2½ feet long were bolted, extending 1¼ feet each way. One line of wire was stretched along the top of the posts, and two other wires on same level along the ends of the cross-bars. The vines were taken with a single cane to the central wire, and then arms taken each way, the fruiting shoots hung over the outer wires and the grapes underneath. This vineyard was purposely not sprayed, and there was no rot, while vines on vertical trellises in the same neighborhood rotted badly where not sprayed. In all my experience with grapes I have found that horizontal training is far better than vertical. My backyard is very largely a grape arbor, and I have also about 100 feet of vertical trellis, but the arbor gives more grapes and better, and I intend to build more arbor and take on it the vines now trained on the vertical wires. Cutting out old wood and training long renewal canes on the arbor gives me more and better grapes than the close spurring on the upright trellis. Then I never prune till March, for Fall-pruned vines start too soon in Spring, and are apt to get caught by a late freeze, and what little bleeding takes place from the Spring pruning is soon stopped by the swelling buds. W. F. MASSEY.

Maryland.

Sorrel in Lawn.

I HAVE a lawn of an acre or more, and it is over-run with sorrel. The sorrel seems to spring up in places which had been free from it before. What can I do to get rid of it? We have very dry Summers, so the grass does not grow as well as in cities when it is watered.

Eden, N. Y. O. H. H.

The presence of so much sorrel in the lawn indicates that the soil is quite sour and in need of lime to neutralize the acid. Apply about 1,500 pounds of hydrated lime, spread evenly, this Fall, and in the Spring apply a half ton of raw bone meal broadcast. The lime will sweeten the soil and make it uncongenial for the sorrel. The bone will stimulate the grass into strong healthy growth. The two operating together should bring the sorrel under control, and finally kill it out almost entirely. K.

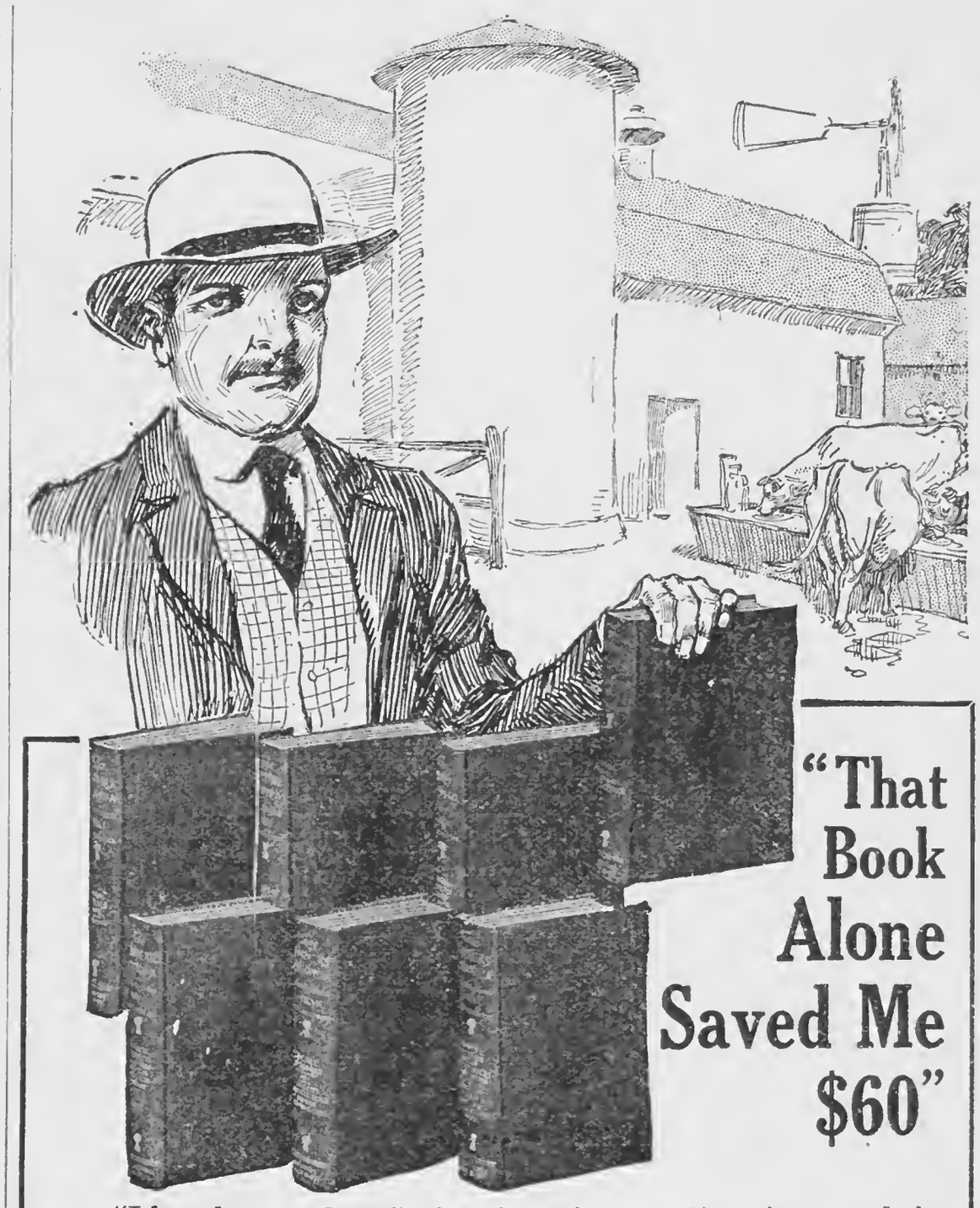
BUILDING VEGETABLE CELLAR.—I would build a vegetable cellar of concrete far enough below the surface of the ground to protect from frost, have adjustable ventilators in roof every six or eight feet, have entrance door at one end and have chimney in opposite end; chimney so arranged that it could be closed tight, avoiding draft, except when draft is desired, at the same time admitting of small fire when increased draft is desired. The dimensions of this cellar will be governed by the demands of the person building it. If not desirable and practicable to build deeply enough in ground to guard against frost, the structure should be surrounded with earth—roof and all—so that there would be no danger from frost. J. M.

New York.

ON page 968, H. N. of Cleveland inquires concerning bisulphide of carbon for squash-vine borers. The eggs of the borers with which I have had experience are laid at the first leaf joint or higher, and the borer when it hatches commences eating its way toward the root, through the center of the vine and by the time it gets there, or below the surface of the ground, where carbon bisulphide would kill it, the vine is useless for bearing, and almost always dead. The borer follows the root an inch or two and then enters the earth, being then about 1½ inch long and full grown. When I found vines which contained borers I slit them open lengthwise and removed them, but this treatment is almost as bad as the borers and the next case I find I shall try injecting some white hellebore or tobacco extract. I have found it better to use a preventive, in the form of moth balls, which are placed every four or five inches and keep the striped beetles away also.

Ohio. W. J. M.

All those who are interested in fruit shows, and fruit judging, should obtain a copy of "Timely Helps For Farmers," Volume VII, No. 11. This is published by the Maine College of Agriculture at Orono, Me. This little pamphlet gives an excellent study of the problem of the judge at a fruit show. There are pictures showing how to judge fruit, how to examine the box carefully, and in fact much information which the fruit judge ought to have. It is one of the best little pamphlets of this kind we have seen, and as fruit judging is becoming a science, the man who undertakes to do the work should collect all useful information on the subject.



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Hope Farm Notes

WEATHER.—Up to July we were finding more or less fault with the rains. It *was* wet during early Summer, but now we make up for it. The soil is dry and baked. You may now easily see what cover crops and lime have done for our soil. On pieces of land where for some reason our regular plan has not been followed the soil is so hard that a pickax would be necessary to open it. On the same kind of land where rye and lime have been used for a number of years, the soil is open and mellow—you can kick it up in dust with your feet. The color is darker and even in this dry time you can find dark colored soil down below showing that there is still a supply of moisture. This has been an ideal season for this kind of farming. The Spring was wet and this made a heavy crop of rye without drying the soil too much. The lime in this damp soil quickened decay, and the rye was rapidly broken up. Had it been a dry Spring I would not have let the rye grow so large, as this would have taken too much moisture out of the soil. As it is now the rye, turnips and rape in the corn are growing very slowly, and will not come to much until we have rain.

LATE CROPS.—You remember how we planted potatoes at July 4? A five-year-old strawberry bed was turned under and the potato seed put right down into the mass of vines and weeds. The seed was not the best yet on September 25, most of the vines were still green and thriving. A few are dead, but apparently the greater part will grow until frost kills them. As we expected, that heavy, green mass turned under held the moisture just where the plants needed it. I think this experiment will succeed.....The old strawberry beds look better than ever this Fall. They had been fruited four years, but we needed them one more year. Right after fruiting the vines were cut with the mower and raked off. Then with plow and cultivator the middles were ripped out and a narrow strip of plants left. Hoeing the grass and weeds out of this strip was a long and expensive job, but the dry weather helped and we took the time to rake up the weeds and dump them around the apple trees, for the cultivator is kept going, and we have a fine new growth and strong plants for next year's fruiting....The Japanese millet seeded late after cutting rye for straw and grain, is growing well and proves a good yield. Corn cutting began September 22. Part of the corn in the young apple trees is poor—the rest is good

FRUIT.—By September 25 I figured that we had eaten peaches continuously for 60 days—beginning with Alexander and running through Greensboro, Carman, Belle of Georgia, Niagara, Elberta, Mountain Rose, Crawford, Crosby and others. Our crop was larger than ever before, but it has been a peculiar season for selling. Many people who formerly bought peaches for canning have this year refused to buy—complaining of the high price of sugar. It seemed strange to me that they could not see that the low cost of peaches more than offset sugar prices. Some of the smaller fruit has been slow of sale, but the larger peaches have brought fair prices..... Our apple crop is good, and I am selling it off rapidly. By September 22 the Wealthy and Twenty Ounce had all been sold, and we were working off the McIntosh. Northern Spy is a Fall apple with us, and that and Greening will go next. I shall let the Baldwins hang to the tree as long as is safe, and then get them off rapidly. If conditions were normal I should put up a storage plant this year and hold the fruit, but the lack of an outlet to Europe will complicate the situation here. No poor or low grade fruit should ever be sent to market this year. Far better give it away as an advertisement.

PUBLIC MARKETS.—The farmers in our section are interested in the market discussions, but the trouble is to transport our produce. On every farm in this neighborhood can be found fruits and vegetables that will be wasted for lack of transportation. With only one team or three horses, how can a farmer haul all his perishable stuff and at the same time do his farm work? A load of fruit goes from Hope Farm practically every day, yet we could send more, and in fact we could often use the horses to advantage here. Another year I shall evidently be obliged to get some sort of an auto-truck. In order to make these public markets successful I think some sort of swift trucking service will have to be arranged. If some auto-truck could make a daily trip through our section, picking up produce from farm to farm, we should soon get into the habit of providing for it, and arranging to send tons of produce during the season. Most of this produce would not otherwise be sent away, but it would be a great help to the city buyers and a help to us when it was taken away. This side of the public market question has not been discussed yet, but it will have to be worked out before these markets reach anything like full success.

PEDIGREED ASPARAGUS.—You will remember how last Spring we planted a pound of superior asparagus seed. This was our first experience with this crop. After much hard work at weeding we have about 15,000 good plants. The variety is Reading Giant of a rust-proof strain. This is the variety which has been selected from immune plants. The original male parent was one plant out of nearly half a million, which showed no rust in a locality where every effort was made to spread the disease. Later the experimenter found a female plant which stood up and resisted the disease while hundreds of thousands around her went down with rust. By breeding these two strong plants together the plant breeders have obtained a strain of Reading Giant which may be called disease proof. The seeds have grown well on our soil, and I think the roots will be good ones. I expect to go into this business on a larger scale next year.

"DUMPLING" WYANDOTTES.—I should judge that our friend, John H. Robinson, must be having an ideal time just now. He recently printed more than half a page in his paper entitled, "The Hope Farm Man' as 'Mr. Facing Both Ways.'" He seems to find fault because I do not engage in a long controversy over a matter which eggs rather than words should settle. Of course, we all understand that Brother Robinson is doing very well what the boys call "playing to the galleries." That is good fun and very profitable at times, and I have no desire to interfere with it. And now, for the last time, let me state the case as I see it: We printed a picture of what the Standard of Perfection calls an ideal White Wyandotte. I called it a dumpling, and said that I do not believe a hen shaped like that one can be a good layer. The more I look about, study Wyandottes and hunt up their records the stronger I will make that statement. Now, of course, Brother Robinson knew well enough what I meant. There was no thought of discrediting the Wyandotte as a breed. No one can do that in the face of the records which Wyandottes are making at the egg-laying contests. What I did say, and what I repeat is that the "ideal" Wyandotte, as represented in that picture is not a good layer. It suits Brother Robinson's purpose to try to make it appear that I am in some way attacking the breed. Under such circumstances a long wordy controversy with him would get nowhere, and I cheerfully admit that I am no match for him at "talking about it." I want him to let his hens talk, or rather lay. In my own case if some one stated positively that a horse or a cow or a hen in which I was interested could not trot or milk or lay profitably I should not expect to settle it by *talking*. I should come back to the old text:

"He is of age—ask him!"

I should put my animals right up where all could see the work if I really had faith in them. That is what I call upon Brother Robinson to do. Let him enter a pen of what I call "dumplings"—which means birds shaped like that "ideal" picture—at one of the egg-laying contests, and then stop talking and let his hens settle it. I see no better way to decide it. When I was a boy there was a five-word comment which seemed to me very appropriate: *"Put up or shut up!"* Perhaps Brother Robinson does not want to do either! H. W. C.

"YEP, I've made up my mind to get rid of that auto I bought from Pete Haskins. Guess I'll let it go for $30 jest as it stands." "What you want to do that for?" "'Cause it won't move."—Cleveland Plain Dealer.

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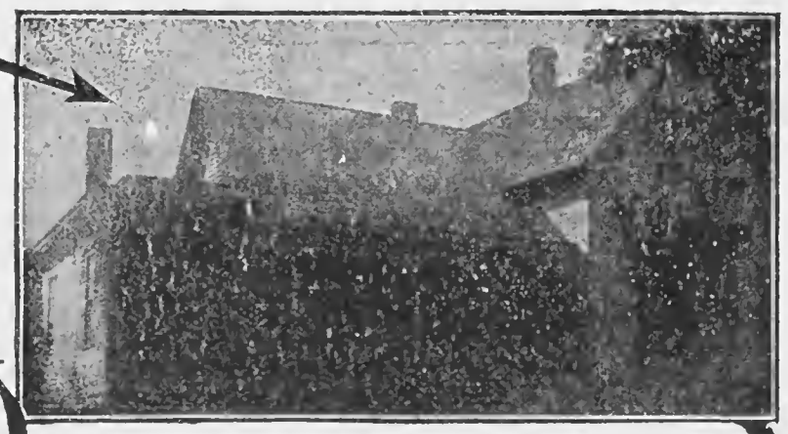

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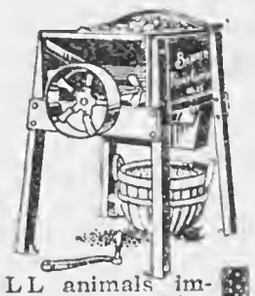

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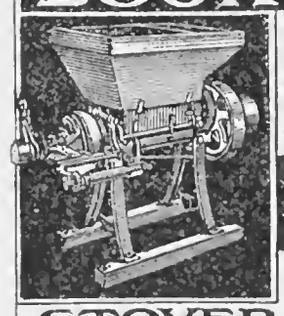

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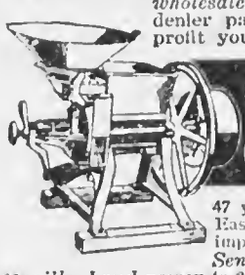

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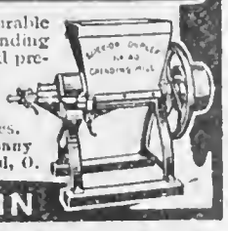

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Ruralisms

DRYING PERSIMMONS IN CHINA.

BULLETIN 95 of the Office of Foreign Seed and Plant Introduction reports that cuttings of 52 varieties of persimmon have been received from the provinces of Shensi, Shansi and Honan, China. Some of these are seedless, some specially desirable for drying, while others are used in China for the distillation of brandy. Regarding the drying, Prof. Meyer, the explorer who obtained these says:

In early October sound fruits are picked, which although ripe, must still be hard, care being taken to have the peduncle with a piece of twig attached to each fruit. The fruits are peeled by means of a small, special knife and an average worker can peel 2,000 persimmons a day, while an expert brings it up to 3,000. The peeled fruits are tied by means of their peduncles, on a loosely twisted, but strong sort of string, which hangs down in pairs vertically over horizontally placed beams which have been put up specially for this work. From 200 to 300 fruits are tied to each string and the work of tying starts by putting a couple of fruits at the bottom first, so as to keep the strings taut, after which the work progresses from top to bottom. The fruits are now left hanging for about twenty days, in a warm, sunny situation where if possible the wind can also blow, but where there is freedom from dust. The persimmons should be squeezed and manipulated by hand every four or five days, so as to assist them in drying uniformly and prevent them from becoming hard in spots. After they have been drying thus for about three weeks, they are taken down strings and all and a cool place is selected where they are all put into a big heap and covered over with matting. They are now allowed to sweat for ten days, during which process a dry white powder of sugar forms itself on the surface of the fruits. When sufficiently cured they are hung up again for a couple of days, preferably in the wind, so as to let them dry off. In the meantime the peelings have been carefully dried in the sun and kept in airy baskets. The fruits are now taken from the strings and put in baskets and jars with the dried peelings in between and over them and they are now ready for the consumer. Another method of drying which is practiced often with the smaller varieties, is to run in a spiral or horizontal way a knife point through the skin of the fruits, and then to put them in the sun on coarse matting. After they have dried for several weeks, they are thrown into a pile and covered up with matting or sacking, allowing them to sweat. When through with this process they are ready for the market. Persimmons treated like this are as a rule of much inferior quality to those that have been given more care but on the other hand they sell so cheaply that even coolies and beggars regale themselves on them. These dried persimmons are a most wholesome and pleasant food, comparing very favorably with dried figs, and often even preferable to them, being less revoltingly sweet and not possessing the multitude of objectionable small seeds. There are large sections in the United States, especially in the Southwest, where no doubt the dried persimmon industry could be successfully established and with up-to-date methods of artificial drying and curing a much cleaner and probably superior article could be obtained than the product seen in China and the nation would be richer by a new and wholesome food product.

New Citrus Fruits.

BULLETIN No. 96 of the Office of Foreign Seed and Plant Introduction reports a seedless pomelo secured from the Philippine Islands. It was stated by the grower that the seedlessness was due to the salt deposited from the brackish water which backs up into the river during the dry season; the planter also said that a cocoanut shell of salt was placed in the hole at the time of transplanting the tree, and that another shellful was given the tree each year.

An orange introduced by the recent Brazilian expedition of Profs. Shamel, Dorsett and Popenoe is known as Laranja selecta. Bulletin 96 says:

This unusually choice orange is one of the two principal varieties grown in the Rio de Janeiro district, and has the added distinction of having been, as all the evidence indicates, the parent of the Bahia navel orange or "selecta de umbigo," as it is still called, the culture of which in California at the present day forms so important an industry. The origin of the "selecta" orange is obscure. It has been cultivated in Brazil for more than a century, and although it has been superseded in Bahia by its offspring, the navel orange, it is still cultivated commercially near Rio de Janeiro, particularly in the Sao Goncalo district at Nictheroy. The main crop ripens in July, but it commences to come into the market in March and continues until October. On the fancy fruit stands it brings two or three milreis ($.65 to $1.00) per dozen, but in the public market it can be purchased at a considerably lower price. Around Nictheroy the fruit is picked and brought to the market in baskets strapped across the backs of mules and horses.

GERANIUMS.

THE double flowering geraniums are far superior to singles for outdoor bedding, as the loss of a few petals in a storm does not spoil their beauty as with the singles, but for indoor specimen plants I choose the singles. The specimen geranium is a Winter bloomer of necessity, for they do best in a moderate temperature such as is afforded by fire heat. Having chosen the kind you wish, root as many slips early in Spring as you care to grow. See that these slips are short and of new growth, preferably with a side branch coming out near the base. When nicely rooted put in small pots, two-inch to 2½-inch size. When the roots have filled these pots put into the next size larger and pinch back the branches that are growing rapidly. This pinching process may be continued till the plant is of the desired shape, either tall with few branches or dwarf and very bushy. The soil should be only moderately rich, and with no new manure in it, for that would force a soft sappy growth to the great detriment of any bloom. Always keep a geranium in a pot just large enough to care for its roots and when ready to bloom should be nearly pot bound. During Spring and Summer keep all buds picked off. The first of September stop picking buds and let your plant bloom at will. The plants should have been outdoors all Summer, either plunged in the earth or on a light sunny porch. On bringing them into the house—and don't wait until the weather forces the operation—put them near an open door for a while till they get used to the change. From outdoors to the window direct will cause a loss of most of the leaves.

The enemy of the geranium is red spider, but red spider hates water and can be driven away by washing or spraying the plants. Dust is hard on geraniums. As the florists say, keep a geranium "on the dry side," that is, never water the soil until it is dry, and then do it thoroughly. Also never get the leaves wet on cloudy days or so late in the day that the sun cannot dry them off. This applies to indoor culture of course. With the above treatment, which is comparatively simple, large plants should be produced that will carry during most of the Winter four to eight splendid trusses of flowers. Keep your plants turned daily to prevent their growing one-sided, and don't crowd a window with too many. An ordinary dwelling window can care for not over three of these specimen plants. It is too late now to start new slips for next Winter's bloom, but you can keep the buds off such plants as you already have for a period of four to six months and then secure the same results. For specimen porch plants out of door pursue exactly the same treatment, rooting the slips in late September and keeping the buds off till May 1.

For double crimson S. A. Nutt is the most grown variety, makes a splendid single plant, is an unsurpassed bedding sort and will stand heat and sun. Alphonse Ricard is a splendid semi-double orange scarlet. In white, Mme. Buchner is standard. Two of the very finest for specimen work are Madame Barney, pure double cerise pink, and Mrs. E. G. Hill, a great single salmon. Both carry exceedingly large trusses in the Winter. In single scarlet I have a kind called Jumbo that is very fine. Poitevine is the standard semi-double salmon and Viaud is the standard pink. The list is endless and can be added to at will and with great pleasure.

The ornamental leaved geraniums are very popular. Mme. Salleroi being best known, grows but six inches high, green and white and is used for edging. A silver leaved S. A. Nutt is now offered which is fine. Many sorts with red and yellowish zone in the leaves are offered, but the flowers of all are insignificant. The ivy geraniums are beautiful plants to grow, but bloom infrequently and are a little hard to manage. When right the bloom is more beautiful than the zonal geraniums.

P. L. W.

Michigan.

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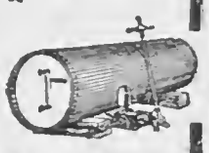

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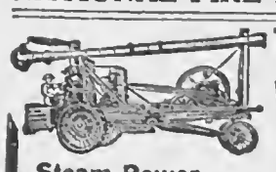

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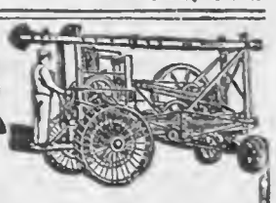

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Established 1850

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AT the celebration of the battle of Lake Champlain, on September 11, Gov. Glynn very properly retold the famous rooster story:

It is related that during the battle, a shot from one of the British ships shattered a packing case and liberated a rooster which flew upon one of the guns on McDonough's flagship and crowed a lusty defiance at the enemy. To-day the American eagle looks with pride upon that rooster's exploit, but it has no disposition to emulate its achievement.

Many of us would nominate the American rooster as a candidate for the place now occupied on the flag by the eagle. The old war eagle is a back number. He never did anything but fight, and if we tell the truth about him he was a nuisance and a fraud in his relation to American industry, a thief and a coward—stealing the farmer's chickens and lambs and fighting weaker birds or small animals. The rooster, on the other hand, represents his wife and sister, the "Business Hen," who has long stood as the faithful friend and supporter of humanity. Had there been an eagle in that coop at Lake Champlain he would have promptly put several miles between himself and danger. The rooster remained at the front and challenged the enemy. Call the eagle down and raise the representative of the Business Hen, or why not the hen herself?

*

THE free public markets in New York have not yet been able to attract many farmers. As we have explained, New York City is a hard city to enter with produce—located on a long, narrow island, with high hills and a marsh to the west. There is plenty of produce within 50 miles of the city if it can be collected and transported. This problem of bringing in the produce is the vital one now. At any rate the starting of these free markets and the discussions in the daily papers have been of great benefit to the public. City people do not usually think except along the lines of their reading in the daily papers. As they see day after day articles on these markets and discussions of the price of food they will soon come to regard this marketing question as one of the most important of any which touch their lives. There is no other way to bring this thinking about except a full discussion in the daily papers. If this can be kept up city people will soon realize that a 35-cent dollar for the farmer means a 165-cent dollar for the buyer. Once let them realize that and they will soon kick over the machine which plays with their dollar.

*

EVERY year at this time we have calls for a trespass sign to put up on woods and fields as a warning to hunters or roamers. Such signs need not be elaborate. The following in large type will answer:

Trespassing on this property for any purpose is forbidden under penalty of the law.

————————, Owner.

The local printer ought to do a fair business in printing and distributing such signs. They should be posted co-operatively. That is, all the farmers in a neighborhood should combine and post all their farms uniformly. Then they should agree to enforce the law and unite, if need be, to drive trespassers away. We have heard of one place where the farmers posted their farms in this way, and then sent a note to the local papers which read about as follows:

We, the undersigned residents of ———————— neighborhood, have posted our farms against trespassers of all kinds. We have agreed to unite in resisting any encroachment upon our rights. Anyone who enters our property without permission is hereby notified that he must take the consequences. Signed.

That is about what it is coming to if the sports and hunters are not checked—and we do not know of any better way of checking them than this form of co-operative support.

READERS who have apples or other fruit of which they are not sure should send it for identification to

U. S. POMOLOGIST,
Dept. of Agriculture,
Washington, D. C.

New Jersey readers who desire a home identification may send to

PROF. M. A. BLAKE,
New Brunswick, N. J.

It is very important to know just what you are growing, especially if you ever intend to propagate from your own trees.

*

I THINK there are two things we should do with experience, first see that we benefit by what has been profitable, and then, if possible, pass it on to the other fellow who thinks he needs it. And when it comes to the latter I think your organization is doing it in a more generous and beneficial manner than any similar organization I have ever came in contact with.

ELMER J. WEAVER.

Our readers frequently express what we would like to say far better than we can do it. This idea about experience is an illustration of what we mean. Mr. Weaver himself has done as much as anyone to help "pass it on." As for the organization, we are fully justified in saying that THE R. N.-Y. has gathered about it the most competent and complete Company for the gathering and distribution of intelligence about farming ever known in the world. Our readers make great use of it. Since January 1 of this year the editorial department alone has written 14,178 letters—which means that about 18,000 questions were answered by mail in addition to those printed. We are enabled to do this work accurately through the cheerful and conscientious help of people like Mr. Weaver, for the best farm intelligence is accurate and tested experience "passed on to the other fellow."

*

WITH the opening of schools this Fall the laws in several States directing the vaccination of school children are being enforced, and are arousing considerable opposition in some places where there are parents opposed to this measure. Much of this opposition, whether with reason or not, is due to a sincere fear of the possible results of vaccination, and some of it is probably due to natural opposition to compulsory laws affecting what people consider their personal liberties. The country doctor has never been an ardent advocate of compulsory vaccination, though he recognizes the value of the measure. While few of the present generation, even among physicians, have ever seen a case of smallpox, its very name still strikes terror in the hearts of those whose ancestors were literally slaughtered by the millions by this scourge which formerly roamed the world unchecked, and which, until the introduction of vaccination, about the year 1800, annually numbered its victims by the thousands. Many who escaped death were blinded and otherwise so disfigured as to make life a doubtful blessing. It is possible for accidental inoculation with disease germs derived from dirty instruments, hands, clothing or other sources to infect a vaccination wound, and, in rare instances, impure virus has made serious trouble. Pure vaccine virus from healthy calves is always harmless, however, and it is entirely possible to guard against accidental infections. When properly performed by competent hands, vaccination is as safe as it is possible for the most minor operation to be, and the timidity which would forbid this would, if logically carried out, forbid the extracting of a decayed tooth or the paring of a corn, both of which ordinary procedures have resulted fatally. The one thing required to make vaccination safe is the observance of strict cleanliness during and after the operation. Vaccine virus is always, nowadays, put up in sealed glass tubes or on equally well-sealed ivory points. Neither should be opened until just previous to using. The arm should be washed with clean soap and water and dried on a clean towel; the operator's hands should be washed and any cutting instruments used should be sterilized. After the operation, the best dressing for the little wound is a soft pad of clean cloth, a freshly-washed and ironed handkerchief being as good as anything. This should be pinned over the arm in such a way that neither dirty clothing nor anything else can come in contact with the sore. No grease or ointments should be used, and when the discharge makes it necessary to wash the arm this should be done with boiled, and cooled, water, and the clean dressing immediately replaced. With these simple, but necessary, precautions upon the part of the physician and parents, and the use of fresh virus from an absolutely reliable source, no one need fear vaccination.

ON page 1108 you say: "Whenever a nation moves nearer to a republic or a more liberal form of government, the military spirit weakens, and with it the desire for fighting."

Are you sure of this? Remember how fiercely the first French Republic fought from 1790 to 1805. And we ourselves, secure as our position makes us, have had five, one of them the greatest civil war on record.

C. E. D. PHELPS.

It is a question whether the first French republic was a "liberal form of government." Surely the "Reign of Terror" was anything but liberal, and the French wars were mostly forced upon the nation by efforts to restore or maintain a monarchy. Surely the fall of both Napoleons led to peace. As for our own government the Revolutionary War left the country full of a fierce fighting spirit, yet Washington and all the wiser statesmen, declared that America must stand for a policy of peace. Every war, except the Mexican War, has been fought to give what the fighters believed would be a more liberal government. To-day there is less of the "fighting spirit" in the nation than ever before.

*

THE apple crop problem has become a serious one. Our reports indicate few sales thus far, and a shortage of buyers. At some of the fruit centers where, in former years, buyers were as thick as flies, hardly one has yet appeared. No one knows just what the foreign situation will develop into, but it is evident that American markets must absorb much of the stock which would be sent to Europe in time of peace. We think this American market will take care of the surplus if it can be distributed properly. During the past week we have received six letters from parties in the Middle West, who ask where they can buy apples in carload lots direct from from growers. That section of the West and the South are short of apples, and can take great quantities of our Eastern fruit if moderate prices are charged. Here seems to be an opportunity for the farm bureaus East and West to help in distributing the large Eastern apple crop. The home market has never been fully developed. Now is the time to organize and push the sale of apples into every home.

*

"IT will pay the farmer to secure a Babcock tester," was the remark of an employee of one of the large bottling and milk shipping concerns operating in New York State. "This is the reason," he added. "I have been testing milk since I became connected with my concern. Some farmers just pass the 3.8% mark and secure the 10 cents bonus, and I find there are a good many herds which do even better than that. I had a remarkable surprise. I tested one farmer's milk, and it lacked just two points of six per cent. I doubted my test. I run through the test again with extreme care, found that I had been absolutely correct. This farmer is ignorant of the possibilities in his herd for butter-making, he only gets the 10-cent bonus, and is losing money every day. The added equipment for butter-making would be small, and the labor necessary would scarcely be more than that involved in bringing his dairy product down over the hills to the factory each day. Then there is value in the skim-milk, depending on the use to which it is placed. It should be worth 20 cents the hundred, and it is an easy matter to figure how much this farmer is losing daily. Farmers are not asking for their test, and I find a good many are satisfied to get through, others to get the bonus, and they seem blind to the possibilities in their herds. It would pay the farmer to ask us what his herd tests, and further to put the scales and tester in his own barn and make each cow make good or leave."

BREVITIES.

NO cedar trees, no cedar rust on apples.

FALL plowing beats the cover crops when the soil is filled with white grubs!

ON a good many South Jersey farms this year sweet potatoes will just about pull loss up to profit.

AN effort will be made during the coming Winter to organize the vegetable growers in New Jersey.

THE West Virginia Experiment Station will send out well-bred Leghorn cockerels of a heavy laying strain to West Virginia farmers under special condition.

TOBACCO stems will rank as a potash fertilizer. If you can buy them at a fair price by all means take them. Tobacco is one of the plants which takes large quantities of potash from the soil.

THE Alabama Experiment Station has made a full study of the boll weevil situation and cotton growing. It warns cotton growers in time that this insect will compel them to change their farming and their crops.

NOW we hear from parties who say they want to start a poultry contest as a commercial proposition. They would charge $15 or more per pen and plan for 50 or 100 pens. The time has not yet come for such individual contests. They should be controlled or safeguarded by some government institution or some great public enterprise so as to carry weight and authority.

NEW YORK FOOD PRICES.

THE new public markets in New York have started lively discussion in the daily papers. This has had the good effect of calling attention to food prices and methods of sale. This is just what New York has lacked up to this time. Farm products have been bought without much consideration of price. If the present discussion can be kept up it will not be long before the buyers begin to figure closely, and when they do that they will realize the wide margin between what they pay and what the producer receives, with that will come such a demand for better marketing and shipping facilities that it cannot be resisted. The following figures show the prices quoted at three of the New York public markets on September 18:

	Fort Lee.	Harlem.	Queensboro.
Lamb chops (pound)	22	..	20
Hindquarters	20	..	14
Shoulder	15	..	11
Steak (Delmonico)	22	18	24
Rib roast	18	14 to 15	16 to 20
Fresh broilers	20	18 to 20	20
Young roasting	20 to 22	20	20
Fowls	18	16	16
Eggs—Fresh brown	35	32	..
Eggs—Fresh white Leghorn	45	43	..
Fish—Flounders	5	5 to 6	8
Bluefish	9	7	..
Cod	5 to 10	6	6
Porgies	10	6	8
Butterfish	5	6	6
Weakfish	5	5 to 6	..
Vegetables—			
Corn (dozen)	30 to 20	25 to 20	30
Potatoes (pound)	1 2-3	1 2-3	1 3-7
Cabbage (head)	2 to 3	2½	4
Cauliflower (each)	10	5	4
Lettuce (head)	5	4	3
String beans (quart)	5	7	5
Fruit—			
Muskmelon (each)	..	5	4

The following table showing average retail prices for produce during August and September is prepared by the Bureau of Weights and Measures:

VEGETABLES.

	August. High.	August. Low.	September. High.	September. Low.
L. I. potatoes (lb.)	2	2	2	2
Cabbage (head)	5 to 6	4 to 5	5 to 6	4 to 5
Corn (dozen)	25 to 30	20 to 30	25 to 30	20 to 30
String beans (qt.)	8 to 10	7½	8 to 10	5 to 8
Green peas (qt.)	10 to 12	7½	8 to 10	7 to 8
Tomatoes (lb.)	2½	2½	2½	2½
Lettuce (head)	5 to 6	4	5 to 6	5
Onions (pound)	2½	2½	2½	2½
Lima beans (qt.)	10	8	10 to 12	5 to 8
Best creamery butter	36 to 38	35 to 37	35 to 37	35 to 37
Flour (3½ lbs.)	14 to 17	13 to 15	14 to 17	14 to 17
Sugar, granulated (3½ lbs.)	22 to 27	21 to 25	23 to 26	22 to 26
Eggs (dozen)	35 to 38	35 to 38	35 to 38	35 to 38
Loose milk (qt.)	6	6	7	6

MEATS.

	August. High.	August. Low.	September. High.	September. Low.
Loins of pork	22	20	22	20
Pork chops	26	20	25	22
Veal (leg)	21	20	24	20
Cutlets	32	30	34	30
Shoulder	16	16	20	16
Breast	18	16	20	16
Stew	18	16	20	16
Bacon (by the piece)	26	25½	25½	25½
Bacon (sliced)	28	28	28	28
Smoked ham	21	20	21	21
Cal. shoulder hams	16	16	16	16
Fresh ham	22	22	22	22
Fresh fowl	24	20	20	20
Fresh roosters	16	16	16	16
Frozen roast, chickens	28	23	23	23
Fresh broilers	23½	22	23½	23½
Long Island ducks	22	21	21	21

FISH.

	August. High.	August. Low.	September. High.	September. Low.
Steak cod	16	12	16	12
Live cod	6	6	6	6
Bluefish	12	10	14	10
Weakfish	12	7	6	6
Butterfish	10	8	9	8
Bass	14	8	8	8
Haddock	6	5	7	5
Mackerel	16	12	18	14
Halibut	16	14	16	14
Eels	18	16	16	16
Porgies	10	7	8	7
Hake	10	8	10	10

In comparison with some of these prices the New York *Sun* prints figures from an Englishman as follows:

	Manchester Prices. (Cents.)	Maximum Recommended. (Cents.)
Lump sugar	7 to 8¼	8¼
*Granulated sugar	6 to 6½	7½
*Butter	25 to 26	35
Cheese	16 to 18	20
*Lard	14	16
*Margarine	13 to 16	18
*Bacon	18 to 26	24 to 26
Flour, a dozen lbs	36 to 44	
*Beef (English) boiling	10 to 12	
*Beef (English) best joints	25	
Mutton (English)	12 to 24	
*Beef, frozen	12 to 22	
Mutton, frozen	12 to 18	

*These are, no doubt, American.

THE WAR AND COMMERCE.

EXPORTS from New York are now about normal, the value for the week ending September 29 being the largest of any week since April 25. The lowest amount was for the week ending August 22, $8,477,361. The total since January 1, 1914, was $620,075,543, or about $12,000,000 less than for the same period of last year. Galveston, Texas, shipped nearly 4,500,000 bushels of wheat to Europe during September.

Ocean freights on apples have advanced. The Anchor Line, New York to Glasgow, now charges, for ordinary storage, $1 per barrel, and $6.75 per 40 cubic feet space for boxes. In refrigerators the cost is $1.25 per barrel and $9.25 per 40 cubic feet. Some Canadian apples are being brought to New York for European shipment, as a great part of the lines sailing from Canada at present are transporting grain and war supplies. Ocean rates on other products to Liverpool are: Grain, 5 to 6 cents per bushel; cotton, 40 cents per 100 pounds; flour, 100-pound sacks, 20 cents per hundred; lard, ton, $7.50; butter, $11.25 ton; leather, ton, $5; beef and pork, ton, $4.30.

There is some improvement in the cotton outlook. Exports are increasing, 27,000 bales having been shipped from Galveston during the first half of September. Considerable movement in buying cotton at 9 to 10 cents per pound to hold is reported from civic associations and private individuals.

THE DAIRYMEN'S LEAGUE MEETING.

AT a directors' meetiug held in Albany, September 18, to which local branches were invited to send delegates or letters expressing the sentiment as to the advisability of accepting or refusing the general prices offered by dealers for milk for the Winter months, about 100 branches were represented.

It was the unanimous opinion that the prices offered were inadequate considering the probable increase in cost of production due to high feed prices and many felt that the farmer should positively refuse to accept the prices, still a majority of the branches represented hesitated to vote for the proposition: "that the producers at this time demand an increase in the schedule of prices offered."

In view of the above action, and that less than one-third of the branches were represented, and with the information that large numbers of the members had hastily obligated themselves to sell for the next six months, much of which was due to the late date on which the stockholders forwarded their agreements to the directors, which left too short a time for the directors to consummate their plans and have them thoroughly understood by so large a membership, the unsettled business conditions and prices arising principally from the European war, the final disposition of pending legislation which may affect our organization, and also that of about one-fifth of the local branches, which have or are constructing receiving stations for their milk—a number will be uncompleted October 1, the directors in executive session decided it was unwise to contest for a definite increase in the price of milk for the Winter months, but that definite plans shall be made for October 1, 1915, and all members are cautioned against binding themselves by contracts unless absolutely necessary, for periods longer than six months and expiring either April 1 or October 1.

It will doubtlessly be a disappointment to many that more tangible results cannot be attained at this time. Such complicated conditions never before confronted the organization, no one could foresee or forestall them. Let all be conservative, loyal and true, remembering that without organization, the milk producers' position would be one without hope.

ALBERT MANNING, Secretary.

FARM PRODUCE BY TROLLEY.

I READ with interest your editorial, on page 1108, concerning the opening of public markets in New York City giving a good opportunity to farmers within 50 miles of the city, and in which you suggest among other things the use of auto trucks to transport produce. This is indeed a good suggestion where farmers can coöperate, but why not make use of our extensive system of trolley lines in the transportation of produce at night? A coöperative organization could be formed, one on Long Island and another in New Jersey, to handle such produce, and which could secure from the public service corporations that now operate the trolley lines the use of the tracks at night when passenger traffic is lightest. Cars could be constructed for the varions kinds of produce and dairy products and side tracks could be run right into the farmer's premises where he could load up his produce and consign it to the agent of the coöperative organization in the city market, thereby saving to himself the great loss of time incident to a trip to the city and back. The result would be a great saving in time and in the handling and rehandling of produce as it is now carried. Of course in the case of the New Jersey farmers their produce would have to be distributed from the New Jersey side of the river for the present, and until more tunnels for trolley lines under the Hudson are constructed, but a comprehensive plan could be evolved for the handling of farm produce that would materially aid the farmer as well as the consumer, thereby raising the value of the 35-cent dollar, and without increasing the cost to the consumer, could we have the use of the trolley lines at night in the manner indicated. I believe many farmers would be glad to use the facilities offered by such a system of distribution could they be assured it was in competent hands, and that their produce would be fairly treated when it reached the market place.

GEO. L. STEVENSON.

Somerset Co., N. J.

R. N.-Y.—This suggestion has been worked out into fact in some localities. Some years ago the writer rode from J. H. Hale's place to Hartford, Conn., at night with a carload of peaches. This car was run at the time when passenger traffic was lightest. The peaches were carried in rapidly and promptly distributed.

New York State News.

FOREST LANDS RECLAIMED.—The Attorney General's office has recovered from squatters who have taken over large tracts withiu the forest preserves as private property, virgin forest valued at about $350,000, and comprising about 37,000 acres in various parts of the Adirondack preserve.

RURAL LIFE PICTURES.—A plan has been adopted by the Farm Brokers' Association of the State to obtain a large selection of New York farm scenes for advertising work in connection with the Department of Agriculture and trunk line railroads. Prizes are offered for views of farm work, pastures with stock, harvest scenes with modern machinery, landscapes, etc. This Fall a New York farming train will be run through the Middle West, equipped with lectures, photographs and agricultural exhibits, and moving pictures will show the best methods of farm work in this State. The train will be in charge of Chas. W. Lamon, of the Land and Labor Bureau, who will be assisted by Prof. Chas. Grein, of Cornell, and is to start the last week in October.

GERMANTOWN FRUIT SHIPMENTS.—Germantown in Columbia County, is one of the largest shipping points for fruit anywhere along the Hudson River. On Sept. 16, 22 carloads of fruit left that station. Of these, 20 were grapes and two apples. On the two days previous 41 carloads went out and it is expected that about 25 carloads will be the daily output until the season closes. Fruit also goes to New York by steamboat and every night the docks are piled high with barrels of fruit. Germantown is the location of a flourishing Grange and a coöperative society organized under the State law.

HEALTH LEAGUES.—One of the outcomes of the convention of state sanitary Officers at Saratoga recently was the plan for lay public health leagues to co-operate with the State Department of Health. These league organizations will be along the same lines as the local committees of the State Charities' Aid Society. Montgomery E. Leary of Rochester was elected president of the State Sanitary Officers' Association.

VACCINATE OR QUIT.—This is the substance of an order from the Department of Education requiring that pupils must be vaccinated on entering school and the law leaves the local school boards no recourse in the matter. Removal from office, without appeal, and civil suits for damages face those school officials who do not enforce the law. The opposition to vaccination in some sections of the State has reached quite virulent proportions. In Gloversville and Mechanicsville candidates for school boards have to run on pro-vaccination and anti-vaccination platforms. In the former place the antis won and the vaccination question was taken at once to the Department of Education, in Albany. They were told that the Department had no alternative but to enforce the law and that members of school boards were personally liable for the amount the non-enforcement of the law would cause the State to withhold from the school funds, and in addition were liable to removal. The legality of compulsory vaccination was upheld in a decision of the Court of Appeals in June. The orders of the State department of education are to require pupils to be vaccinated, if they attend public schools. They may attend private schools but they must attend somewhere.

ST. LAWRENCE COUNTY FARM EXHIBITS.—The county farm bureau and the Pomona Grange of St. Lawrence County are arranging for an exhibit of corn and other field crops in connection wi h the meeting of the Pomona Gra ge in December. Prizes to the amount of $200 are in sight. Now a special feature will be a display of field crops made by any Grange or farmers' organization and also for the best collective exhibit of corn and corn products made by any district school.

J. W. D.

Canadian Fruit Report.

THE apple crop as a whole throughout the Dominion is large, and the fruit clean and of good size.

In the southern and western counties of Ontario apples are heavy. Fall and Winter varieties sizing up well and color excellent.

In the Ottawa and St. Lawrence valleys there will be a full crop of late varieties. McIntosh is light.

The crop of Nova Scotia is not heavy, but particularly free from scab and fungus.

The New Brunswick yield will be equal to any harvested in recent years, though in some sections the apples are small.

Prince Edward Island will have about 70 per cent. of a normal crop. Fall varieties being heavier than later sorts.

The Pacific coast has the largest yield in many years, but in the Okanagan and interior valleys, the fruit is scanty, though of good size.

Pears in Ontario, Nova Scotia and British Columbia are about three-fourths of last year's crop. British Columbia has a large yield of plums, Ontario about 25 per cent. of full crop.

The peach crop of Ontario was a failure. British Columbia had a large yield. The Niagara section there will have a full crop of grapes.

Government Weather and Crop Notes.

OVER the greater part of the corn belt weather has been favorable for maturing late plantings, and the entire crop is now safe from frost. Cutting is progressing rapidly.

In the Winter wheat States the soil is mainly in good condition for plowing and sowing, and rapid progress is being made. Some early growings are up, but rain is needed in many localities to hasten germination.

In the Spring wheat belt weather has been favorable for thrashing in the eastern portions, but delayed by rains in the western.

In the Southern States cotton picking is progressing well, except in parts of the Carolinas, Georgia and Florida, where it is too wet.

Drought persists in the Atlantic and Middle States, delaying Fall plowing and pinching pastures. Pasturage in the Central and Southwestern States continues good and rains and cool weather on the Pacific slope have improved pastures, while delaying hop and fruit drying.

World Crops.

THE International Institute of Agriculture gives the total production of wheat in the following countries at 2,604,000,000 bushels, or 92.8 per cent. of last year's crop: Hungary, Belgium, Spain, United Kingdom, Italy, Luxemburg, Netherlands, Russia in Europe, Switzerland, Canada, Denmark, United States, India, Japan, Tunis and Constantine Province in Algeria.

Barley production for the above named countries, omitting India, is estimated at 1,071,000,000 bushels, or 90.9 per cent. of last year, and the oats crop of the countries named, omitting India and Japan, is 2,779,000,000 bushels, being 87.7 per cent. of last year.

The total rye crop in the following countries is 1,488,000,000 bushels, or 93.1 per cent. of last year: Prussia, Hungary, Belgium, Spain, Italy, Luxemburg, Netherlands, Russia in Europe, Switzerland, United Kingdom, Canada, Denmark and and Constantine Province in Algeria.

Woman and the Home

From Day to Day

IN WHITE AGAIN.

The world shall walk in white again,
  The garments of its crimson stain
Shall vanish in the love of men
  That turns them unto snow again.
Before the cannon dreams shall dance,
  And girls in grace make sweet
The furrows where the battle's lance
  Flashed in its splendid heat.

The shadows of old war shall pass,
  And life with laughter flow;
There is no crimson on the grass
  From battles long ago.
There is no smoke and flame of wrath
  Where men went down in death;
Above the trench a winding path
  Blows sweet with wildwood breath.

Oh, yes, the mighty heart of time
  Shall beat with joy and youth;
Old wars as a forgotten crime
  Grow dim in days of truth.
Fair shall the legions be that come
  O'er many lovely miles
To kiss with silence every drum
  And deck the days with smiles.
—Baltimore Sun.

*

LOGANBERRY juice is now put up commercially in Oregon; it is non-alcoholic, like unfermented grape juice, and is said to make a delicious drink diluted with two parts of water. We wonder whether any of our readers put up blackberry and raspberry juice in this way? We have only preserved raspberry juice in the form of raspberry vinegar, which makes a refreshing beverage either hot or cold.

*

GOING through a country district "up-State" we were shocked to see the remains of an old four-post mahogany bed which had been cut in two and made into porch seats. We have so much respect for old mahogany that this seemed desecration. However, there is no reason why an old bedstead of common wood should not be transformed into a settle for the porch, the headboard forming the back, and the posts with part of the foot forming ends. The seat is made by laying slats across at the proper height. Painted a nice color, olive or willow green, brown or gray, with colored cushions, such a settle is very attractive, as well as comfortable.

*

AN old-time Southern huckleberry cake calls for a cup of butter, two cups of sugar, three cups of flour, five eggs, one cup of sweet milk, one teaspoonful of soda dissolved in hot water, one teaspoonful each of nutmeg and cinnamon, one quart of ripe fresh huckleberries (some call them blueberries). Stir the butter and sugar to a cream, add the beaten yolks of eggs, then the milk, the flour and spice, the egg whites beaten stiff, the soda. The huckleberries should be heavily dredged with flour and stirred in last of all with a wooden mixer; be careful not to break them. Bake in a loaf.

*

A RECENT newspaper cartoon depicted two disgusted small boys talking about the war news. "Paw says it'll change th' hull map o' Europe," observes Jimmy bitterly, "an' when school begins teacher'll make us learn it all over again!" There is one point in which we all have to revise our geography; we must remember that St. Petersburg has ceased to exist, and that the capital of Russia is Petrograd, the German name given by Peter the Great being altered by imperial ukase to its Russian equivalent.

*

HERE is the woman's side of war, as expressed by Olive Schreiner in "Woman and Labor":

Men have made boomerangs, bows, swords or guns with which to destroy one another; we have made the men who destroyed and were destroyed! We have in all ages produced, at an enormous cost, the primal munition of war, without which no other would exist. There is no battlefield on earth, nor ever has been, howsoever covered with slain, which it has not cost the women of the race more in actual bloodshed and anguish to supply than it has cost the men who lie there. We pay the first cost on all human life.

Canning Grapes Without Sugar.

IN looking over the woman's page, I saw an inquiry about canning grapes without sugar. I have canned grapes without sugar for three years, and never lost a can, and this year there is surely more of an incentive than ever for doing it. As we do not like the seeds in the grapes, I separate the pulp and skins, boil the pulp and put through a colander; then add to the skins and boil about five minutes before putting in the cans, which have been thoroughly sterilized. I always use a self-sealing jar which has a brass cap with the rubber attached, and is put on by simply pressing down on can. I am very much interested in the woman's page, getting a great deal of help from it, and hope this information may help someone else. MRS. R. B. P.

Seen in New York Shops.

SOME new redingote coats shown are of sand-colored covert cloth, and it seems possible that the former style of separate covert cloth coats will come in again.

Some pretty tailored waists were of natural colored pongee. They had raglan sleeves with cuffs of white habutai silk, and a standing collar of the same, which ran down to a point in front. This makes a very serviceable waist.

Two complete changes in collars are the square neck and the high plain stock. Some of the new waists and blouses have the high stock collars, which will be a welcome change from the low necks of last Winter. As seen so far they are quite plain, usually of satin, with a deep turnover collar of white organdie which opens in the front and does not lie quite flat against the stock. The style of collar seen with the square neck is shown in the basque pattern on page 1110. The stock collars seen so far are all quite plain and very high. There are many variations of the Napoleonic collar called l'Aiglon, which is high and close in the back, open in front with revers below, sometimes of linen or organdie, and sometimes of cloth or satin.

Wide-brimmed picture hats are promised for the coming season, but very small hats are in the majority at present. One small military turban shown at an opening was plain and rather high, without a brim, giving a Cossack effect; the crown was black velvet, and the hat was edged with a broad band of black monkey fur. Directly in front, standing straight up, was a narrow jet quill, almost like a spear, giving a very military effect. It is many years since black monkey fur was fashionable, but it is now "in" once more, and is used in millinery and dress trimming, as well as for fur sets. Some long redingotes are trimmed around the bottom, sleeves and collar with black monkey. This fur is very lustrous jet black, but not as becoming around the neck as a fluffier fur—it is rather "slinky" in effect.

A pretty Fall gown that was practical as well as stylish had a long waisted basque and tunic of dark plaid serge with long sleeves, underskirt and sash of black satin. The neck and cuffs were finished with white grosgrain pleatings, and there were tiny jet buttons down the front of the basque.

It is generally predicted that dark or subdued colors will be in the lead the coming season, and this is very probable, for half Europe will be in mourning and fashions generally will consult serious taste. A great deal of black is already in evidence. There are also combinations of dove gray or taupe with marine or sapphire blue, which are quite new and becoming, and yet have a soft effect. One example was a basque dress of the moyen-age type with underblouse and skirt of dove-colored satin, while the long tunic and sleeveless basque were of marine blue gabardine. Braiding appears to be very popular; soutache braiding is seen on redingotes and basques, and many coats are bound with silk braid.

Displays of table silver, whether solid or plated, always include new styles of ideas in serving utensils; some are real conveniences, others mere matters of display. Among conveniences are tomato servers, which have a round perfectly flat bowl, if one may use the term, of pierced silver, pointed around the edge. Sliced tomato has a great knack for sliding off a salad fork, but can be helped conveniently with this server. It is also convenient for serving baked apples or tomatoes, fish cakes or fritters. These were offered, in triple plate, for 50 cents in a sale, but they are usually a little more expensive. Lemon forks, which are little long-tined slender forks, meant for serving sliced lemon with tea, are also handy for butter balls or olives. Pie knives, with broad flat trowel-like blades, would be appreciated by women whose flaky fruit pies are the favorite family dessert. In triple plate they are 50 cents in a special sale, and go up to $2.50 to $4 for solid silver.

Babies' sweater sets in brushed wool—the fuzzy wool often called angora, though this name is not correct—cost $5 for a four-piece set of sweater, leggings, cap and mittens. They are brown, tan, gray or white, and make the little one look like a cherubic brownie. Three-piece sets of sweater, leggings and cap in red, white or oxford worsted are $3. The sizes are two to six years.

Chili Sauce.

COULD you publish a good recipe for chili sauce? MRS. S. M. N.

We have used the following recipe for chili sauce for many years; it is the one given in the Rural Cook Book: Peel and chop fine one onion, and six large tomatoes, add one green sweet Spanish pepper and one small hot chili pepper, chopped; then season with one cupful of vinegar, one tablespoonful salt, two teaspoonfuls brown sugar, one teaspoonful each of ground ginger, cinnamon, cloves and black pepper, and half a nutmeg. Boil slowly until very thoroughly cooked, then bottle and seal when cold.

Cooked Piccalilli.

WILL you repeat a recipe given, several years ago, for a cooked piccalilli made from sweet peppers and onions? M. T.

This recipe calls for 25 large sweet peppers, half green and half red; 18 medium-sized white onions; one quart of vinegar; 1½ cup, good measure, of light brown or granulated sugar; one tablespoonful salt. Peel the onions, remove seeds and stems from peppers and chop fine; this is quickly done with the meat chopper. Put all ingredients together in a preserving kettle, and boil slowly for half an hour, or longer if needed to cook soft; seal in small jars. This is very good.

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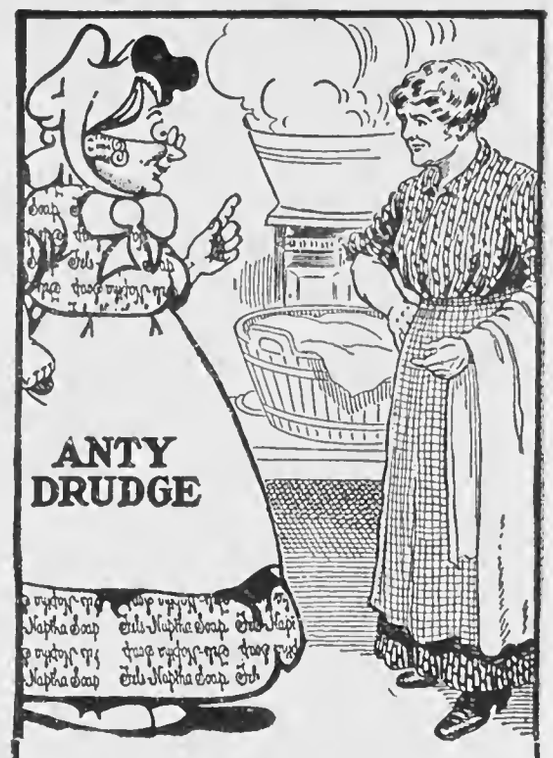

Mrs. Disappointed:—Anty Drudge, I wish you could cast a vote for me at the club this afternoon. I specially wanted to go, but I couldn't get through my washing in time, because the fire went out, and I couldn't get hot water until I made it again. I'm so disappointed.

Anty Drudge:—Poor child! I'm sorry. But let this be a lesson to you to keep a box of Fels-Naptha Soap on hand. You don't need hot water when you use Fels-Naptha Soap, and it does your work twice as quickly and easily.

Fels-Naptha Soap keeps the work from piling up. It gives you time to rest or go visiting. Saves the expense and the discomfort of a hot fire. Washes clothes perfectly in cool or lukewarm water, dissolves grease, takes out stains, even stubborn blood stains, and does your work in less than half the time, with less than half the trouble.

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of 27 or 36-inch material for blouse and ⅞ yard 44 for trousers, and trimming. 8280a, Boy's Norfolk coat. Cut in sizes 4 to 10 years. Size 8 requires 3 yards of 36-inch material. 8315, Boy's suit with coat effect. Cut in sizes 4 and 6 years. Size 6 requires 1 yard of 36-inch plain material with 1¼ yards of plaid. 8343, Child's rompers. Cut in sizes 2, 4 and 6 years. Size 4 requires 2½ yards of 27 or 36-inch material with ¾ yard 27 inches for trimming.

8302, Ladies' yoke blouse. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅝ yards of 36-inch material. 8259, Ladies' plain blouse. Cut in sizes 34 to 44 bust measure. Size 38 requires 2¾ yards of 36-inch material, with ⅜ yard 27 inches wide for collar. 8255, Semi-princesse

dress for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 4¼ yards of 36-inch material with ½ yard 27 inches wide for collar and cuffs. 8211, Two-piece flounced skirt. Cut in sizes 22 to 30 waist measure. Size 26 requires 2⅜ yards of 27, 44 or 52-inch material for skirt, and 2⅝ yards 27 inches for flounces. 7775, Five-gored skirt for misses and small women. Cut in sizes 14, 16 and 18 years. Size 16 requires 3½ yards of 36-inch material.

Canning Fruit With Little or No Sugar.

WHILE sugar is a very important article of food, it is a highly concentrated one, and with our love for all kinds of sweets, we are often tempted to use more of this carbohydrate than the system can readily take care of. I think I can safely say that in no other country is sugar used so extensively as we Americans use it, and we all suffer, more or less, from this erroneous and expensive habit. "But how can we do up our fruits for Winter use without sugar?" the busy housewife stops to ask. Why, easily enough. If the mildly acid fruits are perfectly ripened they will be sweet enough for the "unperverted palate," and the perverted one can easily be educated in this direction, or, they can be sweetened to suit individual taste on using. If our fruits come to us, as they more often do when bought from a market, a little underripe, you have only to add just enough sugar as will make them as sweet as when fully ripened. Any fruit hygienically put up and sealed will keep indefinitely without sugar.

In some of the following recipes, apples, peaches, pears, and grapes are put up without the addition of a grain of sugar, while the more tart varieties have a very small amount added. The general directions for canning fruit are so well known to most of you it will not be necessary for me to go into detail as to the necessity of perfect cans and rubbers, and their sterilization, as well as the other utensils used in the process.

Peaches.—Choose only the best, but not too ripe fruit, they should be firm to the touch. Peel thinly, then divide each peach into halves, and remove one-half of the pits. Put into a porcelain or granite preserving kettle, and add one quart of cold water to every six quarts of the prepared peaches; bring gradually to the boiling point, then can and seal at once.

Pears.—The tart varieties are best for canning even though no sugar is used. Peel thin, halve, and core, dropping each prepared piece into cold water, to which a little lemon juice or vinegar has been added, to keep them from discoloring, then drain, and add one quart of cold water to every seven or eight quarts of the fruit. Bring slowly to a boil, and let simmer gently until tender without being broken, and can.

Grapes.—Take grapes fully ripened, and if possible fresh from the vines. Separate from the stems, rejecting the defective ones, wash, and drain. Remove the skins from the pulp, and press the pulp through a sieve to extract the seeds. Put skins and pulp together in the preserving kettle, allowing two quarts of water to every six quarts of grapes; bring slowly to a boil, skim if necessary, then simmer them eight or 10 minutes, and can.

For grape juice cook stemmed grapes with one-third as much water as you have of the stemmed fruit. Bring gradually to a boil and cook slowly until the seeds separate from the pulp, then press through a cheese-cloth. Heat again slowly, and when boiling hot, skim, and put into cans or bottles, and seal.

Apples.—Select red apples of a fine sub-acid flavor, and wipe, but do not peel. Remove any defective spots, and divide into quarters, core, and cut each piece into fourths, then add just enough cold water to make them juicy, and heat and cook slowly until tender, with each piece whole, and the juice clear. The skins add much to the flavor and coloring of this preserve. Lift carefully into cans while hot, and seal.

Quinces and apples.—Take equal quantities of quinces and sweet apples, or two parts apples and one of quince. Wash and peel the fruit, then halve and core, cut the apples into fourths, and slice the quince thinly, as it takes longer to cook the latter than the apples. Put a layer of the quince in the bottom of the kettle, and follow this with one of apples, and continue the layers alternatingly until the fruit is used, then add enough cold water to half cover them, and cook slowly until tender. Can the same as apples.

Plums.—For the green or blue gages, allow three pints of water and one cupful of sugar for six quarts of fruit. Heat them slowly, then add the sugar, and cook gently for five or six minutes, this fruit should be rather hard, else they will cook to pieces. For the damsons, use two quarts of water to four and one-half quarts of the fruit, and two cupfuls of sugar, and cook slowly for 10 minutes.

Huckleberries.—Pick over and wash the fruit carefully, then put in the kettle with just enough cold water to keep them from burning, and cook slowly until soft, stirring occasionally.

Cranberries.—Pick over the fruit carefully rejecting all the soft ones and those affected with dry rot. Then wash and drain. Allow three parts of cold water to two quarts of the berries, and cook slowly for 15 or 20 minutes, skimming whenever it is necessary, then add one cupful of sugar, cook a little longer, and can. If the fruit is very ripe less sugar will be needed, and a little more water may be added. ROSAMOND LAMPMAN.

Tested and Tried.

Graham Fruit Bread.—Two cups graham flour, one cup white flour, one cup sour milk, one teaspoon soda, two teaspoons each of brown sugar and molasses, one teaspoon of salt and one-half cup each of chopped nuts and seeded raisins, dates or prunes, cut in bits. Bake slowly almost an hour.

Rice Bread.—One cup each of cold boiled rice, white Indian meal, wheat flour and milk. One egg, two teaspoons of baking powder, half teaspoon salt and a tablespoon of melted butter. Mix dry ingredients, and the egg beaten with the milk and lastly the melted butter. Bake in moderate oven. This is very nice baked in muffin rings and eaten hot, pulled apart and buttered.

Beauregard Eggs.—Cover three eggs with boiling water, and keep the latter at simmering point for three-quarters of an hour, then cool and shell the eggs. Chop the whites quite fine. Make a sauce with one cupful of milk, one tablespoonful of flour mixed to a paste with a little cold milk, and one-third of a teaspoonful of salt. Add the chopped whites and one scant teaspoonful of butter, and simmer for 10 minutes. Toast and cut into triangles several slices of bread. Arrange on a hot dish, pour over the sauce and rub the yolks through a strainer, letting them cover the sauce. If desirable, garnish with a pinch of chopped parsley.

Savory Beef Roll.—Select the piece of meat called the inside flank, wipe it with a damp cloth, remove the skin and fat and lay it out flat on the bread board. Place in a mixing bowl a cupful of grated bread crumbs, add one teaspoonful of onion juice, one scant teaspoonful of salt, one teaspoonful of chopped celery tops, a sprinkling of paprika and a tablespoonful of melted butter. Mix well and spread evenly over the meat; roll it up, tucking in the ends, and tie securely in shape with twine. Slice into the bottom of a baking pan one white onion, two small carrots, a stalk of celery and a small turnip; place the meat upon the vegetables, lay on top three slices of bacon and pour into the pan two cupfuls of soup stock. Cover the baking pan closely and cook very slowly for about four hours, basting frequently. When cooked, season the gravy in the pan with a few drops of kitchen bouquet and thicken with a tablespoonful of brown roux. Pour the gravy over the meat and garnish with a few crisp celery tops. Long, slow cooking is essential to the success of this dish, for if cooked too fast it will not be good.

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FEEDING WINTER LAMBS.

Advice From An Expert.

"WE should have a margin of two cents between the price we pay for lambs in Chicago, and the price for which we sell them in Buffalo," is the assertion made by Mortimer Tyler of Hillsdale County, Michigan. "For the practice of feeding to be lifted from one in which there is uncertainty, we must buy lambs in Chicago at six cents, then sell them in Buffalo at eight cents, and then we can pay for interest on investment, labor, use of equipment, possible loss among the lambs, insurance on our stock and buildings, farm improvements and besides have a profit. These are charges which the business man figures against his investments, and the farmer should do so in his business. Too many farmers have gone in buying lambs blindly on the basis that manure pays for labor, that increased weight pays for feed, interest on the loan at the bank, and possible loss."

Mr. Tyler added: "I have not always quite lived up to my own advice, for last year I paid $6.65 for the first lambs with which I started, and they were sold in Buffalo from $7.90 to $8.50. Many farmers wonder if it would not pay to buy in Omaha or the ranches of Idaho and Montana or Eastern Oregon. If lambs are 35 or 40 cents lower in Omaha than Chicago, I would then advise buying in Chicago, for there is a five pound shrinkage between the two cities, and one feed bill, while from Chicago to points in Southern Michigan there is no feed bill, and small additional shrinkage. There are times when lambs might be enough cheaper in Omaha to pay, and times they sell at as much as in Chicago.

"I would not advise the farmer to go to the far West to buy, although I have bought on the ranges at $3.25 the head delivered at cars, but the trip from home, the time from the farm, the long ride of 50, 60 or 70 miles from one ranch to another, all charged in dollars and cents together with freight, insurance, shrinkage, feed bills, personal incidentals added to the cost of the lambs, make the Chicago bought stock the better investment. It requires about 10 days to two weeks to ship to Chicago, and although I have bought as high as 5,000 lambs in one place, a 150-mile horseback ride among the mountains away from the railroad, with horse hire and some expenses, induce me to advise relying on one of the commission firms which has a reputation of honesty. The feeder can place his order with his firm, describing the stock he wants. He can limit them in price, and they will take care of the purchase as well as the buyer could personally.

"I advise the western lamb, for it is more hardy, free from worms and is desired in the market. A farmer may think that he could select a bunch of culls and make a good thing on them. In my purchases I find some smaller lambs, and these I have placed by themselves, fed them the same ration day after day, as I did the heavier lambs, and when ready for sale they were 12 or 15 pounds lighter than their better companions. Culls are profitless. But keep the small lamb separate from the others, for you are apt to get some small ones in a carload, and the larger ones crowd the weaker ones away from the feed trough.

"Feeders commence buying lambs as early as the first of August. It pays if one has pasture. I have secured 12 pounds gain on pasture, and the ordinary price paid the head for pasture is 1½ to two cents, although I have secured good pasture as low as one cent a week. I have had them gain two to three pounds weekly, yet 1½ or two pounds is good gain the week.

"The silo plays an important part in our feeding. We feed silage once a day inside, and that is in the evening. The sheep will consume their evening meal in 15 or 20 minutes and then lie down. We feed about 1½ pounds of silage the head to the feed, and on it we sprinkle cottonseed meal. We start feeding the cottonseed at the rate of half an ounce the lamb and increase to two ounces. Cottonseed costs about the same as oil meal, and contains more protein. In the morning we feed shelled corn in the buildings, and Alfalfa hay or clover hay outside in racks. I have started with one-fourth pound of shelled corn and have completed the feed with 1¾ pound a head. We give all the hay they will clean up nicely. At first, apparently, they cannot be given sufficient. This is good for it gives them capacity. I like to feed straw once a week. They eat it as ravenously as they would hay. Cornstalks also are very good, and many of the farmers are using corn stalks in their feeding.

"Many feeders are looking for gain in pounds and forget the real profit lies in economical increase in weight. One of the things to be remembered in securing this gain at a nominal cost is to feed the lambs regularly. They cannot, however, be fed before daylight in the morning nor after dark at night, but should be fed in the evening in time to complete their evening meal before dark.

"We keep the lambs outside each day part of the time except when it rains. The cold dry air is a natural condition for lambs, but they should not be exposed to rain. Snow does not hurt them, for they will readily shake it off. The pens or buildings in which the lambs are kept should be well ventilated. One farmer tells me some lambs did best in a shed with two open ends, while others kept in a warm basement did not show near the gains. The lambs should have access to good fresh water, and they should be kept dry under foot. The farmer need not hesitate fearing disease, for shipments are carefully inspected. Scab sometimes breaks out but the chances are very small, sheep this side of the Rockies are generally apt to be infected with stomach worms, while the mountain range lambs are free from worms."

There are some men who will succeed, for they are natural feeders, they like stock, and stock thrives in their hands, while others feed any time, they have thin horses, poor hogs and thin live stock about them. Such a man will fail feeding lambs. Now, here is another thing, feed for a definite time, have your lambs finished and sell them at that time. If your lambs go in the middle of November and you feed with the view of finishing them the 15th of January, and should carry them to the first of April there would be no profit. There is a possibility of the lambs going back. Of course market conditions might demand holding the lambs a week or two weeks, but to carry them along at other than loss is almost impossible. W. J.

"SHALL we take a few Summer boarders this year?" said Farmer Corntossel. "I don't know," replied his wife. "Summer boarders are kind of in the way. But they do help some in drawin' the mosquitoes away from the kitchen around to the front porch."—Washington Star.

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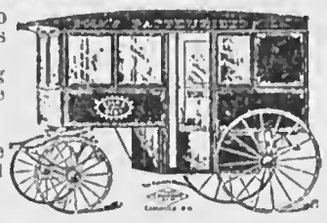

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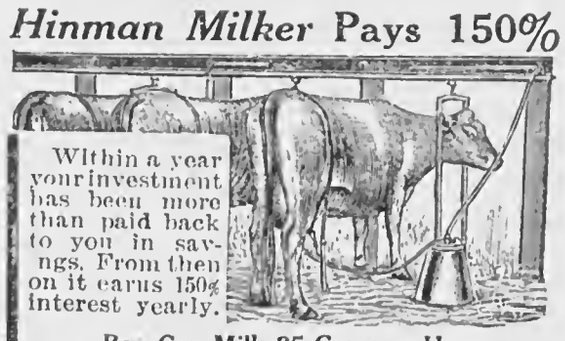

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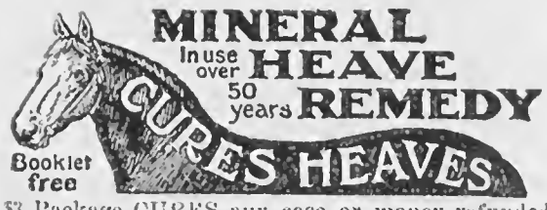

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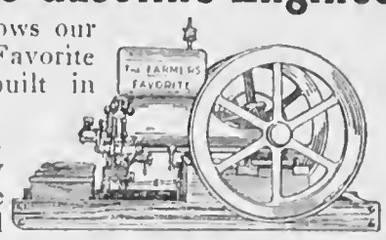

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For Sale—Swine—Purebred Tamworth Swine. Wish to purchase Jersey heifer. Sire and dam must both be in register of merit.
J. G. ARMSTRONG, Grosse Pointe Farms, Detroit, Michigan

LARGE ENGLISH Yorkshire Pigs—eight weeks old, $10 each, 10% discount for three or more. Boars and sows not related. Registered f. o. b. Hamilton. FRANK TOOKE, Morneylight Farm, Hamilton, N.Y.

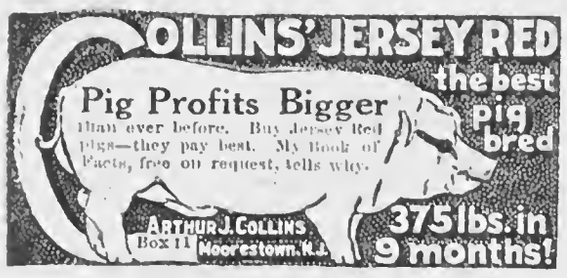
REGISTERED
LARGE YORKSHIRE BOARS and SOWS
six months old. Six-weeks-old-pigs ready Oct. 10th, 1914. Satisfaction guaranteed or money refunded.
TROVIN FARMS
Cornwall Bridge, - Connecticut

FOR SALE—REGISTERED Berkshire & O. I. C. Boar Pigs—about 8 weeks old. Prices reasonable. Good individuals and of excellent breeding. TARBELL FARMS, Smithville Flats, N.Y.

BERKSHIRES
We have the large, thrifty kind, with lots of type, quality and breeding. Write for prices and descriptions. TOMPKINS FARM, Lansdale, Pa.

Large Berkshires at Highwood
Just sold eleven sows for export to Argentina. Makes fourth exportation this year. We sold 475 registered Berkshires during 1913, which is over a hundred more than any other swine breeder in the U. S. Most of these went to old customers, which speaks for itself. Selected animals all ages for sale.
H. C. & H. B HARTENDING, Dundee, N.Y.

Springbank Herd Big Berkshires
I have a fine lot of March and April (1914) Boar Pigs fit for service this Fall; of high class conformation and good looks.
J. E. WATSON, MARBLEDALE, CONN.



SHEEP

HIGH-CLASS Shropshire and Southdown sheep for sale. NIAGARA STOCK FARM, J. C. Duncan, Mgr., Lewiston, N. Y.

REGISTERED SHROPSHIRE RAMS FOR SALE—Yearling and two-year-olds, from imported sire. E. E. STEVENS & SON, Wilson, New York

HAMPSHIRE RAMS—ewes (bred), and lambs Highest quality, best breeding, lowest prices. Stock ram, sure breeder of good ones. HASLETT BROS., Seneca, N.Y.

REGISTERED DELAINES RAMS AND EWES WEATHERBY & SON, Trumansburg, N. Y.

TEN BOOKS WORTH BUYING

Landscape Gardening, Parsons	2.00
Lawn Making, Barron	1.10
Agriculture and Chemistry, Storer	5.00
Fertilizers and Crops, Van Slyke	2.50
Weeds of Farm and Garden, Pammel	1.50
Book of Wheat, Dondlinger	2.00
Successful Fruit Culture, Maynard	1.00
Irrigation and Drainage, King	1.50
Study of Corn, Shoesmith	.50
The Soil, King	1.50

THE RURAL NEW-YORKER
333 W. 30th St., New York City

Dressings for Wounds of Animals.

THE Department of Agriculture gives a list of dressings which may be used on wounds to prevent flies from laying their eggs or carrying infection to the sores. Jensen gives three formulas of repellents for application to wounds:

Formula No. 1:
Oil of tar ..... 8 ounces
Cottonseed oil to make ..... 32 ounces

Formula No. 2:
Powdered naphthalin ..... 2 ounces
Hydrous wool fat ..... 14 ounces
Mix into an ointment.

Formula No. 3:
Coal tar ..... 12 ounces
Carbon disulphid ..... 4 ounces
Mix; keep in a well-stoppered bottle and apply with a brush.

Another ointment widely used at the South is:
Oil of turpentine ..... 1 dram
Phenol ..... 1 dram
Cottonseed oil to make ..... 4 ounces
Mix and apply freely to wounds.

A Live-stock Association.

THE North Dakota Experiment Station tells of an association formed at Esmond, in that State for improving the stock in Benson County. Already 19 purebred bulls have been brought into the county. Seventeen of these are milking Shorthorns and two are Holsteins. The plan is this:—eight farmers living near together form a local club. Each one puts up $20, which is turned into the parent association, which in turn furnishes the local club with the kind of a bull it wants. The call has, in nearly every case, been for the milking Shorthorns. One of the members of the club keeps the bull and receives $30 a year for this. A service fee of one dollar is charged members and non-members are charged $3. This provides for the running expenses. When the bull has been used two or three years he is exchanged for another, in this way inbreeding is prevented. The local club must keep on using the same breed, as the association does not believe in the mixture of breeds. Considerable improvement has already been made in the live-stock of these localities. It is the aim of the association to have four local clubs in each township of the county. This is one of the best organizations of its kind in the State. Its method of organization is securing results. It will not be long before the cattle of Benson County will be well graded up and will have the appearance of purebreds as well as their good qualities in production.

Cortland Dairymen Meet.

DISSATISFIED with the prices that are being received for milk the dairymen of Cortland and Homer, two of the largest milk-producing sections of the State, met Sept. 12 to consider the question in response to a call from the State Secretary of the Dairymen's League, Albert Manning. The League sent a committee to New York August 24 to confer with the dealers and if possible to prepare a schedule of prices to be in effect from Oct. 1 to April 1. The present price is $1.40 a can of 85 pounds, just the same as that received a year ago, although the cost of feed is very much higher. The conference in August was a failure, the Bordens refusing to recognize the demands of the milk producers and the smaller dealers taking the same stand. Building local plants for handling milk in emergencies is strongly urged by the League and the farmers are rousing to the need of concerted action. The highest price ever received here for milk was $1.70 per can of 40 quarts of which 10 cents per can was paid for drawing, and this price held but for one month. When this maximum price of four cents a quart is compared to the retail price in New York it will be seen who furnishes the labor and the capital and who secures the greater part of the profits.

Ralph Butler, president of the Homer branch, was elected as a delegate to represent both Homer and Cortland at the Albany meeting. Prices were named all the way from $1.70 to $2 per can as what the producers considered their due. On Sept. 15 the Bordens named their prices throughout the district to prevail the next six months. They are the same as last year, and are as follows for grade B milk which is the grade produced in this locality: October $1.70 to $1.90 per 100 pounds; November $1.80 to $2; December $1.80 to $2; January $1.75 to $1.95; February $1.65 to $1.85; March $1.60 to $1.80. The first figures are the minimum and the second the maximum prices. The maximum depends on butterfat, plant and equipment. The butterfat must be at least 3.8 and the scoring at least 68%, 25% on plant and 43.7 on method. The company, as usual, agrees to make an adjustment of prices if conditions warrant.

The Dairymen's League controls the output of 185,000 cows, or 75% of the entire milk supply of New York City. The Cortland branch alone has about 90 members and controls 1,147 cows. After the meeting in Albany active efforts will be made to get as many cows as possible under the agreement whereby their milk will be held by their owners until such a time as the producers shall secure a more reasonable price for their product. To this end other meetings of local branches will be called directly after the Albany meeting. E. G. F.

DAIRY CATTLE

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

FOR SALE
Herd 20 Registered AYRSHIRE CATTLE
consisting of animals of all ages. If you are in the market for desirable stock I will make prices that will interest you. A. F. CURTIS, No. 131 State St., Boston, Mass.

READY FOR SERVICE—PRICES, $75.00 to $150.00 Registered Holstein and Jersey Bulls. Splendid individuals with great backing. Best blood in the land. Also younger bull calves. Write for list. HOMEWOOD FARMS, RYE, N. Y.

Ontario Pietje Lad—Holstein bull, born Jan. 1, 1914. Well marked, fine individual. Sire, a 35.61 lb. bull; dam, grandly bred 15 lb. 2-year-old. Send for pedigree. Price, $250. CLOVERDALE FARM, Charlotte, New York

MERCEDES
CORNUCOPIA
KORNDYKE
KING SEGIS
JOHANNA
PONTIAC
These noted Holstein families make up our pure-bred herd. Orders taken for this year's bull calves at $150 to $500. Send for booklet No. 4.
MOHEGAN FARM, - Peekskill, N. Y.
Hudson Valley Holstein Headquarters
CHAS. H. BAKER, Owner

HOLSTEINS FOR SALE
Reg. Holstein bulls for $50 each.
7 registered heifers for $900.
100 high grade and registered cows, 100 high grade yearlings and 2-year-olds, $40 to $60 each.
Heifer calves, 7-8 Holstein, $15 each.
REAGAN BROS., - Tully, New York

BIG BARGAIN
Reg. Holstein Bull
1 year, 6 months old; choicely bred; $125, with all papers, delivered. Younger bulls for less money. Can spare a few females.
F. H. RIVENBURGH, HILLHURST FARM, Munnsville, New York

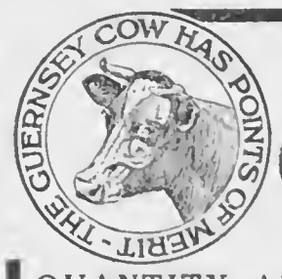
Buy a Bull on Easy Terms
Long Time and 4 Per Cent Interest
Holstein bull calves, sired by a SON OF KING OF THE PONTIACS, whose dam has a record of 29.57 lbs. butter in 7 days and 113.96 lbs. in 30 days, and out of A. R. O. DAMS. WRITE AT ONCE for breeding, prices, and particulars regarding our terms.
JUSTAMERE FARM, Middletown Springs, Vt.

East River Grade Holstein Cows For Sale
100 cows served to calve in August, September and October, all served to registered bulls. STRICTLY DAIRY TYPE AND GUARANTEED. 60 yearling heifers. 40 two-year old heifers all sired by pure blooded bulls from high producing dams. 10 extra well-bred registered bulls, PONTIAC BREEDING, from A. R. O. DAMS. If you are looking for extra good dairy cows, visit the EAST RIVER HOLSTEINS. Special price for the next 30 days. WE TUBERCULIN TEST. JOHN B. WEBSTER, Dept. Y, Cortland, N. Y. Bell Phone 14, F.5.

HIGH GRADE
HOLSTEINS
100 cows due to freshen in Sept. and Oct.
100 fresh cows and springers.
PRICE, $75 to $100.00 EACH
All large, well bred, nicely marked and heavy milkers. 100 2-year-old heifers due to freshen this Fall, and all in calf by registered bulls. You can pay more but you can't buy better.
F. P. SAUNDERS & SON, Cortland, N. Y.
Office, 50 Clinton Ave.

Purebred Registered
HOLSTEIN CATTLE
The Chief of Dairy Husbandry at University of Illinois Agricultural Experiment Station says: "A scrub bull is the most expensive and extravagant piece of cattle flesh on any farm." At the June sale of purebred registered Holstein cattle at Chicago, nineteen bulls were sold at an average of $1,750 each. Leaving out the record breaking $20,000 calf, the remaining eighteen bulls brought an average of $755 each. Pretty good evidence for you to consider.
Send for FREE *Illustrated Descriptive Booklets*
Holstein-Friesian Asso., F. L. Houghton, Sec'y, Box 105, Brattleboro, Vt.

Good Guernseys for Sale
1 Purebred cow, 4 years, fresh, $250. 1 Grade cow, 4 years, fresh, $110 1 Purebred Bull calf, 6 weeks, $35.
MOHEGAN FARM, Peekskill, New York



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We are first hands and can quote you absolutely bottom prices, delivered your station, in lots of anywhere from one barrel to a trainload. Write for booklet.
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HORSES

PONIES—SHETLAND PONIES of quality Prices reasonable. Write for Fall Catalog to Dept. L.
THE SHADYSIDE FARMS, North Benton, Ohio

FOR SALE—5 HEAVY Percheron Draft Horses—4 brood mares and 1 gelding weighing 1,700 to 2,000 pounds. Young, handsome, hard and sound. MOHEGAN FARM, Peekskill, New York

50 STALLIONS
and MARES, $250 to $1000 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

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FERRETS FOR SALE—CATALOG FREE!
C. D. MURRAY, :-: New London, Ohio

Ferrets For Sale—Booklet and Price List Free. J. F. Murray, R.1, New London, O.

Pedigreed Collie Pups—$10—CLARK FARM Boonton, N.J.

COLLIE PUPS—the intelligent kind. Also Bloodhounds. NELSON'S, Grove City, Pa.

Newfoundland PUPPIES
$25 each. CLARK FARM. Boonton, N. J.

AIREDALES OF QUALITY
Eliminate poultry theft. Whelped, June 29, 1914. Registered. Price, $15. Send for pedigree.
BIRCH FARMS, - Three Tuns, Pa.

Fox, Coon, Skunk and Rabbit Hounds that are right, and broke to gun and field. Price right. Stamp for photographs and reply. H. C. LYTLE, Fredericksburg, O.

FOR SALE—**Fox, Coon, Skunk, & Opossum Dogs**
Price is $30 up to $50 each. Rabbit dogs from $7.50 up to $20 each. Pups, near 6 months old, just right to start hunting this Winter. Are bred from game getters. Price, is $5 each. Send stamp.
J. W. DEARTH, - Zanesville, Ohio

Pedigreed Scotch Collie Dog FOR SALE
14 months old. Good cattle and watch dog.
HENRY RUNDALL, - Amenia, N. Y.

FOR SALE—fox, coon, deer, cat, bear, wolf and rabbit hounds; setters, pointers, spaniels; bloodhounds, Newfoundland, St. Bernard, great Dane, mastiff, bull dogs and bull terriers, collies and shepherd's; pigs all breeds, rabbits, ferrets, guinea pigs; grade and thoroughbred calves, sheep; young stock specialty; 12c for handsome catalogue, all breeds; price list poultry and pigeons.
S. V. KENNELS, Dept. C, Tunkhannock, Pa.

DAIRY CATTLE

FOR SALE—Young High-Grade Jersey Family Cows. Springers A. L. FITCH, Westmoreland, N. Y.

Young Jersey Bull Calf for Sale
(not eligible for registry) out of tested dam; register of merit sire. ROBERT FRAME, Newport, Rhode Island

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

Jersey Cattle
Keep Boys from Getting "City Fever"
What are *you* doing to keep *your* boys on the farm? If you don't furnish them with some live interest, they are sure to leave.

How about getting some pure-bred Jersey Cattle?
Here is a live, an interesting, a profitable outlet for their youthful enterprise and energy, that can be had right at home. Think about it. Information about Jersey Cattle can be procured free from
THE AMERICAN JERSEY CATTLE CLUB
324 West 23d Street, New York City

Day after Day, Year after Year,
PRODUCTION COUNTS
It is not what a cow can produce in 7, 14, or 30 days, even in a year that determines her value to the farmer, it is what she can do in a lifetime.
Brown Swiss Cows rank high in average production and are regular and persistent breeders and producers. Year in, year out, they make good records and raise good calves without any coaxing or pampering. If interested, we will send you an Illustrated booklet.
The Brown Swiss Cattle Association
IRA INMAN, Secretary BELOIT, WISCONSIN

NEW ENGLAND MILK CONDITIONS.

AS the time draws near for making the milk prices for the coming season much speculation is apparent, and also much anxiety as to what the price will be. Conditions are bad any way you look at it. Massachusetts milk is in light supply, and probably will remain so a while longer, as other lines of farming look better to the majority of farmers and milk producers. Boston milk authorities have not been fair in the general policy of sampling milk this Summer, laying on the producers what should have been blamed to the handlers and contractors in some cases, which has caused hard feelings that will last for some time. The contractors have also been unfair in many ways, especially in regard to prices, which have been low, and no offers of raise have we heard, while the cost of production has been steadily increasing the last few months. The producers are making an effort to keep the supply normal, but are letting the cows give what they will and letting it go at that, and you cannot blame them, as no encouragement to keep the supply up or increase it is in sight. I doubt if the contractors will be willing to give a raise in price that will help or improve matters very much, or will make any offer at all for over two or three months. The price should be made for a year, is the general belief among producers, but I see no hopes of this being brought about at present. These conditions exist in Massachusetts and probably to quite an extent in our neighboring States also, and milk producers are turning to fruit growing or beef raising or poultry farming or combinations of these, and making much better returns than formerly while depending on market milk as the chief source of income.

I will state one example in regard to this change, a certain father and son living in central New Hampshire, the latter a graduate from agricultural college, while the father is a man of common sense and good judgment, and also a believer in up-to-date practices of conducting farm business. These people formerly kept about 40 dairy cows and sold milk to a Boston contractor, getting an income from the same of about $5,000 per year without deducting expenses. Not being satisfied they desired to try beef production and hogs. They decided to begin right and got a few purebred Herefords, and have built up a business that now returns them more than double their former income, or about an average of $12,000 yearly, from sales of beef and purebred stock. Any animal not about perfect is sold as beef, only the best are sold as breeders. These cattle are pasture-fed in Summer and barn-fed in Winter with good hay and a small grain ration, mainly to keep up a steady growth. Clover hay is considered much the best feed for good results. The calves are allowed to suck the cows as long as they give milk, and in some cases if the mother does not give enough another common cow is bought to supply the deficiency and yearlings weighing 1200 and 1500 pounds are the result. Under this system, as no milking is required, one man can do the stable work easily and not be tied down to certain hours, as is the case in dairy farming. These people believe that New England is an ideal breeding ground for purebred stock and that this cannot be overdone in beef cattle for some time to come, as they cannot supply anywhere near the demand they have for their stock, and the demand is growing owing partly to opening up of the South to cattle growing and dairying. While everyone who tries could not have perhaps the success of the above case, yet good returns can be made in this line of farming in the right localities where pasture is good, and the farmers are waking up to the fact.

One would naturally think if this change is going on the dairy business must improve, and it should and may, but as long as the contractors can draw on Canada freely as at present, and on other faraway sections when necessary to obtain milk to keep up the supply, and the milk authorities are paying more attention to harassing Massachusetts producers than looking out for the distant supply, it is doubtful whether conditions will improve enough to make it a paying proposition to produce good milk for Boston market. A. E. P.

LIVE STOCK BULLETINS.

DAIRY BARNS.—Bulletin No. 179 of the Kentucky Experiment Station at Lexington, discusses "The Construction and Equipment of Dairy Barns," and does it well. While naturally the discussion of the subject is mostly to Kentucky conditions, there is a general discussion of the subject, and pictures are given of some of the best dairy barns in the country. They are both exterior and interior views, thoroughly covering the subject of sheltering and fastening the cattle. There are also figures and specifications showing the course of different plans of barn building. A very practical bulletin, sure to be useful for dairymen.

COLOR OF HORSES.—Bulletin No. 180 from the Kentucky Station is an interesting discussion of "The Inheritance of Coat Colors in Horses." This bulletin takes up the scientific discussion of the horse colors, which are likely to result from certain experiments in breeding. It takes up the classes of colors which are found in the horse, and shows which colors are most fixed or permanent and how far these colors are likely to follow the sire or the dam in breeding. It is a very useful discussion, for as all know certain colors in horses are more desirable than others. It is also believed by a good many people that color in the horse indicates speed, intelligence, or other good traits. Most people for instance have heard it said that sorrels are always tough, whereas black horses are apt to be soft. Professor Anderson, who writes this bulletin, says that the color has practically nothing to do with intelligence, vigor, or speed. In other words, color is no indication of the real value of the horse but it is profitable for a breeder to know just what colors he is likely to produce by certain lines of breeding. This bulletin gives a detail of such matters so far as they have been worked out.

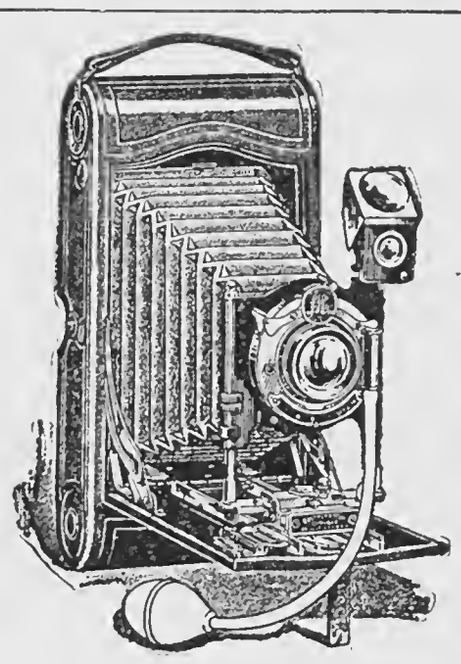
"STOCK CONDITIONS."—The Kentucky Experiment Station has issued Bulletin No. 181, a part of which discusses the disease known as "Hog Cholera." The scientific men all agree now that the only real remedy or preventive of this disease is through inoculation, and such sanitary measures as will keep the disease away from the herd. It is not possible by means of a tonic or so-called stock foods to keep the disease entirely away from the hogs, but there are certain drugs or substances which may keep the animal in good condition and better able to resist infection. This bulletin gives one of these combinations which it calls a conditioner. This mixture is made up as follows:

Common salt	15 pounds
Wood ashes	5 pounds
Wood charcoal	5 pounds
Powdered copperas (ferrous sulphate)	1 pound
Sodium sulphate	1 pound
Antimony sulphide	1 pound
Sulphur	1 pound
Sodium hyposulphite	1 pound
Air-slaked lime	1 pound

One ounce of this mixture is fed with about 40 pounds of feed, or what is better, the mixture is left in some safe place where the hogs can eat it as they desire.

Milk Business at Providence, R. I.

THERE is a great deal of uneasiness in Providence and vicinity in regard to the dairy business. September 1 the Board of Agriculture had a special session for dairy farmers, trying to find out from the dairymen themselves, what it costs to produce a quart of milk. No one could give a definite answer to that question, and in fact, it depends a great deal on the conditions under which every dairyman is working. But the outcome of the meeting left the impression that under present conditions, the dairyman was just about making both ends meet even selling milk at five cents a quart wholesale. Very few farmers raised calves, mostly for lack of room, every available space being taken for cows in milk. The custom in general is to keep a cow as long as she pays for her keep, or in other words, selling her to the butcher when her milk flow falls below six or seven quarts a day.



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A Pocket Camera—so simple that the beginner can make good pictures with it from the very start, even to the developing and printing. Capabilities that appeal to those who know photography in every detail. Made of aluminum, covered with fine seal grain leather. Has a superior rapid rectilinear lens and Kodak Ball Bearing shutter with automatic speed of 1-25, 1-50 and 1-100 of a second—also the "bulb" and time exposure action. Has reversible brilliant finder, two tripod sockets, rising and sliding front, automatic lock. Uses Kodak film cartridges, (can also be fitted for plates), loading in daylight for six or ten exposures. Is *right* in every *detail* of construction and finish. Pictures postcard size (3¼ x 5½). Price $20.00.

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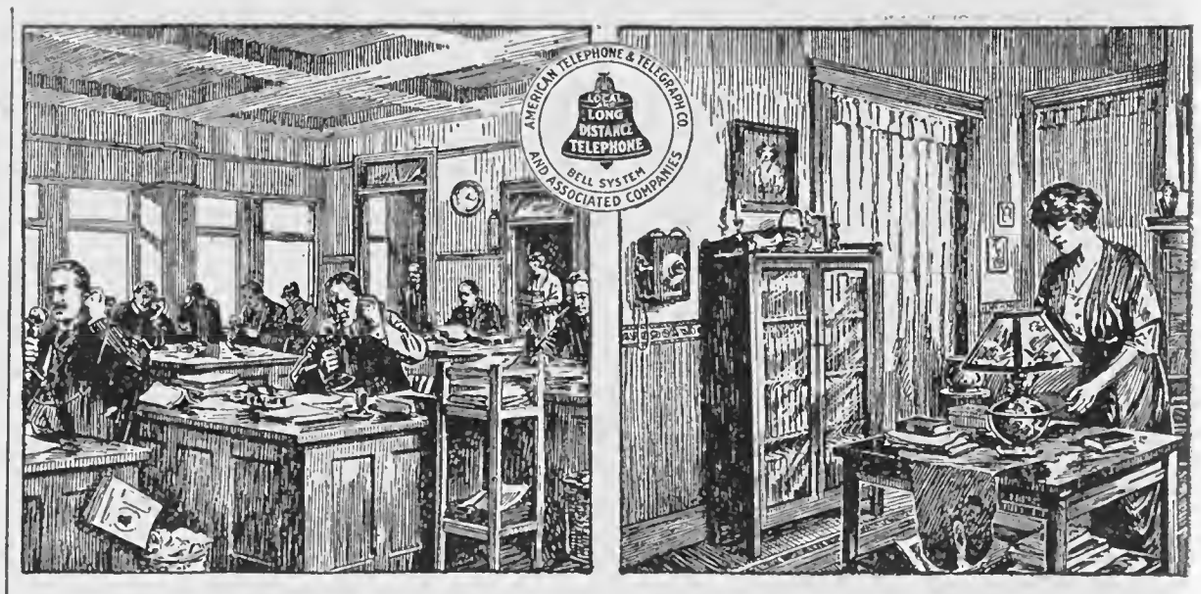

Fair Play in Telephone Rates

IT is human nature to resent paying more than any one else and to demand cheap telephone service regardless of the cost of providing it.

But service at a uniform rate wouldn't be cheap.

It would simply mean that those making a few calls a day were paying for the service of the merchant or corporation handling hundreds of calls.

That wouldn't be fair, would it? No more so than that you should pay the same charge for a quart of milk as another pays for a gallon.

To be of the greatest usefulness, the telephone should reach every home, office and business place. To put it there, rates must be so graded that every person may have the kind of service he requires, at a rate he can easily afford.

Abroad, uniform rates have been tried by the government-owned systems and have so restricted the use of the telephone that it is of small value.

The great majority of Bell subscribers actually pay less than the average rate. There are a few who use the telephone in their business for their profit who pay according to their use, establishing an average rate higher than that paid by the majority of the subscribers.

To make a uniform rate would be increasing the price to the many for the benefit of the few.

All may have the service they require, at a price which is fair and reasonable for the use each makes of the telephone.

These are reasons why the United States has the cheapest and most efficient service and the largest number of telephones in the world.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

Galvanized or Painted Roofing

Made of high grade open hearth metal. All galvanized Roofing and Siding have an extra heavy tight coating of galvanize. Write today for free sample and mill price list No. 204. Send size of building, length of ridge, length of rafters and we will furnish free complete estimate of cost--without obligation on your part to buy--then make comparison and see the big saving. Also makers of galvanized shingles for houses.

30 Year Guaranteed Galvanized Roofing

Made of selected best grade No. 24 gauge open hearth metal with DOUBLE COATING of GALVANIZE and PURE TIN. Write today for price list No. 60. When you buy from us you buy from the manufacturer.

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Write for Cat. "C" and price del. your station.
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LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. **We tan and finish them right;** make them into coats (for men and women), robes, rugs or gloves when ordered.

Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

It tells how to take off and care for hides; how and when **we pay the freight both ways;** about our safe dyeing process which is a tremendous advantage to the customer, especially on **horse hides and calf skins;** about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

The Crosby Frisian Fur Company,
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Don't let the rain drip in and spoil everything.

Conkey's LEAK-FIX PUTTY

seals every crack and cranny in any kind of roof on any kind of building. Always pliable. Clings and takes with the weather. Stops leaks for good. Special offer 10-lb. Can $1.00, order today. We pay expressage, G. E. CONKEY CO.
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THE MONTH

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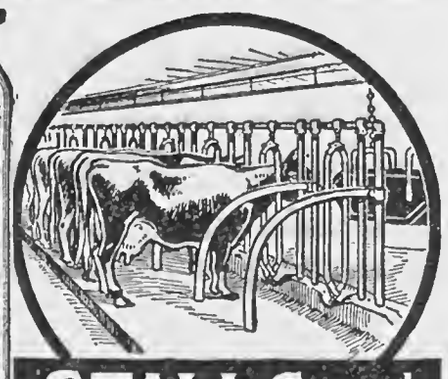

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Composed of eleven different ingredients carefully apportioned and thoroughly cooked, producing a scientifically balanced ration for the young calf.

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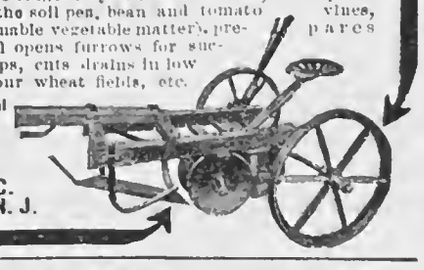

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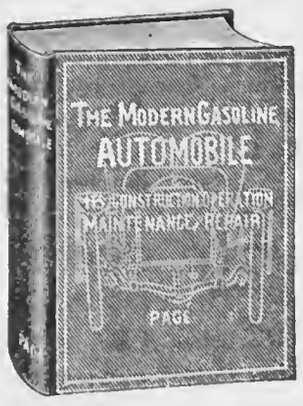

It gives up-to-date information on the construction, care and operation of the gasoline automobile, including breakdowns, and troubles of every description, with their proper remedy. The book is clearly and concisely written, and tells just what to do and how to do it under all circumstances. Every illustration in the book has been specially drawn by the author, and shows details of every part of the machine.

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Conditions in Southern Vermont.

FARMERS are inclined to decrease their herds and sell hay at $22 to $24 per ton in North Adams. Probably one of the reasons is the lack of purebred stock. In this vicinity the farms are nearly all small, keeping from six to 15 head, and they cannot afford to buy purebred bulls to head small herds. The majority would rather pay a 50-cent service fee for a scrub bull than pay $5 for one with a 25-pound backing. Club buying does not meet with much success. There was some effort made at one time to get four or five farmers together and buy a descendant of "King of the Pontiacs," but nothing came of it. Labor is high; we have to pay $2 a day for common farm labor, and then they don't want to milk. Not much grain is raised; none to my knowledge is sold out of town. Corn is nearly two cents a pound now, and other grains around $1.85 per hundred. Our crops are good this year. Farmers are using much chemicals now and many use them entirely for top-dressing meadows and find it profitable. All our milk is sold in North Adams at eight cents per quart retail. Those that sell at the farm to peddlers get from four to five cents per quart. Barns are inspected by Massachusetts inspectors, and there is very little trouble with them. Some farmers have butter and egg routes in North Adams and receive on an average about 35 cents per pound, and at present 38 cents for eggs. There is no trouble to find trade once they find your produce is of good quality. We find good cows are high, bringing $60 to $80 at auction.

Stamford, Vt. J. R. E.

Skim-Milk for Hogs.

THE Fairmount News figures the value of skim-milk for hogs in the following manner:

"You have five little pigs four weeks old. If these are weighed and are thrifty, they will average about 20 pounds apiece. Now consider, that you have at your disposal skim-milk sufficient to average 100 pounds per day for six months, or 180 days. When the pigs are young a small quantity of milk will be sufficient, but as they grow older a greater amount is needed, but the deductions should be on the average of 100 pounds for 180 days. If these pigs are turned upon a grass plot, and are supplied with this skim-milk in the proper way and amount they will weigh better than 200 pounds when six months old. If the 20 pounds, which they weighed at the time they were weaned is deducted from the 200 pounds, it will leave you 180 pounds gain for the 180 days fed, or actually one pound gain per day for each hog. Hence, if one hog will gain one pound per day, the five will equal five pounds of pork per day gained, and if this pork is worth eight cents per pound it will make the skim-milk net the farmer 40 cents per hundred.

"In addition thereto, if this half acre of ground is put into crops next year under good conditions, it will produce an increased return equal to 10 cents per hundred for the skim-milk fed. No argument is needed here to bring to the farmer's attention the value of hog manure as a fertilizer. Another feature, if this half acre will be used for green feeding crop for cattle, the amount of green feed produced after being used for hog pasture will greatly cut down the farmer's feed bill, and give him a much larger profit."

Value of Cow Testing.

THE Wisconsin College of Agriculture sums it up as follows:

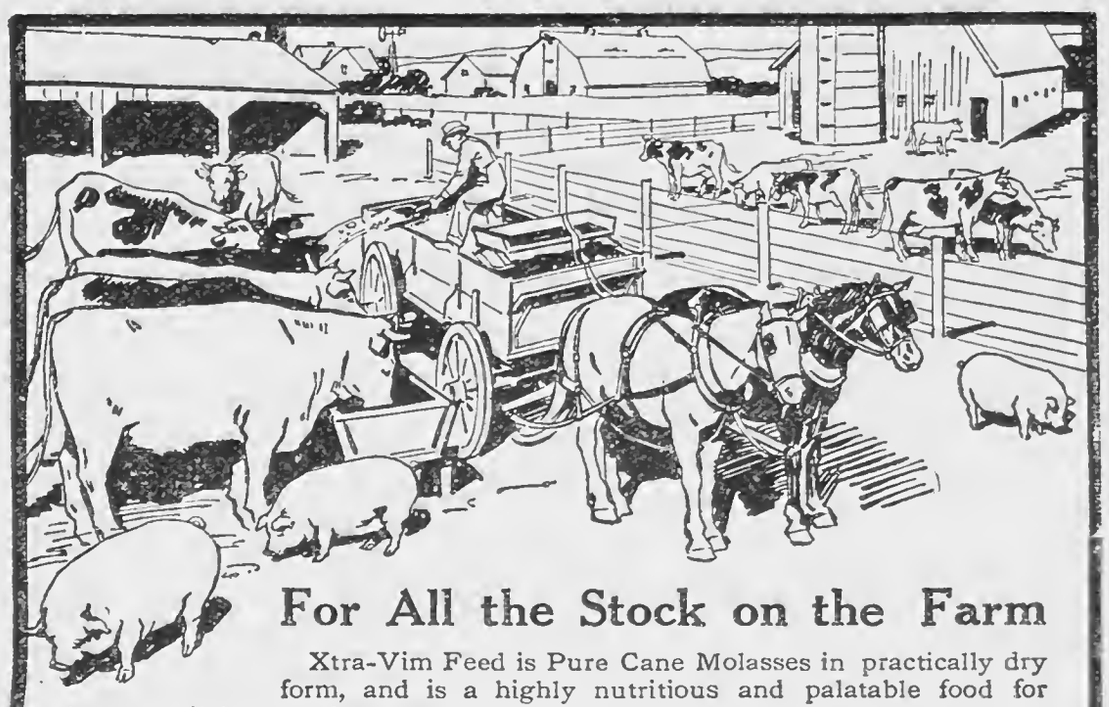
"Cow testing one shows the money makers. The best cows in many Wisconsin herds are returning a profit of $100 or more every year. It is possible to have every cow kept do as well.

"The loafers, the cows that consume more than they return, are quickly spotted and eliminated when the cow test is used. No successful merchant handles a line of goods on which he loses money; likewise, no progressive dairyman will milk a cow on which he does not make a profit. The milking of cows is a straight business proposition and no farmer can afford to spend his own time or pay high priced labor to milk cows which do not pay for their board. Let's make the $100 return per cow our standard.

"To build up a profitable herd the cow test is indispensable. It enables the dairyman to quickly get a high producing herd by selecting heifers from only the best cows. In this connection the sires that are capable of transmitting dairy quality and temperament to their offspring can be proven. The very general practice of sending mature bulls to the block, when they are just in their prime for breeding purposes, is detrimental to our dairy industry and should be stopped.

"Cow testing also pays because surplus stock of both sexes sells for higher prices when buyers can see what the ancestors of these animals have done in the line of milk and butter fat production.

"When using the test, farmers may know their cows as individuals and feed so as to get the greatest return for every dollar's worth of feed provided. The value of the silo in supplying fresh Summer succulence during the Winter months, and in helping out when pastures dry up in the Summer, is also shown best when cows are under test."



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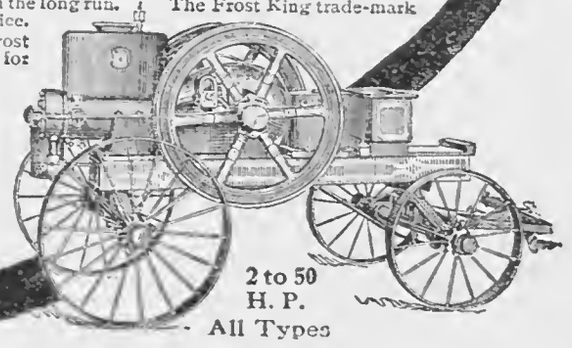

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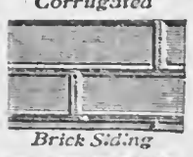

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Once you have purchased and laid Edwards Tightcote Galvanized Steel Roofing your roofing expense for that building is at an end.

Its cost per square is the lowest ever made. It has *no* up-keep cost. Always beautiful in appearance. Reducing cost of insurance.

EDWARDS Exclusive Tightcote Process

Makes Rust-Proof Roofing. The zinc spelter becomes practically one piece with the steel. No ordinary galvanizing can compare with it. Each and every Edwards Metal Shingle, Metal Spanish Tile, each sheet of Edwards Reo Steel Shingles, Grip Lock Roofing, Pressed Standing Seam or Roll Roofing, Ceiling, Siding, etc., is dipped in a bath of molten zinc, one at a time, after the metal has been stamped and resquared. The edges are galvanized as heavily as the sides. Not the space of a pin-point on steel exposed to weather.

How To Test Galvanizing Take a piece of any other galvanized steel, bend it back and forth several times, hammering it down each time. You will then be able to flake off great scales of the galvanizing with your finger nail. Apply this test to a piece of Edwards Tightcote Galvanized Steel Roofing—you'll find no flaking.

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WHAT IS AN EDUCATION?

PART II.

By Dr. E. H. Jenkins.

THE IMAGINATIVE MIND.—The mind of the great investigator is an imaginative mind; the mind of the successful farmer is an imaginative mind. His calling requires a knowledge of economics, the laws of business, demand and supply, forecasting crops and markets, and ability to act rightly almost by instinct in emergencies. He needs all the college can give him of the facts of entomology, botany, chemistry, genetics, and so on, but he needs just as much a sober, reasoning imaginative mind to see them all in their relation to each other and to the problems of his farm. Let me give you a lonely and very inadequate illustration which comes to mind. Looking over the strawberry beds of a farmer near one of our cities, I said: "These old beds you'll plow up this year, won't you? They'll hardly pay to keep." "Nope," he replied, "strawberries will be high this Summer and too few of 'em." "How so?" "Well, the grip and pneumonia were mighty fatal this year. The factories for coffin trimmings in town have been running nights. Those operatives have got money to spend on fresh fruit as soon as it comes to market." And this leads me to the exhortation which I wish I had heard and heeded in my own college days. Do not shirk nor little value as means for a truly practical education the "cultural" as distinguished from the vocational studies. Your mathematics, for instance, which you may never use again, but which teach accuracy and logic.

NEEDED KNOWLEDGE.—Do not shirk your English composition. You do not really known a thing until you can express it in clear, concise, accurate English. Clear writing and clear thinking go together. Get a reading knowledge of one other language, at least, so that you may have acquaintance with its best literature and its technical journals even if you have to wait some years for the chance to read them. Whatever of history, of economics, of logic, of any so-called cultural study you can get will equip you better for your vocation. Your educators believed it, or they would not have put them into the course at all. They cannot do much with them in the crowding of other things. But they open the door to you and, because not much emphasis can be put on them in the classroom, do you put all the more on them in your outside study and reading. Devour good English literature Saturdays and Sundays and in *all* vacations, both for its form and substance. If you don't get the reading habit before you leave this college you will probably never get it, and you will suffer a leanness of spirit for all your life.

A TASTE FOR LITERATURE.—Do not even leave out of account the training of your imagination. Read good poetry as a part of the preparation for practical farming. The ideal investigator and the ideal farmer have that rare balance of active imagination and passive scepticism which can grasp a vision but dispassionately dissect it and prove its worth. The farmer needs it as well as the investigator. The most successful fruit grower in my State has the imagination to picture the condition of his trees and just what they need at any season of fertilizer, of mulching, of heading, etc. He is a failure in farm institutes, for he cannot give receipts and rules, but he has a personal acquaintance with his trees which comes from reading, thinking and scientific imagining and brings him success. Your cultural studies faithfully followed will, I believe, do more than any other to refresh your mind and keep you from "going stale" in the routine of business. They will lift you above the pettiness of life. They will help you to watch and to do your part in guiding with intelligence public affairs—what Lanier calls "The great soft rumble of the course of things." They will give you amid the small, mixed, petty details of business, occasional clear visions of the meaning of life and perhaps of that "far off divine event to which the whole creation moves."

"Take not that vision from my ken;
O whatso'er my spoil or speed.
Help me to need no aid from men
That I may help such men as need."

UTILITY WYANDOTTES.

I HAVE been an admirer of White Wyandottes for many years and in my estimation THE R. N.-Y. is manifesting fairness and loyalty to the breed, in discussing its performances in the pending egg contests, relative to practical or utility versus the exaggerated dumpling exhibition type. The fads, fancies and fashions of breeders are many times as devoid of good sense as are the same in the realm of human attire and custom. Surely you have not been "knocking" the *producing* White Wyandotte. And when you get after the drones and loafers with only Standard of Perfection points I must give expression to a hearty amen. Some years ago I met a fancier who took some of the principal prizes at the Pittsburg poultry show, and he told me he had a laying strain from Michigan, if I mistake not, which were far better layers than the exhibition strain from which he selected his Pittsburgh winners. His winners were bred from the flocks of the breeder from whose strain Barron obtained his foundation stock. Those layers were not as white as the winners yet their status as purebreds remained white—unsullied. Do those breeders afflicted with dumpling mania desire their chosen breed to go the way of some of the fashionably fluff feathered-to-the-toe-points Asiatics which were relegated to "innocuous desuetude" in times gone by? The exaggerated dumpling type is neither highly productive nor handsome—the two requirements of present day popularity in poultry. One detractor writes that Barron's system of selection for laying Wyandottes would finally result in a Leghorn in type. If this were true then the Holstein and Ayrshire bred for the same purpose would also be one type, and the same would apply to the Guernsey and Jersey.

Grantsville, Md. J. B. M.

FAT LAYING HENS.

TO you think there is any danger of Leghorns getting too fat where they have constant access to dry mash, and have the mixed grain ration scattered over the bare yard instead of in litter? I have been feeding a little less than 1½ quarts morning and night to 25 Brown Leghorns in this way, and green feed at noon, with water, shells and grit always before them, also dry mash. One died on the nest a few days ago and on opening her, found her very fat. But if we feed less grain they will eat too large a proportion of the dry mash. Do you consider the charcoal much benefit? They lay very well; last year our hens averaged 145 eggs apiece, and I think they will do as well this year, but in the light of the contest I begin to think they should do better than that.

MRS. F. J. B.

Fowls are something like people; some will get too fat on rations that are just right for others. One has to feel quite a number of his fowls to tell whether they are getting too fat or not. I used to have trouble with White Wyandottes, especially just after they were through molting. It required special care in feeding to get them started to lay after the molt. There was a natural tendency to take on fat, instead of devoting the food to the production of eggs. When we come to think about it, we see that this taking on of fat is nature's way of protecting the fowl against the cold of the coming Winter. One of the good things about Leghorns is that there is very much less trouble in this direction. My Leghorns have all the dry mash they can eat, and I feed mash also, at noon, oats that have been scalded since the night before, they are well swelled out, and I pour in enough hot water to cover the oats, then at noon time, all the scraps from the table go in the pail of oats, and a mixture of cornmeal, bran and middlings is stirred in until the mash is crumbly. My fowls stand around at noontime and wait for this mash and clean up the last particle of it. I feed it to everything, young and old. This boiled oats and wet mash, is Mr. Barron's way of feeding; but he feeds it at night. Fowls that will not eat dry oats, will eat them when boiled and fed in this manner. If F. J. B.'s hens really are too fat, I should cut down the proportion of cornmeal in the dry mash, and of cracked corn in the dry grain. It should not be forgotten that a laying hen needs to be fat, or what we call "in good condition," because the yolk of an egg is more than half fat, and a good layer will take the fat out of her own body if she does not have enough fat in her food. In other words, she will lay herself poor and thin in flesh, even taking all the yellow fat coloring matter out of her legs; all the best layers among your Leghorns will have nearly white legs in the Fall. Charcoal I consider a very important addition to the ration. I have seen it completely alter the "too soft" conditions of the droppings in 24 hours after feeding it. In the absence of litter, you can take a hoe and haul the earth up into a pile, scattering the grain through it; the hens will level it off; they would if there was no grain in it, just out of feminine curiosity.

GEO. A. COSGROVE.

A COUNTRY editor wrote: "Brother, don't stop your paper just because you don't agree with the editor. The last cabbage you sent us didn't agree with us either, but we didn't drop you from our subscription list on that account."—Boston Transcript.

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48 Page Poultry Book Free (new edition) containing breeding and feeding charts, plans of houses, cures of diseases, space for daily egg records, etc. Also information about Boys' and Girls' Poultry Club and prizes. Write today.

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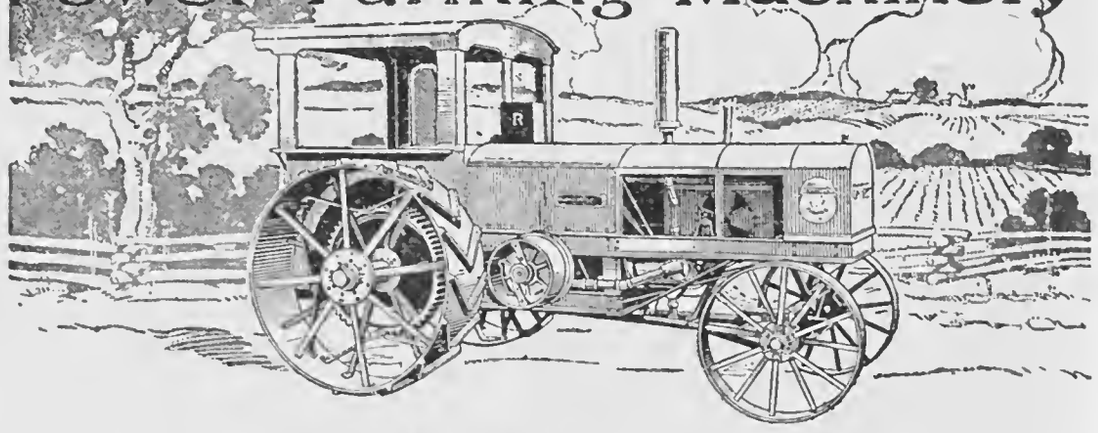

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15 Tractive Horsepower — **RUMELY GASPULL** LA PORTE — **30 Belt Horsepower**

The GasPull has handy levers, a foot brake, and cranks from the ground with a safety crank. All working parts are easily lubricated and are protected from dirt, dust and rain by steel covers. It is powerful—does the work of a dozen horses, and weighs only 11,200 lbs. Four speeds, varying from 2 to 3½ miles per hour. It burns gasoline.

Learn more about it. Ask for GasPull catalog GB47.

The Rumely OilPull easily leads in kerosene tractors. There are no better stationary engines than the Rumely-Falk for kerosene and the Rumely-Olds for gasoline. Every Rumely machine is backed by Rumely service—49 branches and 11,000 dealers. Supplies and parts promptly furnished.

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THE EGG-LAYING CONTEST.

THE forty-sixth week of the contest at Storrs shows a further drop in egg production of 128 eggs, and still further losses may be expected as molting increases. The White Leghorns are no longer the high scorers, the American breeds have assumed that duty, and American birds are going to win the contest too. Last week A. B. Brundage's pen of S. C. Reds won with a score of 52; they win again this week with a record of 49, and their total of 1,693 is 199 eggs ahead of any other pen of Reds, Single or Rose Comb, and is 428 eggs ahead of the average of the 13 pens of S. C. Reds. The next highest pen in the week's score is Frank L. Tuttle's Barred Rocks, their score being 40. Glenview Poultry Farms R. C. Reds take third place with a score of 37. The following pens laid 36: Tom Barron's White Leghorns, Mrs. K. E. Woodruff's White Leghorns, Harry B. Cook's S. C. Reds, and Merrythought Farm's White Wyandottes. In the total score Francis F. Lincoln's White Leghorns are now seven eggs ahead of Storrs "sour milk" pen No. 42, and is 53 eggs ahead of Tom Barron's White Wyandottes, which were the leaders for many months.

In the contest at Thorndale, Pa., the total egg output is now 2,000 eggs more than last year, with eight weeks' laying yet to be added before the year closes. A list of 20 birds with individual scores of 223 up to 247 eggs is given, with 50 days in which to add to those records. The highest scoring pen is a pen of White Leghorns from Penna. Poultry Farm; their record is 1,062, five birds in the pen. From present indications it does not look as if Tom Barron's record of 1,190 eggs last year, will be equaled this time. The record at Storrs for the week is as follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	17	1,281
Frank L. Tuttle, Massachusetts	40	1,315
Waveny Farm, Connecticut	24	1,296
J. F. Francais, New York	35	1,524
White P. Rocks.		
Albert T. Lenzen, Massachusetts	32	1,415
F. H. Benton, Connecticut	35	1,504
Storrs Agr. Station, Connecticut	21	1,140
Storrs Agr. Station, Connecticut	21	1,206
Storrs Agr. Station, Connecticut	18	1,341
Storrs Agr. Station, Connecticut	20	1,187
Storrs Agr. Station, Connecticut	23	1,049
Buff P. Rocks.		
A. A. Hall, Connecticut	20	1,395
W. C. Morgan, Jr., Connecticut	16	1,103
White Wyandottes.		
Tom Barron, England	29	1,890
West Mt. Plty. Yards, Connecticut	19	1,138
Merrythought Farm, Connecticut	36	1,759
Neale Bros., Rhode Island	35	1,746
D. J. Ryan & Son, Connecticut	26	1,308
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	29	1,340
Dr. N. W. Sanborn, Massachusetts	29	1,292
Am. Buff Wyan. Club, New York	31	1,187
H. L. Hamilton, Connecticut	26	989
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts	25	1,308
Single Comb Reds.		
Robert Seaman, New York	16	1,054
J. S. Gillespie, Connecticut	15	1,259
Dr. J. C. Dingman, New York	24	1,190
Burnham Plty. Farm, Massachusetts	11	979
H. P. Deming, Connecticut	32	1,271
Geo. P. Dearborn, Florida	29	1,382
Dr. J. A. Fritchey, Pennsylvania	27	1,472
Ernest Underhill, New Jersey	25	1,158
W. H. Bamsted, Connecticut	27	918
Pinecrest Orchards, Massachusetts	32	1,494
Harry B. Cook, Connecticut	36	1,255
Colonial Farm, New Hampshire	35	1,328
A. B. Brundage, Connecticut	49	1,693
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	37	1,308
C. S. Scoville, Connecticut	17	949
White Leghorns.		
Storrs Agr. Station, Connecticut	19	1,849
Storrs Agr. Station, Connecticut	18	1,567
Storrs Agr. Station, Connecticut	10	1,542
Storrs Agr. Station, Connecticut	26	1,936
Storrs Agr. Station, Connecticut	19	1,445
Braeside Plty. Farm, Pennsylvania	32	1,376
Glenview Plty. Farm, Connecticut	24	1,537
Manor Plty. Farm, New York	18	1,414
A. R. Hall, Connecticut	17	1,410
Marwood Plty. Farm, Pennsylvania	27	1,598
Geo. M. Harris, Connecticut	15	1,191
Sonnie Brook Farm, New York	24	1,623
N. W. Hendryx, Connecticut	10	1,405
J. J. Linehan, Massachusetts	11	1,309
F. F. Lincoln, Connecticut	34	1,943
Cecil Guernsey, New York	28	1,615
Thos. W. Moore, Connecticut	28	1,492
Chas. N. St. John, New York	33	1,499
Chas. W. Sherwood, Connecticut	18	1,391
L. E. Sands, Pennsylvania	17	1,411
Pomoka Plty. Farm, Connecticut	19	1,267
Venture Plty. Farm, New York	9	1,138
Mrs. K. E. Woodruff, Connecticut	36	1,488
Windsweep Farm, Connecticut	5	1,215
C. H. Savage, Connecticut	15	1,420
P. G. Platt, Pennsylvania	19	1,630
Seneca Boue Co., New Jersey	1	551
F. M. Peasley, Connecticut	22	1,452
Chas. Heigl, Ohio	18	1,384
Tom Barron, England	36	1,856
Branford Farm, Connecticut	29	1,602
James Munn, Massachusetts	8	1,200
Geo. A. Cosgrove, Connecticut	31	1,456
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	25	1,481
Blue Andalusians.		
E. D. Bird, Connecticut	26	1,256
Buff Orpingtons.		
O. Wilson, West Virginia	24	994
White Orpingtons.		
P. A. Dongar, New York	21	985
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	20	802
Silver Campines.		
W. J. H. Lobel, New Jersey	31	1,241
"Hens."		
H. W. Collingwood, New Jersey	19	1,220
Daniel Uline, Connecticut	26	1,109
Daniel Uline, Connecticut	15	1,079
Mixed Breeds.		
Profitable Poultry, Massachusetts	22	1,234
Profitable Poultry, Massachusetts	30	1,264

GEO. A. COSGROVE.

A Poultry Epidemic.

AN epidemic among poultry is causing much loss here. All of a sudden whole flocks are taken, large numbers mope around with no appetite, dropping wings and with a general appearance of being used up, but no outward signs of disease. The crops would remain full till death—two or three days after, perhaps, and would fill up with gas. As digestion completely stopped I called it acute indigestion and feared cracked corn was responsible for it—though it looked pure, clean and sweet. Whole flocks were affected, some hens died, while the egg production completely stopped. Is there such a thing as chicken diseases being carried in the air? It lasted about two weeks but in that time helped boost the price of pot pie hereabouts. H.

Green Co., N. Y.

This would appear to be some acute digestive trouble, though you do not give sufficient data for a diagnosis. No, I do not think it possible for poultry diseases to be carried through the air, in the sense that you mean. It is, of course, quite possible for infectious substances to be wind-borne but disease germs fortunately have no wings and the spread of contagion may be taken as indubitable evidence that some infected article or animal has come in contact with the sick fowls. This is equally true of human diseases and the old idea of contagion spreading from a sick person through the air has been about exploded. The source of contagion cannot always be found but sensible people no longer run their horses by a house which displays a quarantine sign. M. B. D.

Precocious Pullets.

I HAVE some pullets that were hatched March 16, and one commenced to lay on July 5. Another of the same age commenced on the 15th and now another commenced on the 27th. They are a cross of the White Wyandotte and Columbian Wyandotte. Is it good for them to lay so soon, and are they likely to molt this Fall? They lay regularly every other day. The first one has laid the oft day several times. E. H. D.

Mechanicsville, N. Y.

This is too early laying, and likely to result in a short period of production and molting; to the detriment of the year's egg production. Reports of such precocity are frequently made, but it is not desirable. If early hatched pullets begin to show signs of premature maturity and likelihood of laying before September, they should be given as much liberty as possible and their rations should be composed largely of corn and other non-stimulating food, with meat omitted. This will encourage growth without "ripening" and be to the advantage of the flock. M. B. D.

Chicks that Swallow Nails.

SEVERAL weeks ago you printed my statement about our young Leghorn chicks swallowing nails. Quite possibly our conditions were entirely responsible for their acquiring this fatal habit, but I fully expected other reports would come in giving some similar experiences. Our total loss by swallowing nails in the lot of 1,500 to 1,600 birds has finally amounted to 62 chicks. The last was a pullet 3½ months old from whose gizzard I took the enclosed nail. This was evidently a fourpenny box nail, and had been carried by the bird probably 2½ months before it finally killed her. I personally opened all of these dead birds and kept an accurate count of them. I only wish now I had kept the collection of nails so you might give a picture of the lot.

California. W. H. MACY.

R. N.-Y.—The nail showed signs of "wear," but was easily recognized. No other reports of such nail eating have been received.

Fattening Fowls in Coops.

WILL you tell me the formula they use for fattening fowls in coops? I have heard they make a wet mash and give no water, compelling the fowls to eat a large quantity so as to quench their thirst, and by so doing fatten very fast. W. H. C.

Delaware.

There are various good formulas for fattening fowls in crates or small yards, such feeds as are at hand being usually used. Two parts of finely ground oats, two parts of finely ground buckwheat and one part of finely ground corn mixed with sour milk to the consisteney of batter has been recommended by the Ontario Agricultural College as a very desirable fattening ration. Equal parts of cornmeal, middlings and buckwheat meal likewise mixed with milk is also a very good ration. Grit should be given the fowls at least once a week. The more ground the grains used the better the results, and it has also been found desirable to mix the grains with the milk 12 hours before feeding. Where milk is not available, beef scrap or meat meal may be substituted in the proportion of not more than 15% of the whole, and water used to wet the mash but milk gives better results. M. B. D.

TOM BARRON AND THE WAR

I am still shipping weekly my Champion Layers—White Leghorns and White Wyandottes, Guaranteed Sisters and Brothers to the pens that are leading the competitions of the world. These birds have 20 years of breeding behind them of the heaviest-laying poultry the world has ever known. Every male has a 200-egg pedigree for many generations. I consider the right male bird increases the egg-laying of the progeny by 50%. Avoid the rough Atlantic weather. Order now. Pay by draft or postal money order on London, England.

PRICES—Carriage and insurance paid, coop and food free, to New York. Trio—$30; 6 birds, $55; 12 birds, $90; 24 birds, $168. Larger numbers at special reduced rates. My White Wyandottes in the competitions for sale. Write now to

TOM BARRON
Catforth, Preston, England

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Get the Facts by Reading The One-Man Poultry Plant

Successful Methods of Men on Farms or Small Acreage. Complete in twelve parts; printed in one volume.

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OUR SPECIAL OFFER—The One-Man Poultry Plant, in twelve parts (book form), and the American Poultry Advocate, one year, for only 50 cts., book and Advocate, three years, for only $1.00, if order is sent at once.

Our paper is handsomely illustrated, practical, progressive and up-to-date on poultry matters. Established 1852. 44 to 132 pages monthly. 50 cents a year. 3 months' trial 10 cents. Sample copy free. Catalogue of poultry literature free. Address

AMERICAN POULTRY ADVOCATE, 513 Hodgkins Blk., Syracuse, N.Y.

TOM BARRON'S
PURE ENGLISH WHITE LEGHORNS
Imported direct from Tom Barron's Farm. 280-egg strain. Breeding stock for sale. Cockerels, $1 and $2; cocks, $2; yearling hens, $1.50. Eggs, $1 per set; $5 per 100.
P. F. RAFFERTY, - Marlboro, Mass.

TOM BARRON'S
283-282-260-248 Egg
LEGHORNS and WYANDOTTES
Contest Pens; guaranteed leaders. Storrs' Buff Rocks, Vibert-Austin Reds, Waltons' Penc. Ducks, Geese.
MORRIS-FARM, R. 4, Bridgeport, Conn.

"Tom Barron" White Leghorn Cockerels from Barron strain hens, mated to cockerel, direct from Barron's "special" matings. Unlimited range. White Leghorns exclusively. Write for circular. Spring-Brook Poultry Farm, Dewittville, New York

Barron Leghorn Cockerels—April hatched. Also a few half Barron and American Leghorn cockerels. All birds guaranteed and in first-class condition. JAY H. ERNISSE, Hudson Ave., Irondequoit, N. Y.

TOM BARRON COCKERELS
Leghorns from extra special imported pens 282-Egg. Wyandottes, 283-Egg, from imported pen. (Sisters to leading pen at Storrs.) C.W. TURNER, West Hartford, Conn.

Barron Cockerels, White Leghorns—Laying and breeding hens. Prices reasonable. Hamilton Farm, Huntington, N.Y.

Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
H. K. BRUNNER, 45 Harrison Street, N. Y.

MAKE HENS LAY
more eggs: larger, more vigorous chicks; heavier fowls, by feeding cut bone.
MANN'S LATEST MODEL BONE CUTTER
cuts fast, easy, fine; never clogs.
10 Days' Free Trial. No money in advance. Book free.
F. W. MANN CO., Box 16, MILFORD, MASS.

BARRED ROCKS
bred to lay well and look well. We have an extra fine lot of husky, vigorous cockerels, on free range, at $3 each. GEO. FALCONER, R.F.D., Milford, New Hampshire

FOR SALE—S.C. ANCONAS
Large, dark, vigorous cockerels, pullets, and yearling hens. Winter layers. Select exhibition and utility stock. Satisfaction guaranteed. I pay express. C. W. SIMONDS, Homestead, Pa.

DUCK DOLLARS Tiffany's Superior Mammoth Pekin and Giant Rouen Ducks are bred to lay, weigh and win. Stock for sale. Write for prices. F. A. TIFFANY, R. 3, Phoenixville, Pa.

INDIAN RUNNER DRAKES FOR SALE—Valentine strain, April hatched. Price, for one, $1.50; two, $2.75; three, $4; four, $5.25. ROBERT TWEDDLE, Montgomery, N.Y.

MAMMOTH PEKIN DUCKS FOR SALE. MAUDE PERKINS, Ocean View Farm, Newburyport, Mass.

BRED TO LAY S. C. WHITE LEGHORNS
A fine lot of cockerels and a few yearling hens.
P. G. PLATT - WALLINGFORD, PA.

S. C. White Leghorns—300 Yearling Hens for sale. Famous Kulp 242-egg strain, $90.00 per hundred. Cockerels $2.00 each. H. BACON, Hillcrest Poultry Farm, Berwyn, Md.

Single Comb Black Minorca COCKERELS $1 each. Also one pair bourbon red turkeys, $6 pr. SUNNY BANK FARM, Box 28, Vega, New York

5,000
S. C. White Leghorn
Pullets

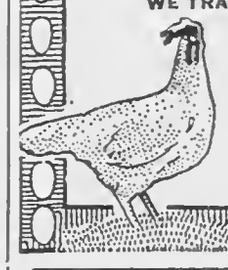
April Pullets	May Pullets
—to lay in October	—to lay in November
In lots of 100 $2.00 per head	In lots of 100 $1.75 per head
In lots of less than 100. $2.25 per head	In lots of less than 100, $2.00 per head

Order Quick

These birds will go fast. A more magnificent lot of pullets were never offered for sale. The blood of the greatest layers in the country is in them. They're beauties. They're sure profit boosters. Write today.

Certified Farms Co., Inc.
26 West 59th Street
New York City
J. C. Punderford, Pres., Chas. J. Fisk, Treas.

Our English Strain PAYS DIVIDENDS
S. C. White Leghorns, White Wyandottes, Buff Orpingtons, S. C. R. I. Reds
Breeding Hens, Early-Hatched Pullets and Cockerels
WE TRAP-NEST EVERY LAYER



Splendid, sturdy stock from champion egg-layers. Winners in 1913 N. A. & Mo. Contests—leading in current contests.
Buy to advantage—now! Booklet tells all about the most profitable poultry in America.
PENNA. POULTRY FARM
2029 Pearl St, Lancaster, Pa.

The Celebrated Hungarian and English **PARTRIDGES and PHEASANTS** Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.

PULLETS—Tested for white diarrhea by Storrs' Station, $1.50. March hatched Pittsfield Barred Rock cockerels, $2, $3. A. B. HALL, Wallingford, Conn.

APRIL S. C. W. LEGHORN PULLETS and yearling hens, $1. Heavy-laying trap-nested stock. ALTAVISTA FARM, Darlington, Md.

FOR SALE—Choice lot yearling Leghorn hens. Address, WILPEN POULTRY FARM, Sewickley, Pa.

Utility S. C. White Leghorns—Selected yearling hens, 80c each, $75 per 100. GEO. FROST, Levanna, Cayuga Co., New York

FOR A REAL BARGAIN IN S. C. W. LEGHORN PULLETS, yearlings or cockerels, write RATHBUNCROFT, Cincinnatus, N. Y.

Pullets, Yearling Hens, Cocks & Cockerels in lots to suit purchasers at attractive prices. MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa

S. C. White Leghorn Hens—$60 per hundred. Two years old. March and April hatched. Pullets, $1.25 each. In 100 lots, $1. Raised on Free range. SYCAMORE POULTRY FARM, Shelter Island, New York

500 Single Comb White Leghorn
Yearling Hens, 75 cents apiece. SUNNYSIDE POULTRY FARM, SIDNEY, OHIO

100 BREEDING HENS, 75c each. S. C. W. Leghorns. Barred Rock Pullets hatched December 1913—$1.25 each. John Lorton Lee, Carmel, N. Y.

FOR SALE—C.W. SHERWOOD'S HEAVY-LAYING S. C. WHITE LEGHORNS—2,000 Pullets ready to lay. 1,000 Breeding Hens. 500 Cockerels. Inspection invited. C.W. Sherwood, Saybrook Point, Conn

IF IN NEED OF A LARGE AND HEAVY-LAYING STRAIN OF **S. C. W. LEGHORNS** Hens, Pullets and Cockerels—none better layers—Write, - J. M. CASE, Gilboa, New York

LINCOLN'S LEGHORNS
Growing S. C. W. Leghorn Cockerels for sale FRANCIS F. LINCOLN, Mt. Carmel, Conn.

White Leghorns—YESTERLAID Strain. Pullets lay at 4½ months. Bought by 20 Experiment Stations. All stud males grandam record of more than 440 eggs in 2 years. Prices very reasonable. Our methods bring success. *Details free.* YESTERLAID EGG FARMS COMPANY, Dept. 62, Pacific, Mo.

Dune Alpin Heavy Laying S. C. White Leghorns
have won more firsts, specials and other awards in the last four years at New York, Boston, Hagerstown and Philadelphia than all our competitors combined.
HATCHING EGGS OR DAY OLD CHICKS PRICES LOW, QUALITY CONSIDERED
Send for catalogue.
DUNE ALPIN POULTRY FARM
Easthampton, L. I., N. Y.

AUSTIN'S 200-EGG STRAIN SINGLE COMB Rhode Island Reds standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.

EARLY WHITE WYANDOTTE PULLETS—Cockerels from Barron stock. W. J. THOMSON, Delhi, New York

Toulouse and African Geese—HUSE FARM Manchester, N. H.

PUBLISHER'S DESK

A MAN named Dockham, from Reno, Nev., and a Rev. M. W. Fuller, from Moores, N. Y., are in this section trying to sell stock from the Coertz Mining and Reduction Co., located near Reno. They want to engage me to introduce them. This Mr. Fuller I knew as a local preacher here some years ago, but the proposition that they are working is a new one. Has it come under your notice, and can you endorse the plan?

Rhode Island. M. T. R.

A minister of the gospel ought to be in better business than helping promoters of mining schemes to get possession of the hard-earned savings of country people. Whether Mr. Fuller is an innocent dupe of the promoters, or is deliberately conspiring against the people of this community for a share of the spoils, the result is the same to those who may take his advice. We hope it is the former. It has been our experience that money entrusted to mining stock promoters is just as effectively lost the moment the owner parts with it as though he put it in a blazing fire.

I enclose a bill for eggs which is long overdue and kindly ask if you can be of assistance to me in collecting same. Robert L. Turk is a lawyer who has elaborate offices at 115 Broadway, New York, and I have no doubt is well able to pay for eggs he orders. I have sent bill and written him but receive no reply.

New York. A. W. M.

The bill amounts to $12. We were reluctantly obliged to ask the attorney's assistance in the collection, but he also was unsuccessful. Mr. Turk made him a number of promises, but failed to make good at any time.

Notice of a judgment of $112.90 against Gertrude E. Meeker, to be recovered by the E. A. Strout Farm Agency, was filed in the Broome County Clerk's office today. It was alleged that on Feb. 16, 1911, a contract was made between Miss Meeker and the agency, in which it was agreed that the agency was to undertake the sale of a farm in Tioga County owned by Miss Meeker, and valued at $4,000. Should the property be sold to any buyer not procured by the agency, the defendant was to pay to the agency in consideration of its having undertaken the sale as a withdrawal fee two per cent. of the net price, $4,000. Miss Meeker sold the property herself. She then refused to pay the two per cent. withdrawal fee. It was ordered that she, as the defendant in the action, pay the two per cent. withdrawal fee amounting to $80 and $32.90 interest and costs.—Binghamton Press.

Where the owner of a farm signs a contract to pay a commission whether the agent sells the farm or not the courts will probably enforce payment unless deception or fraud can be shown. However, any owner who does not have an opportunity to know the contents of the contract or was deceived as to its contents, and these facts are set up as a defence, and proved the verdict would be in favor of the owner. Such have been the rulings of the past.

I bought Sanatogen on the strength of its advertising. I believe, with the reader who wrote you, that there is nothing in it. I inclose a page advertisement from a leading magazine. It is costing the public an immense amount of money. What can be done about it? C. L. C.

Florida.

Chemists say this has the food value of cottage cheese, and that the dollar size costs to prepare about eight cents. We have not found anyone to claim that it had any medicinal value. The advertising seems to be very skillfully prepared and it is doubtful if any legal means could be used to stop it. If, however, the reading public would refuse to receive any publication that carried deceptive advertising, and wrote publishers to that effect, refusing publications until the abuse was corrected, fake advertising would soon disappear from the columns of most of our publications.

I saved more than a year's subscription on one order. I made a mistake and sent too much money for an order and company failed to return it even after writing them. So I wrote again and made mention of THE R. N.-Y. They refunded the amount due at once. G. T.

New York.

It is, of course, difficult to say that this refund would not have been made on the second request without reference to THE R. N.-Y., but it does no harm to have a friend at court, and we want this paper to be of service in any case where the interest of its friends needs a champion.

I like your serious tone about making the farmer a real business man, bettering the environment of the country, educating him to his rights and giving him the self-respect that goes with a noble calling well followed. A. A. M.

The above is from a teacher. We do not for a moment assume or pretend that THE R. N.-Y. is the whole thing in developing the type of farmer referred to. The country is full of just such farmers, but it is our privilege to encourage and inspire and allure the young and inexperienced to these ideals.

I have had all the agricultural papers, and keep paying for one or two others, but really THE R. N.-Y. alone is worth the time it takes to read them! I much enjoy every copy and count it a lucky day when a friend sent me a 10-week's subscription a year or two since, which resulted in joining your family of "rubes." You certainly know how to make an interesting and useful paper. Good luck to you! C. E. E.

Connecticut.

We hope letters like this will encourage our good friends to send in those 10-cent for 10 weeks orders for neighbors and friends who are not yet in THE R. N.-Y. family. It is this interest of old friends that makes the service of the paper to subscribers possible. There is a distinct loss on every 10-cent order. The only way we can make them profitable is to make a paper so serviceable to farmers that they become regular subscribers. Probably half of our present readers came first in that way. You send them in and we will try to furnish the service to keep them. Every additional name on the list increases the power and influence of the paper to help all of its patrons.

James Bottenus, President of the James Realty Company, was arrested yesterday. Bottenus organized in 1906 the James Realty Company, with $500 capital, and purchased thirty acres at the foot of the Watchung Mountains, which he advertised as Bound Brook Manor. Then Bottenus handled Grand View, "within walking distance of Somerville, N. J." It was three miles from the station. It is charged that Grand View was advertised as having street cars and a sewer and curb system, although it was not even plotted. The lots were offered at $36 and then at $55. One device was to advertise in country newspapers that a lot would be given for the solution of a palpable "puzzle." The successful competitors, it is alleged, were told that they had won 20 by 100 foot lots, but that the municipality had imposed a restriction that no building should be put upon a lot less than 40 feet by 100. Consequently they must buy an adjoining lot.—City Paper.

The above item is given as confirmation of our previous show-up of similar schemes. Near this section Ostrander worked his Lincoln land scheme some years ago. It would seem that a scheme like the above was so transparent a trick that it would fail of its own weakness, yet it is reported that the promoter made a nice living out of it for several years.

You would do well to caution your readers against a gang of petty swindlers, who are making the rounds of the country, trading on the name of the Cooper Union or Cooper Institute, soliciting orders for crayon photographs, collecting money in advance and taking with them portraits supposedly to be enlarged. If these people, who have been carrying on their nefarious work for many years, could be placed behind the bars, it would save their innocent dupes the loss of money and photographs of dear ones which cannot be replaced, as these photographs are never returned. It is needless to say that the victims, having parted with their money, never hear from the swindlers again. L. C. L. JORDAN.

Assistant Secretary.

Cooper Union, New York.

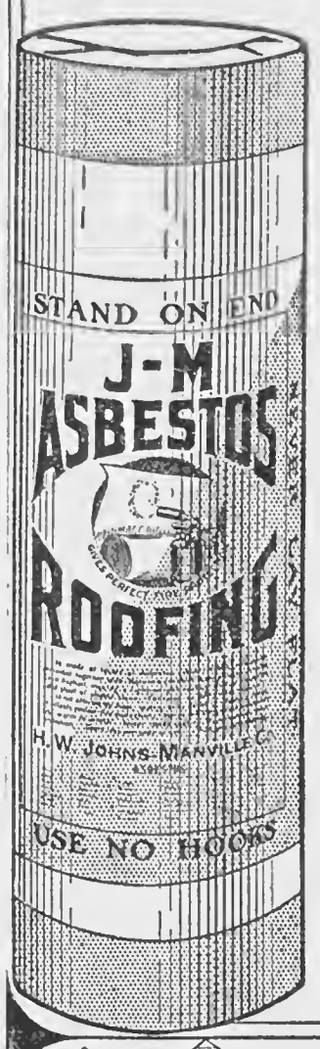
The crayon picture schemers seem to have renewed their activities of late. Recently we told of an experience of a Greene County farmer with a Utica concern, and complaints from other sources are frequent. The agents of these concerns do not generally insist on the whole advance payment at the time of taking the order. They rely on the sentiment of the people to pay to get the photograph back; and insist on the sale of a cheap frame at a high price; or some other concession before they give up anything. The only safe way is to refuse to have anything to do with them whatever. If you want a reproduction of a picture, there are reliable houses, who will be glad to have your order, and who will give you fair value for your money and indulge in no trickery. J. J. D.

Buy Roofing as You Buy Seed

YOU wouldn't think of buying seed from a company you knew little about or because of low price—

You have too much at stake to take a chance—*you must be sure of results!*

Roofing—like seed—is only safe to buy when offered by a company in which you can place absolute confidence.



J-M ASBESTOS ROOFING
"The Roll of Honor"

is manufactured by a concern that has been in existence for over half a century—that has a reputation for honest dealing that is country-wide and has never been known to willingly permit a single customer to be dissatisfied.

J-M Asbestos Roofing is made of the best materials that money can buy—fire-resisting and practically imperishable pure Asbestos fibre and Trinidad Lake Asphalt—the world-famous water-proofing. It never needs coating.

J-M Regal Roofing has proved its merit through years of dependable service.

J-M Transite Asbestos Shingles give you a fireproof stone roof that is artistic and permanent.

Write nearest branch for Samples and Booklet No. 4348

H. W. JOHNS-MANVILLE CO.
Manufacturers of Asbestos Stucco; Pipe Coverings; Cold Storage Insulation; Water-proofing; Sanitary Specialties; Acoustical Correction; Cork Tiling, etc.

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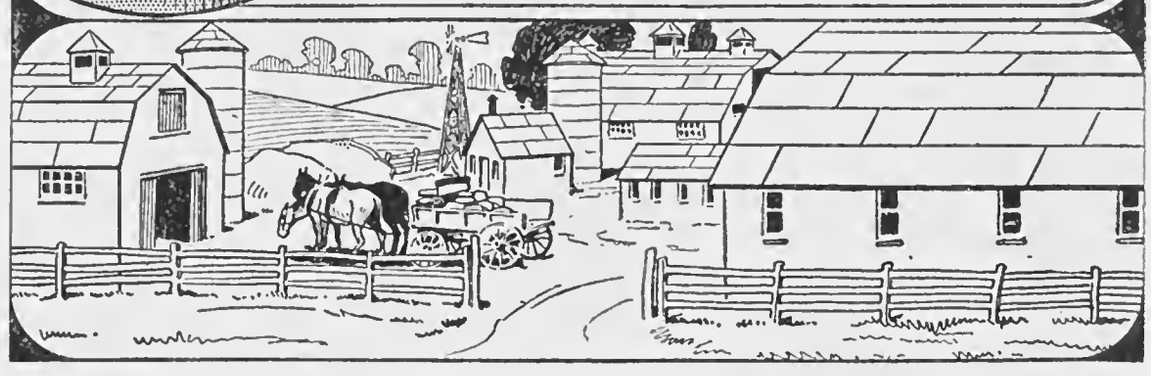

Good eating

THE people who cure this fall with Worcester Salt will look forward to deliciously flavored corned beef, hams and bacon!

Worcester Salt makes the savory sparkling brine that brings out the palate-tickling flavor. The Worcester process insures fullest strength and purity besides freeing the tiny salt crystals from bitterness and dirt.

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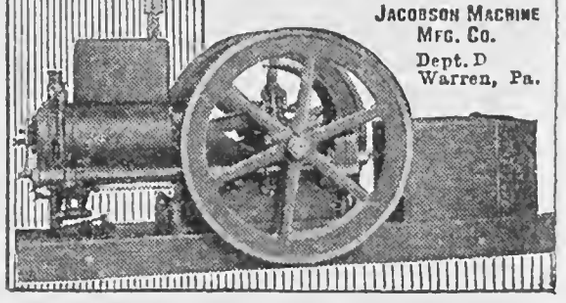

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Sept. 25, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.81 and $1.61 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5½ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The price is one to one and one-half cent below last week. Buyers are taking only enough for immediate needs, and the market is decidedly weak and unsettled, especially on packing stock and process.

Creamery, extra, lb	30	@	30½
Good to Choice	26	@	29
Lower Grades	22	@	25
State Dairy, best	28	@	29
Common to Good	20	@	23
Factory	21	@	23
Packing Stock	18	@	22

Elgin, Ill., butter market 29 cents.
Philadelphia, western creamery, 31 cents.

CHEESE.

An advance of one-fourth cent is noted on most grades of whole milk. Business has been a trifle better than the previous week, except on skims.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15	@	15¾
Prime	14½	@	15
Under grades	11	@	14
Daisies	16	@	16½
Skims, specials	13	@	14
Good to choice	11½	@	12½
Poor to fair	7	@	11

EGGS.

Receipts have been large, except of the best qualities. Medium grades are accumulating and going quite largely into storage, not being salable at present at shippers' price limits.

White, choice to fancy, large	35	@	38
Common to good	30	@	33
Mixed colors, best	30	@	32
Common to good	22	@	25
Western fresh, white	26	@	32
Lower grades	18	@	20
Storage, best	24	@	25
Lower grades	18	@	22

FRESH FRUITS.

The market is again overstocked with medium and under grade apples, which are made still worse by the hot weather. Because of the Hebrew holidays a large number of buyers have not been on the market this week, making slack trade in apples as well as other fruits. Pears selling at a wide variation in price. The drought has made havoc with many of the late peaches from nearby, which are small and withered. An occasional lot from Pennsylvania brings $1.75 per six-basket crate. Half-bushel baskets range in price from 15 to 90 cents. Plums, with the exception of German prune are selling slowly. Grapes from up the river are less plentiful, and very few from Western N. Y. here. No demand for cranberries yet.

Apples—Alexander, bbl	1 50	@	3 00
Gravenstein	1 50	@	2 75
Duchess	1 50	@	2 50
Wealthy	1 50	@	2 25
Fall Pippin	1 50	@	2 50
McIntosh	1 50	@	3 00
Jonathan	2 00	@	3 00
Twenty-ounce	1 50	@	2 00
King	1 50	@	2 25
Greening	1 25	@	2 00
Blush	1 50	@	2 50
Crabapples, bbl	4 00	@	8 00
Pears, Anjou, bbl	2 00	@	3 25
Clapp's Favorite	3 00	@	5 00
Bartlett	3 50	@	5 50
Seckel	2 25	@	3 25
Bosc	3 00	@	4 50
Clairgeau	2 50	@	3 50
Sheldon	3 00	@	4 00
Peaches, Penn., crate	60	@	1 75
Nearby, bkt	15	@	90
Grapes, 8lb case	40	@	60
4lb. bkt	6	@	7
Plums, 8lb.-bkt	10	@	25
Muskmelons, Md., bu	35	@	1 00
Colorado, bu	1 50	@	2 00
Watermelons, 100	10 00	@	20 00

HOPS.

Prime to choice	45	@	50
Common to good	42	@	44
Pacific Coast	21	@	22
Old stock	10	@	16

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	80

BEANS.

Marrow, Medium and Lima have declined 15 to 25 cents per hundred. Pea remain unchanged.

Marrow, 100 lbs	6 55	@	6 70
Medium	4 80	@	4 85
Pea	4 55	@	4 70
Red Kidney	5 25	@	6 25
Lima, California	7 60	@	7 70

VEGETABLES.

Potatoes are lower both here and in primary markets, and trade very dull. Onion market very weak and lower. Cabbage in better demand and in some cases selling higher. A few peas from Western N. Y. have brought $2 per bushel. Sweet corn in rather light supply, but selling slowly because of dry weather damage. Prime from nearby brings $1.50 per hundred readily. Tomato market improved.

Potatoes—Jersey, bbl	1 75	@	2 00
Long Island, bbl	1 85	@	2 00
Sweet Potatoes, bbl	1 50	@	2 75
Brussels Sprouts	04	@	10
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Cucumbers, bu	40	@	75
Corn, Jersey, 100	50	@	1 50
Cabbage, bbl	60	@	90
Lettuce, half-bbl. basket	50	@	1 00
Onions—Orange Co., bag	50	@	1 00
Conn. Yellow, 100 lbs	75	@	1 00
Peppers, Jersey, bbl	75	@	1 00
Peas, bu	1 00	@	2 00
Radishes, 100 bunches	75	@	1 00
String Beans, bu	50	@	1 25
Squash, Hubbard, bbl	60	@	75
Marrow	50	@	75
Egg Plants, bu	25	@	50
Tomatoes, Jersey, box	25	@	1 00

LIVE POULTRY.

Chickens, lb	15	@	16
Fowls	15½	@	17½
Roosters	12	@	13
Ducks	15	@	17
Geese	14	@	15

DRESSED POULTRY.

Turkeys, choice, lb	20	@	25
Common to good	15	@	18
Chickens, choice broilers, lb	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	18	@	20
Fowls	17	@	19
Ducks, Spring	15	@	16
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay market continues very dull, though prices are unchanged except on lower grades which are urged for sale and prices made accordingly. New straw is running largely in the lower grades.

Hay, Timothy, new, No. 1, ton	20 00	@	20 50
No. 2	17 50	@	18 00
No. 3	15 50	@	16 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	15 00	@	16 00
Short and tangled	10 00	@	13 00

LIVE STOCK.

Native Steers	6 25	@	9 60
Bulls	5 00	@	7 00
Cows	3 50	@	6 40
Calves, prime veal, 100 lb	8 50	@	13 00
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	6 00	@	7 00
Hogs	8 00	@	9 50

GRAIN.

Wheat has fluctuated during the week but closes on nearly the same price basis as last reported. Corn is two cents higher. Considerable export business in oats is noted, prices running 50 to 53 cents.

Wheat, No. 1, Northern Spring	1 12	@	..
No. 2, Red	1 16	@	..
No. 2, Hard Winter	1 10	@	..
Corn, as to quality, bush	85	@	86
Oats, as to weight, bush	52	@	53
Rye	98	@	1 00

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality, and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	40	@	45
Mixed colors, new laid	38	@	40
Ordinary grades	20	@	25
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	25	@	28
Friessee, lb	20	@	22
Fowls	18	@	20
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	16	@	18
Stewing beef	12	@	14
Pork Chops	16	@	18
Loin of Pork	15	@	16
Round Steak	18	@	20

Orders for upwards of 25,000 horses are being filled for England in the South and Middle West.

A cargo of 3,400 barrels of dried herring from Iceland has been received at Chicago. The fish came from Rekjavik to New York, and was forwarded by rail.

The output of the South African gold mines for the eight months of this year ending with August was 554,563 fine ounces valued at about $10,000,000.

The United States uses about 4,000,000 tons of sugar per year, one-fourth of which is produced here. An equal quantity comes from Porto Rico and Hawaii, and the remainder is foreign.

BOSTON MARKETS.

THE market is large enough to more than supply all local demands, with one or two exceptions. Apples are coming in too plentifully to bring satisfactory prices, and cooking stock and others of the poorer grades hardly bring enough to pay for carting. Good Gravenstein, Wealthy, and McIntosh sell at about $1 per box, and few do much better than this. Some are sold for 75 cents per box, while the common stock sells around 50 cents per bushel. Pears are not plenty and of course bring good prices; common stock easily brings $1 and better per box, while Bartlett and other fancy stock bring $2.50 and better. Cranberries are a large crop, and even the early frosts have not reduced the amount enough to affect the prices much. $1.50 up to $2 per box and about $5 per barrel is the range they sell at.

Peaches from Southern sources are plenty and reasonable in price, $2 or less per large basket. 75 to $1 half-bushel baskets, with seconds going at about one-third less. Plums have been plenty and prices fair; natives bring about 40 cents per small basket. California $2 per crate. Watermelons about 35 cents each, cantaloupes $2 per crate for Rocky Fords and 75 cents for Gems. Blueberries cleaning up at 15 cents per box. Oranges about $3 per box with small supplies and small demand; lemons $4, $5, $6 and $7 per box.

Onions plenty but not in over supply as yet, although crop is very good. Natives bring close to $1 per box, with Connecticut Valley stock $1.50 per bag and foreign stock $3 per crate. Potatoes in good supply to meet demand; local stock about 80 cents per bushel; bag stock $1.50 for two bushels. Sweets $3 per barrel and not too plenty as yet. Native tomatoes are variable in price, some days going at 50 cents per box as the rule, and other days bring $1 and sometimes more per box. Green ones not being pushed very heavily as yet and bring 50 cents. Squash a fair crop but not ready to market in heavy lots as yet, bring about $1 per barrel for marrow, with turban up to $1.50 per barrel. Summer crookneck and scallops 50 cents per box. Peppers 75 to $1 per box; celery $1 per dozen bunches. Cabbage plenty and very cheap, many selling as low as 50 cents per barrel. Beans about done, those on hand bring $1 per box, in some cases 25 or 50 cents more. Cauliflower 50 cents per bushel or $1 per long box. Lettuce 50 per box; cucumbers between seasons and not plenty enough to force prices down. $2 and $3.50 per box is easily obtained, with pickles $2 to $5 per box. Turnips, white egg and purple tops 50 and 75 per box. Rutabagas $1.50 per barrel bag; beets 60 per bushel; carrots 75; parsnips $1; spinach 50 and 75 per box. Green corn still plenty, 50, 75 and $1 per box.

The butter market is slowly moving upward, owing to several causes; a shortage of 10,000,000 pounds over last year's supply on September 1 is one cause, another the feeling that no imports from across the water are likely, in fact there may be a demand for our butter over there instead. Local conditions are not very promising for any heavy production this Winter to over-supply the market. Best stock now brings 33, 34 and 35, according to package and quality; medium grades 30 to 32. Cheese is steady but not lively at 16, 17 and 18 for best and medium grades. Eggs are working upward owing to fresh supply dropping off some and storage stock not overloaded. Fancy fresh up to 44; good fresh 38 and 40; Western stock 30 to 35; storage stock about 28.

Live poultry in demand with hens at 17, and broiler chickens going at about the same; roosters 11 and 12. Dressed fowls, best nearby stock 21, good 19 and 20; chickens 21 and 22.

Beef cattle on hoof at Brighton in good demand and just fair supply. Fancy steers go at nine cents per pound; good 8½; fair about seven cents; others 3¾, 4, 5 and 6. Veal calves 8; hogs 9½. Milch cows plenty, but prices easy and demand just fair; prices range from $50 to $100 each. Local demand for horses is slow as no one will buy unless to put on a job and prices are a little off except on extra heavy green ones which are not obtained much above the demand. Prices range from $100 up to $425. High grain prices are forcing many second-hand horses on the market and prices rule low on them.

A. E. P.

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WANTED—Married man and family to work Southern Maryland farm; usual shares. WAKEMAN, Sandgates, Md.

WANTED—30 apple pickers, graders and packers. High-grade fruit, boxes and barrels. Board on the place. J. H. HALE, Seymour, Conn.

POULTRYMAN—Wants position, manager or superintendent, specialty baby chicks; wishes connection with orchardist, big proposition preferred. Box 325, Glen Cove, N. Y.

AMERICAN, 26, single, Protestant, wishes position on up-to-date farm or poultry plant, five years' experience raising squabs; give full particulars in first letter. W. T. SLOVER, Elmsford, N. Y.

BOARD WANTED—On a farm by a mother for a deaf son, 26 years old. Ready to pay $7 per week for kind, intelligent treatment. Boy should do regular light work, proportioned to ability. Address M. A., care Rural New-Yorker.

WANTED—Position as manager of commercial Agricultural Enterprise on large farm to be run on a business basis; scientific knowledge and practical experience in North and South; silos, crops, breeding, feeding; unquestionable evidence of ability and integrity; at liberty Oct. 1, or sooner; will not consider proposition paying less than $1,800; or might consider taking under lease a good farm all furnished. Address B. D., Care R. N.-Y.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

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FOR SALE—High-class hand spray outfit; also three barrels lime-sulphur. JOHN LAW, Narvon, Pa.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

300 BARRELS good sprayed Baldwins, young, fertilized orchard, prefer selling in bulk. J. T. SHEDD, Maple Farm, New Braintree, Mass.

WANTED—Golden Seal and Ginseng from collector, not a firm. (C. D. R., of Tennessee, take notice). DR. DEDERICK, Washington, N. J.

FOR SALE—Improved forty cow farm, good buildings; fruit, water and timber. GEO. BITTON, New Berlin, Chenango Co., N. Y.

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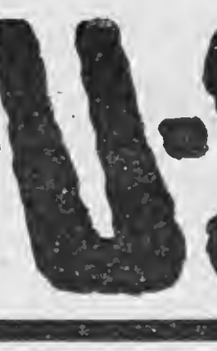

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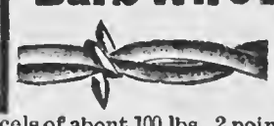

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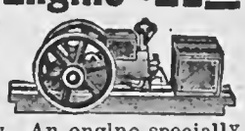

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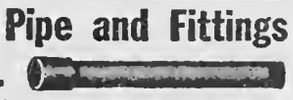

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Cornell University

HARDY STRAINS OF ALFALFA.

What Siberia Has Given Us.

EXPERIENCE IN SOUTH DAKOTA.—A great deal has been written about the Grimm and Siberian Alfalfas. Not only the farm papers, but the great magazines have had many articles concerning these, most of them being highly optimistic as to the future of these new varieties. I confess that I have always been more or less skeptical about the practical end of the matter, and scarcely took the writers of these articles seriously. It had been demonstrated, not only to me but to thousands of other farmers, that Kansas, Nebraska and Colorado Alfalfa did reasonably well all over the corn belt, seldom Winter-killing at all and producing luxuriant crops. Besides that, Professor Hansen himself did not know how the new varieties would do in the corn belt, and I knew that the new importations were scarce enough, so that prices would be decidedly high. A short time ago I determined to find out more about these new strains, and consequently visited South Dakota, where some of the largest amounts of Grimm Alfalfa are produced, and where, at present, practically all of the Siberian Alfalfas are being grown. I talked very carefully with the largest growers, examined fields of Grimm and smaller amounts of the Siberian Alfalfas, and made a careful attempt to decide the importance of all of these new Alfalfas. I believe the entire subject to be of interest to farmers throughout the corn belt, and I will give my conclusions in this article.

THE FOUNDATION FOR A BUSINESS HERD. FIG. 522.

THE GRIMM ALFALFA.—First as to Grimm. Most farmers already know that this variety was introduced into America 20 or 25 years ago, and taken into Minnesota, where the ordinary Alfalfa was inclined to Winter-kill. It throve there, never Winter-killed, and produced just as luxuriant crops as any other strain. For some reason the grower made no particular effort to increase the supply, and until four or five years ago nobody to speak of was growing Grimm, simply because there was very little seed being produced. About that time, however, the Northwest was being settled quite rapidly. Men in this territory were growing more and more Alfalfa, and were having some trouble with Winter-killing. Many of them turned their attention to Grimm as a way out of their own difficulties, and also as a profitable crop to grow for seed; consequently, good-sized fields began to be seeded with this stock. The supply of seed has increased; prices on the pure Grimm have dropped from $1 per pound to about half that price, and instead of there being only a few hundred pounds available, there are this year, possibly a few carloads. Furthermore, this stock is constantly being increased, and it will be only a few years before the seed will retail at 25 or 30 cents per pound. At present prices, I advise farmers to sow moderate amounts of Grimm, especially where they have any trouble with Winter-killing; with lifting out of the ground by frost in the Winter, or with hardpan and see what the results are.

ITS HARDY NATURE.—As soon as seed drops to 25 or 30 cents per pound, I advise farmers almost universally, to substitute Grimm in a large degree for the common Alfalfas. The reason for this is that this strain of Alfalfa is so hardy that the most bitter cold seems not to affect it in the least. Its crowns are four inches under ground, branching beautifully and sending up almost countless stalks from each crown. Its roots fork a good deal more than the common Alfalfas, and this will prevent its heaving out, at least, it will make it much less likely to heave. Also, it enables this strain to grow over hardpan or on ground not as thoroughly drained as ordinary Alfalfa will require. In yield and quality of hay, I see no difference between the Grimm and the ordinary Alfalfa, although I am not sure that comparative tests have ever been made, and if there were any difference, I would think the Grimm would exceed the ordinary on account of the great number of shoots which it sends up from each crown. While I recommend farmers to grow this Alfalfa, I think it wise to say that there is a possibility that several times as much so-called Grimm will be sold in the next few years as is actually produced, and I would be reasonably careful about the source of

supply. The demand will create an opportunity for deception on the part of the unscrupulous dealer.

SIBERIAN VARIETIES.—Now as to the Siberian Alfalfas, I believe the government spent $10,000 or $15,000 to import a comparatively few pounds of these rare strains, and even now several years after the first importation, there are only a very few pounds of the seed in America. The price on some of them is prohibitive; however, this is not so very material because what we really care for is actually to know what these new strains will do, and whether we want them when we can get them or not. The quantity of seed will be increased very rapidly. In a few years some of them will be offered at $1 per pound, and in a few more years for much less. I examined only a few of the more important of these new Siberian Alfalfas. The Cossack is one of the most important, and some seed will be offered this year at about $5 per pound. This strain is almost exactly like Grimm, except in the color of its blossom. Anybody could tell that he had Cossack Alfalfa simply from its blossom. It seems to be fully as valuable as Grimm in every way, with no very material differences; the grower, however, considering it a heavier yielder. I think probably it might some time be used in preference to Grimm, just on account of the ease with which it could be distinguished. Grimm Alfalfa looks just like the ordinary unless you dig the plants up. The Cossack in bloom has many different colored flowers and this distinguishes both from Grimm and from common.

THE CHERNO is so much like the Cossack that I could see no practical difference between them, and I believe even Professor Hansen thinks they are so nearly alike that the differences between them are of no importance. The Semipalitinsk was brought over with the expectation that it would make a pasture variety suitable for dry, stony ground, that it would reseed itself and multiply. It has not been as successful along this line, I believe, as Professor Hansen hoped. I saw places where it had died out in pastures. It is in experimental stage as yet, and for myself I am not convinced as to its importance, especially when compared with Melilotus alba, the White Sweet clover, which seems to me to be fully as good a pasture plant, which will reseed admirably, whose seed is inexpensive and which is decidedly out of the experimental stage.

THE ORENBERG ALFALFA is another of the new Siberian importations. Its seed as yet is extremely scarce, and the grower told me that he would not part with any of it at all excepting in an experimental way; that is, he would encourage farmers to sow a few seeds in their garden to ascertain whether they wanted this variety or not, and by the time they knew, he would have the seed to offer. This strain has not been tested in the corn belt, and we do not know just what it will do here yet. I have a little growing in test plot, seeded this last Spring, and in a year or so I shall know what it does in this climate. Certainly its appearance places it in a class by itself. It practically has no tap-root whatever, or, at least, the tap-root, if it might be called such, is only a few inches long. Its crown is four inches under ground. Below the crown the roots almost immediately start to fork in every direction, sending long, vigorous roots not only down, but laterally. Many of these roots grow six or eight inches under ground, and from time to time send up a new plant. In order thoroughly to convince myself of this point, I dug up one plant, carefully traced its roots and found runners or new plants coming up from these underground roots; the total spreading out over a diameter of seven feet. The original crown of this plant was, at the surface of the ground, about 15 inches in diameter. Close beside it was another plant with a crown over two feet in diameter, and I estimated over 500 stalks coming up from the one crown. The stalks are finer than ordinary Alfalfa; grow apparently about as tall; have smaller leaves but a larger percentage of them, and it looks as if one cutting of it would produce more heavily and especially more feed value than one cutting of any other strain of Alfalfa I have ever seen. Its flowers are yellow. The probabilities are that this strain will produce only two cuttings a year in the corn belt. It is slow about recovering after a cutting, and while it might produce three, we think possibly there would be only two cuttings. It is as hardy as any of the other varieties, and if it is found to produce as heavily as the others, I think it would be the greatest variety of Alfalfa ever introduced into America. I advise farmers to obtain just a few seeds of it this year to put in their gardens. They will be unable to buy much of it, as the grower will absolutely limit the amount he puts out, but if you had even 10 seeds, you would get plenty of plants to watch, and after a year or so, if desired, the original plants can be dug up and divided into many plants. These could be reset and possibly a little money could even be made while the seed is high-priced by saving seed from it. It seems to me that it would be impossible to lift this variety out with frost. It ought to grow over hardpan or poorly drained soil and the quality of its hay ought to be the best of any there is in existence. CHAS. B. WING.

Ohio.

A CROP OF SWEET POTATOES.

WILL you give culture of sweet potatoes? How long does it take them to mature, and when is the best time to dig them? H. W.

North Devon, O.

Just now (the middle of September) South Jersey growers are quite busy moving their sweet potatoes. The yield this year is somewhat below the average, but prices are good. To-day (September 14) the average price paid at the station was $2.35 per barrel. This price leaves a fair margin of profit for the producer who can secure a good yield.

PREPARING THE LAND.—The wise grower plans for his sweets three to five years ahead of planting by working out a rotation that will leave the ground in the best possible shape for his main crop. In planning this rotation the fertilization requirements of sweets should be considered. Manure is beneficial, but it should be given to the crops *preceding* sweets. If applied directly it often results in stringy potatoes and excessive vine growth. Clover sod, rye, cover crops and catch crops are valuable, but any heavy sod should be turned under at least one and better two years before sweets are planted. The object is to have an abundance of *thoroughly decayed* vegetable matter in the soil at planting time. In the older potato sections a rotation bringing the ground in sweets once in four or five years is short enough. In new sections three years is safe. A good general rotation, bringing in other truck crops and used by many growers, is as follows: First year, early tomatoes, manured liberally; second year, clover sod; third year, melons or cantaloupes, manured lightly; fourth year, sweets without manure. This is often modified for local conditions and other crops substituted. The above rotation permits of a Winter cover throughout the entire time, but the year sweets are planted the cover crop is plowed early before much Spring growth is made.

FERTILIZERS.—Sweets are planted in hills and drills. At Swedesboro the hill system is popular and the distance is usually 2½ feet each way. In drills the rows are 2½ to three feet apart, and plants 18 to 20 inches apart in the row. The ground for sweets is plowed in early Spring and harrowed at frequent intervals to hold the moisture. Between plowing and ridging all fertilizers are applied. Sweets need large amounts of available potash and a small amount of soluble nitrogen. An excess of nitrogen promotes vine growth at the expense of potatoes, and the potatoes are of poor quality. Most manufacturers supply ready-mixed sweet potato fertilizers containing 10 to 12 per cent. of potash and seldom above 2½ per cent. nitrogen. The brands in general use at Swedesboro analyze 1.65 per cent. nitrogen, 8 to 9 per cent. phosphoric acid, and 10 per cent. potash. The quantity applied depends on the soil, but 700 pounds per acre of a 1.65—9-10 mixture distributed in the row is an average application.

METHODS OF APPLICATION.—Rows are made with a drag marker about the middle of April so the fertilizer can be distributed and have at least one rain on it before ridging. This washes out the injurious salts that would otherwise burn the plants. Because of burning it is very important to have fertilizers in early, especially on light soils. The fertilizer is distributed with a drill having a tooth behind to mix it in the soil. From 200 to 400 pounds of sulphate or muriate of potash is often used to supplement that supplied in the ready-mixed goods. This is applied broadcast over the ground and harrowed in before marking. Sulphate has the preference over muriate. Ridges or hills are made toward the last of April with a sweet potato ridger. A rain before setting time settles the soil in the ridges and makes ideal conditions for planting.

PLANTING.—Plants or slips are grown from potatoes imbedded in a hotbed. Small potatoes from one to 1½ inches in diameter are used for this purpose. Near Swedesboro sweets are bedded between March 20 and April 1, and they are usually in the field by May 15. Some growers put them out in April. Those who did so this year are far ahead of their neighbors who got them out later right in the midst of a drought that lasted until after June 15. Those who put their plants in the field before May 5, this year, were, many of them, able to get their crop off before September 1, and secured very high prices. Plants put out about June 1 are just beginning to reach marketable size. Near Vineland sweets are bedded much later than at Swedesboro. I visited one grower who did not bed his potatoes until May 10. He grew a crop of early peas, then put out sweet potato plants about July 1. They grew right off and will mature before frost. Few growers in that section try to get ther plants out before May 15, and quite a number of them follow the practice of setting plants after peas. One year with another it works out quite well, but, of course, they do not get off any potatoes for the early market. Most of their crop is stored. Puddling the roots of plants before setting is an advantage. If soil is dry, plants must be watered. This year some of our own potatoes were watered three times, and then barely pulled through.

CULTIVATION AND HARVESTING should begin when plants are thoroughly rooted and continue once a week until vines cover the ground. Potatoes set in warm sandy soil and pushed for earliness can often be dug in August. Such a crop always pays, and has some advantages over a crop dug later. The bulk of the crop, however, is usually dug between September 15 and October 20. When digging, it is best to cut vines first with one of the better makes of vine-cutters now on the market, and then run under the potatoes with a regular sweet potato digger. The diggers are similar to a plow, only they have an iron strap or else several fingers attached to a short mold-board. Potatoes are allowed to dry off before being put into baskets and should not be dug when the soil is very wet. When intended for storage the plants or hills should be lifted carefully and laid in piles, after which the potatoes can be picked off by hand. When shaken off in heaps there is much bruising and skinning, which favors rot in storage. Ordinary ⅝-bushel baskets are generally used for marketing sweets in home markets. When shipped to distant markets they are sold in double-head barrels or bushel hampers. Sweets for storage should be dug before the ground freezes, handled carefully and placed in storehouses where plenty of ventilation can be given. When first stored a temperature of 80 to 90 degrees Fahrenheit should be maintained, and all possible ventilation given until potatoes have passed through the sweating stage, after which the temperature can be reduced and held at 45 to 55 degrees Fahrenheit.

TRUCKER, JR.

FITTING THE FALL-PLOWED GROUND.

ANY land that is in the proper condition for plowing will always be in the best condition for working down in a few hours after being turned over. This practice is an economy in every instance, whether the soil be of light texture or of the clay loam order. This Fall I have seen many fields even on farms where progressive agricultural methods are supposed to be practiced, where the whole field has been plowed over before any attempt has been made to pulverize the surface. The result of such treatment is that the expense of preparing a seed bed has been doubled, while the work is done by a grinding, crushing process. That injures the soil texture, and moisture has been allowed to escape that can never be replaced in the same condition as when the soil was first turned over, even if showers should occur. Such treatment of the soil is an insult to generous nature. All this results from the short-sighted idea that the important thing is to get the field plowed over, and that the fitting down can be done at any time. If the fresh turned furrows were worked down with a plank drag, or log clod-crusher, the surface would be leveled, all the holes made in the soft earth by the horses' feet would be filled, as well as the strip between the furrow slices, and the surface would be left with a rough print, the best possible condition for moisture retention. A roller does not fill up the holes, does not break the clods any better, and leaves too smooth a surface. It does not level the ground.

If this work be done toward evening, after each day's plowing, the seed bed will be in better condition at a greatly reduced expense. I have just returned from an afternoon ride through a good farming section where spring-tooth harrows were being hauled over the dry and crusted furrows, in the attempt to fit the fields for wheat. Once over at the right time with the right implement would have accomplished more than three times over in the present condition. After the furrows have been run over with the drag or clod crusher, and perhaps a shower has occurred, then the spring-tooth harrow is a most effective implement to mellow the soil. When we do not have time to prepare the seed bed properly either there is a lack of efficient farm management, or the job on hand is too big for us, and less acres might be a better proposition.

HENRY E. COX.

VALUE OF VETCH AND RYE.

Plowing Under Stubble in Michigan.

AS to vetch and rye—on June 29 I plowed an acre of vetch and rye stubble and planted half of it in corn and half in potatoes, as an experiment. I expected to get fodder and nubbins from the corn and a small yield of potatoes. We had a good season for sandy soil, and the frost has considerately held off; the result is corn from eight to 12 feet high and ears from 10 to 12 inches long of fine corn. A neighbor who has farmed in Illinois, said: "That looks like Illinois corn." In one hill there are seven stalks with an ear on each one. We haven't dug the potatoes yet, but from the looks of the vines they will pay for the planting. We used no fertilizer, and that field has had nothing but rye and vetch grown on it for three years, but never a crop turned under. The vetch seed that shattered out at harvest last year, has come up between the potatoes and corn rows, so we will not have to re-seed that portion of the field. The corn planted was yellow dent.

I notice you advise against putting in rye and vetch in Pennsylvania and New York after the last of August. We have sowed it as late as October 1 in this latitude, and had it do well. The vetch grows enough in October and November not to Winter-kill even when the snowfall is light in December and January. Of course, our sandy soil is warm. Just keep on hammering rye and vetch as cover crops, and the doubting Thomases will yet bless you. Of course, it would be best to plow it under, but just growing vetch on soil improves it even if the crop is cut for hay or seed—for it adds nitrogen to the soil. Our horses prefer vetch hay to Timothy, and it is better feed and makes better manure. No more clover or Alfalfa for—

F. B.

Ottawa Co., Mich.

R. N.-Y.—No doubt there are soils or favored localities where vetch may be seeded late, but, as general advice, we would not sow it after September 1 in this locality. We shall be glad to have further experience. As for receiving a blessing from the doubting Thomases—it would, of course, be agreeable, and sound evidence such as "F. B." gives us helps to produce it.

FACTS ABOUT HANDLING TIMBER.

PERSONAL EXPERIENCE.—The article, "Marketing The Timber Crop," by Chester L. Mills, on page 1121, comes closer to facts in disposing of timber than any I have seen in any other farm periodical or department bulletin. A few further facts may help those interested in solving this troublesome problem. I have been up against this proposition for three years, and have contracts to run for three years more, and the terms and conditions may enlighten some who are contemplating selling.

WHITE PINE.—Our White pine was sold "on the stump," "Scribner Rule to govern," at $12 per thousand log feet. The buyer and my man kept tally and compared notes. My mistake was in not demanding "saw measure" or board measure, "sawyer's tally" to govern settlement. This would have given me about one-third more feet. The buyer had three years to "cut and clear"—"right of ingress and egress," and two mill stations and necessary piling station; 50 per cent was paid at signing of contract, and 40 per cent. a year from that date. When final settlement was made buyer was to pay seller, if timber overran estimate, and if it underran, seller was to make good difference. As the timber market "went bad" last year, buyer's time was doubled, to help out.

HARDWOOD.—Our hardwood was cut, skidded and hauled to local mill yard, 2½ miles away, by our own timber crew. This cost us $5 per thousand feet from stump to mill as follows: For cutting, $1 per 1,000 feet; for skidding, $1; for hauling, $3. We had to deliver 50,000 feet to mill before any settlement was made, and subsequent settlements were made on each 50,000 feet delivered to mill. Here it was inspected and graded, paid for as follows:

Hemlock at $12 per M, log measure—Scribner Rule.
No. 1 Birch at $12 per M, log measure—Scribner Rule.
No. 2 Birch at $8 per M, log measure—Scribner Rule.
Hard Maple No. 1, $12 per M, log measure—Scribner Rule.
Hard Maple No. 2, $8 per M, log measure—Scribner Rule.
Soft Maple No. 1, $10 per M, log measure—Scribner Rule.
Soft Maple No. 2, $8 per M, log measure—Scribner Rule.
Beech at $8 per M, log measure—Scribner Rule.

Hemlock to be cut in 16 ft., 18 ft., 20 ft., 22 ft., 24 ft. lengths.

Birch to be cut in 12 ft., 14 ft., 16 ft. lengths.

Beech to be cut in 16 ft., 18 ft., 20 ft. lengths.

Hard maple to be cut in 10 ft. 6 in. and 14 ft. 6 in. lengths and be measured as 10 ft. and 14 ft. lengths.

Soft maple to be cut in 12 ft., 16 ft. and 18 ft. lengths.

Cutting in both contracts began in September; awaiting the first snow, piled on skidways. Nothing was cut under 12 inches in diameter.

A FEW SUGGESTIONS.—Always sell to a local man and cut out transportation, and in making contracts you are governed by the "custom of the country." Lumbering is fascinating and sometimes profitable. Always have your own tools—cant hooks, planes, etc. When timber has reached its full growth it should be cropped, as grain is, and sold. This makes room for young, growing timber, and saves losses from wind, flood and lightning. As a rule, beauty spots don't pay. I have 450 Sugar pine and Western Yellow pine seedlings, which I secured from my friend the State Superintendent of Forests, Clifford Pettis. They attain a height of 250 feet, but I never expect to live long enough to sell them. I hope our readers will give Mr. Pettis their full support in his efforts to develop a strong forestry organization in New York State.

New York. HENRY C. COUSE.

A FAMILY GROUP. TOPPING ONIONS IN SOUTH JERSEY. FIG. 523.

MAKING A SOIL FOR GRASS SEEDING.

I WISH to get a good substantial sod on an embankment which has a slope of two horizontal to one vertical. The loam in this vicinity is very shallow and stony, and, therefore, expensive to excavate and place. Some of this work has been completed and a satisfactory sod secured, but I desire to cheapen the process, if possible, in the following manner: Of the 25,000 cubic yards remaining to be placed one foot deep on the slopes, I would like to substitute for the soil a mixture of swamp muck and clay. There is a conveniently located swamp containing black muck, which was covered with a small growth, but which now has been cleared and burned. This muck, averaging four to six feet deep, could probably be loaded by steam shovel, as would the clay from a nearby pit, and all hauled to the top of the embankment in dump cars, and cast down the slopes by hand, whereby the clay and muck would become mixed. Would you consider this a practical scheme, remembering the object is not a big crop of hay, but a good protective sod? What proportion of muck and clay would you advise? Have the ashes on top of the muck had a tendency to sweeten or benefit it? Would the sod or grass so produced have a tendency to soon run out or would it be as permanent as though the poor quality of rocky soil were used? Would you advise a fertilizer being used to give the seed a start, and if so, how much? In the work we have completed we have sown seed of the following proportion, at the rate of 60 pounds per acre, and used 500 pounds per acre of seeding-down fertilizer or its equivalent: Red-top, 25 pounds; Rhode Island Bent, 25 pounds; Timothy, 17 pounds; Kentucky Blue grass, five pounds; White clover, one pound; Red clover, one pound; oats, three pounds. I made two mixtures of the above-mentioned muck and clay, one equal parts, the other one-fourth muck to three-fourths clay, and planted the grass seed without fertilizer on each plot about 18 inches square. After one week of showery weather the grass has a good start, and I cannot see any difference in the two.

New York. F. H. T.

It is quite probable that you will have better results using the clay and muck than the soil you mention; possibly not better results, but as good, provided the work is done properly. Several landscape gardeners here have used the mixture on terraces, using three-fourths clay and one-fourth muck, *but it must be mixed thoroughly.* It is also advised mixing a small proportion of either pulverized sheep or other fine manure, and a fair coat of lime would also be beneficial.

The experience of these men has been that this material should be thoroughly mixed and placed in the Fall, and made as firm as possible, then the seed sown *very early* in Spring, after all small gullies that wash out during Winter are filled. After sowing seed make as firm as it is possible to do it. The sod should be permanent if fertilized occasionally when appearances would indicate the necessity of it.

I have had no experience in mixing seed, as seed used has been a mixture sold by seedsmen for special work, and feel sure that any good reliable seedsman will be able to make a terrace mixture that will be more satisfactory and lasting, than one not having their experience in this matter. E. J. W.

THE SENSE IN "OLD SAYINGS."

AS to the moon, the divining rod and others of their ilk, I don't believe it is going to rain to-morrow just because the tin peddler passed to-day. Don't laugh. I had a man working for me once who did believe just that, and insisted that he had never seen it fail. He was the same man who refused to take the shoes off a dead horse because to do so would surely cause the death of another horse. Nonsense, you say! Of course it is nonsense, and there are thousands of other old sayings just like these two which are evidently ridiculous. On the other hand, it is only a few years, as time goes, since we laughed at the man who said "Lime enriches the father but impoverishes the son." How could the inanimate lime distinguish between the two generations? We have lived to learn what this means, and to learn that it is very true. It has been scientifically explained.

As we were working in a meadow together one of my men said: "I see five-finger is coming into this lot, and if it does the grass will go out. Timothy don't like five-finger." Just another of the old sayings. Let us see. Curiously enough it was only a few days later that one of my professional friends dropped in, and walking across the same meadow casually remarked: "I observe that cinquefoil is encroaching here. That indicates acidity, and you cannot expect a good stand of Timothy in an acid soil." Ah, ha! I see! Then it was not a social antipathy of the aristocratic Timothy for the plebeian five-finger, but was indeed a fact, crudely expressed because coming down through hundreds, perhaps, of generations, but none the less true.

I hold no brief for the moon. I am not in the least "looney." I do not believe that it makes a particle of difference to a piece of potato whether it is planted in the dark or the full of the moon. But I do not laugh at the man who does believe it, because "He laughs best who laughs last," and it is quite possible that some clever professor of the future may find that it is true, and why it is true. We all know that the "line" is only imaginary, and the sun does not get a jolt in crossing. The fact remains that I was married during an equinoctial storm 22 years ago, and it has rained on every anniversary. If this happened just to spoil my celebrations how do you account for the hundreds of times it happened before I was married? Is not it more reasonable to think that the position of the sun has something to do with it? I know absolutely that the tin peddler can-

(*Continued on next page*)

THE SENSE IN "OLD SAYINGS."

(*Continued from pagt 1203.*)

not control the weather. I think Prof. Marvin is right in concluding that the moon has little or no effect upon it. Neither he nor I nor anyone else can prove, however, that the moon does not affect the weather, and what we can't prove we are wise not to assert.

When I first came out of the city I undertook to give some bystanders a chance to laugh at a "water witch." Alas for me, he handed me the twig and said: "Try it yourself." I could not refuse, so I took it, determined that it should not turn down in my hands. I would have given a brand new city hat I was wearing to keep my determination, but the twig began to twist, and the harder I gripped the more it turned. I set my teeth and clenched my fists, but the twig turned down and the crowd had their laugh, but not at the "water witch." It was a good lesson for me, and any success I have since had in the country has come from realizing my own ignorance and being willing to listen to my farmer friends. I don't bother to plant buckwheat in the sign of the twins, but I don't laugh at the successful buckwheat grower who does. If some day some of these things are explained I won't have to apologize for having laughed.

CITY IGNORAMUS.

A Crop of Onions.

CAN you tell me how to cure onions grown from seed? When should they be left in the ground, until all the tops are dead? How low a temperature will they stand? Can they be properly cured in the field? I have no drying shed but spread them on attic floor after topping. They seem to grow very well here and there is a good market for them at fair price. I shall have 50 bushels on less than one-eighth acre and not more than a bushel of small ones.

New Hampshire. A. S. A.

Most growers prefer to have their onions fully ripe before harvesting. When fully ripe the tops are entirely dead and the outer skin of the bulbs dry. While this is very desirable still there are other things to be considered. In the late Fall there are often heavy rains that cause losses or else seriously interfere with the best work in curing. A second growth may start. In view of these things growers are often justified in pulling and topping when the tops are just beginning to turn yellow. Where onions of the foreign type are grown in Southern States it is especially desirable to harvest them early. To hasten maturity growers often run a roller over the field to mash down the tops. This, however, is not equal to natural ripening. August and September are the months when the bulk of the onion crop is harvested in the North.

A mature onion cannot stand alternate freezing and thawing, but a well cured onion frozen solid and kept in the condition will come out all right in the Spring. If weather conditions permit it is best to cure onions as much as possible in the field. To do this onions are pulled and laid in rows where they remain at least two or three days. They are then topped and stored in an open shed or room where plenty of ventilation can be given. This finishes the curing. Slatted crates are convenient receptacles for storing onions and admit of air. White onions are quickly injured by exposure to sun and air and must be handled more carefully than yellow onions. If your attic has windows so the air can circulate through freely, it will serve first rate for a drying shed.

Your yield of onions is excellent. It has been several years since we grew any onions from seed. We grow now altogether from sets. These are put out as early in the Spring as the ground can be worked. They are pulled in early July. This year we had 1⅓ acre planted in rows 2½ feet apart so as to permit of horse cultivation. From that block we marketed 603 five-eighths bushel baskets of onions. The average net price was $1.26 a basket. Net returns in round numbers were $760 for the 1⅓ acre of ground. We are now picking late tomatoes from the same piece of ground. Our crop was sold direct from the field. Italians pulled and topped the onions at 2½ cents a basket. The illustration, page 1203, shows onions being topped from a pile laid crisscross. This often happens when topping is being done by the day, but I notice that when Italians do the topping by piece work they lay the onions in even piles with the tops all one way. This greatly facilitates topping and enables the thrifty worker to get a larger number of baskets to his credit.

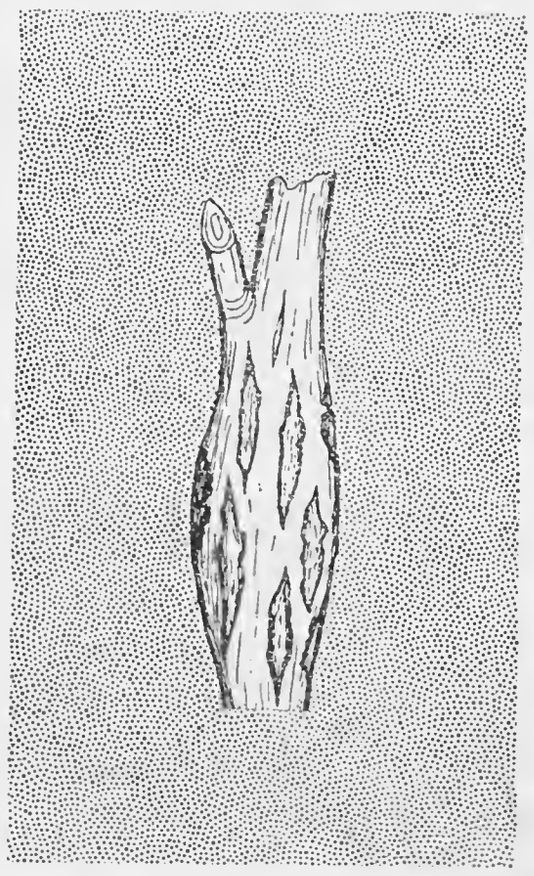
TRUCKER, JR.

Gouty-gall of the Raspberry.

I SEND a cutting taken from a diseased red raspberry shoot. Upon opening there is either a small white worm or else it shows where it has been. We have a new patch of the berries set in a year ago. Beside them is an old patch, and they all seem affected in the same way. Can you tell me how and when the worm enters the shoots, and the remedy if any? F. A. H.

Lake View, N. Y.

The stems of raspberries are sometimes attacked by a small, white, slender grub that causes irregular swellings or galls on the canes. These swellings are from one to two or three inches in length, larger in the middle, and gradually tapering toward either end. The bark over the



GOUTY GALL OF RASPBERRY. Fig. 524.

swelling is usually discolored, roughened and split lengthwise. The larva causing the trouble may be found in its burrow just under the bark of the swelling, but usually, especially toward Fall, it is several inches above the enlargement. The grub, when full-grown is from five-eighths to three quarters of an inch in length, with a brownish head and two small brown hooks at the tip of the abdomen. The full-grown parent insect is a beetle about one-third of an inch in length. Its body and head are black with a bluish lustre, but its thorax or "neck," is a coppery red, hence its name the "red-necked caneborer." The beetle is present and active on the berry bushes from the last of May until August. Its scientific name is Agrilus ruficollis, the last word of which means "red-necked."

LIFE HISTORY.—Probably the eggs are laid mostly in June, although some are evidently deposited later. The egg is inserted in the bark at the base of a leaf on the new growth. When it hatches, the young grub enters the bark and bores in the sapwood of the cane working upward in a spiral around the stem, thus girdling the canes and causing them to enlarge and form the gall. Toward Autumn the grub burrows to the pith, where it hibernates several inches above the gall. In the following Spring the grub transforms to a pupa and emerges as a beetle in late May or June and perhaps later. This insect is a native pest and is common on wild raspberries, blackberries and dewberries. Fortunately, it is subject to the attacks of two parasites that probably aid greatly in holding it in check.

CONTROL.—It is obvious that the grub cannot be reached with insecticides of any form, nor is it practicable, apparently, to control the parent beetle. At least, we know little of its feeding habits and infer that it would do little if any good to spray the bushes with a poison. Thus we are forced to take protective measures of another kind. In the first place, wild raspberry, blackberry and dewberry canes within reasonable distance of the cultivated plants should be destroyed to prevent the beetles from breeding without restraint. In the second place, all infested canes among the cultivated plants should be cut out and burned sometime before April or May. This process may thin the canes considerably in case of a bad infestation but the chances are that such canes would die anyhow and more than that, they would serve as means for the greater increase of the insect during the subsequent season. Hence it is important to begin the work of cutting and burning at once and to do it thoroughly.

GLENN A. HERRICK.

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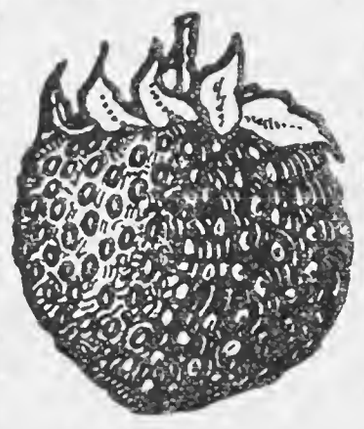

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MANURES AND FERTILIZERS.

Damaged Hay as Fertilizer.

I HAVE about 30 tons of last years' hay in three stacks within one-third mile from the station in New Jersey. It was improperly stacked and is now suitable only for bedding. I do not know that I can get $10 per ton for it. Rather than sell it for less, having use for manure, I have decided to turn it into manure if I can do so expeditiously and advantageously. What would it cost to turn this into manure and just how would you advise doing so in order that it may be used on the land next Spring?
E. E. S.

A ton of Timothy hay will carry 25 pounds of nitrogen, 11 pounds phosphoric acid and 20 pounds of potash. At present prices this means a value of a little over $10 in commercial plant food. If you have stock you can use the hay freely for bedding, let it absorb the liquids well and keep it well mixed through the manure pile. If there is but little manure put the hay in loose piles in the barnyard and keep it well wetted down. Lime would hasten decay but it would drive off too much nitrogen. The wet hay will be fit to use by Spring.

Forest Leaves for Fertilizer.

I HAVE recently come into control of a 60-acre farm in Van Buren County, Mich. About 35 acres of this tract are timbered thickly, and I find a thick layer of leaves covering the ground throughout this timber land. It is my intention to use the woods for pasturing stock during the coming years, and I would like to learn how best to dispose of the leaves which have accumulated during the past years. I shall probably put in a few sheep to help clear away the shrubs and brush, but am wondering if the leaves would be of any value as a fertilizer in the cleared part of the land if raked and plowed under this Fall or next Spring. W. W.

These leaves, if well rotted, would have somewhat the same composition as manure. They will need the addition of lime, as they are usually quite sour. It will hardly pay to rake up and haul the dry leaves. They are too light and bulky to handle economically. After they have rotted or matted down on the ground they may be scraped up and spread like manure on cultivated ground, but we should always use lime with them.

Sheep Manure for Garden Use.

WHAT is the proper way to use sheep manure to the best advantage on a home vegetable garden? That is, when should it be used, at the time of planting or at some stage in the growing season, and about how much?
Jamaica Plain, Mass. J. M. S.

In a general way sheep manure is too expensive to use as a general fertilizer in gardens. Many people find it very useful as a top-dressing for lawns, for use in growing tobacco, or in glass-house gardening. As a rule, however, market gardeners do not buy sheep manure to any large extent, as they think it is possible to obtain plant food cheaper in other forms. It is safe to use sheep manure at any time, and in almost any quantity. Its effect is rather slow as compared with soluble chemicals, and as it supplies organic matter, and is a bulky manure, it may be a desirable thing to use in small gardens. The prices run from $20 to $60 per ton, depending upon analysis, and at these figures it would not pay as a practical fertilizer, except upon special crops, or very intensive gardening. We should prefer, if unable to buy stable manure, to use a good chemical fertilizer in addition to cover crops, or any green or growing matter plowed into the soil with lime.

Killing Seeds in Manure.

WILL you tell me how to treat seeds in stable manure before putting on land, so that the seeds in manure may not sprout again? G. M. W.
Canandaigna, N. Y.

If the manure is piled and heated and then turned and piled again and treated in this way till rotted there will be few seeds left alive. Of course there will be some loss in the manure, for I have always found that the best way to use manure is to get it out on the land as fast as made, and then fight the weeds early and kill them as they start. But in garden work it always pays to get the manure well rotted; I have some now undergoing the heating and repiling process for use on the garden in early Spring when it will be perfectly fine. I do not mind the weeds, for I kill them as soon as they start. W. F. MASSEY.
Maryland.

Our method of treating manure has been very effective and simple. We purchase it by the carload and pile about four feet deep, tramping very firm and adding enough water so as to prevent firefang. In hot weather this watering is very important, and a carload will require a large quantity. We usually have three or four men forking the manure and one man tramping and watering with a one-inch hose. The manure is then left to heat thoroughly for about one week, when it is turned again and more water added. A third turning will make it in better mechanical condition for some purposes, though not necessary to kill weed seeds, as we have found two weeks usually kills all, or very nearly all weed seeds. ELMER J. WEAVER.
Pennsylvania.

We do not have any special treatment for stable manure to kill the weed seed it contains. The manure we use for hotbeds and cold frames is hauled out in the Fall at any convenient time, and turned once, if possible, before freezing weather. It is turned again in the Spring before going into the beds. The fermentation and decay that takes place in the manure not only makes it fine but also, I believe, kills many weed seeds. If we were trying to eliminate the weed seed nuisance in manure we would use cut corn fodder (the waste left after feeding) for litter. As it is we have a bountiful supply of rough hay from low meadows and utilize all we can of it for making manure. The weed seeds it contains are in one way a nuisance, but in another a sure guide as to the thoroughness of cultivation.
New Jersey. TRUCKER, JR.

Value of Air-slaked Lime.

IS air-slaked lime anything but an indirect fertilizer? Has it, in itself, any direct fertilizing value, or does it only set free in the soil plant food and thus become what is known as an indirect fertilizer? Of course I know of its value as a sweetener of soil and also of its mechanical effect in lightening heavy soils, but what I wish to know is, has air-slaked lime available plant food in its makeup? R. C. R.
Salisbury, Conn.

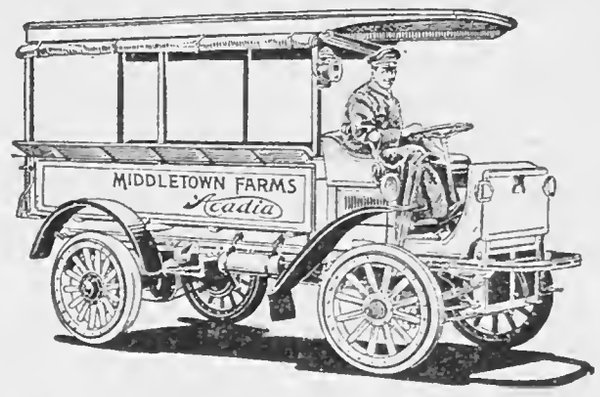
All plants contain lime as is shown by the analysis of their ashes. Most soils contain enough lime to supply the plant food needs of the crop and when phosphates are used a fair supply of lime is added. In the great majority of soils the need of available lime for feeding plants is much less than that for either potash or phosphoric acid. Air-slaked lime is available for feeding plants, but its greatest service is in acting chemically and mechanically upon the soil.

The Adsuki Bean.

A PLANT immigrant from Japan that seems likely to prove a most desirable addition to American agriculture, is the adsuki bean, which has been successfully grown on the Government's farm at Arlington, Virginia and at many other places. Its most valuable feature lies in its large yield of seed. Owing to its texture, the bean is easily ground into meal or flour and has proven far superior to any other bean for that purpose. Its flavor is delicate and it lacks any objectionable "beany" taste. The adsuki bean is a most popular food in Japan, and there seems no reason why a food so rich in protein should not become popular in the United States. A statement from the Department of Agriculture says the average yield per acre of the best varieties of the adsuki bean at the Government's farm has been about 25 bushels. The bean is a Summer annual requiring about the same climatic conditions as the common bean. The plants are bushy in habit, growing from 1½ to two feet high according to variety and soil. The beans are not only prolific, but ripen evenly and do not shatter readily. It has been evident, however, that these beans cannot compete with either cowpeas or Soy beans as hay producers. Their initial growth is slow and their total yield of herbage inferior.

VENTILATING AND COOLING A CELLAR.—In the house which I recently built there is only one small window in the room intended for storing fruit and vegetables. To prevent wilting of fruit, this room has the natural dirt floor. The following device helps to ventilate the room in a very satisfactory manner. From the lower half of the window extending to near the floor is a long box made of half-inch lumber. In cool weather the warm air passes out the open upper half of the window and cool air passes down the long box to take its place. When well cooled down to near freezing the whole window is tightly covered on the outside. The cooling-off process needs to be repeated occasionally with changes of temperature. W. J. B.
Amherst, Mass.

Dairymen and Fruit Growers Profit by Use of *Autocars*



Save Cost of Rail Shipments—Deliveries More Prompt

THE quickness with which the *Autocar* carries its loads to market, with less handling and less expense than rail shipments, explains its growing favor among dairymen and fruit growers.

The Middletown Farms, of Middletown, Del., have had an *Autocar* four years. They used to ship their milk and cream by rail to Wilmington, 25 miles away. Their *Autocar* now takes care of this work, making some days as many as three trips to Wilmington and return, delivering right at the doors of their customers.

"We have found the greatest satisfaction with our *Autocar*" says the Middletown Farms. "It has brought very great improvement to our facilities."

The Autocar

"Used in Every Line of Business"

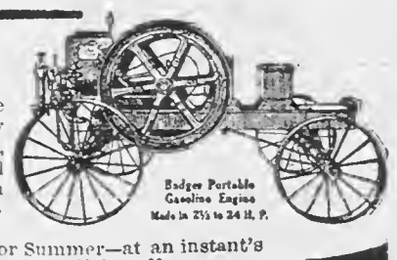
ALBERT HANSELL, a prominent farmer and fruit grower, of Burlington, N. J., bought an *Autocar* in February, 1911. In discussing it recently, he said:

"I bought the car because I became convinced that hauling my fruit to market with horses and wagons was too expensive. After several years of service with the *Autocar*, I know now that I was right. The car makes three trips to Dock Street, Philadelphia, 15 miles distant, in a day, while a team of horses is making one. And horses after such a trip, have to be rested up the next day. "My *Autocar* often makes three trips to Trenton and back in a day, a total distance of 120 miles. Since I have had the car, it has travelled more than 32,000 miles without a serious breakdown, and has added greatly to my profits through the quick marketing of my goods."

Why not become fully informed about the *Autocar* and its work? Write for our new catalog, Address Dept. R.

THE AUTOCAR COMPANY, Ardmore, Pa.
Established 1897 *Motor Delivery Car Specialists*

For Threshing and Ensilage Cutting



The "Badger" gasoline engine is the best power plant for the big jobs, like threshing and ensilage cutting. Reliability, plenty of power, steadiness and readiness, required for these big jobs, typify the "Badger." Made of the best materials; speed and parts made adjustable; the engine develops more speed than rated at less cost of fuel. Runs by gas, gasoline or kerosene. Consumes no fuel which is not turned into power.

The "Badger" is always ready to run—Winter or Summer—at an instant's notice. **Every part guaranteed for five years unconditionally.**

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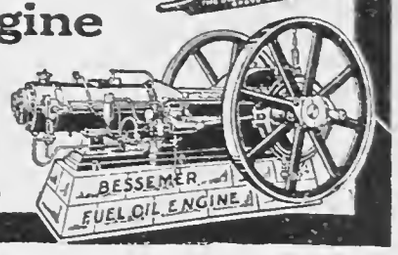
Let the Bessemer do it: This sturdy little worker will pump your water, run your machine shop, buzz saw, sprayer, washing machine, and do all the other power jobs on the farm. And do it at small cost, because the Bessemer runs on kerosene, distillate, etc., and thus pays for itself in fuel saved. 2 to 8 H. P. Thousands are in use. 30 days' free trial. Immediate shipment. Write for Catalog "K." If you require a larger engine use the

Bessemer Fuel Oil Engine

Lower picture shows the Famous Bessemer Fuel Oil Engine. Widely used in irrigation, flour mills, factories, electric light plants, etc. Runs on cheap fuel and crude oils. No batteries or magnetos required; ignition is automatic after starting. 15 to 165 H. P. Special Catalog "O" free.



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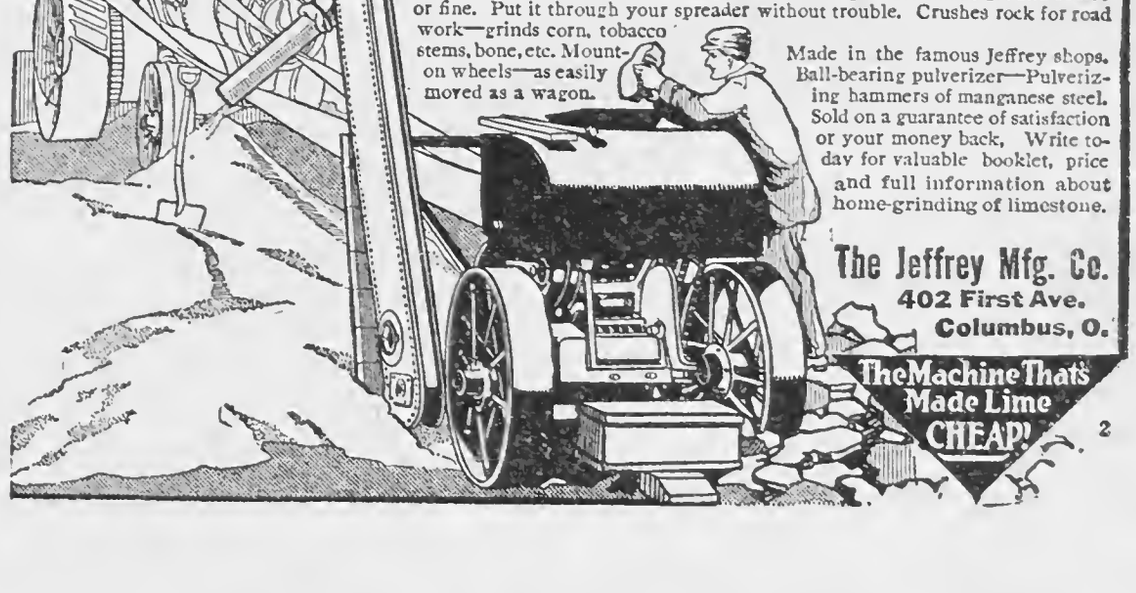
The day of cheaper lime is here. If you have lime rock available you can make fertile fields of land that is now sick and sour. No need to buy burnt lime at high prices that burns up the humus and wastes the Nitrogen in the soil. No need to buy ground limestone and pay for freight and hauling. Get a JEFFREY LIME-PULVER and, after quarrying the rock, grind it at a cost of 50c per ton. Dig out those rocks that prevent your cultivating your fields and make them enrich your soil—turn the stones into dollars! Grow clover, alfalfa and other legumes by giving your soil the lime it needs.

Saves From $1 to $2.50 Per Ton

It costs most farmers from $1.50 to $3 per ton to get ground limestone on their farm. With a Lime-Pulver you can grind your limestone for 50c and save from $1 to $2.50 per ton. In a short time the Lime-Pulver pays for itself.

Both a Crusher and Pulverizer

The JEFFREY Lime-Pulver is the machine that crushes and pulverizes. It takes big rocks 4 inches thick and 11 inches long and reduces them to powder. Grinds from 2 to 3 tons per hour. The product can be ground coarse or fine. Put it through your spreader without trouble. Crushes rock for road work—grinds corn, tobacco stems, bone, etc. Mounted on wheels—as easily moved as a wagon.



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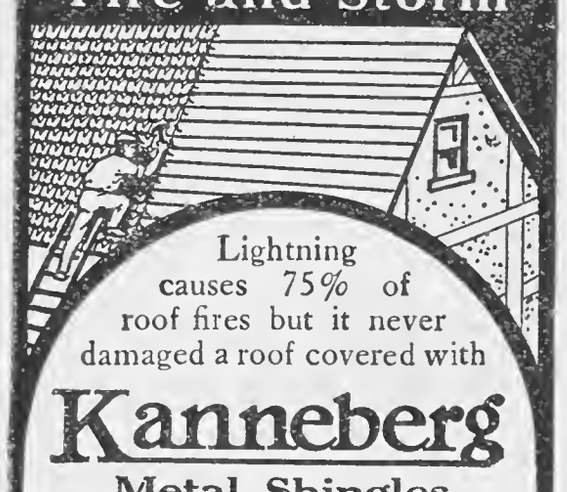

Lightning causes 75% of roof fires but it never damaged a roof covered with

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They are proof against fire, rain, snow, heat and cold. Need no repairs, because they will not rot, rust, crack, buckle, curl nor fall off. Can be laid on low pitch roofs and always look well. Give clean cistern water. You can save big money by using this almost indestructible roofing. Buy direct from the factory. Put it on yourself easier and quicker than wood shingles.

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12 inches by 2½ inches face, $1.50
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EVENTS OF THE WEEK.

DOMESTIC.—The Marconi wireless station at Siasconset, Mass., was closed by Federal order Sept. 25, because it declined to recognize the Government's right of censorship. The Navy Department took no cognizance of the fact that the Marconi company had appealed to the Federal court and filed an application for an injunction to restrain the naval officers from closing or censoring the station.

Fire in a storage warehouse and knitting at 85 Meserole St., Williamsburg, New York City, Sept. 25, caused a loss of $100,000.

Forty-eight additional coal operators of Colorado have sent a letter to President Wilson objecting to some of the principal features of the Federal plan for a three-year truce in the strike war. Both sides—the mine owners and the striking miners—are making preparations for a continuation of the siege that has lasted more than a year.

A fire in a crowded block of old tenement houses on East 11th St., New York, Sept. 27, caused the death of 60 horses in a livery and undertaking establishment, and resulted in a total loss of $75,000.

A large wireless plant near Hollister, San Benito Co., Cal., is under investigation by the Navy Department, under suspicion of violating neutrality.

Nine counties of twelve in Kentucky, which voted on the liquor question, Sept. 28, returned large "dry" majorities, while only three remain "wet." One county, Anderson, was close and went "wet" by a majority of 64 votes. The biggest vote received by the liquor people was in Fayette County, home of many of the biggest distilleries in the country, which gave a majority of 3,264 for the "wets." The three counties which voted to sustain the liquor questions contain distilleries.

Health Officer Joseph J. O'Connell of New York City issued, Sept. 28, an order to his boarding officers to give particular attention to all passengers who may arrive here from the Adriatic east of the Italian boundary, the Ionian Sea, the Ægean Sea, the Mediterranean east of Italy and the Black Sea, cholera having been reported in epidemic form in eastern Russia, Austria and in the eastern theatre of war.

Three persons were killed and 20 persons injured, one probably fatally, in a gunpowder explosion in the plant of the Pain Fireworks Display Company 1316 South Wabash Ave., Chicago, Sept. 30.

Delegates to the Southern Cotton Association at New Orleans decided, Sept. 30, not to grow any cotton in 1915 in the six States represented at the convention and to ask Legislatures to prohibit planting.

WASHINGTON.—The Senate passed the Alaska coal lands leasing bill, Sept. 26. It authorizes the Secretary of the Interior to survey all of the coal lands of the Territory of Alaska, beginning with the Bering River and Matanuska fields. After the surveys have been completed the President is directed to reserve 5,120 acres in the Bering River field and not more than 7,680 acres in the Matanuska field. As to the reserved lands, they can only be mined in the discretion of the President to meet an emergency created by "an insufficient supply of coal at a reasonable price for the requirements of Government work, construction and operation of Government railroads, for the navy, for national protection and for relief from oppressive conditions." The unreserved coal lands are to be divided by the Secretary of the Interior into tracts of forty acres or multiples thereof, but in no case exceeding 2,560 acres in a single leasing trust, and thereafter to be leased by the Secretary to any citizen of the United States, or any corporation of the United States.

Mrs. Woodrow Wilson's dying wish that the worst slums in Washington be abolished was finally realized, Sept. 25, when the President signed the bill clearing the alleys of dwelling places. On her death bed Mrs. Wilson expressed the hope that the bill would be passed, and both houses of Congress acted. Although it differed in some particulars from the measure as Mrs. Wilson originally championed it, the President decided it accomplished the principal purposes sought.

Peace commission treaties with Great Britain, France and Spain were ratified, Sept. 25, by the Senate, making twenty-five in the series negotiated by the State Department which have been approved by this government. A similar treaty with China was favorably reported by the Committee on Foreign Relations, but action was deferred by request of several Senators, who wish to discuss it thoroughly in view of the situation in the Far East, involving Germany and Japan at Kiao-Chau.

THE EUROPEAN WAR.—Sept. 27 12 cities and towns were attacked from the air by the Germans. Their aerial warcraft bombarded Paris, Warsaw, Antwerp, Ghent and numerous small towns in Belgium. In Warsaw their Zeppelin was shot down and its crew captured. Four persons were killed, two in Paris, one in Ghent and one in Dynze. Several were injured, but the damage to fortifications and public works was comparatively small. The objects of German attacks from the air appeared to be the Eiffel Tower, in Paris, the Antwerp fortifications and ammunition depots in France and Belgium. A hospital in Belgium was damaged and patients and nurses endangered.....Sept. 30, the eighteenth consecutive day of the battle of the Aisne, little change was reported officially, but there was no apparent gain by the Germans. Censorship was very rigid. The fighting continued day and night, and this conflict is likened to the battle of Mukden, which lasted for 20 days. Casualties on the Aisne are enormous and are already reckoned at over 200,000.....The Russians were advancing in central Galicia Sept. 28. The Russians have crossed the Carpathian Mountains, have captured Uzsok with a number of guns and prisoners and from this point they have descended into the plains of Hungary. .....Germany is increasing forces in Belgium, and concentrating an attack on Antwerp, which, if taken, would give a naval base for attack on Great Britain. Fort Waelhem, one of the strongest of the fortifications around Antwerp, has been partly destroyed by an all night bombardment by the Germans. The Belgians the next day attacked the German besiegers and drove them from their position. A report from Antwerp says that men in balloons are finding the positions for the German gunners in their firing upon the Antwerp forts..... Malines has been reoccupied by the Germans. Oct. 1 they renewed the bombardment of Lierre (a manufacturing town nine miles southeast of Antwerp) and Heyst-op-den-Berg (a town near Lierre.) In Lierre the tower of the Church of St. Gommarius, the convent of the White Sisters and some houses have been struck by shells. Most of this district has been completely deserted by the civilian population.....The British steamship Indian Prince has been sunk at sea by the German converted cruiser Kronprinz Wilhelm. The master and fifteen men of the crew of the Indian Prince have been landed at Santos, Brazil, by the German steamship Prussia.....The British Admiralty gave out the following figures, Sept. 28: Captured, destroyed, interned or otherwise put out of commission, British, 94 vessels, of 232,310 tons, or 1.2 per cent. of total tonnage; German, 387 vessels, of 1,140,000 tons, or 23.6 per cent. of total tonnage..... Great Britain has asked the United States to investigate who was responsible for sending the American ship Lorenzo with coal to the German cruiser Karlsruhe in British West Indian waters. The Lorenzo was caught by a British cruiser. The Departments of Commerce and Justice will determine who may be prosecuted under the neutrality laws.....The British Admiralty announced, Sept. 29, that the German cruiser Emden has sunk four British steamships and one British collier in the Indian Ocean.....The Admiralty issued orders, Sept. 29, forbidding neutral trawlers to fish on the east coast of England. The order says that the neutral trawlers may continue their operations on the west coast. The order affects a large number of Dutch and Danish fishermen who use Grimsby as their base.....Many German firms who owe money to British exporters have sent intimations to their creditors that they are investing the money in the German war loan and that they will send scrip to England in payment of their trade debts. Swiss firms are being paid in the same way.....An Australian force has captured Kaiser Wilhelm's Land, the German portion of New Guinea.....Sept. 28, it was announced that a British force had captured Duala, capital of Kamerun, German West Africa, while Bonaberi surrendered to an Anglo-French force.....There are now over 150 German prisoners confined in the military fortress at Halifax, N. S. The last batch was brought in by the British cruiser Suffolk. They were taken from a steamer five miles off New York harbor. It is just 100 years since prisoners of war were last confined in Halifax.....Sept. 27 the Japanese defeated the Germans after 14 hours' fighting at Tsing-tau, China.....Spain has sent offers to France to care for 30,000 wounded in her hospitals, Madrid being prepared to care for 6,000..... An Italian fishing boat was sunk by Austrian mines 20 miles off Ancona, Sept. 28, and eight men were killed. The Italian Government has asked its Ambassador at Vienna to file a protest against the strewing of mines by Austria in the Adriatic. Italy has called to the colors three classes of reservists.

This part of Illinois (central) 35 miles south of the 41st parallel, has unusually poor grass and grain crops, owing to drought. Hessian fly, chintz bugs and a few isolated places of army worm. For this reason farmers must change their fields. Quite an acreage of wheat will be put out. The seeding commenced Sept. 28 to 30; late seeding, in order to have less fly to contend with. J. B. A.
Taylorsville, Ill.

Weather has been unusually wet for Western Montana; ground in splendid condition for seeding to wheat. A large amount will be sown. This is a dry farm section; wheat yields from 10 to 25 bushels an acre, oats about 30 bushels. Prices are, oats, $1 per 100 pounds; wheat 85 to $1 a bushel. No corn raised here; it is shipped in and retails at $1.50 per hundred. Ranchers are turning to dairying and stock as fast as they can. Creameries are buying the product mostly. H. T. A.
Montana.

CROP NOTES.

Sept. 19. Grain all thrashed, yield good. Grass catch fair to good. Pastures none too good, cows dropping off in yield, although fed in barns. Grain in store is, corn, $1.25; oats 60; feeds $1.60-$1.70. J. C. S.
So. Thomaston, Me.

Crops are looking fine in the southern part of Livingston County; think potatoes will average 150 to 200 bushels to the acre, some going better than 200. Butter 30 cents per pound; eggs about the same per dozen. Apples just a medium crop and no sale for them.
Dansville, N. Y. D. N.

Sept. 22. Thrashing is about done except the buckwheat crop, which is not all cut. A good many are digging their potatoes; early-planted potatoes are small, late potatoes are larger. The apple crop is good, but the demand is light. Not much hay is being sold. Butter brings in jars 29; eggs 26. Silos are nearly all filled. We have had a few light frosts. P. S. S.
Mayville, N. Y.

Sept. 26. New milch cows $40 to $80; fat cattle, live weight, 5 to 8 per pound; veal calves 9; hogs 8 to 9; lambs 6 and 6½; milk at condensery $1.55 for September; cheese 15½; butter, dairy, 30 to 32; Fall apples, 60 cents per bushel; plums $1.50; pears $1; potatoes 45; tomatoes $1; cabbage one to two cents per pound. Some hay is sold and brings this year about $14 per ton, pressed and delivered at station or shipping point.
Alfred Station, N. Y. D. L. L.

Sept. 25. Wheat brought to our elevator is $1.05 per bushel; oats 46; old corn 75; potatoes market price 80; onions 75; cabbage $6 per ton paid at factory. Pears from $3 to $4.50 per 11-peck barrel, according to variety. Butter 31 per pound from creamery in 50-pound lots, retail 37 cents per pound; this is in pound packages. Farmers are getting $1.55 for a eight-gallon can of milk, transportation costs 16½ cents per can; retailed in our town at seven cents per quart. Hogs, live nine cents paid by buyers. Timothy hay $14 per ton; oat straw $6 per ton paid by warehouse men; bran $25; dried malt $25; middlings $33. Milch cows are selling at private sale and auction from $75 to $125. Eggs 25; Spring chickens 15; ducks 13; apple crop a failure. G. K.
Arlington Heights, Ill.

Sept. 25. The staple farm products in this vicinity are corn, oats, Timothy, clover, potatoes, stock, butter, eggs, and poultry. Garden truck, while staple in a way, is not generally raised for market, being more particularly raised for individual consumption on the premises. A comparatively small amount of fruit is raised here, and it is considered a side issue by the farmers. The prices for live stock from day to day can be readily obtained by taking the Chicago market and allowing about 40 cents per cwt. for shipping expenses. It costs about three cents a bushel to ship corn and oats, so those prices can be obtained in similar manner. Butter sells at about 30 to 33; eggs about 22; poultry around 12; Timothy and clover about $10 to $12 per ton, and potatoes about 75 cents per bushel. F. N. V.
Amboy, Ill.

Our first frosts here, Sept. 12, 13, 14, froze water one-quarter inch thick on pailsful standing out. Year a good one, hay fair crop; oats good average; corn the same. Potatoes extra good crop; apples fair; plums and pears a small crop. Plenty of rain and pastures good. Cows in good flesh and native beef good and in good demand, 10 to 11 cents a pound by the side. Sheep and lambs fat and mutton good. One veal three months old over 300 pounds sold to local butcher last week for $32.50. Is it any wonder few calves are raised for cows? The war in Europe has, through the speculators, put prices away up: sugar eight cents; corn $2; feed oats and corn $2; flour $7.50; potatoes 60; oats $1.90 per 100 pounds; eggs 32; butter 32. B.
South Dorset, Vt.

The Winter wheat crop was large as a whole, by reason of large acreage. Thrashing was mostly done from the shock, and as the weather was dry it was all done in fine condition, with average yield of about 20 bushels per acre. Oats were the best crop in 20 years averaging around 50 bushels. Only two cuttings of Alfalfa as a rule, drought setting in in time to check the growth of the plant. Corn is a fair crop in the main, but some localities have none whatever, due to the rains being local showers. Rain came in time to allow plowing for wheat and a large acreage will be planted. Hessian fly did considerable damage to wheat this season. To avoid this our farmers are delaying seeding till later in the season. Probably not much will be seeded before Oct. 1. The price of wheat went to a dollar per bushel at one time, but is now quoted at 92 in our local markets. Oats 40; corn, old, shipped in, 80; potatoes 75; hay $8 per ton; wild hay is a very heavy crop. Live hogs around $8 per 100 pounds, and very scarce; cows $60 to $80; butcher cattle six to seven cents; other cattle very high; common Spring calves $20 to $30; butter 20; eggs 20; chickens 12½. The weather is hot, very hot the past week; pastures are fine and stock doing well.
Fairbury, Nebr. H. M. R.

San Diego Panama California Exposition

The right way to pick out a farm

TOO many men pick out a farm where they are; they take what they can find there. The right way is to decide beforehand on just the things you want in a farm, and then find the one that comes nearest to giving you these things.

You can do that—exactly that—if you visit the Panama-California Exposition at San Diego. There are 44,000,000 acres of the best land under the sky waiting for farmers, in the Southwest. It isn't all one kind of land, either; there's variety enough for every kind of farming known. And you can learn all about this land without moving out of your chair, if you choose; the Exposition authorities have gathered *all* the facts about *every acre* of these 44,000,000 acres, and these facts are ready in concise form to lay before you. That's the kind of an Exposition this is.

Here are some things you'll learn

The cost of the land per acre; the general condition and character of the land; the accessibility to water; the kind of crops it will raise best; the cost of labor; the markets, transportation, prices; the average expenses for maintaining a family, and of maintaining and running a farm like that; these and all other facts, things that you may not even know about the farm you now have, will be laid before you at San Diego.

Not only that. You'll see all kinds of farm machinery displayed; and if you step out of the building, you'll see this same machinery in actual operation in the field. You'll see intensive farming going on under all sorts of conditions.

Tomorrow rather than yesterday

The Panama-California Exposition at San Diego shows, not merely what has been done; but what can be done; it's an Exposition of tomorrow rather than of yesterday. Bring your family to San Diego; they'll get as much pleasure as you will; and as much profit. An experience they'll never forget. The Exposition opens January 1st, 1915, and keeps open until December 31st, 1915; a whole year. Come any time that suits you, you'll find things to interest you and give you information that's worth having, any time during the twelve months.

It's the greatest Exposition for the farmers of the country that the world has ever seen.

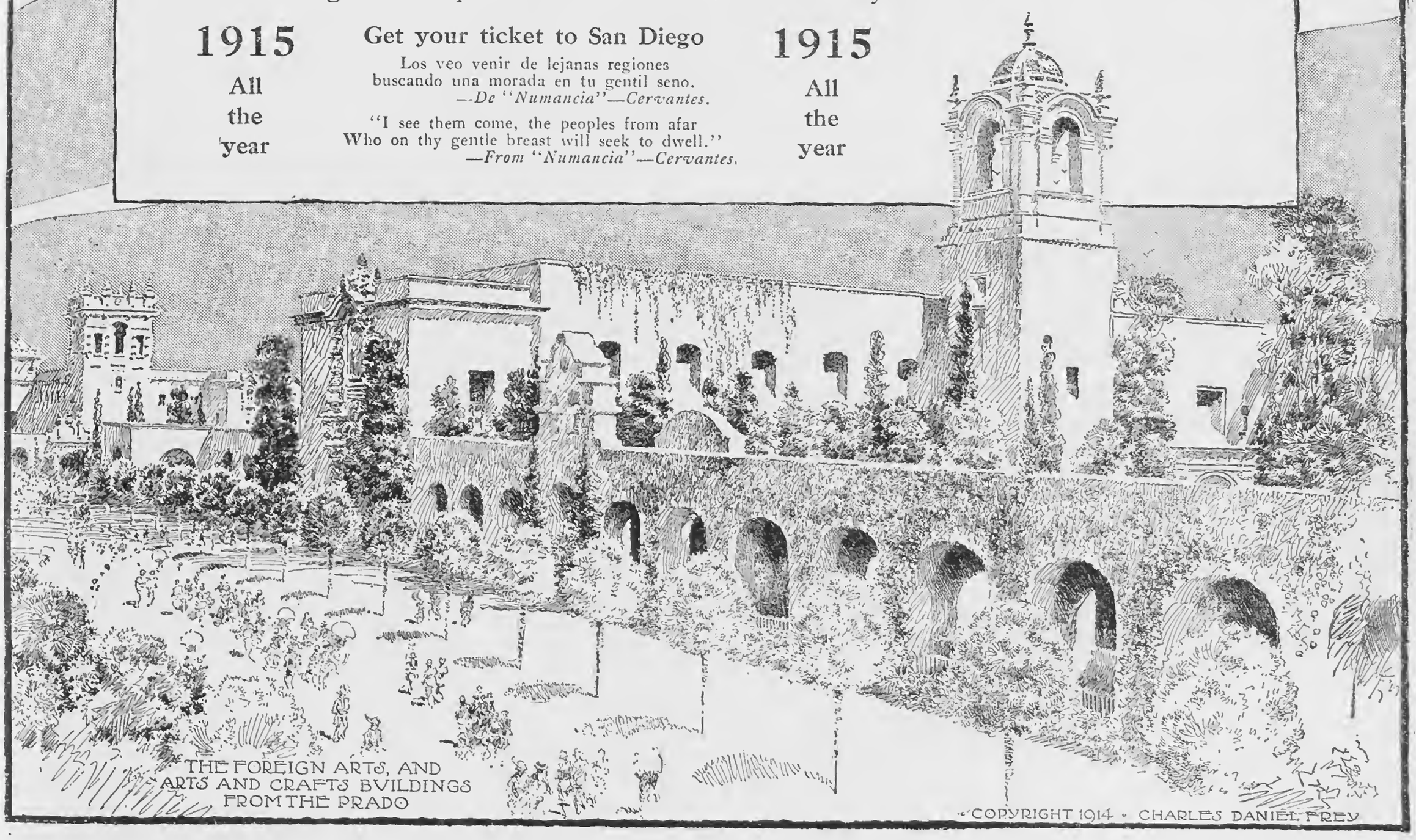
1915
All the year

Get your ticket to San Diego

Los veo venir de lejanas regiones
buscando una morada en tu gentil seno.
—*De "Numancia"—Cervantes.*

"I see them come, the peoples from afar
Who on thy gentle breast will seek to dwell."
—*From "Numancia"—Cervantes.*

1915
All the year



THE FOREIGN ARTS, AND ARTS AND CRAFTS BVILDINGS FROM THE PRADO

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VAN DEMAN'S FRUIT NOTES.

Quinces in Damp Ground.

I HAVE about an acre of sloping ground in a little valley where old half-wild quince trees bear profusely. It is very wet in Spring, but well-drained later. Nurserymen tell me the Bourgeat quince is especially adapted to wet ground. Is this so? What varieties do you recommend, and do you advise commercial planting in this situation. C. H. S.
Hempstead, L. I.

While it is true that quince trees will flourish in damper soil than most fruit trees it is well to have them where there is no standing water at any time of year. The soil mentioned may be too wet, and as it will do good to drain it anyhow I would suggest that this be done before planting quince trees of any variety. I do not know that the Bourgeat is in less danger of being damaged by wet soil than other kinds and would advise not to depend on any such supposition or report. The draining may be done very cheaply by the use of stone or even poles and brush put in ditches, but tile would be safer and much more durable. It will pay in any case.

Ameliaberta Peach.

I SENT a sample of four peaches to the U. S. Department of Agriculture for identification. They determined the variety as Ameliaberta. They were sold to me for Elberta. This is the first year they have borne any fruit. They are four years old. Are you acquainted with the Ameliaberta? Is it a reliable variety to plant? Is it as productive as the Elberta? I know it is not Elberta because that variety (Elberta) ripened two weeks before this did. It is a better flavored peach and a much better keeper than the Elberta. R. H. P.
Brooklyn, Md.

Although I have never grown the Ameliaberta it is said to be a very valuable variety in every way. There are a great many seedlings of Elberta now being grown and some of them are earlier and some later than the parent variety, but all resemble it in color, shape and size. A few are better in quality. If it is correct as to this variety being Ameliaberta there would be no mistake made in planting more of the same kind of trees. To make sure of having the same kind, trees could be propagated from those in bearing on the premises of the inquirer.

Barren Plum; White Grubs.

I HAVE a plum tree in my garden six years old that has bloom every Spring, but never sets fruit. I may be impatient as to results but have determined to give this tree one more year. Is there any remedy, or perhaps, something in the soil needed to produce fruit and not available? 2. My garden is infested with grubs, but I have no pigs to turn in to destroy them. Would bisulphide of carbon sprinkled on the ground do any damage to the grubs? After plowing one furrow I would sprinkle in the furrow and have plow follow immediately and cover, then sprinkle again and cover immediately Would formaldehyde give better results applied in same way? I have an idea that this method would destroy every other bug or insect, yet have my doubts about the grubs. L. R.
Louisville, Ky.

1. It may be that the plum tree in question is of a variety that does not pollinate its own flowers and therefore sets no fruit. As it does not bear it would be well to graft it over to some variety that is known to bear well in that locality. There must be such plum trees there from which scions could be taken, and some skilled grafter could set them next Spring in the barren tree. It would be a loss of time to dig out a fine tree that could so easily be made productive in a short time.

2. If it is true that the garden soil is affected with grubs they can be destroyed by repeated plowing or any frequent stirring or turning over of the earth. It would be very expensive and very likely, needless expense, to treat the soil with any kind of chemical, especially those mentioned. To be effective it would be necessary to saturate the soil and cover it with something for a time to keep in the fumes, which do the killing of animal life.

Late Peach; Jonathan Apple as Filler.

WHAT is the best October peach that I can plant in this section? Is there a good marketable variety maturing at that time? The Krummel is very highly advertised. What do you know about this variety? Would an October peach have to compete with any Georgia or New England peach if I shipped to northern markets? The elevation would be about 800 feet. 2. Will it be profitable to plant as fillers Jonathan apple trees between Winesaps? The Winesaps were planted last year 36 feet apart. G. M. J.
Nelson Co., Va.

1. Among the very late peaches there is none of the older varieties that excels the Salway, for it is a yellow freestone of high quality, good size and ripens after nearly all the rest are gone. The tree is a good bearer and has no special faults. Krummel is a yellow freestone that ripens 10 days or more later than Salway and is one of the very best and most profitable of the very late peaches, especially for the southern regions where the ordinary or Persian type succeeds. The Heath Cling is an old favorite and is not only large and of a creamy color with a beautiful blush but is of the highest flavor. The trees are among the surest and heaviest bearers. There is no peach that I know equal to it for canning, for the flesh is firm and the flavor peculiarly rich and delicate. I would plant all of these kinds. As Shipman, Virginia, is near the central part of the State, and the climate and soil are well adapted to peach culture, as well as for other fruits, it would seem to me that the time of ripening of these late varieties would fit into the markets very well. But there is no doubt that they would have to compete with the peaches of other more northern sections to some degree. However, the northern grown Elberta and others of that class are usually sold so far north that there would be open markets sufficient to take all that are likely to be grown of the very late varieties in the region of Virginia.

2. Jonathan is a splendid apple and the trees bear about as early as Winesap but it is not yet demonstrated that it is good to cross-pollinate the Winesap blooms. Besides, it has the serious fault of having black specks on the skin that are a hindrance to the sale of the fruit. Grimes would be a better variety to use as a filler among the Winesap, because it is not affected with any special disease, except a trouble with the roots, the flowers are very strong in pollinating ability, the trees bear early and well and the fruit brings high prices in market. Besides the apples are very distinct in color from Winesap and would not get mixed by mistake in gathering as the Jonathan would.

Keeping Pears.

HOW can I keep pears so as to have them fresh about the holidays? I want to keep them for family use. We have no cold storage. J. W. M.
Schuylerville, N. Y.

There are a few varieties of the pear that may be kept until midwinter or even later as apples are kept, without the aid of cold storage, but it is not possible to keep any but the very late kinds in that way. Among them are the Lawrence, Nelis, Morcean and Easter, but such as the Sheldon, Anjou and Bosc are very difficult to keep unless in cold storage. It all depends on the varieties J. W. M. has to put away for Winter use, and the way he handles the fruit. The pears should be gathered when the stems will part from the wood easily by lifting upward and the greatest care used to prevent all bruising. The place of storage should be as cool as possible and free from changes of temperature. If each specimen is wrapped in paper the fruit will keep better than without this treatment.
H. E. VAN DEMAN.

A Vacation at Grape Picking.

WHAT are the chances of my getting work for a week or two here?" asked a Pittsburgh attorney who sought to make his vacation pay its way. Both he and his wife found work within half an hour. Although both were unfamiliar with fruit gathering, before two weeks were passed they were good pickers, and had paid more than all their expenses. Another young woman with whom the writer is acquainted is a telephone operator, but at the opening of the berry season she leaves her work, and starts in with the strawberry season and ends picking grapes. This young woman earns from $18 to $20 weekly. There are many young women and men of good families who visit the lake shore grape sections during the picking season. They come from interior towns, and the change not only is interesting, but they go home with more money than had they been teaching school or working the same time as bookkeepers or stenographers. The prices paid at North East, Pa., are as follows: 1¼ cents for eight-pound baskets of grapes; 10 cents per eight-pound basket of cherries; 1¼-1½ cent a quart for strawberries; two cents for blackberries, and 2½ to 3½ cents for red raspberries. Good pickers should average from $12 to $15 per week. One of the best which has been heard of a grape picker has been $4 per day, and the average of this picker was about $22 a week. The growers in many instances provide quarters for the pickers or drive to town, get them, and return them at night. Many pickers have tents, and camp on the grower's premises. There is generally a shortage ot pickers. Two years ago this shortage was very great, and grape picking lasted in some vineyards several weeks longer than was desired. This year, at North East, up to present, there was sufficient supply of help in most instances for all work, except red raspberries.

A Combination Cover Crop.

I HAVE a piece of light, sandy loam, naturally rather poor. I dressed it heavily with corn manure for several years, and while much improved, it still lacks humus. At present I have no stock, so I am trying to fill the want by cover crops. I have more than I need to plant at a time, so last Fall I sowed rye on a part of it, which I plowed in this Spring and sowed to oats and peas, plowed again this Fall, and sowed to rye, to plow in next Spring. The trouble with this combination is that the oats and peas are ready to plow in too early to sow Winter rye. Would rape be better, letting it die, or can you suggest a better combination? I wish to plant a part and have cover crops on a part, alternate years, with the primary object of increasing the humus.

It is rich enough from the dressing I have used to grow fine crops of nearly all kinds. Fruit and berries do splendidly, but it does not hold the moisture as well as I wish. I also sow rape where my peas were, and among my berry bushes, after cleaning them out, and rye among my corn about this time. A. D. M.
Woodfords, Me.

In this case we should plow under the stubble of oats and peas, and sow a combination of buckwheat, rape and rye. The buckwheat and rape will start first and make a heavy growth. At first the buckwheat will be killed, and the rye will begin to grow faster. The rape will die out during the Winter, and the rye will grow in Spring. In some cases the rape is left out, buckwheat and rye being seeded alone. This method kept up year after year, cultivating half the ground each year, will surely improve the soil. We should use annual applications of about 500 pounds of lime when plowing under the rye, except, of course, when potatoes are planted.

Slitting Bark for Blight.

NOTICING a suggestion made by your correspondent, Walter C. Black, of New Jersey, for the cure of twig blight by slitting the trunk of the apple tree, does he have any information as to the time of the year when this should be attempted? How long and how deep a slit should be made, and with what instrument? W. H.
Altoona, Pa.

The experimenting for twig blight was done about August 1, 1913, and was done with the point of a sharp knife drawn on four sides of the main trunk, cutting through the bark only, no bark was taken out. The knife was also drawn down the side branches on two sides. My informant did his cutting earlier, about June 1st, I understand. WALTER C. BLACK.

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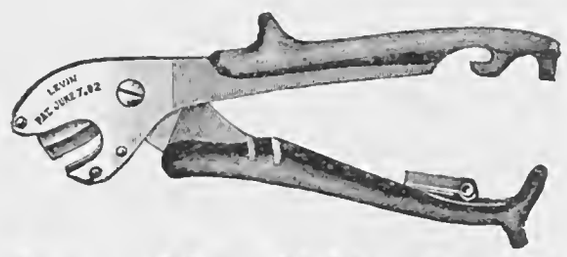

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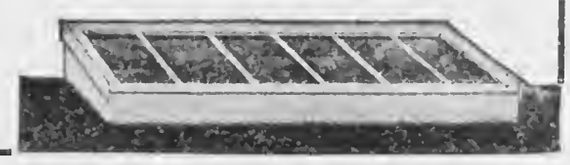
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NOTES AND COMMENTS.

SWEET CLOVER IN MARYLAND.—Riding recently through the lower section of Somerset County, Md., I noticed that all along the roadside and on the ditch banks there was a rank growth of the so-called Sweet clover growing four or five feet high. I called the attention of a companion from Somerset, who was taking me in his automobile, and he seemed surprised that anyone would call that rank weed clover. Of course the Melilotus is not clover, but people have got in the habit of calling all leguminous forage crops, clover. But I noticed that even in fenced pastures the stock seemed to let the Melilotus alone. In fact it is the general experience that cattle do not take to it readily, but get fond of it after they have got to eating it. My own opinion is that here in Maryland we do not need the Sweet clover, as we can get better forage from cow peas, vetch, Crimson clover and Alfalfa.

PLOWING UNDER GREEN CROPS.—The cut on page 1099 shows rye in a stage of growth that I would never allow if wanted for turning under. I would always turn it under when little over knee high. It has then done its part as a Winter cover, and if a disk harrow is run over it both ways it is easy to turn it under properly. With a tall headed growth turned under in a mass the plant has got into the strawy stage, and decays much more slowly, and the solid layer of straw may cause damage in dry weather to a hoed crop by cutting off the rise of the capillary moisture, while the green rye, well chopped into the soil before plowing, will not be in such a solid mass, but will be mixed with the soil. The moisture will not be checked and the green rye will decay rapidly. The disk harrow beats the chain.

THE JOHN BAER TOMATO.—This tomato was sent out with the claim that it was the earliest of all, and that good plants set in the open ground would give ripe fruit in 30 days. Now I had fine plants, started early in the greenhouse and hardened off in cold frames. They were set in the open ground the last of April, rather later than we usually set here. The first ripe fruit was after the middle of July, while the Earliana was ripe the last of June. I have not said that it is not a good tomato, but it resembles Chalk's Jewel very closely, but here was later than Chalk's. My plants made a fine crop of smooth and good fruits, and I shall grow it another season right alongside of Chalk's Jewel. All tomatoes were a little later here this season on account of the extremely dry weather, but all varieties were alike affected by this, and the John Baer ripened at same time with the big Brimmer, which seems to be a selection from the Ponderosa, and we all know that Ponderosa is not early. The John Baer is a good smooth and solid tomato, but here it cannot be called early. The fruit is certainly better than Earliana, but the Langdon strain of the Earliana is quite smooth, and coming in so much earlier is far more profitable for the market grower. In fact the market here was well supplied with Earliana before there was a single ripe fruit on my John Baer plants. I am glad to know that it seemed earlier with Mr. Weaver and I shall grow it, early or not, because of its good cropping and smooth fruit. At the Louisiana station they considered it identical with the Chalk's Jewel.

GREEN ONIONS.—The Egyptian top onions may be best in New Jersey, as stated by Trucker, Jr., but here I plant sets in September of the onion sold by Norfolk seedsmen under the name of Queen. This is not the Early Queen of the Northern catalogues, but is more like the Pearl, but is better and earlier than the Pearl. I have often had them ready for bunching the last of February, and have never found any onion better suited for the green bunching crop. Then I plant the Yellow Potato onion sets at same time, and after the Queen plants are used up the offsets of the Potato onion come in very nicely for green onions, as they clean off perfectly white, and the main bulb can be left to mature, and coming in ripe long before the Northern seed crop will pay very well. In fact I sold them for $2 a bushel this Summer.

W. F. MASSEY.

Maryland.

Defective Ears of Corn.

I SHOULD be glad to know whether the absence of any particular constituent of soil fertility is indicated by the failure of ears of sweet corn to fill out at the end of the ear. My corn, Golden Bantam, which I have raised for a number of years, is of uniformly excellent flavor and the ears well filled out over, say, three-quarters of their length. The remaining quarter, however, is practically devoid of kernels, or at least they are so small at the time the remainder of the ear is fit for picking that there is a wastage of that end of the ear.

J. B.

On general principles this indicates a lack of both phosphoric acid and potash. The cob of the corn is very high in potash while phosphoric acid is the vital principle in all seeds. In such case we should use a mixture of three parts fine bone and one part muriate of potash.

Dodder on Alfalfa.

THERE is an air plant, which we call in this locality "dodder," which is destroying the Alfalfa. It seems to feed on the Alfalfa and sucks the life out of it until it finally dies. It is a long vine, without leaves, and runs all over the top of the Alfalfa. Can you tell me how to get rid of it?

G. F. B.

Covington, Ky.

This dodder is a plant parasite, which grows on the plants of clover or Alfalfa and strangles them to death. It is usually introduced through the seed. A good many samples of Alfalfa in particular have been examined and found to contain dodder. Since the government began its investigations, the Alfalfa seed is generally cleaner than it was before. This dodder is such a pest that no farmer should buy cheap clover or Alfalfa seed, and it will be well to have a sample of the seed examined by the experiment station before putting the seed into the ground. In cases where the dodder extends all through the field, the best plan is to plow, give thorough tillage, and reseed. If there are only patches here and there, the treatment is to mow these patches off, taking two or three feet on the outside of the dodder, rake the grass together and burn it. In this way the dodder may be cleaned out when it has not spread too far, but as stated when the field is badly infested, the best plan is to burn it all over and then plow and reseed.

Gathering and Drying Citrons.

WHEN are citrons ready to take off the vine? 2. How can I sugar cure citrons?

J. C. W.

Hyattsville, Md.

The experienced can tell at a glance by the appearance of the rind when a watermelon or citron is fully ripe, but the inexperienced must look for other signs of ripening, of which there are three that are considered unmistakable. The part of the fruit that comes in contact with the ground is as a rule a greenish white, while the fruit is in the green or unripened condition, and is perfectly smooth to the touch, but when the fruit is ripe, the part next to the ground assumes a yellowish cast and becomes scaly and rough to the touch. This is an unmistakable sign that the fruit is ripe enough to pick. The rind of the green fruit is tender and quite easily punctured by the thumb nail, but when the fruit is ripe the rind is tough and difficult to puncture in this way. Still another sign is present that is fairly reliable, but not always so. At the base of the stem, or axil, there is always a curl or little tendril. This remains green until the fruit approaches the period of ripening, when it begins to turn brown, and is usually dry and hard when the fruit is fully ripened, though not always.

How to Preserve Citron.—Cut the citron in thin slices, pare off the outside rind and take out all the seeds, put in the preserve kettle with water enough to cover it; boil until it can be pierced easily with a fork, skim it out and strain the water, placing back in the kettle. Allow three-fourths of a pound of sugar to a pound of citron; dissolve the sugar in the liquor, cut three or four lemons and boil until it becomes a thin syrup, then put in the citron and boil until the citron is transparent. Then it is done. Now lift the citron out of the kettle with a ladle or draining spoon, and place on a wire tray, and when dripping has stopped sprinkle powdered sugar thickly all over the pieces and set in the sun or warm oven to dry. When thoroughly dry it is to be packed in small wooden boxes and set in a dry, cool place.

K.

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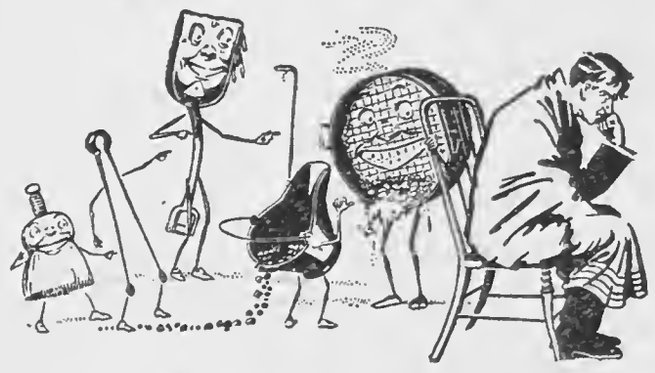

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NEW YORK STATE APPLE OUTLOOK.

ABOUT 60 per cent of trees, have fair crop of good quality but a little under size. Local buyers are offering $1.50 for 2½ inch Greenings, $1.70 for Kings, packed A grade. L. V. F.
Charlotte, N. Y.

Apple buyers here are not taking hold. One local dealer has bought a few orchards at a lump sum, and another has paid $1.50 tree run, barrels included. Growers generally are going to handle the apples according to the new law.
Brockport, N. Y. H. L. B.

Our apple market is very dull. A few growers have sold Greenings at $1.50 per barrel "A" grade, packed 2½ inch. Others have sold Greenings at 50 cents per 100 pounds. Twenty Ounce are selling at $1.75. As yet there is no market for Baldwins. Most of the apples in this locality will be handled through a branch of the Eastern Fruit Exchange recently organized in Churchville and will be packed at central packing plant.
Churchville, N. Y. Y. D.

I have heard of one sale at $1.20 per barrel for New York standard grade A, 2½ inches and upwards, and this price has been offered us. The same buyers take the seconds at 20 cents per hundred. Evaporators are buying some orchards at 25 cents per hundred for the crop, shaken and picked up. Twenty Ounce and King A have sold for $1 per hundred. Fall Pippins and Maiden Blush 75 cents per hundred. G. W. C.
Union Hill, N. Y.

Buyers are only looking at orchards and some are not even offering any price. Local dealers are offering $1.25 for A grade for fruit and barrel and $1 for B grade. Growers who barrel their fruit will try to handle them according to the new law. Some are going to make three grades. Growers who do not spray or thin their orchards well have an inferior quality and nearly all of them are taken to the canning factory at a low price this year. We shall pack our fruit under the new law and store it in Philadelphia.
Sodus, N. Y. A. D.

I have heard of but one or two sales of Winter apples at $1.50 for A grade. Baldwin 2½ inch and up. Greening are bringing from $1.30 to $1.60 for A grade, 2½ inches. They sort ont one half or more. Twenty Ounce are from $1.75 to $2.25, A grades. There has been no market for drying stock yet. One carload of ciders sold at 12 cents per hundred.
Spencerport, N. Y. L. E. C.

I do not know of any sales or any offers being made by buyers. I think this is due to the reluctance of the banks to advance money on storage receipts, as they usually do. I believe that all growers who are in the habit of storing and shipping their own apples are striving to live up to the new law. Others denounce it and are trying to dispose of their crop by the bushel. F. W. C.
Pultneyville, N. Y.

Wealthy, Twenty Ounce and Alexander have brought about one cent per pound or $2 for A grade packed according to the new law. I know of no sales of Greening or King. No offers made on Winter fruit yet. The buyers say there is no market and the export trade is spoiled for the present. There has been a new growers' and shippers' exchange formed here in the last few days with 20 members. Winter fruit seldom looked better than at present, and a good crop of most varieties. G. J. A.
Hilton, N. Y.

Buyers are offering $1.50 for King, Spy, Twenty Ounce and Pound Sweets. I have heard of one sale of Baldwins at that price, all to be packed standard A grade. I think nearly all the growers in this locality intend to pack in accordance with the new law. I understand the evaporators intend not to run. D. D. S.
Wyoming, N. Y.

Some buyers are offering $1.50 for Winter apples, but not many sales. It is about impossible for buyers to get money to buy apples with, or for farmers to get money either, and the uncertainty makes a man think twice before he buys apples at $1.50, even if he can get the money. I do not believe, however, that the apple crop will barrel up nearly as big as reported. C. A.
Medina, N. Y.

There are no outside buyers in here and the local dealers are not on the road looking for apples. They are buying some. Prices ranging from $1 per barrel, including the barrel, to $1 per barrel for the fruit. Growers who are packing their own apples seem to be making an honest effort to comply with the law and all seem to agree that the law is a good one so far as its intent is concerned. There will be comparatively few "fancy" grade apples here as they are running small. Grades will be mostly A and B, A grade being packed down to 2½ inch. Evaporator men are buying orchards, tree run, for from 25 to 40 cents per 100 pounds with chops out. C. P. F.
Williamson, N. Y.

The situation here is hard. Practically no sales have been made at this time; no buyers here and all local men seem to be talking less than $1. About 50 per cent. of the growers are packing in accordance with the New York standard pack. The rest are selling tree run. The inspectors have been around among the buyers and ordered several to either re-pack or mark unclassified. About 40 per cent. of the fruit will go as Fancy or A brand, here. Reports have it that buyers from out of the State are shipping out fruit, unbranded and a very poor class of fruit at that. T. W. A.
Holley, N. Y.

Dealers do not seem to be buying in large quantities, whether from lack of financial backing or confidence, I do not know. One dealer with whom I have talked, says he is going to store about three thousand barrels—enough to take care of his regular trade—and will buy only in small lots through the Winter. This man ordinarily stores 20,000 or 30,000 barrels and buys small lots besides. Greenings, N. Y. standard A grade, min., size 2½ inches, are bringing $1.50 per barrel, packed. I have not been able to get an offer on a very nice lot of Kings and Baldwins and have not heard of any sales or bids. Wealthys and Twenty Ounce I received $2 for. Cold storage space is all taken and I know of several lots which are going into common storage. We are all packing under the new law and I believe it will help us in marketing this crop. L. M. B.
Albion, N. Y.

It is not my opinion that the buyers are making a concerted effort to work the price down. I believe the truth is that the buyers are entirely at sea as to what they are going to do with the apples after they buy them. This, we think, is borne out by the fact that very few buyers are in sight anywhere, and it seems to us that if the buyers were acting in concert to work the price down, they would be in evidence, talking low prices. The writer has been connected with a line of canning factories for the past ten seasons and has been interested in the buying of apples for canning purposes and has had to follow closely the barrelled apple situation. During that time I have never known the buyers to be avoiding apples as they are this year. The reason would seem plain that they have fear of their ability to dispose of the fruit on almost any basis. Most farmers who are marketing their own barreled apples are doing so in accordance with the new law. I find them more or less conversant with this law, but find also that many prefer to market their apples to the buyer tree-run and let the buyer assume all of the trouble in the marketing of the fruit under this law.
Batavia, N. Y. R. M. D.

Sept. 28. Fruit raising and dairying are the principal occupations in this, the Southern part of Ohio. People are beginning to turn their attention to fruit, as this section is more adapted to grazing and fruit raising than to raising grain. Price for butter at stores here 24; eggs 24; peaches $1 per bushel; apples not much sale, talking 50 cents per bushel. Potatoes $1; hogs 8½; cattle 6 to 7; chickens 10; veal calves 11. Wheat around the dollar mark, while flour sells by the single sack for from 70 to 75 cents. One mill offers 95 cents for wheat while flour from their mill is retailing at 70 cents per sack. The potato crop here is a failure, owing to drought, yet prices remain low.
Alice, O. E. L. T.

NEW YORK STATE NEWS.

THE REST DAY LAW.—The cheesemakers of the State are of the opinion that the one-day-of-rest law, enacted by the last Legislature, is unconstitutional, and they are going to try it out in a test case. Wm. J. Peach, one of the largest cheese manufacturers in the State, has been made defendant in a friendly suit to test the law. It is to get a decision of the courts on an important matter, as the cheese men think, for milk must be taken care of on Sunday as well as on any other day of the week at cheese factories.

THE DEER SEASON.—October 1 the deer season officially opens. It is well for those who shoot deer, or shoot at them even, to bear in mind that male deer only may be shot, and these must have horns at least three inches long. The fine for violation of the law in this respect is at least $50.

THE APPLE TRADE.—There is less activity in the apple business in Western New York than last year, but growers and buyers will be likely to get on better terms before the week closes. Farmers have been holding No. 1 Kings and Greenings at $1.50 and some were sold at that price but Baldwins went for $1 to $1.25. It appears that the foreign war is not hampering shipments as badly as it was feared early in the season. In fact the export movement from Atlantic ports to European ports was greater by 10,000 barrels, up to last week, than for the same time last year. Last week's movement from New York was 17,000 barrels, the shipments being divided between Liverpool and Glasgow, the latter getting the big end of the trade.

INDICTED FOR ROAD GRAFT.—A former first deputy State highway commissioner and a Troy contractor have been indicted by the Ulster County grand jury on charges of conspiracy and grand larceny, also a labor foreman. These indictments hinged on a comparatively small contract for building two and a half miles of road in Saugerties township, the allegation being that the stone used on this road cost only $3.30 a cubic yard, while the State paid $6.25 for it. It also appears that the road was a wretched piece of work, and one end had worn out before the other end was completed.

FOREIGNERS WANTED IN JEFFERSON.—A plan is under way in Jefferson County to organize an association for the purpose of inducing desirable immigrants to locate there. This is done in view of the shortage of farm help, both indoors and out, and it is believed that if a stream of immigration can be started from a race or nationality to this locality that it will continue for many years. Of course, no immigration is expected from the nations while at war, but when it ends there will be a rush for this country, as the promoters of the plan aver. Senator Brown, State Grange Master Vary, D. C. Douglas, and others, are interested in the matter. It is hoped that 500 or 1,000 farm laborers may be induced to settle in that county, and it is estimated that there are now enough vacant houses to accommodate them.

GRANGE HALL DEDICATED.—The fine new grange hall of Chapel Corners Grange, in Poughkeepsie, was dedicated recently, State Master W. H. Vary officiating. The building is of concrete blocks and cost $3,000. The assembly hall is on the second floor, and on the first floor there is a kitchen and smaller rooms.

COW JUDGING CONTESTS.—The Farm Bureau of Tompkins County has conducted cow judging contests at three county fairs, and thereby 44 boys have received a lesson in judging, while 31 were benefited by actually testing their skill in placing the cows, in the judging ring. It would seem to be a good plan for other farm bureaus to adopt where there is much interest in the breeding of pedigreed stock. J. W. D.

COMING FARMERS' MEETINGS.

National Apple Day, October 20.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy-Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers, Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

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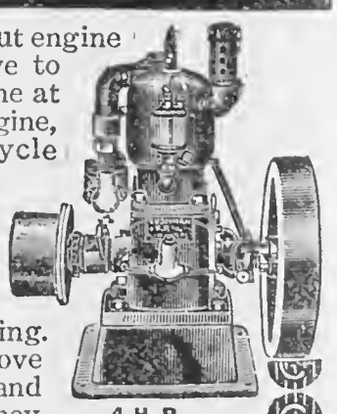

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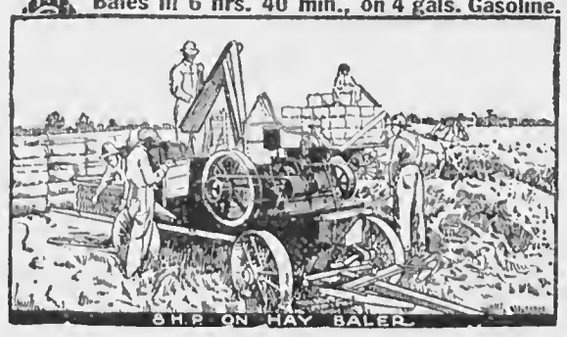

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A Young Clover Crop.

WHAT shall we do this Fall with a strong crop of clover of this year's seeding?

On the college farm we do not pasture our meadows. It is not every year that we get a sufficient growth of second-crop clover to raise the question whether it shall be taken off for feeding purposes or left on the ground for the benefit of the soil. As a rule, when we have the growth we usually have use for the hay and harvest it. I should say the need of the hay would be the factor that would decide what course to pursue.

If the farm supplies more than sufficient hay for the live stock kept, it is good practice to clip the second growth and let it remain on the soil. As an experiment, two years ago, having a field with a very nice second growth we cut and removed a portion of it, we clipped and left on the ground another portion, and left the third portion standing. This growth was so good some feared that if left standing it might fall flat and smother the roots. As a matter of fact, we were not able to discover any material difference in the effect upon the succeeding Timothy crop. Of course it must be that leaving the crop on the ground will, in the end, benefit succeeding crops, but the benefit did not appear immediately. My answer to such a question is, if you have real need of the hay, harvest it; if not, leave it on the land for the benefit of the soil. I know little difference between clipping it and allowing it to stand.

[PROF.] J. L. STONE.

Cornell University.

It is some years since we have had a growth of clover that seemed to need any especial attention the first season. Even this year of increased rainfall gives us only one piece that can possibly take any harm by being left to itself, and this is not so great a growth as to determine us to cut it. Usually there is no danger in leaving it to take care of itself, and if not we let it alone. I have tried clipping and leaving on the ground, but I think if I were to clip at all I would harvest and feed, returning something in the shape of fertilizer. Sometimes we used to turn in stock, but of late years all cattle have been kept out of the mowing land. This we do so as to prolong the time of keeping the field in grass. My idea would be to let it alone unless the danger of killing out is considerable, and if that is the case I would either turn in cattle for a short time or mow and feed to stock. H. H. L.

Plowing Old Grass Field.

I EXPECT to plow under a grass field that has not been plowed for 10 years. Would you advise a coat of lime before plowing this Fall? The ground is well drained and does not appear to be sour. I wanted to plant a part of the field this Fall with strawberries and perennials. Would this be all right, or would I better wait until Spring? W. E. K.

New Jersey.

We should not put lime on top of that sod and plow it all under. In this way you would lose part of the value of the lime. The best way is to plow the land, then spread the lime and work it thoroughly into the soil. In this way lime is mixed all through the upper soil, so that it may perform its chemical work to a much better advantage. It is probable that the land is sour after standing so long. Do not under any circumstances plant strawberry plants on an old sod of this kind or on soil which has just been limed. You could hardly do a worse thing than follow either plan. The strawberry will not thrive in connection with lime, as it prefers a sour or slightly acid soil. These old sods are sure to contain many white grubs and wireworms which would prove very dangerous to the berry plant. It would be well enough for the perennials, but leave out the strawberry until that ground has been thoroughly fitted.

Acetylene Waste as Whitewash.

SOME time ago, some one asked about a use for the waste from an acetylene plant. In the South, a development company used it as whitewash on fences and laborers' cottages. G. S. H.

R. N.-Y.—This waste or deposit is lime—nothing else, therefore it ought to make a fair whitewash.

"YES, my son is going to spend a few days in the city." "He'll git bunkoed sure." "Well, he's sure of carfare home. He's wearing a $10 bill underneath a porous plaster on his chest."—Louisville Courier-Journal.

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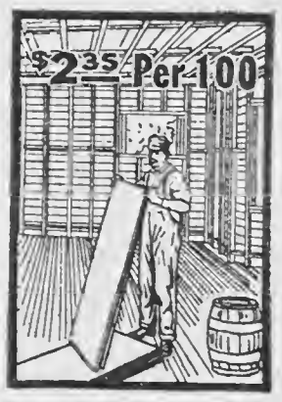

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Hope Farm Notes

WILL you advise me regarding the Fall planting of peaches and other fruit trees? F. R. A.
Allendale, N. J.

As the result of our experience we plant in the Spring. One year we planted both apple and peach in the Fall and had a fine showing as the result of it. Encouraged by this we made heavy plantings the next Fall and lost about 75 per cent. of the trees. Investigation showed that the first lot of trees were fully matured, with the wood solid and firm. The Winter, while cold, was steady, without great changes. In the second case the trees were soft and tender. The nurseryman had evidently stripped off the leaves by hand to make them appear dormant. The Winter was variable—severe cold spells alternating with warm thaws in February. Those unripe trees were frozen and did not recover. With trees fully mature and sound I think Fall planting in our section would be safe. The work would be out of the way, and in case of a very late Spring this would help. After our experience, however, we stand by Spring planting.

Why was it that my strawberry bed, 15x30 feet in dimensions, yielded me less than half a dozen quarts of berries this season? J. B. L.
Vermont.

Not having seen the strawberry bed I do not know. All I can do is to name some of the things which might be responsible. The plants may be "imperfect." Most varieties carry both male and female flower parts and are thus self-fertile. Others have only the female parts, and cannot set or produce good berries unless the pollen is supplied from other plants. Bees will do this to some extent, but usually such varieties give little or no fruit unless male plants are nearby. There may be white grubs working at the roots, or borers at the fruit buds. The plants may have been fed too much nitrogen last year. In that case they would make a rank, heavy growth of vine and leaf, but very few fruit buds. Remember that the buds from which next year's crop will grow are *now made* or now *being made*. If you force the plants into a rank growth now you may have no fruit next year! The soil may not suit the berries—you may have used lime or wood ashes freely, in which case the strawberry plants will not do their best. How old are these plants? If they are potted plants set last Fall you could hardly expect a larger crop. As you give us no particulars I cannot do more than mention these general causes.

FARM NOTES.—Our mangel crop will not be a "wonder" by any means. There are no great roots such as we read about, but we shall evidently have a good lot of medium-sized mangels. As we expect to sell part of the crop to chicken men these smaller roots will be more suitable than the giants. The carrots have done better this year than the mangels. In fact the carrot seems to me better able to take care of itself than any farm crop I know of.....There are still several varieties of late peaches to pick—Salway and Iron Mountain and several of the elings are slow to mature this year. A light frost will not hurt these tough citizens. On the whole, in spite of rather low prices, our peach season has been the best we ever had. Some of the large growers have been obliged to sacrifice some of their crop, but we have so many varieties that there has been no great surplus of any one. From Alexander to Salway and Iron Mountain with us means 75 days at least of continuous peach picking..... By October 1 all the Wealthy, Twenty Ounce and Wolf River apples had been sold. The McIntosh had been picked and all delivered except about 50 packages. Then will come Greening and Northern Spy—the latter a Fall apple with us. Most of these earlier apples sold in peach baskets at 40 cents each for No. 1. The Baldwins will be left on the trees as long as we think safe and then picked and sold at once. I shall make no effort to store fruit this year—except enough for our own use.....Corn cutting started September 23, and we hope to get the entire crop cut before frost. Our corn is all grown in the orchards between the rows of trees. Many of the trees are now so vigorous and large that the corn does not have a fair chance, and thus makes a poor crop. In the younger orchards our flint corn does well, and is the best variety or strain I have yet found for such planting. The stalks are slender and full of leaf, so that the stock will eat the fodder up clean—as they do hay. The ears are full of kernels, and well set on the stalk. I feel sure that selected strains of Canada flint corn will produce more grain in orchards or on rough hillside culture than any other grain plant that can be found. Last year we lost much of our seed through the wet Fall, but this year we shall make a business of saving it.

CLASSIC COVER CROPS.—We surely have all sorts of people who are interested in farming, and they look at the subject from many different angles. Take this cover crop proposition. Not many of us can see any classic literature or poetry in plowing rye or turnips or vetch into the ground. It seems a very practical operation—though we know it is profitable. Men come and tell me to read in old Greek and Latin classics about this very process. They also tell me that the poets have plowed a few cover crops into literature. These classics are beyond me. I can root-prune a tree, but Greek and Latin roots are too much for me. As for the poets no doubt many of you are already familiar with the following from "In Memoriam."

How many a father have I seen,
A sober man among his boys
Whose youth was full of foolish noise,
Who wears his manhood hale and green.

And dare we to this fancy give,
That had the wild oat not been sown
The soil, left barren, had not grown,
The grain by which a man may live?

You might, with much truth, call that a moral cover crop—plowing under a crop of young wild oats and putting on a good dressing of character to represent the lime. Some minister, familiar with farming, might make a good sermon out of this. You will have to count me out of sermons and classics, but if I could have my way this matter of cover crops would be driven home to farmers everywhere and at all times. Having seen what rye and lime have done for our hard and barren soil, I try to spread the glad tidings—especially to those farmers who are situated so that they can grow vetch, clover, beans and the other crops which are so much better than rye.

HOPE FARM HENS.—There has been some objection to "scrubs" as a name for the hens at the egg-laying contest. It is suggested that "culls" would be a better name. I do not care what they are called—suppose we call them "hens." That ought to suit all hands. Whatever you see fit to call them here is their August record:

HOPE FARM "HENS."

	May	June	July	August
No. 1.....	21	7	18	13
No. 2.....	22	19	21	20
No. 3.....	23	22	20	17
No. 4.....	21	10	18	8
No. 5.....	28	21	12	16
No. 6.....	25	19	15	10
No. 7.....	13	11	4	15
No. 8.....	19	18	10	26
No. 9.....	22	23	25	26
No. 10.....	19	19	22	21

As they laid four eggs outside the nest they are credited with 170 eggs. Suppose we make some comparisons, as follows:

EGGS IN AUGUST.

Hope Farm "hens".....	170
Best Rock (3 breeds).....	177
Poorest Rock (3 breeds).....	136
Average Rock, 13 pens.....	153
Best Wyandotte (3 breeds).....	187
Poorest Wyandotte (3 breeds).....	122
Average Wyandotte (10 pens).....	154
Best R. I. Red	190
Poorest R. I. Red.....	102
Average R. I. Red (15 pens).....	132
Best Leghorn	238
Poorest Leghorn	104
Average of all (82 pens).....	159

Thus my "hens" beat the average of all the pure breeds and the average of all by 11 eggs. Up to September 1 they laid 1,158 eggs. I had figured on 1,100. Judging from their past week's record I think they are now about done, and I expect to see them quit entirely by the middle of October. If they lay 1,300 eggs all told by November 1, it will be at least 300 more than I expected, and I am prepared to enter them right over again for another trial.

CHRISTMAS TREES.—I have told several times what a mistake we made when we first came to this farm and started to clear up the back fields. We started to raise corn and potatoes, and then peaches and apples. The latter are doing well, but the journey over the rough hills is bad for the peaches. I now see that if, when we started, we had planted from year to year, hemlock and spruce in these fields and given them reasonable care we should now be reaping our reward. The demand for Christmas trees is growing each year, while the supply for New York has been restricted. Had we started planting the evergreens when we came here we might this year cut out carload lots of trees suitable for Christmas, and in this way benefit the trees that were left. Somehow I must confess that I could not take "forestry" very seriously when we started. By the failure to look ahead we have missed an opportunity. No doubt the dairyman or the grain grower or stockman will smile at this idea of a Christmas tree crop, but there is a good future in it for some young fellows near large cities who have cheap waste land and abundant patience. This country is now so big and its people are so varied that any product you can mention may become a profitable crop if the right man will start it in a suitable place. If you could look ahead 10 or 15 years into the future development of your neighborhood and market the chances are that you would go to planning to produce things which seem ridiculous to you now. H. W. C.

The Florida Land Frauds.

YOU recently printed part of our circular showing up the land frauds and fakers. While you evidently bear the distinction clearly in mind, I want to invite your attention long enough to say that readers of my letters should notice that I am aiming only at the fakers; I mean the fly-by-night organizations or agents that acquire swamp lands or beds of sand in Florida and sell them out to unsuspecting victims. These barren tracts are to be found in New York and, indeed, in every State in the Union, and constitute but a small part of the acreage. These fakers do not go into the best counties, or even secure titles to or control of fairly good land, not to mention the best land. These are the fellows we want to nail, and thus save men and women from all over the country from being victimized. Whenever you hear of one of these fellows in this territory, if you will send us down a description of the exact location of their lands, we will have the matter looked into, and can tell you mighty quick if the soil is fertile and adapted to the peculiar crops that may be boosted.

Only the other day we very likely saved a man from investing in some pineapple land or land for pineapples. The tract was represented to him as being first-class for the growing of that fruit, when as a matter of fact, it was not, being within the frost belt, but is of high grade as farming or grazing land.

F. M. RUNNELS,
Secretary.
Gainesville, Fla., Board of Trade.

THE real estate dealer had gone into the details of the Summer cottage at great length and Mr. Steiner had become bored. "The cottage is a stone's throw from the trolley," said the agent. "Indeed! That's good," said Steiner. "It will give us something to do Summer evenings." "I beg your pardon," said the agent, rather mystified. "I said it would give us something to do evenings," repeated Steiner. "We can sit in the cottage and throw stones at the trolley."—Evening Post.

Write For This Book

—if you haven't an indoor closet in your home. It tells how we have perfected a chemical system which does away with the necessity for sewerage or cesspool connections, thus placing a sanitary indoor closet within the means of those who could not heretofore afford one.

THE WATERBURY SANITARY CLOSET
ALL METAL-CHEMICAL

—can be placed in any room in the house, —it is so inoffensive, so absolutely odorless, so positively sanitary. The price of $22.50 includes everything. No installation expense. A boy can set it up.

We sell it by mail under a *real* guaranty covering the odorless and sanitary features, as well as materials and workmanship. Thousands sold and giving entire satisfaction.

If you're in a hurry to put an end to the inconvenience, discomfort, distress and suffering that you now have to put up with, send us your order direct. We'll ship promptly.

WATERMAN-WATERBURY CO.
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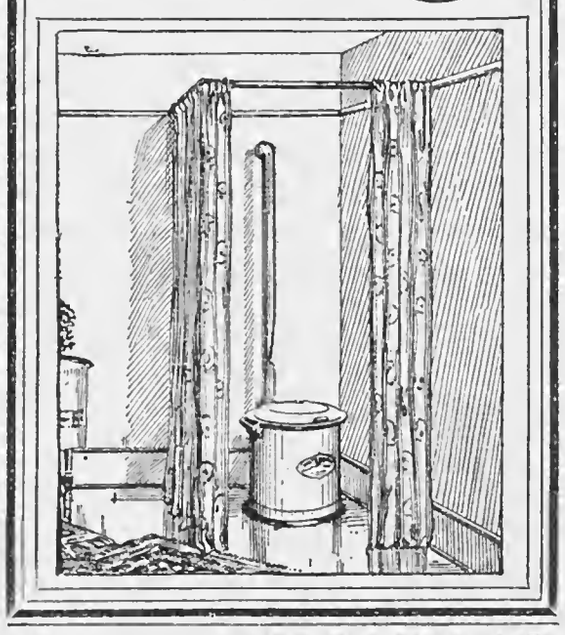

RIEMER'S
WOOD SOLE
Buckle Shoes, $2.50
High Boots, 4.00

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Just the thing for farmers! Light, durable, sanitary, waterproof—way ahead of leather or metal soles for all farm and dairy work. Try a pair and be convinced. Send money and state size wanted. Delivered by Parcel Post, free, direct to your door. Satisfaction or money back. Illustrated booklet free.

A. H. RIEMER SHOE CO. (Established 1887)
2911 Vliet St., MILWAUKEE, WIS.

Monarch Steel Stump Puller
Sold On 5 Year Guarantee—Investigate.

Made of steel. Has all modern improvements. Easy to operate. Triple and Double Power Machines clear 1 to 5 acres per day including stumps up to 7 ft. in diameter. It will pay you to get our catalog and guarantee. Zimmerman Steel Co., Lone Tree, Iowa. Dept. NY

ROCHESTER ROTARY WASHER

Does away with wash-day drudgery and enables you to do the regular housework at the same time the washing is being done.

Simple, quick, inexpensive to operate. This home washing machine, with the reversible wringer attachment, washes clothes by tumbling and the suction of hot suds in a revolving wooden cylinder without any rubbing or grinding action. Works on the same principle as the best laundry machine.

Washes Clean and Does Not Wear Out the Clothes

Has a capacity of approximately 7 sheets or equivalent. Washes everything from blankets to fine linen, and has no complicated mechanism or springs; is simple and durable throughout. Operates by Electric Motor, Water Motor, Gas Engine, or by Hand. We furnish motor and wringer complete.

If you want to make wash day a pleasure and

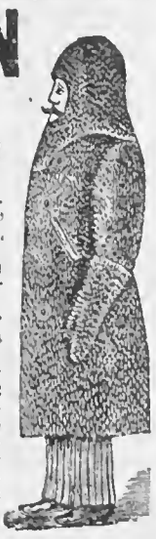
Save Money, Time, Worry, and Clothes

Write for our "Rochester" booklet mentioning the kind of equipment you desire.

LOOK OVER THESE SPECIAL FEATURES: Clothes do not touch rustable material. Metal tank, which does not shrink, warp, rot, or leak. All gears protected. Cylinder easily removable. Reversible Wringer and Lever control. Brass faucet with one-inch opening, threaded for hose coupling. Write today for the booklet.

Rochester Rotary Washer Co., 632 Culler Bldg., Rochester, N. Y.

LET US TAN YOUR HIDE.



Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. **We tan and finish them right;** make them into coats (for men and women), robes, rugs or gloves when ordered.

Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

It tells how to take off and care for hides; how and when **we pay the freight both ways;** about our safe dyeing process which is a tremendous advantage to the customer, especially on **horse hides and calf skins;** about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.

HANDY BINDER Just the thing for preserving files of THE RURAL NEW YORKER. Durable and cheap. Sent postpaid for 25 cents.
The Rural New-Yorker, 333 West 30th St., N. Y.

Ruralisms

CHINESE PEACHES.

BULLETIN NO. 97, of the Office of Foreign Seed and Plant Introduction describes some of the new peaches introduced from China by Mr. Meyer. The Fei peach, from Feitcheng, is thus described:

A remarkable variety of clingstone peach, considered to be the best in all China. Size, large to very large; shape, round; very heavy, often over one pound apiece; skin, quite downy and of pale yellowish color, with a slight blush on one side. Flesh very juicy and sweet and of excellent aromatic flavor, of white color, except near the stone, where it is reddish. Stone very large and pointed, flesh strongly adhering to it. Ripens in early to middle October, and possesses excellent shipping and keeping qualities. The trees are of erect growth when young, but when older they spread out considerably, remaining of open growth. To reach their greatest perfection these peaches need to be fertilized each Spring, while during dry seasons they are irrigated from wells. The fruit is also thinned. The soil they seem to thrive in best is a porous, light clayey loam of reddish color, retaining moisture quite well, but not becoming too soggy. The local people calculate that on an average a tree supplies ten dollars Mexican worth of fruit each season, and they consider an orchard of these peaches a very valuable asset indeed. The climate around Feitcheng is of a semi-arid nature and this variety of peach may be expected to thrive especially well in the regions west of the Rocky Mountains. Chinese name, "Fei tao," meaning "Fei peach."

Five varieties of peach cuttings have been secured from Taianfu, Shantung. One of these is said to be very large and juicy, weighing up to a pound, and keeping to December, another of medium size, ripening late, and keeping well, a third very ornamental flowering variety, with small, peculiarly-shaped three-pointed, rosy-red fruits, and two of the pien tao or flat varieties, of good quality.

NORTHERN OHIO GARDEN NOTES.

IT is now a little past the middle of September, and I am using odd bits of time in transplanting strawberry plants from the edges of matted rows into the middles of late tomato rows which were planted between every other row of Alaska peas, and consequently are five feet apart. Next Spring I can plant early peas or beans where the tomatoes are, and can thus utilize the ground while the strawberries are making wide matted rows of plants to sell or transplant. The weather, barring rain, is much like April, with nights almost as long as days; the sun is no longer vertical, and with moist ground the conditions are very favorable to success. Many of the plants have some soil adhering to the roots, and being dug close by are out of ground less than half an hour. The ground is firm, it having been six weeks since last cultivated, and I do not disturb it. I just scrape it with a hoe to kill the young sorrel and purslane, and place the plants in small holes about as big as a teacup scooped in the soil, and press the loosened earth back around the roots. No attention is paid to straightening the roots, as it is not necessary, and too much fussing with the roots loosens the earth adhering and does more harm than good. At this writing, 11 a. m., very few plants set yesterday are wilting, although the sky is clear and some wind is blowing. My object in setting now is to save time and utilize plants which otherwise would have to be destroyed in plowing.

Possibly I may get a little fruit. When the frost kills the tomato plants I shall pull the vines and throw them over the berry rows, which will protect them sufficiently until time for Winter mulching in December. Where there is a plantation close by the transplanting may be done as late as October 10th in the latitude of New York, and later farther south, provided the ground is kept from freezing by a mulch of short straw or coarse manure. A healthy strawberry plant set in moist ground with little disturbance or drying of the roots will often send out roots six inches long in a week after moving, but these roots are near the surface, and too weak in their growth to hold against frost.

LATE CUCUMBERS.—The latest cucumbers I ever grew were planted in the row between newly-set raspberries, the raspberries being 72 by 30 inches. The raspberries made a rank growth, and at blighting time (close of August) shaded the vines and I am sure prevented the blight spores from being deposited in large measure by the wind, and the cooler atmosphere hindered development of those which were deposited. The vines were healthy and bore until frost came in October. Gathering the pickles was thorny work, but I had the market all to myself and those dilatory women who always wait to buy cheap had the pleasure of paying 60 cents per hundred or doing without. As the frosted leaves dropped I found quite a few overgrown slicers which had been overlooked, and these found a ready sale for chopping. I have a friend who plows under a rich strawberry field nearly every year and plants to sweet corn and cucumbers about June 25th. He marks for corn and plants two rows of corn and one of cucumbers. The ground is marked east and west and the cucumbers allowed to grow with two plants each two feet. The corn makes a rapid growth in the July weather, and seems to temper the atmosphere so as to prevent blight, and very likely catches spores which would otherwise be deposited upon the vines. For a couple of seasons this man has let his September setting grow to slicer size, picked them, and laid in loose piles upon the ground and covered with cornstalks. In this way they keep perfectly for three weeks, and last year he got one dollar per dozen, the market being bare of cucumbers. Of course, it must be guessing on the weather when to begin laying them by, but if they commence to rot they can be marketed and in any but abnormal seasons find a ready market. L. B. PIERCE.

The Brashington Cherry.

DO you know anything about the Brashington cherry, a sour variety? What are its good and bad qualities and why is it not catalogued by the nurserymen. J. F. S.

Waynesburg, O.

The Brashington cherry is a variety that I never heard of and I think it must be either very newly originated or of so little value that it has not been brought to general notice. There are such good kinds of sour cherries now well tested and known to be valuable that it seems rather needless to introduce new kinds, unless they surpass those we have in good qualities. The Richmond is the first to ripen, the Montmorency next, and the English Morello last, which cover the season fully and are almost without fault.

H. E. VAN DEMAN.

"No purpose once undertaken should be given up," said the resolute man. "Maybe you're right," replied Farmer Corntossel. "But I know a hen that lost a lot o' chickens by tryin' to hold out an' hatch a china egg."—Washington Star.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

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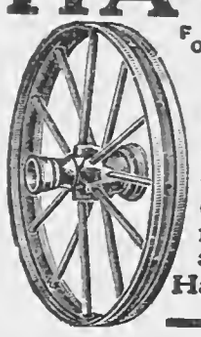

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That is what users paid dealers last month for this new-model HUDSON Six-40: that is, they paid weekly, on the average, $930,000. They bought the limit of our output—100 cars per day—and urged us to build cars faster.

The World's Record
Among Class Cars

That is the record demand for a quality car.

The HUDSON Six-40 now outsells any car in the world with a price above $1,200.

HUDSON sales today are *five times* larger than last year at this time. Yet the HUDSON has long been a leading car. Such an increase as that—five-fold in one year—was never before made on a well-known car.

We trebled our output in July, when this 1915 model came out. But in 30 days we had 4,000 unfilled orders. Thousands of men—with other cars plentiful—waited weeks for this HUDSON Six-40. No other car would do.

The Magic Model

You should see at once the new car which has wrought this magic. It has upset all the old ideals, and changed all former standards.

It is 1,000 pounds lighter than former cars of this size, yet never was a car more sturdy. A new-type motor saves about 30 per cent on fuel.

It brings out countless new attractions in beauty, comfort and convenience. And it costs you less than a class car ever before has cost.

The cars you know will seem crude in comparison. Go see the refinements which men so welcome in this new-day type of car.

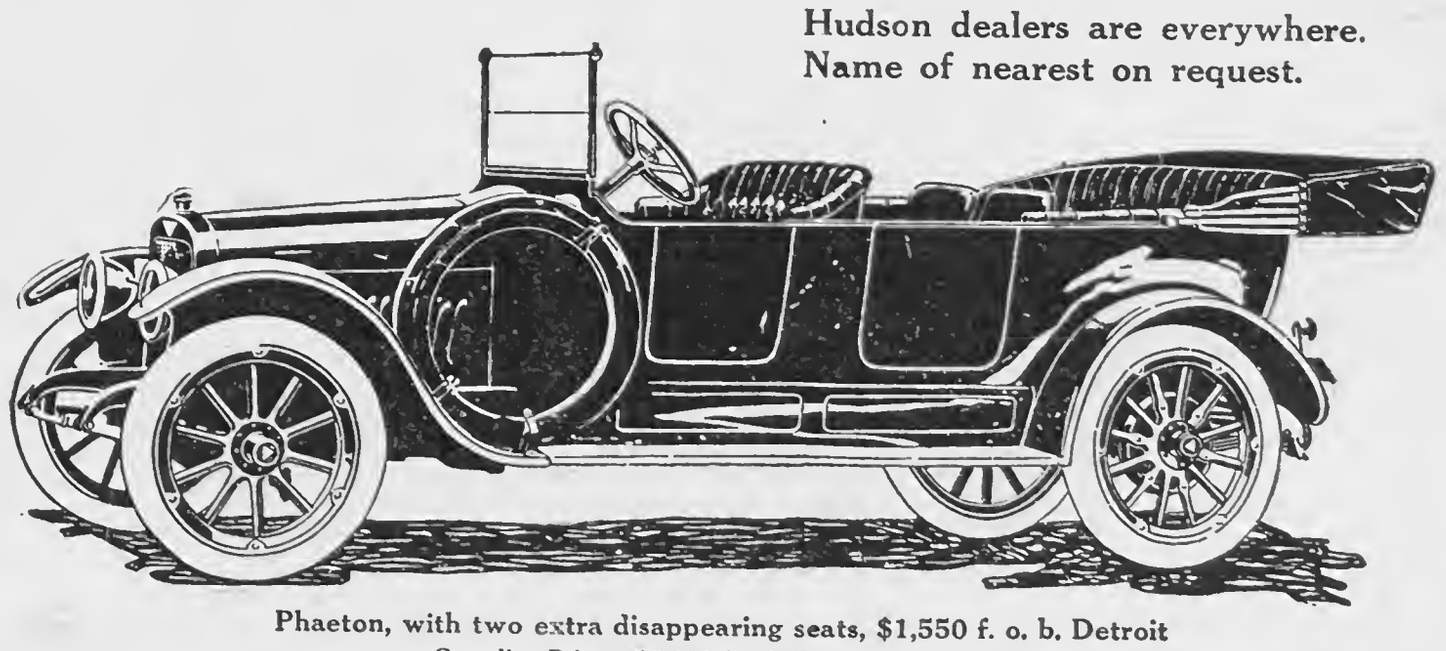
Due to Howard E. Coffin

This new-model car is due to Howard E. Coffin, the famous HUDSON designer. He has always led in advances. In this HUDSON Six-40 he reaches his climax—his finished ideal of a car.

He has worked for four years to perfect it. All the 47 other HUDSON engineers have worked with him. Now every part and detail show their final touch. You will never want a finer, lighter, handsomer car than this.

Go see it. If it suits you, get your new car now. The 1915 models are out now, so you know what's coming. And this is touring time. You have leisure now, and the coming months are perfect. Don't miss them. Your dealer will get you prompt delivery, even if the car has to come by express. To make prompt deliveries we have already shipped almost 1,000 cars by express—an unprecedented thing.

Hudson dealers are everywhere.
Name of nearest on request.



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(235)

The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

Published weekly by the Rural Publishing Company, 333 West 30th Street, New York
HERBERT W. COLLINGWOOD, President and Editor.
JOHN J. DILLON, Treasurer and General Manager.
WM. F. DILLON, Secretary. MRS. E. T. ROYLE, Associate Editor.

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We believe that every advertisement in this paper is backed by a responsible person. We use every possible precaution and admit the advertising of reliable houses only. But to make doubly sure, we will make good any loss to paid subscribers sustained by trusting any deliberate swindler, irresponsible advertisers or misleading advertisements in our columns, and any such swindler will be publicly exposed. We are also often called upon to adjust differences or mistakes between our subscribers and honest, responsible houses, whether advertisers or not. We willingly use our good offices to this end, but such cases should not be confused with dishonest transactions. We protect subscribers against rogues, but we will not be responsible for the debts of honest bankrupts sanctioned by the courts. Notice of the complaint must be sent to us within one month of the time of the transaction, and to identify it, you should mention THE RURAL NEW-YORKER when writing the advertiser.

NEXT WEEK we shall begin the publication of a series of articles on "Farm Stock Breeding." They will run for a number of weeks, and will, we think, prove thoroughly useful to all our people who are interested in the breeding of farm animals. Much of the excellent work done by the scientific men along this line has never been popularized and brought down to the clear understanding of the majority of the stockmen. The articles which we shall print are standard and give in clear, forcible manner the principles of the science of breeding and practical application for the farmer. Readers who are interested in live stock should plan to keep these articles on file.

*

JERSEY CITY seems to be the first community to try THE R. N.-Y.'s suggestion of using an auto-truck to collect produce for the public market. City Commissioner George F. Brensinger has been very active in trying to make this market successful. He went out himself with a big truck and collected a load; then helped sell it at retail. It will pay to organize a regular trucking service of this sort in order to supply these new markets. Tons of produce will be wasted unless some arrangement of this sort can be made for transporting it. Every farmer within hauling distance of New York raises more than he can carry. Bring that surplus in and all will benefit.

*

THE apple situation in New York State this year is peculiar. The crop is only a little above that of last year, yet from almost all sections of the State we hear that buyers are scarce. Two reasons are given for this, the uncertainty as to the export trade, and the tightness of money, as banks are less ready than usual to make advances on storage certificates. The home market will be looked after much more closely than usual, by advertising in local papers, canvass of the grocery trade, etc., and the *net* returns from such sales will frequently be found better than where the fruit is shipped or sold to travelling buyers. In several cases reported to us farmers have organized, bunched their crops, packed under the New York law and advertised in the trade papers. If this is kept up the present trouble will develop into a future blessing.

*

WE learn new things about our old friend, Luther Burbank from an interview in the Worcester (Mass.) *Post*. Mr. Burbank was visiting his cousin, W. D. Ross.

"Say, Cousin Luther," said Mr. Ross to a quiet, common-looking man in rather ill-fitting hand-me-downs—a man whom you would never take for one of the world's greatest scientists—"say, if we'd had you here for the fair and advertised that you'd talk just 10 minutes about your work, it would have meant about $10,000 to us."

Quite likely Mr. Ross is the author of some of those eloquent appeals for $151 sent out by the Luther Burbank Society. Mr. Burbank quietly disposed of the statement by saying: "I'm not much on talking." The reporter adds that Burbank's pictures make him look like an orator, "but they do him great wrong." Like all the rest of us, Mr. Burbank is interested in the European war. The *Post* reports him as follows:

Germany will have to depend more on the potato than ever before in this war—and it will be the Burbank potato.

Russia can raise in Siberia enough wheat to feed all the armies of the world. I am experimenting on a wheat which will help her do it.

My spineless cactus, used as a fodder, could feed the cavalries of every European army.

Germany is a wonderful nation, and we are bound to have great respect for Mr. Burbank's opinion, but we doubt if she will thunder very loud at the gates of Paris with men fed on potatoes and horses fed on spineless cactus. Mr. Burbank believes that in 20 years Siberia, with proper development, will be able to produce wheat for the entire world. He says he has a new wheat with heads three times as large as ordinary varieties. We think Mr. Burbank is right in thinking that the present war is to shake up the nations like chemicals in a bottle. The social explosion resulting from this will blow down old customs and ideas which many of us have considered fixed for centuries to come. The world is to find in Russia a wonderful producer and exporter of food.

*

WHAT Prof. Massey says on page 1209 about plowing under rye is further proof that no general rule can be given for farm operations. The farmer must think out his own plan. No doubt Prof. Massey is referring to the light open soils of the Delaware peninsula, where disking young rye would probably be the best policy. On most of our own farm and on most of the soil in our section it would be impossible to use the disk effectively on knee-high rye. The soil is hard and wet, and the seasons are backward. One reason for sowing rye on our own lower ground is to let this crop dry out the soil in Spring. Even if the disk would work on this wet soil it would leave it in bad shape for fitting. We are convinced that it pays us better to let the rye grow larger, then plow it under, pack down and use lime. The soil is very deficient in humus and we need all we can get. At least this system has paid us well and we conclude it is best fitted to our conditions. The danger comes in letting the rye grow too large in a dry season and in not packing it down hard. The rye is such a strong feeder and drinker that it will dry out a soil if left too long. If you leave the green mass loose in the soil you will have more trouble. By plowing under in time, packing down hard and using lime annually we have been able to start the rye into quick decay. On most of our Eastern farms and particularly where little live stock is kept, this cover crop matter is very important. There ought to be the fullest discussion of it because great judgment is required to handle it right.

*

THERE is one probable outcome of the European War which food producers should consider That is the discovery of new chemical methods of preparing food. As we know, the shortage of food during the siege of Paris, more than 40 years ago, led to the "invention" of oleomargarine. Chemists learned how to blend cheap fats into an imitation of pure butter. We all know what a remarkable effect this discovery has had upon the dairy business. It is not at all unlikely that the necessities of the present war may drive the chemists to new discoveries which will enable them to produce substances capable of sustaining life without going through the slow processes of animal or vegetable growth. The Germans are a strong, capable and determined people. We hear it said that this nation may be "starved out," yet it has been nearly self-sustaining in its food production, and its chemists are probably most capable of making the laboratory substitute for the farm in producing food and fibre. While America must now be considered the great food-producing nation for the next 20 years, we must all be prepared for new chemical foods which may affect our business as oleo has changed dairying, and the same necessities will drive our chemists to the discovery of new methods of producing the chemicals needed in manufacturing. Already it is said that Mr. Edison has discovered a new plan of preparing carbolic acid. We think both farming and manufacturing will be greatly changed by this war

*

WHILE we are discussing the trouble about buying potash this year let us remember that large quantities of this element are wasted on most farms. Now or never should be the time to save it. Ashes from wood, tan bark or similar fuel, contain potash. Save every pound of it under cover. Coal ashes have very little value as plant food, but may help a sandy or a heavy clay soil. The liquid manures carry most of the potash in animal excrements. Except in the case of pigs, the liquids contain five or more times as much potash as the solids. With cattle 85 per cent. of the potash is found in the liquids. For every 1,000 pounds of cattle there will pass each year in the liquids about as much potash as we buy in 225 pounds of muriate. This year therefore we have a stronger argument than ever before for concrete floors, full bedding and anything that will save the liquids. Remember, too, that in our grains most of the potash is found in the straw and stalk rather than in the seeds. All straw and cornstalks should be used as bedding or in the manure pile. We hear of the great sums of money which have been spent for commercial potash. It has mostly been well spent, but the sum could be multiplied by 10 and then fall short of the sum we have thrown away through a failure to save the liquid manures. You may have a chance to buy tobacco stems, ashes, tan bark or straw. These are the things most likely to contain potash. Such substances as fish, bone, tankage or meat have practically no potash, but do supply nitrogen and phosphoric acid. But in any event save the wood ashes and the liquids.

*

ON page 1086 we told how the Gainesville Board of Trade has gone out after the land sharks and "home seeker" rascals who have so long cursed Florida like a horde of human malarial mosquitoes. These Gainesville people are doing fine work. We try to lash the frauds, and we are glad to help the fraud killers. Mr. Runnels, the secretary of the Board of Trade, says he has received letters all the way from Massachusetts to Washington.

In some instances they have proved my contention that these people are laboring under mistaken notions. For instance, one middle-aged woman residing in the New England States, with only a limited amount of money, writes me that she was on the eve of purchasing 1¼ acre of ground on which she is to build a house and grow fruit and vegetables sufficient to maintain her. Now, what do you think of that? An inexperienced woman taking wild land and expecting, without previous experience, to make a comfortable living, paying for this land at the rate of $100 per acre!

What do we think of that? Nothing new. We have known of such things for years. We rejoice to think that Florida people are at last waking up to realize what this rascality means to the State. They are not all awake yet. It seems that Mr. Runnels has been criticized by another "Board of Trade" for telling the truth about these frauds. We like the way he comes back:

As long as I am in Florida, whenever an opportunity comes up to establish the good name of our State, I am going to land on these fellows every time I get the chance. They have done more to injure Florida, they have robbed more thousands of people using Florida as their jimmy, and have caused more people to curse the State than all the legitimate advertising and legitimate salesmen has been able to overcome.

We have heard people offer a good argument to show that Esau was justified in selling his birthright for a mess of pottage, but nothing can justify the people of Florida or any other section, for giving the land sharks and "home" baiters a white card to rob the confiding poor.

BREVITIES.

CALIFORNIA farmers have combined to fight the eight-hour law.

GET the stoves or heaters going early enough this year. It may save a cold that will last all Winter.

A LOT of these big stories which we are to take with a grain of salt seem to be salted down so that they keep forever.

WE believe that more grape juice will be preserved by private families this year than ever before. A good thing, too.

I CAN put a dollar bill on the wall within 10 feet of you. Then I can put a copper cent in front of your eye so that you cannot possibly see the dollar!!

"ALL the eggs in one basket." The old advice about this is good, but the trouble is that most farmers will not have any eggs at all—basket or no basket—until next Spring.

NOW comes the old question about the superiority of nursery trees grown in one section over that grown in another. It makes little difference to us provided the trees are vigorous and the wood well ripened.

NO question about the growing demand for nuts. This is a product well suited to a parcel post trade and for advertising. Anyone with good nuts for sale ought to let the public know where he lives.

THE Indiana Experiment Station has worked out a new method of killing wild onions—that pest of the pasture. It means spraying with road oil and is best done in the Spring. We shall tell all about it in time for use.

IN reply to many questions we consider good corn fodder—dry and sweet—worth about half as much as hay. Silage is worth about 30 per cent. of hay prices, and green corn, standing in the field, about $1.50 per ton.

THE very first principle in using hen manure as a fertilizer is to crush and sift it as fine as possible. All fertilizers should be spread evenly and freely to obtain best results. A "chunk" is nowhere near as effective as a handful of dust.

SOME of the farm writers advise burning all squash and melon vines. This is to destroy borers and other insects or diseases. Anyone with an apple orchard should hesitate to burn up any organic matter. We haul the potato or squash vines and pile them around trees where these crops are never grown.

MANY poultrymen use mercurial ointment for destroying vermin on poultry. It makes a very good lice killer. The war has about doubled the price, as most of this material is produced in Germany. If the war conditions continue the material may be practically out of the market, or out of the reach of practical people.

THE Nebraska Experiment Station advises the adding of water to the corn while it is yet on the wagon, rather than pumping water into the silage. The water and silage must be thoroughly mixed to prevent it from molding. It is the opinion of the station that it does very little good to put water on silage after it has been filled. Dry, semi-dry or frosted corn should always be dampened as it enters the silo. Ordinarily it requires from one to three tons of water for each ton of such corn. It is always better to get too much rather than not enough.

THE LAND BANK.

SOME of the politicians who would like to be Governor of New York, and some political papers which favor their ambitions, seem to think that it is necessary to oppose and discredit the Land Bank system, now being organized to finance farm and home mortgages in the State, because Governor Glynn was instrumental in securing the passage of the Land Bank law, and has encouraged the organization of it. Mr. John A. Hennessy, an aspirant for the nomination for Governor, and the *Knickerbocker Press*, of Albany, have been particularly hysterical in their attacks. Mr. Hennessy tells farmers that saving and loan associations cannot loan money on farm mortgages. He accuses everyone who disagrees with him as ignorant of the law. We can tell him that these institutions have had the authority to loan money on farm mortgages for more than 20 years, and have done so in a limited way. The Land Bank is intended to enable them to finance every farm and home mortgage in the State. Mr. Hennessy says instead of saving money for the farmer the Land Bank would rob him, and challenges anyone to meet him on the platform and discuss it before an audience. That challenge is here and now accepted. We are not candidates for office. We are not campaigners or orators. Mr. Hennessy seems to be all three. But we have confidence enough in the horse sense of the American people to believe that they are not going to be fooled with oratory and buncombe, and that they can grasp the principles of a business proposition and pass intelligently on its merits when it is presented to them in plain, unvarnished English. We had something to do with the preparation and passage of the Land Bank act, and we are prepared to defend it. Since Mr. Hennessy and the papers that support him are challenging debate, they now have their opportunity. The best farmers throughout the State exercised their influence for the passage of this law, and without regard to their personal political preferences, co-operated with Governor Glynn and its other sponsors in securing an appropriation and an organization for putting the system in working order. It is no less than an insult to their intelligence to be told now that the measure they adopted for their own benefit, will be an instrument to rob them.

In the meantime the Land Bank is well under way for organization. About 50 associations have subscribed for Land Bank stock. More than $70,000 is already subscribed; and new subscriptions are coming as fast as the associations can get the proper authorizations of their members. The charter is being prepared. The by-laws are about ready, and the Land Bank will soon be a reality, with $100,000 all ready to loan on farm and home mortgages in the State of New York, and with authority to secure $2,000,000 on its bond issues to loan for the same purpose. When this is exhausted these sums may be duplicated indefinitely. There are mortgages on farms of this State that have been in existence for 70 years. Four or five times the original mortgage has been paid in interest, and the original amount is yet due and must be paid in bulk. The farm mortgage indebtedness of the State is about $100,000,000. Much of this pays six per cent. interest; and if we count the expense of renewals the total cost would probably exceed six per cent. on the whole per annum. No man can say definitely just what this saving will be. No one attempts to say that; but if these mortgages can be amortized on the basis of the German and French loans, then the direct saving to the farmers of New York State would be in excess of $24,000,000 in 10 years. The saving would be proportionately greater on a longer period. There is no good reason why we could not equal the success of the European farmers in financing farm credit, and while we may not reach the full results at once, we believe that in a short time we can exceed their results.

The indirect result of this system to the farmer and home builder exceeds the direct saving. The money now saved by farmers and wage earners, and deposited in banks, or used to pay insurance premiums, goes out of their reach and influence to finance railroads, or other large speculative enterprises. The savings banks, the trust companies, the national banks, and the insurance companies do not to any extent invest in mortgages on farms or small homes. This is intended as no criticism of them. They have their own uses and their own functions. They handle large sums. They could hardly afford to bother with small problems. The point is that whatever money the farmer entrusts to them goes to build up other industries and not back to help other farmers. This Land Bank system keeps every dollar saved in the place where it is accumulated, and in the hands of the persons who saved it and own it. Not only this, but it gives them the power to borrow still larger amounts at low interest rates from sources outside their own circle. So that instead of sending their savings out of their own reach to build up other sections and industries, they use it at home to attract more capital to themselves from the outside to build up their own section and their own industries. They gain experience and courage and skill in the management of affairs from the experience of doing things for themselves. We would like to have Mr. Hennessy and his political editors tell us how this is to work a robbery of the man or the community that makes use of its possibilities.

THE R. N.-Y. has no concern in the political aspirations of the gentlemen who have sought to promote their fortunes in an attack on the Land Bank, in an apparent effort to detract from the measure of credit due Governor Glynn for his part in it; but we will not silently permit them to malign the Land Bank system which is now being organized in this State, and which is attracting the attention of farmers and Grangers in every other State in the Union. If their other protestations are founded on no better information or no more sincere convictions than their criticisms of the Land Bank, then we do not hesitate to say that they are mighty poor leaders for farmers to follow. J. J. D.

WESTERN APPLE GROWERS' PROBLEMS.

THE apple growers on the Pacific Coast find their business severely injured by the European war. A good proportion of their fruit has, in former years, been sent to Germany and Great Britain, where it found profitable sale. Europe has little time to eat apples at present, and less money to pay for them, and thus the great output of fruit from the Pacific Coast must find a new market, and go out for it in the face of serious competition from a large crop in the Eastern States. It is a serious problem for these Western people, but it must be said that they are meeting it in the best possible way. They are already organizing an immense "by-product club," and they are ready to spend their last dollar in advertising their fruit and organizing new methods for its distribution. Thousands of dollars will be offered for prizes both for fruit exhibited at the shows and also for orchards. Large prizes are to be given to the men who can show the greatest profit from 100 fruit trees, and all sorts of schemes are being developed for putting this Western fruit before the people in tempting array. Among other things proposed is to take the fruit which wins prizes at the great shows and distribute it to Senators and Representatives at Washington, judges, and all prominent men. If the Western people have their way the men who make public opinion will go about this Winter with their pockets stuffed with fine apples. Instead of smoking a cigar or taking a drink, it will be popular to eat an apple, and these Western people are apparently ready to give up half their crop this year in this plan of encouraging apple-eating. These men are up against the real thing in trouble, and the distribution of their crop has become a big problem. It must be said that they are meeting it in just the right way. This country can take care of three times as much fruit as is now consumed, if the growers can only make the consumers understand the profit and pleasure of apple consumption. The Western men understand this, and they are going after the trade. Our Eastern fruit growers will have to meet them in a liberal and enterprising way, if they expect to hold their own in the market. This year of large crop and curtailed market can be made the most profitable season our fruit growers have ever known if they will follow their Western brothers and put their fruit on the market at a low figure, and spend a fair share of their income in advertising their goods.

PRICES AT PUBLIC MARKETS

THE work of educating city people in buying food to advantage goes on. Thus far this is the best that has come from the free public markets in New York. The following lists of comparative prices at stores and at public markets were compiled by the Fifth Avenue Coach Co. for its employees. Labor unions and other organizations are now working for improved free markets and an extension of the service:

Market Price.	Store Price.
Potatoes, 8 lbs., 10c.	15 lbs., 25c.
Onions, 2c. per lb.	4c. per lb.
Carrots, 3 bunches, 5c.	2 bunches, 5c.
Bananas, 8 for 5c.	1c. each.
Tomatoes, 10 for 5c.	1c. each.
Peaches, 10c, per doz.	15c. per doz.
Grapes (green), 6c. lb.	8c. per lb.
Grapes (black), 5c. lb.	7c. per lb.
Celery, 5c. bunch	7c. bunch.
Cabbage, 3c. and 5c. head	6c. and 9c. head.
Beets, 4 bunches, 5c.	2 bunches, 5c.
Green peppers, 6 for 5c.	3 for 5c.
Red peppers, 6 for 5c.	3 for 5c.
Cantaloupe, 3c. and 4c.	5 and 8c. each.
Corn, 10c. and 15c. doz.	18c. and 22c. doz.
Cucumbers, 1c. each	3 for 5c.
Seckel pears, 2c. doz.	5c. per doz.
Apples, 6 lbs., 10c.	6 lbs. for 18c.
Lemons, 7 for 5c.	3 for 5c.
Catsup, 9c. bottle	10c. bottle.
Plums, 4c. doz.	7c. doz.
Fresh eggs, 11 for 25c.	9 for 25c.
Sweet potatoes, 4 lbs. 10c.	5 lbs. for 15c.
Porterhouse steak, 18c. lb.	26c. and 28c. lb.
Sirloin steak, 18c. lb.	26c. and 28c. lb.
Prime ribs beef, 16c. lb.	22c. per lb.
Leg mutton, 12½c. lb.	16½c. per lb.
Porgies, 5c. lb.	3 lbs. for 25c.
Flounders, 5c. lb.	3 lbs. for 25c.
White fish, 5c. lb.	3 lbs. for 25c.
Weak fish, 5c. lb.	3 lbs. for 25c.
Chuck steak, 14c. lb.	16c. per lb.
Pears, 10c. doz.	18c. per doz.
Lima beans, 5c. quart	7c. per quart.

Average saving, 38 per cent.

This means a saving of from 12½ to 60 per cent. in price through trading at the free markets. The system has only been started, and is but a very small thing thus far, because the supply of food which can be hauled into New York will always be small. The principle of the free market is correct, and the system must be extended. There should be convenient terminals in New York for receiving farm produce, and an organization here for distributing it. This must come in time. The thing to do now is to keep at the people until they realize that direct buying is their best economy.

ONE of the imaginations of Fall is the idea that forest leaves are very valuable as manure. They have some value, but they are so light and bulky that it will hardly pay at present labor prices to gather them. If you do get them use as bedding and mix with manure.

HEARD AT NEW YORK FREE MARKETS.

"THERE are only three or four of us patronizing this market on 130th Street, New York," said John Hirsch, of Rockland Co., N. Y. "There are two things which we farmers need to make success of this marketing idea; we need auto trucks, and we need market stalls. I could not be here were it not for my truck. I live out 30 miles. I can't drive fast, and it takes me about three hours to come in, cross the ferry and be on the ground ready to sell. I tried to shorten my time; had a load of peaches, and when I got here I would have sworn they were not my goods. They were badly shaken and bruised. Where the idea of having a stall will help me, is that I have to spend pretty near all night getting here, and then a good part of the day in selling out. You might say that each trip costs me a night and a day. My auto truck here is idle while I am selling from it. With the market stall I could rent quarters, install a 'phone, and when I would run low, could call up the farm; they could hustle in needed supplies, and I would not be overstocked nor sold short. The boys right next me employ this system with horse. One remains here and the other makes trips to and from the farm. It is about 20 miles to their place. If there should be a permanent market, they would be benefited by the telephone, by a definite location, and would not need a wagon tied up continually.

"Here again the competition of the hucksters is a stimulant rather than injury. They all seem to do business squarely. They specialize. Some sell oranges, some bananas, some have a load of corn, while we farmers have a diversified load. We have to load up with a variety which we can sell in a day and get back home. Those fellows, like the one over there, with a load of sweet corn, can be right here to-day, and to-morrow, until he gets sold out. He gets his rest besides. This fellow over to my left is a fair example of the farmer with some one thing. This farmer came this morning (Wednesday). He has eight barrels of pears. They are suitable only for canning. His receipts will be small, and he says he will probably be compelled to remain until Saturday night. It will not pay him. He would better allow a commission merchant a dollar on a barrel, or sell to some huckster, than spend his time and be at the expense of selling his fruit. Here is where the stall would benefit this man. He and three or four of his neighbors could co-operate. They could use wagon or truck, keep in touch with their quarters daily, and keep one person there. A woman, a young man, or a girl, could do nicely selling, and they could take turns selling and supplying the location, and in this way the proposition would pay them. It is not a case of competition, for the more good fresh fruits and vegetables come from the farm, the better and higher will be the class of our patronage, and this means more money for us." W. J.

JERSEY CITY MARKET.

JERSEY CITY has established a public market on Railroad Avenue, near the Grove Street tube station. This is where the Pennsylvania Railroad elevated its tracks several years ago, and is a sheltered place, with plenty of room for farmers' wagons. The market, though established late in the season, was a success from the start, and promises to be of great importance to the food trade of Jersey City. It is accessible to a large number of New Jersey farmers, and all who have attended thus far appear to be satisfied with the results. The market is open to both wholesale and retail trade, and is an especial convenience to the grocers and peddlers, many of whom have previously had to cross the ferries to New York for supplies. This wholesale trade begins early, usually before daylight, so that farmers who close out their stock in this way are able to make an early start for home. Others who wait for the housewives' trade do a brisk business until about 9 A. M., when practically everything is sold.

The goods available at present are: Peaches, pears, tomatoes, muskmelons, beans, kale and other greens, peppers, eggplant, corn, etc. Some of the prices were: Corn, $1.75 per hundred, 30 cents per dozen; eggplants, $1.50 per barrel, five to 10 cents each; tomatoes, 40 to 60 cents per half-bushel basket; string beans, $1.25 per bushel, two quarts for 15 cents.

Along Railroad Avenue are several vacant buildings, and it seems probable that some of these will be rented for produce stores, where foods not handled by local farmers will be sold. This would widen the field of the business and draw additional trade to the market. Altogether the prospect is favorable for a permanent market on the healthy basis of profit to the farmer and convenience and profit to the buyer.

GOVERNMENT CROP AND WEATHER NOTES

OVER the principal corn growing States the crop has matured without injury from frost, cutting is progressing rapidly, and much of it is now in shock, with prospects of a fair yield.

In the Winter wheat growing States the weather has continued favorable, the soil remains in good condition, except in portions of the Atlantic States, and seeding is progressing satisfactorily, except that it is being delayed to some extent to avoid damage from fly. Tobacco has improved greatly and much is now being housed. Pastures are reported in excellent condition in most districts and feed of all kinds is plentiful.

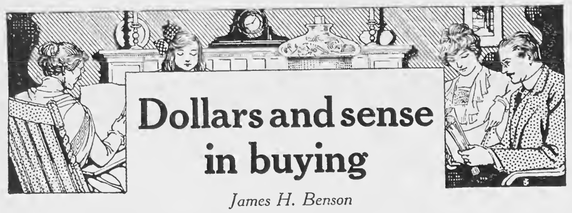
In the Spring wheat States the weather was favorable for all farm work, and most crops are now safely housed. In the cotton region some damage occurred from wind and heavy rains, and picking was slightly delayed, but on the whole the weather was favorable for picking and for the development of late cotton and the top crop, although these are reported as being injured in some districts by insects.

Over the Atlantic States, from Virginia northward, severe drouth continues over much of Pennsylvania and New Jersey, and plowing and seeding are delayed. In other portions of this district the weather was more favorable, and the ripening and gathering of crops and preparations for seeding were continued without interruption.

Over the range country of the Southwest grass is maturing under favorable conditions, and stock is reported ready for market.

Over the northern portions of the mountain and plateau districts favorable weather for Fall work continued, except that the ground is too dry for seeding in some localities.

In the fruit growing regions of the far Northwest apples are being picked, the hop harvest has been completed and other farm work progressed satisfactorily. In California damp weather caused some injury to raisins, but the gathering, drying and shipping of other fruit crops continued without interruption.



Dollars and sense in buying

James H. Benson

NOTE: Making two blades grow where only one grew before, is the new note in modern farming. Making one dollar do the work of two, is the new note in modern buying. The art of saving money is just as important as the art of making money. If you believe in the old adage, "A penny saved is a penny earned", you will profit by reading this article. Even if you are now buying your needs by mail, this article will open your eyes to the TRUEST economy in mail order buying—will show you how to make your money buy more. If you buy in your local town or in some larger town nearby, this article will tell how to shop in New York, the World's Greatest Commercial Center, with greater convenience, greater economy and greater satisfaction. Dollars and Sense in Buying is a mighty big subject, worthy of your most careful consideration. Read every word of this article carefully and you will know the reason for the tremendous growth of the Charles William Stores.

ALERT, progressive farmers everywhere know that the Mail Order way is the most economical and most satisfactory way of purchasing merchandise of every kind. They know that the big Mail Order houses offer the lowest prices, the most complete selections, and the strongest guarantee of satisfaction.

Dealing with almost any Mail Order Company is far more economical and assures you of greater satisfaction than going to the local town or to some nearby larger town for purchases of importance. But, as in *every* line of commercial endeavor, you will find many advantages in dealing with one company in preference to others.

New York Public Library at 42nd Street and Fifth Ave., near New York Central Terminal. Largest public library in the United States.

In buying by mail, there are five things to consider carefully before sending your order. They are:

1. Price.
2. Quality.
3. Quick Service.
4. Transportation Charges.
5. Guarantee and Reliability.

It is our purpose to show you why you may expect these advantages in a *greater* measure from The Charles William Stores than from *any other buying source anywhere.*

A pleasant surprise for farmers

Sixty per cent. of all merchandise sold in America originally comes from New York. The Charles William Stores are located in the *heart* of New York. We buy from first hands. Our buyers do not take annual trips to New York because they are always here—always on the ground to watch for buying opportunities. Think of it!—243 out-of-town buyers *registered* their arrival *in one day* in the New York Times. It is safe to say that not one in ten visiting buyers registers. From Pittsburg, Philadelphia, Chicago, St. Louis, and even as far west as San Francisco, they come once or twice a year to buy at *headquarters!* But *The Charles William Stores'* buyers are *always* on the ground, ready to snap up exceptional values at a moment's notice, ready to get the newest merchandise.

Because of our remarkably low prices we have found it necessary to add a six story building, another five story warehouse and eight floors in still another building to our already large quarters. Nearly a million new customers joined The Charles William Stores during the past year! Why? Primarily because our prices save them money over the prices quoted by others. Nobody buys on sympathy or sentiment. It's a cold, hard, *business* proposition with our customers—a *dollars and cents* affair that we must make good on. If we don't save *you* money, *you* won't buy from us. We ask you to compare prices—then decide for yourself.

The question of quality

For example, in the matter of fashions. Everybody knows that New York is the style center of America. Every woman wants the styles that will be worn in New York. Located as we are, in the heart of New York, we are in a position to know far in advance, just what styles will be wanted by women everywhere. There's *quality* in every style, *quality* in every inch of the fabric, *quality* in every stitch, *quality* in every curve of the garment you buy from The Charles William Stores—yet the prices are exceedingly low. And this spirit of high quality extends to *everything* described in "Your Bargain Book". You'll find it in *Jewelry, Dry Goods, Toys, Toilet Articles.* You'll find it in *Furniture, Carpets, Rugs, Musical Instruments, Chinaware.* You'll find it in *Sporting Goods, Bicycles, Auto Supplies, Paints, Hardware, Farm Implements, Engines, Separators, Harness, Vehicles. Quality first* is The Charles William Stores watchword.

24-hour delivery service

So important do we feel it to please you on quick shipments as well as on the merchandise, that this is what we do to enable us to ship orders *the day they are received:*

automobiles are at the Post Office to bring the mail to us to save *half an hour.* As each order is opened, the time is stamped upon it and *the time for shipment, just exactly 24 hours* from the time it is received.

If for any reason the articles in your order cannot be shipped that day or by the following morning, a postal will be mailed to you, telling you why. Delays happen sometimes, of course. It is impossible for them not to, among the thousands of orders received, but the exceptions are rare.

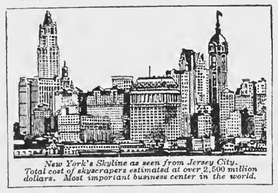
To figure when you will receive the things you order, allow for the time it will take your letter to reach New York and for the goods to reach you from us; *add one day*, and unless you are notified to the contrary, you will have your things. Our customers appreciate this extra speed in filling and shipping orders. They have grown tired of waiting, waiting, waiting for their goods to arrive, worrying and fretting for fear something has gone wrong. Now all that is past. *The Charles William Stores'* way of doing things suits them to perfection. They want their goods quick *and they get them* quick. No delays—no unnecessary correspondence.

Times Square, between 42nd and 47th Streets," 40 theatres and 75 large hotels and restaurants are within a radius of 400 yards.

The Charles William Stores is but six city blocks from the Post Office, but we do not wait for the letter carriers to deliver our mail. Before our Stores themselves are opened, our

Nothing to pay when the goods arrive

Wherever you live we pay transportation charges on everything in the first 342 pages of Your Bargain Book. On all other merchandise we pay freight on shipments of 100 pounds or more, to the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Ohio, Virginia, West Virginia, Maryland and Delaware. If you live beyond, we pay a good part of the freight on all shipments of 100 pounds or more. Remember, we pay transportation charges on everything shown on the first 342 pages of Your Bargain Book, *wherever you live. Nothing for you to pay when the goods arrive.* No other Mail Order house treats you as liberally as The Charles William Stores. You know exactly what your purchase amounts to, without wondering what the freight charges will be! Think what a great advantage that is, especially if you have been buying from some *distant* Mail Order house.



New York's Skyline as seen from Jersey City. Total cost of skyscrapers estimated at over 2,500 million dollars. Most important business center in the world.

Does it pay?

Thousands can answer that question for you—people who are now purchasing goods from us regularly. Your money will buy more—comparison of prices and quality will prove that to you. You can *depend* on us—that you will learn by your first purchase. You will be glad of our freight prepaid offers, wherever you live. You will appreciate receiving new, fresh goods. You will like our 8-hour service, which prevents delays in sending your order. And you will appreciate the kindness and consideration with which we treat our customers.

Complaints are welcomed because they give us an opportunity of correcting errors and increasing our efficiency. We want no silent grievances. We would much prefer to accept a total loss of a suit, or a plow, or *anything* purchased from us, if you are the least bit displeased with it, or if you have changed your mind, than to have you keep the goods.

It has been our experience that customers are fair. When they return merchandise or make complaints there are reasons. In all cases, reasons or no reasons, we treat our customers exactly as *we* would want to be treated. We return the full purchase price immediately upon request. There are no questions, no quibbling, no correspondence, no printed excuses, no "red tape." And it makes no difference whether you return a packet of pins or a $500.00 gasoline engine. That is The Charles William Stores way of doing business. Everybody likes it, judging by the generous measure of orders we are receiving.

Your Bargain Book

Our new Fall and Winter Catalog is ready. If you haven't received a copy, send us the coupon at the top of the next page—or just a postal card. Judge our book by any other—Judge our prices, our service, *everything.* You and your family are the ones to say whether or not The Charles William Stores meet your demands of what *your* Mail Order Company should be.

Statue of Liberty, N.Y. Harbor

Your money buys more, *we pay delivery* charges, *you get quicker service* and fresh, new merchandise—and you are always treated with respect and courtesy under every condition—when you deal with The Charles William Stores.

Mail coupon or postal for Your Bargain Book, 1186 pages, fall and winter edition Now Ready

Let us mail you a copy of "Your Bargain Book". The fall and winter edition is now ready. Our customers say it offers greater advantages than any other big mail order catalog published. We would like to know *your* opinion of it. Mail us the coupon, or just a postal card, and your copy of "Your Bargain Book" will be sent to you at once, free and prepaid.

When "Your Bargain Book" arrives, look through it—see how easy it is to shop in *New York* without leaving your home—see how much *less money* it takes to supply your wants—see how *it makes every day a red letter bargain day*—see how much money you save because *we pay* transportation charges.

If you send us an order—even a *small* order—you'll understand what we mean by *24 hour service*—you'll know what we mean when we promise you clean, fresh, new goods—you'll notice the respect and courtesy with which we treat every customer under *all conditions*—you'll know why *nearly a million people* have found, in the last 12 months, The Charles William Stores an ideal place to make their purchases.

We want you to have "Your Bargain Book". You are urged to send for it *today.* Use the coupon printed at the top of this page—or just a postal card—but please do it now—before you forget. We are sure you will be *glad* you wrote for it.

YOUR BARGAIN BOOK-FREE COUPON

THE CHARLES WILLIAM STORES,
207 STORES BUILDING,
115 EAST 23rd STREET, NEW YORK.

You may send me a copy of your big catalog, "Your Bargain Book," free, postage prepaid.

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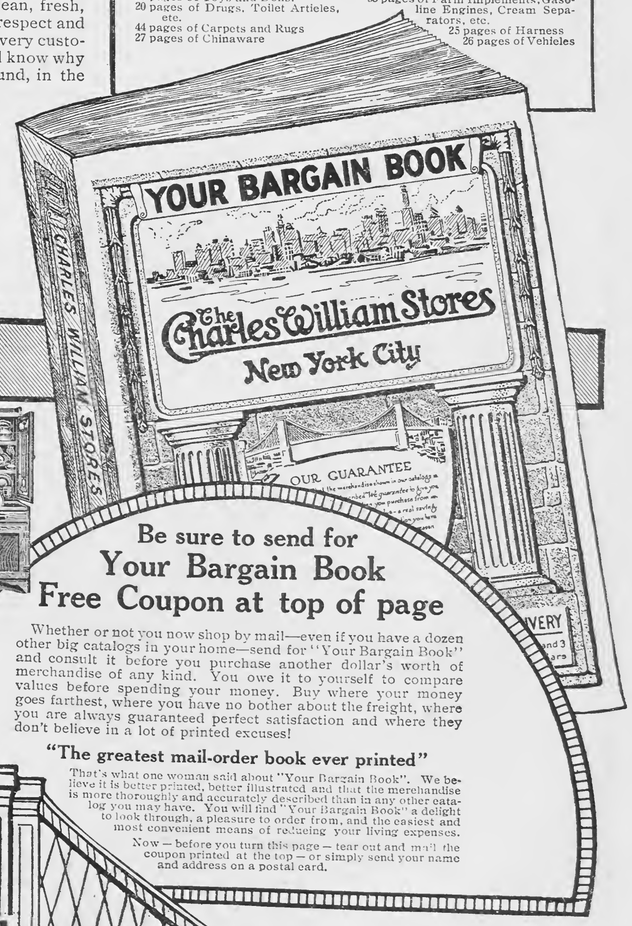

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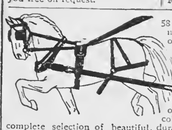

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Woman and the Home

From Day to Day

TO THE FRINGED GENTIAN.

Thou blossom bright with Autumn dew,
And colored with the heaven's own blue,
That openest when the quiet light
Succeeds the keen and frosty night.

Thou comest not when violets lean
O'er wandering brooks and Springs unseen,
Or columbines in purple dressed,
Nod o'er the ground-bird's hidden nest.

Thou waitest late and com'st alone,
When woods are bare and birds are flown,
And frosts and shortening days portend
The aged year is near its end.

Then doth thy sweet and quiet eye
Look through its fringes to the sky,
Blue—blue, as if that sky let fall
A flower from its cerulean wall.

I would that thus, when I shall see
The hour of death draw near to me,
Hope blossoming within my heart,
May look to heaven as I depart.

—William Cullen Bryant.

*

AS we walked down one of the crowded streets near THE R. N.-Y. office recently we met with a member of the Apple Consumers' League in deep distress. She was a little girl of seven or eight, neatly dressed, though her little gingham frock was faded and not over clean, and her thin little braids tied with scraps of ribbon that looked like cigar bands. She walked up to a woman passing by, and remarked:

"Say, Missus, do you see them two boys what's eatin' an apple?"

The person interrogated nodded, noticing the two boys, who were rather larger than the little girl. They sat on the edge of the curb, sharing an apple and playing a game of chance.

"Well," continued the little girl, "that apple they're eatin's my apple—they took it off of me. My mother give me a penny to buy an apple, and I don't often get one, because my mother she says it's hard to get enough to feed the hull lot of us, and then when I got it they took it off of me before I got a taste of it."

The little girl did not cry or whine; she spoke with indignation, but with the reserve of one whose feelings were held in check. The woman addressed voiced her indignation, then suggested it would be a pleasure to supply means for replacing the apple. The little girl remarked, with dignity, that she wasn't asking for anything, but she agreed to take the offering remarking with some pride:

"Anyway, it took the two of them to take that apple off of me!" and darted across the street, almost under an auto truck, to chaffer with the Greek who keeps a fruit stand and, we hope, to secure a quiet place where she could enjoy her apple without fear of boy bandits.

*

THERE is no household where it is more necessary to study methods of saving labor than on the farm. It is not, in this case, a matter of cutting out senseless elaboration, but of reducing absolutely needful work to the minimum. Yet, whenever saving labor is contemplated, we are likely to find that some, at least, of the trouble cannot be eradicated without structural changes in building. For example, in an old house, there may be the nuisance of nailed-down carpets, unwholesome dust-catchers, a standing invitation to buffalo moths, and a back-breaking part of every sweeping day. Yet the floors may be so old and warped that they cannot be left bare, and the housekeeper must endure the trouble until new floors can be laid. Even then in the cold North bare floors are not comfortable where stoves supply the heat; one needs a cellar heating plant. So, to simplify labor, one needs, first of all, a cellar heating plant, which will keep the house at even temperature and do away with incessant dragging about of fuel and ashes. Steam or hot water heating pre-supposes a good water supply, piped in, not only to the kitchen, but upstairs also. The water supply naturally includes a bathroom and a laundry with set tubs, separate from the kitchen.

Are we suggesting luxuries in these things? No; we are suggesting necessities for comfortable living, that are everyday affairs to hosts of hardworking people. Nor are they comforts only; they are aids to one's self-respect. We believe that many young people who are sent to a town school, and come back dissatisfied with farm life, really feel the lack of these modern conveniences even more than the isolation or hard work.

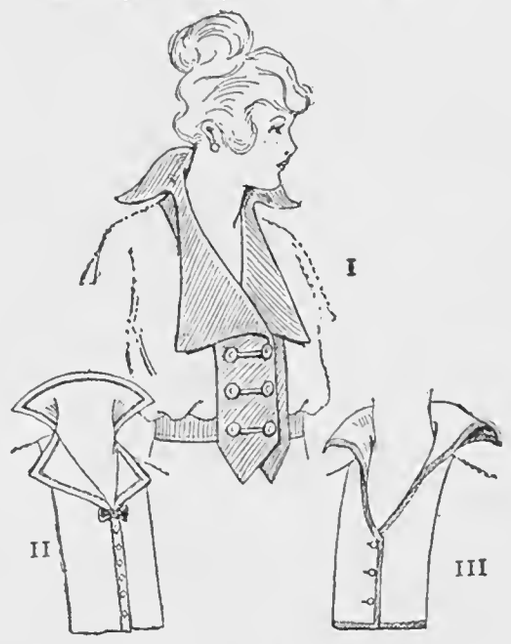
Labor saving appliances are plentiful; vacuum cleaners, fireless cookers, washing machines, etc., are all helpful. But heating, water and the disposal of household wastes are the three things not only fundamental in comfort and health, but on them depends the extent to which labor can be saved in other departments. Every farm woman knows this, and it will be brought before the family more and more, with the extension of knowledge in home economics.

What is the use of stating conditions we all know, when the one cause of narrow living, scanty comforts and overwork is ignored? There you touch on the great cause of unrest in every branch of labor—the need of a living wage. But before you can get what you want, you must want what you aim to get, and the farm woman, as well as the farm man, must formulate her needs, and the rewards she deserves.

The Rural Patterns.

When ordering patterns give number of pattern and size desired. Price of each pattern, 10 cents.

The three styles of collars shown will be found very attractive. Each requires such a small amount of material that, when home-made, the cost is trifling. To give a very dainty touch the collar and



fronts of number three could be embroidered by hand in some simple floral design. To make Number one will be required ⅞ yard of material 27, 36 or 44 inches wide; to make Number two, ⅝ yard any width; and to make Number three, ½ yard of any width with 2¼ yards of braid for binding.

8392, Gathered basque. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅝ yards of 36 inch material with ¼ yard 21 for collar and cuffs. 8420, Tucked blouse. Cut in sizes 34 to 42

bust measure. Size 38 requires 3 yards of 36 inch material with ⅞ yard 27 inches wide for collar and cuffs. 8344a, Basque with tunic. Cut in sizes 34 to 42 bust measure. Size 38 requires 4¾ yards of 36 inch material and ⅜ yard 27 for collar and cuffs. 8174, Seven-gored skirt. Cut in sizes 26 to 36 waist measure. Size 32 requires 3¼ yards of 36 inch, plain material. 8382, Three-piece skirt with long tunic. Cut in sizes 24 to 32 waist measure. Size 28 requires 2½ yards of 36 or 44 inch material for skirt and 2¼ yards for tunic.

Necessary Solitude.

I WAS married after a long girlhood, in other words, in the late 30's. In my old home, I had a large chamber, comfortably furnished, where I always could be by myself if I chose, and where all my personal belongings were together. As the years went by, it became to me a home within a home, holding my favorite books, pictures, souvenirs of happy trips, and all such precious things. Here on my writing table lay my diary, my Bible, and my stationery. Everything could be dropped at once, if I was called, with confidence that it would be undisturbed until my return. From the windows of this room could be seen orchards and grasslands sloping gently to a little lake.

Upon my marriage into a kindly and affectionate family, I still had pleasant rooms, but alas! no room where I could be sure to be undisturbed. If I sat down, with the wish for the quiet of former days, some kind soul was pretty sure to want to be with me, and how could I be ungracious? Yet the lack of occasional solitude wore upon me, and as time went on, my nerves wearied of the constant companionship even of those I respected and loved, and ungracious words and acts did often escape me. For years I longed for privacy, and tried various methods to obtain it, yet usually failed. All of the house was mine, yet none of it was mine exclusively.

At length a plan worked out in my brain. In the back of the house was a great pantry, all out of proportion in size to the needs of the family. It had two windows, one of which was in a "jog" in the room, that was about six feet square. I moved things out of this jog, and had a carpenter fit a partition of sheathing across it, including a door. This left one window for a pantry of much better size, and gave me a tiny room, with a window that looked out upon a beautiful range of hills beyond a river.

In one corner of this little den is fitted a set of shelves for my favorite books, a drawer for my papers, and below that, more shelves for the books of my church offices, for club books, etc. A table of generous size stands before the window, and one chair. Above, and at one side of the table, hangs a pretty cast-off dye case from the druggists, which with a part of the partitions removed, provides a set of shelves and pigeon-holes for letters and conveniences. My dictionary lies on a stand at the other side of the table. On the walls of this tiny room are clock, calendar, letter scales, and the interesting things that everyone likes to keep, with the wise or cheerful sayings of favorite authors. On the table are my Bible, papers, and materials for writing.

It is such a cubby hole that many would despise it. The only expense was about eight dollars for carpentering. It is so secluded that some would fly from it, but to me it is a place to work happily, a refuge—a sanctuary. Life is much less tense, nerves are quieter, and family life is happier because the mother has a place where she may "find herself."

MRS. E. FLAVEL.

MANNERS have an enormous commercial value in life. No one can have lived as long as I have without noticing the weight and value of manners in the ordinary transactions of life, in public life, and having seen men by appearance and manners get such a start of very much abler fellows that they have been able by appearance and manners to keep their place much higher in public life than their own abilities or service would entitle them to.—Lord Rosebery.

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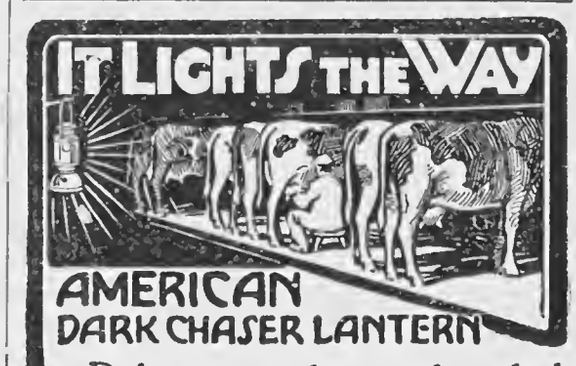

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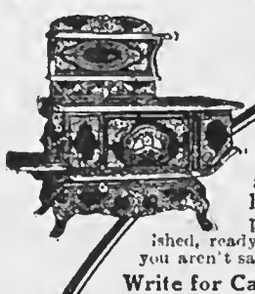

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The United Pump & Power Co. 473 Dickey Bldg., Chicago

Seen in New York Shops.

A PRETTY little hat of a narrow-brimmed shape with sloping crown was of midnight blue velvet, having around the base of the crown a band, of blue moire piped with silver. The ends of the band were crossed in the back, and also crossed in front, with a small cluster of silver flowers. A good many hats show some metallic trimming, silver, gold or bronze, but such garniture must be used with good taste, or it has a "would-be" stylish effect.

Rainproof gloves of tan capeskin are new, and they may be washed with cold water and soap. They have stylish stitching of tan or black; $1.50 pair.

Burnt ostrich feathers are among millinery novelties. They are thin plumes that look as though all the fluff had been singed off, and are made up in clusters and "fancies." They are not very beautiful, as a rule, for a good many of them suggest discarded trimmings, but for the moment they are very fashionable.

Plain walking hats are described as "trotteur" hats, just as the plain tailored suits are "trotteur" suits. Among young girls' black velvet hats a favorite model is the "beret," which, as its name implies, suggests a priest's biretta. It is rather flat, loosely draped with velvet drawn towards the center in folds like the sections of a biretta, and simply finished with grosgrain ribbon. Such a hat is offered for $3.50. Black velvet trotteur hats for women, in sailor, tricorne and turban styles, trimmed with fur, metal galon or silk, are offered in great variety for $5, while tailored velour hats, in black and colors, trimmed with ribbon bands, cost from $2.95 up. Then there are plain sailor hats of silk velvet and hatters' plush, with no trimming except moire bows, that are priced at $14, but they are copies of new French models made up in high-grade materials.

Monkeyskin trimming is sold by the yard at 45 cents to $1 a yard for single edge, used as a border, and $2 a yard for the double edge used for cuffs and collars and bandeaux on hats.

Many of the leading shops now make a specialty of American-made silks, and announce the fact quite as proudly as they formerly called attention to imported goods. Many of these are 36, 40 and 42 inches wide. Among them are satin charmeuse, crinkle crape, crepe meteore, faille souple, etc., at from $1.95 to $2.85 or over a yard. It must be remembered that these silks are so wide that they cut to great advantage, unlike the old 18 and 22-inch silks that used to be made up into wide skirts.

Very practical coats for young girls are made of Scotch tweed, dull mixed colors with gray, green or brown predominating. A favorite style has raglan sleeves, a wide flaring collar, deep cuffs and a wide low-placed belt fastened with large buttons. These coats, in very good tweed, cost about $12 to $15.

Smart new veils have a filet mesh. This square mesh is becoming, and is not so trying to the eyes as a fancy mesh. Some of the veils are plain, others dotted or figured; many are bordered. In addition to black, white and flesh, these veils come in mousse (moss green), aubergine (eggplant) rhubarb pink, ambroisie, which is a soft red, and paon or peacock. Lace veils come in black, white, blue and the dark brown called tete de negre. Washing veils of white lace in shadow weaves are very popular.

Tested Grape Juice.

J. M. R. asks how to make grape juice; this is my way: 10 pounds grapes, stemmed and washed, two quarts water. Boil 10 minutes, strain without squeezing, add two pounds sugar, bring to boil, bottle. This makes four measured quarts, and is very sweet and rich, so we get just equal to 10 of the 25-cent size grape juice bottles ($2.50) for the two pounds of sugar, and this is double the strength of any I ever bought. Some, I put in any shaped bottles with new corks. Then I fill the heated bottles overflowing and pour back one inch of juice into kettle, quickly cork, taking corks from pan of boiling water, press in all the way. When cool, seal over with paraffin. Other times I use pint or even quart jars, but when opened it cannot be kept more than a day or two without souring a little. If ever any has worked in the bottle, as has occasionally happened, boiling up again seems to restore sweetness. In serving it we fill tumbler one-third full of juice and fill with cold water. In sickness we sip it only slightly diluted; often use it, too, in lemonade—or with a beaten egg. My way of squeezing the grapes now, is to put the jelly bag in the lard press and press only slightly, not enough to cloud the juice. The residue makes fine jam.

E. A. L.

Educating Children at Home.

I HAVE two children, age three and five, and would like them to enjoy some kindergarten work. We are too far away from a school to send them so early, so I should like to get kindergarten ideas into their heads instead of mischief. I have read a little about the Montessori method. Could you tell me some book concerning this method? Would it be practical for a busy housewife to attempt such a method? Can you give me some information on home education?

MRS. M. J.

This letter touches a subject of importance to many mothers. Isolated farm homes, even in the Eastern and Middle States, often hamper the parents in providing systematic education, while this becomes a far more serious problem in sparsely settled localities in the West or Southwest. The National Bureau of Education has received so many appeals from parents in lonely districts that they have now established a Division of Home Education, which coöperates with the National Congress of Mothers. A series of bulletins on home educational problems has been prepared, so Mrs. M. J. is advised, first of all, to write to the Division of Home Education, U. S. Bureau of Education, Washington, D. C., stating her problems, and asking for any bulletins bearing upon them. She will receive expert advice adapted to her special needs.

A most interesting book on the Montessori system is "A Montessori Mother," by Dorothy Canfield Fisher, and this will be found very helpful. It will suggest ideas and methods that may be used by a busy mother, even though she may not feel able to carry out its teachings in full. Another useful book is "Educating the Child at Home," by Ella Frances Lynch, which suggests simple and effective methods of utilizing the child's natural curiosity in imparting instruction.

This subject of home education should be utilized in bringing rural women together for club or society work. A woman who tries to teach children at home soon learns that any normal child can ask more questions in a day than she can answer in a month, and she is thus led towards new lines of study herself. The most common defect in home teaching is a tendency to omit subjects that either mother or child is not interested in, especially such essentials as arithmetic and grammar in its drier forms. But these are touched but lightly in kindergarten and primary classes; if the mother forms habits of intelligent reasoning, fixes the attention and gives a respect for discipline, her little pupils will not be found deficient when they enter higher classes.

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1 cup Brown Sugar
1 cup White Sugar
1 cup Milk. Piece of Butter, size of Walnut, half cake of Chocolate, pinch of Salt.

Boil over low fire. When done stir in half cup chopped walnut meats. Add half teaspoonful vanilla, stir until creamy and pour into "Wear-Ever" biscuit pans.

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45A73 **37c**

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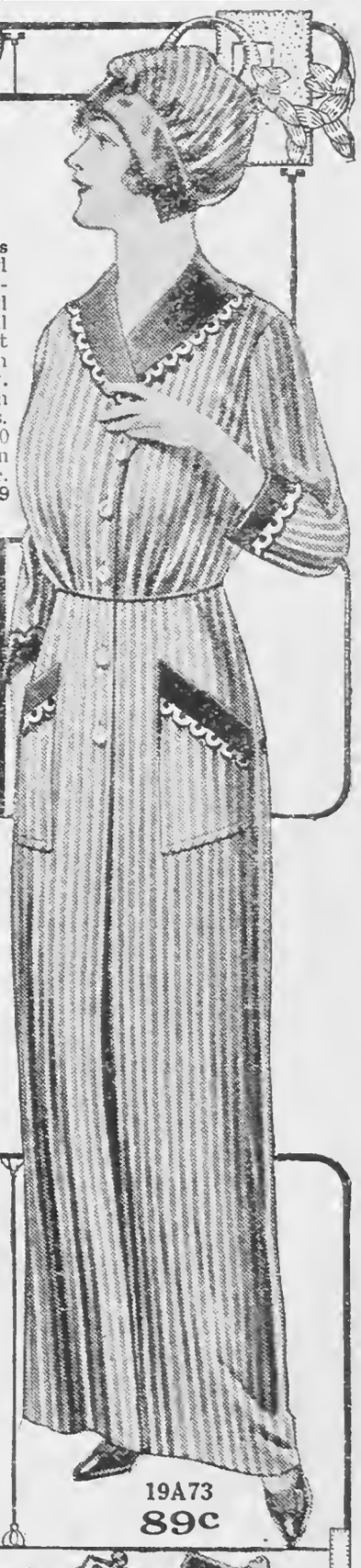
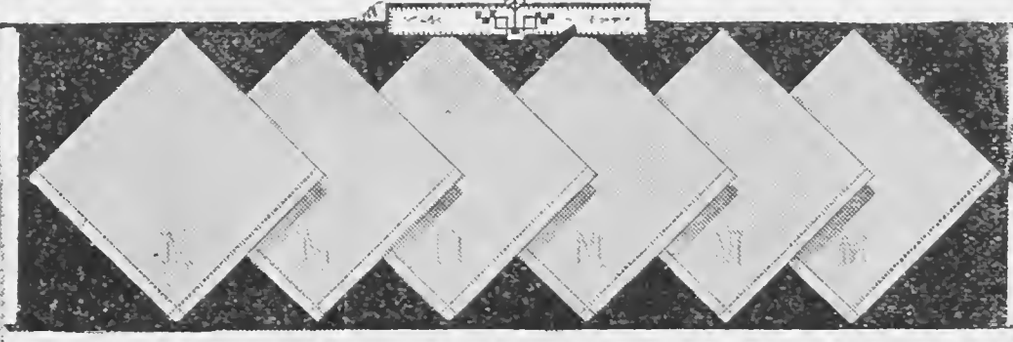
19A73—Worth $1.00—our price, 89 cents for this attractive House Dress of Striped Percale with Dust Cap to match. Copenhagen blue linene, edged with scalloped embroidery, is used for the collar and cuffs and also trims the two convenient patch pockets. Three-quarter length sleeves. Gored skirt with lap in back. Visible front closing. COLORS: blue with white stripes, or grey with white stripes. SIZES: 32 to 46 bust; skirt length about 40 inches, with three-inch basted hem. In ordering give bust and waist measure. Order today.....*Postpaid*, .89



19A73 **89c**



Shop-Worn Initial Handkerchiefs (Not more than one dozen sold to each customer)

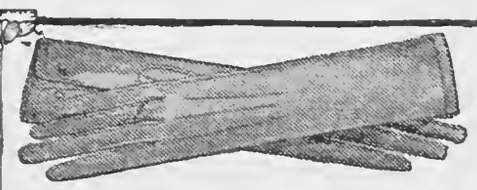
Unlaundered Pure Linen—and Six for 39 Cents

32A73—These Ladies' and Misses' dainty and serviceable Handkerchiefs are 50-cent quality and need only laundering to be as fresh as if you paid the regular price for them. They are made of Pure Linen, finished with a hemstitched border and embroidered initial. Any letter except I, O, Q, U, V, X, Y and Z. Be sure to state initial desired. Order today.....*Postpaid*, **Six for .39**

Your Money Back if You Want It

The Newest Girdle

31A73—Fashionable crushed girdle of lustrous Satin, finished with a large bow and buckle which may be worn at the front or back. COLORS: black, navy blue, lavender, white, light blue, emerald green, or American Beauty red. SIZES: 22 to 34 inches waist measure. Order today.....*Postpaid*, .47



Here Are Your Gloves

46A73—An exceptional value—Ladies' Fleece-Lined Suede Gloves for only $1.00. Dressy, yet very warm and very serviceable. Half-pique sewn; three rows of stitching on back. COLORS: tan, or medium grey. SIZES: 6 to 8½—in half sizes. You will be delighted with the warmth and beauty of these splendid gloves. Order today.....*Postpaid* $1.00

A Real Bargain

42A73—A real "NATIONAL" bargain. A set of three attractive and serviceable garments for the small girl, at the money-saving price of $1.00. This set consists of one Dress of medium grey striped Outing Flannel trimmed with cadet blue percale; one Dress of cadet blue Plaid Percale trimmed with solid cadet blue percale; and one Apron of cadet blue Chambray. SIZES: 2 to 6 years. Sold only in sets; one of each style and all of the same size. Here is a splendid example of "NATIONAL" money-saving bargains. Order this set today and see for yourself your saving.

Postpaid, **Three for $1.00**

42A73 **3 for $1.00**

30A73—The new style Party Box of Morocco Grain Leather, fitted with mirror, leather purse, powder box, memorandum pad and pencil, eyebrow pencil holder and perfume bottle; all gold plated. COLORS: black, navy blue, purple, or dark green. A regular $3.75 value...*Postpaid*, **$2.69**

NATIONAL CLOAK & SUIT CO. 273 West 24th St., New York City.

A DRESSMAKING LESSON.

Making the New Basque.

THE basque is among the most popular new models, and a little instruction regarding it may be helpful. The lining consists of two pieces, front and back, shown in the diagram laid out on

THE GATHERED BASQUE 8338A.

material 36 inches wide. Whether this material shall be silk or mercerized cotton must depend entirely upon the material from which the gown is to be made. The basque itself can be of any material soft enough to be made full. In the diagram, the basque is shown laid on such material 44 inches wide. The dotted lines that indicate the second collar and second cuffs are to show where the lining can be cut.

Pin the various pieces carefully into place and mark all around the outside edges of the pattern with tailor's chalk, marking all the perforations and notches. Cut as far beyond the edge for seams as the material requires. For the satin, one-half inch will be sufficient. Take up the deep darts that extend from the lower edges of the lining fronts and the darts from the shoulders of the basque by bringing the corresponding lines of perforations together, baste and stitch on the right side. Split the darts at the folded edges and press open. Join the lining backs on the marked outline and press the seams open. Then gather both the fronts and the back on the under-arm and front edges between the double crosses and arrange each portion of the basque over the corresponding portion of the lining with the shoulder edges exactly meeting. Baste on the marked outline and try the garment on the wearer. It should not be tight, nevertheless one figure may require the under-arm seams to be taken up a little more than another and it is just at this point that any necessary changes must be made. When the basque is adjusted, stitch the seams.

Next slash each under-arm seam three-quarters of an inch above and three-quarters of an inch below the waistline to allow spring for the figure, and curve the edges of these slashes. Bind each edge of the seams separately wtih a thin silk binding, taking in the material of the basque and the material of the lining in each case. Press the seams open and flat.

To finish the front and back edges with cords, as illustrated, cut bias strips of material one inch in width and fold at the center over a cord, basting the two edges together within the cord; then baste over the edges of the basque with the folded edges of the silk meeting the edges of the basque. Cut straight underfacings one inch in width and the length of the basque and arrange one of these over each front. Baste and stitch together close to the cord. Turn the facing under the basque, and fell the edges to the lining only.

Stitch the lining and the outside of the collar together with the right sides meeting, turn on the seam, baste and press. Arrange over the basque with the right side uppermost, the center back exactly meeting the center back of the basque; roll the collar down and stitch the lining to the edge of the back on the marked outline. Fell the edge of the collar over the seam; then roll the collar back on the perforations. Close the seams of the sleeves. Join the ends of the cuffs and line them. Arrange over the sleeves with the large perforations at the seams and the notches meeting. Cut bias strips one inch in width and under-face. Place the sleeves in the armholes with the notches exactly meeting and the single large perforations at the shoulder seams of the basque. Baste carefully and stitch, using the marked outline as a guide.

Close either with buttons and buttonholes or with buttons used for ornament only and snap fastenings. For the complete garment will be needed 1⅝ yards of material 44 inches wide and 1⅝ yards of lining 36 inches wide.

To Make Money.

IF you want to save money, why put it away,
And let it lie still till a rainy day,
Then if you would double it, take out a bill,
And fold it across, any way that you will.
You will find for your trouble
Your money is double,
And all men can see without banks or leases.
Your money thus doubled, is always in creases.

The above isn't written from memory, although the idea was instilled many years ago, in an old scrap of a poem, the writer of which I cannot tell. I hope, however, to give a method of increasing money a little more satisfactory than that above.

There are very few women who haven't some ability a little more in evidence than other abilities. A woman on a farm who had been practically shelved, from ordinary work, began showing young people how to do certain things. For instance, the woman had learned to make tatting years ago, and an old tatting shuttle had lain around for many years. This was brought forth and she picked up the old work. The revival of this art led others to want to learn it, so she decided that she would open a class in tatting. The young girls around came in and at 10 cents an hour for the lessons, felt little drain on their purses, and yet the little received helped the woman considerably, more in fact, from the consciousness that she was not wholly useless and helpless than in a financial way, but the little work begun broadened out in other ways. Some were slow in learning to tat, and yet persistent, and one young girl, who spent a dollar in learning the mere stitch felt highly satisfied. She declared that while she had spent a dollar in learning the stitch, she should save many dollars by making her own trimming, which is a very sensible way of looking at the matter. Another young girl who learned the tatting, has made over fifteen dollars in tatting this Summer. She makes a common, plain tatting for 15 cents a yard, and she has made yards and yards of it. Others finding that she does the work reasonably, have had her make some especial kinds for which she gets from 15 cents up for her work. She made one baby bonnet for which she gets five dollars. The woman who taught the art, frequently has this girl as a pupil for an hour or so, as the teacher is ingenious and inventive she thinks up new ways and combinations, and these she teaches at the regular rate, and she can teach a good-sized class at once, especially if all are learning the same pattern, althongh she can handle several different methods at once. It is astonishing the furore for tatting. This woman makes medallions of various sorts for insets in waists, etc. For one woman, she made a triangle of wheels, and three small wheels; these were used as insets on a vest front to a dress. After these were made it was decided that an edge was wanted, and the woman offered some clover-leaf tatting she had made, and it was accepted. The medallions sell from 15 cents each up, according to the style and work employed. A lot of jabots of tated wheels were made to sell at 50 cents each, that is for the two wheels joined.

Having had good success teaching tatting she took up crocheting, beginning with the simplest forms, for the ends of bath towels, and going on to more intricate things. Her charges are so very reasonable for teaching that even real young girls avail themselves of her lessons; she has the faculty to teach, which helps much. These lessons she does not hold more than an hour, or at the most two hours at a time, as she has not been fit to do more than that, but she has earned a little money for her own use, and has helped to keep her heart and mind interested, besides getting in touch with the girls of the neighborhood, which has meant much to her.

Once beginning she has forged ahead, slowly, and a little at a time, she had made sales for her work, although she has not advertised it, nor has she preyed upon the good nature of her friends, in fact she has never solicited work, but it has slowly come to her. She was lucky enough to find a woman's exchange which had just started, and which wanted work for sale, and the work was accepted with no entrance fee, but a charge of 10 per cent. commission was allowed for the selling. It is a wonder that more women who have ability to do work of this kind don't try the exchanges, for nearly everything can be displayed there, and in time be sold.

A carpet warp bedspread was made, using filet crochet patterns for the work, the pattern being extremely original, having initials crocheted in and at the top of th spread the words, "Peace to Thy Slumbers," all done in crochet. This spread the invalid made at odd times, and it is not for sale, but it will be shown at fairs and probably she will get premiums on it, for its very originality. Moreover, girls who could not pay her money, for learning the work, often paid her by work, which she could not do herself, and so a sort of neighborhood coöperation was begun.

One might put her tatting and crochet work in stores to sell, but she gets a better price if it is sold to individuals. With an eager interest in some thing one will find time to do it, and it is astonishing the number of yards of tatting which can be done at odd moments. The girl who sold her tatting for 15 cents a yard, learned that it was hardly enough, as the thread used was the best made for such work, and the cost of the thread took off the profits, so that now she lets the buyer of the tatting buy the thread, and the price is just for the work alone.

R. S. M.

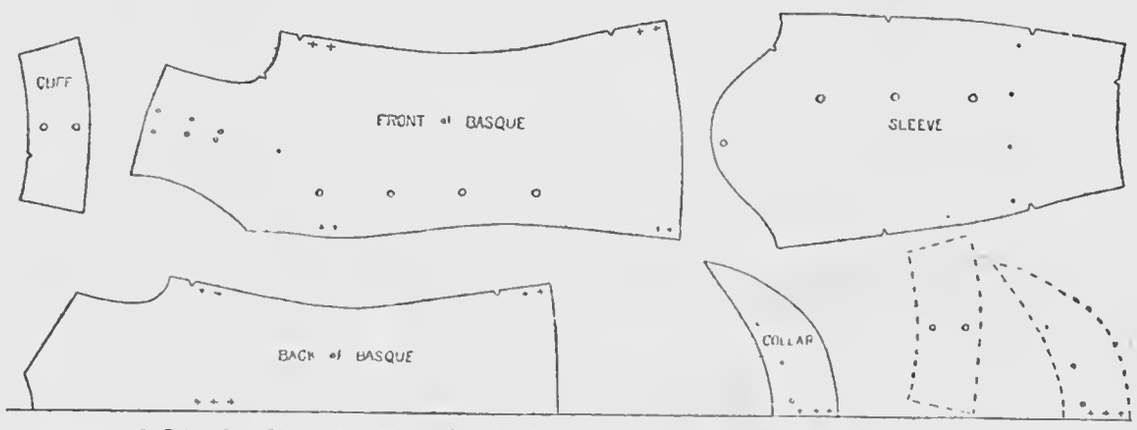


DIAGRAM OF BASQUE LAID ON 44-INCH MATERIAL.

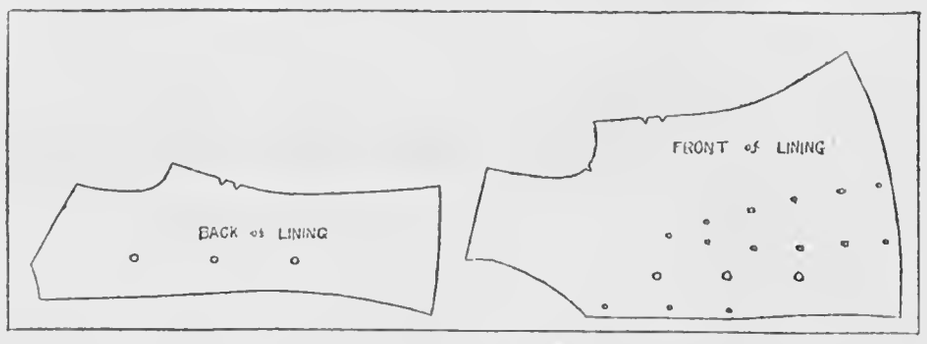


DIAGRAM OF BASQUE LINING.

Making Sauerkraut.

WOULD you give a good reliable recipe for sauerkraut. Your Rural Cook Book is in constant use in our family, but find no kraut recipe.

MRS. L. K. M.

Will you tell me how to make sauerkraut by the barrel, and also in what different ways it is prepared for the table?

C. L. M.

The preparing of plain sauerkraut is very simple. Select sound hard cabbage, remove and discard the loose outer green leaves. Quarter the heads, cut out the cores and the bases of the large outer mid-ribs. Then slice with a sharp knife, cutting into fine strips lengthwise. Sauerkraut cutters are made for both hand and machine power, and ar very convenient, as a sharp knife is needed, and a careless person may easily cut himself with an ordinary large knife. Weigh the sliced cabbage, and for each pound of sliced cabbage allow one-half ounce of table salt. Dust salt in the bottom of a clean keg or earthen jar and put the cabbage in it in layers, dusting each layer with salt. On top of the last layer add more salt in the proportion of one pound of salt to each 100 pounds of cabbage. The cabbage should be pressed down firmly; some housekeepers pound it down with a wooden pestle. Sometimes juniper berries are added to the top layer of salt, a handful to each 100 pounds of cabbage, but this is a matter of taste. A loose cover is then put on, with a heavy stone on top to weigh it down, so as to keep the cabbage under the brine that is formed. Keep it in a cool dark cellar, and skim off any scum that forms as it ferments. If the brine lessens much as the sauerkraut is used, add enough brine to cover it completely, and always keep the cover with weight on top. Experienced housekeepers rarely weigh their materials in making sauerkraut, as their rule-of-thumb knowledge is sufficient.

When preparing for the table, take out the required amount, rinse in cold water, drain, and boil like cabbage. Salt pork, ham or corned beef may be boiled with it if desired; sparerib or sausage are also desirable accompaniments. After boiling it is often warmed over in the frying pan with bacon drippings or other fat, and many consider it more savory in this form than boiled. This sauerkraut sauté, if we may be allowed, at the present time, to combine a French adjective with a standard German dish, is desirable with Hamburg roast—that is, savory chopped beef baked in a roll. Some boil the sauerkraut a long time, until it becomes quite dark colored, but it is usually only boiled until tender and white. It becomes dark when warmed over in the pan. Another savory dish is sparerib stuffed with sauerkraut; the boiled kraut is laid on the hollow side of the sparerib, which is folded over it, and then cooked in the oven.

Sauerkraut is sometimes made from red cabbage, while a Thuringian recipe calls for caraway seed, the same amount by measure, not weight, as of salt, and some sliced tart apples.

BAKED EGGS WITH HAM.—Mix a cupful of finely chopped ham, half a cup of bread crumbs, one teaspoon of chopped parsley, one teaspoon of butter, quarter teaspoon of made mustard and enough hot milk to make a smooth, soft paste; spread this in buttered scallop shells, break an egg into each shell and sprinkle with buttered crumbs. Bake in a quick oven until the crumbs are brown and the whites of the egg firm.

WAFFLES.—Do you make waffles? If not, why not? Try this, following directions carefully, and you will be pleased with the result: Two cups of sifted flour, one cup of buttermilk, one tablespoon of melted butter, one teaspoon of baking powder, one-half teaspoon each of salt and soda, two or three eggs, beaten separately. Sift the flour, salt and baking powder five or six times. Beat the yolks of the eggs and stir into the buttermilk, sift the flour in a little at a time, beating the mass smooth between times, add the melted butter and beat till perfectly smooth; beat hard and long, for your success depends upon it. Add the soda dissolved in a tablespoonful of warm water, beat some more, then fold in the beaten whites of the eggs. Grease the waffle irons well before you bake the first waffle, and they will not need it again. Have the irons good and hot. Serve each waffle on a warm plate, fresh from the irons, crisp, feathery, melting, and your family will be sure to pronounce them the "best ever."

Aunt Abby's Outdoor School Room.

AUNT ABBY had been taking a regular course in the city school rooms, accompanied by the children's mother, who had taken much pains to point out all the new and wonderful methods of teaching and training the different grades and who emphasized the improvements at every turn, until in duty bound she had to turn homeward. The first school visited was the high school, where Niece Isabel was in the graduating class. The course consisted of a wonderful medley of Latin and Greek, political economy, English literature, etc., but the prevailing at all times, appeared to be graduating topic of conversation among the students dresses, graduating gifts, class pins and photographs, until Aunt Abby wondered where the real study came in.

The next school was Tom's; he attended the grammar grade. Here the common studies had more show, but according to Tom's own version the gymnasium and football were the principal and most attractive features. Tom's light did not shine particularly bright in the class room, but he was quite a hero at sports. Tom's father consoled himself by saying that the boy was building up a good, strong body anyway, and he might get a job as a coal-heaver if his mind failed altogether.

Marjorie, who attended the public school, a tall, delicate girl quite the reverse of Tom, was being pushed and crowded along so fast that she broke down at the end of every school year, while Doris and Stanley, the two youngest, were just ready to leave the kindergarten. Their mother told wonderful tales of their progress, and when Aunt Abby proposed that the three youngest children should go home with her, she at first refused, for fear they would fall behind their class, etc. But their father set up his authority. He agreed with Aunt Abby that Marjorie was in need of a long holiday. It would be the best thing for her to be turned wild out of doors for a whole season, if not a year, and the two younger children could learn all about the country; their Aunt Abby could teach them common sense anyway, "class or no class." So one bright day in May he slipped a well-filled purse into Aunt Abby's hand, kissed the children good-bye, and hurried them off to the train, saying, "I'll give these babies a chance to grow anyway, if they never graduate."

How happy they all were! Even tired, listless Marjorie woke up and laughed and talked as she had not for many a day, while Doris and Stanley were fairly rapturous. Of course, the reaction came to Marjorie the next day; but she seemed quite content to be out in the hammock among the green trees, as Stanley said like a sick bird in its nest, but Aunt Abby knew the nest would not hold her long. As soon as her wings were strong she would want to fly.

The two younger children were allowed to run wild for a week; then Aunt Abby proposed that they open a country school. Marjorie might come or not, as she chose. The children did not favor the plan at first, but it proved so delightful that there was no question about Marjorie's joining. The first lesson was learned out in the old apple orchard under the beautiful canopy of fragrant, blooming trees. They first read and then recited the beautiful poem entitled, "Planting the Apple Tree," by William Cullen Bryant. Then Aunt Abby told them something of the history of the apple trees, gleaned from her scrap-book. "The first fruit trees were brought from England about 1639. These were all planted on Governor's Island, in Boston Harbor, where there were a few pippins. The Mayflower is supposed to have found room in her cargo for nursery plants as well as tables and chests. There is a tradition that when John Winthrop began the settlement of Pequot (New London), in 1646, he distributed a large number of fruit trees to the young planters, while Governor Endicott's orchard at Salem, Mass., is mentioned as early as 1644. By 1650 Mr. Henry Wolcott's apple orchard, in Windsor, Conn., one of the first and largest in the Connecticut Valley, was in bearing, and for 20 years after, he supplied young trees to his neighbors, and made "syder" by the hogshead, which he sold to neighboring towns and colonies for 10 shillings a hoghead. Five hundred hogsheads were made in one year. Pippin and Pearmain apples seemed to be the favorite varieties.

"William Blackstone, the first permanent white settler in Rhode Island, who built his cabin in the Blackstone Valley in what is now the town of Lincoln, set up his library there, and called the place Study Hill. The name clung to it until 1885, when the hill was removed to make way for a cotton mill. On this hill Blackstone planted an orchard, and the trees bore the first sweet apples that ever were in the new world. According to history, Blackstone, riding on a bull, went to Providence occasionally to preach, and often carried a sack of these sweet apples to distribute to the members of his congregation. There is no doubt that these sweet apples were produced on other stock by grafting, and that the apples increased and spread throughout the State of Rhode Island, and into adjoining States."

Of course this history led naturally to a host of questions from the children about the early history of the colonies and the first settlers, while Stanley clamored for Indian stories until Aunt Abby had to start both him and Doris on a journey around the orchard to count the number of trees in a row, the number of rows, etc., and they had an exercise in arithmetic, both mental and physical, which lasted until the tea-bell rang. They all agreed that Aunt Abby's school room was the most delightful one they had ever entered. They had never learned so much about everything at one session, and "I can remember it all without trying," exclaimed Stanley. "The best of it is we have not exhausted the old orchard yet," replied Marjorie. "And that is only a tiny bit of even our own little world," echoed Aunt Abby.

ALICE E. PINNEY.

Starch Beads and Damp.

ON page 1088 A. G. W. has stated her trouble with starch beads and the editor asks for others' experience. I made some beads according to rules that you had published and they appeared hard, pretty and quite a success, until worn during our damp weather of the Massachusetts coast, and then, alas, they were anything but successful. I know of nothing to harden them against the damp weather. They may be satisfactory inland where the air is more dry, but sealing wax or glass will have to be used by people who live near the coast, unless I am mistaken. I should be interested to see what is said on the subject.

H. R. K.

I make starch beads for sale, and have never had trouble with their softening. I have even washed them without trouble. Take one tablespoon of starch, 1½ tablespoons of salt, four tablespoons of water. Boil hard till stiff. Then take one tablespoon of the mixture and roll out in a little salt. Cut even strips with a knife or large needle and form into beads and string. In about one day they will be ready to string if made right. I have made them for a long while and sell them, getting 30 cents for 75 blue, 30 cents for 75 black and 35 cents for 75 pink ones. I don't furnish the small beads to go in between.

E. J.

Pork Spice Cake.—One cup cracklings, ground; one cup molasses; one cup brown sugar; one cup fruit; one-half cup citron; all kinds of spice, ground; one teaspoon soda; one cup boiling water; flavor to taste.

MRS. A. D. H.

Potato Pie.—One cup potatoes mashed fine, one cup sweet milk, one-half cup sugar, two eggs well beaten, butter the size of a walnut. Flavor with nutmeg. Put all through a colander and put in a pie tin which has been lined with a good pie paste and bake. This makes one pie.

MRS. ELLEN KYLE.

Carrot Pudding.—Two cups flour; one cup raisins; one cup grated carrots; two eggs; one cup chopped suet; one cup milk; one teaspoon salt; two teaspoons baking powder; cup sugar; vanilla; boil or steam. Carrots used in the same way as pumpkins for pies are fine.

A. D. H.

When you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

Live Stock and Dairy

CONCERNING HEAVES OF HORSES.

FARMERS often are at a loss to understand why one horse out of a number fed in exactly the same way contracts heaves (broken wind). If the disease is due to feeding dusty hay one should suppose that all horses so fed would become heavey; but this is not the case. Certain horses evidently are particularly susceptible to heaves. That assuredly is true of the horse with the gluttonous appetite. Think the matter over and it will be conceded that practically all heavey horses have gluttonous appetites and such horses, before the disease attacks them, are the best workers. They come in from work ravenously hungry, gobble up their grain and then stow away all of the hay in sight, and commonly there is far more hay available than any horse should have. Before there is time for sufficient rest, or the partial digestion of feed, the horse is returned to work. His stomach is greatly distended and presses injuriously upon the diaphragm, a muscular tissue separating the lung cavity from the abdominal cavity. The lungs in this way are impeded in their action while the digestive organs are burdened by an oversupply of feed which is not properly digested. Under these circumstances the horse soon contracts chronic indigestion which always is present in heaves and explains the formation of gas, the frequent passage of which, during a coughing spell, is one of the most annoying symptoms of the disease. In a confirmed case it will be noticed that the horse has a coarse, harsh, staring coat of hair and is pot-bellied, hidebound and weak, but retains appetite. We must conclude that the tendency to heaves is hereditary. Gluttonous appetite is temperamental and temperament is hereditary. The horse should not be blamed, however, if heaves is contracted. It may be expected to come on if a horse that has a gluttonous appetite is allowed to stuff himself with coarse, bulky, dusty Timothy or clover hay three times a day and then is made to work when over-distended with such feed. The horse that is a big eater will prove the best worker and most enduring animal if judiciously fed. Allow him not over 1¼ pounds of the best of hay per hundred pounds of body weight as a day's ration and dampen it with water at feeding time. At times when he has to work extra hard do not feed any hay at noon. Give most of the hay at night. If a horse comes in hot and tired and is to be allowed a considerable rest at noon, give him a sip of cold water, then one to two pounds of hay to eat while cooling off, then his drinking water and then his grain feed. So fed a horse will not be likely to contract heaves, and the chance will be less still if he is allowed plenty of time to rest and digest feed at noon and never is made to work when his stomach is distended with feed.

Many experienced horsemen do not regard heaves as being hereditary, but we do not belong to that group, for we have seen many cases where the progeny of heavey mares proved heavey when mature and many cases have been reported of "wind-broken" stallions begetting colts which in time became heavey. These cases may have been merely incidental, but they certainly are so suspicious that one had better avoid breeding from heavey sires and dams. In many States stallions afflicted with pulmonary emphysema (heaves) are not granted licenses for public service.

If a horse is seen to be coming down with heaves hay should be withheld. Feed grass alone in Summer and in Winter prefer wet oat straw to hay. Well-made clover hay is good feed for any horse so long as it is not too freely fed, and it should be wetted at feeding time. Second growth clover hay, or that which has been thrashed, seldom is fit fodder for a horse. Prefer limewater for the wetting of feed for a heavey horse. Do not feed any bulky feed at noon and do not work him soon after a meal. The bowels should be kept active at all times and for that purpose a heavey horse may have as often as necessary, two or three ounces of raw linseed oil in a bran mash. Carrots and parsnips also are good Winter feed for such a horse and many farmers are now successfully feeding silage as a part ration. Moldy or excessively acid silage is absolutely unfit and highly dangerous as a feed for horses.

Fowler's solution of arsenic is the popular remedy for heaves, the dose being one tablespoonful (half an ounce) night and morning. Arsenic is especially beneficial in diseases of the breathing apparatus and for chronic diseases of the skin. It also is much used as a tonic for plumping up a thin horse. When it has done its work it should be very gradually discontinued. If suddenly withheld the horse may "go to pieces," like any drug fiend suddenly deprived of his "dope." Home remedies are many. One of them is to give drinking water made quite blue with washing indigo. Another is to allow the horse to inhale the fumes from a pailful of crude petroleum (Beaumont oil) placed in the manger. There are many more or less effective commercial heave remedies on the market, and they probably contain lobelia leaves and arsenic in combination. The disease when confirmed is incurable, but fed and managed in the way suggested here a heavey horse may be enabled to do enough work to at least pay for his feed.

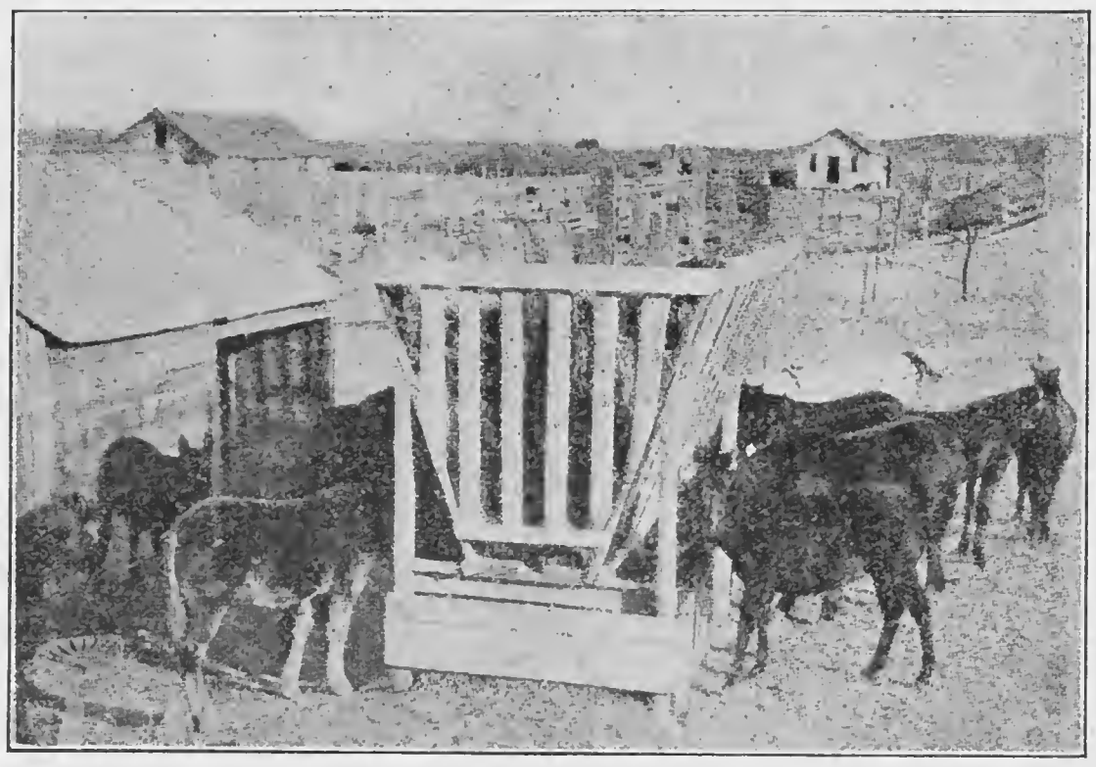
We find that the disease is most likely to attack horses in States where clover thrives luxuriously. It would also seem that it is most common in damp, muggy climates. We have not heard that it is prevalent in mountain States.

A. S. ALEXANDER, M. D. C.

Alfalfa Hay for Horses.

HORSES are maintained more economically, are supplied a balanced ration without bran, suffer no bloating, growing draft colts have seldom been injured by eating too much Alfalfa and oats, and as horse feed good well-colored Alfalfa is equal in value to wheat bran in the horse ration. This is the opinion of the Nebraska Experiment Station which has investigated Alfalfa and other hay for horses. In the experiment six animals did heavy work seven or eight hours daily, and mules consumed half as much Alfalfa as the horses. The mules, working one hour less the day, held their own with the horses, and the cost of feed was two-thirds as much for the mules as for the horses. With Alfalfa, to obtain the best results in pasturing, it is advised that horses should be turned out at night. Six work horses with rations of corn and oats, and a feed of Alfalfa hay at noon, it was observed, stood work equally well with dry-fed horses on adjoining farms. A mixture of eight pounds of Alfalfa and 12 pounds of Brome grass makes a safe pasture for horses and other stock.

For fattening horses, one feeder secured four pounds gain daily on horses by feeding 21 pounds coarse ground corn and 14 pounds Alfalfa daily. Alfalfa meal is being used as a partial substitute for oats in a grain ration, as corn alone is apt to produce digestive troubles. Alfalfa meal adds bulk to this corn, and forms a cheaper feed than bran or other commercial by-products. A charge of $3 the ton for preparing the meal is added to the hay cost, which was $10.50 the ton. One breeder stated that he finds 10 pounds of Alfalfa hay in the dry lot with a little corn fodder or wheat straw makes a splendid feed, and colts do better than when fed the same weight of prairie hay and 10 pounds of corn or oats. It is advised that one pound of Alfalfa or other hay and 1¾ pounds of grain per day for each 100 pounds of the horse's weight makes a good ration for the work animal. Horses like the stems, and refuse from the cattle racks is very acceptable to the horses. Because of the ease with which it can be grown it should form a part of the horse's ration. Bran at $1 per cwt. is not practicable as regular feed with corn at 45 cents and oats at 33⅓ cents. Oats and corn are about equal value for horses, pound for pound. These facts are taken from a recent bulletin issued by the Nebraska Station. The picture given below shows a rack for feeding Alfalfa hay to mules and colts in the yard.



ALFALFA FEEDING RACK USED IN NEBRASKA.

The Brown Swiss Cattle.

CAN you give me any information pertaining to the Brown Swiss and French-Canadian breeds of cattle? Are they essentially dairy breeds, and what are their points of excellence? If there is an association of breeders for each in this country, can you give the addresses?

R. F.

The Brown Swiss Breeders' Association is located at Groton, Conn.; Mr. N. S. Fish is secretary. The Brown Swiss as a breed are plain, substantial, although rather fleshy, and give one the appearance of being somewhat coarse in bone and general make-up. The head and neck especially are large and plain contrasted with the English breeds of cattle. The hind quarters are full and round. The cows have large, well-shaped udders and uniform teats. The cows average about 1,200 pounds in weight, and the bulls 1,600 to 2,000 pounds. The color is brown or mouse-colored. The brown varies from a very light to almost black. The nose, switch, tongue and horn tips are always black. The nose is surrounded by a mealy ring and a light stripe is always found along the top-line. In disposition the breed is especially quiet and docile and easily handled. The breed is slow maturing; cows usually calving at about three years of age. They are noted for continuing to be sure breeders to an advanced age. While in Switzerland the breed is considered dual-purpose, in America the Brown Swiss breeders are developing their breeds strictly as a dairy breed. The majority of the cows can be counted on to average about 6,000 to 7,000 pounds of 4 per cent. milk. No system of advanced registration has been adopted in this country as yet.

The French-Canadian breed is very closely related to the Guernseys and Jerseys. They have become adapted to severe climates and are noted for their vigor and ability to withstand the cold Winters of the North. In size and conformation they are much like the Jerseys; cows averaging about 700 to 900 pounds in weight. They are active and adapted to hilly and rough pasture. In color they are black with an orange stripe down the back, and along the muzzle. In quantity of milk they can be compared favorably with the Jerseys, and the fat content averages 4 per cent. to 5 per cent. The French-Canadian Herd Book was established in Canada in 1886. There is no breeders' organization in the United States.

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DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

Selecting a Flock Breeder.

FIRST I am going to address the man who wishes to buy a good ram to use on grade ewes to produce lambs for market. He wants a ram that will, when mated to his ewes, give him the quickest-growing heaviest lamb of the most quality that his ewes are capable of producing. I say heaviest lamb advisedly, for I have proved to my own satisfaction that pounds pay provided you have quality. Buyers do not discriminate against lambs usually on score of weight unless over 90 to 100 pounds, and lambs capable of greater weights make 90-100 pounds quickest. Thus when you select a ram be sure to buy a lamb if you can. Some may think this queer advice but if "like produces like" then a lamb ought to foretell what sort of lambs he will sire. If you think necessary keep him for a year before you use him, but buy him as a lamb. When you select him look for masculinity as portrayed in the broad nose, the strong sturdy neck, the flashing eye and the desire to hit you a rap. Look for a straight back and broad loins, a good fleece and plenty of bone. Never if you can help it buy a ram that is at all feminine in characteristics. He will be unsatisfactory as a sire. Learn to tell a good lamb in the rough. A fat lamb costs more, and fat hides many defects. Last but not least, do not expect to buy a good sire for less than $12 to $15, as a lamb, and do not expect a show lamb at that price. You will never get it. If you must buy your ram by mail buy from a reliable breeder and tell him what sort of ewes you have, and he will treat you right.

Now for the breeder of purebreds. He already has a high-class flock, but he wishes to raise his standard. He must know just how high his own flock stands, and then buy the very best his pocketbook will allow. He must remember when buying to pick not only for all that the breeder of grades wants, but he must have breed type, pedigree, clean fleece and all the things which it is so hard to find in one sheep. He should, if possible, see the sire and dam of the sheep he buys, and this breeder, like the other, should buy a lamb. Almost everyone wants a yearling, and yet invariably the lambs we sell are the most satisfactory and the most profitable for all concerned. I believe that the purebred man and the grade breeder are in essentials looking for the same thing, but the purebred man has some finer points that are like putting the polish on the rough diamond. Sheep are the most profitable stock on the farm today, and becoming more so, and it behooves the flock owners to buy good rams. H. B.

A. R. O. Record.

WHAT is the meaning of A. R. O. Record of cows, and how should I handle cow to make same? 2. I wish to cut a boar, weight abont 300 pounds. Can it be done and is it risky? New Jersey. J. A. B.

1. The terms "Advanced Register Official" is oftentimes abbreviated "A. R. O.," and signifies that a certain named cow has been put under official test for a stipulated period, and that the record established has been authenticated or made under the supervision of the representative of an experiment station, who is the authorized agent of the Record association that tabulates and recognizes performance achievements. With the Holstein breed they have what is known as the "Seven Day" and the "Thirty Day," as well as the semi-official yearly record. They require a cow to produce a given amount of butterfat or its equivalent in butter, and provided she meet such requirements she is given what is known as an "A. R. O." number. First of all she must be purebred and registered with the Holstein-Friesian Association, and, second, she must produce at least the minimum requirements of the Association as far as milk and butterfat is concerned before she can be admitted. Furthermore, the test must be supervised by an authorized representative of the Breed Association. Some of the seven day or thirty day records have been made where the cows in question have gone dry for a considerable length of time, previous to freshening, and at calving time in very high condition, in fact, notably fat. Of course, they should be given plenty of feed and every other condition for comfort and contentment must be provided. The placing of a cow in the advanced registry is a good means of advertising, for it not only shows performance on the part of the cow herself, but oftentimes, evidences the qualities of a good feeder on the part of the man.

2. A male hog may be emasculated without great risk at this season of the year. The most convenient plan, perhaps, consists in tying the animal firmly by means of a rope aronnd his upper jaw, behind the tusks, fasten this firmly to a post along the side of a fence, and then by means of a gate hold him in a standing position. The operation can be performed while the animal is standing, providing, he is tied in such a way as will prevent his lying down or squatting. A 5% solution of creolin should be used in thoroughly cleansing the wound, which should be low enough and large enough to permit complete drainage.

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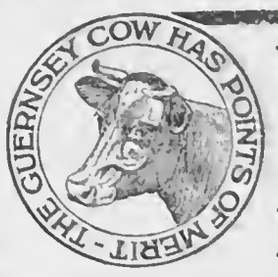

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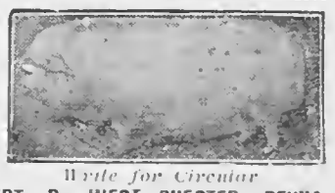

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Brown Swiss Cows rank high in average production and are regular and persistent breeders and producers. Year in, year out, they make good records and raise good calves without any coaxing or pampering. If interested, we will send you an illustrated booklet.

The Brown Swiss Cattle Association

IRA INMAN, Secretary BELOIT, WISCONSIN

FEEDING PROBLEMS.

Sorghum as Fodder.

IS sorghum injurious as a feed for horses? Is it likely to cause abortion in cows? What is the feeding value; as compared with corn fodder?

Yates Co., N. Y. J. F. W.

Sweet sorghum is not injurious as a feed for horses in case it is properly cured and fed while in good condition. It very easily deteriorates in feed value, and it is difficult to store the material without danger from mold or decay. It is the moldy and decayed sorghum that is especially injurious as a feed, in fact it is dangerous under certain conditions of storage. It is sorghum that is in a bad condition that may cause abortion when fed to breeding cows, but there would be no danger in feeding it to dairy animals, provided it is well cured and not damaged in any way from storage. As far as its feeding value is concerned it is superior to corn forage for horses and the analysis shows the following content:

Feeding Stuffs.	Water.	Ash.	Carbohydrates.			
			Crude Protein.	Fiber	N-free extract.	Fat
Fresh Green Corn Forage.						
Fodder corn	79.3	1.2	1.8	5.0	12.2	0.5
Sorghum	79.4	1.1	1.3	6.1	11.6	0.5
Dent varieties	79.0	1.2	1.8	5.0	12.0	0.5
Dent, kernels glazed	73.4	1.5	2.0	6.7	15.5	0.9
Flint varieties	79.8	1.1	2.0	4.3	12.1	4.7
Flint, kernels glazed	77.1	1.1	2.7	4.3	14.6	0.8
Sweet varieties	79.1	1.3	1.9	4.4	12.8	0.5
Sweet corn	80.0	1.2	1.4	4.9	12.0	0.5
Corn leaves with husks	66.2	2.9	2.1	8.7	19.0	1.1
Stripped corn stalks	76.1	0.7	0.5	7.3	14.9	0.5
Field Cured Corn Forage.						
Corn stover ears removed	40.5	3.4	3.8	19.7	31.5	1.1
Amber cane forage	41.7	3.0	3.2	17.0	32.2	2.9

F. C. MINKLER.

Cull Apples for Hogs.

I SHALL have several hundred barrels of Baldwin and Greening apples that were damaged by hail and are not marketable. Would it be profitable to put them in the cellar and pay $5 for shotes to feed them to? Cornmeal is worth $1.95; middlings $1.85; dressed hogs 12 cents per pound. How many apples would it do to feed? S.

Maine.

The feeding value of apples is not very high, and the expense of harvesting and storing the apples would have to be taken into consideration. If you can take care of the apples without very great expense, and can provide comfortable quarters for the hogs, it would seem to me that good thrifty shotes at $5 apiece ought to turn a profit. Give them all the apples they will eat, but also give them a slop of equal parts cornmeal and middlings twice a day, what they will eat with a good appetite, but not enough so that they will not eat a good quantity of apples. The pigs will not need much drink aside from the liquid furnished by the apples, just enough to make the meal and middlings palatable. Provide a box of salt and ashes where the pigs can help themselves and if practicable let them run out of doors except in severe weather.

C. L. M.

Grain for Dry Cow.

I HAVE a cow that is due to freshen the middle of October. I stopped milking her two weeks ago and continued to give her the same feed as when I milk her, which was three quarts mixed wheat feed and one quart of cornmeal. Her milk seemed to keep up, and I was told not to feed her any grain, only plenty of grass. I stopped giving her grain for a few days but she seemed always hungry, so I gave her a quart of mixed wheat feed. Pasture is not very good now. Is new hay good for her? G. M.

Rhode Island.

A moderate amount of grain will certainly be beneficial to your cow. However, it is not best to give cornmeal. I would suggest three parts by weight of wheat bran and two of ground wheat feed. A week or 10 days after she freshens add two parts cottonseed meal or oil meal to the mixture. Newly cut hay is not at all injurious to cows. C. L. M.

Balancing Rations.

WILL you give me a balanced ration when cows are on pasture and fed corn from field; stabled and fed Timothy hay, with the following feeds: Corn and oats on the farm to be fed up; beet pulp $32; hominy $32; gluten $33; cottonseed $36; wheat feed $26; middlings $28. G. S. B.

New York.

When cows are on pasture, cottonseed meal two pounds, ground corn and oats two pounds, middlings one pound. This ration will be equally good when cows are being fed green corn fodder. When the cows are stabled, with Timothy hay for roughage, a good grain ration would be cottonseed meal three pounds, beet pulp two pounds, ground corn and oats three pounds, gluten feed one pound, wheat feed one pound. C. L. M.

Comparison of Food Value.

WILL you give a comparison of standard wheat middlings and a stock feed containing cornmeal, hominy, dried brewers' grains, wheat bran, oat hulls, oat middlings, oat shorts, and salt, analyzing protein 10 per cent., fat five per cent., fiber 16 per cent., to be used as a feed for heavy work horses? The stock feed costs $1 per ton more than the middlings. J. H. D.

Rennselaer Co., N. Y.

While the middlings contain more nutrients than the stock feed, they would not make a suitable grain ration for work horses. The stock feed will make the better feed for work horses if either is to be fed alone. A mixture of equal parts middlings and stock feed would be better than either one alone. C. L. M.

LIVE STOCK NOTES.

Cows and Hogs on Same Pasture.

"I HAVE my sows farrow in August and September," says Harry Kuns of Ashtabula County, Ohio. "I have a large farm and considerable pasture. My pasture is fenced hogtight, and I allow my hogs to run in the pasture with my dairy. This can be successfully done, and where there is water one need not give much attention to the pigs, provided woods are in the field. One bunch of little fellows, numbering 15, were sold last Fall for $35. I had not seen them until they were two weeks old. Pigs feed on roots and they work in the low places where the cows seldom visit. Of course I would advise rape, clover, and the cheapest gain I ever put on Spring pigs was by hogging down corn. There are many farms on which brood sows and pigs may be maintained in the same pasture with the cows." W. J.

Salting Silage.

ON page 1046, in H. U. W.'s article, on coöperative silo filling I read: "To prevent the surface of the silage from decaying I soak the corn with a solution of common salt and water almost concentrated. Following this method there is almost no decay." What does he mean by "almost concentrated?" Can you give me the right proportion of each and the amount to be spread over a 12-foot silo? We had two feet of our good feed spoil last year, which we would like to prevent this year. H. A. E.

Fond du Lac, Wis.

What I meant in my recent article by "almost concentrated," is that the liquid used in preserving the surface of the silage is so heavily impregnated with salt that not more than half of it is dissolved. That is, much more salt is used than the water can take up. This is put over the silage until the undissolved portion of the salt is about a third of an inch deep over the surface. W. H. U.

The Brighton cow market near Boston takes place every Wednesday and almost every dairyman buys his cows there; the prices range from $60 to $120 for cows fresh in milk. The market is well supplied every week, but is considered even by shrewd buyers a renewal of a lottery, as the cows are all well bagged up and it is hard to tell what one has bought until the cows have been milked about one week after market day. Of course like everywhere else, the price of grain is getting so high that it will be still harder to make a profit in the dairy business. I am glad to state that this Fall a great many silos are being built, and this will help to solve the question of cheaper milk. At the Fairoaks farm we retail our milk at 10 cents a quart the year around, and we received 60 cents a quart for cream.

Providence, R. I. A. P.

Sept. 21. Milk retails at five and six cents a quart; butter 30 to 40; cattle, about 10, calves 10. Peaches 25 to 60 16-quart basket; onions 40 to 60; melons 25 to 40. Horses high. Hay $22; new hay $12. Potatoes $1.60 barrel, Giants; round stock $2 per barrel. Eggs 33. Severe drought now, grass suffering very much. Corn, 100 pounds $2; wheat $2.20; oats $1.50 per 75 pounds.

Adelphia, N. J. F. L. H.

Sept. 13. This is a dairy section; we have one of the largest coöperative creameries in the State, doing a business of between $200,000 and $300,000 yearly. No market for garden truck nearer than La Crosse—13 miles—so very little truck is raised here. Cattle and hogs are raised very extensively. Few of the cattle are finished for beef here, most of them are sold as feeders. Following were prices Sept. 10: Wheat 90; rye 85; oats 40; corn 60; barley 55 to 60; hogs 8¼ to 8½ cents per pound, live weight; cows 4½; heifers five cents; steers five to seven cents; hay $8 per ton. Butter, creamery, 31; potatoes 60; strawberries in season, $1.25 to $1.50 per 16-quart case; raspberries $2 to $2.25 per 24-quart case; blackberries $1.75 per 24-quart case; currants $1.35 per 16-quart case. Other fruits are raised very sparingly. Apples are very scarce (home-grown). J. B. N.

West Salem, Wis.

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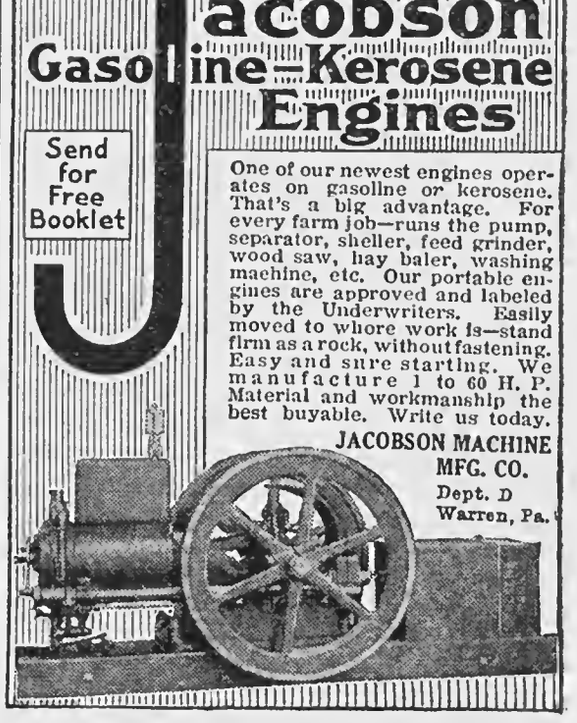

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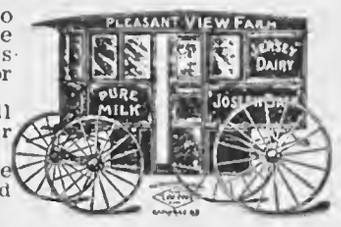

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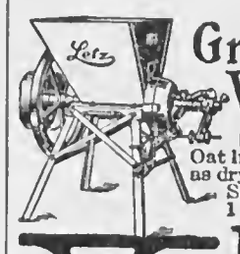

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BEEKEEPING NOTES.

PREPARING BEES FOR WINTER.—On the proper condition of the bees in the Fall and correct care in preparing them to Winter well, depends the following season's success. Every care should be taken to have the bees in the best possible condition. Bees should have sufficient honey in the Fall to last the colony until honey commences to come in the Spring. Colonies which do not have honey in abundance in the Fall curtail the brood rearing and colonies go into Winter quarters with old bees, which die during the Winter, and leave the colony in a very weak condition. These weak colonies are subject to "Spring dwindling," which soon kills the colony. Bees deficient in stores should be fed early, although it is possible to do this in Winter. Hives having supers on them should have them removed. Colonies are inspected to see if they have a young queen and numerous young bees. If either are lacking the colony should be united with a good colony. Each hive should have 25 to 40 pounds of honey, according to the size of the colony. In some cases this will be a hard thing to determine without going into the hive for an examination. By lifting a few hives, then examining them, a close guess can be made on the quantity of honey in the remaining hives by simply lifting them. This should not be taken as an inflexible rule, as size of hive and strength of the colony will have a bearing on the weight. Hives may be lifted and all those that seem sure of having enough stores need not be examined, but all those that are light and suspiciously light should be examined and amount of stores necessary marked on the hive.

PROVIDING STORES.—The most common and also the best way to furnish stores is to feed sugar syrup. Some bee keepers have extra frames, filled with honey during the honey flow, and these are put in light hives, after removing the empty frames from that hive. This is a good and easy method, but combs given should be of good grade of honey. No dark Fall honey or honey-dew should be given. Sugar syrup is a better food for wintering bees than most honey. Nothing but the best grade of granulated honey should be used. Homemade feeders will answer the purpose. These need be nothing more than pans put inside of an empty super which has been set on top of the hive, to be fed. A large pan is advisable, as the giving of a small amount of feed daily until the deficiency of stores is made up, induces the bees to rear brood and excites them, thus wasting their energy. Chips, shavings or excelsior are put in the pan to prevent bees from drowning. If feeding is done in cold weather the syrup should be made of five pounds of granulated sugar to one quart of water. A teaspoonful of tartaric acid is added to every 20 pounds of sugar which has previously been dissolved. Without the acid the syrup is liable to granulate in the combs. When feeding the shrinkage of the syrup which is 10 to 25 per cent. should be taken into consideration. Feeding is done at sunset and as much is given as the colony will take up in 24 hours. Weak colonies take up the syrup much slower than strong ones. The feeding of the first batch of feed warm and much sweeter is advisable, as it gets the bees started easier and quicker. Feed is more quickly taken up if given warm, as the heat of the syrup warming up the hive arouses the bees from their semi-dormant condition.

MARKETING OF COMB HONEY.—Comb honey at the time it enters the home of the consumer is generally vastly different in appearance from the neat article which left the apiary. The soiled dauby untidy condition in which it arrives at the consumer's table does not induce people to buy freely and often. The grocer dislikes handling it. A better prepared article finds favor with the grocer as well as the consumer, and produces a lively demand at higher prices. There is too large a supply of the commonly prepared honey on the market. Prepare yours for the fancy trade and realize a fancy price for it. The expense is small per pound, and by so doing you may obtain five cents per pound more for your honey. A steady demand can be created by putting up a good article.

METHODS OF PACKING.—Take your nice comb honey and put it up in fancy packages. Wrap your plain or no bee-way sections in a parchment paper that will show off its contents. In the wrapping fold ends of paper to top and bottom of the section and fasten with a label to keep paper in place. This method does not work well with scalloped or bee-way sections. These may be put up in cartons. Cheap or very elaborate cartons may be obtained at bee-supply firms. Some of these cartons have a circular hole in the front to show the honey. Others have a celluloid covering for this hole to keep insects and soil from coming in contact with comb, and still allow the comb to show. These are good, but a neat plain carton is very satisfactory. Your name and address on the carton will help your future sales. Labels used should contain your name and address.

THE SHIPPING CASE.—To deliver to the purchaser use a shipping case. No glass front case is needed. The grocer can put this honey on his counter or showcase without fear that flies, insects or soil will spoil the ready sale of it or that counter or case will be smeary with honey when display is removed. It will make a pretty article to display, and so will not be kept in a case in some out-of-sight place back of the counter. Grocers do not have to wrap it up in selling it. There are no leaky combs or smearing of cases. Honey will present an appetizing appearance and will promote other sales. Most grocers are also pleased with prepared cases in which the combs weigh exactly alike. This can be easily done by weighing each comb on a small scale and packing all 13, 14, 15, 16 and 17-ounce combs in separate cases. Grocers can then quote sections at a definite price, knowing that they all weigh alike. Bee-keepers can sell such cases to grocers as 24-section case of 14 ounce-sections for such a price as he sets on it. No weighing for the grocer, either at the time of buying or that of selling. Honey reaches the consumer in a neat, pleasing package.

Michigan. NORMAN F. GUTE.

AILING ANIMALS.

Balky Horse.

WILL you give some suggestions as to the best management of horse inclined to be balky? W. E. P.

Pennsylvania.

There is no specific cure for a balky horse, and yet there are numbers of popular remedies. If your horse is not a confirmed balker the best treatment would be to work him every day with a quiet well-broken mare or horse. If balking continues better sell the horse to some dealer or breaker who makes a specialty of training such animals. Time on the farm is too precious to waste on such a horse. One good plan when a horse balks is to throw him with side lines, "hog tie" him and let him lie there for a while. A few experiences of that sort may sicken him of balking. Another plan is to pull the head around to the side and the tail around to meet it, then tie the halter rope in a bow knot to the tail. Then drive the horse in a V-circle until he is ready to drop. Many other plans might be mentioned, but they no doubt are well known to you or your neighbors.

A. S. A.

Summer Sore on Colt.

COLT has raw fleshy growth on the inside of the leg. Will you prescribe?

Ohio. W. L. J.

This probably is a "Summer sore," and if so will be found very difficult to remedy. The tendency is for such sores to dry up in Winter, but return the following Summer. A qualified veterinarian would treat it with strong, sloughing caustics, the actual cautery (firing iron) or would cut it out and treat as a common wound. You might try the effects of an application once daily of a solution of half an ounce of picric acid in eight ounces of alcohol. After each application dust the sore with iodoform and cover with absorbent cotton and a bandage.

A. S. A.

Fistulous Sore.

I BOUGHT a horse five weeks ago, shipped here from Kansas. He had a lump about six inches above his nose right in front on his face with a small opening at the side of the lump, which no doubt he got from shipping. When I first had him the opening was running freely. At the present time it is still running, but not quite as freely as at first. I am of the opinion that there is a splinter in it, or else the bone is bruised, as the swelling is larger than it had been. It does not seem to pain him as I can press out the matter and he does not seem to mind it. Would you let me know how to treat it? J. A. W.

Pennsylvania.

We suspect that a tooth has been removed by trephining and that the hole therefore was made by the trephining instrument. In that event it will probably be necessary to trephine again for removal of diseased bone and trephining may be necessary if it was not done before but an accident shattered the bones, or a sliver penetrated them caused disease. All foreign bodies, including the sliver or snag, must come away before healing will take place. Meanwhile syringe out the opening night and morning with a pint or more of solution of one ounce of bicarbonate of soda to the gallon of warm water. A. S. A.

Tumor

I HAVE a mare 14 years old. Last Winter there came a lump on the cord on the side of the neck, close to the shoulder, so that the collar wears against it. It never seemed to bother her until lately the lump has got as big as a teacup, is very hard, but can move it by hand. I thought the cause was due to the stable blanket binding around her neck last Winter. Do you think I can do anything to remove it or stop its growth? I have painted it with iodine.

New Jersey. A. H.

You should have the tumor removed by dissection, and then treat the wound with antiseptics until healed. A skilled surgeon should be employed, as the growth is close to the jugular vein and other important vessels. We do not believe that treatment other than this will do any good. A. S. A.

Sweeny.

I HAVE a horse that has sweeny; have tried different remedies without any good results. Can you give any remedy? Horse is 12 years old and valuable.

Lewis, N. Y. L. R.

Sweeny is an accidental condition and not hereditary. Clip off the hair and massage the wasted parts three times a day, pulling the skin away from the bones each time, so far as that is possible. At night, or in the morning rub the wasted parts with a liniment composed of one ounce each of turpentine and aqua ammonia and six ounces of raw linseed oil. Discontinue the liniment for a few days each time the skin becomes severely irritated. A. S. A.

LIVE STOCK NOTES.

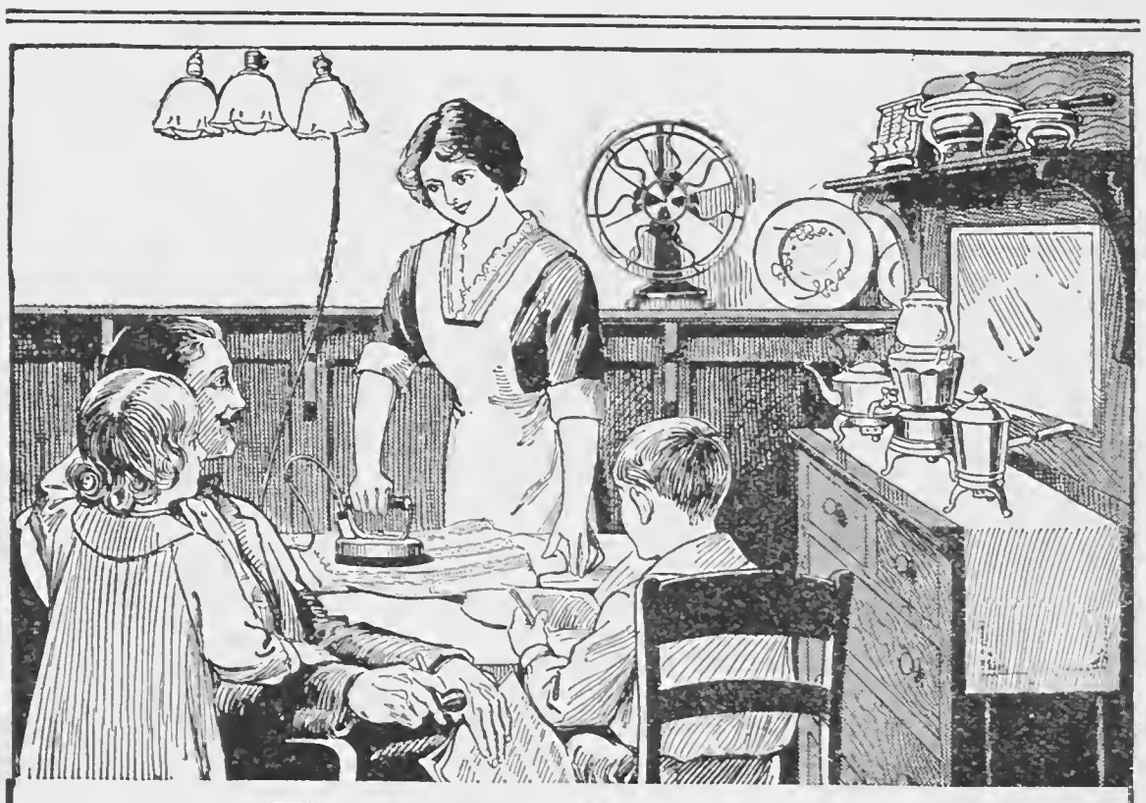
One main thing that stands in the way of profitable sheep raising in New York, New England and other States is the sheep killing dog. In Virginia a recent enactment makes it a misdemeanor punishable with a maximum fine of $50 for an owner to allow dogs to run at large in the country.

Two hundred horses daily were purchased in Kansas City for the allied armies in Europe, according to the Drover's Telegram of that city. They were from 14.3 to 15.3 hands high and weigh from 900 to 1,100 pounds. They must be between five and eight years of age and all colors are accepted except light grays, spotted and dun-colored animals. Better prices were paid than for this class animal last year.

Texas corn should not contain over 10% of moisture, and if it contains as much as 14% it will surely spoil during the Winter. Much of the imported corn has higher moisture content and it spoils unless immediately fed or dried. The station advises careful drying of corn in that State.

"The silo and the smoke house will make Texas prosper," is the suggestion going the rounds in the Lone Star State. The destruction of the cotton market shows the Texas farmer it doesn't pay to put his eggs in one basket. Under the Smith-Lever bill, the Texas College work will be much broader. Visitation, bulletins and correspondence are the avenues through which dairying, live stock raising, coöperation, road construction and home economics will be taught.

An excellent and not expensive fly repellent recommended several years ago in the South follows: One pound common laundry soap, one gallon crude petroleum, four gallons water, and four ounces powdered napthalin. Cut the soap in thin shavings and dissolve it in the water by the aid of heat. Dissolve the napthalin in the crude oil, then mix the two solutions thoroughly, agitating them for fifteen minutes. The mixture should be used once or twice a week, stirred well before using, and applied with a brush.



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The Cost of a Heifer.

IT has been figured that the average net cost of raising a yearling dairy heifer on a Wisconsin farm is $39.52. A two-year-old heifer costs $61.41. These figures are probably fair, as they represent the average of 117 calves. Probably these figures will apply to most other dairy districts in the North and East. There are in the United States today over 21,000,000 dairy cows, or about one for each five human beings and this of course shows what an immense sum is required each year to keep up the size of this national herd. The figures for the one year old heifer are given by the Department of Agriculture as follows:—

Feed	$24.67
Labor	4.45
Other costs	6.36
Initial value of calf estimated at	7.04
Total cost at end of one year	$42.52

A credit of $3. is allowed for the manure, which gives the net cost as stated above. For the two year old heifer the following figures are given:—

Initial values	$7.04
Feed	40.83
Labor	7.81
Other costs	13.73
Total	$69.41
Credit for manure	8.00
	$61.41

The most expensive period in the life of the calf is the first four weeks, because during that period, the calves must live almost entirely upon whole milk. One-half of the feed cost for the first year and one-third for the full two years is for whole or skim-milk. The manual labor required in raising a heifer is about 40 hours during the first year and 23 hours for the second year. The total cost of man and horse labor in caring and providing food for the two years is close to $8. The item of other costs would include interest, rent of building and equipment, bedding and a fair share of the expense of the farm business. We believe these figures are substantially correct as given by the Department. It costs about as much to raise a scrub heifer as one that contains a good share of pure blood. A scrub heifer would rarely sell for more than $40, a clear loss of $20 or more. In fact, a heifer has to be good enough to bring $60 when two years of age in order to give an even return for what she has cost. It is true that on some cheap farms, or where there is an abundance of silage, or Alfalfa hay the heifer may be grown for a little less than these figures, but there is no business that could prosper in producing a thing for just about what it cost, and if you produce a heifer at all, and pay out $60 in labor and feed, you ought to produce a good one rather than a scrub.

Composition of a Cow's Cud.

WHAT is the composition of a cow's cud? I know that the pellets formed in the first stomach of the cow tribe, which are afterwards raised and chewed again, are passed into the third stomach to be completely digested in the fourth stomach, but this does not explain *what the composition of a cow's cud is* B. H.

Alabama.

The cow's cud consists of a food partially masticated which has been through the pouch and returned for more thorough mastication, and the only change the food has undergone is that a part of the insoluble starch has been changed to a sugar called maltose. When the food first enters the mouth of the animal it is ground by the teeth, and at the same time moistened with the alkaline saliva. In this condition the food is more easily swallowed. The most important property of the saliva is due to the enzyme petuialin, which it contains. This first enzyme of the digestion converts the insoluble starches of the food into a sugar called maltose. The protein and fat of the food are not changed by the action of the saliva. The food remains in the mouth for a comparatively short time when it is passed on to the stomach. In ruminants or animals which chew the cud, the stomach has expanded into three compartments called the pouch, the honeycomb and the manyplies before the true stomach is reached. They serve him merely for a pouch chest for the storage of food and for better preparing it for digestion. In ruminants the food is swallowed after partial mastication, and passes into the pouch from which it can be returned to the mouth in small portions to be again chewed when it passes on to the true stomach and digestion proper begins.

F. C. M.

Delaware County Conditions.

DELAWARE County farmers are justly indignant regarding articles appearing libelling the county. The dairymen loudly protest against reports branding them as filthy, their barns dark and unsanitary and stating that butter and cheese factories are encouraging these conditions that they may control the milk supply. These facts are not true, and if dairymen anywhere deserve commendation for clean well-lighted, well-ventilated barns, the farmers of Delaware County deserve praise. The Delaware County farmer admits that there are slovenly dairymen here, but there are fewer slovenly dairymen in this county, the number of dairy farmers considered, than in many dairy sections elsewhere. A writer recently declared, "There is a curse on Delaware County," and the farmers insist the author of the article is the curse, and his story is entirely false.

Delaware farmers state that of 90 creameries in operation there is not one which receives milk which would not be accepted in New York city. The butter and cheese produced in the county, the present writer is informed, are from dairies which have passed rigid inspection by competent and sensible men. Two of the large milk concerns, Borden's and Sheffield's, employing a skilled veterinarian, and demanding the most rigid inspection, are operating in the county, and they find the dairymen willing to measure up to their demands in barn equipment, sanitation and maintenance of healthy herds.

One concern which had not been under the direct supervision of the State, owing to sales outside the Empire State, recently came under New York health authorities' supervision in view of shipping milk to the city. The 370 tributary dairies to this concern were inspected, and it was found necessary to make recommendations to but 25 dairymen, and then not for filth, but for insufficient light and air requirements. The demands of the department were satisfied in each instance.

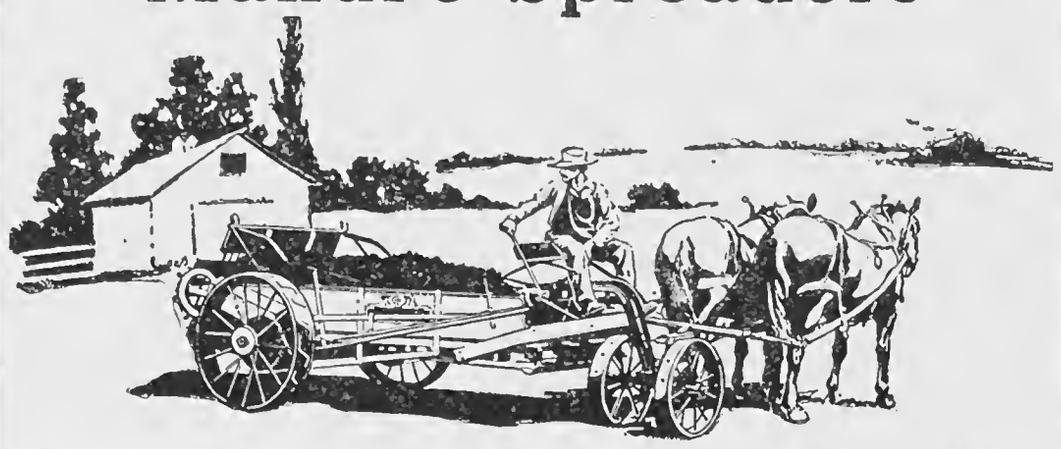
One of the leading dairy papers also takes a gloomy view of the county, and this has aroused protest in the minds of the farmers in Delaware County. The farmers admit there are dairymen who are in the rear of the procession. There are many silos, and there are being more established each year. It is a good hay county; many of the farmers have a large acreage of hay. Where hay has grown as well as in Delaware County, farmers have been slower in establishing silos. Farmers in this county are buying gasoline engines, many own their silo-filling outfits, many automobiles, mechanical milkers and the interest is keen in purebred stock. Jerseys predominate in the county, Holsteins next and there are many Guernseys and Ayrshires. The farmers are forming a breeders' association, open to all, and there is an active Holstein-Friesian breeders' association. The purebred Holstein population is between 3,500 and 4,000 head, and is increasing rapidly. As good dairy blood is to be found in this county as elsewhere, and among the Jerseys there is one farm, the Merridale farm, which has 400 head of purebreds, both excellent imported and American blood. There are many excellent herds of from 50 cows to more than 100. The farmers are learning the value of the purebred sire, and are heading their grades with good blood. Those who have been keeping grades are introducing purebreds in their herds.

Farmers agree there is too much swapping of milk checks for feed bills. This situation cannot be remedied at once, but it is the policy of some farmers to raise as much grain as they can, oats and buckwheat being their principal grain crops. The oat crop was very good this year, many pieces going better than 50 bushels. Buckwheat, some farmers declare, is not as well filled as it might be but quite good. The season has been a little wet. Silo filling was well completed September 20.

There is perhaps only one per cent. of the sheep raised there were a half century ago. A number of farmers are raising hogs; the white breed seems the favorite, the O. I. C. the Chester Whites being the more common.

One farmer stated the price they are receiving is $1.65 for 4.5% milk, and three cents better the point up to 5.3%, and three cents off for every point below that figure, 10 cents better for barn score. There were 16 farmers who recently had bacterial count made of their milk, and it was below the minimum limit prescribed. The farmers have high labor expense, great expense for feed, and the margin to the man who relies on milk production alone is small. The farmer is justified in criticising prices in view of his high cost of production and interest on investment, and his interest in purebred stock is one of the various evidences that he wants to make dairying pay a profit in Delaware County. For July the Bovina Center Coöperative Creamery Co. paid 37½ cents a pound for butterfat; the Andes Creamery Co. paid 34 cents, and the Andes Coöperative Dairy Co. 32½ cents a pound. W. J.

International Harvester Manure Spreaders



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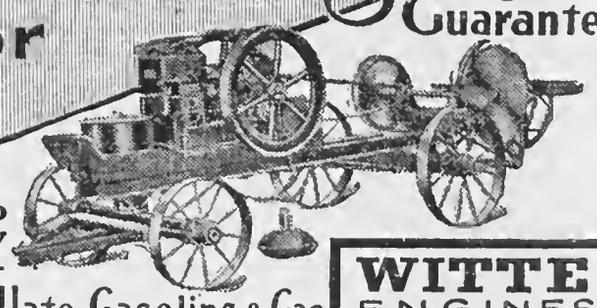

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Cash or Easy Terms

FARM NEWS.

ENGLAND, as a hop market, appears good, and a British opinion declares: "Now is the time to capture the American market. It is safe to say that imports from Belgium, Germany and Austria will be non-existent."

Here is a good idea, a farmer in the Middle West suggests. When you do thrash buckwheat build a frame with sides like the sides of a low barn and with an A-shaped roof. Have the building run north and south, and leave the south end open. Direct the blower or stacker on the roof of the straw shed, have as many men as necessary get up and fork the straw this way and that. This makes a very good temporary shed for young stock. A good firm roof and sides and well topped out makes the shed wind-proof and rain-proof.

Hogging down corn is gaining ground everywhere. The system is the short cut from field to feeding pen and no labor between. Less corn is wasted in dry than wet seasons, and but very small percentage in any season. Rye and rape between the rows increase the efficiency of the corn lot.

Movies for the Wisconsin schools will not only visualize history, art, bird lore, and industrial activity, but it will also mean a light in the schoolhouse for the patrons. Over 400,000 slides have been subscribed for by the Wisconsin schools. The slides and films are gratuitous, receiver paying the express one way. He is allowed to keep them three days.

Fifteen hundred farmers are coöperating in Wisconsin in establishing and maintaining a packing plant. In view of the farmer plant being agitated, the commercial one preferred joining forces. The new organization was incorporated for $250,000 and nearly all stock has been placed.

Out in California the university suggests farm advisers, not because they can give advice which has been preached repeatedly by the agricultural press, but that farmers must see, and seeing is believing.

In Oregon the railroads are reported advising against planting apples, regardless of the market which may be developed, since it is said the railroads cannot handle half of them.

Plow the long way, and make your fields longer is pretty sensible advice. Out in Colorado it is figured that 30 seconds are required for turning. Supposing a field is 40x80 rods, and a 12-inch two-way plow is used. The number of furrows lengthwise will be 660, while the number crosswise will be 1,320. There will be twice the number of turnings plowing crosswise than lengthwise. In turning by plowing across the short way 11 hours will be consumed, while plowing the long way only five and one half hours. Figure that in dollars and cents, by plowing the long way, over half a day with man and team is saved.

The Connecticut Agricultural College opened Sept. 22 with its largest enrollment, numbering 232 students. There are 18 enrollments in the home economics department. The college has obtained funds for a farm mechanics building which will enable the department to give a thorough course in this line.

According to the Connecticut Agricultural College, where succession of crops permits Fall plowing, it will be advantageous, as it will destroy many harmful insects. Cutworms, corn ear-worms, May beetles, click beetles (the adults of the wireworms) grasshoppers and army worms will be greatly reduced in numbers by Fall plowing. This operation breaks open the cells in which these insects are transforming, and exposes them to frost and rains. Late Fall plowing is best, but early Fall plowing followed by thorough harrowing is helpful. The practice is recommended particularly this year in view of the number of white grubs, and the fact that the army worm had been very numerous during the past season.

A new department has been organized at the Ohio State University to be known as the Department of Agricultural Engineering. The work given is not altogether new, as it has been presented from another department for some years. The course will be extensive, and treat of agricultural architecture, farm power, drainage and machinery.

The short courses in agriculture offered with the New Jersey Agricultural College at New Brunswick will open November 16, lasting 12 weeks. Courses are dairying and general agriculture, poultry husbandry, fruit growing, and domestic science and art. Tuition is free to residents of the State, and for this course no entrance examination is required.

There are many simple ways of applying the litmus paper to test soil for acidity. The Ohio State University suggests scraping away the soil with a shovel or hoe, then press a sheet of blue litmus paper firmly against the moist earth with shovel, knife or piece of glass. If the soil needs liming it will turn from blue to red in from 10 to 20 minutes. Care should be given the paper when handling it. There is even acid in the skin which will change the paper from blue to red, and this will be noticed where the fingers touch the corners of the paper. Litmus paper may be secured from any drug store, or possibly the local physician has some of it.

DISCUSSING THE MILK SITUATION.

MILK prices seem to be the important topic just now in all parts of the country. In Chicago a low price will prevail if reports are true of $1.78 per hundred pounds. This price, which means 3.8 cents per quart, is worse than Boston milk prices, which we know are bad enough; in fact so bad few, if any, of us can show any profit on cost of production, and unless conditions are much more favorable there in cost of feed, grain, etc., and board of health rules and regulations are more favorable to producers, I do not see how they can produce milk at the price. The directors of the N. E. M. P. A. are united in asking an advance of four cents per can above last Winter's price, and this is certainly none too much to ask, and will not be thought enough by many producers who do not understand the situation and average circumstances of the many consumers who should buy our product, but as many of these are out of work and other necessities of life are high on account of conditions across the water, I believe it is well to be as reasonable as possible in our requests for an advance, and at a more favorable time make our demands and stand by to obtain them. The H. P. Hood Co. have opened their registers on the following prices and conditions, which are a slight advance above last Winter's price, a fraction of a cent I believe per can, and will average 39¼ cents per can for the six months. The price is graded as follows: October, 38; November, 38; December, 41; January, 38; February, 36; March, 34. This price is subject to the producer's living up to the four conditions imposed by the Hood Co., and refer to milk cooling, milk room, stable and ventilation and air space therein, all of which are reasonable and will no doubt be lived up to by nearly all producers selling to this company. The other companies are holding back and playing their usual waiting game, as they have nothing to lose and everything to gain by this policy. Other cities and towns in Massachusetts pay the producers more and sell to the consumer for less than Boston. The only reason I know for this is that the Boston milk companies have a great many salaried officials in their offices, and these have to be paid by the producers and consumers. Yet the milk companies would not admit it, but are always speaking of the heavy expense they are under and not being able to do business and show a profit under any smaller margin.

The tendency of the most successful milk producers of Massachusetts, in most cases is either to retail or wholesale their milk direct to local or city customers, restaurants, hotels and small peddlers, at a good price compared with what the large Boston contractors pay. They work into Guernsey purebreds or grades as fancy or pocketbook will allow, and the exhibit of those cattle at the Framingham cattle show the other day showed how popular and profitable this breed is with Massachusetts farmers. The exhibit of these cattle there, in fact it is a Guernsey show in the main and conducted as such, was the largest and best of any show in the eastern United States and certainly was worth going to see. The combined value of these cattle was supposed to be upwards of $75,000 and consisted of local herds, herds from other parts of this State, and also herds from outside the State as far distant as Pennsylvania. Most of the prizes, and there were many, went to Massachusetts' exhibitors, yet F. G. Thompson of Pennsylvania took away two firsts, one third, one fourth and one trophy. To show that all had mighty good stock, no one exhibitor got any exclusive share of prizes, but nearly or all herds there got several; in fact they seemed to be well divided up, and no one could cry for getting left. But the main lesson learned from the Guernsey exhibit is this: The public who buy milk and pay a good fair price for same want milk as the rule of good quality and color and rich in cream or butterfat. Guernsey milk will meet these requirements and as these cows are large producers if fed well are a profitable herd to keep, and please all concerned, producer and buyer. The leading Massachusetts producers either know or are learning these facts, and intend to follow these lines to profit and success. A. E. P.

BUFFALO MARKETS.

HOME-GROWN white and blue grapes 40 to 45 cents per 20-pound basket, wholesale, with prospect of a big yield if frost does not interfere. Potatoes 65 cents a bushel and "easy" at that. Apples are colored high and so plenty, that there is really no price for them. Farmers are selling a few Greenings at $1 a barrel and paying 40 cents for the barrel, besides cost of picking and marketing, not to mention meeting the demands of the onerous State packing law. At this rate many of the best apples will not be picked. Fall apples are retailing as low as 50 cents a bushel. The canning factories and evaporators in some sections are offering only 12 cents a hundred for windfalls. Peaches are not high, spite of the failure of the local crop, retailing at 65 to 85 cents a third-bushel basket and of good quality. Prunes 25 to 35 cents per basket. Pears are in small supply. Bartletts being quoted at not above $2 per bushel. Clapp and Duchess $4 per barrel. Watermelons were scarce awhile, but are again on sale at usual Summer prices, 40 to 50 cents each by the hundred. Muskmelons are cheap, not over $1 per bushel; the quality is much better than average. The bean crop is light and prices are high, running from $3 for pea to $4.25 for marrow. The supply of green beans is large, prices from 50 cents to $1 a bushel. Other vegetables are in large supply, cabbage, $2 to $2.50 per hundred; celery, 30 to 35 cents per dozen; cucumbers, 50 to 75 cents per bushel; pickles, 15 to 20 cents per 100; egg plant, 60 to 75 cents per bushel; peppers, 90 to $1.10 per bushel; tomatoes, 18 to 22 cents per 18-pound basket; lettuce, 20 to 30 cents per dozen; cauliflower, 50 to 75 cents per basket. Onions are again cheap, being 75 cents per bushel for good home grown. There is not much change in butter, eggs and cheese; butter is not quoted above 33 cents a pound, the retail price being 33 to 36 cents for very best. Cheese is firm at 17 cents wholesale and eggs 35 cents for fancy, wholesale. There has been little recent change in the prices of poultry. Supply is light and market dull. J. W. C.

Disease of Hogs.

I HAVE a large drove of hogs, mostly Yorkshires, have about 75 young pigs from two months to three months old. I have lost several from disease. Some go blind, will eat a little if held at trough, but if left alone can only locate it by sound of other pigs feeding. Some of the last ones taken I gave a dose of tapeworm medicine as soon as I saw they were sick; three of them are improving. These pigs have been fed on ground feed, oats and wheat mixed, wetted with clean creek water; had a clean dry pen and seemed healthy until suddenly stricken. Can you give me any information? E.

Montana.

The disease may be cholera and you should have a graduate veterinarian make an examination and immunize the balance of the herd with serum if cholera is found present. Meanwhile keep the pigs away from the creek and do not use creek water. Such water often carries cholera contagion. While indigestion no doubt is present one worm noted in the intestines would not be a likely cause. Thorn-headed worms (echinorynchus gigas) no doubt are present. They may be killed by giving eight grains of santonin and five grains of calomel, for each hundred pounds of body weight of hog, after starving the animal for at least 12 hours. Give the medicine in a little slop. Divide the pigs into lots of five for treatment. Care must be taken not to exceed the doses prescribed.

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The Henyard.

Fancy vs. Utility Poultry.

AT the recent meeting of the Connecticut State Poultry Association Judge F. M. Peasley made a strong and sensible speech at the dedication of the new poultry building. The following extract is interesting right now:

"If we judge by the recent past, we can look forward in the development of the poultry industry to a rivalry between two classes of breeding now known as the fancy and the utility. That there is such a rivalry, and that in some quarters it is an unfriendly and bitter rivalry, is to be regretted. From the standpoint of the so-called utility breeder, I can see much of good that has been accomplished by the fancy breeder and more to be accomplished. I seriously doubt if we would have our pure breeds today, if it had not been for the persistent and painstaking, skillful work of the fancy breeder. His work has in the past and will in the future, be the cornerstone for the utility breeder to build upon. The time has come, or is near at hand, when the progressive fancy breeder may be required to resort to the trap-nest to add another quality, that of inherited capacity for egg production, to the other qualities sought to be produced. While I believe that such a quality can be added to a strain or bred into it, or developed out of it, I am not wholly satisfied that such is the case, and that an excess of strength and vitality is not the explanation of the greater egg records made by some of the pens in the different contests; but when this claimed fact of inheritance once becomes permanently established as a fact, if ever it does you will see the names of the country's greatest breeders in the lists of laying contests, where they are now so conspicuous by their absence.

"Nor can the fancy breeders be blamed for not rushing into the laying contests till they have had a reasonable time to try out the question of whether or not the hen can be as truly bred for production as the cow is bred. If the time comes for them to produce by their skillful breeding hens that can lay eggs as well as carry a certain shape and sport fine feathers, I believe that they will produce beauty and utility so combined that the fascination for poultry husbandry will be upon a surer and safer foundation than at the present time. When these fanciers produce the hen of combined beauty and utility, they will offer no excuse that the trapnest produces green shanks or lavender ear lobes or the shape of a duck.

"I believe that there is no reasonable ground for the differences that appear to exist between these two classes of breeders and hope that the time may come when all lines of difference will be eliminated and every breeder will be both a utility and fancy breeder and that these adjectives may be dropped; that the breeder who wins the ribbons for form and feathers will, with birds of the same breeding, be found among the leaders in the egg laying contest."

Persistent Roup.

THREE years ago I bought some young chickens, and turned them loose with my home flock. Before many days I noticed that the new chickens were not looking well and examination showed that they were running at the nostrils and laboring for breath. It soon spread to all my fowls, and I never had such a time. I tried everything imaginable—all kinds of advertised remedies. Nothing ever did any good. Only the younger chickens were attacked, grown fowls never take it. The sick chickens finally recovered after several had died and I thought I was through with the matter. But the next Spring my little chickens had not reached the age of two weeks when I saw that they had it and they nearly all died. Those that finally recovered were always weak and undersized. The next year I moved to another part of town and was careful not to move a coop, box or anything that had been used near my chickens; I took only grown hens, and they showed no signs of the disease. In the Spring I hatched out a lot of chickens and they grew off nicely at first, but I have discovered several half-grown chickens showing the same old trouble in very pronounced type. The nostrils are running a whitish watery fluid, and some in the eyes and mouth, with labored breathing and a general droopy sick appearance. It is not a cold and no use to recommend permanganate of potash for I have almost used it by the pound. If it is roup why do the old birds escape? H. D. L.

Your description of the disease certainly indicates roup, of a particularly persistent type. The immunity of the older fowls may be due to their greater resistance, owing to maturity. The infection of this disease is easily carried from one place and from one flock to another and is frequently very difficult to eradicate. Complete removal of all sources of infection, including fowls that harbor the disease, and thorough disinfection of the premises offer the only hope of stamping out the trouble. In the case of a flock of only ordinary value it would probably be best to dispose of the entire flock and to replace it with fowls from a source known to be free from the disease. No healthy fowls should be placed in quarters formerly occupied by roupy ones, however, until they have been thoroughly disinfected and all utensils used have been sterilized by heat or chemical disinfectants. Cleaned floors, whitewashed walls, utensils cleansed with *boiling* water or a five per cent. solution of carbolic acid and an ample supply of fresh air and sunlight in the buildings together with prompt disposal of all birds that are harboring the germs of the disease offer the only hope of eradicating the trouble when once it has become well seated. M. B. D.

Managing Breeders.

I HAVE 260 White Leghorn yearlings which I intend to use for breeders next Spring. I have 30 cockerels which I intend to mate, changing them twice a week. Would it be advisable to leave the cockerels not in use in same house caged up? Would you leave all stock out all Winter? At present the egg production has dropped off. Would you advise feeding mash now and how long to keep it up? Can permanganate of potash be used in galvanized iron or tin fountains? How often would you give same and how much? F. J. E.
New Jersey.

If your purpose in managing these hens is to fit them for breeders next Spring rather than to force them for the highest egg production previous to that time, they should be given all the range possible and would better not be confined even through the cold weather and the deep snows. I should keep a dry mash constantly before them in hoppers and would feed whole grains in addition, feeding no moist mashes but giving skim-milk if I had it. The rations need not differ from those ordinarily fed to laying hens though meat food of any kind should be fed more sparingly until the hens begin to lay in Winter; the object being not to force early laying but to keep the fowls in first class condition and cause them to begin their second laying season with an abundance of vitality. They are not apt to begin laying any too early, even with the best of feed and care. Ten cockerels would be sufficient for that number of hens and eight would probably do as well. If the flock has their liberty it will be fully as well to allow all the cockerels used to run with the hens all the time, though if closely confined this sometimes results in too much fighting.

Permanganate of potash should be given in earthenware or wooden vessels. It need not be used at all unless the fowls show signs of colds when it is well to add it to their drinking water in the proportion of about one teaspoonful to the quart. Plan to do your hatching before the middle of May; late hatched chicks are pretty sure to start life with deficient vitality and succumb easily to prevailing infections. M. B. D.

Hens With Conjunctivitis.

WHAT causes the red around hens' eyes to enlarge until nearly or quite as wide again as is natural? Sometimes the eyes swell shut, others only enlarge and look inflamed. They seem well, eat well and lay well. H. A. E.
New York.

Hens are subject to inflammation of the lining membrane of the eyes, or conjunctivitis, and this may result from exposure to dampness and cold, to irritating dust or vapors, or to contagion. It would be best to remove affected hens from the flock that it might not spread to others through contact and if it is desired to treat the hens they may have a few drops of the following solution placed in each eye once or twice daily. Boric acid, ten grains; sulphate of zinc, one half grain; water, one ounce. This is conveniently used from an ordinary eye dropper. A mild attack of this trouble would not render the fowls unfit for food, as it is a local inflammation. M. B. D.

AILING ANIMALS.

Slobbering.

WHAT may be done for a horse that slobbers all the time? His teeth and grinders are all right; it is a weakness of the glands, but I don't know what to do for him. He is 12 years old and has been in that condition for three months. E. F. C.
New York.

See that the feed is sound. Molds or irritants in the feed sometimes cause such salivation. Usually, however, a 12-year-old horse affected with the trouble has something the matter with its molar teeth, and if a veterinarian has not made an examination he should do so at once. He may also find the stones (salivary calculi) are present in the salivary duct (Steno's) which discharges into the mouth. On general principles swab out the mouth twice daily with a solution of half an ounce of powdered alum in a quart of soft water. A. S. A.

Cow With Boils.

I HAVE a cow with hard bunches along her hind leg, between her ankle and hock. These bunches suppurate occasionally, but do not disappear. They are as large as hen's eggs, and smaller. What are these bunches, their cause and their cure? M. C.
New York.

Such small abscesses or boils come from infection of a scratch or slight wound, the infection running in the connective tissues under the skin. Swab them with tincture of iodine once daily and open freely when they soften; then continue using the tincture until they heal. In some instances rubbing with citrine ointment daily gives better results with boils that are indolent and obstinate. Keep the cow from wading in filth or standing in stagnant water. A. S. A.

Itching Skin.

SEVERAL months ago I noticed that one of my horses, which is six years old, would bite at himself and try to rub against his stall. This symptom has continued and now the hair has fallen off in spots on his front shoulders and a slight scab rises on the bare spots. The area affected also seems to be spreading backward. The horse is in good condition otherwise, has good appetite and seems to be in good spirits. Until hot weather came on he was fed three quarts of whole corn with his oats each day, but for the last two months has had simply nine quarts of oats a day and hay. What can I do to relieve the trouble? A. D. K.
New York.

Make sure that chicken lice are not causing the irritation. Stop feeding oats for the present and feed lightly on bran and hay. Work or exercise the horse every day. In the feed twice daily mix half an ounce of granular hyposulphite of soda. If the itchiness continues have the horse clipped; then wash itching parts with a 1-100 solution of coal tar dip as often as found necessary. A. S. A

Thriftless Pigs.

WE have two pigs four months old, weighed 20 pounds at six weeks; seem well, eat well, but they do not grow as fast as they should. I feed them red dog meal, about six quarts a day. When they find a bone they chew on it for a long time. We fed the same meal other years and the pigs did well. What is the trouble? J. J. V.

Feed a thick slop of middlings, cornmeal, ground oats (screened) and 10 per cent. of digester tankage. Make it up fresh each time with hot water. Quit tankage if milk is used. Add one ounce of limewater to each quart of slop. The pigs should be allowed free range on grass. It is quite likely that the pigs are infested with worms, so it would be well to dose them for worms, on general principles. After starving the pigs for at least 12 hours divide them into lots of five and in a little slop mix eight grains of santonin and five grains of calomel for each 100 pounds of body weight. Great care must be taken to prevent pigs from taking more than the doses here prescribed. As they eat bones it would be well to allow free access to slaked lime, wood ashes and charcoal. A. S. A.

Garget.

I HAVE a cow that got her teat caught in a barbed wire and made a bad wound. Wound is getting all right, but she held milk so it is caked. What would you advise doing for it?
New Jersey. E. V. B.

Milk that quarter four times a day, massaging the part each time and at night rub in a mixture of one part of mercurial ointment and two parts of lanolin or lard. It may not be possible to save the quarter now, but the treatment here advised succeeds when the case has not gone too far. A. S. A.

Lameness.

A FEW weeks since I purchased a horse, age about 12 years, weight about 1100 pounds, a very good roadster and a good pulling horse, bought for "sound, except might interfere a little behind and take a few lame steps when first starting." I find the horse does not interfere, but has a weakness in right hind ankle, which does not swell at all even when standing several days in stall, nor does he favor it any when walking or pulling. When he first starts to trot he will favor that right hind ankle considerably for one-half or three-quarter mile, and then he will go sound for remainder of the distance. I am told, on good authority, no spavin exists. I think no doubt it is in the ankle and is a strain or wrench. I do not wish to blister the ankle if I can help it, but would like to know if you can tell me some potent liniment I can make to cure that weakness in that ankle, or in the cords of the ankle? G. H. W.
Maine.

The symptoms point to the hock joint as the seat of lameness, and if so a spavin no doubt is present. It may be a hidden (occult) spavin, among the small bones of the joint. To determine whether the hock of the leg is the seat of the lameness have the horse led out to halter and tell the attendant to trot him instantly when you give the word of command. Pick up the foot of the lame leg and hold it as close to the abdomen of the horse as possible, so as to close the hock joint tightly. Hold it that way for two minutes or so; then drop it and have the horse trotted. If it is hock lameness he will go excessively lame for a few yards; much lamer than before. If it is a spavin we should advise having the joint fired and blistered by a qualified veterinarian, when the weather becomes cool, the horse to be tied up short in his stall for six weeks after the operation. Liniment will do no good. A. S. A.

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The Henyard.

THE EGG-LAYING CONTEST.

THERE was a loss of 70 eggs in the total production in this, the forty-seventh week, as compared with the previous week. Molting is in full progress; 180 are marked "M" on this week's report, which signifies that that bird is molting. A larger proportion of the White Leghorns are molting than of the other breeds. Of the 40 Barred Rocks not one is molting, and of the 70 White P. Rocks only two are marked as molting. In the 33 pens of White Leghorns, not a single pen but shows one or more birds molting. The highest number laid this week is 45, by Frank L. Tuttle's pen of Barred Rocks. A. B. Brundage's S. C. Reds keep up their good work and stand second for the week with a score of 41. Tom Barron's White Leghorns tie with his White Wyandottes, and with Fred H. Benton's White P. Rocks, for third place, each pen laying 39. In the totals Francis F. Lincoln's White Leghorns lead the next highest pen by 16 eggs; they laid 34 this week and the prospect is good for the Yankee pen to win. Their total is 1977, the "sour milk pen of Leghorns from Storrs Agricultural Station has laid 1961, and Tom Barron's White Wyandottes 1929. Barron's White Leghorns got too far behind on the start to catch up now; their total is 1895. The only pen in the contest which did not lay an egg was the Heneta Bone Co.'s pen of White Leghorns. This is an experimental pen which has been fed Heneta Mash and Sueculenta tablets; no green food or grain. Their total output is 551 eggs to date. Cutting out this pen, the other 32 pens of White Leghorns have averaged almost 1500 eggs per pen; 1499.78 to be exact. The week's record follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	21	1,302
Frank L. Tuttle, Massachusetts	45	1,360
Waveny Farm, Connecticut	20	1,316
Jules F. Francais, New York	33	1,557
White P. Rocks.		
Albert T. Lenzen, Massachusetts	37	1,452
F. H. Benton, Connecticut	39	1,443
Storrs Agr. Station, Connecticut	27	1,167
Storrs Agr. Station, Connecticut	33	1,239
Storrs Agr. Station, Connecticut	26	1,367
Storrs Agr. Station, Connecticut	26	1,213
Storrs Agr. Station, Connecticut	13	1,062
Buff P. Rocks.		
A. A. Hall, Connecticut	27	1,422
W. C. Morgan, Jr., Connecticut	22	1,125
White Wyandottes.		
Tom Barron, England	39	1,929
West Mt. Plty. Yards, Connecticut	17	1,155
Merrythought Farm, Connecticut	38	1,797
Neale Bros. Rhode Island	31	1,777
D. J. Ryan & Son, Connecticut	15	1,323
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	28	1,368
Dr. N. W. Sanborn, Massachusetts	24	1,316
Am. Buff Wyan. Club, New York	30	1,217
H. L. Hamilton, Connecticut	27	1,016
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts.	23	1,331
Single Comb Reds.		
Robert Seaman, New York	22	1,076
J. S. Gillespie, Connecticut	32	1,291
Dr. J. C. Dingman, New York	23	1,213
Burnham Plty. Farm, Massachusetts	11	990
H. P. Deming, Connecticut	27	1,298
Geo. P. Dearborn, Florida	24	1,406
Dr. J. A. Fritchey, Pennsylvania	31	1,503
Ernest Underhill, New Jersey	28	1,186
W. H. Bumsted, Connecticut	33	951
Pinecrest Orchards, Massachusetts	25	1,519
Harry B. Cook, Connecticut	31	1,286
Colonial Farm, New Hampshire	29	1,357
A. B. Brundage, Connecticut	41	1,734
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	25	1,333
C. S. Scoville, Connecticut	13	962
White Leghorns.		
Storrs Agr. Station, Connecticut	22	1,511
Storrs Agr. Station, Connecticut	14	1,581
Storrs Agr. Station, Connecticut	9	1,551
Storrs Agr. Station, Connecticut	25	1,961
Storrs Agr. Station, Connecticut	16	1,461
Braeside Plty. Farm, Pennsylvania	19	1,395
Glenview Plty. Farm, Connecticut	22	1,559
Manor Plty. Farm, New York	14	1,428
A. B. Hall, Connecticut	17	1,427
Marwood Plty. Farm, Pennsylvania	25	1,623
Geo. M. Harris, Connecticut	10	1,201
Bonnie Brook Farm, New York	19	1,642
N. W. Hendryx, Connecticut	7	1,412
J. J. Linehan, Massachusetts	10	1,319
F. F. Lincoln, Connecticut	34	1,977
Cecil Guernsey, New York	23	1,638
Thos. W. Moore, Connecticut	24	1,516
Chas. N. St. John, New York	33	1,532
Chas. W. Sherwood, Connecticut	10	1,401
L. E. Sands, Pennsylvania	17	1,428
Tomoka Plty. Farm, Connecticut	14	1,281
Venture Plty. Farm, New York	8	1,146
Mrs. K. E. Woodruff, Connecticut	31	1,519
Windsweep Farm, Connecticut	5	1,220
C. H. Savage, Connecticut	18	1,438
P. G. Platt, Pennsylvania	18	1,648
Heneta Bone Co., New Jersey	..	551
F. M. Peasley, Connecticut	22	1,474
Chas. Helgl, Ohio	17	1,401
Tom Barron, England	39	1,895
Branford Farm, Connecticut	26	1,628
James Munn, Massachusetts	5	1,295
Geo. A. Cosgrove, Connecticut	27	1,483
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	25	1,506
Blue Andalusians.		
E. D. Bird, Connecticut	21	1,277
Buff Orpingtons.		
O. Wilson, West Virginia	36	1,030
White Orpingtons.		
P. A. Demgar, New York	15	1,000
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	26	828
Silver Campines.		
W. J. H. Lobel, New Jersey	30	1,271
"Hens."		
H. W. Collingwood, New Jersey	20	1,240
Daniel Hine, Connecticut	23	1,132
Daniel Hine, Connecticut	17	1,096
Mixed Breeds.		
Profitable Poultry, Massachusetts	14	1,248
Profitable Poultry, Massachusetts	13	1,295

GEO. A. COSGROVE.

Chicks Not True to Type.

LAST June I sent to a well-known breeder and bought a setting of eggs which hatched out four chickens which looked and feathered out just like a White Rock or Wyandotte, but are supposed to be purebred White Leghorns. What is the cause of this? Would you advise breeding from these or not? Should I be liable to a fine for selling these for purebred stock? F. W.
New York.

You will probably be able to tell with certainty after a few weeks more whether these chicks are Leghorns or not. If they prove to be anything else, it will be evident that some one has made a mistake, as Leghorn eggs can hatch only Leghorn chicks. There is a possibility, of course, of an accidental cross with some other breed, but if this has been made it will be evident when your chicks get a little older. The breeder of whom you purchased the eggs should make good any mistake on his part and if your chicks prove to be anything but purebred you cannot, of course, sell their eggs as those of purebred stock. Whether you should use these chicks for breeders or not will depend upon what they prove to be and whether you wish to raise only purebreds; purebreds can come only from purebreds.
M. B. D.

Aspergillosis.

A COCK past one year old for some time seemed to be ailing. At times there was a rattling sound in his throat. Sometimes he seemed to choke and gasp for breath. He became weak and lost flesh. I had him killed. An examination revealed the fact that he had lice in great numbers. The internal organs seemed to be normal except one lung. Over and about this was a substance in color like fat but in consistency more like hard boiled yolk of egg. What was the matter and would it be harmful for chickens to eat the meat of such a fowl either raw or cooked? B. M.
New York.

Certain molds, or fungi, sometimes found upon musty straw or grain may find their way into the air passages of fowls and developing there cause obstruction to breathing and, finally, lead to emaciation and death. After death yellowish tubercles, or masses, may be found in the internal organs where these fungi have lodged and developed. These fungi belong to the genus Aspergillus and the disease caused by them is known as aspergillosis. It seems to attack only certain fowls, probably only those that are in some way unable to resist the infection and there is no satisfactory treatment when the disese has become established. Cooking would destroy these fungi and make the flesh of their hosts harmless as food. M. B. D.

Guinea Hen Not Laying.

CAN any one tell me why my Guinea hen does not lay any eggs this Summer? She has just laid one egg this season. She seems healthy, eats well. I keep them with my hens and they have a run about 50x50 feet and only about 40 hens in it, but I have not let them outside of it this year. Last year they ran all over the farm. Do you think keeping them yarded up would make any difference with their laying? They eat with the hens. Is there any other breed of Guineas except the Pearl and White or African? I have some I bought last year that I should call Pearl Guineas; they are gray, a little the color of a Plymouth Rock hen. I read in a farm paper of a breed called Gray Guineas and did not know but mine might be that breed instead of the Pearl. Mine are just like those one usually sees on a farm where they keep a pair or so and don't make a business of selling them. I. E. B.
Cattaraugus Co., N. Y.

The confinement to a yard is probably the cause of failure to lay, although I have known Guinea hens to lay as well in a small yard as outside. They are not very far removed from the wild birds and like to wander. There are three varieties of Guinea fowl in the country outside of parks and collections of wild birds: the Pearl, the most common, with bluish gray plumage covered with numerous round, white spots; the Lavender, with very pale plumage and similar spots; and the White. They are all native to Africa and are probably only varieties of one species. If your birds are the common kind there would be no indiscretion in advertising them as Pearl Guineas. I have never heard of Grey Guineas. They are probably the Pearl. W. H. H.

Bumblefoot.

I HAVE a strange malady among my fowls; the rooster was affected first, then two hens. There is a swelling on the foot at the junction of the toes; it seems to pain them some, and they walk lame. It looks like bumblefoot. How should it be treated? E. T.
Connecticut.

This is bumblefoot, or inflammation of the deeper structures of the foot accompanied in severe cases with pus formation. It is caused by infection through some break in the skin of the foot such as is easily made by the vigorous scratching of the fowls or by jumping from a considerable height to hard floors. The fowls should be placed on soft clean litter or upon the ground and if the swelling does not subside but becomes soft, showing the presence of pus, it may be freely opened with a sharp blade and the wound syringed out with peroxide of hydrogen; after which it may be dressed with carbolized vaseline and allowed to heal.
M. B. D.

Ailing Fowls.

SOME of my young White Leghorns have been affected with warts around the mouth and eyes, some have one wart only, while others have two. They usually last from two weeks to a month. When they break, some matter appears. If this is the chickenpox, is it contagious to humans? I have not been able to isolate the affected ones; is it necessary? A couple of others are suffering with breathing trouble; these I have isolated for fear it might be the gapes, told me to be very contagious. Their breathing is very noisy, and their combs are turning blue, indicating pressure in their heads. Do you think there might be danger of tubereular affection, if this is the gapes? The fowls are coughing and gasping for breath. H. P.
Florida.

This eruption is very likely that of chickenpox and is not dangerous to humans; the affected fowls should be isolated, however, as the disease is very contagious in the flock and in severe forms is frequently fatal. The sores may be painted with tincture of iodine and the quarters of the fowls disinfected by whitewashing while utensils are cleaned with boiling water. In some cases this eruption may appear in the mouth and nostrils and by the inflammation caused affect the breathing. The noisy breathing of the other fowls may also be caused by catarrhal inflammation of the membranes lining the respiratory organs. Such "colds" are common in the damp weather of Fall and Winter. There is no indication in these symptoms of tubercular infection. M. B. D.

A GREAT TURKEY.—I have a Bronze turkey that laid during the year 1913 141 eggs in one nest. She commenced in March and wanted to sit in September. In 1914 she has laid 104 eggs. She has laid in three nests this year, and wanted to sit twice. As it is only the 10th of August she still has time to beat her record of last year.
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This outfit consists of a Patented Loom for making articles, an instruction and design book, a spool of cotton, twelve H. Milward Sons' needles, seven bottles of colored beads—dark blue, green, light blue, black, red, yellow and white—a complete outfit to start the work.

Every woman knows and appreciates the value of these home-made articles.

Your neighbor needs *The Rural New-Yorker.* If he is not a reader get his subscription. If he is a subscriber get his renewal.

These articles will not be given with subscriptions—they are sent as rewards only (in place of cash) to our subscribers and friends who, acting as agents, send us subscriptions as indicated.

THE RURAL NEW-YORKER, 333 W. 30th St., NEW YORK CITY

PUBLISHER'S DESK

I would like to become a member of Dr. Ulman's Anti-Fake Club. I think I have enough of contempt for the fraudulent advertiser to keep him out of my home, and enough of business judgment to know that the paper that carries such advertisements cannot thrive in the future as in the past. I believe the people of this country are beginning to learn.

Pennsylvania. J. D. M.

You might write for a week and fill a volume on the subject; and yet say no more than is expressed in the above few lines. This spirit and purpose is broader and bigger than any club can be. The club can only crystallize the spirit; and lead the way that 95 per cent. of the people of this country wish to go. It is not so much to protect oneself individually as to protect the people collectively. Neither is it for our generation alone, but to make dishonesty and deceit unpopular for the benefit of generations to follow us. It is not alone to drive out falsehood and to confuse rogues; but to magnify truth, and to increase our appreciation of the dignity and nobility of honest men.

In THE R. N.-Y.'s article on the "Land Bank of the State of New York," you write "Mortgage banks to be controlled by bankers and capitalists have been proposed to finance farm mortgages. We bid farmers to have a warning of them. If organized at all such banks will exist for the purpose of making dividends." Will you permit me to express my hearty approval of these words and your sound "economy." Over in England my brother-in-law is a director in several land companies, having a pseudo-philanthropic interest in the laying out and erection of workingmen's dwellings on the rent of which these *gentlemen* encompanied are careful to levy their little perquisite for dividends. It will take a long time yet for the average man to learn that it is foolish to pay another person to do what one can and ought to do for one's self.

Massachusetts. F. W. B.

It is encouraging to know that a citizen of Massachusetts appreciates the provisions of the New York State system for financing farm mortgages. This correspondent has the key to the situation. Do not pay another to do for you what you can do for yourself. In this reference it means do not pay a banker, broker, agent, lawyer, or money lender a fat fee, commission or profit to secure a mortgage for your property. It is true that heretofore farmers had to do this because they needed the money. In some cases they had to have it; and there was no other way to get it. Now there is a way. Every community in the State ought to have a Local Land Bank or what is the same thing, a saving and loan association. Other States are trying to adopt mortgage credit systems. So far all of them have proceeded on the capitalistic plan. Through the sympathetic interest of Governor Glynn, New York State has been able to overcome the scruples of capitalists and has secured the only purely coöperative system in the States. In it the capitalist may buy the securities on the same terms as the poorest investor; but he has no opportunity to manipulate them. The management is reserved to the members. No outsider can demand a tribute. There is no other system yet devised by which the borrower may sell his credit on an open market at rates solely dependent on the current rate for many and the merit of the risk.

In a recent issue you had a reference to the case of True S. James against D. B. Cornell, the real estate agent, which may leave a false impression of the true situation in this case. The facts are that Mr. James alleges that Cornell secured a five hundred dollar mortgage on his farm through fraud. Mr. James refused to pay interest on the mortgage, and Cornell thereupon assigned it to a third party, one of his own agents, and proceeded to foreclose. Up to this point Mr. James was willing to leave the decision to the civil courts, but this subterfuge led to the arrest of Cornell. Before the hearing Mr. Cornell agreed to drop the foreclosure proceeding and with this stipulation Mr. James was willing to drop the criminal proceeding, being entirely confident of his facts in the civil courts when tried on their merits between himself and Cornell, without the intervention of a supposedly innocent third party.

New York. FARMER.

It seems that this case was not decided as we supposed on the theory that it belonged to the civil courts; but by an agreement between counsels on both sides that both proceedings be withdrawn, until the superior court pass on the civil case before it. This case before the superior court is an appeal from a decision in the local courts, which was decided against Cornell. Mr. James in this case is doing a service to the farmers of the whole country. It is well to have some one contest in the courts the legality of methods pursued by some real estate agents in the sale of farm properties.

The Amalgamated Oil Company of Oklahoma City, Okla., is franker than some of the promoters with similar schemes. They want to sell stock at one cent a share; but when asked for a statement of assets, reply that t is not necessary for a company to have any assets to sell stock. They say they sold stock even before they had so much as a lease, but say when the stock is sold it becomes an asset to the company. That is news to us. We have always thought that stock is a liability of a company. They claim that they have sold as much as 273,800 shares in a day. That would mean an income for that day of $2,738. We do not much doubt the statement. People do part with their money easily when some promoter promises big profits, but if this promoter keeps on writing letters, it is hard to believe that anyone with ordinary human intelligence will give him even a penny for shares in a company that has no tangible assets.

I never have to hunt all through the pages of modern publications to find the address of the publisher that I do not curse the modern publisher for not putting it on the outside cover, as though he had some intelligence. He is like the veterinarian; never can learn modern ways of doing things. J. G.

Pennsylvania.

This critic cannot mean to include THE R. N.-Y. in his criticism, because the name and address are both on the first page of the paper. But no one need lose time or patience looking for the address of THE R. N.-Y. If you write the name of the paper on the envelope and mail it under a two-cent stamp anywhere in the States, and I venture to say, anywhere in the world, it will find its way to us. As a matter of fact this has already happened.

I am a subscriber and need a little information. Can you help me locate a person named Morris Garfinkel, whose address was 821 E. 161 Street, New York. He comes up to Centreville each Summer and peddles souvenirs, and has been buying some from me each year. He came this Summer as usual and bought something over $75 worth and has failed to pay me. Can you help me?

New York. F. W.

We could not locate Mr. Garfinkel and our attorney was equally unsuccessful. These itinerant peddlers are peripatetic in their nature, and it is unwise to allow them credit to any extent. We print this record as a warning.

Inclosed find some "dope" sent me without solicitation. It does not look good to me. If they do not catch a sucker with one trick, they would catch him with two.

READER.

The literature comes from the International Liberty Union of the World, Covington, Ky. It includes agency for stockings, cheap clothes, portraits, hair restorers, tobacco habit cure and patent medicines, together with subscription to a journal, insurance, a free watch and compass, and dear knows what else, all for 10 cents. No wonder our correspondent calls it "dope." It is about the hottest specimen of hot air that has wafted our way for some time. We recommend the literature as a first aid to fire making.

J. J. D.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

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The Clothcraft Store

(in your town)

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Oct. 2, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.81 and $1.61 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5½ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The market is decidedly dull, as receipts are in excess of present needs, and buyers not stocking up. No change in price is noted except on some medium and under grades. The N. Y. Mercantile Exchange has adopted new butter rules in effect October 1. The classification will be: Creamery; Process, made by melting, clarifying, churning again, etc.; Ladles, butter that is collected and worked over by dealer or shipper; Packing Stock, butter as originally made at the farm in rolls, lumps, etc.; Grease Butter, which speaks for itself without description. The grades of Creamery, Process and Ladles will be: Extras, Firsts, Seconds and Thirds. Packing Stock will be No. 1, No. 2, No. 3. The score for Creamery will be on this scale: Flavor, 45; body, 25; color, 15; salt, 10; style, 5. Extra may score 91 to 93 points, depending on season and average quality of the best offerings. Butter scoring higher than the requirement for Extras may be branded accordingly on the demand of seller or buyer. In minimum scores, Firsts may be four points below Extras; Seconds, five below minimum of Firsts; and Thirds, seven below minimum of seconds.

Creamery, extra, above 91 score, lb...	30	@	30½
Extra, 91 score	29	@	29½
Good to Choice	26	@	28
Lower Grades	22	@	25
Storage	27	@	30
State Dairy, best	28	@	29
Common to Good	22	@	25
Ladles	19	@	22
Packing Stock	18	@	21
Process	22	@	26

Elgin, Ill., butter market 29 cents.
Philadelphia, western creamery, 31 cents.
Chicago creamery, 24@29

CHEESE.

Business is not brisk, but dealers as a rule are storing rather than cutting prices, except on skims.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15¼	@	15½
Prime	14½	@	15
Under grades	11	@	14
Daisies	16	@	16¼
Skims, specials	13	@	13¾
Good to choice	11½	@	12½
Poor to fair	7	@	11

EGGS.

There is considerable surplus of all but nearby white eggs, which are three to four cents above last week. Very little business in storage stock except on the better grades.

White, choice to fancy, large	40	@	42
Common to good	30	@	33
Mixed colors, best	31	@	33
Common to good	22	@	25
Western fresh, white	28	@	33
Lower grades	18	@	20
Storage, best	24	@	25
Lower grades	18	@	22

FRESH FRUITS.

The surplus of low grade apples has been disposed of, and, with weather cooler, the tone of the market is improved, although prices remain practically the same. Peaches are getting scarce, choice late varieties like Morris White bringing $1 per basket. Pears of standard varieties are bringing high prices.

Apples—Alexander, bbl.	1 50	@	2 50
Gravenstein	1 50	@	2 75
Duchess	1 50	@	2 50
Wealthy	1 50	@	2 75
Fall Pippin	1 50	@	2 50
McIntosh	1 50	@	3 00
Jonathan	2 00	@	3 00
Twenty-ounce	1 50	@	2 25
King	1 50	@	2 25
Greening	1 25	@	2 00
Blush	1 50	@	2 25
Crabapples, bbl.	4 00	@	8 00
Pears, Anjou, bbl.	2 00	@	3 25
Clapp's Favorite	3 00	@	5 00
Bartlett	3 50	@	5 50
Seckel	2 50	@	4 00
Bosc	3 00	@	4 50
Clairgeau	2 50	@	3 50
Sheldon	3 00	@	4 00
Peaches, nearby, bkt.	25	@	1 00
Grapes, 18lb case	40	@	65
4lb. bkt.	7	@	10
Plums, 8lb.-bkt	10	@	25
Muskmelons, Colorado, bu.	1 00	@	1 50
Watermelons, 100	10 00	@	20 00

HOPS.

Prime to choice	45	@	50
Common to good	40	@	44
Pacific Coast	19	@	20
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	80

BEANS.

There has been a decline of 10 to 25 cents per hundred on practically all varieties. A few Red Kidney have been exported, but otherwise business is dull.

Marrow, 100 lbs.	6 40	@	6 50
Medium	4 65	@	4 70
Pea	4 40	@	4 55
Red Kidney	5 25	@	6 05
Lima, California	7 00	@	7 25

VEGETABLES.

The potato market has been in poor condition during the week, with more or less damage in the bulk shipments, which had been on the road during the recent hot weather. Some Long Island and Jersey round have sold up to $2 per barrel, but $1.75 has been nearer an average of sales. Onion market very dull. Cabbage in moderate supply. A few tomatoes bringing $1.25 per bushel.

Potatoes—Jersey, bbl.	1 65	@	1 85
Long Island, bbl.	1 75	@	2 00
Maine, 180 lbs.	1 70	@	1 75
Sweet Potatoes, bbl.	2 00	@	2 50
Brussels Sprouts	08	@	12
Beets, 100 bunches	50	@	1 00
Carrots, bbl.	75	@	1 00
Cucumbers, bu.	40	@	75
Corn, Jersey, 100	50	@	1 50
Cabbage, bbl.	60	@	90
Ton	9 00	@	12 00
Lettuce, half-bbl. basket	25	@	75
Onions—Orange Co., bag	75	@	1 12
Conn. Yellow, 100 lbs.	75	@	1 15
Peppers, Jersey, bbl.	1 00	@	1 75
Peas, bu.	1 00	@	3 00
Radishes, 100 bunches	75	@	1 00
String Beans, bu.	75	@	1 25
Squash, Hubbard, bbl.	60	@	75
Marrow	50	@	75
Egg Plants, bu.	50	@	90
Tomatoes, Jersey, box	25	@	75

LIVE POULTRY.

Chickens, lb	15	@	17
Fowls	15	@	18
Roosters	11½	@	12
Ducks	16	@	17
Geese	15	@	16

DRESSED POULTRY.

Turkeys, choice, lb.	23	@	25
Common to good	15	@	20
Chickens choice broilers, lb.	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	18	@	20
Fowls	17	@	19
Ducks, Spring	15	@	16
Squabs, doz.	1 25	@	3 50

HAY AND STRAW.

The heavy accumulation of hay at terminal points has been lowered a trifle, but there is still considerable surplus and a large amount of heated stock, caused by baling too early. A decline of 50 cents per ton from last week's prices cover most business in medium and under grades. Straw prices unchanged.

Hay, Timothy, new, No. 1, ton	20 00	@	20 50
No. 2	17 50	@	18 00
No. 3	15 50	@	16 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	15 00	@	16 00
Short and tangled	10 00	@	13 00

LIVE STOCK.

Native Steers	6 25	@	8 90
Bulls	5 00	@	6 50
Cows	3 00	@	6 00
Calves, prime veal, 100 lb	8 50	@	12 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 65	@	8 40
Hogs	8 00	@	9 60

GRAIN.

Wheat has declined three cents, owing to light speculative buying and large receipts at central markets. Corn is three to four cents lower, owing to good crop reports and free offerings of Argentine.

Wheat, No. 1, Northern Spring	1 08	@	..
No. 2, Red	1 12	@	..
No. 2, Hard Winter	1 06	@	..
Corn, as to quality, bush	80	@	81
Oats, as to weight, bush	50	@	53
Rye	96	@	98

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality, and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz.	45	@	48
Mixed colors, new laid	40	@	42
Ordinary grades	20	@	30
Butter, fancy prints, lb.	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb.	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb.	25	@	28
Fricassee, lb	19	@	21
Fowls	18	@	20
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	16	@	18
Stewing beef	12	@	14
Pork Chops	18	@	20
Loin of Pork	17	@	19
Round Steak	18	@	20

Apples in Bulk.

I would like to know the name of a concern in New York that will handle bulk apples. L. W.
New York.

The name of a dealer of this class, has been sent the inquirer, but the price for apples shipped in this way is likely to be low. They will be badly bruised in the two handlings and shaking up they will get on the way, and will appeal to a class of cheap trade known to the dealers as "snakes." In our judgment there will be more profit in barreling those that are worth selling and using the remainder for vinegar, stock or live stock feed. Apples in bulk are often seen in peddlers wagons in various parts of New York, but most of these were shipped in baskets or barrels and poured carefully into the wagon box after buying, as they make a better show in this way. Dozens of these wagons may be seen every business morning in the wholesale districts, loading up with whatever kind of produce is cheapest.

What apples are raised here are sold in local market. No. 1 Gravensteins are retailing at $1.75 per barrel. Apples are plenty, and the wholesale men are not buying. Winter apples are not yet on the market. It is predicted that the Winter fruit will be sold for $1.25 a barrel. Since the men here do not ship their apples it is doubtful if many know what the apple law is. A. B. H.
Bangor, Me.

"I HEAR the sea captain is in hard luck. He married a girl and she ran away from him." "Yes; he took her for a mate, but she was a skipper."—London Tit-Bits.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, Etc., of THE RURAL NEW-YORKER, published weekly at 333 West 30th Street, New York, N. Y., as required by the Act of August 24, 1912.

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Herbert W. Collingwood, Woodcliff Lake, N. J.

There are no bondholders, mortgagees or other security holders.

(Signed) JOHN J. DILLON, Business Manager.

Sworn to and subscribed before me this 2d day of October, 1914.

C. S. LORENTZEN,
Notary Public,
New York County.

My commission expires March 30, 1915.

FARMERS SECURITY BUREAU } Superintendents, Working Foreman, Gardeners, Dairymen, Herdsmen, Farmers, Milkers, Couples, Teamsters, Farmhands, Laborers. Sidney Sullivan, Expert Agency, 99 Nassau St., N. Y. 6486 Cortland. Classed by itself.

Subscribers' Exchange

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

WILL EXCHANGE White Potatoes for Sweets. Write C. T. STONE, De Ruyter, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

FOR SALE—Fine team gray horses, 5 years old, weight, 3,000 lbs., well seasoned and suitable for any kind of heavy work. Address FARMER, care Rural New-Yorker.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A reliable farm hand for general farm work. MAX G. ELDER, Pattersonville, N. Y.

WANTED—Work on farm; married man, wife, one child; understands all kinds of farm work. K. H., care Rural New-Yorker.

AGRICULTURAL COLLEGE MAN desires position as worker-manager, renovation or poultry specialties. PHILIP MARSH, Farmington, Me.

WANTED—30 apple pickers, graders and packers. High-grade fruit, boxes and barrels. Board on the place. J. H. HALE, Seymour, Conn.

BY MARRIED MAN—Life experience in all branches of farming; milker and teamster, wants steady work. EMIL LAUBLE, Arlington, N. Y.

UNMARRIED MAN—Farm reared, now employed, desires poultry farm work, where character is appreciated. Address X, care Rural New-Yorker.

WANTED—Position as working foreman on gentleman's farm, life experience, married, no family, with cottage, or wife do housework, knowledge of fruit and gardening, good habits, no liquor. G. M., care R. N.-Y.

WANTED—THOROUGH POULTRYMAN, WITH business ability, to take Presidency of large plant on basis of salary and share in profits. Only applicants who have been successful and made profits will be considered. Address full particulars to M. C., care R. N.-Y.

MAN familiar with general farm work from boyhood, desires employment on general or dairy farm, or driving team; wife would also assist. Best references as to honesty, industry and ability for farm service; do not aspire to management of large place. Address F. M. B., care The R. N.-Y., 333 West 30th St., New York.

DAIRYMAN—Wanted for private estate, near New York, a first-class dairyman, married, without family; one who has been accustomed to Guernseys; capable of keeping records, etc.; no others need apply; wages, $70 per month, with free house and light. None need apply whose references will not bear the strictest investigation. Apply "DAIRYMAN," 166 W. 23d St., New York.

WANTED—Position as manager of commercial Agricultural Enterprise on large farm to be run on a business basis; scientific knowledge and practical experience in North and South; silos, crops, breeding, feeding; unquestionable evidence of ability and integrity; at liberty Oct. 1, or sooner; will not consider proposition paying less than $1,800; or might consider taking under lease a good farm all furnished. Address B. D., Care R. N.-Y.

FARM MANAGER—Are you in need of a successful farm manager? Understand breeding pure bred stock, growing all crops, dairying, certified milk, fruit growing, gardening, business management. Wisconsin graduate and formally in charge Wisconsin Experimental Farm. Married, one child; 9 years' experience as manager of large estates. A1 references, including present employer. Not less than $1,500 considered; would consider salary and percentage. SCIENTIFIC, care Rural New-Yorker.

FOR SALE—Improved forty cow farm, good buildings; fruit, water and timber. GEO. BUTTON, New Berlin, Chenango Co., N. Y.

GOOD FARM 200 ACRES, fine buildings, ¼ mile of store, school, depot. EMERSON GREGORY, Owner, Bangall, Dutchess Co. N. Y.

FOR SALE—Farm in rich Nehalem valley, western Oregon; great dairy and fruit region; the country of the future. For particulars write MRS. W. J. D. YOUNG, Jewell, Oregon.

FARM—$2,000 will give you possession of a fine 100-acre farm in Hunterdon County, New Jersey. Crops in the ground; water possibilities; fine for health resort. C. W. A., care R. N.-Y.

FOR SALE—120-acre dairy farm with retail business, excellent markets, nearest dairy to great summer and hunting resort on Jersey coast; crops and stock included. Apply EMGE, care of R. New-Yorker.

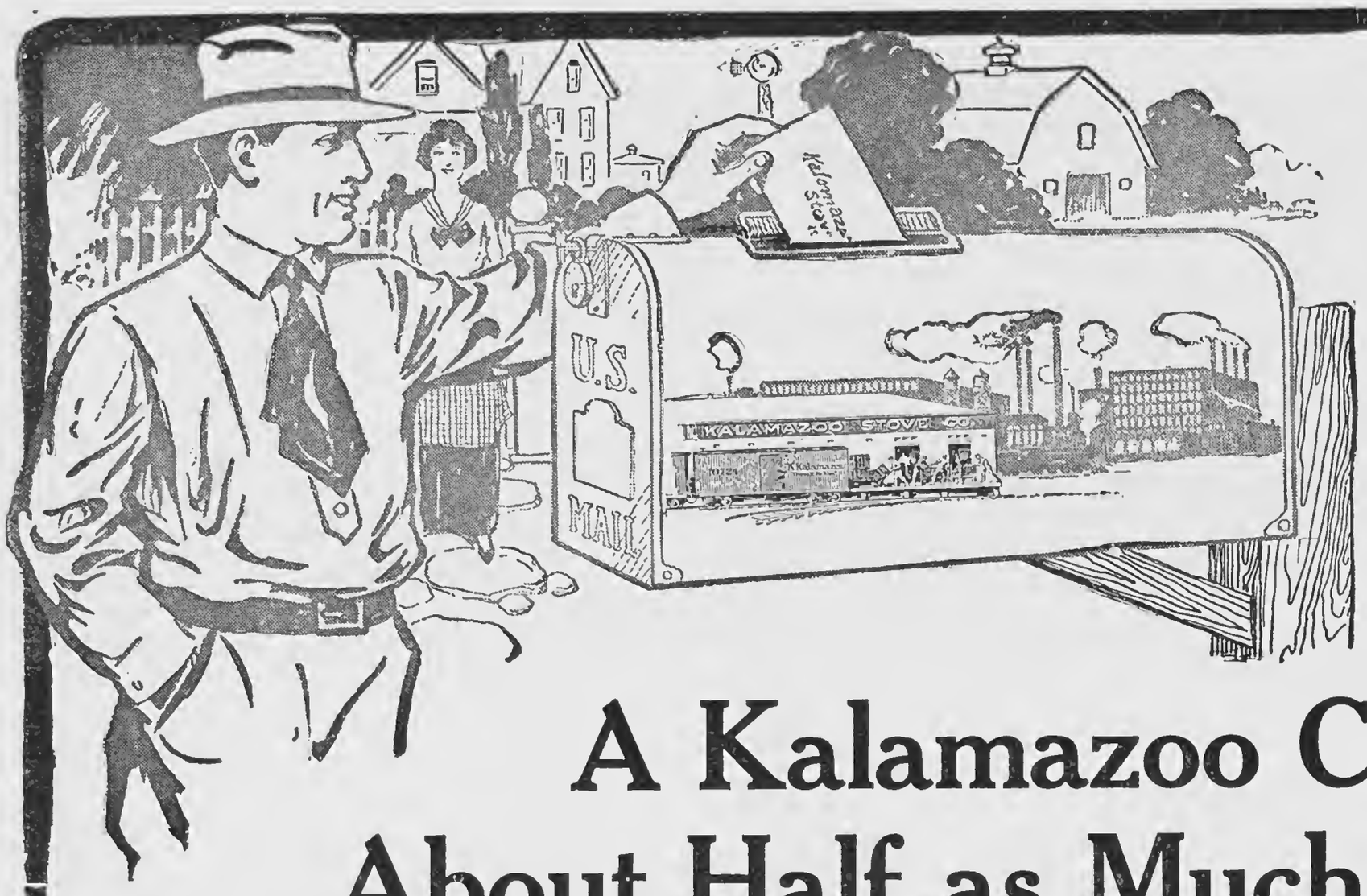
WANTED—To rent small farm, with privilege of buying; anywhere between Dover, Del. and Princess Anne, Md. Must have fruit and on good road. Give full particulars. GRANT PULLHART, Muncie, Ind.

FOR SALE—One of the finest farms in Albemarle Co., Va.; 545 acres; 100 acres river bottom; balance red clay soil; 100 acres Virginia timber; full description in first letter. J. E. BABER, Afton, R. R. 1, Albemarle Co., Va.

LARGE FARM—Stock hay, crops, tools, good buildings, cuts 60 tons hay, 200 fruit trees, large sugar grove, 500,000 ft. timber, mile large railroad town, adjoins large lake, Summer resort, sacrifice quick buyer; part cash. Address OWNER, Box 100, Wilmington, Vt.

TO LET OR FOR SALE—Good water power, factory and tenant buildings, excellent condition on State road at Malden Bridge, Columbia County, New York, three miles from Boston and Albany station. Great opportunity for manufacturer with light transportation. Write for particulars. E. W. RIDER, 50 Court Street, Brooklyn, N. Y.

FOR SALE—Owing to war, attractive place suitable for Summer boarders, 18 rooms, new plumbing and bath, large verandas, 2 cellars, children's play house in grounds, 12 acres land, fine truck garden, apples, pears, ice house, good barns, new pigeon pens for 1,000 birds; excellent water, large shade trees; wonderful climate; one mile from station. Owner will sell on easy terms and leave some furniture, if desired. References given and required. Price $7,500. Address BYAM, East Chatham, N. Y.

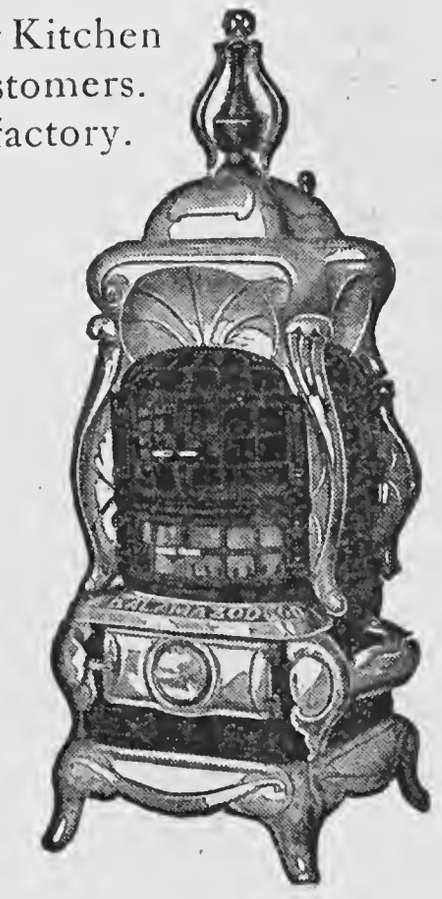


You are as Near to the Kalamazoo Factory as You are to Your Mail Box

A Kalamazoo Costs You About Half as Much Because Uncle Sam "Handles" the Order

Wholesale Price or the Dealer's Price—WHICH?

YOU are as much entitled to a Kalamazoo Stove, Range, Furnace or Kitchen Cabinet at the Kalamazoo factory price as any of our 275,000 customers. It is just as easy for you to get one as if you lived next door to our factory.



Why, then, cheat yourself with an ordinary stove, at a high price, when you can get a Kalamazoo for much less?

It is all a matter of habit. Some have the habit of stepping into the store and paying what is asked. Others have the habit of sending to a "Catalog House" —for the sake of price, regardless of quality. And now more and more people are forming the habit of *investigating.*

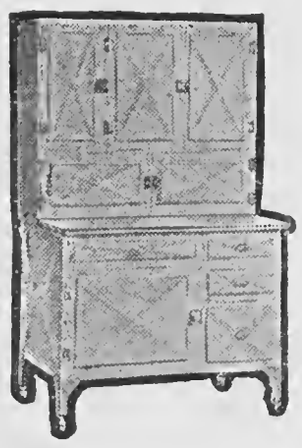
They figure that those who actually *make* the goods must be able to sell them at lowest prices. So when they want a stove they write to the makers of stoves—the Kalamazoo Stove Company—the largest manufacturers in the world dealing direct.

The coupon or postal card brings the catalog. There is no other like it. It makes the buying of a stove a pleasure instead of a task. It shows every kind ever built, every improvement ever thought of—lots of features that you can't get anywhere else at any price.

Your mail box is handy. Clip the coupon below or just write a postal asking for the book. That will bring to you the greatest display of fine stoves at low prices in America.

This Book Sets the Styles in Stoves—Turns the Light on all Stove Secrets —and Protects You on Price

It has helped 275,000 families to a better stove at a lower price. Ask any Kalamazoo customer. They are everywhere. Some near you. Ask for names and addresses.



Kalamazoo Kitchen Cabinet
All Metal White Enamel

Only Kalamazoo customers know how handsome, convenient, sanitary and durable a kitchen cabinet can be. Nothing else built equals this time-saver, labor-saver and money-saver. Direct to you at factory prices. Free Trial. Year's guarantee. Cash or Easy Payments.

Write for Special Catalog

500 Styles and Sizes—All Prices—Free Trial

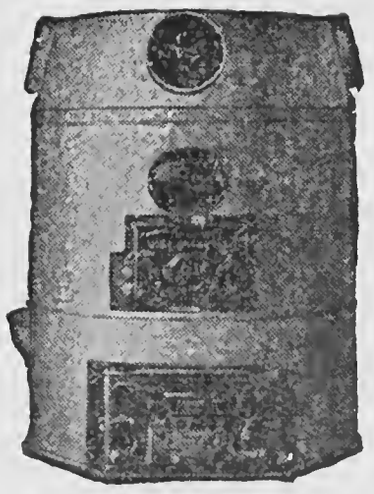
Don't Pay Until Trial Has Proved Extra Value, Every Order Shipped Prepaid, No Delay, Time Payments If Preferred

That is the offer that has broken the habit of careless buying in 275,000 families.

That is the offer that has saved $5.00 to $40.00 for each and every one of these customers and will save as much for you.

But this advertisement is not asking you to *buy* a Kalamazoo. It is only asking that you send us your name and address so we can mail you the Kalamazoo book.

A book that has stirred up the sensation this one has in the stove business, and has saved, all told, some twelve million dollars for stove buyers—yours for a postal.



Ask for Catalog No. 114

Kalamazoo Stove Company

Manufacturers

Kalamazoo, Michigan

We make a full line of Ranges, Stoves, Furnaces, Metal Kitchen Cabinets and Gas Stoves. Mention catalog wanted.

Cut Out Coupon and Mail Now. Or Write Us a Postal.

No. 114

Mail This FREE Coupon Today

Kalamazoo Stove Co., Kalamazoo, Mich.

Please send catalog checked here.

- ☐ Stoves and Ranges
- ☐ Furnaces
- ☐ Gas Stoves
- ☐ Kitchen Kabinets

Name.....

Address.....

Town.....

"A Kalamazoo Direct to You"
Trade Mark Registered

Let Our Experts Send You Plans and Figures on Installing a

Kalamazoo Furnace

FREE

Kalamazoo Furnaces are going up in all parts of the country because people are learning that they not only save $25.00 to $75.00—but get a better heating and ventilating system. Write for the Furnace book and get the most expert heating information and the best Furnace proposition in America.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII. No. 4277. NEW YORK, OCTOBER 17, 1914. WEEKLY $1.00 PER YEAR.

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PLAIN TALKS ABOUT BEES.

Fruit Work; Lazy Bees; Hive Population.

THIS past season we have had a dozen to 15 colonies of bees on the farm. We knew what bee-keepers claim regarding the value of bees in working on the apple bloom, and we made careful observation in order to test these claims. We are convinced that the bees greatly increased the number and quality of the apples. Becoming greatly interested in the work of these little creatures we have been asking about them—questions not usually answered in books. The following notes are made up from answers to questions asked of E. R. Root of Ohio:

BEES AND FRUIT.—"I understand you have records of cases which absolutely prove the value of bees in the orchard."

"You possibly saw the mention of the experiment recorded in our journal, something I know absolutely about, because I was an eye witness to the whole thing. There was a 50-acre orchard about nine miles north of Medina that had not been yielding any fruit and such fruit as did come from it was of a poor wormy kind unfit for market. Some practical fruit growers got hold of it. Van Renseller and Southam, and secured a lease on it for five years with the option of purchase at the end of the fifth year. They also asked for 50 colonies of bees, which we were glad to supply. The first year they carefully pruned the trees, sprayed them before and after blooming, and then took 16,000 bushels of perfect apples, selling them at an average price of 80 cents per bushel. In fact, they offered a prize to anyone who could find a single apple on the ground under any of their trees or on the trees that was wormy."

ONE OF THE LABORERS IN THE VINEYARD. Fig. 525.

HOW MANY NEEDED?—"How many bees does an apple orchard require?"

"I have roughly estimated that it takes about a colony of bees to the acre. While a single colony in a good year, under favorable conditions, will take care of five times that number, yet there is so much of the early blooming time that occurs during bad weather that the bees have only a very limited opportunity to get at the trees. It is, therefore, necessary to have a larger number of bees under those conditions."

DEPENDS ON THE QUEEN.—"Are all colonies equally productive or are some more industrious than others—as might be said of other animals?"

"Some colonies are much more industrious than others. One colony will have a queen whose bees will produce 200 or 300 pounds of surplus honey in a season, while another colony right side of it will produce only 25 or 30 pounds. The value of the colony rests primarily in the value of the queen. There is just as much difference between colonies of bees as there is between human beings, or, rather, I should say, the difference is greater."

ABOUT LAZY BEES.—"And what about the busy bee? As a boy I was told to exert myself as the bees were supposed to do, yet I always suspected some bees were industrial frauds or loafers. Are there not lazy bees in the hive?"

"It is also a fact that some bees in a hive are lazy, and all of them are lazy at times. After a bee has been out foraging for perhaps two or three hours, gathering a load of nectar, it will very often go inside the hive and deposit its load and per-

haps it will lie almost entirely motionless for a couple of hours or more. Observers have watched bees that have come from the fields, go into the hive, crawl into a cell and lie motionless for two or three hours at a time. The old legend, 'busy as a bee,' does not always apply. If we had hired men that would work half a day and then loaf half a day, well, I don't know what we would do with them; but that is what the bees do sometimes, although ordinarily in the height of the season it is my belief that most of the bees are busy on the job from daylight until dark, but when the picking is poor and there is not much nectar to be had the bee goes into the hive and takes a period of rest. Whether these rest periods are common with other bees I am not entirely sure. It would take hours and hours at a time to determine the point, and what is more, it would be very difficult to look down inside the hive without disturbing the normal routine. When that is once disturbed bees will do a little differently from what they would provided they were left to their own sweet ways."

POPULATION OF A HIVE.—"About how many bees are to be found in the average hive?"

"The number of bees in an average hive will vary according to the season. In the Spring of the year there will probably not be more than about 10,000 individuals. About the time clover begins to come into bloom this number will be increased from 10,000 to 25,000, or even 50,000. A hive with 50,000 bees in it would be a very strong colony, and is the exception rather than the rule."

A BEE CENSUS.—"How is it possible to count bees in this way?"

"I have weighed a good many swarms of bees as they have been brought in by farmers. The heaviest swarm I ever knew of that was brought into Medina weighed five pounds and a half. A pound of bees that has been well fed or has taken with it all the honey it can carry will contain about 20,000 bees. If it is two or three story, as they often are for the production of extracted honey, it would contain two or three times as many."

$140 PER ACRE FROM CORN.

IS it possible to make about $90 per acre on corn in New York State ($90 net profit), as is done on the Hospital State Farm in South Carolina? I see the statement in the *Country Gentleman*, called "A Fortune from Run-Down Farms." If possible, how can it be done in New York State? G. B.

Syracuse, N. Y.

"All things are possible," but not all are profitable or expedient. The article with these large figures describes a farm at an insane asylum! The writer says it required 15 years of dreaming and 20 years of hard work to make the dream come true. The income from this farm per acre is given as follows:

INCOME.

One hundred bushels of corn, at 90 cents	$ 90.00
Three tons of silage from stalks, at $2	6.00
Two tons of corn stover, at $12	24.00
One ton of pea-vine hay	20.00
	$140.00

The expenses per acre are given at $49.25. The price of good No. 2 corn in New York city is 85 cents, or a little over. It is doubtful if cornstalks would sell for more than $8 per ton. The ton of pea vine hay, of course, could not be secured in New York State. In South Carolina it is possible to sow cow peas in the corn as a second crop. After the corn is cut the long Southern season enables the cow peas to grow and make a good crop. There have been cases where on single acres yields of 100 bushels of corn have been produced in New York. Our best farmers would be well satisfied with an average of 70 bushels, while 50 would be very good for a beginner. The cost of growing the acre would probably be greater than the figures here given, while the income would be $40 or more less. If anyone has ever averaged a profit of $90 an acre growing corn in New York we would like to hear from him. Such glowing stories may have a basis of truth. They often show the possibilities of some unusual cultivation, or location, capital and skill. We have on our own farm a field of a little over an acre which gave last year 175 barrels of apples and over $200 worth of strawberries. At the same time other acres produced barely enough to pay for the labor of working them. You must also remember that these figures showing an income of $140 per acre do not represent cash sales, but estimated values—a very different thing. We avoid the printing of such great stories unless the figures are qualified and explained. The trouble is that these stories are read by inexperienced people who want some short cut to wealth at farming. Several of such people have already written us about these articles. They are almost persuaded to buy poor land and spend their money at farming when every practical farmer knows that they are simply chasing a gold brick. We cannot see that such extravagant articles do any good as practical educators, and they certainly give the untried and susceptible a wrong idea of farming. Practical farmers know how to sift them down, but the back-to-the-landers are unable to do this.

BARNS OF STEEL OR CONCRETE.

I WOULD like to know your opinion on steel barns. I am about to erect a small barn on an 18-acre place, but have not sufficient capital to try experiments. Will the steel barn sweat, and make damp hay? H. Mc C.

Hockessin, Del.

I am glad to note the demand for permanent farm buildings. Self-supporting trussed steel barn frames have been constructed which give great strength and economy of floor space. These have been, I think, in every way satisfactory. But the first cost is great, too great to permit of general use.

The permanent structure, which is popular to-day, is the reinforced concrete structure. Barns are being built entirely of concrete and steel that are permanent, fireproof, neat and economical. The economy of reinforced concrete is due to the fact that when a beam of any material is supported at the ends and subjected to a load, the fibers in the upper surface of the beam are subject to a compressive force, while those in the lower part are subject to a tensile (pulling apart) force. Concrete has a very great *compressive* strength, but a very poor *tensile* strength. Steel has a very great tensile strength, and by embedding a very small per cent. (commonly three-eighths of one per cent.) of steel in the lower part of a concrete beam, its tensile strength is made equal to its compressive strength. Steel costs 10 times as much per pound as concrete, and a concrete construction with a small per cent. of properly placed steel reinforcement, gives a greater strength for the cost than either concrete or steel alone.

The cost of a finished reinforced concrete building is said to be in general about 10 per cent. more than

THE PRIZE CHICKEN. Fig. 526.

a good frame building, but the saving in insurance, paint and repairs will probably in the end make the permanent building the cheapest. It is estimated that a trussed steel frame will cost about 15 per cent. more than reinforced concrete, and reinforced concrete will cost 10 per cent. more than wood. For a small barn on 18 acres I would suggest the hollow cement block structure with concrete floors. This is neat, durable and serviceable.

None of the types under discussion "sweats." A wooden structure absorbs and carries away to some extent the moisture from damp material, or that exhaled from animals, and is dry. A monolithic (solid concrete) structure is a good conductor of both heat and moisture, and may be cold and damp. The hollow block tile or double-walled concrete structure should be dry and of even temperature for a stable.

F. L. ALLEN.

THE VALUE OF SHEEP MANURE.

THERE has been of late much talk about pulverized sheep manure as a fertilizer for farm work as well as gardening. Some quite extravagant stories have been told about this manure, and we are frequently asked if it will pay a farmer or gardener to buy it in place of stable manure or high-grade fertilizers. The following notes by Dr. E. H. Jenkins tell the story fairly and well:

Sheep manure has this to commend it: It is an animal manure, which is fine, has no coarse litter in it, and is comparatively inoffensive in odor. For the greenhouse and the lawn it is worth considering, but for farm use—let us see.

We pay $2.85 per ton for N. Y. stable manure delivered at our freight station. We pay $30 for sheep manure pulverized, though in car lots it may be considerably cheaper.

We buy about 10½ tons of New York manure for the same price as one ton of pulverized sheep manure and for our $30 we get:

	In one ton sheep manure, pound.	In 10½ tons N. Y. stables manure.
Organic matter	1,426	4,704
Nitrogen	47	128
Phosphoric acid	33	115
Potash	39	117

When we buy manure we buy it for the quickly decaying vegetable matter in it. The "plant food" is rather a side issue. We can get them cheaper in chemicals. I should consider good stable manure at $2.85 per ton a better purchase than sheep manure at anything over $8. E. H. JENKINS.

TREATMENT OF AN APPLE ORCHARD.

I HAVE an apple orchard 30 years of age. The trees do not bear what they should, as most of them look very healthy. Some trees in a row will be loaded well with fruit and those next to them will only have fruit on one side. The orchard of 350 trees had 300 barrels four years ago, but since that it averages about 100 or 150. What is the best plan to bring this orchard back to good bearing? It has been in sod three years. I intended to prune the trees, removing all dead limbs, spraying with lime-sulphur, and then plow the ground this Fall, sowing buckwheat on it in the early Spring with about 400 pounds of good fertilizer to the acre, and when the buckwheat is in blossom to plow it under, and keep the ground harrowed for the rest of the Summer, then in the Fall sow rye to be turned under in Spring. Is this a good plan? Also the kind of fertilizer to use and amount of same to acre. T. W.

Greene Co., N. Y.

You plan to prune your orchard, removing the dead branches. I would remove more than this, in order to let the sunlight into the center of the tree. There is danger of thinning out too much, so that the growth will go to the branches rather than the fruit.

You plan to spray with lime-sulphur, using three gallons to nine gallons of water. The commercial lime-sulphur which tests 32 or 33 Beaume needs to be diluted 35 to 40 times before it can be used on trees in leaf. I would suggest the following plan for spraying your orchard.

1. Dormant season before the leaf buds open but just as they are swelling. Use lime-sulphur 32 Beaume and dilute the concentrate 1-8. Add lead arsenate to the lime-sulphur in the proportion of two pounds to 50 gallons.

2. After leaf buds open, but before blossoms open. Spray before rather than after a rain. Lime-sulphur solution 32 Beaume diluted 1-40 and arsenate of lead 2-3 pounds to 50 gallons.

3. After petals have fallen, beginning when about two-thirds have fallen. This is the most important application. Use same mixture as at the second spraying.

4. Ten days to two weeks later. Before rain period. Same mixture as at second spraying.

5. Eight or nine weeks after the blossoms fall. In case of late scab infections or attacks of codling moth. In most seasons this mixture is unnecessary. Same mixture as at second spraying.

If aphis appears spray before leaves curl with whale-oil soap, one pound to six gallons, or with kerosene emulsion diluted with six parts of water or with one of the tobacco extracts.

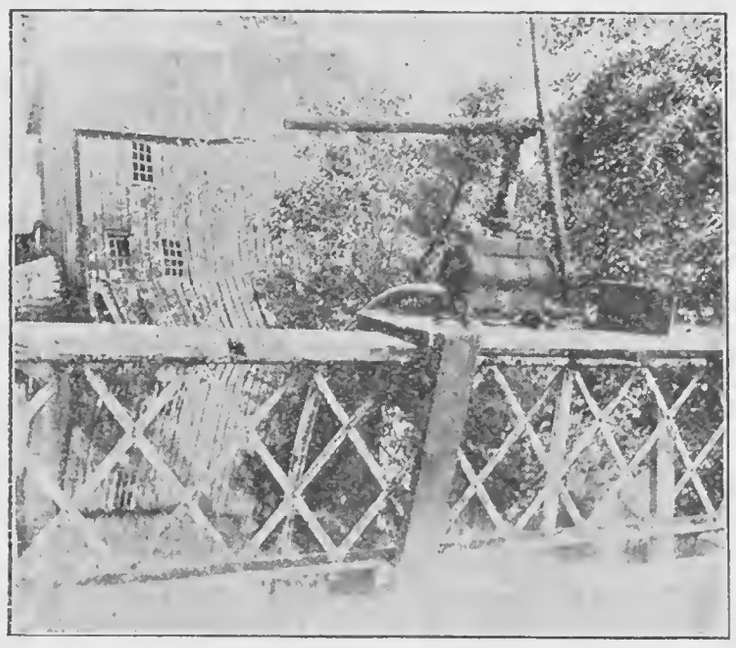
The use of a cover crop in combination with clean cultivation during the Summer is good orchard practice. I would change your plan a little, however. Instead of sowing buckwheat in the Spring I would harrow the orchard until August, and then sow buckwheat and rye together. It might be well to include a leguminous crop. Before sowing the cover crop I would apply the fertilizer. The fertilizer should consist of about 8 per cent. phosphorus and 10 per cent. potassium. The phosphorus may be in the form of acid phosphate or basic slag phosphate, and the potassium may be in the form of muriate of potash or sulphate of potash. Four hundred pounds to the acre should be sufficient. You may find that commercial fertilizer will not be always necessary, but it will be wise to apply it the first year.

F. W. L.

A SMALL HEN WOMAN.—It is gratifying to see how thoroughly interested our readers are in their children. Evidently the homes into which THE R. N.-Y. goes are cheered and brightened by these little folks, and the older people are proud of their children, and try to make much of them. We have pictures sent us of this young stock, from time to time. There used to be a period when farmers seemed more likely to send pictures of themselves, with a suggestion that they would look well in print. We have less of that now than ever before, but very much more of the suggestion that the little folks might well be shown. This is what we like, and we are glad to show some of these little people when the photographs are clear enough to make a good engraving. The little two-year-old girl shown at Fig. 526, is Winona H. Brock. Her father, Andrew C. Brock, of Delaware County, N. Y., sends this picture. Mr. Brock's farm is known as "The Maples," and we are sure that this little hen woman is the life of the farm, and as sweet as any maple sugar.

ORGANIZED FRUIT BUSINESS IN MICHIGAN.

SOMETIMES a lot of good comes from what seems to be nothing less than a mass of ruins. The old grist mill shown in Fig. 527, has long been in the discard in Allegan County, Michigan. The old dam, however, has been reinforced by the use of concrete, and is now serving a very useful purpose. The farmers in the region bolted a pump to one of the rails of a bridge spanning the dam, and dropped a suction pipe into the dam. In proper



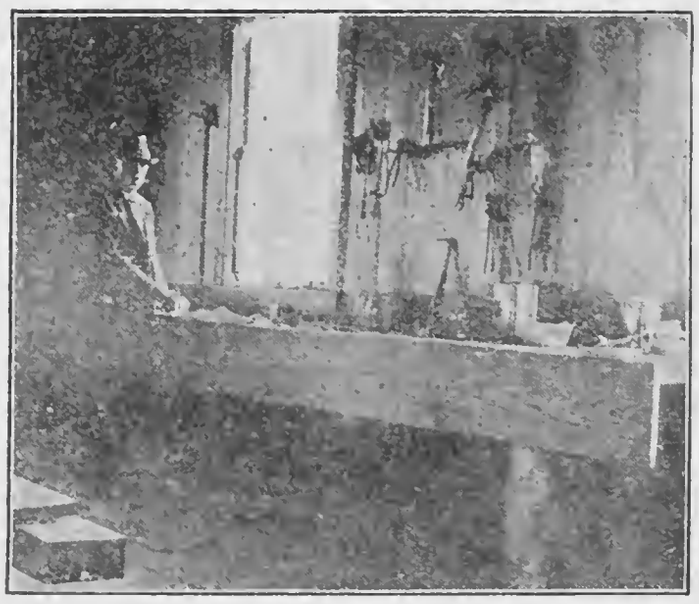
A WATER SUPPLY FOR SPRAYING. FIG. 527.

season the water is pumped up and hauled away in barrels to use in mixing spray material for hundreds of acres of trees around and about the old mill-site. Scores of fruit growers get their water supply from the old dam for this purpose.

The other picture, Fig. 530, shows the result. It shows the front of a fruit receiving and shipping shed. The loaded wagons drive through the rear part of the shed, and the packages are transferred to long push cars. The cars being loaded are pushed over a stilted double-track railway over a sandy beach and a bar. At the end of the railway is a steamship in water deep enough to float it. This ship then transfers the load to a large lake liner which crosses Lake Michigan to the Chicago and Milwaukee market, where a big consumption and outside distribution of fruit takes place. The car shown in the picture is loaded with peaches, the production of which largely was aided by the spraying process. J. L. GRAFF.

WINTER CARE OF THE SUMMER MACHINE.

ESSENTIALS FOR CARE.—The greater portion of the mechanical equipment of the farm is Summer machinery, i. e., it is machinery such as the grain drill, plow or harvester, that is designed for Summer use. Such machinery is idle in the Winter, and during this time it should be so cared for that the deterioration will be as slight as possible. Only too often this period of rest from one season to another takes more out of a machine than the field work done by it. The first essential for Winter care is proper storage. Perhaps no other one thing, unless it is the lack of systematic



A COMFORTABLE FARM REPAIR SHOP. FIG. 528.

repairs and adjustments, so affects the life of a machine. By proper storage is not necessarily meant a tight roof only; other conditions enter that may more than counter the good done by a tight roof. The writer has seen machinery stored under an absolutely tight roof with tight side walls as well, that would have been in better condition in the Spring if wintered out of doors. An unventilated stable was below it, and the machines were constantly wet from the vapor of the stable condensing on them. Stable vapors are absolutely fatal to most paints, and it is but a short time until it peels off, leaving the metal beneath it to become pitted and weakened by rust.

THE STORAGE SHED.—A storage shed for farm machinery should be free from stable vapors and should have ventilation. In our climate we have some very rapid changes in temperature during the Winter. When the weather changes quickly from cold to warm, moisture is condensed on the metal parts of machinery, and unless good ventilation is provided it is not evaporated quickly. A shed of the style illustrated in a previous article, page 1079, has much to recommend it; it is cheap, has a tight roof and a free circulation of air. A system of doors would improve it for nearly every farm has poultry, and poultry and farm machinery has a great affinity for each other to the detriment of the machinery. If doors are out of the question protect the machines by blankets made from the ever-present bran sacks.

NEEDED REPAIRS.—As the machinery is stored broken parts should be removed and carried to the shop, or, at least, a note made of their location so that it may be attended to on the first rainy day. Repairs should then be ordered, for Winter should be the time for repairing, re-adjusting and painting the farm machine. Repairs ordered now will not tie up the work if they are a few days late. The branch house dealing in repairs can give better service now than it can in the Spring, when everybody is rushing them for extras, and you have more spare time to fit and adjust the new parts to the machine than you will have when the rush season comes. A well-equipped and comfortable farm shop does much toward making these Winter repairs comfortable, as well as possible. The shop should be made tight enough to be warm, and then see to it that it is used enough to get a good interest on your investment.

METHODS OF PROTECTION.—Plows and other implements having a polished metal surface should

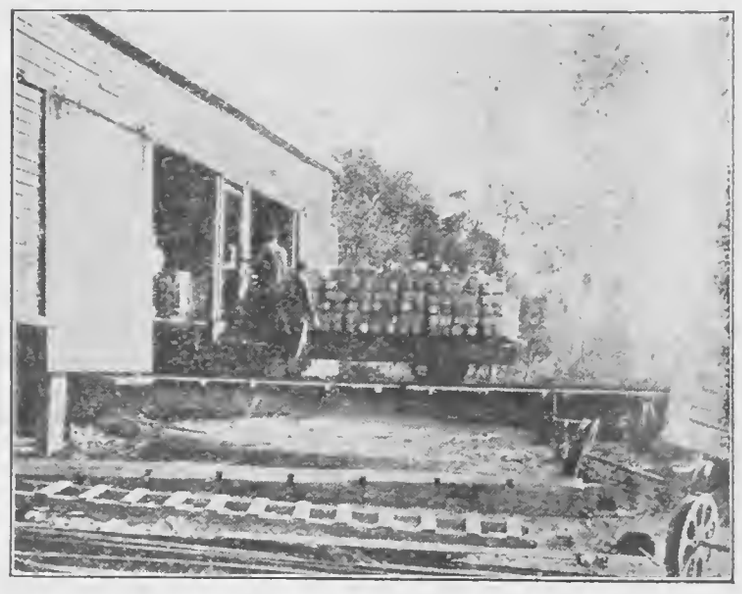
REMOVE THE BROKEN PARTS. FIG. 529.

be protected by a coating of grease or a cheap varnish of some kind to keep them from rusting. The "land polish," on your plow cost you money, and your team hard work to get; it is necessary for good work; why not keep it? If there is no floor in the shed pieces of plank should be thrown down and the machines run on to them so that they will be up out of the damp. By placing blocks under the corners of the frame the weight may be taken off the tongue or the tongue may be taken off entirely, making more storage room. Apply grease liberally to the knives of mowers and harvesters. It is best after coating them with grease to wrap them in old sacking or burlap, this protects them and helps to prevent accidents. A place that is often overlooked is the metal lining under the canvas back of the cutter bar in the harvester. In use the paint gets worn from both sides of this and unless repainted or kept greased it soon rusts through. If not done before see that the seed and fertilizer hoppers of the grain drill are cleaned out. Chemical fertilizers have a tendency to rust the metal parts. Open dishes of unslaked lime set in these hoppers take the moisture from the air and help to keep the rust from forming. Calcium chloride is even better for this purpose, and is inexpensive. Fight rust, it is the enemy of the farm machine, and can be controlled only by good shelter and the liberal and sensible application of good paint and grease. ROBERT H. SMITH.

WILD DEER AND FARM STOCK.

THE R. N.-Y., I am aware, has a large circulation. Possibly it reaches the man in this country who is complaining of the increasing cost of living. In that hope I write to lend him a bolt for his bow. The State of Connecticut has a long-winded law which gives to the patient reader the information that wild deer shall not be destroyed except upon one stated day yearly; and further, if deer do damage to crops the State will make good the farmer's losses. There is only one occasion when deer may be killed out of season, and that is when a farmer is a good enough woodsman to find them at their depredations and a good enough shot to scotch them before they bound over his neighbor's fence. A deer killed is not, as in the old days, venison found. The game warden has the disposition of the carcass, and he usually has a long throat for steel-drilled flesh.

Connecticut has not now sufficient pasturage to supply beef for its citizens. Therefore, seeing that cattle raising is a useless expense, the Legislature generously gives a small class of men known as



LOADING FRUIT FOR THE BOAT. FIG. 530.

"hunters" (because they can pull a trigger without being kicked flat) the right to pasture a million or so of deer on those same over-worked pastures. No one can use these (public) tons of converted (private) grass for food unless he belongs to the small sect whose privilege it is to let off primitive zeal one day annually.

The deer trample corn, eating a little. The State pays for what they eat but not for what they trample. That's up to the farmer. Many farmers lose even this small return, because they do not trust the State—in which I will not initially blame them. An instance is before me, that of an Italian who planted an acre to cabbage. The next day his wife saw 19 deer pass his house, and when he saw his cabbage sprouts again there were not enough to count. He didn't go to the State, but asked a neighbor what to do. The neighbor angrily said: "You live out of hearing of any other farm. Can you shoot? Well, then, you just lay for them critters an' you pepper 'em till they look like jerked beef. Then you salt 'em down an' say nothin'. Come Winter you won't miss the bootcher wagon."

That Italian will do well if he follows that advice. Public opinion used to back the deer laws. It doesn't now. Not where it counts. City folk who shoot have no opinions on the subject of real value. The laws are paling into dead letters and should be changed soon. When they are changed they should be drafted so that any man, hunting alone, may kill deer for food. Not more than one a month should any man kill. No butcher should be allowed to sell the meat—no clique should be allowed to hunt for profit. But it is manifestly ridiculous that with beef selling at the cost of butter so many pounds of good meat should be permitted to vie with the farmers' stock on their own land.

One good turn the deer do do. They keep the

SCOUR AND GREASE THE METAL. FIG. 531.

woods fairly clear of underbrush, a doubtful good, since partridge need the brush to nest in and they do good. BATTELL LOOMIS.

Connecticut.

THE Kansas Agricultural College has two resident physicians, one a man—the other a woman—the latter for the girl students.

THE Department of Floriculture at Cornell University, Ithaca, N. Y., has issued Extension Circular No. 8, calling attention to the opportunities for young men in floriculture.

A FUNGUS disease of cultivated mushrooms has been causing much loss to commercial growers. The U. S. Department of Agriculture has issued a bulletin on this subject, "The Mycogone Disease of Mushrooms and its Control," which should be studied by anyone engaged in mushroom culture.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Formalin for Fumigation.

LIKE some others, we have to store potatoes in our house cellar. The cellar is now empty and I wish to fumigate it with formaldehyde. Will commercial formalin, 40%, exposed in shallow vessels be sufficient? Will the gas injure any articles of furniture or clothing in the house above? The purpose is to destroy fungi. G.
Exeter, N. H.

"Forty per cent. formalin exposed in shallow vessels" would not be effective in destroying fungi either on the potatoes or in the cellar. The treatment of the cellar with formalin before storage of the potatoes would not, it seems to me, be of particular value, and such treatment after storage would be of use simply for scab. The treatment with formalin fumes now in use, according to Stewart's recommendations, is at the rate of three pints formaldehyde poured over 23 ounces potassium permanganate, to every 1,000 cubic feet of space. In order that the potatoes shall not be injured, however, be found that much of this space should be occupied by the potatoes, and that at least 167 bushels of potatoes should be included in this amount of space. If the cellar is not tight, the fumes might escape into the rooms above and cause some irritation, but there would be no injury to articles of clothing or furniture. G. P. C.
Conn. Experiment Station.

Trouble from Rabbits.

WHAT can I do to get rid of rabbits? They ruin my crops as they come in great numbers. Is there any way I can poison them? R. W. C.
New Jersey.

In my opinion, the best remedy for rabbits is a good cocker spaniel and a shotgun. If I were in the position of R. W. C. and the State law did not forbid or, as in New York, permitted the killing of rabbits that were destroying crops, I should resort to systematic hunting, especially whenever there was a tracking snow in Winter. The rabbits that injure crops are easy to destroy because, except in the mating season, they seldom travel more than a quarter mile from their regular resting place. In half a day a well-trained dog should bring within range most of the rabbits that are troubling R. W. C. and the rest is simply good shooting. A few outings at intervals of a week or so should end the nuisance. If feed were abundant all the Summer there should be little trouble if all the brushy land and fence rows were cleared up and planted to annual crops to be cultivated regularly and *frequently*. When feed is scarce the rabbits will go and stay where they can be near a supply. If we find the rabbits so numerous as to threaten our orchards or nurseries we hunt systematically whenever there is a good tracking snow, and usually have them so reduced that no damage is done when deep snow comes. A. C. W.

Celery in North Carolina.

I HAVE a strip of land lying between two mountain branches which is sandy loam, mostly sandy and rather damp. I have been advised to put this in celery by splitting furrows with a two-horse plow and filling it up with new dirt from a hard-wood forest. Would this bring good celery, or what would be the best method for preparing this spot for celery?
Swannanoa, N. C. J. A. W.

I have seen as fine celery as is grown anywhere produced on the bottom lands of the Swannanoa and French Broad in your section. The natural soil of your bottom land will be better than leaf mold hauled in, if you fertilize it as needed. It is too late to set celery plants now in your elevated mountain section, where the plants should be set in early August. Soil inclining to clay will usually make more brittle and crisp celery than peaty soil, but a sandy loam will make better celery than the black soil in quality, though not so large perhaps. That is, provided there is unfailing moisture in the soil. Of course the soil must be fertile, and if not so must be heavily fertilized especially with some carrier of phosphorus, such as acid phosphate, and nitrogen. Your soil as a rule has an abundance of potash. Years ago a grower in your section sold his celery crop in Raleigh, and I had an opportunity to test it and found that it was peculiarly fine, and far better than can be grown in the warmer parts of the State. Moisture and plenty of plant food have more to do with the making of good celery than the particular character of the soil, though I have found that a loam soil will make usually more crisp celery than a black peaty soil, where it is apt to grow large and coarse and stringy. W. F. MASSEY.
Maryland.

Septic Tanks.

HOW big should a septic tank be for an ordinary family? How thick should the wall be and how much disposal tile should there be? R. B. O.
Cheshire, Conn.

A septic tank with an interior width of three feet, length of six feet and depth of 4½ feet would be amply large for a family of eight people. The walls should be of concrete six to eight inches in thickness. The number of feet of tile required in the disposal system depends upon the character of the soil. From 10 to 12 feet for each person using the system might be required in a loam soil while half of that amount would answer in open gravel. The principles of septic tank construction are well discussed in a bulletin entitled "Sewage Disposal for Country Homes," issued by the State College of Agriculture at Ithaca, N. Y. This bulletin is free to residents of New York State and will probably be sent to others as far as practicable. M. B. D.

Leaving Onions Out All Winter.

WOULD it hurt small onions to leave them out all Winter, or should I dry and set out in Spring? Would they go to seed? When is time to pull late onions? P. G.
Waterville, N. Y.

Here in Southeastern Maryland I have already planted my onion sets to make green bunching onions in the Spring. I have also planted sets of the Yellow Potato onion, which makes no seed, but makes ripe onions in June from the Fall-planted sets. Onion sets from the seed, when planted in the Fall, are very apt to run to seed in the Spring if allowed to grow for ripening. I plant in the Fall only for early green bunching. Small onions left in the ground now, if they live through the Winter in your climate, will make good green onions, but will be pretty certain to run to seed if left to get fully grown. Mr. T. Greiner found that the Silverskin onions would winter with him in Western or rather Northern New York, and hence I suppose they would live out with you
Maryland. W. F. MASSEY.

A METHOD of keeping onions in Winter comes from the Colorado Agricultural College. Allow the onions to freeze solidly and keep them frozen, and their value will in no way be impaired. Alternate freezing and thawing injures them. The advice suggests selecting a dry, somewhat elevated place; on this place a box or frame of desired dimensions for the onions to be stored. The depth of the box should not be over 16 or 18 inches. Pieces of 2x4 or 4x4 should be placed under the box so that the box will not come in direct contact with the moist soil. The floor of the box should be reasonably tight. After the onions have been thoroughly cured and topped, they should be placed in the box and the boards placed on top. The cover should be water-tight. Before cold weather sets in keep the cover raised to permit ventilation. No other protection is given the onions, but they are permitted to freeze solidly, and when in this state the box should be covered with dry straw or cornstalks, or any material that would prevent the onions from thawing out. In the Spring, or when ready to be sold, the covering should be removed gradually and the onions permitted to thaw out without coming in contact with sunlight. During the Winter or while frozen, they may be taken out and gradually thawed in a cool room. Frozen, the onions will keep perfectly, and when thawed will remain solid for considerable time.

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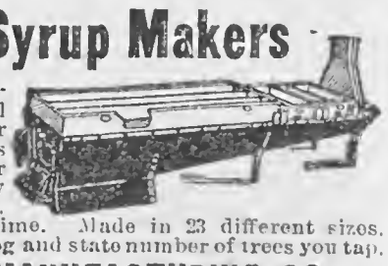

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Waterproof Paint for Tents.

WHAT paint could be used on a tent top to stop it from leaking? Is there anything I could put in the paint to keep it fireproof? G. A.
Herrin, Ill.

I know of nothing that would fireproof a tent top; its very nature is opposed to it, as any chemicals to fireproof same would wash out in the rain. Cloth is fireproofed where used indoors; even then it takes two or three applications a year to hold it so. To paint it use one-half pound of alum to a gallon of water (just put alum in water and stir up). Wet top with this thoroughly; when dry, use linseed oil and white lead to make a paint to cover same. Mix as follows: one gallon will cover about 80 square feet on first coat and about 300 square feet on second coat. Measure tent, get what you need. Raw linseed oil will cost about 70 cents a gallon, white lead about 8½ cents a pound. To every gallon used on first coat use five pounds white lead; on second coat use 12 pounds to a gallon. Mix for each coat separately. Just put oil into a tub, add as many pounds of lead as above, take a stick and mix it up well. Tie a piece of bagging or cheesecloth over another tub and pour paint on it and push it through with a brush. Do this both coats, and just before you start to use the paint, add about a wineglassful of liquid drier to every gallon. Brush it in well (I don't mean the drier, I mean the paint); mix drier into paint well before using it. A. F. R.

Building a Water-tight Cistern.

FROM time to time I note queries and comments regarding waterproofing cement construction. Several years ago in an engineering publication, I noticed an article on this subject stating that 5 per cent. of hydrated lime added to the cement would make the concrete impervious to water.

Wishing to construct a cistern of 7,000 gallons capacity I wrote a cement company regarding this matter, and their engineer replied that 10 pounds of hydrated lime added to each 100 pounds of cement would be better than five, and would make the resulting mixture absolutely waterproof, and, instead of having a tendency to weaken the concrete he stated it would possibly have the opposite effect.

We dug the desired hole and placed four inches of concrete on bottom, which we kept covered with water during the night; following morning had carpenters place casing, allowing four-inch walls all around the cistern.

We were careful to have the mixture very thin and tamped it thoroughly, placing the entire amount without allowing any to set.

As soon as the cement had become hard we turned water in and found we had a perfectly tight job, except one small leak about 18 inches from the top, where the mixture was not quite thin enough. Below this point we have let water stand for several months, and none whatever leaks away. It was never necessary to brush or smooth-coat any portion of this work except the small hole mentioned previously. E. J. W.

Ditching in the South.

WE have a traction ditching machine, contractors' size, cuts a trench six feet deep and 19 inches wide. We have been working with it this Fall in this locality, and as we shall be unable to use it this Winter I would like to inquire if there are any prospects of getting drainage jobs anywhere in the South that would pay to ship the machine there for the Winter? We can do machine trenching, which is better than hand work, for about one-half what it costs to do the work by hand in this locality, and as tiling has grown so popular in the last few years, think perhaps if we could hear of a locality that needs it, and the farmers are able to have it done, we could work up some business that would be of benefit to the community as well as ourselves. L. W. S.
Gowanda, N. Y.

Our suggestion is to write the directors of the Southern Experiment stations. You will find them on page 1172. They would be likely to know of any localities where such ditching is being done. The U. S. Government has on hand some experiments at draining land in the South.

"WHAT'S wheat worth now?" "It all depends," replied Farmer Corntossel, "on whether you're raisin' it or usin' it fur food."—Washington Star.

FARM NEWS.

Fifteen silos a day in Texas for the past 12 months is establishing these evidences of prosperity rather rapidly. On September 1, 1914, there were 8,560 silos in the State, and their original cost was $4,520,000. Nearly 5,000 orders were in the hands of manufacturers for silos to be established before the close of the present year. Two-thirds of those already established were built during the past year.

A great rat hunt was the diversion of the farmers at Findlay, Ohio, recently when they made a record of 23,938 rats killed. The Nimrods were divided in two parties and the penalty imposed on the losing side was to furnish a banquet for the side with the larger number to their credit. Boys and men entered the game enthusiastically. A suggestion for the agricultural colleges is to establish a "Swat the rat" day along with "Swat the rooster" and other days deserving of enthusiastic celebration.

The California olive crop is reported to be one of the largest in the history of the State, being 85% of normal crop. It amounts to about 15,000 tons, and is worth $2,000,000. This is easily the largest crop since 1911. The foreign olive crop is light in some sections and heavy in others, and considerable damage has been done in the Eastern Hemisphere in localities by the olive fly. Harvesting will commence in Southern California the last of October and farther north a little later.

With market in Germany for American apples shut off, and with that in England seriously curtailed, the situation demands that growers pack and handle fruit for markets in such condition as to prevent deterioration, pack only No. 1 fruit, and divert other fruit to the cider mills and evaporators. The apple situation was discussed recently by the committee on Fruit and Agriculture of the Boston Chamber of Commerce. Here it was shown that the retail dealer can buy No. 1 apples for from $1.75 to $2.25 a barrel, which only means a small return for the producer. The fixed charges against each barrel of apples, it was found, amount from 18 to 25 cents; cost of barrel, 36 to 42 cents; cost of packing 25 or 30 cents; delivery to car average 10 cents; freight 25 cents; wholesaler's commission 20 cents; cost of cartage six cents, and jobber's profit 25 cents, making the fixed charges against each barrel range from $1.45 to $1.58. At present prices in Boston, the returns for a barrel of No. 1 fruit are only about 50 cents a barrel for first quality, and only the best grade of fruit can be offered if the demand is to be stimulated.

It has been found in Wisconsin that onion smut may be easily controlled by use of a formaldyhyde solution in the drill. Danger in loss by cabbage diseases, particularly yellows, has been reduced by breeding up a strain which when planted on diseased land, produced a fine crop of healthy marketable cabbage. This was done by keeping for seed plants which were able to withstand the attacks of the parasite. From such seed a 98 per cent. crop has been produced when planted on soil on which ordinary seed did not produce more than five per cent. of a crop. The disease-resistant strains, together with careful seed disinfection, will increase the yield and encourage growers to increase their acreage.

LAWYER: "Your wife must be at the trial. A weeping woman is very effective with a jury." Prisoner: "But I'd have to choke her to make her weep! And that might sour the unmarried jurors on me!"—Daily News.

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Every stump on your farm takes up from 100 to 400 sq. ft. of *rich ground* that would be yielding bumper crops. Take out the stumps! New land often yields $200 to $300 profit the first year.

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If *you* hear it—and *she* hears it—there are a couple of joyous thrills running up and down two spines. YOU KNOW IT.

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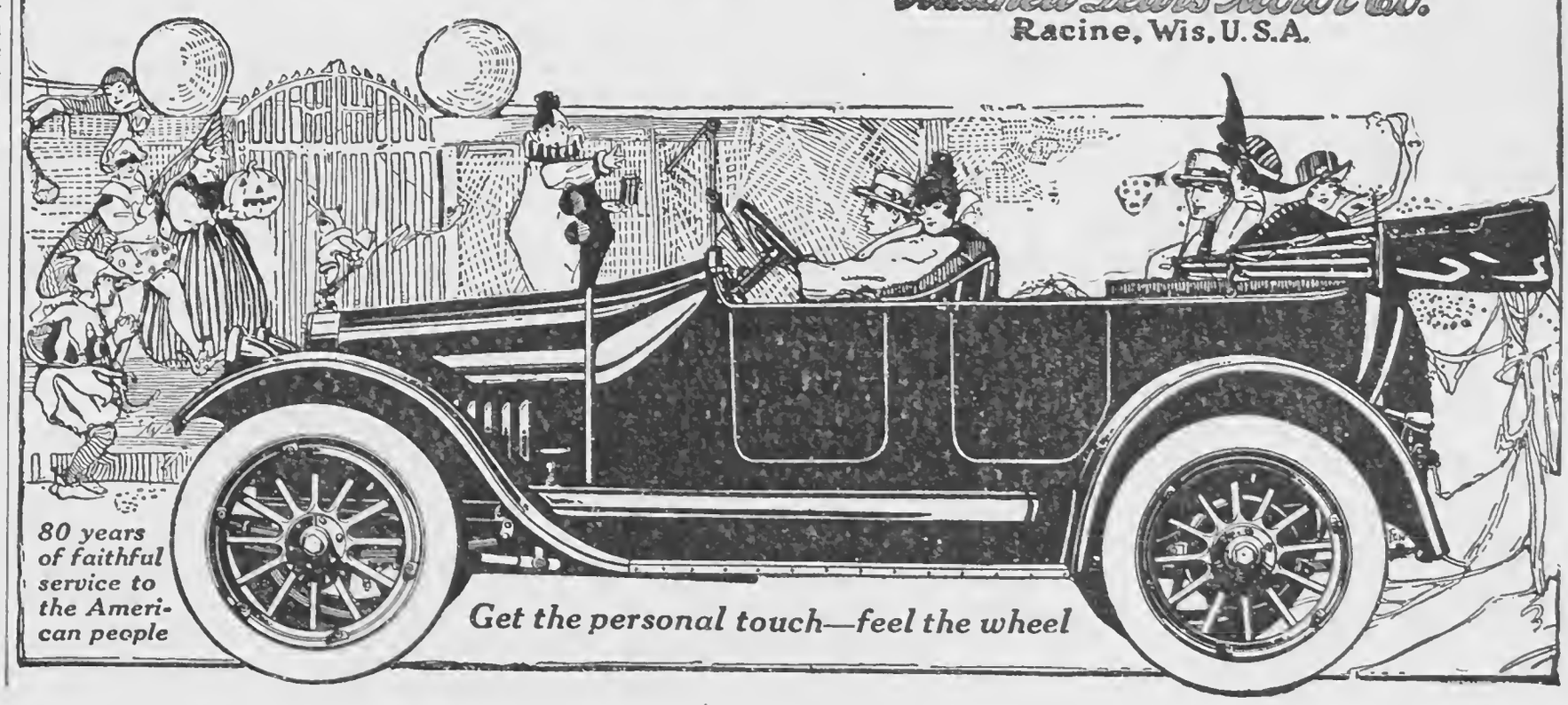

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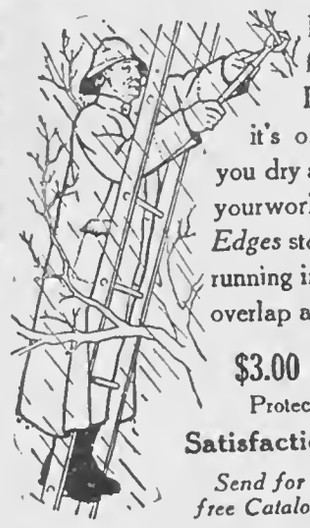

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EVENTS OF THE WEEK.

DOMESTIC.—A cave-in at the American Davy Zinc mines, Webb City, Mo., October 1, caused the death of 12 men.

C. F. Crecelius, Secretary of State for Kentucky was indicted on three counts by the Franklin County grand jury, Oct. 1, for obtaining money under false pretenses and farming and selling State offices. It is charged in the indictments that Crecelius employed a new stenographer at $100 a month and drew that sum from the State while he only paid the stenographer $25 a month. It is alleged that he sold to one of his clerks a position for $800.

Twenty persons were injured at the Interstate Fair at Trenton, N. J., Oct. 2, when an automobile, driven by Jack Le Cain in the twenty-five mile race, crashed through a fence into the crowd. Le Cain was rounding a turn when his rear axle broke. He was thrown out when the machine struck the fence, but the automobile plowed on through the crowd.

Five persons were killed and seventeen injured in automobile and motorcycle accidents in New York and vicinity, Oct. 4. Of the injured four were reported to be in such serious condition that the day's death toll probably would reach nine.

Jamaica Bay oystermen, who have been forbidden by the New York Board of Health to raise oysters in Jamaica Bay, L. I., on account of its proximity to a sewer, are interested in a $100,000 damage and injunction suit, Oct. 5, against the city before Justice Maddox in the Supreme Court, Brooklyn, by George A. Carman of Canarsie. He says that before the Board of Health acted he made $5,000 a year from the oyster beds. Several other oystermen have brought suits against the city on the same ground, and if they are successful the city may have to pay $1,000,000.

Sixteen men are known to be dead and twelve injured as the result of a pocket gas explosion, Oct. 5, at the Mulga mines of the Woodward Iron Company, near Ensley, Ala. Mine officials state the explosion was purely local and was caused by striking a pocket of gas. Mulga mines had a previous explosion on April 20, 1910, when thirty-five were killed.

T. E. Stokes of the United States Department of Agriculture, who recently came to Kentucky as State agent of the Boys' Pig Clubs, has been looking over the field in that State, and it is possible that Woodford will be chosen as one of the counties in which the organization of the pig clubs will be undertaken. The object of pig clubs is to stimulate an interest in swine production and to teach farmer boys how to raise better and cheaper hogs by use of improved blood and the growing of forage crops; to complement the work of boys' corn clubs by showing the boys how they can profitably sell their corn through hogs.

In conformance with a vote of the New Haven Railroad directors last July, the railroad, Oct. 6, began a suit for the recovery of $3,900,000 against John L. Billard of Meriden, a former director; Edward D. Robbins of New Haven, former general counsel; Samuel C. Morehouse of New Haven, who acted as assistant attorney to Robbins; Charles F. Linsley of Meriden, Henry Whipple of New Haven and Samuel Hemmingway, the New Haven banker, who formerly was on the board of directors.

THE EUROPEAN WAR.—The battle of the Aisne, nearly at the end of the fourth week of consecutive fighting, was still bitterly contested, Oct. 7-8, both sides claiming gains in certain areas. .....The Germans continued their attack on Antwerp, Oct. 7-8, and it was reported that the fall of several fortresses would necessitate the capitulation of the city. All noncombatants had been warned to leave several days previously, and the seat of government had been moved to Ostend.....Hard fighting continues between Russians and Germans in Galicia, while in Hungary the Russians are only six hours by rail from Budapest.....Oct. 7 the British submarine E-9 sank a German destroyer just off the mouth of the Ems.....The British Admiralty has warned all shipping that it is now laying mines in certain areas in the North Sea.....Papeete, Tahiti, belonging to France, and the British cable station on the Fanning Islands, North Pacific, have been bombarded by German warships..... There has been further loss to shipping from mines in the North Sea and Adriatic. The French fleet is now laying mines in the Adriatic, but has announced the danger zone.....Japan continues hostilities in China; it is reported that the bombardment at Tsing-Tao has wrecked a German cruiser. One Japanese mine-sweeper has been destroyed by a mine. Japan has seized Jaluit, in the Marshall group between Hawaii and the Philippines, for temporary strategic reasons.

Corn, old, $1; new, no price. Wheat $1.05; oats 60; potatoes $1.20; hay $15; straw $7; sheep four to five cents per pound; hogs, fat 9; stock 8; cattle 6 to 8; horses $100 to $200 each. Corn crop about 50%; wheat 80%; oats 50%; hay 50%. Stock of all kinds rather scarce. A good many farmers are putting up silos and going into the dairy business. F. L.
Albany, O.

CROP NOTES.

Sept. 28. The season has not been as favorable for crops, due to excessive rains in June and part of July, and later very hot and dry. All small grain grew very rank and a good deal of it lodged badly; black rust struck our wheat and affected oats also, cuting both quality and quantity from what it might have been under more favorable conditions. No. 1 wheat 99; oats 39; rye 79; barley 44; corn 65. Live hogs around 8 cents a pound; fat cattle from 6 to 7. Common cows from $40 to $75; butter 30; eggs 22; hens 8; broilers 1½ to 2 pounds, 11. Fruit is little raised here, and very little sold; no market gardening done. Hay plentiful and cheap, wild hay selling at $4., tame hay $6. Horses from $100 to $200 each. G. A. Q.
Clearwater, Minn.

Sept. 23. Old chickens 12; young, 13; roosters 5; eggs 23; butter 23-25; lard 10; potatoes 75. Cattle 7 to 8; calves 8 to 8½; sheep 4 to 6; spring lambs 7; hogs per 100, 9; hides 12½; tallow 5; wheat $1; corn $1.03 per 100; oats 43; rye 80; clover seed $8; Alsike $7; clover $12 to $15; timothy $15 to $18; horses $100 to $300 as to quality; good drafty brood mares command fabulous prices. Good dairy cows bring $50 to $150 as to breed; grade Holsteins sell at $100 to $200. This is a diversified farming country, wheat, oats, corn, hay and tobacco; nearly every farmer raises four to 10 acres of Spanish or Seed leaf. Buyers are offering 10 cents per pound for Spanish. No prices offered for seed yet, the tobacco crop was universally good through here, of extra quality, and all housed before any frost, in fact no frost of any consequence to present time except in very low grounds, such as marsh low land. The wheat crop is being sowed and a few fields greening over, no fly noticed yet, but chinch bugs are in cornfields and very numerous. A few fields of corn damaged very badly by them, and farmers are sowing wheat in these fields late hoping freezing will keep the insects from injuring the crop.
Ansonia, O. A. L. W.

Cass County lies about 200 miles north of St. Paul, near the center of the State east and west. It is mostly on cut-over country abounding in beautiful lakes and Itaska Lake, the source of the great Mississippi, is only a little way to the west of us. We have a healthful and delightful climate, especially in Summer, and hundreds of pleasure-seekers come here every season. Fish and wild game and even bears are plentiful. Not one-tenth of this county is yet developed, and lumbering is the chief industry. This is the land of the big Red clover, and dairying is coming to the front. We have numerous natural meadows where all kinds of grasses abound. Our Winters are rather long but are generally mild, with little wind. Speculators hold by far too much of the land but many new settlers are coming in and opening up farms. General prosperity and contentment prevails. The farmers are intelligent and nearly all belong to some club.
Pine River, Minn. J. W. W.

COMING FARMERS' MEETINGS.

National Apple Day, October 20.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy-Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Dairy Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29. American Guernsey Cattle Club, Oct. 29. Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting, in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 2, 1915, State College P. O., Penn.

January 9th to 15th, inclusive, 1915. Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

ANOTHER "MAKING MONEY" STORY

Getting Cash Dividends out of Wood Lots and Spare Time

By A Real Farmer

(Name on Request)

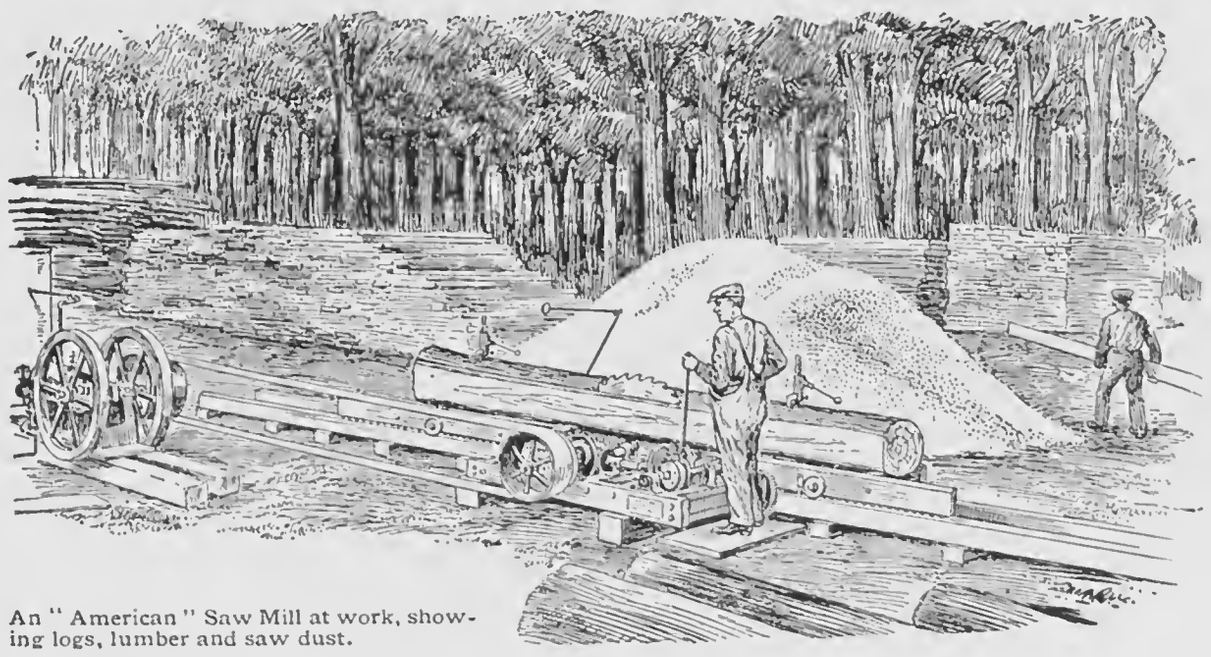
A few miles back from the Hudson in the country made famous by Cooper and Irving, a wide-awake farmer is making winter a harvest-time. With his farm engine, an "American" saw mill, and farm help, he is sawing a profitable lumber crop out of his wood lot and those of his neighbors.

If you wish to verify any statements in this story, or to know what he thinks about "American" saw mills, he will be very glad to answer your letter. His name and address may be obtained by writing the American Saw Mill Machinery Company, Hackettstown, N. J.

HOW can a farmer make more money in the winter? That's a question I scratched my head about many a time, until one day last fall I got hold of a book. It was about "American" portable saw mills and told how lots of farmers were making winter a harvest-time with these mills. It said that any farmer who had a wood lot could make money sawing his trees into lumber with a light, portable "American" mill, his farm engine and his farm help.

Well, I got one. She worked fine. The boys got the hang of it quick and pretty soon we were making lumber for the neighbors. They brought their logs to the mill on sleds from as far as six miles; paid me $7.50 a thousand for sawing; and took away the lumber. The mill turned out 4,000 feet a day. The labor cost $6.50, with $2.50 extra for gasolene and oil. My profit on a day's work was $21. On small jobs I used my own farm help, so labor was cheaper, but a steady job paid me to hire a sawyer at $3.00 a day and two helpers at $1.75 each. I always kept the slabs, too, worth $2.50 a cord as firewood. Between times, I made myself new planks for the barn floor, and sawed out of one tree enough lumber for two wagon-boxes for about $7, including carpentering, and better than I could buy for $10 apiece.

I sawed and sold my own lumber as fast I could get it out of the woods. The local wheelwright paid me $120 for 2,000 feet of white oak for wagon purposes and over half was profit. I got a contract to supply planking and stringers for bridges from the Town Superintendent. Then came the big deal which not only paid for my saw mill, but my 12 H. P. farm engine and a shingle machine to boot, and left me $400 clear profit.

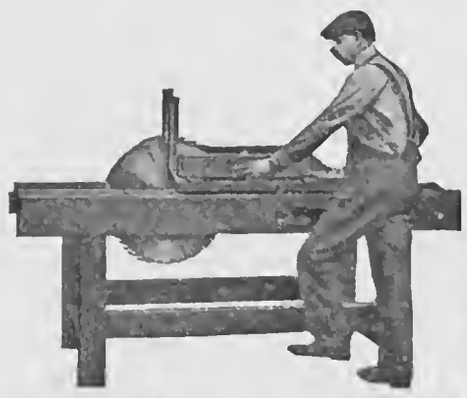


An "American" Saw Mill at work, showing logs, lumber and saw dust.

A neighbor of mine was building a big barn last spring—about 100x40 feet with 20-foot posts and a basement big enough for 100 cows. I furnished all the lumber for that barn except siding, doors and window frames. I got the order because I could afford to sell good chestnut from off my place at the same price the lumber dealer asked for spruce or hemlock, and I could saw the exact sizes wanted. In two weeks' time my little "American" mill sawed out 40,000 feet of chestnut for that barn, bringing me $40 a thousand—$1,600 for the job. Besides that I made and sold all the shingles at $5.50 a thousand. Of course, I won't get a big job like that every day, but it shows what a farmer can do to make money in the winter. Now I have my saw mill outfit paid for twice over, and good for many a winter to come.

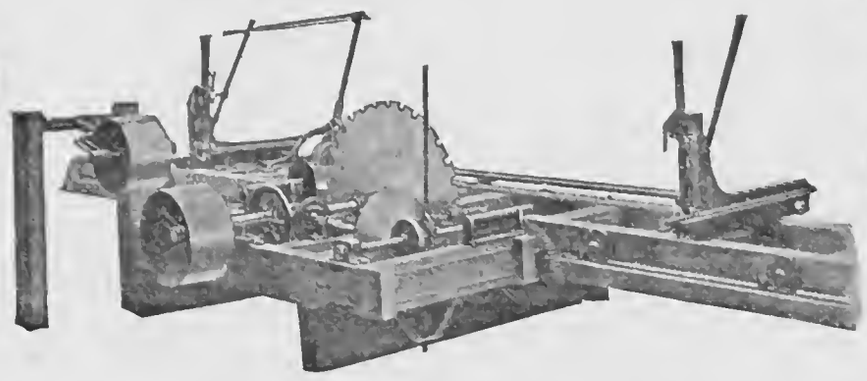
Every farmer needs an "American" saw mill. It's as necessary as a silo. On all kinds of odd jobs where lumber is needed you can save money. If a barn burns down, you can save enough money sawing lumber for a new one, to pay for a saw mill. Your neighbors will buy your lumber at retail prices. I even sell to carpenters and builders, and will sell more as soon as I get an "American" Jewel Planer for finishing up rough lumber. I tell you what, I'm enthusiastic about "American" Saw Mills and I have good reasons. The Company will give you honest advice and they can make quick delivery so you can get busy at once. Don't wait. Start now.

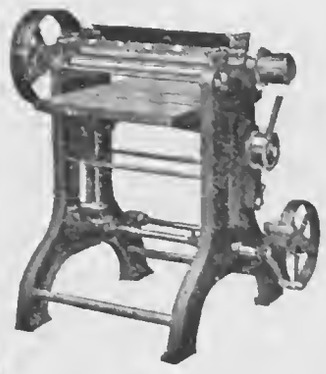
Send in your order and then start to cut and haul your logs before the mill comes, so you can start to make money right away. Any farmer can make money with "American" mills.



With an American "Up-To Date" Shingle Machine you can make 5,000 to 10,000 shingles per day with 4 to 8 H. P.

The illustration below shows an "American" Standard Variable Friction Feed Saw Mill for farmers. It is a plain, simple, strong machine—light and easy to move around. Requires no experience to run. Guaranteed, of course.





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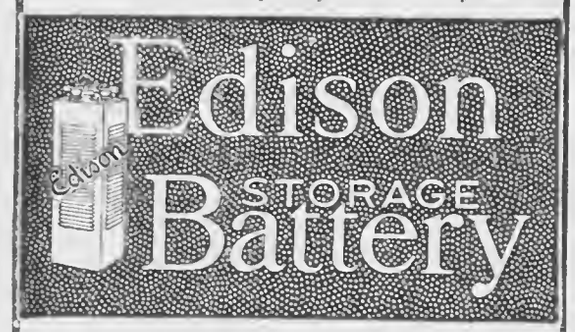

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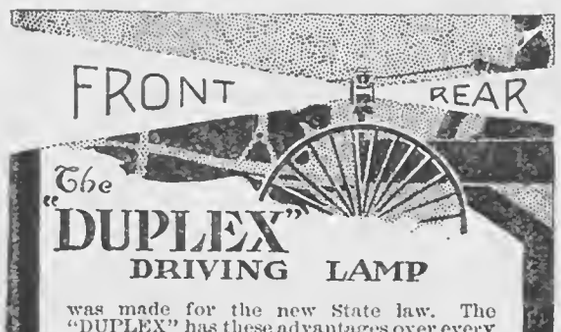

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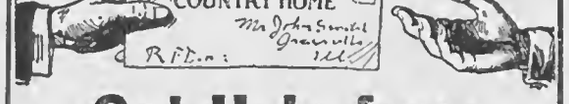

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The Rural New-Yorker, 333 West 30th St., N. Y.

WHEN TO TRIM PEACH AND PEAR

HOW soon after fruit is gathered is it safe and prudent to trim up, cut out limbs, and generally fit and shape peach and pear trees for the next year? This question refers to Western New York, or the strip along the Lakes. Just how soon after picking would you consider it safe to begin on the trees?

I have had best results in trimming peach trees in Spring, March or April; with pears any time in the Winter months. We harvested about 7,000 bushels of Bartlett pears this season and 1,200 bushels last year. Peaches were a failure, the first time in 16 years.
WILLARD HOPKINS & SONS.
Niagara Co., N. Y.

The notion is rather widespread that it is desirable to prune peach trees soon after the crop has been harvested. The practice of pruning at this time comes from the old world, especially from England, where late Summer pruning is often recommended, and is probably necessary in the cool, damp, English climate so that air and sunshine can better reach all portions of the tree and assist in ripening the young wood. In such pruning the old wood is not cut but the work consists of pruning out and training the young shoots leaving mature wood until Winter. In America this late Summer pruning of the peach is little or not at all practiced by commercial peach growers, and even those who are growing peaches in private gardens, where it is possible to train and prune with more particular care, seldom trim their trees at this season of the year. Indeed, sometimes it is unsafe to do so, for if such a burst of Summer weather as we are having in New York at this writing should follow, a very undesirable second growth might appear. The time to prune the peach in this climate, then, is, with almost no exceptions, when the wood is dormant. It matters little after leaves drop and before they come the next Spring as to when the pruning is done, though there is a current prejudice that peach trees should not be cut until late Winter, because of injury from cold. Large peach growers, however, find it necessary to begin the work in early Winter, and do not report injury from freezing or from checking.
U. P. HEDRICK.
Geneva Exp. Station.

The largest fruit growers around Hilton commence in December and trim on mild days all Winter. If I had but two trees to trim I should prefer to do it in March. I should not trim till the leaves had dropped; should not think it safe to do so. DELOS TENNEY.
Monroe Co., N. Y.

We have found it safe to trim peach trees at any time after the growth of the tree has stopped. This is indicated by the leaves turning yellow and commencing to drop. We usually begin as soon as the Fall harvest work is finished, about November 1. F. W. CORNWALL.
Wayne Co., N. Y.

In regard to the question of trimming peach and pear trees, trim any time after the fruit is harvested.
Orleans Co., N. Y. JAY E. ALLIS.

We always leave our trimming until about mid-Winter. The reason for this is that it is always possible, especially with peaches, in case of a hard freeze, that a certain growth of wood may freeze. If you trim early you of course trim it as you wish it to start next Spring. When the cold weather comes after that and freezes it back another foot the tree has to be trimmed again, and you are taking off more than you want. My experience is that we are apt to have our extremely severe weather usually by the end of January, and a few years ago, in talking with Mr. King of Trumansburg on this subject, I understood him to say that they began trimming about the first of December, but they began early, as they had so much to do that they were obliged to begin then in order to get it finished before Spring, with the experienced men they wish to do the work. If I remember rightly he expressed a preference for the later trimming, but feels forced because of the facts stated. While I have never practiced Summer trimming I cannot help but feel that for peaches especially it would be a good thing. This will of course tend to the formation of fruit buds lower down on the tree, whereas the majority of buds appear on the present season's growth, and sometimes severe trimming will remove more fruit buds than is desired. Except for the danger of freezing back I cannot see any reason why a fruit tree may not be trimmed any time of the year after the first quick early growth is about over. I might add that it has seldom occurred in the past 30 years that in my location I have seen it sufficiently cold to freeze back the trees. W. L. MC KAY.
Ontario Co., N. Y.

"I SUPPOSE," said the candidate "that I can depend on your support?" "I dunno," replied Farmer Corntossel, in a low tone. "Mirandy an' the two girls are hangin' out o' the window, over the porch, tryin' to hear what we're talkin' about. I want to support you, but you'll make it easier fer me if you'll sort o' get agitated as we walk toward the gate an' holler, 'Votes for women!' a few times."—Washington Star.

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VAN DEMAN'S FRUIT NOTES.

ORCHARD QUESTIONS.

WHAT kinds of soil are best suited for the different tree fruits? 2. What system of laying out an orchard is to be preferred? 3. Should orchards be plowed deeply? 4. Has salt any value as a fertilizer for fruit trees?

Richmond, Va. W. N. W.

1. As a rule the heavier or clay and shaly soils are better suited to the growth of apple and pear trees and the sandy soils to the peach, plum and cherry. But the apple, pear, plum and cherry also do well in the sandy lands when they are well enriched and tilled.

2. There are various good systems of laying out orchards, but that which my experience and observation of over 50 years has taught me is the best is the plain square system, especially if the plan of using temporary trees as fillers is followed, and I like it very well. There is the objection to it that the average fruit grower dislikes to, and often will not, cut out the fillers when they begin to crowd, but this is positively necessary and should be done at all hazards. Otherwise damage will be done to all the trees, and the permanent ones will never entirely recover from even a year or two of crowding. The distance I have found to be the best for setting apple trees with the fillers in is 25 feet apart. At first I tried 16½ feet in Kansas but that was so close that it did not give time enough for the fillers to do their full duty. Then I tried 20 feet and that was too close, so I have since planted 25 feet apart and with good results. By cutting out half of the diagonal rows the trees left will be about 35½ feet apart, which in some climates and soils is sufficient distance for full development of the trees, and no further thinning out is needed, but in the best apple soils it is not. In such cases it is necessary to dig out one-half of the remaining trees by removing all in each alternate row running squarely through the orchard, which will leave the trees 50 feet apart and give ample room for full development and I have seen many apple trees that needed that much room. In no case would I plant peach tres as fillers, because they are sure to injure the apple trees to some extent by their more rampant growth. They need different culture and spraying from apple trees and should be in an orchard by themselves. Same is true of about all fruit trees in various degrees.

3. Orchards should be plowed deeply while the trees are very young and always cultivated shallow, and as the roots extend into the soil the plowing should be shallow where they are. It is better to plow deep in an orchard than not at all, but it is an injury to break the roots and the greatest care should be used to watch the mark and know what the tools are doing to them. Frequent and shallow cultivation is the right plan to follow in an orchard of any kind.

4. Common salt has no value as a plant food nor in any other way for fruit trees in the soil. It is soda and chlorine, and contains no potash or other ingredient that is used in fertilizing.

The Muscatine Grape.

YEARS ago, when a boy in Eastern Massachusetts, we had on our place a particularly fine flavored white grape, which was known as Muscatine or Muscatel. I am at present setting out fruit on my place in New Jersey and am anxious to get some of the above variety, but up to date have been unsuccessful in locating it. Can you help me?

Mountain View, N. J. H. C. L.

The name Muscatine is very commonly used as a popular one for the species of grape that is native to our Southern States, and botanically known as Vitis rotundifolia, and is sometimes applied to the variety of that species called Scuppernong. "Muscatine" and "Muscatel" are names that have been used for some varieties of the European species V. vinifera, but they are quite unsuitable to Massachusetts and could hardly be the same referred to by the inquirer. But there are several very excellent white grapes that are suited to that region, of which the Winchell is one of the very earliest and sweetest. It is also called Green Mountain. The Duchess, Triumph and Niagara are other white grapes of good qualities of fruit and vine.

H. E. VAN DEMAN.

LEGAL FARM MATTERS.

Enforcing a Contract.

A BUYS a farm, makes a trade with B to carry on the farm for one-half net proceeds, A furnishing team, tools, one-half fertilizer, one-half of packing cases or barrels for shipping. B having no ready money, A offers to furnish all of the above and expense money for living until crops are turned off. A having died about two months after the trade was made, his wife and his brother agree to carry out his part of the trade, if B would continue his contract. A and B having been close friends, B agreed to do so, while A's wife and his brother did not continue to do so, even disposing of team before B could harvest a crop of watermelons, also corn land plowed ready to plant, except fertilizer. B was to stay on the place for a year, but had to leave on account of not having living furnished and in fact nothing was furnished after a few weeks. B claims $500 damage; there were no papers to show the contract. A witness was called in. Can B collect damages? W. H. R.

Florida.

Everything here depends upon questions of fact, which B will endeavor to show are in his favor, and the wife and brother of A will as surely endeavor to prove are favorable to them, and it will be a question of whom the court believes. If even the essentials of this contract had been put in writing, how much easier of proof it would be for all parties and how much less chance for misunderstanding. The wife and brother will claim that B did not stay on the land for a year and so did not fulfill his contract. On the other hand, B will claim that the actions of the wife and brother made it impossible for him to continue with his contract, and from the letter this appears the more correct, and it would seem as if B had a claim for damages against the wife and brother for the breach of contract: but, as stated above, it all sifts down to questions of fact, which must be proved by interested parties without the aid of any written instrument. If a friendly settlement could be arranged, it certainly would be the best way out. M. D.

Hackman's License.

WHEN a man has a license to operate his own automobile, can an incorporated village impose a license for "hacking" within the village limits, that is to take passengers to and from trains, handle freight, etc.? E. V. F.

New York.

The law gives the board of trustees of villages power by ordinance to prohibit the running of public hacks within the village without a license, and the village has full power to give or withhold a license for good reasons. M. D.

"IT appears," said the magistrate, "that you stole seventeen pounds of butter. It was found in your possession and identified positively. You have not accounted satisfactorily for it, and there is no doubt whatever in my mind that you are guilty. I shall send you to prison for one month." "Your worship," protested the prisoner, with tears in his eyes, "can't you make it fourteen days? The stuff was only margarine."—London Farm and Home.

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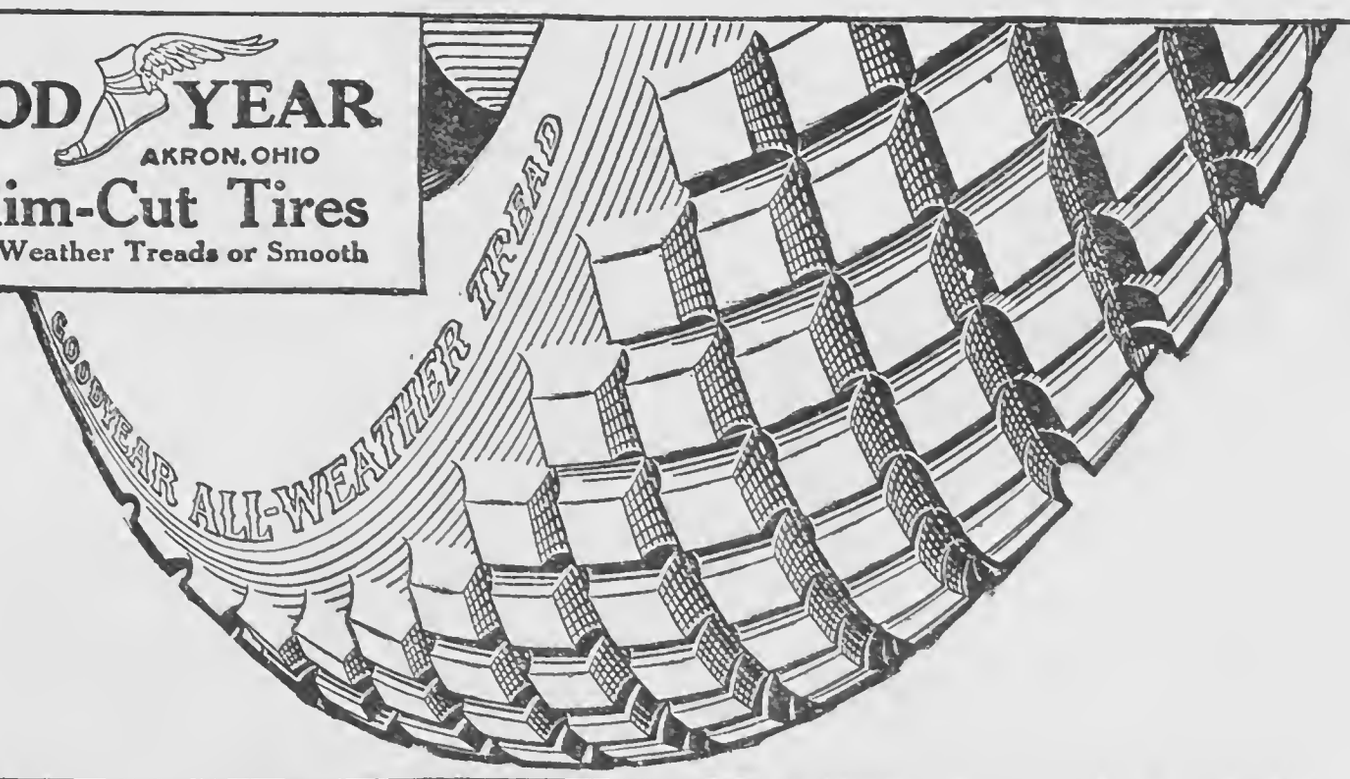

(1885)

Hope Farm Notes

APPLES AND IDEALS.

I HAD a call a few days ago from a friend living in Rochester. He found me in the orchard picking a few apples. He was so impressed by their beauty and excellence that he bought a barrel and had it shipped by express to his family in Rochester. H. V. D. R.

Amenia Union, N. Y.

WESTERN SPIRIT.—This is merely renewed evidence of what I have always claimed, that the Hudson Valley fruit region can and does produce the most beautiful fruit that comes into market. This fact is not generally known. So much has been said about the wonders of fruit growing on the Pacific Coast, and about the immense orchards of Western New York, that the Hudson River growers have been content to remain quiet and let others do the talking. They make a mistake in this, for the Valley is really a wonderful fruit section, and its advantages and possibilities ought to be advertised. At the big fruit meeting in Poughkeepsie last Winter, the Hope Farm Man gave a little talk on "Ideals in Horticulture." There have been a number of requests for a copy of what he said regarding this matter of advertising the section. He spoke of the spirit which is found in many of the Western towns and cities toward those who excelled in fruit growing. Let a man from that region go to a big fruit show and win a prize for beautiful fruit, and when he comes home he finds the whole town lined up to meet him with a brass band, and all the notables present. This spirit is a wonderful thing for Pacific Coast fruit growing, because it gives all people, old and young, the true thought that their own produce should be the best of all, and that they should all strive to make it so. After stating this, the Hope Farm Man went on to talk about as follows:

GLORY.—During the Spanish War this part of New York State sent a company or a regiment of soldiers to the front. It is very doubtful if these young men ever saw a Spaniard on the battlefield. Quite likely they never fought anything fiercer than a malarial mosquito in the recruiting camps of Florida and Tennessee, yet their spirit was true. They willingly offered their services and their lives to their country, and when they came home, very properly the main street of Poughkeepsie was one mass of color. Your factories were closed for the time, and all your people turned out to welcome those boys back home again, because they had upheld the honor of the Hudson River, and offered the best they had for their country.

BASEBALL.—I read not long ago of a baseball player who took part in the famous world's series. I cannot tell you how many men he struck out as a pitcher, or how many runs he made, but he was a great man, because he did something which appealed to popular feeling. When he went home and stepped off the car, he found lined up in the public square half the population of his home county. The president of a great university made a speech welcoming him home. The leading clergyman, the judge of the local court were there, and the Congressman hurried home from his arduous duties at Washington to show himself before that crowd. This man had done nothing but throw a baseball so that it dodged around a corner and got away from the bat, yet he threw that ball partly for the money he got out of it, and very largely for the glory of the home town. The Congressman said that this young man had put that town on the map by throwing the baseball. At any rate he made an appeal to popular feeling, and society rose up and honored him.

BRUISERS.—In like manner I heard of a prizefighter who went away from home, and succeeded in hammering another human brute into the condition of hamburger steak, winning fame and profit thereby. When he came home his town turned out to welcome him with great applause. He also was told that he had put his home town on the map, and written his name in italics. I could stand here and give you instances by the hour which would show where men, women or children have gone out into the world, done something for the honor of their home section, and returned to be lionized and pointed out as public benefactors. That is the spirit which makes a community worth while. When a man does something to put his home town on the map he ought to be called a good citizen, and honored accordingly.

A PRIZE WINNER.—Now let us see how this works out in the Hudson Valley. A few weeks ago our good friend, J. H. Hepworth, who is known to all, packed his grip and started for Rochester. That grip did not contain dynamite, or boxing gloves, or baseballs, or a fancy dress uniform, but it did contain a bunch of the finest fruit that ever grew on a tree; fair specimens of the best products turned out by the Hudson Valley. Brother Hepworth went up against the best fruit growers in the country. He exhibited his apples at the big fruit show, and won so many first prizes that it wasn't worth while to ask who was second. His Baldwin apples from the Hudson Valley were voted by the judges to be the most beautiful and perfect specimens of that fruit to be found at that great exhibition. You see some men write the name of their home section with a baseball; others pound it into the face of their antagonist; still others shoot it into the enemy, but Hepworth wrote the story of the Hudson Valley in the beautiful colors of your priceless fruit. And in doing so he did more for your section than any man you have ever sent to Congress to do your public work for you.

HOME COMING.—All this was very fine, and of course Hepworth, like the rest of the notables, got his reward. When he started from Albany on his way home down the valley, of course there was a signal fire on eve y hillside. Every time the train stopped, of course there was a brass band, and all the pretty girls in town were out singing "Hail to the Chief Who in Triumph Advances." When he got off the train at his town, of course everybody within gunshot was there to greet him. They put him into an automobile of course, with the old flag flying above it. The Congressman of his district, and the local judge were there, to welcome home this great man who had put the home town on the map. Am I not right, Brother Hepworth, in this? Hepworth shakes his head. But didn't they have the band out? Didn't the school children meet and sing "America?" Didn't they give you the freedom of the city? Hepworth still shakes his head. Didn't the minister on the following Sunday put you right into his sermon, with you up on a front seat listening to the text? *"Well done, thou good and faithful servant."* Hepworth still shakes his head, and says he doesn't know, because he didn't go to church. Then leaving out these smaller matters, when you got home from that glorious victory, didn't you receive a visit from a committee of gentlemen who demand that you run for Congress as a reward for your services? He says that nothing of this kind was done. He simply came home with the blue ribbons stuffed in his pocket. He got off the train and walked up the hill alone, and when he got home he had to explain what had been going on during his absence, just like the rest of us who are common people.

THINK IT OVER.—But seriously, I speak of these things to bring home a point which we must all recognize. Most of us are chasing off into some other part of the country to find heroes or heroic things. Somehow we think that the home town may be a good enough place for the practical working things of life, but when following the ideal or the imagination of life we seem to think that we have to go somewhere else and find it. That is one reason why this good old Hudson Valley has never really come to its own. That is why the world does not recognize the fact that here on these sunny slopes by the side of the river, we are producing the most beautiful fruit, the most glorious specimens of Horticulture, that ever were colored by the Autumn sun, or ever were picked from a tree. Tourists come back from the old world after studying the valley of the Rhine. Travelers come back from California and the Pacific Coast after wandering for hours through the orange groves of that beautiful country, and yet when they stand on the banks of the Hudson in the Autumn, when nature is painting the fulfillment of her promise upon vine and tree, they say there is no fairer valley, no more hopeful section on the face of the earth, and they are right. And if we could have in this valley something more of the spirit which prompts the Western town to applaud those who make her products famous, this valley would become as glorious in song and story as any spot on earth. H. W. C.

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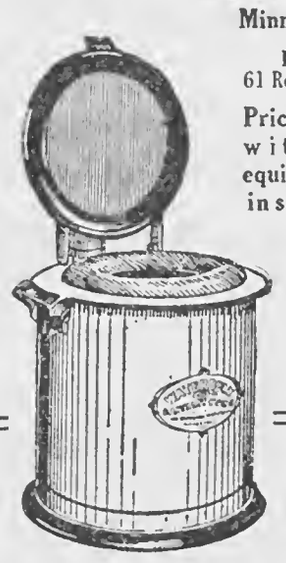

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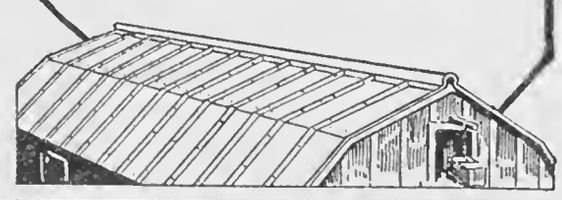

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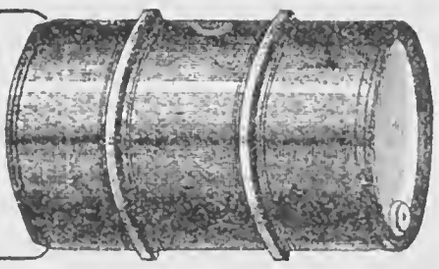

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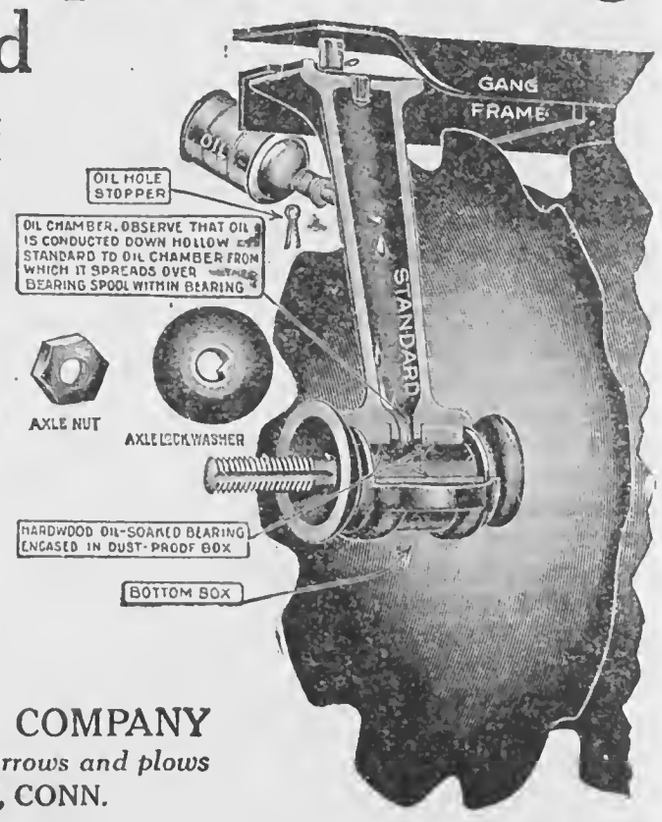

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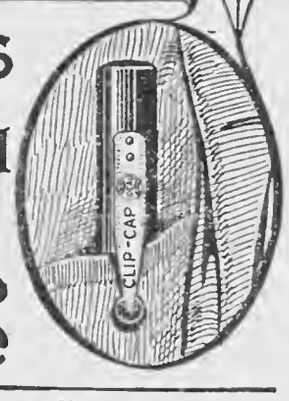

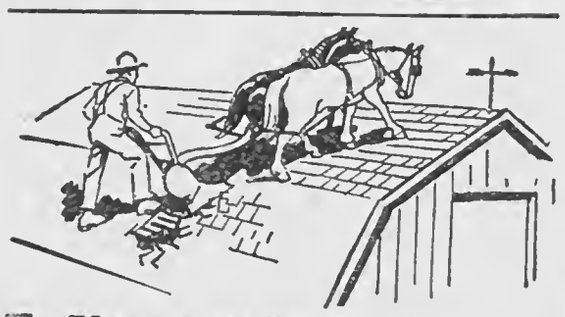

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prevent damage to eggs, garden truck, fruits or live stock on road to market. Make any wagon a spring wagon. Soon save cost—produce brings bigger prices—wagon lasts longer—horses benefited. Thousands in use. "My wagon rides like auto" says one user.

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Ruralisms

Onion Questions.

I HAVE a plot of onions, Silverskin, sown last of April, looking well; some are very large, some are small. Do you think those that do not get large and are unripe would be all right to leave out all Winter? In Spring would they get ripe or go to seed? Would it be a good plan to sow onion seed in August for next year? L. G.

Climate has much to do with the success of Fall-planted onions, and your letter does not say where you live. If the Silverskin onions are quite small you can plant them and make early green bunching onions, but if left to ripen they would probably fail to do so and would run to seed. Here in the southeast corner of Maryland we plant onion sets in September for early green onions, and also plant sets of the Yellow Potato onion for making mature onions, since this species makes no seed and forms sets as offsets to the main bulb. The white Silverskin onions I think will run to seed in late Spring. W. F. MASSEY.

Distributing Grape Root-worm.

GRAPE roots grown in a territory infested by the root-worm, taken up in the Fall and stored in a cellar, are to be transported in the Spring to a locality not known to have the root-worm. Would the roots carry the root-worm to the uninfested locality?
Irving, N. Y. H. G. H.

While there is the possibility that the larvæ of the Grape root-worm might be carried in the manner above described, the probability that it is distributed in this way is very remote. In digging the roots all earth is removed and the subsequent grading and handling would dislodge those that were taken to the cellar on the roots. The fact that plantings of cuttings are rarely attacked by the root-worm beetle would also tend to lessen the probability of its spread in this manner. The larvæ drop to the ground in very close proximity to the vine on which the eggs were laid, and migrate but little if any from the point at which they come in contact with the soil. Further, the wood and bark of the growing cutting do not offer a favorable place for egg laying, as they are placed in protected spots, such as beneath the shedding bark of the old stems, arms or second-year wood. The spread of this pest has been almost entirely through the flying of the beetles from vineyard to vineyard, and no doubt aided by the prevailing winds.

F. E. GLADWIN.

Chinese Peonies.

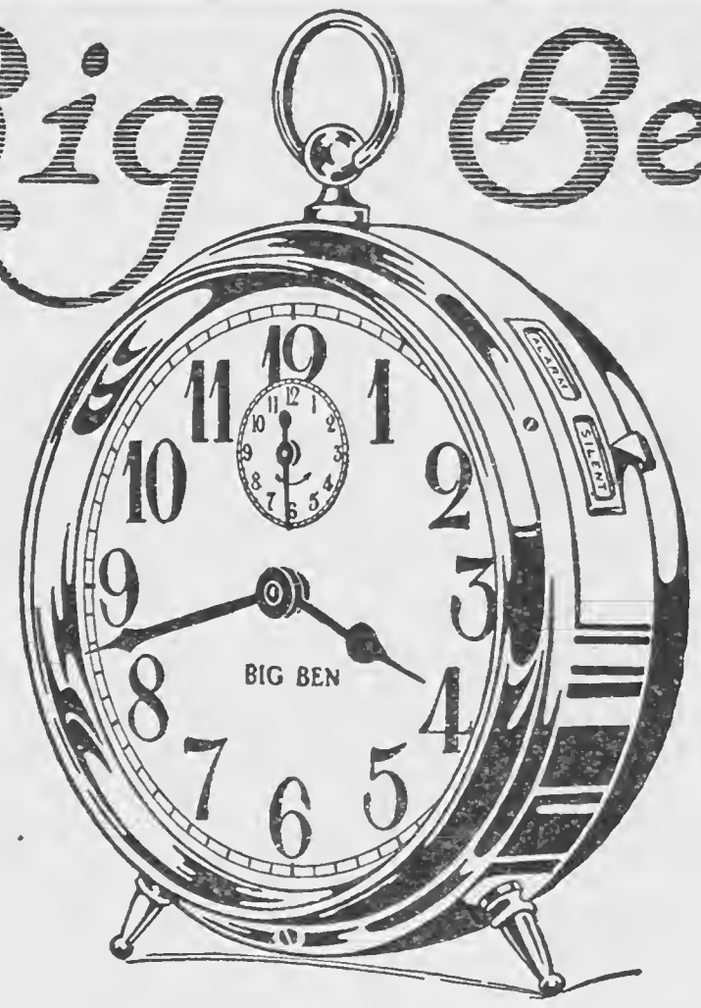
BULLETIN No. 97 of the Office of Foreign Seed and Plant Introduction, mentions some new tree peonies (Pæonia Moutan) sent by Mr. Meyer from Tsao-choufu, Shantung, China:

Twelve rare varieties of tree peonies, among which are said to be yellow, blue, green and black flowered ones. The soil best suited to these tree peonies is a loose porous, sandy loam, with perfect drainage and of great depth. In the district to the northwest of Tsao-chou one finds such soil and climatic conditions as seem to suit this peony to perfection, and the plants are grown there on fields as regular crops, and are sent all over eastern China, going as far south as Canton, and as far north as Mukden, to be used mainly for forcing purposes. There are said to be more than 300 varieties in cultivation here. The best time for transplanting is considered to be September, while propagation is effected through division. The plants require 3½ feet distance in all directions to develop to perfection, while older plants need even four to six feet distance apart. At the approach of Winter these peonies are covered over with some soil, which is taken away again in early March. This saves the flower buds from being Winter-killed, and reduces danger of damage by men or beasts, as the wood of the tree peony is quite brittle. It is thought that possibly an industry could be established in some suitably section of the semi-arid southwestern United States, where the tree peony could be grown in large quantities, to supply florists with one of the most decorative flowers for Winter forcing purposes.

WANT TO KNOW.

DISK HARROWS; MASSACHUSETTS PEACHES.—Will you ask your readers which they prefer in disk harrows, large or small disks, plain or Cutaway, pole or fore truck? Also, in Massachusetts, what good market peaches ripen in August? F. B.

Big Ben



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His work is getting the farm hands in the fields on time, starting the before-breakfast chores on time, and telling the right time all day so the women folks can have the meals on time—these are easy jobs for him.

Big Ben stands seven inches tall. He is triple-nickel plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His keys almost wind themselves. He rings for five minutes straight, or every other half minute for ten minutes, as you prefer.

The next time you're in town, just drop in at your jeweler's and ask to see Big Ben. If your jeweler hasn't him, send a money order for $2.50 to Westclox, La Salle, Illinois, and he'll come to you, transportation charges prepaid, all ready for work. Hire Big Ben for your farm and he'll prove the promptest hired man on the place.

TILE DRAINED LAND IS MORE PRODUCTIVE Carries off surplus water. Increases the value of your land. Acres of swampy land reclaimed and made fertile by using JACKSON'S DRAIN TILE. We are producers of Albany Blue Slip Clay, Hollow Brick and Blocks. Dealers in Sewer Pipe, Flue Lining, Fire Brick and Chimney Tops. Send for catalog and prices. John H. Jackson Tile Co., Inc., 89 Third Ave., Albany, N. Y.

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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THE foreign war has produced a demand for oleomargarine and butter. Europe demands mostly an "oleo" containing cocoanut oil, and Germany has been the great center of production of this oil. In this country "oleo" is chiefly made from oleo or beef oil, neutral lard and cotton oil. England alone imports 80,000 tons of pure butter from Denmark, and 100,000 tons of oleo from Europe. This country has been exporting the oleo oil to Europe, where it has been mixed with cocoanut oil and other fats. In Europe this mixture is sold for what it is, as the laws are very strict against imitating pure butter. In France and Germany many fine dairy herds will be destroyed and Denmark will lose part of her dairy export trade. All these things ought to help American dairymen if they can combine to make and ship a standard product.

*

POTATO digging is now on. In dry compact soils or in wet weather handling one of the large, powerful diggers is a serious thing for the horses. The digger itself must be made with great weight in order to stand the strain, and the machinery working in dust and dirt requires great power to lift and sift out the tubers. It now appears that farmers are experimenting with small gasoline engines mounted on the frame of the digger. These little "strong-arms" operate the machinery, so that about all the horses are expected to do is to move the digger onward. This plan of mounting the little engine on a binder or reaper to operate the working parts has proved successful in the West—saving the work of one or more horses. The digger proposition is harder and more complicated, but we understand it is working in many cases.

*

THE people of the Gulf States are getting their full share of advice just now about breaking away from all cotton growing. The latest comes from Dean W. M. Jardine of the Kansas Agricultural College:

The war will be of greater benefit to the South than to any other part of the United States, because it will force the Southern planter to abandon his single cropping system and adopt diversified farming methods. This will, in the long run, help the Southern farmer.

Since long before the Revolution efforts have been made to induce the Southern planters to produce more bread, butter and meat and the same amount of cotton on fewer acres. The boll weevil and the war together will do much to change Southern farming. There are other "one crop" sections which should be stirred up. There are the dairy districts which provide New York cities with milk. Side crops are badly needed there, and they are slow to work in.

*

SOME time ago a farmer wrote making serious charges against a business firm. He expected that we would, on his statement alone, and without any investigation, denounce this firm publicly. We do not do business that way, but after a long and expensive investigation it became clearly evident that the farmer was right, and the firm in question finally paid him a good sum of money in settlement. A little later the farmer came with another trouble. This time he was clearly in the wrong. He had made a definite agreement, knowing what he was doing, and was under legal and moral obligations to carry out his contract. Yet he came and asked us to help him as we had done before, and to use our power to "get him out of a scrape." The point is that this farmer expected us to take his side and bring power to bear upon the other man, whether the cause was right or wrong! Such cases do not often occur, but now and then we are expected to do battle for a man just because he is a farmer, and without regard to the true merits of the case. We spend time and money freely in trying to help our readers—in cases of misunderstanding or injustice giving all sides a fair hearing. Whatever power we may have to compel the righting of a wrong comes entirely from the backing of our readers. They would never knowingly stand for a man, who was in the wrong, simply because he was a farmer.

LIME FOR LIBERATING POTASH.

PROF. WM. P. BROOKS, of the Massachusetts Agricultural College, questions the statements or teachings that an application of lime to the soil will serve to liberate potash from unavailable combinations and make it soluble for plant feeding. He says that this theory has usually been taught, but his own experiments do not justify it.

It would be presumptuous for me to take the position that lime never has this effect, but facts connected with one of my most important lines of experiment appear so conclusively to indicate that the effect of lime in this direction is insignificant that it seems to me best to call attention to these results.

For the past 25 years Prof. Brooks has conducted fertilizer experiments on a soil naturally rich in potash. Analysis of this soil shows a good supply of available potash and also a large amount not soluble. Most leading farm crops have been grown on this field, but corn more frequently than others. The application of 160 pounds muriate of potash to the acre has increased the yield of corn 27 bushels of grain and 220 pounds of stover. This shows that an application of available potash was needed to obtain a good crop of corn. Now on one plot of this experiment large quantities of lime have been applied. As it has been shown that the corn needed more potash than the natural soil supplied, Prof. Brooks reasons that if lime renders the potash in the soil available there should have been an increase of corn where the lime was used. The facts are that the corn crop was smaller where the lime was used. On one plot where, all told, 9,620 pounds of lime to the acre have been used, the crop was quite inferior to the unlimed plots. Prof. Brooks says that much the same results have followed the use of land plaster, and he offers them as evidence that lime will not substitute indirectly for potash. As we have stated, the scientific men do not quite agree on this question, but the majority of them seem to believe that the chemical action of lime, particularly in heavy clay soils, is to take the place of potash in soil combination—leaving the latter free. This chemical action is clearly described by Dr. A. D. Hall in his book on "Fertilizers and Manures," which is a record of the famous Rothamsted experiments:

The action of lime upon the potash compounds in the soil is equally marked; as the soil water carries down the dissolved calcium bicarbonate it attacks the zeolitic double silicates in the clay and a portion of their soluble bases, potash among them, changes place with the lime and comes into solution. Thus lime is precipitated and potash is found in the soil water. The action is the converse of that which takes place when potash salts are applied as manures; whatever base is in excess in the water reaching the soil will turn the others out and be precipitated in the solid zeolite. When potash salts are applied to the land the strong solution thus formed attacks the zeolites and replaces calcium by potassium, thus the potash is precipitated and lime salts go into the drainage water; when lime is applied to the land the process is reversed and potash goes into solution as bicarbonate.

It is quite possible that Prof. Brooks has overlooked the fact that corn (and some varieties in particular) is not a "lime plant," and does not respond to lime as most other grains do. In our own work we have found that both corn and rye prefer a somewhat acid soil, and are really held back in development by heavy applications of lime. We think there is a difference between dents, flint or sweet corn in this respect, and from our own experience we do not wonder that the corn did not respond freely on this heavily limed soil. Where the authorities disagree it is hard for the practical farmer to decide. Most soils long in cultivation need lime in any event. We should not use it freely on corn, but we expect good results from its use on small grain, grass and clover or cover crops.

*

FROM your experience I would like to have your opinion as to what can be made per year per hen over and above all expenses, buying all feed. There must be some big chicken men in your list who could give you this information. I expect to go into the chicken business, and I would like a good solid base to work on before I take the leap. M. M.

During the past month we have received at least 25 such questions. How much profit will a hen pay? How long is a piece of string? It looks as if there is to be a great migration into the chicken business on the part of men and women who know little or nothing about it. Some of them may have seen a hen, and perhaps have studied books and bulletins, but most of them are untried, and have the practical part of the business to learn. Now what can an honest man tell such people? If he has ever paid the feed bill of a flock of hens he knows that the bird does not count so much as the man. Is this man strong and self-reliant? Has he bulldog determination and fight? Has he capital enough to carry him a year? Is there any streak of laziness in him? Does he know what breed he likes best? Is he capable of that affection and gentleness which enables a man to gain the confidence of a hen or a cow? Unless he has these qualities, or most of them, his hens never will give him any profit, and he will merely discredit the business by going into it. Let us know your character before we make a guess as to what a hen will do with you. There are many "big chicken men" on our list. Let us see if any of the really big ones who have nothing to sell, will criticize these statements.

*

ENGLISH farm and garden papers contain advertisements like the following, from London *Gardener's Chronicle*:

WANTED—Two Active YOUNG MEN for Kitchen Garden and Pleasure Grounds, for period of war; men not eligible for the Army, with slight physical defects; wages 18s. per week, Bothy, etc.—Apply, E. STEELE, Acryse Park Gardens, near Folkestone.

This shows how the European War is affecting English labor. Not since the danger of Napoleon's invasion a century ago have the English people felt the necessity of making every effort to recruit their last available man. Napoleon kept a great army on the coast of France for months—waiting for a chance to slip across the Channel and strike at London. Day and night the English warships watched him, and when Nelson won the naval fight at Trafalgar there was no hope for a French invasion. To-day there is a new peril for England. Her fleet may control the water, but who can tell when a swarm of airships will fly out of German territory and drop their horrible explosives into the heart of London? Surely this is no time for able-bodied men to stay at home working in English gardens!

*

DR. T. N. CARVER makes a good point out of the fact that would-be philanthropists are trying to locate the city cheap and unskilled labor on farms. Gangs of cheap labor in our country districts will injure social conditions:

With an abundance of cheap labor at his disposal the big farmer will crowd the man of moderate capital from the field. If the time ever comes when there is cheap labor in the country, as there is now in the city, two large classes will be developed, the large land-holding class and the working class, with a small third class which will hold much the same social position as did the poor whites who competed with slave labor in the South.

This point was brought out in our little book, "The Child," and it is one of the great questions which this generation must face. The true strength of this nation lies in the class of smaller freeholders who own and occupy their farms. It is universal history that when this class is removed or weakened the nation goes down. The "factory system" applied to farming—under which gangs of homeless laborers produce the nation's food—will crowd out the freeholder. The proposed land banks, with the opportunity they offer for small safe long-time loans, will help farmers over and save land, and that is the most desirable thing that we can think of.

BREVITIES.

KANSAS farmers boast of 7,137 silos against 60 in 1909.

IF your hens eat salt or other food likely to injure them as good a thing as you can do is to give a cathartic at once. One or two teaspoonfuls of castor oil to each bird will help.

MAGNESITE has mostly been imported from Germany. There are large deposits in California. The war creates the necessity and the Panama Canal gives opportunity for California to supply this mineral.

A CONSTABLE or special officer in New Jersey arrested an Italian for stealing fruit. The prisoner broke away and ran. The officer fired and killed the man. Judge Garrison of the Supreme Court has decided that this officer may now be tried for murder.

THE Supreme Court of Pennsylvania has decided that the amount of damage collectible on growing timber set on fire through negligence is not only the value of the wood destroyed, but also the injury to the property as a whole through the destruction of the young growth.

WHILE this country has supplies of most minerals there is a shortage of tin. We must depend on foreign countries for our supply. Each year nearly 40,000 tons of tin concentrates are sent from Bolivia to Europe to be smelted and then brought back here. Now a tin smelter is to be built in this country and the Bolivian ores brought directly here.

HERE is a new one from the North Dakota Experiment Station, advising farmers to leave every fourth row of corn standing to hold the snow on the land. "It was found that one-fourth of the cornstalks left standing stopped about as much snow as when all were left. This will in many cases mean a good deal to the next crop. The added moisture will make the soil less liable to blow, and the standing stalks will check the wind a good deal, near the surface, and this also reduces the drifting. Better try leaving a few rows and see if it does not pay."

Pacific Apples in South America.

AS evidence of the aggressiveness of the Northwestern fruit growers, a resident manager has been placed in Buenos Aires to look after the interests of the Exchange the entire year. Northwestern fruit has sold in Buenos Aires and Rio at notoriously high prices heretofore, owing to monopoly of the New York and London middlemen, buying at low figures in the West, the fruit having often sold in South America as high as $16 a box gold.

This is but further evidence of the thorough preparation those Western growers are making to dispose of their apples. They know the export trade to Europe is limited while the war lasts, and they must hunt for other markets. South America is a good field for cultivating the apple-eating habit. There is no reason why apples should not become as popular in the warmer latitudes as oranges and bananas are in the temperate zones. Let any man think for a moment what will happen if the people of Brazil or Central America come to eat apples as freely as our people consume tropical fruit. Yet such a thing is entirely possible if systematic efforts are made to let these people of the Southern countries know what a good apple tastes like! The Western people are alive, and are doing this work well. If they are left to do it alone they will receive the benefit, for they will take care to preach the theory that the Pacific coast apples are superior. What is the Atlantic coast doing about this? Acting as individuals alone, apple growers will never control new markets.

New York State News.

FARM BUREAU NEWS.—The September Bulletin of the New York State Farm states that 15 boys were taken to the State Fair by the Farm Bureau manager of Erie County and were required to write an essay on their "agricultural observations at the fair" for which prize money to the value of $37 was offered. A new Grange has been organized in Cattaraugus County at Lyndon, largely through the efforts of Farm Bureau manager H. K. Crofoot; C. S. Regan, Farm Bureau councilman, was chosen Master of the Grange. The Farm Bureau of Monroe County made a fruit and grain exhibit at the Rochester Industrial Exposition. A championship stock judging contest was conducted by the Farm Bureau man of Tompkins County at the county fair. It was for boys under 18, and there were 46 boys who had part in the contest. M. E. Chubbuck has resigned as manager of the Herkimer County Bureau and has become manager of the Chemung County Bureau to succeed Mr. Scoville. J. W. Doty of Niagara County succeeds Mr. Chubbuck in Herkimer.

NEW BUILDING FOR AGRICULTURAL SCHOOL.—Plans for the new dairy building at the agricultural school at Delhi have been approved by Commissioner Huson and the board of control. This will be the first of several buildings to be erected from the appropriation made by the Legislature and is subsidiary to the main groups of administration, instruction and laboratory buildings.

THE GRAPE INDUSTRY.—About 300 carloads were forwarded during the week from Lake Erie Valley points of which Westfield is the center. The estimates made early in the season will hardly be realized, in respect to the size of the crop. The grape juice companies are starting in the price at from $30 to $35 per ton. It is believed by experts that bulk grapes will run steady at $30 or a little more. The grape juice manufacturers promised the growers $35 at the opening of the season as a minimum price but later trade conditions did not warrant their taking all the acreage offered, so actual contracts were only 50 to 60 per cent. of the offerings.

APPLES FOR EXPORT.—The demand for export apples is constantly increasing. The demand for space on steamers is in excess of their capacity, which is owing to the good prices which have been prevailing on the English and Scotch markets. Reports from the belt reveal a shortage of fancy Greenings, and this condition is said to prevail in the New England States as well. The weekly movements of apples to foreign ports totaled last week about 50,000 barrels and the total movement up to the close of that week was 123,361 barrels. Of this number of barrels 35,254 went out from the port of New York. According to reliable reports it appears that Liverpool has had thus far 20,000 more barrels than last year, but London has taken less by about one-half, Glasgow has about the same and Hamburg, notwithstanding the war, has had about four times as many barrels as last year. It may not be wholly fair to make comparisons with last year as the crop was much lighter then than now.

HOPS ARE PROFITABLE.—Some hop growers in the vicinity of Waterville will make small fortunes this year from their hops. As the price is likely to start in around 50 cents per pound it means that a man who markets 20,000 pounds, and there are some such, will realize $10,000 from his crop. Added to this fact that nearly all hop growers also conduct dairy farms or grow varied crops on large acreages, it is quite evident that there will be business for the Land Bank or some other bank in that section. Reports from Richmondville are to the effect that up to last week there had been very little doing in the hop market and the general anticipation of a better than 50 cent price is giving way to a feeling of another sort.

BIG ALFALFA CROP.—A few years ago Alfalfa was a comparatively unknown crop, that is as grown to any extent. Now one county in this State—Onondaga—will report a crop of Alfalfa worth $1,000,000. The county has an estimated acreage of Alfalfa of 15,000 acres, which places it at the head of all counties in the State, not only, but it leads all other counties east of the Mississippi. The limestone belt that runs across the county makes an ideal soil for the growing of this crop. As high as $22 and $24 have been received by Onondaga County farmers for Alfalfa this year. This county is also famous for its apples. It is said that one orchard will produce 30,000 bushels this year. There are 640 acres of apple trees, a total of 28,000 in number. J. W. D.

Government Crop Report.

THE last regular report for the season puts the total wheat crop at 892,000,000 bushels, about 4,000,000 less than previous estimates. September was favorable for finishing the corn crop, the estimate being 2,676,000,000 bushels, or 78,000,000 more than was expected in late August. Oats are put at 1,137,000,000, the per acre yield being 29.6 bushels; barley, 197,000,000 bushels, 19,000,000 more than last year; flax, 17,000,000 bushels; tobacco, 954,000,000 pounds; and apples, 230,000,000 bushels, which is 10,000,000 above the previous estimate.

The cotton outlook in early October was for a yield of 7,400,000,000 pounds in our 14 cotton States. The area in cotton is about 36,960,000 acres, 1.3 per cent. less than last year, but the per acre yield is 200.2 pounds of lint, 18.2 more than in 1913. Texas leads in area, 12,052,000 acres; Georgia, 5,398,000; Alabama, 3,912,000; Mississippi, 3,148,000; Oklahoma, 2,854,000; South Carolina, 2,826,000; Arkansas, 2,527,000; North Carolina, 1,589,000; Louisiana, 1,389,000; Tennessee, 866,000; Florida, 194,000; Missouri, 124,000; Virginia, 46,000; California, 35,000.

Rosewood by the Cord.

THE picture shows a pile of rosewood in front of a New York steamer dock. The sticks shown are five to 10 feet long and run six inches to a foot in diameter. This rosewood came from the West In-

ROSEWOOD IN THE ROUGH. FIG. 533.

dies. The ends show crude ax work, as though done with poor tools or by inexperienced men.

Modern Freight Storage.

BUILDINGS for the handling and storage of freight at terminal points were formerly made low and often of wood, dingy and dirty inside and out. The picture shows one of the finest modern buildings for this purpose, 26th St. and Hudson River, N. Y. It is of reinforced cement and steel construction, nine stories high and strictly fireproof. One side is accessi-

CONCRETE RAILROAD WAREHOUSE. FIG. 534.

ble to trucks, and on the other, shown in the picture, cars are loaded and unloaded. Elevator service makes all of the floors quickly available. Cars from the railroads terminating in New Jersey are brought by lighters to the New York side and run from the floats to the yard in which the building stands.

The War and Commerce.

EXPORTS from New York for two recent weeks amounted to $33,300,000. There is again a shortage of steamer space, owing to the number of ships taken for army transport. Present steamer rates to Liverpool are: Grain, 7 to 8 cents per bushel; flour in sacks per 100 pounds, 21 cents; bacon, beef, pork and lard, ton, $7.25; butter $14.50; cotton, compressed, 70 cents per 100 pounds.

Business in grain has been on nearer a normal basis than for a month previous. Export sales are averaging about 500,000 bushels daily, but at prices considerably under previous figures. Reports from the countries at war indicate that great efforts are being made to increase the acreage of Fall sown grain, the work being done by prisoners of war and old men and others at home. On the whole the prospect for next year's foreign grain crops is much better than was anticipated.

American factories in many lines are busy with war supply orders. Among other items are: 1,000,000 blankets, 500,000 sweaters; 1,000,000 yards of tent cloth; 30,000 saddles and an equal quantity of artillery harness, horse shoes, hospital supplies, horses and mules, motor trucks, and coal.

The London wool auctions opened their fifth series of sales for this year October 6, interest being large. Scoured crossbreds, and other wools suitable for use in existing home contracts, were higher, 10 to 30 per cent. above July sales. Merinos sold lower. England has nominally prohibited exports of raw wool, but it is understood that this does not apply to direct shipments from the colonies, and that exports of merino will be permitted except to hostile countries. Our market has been dull, with buyers taking only enough for immediate needs in hope of lower prices, which do not now seem probable, except on some grades not specially desired. In another week the situation will doubtless develop more definitely.

By government decree the cotton area of Egypt for 1915 will be limited to 1,000,000 acres. At present there are 1,750,000 acres in cotton. The 750,000 acres will be put in wheat and other cereals, of which Egypt imports largely.

The British commission for handling the sugar shortage situation reports that 1,800,000,000 pounds were bought by the government. This is sold to the refiners who are obligated to dispose of the finished sugar at a normal profit.

South Jersey Cranberries.

WHAT is being accomplished by a strict application of scientific methods and the use of the most approved machinery and appliances in the cultivation, harvesting and marketing of cranberries to increase New Jersey's already valuable output, was demonstrated to 200 persons recently at Joseph J. White's extensive bog, a few miles beyond Brown's Mills. This was the annual convention of the American Cranberry Growers' Association. To those who had never seen the system and equipment which have brought to Mr. White the title of "Cranberry King" the inspection was a revelation. The scene was the settlement known as White's Bogs, where there are about 25 houses, a general store and the immense buildings used by Mr. White to handle the cranberries. There are about 1,000 acres in the White tract and 600 are under cranberry cultivation. They show a remarkably fine condition and barring unfavorable elements, he will gather about 40,000 bushels.

The meeting was opened by an address of welcome by Frank S. Chambers, son-in-law of Mr. White, with a response by Mayor C. Fowler Cline, of Wenonah. President E. H. Durell, of Woodbury, delivered his annual address, which was very interesting. He spoke on the best up-to-date method of harvesting and gave many valuable pointers to the growers, who represented nearly every bog and certainly all of the important interests of cranberry growing in all parts of the State. In his annual report Secretary A. J. Rider, of Hammonton, referred in a general way to existing conditions, and said that if New Jersey is to resume her place as a leader of cranberry production there must be a cleaner culture than can be found in many places. "Before we learned some things we know now," said Mr. Rider, "a suggestion of this kind would have been turned down as theoretical, but it is pertinent now. We must have more intensive cultivation and spend less time and money in making over the bogs that have been overrun with brush, briers and bracken." The crop report and forecast which formed a part of Mr. Rider's remarks was given out as being less dependable than in former years, this being due to the holding of the convention a week or 10 days earlier than usual. He said that 50 reports from New Jersey and Long Island growers estimate the 1914 crop at 243,140 bushels, an increase of 27½ per cent. over last year. Limited reports from New England and Wisconsin make a forecast of their crops impossible.

Dr. J. G. Lipman, director of the New Jersey Experiment Station, urged that the cranberry men organize their experimental work for a series of years and cooperate with the Federal Agricultural Department, the New Jersey Station or the State College in providing for the permanency of experiments. He knew that some of the older members of the association owe something of their early success to the suggestions and assistance given by those who had directed the work of the experiment station in years gone by. There is now promise of important and effective work through experiments being made and he wants the cranberry growers to assist in getting the funds needed to produce even greater benefits.

The insect question that is so puzzling to all cranberry growers was touched in a brief address by Dr. J. T. Headlee, another representative of the New Jersey station. He gave the growers an important truth when he said that they must familiarize themselves with the beginning of every devastation and know what is going to happen and what to do to stop it. "Every grower," he said, "must keep in touch with all conditions and the progress of growth and act as such conditions demand. It generally happens that 75 per cent. of the injury by insects has been done before the real condition is discovered, and for this reason it becomes the duty of the cranberry producers to keep awake if they desire to obtain a greater degree of success. You must know when the destructive work is beginning and then act to stop it."

H. B. Scammell, of the U. S. Bureau of Entomology, gave the results of his investigation of the blackhead fire-worm, the girdle-worm and the new root-worm. He said that spraying with pure kerosene at the rate of 180 gallons to the acre, with both sides of the foliage sprayed, will kill about 65 per cent. of these worms, and arsenate of lead at the rate of 16 pounds to 200 gallons of spray is safe poison to use, but, while both do good work, neither produces an absolute control of the infestation. There is nothing so effective as reflooding after the larvæ are old. If young they will live under water for at least four days, and under such a condition it is necessary to hold the water for five or six days.

Frank S. Chambers, chairman, made a committee report on attacks made on the child labor question as applied to cranberry picking by a well-known magazine in November last. He said that all of the charges made had been investigated, and it could be shown conclusively that there is no foundation for the attack. He further said that the growers will welcome investigators with an honesty of purpose who are looking for true general conditions and not exceptional cases, and who are not the paid agents determined to get stories that are misleading and damaging and cause publishers to misrepresent. The experience has been that the families of pickers look forward with pleasure to getting on the bogs.

After luncheon in the large packing house by a Philadelphia caterer there was a tour of inspection of the bogs and the experimental fertilized plots handled under the direction of Prof. John H. Voorhees of the New Jersey station. Much interest was shown in this part of the proceedings. It has been clearly demonstrated by Prof. Voorhees that scientific fertilization will produce a greater yield of berries. He has several one-twentieth acre plots laid out for his experiments, and comparisons were made between the yield of fertilized and untreated plots side by side. The experiment with acid phosphate, which he suggested be used at the rate of about 250 pounds to the acre, seemed to attract the greatest attention among the growers generally.

D. T. H.

Woman and the Home

From Day to Day

EMPIRE BUILDERS.

For all are empire builders here
Whose hearts are true to heaven and home,
And, year by slow revolving year,
Fulfill the duties as they come.
So simple seems the task, and yet
Many for this are crucified.
Aye, and their brother men forget
The simple wounds in palm and side.

But he that to his home is true,
Where'er the tides of power may flow,
Has built a kingdom great and new
Which time nor fate shall overthrow.
These are the empire builders; these
Annex where none shall say them nay
Beyond the world's uncharted seas,
Realms that can never pass away.

—Alfred Noyes.

*

FOR several weeks the Russo-Austrian battle tide has surged about Przemysl—certainly, to American tongues, the most impossible and unpronounceable name the Great War has yet given us. However, it is a good deal simpler than it looks, and while we may not give it the musical accent of those to the manor born, the authorities tell us to call it "Pshem-e-sel," with the accent on the first syllable.

*

A SIMPLE but good grape catsup is made as follows: Boil until well cooked five pounds of Concord or wild grapes, stemmed and washed, in just enough water to cover. Strain through a sieve, add a pint of pure vinegar, a teaspoonful each of ground cinnamon, cloves, allspice, pepper, and half a teaspoonful of salt. Boil till a little thickened, then bottle, cork and seal. One has grapes so much longer than many of the other fruits that it is quite possible to make this after other pickling and preserving is done. We have heard several complaints this year of grape jelly that did not "jell," though carefully made by experienced housekeepers. In some cases it may have been induced by fruit that was over-ripe, but this was not always the case, and we must therefore lay it to weather conditions. Miss Parloa warns us that extra sugar is needed when the fruit has been exposed to much wet weather, and though September gave us 24 days of absolute drought, the excess of rain in August may have affected the maturing fruit.

*

THE New York *Sun* recently published an enthusiastic editorial in favor of New England pie. It credits the Massachusetts Agricultural College with a lament over the decline of pie as a family edible, which is causing pie-making to become a lost art. It is admitted that the pies concocted by alien cooks, and those turned out by factories have lowered pie standards, and caused dietists to object to pies as a whole. The *Sun* observes:

The men of New England will be disloyal to the old stock if they do not rally round the few good women left to whom pie-making at the Puritan festival season is a part of religion. What an aching void there would be after the well-browned turkey was consumed to the last crisp if the pie made from selected pumpkins, blended with the freshest eggs, the richest milk and cunning spices did not follow with its inseparable companion, that masterpiece of pastry, the mince pie! To the last flake of crust those pies can be eaten with a divine relish. The New England conscience is in them, and inevitably they are perfect. Angels will weep if the art is forfeited by neglect and indifference.

After such an eloquent tribute as that, the farm housewife, with the best of pie materials at hand, together with the practiced skill to use them, may realize what a work of art is enclosed within her crisp and flaky pastry.

*

THE official statement that New York City has a lower death rate than the rural sections of the State is an endorsement of preventive hygiene; it is also a warning against carelessness in sanitation. The country has the raw materials for health—fresh air and abundance of wholesome food. One great danger, often entirely overlooked, is contaminated water. No one has so good a chance to control the purity of his water supply as a farmer, and this is a subject for study by every farm community. The Winter usually gives more time for study and social intercourse than any other season on the farm, and it will be worth while to include rural sanitation among the subjects for investigation. There are plenty of good bulletins procurable from State and national sources. The local health officer will do his most efficient work when he is a friend to be consulted in emergencies, and is not regarded as a busybody just "snoopin' around." A good many of the professional investigators and uplifters make elaborate "surveys" of conditions in special localities or industries. Why shouldn't each farm family plan a "survey" of its own disadvantages, and then proceed to rectify them, whether it be sister's headaches from too much cake, or the mud tracked in because the dooryard path has never been properly drained?

The Rural Patterns.

In ordering patterns always give number and size desired. Price of each pattern 10 cents.

8112, Russian Blouse coat. Cut in sizes 34 to 40 bust measure. Size 36 requires 2⅜ yards of 44 inch material

with 1¼ yards 27 inches wide for collar, cuffs and girdle. 8293, Kimono coat. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅞ yards of 36 inch material with one-half yard 27 inches wide for collar and cuffs. 8290, Loose coat. Cut in sizes 34 to 42 bust measure. Size 38

requires 4¼ yards of 36 inch material. 7296, Norfolk coat for misses and small women. Cut in sizes 14, 16 and 18 years. Size 16 requires 3¼ yards of 36 inch material. 8272, Loose coat for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 3⅝ yards of 36 inch material with one-half yard 27 inches for collar and cuffs.

8328, Boy's overcoat. Cut in sizes 2, 4, 6 and 8 years. Size 6 requires 2 yards of 36 inch material. 8068, Girl's coat. Cut in sizes 8 to 14 years. Size 12 requires 3¼ yards of 36 inch material. 7217, Boy's overcoat. Cut in sizes 8 to 14 years. Size 10 requires 2 yards of 44 inch material. 7420, Child's coat. Cut in sizes 2, 4 and 6 years. Size 4 requires 2¼ yards of 36 inch material with one-half yard 27 inches wide for collar and cuffs. 7103, Child's coat. Cut in sizes 6 months, 1, 2 and 4 years. Size 2 requires 2 yards of 36 inch material.

Preserving Citron.

WOULD you tell me how to preserve and can citron? H. R.

The following recipes were given in the Rural Cook Book:

Pare and core the citron, cut into strips and notch the edges, or cut into fancy shapes. Allow a pound of sugar to a pound of fruit, and to six pounds of the fruit allow four lemons and a quarter of a pound of ginger root. Tie the ginger root in a cloth and boil it in a quart and and a half of water until the flavor is extracted; then remove it and add to the water the sugar and juice of the lemons. Stir until the sugar is dissolved and the syrup is clear, remove any scum that may form, then add the citron and cook until it is clear, but not enough to fall apart; can and seal while hot.

Citron Preserves No. 2.—Cut the citron in strips half an inch wide, pare off the rind as thin as possible and cut up the fruit in small squares. Put in a vessel and cover the fruit with water in which has been dissolved an ounce of alum to the gallon of water. Soak 24 hours, or until the citron is clarified. Take out of alum water and soak in clear water until the alum is all out, which will probably be in 12 hours. Weigh and allow to each pound of fruit a pound of sugar. Put the fruit in a preserving kettle with only a little sugar, adding sugar several times until the weighed amount has been used. Season with any flavoring preferred. Cook rapidly until done, put in glass cans and seal.

Citron Preserves No. 3.—Pare a large citron, cut into thin slices, and then into strips or squares, removing all seeds. Weigh equal quantities of fruit and sugar, mix together, and stand over night in a large bowl; the sugar draws out juice, forming a syrup. In the morning put in a preserving kettle, and boil slowly for two to three hours, skimming carefully, until the syrup is like honey. About 15 minutes before taking from the stove add, for each quart of preserves, one lemon cut in very thin slices, and one small piece of green ginger root. Some housekeepers add a few whole cloves, but we do not care for this. Another method puts the sliced fruit to soak in brine for a few hours, then in clear water to freshen it, this process hardening the fruit, but we have never used this process.

GREAT thoughts reduced to practice become great acts.—William Hazlitt.

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School Conditions on the Great Plains.

"THERE is not another place in the district where the teacher could have a room and bed by herself," remarked a lady who wished us to board the teacher. "In fact I do not know of a district that has," she continued. Teachers in Colorado receive good wages; by law of the State they cannot receive less than $50 a month; in the country that is good, but when one takes into consideration where they have to board and often long distances to walk or ride, it is none too much. I heard a mother tell what her young daughter went through last Winter, and it made me heartsick for the poor girl. She graduated last year from the county high school, standing first in her class, brought up in town and tenderly cared for. The county superintendent asked her to take a school some distance out in the country, as the school where she was teaching had been closed on account of diphtheria. He told her there was a new schoolhouse, and she could board at the postoffice (which was kept in private house). She started with the Star Route mail carrier. It snowed some, but kept getting worse, and finally they got lost, wandered around all night and just before day came to a dugout. The poor girl fell fainting in the door. The people took her in and cared for her as best they could in their one room. Before night she recovered, so they took her on a sled four miles farther to a house where she spent the night, and these people broke roads next morning and carried her to the boarding place. The woman refused to board her at first, but conferred with her sick husband, and as the poor girl was all worn out and crying, finally said she could stay. There were but two rooms, a board partition only: two beds in one small room, one occupied by the sick man, with a curtain between the beds, one small window in the room. She had to sleep with two of the daughters, 15 and 17 years of age, three in a bed

When she reached her *new* schoolhouse she found it made of sod, and the sod had settled away from the door and window frames so much that birds roosted on the seats, which were covered with their droppings. No stove, no table or chair, or desk for the teacher, no maps, no books. The people where she boarded took an old stove and some coal when they took her to the school house. She was a brave, gritty girl, only going home twice in the six months' term. She never let her parents know what she had to go through until school closed and she was home. "If I had known it, my daughter would have come home at once," said her mother.

We attended a wedding at our little country church a short time ago. The ladies had decorated the church very prettily with several dishes of flowers and plants. First after service at "high noon" the wedding party came in. I was greatly surprised to see such a fine-looking bride, dressed in white satin, lace veil and orange blossoms. They were a nice-looking couple; came to the church in an automobile. The bride lived some six miles out. There was a great contrast between the little church with its bare floor and the dress of the bride. The little teacher whose story I have just related was there, a sweet pretty girl, and I told her I hoped she would never have to pass through another such experience.

"Oh, Mrs. Johnson, I don't believe I could do it again," she replied.

Many a teacher and pupil have only chunks of bread and a cup or bottle of molasses to eat with it for dinner; all drink from the same cup. Nearly all schools have a well in the yard, as it usually is too far from a house to carry water. Our neighbor who lived in a dugout, has built a very comfortable four-room house and they really moved up from the old into the new. The poor woman remarked that she had so much room now she did not know what to do with it—and there are 10 in family, eight children. The good wheat crop this year, with good prices, will help many to build houses and barns. The soddy and dugout will soon be things of the past, but they served their purpose.

MRS. FREDERICK C. JOHNSON.

Seen in New York Shops.

IT is not only the wearers of basques and polonaises who have returned to the styles of the early nineties; small girls are now seen in little Mother Hubbards, instead of the long-waisted French frock, and there is also a decree that the hair must be brushed so that the forehead shows, which has caused a demand for the old-fashioned round comb. Flat black slippers tied on with narrow black ribbons are also noted among childish fashions.

Moravian table linens are noticeable for their satin texture, which is said to be a secret in weaving. The patterns are very beautiful, among those noted being cherries, lilies, orange blossoms, little formal wreaths, and even a combination of stars and stripes. They are not cheap of course; tablecloths range from $4.75 to $28; napkins to match from $5 to $43 a dozen.

Do you remember the "godet pleats" of nearly 20 years ago, when the backs of bell skirts were stiffened with haircloth so as to form folds like organ pipes? These godet folds, but without stiffening, are shown in some tunics attached to Russian blouses. These are over narrow skirts; where the skirt is made without a tunic it falls in ripples at the bottom. Among the new suits are many made of sharkskin cheviot, which is very serviceable; rep serge is another hard-wearing fabric. Both cheviot and serge suits often show trimmings of caracul cloth.

Little girls' school dresses are seen in very practical models to wear over a separate blouse or long-sleeved gnimpe; the waist is cut low and pointed, and there are large armholes. Some are made all in one piece, after the old Gabrielle style, others are long-waisted with a skirt having a box pleat in back and front. The neck and armholes are piped with silk, and sometimes there is a little braid trimming. There is nothing new about such dresses except the large armholes, but they are very practical, especially when making a new dress out of an old one. Blue serge, black and white checks and colored plaids are favorite materials. Among handsomer dresses for children are many of velvet, velveteen and corduroy; even the cotton corduroy known as golfine, which has been very inexpensive, is extremely pretty for this use in soft brown and gray shades. Little boys' "party suits" of velvet, in black, dark blue and hunters' green, show a narrow vest of white pique.

A muff of black monkey was round, not flat, consisting of a central band of the fur about 12 inches wide while at each end was a shirred band of black satin about as wide as the fur. The shirring was gathered in smaller at the ends, so as to make a rather long watermelon-shaped muff. With it was displayed a little toque of black satin with the crown shirred over to one side, and a band of monkey fur around it. A good many new muffs displayed are of this watermelon shape, shirred in at the ends, and many of them show a combination of fur with fabric, or of two kinds of fur. There are also more muffs or sets of the short furs, such as otter, beaver and seal-dyed muskrat. American women have had a prejudice against crediting their furs to the humble muskrat, and it has been known as French seal and several other names, just as skunk was called Alaska sable, but the beauty of these furs has at last given them a place under their real names. In Great Britain muskrat fur has long been known by its real American name of musquash.

Sleeping bags of white worsted, knitted and very warm, are offered for those who sleep out of doors. They are made in Switzerland, and cost $5. A sleeping bag of this sort is very desirable for the modern baby who takes his daily nap on the porch at all seasons.

The art department in some stores is offering large unframed carbon photographs of the beautiful Rheims Cathedral as it was before bombardment, for $3; smaller ones $1. Small engravings of this masterpiece of Gothic architecture are sold very cheaply by firms making a specialty of such reproductions.

Very smart new blouses are shown with a cape effect at the back. Such draperies, however, are not practical for wear under a coat, and that is what one buys a blouse for.

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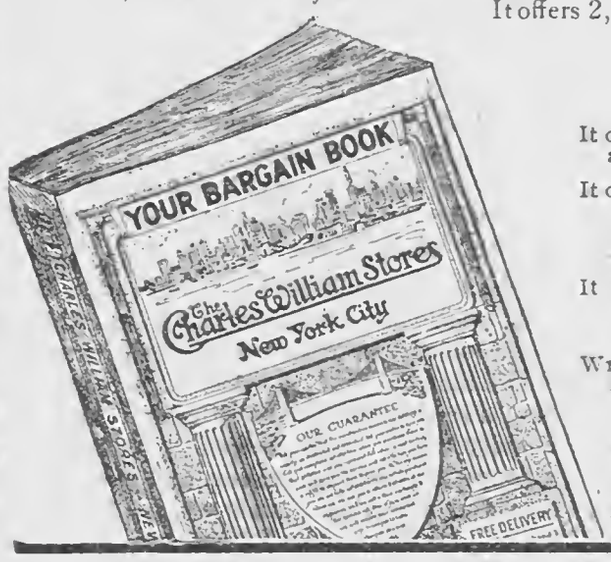

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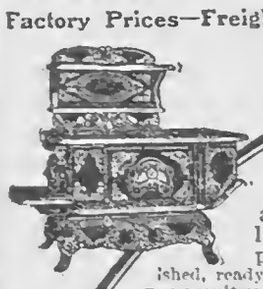

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Live Stock and Dairy

FARM STOCK BREEDING.

General Principles.

PART I.

A MATTER OF BUSINESS.—While it is necessarily true that no farmer can take up the work of stock breeding in an intensive manner and carry it on in its most minute details, yet it seems to be a fact that the prosperity of the farmer is quite largely due to the principles of stock breeding which he practices. This will be true more in the future than it has in the past. There, of course, has been a time when the farmer could make a commercial success by growing wheat and selling the product from his farm but consequent depletion of the soil fertility with the increasing population have made live stock farming more and more a necessity. The time of the exclusive grain farmer has about passed. Corn for silage has, and will in the future more than in the past, taken the place of wheat. The stock is next in line. We must produce more food on fewer acres and since the area of tillable land cannot be greatly increased, a change in the style of farming must take place. There are some principles of stock breeding that should be observed when dealing with all classes of live stock on the average farm. These will be dealt with generally and then we shall apply them to the various general classes of farm stock, horses, cattle, sheep and hogs.

INFLUENCE OF THE SIRE.—We often hear it said, especially in relation to the human family, that the mother is more relation to the child than is the father. This statement is founded on ignorance. We must not take it for granted that because of the mother's close relations with the unborn child that she stamps more of her character upon the offspring than does the father. It often happens that the offspring does show more of its mother's characteristics than those of the father but the reason is not that it is more related to the mother. The offspring must necessarily spend the formative part of its external life with the mother and in this manner, acquires the mother's habits and characteristics. In the science of embryology, we find that there are the same number of character formers in the male as in the female portion. This is true of all members of the animal and plant kingdom. It would be as reasonable to say that the incubator is related to the chicks which are hatched in it as to say that the mother is more related to the offspring than the father. After the egg is once formed, the incubator makes no difference.

THE SIRE'S INFLUENCE.—That the sire is one-half of the offspring, we can easily see and it can be just as easily shown that he is more than one-half of the herd or other collection of individuals upon which he is used. When used in a single cross, the sire is only one-half of the result but when taken on a large number of individuals, the male is more than one-half of the result. We may take dairy cattle as an example. If a bull with an ability to sire heifers of high productive power is used on a herd of low producers, he is much more than half of the herd, for the standard of the herd is raised by his use to a productive power of more than one half. But we must not expect that each heifer resulting from this cross will be a superior producer. While in the majority of cases, the heifers will be better cows than their dams, the breeder must not be discouraged if they do not always prove so. The trouble usually is in knowing the bull to be a sire of high producers—this takes a test period and by the time this has passed, the old bull has become intractable and hard to handle and by the time his records are available, he has gone the rounds of the butcher's trade.

DETERMINATION OF SEX.—The determination of sex is a question that has held great interest for investigators, from antiquity to our modern days and still no one knows how it really is determined. It would be a great achievement if one could control sex by some external operation for many times the females of a certain species of animal are much more valuable, commercially, and if man could influence the sex nearly all of them would be females or males, whichever might be worth more money. Many farmers believe that breeding females during the latter part of the period of heat will produce males, and vice versa, and a great many experiments have been performed and surgical operations made to discern how sex is determined, such as removal of one ovary or testicle, etc., but the progeny still continues to be approximately one-half male and one-half female. However much value it would be in a commercial way to control sex, still it seems that it is a wise provision of nature that causes sex to be so determined that the number of males born is about equal to the number of females. This gives a chance for a better choice of males than as though man could control this. One reason why a great many of the theories advanced have seemed to have some truth in them is that there are only two chances for sex determination; the offspring is either male or female. If there were a chance for many sexes, we would have a better opportunity to determine if sex may be influenced by any external factors. We do know, however, from a study of embryology that sex is not determined at the time the two parts of the egg unite; that is, it is not to be seen by the use of the microscope. The embryo is usually quite well developed before any sex can be determined. With those animals which are ordinarily carried in embryo for nine months, the investigators have not as yet been able to distinguish the sex until the individual was about two months in embryonic development. This does not necessarily show that sex is not present before that age but from all outward appearances, the female individual is the same at 1½ month development as the future male individual at the same age. With foals the external sex organs cannot be seen until the embryo is about 2½ months along.

EFFECTS OF INBREEDING.—In the natural state, the strongest male animal of the species was the sire of the future individuals of that species. As soon as the sire became weak through age or accident, he was driven out by the stronger, oncoming males and ceased to sire the offspring. This state of nature often resulted in inbreeding and it seems from a survey of the natural state that this very condition often resulted in perpetuating species characteristics, yet undoubtedly, it was this same inbreeding that has distinguished most of our distinct species. In all probability, all breeds or species first started from a single differing individual. Whether or not it has been this inbreeding which has fastened some of the characteristics of the wild species so tenaciously to themselves, we do know that within comparatively recent and modern times we have

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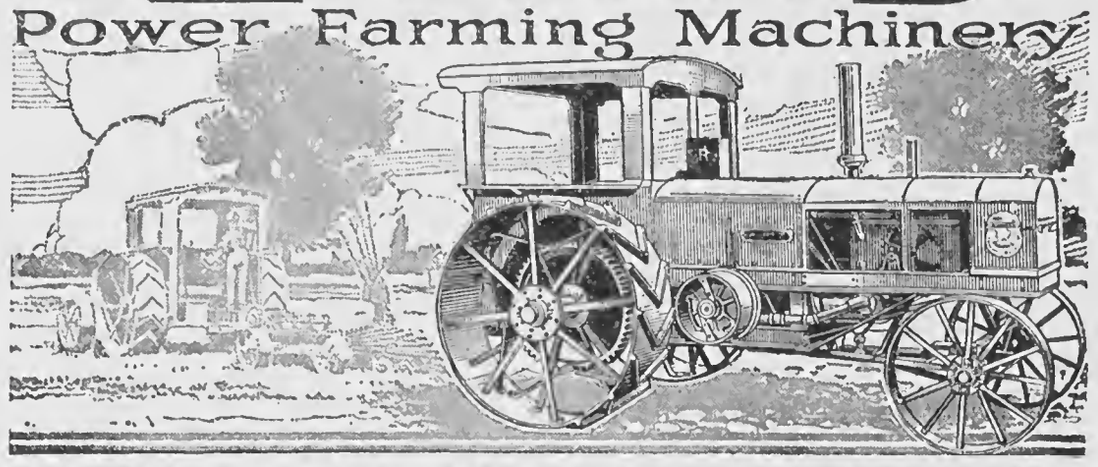

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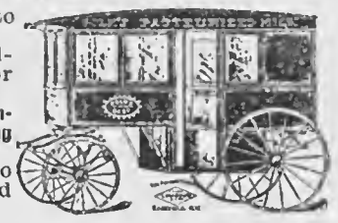

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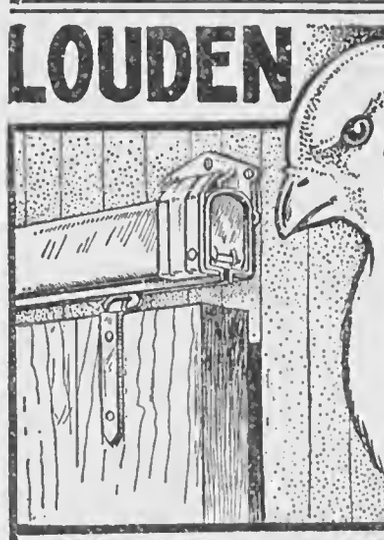

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had certain breeds perpetuated and made stronger by what might be called inbreeding. We know that some of the great cattle breeders such as Hugh Watson, who bred up the Aberdeen Angus and Cruickshanks, who standardized the Shorthorns, practised inbreeding very extensively. We can see that a bull of desirable characteristics would materially improve the character of the herd and stamp those fine points upon his get, but another question arises, will the weak points be further stressed? It seems that this is the reason why so many breeders do not favor inbreeding. While it perpetuates the good characteristics of an animal, it likewise fixes the poor characteristics more strongly, and the most perfect appearing animal has some weak points.

BREEDING AND FEEDING.—It takes something besides quality breeding to produce quality animals; it takes also quality feeding. It goes without saying that a successful breeder is a good feeder but the successful feeder is not always a good breeder. It is one thing to put two individuals together so as to get a desirable individual therefrom, but after this young animal is once brought into the world, it takes good care to make it a desirable adult. Poor feeding may result in a purebred scrub and these animals are the bane of the stock breeding work. Some purebred animals do poor work through the care they are given while others do poor work because they were not sent to the block when they were found wanting. The latter were caused by breeding defects. Since feeding is somewhat removed from our subject, it will be dropped here.

EFFICIENCY AND INDIVIDUALITY ARE BREEDERS' AIMS.—The common points which are bred for are efficiency and individuality. By efficiency, is meant the ability of a cow to consume feed and to make therefrom milk and butterfat. The efficiency of the cow in the making of milk or the efficiency of the hen in making and producing large quantities of eggs are innate qualities which cannot be discerned with the naked eye. Such results of breeding cannot be ascertained nor judged by an external examination alone. It requires certain well authenticated records. The other point which breeders strive to attain is individuality, and by this I mean a certain external form. The horse is valued not so much on account of the good use to which he puts his feed in putting on flesh as in the amount of work he can do. The beef animal is valued not so much for his efficiency in masticating and digesting his food as rather for the relative amounts of the expensive cuts of meat on his carcass. The mutton sheep, like the fat steer, is not valued for the efficiency with which he puts on fat but rather for high priced cuts he produces.

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LIVE STOCK NOTES.

SWEET CLOVER FOR SHEEP.—Sweet clover will soon be a solid mat from Canada to Mexico in the hill and mountain countries of the West, is the opinion of a sheep man in the American Sheep Breeder. It is the only clover that will not injure sheep or other animals pasturing on it, it improves the soil, and makes larger and fatter sheep. It stands abreast with Alfalfa in feeding value. Farmers in Oregon and Washington are sowing it in the mountains for pasture.

GRATUITOUS service of a poor bull is penny wise and pound foolish, while on the other hand it is sensible to pay anywhere from $5 to $50 for the service of a good bull of good breeding. Arizona figures that if a man has 15 cows it would be cheaper for him to pay $5 the head service than keep a bull, but the farm expert fails to consider value of time in taking the cow to the next ranch. They value the bull low, at $100, and in making up the account they charge interest at 5%, taxes at 1.59%, depreciation at 10% and feed at $60. In computing dairy income, interest, maintenance and depreciation of the sire should be charged against the herd.

FOUR years is probably the record length of time to keep silage, and O. W. Righter of Indiana, holds this long distance record. He placed well-matured corn in the concrete silo in 1910, and not long ago emptied the bottom of the silo. Cows ate both the old silage and that last year with equal relish, and the only difference he could observe is that which was kept the great length of time, was slightly more acid. The secret of its excellent preservation is well-matured corn.

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Summer and Fall pigs, bred from large, healthy, prolific stock. Registered in either Chester White Record or O. I. C. Record.
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Just sold eleven sows for export to Argentina. Makes fourth exportation this year. We sold 475 registered Berkshires during 1913, which is over a hundred more than any other swine breeder in the U. S. Most of these went to old customers, which speaks for itself. Selected animals all ages for sale.
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Large Yorkshire Swine
We are offering a fine lot of LARGE YORKSHIRE Boars, ready for service. These boars have large bone and are true to type. Also have a few young sows of splendid conformation.
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REGISTERED
LARGE YORKSHIRE BOARS and SOWS
six months old. Six-weeks-old pigs ready Oct. 10th, 1914. Satisfaction guaranteed or money refunded.
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Registered and High-Class Grade Stock
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ADIRONDACK FARMS, GLENS FALLS, N. Y.

COLLINS' Jersey Red
Insure Bigger Pig Profits
Buy Jersey Reds—they pay best. Turn any common feed into uncommonly fine meat, most desired by packing houses. My free Book of Facts tells how to raise hogs that average
300 to 375 pounds in 9 months!
Write for it today.
ARTHUR J. COLLINS Box 11 Moorestown, N. J.

"The Best Pig Breed"

Butter that Will Keep.

WILL you inform me why I am unable to lay down butter for family use so that it will keep a reasonable length of time? I have two very fine Jersey cows, the cream is separated and buttermilk thoroughly worked out of butter. It does not matter how much salt I use, the butter becomes rancid in a short time. On page 934 I note your answer on strong butter. We have complied with all your sanitary requirements, keep a refrigerator for nothing but milk and butter. Tub butter seems to keep well, no doubt there is something put in butter. Will you inform me if there is anything to prevent rancidity? A. B. S.

Massachusetts.

Years ago my father used to make butter from a herd of 40 cows and pack the butter down in 100-pound firkins until he had the cellar about full, and then sell the butter all at once in the Fall. At this time the milk was set in an immense tin pan that had an outer jacket for cold water. The milk was in a thick loppered condition when the cream was taken off, and then the cream was allowed to accumulate for two or three days before it was churned. So you see the cream was what we would now consider very sour before it was churned. Still the butter made from this cream kept sweet for a long time. Why? I am willing to confess that I don't *know*. But I have a notion that this sour cream when churned separated more clearly between the fat and the other contents. The butter that is nearly all fat keeps, while the butter that contains quite a percentage of casein goes strong or "cheesy" in taste.

When people first began using separators it was a very common belief that separator butter would not keep, and I am inclined to think that the reason was that the cream was churned before it became so sour. At Laurel Farm we do not make butter to keep. We don't have to. But if I wished to keep butter for some length of time I would set the separator to run a heavy cream, then I would cool the cream down well, and hold it until I had enough for a churning. Now warm the cream to 70 deg., and hold it at near that temperature until it gets good and sour, stirring it frequently in the meantime, then cool down and churn. Wash the buttermilk out well, and after salting let it stand 12 hours. Then re-work to press out all the moisture possible, pack in new crocks and cover with an inch or so of strong brine. J. GRANT MORSE.

Dry Corn in the Silo.

YOU ask for experience in regards to putting shredded dry fodder into the silo from corn husked by adding water. I have had experience along this line with very satisfactory results. My method is as follows: We aim to cut the corn at just the right time; that is, when the grain is well glazed, before the corn plant is dry; then husk at the usual time. We fill the silo with green corn from field, commence to feed silage at once, then we have no waste. By the time we have the field corn husked the silage, what we have fed and the settling, gives us room to store some fodder direct from field to silo. We have a No. 11 Blizzard cutter; cut the fodder in one-quarter inch length. Here comes the important part. We are situated so that we can run water from a ¾-inch hose right in the fan of the cutter. This will diffuse the water with the fodder so it comes in the silo in a fine mist; in fact, working in the silo one will hardly notice the water at all, so well is the water distributed through the fodder. That fodder with the silage, will last us till some time in February, when we fill the silo again with fodder that is left the same way.

We stack the fodder that is left from the first filling in the usual manner right beside the silo for the February filling. I have done this way the last three years with very good results. If some corn remains in the fodder so much the better silage it will make. The corn in the silo will heat and get soft so cattle will eat it without waste.

First have good quality of corn fodder. You cannot make good silage from half rotten or the other extreme by having it too dry before cut in the field. Cutting it too coarse for the silo is an error, it should be cut fine, so it will pack well. Distribute evenly all over the silo; the leaves and husks will not cut so fine as the stalk—here care must be taken to keep it level. Plenty of water must be used to prevent firefang. There is also risk in using too much water, but this is not likely by the above method. The advantage of putting dry fodder in the silo is that you can improve the feeding value of the fodder greatly, can have some corn to feed to other stock, and by adding these feeds to the silage can balance the ration with cheaper feed than corn. If the directions are followed the fodder will come out of the silo in good condition with the odor of sugar feed.

Pennsylvania. L. B. HUBER.

How to Preserve Silage.

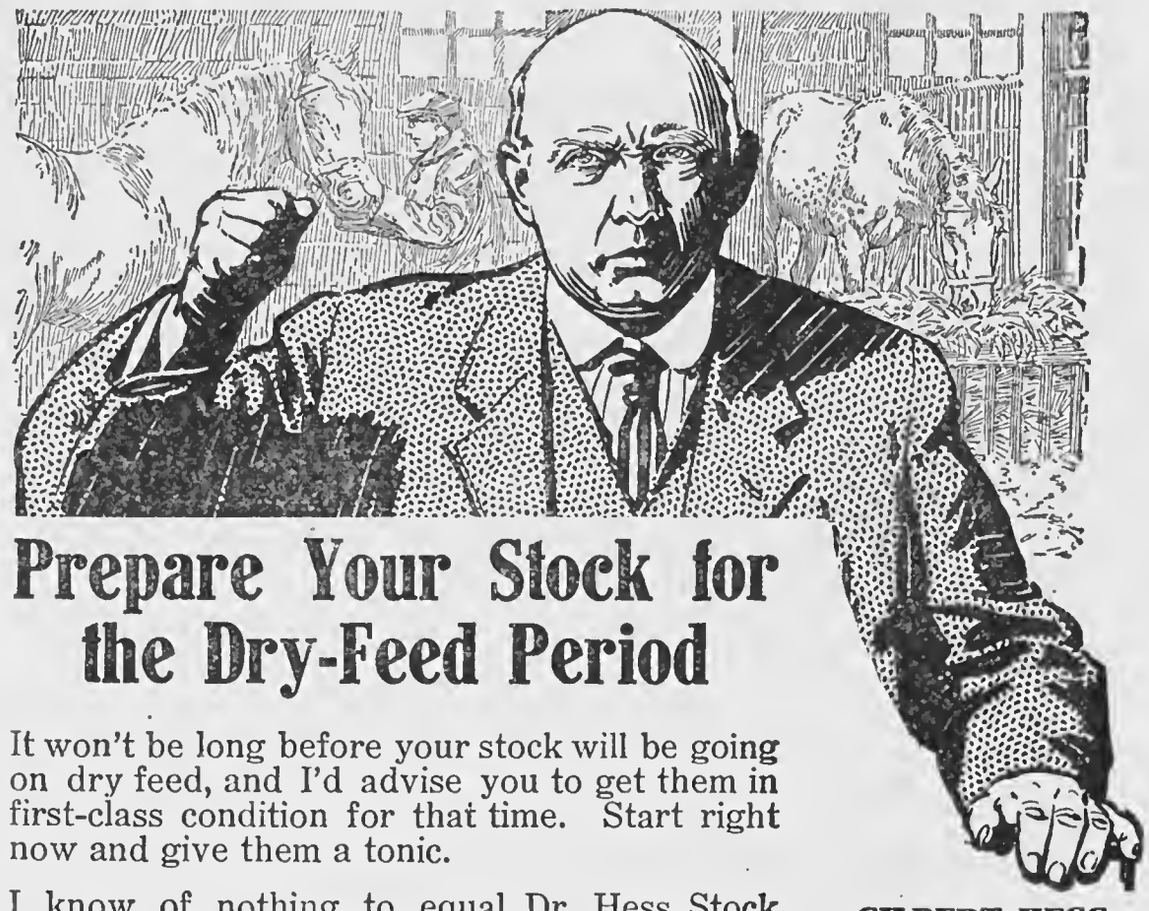
AFTER the silo is filled, or until you have all the corn you care to place in the silo, sow at once a very heavy coating of oats, the oats will sprout and grow, the roots will spread and mat together, thereby keeping the air from the silage. By using the heavy coating of oats very little of the silage has to be thrown away as useless, as compared with what would spoil if it were not for the coating of oats. It means more feed, and very little trouble is required to sow the oats. H. E.

Dairy Conditions in Kentucky.

AT this time of the year business is brisk. Dairymen are making preparations for Winter. For the past two years they have had an up-hill grade; a drought lasting all last Summer up to latter part of September killing all young grasses and short corn crop kept the dairymen in a bad shape to start through Winter. By the closest margin they all pulled through. But to face another long dry hot Summer seemed impossible. This is just what we have experienced; this drought lasting until middle of August. Pastures were completely burned up and nearly all the young clover and grasses sown last Spring. The rains set in this year August 10 and everything has been helped wonderfully, making the best of all pastures we have had in years. All corn has been benefited excepting real early corn; we might say we are in much better shape to go through the coming Winter. There was quite an acreage of Alfalfa sown last Fall; this will help to hold the high price of hay down. A good many sowed forage crops, some sowing for gluten and peas. A good many have built silos, some having filled last week, while others are filling now. In summing up the whole situation prospects look brighter for us; although the war has raised the price of all mill feeds we shall be able to get through the Winter with a little more profit than last.

There are no reports of any dairymen selling out, but some are selling off a few, so as to give the remainder better attention. All are pushing the business for brighter prospects that are coming. High-grade Jerseys, or cows that will produce, are bringing $75, reported scarce at the price, while registered Jersey cattle are selling very high, $100 to $200 according to capacity. There seems to be a good demand for all registered stock; the supply is not equal to the demand, males selling for $50 to $100 and heifers $75 to $125, with the supply limited. S. J. HOWARD.

Kentucky.



Prepare Your Stock for the Dry-Feed Period

It won't be long before your stock will be going on dry feed, and I'd advise you to get them in first-class condition for that time. Start right now and give them a tonic.

I know of nothing to equal Dr. Hess Stock Tonic for putting stock in good shape—strong, healthy and well able to stand the ravages of disease.

DR. HESS STOCK TONIC

A Conditioner and Worm Expeller

This preparation is the result of my lifetime experience as a doctor of veterinary science and doctor of medicine. It contains tonics for toning up the system and enriching the blood, laxatives for regulating the bowels and vermifuges for expelling worms. As a worm expeller, I say emphatically that this preparation has positively no equal, and I'll back this statement up with the strongest guarantee you ever read. Here it is:

So sure am I that Dr. Hess Stock Tonic will keep your stock healthy and expel worms that I have authorized my dealer in your town to supply you with enough tonic for all your stock and, if it does not do all I claim, just return the empty packages and get your money back.

25-lb. pail $1.60; 100-lb. sack $5.00, smaller packages as low as 50c. Except in Canada, far West and South. Never sold by peddlers, but only by reputable dealers whom you know. I save you peddler's wagon, team and traveling expenses, as the above prices prove.

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A splendid poultry tonic that shortens the moulting period. It gives the moulting hen vitality to force out the old quills, grow new feathers and get back on the job laying eggs all winter. It tones up the dormant egg organs and makes hens lay. Also helps chicks grow. Economical to use—a penny's worth is enough for 30 fowl per day. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Guaranteed.

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Blatchford's Calf Meal is composed of all the elements the young calf needs in the most trying period of its life; is thoroughly steam cooked—prevents bowel troubles and other ills due to improper feeding.

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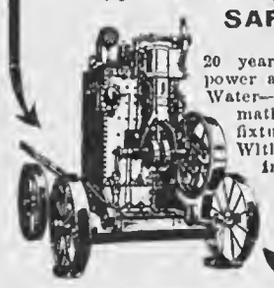

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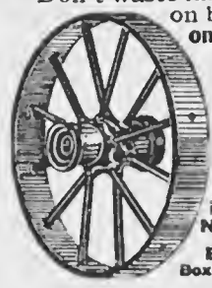

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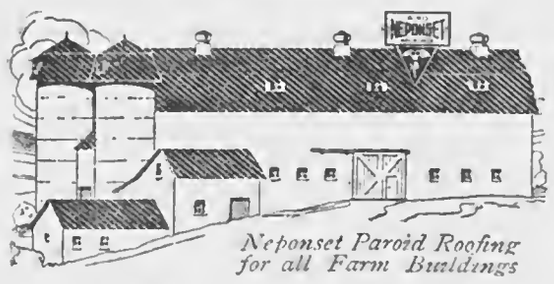

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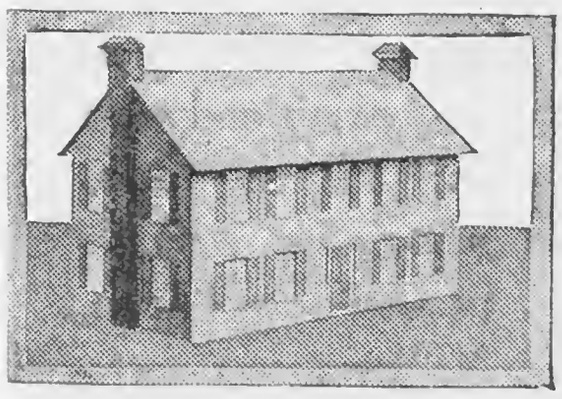

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BOSTON MARKETS.

GENERAL conditions in Boston market are improving slightly, but there is still room for further improvement on several things, onions and cranberries especially, to make these return a paying average above cost. Potatoes are up a little just at present from what they were, but present prices will not make the grower very rich, as 60 or 65 cents per bushel in Boston means probably about 40 cents at some of the distant shipping points for the grower. Sweets, however, are holding up well in prices, longer than is usually the case in this market; $2.50 to $2.75 per barrel being the rule. Tomatoes are selling just fair, a few very fancy sell up to $1.50 per bushel, but the larger part is not fancy and sells at 50 to 75 cents. Root crops are in fair demand at very good prices, beets 75 per box; carrots 65 to 85; parsnips 85 and $1; radish 75; turnips 60 for white egg and about the same for native ruta bagas, with hog stock bringing $1.50 per barrel. Cucumbers $1 to $3.50 per box with demand not heavy. Squash not too plenty, yet prices are easy; marrows bring $1 per barrel, with turbans going at $1.25 in a few cases and Bay State about the same figure. Onions slow at 75 per box, with some sales at about 60 for nearby stock. Corn $1 per bag or a little better in some cases. Cabbage a little better, bringing up to $1 per barrel, yet many are sold for less. Savoys bring about the same as the drumheads; reds $1 per box when wanted. Cauliflower in good demand and sells at $1 per box for best; mediums about 75 per box. Celery 75 per dozen for White Plume, and $1 and better for Pascal, while best Boston Market brings $1.50. Lettuce 60 per box of 18 heads. Beans about done and in good demand; for last lots $1.50, $1.75 and $2 are obtained per box for green and wax. Shell beans $2.50 and better, and Limas, if good, bring as much.

Watermelons about through except small lots, about 50 cents each; cantaloupes about $1 per crate. Plums 30 cents per small basket; pineapples about $4 per crate; bananas $1.50 to $3 per bunch for good yellows, reds $2 to $4 per bunch. Grapes per small basket 11 for Concord, Niagara, Worden and Salem; Delawares 15. Lemons plenty at $2.50 up to $6 per box; oranges $3.24. Peaches falling off in supply and bring about $1 per basket in most cases, with large baskets $1.75 and $2. Pears are wanted, but supply is not heavy for most kinds; Bartletts bringing $3.50 for best Western stock, natives $2.50 and $3 for best stock; Seckel $1.50 and $2.50 according to size and quality. Good Bosc bringing $3 per box, best Anjou $2 with Sheldons about the same price.

Apples are still plenty but demand is better and most stock is sold, which is more than could be said a while ago as many farmers carted part of their loads back home as no offer could be got as the rule for the part left unsold after the morning rush was over. One man had an offer of 10 cents per box to clean up his load and the buyer wanted the boxes thrown in; these cost 8 to 10 cents each. The offer was not accepted and the apples went back to the farm for cow and hog feed. Prices are still low and likely to remain so but if sales can be made at reasonable price many will be happy; $2.75 per barrel for a few fancy Gravenstein and Snow is obtained, while $1.75 or thereabouts buys many other good kinds including Twenty Ounce. Wealthy and Alexanders; McIntosh brings up to $2.50. Baldwin about $1.50. Common box stock around 50 is the rule, but some good stock brings up to $1. A few dealers are offering $1.25 and $1.50 for Winter apples furnished on board cars at country stations, probably this will be about the price for a while at least.

Best butter is firm and not too plentiful and brings 33½ to 35; medium and poor grades are plenty and are worked off for good butter when possible by many dealers, prices on this ranges from 29 to 32. Cheese in rather poor demand and sells at 16 to 18. Eggs in good demand and supply of fresh nearby not heavy, these bring 40 to 45; other grades 27 to 37.

Live poultry a little off; hens 16; chickens, light weight, about the same price; roosters 12. Beef cattle slow and prices range from $8.75 per hundred for best down to 3½ for poor grades on hoof. Fat hogs, live weight, 9½; dressed 11½. Good veal on hoof 8½. Milch cows in better supply than demand, prices range from 50 to 85 as the rule.

Hay market is reported dull as the rule, best horse hay 22; other grades 14 to 20. Rye straw $16. A slight drop in grain has taken place but not enough to help out the small buyer much; bran $24.50 per ton; cottonseed $30; gluten $28.50; meal $1.65 per bag. A. E. P.

Oct. 5. We are quite large potato growers and anything on the growing of that crop is of interest to us. This year we had the largest crop ever grown. Many farmers load a car a day, and some will load two, a car running from 175 to 200 barrels. While the price, except for Cobbler, has not been high, the big crop has been quite profitable. Giants selling during August from $1.35 to $1.50 net 165 pounds. Now they are $1.25. I have just sold 200 barrels of Green Mountain for $2 here. Apples are very low, as there seems to be too many. Bradwelt, N. J. C. A. J.

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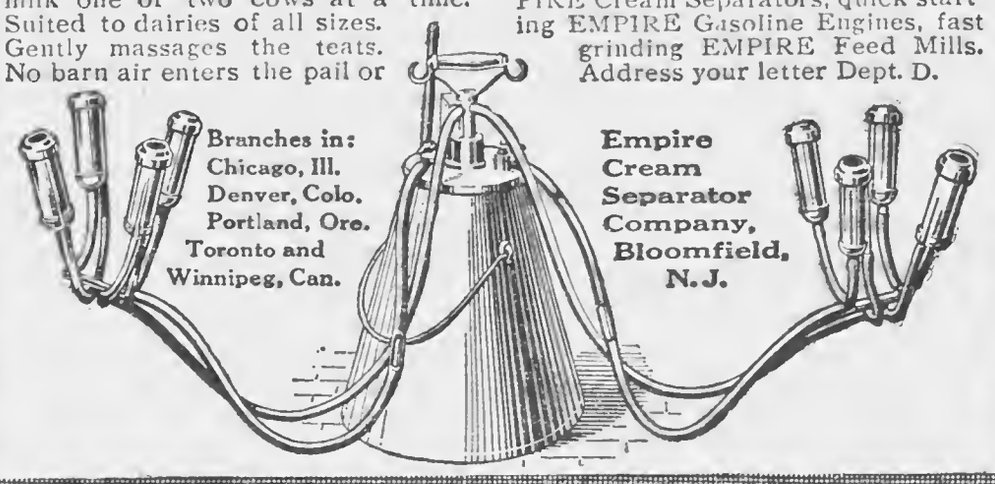

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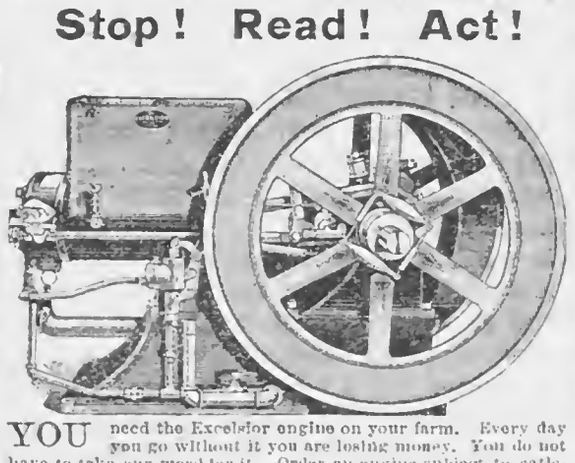

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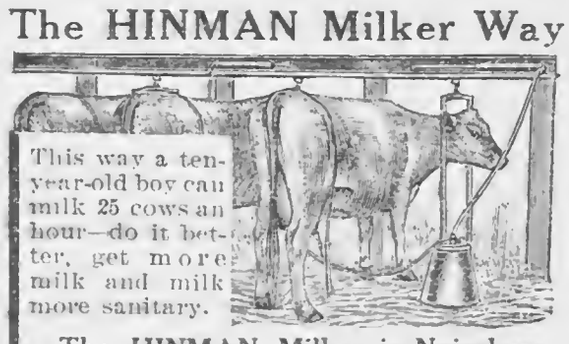

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FEEDING PROBLEMS.

Feeding Apple Pomace to Cows.

AROUND here they joke me quite often about my cows, because I take pains with them and keep so many (14) for one living in a village with only a small farm, but I have quite a little Alfalfa sown now, having just sown some more, which makes me between nine and 10 acres, about one-third of my farm. Last Fall my corn crop only filled one silo, 12x35, which was not as much feed as I wanted. Having a bulletin of the Vermont Experiment Station on pomace, which said it was safe to silo it I went to the cider mill and asked if they would give me the pomace if I took it all, I furnishing wagon and they to dump the cloths on so it would be clean. They laughed at me but said I could have it. People around laughed and wanted to know if I was crazy. I may have been, but from 14 cows after feeding new milk to six calves most of the Winter, I sold an average of $200 worth of milk per month for three or four months. I drew the pomace as often as they had wagon loaded, sometimes two loads a day and again one load in two or three days. I built a conveyor and run same in silo right from wagon and every few days I leveled the silo off according to how fast we put it in. I put it in alone, but when I got above the floor (the silo is in barn with a 4½-foot pit, 10 feet in diameter) the juice ran quite a little, showing the press did not get all the cider out and I think if I do it again I shall cut some straw or other dry fodder in with it continually or in layers to hold that juice.

Speaking of the juice calls to mind my experience a few years ago, before I came to my present location. I had an old orchard of very high trees, and quite a little natural fruit, which made lots of apples which could not be peeled at the canneries or evaporated, and I could only get five cents for a bushel of them, which would only a little more than pay for hauling them off. I had about 20 cows in milk. I drew the apples to the stable, and after we had fed the cows their silage and grain begun to feed a bushel of those whole apples to five or six cows at first, and later fed a bushel to three or four cows. We gained about 25 quarts of milk per day after three days. I fed about 250 bushels in that way with no bad results that Fall, and they were all sour apples. Since then I never sell cull apples very cheap.

I fed the pomace twice a day, one bushel to three cows, with one bushel of corn silage to two cows, Alfalfa hay at noon. For grain I used bran, hominy, cottonseed, middlings, oil meal and some ground oats part of Winter, aiming to feed one pound of grain to three or four pounds milk. C. R. SWEEZEY.

Wayne Co., N. Y.

R. N.-Y.—In feeding apples to cows better begin with a few and slowly increase as the cows grow accustomed to them. It would be a great mistake to begin with a full feed.

Dairy Ration; Small Silo.

WILL you give a balanced ration for dairy cows? The grains to consist of corn, oats, wheat bran, oil meal and cottonseed meal; the roughage is fodder corn and field corn stalks; a few carrots on hand to give as desired. Would it be profitable to erect a silo for four cows, silage to be fed the year around on what is called the "soiling system?" What size should it be?

Schuyler Co., N. Y. H. S. K.

The following ration should give good results with dairy cows: Cornmeal one pound, ground oats one pound, bran two pounds, oil meal two pounds, cottonseed meal two pounds. The amount to be fed each cow of course will vary with the cow, say about one pound of grain per three or four pounds of milk.

I doubt if it would pay to erect a silo, or silos, for four cows. One must take into consideration the cost of silos, of feeding, and of raising the corn, as compared with the cost of feeding by other methods. You can figure up these things better than one not familiar with your conditions. For feeding four cows a silo should not be over seven feet in diameter, so that enough silage may be taken off each day to prevent moulding on top. A silo seven by 30 feet will hold approximately 25 tons, not quite enough for a year's supply, unless you can fill several times. I should judge that 7x36 would just about give you the required capacity. C. L. M.

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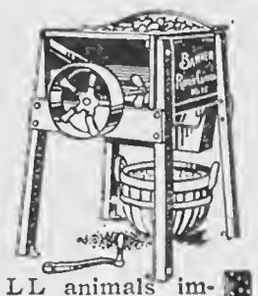

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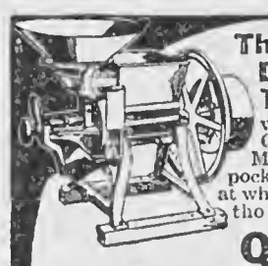

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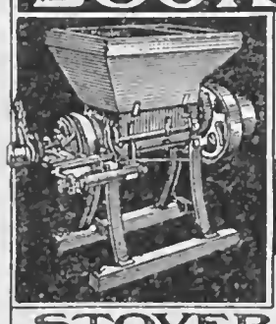

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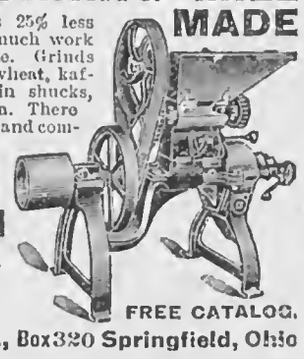

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The Henyard.

THE EGG-LAYING CONTEST.

THE forty-eighth week of the contest, ending October 2 shows a production for the week of 1,667; or 227 less than the previous week. White Leghorns are responsible for the greater part of the loss; the American breeds laying a larger proportion of the eggs. Tom Barron's White Wyandottes lead the procession this week with an output of 41 eggs, A. B. Brundage's S. C. Reds being next with a score of 38; Albert T. Lenzen's White P. Rock tie with Merrythought Farms White Wyandottes for third place, each pen laying 34. Tom Barron's White Leghorns laid 33, and J. F. Francais' Barred Rocks and F. H. Benton's White Rocks laid the same number. The pen average for the week shows how the White Leghorns have fallen off as compared with the other breeds.

The S. C. Reds have averaged 22.7 eggs per pen. The Buff Wyandottes averaged 29, the White Wyandottes 26.5, the Barred Rocks 26.5, the White P. Rocks 25.3, the Buff Rocks 24, and the White Leghorns only 16.3. Francis F. Lincoln's White Leghorns have laid 2,008 eggs, laying 31 the past week. There is little doubt that this will be the winning pen. The week's score follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	25	1,327
Frank L. Tuttle, Massachusetts	32	1,392
Waveny Farm, Connecticut	16	1,332
J. F. Francais, New York	33	1,590
White P. Rocks.		
Albert T. Lenzen, Massachusetts	34	1,486
F. H. Benton, Connecticut	33	1,476
Storrs Agr. Station, Connecticut	16	1,183
Storrs Agr. Station, Connecticut	32	1,271
Storrs Agr. Station, Connecticut	30	1,397
Storrs Agr. Staton, Connecticut	23	1,236
Storrs Agr. Station, Connecticut	9	1,071
Buff P. Rocks.		
A. A. Hall, Connecticut	31	1,453
W. C. Morgan, Jr., Connecticut	17	1,142
White Wyandottes.		
Tom Barron, England	41	1,370
West Mt. Pity. Yards, Connecticut	12	1,167
Merrythonght Farm, Connecticut	34	1,831
Neale Bros., Rhode Island	31	1,808
D. J. Ryan & Son, Connecticut	13	1,336
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	30	1,398
Dr. N. W. Sanborn, Massachusetts	26	1,342
Am. Buff. Wyan. Club, New York	28	1,245
H. L. Hamilton, Connecticut	32	1,048
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts	27	1,358
Single Comb Reds.		
Robert Seaman, New York	20	1,096
J. S. Gillespie, Connecticut	27	1,318
Dr. J. C. Dingman, New York	17	1,230
Burnham Pity. Farm, Massachusetts	9	999
H. P. Deming, Connecticut	18	1,316
Geo. P. Dearborn, Florida	20	1,426
Dr. J. A. Fritchey, Pennsylvania	31	1,534
Ernest Underhill, New Jersey	25	1,211
W. H. Bumsted, Connecticut	28	978
Pinecrest Orchards, Massachusetts	11	1,530
Harry B. Cook, Connecticut	28	1,314
Colonial Farm, New Hampshire	23	1,380
A. B. Brundage, Connecticut	38	1,772
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	23	1,356
C. S. Scoville, Connecticut	14	976
White Leghorns.		
Storrs Agr. Station, Connecticut	20	1,531
Storrs Agr. Station, Connecticut	13	1,594
Storrs Agr. Station, Connecticut	10	1,561
Storrs Agr. Station, Connecticut	25	1,986
Storrs Agr. Station, Connecticut	14	1,475
Braeside Plty. Farm, Pennsylvania	18	1,413
Glenview Plty. Farm, Connecticut	21	1,580
Manor Plty. Farm, New York	14	1,442
A. B. Hall, Connecticut	13	1,440
Marwood Plty. Farm, Pennsylvania	23	1,646
Geo. M. Harris, Connecticut	17	1,218
Bonnie Brook Farm, New York	19	1,661
N. W. Hendryx, Connecticut	5	1,417
J. J. Linehan, Massachusetts	9	1,328
F. F. Lincoln, Connecticut	31	2,008
Ceell Guernsey, New York	22	1,660
Thos. W. Moore, Connecticut	22	1,538
Chas. N. St. John, New York	27	1,559
Chas. W. Sherwood, Connecticut	13	1,414
L. E. Sands, Pennsylvania	6	1,434
Tomoka Plty. Farm, Connecticut	16	1,297
Venture Plty. Farm, New York	4	1,150
Mrs. K. E. Woodruff, Connecticut	25	1,544
Windsweep Farm, Connecticut	4	1,224
C. H. Savage, Connecticut	14	1,452
P. G. Platt, Pennsylvania	15	1,663
Heneta Bone Co., New Jersey	....	551
F. M. Pensley, Connecticut	20	1,494
Chas. Heigl, Ohio	16	1,417
Tom Barron, England	33	1,928
Branford Farm, Connecticut	23	1,651
James Munn, Massachusetts	7	1,302
Geo. A. Cosgrove, Connecticut	19	1,502
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	20	1,526
Blue Andalusians.		
E. D. Bird, Connecticut	18	1,295
Buff Orpingtons.		
O. Wilson, West Virginia	24	1,054
White Orpingtons.		
P. A. Demgar, New York	15	1,015
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	12	840
Silver Campines.		
W. J. H. Lobel, New Jersey	19	1,200
"Hens."		
H. W. Collingwood, New Jersey	14	1,254
Daniel Hine, Connecticut	17	1,149
Daniel Hine, Connecticut	11	1,107
Mixed Breeds.		
Profitable Poultry, Massachusetts	18	1,266
Profitable Poultry, Massachusetts	24	1,319

GEO. A. COSGROVE.

A BARBER, after scraping away industriously for a few moments, made the usual inquiry: "Razor all right, sir?" "My good man, if you hadn't mentioned it, I should never have known there was a razor on my face." The barber beamed. "Thank you, sir," he said. "No," added the customer reflectively, "I should have thought you were using a file."—Chicago News.

Ducks Eating Feathers.

I HAVE a flock of 35 young ducks about 10 weeks old, and they seem to enjoy pulling feathers and down off each other and eating it. They do it so much that they often make the place bleed. They have free range with plenty of grass and are fed: Morning, dry mash consisting of three parts wheat bran, three parts wheat middlings, two parts ground oats and one part beef scrap; in the evening three parts corn, two parts wheat, two parts hulled oats. Drinking water constantly before them, open-air sleeping quarters with good shelter in wet weather. Can you tell me what to do to remedy this habit of eating feathers and down? Is there any fault with the way I am feeding? If so will you let me know how and what to do? T. D.

Coventry, R. I.

Feather pulling is usually caused by lack of meat in the food, but apparently is not so caused in this case. If the trouble is not caused by all I would advise separating the pullers from their victims and keeping them apart till they had forgotten the trick. W. H. H.

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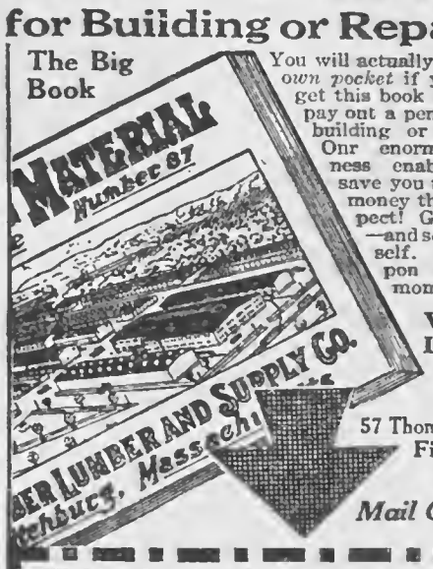

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Clean Milk, Winslow	3.25
Dairy Chemistry, Snyder	1.00
Dairy Farming, Michels	1.00
Handbook for Dairymen, Woll	1.50
Milk and Its Products, Wing	1.50

THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

PUBLISHER'S DESK

I SHIPPED one case of eggs, on June 9, to Hess, Woodward & Freund, 204 Callowhill Street, Philadelphia, Pa., commission dealers. The express company traced and said they delivered it on June 10. As they did not send the check in payment right along I wrote them and told them I could not afford to lose the amount, but they make no reply. What can you do for me?
Delaware. MRS. B. W. S.

This concern had only a limited capital to start with, and if our advice had been asked we would not have recommended shipments to them. As it was we were unable to help the inquirer out, as the investigation now shows that they left the above address some two months ago, and we are not able to locate them at this time.

Your comments on International Stock Food Company are in the right direction. That man Savage is flooding the country with flaming literature to catch the unwary, not only now, but for years past. He always has some free gift; but in the end is very careful to collect his price. Your show-up of fakes and frauds certainly does much good. A. L. W.
Ohio.

Our farmers are pretty well able to discriminate between honest propositions and the fake article. They have two guides to the latter. They have too much friendship from people they do not know; and promises of big profits. The two signs usually go together. When some gift all for nothing is tacked on there is no longer any doubt of the character of the proposition, nor should there be any hesitation about leaving it alone.

Yours with check received from Adams Express company in settlement of shipment to Georgia. You have done me a great favor, not only now but also before, greater than any other paper would have done, and as long as I have a dollar to spend for reading I shall not be without your publication. G. A. J.
New Jersey.

In regard to my claim against the Erie Railroad, which I placed in your hands a short time ago, I wish to say they have settled. I know for a fact that I would not have had the money without your aid—not for a year yet anyway. I thank you heartily for what you have done for me. I would just as soon try to farm without horses as without your paper.
New York. D. F.

Your letter and check for $7 received. Thank you very much indeed. I feel as though it was a present, for had I not given it into your hands I would have been out the whole $10. You may send me some of your trial envelopes and I will give them to friends. P. P. F.
New York.

Thanks for the check just received. If you had not sat in this game I would have received nothing, as they laughed at me before I applied to you. This is the second complaint I have made to you in twenty years and in each case you effected a settlement. P. B.
New York.

I have delayed in thanking you for your service in getting the money for the turkeys lost by the express company. My attorney kept at it, but got no reply and I gave it up as lost, but when THE R. N.-Y. got behind them they were ready to settle. M. W. T.
Virginia.

Yours with check from Adams Express to hand, and I certainly appreciate your service. I enclose check for five 10-week subscriptions and 50 cents for me. I will try to get more subscribers for you soon to help run the list up to the 200,000 you want, and think with the paper you have it ought to be in every farmer's home. T. S. G.
Florida.

The above half dozen letters are just samples of a flood of mail that comes to this department every week. They all suggest the little service that the paper is able to give subscribers in such cases. You may never have had occasion to use the service, but it is here for you in case you need it. In short, it is your service. Every subscriber has his part in creating it. Without the backing of a loyal list of subscribers no paper could give the service. So long as you are a member of THE R. N.-Y. family you may feel sure that you have helped secure redress for another farmer in cases like those referred to above.

I inclose a letter from the U. S. School of Music. It seems that you or they are misrepresenting things, and I would like to have your opinions further. W. F.
Tennessee.

Some time back this correspondent asked our opinion of the U. S. School of Music. We replied that our faith in it was not strong and that the musical authorities on whose judgment we relied, stated definitely that music could not possibly be successfully taught by mail. The inquirer also asked why the school was not advertised in THE R. N.-Y. We answer that for one reason we would not accept it.

The contents of our letter evidently found its way to the school, and its proprietor replies that Mr. Dillon is an old fogy who wants to rule over the destinies of all mankind; that in his advancing years he takes himself seriously, but that no one else does except possibly a few subscribers who are too lazy to think for themselves. Lastly he thinks it possible that Mr. Dillon has an ax to grind in the shape of a musical friend who would like to give instructions. So the correspondent comes back and wants to know who is working him to turn the grindstone. We cannot tell him any more. We did not tell him not to patronize the school. He asked our judgment, and we gave him our opinion. We asked nothing for it and would accept nothing. Perhaps it is worth no more than the cost. What we do not know about teaching music would make a book as large as the Bible; but we have no musical friend who wants to go to Tennessee to teach music. Our advice is based on information received from the leading musicians of the country. Here is one of them:

In reply to your inquiry I would say that the teaching of music by correspondence is a farce and cannot possibly produce satisfactory results. The only branch of musical instruction which can be taught by correspondence is theory.
FRANK DAMROSCH.
Institute of Musical Art, New York.

We think Mr. Damrosch pretty good authority on musical matters; but we may learn later that he too is an old fogy.

The Interstate Milk & Creamery Company, formerly the Liberman Dairy Company, of New York City, holds leases of coöperative creameries at Remsen and Barnesville, New York, and contracts for milk produced in the neighborhood. They are reported about two and a half months behind in payment; and word was received at the creameries about the first of the month to make no further deliveries. It is said that the amount due producers is in the neighborhood of $40,000. The company does not seem to be rated in the commercial books. Chattel mortgage was reported on their city effects, and altogether the prospects for the producers in those places do not seem encouraging for a prompt settlement. These sections are well protected in so much as they own their own creameries in both places. The weakness is in extending credit beyond the safety time limit. The company has been reported slow, but the returns heretofore always come, and the record favored the company in the present instance. The repetition of such experiences suggests caution in every case where milk dealers let settlements go past the date for payment. J. J. D.

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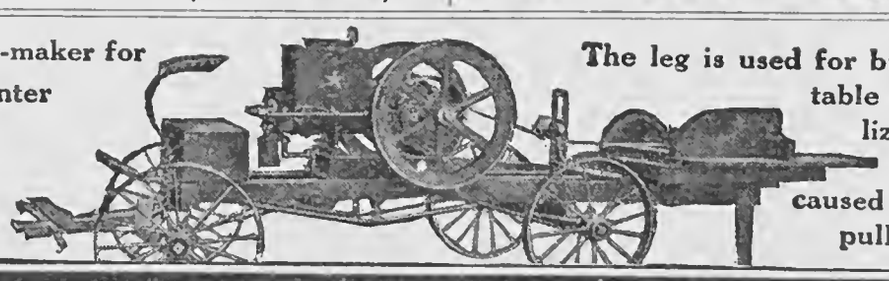

The leg is used for bracing the table to neutralize the vibration caused by engine pull on frame

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Oct. 9, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.81 and $1.61 for B and C. Hotels and restaurants using two to three cans per day are paying five to 5½ cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

As the quality of creamery has been running better the minimum score for extras has been raised two points, to 93. It will be lowered again when the average quality of receipts warrants it. There has been a one-cent price advance on the better grades including storage, of which there is supposed to be about 7,000,000 pounds less than a year ago in the principal warehouses.

Creamery, extra above 93 score, lb	31	@	31½
Extra, 93 score	30	@	30½
Good to Choice	26	@	28
Lower Grades	22	@	25
Storage	27	@	31
State Dairy, best	29	@	30
Common to Good	22	@	26
Ladles	19	@	22
Packing Stock	18	@	21
Process	22	@	26

Elgin, Ill., butter market 29 cents.
Philadelphia, western creamery, 31 cents.
Chicago creamery, 24@29½.

CHEESE.

There has been a decline of one-half cent on all grades, caused by weaker primary markets, particularly in the West.

Whole Milk, fresh, specials	15½	@	15½
Average fancy	14¾	@	15
Under grades	11	@	14
Daisies, Wisconsin	14	@	15
Skims, specials	12¾	@	13¼
Good to choice	11	@	12
Poor to fair	7	@	11

EGGS.

Fancy nearby eggs are scarce and three cents higher, but the market as a whole is dull and unsettled, loaded down with qualities selling from 20 to 25 cents. The estimated storage stocks in New York and Chicago are 65,000,000 dozen, but as with butter this is merely an estimate, many warehouses making no public report.

White, choice to fancy, large	43	@	45
Common to good	30	@	33
Mixed colors, best	31	@	33
Common to good	22	@	25
Western fresh, white	29	@	34
Lower grades	18	@	20
Storage, best	23	@	24
Lower grades	18	@	22

FRESH FRUITS.

Good specimens of Alexander, Jonathan and McIntosh advanced 50 cents per barrel, and some of the standard Winter grades are 25 cents higher. Pears of good quality continue high, but a considerable proportion of the receipts run small, this is particularly true of nearby Kieffer, which have been badly pinched by the six weeks drought. Nicely packed shipments of Kieffers not larger than pullet eggs are seen, scarcely worth transportation charges. Plums and peaches scarce, the latter mainly poor. Grapes continue low, though the market is slightly improved except on white.

Apples—Alexander, bbl	1 50	@	3 00
Gravenstein	1 50	@	2 75
Duchess	1 50	@	1 75
Wealthy	1 50	@	3 00
Fall Pippin	1 75	@	2 50
McIntosh	1 50	@	3 50
Jonathan	2 00	@	3 50
Twenty-ounce	1 50	@	2 25
Spitz	1 50	@	2 50
Baldwin	1 25	@	2 00
King	1 50	@	2 25
Greening	1 50	@	2 25
Blush	1 50	@	2 25
Crabapples, bbl	4 00	@	8 00
Pears, Anjou, bbl	2 00	@	3 25
Bartlett	3 50	@	5 50
Seckel	2 50	@	4 00
Bosc	3 00	@	4 50
Clairgeau	2 50	@	3 50
Sheldon	3 00	@	4 00
Peaches, bkt	25	@	1 00
Grapes, 18lb case	30	@	65
4lb. bkt	6	@	10
Plums, 8lb.-bkt	10	@	25
Figs, fresh, qt	05	@	10
Muskmelons, Colorado, bu	1 00	@	1 50
Watermelons, 100	10 00	@	20 00

HOPS.

Prime to choice	45	@	48
Common to good	40	@	44
Pacific Coast	16	@	18
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	80

NUTS.

Arrivals of chestnuts considerably larger, and cultivated lower, as these do not meet much demand here when wild nuts are plentiful. Very few hickories in yet.

Chestnuts, Northern, bu	3.50	@	5.00
Southern	3.00	@	4.00
Cultivated, lb	04	@	08

BEANS.

Prices have dropped 15 to 20 cents per 100 pounds on all varieties but Limas, which are 75 cents lower.

Marrow, 100 lbs	6 25	@	6 35
Medium	4 35	@	4 45
Pea	4 00	@	4 35
Red Kidney	5 00	@	5 90
Lima, California	6 35	@	6 40

VEGETABLES.

Potatoes very plentiful though prices on good stock are unchanged. Onion receipts excessive and prices 10 to 25 cents per 100 pounds lower. Cabbage slightly improved. Tomatoes higher as the outdoor season closes. Squashes and turnips dull and low.

Potatoes—Jersey, bbl	1 65	@	1 75
Long Island, bbl	1 75	@	2 00
Maine, 180 lbs	1 65	@	1 75
Sweet Potatoes, bbl	2 00	@	2 50
Brussels Sprouts, qt	05	@	10
Beets, 100 bunches	50	@	1 00
Carrots, bbl	75	@	1 00
Celery, doz	10	@	25
Cauliflower, bbl	75	@	3 50
Cucumbers, bu	50	@	1 00
Corn, Jersey, 100	50	@	1 50
Cabbage, bbl	75	@	1 00
Ton	10 00	@	14 00
Lettuce, half-bbl. basket	25	@	1 00
Onions—Orange Co., bag	75	@	1 00
Conn. Yellow, 100 lbs	75	@	1 00
Peppers, Jersey, bbl	1 00	@	1 50
Peas, bu	1 00	@	3 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	75	@	1 00
String Beans, bu	1 00	@	2 75
Squash, Hubbard, bbl	60	@	75
Marrow	50	@	75
Egg Plants, bu	50	@	90
Tomatoes, Jersey, box	50	@	90

LIVE POULTRY.

There is a fair demand for fowls, chickens and ducks. Geese and turkeys selling slowly. At the auction fowls sold at 16 to 18 cents.

Chickens, lb	14	@	16
Fowls	15	@	18
Roosters	11	@	11½
Ducks	16	@	18
Geese	13	@	14

DRESSED POULTRY.

Business in fresh-killed is dull, except on large fowls and roasting chickens, which are scarce. Spring ducks from Long Island showing poor quality. Market on frozen poultry is unsettled and holders anxious to sell.

Turkeys, choice, lb	23	@	25
Common to good	15	@	20
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	19	@	21
Fowls	17	@	20
Ducks, Spring	15	@	16
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay demand is somewhat better, especially on the better qualities. Straw prices unchanged.

Hay, Timothy, new, No. 1, ton	20 50	@	21 00
No. 2	18 00	@	19 50
No. 3	15 00	@	17 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	13 00	@	14 00
Short and tangled	10 00	@	11 00

LIVE STOCK.

Native Steers	7 50	@	9 60
Bulls	5 00	@	6 90
Cows	3 25	@	6 60
Calves, prime veal, 100 lb	8 50	@	12 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 65	@	8 60
Hogs	8 00	@	9 05

GRAIN.

Wheat has advanced one cent, but business dull. Corn a trifle lower on light trade and improved crop report. Oats moving raidly from primary markets as export demand is large.

Wheat, No. 1, Northern Spring	1 18	@	..
No. 2, Red	1 16	@	..
No. 2, Hard Winter	1 09	@	..
Corn, as to quality, bush	80	@	81
Oats, as to weight, bush	50	@	53
Rye	94	@	95

RETAIL PRICES AT NEW YORK.

These are not highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	45	@	50
Mixed colors, new laid	40	@	42
Ordinary grades	20	@	30
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	24	@	26
Fricassee, lb	18	@	20
Fowls	19	@	22
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	16	@	18
Stewing beef	12	@	14
Pork Chops	18	@	20
Loin of Pork	17	@	19
Round Steak	18	@	20

*

The harvest of Monmouth County, New Jersey, will this year total $5,000,000, the potato crop alone bringing $2,000,000.

MARKET FOR NUTS.

Will you tell me whether there is a market for the common black walnut, such as grow on our farms; also the white walnut? About what do they bring per bushel? M. H. M.
Virginia.

There is a limited sale for black walnuts in New York and most large cities. They seldom bring more than $1 per bushel, and often only 75 cents. Candy makers use them to some extent. Butternuts sell at 50 to 75 cents per bushel, wholesale. The great drawback to their extensive use is the difficulty in cracking, an anvil or heavy stone and large hammer being needed. The price on white walnuts, or hickories, varies from 75 cents to $2.75 per bushel. A great proportion of the choice hickories never reach market, being sold locally. The percentage of these nuts of good size, thin shell and easily removed meats is small.

VALUE OF A BRAND.

THE commercial value of a brand on any food product depends on how much careful inspection the brand represents. This applies with special force to apples. For a long time it was a practice to put an imposing lot of symbols on apple barrels, XXXX, AAI, etc., supposed to represent superlative quality, when an investigation of the fruit showed that the alleged quality was only skin deep. This practice still prevails to some extent, though many States have laws forbidding such misrepresentation, and in many places where there is no law, the common sense of the grower prevents it. These exaggerated brands seldom deceive buyers, who look on them as jokes and dig deeper into the barrel in their search for culls.

Long before the western fruit associations had become successful marketing agents, individual farmers had established their own private apple brands, which were eagerly sought after. Hundreds of farm-packed barrels and boxes are daily sold in New York and other large markets, without inspection, on the farmer's mark, because the buyers have found that the mark stands for character. It may be a letter or monogram or even some peculiar pencil mark. Whatever it is its value is in the fact that buyers have translated it into quality so many times that they feel confidence in it.

The brands of fruit associations have grown in importance in proportion to the amount of unbiased inspection they are found to stand for. It was learned early that the more publicity given to the exact methods used to safeguard a brand the better, so we have been told many times how the apples are handled, no man allowed to pack his own fruit, etc. The grape growers in N. Y. State have done creditable work in building up labels that have found important places in the market.

No State has thus far been able to inspect the apple output thoroughly enough to give any guarantee of the pack as a whole, but growers who supplement the State brand with their own private marks will get whatever benefit there is in the plan. Certainly no grower or packer who has any regard for the apple industry will misuse the State brand merely because he may without being detected by the authorities. His punishment will be the low price his dishonest pack will bring, because State branded fruit will be bought on market inspection.

FARMERS SECURITY BUREAU } Superintendents, Working Foreman, Gardeners, Dairymen, Herdsmen, Farmers, Milkers, Couples, Teamsters, Farmhands, Laborers. Sidney Sullivan, Expert Agency, 99 Nassau St., N. Y. 6486 Cortland. Classed by itself.

Subscribers' Exchange

ALFRED Ag. School student wishes position as herdsman, age 26. WM. J. WILCOX, Amity, N. Y.

WANTED—Position as fruit pruner, fifteen years' experience; best reference. Maryland preferred. F. SIMMONS, Wernersville, Pa.

MAN with family wants position as caretaker of estate; carpenter, gardener, etc.; useful all-round man. ARTHUR SILVANDER, North Colebrook, Conn.

CITY MAN offers, from November 1, to experienced American farmer, with working family, liberal share proposition Tolland County, Conn. farm, including stock and tools. References required. Address F. P. HAMILTON, 299 Park Avenue, East Orange, N. J.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

AMERICAN young man seeks position on poultry farm. Would accept small salary to start. S. H., care R. N.-Y.

WANTED—Farmer, who will furnish team, to work farm in Virginia on shares; references required; state terms in first letter. Address M. M., Rural New-Yorker.

EXPERIENCED farm hand wants position on farm, all-around work; vicinity of New York preferred; best references. E. BENECKE, 711 Washington St., Hoboken, N. J.

WANTED—Position as farm manager, by young American; married; experienced with live stock, farm crops and gardening, Cornell course. References. R. F. D. 49, Box 1, Rhinebeck, N. Y.

YOUNG MAN, 24, with good farm and business experience desires position on an up-to-date farm; married, one child; can furnish best of references; what have you to offer? S. J., care R. N.-Y.

AMERICAN, 28, married, experienced, desires position at general farm work. Good hand with horses, some experience with poultry, handy with carpenter tools. Box 82 A, Route 4, Vineland, N. J.

YOUNG FARMER, 22; understands engines, thrashers, all modern farm machinery, general farming; will manage farm or work as farmhand; no liquors; will peddle milk. References. K. E., care R. N.-Y.

POSITION on farm near New York wanted by man and wife. Teamster, milker and light farm work. Wife capable and willing, nursing experience; exceptional reference. Address FARM HELP, care The R. N.-Y., 333 West 30th St., New York.

YOUNG MAN of 20, of best character, strong and willing, who has taken one year in Agricultural College, desires position on farm near N. Y. City at moderate wages, with good Christian people. Address PERRY YOUNG, 1273 Pacific St., Brooklyn, N. Y.

WANTED—Position as Superintendent to take complete charge of farm. Married; college graduate; thoroughly understands crops, stock, dairying and up-to-date methods, particularly production of sanitary milk. Excellent references. JOHN HESSE, Smithtown, N. Y.

SINGLE MAN wants position as superintendent of farm; experienced in handling help; potatoes, orchards, sub-soiling, dairying, and all kinds of farm machinery; references; state particulars in first letter; would consider renting farm stocked and tooled; at liberty Nov. 1. PERCY MILLIKEN, Somers, Conn.

WANTED—Position to farm place for salary or part salary and share of proceeds; am 26, married and energetic, ambitious and widely experienced, especially with poultry, hogs, horses, machinery. Want permanent home with opportunity to build up profitable farm business. References exchanged. At present employed in Delaware. Box W. O., care R. N.-Y.

WANTED—On a large farm in Niagara Co., N. Y., two practical farmers of experience and ability, one practical experienced hog and live stock raiser and feeder, two practical experienced dairy men, one competent experienced orchardist. Must have references from actual employers. Good, permanent positions for practical, intelligent men. Good wages, privileges and opportunities for right men. Address with references and past experience, Box 99, R. F. D. 14, La Salle, N. Y.

SPRAYED winter apples for sale. C. M. HOFFMAN, Oxford, N. Y.

VALUABLE PATENT on Combined Seed Planter and Fertilizer Distributor for sale cheap. Patentee financially unable to manufacture. A. J. BURKETT, Wakefield, Va.

FOR SALE—Fine team gray horses, 5 years old, weight, 3,000 lbs., well seasoned and suitable for any kind of heavy work. Address FARMER, care Rural New-Yorker.

FOR RENT—For 1915 400-acre grain and stock farm; on river and near station. N. R. PALMER, Sweet Hall, Va.

GOOD FARM 200 ACRES, fine buildings, ¼ mile of store, school, depot. EMERSON GREGORY, Owner, Bangall, Dutchess Co. N. Y.

FOR SALE—Small place, Sullivan Co., N. Y., over two acres; good buildings; adapted for chickens and truck. JOSEPH ROGERS, Farmingdale, New Jersey.

FOR SALE—Farm in rich Nehalem valley, western Oregon; great dairy and fruit region; the country of the future. For particulars write MRS. W. J. D. YOUNG, Jewell, Oregon.

FOR SALE—120-acre dairy farm with retail business, excellent markets, nearest dairy to great summer and hunting resort on Jersey coast; crops and stock included. Apply EMGE, care of R. New-Yorker.

FOR SALE—Seashore and village farm of 15½ acres, with fruit and berries; within 15 minutes' walk from ocean, and two depots; 5 minutes from school, stores and trolley; 7-room house, barn, large greenhouse. OWNER, R. F. D. 2, Box 4, Belmar, N. J.

FARM FOR SALE—Farmer's Farm, 600 acres, stocked, equipped and with 12-room furnished house; 2 tenant houses, 6 barns, silo, 3 orchards, brook, wells and springs; about half tillable; balance woods and pasture; title perfect; 100 miles N. Y. City; price $12,000, half cash. Address J. T. PETTY, R. F. D. 45, Red Hook, N. Y.

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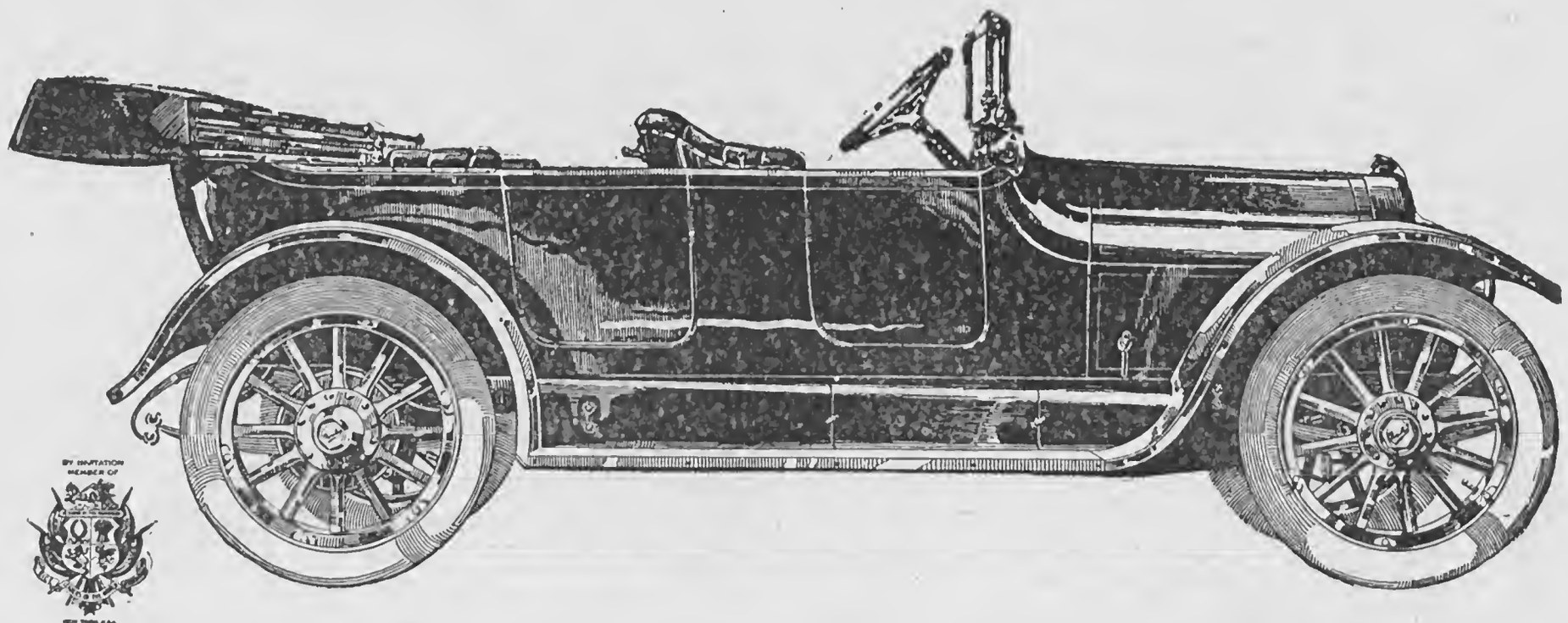

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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POTATO-DIGGING TIME.

"Lifting" by Horse or Hand.

THE PLEASURE OF HARVEST.—Is it work or is it play? I think it is neither. The little girl is filled with the glory of harvest. Hers is an unalloyed pleasure. As she gathers together the great smooth potatoes she thinks only of the gathering. There is no thought of the heavy disking and plowing of the ground on cold windy days; no thought of the seed cutting, disinfecting, planting, etc.; no thought of the cultivation and work with disagreeable poisons on hot dusty days; no thought of the chances taken with the elements. In fact it is nothing but pleasure, and it is the kind of pleasure that comes to a greater or less extent to every man who has the privilege of gathering the crop that he himself has grown, worked with and watched over throughout the growing season.

THE FUN OF POTATO HARVESTING. FIG. 535.

TWO POTATO CROPS.—Just now it is the Northern grower who is having this experience. Our Southern friends had their early crop of tubers off before the northern crop was in the ground, and soon they will be engaged in harvesting the second potato crop of the year. Here in South Jersey much the same thing takes place. Irish Cobblers are planted in early Spring for the first crop and Hoosiers (also known as "Pink Eye" and "No Blight") and Redskins are planted for the second crop. This second crop is destined, I believe, to work a big change in our system of cropping. One can now see many plots of these potatoes scattered throughout the entire trucking section of South Jersey. A few years ago there was none. For many years it has been a big problem to find a crop that could be grown with profit after early peas, beans, onions or strawberries had been removed. Thus far the Hoosiers and Redskins have been used mostly after strawberries. A plot of berries two or three years old, picked for the last time in late June, is plowed immediately and put in potatoes. For South Jersey planting can be done from July 1st to 15th, and in an average year the crop will fully mature before frost kills the vines. Last year we had a five-acre plot of Hoosier potatoes planted the first week in July, after strawberries, that gave a yield of over 1400 ⅝-bushel baskets of potatoes for the five acres. Less than 5% would grade as seconds. Other growers have done even better than that.

STORING THE CROP.—Because of the solidity and keeping qualities of these potatoes most of the crop is stored. To store, a pit is dug about two feet deep. Potatoes are poured in to make a conical shaped heap; this is then covered with a layer of hay, then a thick layer of soil. There is a slope to this so as to shed rain; a trench is dug around this heap or mound to allow the water to run off without entering the pit. Late potatoes stored in this manner come out solid and firm in the Spring, and can be held without cold storage until May 1st or 15th. Redskin potatoes grown here and stored as described have been taken out in the Spring and sold at the price of new potatoes from the South.

DIGGING METHODS.—Just now, however, we are interested in the best methods of digging. The little girl is not concerned with this, but with growers this problem is uppermost in their minds. For the large grower who makes potatoes his main crop there is no question but what one of the better makes of potato diggers now on the market offers the most economical means of removing his crop. Such diggers are usually drawn by four horses, and the tubers are left lying on top of the rows where they can be easily gathered in basket. Smaller growers feel that it would not be economy to buy one of these larger diggers. They must depend on small diggers or else do the work by hand. In home gardens or breeding plots for seed the old potato hook still offers the best means of getting out the tubers. Between these two classes of growers there are a vast number who produce from one to five acres of potatoes annually. We come in with this class. For removing our own crop we find the ordinary sweet potato digger or plow very satisfactory, and

less expensive for small areas than the larger diggers. The sweet potato digger has several iron rods or fingers attached to a short mold-board, and after running under a row the tubers are left fairly well exposed to the view of the men who follow and gather the potatoes in baskets.

DEEP-PLANTED POTATOES.—A sweet potato digger will not always answer for getting out the crop. Some growers prefer to plant late potatoes deeper than they do the early crop. To accomplish this they plant the potatoes as they plow, dropping the seed pieces in every third furrow. Such potatoes set very deep in the ground, and when digging a two-horse plow seems to work to best advantage. A two-horse plow set shallow will also work fairly well for digging potatoes not set so deep in the soil, but the tubers are not thrown clear of the soil as with a sweet potato digger, and the men gathering them must search around more in the soil for the loosened but uncovered potatoes. Others may use different methods of digging but, whatever the method, may we all be filled with the same joy in our work that seems to be possessed so abundantly by the little girl in the picture. TRUCKER, JR.

KILLING WEED SEED IN MANURE.

THE wise and wonderful Creator has so hedged about the continuation of species that it is impossible wholly to annihilate any. One way of perpetuating plant life is by enormous multiplication of seed. I have an instance at hand in the case of an enormous pigweed growing in a cold frame, which in four months has attained a height of 11 feet, and will undoubtedly mature several thousand seeds, or enough to make several acres so weedy that nothing else would grow. The seeds of this plant are immune to temperatures up to 150 degrees and any degree of frost, and will remain in water a number of days without injury and in all respects may be considered an average representative of a large proportion of our commonest weeds, as regards difficulty of destroying seeds by forces which destroy both wood and metal.

The age at which seeds lose vitality has not been very definitely settled except in the case of garden and field seeds and these have never been tried out in the same way Nature tests and preserves wild seeds. Weeds constantly spring up where they are not wanted, and in some cases where it is very difficult to account for. The inherent staying power of seeds makes any process expensive which will kill their germinating power. The most available way, that of heat in manure, destroys a valuable constituent of the manure's fertilizing value unless done under conditions like the hotbed, where the ammonia passes into a layer of soil and is partially used before it vanishes. Lettuce growers under glass sterilize soil to get rid of injurious bacteria by burying perforated steam pipes and steaming several hours. This also kills most of the weed seed and all the beneficial bacteria which the soil may contain.

All this is preliminary to answering the question as to destroying weed seed in manure, and answering that I do not know of any practical way of doing so except to ferment it. It is not a question that greatly interests out-of-door gardeners. As soon as rows of beets, lettuce, or other vegetables show above ground the row is straddled with a wheel-hoe and all the weeds eliminated except a very narrow strip. This matter of hoeing is as necessary in a piece of ground which has been cleared of weeds by previous culture as in a weedy one, because the ground must be stirred to get new particles of soil together as well as to prevent caking. Finally, only a tithe or less of the weeds come from manure. There are soils which have produced continuous crops of corn annually for 70 years without a particle of manure being spread upon them, yet one such field left idle for one Summer by the death of the owner produced a wonderful crop of weeds five feet high, and of more than 20 sorts, some of which were not common in that locality—the Scioto Valley.

I have never been in any location where there was not enough neglected and weed-grown land to more than stock the cultivated soil. Narrow and short-sighted methods produce weeds in variety and great abundance. The farmers in my town carefully cut the nearly ripened docks out of their meadows and deposit them in the wagon road, to be washed by rain and carried by the mud on wagon wheels and horses' ankles to a thousand places where they should not be, and would not be if they simply laid them in a little pile and killed them when dry with a little oil and fire. A meadow infested with the white-topped weed will put enough seed into the stable manure to stock a farm for a lifetime. Such a field should be plowed for corn in May, the corn followed with rye and the next year put into Alfalfa. Some day our agricultural experts will recognize weeds as plants worthy of close study, and find a way to make these intruders pay their way. L. R. PIERCE.

Ohio.

R. N.-Y.—Some of us who grow fruit have already found a way. Let them grow, cut off with the mower and pile around the trees. They make good humus.

CUTTING BACK 40-YEAR TREES.

WE have a number of Gravenstein trees about 40 years old that have been allowed to get too high for spraying and picking. Would it be profitable to cut them back and form a new head that will be within reach? R. D. P.

New Jersey.

Whether it is likely to be profitable to cut back and form heads depends entirely upon their present condition. If the trees are a good distance apart, say 38 to 40 feet, and are in a favorable location for cultivation and spraying, and are fairly vigorous, a thorough cutting back and pruning would be likely to be successful and profitable. On the other hand, if the trees are close together, say 30 feet apart, and have lost all of the lower branches because of overcrowding, with many dead and blighted branches, there is considerable doubt whether the cutting back and the forming of a new head would bring the desired results. A tree that is in good condition for improvement should have space enough in which to develop, and should have a few live branches within eight or 10 feet of the ground. If the trees have a trunk bare of branches to a height of 15 to 18 feet, it is difficult to develop good low heads upon the trees. If these trees have some fairly vigorous branches within a reasonable distance from the ground, the following suggestions for pruning can be made:

Remove all dead and diseased branches. Prune out any upright growing branches in the center of the tree that exceed a height of 20 feet, or in other words, cut back the top to side branches so that it

PEACHES, GRASS AND PULLETS. Fig. 536.

can be sprayed readily from the tower of a sprayer.

In some cases where the trees have been much weakened there may be water sprouts growing upward from the old branches. In cutting back the trees, some of these should be saved and allowed to fill the space left vacant by the pruning out of the dead and weakened branches. The lower side branches that may be left upon the trees should be pruned sufficiently to enable one to cultivate and spray the trees well. If these lower branches are very thick, they should be thinned out somewhat to permit light to enter, and if they extend to a considerable distance beyond the trunk of the tree some slight cutting back may be required. In a general way the object is to secure a shortened, but well-balanced framework, and to retain as many of the small spurs and side branches as possible. Where a large apple tree is cut back to mere stubs of branches 10 or 12 inches in diameter, and without any small side branches, it is almost impossible to form a strong and satisfactory new top upon the tree.

The pruning should be done during the Winter and early Spring before any growth takes place. Whether any fruit would be borne the season following the pruning will depend upon the condition of the trees. If the lower branches are vigorous enough to carry fruit buds there should be some fruit to mature. If the lower branches that are left after pruning are very weak little fruit is likely to be secured the first season. M. A. BLAKE.

New Jersey Exp. Station.

PEACHES, GRASS AND PULLETS.

THE picture at Fig. 536 was taken in the peach orchard of Judge F. M. Peasley of Connecticut. Judge Peasley has a large flock of White Leghorns, which run through the season on the colony system. He says he raises hay, peaches and pullets on the same land, and produces a good crop of each. The plan of keeping hens in a peach orchard is not usually favored by fruit growers, as the scratching and manuring by the hens is apt to drive the tree into too much wood growth. Where the grass is left, however, to be cut for hay, the combination makes a good one, as the growth of the hay prevents overforcing of the trees, and the pullets take pretty good care of both crops. The water and feed wagon is shown in the picture, and also the homemade brooder made out of a piano box. Some of the devices used by the Connecticut hen men to save labor and at the same time produce good stock are very ingenious, and quite worthy as evidence of brain development of the descendants of those who in former years are said to have produced wooden nutmegs and basswood hams which would really deceive a good housekeeper. There is little chance for deception, however, in the production of a good hen or pullet, for the hen is honest, and you cannot make her carry along any tricks of the hen man.

AFTER THE PEACH HARVEST.

WE just finished harvesting the biggest peach crop from our little orchard we ever had. Most of our bearing trees are four and five years old, with one lot only two years old which has a fine crop. Besides our own crop I purchased two small crops from neighboring farmers who have planted peach orchards by way of experiment. I picked and sold these for one-fourth of the proceeds. I hired a man at 16 cents an hour who did most of the picking in all the orchards. The delivering and some of the picking I did myself, thus the two of us harvested about 275 bushels of peaches with very little outside help.

The season was rather a trying one in some respects, yet on the whole I came out on my own peach crop as well as on the ones I purchased. Most of the trees were well loaded, but the dry season here caused a large proportion of undersized fruit. We thought we had thinned the fruit thoroughly, going over some trees several times as the green fruit grew larger. Yet the trees were too full, considering the dry season. Severe thinning is much more necessary when there is a lack of moisture.

The home peach market was as brisk as ever, notwithstanding we heard many complaints of the small size of the fruit. Nearly everyone wanted a few of the largest peaches, while some customers would not accept any other kind. Of course we graded them, the best grades selling for about double the price of the poorest grades. But we soon found ourselves with comparatively few bushels of really fancy fruit, while there was an abundance of the middle and lower grades. We found good sale for these latter goods, provided one would promise them some of the big fellows. This meant some careful maneuvering to get everybody supplied. Unlike other kinds of fruit here peaches do well only in certain protected localities. Again, peaches seem to be the favorite fruit of many people. As a result of these conditions we were able to secure in the home market a price for our smallest peaches about equal to the price of the best Bartlett pears. Many farmers would gladly have given three bushels of their best Fall or Winter apples in exchange for one bushel of our best peaches. Cherries, plums and grapes became so plentiful one could scarcely give them away, yet the demand for peaches kept up, though the price was not so high as for several years past.

We noticed a big difference in the size of different varieties. The Elbertas are always medium to large if the trees have a fair chance to make a crop. This variety is considered by many fruit growers as second in quality, but I find it gives excellent satisfaction, and because of its large size and beautiful yellow color is absolutely the best seller in our orchard. The Elberta is not quite so hardy nor as prolific as some other varieties, otherwise I would probably plant more of these than all other varieties combined. As it is I expect to plant more Elbertas than any other one variety. The Belle of Georgia is still holding the highest place among white peaches here. I do not yet have the Carman in bearing. The five-year-old Late Crawford trees have their first crop of fruit this year. The fruit is of good quality, but rather acid.

One of the most serious difficulties in peach growing which I have experienced is getting trees true to name. One block of Elberta trees bought from an agent whom I believed to be thoroughly reliable have been a sore disappointment to me. Only about one-fourth of the trees are true to name. When the trees arrived the tops were quite dead, but after planting, they sprouted out (as I thought) above the bud, but such a mixture of little white and yellow freestones and clings I have never seen. I now buy guaranteed trees direct from the nursery. At least I shall know where to place the responsibility if they prove untrue. DAVID PLANK.

Pennsylvania.

THE NEW YORK APPLE GRADING LAW.

What It Is, and What It May Do.

A GOOD LAW.—To begin with, I make the claim without fear of intelligent contradiction that the New York apple law, which went into effect on July 1, is the best apple-packing law ever put on the statute books of any State. It is a reasonable, understandable and workable law, and its enforcement will restore New York apples to their proper place as the standard of quality everywhere in the markets of the world, and save the apple-growing industry of the Empire State from ruin toward which it has been drifting headlong the past few years, owing to the entire absence of honest, uniform grading and packing. I believe that the dishonest packing of New York apples has cost the apple growers of this State, to speak conservatively, $3,000,000 annually. The United States (Sulzer) law is a good law, but it does not meet the situation as fully as does the New York law, and the fact that it is *optional* completely destroys its usefulness; not one in a hundred growers packed their apples under this law last year. We became convinced that the only way the growers and dealers of this State could ever be induced to pack their apples properly was to pass a law to compel them to do so. The law has only been in effect three months but it has already worked wonders. Growers of other States recognize that they are "up against the real thing," now; there is no competition that can beat New York State apples when they are properly packed. The Northwestern box apple industry is fully awake to the fact that excuse for paying fancy prices for their product in the East no longer exists. No finer apples are grown anywhere on earth than in New York, and when the consumer learns that he can safely purchase a barrel of our fruit without danger, to say nothing of a certainty, of being swindled, he will no longer hesitate to buy the apples that taste the best. Such a law was absolutely essential to keep fruit suited only for the cider mill and evaporator, out of barrels and out of the market.

DEALERS AND PACKERS.—Right here I wish to say a word in defense of the farmer, who has had to bear all the ignominy of crooked packing. There are undoubtedly some farmers who have been shortsighted and pennywise enough to pack their apples improperly, but I believe it is conservative to say that 75% of the crooked packing of New York apples has been done by dealers. During late years a large proportion of our apples have been purchased by speculators "tree run," and all the farmer has had to do with the crop was to pick it and draw it to the storage, and it has been a matter of common observation that mighty few of the apples "escaped" to the cider mill or evaporator. Year after year the fruit growers' associations have met in annual convention, discussed the situation and passed resolutions condemning the practice of poor packing, but the practice has gone on in the face of a declining export trade, and the preference shown in the markets for apples from other States, until finally last Winter a few growers who could see farther than the end of their nose took a determined stand and worked out the details of the law, drafted the bill, took it to Albany and secured its passage. There is nothing in the law to prevent a man packing his apples exactly as he has been in the habit of doing; he can put a bushel of cider apples in the middle of the barrel if he wishes to, but *he must put on the head of the barrel his name and address; the minimum size of the fruit in the barrel* and *also mark it "wormy," "scabby," "fungused," "rotten,"* etc., in accordance with the *true facts;* of course he will not do this because there is no chance left to *deceive the purchaser.*

SCOPE OF THE LAW.—Great care was taken in preparing the law to conserve the interests of the individuals concerned, the grower, the consumer and the industry in general. Four grades are provided: "Fancy," "A," "B," and "unclassified." There should be no question as to what constitutes a "fancy" apple. Any fruit that is fancy must be perfect; it must have good color for the variety, be free of all defects and of good size for the variety. Baldwin apples may be called "fancy" if every apple in the barrel is blood red and perfect, although in size they are but 2¼ inches and so marked. Kings, Twenty Ounce and other naturally large varieties could not be called "fancy" and packed to a minimum size of less than three inches. The "A" grade is intended to represent a first class No. 1 apple; the "B" grade a first class No. 2 apple, and the "Unclassified," as the term implies, apples which do not conform to the requirements of the other grades, but in the case of the "unclassified," the minimum size, and other facts representing the *true facts* covering the contents, together with the name and address of the packer must be marked on the head of the barrel. The law is intended to stop crooked packing; to put an end to deliberate deceit and fraud. Of course we may expect that every dishonest apple packer in the State will be against the law; that under one pretext or another they will endeavor at the first opportunity to have the law repealed or amended so that they may continue their nefarious business, but the decent growers of the State, the real men engaged in the industry who recognize the absolute necessity of such a law, if the great apple industry of New York is to survive, are going to fight the crooks to a finish. The practice of killing the goose that lays the golden eggs has gone on long enough; it is a question of honesty or dishonesty, of good healthy life or suicide. Let those who care to align themselves on the side of fraud and deceit, do so; they will find plenty of opposition and a tough row to hoe if they try it. The law has the unqualified endorsement of the two largest fruit growers' associations in the State, as well as that of the International Apple Shippers' Association, the secretary of which aided very materially in drafting the law.

OBJECTIONS TO THE LAW.—A certain grower came to us and said: "I can't pack my apples under this law." "Why not?" we asked. "Well," he replied, "you see in my part of the State we don't grow as fine apples as you do in Western New York, we have a lot of fungus and our apples are wormy." "What have you been doing with your apples heretofore?" I asked him. "Oh, I've been putting them in the barrel," he replied. "Well," I said, "you can continue to do so if you like; all that is necessary is that you put your name and address on the head of the barrel, also the minimum size and mark them 'fungused' and 'wormy.'" "Oh, but I can't do that you know," he replied. Of course no law is of much account if it is not enforced, but it is the intention of the real fruit growers of New York that this law shall be enforced, and it can be very easily and at little expense. Only a few intelligent, capable inspectors are necessary. The Commissioner of Agriculture is, I believe, ready and willing to do his part to enforce the statute, and if the intelligent progressive growers will all get behind the law and support it, the task will be easy, and it is *up to everyone of them to do this thing.*

DISHONEST PACKING.—The grower who is trying his best to obey the law is not the man we are after, but the fellow who does not wish to pack honestly and will not do so unless he is watched and punished, is the chap to get after. It is not going to be so hard to find these gentry, and after they have been caught and punished, the effect will be very wholesome. One very important thing this law has already accomplished, is the proper sizing of apples; hundreds of growers this Fall have purchased and are now using for the first time, apple-grading machines. These machines are not very expensive and will pay for themselves in one season on a large crop of apples, in the labor saved. To begin with they take out all the small cider apples, and easily save two men's wages doing that; then they make three or four accurate grades as to size, and this can only be properly done with a machine. It has always been a mistake to put large and small apples in the same barrel, even though the small ones were 2¼ or 2½ inches; they look a great deal better and sell a great deal better packed separately. The reports received from many markets this Fall are very gratifying. Several letters and telegrams have come to us stating: "We have never before seen such fine fruit from New York State" and "It is no trouble to sell your fruit this year." The fruit is not any better than formerly, but it is *packed right*, and for the first time the marks on the head of the barrel really *mean something.* That is the whole answer.

SETH J. T. RUSH.

RESULTS FROM DRAINING WET LAND. FIG. 537

PRODUCE ON THE WAY TO CHICAGO MARKET. FIG. 538.

FREE MARKETS AT CHICAGO.

THERE is now going on in Chicago a contest that is of interest to every man who tills the soil, and every person who makes use of the product to sustain life. The Chicago city government established in a disused school building a city market, where city people are able to buy fruits and vegetables independent of the commission men. It is a plan by which it is sought to wipe out some of the profits of the middlemen, and give the advantage to the consumer. But the commission men are on the alert; they are said to have started a propaganda by the spread of which among the growers the latter will still dispose of their stuff to the commision men, who can in turn sell it to the grocerymen. The argument of the commission men is that they have sought to keep up prices, by which the producers get more for their crops than by selling to any city market.

Despite these efforts to cut out the middleman, however, new ideas in middle dealing crop out almost every day. The other day a government worker lost his $2,300 job. Almost at once this man undertook a plan to get a profit on eggs somewhere between the hen and the consumer. I met this man on a Lake Michigan steamer the other night. He was on his way to Michigan to hire a man to buy eggs from the farmer. The ex-government clerk pays the buyer a dollar a case for buying them, the farmer ships the case to the former clerk who candles them and then sells them to the corner grocery man, who disposes of them to the consumer. The picture at Fig. 538 shows a market gardener's load which sold for $100 or more, without having to pass through the middleman's hands.

J. L. GRAFF.

DYNAMITE OR TILE FOR DRAINAGE.

WHAT DYNAMITE DOES.—Among the many modern agencies tending toward improvement in methods of solving problems that confront us on every hand dynamite holds a prominent place. In clearing our fields of those rocks and bowlders that have been used as a nucleus for unsightly stone piles frequently overgrown with bushes, loosening the sub-soil for the setting of anchor posts in fence building, breaking up the stubborn hardpan for tree planting and in clearing up new ground, it has no equal. Again, by its use large, open ditches can be dug rapidly and economically, especially if the course is through swampy land, where bushes and small trees abound. These are torn to shreds, while the earth is scattered over so wide a space that there is no high bank of earth at the side of the ditch, which must continuously keep sliding in, making it necessary to frequently reclean the ditch. In all fairness, I want to give dynamite credit for what it accomplishes, but when it is heralded as the proper agent to be used in land drainage some one has blundered. My experience and observations have led to the conclusion that as a means of drainage it is only permanently effective where the hard subsoil is underlaid with a stratum of more porous character allowing the excess of water to leach away; and even then the subsoil would, in time, revert to its former condition in a great measure. There is no aeration of the soil in drainage by the use of dynamite. The water simply lies dead and soaks away, consequently there is no sweetening of the soil.

TILE WITH DYNAMITE.—In land drainage there are three items of importance: to get rid of the excess of water, retain necessary moisture and sweeten up the soil by aeration. The results accruing from soil improvement by draining land with tile for the past 50 years or more prove conclusively that this is the proper method provided the work is properly done. I will now cite an instance where both dynamite and tile were used in the same field. In clearing off the stumps and bushes from what is called the "swamp lot" on Mr. E. E. Doty's farm two methods were tried. First, a powerful stump-puller was used, but when the huge stumps were pulled over there was much earth adhering to them, and as the subsoil was clay it was found impossible to handle them without the use of dynamite, so the stump-puller method was abandoned. By using dynamite of proper strength and quantities these were cleared out and torn apart so that there was no trouble in removing the remains, but in every instance where a big stump was blown out a deep and large basin remained. It was the intention to drain that lot last season, but the Fall was so dry this was not accomplished. The field was plowed over last Fall, as such land can be plowed, but first these pits had to be partly filled in by hand, so that the teams could get over them. I noticed that the plowmen were frequently inclined to profanity while at this stump-lot job of plowing—however, this has had no bad effect, apparently, on the crop now growing on the land.

DRAINING THE FIELD.—This Spring, 1914, we started in to drain the field, or, at least, the wettest part of it. Every pit where the stumps were blown out was filled with water, *and stayed full*. There was no settling or leaching away. The field presented the appearance of a chain of small lakes; in fact, there was as much water as land in sight. There was a line of six-inch tile running across the foot of the swamp. From this we ran a submain up through the lot, touching as many of these ponds as possible. Then the laterals were staked off, and all ditches dug down about 18 or 20 inches. What ponds were not reached by these ditches were tapped by digging little trenches to them. Then after these had drained off sufficiently to admit of further operations work began again at the outlet point. This sub-main was in depth from 2½ to 3½ feet, and had a *uniform grade* of four inches to the hundred feet. This was done so as to allow more fall in the laterals where there is always greater need of it. It was a tedious, difficult job, but the men were interested in the work, and the job was finally completed—and done right. Then came the fitting of the land, clearing off roots and stones, etc. This was no small matter. The field was then planted to Leaming corn for silo use. The picture at Fig. 537, shows the condition of the crop in August, and it is simply an immense crop. I believe both dynamite and tile drainage deserve credit for present results, the dynamite for tearing up and mixing the soil and subsoil, and the tiles for drainage and aeration. As the years roll by, tile-drained land becomes better in structural and mechanical condition, and capable of producing better crops annually, provided it is properly farmed. No other feature of soil improvement can show as profitable results. HENRY E. COX.

Fall Spraying for Peaches.

I HAVE peach orchards where ground is so wet it is late in the Spring before I can get on the land with my sprayer. Would it be advisable to spray with lime-sulphur for scale in the Fall?
Wilson, N. Y. J. S.

Yes. We should, under such circumstances, spray in late Fall or Winter with either lime-sulphur or soluble oil. On our own farm we have just such a field, and follow this plan.

Care of Paint Brushes.

WHEN paint brushes are put away with more or less paint in them, they get very hard and stiff at the base of the bristles, although kept in oil. Can you tell me how to restore them to general usefulness? I think that I have heard something about boiling in water.
Litchfield, Conn. W. W.

To soften brushes get from your druggist one pint of benzole, not benzine; stand brushes in it a few minutes, then press up and down until soft; wash them first in turpentine, followed by warm water and soap. Or get at some paint shop one pint of paint remover; it is the same thing, but has a trademarked name which adds two dollars a gallon to price; use same as above. A. F. R.

WANT TO KNOW.

CAN anyone give me the name of the originator of the Troy Market Garden sweet corn? I am very anxious to set some seed as true to original type as possible. F. B. S.
Castleton, N. Y.

CONCRETE FENCE POSTS.—Does it pay to make fence posts of concrete? If so give directions for making. E. H. A.
Virginia.

COMING FARMERS' MEETINGS.

National Dairy Show, Chicago, Ill., October 22-31. The following meetings and conventions will be held in connection with the show: American Association Creamery Butter Manufacturers, Oct. 26. Holstein-Friesian Association of America, Oct. 26. International Milk Dealers' Association, Oct. 26 and 27. Conference, Secretaries of State Dairymen's Association, Oct. 27. Official Dairy-Instructors' Association, Oct. 27. National Dairy Union, Oct. 28. American Diary Farmers' Association, Oct. 28. Council of the National Dairy Show, Oct. 28. National Association of Creamery Managers and Owners, Oct. 28. American Jersey Cattle Club, Oct. 28. National Association of Ice Cream Manufacturers Oct. 28, 29 and 30. International Association of Dairy and Milk Inspectors, Oct. 29, American Guernsey Cattle Club, Oct. 29, Congress of Marketing, Oct. 29. Milk Producers' Association, Oct. 30.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Institute and convention, Lycoming County Farm Bureau, Williamsport, Pa., November 17-20.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 2, 1915, State College P. O., Penn.

January 9th to 15th, inclusive, 1915. Mid-Winter Exposition, Statae Fair Grounds, Columbus, Ohio, Corn Apple, Dairy and Poultry Shows combined.

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VAN DEMAN'S FRUIT NOTES.

Tardy-bearing Pear Tree.

FIVE years ago I planted a three-year-old pear tree which has never fruited, though three years ago it blossomed. Can you tell me what to do to make the tree bear fruit? R. E. B.
Grantwood, N. J.

If the pear tree is a dwarf it is very strange that it has not borne at five years from planting, but if it is a standard, which is very probable, it is not strange. Therefore it is not to be wondered at that no bloom has appeared except the little that came at one time. If after waiting a year or so longer no bloom appears it would be well to investigate the matter. There are great differences in the time of beginning to bear among the varieties of pears and as the name of this tree is not given it is impossible to give an opinion as to what should be expected of it.

Sweet Cherries on Mazzard.

I HAVE read that the reason our heart or sweet cherry trees do not last well is that the stocks they are budded on are unsuitable. Are Mazzard stocks a wild sweet cherry? W. J. H.
Raritan, N. J.

It is quite true that the main reason for the failure of many of the sweet cherry trees that were grown and sold by nurserymen is that they are on Mahaleb stocks, which is only suitable for the sour varieties. The cherry trees that are very common over many of the Atlantic States, New Jersey among them, and are often called a "wild" cherry, because they come up over the fields and along fence rows, are of the European sweet or Mazzard species. This is the parent of the good sweet varieties and is very suitable to use as a stock for them.

Transplanting Apple and Pear Trees.

WHAT do you think of transplanting apple and pear trees, 12 of each, that were planted in a row two years ago this Fall? I would like to plant English Morello cherry instead, as these were planted along a fence line, and wish to transfer apple and pear trees to a different row with several hundred different varieties this Fall. Would it be safe to transplant these apple and pear trees? A. W. G.
Perrysville, Pa.

I would say that it would be safe to transplant the apple and pear trees by taking them up very carefully, so as not to injure their roots more than is absolutely necessary. One very important point in the transplanting is to pack the soil between and over the roots very firmly. This insures the moisture in the roots being kept in the normal condition and injury from the drying influences of the Winter will not result.

Hybridization by Grafting.

A FRIEND here claims to have produced hybrid apples by inserting scions after their buds had opened, and that others have secured similar results, asserting that unless scions are dormant the fruit will partake of characteristics of both stock and scion. Can you cite any experimental data on this question? E. G. B.
Fredericksburg, Va.

There is not a particle of truth in the theory that hybrids can be made by grafting diverse varieties together. This has been disproven many millions of times by grafting and budding in nursery and everywhere and over the whole range of trees and plants, from pines to potatoes. Not a trace of the supposed transmission of varietal characteristics has been noticed in my own experience of over 50 years of budding and grafting, but entirely the reverse. And I have done the work at all possible times of year, including the active season of growth; nor have I ever had others who have had abundant experience to report a single case of that kind. Varietal or individual traits or peculiarities are transmitted through their sexual organs only. This is the law of nature in both animal and vegetable life. The resulting crosses show the blending of the traits of their parents. Grafting does not blend the varieties, nor does it blend the wood. Where a pear graft or bud joins onto a quince stock, as occurs on every dwarf pear tree, one is pear and the other is quince wood, quince sap, quince foliage (if there should be sprouts below the union), and above all is pear wood, pear sap, pear foliage, and pear fruit of the size, shape, color, flavor and season of the variety used. It is so with all of the other innumerable cases of grafting and budding that I have ever seen or heard of on good authority. All the contrary reports, so far as investigated, have been mere guesses or stretches of the imagination.

H. E. VAN DEMAN.

CROP REPORTS.

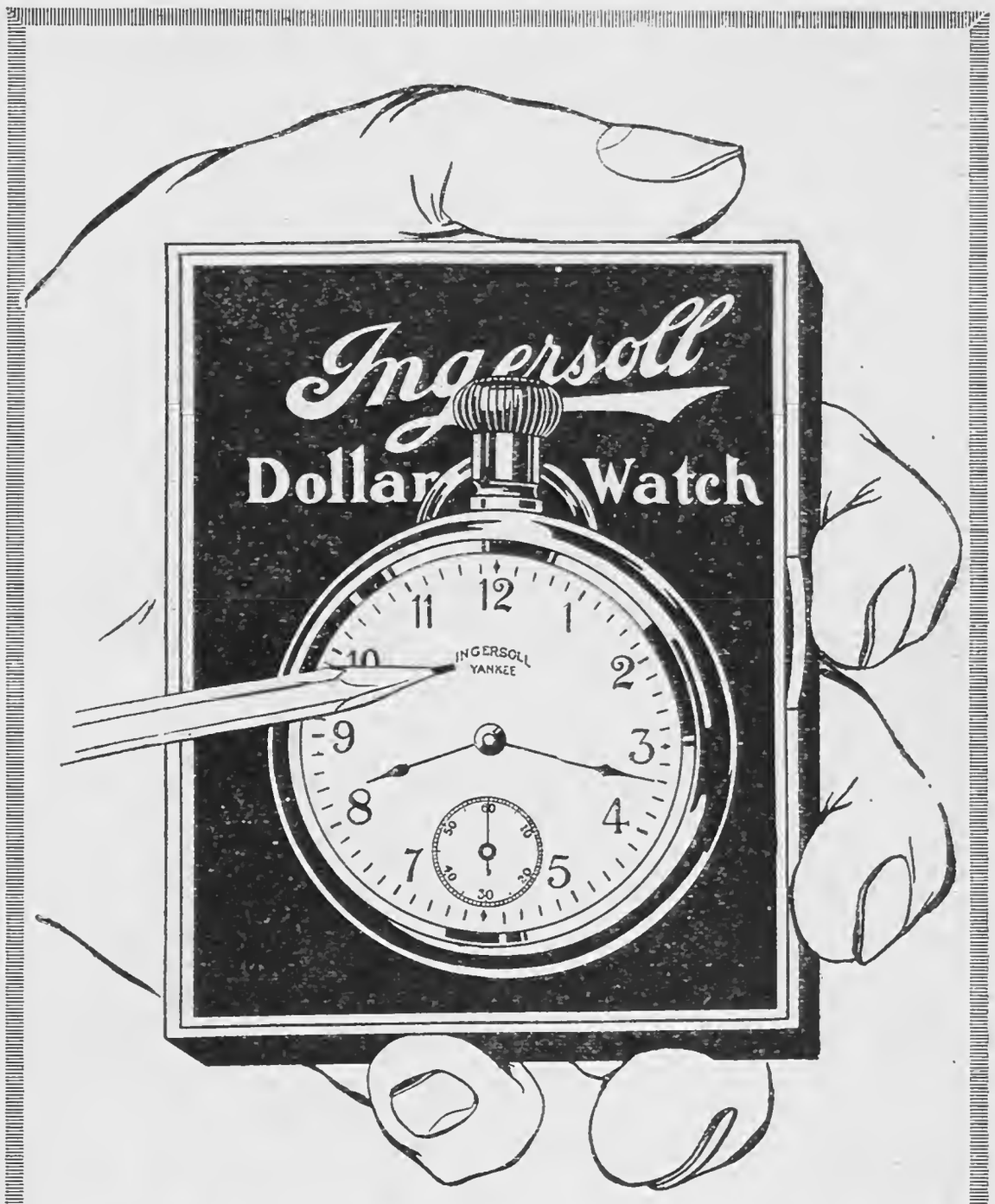
Oct. 10. Prices paid to farmers: hay $14 (loose) and $15 for baled; butter 22; eggs 26; potatoes 70; veal calves $8 to $8.50. I. W.
Coshocton, O.

Oct. 4 and no frost. Corn is still green on the stalk. Grass is green and flowers blooming everywhere. Plenty of rain all Summer and Fall. Pastures good. Hay crop is plentiful while corn and oats are up to average or better. Farmers are keeping usual number of cows, but are not buying any new ones. We raise our own cows through here and sell the surplus. Butterfat is high and pork, the main by-product of dairying here, is standing at a good figure.
White Bear, Minn. R. F.

Oct. 12. Crop conditions in this territory are normal. A drought of long duration, which dried up many springs and killed pastures, was broken by copious rain Oct. 10. Crops were good, hay a full crop and corporations offering $15 f. o. b. destination for it; potatoes coming out clean and of extra quality, selling for 65 to 80. Apples are a bountiful crop and supply exceeds demand, hence price low. Such as are prepared to pick and preserve for late delivery will get better prices. Oats 60; buckwheat 70; rye 85. Farm sales well attended and good prices obtained. Horses are lower in price and other live stock, especially cows and swine, are in larger demand. Fall grain about the normal acreage, and looks well considering the dry spell just over. Rye still being seeded. Hay bales and thrashers are busy, $1 per ton for baling and 2½ to four cents for thrashing charged for the work, the farmer to furnish all extra help and board the entire force. About 18 tons per day the average. L. E. K.
Ebensburg, Pa.

Oct. 6. Conditions are comparatively favorable in Jefferson County at the present time. The weather continues warm, there has been no frost and stock is running on wild pasture which is still yielding good feed. Wheat seeding is still going on. A majority of our farmers delayed seeding until late, hoping thereby to avoid Hessian fly, which was prevalent over a large territory this season. The wheat crop was thrashed early from the shock and a large share of it was marketed direct from the thrasher at 62 to 65 per bushel. It has since brought $1, but went off again and is now selling at 85. A large acreage is being sown this Fall. The corn in a large part of this county is fairly good, but east of here to the Missouri River it is a very poor crop, on account of lack of rain. Oats were the best crop in years, and selling at 40. Potatoes are a fair crop, selling at 80. Many carloads will be brought in here from Wisconsin, the Red River country, and Northwest Nebraska. Only two good cuttings of Alfalfa were put up this season, rainfall being too light to make much of the third crop. Stock cattle are increasing in number slowly. Such cattle are selling at 6½ cents to feeders. Hogs are scarce; fat ones selling at present at eight cents. Hay appears to be plenty at $8 to $10 per ton. Country butter 20; eggs 20. Apples were a complete failure here. The orchards are dead over a large region, trees that were set years ago and have never paid the taxes on the land they occupied.
Fairbury, Nebr. H. M. R.

Oct. 8. The principal crops raised here are sweet corn and tomatoes, for which the canners pay $11 per ton for corn and 30 cents per bushel for tomatoes. I did not raise either as crops, am selling a few fine tomatoes at 50 cents per bushel. I sold some sweet corn at one cent per ear. Summer apples 50 per bushel; peaches sold from $1 to $1.10 per bushel. There is no sale at present for apples. Wheat has run from 80 cents to $1; had an offer of 68 cents for my wheat, and was asked $7 per barrel for flour by same dealers. I sold part of my wheat at 80 and had the balance ground for hog feed. Hogs are selling at $9 per cwt. on foot or 20 cents added per cwt. dressed. Dairy products are low compared to other localities and in proportion to price of feed. Milk sells at six cents a quart delivered. Butter now 30; all Summer was from 16 to 20; eggs same price as butter. I have my experience relative to price of cottonseed meal, which I think should be investigated. I came here from Virginia last November, had been paying $1.50 per cwt. Our local dealer here charged me $2.25. Some time ago I read an article in the "Breeder Gazette" extolling the merits of cottonseed meal for dairy cows and deploring the fact that it was not more universally used by our dairymen in this country, while so much of it was exported, the price mentioned in the article was $25 per ton. If that is the price in quantity, why should it retail at $45? G. A. S.
Aberdeen, Md.



The Watch for the Man Outdoors

This is the watch that 40,000,000 people have found to be a reliable timekeeper.

It is the watch for business men, physicians, mechanics, farmers, and all practical men who decide that what they want in a watch is accurate timekeeping.

The Ingersoll is particularly a better watch for use where it is subjected to hard knocks, or exposure to dust, rain, or any bad weather.

And the Ingersoll can be bought in any store anywhere—on Broadway, New York, or at any little crossroad store in America; and the price is the same wherever you find it—One Dollar.

Look sharp for the name "Ingersoll" on the dial—the mark of the good timekeeper.

ROBT. H. INGERSOLL & BRO., 315 Fourth Avenue, New York

EVENTS OF THE WEEK.

DOMESTIC.—Three were killed and 14 persons seriously injured, Oct. 12, as the result of the wrecking of a Denver and Rio Grande train 16 miles from Grand Junction, Colo. The wreck was caused by a 20-ton boulder falling from a precipice and crashing through one of the cars of the train.

The entire business district of Spencer, W. Va., was destroyed by fire, Oct. 12, with a loss of approximately $300,000. The fire started in a fruit store and spread rapidly because there was no water with which to fight the flames. Little rain has fallen throughout this section in the last two months.

Thirty hungry sailors who experienced a narrow escape from starvation on the sea reached New York, Oct. 12, aboard the schooner Alice Lord, long overdue from St. Martens, in the Danish West Indies. The little vessel had been driven by a hurricane nearly one thousand miles from her course. For five days the only rations her sailors had were a plate of bean soup and two or three pancakes apiece.

University Hall at Columbia University, New York, was practically destroyed by fire, Oct. 10. The loss is estimated at $250,000.

Mrs. Annette Abbot Adams, the first woman to be appointed an Assistant United States District Attorney, took the oath of office at San Francisco, Cal., Oct. 13, in the Federal Court. Mrs. Adams immediately went about her duties as fourth assistant to John W. Preston, United States District Attorney for Northern California.

An attempt to wreck St. Patrick's Cathedral, New York City, with a bomb, Oct. 13, was followed at midnight by a similar attempt in St. Alphonsus Roman Catholic Church, at 312 West Broadway, near Grand Street. It was supposed that the two explosions were caused by the same person.

Washington, Oct. 12.—Assistant Surgeon L. W. Jenkins and five others were drowned when a boat from the revenue cutter Manning was swamped in a bad sea in Unalga Pass, off Cape Sariches, Saturday, according to a radiogram received today from the commander of the Bering Sea fleet. The boat was returning with a sick man from the lighthouse at that point when the accident happened.

James J. Farmer, Colonel William J. Hartley, Samuel F. Warfield and others and the Anglo-American Authors' Association, of 225 Fifth Ave., New York, were put on trial in this city, Oct. 13, on indictments charging the use of the mails in the operation of a scheme to defraud. According to the postal authorities, the defendants reaped profits amounting to nearly $10,000,000 in three or four years from the sale of ornate editions of classic and modern authors. Men and women of wealth have been led to pay enormous prices for volumes which they could have purchased from reliable booksellers for one-third or sometimes one-tenth of the price charged by the Anglo-American Authors' Association. Two of the men concerned pleaded guilty, Oct. 14.

FARM AND GARDEN.—In the boys' corn contest held at the Lancaster, Pa., Fair, Albert O. Bruckart of Lititz won first prize on White Dent corn in a class of 13 exhibitors. He was also awarded the grand champion prize of $10 in gold for the best 10 ears in the entire contest. There were 89 contestants from all parts of the county.

Consular Agent E. J. White reports as follows on fox farming from White Horse, Canada: "While the fox markets of eastern Canada, principally in New Brunswick and Prince Edward Island, are practically the same as last year, the prices paid here for young foxes this season are only about one-quarter of those paid last year. This is due to a law passed by the Yukon Territorial Legislature in March, 1914, providing that a fox from the wild state must be kept in captivity two years before it can be exported. Animals born in captivity may be exported at any time. As the majority of the young foxes captured are taken by Indians who are not prepared to keep them for any length of time they are bought by 'fox farmers,' of whom there are now about twelve in Yukon Territory, and kept by them until such time as they may be legally exported. The result of the passage of the law forbidding the exportation of captured young foxes has prevented outsiders from buying for immediate exportation, as was done in previous years, and in consequence prices are now much lower. A silver gray pup three months old, which one year ago brought $800 to $1,050, now sells for $150 to $250."

The Vegetable Growers' Association of America opened its seventh annual convention in Philadelphia October 6, to continue four days. The president, W. J. Ritterskamp, Princeton, Ill., introduced an interesting programme, which included lectures, essays, and tours to places of trade interest.

Another government nursery is being planned at the Great Plains Experiment Station, near Mandan, N. D.

The first annual institute and convention of the Lycoming County Farm Bureau will be held at Williamsport, Pa., November 17-20. In connection with this exhibit there will be held the fourth annual display of the Lycoming County Apple Growers' Society; the fourth annual display of the Holstein-Friesian Cattle Association; the seventh annual exhibition of the Williamsport Poultry Association and an official display, demonstration and institute of the Pennsylvania State College. Premium list may be obtained from Wm. S. Milliner, City Hall, Williamsport, Pa.

The Maryland Week Exhibition will be held at the Fifth Regiment Armory, Baltimore, November 17-21. It will be, as last year, under the auspices of the Maryland State Horticultural Society, and affiliated with this organization will be the Maryland Crop Improvement Association, Maryland State Dairymen's Association and Maryland State Beekeepers' Association. In the order named, these organizations will hold their annual meetings on Wednesday, Thursday, Friday and Saturday, with three sessions daily, in the Armory gymnasium. The formal opening on Tuesday night will be with an appropriate programme in which national government, State, city and various rural interests will be represented.

THE EUROPEAN WAR.—Antwerp surrendered Oct. 9, after a heroic defense, and is now occupied by the Germans. The King and Queen, and the entire Belgian army, with its British auxiliaries, escaped to Ostend. A great proportion of the civil population fled to Holland, across the Scheldt. It was reported, Oct. 12, however, that several Antwerp forts still held out. The German government has notified Holland that it will not disturb the neutral status of the river Scheldt.....The government of Belgium, with no place of safety, has abandoned the country, and its administrative offices are removed to Havre, on French soil. One reason for this was the dropping of aerial bombs on Ostend. King Albert has remained at Ostend to command the army.....

The University of Louvain has accepted the offer of the University of Cambridge, England, to continue its work there. .....Oct. 10, the Russian cruiser Pallada was sunk in the Baltic Sea by a German torpedo.....The British consul at Warsaw has asked the American consul to take over his office there, and it is believed that the capture of the city by the Germans is imminent..... The forty-four lists of losses in the Prussian army which have been published contain a total of 211,000 killed, wounded and missing, according to a Reuter dispatch from Amsterdam. The lists do not include losses among the Bavarians, Saxons and Wurtemburgians.....Oct. 11 Germans made another aerial raid on Paris, dropping bombs at several points, but doing little damage. One bomb struck the Cathedral of Notre Dame.....The campaign on the Aisne, called the Battle of the Five Rivers, continues; the Allies have advanced to Ypres, Belgium..... King Charles of Rumania died Oct. 10, aged 75. He had kept his country strictly neutral, but it is now believed that the country will side with the Allies.....Martial law has been proclaimed throughout the Union of South Africa as a result of a rebellion in the northern part of the Cape Province, which adjoins German Southwest Africa. Lieut. Col. Maritz, a Boer officer with a number of his officers and men, has gone over to the German forces..... The Japanese and Germans have agreed on a brief armistice to bury the dead at Kiao-Chau. The Governor of the territory is endeavoring to arrange for the departure of all non-combatants remaining in Tsing-tau.....Portugal began mobilizing troops, Oct. 15, and is expected to declare war on Germany. It is believed Portugal will be active in Africa.

BUFFALO MARKETS.

HOME-GROWN grapes are $30 per ton and 11 to 12 cents for seven-pound baskets. Apples of the home crop are not quoted at more than $2 a barrel, wholesale, with fair to good at 20 to 30 cents a bushel. It still looks as though part of the local crop would not be picked. Pears are $3 to $4.50 per barrel wholesale. Quinces of rather poor quality retail at 40 cents a third-bushel basket. There is a good supply of prunes at 30 to 35 cents per six-pound baskets. Potatoes are down again, 50 cents a bushel wholesale and 65 cents retail. The crop in this section promises to be large. Onions are 60 to 65 cents per bushel, fancy. Cabbage is $1 to $2.50 per 100. Beans are high, $4 per bushel for Marrow. There are still string beans, at 75 cents to $1.25 per bushel. This is a great chestnut year, northern nuts wholesaling at eight cents per pound and sometimes retailing as low as 10 cents a quart. Butter and eggs are higher, but cheese is dull and a trifle lower. Best creamery butter wholesales at 33 cents, fair grades at 26 cents. Cheese is 14 to 17 cents per pound, fair to best being about a cent off from last year and two cents from a year ago at wholesaling centers. J. W. C.

HUDSON Six-40-$1550

The Winning Class Car

For several years, among leading designers, a new-type car has been rapidly evolving. It came in response to motorists' demands. It began with the trend toward Sixes.

The aim was to remedy crudities and to end all over-tax.

That meant light weight. It meant economy of fuel. It meant artistic lines, ideal equipment. And it meant a reduction in quality prices. Most late-year efforts among high-grade designers have been bent in those directions.

Howard E. Coffin Started in 1910

Four years ago, Howard E. Coffin, the great Hudson designer, began to develop this Hudson Six-40 as the ideal coming type. During all those years he has had working with him 47 other engineers.

Part by part, detail by detail, they worked out their final refinements. Now this Hudson Six-40 for 1915 shows their finished conception of the new-day car.

They have saved about 1000 pounds in weight, by better materials and better designing. They have saved about 30 per cent in fuel by a new-type, small-bore motor. They have devised and adopted countless new attractions in beauty and comfort, in equipment and convenience. Their car of today represents the last word in modern motor car engineering.

Last year, by efficiency, they brought the price down to $1750. That broke every record on a quality car. This year, with a trebled output, they brought it to $1550. Now, at this price, which once denoted a low-grade car, you can buy this prince of class cars.

$3,875,000 Last Month

Note what a welcome men have accorded this masterpiece of Howard E. Coffin.

In June, when our first-year Six-40 was all sold out, we had 3000 unfilled orders. On August 1, 30 days after the new model appeared, we had 4000 buyers waiting. Yet our output had been trebled.

In September, motorists paid for this Hudson Six-40 $3,875,000. We built five times as many cars as in September a year ago. Yet we could not keep up with orders.

Now this model outsells any car in the world with a price above $1200.

Thus the Hudson Six-40 has become the leader among all the new-type class cars. The verdict of buyers, as shown by sales, is that no rival compares with it. Men waited weeks for this model when other cars were plentiful. It has multiplied Hudson popularity five-fold inside of a single year.

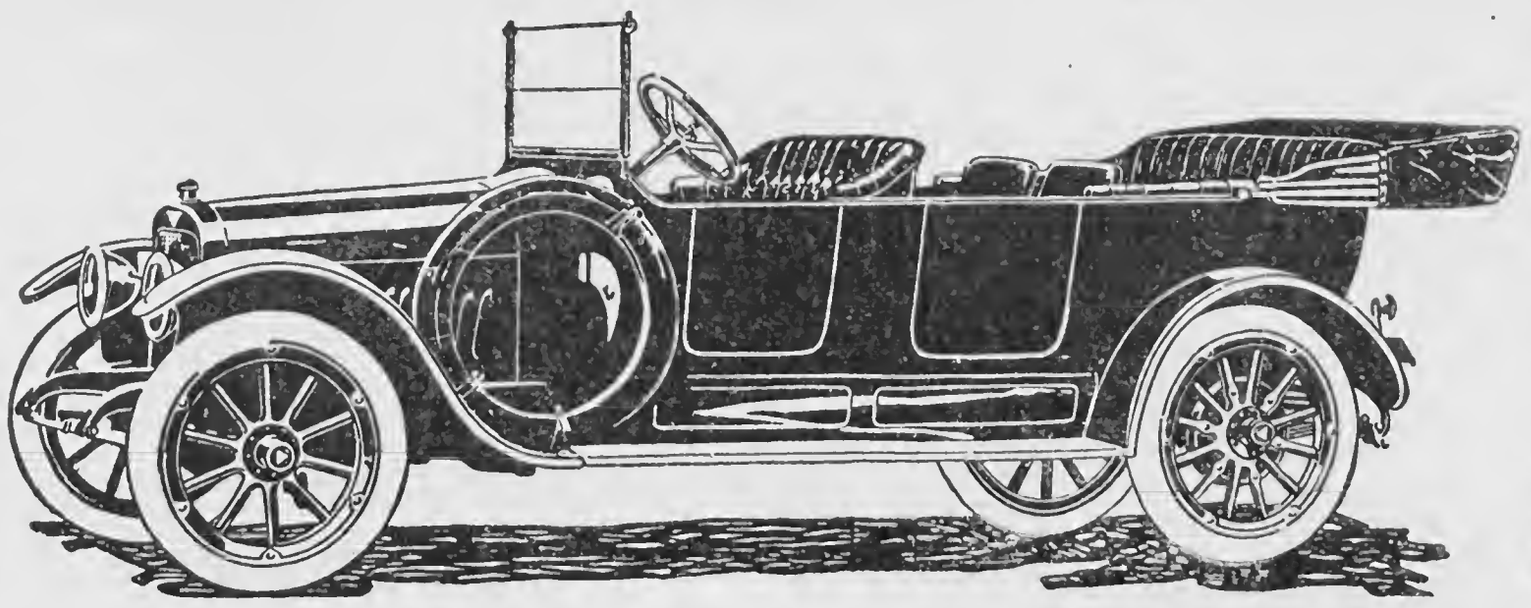
Go see this car now. Next year's models of all makes are out now, and this is the time to choose. Get your new car for fall driving; for the best motoring months of the year. Your dealer will see that you get prompt delivery, if we have to ship by express.

Phaeton, with two extra disappearing seats, $1550 f. o. b. Detroit.

Canadian price, $2100 f. o. b. Detroit, duty paid.

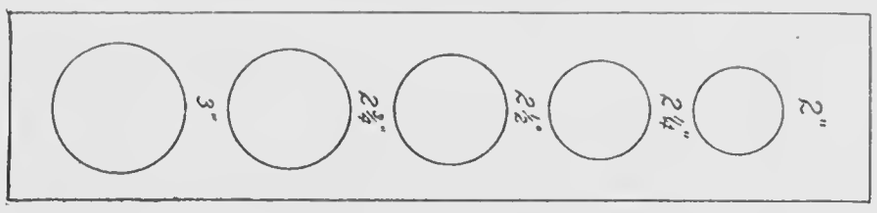
Hudson dealers are everywhere.

HUDSON MOTOR CAR COMPANY
8173 Jefferson Avenue, DETROIT, MICH.



APPLE-GRADING GAUGE.

The accompanying drawing shows a gauge for grading apples, which we find very convenient. After using it a short time a person can very nearly judge the correct size. The holes can be bored with



GAUGE FOR GRADING APPLES.

an expansion bit which can be purchased for 50 cents. D. R. G.

Red Hook, N. Y.

NEW BUSINESS FOR FARMERS.

WE have a report of a Massachusetts man, who lives back among the hills where there was not much business. Among other things, he had a little store, and has been depending upon the stage or farmers' wagon for hauling home his goods. Finally he tried an experiment with an auto truck. With this, he was able to make rapid trips to the county town and come back quickly with such goods as he needed. He was able in this way not only to supply his own goods, but do errands for the neighbors, and also carry passengers. This latter business finally developed very well, and he has established a regular route and a time for traveling back and forth between his country village and the town. By adopting a regular route and timing himself, so that people may know when he would reach certain points, he has developed a steady business, and people along the way are greatly accommodated by this service. This is only one example of the way country people are making use of these automobiles and trucks. There are a good many localities where, for a long time, people have impatiently waited for a railroad or a trolley service. In many cases, the cost of establishing such service would be altogether too great for the returns, but by making use of large automobiles or trucks, people in these outlying towns may be well served in the transportation of both passengers and freight. Another man that we hear of in a New England college town has developed a business of buying second hand furniture from farmers and others and selling it at a fair price, after cleaning and repairing, to college students. All sorts of things are being tried out in the way of developing a business, and many of them are succeeding in the line of putting to profitable use, things that would otherwise be thrown away. We have all got to remember that profit in modern business is now made by saving and utilizing things or opportunities which were formerly not considered or wasted.

How to Store Seed Potatoes.

SEVERAL of our readers have asked us for the best method of storing potatoes, in order to obtain fairly good seed for next year. These persons want to use selected seed of their own growing and have the ordinary farm facilities for handling seed. What would you advise such persons to do with their seed in order to hold it to the best advantage?

Prime essential is to keep tubers from freezing and dormant until planting. I have never enjoyed other facilities than dwelling-house frost-proof cellars, but utilize every weather advantage of temperature to get them cooled down to 35 degrees as soon as possible and keep them there. I obtain desired temperature by opening to outside air when cool and closing when warm. I do not think excessively moist air desirable, nor ventilation. I prefer dry soil at digging and no exposure to sun. I was for ten years a potato dealer, and the best kept potatoes I ever handled were from an unused dwelling cellar that had been heavily banked well up against house and unopened until July 1; cellar bottom was earth, neither wet or dry. My customers in absence of assurance to contrary, believed them of that season's growth.

New York. E. A. HILL.

On storing my seed potatoes I put them in the house cellar when dug and leave out the cellar windows until freezing weather, but cover the windows during the day to keep cellar dark. The idea is to keep them in a dark place and at a low temperature, 35 to 40 degrees, and then they keep dormant and firm; warm cellars would be liable to cause them to heat and start decay and lower the vitality of the seed. In a long, cold spell I have seen the frost stand on the cellar walls on the north side of the cellar, but does no harm unless it gets cold enough to freeze the potatoes, which it does not. Keep them dark and in a cool place for good seed. W. L. HANNAH.

Maine.

Since we are growing a variety of early potatoes which sprout early in the Spring, and since we do not wish to plant until about June 1, it is a problem to store the seed in such a way that the sprouts will remain dormant until a short time before planting. For a number of years we stored the seeds in a house cellar, but the vitality of the seed was very often seriously injured by early sprouting. We have, therefore, adopted a method of wintering our seed potatoes out of doors in a pile covered with alternate layers of straw and dirt. We choose a well-drained spot for the pile, preferably on the north side of a building where it will not be exposed to the sun. We set up two boards on edge, four feet apart, and pile between these boards all the potatoes that we can, making an A-shape pile as long as is necessary to store the number of potatoes we wish for seed. Then beginning at the base of the pile we place forkfuls of straw about one foot thick, lapping them carefully so there will be no thin places. We build up each side of the pile in this way, and finally lay forkfuls of straw along the ridge. Then we cover this pile with about four inches of dirt, which we allow to freeze. The dirt may be taken from the ground near the pile, but not nearer than three feet to it. After the first layer of dirt is frozen we put on another layer of straw like the first, then a layer of about six inches of dirt. In a normal Winter the pile will go through with this covering without any loss from freezing, but it will be safer after the last layer of dirt has frozen to pile on more straw, corn husks or any material which is handy in order to protect the pile from too severe cold, and to keep the layers of earth frozen until late in the Spring.

A cool day should be chosen for making the pile, so that the potatoes will be cool when they are stored. If this point is not observed the pile may heat and potatoes start into growth. We have no difficulty in keeping potatoes stored in this way until May 20 in a perfectly dormant condition. I would advise anyone who contemplates trying this method to be very careful in getting the layers of straw and dirt evenly distributed and of uniform thickness. If this is done and the potatoes put into piles when cool, and the first layer of dirt allowed to freeze before the second one is put on you may expect the seed to keep perfectly.

Vermont. E. S. BRIGHAM.

R. N.-Y.—Let everyone remember that this advice is for a cold country like Northern Vermont. If the pile is put up properly and the seed put into the pile when cool this is the best method for storing seed potatoes in cold climates. It would not, however, do farther south, where Winters are warm, and it may be rather dangerous to recommend to people for fear that they will not be careful in putting on the layers of straw and dirt according to directions.

A FARMER living not far from Boston was disappointed the other day when Mrs. Blank, one of his regular customers, refused to buy any more eggs from him. "They are not satisfactory," she told him. "Some of the last lot were not fit to use." "But, Mrs. Blank," remonstrated the old man, "a hen is bound to lay a bad egg now and ag'in."—Boston Transcript.

Paid $105.00 for a Studebaker wagon 38 years ago

IN 1876, Mr. R. F. Dewey, of Millersburg, Ind. bought a Studebaker Farm Wagon for $105.00. Mr. Dewey writes:

"I have a Studebaker wagon that I purchased of E. A. Welch in Goshen in the spring of 1876. I paid $105.00 for it. It was a high wheeled, narrow tired wagon when I got it but I later had it cut down and made into a wide tread. I am still using the wagon on my 160 acre farm, 8 1-2 miles southeast of Goshen. It has had all sorts of hard work. At present I am using it to haul cordwood."

COST HIM $2.77 A YEAR

Figure it out yourself. Divide the cost of the wagon, $105.00, by thirty-eight years and you will see that Mr. Dewey has been paying in the neighborhood of $2.77 a year for his farm wagon—or about three quarters of a cent a day.

Think of the money that this wagon has earned for Mr. Dewey and the money it will continue to earn, because every year's life added to 38, still further cuts down the cost of the wagon.

But that is the way with a Studebaker wagon. Built of air dried lumber and tested iron they outlast other so called "Standard" farm wagons by many years. Studebaker wheels alone are a guarantee of long life. The slope shoulder spokes, the carefully pinned felloes, the inspected hubs all contribute to wearing qualities and ability to stand up under hard work.

You can buy cheaper wagons than Studebaker's. But no wagons made have the reputation for lasting as long as Studebaker's.

Studebaker Buggies and Harness carry the same high standard of excellence as Studebaker Wagons.

STUDEBAKER South Bend, Ind.

NEW YORK CHICAGO DALLAS KANSAS CITY DENVER
MINNEAPOLIS SALT LAKE CITY SAN FRANCISCO PORTLAND, ORE.

Adv. 2011

Studebakers last a lifetime

Waterproof

Not nearly — not fairly — but *dryly* waterproof

TOWER'S FISH BRAND

REFLEX SLICKER

The wet weather coat for you for good hard service. Light weight, strong, and big all over for comfort.

$3.00 Everywhere Protector Hat, 75 Cts.

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—the most frequent and dangerous. Protect it against the ravages of rain and snow storms by roofing with

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Metal Shingles

"We Pay the Freight"

You can now buy direct from us at factory prices and save money.

These long-life shingles are fire-resisting, weather-proof, cold and heat-proof. Cheaper than wood shingles and easier and quicker to lay. Do not rot, curl, crack, buckle nor fall off.

Every shingle guaranteed. Made of full 28-gauge steel, painted or galvanized, and come single, eight to sheet or in clusters 2 ft. by any length 5 to 10 ft.

Send for New Big Catalog. Shows how to get full protection at a very low cost.

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The New GREENWOOD LIME and FERTILIZER DISTRIBUTER

TOP FEED—NO RUSTING—NO CLOGGING

Accurate indicator for 100 to 3,500 lbs. per acre, whether material be wet, dry, sticky, lumpy, heavy or light. Write for booklet R to

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BROWN FENCE

Direct from factory, freight prepaid. Over 150 styles for every purpose, all *Double galvanized*. 13c per rod up. New Bargain Catalog and Sample to test, ALL FREE. Mail postal NOW, to THE BROWN FENCE & WIRE CO. Dept. 59 Cleveland, Ohio

Mothers and fathers look at this bargain!

BOYS' NORFOLK SUIT with extra pair of trousers. Made of all wool, fast color blue serge that resists the hard wear that boys give their clothes. This suit, with extra pair of trousers, is cut in beautiful Norfolk style. Any boy will be proud of it—and parents will be proud of their bargain. The knickerbockers are lined and have belt loops and suspender buttons. Coat is also lined. Suit has all usual pockets. A big bargain. Sizes, 6 to 17 years. *State age.* No. 4E528, Norfolk Blue Serge Suit, with extra pair of trousers. Prepaid price, $4.95

We pay delivery charges. We guarantee quickest service, save you the most money and give you New York Styles. Just a penny postal brings this big book of 125,000 bargains by return mail.

If you haven't a copy of "Your Bargain Book," write us a postal or letter now. It's the greatest big mail order catalog ever printed. Turn to page 195 and see beautiful color illustrations of this and other boys' suits. Turn to other pages for ANYTHING you need.

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The Charles William Stores

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Feed Grinding and Wood Cutting

In the Winter every farmer finds himself beset with numerous jobs—big and small—every-day jobs and occasional ones. This is where an efficient, reliable power plant is a time and money saver.

The "Badger" Engine is made well from start to finish; made to run without interruption; not merely to sell.

It is simple—anybody can run it or adjust it. It is economical, using less gas or gasoline than any engine known. It develops more power than rated. There are many types and sizes of "Badgers" to suit every individual need. Any BADGER is a GOOD engine.

The "Badger" is always ready to run—Winter or Summer—at an instant's notice. **Every part guaranteed for five years unconditionally.**

Send for Catalog. Free Engineering lessons sent on receipt of dealer's name. Address. The Christenson Engineering Co., Milwaukee, Wis.

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GASOLINE ENGINES

Hope Farm Notes

HOPE FARM "HENS."—Let us call them "hens," out of consideration of the feelings of those who say they are not "scrubs." I went up to Storrs on Oct. 10 to look over the contest and make arrangements for the "Favorite Hens." My birds are there, happy and lively—though most of them are molting. Naturally they have tapered off on the egg yield, but it looks as if they would reach 1,300 eggs by November 1. Now I want to give their individual record up to Oct. 1 so that we may see that even "hens" as well as pure bloods may be drones or lazy members.

THE HOPE FARM "HENS."
Record from Nov. 1, 1913 to Oct. 1, 1914.

	1	2	3	4	5	6	7	8	9	10
Nov.	0	0	0	0	0	0	0	0	0	0
Dec.	0	0	0	0	0	0	0	0	0	0
Jan.	0	6	0	0	0	0	0	7	0	0
Feb.	0	10	0	6	1	5	0	14	9	0
Mar.	10	17	6	14	5	12	17	17	22	15
April	18	23	19	14	21	21	15	17	20	20
May	21	22	23	21	28	25	13	19	22	19
June	7	19	22	19	21	19	11	18	23	9
July	18	21	20	18	12	15	4	10	25	22
Aug.	13	20	17	8	16	10	15	20	26	21
Sept.	4	4	0	0	12	20	4	16	22	8
Total	91	142	107	100	116	127	79	138	169	114

There were enough eggs laid outside the nest to make a total of 1,250 up to Oct. 1. As for feed, these 10 hens consumed up to Sept. 19, 484 pounds of dry mash and 612 pounds of grain. This covers 313 days, and makes a little less than 25 ounces of mash and 31 ounces of grain per day for the 10 hens, or 2½ ounces of mash and a trifle over three ounces of grain per day for each hen. These hens also consumed a little over eight pounds of grit, four pounds of charcoal and 25½ pounds of shells. I will not figure profit or loss on the hens until Nov. 1, when the full year's record is completed.

There is a wide margin between the record of No. 9 and that of No. 7. No. 9 is a good White Leghorn. Judge Card scored her 90 points. No. 7 is a mongrel showing marks of several breeds, with Brown Leghorn perhaps predominating. I picked her as the best one in the pen—she has turned out to be the drone. Yet you see she went about 140 days before laying an egg. That adds to the glory of No. 9. She went over 100 days without laying. Take her record since March 1. In 214 days she has laid 160 eggs. She is still laying, and will probably reach 175 eggs by Nov. 1. No. 8 began laying in January, but fell down later on. Here is another mongrel with Red blood dominating. The Leghorns average 142 eggs, the Rock culls average 98, and the mongrels 122. As you see they all waited nearly 100 days before laying an egg, for they were in very poor condition when they reached the contest. Their record is really for nine months. Now these hens are to be carried on another year under the same conditions of feeding and care. We shall see what they do next year. My belief is that they will lay more eggs by 200 than they have this year. I base this prediction on the fact that they are now in very much better condition than they were one year ago. They will, I think, start off promptly after recovering from their molt and keep it up. Now then, who says my "hens" will not reach 1,500 eggs next year? I did not expect them to lay over 750 in this contest. Now, I am inclined to back them to double that figure. Remember they will be bred to two different cockerels during the season!

DOUBLE CROPPING.—You will remember that we plowed up a five-year-old strawberry bed after this year's picking, and about July 4 planted potatoes on the sod. These potatoes were dug during the first week of October. It was a light yield, as we evidently did not use the right kind of seed. When the potatoes were dug we chopped up the soil with the harrows, fitted it well and set out strong layer plants of strawberries in rows three feet apart and two feet in the row. These plants are starting off, though the soil is very dry. I do not claim that these plants will give a crop next year. They will bear a few fine berries, but will make a better growth if we can carry them through the Winter than Spring-set plants. But see what we are doing. On land very suitable to the strawberry we get five good crops. The ground is plowed and fitted by growing potatoes. Then it comes back, the same year, into strawberries again—the crop best adapted to the land. Next year, if we like we can run a row or two of lettuce or early beets along the rows of strawberries while the latter are growing.

MAKING BARN INTO HENHOUSE.—As usual I am after information, and as usual I go right to the fountain's head. Can I take a regular country barn and by lining it with tarred paper or anything else, make it comfortable for White Leghorn hens in Winter, and make it so comfortable the hens will lay in cold Winter weather? What would it be best to line it with? A. R. P.
New York.

Yes, you can line such a house with thick tarred paper so it will be comfortable. The chief thing is to keep out the wind and prevent draughts. We should batten the cracks over, and then tack the tarred paper over the inside so as to leave, if possible, an air space of about three inches between the wall and the paper. Make both airtight if possible. I should try to make the walls of such a hen barn not unlike an icehouse—making the inside tight and warm, and then attending to the fresh air problem. While you can make such a building comfortable, it is another thing to make the hens lay. It is not the barn, but the man who becomes responsible for that.

NOTICES.—Several people have asked me to reprint a notice which is sometimes pasted up on the barndoor at Hope Farm. I presume they mean the following. The suggestive treatment is often better than attempts at prohibition. It surely seems to me ridiculously inconsistent for a man to try to prohibit others from doing just what he does himself. For example, think of a man who uses tobacco freely commanding his boys not to smoke cigarettes!

NOTICE

THE HOPE FARM MAN

is quite capable of drinking all the liquor, doing all the fighting and all the swearing that will ever be necessary on this Farm.

He could also, if necessary, tell most of the stories and find use for all needed tobacco.

Business Hours belong to the Boss!

COW ON BOUGHT FEED.—Can a cow be kept without a loss where all feed is bought and there is no pasturage on or near the home? G. B. G.
Wilmington, Mass.

I should figure in such a case that I should be obliged to feed the equivalent of 2½ tons of hay and 3,000 pounds of grain to keep the cow one year. If this were all bought it would cost in this section about $95. The cost of a cow would be $75 or more. I should figure at least 10 per cent. for yearly depreciation in value. Labor, rent, medicines and similar expenses would come to $15 at least, or a total of $117.50 as year's outgo. Now if your milk costs you eight cents a quart to buy, your cow would have to give, say 1,500 quarts, to pay her way. At six cents this would be 2,000 quarts. If you have a garden the manure could be used to advantage, and the wastes from corn and beans or the tops of roots or vines will all help cut down the cost of food. In our own case the cow will make use of much roughage which could not be otherwise used profitably. The chances are that it will cost you $125 or more to take care of a single cow. A good one ought to be profitable if you put little or no value on your own labor, and have shelter for her so that it will not be necessary to build.

CRAB GRASS.—We have had considerable to say about crab grass lately—among the rest a note about this pest in a lawn. The following note is from Dr. W. J. Beal—the most noted farm botanist in the country. Years ago the Hope Farm man studied botany under Dr. Beal, but as we see without much fame to student or teacher:

"I mail a specimen of one common sort of crab grass, Digitaria humifusa, or Panicum glabrum, often bad in lawns, an annual grass, everything except seeds dying in the Fall. Your note on page 1149 must mean witch grass or quack grass. When I tell my son-in-law some points in botany or horticulture I say as I do to you, 'This is instruction that I neglected to drill into you when you were my student.' To get rid of either species of crab grass make the lawn richer and the better lawn grasses will keep Mr. Crab out. Crab grass is also known as finger grass." W. J. BEAL.

I will testify that Dr. Beal did his full duty. He drilled hard with a strong arm and a good drill, but I fear he struck a head so hard that it turned the edge of the drill. H. W. C.

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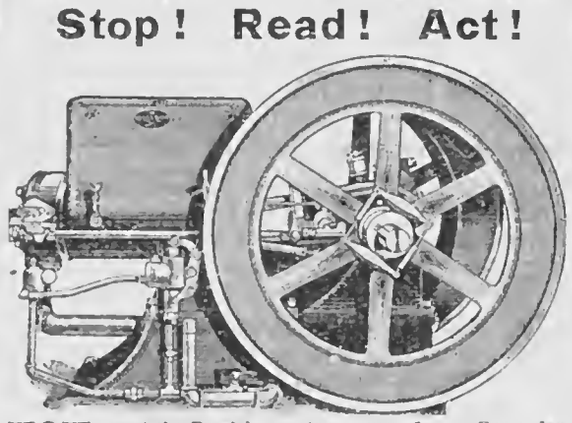

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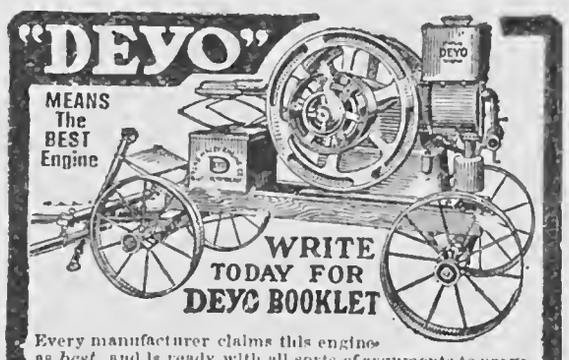

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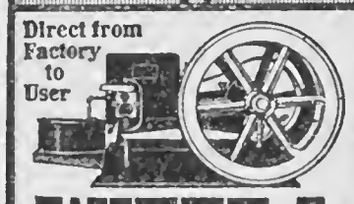

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Department "M"
The Rural New-Yorker
333 West 30th Street
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40

Ruralisms

Landscape Gardening as a Profession.

WILL you advise me as to how I should proceed to learn the profession of landscape architect? How long would it take, and what are the possibilities? I have a natural taste for it.
New York. J. J. R.

Take the course in landscape gardening at Cornell University; after graduating from there secure employment with some good firm making a specialty of landscape gardening, which will be necessary for the rounding out of your knowledge of the work. There is very much to learn in this profession. One must not only know how to draw plans for the improvement of the landscape, but he must have a thorough knowledge of all the species and varieties of trees, shrubs and plants generally used in the adornment of the house grounds, public parks, cemeteries, etc., as to their habits, height of growth, color of foliage, time of blooming and color of flower, that he may group them or use them as single specimens in a pleasing and harmonious manner. The length of time required to acquire this knowledge cannot be accurately estimated, as so much depends upon circumstances in each individual case. A natural love and aptitude for the profession will be much in favor of the aspirant, hard work and close application to the studies will also have a tendency to shorten the period of qualifying for the profession, but at best several years of hard study and practical work will be necessary before you can become a professional landscape gardener.

This is one profession that does not seem to be over-supplied with good practical men, and is undoubtedly more promising than most of the older and more common professions. Landscape gardening in America has scarcely advanced beyond the infant period. The next 25 years will witness vast strides along this line of work, and good landscape men will be in great demand at very attractive and lucrative figures for their advice and work. By all means go ahead and acquire the profession if you can possibly do so. K.

Roses Choked by Stock.

WHAT is the matter with my roses? I am enclosing samples, so you will understand better what I mean. The garden was planted with best roses that could be bought. The first and second year they did finely, but since that time they have been steadily going back, that is, what I call growing wild. Every new shoot that came up is like the sample, and instead of the beautiful double flowers I only have single ones. This rose garden has the best of care in the Fall, before hard freezing, it is given a heavy mulch of oak leaves and well rotted stable manure; in the Spring the coarse mulch is taken off and the fine is forked on; they are gone over thoroughly and pruned of all dead wood, but they are still going back all the time. T. W.
Tarrytown, N. Y.

The twigs sent are the brier rose, and the whole trouble is that the bud has been choked out by the stock on which it is budded. In planting budded roses they should always be set with the collar—the point at which the union is made—two inches below the surface; this gives the graft a chance to form, in time, its own root system, and also lessens the chance of winter-killing at the point of union. Even with this deeper planting the stock will throw up a good many shoots, in some cases, and these must always be cut out as soon as they show, or they will certainly choke out the less vigorous graft. The brier rose has seven leaflets, the stems covered with small thorns, like those sent us, and this is easily distinguished. The Manetti rose, also much used for stock, has few thorns, three to five leaflets, sometimes seven. These "wild" shoots usually come up on the outside of the plant, and it is quite easy to detect them; if you feel uncertain follow the shoot down to its point of growth, and rub the bud right off. We have grown budded roses for years without ever having the experience complained of, but they have been set deep and every suspicious shoot removed, in the few cases where they have formed. Anyone who plants roses should notice whether they are on their own roots or not. Such a wholesale disappointment as that described by T. W. is very rare; yet it may easily occur if the persons managing the rose garden have no suspicion that the stock is thus strangling its foster offspring. Of course the only thing to do is to dig out these roses, and either replace them with own-root stock, or utilize this unhappy experience in the care of any worked plants used.

Eradicating Woodbine.

WHAT is the best way to get rid of woodbine vines? They are near a dividing wood fence between two yards. I thought I would dig the roots of the vine out this Fall and again in the Spring. Is there anything more that could be done to kill them? C. H. T.
Hartford, Conn.

Woodbine is the popular name of Lonicera grata, one of our native honeysuckles. The name is also inappropriately applied to Bignonia radicans (Chinese trumpet vine) and Ampelopsis quinquefolia (Virginia creeper, five-leaved ivy). All these species of vines are very tenacious of life and very difficult to eradicate, as almost every piece of root left in the ground will sooner or later send up sprouts and shortly become an established thrifty plant. The best method of eradicating them is to grub out the plants, digging the ground over thoroughly, picking out and casting aside every piece of root brought to view, which work should be done this Fall. Next year if any sprouts appear, they should be chopped out promptly. If none is allowed to grow during the Summer, it is possible that the plants may be entirely eradicated by Fall. K.

Selecting Lima-bean Seed.

THE New Jersey Experiment Station has sometimes had complaints to the effect that lima beans have been growing less productive or later in season year by year. If it is true that some growers save their seed from what is left of the crop after the marketing season is over, this state of affairs is little to be wondered at. Seed set late in the season is apt to be poor of germination and growth because cool weather and weakened plants are not likely to produce strong seed. More than this, seed saved from the last of the crop is more apt to come from late than from early plants, as the latter have by that time yielded their best product. Seed for sowing should be borne by the plant at the height of the season, or better still, all the seed of selected productive plants may be saved.

Most growers reject discolored seed, and that which is under size or misshapen. Special care should be taken in this direction during the present season, because a disease that badly spots the pods has done some damage in bean growing sections. Many pods so spotted give seeds of a pale yellow or brownish color. The Experiment Station specialists in plant diseases say that although this spot may not wholly destroy the seed or may not be transmitted through the seed, beans so diseased may give weak, early growth and, if the planting season be cool, are more apt to rot in the ground.

THE hundred and twentieth inquirer: "What is the matter, constable?" P. C.: "Motor-bus ran over a cat, mum." Hundred and twentieth: "Oh, dear me! Was the cat in the street, constable?" P. C.: "No, mum, the motor-bus chased it up the lamp-post."—Melbourne Australasian.

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A National Weekly Journal for Country and Suburban Homes

Established 1850

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UP and down through the Hudson Valley large quantities of rye are grown. Years ago in the upper valley rye straw was a standard and profitable crop. It is now to a less extent. In late years green manures and cover crops have become popular and most of us come to believe that no matter what other seed we use it pays to put in some rye to make sure. This season a company of farmers organized to buy and sell produce and supplies. They had, combined, a large quantity of rye. On sending samples to a large milling concern they found that their rye contained garlic. Such rye (with garlic) was quoted at 80 cents, while rye free from garlic brought 96 cents. Here was a difference of 16 cents a bushel, or 20 per cent. of the price lost through foul grain. Here is something for the Hudson Valley farmer far more important than the European War. The farmer cannot influence the war, but he can clean up his seed! Much of this trouble is due to the common practice of borrowing or changing seed with the neighbors, and not fanning or cleaning it in any way. In the company of farmers here mentioned this loss from unclean rye seed reached nearly $1,000!

*

DURING the past few weeks the inhabitants of Belgium have given the world an example of fierce, bulldog courage in defense of their country. We are not discussing their motives or the justice of their cause, but referring to the fighting quality of men whose ancestors made even the great Cæsar turn back, and this is why we refer to it. A few years ago we had a visit from a scientific gentleman who had spent some years studying conditions in Europe. This man said that the Belgians were becoming a weak, effeminate race—"a race of old women" was the way he put it. This was due to diet, he said. The average Belgian rarely ate "good red meat," but lived upon vegetables, bread, cheese and eggs or poultry. Such a diet would tame any nation, and take the fighting spirit out of them. Our friend claimed that only the large meat-eating nations would show any patriotism—"potatoes and pullets make a tame dog—not a fighter!" It looks as if the Belgians had eaten a few roast bantam roosters along with their potatoes and pullets! It does not make so much difference what a man eats. It is the spirit of the man that counts. Nine-tenths of the people who reach 40 years would be far better off if they cut half the meat out of their diet.

*

EVERY week we are asked to help settle a milk trouble which results from a dispute over testing. The milk in question is bought on the basis of its per cent. of fat—the testing being done by the buyer. Sometimes the dairyman feels that he does not get a fair showing—that the test is not accurate. A fraction of one per cent. of fat in a month's supply of milk will make a big difference to a farmer, and cutting down the multiplier in this way is a serious thing. In New York State, when a farmer is not satisfied that he is getting a square deal he can apply to the Department of Agriculture. An inspector will come and sample the milk, and it will be analyzed by the State's chemist. Yet this is not always satisfactory, as in such a dispute it is a contest between two inspectors and two chemists. A better way is for the dairyman to obtain a Babcock tester and learn how to operate it accurately. This will enable him to check off the record so that he may be sure of his ground. It is the same principle of having a good pair of scales at home and weighing feed or seed as it is received, or farm produce as it is sold. Without the milk tester and the scales the buyer or seller has all the advantage in dealing with a farmer. With these implements and a good knowledge of their use the farmer can protect himself.

IN an ordinary season this might be considered very early to talk about buying seeds for next year. It is no ordinary season, however, and our advice to careful gardeners and farmers is to start now in bargaining for a seed supply. The war in Europe has involved several countries which supply large quantities of seeds. In some cases these seeds will not be furnished at all—in others they cannot be as carefully selected or handled as would be the case in time of peace. Those who order first will have best chance at the true seed supply and run less risk of obtaining "misfits" or adulterated seeds. Again, in such a season as this one is to be, farmers should be careful to have samples of their seeds tested by the experiment stations or the Agricultural Department. There will be a rush of this work later. The stations can do careful work for you this Fall and early Winter. There never was a season when it paid to hunt for "cheap" seeds, but this year the folly of doing so is greater than ever. Our advice is to patronize a reliable seedsman of long standing reputation and to make out your order early.

*

THE Land Bank of New York is now a reality. The Board of Directors held its first meeting at Albany on Friday, Oct. 16. The Land Bank has the full $100,000 capital pledged—the subscribing associations representing total assets of $20,000,000. The bank will be open to do business as soon as the legal papers are executed. Money will then be available for loans on farms and homes in this State. The names of the first Board of Directors follow:

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Robert B. Van Cortlandt, Mount Kisco.
William H. Judson, New York.
Charles S. Folsom, New York.
George F. Flandereaux, New Rochelle.
David B. Hutton, Brooklyn.
James P. Judge, Brooklyn.
Benjamin Thompson, Brooklyn.
Bernard G. Parker, Gouverneur.
Edgar A. Newell, Ogdensburgh.
Elmer E. Stanton, Troy.
Frank D. Kingsbury, Corning.
W. C. Cooper, Oswego.
J. C. Farnwell, Geneva.

These directors will serve until the first annual meeting in January, when a new Board will be elected by the members. The first three are elected from the State at large, the others represent the four judicial districts of the State—three directors from each. The stupidity of politicians was revealed in an incident connected with this meeting. While the directors were arranging for the opening of the bank the city papers which fear that Governor Glynn will get credit for the Land Bank, were busy writing editorials to discredit it; and the directors on reaching the street after completing their arrangements, read in the Albany papers that the Land Bank would never be organized. Here is an institution to benefit all classes, purely coöperative, and generally demanded; yet these blind partisans think they can kill it with sneers. They would show more sense if they joined the Governor and other supporters of the Land Bank, and demanded credit for a share in it.

*

THE business of growing hickorynuts in New England ought to be made as large and profitable an enterprise as growing pecans in Louisiana or walnuts in California. No one questions the immense development of these last-named enterprises. Without question somewhere off in the woods are to be found varieties of hickories far superior to those now picked and sold. Compare the present hickory situation with that of apple growers before such varieties as Baldwin, Grimes or Greening appeared. Farmers grew mostly a few inferior varieties, or had orchards of natural seedling fruit. Some one, wandering in the woods, discovered a tree with fine, superior red apples. It became known as Baldwin, and its wood used for propagation was carried far and wide, changing the entire character of New England apple growing. New England nut-growing will in time be changed and improved in much the same way. Superior hickory trees will be found and tested, and the coming nut grower will learn how to use the wood of the high class nuts for propagating trees. We have every confidence that this will be done until some day the New England hickory will rank with the California walnut and the Southern pecan as representing a large industry. Every man who knows of any superior hickory tree should notify the Northern Nut Growers' Association. He will not obtain wealth by doing so, but he will do more—help a good cause.

WEST VIRGINIA has a law under which agents of the State Crop Pest Commission are authorized to enter private property and cut down cedar trees which carry their share of the cedar and apple rust disease. This plant disease, like some others, passes parts of its life on two different plants. Part of its development is made upon cedar trees—from which it is carried to the apple, where it often causes great damage. It is often difficult for farmers to realize this fact of the part played by cedar trees, and when the crop pest agents came to cut the diseased cedars down some of them were arrested and indicted for malicious trespass and conspiracy. Suit was also brought asking for an injunction to prevent further action of this sort by the Crop Pest Commission. The argument was that this law was unconstitutional, since it interfered with the rights of private property. At the trials of these cases it was necessary for the scientific experts to demonstrate the true character of the rust disease. They were obliged to prove that the cedar was its "host plant," and that it could not be developed and spread unless there were cedar trees reasonably near the apple orchards. This they succeeded in doing, and the cases were dismissed. The court has now decided that the law is constitutional, and that the State has a right to enter property and destroy the cedar trees on the theory that by harboring the rust disease they are a menace to the apple growing industry.

*

WHEN Tom Barron was at the egg contest last July, he invited American breeders to enter an English contest which starts at Burnley, Lancashire, on October 28. American hen men will be glad to know that Francis F. Lincoln has sent a pen of his Leghorns to measure eggs with the English birds. Mr. Lincoln's hens are now ahead in the American contest, and seem likely to win out, though the Wyandottes are after them and gaining. Every American will send good wishes along with the Lincoln Leghorns. They are American bred, and they carry a great American name. In this English contest six hens are entered. Three of them are to be kept in a small house—holding a dozen or so—while the other three are to be in a long house where half the birds in the contest are located. The object of this evidently is to test both systems of hen-keeping. Prizes are to be given on the basis of market values (weight considered)—not merely numbers of eggs. THE R. N.-Y. will give the record of these American invaders from time to time. If other American breeders have entered we shall be glad to record their names.

*

THE great problem is the marketing or reaching the market. We are much interested in the accounts in THE R. N.-Y. about the public markets. It is hard to be satisfied to take 30 cents per bushel for potatoes, the price now paid here by buyers. We hope to get a little nearer the consumer later and will hold ours. I.

This report comes from Livingston Co., N. Y. The average consumer here in New York is paying close to $1.50 for potatoes right now. This is partly because purchases are made in small quantities—half a peck or even less, but the facts are beyond question. Yet even now we have people who say there is no such thing as a "35-cent dollar." The new public markets are waking up the city people. That is about all they can hope to do for a time, but it is the most important thing of all. Just as soon as the city people realize that they are paying three prices for their food and that they can save one price by more direct dealing they will change their habits of buying. It is a matter of education first of all. Most of these city buyers read nothing but the daily paper, and their education will come largely through that. The daily paper follows whatever is popular. Popularity comes through discussion and thinking. Keep talking public markets!

BREVITIES.

"KILLING the goose that lays the golden egg." Some men would be better off if this goose were killed and they had to get down to brass tacks.

THE Kansas Agricultural College has gone to jail—about 130 inmates of the Leavenworth Federal Prison taking the correspondence study work from the college.

GOV. WALSH of Massachusetts has called off the open season for hunting in that State as a measure of protection against forest fires. The drought has made the woods as dry as tinder.

A WOMAN reader asks us the blunt question—"Do you believe the statements made in the advertisements about success in squab breeding?" We have not read such literature for some time. The last we read seemed to be a pure fake. The author surely took the readers for the softest kind of squabs that ever craved pigeon milk. Some people tell us they make a profit from squab raising. For the untried beginner we think it a dream.

A PUBLIC MARKET IN POUGHKEEPSIE, N. Y.

THE women of the Housewives' League and the farmers of the Dutchess County Coöperative Association had an enthusiastic meeting in the Court House, Poughkeepsie, on Thursday evening, October 14th. The immediate reason for this particular meeting was the opening of a producers' open market in one of the open spaces of the city during the past week. This departure came into action largely through the local members of the Housewives' League. Local growers during the present season have been receiving from 30 to 50 per cent. less for their produce than they got last year; while the housewives complained that they were paying more this season than a year ago. This resulted in a demand on the local authorities for opportunity for farmers to display their goods in an open market and to sell them direct to the people. Farmers came with their fruit and vegetables and were all sold out long before noon. The result was repeated day after day for five days, and then an opposition to the open markets developed by the local dealers. They distributed printed circulars attacking the open markets and advised their customers not to patronize them. Neither the growers nor the women wanted any local dispute or hard feeling; and the meeting was called and everybody invited in the hope that a better understanding might be reached.

The complaint from the producers' and consumers' side was that dealers insisted on wanting a level of prices even when the surplus was greatest and in that way restricted consumption of cheap products; and while denying the consumer the benefit of surplus prices, caused the goods to rot on the farmers' hands because there was no demand for them commensurate with the supply. It was charged that because of this state of affairs we have hungry children in the cities, while the best food in the world is rotting on the ground within a few miles of the empty kitchens of the town and city. Numerous instances were quoted to show that the price paid the producer bore no corresponding relation to the price charged the consumer. Individual dealers in different parts of Poughkeepsie offered different prices for the same grade of produce, and there being no standard of prices, farmers refused to bring goods to Poughkeepsie markets unless contracted for in advance. This worked to the disadvantage of the consumer.

The dealers contended that the housewives were partly to blame for high prices, because they exacted an expensive delivery service. They also complained that farmers were largely to blame in not properly packing and grading produce for local markets.

It was an intelligent and enthusiastic meeting, well represented by the three classes of producers, distributors and consumers. The general consensus was that the cost of distribution is higher than it should be; and the only question of contention was the means by which extravagance and waste could be eliminated.

The open market is only a temporary expedient. A dozen or 15 farm wagons were at the market Thursday morning. They had choice, fresh goods, and the women were buying at reasonable prices. But the open wagon only changed one form of extravagance for another. If the producers had a covered market and packing house combined, three men could receive all their goods and handle them and sell them to better advantage than the 15 men, teams and wagons. The organized coöperative market would permit the farmers to unload their produce, and go home with their teams while their representatives made the sales, and took proper care of the goods. The need of such local markets and packing and grading and storing facilities is apparent in every village and city of the State and country. There is no other way to save waste and reduce cost. Governor Glynn provided for the organization of these local associations and markets as part of the system contemplated in the new Food and Markets Department. He secured an appropriation of $20,000 for the initial work in organization and this work is now going on; but of course the State cannot be expected to provide the buildings nor the operation of the markets. It is probable, however, that the Land Bank will be in a position to assist farmers in the financing of the building for local market purposes. Plans are already under consideration for a permanent covered market in Poughkeepsie, and from the temper of the people, and the progressive spirit of both farmers and housewives in that vicinity, the prediction is made that the market will soon become a reality. J. J. D.

WORKING OFF THE APPLE CROP.

ALL over the country where apples are grown the producers are alive to the fact that they must exert themselves to get rid of their fruit. No one is going to do it for them. The cotton growers have troubles of their own and serious ones at that. There is a movement on foot urging people to buy a bale of cotton and thus help finance the crop. Even the moving picture shows have been brought into this campaign, and night after night throughout the large cities pictures are shown of the growing of the cotton crop and the great need of selling the vast quantity now on hand. Those of us who grow apples must make a similar personal and popular campaign in order to get rid of our fruit. Foreign shipments will be cut off to a great extent, but there are people enough in this country to eat every apple we can grow and look around for more, if we can let them know about the fruit. The South offers a great opportunity in this line. Some of the Southern storekeepers are waking up to the fact. Here, for instance is an advertisement which appears in a local paper printed in Georgia:

In that country apples are almost a novelty, and

WANTED

2,000 SCHOOL CHILDREN 45 SCHOOL TEACHERS
5,000 HOUSEKEEPERS

To know where they can buy Fresh Fruits for lunches at the following Prices:

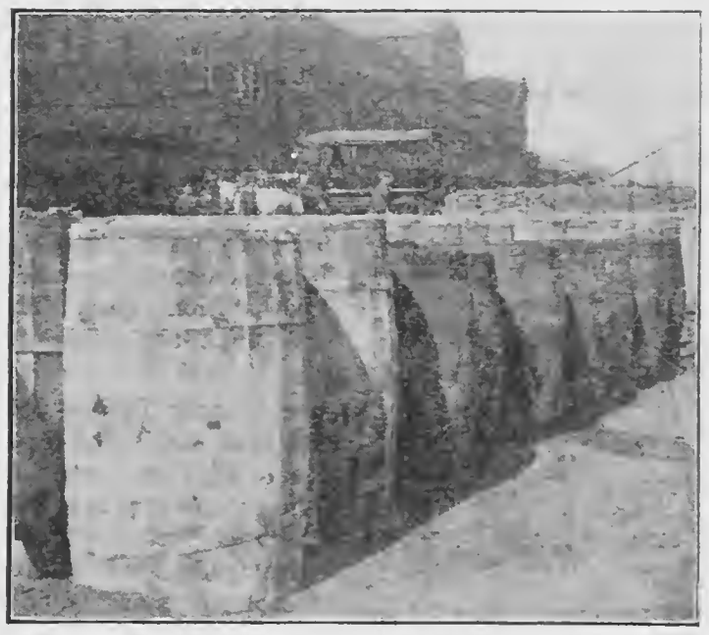
Concord Grapes (just received) 3 lb.	25c	Basket
Tokay Grapes (big purple ones)	15c	Pound
Oranges (sweet and juicy)	30c	Dozen
Oranges (sweet and juicy)	35c	Dozen
Grape Fruit (large)	15c	Each
Big variety of Virginia Cooking and Eating Apples	40c to 50c	Peck
Native Pecans	20c to 50c	Pound
Bartlett Pears (Fine Flavor)	25c	Dozen

Fresh Shipments Received Daily.

6 PARKER ST., Back of Phoenix Hotel, PHONE 141

WILLIAMS COMMISSION CO.

rarely eaten by the common people. They ought to be eaten more freely than bananas or oranges and they would be, if our growers would wake up, and like the Western apple men, stand ready to give a fair share of their crop for the purposes of advertising. We must not only resort to advertising but to song and story as well in order to get rid of our fruit. The Rochester people announce apple day with its demand that every one who lives anywhere near that city shall eat apples and eat many of them too. There will be



BARRELS OF ROSIN AND TURPENTINE.

speeches and stories and songs in addition to apples and among others the following song is announced:

Seems like I'm crazy for apples—
Been without any so long;
Now that it's time for the fruit to be prime,
Say, I just burst into song.

Other fruit's good in its season,
But, ah, how I welcome the Fall,
That part of the year when the apples are here
The bulliest fruit of them all.

There's a tang to the taste of an apple,
A zest like the keen Autumn breeze,
With a savor that's won from the smile of the sun
When it ripened the fruit on the trees.

Oh, I've hungered and thirsted for apples,
With the appetite keen of a boy,
And the season which brings in this viand of kings
For me is a reason of joy.

For Autumn means rosy-cheeked apples,
And apples mean cider and pie,
And dumplings and such which you can' praise too much.
No matter how hard you may try

So here's to his Highness the Apple.
Who comes with the crispness of Fall,
When my palate's athrill as I take in my fill
Of the bulliest fruit of them all!

No one seems to have fitted a tune to it yet, but that is a small matter in a campaign like this. The point is for every man who has apples for sale this year to grade them properly, put only the best on the market and talk apples and sing apples and eat apples wherever he goes, whether indoors or out. That is the way to move popular thought, and nothing except popular thought can get rid of our fruit this year.

Pine Tree Products.

THE picture shows turpentine and rosin just unloaded at New York from a Savannah steamer. There were about 600 barrels of turpentine and 300 of rosin in the lot. The rosin is in the long irregular shaped barrels, which are made of rough material and can be used but once.

New York State News.

MANY NEW GRANGES.—New York has organized 36 new Granges during the year ending September 30. The total number organized the country over is 490, and 28 have been reorganized. There has been a great growth in membership in the West, as we find that Kansas has 68 new Granges, Nebraska 57, Ohio 55, Washington 28, and North Dakota 26. In the East, Pennsylvania leads, with 38 new and seven reorganized Granges.

HOW THE LAW WORKS.—The new compensation law is being "operated" diligently these days but there is no hope of the Commission ever catching up with their work. The law has been in operation now three months and about 4,000 cases have been settled out of 18,000 claims filed. If the same rate of progress continues, the end of the year will find 16,000 claims disposed of and 64,000 still pending.

PROF. FLICK ADDRESSES HOLSTEIN MEN.—The Holstein-Friesian Club of Syracuse at its recent smoker given at a Syracuse hotel, heard Prof. A. C. Flick of Syracuse University on the effect of the European War on the Holstein industry of Holland. After discussing the war at length, he declared that America, not Holland, would be the center of the Holstein industry in the future. He believes that Holland will have to send all its cattle to the block to keep up the food supply. A committee from the Holstein-Friesian Club of New York was present and discussed means for getting larger returns in the milk business. It is the plan of the committee to get in touch with the Dairymen's League and the Housewives' League, in regard to this matter.

FRUIT GROWING THAT PAYS.—Last week the writer visited the fruit farm of A. Jansen in Ulster County. It is not a large farm, only about 1,200 trees in the apple orchards, but it is exceeding profitable. Last year he marketed 2,500 barrels but this year the crop will not exceed half that number. We found Mr. Jansen and his men running the sorter on a lot of McIntosh Reds that were sold at $4 per barrel; this when most growers are wondering how they can get $1.50 for their crop. This latter price is what Mr. Jansen gets for windfalls. He doesn't believe in sending windfalls to the cider mill when the assorted fruit, scarcely differing from the picked, will bring $1.50. He does not sell windfalls as picked fruit, but labels the barrels in large letters WINDFALLS, and the consumer knows he is getting windfalls. Last year McIntosh sold for $6 in New York, so did Spys, and Baldwins brought $7 or more. Perhaps we haven't the full secret of these top-notch prices and a little better, but we have one secret, namely that Mr. Jansen has shipped to the same commission house in New York for 20 years, and it takes all the fruit he can raise. The commission man knows precisely what he is getting when he reads the Jansen labels and so do the customers, the consumers, in the city. It is chiefly this that enables Mr. Jansen to get about $1 per barrel more than the market price for this choice fruit. The new packing and grading law doesn't trouble him in the least. He has been doing the very thing the law requires for years. He says the law is all right and will bring to account those men who have been accustomed to use a stove pipe in the middle of the barrel while packing. Those growers who favor cultivation of orchards will not find much here to support their theory. Here are hundreds of trees, set 17 years ago, through and between which no plow has been driven in 12 years. These trees are averaging seven barrels, some running as high as 11 barrels, to the tree. J. W. D.

The New York Apple Crop.

THE apple market so far has been decidedly slow. Warm weather early in October also has reacted on many Wayne growers. Ordinarily all cars can be shipped without icing, but from reports in some parts of the county there would have been a gain in using cooled cars. Some dealers report that they are unable to dispose of any stock at $1.75 per barrel. Under these conditions not all of them are anxious to buy for early delivery. A large number of growers are not disposed to move on the market at the present quotations, and are placing their fruit either in cold or common storage. It is thought by many that when the plethora of undersized, inferior fruit is taken care of there will be much more of a chance for the better grades of fruit. One grower stated that he knew of a deal for seven cars at $2.25 per barrel. He averred that it was quite likely the next few days would see him buying for future selling.

The Wayne County Cold Storage and Ice Company has been incorporated at Newark. The amount of the capital stock is $125,000, divided into 1,250 shares of $100 each. The Lyons Cold Storage Company has about completed its plant, which is of reinforced concrete and terra cotta tile. It is three stories high, without a basement. The first floor contains the office, receiving room and engine room, with a storage capacity of 12,000 barrels, packing room and two elevators on the same floor. On the second floor is a storage room with a capacity of 15,000 barrels and a packing room; the third floor is given over to storage entirely, holding 17,000 barrels and making a total capacity of 44,000 barrels for the plant. Some fruit is already coming in. The plant was built by the Voshall-Percy Company; the machinery was installed by the Frick Construction Company. Work was started on the plant about the middle of June. The total cost will be $70,000. The directors of the company are Charles Coffey, N. A. Mestler, E. W. Haum, S. B. Gavitt and C. W. Barrick.

The War and Commerce.

DURING the first 10 days of October New York sent to European ports 2,600,000 bushels of wheat, 500,000 of corn, 530,000 of oats, 10,000 tons of flour and 26,000 tons of raw sugar.

The Department of State has ruled that private citizens of the United States can sell army supplies to any of the warring nations of Europe without violation of neutrality. Of course such goods would be contraband and liable to seizure by an enemy on the sea. War expeditions fitted out in our ports or on land, are contrary to law.

A Pennsylvania concern has an order for 50,000 stretchers from Europe for removing wounded from the field, delivery to be made at the rate of 1,000 per week.

One peculiar result of the war is the failure of the Brazil Railway Co., which has been forced into receivership on complaint of stockholders. The Brazil Railway and subsidiary corporations is capitalized at $71,000,000, with debts said to exceed $118,000,000.

Great Britain embargo on wool shipments promises to make a slight increase in prices here, perhaps one cent per pound or more on specially desired varieties. Boston, the greatest wool market in this country, now has about 50,000,000 pounds in storage, on which $500,000 or more will be made by speculators. We produce about half the quantity of wool used here, and there will be practically no further supplies brought in until Spring, when the clip from Australia and other South Temperate Zone points will be on hand. The first lots may reach Boston in January. The outlook is for lower prices then, as Europe's manufacturing demand is so small. Sales of domestic wool at Boston are ranging from 19 to 26 cents. Some three-eighths blood Ohio has brought 28 cents; delaine unwashed, 22 to 24; and Montana, 19 to 22.

Woman and the Home

From Day to Day

COLUMBIA'S EMBLEM.

Blazon Columbia's emblem,
The bounteous golden corn!
Eons ago, of that great sun's glow
And the joy of the earth, 'twas born.
From Superior's shore to Chili,
From the ocean of dawn to the west,
With its banners of green and silken sheen
It sprang at the sun's behest;
And by dew and shower, from its natal hour,
With honey and wine 'twas fed,
Till on the slope and plain the gods were fain
To share the feast outspread;
For the rarest boon to the land they loved,
Was the corn so rich and fair,
Nor star nor breeze o'er the farthest seas
Could find its like elsewhere.

In their holiest temples the Incas
Offered the heaven-sent maize—
Grains wrought of gold, in a silver fold,
For the sun's enraptured gaze;
And its harvest came to the wandering tribes
As the gods' own gift and seal,
And Montezuma's festal bread
Was made of its sacred meal.
Narrow their cherished fields; but ours
Are broad as the continent's breast,
And, lavish as leaves, the rustling sheaves
Bring plenty and joy and rest:
For they strew the plains and crowd the wains
When the reapers meet at morn,
Till blithe cheers ring and west winds sing
A song for the garnered corn.

The rose may bloom for England,
The lily for France unfold;
Ireland may honor the shamrock,
Scotland her thistle hold;
But the shield of the great republic,
The glory of the west,
Shall bear a stalk of the tasseled corn—
The sun's supreme bequest!
The arbutus and the goldenrod
The heart of the north may cheer,
And the mountain laurel for Maryland
Its royal clusters rear,
And jasmine and magnolia
The crest of the south adorn;
But the wide republic's emblem
Is the bounteous, golden corn!

—Edna Dean Proctor.

*

THE London *Times* tells of one little French village in the path of war where an aged lady sent the town crier around with a drum, after the manner of rural France, to announce that she would take care of all cats and dogs left by their owners in their flight from the invaders, she remaining in the deserted village to care for the derelicts. We hope that this brave and humane woman was left unhurt, with her charges; she surely deserves one of Mr. Carnegie's medals.

*

HERE is a recipe for cranberry pudding, given by the *Mothers' Magazine*: Cream half a cupful of butter, add slowly one cupful of sugar, then add three well-beaten eggs. Mix three teaspoonfuls of baking powder with three and a half cupfuls of flour; add this to the mixture alternately with half a cupful of milk. Add two cupfuls of cranberries which have been washed, dried and floured with some of the flour already measured. Turn into a buttered mold, cover closely and steam two hours. Serve with hard sauce.

*

THE Department of Agriculture has issued a very interesting Farmers' Bulletin, No. 609, on "Bird Houses and How to Build Them." It is by Ned Dearborn, Assistant Biologist of the Bureau of Biological Survey. The introduction gives general advice and suggestions for attracting birds about a home or farm. The bulletin states that since the movement began to encourage bird protection the number of house birds has greatly increased. Dimensions are given for nesting boxes, adapted to different sorts of birds. Some of the martin boxes shown are regular apartment houses, with accommodations for a number of feathered families. The plans given range from the humble tomato can or empty gourd to structures of some elaboration. We think the bulletin will be greatly enjoyed by young people on the farm, who will have opportunity during the Winter to make plans for bird homes before the next nesting season. Reference is made to the attraction offered birds, during the Summer, by a shallow pool or pan of water for drinking and bathing. During the past Summer we found that a fountain made by the spray from a hose in a shady place, attracted birds in great quantity; they frolicked in it like a lot of boys in a swimming hole. Last Winter, which was very snowy with us, we fed starving birds by hundreds, and many of them stayed with us until the thaw came.

The Rural Patterns.

In ordering, send number and size of patterns desired. Price of each pattern, 10 cents.

7779, Ladies' plain blouse or shirt waist. Cut in sizes 34 to 44 bust measure. Size 38 requires 2 yards of 36-inch material. 7855, Shirt waist or blouse. Cut in sizes 34 to 44 bust measure. Size 38 requires 2⅝ yards of 36-inch material. 8176, Semi-princesse gown. Cut in

sizes 34 to 40 bust measure. Size 36 requires 4 yards of 36 or 44-inch material with 1⅜ yards 27 inches wide for trimming. 8407, Ladies' one-piece skirt with yoke. Cut in sizes 24 to 32 waist measure. Size 28 requires 2½ yards of 36 or 44-inch material. 7549, Four-piece skirt for women. Cut in sizes 22 to 32 waist measure. Size 26 requires 3½ yards of plain material 36 inches wide, or 4½ yards if material has figure or nap.

7885, Girl's one-piece dress. Cut in sizes 8, 10 and 12 years. Size 10 re-

quires 3¼ yards of 36-inch material with 1 yard 27 inches wide for collar, belt and cuffs. 7860, Girl's dress. Cut in sizes 10, 12 and 14 years. Size 12 requires 4½ yards of 36-inch material. 8361, Dress with long tunic, for misses and small women. Cut in sizes 16 and 18 years. Size 16 requires 6 yards of 36-inch material with 1½ yards for the facing and collar to make as shown on the figure. 8387, Child's apron. Cut in sizes 2, 4 and 6 years. Size 4 requires 1½ yards of 36 or 44-inch material. 8274a, Girl's dress. Cut in sizes 6, 8 and 10 years. Size 8 requires 2⅝ yards of 36-inch to make of one material.

Weaving Coverlets.

I AM very anxious to know how to weave the old-fashioned coverlets (blue and white). Can you give me any information about the work?

MRS. C. P. E.

Will some one who has preserved a knowledge of this old-time handicraft tell us all about it, from threading the warp to the finished product? We have had some references to it, but not quite specific enough to help a beginner, and even an old-fashioned hand loom seems very complicated to the inexperienced. A very good book for the amateur weaver is "Hand Loom Weaving, Plain and Ornamental," by Luther Hooper. It is an English work, and while it does not mention coverlets, it explains all the parts of a loom very thoroughly, the explanation being aided by many pictures. It shows some patterns that could be used for bed covers, telling just how they are made. These hand-woven coverlets are now chiefly made in the South, though they form one of the revived handicrafts in New England. Some handsome ones, made of home-dyed flax, the blue colored with indigo, are to be seen among old Dutch families in New Jersey.

Frugal but Savory.

GRAVY For a Meatless Dinner.—Cook one medium-sized onion (minced fine) in four cupfuls of boiling water. When onion is cooked until tender add two bouillon cubes. Thicken with butter and flour and add one teaspoonful of sage.

A Hearty Dish.—Boil two cupfuls of rice and six sliced sweet peppers until done. Salt to taste. When cold shape into croquettes, roll in flour and fry in plenty of lard. Serve with a tomato sauce made as follows: Stew one pint of cooked tomatoes and one onion for 15 minutes, then rub them through a wire sieve. Thicken the strained tomato with butter and flour.

F. A.

Tomato Pot Roast.—Beef of bottom of round, or any preferred cut for this dish, three to four pounds; hot drippings, two tablespoonfuls; onions, two medium sized; carrot, one; bayleaf, one-half; liquid portion of a can of tomatoes, or fresh tomatoes, four or five; salt and paprika to taste; thickening, sugar, one-quarter teaspoonful; flour, one tablespoonful, will be needed.

Sear the meat on all sides in the hot drippings, put in boiler and add the onions, sliced, also the carrot, sliced, and half of a bayleaf. Cover with the tomatoes. If fresh tomatoes are used they should be peeled and cut into small pieces. Add the salt and paprika, cover the pot tightly and let simmer slowly for three hours, or until done. A little water may be added if the tomato juice cooks down too much. When serving thicken the sauce, and add more sugar and more salt and pepper if necessary. Thicken with one tablespoonful of flour, moistened with cold water, to each cup of gravy; let boil and serve in a sauceboat.

As a plant upon the earth, so a man rests upon the bosom of God; he is nourished by falling fountains, and draws, at his need, inexhaustible power. Who can set bounds to the possibilities of man?—Emerson.

An Indoor Closet For Every Home

This sanitary convenience, this modern comfort, this safeguard to health, is now within *your* means.

We have perfected a simple and inexpensive chemical system in

THE WATERBURY SANITARY CLOSET
ALL METAL—CHEMICAL

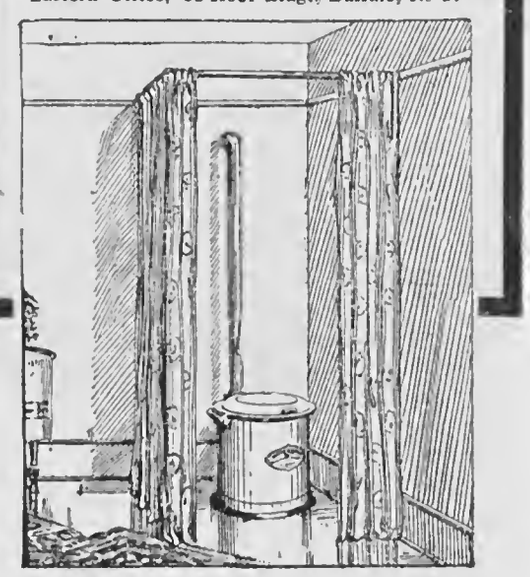
that does away with the necessity for plumbing, water system and cesspool. Thus for the very small cost of $22.50 you can have a complete, sanitary, odorless indoor closet.

No installation cost; is quickly set up. You can put the Waterbury in any room, hallway or closet in the house, as it is positively inoffensive in every way. It is a well finished, nicely decorated piece of furniture. The odorless and sanitary features are covered by our guaranty.

You can feel perfectly safe in ordering direct from this ad. if you wish to get a Waterbury Sanitary Closet as soon as possible. A big, responsible, well known company is behind the Waterbury and the real guaranty that goes with it.

By all means write for the Waterbury Book, explaining fully how it works.

The Waterman-Waterbury Co.
1143-57 Jackson St., N. E., Minneapolis, Minn.
Eastern Office, 61 Root Bldg., Buffalo, N. Y.



TEA By PARCEL POST

ONE POUND of TEA and a Japanese Gold and Blue Cup and Saucer... 49c

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Suggestions for a Hallowe'en Celebration.

OF the many celebrations that come to us throughout the year All Saints' Eve, or Hallowe'en, with its mystic traditions, offers the most real merriment for our fun-loving young people. The tang in the crisp Autumn air sets pulse beating high, and puts one in just the mood for a lark with weird spooks, sly elves and gruesome witches. Then, too, the fact that one is not expected to dress in his best or stand on ceremonies lends much to the zest of the occasion. The big farmhouse kitchen, a roomy old-fashioned cellar, or, if the weather is not too chillly, a clean swept barn, lighted with pumpkin Jack-o'-lanterns, make ideal places for frolicking, feasting, and ghost meets.

Invitations for a Hallowe'en party can be as quaint and fantastical as one wishes. A piece of coarse brown wrapping paper with ragged edges, waxed to resemble parchment, and decorated with one of the many old-time Hallowe'en devices—witches, black cats, bats, owls, or pumpkin heads, in red and black ink; rolled and tied with red and black ribbon, or sealed with red and black sealing wax, are very appropriate.

The woods, fields and garden will furnish enough suitable material for decorations. Squashes and pumpkins, cut into halves, crosswise or lengthwise, the seeds and pulp scooped out, make charming receptacles for gay Autumn leaves and red berries, and for holding fruit, nuts and bonbons. A great cabbage head with the heart removed, makes an ideal Jack Horner for the center of the table. All sorts of small fantastical gifts, wrapped in tissue paper and tied with half-inch ribbon in yellow and black, equal numbers of each color, leaving long streamers, are hidden among its leaves and in the center. After the feast is eaten each guest draws a prize by pulling on a ribbon.

Big red and yellow apples, with the blossom end sliced off so they will stand alone, the top cut evenly off, the core scooped out, and the cavities filled with red, yellow and brown candies, then the top replaced, with a tiny lighted candle set in where the stem once was, and placed at each plate, make very attractive favors. The candles used for Christmas tree decorations are about the right size.

For another unique centerpiece, a great yellow pumpkin shell filled with fruit, nuts, and bonbons, has a circle of these small lighted candles set in around the edge. With this there is a candle blowing contest before the contents can be enjoyed. Each member of the party blows out the candle assigned him; if he does not succeed in the first attempt, or blows out more than one, he must lose his share of the goodies, or pay a forfeit.

As for the walls, there is nothing prettier than the fluffy gray Clematis and red mountain ash, or gray bayberries, and red and yellow oak leaves. Long, well-shaped carrots with oval slits cut in the big end for eyes, a triangle for the nose and a bow shape for the mouth, and a tuft of the foliage left on, suspending here and there among the Clematis, are both quaint and decorative. When pumpkins are plentiful Jack-o'-lanterns might be the only illumination, and when these are not forthcoming there are the big and little paper ones that can be purchased at a small cost in almost any of the large towns.

Half a dozen rolls of crepe paper with Hallowe'en patterns, offers a limitless range in decorative possibilities in this direction. The designs can be cut out and pasted on cardboard. Witches flying on broomsticks, or stirring the caldron kettle, thin black cats with bushy tails, dismal owls perched on bare boughs, "Br'er Rabbits" peeping out of pumpkin heads, and uncanny bats, all of which when cut out, mounted, and rubbed with a little phosphorescent paint, are just the thing for decorating the walls and table of a dimly-lighted room. The smaller designs can be used on the invitations if one likes, instead of the pen and ink sketches.

An open fire plays an important part in many of the old-time Hallowe'en games, and when this is not to be had the kitchen range or furnace are very good substitutes. There should be some real candlesticks with lighted candles for the "Jump Over the Candle" game you all know so well. A small washtub half filled with water, and partly hidden with evergreen boughs and Autumn leaves, is needed for the "bobbing apple" contest. Apples with the initial of a girl cut on them, are dropped into the water, then each boy is invited to duck his head and bring out one with his teeth. The letter on the apple is, of course, the initial of his true sweetheart. At the far corner of the room have the lights turned out, and a ghostly shrouded figure doling out fortunes. These, like the invitations, should be written in red and black ink on parchment-like paper, and handed to each guest as he or she is requested to approach the awesome specter.

Eating a thimbleful of salt while walking down the cellar stairs backward with a lighted candle in one hand and a looking glass in the other to catch a glimpse of one's future husband is another old-time feature. Then there is the nut test on the hearth, the test of the three "luggies," and the tossing of the apple paring to see what initial letters it forms as it falls to the floor, and many other old-fashioned foretelling signs and symbols that never lose their quaint charm. A ghost dance, where everyone, shrouded in pillow cases and sheets, wearing black or yellow mask, is expected to take part, will furnish any amount of fun.

Nuts and apples with plenty of sweet cider are the regulation refreshments for an old-time Hallowe'en frolic, but if one likes to add a touch of modernism there may be a menu something like this:

Devilled oysters.
Brown bread and cheese sandwiches.
Devil's food (black chocolate cake).
Ghost cake (white mountain cake with white icing).
Tea. Sweet cider. Home-made Fudge.

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Seen in New York Shops.

CORSAGE bunches of artificial flowers or fruit are again much worn, but this Fall they are pinned on the coat high up on the left side, near the shoulder. A great many little bunches of fruit, satin or velvet, are thus worn, as well as flowers that never saw their counterparts in any garden. The street corsage bunches are almost always of small flowers, but gigantic velvet roses, single or semi-double, are used to pin on a muff, or for evening wear. These big roses cost from $1.50 up, each; little knots of small flowers or fruit cost from about 35 cents up, according to quality and make. Some artificial flowers are always expensive; for example, we have never seen cheap nasturtiums. Roses and violets are the universal flowers, coming in every grade of quality.

Among new neckwear are high collars, coming down to a low V-shape in front, which have a ribbon an inch wide run through broad eyelets at the back. The ribbon is tied in front, thus holding up the back of the collar; the tie crosses the open space left by the flaring collar, the V remaining open below it. The ribbon ties were either black satin or Roman stripes. These collars, in white washing organdie, with ribbon included, were 50 cents.

Maline ruffs and feather boas are both again in vogue. The ostrich boas noted are not round, but flat, of closely curled feathers, and are broader at the middle than at the ends, which are finished with tassels or long ribbon loops. Pleated maline ruffs are sometimes short enough to fit snug around the neck, while others are long enough to reach the waist line; black and white are most becoming, but this Fall there are many of maline, as well as feathers, in various shades of brown. It should be remembered that a plump, short-necked woman should never wear a maline ruff or feather boa; it is sure to give her a pouter-pigeon effect.

Among women's smart shoes are many made with the overgaiter effect; they are made of black Russia calf or patent coltskin, with an overgaiter effect of fawn, gray or black cloth. They have high French heels and light welted soles. For harder service are very businesslike walking shoes of tan Russia calf with Cuban or low heels. Bronze kid slippers, in a variety of models, are much in vogue; some are high-heeled evening models, others walking pumps. The evening slippers are often beaded in bronze, while other styles show bronze or yellowed silver buckles. All call for stockings to match, for while many women have been wearing stockings of white or contrasting colors with pumps and slippers, the style has never been really in vogue except for informal Summer wear. It has the disadvantage, too, of being usually unbecoming, unless the feet and ankles are unusually trim and pretty.

The new blouses are of infinite variety. One inexpensive model, costing $2.95, is of crepe de chine, having sleeves, chemisette and flaring high collar of lace, while another crepe de chine model, costing $3.95, has a high collar at the back and in the front finely tucked frills coming down to a V at the waist. Sleeveless basques of black satin, with white satin collar and revers, cost $3.95; sleeveless basques of black velvet, with silk sashes, are $5. These are worn over long-sleeved guimpes of lace or crepe de chine. Black satin basques are also shown with black lace sleeves. There are a great many styles of black lace blouses, either all black, or made over white chiffon. These are quite serviceable, while dressy and becoming. Black lace seems more in vogue than for several years.

A new style of veil, in either octagon or filet mesh, has a wide border formed of velvet squares.

A pretty dress for a girl from eight to 12 years old has a loose overdress of dark blue serge, something like a very long-waisted Balkan blouse with a short circular peplum, so that it came half way to the knee. Collar, cuffs and chemisette were of white pique. This was worn over a plain skirt of blue and white check. This is a desirable style for combining two materials.

One of the new circular skirts in blue serge fitted smoothly over the hips, where it had three rows of black silk braid; below it flared out so as to ripple at the bottom, being about 3½ yards round. This dress had a waist in coatee effect, with a rounded swallow-tail back; it was trimmed with silk braid and cube-shaped braid buttons, and had a white silk collar.

Shirred Eggs With Tomatoes.—Butter shallow fireproof shirring dishes and spread with a layer of tomato pulp which has been previously cooked to a thick paste and seasoned. Sprinkle with buttered crumbs except in centre. There, make a slight depression in which to break an egg. Place in the oven until the egg is sufficiently cooked and the crumbs well browned. If these shallow dishes are not available, spread the tomato pulp on a rather thick slice of toast, removing a little of the crumb from the centre to leave the hollow for the egg. Arrange in a baking tin and bake until eggs are set.

Baked Tomatoes With Bacon.—Remove thin slice from top and bottom of large tomatoes. Divide in two thick slices. Place in baking tin and set in moderate oven. When the tomatoes are partially cooked, place on each half a crossing of two narrow strips of thin bacon. Increase heat so that bacon shall crisp nicely. The bacon fat will furnish sufficient seasoning. Serve on rounds of buttered toast.

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PART II.

General Principles.

HEREDITY.—The modern idea of heredity does not believe in the inheritance of acquired characters. Of course, that will largely depend upon what we call acquired characters. Some of the characteristics of a species or class of animals have been acquired through long ages of natural selection and weeding out of the weaker ones, but the common usage of the word, "acquired" when applied to characters means those which are of a transitory nature much as the tricks of a dog, the hand-shaking of a horse and other achievements which may be brought on by training. The colt will not possess the acquired characters of the mother; that is, the colt of a trick mare will not necessarily be a trick colt although he may have acquired a tendency in that direction, and may be very easily trained to do tricks. I have seen colts of such mares very obstinate and scarcely able to learn anything. The feeding or other factors which enter into the making of the desirable adult besides the coming together of two desirable parents are acquired characters, and the answer to the question of their transmission is probably no.

PRENATAL INFLUENCES.—While we must not deny that the nervous condition of the mother may have some effect upon the offspring, such prodigious effects as are often claimed for it would seem to be simply "out of the question." Many freaks which are often called birth marks are more likely cases of reversion to some ancestor or cases of arrested development.

CROSSING BREEDS.—The crossing of breeds is a practise that is seldom advisable, for the chances are that one will get an inferior animal which combines the bad characters of both breeds and has not the good qualities of either of the animals entering into the cross. In some cases, however, as crossing the Shorthorn upon the Hereford gives a good type of market steer, the two breeds seem to reinforce each other. At any rate, never cross more than once. If crossing is done at all, it should be for the production of market stock only. Cross a Shorthorn bull on a Hereford cow and the first cross may not look like either of the parents but the offspring of such first crosses will look very much alike. Go on with the crossing on these halfbreeds with the Shorthorn bull and one gets everything ranging through good, bad and indifferent. After one gets beyond the first cross, the weak points of both breeds begin to show up and a mongrel lot of stock is the result. It is true that some of our breeds were originated by crossing on native cattle, but at present we have enough breeds to supply adequately the needs of any part of the country. Make a choice of the breed that best fills the requirements and then stick to it. Sometime ago, a correspondent of THE R. N.-Y. wrote that some dairymen in the Western Reserve in Ohio had been breeding up Holsteins for eight to 10 years and then to get the bonus for high-testing milk, Jersey bulls were turned in. This could hardly be considered good dairy breeding. If this is continued for 10 years, these farmers will have neither Holsteins, Jerseys nor a new breed but will be the owners of a mongrel lot of cattle.

TRANSMISSION OF DISEASE.—We often hear it claimed that diseases can be directly transmitted to the embryo. This is probably true in blood diseases or diseases of the ovaries. It seems that hog cholera which is a blood disease can be transmitted to the offspring. I have never known of a case where a sow contracted hog cholera and still farrowed her pigs naturally. She will invariably abort if she has true hog cholera. Another common disease which is transmitted in embryo is the white diarrhœa which affects young chicks from three to seven days after hatching and which is claimed by scientists to be due to diseased ovaries in the hens. These contaminate the embryo before the shell is formed around the egg and these bacteria grow with the developing chicks and are ready to attack them in dead earnest as soon as they emerge from the shell. The mother's blood gets to the embryo by diffusion or slow seeping through animal membranes; usually the bulk of it diffuses through cross membranes in the umbilicus or navel cord. The exact particulars vary with the different kinds of animals. Any blood-borne germ disease cannot be carried to the young as these membranes strain the germs out. In fact, the bacteriologist can separate the germs from blood or tissues by filtering through animal membranes. Of course, when the ovaries are diseased, it would be hard to imagine a healthy egg developing in them. The disease attacking the ovary would naturally attack the egg and either arrest its development or so weaken it that it would not develop into a healthy animal. Any local disease, however, such as in tuberculosis, lump-jaw, cancer, etc., does not seem to be transmitted to the offspring. There are on record many cases where tuberculous cows have dropped healthy calves. These have been isolated at once and not allowed to take the milk from their dams and have developed without ever having the disease. It seems that such offspring are somewhat super-sensitized to the attack of the disease from which the mother is suffering which means that they may inherit a tendency to be easy prey for the disease atlhough they do not actually inherit it. The best policy for the breeder is to avoid all these diseases so far as possible and thus preclude the possibility of spending time and money on animals having a tendency which renders them more susceptible. I. J. M.

Michigan.

LIVE STOCK NOTES.

THE butter production of Holland is so controlled by the government as to guarantee its purity. It amounts to 154,000,000 pounds yearly.

Increasing parasitical diseases in poultry and game birds in England is said to be due to distribution of dust in the air by automobiles.

French government agents sought contracts from New York steamship companies to transport 5,000 army horses to Bordeaux at $40 a head. The animals were westerners, half broken, light and young. They were suitable for cavalry work only, and cost from $80 to $100 per head. The large New York dealers say that most of the orders for horses have been put through dealers in the West, and that representatives of England and France are buying directly from ranchmen. One said that he knew of sales of more than 100,000 horses made in the West; that the animals were shipped either to England or France by way of Canada. This dealer said since the war commenced the price of horses went upward $20 to $25 per head, and they will go higher. He declared it is very difficult to secure large horses.

There is an organization of Texas ranchmen now established with the view to shipping to New York cattle and beef by water from the Black Prairie coast lands in the Lone Star State.

Don't try keeping over stunted pigs, hoping to get them growing this Winter, and perhaps ready for Spring. It is a waste of effort and feed, and besides it does not pay to let them become stunted, it will be a good plan to sell those little fellows now, before Winter starts in. Perhaps some neighbor with more feed can make good use of them.

The advantages of raising Fall calves are that cream may be sold in Winter and skim-milk fed to calves, the calves may receive more careful attention; the calf is ready to go on pasture in Spring. Keep the calves in a dry place, give them plenty of sunlight and air, keep the calves growing steadily, and free from lice.

Many farm people in the Winter will allow the separator to stand several days without washing, only flushing it out with warm water. The California Station advises: "The cleanliness of the separator needs first attention. It must be kept scrupulously clean. The disastrous effects of using a foul separator bowl can be imagined only when recalling that all cream that passes through it becomes seeded with the bacteria it contains."

Preceding June 30th the imports of cheese from Europe averaged about five and one third million pounds a month for the year. Since then the European war has affected the imports considerably, and it is the opinion of the Department of Agriculture that American cheesemakers can take advantage of the opportunity to establish their products in place of European goods. Limburger has been made in America and sold for some years at a price which drove the imported product from the market, yet many people believe they are eating imported limburger.

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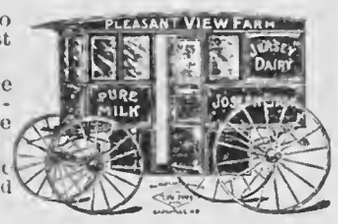

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FOR PURE BRED TAMWORTH SWINE
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Alfalfa Lodge Yorkshires
Large English, white, short nose type. Special sale boar pigs, superior quality, fair prices. It is not what you pay, but what you get that counts.
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Pedigree Chester Whites. SCOTT, STONE RIDGE, NEW YORK

Registered O.I.C. Pigs—one and three months. T. G. BRONSON'S ESTATE, East Hardwick, Vermont

WINGOHOCKING HERD offers a choice lot of Chester White Pigs, selected from 100 head. Spring gilts ready to breed. 3 service boars. Pigs from 8 weeks old up. Prices reasonable. F. W. LEVIS, R. D. No. 1, Chadd's Ford, Pa.

O. I. C.'s and CHESTER WHITES
Summer and Fall pigs, bred from large, healthy, prolific stock. Registered in either Chester White Record or O. I. C. Record.
VICTOR FARMS, BELLVALE, ORANGE CO., N. Y.

O. I. C. WHITES—Have a litter of 10, farrowed July 24th, out of A1 matured stock. Price, $10, at 8 to 10 weeks. Registered. WAYSIDE FARM, Chatham, N. J. Address A. L. Page, (Owner), 62 Cortlandt St., N. Y. City

Berkshires—BOARS and GILTS—Spring and fall litters of the finest breeding, priced to sell. J. I. HERETER, R. D. 4, Gettysburg, Pa.

Berkshires—with Size, Type and Stamina. Pigs and service boars of most popular blood lines. JNO. C. BREAM, R. 4, Gettysburg, Pa.

WOODLYNN FARM BERKSHIRES—Spring and fall pigs, trios not related. Gilts bred for early spring litters. JOHN W. COOPER, Pineville, Pa.

BERKSHIRE PIGS
either sex, 6 to 8 weeks old, Masterpiece breeding.
HARRY A. KUNZ, - Titusville, Penna.

BERKSHIRES
We have the large, thrifty kind, with lots of type, quality and breeding. Write for prices and descriptions. TOMPKINS FARM, Lansdale, Pa

A BRED BERKSHIRE SOW
worth $75, when safely bred for March, April or May farrow, is now a gilt that can be sold for $30. A boar and 3 sows at $100 is therefore a good investment. We have them for prompt movement at that price. Write for further particulars.
R. Y. Buckley, Woodrow Farm, Broad Axe, Pa.

Springbank Herd Big Berkshires
I have a fine lot of March and April (1914) Boar Pigs fit for service this Fall; of high class conformation and good looks.
J. E. WATSON, MARBLEDALE, CONN.

Large Berkshires at Highwood
Just sold eleven sows for export to Argentina. Makes fourth exportation this year. We sold 475 registered Berkshires during 1913, which is over a hundred more than any other swine breeder in the U. S. Most of these went to old customers, which speaks for itself. Selected animals all ages for sale.
H. C. & H. B. HARPENDING, Dundee, N.Y.

Eureka Stock Farm
Registered Jersey Cattle. 4 mos. to 2 yrs. old. Chester White, Poland China and Berkshire Pigs, all ages. Lincoln Buck Lambs. Variety of Poultry.

Write for Circular
EDWARD WALTER, DEPT. R, WEST CHESTER, PENNA.

BOOKS WORTH BUYING

Animal Breeding, Shaw	1.50
Breeding Farm Animals, Marshall	1.50
Principles of Breeding, Davenport	2.50
Cheese Making Decker	1.75
Business of Dairying, Lane	1.25
Clean Milk, Winslow	3.25
Dairy Chemistry, Snyder	1.00
Dairy Farming, Michels	1.00
Handbook for Dairymen, Woll	1.50
Milk and Its Products, Wing	1.50

THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

SUCCESS WITH PUREBREDS.

I BEGAN farming February 1, 1912, with five head of purebreds and 20 grades. In August of that year I purchased Fairview Pontiac Korndyke Prince, who possesses 75% of the same blood as Pontiac Korndyke, and am using him as my herd sire. I now have 21 purebreds and have six A. R. O. records. One cow over 17 years of age, 43 days after calving, made 377.8 pounds milk and 16 pounds butter in seven days. One of her three daughters as a junior two-year-old produced 344.7 pounds milk and 17.71 pounds of butter in seven days. Other two-year-olds have produced 18.81 and 17.66 pounds butter in seven days, receiving ordinar care. My rations for milch cows are 200 pounds brewers' grains, 100 pounds bran, 75 pounds ground oats, 100 pounds gluten, 75 pounds oil meal, 100 pounds ground Alfalfa and four pounds salt. I feed cottonseed meal, but do not mix it with the other grains. For dry cows and calves, I mix 50 pounds ground oats, 100 pounds bran, 100 hominy, and 100 pounds oil meal. To prepare cows for testing add three to five quarts of oil meal as required. For young calves I begin with three pounds milk and one pound water, gradually adding milk until six pounds is reached, and feed them all the grain they will eat up clean. M. N. TOREY.
Delaware Co., N. Y.

Selecting Steers for "Feeder" Cattle.

IN selecting steers that will feed to a profit, the Wisconsin station advises:

They must have beef characteristics, a wide strong back and a large heart girth.

They must have strong frame with plenty of room for vital organs, for a weak constitutioned animal cannot endure the feeding season.

A wide head and muzzle usually indicates good feeding qualities.

Short legs, heavy hind quarters and arched ribs are essential in the feeding animal.

The skin should be reasonably thick, soft, and covered by heavy coat of hair.

The animal should have a straight back and low-set appearance due to the depth of body and short legs.

Things a Dairyman Should Not Do.

THE following advice placarded in view of dairymen visitors at Syracuse, should be brought home to every farmer:

Do not stir up any dust just before milking time.
Do not sweep the stables at milking time.
Do not milk with dirty hands.
Do not use a wide-top pail.
Do not allow milk to stand in the stable.
Things a dairyman should do:
Keep cows clean.
Wipe flanks and udders just before milking.
Avoid dust in the stable at milking time.
Have clean hands and clothing while milking and handling milk.
Thoroughly cleanse and scald all utensils and keep in clean place.
Use a small-top milk pail.

FARM NEWS.

AT the Ninth Annual Dairy Show, October 22-31, 1914, the American Jersey Cattle Club has offered $1,000 in premiums. 181 Jerseys have been entered in competition for these premiums. A mass meeting of Jersey breeders will be held, either in the Breeders' Building or at the Saddle and Sirloin Club, at the Stock Yards, at 2.30 P. M., October 29. A meeting of the Board of Directors of the Club will be held on October 29th, at 10 A. M., at the Hotel Blackstone; and a Banquet of Jersey breeders, under the auspices of the A. J. C. C., will take place at the Hotel Blackstone on the evening of October 28th, at 7.30 P. M. All Jersey breeders are cordially invited.

The European war, together with the increased demand for purebred draft stallions from American stables, should establish the American breeder on a very firm basis. The importations will suffer severe curtailment as the war progresses, although when the war commenced, those animals that were already purchased were not requisitioned, and yet there was considerable difficulty in getting from foreign ports here. In speaking of American Percherons a prominent live stock writer declared he had seen as good Percherons in America as he had seen in France.

Three buyers recently from Graham County, Arizona, visited Wisconsin, and from three counties took out 250 purebred Holstein, Guernsey and Jersey cattle, paying an average price of $100 a head.

HORSES

PERCHERON STALLIONS—Buy from farmers. Our hobby is quality. S. Schoonmaker, Gardiner, N. Y.

50 STALLIONS
and MARES, $250 to $1600 each
Write for my Illustrated Circular telling why I can save you money on the purchase of a Percheron or Belgian Stallion or Mare.
A. W. Green, Middlefield, O.
R. R. Sta., E. Orwell, on Penna. Ry. Midway between Ashtabula & Warren

SHEEP

REGISTERED SHROPSHIRE, yearling Ewes and rams bred right at low prices. FRED VAN VLEET, Lodi, N.Y.

REGISTERED SHROPSHIRE RAMS FOR SALE—Yearling and two-year-olds, from imported sire. E. E STEVENS & SON, Wilson, New York

HIGH-CLASS Shropshire and Southdown sheep for sale. NIAGARA STOCK FARM, J. C. Duncan, Mgr., Lewiston, N. Y.

REGISTERED SHROPSHIRE YEARLING RAMS. Ewes for sale. Sired by an imported ram. Also ram and ewe lambs. H. B. Covert, Lodi, N. Y.

FOR SALE—REGISTERED SHROPSHIRE EWES AND RAMS. Hampshire and Oxford rams from prize-winning stock. Moderate prices. E. J. COLBERT, East Chatham, New York

HAMPSHIRE RAMS—ewes (bred), and lambs Highest quality, best breeding, lowest prices. Stock ram, sure breeder of good ones. HASLETT BROS., Seneca, N.Y.

Fairholme Hampshire DOWNS
From imported and home-bred stock. Great bargains in ewes. EARL D. BROWN, R. F. D. No. 2, Ilion, N. Y.

Rambouillet, DORSET, LINCOLN, COTSWOLD, CHEVIOT RAMS. POLAND, ESSEX, DUROC and YORKSHIRE SWINE—all ages. D. H. TOWNSEND, Lodi, N.Y.

TUNIS SHEEP AND MULE-FOOT HOGS—Registered stock. Rams and ewes all ages. Pigs both sexes all ages. Prices low, considering quality. J. N. McPHERSON, Scottsville, New York

Registered and Grade Suffolk Sheep FOR SALE
$7 each for grades; $15 each for registered. D. R. HONE, CRESCENT HILL FARM, SHARON SPRINGS, N. Y.

WANTED IMMEDIATELY—Well-Bred Cheviot Ram one year old. JAMES C. MITCHELL, Port Washington, N.Y.

ONE PAIR KIDS—8-weeks old; one yearling Nanny Goat, cross between Saanen and Toggenburg breeds. Also one 3-year old Goat now fresh with pair of Nanny kids. Wanted—White Leghorn pullets.
H. P. TABER, West Oneonta, New York

Dogs and Ferrets

COLLIE PUPS—the intelligent kind. Also Bloodhounds. NELSON'S, Grove City, Pa.

Collie Pups—$5 and up. CLARK FARM, Boonton, N. J. Also Newfoundlands, $15 and up.

FOR SALE—Fox Hounds and Beagle Hounds
Reasonable prices. V. C. MULLEN, Holmesville, Ohio

Fox, Coon, Skunk and Rabbit Hounds that are right, and broke to gun and field. Price right. Stamp for photographs and reply. H. C. LYTLE, Fredericksburg, O.

BEAUTIFUL BLACK & WHITE SCOTCH-IRISH SHEPHERD PUPS
Fine pedigree. High intelligence and docility. Natural drivers and watch-dogs.
M. W. ADAMS, Anchorage Farms, Highland, Ulster Co., N. Y.

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Most useful, popular, profitable country dog. Guards home, stock, children; kills rats, skunks, weasel, fox; puppies sell readily; two litters yearly. Strong, faithful, sensible. Sturdy, farm-raised stock, young and grown, from best Airedale blood in world. Pedigreed, certified, registered 20 champions in pedigree. Folder. AT STUD—WESTON WILLIE, a grandsire out of famous Champion King Oorang. Fee, $15.
VIBERT KENNELS, Box 1a, Weston, N. J.

Ferrets For Sale—Booklet and Price List Free. J. F. Murray, R-1, New London, O.

Ferrets for Sale—Either color, large or small; mated pairs or dozen lots. Choice stock. C. H. Keeler & Co., Greenwich, Ohio

FERRETS For Sale—Fine Stock. Best hunters on earth. Write for Free Book and prices.
C. M. SACKETT, DEPT. R, ASHLAND, OHIO

DAIRY CATTLE

FOR SALE—Registered Ayrshire BULL CALF, 3 months old. A. K. LENT & SONS, R. 5, Towanda, Pa.

FOSTERFIELD'S HERD REGISTERED JERSEYS for sale. Cows, Heifers and Heifer calves. Charles G. Foster, P. O. Box 173, Morristown, N. J.

Young Jersey Bull Calf for Sale
(not eligible for registry) out of tested dam; register of merit sire. ROBERT FRAME, Newport, Rhode Island

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

FOR SALE—Three Nice Young St. Lambert JERSEY BULLS—$50 to $75 each. Some choice Berkshire Sow and Boar Pigs, $20 each. Our herd is headed by a high-grade Masterpiece Boar bred by the University of Ohio. A. M. Hagerty, Arch Spring, Pa.

"QUALITY"
FOR SALE
20 Jersey Heifers and Heifer Calves
from yearly record Register of Merit dams and cows on test. Their grandams, sires and grandsires in R. of M. Also two young bulls old enough for service. Let us know your wants. Address,
E. W. MOSHER, - Aurora, N. Y.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

FOR SALE—200 head yearlings, Holstein, Jersey and Guernsey, $45 each
HARRY VAIL, WARWICK, NEW YORK

DAIRY CATTLE

What Every One Wants
A bull calf closely related to
King Segis Pontiac Alcartra
the
$50,000.00 Holstein Bull
ONE that is RIGHT. Will be sold (to raise funds QUICKLY) for $300. First check gets him. For information come and see him. Write or wire. If not satisfactory money refunded.
F. C. BIGGS, - Trumansburg, N. Y.

FOR SALE—ONE REGISTERED GUERNSEY BULL—four years old—all safe to handle. WM. C. WHIPPLE, Purchase, New York

Guernsey Bull Calves from fashionable breed cows now entered for advanced registry. Prices, $50 to $100 OAK HILL ESTATE, Uniontown, Penn'a.

THREE PUREBRED Guernsey Heifers due to freshen in Spring, all bred to May Rose Bull. Price on application. Ardmore Farm, P. O. Glen Spey, Sullivan Co., N. Y.

For Sale—Nine High-Grade Guernsey cows. One seven months old Registered Guernsey Bull calf. F. W. Borden, Schaghticoke, N. Y.

Registered GUERNSEY BULLS
One 3, One 5 Months Old.
USUAL ATTRACTIVE PRICES
LOCHEVAN FARM, Derby, Erie Co., N. Y.

It is a Fact
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every dollar invested in feed you will secure a larger profit from
GUERNSEYS
Write for literature
GUERNSEY CATTLE CLUB
Box Y Peterboro, N. H.

Holsteins For Sale—100 high-grade yearlings, $40 and $45 each. Heifer calves, 7/8 Holstein, $15 each. Registered Holstein bulls, $35 to $100 each. REAGAN BROS., Tully, N.Y.

ONTARIO PRINCE LORIE—HOLSTEIN BULL—born, April 3, 1914; dam, high record granddaughter of Hengerveld De Kol; sire, 35.61 pound bull. Price, $250. Send for pedigree. Cloverdale Farm, Charlotte, N. Y.

Registered Holstein Bull Calf—born Sept. 1914. Dam has an official record at three years old of 17 lbs. of butter. Price, $50. One ready for service at $125.
ARTHUR R. FREEMAN, PULASKI, N. Y.

Holstein Bull
Yearling grandson of Pontiac Korndyke. Sire's dam has record of 33 lbs. butter 7 days. More white than black. A bargain. Sabarama Farm, Baldwinsville, N Y.

READY FOR SERVICE—PRICES, $75 00 to $150.00 Registered Holstein and Jersey Bulls. Splendid individuals with great backing. Best blood in the land. Also younger bull calves. Write for list. HOMEWOOD FARMS, RYE, N. Y.

Fine Purebred Holstein Bull Calves
FOR SALE—We have two at $45 each, suitable to bring up a grade herd. Others of fancier breeding, $125 to $300 each. Suitable to head any herd.
MOHEGAN FARM, Mohegan Lake, N. Y.
Hudson Valley Holstein Headquarters

REGISTERED HOLSTEIN YEARLING BULLS
Sired by Colonel Korndyke De Kol, one of the best sons of Pontiac Korndyke. Also 4 grandsons of the King of the Butter Kings, from choice heavy-milking dams, at popular prices. Write me what you want. Donald F. McLennan, Syracuse, New York

East River Grade Holsteins For Sale
75 High Grade Cows just fresh, large producers. 40 cows due to calve this month and next. 40 extra nice heifer calves ten days old, sired by pure blooded bulls, from high producing dams. Registered and grade bulls all ages.
WE TUBERCULINE TEST.
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Dept. Y, Cortland, N. Y. *Bell Phone 14, F. 5.*

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Quite a saving in labor, feed, and equipment to say nothing of the increased value of your cows and calves.
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Holstein-Friesian Asso., F. L. Houghton, Sec'y, Box 105, Brattleboro, Vt.

THE SILO.

Paints for the Silo.

I READ the cob-house silo article on page 1071 with interest. I have a square silo built of rough boards not surfaced, some boards thicker than others, some shrunk, but practically airtight, except possibly in the corners. I am looking for a preparation to finish inside of same to make it absolutely airtight, fill cracks and make a smooth surface. Do you think gas tar will do this? If so how much time does it take for it to set? Several years ago before I was interested in silos I saw a barrel of something which looked like some kind of tar and rosin that was applied hot to the inside of silos and finished them up nicely. I cannot find anything like this on the market, and am hoping that you can direct me. If I use gas tar do you think sand and cement could be used with it in place of sawdust as a crack filler, as advised in the article? R. E. P.

Nelson, Pa.

From the description given, there does not seem to be any serious difficulties to overcome, as the silo seems about "tight" to commence with. I think any of the waterproof paints would fill all cracks and make a smooth surface, the value of the latter is to prevent friction, or preventing perfect settling of the silage along the walls, and the rough, uneven surface might hold a little air if the silo was boarded horizontally. There are three paints, that I think would—any of them—fill the bill. One very cheap and simple one is skim-milk and Portland cement made somewhat thick and put on liberally with a wide brush; it would fill all cracks, make a smooth surface, dries quickly and would, I am sure, make the corners snug. The other is gas tar, mixed with gasoline to medium thickness and applied with a liberally filled brush, commencing at the top to paint. This is a great crack filler, quickly dries out, never peels or loses its hard shiny surface, as my old silo painted with it quite 25 years ago, will testify. If the corners are too wide open, paint them liberally, then run up a narrow width of roofing paper in the corner, and nail in a three-cornered strip, and then put on more paint. You then will have an air and moisture-proof lining to the silo. Of the composition of supposed tar and rosin you mention I have no knowledge, though it may be what is known as smokestack paint, and used also for coating tar-paper roofs, is cheap, dries quickly, and is a good filler. For large cracks the tar and sawdust is all right, but its use, as referred to, was a "cement" to be used between the layers of planks where the silo walls are made by spiking planks, one upon the other; some are still building that way, though very costly in lumber.

JOHN GOULD.

Who Should Build Silos?

IT is hard to estimate the value of the silo for the farmer on the corn belt farm who keeps any amount of live stock. Silage has long been proven and recognized as one of the best feeds obtainable for either Winter or Summer feeding. Some different crops may be advantageously siloed, but the most commonly used, and perhaps one of the most satisfactory is Indian corn. Corn silage is by far the most generally used, but clover, Alfalfa, rye and oats have been siloed by many with good results.

Silage is used for feeding beef and dairy cattle to a larger extent perhaps than any other live stock. Some feed it with good advantage to breeding sows, and say it invigorates and tones up the sow's system, and keeps the bowels gently loose, which is so essential before farrowing time. Others insist that it is not a highly satisfactory feed for hogs because too much fiber is necessarily eaten, which is hard to digest and of no particular value. Other farmers feed it to horses in limited quantities with the best of results. However, the horse's digestive apparatus is so different from that of the cow that if the greatest care is not exercised in feeding, serious cases of indigestion may arise. The writer has fed silage in a very limited way to swine and horses, but has fed large quantities of it to cattle and sheep, and likes it for this purpose. From the fact that silage has been found such valuable feed for farm live stock, and since by siloing corn there is practically no waste of the corn plant, because the whole stalk is put into the silo from right above the ground, including the ear, the purchasing of a silo is worthy of serious deliberation for many farmers, but after all, is the silo a necessary asset for the average farmer in the corn belt? Several things must be taken into consideration before buying a silo. Many have the erroneous idea that because the silo is a good investment for the average man who keeps a number of cattle or other live stock, it is desirable for the one keeping a limited number of live stock. Where only four or five cows, three or four horses, no sheep, and hogs not to exceed 30 are kept, and it is expected to add no more, a silo is not a good investment.

The writer resides in one of the chief tobacco-growing regions of Ohio, but a large amount of live stock is kept by a great many farmers who have silos. The farmer who devotes most of his time and energies to tobacco or some other crop does not need a silo. Many farms are less than 100 acres, and tobacco is the main money crop, with only sufficient live stock to supply the wants of the home with beef, butter and milk; with a portion of the products to sell. For men thus situated silos are not necessary, but to get the most out of this process the cattle need be fed a balanced ration out of a combination of clover, or Alfalfa, chop feed, oil or cottonseed meal. The horses can be fed clover or Timothy hay, corn stover, corn and oats, or a combination of these.

The farmer who is so situated that it is a difficult task to get sufficient help at filling time may find that the silo is not desirable for him. Here with us in the tobacco region silo filling, tobacco cutting and wheat sowing all come at practically the same time, and for this reason we have had to delay filling the silo several days on different occasions until we could get sufficient help. The corn was more matured than we would have liked to have it by this delay. If the hired help problem is a serious one, the silo may be an unnecessary equipment, but for the farmer who has none of these undesirable conditions to meet and who retains sufficient live stock cannot make a better investment than to erect one of standard makes of silos, and thereby conserve the corn crop and get the most possible benefit from the entire crop.

IRA G. SHELLABARGER.

Miami Co., Ohio.

Fumes from Silo Kill Four.

COLUMBUS, O., Sept. 23.—Four men were killed at the hospital farm Saturday, according to a telegram sent by officials of the Athens State hospital to members of the State board of administration, the governing body. Two other persons were reported probably fatally injured. The men were overcome by noxious fumes generated in the silo. All the victims were patients in the State hospital.

This report is printed in the daily papers. Every year we have several reports of this sort. The "deadly fumes" come from carbonic acid gas. This is heavier than air, and settles at the bottom of silos, wells or cellars, or in large valleys where there is no chance for air drainage. In nearly every neighborhood there are records of death from going down into old wells which have not been used for some months. No one should go into a silo or a well testing the air. Lower down a lantern or a candle before entering. If the light goes out do not go down until the air has been well stirred up. By working the cutter or blower into the silo for a few moments the danger will be removed. A chain and bucket pump in the well or a flat board or pan churned up and down at the end of a stick or rope will mix the air thoroughly. The average silo with the feeding gates left open is not likely to be dangerous as the heavy gas can drain out.

SILO PARTLY UNDERGROUND.—I expect to put up a silo right in the corner of the haymow in the barn. I wish to make it part underground, with a wooden silo on top. I have the room in the barn, and that is warm and handy always. If I can dig it I expect to go down about 15 feet, and eight feet wide. If I concrete the hole six or eight inches all around I think I shall have a substantial underground silo. They talk about the danger of suffocating in such a pit, but I think there is a way of overcoming that. I intend to remain about 12 or 15 inches away from the wall so as to work around my top silo. I intend to salt the silage. Does that help to keep it in good shape? If any of your readers have any experience with such work I wish they would let me know.

Berks Co., Penn. G. C. L.

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LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. **We tan and finish them right;** make them into coats (for men and women), robes, rugs or gloves when ordered.

Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

It tells how to take off and care for hides; how and when **we pay the freight both ways;** about our safe dyeing process which is a tremendous advantage to the customer, especially on **horse hides and calf skins;** about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

The Crosby Frisian Fur Company,
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MORE FEED per Gallon Gas

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Try it 10 days free. If not satisfied, send back at our expense. Give H. P. of engine when you write.

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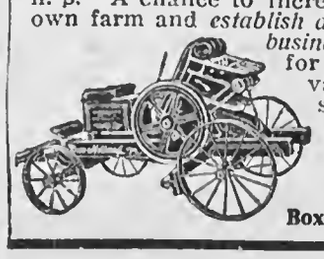

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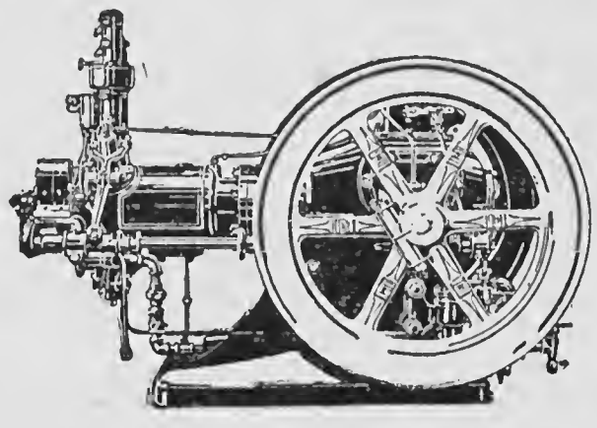

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International Harvester Company of America
(Incorporated)
CHICAGO USA
Champion Deering McCormick Milwaukee Osborne Plano

The Henyard.

THE EGG-LAYING CONTEST.

THE forty-ninth week shows an egg production of 1,417 eggs; this is 250 eggs less than last week. All of the American breeds, Rocks, Wyandottes, R. I. Reds, show a much better egg production than the White Leghorns, with the exception of the high-scoring pens of the latter breed, which are holding up remarkably well. A singular fact is that this week all the three highest pens of White Leghorns lay the same number of eggs. Tom Barron's pen laid 28, Francis F. Lincoln's pen laid 28, and Storrs Agricultural Station pen No. 42—the "sour milk" pen—laid 28. These were the three highest scoring pens among the Leghorns. But the "top-notcher" for the week is Tom Barron's White Wyandottes, with a score of 41. When Mr. Barron was on here last July, and his Wyandottes had fallen to second place, he said to me that he still thought they had a good chance to win, because "they would beat the Leghorns at laying when the cold weather comes." But Francis F. Lincoln's Leghorns are 25 eggs ahead, and there are only three weeks to go, so it looks doubtful; yet if the Wyandottes can gain for two weeks as many as they have this week, viz.: 13 eggs, they will beat Lincoln's birds by one egg. It's a very pretty fight as it stands. What impresses me very much is Mr. Barron's confidence in the results of his breeding; in private conversation, he would say "those birds are bred right, and they will do"—so and so. It seemed as if in his mind it was like a mathematical demonstration; that there was very little of the element of chance in it.

I have just received the report for September of the Missouri contest. The English Leghorns have laid 2,136 eggs in the 10 months; the next highest pen is a pen of Leghorns from Missouri, and their total is 1,909, showing a lead of 227 eggs for the Barron pen.

The Storrs contest bids fair to have 100 pens full in the next contest; more breeds are represented than ever before. So far no one has entered any Light Brahmas. Hasn't some breeder of this grand old breed the "sand" to enter a pen? The report for the week is as follows:

	Week	Total
Barred Rocks.		
A. B. Hall, Connecticut	20	1,347
Frank L. Tuttle, Massachusetts	23	1,415
Waveny Farm, Connecticut	13	1,345
Jules F. Francais, New York	30	1,620
White P. Rocks.		
Albert T. Lenzen, Massachusetts	28	1,514
F. H. Benton, Connecticut	25	1,501
Storrs Agr. Station, Connecticut	12	1,195
Storrs Agr. Station, Connecticut	27	1,298
Storrs Agr. Station, Connecticut	23	1,420
Storrs Agr. Station, Connecticut	25	1,261
Storrs Aga. Station, Connecticut	..	1,071
Buff P. Rocks.		
A. A. Hall, Connecticut	30	1,483
W. C. Morgan, Jr., Connecticut	11	1,153
White Wyandottes.		
Tom Barron, England	41	2,011
West Mt. Plty. Yards, Connecticut	10	1,177
Merrythought Farm, Connecticut	21	1,852
Neale Bros., Rhode Island	30	1,838
D. J. Ryan & Son, Connecticut	10	1,346
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	35	1,433
Dr. N. W. Sanborn, Massachusetts	25	1,367
Am. Buff Wyan. Club, New York	20	1,265
H. L. Hamilton, Connecticut	30	1,078
Columbian Wyandottes.		
Natl. Col. Wy. Club, Massachusetts.	25	1,383
Single Comb Reds.		
Robert Seaman, New York	19	1,115
J. S. Gillespie, Connecticut	23	1,341
Dr. J. C. Dingman, New York	17	1,247
Burnham Plty. Farm, Massachusetts	7	1,006
H. P. Deming, Connecticut	20	1,336
Geo. P. Dearborn, Florida	20	1,446
Dr. J. A. Fritchey, Pennsylvania	27	1,561
Ernest Underhill, New Jersey	21	1,232
W. H. Bumsted, Connecticut	19	998
Pinecrest Orchards, Massachusetts	10	1,540
Harry D. Cook, Connecticut	22	1,336
Colonial Farm, New Hampshire	18	1,398
A. B. Brundage, Connecticut	34	1,806
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	27	1,383
C. S. Scoville, Connecticut	14	990
White Leghorns.		
Storrs Agr. Station, Connecticut	15	1,546
Storrs Agr. Station, Connecticut	10	1,604
Storrs Agr. Station, Connecticut	9	1,570
Storrs Agr. Station, Connecticut	28	2,014
Storrs Agr. Station, Connecticut	15	1,490
Braeside Plty. Farm, Pennsylvania	18	1,431
Glenview Plty. Farm, Connecticut	23	1,603
Manor Plty. Farm, New York	13	1,455
A. B. Hall, Connecticut	4	1,444
Marwood Plty. Farm, Pennsylvania	23	1,669
Geo. M. Harris, Connecticut	17	1,235
Bonnie Brook Farm, New York	20	1,681
N. W. Hendryx, Connecticut	5	1,422
J. J. Linehan, Massachusetts	5	1,338
F. F. Lincoln, Connecticut	28	2,036
Cecil Guernsey, New York	14	1,674
Thos. W. Moore, Connecticut	7	1,545
Chas. N. St. John, New York	21	1,580
Chas. W. Sherwood, Connecticut	5	1,419
L. E. Sands, Pennsylvania	1	1,435
Tomoka Plty. Farm, Connecticut	14	1,311
Venture Plty. Farm, New York	..	1,150
Mrs. K. E. Woodruff, Connecticut	21	1,565
Windsweep Farm, Connecticut	4	1,228
C. H. Savage, Connecticut	15	1,467
P. G. Platt, Pennsylvania	9	1,672
Heneta Bone Co., New Jersey	1	552
F. M. Peasley, Connecticut	18	1,512
Chas. Heigl, Ohio	7	1,424
Tom Barron, England	28	1,956
Branford Farm, Connecticut	16	1,667
James Munn, Massachusetts	1	1,303
Geo. A. Cosgrove, Connecticut	15	1,517
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	18	1,544
Blue Andalusians.		
E. D. Bird, Connecticut	16	1,311
Buff Orpingtons.		
O. Wilson, West Virginia	11	1,065
White Orpingtons.		
P. A. Demgar, New York	18	1,033
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	13	853
Silver Campines.		
W. J. H. Lobel, New Jersey	11	1,301
"Hens."		
H. W. Collingwood, New Jersey	13	1,267
Daniel Hine, Connecticut	14	1,163
Daniel Hine, Connecticut	14	1,121
Mixed Breeds.		
Profitable Poultry, Massachusetts	24	1,290
Profitable Poultry, Massachusetts	23	1,342

GEO. A. COSGROVE.

Fowls on Free Range.

I AM about to start a small chicken ranch of about 100 hens. I have no pens. Do you think if I keep about 12 cockerels and let a different one run each day to prevent their fighting, this would be sufficient to insure good fertile eggs? I think breeding fowls will do better and keep in a healthier condition if let run at large. Do you not think so? R. S.

Three vigorous cockerels should be ample in a flock of 100 Leghorn hens, and if they have free range it is not necessary to keep part of them shut up to prevent fighting. It is true that breeding fowls do better when having their liberty, but in cold weather it is necessary for them to have comfortable quarters of some kind; these quarters may be very inexpensive, however, if dry and free from drafts. M. B. D.

Lettuce and Feathers.

IS there an element in lettuce leaves, which will promote the growth of feathers, on chickens, which are slow to feather out? I ask because in a 10-chicken hatch kept in a coop of Plymouth Rocks, two did not feather out; they were covered with a down until quite large, five or six weeks old. I then fed the brood lettuce, and a few days after I commenced doing so I noticed that feathers came out rapidly and they were soon covered, while the others in the brood seemed to grow brighter and more feathers. M. H. D.

I know of no reason for thinking that lettuce leaves can stimulate the growth of feathers, these latter requiring for their development the protein element of food in which most vegetables are deficient. The observation is interesting, however, and may well be followed up if occasion offers. Most flocks show, at times, cases of delayed development in feathering out, this seeming to be rather a curious physiological phenomenon not easily accounted for. A friend in Alabama gives the following interesting account of delayed feathering as seen in the South. "I have had Barred Rocks, chicks hatched in early Spring or late Fall, go along and feather normally but those hatched in late Spring and early Summer shed the baby down and the pullets grow a normal covering, while the little cockerels go as naked as a plantation pickaninny, except for a few of the flight wing feathers and some on the head and back of the neck. They often get badly sunburned on the back because of the lack of protection. The young roosters always feather up all right as the cooler nights begin, and it has appeared to me that, as a rule, the featherless specimens feather up and are better birds. This happens as regularly here as the year rolls around to the appointed season." M. B. D.

Cleaning Soiled Eggs.

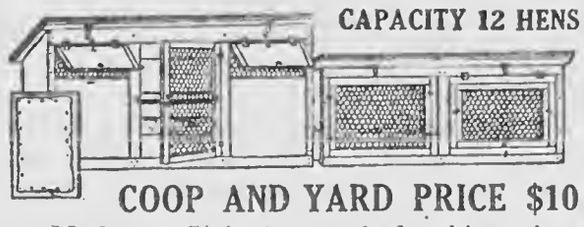
WHAT can be used to remove spots from eggs? I generally keep from 500 to 800 hens and at times some of the eggs get very dirty and I find it impossible to remove the stains.
New York. W. B.

I know of nothing more suitable for this purpose than one of the scouring materials used upon a soft dampened rag. Most stains may be quickly scoured off with one of these scouring soaps and the shell is left in as good condition as is possible after washing. Poultrymen are frequently cautioned against washing eggs in preparation for market, as this removes the protective coating from the newly laid shell and injures the keeping quality of the egg. While all this is undoubtedly true, all poultrymen know that it is practically impossible to keep eggs from becoming soiled in the nests, and if they were sent to market without cleaning they would be severely cut in price. Until some method of preventing hens from soiling their eggs is devised eggs will be washed, and the use of these scouring materials removes the stains with as little injury to the egg as anything known to the writer. M. B. D.

Middlings and Mixed Feed.

ARE brown middlings, and same marked standard middlings, as good as mixed feed for poultry and horses? They usually sell for $2 per ton less here than mixed feed. G. W. S.
So. Woodstock, Vt.

There seems to be no definite standard for middlings or trade name by which the grade can be recognized; millers market their wheat middlings under different names and these signify little or nothing as to the quality of the product. Mixed wheat feed, composed of both middlings and bran, is superior to ordinary middlings, whether marked "Brown" or "Standard" and should bring more in the market. M. B. D.



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Tom Barron's White Leghorns

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R. T. EWING, - - Atlantic, Pa.

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Barron Cockerels, White Leghorns—Laying and breeding hens. Prices reasonable. Hamilton Farm, Huntington, N Y.

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TOM BARRON'S

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S. C. White Leghorns, April hatched. Bred for vigor and egg-laying power; large, strong, healthy birds, ready for business now. $1.50 each.

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Pullets, Yearling Hens, Cocks & Cockerels in lots to suit purchasers at attractive prices. MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.

300 White Leghorn Pullets from fine utility strain, $1.25 each. W. E. CATHER, R. 2, Winchester, Va.

FOR SALE—Choice lot yearling Leghorn hens. Address. WILPEN POULTRY FARM, Sewickley, Pa.

Utility S. C. White Leghorns—Selected yearling hens, 80c each, $75 per 100. GEO. FROST, Levanna, Cayuga Co., New York

REMOVAL SALE—Six March hatched W. ORPINGTON PULLETS, $10. Fine trio Silver Spangled Hamburgs, $5. J. D. GRAHAM, Lyonsville, Mass.

50 F. and W. INDIAN RUNNER DUCKS and DRAKES—$2 each. Prize winners. White-egg strain. Geo. Williamson, Flanders, N.J.

25 MAMMOTH PEKIN DRAKES FOR SALE AT $2.00 EACH. Bred from winners. Geo. Williamson, Flanders, N.J

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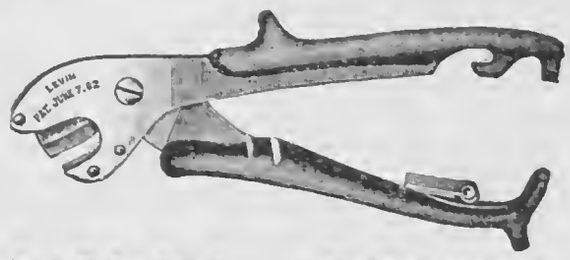

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THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

PUBLISHER'S DESK

WHAT do you think of the Franklin Park Corporation, circulars of which I enclose? It does not appeal to me but I would be glad to have your estimate of it. A. G. F.
Virginia.

The literature accompanying this inquiry seems to indicate that the Franklin Park Corporation is located at Washington, D. C., and that they want to organize a branch office in Virginia. They want a manager for the local Park Corporation who will invest from $4,000 to $7,000 in the business, and they say appropriation of half the investment will be made for his salary and expenses. They claim the opportunity is presented for making $4,000 to $10,000 per annum. The inducement for the manager to put up cash in advance, and the fixing of his salary is significant, though there is nothing very new about it. We have seen a good many schemes in the past started on just this basis, but if a man wants to pay himself a salary of $2,000 out of his own pocket, we see no very good reason why he should put up $4,000 to somebody else for the privilege. Our opinion is that he can make better use of his money.

I think I am eligible to membership in the Anti-Fake Club, as I have already turned down several papers on account of their advs. and have reported several cases of faking that have come to my notice. At a local fair recently there were numerous glib-tongued agents who wanted to send papers free of charge for one year to introduce the paper. All they asked was that you pay the postage, which probably amounted to their regular subscription. I examined the wares of two of these agents and showed them advs. that "queered" the paper for me. One fellow was a bit angry and wanted to know what influence I would have. He said it would amount to about as much as the Prohibitionists. He didn't seem to realize that if every one did his duty it would not take long to right any wrong. But where most everyone figures that his influence does not amount to much and he may as well take the course of least resistance the wrong is sure to prevail. One drop of water in a place does not amount to much but when enough of them get together and move in the same direction, their power is practically unlimited. L. E. G.
Vermont.

The above letter we think good enough to print in full. If we all did our part to produce conditions as we would like to have them, there would be no doubt of the result. And what a beautiful world we would have to live in. The gathering members of this Anti-Fake Club seem determined to do their part all right.

We are enclosing bill against the Southern Express Company for one case of eggs shipped to a New York house on Sept. 26, 1912. The case of eggs was so badly damaged it was refused. We made claim against the express company, and received several letters from them. One letter in reply said the claim would be adjusted soon. The next letter stated they had lost the papers. We had given it up for lost, but seeing the work you are doing for others, we thought we would get you to try it.
Virginia. W. W.

We took this up promptly. On September 26, 1914, we received advice that this claim was settled on that day—just two years from date of shipment. If this claim had not been entered promptly we would not have been able to help in the adjustment, as the transportation companies are holding very strictly to the four-months limitation, and it will be well for shippers to bear this in mind.

I enclose a letter from the Victor Razor Co., 412 Drexel Bank Bldg., Chicago. A year or so ago I received a razor from them, which I returned, but they sent me another, or it may have been the same one, and I returned that. Now I have the package that they refer to in their letter. I have not opened it, but I suppose it contains a razor. If I thought they would not bother me or anyone else with it, I would accommodate them once more. I do not want the razor. Will you kindly advise me what I should do with the razor?
New Jersey. W. W.

The New Jersey subscriber is under no obligation whatever to return this razor. The Victor Razor Co., as is their habit, sent the subscriber the razor without his knowledge or consent, and it is incumbent upon them either to come and get it, if they want it back, or send postage for its return. The only way to stop this nefarious manner of doing business is to make it unprofitable. Some of our subscribers who have received razors in this way have sent them back by express, charges collect. If all who are sent razors or other goods in this way would take some such action and refuse being bluffed into paying for the goods under the threat of bringing legal action, this class of houses would soon go out of business or reform their methods. In his palmy days, E. G. Lewis organized an agency to collect just such claims on behalf of his fake advertisers. When Secretary Redfield, now of the Department of Labor, Washington, D. C., had the job of whitewashing Lewis through a Congressional committee he thought Lewis was doing a meritorious service to these victims of what were called systematic robberies. The robbers in their estimation were the people who refused to pay for razors and other worthless junk.

Do you consider Phelps building certificates a safe investment of the Farm and Home Publishing Company?
Pennsylvania. W. M. T.

Some years back Herbert Myrick, the controlling spirit in the above concern, put up a building in Springfield, Mass., for his publishing business. At the same time he advertised and sold so-called building certificates to subscribers of his various papers through the country, and promised 15 per cent. interest on them annually; but it was stipulated that the creditor must pay for one of the Myrick papers out of the interest. The certificate seemed to read plainly enough on the face of it that the balance would remain at compound interest and the whole might be withdrawn under certain conditions. Later when an effort was made by a creditor to withdraw the money, Mr. Myrick set up the claim that he was not entitled to the extra interest above the price of the paper, if he withdrew the money during his lifetime. That is you had to die to get it, and a veiled paragraph on the back of the certificate seemed capable of such an interpretation, though it is doubtful if any one would discover it on casual reading. On withdrawal the creditor was obliged to pay for two years in advance for the Myrick paper.

Mr. Myrick's different papers at the time were published by five or more separate companies. We have nothing to show that any of them owned the building at the time, and certainly four of the companies owned no part of it. Yet Mr. Myrick issued building certificates in the name of the companies having no interest in the building, and plainly represented to the purchasers that the certificate made them part owners in the building. It of course did nothing of the kind. Two of the papers which offered the certificates have since been sold. The papers have been discontinued to the certificate holders, and in some cases they have appealed to us, and we have collected the money for them. If any have lost their certificates or neglect going past the present publishers back to Mr. Myrick with a demand for the money, they have not been disturbed in their modest retirement. The certificates were nothing but receipts for the money, with some confusing details as to its return and the disposition of the interest. They were a mere evidence of indebtedness of the concern that signed them. These concerns had no interest in the Myrick building or any other building and of course no control of it. Some of the investors write that they thought the building was security for the investment. These were deceived.

The blank application with this inquiry indicates that Mr. Myrick simply wishes to borrow money from farmers at five per cent. interest payable semi-annually, and the principal returnable on 90 days notice after the lapse of a stated number of years. We do not care to draw any conclusion as to the safety of such an investment. We give the record and leave every man to draw his own conclusion. J. J. D.

UNCLE ZACK, the stable man, enjoyed local repute as a weather prophet. Miss Cassie, coming down early one morning, found Zack on the back porch. "Is the rain going to last all day, Zack?" she asked. "Yessum, Ah reckin it is." "Why, Zack," Miss Cassie said, "I have always heard you say, 'Rain before seven, clear before eleven.' Isn't that true?" "Yessum, it's strickly true," Uncle Zack maintained stoutly, "jes 'cepting it doan' apply to an *all-day rain, ma'am.*"—New York Evening Post.

Save $1 to $2.50 PER TON on Lime

Ground limestone at the quarry costs from $1 to $1.50 per ton. Freight and hauling makes it cost from $1.50 to $3 delivered on your farm. If you have lime rock available, it's like throwing away money to buy limestone at these prices! For, with a JEFFREY LIME-PULVER on your farm, after quarrying the rock, you can grind it for 50c per ton. You can save from $1 to $2.50 per ton. In a short time the machine has paid for itself. Your farm is free from rock—richer—more productive. You can grow the clover and alfalfa that before refused to thrive. You have lime in a form that's better than burnt lime.

Grinds 2 to 3 Tons Per Hour

The Jeffrey Lime-Pulver will take the big rocks—any size up to 4 inches thick and 11 inches long—and grind them to a powder at the rate of from 2 to 3 tons per hour. It's both a crusher and a pulverizer. No need to have two machines—one to crush and one to pulverize. The Lime-Pulver takes the big rocks and grinds them to a fineness that will go through your spreader without the slightest trouble—no clinkers to get in and break it up. You can grind the rock coarser if you desire. But fine grinding is of utmost importance.

Grinds Rock for Road Work, Corn Tobacco Stems, Bone, Etc.

The Lime-Pulver is a dual purpose machine. It will grind rock for road work—2 to 3 tons per hour. Grinds corn on the cob, tobacco stems and bone. Made in the famous Jeffrey shops, of materials almost wear-proof. Ball-bearing pulverizer—pulverizing hammers of Manganese steel. Mounted on wheels and as easily moved as a wagon. Sold on a money-back guarantee. If you have lime rock available and do not own a Lime-Pulver, you pay for it over and over again without ever really owning one, if you have lime rock, you can make big profits selling ground limestone to neighbors. Write today for full particulars, price and our free booklet on Lime.

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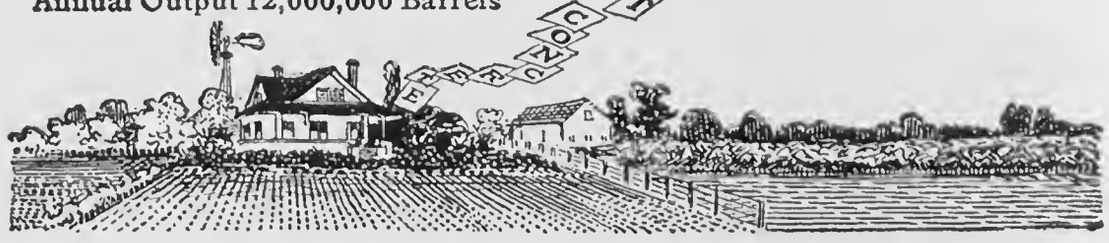

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Oct. 16, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.91 and $1.71 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The scarcity of best creamery has forced the price up one cent. Other grades are plentiful—some in surplus and meeting dull trade. Very little storage is moving, desirable lots being held firmly.

Creamery, extra, above 93 score, lb	32	@	32½
Extra, 93 score	31½	@	32
Good to Choice	26	@	28
Lower Grades	22	@	24
Storage	27	@	30½
State Dairy, best	30	@	30½
Common to Good	22	@	25
Ladles	19	@	22
Packing Stock	18	@	21
Process	22	@	26

Elgin, Ill., butter market 30 cents.
Philadelphia, western creamery, 32 cents.
Chicago creamery, 25@30 .

CHEESE.

There has been a further half cent decline, which has encouraged business a trifle, though trade is still light, especially on skims.

Whole Milk, fresh, specials	14¾	@	15
Average fancy	14½	@	14¾
Under grades	12	@	14
Daisies, Wisconsin	14	@	14½
Skims, specials	12	@	12¾
Good to choice	10½	@	11½
Poor to fair	7	@	10

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, Etc., of THE RURAL NEW-YORKER, published weekly at 333 West 30th Street, New York, N. Y., as required by the Act of August 24, 1912.

Editor: Herbert W. Collingwood, Woodcliff Lake, N. J.

Managing Editor: Herbert W. Collingwood, Woodcliff Lake, N. J.

Business Manager: John J. Dillon, 903 West End Avenue, New York.

Publisher: The Rural Publishing Co., 333 West 30th Street, New York.

Owners: John J. Dillon, 903 West End Avenue, New York.
Wm. F. Dillon, 3675 Broadway, New York.
Herbert W. Collingwood, Woodcliff Lake, N. J.
The Rural Publishing Co.,
333 W. 30th Street, New York.

There are no bondholders, mortgagees or other security holders.

(Signed) JOHN J. DILLON, Business Manager.

Sworn to and subscribed before me this 3d day of October, 1914.

C. S. LORENTZEN,
Notary Public,
New York County.

My commission expires March 30, 1915.

EGGS.

The price range covering different qualities is unusually wide. Some nearby white have sold up to 50 cents, but lower grades are in considerable surplus, some permitted sale by the health authorities going as low as 10 cents. Most business in what are known as fresh gathered is under 30 cents, and best hennery brown, 32 to 34. There has been a little export business in good storage grades to England, and this trade may increase if breakage is not too heavy. On the other hand we have had small shipments from Denmark.

White, choice to fancy, large	48	@	50
Common to good	39	@	33
Mixed colors, best	33	@	35
Common to good	25	@	28
Western fresh, white	29	@	35
Lower grades	10	@	20
Storage, best	22	@	23
Lower grades	18	@	20

FRESH FRUITS.

Most apples are 25 to 50 cents per barrel less than last week, receipts having been heavy on our already loaded markets. Demand for pears has been good, and the better grades of Clairgeau and Bosc higher. Grapes in larger supply but selling well at former prices.

Apples—Alexander, bbl	1 50	@	2 50
Gravenstein	1 50	@	2 25
Duchess	1 50	@	2 25
Wealthy	1 50	@	2 50
Fall Pippin	1 25	@	2 00
McIntosh	2 00	@	3 00
Jonathan	2 00	@	3 00
Twenty-ounce	1 25	@	1 75
Spitz	1 25	@	2 00
Baldwin	1 25	@	1 75
King	1 25	@	1 75
Greening	1 25	@	1 75
Blush	1 25	@	1 75
Crabapples, bbl	2 00	@	8 00
Pears, Anjou, bbl	5 00	@	5 00
Bartlett	3 50	@	5 50
Seckel	3 00	@	5 00
Bosc	3 00	@	6 00
Clairgeau	3 00	@	5 00
Sheldon	3 00	@	5 00
Peaches, bkt	25	@	1 00
Grapes, 18lb case	40	@	90
4lb. bkt	6	@	10
Plums, 8lb.-bkt	10	@	25
Figs, fresh, qt	05	@	10
Muskmelons, Colorado, bu	1 00	@	1 50

HOPS.

Prime to choice	43	@	45
Common to good	38	@	42
Pacific Coast	15	@	16
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

The market on chestnuts went to pieces badly owing to heavy supply and warm weather. In one day there was a drop of $4 per bushel on wild chestnuts. Cultivated have held up better in price. Some extra fine cultivated are seen—about half the size of Paragon, but closely resembling wild. In fact many would pass for wild nuts grown under favorable conditions. There is more commercial possibility in these moderate sizes at present than the very large ones. Hickory nuts are scarce, choice bringing upwards of $3 per bushel.

Chestnuts, Northern, bu	2 00	@	3 25
Southern	1 50	@	2 00
Cultivated, lb	03	@	08
Hickory Nuts, bu	2 50	@	3 50

BEANS.

The market is 20 to 30 cents per hundred lower on practically all varieties.

Marrow, 100 lbs	5 95	@	6 00
Medium	4 00	@	4 10
Pea	3 95	@	4 00
Red Kidney	5 00	@	5 65
Lima, California	6 20	@	6 25

VEGETABLES.

Potato market is weak and prices 10 cents lower on medium grades. Onions continue low, though some sales are noted at better prices than last week. Cabbage slightly higher. Cauliflower in heavy supply and lower. String beans plentiful from Virginia and low. Tomatoes getting scarce and higher.

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 75	@	2 00
State, 180 lbs	1 50	@	1 60
Maine, 180 lbs	1 65	@	1 75
Sweet Potatoes, bbl	2 00	@	2 50
Brussels Sprouts, qt	01	@	10
Beets, 100 bunches	50	@	1 00
Carrots, bbl	1 00	@	1 25
Celery, doz	10	@	25
Cauliflower, bbl	1 00	@	3 50
Cucumbers, bu	50	@	1 00
Cabbage, bbl	75	@	1 00
Ton	10 00	@	14 00
Lettuce, half-bbl. basket	15	@	1 00
Onions—Red, bag	75	@	1 00
Yellow	60	@	90
Peppers, Jersey, bbl	1 00	@	1 75
Peas, bu	1 50	@	4 50
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	1 00	@	1 25
String Beans, bu	50	@	1 50
Squash, Hubbard, bbl	60	@	75
Marrow	50	@	75
Egg Plants, bu	50	@	90
Tomatoes, Jersey, box	50	@	1 00

LIVE POULTRY.

Business is fairly active and market firm. A few choice fowls have sold up to 18 cents. Few chickens good enough to bring above 15. Ducks and geese selling slowly.

Chickens, lb	14	@	15
Fowls	15	@	18
Roosters	12	@	12½
Ducks	15	@	17
Geese	13	@	14

DRESSED POULTRY.

The weather has been too warm to stimulate much poultry trade. Heavy fowls and good roasting chickens have sold best. Turkeys very dull.

Turkeys, choice, lb	23	@	25
Common to good	15	@	21
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	65
Broilers, common to good	19	@	21
Fowls	17	@	20
Ducks, Spring	15	@	16
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

The hay market has improved and prices 50 cents higher on most grades. A little Alfalfa has been sold here recently at $20 to $24. Straw market dull, bulk of receipts being No. 2 or under.

Hay, Timothy, new, No. 1, ton	20 50	@	21 50
No. 2	18 00	@	19 50
No. 3	15 00	@	17 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	13 00	@	14 00
Short and tangled	10 00	@	11 00

LIVE STOCK.

Native Steers	0 25	@	8 75
Bulls	4 50	@	6 50
Cows	3 00	@	6 00
Calves, prime veal, 100 lb	8 50	@	12 50
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 25	@	8 00
Hogs	8 00	@	8 50

GRAIN.

The wheat market has been firm during the week owing to heavy export sales, but weakened at the end and prices dropped one to two cents. Corn dull; oats lower because of favorable outlook in Argentina.

Wheat, No. 1, Northern Spring	1 14	@	..
No. 2, Red	1 17	@	..
No. 2, Hard Winter	1 11	@	..
Corn, as to quality, bush	80	@	81
Oats, as to weight, bush	49	@	53
Rye	95	@	96

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	50	@	55
Mixed colors, new laid	42	@	45
Ordinary grades	25	@	35
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	28	@	30
Squab broilers, pair	1 00	@	1 50
Broilers, common to good, lb	24	@	26
Fricassee, lb	18	@	20
Fowls	19	@	22
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	16	@	18
Stewing beef	12	@	14
Pork Chops	18	@	20
Loin of Pork	17	@	19
Round Steak	18	@	20

Receipts at New York, week ending October 16, 1914:

Wheat, bushels	2,109,520
Corn, bushels	133,800
Oats, bushels	1,003,700
Rye, bushels	167,150
Apples, bushels	445,000
Potatoes, bushels	220,000
Hay, tons	5,000
Butter, pounds	2,700,000
Eggs, dozen	2,200,000

Our total circulation of currency is now $3,694,748,196, or $37.15 per capita.

*

The sale of gold bars at the New York Assay Office for the nine months ending September 30 amounted to $48,409,695.

*

The first steamer from New Zealand to New York without a stop arrived after a voyage of 44½ days by way of Cape Horn.

*

During September new incorporations amounting to $100,000 or over totalled $87,551,400. For the nine months of 1914 capitalization was $1,114,107,700. Delaware led in number of charters.

*

Since May the government fisheries commission has planted 182,000,000 lobster fry along the Maine coast. The young lobsters are the prey of many fishes, so that not more than 10 or 15 per cent. of the plant survives.

*

Brooklyn, N. Y., has been added to the postoffices where extensive distribution of farm produce by parcel post will be made. Postmaster W. E. Kelly will make lists of farmers who want to sell their goods in this way, and these names will be sent to Brooklyn residents. Distribution will be made from a special parcel post sub-station, so that the goods can be handled with the least possible delay. A similar experiment in Boston, Mass., has proven a great success.

*

The North Pacific Fruit Distributors have set these prices at primary shipping points for boxed apples, the first price being for "Extra" and the second "Fancy." Baldwin, $105 @ 85; Jonathan, $1.15 @ 95; McIntosh $1.05 @ 85; Rome Beauty, $1.25 @ $1.05; Spitzenburg, $1.35 @ $1.15; Newtown, $1.35 @ $1.15; Ben Davis, 90 @ 75; Gano, $1.00 @ 80; Winter Bananas, $1.50 @ $1.15; Winesap, $1.35 @ $1.15; Delicious, $1.50 @ $1.15; Grimes, $1.15 @ 95; York Imperial, $1.05 @ 85; Arkansas Black, $1.50 @ $1.15.

*

In the seven months ending with July we imported 122,163,556 pounds of clothing wool, worth $30,332,744; 16,717,949 pounds of combing, $4,195,753; and 67,388,213 carpet wool, $11,428,213; total $45,956,710.

Binding twine imports were 7,500,834 pounds, $687,596; jute, hemp and flaxseed yarns, 3,072,808 pounds, $601,050; burlap and other plain fabric of single jute yarns, 292,851,532 pounds, $24,801,572. Four-fifths of the last item came from British India.

Raw silk imports were 14,684,162, valued at $53,957,340. Nearly three quarters came from Japan.

"WELL, Jean, are you content about your examination?" "Yes, grandpa, I answered all the questions." "And how did you answer them?" "I answered that I didn't know."—Le Rire.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

AUSTRIAN, 24 years, wants situation on poultry farm to learn; no wages, lodging and table only. ILLERT, 231 East 48th St., New York.

WANTED—A competent farmer to run my 100 acre Connecticut farm, 50 miles from New York; shares or salary. Address R. C. T., care R. N.-Y.

POULTRYMAN—Desires position; married; 8 years' experience; modern methods; can get results. Address POULTRYMAN, care Rural New-Yorker.

POSITION WANTED—Married man, with small family, good milker, understands all kinds of farm work, and handy with machinery. F. C. F., Box 182, Chappaqua, N. Y.

PARTNER WANTED—Florida live-stock proposition, with capital, by university trained agriculturist; 500 acres rich clay soil, near Tallahassee. L. HEIMBURGER, Tallahassee, Fla.

WANTED—Single man; must be good milker, who wants to learn advanced registry feeding and work; state nationality, age, wages wanted and reference. New York State, care Rural New-Yorker.

WANTED—Position as manager of a large country estate by a practical farmer, horticulturist and stockman who can produce results; small family; references furnished. M. L. d., care Rural New-Yorker.

POSITION WANTED—By expert poultryman, fruit grower and practical mechanic, build poultry houses, etc., conscientious worker, strictly sober, excellent reference; Swiss-American, age 40, unmarried. JOHN H. GASSER, Bethel, Conn.

TWO STRONG CITY BOYS, aged 18 years, want place on farm for two years, to get practical experience preparatory for agricultural college course. Salary not important. Address ROBT. P. KEHOE, 98 Morningside Ave., New York.

STOCKMAN wants position on large farm; understands horse raising, the care of dairy cattle, sheep, hothouse lambs and hogs; also good working knowledge of poultry; long experience with registered stock, scientific training. R. D. C., care R. N.-Y.

WANTED—Position as herdsman or dairyman by one who thoroughly understands the business; an experienced feeder for tests; A1 buttermaker; ten-year practical experience; single, American, age 31; college training; good habits and record. X Y Z, care R. N.-Y.

WANTED—Position as Superintendent to take complete charge of farm. Married; college graduate; thoroughly understands crops, stock, dairying and up-to-date methods, particularly production of sanitary milk. Excellent references. JOHN HESSE, Smithtown, N. Y.

WANTED—Competent, experienced farmer, 300-acre Niagara fruit and stock farm, fine location, surroundings and equipments all up to date, good opportunity for man who can show results from past records; state in full references, age and salary wanted. CHESTNUT RIDGE FARM, Lockport, N. Y.

TENANT WANTED for improved 130-acre farm near Seneca Lake, Seneca County, New York; 16 acres grapes, 8 acres apples and peaches, rest tillable soil producing Alfalfa, corn, wheat and hay. Good water and accomodations for stock. School, church and R. R. near; progressive neighbors, ample barns, house and outbuildings. A No. 1 opportunity for the right man. Good reference required. HERMAN VAN VLEET, Olmstedville, N. Y.

PURE HONEY—Direct to Consumer; circular free. HARRIS T. KILLE & BRO., Swedesboro, N. J.

THREE CYPHERS four hundred egg incubators; cheap now. HAMILTON FARM, Greenlawn, L. I.

FOR SALE—Fancy Sweet Potatoes at $2.50 per barrel, or will exchange for fancy apples. C. A. NOTTINGHAM, Cape Charles, Va.

EXPERT INFORMATION—Making Cider Vinegar, quick process; forty years' experience; results guaranteed. JOHN P. CASE, Spring St., Trenton, New Jersey.

FOR SALE—Valuable fruit and poultry farm of 9 acres. Fine market. MOORE & SON, Nazareth, Pa.

FOR SALE—Fifty-three-acre farm, with improvements, near Bridgeton. A. J. ALLEN, Salem, N. J.

10 ACRES of good land; orange trees; good house, barn, all improved, $500. M. RIGEL, Yellow Pine, Ala.

I WANT to rent with option of buying a truck farm, 80 to 100 acres in Long Island, within 50 miles of New York. W. R., care R. N.-Y.

FOR SALE—Small place, Sullivan Co., N. Y., over two acres; good buildings; adapted for chickens and truck. JOSEPH ROGERS, Farmingdale, New Jersey.

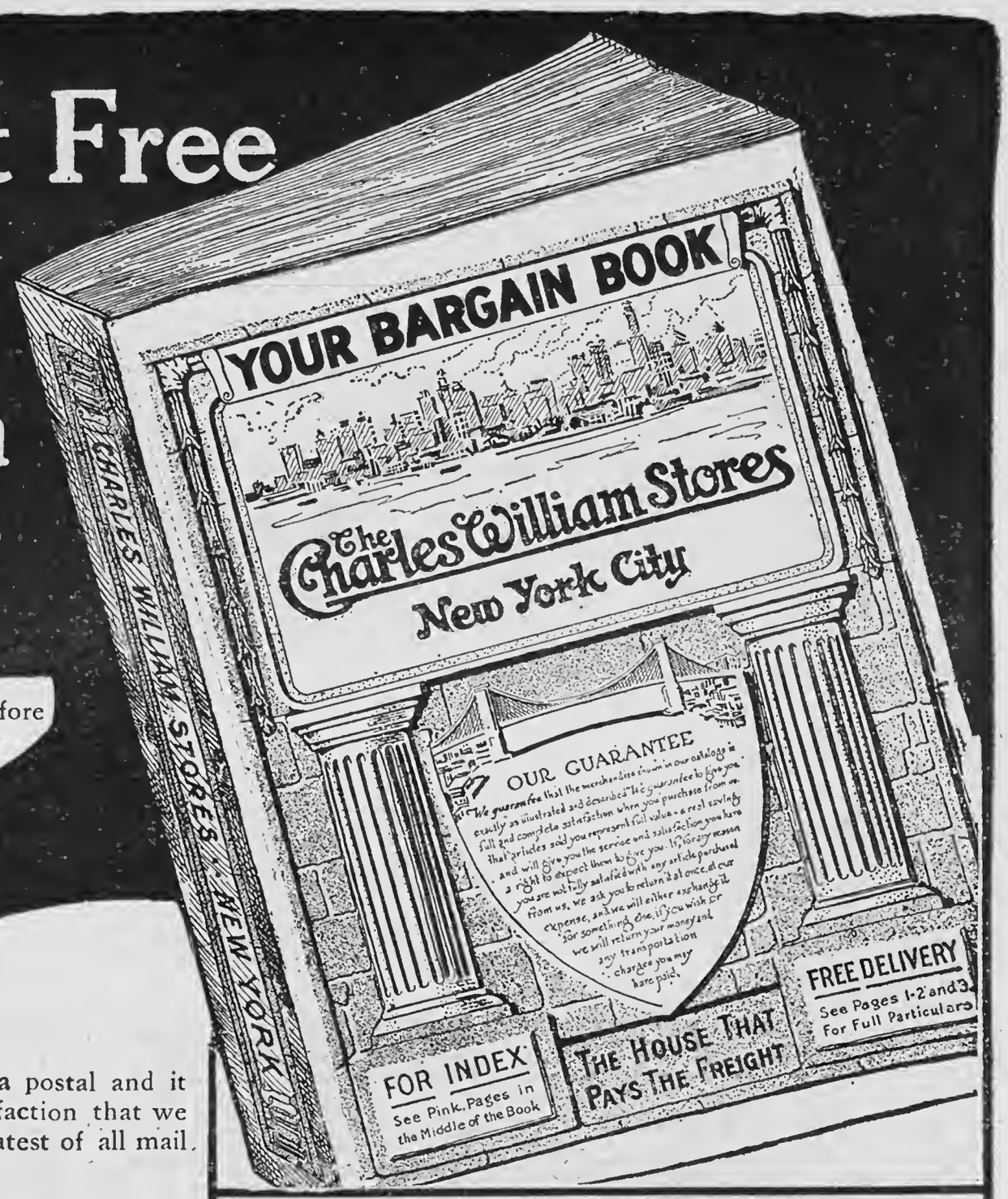
FARM FOR SALE—20-acre plantation Isle of Pines. Finest climate Winter and Summer. Grapefruit, oranges and pineapples; 5,000 American colony. Write DR. O. M. MYERS R— 16 State St., Rochester, N. Y.

FOR SALE—Successful poultry plant, location convenient to market, modern equipped buildings housing 900 hens; must be seen to be appreciated. Price reasonable; terms. Address BARGAIN, care Rural New-Yorker.

FARM FOR SALE—60 acres, with 6-room house and large barn. 3½ miles from L. V. R. R. station and market; 1 mile from village; pleasant, healthy location. Price $1,500 cash. Write to DANIEL HOGAN, R. D., Wyalusing, Bradford Co., Pa.

WANTED—To rent or work on shares, desirable farm well located, 12 to 24 good cows, by young married man, up-to-date, scientific, life experience, studied under Cornell, no bad habits; best references. J. HOLLISTER BARRE, Afton, N. Y.

What This Great Free Book Means to Every Farmer in the Land →



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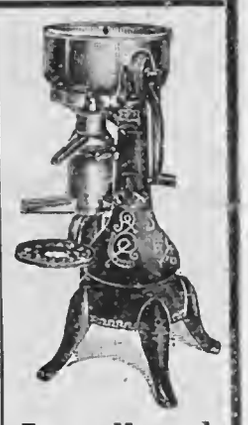

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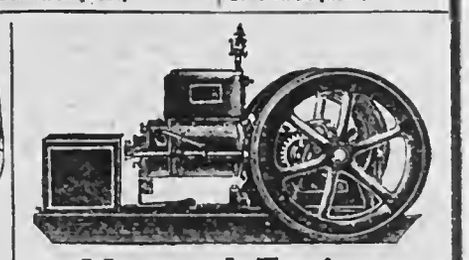

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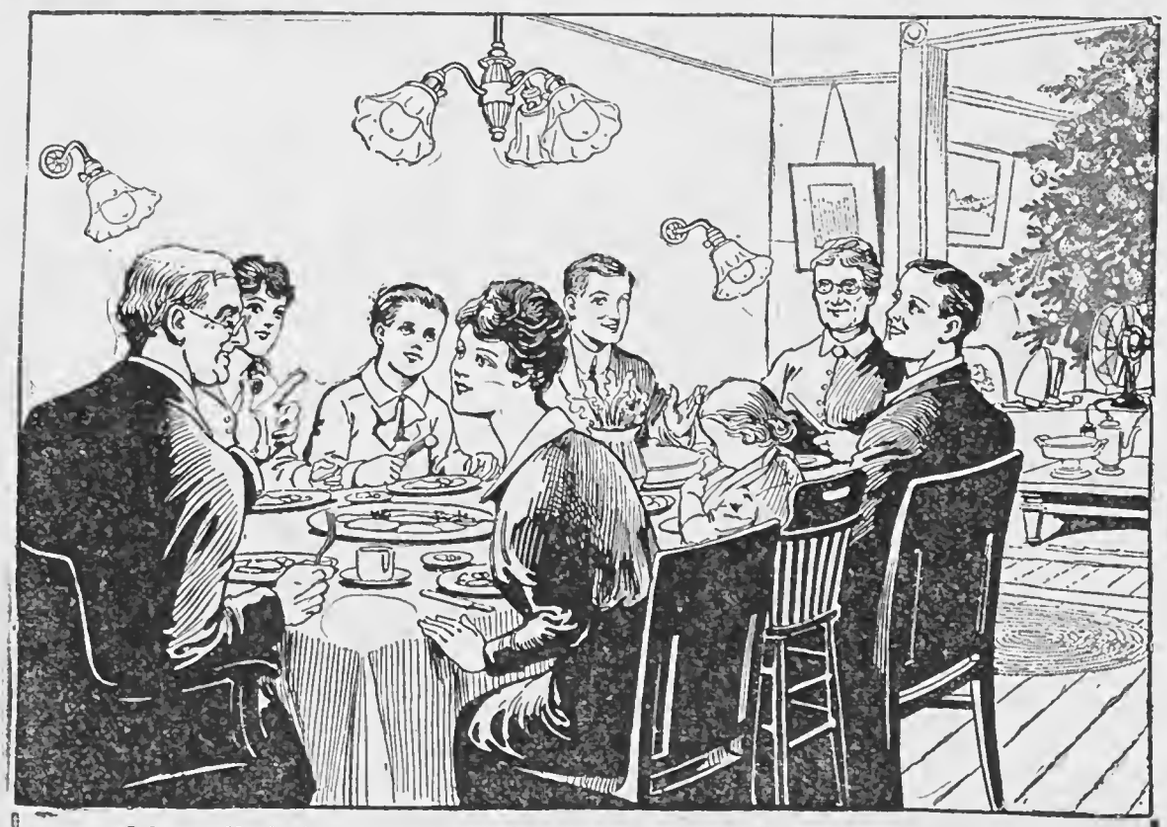

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THE COST OF GROWING WHEAT

Cut in Two by Changed Methods.

VALUE OF CROP RECORDS.—Farming is not and never can be an exact science. This is no excuse for the indefiniteness and the lack of knowledge of the costs of production, which characterize much of our farming. Carefully-kept records not only offer the most accurate information possible about a crop, but stimulate one to try to lower his costs of production, increase the efficiency of his labor, and modify his methods so as to get larger yields at a less cost per unit. At Beechwood Farm, in Monroe County, New York, careful records have been kept on all the crops for six years. These records are particularly interesting in the case of wheat, of which nearly 80 acres and 2,000 bushels have been grown during this period. The records which follow are given as a four-year average, from 1909 to 1912, and as a two-year average for 1913 and 1914. The reason for this grouping lies in the change in the rotation system, which was made in 1913, and which has greatly reduced the cost of production.

CHANGE IN ROTATION.—Up to 1913 our rotation had always been from five to seven or eight years in length, somewhat as follows: Corn, oats, wheat, hay one to three years, beans sometimes followed by wheat, but more often by oats, etc. After keeping records for four years, it was found that under our conditions, corn and oats were not profitable crops, and they were dropped from the rotation, except as substitute or emergency crops. Since 1913, the rotation has been one of four years, as follows: (1) beans, (2) wheat, (3) clover hay, (4) mixed clover and Timothy hay. The change has resulted in a much lower production cost for three reasons: (1) it permitted a rearrangement of fields (our soil is quite uniform and our fields level) so as to increase the average size of the wheat fields from 10.8 acres to 18 acres. Larger fields reduce the labor costs considerably, our experience has shown; (2) it made possible the sowing of wheat after beans without plowing, at the same time lessening the cost of preparing the seed bed; (3) the yield of wheat was increased because of the better seed bed, which it was possible to secure by the new method. This, I think, is common experience among western New York farmers.

A HOPEFUL YOUNG GARDENER. Fig. 541.

LABOR COSTS.—Labor costs are the largest which enter into the cost of producing wheat, amounting to from one-third to one-half of the total cost. Of this total labor cost, man labor comprises about two-fifths, and horse labor three-fifths. We figure the rates per hour for this labor as 20 cents for men and 15 cents for horses, after carefully keeping records to ascertain these costs. The tables on next page show the total amount and distribution of these labor costs for the six-year period.

From first table it will be seen that from 1909 to 1912, twenty-six and one-fourth man and forty-three and one-half horse hours were required to produce an acre of wheat. By making the change in the rotation the labor cost of production was reduced to 20 man and 21 horse hours. The cash value of this saving amounted to $4.58, as shown in the table which follows. The saving was effected chiefly by doing away with the necessity of plowing the land for wheat after beans, but also by a considerably lessened cost of preparing the land after beans had been removed, than of preparing freshly-plowed ground. The increased size of the fields probably decreased the amount of the labor. This saving was even more pronounced in the horse hours than in the man hours. It should be pointed out also that the total hours saved would have been still larger had the yield remained the same. The increased yield, however, increased the cost of harvesting, hauling, thrashing and marketing.

CASH COSTS SUMMARY.—The next table shows the labor converted to cash, together with the cash items involved in the production of wheat.

It will be noted that the cost of fertilizer was slightly less in the last two years than in the first four years, due to absence of manure. When manure was used 50 per cent. of its value was charged to the first crop, 30 per cent. to the second and 20 per cent. to the third. Since less equipment was used this cost was reduced slightly. Overhead expenses include beside taxes and insurance, all items chargeable to the farm, but not to any particular crop. These are distributed among all the productive enterprises of the farm. The land is valued at $100 an acre, upon which an interest rate of 5 per cent. is charged, as this is the rate at which money can be borrowed on mortgage in this community. By this change in rotation $4.09 was saved, practically changing the balance of the wheat from the debit to the credit side. Ninety per cent of the saving was in labor costs.

COSTS PER BUSHEL.—In order that it may be more clearly seen just what these figures mean, I have divided them into costs per bushel for each year in the last table.

In the last table from the total cost per acre has been deducted the value of the straw, the yield and price per ton of which are given. The value of the straw, none of which is sold, is based on one-half the current price of hay at the barn. The net cost of the grain per acre is then divided by the yield of grain per acre, giving a cost per bushel. In arriving at the average cost per bushel for each period, the net costs per bushel each year have been added and then divided by four and two years respectively.

REDUCTION IN COST.—From this table we learn that the cost per bushel of growing wheat on this particular farm has been reduced from $1.11, under the old method, to about one-half or 54 cents per bushel under the new method. The average cost per bushel for the six years is 92 cents, which is just about the average selling price. By the old method, growing wheat was a losing proposition; by the new it is fairly profitable. The difference is due both to a decrease in the cost of production and to an increase in the yield, both brought about by improved methods and culture. It is true that in the first four year average we had two very poor crops of wheat. The 1912 crop in particular was very poor, due to winter killing, and to an attack of the Hessian fly. But between the years 1909 and 1913, and between the years 1910 and 1914, there is a very fair comparison, since the yields are practically the same. In both cases the costs of growing wheat in the new rotations are nearly 25 per cent., or from 18 to 22

cents a bushel less than in previous rotations.

All the original labor and cash records were made by the tenant, Mr. Robert Hall, who finds that labor

MAN HOURS PER ACRE.

	Man hours per acre.		Horse hours per acre.	
	1909-12	1913-14	1909-12	1913-14
Total acres grown	43.4	36		
Plowing	5.10	....	14.10	....
Preparation and seeding	8.31	3.25	20.21	6.35
Harvesting	2.47	3.21	2.73	3.20
Hauling to barn	3.33	5.10	3.05	3.80
Thrashing	3.57	3.27	....	....
Marketing	2.28	4.92	3.04	7.20
Miscellaneous	1.22	.25	.42	.45
Total	26.28	20.00	43.55	21.00

CASH COSTS OF GROWING WHEAT.

	1909-12		1913-14	Saving
Labor (26¼ man hrs. @ 20c.)	$5.25	20 man hrs.	$4.00	
Labor (43½ horse hrs. @ 15c.)	6.52	21 horse hrs.	3.15	
	$11.77	.....	$7.15	$4.62
Fertilizer (inclu. manure)	3.88	.....	2.73	
Seed	1.92	.....	2.24	
Thrashing (4c. and fuel)	1.10	.....	1.36	
Twine	.20	.....	.24	
Use of equipment	1.71	.....	1.35	
Overhead (taxes, ins., etc.)	1.39	.....	1.81	
Interest (5% on $100)	5.00	.....	5.00	
Total cash cost	$15.20	.....	$14.73	.47
Grand total cost	$26.97	.....	$21.88	$5.09

WHEAT—COST PER BUSHEL.

Year.	Total cost per acre.	Straw per acre		Net cost of grain.	Yield per acre, bus.	Net cost per bushel.
		Yield tons.	Price per ton.			
1909	$24.42	.60	$5	$21.42	30.0	.71
1910	26.10	.95	6	20.40	26.3	.77
1911	29.41	.75	8	23.41	19.3	1.21
1912	27.74	.56	6	24.38	14.0	1.73
4 year avg.	$26.92	.72	$6	$22.40	22.4	1.11
1913	$23.90	1.00	$6	$17.90	33.6	.53
1914	19.83	.90	6	14.43	26.4	.55
2 year avg.	$21.87	.95	$6	$16.17	30.0	.54
6 year avg.	$25.23	.79	$6	$20.32	25.0	.92

records require about ten minutes a day in time. The owner has had the assistance of the U. S. Department of Agriculture's Office of Farm Management in tabulating the records. This co-operation is herewith acknowledged. M. C. BURRITT.

ABBREVIATED TALES.

Formalin on Wheat.

I am thinking of treating my seed wheat with formalin for rust. Is there any danger of poisoning chickens where wheat is sown near the barn, with the drill, as some of the wheat will not be covered? S. M.
New Jersey.

No. There will be no danger from eating such wheat. The effective principle in the formalin is a gas which does its work and then passes off. You need not fear about the wheat after it has dried.

A Congregation of English Sparrows.

I HAVE two beautiful elm trees before my residence in which the sparrows (I think the entire sparrow population of Albany) congregate every evening. I do not mind that, but the droppings from this congregation are something awful, the street is literally covered every morning. The nuisance is getting to be unbearable. Can you recommend some remedy for this? I do not wish to cut the trees down, as they are perhaps two of the finest trees in our city. If you do not know of a remedy, perhaps some member of the R. N.-Y. family can suggest an effective remedy which has been used with success.
Albany, N. Y. A. C. K.

R. N.-Y.—Our people have never failed yet to find a practical remedy for such troubles. Who can help in this? We have given several articles showing how these sparrows are trapped or poisoned. There may be too many of them in this congregation to make such methods practical. Who can tell?

Our Old Friend "Stonemeal."

LAST Spring our implement dealer, an honest and straightforward man, came to us claiming to have a fertilizer or ground rock containing from 14 to 16 per cent. potash, guaranteed it, or said the company did, to hold blight from cantaloupes or muskmelons, also tomatoes. He did not state whether the potash was soluble in water or not, nor did we take the time to inquire, as we were rushed to the utmost. The fertilizer was to cost $26.50 per ton, $3.50 per ton for freight upon arrival, and the rest if results were obtained. Our muskmelon patch of three acres drilled with the stuff has the blight, and would have been an entire failure, but we top-dressed with chicken manure and fine tobacco siftings. We used it on a row of tomatoes, a row of sweet potatoes, also a row of Irish potatoes. You can tell to the row where that stuff went. Do you know the firm and have you seen any of the stonemeal used and analyzed? The front of the sacks are marked thus: "100 lbs. Stonemeal, for horticulture, and pomology. Stonemeal Fertilizer Co., Inc. Works, North Paterson, New Jersey."
Pennsylvania. D. S. A.

R. N.-Y.—We have had several articles on this "stonemeal." It has been analyzed at the N. J. Experiment Station, and Dr. J. G. Lipman, the director, says it is a ground silicate rock to which some land plaster has been added. The stuff contained 1.73 per cent. of phosphoric acid and 4.13 per cent. of potash—not available as plant food. The station considers it worth about $3 per ton as plant food. Some of the farm soils in New Jersey contain more actual potash than the "stonemeal." As for the claims that it will prevent blight or other diseases we consider this "guff" pure and simple. No one but a man with a stone head would pay $30 a ton for stonemeal after reading the New Jersey reports.

HIT OR MISS REMEDIES.

REGARDING the question of non-bearing plum trees, tell your inquirer to put salt or brine around them, and they will bear. Say a good, big double handful of salt, or equivalent of old brine. I see you advertise "protectors" for fruit trees. I have 150 fruit trees in Hunterdon County, where there are lots of rabbits, but a coating of thick cow manure paste, applied to trunks in late Fall with a whitewash brush, is all the protection they need. No rabbit will touch them when thus treated. Try it. M.
New Jersey.

All sorts of recommendations and advice are still given for the control of various orchard troubles, and some of them are typical of the days when hit-or-miss remedies of all sorts were suggested for the control of insects. But to-day the successful fruit grower bases all of his remedies upon some fact in connection with the life history of the trouble, and recognizes that all remedies, not based upon scientific facts, may not only be a waste of time, but may cause damage. The statement that salt or brine will make non-productive plum trees bear is without a single supporting plant law. Plums are quite frequently unproductive because of self sterility, and salt has no effect upon changing the sex of the flowers. Again, plums may lose most of their fruit through severe attacks of the plum curculio, and a little salt or brine at the roots of the trees will not prevent the "Little Turk" from conducting his business. In some places the plum crop may be destroyed by frost nearly every year, and the application of brine at the base of the tree would be without avail.

Sodium chloride, or common salt, in quantity is also injurious to most of the higher forms of plants. In too many cases a practical test is made without leaving check or untreated trees so that incorrect conclusions are drawn.

In regard to protecting the trunks of fruit trees from rabbits by a coating of cow manure, we might expect that this treatment is likely to be successful. The rabbit objects to most any material with a strong odor, and lime-sulphur, soft soap, fish-oil soap, blood and numerous other materials, if maintained upon the trunks of the trees, will prevent attack. But the rabbit may not cause as much damage as mice, and the latter animals are not so easily repelled, especially by such materials as barnyard compost. Science is often ridiculed, but it is sifting out the remedies that are not founded upon the laws of plant and animal life. M. A. B.

RIPENING TOMATOES OFF THE VINES.

Can green tomatoes be ripened off the vines by wrapping them in paper? If so, would waxed or paraffined paper be better for this purpose than common wrapping paper? Are there any other ways of ripening green tomatoes that will not ripen on the vines before frost?
Ohio. H. M.

Green tomatoes that have reached nearly or quite mature size can be ripened off the vines with very little trouble, and still be of fairly good flavor, but the half-grown or smaller ones, thus ripened are of very poor quality, being extremely sour and of very poor flavor; they are tomatoes, which is about all that can be said of them. I have not tried wrapping them in paper for the reason that they require watching during the ripening period, and should not be handled any more than can be helped. To wrap them in paper would interfere with close observation, and would also entail frequent handling of the fruits to ascertain what progress they are making toward ripening, which would be considerable trouble, and be of more or less injury to them.

I have never bothered much with fruits under three-quarter size or growth. When picking them it is well to sort them into about three lots, the first being those nearing the ripening period, the second, those somewhat greener, and the third, those three-quarter size and smaller. After being graded each grade should be placed separately, on trays or shelves one layer thick, and set anywhere that is dry and a temperature not much below 55 degrees. A lower temperature will retard ripening and in some of the smaller fruits prevent ripening at all, while a higher temperature will hasten ripening of all the sizes. Exposure to full light (but not to the direct rays of the sun) seems best for them. K.

VALUE OF STRAW AS MULCH.

THE Spokane Review prints the following item about burning straw, formerly the common practice in wheat-growing sections:

Pratt county (Kansas) farmers are finding out that it costs them five bushels of wheat to the acre to burn their straw stacks or let them rot. Using straw mostly as a top-dressing for Winter fields, these farmers find that it helps to keep the soil from blowing, conserves the moisture and adds to the fertility. The laborious practice of scattering the straw by pitchfork has been abandoned, and spreaders are used instead.

We never did expect that Kansas farmers would teach lessons of intensive farming to our Eastern market gardeners. There is no question about the value of this straw when worked into the soil. But if a Kansas farmer loses five bushels of wheat by not plowing under the straw the New York or New England farmer will gain five bushels and more by putting under a cover crop. We think it is a sin to let our corn, potato or garden crop soils lie bare through Fall and Winter. Rye and other cover crops seeded in the corn at the last cultivation will prevent losses from the soil and give a great crop of green material to plow under. All this without interfering with other crops. The thing is so simple and plain to those of us who have tried it that we cannot understand why farmers are willing to let their cornfields go bare through the Fall.

OUTLOOK FOR PHOSPHORIC ACID.

THE U. S. Geological Survey makes this prophecy regarding our future supplies of phosphoric acid:

While the States of Florida, Tennessee, and South Carolina have for many years been the principal sources of phosphate rock in the United States, it is believed that the main production in the future will probably come from the great deposits of phosphate rock on public lands in Idaho, Utah, Wyoming and Montana.

At one point in Idaho alone it is estimated that two and one-half billion tons of high-grade phosphoric rock are in sight. This region is as yet in the wilderness, but it will be reached by railroads when the phosphate is needed. With these constantly new discoveries of phosphate deposits there seems to be little reason for the present generation to fear a shortage in this plant food. With the great majority of our soils phosphoric acid is the most needed element in fertilizers, and Nature has evidently hidden away abundant supplies of it in her ample American pockets.

CHICKS SWALLOWING NAILS.—The communication from W. H. Macy, on page 1197, regarding chickens swallowing nails, interests me, for he is the first poultryman other than myself of whom I have heard having this trouble. Three years ago I started in the poultry business, raising 2,500 White Rocks the first year in a new plant. The plant being new there were undoubtedly a large number of nails lying about, but I had no trouble of this sort. For the past two years I have been raising White Leghorns, and have had a good deal of trouble in this respect, and out of flocks of from 3,000 to 6,000 have lost many chickens from this cause. They have swallowed tacks both single and double-pointed, poultry staples, lath nails, eight-penny nails, eight-penny finishing nails and wall-board nails, which have a head one-half inch in diameter. During these past two years I have been troubled with rose bugs, and the poison from these bugs has thrown the digestive organs of my chickens very much out of condition; this may account for their swallowing such indigestible materials. I have watched the chickens very closely, and I find that the Leghorn is much more active, I might say more playful, than the Rock, and when one of them finds a nail he takes it in his beak and tears about the coop with half the others after him, and to avoid losing it he swallows it. I have come to the conclusion that the best way to avoid this loss is to keep such things out of their reach.
Connecticut. THOS. W. MOORE.

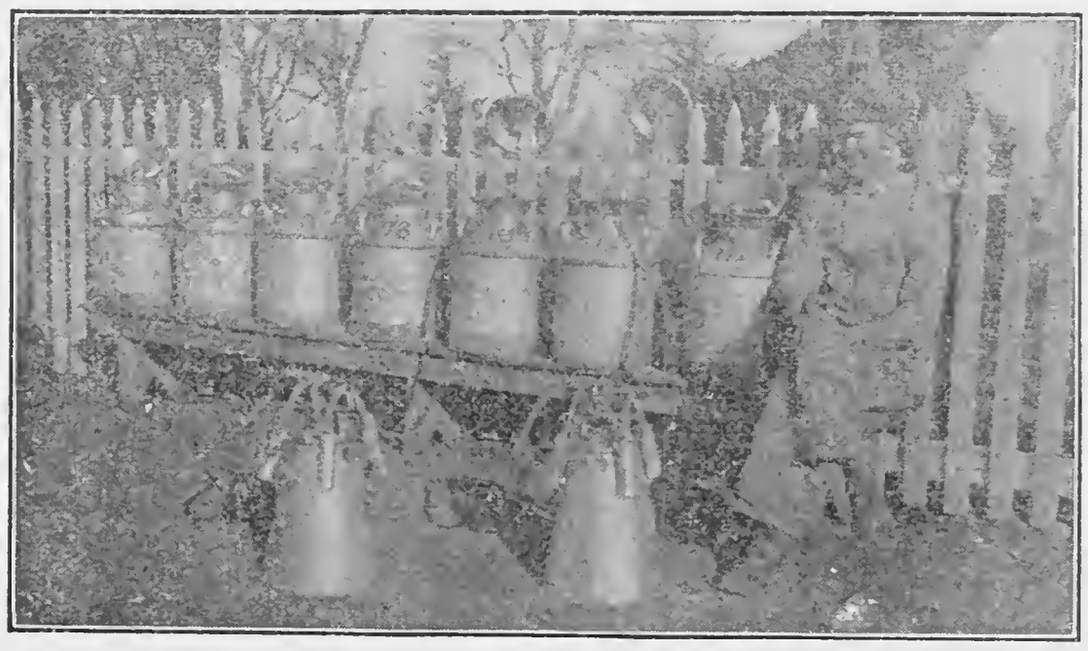
AFFLICTED DAIRYMEN AND MILKING MACHINES.

SINCE the milking machines came upon the market, we have been interested in finding cases where afflicted people who are more or less crippled have been able to use the machines in order to keep up their dairy work. We have found a number of cases where men brought up from boyhood to milk cows, have suddenly met with an accident which deprived them the use of one of their hands. As is well known, men in such a situation find it hard to take up other lines of farming. When a man has milked cows for a number of years, it is difficult to take up other work, yet it would seem that the loss of a hand or a portion of it, would ruin a man's ability to milk and thus drive him from the dairy business. It would be a good test for the milking machine if it would enable such people to come back after their accident and still be able to take care of the cows. We have found a number of cases where this very thing has been done, and pictures of three such men are given this week. The facts are sent us by Mr. Walter E. Cox of Pennsylvania.

ARTHUR HALL ADJUSTING THE MACHINE FIG. 542.

Mr. Charles Weaver, of Illinois, lost his left arm at the elbow. This loss occurred about 18 months ago, and at that time he expected that he would be obliged to give up his fine dairy, which he had started shortly before, and which was doing well. He heard of the milking machine, and made a trial of it. He is now milking 18 cows in less than an hour with this machine. He learned to operate the machine and handle the cups in a very few days, and in about two or three weeks he had the system in operation perfectly, doing more milking than ever before, and taking care of his dairy without trouble. It is needless to say such a man and his family thoroughly believe in a milking machine.

The next picture, at Fig. 544, shows Mr. Cecil Weaver, of Kansas. His father is one of the largest milk producers in the community. Cecil had the misfortune to lose a hand several years ago. He grieved because he wanted to be a dairyman, and felt that this accident had deprived him of his earning capacity in that line. It did not seem possible that a boy with one hand would ever become a practical milker. At the present time this boy is milking 40 cows by himself, by making use of a milking machine. He is thus able to keep up with any of the others, while, but for the milking machine, he would be absolutely out of the race. A separate contrivance has been made which is strapped over the boy's injured arm, and this substitute for a hand enables him to take care of the milking machine. The other picture, at Fig. 542, shows Mr. Arthur Hall, of Virginia. Mr. Hall lost his arm, and yet he is able to use the milking machine, and conducts a profitable dairy, and is himself responsible for milking 30 good cows. As most afflicted people of intelligence are able to adapt themselves to conditions, Mr. Hall is able to use his knee to adjust teat cups to the cows, and does it quickly and in good style. We print these pictures of milking machines in order to encourage others who may have met with a serious accident and who, perhaps, feel that the loss of a hand has driven them forever out of dairy industry. They need not feel this way, for the milking machine, as in the case of the men here mentioned, may give them opportunity to come back and continue their work. They will all tell you, however, that the milking machine will not run itself. It is a more or less complicated device, and needs a careful, intelligent man to handle it properly.



CHARLES WEAVER, HIS MACHINES AND MILK CROP. FIG. 543.

FALL SELECTION OF BREEDING HENS.

TRAP-NESTING.—Mr. Hunter's answer, published on page 1177, in response to Mr. Mapes' request for a "rule-of-thumb," prompts me to suggest that Mr. Hunter offers a poor substitute for a good "rule-of-thumb." Years of experience with trap-nests and the observation of the trap-nest records in the laying contest at Storrs have convinced me that the farmer-poultryman can select his great layers without the expense involved in obtaining accurate individual records with trap-nests. All the farmer-poultryman has to do is handle his flock over early in October, and band those that he finds are then laying. The trap-nests and the contest records teach us that practically all, if not all, of the great persistent layers are then laying, and that the non-layers are then all out of commission. By this method you can avoid the use of the trap-nests, and for the purpose stated, duplicate the trap-nester's work. Of course, you cannot by this plan get the individual records of each hen, but you can get the cream of your flock into the breeding pens, and you can greatly improve the laying capacity of your flock.

THE TOUCH SYSTEM.—Mr. Hunter states that "with such pullets the pelvic bones being one finger's width apart, indicates that the bird will lay in about six weeks' time; two fingers' width apart indicates that the bird will lay in about four weeks; three fingers' width apart that she will lay directly, if not laying." This is a trifle amusing as a positive rule, when you consider the difference in pullets and the different ways in which they may be housed and fed, and worst of all, the difference in size of different people's fingers. Whose fingers is he talking about, and whose pullets?

LAYING BREEDERS.—But why discuss pelvic bones of pullets when prescribing rules for selecting breeders? My experience has taught me to stay away from the pullets when selecting breeders. Early in October we go through our pens of hens and band the layers—those whose pelvic bones are wide open and loose on their hinges. Our pens contain 100 hens each. We go into a pen in the dark and catch all the hens and put them in crates, then we turn up the lanterns to their full capacity and one man hands the hens to the man who does the selecting, and he passes judgment upon them. Those with bright red heads, with wide-apart pelvic bones, showing strong vitality and good weight, are handed to either of two men supplied with spiral celluloid bands, while another man keeps a record of the total count and the count of breeders. Those that show no promise of profit are put into other crates and shipped alive to market, and the others, not chosen for breeders, are kept for another year as layers when we have room for them. About November 1st we will run over these banded breeders and add another band to those that are still laying. This will give us a few "crackerjacks," that we consider very valuable. The above method can fairly be called a "rule-of-thumb" and its employment bears no reasonable resemblance to "main strength and stupidness."

SHORT-TIME LAYERS.—Your farmer-poultryman has not the time to trap-nest his stock the whole year, and to do so for any less period would be of little use, as it is well known by those familiar with trap-nest work that many otherwise promising layers quit at the end of from five months onward, and that some layers making a poorer record for six months will, by their persistent work, do more in the year than those of greater earlier promise. Mr. Barron knew whereof he spoke when he advised that we trap-nest through the year or not at all, and I have no doubt that his experience tallies with that of anyone who has practiced trap-nesting to any extent.

FALL AND WINTER LAYING.—Mr. Hunter told the whole truth when he wrote: "The birds which are the great layers are certain to be late Fall and Winter layers, and it is equally certain that the birds which are not late Fall and Winter layers are not great layers at all." This being admitted, what excuse is there for advising six or seven months' labor with the expensive trap-nest? Why not pick them out in the Fall and early Winter and be done with it, and not shroud the whole subject with so much mystery? It can be done easily and surely and quickly. I know because I do it, and I know that no other work on the farm pays as this does.

FRED'K M. PEASLEY.

FIGURING PROFITS—35-CENT DOLLAR.

I NOTICED the article on page 1149, in which Mr. Peasley submits a balance sheet containing the results of a number of experiments in growing potatoes. And I noticed that, in the first experiment, with an investment of only $65, he made a net profit of $55; in other words, a net profit of nearly 85 per cent. Apparently this estimate does not take into consideration the rental of the land. But, assuming this to be $10 an acre, which is bank interest on a valuation of $200 an acre, and is certainly enough, he still has a net profit of 60 per cent. And this, with potatoes selling at only 75 cents a bushel. Now, if Mr. Peasley can make this net profit, it is only a lack of management or a lack of business efficiency that prevents every other farmer from making a similar profit. This being the case, is it not to the advantage of the farmer to pay such attention to the details of his own business as will enable him to make this profit, rather than to grow potatoes at a nominal profit, or, even as it is claimed, at a positive loss, while he spends his time sitting on a soap box endeavoring to devise some scheme wherey he may put the 65 per cent. profit that he says the middleman robs him of, into his own pocket?

Now a word in regard to this 65 per cent. At the present time I am not growing potatoes. Instead, I buy them for my own use. Recently I met a farmer who was selling potatoes from his wagon, and he had just five bushels left. He offered them to me at the rate of $1 a single bushel, or 90 cents, if I would take the five bushels. I saw a good chance to help in getting rid of the robber middleman, and so I bought the five bushels and went about my way, while the farmer drove to my house with the potatoes. At night, when I returned home, I found that my wife had also bought a bushel of potatoes from the grocer, who had obligingly carried them down cellar, while the farmer had left those that I had bought from him on the piazza. I found that she had paid the grocer but 70 cents a bushel, while I had paid the farmer 90 cents for potatoes that were not quite as good. And I found, also, that the grocer's bushel weighed an even 60 pounds, while the farmer's bushels weighed but from 48 to 51 pounds, including the sacks. Now, as a matter of information, I would like to know where the 65 per cent. that the middlemen are said to have robbed someone of, may be found. I am not high enough in percentage to locate it. C. O. O.

Vermont.

R. N.-Y. — It was clearly stated that the figures given by Mr. Peasley were estimated. He wanted to learn how much fertilizer he could afford to use. So he put different quantities on small plots or rows, and figured the yields out to acres. We thought this was clearly understood. No one would expect that a full acre would work out exactly the same as a short row, but the comparison told the needed story about fertilizers. As for the sec-

CECIL WEAVER WITH HIS MILKING MACHINE. FIG. 544.

ond matter, why did our friend buy his potatoes before comparing prices? It would have been good business to learn first what the farmer and the grocer charged, sample the goods and take the better bargain. That is what he would do in his own business. Most of us have at times paid storekeepers more than we could buy the goods elsewhere for because "we ought to support home trade." We never asked anyone to pay a farmer more than his produce was worth. As for the 35-cent dollar, there are many cases where farmers sell direct. On the other hand, potatoes are selling in New York at 40 cents a peck, while farmers in Western New York are offered 30 cents a bushel. We refer to the average returns —not to certain favored business.

CANDIDATE FOR GOVERNOR.

WE have received many letters or notes like the following:

How are we to know who to vote for this year?

There has not been in many years an election in which the issues were as complicated as, or less clearly defined than is the case this year. In order to present the case fairly we have asked a supporter of each of the four candidates to state briefly why farmers should vote for either of the following:

Charles S. Whitman—Republican.
Frederick M. Davenport—Progressive.
Martin H. Glynn—Democrat.
William Sulzer—Prohibitionist.

The men who have prepared these statements fully understand conditions, and what they say may be considered typical arguments for each side.

Why I Vote For Wm. Sulzer.

We farmers have expected great things of a primary election law, and here we are well past the first primary under the new law. "Watchman, what of the night?" As I see it the bosses of both the principal parties are in the saddle, riding confidently towards election day, hardly taking the trouble to look back and see if we tag behind, so accustomed have they become to a blind acceptance of the party whip. I for one propose to bolt, and take this occasion to vote a Prohibition ticket as a sort of protest. I am in favor of the principle of prohibition and have always supported it locally but have not been in the habit of voting a prohibition ticket for Governor. I shall do it the more gladly now, since I can at the same time help to vindicate the man of his convictions as Governor, who dared to throw down the gauntlet to the party boss. The disgraceful way in which the whips of the two party bosses were applied in order to discourage future Governors from attempting to disregard their orders was a disgrace to the Empire State and an insult to the electorate, which I for one have not forgotten.

I regard the prohibition question in State and nation as of vital importance to all classes in general and farmers in particular. The only other domestic problem that approaches it in importance is that of equal suffrage. Local option at best is only a makeshift. Rural communities cannot, under the present system, escape from the curse of rum. We may close the saloons in our own towns, but escape from the demon's talons is impossible so long as cities or towns in contiguous territory lure our boys and hired help with open saloon doors, and windows in which are conspicuously displayed the license of the sovereign State to help in their destruction in consideration of a few paltry dollars paid into our treasury.

Fealty to party at any cost has been the bane of our experiment at self government. Those who are looking for office at the hands of a particular party practice it for business reasons and the rest of us have followed suit without giving the matter much thought.

It is a matter of history that bolters gave us the Republican party and Lincoln with his level head at a time when he was sorely needed. It is equally a matter of history that bolters from the Democratic party gave us Wilson with his level head at a time when a level head is also sorely needed. The decent element is surely in the majority in both State and nation, and if we now take this opportunity to bolt and vote the Prohibition ticket we can kill two birds with one stone. We can give the party leaders who are in the saddle and riding confidently towards election day a big jolt when they look back on election day and count up the size of their following. At the same time we can give the drink evil a blow that will be a big help towards the saloonless nation we all would like to welcome during our lifetime.

Why Davenport Should Should Be Elected.

From the viewpoint of the farmers of the State the political situation is a very simple one. We have no National issues before us this year. We have to decide only the kind of government we want to have within the Empire State. Do we want the Hughes type of clean, efficient government in the interests of all the people alike, with laws administered economically by honest officials; or do we want the Barnes-Murphy combine type in the interests of a few (mostly contractors), with laws administered for the enrichment and furtherance of political machines and their hirelings? That is the whole problem before the voters of New York State today.

Frederick M. Davenport was in the State Senate during Governor Hughes' term, and was one of Hughes' staunchest supporters, fighting with him at every step against the bi-partisan system of Barnes and Murphy. He inherits that fight and is the only candidate for Governor who does inherit it. He has proved over and over again that he is for cleanliness and efficiency in every department of our State Government. No boss has any string on him in any way. If elected he will go into office with free hands, with a record for ability and rightmindedness, determined to fight to the last ditch for honesty and decency in every office, and for the prevention of every sort of graft.

As taxpayers we farmers have much at stake this year and we have an opportunity to protect ourselves better now than ever before because we have simply a choice of whether we want every dollar to bring in a dollar's worth; or whether we want the State to suffer from a 35-cent dollar. No reasonable man can ask Mr. Whitman to turn and bite the hand that is feeding him. Nor can we expect Mr. Glynn to do it. We know that neither of these gentlemen will be a free agent if elected. We have had recent forcible proof that they cannot be free agents. Therefore from them we can expect only a 35-cent dollar. We must have a clean man, a man of proved ability and fearlessness and bound only by his duty to each and every one of us. Davenport is the only one who fills the bill. Unless we elect him we can have no hope of the appointment of the proper men to administer such laws as our Land Bank law, our Food and Markets law and other agricultural laws.

The Political Argument For Mr. Whitman.

I am a Republican, and I frankly make my appeal to members of that party. Mr. Sulzer and Mr. Davenport cannot be elected anyway. For many years the farmers of New York gave great Republican majorities. By doing so they controlled the policy of the State, and to a large extent that of the nation as well. We were well and intelligently governed. Now and then, so-called "leaders" got away from us, but the rank and file of the Republican party have always pulled them down and cleaned up the records. New York State never occupied a stronger or more prominent position than when its policies were controlled by its intelligent farmers through the Republican party. The so-called Progressives can accomplish nothing this year by themselves, while, back in the Republican party, they could join with us and dominate it. The way to return to sound intelligent government in New York is to put back the Republican party—made wiser and cleaner by its trials and defeats. Mr. Whitman is a clean and able man. He received a unanimous vote in New York City for district attorney and has sent some of the most notorious crooks to jail. This unanimous election was the highest possible testimonial to his ability and courage, and in the Governor's chair he will be equally fearless and fair.

In all the idle talk about "bosses" no one ventures to say a word against Mr. Whitman's character or ability. As Governor he will give the State a clean, able, and sane administration without fireworks or folly. That is what our practical farmers want—and what they need. They know that with the primary and with the experience of the past two years they are better able than any other class to hold a Governor up to his duty.

The Argument For Gov. Glynn.

The farmer's ideal of good citizenship will impel him to vote for Governor Glynn. The farmer demands honest, efficient and capable service from public servants. Governor Glynn has qualified in these requirements. He has made a record that measures up to the farmers' demand for economy. He has applied sound business principles to the business of the State, and as a result he has saved $11,000,000 to the taxpayers of the State in one year's budget.

During his brief term as Governor he has particularly devoted himself to the interests of the farmer. For years farmers demanded a real primary law and the Australian form of ballot. Governor Hughes responded to their demand; but the party bosses opposed him, and he lost. This was one of Governor Glynn's first reforms. He won where Governor Hughes failed, and voters may now select their own candidates independent of the party bosses.

Governor Glynn secured the best workmen's compensation law in the world. It protects workmen in hazardous employments, but exempts farmers from its requirements. If workmen understood this law as they will later, they would cast a unanimous vote for Mr. Glynn.

The Land Bank is one of Gov. Glynn's special measures. It is now nearly ready for business, and will soon be ready to loan money on farms mortgaged for long terms, and on easy payments. New York is the first State to adopt a farm credit system, and without the active insistence of Gov. Glynn it could not have been secured.

Gov. Glynn soon learned the meaning of the 35-cent dollar. He learned that it cost 65 cents to deliver a dollar's worth of food. For 15 years other Governors have been told the same thing, but Gov. Glynn was the first to attempt a reform. He secured a law to create a Food and Market Commission by which farm food products can be delivered from the farm to the consumer at a price governed by the law of supply and demand, and he provided for a sure and prompt return to the shipper. The saving in this system of distribution can be estimated only in millions.

To put these coöperative measures in operation Gov. Glynn secured appropriations of $35,000. He made $50,000 available to fight sudden ravages of insect pests; and $5,000 to investigate tuberculosis in cattle. He also righted an injustice of two years standing by securing prompt payment to farmers for $217,000 worth of cattle that had been previously destroyed and payment unjustly withheld. While vetoing needless appropriations and cutting useless expenses, he initiated these wise and needful expenses himself in the interests of the people and the farms.

Farmers are opposed to a single tax on land, by which other forms of wealth would escape taxation entirely. His two leading opponents have pledged themselves to favor this policy. Gov. Glynn has refused to do so.

In times of political excitement, leaders appeal to the party spirit of voters; but party lines today are actually pretty dim. Gov. Hughes and Gov. Glynn represent opposing parties; but in principles and policies they have more in common than either of them has with the sordid politicians of his own party. The man who voted for Hughes may with greater reason on the same grounds vote for Glynn.

The farm measures initiated by Gov. Glynn need development. They have a friend in him. He will naturally want to make the most of them. A new man would hardly wish to develop Gov. Glynn's pet measures. He would have other policies nearer to the interest of a city-bred man, and these farm measures would not be worked out to their possibilities.

As Secretary Giles of the State Grange has well said, for the first time in the history of the State farmers found the doors of the Executive Chamber wide open by Gov. Glynn. He has taken the initiative for them in every just and useful measure. To turn their back on him now would be a refusal to reward the service of a friend. Farm influence would not recover from such a mistake in twenty-five years.

In an effort to detract from the credit due Gov. Glynn, his opponents have foolishly put themselves in opposition to these measures which have been demanded by farmers without regard to party. With insincerity they exhibit ignorance of farm needs. With this position now, what could farmers expect from them after election? Consistency would require continued opposition. Hence the self-interest of the farmer prompts him to vote for Gov. Glynn.

Farmers know what to expect from him, and they are not likely to take chances with another. Lincoln's admonition appeals to them with special emphasis at this time: "Don't swap horses while crossing a stream."

ADVERTISING GRAPES.

"Advertising multiplied the number of consumers of grape juice by a dozen, and advertising should now be directed more strenuously in behalf of the apple," says Louis Erb, president of the Apple Advertisers of America, and adds: "Advertising will increase consumption 50 per cent. It takes money to advertise the apple and about the only means the organization has for securing it is by selling stamps to growers to be placed on packages and barrels. The stamps for barrels cost but two cents each, and for boxes one cent." This in case of barrels is less than one for advertising. The manufacturer spends several times the 1 per cent., and in some cases a fair proportion of his profits, and he considers advertising the cheapest way to secure sales.

California as the future wine center of the world, seems assured as the result of the European war. The damage to vineyards in the warring zones is so great that recovery will require some years. California produces nine-tenths of the 50,000,000 gallons used in the United States. The California Wine Association is said to be doing the largest business in its history, the Eastern demand having been doubled since the outbreak of the war. The association is advertising for wine grapes, offering $10 the ton.

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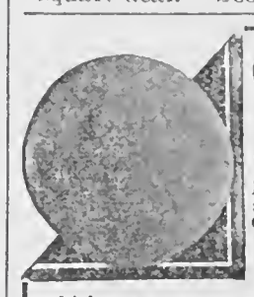

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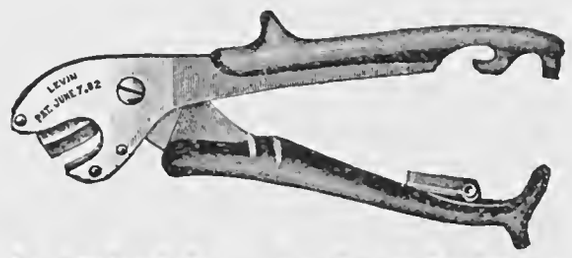

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VAN DEMAN'S FRUIT NOTES.

Harvesting Black Walnuts.

ON harvesting Black walnuts for home use should the hull be removed?
North Clarendon, Vt. A. N. H.

It is very desirable to hull the walnuts as soon as gathered, and dry them, for otherwise there would be a lot of trash to bother when cracking them. When I was a boy my hands were brown every Fall with the stain from hulling walnuts. The easiest way to get off the hulls is by running them through a cornsheller.

Pruning Young Peach Trees.

COULD young apple and peach trees that were planted last Spring, and have made a rapid growth, be clipped this Fall to ripen their wood for Winter?
Northville, Mich. E. J. K.

It sometimes occurs that the growth of fruit trees, and especially those that are very young and not yet in bearing, continues so late in the Fall that, in some sections it is hurt by early freezing. This is apt to be the case in northern Michigan, where the Springs are late, and hard frosts come early. If the young growth is very late in ripening it would be well to clip it back to hasten maturity. At this time, however, the season is so far advanced that it may be too late to do so with benefit to the trees.

The Clairgeau Pear.

WILL you give me some information about the Clairgeau pear, as I expect to set out a commercial orchard next Spring, and am undecided between this variety and the Kieffer? Is the Clairgeau tree a thrifty grower? Is it as healthy a tree as Kieffer? E. K.
New York.

The Clairgeau pear is one that has long been grown all over the world where pears succeed, and yet it is not very popular either as a market variety or for home use, unless it is in California, where it is grown to some extent and sent to the Eastern markets. The tree is a good grower and bears well, but it is about as subject to blight as any variety. It is not nearly so healthy as the Kieffer, but the fruit is of better quality. However, it is far from being the rich flavor of most of the good pears, and is not esteemed for eating in the fresh state, nor for canning. The Bartlett is far better, and so are the Sheldon, Anjou and Bosc. It would be a good plan to plant Kieffer instead of Clairgeau if the design is to cater to the low grade markets, but it would seem to me better to plant the better kinds for the better class of trade. Bosc top-worked on Clapp or some very strong grower would be a good one, and there is no pear that sells better in the fancy markets nor that is better to eat.

Pronunciation of Kieffer and Van Deman.

HOW do you pronounce the name Kieffer? Is it Ke-fer, long e, accent on Ke, or Ki-fer, long i, accent on Ki? Also pronounce Van Deman correctly. It is *Van* Deman, accent on Van, or Van *De* man, accent on De? N. B.
New Cumberland, Pa.

N. B. has made the mistake of spelling the name Kieffer with the e first, Keiffer. The old German, after whom the pear was named, had been reported, on good authority, to have spelled his name Kieffer, and said it should be pronounced according to German rules, which would be Kefer. If this i came last it would be Kifer. As to the pronunciation of my own name it is properly Van *De*man, for it is an old German name and the *Van* (or Fon or Von, as it is in the native language), is a prefix to the real name. In the original German family manuscripts which our family possesses, there are differences in the spelling, but the name as translated into English on our grandfather's Revolutionary war records was first "Vandement" and later it is "Van Deman." The family is not unanimous in the accentuation but the majority say it should be Van *De*-man. H. E. VAN DEMAN.

GROWTH OF GRAFT.—Three feet growth from a graft in a season, page 1178. But that is nothing; I had five feet growth last Summer from a Belleflower, bud set the previous August. It is still in evidence. W. L. S.
Pennsylvania.

"DID I tell you of the dreadful fright I got on my wedding day?" "S-sh! No gentleman should speak that way of his wife."—London Evening Standard.

NOTES FROM A PRODUCE SELLER.

SUCCESSFUL market gardening requires more work than any other line of agriculture, and when one sells his produce direct to consumers on a regular route from a wagon, this fact is especially brought home to him. We have been engaged in this business for some years and know something of its hardships and drawbacks. We are somewhat inclined to warn the indolent, and also those who have not plenty of strength and help, not to begin as they would be certain to make a failure. In selling produce direct to consumer, the grower has the advantage of getting the consumer's entire dollar. It is not easy to get such a trade, and after it has once been obtained, it requires a constant effort to retain it.

Take, for example, my trip, made on Friday, September 18, on which I made the heaviest delivery of the week. As I make it a point to supply my customers early in the day, I am obliged to rise early so as to reach my first customer by six o'clock in the morning, the city being four miles distant. The greater part of my load had been ordered on a previous trip, while some of it had been ordered by 'phone. The complete delivery was finished before 10 o'clock, and I was able to reach home by 11 a. m., the entire load bringing nearly $17.

Part of the afternoon was spent in work around the garden, and towards evening a load of produce was made ready for delivery Saturday morning. There is a good deal of work connected with the proper preparation of the various vegetables, as customers as a rule are quite particular, and I am therefore required to attend to details in this matter. I carry scales and sell by weight, excepting beets, radishes, onions, and celery, these vegetables being sold in bunches of from four to five early in the season, increasing the size of the bunches as the season advances, until eight to ten are put in a bunch. The well-to-do generally object to culls, and so these are sold in the foreign quarters of the city, the prices obtained usually being enough to pay for the handling.

It is my constant aim to have a full line of such produce as my customers require, and to build up such a reputation for honesty and fair dealing that they will not hesitate to buy anything from me on my recommendation. I also make it a special point to make good such losses as my customers may lay to my charge, and in some cases those for which I have not been responsible. By doing so, I retain the good will of my customers, and this pays greatly in the end. Also, if through oversight any stale stuff was delivered to any customer, I replace it with fresh stuff.

While ringing a hand bell does well enough to call out my customers as I approach their houses, I do not use this in soliciting the new customers. To get these, I fill a market basket with samples of the vegetables most in demand at the time, and go from house to house, calling at the kitchen doors, leaving the wagon as near to the side of the street as possible.

There is considerable aversion to the house to house canvass by most market gardeners, as they feel that the housewife might consider them in much the same light as they do the book or medicine peddler. In this they are greatly mistaken, however, as the average housewife is very much pleased to have fresh vegetables offered at her own door. She can see almost at a glance that the produce is fresh and attractive, and this alone often brings a customer without any other argument. City people readily know the difference between vegetables that are fresh from the garden and those that have lain around in the stores for three or four days. The house-to-house canvass takes time and patience, but thus far I have yet to learn of a better method in soliciting new trade. D. L.
Indiana.

THE Teacher: Now, children, listen to this. Thomas Campbell, the famous poet, once walked six miles to a printing office to have a comma in one of his poems changed to a semicolon. Why did he take all that trouble? Bright Boy: 'Cause he didn't have no tellyphone.—Cleveland Plain Dealer.

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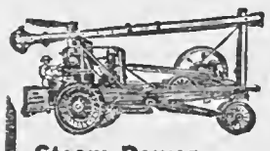

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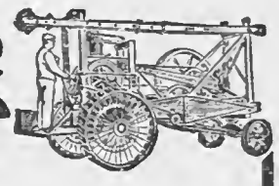

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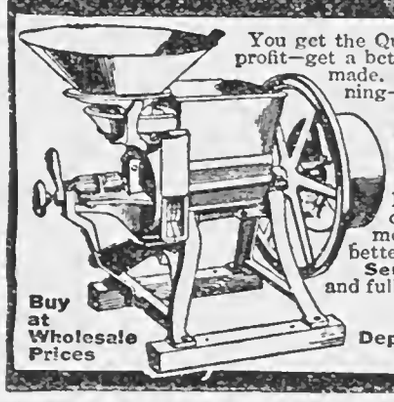

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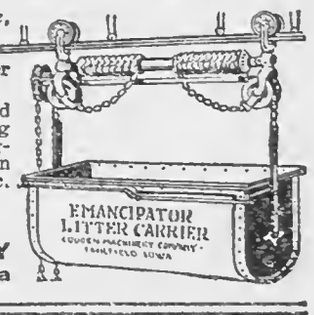

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EVENTS OF THE WEEK.

DOMESTIC.—Wallace Smith, a young white lad, while roaming around the shops of the Gulf and Ship Island road, at Gulfport, Miss., Oct. 16, felt thirsty and proceeded to what he thought was a hydrant and a hose attached. The liquid he received instead of being water was compressed air. His front teeth were blown down his throat and his arm was broken by the force of the rushing air.

Pressure on the banks forced the bottom of the Culebra Cut, Panama Canal, up about 24 feet, Oct. 14. This upheaval has blocked the use of the canal by all vessels having a draught of more than 15 feet. Dredges are at work removing the obstruction. Seven ships were waiting for passage through the canal and the delay will affect at least sixty more vessels.

While feeling her way through a thick mist off Sandy Hook just after entering the Ambrose Channel, entering New York Harbor, Oct. 15, the United Fruit steamship Metapan, from the Caribbean, was rammed by the American-Hawaiian freighter Iowan, bound out. She was immediately run aground by her skipper, Capt. Spencer, on the north side of the great fairway to save her from foundering with her passengers and a rich cargo, including half a million in gold bars. None of the passengers or crew was hurt.

A swindle, by which women in the poorer sections of New York City have been duped into buying worthless furniture, has been disclosed by District Attorney Whitman, following the arrest of six men, said to be associated with the Grand Rapids Distributing Company, at 120 West 18th St., and the Empire Home Furnishing Company, at 241 West 23d. The men are charged with having sent out agents, who are alleged to have induced women to subscribe to a so-called furniture club, each member to pay 25 cents a week for a period not to exceed seventy weeks. The membership of the club was not to exceed 70, and each week one member of the club was to receive an article of furniture valued at $17.50, after which the lucky one was exempt from further payments. During the first few weeks, it is alleged, several influential women in the neighborhood would receive handsome prizes, and by this means other women would be induced to form clubs. It is alleged further that after making their full payments the women went to the company and were offered articles of furniture of insignificant valne. An examination of the books of the concerns, made by Assistant District Attorneys Colnon, Heilborn and Loening shows, it is said that the daily receipts of one of the companies averaged $400, which meant more than nine thousand outstanding contracts. The examination further established, it is said, that the proprietors are likewise proprietors of similar concerns, operating the same business under different names.

The New Haven Railroad's year long negotiation with the Department of Justice to set itself in order before the law came to an end, Oct. 17, when Judge Mayer in the United States District Court signed the dissolution decree that had been agreed upon by the New Haven and the Government. Under the decree the New Haven and the New England Navigation Company will dispose of properties carried at a book value of $134,000,000.

After 48 hours' imprisonment in quicksand 25 feet below the surface of the earth, Maurice Allen was rescued at Ware, Mass., Oct. 19, by a gang of firemen, policeman and citizens, who dug a ditch 50 feet long and 30 feet deep to reach him. Allen was boring a well when he struck quicksand and sank. All attempts at rescue by ladders and ropes failed owing to earth slides. An improvised diver's helmet made from a barrel was lowered into the hole and the man was supplied with air by a pump. Food and stimulants were fed to him through a tube.

Ten thousand dollars reward has been offered by the Lackawanna Railroad for the arrest of train wreckers who ditched the Manhattan flyer near Fulton, N. Y., Oct. 17, killing the fireman and fatally injuring three other members of the crew and cutting and bruising 15 passengers. A series of depredations in Fulton during the last month has caused District Attorney Culkin, of Oswego County, to believe that the spiking of the switch causing the wreck was the deed of a Black Hand organization.

Two persons are dead, several are dying in the hospitals and others were buried in wreckage as the result of the explosion of a bomb or an accumulation of dynamite in a string of tenement houses in Frontenac St., Montreal, Oct. 20. The majority of the tenants were Austrians and Russians. The authorities believe that the explosion was caused by race prejudice and a desire for revenge inspired by the European War. The police hold the same theory and are detaining 13 prisoners.

Great Britain has seized three American oil ships, the Brindilla, the John D. Rockefeller and the Platuria, all bound for neutral ports. All three belong to the Standard Oil Company. This action is to prevent Germany from getting fuel for her Zeppelins and aeroplanes. The British maintain that the shipments of oil to Danish ports are in reality destined for German points and therefore will not be permitted to proceed. Great Britain recently has made an arrangement with the United States whereby American shippers are to enjoy their usual access to the markets of Holland, Sweden and Denmark, provided these neutral countries prohibit the exportation of contraband of war to Germany. If the British suspicions continue to be acted upon these markets will be at least partially closed to American shippers of contraband and conditional contraband. The State Department is taking action on these seizures.

FARM AND GARDEN.—Poultry week at the Maryland Agricultural College, forming a part of the short course, is announced for January 18-23, 1915. There will be many interesting lectures and demonstrations.

The tenth annual show, of the Dover Poultry, Pigeon and Pet Stock Association, will be held at Dover, N. J., November 23 to 28. In conjunction with this the Ancona Club of America will hold its annual State meet.

Proceedings against an alleged "egg-trust" began, Oct. 22, in the office of the Attorney General at 299 Broadway, New York. The action, which has been instituted by James A. Parsons, Attorney General, is directed against the New York Mercantile Exchange and cold storage and packing houses. Edward R. O'Malley, of Buffalo, former Attorney General, will act as referee. Franklin Kennedy, Deputy Attorney General, will present the State's case. Attorney General Parsons asserts that the Mercantile Exchange, whose membership is largely made up of butter and egg dealers, has entered into an agreement with cold storage warehouses which constitutes restraint of trade. He further alleges that the exchange is violating the spirit of the agreement under which, two years ago, District Attorney Whitman did not press a John Doe inquiry to a conclusion upon the understanding that the exchange would cease to post quotations.

THE EUROPEAN WAR.—The British scout cruiser Hawke was destroyed in the North Sea, Oct. 15, by a German submarine with a loss of 400 men. Oct. 17 the British light cruiser Undaunted, aided by the destroyers Leunox, Lance, Legion and Loyal, sank four German destroyers off the Dutch coast. Oct. 19 the Undaunted captured a German mine layer.....The German cruiser Emden is still active in the Indian Ocean, recent operations including four British vessels sunk and one captured. It is estimated that the Emden has destroyed $10,000,000 in British shipping, apart from loss of trade.....Berlin reported that the new British submarine E-3 was sunk by German warships in the North Sea Oct. 18.....The Germans occupied Ostend Oct. 16. During severe fighting on the coast the Allies' left was reënforced by a British fleet, which was able to operate on the coast and in canals, coöperating with the Belgians between Nieuport and Dixmude..... The line of battle, Oct. 21, was 360 miles long, from the Straits of Dover through Belgium and France to Belfort. Severe fighting existed at many points but the Germans had not succeeded, Oct. 22, in breaking through the Allies' lines..... Oct. 16 a German factory in a London suburb was raided by the police. It was a concrete building of great strength with exceptionally heavy foundations. A similar building at Edinburgh, Scotland, was seized Oct. 17. In each case the factory occupied a strategic point, and was to all intent a fort. Similar factories have been reported in Belgium; at Maubeuge heavy concrete foundations in a German factory supported the German siege guns. The discovery of these fortress fetories has caused rioting in England, and the government is ordering all "alien enemies" to leave the country .....Both the Russians and the Austrians claim advantages at Przemysl, Oct. 20. The Russians report that they have taken the outer forts, the Austrians that they have gained one of the forts that was formerly captured by the Russians. The Austrians say that in Russian Poland the combined Austrian and German cavalry repulsed a Russian attack west of Warsaw. A report from Petrograd says the fighting on the Vistula continues without any marked advantage in favor of either force..... The Russian government reported, Oct. 17, that owing to the sowing of mines in German waters and the presence of German submarines, it would be compelled to sow mines in the Gulf of Finland and Gulf of Riga.....Rebel forces in South Africa were defeated by Union soldiers, Oct. 15.———Japan has seized, for strategic purposes, important islands in the Marianne or Ladrone, Marshall, East Caroline and West Caroline archipelagos. One Japanese warship was wrecked at Kiao-chow, presumably by a German torpedo boat.....The Russian government has announced its permanent withdrawal from the manufacture and sale of alcoholic drinks, which began with the war. The "Novoe Vremya" cites as a happy effect of the suppression of the sale of liquor an increase in savings bank deposits during September of 23,000,000 roubles ($11,500,000) over the same month last year, in spite of the war.

NEW YORK STATE NEWS.

EDUCATION DEPARTMENT BULLETIN.—The State Department of Education has set forth in a bulletin just issued its purpose to improve our rural schools and urges the adoption of the township as the administrative unit in taxation instead of the present school district. It also urges the better qualification of teachers, and that the rural schools must be maintained for a period of time equal to the schedule maintained in the cities. The courses of study in rural schools must, it says, be adapted to the conditions of rural life, and the school buildings, grounds and equipment must be as adequate and as attractive as those of the city. On the consolidation of schools in weak districts, the bulletin goes on to say that there are 1,400 school districts having an assessed valuation of $20,000 or less. There are 4,000 districts with an assessed valuation of $40,000 or less. This means that each of these 4,000 districts must depend for its financial support on 10 farms with an average value of $4,000. In about one-half these districts the average daily attendance is less than 10. Dr. Finegan states it as his belief that the improvements that should be made in our rural schools cannot be made until the township is made the administrative unit, and until that can be accomplished the weak school districts must be consolidated as authorized by the law of 1913. Within the next few years these districts should be reduced from 10,500 to less than 5,000. The bulletin also discusses the desirability of taking city schools out of municipal politics.

WEIGHTS AND MEASURES.—Delegates from all over the country will attend the convention of weights and measures' commissioners to be held in New York on October 29 to 31. A matter that will come up for discussion is the Federal regulation of weights and measures, in accordance with the Ashbrook bill now pending in Congress. This bill gives full authority in fixing and enforcing standards of weights and measures throughout the United States. The convention will also discuss the various types of weighing and measuring devices which the bureau of standards ought to select as mandatory throughout the United States should Congress enact the Ashbrook bill.

NEW FARM BUREAU PLANNED.—The Chamber of Commerce of Glens Falls and the local Granges are co-operating in an effort to have a Farm Bureau established in Warren County. A public market for Glens Falls is also being considered. The idea of extending the school gardens to the district schools is also under consideration.

BOYS WIN POTATO PRIZES.—Last Spring County Agent Barlow, of Otsego County, offered prizes for the best crop of potatoes raised by boys from 25 potatoes planted in 100 hills. The results are now known and George E. Cummings of Milford won the first prize, a thoroughbred bull calf, and Howard Van Scoy of Gilbertsville took second prize, a trio of White Leghorn fowls. Cummings planted the White Mountain variety and raised 571 pounds, his best hill yielding 54 salable potatoes weighing 34 pounds. Van Scoy had 492 pounds, his best hill yielding 38 pounds.

CORNELL WINTER COURSES.—This year the Winter courses in the State Agricultural College will begin on November 10 and will close February 12, 1915. The course is open to all students who have been graduated from a common school or have received an eighth grade certificate, and who are at least 18 years of age. Tuition is free to residents of this State. Last Winter there were more than 550 enrolled in these courses, and that number is likely to be surpassed this year.

BIG CHEESE FOR EXHIBITION.—The monster cheese to be exhibited at the Panama-Pacific Exposition has just been made at the West Martinsburg factory, in this State, under the direction of the cheese expert, Mr. H. A. Reese. The cheese will weigh between five and six tons, or two tons more than any turned out heretofore. It required 100,000 pounds of milk, the output of 25 factories for a day. It will be kept in the factory until January, when it will be started on its way to the Exposition. J. W. D.

Oct. 17. Apples very plentiful, good quality from $1 to $1.50 per barrel, some asking $2. Potatoes some sales; good crop; many holding for higher prices; going price 50 to 60. Butter, dairy, about 32 to 35. Hay from $12 to $20, quite plenty. Cabbage, beets, etc., reasonable. Cabbage about $1 per dozen; beets 60 cents a bushel. Cows are not plentiful, particularly new milch; there is a long range of prices from $40 to $80 or $90 each. G. A. S.
Center Harbor, N. H.

MEDICAL PROFESSOR: "What would you do in the case of a person eating poisonous mushrooms?" Student: "Recommend a change of diet."—Boston Transcript.

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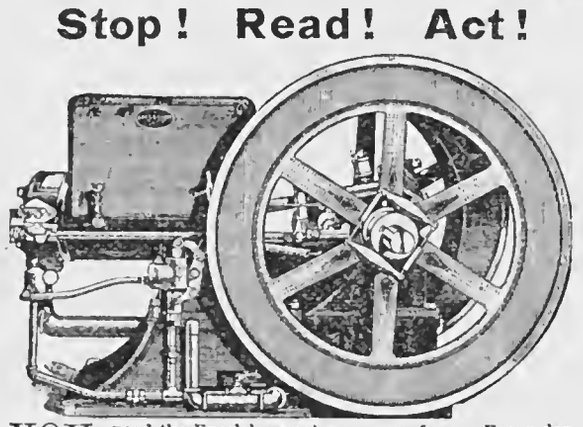

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The Home Acre

CABBAGE AND TOMATOES.

A DELAWARE reader writes: "I have been reading your garden notes, and would like to ask your opinion of certain varieties of cabbages and tomatoes. I want a good sized cabbage to come in right after the Early Jersey Wakefield. Will the Succession do this? How about the Copenhagen Market and the Early Flat Dutch? Also tell us about tomato varieties and their respective earliness, such as John Baer, Marketer, Brimer, Crimson Cushion, Globe and Magnus."

For a cabbage of good size to follow immediately after the Early Wakefield there is none better than the Copenhagen Market. I have found that this variety is no good for Fall sowing here, as the plants run to seed badly. But sown in frames in Winter it grows and heads finely, and comes in about the same time as the Charleston Wakefield, and is larger. Succession is later and makes fine heads here in late July and August. The heads are the general shape of a drumhead. For late Summer and early Autumn I like the Eottler's Improved Brunswick. It makes large heads on very short stems and I prefer it to the Early Flat Dutch. The heads are fuller, round and not quite so flat as the Flat Dutch, and it is the most uniformly heading of any Fall cabbage I have grown. I formerly grew the Winningstadt as a succession to Early Wakefield, but the Copenhagen Market is better. For a Winter cabbage I have not found any better than a good strain of the Late Flat Dutch.

Now as to tomatoes, I have already given my opinion of the John Baer. It is a good, smooth and productive tomato, not early this season here as was claimed for it, but the dry season may have had something to do with this, though the Earliana ripened as usual and was 10 days earlier than the John Baer, which looks too much like Chalk's Jewel to be distinct. Marketer I do not know and have never grown it. Brimmer seems to be a good selection from the Ponderosa, and like all extra large tomatoes, does not make a large crop of fruits. It has a good deal of hard core. Crimson Cushion is a red Ponderosa, and one of the best very large tomatoes. Globe in my experience is the best of all the pink tomatoes. It is a very productive variety, fruit of fair size and solid, with very little hard core. Magnus is also a good tomato, and has the advantage of heavy foliage to protect the fruit from sunscald. It is not early, but is good and smooth. Maule's Success is one of the best main crop tomatoes, bright red, smooth, solid and produces fruit of good size and quality. Our growers here for the canners stick to the Stone, and when this is from a good strain there are few tomatoes of the main crop equal to it. The Delaware Station reports that Greater Baltimore made a heavier crop for canning. I have found no extra early tomato equal to the Langdon strain of Earliana, and Bonnie Best is a close succession and better quality. For a good succession I would grow for red tomatoes Earliana, Bonnie Best, and Success or Stone, and for a pink tomato the Globe. I have always had a passion for testing tomatoes from the time when I paid Col. Waring $5 for 20 seeds of the Trophy. Up to that time the Tilden had been the best smooth tomato. But it lacked meatiness and solidity, and the Trophy was the first effort to get the old ridgy Mammoth Chihuahua inside a smooth skin. I got the 20 seeds of the Trophy early in January and sowed them at once in my greenhouse, and as fast as they grew made cuttings and rooted them, and by Spring I had 150 plants and sold 18 of them for 50 cents each, and set out plants that made me $50 worth of seed, so that the $5 was well invested. This expensive propagation often pays very well with new things. Many years ago, when the Herstine raspberry was introduced, a neighbor bought in the Fall two large field-grown plants for which he had paid $5. I told him that I would propagate them for one-half and he left them with me. I cut the long roots into small pieces and sowed them in a flat in the greenhouse, and as fast as they sprouted potted them into three-inch pots. In the Spring my friend was astonished when I gave him 127 plants in pots with tops over a foot tall. This would hardly pay with plants at ordinary prices, but with new and high-priced plants it pays to do some intensive propagation. W. F. MASSEY.

Maryland.

Crab Grass in Lawn.

WHAT can I do to overcome crab grass in lawn? Last Spring I sowed grass seed, but the crab grass smothered my lawn seed out. I keep it cut down, so it will not go to seed. Would it be advisable to sow Timothy and clover this Fall, and work some lawn grass seed in it, and then next Fall sow more lawn seed? G. F. H.

Maple Shade, N. J.

It is no uncommon thing for new-made lawns to be smothered by a heavy growth of crab grass, and in such cases the entire lawn will have to be seeded over again to lawn grass. I have had several experiences of this kind, but instead of plowing or spading the ground again, as is most usually advised by grass experts, I pursued just the opposite course with good success. Crab grass is an annual, and dies down shortly after seed ripening time, which is during the month of October, but on account of its large root system it cannot be pulled out except with much difficulty in the Fall, but if left until Spring the old stems and roots can be raked off with a steel garden rake quite easily. This should be done early in April. After the lawn has been cleared of this rubbish, and the surface becomes dry enough to crumble, sow the grass seed broadcast and in the same quantity as for a newly-made lawn, and use a sharp spike-tooth harrow with the teeth pointing to the rear at an angle of about 45 degrees. Go over the lawn both ways with this, at least twice each way, then roll with a hand or a light one-horse roller, then wait for results, which I would be almost willing to guarantee will prove entirely satisfactory. Do not sow any Timothy nor Red clover on the lawn; neither of these is suitable for lawn purposes. You will probably have more or less crab grass in your lawn in the years to come and will also have to re-seed spots here and there almost every year, but do not let that worry nor discourage you, for it is a common occurrence everywhere that crab grass is abundant, and everybody is troubled in the same way in sections of the country where it grows at all plentifully. K.

LITTLE Paulina came in, bringing a scratched finger for salve and sympathy. "I cut it on the cat," she explained.—Judge.

Storing Vegetables for Winter.

NOW is the time to consider storing vegetables for Winter use. Onions and squash should be placed where there is sufficient heat and dryness to prevent any possible decay; a heated room or warm attic will do. Parsnips, carrots, beets, salsify and turnips are best buried in soil. A good sandy loam is excellent. Place a layer of soil in the bottom of a barrel or box, then a layer of the roots, a layer of soil, a layer of roots and so on. Another good way where there are more roots to be stored is to pile the vegetables in conical form, place straw over them, cover with dirt, and as the weather becomes colder, add either dirt or manure.

Cabbages may be stored in a hotbed pit, if protection from over supply of water is afforded by covering the tops of the beds with boards and tarred paper. Protection should also be given against excessive cold by applying refuse over the tarred paper. Cabbages may be stored by spreading straw on the ground, removing cabbages, roots and all, from their location, and placing them head downward in the straw. Place them four wide, and on these another layer three plants wide, and place straw and soil over them. This will cause them to keep in the very best condition, especially on well-drained locations. The whole aim of storing vegetables is to prevent sudden thawing and freezing, to afford sufficient ventilation so the product will keep well, and to supply moisture to prevent shrinkage, while in the case of the squashes and onions, heat enough is given to prevent excessive moisture.

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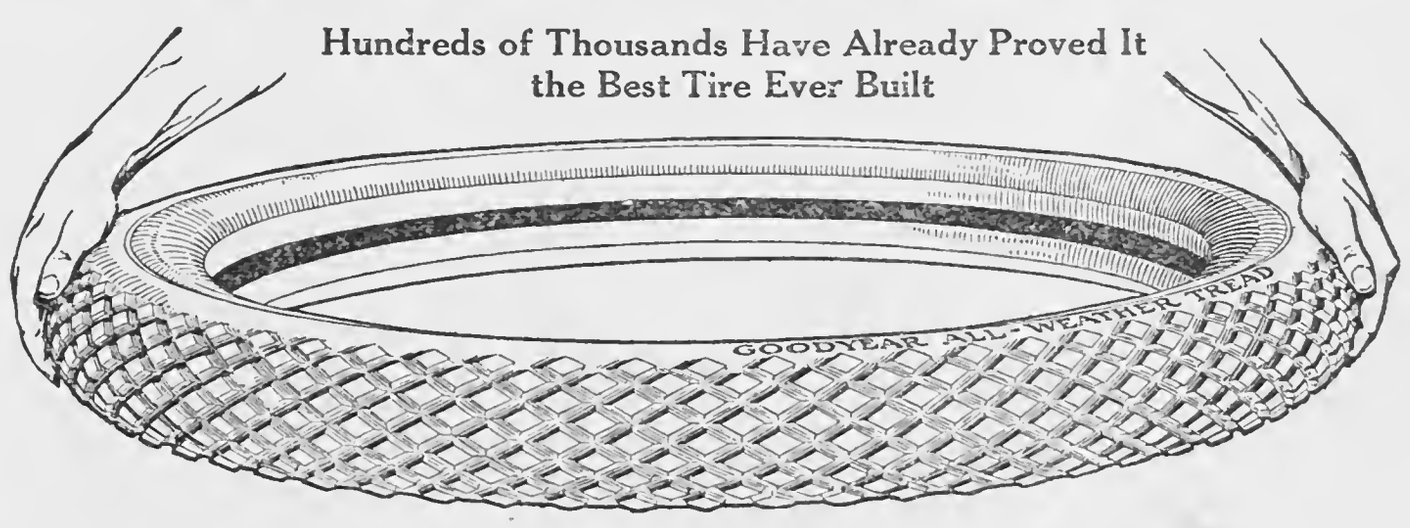

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THE TALE OF A TOOTH.

INTRODUCTION.—It is my tooth, and I am largely responsible for its condition. It has had a long and varied experience, and its story may be said to carry both moral and evil. The dentist might describe it as an upper left hand canine. To me it is an eye tooth gone to the dogs. Why not let such teeth rest in oblivion? I think it has a message to humanity—along with the poet or the statesman. There should be a motive for every story. The other day I saw a young man cracking walnuts with his teeth and betting that he could crack hickories in the same way. Another young fellow with decay starting in his teeth spent the money which should have employed a dentist in paying for some midnight suppers. I met a woman of 25 who has lost all her teeth and must now chew on through life with plates. Perhaps the tale of this tooth may startle some careless young person into the warfare against pyorrhea and other allies against the gums and teeth. The old one-legged veteran by the fire never could convince us children that the pen is mightier than the sword, but perhaps my dilapidated canine may indicate the power of the toothbrush!

YOUTH.—This eye tooth grew along with the rest of the set. It is said that in some families nearly all members show poor teeth—due to naturally "imperfect enamel" and poor food and water. Brown bread or cornmeal bread and other foods low in lime with soft water and potatoes made up a good share of our diet as children. I think that gave our teeth a poor start, and yet I have seen the negroes at the South—living mostly on corn bread and pork—with perfect, dazzling white teeth. At any rate my children now have food which I know is rich in lime and phosphorns. By the time my second teeth came on some of them seemed ready for pulling. The local dentist was known as "Snake 'em-out Thomas." He had a strong arm and lived up to his reputation. He got out a couple of mine and cast his eye on this "canine," but finally let it go. At that time, as I remember it, the great majority of people of 40 or over had lost their teeth. The dentists did not try to save teeth as they do now. They pulled them out and comforted you with the information that Geo. Washington "wore" a set of teeth carved out of a solid block of ivory! It must have been very consoling. People [illegible]ed to accept the loss of their teeth with philosophy. It was a regular part of nature—like having the hair turn color. Most people seemed to be rather proud of their plates!

BEGINNING EARLY.—My "upper canine" began to growl before I got my growth. My children are taught to consider their toothbrush as necessary as knife and fork. Both the old people who brought me up had lost their teeth years before, and accepted the situation. When a man accepts the situation he is not a first-class teacher. I was taught that children should eat the hard crusts of brown bread—the chewing of these tough morsels would clean the teeth! It is much the same proposition as feeding ear corn to horses as a remedy for lampas or a growth on the teeth. I nearly broke my young teeth on that hard crust, and there was not lime enough in it to make solid bone. Then I went to Boston as errand boy in a big store, and the teeth lacked even this brown bread crust care. One day I stopped to listen to a faker on a street corner. He had some wonderful powder for cleaning the teeth. "Now," he said, "here's a young lad!" and before I knew it he had me up on a box with my mouth open cleaning my teeth with his powder. He did make them shine, but I am satisfied that his stuff started my canine along the way to the bark which largely destroyed its bite. No more playing the part of "object lesson" for me. My tooth began to fail. There was a little pain at drinking ice water or hot coffee, and small black holes appeared. I would have my children's teeth looked over twice a year, but in those days somehow we just let them go. Finally I decided to go to Colorado to try my fortune at cattle herding. An old friend out there wrote this practical message—"Get your teeth fixed before you start—you will have to chew salt pork and leather cakes here."

FINANCING IT.—So I went to a dentist. He looked in my mouth and shook his head. "You ought to have come two years ago," he said. However, he pulled out a couple and began on the others. That was in the good old days when the dentist worked a pedal with his foot to drill out the tooth. Two old soldiers sat about and watched the work telling how it was done in the army. The old dentist did a good job, and packed a chunk of gold into my canine. Unhappily I made no bargain before we started, and I had no idea what the job would cost. When we were done I thought it might perhaps be $15. You can imagine my feelings when the old dentist handed me a bill for $60. I am told now that expert New York dentists would charge $200 for the job, but that would not relieve a moneyless young man. Well, I couldn't pay it; I told the old dentist so. He sat down in his chair and looked at me for about five minutes. I expected he would call in a policeman and set my teeth on edge. Instead of that he said slowly and kindly:

"I am going to trust you. I think you are honest, and I don't think you tried to beat me. You can't give back my work as you could a suit of clothes. You are going 2,000 miles away, and probably will never come back, but I think you will pay that money and I shall trust you to do it. Good bye and good luck to you!"

That was in March. By August I had saved $60 out of my wages. I rode into the little Colorado town with that money in my pocket. The bank was in the same block with a clothing store. I needed clothes and many other things, and I confess that I went past the bank and got inside the store. It was easy to argue that this old dentist never could get at me far out on the plains. He was probably rich anyway, and did not need this money, while I did. Let him go! A minister to whom I once told this story said that "the old devil" was right there on the sidewalk telling me this. I did not see him, but I did feel like him.

Then came the other side. This man trusted you, and put it up to you squarely as a matter of honor and character. Have you anything of either quality? If so you have got to show it now or quit forever. All this was fought out over my tooth. Finally I went into the bank, bought a draft and paid the $60 to the old dentist. You see this old tooth of mine has had a varied experience and considerable influence. I think that decision to pay the bill was the best financial move I ever made. It was the foundation of saving and meeting obligations so as to obtain credit. Do you wonder that I stay by my old friend the canine tooth?

TINKERING.—The old dentist saved that tooth, and his gold held in place, and I enjoyed the "salt pork and leather cakes." But while the old dentist and the tooth taught me financial obligations, somehow they could not make me realize the fact that teeth need daily care. Tartar began to accumulate and pyorrhea appeared. This wasting away of the gums comes on as slowly as "near sight" or deafness. The young and vigorous think nothing of it until finally the fact is forced upon them that the teeth are becoming loose and that a little bare streak has appeared above the crown which "aches," with a pain which no remedy can subdue. Some of my teeth went that way, and when they start it is hard to hold them. While at college I worked one Winter in a lumber camp far from town. One big fellow in the midst of a bad storm, came down—or up as you please—with a jumping toothache. There was no remedy and this man had no use for a dentist except to pull teeth whenever they ached. There was an old fellow near by who "knocked out teeth," and in his desperation the sufferer went to him. I did not have the nerve to witness the operation, but the report was that three men held the "patient" while the operator put a small, sharp, cold chisel at the root of the upper tooth and tapped it with his hammer. They said the tooth dropped quickly out at a light blow! My own canine tooth began to ache in sympathy, but I thought so much of my old friend that I declined this sort of surgery and walked through the storm to town. There a dentist filed off the upper part of the tooth below the gum and put in cement. He meant well, but he hurt so with his few rude tools that he did not do a thorough job.

A REMEMBRANCE.—When I finished at college I started for the South. Waiting for a train in a little junction town I saw the name of a good old friend on a dental office. This man had studied dentistry and "hung out his shingle" in this little place. The shingle was accummulating more moss than money, but like all the rest of us in those days, my friend was as hopeful as a dream. He had more time than patients, so he got me into his chair. His proposition was that he could fix up a couple of my teeth and I could wear them as I would a ring or a jewel for remembrance. So while we talked over old days this man dug out the gold of the old dentist and the cement of the new one, bored a deeper hole and patched up my friend anew. It was a kindly and original thing to do for remembrance, and I went on my way with the "upper canine" not only carrying a financial lesson but one of sentiment and friendship as well. Of course I would stay by such an old friend. Every one of these men told me that I might have saved my teeth had I cared for them properly.

STILL ANOTHER.—In the South I picked up another good friend. Dentistry in that section could not be called an exact science. This man could not get his patients to come to him, so he went after them. He rode out over lonely roads through mud or dust, across rivers and swamps, with his dental kit in the saddle bags. He would stop at farmhouses and talk teeth-pulling or filling as times were good or bad. After the cotton was sold and money was plenty there would be more filling done. It was rough work, but this man did it well. My canine began to bark once more—this time above the gum. There was to be a great baseball match with some neighboring town, and it was one of the very rare occasions when my fellow citizens built their hopes on me, or on my arm. I was pitcher of the town club, and although a very poor vessel I held the water of hope for the town. And a few days before that great match my tooth went wrong. The trouble was up in the gum. You may know how the face puffs up—so painfully that it hurts you to think. My eye was nearly closed and life had lost its charm. Then my friend the dentist came to the rescue. I would not let him pull my old friend, for it was full of "Records which defy the tooth of time."

So he picked out my friend's "remembrance" filling, got up into the gum and relieved the swelling. Then to be sure he ground out a little more of the tooth and packed in a larger filling. And at the baseball game when I mowed down those batters with a curved ball my good friend the dentist danced for joy over by first base.

CRUMBLING.—Three other dentists have had a chance at this old tooth since then. Most of them have advised pulling it at times, but I have hung to it as I would to any old friend fallen upon evil days. Little by little it crumbled. The gum receded and a little crown was put on it—not, however, for the good it had done. Then it played the part of anchor with a wire to hold two other teeth firmly. It is wonderful how the modern dentist will fight for a tooth—and hold it in the jaw. There came a time after all this patching when my friend carried about as much cement as a fence post. There was no longer a cavity, but a little strip of enamel and a hole. "We will hang to it," said the dentist; "it helps!" So it did.

A SHOCK.—One night the blow fell. When I was a boy I knew a man with a very long nose who got up in the night. The room was pitch dark, and this man groped around for a light. The door stood open. The man with arms outstretched to feel his way walked into the edge of the open door. One hand passed on either side and he walked on until he bumped that long nose plump into the door. It was a standing joke that his nose was longer than his arms. I laughed with the rest and perhaps fate came back and marched me into retribution. At any rate I got up one dark night groping in that same way and passed the open door with my hands spread out. The edge of that door might easily have hit me on any one of 50 other places, but it landed fairly and squarely right on the point of my old friend the canine, and broke it off at the gum. It seemed to me for about five minutes that the end of the world had come. My old friend through trouble and joy would never bite again.

GRAFTING.—That would have been true 50 years ago, but it is not true now. "The root is strong," said the dentist, "we will graft in a new one!" So he proceeded to grind down the top of that root. The old dentist who started that tooth did his grinding by working a little machine with his foot. His leg soon gave out. The modern dentist put a tiny grindstone at the end of a wire, touched a button and the grinding was done by electric power. I never realized how hard a tooth really is until the fraction of an inch was ground off that root. It is not my job to tell how it was done, but it seemed to me that after grinding down the root the dentist bored a small hole into it and then put in a porcelain tooth with a stout pin at the top. After being nicely adjusted this was firmly cemented in so that now my old canine friend is stronger and more serviceable than at any time during the past five years! It is like the old tree at Hope Farm which we cut off and topworked. It is now far more vigorous and profitable than before. And so it happens that after over half a century of service, and after being given up by half a dozen experts, my old friend is still at work—a rooted witness to the wonders of modern dentistry. Yet there was no good reason why it should be a wonder, because if it could have received good care in its youth it might have grown on sound and useful without all this painful and varied experience. I wish it were possible to make our young people realize the folly or crime of disregarding their teeth. Very few of them thus neglected will stay by as my old friend has done. H. W. C.

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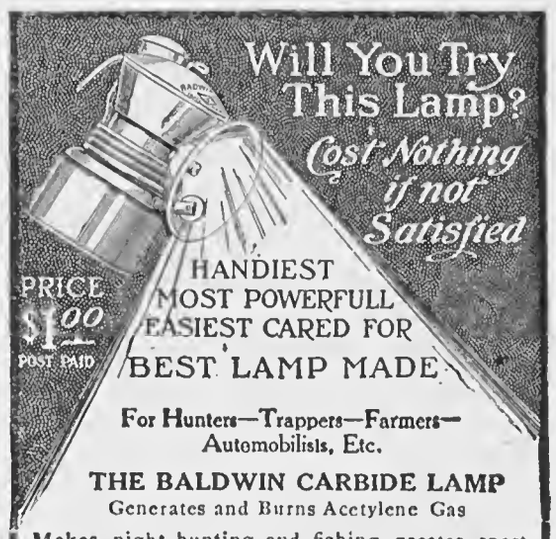

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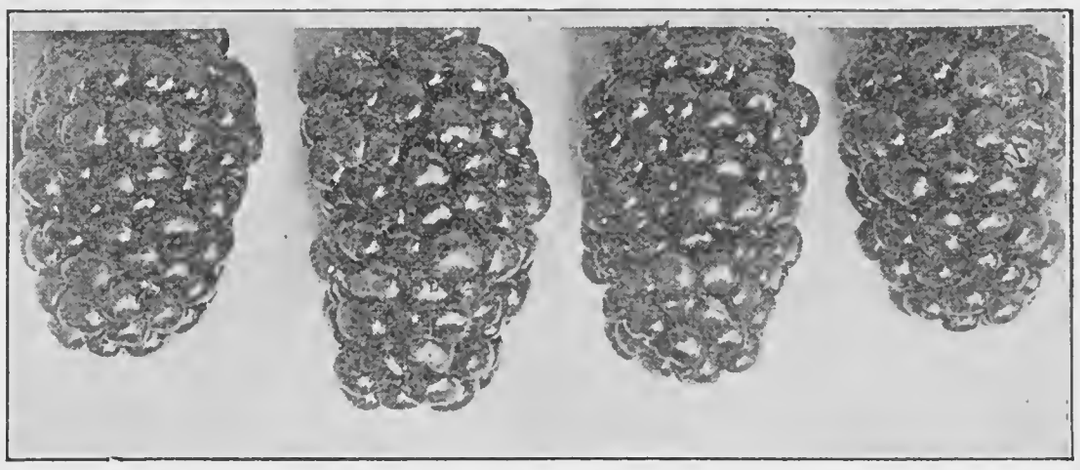
FRUIT NOTES FROM MISSOURI.

McDONALD BERRY.—I have spoken previously of the dewberry-blackberry hybrid from Texas, the McDonald, which I have had on trial. This Summer more than a hundred plants of this variety bore their first crop, and for the first time I was able to estimate its true value. As a result I feel that in the McDonald there has arisen the greatest of all the blackberry family, and that it stands alone in the possession of qualities that make it the most valuable of its group both as a market and family berry. In one point only is it open to criticism, it is not self-fertile in flower. The question of a suitable mate is not so easy to solve. In Texas it is planted with the Austin and other dewberries, and also with the blackberries standard there, the Sorsby and Dallas, but I believe it is only necessary to plant it with any self-fertile variety of its family which blooms at the same time. How far north the Sorsby and Dallas are hardy I cannot say, but probably not above the latitude of St. Louis. The Early Harvest is the standard extra early blackberry throughout the Middle and most of the Southern States, and should also prove to be a dependable pollenizer. But the McDonald begins to bloom before any other kind of blackberry or dewberry that I am acquainted with, and is the first of all its tribe to ripen fruit. Therefore its earliest berries are to some extent imperfect, but its blooming season, if very early, is also quite long, and this loss from defective berries is not worth considering. The McDonald is also the most productive of all, considering the size of its berries; its berries average larger than those of any other variety, and its berries grade as dewberries and therefore bring a considerably higher price than blackberries. It is an extremely vigorous grower, surpassing in this respect all our standard varieties. It has endured without injury 10 degrees below zero and is a true evergreen, holding its leaves green even at zero temperature.



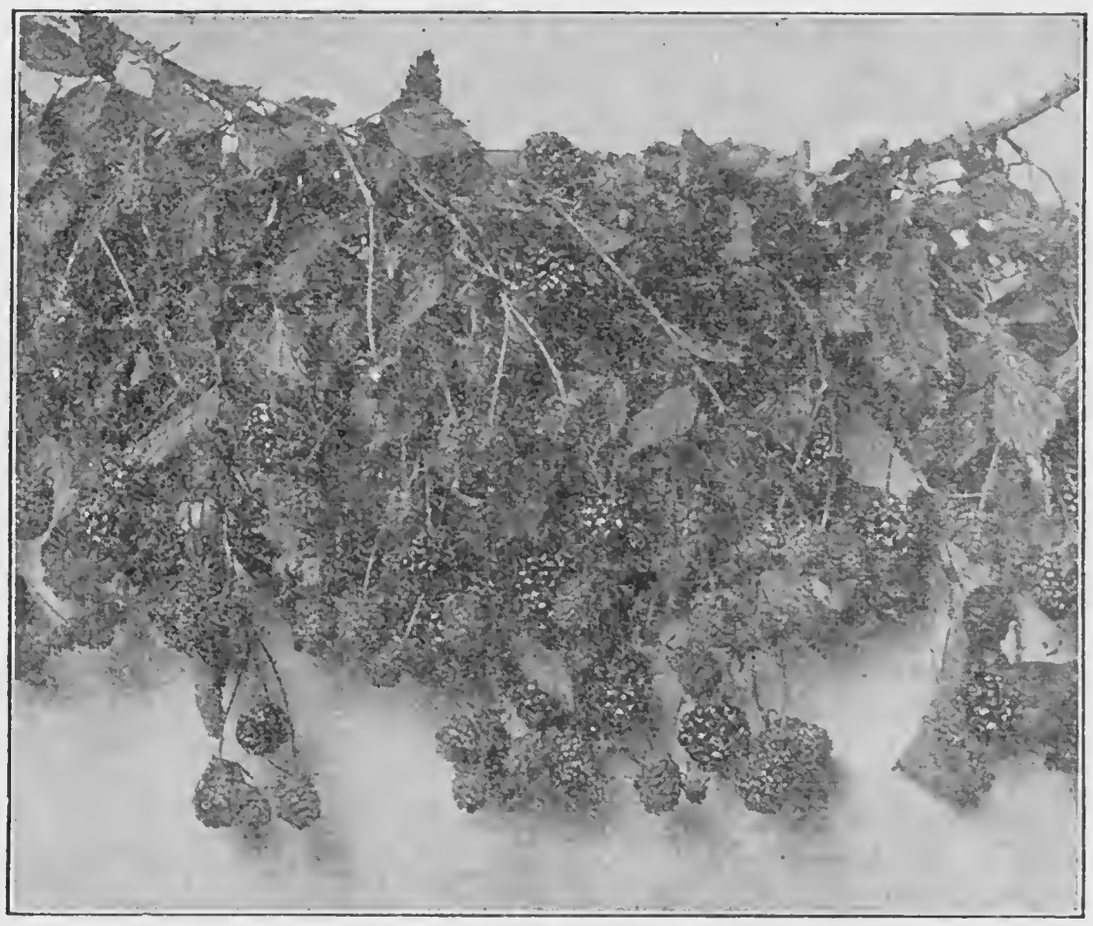
FRUIT OF McDONALD DEWBERRY-BLACKBERRY.

GROWTH AND CULTURE.—Minor points are that it roots readily from its tips. For the first year of growth it is a creeper, but after that sends up long, strong canes of great length; in the latter part of the season these canes put forth a mass of slender laterals which envelop the whole bush and reach on to the ground, where they take root at their tips. This habit of growth brings nearly all the berries on the outside and distributes them from top to bottom. It appears to be able to get along without any pruning, the new growth using the old wood as a frame over which to lie. Notwithstanding we had an all-Summer drought here, the McDonald brought its great crop to perfection, and then made its usual vigorous growth, its laterals forming during the hottest and driest part of the Summer. At this place, about latitute 37, McDonald berries were all sold by June 10. Early Harvest about half gone, Early King just ripening.

POST AND WIRE SUPPORT.—The way that I am growing the McDonald is to use posts and wire, placing two parallel wires about 18 inches apart and about five feet from the ground. Two others might, for the second year of growth, be placed about three feet from the ground. As the long main canes grow up through the former year's growth, they are trained up between the two wires so as to hold them erect. They are then carried to the right and left, but not more than six canes should be permitted to grow, and two canes may be better, depending on strength of soil. When the laterals start from these canes, they form a solid mass flowing down to the ground on each side of the wires. The rows should be not less than eight feet apart and 10 feet would not be at all excessive, and this distance would not suffice for a wagon to pass along. I am coming more and more to the opinion that the most satisfactory way to handle both blackberries and raspberries is to train the bushes on wires. I am already doing this with the blackcaps and shall add the reds and the blackberries as well. It is the only feasible way I can discover to keep the middles free and open for cultivation and picking and destroying such weeds as the morning glory.

L. R. JOHNSON.

Cape Girardeau Co., Mo.



A PROLIFIC CANE OF McDONALD.

PLANTING BULBS.

WILL you give some information on the Fall planting of a tulip bed, also Crocus and other bulbs? How should the bed be covered for very cold weather?

W. J. E.

Dillonvale, O.

Bulb planting should not be done while the soil is sticky from recent rain; a well-drained soil should be selected. Set early tulips five inches deep, and the same distance apart; the large late-flowering or May tulips need a little more room, and may be set six inches apart, and about the same depth. No fresh manure should be near the bulb. After the ground is first frozen for two or three inches deep it may have a light covering of spent manure or other litter, such as marsh hay or shredded cornstalks. If the litter is put on before the ground is frozen it makes a congenial home for field mice, which are extremely partial to tulip bulbs, and they always seem to choose the more expensive varieties for food. The mulch must be removed as soon as growth shows in early Spring, but if there is a sharp frost followed by snow or rain, the plants must be covered again, or the flower bud may be destroyed as it emerges. On large places, and in public parks, it is a common plan to lift the soil from a tulip bed to the proper depth for planting, set the bulbs on this uncovered floor, and then return the soil, spreading it over the bulbs.

Crocuses are set two inches deep, and prefer a sunny situation. Scillas (squills), though small bulbs, must be planted four or five inches deep; they prefer shade, and do well under trees. Snowdrops, grape hyacinths and glory-of-the-snow should be covered three to four times the depth of the bulb.

Narcissi are set at varying depths according to size; one rule is to cover them one and one-half times their own depth, measuring from the bottom of the bulb to the beginning of the "neck." This brings most of them about six inches deep; the small ones are set four or five inches apart, the large ones six or eight inches. Hyacinths are set six inches deep.

Bulb planting usually begins as soon as the leaves are all off the maples, and from then to hard frost, but the amateur planter rarely receives them much in advance of the time of planting, and Narcissi especially should be planted promptly. Some of the lilies are received earlier, especially Lilium candidum, which is ready for planting in August, and should make its preliminary rosette of leaves before Autumn.

Pruning Hybrid Roses.

WILL you tell me the proper way to prune the young wood of Hybrid Remontant roses? I have some seven feet high; some claim they should be cut back to about six inches above the ground to allow other shoots to start from this new stock. Others claim they should be cut back to about three feet through the Summer. In Spring I prune back to about one foot, but I do not know if it is right to allow new shoots or young wood to grow so long.

W. M. D.

The main pruning of Hybrid Remontant roses is done while they are dormant in early Spring, when they should be cut back to about six to eight inches. A moderate cutting back of long, unsightly canes may be done after the June flowering is over; this is to induce growth that will bear late flowers. Weak interfering shoots may be removed at this time, but no severe pruning such as is given the dormant plants. Late Summer pruning induces a growth that has little chance to ripen fully, and severe winter-killing may follow, especially if there is a late Fall with abundant moisture.

"My son Hiram is just crazy to go to college an' study pharmacy," said Mrs. Wheatly. "It may be all right," replied Mrs. Corntossel, "but I think th' place to study farmin' is right here on the farm, where ye git practical experience."—Livingston Lance.

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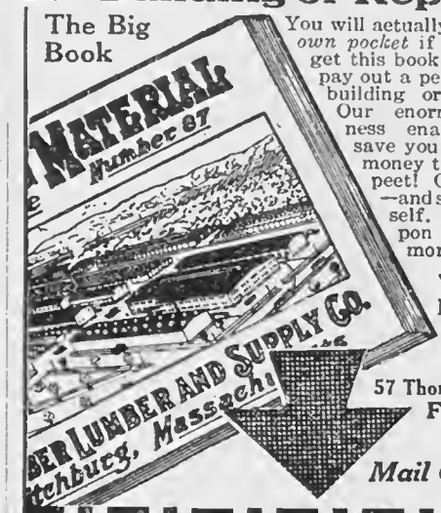

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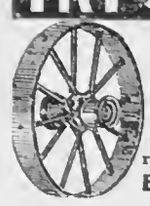

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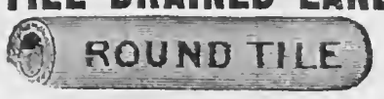

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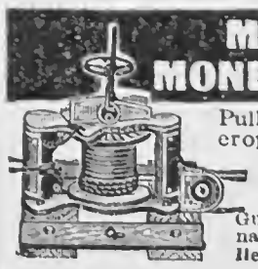

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The Rural New-Yorker

THE BUSINESS FARMER'S PAPER

A National Weekly Journal for Country and Suburban Homes

Established 1850

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I SEE that ex-Senator Eugene M. Travis is a candidate for Comptroller of New York. Is this the same Senator Travis who made such a fight against the bill to regulate commission men? D. S.

The same Senator Travis! While he was in the Senate, and after he failed to return, Mr. Travis was the leading spirit in the efforts to kill or cripple the commission man's bill. He sneered at farmers, ridiculed them, and told us personally that the biggest crooks in business were to be found among fruit-growers. At that time Mr. Travis kept his hat on in the presence of farmers. Now he takes it off and asks for their votes. What Mr. Travis fought hardest was the proposition to bond the commission men. As Comptroller he would be expected to pass on the sufficiency of these bonds. Travis the Senator with no farmers in his district, was one thing Travis the candidate is another. He has informed us that he is now highly in favor of the commission man's bill and considers it a fine piece of legislation. As is the case with many of us, his hindsight is very much superior to his foresight.

*

THAT is a pretty race in the egg contest between the English Wyandottes and the American Leghorns. This week the Leghorns are ahead, but the Wyandottes are pulling them down. With two weeks more to go it will be a close race. May the best birds win! Now we want to say something about this "Barron" stock. Mr. Barron's success at the egg contests has naturally created a demand for his birds, or for the blood of his leading strain. Our American poultrymen should remember that these English birds are quite different in type from the American specimens of the breeds. It is by no means sure that this Barron stock will be best to cross upon the American birds. Our own advice is not to make such a cross, but to breed the English stock pure—that is, to keep it separate from the American. These English birds are remarkably good layers, but they have been bred on different-lines from the American, and we would not mix the two. Again we give fair warning that some breeders may offer so-called "Barron" stock when they have nothing of the sort. Men may buy an English rooster and cross him with their hens, or buy a sitting of eggs and use the cockerels for breeding, and then advertise the true English stock. We would not advise the use of such birds for breeding. Use the pure strain of English stock without admixture of other blood, or do not touch it for breeding!

*

CHAS. S. WHITMAN, one of the candidates for Governor of New York State, is reported in up-State papers in opposition to the Land Bank as follows:

At the end of ten years, it is true, you have paid $1,350 (on a $1,000 mortgage)—paying $100 a year and the interest at 3½ per cent. But you have paid $135 the first year, $135 the second year, and so on until when the last year has arrived there is only $100 to pay and you have to pay the $135, or 35 per cent. interest. Altogether then the farmer has to pay seven per cent. interest on his loan instead of six per cent., as it was under the old system.

The trouble with the District Attorney of New York is that he knows nothing about the subject he is talking about. Any other conclusion would impeach his sincerity. He is talking about a 3½ per cent. mortgage for $1,000, to be paid in 10 equal annual installments; but he forgets that in such a case the second year's interest would be on $900; the third year on $800, and so on, until the last year, when he would pay interest only on $100. The farmer would simply save interest on his payments; and Mr. Whitman would have trouble to figure him out a seven per cent. rate in such a case.

But the Land Bank is not expected to loan at a 3½ per cent. rate in these times. That will probably come later. The Land Bank does not propose the kind of mortgage Mr. Whitman has in mind. A small percentage will be paid on the principal of the new mortgage in addition to the interest. The German rate is 4.3 per cent. If the Land Bank can loan at that rate, the borrower will pay $124.09 annually for 10 years, and his debt will then be wiped out. If he paid only $52.59 annually, including interest, he would be out of debt in 40 years. Mr. Whitman reasons on the Wall Street basis by which the lender gets the benefit of interest on the accumulations. The farmer gets the benefit of compound interest in the Land Bank system.

*

VOTE FOR WORTHY FARMERS.

WE consider it very important that intelligent farmers should have a fair share in making and administering the laws of New York. Farming is one of the greatest industries of the State, if not the most important. During the next few years great changes are coming to farming. New laws and new regulations will be needed, and hard battles must be fought to prevent encroachment upon our rights. In the last Assembly 18 members out of 150 professed to be farmers or fruit growers. Of the 51 Senators four were farmers and one claimed to be an "agriculturist." The farmers in the last Legislature were fully alive to the needs of farm legislation, and were of great help in pushing through the four great bills which are to mean so much in the future. Whenever you go to the Legislature with a needed measure which is to help farming you find the farmers in that Legislature anxious to help and more than willing to work. The situation has greatly changed in this respect during the past few years. The quality of the men who write "farmer" after their names is high, and they know how to work for agriculture, and are willing to do it. It is more than ever desirable that strong and intelligent farmers should be elected this year. There are many candidates. We cannot name them all, but as illustration of what we mean, take Senator Thomas B. Wilson, of Ontario County, or Albert Manning of Orange County. Mr. Wilson is one of the most useful members of the Senate, and he will go back with wider experience and stronger influence. Mr. Manning is secretary of the Dairymen's League, and he will stand for the rights of milk producers in particular and farmers in general. We might mention many others if space permitted, but in general we urge our readers to vote for those candidates who in addition to real character and intelligence, can honestly call themselves farmers, and who are in sympathy with farming. Another important thing this year is the election of delegates to the Constitutional convention. New York voters will be called upon to elect 15 delegates to this convention. Here again it is necessary to take care of the interests of farming. Under our present constitution there are several unsettled questions regarding the laws which are supposed to protect farmers. Some of these questions have not yet arisen, but they are sure to do so in the future, and this constitutional convention gives us a chance to settle them and escape a long controversy in the courts. We must have in that convention trained men not only farsighted enough to know what agriculture needs, but with the practical knowledge and sympathy which give men the courage and power to fight the battle for their people. THE R. N.-Y. would greatly like to see our present Commissioner of Agriculture, Calvin J. Huson, elected as a constitutional delegate. We would like to have his election made unanimous or nearly so in the rural counties. In such an event Mr. Huson could go to the convention so clearly the special representative of the farmers that he could command instant attention and carry great power. With such a backing the convention would recognize the fact at once that New York farmers were a unit in demanding constitutional rights for their business. THE R. N.-Y. does not attempt to offer political advice to its readers. They are intelligent men who can think for themselves. It is our judgment, however, that one of the wisest things our farmers can do this year is to give Mr. Huson a practically unanimous vote.

*

THOUGHTFUL people are now considering the future effect of this awful European war upon the industries and society of this country. It seems like a simple proposition that no matter how the war ends, this country must reap great material gain. Europe cannot lose the services of 6,000,000 men or face the destruction of billions of dollars' worth of property without calling upon this country to help feed and clothe her people. There seems no escape from the conclusion that for years to come the United States must supply Europe and South America. There is another side to this. What will be the effect of this war upon immigration? Shall we have new streams of immigrants from Belgium and a revival of German immigration, or will peace make new opportunities in Europe? Prof. Ross, of Wisconsin University, advances this novel prediction:

I now look for a rapid increase in the immigration of women—widowed, or otherwise bereaved by the war. This may have a serious and lasting influence upon the social position of woman in this country. Such an influx might break down barriers the trades unions have tried to maintain against the employment of women in "men's work!" From the standpoint of the employer, bereaved immigrant women, lashed by hard necessity, would be quite ideal strike breakers.

As is well known, the women in Germany and France have for years done "man's work" on the farm or in shops. During the present war European women are doing the work of home defenders, and should the war continue for several years much of this change of industrial society will become permanent through habit. Here then is a new thought and an entirely new problem for this country.

*

WE believe that this "Favorite Hen" entry at the egg-laying contest will prove one of the most attractive features yet introduced in this popular event. The hens are fair representatives of good utility farm stock. They do not come from "fancy" or high-pedigreed flocks, but have been developed under the care of intelligent farm women, with such resources as a good farm can provide. Thus these hens, taken from 30 widely scattered farms, will give us a fairer idea of the merits of the true American hen than either the picked representatives from leading hen farms or the "scrubs" or "culls" taken from the market. We expect a most interesting contest between these "favorite hens." We have long believed that some of these farm flocks, unknown to fame, contain hens of unusual laying ability. We expect this contest to demonstrate this belief. The poultry business has gained rapidly in importance since these contests were started. Society must look to the hen more and more for its food. In a report from Manila we are told that poultry are not bred for size or egg production as they are for fighting:

The fact that no Filipino of the common class regards himself equipped for living without at least one male chicken explains why the islands, although raising so many chickens, still import eggs. As in all cock fighting countries, the fighting bird in the Philippines is a personal pet which the owner carries about during practically every idle moment of the day, and on which he lavishes enough care to raise many laying hens.

While the Filipino trains his fighting bird and buys eggs the American will "swat the rooster" and take off his hat to the American hen! We hope that among these 30 Favorite Hens there may be found several capable of making a new egg record.

*

EFFORTS will be made to sell substances which are said to contain potash—such as "stone meal," mineral fertilizer and similar things. We warn our readers against an investment in any of these things until they have been analyzed and endorsed by the experiment stations. Pay no attention to the wild stories told about these things. The promoters will try to take advantage of the present shortage in potash to sell their stuff. Pay no attention to them—you will pay dearly for it if you do.

BREVITIES.

No frost yet on our hills.

IN attempting to dispose of this big apple crop, do not forget your own home market.

THE boom is coming in the hen business. Tie a stone to it for ballast. Do not let it all be gas.

THE latest suggestion for teeth cleaning is to eat a mellow apple after each meal. The apple as a toothbrush ought to appeal to fruit consumers.

IN 1913 Pennsylvania turned 6,702,449 tons of sand and gravel into glass and buildings. In the same year Missouri made $6,412,861 worth of clay products.

NOW WE have writers appearing who tell us that swamp muck will take the place of potash. Nonsense! The striking feature of muck is that it has little or no potash!

ONE scheme for encouraging the use of cotton is to handle flour in cotton sacks instead of the usual sack of jute. The problem is to find new uses for cotton and thus increase its sale.

THE public usually lines up into two sides on most public matters. We may call them the "pro" and the "anti." Can you tell us why the "anti" people are usually the more rabid and violent in their statements?

THE nursery business seems to be one of the many affected by the European War. At least some of the nurserymen begin to claim that they must have higher prices because some supplies are shut off. With very few exceptions American nurserymen can supply practically every demand from home-grown stock. Much that is usually imported can be grown here. It will require enterprise and effort to do it, but is feasible.

WOMAN AND HOME

A Plain Country Dinner

What It Cost in New York—New View of High Cost of Living

"LET us move to the city, Clara, I can earn $2.50 or $3 a day, and we ought to save some money. I am tired of this business of being tied to a cow's tail all the year around. Chores morning and night, and we never get anywhere, have to be here every day. We could economize in town and could see things, and it would be an easy job."

This is the way many country folk talk. Many have acted on the suggestion, have gone to the city, and are finding daily that dreams do not come true.

I don't forget some of those days when my mother was living. After church my wife and I would drive around to father's and mother's place, and we would have a fair country dinner. It would be no spread. My wife would put on my mother's apron, roll up her sleeves and help get dinner. Sentimental reasons have indelibly stamped in my mind one beautiful Sunday in early September. We were late from church. When we arrived, mother said: "Children, I was a bit afraid you would not come to see me today, that you were sick, my dear girl, or the baby was not well." Dinner was at a standstill. As we hastened to unhitch, mother said: "Father, you go out to the garden and get some potatoes." My wife whispered to me: "I believe there must be ripe tomatoes out in the garden, they were a little late but must surely have ripened in a week." With basket, pail and potato hook, and leading the little toddling four-year-old by the hand father and myself and the little fellow went back to the garden. The big black dog, returning from a hunting trip, had little respect for hygiene. He ran up and kissed the little fellow all over his face.

Father dug potatoes, I gathered the tomatoes, while the little fellow wrestled with the big good-natured dog, and tried again and again to induce him to roll over.

"Let's hurry and get the potatoes over, for the children must be awfully hungry, I'm about starved," said mother. The potatoes were soon boiling over the oil stove. Mother had got out the last ham and cut out generous pieces from it. The tomatoes were peeled and sliced and placed around the plates.

"We save out a lot of milk for the baby, and does grandma's little man like nice fresh milk?" mother said as she dipped from a cool crock a large glass for the little fellow. The rest was poured in a generous-sized pitcher and placed on the table.

"Do you want some eggs with the ham? mother asked.

"No, we are tired of them, we have had them all Summer. This is enough, we haven't got time to bother anyway, it isn't as though we were cooking for company or thrashers," my wife remarked.

We had coffee for dinner; this my father preferred. We had cream with the tomatoes, for sugar and cream on tomatoes was our peculiar way of preparing them. We had a generous apple pie, thick and well seasoned. Mother baked this Saturday. There was nice fresh bread, baked the day before, for Saturday was bake day for mother and she always tried to have something fresh for "the children" as she called my wife, the little boy and myself.

We did not have a sumptuous dinner: it was average, frequently we had better, and at times perhaps not as much. Perhaps if some person had come along and offered to buy the whole dinner prepared, we would have given it freely, and would have declared that it was not worth 30 cents. We were at no cash outlay for anything, we traded eggs at the store for the coffee and for salt; the rest was prepared on the farm. There was not much left after that meal. I finished the last drop of milk. Father poured out the last of the cream in his second cup of coffee. There was little bread, and of nearly a pound of butter, perhaps some was left for evening lunch.

We attached little or no value to this meal. I remember it distinctly, and sought to duplicate it at a delicatessen store in New York City. I did not go to the cheapest store, for I was afraid of the service, the quality of the goods, and I did not go to a high-priced store. I thought that perhaps I could get inside a dollar, for such dinner; that looked pretty high. I made out the order and handed it to the clerk. First he cut off some ham. I looked at it.

"Why, there is not enough, cut off some more," I said, and when he remarked "90 cents" for it and headed the sale slip with that figure, my dreams of duplicating a farm dinner in the city for anything like $1 were dispelled.

"Will you let me wait on this lady and then I will complete your order," the clerk courteously asked, which I gladly granted. The little baby which the woman carried bit at the mother's nose and cheeks in a playful way, and the woman said, "Nice baby, we'll have some nice milk for the little girl." The woman bought a quart of milk for the affectionate little one. For herself, but five cents worth of butter, a tiny loaf of bread and another purchase not to exceed five pennies.

A FARMER'S DINNER AT RETAIL—PRICE $2.22.

The clerk returned to my order. He seemed pleased at its size, yet I doubt if his margin of profit was large because of rent, service and goods passing through many hands before reaching him. He figured up the bill and handed it to me. I asked later in the day of one who is familiar with prices received for farm produce, and he estimated the dinner would cost say 90 cents.

In ordering, one pie looked too small so I ordered two. They were just about the size of the little pies my grandmother used to bake for me in a little tin plate which had alphabet letters all round the rim. These two pies made about one-half of the pie we had that Sunday for dinner, and I got them cheap at that. I ordered two loaves of bread. The loaves seemed about as long as my arm, but were just about as large around as a soda biscuit. There did not seem to be as much substance in the two loaves as in one of mother's nice large homemade ones.

Ten cents for the milk looked a pretty good figure, and when I studied the printed milk bottle cap, I couldn't blame the grocer for making the charge. I made the purchase Friday at noon, and the milk had been bottled Wednesday up in Orange County, New York. All of that time between somebody had to pay interest on investment, had to pay storage, insurance and the hundred and one little charges that grow with delayed sales. This milk in stock all of this time had to pay its share and yield a small profit, and ten cents a quart for milk, interest deducted might not have been serious.

Here is the sales slip:

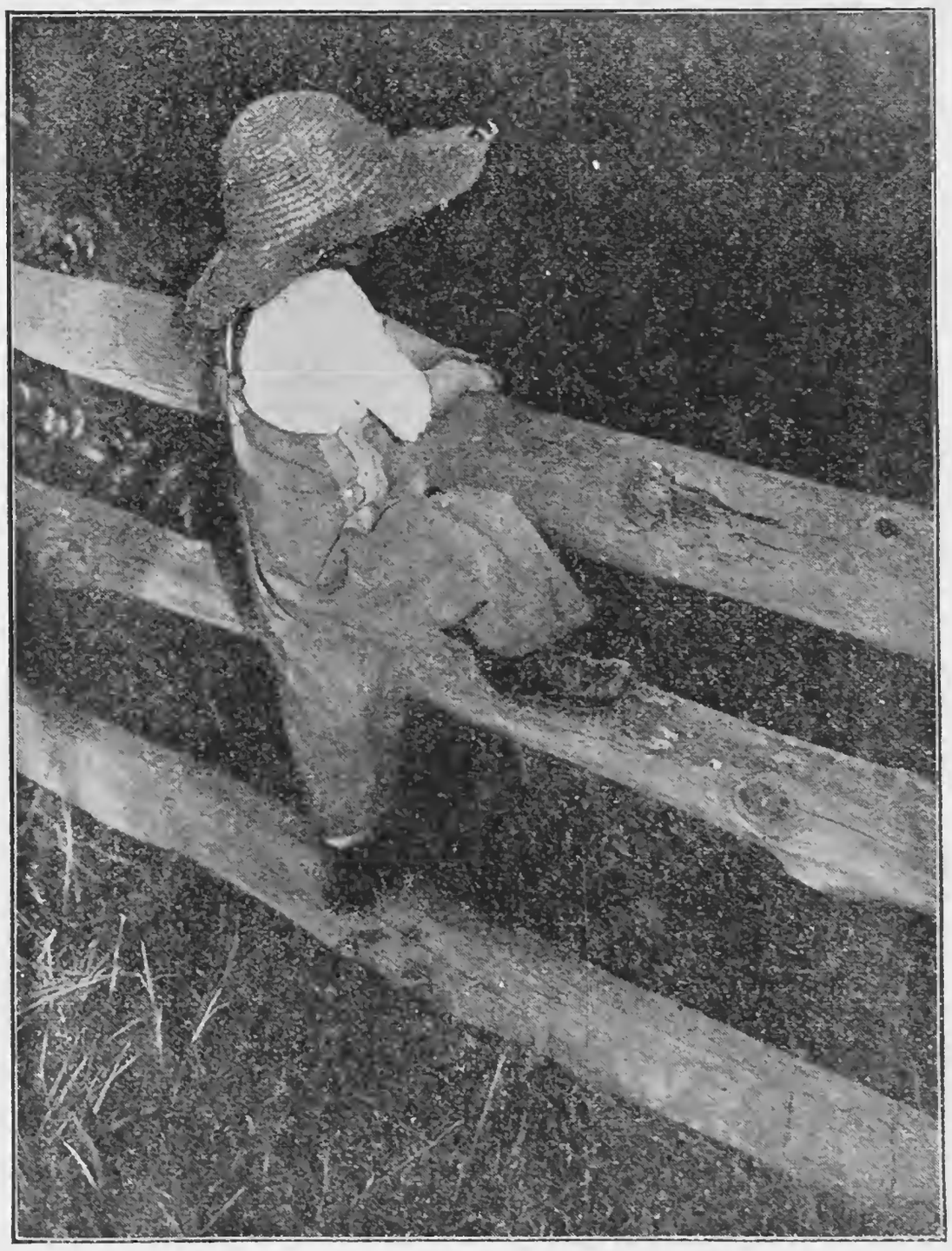
October 2, 1914.
Bought of Boskind Bros.

2 lbs. of ham	.90
1 quart of milk	.10
One-half pint of cream	.13
1 lb. of butter	.40
2 loaves bread	.20
2 pies	.10
9 tomatoes	.20
3 pounds potatoes	.10
One-fourth lb. coffee	.09
	$2.22

Two dollars, twenty-two cents and I considered myself lucky that I did not set out to buy a dinner for thrashers, for I could easily have multiplied the cost by 10, and then not had enough for an ordinary thrashing or silo filling gang. I was indeed glad that I did not attempt to duplicate the dinner at my father-in-law's home when the boys and their wives and their little ones, and my family were there. I did not enquire regarding rents when I learned that in some of the apartment houses $2,000 to $6,000 was the annual rental for a small suite of rooms, not half as many as in the old farm house at home. I did not enquire regarding dress, for one must dress in the city if he is in any line of work, laborer or professional man, and his wife must dress better.

"And what about being tied to a cow's tail morning and night?"

Think of being enslaved to a job noon and night with the fear any moment you may get fired! W. J.



A JOURNEY INTO A STRANGE COUNTRY.

"No Place."

THE new "professor" held the soft, girlish hand for a moment and, looking down into the bright, piquant face, said:

"It has been a pleasure to meet you, Miss Clayton. I should like to know you better. May I call some evening soon?"

There was no mistaking the clouding of the sunny face, nor the faltering of the ready tongue as she turned aside before answering:

"Pardon me, Mr. Thayer. I fear it will not be convenient."

The chorus of good-byes drowned his answer, and the girl slipped away. But on the way home from the academy she opened her heart to her chum:

"It is so hard to bear, Isabelle, and I know I am selfish, but how can it be helped? Of course it was splendid of father and just like his kind heart to open his home to the brother who was old and alone, but there are so many of us the home nest is overcrowded now. We all agreed to give up the parlor to Uncle for a sleeping apartment. I didn't realize quite what a sacrifice it would be until I found I had no place to entertain my young friends. I have refused

(*Continued on page 1291.*)

POEMS OF THE WAR.

THERE are many Americans who find their sympathies badly mixed up over this horrible European War. We are tied to Great Britain by ties of language and blood, and most lines of thought and sentiment. Our people also have great admiration for the German people—a strong, sound, loyal nation. Older people will remember the part taken by the Germans of the West and Southwest at the outbreak of our Civil War with gratitude and respect. These very feelings make it all the more necessary for this nation to preserve a strict neutrality in the fearful struggle now going on. The sentiment of a nation is perhaps best expressed by its poets and we give here two new poems, one by an Englishman, the other by a German-American.

Fall In!

By Harold Begbie.

What will you lack, sonny, what will you lack
When the girls line up the street,
Shouting their love to the lads come back
From the foe they rushed to beat?
Will you send a strangled cheer to the sky
And grin till your cheeks are red?
But what will you lack when your mate goes by
With a girl who cuts you dead?

Where will you look, sonny, where will you look
When your children yet to be
Clamor to learn of the part you took
In the War that kept men free?
Will you say it was naught to you if France
Stood up to her foe or bunked?
But where will you look when they give the glance
That tells you they know you funked?

How will you fare, sonny, how will you fare
In the far-off Winter night,
When you sit by the fire in an old man's chair
And your neighbors talk of the fight?
Will you slink away, as it were from a blow,
Your old head shamed and bent?
Or say—I was not with the first to go.
But I went, thank God, I went?

Why do they call, sonny, why do they call
For men who are brave and strong?
Is it naught to you if your country fall,
And Right is smashed by Wrong?
Is it football still and the picture-show,
The pub and the betting odds,
When your brothers stand to the tyrant's blow
And England's call is God's?

*

The German-American to His Adopted Country.

By George Sylvester Viereck.

The great guns crashing angrily
Sound, distant echoes, in our ear.
We pray for those beyond the sea
Whose lives to us are very dear.

We catch a mother's smile. We seize
In thought a father's hand again.
We see the house and, through the trees,
A girl's face in the window-pane.

May God above them stretch His hand,
For men are mowed as fields of rye.
Destruction rides on sea and land
Or drops, like thunder, from the sky

Columbia, though thou shed no tear,
Must thou fan hate with evil breath
Through ghouls in easy chairs who sneer
While these our brothers go to death?

Shall these that are thy children fling
Their gibes upon our brothers' scars?
We taught our hearts thy songs to sing,
Ay, with our blood we waged thy wars.

We fought thy fight when Britain's paw
Upon thy country's heart was laid
When the French eagle's iron claw
Perturbed great Montezuma's shade.

The dry bones of our kinsmen rot
In Gettysburg. Was it for this?
Are Schurz and Steuben both forgot?
Nay, thine is not a traitor's kiss.

Let not thy words belie the right.
Turn not from them that are thy kin!
Thy starry crown will shine less bright
If freemen lose, if Cossacks win.

*

THE scientific men have now found that the pumpkin really has curative powers in kidney diseases. Boiled pumpkin and skimmed milk is recommended as a diet in cases of Bright's disease. There seems to be no doubt about the genuine character of pumpkin as a "cure." Grandmother' pumpkin pie suits us better than any dose the doctor can put up.

*

THIS is a good time for all Americans to read Edward Everett Hale's "The Man Without a Country." There is no finer appeal to patriotic feeling in the language, and every child should be taught to read this classic at least once a year. Every New Englander makes it a point to read Whittier's "Snow Bound" in late November of each year, and all Americans—no matter where they come from—should read Hale's little story over and ove

*

A CHILD four years old, in New York City, recently choked to death on a peanut, which lodged in her throat. Here is another argument for peanut butter.

*

WINTER is coming. It is the dull season of the year on many farms. The family is crowded into the house, and there will be dull and cheerless hours unless we plan to make them otherwise. There are two things we should try for anyway. Make your house warm and your living rooms bright. You may not be able to afford a heater which will heat every room, but try to have doors and

"Books That Have Helped Me."

windows tight, and provide plenty of good fuel. If possible have an open fireplace. And do your best to provide a bright, clear light. Have a good lamp and make your evenings as bright as you can.

*

THE latest proposition for the country is a clothes club. This might take the place of the old "sewing circle" or better, work out of that into broader lines. Women and girls could study the developments in clothing and save money by buying material to better advantage and studying new plans for designing. In this way coöperative dressmaking would come to be great help. No one wants a woman to spend all her time thinking of dressing, but it is her duty to make herself as attractive as she can.

*

WE are sometimes asked why such a feature is made of trying to encourage farm women to make a little money of their own. Why not, instead of this, teach "higher aims and aspirations?" THE R. N.-Y. deals with the practical, human side of life, and has unrivalled opportunities for knowing the desires and the limitation of country people. "Money makes the mare go," is one of the old sayings into which has been packed a world of truth. One of the vital needs of the farm woman is the ability to handle and control a little money of her own. This does not mean a large sum—it is more in the *feeling* that she is the real owner and mistress of her own money. That feeling is the foundation of true independence and growth of the farm women. We like to get down to foundation principles, and that is why we do everything we can to encourage the woman on the farm to develop, if she can, a little business and income of her own. Fifty years or more ago a very large share of certain manufactured goods was made in farm homes. We can well remember years ago helping to braid straw, sew hats, wind yarn and make mats and rugs. The money thus made was saved by the women and much of it was spent in educating the children. Many a successful man today will tell you how his college expenses were partly paid by mother and sister, who made hats and clothing through the long Winter nights. As manufacturing has developed men have taken most of this work of feeding and clothing the world away from women and with it has gone the independent income of the farm woman of old days. Now we want to bring some of this money back by sending part of this work to the farm women.

*

VIRGINIA has joined the "dry" States—voting for State-wide prohibition by 30,000 majority. Only three large cities voted "wet," while the rural districts were "dry" by large majorities. One great argument against prohibition was that it will lose $700,000 annually in revenues to the State, but the people refused to consider this argument, and they will enforce the law. This makes 10 States with 16,550,000 population now under prohibitory laws: Maine, Kansas, Georgia, Mississippi, North Carolina, North Dakota, Oklahoma, Tennessee, Virginia and West Virginia. The situation in Ohio and Pennsylvania is hopeful. There will be an opportunity for the submission of the question in New York within a few years, and when the struggle does come the power of the temperance vote will amaze the public.

*

NOW we are invited to cut down the cost of living by trying various "mock" preparations. Mona Varne Lace, of the Colorado Agricultural College, says the following dessert for 12 persons will cost 19 cents:

Mock Plum Pudding.—One cup carrots, one cup potatoes, grated raw and put through grinder; one cup beef suet, ground fine; one cup raisins or currants, one cup brown sugar, 1½ cups flour, one teaspoonful each of nutmeg, cinnamon, and salt; one small teaspoon soda dissolved in three tablespoons hot water added last. Steam 3½ hours. Serve with sauce.

Try it on the family. It cannot hurt them at least.

*

ONE of our country readers was so impressed with a play at a New York theatre that she wrote inquiring whether a young girl should come to New York, and where she should go to seek a position, knowing it would be a reliable, legitimate business. This brings up the question of just who should come to the large cities seeking employment. What shall be the test to determine who will succeed and who will fail? What preparation is needed? What is the opportunity for a young man or woman coming from the free, healthful life of the country to the congested cities? There are openings. Many of our most successful men came from farms, but the city is also full of failures. We would like the views of our readers on this subject. What preparation, if any, is needed in this day of specialization? Who shall come and who shall stay at home? It is a vital question for many and we hope to take it up thoroughly.

*

The Father's Part.

WHEN I was commenting on the father's part in family life, as it looked to me, father quietly said that wives and children did not always do their part and he told me the story of our landlord in a certain place. This man was employed in a sewing machine factory, where he did some especial difficult work at big pay. His doctor wanted him to give up, as the work was killing him, but the man thought if he could keep on for a few years more, there would be money enough for always and then he and his family could have such a good time. At last the time came to leave the factory, then the man found he had made a big mistake. His two sons were practically ruined, their mother and daughter cared only to spend his money. The man knew he could not live many years, and the time must be spent in physical misery on account of some trouble like asthma. Supposing him asleep one night, he heard his sons express a wish for his death so they might spend the money. The daughter said: "Oh, he's too mean to die so we can have some fun." The man after that made his will so that when the money did come to them, it would come only at stated times, giving each a moderate income. K.

*

Wife's Pay for Housework.

THE daily papers recently had a story of a legal decision in New Jersey. Mr. Wendt owed a mortgage for $8,000 and endeavored to show that his wife had a prior claim of $5,592 because she had earned $6 per week for 16 years for doing the housework. The papers stated:

"When a husband pays a wife for performing household duties," said the court, "he is putting her on the plane of a servant. That is degrading to a wife. It is her duty under the law to care for her husband's home and for her family. Wendt testified that the mortgage held by his wife for $5,592 was for $1,000 she had loaned him and for her services in fulfilment of an agreement he had made with her sixteen years ago."

We are asked if this is sound law.

As is usual, the newspapers did not get the story very straight. The facts, are as follows: The bank held a judgment against Mr. Wendt. When Mr. Wendt saw that the judgment would probably be obtained he gave his wife a mortgage on his property in the sum of some $5,592, which covered all the equity which he held in this property. After the bank obtained its judgment, it commenced a proceeding in equity to have the mortgage of the wife declared invalid on the ground that there was no consideration and that it was made to defraud Wendt's creditors, and Master in Chancery Roe held that the scheme which Wendt used as the consideration for the mortgage to the wife, of claiming that he owed her $6 per week for 16 years, was merely a scheme used to put her mortgage ahead of bona fide creditors and on that account it was illegal. Roe did, however, hold that the $1,000 loan from the wife to the husband was a legal transaction and enforceable even as against the other creditors because he found, as a fact, that the wife was not a party to the scheme. As explained this way, this does not take on the appearance of an unusual case. It was merely another scheme to defraud creditors. Had there been any legal written agreement between husband and wife which was not used as a basis for fraud, it would probably have been held enforceable.

MILLARD DAVIS.

*

AMONG the public school teachers in New York City are a number of married women. Several of them have applied for leave of absence at the approach of maternity, and the Board of Education has adopted a stern rule. The case of Mrs. Peixotto has gained a national notoriety. This teacher notified the Board that she would be absent from duty. While in the hospital, after the birth of her child, she was served with a notice of her suspension. She was charged with "neglect of duty" and not permitted to return to the school room. There was no question about the reason; the Board of Education were determined that maternity should bar their teachers from the school room. The chief reason which they give that such teacher have a bad influence upon the morals of their pupils (!) is a remarkable commentary upon modern education and modern sentiment toward women. Among the thousands of comments on this affair the following by Mrs. Balch, the suffragist leader, is to the point:

At the present moment in warring nations a man teacher in school would and does drop his work to go to the front and perform a duty for his State. On his return he is not only given back his position, but he is honored above other men. But the Board of Education of the leading city in the United States declares that when women temporarily drop their work and march to the gates of death to create—not to kill off—our population, when woman does that the Board of Education of New York city declares that she has no valid excuse for absenting herself from school.

Far from giving her back her position and far from honoring her, they turn her out from her profession. The arrogance of men! It is a striking argument of the need of women to put their viewpoint in government.

The New York courts have decided that the Board of Education has the right to enforce this rule if they see fit to make it.

"No Place."

(*Continued from page 1289.*)

dozens—and now the new professor. Did you notice, Isabelle, how embarrassed I was? It was awful."

"I am so sorry, Louise," soothed her friend, "but it cannot he helped, and I am sure there will be some way out. If I can find out in time I will have you up to help me entertain the evening the new professor calls on me, and I know some of the Academy girls will invite you to come with them the nights of the promenades."

But Louise, usually so thoughtless and merry, hesitated before she answered.

"Do you know, Belle, it is very kind of you all, hut somehow I don't like it. For one thing it doesn't seem exactly loyal to the home folks, and it would lead to mistakes and misleading circumstances to entertain my company elsewhere. No, I feel as if I would rather be sure that I was a lady."

"Just as you like," retorted careless Belle. "But Louise, I cannot see any harm in your having your company somewhere. You always are queer."

The subject was dismissed with the good nights, but as the days went on the fact that there was no place to entertain company became a real, live trouble to Louise Clayton. At last she thought:

"I will ask Lucinda Graham. She always knows what is right to do."

A few days after this the girl broached the snbject to her mother, in this wise.

"Mother, don't you feel that I represent one-seventh of the earning power of this family?"

"Why, Louise, what do you mean?" gasped her mother.

"Bnt do I not?" persisted the girl. "Father works and each of my five brothers and myself. That makes seven, and I am one-seventh of the earnings. Therefore I should have one-seventh of the recreation. Would it be selfish, mother dear, if I asked for one evening in the week to entertain my friends? We will give you all the daytime, you best of all workers," added the affectionate girl.

"But, daughter, it is not selfish and only natural to want your young friends. I know this and am so sorry that since uncle came there is no place for you."

"But there is a place!" cried Louise. "I want my associates every one of them to know what a dear mother and sensible father and good brothers I have. The best of all places to entertain my company is in the midst of my home life. So no remonstrances, mother dear. Put on a fresh apron every Friday night for my callers are coming."

And come they did. A little note explained to the professor:

"The inconvenience which obliged me to refuse you the pleasure of a call has been done away or rather overcome. If you will not mind the dignified presence of the dearest father and mother in the world and the friendly advances of five big brothers I shall be glad to have you come with some others from the Academy for a contest in music and games next Friday evening."

They came, not only for "next Friday evening" but for the next and the next. They voted it the best place in the world in which to have a good time. Louise did not mind if they talked politics with father or jollied the big brothers. The home atmosphere was sweet and attractive.

When two years later "the new professor" asked Louise to make a home for him like the one her mother made he explained:

"It was seeing you in your home surroundings that first attracted me. It is to keep you with me in a similar environment that has become the desire of my life."

"Thanks to Lucinda Graham" exclaimed Louise.

FABLES OF THE FARM.

The Wise Parents Who Picked Their Son's Wife.

DOWN in Iowa there was a farmer and his wife who decided that their children should not have as hard a time in life as they did. As a result, Mr. Jones labored early and late in the fields, and was always on the lookout to make money on cattle, hogs and horses. In fact, nothing escaped him, and his good wife contrihuted her share by raising chickens, making butter and patching their clothes as long as they would hold

"After Their Hard Examinations."

together. She, herself, denied herself a new dress every year, being satisfied to go about in shabby apparel so that their bank roll might grow.

There were two children, Robert and Bess. After they had completed the country school, they were given the privilege of attending the high school in the little town nearby. Now, the school in question was a good one, but the constant allusions to the fact that the two Jones children were to be given every advantage in life turned Robert's head. Instead of being willing to attend the high school, he actnally refnsed. So the farmer had to send him to a way-up military college in another State, where the tuition was six hundred dollars a year. Of course there were other expenses.

But the farmer and his wife said nothing. They gritted their teeth a little harder and put their noses closer to the grindstone. In fact it pushed them so hard that they could not afford a new separator, even though the old one was really worn out. But then Bess did not need much, and they wanted to make life easy for Robert. For four years they paid. The boy came home every Summer, each time more unwilling to do anything about the farm. In fact, the last term he said nothing would do but a vacation to the mountains, where he and some of his fellow students were going to recuperate after their hard examinations. Again the father shelled out.

In the Fall Robert went to the university—not the excellent one which the State maintained, but one in the East. Here he spent money again, even more than he did at the military school. Bess, on the contrary, attended the normal school, and, after a term, taught in Wheatland, where she made her sixty dollars per month. When the farmer and his wife were nnable to pay more towards the son's schooling, she undertook to help, so most of her wages went to the brother also.

During the second year at school Robert discovered—quite by accident—that he was not cut out for a Daniel Webster or a Henry Clay. He was in love with a petite little miss, who had a perfect horror of rural communities. The boy explained the case to his loving parents as best he could, and intimated that should the opportunity arrive he would take unto himself a wife and get a job as clerk in some office in New York. Of course, the father was wroth, and Mrs. Jones cried, after which they held a family consultation. While discussing the matter pro and con, the daughter suggested that Robert should invite his lady love to visit them the next month. In fact Mrs. Jones wrote the invitation herself.

Now Farmer Jones and his wife had always set their hearts upon their boy marrying Amy Wells, the daughter of a neighbor, who knew how to cook and bake so that her husband, whoever he might be, could not find fault with her pies and biscuits. But they knew it would do no good to urge their choice, so they sat back and let things run their course.

In due time Esther Harris arrived. On her finger sparkled a shiny white stone which Dad Jones figured cost him about half of what his Fall hogs brought. But he said nothing, and under the direction of his wife and daughter sought to make their guest feel at home. Picnics, rides and dances were arranged, which mightily put them out, and caused the poor mother to slave the harder. But before the week was over Miss Harris was plainly bored, and at the same time vented her displeasure on the boy who was her promised husband. On the other hand, Amy Wells comforted her old playmate.

Quarrels followed between the engaged couple at frequent intervals after that. The breach widened. The crisis came when Esther announced that she never wanted to see a farm again, and that those who lived on them were bores and fools. It seemed that there was some of the old Jones stock in the boy, as he flared up and told her a few things, too. The upshot of the matter was that the girl went back to her home minus the engagement ring.

Two months later Robert married Amy, and settled down on an eighty near her father's farm. Jones, Senior, and his

He Could Find No Fault With Her Biscuits.

wife breathed a sigh of relief and the lines of trouble and worry which had furrowed their faces gradually disappeared. G. J. THIESSEN.

MORAL.—It is a true saying that you can lead a colt to water but cannot make him drink. That is because the critter knows you want it to stick its nose in the trough. G. J. THIESSEN.

Country Manners at Grandfather's.

"MY dear boy, I am so glad and thankful to see you looking so well," exclaimed Robert Dexter, as he clasped his only son in his arms as the boy stepped from the team.

"I could not help getting well, father, in the beautiful country, and at grandpa's too. I just hated to come back to this dirty old city, but I did want to see you and mother."

"I wish your mother loved the country, my boy, we would go there to live."

"Would you, father?" If mother would only go and see I am sure she would."

It is evening, the pretty home is lit up and Mr. and Mrs. Dexter are at dinner with their boy; all bright and cheerful. There are servants to wait upon them, and costly food. Harold sits by his father, and as the first course is brought he looks at his father and says:

"Grandpa always thanks God for the food every meal. Ain't you thankful, father?" Before the father could reply Mrs. Dexter answers:

"Grandpa is old-fashioned, Harold; people do not say grace any more except in the country." A hurt look came into the boy's eyes.

'Ain't you glad I got well, mother?"

'Of course I am, child."

"Well, grandpa asked God every day to make a well boy of me and He did."

"God had nothing to do with it," exclaimed Mrs. Dexter flushing.

"Yes, Harold, my boy. God had something to do with it, but fresh sweet air and change with different food helped very much. Mother is a little off to night," and Robert Dexter gave his wife a warning look.

"These peas are not sweet and good like grandma's. You told me, mother, when I went away I must eat and act as I did at home. When I tried to eat peas with a fork grandma laughed and said 'Take your spoon, Harold, that nice cream juice is the best part,' and I did. If you could see the lot of cream, yes, real thick cream, she put in the peas, you would want to eat it, and you can't with a fork.

"I am glad, Harold, you had such a good time, but I do not like the country, and wonder your father lived there as long as he did."

"Oh father, I wore your boots when it was wet."

"My boots, child, what do you mean?"

"The ones you wore when a little boy, just my age, grandma said; they were a little large for me, but they had copper toes and were so funny. Grandma said you outgrew them before any holes came in them, and she always kept them to remember her little boy by, and she cried a little."

A mist came before the eyes of Robert Dexter as he replied.

"I am sorry we have not been to see mother; a little visit would do her world's of good. Some way I have been so eager to get on in the world that she and father have been left out the last few years. I wish we might all go for a little visit at Thanksgiving."

Harold clapped his hands and almost shouted.

"Oh will you, father and mother? It would make me so happy."

"Don't make such a racket, son, the butler will think you are just from the woods," said his mother.

"I can shout and laugh as loud as I want to in the country; every boy and girl does, and you said, mother, grandpa was poor. He is not, he had lots of cows and horses, pigs and sheep and such dear little lambs. They have a big carriage and he drives Billy and Polly, they are so slick and fat, grandpa says he rather have the money in the bank than in an automobile. I think the horses are lots nicer; won't you go, mother?"

"Your father can go with you on Thanksgiving, but I don't care to go," answered Mrs. Dexter. Tears came to the boy's eyes, which he brushed away and busied himself with his dessert. The tears were too much for the mother heart after all and she said, "Never mind, sonny, perhaps mother will go. I will think about it." The glad look from the boy's eyes and the "thank you dear" from her husband was enough to decide she would go, and bury her dislike for country life for their sakes.

And at Thanksgiving at the old homestead found Robert Dexter with his wife and boy gathered around the big table with his parents for the first time in years and as the father and grandfather asked God's blessing on the food before them and thanked Him for the home coming of the loved ones which had tarried away so long there was a tremble in the voice, and Robert Dexter joined in the Amen. MRS. FREDERICK C. JOHNSON.

Dyeing a Coat.

I HAVE a dyed black dogskin coat, and when packed away for the Summer chemical action took place so as to turn it dark red. Do you know of any method by which I can successfully dye it at home? Only a few small places affected. S. S. C.

Dying a coat of this character is naturally a delicate piece of work and more particularly when it is to be done in small places only. The great difficulty S. S. C. will encounter will be matching the shade of black. I would suggest the following: Take a small quantity of nitrate of silver, dilute it with an equal quantity of water. Take a rather coarse fine-tooth comb, dip the comb in the solution and comb the hair where it is discolored. Continue applying this solution until the desired shade of black is obtained. To make it blacker increase the quantity of nitrate of silver. To make a brown shade increase the quantity of water in the solution. Be careful not to get any of the nitrate on the hands, as it will make a black spot and no known chemical will remove it. It will have to wear off. Nitrate of silver was formerly used as a hair dye and was applied to the hair or whiskers in exactly this manner. By exercising care the exact shade of the rest of the coat can be obtained. E. A. C.

Inexpensive Things a Girl Can Make

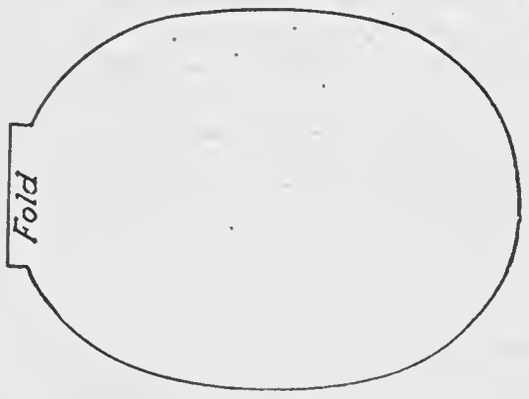
Where Love Substitutes for Money

By Edna S. Knapp

[NOTE.—Miss Knapp is ready to answer any questions about these or other simple gifts which girls may ask. As an expert teacher of sewing and domestic work she can help in many a household problem.]

THINK first what the recipient would enjoy, not so much what you want to make. Choose something simple enough so that you can do most of the work. If you can earn or save the money to buy the material, so much the better.

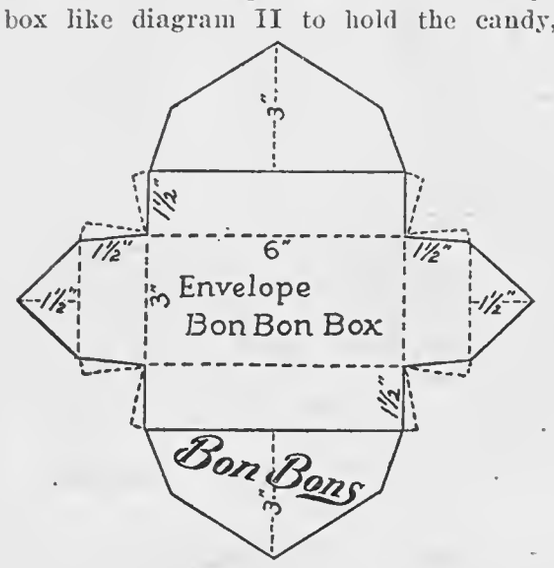
Grandfather would like something to clean his glasses, large enough so he can handle it easily. Better make two, as he sometimes mislays one. See diagram I. Cut one piece of chamois by the pattern and one of fancy silk. Lay the silk over the chamois, baste both together close to the edge. Now buttonhole the edge with embroidery silk, the stitches one-eighth inch apart. Take out bastings, fold double with the silk outside and sew a bow on the fold; use ribbon to match the embroidery silk.



HALF OF EYEGLASS CLEANER.

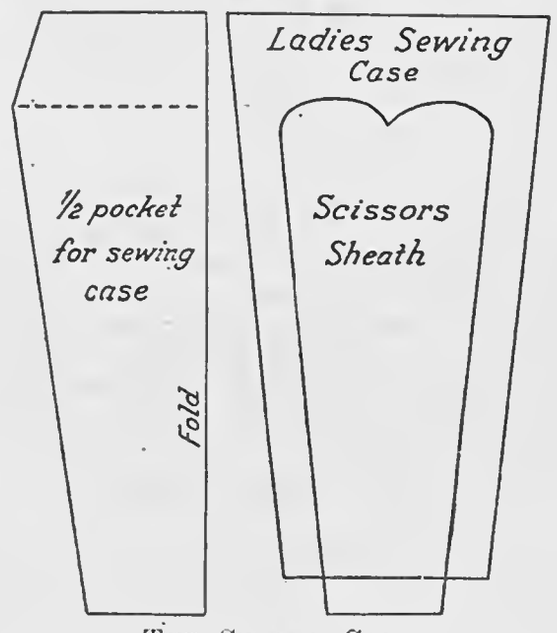
Grandmother still wears dainty muslin ties in the morning, and cannot buy them now. Take a strip of fine lawn 3½ by 40 inches, cut the long way of the goods, you can make a narrower hem this way. Fold a narrow hem on each long side, use fine thread, about No. 120, so the stitches will not show. Mark scallops across the ends and buttonhole with white floss. Mark little circles above the scallops with your thimble and featherstitch these. Father has a sweet tooth, so make him some candy by this recipe.

"FATHER'S CANDY."—Two cups light brown sugar, two-thirds cup milk, one scant cup cocoanut. Boil to soft ball stage, remove from stove, add two heaping teaspoons butter. Flavor with wintergreen and beat like fudge. Make an envelope box like diagram II to hold the candy, of bristol board. Mark around all the edges with red crayon, then trace a line inside this with green crayon. Print the word Bonbons with both colors and tie at the corners with red and green Christmas ribbon.



FOLDING CANDY BOX.

Mother could use a sewing set. Choose some silk that is especially pretty, but will not soil easily. This set will take five or six hours to make. Cut four pieces of bristol board like diagram above. Cut one piece of silence cloth, also. Then cut four pieces of silk one-half inch larger all around than the pattern. Cut one piece of silk for the pocket. Cover the bristol board pieces with the silk ones and oversew, inserting the silence cloth between one pair. These make the covers of the needlebook, the thicker one holds pins stuck in its edges. Turn down the hem on the pocket piece, make a casing and draw up with narrow elastic. Turn under the edges, laying pleats at the bottom and oversew to the other cover. Cut three leaves of white flannel a little smaller than the case, and notch the edges, sew in place. Oversew the covers across the narrow end. Put a bow of one-half inch ribbon on the middle of the casing and close the covers with ribbon strings. For the scissors sheath, cut four pieces of bristol board like diagram and four of the silk one-quarter inch larger all around. Cover



THE SEWING CASE.

the bristol board with the silk, then oversew the two covered pieces again, leaving the scalloped end open. Add bows of ribbon at each side of the top; 1½ yards of ribbon will do for the sewing set.

Big sister likes sachets to put among her clothes. Get a pretty lace-edged handkerchief, cut it in quarters and hem the cut edges. Make sachets from squares of violet silk the size of the hemmed squares by folding diagonally across the middle. Lay the handkerchief section over the sachet, tack in place at the corners and add ribbon bows. Half violet sachet powder and half orris root is a sweet and lasting odor.

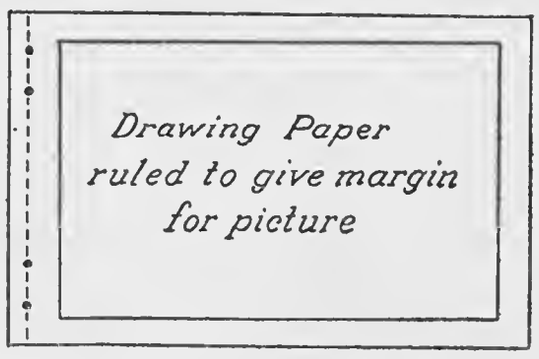
Aunt Ella is always wanting a pin. Cut six pieces of bristol board like diagram below, cover with fancy silk and oversew. Hang from ribbons of varying

TO HOLD THE PINS.

lengths with a bow at the top. Buy a pin cube and arrange the pins from it in these hearts. A girl of 12 made this in three hours.

Big brother uses piles of blotters. Take a dozen blotters, separate a calendar pad and mount one leaf on each blotter. Cut a piece of bristol board or water color paper the size of the blotter, make slits in it like those in your post card album. Insert a Christmas post card, paint one yourself if you can. Lay the cover on top of the blotters and tie at each end with holly ribbon.

Little brother loves to color pictures but cannot handle a paint brush well,



FOR THE SKETCH BOOK.

and most drawing books are too hard. Get the easiest set of light and shade studies from any school supply house, buy a thousand sheets of drawing paper (30c.), and have a sheet of mounting board (8c.) cut into pieces 6x9 inches; you will have seven pieces. The extra ones can be used to mount pictures and calendar pads. Now rule a number of sheets of drawing paper like diagram below. With an eight color five-cent box of school crayons, copy as many of the studies as you have time and patience for. Follow the printed directions that come with each. On an equal number of ruled sheets, draw as many of the studies, but do not color them. You will find there are very few lines to put in. Lay your copies in pairs, a colored one facing an uncolored one. Punch holes in four places, punch holes also in two pieces of mounting board and tie into a book with narrow ribbon. Do a small sketch on one-half of drawing paper, letter it "Beginner's Sketch Book," and paste onto the cover. Your book will look something like diagram below. An

THE BEGINNER'S SKETCH BOOK.

older girl I know colored 12 crayon sketches, one for each month in the year, copied a dozen suitable hymns and tied all into a pretty cover. She called it a "Year Book," it was a gift for an invalid friend.

Daisy's fairy godmother has everything heart can wish for, but is growing old. So this year Daisy will lend her clever fingers in making some of the hundred gifts this dear lady uses.

The Little Peacemaker.

ALL sorts of human tragedies and comedies are worked out in this great city—a wonderful spot for the study of human nature. Last week a little child of three stopped the strife between her father and mother, and led them joyfully out of court for a new start in married life. There was trouble between this couple. It was the old story of the sensitive young woman trying to live with her husband's family. They would probably have made a good start and got on well could they have gone into a home of their own to begin with, but they started in with the old folks, and fault finding led to criticism until the too common end was reached. The man and his wife went into court, asking for a separation. Justice Weeks, with a good knowledge of human nature, saw the real trouble between these young people, and he tried to bring about a reconciliation. When the woman gave her testimony on the stand the judge saw that her grievances were not too serious to be mended by a little tact and self-control, and so he stopped her in the midst of her story, and said that he would adjourn the case for one month, to see if these young people could not forget their differences and start over, and this was what the good judge told them:

I believe the fires of love can be rekindled in this case. Why don't you both take your little girl and go to some quiet suburb to live where you will be alone? Let the wife take off her kid gloves and do the housework and let the husband devote himself to his home exclusively. The lawyers, too, must forget the words that have been said and not permit them to stand between their clients and their future happiness. The motto of young married couples should be, "He who gives most gets most."

The woman left the witness stand in rather a bewildered frame of mind, and just as she reached her seat, little Miriam, the daughter, slipped off the lap of a woman who was holding her, and ran up to her mother's side. The New York *Sun* tells the rest of the story. It is to be hoped that this little peacemaker will have her way, and that these young people after their quarrel will find that the judge is right, and that it is for them to forget their differences and start over.

"Are you and papa going to take me home now?" asked Miriam.

Before Mrs. Wodiska could answer the child led her across the room to a chair where Wodiska was sitting with his attorney. When the wife faced her husband she put her handkerchief to her eyes and sobbed. Wodiska jumped up and embraced her. Then he kissed both his wife and little daughter, his own eyes filling with tears. The child looked from one parent to the other with a puzzled expression. She didn't understand that she had been a successful mediator.

But Justice Weeks understood.

"Adjourn court," he said. Then he left the bench and patted the curly head of the little peacemaker.

Snowy, Puffy Doughnuts.

"WHAT delicious doughnuts! If I thought I could make such good ones, I'd be a happy woman. All my men-folks are doughnut eaters, and I fail at every attempt, so the baker reaps the benefit. Mm—hm, but they're good," and Mrs. Ray again helped herself to a crisp brown ring, hot from the kettle. "I never saw such puffy homemade ones.

Mrs. Patt smiled. "I'll tell you the secret if you wish."

"Do begin from the beginning," begged Mrs. Ray, "and I'll take notes."

"Take any good recipe for doughnuts," began Mrs. Patt, "and cut them out before putting the fat on to heat."

"Why, why, my mother——" expostulated Mrs. Ray.

"Yes, I know our mothers," laughed Mrs. Patt, "but any mixture to be fried in deep fat is improved by standing, even hours, and fries much easier, too. In fact, one may fry one-half the quantity one day, and the remainder the next day, if it be kept cool, and covered."

"And then one could have hot doughnuts for breakfast!" exclaimed Mrs. Ray, delightedly.

"Surely; and cut them out with a rotary cutter, a great time-saver, and costs only 12 cents by mail."

"I am glad to know about that, and now for the secret of the puffy doughnut. How do you accomplish that?" asked Mrs. Ray, eagerly.

"That's easy," encouraged Mrs. Patt. "Simply keep the kettle in which the doughy rings are frying covered, and they will rise to double their original size. When all are cool, put two tablespoonfuls of confectioner's sugar in a large bag, put in three or four doughnuts at a time, and shake bag gently till doughnuts are coated with sugar. Continue till all are sugared, then put away in covered tin, and the last one will be as good as the first."

Mrs. Ray hurriedly arose. "I'm going home to try my luck this minute!"

C. H. WEEKS.

Grape Juice From Whole Grapes.

I NOTE on page 1164 a note on unfermented grape juice. Fairly good unfermented can be made in the way there described, but I would like to tell your readers how the very best unfermented can be made. In our town is situated the largest unfermented grape juice plant in the world, where hundreds upon hundreds of carloads of grapes are made into juice. It is not their plan, however, that I would describe, but a plan that is easier than the most simple canning operation, and that gives a juice that is without comparison, clear as crystal, tastes just like fresh grapes and has no cooked or burned flavor.

Use ordinary two-quart glass cans. Place the can tops and rubbers in boiling water. Pick the grapes from the stems, wash them and in each can put one pint of the grape berries and one half pound of granulated white sugar, then fill the can with boiling water and seal. That's all there is to it. Care must be taken to see that the water used for filling the can is *boiling* hot and that the can itself and the top and rubber is also boiling hot until sealed. If larger or smaller cans are used, use grapes and sugar proportionately.

Do not crush the grapes or try to separate the juice from the pulp, do not cook or even heat the grapes. There are enough heat units in the rather more than three pints of boiling water to bring the whole content of the can up to the point necessary for sterilization, but not enough to leave a cooked taste. Place the cans in a cool cellar and do not disturb till ready to use. If the work is carefully done it will keep a year, two years or more. The water dissolves out the flavor and coloring but none of the cloudiness of the berries leaving them about full size but without much substance or flavor.

A. I. LOOP.

Pennsylvania.

Mobilizing the Family Against the Pig

"WE are all tired of salt pork, and it is pretty near gone anyhow. The nights are getting chilly, there is corn husking and a lot of good hard work yet to do, and we need some fresh meat." When mother says this, she has spoken "law." One little fellow says he wants a piece of spareribs, and all shout tenderloin, even though dinner may be delayed until the middle of the afternoon. The old iron kettles are rolled out from the shed, and every butcher and bread knife on the farm is found and sharpened. The oil barrel is leaned up against the flat sled, and everything is ready. Then is when the sadness of the mobilization of the whole family. The little girls run to the house and cry, for they do not want to hear piggy squeal, mother even stops her ears, while the older boys try to look brave. As the father slips over in the pen he says: "Old fellow, you've had a pretty easy time, you haven't had anything to do, we have fed you, and it is a pretty easy way to die." The modern way is to can a part of the meat as we have described.

THE FAMILY ARMY LINED UP AGAINST MR. PIG.

Freaks of Fashion.

IT is amusing to read the current fashion notes. The fashion makers take themselves so seriously. Dutch collars are deader than a door-nail; loose floppy waists are defunct, and everybody that is anybody is wearing a basque and a flaring collar of some sort. I have a friend who is a joy to the eye in a Dutch collar, while in one of the flaring sort she looks like a pig in a poke. I have a blind friend to whom I try to describe the latest freaks of fashion. The new skirts I tell her look like the old-fashioned pantalettes. That pantalettes were not worn in my day rejoices my heart when I look at the photographs of some cousins who preceded my advent to the world of clothes. Poor innocents, victims of the hateful tyranny of fashion! Somewhere (out in Kansas I think) a movement has been started to encourage individuality in dress. How delightful it would be if everybody were to wear becoming clothes. I have a conviction that pantalettes and some other creations of fashion never had an excuse for being. They couldn't possibly be becoming to anybody. Why in the name of sense does anybody wear what is unbecoming?

C.

IT seems a sin that these golden days of October should find anyone idle with half the world likely to be in dire need before another harvest. Here we are two of us on a farm that furnishes ample work for four people. Where are the other two? One of the daily papers in a nearby city is calling for increased taxation in order to furnish work for the unemployed. I have tried various times to get help from this same city, but the city dweller looks with disdain on the country job. Scarcely a day passes that we are not asked to give something for somebody. Are we to be taxed lean and give ourselves poor that these "I won't work at anything but my regular job at full pay" gentry may carry their point? We are willing to share with those who cannot help themselves, but in view of the untold misery that is coming upon the world, every person able to work should be willing to do anything that is honest. There is no lack of work. C.

A Bunch of Questions

We Want to Know

Summer-Itch; Buckwheat Straw.

WHAT is a cure for Summer itch caused by Filaria irritans, a germ, so a veterinarian tells me, if there is any known cure? Is well-cured unthrashed buckwheat straw fit to feed for roughage to a horse that has scarcely work enough for exercise, also feed other grain with the straw? W. C. R.

Vineland, N. J.

The treatment for Summer itch caused by Filaria irritans infesting the skin of horses as given by a report from the U. S. Bureau of Animal Industry is to rub the surface of the wound with iodoform and cover it with a layer of collodion, repeating the applications every twenty-four hours for fifteen days, or until the sores heal up. Ether or chloroform may be used in the place of the iodoform, pouring it onto cotton wool and applying it to the sores for two minutes before covering them with the collodion. Buckwheat straw makes fair roughage for idle horses and may, of course, be supplemented by grain for those doing hard work. If fed, unthrashed, a bundle should be shelled out so that some idea of how much buckwheat grain the horse is getting in it may be had. Buckwheat straw for cows and horses has never enjoyed a high reputation as a feed but necessity has taught many farmers that it is by no means to be despised when better roughage is not at hand.

M. B. D.

Unruly School Children.

A PUBLIC schoolhouse is situated adjoining my farm, and I have great annoyance from the pupils who attend. They do all sorts of mischief, and I have tried time and again to correct them, also have spoken to the teacher repeatedly, but to no avail. What course can I pursue to have them behave?

New York. MRS. A. S.

Such things are certainly annoying and the more so that one does not wish to offend neighbors by complaining of the acts of their children. A complaint on your part to the trustee of the school with a request that he speak to the teacher, and if necessary, to the pupils warning them against trespassing upon your property might have good results. The teacher is responsible for the behavior of the children while at school and the parents are, of course, liable for any damage that they do at other times. A statement to the parents of the most unruly children that they will be held responsible might have good effect. After all, one has to put up with a good deal from thoughtless children, and try to take it out in recalling the mischief of his own youth. They sometimes go beyond the limits of patience, however, and something has to be done. I think that most parents are willing to curb their children when informed of their pranks, and it is best, all around, if this can be brought about without stirring up unneighborly feeling. D.

Women on Public Land.

COULD you or anyone on your staff put me in touch with one or more women who have received land allotted by the government and who have made a success in cultivating it? A friend and myself are extremely anxious to become the owners of such land on which to raise cattle or hogs, but we are at a loss where to get the necessary information as to how we shall go about it. Quite some time ago I wrote to the Secretary of the Interior asking for details regarding the allotments of land, but have not yet received a reply.

Pennsylvania. JENNIE R. OWEN.

In such a case we are obliged to refer to our readers. We have no doubt such women read THE R. N.-Y. If this meets their eye we should like to hear from them.

Marriage and Birth Certificates.

A YOUNG man was married six years ago. Three children were born at intervals of two years. Last year he undertook to find birth records and none were obtainable. The town clerk claims there is no record of such births, and to all appearances no marriage certificate was filed at the time. Is the town clerk the proper person to go to, or the county clerk? One physician attended the first birth, and another the other two. A letter addressed to the first physician brought no satisfactory response. Are these doctors not responsible for the proper filing of these certificates? Kindly inform me how to proceed in the matter to find these records, as it leads to great tribulations to the parties concerned. F. L.

New York.

The New York State law requires that birth and marriage certificates be promptly recorded in the office of the town clerk of the township in which they occur. The birth certificates should have been filed by the physician in attendance and the marriage certificate by the one performing the ceremony. If they were not so recorded, either the attending physicians, the officiating clergyman, or the town clerk were guilty of gross neglect of duty. A copy of these records is sent by the town clerk to the State Department of Health at Albany, N. Y., and by writing this department you may learn whether any such certificates have ever been filed with them. There has been a very regrettable carelessness on the part of physicians and clergymen in the matter of filing vital statistics in the past and the State Department of Health is now vigorously enforcing the law covering this matter. M. B. D.

Distemper or Consumption in Cats.

IS there anything that will cure cats of a throat disease? We have some that otherwise seem healthy. They choke and cough when eating or drinking. The kittens catch the disease. They are kept in the barn and are fed well.

A FARMER'S WIFE.

It should be remembered that cats often contract incurable tuberculosis from drinking the milk of tuberculous cows, so it always is well to test the cows with tuberculin, if the cats are milk fed, and the cows have not been tested. Cats also suffer from diphtheria and should never play with children when affected with cold, cough or sore throat. Distemper commonly is present in cases such as you describe, and it often proves fatal. It is a contagious germ disease. Clean up, disinfect and whitewash the stables and make the cats sleep in such a sanitary place. Good care and feeding is imperative. A pinch of sulphur or of bicarbonate of soda in milk or water is helpful at the outset of an attack and a drop or two of tincture of aconite may be mixed in the drinking water, if the fever runs high. A. S. A.

SUNDAY SCHOOL TEACHER: "What do you understand by suffering for righteousness' sake?" Little Girl: "Please, miss, it means having to come to Sunday school."—Credit Lost.

BISHOP Olmstead was talking about boy nature. "I once said to a little boy: 'Do you know the parables, my child?' Yes, sir,' he replied. 'And which of the parables,' said I, 'do you like best?' 'I like the one,' he answered, after a moment's thought, 'where somebody loafs and fishes.'"—San Francisco Star.

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Home Management

Plan It Out Now

::: WHAT :: WOMEN :: CAN :: DO :::

"THAT PANTRY OF MANDY'S" interested me exceedingly, it was so true to life, and illustrated so well the usual actions of the average farmer. There is no class of women who can help their husbands so much in their work as farmer's wives. The men do not seem to realize that it is to their interest from a practical standpoint, if no other, to keep their women folks in good health and a happy frame of mind. This they could do by giving her all the conveniences in the house that are possible for them to get, and by doing the hard work in the kitchen garden, for plenty of fresh vegetables are as good an investment as a farmer can make from the standpoint of health and grocery bills. Now, when "Mandy" wanted the "tiny box of a kitchen bedroom" turned into a pantry and the shelves taken out of the much larger pantry and turned into a bedroom Ephraim had so much outside work he could not possibly take the time to fix it, even in Winter. And think of the amount of work it took that long 10 years before the new house was built to keep that pantry clean, and the number of steps it took to go 'way across the sitting-room each time. Yet we see that the new pantry was built according to Mandy's idea because it did not suit Ephraim, he could drop his regular work and fix the pantry the way it should be (according to his idea).

MAN'S AND WOMAN'S WORK.—How much better it would have been for all concerned if Mandy had at first insisted on having things fixed so as to save her health and strength. But when I say "insist," I do not mean to nag and nag until you get what you want, but simply set about doing things yourself and let some of the "women's work" go while you are doing the man's work. If a man had to make his dinner and supper from milk, bread and butter and cheese or apples (cold things that don't have to be prepared) because you were fixing the pantry, or kitchen shelves, etc., I do not think you would have to work the second day at the man's work. However, some men are very stubborn, and it might take two or three lessons to bring them around, and in the end it works for the good of both husband and wife, for there is not the man living who will not respect and love his wife more if she makes him respect her rights and feelings, provided it is not done in a nagging way, and also provided she does her part as the wife and homemaker.

STARTING AFRESH.—And right now is the time for each farmer's wife to turn over another page and start anew, instead of on January first, as is so much the custom in theory, whether or no in fact. For now is the time to plan your next year's work and provide accordingly. First and foremost to consider is what improvements can be made in the house to facilitate work and save steps. Have you a pulley line extending from just outside your kitchen door, which saves many steps, besides saving your shoes and skirts from getting wet with the dew in Summer or the snow in Winter? Even if you have not running water, have you a sink with drain in it and a large drainboard on the left and one-half as large on the right? This should be large enough to accommodate all the soiled dishes from a meal, the pots and pans being placed on the right hand side.

A HANDY SINK.—Let me tell you about the one I had, for it was the most convenient one I ever saw, and every housekeeper who saw it said the same thing. My kitchen was 13 feet 6 inches on one side. In the corner farthest from the dining room was my kitchen cabinet, the lower part of which held cake tins, bread tins, muffin pans, etc., and on the right side of this was an aluminum covered drop table, which came in front of a window. Right next to this I had my drainboards and sink. The first drainboard was made of heavy boards with two wooden legs, and with a front edge four inches high. Most of the ready-made drainboards either have no edge or only one about an inch or two high; consequently one cannot pile many dishes or things up on them without their tumbling off. This was made about four feet long by 21 inches wide, and was covered with zinc, which lapped over the edge of the sink. The entire wall back of drain-boards and sink was covered with zinc, and where the two edges of the drainboard and wall met the zinc was soldered, so that there was not a crack anywhere that a drop of water could get to make things unsanitary. The sink was a gray agateware one, as these are easier to clean, I think, than any other kind. It was 20x30 inches, which is large enough to set an ordinary-sized dishpan right into. At the right of the sink was another drainboard made the same as the one on the left, only it was just about half the size.

CO-OPERATION IN THE POTATO FIELD.

NEARBY CONVENIENCES.—There was a small window right above the sink, so that there was plenty of light in the daytime, and at night there was one light right over the sink. In the right-hand corner above the sink was a small shelf which held a bottle of ammonia, box of borax and a box of soap powder. Hanging up above the sink I had two agateware soap dishes (which I have had for 11 years) one for soap, the other for sapolio; and a wire basket in which I kept a large and small scrubbing brush for cleaning vegetables, etc., and a wire dishcloth. My dishmop I always hang outside the kitchen door in the fresh air, as well as the dishcloth. The drainboard was made slightly higher at the end away from the sink, so that all water would drain away. When washing dishes I had a pan of hot water in which I rinsed tumblers and cups before putting them to drain, but the different plates I piled up against a cup or bowl and poured boiling water over them. I usually let the dishes drain until I made the beds or did some baking, or whatever was next on the schedule, and by that time they would all be dry and ready to put away.

OTHER HELPS.—I always put kettles to soak in cold water the minute food was taken from them, so that by the time a meal was eaten and the other dishes washed the kettles were easily washed, too. If greasy things had been cooked a little soap powder put into the water and the kettle placed on the back of the stove made everything all right, and outside of a place where there is a regular dishwashing machine I will venture to say you could not find a place where the dishes were so quickly and easily washed. When washing vegetables, canning fruit, etc., the drainboard and sink together made it very much easier, and the only other table I needed was a small zinc-covered one right near the stove, which made it very handy in dishing up a meal.

THE KITCHEN SAFE.—Another thing that saves a great many steps is what is known as a "kitchen safe," which is really a wooden cupboard with fine window screening set into the sides and door, and is meant to keep food in when it is cool enough to do without ice, or to keep things in in the cellar that do not need a refrigerator in the Summer. These to buy cost from four dollars up, but it would be a simple matter to make one from a box which could be procured at a dry goods house for 10 cents, and the shelves could be made from a smaller box if no other lumber was available. The one important thing is that it should have short legs of some sort and then if these are set in little dishes of kerosene no ants or bugs of any kind will be able to crawl up into the safe. In the Spring and Fall if this safe is put on the back porch or shed, or anywhere near the kitchen where it is cool—only, of course, it must be protected from any dust—it will save a great many steps where things usually have been kept down cellar.

PLANNING FOR BOARDERS.—In planning for next Summer's work, are you going to take boarders? Well, then, instead of giving them so much meat bought at the butcher's, raise more chickens, so that you can have it several times a week instead of once or twice, as they do at most country boarding houses. Or even if you are not taking boarders can't your butcher pay a fair price for them, and wouldn't you like the little extra money from them? If so, get your houses ready now, and fence in the orchard for them to run in, or a large run with plenty of shade, for they won't do well in a small, hot yard. The houses will only need to be very simple if they are not to be used in Winter, but have them waterproof and so they can be easily cleaned. Also, if you have not had a good kitchen garden now is the time to plan for one. Have the ground plowed up, the stones picked out etc. Have you currants, plums, gooseberries, raspberries, blackberries, grapes, peaches, pears, cherries and all kinds of apples? If not, plant some either this Fall or in the Spring. Just a few of each will mean so much in enjoyment and health as well as saving in money, particularly if you take boarders.

HOME SEWING.—In planning the sewing, if you have a large family and house to take care of without help let some of the things go that you have been accustomed to doing, as, for instance, sewing rags for carpets, quilting, hemming by hand dish towels, ordinary napkins and tablecloths, and instead take the time you would have taken for those things in resting or recreation in the fresh air. You can buy nice big quilts that are very warm for two dollars apiece, and it will be easy enough to earn that two dollars by raising more chickens or garden stuff, for that is a much healthier way, as it keeps you out of doors. The trouble with most women on farms is they don't get fresh air enough. Of course, I know it is considered much nicer to have all your linen hemmed by hand, but when you consider how much time is saved by using the machine, and how much better it would be in the end for the women to take that difference in time to rest or for outdoor work it is only using common sense to do the latter. And last, but not least, try to plan a little vacation for yourself this Winter. Now I can well imagine the number of women who have large families to take care of thinking they cannot possibly take any vacation, but the old saying is, "Where there is a will there is a way." If it is no more than one afternoon a week for a few weeks. Borrow a book or buy a magazine to read—something that will interest you so much that you will be taken mentally right out of your present surroundings, and bundle yourself up well and sit outdoors in a sheltered corner somewhere in the sun. You will be surprised how much good this will do the tired nerves. Of course, if you can make a visit to someone and have a complete change of scene the better it would be. But you will say, "How will my family get along?" How would they get along if you were taken seriously ill? If they could manage then they can manage now so as to save a possible sick spell. F. B.

New Uses for Bi-Carbonate of Soda.

WHILE a great many of your readers may be familiar with these uses for soda, I am sure there are a great many more to whom they will be new, and it has helped me so much that I would like to pass the idea along.

If spread around where there are black ants (or any other kind of ants I should judge) it will not only kill them but drive the others away.

For anyone who is troubled with rheumatism—which is caused by uric acid in the blood, the doctors say—one-third of a teaspoonful taken three times a day, in half a glass of water, about an hour after meals is preferred. That is to say if they are feeling twinges of rheumatism, or if they have gas on the stomach after eating, or a sour stomach, the soda will be a great relief and very helpful. The best part of it is that if anyone has any of the above mentioned things the matter he could not possibly be hurt by the soda even if he took a much larger dose (so my doctor told me). It has certainly helped me wonderfully, and is a thing that most people always have in the house.

Stout nervous people who perspire excessively under the arms, and where it has a very disagreeable odor, can do away with this odor by bathing under the arms with a strong solution of soda water. I have tried a good many things, but none of them seemed to be effective

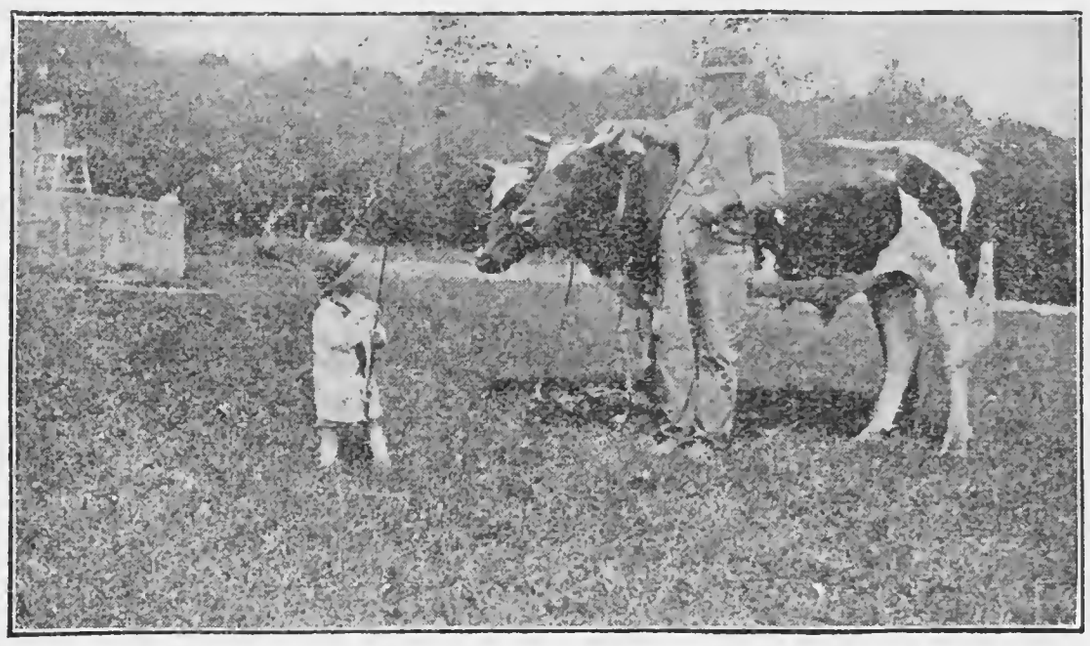
While speaking of perspiration I will tell you about another discovery of mine, which will be very helpful to anyone who perspires excessively. Try reversing the position of your shields when sewing them into your dress. That is, put the pointed parts, which usually go to the back and the front, along the arm and down toward the waistline and you will find that you do not need as large a shield—which of course will effect a saving when buying shields, and the shield you do buy will be in the place it is most needed.

MRS. FLORENCE BELLE.

Everything of Human Interest

Oxen to Earn Automobiles.

THE picture below, is sent us by Mr. H. M. Clark of New York. He says he wants to show his two-year-old grandson and the choice yoke of three-year-old steers. Mr. Clark has a farm of 125 acres, and he keeps horses beside these oxen. He says he is a firm believer in the theory that farmers ought to raise more oxen to do the slow, hard work of the farm, and then turn around and help out the nation's beef supply. Mr. Clark says if more farmers would do that and keep more of these oxen, they would have more money with which to buy an

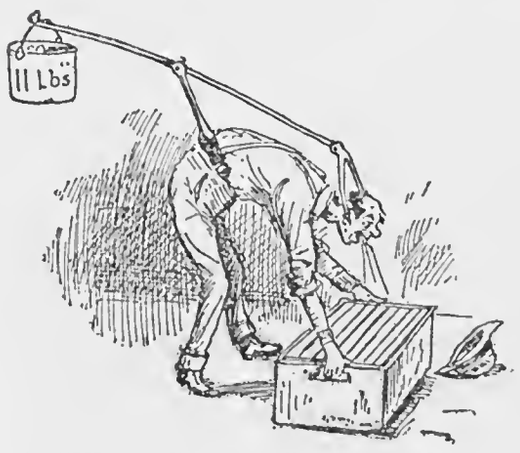


TWO YEAR OLD BOY AND THREE YEAR OLD STEERS.

automobile. This idea of using the slow ox to obtain the price of a rapid automobile is surely a new one, and we have no doubt that the two-year-old boy will grow up to drive the car which the three-year-old steers will haul into the family. There is probably much truth in this idea of keeping more oxen on a dairy farm where the large breeds of cattle are bred.

A Labor Saver.

SPEAKING of household or labor-saving conveniences, the ingenious scheme shown in the picture may possibly interest some of our people. This was taken from "Gleanings in Bee Culture," and we understand it to be a suggestion for the man who does not like to bend his back and lift a heavy weight. The theory of course is that of the old-fashion well-sweep, where the weight on the end of



A "WELL SWEEP" FOR THE BACK.

the pole lifted up the water from the well. Our friend who is trying to lift the crate does not appear to be particularly happy over his invention, and he will probably take off the harness without giving it any further trial.

Baked Apple Juice—A New One.

I WANT to suggest to those who put up fruit and fruit juices for family use a new old substance that is of great value in sickness, and a nice beverage to offer in a small glass to your guest. It is simply the juice from baked apples put up like grape juice. Of course you will need a lot of apples, but you probably have a lot of unsalable seconds or thirds that would go to the cider heap otherwise. Select ripe sound fruit, small or specked it may be, since you are going to cut them over anyway. Such nubbins as an unthrifty Northern Spy tree will furnish by the bushel give just as nice juice as fair fruit. It will not be necessary to pare them, but no doubt they would better be cut, the juice will start better. If the inside prove sound and clean the core need not be removed, so it is but little work to prepare a bushel. Father or the boys will do it for you these long evenings after the chores are done, and they get their boots off. Take all your available "things" and fill the oven full. When well done put the pulp in a cheese cloth and hang over a dish just as would be done for jelly. No one who puts up grape juice will need more instruction. Use sugar if you want to, but it is good enough without and sugar is high. Give the pulp to the hens, though I, the man of the house, being fond of apple sauce, have sometimes dipped my spoon in and disregarding hulls and seeds have called it good.

The juice has considerable food value and is always acceptable to the invalid. Our housekeeper has sometimes fed almost no other nourishment to the sick one for a week at a time. Put up a lot of it. Take a bottle to your sick neighbor when you call and want to carry something nice. Use it with lemons and grape juice for punch for the picnic or surprise party, and ask your friends to guess what it is. I have looked for it on the exhibition table among the jellies and canned goods at the great apple shows on the "apple products" table, and never found it yet. Try it, everybody, and tell us through THE R. N.-Y. how you like it. U. L. R.

UTILIZE SMALL CARCASSES.—The Department of Agriculture is advising housewives in town near the country to buy mutton in quarters. Farmers' wives are advised to share sheep and lambs with their neighbors. This is good advice from every point of view. In the country the distribution of small animals in this way will give several families the chance to obtain fresh meat frequently, and they can obtain it in this way very much cheaper than they could by buying it in small lots from the butcher. At the same time it would be impossible for a single farmer's family to take care of an entire carcass before it would spoil. As for dealing with out-of-town housekeepers, we have found this season that there are a good many boarding houses or small hotels in many a country that will gladly buy half or even more of a small carcass. In the cool weather such customers can buy an entire lamb or a small hog well dressed, and cut the carcass up to suit themselves. In every town also where there is an organization like the "Housewives' League," it is possible to handle an entire carcass to good advantage, for the members will usually be only too glad to buy such a carcass at a fair price, cut it up to suit them and distribute the meat. We have been handling a good share of our produce in this way, and it has become evident that here is one good outlet for the farmer. We believe it will pay many a fruit grower to buy a small flock of sheep or lambs, feed them through the season and during the Fall and Winter slaughter and sell the entire carcass or a half at a time, to people who understand how to take care of the meat. Such people will be found in any town of fair size, if we will only hunt for them.

Baby's Winter Clothing.

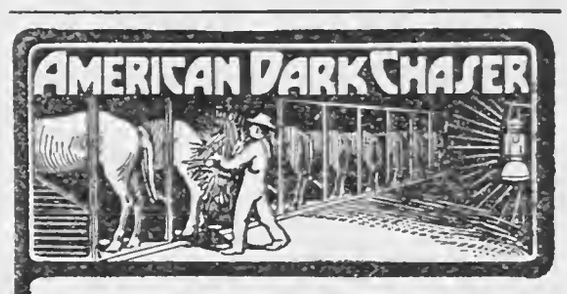
NO doubt every mother has solved the problem of dressing the wee girlie in her own way, but perhaps if I pass on some of the ideas I have picked up they may help some one a little. I don't find very satisfactory outer garments on the market, and if I happen to find anything really comfortable for severe weather the price is prohibitive. I think I hear someone say "wee girlies" should be indoors in very cold weather, which may be true in a measure, but the healthiest ones of my acquaintance are out much more than mine. Mine refuses to go out much alone, and I cannot always go with her, while my neighbor's little tots can play out indefinitely with their older sisters. They stand the cold much better than mine as a consequence too.

I buy the warmest underwear I can get, not the most expensive silk and wool grade, but the softest, warmest, wool with just a little cotton to prevent shrinking; even then it shrinks enough. This grade costs pretty well, but is infinitely preferable to doctors' bills, besides being cheaper. Then I make warm little woolen skirts and for cold weather will button them to substantial outing flannel underwaists with sleeves. Some people make these waists double, but I shall not. Last Winter we did not have the outing flannel waists, so I made outing flannel dresses, but gingham and chambray will be all right this Winter.

When it comes to baby coats, I invariably think of the man whose friend congratulated him upon the robust health of his little girl, but added: "I'm sorry to see *you* so delicate." The man replied in astonishment that he was perfectly well, but the child was not, whereupon his friend retorted that he only judged by the man's overcoat and the child's socks and short sleeves. If our Winter coats could be reduced to children's dimensions in all but thickness they would no doubt be very bungling, but we would surely freeze in a coat no thicker than the average child's cloak. For the first Winter I made my little girl a long full cape of eiderdown lined with outing flannel, and that had to be discarded, and I have just finished a new coat for this Winter. It is also of white eiderdown, lined with outing flannel, but I cut an interlining of cheesecloth, covered it with a thick pad of cotton exactly as for a quilt or comforter, and quilted it on the machine. It must be generously large, as it takes up a good deal in quilting. The coat is double-breasted and closes with a double row of big pearl buttons, four on each side. These were the only expense, as the eiderdown was given to me, but we buy it from mail-order houses at about 30 cents per yard, which would have made the coat cost less than a dollar, and I doubt if I could have found one so comfortable for a child of two years at any price. I shall make a little hat to match after the style of the boudoir cap. Cut a circle 18 inches across, line with something soft and warm, and insert an elastic draw string an inch and a half or two inches from the edge, leaving a full ruffle all around. For Summer we made one of lawn edged with embroidery, and my neighbor and I think them even cuter and prettier for the little tots than milliner's hats and bonnets costing several dollars. Mine for this Winter costs 34 cents which is about three times as much as I ever paid for my baby's headgear before; a little lawn hat costs less than 10 cents.

My baby always had ingrowing toenails until the doctor suggested shoes with extra wide toes, and I have had no trouble since. I know several mothers now who always buy them, and if all mothers did the babies' feet would be more comfortable. We consider comfortable clothing a real economy, because neither my husband's family nor my own is famous for robust babies, and if we dressed them as some people do we would employ a doctor or an undertaker, perhaps both. MRS. E. M. ANDERSON.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.



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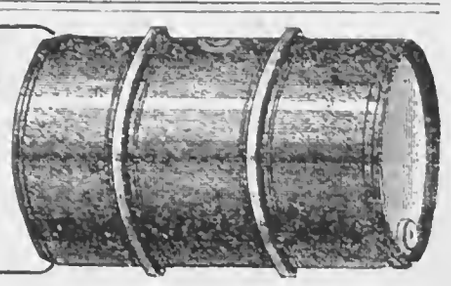


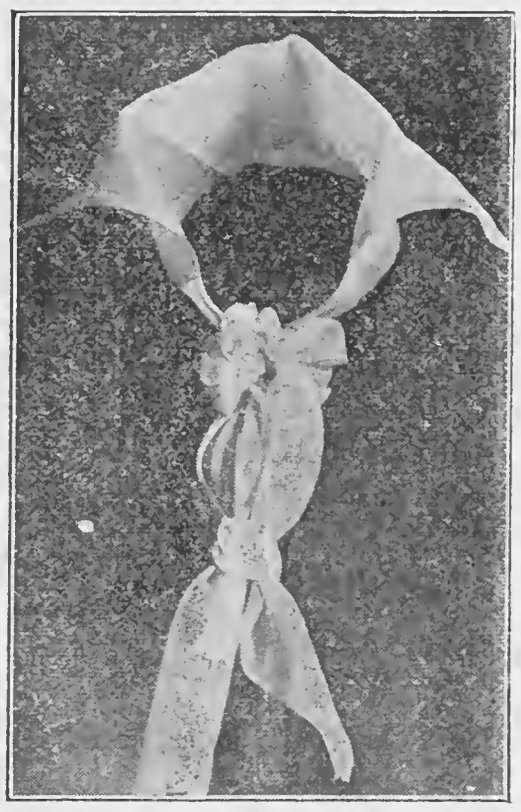
Good Dressing At Light Expense

Novelties in Neckware

By Esther M. Cosse

[NOTE.—Questions relating to dressmaking, millinery, fitting or caring for clothing or other matters concerning women's apparel will be answered by Miss Cosse. Send questions to THE RURAL NEW-YORKER.]

THE WELL DRESSED WOMAN.—While walking through the business section of a large city recently I met a woman who attracted my attention. She



THE KNOTTED SCARF.

was one of, what one might call, the best dressed women I have ever seen. Naturally I met that woman many times while in the same section, and after closely observing her my curiosity was aroused, since a friend accompanying me on several occasions, said she had never heard of a woman who spent so little on clothes. I was much surprised, since I considered her well-dressed and couldn't see how she could always look so well, and not spend much money. After a time I met this woman through a mutual acquaintance and it was the beginning of what I imagine will ripen into friendship. Since meeting her I have begun to study her and find that what my friend said about her is true. One day we met her, and she had on a very neat suit, shirt waist, and looked well dressed for the occasion. On the next meeting which was at a small social gathering, upon close observation I discovered she had on the same shirt waist and suit, but how differently she appeared. Shall I tell you what she did?

CHANGING A WAIST.—To begin with she had on the same waist, but the difference was that she had added what is being used this season very extensively, and called the vest. This was made of the same material as the suit, and trimmed elaborately with buttons of a lighter color. The waist had been changed by adding a little fluting around the neck, leaving it open at the neck, and a little ruffling sewed to the sleeves, which I noticed were rolled to the elbow, and she wore long gloves. This made a dress, and not a shirt-waist suit. When she went on the street another time with the same suit she made many changes by wearing one of the plain white organdie collars, but added to it a silk scarf, which had been tied as shown in illustration. But remember this woman was not a very large person, she was of medium height and was what one might term of slight willowy figure. She was a young married woman, but the same thing has been done for young girls, or for an older person of her type.

THE KNOTTED SCARF.—The scarf she used for her tie one day had been worn by her little son. It was scarlet, but before pinning it to the waist, she found the center of the scarf, tied two loops one and a half inch long, with a tight knot, with the ends she made a four-in-hand knot, then pinned the tie to her collar as shown in illustration. This made a most artistic decoration. Another day she used ribbon in the same way, and at another time the ribbon was merely tied in a sailor's knot. This made a change, since the colors were different each time, and it was an easy matter to find a piece of ribbon which was nearly a yard in length. For the larger woman this tie could not be used in the same way, since it would only emphasize her size, which we all are anxious to avoid. The tie could still be used, but it would be better to tie it in just the four-in-hand knot, and make it as long as possible, since it must fall below or to the waist line. What is better for the large woman to use is a flat bow.

A DAISY BOW.—The second illustration shows one that is very pretty, and can be used in any combination desired. The daisies are made of coronation or rice braid, generally using the heaviest which can be secured. They are made by wrapping the knots with thread to hold them in place, then making French knots in the center of embroidery floss. Take up two knots and twist thread about the lower part, just below the heavy part; take up two more until you have made eighteen petals for your daisy, then join them together and insert the French knots. Make the second daisy in the same way and join them together at the back. Take a piece of velvet ribbon six inches long and slip through these flowers. You can have any number of colors you wish and change very easily every time you wish to wear the bow, thus having any color that will harmonize with the rest of your costume.

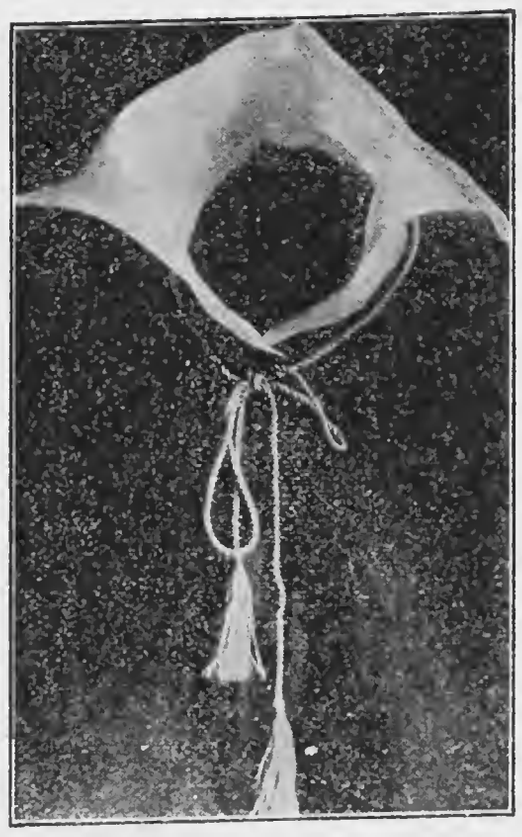
THE TASSELED CORD.—Still another decoration which can readily be changed at practically no expense is the

BOW WITH BRAID DAISY.

cord, which is used with the new collars worn this season, especially the Gladstone, or the soft lacy ones, which are used as a trimming for the fancy and plain dresses. These cords can be made at home, and of as many colors as desired. If one has ever used Royal Society floss No. 5, or D. M. C., for slippers, or any fancy work, no doubt she has some left over. If you would take two lengths of this floss five yards long you could make one of these cords. If you desire a heavy one take four five-yard lengths and make in the same way. After cutting off the lengths of thread, tie the ends together at one end, leaving the ends of equal length. Place knot between the thumb and third finger of right hand from outside, between first and second fingers and hold by thumb with knot. Take other piece of floss between third and fourth finger of other hand, put first finger of left hand through long loop over first finger of right hand and catch thread running to fourth finger of left and draw the end up with the right hand. Still hold firmly with the left hand and draw the end through with the right hand, and draw up in the same way with the left hand. This will give you a firm beginning, but if left to slip when starting the end looks loose, which if possible, must be avoided. Thus you continue to the end of the floss, alternating hands as you make the loops, always remembering to make loop with one hand and draw up with the other. When you have reached the desired length, slip one end through the loop and draw up and tie with other end. Then take a little more floss and wrap around three fingers 10 times, tie with a small piece of the floss through the center, which has been left on the cord when you broke off the floss. Fasten this securely, then wrap the top edge with the floss to give the tassel a good finish where it is attached to the cord. Then cut through the center of the wound floss and cut the ends for the tassel, making all ends even. Do the same with the other end. This is also suitable for the stout woman, provided she leaves it long and doesn't tie it too short.

OTHER VARIATIONS.—With the slender person all of her bows can be cut off short and still make her look well, while the tall woman can have nothing long, but everything must be short and broad. For instance, she can use the tie as shown in first illustration in a different form. She can have the bow tied much the same, but if the ends are tied in either a four-in-hand or a sailors' knot (made by tieing an ordinary double knot, but left loose) the tie must not be drawn down tight, but pinned to the waist after pushing it up about two inches. This will widen the ends, and make a broader effect. It is also well to have the loops made 2½ inches long, instead of 1½ inch. But the tall, slender woman should never wear one of the Gladstone collars unless it is made to roll and is wide, and the long narrow ones should be avoided. In fact, she should select the soft lacy styles, and then wear the colored neck decorations. If she is inclined to have little color the fancy neck pieces will give her skin a more healthful glow.

TAILORED BOWS.—The small tailored bows are still used extensively, and are especially suited to the person with a short neck. They are made of velvet ribbon, satin ribbon, and if one has not the ribbons, it is possible to make them of small pieces of silk. If silk is used, the strip must be one-eighth of a yard wide and 27 inches long. A double fold is made, since no stitches must show. The silk is folded to the center of the inside, then caught together with what has been called an ordinary cat-stitch, or a short stitch from one side of the seam to the other. When the piece is finished make a pointed end, then pin the silk in one end, one loop, then start from the other end and make the other end and loop the same length, and if there be a surplus, fold in evenly each way across the bow to form the knot. Take a needle and sew it together, not allowing any stitches to show through, but catching the loops firmly together then slip stitch the knot through. You will then have a tailored bow of silk. Of course if one has the velvet ribbon or a piece of satin ribbon, it is a simple matter to form one of these bows, but they must all be pinned together before any other part is sewed. Sometimes we have a few rosebuds left from our Summer hats, if such



THE TASSELED CORD.

is the case, sew them on a straight piece of ribbon, then to a safety pin and use that at the neck. Of course the pin must be sewed with the end which holds the pin fastened at the top, so the pin can be used to catch it to the waist.

:: Good Words ::

For the Boys.

I WISH I had the ability to write you the story of our decision to give up a city home and place our three boys here in the country the whole year round. Your paper has helped us make this decision, for it has the knack of accentuating and bringing to a focus the thoughts and aspirations which in our hearts we know are wise ones. We really feel grateful for the policy of the paper, and would miss it more than I can say, because of its great helpfulness on all points.

Maryland. MRS. GUION MILLER.

Friend and Guardian.

I WOULD like to say at this time that we consider your paper a real friend and guardian. Why can't more papers be edited in this real way? It must be a pleasure to publish such a helpful, clean paper, and to know that your subscribers back you up as yours cannot help but do. When people get to realize the real worth of THE R. N.-Y. to town as well as country people you will be overrun with subscriptions. Am very glad to send these few names, or to help in any other way. L. LA MONTAGUE.

Massachusetts.

I take this opportunity to tell you how helpful we find your paper. We not only keep it on file, but I have a little index book for my own use, so that I may be able to refer to special articles.

MRS. M. H. MILLER.

The Estate Manager.

I AM a comparatively new reader of THE R. N.-Y. I take 10 to 14 agricultural and pictorial papers, about one-half being farm journals. I consider yours to be the most practical, helpful, and at the same time interesting agricultural paper I subscribe to, and am only sorry I did not take it earlier. As superintendent on a large estate I find it of great value, and my advice to any friends needing the best farm paper is subscribe to THE R. N.-Y. WILLIAM N. CRAIG.

The School Teacher.

SCHOOL TEACHERS do not get their month's salary till about the first of October, and during the Summer money is at a premium. You may register me as another of your old cranky teachers who can't get along without your blamed old paper. G. L. C.

R. N.-Y.—No one will deny the fact that cranks make the wheels go round, and that teachers train those who work the wheels.

A COMMUTER'S STORY.—This is a commuter's section. The farms are mere residences, and the land lies idle to a great extent. Some have tried to make the farms pay the taxes and the interest on the investment, but have failed. I read THE R. N.-Y. for general information, and I enjoy it as well. I like it better than any other farm paper, for it more nearly gets down to the simple and practical. There are lots of people who come from the city and rent small places in the neighboring towns. They take a farm paper and start a small garden. This lasts for one or two years. The gardens are truly wonderful creations and illustrate how deficient trade papers are in those little details. One of your papers was given to me, and in it there happened to be an article in which the writer had omitted all "padding," but had given every little possible detail. I subscribed for the paper on account of that one article. S. L. S.

New Jersey.

A POLICEMAN'S VACATION. — I would not miss one copy of THE R. N.-Y., and I can hardly wait for the time to receive my weekly paper. I am a New York policeman, and after retiring, expect to go farming, and I must say that I received more valuable information out of your paper than out of all the farm books I have ever read, excepting books and bulletins from the Department of Agriculture. While on my vacation this Summer, visiting a friend, who is also a retired policeman, and also a subscriber to your paper, and in the poultry business, I received my first initiation as a farmer. I did all kinds of work a hired man would have to do, such as plowing, harrowing, milking, cutting brush, tying and setting up buckwheat, and corn, etc., and I found out that farming is no play, for my hands being soft, not being used to hard work, were full of blisters in a little while. But this did not discourage me in the least, and after two weeks' time I was well used to it, and hated to leave the farm, to get back to the city. I will say that this was the best vacation I ever spent in my life. E. M. G.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 1065.*)

CHAPTER IX.

HE saw Nate's dark head upon the waters, his ghastly face and open, staring eyes. Norm poised the rope in his hand, which was as steady as death itself; he threw it, and it seemed to Norm that it had caught the boy, but with a gurgle of the demoniac waters Nate sank again—sank the third time, and the rope went trailing away over the waters.

Norm pulled and struggled at the rope, but it had caught, and Nate had gone down, down, for the third and last time. Was there no help? Was there no way to save his friend, his brother from this awful death? Norm still wrenched at the rope, but the weight that held it was beyond his lifting and he sprang on to a narrow shelving of the bank, ran back and with a mighty plunge, dived beneath the waters. They were black, and turbid and roaring, but still he sank beneath them, holding his breath and forcing himself along beneath the flood. Norm's arm struck against something that rasped and tore it, reaching to disentangle his arm, his hand touched something icy cold, and clammy as death, then something wet, like hair; with a joyous gripping he caught hold of that soft hair, and he held on although the weight seemed dragging him down so that he could not rise. Norm's chest seemed well-nigh bursting with his indrawn breath, but he knew that perhaps the life of both Nate and himself depended upon the holding of his breath for an instant more. He tried to loosen the lassoo from Nate's body, for it had really caught him, but he could not do it, and finding himself spent, and ready to collapse, he loosened his hold and swept to the surface, for a breath of air. He had kept hold of the rope, and driving the picket pin into the crumbling shale, he began to wind the rope in. It came very slowly and heavily, but it came, and Norm knew the precious burden that was weighting it down. Could he never get that body to the surface? Would it be beyond all hope, if he did? Wild thoughts flung through his brain, but Norm had not lived in a lake country for naught. He remembered well the resuscitation of one who had lain in the water more than an hour, and he had heard tales to the effect that persons who had been under water for many hours were eventually resuscitated.

Suddenly, upon the bank above arose the old familiar lowing of the oxen, and looking up, it seemed as though they had come in answer to Norm's prayer for help, but in reality, they had found the barn door open and had wandered out, merely to investigate this mild Spring morning. With a rush of joy Norm stormed up the bank, fastened the rope about the oxen, and giving them a sharp slap, bade them forward. The rope cut into the tough hide of the team, but still they went forward at Norm's cry of command. The rope was long—too long, Norm realized, but at last the oxen had drawn until it held taut against the shale bank, and could not be pulled farther. Nate's body had lodged, but Norm slid, slipped, rolled, fell down the slippery precipitous bank, followed the rope into the water, found Nate lodged against a shelf of shale, slackened the rope, and with a mighty effort pulled the boy out of the water.

Norm knew that it would be slow and difficult to carry his precious burden up the bank. He knew that every moment was precious, so steadying the inert form he bade the oxen go forward again, which they did. Long used to absolute obedience, slowly, but surely they drew the inert object at the other end of the rope up the embankment. The rope sawed over the edge of the bank, and Norm watched constantly lest the parting strands should break. At last the top was reached, and with a cry of joy, Norm lifted the limp figure in his arms, and carried him home. It had all taken but a few minutes of real time, but ages of agony had gone into it. Quickly he laid Nate's body over a chair and pressed the water out of the mouth and nostrils. He stripped off the wet clothing and wrapped the cold body, in blankets, yet warm from his own night's sleep. With a few deft movements, he started the fire, and swung the kettle in place, thrust some stones on to heat, and then began a systematic raising and out throwing on Nate's arms. How he worked, and how he prayed, and how he hoped that someone, someone, would come to his aid. How long Norm had worked he had no idea, but he was giving every ounce of himself to the resuscitation of his friend, and he was finding no sign of life, although he was bravely struggling to re-establish respiration. Perhaps it was no miracle that Jim Maynard arrived, and perhaps it would have happened so anyway, but "Halloo, You!" came Jim's voice and it sounded to Norm like the voice of an angel. "What on earth are you doing to Nate?" Jim gasped as he saw the ghastly object before him. Norm had not stopped to gather up his clothes and he was almost as wet as was Nate himself. "Here, let me!" Jim thrust Norm aside and began working over Nate. But only for a few moments did Norm acquiesce. He thrust Jim aside.

"Let me! I must!" he said brokenly. And Jim relinquished his place again.

"It would take hours and hours to get a doctor," Jim said thoughtfully. "But I'll send for one, and I'll get Hank Jones, he knows as much as two doctors and a few women besides. Then I'll see if that drunken Peters has any liquor, he went to town yesterday," and Jim was away, and in an incredibly short time Hank Jones, strong, gentle, and efficient relieved Norm. He was followed by many others, curious, anxious, kindly, for all wanted to help the boy, who had been well loved, the boy who had been helpful, a ready source of comfort in all sorts of difficulties, who had a mind quick and resourceful in all kinds of dilemmas.

"You fellows 'll have to get out," Hank Jones said quietly. "We must give Nate all the air, and all the chance there is for him." So mutely the men filed out again. Some wandered off to the barn and attended to the chores, while others simply stood about outside and waited, hoping there might be something they could do.

"You get some dry things on, Norm," Jim commanded, but Norm made no move to help himself. Someone thrust a cup of hot coffee into Norm's shaking hand, but he would not touch it, until Hank spoke:

"You can't keep up, Norm, for the sake of Nate, take something," and for the sake of Nate he did. And all three boys worked and worked and worked, yet no flickering eye lash, of the waterlogged body, gave evidence of life, and yet they worked mightily. After hours of work, raising and lowering that inert chest by means of artificial respiration, Hank paused a moment, and placed the slim hands upon the white chest. "I'm afraid—we've done—all—we can—" he said haltingly.

"Why you quitter," flamed Norm, "men are saved after being in the water for many hours—Nate was in only a few minutes. I'll never quit; I'll never give up until I drop myself." and Norm thrust Hank fiercely aside.

Hot water bottles, and hot blankets were being constantly placed about the boy, and much chafing of rough hands wore the skin almost from the cold arms and limbs, and still they worked. Suddenly Norm paused; suddenly, he almost sank to the floor. Did an eyelash flutter? Was there a slight beating of the heart? "Norm had watched so intently that he could not trust his sight, and he turned with pale lips to Jim who was standing near, and to Hank, who never for a moment relaxed his ministrations.

"He's—" Jim stammered and then he seemed to be trying to swallow his throat. Hank held a litle looking glass before Nate's mouth, and a slight film covered it.

"He—lives!" Hank could hardly enunciate the words.

"He lives. He lives!" the glad words flew from mouth to mouth, and many a young heart thrilled with the rapture of that moment. The boys who had been shut out so peremptorily that morning came edging near to the shanty, that they might just stand near. They would not shut off one atom of the blessed oxygen from those long dormant respiratory organs, but they stood ready to serve, and with uncovered heads as though the resuscitation of this almost drowned boy had brought them into that Presence which calls for reverence. Nate himself, breathing faintly, but yet breathing, was tucked into a bunk soft by the love of all those young homesteaders of the plains. Nate slept for long, his breathing gradually becoming stronger and finally he became dimly conscious. He half opened his eyes, to find himself in Norm's shanty instead of his own.

"Must have fallen asleep over here last night," he whispered, gazing curiously about. "I've dreamed of everything I ever did in all my life—I've done a lot of low-down things—but I'm going to be white from now on—I'm going—to—be—white," and with this spoken resolve Nate lapsed into sleep again. The watchers, smiled solemnly and a tear rolled down Norm's white face, but no one spoke—they were too full of unspoken thanksgiving for any words.

Nate did not waken again till midnight, and then he only roused a little to say worriedly," The chickens, Norm! There'll be a flood tomorrow—it's raining now—" then a pause—and he added "Hear it roar!"

"It isn't raining," Norm answered quietly, and he drew the curtain from the little window, to show the stars.

"The stars are shining—the stars—I—must have—dreamed—" and then he fell asleep quite satisfied.

The sudden rising of the creek caused much damage; bridges were washed away, railroad culverts washed away, but no loss of life ensued. Some six miles from the place where Nate had striven to rescue the chickens, they were found upon a little shelf of shale above the creek bed, washed there by a high tide of water, and left stranded when the flood had spent itself, as it did almost as soon as the creek itself became open and made a channel for the water. The chickens were safe enough, for they had kept on their perches, and the one who found them, fed and cared for them until they were called for.

With the sudden coming of Spring the young homesteaders were as busy as boys could be. Nate had rallied rapidly, and in a week he was as strong as ever, which bore high evidence to the benefit of his outdoor life and his simple, wholesome living in all ways. There was new machinery, and new horses and the farm work went joyously forward. But this year the rains did not come as needed, and the crops did not turn out as well, and yet, there seemed to be a steady advancement towards prosperity. Every expense was calculated, and every necessity rigidly brought within the bounds of the means they had to meet it. And so the days rolled on. The farm upon the creek bank had been a good investment for the boys, and yet—and—yet—

It was the fourth year of their homesteading, and the crop was the poorest they had ever harvested, and yet the crops upon adjacent land were good, and the grain plump and of good, clean texture.

"Norm," said Nate thoughtfully. "There's a big difference in the grain yield on our land, and on that of Jim's and Hank's and all the rest."

"Our soil is shallow, not deep enough for steady cropping," Norm explained. "Sometimes, I've almost thought, perhaps we did make a mistake in filing on this land. "I was so impractical then—" Nate mused—"But I've reaped the harvest I came for, and yet, maybe we would have done better had we done a little differently."

"Yes, we've reaped what we came to find—your health—you're as wiry as a corkscrew, and you're like one too; you always get a pull on what you're after, and you're always after something worth while. But there's no mistaking that the top soil on Jim Maynard's land is a hundred per cent better than that on ours, and yet our valley land is the richest I ever saw. If we wanted to farm on a small scale, and run the risk of a flood, we could raise big truck down there. But we've absorbed too much of the spirit of the country; we've got to spread out over a big space. I don't know as I ever go out into our fields that I don't dig down to see if I can't find a deep top soil, with a reasonable subsoil, beneath it—"

"And you find shale," Nate exploded.

"We've had a glorious experience anyway," Norm comforted. Norm struck Nate's chest with a resounding blow, "counting that into the profits of the adventure we have made good. You've got that filled out with the best air man ever had to breathe, and you haven't got glass eyes any longer. You're eyes used to look like glittering chunks of ice with a fire behind them. You're cheeks aren't painted every morning with a hectic rose, and you haven't any more cheek bones just now, than any other fellow who's as wiry as you are." As Norm enumerated these things, Nate's dejection swung away like a barn door in a high wind.

"I do forget sometimes—" Nate apologized. "But this bed of shale has been worth more than most folks see. We'll make good; we'll make better; we'll prosper."

"Of course we'll prosper; unless a man is quite a fool, he can't help but prosper here. If we can't raise wheat we can raise cattle—this is more a cattle country anyway—and after we get our patents on this land, we can go away or do anything we please, we are not tied here."

(*To be continued next month.*)

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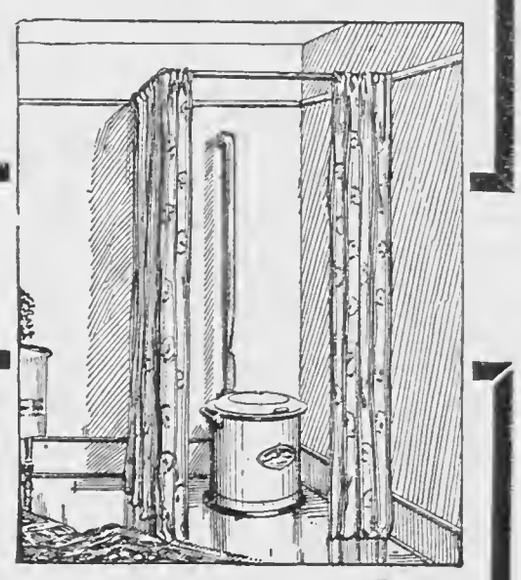

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Holly or Mistletoe for Market.

EVERY year a great business is done at Christmas in handling holly and evergreens for decorations. Some of our readers are engaged in the work of gathering the holly and one of them tells about it as follows:

As I have been working with holly since a boy I am quite familiar with its gathering and marketing, which is as follows: A man climbs and starts cutting a well-berried holly tree at the top, and chops the branches as he comes down until all are cut, then the small branches are broken by men called breakers. They are broken in pieces from eight to 24 inches in length according to the amount of foliage and berries. Branches are held in the left hand, green side up until all that can be held are broken with the right. Then the handful is passed to the packer. He places the holly in layers until the case is filled. The case is made of seasoned pine lumber, surfaced one side, ⅜-inch thick, and is two feet wide and two feet deep by four feet long. The top is then nailed on, and the case is carried to the road or transported by team. The cost of gathering and shipping is as follows: The holly, 50 cents the case, empty case, 40 cents; breaking 33 cents; hauling to station, 10 cents; freight prepaid to Philadelphia, 38 cents; totalling $1.71, and a case usually sells for from $2.50 to $3. The transportation charge is for hauling to station within radius of two miles, and labor is reckoned at $1 a day. Holly cut in North Carolina and Virginia costs less, in view of lower priced labor and cheaper cases.

The holly wreaths are made mostly by women, almost all classes work at them. A switch or stick is cut 33 inches long. This is bent, allowing three inches for splice, and is fastened with wire, making a 10-inch hoop. Choice green holly is used, twigs with about three leaves are put on and wrapped with special wire made for that purpose, about every six inches. A nice bunch of berries is included, making a total of four or five on each wreath. These wreaths are taken up by teams supplied by dealers who pay from five to eight cents each for them, according to market prices. These are carried to the packing house and are packed in cases lined with paper, making the case as airtight as possible; air or light will soon fade them. They are packed 225 in a case, and lid nailed on ready for shipment.

Mistletoe is very scarce, and but very little is shipped. In cutting it, the branch on which it grows, the trees being maple and gum, are sawed off and lowered to the ground by a rope. In placing the mistletoe in case, care should be used to see that stick is as long as case is wide. A nail is then driven in each side of the case and in the end of the stick. This holds the bunch firmly. Six bunches usually fill a case, and sells for $4.50 to $5. Much care is needed not to break off the pearl-colored berries.

Delaware. P. L. HUDSON.

A Supply of Donkey's Milk.

ONE of my neighbors is very sick and would like to get donkey's milk, about two quarts. He thinks the milk will give him a new start. If you know where it would be bought would you let me know? J. A. F.

We have all kinds of questions and generally obtain answers to them, but this is a hard one. We find that donkey's milk is considered by some persons as superior to any other kind except perhaps goat's milk as a food for invalids. In Europe this milk is frequently fed as a last resort to weak children or persons who are wasted away with some lingering disease. After writing some dozen letters we have found several persons who have at this time jennets that are giving milk. R. H. Walter of Pennsylvania, has a five-year-old donkey, apparently flush in milk, and he knows of several others. This stock is used to produce breeding jacks and, of course, they are very valuable. Just how to supply the milk is a problem, too much for Mr. Walter and the other parties who tell us they have it. The patient might buy the donkey, which would cost him $300, or he could come and board near the farm where the donkey is kept, and thus obtain it. A few quarts of milk might be sent by mail, but, of course, there would be no profit in taking such milk treatment unless it were kept up for a reasonable time with steady

Business

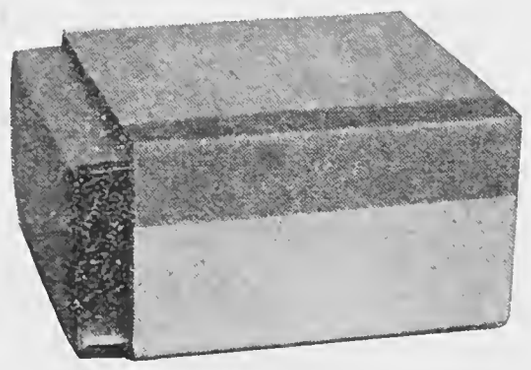
Farm Women As Earners

supplies of the milk. This question will give an idea of the way our readers rely upon our help. Among other information on this subject we have the following:

I can sure furnish donkey's milk, but never heard of its being used in sickness, nor in any other way only to feed young donkeys. Your reader can have it at $5 per quart. In order to secure it for him I will have to rob a valuable young male donkey! W. H. WHITTENBERG.
Illinois.

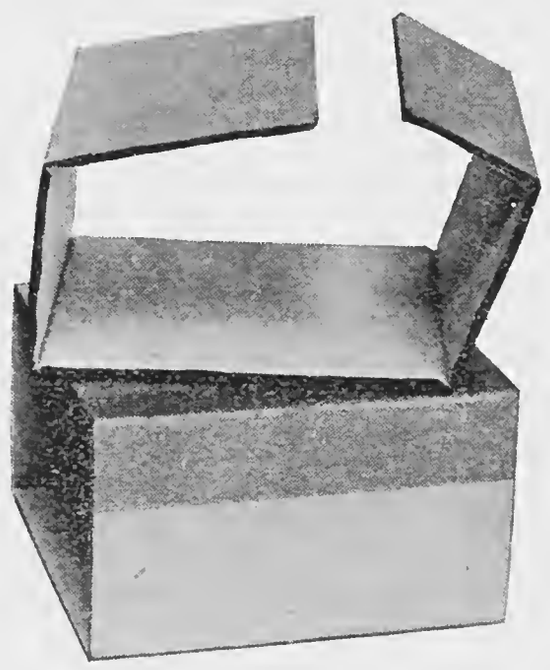
Shipping Butter by Mail.

THERE have been many questions from our readers about the practical wisdom of shipping butter by parcel post.



BUTTER MAILING PACKAGE CLOSED.

Many people seem to think that all forms of farm produce, from strawberries to cabbage, ought to be sent by mail, and many dairymen can see the great advantage which would come to them if it were possible to send butter in this way. Our advice has been not to attempt to ship butter by mail during the warmer weather in any event. We know of several



BUTTER MAILING PACKAGE OPEN.

cases where such shipments have failed, and naturally so, since an article like butter cannot stand up and endure the heat of a crowded mail car. During the past month we have spent much time in investigating this matter of butter shipment. The conclusion seems to be that in cold weather such shipments can be made where the distance is not over 50 or

THE BEGINNING OF PARCEL POST.

60 miles, and where there would be a sure and prompt delivery. Long shipments of butter by mail have not proved satisfactory. The butter melts, loses its shape and form, and in many cases leaks from the package and does not come in good condition. If provision could be made for avoiding warm storage rooms, or for leaving the mail packages close to stoves or steam pipes, the butter would go in better shape, but in the ordinary post office and mail car such precautions are not to be expected at present. The best package seems to be the one shown in the pictures. It is made of heavy cardboard, and as seen is a double package, giving the butter a double protection when fully packed. The five-pound package has usually gone through in the best condition. For shipment in this way the butter is made in the oblong pound blocks, thoroughly chilled on ice, then packed in parchment paper, and well sealed. These blocks are then put together and wrapped securely in heavy paper. This is then put inside the upper wrapper, shown in the picture, and this is pushed into the box with open ends, making the package as finally shown in closed package. This is then wrapped in heavy paper and properly tied up. Packages of this size and description have been sent successfully in cooler weather, and with care on the part of the mail carriers, Winter shipment of this sort would prove satisfactory. In the Summer, however, we could not advise shipments of this sort, and in the Winter with careless handling there would be serious trouble in many cases where the bags of mail are left in a warm place. The parcel post has not proved very satisfactory thus far for the shipment of these perishable products, largely because no provisions are made for handling them in special cars or hampers, where they can be kept cool. As the system develops, which it will do slowly, many of these objections will be overcome, but we must not expect at once to be able to ship strawberries, butter, or similar things in the same mail bags or cars with more enduring products.

Does Honesty Pay?

FOLLOWING our plan of printing new or singular business propositions we give the following this month. The ordinary college man who applies for a position of "manager" has a very good opinion of his own powers. Now the question is, will the "bluffer" really do better than the man who tries to tell a fair story about himself? The poet Whittier never married. It is said that he proposed to one young woman by mail and made the mistake of admitting his faults and leaving her to see his virtues. It should have been the other way—perhaps!

I am in a small dilemma. I have had two years' agricultural college training; have worked out successfully some of the theoretical laws learned in the classroom upon my uncle's farm. I had intended, when leaving college last Spring, to teach in a "prep" school this Fall. I have secured no teaching work, cannot return to college, and desire to go into managerial work. I have advertised in two prominent agricultural papers, have corresponded with several persons, but with unsatisfactory results. It seems to me that I must have told too much the truth; I wrote both of my failings and of my abilities, and tried to make plain just what I was not, so that I would disappoint no one should he employ me. Is it possible that I have said too much against myself? I know that the fellow who bluffs out a thing with the chesty "I-me-myself" stuff does get there often when the other fellow doesn't; but I do not wish to be that sort.

I wonder whether you can assist me. I am specializing in poultry husbandry; have successfully raised and cared for 336 chicks and 130 hens here; got highest prices for eggs and poultry, etc., and shown a good profit, as a side line experiment. Of course, I can do most other farm work decently, but poultry is my main post. I am also deeply interested in the run-down farm, and believe I would like to take the job of renovating and putting into profits some poor looking place. I can do it, too. I am careful, clean and systematic; do not smoke, chew or drink. Do these qualities command a good salary? I am no Sandow in strength, however, and though in good health, I am not extra robust. I have, as you see, no long record of work to recommend me, only what I feel sure I can do. I like to study best, but I am sincerely desirous to see the studied things worked out by my own hands in practice. P.
Maine.

A Public Refrigerator

ONE of the literary papers recently printed a picture of a large building at Cleveland, Ohio, part of which is a public cold storage. In theory the city offers to store perishable goods for all—dealers or housekeepers—for a reasonable sum. The plan is for a housekeeper to buy a crate of eggs, half a carcass of meat, a tub of butter or any other perishable stock when prices are low and store it in this "public ice box" until the prices rise. A number of Cleveland housekeepers express their views on the "ice box."

Auntie Cleveland goes to market,
Just to show that she is wise,
Saving money for her pocket,
Buys ahead a year's supplies.
Uses Mose's refrigerator
Puts them in when they are cheap,
Takes them out a few months later,
When snow makes the prices leap.

"Here is just how I can save for my Spring suit and Easter hat," one Cleveland woman may tell her friends. "I bought my Winter eggs, butter, apples and potatoes when the prices were way down. I placed them in the West Side Community Ice Box. I bought eggs for only 20 cents last April and May, and when eggs are 40 or 50 cents I'll be shocking my guests with expensive living, costing only Summer prices. Here again is where the ice box benefits us West Side people. We can put in nice fresh butter in June when it is the cheapest, and take it out a parcel at a time. We have just put in two barrels of apples, the 1st of October, we can keep those until May, have nice apple pies, when our neighbor across the street has to pay 50 cents a peck for them. Now, some of us people on the West Side don't have much to spare each week to buy ahead, and here is a plan some ladies have worked out. The woman clubs with friends, they buy a case of eggs, a quantity of butter, and produce and place it in the ice box. It doesn't cost much. A case of eggs is stored from May until January for 40 cents, a barrel of apples from October until June for the same amount, and the goods all come out fresh. Of course we are restricted in making too frequent visits to the storage, yet we are finding it so convenient and economical that women in other cities are taking up the matter. It was a little hard for us to understand the proposition but now every available space is occupied." Such a proposition ought to benefit direct trade from the country. City women can order in large quantities and store what they do not use at once.

High-priced Turkey Feathers.

IN the "Needlecraft" I saw an article stating that certain turkey feathers were used in millinery at $16 per pound, but did not find where they could be sold. I would be willing to send the editor enough for his hat if I can find a sale at that price. MRS. CHAS. E. BLAIR.
Vermont.

The feathers of turkeys and other barnyard fowls have for a long time been used in millinery, but the crude feathers are usually cheap. The high price mentioned evidently refers to the fluff at the base of some turkey feathers, which is manufactured into some forms of hat trimming and imitation marabou scarfs. The only manufacturers we know about who would be likely to buy the feathers direct from the farm have so little capital and poor business standing that it does not seem safe for outsiders to send them goods. Many poultrymen send the feathers to the same concern that handles their dressed poultry, the quills and wing feathers being kept separate from the others. Feather buyers come around the commission houses and take what suits their purpose, but no fancy prices are paid. That is the result of manufacture.

FIG PRESERVES.—In making fig preserves, our way is not just like all people do, but will state it, as some folks might be interested: Use good ripe and perfectly sound figs, stems on. Soak in strong lime water for about two hours to harden. Take from lime water and wipe each fig with a soft cloth to clean and remove surplus lime water. Put in preserving kettle and add sugar, three-quarter pound, to each pound of figs, and slice about one lemon very thin to the gallon and put in. Cook until the syrup is as thick as desired, skimming all scum that rises, and by the way the trace of lime left on the figs clarifies the syrup more thoroughly than one would suppose.
M. A. P.

How the State Education Department Can Serve the Rural Community

THE LOVE OF BOOKS.—"The place to form intimate companionship with real books," says Samuel McChord Crothers in a recent article, "is in the home. Happy is the child who has made the acquaintance of books that have been his father's and his mother's friends. They will always hold a peculiar place in his affections. As the years go by he will make new friends, and so the circle will be enlarged, but he will never forget those that have been 'in the family.'" If you will go into the children's room of any public library either in a city or a small town you will see many joyous youngsters poring earnestly over fairy tales, stories of adventure or whatever most appeals to them at the moment, and you will go out saying, somewhat as Mr. Crothers has, "Happy is the child who may browse undisturbed in a public library." The University of the State of New York believes that every child as well as grown-up has the right to know good books. With this idea in mind the Department of Educational Extension determined to extend library privileges to those who live in the country, especially those far removed from such privileges, and in 1891 the first traveling library was sent to Charlton in Washington County.

TRAVELING LIBRARIES are small collections of books which will be sent to any place in New York State, preference being given to places where it is difficult to provide good books for free circulation. Perhaps the most useful variety is the library of 25 volumes for general readers. These libraries contain books on all subjects, and are made up in fixed groups, or according to the wishes of the borrowers. As one of the librarians remarked: "They are a mighty good-looking lot of books, too." On application, lists of these books will be sent to any tax-payer. There are special lists for adults and for children, and one may have a combination of the two if desired. The conditions for obtaining the books are very simple. Application must be made by five taxpayers on a blank which will be furnished on request. Twenty-five volumes will be sent free, transportation both ways paid by the State and an oak bookcase furnished if needed. When more books at a time are wanted, a fee of 50 cents is charged for each additional 25 volumes. These books should be kept at some convenient place which must be open for free circulation during not less than three hours each week, with due public notice. If any group of taxpayers is interested in a special subject, such as agriculture or transportation, a library on that subject will be made up. These libraries may be kept six months and then exchanged, so that one may always have a supply of good literature on hand. There is available also a limited number of books in Italian, Polish, German, French, Hungarian, Spanish, Danish and Swedish. Additional purchases will be made as funds permit.

A HOUSE LIBRARY.—Suppose you live too far from any community center to obtain books easily. Why not send for a House Library? These consist of 10 volumes which will be lent for three months for a fee of $1, with the privilege of renewal for three months for 50 cents additional. Any two or three neighbors may pay the fee together and share the books. Either send for the catalogue and select the books you wish, or inform the Division as to the ages and tastes of the readers, and leave the selection to the librarian.

THE STUDY CLUB.—An interesting feature of the Winter life of many small towns is the study club. The Division of Educational Extension registers those which agree to carry out an approved course of study and assists them in preparing programs and by lending traveling libraries, pictnres and lantern slides. A fee of two dollars is charged for any library lent to clubs, Granges or private schools, so that the use of the books may be restricted to their own members. Requests for application forms and additional information will always be promptly answered, as the Department is anxious to extend the work as rapidly as its means permit. In the famous fire in 1911 50,000 volumes were lost. Perhaps it is more interesting to know that more books from this department than from any other were saved because 45,000 had gone traveling.

VISUAL INSTRUCTION.—Working with the Department of Educational Extension and of scarcely less importance is the Department of Visual Instruction. This Department will loan lantern slides and photographs on a great variety of subjects, and to schools and libraries wall pictures. The State pays transportation both ways. These lantern slides are interesting to young and old. They are useful in connection with school work or study club programs, or to illustrate lectures. If any minister or school teacher wanted to give a series of lectures during the Winter—and why shouldn't he, using the schoolhouse as a "social center?"—the Department would help him by sending reference books and the slides with directions as to their use.

"The chief difficulty in helping people in the rural districts," says Mr. A. W. Abrams, who is head of this Department, "is that they do not tell us definitely enough what they want, and that they lose the catalogues." The catalogues are not printed annually and the supply, since the Education Department, like other people, must live within its income, is somewhat limited. Mr. Abrams suggests that some one person in each community, perhaps the secretary of the local Grange, shall make himself thoroughly familiar with what the Education Department can do for country dwellers, and keep on hand a complete file of all the catalogues and handbooks issued by the Department. If these could be kept at some central place, where interested readers could consult them it would greatly aid the Department.

THE REFERENCE LIBRARY.—Something new is Reference Library, which is proving of great help to High School girls and boys and to debating societies is the Debate Collection. This material is intended to supplement what is in the public and school libraries of the State. It consists of newspaper clippings, magazine articles, pamphlets and books on timely subjects which will be loaned for four weeks, with the privilege of renewing for four weeks unless the material is needed by other debaters. The borrower pays postage. A few of the subjects suggested for 1914 are Reserve Banks, Marketing Produce, Workmen's Compensation Act, Parcel Post and the Currency. The Reference Section of the Library will answer inquiries by mail concerning the books and manuscripts in its possession, and will send lists of authoritative material on any subject within its scope. It will also look up particular facts in history if the question does not demand extended research. A handbook describing its work in detail will be sent on request.

BOOKS FOR THE BLIND.—Of special interest is the Library for the Blind. This collection contains over 3500 volumes printed in embossed type. It includes text books and music, periodicals and general literature. Any blind reader in the State may borrow from this library without personal expense, the books being carried free in the mails. Through a special appropriation the library is able to add a few titles each year to the number of books printed for the blind. Of the 96 books so printed all are in New York point, which is the type of the greater part of the collection, and the one taught in the New York State Schools for the blind. American and English Braille, line letter and Moon types are, however, fairly well represented with over 1000 volumes.

EXTENT OF THE WORK.—Last year 1114 traveling libraries and more than 200,000 lantern slides were sent throughout the State, chiefly to rural communities. The library answered several thousand inquiries by mail. Other people are taking advantage of what the State can do for them, why should not you? If you have not already used the resources of the splendid new Education Building which really belongs to you, do so now. Send for a traveling library, give your children a chance to make friends with really good books in their own home and you will help the little traveling library to realize the dream of Mr. Melvil Dewey, formerly State Librarian, and his co-workers who set it in motion.

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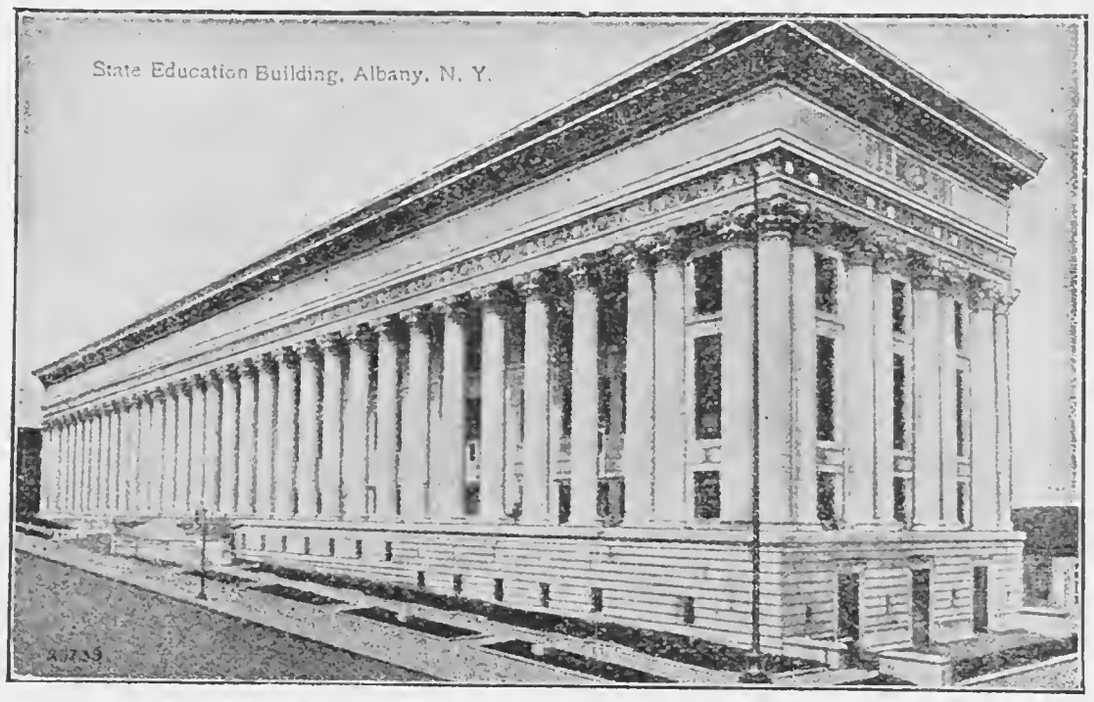

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THE RURAL NEW-YORKER, 333 W. 30th St., NEW YORK CITY

Live Stock and Dairy

FARM STOCK BREEDING.

PART III.

HORSE IMPROVEMENT.—In breeding horses, there are many points which are not given much attention with other classes of live stock. The kind of horse which is bred and raised is so largely dependent upon the conditions which the horse fulfills on the farm that the horse breeding varies according to the needs of the locality or farm. In a grain farming community, while stock kept is very limited, yet good, heavy horses are in demand. Necessarily, the type of horse bred for this work will be far different from the horses which are bred in a dairy community. When most of the work is such light work as cultivating and delivering the products of the cows, a heavy horse is at a disadvantage because the same traveling on the road that would ruin the feet of a larger animal will do no damage to the feet of a lighter animal. Probably from 1,100 to 1,350 pounds would be about the weight of horse desired under these conditions, while for the heavier work, one would want teams weighing from 2,800 to 3,400 pounds. While it is true that the market uses a certain quantity of light horses, yet the great demand is for a heavy horse with good feet to be used for trucking purposes in the cities. For the lighter work, automobiles can be used more economically, but when it comes to the heavy trucking, the heavy horse is often preferred to the automobile truck. Light horse breeding is not an industry which belongs with farming.

BETTER HORSES ARE NEEDED.—The need in most localities is more and better horses. If one has them to sell, they are always eagerly bought, and the market will probably be good for a great many years. It was prophesied before the European war that the price of horses would reach a low ebb during the next 10 years, but the experience of the horse market at present should lend itself strongly towards encouraging the breeding of good horses, for of all industries represented in our leading centers of business as well as in rural centers, the horse industry suffered as little as any. There are many reasons why the need for purebreds will not be satisfied in the present or ensuing decade. One ought, other things being equal, to select the breed which he prefers, as long as he is breeding along lines which insure uniform results. The one feature which draws strongly in colts, is the uniformity of one's offerings. If the colts are uniform in conformation and color, it shows the intentions of the owner in his breeding practice, and to breed aimlessly is almost, if not quite, as bad as not to breed at all. If one breeds along the lines of his preference, he will take more interest in his operations and be more likely to get better results.

PUREBRED SIRES ESSENTIAL.—If one be breeding either light or heavy drafters, purebred sires are an essential. Before one breeds to a purebred even, he should be reasonably sure that the stallion is free from diseases and hereditary weakness. Such hereditary weakness may take the form of a poor quality of bone, defective eyesight, or flat feet, etc. One of the important assets of a market horse is good feet. The sire should be well proportioned and not too heavy for his bone. Good breeders like to see a stallion's weight come from bone and muscle, not from fat. Some comparatively light stallions are made to seem heavy by feeding a large amount of corn; this is especially true where corn is grown. Such feeding not only deceives those who are judging the animal but also injures his breeding powers. The same corn which is so valuable in fattening steers or lambs for market does not add to the quality of the horse nor to his weight of bone. It is a poor feed for breeding horses. There is nothing better for stallions than good, clean oats.

THE LIGHT HORSE.—Should a farmer prefer to breed lighter horses, the Suffolk and Percheron are the most desirable. I have reference to the old style Percheron of the conformation and weight general to the breed before the infusion of the blood of the heavier breeds. These Percherons weigh from 1,350 to 1,500 pounds and the old Percheron owners used to make their brags that their horses could travel all day at from 10 to 12 miles an hour. When one is selecting animals for breeding purposes, look for an active, animated appearing animal with good action. The special qualities which the market lays the most stress upon are a close coupling, broad chest and loin, a well-formed neck and shoulders, well muscled but not fat quarters, strong in the stifle, with clean flat bone and sound feet. Of these the most important are close coupling, strong in the stifle, and sound feet. The horse with a long coupling is rarely a heavy hauler, while the strength of the stifle is insurance against some of the accidents to which horseflesh is heir, the great majority of which are in the hind legs. For heavy work on the cement or brick pavements or macadam roads sound feet and hoofs are demanded.

When using such a stallion upon a grade mare, she is almost certain to produce a good colt. Excellent general purpose horses will usually result from such a mating, especially if the mare is a little lighter and has some trotting blood in her. Should the mare be weak in any particular such as weak feet or bone, she would best be bred to a stallion in the neighborhood who is especially strong in these characteristics. If a choice is to be had, and it usually is, use the strongest bone. This does not mean, however, to use the stallion having the coarsest bone.

GOOD SUPPLY OF FARM HORSE POWER.

"FEATHERS" ARE UNDESIRABLE.—For the heavier breeds of horses, stallions from the English Shire, Belgian, or Clydesdale, may be used. The Belgian seems to be the most in favor in the United States to-day because of his good quality of bone and freedom from "feather," which is so much in evidence on both the Clydesdales and Shires. The United States markets discount rather heavily this large amount of "feather" which is the term used to designate the long hairs starting out at the knee and extending down to the fetlock joint. It is generally accepted by breeders that this feather indicates the class of bone which it covers. If the hair is soft and silky in texture, yet fine, it is taken as a corollary that the bone under it is dense, hard and clean. The converse is also thought to be true. If these suppositions are true, should the limb get injured, it would heal very slowly on a horse whose "feather" is coarse. However good an indication the "feather" is of the bone which lies under it, American breeders do not like it. Only 98 Clydesdales were imported into the United States in 1913, according to the 1913 yearbook of the Department of Agriculture. For some years back the American importers have been asking for a horse with fewer hairs on the legs, but the Scotch breeders paid no attention—they went right on in the old way without heeding the demands of the importers. Had they started breeding Clydes with small or no "feathers," the demand would be just as strong for them to-day as it ever was. Another weak feature which the Clydesdales as a breed have is a long coupling. Most of them wabble as they walk and such a gait usually goes with poor hauling ability.

SUIT THE STALLION TO THE MARES.—In selecting a sire to use upon farm mares, it is well to be careful not to get too far away from the type which the mare approaches in her conformation. While it is necessary to establish uniformity in the horses, this uniformity cannot be reached by even a single cross or two. It is a thing to be striven for rather than to be possessed. There are some mares in teams that could not or should not be mated to the same stallion. Common mistakes in everyday breeding practice such as breeding small mares to very heavy horses, breeding mares noticeably weak in certain parts to a stallion weak in the same particulars, all tend to prevent any chance of uniformity. Each colt from such a cross is an accident, and two that look and are alike only happen once in a while. It is well to study the mares and decide what kind of stallion to use with each one, giving proper consideration to her weight, apparent breed, conformation, energy and disposition. The best colt I ever saw was foaled about one-half hour after the mare was unhitched from the plow. I believe the mare should be expected to do her share of work up to within two weeks of foaling, and commence at light work two weeks afterward, always protecting her against severe strains or slips. Steady work is good for mares otherwise well cared for.

MARKETS PAY WELL FOR UNIFORMITY.—Breeding horses on the farm can be made a paying business by keeping two teams of brood mares to do the work, and breeding them to a good stallion each year. Probably mares weighing from 1,100 to 1,300 pounds are best suited for this purpose. For the breeder, however, the mares should be grades at least, of some good breed such as the Percherons. The "why" of the mares being grades is because the offering of colts will be more uniform and a well-matched team will bring from $150 to $200 more than the same team, not matched. Such a sum as that is worthy of notice. Such mares might be bred to a purebred stallion of one of the draft breeds, preferably the same one as the mare. The colts from such a mating would match up well and bring a good price. A well matched team of heavy draft type always commands a good price, and their mothers, while doing the work on the farm, would furnish the basis for two such teams each year. The cost of raising such matched colts is no more than that of raising scrub colts

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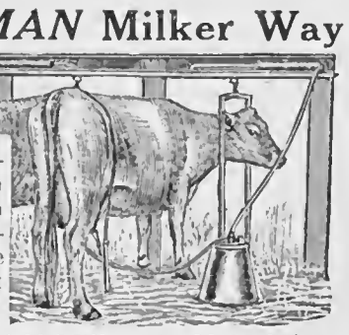

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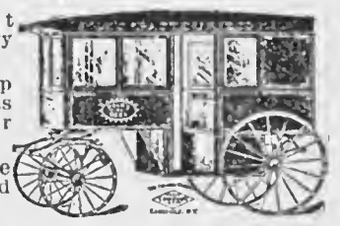

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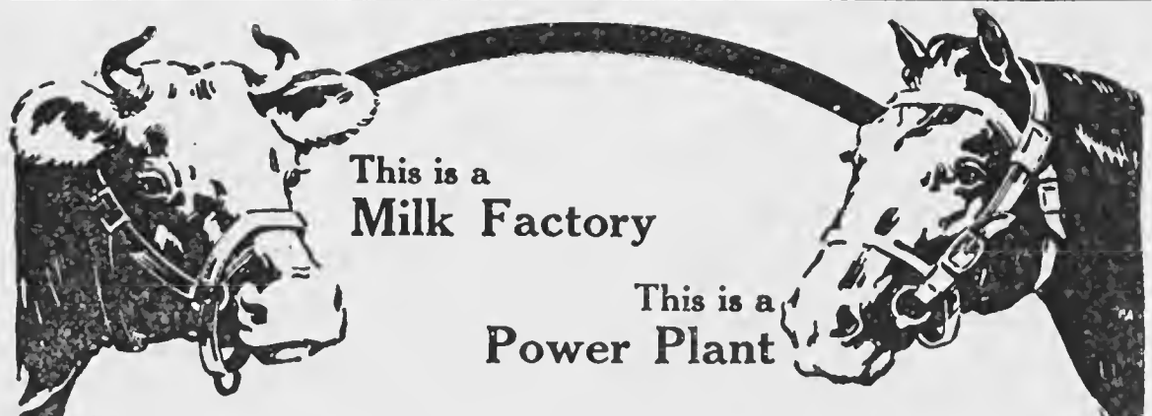

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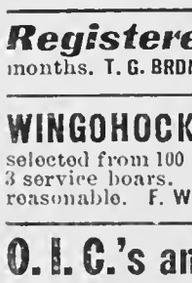

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THE RURAL NEW-YORKER,
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A New Jersey Pound Master.

WILL you tell me something about the compensation of a pound master in New Jersey? Who pays him and what is a fair charge for keeping straying live stock in the pound?
New Jersey. L. C. M.

I communicated with the Attorney-General at Trenton, and submit a copy of his reply. While this does not state appropriate charges or fees, it fixes such responsibility with the township committee.

I have examined the Township Act of 1899, which is still in force in this State, and which is to be found in the Session Laws of that year, on page 372. The same act will likewise be found in the Compiled Statutes of New Jersey. Sec. 4 of the act provides for certain elective officers, among whom are "so many pound-keepers as shall be deemed necessary." Sec. 32 provides that the township committee shall have power to make, amend or repeal ordinances for the several purposes therein named, one of which is to fix the annual salary or compensation to be paid to each person elected or appointed to any township office, except members of the township committee, and the manner of the payment thereof. This section provides that the salary of compensation when fixed by ordinance, shall be in lieu of the fees or compensation otherwise provided by law, and that the said fee or compensation shall be collected into the treasury of the township for its use. Under the circumstances, it is clear that the pound-keeper is an elective officer, and that his compensation is to be fixed by the township committee, under Sec. 32, which compensation shall be in lieu of all fees provided by law.

Ordinarily when live stock is running at large and trespassing, and is taken up by the authorities, the following charges would be reasonable: For horses, 75 cents per day, or $18 per month; for cattle, meaning mature animals, 50 cents per day per head; for sheep or swine, 25 cents per head, per day. In addition to such maintenance charges, it would be appropriate to charge the owner the actual cost of collecting the animals and if damage is wrought from the trespassing, this should be appropriately provided for under separate charged of damage. F. C. M.

How Butter Making Pays.

"IT pays me better to make butter, than to take my milk to Borden," is the opinion of William Winnie of Otsego County. "It is two miles to the station, and I took my milk there for two years from my dairy. I became tired of making the trip, it divides the day, and interferes with a systematic program in farm work. Now I separate my milk at the barn, we churn in the house, in the Summer in the cellar. We keep everything in good order, and would have nothing to fear from inspection should we go back to Borden's, but we would lose to go back. I am now able to raise hogs and calves on the skim-milk, I receive about as much from my herd by making butter, the work of making butter is no greater than the monotonous trip morning after morning to town. I have skim-milk which I consider worth $10 the cow the year for feeding on the farm. I milk from 12 to 20 cows, and the value of this skim-milk in dollars and cents looks good to me. I have local demand for part of my butter, part goes to Binghamton, and I receive 33 cents the pound. My herd consists of Guernseys and Jerseys. There are many farmers who could profitably do as I am doing, and there would be more dollars in dairying. I would say measure up to milk inspection, add a few more dollars in the equipment, then produce butter, it will pay."
W. J.

THE Nebraska Experiment Station, in experiments on cost production of baby beef, shows that Alfalfa, silage and corn produced the fastest and most economical gains, giving the most profit the calf. It showed that silage had a much higher value when fed in rations in connection with Alfalfa than without. The ration of Alfalfa, prairie hay and corn was second in economy. Two rations containing Alfalfa gave much better results than any ration not containing Alfalfa. The profit the calf from the lot fed Alfalfa, corn and silage amounted to $22.21 the calf, while the next ration in economy netted a profit of $20.28. The lowest in profit was from prairie hay, silage and corn, with profit of only $11.77.

Bulletin No. 242 of the Wisconsin Experiment Station is an excellent discussion of pork production in Wisconsin. In 35 pages it gives a very good statement of the important things in keeping hogs. There are pictures showing the kind of hog to raise, the best way to house them, fences, and the other important things which a farmer will need to know about. There is a discussion of feeding, which is very useful; in fact, the entire bulletin is just what hog breeders want to know, as judged by the questions which constantly are sent to us. We should think this bulletin would be of very great interest to all who keep hogs.

Molasses FOR STOCK LIQUID OR DRY
THE MOORE BROS., ALBANY, N. Y.

Dogs and Ferrets

Ferrets For Sale—Booklet and Price List Free. J. F. Murray, R. 1, New London, O.

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FERRETS For Sale—Fine Stock. Best hunters on earth. Write for Free Book and prices. C. M. SACKETT, DEPT. R, ASHLAND, OHIO

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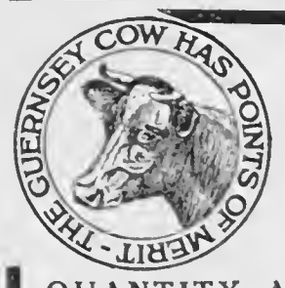

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RAISING HOGS WITHOUT MILK.

CAN one raise hogs as a paying investment without feeding milk in some form? If so, what food can one feed to fatten hogs and what food should one feed a sow with pigs? What breed will give the best financial returns? L. H. C.
New York.

It is possible to raise swine at a profit without the use of skim-milk or buttermilk. Dairy by-products are useful in swine feeding, due to the protein that they contain, and to the further fact that milk is palatable, easily digested and otherwise adapted for use for growing animals. Especially is milk useful for young pigs five or six weeks old, for its use enables the youngsters to wean more easily and to grow a frame of substantial form.

Digester tankage or oil meal supplies protein in the most desirable form for swine feeding, especially if they are used as a supplement to corn. In the absence of skim-milk the following ration would give good results for young pigs of the age noted: 100 pounds red dog flour; 50 pounds sieved oats; 10 pounds digester tankage; two pounds bone meal. This should be mixed and fed in the form of a thin slop, the consistency of which was similar to that of buttermilk. They should be given relatively small amounts of this mixture, and required to clean out with avidity the trough promptly at each meal. As they increase in size and vigor, a small amount of soaked shelled corn could be added to the ration. Care should be exercised to soak the corn not more than 12 hours before feeding, and to practice the same means of keeping the edge on the pig's appetite as suggested with the slop mixture. We have found it a very great advantage to use forage crops as a source of succulent feed for brood sows nursing pigs. Alfalfa, rape, Soy beans, Red clover, oats and Canada field peas, or combinations of these crops, supply excellent sources of feed. In addition to the forage crops we have used to advantage the following grain mixture: 100 pounds ear corn; 40 pounds red dog flour; 10 pounds wheat bran; 10 pounds digester tankage; two pounds bone meal; one pound salt; 10 pounds oil meal. The corn may be fed in the form of meal, but there is no advantage in grinding or preparing corn in any way for swine. The balance of the feed suggested should be mixed and fed in the form of a thick slop, about the consistency of buttermilk.

It is always good judgment to arrange trough room, so that the pigs as soon as they are old enough, can partake of the same feed mixture as their mother. When they are six weeks of age, a creep should be provided where the pigs can run to a trough inaccessible to the mother, where the same feed, reduced however, by the addition of water, is available. Neither the brood sows or the young pigs should be given more than they will eat and clean up with relish at feeding time. Indigestion, scours, thumps and other disorders are the results of over-feeding, accompanied by inactivity.

When the pigs reach the weight of 50 pounds their ration can be changed to the following mixture: 100 pounds red dog flour; 100 pounds ground oats; 100 pounds cornmeal or shelled corn; 50 pounds wheat bran; 20 pounds digester tankage; 10 pounds oil meal; five pounds bone meal. This should be continued, supplemented perhaps, with a little ear corn, until the animals weigh 125 pounds, at which time they should be fed exclusively ear corn and digester tankage, utilizing 10 pounds of the 60 per cent. tankage for each 100 pounds of corn fed. The tankage may be reduced to 5% when the animals reach 200 pounds in weight if it is intended to dispose of them when they weigh 250 pounds.

As far as the breed is concerned, it is possible to find most excellent individuals in all the recognized breeds, and one's success in pork production does not depend upon the breed selected, but rather the type of animal selected within any given breed. There are two distinct types of swine, the fat hog type, and the bacon type. The former is represented by the Duroc Jersey, Berkshire, Poland China and Chester White, while the latter is represented by the large Yorkshire and Tamworth. There are a number of breeds intermediate, but those named in the largest numbers in our pork producing sections. Profits in swine depend upon a number of factors; prolificacy, extreme weight for age, quality, vigor are among those of the greatest importance. The use of home-grown feeds and forage crops are essential if one is desirous of the most economical gains. Animals thus cared for are more resistant to disease and make their gains with the most rapidity and at the lowest cost. F. C. MINKLER.
N. J. Experiment Station.

AILING ANIMALS.

Swelling.

A WEEK ago we turned our cow on wheat stubble and began feeding her lightly on rutabagas, tops and all. A couple of days later I noticed a swelling on her side quite low down, which is hard. Her navel is also swollen but very soft, feels as if it had water in it. She eats as well as usual, is in good flesh, and gives nearly four gallons of milk; freshened three months ago and will freshen again in the Spring. There is no veterinarian near and she is our only cow. F. K.
California.

The swelling may be due to horning and an abscess may be forming. The swelling of the navel may be incidental and will be likely to subside when the other condition disappears. Bathe the parts twice daily with hot water and swab the hard lump with tincture of iodine. If it softens the pus will have to be liberated. It is not a case for which we can confidently prescribe without making an examination. A. S. A.

Rheumatism.

I HAVE a hound which has rheumatism: it gets worse before rain, and seems to be all through him, and through his chest. What can be done for it? A. M.
West Virginia.

Give the dog five grains of salol in a capsule night and morning, and if necessary increase to three such doses a day. If the pain is very severe at any time give five grains of aspirin and repeat every four hours until pain subsides. Rub swollen or stiff joints with oil of wintergreen once a day. Keep him out of wet and cold. The bowels should be kept active. A. S. A.

Thoroughpin.

I HAVE a colt about six months old which has for the past two months been bothered with a thoroughpin on the joint of the rear leg. We have had her examined by the local veterinarian who said that the lump could only be reduced through the use of some imported medicine, at present not obtainable. Could you suggest any remedy, if any exists? J. F. K.

Persistently use a commercial absorbent if lameness is not present. If lameness is present better have the veterinarian line-fire and blister the hock joint. We do not know what medicine he has in mind. Such cases are not promising, but the absorbent or an iodine lotion may do some good if patiently used. A. S. A.

Warts.

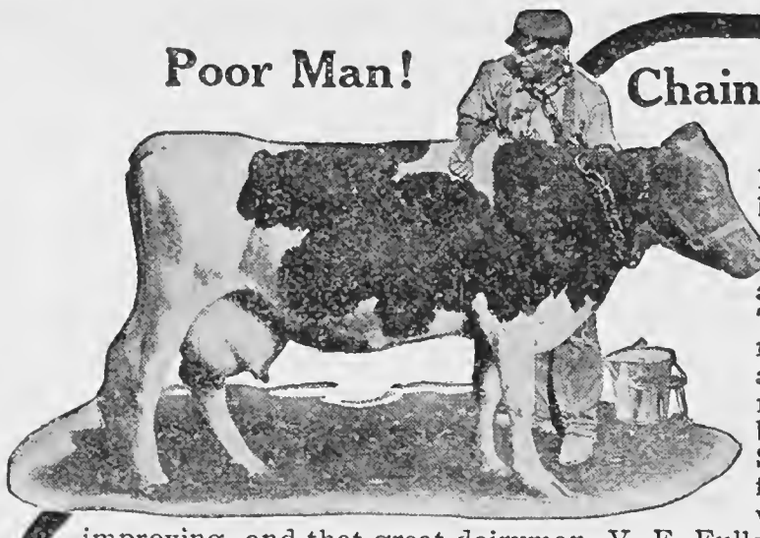
I HAVE a yearling steer which has warts on the back of his head and on his neck; some of them are three inches over, or more, and others stick out half a finger's length. He twists them so they bleed, and is not doing as well as the others. Can you tell me how to cure him? E. W. H.
Ohio.

Twist out the large warts and then stop the bleeding by applying a hot iron, or Monsel's solution or powder. Small warts in masses will disappear in time if you rub them freely with best castor oil once or twice daily. Feed roots or other succulent feed, or flaxseed meal or cake and he should soon pick up, if well fed on other nutritious feeds. A. S. A.

Fits; Rat Virus.

WHAT was the trouble with a three-months-old pig, which began suddenly to jump into the air, and shake his head as though taken with fits? It was hard for him to breathe. He died in about five minutes, bloated considerably. I thought perhaps it might be cholera, although the disease has never been known on the island where my farm is located. 2. Where can I purchase rat virus? C. E. S.
New York.

1. The fits were not due to cholera, but to indigestion. Possibly worms may be a part cause, but is more likely that you have been feeding too well and restricting exercise. Where that is done pigs tend to become plethoric and apoplexy results, causing rupture of a blood vessel in the brain and sudden death such as you describe. Reduce the rich feed and let the pigs live an outdoor life, so far as possible. If worms are seen in the manure give copperas as so often prescribed here. 2. Rat virus may be ordered by your druggist of a dealer in biological products. A. S. A.



Poor Man! Chained To a Cow!

How often you have heard that expression—showing the popular ideas as to "the bondage of the dairyman." There are two very good reasons for it: 1st, there are thousands of cows not paying for their board (250,000 in one State alone). 2nd, poor feeding, causing great waste. But things are improving, and that great dairyman, V. E. Fuller, and the "big-little" Farm Journal are having a great hand in it.

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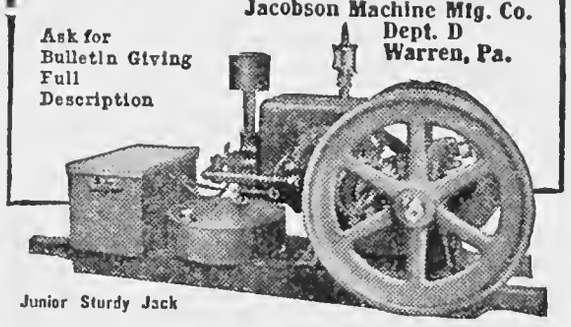

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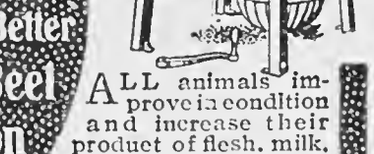

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The Cattle Grub.

ALL who handle cattle are familiar with the bunches which appear on the animal's back during late Winter and Spring. On squeezing these lumps an insect or grub is forced out. In some cases there will be 20 or more of these grubs on one cow or steer. They are very irritating and they injure the hide. Every year we are asked to tell how they get under the skin, the usual belief being that the eggs are laid on the cow's back. The following life history of the insect is taken from a circular sent by the Ohio Experiment Station:

"The fly (Hypoderma lineata) that causes this grub is known as the ox warble-fly, the heel fly, or the ox bot-fly. The eggs are deposited upon the hairs during the Spring and Summer, and the animal on licking them carries the eggs or larva into its mouth. The young maggot passes into the gullet. From the gullet it migrates to the back, where it causes a lump or swelling noticed in late Winter or early Spring. In the Spring or early Summer months, the grub emerges from the back of the animal through a small hole previously used for breathing purposes. Falling to the ground and burrowing in it the grub enters the pupal state, which covers a period of from three to six weeks. At the end of that period a two-winged fly emerges. Thus the complete life history covers almost a year."

How the Jumping Steer May Be Effectively Hobbled.

IT is really hard to tell just what will have the best effect in restraining the steer from jumping. A Michigan reader advises the poke with pole from three to four feet long. Another advises a long poke made of two poles, the upper cross-piece just in position to allow the poke to swing clear of the ground when the animal is standing. In the under cross piece at the lower end, a cross piece pointing dowr ward and out ward is inserted. This writer states that if a wide short strap is buckled around the ankle, and a short piece of rope attached to the horns from that strap, the animal will have to stay where put, and if this fails, sprinkle a little sugar around the field. For that is so high now nothing can get over it. Another advises a strap around the front legs of the steer at their smallest part, then fasten an inch rope to these straps so it will be taut when the steer's head is in grazing position. It may be fastened by snaps at the ends of the rope hooked into rings in the straps. Another advises haltering him and extending a good long rope to his hind leg, to which it should be fastened. He states that when the steer raises up to jump he will turn around and find himself established as a permanent fixture in the field. This writer also advises wiring the hoofs together. Little holes are bored in the hoofs and wire inserted so as to hold the hoof from spreading. It seems to take the spring out of them, for a split-footed animal will not jump very far nor hard if the hoof will not spread. Another writer advises nailing a pair of horse shoes on the front feet. All advise they have tried these remedies with more or less success, but the meat block is really sure.

Obstinate Cows and Kicking Heifers.

ABOUT 60 years ago, John S. Rarey created a great sensation with his method of taming vicious horses, applying it also to the breaking of other colts. He went to England and received a "command" to try it on a stallion in the Queen's stable that had killed his groom. Rarey had a coat sleeve made of iron, encased his arm and approached the head of the horse stall. The horse promptly seized it, and with the aid of grooms his head was secured, and the lesson continued. In two hours, Rarey rode him into the Queen's drawingroom, so the papers said, and a picture of its doing was published in the "Illustrated News." When Mr. Rarey returned to this country, I chanced to make his acquaintance, and he taught me his method. I used it successfully on several colts, and tamed an ugly steer in an hour's time so that I led him about town with a cotton string. The entire method is too long for a newspaper, but the first step of getting control is a short one.

Beginning with the kicker, provide a strap about 18 inches long, a hold-back strap, or a rope may be used, buckle up or tie up the near front leg. She cannot kick, and if gently milked and handled, talking to her or whistling, and two or three lessons will complete the cure. Or if you prefer to take the trouble to go through the entire lesson that follows for the other cow, once will be enough. The leading lesson follows, which is a paradox. In addition to strap above mentioned have one about four feet long, and a strap or rope around the body next to the forelegs. Fasten the long strap around the off foreleg and pass the other end under the body rope and body to a point where it can be easily held by the right hand. Have the animal in a well-littered yard or on a clean turf to avoid hurting the knees. Tie up the left front leg, hold the halter or rope about the horns with the left hand, and the other strap in the right hand, and when she lifts the down leg pull it up, and she will of course land on her knees. She will rear and pitch for a time, but will finally lie down in despair, and will not try to get up. Take off the ropes, and you can handle her as you like. At this stage Rarey used to lie down with his head between the horses hind legs. Handle the beast (horse or cow) in every way, till it does not shrink from touch, talking and petting at same time. Then go on the off side, lift up the head and get her back to an interest in life, by helping her up. You are her friend for life, and I think you can lead her anywhere. With a horse, treatment is the same up to now, but other lessons follow.

FRANK HYDE.

NEW ENGLAND MILK CONDITIONS.

AT the hearing on the cost of production of milk in Massachusetts held at the State House, Boston, October 15, much valuable information was given on the subject, yet it was not just to the point which the committee most wished to obtain. Very few farmers keep exact accounts of their expenses, that are itemized and specified as the committee wished. Yet all testimony given was very positive that few, if any, farmers could get or are getting a satisfactory income from this source alone. Another very important fact was brought out, and this was, that very little Massachusetts milk is bought by contractors for Boston consumption. All present were either selling their product direct to consumer or to independent dealers or peddlers not connected with or controlled by the big Boston dealers.

Practically only one witness admitted he believed he was getting his living from a herd of about nine cows, personally taken care of, and as the rule getting along without hired help. At first he stated his entire income was from his cows, whose production averaged about 10 quarts per day per cow, price received five cents per quart; average time of keeping cow productive eight years without renewing or replacing by another. Feed averaged eight quarts of grain per day, one pound of silage per feed and hay; thought $15 per year about right for depreciation of cow. After further questioning he admitted income from about 30 barrels of cranberries per year, and also sales of wood. He keeps about 100 hens which should help some. He stated his wife had the money from eggs, although he furnished the feed. A curious person in the audience asked if his wife had to buy the groceries from this money. He replied no; she used it as she pleased and he bought the groceries. This person then stated in many cases when the wife has the egg money she furnishes or helps to furnish these, which statement is true in many cases. This person was also questioned by the committee and stated he kept nine cows and received 45 cents per can for the milk, working into purebred stock as past as possible and expected from sales of these to make the business pay, but was very positive he could not make it pay or make a living by selling milk at present price even if more cows were kept.

One other witness stated he got his entire living from cows by selling milk; 48 cents per can is price received now. He now keeps 55 cows in milk, but started with few at first and had only $400 capital at the time; has sold milk and traded or sold cows all his life, but could not tell just what proportion of his income came from each, the sale of milk and the cow selling. His practice is not to keep a cow that gives less than 10 quarts per day, but get another in her place. His stand-by feed is just brewery grains, costing 12 cents per bushel, and he buys a load of over 100 bushels three times per week, hauls these six miles and takes one-half day to make the trip. He claims these grains are an ideal feed, and keep the cows in fine condition all the time; seldom or never has a sick cow; four quarts of meal per day is also fed, and cows are usually ready for the butcher when milked out. He stated if he could not get the brewery grains he would go out of the business.

All the others who testified had other incomes from other farm produce or sale of purebred stock or something of the kind from which part or most of their income was obtained, not from the sales of milk, which were quite large, but without profit to show for same.

Many good points were brought out, the most important of which was the general idea of depreciation of cows in the different herds. Some stated this as 10 per cent. of cost, but more thought 10 cents per day was more right. One stated cost of distribution of retail milk three cents per quart, cost of production 7½ cents per quart; depreciation of cows, $37 per year per cow. He was selling at retail at 10 cents per quart and thought he should get 11 cents in order to make profit. One who sold at retail at nine or 10 cents per quart in a nearby city thought about $2,000 per year profit was obtained from his herd of 40 cows.

One who keeps 30 cows and allows the 10 per cent. depreciation per cow, and sells at wholesale at 55 cents a can, considered his net profit $1,500 per year as price of services of good foreman. Those who figured on the 10 cents per day or $37 per year as depreciation cost only keep their cows a year or less as the rule; this makes the shrinkage very large, as you can see. Three women were present, and all had something to say. Two of these were city people, the third a farmer's wife, who assists her husband in care of cows and looking after the farm, as he is away several hours each day. The farmer's wife was much the smartest appearing of the three, or to put it another way, the best posted on the whole subject, and certainly made all her statements as clearly and intelligently as any man present, and yet was as much of a lady in dress, appearance and every way as the two city women; in fact put them in the shade. This pleased me very much, as some have the idea that farmers' wives are inferior and not up to date as city wives; they have much to learn along this line. I met another farmer's wife while at the Worcester Fair, who has an invalid husband, so that all the work and management falls on her, yet she seemed to be able to fill the situation successfully, and is doing much better than many men I know in conducting a large dairy farm, and getting a profit from same by making butter and raising veal calves and some stock. A. E. P.

COMING FARMERS' MEETINGS.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association, annual meeting in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Institute and convention, Lycoming, County Farm Bureau, Williamsport, Pa., November 17-20.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Dover Poultry, Pigeon and Pet Stock Association, tenth annual show, Dover, N. J., Nov. 23-28.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple Dairy and Poultry Shows combined.

"How are you going to tell when there is anything of importance going on?" asked one war correspondent. "I'll keep my eye on the censor," replied the other. "Whenever there's nothing given out for publication, you may know it's time to hustle, and get the news."—Washington Star.

Mr. Howard Willets

New Marlboro, Mass.

Will Sell

At the New England Fair Grounds
Worcester, Mass.

November 5, 1914:

50 Head of Imported Jerseys and their descendants,

mostly sired by Gold Medal Prince 76505, a son of Oxford Lad P. 3123 H. C. out of Gold Medal Princess 187433 (3 lbs. 2¾ ozs.), together with

150 Horned Dorset Sheep,

descended from an importation made by Mr. Willets.

At the same time

The Pastures, Belfast, Me.

Will Sell their herd of

50 Head of Jerseys, including a number of Register-of-Merit Cows.

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Auctioneer and Commission Agent in Improved Live Stock

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SCOURS can now be CURED

The most dreaded ailment—the disease that takes **ninety per cent** of all calves born—**can now be fully, quickly cured.** You won't lose any of your calves with Scours if you give them **Payne's Scours Special**—a new, sure, complete cure for Scours in all animals. Harmless, easy to give and thoroughly guaranteed to cure or **money immediately refunded!**

Ask your dealer for Payne's Scours Special or send one dollar and we will send bottle prepaid. Do it **now**—and save your calves!

Read This:

"Gentlemen:—I have used Payne's Scours Special for calf Scours with most gratifying results. Recently I had a valuable calf in very bad shape; one dose effected a complete cure. I consider this remedy a great boon to dairymen."—W. B. Whitney.

Send for Helpful Booklet on Scours—Free

The Calf Saver Corporation
Maple St., Gouverneur, N. Y.

PAYNE'S SCOURS SPECIAL

Don't Sell the Young Calf

BLATCHFORD'S CALF MEAL Will Raise It Without Milk

There's big money and little trouble for you in raising your calf the Blatchford way.

You can save all the milk of the cow for market. As soon as the mother cow's milk is ready to sell, the calf is ready for

Blatchford's Calf Meal

—For over a century the Recognized Milk Food for Calves, at One-Fourth the Cost of Milk

Composed of eleven different ingredients carefully apportioned and thoroughly cooked, producing a scientifically balanced ration for the young calf.

Successfully used on thousands of American farms for over thirty years.

The Only Milk Equal Made in an Exclusive Calf Meal Factory. Unlike any of the So-Called Calf Meals Made of Raw Cereal By-Products.

Blatchford's Pig Meal Insures rapid, sturdy growth of young pigs. Write us about it.

Write for Free Illustrated Book on "How to Raise Calves Cheaply and Successfully Without Milk."

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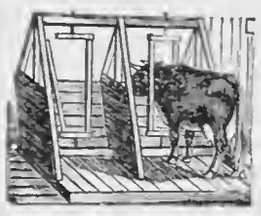


ROBERTSON'S CHAIN HANGING STANCHIONS

"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

Thirty days' trial on application

O. H. ROBERTSON
Wash. St., Forestville, Conn.

HANDY BINDER Just the thing for preserving files of THE RURAL NEW YORKER. Durable and cheap. Sent postpaid for 25 cents.

The Rural New-Yorker, 333 West 30th St., N. Y.

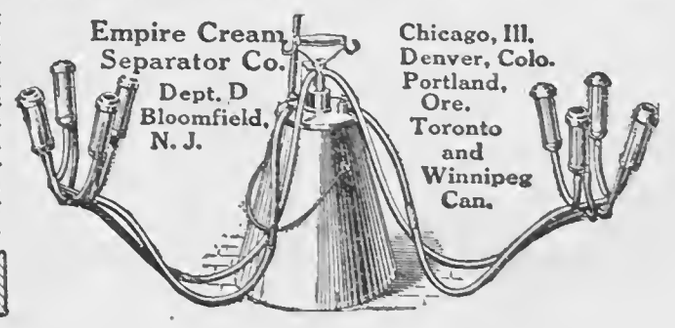
Gentlest Safest Mechanical Milker

Massages the teats with *natural* air pressure. Induces a *natural* flow of milk in the vacuum period that succeeds the teat manipulation. Doesn't use compressed air. Therefore, requires but one tank and one pipe line.

Empire Mechanical Milker

Milks by Natural Air Pressure

Capacity of double or two cow unit 20 to 30 cows per hour. One man operates 1 or 2 double units. Works the teats more gently—keeps even nervous cows contented. Works teats more uniformly—increases cows' milk yield. Write for circular. Learn how this milker assures quicker, better milking—milk free from stable odors or impurities. Get our offers on Empire Cream Separators, Empire Sta-Rite Engines and Empire Star Feed Mills,



:: The Favorite Hen ::

Thirty Women Enter Birds

ARRANGEMENTS have now all been made for entering the egg-laying contest. We printed the names of the women who furnish these hens last month, and in order to make doubly sure that all understand, we print them again as follows:

WHITE LEGHORNS.

1. Mrs. N. D. Rand, New York.
2. Mrs. Lewis J. Happich, New York.
3. Mrs. V. D. Miller, Ohio.
4. Mrs. A. J. Skellie, New York.
5. Mrs. C. L. Todd, Virginia.
6. Mrs. Walter Fletcher, Pennsylvania.
7. Miss Tillie B. Cloud, Pennsylvania.
8. Mrs. Josephine Hollenbach, Pennsylvania.
9. Mrs. W. E. Phelps, Pennsylvania.
10. Mrs. L. E. Hilborn, New York.

RHODE ISLAND REDS.

1. Mrs. Carrie Bliss, Virginia.
2. Mrs. E. S. Marlatt, New Jersey.
3. Mrs. T. Schwenk, Connecticut.
4. Miss Ethel A. Pierce, New Hampshire.
5. Mrs. Samuel O. Travis, New York.
6. Mrs. W. R. Merrick, Massachusetts.
7. Miss Edna M. Porter, New York.
8. Mrs. Andrew J. Wilson, Connecticut.
9. Mrs. E. P. Andrews, New York.
10. Mrs. Cecil Farnham, Maine.

THE MIXED BREED.

1. Mrs. F. M. Earl, Connecticut, White Wyandotte.
2. Mrs. A. N. Conell, New York, White Wyandotte.
3. Mrs. R. W. Stevens, New York, White Wyandotte.
4. Mrs. W. S. Walters, Michigan, Barred Rock.
5. Mrs. G. L. Rothgeb, Virginia, Barred Rock.
6. Misses Osler & Wilcox, New York, Barred Rock.
7. Mrs. Robert H. Wood, New York, White Rock.
8. Mrs. Joseph di Fabrizio, New Jersey, Black Minorca.
9. Mrs. Emma H. Wood, New York, Buff Orpington.
10. Mrs. Edwin Walker, Massachusetts, Buff Orpington.

These birds will all be entered in the regular egg-laying contest at Storrs, Conn., which begins on November 1. It has required considerable management to have these entries properly made and classified. In order to make sure that the hens would not be mixed up, leg bands were sent to each of the parties named. These bands were all numbered and are to be put upon the left leg of the hen. For example, the "Leghorn" band will be numbered from 1 to 10 in the order here given. The hen belonging to Mrs. Rand will wear a band marked L No. 1, and so on through the list of hens. This number will also appear upon the outside of the crate when the hen is shipped. At the College the authorities will have a complete list of the names of the owners and also of the numbers on the hens, and when the pen is entered the hens will carry the contest numbers on another band to correspond with their numbers in this list. In that way there will be no chance of mixing them up or not having them identified.

Tags bearing the numbers were sent to each of the 30 women who have entered the contest. They are expected to send the birds early in the last week of October, so that they may reach the contest a few days in advance of the start, and thus give time for safe arrival and a few days of rest before the contest opens. In this way we hope to make a good clear start under the best of conditions. Very great interest is being taken in this favorite hen competition, and for many reasons, we believe it will prove one of the most popular features yet introduced into a contest of this sort. We believe these hens will represent the better class of farm flocks. Our understanding is that none of these owners can be called expert breeders. They have simply developed good flocks in their own way, but yet we shall not be at all surprised if the outcome shows that many of our farm women have actually developed a very superior strain of poultry. After the contest starts we shall give from week to week or month to month a regular report of the eggs laid, the food consumed, and egg profit of the hens and many other things which will interest poultry people generally. We also have in mind several features which will be introduced from time to time to liven up the contest.

A Pest of Fleas.

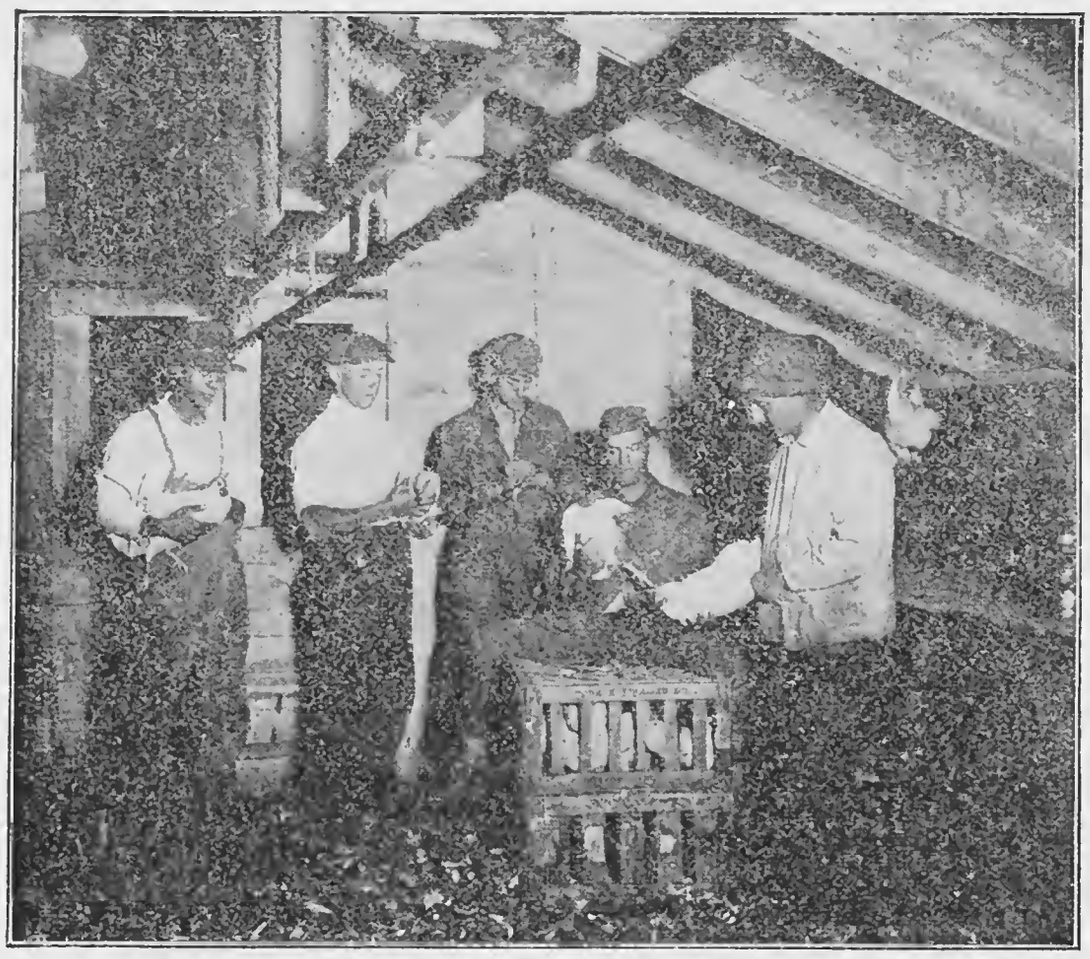
COULD you advise me how to get rid of fleas? It may be your paper does not go into families that have such, but fleas are like calamities; they are liable to come to anyone. We never had them before. They seem to be quite numerous just now. Will they go away when cold weather comes? We think they came from the cat. The cat is now under the sod. H. C.
Massachusetts.

The correspondent is undoubtedly right in thinking that the troublesome fleas came from the cat. Probably in nine cases out of ten where fleas appear and become annoying in a household in the East, at least, they originate from some pet dog or cat. The afflicted pet comes in contact with some neglected animal of its kind and catches the infection of fleas. If the cat or dog be left without attention the fleas will go on developing indefinitely.

The first thing to do then to get rid of fleas is to kill the dog or cat or free them absolutely from the pests. The correspondent followed the most sure and effective method of destroying the origin of flea infestation when the cat was put "under the sod." On the other hand, a cat or dog may be retained if proper care is followed in keeping them free of these pests. For example, a three per cent. solution of creolin made by putting four teaspoonfuls in a quart of water will kill fleas on a dog. The animal may be bathed in this solution if desired. For a cat a two per cent. solution should be used, as its skin is a little more sensitive than that of a dog. After the animal is freed from the pest the house still remains a problem, for invariably the insects have become more or less scattered throughout the rooms frequented by the cat or dog. This part of the fight often becomes strenuous and long drawn out.

If the infestation is severe the carpets should be removed from the floors and the latter washed with a strong solution of soap and water. If there are large cracks in the floor they should be treated with kerosene or gasoline and then filled with some crack filler. Cracks beneath the baseboards should be treated with gasoline or kerosene. The carpets should be hung in the sunlight, beaten thoroughly and in extreme cases sprayed with gasoline. One must not be deluded in believing that one treatment will always suffice. In many instances the work may have to be repeated more than once, as fleas are persistent and increase rapidly.

Dr. Henry Skinner of Philadelphia says that he has had very satisfactory success in destroying fleas by the use of naphthaline flakes. He took one room at a time and scattered five pounds of flake napthaline on the floor and then closed the room for 24 hours. Other rooms were treated in the same way, the flakes being simply transfered from room to room. He says "it proved to be a perfect remedy and very inexpensive.



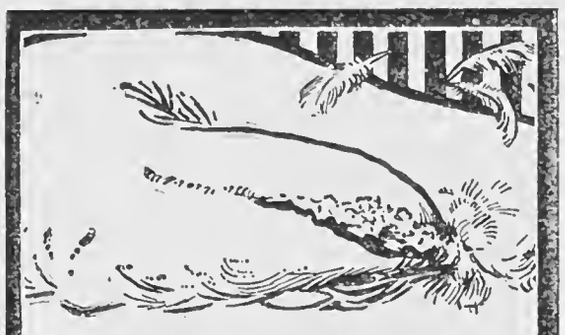
SELECTING THE BEST LAYER. (See page 1281.)

The Smoke Cure for Skunks.

ONE night last week the dog had a battle with a skunk, and succeeded in routing him, although with the usual consequences which follow when a skunk is stirred up. The dog, however, was very proud of his victory, and just as our people were sitting down to enjoy breakfast, the dog came running up from the barn wagging his tail, and saying, as only a dog can: "Look at me! I am a farm defender. I have conquered the enemy." There was a bunch of flowers on the table, the peaches were extra fine that morning, and it was a breakfast to enjoy, yet there was a general stampede when the good dog looked in at the kitchen door still wagging his tail. He was driven away with no gentle hand, and is probably still wondering why his humble efforts to please were not appreciated. Breakfast is the beginning of the day, and that day was spoiled for the majority of our people. The skunk is not a desirable character, although in his capacity of grub-destroyer and worm-eater he is a friend of humanity. We can get rid of him, but what to do with the influence he leaves behind him is frequently a problem. We have known reputable farmers who stood well at home, in the community, and in the church, who have been obliged to partake of their meals out in the woodshed for several days after an encounter with a skunk. Therefore he who can devise some method of relieving such a situation is a public benefactor. That is what we think on receiving the following letter. Mr. Huse admits that his statement may look "fishy," but he is prepared absolutely to vouch for its success in his case. We print it as an addition to the literature of the skunk, and there may be energetic and patriotic people among our readers who are willing to try this experiment and report its success or failure to us.

Most of us instinctively relinquish our right to the road whenever we meet a skunk, whether we have on our best clothes or only old duds. The apparent ruining of the clothes is one of the most serious inconveniences of being hit. It is not necessary to bury the clothes in order to remove the odor. Smoke will do the trick. I had been told of its efficacy, and a while ago when I received a full charge in the face and over the entire front of my clothing I hastened to try it. I made a smudge of wet hay and stood in the smoke about 20 minutes in the aggregate. The only other thing that I did was to wash my hands and face in clear water before trying the smoke. The odor was removed so completely that when I went in to supper about two hours later, with the same clothes on, no one had any idea that I had been near a skunk. This may not work so well in every case, but it is worth trying. I pass it along.

W. H. HUSE.



Lousy Poultry Can't Pay

Lice-infested poultry are a constant loss to the poultryman. Lice suck the rich lifeblood from poultry, stunt the growth of young chicks and rob you of your well earned dollars. These pests reduce the hens' laying ability. Buy an effective louse killer and use it liberally.

DR. HESS
INSTANT LOUSE KILLER

Kills Lice Instantly. Sprinkle it thoroughly on lousy hens, rub it well under the wings and neck, put it in the dust bath, in the nests, roosts and cracks. Instant Louse Killer also kills lice on farm stock, bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes. Comes in handy sifting-top cans.

1 lb. 25c; 3 lbs. 60c; except in Canada and far West.

If not at your dealer's, write—
DR. HESS & CLARK
Ashland, Ohio

MAKE HENS LAY

By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier profits larger.

MANN'S LATEST MODEL Bone Cutter

Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free Trial.** No money in advance.
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W. Mann Co., Box 15, Milford, Mass.

Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
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Orr's Poultry Feeds—For molting hens and laying pullets. Our Digestible mash just fills the bill. Our poultry feed mixtures and straight grains, also cracked goods, are of the utmost in quality. For results use the best goods, and we have them. Send for circular and price list.
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TOM BARRON'S
CONTEST WYANDOTTE PENS
At PA., CONN., MO., are owned by me
"World's greatest winter layers"
LEGHORNS and WYANDOTTES—283—282—260—248
Storrs' Buff Rocks, Vibert-Austin Reds, Ducks and Geese
MORRIS-FARM, R. 4, Bridgeport, Conn.

500 Choice Pullets and Cockerels
Tiffany's Superior Silver Wyandottes, Pekin and Rouen Ducks, sired by winners at America's greatest shows. Free range grown. **F. A. Tiffany, Phoenixville, Pa.**

Tom Barron Wyandotte Cockerels, farm raised; stock direct. $3—$4. White Rocks, Buff Leghorns, $1.50—$3. **L. A. MAPES, R. 3, Newburgh, N. Y**

FOR SALE—MARCH HATCHED WHITE WYANDOTTE COCKERELS $2 to $5 each.
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We offer finely-bred cockerels for sale, from our best lines for egg production. Strong, rugged birds of pedigreed ancestry. Also pullets and yearling breeding hens of proven value. Honorable treatment guaranteed. Satisfied customers all over the country.
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AUSTIN'S 200-EGG STRAIN SINGLE COMB Rhode Island Reds standard bred, high record stock, red to the skin. Old and young stock for sale. **AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.**

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Prize winners. White-egg strain. **Geo. Williamson, Flanders, N. J**

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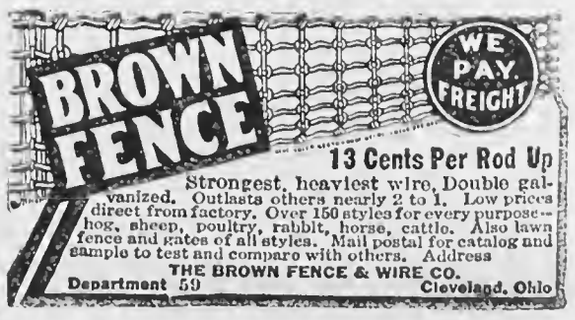
The Celebrated Hungarian and English **PARTRIDGES and PHEASANTS**
Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. **WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.**



The Henyard

THE EGG-LAYING CONTEST.

THE fifteenth week of the contest ended October 16. Only two more weeks to decide the question whether Tom Barron's White Wyandottes or Franeis Lineoln's White Leghorns are to win this contest. Lincoln's Leghorns are now 17 eggs ahead. Can the Wyandottes beat that in two weeks? During the week ending Oetober 9 they gained 13, this week they gained 8—21 in the two weeks. If they can make a like gain in the coming two weeks, they will win with a good margin. But Lincoln's Leghorns are holding up remarkably well, and the chanees are that the Yankee pen will beat.

Neale Bros.' White Wyandottes make the highest score this week, viz., 33, Mr. Barron's pen of same breed being seeond with 32. Three pens tie for third plaee with scores of 29 each, Fred H. Benton's White P. Rocks, A. B. Brundage's S. C. Reds and Glenview Poultry Farm's R. C. Reds. The week's seore follows:

	Week.	Total
Barred Rocks..		
A. B. Hall, Connecticut	17	1,364
Frank L. Tuttle, Massachusetts	19	1,434
Waveny Farm, Connecticut	19	1,364
Jules F. Francals, New York	28	1,648
White P. Rocks.		
Albert T. Lenzen, Massachusetts	23	1,537
F. H. Benton, Connecticut	29	1,530
Storrs Agr. Station, Connecticut	11	1,206
Storrs Agr. Station, Connecticut	22	1,320
Storrs Agr. Station, Connecticut	20	1,440
Storrs Agr. Station, Connecticut	12	1,273
Storrs Agr. Station, Connecticut	..	1,061
Buff P. Rocks.		
A. A. Hall, Connecticut	22	1,505
W. C. Morgan, Jr., Connecticut	6	1,159
White Wyandottes.		
Tom Barron, England	32	2,043
West Mt. Plty. Yards, Connecticut.	14	1,191
Merrythought Farm, Connecticut	23	1,875
Neale Bros., Rhode Island	33	1,871
D. J. Ryan & Son, Connecticut	12	1,358
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	28	1,461
Dr. N. W. Sanborn, Massachusetts	24	1,391
Am. Buff Wyan. Club, New York	17	1,282
H. L. Hamilton, Connecticut	22	1,100
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	22	1,405
Single Comb Reds.		
Robert Seaman, New York	12	1,127
J. S. Gillespie, Connecticut	7	1,348
Dr. J. C. Dingman, New York	17	1,264
Burnham Plty. Farm, Massachusetts	5	1,011
H. P. Deming, Connecticut	17	1,353
Geo. P. Dearborn, Florida	16	1,462
Dr. J. A. Fritchey, Pennsylvania	22	1,583
Ernest Underhill, New Jersey	17	1,249
W. H. Bumsted, Connecticut	13	1,011
Pinecrest Orchards, Massachusetts	8	1,548
Harry B. Cook, Connecticut	18	1,354
Colonial Farm, New Hampshire	19	1,417
A. B. Brundage, Connecticut	29	1,835
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	29	1,412
C. S. Scoville, Connecticut	18	1,008
White Leghorns.		
Storrs Agr. Station, Connecticut	12	1,558
Storrs Agr. Station, Connecticut	9	1,613
Storrs Agr. Station, Connecticut	10	1,580
Storrs Agr. Station, Connecticut	22	2,036
Storrs Agr. Station, Connecticut	11	1,501
Braeside Plty. Farm, Pennsylvania	16	1,447
Glenside Plty. Farm, Connecticut	16	1,619
Manor Plty. Farm, New York	7	1,462
A. B. Hall, Connecticut	3	1,447
Marwood Plty. Farm, Pennsylvania.	20	1,689
Geo. M. Harris, Connecticut	12	1,247
Bonnie Brook Farm, New York	9	1,690
N. W. Hendryx, Connecticut	3	1,425
J. J. Linehan, Massachusetts	2	1,335
Francis F. Lincoln, Connecticut	24	2,060
Cecil Guernsey, New York	12	1,686
Thos. W. Moore, Connecticut	3	1,548
Chas. N. St. John, New York	14	1,594
Chas. W. Sherwood, Connecticut	6	1,425
L. E. Sands, Pennsylvania	2	1,437
Tomoka Plty. Farm, Connecticut	9	1,320
Venture Plty. Farm, New York	..	1,150
Mrs. K. E. Woodruff, Connecticut	24	1,589
Windsweep Farm, Connecticut	4	1,232
C. H. Savage, Connecticut	8	1,475
P. G. Platt, Pennsylvania	8	1,680
Heneta Bone Co., New Jersey	1	553
F. H. Peasley, Connecticut	18	1,530
Chas. Heigl, Ohio	4	1,428
Tom Barron, England	26	1,982
Branford Farm, Connecticut	12	1,679
James Munn, Massachusetts	..	1,303
Geo. A. Cosgrove, Connecticut	16	1,533
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	13	1,557
Blue Andalusians.		
E. D. Bird, Connecticut	16	1,327
Buff Orpingtons.		
O. Wilson, West Virginia	9	1,074
White Orpingtons.		
P. A. Demgar, New York	14	1,047
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	6	859
Silver Campines.		
W. J. H. Lobel, New Jersey	9	1,310
Hens.		
H. W. Collingwood, New Jersey	10	1,277
Daniel Hine, Connecticut	12	1,175
Daniel Hine, Connecticut	11	1,132
Mixed Breeds.		
Profitable Poultry	23	1,313
Profitable Poultry	14	1,356

The total number laid to date is 116,090.

GEO. A. COSGROVE.

A FARMER, steering a drove of troublesome porkers down a lane, met a group of superior young gentlemen, and one bright city youth endeavored to entertain his fellows with some fun at the farmer's expense. "I say, my man," said he, "do you know that a person grows in time to look like the animal he tends?" "Law, now, you don't say so!" returned the yeoman. "Well, then, I suppose you people have just left off keepin' monkeys!"—London Farm and Home.

Blackhead in Young Turkeys.

I STARTED last Spring with Silver-tipped Red Bourbon turkeys, three hens and one tom. I lost quite a number of small ones as it was a rainy season in this part of the State. I sueseeded in raising 11 turkeys whieh stayed with the old ones on the side hill baek of the house. They finally got to eoming to the house for a mixed seratch feed; after eating they would go below the house along a creek where choke cherries grew. I first noticed that they died without apparent eause. After watching them closely for a while I notieed that they seemed to have leg weakness, their wings would droop and they would not eat. Two or three days later they would die. Is it blaekhead? I have lost six fine young turkeys besides the two whieh are now afflieted.

New York. M. H. R.

The disease affecting your young turkeys is probably blaekhead, the symptoms that you mention being those displayed by poults suffering from this infection. The young turkeys droop their wings, lag behind the rest of the flock, walk and run as though very weak, have more or less diarrhœa, beeome emaeiated and are finally found dead in the fields. There is no known cure for this trouble and the infeeting organism is so widespread that prevention is very diffieult. Early and continuous feeding of soured skim-milk is of value in preventing the development of the infective organism and if possible to raise the turkeys on ground not previously oeeupied by other poultry the chanees of suceess are greater. M. B. D.

High Scoring and Egg Contests.

I NOTICE you have an inquiry asking why utility men with high reeords for eggs do not generally enter egg-laying contests. My reason is very simple. I do not know how to select, from untried pullets, birds of superior laying ability. I depend on the trap-nests to select my breeders, and thus far I have no sooner decided what manner of bird is a winner, than she is beaten by a bird I had passed by. I use only birds of known egg production in the breeding yards, never pullets, so I make no particular effort, exeept as an experiment, to choose breeders until the egg reeord is complete at the end of the pullet egg year. This trap-nesting of birds is no spectacular advertising feat with me, it is a business man's way of keeping a working knowledge of his manufaeturing plant. So many shining examples of "get-eggs-easy" chicken plants are stark and bare that they teach the absolute necessity of knowing what the stock is doing eaeh and every day in the year. Sundays ineluded. It is wholly a bread and butter proposition. GEO. R. SHOUP.

Washington.

Hen Ration.

IS the following a good ration for hens, and if not how could I change it? Wheat screenings in morning, corn and oats at night; all the dry mash they will eat all the time. How much grain per day should I feed 12 hens? A. R.

You are feeding your hens properly as far as I ean see. Of course, the term "dry mash" is indefinite, but I suppose you follow some approved formula. Hens should also have access to oyster shells and grit, and should be supplied with green feed if they do not have a grass-eovered range. As to the amount of grain to feed 12 hens, I really don't know. I intend to feed my hens what they will eat up at once, without leaving any, but I have no rule for determining this amount except to watch the hens. If you feed them too much whole grain they will not eat enough dry mash. Feed just about what they will eat up clean, and you will hit nearer the mark than if you measure it out in ounces or pints. C. L. M.

Oiling Chicks to Grow Feathers.

ON page 1073, A. C. G., Pennsylvania and A. P., Orange Co., N. Y., ask what to do for poorly feathered chieks. If they will rub them a few times with any good oil—ehieken or pig's foot—I think they will find that both feathers and ehieks will grow. At least that advice was given me, and has proved good. I. B.

Cobleskill, N. Y.

Ground Oyster Shells FOR HENS MICHAEL DIMLER, Ashland, Pa.

BURNETT'S STOCK ARE CHAMPION RECORD LAYERS They are winning at the best season shows. Special offers. Pekin Ducks, $1 each. 300 White Turkeys from the world's greatest stock, $15 per trio; Minoreas, Cockerels, $5 each. Handsome birds. Money returned if not pleased. Send address for our new Circular. COLDENHAM POULTRY YARDS, W. L. BURNETT, Prop., Montgomery, Orange Co., New York

TOM BARRON STRAIN OF **Wyandotte Cockerels**—descendants of hens that laid 190 to 240 eggs in their pullet year; sire imported and from pen of hens with records of 235 to 250 eggs; good, vigorous birds, five months old, $4 each; three months old, $2 each. If not satisfied we will refund your money and express charges. C. E. BURGER, Ithaca, N.Y.

BARRED ROCK PULLETS—Purebred Utility Stock, hatched May 1st, averaging close to 4 lbs. each. Price, $1. THE MACKEY FARMS, Gilboa, New York

Bourbon Red Turkeys—Prize layers. Per pair, $8; Trio, $10. Shipments Nov. 1. Orders booked now. Fiona Horning, Ulysses, Pa.

FOR SALE—TOM BARRON LEGHORNS
WORLD'S CHAMPION LAYING STRAIN
600 fully matured S. C. W. Leghorn pullets and cockerels; pullets laying. Every bird warranted pure Barron strain. Parents came direct from Tom Barron, Catforth, England. These are unusually fine big husky birds, raised on free range and all from parents with records of 200-eggs or better. Warranted right in every respect. These birds must be sold before cold weather. Low price, considering quality of stock. Write for prices on stipulated quantity, or come see birds I am proud of.
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Tom Barron S. C. White Leghorn
and White Wyandotte cockerels; pullets, out of direct importation, from the World's greatest layers. In splendid vigor. BROOKFIELD POULTRY FARM, R.F.D. 3, Versailles, Ohio

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Imported direct. 280-egg strain. May Cockerels, $2. Yearling hens, $1.50. Trios, $5.
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Pedigreed Barron Leghorns—Sire's mother laid 258 eggs; grandsire's mother, 248 eggs. Also R. I. Red Cockorels. Harry B. Cook, Orange, Conn.

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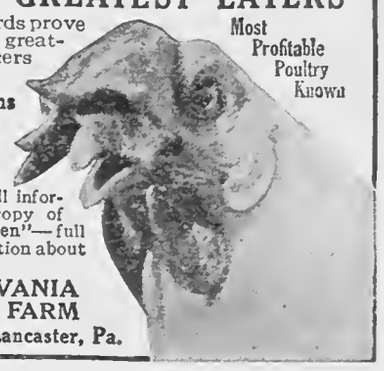

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FOR SALE—A fine lot of free range purebred **Single Comb White Leghorn Pullets** & unrelated cockerels, $2. Peter J. Wagner, North Branch, N.Y.

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100 BREEDING HENS, 75c each. S. C. W. Leghorns. Barred Rock Pullets hatched December 1913—$1.25 each. John Lorton Lee, Carmel, N. Y.

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100 S.C.W. Leghorn Yearling Hens—Young and Wyckoff strain, 90c. each; $85 per 100. 200 S. C. W. Leghorn pullets, April hatched, free range, Young and 200-egg strain, $1.10 each; 200 for $200. Mrs. W. W. WISOR, Catatonk, N.Y.

300 White Leghorn Pullets from fine utility strain, $1.25 each. W. E. CATHER, R. 2, Winchester, Va.

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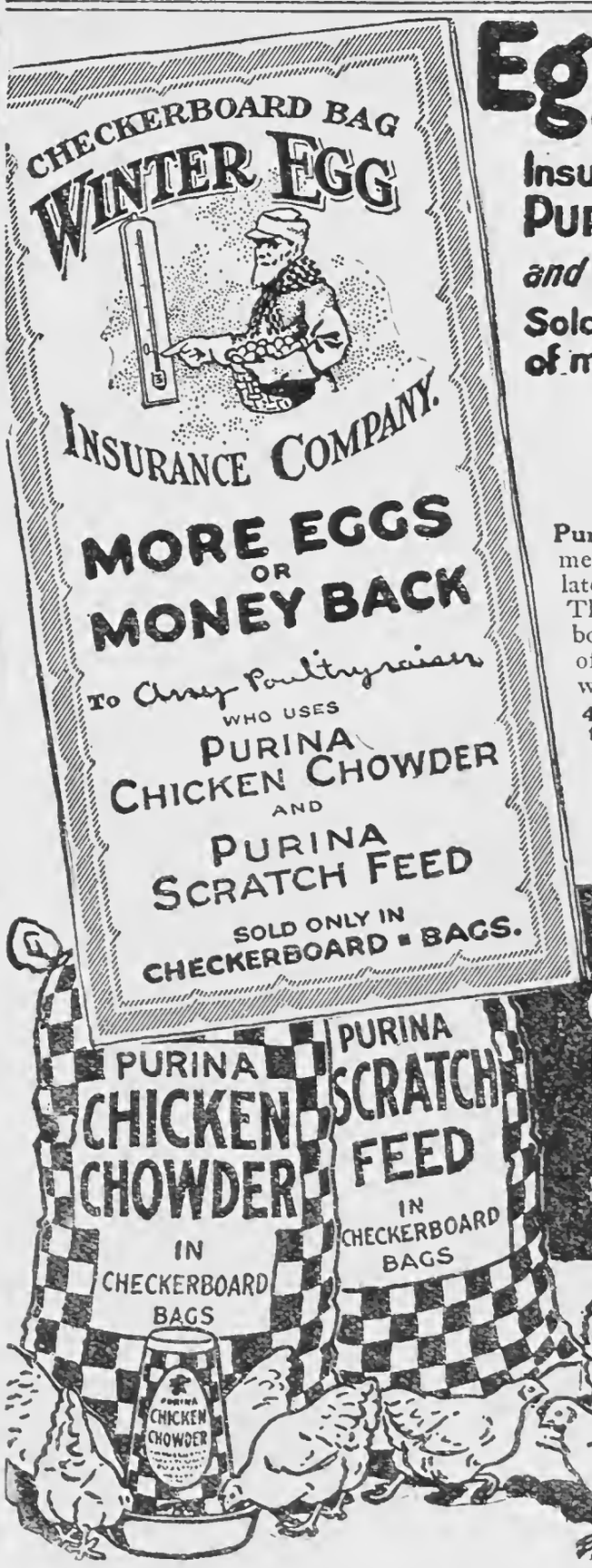

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Publisher's Desk

THIS edition of THE R. N.-Y. is the first one on our new press. If it is not up to the usual standard of printing, we ask the indulgence of our readers. We will try to make it even better than before. That is the ultimate object of a new press; but no one can tell just what the complicated and delicate machine will do on the first trial. The shafts must settle into their bearings and be adjusted before we can hope to get the best results. As soon as this is accomplished, we expect to give you a bigger and better paper than ever before. The old press printed 40 pages at one time. The new one prints 64 pages; and gives two colors on the cover when wanted. It is also a much finer adjusted machine, with extra ink distribution, so that we can use a higher finished paper and get better effects on illustrations. Incidentally it costs a little more than $25,000 to install. But our friends need not be afraid to embarrass us now with new subscriptions. This new press will turn out papers up to 12,000 copies per hour. With our new building and our new press we are prepared for any service. We send out 20 tons of paper now every week on THE R. N.-Y. This is 160,000 copies. We want to make it 200,000; and we will then feel content as far as circulation goes. Keep us sending out 200,000 papers weekly and back us up in the future as in the past, and you and we, working together, concentrating our influence through the paper, can get anything to which farm interests are justly entitled.

The trial of James J. Farmer, Colonel William J. Hartley, Samuel F. Warfield and others and the Anglo-American Authors' Association, of 225 Fifth avenue, on indictments charging the use of the mails in the operation of a scheme to defraud, is in progress this week. According to the postal authorities, the defendants reaped profits amounting to nearly $10,000,000 in three or four years from the sale of ornate editions of classic and modern authors. Men and women of wealth yearning for de luxe editions with colored illustrations, have been led to pay enormous prices for volumes which they could have purchased from reliable booksellers for one-third or sometimes one-tenth of the price charged by the Anglo-American Authors' Association.—Local Paper.

The key to this swindle came out in the trial. The victims admitted that they had been led to believe that in a short time they would be able to resell the books at an enormous profit. Cupidity is the one string that the promoter has to play on, and he always makes the most of it. Of course, because a man or a woman has an itching for quick riches is no reason why he or she should be robbed; but it is the weak point in the armor of the average victim, and the promotor knowing human nature, always finds it. The romantic stories in the daily papers about big prices for rare books helped the rogues to play on the gullibility of their victims. The average person cannot appreciate the difference between a useful book and one that is rare.

I have been receiving a number of letters from an insurance brokerage company that wishes me to send them $20 for a bid on 10,000 bushels of wheat or corn. They tell me that if wheat goes up one cent on a bushel I would make $100, two cents, $200, etc. Do you think it would be safe for me to send any money for a bid or not? L. U. F.

New York.

If you understand the proposition of the grain broker we do not think you would be very much interested in him. What he wants you to do is to make a bet. In other words, you bet $20 that wheat will advance one cent a bushel. He bets $20 that it will not. The only difference is that you put up the $20 and he does not. If the price of wheat does not go up, but goes down, you lose your money. If it should go up he would charge you for brokerage, and as a rule manipulate it in some way either to induce you to put in more money for another bet, or failing in this, find some other scheme to keep your money. Betting on a horse race is a little surer thing than this method of betting on the rise and fall of grain markets, but understanding the situation we do not think you will want to bet, and at all events our advice is don't.

I believe it would be of interest to you to know that I visited Dr. George A. Shepard, of Hartsdale, N. Y., and he happened to mention THE R. N.-Y. It immediately aroused my curiosity, and I asked him what kind of a paper it was. He said he certainly could not get along without it, and that it was one of the best edited and most interesting publications that he subscribed to, and was one of the last on which he would fail to renew his subscription. A. B. U.

New York.

Of course, reports like this are interesting and pleasant. When we started out to make a paper for the active business farmer we had no thought that such a paper would also interest professional men and gentlemen farmers; but we now see what we might have anticipated but did not, that the latter class, being more in need of definite, practical and reliable information about farm business than the experienced farmer, are counted among the most enthusiastic friends of the paper. These people realize that a service to the humblest man on the farm is also a service to them. There are yet city men who swallow the romance of a farm bait, hook and sinker, just as a get-rich-quick victim takes in the gold-brick prospect; but the man who really wants to know turns to tested sources of information.

I am delighted with what you have done for me. The D. B. Cornell Company sent me a check today for $15. I do thank you sincerely, because I never expected to get it. I shall subscribe to your paper as long as I have a dollar to do so. My neighbor has not received her $15. W. J.

Connecticut.

This subscriber had a receipt from D. B. Cornell Company, agent in his own handwriting, reading as follows:

The farm of————————is taken for twelve months from date and if the farm is not sold by above date the fee for listing and advertising is then returnable to the said owner. J. J. LOOKER.

The fee was $15, and this seems to have been paid as a listing fee, the owner taking the receipt. At first the company refused to return the $15 on demand after the year expired, claiming that the owner had not withdrawn the property, and that when withdrawn by the owner the fee would be $80, and $65 would be due them rather than $15 due the owner. The withdrawal fee was not mentioned in the receipt, and we insisted that the money be returned as promised. The Cornell Company seemed to put it up to the agent, Looker, but finally sent the check as requested. We still have a similar complaint from another party in the same neighborhood for an equal amount on the same kind of a receipt. We believe the claim is collectible and we are going to insist upon having it. J. J. D.

Leghorn Characteristics.

WHAT breed of S. C. White Leghorns is it that has yellow feet and legs, and are they better than those with white feet and legs? G. A. C.

Ohio.

All purebred S. C. White Leghorns should have yellow feet and legs, this being one of the characteristic marks of the breed. This yellow color will fade out as the hens become old but should be marked in young stock. M. B. D.

Lame Chickens.

WILL you tell me what is the matter with my chickens and what to do for them? I first noticed that they walk with a peculiar hitch in their gait and go only a little way before they drop down as though their legs would carry them no farther. They gradually grow worse until in a few days they cannot walk at all. Their appetite is good, they will eat anything I give them and I can see nothing wrong with the droppings. They get very poor, but they seem to feel well. There are no lice on them. They have been having a grain ration of three parts cracked corn and two parts wheat and until the last two or three have had a dry mash of equal parts cornmeal, wheat bran and beef scrap before them all the time, also sour milk. They have free range, but for some weeks they have been rather crowded at night, as my coops were not large enough to accommodate them as they grew larger. R. W.

Pennsylvania.

The overcrowding of these growing chicks may have led to sweating and subsequent chilling with rheumatism as a result. I can only suggest that you confine those that show evidence of leg weakness by themselves in warm, dry, quarters and feed them less meat and more green stuff. Giving the others more room and seeing to it that they are not exposed to dampness and drafts while on their perches should prevent further extension of the trouble, if, as is probable, rheumatism is the cause of it. M. B. D.

Hens Eat Feathers.

I HAVE abont 125 chickens just on a town lot. I feed them corn, wheat, oats, bran, ground green bone, shells and grit, and still they pick the feathers off each other. It seems they do it mostly at night. Their backs and breasts are bare. They are such good layers I do not like to part with them. Will you tell me if there is anything I can do to stop them eating the feathers? T. S.

Pennsylvania.

The feather eating vice is frequently hard to control; it is most apt to be found in fowls that have too little exercise and are fed on too exclusively a corn diet. The irritation from the presence of lice and mites may also cause birds to begin the habit. The fowls should be given all the liberty and exercise possible, a variety in food, including animal food of some kind, and should not be without grit and charcoal. The worst offenders may be removed from the flock and the bare places on the rest well greased with carbolized vaseline. Search should be made for lice and mites and if these are found they should be disposed of by the use of dust baths for the fowls and by painting the perches and nests with some one of the liquid vermin destroyers; of these, a mixture of one-fourth part crude carbolic acid and three-fourths parts kerosene is efficient. M. B. D.

Favus in Fowls.

WHAT is the matter with my White Leghorn pullets? Last Spring I purchased four settings of eggs from a person who had very nice Leghorns, supposed to be purebred. When the pullets got a few weeks old they got scabs on their necks just below the head and later on it seemed to scatter down towards the body, the neck would swell up and feathers come out. They seemed to have a good appetite, but couldn't swallow very well. I killed some. The person from whom I got the eggs is having the same trouble, and a neighbor who got two eggs hatched their pullet and rooster and their pullet has it too. F. A. L.

New Jersey.

Your description of the disease affecting your pullets suggests that it may be a contagious trouble known as favus. This disease is characterized by the formation of scabs about the head and neck, which scabs may later extend to other feathered portions of the body and cause loss of the feathers. The bare skin is then found to be covered by crusts of a dirty white color and showing cup shaped depressions in the center. At first the general health of the fowl is not affected but as the disease extends symptoms of exhaustion appear and death may ensue. The remedy is to isolate the affected birds from the healthy members of the flock and to disinfect their quarters with whitewash and carbolic acid. The individual birds should be treated by gently removing the crusts with some smooth, blunt, instrument and anointing the surface with a mixture of calomel, one part, vaseline eight parts, this to be repeated daily, or by painting the parts with tincture of iodine. With isolation of affected fowls and persistent attention, the disease should be eradicated from the flock. M. B. D.

Dry Mash; Forcing Molt.

WHAT, in your opinion, is a good dry mash for White Leghorns? Would you advise forcing hens to molt, shutting off their grain two-thirds for about two weeks, and then feed them heavily, thus forcing molt? H. B.

Lisbon, Me.

A good dry mash, much used by the writer, is made up of equal parts of wheat bran, middlings, cornmeal and gluten feed, to which about one-eighth part of meat meal is added. The mash will be improved by the addition of a pint of fine salt to each two hundred pounds. The authorities at the Cornell Experiment Station, after a series of experiments, concluded that forced molting, or attempts at it, were not advisable and that the natural process should not be interfered with. M. B. D.

Ailing Hens.

MY hens sicken and die (White Leghorns and laying). Their crops would fill up, not hard; their heads turn purple. They are very thirsty and appear to be very stiff. Would linger several days or week. I feed wheat, oats, bran and middlings mash. W. S. R.

I cannot say positively what the trouble with these fowls is, but suspect some inflammation of the digestive tract. They may have obtained some putrid food or eaten some poisonous matter to which they obtained access. Marked thirst is an indication of such condition of the stomach and intestines, but of course a positive diagnosis cannot be made from one or two symptoms alone. A cathartic dose of castor oil; one to two teaspoonfuls; to each hen and confinement in a comfortable place where it can have soft food and plenty of clean water until death or recovery would be rational treatment in the absence of more definite knowledge as to the cause of the trouble. M. B. D.

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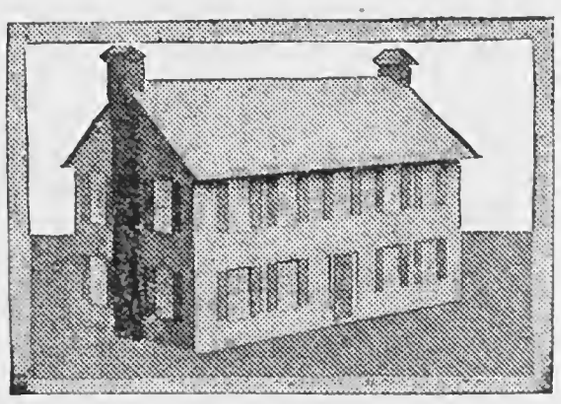

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Oct. 23, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.91 and $1.81 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents."

BUTTER.

Prices on the higher grades are unchanged. Medium and low qualities are in considerable surplus, and dealers ready to cut prices where necessary to clear out their stocks.

Creamery, extra, above 92 score, lb	32½	@	33
Extra, 92 score	31½	@	32
Good to Choice	26	@	28
Lower Grades	22	@	24
Storage	27	@	31
State Dairy, best	30	@	30½
Common to Good	22	@	25
Ladles	19	@	22
Packing Stock	18	@	21
Process	22	@	26

Elgin, Ill., butter market 30 cents.
Philadelphia, western creamery, 32 cents.
Chicago creamery, 25@30

CHEESE.

The one feature of the week has been an increase in export demand for both Wisconsin and State make. Prices for this trade have run 13 to 14 cents on whole milk.

Whole Milk, fresh, specials	14¾	@	15
Average fancy	14¼	@	14½
Under grades	12	@	14
Daisies, Wisconsin	14	@	14½
Skims, specials	12	@	13
Good to choice	10½	@	11½
Poor to fair	7	@	10

EGGS.

Fancy nearby eggs are very scarce, as has been the case for several weeks. An occasional lot has brought 52 cents, but to approach this they must be large and pure white, as well as fresh. The bulk of trade in fresh gathered is in the range of 30 to 35 cents. Very little being done in storage eggs, as prices, except on top grades, are not good enough to warrant sales.

White, choice to fancy, large	50	@	52
Medium to good	40	@	45
Mixed colors, best	35	@	38
Common to good	25	@	30
Western fresh, white	35	@	40
Lower grades	10	@	25
Storage, best	24	@	25
Lower grades	18	@	20

FRESH FRUITS.

Apple prices are 25 cents lower, except on best grades. Large quantities are selling at $1.50 to $2. Pears are rather scarce and in some cases higher. Grapes increasing in supply and market dull.

Apples—Alexander, bbl	1 50	@	1 75
Gravenstein	1 50	@	2 50
Duchess	1 50	@	2 50
Wealthy	1 50	@	2 75
Fall Pippin	1 50	@	2 25
McIntosh	2 00	@	3 00
Jonathan	2 00	@	3 00
Twenty-ounce	1 50	@	2 00
Spitz	1 50	@	2 25
Baldwin	1 50	@	2 00
King	1 50	@	2 50
Greening	1 50	@	2 50
Blush	1 50	@	2 00
Crabapples, bbl	2 00	@	8 00
Pears, Anjou, bbl	3 00	@	5 00
Bartlett	3 50	@	5 50
Seckel	3 00	@	5 00
Bosc	3 00	@	6 00
Clairgeau	3 00	@	5 00
Sheldon	3 00	@	5 00
Peaches, bkt	25	@	1 00
Grapes, 18lb case	50	@	1 00
Niagara, 4lb. bkt	8	@	12
Black, 4lb. bkt	7	@	10
Black, 20lb. bkt	30	@	35
Bulk, ton	35 00	@	50 00
Cranberries, Cape Cod, bbl	2 50	@	5 00
Jersey, Standard crate	1 12	@	1 25

HOPS.

Prime to choice	40	@	42
Common to good	35	@	39
Pacific Coast	15	@	16
Old stock	10	@	15

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

The chestnut market is still very low, with poor qualities in surplus. Hickory nuts scarce.

Chestnuts, Northern, bu	2 50	@	3 50
Southern	1 50	@	2 50
Cultivated, lb	03	@	08
Hickory Nuts, bu	2 50	@	3 50

BEANS.

The market is 20 to 30 cents per hundred lower on practically all varieties.

Marrow, 100 lbs	5 90	@	6 00
Medium	4 25	@	4 35
Pea	4 20	@	4 30
Red Kidney	5 35	@	6 50
Lima, California	5 90	@	6 00

VEGETABLES.

Potato receipts heavy and market continues very weak. Cabbage somewhat improved and $1 per ton higher on best Danish seed. Outdoor tomatoes scarce and 50 cents per bushel higher. Onions selling slowly at unimproved prices.

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 75	@	2 00
State, 180 lbs	1 25	@	1 75
Maine, 180 lbs	1 50	@	1 75
Sweet Potatoes, bbl	2 00	@	2 75
Brussels Sprouts, qt	04	@	12
Beets, 100 bunches	50	@	1 00
Carrots, bbl	1 00	@	1 25
Celery, doz	10	@	35
Cauliflower, bbl	40	@	2 00
Cucumbers, bu	75	@	1 25
Cabbage, bbl	75	@	1 00
Ton	8 00	@	15 00
Lettuce, half-bbl. basket	50	@	1 25
Onions—Red, bag	60	@	90
Yellow	60	@	90
Peppers, Jersey, bbl	1 25	@	2 00
Peas, bu	1 00	@	1 75
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	50	@	75
String Beans, bu	25	@	1 00
Squash, Hubbard, bbl	60	@	75
Marrow	50	@	75
Egg Plants, bu	50	@	90
Tomatoes, Jersey, box	1 00	@	1 50

LIVE POULTRY.

Receipts are heavy and market loaded with unsold stock.

Chickens, lb	13	@	14½
Fowls	13	@	15
Roosters	10	@	11
Ducks	15	@	15
Geese	13	@	14

DRESSED POULTRY.

Fresh killed turkeys are scarce. Demand fairly good for small fowls and chickens of medium size.

Turkeys, choice, lb	18	@	22
Common to good	15	@	17
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	21
Fowls	17	@	20
Ducks, Spring	16	@	17
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Business in hay is dull and prices 50 cents lower. Receipts are so heavy that the Erie has an embargo on New York and Long Dock lighterage delivery.

Hay, Timothy, new, No. 1, ton	20 50	@	21 00
No. 2	18 00	@	19 50
No. 3	15 00	@	17 00
Clover mixed	17 00	@	19 00
Straw, Rye, choice	13 00	@	14 00
Short and tangled	10 00	@	11 00

LIVE STOCK.

Native Steers	6 85	@	9 75
Bulls	4 50	@	6 50
Cows	2 75	@	5 75
Calves, prime veal, 100 lb	8 50	@	12 75
Culls	6 00	@	8 00
Sheep, 100 lbs	3 00	@	5 00
Lambs	7 25	@	8 00
Hogs	7 75	@	8 10

GRAIN.

Wheat business has been active, but declined later in the week, although prices closed two cents above last week. Corn two cents higher. Oat market firm, especially in the West.

Wheat, No. 1, Northern Spring	1 16	@	..
No. 2, Red	1 20	@	..
No. 2, Hard Winter	1 14	@	..
Corn, as to quality, bush	82	@	83
Oats, as to weight, bush	49	@	53
Rye	98	@	99

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	55	@	60
Mixed colors, new laid	45	@	50
Ordinary grades	25	@	35
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	25	@	28
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	24	@	26
Fricassee, lb	18	@	20
Fowls	18	@	20
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	15	@	18
Stewing beef	12	@	14
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	20

*

CANADIAN DAIRY LAW.

A law in effect September 1 has stringent regulations covering adulteration, misbranding and short weights of dairy products. One section apparently prohibits the possession or sale of oleomargarine and renovated butter, as it states that:

No person shall manufacture, import into Canada, or offer, sell or have in his possession for sale, any oleomargarine, margarine, butterine, or other substitute for butter, manufactured wholly or in part from any fat other than that of milk or cream.

Mix with or incorporate with butter, by any process of heating, soaking, rechurning, reworking, or otherwise, any cream, milk, skim-milk, buttermilk or water to cause such butter when so treated to contain over 16 per cent. of water.

Melt, clarify, refine, rechurn, or otherwise treat butter to produce what is generally known as "process" or "renovated" butter, nor add any milk or cream to butter.

No person shall import into Canada, or offer, sell or have in his possession for sale any butter containing over 16 per cent. of water or any process or renovated butter, or butter to which milk or cream has been added.

*

From August 15, when the Panama Canal was opened, to October 4, 100 vessels passed through. To October 1 the total tolls paid amounted to $369,706.

*

Our exports of foods, cotton and oils for the nine months ending September 30 were valued at $616,043,896. Important items were: Corn, $5,724,419; wheat, $105,522,416; flour, $37,628,175; meats, $40,707,360; cotton, $242,208,637; oils, $107,115,034.

*

In 10 days, ending Oct. 20, there the following exports of foodstuffs from New York to Europe: Wheat, 1,539,415 bushels; flour, 1,340,000 pounds; corn, 171,915 bushels; oats, 577,782 bushels; rye, 176,725 bushels.

*

At the Saturday "bargain day," recently held in the New York open markets, the following prices were noted: Potatoes, 80 cents bushel; cabbage, head, five cents; apples, bushel, 90 cents; sausage, pound, 12½ cents; lamb by the quarter, 9 to 12 cents; beefsteak, 18 cents; fresh pork, 14 cents; roasting chickens, 16 cents.

*

The wool market during the past week has been in stronger position than for some time previous. The demand for Winter clothing from the war zones has stirred up manufacturing and the embargo on certain wools from Great Britain has shut out part of our normal supply from the London auctions. It is expected that a serie sof auctions will be held in Australia and New Zealand, in which no doubt American buyers will be interested. Prices on unwashed delaine at Boston have run at 24 to 25 cents, and 28 to 29 for half blood. Western territory wools have brought 19 to 23 cents.

Subscribers' Exchange

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

SECOND CUTTING ALFALFA for sale. E. V. BEACH, Oriskany Falls, N. Y.

PURE HONEY—Direct to Consumer; circular free. HARRIS T. KILLE & BRO., Swedesboro, N. J.

NEW HONEY—Basswood or clover in sixty-pound cans; write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

FOR SALE—Valuable fruit and poultry farm of 9 acres. Fine market. MOORE & SON, Nazareth, Pa.

FOR SALE—Fifty-three-acre farm, with improvements, near Bridgeton. A. J. ALLEN, Salem, N. J.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Farmer work large dairy farm on shares, near Ithaca; splendid chance for right man. H., care R. N.-Y.

WANTED—Position on farm by young man; six years' experience; what have you got? state wages. L. A., care R. N.-Y.

WANTED—Position as fruit pruner, fifteen years' experience; best reference. Maryland preferred. L. SIMMONS, Wernersville, Pa.

POSTION WANTED as farm foreman or herdsman, experienced; best references; wife would board help. AMERICAN, care Rural New-Yorker.

FARM WANTED—Farmer owning complete up-to-date farming implements, wants farm of any size to work on shares. Address MRS. R. JAMGOCHIAN, Merchantville, N. J.

POULTRYMAN graduated from a scientific course, and worked on the largest plants in the United States, will take charge or go as an assistant. G. J., care Rural New-Yorker.

PARTNER WANTED—Florida live-stock proposition, with capital, by university trained agriculturist; 500 acres rich clay soil, near Tallahassee. L. HEIMBURGER, Tallahassee, Fla.

WANTED—About Nov. 15 by two young men, positions on stock, or dairy farm. life experience; no liquor or tobacco; good teamsters and milkers. Address RELIABLE, care Rural New-Yorker.

EXPERIENCED POULTRYWOMAN desires correspondence with woman interested in organizing poultry business in country town near good market; unquestionable references exchanged. Address K., Rural New-Yorker.

EXPERIENCED DAIRYMAN wants permanent position; willing to work at moderate salary if the position is permanent and the surroundings congenial; age 40, and would prefer place where work is not too heavy. M. R., care Rural New-Yorker.

WANTED—Position as herdsman or caretaker by sober, single man of 30; life experience in feeding and caring for stock; best of references; will go anywhere; state full particulars and wages in first letter. ARTHUR RIPLEY, Skaneateles, N. Y.

HERDSMAN WANTED—Married, about 35, with some college training, experienced in purebred Holsteins and dairy practice, and at present employed; must understand feeding balanced rations for milk and A. R. O. and be a good milker. MOHEGAN FARM, Peekskill, N. Y.

WANTED—Competent, experienced farmer, 300-acre Niagara fruit and stock farm, fine location, surroundings and equipments all up to date, good opportunity for man who can show results from past records; state in full references, age and salary wanted. CHESTNUT RIDGE FARM, Lockport, N. Y.

WANTED—By a first-class manager, at present employed managing a large private estate, a position of similar capacity, private or commercial, thoroughly versed in up-to-date farming and thoroughbred stock raising; capable of managing any large proposition; highest references; satisfactory reasons for leaving. Address "SHELDONCROFT," Silver Lake, Pa.

WANTED—Position as caretaker and general utility man on gentleman's private place, by an American, married, two small boys; have had six years' scientific, 10 years' practical training, thoroughly understanding care and feeding of all farm animals, farming, gardening, horticulture, dairying, carpentry, farm machinery, engines, etc.; not a user of liquor or tobacco; best reference. W. B. F., care Rural New-Yorker.

TENANT WANTED for improved 130-acre farm near Seneca Lake, Seneca County, New York; 16 acres grapes, 8 acres apples and peaches, rest tillable soil producing Alfalfa, corn, wheat and hay. Good water and accomodations for stock. School, church and R. R. near; progressive neighbors, ample barns, house and outbuildings. A No. 1 opportunity for the right man. Good reference required. HERMAN VAN VLEET, Olmstedville, N. Y.

FOR SALE—Fully equipped poultry plant in San Joaquin Valley, Calif.; particulars free. O. C., care R. N.-Y.

FOR SALE—257-acre farm, good buildings, would include stock and tools. For particulars address CLARENCE RICE, Camden, N. Y.

FOR SALE—Small place, Sullivan Co., N. Y., over two acres; good buildings; adapted for chickens and truck. JOSEPH ROGERS, Farmingdale, New Jersey.

FARM—177 acres, $4,900; terms; level timber, buildings, fruit, water, fences, productive, warm climate, with photos, description. PHOTOGRAPHER, R. 3 N., Decatur, Tenn.

POULTRY FARM FOR SALE—Paying good profits, fifty acres, beautiful home, ¼ mile from depot, 6 miles large city; 1,000 layers; broods 3,500; $10,000; $6,000 cash. Address POULTRY, Rural New-Yorker.

WANTED to rent, with privilege of buying, country place, not over 125 miles from New York City, suitable for Summer boarders; modest size, moderate price; accessible by vehicle to main railroad. Address with particulars, JOHN R. METZGER, 379 E. 162d St., N. Y. City.

UNUSUAL FARM BARGAIN—160 acres dark loam soil slightly sloping east, free from stone, never-failing water, 14-room house, with hot and cold water and fine bathroom, large, new barn, buildings all newly painted; farm lays on main road one mile from small village. Price $4,000; one-quarter down, balance at 5 per cent. Write quick if interested. C. L. STONE, Oxford, Chenango Co., N. Y.

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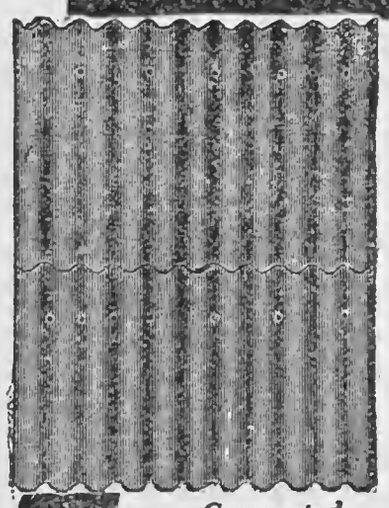

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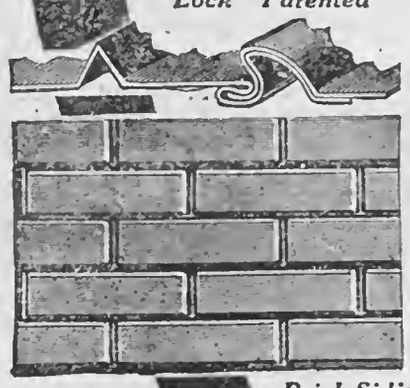

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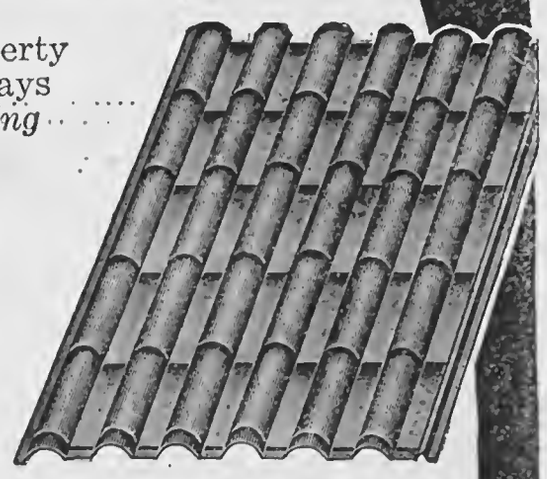

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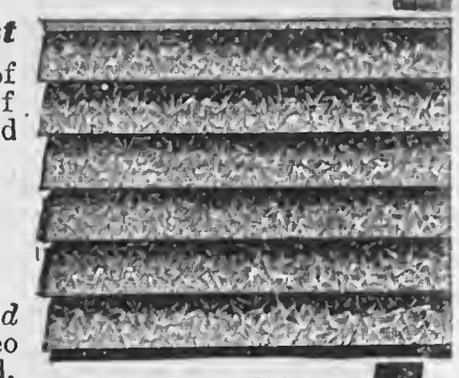
The Edwards process of galvanizing makes the zinc spelter practically one piece with the steel. No ordinary galvanizing can compare with it. Each and every *Edwards Metal Shingle, Metal Spanish Tile,* each sheet of *Edwards Reo Steel Shingles, Grip Lock Roofing, Pressed Standing Seam or Roll Roofing* is dipped in a *bath of molten zinc, one at a time after the metal has been stamped and resquared.* This insures a uniformity. *The edges are galvanized* as heavily as the sides. Not the space of a pin-point on the steel is exposed to the rain, snow, frost, acids or anything that eats or destroys a steel roof.

How to Test Galvanizing

Take a piece of any other galvanized steel, bend it back and forth several times, hammering it down each time. You will then be able to flake off great scales of the galvanizing with the finger nail. Apply this test to a piece of *Edwards Tightcote Galvanized Steel Roofing*—you'll find no flaking—not a space on the metal the size of a pin-point exposed to rust.

EDWARDS Patent Interlocking Device
Prevents Warping, Buckling or Breaking—Protects Nail Holes—They Can't Leak or Rust

This device not only takes care of expansion and contraction so that an EDWARDS Steel Roof never warps, buckles or breaks, but it is so designed that nails are driven through the *under* layer of metal only—nail holes are protected from exposure—cannot rust. No special tools or experience needed to lay it—anyone can do the work—lay over old shingles if you wish.



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Reo Steel Shingles

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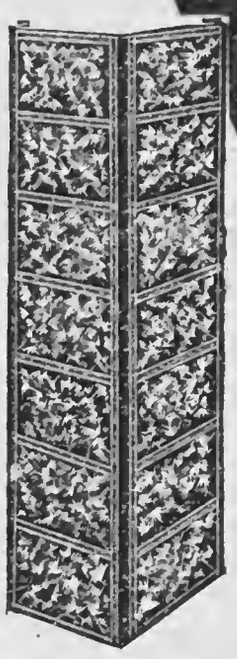

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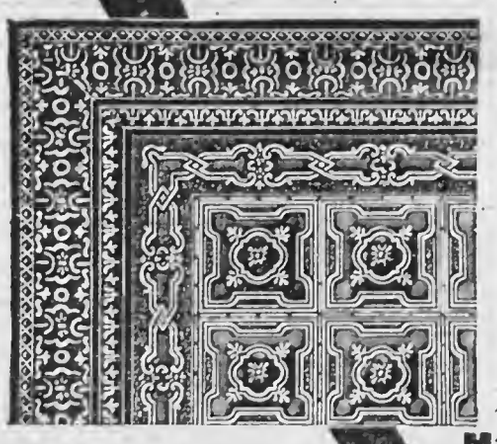
Many patterns for Surfaces, Corners and Pilasters



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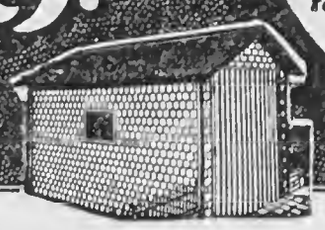

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. LXXIII. No. 4280. NEW YORK, NOVEMBER 7, 1914. WEEKLY $1.00 PER YEAR.

STEER FEEDING IN NEW JERSEY.

A Business Likely to Come Back.

WOULD it be profitable and safe to buy 1000-pound steers at this time, feeding them for five months or until Spring, and then disposing of them? I mean to finish them off for the market. What age steer is it most profitable to buy? Will the European War tend to increase market price by Spring? I have as a ration for this Winter's feeding, corn silage, corn and cob meal, and can purchase either wheat bran or cottonseed meal. Would this be as large and safe a means of profit as that of putting on dairy cows? I know it would mean considerably less work.

New Jersey. J. E. W.

There are so many factors involved in the inquiry that it would be quite necessary to know more of the local conditions in order to answer the questions with the most intelligence. In the first place, the cost of transportation from sections where feeders could be purchased in carload lots adds materially to the cost of the animals delivered to the farm. The loss of one or two animals, either during the period of transportation or in getting them accustomed to local feeding or climatic conditions, would consume considerable of the profits. In the second place, conditions for marketing in the East are disappointing. In many sections of the State, butchers or buyers will pay no more for prime steers in a finished condition than they will for old dairy cows in good flesh. A surprisingly small percentage of our butchers buy animals on the hoof, preferring rather to buy so many hind quarters, so many loins or so many fore quarters on the hook. They are not butchers in the strict sense of the term, but rather meat cutters. Their argument, no doubt, is a convincing one; namely, that they do not have to dispose of the refuse products, nor to keep the necessary help and equipment necessary for slaughtering. Their running expenses are much less.

On the other hand, if the inquirer can obtain representatives of any of the beef breeds locally or delivered at his station at reasonable cost, and provided he can market his finished animals at a price consistent with the quality of the meat produced, there is no reason why beef animals should not convert his corn silage, cornmeal and purchased cottonseed meal into meat at a profit. He ought to obtain market prices for his farm-grown products, be paid day wages for the labor involved, and have the manure as a dividend. Animals known as short two-year-olds, weighing from 800 to 1,000 pounds, would make the best mediums for feeding.

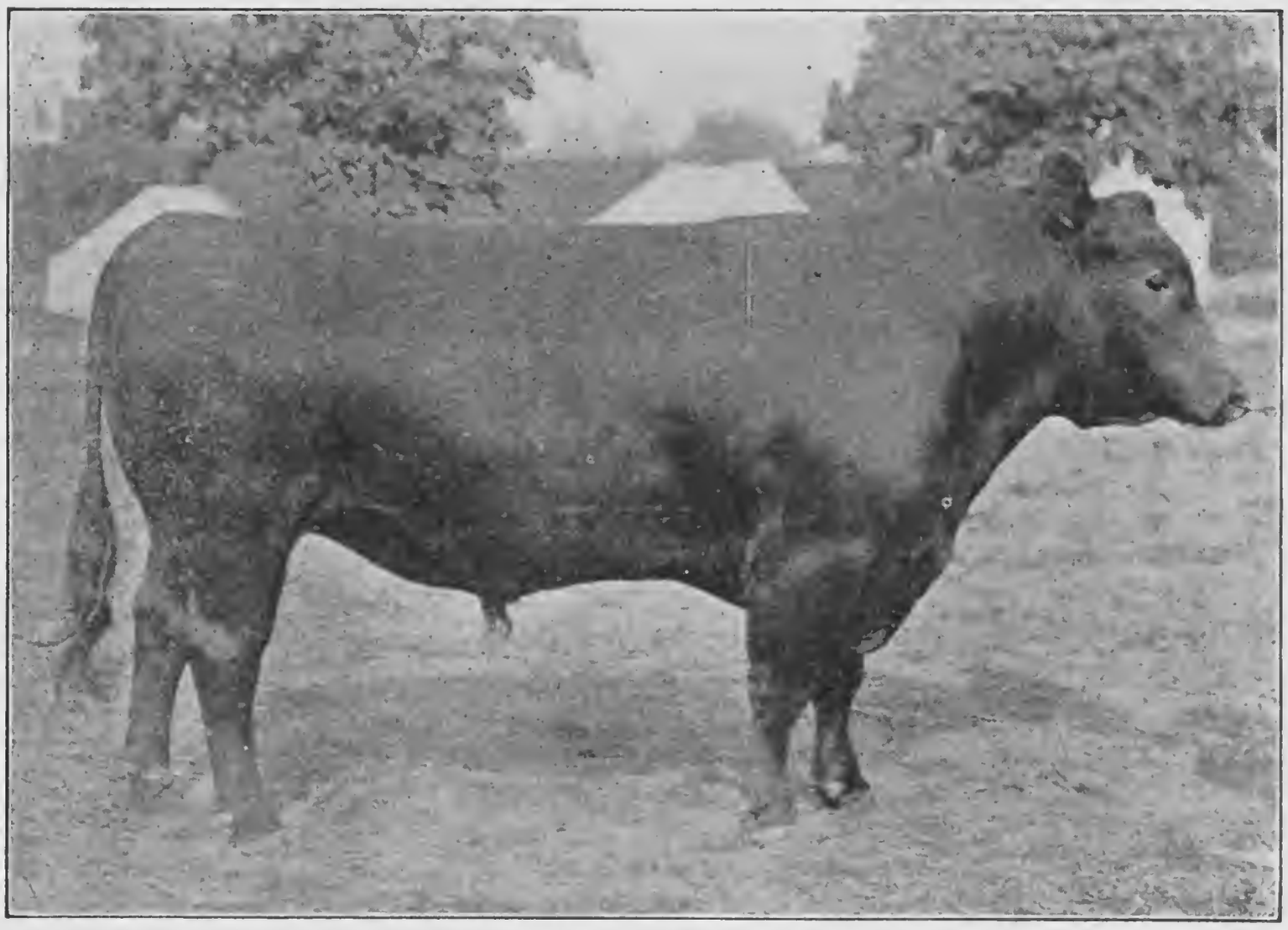
If he lives in a dairy section, and the farmers in that community buy a great many dairy cows, as is the prevailing custom, it would seem reasonable to believe that a more profitable line of procedure would result in case dairy heifers were purchased and fed through the Winter months, and sold as they were about to freshen in the Spring; for instance, it would be possible to buy a carload of bred heifers at a cost varying from $50 to $65 each; they could be wintered on silage, corn and cob meal, supplemented with some cottonseed meal, and would, no doubt, bring in the neighborhood of $90 to $100 each in the Spring. Dairymen pay these prices for heifers or cows brought in from New York State and Pennsylvania, and I know of no reason why such a scheme would not pay. The heifers should be tuberculin-tested and housed in such a way as would promote health and vitality. They would utilize the farm products economically and the voidings would be just as valuable.

In case J. E. W. has an abundance of pasture land, he might buy heifer calves a year old, run them through the Winter, as suggested, put them on grass in the Spring, and either sell them in the Fall, if they were old enough and large enough to breed, else winter them still another season and sell them as dairy heifers in the Spring, when they are about to calve with their first calves at three years of age.

This fact is significant: the problem facing the Eastern farmer is that of producing more of the products that he uses on his own farm. A few years ago, practically every farmer in New Jersey fattened a few feeders, even though they were only dairy cows or steers. Now he not only buys his milch cows, but a large proportion of the feed that he gives them. The home-grown heifer calf out of a sire and dam whose record for production and reproduction is above the average is a much safer medium to feed home-grown products to than is the animal that is picked up from the drover and fed purchased food stuffs that contain so-called elements that the calves cannot find. F. C. MINKLER.

New Jersey Station.

R. N.-Y.—Prof. Minkler here touches on a problem we have often referred to—a market for Eastern beef.



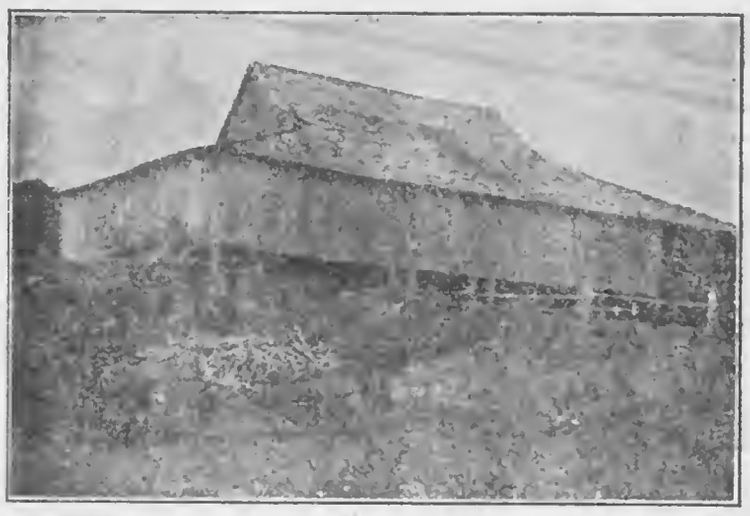
THE BEEF BREEDS.—A FIRST PRIZE ANGUS BULL. FIG. 569.

ABOUT THE DEVON CATTLE.

IT is no more than right that the most domesticated cattle should have a picture in THE R. N.-Y., and a statement as to their worth. The Devon type is shown in the statues of Egypt, illustrated in National Geographic Magazine, and presumably the Devon cattle have been under the care of the milkmaids for 3,000 years or more. I find that the bulls are as tame and gentle as the cows, and they are very intelligent, so that they are used largely for oxen. I visited Dr. Buell's farm and saw about 70 superb Devons; all his surplus males were made oxen and trained and sold. The Devon herd books and the New York Experiment Station give the tests for the milk, and it is the richest in casein, and is above the average in fat. I find that my Devons (registered) keep up their milk flow long after calving, and do not as my Jerseys did, give a bountiful flow at first and then go down to almost nothing. I haven't as yet kept a daily measurement of the amounts of milk given by my cows, but Dr. Morris, (President of the Devon Cattle Club) has, and he finds that the Devons are not at all at a disadvantage in comparison with other breeds of cattle. I am breeding the dairy type, so my animals are smaller than the usual beef-bred Devons, but, as a matter of taste I prefer a small cow; in proportion to their size with the others they give more milk, the mother of the mother of my herd was a 20-quart cow, so the owner, B. J. Wightman, wrote me; at any rate without the trouble of daily weighing or measuring the milk I am quite satisfied with their yield.

The superb appearance of these Devons as lawn or pasture ornaments cannot be excelled by any other breed; rich red in color, with large, branching white horns, large, beautiful eyes, and a placid disposition that adds to their beauty. They just suit a landscape. The milk is the finest for drinking, it having none of that oily flavor so objectionable in the Jersey milk. In fact, my daughter, then a young child of nine, didn't like the flavor of the Jersey milk on account of its oiliness, and I read of the Devon milk being the best for children and invalids because of the better proportions of the food nutrients, consequently the Devons are here and are prime favorites. The mother of the herd, now 11 years old, is said by many to be the finest cow they have seen and the finest in the county. The bulls I have had are all gentle, as gentle as the females; I haven't put a ring in the nose, only the same rope that ties the cows to tie them, and that is a comfort, for some of my neighbors with Jersey, Holstein and Dexter bulls find them very cross, and some are positively dangerous. Two neighbors were killed by their own bulls.

The Devons' home here in Southern Maryland is the beautiful pasture nearly all the year, for short intervals they go in this barn, Fig. 572, which is typical of this county. It is a useful barn, the plan of which might be followed to advantage. The driveway is plenty wide enough, for farm implements to be on the sides, such as plows, cultivators, harness, seeds, fertilizers, etc. It is very handy to drive a



A MARYLAND CATTLE BARN. Fig. 570.

load of hay right under cover at times. Even on Long Island I found the Devons reluctant to go into stalls at night—they seem always to prefer the open. The vice-president of the Maryland Horticultural Society wrote me that cattle in St. Mary's County did better if allowed to be out all the year, and one of my tenants did so Winter before last, and his cattle wintered well. At any rate this is a far different climate from Winnipeg and Alberta, and the wheat here is fine, above the average in yield.

Maryland. ELBERT WAKEMAN.

A FIG PROPOSITION—THE LATEST.

HALF A DOZEN people from Canada to Delaware have sent us the following notice, which appeared in the daily papers. We omit the address:

"IS HE CRAZY?

The owner of a large plantation in Mississippi, where the fine figs grow, is giving away a few five-acre fruit tracts. The only condition is that figs be planted. The owner wants enough figs raised to supply a co-operative canning factory. You can secure five acres and an interest in the canning factory by writing the..... They will plant and care for your trees for $6 per month. Your profit should be $1,000 per year. Some think this man is crazy for giving away such valuable land, but *there may be method in his madness.*"

This seems to be a very slick concealed advertisement—one of the meanest forms of fishing for suckers. We submitted the proposition to a very intelligent correspondent on the Gulf coast. Here is his report:

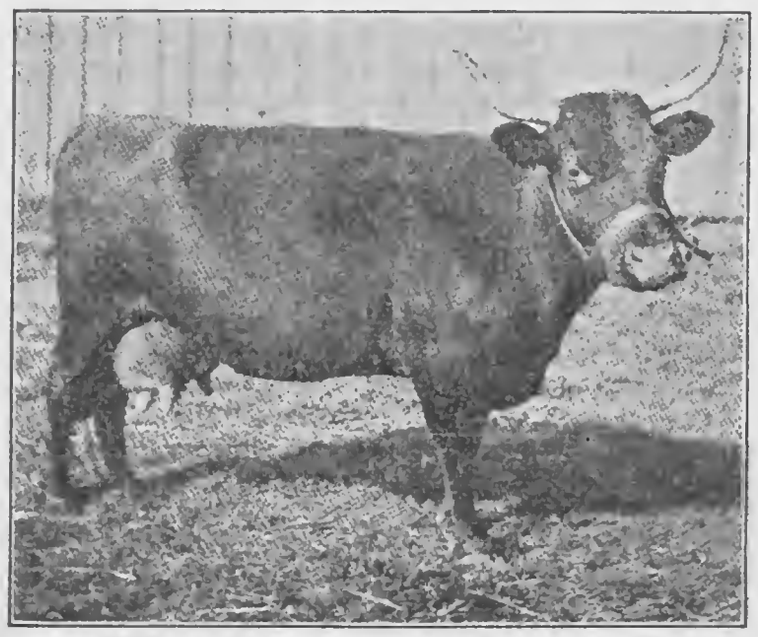
River plantations along the Alabama and Tombigbee rivers, in Alabama, that is, alluvial deposit soil which was rated as a bale to the acre for cotton when slavery solved the labor question, can be bought at from $5 per acre up, due to the trouble of getting labor to cultivate the land. In view of the value of the land as a whole, I would not judge that it would be much over $10 to $15 per acre, and it is a good proposition for a seller to give away five acres worth $75 and get $72 per year for several years for looking after it. I do not think the man is mad, but wants to unload his plantation.

The fig orchard proposition is a very dangerous enterprise for a Northern man to venture on. As a rule, with rare exceptions, the orchard treatment of figs is a failure in this country; Cudahy, the meat packer, set out an orchard of 13,000 trees in Baldwin County, within 30 miles of Mobile, got an expert from Chicago to operate it, and this season (1914) estimated he should get a good crop for young trees. I have learned on authority that I accept as correct, that every tree in the tract dropped its entire crop, and the orchard produced no revenue at all. No doubt his manager was competent to manage a peach, apple or ordinary orchard, and assumed that the fig was amenable to the same treatment, which it is not.

While California has fig orchards and produces dried figs, they are from what I have read and heard, mostly of the Smyrna type, the male and female trees, and fertilized by the fig wasp, the insect often being brought from points south of the orchard where the climate permits them to winter. This is an entirely different fruit from our figs, which belong to the "mule" type, and are incapable of being reproduced from seed, but are propagated by cuttings and suckers and it is probable that the California methods would not work on this different tree. The California fig is primarily large, rather coarse and well adapted to drying; our fruit is small, juicy, delicate, and is pre-eminently a table and preserving fig and is practically useless for drying. The fig is a very delicate fruit, and a rain on it when about ripe swells and sours it on the trees, so a large portion of the crop is lost this way; I figure on an average that half of the fruit on my place is destined to be lost this way; the season just gone, I believe it amounted to two-thirds of the crop. The fig ripens in our season of rains, so you can safely figure the rain damage. The year of the great freeze, I forget the date, that wiped out the Florida orange orchards, every fig tree in this section was cut to the ground, but grew again from the roots.

There is no doubt that there is good money to be made from a fig orchard, as the supply is short of the demand, but to successfully orchard the fig is something which will require more study, and is a proposition for the future. It is strictly to-day a back-yard and fence-corner tree, flourishing in such locations of apparent neglect, and such conditions, in view of present information, must be duplicated to orchard it successfully. The co-operative cannery looks like a promoter to me. The fig canneries here are those putting up oysters and shrimps, and are open for the fig season with nothing else to do, when it comes. An ordinary cannery would have to use them as a side line, or crowd out some other fruit, and could operate just as well without figs as not.

Taking the proposition in another light, if a man had a good and productive plantation which he could cultivate, he would not get rid of it in five-acre driblets at a reasonable price, certainly not give it away. Further, if he had a good plantation but had not available labor to work it, how could he get the labor to cultivate the small tracts? We have a good climate, the range in temperature compared to other sections is small, it suits me right down to the ground, but I very seriously doubt that the average Northern man would like it after he had grown up under other conditions; further, he does not understand the negro, and would never learn to handle that class of labor, practically the only kind avail-



A TYPICAL DEVON COW. Fig. 571.

able, and I would not advise him either to buy or accept as a gift (without a string to it) any land down here, until he had lived here several years and saw if it suited him. He probably would not care to live on his place, and to run it by absent treatment would be a losing proposition, and he couldn't sell it, for I do not think there is a market for fig orchards; I have never seen one offered, and doubt a buyer could be found if it was.

CONCRETE FLOOR FOR BARN.

I WOULD like advice about putting cement bottom in a basement barn 30x60 feet. A. A.
Addison, N. Y.

If your floor is to be a continuous basement floor, without special arrangements for stalls, etc., its construction will be a very simple matter. If the soil is of open, well-drained character, the dirt floor may be leveled and tamped, and the concrete laid directly upon it, but if it is inclined to be wet it will be safer to lay a sub-base of field and cobble stones eight or 10 inches in depth. Build the concrete floor in sections, working from the walls toward the centre to permit of using the open centre for working purposes. Set 2x4 scantlings upon edge against the base of the wall, running the long way, and parallel with them and eight or 10 feet distant, another line of scantlings, fastening these to the ground by means of short stakes. Fill the space between these two lines of scantlings with your concrete mixture, leveling it with a straight-edged board resting at the ends upon the scantlings. After the concrete has become somewhat stiff, finish the surface with a rough float or wire brush. Set another line of scantlings at a convenient distance within this section, and continue the process until the floor is completed, removing the used scantlings as soon as the concrete has become sufficiently set and filling the spaces left with the concrete mixture. The standard mixture for such a floor would be one part of cement, two and a half parts of sand and five parts of crushed stone or gravel; if you have a natural bank mixture of gravel and sand suitable for this purpose, however, one part of cement to six or seven of sand and gravel should make a good floor; local masons should be able to advise you as to the proportions needed. Unless a specially smooth, hard, surface is wanted, it is not necessary to use a finishing coat of sand and cement. Small cobble stones may well be used in the concrete, but they should not be allowed to come within less than one or two inches of the surface. If desired to waterproof the floor, a layer of concrete may be laid and tarred paper spread over it; this to be mopped over with hot tar and the concrete filling then completed. With some one who understands the mixing of concrete to supervise the work, such a floor may easily be laid by ordinary labor. M. B. D.

FARM ECONOMY—A CROP ROTATION.

CAN you help me solve the following question in crop rotations? A man, having a farm of a given size wishes to raise chickens and hogs as his chief products with orcharding, potatoes and hay as side lines. His grain crops therefore must comprise, to be used exclusively in feeding his live stock, corn (chiefly), oats, wheat, buckwheat. He sets apart a certain portion of the farm for orchard, buildings, permanent pasture and garden (potatoes), the remainder for his grains. He naturally wishes to have the rotation shortest possible, thereby cutting his land up into the least number of plots and having the fields the largest possible. My idea would be:

First year, corn; last cultivation plant cover crop. Second year, corn; after harvested sow Winter wheat. Third year, one-half of field to buckwheat (for chickens) and one-half to Soy beans or some crop which would make good roughage for hogs, and which can be planted late. These two crops are put in after wheat is off. Cover crop same Fall, if possible. Fourth year, oats and clover, sown together. Harvest oats, then pasture clover, from say middle of August on, with hogs. Fifth and sixth years, hay, light cutting first year. With regular cutting second year, would this hay crop pay? However, this rotation requires a long period, and consequent inconveniences. It is possible that you may consider some one of these crops unprofitable, or that one could buy necessary amount rather than raise it. If so, of course, omit it. K. E.
New York.

The proposed plan of crop rotation is quite a feasible one. It would seem to me, however, that the following suggestions might add value:

First year, previous to last cultivation, sow cover crop of wheat and vetch or rye and vetch. Second year, corn, to be followed by Winter wheat. Third year, instead of putting in buckwheat and Soy beans as suggested, I would prefer to seed a mixture of rape and Soy beans, utilizing six pounds of rape and a bushel of Soy beans per acre. These could be seeded after the wheat had been harvested, and would make a most excellent forage for swine. A cover crop consisting of rye and vetch or wheat and vetch should be seeded in the Fall. Fourth year, oats and Canada field peas, drilled early in the Spring. They may be harvested either as green forage or cured as hay, or even matured as hay and thrashed. This field should be seeded to grass during August or September without a nurse crop. We have had the best results in establishing meadows by taking advantage of the Fall seeding of grass seed. A crop of hay could be harvested during the next two years, and it is recommended that a mixture of grass seed be utilized, namely, Timothy, Alsike, Red clover with a little Alfalfa, rather than straight clover or Timothy.

If it is intended to produce crops primarily for poultry and swine, the rotation could be shortened, utilizing corn, to be followed with a cover crop seeded in the Fall. This area could be pastured in

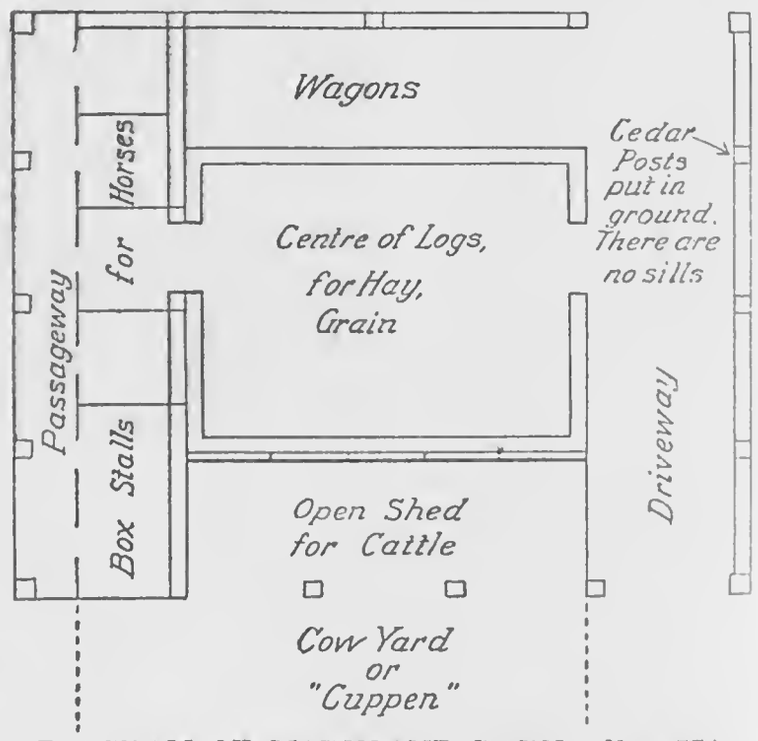


DIAGRAM OF MARYLAND BARN. Fig. 572.

the early Spring, and the rye and wheat harvested as scratch feed for the chickens and the area plowed and seeded with rape or Soy beans; this crop to be utilized as forage for swine. After frost appears in the Fall the ground could again be plowed and seeded to a cover crop, and this rye and vetch plowed under during the early Spring, and the area planted with corn. This is a two-year rotation that is very practical and useful? The swine and poultry products in this case would be the only cash products, unless other areas of the farm were devoted to hay and other grains. F. C. MINKLER.
New York.

BRAZILIAN METHOD OF MANURING TREES.

Experience in Orange Groves.

WITH regard to the use of manure in orchards, we made a very interesting and suggestive observation in Brazil last Winter in this connection. We found in the orange groves in the vicinity of Rio de Janeiro, and more particularly at Bahia, that the orange growers practice the application of manure to their orchards regularly and in considerable quantity. In fact we were told by many orange growers, and found no contrary opinion, that manure in those citrus orchards was absolutely necessary for the maintenance of healthy and productive trees. They use the term manure to include both the manure from dairies or other sources, the composting of various organic substances with this manure, packing-house refuse, and, in one or two cases, other highly nitrogenous substances, such as the sugar cane after the juice had been pressed out of it. We were repeatedly informed by the leading and most successful citrus growers, without exception, that this practice was absolutely necessary in order to grow healthy orange trees.

The method of using this manure by these orange growers did not make so much impression on us at the time as it has since we have had an opportunity to study and digest our notes and observations made on this expedition, since returning to the United States. In the first place, as a rule the manure is collected in cemented pits; care is taken to preserve the liquid as well as the solid manure, mixing both before distributing the manure in the groves. Usually cisterns are provided for collecting the liquid manure, from which it is taken up by buckets attached to ropes. The manure is buried in the soil in the orange groves.

On level land, a hole about three feet across and 15 inches deep is dug with a heavy hoe, called "enchada," in the center of the square made by four trees. The trees are planted on the average about 20 feet apart each way in squares. On hillsides this hole is dug directly above each individual tree, perhaps five feet above the tree. The earth is somewhat banked up on the lower side of the holes. After the manure is placed in these holes the loose earth is thrown back on the manure, usually resulting in the loose earth being raised above the surrounding soil several inches. In a short time, however, the manure and loose earth settle so that these holes filled with manure and earth have the same level as the rest of the orchard.

There is no doubt in my mind but what there is a philosophy about this method of using manure in citrus and perhaps other orchards which is worthy of careful study in this country. The method used by the Brazilians is, no doubt, an inherited method, handed down from generation to generation, perhaps from Portugal, and even before this from India, from which source the Portuguese secured their citrus trees. From India the Portuguese carried their citrus to Portugal and later to Brazil. A. D. SHAMEL.

U. S. Dept. of Agriculture.

R. N.-Y.—In Florida we were told by expert orange growers, whose groves were on light soil, that manures and organic fertilizers were not satisfactory. The reason given was that the organic manures kept up a long continued supply of nitrogen—often causing a rank growth too late in the Fall. Therefore these growers preferred chemicals containing soluble plant food. The soil and conditions in Brazil may be different from those in Florida. It has long been known that if we plant manure or even a bone in the soil some distance from a tree or vine the roots will turn and make for this buried plant food.

GOOD WORDS FOR SWEET CLOVER.

ON page 1209 W. F. Massey, of Maryland, writes rather disparagingly of Sweet clover; calling it a rank weed, and remarking that there is no need for it in that State. Maryland must indeed be a very fertile State if there is no land in it that could be benefited by a crop of Sweet clover, or where a crop of this legume would not be the most profitable one that could be grown. For several years I have been quite an extensive grower of Sweet clover, therefore feel competent to testify to its qualities, good and bad. It is equal to Alfalfa as a forage crop; far excels any of the clovers as a seed crop, and is only a shade under Alfalfa in nutritious properties; contains more nutriment than Crimson clover, and Timothy is not in the same class.

After cutting a hay crop, which in every respect will compare favorably with the first cutting of Alfalfa, you can harvest a seed crop ranging from four to 15 bushels per acre, which is now selling in central Ohio from $10 to $12 per bushel of 60 pounds, with the supply not equal to the demand. In most States, and possibly in Maryland, there are gravel and clay hills which will grow no crops, and wash greatly. A sparse covering of grass may possibly succeed in its struggle for existence, but 10 acres would scarcely afford pasture for one healthy cow. Sow this same 10 acres to Sweet clover, 20 pounds per acre, early in the Spring, and it will afford good pasture for the first year for all of the stock found on the average 100 to 150-acre farm, and the second year it can either be pastured until the middle of June or a hay crop be obtained. About the middle of September a seed crop can be harvested, then the field can again be pastured until early Winter. This seed crop will easily pay for the feed consumed by the stock the remainder of the year.

Sweet clover is a biennial plant, with seed crop best the second year. It is an easy crop to raise, as the ground requires no special attention. All that is necessary is scratching the surface with a disk or an ordinary iron-tooth harrow, and broadcasting 20 pounds of seed to the acre. My first experience was rather unique. I carefully prepared a 35-acre field—good soil, and drilled in the seed with oats as a nurse crop. Another field of 15 acres, gravel and clay hills, was scratched over with a disk. Seed was sown broadcast. In an old gravel pit of about two acres, the seed was sown broadcast, without any preparation whatever. In the 35-acre field with good seed bed, the effort was a complete failure, but in the 15-acre field and the gravel pit I had excellent results. I afterwards found out, by experience, to be successful, you must have a very compact seed bed, with a pulverized surface of not over one-half inch in depth. The seed in the 35-acre field was drilled in too deep, and the soil underneath was too soft. All of my stock prefers Sweet clover pasture and hay to any other. C. H. K.

Springfield, Ohio.

AFTER A NUTTING EXPEDITION IN CONNECTICUT. FIG. 573.

A NOTE ABOUT NUTS.

IN answering the letter of M. H. M., of Virginia, on page 1255, you speak of "White walnuts or hickories." In Bulletin 17, Division of Forestry, U. S. Department of Agriculture, "White walnut" as a name in use for Hicoria ovata, or shagbark (hickory) is given only from New Jersey; whereas "White walnut" as a name in use for Juglans cinerea, butternut, is given from 16 States, including Virginia. So undoubtedly your correspondent had this nut in mind when he asked about the market value of the "White walnut."

As you say, the great drawback to the Black walnut and the butternut is the thick shell and the difficulty of getting out the meat. There must be somewhere trees of these varieties that bear nuts that have thinner shells and meats that are easier to get out. It is now comparatively easy to propagate any nuts by budding and grafting. If any person knows of a superior Black walnut or butternut he should make it known to the U. S. Department of Agriculture for expert opinion and for propagation if found worthy.

About the hickory (shagbark, H. ovata) you say "The percentage of these nuts of good size, thin shell and easily removed meats is small." This is true, but there are nuts with these good qualities, and there will be more of them some day when people realize that they can top-work their hickories of any variety with selected varieties and get nuts that fetch the highest market prices. But many of the trees that bear these extra good nuts are dying off year by year, without anyone making an effort to have them perpetuated by grafting.

W. C. DEMING,
Secretary Northern Nut Growers' Association.

HOW TO STORE SEED POTATOES.

STORE them in the cellar exactly the same as apples in bins, only be careful to see that the temperature never goes lower than 32 degrees. In the Spring it is most difficult to keep the seed in perfect condition. Early sprouting does to some extent lower the vitality, but this of itself is not necessarily most damaging, because if the seed is stored in thin layers, well aired, we always find it strong after planting, judging by the stand of plants. But it is when the seed is stored in a large body that we have trouble; then the seed will heat, and the worst of it is there is no way of determining the extent of the damage, for it looks exactly like the seed spread out in shallow layers.

We have found a better way than to depend on cellar storage in late Spring. As soon as the seed shows a tendency to sprout, we remove from cellar storage, treat with formaldehyde solution and immediately spread in a thin layer on the grass. If the seed is intended for late planting we put it under the shade of trees and let it lie there for weeks or until we are ready to plant. The seed will at once begin to put out short, stubbed, leathery, green sprouts. The longer it is spread out the tougher these sprouts seem to be, working perfectly without injury in any of the modern planters. It is by this means that we get the perfect stand, for when the seed is cut the future plant to be is right before you. There is no chance for heating as in cellar storage at this season of the year, and we are relieved of all doubt as to the vitality of the seed.

Up till the time when the seed begins to sprout we consider cellar storage ideal. After that it is faulty because every sprout formed in cellar storage is almost sure to be broken off, thereby weakening the seed just to that extent. But as I have pointed out, the real damage occurs where potatoes are stored in a solid mass and allowed to sprout, filling up the air spaces, causing them to heat, resulting always in a poor stand, and disastrously to the grower. I. L. WARE.

Maine.

R. N.-Y.—This refers to very late planting in Maine—long after danger from frost is over. In latitude farther south, where potatoes are often planted before danger from frost is over, this advice to spread on the open ground would have to be modified. The formaldehyde treatment is always good insurance. The main idea involved—that of avoiding long, weak sprouts, that impair the potato's vitality, holds good in any case.

TEMPORARY PASTURE FOR ONE YEAR.

NOW the season is over and our farmers have felt the need of temporary pasture, may I offer the suggestion below, which is strongly recommended by the Ontario Agricultural College, Canada, and has been found very effective?

A good temporary pasture can be used by sowing the following: 51 pounds oats, Early Amber cane 30 pounds, common Red Clover, seven pounds, making a total of 88 pounds per acre. The oats and cane are mixed together, and are sown from the grain box of the seed drill, and the clover is sown from the grass seed box placed in front of the tubes of the drill. If the mixture is sown about the first week in May, it is usually ready for pasture about the 20th of June. The oats are early and rapid in growth; the cane is later, and the clover forms the principal pasture in the Autumn.

Pasture for two years: Red clover, six pounds, Alsike clover, three pounds, Orchard grass, three pounds, Meadow fescue, three pounds, Timothy three pounds, making a total of 18 pounds per acre. This mixture can be sown in the Spring, either with or without a grain crop the clover and the Timothy from the grass seed box, and the Orchard grass and fescue by hand. It could be used as a hay crop the following year and for pasture after. F. K.

Connecticut.

Now the Australians are planting citrus fruits, expecting to send oranges to the American market. The Spanish government will also send commissioners here to see if a market for Spanish oranges can be found!

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Indian Meal-Moth in Dried Fruit.

WILL you give a remedy for "millers" and "worms" in raspberries? After evaporating my berries I spread them on a floor upstairs in the house and the room is filled with "millers" and there are eggs and worms in the berries. W. M. B.
Watkins, N. Y.

Dried fruits of all kinds, raisins, currants, peaches, plums, apricots, and others are liable to become infested with an insect commonly known as the Indian-meal moth. Undoubtedly the insect responsible for the injuries to the dried berries referred to in the foregoing letter is the same meal-moth. The Indian-meal moth is distributed all over the United States and as Holland says "has a propensity to feed upon almost anything edible that comes its way." In addition to feeding on dried fruits it will attack meal, flour, crackers, and almost any cereal. The whitish or pinkish larva has the pernicious habit of spinning a web wherever it goes, which entangles the particles of food, binds them together in a webbed mass and makes the material unfit for food. This is especially true of cereals like flour and meal. The small white eggs are laid singly or in groups of a half dozen or more on the material upon which the insects happen to be working. In a few days the eggs hatch and the larvae mature in hot weather in about three weeks. There may be several broods during a season, thus enabling the insects to increase very fast and become exceedingly numerous in a comparatively short time.

In this particular case, probably the best way to destroy the insects is to place the fruit in a tight barrel or box and fumigate it with carbon bisulphide. The liquid should be used at the rate of two pounds to 1,000 cubic feet of space. For an ordinary barrel a teacupful should suffice. The liquid should be poured into a shallow basin and set on top of the fruit to stand there and evaporate. The top of the box or barrel should be covered with moistened newspaper and then a thick blanket or two to keep the gas from escaping. Care should be exercised not to go near the box or barrel with a light of any kind until after the blankets have been removed and the gas has dissipated itself. Carbon bisulphide is explosive and inflammable but otherwise is not dangerous. It will not injure the dried fruit.

GLENN W. HERRICK.

Breeding Habits of Snakes.

In order to settle a dispute, will you tell us whether snakes lay eggs or bear living young? J. S.

Snakes may be classed roughly as oviparous or viviparous. The former lay eggs and the latter bear living young. There is no hard and fast line between these groups, as some species lay eggs in which the young are already well developed and which, therefore, are not long in hatching. An example of this class is the ring-necked snake. The eggs are known to have hatched in a period of 41 days from the time of laying. Among our common oviparous snakes are the hog-nose snake, or spreading adder, the common black snake, fox, chicken, and milk snakes. The eggs of these snakes hatch in periods varying from six to 11 weeks. The coral snake is an exception among poisonous species in that it is oviparous. The incubation period is about 12 weeks.

The water and garter snakes and most poisonous species, as the cotton-mouth, copperhead, and rattlesnake, are viviparous. So far as we know there is no data on the exact length of gestation in these snakes. As stated above, the viviparous is not entirely distinct from the oviparous habit. Instead of saying that these poisonous and other viviparous snakes bear their young alive we may just as well say that they retain the eggs within the body until they are hatched. If one of the snakes is cut open during an advanced state of gestation it will easily be seen that this is the exact state of affairs. It is probable, therefore, that the duration of gestation in these species is not strikingly different from that of incubation in the egg-laying snakes.

W. L. MC ATEE,
Assistant Biologist.
U. S. Biological Survey.

THE GARDENS OF THE EAST.

CLIMATIC DIFFICULTIES.—I have just returned from attendance upon the seventh annual meeting of the Vegetable Growers' Association of America. It took 1,100 miles of railway travel, and I was only gone 100 hours from home, yet I feel that I have never made so profitable a trip, as measured by what I saw and the enlarged grasp I got on the problems connected with feeding the so-called non-producing class. I saw that the difficulties attending the treatment of farming as a fixed science either in precept or practice are being greatly reduced by up-to-date gardening as practiced in supplying the great eastern cities with food. Ordinarily everywhere climatic conditions make crop production a gamble every minute of the time, and often labor, seed and fertilizer are buried in a grave which under favorable conditions would have been a teeming birthplace. Many generations ago gardeners made a climate wholly under control by inclosing small areas under glass. Now many acres are under glass near every city of any importance.

FLOWERS BY THE ACRE.—I visited such a place near Baltimore on my way, where 267,000 small geraniums were grown, and before next June more than 1,000,000 will be started at a time of year when all out-of-doors vegetation is dormant. Of the six acres of glass nearly one was housing 38,000 stock plants from which two girls were taking cuttings while another was sticking them in benches of warm sand. In the service room adjoining, six girls were potting rooted cuttings at the rate of 12,000 per day. In one house were thousands of dwarf hardy Chrysanthemums in five-inch pots just ready to bloom. These will be shipped to florists all over the country, and the customers who buy will enjoy their beauty and then plant them in the border, where they will give flowers for many years at a season when tender plants have succumbed to October frosts. Outside there was more than fifty acres planted to Cannas and Dahlias, and on the 5th of October the sight was gorgeous indeed.

VEGETABLE PLANTS.—The farm was not all flowers, however. In one block was growing 3,000,000 cabbage plants, the product of 60 ounds of seed. I was shown a bin containing bags of cabbage seed for future use, and I should judge that it would fill more than two barrels. The plants growing will be sold to gardeners along the bay north of Baltimore for immediate planting. The plants are set on the north side of ridges and the mild climate, made so by the proximity of the ocean, carries them through the Winter.

TRUCK UNDER IRRIGATION.—In the days following I saw at Bustleton, in the northeast portion of Philadelphia, and at Bridgeton, in southern New Jersey, practical examples of gardening carried on in direct disregard of weather conditions. Water forced through perforated pipes on tall posts gives a shower whenever necessary, the rain-maker being a large gasoline engine in the packing shed, whose wants are attended to with scarcely any loss of time by one of the helpers. At Bustleton celery under irrigation was a foot taller than that without, and at Bridgeton, where 55 acres were under irrigation, all sorts of crops were being grown. Strawberries had proved very profitable, the crop from one 12-acre field selling for $8,000. Catch crops of spinach and celery grown the year before had more than paid the expenses of labor in growing themselves, and the strawberries. For the water supply a very small, inoffensive-looking brook had been dammed, making a pond of a few rods in extent. The big, greasy, gasoline engine which turned this brook water into rain was an unsubdued "knocker," but it knocked with a purpose and got results.

OVERHEAD IRRIGATION.—There is no question that overhead irrigation has come to stay, and on any farm where there is an engine, a garden spot could be irrigated with a very little expense. Irrigation is especially valuable at transplanting time, and the opportunity to carry early crops through an April or May drought gives success in the place of failure. I should think that on Hope Farm, where spring water is found at the highest point that irrigation could be done by gravity alone.

WEEDING.—At the Skinner place just described, I was reminded of what I wrote recently in regard to weeds. A gang of 15 Italians were hoeing lettuce. They walked backward, each man hoeing three rows, but they were not hoeing any weeds which were big enough to see. They were hoeing to bring the particles of rich loam and humus into new combinations with the fertilizer. Incidentally they interfered with weed growth.

CHINESE CABBAGE.—One of the interesting things at this place was an acre of the comparatively recently introduced Chinese cabbage. This looks more like a huge bunch of celery than cabbage, having an upright growth with large midribs with numerous branches which clasp around the bunch and enclose a fine, well-balanced center. The quality is fine, but has the true cabbage taste, and the same pronounced perfume when decaying. A woman from Michigan who had her curiosity aroused by seeing some on exhibition at the Toledo meeting last year grew an acre this year, and sold recently 6,000 heads to a Detroit dealer for eight cents per head. It packs nicely in upright crates like celery, and seems likely to become generally grown.

SECOND CROP POTATOES.—One of the crops being considerably grown in South Jersey is late planted potatoes for seed. They are a second crop after mid-Summer garden crops, and were in very vigorous growth at the time of the excursion. Owing to drought they were quite backward in setting tubers, and would require considerably more warm weather to be a success this year.

LEGUMES FOR HUMUS.—I saw no evidence of Summer manure being accumulated anywhere in our excursions, except on one Philadelphia farm, where it appeared to be the accumulation of daily drawing from city stables. In South Jersey I was told that they were getting to depend upon legumes for humus and commercial fertilizers for plant food. We saw several fields of Crimson clover just beginning to make the ground green, and now and then patches of beans and peas. Corn grows to large size in South Jersey and they husk it before cutting, and then cut the stalks, and cut it so low that less than an inch of stalk is left above ground. I guessed, but do not know, that this closely-cleared ground was to be disked and sown to some cover crop.

L. B. PIERCE.

Pine Needles for Mulch.

I HAVE a small strawberry bed, and do not seem to have much available material for a mulch. Would pine needles answer the purpose? There is a pine grove near me and it might be possible to get into it with a team to draw them out. Would there be the objection of using them for bedding that there is with same quantity of pine sawdust? L. H.
Hartland, Vt.

The pine needles or "pine straw" as it is called in the South, will answer. In some parts of the truck section in the South this "straw" is largely used.

Pond Mud on Grass.

WOULD it be practicable to use pond mud on grass land to get a crop of hay? If not what would you advise mixing with it? D. W.
Foxboro, Mass.

A ton of the pond mud would contain about six pounds of nitrogen and but little potash or phosphoric acid. The best way to use it would be to haul out during Fall and Winter and put in piles well mixed with lime. Let it ferment or compost through the Winter, and spread thickly over the grass in the Spring. You ought to use in connection with it a fertilizer high in phosphoric acid, and as much potash as you can get this year.

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THOMAS E. SHEERIN, NURSERYMAN, 21 Main St., DANSVILLE, N. Y.

Apples Among Grapes.

WOULD you advise planting apple trees in a grape arbor? I have more grapes than I want, and thought of planting Delicions apples and also some Duchess in the grape rows. Then when the tree gets of any size, I should take out that row. What is your advice? T. S.
South Bend, Ind.

It is never advisable to interplant apples with grapes; of course, it can be done, but as a rule not successfully. The root system of the vines being already well established it is an uphill fight for the apple roots to gain a foothold. Certain insects that are common to the grape feed on apple foliage when the latter is offered. Far better results can be obtained through tearing out entirely that part of the vineyard, and after turning under a green crop, as rye, clover, etc., plant the apples. F. E. GLADWIN.

Orchard and Hens.

I HAVE a five-acre orchard of young trees. The soil today is in nearly perfect condition. I have been a great believer in cover crops and have used in addition hen manure and commercial fertilizers. I have now a large flock of hens in the orchard. They have laid bare about half the orchard, and will be likely to complete their work another year. This renders cover crops impractical. Will the soil in time become deficient in humus? If so, what is the remedy? What needs to be done to such an orchard by way of fertilizing in addition to the presence of the hens in it?
Lynn, Mass. S. P.

We assume that this is an apple orchard. The hen manure will furnish much organic matter, but cover crops will help. Our plan would be to put temporary fences of high netting so as to divide the orchard into three parts. Seed two while the hens run in the third and change from one to another as the crops grow. You can sow at different times oats and peas, clover, rape, rye, wheat or buckwheat, and let the hens harvest the grain crops if you desire. Or you can raise corn with a cover crop in one part of the orchard by keeping the hens out until the corn has a good start. Different combinations of grains or other seeds can be used for this pasture. Hen manure is rather high in nitrogen to use alone for an apple orchard. It will cause too much wood growth and rather poor color. We should use 400 pounds per acre of a mixture of 300 pounds acid phosphate and 100 pounds muriate of potash.

S. S. M.

Cherries Fail to Bear.

I HAVE one sour cherry tree and one sweet Windsor; both are healthy and thrifty growers. I spray them every year. They blossom well, but neither sets any fruit. The sour cherry tree had a few quarts; its age is about 20 years, and the Windsor about 12 years. What would you advise to do to get fruit? Girdling, I believe, would kill the tree. S. L.
Allentown, Pa.

If a cherry tree will not set fruit up to even 10 years from planting I would topwork it to some variety that is known to be a reliable bearer. The Windsor is usually a good bearer without the aid of the pollen of any other variety, and this tree may not be true to name. In any case I would graft both the trees to other kinds next Spring. The Schmidt would be a good one for the Windsor tree, and Montmorency for the sour one. Scions should be secured about the month of March and put in damp, cool storage until the buds start on the trees to be grafted, when the work should be done. Late grafting with perfectly dormant scions is better for stone fruit trees than early grafting in the Spring. Girdling the trees would be fatal.

H. E. VAN DEMAN.

Top-working Quinces.

I HAVE several hundred quince trees which were set out six years ago for Orange quince. They have turned out to be a variety which apparently will not mature in this section. Is it practical to have these trees grafted or budded? Or should they be pulled out and reset?
Williamson, N. Y. P. H. V.

There need be no serious difficulty in grafting over the quince trees to the true Orange variety, which is the one usually of most value for growing in New York. The later kinds do not always come to full maturity then, and the trees complained of must be of that character. The greatest care should be used to secure scions from trees of the Orange variety that are in bearing, and no doubt of their correctness. The grafting should be done next Spring. H. E. VAN DEMAN.

Rot of Hyacinths.

I HAVE a flower bed 4x12 feet that I used a number of years, for hyacinths, but two years ago the bulbs practically all rotted after blooming. I took them up every year or so after the leaves died, and replanted later, and occasionally added some new bulbs. The soil is good leaf mould, and I wish to plant hyacinths again after waiting two years. Would it be safe in the same soil, or would a treatment with lime-sulphur, Bordeaux or pure sulphur render it suitable to plant them?
Carthage, Ind. T. T. N.

I have never had experience with the trouble mentioned with hyacinth bulbs rotting, though results are not very satisfactory if old bulbs are used season after season. New bulbs may correct the trouble, though a good coat of lime may help put the soil in better condition. I do not think sulphur or Bordeaux mixture would be of any benefit. Growing a heavy crop of oats or rye and digging down when eight inches to one foot high might help in addition to the lime, though, new bulbs would be best. E. J. W.

Peaches for Columbia Co., N. Y.

WILL THE R. N.-Y. state what it deems a good assortment for a peach orchard of 400 trees in this vicinity, for commercial purposes, and in what proportion for each variety? This section is only moderately a peach country, but I have a three-year-old apple orchard on ground that I am cultivating, but that is too rough to intercrop, so I plan to put in the peach trees as fillers—apples set 45 feet apart—with little loss of labor aside from pruning and spraying and no loss of ground. S.
Columbia Co., N. Y.

We are in the lower part of the Hudson Valley, and find the following varieties profitable: Carman, Belle of Georgia, Mountain Rose, Elberta or J. H. Hale, Chair's Choice, Salway, Iron Mountain. We think J. H. Hale is to take the place of Elberta. Carman and Belle of Georgia pay us best, though in a season like the present one Salway as a late peach is very profitable. These varieties may not be at all suitable 100 miles north of us, but they do well here. We shall not put any more peach trees as fillers among apples, as we have become convinced that Wealthy or other apple varieties of that shape, are much better.

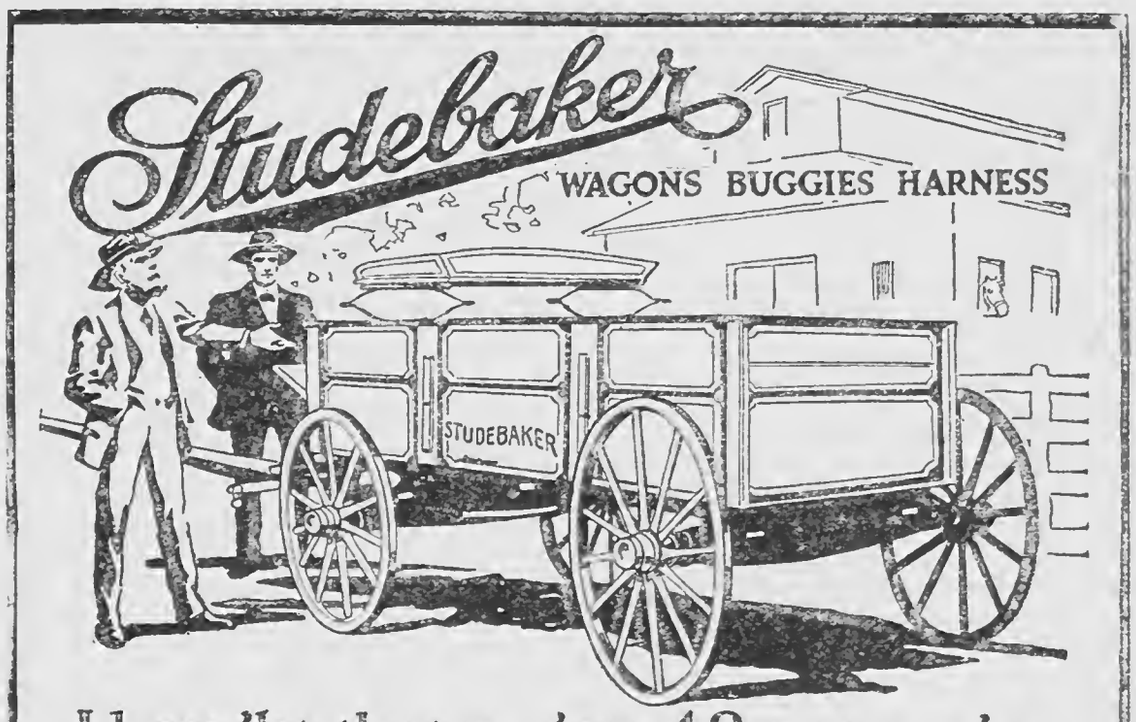
Corn With Defective Ears.

I NOTICE on page 1209 J. B. inquires for reasons why Golden Bantam sweet corn fails to fill out properly. I have planted Golden Bantam, Evergreen and Kendall's Early side by side on soil that had not been plowed previously for at least 25 years. The two latter varieties filled out perfectly, but Golden Bantam failed to do so. This would seem to indicate that Golden Bantam needs something more than the other or "white" varieties require, I think, and I hardly think this thing is potash, either, because, by pure chance, I put an application of kainit where the Golden Bantam was planted, and not on the remainder. Perhaps the soil needs lime—I am sure mine is too acid. If J. B. will tell how long it has been since his soil has been limed and how much has been done in the way of green manuring perhaps we can find the answer. W. P. M.

WANT TO KNOW.

WHO can tell the weight of a cord of hard and soft wood—say hickory or white oak and chestnut, green or dry, or both?

HAVE readers of THE R. N.-Y. any experience in the use of dynamite for draining out small swamps in our New England meadows? My side-hill farm has an average of perhaps a 15-degree slope and there are many small swampy places covering from a few square rods to half an acre or more. In hardly any case is there running water in them, but much of the time they are too soft to work. About two feet below the surface in these places I find hardpan, which I imagine from the general formation in this section is underlaid by solid ledge. I have read of some who have drilled through the hardpan, and by using dynamite to break and loosen it have drained out certain types of soil. Where there is gravel under the hardpan I can see that it would work, but would it in my case with the possibility of ledge? In the successful cases how permanent is the method? Does it not have to be repeated after a time? If any one has had experience in a like case and can give me any advice I would be greatly obliged. L. H.
Vermont.



I bought that wagon 48 years ago—
Use it every day—it is a Studebaker

A WAGON that has been giving its owner adequate service for forty-eight years would be considered a wonderful wagon *if it wasn't a Studebaker.*

Thousands of Studebakers, forty years old, and more, all over the United States, are making money for their owners every day. Here is a letter from dealer William Nevenheim who reports on a Studebaker wagon owned by David Clark, of Bemis, South Dakota:

"I have a customer here, Mr. David Clark, who owns a Studebaker wagon he has used constantly since 1865. Mr. Clark bought this wagon from G. W. Howard, Gilenton, Wis.
"The wagon is in actual use every day."

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We have thousands of letters from all parts of the United States furnishing proof that thirty-five and forty years of life are nothing unusual for Studebaker wagons.

—and the Studebaker wagon you buy today is better built than the Studebaker wagon of 1865. Improved machinery makes it so.

Don't accept any other wagon represented to be "just as good" as a Studebaker. The substitute may be cheaper but it isn't up to Studebaker standard and you can't afford to buy it.

Studebaker Wagons, Buggies and Harness have equally good records.

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Studebakers last a lifetime

That Red Ball Means Longer Wear—Greater Comfort

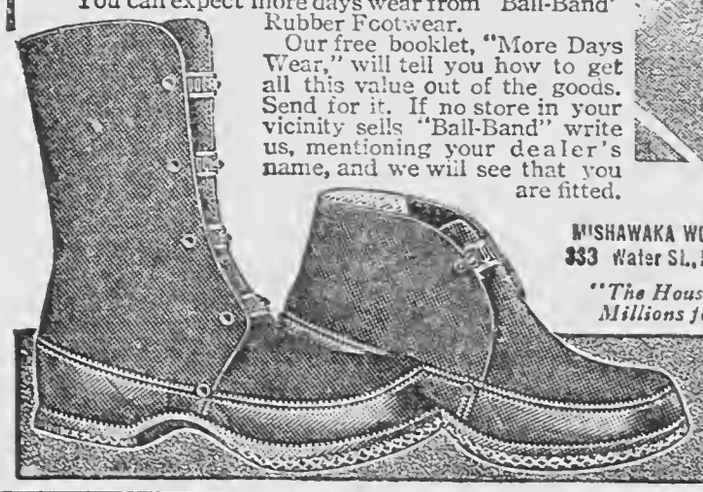
"Ball-Band" Rubber Footwear, the kind that bears the Red Ball, is made over a natural last, to make a snug, easy fit more certain. Points that are weak on other footwear are reinforced and made the strong points of "Ball-Band."

Look for the Red Ball

"BALL (Red) BAND"

You can expect more days wear from "Ball-Band" Rubber Footwear.

Our free booklet, "More Days Wear," will tell you how to get all this value out of the goods. Send for it. If no store in your vicinity sells "Ball-Band" write us, mentioning your dealer's name, and we will see that you are fitted.



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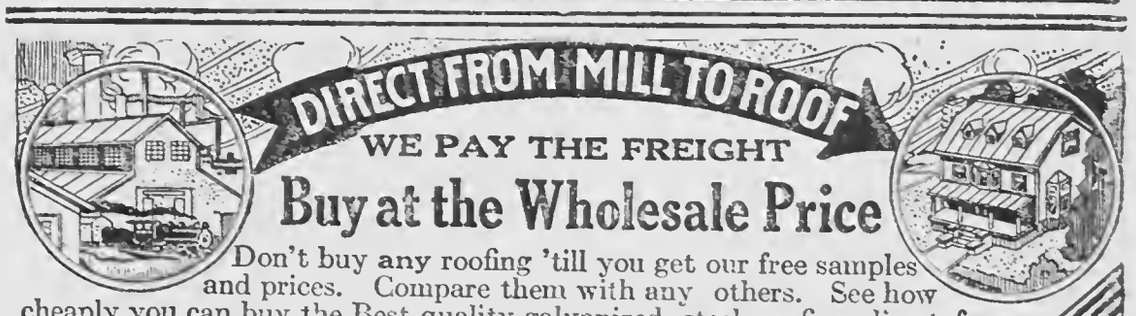

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Don't buy any roofing 'till you get our free samples and prices. Compare them with any others. See how cheaply you can buy the Best quality galvanized steel roofing direct from the Mill—and keep the Dealer's profits in your own pocket. Our roofing resists fire, is proof against lightning and the elements, requires no repairing and gives longest wear. Can be laid over old shingles, prepared roofing or nailed to rafters. Anyone can put it on, without special tools. Strengthens old buildings and makes them look like new.

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We will send full instructions for measuring and applying. WRITE US TODAY.

V Crimp Roofing

The Ohio Galvanizing & Mfg. Co., 58 Ann St., Niles, Ohio

LEGAL QUESTIONS.

Distribution of Personal Property.

WHAT is the law in regard to personal property in the States of Massachusetts and New Hampshire? There are no children. Husband and wife both have personal property in their names. In case of death of husband what part of his personal property would wife get? In case of wife's death what part of her personal property would the husband get?
Massachusetts. G. W. H.

In case of death of the husband the wife would get in Massachusetts such parts of the personal estate as the Probate Court may allow as necessary for the widow and for reasonable sustenance of the family and the use of the house and furniture for six months after death; then, after the payment of debts, funeral charges and expenses of administration, and where there are no children as in this case, the sum of $5,000 and half the remaining personal property or the whole if there are no kindred. The husband's rights are in the personal estate of his deceased wife after the payment of debts, etc., the same, to-wit: $5,000 and half the remaining property or the whole if there are no kindred.

In New Hampshire the surviving husband or wife of a decedent is entitled to the following share of the personal estate: one-third if decedent leaves issue by such survivor, but if decedent leaves no issue $1,500 where value of whole does not exceed $3,000, and one-half where such value is in excess of $3,000. M. B. D.

Wife's Interest in Real Property.

My parents owned real property in New Jersey to the value of about $7,000. Recently my mother died without making a will. This property is free from debts. The family consists of one girl of age and six boys, four being minors. Father has a buyer for this city property which he wishes to sell, and with the proceeds buy a farm in New York State on which he has an option. To this we all agree except my oldest brother, who wants the property to stand as it is, and contends that the property cannot be sold without his signature. I am next oldest son, my father wants my assistance to take up farming; this I am willing to do, but before going north I wish to know what there is to the argument my brother puts up. G. M. C.
Florida.

Very little real property is held in the names of both husband and wife and if your parents held this property in that way it is a bit unusual, and before any definite answer to your inquiry could be made it would be necessary to know whether the deed is in the name of your father or was to your father and mother. If the latter be the case, your father would seem to have his right of courtesy in your mother's share for his life and then it would descend to the children, but if the title is in your father alone, your brother at this time would have no interest in the matter, and can take no steps to interfere with the sale of the property by your father. And if it were owned by both your father and mother, there seems to be no objection to a partition of it and a division of the proceeds. Your brother individually cannot indefinitely hold up a sale where all the other parties consent. If your brother is serious in his objection, it would be well to consult good local counsel.

Descent of Wife's Property.

I have a neighbor who has raised her family. Eighteen years ago her husband gave her a quit-claim deed for their home when it became apparent that she must put in not only all her inheritance from her parents, but a lifetime's hard work to save it. She now wishes to know, should she die before her husband, if her children will inherit the home, or if she must will it to them in order that they should inherit it, and if her husband has a lifetime interest therein. G. M. R.
Ohio.

She can accomplish nothing more by a will than she can by not leaving one. In either event, the property would go to the children, with the exception that possibly the husband would have a dower interest in one-third of her real property for his life, even though he has given her a quit-claim of the property. If he has a dower interest, she cannot defeat it by will and, if he has none, the property will descend entirely to the children. Dower rights of husband and wife are equal in Ohio.

JUDGE: "Where did the automobile hit you?" 'Rastus: "Well, judge, if I'd been carrying a license numbah it would hab been busted to a thousand pieces."—Puck.

ALL SORTS.

Tar for the Bats.

THE house in which I live was badly infested with bats when I bought it. I got rid of them by daubing tar or rather a roofing paint, of which I had plenty, on their roosting places and saturated rags with the tar and stuffed into all cracks and crevices which they used. The tar will gum their wings so that they cannot fly. They will not come back into that sticky place until it gets dry. Many will die from this treatment. Any other sticky substance would probably do as well. All cracks should be stopped up some way so that they cannot come back after the tar dries. Brick houses, if old, are the hardest to fix, but it can be done. Sharpen an old steel umbrella stay and spear them out of the cracks around the window casings. Keep up a persistent war on them and show no mercy. Sulphur will drive them out, but they will come back as soon as the smoke disappears. Don't neglect to keep all holes and crevices stuffed with tarred rags. In fact tar everything that they occupy. The bat may be all right in his place, but no man cares to have them by the thousand in the attic as we had them.
Iowa. D. W. FORD.

Expense of Vaccination.

I SAW an article in THE R. N.-Y. in regard to the vaccination of children in public schools. Whose place is it to pay charges, the district or parents?
New York. N. G.

Regulation 31 of the new sanitary code for the State of New York says that "It shall be the duty of the board of health of every municipality to provide, at public expense, free vaccination for all persons in need of the same." As it is the duty of school trustees to see that the compulsory vaccination law is enforced in their districts, provision for vaccination of the school children seems to devolve upon them, and in this vicinity trustees of district schools are employing physicians to inspect their schools and vaccinate such children as have not been vaccinated at the district's expense. I am not sure but that, under the sanitary code, the expense of vaccination could be placed upon the municipality in which the school is located, rather than upon the district; that is, upon the town or village. But, as the taxpayers of the districts making up the municipality would bear the burden, in any event, this would seem to be immaterial. M. B. D.

Hiving Wild Bees.

THERE is an old tree of little value on my farm containing a swarm of bees. I would like to cut the tree and secure the swarm for a hive. What would be the best way to do this, and would it pay better to keep these bees if I could get them into a hive than to buy a swarm? I have never kept bees.
Philadelphia, Pa. F. M.

It would be hardly practical to secure these bees and sufficient brood and honey for a hive so late in the season; you will probably find it more satisfactory to cut the tree and secure what honey there may be without attempting to save the bees. Bees should be transferred sufficiently early in the season to permit them to build up their colony and provide Winter stores before the honey flow for that season ceases. They may, of course, be helped out by artificial feeding, but this should not be depended upon. Better make your start by buying a newly hived swarm of bees next Spring. M. B. D.

Cost of Horse Power.

IT costs the farmer a fraction over 10 cents an hour for each hour's work done by a horse, according to the figures of an Illinois farmer. Further, this farmer discovers that 2½ hours a day is the average time each horse works. The total cost of feed annually is $68.70 the horse, and other charges, such as pasture, maintenance of buildings, labor, interest, shoeing and sundries made the amount of maintaining a single animal for a year reach $92.30. He was in position to figure on increase in value on horses, while on the average farm there is a depreciation charge. He credited to the horse this increased value, the value of the manure, and the net cost of maintaining the horse amounted to $87.50. It is apparent the cost of maintenance of a horse is practically the same regardless its efficiency. It is evident the farmer should equip his farm with mares, or have at least part of his horse power such as could produce young stock and credit him with annual increase in value. Many farmers could dispense with one or more horses, reduce or rearrange their farm equipment so as to accomplish the same work with less horses, and be dollars ahead by the reduction.

The Question of Fence.

WE have been taking an auto trip through Palatine, St. Johnsville, Rome, Camden, Richland, Pulaski, Mexico, Syracuse and Utica, taking in many places that lie between, with views of Lake Ontario and a visit to the State Fair. We passed through some fine farming sections, and noticed that in these sections there were no roadside fences, beautiful fields of corn, buckwheat, potatoes and fruits with no protection, and yet I could not find one hill of corn that had been disturbed by passersby. We also noticed the pastures were well fenced, and that set us thinking. "They do not pasture their meadows," which we do not believe in, and so the crops are better and they need no fencing. What a contrast the poorer sections with their high roadside fences and poorer crops, not that we do not think the soil has most of all to do with it. But it all set us thinking of the possibilities of improvement even in the poorest sections. F.

Heating Inside Air.

ON page 1165 M. B. D., in describing his hot air furnace, says he takes his cold air from inside the house. There may be a little economy in doing this, but I doubt it. Fresh air heats much easier than foul, and by doing so he is losing the one great advantage that hot-air heating has over all others, that is, a steady supply of good fresh air, nicely warmed and furnished all over the house. All other systems, steam, hot water, etc., simply warm the old, stale, vitiated air, over and over again, and require some expensive method of ventilation to make them satisfactory and healthful. A. D. M.
Maine.

The criticism of the method of taking cold air from one of the rooms of the house would be perfectly valid in the case of an assembly hall, school room, or other place where a large number of people rapidly vitiated the air, but the writer doubts whether it holds good in the case of an ordinary dwelling. The supply of fresh air in most farmhouses is being constantly renewed through the numerous cracks about ill fitting doors, windows, etc., and the number of people who contribute the waste products of respiration to it is small in proportion to its quantity. While the plan of re-warming air cannot be considered ideal from a sanitary standpoint, its advantages probably outweigh its disadvantages and with the frequently opened doors and leaky walls it can hardly be called unhealthful for a small family in a large house. M. B. D.

The Purchase of a Patent.

I WAS very glad to see in a recent issue of your paper a hint at what I consider one of the most potent causes of our high cost of living, i.e., the fixing by the wholesaler of retail prices to the consumer sufficiently high to cover a profit to the retailer and all average losses, *bad accounts*, shrinkage, etc., and have been hoping for a wider discussion of this particular phase of the matter. It also occurs to me to ask if it would be possible for the Federal Government to withdraw its protection, as afforded through the patent laws, from all patents, the products of which, are so manipulated as to cause unduly high prices to the consumer. Nearly all of the staples are controlled by the so-called trusts by reason of their ownership or control of patented devices cheapening the cost of production. With a lot of these patents free for anyone to use competition would soon relieve us of some of our burdens. J. W. BARNEY.

R. N.-Y.—Some of these things are attempted in the new anti-trust law. Recent decisions of the Supreme Court have decided that the holder of a patent cannot dictate the price at which the retailer sells his articles. Formerly such a dealer was obliged to agree that he would not sell below a certain fixed price. There has been for years a growing belief that the government should have the right to buy, for the benefit of the public, any patent which becomes an extortionate monopoly. This would not be confiscation, but it would mean paying a fair valuation and then making the patent free.

DRY WELLS.—You do not give sufficient information for a good guess why J. I. C.'s well, page 1149, went dry. Blasting within five miles may cause a crack to open in the rocks and give the water a new passage. I have known operations 15 miles away to dry wells in Colorado. Near my home, wells 1300 feet deep, at a State institution, have dried all wells and springs for a mile radius. They force constant big streams, by air lifts, working night and day to take all the water. J. I. C. may look around within five miles and find the cause better than strangers can guess. J. G.
Norristown, Penn.

Canvas Covers—wagons, hay stacks machinery, boats, waterproof duck. Heavy canvas for all purposes at low cost. 10 oz. wagon cover 7½ x 12 ft., $3.80 prepaid. Write for prices stating size required. W. W. STANLEY, 50 CHURCH STREET, - - NEW YORK

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Stock Tools and 368 Acres
Pair mules; pair horses; 22 cows; lot of tools. Old age forces this farm, located on State Macadam road, on market. $16,000; part cash. Barn cost $5,000 to build. Send for photos and Free list of money-making farms. Hall's Farm Agency, Owego, Tioga Co., N. Y.

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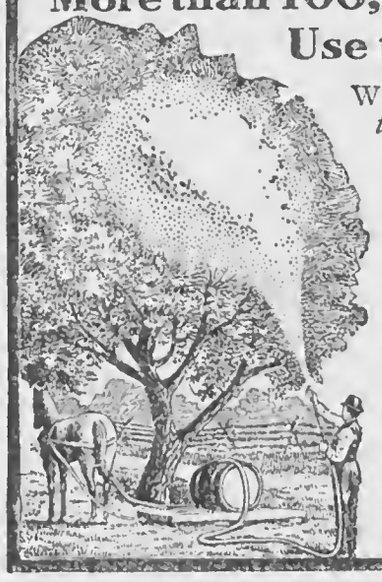
More than 100,000 Farmers and Fruit Growers Use the STANDARD SPRAY PUMP



With it they spray their tallest orchard trees *from the ground* in half the time required by others. The knapsack attachment enables them to spray their potatoes and low growing crops at the rate of an acre an hour or better. They whitewash their barns and chicken coops and spray "dip" on their live stock with the Standard Spray Pump.

Made throughout of brass, with nothing to wear out or break, the Standard Spray Pump lasts a lifetime and pays for itself over and over again.

Warranted 5 Years. Price $4 Prepaid. (West of Denver $5.) Money back if not satisfied.

Send no money but write today for our Special Offer and Catalog M.

The Standard Stamping Co.
1948 Main St., Marysville, O.

Care of Harness.

WILL you give a good method for keeping harness in the best condition? What oil, etc., is best to use, and how should it be applied? How about the harness soaps and other preparations on the market? T. H. H.

Hillards, Ohio.

My method for cleaning and oiling harness is as follows: Unbuckle every strap, pack in tub, scatter on a handful of washing powder, cover with warm soft water, let stand 30 to 60 minutes, then remove dirt and sweat with coarse cloth, and rinse with clean water. Allow leather to get nearly dry, then apply a blacking made as follows: Two quarts soft water (hot); two ounces extract of logwood; 12 grains bichlorate of potash. When dry apply an oil prepared as follows: One pint neat's-foot oil, one-half pound beef tallow (melted). Apply with brush, rub in well. One application is sufficient if harness is treated as above every six months. The blacking being underneath the oil will not rub off. No better preparation for harness can be made at any price. Most harness soaps are good for cleaning harness after they have been well oiled, should be used often and will keep harness in good condition. Most other preparations are of very little value as preservatives to leather, as they are principally made up with crude petroleum, lampblack, etc. H. A. L.

Linesville, Pa.

Contaminated Well.

A TENANT a few years ago let a cow get in a well which was unused, and said nothing about it. As the well was a good one, and the water badly needed this season, I had it cleaned out. The water in it is very foul. Will pumping it out a few times cause the water, by aid of chemicals, to be fit to use for stock again? J. B. A.

Illinois.

If the water in this well is foul from the presence of decaying matter of any kind, it may be made fit for use again by a thorough cleaning out of the well after pumping it dry. If the water remains foul after the well has been cleaned it is evidence that there is some other source of pollution, and search should be made for such possible source in an adjoining manure pile, privy vault or accumulation of surface water which may find its way into the well. Chemicals should not be depended upon to purify water which is being fouled by some foreign matter gaining access to it. M. B. D.

Lessons from the Vegetable Growers' Convention.

THE seventh annual convention of the Vegetable Growers' Association of America, recently held in Philadelphia was a signal and all-inspiring success. The attendance was large, the reports of the various standing committees showed labor and painstaking care, the addresses and discussions were lively and thorough. The exhibition of gardeners' supplies and equipment were more complete and better installed than at any previous meeting. One commendable feature of the convention was the agricultural college exhibits showing various phases of the work in vegetable gardening. The State colleges of New York, Illinois, Pennsylvania, Ohio, Oregon and Maryland were represented. The largest exhibit of vegetables was that made by the Philadelphia Vegetable Growers' Association, but there were several others not far behind in quantity and quality, and some were even more attractively staged.

Among the subjects that were most exhaustively presented and which elicited the most general discussion were marketing, soil fertility, standardizing weights and measures, improving the nomenclature of vegetable varieties, and co-operation.

Under the title of "Soil Problems for Vegetable Growing," Dr. Lipman, of the New Jersey Experiment Station, urged the importance of selecting a location for gardening that would meet definite conditions as to soil moisture, soil temperature, soil ventilation and soil texture. Having found the location, the grower should place and keep the soil as far as possible under the conditions demanded by his various crops. In other words, the vital needs of the soil must be met if it is to continue to bring forth a full return in the way of produce. The vegetable grower cannot depend upon commercial plant food alone, but must supplement this with stable or green manure. It is very difficult to maintain soil moisture and soil texture conditions with commercial fertilizers alone. On the other hand, too much stable manure is sometimes used, and the soil fails to respond. Under such conditions stable manure should be withheld for a year or two, and commercial fertilizers used. If the soil is acid a moderate dressing of lime will prove of value. The war in Europe has cut off our principal source of supply of potash. It is estimated that the supply on hand is less than 30 per cent. of the usual stock. To a great extent the same is true of garden seeds. If the war continues for another year the situation will become serious, unless we boldly face the question and supply these needs ourselves.

In discussing the great economic question of marketing no attempt was made to solve the "high cost of living" problem, and no time spent in simply denouncing middlemen. Two things would greatly facilitate and improve market conditions; one is better crops, and the other is better means of distribution. The time and means spent in trying to grow crops where only half or quarter crops are made, is one heavy item on the wrong side of a vegetable grower's balance-sheet. The expense of marketing even a good crop is often another serious obstacle to success. While much can be done by using the parcel post trolley-car, express and freight shipments direct to consumers, yet the fact remains that in our large cities many persons will be required to serve as agencies in the distribution of farm and garden produce. While eager for information, the Vegetable Growers' Association will not endorse any scheme or method of marketing that has not been tested and its merits proven. Coöperation in some form seems to be the ideal plan in selling as well as in buying. It was thought that neighborhood or more local markets in large cities were better than large terminal or central markets, and that the trolley freight might be one efficient means of cheapening and quickening distribution.

One of the most instructive features of the convention was a round table discussion led by Prof. Work of the New York State College of Agriculture. Some of the points brought out were that co-operation is simply a union of the means and efforts of many to accomplish results that benefit all. In beginning a coöperative effort it is well to commence on a small scale. In many a community vegetable growers could get together and unite in buying seeds, fertilizers, and other supplies, or for simply exchanging experiences and observations. In this way they get acquainted and learn to trust each other. Confidence and loyalty are absolutely essential in all co-operative enterprises. In many places vegetable growers could improve and control their market facilities by a united or co-operative action. When the right attitude or spirit is developed then the larger activities like grading, packing and shipping products by the carload can be entered upon.

The Association elected the following officers for the ensuing year President, M. L. Rueterik, Cleveland, O.; secretary, S. W. Severance, Louisville, Ky.; treasurer, E. A. Dunbar, Ashtabula, O The most encouraging lesson of the convention is the evident fact that the vegetable growers are no longer blindly devoted to a routine which has ceased to be either economical or judicious. The methods of the pioneer gardener are not adapted to the changed circumstances of his grandchildren. We are infusing more thought, more study, more science into our work, and this can scarcely fail to incite an ever increasing number of young men to feel a greater pride in their calling and to take a livelier interest in everything that tends to improve and dignify it.

WILLIAM R. LAZENBY.

Ohio State University.

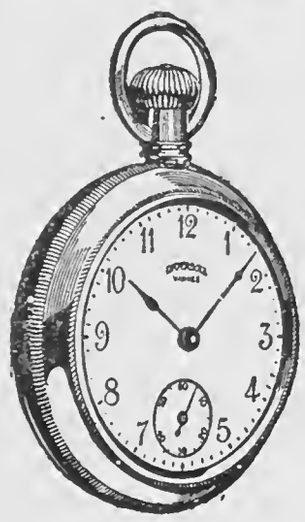
SOIL MANAGEMENT; by F. H. King, 303 pages; illustrated; published by Orange Judd Co., New York. This book is a result of the extensive investigations of the late Prof. King, one of the greatest soil experts. It is a fitting supplement to his other books, "The Soil," "Irrigation and Drainage," and "Farmers of Forty Centuries." Some of the subjects discussed in "Soil Management" are: Productive capacity of fields; Soil moisture and plant feeding; Principles of earth mulches; Physical features of soils; Why lime soils are strong; Reclaiming swamp lands, etc. For sale by THE RURAL NEW-YORKER; price $1.50.

RURAL IMPROVEMENT; by F. A. Waugh; 259 pages; many illustrations; published by Orange Judd Co., New York. Prof. Waugh is well known as a teacher and practical authority on horticulture and landscape gardening. The purpose of this work is to improve the appearance of country homes, villages, school grounds, small parks, etc., and stimulate wholesome recreation and neighborhood social intercourse. All of these things can be done with but little expenditure of time and money, and are certainly worth while additions to the comforts and pleasures of country life. For sale by THE RURAL NEW-YORKER, price $1.25.

FARM ANIMALS; by Hunt and Burkett; 526 pages; fully illustrated; published by Orange Judd Co., New York. This book is well adapted to school use or the farm library, as it covers in concise and convenient form practically the whole live stock field, breeds, feeding, sanitation and production, with a chapter on farm butchering. For sale by THE RURAL NEW-YORKER, price, $1.50.

MARIE: "At the place where I was spending my vacation this Summer, a fresh young farmer tried to kiss me. He told me he'd never kissed a girl in his life." Ethel: "What did you say to him?" Marie: "I told him I was no agricultural experiment station."—Boston Transcript.

Ingersoll Dollar Watch



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The biggest value as a timekeeper in the watchmaking industry and its big broad guarantee adds not a cent of cost.

15,000 Ingersoll watches are made every day, so uniformly and perfectly that the guarantee adds practically nothing to the expense and nothing to the cost of the watch.

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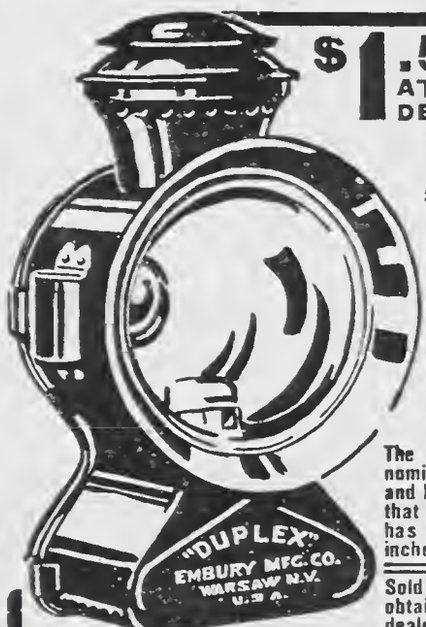

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With optical lens. 50c. extra.

This beautiful lamp made especially for your night driving. Fits on either side of the dash.

CAN'T blow out or shake out.

The most economical, brilliant and handy lamp that your dealer has in stock. 9 inches high.

Sold direct if unobtainable from dealer.

Write us for copy of the New State Law regarding lamps on vehicles. We send it FREE to you.

EMBURY MANUFACTURING CO.
WARSAW, N. Y.

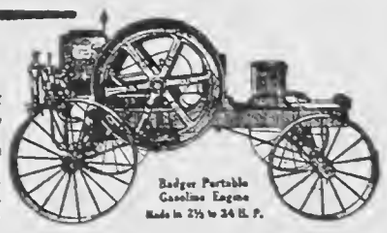
Make Your Own Drain Tile

THE FARMERS' CEMENT TILE MACHINE

Makes tile 3 to 8 inches in diam., 12¼ inches long. One man or boy operates it by hand or power. 500 tile per day by hand, 1,200 by power. Tile thoroughly cured by patent process. No tamping or use of pallets. This machine and tile used by Experiment Stations of Agricultural Colleges and the U. S. Dept. of Agriculture. 5,000 farmers have doubled the yield of land by underdrainage, and saved 75% of cost by using our Machine. You can do the same. Save cost of hauling and breaking. Make perfect tile $3 to $5 per thousand. MACHINE SOLD DIRECT FROM FACTORY TO YOU. TEN DAYS' FREE TRIAL. SEND NOW for 36-page Illustrated Catalogue. Tells you about great benefits of underdrainage, how to take levels and get grades, make and lay your tile at low cost.

FARMERS' CEMENT TILE MACHINE CO., - Box 604, ST. JOHNS, MICH.

Feed Grinding and Wood Cutting



In the Winter every farmer finds himself beset with numerous jobs—big and small—every-day jobs and occasional ones. This is where an efficient, reliable power plant is a time and money saver.

The "Badger" Engine is made well from start to finish: made to run without interruption; not merely to sell.

It is simple—anybody can run it or adjust it. It is economical, using less gas or gasoline than any engine known. It develops more power than rated. There are many types and sizes of "Badgers" to suit every individual need. Any BADGER is a GOOD engine.

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GOOD PROTECTION FROM FIRE, WIND, RAIN AND STORM is assured if your buildings are covered with

APOLLO ROOFING

APOLLO Roofing and Siding Products are highest quality, full weight, and reasonable in cost. Made from the well known APOLLO Best Bloom Galvanized Sheets, and sold by weight by leading dealers everywhere. Our interesting "Better Buildings" booklet sent free upon request.

AMERICAN SHEET AND TIN PLATE COMPANY, Frick Bldg., Pittsburgh, Pa.

A FARMER IN PALESTINE.

THE picture here given shows a farmer in the Holy Land coming home from his day's work. There is some contrast between this and the advent of a prosperous American farmer into the yard as the sun goes down. This man drives his team of big gray horses up from the field, and the boys go out to help unhitch. Mother stands at the kitchen door and past her comes a whiff from the hot biscuits and baked potatoes and baked apples. There are chores to be done, but that is in the day's work and soon over. The farmer shown in the picture comes in carrying the yoke. His wife or wives have no biscuits and honey for him. A few dates or dry wheaten cakes will be all there is for supper, and then a dull sleep to prepare for another weary day. The cheerful and bright home is the mainspring of the farm. "No place like home."

EVENTS OF THE WEEK.

DOMESTIC.—A five inch rain in less than four hours, Oct. 23, gave San Antonio, Tex., the most destructive flood in its history. Fifteen persons were drowned, 200 houses were destroyed and about 2,000 persons were made homeless when the San Pedro and Alazan creeks overflowed. The insignificant streams rose to raging rivers 500 feet wide, and swept houses, mostly small structures, from their foundations. The San Antonio River rose out of its banks, and in many residence districts spread over wide areas and flooded many streets. The property loss is estimated at $150,000, exclusive of damage to several bridges and other municipal property.

Four men were instantly killed and one mortally hurt at Hempstead, L. I., Oct. 23, when a six passenger touring car going at mad speed wrecked itself against a curbstone.

Dr. Richard C. Flower, who managed for 11 years to keep out of the grasp of the New York police, by whom he was wanted on a charge of larceny involving more than $1,000,000 in connection with the exploitation of the Arizona Mining Company and the Lone Mining Company, arrived at Police Headquarters, New York, Oct. 23, having been arrested in Canada. There are five indictments against Flower, found in 1903. The complainant in one case, Isabella Gray Taylor, will appear against him. This indictment charges Flower with the larceny of $500 from Mrs. Taylor by selling her worthless stock in the Arizona Eastern and Montana Smelting, Ore Purchasing and Development Company.

Eleven workmen, employed on a new intake crib nearly a mile in Lake Michigan, were rescued from death, at Milwaukee, Wis., Oct. 24, by the lifesaving crew. The high waves which were flooding the crib made it impossible for a tug to approach close enough to take the men off. A member of the lifesaving crew, swam to the crib from a motor boat with a line and life belt, and one by one the men were saved. The rescue calls to mind the disaster on April 20, 1893, when twenty-one men lost their lives on a waterworks crib at Milwaukee during a storm.

The United States revenue cutter Bear arrived from Nome, Alaska, at Victoria, B. C., Oct. 26, bringing Capt. Robert A. Bartlett, master of the wrecked Stefansson exploring ship Karluk and eight Karluk survivors, who were taken off Wrangell Island. They were landed at Esquimalt and the Bear proceeded for Seattle with 48 officers and men rescued from the United States revenue cutter Tahoma, which was wrecked on a reef of the Alentian Islands. Of the 28 men who sailed from Port Clarence, Alaska, July 27, 1913, for the Arctic Ocean on the steam whaler Karluk, 11 perished. Stefansson with two companions is now adrift on the polar ice north of Alaska, having set out from Barter Point for Banks Land over the ice last March and having failed to reach his destination because of the early melting of the ice north of the mouth of the Mackenzie River.

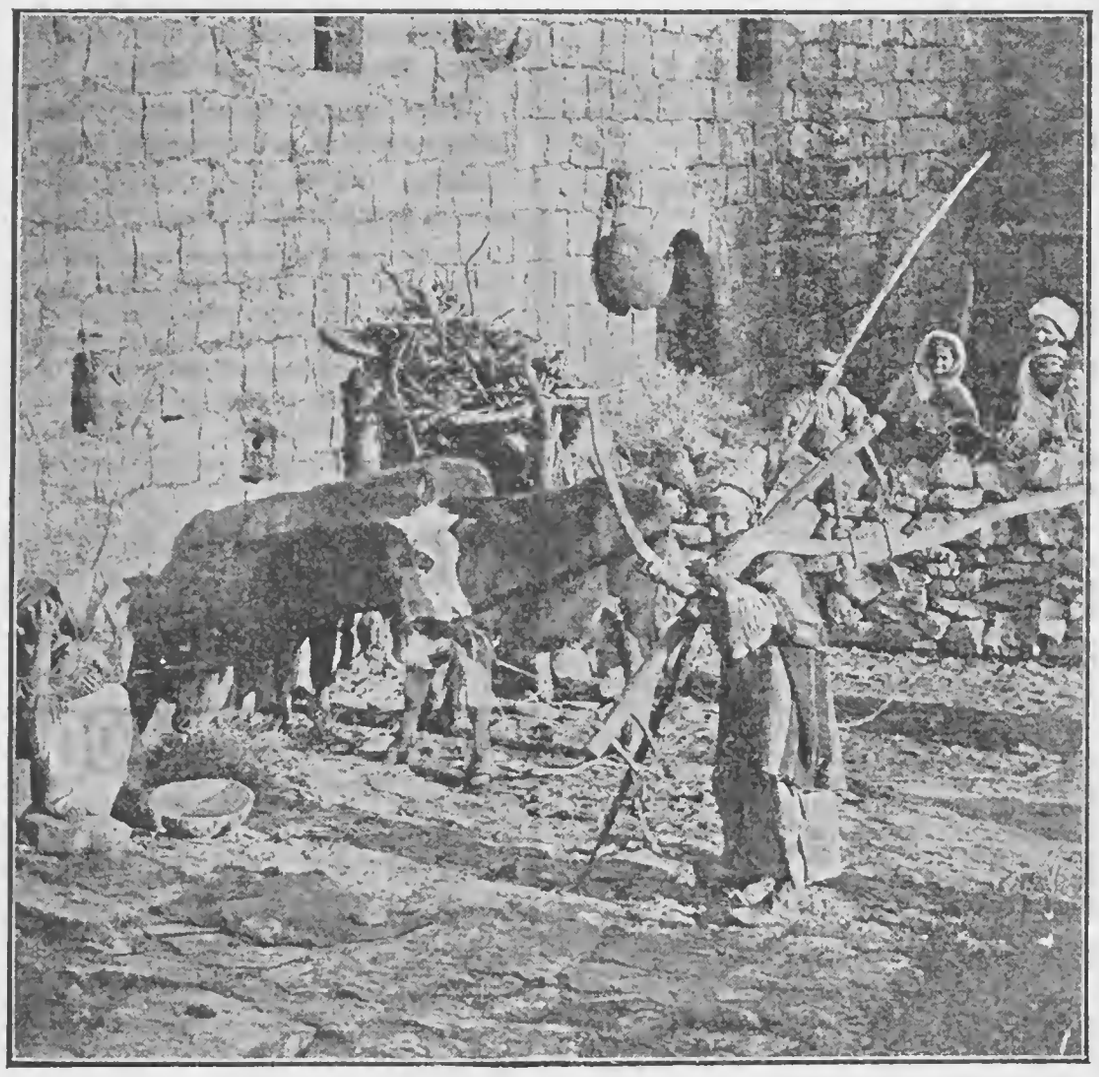
Two firemen were injured in New York, Oct. 27, at a blaze which for two hours defied the high pressure apparatus summoned by three alarms. The four upper floors of a six story factory building on the northwest corner of Lafayette and Great Jones Sts., were burned out. Acting Chief Martin estimated the damage at from $75,000 to $100,000. It took 1,500,000 gallons of water to subdue the fire.

Three men were killed and three injured, Oct. 26, by the collapse of a new theatre building at Youngstown, O.

Fifty men perished in the coal mine of the Franklin Coal and Coke Company near Royalton, Ill., Oct. 27, following a gas explosion, which caused a fire that could not be subdued.

A jury, at Cleveland, O., Oct. 27, awarded John Haas, 58 years old, of West Park, a verdict of $25,000 against Theodore Kundtz, cabinet maker, for the loss of his sight. Haas alleged that when operating a circular saw in the Kundtz plant he was hit in one eye by a piece of wood and afterward became blind. For the loss of his right eye a jury in Boston, Mass., the same day awarded Wilfred W. Davis of Brookline $15,000 damages from the Boston Elevated Railway. As Davis was waiting for a car a fuse blew out and particles of molten metal entered his eye.

THE EUROPEAN WAR.—The Swedish steamer Alice was blown up by a mine in the North Sea, Oct. 23; all on board were saved.....The British Admiralty reported, Oct. 23, that the German cruiser Karlsruhe had captured 13 British steamers in the Atlantic. These ships were mostly engaged in the South American trade.....Oct. 24 the British destroyer Badger rammed and sunk a German submarine off the coast of Holland.....The French steamer Amiral Ganteaume, from Calais to La Rochelle, with 2,600 refugees on board, struck a mine in the Channel, Oct. 26. Only about 30 lives were lost, owing to the presence of the cross-channel steamer Queen of Dover.....The freight steamer Manchester Commerce has been sunk by a mine off the west coast of England. This is the first mine disaster on the west coast.....The German cruiser Emden recently sunk the Japanese steamship Kamegasaki Maru, bound for Singapore. .....In the Battle of Flanders, October 22-29, along the seacoast, British and French light cruisers and monitors did effective work in bombarding the German positions. The fighting was terrific from Lille to the North Sea. The Germans crossed the Yser seven times. Prince Maurice of Battenberg, cousin of King George and brother of the Queen of Spain, is the first member of the British royal family killed. The Germans claim progress near Ypres and southwest of Lille, but this is denied by the Allies. The French appear to be advancing in the Woevre district.....Fierce fighting continues from the Baltic to the Carpathians, gains being claimed by both sides. Up to Oct. 29, the Russians had not captured Przemysl.....The South African rebels under Lieut. Col. Maritz have been defeated at Kakamas, their leader having fled, wounded, to German territory. Burghers are now arming under Christian De Wet in Orange Free State, and under Beyers in the Western Transvaal. Governor-General Botha announces that the very great majority of the citizens are loyal in every Province, and the Beyers commando was routed by Gen. Botha, Oct. 28.....Westminster Abbey has been insured for $750,000 against dam[illegible] on aircraft. It is reported that many other London churches have taken out similar insurance..... Nearly seven million in Belgium face famine unless they receive help from the outside at once. The American Minister to Belgium, Brand Whitlock, stated, Oct. 26, that less than two weeks' supply of food remained in the cities, while conditions in the country districts were worse. Though Germany has seized the food in some cities for her soldiers, she still disclaims responsibility for feeding the Belgians.....Insurance companies estimate the damage at Rheims at more than $200,000,000; more than 1,200 civilians were killed during the month's bombardment; 40,000 of the population remain, mostly living in cellars.



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END OF THE DAY ON A PALESTINE FARM.

FARM AND GARDEN.—The New Jersey State Horticultural Society will hold its annual meeting in the agricultural building, State Experiment Station, New Brunswick, Dec. 8-10. A good exhibition is expected, and there will be the usual interesting speeches and discussions.

The first term of the two-year Winter course in agriculture given to farmers, their wives and daughters by the College of Agriculture of the University of Missouri began November 2 this year. For men this is a course in good farming; for women it is a course in better housekeeping. Anybody more than 16 years old may attend. The first term of the course ends December 18.

The Maryland Week Exhibition will be held at Baltimore November 16th to 21st. This Exhibition means a combination exhibit of various Maryland societies. The Maryland State Horticultural Society takes a leading part in the exhibit, and in connection with it the Maryland Crop Improvement Association, the State Dairymen's Association, and the State Bee-Keepers Association will combine and add to the exhibition. It will be one of the largest gatherings of farmers or country people ever known in Maryland. Great exhibits of farm products will be made, and valuable prizes will be offered. This in connection with addresses by prominent teachers and specialists will make a very strong meeting. A novelty in this connection will be an essay contest, open to boys or girls who regularly attend the Maryland public school. For example, $20 in gold will be offered for the best essay by a boy or young man on "Why the Maryland farmer's boy should remain on the farm." Twenty dollars will also be given for the best essay by a girl or young woman on "How social conditions in rural life in Maryland can be bettered by the daughters of Maryland farmers." The offering of these prizes for practical essays is a most excellent plan, and we believe that this part of the exhibition will be very interesting.

The nineteenth annual meeting of the American Association of Farm Institute Workers will be held at the Raleigh Hotel, Washington, D. C., Nov. 9-11. In addition to the reports of the standing committees dealing with the various problems of interest to institute lecturers, there will be a number of addresses of general interest.

At a recent meeting of the Eastern Live Stock Sanitary Association, Harry B. Winters, Albany, N. Y., was elected President; F. F. Walker, Boston, Mass., Vice-President; Dr. J. F. DeVine, Goshen, N. Y., Secretary and Treasurer. Dr. A. Joly, Waterville, Maine, Dr. Frank A. Ingram, Hartford, Conn., and Dr. H. P. Eves, Wilmington, Del., were elected members of the Executive Committee. The next meeting of the Association will be held at Wilmington, Del.

Information having reached him that the dangerous, infectious and contagious disease known as the foot and mouth disease exists in several counties of the States of Michigan and Indiana Calvin J. Huson, State Commissioner of Agriculture, has issued a notice and order forbidding the bringing of any horses, cattle, sheep, swine, goats or poultry into the State of New York from any of these counties. The order takes effect immediately and is for an indefinite period of time.

Twenty high school boys, specialists in agriculture, from California, who won prizes for getting the largest net results from given plots of ground, arrived in New York, Oct. 28, by special car. A transcontinental trip of 7,000 miles was the reward given to the twenty for their diligence and skill, through the efforts of the College of Agriculture of the University of California, with the coöperation of municipal chambers of commerce. Professors B. H. Crocheron and B. F. Morgan, of the agricultural extension of the University of California, are in charge of the party. They left California on October 15, and on their way East inspected twelve types of farms. They are going to see cotton in Georgia and sugar in Louisiana.

Goshen Farm Bureau was organized at Court House, Goshen, N. Y., Oct. 24. Forty-one paid in out of fair attendance. D. V. Farley, president; John Arfman, vice-president; C. B. Coleman, secretary; Howard Seeley, treasurer. Albert Manning, supervisor's nominee, executive committee, also C. W. Harlow, Pomona Grange nominee.

The case of the National Society of Record Associations before the Interstate Commerce Commission has been set for hearing on November 20th at Chicago. In this case the breeders of purebred live stock in the United States, through their national organization, are attacking the present requirements of railroads relative to less than carload live stock shipments. The breeders will attempt to secure relief from the present excessive rates imposed on shipments of live stock under declared values in excess of the limited liability. The breeders also ask to have the minimum weight reduced in official classification territory where stallions are now shipped at the weight of 7,000 pounds and horses and cattle at 5,000 pounds. The present limitation of liability in case of loss is claimed to be unreasonably low, and the Commission is asked to order an increase of this liability.

THE WAR TAX.—The new war tax revenue law, affecting nearly all lines of business, became operative Oct. 23, except where later dates are specifically provided. Among the articles on which it went into immediate operation were the taxes on fermented liquors, including a graded scale of taxes on domestic and imported stilled wines, champagnes, liqueurs, cordials and sparkling and carbonated wines. Pending the preparation of the new stamps for wines, liqueurs, etc., the internal revenue collectors were authorized to imprint on the old stamps the new rate of tax and to permit their use by distillers. On November 1 the new war taxes to be imposed on bankers, brokers, proprietors of theatres and circuses, tobacco dealers and cigar and cigarette manufacturers went into effect, while one month later, on December 1, 1914, the new taxes on bonds, debentures, stock certificates, selling agreements and contracts, promissory notes, express and freight bills of lading, manifests and other shipping and sales memoranda, policies of insurance, or bond of nature of indemnity for loss, entry or withdrawal of merchandise from customs houses, telegraph and telephone messages, etc., become effective. It is further to be noted that the system of taxes provided for in the new law are not to be levied after December 31, 1915. Before that time, however, the occasion may arise for Congress to extend its period of effectiveness, in some part at least. Bankers on each $1,000 of capital, surplus and undivided profits shall pay $1. This tax applies to any person, firm or company and every incorporated or other bank "having a place of business where credits are opened by the deposit or collection of money or currency, subject to be paid or remitted upon draft, check or order, or where money is advanced or loaned on stocks, bonds, bullion, etc.," but savings banks having no capital stock, including postal savings banks, whose business is confined to receiving deposits and loaning or investing the same for the benefit of its depositors, and which does no other business of banking, are exempted from the tax. The tax on beer is fixed at $1.50 a barrel, or 50 cents above the tax as it formerly stood. The law provides for the punishment of those who violate or seek to evade any of its provisions by declaring that such acts shall be deemed misdemeanors, and the offenders, upon conviction, shall be subject to fines ranging from $10 to $300 for each offense, and also provides in one or two instances for fines as high as $1,000 and terms of imprisonment for from six months to five years, at the discretion of the court. The heaviest penalty is incurred for counterfeiting or conspiring to counterfeit or alter any of the adhesive stamps which will shortly be issued under the law.

CROP REPORTS.

Oct. 20. The markets here are very narrow. We can get only 32 cents per can for our milk now, 8¼ quarts. In the Summer it was 28 to 30 per can. For Manchester, 10 miles away, it was selling at 8 to 10 cents per quart. Cattle do not command a big price. Good cows can be bought for $40 to $60 each. It all depends upon whether a farmer has hay enough to keep the cows through the Winter. Hay sells at $20 to $23 per ton. We have to pay $1.25 per bag for oats, 32 pounds to the bushel, which measures 1½ bushel per bag. We can only get 36 for butter, and 38 for eggs. Apples only bring about $1.50 to $1.75 per barrel for hand-picked Baldwins. Potatoes bring now about 55 cents per bushel. Live poultry 15 to17. Hay, good English $20 to $23; cows $40 to $65; milk, per can 8¼ quarts, 26 to 34; butter, 32 to 38; eggs, A1, 20 to 40; apples this year, $1.50 to $2 per barrel. We do not sell any gardening crops to mention in this locality. W. F. L.

Candia, N. H.

Oct. 23. Turnips 50 cents per bushel; potatoes, 85; apples, per barrel, $1.50 to $2 for good Winter apples. Cabbage $6 per hundred; beets 50 cents per bushel; hogs, $11 per cwt.; eggs 50.

Arlington Heights, Mass. C. B. G.

Comparison of Stable Manure, Bedding and Hay.

WHICH would be the cheapest way to improve the fertility of my farm; to buy Boston stable manure at $7 per cord, or buy ordinary fresh water swamp grass at $12 per ton? This is to be used as bedding, and then put on to the land (not taking into consideration the value of the excrements from the cows which will be added to the grass when used as bedding)? A third plan is to buy hay at $15 per ton, feed it to stock and spread the resulting manure on the land. In other words, what is the comparative fertilizing value of Boston stable manure, bedding and hay? F. K.
Connecticut.

The following table shows what you would import as plant food in these substances:

Pounds In One Ton.

	Nitrogen	Phos. acid	Potash
Stable manure	10	6	12
Swamp grass.	20	4	17
Hay	26	6	30

This is mixed hay—not pure Timothy. The manure is figured by the ton and not by the "cord"—the latter varying considerably in weight. We do not know whether F. K. has a barn and is already stocked with cattle.

Tanners' Refuse for Fertilizer.

WHAT is the value, for fertilizing purposes, of refuse from a leather manufacturing establishment? Several tons of this can be secured at an expense for hauling and handling of about $2 a ton. The proprietor of the factory describes the refuse as follows: In the tanning of hides the raw hide is placed in a vat in which is a large quantity of lime, together with chemicals. After standing several days the lime and chemical eats off the hair and all of the fat and grease. The hair, fat, grease and lime settle to the bottom of the vat, and are later thrown on a pile in the yard. Is there any fertilizing value to this refuse, and how am I to determine the same? J. E. W.
New York.

These things, among others, are discussed in a little pamphlet on "Plant Food Wastes," which we distribute. The following is printed under "Tanning Wastes":

"Some of our readers are located near tanneries where wastes are thrown away or held at a low value. Here are average analyses of these wastes:

POUNDS IN ONE TON.

	Nitrogen.	Potash.	Phos. acid.	Lime.
Ashes—spent tan bark....	..	36	26	600
Ashes—tan bark	..	30	.12	1,000
Tannery lime waste.....	13	..	..	1,100
Tannery vat refuse	12	6	2	32
Tannery filter bed refuse.	18	2	16	400

Here we strike the first thing to remember. Whenever a substance is burned to ashes the nitrogen is driven away in the burning. There cannot be any nitrogen in any waste that is completely burned. Thus the ashes of tan-bark, like any other ashes, are useful for the lime, potash and phosphoric acid they contain. The unburned wastes from the tannery contain nitrogen with more or less of the other elements. In figuring values on such wastes you may estimate that when you buy fertilizers a pound of nitrogen will average you about 18 cents, while potash and phosphoric acid will cost about five cents. The price of lime varies too much to give any general price. Another product now being used is the refuse or sludge from glue factories. It will frequently contain 30 pounds of nitrogen and 600 pounds of lime to the ton."

Such wastes may be spread on the ground during the Fall and left to "weather" during the Winter, or composted with the manure before using.

Recent Experiment Station Bulletins.

FROM the New York Agricultural Experiment Station at Geneva, N. Y.:

Bulletin No. 387: The Pear Psylla and Its Control; a brief review of the more complete bulletin on this subject and containing a description of the life history of the pear psylla with methods for its control.

Bulletin No. 388: Tree Crickets of Garden and Orchard; another condensation of a larger bulletin upon the same subject containing an interesting description and fine illustrations of our common tree crickets. The more complete bulletins mentioned above bear the same numbers as those given for the popular edition described.

Bulletin No. 383: How Sod Affected an Apple Orchard; a popular and condensed review of the larger bulletin by the same number giving a comparison of tillage and sod mulch in apple orchards.

Bulletins Nos. 373 and 380: A New Method of Determining Milk Quality; again a popular and condensed review of larger bulletins describing a comparison of microscopical and plate methods of counting bacteria in milk.

Bulletin No. 382: Control of Cabbage Maggot on Early Cabbage; another popular edition of the larger bulletin upon the same subject.

From the Agricultural Eperiment Station at Madison, Wis.:

Bulletin No. 202: How to Improve Our Heavy Clay Soils; a bulletin of interest and value to all farmers on this type of soil.

Bulletin No. 241: Some Improved Dairy Tests and Methods; of chief interest to ice cream manufacturers and creamery operators.

Bulletin No. 239: Three Creamery Methods for Making Buttermilk Cheese; for cheese manufacturers.

Bulletin No. 204: Ways of Improving Our Sandy Soils; like the bulletin upon the management of clay soils of interest to all farmers owning this type of soil.

Bulletin No. 205: The Improvement of Marsh Soils; those wishing to utilize this type of soil will find this bulletin of value

From the Massachusetts Agricultural Experiment Station at Amherst, Mass.:

Bulletin No. 155: New Fertilizer Materials and By-products; this bulletin gives the fertilizer value of a number of miscellaneous materials available in limited quantities to farmers in the vicinity of the establishment where they are produced. Cocoanut meal as a dairy feed is also discussed in this bulletin.

Summer Pruning the Peach is the title of Bulletin No. 108 from the Tennessee Experiment Station at Knoxville Tenn.; of interest to peach growers.

Wild Garlic and Its Eradication is treated in Bulletin No. 176 from Purdue University Experiment Station at Lafayette, Ind.; it is complete and copiously illustrated. M. B. D.

FARM NEWS.

THE Wisconsin Cranberry Growers' Association distributed at the Minnesota State Fair 10,000 copies of "How to Cook Wisconsin Cranberries." They have learned it pays to advertise. Their annual crop is valued at $450,000, and the State stands third in the production of berries.

If the corn is in an open crib better stack some fodder around the north and west sides to keep the wind from driving snow in on the corn. Keep the crib well covered, for corn inside will suffer injury, if not protected in this way.

Ohio cranberry growers are enthusiastic over the color and quality of the product from the bogs around Toledo. It is said they are superior to Cape Cod berries, and are selling in the Toledo market at $4 a barrel. The Ohio crop is large, as is the crop elsewhere.

Many farmers were dissatisfied with sugar beet returns, and turned their acreage in other crops. This is particularly true in Ohio and Michigan. Regarding the war, "It's an ill wind that blows no man any good." The sugar beet trade has been boomed by the war, and up to the time of its declaration the possibility of profit to manufacturers as well as farmers was considered small.

The value of manure is increased $1 a ton, when applied by a manure spreader is the opinion of an Indiana writer. He says, "We must apply manure more carefully to the land to get the best results from it, and the old way of hauling and piling is a waste of labor." Manure should be hauled out and spread on the ground directly, or it should be conserved in a pit, the juices saved, and then hauled and spread at proper time.

The Wisconsin Experiment Station advises Fall plowing for Alfalfa seed bed, particularly on the loam and light soils in Wisconsin. If the ground is plowed just before seeding it leaves the ground too loose for good germination. By Fall plowing the seed bed is properly firmed, and is in best condition. Fall plowing is beneficial, as it gives opportunity to combat weeds by disking until time for seeding the Alfalfa. Farmers may also put lime on the plowed ground during the Winter.

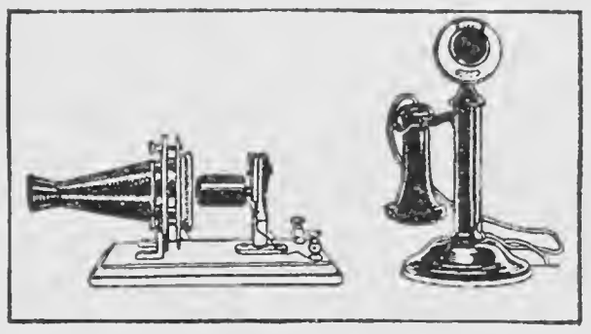
There will be no shortage of kraut either at the White House or the country over, is the opinion of manufacturers. President Wilson will receive a 60-gallon cask from Sandusky as a gift this year, from a concern which was similarly mindful of President Taft. Manufacturers report that throughout northern Ohio, Western Pennsylvania, New York, Indiana, southern Michigan, central Minnesota and Wisconsin the cabbage crop this year is very good. It is predicted there will be no soaring of prices, although the German product will be absent from the American market.

"O, DOCTOR, I have sent for you, certainly; still, I must confess that I have not the slightest faith in modern medical science." "Well," said the doctor, "that doesn't matter in the least. You see, a mule has no faith in the veterinary surgeon, and yet he cures him all the same." —Sacred Heart Review.

THE man in the automobile duster and goggles confronted an artist painting a picture by the roadside. "Say," said the motorist, "I'll give you $5 for that picture just as it is. Don't put another stroke on it." "I am really very flattered by your offer," replied the artist, "but why not wait until the picture is finished?" "Can't. I need the canvas to mend a busted tire with."—New York World.

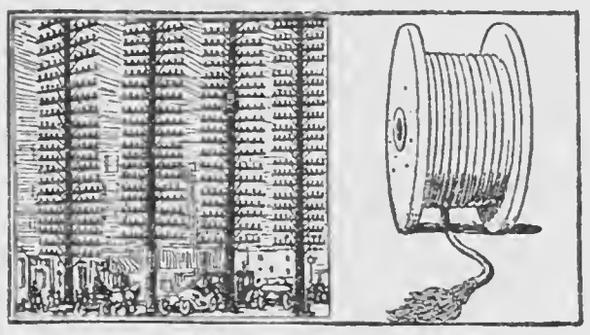
How the Public Profits By Telephone Improvements

Here is a big fact in the telephone progress of this country:



Original Bell Telephone 1876 — Standard Bell Telephone To-day

Early Telephone Exchange — Typical Present-day Exchange



If City Wires Were Carried Overhead — 800 in Underground Cable

Hand in hand with inventions and developments which have improved the service many fold have come operating economies that have greatly cut its cost.

To appreciate these betterments and their resulting economies, consider a few examples:

Your present telephone instrument had seventy-two ancestors; it is better and cheaper than any of them.

Time was when a switchboard required a room full of boys to handle the calls of a few hundred subscribers. Today, two or three girls will serve a greater number without confusion and very much more promptly.

A three-inch underground cable now carries as many as eight hundred wires. If strung in the old way, these would require four sets of poles, each with twenty cross arms—a congestion utterly prohibitive in city streets.

These are some of the familiar improvements. They have saved tens of millions of dollars.

But those which have had the most radical effect, resulting in the largest economies and putting the telephone within everyone's reach, are too technical to describe here. And their value can no more be estimated than can the value of the invention of the automobile.

This progress in economy, as well as in service, has given the United States the Bell System with about ten times as many telephones, proportionate to the population, as in all Europe.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy One System Universal Service

The Flame of Acetylene Light is Small and the Burner Peculiar

You have probably noticed that a Pilot Country Home Acetylene burner is shaped like the letter "Y."

And that the little gas openings in the arms of the burner are only pin hole size. So small they let out only half of a cubic foot of Acetylene in an hour.

You might leave one of these Acetylene burners open by accident all day—and even then there wouldn't be gas enough in the air of the room to enable you to set fire to it if you tried.

As a matter of fact, you would have to leave the burner open fully three days and nights in a room twelve by fourteen, with windows and doors closed tight, before there would be any fire or explosion whatever.

And the chance of your leaving a burner open that long is not worth considering. The pungent odor of the escaping gas would be certain to attract attention in a few seconds.

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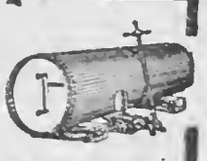

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Hope Farm Notes

I HAVE six acres of Cowhorn turnips sown in a seven-year-old Bartlett pear orchard. These turnips were sown in July, and now the tops cover the ground. When would it be advisable to plow them under, this Fall or next Spring? C. M. R.

Here is a case where what we may call the social side of agriculture must be considered. How near is this field to the dwelling house? If nearby and to windward, I would plow the turnips under this Fall. With all their fine qualities as humus and potash accumulators, these turnips during a mild Winter or a thaw will send out a fearful odor. The turnip is strong in sulphur, and you pay the penalty when the roots decay. If the field is out of range I would leave it till Spring, as you will get more good out of it then, especially if rye was seeded with the turnips. Such a field will be a mighty offense to a delicate nose in a Winter thaw or in late Spring if it is near the dwelling house. One good way to handle such a field is to turn in a flock of sheep at this time and let them gnaw the turnips down. You are fortunate in getting such a growth. Most of us have a poor stand as a result of the drought.

TENDER HANDLING.—There is no question about the wisdom of handling all perishable products tenderly. You cannot expect to handle eggs with a scoop shovel or apples with a pitchfork, or to throw potatoes around as you would field stones—not if you expect to make anything out of them. A very slight bruise will start decay in tender flesh and then, with ordinary storage, there is rapid loss. We all realize that eggs must be handled gently. The loss in a broken egg is quickly evident. It takes longer to realize that apples or roots or vegetables cannot be used as baseballs, but such is the fact, and this gentle handling is one of the first principles of fruit growing. It is one of the first lessons in picking which I try to teach the children.

APPLES.—We finished picking the last week in October. The actual crop ran at least 50 barrels over our estimate on the trees, and there are still over 100 barrels of drops and culls to pick up. We cannot handle them this year, so they are sold on the ground—the buyer picking them up, paying so much a bushel. He will sort and sell part as pie fruit and the rest for vinegar. We could get more out of it if we had the time to pick up, but with our crop to rush off before December 1 we have little time to handle drops. Our fruit will mostly go into the local market. We put the following advertisement into the paper published in our county town:

BERGEN COUNTY APPLES—Our fruit is sound and fine this year and will be sold direct from the orchard in scant half barrel baskets. No. 1 means full size, hand picked and sound; No. 2 are of smaller size, otherwise the same. Pie fruit is of medium size, slightly bruised, but suitable for cooking. Free delivery.

I leave out price and address as I do not think it fair to compete with other apple growers. I merely print this to show how we do it. I have letters from people who live all the way from New Hampshire to Indiana asking for our apples. Now I know that there are apples in New Hampshire better than ours, and I do not want to interfere with sales by local growers. We can handle our fruit without great trouble, and it will be far better for all to buy direct from nearby growers if such a thing is possible.

BUSINESS.—This advertising pays us well. Within a few hours after it first appeared a woman called up on the 'phone and ordered two barrels. Calls for 15 baskets or more in a single mail are not infrequent. I have been astonished, in view of our own results, that more farmers do not make use of this local advertising. I think it far better to go into the local town or city rather than to try some faraway field. If you do try it be as liberal in your dealings as possible. Give them heaped-up measure and the finest quality you have. I am trying to bring my boys up to understand that it is just as dishonest to put inferior fruit in the package as it would be knowingly to pass counterfeit money. Follow this plan, and every customer you pick up will come back for more of your goods and also go out and drum up trade for you. You will be surprised to see how many there are in your town who appreciate good produce. One boarding-house keeper has ordered 20 barrels of apples, and would take 100 barrels of potatoes. The Housewives' League members are ordering 60 barrels of apples, and would take dressed poultry, small carcasses of pork and other food. Here are opportunities for small organizations of farmers to meet these household organizations in direct trade. Two things are necessary, however. We must be fair. We must learn to make a standard for our goods and live right up to it, and we must make a fair price. I consider it folly for the farmer to try to hold up his direct customers to the retail prices charged by the stores. We must offer a fair inducement if we ever expect to change the present system of doing business.

THE SPIRIT OF AGE.—On October 20 the Hope Farm man attended a banquet given by the Business Men's Association of Windsor, Conn. There are many thousands of towns in this country all claimed to be "best." I think Windsor has about the best motto I have seen—"In years the oldest town in the State—in spirit the youngest." Just stop and run that over until you get it all and see how much it means. It means so much that I cannot possibly add to it by any comment. This old town lies in the rich Connecticut Valley—a region of tobacco farming—perhaps the most profitable of any in the country. I should judge that Windsor remained satisfied and stationary for a good many years. Now a few eager spirits have organized an association, and they are pushing the old town into new and vigorous life. There were nearly 300 people at this banquet—about half of them sturdy and substantial farmers—the rest business men. The women got up the supper, and it was served informally. I presume every section is noted for some kind of food which is cooked in superior fashion. There is no spot on earth—at least I have never found it—where finer pumpkin and apple pies are to be found than in the upper Connecticut Valley. They had them on tap that night to top off a dinner which would be served by a prosperous farmer to entertain company. There was a fine program of music and recitations—no foolish vaudeville performances, and no smoking. They had invited the ladies, and the wives and sweethearts and sisters and daughters were there as fine and rosy as apples. Here was a section of apples and peaches and tobacco. In compliment to the ladies the men cut out tobacco, while the ladies came as peaches and turned the apples into those famous pies. All agreed that this club and its meetings were doing great things for the town by bringing people together and making them acquainted. They also agreed that such a club could not live long unless a few live and unselfish members were willing to give time and money to the job. That is the secret of all such organizations. There ought to be thousands of just such clubs in country towns. They could do wonderful good just now in organizing for selling products, or for inducing people to establish manufacturing plants, or develop new enterprises. What about your town? Is it old in spirit as well as in age? What is the reason *you* cannot put new spirit into it—as they have done at Windsor?

SELF DENIAL.—This horrible European War will result in frightful suffering during the coming Winter. Many of the Belgians are without homes and probably 1,000,000 soldiers have been killed or seriously wounded. Vast as are the resources of the great fighting nations it will be impossible to care for all the helpless ones. This great nation cannot take sides in this hideous quarrel, but we can help the unfortunate through the Red Cross and other commissions. All over the country this need of help and the privilege of helping is coming home to our young people as few things have done for years. As an instance, my daughter at a woman's college, tells us how the junior class is exercised over the question of celebrating their annual "Prom." This is the big social event of the year—the one great dance and general "good time" which the students are permitted during their four year's course. It is an elaborate affair and costs considerable money. Now the question has come up to those girls—"Shall we hold this expensive 'Prom' or have some simple affair and give the money to the Red Cross?" It is a hard question for those young women. I would not influence one of them one way or the other, for character is made—not by what others tell us, but what we reason out for ourselves. It is the question, however, which will come to thousands of our young people during the remainder of this awful war. H. W. C.

Panning Gold Dust.

I HAVE small deposits of gold in the sand of a stream. Can you tell me where I can find instruction about using a pan for separating out the gold? J. P. R.

Panning is a very simple process if one has seen another do it, but it is rather difficult to become efficient with a gold pan from written directions. The best directions that I know of are contained in the first five pages of a little hand-book entitled "Useful Minerals and Rare Ores," by Alexander McLeod, published by John Wiley & Sons, New York. In regard to machinery for extracting the gold J. P. R. may take up the subject with the *Engineering and Mining Journal* of New York, as it will be able to furnish him the names of reliable manufacturers of such machinery. G. H. A.

Massachusetts Garage Law.

WHAT is the law in Massachusetts in regard to fireproof garages? How many feet must they be from a building, and does the law apply to country places the same as in thickly settled places. F. D.

I suppose the inquirer means a private garage for family use only, which would probably come under the fourth or fifth class, the former for housing one car, the latter for housing not more than two cars. These may be conducted without a license or permit, but are subject to the laws and regulations of Massachusetts in regard to operation and maintenance. Such a building must be made with fireproof floor, and shall be at least 20 feet distant from any other building which is not over three stories in height; not less than 50 feet distant from building over three stories in height; must be at least 100 feet from any building not owned or controlled by owner of garage. All other garage come under first, second and third class, and must be fireproof in all ways. Artificial heating must be by steam or hot water. No volatile inflammable liquid shall be put into or taken out of a motor vehicle near open lights; all lights on vehicle must be out and engine stopped when so doing. Above liquid should be stored in ground outside garage unless permission to store underground inside is obtained from proper officials. The laws cover both city and country garages in all cases. A. E. P.

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Ruralisms

NOTES FROM A MARYLAND GARDEN.

A DRY SEASON.—The driest Summer I have ever known has closed in the midst of arid conditions. Spring was very dry, and no rain till the first of July, when we had good rains and hoped that the drought was over. But the rains stopped till August, and we had good ones the early part of that month, and then another stoppage, and here is the last of September and still no rain, and a temperature of 95 the last week in this month. The great tomato canning crop is a very important one here, for every farmer plants a field in tomatoes for some one of the fifty or more canning ho ses in this county. The crop was late and the drought has cut it short, and many claim that they will not have more than half a crop.

DROUGHT DAMAGE.—In my garden the drought has made very serious damage, and many things have been affected in an unusual manner. I am now lifting Gladiolus corms. The majority of them, instead of making the one or two good-sized corms on top of the old one, have broken up into half a dozen or more little corms less than an inch in diameter. These little corms will all probably bloom, but are wholly unsalable, for people who buy bulbs of any sort always want large ones. The one exception has been the America. Why these have developed to the normal size in the same plot where others run small is hard to understand. But even these have failed to make the mass of little corms usually found between the new and the old corm, and America usually makes a great many of these. My eggplants were heavily mulched with stable manure, which has had some effect in retaining moisture, and the plants have made a wonderful growth, but have produced fewer fruits than I have ever known on the usually prolific eggplant. Last year I had a trellis 50 feet long covered with moonflowers, and they seeded finely, so that I was able to supply quite a lot of seed to the Northern trade. This year the moonflowers have grown and bloomed finely, but never a seedpod formed. One would suppose that the arid season would be favorable to the setting of seed. But probably the bees have been driven to the swamps and low grounds, and a lack of insects may have had something to do with the scant seed-setting.

VEGETABLES.—Spinach seed sown early in August has almost entirely failed to germinate in the dry soil, and I have sown a lot in a plot where I can reach with the hose and keep it watered daily, and am getting some started which will probably get large enough to winter, but we shall be short of Fall spinach. But through all the dry weather we have had one resource in the chard. This has been our dependence for boiled greens, and it takes the place of spinach very well. We keep the big outer leaves pulled off to encourage the production of the inner and more tender leaves. Leeks are uncommonly small, but we may have some rain yet, and these hardy things will grow till Christmas and may still give us leeks this Winter.

LATE SOWING.—The Chinese Rose-colored radish seed has just been sown. These we mulch heavily with manure in Winter and generally keep them in good condition for use. The lettuce frames will now be the chief thing to be looking after. Plants for the Christmas crop are now nearly large enough to prick out into flats to get stout for setting in the frames, and I shall still sow seed inside to plant for the succession Winter and early Spring crop. Cabbage seed has not germinated yet, and it looks as though I shall have to depend on plants from the frames for planting in Spring, and leave out the Fall setting entirely.

W. F. MASSEY.

Brassington Cherry.

THE Brashington cherry, about which J. F. S. inquires on page 1213, is probably the Brassington, a comparatively new sour cherry of considerable merit, originating, I believe, in Michigan. As grown on the Experiment Station grounds the trees are moderately vigorous, very erect growing. The fruit is larger and darker than Early Richmond, and is of excellent quality when fully ripe. The characteristics of tree and fruit leads to the impression that it belongs to the Duke class. PAUL THAYER.

Ohio Experiment Station.

Perfume from Scented Geranium.

I HAVE been informed that perfume can be made from Sweet scented geranium leaves. Could you tell me how this can be done? H. C.

Long Island.

The essential oil of scented geranium is used by perfumers, and is also an adulterant of attar of roses. The process of extracting flower oils, which is followed in extracting essential oil from leaves also, was described quite fully in THE R. N.-Y., issue of October 11, 1913, page 1105. The appliances called for were a steam can, herb can, and condenser, with an overflow for waste water and a receptacle for the finished product. For the steam can, a clean five-gallon oil can is suggested; a pipe of lead or pure tin from this enters the herb can at the top reaching down, inside, to the bottom. Another pipe soldered into the top of the herb can leads to the condenser. The top of the herb can must screw or clamp tight, so that there is no leakage of steam. There are various types of condensers; the article we printed last year warned against the glass coil, which is cheap, but unsatisfactory unless the operator knows how to use it. The old form of a metal coil in a pail or tub of water may be used, but a glass condenser with rubber tube may be bought from a chemical supply house, and this is preferable. The Allihn type is advised; the straight Liebig type permits the steam to blow through.

The steam can, with a vertical tube at the top to act as safety-valve and give warning when the water is low, should be nearly filled with water to start, and the herb can, with the steam tube reaching below the false bottom, should be packed with the flowers or herbs. The flow of water in condenser may be from one pail to another. Of course, there is a separate flask or other vessel to receive the distillate. When the charge is exhausted the oily drops or milky flow cease, and only water comes out.

Anyone wishing to operate such a still should register it with the Internal Revenue Office for his district, to avoid any risk of injurious suspicion. The Bureau of Plant Industry, U. S. Department of Agriculture, Washington, can supply practical information on the distilling of perfumes, having literature available on the subject, and it would be well to secure this matter from them.

California Poison Oak.

IS the poison oak of California and the Pacific Coast the same as the poison ivy of the Atlantic States, and will it respond to the same preventive and curative treatment as the other? The poison oak here, on poor thin soil is a small bush; in rich deep soil it is a much larger and thicker bush; when it grows next to a large oak in good soil it becomes a vigorous climber. A. L. B.

Oakland, Cal.

The poison oak of California, also called poison ivy, yeara and poison sumach is Rhus diversiloba, and is closely related to Rhus radicans, the poison ivy of the East. The same treatment and preventives apply to this plant as to the poison ivy.

DURING the past year we have had a great many questions about the possibilities of nut culture in New England. It is very evident that our readers in that section are much interested in this nut proposition. All who are so interested should read the document on nut culture by William C. Deming, which is issued by the State Board of Agriculture at Boston. This document is known as "Nut Culture for Massachusetts," and is Circular No. 26, issued in June, 1914. Dr. Deming gives a thorough study of the matter as applied to New England. Among other things, he predicts that the time is coming when the future American will grow nut trees, and between them beans and Alfalfa; he will keep some chickens and a cow and be forever independent of the butcher, although he may have to send to the grocer now and then for a codfish from which to make codfish balls. When this happy time comes we shall all have to get nut trees. The pamphlet is an excellent one, and we commend it to our readers who are interested in nuts.

"What's the matter with Willie?" "He's turned anarchist." "Anarchist! Dear, dear! What's turned him?" "He says he can't support any government that wilfully sends ships to bring home stranded school-teachers." — Cleveland Plain Dealer.

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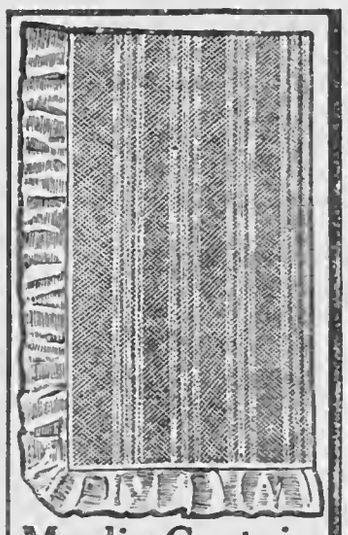

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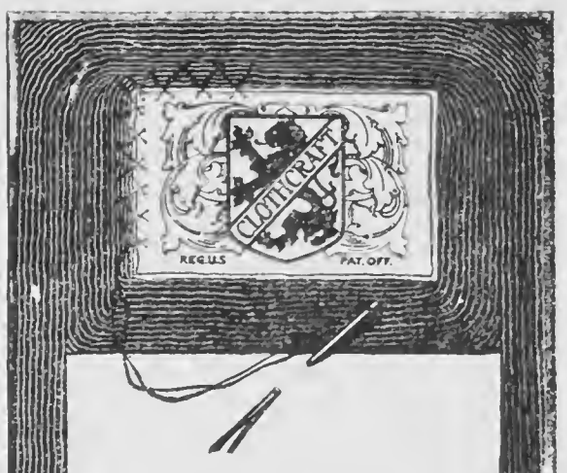

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A National Weekly Journal for Country and Suburban Homes

Established 1850

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*

SOME of the most useful agricultural exhibitions in the country are the small Grange fairs. While less pretentious than the county fairs, they are more useful because they represent the plain farmers and give all a fair chance. They are coöperative too. Many of the prizes are offered by business men in town, so that both producers and consumers are interested. The fairs are held late enough in the season to give farmers a chance to exhibit mature fruits, grain and vegetables. The idea of these little local fairs is fine, and they ought to be encouraged everywhere.

*

THE Housewives' League is a very useful organization. In many places it has done excellent work in organizing buying and in fixing a standard of quality. Its advocates must remember one thing, however. There is a fair price for farm produce, below which it should not go. The Housewives' League should not be so eager to cut prices as to demand that the farmer sells for less than his produce costs. The fierce demands for "bargains" in dress goods resulted in taking most of the home manufacturing away from farmers and their families and driving it to poorly-paid foreign labor—crowded into the cities. This constant demand for food at prices below the cost of production will result in economic disaster to farmers. Such organizations as the Housewives' League ought to work with country women in maintaining fair prices.

*

IN a recent issue of THE R. N.-Y. several stories appeared concerning the apple crop, with apparently no available market. I have looked through the paper carefully and as a result found no advertisements where anyone wishes to sell apples. The wholesalers are asking $1.75 a barrel for apples here, but only retailers can buy them. They are receiving 25 cents a peck for the apples, which are by no means what you could call fair. A good many are deformed and wormy. This will, I think, partially account for the poor apple market. FREDERICK KRONMILLER.

We cannot understand what apple growers are thinking of to let the local markets go in this way. In every town and city of this nation may be found families who will gladly buy apples at a fair price. Left to the usual methods of distribution these people will eat but little fruit. With direct trade, good fruit and a fair price they will clean up every apple in the country and call for more. Our own experiment in advertising in the local market is so convincing that we cannot understand why growers neglect such opportunities!

*

WE know a man now over 70 who bought a farm and started to develop it on modern lines. There was one good-sized field which seemed just suited to Alfalfa. Our friend went to large expense to fit this soil. Several carloads of manure were plowed under, lime and fertilizer used freely and good money spent for inoculating material. A large quantity of Alfalfa seed was bought of a prominent seedsman and every plan suggested by the authorities was faithfully carried out at heavy expense. As a result this man has a fair seeding of Red and Alsike clovers with a scattering of Crimson. It is doubtful if there are a dozen Alfalfa plants on an acre. There can be absolutely no question about the fact that this mixture of clover seeds was substituted for Alfalfa! This man does not accuse the seedsman of cheating him. He thinks they simply tagged the wrong bag! Of course it is easy to say that this man should have sent a sample of that seed to the experiment station for examination, but the very character and reputation of this seedsman made such a thing seem unnecessary. Now what about it? At this man's age, such a blunder is a very serious matter. He has a stand of clover—worth less than half as much as Alfalfa would be. Under such circumstance what should the seedsman do? Get behind his "non-warranty" clause or pay fair damages?

*

EVIDENTLY the modern farmers' meeting demands a modern programme. About 25 years ago a few veterans met and solemnly discussed a lot of dry, general topics. They were all interested, and all agreed that such a meeting must be like an old-fashioned school-room. Then came the demand for larger meetings, and it was found that the younger people would not come out unless the programmes were made "popular." All sorts of attractions have been tried—concerts, prize speaking and even vaudeville shows. The older people may shake their heads and sigh for the old-time serious meeting, but "youth will be served," and the crowded gatherings of to-day are in line with the spirit of the age. Managers of horticultural and other societies, are stimulating their brains to try to think of new attractions for the young people. The Maryland society has a new one. Prizes of $20 will be given for the best essays by young people who attend the public schools. The boys will take this subject:

"Why the Maryland farmer's boy should remain on the farm."

The girls will struggle with the following:

"How social conditions in rural life in Maryland can be bettered by the daughters of Maryland farmers."

Good subjects—both of them. What a change has come since the day long ago when we heard at an agricultural meeting college boys discuss the question whether Milton was a greater freeman than Shakespeare! There is another novelty which the horticultural meetings might take up. We have suggested it for several years. Offer prizes to the farmers' daughters who make the best apple pies. Let those pies be made before the audience—not at home. Give each girl some good apples, a handful of flour, a lump of butter and such sugar and spice as she needs. Give her a table and a chance at a hot oven and let her alone! That will beat any prize speaking that ever came down the road. We would not object to acting as judge to sample the pies.

*

IT will startle many of our readers to be told that Buenos Aires, in Argentina, is the third largest city on the western continent. The latest report is that this Southern city contains more people than Philadelphia, and thus ranks next to Chicago. Very few of the people in this country have ever realized the possibilities of Argentina. We have dismissed the subject with the thought that great energy and substantial growth are only possible in the temperate zone! But Argentina lies in the south temperate zone, Buenos Aires, lying about as far south of the equator as Nashville or Cincinnati are north of it. A quarter of a century ago James G. Blaine, then Secretary of State, saw the wonderful possibilities of Argentina, and he tried to arouse interest in South American trade. Congress could not see into the future any more than it could see beyond the Mississippi when, years ago, statesmen tried to develop California and Oregon. As a result we nearly lost the Pacific coast, and the immense trade of the Argentine went mostly to Europe. Few of us realized the size of this trade until the shock of the European war showed what we have been neglecting so long. One thoughtful thing about the great growth of Buenos Aires is that it is largely built on the cultivation of Alfalfa. Argentina is largely an agricultural nation, and will long continue to be. It made rather slow progress so long as it depended upon its natural grasses or grains or its natural soil. From the introduction of Alfalfa culture on a large scale agriculture has rapidly gained, and has carried the general prosperity of the country with it. More and better food for stock has been made possible, and the soil has been improved so that all crops have increased. Thus the blessing of prosperity which has come to Argentina has literally come from the skies—in the form of nitrogen taken out of the air by Alfalfa. Much of this same prosperity will come to every nation or section or farm where this wonderful Alfalfa can be made to grow naturally. Twenty years from now we shall witness the truth of this statement in central New York, where Alfalfa grows freely. The farms in that section will be wonders for productive power, and the towns and cities will share in the prosperity.

"WHY should I keep purebred stock?" That was the question in the minds of 100 farmers seated in the demonstration pavilion at the National Dairy Show. These were men representing the majority of farmers everywhere. A speaker pounded home facts that have been recognized everywhere. A purebred has the ability to reproduce a superior animal; the chances are against a scrub. You may have a cow in your herd that will produce one, two, or three good calves, and the next one may be a worthless freak. You have no guarantee. The scrub and grade bulls are the curse of the country. The sire is more than half the herd. The grade sire may be but half the herd, but the purebred is three-fourths or seven-eighths or even more. In three or four generations the cow may be essentially purebred. It may not be possible for every man to purchase both purebred cows and a bull, but it is within reach of most men to own a purebred sire of any breed. There are bull associations which make it possible for the farmer to have access to the best; it gives the bull a chance, and keeps the cost of breeding down. The associations provide a bull for a block of 50 cows, generally 200 cows in the association, and a bull breeds the block two years and is passed on. The bulls that do not make good are sent to the meat block. This gives the sire his chance.

*

HERE is a remarkable incident which shows the mighty change which has taken place in the last half century:

This little incident may interest your readers, and "W. T.," who wrote the article on Delaware County, page 1226. The latter part of September I happened to be in that county, and there met an interesting family, who told me they had just "trekked" all the way from Chicago, in their auto, in search of the farm house they' visioned, and had not found it until they reached the fertile fields of Delaware County. In the olden days we trekked West in prairie schooners. The trekking is good East in motor cars these days, it seems. This forcibly also illustrated the custom of a foregone era, in that father and son cast their fortunes in together. Delaware County may be proud of attracting such people. A prosperous family, consisting of a father and mother in the prime of life, their sturdy son, and his very handsome young bride. J. C.

We have people on our list who went "out West" in wagons drawn by oxen—far into the wild prairie, where they settled and endured until prosperity came their way. In those days it did not seem possible that the hilly lands of New York and New England could ever again offer opportunity. Yet here is some of the money painfully earned from that old ox team invested in a motor car and bringing back the third generation to a New York farm. There is no other country in the world that can show such a curious outcome of history. No other section of the country can "come back" so vigorously as the strip 200 miles wide along the upper Atlantic.

BREVITIES.

A WHITE card for the Black walnut.

THE bushel crate is a good apple holding package.

No doubt that Fall plowing helps kill out the insects.

A NURSERYMAN is not necessarily an authority on babies.

THE wrong kind of a boost when old opinions formed before we knew—come home to roost!

MANY a farm carcass now wasted could be put into cans and sold or used as poultry food.

DID any county or township ever improve its roads without adding to the value of adjoining farm land?

THIS is the annual season for foot and mouth disease—the politician opens his mouth and puts his foot in it.

BALDWINS mellowing to decay in the tall grass of the orchard—unnamed frauds on the city fruit stands at two for five!

HERE is another new one—a potato paring and dish-washing contest at the agricultural exposition for Vermont boys and girls at Windsor!

DON'T forget to plant two trees for each one cut this Winter. This applies to woodland as well as orchard. We aim to try to help all to maintain good farm practice.

YOU would not consider Connecticut as a mining State, yet the minerals taken from her soil in 1913 came to $4,000,000, while Vermont gave a total of $9,647,985.

THE Massachusetts Agricultural College at Amherst has established a steam plant for rendering beeswax. This is at the service of Massachusetts beekeepers, who are invited to use it.

No sir! We would not knowingly plant a tree afflicted with crown-gall. Cast it into the fire. It seems like a crowning case of "gall" for a nurseryman to tell us this disease is not worth considering.

THE cover crop, the cover crop! Now is the time we see it stop the costly drain of nitrogen out of the soil in Autumn when the corn is cut and fields are bare and no live roots are feeding there.

WE receive a good many stories and pictures of hens or pullets which are said to have "records" of 300 eggs or more in a year! These are private records made on the owner's farm. You cannot blame us for limiting such printed stories to the official records made under the eye of some reputable public institution. We do not question these private records, but there should be some official evidence.

A CRITIC OF THE LAND BANK.

SOME months ago Herbert Myrick ventured to criticize the Land Bank of the State of New York, through the *American Agriculturist*, which, before Myrick's control of it was a respected farm paper. A few weeks later he indorsed the bank and urged Granges and other farm organizations to identify themselves with it, having, no doubt, heard from farmers in the meantime. He even called it a Myrick victory. Now he is out again in an attempt to discourage farmers in the use of it. Myrick clearly indicates by his criticism that he knows nothing about the Land Bank system. He simply knocks it because there is and can be no opportunity for him to benefit himself through it. Here is one of his arguments against it:

To keep the farmers out of it, the 10 member-associations comprising the Land Bank, must have aggregate resources of not less than $5,000,000, and must put up at least $100,000 in cash capital to start the land bank.

Myrick must know that forty-odd associations have already applied for membership in the Land Bank, and that at least one of them is composed entirely of farmers. He must know that the $100,000 of capital is already subscribed; and that the resources behind the bank already are over $20,000,000. He must know that this $100,000 is to be invested in first mortgages on farms and small homes, and that this capital makes available $2,000,000 more to be invested in the same way. Myrick says the system is a good thing for wage earners in cities and towns, but not for farmers. He makes this bald statement, but does not dare state any reason for it. He says the banking interest "slipped one over on the farmer." Will he tell us how? Will he explain to us how a banker is going to get any advantage out of the Land Bank that an individual farmer cannot get? As a matter of fact it is the one fiduciary institution in the United States organized exclusively on co-operative lines, and so safeguarded that no banker, capitalist or other interest, can get any advantage over the humblest member of it. And this is just why it does not suit Myrick and others of his kind. They want something that can be used by selfish interests to assemble the frugal earnings of the people, and place it in their hands for speculative purposes. Their real objection is that it does not furnish this; but they dare not plead for their selfish interests. They try to throw dust in the eyes of the farmer by a pretense of pleading his cause, while knowingly opposing his interest. The Land Bank system provides for the assembling of savings; and for the investment of it with the people who save it. It not only keeps the farmer's savings employed for himself in his own neighborhood, but it attracts capital to him from circles outside of his own realm.

New York State farms carry $100,000,000 of mortgages. Including expenses they pay in excess of six per cent. Some of them have been in existence 70 years. If one stands for 40 years, the farmer pays $60 annually for interest on every $1,000, and the $1,000 must then be paid in bulk. The German farmer pays 5.2 per cent. for 40 years, and the mortgage is then wiped out. Which system would Myrick recommend? The Land Bank brings the German system to the New York State farmer. Rates are higher here and for a while one may be obliged to pay more than 5.2 per cent.; but the systems are virtually the same; and when the soundness of our system is established, we will be able to equal or exceed the German terms.

Myrick implies a criticism of the Land Bank because it provides for substantial capital and resources. But the success of the system depends on its absolute soundness. The bonds of the bank will be taken up by farmers, laborers, frugal savers, and small investors generally as well as by bankers and large investors. They must be made absolutely safe for the widow and orphan. Hence it was provided that a safe ratio must exist between the capital and assets, and the bonds the Bank would be allowed to issue. This is not Myrick's style of financing and he could not be expected to approve it. Myrick borrowed money from farmers and farmers' wives under the pretense of giving them a building certificate in exchange, which was nothing but a receipt for the money, and no lien on the building whatever. When these people want their money, they are obliged to employ attorneys to get it. Myrick organized the Homestead Publishing Company, and tried to sell stock to farmers. The stock cost him about $8 and he sold it to farmers for $100. He sold them Good Housekeeping Company stock for 20 per cent. above par. He then sold the publication without their knowledge or consent, and they had to apply to THE R. N.-Y. to get their money. They never could find out what it sold for; but every publisher knows that the stock sold by Myrick to farmers for $120 was not worth to exceed $25. Myrick was indicted by a Federal Grand Jury through the Post Office Department. He was convicted of making false statements to the Department under oath. In the discretion of the judge he might have been fined or sent to a penitentiary. He was fortunate enough to get off on a fine. Myrick sold advertising space on a guaranteed circulation of 100,000 for his publication. The Post Office suit showed that his real circulation was 27,000. Some advertisers made a demand for the return of their money, and Myrick was obliged to return it.

Such is the man who sets himself up to farmers as a qualified critic of the Land Bank. J. J. D.

KITCHEN work in this country affects 8,000,000 workers. A plan or a trick for saving or shortening steps is a national blessing!

Substituting Corn for Cotton.

IT seems settled that there must be a decrease in cotton acreage in the South another year. Every public man in that section is advocating such a measure, and probably a large area now in cotton will be planted in corn or other crops. One outcome from this departure would be the fact that a decrease in cotton acreage means a decrease in labor, as one man can take care of many more acres of corn than he can of cotton. As the result of this the corn acreage must be largely increased, or there will be a drift of negro population to the towns and cities. All over the Southern States there are now vast tracts of idle land. Some of this was formerly cultivated with fair profit, but it has gone back to scrub trees or broom sedge. The trouble with most of this land is a lack of organic matter. Probably nowhere in the world can green crops for supplying this organic matter be grown to better advantage than in the South, and thousands of these acres can be readily brought back into cultivation. Such a large increase of corn culture would have a perceptible effect upon the general production of that crop.

Meeting of the Dairymen's League.

THE annual stockholder's meeting of the Dairymen's League will be held in Albany on Saturday, November 28; probably in one of the rooms of the Agricultural Department. There are over 13,000 of these stockholders, and it is important that the meeting should be largely attended, and all milk-producing sections of the State be represented, either personally or by a representative. Of course it will not be possible for all these producers to assemble in one meeting, but the different locations will undoubtedly select one of their members to represent them at the meeting, and care should be taken to select level-headed men for this mission. It is probable that members of the board for the coming year will be made up of the representatives present at the meeting, and this is another reason why the selection should be made with care, and strong, practical men sent to the meeting.

Producers are now pretty well organized and the success of the organization and the methods adopted will be put to the test this year. A serious mistake will not be fatal, but it certainly would put back the work. The time calls for strong, able leaders, and staunch support for them from the members of the association. The League has been developed along conservative lines by altruistic men who have given their time, and their thought, and their ability to the work, without expectation of compensation, and we venture the prediction that they will yet successfully work out a plan and a practice to improve the business of milk production and distribution for the metropolitan markets. The new Department of Foods and Markets will be a powerful aid in the work when it is completely organized.

Advertising on Apple Day.

THE Hampton County, Mass., Improvement League made a very practical use of Apple Day in advertising apples and encouraging sales. It seems that people in Springfield, Mass., were not eating near as many apples as they should have done. Local retailers were buying No. 2 apples at a dollar a barrel from the wholesale houses, and charging 35 to 40 cents a peck at retail. No. 1 apples, which cost them $2 or a little over, were being sold at 50 cents a peck, and with these prices sales were slow. The business men of Springfield were interested in using Apple Day for advertising Massachusetts apples. Mottos were displayed everywhere. *"Eat Apples and Live Forever"* seemed to be the favorite. The hotels, the big business men, including drugstores and drygoods houses, got into the spirit of the day and talked apple. In one case a man and a trained rooster were employed to walk the streets during Apple Day, with a basket of apples on his arm. No doubt the rooster entered into the spirit of the occasion with an occasional crow. It is said that by night the streets were covered with apple cores, and the consumption of fruit for that day was immense. The report is that this educational work has increased the demand for apples in Springfield fully 50%. Prices of apples from the producers have advanced fully 25 cents a barrel, and the local crop will be well cared for at home. This is good work by the League. It proves just exactly what we have always claimed—that no matter how large the apple crop may be, it will be fully taken care of if producers will only get out, show themselves and talk apple. Do not wait for somebody else to do this work for you; get out and do it yourself, and the returns will be sure.

New York State News.

DOG QUARANTINE IN SYRACUSE.—It appears that the control of the rabies situation in Syracuse is to be left with the city authorities provided they carry out the instructions of the State Commissioner of Agriculture. There has been a difference of opinion as to whether the city should be quarantined or not, by State authority, and Commissioner Huson visited Syracuse last week to investigate conditions. Upon assurances from the City Commissioner of Public Safety that he would handle the situation without establishing a quarantine, the Commissioner advised him to go ahead but laid down certain conditions which must be observed. As a like situation may arise elsewhere the conditions laid down by the Commissioner may be of general interest. All dogs running at large must be properly muzzled, otherwise they will be captured and disposed of. No dogs within city limits must be taken out of the city. Prompt reports must be made to the office of the Commissioner of Agriculture regarding dogs captured and the disposition made of them. The Commissioner impresses the fact upon the Syracuse authorities that many muzzles now in use afford no protection. This must be remedied.

FOOT AND MOUTH DISEASE.—Information having reached the office of Commissioner Huson that the foot and mouth disease was prevalent in certain counties in Michigan and Indiana, he has issued a notice and order forbidding the importation into this State of any horses, cattle, sheep, swine, goats or poultry, from the counties named therein. The fine for the violation of this order is $100 for each offence. In Michigan the counties quarantined against are Cass, Van Buren and Berrien and in Indiana St. Joseph, La Porte, Starke, Marshall and Elkhart. It appears that Illinois has also issued quarantine against these counties. Government quarantine has also been established.

GOOD POTATO CROP.—What is claimed to be the largest potato field in the State is that of E. C. Gleason, of Malone, which contained 43 acres in one solid potato patch. Mr. Gleason harvested about 11,000 bushels from the 43 acres. They were of excellent quality.

APPLES IN ONONDAGA COUNTY.—The manager of the Onondaga County Farm Bureau estimates the apple crop in that county at 100,000 barrels. This is about 10,000 more than last year. Practically all the fruit will be consumed locally. He also says that less than one per cent. of the trees in that county are sprayed. If that correctly reports the farm agent he would seem to have part of his work cut out for him for another year. We of New York State should enter no complaints about competition with the northwest when we let all but one per cent. of our trees go unsprayed.

NEW FARM BUREAU.—Orange County will have a farm bureau. At a meeting of farmers and others interested in the project, held at Goshen, October 24, Mr. Burritt, State Superintendent of Farm Bureaus, was present and explained the methods of organization and the purpose and work of the Farm Bureaus. It was voted to organize and these officers were elected: President, D. V. Farley, of Hamptonburgh; vice-president, John H. Arfman, of Middletown; secretary, C. B. Coleman, of Goshen; treasurer, Howard D. Seeley, of Goshen. C. B. Harlow, of Stony Ford, was elected representative of the county Grange, and Albert Manning, representative of the Board of Supervisors.

MR. MANNING APPOINTED.—Albert Manning, of Otisville, has been appointed by Gov. Glynn as a member of the Bovine Tuberculosis Commission, which was created by an act of the Legislature at its last session. Gov. Glynn has called a meeting at the executive chamber on Friday, November 6, for the purpose of organizing the commission. J. W. D.

Grain Notes by Experts.

BROOMHALL reports large wheat crops in India and Australia, and heavy receipts at Liverpool, where wheat is selling at $1.25 to $1.30 per bushel, and oats, 78 to 80 cents. In Hungary the import duty on all grain has been removed, yet prices are increasing rapidly, wheat at Budapest being $2 per bushel.

A report from The Hague gives the German wheat crop as 2,182,000 tons; rye, 8,401,000 tons, and oats, 5,949,000 tons, a total grain shortage of 1,764,000 tons from last year. The potato crop is about 6,000,000 tons less than last year, but as all exports are forbidden German authorities state that there will be ample food for home use.

Clement, Curtis & Co., say: "Our returns on the corn yield show a slight gain over last month and are indicating a crop around 2,700,000,000 bushels. The largest gains over last month are in Ohio, Iowa and Minnesota. Losses from the indications of October are largely in Illinois and Indiana."

Oscar Lyle estimates the following distribution of this country's corn crop:

	Bushels.
Mills for city use	136,476,000
Mills for farm use	107,040,000
Glucose and starch	40,140,000
Distilled liquors	21,408,000
Malt liquors	13,380,000
Feed in towns	117,744,000
Feed, horses and mules on farms	722,520,000
Hogs on farms	717,168,000
Cattle on farms	251,544,000
Milch cows on farms	230,136,000
Sheep on farms	58,872,000
Poultry on farms	96,336,000
Seed on farms	21,401,000
Exports, etc.	141,828,000
Total	2,676,000,000

Our estimated stocks of grain in storage are shown in the following table, the figures being thousands of barrels:

	Wheat		Corn	
	1914.	1913.	1914.	1913.
New York	2,879	1,329	456	13
Boston	112	20	27	....
Philadelphia	1,501	442	110	22
Baltimore	2,757	288	186	116
New Orleans	2,781	125	78	110
Galveston	2,865	473	193	10
Buffalo	3,432	19,600	439	761
Toledo	1,784	1,215	75	790
Toledo afloat	....	30	....	....
Detroit	490	76	112	171
Chicago	5,096	9,303	910	4,050
Milwaukee	428	314	71	39
Duluth	8,814	10,443	....	....
Minneapolis	13,713	13,835	6	24
St. Louis	3,517	1,835	22	290
Kansas City	8,452	8,231	74	373
Peoria	3	122	55	26
Indianapolis	614	327	88	342
Omaha	960	1,473	64	362
On lakes	2,926	1,640	108	307
Canal and river	25	24	....	9
Total	63,149	53,505	3,074	7,075
Increase	2,993	....	....	....
Decrease	....	896	981	277

	Oats		Barley	
	1914.	1913.	1914.	1913.
New York	1,735	1,254	493	61
Boston	3	17	....	2
Philadelphia	627	93	....	....
Baltimore	1,085	445	42	1
New Orleans	438	158	....	....
Buffalo	2,710	2,153	498	1,037
Toledo	864	906	....	....
Detroit	50	136	11	....
Chicago	12,631	14,053	915	84
Chicago afloat	102	....	....	....
Milwaukee	471	466	305	290
Duluth	1,505	1,408	1,244	1,792
Minneapolis	3,763	3,510	958	1,128
St. Louis	488	1,440	16	37
Kansas City	761	1,133	....	....
Peoria	1,207	1,639	....	....
Indianapolis	374	280	....	....
Omaha	2,302	2,420	46	28
On lakes	582	....	409	223
Canal and river	218	298	95	172
Total	32,016	31,830	5,033	4,855
Increase	657	1,084	....	....
Decrease	....	....	69	907

Rye (1914).—New York, 242,000; Boston, 35,000; Baltimore, 644,000; Buffalo, 29,000; Toledo, 4,000; Detroit, 33,000; Chicago, 79,000; Milwaukee, 66,000; Duluth, 172,000; Minneapolis, 288,000; St. Louis, 3,000; Kansas City, 11,000; Peoria, 2,000; Omaha, 41,000; on lakes, 291,000. Total, 1,940,000 bushels; decrease, 131,000.

Rye (1913).—New York, 16,000; Boston, 1,000; Buffalo, 100,00; Toledo, 11,000; Detroit, 44,000; Chicago, 231,000; Milwaukee, 290,000; Duluth, 361,000; Minneapolis, 535,600; St. Louis, 41,000; Omaha, 62,000. Total, 1,866,000 bushels; increase, 11,000.

Woman and the Home

From Day to Day

BATTLE BUNNY.

Bunny lying in the grass,
Saw the shining column pass;
Saw the starry banner fly,
Saw the chargers fret and fume,
Saw the flapping hat and plume—
Saw them with his moist and shy
Most unspeculative eye,
Thinking only in the dew,
That it was a fine review—
Till a flash not all of steel,
Where the rolling caisson's wheel
Brought a rumble and a roar
Rolling down that velvet floor,
And like blows of Autumn flail
Sharply thrashed the iron hail.
Bunny, thrilled by unknown fears,
Raised his soft and pointed ears,
* * * * * * * * * *
As the sharp vindictive yell
Rose above the screaming shell;
Thought the world and all its men—
All the charging squadrons meant—
All were rabbit hunters then
All to capture him intent.
Bunny was not much to blame;
Wiser folk have thought the same.

Wildly panting here and there,
Bunny sought the freer air,
Till he hopped below the hill,
And saw, lying close and still,
Men with muskets in their hands.
* * * * * * * * * *
One—a grave and quiet man,
Thinking of his wife and child
Far beyond the Rapidan,
Where the Androscoggin smiled—
Felt the little rabbit creep,
Nestling by his arm and side,
Wakened from strategic sleep,
To that soft appeal replied,
Drew him to his blackened breast,
And—

But you have guessed the rest,
Softly o'er the chosen pair
Omnipresent Love and Care
Drew a mightier hand and arm,
Shielding them from every harm;
Right and left the bullets waved,
Saved the saviour for the saved.

Who believes that equal grace
God extends in every place,
Little difference He scans
Twixt a rabbit's God and man's.

—Bret Harte.

*

BOSTON brown hash is a savory way of using left-over meat. Chop any remains of steaks, roasts or stews very fine. Grease a deep pie dish. Put a layer of mashed potatoes (cold ones, left over, will answer) in the bottom of the dish, then a layer of meat, then a layer of bread crumbs; sprinkle with salt and pepper, a few bits of butter; moisten with a half cup of beef gravy, then put another layer of potatoes. Dip a knife into milk and smooth the top. Bake in a moderate oven until brown. Serve hot.

*

A PEACH Betty, according to an up-State recipe, is made by putting a thick layer of peeled and sliced peaches in the bottom of a baking dish, and there covering with a rich biscuit dough. Serve hot, turning the slices fruit side up as they are served, with hard sauce or sugar and cream. The dough used is not sweetened; the usual recipe is one quart flour, with two teaspoonfuls of baking powder well sifted in half teaspoon of salt, a tablespoonful of shortening and milk enough to make a rather soft dough that may be rolled or spread. Canned peaches may be used in the same way.

*

THE Farm Women's Press Association is much interested in the passage of the Smith-Lever bill which makes possible appropriations, in each State, for demonstrations in home economics. The Association makes the following statement of things a State farm woman expert can do:

She can tell us: How to save steps in our kitchen work. How to get running water either from springs or by windmill power. How and where to get simple labor-saving devices to lighten our work. How to form afternoon get-together meetings where we can study these things; where we can work for better schools and better roads; where we can talk up coöperation in selling eggs and butter and in buying supplies. How to improve our lighting, heating and sewage systems.

We have commented, more than once, on the advantages offered to poor women in the cities, through free lectures and demonstrations in hygiene, home economics, the care of children, etc. They have many possibilities denied even to women in comfortable circumstances in the country. An appropriation for extension teaching will bring some of this instruction within reach of rural women too.

Workaday Dollies for Holiday Time.

MOST girls love dolls, even after they grow too large to care to play with them openly. Why, then, should they not enjoy making and dressing them, especially at holiday time, when fingers that have scarcely learned to sew, feel the itch for a needle with which to make something as a gift for a friend? Since it is an open secret that many really grown-up girls love them, and possibly some boys as well, could there be anything nicer, either to make or to receive at Christmas time, than dolls? These may be something more than the well-known playtime dolls, beloved of the little ones, each one having a place and purpose in the workaday world. There are many such dolls, and every member of the family may have one, from the oldest to the youngest. Should you decide to confine your gifts this year to dolls, permit me to introduce you to several members of the workaday doll family:

To begin with the simplest, let us make a pincushion doll for Big Sister! For this you will require a small, unjointed doll four or five inches long, which you can get for 10 cents, and half a yard or more of ribbon in Sister's favorite color. Both the width and length of ribbon will depend on the size of the doll. It should be just wide enough to go around the doll's body, half way down her arms, and long enough to come well down over her feet. Fold the length of ribbon in half, and cut a hole in the centre large enough to slip over Dollie's head. If it comes rather low on the shoulders no matter, for low necks are fashionable. Fold the ribbon in underneath the arms to form sleeves, and fasten it there. Tie a narrow ribbon about her waist for a sash, and edge the neck with narrow lace to conceal the raw edge. Dollie's petticoats, of which there are two both front and back, are strips of thin white flannel or flannelette, cut a little narrower than the ribbon and buttonholed around. Fill these with assorted pins and sew a loop of narrow ribbon to her waist at the back from which to hang her beside the dressing table.

For Mother or Auntie you may make a broom Dinah, the foundation of which is a child's toy broom. Dinah comes "riding on a broomstick," and she will prove most useful in cleaning behind pictures or under radiators where a big broom will not go. The easiest way to dress Dinah is to use one of the stamped cloth doll forms. Cut the body in two just below the waist line, discarding the legs. Slip the upper portion over the broomstick down to where it joins the straw, and stuff all around the stick to properly fill out the doll body, fastening the top of the head very carefully and neatly around the stick. Now make a dress for her from some bright material, the skirts reaching to the bottom of the straw. Add a big apron of gay color, and a bit of plaid about the head for a handkerchief. Or if you have not the stamped form you may use a piece of black stocking, drawing it well down onto the straw, and stuffing just above where the stick joins it to form a waist: tying close to the stick to indicate a neck, then stuffing a smaller round above that for a head. Sew on white buttons for eyes, and indicate mouth and nose with a bit of red yarn; add hair or wool of raveled-out stocking, and roll up pieces of stocking to form arms, which sew in place. Dress as suggested for the other Dinah.

For Little Sister nothing could be nicer than the milkmaid doll, especially since her attractive personality may prove an incentive to a closer acquaintance with sewing materials. This is merely a small, unjointed doll with feet firmly glued to a small board so that she will stand upright. Her dress is that of the Holland milkmaid, with wide, short skirts, apron, and pointed waist. Her white, tall-crowned cap is left open at the top to provide for hiding a thimble. Her skirt conceals a pincushion, her apron is a needlebook; while across her shoulders is an equivalent for the neck-yoke of the peasant woman, the water buckets in this case being spools of thread suspended by cords to a crochet hook which is fastened in place across the shoulders.

Papa or Big Brother will be glad of the pen-wiper doll, which will prove useful for the purpose suggested by its name. Also the year-old baby may be safely trusted to find a use for it; the yarn dolly being too soft to hit back, is just right for chewing, and will endure hard usage. To make her take a ball of heavy darning cotton in any preferred shade. Wind the yarn around a thin book about eight inches long. Slip a stout thread under the strands at one end and tie tightly; then clip the strands at the opposite ends quite through. Remove from book, and from the tied end separate several threads and plait into braids to simulate Dolly's hair. About an inch and a half below the first tying tie again, the threads above this tying forming the head. From each side below head separate sufficient threads to form arms, cutting off about one-third of their length and tying near the ends to form hands. Tie a piece of colored ribbon a little above the middle, this being the sash about her waist, and all Dolly lacks is features. These may be simulated with colored threads, when she is ready to take up the duties of a busy life.

Grandmother will be sure to like the door-tender dollie, she being substantial enough to hold doors open at any angle, whatever the weather. For this procure a bottle with a heavy base and long, gradually sloping neck. A quart size milk bottle will do very well. Fill the bottle with coarse sand to give it weight, then fasten firmly in the mouth of the bottle a doll's head and shoulders. Dress the doll in housemaid style with black dress, white apron, cuffs and cap; the flowing skirts concealing the sand bottle. If preferred you might make this a Dinah doll also.

The Brownie Doll is usually the hardest worked member of the working doll family and cannot fail to please Little Brother, and possibly other members of the family at the same time. To make him roll up one of Father's discarded cuffs to about two inches in diameter, and fasten firmly. Glue or sew a piece of cloth over the opening at one end, to which sew slender rolls of brown cloth four inches long, to form legs. Make long, slim arms in the same manner, and fasten in the appropriate place. Near the top of the open end draw features with ink on the white ground, giving him as jolly a cast of countenance as possible. Now drop inside Mr. Brownie's body a large glass marble, and close the end securely. This end, which is the head, should be surmounted by a red cap, while a brown swallow-tail coat and shoes and gloves, (cut from old kid gloves) may complete the toilet. To induce Brownie to show off, you have only to set him at one end of an inclined board, (Mother's ironing board set one end on a chair, the other on the floor) give him a little push, and he will do the rest. The series of delightful somersaults and jerky contortions which follow will delight his audience, both old and young. Tiny bells sewed to each hand will add to the grotesque appearance of this clown doll.

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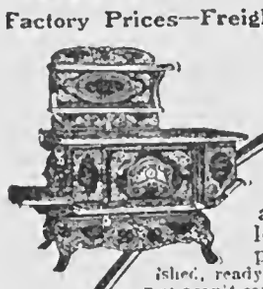

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7855, Shirt waist or blouse. Cut in sizes 34 to 44 bust measure. Size 38 requires 2⅝ yards of 36 inch material. 7889, Fancy blouse for misses and small women. Cut in sizes 14, 16 and 18 years. Size 16 requires two yards of 36 inch material. 7569, Princesse house gown. Cut in sizes 36 to 46 bust measure. Size 40 requires 5¾ yards of 36

inch material. 7860, Girl's dress. Cut in sizes 10, 12 and 14 years. Size 12 requires 4½ yards of 36 inch material. 7809, Girl's one-piece dress. Cut in sizes 8, 10 and 12 years. Size 10 requires 3¾ yards of 36 inch material.

No. 807. A design for embroidering a pillow or cushion top, 24 inches wide by 18 inches deep. The flowers are designed to be worked in French knots placed close together, the leaves are designed for solid embroidery and the lines enclosing the design to be outlined. When making solid embroidery, pad the stamped figures by darning backward and

forward lengthwise and then cover closely with over and over stitches worked in the opposite direction from the padding. Stamped and tinted on gray linen, 18x24 inches, with same back and mercerized floss to work, 70 cents.

Seen in New York Shops.

ONE new collar consists of a band of black ribbon velvet 1½ inch high, with a two-inch knife pleating of lace or organdie at the top, giving the effect of an Elizabethan ruff. The velvet is closed with snap fasteners, and there are three small satin buttons over the closing. There are many collars made like Medici ruffs, standing up about four inches high at the back, and coming down to a V in front.

Skirts are much shorter than they have been, and we are told they are to be worn a full eight inches from the ground. Such skirts are full, falling in ripples. A full skirt made very long is always a nuisance, and there will be much relief in having it clear the ground well all around. The new jacket suits with short full skirt and braided military coat are very jaunty and comfortable.

One of the high-class stores recently made a new departure in offering tablecloths, napkins, towels and toweling of cotton or cotton and linen mixed. Such materials have of course been on the market for some time, chiefly in stores catering especially to people of small means; undoubtedly they have often been sold as linen. These fabrics are now mercerized in imitation of linen, and are greatly improved in quality, so that they are highly recommended for their wearing qualities. Flax has increased greatly in price, and is likely to increase still further, so this is a good time to help our own cotton growers. The sellers claim that mercerized cotton, or cotton and linen mixed, will give better wear and more satisfaction than a poor grade of all-linen. Prices are very moderate; tablecloths from 85 cents to $1.75; napkins 75 cents to $1.50 a dozen; towels 60 cents to $1.50 a dozen; towels of cotton and linen mixed $2 to $3 a dozen; mercerized cotton damask, 30 to 55 cents a yard.

A very smart blouse to be worn with a black tailored suit was of flesh-colored chiffon, with a bolero of black chiffon bound with black silk braid and having black lace insets.

Many serge and broadcloth one-piece dresses are embroidered in self-colored beadwork, one color only; small beads are put on in a pattern like braiding. An example was a long-waisted moyen-age dress of dark blue serge, having a girdle of dark blue beads applied to the material, with further beading on cuffs and collar opening; the collar of white silk was high and close at the back, and open in front.

Heavy corded gros-grain ribbon, like that used for the bands on men's hats, is much in vogue for women's velvet hats; it is put on in masculine fashion, with a small flat bow at the side. A hat of this style often has small wings or fan-shaped feather ornaments put at a jaunty angle at one side of the top of the crown.

Colored handkerchiefs are again seen in all sorts of shades, red, blue, green, purple, orange or wood brown. They are of extremely fine linen, with a quarter-inch hem and an initial embroidered in a darker shade. Some have a border of white net footing, put on quite full.

American-made kid gloves are among specialties offered by one big firm, which handles foreign gloves largely, but states that those of domestic manufacture are better than those from abroad at the same price. Among them are attractive slip-on gloves with wrist straps.

Light-weight pique in narrow wale is the favorite material for collars, cuffs and vestees with tailored suits. It launders well, is inexpensive, and has enough weight to keep in place well, being more satisfactory in this respect than the starched linen.

Saving Labor on Washday.

TRY for once this way of disposing of the weekly washing, and see if you like the plan. Put a lot of cold water and dissolved soap-powder or soap into the boiler, and immerse therein as many of your white clothes as you care to at once. If there are any especially soiled white pieces put them to soak in cold water until such time as the boiler is ready for them. Then form a nice suds in the tub and wash and rinse the daintiest of the colored clothes as quickly as possible, then darker and more soiled pieces. If you have a good fire the first white clothes are usually ready by this time, and you can slide right ahead to the end of the job. It is so restful not to have a lot of soiled stockings for the last! A. D.

More Chili Sauce.

EIGHTEEN tomatoes, six onions, three peppers, chopped fine; two tablespoonfuls salt, one mustard; one teaspoonful cinnamon; one-half teaspoonful cloves; one cup sugar; two cups cider vinegar. Very good. MRS. VERITY.

One peck tomatoes; two quarts onions; two stalks celery; eight green peppers, one red, all chopped fine; two two quarts vinegar; two cups sugar; one teaspoonful each of cinnamon, allspice, ground mustard, cloves, ginger, salt to taste. Cook tomatoes first, and strain, then add other ingredients and cook about an hour. Very good.

MRS. F. GERMAN.

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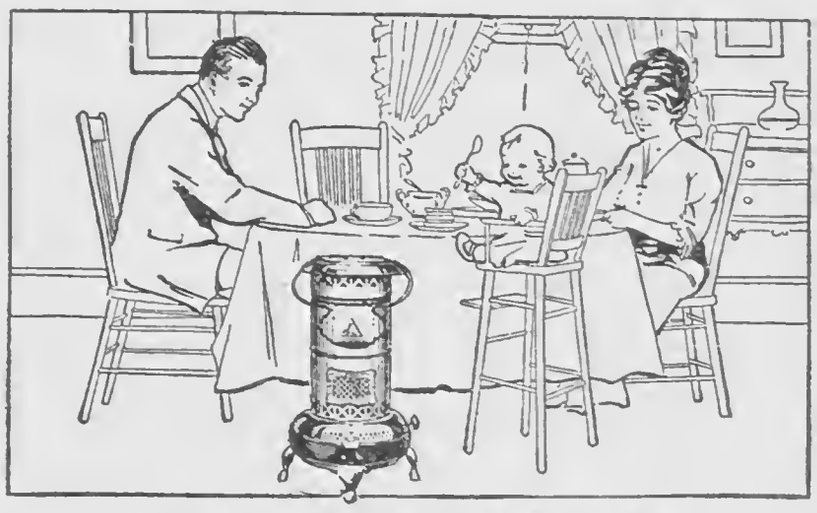

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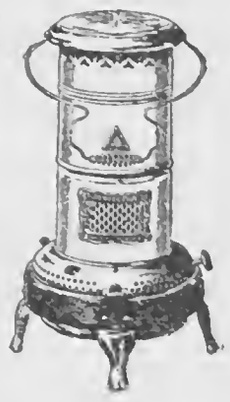
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PART IV.

SO varied are the conditions under which cattle are maintained in this country that the popularity of special breeds and their management differ widely. As long as there are areas of pasture land not yet settled upon, beef cattle on these pastures are the main reliance of the general farmer. As the country becomes more settled, markets are opened up and there comes a gradual change. Villages are formed nearby and transportation makes it possible to ship dairy products long distances with no harm resulting. Under these conditions, dairying which can only prosper upon the cultivated farm, displaces beef making. This is especially true where land values have so increased as to make the raising of beef cattle unprofitable except in combination with the dairy cow.

HOLSTEIN COW, VALLEY FARM TOPSY, 59589.

Official record, milk, 80.9 lbs. one day; 551.6 lbs. seven days. Butter, 24.17 lbs. seven days, 99.87 lbs. 30 days.

There is no want of breeds from which to select if the farmer is engaging in the production of beef. Among the most popular are the Hereford, Aberdeen Angus and the Shorthorn. These breeds all originated in Great Britain where the beef cattle business is a little more advanced than in this country. These three breeds are suited to different conditions and surroundings. The Hereford will do somewhat better on pasture than either the Shorthorn or Aberdeen Angus but the last two breeds will do better in confinement—in other words, they can stand the heavy grain feeding which forces early development without showing "patchiness." On the western ranches, Hereford cows are most popular because they give such a small quantity of milk and there is little danger of milk fever. Shorthorn bulls used upon such cows make a fine beef animal for the market as the two breeds tend to reinforce the weak points of one another. Avoid anything but the first crosses, however. The weakest point of the Shorthorn is the crops, and a tendency to a flat rib, while in these particular points the Hereford is strong. On the other hand, the Hereford is usually weak in the hind quarters where the Shorthorn is especially strong. The combination of the two breeds gives a very evenly developed carcass, the meat of which is well marbled and high in quality.

The influence of the purebred sire is just as pronounced in beef cattle as with other classes of livestock. The ideal beef bull is a far different shaped animal from the dairy sire. The beef bull is a beautiful animal to look upon while the dairy sire is too angular to present a good appearance. In the beef animal we look for the rectangular or parallelogramic conformation which usually gives a carcass of good fleshing qualities and meat so evenly distributed that the body is said to be symmetrical.

VALUE OF BEEVES DETERMINED BY HIGH PRICED CUTS.—I have seen the butchers walk into a herd of young beeves and say to the owner: "We will give you $42 apiece for those three animals there," pointing out three special steers. "We will give you $35 apiece for those six and the rest we will take at $30 per head." I wondered at this and asked the butcher why those three steers were worth so much more per head than were the others. He explained to me that by their conformation and development, when dressed they would give a much higher weight of round steak and loins—those parts of beef which bring the most in the market—than would the other steers. The answer was logical enough and when I looked more closely, I could see that these three steers did excel in the weight of high priced beef. This was an eye-opener and it gives us the cue as to what we should desire in a beef sire. A good beef sire must be strong in the hind quarters, well muscled and with a good length and proportion of loin. How can we expect to get choice prime beeves out of the young stock when we use a cat-hammed sire? While it seems a trifle far-fetched to call the limbs of any of the beef bulls "cat-hammed," yet when we see two of them together, it is usually easy to pick out the one which has the most meat on the steak and loins. Although a great deal is said about the purebred dairy sire, the purebred beef sire has just as good a chance to improve the progeny of the herd as has the dairy bull.

CONSIDERATION OF DAIRY BREEDS—The most prominent dairy breeds are the Jersey, Guernsey, Holstein-Friesian, Ayrshire, and Brown Swiss. Each of these breeds, like the breeds of beef cattle, is suited to somewhat different conditions, and on account of having been developed in different environments, each presents peculiarities which are common only to the members of the breed. The native home of the Jersey is the Island of Jersey, in the English Channel. These cattle have not been reared on abundant pastures; in their native home, they are usually tethered or "staked out." The inhabitants of the Channel Islands were among the first to take steps toward keeping the blood of their cattle free from infusion of outside blood. They made a law that no cattle should be imported to the Island of Jersey for other than consumption purposes and these must be slaughtered before the expiration of a certain number of days. Such close watch over the purity of the blood of these cattle, has given the Jersey breed a refinement which is scarcely possessed by any of the other breeds. The individuals were prized for their rich milk and consequently, the Jersey is today a rich-milk breed of persistent milkers, milking all the year round. They are smaller than any of the other dairy breeds, of a light, dark brown, or even black color and possess the tri-wedge conformation which is so highly valued in dairy animals.

The island where the Guernsey breed was originated is only a short distance from the home of the Jersey. The Guernsey breeders practiced the same supervision of the blood which was brought to the Island but they did not commence this as soon as did the Jersey breeders and they were not so particular about color. Guernseys may be fawn and white or a clear fawn while some of them very nearly approach a red. The Guernsey breeders did not pay so much attention to form; they bred for a persistent milker, giving a rich yellow milk and that is what they secured. As a consequence, the Guernsey has rather less refinement of form than has the Jersey and giving a medium, annual weight of milk which is rich and yellow. Here, let us settle the fact that the color of the milk is no indication as to amount of butterfat which it contains. Butterfat is seldom present in milk in sufficient quantities to give the milk a color. The yellow milk of the Guernsey is yellow because of a pigment contained therein while the Holstein milk is blue because of a blue pigment which it contains.

The Holstein-Friesian cattle have been found in Holland for over 2,000 years. We have mention of them in history that far back as the "black and white cattle of Holland." They are larger than either of the two dairy breeds mentioned before. The Holstein can consume a larger amount of food in confinement. In quantity of milk, this breed far surpasses any of the other breeds while the quality is only medium. There has been a tendency, especially when the Holsteins were first introduced into this country, to regard them as skim-milk cows and although their milk is not quite as rich in butterfat as the Jersey or Guernsey, Holstein breeders have been constantly striving toward a higher percentage of fat. Now, the average for the Holstein breed is around 3.5 and many Holstein cows and strains of them are averaging as high as five per cent. butterfat.

The Ayrshire is a Scotch breed of medium-sized animals. Their one point of excellence over any of the dairy breeds is the udder which is recognized by dairy judges as being as near perfection as can be had. The animals are red and white and as there are so few of them in the United States, their breeding is a local matter.

The Brown Swiss are worthy of mention. Previous to six years ago, this breed of Swiss origin was deemed by American breeders to be a so-called "dual-purpose" breed. About six years ago, the Brown Swiss breeders determined to make their breed conform more to the dairy form. They have accomplished wonders in this short time and now some of the individuals of the breed are making records which are comparable with the other dairy breeds. The cattle are a mouse color with a light brown stripe down the back.

EXTERNAL FORM NOT A POSITIVE INDEX TO PRODUCTIVE CAPACITY.—As to judging the points of a dairy cow by an external examination only, I do not think it amounts to much. As far as I can see, the judging of dairy cows by conformation only is one of the biggest will-o'-the-wisps of the stock judging pavillion. We do know that the former World's Champion Guernsey, Spottswood Daisy Pearl, was at one time placed at the end of the list and in the tenth place by a prominent dairy judge who was judging productive capacity by conformation only. Those cows of the dairy breeds which took the prizes at Chicago last year were not the most productive animals that the exhibitors had in their herds. As a general rule, however, the tri-wedge conformation goes with high productive capacity while the udder should be well hung, of good size with teats well placed. All the finer points of dairy form are good only when associated with a superior producing animal. The real detectives on the trail of the dairy cow are the Babcock test and the milk scales. These, taken together with the amounts of feed consumed, rarely fail to give evidence which should oust the unprofitable ones.

GRADE UP FROM MONGRELS OR GRADES.—As for cows with which to start, do not make the mistake of thinking that they must be purebreds. Let the first real start begin with the dairy animals that are already on hand; some

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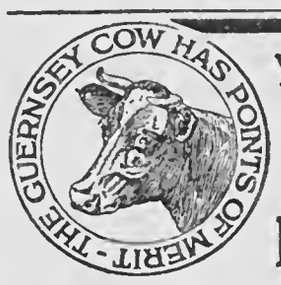

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Holstein-Friesian Asso., F. L. Houghton, Sec'y, Box 105, Brattleboro, Vt.

of them are good dams for the future stock. Cull out the poor ones each year and soon, if a sire is used that is worth his keep, a herd of high producing grades will result.

As to the relative value of dairy bulls in grading up the herds, we have the following quotation from Ohio Experiment Station Circular, No. 135, page 81:

"One Holstein-Friesian bull used in the Ohio Experiment Station herd increased the average production of his seven daughters 1,299 pounds of milk and 40 pounds of butterfat per year above that of their dams. Forty pounds of fat per year for six years (average producing period) by each of seven cows would be 1,680 pounds of fat; 1,680 pounds at 30 cents per pound equals $504. This animal cost $100 when a calf. One Jersey used in the Station herd decreased the average production of his 11 daughters over 700 pounds of milk and over 45 pounds of butterfat per year below that of their dams. Forty-five pounds of fat per year for six years by each of 11 cows would be 2,970 pounds, which at 30 cents per pound would equal $891. The immediate difference in money value of these two bulls on these herds of less than 20 cows each was $1,395. Both bulls had an equally good chance to increase the production."

The essential points in dairy breeding are to get a good bull with an ancestry of high producers. If possible, keep records of milk weights and tests and keep setting the standard higher as the years go by and the cattle improve. Stick to the same breed. Above all, keep the weather eye out for signs of contagious abortion and tuberculosis. They will ruin the best herd of cattle in the world if they once get a foothold.

Michigan. I. J. MATHEWS.

Decrease in Butter Fat.

ON page 1039 is an inquiry relative to the decrease in butter fat. F. C. M., in answer, gives one to infer there should be a decrease, and that less than one-half as much butter would be made from 20 pounds of milk than from 40 pounds when cow first freshened. This is contrary to my experience. My records show that my cows make about the same amount of butter when giving 20 pounds of milk per day, as when during the first few months after freshening they gave 40 pounds per day. If milk will not test higher in butter fat when the smaller amount is given, how can this be accounted for? E. E. S.

Skowhegan, Me.

E. E. S. has misinterpreted my reply noted on page 1039. It is true that the butter fat test of milk is inclined to increase as the amount of milk produced decreases. However, the physical condition of the cow is a factor that must be considered. In this connection it is interesting to note the following taken from "Milk and Its Products," by Wing, page 27:

We find that there are a large number of conditions that affect the quality of the milk, meaning, thereby, the relative proportion of the various constituents, and particularly the proportion of fat to other constituents. Some of these changes are regular and progressive during the period of lactation, others are due to definite causes and still others occur from time to time to which we have as yet been unable to ascribe any definite cause. After about three or four weeks of lactation, the percentage of fat in the milk remains nearly constant until the seventh or eighth month, or until the quantity of milk begins to rapidly diminish.

There is no question but that under certain conditions there would be a difference in the butter fat test during the lactation period of the cow, if comparison is made at freshening time when she is giving 40 pounds of milk per day, with the period nine months later when she might be giving 20 pounds of milk per day. However, it is unusual for cows to give as much actual butter fat when they are milking only 20 pounds per day, as was the case when the animals were producing 40 pounds per day. If the records of some of the officially tested cows are considered, it will be found that in some cases unusually high butter fat tests are recorded at the outset of their lactation period. Such animals, no doubt, have been given a long dry period and carry an unusual amount of flesh at calving time. F. C. MINKLER.

How Much Live Stock?

I HAVE a farm of 200 acres; 25 in wood, 25 in ordinary hillside pasture, 30 in fruit and 120 in crops where hay, oats, rye, corn and buckwheat can be raised. On how many cows should I figure, how many hogs, how many chickens, so that all the waste products in making butter would be utilized on the farm and that in figuring on raising as much feed as possible I would have to buy the least amount of feed? G. W. K.

New Rochelle, N. Y.

The producing capacity of any given area varies a great deal, and it is rather unsatisfactory to attempt to give definite suggestions as to the number and kind of live stock that could be most profitably produced on this farm without knowing more about the condition of the soil and its ability to grow average crops. A still further question might be raised as to the owner's experience in crop production and dairying; for it is possible to maintain successfully relatively large herds on comparatively small areas.

Assuming that the 120 acres are utilized for crop producing and a rotation planned whereby 40 acres could be devoted to the growing of corn, 40 acres meadow and the balance used for other crops, it would seem reasonable to maintain a herd of 25 milking cows, and as much young stock as one would care to select and grow from such a herd of grade cows. The number of hogs that may be kept is even more indefinite, but I am satisfied that where cream can be marketed and the skim-milk kept on the farm that the pork industry deserves extensive development and if sufficient areas can be fenced and used for forage crops for swine, I would not hesitate to keep 15 or 20 brood sows on such a farm. It might necessitate the purchasing of some additional concentrates, for this is always advisable up to a certain limit.

A flock of 200 birds at the outset might establish a unit that could be added to or reduced as one's experience might suggest. The aim should be to grow silage and Alfalfa hay as a basis for feeding the dairy herd, while corn and rye could be fed successfully to the pigs. I doubt very much if there is any profit in oats for the average Eastern farmer if they are grown alone, but when mixed with Canada field peas there should undoubtedly be a place in the rotation for this crop. Rape and Soy beans make a most excellent forage crop mixture for swine, the proportions being six pounds of rape and one bushel of Soy beans per acre seeded any time from early Spring to August 1st.

F. C. M.

LIVE STOCK NOTES.

THE Ayrshire cow is proving her worth in view of recent Canadian tests. To June 1, 454 cows and heifers have registered in the Canadian Record of Performance. These gave an average of 408 pounds of butter, a splendid average, 189 of the number being two-year old, and 82 three-year-old heifers. One cow gave over 850 pounds of butter, three over 700 pounds, 22 over 600, 30 over 550 pounds, 70 over 450 pounds, and 140 over 400 pounds.

The treatment of hogs exposed to contagion from cholera has saved all but 2.27 per cent. in the Southern States, according to reports received by the Department of Agriculture from local agents engaged in demonstration work. The report shows in one year a total of 34,636 inoculated hogs in good health exposed to disease only 787 died. In case of animals so affected with cholera that symptoms were plainly visible, in these 7.15 per cent. were saved by the agents taking a "fighting chance." Inoculation is not sufficient; the animals should be kept in sanitary quarters, and free from lice and worms. The following Kentucky formula is recommended for worms: Santonin, 2½ grains, areca nut, one dram, calomel, one grain; sodium carbonate, one dram.

The margin is too narrow between prices of butter in New Zealand and this country to insure heavy shipments. The present margin is six to seven cents per pound. The dairy population was greatly reduced in New Zealand owing to elimination of the bourder cows caused by shortage of feed last year.

There are 30 creameries in Montana and only one cheese factory. The Montana farmer might buy another cow.

Winter course in dairying at Cornell opens November 10 and closes February 12. The course will cover dairy bacteriology, buttermaking, cheddar cheese making, market milk handling, and dairy mechanics.

There have been practically no importations of draft horses since the opening of the European war, except possibly from England, and in limited numbers. There is sufficient good stock in America for all practical purposes, and the present European crisis will place American stock on its own merits. Previous to the war the United States imported from 2,500 to 4,000 for breeding purposes. The standard of the purebred draft horse will in no way suffer.

There will be a great demand for American horses during the war in Europe, and for a decade following it, is the opinion of the United States Department of Agriculture. Foreign agents are purchasing horses in the United States and Canada, and it is emphasized that only high quality animals should be reared. Inferior horses are a drug on the market. Next to Russia, the United States has more horses than any other country, and the two countries possess 58 per cent. of the world's supply. The German army for complete mobilization, requires 770,000 horses, and the French army about 250,000. These are probably figures for cavalry use only. During the Boer War the British Government secured 100,000 horses from the United States, and it is doubtful whether this number could be secured at the present time except at excessive cost. At the present time there are over 1,000,000 horses in the European service. The great majority of these horses are used in agricultural pursuits, and requisitioned only in the time of war. Before the planting of crops next season the shortage of horses will be keenly felt, and already rural credit for the benefit of farmers is being urged which will make it possible for them to secure motor equipment. This is being proposed in Germany. The United States army furnishes a desirable market for horses, and demands under the remount system at least 5,000 horses annually. There are now abont 20,000 horses in the army on a peace basis.

Sheep men declare that the wool pays for the keep of the sheep. Where this is true there is a nice profit left in increased stock and sale of surplus stock. There is a value in dollars and cents to the farm where sheep are kept, particularly where the farm is so fenced that they can be shunted from one field to another. One farmer advises if he had no sheep he would give free pasturage of a certain fields for some weeks for the benefit the sheep would afford. If the farm is well fenced, allow the sheep the run of the wheat and oat stubble after the grain has been removed. They will secure feed for some little time, and will clean out the fence rows. Turn them on the corn stubble after the crop has been removed, and they will clean up the waste food and make steady gains. Sheep will work under hedges, will clean up briars, there will be no goldenrod left in the pasture when they are through. The field is cropped as close as a lawn, there are no daisies or other weeds left in the field.

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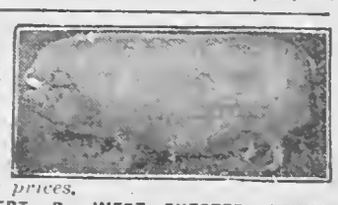
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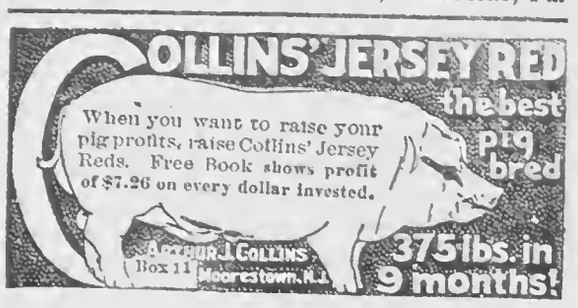
About Christmas time I will have a deluge of letters asking for boars fit for immediate service. The wise ones are buying now and putting them at once in their permanent quarters, so that Mr. Pig will feel quite at home and have his mind on business when the New Year's rush is on. DON'T DELAY. BUY TODAY
R. Y. BUCKLEY, Woodrow Farm, Broad Axe, Pa.



MAKING SMALL CHEESE.

TAKE 20 pounds warm milk, add sufficient rennet. When thick cut into checks. In half an hour dip the curd into a drainer. After draining cut the curd with a knife and pour on to it two quarts of hot water. Drain again. Chop the curd, salt it and press it. If you expect to make a good cheese the first time, you will be sadly disappointed.

In the first place get a calf's rennet from the butcher. Have him clean it. After soaking a day or two in salt water you can pack it away in salt to keep it for future use. For making cheese, cut off a piece two inches square, more or less, and soak in water over night. Take a teaspoonful of the liquid and test its strength by using it in skim-milk. If it thickens in about half an hour it will do. If it takes longer you must put in more rennet. If it thickens sooner don't put in as much rennet. Too much rennet makes the cheese dry. Experiment with warm skim-milk before you dare to use the whole milk. Keep the milk as warm as new milk or in cool weather a little warmer, by setting in a dish of warm water.

When the milk has thickened so that you can cut it into checks, take a long, thin knife and cut 'way to the bottom, making checks two inches square. Let it stand a few minutes longer, then take a new dish drainer, lay a piece of cheese cloth over it and dip the curd into it. Frequently draw the corners of the cloth towards the center to let the whey off, but don't hurry it or you will start the white whey. After it is har' enough to cut into slices, or chunks, put it in a bowl and cut it across a few times, then pour on two quarts hot (not boiling) water. Drain and chop. Salt it, not too salt. Too much salt makes it dry. Try one tablespoonful first, next time, more or less.

For a hoop, take a can that will hold about 1½ quarts. Cut out the bottom with a can opener. Put in a cloth over the top of the can and press it down into the can, then put in the curd. When full lay your hand over the curd and draw the cloth up smoothly all around the side of the can. Lay one corner of the cloth smoothly over the top. Lay a round piece of wood on top and put into the cheese press or under a weight. The round piece of wood, which we call the follower, must be just large enough to fit into the can, not too small, or your cheese will have a rim. If you can't find a wooden piece you may be able to find the cover to a smaller can which will just fit in.

Don't put too much weight on at first. Keep adding more weight until you have enough to press it down firmly. Be careful not to start the white whey. At night take out the cheese, lay the cloth in the can as before and put in the cheese the other side up. Put on the weight and press until morning, then take it from the can, rub it all over with butter, lard or bacon fat. Keep in a warm place. Turn and rub every day. In two weeks or less it will do to eat.

Take these few hints to start with; varying them as you see fit. With good milk, good rennet and good courage you will be able to get some nice little cheeses just large enough to carry for your lunch on an automobile trip.

Maine. MRS. A. L. LIBBY.

PACKED BUTTER.

IN answer to A. B. S. of Massachusetts, page 1250, in regard to packing butter, there may be more than one reason why the butter put down for home use did not keep. There are times when the milk is not in good condition when it comes from the cow, owing to some food eaten or to tainted drinking water. The cream from such milk will not make butter of good keeping quality.

As the cream is from only two cows it may be kept too long before churning. I have known cream to be kept a week in some cases before churned. This is too long to be able to make good packed butter, for if the cream is kept at a good ripening temperature it will become too sour, and if kept cold will very often develop a species of bacteria that produce a bitter flavor. As A. B. S. says, if sanitary methods have been followed it can be nothing along that line. I would think the trouble might be that a too thin cream has been run. I would suggest that a cream not less than 35% be run, not kept more than two or three days at a moderately low temperature of about 65 to 70 degrees.

As this is home making we assume there is no acidity test to use, so must depend on the taste, and will call it ripened when a good clean, sour flavor is secured. Cool for at least two hours to about 60 degrees. Churn and wash with good clean water of about the same temperature as the butter-milk. Salt from three-quarters to one ounce per pound, according to taste. I suggest working thoroughly at once, as never is butter in better condition to work than when it first leaves the churn if firm enough to insure a good body.

From now two methods may be used, packed solid in clean stone jars or crocks, covered with a circle of thin butter muslin, then a layer say of one inch of salt. This must be kept in a cool dry place.

The second method is to form the butter in prints (or rolls) wrap in a parchment butter paper as if to be put on the market, pack as closely as possible in a large stone jar and pour a strong cold brine over this, completely covering the butter. This is a handy way for home use, as a few pounds or as much as is needed for a week's use may be taken out, the brine rinsed from the paper covered butter and it is ready for the table. From time to time a handful of salt may be added as the brine weakens. This certainly is a splendid way to keep butter and has been well tested. For several years, butter made in my husband's creamery with the ordinary dairy methods and no particular preparation was packed for use by a man in a nearby city. One year 125 pounds were packed during the first week in October, and the last of the butter was used about the 25th of June. We were assured by this man that the last of the butter was as good as the first. K. C. WIVEL.

THE BROWN SWISS CATTLE.

I NOTICE an inquiry regarding Brown Swiss cattle, the answer to which I wish to correct in some particulars. Ira Inman, Beloit, Wis., is secretary and Wm. B. Hale, Rochester N. Y. is president of the Brown Swiss Association. Prof. Minkler states that no system of registration for production has been adopted. Under separate cover I am sending you a publication showing the records of cows and heifers that have qualified for registration of production, which was adopted about three years ago. This publication was issued about two and a half years after the register for production was established. The 94 cows and heifers named averaged 10805.4 pounds of milk and 431.91 pounds fat. The highest cow was College Bramsa 2nd, 19460.6 pounds milk and 798.16 pounds fat Thirty-nine mature cows averaged 11446.3 pounds milk, 447.91 pounds fat. Sixteen five-year-olds averaged 12087.3 pounds milk, 483.08 pounds fat. Ten two-year-olds averaged 8422.5 pounds milk, 360.59 pounds fat. The highest two-year-old gave 10464.3 pounds milk. The highest butter-fat test for two-year-olds was 454.24 pounds. This would also tend to refute the statement that they are slow maturing. Every cow thus far that has applied for entry, except those that have met death or accident, has qualified, and the average has been higher than that of any other breed.

The showing of the Brown Swiss at the various shows and fairs this year has been very conspicuous and noticeable. In this week's Hoard's Dairyman I notice the following: "Mr. Stevenson, who judged Brown Swiss and Holsteins, made the statement that the Brown Swiss was the finest class of these cattle that he had ever seen. The breeders are giving a smoothness and finish to their cattle that is compelling the attention of the dairy world." This breed has also won the highest honors at the butterfat contests open to all breeds at the Michigan and Illinois State Fairs this year. The Brown Swiss Breeders' Association held its annual meeting this year Oct. 27th in Chicago during the National Dairy Show, at which time they expected to make the finest display of the breed that has ever been seen in this country. W. E. JANES.

New York.

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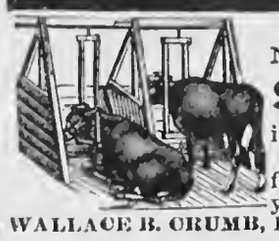

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OHIO CATTLE MEN ORGAN ZE.

A THOUSAND farmers and breeders can do much for live stock interests in any State. When these interests are so appealing that five times this number will probably join forces in the next few months, the association evidently is handling situations which are vitally important not to one thousand or five thousand members, but to all farmers and stockmen of the State. This is the Ohio Cattle Men's Association. The movement has only been organized within the last six months. It is the opinion of the membership that legislation has been enacted which has overlooked the rights of owners of live stock and has caused them inconvenience and loss. The problem of bovine tuberculosis is one facing the farmers of Ohio. It has been discussed in State meetings for several years. The prominence of the question is making it one of the important matters under consideration by the members who maintain their views in the matter are fair. A prominent member advises the policy of cleaning up of herds, not on the basis of the tuberculin test, but on the basis of evidences of the disease in the excretions of the animals. He says that he is backed by the members and farmers of the State on the basis that all spreaders should be eliminated, while in his opinion, reacters may in no way become dangerous owing to very small evidences of the disease. He maintains in behalf of the members that the movement against the disease may be in this way immediately inaugurated. The tuberculin test is but one of the problems which faces the association. The matter of encouraging systematic and improved breeding operations in the State, the stimulating of coöperative activity among other live stock organizations, and the promotion of the various breeds are purposes of the organization.

The officers are: President, Dr. R. G. Holland, Wellington; vice-president, J. J. Hudson, Ravenna; secretary, W. W. Watson, Youngstown; treasurer, Samuel Werren, North Benton; executive committee, George A. Klotz, Canton; J. S. Miller, Ellsworth; J. W. Scott, Hudson; Wm. Bakody, Youngstown and Charles Norr, Wellington. A meeting is planned for farmers' week at Columbus, Ohio, at which time an election of officers will be held. W. J.

BOSTON MARKETS.

A GENERAL decline of prices due to rather large receipts of most kinds of fruit and produce in Boston has taken place lately, and from all signs is likely to continue for a while. Apples, which were selling fairly well, considering the crop and general condition of trade everywhere, are now practically a glut in the market, and the falling off of export trade from 44,000 barrels three weeks ago to 24,000 barrels two weeks ago and 14,000 barrels last week, has not helped matters a bit. Large quantities of dropped apples, especially Baldwin and Greening, are being put on the market, but find poor sale and bring low prices. The new open-air market opened at Shawmut Ave. and Castle St., a few days ago, is giving the consuming public of the medium and poorer classes a chance to buy apples at a much lower price than they have been paying to the street peddlers, and bids fair to cut quite a figure in market circles by helping out the producer and consumer both, and leaving the middlemen to look on. At this time of year up-country shippers and Boston dealers ship in car lots of drop apples in bulk and shovel them into barrels which are weighed and sold at $1 and $1.25 per barrel to peddlers, who distribute them about the city at a good profit, the general prices being 20 to 30 cents per peck. Now anyone can go to the new market and buy better apples at 40 to 60 cents per box, and the public is doing just this. At the regular market fancy apples are in demand to supply a certain trade. Gravenstein brings up to $3 per barrel, McIntosh about as much; other kinds such as Snow, King, Wolf River, Alexander, etc., about $2 per barrel; Baldwin and Greening about $1.50 in most cases. Western box fruit $1.50 to $2 per box when wanted. Good bananas, yellow, $2 to $3 per bunch; others $1 and $1.50; red $3 to $4.25 for choice, others $1.50 and $2.50. Cranberries slow and prices rule low at $4 per barrel and $1.50 per crate. Grapes plentiful and cheap; California stock of Malaga, Tokay, etc., $1.25 and $1.50 per crate; Delaware, Concord and such kinds in small baskets range from nine to 15 cents each. Grapefruit plenty at $2.50 and $3 per box. Lemons cheap and plenty enough for all wants, prices range from $2.50 to $6 per box. Oranges from California about $4 per box. A large crop of Floridas will soon be in the market at reasonable prices. Pears not in heavy supply, but demand good on all grades; Bosc about $3 per box; Seckel $2.50 and $3; Sheldon $2; Anjou $1.50; cooking stock 75 to $1. Pineapples $3 to $5 per crate. Quince cheaper than usual, $2 per box being the average price for most kinds.

Potatoes rule rather low at present, but may advance slightly later; $1 and $1.10 per bag are the general prices on these; sweets $2.25 per barrel. Southern string beans 75 to $1.50 per bushel basket; Limas $3 per box; cabbage a little short and bring up to $1 per barrel for both drumheads and Savoys; reds 75 per box. Cauliflower 75 per box; celery 75 per dozen for early sorts, with Pascal and Boston Market from $1 to $1.75. Cucumbers $4.50, $3.50 down to $2 per box. Lettuce 50 per box; tomatoes $3 per box for ripe, $1.50 for green. Squash are plenty in the market just now, and price low, with demand just fair; marrow 75 per barrel; turban, Bay State and Holland $1 to $1.50 per barrel or per hundred pounds. Onions very low and quality rules rather poor for present stock of Western Massachusetts, etc.; 75 and $1 per bag is what many of these are sold for; native stock, well dried, 65 to 75 per box and extra large firm stock $1 for the best trade. Turnips, Fall varieties, 75 per box; rutabaga $1 per barrel. Dry weather has shortened all root crops, which are the best property the gardener has this season. Beets 75 per box; carrots 85; parsnips $1; radish 50 and 65; spinach, 50 per box and plenty.

Live hogs and beef lower, the former about eight cents per pound; the latter four to eight cents is general run of the different grades with extra fancy in a few cases up to 10. Dressed hogs, 10 is about the average. Veal calves in demand and slightly higher, 10 to 12 for best, six to eight for poorer grades. Milch cows in slow demand except for a few extras which always are in demand at good prices; the former being $50 to $75 each, the latter $75 to $125. Live hens and chickens 14 to 15 per pound. A. E. P.

BUFFALO MARKETS.

THE apple market has improved lately, so that some extra grades are selling for $1.75 per barrel. Greenings retail in the city at 60 cents a bushel. Potatoes are not quoted at above 48 and retail at 60. The local crop is very large and of fine quality. Peaches are about gone, a few being offered at $1 for a third-bushel basket. Pears are not plenty and the quality is only fair. The price is $4 per barrel wholesale. Grapes are very plenty, home-grown wholesaling at two cents a pound and retailing at three. In car lots the price is $35 per ton. Cabbage is not quoted above $3 per hundred; celery is 30 cents a dozen down; cucumbers are becoming scarce at $1.75 per hamper; lettuce, 20 cents per dozen; tomatoes, 20 to 40 cents per half bushel. String beans are poor at $1.75 per hamper or eight cents per quart, retail. Frost held off a long time and enabled the farmers to market about everything. Market dealers complain that consumers deal with farmers direct and make it hard for them to pay stall rents. If there were half as many of them the business would still go on at full volume and it would be easy to pay rents. There are a few Brussels sprouts, retailing at 25 cents a quart, a high price, and parsnips have appeared at 10 cents per two-quart measure. Hubbard squashes are plenty and very fine, at two cents a pound or less, as the crop is large. There is considerable sweet corn yet, though mostly hard, retailing at 20 cents a dozen. Butter is steady, but quiet, at 34 cents down, wholesale, and cheese 17 cents down. J. W. C.

AILING ANIMALS.

Suspicious Case.

I HAVE a horse which seems to have a very bad cold. She has no cough and her nose seems to be dry when in the barn, but as soon as she travels on the road there is a watery discharge that comes from her nose. Under her jaw she has a little swelling the size of a walnut; the white of her eyes are pink, and the lids are a little swollen. We also discovered a red spot on her tongue. Her appetite is not very good; she refuses to eat oats, but eats hay; we gave her some middlings, and she acted as though very hungry. It seems her throat is sore and it hurts her to swallow. C. D.

Connecticut.

We should not feel justified in prescribing treatment in this case as the symptoms suggest glanders, and that disease is incurable, contagious among horses and communicable and fatal to man. An affected horse has to be destroyed according to State law and the premises quarantined. The stable has to be cleansed, disinfected and whitewashed. It may be some simple ailment, but the only safe plan will be to have an examination made by a local graduate veterinarian. Meanwhile isolate the horse. A. S. A.

Itching Skin.

I HAVE a horse troubled with itching skin. Is there anything that can be done for it? J. M. G.

Pennsylvania.

Chicken lice or horse lice may be the cause of the itchiness. Keep poultry out of the stable. Clip the horse and wash affected parts once daily with a 1-100 solution of coal tar dip. Do not feed corn or green grass in Summer, if the horse has to work. Keep the harness clean. If the itchiness persists mix half an ounce of granular hyposulphite of soda in the feed once daily. A. S. A.

Indigestion.

A CALF now about two months old does not grow. When I first got her I began feeding calf meal, according to directions, kept her in a box stall as the weather was hot and flies bad. Then seeing she was making no progress I tied her outside in the shade. She nibbles a little grass occasionally, but lies down most of the time. Her bowels seem all right, but the manure has a very bad odor. She always has water at hand, but does not appear to drink much. I have raised calves before, but have never had one that would not eat grass most of the time and keep on growing. H. M. B.

New Jersey.

Physic the calf with castor oil in milk, then add one ounce of limewater to each pint of milk fed. Feed six times a day, and allow the calf its liberty on grass, in orchard or a shady place. Spray with a fly repellant daily. See that all feeding utensils are kept scrupulously clean and sweet. A. S. A.

Strong Milk.

I HAVE a Jersey cow that I highly prize; she milks well to within four months of calving, she will then dry up. I could keep her milking longer, but the milk seems strong and thick so much so we dislike to use it. Can you tell me the cause of this, and do you know to how to prevent it? I feed this cow soft feed, cow beets and corn fodder. Would the feed cause the milk to get thick and strong? W. H. W.

New York.

A cow that "dries off" four months before calving is scarcely worth retaining for dairy purposes, but if there is a profitable flow of milk at the time you dry her off on account of the milk being strong in taste, she may be worth treating. The cow beets are a probable cause of the tainted milk. They should be fed after milking, or in this case, it would be well to exclude beets from the ration and if possible substitute corn silage and good mixed clover hay. Great care should be taken to sterilize the milk utensils and to keep the stable free of strong odors which tend to taint warm milk. Everytime the milk becomes strong in taste physic the cow and then mix half an ounce of granular hyposulphite of soda in the feed twice daily. A. S. A.

"You are still taking Summer boarders?" "Yes," replied Farmer Corntossel. "It isn't that we need the money. But we'd get kind of lonesome if a new bunch of city folks didn't come along every week or so an' cut up an' try to entertain us natives."—Washington Star.

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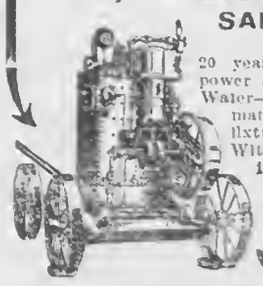

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THE EGG-LAYING CONTEST.

THE contest is getting exciting. With only one week more to go Tom Barron's White Wyandottes have gained steadily every week lately, until now they are only six eggs behind Francis F. Lincoln's White Leghorns. As Barron's pen gained 11 eggs over Lincoln's pen this week, the probability is that Barron's White Wyandottes will win this contest. Barron's Wyandottes gained eight eggs on Lincoln's pen last week, and 13 the week before, and 10 the week before that; they are certainly walking up towards the front at a good pace, and stand more than an even chance of winning this contest. In the next contest at Storrs there will be a larger variety of breeds than have ever been entered before, also a larger number of birds. A feature of great interest will be the 30 single birds entered by THE RURAL NEW-YORKER for 30 of its woman readers.

The Rhode Island Reds from Glenview Poultry Farm make the highest score this week viz., 33; Tom Barron's White Wyandottes tie for second place in the week's record, with Dr. N. W. Sanborn's Buff Wyandottes, each pen laying 29. Neale Bros.' White Wyandottes are third, with a score of 28, and Jules F. Francais' pen of Barred Rocks tie with Storrs Agricultural Station pen of White Leghorns, each scoring 25. The total for the week has dropped down to less than 1,000, the record for the week being 969. The total number laid to date is 117,059. This is an average of about 143 eggs per bird, with one more week's output to add to that. This is far above the average laying of outside poultry. The record for the week follows:

	Week	Total
Barred P. Rocks.		
A. B. Hall, Connecticut	15	1,379
Frank L. Tuttle, Massachusetts	11	1,445
Waveny Farm, Connecticut	12	1,376
Jules F. Francais, New York	25	1,673
White P. Rocks.		
Albert T. Lenzen, Massachusetts	20	1,557
Fred H. Benton, Connecticut	19	1,549
Storrs Agr. Station, Connecticut	16	1,222
Storrs Agr. Station, Connecticut	17	1,337
Storrs Agr. Station, Connecticut	9	1,449
Storrs Agr. Station, Connecticut	9	1,282
Storrs Agr. Station, Connecticut	..	1,071
Buff P. Rocks.		
A. A. Hall, Connecticut	19	1,524
W. C. Morgau, Jr., Connecticut	11	1,170
White Wyandottes.		
Tom Barron, England	29	2,072
West Mt. Plty. Yards, Connecticut	12	1,203
Merrythought Farm, Connecticut	15	1,890
Neale Bros., Rhode Island	28	1,899
D. J. Ryan & Son, Connecticut	11	1,369
Buff Wyandottes.		
Dr. N. J. Sanborn, Massachusetts	29	1,490
Dr. N. J. Sanborn, Massachusetts	20	1,411
Am. Buff Wyan. Club, New York	16	1,298
H. L. Hamilton, Connecticut	7	1,107
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	15	1,420
Single Comb Reds.		
Robert Seaman, New York	16	1,143
J. S. Gillespie, Connecticut	5	1,353
Dr. J. C. Dingman, New York	16	1,280
Burnham Plty. Farm, Massachusetts	4	1,015
H. P. Deming, Connecticut	12	1,365
Geo. P. Dearborn, Florida	12	1,474
Dr. J. A. Fritchey, Pennsylvania	19	1,602
Ernest Underhill, New Jersey	16	1,265
W. H. Bumsted, Connecticut	17	1,028
Pinecrest Orchards, Massachusetts	9	1,557
Harry B. Cook, Connecticut	14	1,368
Colonial Farm, New Hampshire	22	1,439
A. B. Brundage, Connecticut	24	1,859
Rose Comb Reds.		
Glenview Plty. Farm, Connecticut	33	1,445
C. S. Scoville, Connecticut	15	1,023
White Leghorns.		
Storrs Agr. Station, Connecticut	13	1,571
Storrs Agr. Station, Connecticut	7	1,620
Storrs Agr. Station, Connecticut	6	1,586
Storrs Agr. Station, Connecticut	25	2,061
Storrs Agr. Station, Connecticut	6	1,507
Braeside Plty. Farm, Pennsylvania	11	1,458
Glenview Plty. Farm, Connecticut	17	1,636
Manor Plty. Farm, New York	5	1,467
A. B. Hall, Connecticut	4	1,451
Marwood Plty. Farm, Pennsylvania	16	1,705
Geo. M. Harris, Connecticut	5	1,252
Bonnie Brook Farm, New York	8	1,698
N. W. Hendryx, Connecticut	1	1,426
J. J. Linehan, Massachusetts	..	1,335
Francis F. Lincoln, Connecticut	18	2,078
Cecil Guernsey, New York	8	1,694
Thos. W. Moore, Connecticut	..	1,548
Chas. N. St. John, New York	9	1,603
Chas. W. Sherwood, Connecticut	1	1,426
L. E. Sands, Pennsylvania	4	1,441
Tomoka Plty. Farm, Connecticut	8	1,328
Venture Plty. Farm, New York	..	1,150
Mrs. K. E. Woodruff, Connecticut	17	1,606
Windsweep Farm, Connecticut	..	1,232
C. H. Savage, Connecticut	..	1,475
F. G. Platt, Pennsylvania	4	1,684
Hencta Bone Co., New Jersey	..	553
F. M. Peasley, Connecticut	16	1,546
Chas. Helgl, Ohio	4	1,432
Tom Barron, England	13	1,995
Branford Farm, Connecticut	13	1,692
James Munn, Massachusetts	..	1,303
Geo. A. Cosgrove, Connecticut	12	1,545
Buff Leghorns.		
Wolverine Plty. Farm, Michigan	12	1,569
Blue Andalusians.		
E. D. Bird, Connecticut	12	1,339
Buff Orpingtons.		
O. Wilson, West Virginia	3	1,077
White Orpingtons.		
P. A. Demgar, New York	8	1,055
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	6	865
Silver Campines.		
W. J. H. Lobel, New Jersey	12	1,322
Dunghills.		
H. W. Collingwood, New Jersey	6	1,283
Daniel Hine, Connecticut	12	1,187
Daniel Hine, Connecticut	11	1,143
Mixed Breeds.		
Profitable Poultry, Massachusetts	25	1,338
Profitable Poultry, Massachusetts	12	1,368

GEO. A. COSGROVE.

A Busy Man's Hen Record.

IN answer to M. M., who asked what profit can be made per hen per year, on page 1244, I will give my record. I do not class myself as one of the big ones, and I have nothing to sell. Record is of 450 S. C. White Leghorns, about one-half pullets, from Sept. 1, 1913 to Sept. 1, 1914.

1913, Sept., 2,811; Oct., 897; Nov., 1,292; Dec., 1,754; 1914, Jan., 920; Feb., 3,186; Mar., 6,372; Apr., 8,312; May, 8,522; June, 7,232; July, 6,960; Aug., 5,838. Total eggs, 54,096—4,508 dozen. Averagae price, per doz., 28 cents.

Total amt. received from eggs	$1,262.24
Poultry sold during the year..	171.17
Increase of 100 pullets.....	100.00
Total receipts	$1,533.41
Paid for feed	750.00

Average eggs per hen, 120.

The feed includes all fed to young chicks as well as the hens. My hens are kept in their houses from Oct. 1 to Apr. 1, when they are let out every afternoon. My houses are not more than large sheds; nothing in front, but wire and a bran sack curtain which I drop to keep out snow, and when the thermometer gets below zero. All shelled grain is fed in deep litter nights only, composed of good oats and cracked corn. In the morning they are fed all the dry mash they can clean up before feeding time at night, composed of 200 pounds mixed feed, 100 pounds middlings, 100 pounds cornmeal, 100 pounds gluten, 100 pounds meat scrap. For green feed they have all the cabbage they can eat from Fall until Spring. Fresh water is before them at all times. My egg yield in the Winter was the poorest it ever was because I had not prepared for the blowing snow which piled in and soaked the litter. The pullets and hens were kept separate, but the records together. This record includes all broken ones and those used in the house, also for setting, but not the birds eaten in the home. The eggs were all sold in the local market to one man. Eggs were wiped clean and put up well. I have sold my eggs for a flat price of 33 cents a dozen for the year commencing January 1, 1915, excepting what I may use or sell for setting. I would like to hear from others and would be glad of any criticism one might offer. I run in connection with my hens a dairy of 20 cows, also have some fruit; have a farm of 132 acres. I do the work with the help of one good man and have time to go to church twice on Sunday.

H. B. SMITH.

Dutchess Co., New York.

Making Hens Pay.

WOULD you advise me how to make a flock of hens pay? My sister has a large flock consisting of Barred Plymouth Rocks, pure strain, and Rhode Island Reds. She is getting two dozen eggs a day and with the price of grain way up she finds it rather a serious matter. The hens have plenty of room and shade, and a good new building. She has to buy everything they eat, as she raises nothing. MRS. E. F.

New Hampshire.

There are so many things to be considered in the effort to make a flock of hens profitable that it is utterly impossible to include them all in this reply. The most practical suggestion that I can make is that the poultry columns of this, and other, papers be read regularly and that such methods of feeding, breeding, housing and general care as seem sensible and can be adapted to one's conditions be adopted. It is neither practicable nor wise to attempt to follow all the ideas one finds in print but the general practice of successful poultrymen may be learned from reading and practical experience with a flock will enable one to sift the wheat from the chaff of the advice that is tendered. If feeding is your problem, tell the methods that you are now following and the kinds of feeds that are available to you in your market; the most economical and efficient way to use these in securing a satisfactory egg production can then be considered. M. B. D.

Leghorn Feathers for Pillows.

HAVING dry-picked quite a few broilers, White Leghorns, I proposed using the fluffy feathers for pillows, but was told they were unhealthy for this, causing various ills. Have you used these feathers for any such purpose and with what results? E. H.

New York.

There seems to be a prevailing notion that chicken feathers are injurious to health in some way when used in beds or pillows but that there is any foundation for this opinion the writer does not believe. Feathers of any kind used for this purpose should, of course, be perfectly clean and those from hens are inferior to geese feathers. M. B. D.

Medicated Eggs.

DO you think medicated eggs are any good to put into nest to kill lice? A. R.

I have never seen any medicated eggs that were of value in destroying hen lice, and do not see how any could be prepared. They would not necessarily come in contact with the lice on a hen's body and I doubt if any substance giving off fumes of sufficient intensity to destroy lice would be accepted by the ordinary hen as a proper tenant of her nest. M. B. D.

Ailing Hens.

WHAT is the trouble with my White Leghorns? I have some with purple combs; gave each of the sick ones liver pill, but it did not do any good. Chickens have free range of 30 acres. I gave one of them a teaspoonful of castor oil and it died in a little while. F. W. M.

Purple combs alone are not significant of any particular disorder as they accompany various diseases of fowls. It is necessary to have a detailed description of the conditions and symptoms present before any diagnosis as to the probable disorder can be made. Few people are accustomed to making careful observations in the case of sick animals and it is frequently difficult to get a clue to the trouble present from their description. We make the effort, however, and hope, usually, with success. M. B. D.

Buckwheat for Hens; Apples for Pigs.

WOULD it be advisable to feed buckwheat in straw for litter and scratch feed in Winter? What other grains, including buckwheat, are needed for a balanced ration and in what proportion? Which do you consider better to feed growing shotes, cooked or raw apples? What grain and the proportion would you feed with the apples?

New York. W. V. O.

1. The only objection to feeding unthrashed buckwheat is the difficulty in knowing how much the fowls are given. Buckwheat is one of the best grain foods for Winter use and should not be given exclusively. A good grain mixture for scratch feed is corn 60 pounds, wheat 60 pounds, oats 30 pounds, buckwheat 30 pounds. A mash, either wet or dry, containing meat food of some kind, should be given in addition.

2. Apples are usually fed raw; there would probably be no gain in cooking that would justify the added expense. They are a succulent food of some value, but do not contain the nutrients needed by growing stock. Wheat bran, middlings, cornmeal, barley, ground oats should form the basis of the ration, given with skim-milk or water as slops, and apples in such quantities as they will readily eat may be added. Growing pigs should have pasture if they are to be economically raised. M. B. D.

Small Poultry Plant.

I EXPECT to be interested in a small poultry plant for about 100 hens. Will you give me an idea of plan that would be suitable for such, and which would include place for storing food, etc.

Canada. F. R.

One hundred hens will not require very extensive buildings or grounds for their care. If a new building is to be put up, it should have, at least, 300 square feet of floor space for the fowls, and as large a storeroom as is desired for feed. The larger the run that the fowls can have in connection with this the better. The more nearly square a building, the less material required for the walls, and the greater the depth, up to eighteen or twenty feet, the better. A building 16x20 feet in size would, perhaps, be about the minimum in the way of space requirements. It should have a sufficiently open front, guarded by curtains in your latitude, for ventilation and glass enough in the eastern and southern exposures to admit what sunlight is available to the building. The general style of the building and the material for its construction may safely be left to your taste and pocketbook. M. B. D.

FARMER CLAPOLE: "Has that city feller who bought Stone's farm learned anythin' yit?" Farmer Sands: "Wall, he's larnt it don't do no good ter try ter make apple butter in a churn."—Judge.

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The Henyard.

Farm-Raised Pheasants.

CAN I raise pheasants on the farm with hens, the same as turkeys? Would they stay around or would they wander away? H. H. M.
Carmel, N. Y.

So far as the actual raising of the pheasants is concerned there is no great difficulty in getting good results, and they usually stay around until the neighbors or "friends from the city" shoot them. I have heard of a number of cases near here where as good hatches were made and as many birds raised as would be likely to be the case with Leghorn chickens. The greatest difficulty is with the game law. In order to be permitted to raise pheasants, whether you let them wander off from your land or not, it is necessary: (1) to be sure that the entire boundary of your farm is marked in some way. (2) To post notices at each corner and not more than 40 rods apart between corners stating that this farm is established as a private game preserve. (3) To publish this information once a week for four weeks in some paper printed in the county where the farm is situated. (4) To pay five dollars annually for a license, which will be issued when the Conservation Commission has been satisfied that the application has been made in good faith.
Wayne County, N. Y. A. C. W.

Pullets Eating Feathers.

I HAVE about 24 pullets in my back yard; as soon as one drops a feather there will be another right there eating it. They look well and healthy. Is this bad for the hens and what is the cause of their eating feathers? They get grit, charcoal, beef scrap, bone meal in mash and lots of green food. G. B.
New York.

Feather eating is a habit likely to be acquired by chickens that are closely confined and perhaps have some cravings for unnatural foods that would be satisfied by the hundred and one things that they pick up when they have their liberty. If you can spade up the soil in some place and let them dig in it, and then give them all the liberty possible, they will probably not suffer any ill effects from what feathers they eat, but the practice should not be encouraged. M. B. D.

Arrangement of Henhouse Windows.

IN my poultry house, with opening about 5x8 feet, house 15½ feet square, if curtain is not closed when we have southerly rains litter gets wet and fowls have colds. How would it do if the opening had sash arranged at an angle to keep out rain? Would it be sufficient for 55 to 70 birds? A. F. L.
New York.

Your plan should prove satisfactory if you did not yield to the temptation to keep the windows closed too much of the time. An awning or other protection for the opening would be cheaper than sash and, perhaps, fully as satisfactory. The method of ventilating a henhouse is of less importance than the thoroughness with which it is done, remembering, however, that fowls should not be exposed to direct drafts. This building should house 75 fowls. M. B. D.

Buff Orpingtons.

WILL you give me information concerning Buff Orpington hens and tell me the best method of feeding them? A. W.
Dover, N. H.

Replying to A. W.'s inquiry about Buff Orpington hens, would say that I kept that breed for a while and liked them very well. For table poultry I never saw anything better, and for laying in cold weather they equalled the best of my White Wyandottes. At the Storrs contest last year, if I remember right, one of Mr. O. Wilson's Buff Orpington pullets laid the most eggs of any hen in the contest. As to feeding them, the only thing to look out for is to see that they do not become too fat. They take on fat very easily, therefore a smaller proportion of cracked corn in the grain feed, and of cornmeal in the dry mash should be used than if one were feeding Leghorns for instance.

A good dry mash would be three parts wheat bran, two parts middlings, one part cornmeal by weight, with one-half part of beef scrap added. If gluten and ground oats can be had, add one part of each. For the grain feed use equal parts of wheat, oats and cracked corn. Mr. Barron uses also Kaffir corn and barley, thinking the larger variety the feed the better. How to feed is almost of as much importance as what to feed, but this can be best learned by experience. Mr. Barron feeds dry grain in the litter in the morning, a little more at noon, then a full feed about 4 p. m. of boiled oats, sometimes with cooked vegetables in it, the whole dried off into a crumbly mash by stirring in a mixture of ground grain, bran, middlings and meal. But experience only can teach a person how to be a good feeder. GEO. A. COSGROVE.

Chicken Pox.

I HAVE a flock of White Wyandottes and Light Brahma pullets and cockerels, five months old. The birds were healthy and thriving until about two weeks ago, when I noticed sores appear on their combs, wattles and evelids. On several, only the eyes are affected, no sores being visible, only a white foam in the corners of the eyes. The sores vary in size, the largest being about the size of a pea. They are yellow and pink in color, and do not open unless the chickens pick or scratch them. The birds affected worst, have also diarrhœa. I feed a wet mash of cornmeal, middlings and ground oats in the morning, and wheat and corn at noon and evening. The coop is in sanitary condition, also the runs, both being new and used for the first time. What can I do for them? The disease is spreading rapidly. I have already separated the healthy fowls.
New York. F. H.

This eruption is very likely that of chicken pox and is very contagious, but, in Northern States, not apt to be fatal. The sick fowls should be isolated and the eruption painted with tincture of iodine; the utensils should be disinfected with boiling water and it would be well to whitewash the interior of their quarters, even though new. With care the trouble should be eradicated. M. B. D.

Cross-breeding Fowls.

IS it advisable to mate R. C. Rhode Island Reds with S. C. Red cockerel? Do you think it of any benefit to mate a mongrel Brown Leghorn, a good layer, with a White Leghorn cockerel? D. D.
Pennsylvania.

There is nothing to be gained by crossing the Rose and Single Comb varieties of the different breeds, and a little something in the way of purity of strain is lost. There is no serious objection to it, however, if one wishes only a utility flock. The same statements apply to crossing the different colored varieties of the same breed; the result is a mongrel flock of many colors but not necessarily inferior as layers. M. B. D.

Limberneck.

MY poultry have limberneck; this is the fourth year. I have tried different remedies but they still have it. They get slimy in the mouth, and their feathers fall out. L. B.
Delaware.

If your fowls have true "limberneck" caused by eating decayed and poisonous food they should be treated by administering a cathartic, such as one to two teaspoonfuls of castor oil, and preventing their access to such food. This does not cause feathers to fall out, however, and it is possible that your fowls are afflicted with depluming mite, which burrows into the skin at the base of the feathers and causes their loss over the affected areas. These mites may be destroyed by rubbing in grease of some kind, like lard or vaseline with the addition of a little kerosene. Without a more complete description of the trouble with your fowls and your methods of care, I cannot be at all sure of the cause of their ill health or of the measures that need to be taken to overcome their indisposition. M. B. D.

Thermostat for Incubator.

COULD you give me any information in regard to the construction of the heat regulator for incubators, of the disk type, and what the fluid is that they contain? R. H.
Schenectady, N. Y.

Wafer thermostats of the disk type are made of thin sheet metal in hollow form, and are filled with a volatile fluid which by its expansion and contraction under varying degrees of heat moves the regulating bar of the machine. I do not know what fluids are used by the manufacturers, but presume that any volatile liquid like ether or bisulphide of carbon would answer the purpose. These disks may be purchased from the incubator manufacturers whose advertisements you will find in the agricultural and poultry journals. Disk thermostats, while sensitive, are comparatively short-lived, and the better grade of machines usually use the zinc and steel bar thermostats; these also may be purchased alone and used in any machine. M. B. D.

COMING FARMERS' MEETINGS.

American Association of Farm Institute Workers, nineteenth annual meeting, Raleigh Hotel, Washington, D. C., Nov. 9-11.

New England Fruit Show in connection with the Rhode Island Fruit Growers' Association annual meeting in Providence, R. I., November 9, 10, 11 and 12; secretary, A. M. Parmelee, Norwood, R. I.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Institute and convention, Lycoming, County Farm Bureau, Williamsport, Pa., November 17-20.

Annual Show of the Paterson, N. J. Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Dover Poultry, Pigeon and Pet Stock Association, tenth annual show, Dover, N. J., Nov. 23-28.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December, 8--10.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

"WHY does that fellow look so glum and grouchy all the time?" "I fancy it is because he knows so many mean things about himself."—Kansas City Journal.

"How's vacation, Johnnie?" "Bully. Fell off a shed, most got drowned, tipped over a beehive, was hooked by a cow, Jim Spindles licked me twice, an' I got two stone bruises an' a stiff neck."—Zion's Herald.

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Single Comb White Leghorn Pullets
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CONTEST WYANDOTTE PENS
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"World's greatest winter layers"
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Storrs' Buff Rocks, Vibert-Austin Reds, Ducks and Geese
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Imported direct. 280-egg strain. May Cockerels, $2. Yearling hens, $1.50. Trios, $5.
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TOM BARRON'S WHITE LEGHORN COCKERELS, bred from Pen of Prize Winners at Burnley, England, 1912. Each Cockerel I guarantee pure Barron and from a high producing hen. Price, $5 each. F. W. GILL, Storrs, Connecticut

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A few choice Cockerels from pen imported direct from Tom Barron, $3. 4 yearling hens (Rancocas strain) and Barron Cockerel, $6. S. W. JONES, Hillsdale, N.Y.

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PUBLISHER'S DESK

FREQUENTLY we hear from old friends who say they read the first issue of THE R. N.-Y., and have subscribed for it regularly ever since, with possibly a lapse of a few years in some cases. The cycle of time is making inroads in the ranks of these old friends, but some of them are yet with us and we feel for them sentiments of gratitude and friendship. Just at this time we are particularly interested in locating these old friends. We would like to hear from subscribers or from surviving wives of subscribers who remember the first issue of THE R. N.-Y. and are yet receiving the paper. We have something in mind which we believe will please them and their friends.

John Kearn, 35 years old, of 504 West 145th Street, New York, has an imagination, if not a profound practical knowledge, of the pig industry. His theory is that:

One sow will bear two litters of pigs a year.
Each litter will number six pigs.
Each pig is worth $10.

Income $120 a year from each sow. This you can multiply as often as you like by the simple process of increasing the number of sows. On this theory Mr. Kearny organized the Eastern Pig Company, with offices at 2 Columbus Circle, where land is worth $200 a square foot, and office space costs $3 per foot per year.

Aaron Dettel seemed to have been the first customer, and was hired to drive around town with a pig, properly placarded to convince the public of their independence of Wall Street, provided they made prompt use of their opportunities. The paper stock was to be sold at par; and the four-legged species at $50 apiece. Dettel and several other credulous investors put up their cash; but when Dettel applied for his week's salary he found the office closed. He and the other investors then caused the arrest of Kearn and his 17-year-old wife, who acted as stenographer, and the judge held them in $3,000 bail.

Some of our city papers would give the impression that gold bricks find a ready market only in the country and every victim is classed as a "rube." It will be hard to convince some farmers that the above story is not a joke; but we assure them that we repeat a solemn serious court record of the City of New York. Evidently some city subjects know no more about pigs than farmers know of green goods. You will notice that every time a person shows up as a victim of one of these schemes, he confesses that he was misled by the promise of big profits or quick riches.

On June 15, 1913, I sent check for $6 to the National Correspondence Institute, Washington, D. C., as enrollment fee for preparation for examination as postmaster at fourth class office, this examination to be taken by the assistant postmaster, as I was past the age limit. The assistant postmaster afterward decided that he would not take the examination and the office was not listed for same. I wrote this party to refund the enrollment fee, but they refused to do so. I then placed it in the hands of a collection agency but with no better results. While this may not get me my money I may save some one else.
Pennsylvania. M. T. R. B.

The complaint in this case seems to be that no service having been received the fee should have been refunded. The demand seems fair and equitable; but fees of the kind are not always returned in such instances by schools of unquestionable standing. In all such cases it is best to stipulate in advance that the fee would be returned in case it was found necessary to change plans.

E. B. Dennison, formerly a lawyer in New York City, has been convicted on a charge of extortion in Grant's Pass, Ore. Dennison was the main witness in the State's case against Oslin M. and Edgar R. Jackson, formerly of the Jackson Brothers Realty Company, of 507 Fifth Ave., indicted for alleged real estate swindles three years ago. Soon after the indictment Oslin Jackson went to Oregon. He is still wanted by the New York authorities. Dennison, learning that Jackson was in Grant's Pass, followed him there, and his efforts, it is said, to realize from Jackson on a Judgment obtained in the New York courts resulted in his conviction on a charge of extortion. Edgar R. Jackson, Oslin's brother, was convicted two years ago, and obtained a new trial by the Appellate Division. He is now out on bail. —Tribune.

THE R. N.-Y. readers will remember the Jackson Brothers and their realty schemes. Schemers never give up their trade; but it is important to credulous people that they follow the developments. When they escape the law in one place they proceed to new ventures.

The North American Art Studio people claim they come from Syracuse, N. Y. I have written them there, but can hear nothing. They stopped around here a year ago and were enlarging pictures while on their vacation. They took in a number of nearby towns. They brought the proofs and gave 10% off to all who paid in advance, but after paying in advance, we never saw anything of them or of the pictures either. I thought perhaps some of your readers could let us know something about them. A. H. D.
Vermont.

Complaints of this kind are numerous. No one should pay money or give up photographs to these itinerant agents unless it is shown that they represent responsible houses. We have been unable to locate this particular concern. It is probably a name assumed by the agents for the time being.

I sent $10 to the Continental Cigar Company, Beacon Bldg., Wichita, Kansas, on May 10, 1914. In a few days I got a statement that they had been arrested for doing an illegal business and they could not send the sample cigars as agreed, but would return the $10 as soon as the suit was settled. I wish you would look them up and see what you can do to get my $10. I wish to join your club to expose fraud. J. L.
New York.

An experience of this kind shows the advisability of being cautious about giving orders to itinerant agents. We endeavored to get in touch with the company, but mail addressed to them is returned marked "Fraudulent," and the $10 will have to be charged to experience. The subscriber is one of the charter members of the Anti-Fake Club.

I bought, through the Mutual Mining and Reduction Co. of Philadelphia, Pa., three years ago, 800 shares of gold mining stock valued at $1 each, for $400. Property is located in New York State, Lewis County, 250 acres land, sand formation, and as I have found out that the mine has not been running for over a year and the offices closed, I tried to sell it. Is there any chance for me to get back my $400, hard-earned money, for which I have been working over four years at 16 hours a day, by claiming a part of acreage or otherwise?
New York. G. R. F.

It is doubtful if you could sell the stock for the cost of the blank paper on which it is printed. The great majority of the mining companies are not organized to dig metal out of the ground, but as an excuse to sell the stock to just such credulous purchasers. This stock never had any value, and G. R. T. might just as well have burned his four years' saving as to give it to these promoters. In a few weeks now we hope to have a place where these frugal people may invest their savings and get the benefits of the earning power of the money. The Land Bank securities will save millions to such people annually, provided they use it. But neither the Land Bank, nor any other sound institution, will promise quick riches. It is too bad that our frugal people are so often robbed of their savings; but they must learn to be suspicious of promises of big profits, and seek safe investments for their savings.

Enclosed you will please find a two dollar bill for a two years' subscription to THE RURAL NEW-YORKER, as my subscription expires about this time. The longer I get the paper the better I like it, and especially the way you expose fakes and frauds. I also enclose a slip that was left here at our place some time ago, according to your book "Hindsights." It is that old "soap fraud" game that was being worked through this section. He offered to give china closets, etc., as premiums, but they never showed up. As soon as I saw the circular and heard of his wonderful premiums it reminded me of "Hindsights," and I looked it up at once and found it to be about the same thing as the "soap fraud." I wish your paper success, and also your "Publisher's Desk" department. S. H.
Pennsylvania.

It is some satisfaction to know that we are heading off the fakers among our own people at least. It is always well to beware of big promises. These soap schemers make collections in advance on the promise of big premiums to follow, but the premiums do not come.

J. J. D.

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do you bring it out—
or kill it?

WHEN used for curing meat pure Worcester Salt makes the "flavor-compelling" brine.

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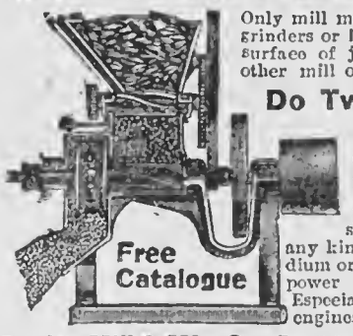

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Practical farmers and stock raisers know the value of the corn ground with the cob. Fatten your stock quicker and at less cost by using the
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It grinds cob corn, shelled grain and table meal perfectly. Simple in construction—easily operated. All troublesome parts eliminated. An examination will prove to you its many superior qualities. Real money-makers for the farmer. Write for low prices and free trial offer today.

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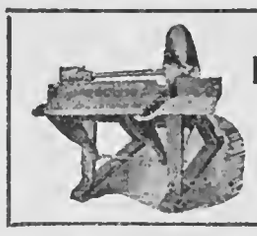

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As low as $10

HERTZLER & ZOOK Portable Wood SAW
is easy to operate. Only $10 saw made to which ripping table can be added. Guaranteed 1 year. Money refunded if not satisfactory. Send for catalog.
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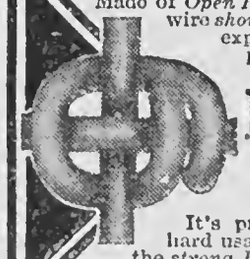

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The American Leghorns Win.

A telegram from the egg-laying contest at Storrs, Conn., received as we go to press, states that Francis F. Lincoln's White Leghorns have won the contest by three eggs, over Tom Barron's White Wyandottes, the record being 2,088 to 2,085. Full particulars will be given next week.

Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Oct. 30, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $1.91 and $1.81 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The better grades of fresh creamery have advanced one cent, qualities scoring 92 or above being scarce. Large quantities scoring 83 to 87 points have sold at 25 to 28 cents. There has been considerable movement of storage.

Creamery, extra, above 92 score, lb	33½	@	34
Extra, 92 score	32½	@	33½
Good to Choice	26	@	28
Lower Grades	22	@	24
Storage	27	@	32
State Dairy, best	31	@	32
Common to Good	22	@	25
Ladles	19	@	22
Packing Stock	18	@	21
Process	22	@	26

Elgin, Ill., butter market 35½ cents.
Philadelphia, western creamery, 32 cents.
Chicago creamery, 26@32.

CHEESE.

Prices are one-fourth to one-half cent higher on most grades of whole milk, and demand for high qualities good.

Whole Milk, fresh, specials	15	@	15¼
Average fancy	14¾	@	15
Under grades	11	@	14
Daisies, Wisconsin	14¼	@	14¾
Skims, specials	13	@	13½
Good to choice	10½	@	11½
Poor to fair	7	@	10

EGGS.

The top price on fancy white covers but a small amount of business, but this grade is so scarce at present that buyers who are not limited as to price can handle most of the receipts. Others who are usually in market for top grades are now taking brown and mixed colors at 40 cents or under. Cracked and dirty eggs are in good demand at 14 to 20 cents.

White, choice to fancy, large	52	@	55
Medium to good	40	@	45
Mixed colors, best	35	@	38
Common to good	25	@	30
Western fresh, white	35	@	40
Lower grades	10	@	25
Storage, best	24	@	25
Lower grades	18	@	20

FRESH FRUITS.

The apple market is in better condition, many well graded lots selling 25 to 50 cents per barrel higher. Kieffer pears lower; Seckel, Anjou and other high grades unchanged. Grapes very plentiful and market generally weak except on some special brands of Western N. Y. pack. Cranberry market very dull.

Apples—BenDavis, bbl	1 50	@	2 00
Fall Pippin	1 50	@	3 00
McIntosh	2 00	@	3 00
Jonathan	2 00	@	3 00
Twenty-ounce	1 50	@	2 75
Spitz	1 50	@	2 75
Baldwin	1 50	@	2 25
King	1 50	@	3 00
Greening	1 75	@	3 50
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 00	@	5 00
Bose	3 00	@	6 00
Clairgeau	3 00	@	4 50
Sheldon	3 00	@	5 00
Kieffer	1 50	@	2 00
Grapes, 18lb case	50	@	85
Niagara, 4lb. bkt	8	@	10
Black, 4lb. bkt	7	@	10
Black, 20lb. bkt	35	@	40
Bulk, ton	34 00	@	38 00
Cranberries, Cape Cod, bbl	2 50	@	5 50
Jersey, Standard crate	4 00	@	4 75

HOPS.

Prime to choice	35	@	38
Common to good	30	@	34
Pacific Coast	12	@	15
Old stock	09	@	10

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

Chestnuts, Northern, bu	3 00	@	4 50
Southern	50	@	3 00
Cultivated, lb	03	@	08
Hickory Nuts, bu	3 00	@	3 50

BEANS.

Marrow, 100 lbs	5 80	@	6 00
Medium	4 25	@	4 30
Pea	4 30	@	4 30
Red Kidney	5 10	@	6 00
Lima, California	5 90	@	6 00

VEGETABLES

Potatoes continue low, partly because of the inferior quality of much of the stock offered. Cabbage one dollar per ton lower. Onion market slightly improved.

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 50	@	2 00
State, 180 lbs	1 50	@	1 65
Maine, 180 lbs	1 35	@	1 85
Sweet Potatoes, bbl	2 00	@	2 50
Brussels Sprouts, qt	05	@	12
Beets, bbl	1 50	@	2 00
Carrots, bbl	75	@	1 00
Celery, doz	10	@	35
Cauliflower, bbl	1 00	@	3 00
Cucumbers, bu	1 00	@	3 50
Cabbage, bbl	1 50	@	2 00
Ton	7 00	@	14 00
Lettuce, half-bbl. basket	50	@	1 00
Onions—Red, bag	75	@	1 00
Yellow	60	@	90
Peppers, Jersey, bbl	75	@	1 50
Peas, bu	1 00	@	3 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	75	@	1 25
String Beans, bu	65	@	1 25
Squash, Hubbard, bbl	60	@	80
Marrow	60	@	80
Egg Plants, bu	75	@	1 25
Tomatoes, Jersey, box	75	@	1 75

LIVE POULTRY.

Chickens, lb	12½	@	13½
Fowls	12	@	14
Roosters	10	@	10½
Ducks	15	@	17
Geese	13	@	14

DRESSED POULTRY.

Turkeys, choice, lb	18	@	22
Common to good	15	@	17
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Fowls	16	@	18
Ducks, Spring	16	@	17
Squabs, doz	1 25	@	3 50

HAY AND STRAW.

Hay 50 cents per ton lower and in light demand except for best Timothy. Straw dull—very little prime rye on hand.

Hay, Timothy, new, No. 1, ton	20 00	@	20 50
No. 2	17 50	@	18 50
No. 3	14 00	@	15 00
Clover mixed	17 00	@	18 50
Straw, Rye, choice	12 00	@	13 00
Short and tangled	10 00	@	11 00

LIVE STOCK.

Native Steers	6 00	@	9 75
Bulls	5 25	@	7 35
Cows	3 25	@	6 30
Calves, prime veal, 100 lb	8 50	@	12 35
Culls	6 00	@	8 00
Sheep, 100 lbs	3 10	@	5 25
Lambs	7 25	@	8 00
Hogs	7 75	@	8 00

GRAIN

Receipts are so heavy that there is no improvement in prices of wheat, in spite of the large export demand. Corn is two cents lower. Arrivals of oats from primary markets are large.

Wheat, No. 1, Northern Spring	1 15	@	..
No. 2, Red	1 19	@	..
No. 2, Hard Winter	1 15	@	..
Corn, as to quality, bush	80	@	81
Oats, as to weight, bush	49	@	53
Rye	99	@	1 00

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of half of New York's population.

Eggs, fancy white, doz	55	@	60
Mixed colors, new laid	45	@	50
Ordinary grades	25	@	35
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	25	@	27
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	23	@	25
Fricassee, lb	18	@	20
Fowls	18	@	20
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	15	@	18
Stewing beef	12	@	14
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	20

*

Shipment of 288 carloads—about 9,000,000 pounds of flour—is being made to Holland from New Orleans.

*

Tulsa County, in Northeastern Oklahoma, has sown 50,000,000 acres in wheat this Fall, more than double the last harvest acreage.

*

When the Federal reserve banks are opened, some time during November, an additional sum of $580,000,000 will be available for circulation. The new law permits National banks to reduce their reserve from 25 to 18 per cent. of their deposits. The 12 reserve are supposed to care for emergencies, so that there will be no need for the National banks to hoard large sums. The Federal reserve banks must hold in gold or lawful money not less than 35 per cent. of their deposits.

*

California products this year will exceed $120,000,000 in value. Citrus fruits make the largest item $33,0000,000. Other large sums in order are: Barley, $20,000,000; beet sugar, $16,000,000; wine, $15,000,000; grapes, $6,900,000; Lima beans and muskmelons, each, $5,000,000; raisins, $4,800,000; walnuts, $3,500,000; olive oil and cotton, each, $3,000,000.

*

One of Spain's most valuable crops is the orange. The European demand is so poor this year that large quantities of Spanish oranges are expected to be marketed in the United States. Oranges are being largely planted in Australia, and it is expected that many will be marketed here via Panama Canal.

*

New York's exports thus far this year have been valued at $723,000,000, which is about $120,000,000 less than our imports. Our exports are rapidly increasing, as Germany is now getting large quantities of our products, through neutral countries. As Great Britain has declared cotton not liable to seizure as contraband it is expected that heavy shipments will be made to Germany.

*

Usually Western New York puts up large quantities of apples in gallon cans for bakers' use. This year the canned apple market is so poor that the pack will apparently be much lessened. The present price offered at New York, $2 to $2.15 per dozen, delivered at New York, are said by canners to give less than 25 cents per dozen profit.

"I NOTICE your little boy reads the war news assiduously. I am glad to see him taking such an intelligent interest in current events." "His interest is purely selfish. His teacher is marooned abroad."—Louisville Courier-Journal.

Subscribers' Exchange

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

NEW HONEY—Basswood or clover in sixty-pound cans; write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

ALFALFA FOR SALE—Fifty tons first cutting, thirty tons of second cutting, all cut early, well cured, bright and pea green; have sold farm and must dispose of Alfalfa. JOHN McLENNAN, Fayetteville, N. Y.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Farm board for work. B. ANDREWS, Teachers' College, New York.

SINGLE middle-aged man wishes position to help on farm, wages no object. J. S. P., care R. N.-Y.

EXPERIENCED young man, 19, desires work on farm; good references. C. MICHEL, 113 West 111th st.

A LADY—Practical and efficient, wishes a position in a home of refinement. Address O. B., R. N.-Y. New York City.

YOUNG MARRIED MAN wants position on farm, one year's experience; good house, fair wages. Address B., care R. N.-Y.

PRACTICAL experienced man desires position as superintendent of large estate, decease of employer reason for change. Box 141, Redford, Mass.

A CORNELL GRADUATE, with an experience of 25 years in making fine butter, desires a situation. C. F. LANE, Oneida, care Hotel Oneida, N. Y.

COMMON SENSE experienced manager wishes position; salary or shares; married; Cornell training; references. LESTER HAYES, St. Johnsville, N. Y.

MAN AND WIFE (no children)—Man for farm work and stock, wife cook and downstairs work; state wages, experience and wages desired. GREENFIELD FARMS, Center Square, Pa.

PARTNER WANTED—Florida live-stock proposition, with capital, by university trained agriculturist; 500 acres rich clay soil, near Tallahassee. L. HEIMBURGER, Tallahassee, Fla.

FARM MANAGER—Would like position to manage anything in the line of agriculture, competent and up-to-date; can give best of reference. MANAGER, care R. N.-Y., 333 West 30th Street, New York.

WANTED—Partner, worker to put $1,000 additional working capital in high-class poultry, truck and fruit farm; 25 acres in wealthy suburb of New York City; home market for everything; high prices; big opportunity for experienced hustler take full charge and half profits. N. A. F., care R. N.-Y.

POSITION WANTED—By working farm foreman, not afraid of hard work, who understands farm, garden, poultry, cattle, with ability to make good; at present employed; would like a change; Scotch, aged 39 years, married, no children. SCOTCHMAN, care A. E. Wheeler, 166 West 23d St., N. Y. C.

GOOD STEADY POSITON for reliable, competent man and wife, no children, American or Scotch. To take charge of private stable (3 horses, carriages and equipment), care of lawn and border beds and shrubs, do chores about house, good disposition, no dissipation, willing to be called upon, when necessary to do, or assist on any odd job about the premises; wife to do family laundry; $40 a month and cottage with modern conveniences rent free; only short distance from N. Y. City, West Shore R. R. W. H. PITKIN, Cougers, Rockland Co., N. Y.

A FIRST CLASS family hotel in New York City wants to make arrangements for weekly shipments of butter direct from creamery, to take about 1,000 pounds a month. Financial reference furnished. State terms in tubs delivered New York. Address BUTTER SUPPLY, care THE R. N.-Y.

BOXES AND CRATES quick on new and repairs young man, reliable, strictly sober, now employed as working foreman with New York builder, about to be laid off for Winter season, wants position; no objection to doing other light carpenter work; has tools; $30 per month and board. References. Address R. F. C., care Rural New-Yorker.

WILL pay cash for equipped poultry fruit farm. P. L., Rural New-Yorker.

BEAUTIFUL, rich farm cheap; investigate. VIERS, Huntingdon, Tenn.

FOR SALE—Fully equipped poultry plant in San Jonquin Valley, Calif.; particulars free. O. C., care R. N.-Y.

WANT—Small farm about 35 miles from N. Y., suitable for truck gardening. H. HOOS, 1950 Boulevard, Jersey City.

BERRY, TRUCK and Poultry Farm, 15 acres loam, good buildings, spring water, State road. Box 225, Sidney, N. Y.

FOR SALE—Two Parsons low down milk cans, used but short time. HENRY T. FAY, 236 Main Street, Poughkeepsie, N. Y.

BARGAIN—1,800 acres, $12.50 acre; suitable dairy, stock, grain; serviceable improvements; sell or trade. R 2, Box 108, Cartersville, Va.

FOR SALE—150-acre farm, good buildings, good water, on R. F. D., easy terms. BENJ. LEHMAN, Sharon Springs, Schoharie Co., N. Y.

FOR SALE—Small place, Sullivan Co., N. Y., over two acres; good buildings; adapted for chickens and truck. JOSEPH ROGERS, Farmingdale, New Jersey.

FOR SALE—Farm 85 acres, 65 wide, cultivation apple and peach orchards, one-half mile of depot and town of 1,000 inhabitants; bargain to quick purchaser. HANSON S. PHILLIPS, Hebron, Md.

POULTRY FARM FOR SALE—Paying good profits, fifty acres, beautiful home, ¼ mile from depot, 6 miles large city; 1,000 layers; broods 3,500; $10,000; $6,000 cash. Address POULTRY, Rural New-Yorker.

FOR SALE—Dairy Equipment; small bottling plant; bottle washer, sterilizing oven, can washer, bottler, wooden bottling cases and metal delivery cases. All in good condition. HENRY T. FAY, 236 Main Street, Poughkeepsie, N. Y.

FOR SALE—200 acres dairy, fruit and vegetable farm, one mile from City Hall, sidewalk and electric light to the farm; a good paying proposition or would make an ideal summer resort for city people; full description and price. Address OWNER, Box 277, Montpelier, Vt.

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THE CLOVERS IN NEW YORK.

Each has a Special Place.

THEIR PLACE IN AGRICULTURE.—It has long been recognized that clovers are good for the land, and that other crops are benefited when grown after them. They benefit the land in two ways; first, by fixing the nitrogen of the air by means of bacteria which are associated with them on the roots, and secondly by increasing the organic content of the soil. In New York, clovers are probably the most important single factor in the maintenance of the fertility of the land. It is often said that the growing of clovers will increase the fertility of the soil. This is only partially true. The nitrogen content of the soil is generally increased, especially, if the nitrogen content was low before the clovers were grown, but the amount of nitrogen added to the soil seems to depend rather on the amount available for the use of the growing plant. About two-thirds of the nitrogen used is considered as coming from the air, the other third from the soil. The potassium and phosphorus used by the clover crop is, of course, not returned to the soil directly unless the crop is used as a green manure. If it is removed from the land as hay, very little of the fertility which it contained may be returned. Regardless of how much of these two elements is brought up from the lower strata of soil by the deep and penetrating roots, which finally may become available in the surface soil, the growing of clovers tends to decrease the total amount of these elements in the soil, although at the same time it may greatly increase the availability of these elements to succeeding crops. From this point of view, clovers may materially increase the ready fertility of land for a while. But the problem of fertility is both one of increase, where low, and of maintenance, where high. In the evolution of a system of agricultural practice by which soil fertility can be kept up, the continuous cultivation of single crops has been replaced by rotation, first of cereal crops mostly, secondly by the introduction of grass into the rotation, and thirdly, by the introduction of a leguminous crop, usually clovers to be harvested or to be used as a green manure. New York has reached this latter stage where, not considering commercial fertilizers, clovers and other plants of the legume family are necessary for the rotation and maintenance of fertility. This is true wherever land has been long cultivated and cropped

A HEN WOMAN AND HER PARTNER. Fig. 578.

CLOVERS FOR NEW YORK STATE.—Because of climatic and soil conditions, only a few of the clovers are adapted to New York State conditions. The hay clovers are, in order of importance, Red, Alsike and Mammoth Red. The pasture clovers are White and Alsike. The green manure clovers are, Mammoth Red, Red, Alsike and Crimson. The reasons for such a classification, which may vary somewhat with local conditions, will be given later in this discussion. White Sweet clover—which is not a true clover, although it belongs to the clover "family," will without doubt come into greater prominence in the future, on account of its very wide range of adaptation to soil, climate and uses.

RED CLOVER (Trifolium pratense).—Red clover is sold and grown under many names. It is known as Medium Red, Medium clover, June clover, common clover, meadow clover, Broad-leafed clover and meadow trefoil. It is the most important clover in New York State. It requires a rather mild temperate climate. It winter-kills when subject to too severe conditions, and in the South cannot be grown on account of the heat. It does best on loamy soils, which are rather high in lime. On wet or acid soils, it gives way to Alsike clover. On drier and finer soils, it is surpassed by Mammoth Red clover. It is a perennial under favorable conditions, but in New York State it lives usually only two years, providing one crop of forage. This is due to the root-borer, an insect which attacks the roots, so that the plant seldom lives over the second year. The maximum yield of hay is usually secured if the plant is cut during early blooming stage; after this time the weight decreases. It should be harvested with a view to securing the largest yield and retaining the fine leaves and stems, making a hay of good quality and palatability. One objection to Red clover when mixed with Timothy, is that it matures about two weeks earlier than Timothy, so that the quality and yield of one must often be sacrificed for the other. Alsike and Mammoth Red mature about the same time as Timothy, but the first only yields about two-thirds as much as Red, and the latter does not give a hay of as fine a quality on account of its coarseness. Red clover makes an excellent green manure crop to plow under, probably one of the very best, but where grown, it is often considered too valuable for this purpose. It well deserves first place among the clovers of the State.

ALSIKE CLOVER (Trifolium hybridum.)—This clover is considered by some a hybrid between Red clover and White clover. It serves the double purpose of a hay and pasture plant. It is hardier than Red clover and more winter-resistant. It is adapted to climatic and soil conditions which are unfavorable to Red clover, growing on wet and acid soils. It does not prefer such conditions, but where they exist, Red clover cannot compete with Alsike. For these reasons it is well to mix a few pounds of Alsike seed with the Red clover, for hay purposes, so that the ground may be more completely occupied. Where the conditions of the field are unfavorable for Red, Alsike may persist and produce a crop. The plant is smaller than the Red, the stems are finer, and the yield is only about two-thirds that of Red clover. It matures two to three weeks after Red clover, about the same time as Timothy, so that Alsike and Timothy can be harvested under the most favorable conditions of growth. On account of its more perennial habit and its prostrate growth, it is better adapted to temporary pastures than Red, but it is not so good as White for permanent pastures, which makes a better sod and is more palatable. It is not affected by the root-borer and produces seed readily. It seems to find its best adaptation intermediate between those conditions most favorable to both Red and White clovers. This gives it a special value in meeting varied conditions.

MAMMOTH RED CLOVER (Trifolium pratense perenne.)—This is considered a variety of Red clover, differing from it in its more perennial habit, larger, coarser growth and its adaptation to more adverse conditions. It is sometimes called perennial red, sapling clover and pea-vine clover. It is adapted to drier conditions and to poorer soils than common Red. If grown under such conditions the growth is not apt to be so rank and makes better hay. Where it is grown under most favorable conditions, the growth is usually so large that it makes a coarse, fibrous and less palatable hay. Its yield is much larger the first crop than Red, but there is little after-growth. It blooms three to five weeks after Red. Where soil improvement only is to be considered, on account of its ability to grow on poorer soils, and to withstand adverse conditions, and its large, green growth, it is better than Red clover. On lands well adapted to Red clover, again, Mammoth clover cannot compete, but under conditions adverse to Red clover, Mammoth Red becomes the more valuable as a hay crop, and under most conditions would be most valuable as a green manure crop.

CRIMSON CLOVER (Trifolium incarnatum.)—This clover is often called scarlet and carnation clover. It cannot be generally grown in New York State. It requires a rather sandy soil that is warm and moist. It does not endure heat, so is usually planted after Summer, grows well until Winter sets in and starts growth again early in Spring, and is harvested the last of May or the first of June. Its greatest uses are as cover and green manure crops. On account of the stems being thick and hairy, and the leaves hairy, it makes a dusty and coarse hay, though of fairly good quality. It is what is known as a Winter annual. It must be sown in the Fall, and only where the Winters are mild. It is unlikely that it will ever become of any importance in this State. Although it has a lower lime requirement than Red, it cannot compete with Red when the latter can be grown.

WHITE CLOVER (Trifolium repens.)—This is sometimes called Dutch clover. It is the important pasture clover. It is spreading in habit of growth and forms an excellent sod, besides being a perennial plant. It requires a soil that is fairly sweet, its requirements in this respect being similar to that of Kentucky Blue grass. It is found associated with this latter plant, generally, and should be included in every pasture mixture. It is very palatable, and cattle will eat it in preference to Alsike clover. It takes from three to four years from seeding before it becomes established in a pasture, but when once established it is usually permanent, and certainly very valuable. It will be seen from the above discussion that the clovers vary greatly in their range of adaptations to soil and climate, and to use. Each clover, however, seems to have some distinct advantage which makes it peculiarly adapted to a given set of conditions. It should be the aim to discover the best clovers for the best places with a view to their most economic and best utilization.

JOHN H. REISNER.

THE DAIRY COW SAVES THE OHIO CORN BELT.

"THE dairy cow will be the salvation of our rich corn lands. They are becoming depleted in fertility," is the opinion of Lloyd Willcutt, of Mercer County, Northwestern Ohio. "The older farmers believed the rich black soil of Northeastern Ohio would last forever. Some maintain the theory, but we younger men can see they are wrong. I know a farmer 60 or 70 years of age. He raised corn from boyhood; a dozen years ago he began raising clover in the rotation, corn, wheat or oats and clover. He believed with the rotation the wealth of the soil would not be depleted, but now his soil is losing its efficiency, and this farmer is noticing that his corn crop is falling off each year. He is but an example. Others have learned the value of marketing grain products through live stock, they have lessened the drain on the fertility. We are going further, the dairy cow is the salvation of our robbed farms. In our section many of us sell cream, we feed the skim-milk to hogs, calves and chickens. Since the price of beef has been going up, we are not selling the male calves from the beef breeds as

much as heretofore. It was five years ago when the price of beef fell off that we started with the dairy cow. We have not increased rapidly, but steadily. With the increase in dairy population we are adding the silo, and the beef man is now learning from the dairyman that he can use silage to advantage. The number of silos was doubled this year. The farmer has more faith in the creamery man. At one time he was fearful of his test, he thought he was being skimmed by the creamery man, but now under State inspection the farmer is more confident in increasing his dairy herd." W. J.

DYNAMITE OR TILE FOR DRAINAGE.

IN reply to Henry C. Cox, page 1260, while he gave credit to dynamite for a lot of things it would do, he failed to show why dynamite would not drain the field. The fact that dynamite was used to blow the stumps is no reason to be eve that the one operation would do both, clear the field of stumps and drain it. In my estimation dynamite has *not* failed to drain this field because dyn mite was not used for that purpose there.

In regard to the pits that "stayed full" of water I would think that perhaps the persons in charge of the work wanted to make sure of getting the stumps out and used too much dynamite. A little goes a great way when properly placed. In that case the too much dynamite gave too big a hole. One must not get the impression that by blasting stumps in a swamp, the swamp will be drained. It will not, and this is the reason why it won't work out.

When we blast stumps we are not draining; these are two entirely different operations. In blasting a stump the charge is so placed that its force will throw up the stump. Dynamite will blow in the direction of least resistance. The stump goes, also some of the earth close to the stump. While it spent most of its force on the stump it also forced downward. This downward forcing, if the land is wet, will have a tendency to compact the earth. In order to test this out all we need do is to discharge a piece of dynamite that lies on the ground. We will find, after the explosion, that while little or no earth was blown into the air, there is a hole. If water were to be poured into it I doubt if it would drain off. These conditions, such as large pits, are many times made far worse by using too much dynamite.

The charge that is placed to drain land by the subsoil method is placed in a very different position from that of blasting a stump. In stump blasting the charges are placed or inserted under the stump in a slanting position, while in subsoiling it is placed at least three to five times deeper, and in an upright position. When rightly tamped its force is confined to the lower strata of the earth. Many a hole has been drained by placing the charge 10 to 18 feet deep. While some people have trouble in using dynamite for one purpose or other there are hundreds who have the best results. F. A. K.

Williamsville, N. Y.

REMARKABLE FARMING IN TENNESSEE.

I ENCLOSE a picture of a field of corn planted July 4, after a crop of oats had been pastured off until last half of June. It got so dry I could not plow it and kept stock on it. This field and two others, one planted June 24, the other July 6, have been in corn at least eight years out of the last ten. They are close to my dairy barn and I cover them with manure every year, about 20 acres, and make my silage corn on them, besides a crop of oat hay on at least one of them. The corn was cut for silage October 6 to 10, making it three months and four to six days old. It was not quite as matured as I like it, but was afraid to wait longer. I got 250 tons of silage off the land; seems good enough at this time.

With plenty of good manure, rotation is of little use to such land as this. I commenced rotating these fields 25 years since and found that I had much heavier expense in filling silo from fields farther away, and find my silo fields are good as ever, yes, better. The second thought is kindred to this. Rotation is talked so much that many people begin to rely on it entirely to improve their lands, and they find it a very slow business to sow wheat, corn, clover and grass, and cut it all off and sell it. The only rotation I think useful is one that puts something back when you remove the crop. Pay your land as you go. W. G. LENOIR.

Tennessee.

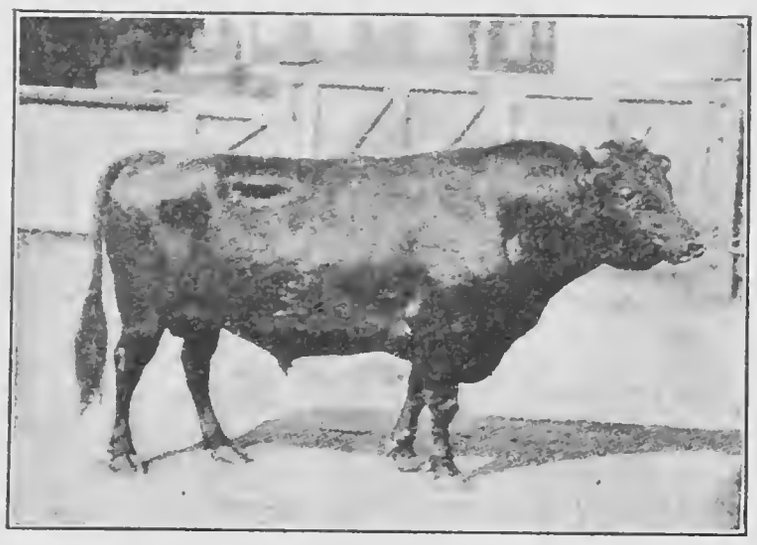
R. N.-Y.—The photograph was so dim that we could not make an engraving from it. It showed a field of corn standing like a thick forest. We see what Mr. Lenoir does with this land. It is close to the barn and therefore gives a very short haul for the bulky silage crop. Each year a heavy coat of manure is applied—this also giving a short haul. Then Winter oats in that climate will grow like rye or wheat. After they are harvested corn comes on again.

THE FRENCH-CANADIAN CATTLE.

COULD you give me any information in regard to the French Canadian cattle? I have seen some at the fairs, and like the looks of them very much, but would like to know a little more about them before buying any. Would they be good cows for butter, and do they give a good mess of milk? Are they easy keepers? Are they nervous, like the Jerseys?

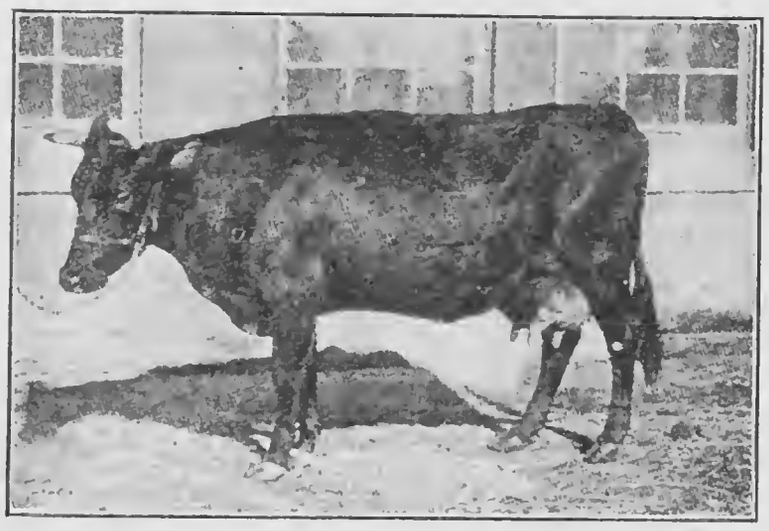
Chenango Co., N. Y. E. F. S.

The French Canadian cattle are well described in publications issued by the Canadian Experiment Station. Bulletins may be obtained by addressing the Department of Agriculture at Ottawa, Canada. This breed is chiefly noted for its hardiness and ability to rustle under rather poor conditions. The individual cow is rather small, weighing only 700 to 900 pounds. A good bull will weigh about 1,000 pounds. In shape or general conformation they are inclined to be



A TYPICAL FRENCH CANADIAN BULL. FIG. 579.

rather rough and angular, lacking the smoothness and even type of the Jerseys or Guernseys. In the cows, the wedge shape, so prominent in dairy cattle, is present and well developed. The color varies, usually a dark shade running from black to a dark brown. As milk producers they are not equal to the Jersey either in quantity or quality, although they resemble that breed closely in many of their characteristics. Probably an average of 6,500 pounds of milk a year, with a little over 4 per cent. butter fat, would be a fair standard production for the French Canadian. It is thought that the first individuals of this breed were brought from Normandy or Brittany by the early French settlers who came to Quebec and settled along the St. Lawrence River. Starting with this old-time stock the French Canadians represent



FRENCH CANADIAN COW, 6,639 POUNDS MILK IN 269 DAYS. FIG. 580.

the result of many years of "roughing it." As a result, while they may have fallen away in size, and somewhat in dairy quality from the old stock, they have acquired great hardiness, and are probably the most economical cattle in their ability to hustle and produce fairly well on light and rather poor rations. Our impression is that under forced feeding at dairy contests the French Canadians have not made a great showing, but as rustlers on a rough pasture, or in a cold country, they are hard to beat.

THE MOST PROFITABLE APPLE.

Figures from Nova Scotia.

THE question of varieties when planting apple trees is a most fundamental one. Most growers surmise there is a difference in net profits as between varieties, but in many cases their favorite is the one which turned out most barrels and most money the year before. Our Nova Scotian fruit is mainly middle-class apples, such as Blenheim, Ribston, Baldwin, Stark, Ben Davis, with Gravenstein, King, Spy, Wagener and Golden Russet as our high-class eating apples. Blenheims rarely go over 45 per cent. No. 1 (2½-inch diameter free from spot and worms), and soften easily in our ordinary storage. Ribstons are still worse, often not giving more than 33 per cent. No. 1, and have a very restricted market in London, not being liked in the North of England. They also soften badly in ordinary storage. Baldwins are a little smaller than the States apples—at least, such is the general opinion—and with less color. They average about 48 per cent. No. 1. They keep well, but need much thinning and pruning to get the size 2½ inches diameter, and I always disliked the color in Nova Scotia. Stark is an early bearer, extra fine growing tree, with solid crotches and an even branching system. The apples keep well, are fairly well flavored, though coarse, and for the last three years sell better than our Baldwins. Stark pack about 55 per cent. No. 1.

Ben Davis lacks size here. The color is fair. It keeps well, but becomes greasy and unappetizing to look at. It packs badly, only 40 per cent. No. 1.

Gravenstein is largely grown here, but being a delicate apple and having to be shipped in a hot part of the year, they arrive in poor condition, not making prices in proportion to their quality. Whether because of intensive cultivation or extensive pruning, about eight years ago it seemed quite probable that Nova Scotia Gravenstein trees would all die out. The trees appear healthier than at that time. Few are being planted. Gravenstein may have a future in Nova Scotia, as they can grow to fine size, color and flavor, but they will need pre-cooling or cold storage and better orchard care.

King is one of the varieties which suffered most from the old system of pruning. "Prune to stiffen up the branches" made the King grow much wood and "Thin out your top" gave the owner the pleasure of cutting it out. It usually took 12 to 15 years before Kings bore much fruit. Kings pack well—62 per cent. No. 1.

The Spy grows very fairly in Nova Scotia. The tree is sufficiently hardy, but needs much pruning (after the first six or eight years), as it sets too many apples, and also grows too dense. The apples as grown here in the past have poor color and size. They also packed badly, 42 per cent. No. 1. This tree will probably pay even better than most for extra pruning and thinning.

Wagener has come to the front as a filler and early bearer. They are also high-priced and a good shipper, the best being sent to South Africa from here. The quality is good, and as the tree is small they are ideal to thin. They pack about 61 per cent. No. 1.

I have few Golden Russets, but as mine only pack 18 per cent. No. 1 perhaps I have too many. I exceedingly dislike Mann as a tree, a bearer and as an apple to eat. Ontario is another poor variety which is an early and heavy bearer of very tender-skinned apples. They are poor shippers—worse than Spy to handle. These percentages of pack are based on the No. 1 apples packed out from the 100 barrels as they come from the tree on an average of about five years. We in Nova Scotia also pack No. 2 which are smaller, and No. 3, which are rougher or perhaps a little defective.

For the five crops, 1908 to 1912, I have my own figures and also those of another orchard, giving prices realized per barrel of about 125 pounds net weight of apples. This price is for the barrel of apples as it comes rough from the tree, and all expense of packing, commission and freight has been paid, leaving the following figures:

My fruit, five years to 1912; other orchard, 5 years to 1912; my last 1911-'12-'13 prices.

	1912	1912	1911-12-13
Gravenstein	$1.60	$1.63	$1.56
Ribston	1.53	1.50	1.10
King	2.04	2.29	2.09
Wagener	1.94	2.00	2.00
Ben Davis	1.51	1.56	Not settled
Northern Spy	2.11	1.88	Not settled
Stark	1.80	1.75	1.61
Blenheim	1.46	None	1.49
Baldwin	2.03	None	1.55
Mann	....	....	1.15
Ontario	....	....	1.04

These figures are useful, but to get an idea of what variety is most profitable one needs to have the figures on production. For instance, 15 King trees planted in 1886, in the nine crops, 1904 to 1912, bore an average of 2.67 barrels per tree per year; 18 Ben Davis, same age, same period, 3.35 barrels per tree per year.

But each barrel of apples costs to pick 15 cents, hauling five cents, barrel 28 cents and thinning five cents. So at values given above a King tree of this age would make a profit of $4.03 a year, and Ben Davis $3.28 a year, and a Spy tree $5.26. An acre of 50 Kings would be worth $37.50 a year more than an acre of Ben Davis, and 50 Spys would beat the Kings by $61.50 a year. As the base for my figures gets wider these figures will alter, and perhaps others will join to obtain them. JOHN BUCHANAN.

Nova Scotia.

IT seems to us very necessary that pupils in country schools should be taught to know the names and habits of weeds.

PRESERVING FENCE POSTS.

CAN I prolong the life of well-seasoned fence posts by using gas or coal tar? If so, would you state about how long a post so treated will last?
Virginia. W. D. S.

The decay of wood is a condition caused by low forms of plant life or fungi. These fungi require both air and moisture in limited amounts for their development. Moderate warmth also stimulates their action and growth. Hence it follows that wood decays most rapidly in warm, moist climates. Another fact also follows that if these conditions of air, moisture and warmth can be successfully controlled, decay will be checked, as the fungi cannot live. To combat these fungi three general methods are used: First, treating the woods with fungicides. This treatment relies on a fungicide that is forced into the wood to kill any spores that may be present, and thus prevent the growth of the fungi. It is not a satisfactory method where the wood under treatment is to be subject to dampness, as in the case of a fence post. Most of the fungicides used are water soluble, and under conditions where the wood is subject to more or less water, soon seep out and leave it in practically the same condition it was in before treatment. Second, waterproofing the wood under treatment: it has been found that when the water content of wood is kept as low as 10 per cent. there is very little if any decay present. This method fights decay on this ground, not by an attempt to kill the fungi, but so to fill the pores of the wood with a waterproofing compound that no water will be admitted, and the spores of the fungi prevented from securing a foothold because of a lack of moisture, the timber being thoroughly dried before treatment. Paint and coal tar come under this head: by making a more or less impervious coating over a stick they hinder to a certain extent the passage of water into it. However, in a place that is as subject to water as is that occupied by a fence post I would consider either as of very little value. A green timber, if painted, will rot quicker than the same timber would if left unpainted. The paint acts as a check to the passage of moisture, and in this case prevents the quick drying of the stick, promoting decay, as it furnishes conditions suitable for the growth of the fungi. Somewhat the same conditions exist in the case of the fence post, and to my mind paint or tar would be of very little use here, as they would prevent the stick from drying.

The third method consists of treating the posts or timbers with a substance that is both a water repellant and a strong disinfectant. The fact that it is insoluble in water permits its use in places where an ordinary antiseptic would be washed out. The fact that it is a strong disinfectant prevents the spores of the destroying fungi from getting a foothold in the wood. The coal tar creosotes come under this last head, and are probably our best wood preservatives for work of this class, i. e., fencing. The railroads use this to quite an extent in the effort to prolong the life of their woodwork. I have a letter before me now from the engineer of the maintenance of way of the New York Central Lines, stating they estimate that treating with creosote doubles the life of a tie as far as decay is concerned. They use one of the pressure systems; this causes the wood to take up a greater amount of the liquid than it would if treated by the "open tank" method. The cost was given as approximating 30 cents for a 6x8-inch tie 8½ feet in length.

Two methods of treatment are open to the farmer, the brush method and the "open tank" method. Where only a small amount of work is to be done the brush method is probably best. Have the wood dry and apply two or more coats of hot creosote to the surface with a brush, being careful to get the preservative into all the checks and cracks. Paint the post to a point that will come at least a foot above the surface of the ground. The portion of a post that rots out first is near the surface of the ground in most cases. In the "open tank" method the posts are allowed to soak for a short time in the hot liquid. Probably better penetration is secured in this way than by the brush method. Some of the companies handling this material have heaters that they loan or rent for a small sum to the farmers. The price is around 80 cents per gallon, a gallon treating in the neighborhood of 30 posts. In regard to the number of posts treated with a gallon much will depend upon the size of the posts and the wood from which the posts are made.

Posts are usually made from small trees; these contain a great deal of sap-wood. The sap-wood being more spongy and containing food in a more available form is more subject to the attacks of fungi, and therefore decays quicker than the more resistant heart-wood. Here is where the preserving process is of value, the sap-wood, because of its position and structure takes up a greater quantity of the preservative than does the heart-wood; in fact it is very seldom that the creosote penetrates to the heart-wood, and in this way is made as long lived as the remainder of the post. The post illustrated was exposed by a cut made in State road construction. It has been in place about nine years and previous to this had served as a rail for an unknown length of time.

DECAY OF FENCE POST. FIG. 581.

Some woods, as cedar, are filled with a gum that is a natural disinfectant, preventing decay. Here in the North we do not have so much trouble from the decay of wood posts. The writer has in mind a fence that was built over 10 years ago with cedar posts that cost only 2½ cents apiece at the time. The fence was examined this Summer, and very little decay found, although no preservative was used on them. The posts were well dried though, before setting. This has a great deal to do with long life.

The United States Government has recently completed a series of experiments on fence posts, the experiments extending over a period of 20 years. Various methods of preserving the wood were used. The experimenters determined that the "open tank treatment" was much more effective than charring, or applications of coal tar or petroleum oils. Creosote was the material that they secured the best results with in their "open tank" treatment. A list of the publications available on the subject can be secured from the Department of Publication at Washington, D. C. ROBERT H. SMITH.

REMEMBER that hickory tree with the superior nuts. It is needed to start a new industry. If you know of one—tell us.

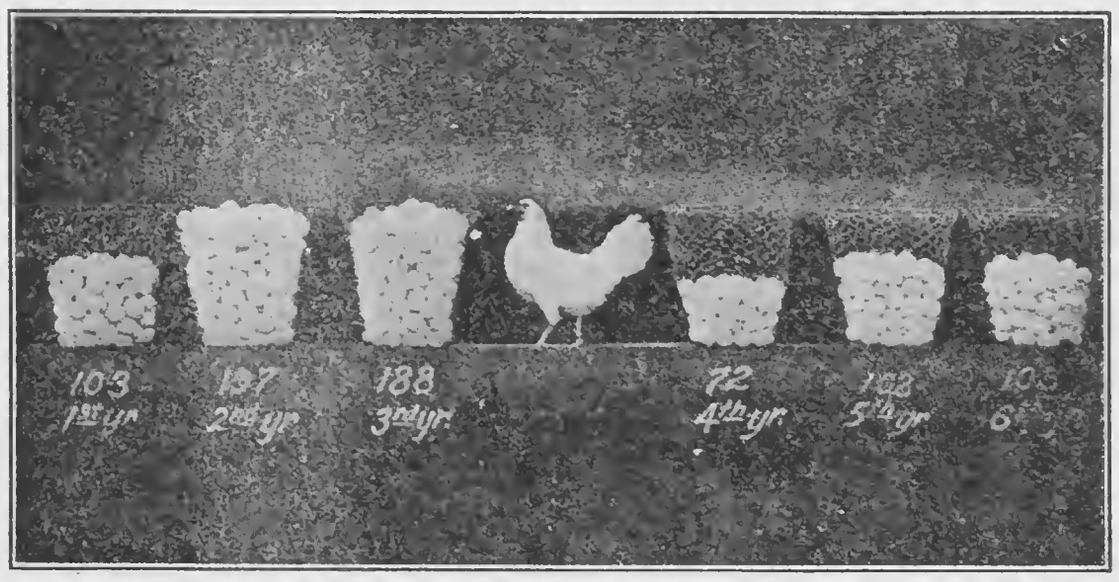
DO OLD HENS PAY?

HOW many years shall we keep a hen? This question comes up frequently for discussion, and the answers made by practical poultrymen are bewildering to a beginner. One man says that we should depend upon pullets entirely for laying stock. His scheme will be to keep the hens through their first laying season, then select the best of them for breeders and let the rest go. This plan is based on the general theory that a hen lays more eggs in her first year than in any other. Many poultrymen seem to believe that most of their hens cannot come back and give a profitable egg record the second year. The system based on this theory demands, of course, a vast amount of work in hatching and brooding, in order to keep up a full supply of pullets each year. On the other hand, there are poultrymen who say that we may well keep our hens two, three, or even four years, provided we have the ability to judge the layers properly or have some system of weeding out the drones. Naturally if we could keep our hens three years it would mean less work at hatching and brooding.

Does anybody know about this?

Bulletin 135 of the Utah Experiment Station, gives the results of a study in annual egg production. This is based on the records of a flock of seven-year-old hens and their progeny, and figures given are very interesting. For example, the picture at Fig. 582, shows a White Leghorn hen, and her comparative egg record for six years was started with 103 eggs. Under the usual system of judging layers, this hen would have been discarded as a drone, but the next year she came back with 197, and repeated with 188. In her fourth year she fell down to 72, yet in her sixth year she laid as many eggs as she had when a pullet. It is a question whether it paid to keep this hen after her third year, but such records are necessary in order to learn definitely about such things.

The cost of renewing the flock is considered one of the greatest drawbacks to the poultry industry, the authors estimating the cost of a pullet—probably up to laying age—at from 50 to 60 cents. The average productive life of hens cannot be estimated at this stage of their work, but for the strain used in their studies was thought to be about four years. The range of individual egg production in their flocks was found to be from 100 to 160 in the first year, from 105 to 140 in the second year, and from 100 to 130 in the third year. After the third year the production remained fairly constant at about 90, with a variation of not more than 10 or 15 eggs per year. The flocks giving a low first year record gave a comparatively high record the second year, and those giving a high first year record gave a low one in their second year, but the three-year average of all flocks was remarkably constant. This led to the conclusion "that an unselected flock of hens of a given strain has a certain potential laying capacity in its first three years, and that it makes very little difference how many eggs are laid in either of the first two years as the balance will be produced in the other two." The records beyond the third year indicated that there is a very definite laying capacity for old hens, and that there will not be much fluctuation from year to year. The average individual production for all flocks was 124 eggs in the first year, the same number in the second year, and 112 in the third. The conclusions were also reached that nearly all the longer-lived hens in a flock will lay over 500 eggs, the majority will lay 600 or 700 and individual records up to 1,000 may be expected. An average for the flock of 127 eggs per year for three years is unquestionably profitable and indicates good constitutional vigor. It was found that in flocks making high first-year records the second and third year's records were low and that in those making low first year's records the records of the second and third years were high, but the high layers of the first year continued to be the highest producers. The 10 hens making the highest second year's record gave a higher three-year total than the 10 making the highest first-year record. More hens made their highest year's record after than during their first year, and three made their highest record in their fifth year. Nearly all the hens in these flocks whose total production has been extremely high have made low or medium first-year records. "From these studies it appears that the three-year average is the most reliable index of the value of a given individual." M. B. D.



A WHITE LEGHORN AND HER SIX YEARS' RECORD. FIG. 582.

YES indeed, the legumes will make the following crops dance.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Mutton and Hare for Meat.

A LONG time ago, I think I saw in THE R. N. Y. something about South Americans raising a sheep or two instead of hogs and salting them down as the Southern people do hogs. I do not like so much hog meat. Can you tell me if it is practicable here? It seems to me sheep could be raised a great deal cheaper than hogs, and I would like the meat much better. Also, how about keeping a few Belgian hares for meat once in a while? We eat very little meat anyway, but like to have a little on hand for company. Once we thought we must have meat three times a day, and now do not have it once a month, and find we get along just as well and I believe we are in better health. E. R. S.
Virginia.

The people of Argentina eat large quantities of mutton. A good account of their habits is given in Joe Wing's book "In Many Lands." The mutton is eaten fresh or salted and smoked like pork. It can be put in cans also—as we have so often described. We can see no reason why the mutton may not be kept as well as the pork. It would be a good change. As for Belgian hares, there was a "boom" over them a few years ago; it has now mostly died out. We know several people who started with these hares expecting to obtain a full meat supply. They have now all given up the business. This is a case where experience is needed. Who can give it?

Trapping Rabbits.

R. W. C., New Jersey, page 1236, wants to get rid of rabbits. Put up a poultry netting wire fence, two feet high, around the patch. Just tack it to temporary stakes. Every 50 feet make a square jog large enough to receive a barrel, which must be sunk in the ground

level with the top of barrel, as shown in diagram. Rabbits will follow along fence and go in on "tip-up," which sets itself again after rabbit has dropped to bottom of barrel. Orange growers in California have these around their groves and they work to perfection. G. H. S.
Monticello, N. Y.

Late Cover Crop.

I HAVE a piece of ground that was in potatoes dug about November 10. I wish to raise tomatoes on this piece of ground next season and desire to sow some cover crop this Fall that can be turned under next season. We set tomatoes about June 15, so thought that rye or barley could be sown this Fall and turned under before it grew too large next season, so that the ground would have time to settle and the green matter have time to decompose before the tomatoes were set. What do you think of this plan? Would it be well to sow a cover crop of this kind to be turned under in the Spring for the purpose of seeding Alfalfa in the Spring? The land in this section needs humus in the soil. Up to October 25 we had no frost here this season.
St. Michaels, Md. J. W. B.

At this late date rye is about the only thing you can sow for a Winter cover. You could have sown Crimson clover after an earlier crop, and but for the digging of the potatoes could have had a stand of clover among them as our growers do among their tomatoes and cantaloupes. But in sowing rye sow a bushel and a half to get a good stand, and then turn it under before it gets strawy, or when it is about knee-high. In that green stage it will decay rapidly, while allowed to run into head it will decay slowly and be in the way in dry weather. Give the rye some acid phosphate and you will get it back for the tomatoes, for the soil will hold on to it, what the rye does not use, and what it does use will be returned to the soil. Tomatoes need plenty of phosphoric acid. I would never sow Alfalfa in the Spring, for the crab grass will be pretty sure to smother it. Better sow cow peas in the Spring after a Winter cover of rye, and you can make a good crop of hay and get the land in order to sow the Alfalfa in late August if you sow an early variety of cow peas. Or you can turn under the peas in August and give the land a heavy dressing of shell lime and prepare it for the Alfalfa. The first Alfalfa I ever saw growing was in your town in 1852, and it was then called Lucerne. W. F. MASSEY.

Killing Weed Seeds in Manure.

WEED seeds in manure are often quite troublesome, and we have tried various plans and methods in overcoming them. Some years ago we noticed that the manure from spent hotbeds becomes very hot, sometimes as hot as 125 degrees, and no seed of any kind can survive such a high temperature. Acting on this suggestion, we began to treat our manure to be spread on the garden to a violent heat. The process takes some time, but we have found that our work of fighting weeds has been greatly lessened. We haul the manure in the garden in the Spring, in large, even, flat piles of about 20 loads each. When one pile has been finished, we commence another, and so on. When we find by the use of a hotbed thermometer that the heat has reached its highest point, we turn it, and allow it to heat up again, after which we spread it on the land. We continue treating pile after pile in this way until all have been treated. Of course, one heating might answer very well, but a double fermentation is much surer, as handling and displacing the manure twice makes all parts of the pile come inside, and consequently the weed seeds in the pile are much more likely to be killed. D. L.
Indiana.

Sour Honey.

WHAT use, if any, can be made of comb honey that has soured? How prevent souring? E. J. L.
Briarcliff Manor, N. Y.

I do not know of any use that can be made of soured comb honey; possibly, some reader may have discovered a method of utilizing it. Honey should always be stored in a warm, dry place, to prevent its souring. The mistake is frequently made of storing it in the cellar, where moisture collects upon the comb and results in diluting and souring the contents of the cells. A warm, dry attic, or upper room, where the honey cannot freeze, is the most suitable place for keeping the surplus supply of this sweet. The writer now has several sections of white clover honey that have been kept for two years in the chimney closet of an upstairs bedroom without deterioration. M. B. D.

Battling With Peach Borer.

AT what season, or part of the season, is it necessary to pursue the peach borer? In other words, is its piracy continuous, or is it troublesome at certain periods, and what periods?
Mendota, Ill. L. B. C.

In our own case we begin now to dig out the peach borer. The eggs from which this insect is hatched are generally laid in this latitude in late June or early July. The insects hatch at the base of the tree, and begin to gnaw their way down to the root. Many peach growers now follow the plan of spraying the trunks of their trees near the ground with a thick solution of lime-sulphur. This destroys many of the young worms, and prevents others from working into the tree. It hardly pays to dig out the borers until October or November, as they are not large enough to be readily seen earlier in the Fall. We follow the plan of scraping away the dirt from the base of the tree, finding the hole which is made evident by gum containing sawdust, and working down through the hole until the insect is found. A sharp, small knife is good for this purpose; make sure to slit or cut down the trunk and not across it. After this digging a mound of earth or coal ashes is piled around the tree, and in late April in the following Spring we go over the trees again, for any borers which may have been left at the Fall digging. This treatment with washing or spraying the tree trunks with lime and sulphur is as good as anything we know of. Soft asphalt is being used by some growers, who report fair results from its use. We have continued to use the digging method.

"THE people of London are noted for their stupidity," wrote a schoolboy. "Where did you get that idea?" asked the teacher. "Please, miss," was the reply, "it says in the textbook 'the population of London is very dense'!"—London Evening Standard.

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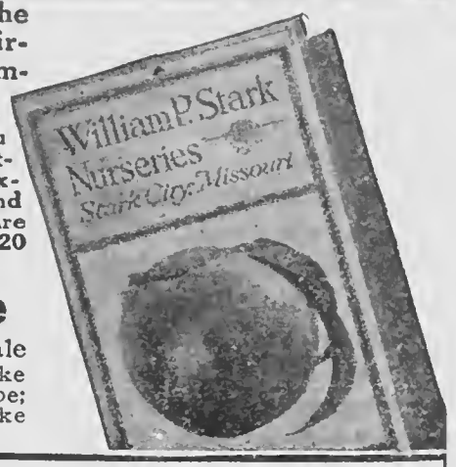

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The Home Acre.

NOTES FROM A MARYLAND GARDEN.

GLADIOLI FROM SEED.—It is now near the middle of October, and the weather seems to have turned back to Summer since the cool September, for last week we had the mercury up to 90 on one day, and warm Summer weather all the time. The favorable conditions have brought out a wonderful bloom on the Dahlias, which a little while back seemed to be nearly a failure. Now they never were finer. Last week at the meeting of the Vegetable Growers of America in Philadelphia I was particularly attracted by the exhibit of Dahlias and Gladioli made by Mr. Burpee. The Gladioli were especially interesting, not only for the lateness, but the beauty of the flowers, and the fact that they were grown this season from seed sown in May. I have had Gladiolus corms get large enough the first season to bloom the next year, but never had any to bloom the first season from seed.

DROUGHT AND VEGETABLES.—The dry Summer has made some peculiar conditions in the vegetable garden. I sowed my first spinach, as usual, for Fall cutting early in August. Here and there a solitary plant made its appearance, and after waiting a month I ran out rows between the first ones and sowed again. Since the more favorable conditions since the first of October, all the sowings have grown well and I now have a thick stand of small plants, and here and there a big one ready to cut. My last sowing of spinach to winter over for Spring was made October 9. I have found that seed sown during the first half of October up to the middle of the month will give me better plants for the Spring than those sown earlier, as they do not run to seed so quickly, and they always get large enough to pass our Winters here, where the climate is much modified by the ocean on one side and the broad Chesapeake on the other. The influence of a great body of salt water is peculiar on some things. Right down along the bay shore and on the ocean front the figs grow and bear luxuriantly, while a few miles in the interior they are sure to get killed back every Winter.

FALL ONIONS.—My onion sets of the Norfolk Queen and the Yellow Potato onion planted in September are now well up, and growing rapidly, and another planting of the Queen was made on ninth of October. This onion makes the earliest of green onions, and I have in mild Winters had them ready the last of February, and always in March. I throw a small furrow to each side of the rows in November as a Winter protection to be pulled away early in Spring.

STRAWBERRIES.—We have found that here and southward November is the best time to set strawberry plants. The soil is then permanently moist for the Winter, and they live better than earlier. In North Carolina I have had the November-set plants make nearly a full crop in the Spring. Just now I am watching with interest some seedling strawberries which have maintained a vivid green all through the dry, hot weather. We cannot hope to produce fruit much better than many varieties we already have, but if we can grow plants with vigorous resistance to untoward conditions, which make good fruit, it will be an advantage, for many of the best fruits have the bad character of rusting foliage in Summer.

TOMATOES.—The tomato canners are nearly through their season and it has been comparatively a short one, as the crop was late, and cut short by the dry weather. The pack will be larger than was once expected, however.

GLADIOLUS. — The Gladiolus corms are smaller than usual, owing to the drought, but I have never seen them make such masses of cormlets, though these were scarce on some when I began the digging, while further on the corms were literally covered with the little ones. As the Gladiolus stands the Winter here, and the scattered sets come up in Spring like wheat, I shall sow a lot of the little cormlets in November, expecting to have better germination in the Spring. The earliest blooms I had this year were from corms overlooked last Fall in digging. But we dig them in the Fall to get the ground for other things. Fall planting of all deciduous trees and fruit trees is far better here than Spring planting. Our soil does not freeze deeply and they make new root fibers and root hairs ready for the swelling buds in Spring and I have always had the trees and also shrubbery to live better from Fall planting.

Maryland. W. F. MASSEY.

Preparing Celery for Winter.

AS it is now time for preparing celery for Winter keeping, I wish to tell my experience with it during the last two years. In the Summer, when ready to transplant my celery, I have a deep trench dug the length of my garden. As my garden slopes gently in that part of it I find it very easy, in case of a dry spell, to supply the plants with water by simply pouring cans of water at one end of the row and letting it run the full length of the row. Care must be taken to pour the water very slowly when the plants are small, else they will be washed out. I grow Golden Self-blanching, and begin banking it up in September. I simply gather each bunch together and wrap it, not too tightly, with a short strip of cloth, and then pack the dirt tightly around it. The trench facilitates the first banking also continuous banking goes on until danger of a freeze, when it is covered for the Winter. I do this by covering it over very deeply with clover chaff and just let the celery remain in the ground. During the Winter, when you wish celery, pull away some of the chaff, get your celery and for whiteness, crispness and tenderness it cannot be beaten. MRS. W. F. N.

Clymers, Ind.

Oct. 26. Wheat $1.05; oats 50; corn 78; potatoes 50 to 65. Hay $14 to $16; cabbage $2 to $4 per 100; carrots 50 per bushel; turnips 50. Hogs 7 to 8 cents per pound live; cattle 5 to 8; chickens 11 to 15; eggs 35; butter 30 to 38; apples 50 to $1 per bushel; pears, Keiffer, 50 to 75; onions 75. W. C. S.

Berea, Ohio.

Oct. 25. Conditions in this section of Nebraska continue favorable. The weather has been ideal warm and dry most of the time, with enough rain to keep pastures green and making ideal conditions for the growth of Fall wheat. There has been a large area sown to wheat, the time for seeding extending from September 10 to October 20. This late seeding is done for the purpose of avoiding Hessian fly, but experience has proved that such late-sown wheat has a good chance of making a better yield than the earlier sown. Corn husking has begun, and the yield is moderate, as high as 50 bushels per acre, and down probably an average of 25 bushels. To the east of us, however, as far as the Missouri River, the crop is very much lighter. There is an abundance of hay, both wild and Alfalfa. Timothy and clover are not raised in very large quantities, although both do well here. Potatoes are a fair crop, but many carloads have already been shipped in from the sand hill country of Northwest Nebraska, also from Minnesota at the Red River region. Cabbage comes from somewhere outside the State, and sells at $1.25 per 100 pounds. Hogs seem to be scarce, still the markets are well supplied, and prices are around two cents off per pound. There is a decided slump in price of horses and milch cows, probably 25 per cent. Wheat is now selling at 96 cents; oats 45; corn 75 for old corn; potatoes 70 to 80; hay $9; butter 25; eggs 20. Apples from the Ozark region $1 at car. There has been no frost yet, and none in sight.

Fairbury, Nebr. H. M. R.

Carries Three Loads to Market while Team of Horses is taking one

THE motor truck on the farm was a short time ago a rarity. Now it is coming to be regarded as a genuine *necessity*. Farmers, fruit growers and dairymen are rapidly discovering the tremendous advantage of having a vehicle which carries their goods to railway station or market quickly and without fatigue, no matter what the distance.

"Shall I make the investment? Shall I put that much money into a delivery car?"

That is the question every man will ask himself. The following facts may help you to a wise decision:

One *Autocar* will do the work of three double teams at a *lower cost of maintenance*.

The *Autocar* is designed especially for country roads—to make long trips in any kind of weather.

Autocar construction, the result of 17 years specialization on one type of chassis, is rugged enough for any emergency. A fruit grower recently wrote us his *Autocar* had traveled 32,000 miles without a serious breakdown.

Think of the times when you have been held up in the marketing of your fruit or produce by the slowness of horses and wagons. Think what it often means to miss the *good* prices of a certain date and be forced to take the *poor* prices of the day after. An *Autocar* will carry *three* loads to market while a team of horses is taking one. It markets your goods *quickly*.

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Let us give you the names of some of the *Autocar* users. Our new catalog will also be mailed if you write us. Address Dept. R.

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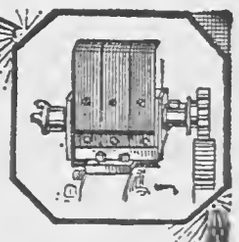

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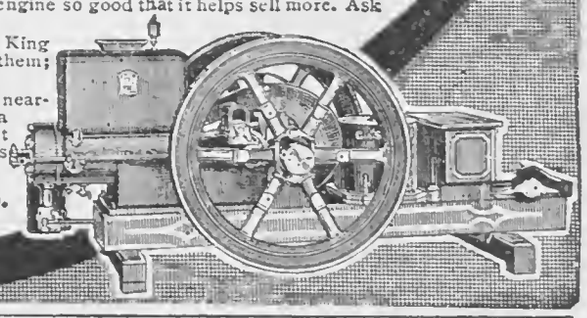

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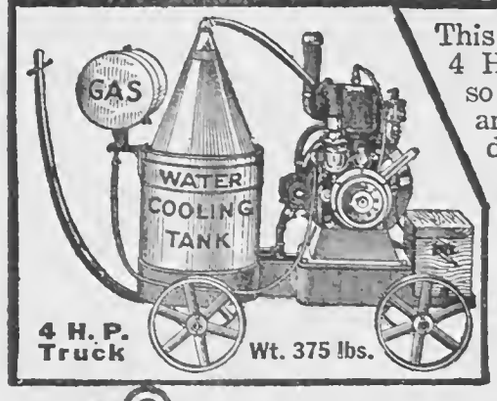

This is the light-weight, quick-action 4 H. P. Truck Outfit that has proved so handy for farm work. **A boy can pull it** around from job to job, yet it easily handles all work up to 4 or 4½ H. P. Pump circulation to water tank on front of truck **prevents overheating,** even on all-day run. Cushman Engines are not cheap engines, but they are **cheap in the long run.** They are built to run without trouble, and are the most useful engines made

For All Farm Work

And For the Binder

Very light weight and steady running permits Cushman Engines to be attached to other machines, such as harvesters and balers, as well as doing all regular stationary jobs. 4 H. P. alone **weighs only 190 lbs.;** 2-cylinder 8 H. P. only 320 lbs. **Throttle governed;** economical of fuel. 4-Cycle. **4 to 20 H. P.** Runs at any speed; speed changed while running.

C. M. Scott, Pawnee City, Nebr., says: "I bought a 4 H. P. Cushman and think it is the **finest engine I ever saw run.** Am grinding shelled corn—can grind 30 bushels per hour with 6-inch bulr grinder. Have seen a great many other engines, but the Cushman has them beat at every turn."

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EVENTS OF THE WEEK.

DOMESTIC.—Another landslide at Gold Hill, Culebra Cut, blocked the Panama Canal Nov. 2.

Nov. 1-3 a number of deaths occurred in and near Bristol, Vt., as a result of manufactured "whisky" with a wood alcohol base. The death list was expected to reach 25, while a number of other victims were blind or crippled. The liquor was illegally sold by a druggist, the town being "dry."

The Department of Justice at Washington announced, Nov. 1, an agreement with the American Smelting and Refining Company whereby title to several thousand acres of coal lands in Colorado, alleged to have been illegally obtained years ago through dummies, will be restored to the government. The lands are part of a 2,214-acre tract near the town of Aguilar and part of 1,280 acres at Cokedale. They are estimated to be worth millions of dollars.

Three persons were killed and one was seriously injured as a result of a race between an automobile and a train on the New York and New Jersey Railroad at Haverstraw, N. Y., Nov. 1.

An indictment charging a criminal conspiracy to violate the Sherman anti-trust law was handed down in the United States District Court, New York, Nov. 2, against twenty-one men, directors or former directors of the New York, New Haven and Hartford Railroad. Joined to these 21 are the names of 45 other men, also directors or former directors, who are designated as "co-conspirators," but they are not indicted. Among them are the names of men long since dead. Summed up, the men indicted and those characterized are charged with a conspiracy which began about the date the Sherman law was passed and continued up to October 30 of this year whereby they obtained a monopoly of practically all the land and water transportation facilities of New England and stifled all competition.

Federal troops have been ordered to the Hartford Valley coal district in Arkansas, where serious labor trouble exists.

Election returns Nov. 3 were largely favorable to the Republicans. The Republicans gained mostly in the New England States, New York, New Jersey and the Middle West. Boies Penrose was re-elected to the Senate from Pennsylvania by a tremendous majority over A. Mitchell Palmer and Gifford Pinchot. In Connecticut five Republicans will replace the delegation of five Democrats now in the House. James W. Wadsworth has been elected United States Senator from New York. "Uncle Joe" Cannon is returned by the 18th Illinois District. The ex-Republican Speaker had seen thirty-eight years' service in the lower body when defeated two years ago by Frank T. O'Hair, who was his opponent at this election. Gov. Glynn of New York was defeated by Chas. S. Whitman. Woman's suffrage amendments were defeated in five States, but won in Montana and Nevada. Ohio and California voted against prohibition, while Washington, Colorado, Oregon and Arizona went "dry."

THE EUROPEAN WAR.—Oct. 29 bombs dropped by a German aeroplane killed 19 women and injured 40 in the market place at Bethune; another bomb dropped in Dunkirk killed a woman and child.....Coast districts in Belgium being flooded by cutting the dikes, the Germans have abandoned the violence of their attacks along the Yser, and have concentrated farther inland. French gains were reported Nov. 5; there is little general change except that the Germans are not perceptibly advancing. Severe fighting is incessant.....Oct. 28 the German cruiser Emden, disguised as a Japanese, entered the harbor of Penang, Straits Settlements, and destroyed a Russian cruiser and a French destroyer with torpedoes.....Oct. 29 a German converted cruiser was sunk in the Adriatic by a British destroyer squadron.....The British cruiser Hermes was sunk by a German submarine in the Straits of Dover, Oct. 31.....The British submarine D-5 was sunk in the North Sea, Nov. 3, by a mine..... The German warships Gneisenau, Scharnhorst, Nurnburg, Leipsic and Dresden attacked the British cruisers Good Hope, Glasgow, Otranto and Monmouth off Coronel, Chili, Nov. 1, sinking the Good Hope and Monmouth, while the Glasgow and Otranto, badly damaged, put into Coronel. There was heavy loss of life.....Great Britain has announced that the whole of the North Sea is now a military area, closed to merchant shipping, owing to danger from mines and warships.....A German squadron left Wilhelmshaven, Nov. 3-4, and a raid on the English coast was then expected. One British submarine and two mine drifters had been sunk in action Nov. 4.....Oct. 30 the Turkish warships Hamidieh, Goeben and Breslau bombarded unfortified cities on the Black Sea, including Odessa, without any previous declaration of war. The two ex-German vessels sunk two Russian gunboats and two Russian passenger steamers. Later Turkey offered apologies, which were not accepted. Egypt has been put under martial law by Great Britain. Nov. 4 the Anglo-French fleet was shelling Dardanelles forts and Russian and Turkish forces were in battle in the Trans-caucasus. Mohammedans in India announce loyalty to Great Britain.....The Boer rebellion in South Africa has not extended and is reported generally suppressed.

FARM AND GARDEN.—The officers of the Cumberland White-Egg Indian Runner Club for the ensuing year are: President, C. S. Valentine; Vice-President, Mrs. Andrew Brooks, Auburn, N. Y.; Acting Secretary, Eugene W. Davies, Everett, Washington; Directors, Mrs. Mollie Allen, Oswego, N. Y., O. P. Vandenberg, Clay, N. Y., Geo. W. Dallas, New Iberia, La., Mrs. W. S. Ritnour, Gulfport, Miss., Mrs. Benigna G. Kalb, Honston, Texas, Mrs. John Harter, Marshall, Texas, Eugene W. Davies, W. W. Harder, Edmonds, Wash., and D. L. Rogers, Dunnville, Ont. Chairmen: Business Unity, Peter E. Pass, Candor, N. Y.; Press, Mrs. E. G. Feint, Cortland, N. Y.; President's Aides, Miss Beulah Maxey, New Berlin, Ill. The Penciled Runners go into the Standard of Perfection under the Cumberland Club's own color-standard.

The American Rose Society last Spring completed arrangements to cooperate with the United States Department of Agriculture in establishing a rose garden at Washington. The society is furnishing the roses, while the Department has set aside two acres of ground at its Arlington farm for the garden, which will be under the direction of federal horticultural specialists. The garden already contains about 320 varieties, but there are many hundred kinds not yet included, and eventually the site can accommodate as many as 2,000 varieties if they can be secured. Any grower of roses who thinks he may have roses not already in the national collection, has been invited by the American Rose Society to contribute a sample plant. Correspondence concerning such plants should be sent to Mr. Alexander Cumming, Jr., Cromwell, Conn., who is chairman of the society's Committee on Gardens. Either Mr. Cumming or the Department of Agriculture will supply a plan of the garden and a list of varieties already grown to the interested rosarian who applies for them.

Nov. 5 the Federal Government ordered the closing of the Chicago Stock Yards, because of foot-and-mouth disease. This closing takes effect Nov. 7-15. The disease is reported at one Iowa point and the International Live Stock Show may be given up. The quarantine has been extended to cover Michigan, Indiana, Illinois, New York, Maryland and Pennsylvania. In addition, restrictions have been placed upon shipments of stock from Ohio. No cattle, sheep or swine can be shipped from these States in interstate commerce and all fodder and animal products of every sort which might possibly convey the disease must be thoroughly disinfected. The quarantined States are not only prohibited from shipping cattle to uninfected areas, but they cannot even send shipments of stock from one infected area to another

Students are enrolled in the Kansas State Agricultural college this Fall, from three foreign countries and 18 States. Japan and China are each represented by one student and Hawaii by two students. The States having students in the college are: Missouri, 44; Nebraska, 21; Oklahoma, 9; Colorado, 7; Texas, 7; Iowa, 6; Arkansas, 6; Illinois, 5; Arizona, 2; Ohio, 2; Wisconsin, 2; South Dakota, 1; Minnesota, 1; Pennsylvania, 1; West Virginia, 1; Idaho, 1, and Massachusetts, 1. The total enrollment of the year has reached 2,702 and is expected to pass the 3,000 mark later in the year.

Among the exhibits at the big "Fenceless Fair" at Atchison, Kan., was a big pumpkin that was sent to the fair by parcel post.

The Missouri College of Agriculture has charge of the total amount of the Smith-Lever funds for the State. The Smith-Lever bill, which was passed by Congress last Spring, gives to the State of Missouri during the coming nine years, for the purpose of demonstration and extension work, a sum of almost eight hundred thousand dollars. This year the State got $10,000 of the appropriation. The College of Agriculture is dividing it among five types of aid for farmers and stockraisers of the State; hog cholera eradication, moveable schools of home economics, boys' and girls' club work, dairy and poultry dmonstration and egg marketing.

The College of Agriculture of the University of Missouri hopes almost entirely to remove hog cholera from the State. To fight the disease it is helping the farmers to organize anti-hog-cholera clubs for the prevention and cure of the disease. The college works by counties. The College of Agriculture is building what will probably be the finest plant for the manufacture of hog cholera serum in the United States. This plant became necessary because of the increased demand for serum. The plant will be finished December 1. The extent of the work done by the College of Agriculture in eradicating the disease is shown by the fact that 208,619 doses of serum representing almost as many hogs treated were sent out by the college during the year.

Joseph W. Ritchie of Freeport, who for twelve years claimed to be the champion pumpkin raiser of Long Island and who took many premiums at the Queens and Nassau agricultural fairs, is dead at the age of 52. He named a number of his productions after prominent men, including Presidents. The largest pumpkin Mr. Richie ever raised weighed 482 pounds. He named it "President Taft." For many years Mr. Ritchie was a prominent baseball player and played with various amateur and semi-professional teams on Long Island.

The steamer Brodmouth is expected to arrive at New York on December 18 from Hong-kong, China, with a cargo of frozen eggs. Before the European war the Brodmouth was employed in the mutton traffic between Australia and England, but when the war broke out an English syndicate contracted for a cargo of frozen eggs for speculative purposes. The cargo consists of 8,800,000 pounds of eggs, all of which are kept below the freezing point. The Brodmouth delivered before sailing from San Francisco on October 29, 1,320,000 pounds of these eggs, leaving a cargo of 7,480,000 pounds to be delivered in New York. The eggs are packed in 10, 20, 30 and 50 pound cans. At the present price of frozen eggs here, 20 cents a pound, the value of the cargo is $1,496,000 and is equal to 6,600,000 dozen eggs in the shell.

Oct. 27. Wheat $1.04; corn $1 per cwt.; oats 46 per bushel; potatoes 45; onions 60; apples 85; Kieffer pears 75; eggs 27; butter 30; butter fat in cream 30. Steers $7 to $8.10; calves $8 to $9.50; hogs $6.75 to $7.25. Turkeys 12; chickens 10; ducks 10; geese 8. G. C. H.
Bowling Green, O.

We are and have been receiving the following prices: Wheat $1.08; Oats 35; corn (ear) 25; hay $10; potatoes 35; grapes, pound, 2; peaches, B, 80 to 100; A $1.25 to $1.65; AA $1.50 to $2.; apples 50 per bu. in small way, poor crop and quality, bulk apples 75 per 100 pounds. Pears, Kieffer 65 per 100 pounds. Eggs 25 to 30, stores pay 25; by shipping to Cleveland 30 to 32 can be obtained. We are doing this. Butter 32; milk per qt. 6; cows $75 to $100; hogs $7 per hundred; cattle steers $7 to $7.50; cows $6 per hundred. W. H. M.
Berlin Heights, Ohio.

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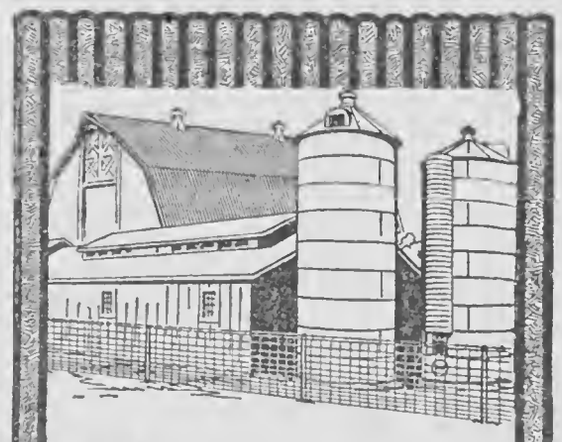

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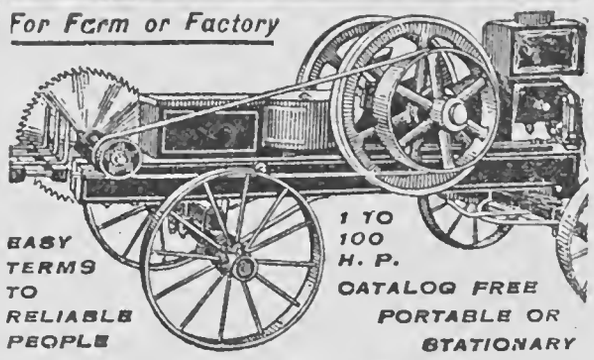

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Learn by Practise

Concrete for Barn Cellar.

I AM filling in the bottom of our barn cellar with 1½ foot rock and one-half foot gravel, and I am trying to find out how thick a layer of concrete it will need on top of the gravel. This cellar is used for storing manure during the Winter and the concrete must be firm enough to stand u- under a team and manure spreader. What would be the best proportions of cement and clean sharp gravel for such a floor? C. J. B.
Hallowell, Me.

A floor of that character is usually made about four inches thick, this depth of concrete permitting the use of a considerable number of good-sized stones in the gravel and saving a proportionate amount of cement. These stones, whether those naturally occurring in the gravel or placed in the concrete as it is put down, should not be allowed to come within less than one inch of the surface, however. With clean, sharp, gravel holding a certain amount of sand as it is taken from the bank a mixture of one part Portland cement to seven parts of gravel should give a sufficiently rich mixture. The standard mixture for barn floors, as commonly advised, is one part cement, two and one-half parts sand and five parts of gravel and if one is doubtful about the results he can screen the sand from his gravel and mix them again in definite proportions. This is by no means always done, however, and the natural bank mixture of sand and gravel may easily be tested by mixing a small batch and waiting twenty-four hours to see whether it sets hard or not. M. B. D.

Tile for Sub-irrigation.

I HAVE been growing strawberries for 50 years, and during that time there have been several seasons that excessively dry weather has materially interfered with my success. Both this year and last we have had distressing droughts, notwithstanding I am in as good a part of the great State of Illinois as there is. Neither year have we had half an average annual rainfall. Strawberry plants put out in April died in spite of all the watering I could do, until I have not more than 10 per cent. living out of all I planted. I want some information about sub-irrigation. I want to start with a plot of ground 30x60. I expect to plant eight rows, the whole 60 feet in length. How shall I sub-irrigate this plot of ground? I had thought that if I put a line of tile under each row of plants that would be sufficient. In the run of the 60 feet there is a fall of 2½ feet. The soil is a black friable loam. It is as good soil as can be found. We have in our town a large factory of drain tile which I can buy at a reasonable price. The tile I should use is the kind that just butts up end to end, and hence there is always opportunity for water to run either out or in at every joint. The tiles are just a foot long. Would it do to put a row of three-inch tile under each row of plants, or would it be better to put a row on each side of each row of plants? This would take twice as many tiles, but I do not care for that if it is better to do that. The tiles I would use have a round three-inch hole. I presume that is larger than needed for so small a plant as I am considering. The water I shall use will come from our city water system, and I would run it into each row of tiles at the highest point and let it flow by gravity to the other end. I would use only a ¾-inch hose to conduct the water to each pipe. How deep should the tile be laid for best results? L. B. C.
Illinois.

It would seem to me that you are planning a very expensive method for irrigation, especially with city water. You would need a head line of tiles across the upper end of the plot so that the water could run into the whole system at once, and a line of three-inch tiles down the middle between the rows would be enough, having of course the lower ends stopped. But then you would have a permanent arrangement for that plot only, and strawberries need frequent replanting. To irrigate in this way every plot planted would be very expensive, especially as the succeeding crops may be such as would not thrive with sub-irrigation as well as overhead. I think that it will be far cheaper and as effective to use one of the overhead systems, which can be extended or moved at will. There are three of these, the Skinner, the Manaway and the Campbell, all good. In this method of irrigation the perforated pipes are run overhead and have specially designed nozzles for spraying, and one line of pipe will water a width of 40 feet. In fact the Campbell system claims that 50 feet apart are sufficient for their rotating nozzles. The overhead systems are put high enough to work teams under, and can be moved easily to other plots or expanded over more ground. They will take less water than the underground tiles, which are not effective till completely filled. Another advantage in the overhead plan is that in the early Spring, when frost threatens, you can turn on the water and spray all night and prevent damage from frost. Large growers of strawberry plants for sale are now using the overhead system. Sub-irrigation may do very well in greenhouses, but in the open ground the underground system of tiles will cost as much as or more than the overhead piping, and will take a quantity of water that would make it very expensive to use city water, and could only be made economical where one could have a natural flow of water. One line of pipe suffices for my garden 50 feet wide, and adds but $1 a month to water rent.

W. F. MASSEY.

Water Flows Both Ways.

THE Geological Survey gives the following singular facts:

"In Northern Minnesota there is a great area of land so flat that its waters sometimes flow into Hudson Bay and sometimes into the Gulf of Mexico. There are times when certain lakes discharge at both ends, the northern outlet carrying water through Red River or Rainy River to Lake Winnipeg and thence to Hudson Bay, while the southern outlet carries water to the Mississippi. Because the dividing line between the Mississippi River drainage basin and that of Hudson Bay is indefinite and in many places cannot be determined, the consideration of these two basins in connection with their water supplies and the uses that can be made of this resource must logically be taken up together."

Septic Tank.

I wish to construct a septic tank for sewage disposal on the farm. Do I need water connections to flush out bowl of closet after use? W. N. M.
Ohio.

Septic tanks require water connections of some kind to flush closet bowls and carry the wastes from sinks, wash basins, etc., to them. Where running water is not at hand, large storage tanks to be supplied from the roof may be built in the attic. There is a type of small septic tank designed to receive its supply of water from the kitchen sink where water is used freely there. This is described in a bulletin entitled "Sewage Disposal for Country Homes" issued from the College of Agriculture at Cornell University, Ithaca, N. Y. A copious supply of water is needed for the operation of a septic tank, as it depends upon frequent flushing to dispose of the wastes after they are digested in the tank. M. B. D.

VERY black, very small and very much impressed with the importance of her mission, she stood before the kindly lady of the house. "Well, Ophelia?" "I's de washerwoman's little girl and mommer she says please to len' her a dime. She got to pay some bills."—Kansas City Star.

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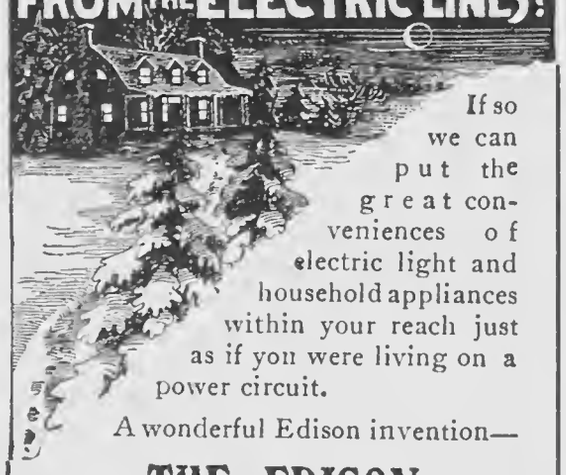

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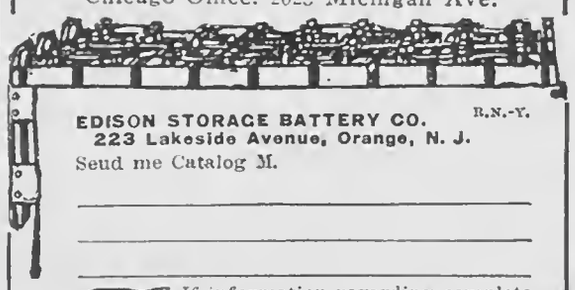

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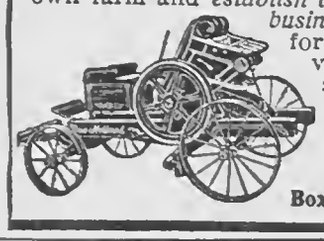

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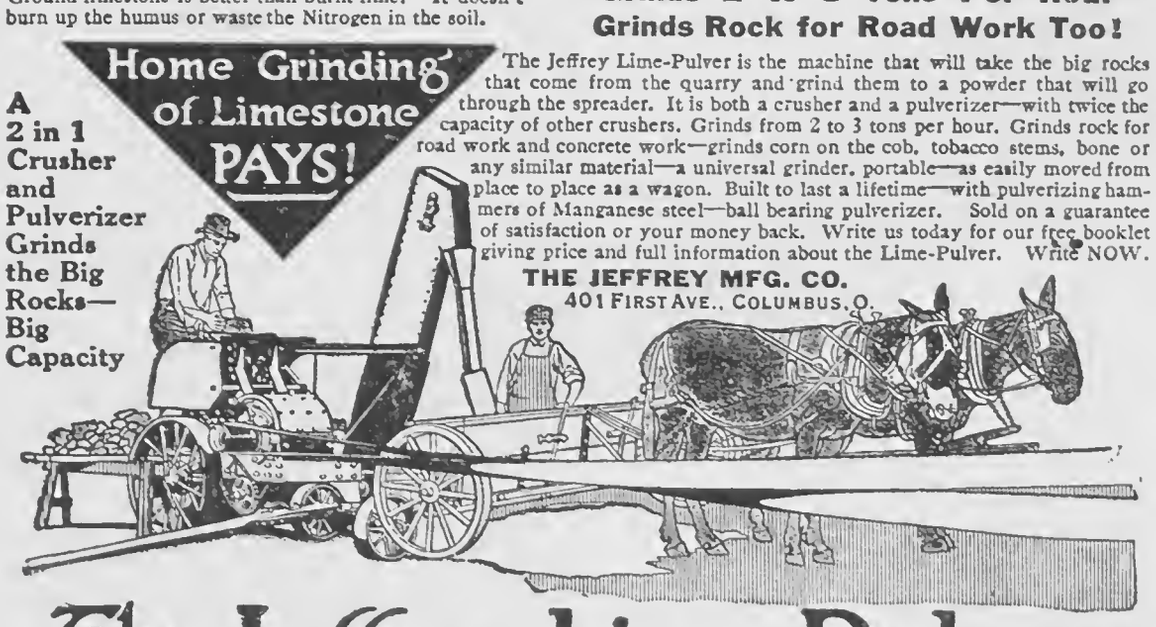


The Jeffrey Lime-Pulver

Hope Farm Notes

A CLOSE RACE.—I went up to the Connecticut Agricultural College at the end of October to see the old egg-laying contest end and the new one begin. The chief excitement was over the close race between Barron's English Wyandottes and Lincoln's American Leghorns. The Americans went far ahead in September, but then the Wyandottes began to gain. Egg by egg they gained until with only eight days to go they were but six eggs behind. It looked as if they would win, but somehow they faltered on the home stretch and the Leghorns won by three eggs. The final score for one year—10 hens—was:

Lincoln's American Leghorns	2,088
Barron's English Wyandottes	2,085
Experiment Pen, Leghorns	2,083
Barron's English Leghorns	2,010
Neal Bros., Wyandottes	1,918
Merrythought Farm, Wyandottes	1,901
A. B. Brundage, R. I. Red	1,885

The other pens all fell below 1,800 eggs. A little later we shall be able to tell how much feed these hens consumed, the weight of their eggs, the cost and the income—figured at prices received month by month. It surely was a great race. We have partly succeeded in our ambition to make these contests as interesting to hen men as baseball or football are to the general public. Thousands of farmers are following these egg contests, and the interest has hardly begun.

A NEW CONTEST.—Saturday, October 31, was a lively day at Storrs. There were 820 birds to be taken from the houses and shipped to the owners, and 1,000 birds to be sorted, identified and properly distributed in 100 houses. All these houses were cleaned, sanded, sprayed and re-marked. It all meant the prompt and careful handling of 209 packages, for our "Favorite Hens" came in 30 different boxes. Most of these packages were handled from Willimantic, some nine miles away. This will give an idea of the labor and the accuracy required to organize and start such a contest. Add to this the fact that each hen must be carefully examined for disease or insects and treated if need be. Briefly stated, there are 50 houses each 12 x 12 feet, divided into two compartments, each holding 10 hens. There are five trapnests in each compartment and an outside run. Each hen wears a numbered legband, and individual records are kept. The hens remain in this house one full year—all being fed the same ration. The following dry mash mixture is kept before them at all times. They help themselves at will:

Coarse wheat bran	200	pounds
Cornmeal	100	"
Gluten feed	100	"
Ground oats	100	"
Standard middlings	75	"
Fish scrap	30	"
Beef scrap	30	"
Low grade flour	25	"

There are little boxes holding grit, shells and charcoal which the hens take as they like. There is also provided a "scratch grain" made up as follows:

Cracked corn	60	pounds
Wheat	60	"
Heavy white oats	40	"
Barley	20	"
Kafir corn	10	"
Buckwheat	10	"
Coarse beef scrap	10	"

Formerly this was fed in an automatic feeder operated by the hens. An experienced man is better than any hopper, and so the scratch feed is now thrown out by hand as needed. It is scattered in the litter, where the hens work for it. Green food is also given in the form of mangels or other vegetables. All the hens are treated alike and this seems as fair a system as could be devised. We have heard Leghorn men say this system favors the Wyandottes, while Wyandotte men say it favors the Leghorns. As a matter of fact the Leghorns won the contest, while the highest individual scores were made by Wyandottes!

NEW FEATURES.—These are houses for 100 pens. All are taken and half a dozen more could have been used. A number of new breeds appear this year. Black Leghorns come from England. There is a pen of good Buttercups—looking like quick, active game birds. The Light Sussex has the head and neck of a Light Brahma with clean legs and something of Orpington shape. The Faverolles wear whiskers, and are certainly much lauded by friends. The Connecticut Station has entered two pens of Light Brahmas. One will be fed meat in the dry mash—the other sour milk substituted for the meat. The old American Dominique is represented, and also the Black Langshan, while one of the "Favorite hens" is a good Black Minorca.

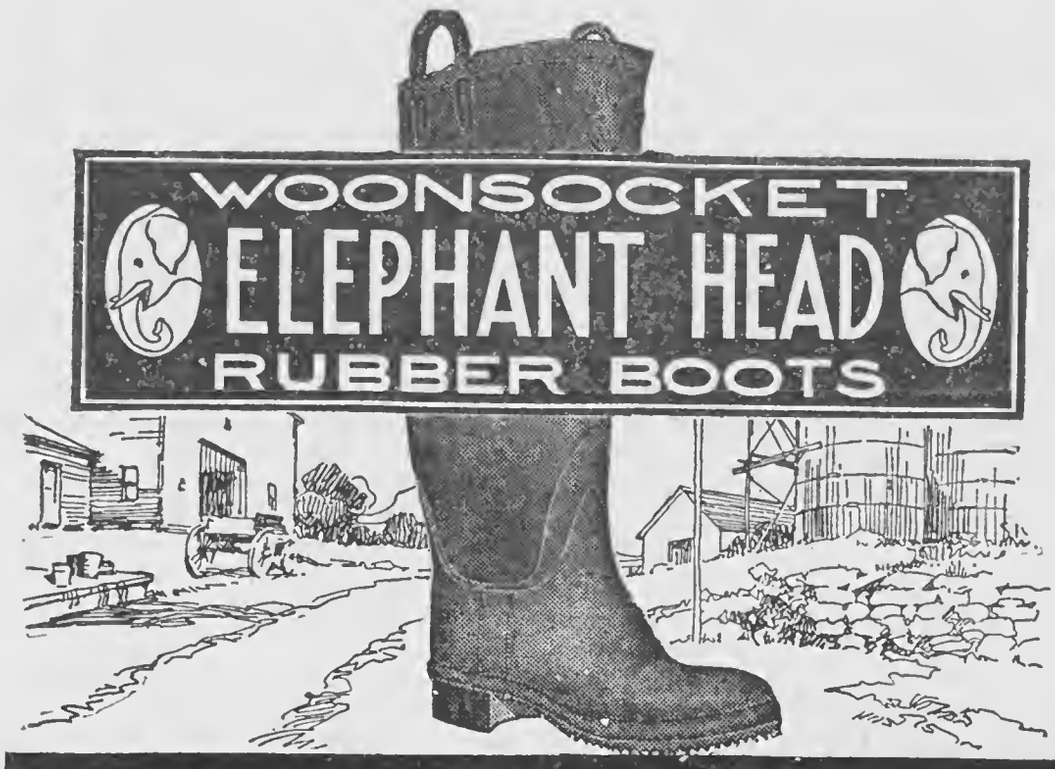
THE FAVORITE HENS.—I found these 30 birds all sorted into their houses ready to begin the year. There are 10 Leghorns, 10 R. I. Reds, four White Wyandottes, three Barred Rocks, two Buff Orpingtons and one Black Minorca. These birds come from 30 different farms and were selected by 30 different people—therefore we would naturally expect varying types of birds. Most of them are good specimens, and I expect several of them to make good records. I hope to have them all scored while they are here, so that we may see how they rank as show poultry as well as layers. I should say that the Black Minorca, one of the Barred Rocks and two or three each of the Reds and Leghorns are more than good. We shall give the individual records of these birds month by month. A few of them look as if they would start laying at once—the others are not ready yet. One bird laid an egg the first day!

THE HOPE FARM "HENS."—Call them "scrubs" or culls as you like. They ended the year's performance as follows:

			No. of Eggs
No.	1.	B. Rock	91
No.	2.	W. Leghorn	142
No.	3.	B. Rock	107
No.	4.	Mongrel	100
No.	5.	B. Rock	127
No.	6.	Mongrel	127
No.	7.	Barred Rock	79
No.	8.	Mongrel	141
No.	9.	White Leghorn	190
No.	10.	White Leghorn	114

Including the eggs laid outside the nest these hens laid a total of 1,287 eggs—as we see, an average of 10 dozen and eight. There were 18 pens of pure bloods below them. I shall have the total amount of their grain and its cost later, but the average cost of feeding a hen in this contest is not far from $1.75. On that basis you will see that my No. 7 was a pure drone, while No. 9 was a great worker. At least three of these birds barely paid for their feed, and under ordinary farm conditions I think it doubtful if they would average 60 eggs per year. Seven of them were evidently culls and discards fro. ordinary farm flocks. I doubt if we could get seven birds more typical of the hens which a farmer ought not to keep—if we accept the teachings of the wise men—I did not expect these seven birds would average 75 each. They were in desperately poor condition to begin with—right out of the live poultry market. All with bad colds. When they came to the contest these birds were so poor that they averaged only 3.2 pounds in weight. In May they averaged five pounds. Most of them hardly began to lay before March. A little later I will try to bring out some of the lessons which I think this pen has taught. I hoped these birds would hold out and lay 1,300 eggs after their good performance in Summer, but they lacked the staying qualities, and I lose by 13 eggs. The Hope Farm man is a good loser, and I have no word of fault to find with the hens. I think even No. 7 did her best, and it was the fault of her ancestors that this best was no better.

ANOTHER TRIAL.—Instead of finding fault I will back the 10 Hope Farm "hens" for another trial. They are to be tested another year at Storrs. As we shall breed them they will be kept outside the regular contest plant, but otherwise their treatment will be the same. The plan is to breed them to as poor a dunghill rooster as we can find, and also to a finely-bred utility Leghorn. If possible we shall raise 10 pullets from each cross, and enter them as two pens in the next contest, the object being to see how much difference will be shown by the two matings. Now these birds laid 1,287 eggs in their pullet year. To show what I think of them I will now, at the opening of the contest, back them to lay 1,400 eggs before Nov. 1, 1915. Here is a good chance for some of the wise men who lay down the poultry laws to make good on their statements that pullets cannot "come back," and poor blood fails. H. W. C.



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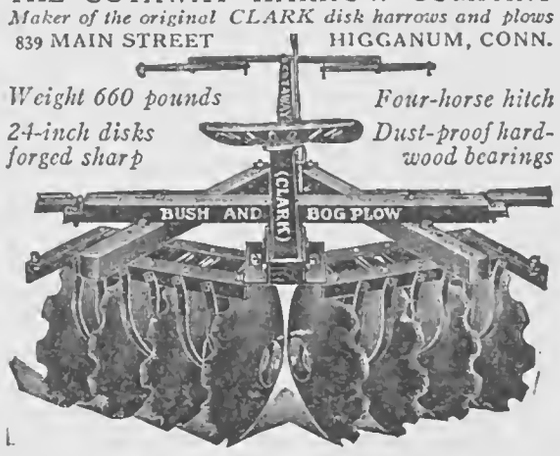

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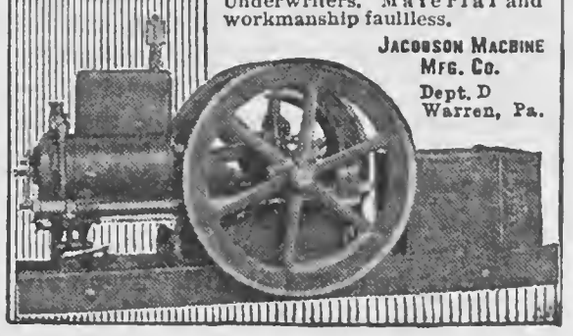

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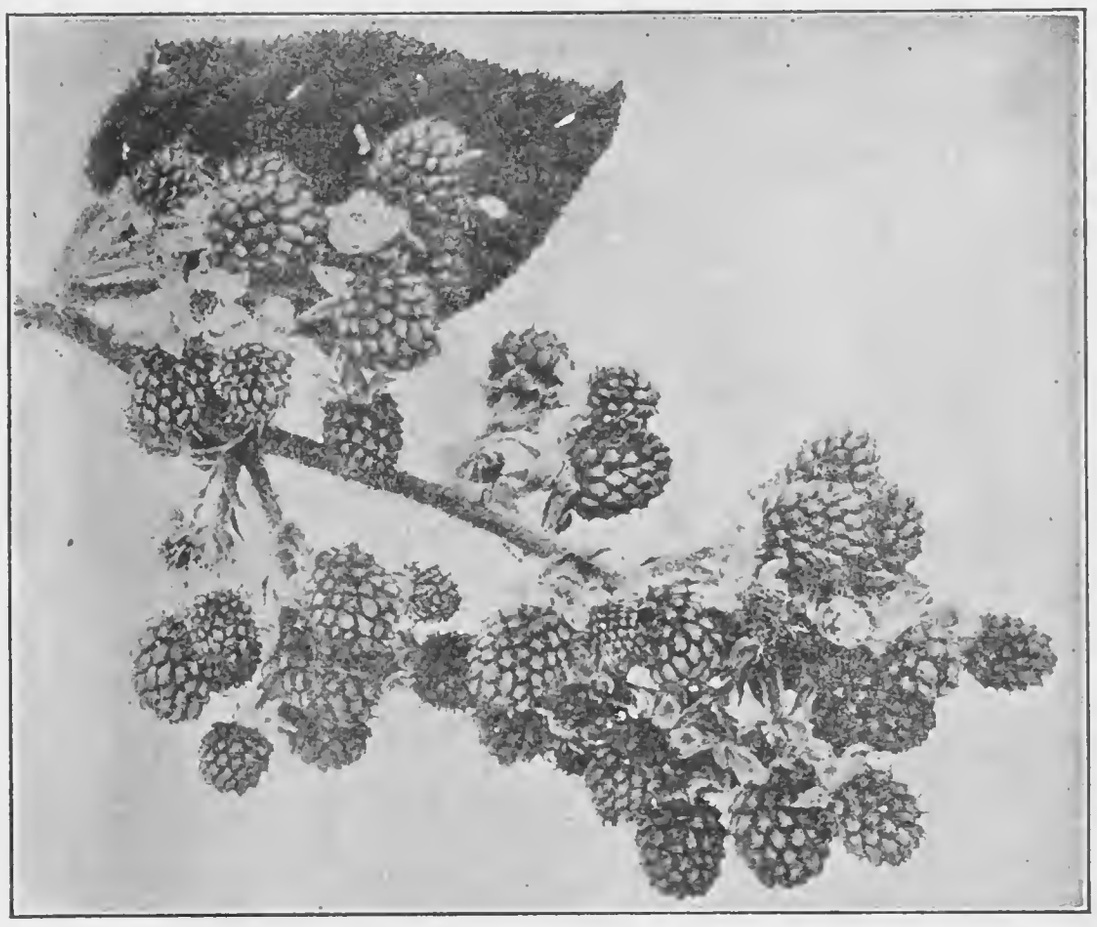
Ruralisms

A GREEN RASPBERRY.

THE raspberry shown in Fig. 583, Rubus Brasiliensis, was collected in the Highlands of Minas Geraes, Brazil, by the Dorsett, Shamel and Popenoe Expedition this year; the picture is reproduced from Bulletin 99 of the Office of Foreign Seed and Plant Introduction. The fruits are described as translucent yellowish green when ripe, sweet and agreeable, but rather seedy. It is called by the natives amora, a name which properly belongs to the mulberry, but is also applied to the strawberry-raspberry, Rubus rosæfolius. It is suggested that this odd fruit may be of interest and value to breeders of rubiaceous fruits. We infer that the plant would be tender where the Winters are severe.



A GREEN-FRUITED RUBUS FROM BRAZIL. FIG. 583.

MORE ABOUT BRASSINGTON CHERRY.

ON page 1213 of your paper J. T. S., Waynesburg, Ohio, asks about the Brassington cherry. It seems strange that Mr. Van Deman is not acquainted with this most valuable cherry. I planted over a hundred cherry trees about 10 years ago and among them were about 10 or 12 Early Richmond, seven Baldwin, three Brassington and 12 May Duke, also 35 Montmorency. The remainder of the planting was of about six kinds of sweet cherries. The Brassington was to be earlier than the Early Richmond but with me it comes the same time; in fact I hardly ever know which to pick first. It is far ahead of any other sour cherry I ever saw. A beautiful, upright grower, and when in bloom it is the most ornamental of all cherry trees. The fruit is wonderfully large and a beautiful red color, about the same as a May Duke, and the most productive cherry I ever heard of. I would willingly give $25 each if I could replace my Early Richmond trees with Brassington of the same size. I propagated a lot of the trees and set out about 20 of them last year. I will also state that it is just sour enough to be good. It is just as far ahead of Early Richmond as a Whitney crab apple is ahead of a wild crab found in the woods.

Barberton, Ohio. I. L.

When the question was asked about the "Brashington" cherry I had never heard of it, and said so in my reply, but did not expect so prompt and clear a response as we have here, although I had hoped that someone would tell us about the variety. If the present grower of it knows the origin and the true name, be it spelled "Brassington" (as he has it) or otherwise, let us have it. As he claims it to be a very superior sour variety it may become a successful rival to those we now have, and of this we should all be glad. The cherry under discussion is probably one of the Duke class, and not a true sour Morello or Amarelle, as the Richmond and Montmorency are.

H. E. VAN DEMAN.

"DID the doctor limit you to any particular diet?" "No, but his bill did."—Birmingham Age-Herald.

NEW PLANT INTRODUCTIONS.

AMONG plants listed in Bulletin 99 of the Office of Foreign Seed and Plant Introduction is Allium schœnoprasum, a superior variety of chives from Sianfu, Shensi, China. These are forced in darkness and used as a Winter vegetable.

More varieties of the Chinese cabbage, or pai-tsai, are being introduced through the Bureau. One called in China "Ta pai-tsai." or "large white vegetable," is described as remarkably fine, very white, with a mild sweet flavor. Another conical in shape, is greenish white, very soft and tasteful when boiled or stewed. In our own garden, while the pai-tsai grew very vigorously, it seemed peculiarly attractive to the flea-beetle, which attacked it in preference to anything else. Hens seemed particularly fond of the Chinese cabbage.

Seed of 13 varieties of Job's tears (Coix) have been received from Burma, where they are used as flour and food grains. These are to be used in the Office of Forage Crop Investigations.

A new carrot from Sianfu, Shensi, China, is described as a long blood-red carrot that is used for pickling; its Chinese name is "Hong tiao lo ba," meaning "red stick root."

White Turkestan barley, presented by the Director of the Yaqui Valley (Mexico) Experiment Station, is described as especially suited to the arid irrigated districts of the Southwest. It is very vigorous and hardy, with robust germinating quality. The seed was collected at Merv, Transcaspia, in 1911. It is quick in growth and three weeks earlier in maturing than the common six-rowed California barley, but a tendency to rust renders it undesirable for the sea coast, where it would be exposed to fog.

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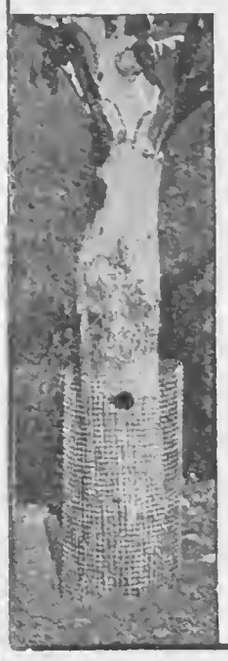

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A National Weekly Journal for Country and Suburban Homes

Established 1850

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IN the new egg-laying contest just starting at Storrs an English breeder entered a pen of Wyandottes. It was necessary to cable about them, and all messages must be sent subject to the military censor. This message was held up and the breeder asked to explain the meaning of the word "Wyandotte" before it could proceed. This will indicate the feeling in England, and the strict supervision of the army officials. Any new or strange word or phrase is regarded with suspicion. They probably thought "Wyandotte" stood for some new explosive. It seems to. The record and shape of these English Wyandottes have certainly exploded a lot of old, comfortable notions about "ideal" birds.

*

A "FREE school of poultry judging" will be held at the Kansas Agricultural College in late December, in connection with a poultry show. "This show will not be judged in the ordinary way, where the judges walk down the aisles and place the ribbons, no one knows how or why. Instead the judging will be done upon a platform, surrounded by comfortable chairs, where those interested may see everything that is done, and ask questions. Instead of looking like a Chinese puzzle to the uninitiated, every award in the entire show will be carefully explained in detail." That is good. The "Chinese puzzle" business has had its day in the show ring. Fine points and eggs do not always agree. It is now suggested that all the birds entered at the egg contest should be "scored" at the beginning, and thus see how shape compares with performance.

*

WE have an ambition to help make these egg-laying contests occupy as lively a place in the popular mind as baseball, football or similar sports. Few things really climb into popular favor until in some way you can make them appeal to a person's imagination or "sporting" spirit. Certainly the egg race just ended at Storrs was as close and exciting as any horse race or ball game. The victory of the American Leghorns is a popular one. Mr. Lincoln is not one of the "big" breeders, but a young man who has only done what hundreds of other bright young fellows can do and surely will do. It means something to win such a contest. Lincoln's 10 hens will now give large interest on a valuation of $1,000. At the Thorndale contest a single hen laid 285 eggs in one year, and the owner has been offered $500 for her! In fact these contests are creating an "advanced registry" for hens by giving them a certificate of official record. After a few generations of breeding from these public record-makers, pedigreed hens will be regarded much as pedigreed cows are now. The fanciers with their idolatry of "fuss and feathers" may sneer at these contests. That is their privilege, but the public prefer eggs to sneers.

*

MOST back-to-the-landers fail through lack of money. They usually give a heavy mortgage, which runs three or five years. Even if they keep up the interest they cannot pay the principal when it comes due, and at the same time invest capital in the farm. Without fair capital they cannot hope to pay the mortgage. So when it comes due they become discouraged and sell out or let the farm go. This is done sometimes—even when the holder of the mortgage would be willing to renew it. The fear that it may be foreclosed haunts the farmer and makes him timid about working the farm properly. We have seen several cases of this sort when if the farmer could have had some different system of payments he could have planned to improve the farm slowly and finally pay out. The new Land Bank will offer just such opportunity to hundreds of farmers. There will be small and gradual payments of the principal extending over 20 years or more. A man can plan to meet these small yearly payments and still provide a little money for drainage, breeding stock or other improvements which are really investments. Such a man will not fear foreclosure, but he can go ahead and plan with confidence for the future. In our own acquaintance we know of at least half a dozen families who failed under the old system, yet might have made good under the plan proposed by the land bank. Under the old plan the mortgage is always master of the man—the new plan gives the man a chance to master the mortgage.

*

SOME time ago, in an argument in your columns, a cow man volunteered to take a hen man's 10 cows and pay him a good percentage, taking out his wages and cost of keep, etc., from the milk bills. Could men be found to take charge of a farm of good size, stocked and machined, and guarantee to make their wages and a fair percentage for the owner? I know of several (city men) farmers like myself who I believe would be glad to get such a man, and would use him a little more than fair if he would do the same by them. S. R.

Why not? Why should not the man who assumes to act as manager take some of the risk—along with the man who puts up the farm, the equipment and the capital? Give us a reason why the man who expects to be well paid for "managing" a farm should not be willing to prove his ability by taking his chances on a guarantee that he can make wages and a profit. Why should he take charge of the farm otherwise? What should he require of the owner in order to give this guarantee? These questions are submitted to the men who solicit jobs at managing. The answers, freely given, will get down to the core.

*

CHARLES S. WHITMAN is to be the next Governor of New York. In this Republic all sensible people recognize the power of the majority. The voters of the State called Judge Whitman to the chair in italics—there is no question about their choice. Great opportunities await Judge Whitman at Albany. The great party which elected him has apparently had its lesson and the split of two years ago seems to have been bolted together. There are also more truly independent voters in the country than ever before. Judge Whitman's party is seeking for a great leader—a man with the courage and the character of Gov. Chas. E. Hughes. In the need of such a great reform leader and in the peculiar circumstances of this election lie the elements which give the opportunity to Judge Whitman. He must realize that he was elected by the votes of farmers and country people—and he must look to this solid and conservative class of citizens for future support. Gov. Glynn and the last Legislature (the Assembly being Republican) gave us four laws which are to have great influence upon the future of New York farming. The most important of these is the law creating the Land Bank. This law was demanded by the best farmers in the State—not as a political measure, but as far-sighted and greatly-needed legislation—not to benefit any party, but to give New York farmers a better chance to obtain fair and needed credit. It is reported that Judge Whitman criticizes this law, and what it seeks to accomplish. We believe this criticism is based upon a hasty reading of the law. When Judge Whitman has full opportunity for studying the law and the help that similar legislation has been to European farmers, we are confident that he will recognize its value and purpose and realize the value of the system to our New York farmers. After a full, understanding study of this legislation we believe that Judge Whitman will realize the need and the sincere demand for it, and become one of the warmest supporters of the Land Bank.

*

HE will be a fool to buy even here without first coming to see the country. Farms within a mile of our own we would not take as a gift, and yet the adjoining farms are very prosperous and the owners have become well off, but these particular farms could never be made anything, not even a goat pasture. One farm within six or eight miles of this city will not grow weeds, it is a light sand which blows like snow, and yet farms adjoining are the best ever. How are you going to prevent a man getting caught on such land if he does not come and see it? The real estate agent might not deceive in one single statement, and yet he would be burning his money if he put it into such farms. C. I.

No, the land here mentioned is not in Florida or California, but right here in New York State. The same story might truthfully be told of any county in the country. This man lays down a large, solid chunk of gospel truth about real estate when he says that a buyer should come and see the land before buying. We cannot think of a more foolish thing than locating a *home* for the family on some unknown and unseen spot in order to save the expense of fair investigation. We have been criticized for taking this position. "Do not interfere with the sale of real estate," these critics say. "Get all the new settlers you can; it is not your business to frighten them away or care if they are not satisfied." A very short-sighted policy that. New York does not want any dissatisfied immigrants. They simply become what are known as "knockers," and there are too many such now. We want to see the farms of New York occupied by contented and prosperous people. There are good opportunities here, but the man must fit the farm in order to make a true combination and so—North, South, East or West—our advice is to see the land and study it before buying.

*

EVER come back after 20 years and see the slender little "best girl" of boyhood grown to a broad, substantial lady ordering a large household about? Ever see a tiny baby in a cradle and after a score of years see it grown to a great giant, smashing through a football team? If so, you may realize how some of the old-timers who helped organize the New York State Fruit Growers' Association feel at its latest announcement. The next meeting will be held at Rochester, January 6, 7, 8 of next year. When the society went to the great convention hall for its meeting, a few years ago, there were those who said it would rattle around like a dry pea in a pod. There was no rattling, and now even this great building is too small, and the society goes to Exposition Park, in order to find room. When this society started it was puny and small. It had a struggle for a few years, but it has had the advantage of being directed by a group of thoroughly honest, capable and patriotic men, who have gone down into their own pockets when necessary, and "boosted" without self-advertising or glory. We mean men like Senator Thomas B. Wilson, Secretary E. C. Gillette, President L. L. Morrell, ex-President Clark Allis and scores of others who should be mentioned. We may safely state that every man who grows and sells fruit in New York has been benefited because this society has grown strong and influential. We think the managers of the New York State Fruit Growers have set us all an example of how to do things and help farmers.

*

SOME farmers here claim that the acid in silage and apple pomace causes the cow's teeth to fall out. Is it true? E. H.

No! This charge has been made repeatedly but cannot be demonstrated, and the use of silage is rapidly increasing. The teeth of all cows are loose and easily knocked out or broken off. Enemies of corn silage, or those who have not studied its value and use often state that this feed loosens the front teeth and causes them to drop out. They blame this to the acid. The accusation is wrong. Thousands upon thousands of successful farmers have for many years fed corn silage and would not do so were this feed to cause trouble such as that mentioned. We do not believe there is any more danger in feeding apple pomace. One trouble about many of such things is that people jump at conclusions. Not long ago we met a farmer who said he was ready to swear that large-sized cinders, full of fire, came out of a passing automobile and set the grass by the side of the road on fire. He would swear to it because he saw the glowing cinders thrown from the car at night and saw the burning grass! Therefore he said all cars were dangerous and should not be permitted to come into a yard or barn! On hunting the matter up we found that a man riding in the car had thrown out his half-used cigar. It was alight and glowing, and it had started the burning grass! This farmer saw the cigar coming from the car and jumped to the conclusion that all cars will "spit out red cinders as large as a marble." We have seen many so-called "facts" which had no better foundation than this "red cinder."

BREVITIES.

No man can make his business throb unless he stays right on the job.

"GOING light" is a disease which, at this season, often attacks poultry and pocketbooks.

APPLE packing school at the Massachusetts Agricultural College, Amherst, Nov. 18-24.

NOW we have warning not to use Dwarf Essex rape as a cover crop in an orchard. It is claimed that aphis develop on the rape and spread to the trees. Can anyone give experience?

WE would like to hear of any local live stock clubs. Clubs are being formed in counties or townships to promote the interests of some breed or type of live stock. It is a good plan—tell us about it.

"TELL the subscriber who 'has the sparrows,' on page 1280 that a Roman candle fired into the trees just at roosting time two or three consecutive evenings will rid him of the nuisance," says A. M. H.

A NEW one in the line of newspaper frauds. This one offers to send the bulletins of the experiment station free as a premium for his paper. These bulletins are free to any farmer in the State anyway, and no agent has the right to promise them.

YOU want to remember that making a concrete block is something beside throwing sand and cement together and watering it. Brains too. A streak of pure sand through a man will make him stick. Such a streak of unmixed sand in a concrete block will make it crumble.

Digging and Storing Potatoes.

CELLAR STORAGE.—The late varieties of potatoes are comparatively easy to keep in cellar, but with early varieties, like Irish Cobbler, which seem in a great hurry to get started to grow, more care is necessary where stored for seed, if one wishes to keep them dormant. A large unventilated bulk of potatoes stored in cellar, even though they are well matured and put in dry, will sweat, and potatoes on top of pile will show dampness. As this continues all through the Winter regardless of low temperature and ventilation, the early varieties begin to sprout badly down underneath, by mid-Winter sometimes, and by Spring, unless attended to, one finds them in poor condition. When the cellar is partitioned off into narrow bins, with well-ventilated sides, this trouble is avoided, but in putting in 2,000 to 3,000 bushels of one variety, all in one pile or bin, we have been able to bring through in fine condition, by simply leaving boards against the walls and then placing old berry crates, peach carriers, or broken ⅝ truck baskets, frequently through the pile, standing them on end and reaching from cellar floor to top of pile. Our aim in keeping seed potatoes dormant, has been to keep them cool, as safe and as dry as possible. We prefer to have them well below 40 degrees much of the time. We are following the same plan now in storing late potatoes we are holding for better prices.

SOIL ACCUMULATION.—One does not realize the amount of soil carried from the field to cellar on potatoes, even when handled in dry weather. This makes but little difference where pile is built from the side, but where large quantities are poured down from overhead, in one place, the accumulation makes trouble, and in such places potatoes sprout badly. Where this method of filling cellar is followed, the potatoes should be dumped above first and then forked into the hole, leaving most of the dirt separate, but at best the plan is a poor one. As it is not always possible to select dry weather to handle the potatoes, as one writer suggests, especially during such a Fall as we have been having this year, at such a time, the wet potatoes should be spread on barn floor or other safe place temporarily, and then stored when dry.

LATE DIGGING.—Late potato digging has been hindered here this Fall by cold wet weather recently. One grower tells of working all day in bad storm and then allowed a load of 50 or 60 bushels of the wet potatoes to stand exposed to cold, that were frozen so stiff the next morning it was impossible to dislodge them from the crates when thrown from the top of load to the ground. Being so wet and dirty they froze together very easily, but apparently without much injury, as but five bushels out of the load were rejected at the car when thawed out, but would not care to be the buyer at the other end of the deal.

DIGGING METHODS.—Trucker, Jr., mentions different methods of digging potatoes. Potato growers know only too well the difficulties to be met at times in getting the big diggers to work under unfavorable conditions, such as wet soil, crabgrass (in New Jersey) or injury to immature tubers in early digging. We understood that buyers here this Fall refused to take digger dug stock early in season, and it was a common thing to see men digging by hand while their big expensive diggers stood idle. Diggers all have their advantages and likewise points that are otherwise. We ran upon a plan that might interest growers who wish to dig seed by hand, selecting hills as they go, also in digging before ripe enough to handle with the digger in the usual way. We have one of the cheaper, simpler makes of diggers, and we simply remove the shaker entirely under such conditions, running the blade under the row, like a tree digger, which lifts and loosens the soil leaving the hill intact, and very easily and quickly removed with ordinary potato hook, or if digging is done early, while tops are green, potatoes hang to the vines and one can more easily and more quickly remove by hand than by the common method of "scratching out" by hand behind the plow, as has been so much practiced in New Jersey, when dug for early market. Any of the cheaper makes of diggers so built as to run blade under the row should answer for this work, by simply removing the attachments intended to separate the tubers from the soil. Aside from the labor saved in selecting hills, when dug for seed, and the better condition of the potatoes when dug early, the labor saved in gathering the potatoes into baskets is quite an item, where two or more rows are thrown together. In scratching out by hand behind the plow I think the Jersey growers who follow this plan early, will admit that there is much gain in picking over that of following the digger excepting under the most favorable conditions.

THE CROP.—It has been a very favorable season here for potatoes and the crop is much heavier than usual. Potatoes generally very large and coarse where grown in hills, many of them hollow. One buyer, we understand, has eight bushels taken out as too large, about 30 potatoes to the bushel crate. Rot is very bad in some places. One grower took a load to car of about 50 bushels and buyer accepted only seven bushels out of the load at 30 cents per bushel. We hear of their selling at one station at 15 cents per bushel a few weeks ago. Thousands of bushels are being stored.

Livingston Co., N. Y. ISAAC C. ROGERS.

The Apple Grading Law.

WHY ENACTED.—Chapter 418 of the Laws of 1914, commonly known as the Apple Grading Law, was enacted for a very definite purpose. Buyers of apples in large quantities usually were obliged to purchase them unopened, with the exception of a few that were inspected as samples. They frequently found that the goods contained were not as represented. Occasionally the fault would consist in inserting cull apples in the center of the barrel, while those at the ends would be of the quality indicated by the marking on the barrel. But more frequently, while the apples would be of about the same quality throughout the barrel, the whole was quite inferior to what was to be expected from the marking on the barrel. It was for the purpose of eradicating these two evils and of standardizing the apples of New York that the Legislature passed this new law. Under it the buyer will feel safe in purchasing barrels of apples without opening them, because he will know that if they are not of the quality and kind indicated by the marks on the barrels, which marks are well defined under this statute, the packers of the apples can be prosecuted. The packers of apples who head up their barrels and consign them for shipment to distant markets will realize that no carelessness or ignorance will be tolerated by the State and that they must pack their goods so that the public cannot be deceived by the stencil marks on the barrels. Improper markings on the part of the packer will involve not merely the paying of a fine but may also brand him as a criminal. It is of the utmost importance, therefore, for the packer to know at what point the first step is taken which calls into operation this new statute.

ORCHARD PACKING.—In Western New York the apple growers have been under the impression, fostered by subordinates of the State Department of Agriculture, that all apples packed in the orchard must be packed according to the provisions of this new statute. A careful study of the statute, however, leads to the conclusion that it does not apply necessarily to operations in the orchard. Experience shows that barreled apples, to be shipped or stored properly, must be well packed, which includes facing, sorting, shaking down and properly heading. This packing makes the barrel a closed package within the meaning of the statute. Does the statute mean that all barrels so packed must be marked in accordance with the terms of this statute? Many orchardists place such barrels in their own cellars partially for family consumption and partially for sale later on. Thousands of barrels that are placed in storage are never sold as originally intended. They may spoil, they may be used for cider or they may be evaporated. It may safely be said that all barrels of apples placed in cold storage and kept there over two months must be reopened and many of them repacked. This is due to the fact that even the best apples in the best cold storage will deteriorate and that one apple becoming bad infects all the rest. It is due to the fact also that occasionally in even the best cold storage plants the temperature gets either too high or too low, injuring the apples. Such mishaps are seldom discovered until the barrels are opened and the condition of the contents disclose the cause of the trouble. None of these barrels, therefore, can be said strictly to have been packed for sale; they were really packed for storage with mental reservation on the part of the owner to determine later what disposition should be made of them.

SCOPE OF THE LAW.—The Legislature never contemplated such barrels as constituting the evils complained of, and for which the State sought a remedy, consequently, the Legislature never intended that the statute should apply to such barrels. There are various steps in the process of sale; they include, according to the statute, the packing, the transporting or other distribution and the offering or exposing "for sale"; each and all of these expressions defining each step of the process, must be understood as qualified by the words "for sale." If the barrels are packed for storage, for gift, or for home consumption they do not come within the statute.

STORAGE APPLES.—In great commercial operations in which apples are taken from the orchard to storage houses, to be held until a rising price later on brings them into the market, the statute does not apply before the apples reach the storage, unless they are packed in the orchard by the grower and then sold to a jobber. If, as has heretofore been the custom, large buyers purchase in the orchard and have the fruit packed under their own supervision, they may pack and mark them, if for storage, according to their own desires. But when later on the barrels are opened preparatory to repacking for immediate transportation to market, then the statute intervenes and the packing and marking must be done strictly according to its terms.

THE STATE'S JURISDICTION.—The State is concerned solely with the public sale of such products, and only where the first step is taken toward such public sale does its jurisdiction apply. It would be intolerable in such a country as this for the government to interfere in the management of an individual's private affairs to the extent of directing how they must box or pack provisions for their own use. The line must be drawn strictly, and it is only where the State can show clearly that the individual is engaged in public operations, that it has the slightest pretext for interfering. The storage of fruit by an individual is not such a public operation; no one is interested in it except himself and no one can be imposed upon or exposed to loss until a sale is attempted. It is only when the closed package is intended finally for sale, with no expectation of reopening it, that the statute applies. CHARLES J. HERRICK.

The Law About Glandered Horses.

OUR neighborhood is quite stirred up over a report that there has been a law passed by the State of New York or State of New Jersey or both, requiring all horses to be examined by somebody, and a health certificate given, otherwise owner or driver are liable to arrest. Can you inform us about it?

New York. W. E. H.

The law referred to relates to glanders, and Commissioner Calvin J. Huson, Commissioner of Agriculture of the State of New York has issued the following order:

"State of New York, Department of Agricultnre.

Notice and Warning Against Glanders or Farcy.

Albany, N. Y., May 28, 1914.

To Whom it May Concern:

"Pursuant to the provisions of Section 91 of the Agricultural Law, I, Calvin J. Huson, as Commissioner of Agriculture of the State of New York, hereby give notice that the contagious or infectious disease known as Glanders or Farcy exists or recently existed in that portion of the State of New York known and designated as the City of New York. Therefore in accordance with the authority conferred and duly imposed upon me as such commissioner by the provisions of Article 5 of the Agricultural Law as amended, I hereby order and direct as follows:

"1. That no person or persons shall remove or assist in removing from within the said City of New York any equine animal to any point or points outside of the said city during the pendency of this notice and order, unless such person or persons shall have first received a permit duly issued by the Commissioner of Agriculture of the State of New York authorizing the removal of such equine animal or animals from said city.

"2. Nothing in this order shall be construed to forbid the transportation by common carriers of equine animals from points without the State to their points of destination within the State, or to such equine animals transported from points without the State to points to other States; nor shall it apply to healthy equine animals in the performance of their daily work.

"This notice and order and regulations issued thereunder will continue in full force and effect until formally withdrawn. (Signed) CALVIN J. HUSON, Commissioner.

No such law to my knowledge exists in New Jersey. I raised the question with Commissioner Huson as to whether this ruling applied to work horses plying between New York and New Jersey, since it would seem that Section 2 clearly admits common carriers. Dr. H. D. Gill, Veterinarian in charge writing under date of September 28th writes me as follows:

"Your interpretation of our quarantine notice that horses in the course of their daily work are exempted from the mallein eye test is wrong. Quoting from the quarantine notice, 'nor shall it apply to healthy equine animals in the performance of their daily work,' I desire to call your attention to the word 'healthy,' signifying that the animal must be free from disease. Glanders being the disease affected by this quarantine, and the several mallein tests being recognized as positive diagnostics, we must be satisfied that all equine animals are mallein tested for glanders before permission is given to take them in and out of our State."

It would seem to me that the word "healthy" is a joker. Animals might be unhealthy, and still not affected with glanders, therefore, why not test them for every other disease? I have written to the Commissioner, asking if the law is to be enforced as thus interpreted, and if it will be necessary to have all work animals subjected to the mallein test. A definite reply has not been received at this date. F. C. MINKLER.

N. J. Experiment Station.

New York State News.

STATE HOP EXPERIMENTS.—The State Experiment Station at Geneva, will conduct experiments in hop growing on a farm at Milford, N. Y. Six acres of land have been leased for a term of 10 years on the farm of P. R. Bennett. The work will be in charge of J. F. Barker and four assistants. The land is to be divided into sections of one tenth of an acre each and the wire trellis system will be used.

TO ORGANIZE CATTLE CLUBS.—Otsego County is feeling the effects of having a live farm bureau manager. The farmers are awake to the needs of organizations of different kinds and it is proposed to form a county Holstein club, at Richfield Springs November 6 and a county Guernsey club at Oneonta November 12. Two cow-testing associations have been organized each having 26 dairymen as members and 1,400 cows are represented. Claude Whipple is president of the Cooperstown association and Floyd Hooker, of Cherry Valley, of the Springfield and Cherry Valley association.

STATE CONFERENCE ON COUNTY AFFAIRS.—November 13 and 14 the New York State Conference for better county government will be held in Schenectady. It will be a kind of clearing house for ideas concerning more efficient and economic county government. Among the speakers announced are Gov. Glynn, Otto G. Cartwright, secretary of the Westchester County research bureau; V. Everit Macy of the same county; Henry J. Cookingham, county attorney of Oneida County; Geo. S. Buck, auditor of Erie County; Herbert Harley of the American Judicature Society; Ernest Cawcroft of Albany, Assistant State Treasurer; L. K. Rockefeller of the State Comptroller's office.

NEW COW TEST ASSOCIATION.—Farmers in the vicinity of Attica have organized a cow testing association with E. H. Waite as president, and Henry Gior, secretary and treasurer. Similar associations have been formed at Perry, Warsaw and Java.

GOOD POTATO CROP.—E. C. Gleason is a farmer living near Malone, N. Y., who grew, this year, 43 acres of potatoes in one block. On this tract there were 12,363 crates of tubers or a total of about 11,000 bushels, and they were all dug and delivered to the station in 12 days. They were of excellent quality.

PROGRESSIVE GRANGE WORK.—The Grange in Suffolk County is accomplishing things. We do not know of a more progressive, constructive work being done anywhere in the State by the Grange than this of the Pomona and several subordinate Granges in the county named. Among some of its chief works is the selection and breeding of seed corn. Three judges were required to visit the members' cornfields this Fall to get yields, make measurements, examine the corn and gather all the information needed to report to the meeting of the Grange when prizes were awarded. At the same meeting 40 candidates took their first degrees. The corn exhibits after being judged are displayed in the store windows of the town. This Grange and most others of the county, coöperate with the new Long Island School of Agriculture, and take advantage of the extension work afforded by the school. There are 14 Granges in the county and 10 had exhibits at the county fair this Fall. Each contributed to the Pomona exhibit, which covered a space of 400 square feet which was not large enough. The first prize went to Mattituck Grange. The Granges have been doing a considerable business in a coöperative way, especially in seed potatoes, fertilizers, lime and other farm supplies. The bureau of information and markets is a distinct evidence of the worth of the work being done by the Suffolk Pomona. The main object of this bureau is to enable farmers to find better markets, largely with the ultimate consumer. J. W. D.

Lyle's Grain Figures.

OSCAR LYLE, the grain expert, makes the following statements of conditions and outlook of the leading cereals at this time:

Farmers' holdings November 1, 1913....	137,972,000
Crop, 1913	2,446,988,000
Supply	2,584,960,000
Remaining March 1, 1914	866,392,000
Disappearance, four months, November 1, 1913, to March 1, 1914.....	1,718,568,000
Crop, 1914, estimated	2,676,000,000

It is in general belief the acres seeded to winter wheat will be largely increased over last year, when 36,506,000 were planted. Of this, 1,119,000 acres were abandoned and the harvest was from 35,387,000 acres. Average yield was 19.1 bushels per acre and crop estimated 675,500,000 bushels.

Average abandonment, taking many years, is over 10 per cent. Should we increase acreage seeded to 40,000,000 and abandon but five per cent, we would have 38,000,000 for harvest in 1915. An average yield of 15.6 on this acreage would be 593,000,000 bushels. It is not likely the winter wheat crop, equal the phenomenal crop of 1914, will be raised in 1915.

RUSSIAN CROPS.

	1914.	1913.
Wheat	779,000,000	956,000,000
Oats	1,560,000,000	1,950,000,000
Rye	870,000,000	970,000,000

Russia's annual requirements of wheat about 560,000,000.

The wheat crop of Manitoba, Saskatchewan and Alberta in 1914, estimated 148,000,000 bushels, compares with 209,000,000 last year and 204,000,000 two years ago. Oats crop, estimated 174,000,000, compares with 242,000,000 last year and year before.

Woman and the Home

From Day to Day

ALL-SAINTS.

One feast, of holy days the crest,
I, though no Churchman, love to keep,
All-Saints,—the unknown good that rest
In God's still memory folded deep:
The bravely dumb that did their deed,
And scorned to blot it with a name,
Men of the plain heroic breed,
That loved Heaven's silence more than fame.

Such lived not in the past alone,
But thread today the unheeding street,
And stairs to Sin and Famine known
Sing with the welcome of their feet;
The den they enter grows a shrine,
The grimy sash an oriel burns,
Their cup of water warms like wine,
Their speech is filled from heavenly urns.

About their brows to me appears
An aureole traced in tenderest light,
The rainbow-gleam of smiles through tears
In dying eyes, by them made bright,
Of souls that shivered on the edge
Of that chill ford repassed no more,
And in their mercy felt the pledge
And sweetness of the farther shore.

—James Russell Lowell.

*

THE following is Martha Washington's historic recipe for fish chowder: Cut five or six slices of salt pork thin and try them out in the bottom of the chowder pot, then put in a layer of thinly sliced codfish, a layer of sliced onions, one of potatoes sliced thickly, three pilot crackers and repeat until there are three layers of each ingredient, and then add pepper, salt and a lump of butter. Lay around the edge a few more of the pilot crackers, put in water almost sufficient to cover the mixture and let stew for a half hour closely covered, then add a cupful of sweet cream and serve.

*

A CORRESPONDENT who gives experience in educating young children at home says:

Does it not suggest a field of work for our farm girls, high school gradnates, who want to stay at home if they can make money there?

The visiting governess is familiar abroad, and in many cities here. Where she is employed in more than one family, visiting them at stated hours, and for a certain period of time, her charges are usually made by the hour. Surely it would be entirely practical for a girl with proper training to take up such work in a locality where the little ones are debarred from school by considerations of health, weather or distance.

*

THOSE who love animals, and who are saddened by the thonght of the many American horses now going abroad to take their part in the carnage of European battlefields will be glad to know that the Purple Cross Society has been formed in England. Its object is to care for wounded horses, and to destroy those in hopeless suffering. Another humane work nndertaken in Great Britain is the care of soldiers' dogs, so that pet animals may not be left homeless and unprotected. Any soldier on active service may send his pet dog to the National Dog Defense League, which will care for these animals during war, and provide future homes for them when their masters do not return.

*

WE are asked every season for some method of keeping cider sweet. Various methods have been given us; some say that if the barrel is sterilized with sulphur before nsing and a handful of mustard seed put in the cider, it will keep well. Of this we have no knowledge, and the method we should select would be to sterilize the cider like unfermented grape juice, and then seal in bottles or earthenware demijohns. The Yearbook of the Department of Agriculture for 1906 gives instruction for the preparation of unfermented apple juice. The first step in the process is the clarifying of the jnice. Instead of straining, running through the separator is recommended; this removes all sediment. The best results are obtained from a hand separator with a capacity for milk of 450 pounds per hour. After running from 25 to 40 gallons of cider, it is necessary to clean sediment from the bowl. The cider is then put in bottles, leaving some air space for expansion, corked (the cork well driven and tied down) and then entirely submerged in water in a tank heated by steam. In household use they would be put in a kettle on the stove. After heating water to 158 deg., 25 to 30 minutes are required to bring contents of the bottles to this temperature, and as they are held at 158 deg. for half an hour, about one hour is needed for the work. In some cases the government investigator only used a temperature of 149 deg., and found results satisfactory. On removing the bottles from their bath, the cork was coated with paraffin before storing away. It must be observed that the cider is not *boiled*, nor is the water in which the bottles stand; tightly-corked bottles would be dangerons if contents were allowed to boil, and the aim is to sterilize without cooking. Bottles were the handiest receptacles, it being difficult to sterilize in larger vessels. Barrels or kegs are not tight enough to keep the sterilized juice.

The Rural Patterns.

In ordering, always give number and size of each pattern desired. Price of each pattern 10 cents.

Circular skirt 8441A is one of the newest models. For the medium size, the

8457A One-Piece Gown, 34 to 40 bust,

skirt will require four yards of material 27, 3⅝ yards 36, 2½ yards 44 inches wide. The width at the lower edge is three yards and four inches. The pattern of the skirt 8441A is cut in sizes from 24 to 34 inches waist measure.

The costume shown in No. 8457A is a stylish moyen-age model, which may be made as a tunic or full length for a complete gown. The bound edges make a feature of the season, also the high collar that is open at the front. For the medium size, the redingote shown in the large view will require 5¼ yards of material 27, 4½ yards 36 or 44, 3½ yards 54 inches wide, with 1½ yards 27, ¾ yard 36, 44 or 54 inches wide for the sleeves and collar; the entire gown seven yards 27, 5½ yards 36 or 44, 4½ yards 54 inches wide, with two yards 10 inches wide for the sash. Pattern 8457A is cut in sizes from 34 to 40 inches bust measure.

Apple Syrup—A New Product.

THE Department of Agriculture announces that its chemists have perfected a formula for making a desirable table syrup from apples. They have applied for a public service patent covering the process, which will prevent any monopoly, and enable any cider mill to use it. The new syrup, one gallon of which is made from seven gallons of ordinary cider, is a clear ruby or amber colored syrup of about the consistency of cane syrup and maple syrup. Properly sterilized and put in sealed tins or bottles, it will keep indefinitely, and when opened will keep under household conditions as well as other syrups. It has a distinct fruity aroma and special flavor of its own which is described as being practically the same as the taste of the syrupy substance which exudes from a baked apple. It can be used like maple or other syrups for griddle cakes, cereals, household cookery, and as flavoring in desserts. The Government cooking experts are at present experimenting with it in cookery, and expect shortly to issue recipes for use of the new syrup in old ways, and for taking advantage of its special flavor in novel dishes.

The success of the experiments has greatly interested some of the apple growers, and during the Fall a large cider mill in the Hood River Valley, Oregon, will in co-operation with the Government chemists, endeavor to produce 1,000 gallons on a commercial scale, and give the new product a thorough market test by making it accessible through retailers in a limited field. The interest of apple growers in the product arises from the fact that the new apple cider syrup promises to give them a commercial outlet for vast quantities of windfall and other apples for which they hitherto could find no market, either in perishable raw cider or in vinegar.

The process for making the syrup calls for the addition to a cider mill of a filter press and open kettles or some other concentrating apparatus. The process is described as follows: The raw cider is treated with pure milk of lime until nearly, but not quite, all of the natural malic acids are neutralized. The cider is then heated to boiling and filtered through a filter press, an essential feature of the process. The resultant liquid is then evaporated either in continuous evaporators or open kettles, just as ordinary cane or sorghum syrup is treated. It then is cooled and allowed to stand for a short time, which causes the lime and acids to form small crystals of calcium malate. The syrup is then re-filtered through the filter press, which removes the crystals of calcium malate and leaves a syrup with practically the same basic composition as ordinary cane syrup. Its flavor, however, and appearance are distinctive. Calcium malate, the by-product, is a substance used in medicine and at present selling for $2 per pound. It is believed that if calcium malate can be produced in this way cheaply and in large quantities, it can be made commercially useful in new ways, possibly in the manufacture of baking powder.

A MAN'S first care should be to avoid the reproaches of his own heart; his next, to escape the censures of the world; if the last interfere with the former, it ought to be entirely neglected; but otherwise, there can not be a greater satisfaction to an honest mind, than to see those approbations which it gives itself seconded by the applauses of the public; a man is more sure of his conduct when the verdict which he passes upon his own behavior is thus warranted and confirmed by the opinion of all that know him.—Addison.

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Seen in New York Shops.

FRENCH dressing sets are shown among decorated china, for the convenience of those who like to prepare the salad at the table. The set includes a tray of fancy china, which carries receptacles for oil, vinegar, mustard, salt and pepper; some have a small lemon reamer, powdered sugar shaker and sauceboat.

Some of the newest handbags are a pouch shape, not very deep, but rather wide, with a down-curving top frame. These are made in moire, panne velvet and pleated morocco, in colors and black.

Among women's coats that look like fur are silk plush and broadtail cloth; they are cut on the plain lines of a fur garment, and are very warm and handsome. They cost from $18 to $25. Zibeline coats at the same price are very soft and furry. Mannish overcoats for women are of English tweed; they are cut as much like a man's overcoat as may be worn by a woman and are warm and weatherproof. Some handsome ones of high-grade materials and workmanship, in various subdued mixtures, were $18.75.

New blankets are seen with floral borders, pink, blue, yellow or lavender, and a binding of corresponding color, there are also many blankets with a colored all-over design of blocks, check or striped. In addition to the delicate colors, there are some extremely pretty ones in designs of soft wood brown on cream. Holland blankets of Australian wool costing $10 to $12 have a very long woolly nap, and are striped all over, yellow and white or blue and white. Blanket covers of thin silk, two yards long, are meant to use over the blankets at night, when the bed cover is removed; they are trimmed with Cluny insertion.

The "Le Brun" muff is a large round style of the "melon" shape, accompanied by a boa. It is modeled after the furs shown in portraits painted by Mme. Vigee Le Brun, the French artist who has preserved for us fashions and personalities of French society from before the Revolution to the end of the First Empire.

We have seen black velvet hats everywhere since July, and now we are seeing felt hats by way of change. They are fine smooth French felts, in all colors, and all prevailing shapes, especially the large flat sailors. Prices vary, but many of them are $3.50 and up, without trimming. Another style of ready-to-wear hat, that has attained a great popularity very quickly, is of velour, in black, dark brown or navy blue. The shape is almost identical with a man's hat, rather high crown, rounded, and flat brim with a slight roll at the edge; there is no trimming except a gros grain ribbon band. These hats are very practical, and becoming to a young face; they cost from $2.50 to $3.

Sleeveless basques, blouses and Russian jumpers of velveteen and panne velvet are very smart, and also practical. A good many styles are shown. The simplest model is a sleeveless waistcoat with large armholes, cut rather high, with a V-neck. Sometimes it is drawn in at the back with a buckled band, sometimes there is a sash, starting near the front, and knotted low at the back, like a basque. Some are straight jumpers, coming below the waist, and fastened under one arm, with large armholes and low V-neck; others a plain waist, slightly gathered at the waistline, where a smooth-fitting peplum is attached.

Breitschwanz, which is used to trim many new suits, is a fur cloth made in imitation of broadtail fur; it is very silky and handsome.

Women who wish to buy a plain black house dress ready-made will find desirable models sold as maids' or waitresses' uniforms. In black sateen such dresses may be bought for $1.75; black soisette, with white collar and cuff, $2.50; black or gray mohair, $5. Nurse's uniforms in white linene are $3; in white poplin $4.

GAMES are not meant for idle people who have nothing to do but study them; their true use is as a relaxation for the man who is doing some serious work in the world, and is doing it hard enough to make games the occupation of a holiday and not of his best strength and time.—Filson Young.

Canned Chard; Quince and Sweet Apple; Ground Cherry.

WILL you publish reliable recipe for preserving Swiss chard for Winter use? I find in THE R. N.-Y. recipes for cooking chard; but do not remember seeing direction for preserving it. 2. I would also like recipe for cooking quinces with sweet apples and other fruit. 3. Would ground cherries or husk tomatoes be improved by adding some lemon or cranberries when cooking? If so, what proportion? S. W. C.

1. The following directions for canning Swiss chard were given in THE R. N.-Y. for April 20, 1912, by a housekeeper who found the results very satisfactory. Wash the chard, boil just enough to wilt it, then pack in jars solid, put on rubbers and covers, but do not fasten tight. Place the jars in a kettle of water and boil one hour; take out and fasten covers securely. The next day loosen the cover, boil one hour, close as before, and the following day repeat the process, closing tight at the last. The same process is used for canning spinach.

2. In cooking apples and quinces together it must be remembered that the quinces take more time to cook, and in preserves, or in making a fruit compote, it is wise to boil the quince until tender, without sugar; the water in which this fruit has been boiled is then used for the syrup. But all the recipes we have call for tart apples with quinces; we find nothing about sweet apples, though we believe they would combine very pleasantly.

Quince Butter.—Use half a gallon of quinces pared and cored, half a gallon of tart apples pared and cored, two quarts of sweet cider, one pint of cold water. Cover the crock and stew gently until the fruit is very soft; then pass through a sieve. Add five cupfuls of sugar and cook until soft.

Quince and Pear Sauce.—Three pounds light brown sugar, six pounds pears, quartered if large, small ones cut in halves; nine pounds quinces, quartered. Boil sugar, pears and quinces nearly all day, taking care not to let them cook too rapidly, until both pears and quinces are of a rich red, and the juice an amber syrup. Can and seal tight. The fruit keeps its shape, the pears having gained a fine flavor from the quinces, and the quinces having added goodness from the pears.

We cook quinces in a compote (stewed in syrup in quarters) combined with tart apples, but have not used sweet apples. The quinces must receive extra cooking first, or the apples will be "done to rags" before the quince is tender. We also like a few slices of quince in apple pie. We should like to hear from anyone who has sweet apple and quince recipes.

3. We have never cooked ground cherries or husk tomatoes, though quite familiar with the wild fruit. We have always considered it very flat and insipid; in fact, more like potato balls than anything else, and lemon would certainly improve it. Perhaps some experienced reader can advise us. In green tomato preserves, the juice of four lemons is used to eight pounds of fruit, which would doubtless be satisfactory with the ground cherries. Only experience can advise as to the proportion of cranberries to be used with them, though this acid would doubtless improve them.

Souse.

I WOULD like to have a good recipe for making souse. J. C. W.

The following recipe for souse is given in the "Rural Cook Book": Clean pig's ears and feet well; cover them with cold water slightly salted and boil until tender. Pack in stone jars while hot, and cover while you make ready for pickle. To half a gallon of good cider vinegar allow half a cup of white sugar, three dozen whole black pepper corns, a dozen blades of mace and a dozen cloves. Boil this one minute, taking care that it really boils, and pour while hot over the still warm feet and ears. It will be ready to use in two days and will keep in a cool place for two months. If you wish it for breakfast, make a batter of one egg, one cup of milk, salt to taste, and a teaspoonful of butter, with enough flour for a thin muffin batter; dip each piece in this and fry in hot lard or dripping. Or dip each in beaten egg, then in pounded cracker before frying. Souse is also good eaten cold, especially the feet.

A Window Cooler.

HAVE you a pantry or kitchen window on the shady side of your house? If so have the "men folks" fix you a window box just to fit the lower sash. The four sides are 10-inch boards and the outer covering is of fine-mesh wire. With one extra shelf this makes such a handy place to set the pie to cool for dinner. In moderately cool weather, butter, lard, milk, etc. can be kept there and save much running up and down cellar.

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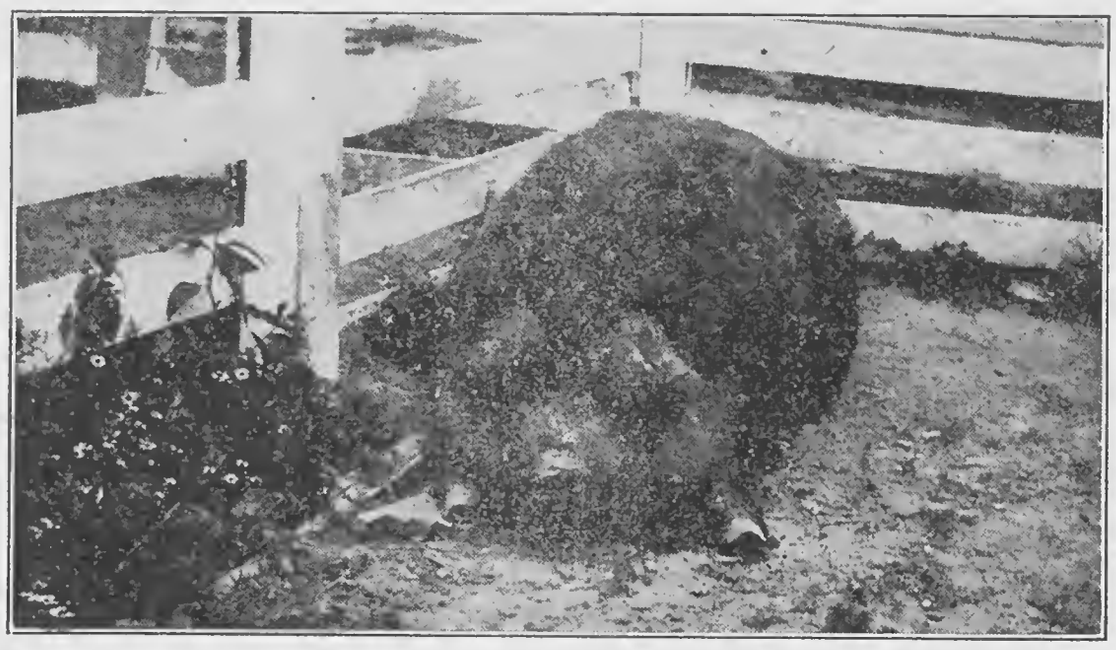
PART V.

LARD AND BACON TYPES.—A few years ago the great demand was for what has been termed the "lard" type of hog. This demand of the local butchers and packing houses was in response to a similar demand from across the waters. Foreign countries demanded pickled or salted meat and the lard type of hog in the one most valued for this purpose because of the large amounts of fat which most salt pork eaters want along with the lean. The lard type of hog embraces the Poland China, Chester White and Duroc Jersey breeds. Often, the Berkshire is also enumerated in this class. These hogs are broad backed with a cylindrical form and the ability to put on internal fat when corn-fed. In fact, the lard hog is the one which is almost wholly raised in the corn belt. It is claimed that a few generations of feeding even this type of hog on the cereals such as barley, rye and wheat will in time cause them to lose their rotundity of body and become more the type of the bacon hog.

Instead of exporting pork in pickle now, approximately three-fourths of our export trade is in bacon and so the raising of this class of hogs has largely displaced that of the lard hogs except in the exclusive corn States. Where hogs are fed on some other fattening stuffs besides corn, there is a tendency to produce more muscle. This is due to the higher percentage of protein contained in



A NINE-HUNDRED POUND MULE-FOOT HOG. FIG. 586.

the cereals than in the corn; proteid feeds make muscle. Corn is especially rich in starches and as this class of feeds ultimately is converted into animal fat, we can expect the lard hog to be more profitable and easily raised where corn is the exclusive fattening diet.

The bacon breeds are the Large Yorkshire and Tamworth while in some localities, the Berkshire hog is enumerated in this class, also. Because of their greater proportions of muscle, these animals are more active and as the bacon is that portion in which their main value lies, they have been bred many generations for length and depth of side meat. They are more angular, with less breadth of back, usually longer on legs and with a body conformation which is rectangular rather than cylindrical. The breeders are striving toward longer and deeper sides with fat and lean meats well mixed. This gives a better grade of bacon and after all, the demands of the market are what breeders in all classes of stock must meet, if they are to make their business profitable.

MARKET REQUIREMENTS.—As to the market requirements for hogs, it demands bacon—then more bacon and when that is exhausted, the buyers buy fat pork for pickling. Our export trade to people engaged in land occupations is mostly in bacon while meat in pickle is used largely for feeding armies, fishing expeditions, exploring parties and others engaged in pursuits which require a cheaper, yet well preserved meat.

The weight of hogs which the market demands was at one time for hogs weighing from 400 to 500 pounds, but during the last three or four years, an excessively large hog has been somewhat discounted, and the urgent need is for a hog weighing when marketed from 250 to 300 pounds. These are bringing the top notch prices and it seems better for the farmer to market his hogs at this weight than to keep them longer. The younger any fattening animal is, the more economical are the gains which can be put on by feeding. Experiment stations and practical farmers have proven that it costs less to keep two thrifty pigs growing until they weigh from 250 to 300 pounds than to make a single animal weigh from 500 to 600 pounds.

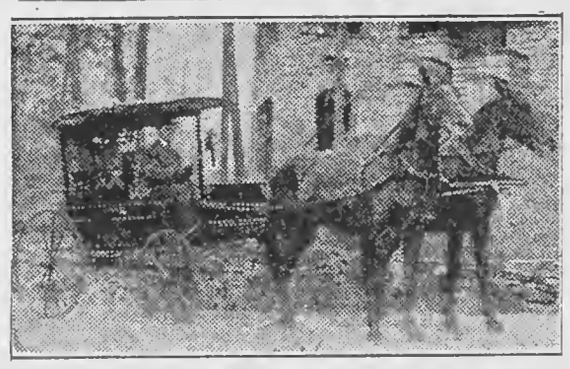
There is a distinct type of animal which is most in demand. This is a short, close-coupled hog with a small bone. Since bone can hardly be considered an article of diet, the market wants no more of it than it actually has to have. An excessively large bone can be transmitted by a boar just as well as length and depth of side; on the other hand, a bone sufficient to sustain the weight which will be placed upon it is what is desired. One point upon which the market is especially "cranky" is a short snout. A carlot of long snouted market hogs will not command a premium by any means. This statement must not be construed to mean that the seemingly long snouts of the bacon hog are charged up against them but for a hog of the lard type to have this snout would be considered a defect. The market wants uniformity of color, size and conformation. While this has no weight when selling only a hog or two to the local trade, it is quite an item in a carload of fat or bacon hogs. There is no question but that such a lot of swine is hard to keep uniform but the efforts of the breeder in this direction are sure to be rewarded in the form of more cash.

THE PUREBRED BOAR.—The purebred boar has just as good a chance to stamp his characteristics upon his offspring as has any other high-class sire but simply because a boar is purebred and has a record a mile long is no sign that he will improve the herd. We should be just as careful in choosing him as we would a beef bull and not be guilty of raising for sale as sires all purebred male hogs. Select a boar that stands up to the market requirements. If the market to which one's sales are made wants bacon hogs, choose a sire of the breeds mentioned and note that he has long, deep sides, sufficient yet not coarse quality of bone and a mild temperament. A point about which there is some contention is the emphasis which may properly be placed upon the bristles covering the animal. Some authorities assert that these are an index to the qualities of flesh and bone which lie under them while other equally as good authorities emphatically deny this statement. There can be no set rule in this regard but it would seem that excessively coarse bristles are to be discouraged while on the other hand, exceeding fineness usually goes with the delicate animal. Delicacy is esteemed in some farm animals but the delicate hog is scarcely a utility animal because a hog is valued largely because of the amounts of food which he can consume and from which he is able to make such economical gains.

SELECTION OF BROOD SOWS.—Do not make the mistake of selecting sows for breeding purposes that measure up to the market standards. The short, closely knit sow is scarcely ever a prolific breeder. On account of the small room which is given for the reproductive organs, the litters from such sows are usually small. It is a common occurrence for such sows to lack nipples enough to feed a large litter. Also, the short-bodied animal seldom has the stomach capacity which enables her to consume a sufficient quantity of food, from which to make the milk which is needed for rapid development in the pigs. The uniformity of one's product carries so much weight in fixing the market price, that grade sows at least ought to be the mothers of the future market stock. One must not, however, think that the present stock must be sold and grade stock bought. Use the stock on hand with purebred boars. The first generation will be grades, the next generation will be three-fourths pure-blood and so on. Let the brood sows be long in body with fairly good depth. This will allow for good stomach capacity and also gives ample room for the reproductive organs which must be strong if the sow is to be prolific and bear vigorous litters. The first time a sow farrows, she is likely to have a small litter of inferior pigs. Give her another chance and then if she does not bring forth a good sized litter of healthy pigs, send her to the butcher. Once having discovered a sow that invariably farrows eight or 10 pigs and has the ability to feed them all and keep them growing, do not under any circumstances allow the butcher to knife her. She is an animal that cannot be duplicated every day in the week.

The size of litter each sow should have is a much disputed point. The prolificacy of some breeds have been very seriously impaired by heavy feeding and selection of short bodied brood sows. The simple fact that constant breeding from such sows has impaired their prolificacy shows that the size of litter is inheritable. A sow pig from a mother that pro-

HORSES



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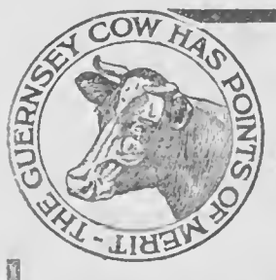

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duces large litters has proven to be more likely to throw large litters than small ones. Some breeds seldom farrow more than six pigs to a litter and more often less than this number. Other sows go on year after year farrowing 14 to 16 pigs while only 10 or 12 of these can be raised. I would rather have a sow that will farrow from eight to 10 healthy pigs at a time and raise them. However, economical production demands that the standard should seldom go lower than seven or eight pigs at a farrow. Mate the boar possessing those peculiarities of form prized by the market to such long bodied sows and the resulting pigs will grow quickly. Even though they do not top the market, one can hardly afford to sacrifice fecundity for the shorter body.

PARASITES AND DISEASES.—Hogs have lice; they also have mange or scab which is a parasitic ailment. Should brood sows or stock boars be suffering from these parasites, the coal tar products in some form will afford relief if used persistently. The scourge of the hog breeding industry is hog cholera. A few days ago, I read a description of this germ and, in fact, a few years ago, the Department of Agriculture thought they had isolated the hog cholera organism but later found out that they had been misled by an organism which produced a similar though not exactly the same disease. At present, we are at sea on this whole proposition. The true germ, if there be one, has as yet not been seen. In all events, the disease is highly transmissible and all possible precautions should be taken against its entrance into a herd of breeding hogs. As has been noted before, a brood sow having true hog cholera will usually abort. The cholera may take the sow off quickly or she may linger along for a year or so and finally recover. In this case, it has been noticed that she will never have the disease again and it is claimed that the pigs from such an immune sow are somewhat immune also. The immunity, however, is not claimed to last into the second generation; it stops with the first. As to whether there is any real immunity, we cannot be absolutely sure. I have heard farmers and stockmen scoff at the idea that hog cholera is a transmissible disease, yet a yard full of dead and ailing animals is hardly a spectacle calculated to excite a scoff. Keeping the pigs healthy and clean will increase their resistance to the disease, but an ounce of prevention of infection is worth a thousand pounds of cure, in the case of hog cholera. Our very ignorance of its transmission should be enough to cause us to avoid it. The problem of the hog breeder is to supply the market with what it wants and at the same time, keep up the vigor and prolificacy of the herd. Avoid any breeding practices that will decrease animal vigor and hence increase liability to losses.

I. J. MATHEWS.
Michigan.

What's Wrong With the Pigs?

THE average farmer does not fully appreciate his losses in this line. If his sow farrows a litter of nine pigs, which cost him each, say 40 cents to deliver on farrowing day, then if he loses say three of them the first few days, it brings the cost of his remaining six pigs up to 60 cents at birth; besides, it reduces his raw material which later may be sold at weaning time or as pork. Every hog breeder is concerned with this subject, and they are all attempting to solve the problem.

I believe that many of the hogs on the farm are too closely bred to their own near kin. This will cause the pigs to be inactive; they will not show the proper energy to nurse during the first day or two, consequently lying around too much making them liable to thumps and scours, unless the keeper understands his business thoroughly and feeds the sow with the greatest caution. A good ration for the sow in pig consists of ear corn and one-twentieth tankage together with clover, Alfalfa or Soy bean hay. I like to feed both tankage and legume hay, as the number of weak pigs will be greatly lessened. It must be borne in mind that strong healthy litters cannot be produced unless a proper ration to supply the sow with muscle, bone and energy-making materials is fed, and then plenty of exercise and kind treatment.

On farrowing day the bedding should be plentiful but of such a nature that the pigs cannot get lost in it; the pen should be tight, with no chance for the baby pig to stroll off through some small opening or fall into the feed trough, becoming chilled and unable to find its way to the mother. Many farmers never think of staying up and watching the sow on this occasion, and their success is as great as their neighbor's who stays up with the sow, and even sometimes better, but you will find that the quiet calm attendant who knows his business will be of great help to give the little pigs their first day's chance.

New York. H. F. LEMMERMAN.

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Our Advanced Registry Office for the year ending May 1, 1914, shows that 9,116 cows (nearly one-quarter heifers), produced within a seven-day period 3,672,371 pounds milk containing 130,339 pounds butter-fat, averaging 3.55 per cent. The average for each animal (not mentioning the calves that sell at from $100 to $20,000 each) was 27 quarts of milk per day and 16¾ pounds of the best commercial butter in seven days. These figures show why the dairymen prefer Holsteins.

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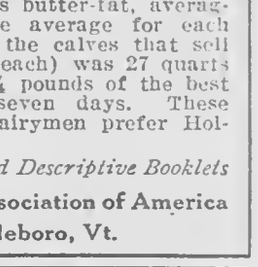

bull counts for more than the dam in grading up. You should be developing some 400-pounds-of-butter cows. The thoroughbred bull is worth all he costs on grade or full-blood Jersey cows. Like begets like.
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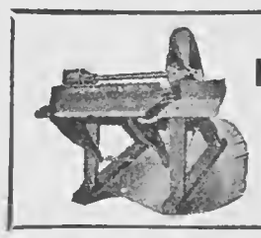

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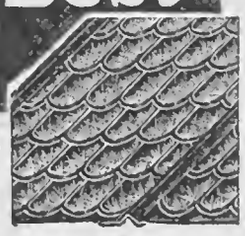

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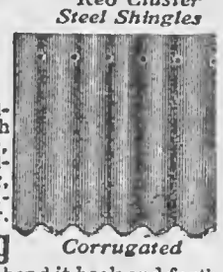

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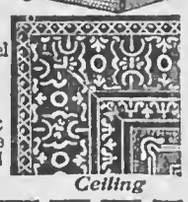

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AILING ANIMALS.

Pining Cow.

I HAVE a cow about eight years old that does not eat very much, drinks little. She is due to come in in March and she gives very little milk now; she usually milks right to the last day. I would like advice what to do.

New Jersey. A. T.

It would be impossible for anyone to give a confident opinion in such a case without making a personal examination, but it may be that the cow has tuberculosis. It therefore would be well to have her tested with tuberculin. The disease is incurable and if found present the cow should be destroyed. If she proves to be free from the disease and her teeth and tongue are not affected she may do better if you give her twice daily in a pint of thin oatmeal gruel a tablespoonful of a mixture of one part of fluid extract of nux vomica, two parts of fluid extract of gentian root and five parts of pure alcohol, as a tonic. Tempt her appetite with various feeds.

Wart on Mule.

I HAVE a mule that has a wart on his ear. I have pulled it off several times and burned the place with sulphuric acid but it comes back as bad as ever. How can I remove it? 2. I would like to know of a good mixture of healing powder for sores and galls.

E. M.

1. After removing the wart cauterize the base with lunar caustic pencil and repeat the application if the wart is seen to be growing again. Nitric acid should be used in place of sulphuric acid for burning a wart. 2. A good cheap dressing powder for such sores is made by mixing together equal parts of sulphur, powdered wood charcoal and slaked lime. A more expensive one is made by mixing together one part each of iodoform, tannic acid and calomel and five parts of boric acid. A. S. A.

Dog With Eczema.

AN Airedale pup has been suffering from mange, which is now improved. About three weeks ago I noticed pimples filled with matter on belly which afterward turned to small sores and spread to different parts of the body and head, also the eyes watered and there was a disagreeable odor. In the mornings she seems much worse, lazy and swollen and stiff in the hind quarters. I have given her two pills of gunpowder which has put some spirit into her, but some days she goes back again. What should be done? F. C.

New York.

Make the pup live an outdoor life and stop all rich feeding. Make it take abundant exercise every day. Feed one small meal each night. If you feed milk or porridge and milk mix limewater in each feed. Keep the bowels active, if necessary giving a little epsom salts in water or soup to bring that about. Once a week tub the pup in a 1-100 solution of coal tar dip and then apply sulphur ointment to the sores as often as found necessary. Use benzoated oxide of zinc ointment twice a week on any obstinate sores. A. S. A.

Bloat.

WHAT was the matter with my heifer calf born last March? One morning when I fed the calf milk she was in her usual health. I had her tied with a long rope near my house. At night when I was about to feed her which was twice per day, I noticed she was breathing hard and was bloated; the next morning the calf was dead. Could anything have been done to save this calf? E. A. A.

New York.

Indigestion was the cause of bloat, possibly induced by drinking too much milk quickly. It is best to feed milk three times a day and make the calf suck it from a rubber teat, or at least drink slowly. "Tapping" the paunch with a trocar and canula, for removal of gas, might have saved the life of the calf, or possibly the operation might have been obviated by giving a tablespoonful of turpentine in four ounces of raw linseed oil, or half a pint of new milk. A. S. A.

Injured Eye.

MY four-year-old colt showed one eye partially closed, and on examination I found a slight cut on lid, which was somewhat swollen, also a light-colored spot over about half the eyeball; eyeball is not broken, only watery discharge from it. I washed frequently with salt and water; swelling is better, but would like advice. Apparently injury was done by whiplash.

J. H. B.

In such a case a compress of absorbent cotton or soft cloth saturated with a soothing lotion should be tied over the eye and kept wet with the lotion. A suitable lotion should contain half a dram of sulphate of zinc, 10 drops of carbolic acid, 18 grains of sulphate of morphia and one quart of water. If the eye is opaque or cloudy after the inflammation subsides wet the eyeball once daily for 10 days with a solution of two grains of nitrate of silver in an ounce of distilled water to be kept in a blue glass bottle. A. S. A.

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And wise feeding now-a-days means constant crowding. You must keep your stock in condition with keen appetites for every meal. Make Xtra-Vim Feed a part of the daily ration and it will turn the trick for you and will keep the stock free from digestive and intestinal troubles.

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ROUND TILE

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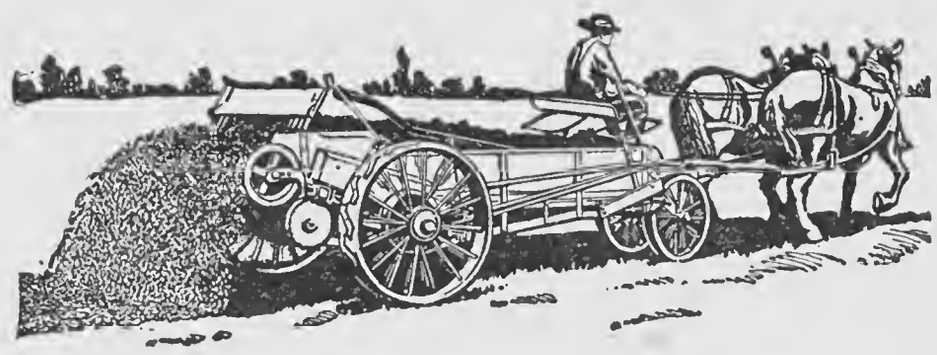

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International spreaders are of all styles and sizes, high and low, endless and reverse apron. Write for illustrated catalogues, and when we send them we will tell you where you may see the spreaders.

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Champion Deering McCormick Milwaukee Osborne Plano

Certified Dairying in South Carolina.

"THE South Carolina dairyman has advantages in the economical production of milk, which are denied the northern farmer," declares George W. Irwin, of Orangeburg County. "We are now establishing a certified plant to supply our little city of 10,000 with pure milk. Regular milk is being sold in the city for 10 cents, and we intend meeting this price with a certified product. We have already been producing certified milk for two years. Since going into the certified production our city dairymen are doing better business, because they supply a better quality of milk. They have imitated our methods. The old fruit jar has had to go, and now bottles are used, and the farmer has cleaned up around his property. We graze our herd out much of the time, except on bad days. Conditions, however, are ideal with us. The stock can be out grazing as often as six days in a week. It is now October, and we are grazing on Bermuda grass. This pasture is about finished now. We started on it in April. The Bermuda grass will now be followed with Bur clover. We sow this about the first of October, to get the start, and we harvest a crop of hay about the last week in March. After the frosts have injured the Bermuda grass we turn on the young clover. We have a part of the field in rye, and the cows have access to this as well as the clover, and the cows go from one field to the other at their will. We broadcast rye and then plant Bur clover in drills about eight inches apart on the ground. We consider this a perpetual pasture of Bermuda grass, Bur clover and rye. The stock can pasture on the Bermuda grass from Spring until frost, and on the rye and clover the rest of the Winter season. When we use the Bur clover and rye for hay, we do not pasture it. The Bur clover will reseed, but under pasturage and cutting it is necessary to reseed annually. We have 15 acres of pasture for 30 cows, and these cows of course have other grazing, but this gives the cows about half their pasturage.

"We have a 70-ton silo on the farm, and feed silage supplementing the pastures in the Winter. This year we got 10 tons to the acre. We raise most of our feeds. We feed cottonseed, which we raise, we raise our corn for our corn chop, but we buy wheat bran. We raise our oats. We find corn and oats give milk a good flavor. We do not feed them at the same time, but we do feed them in about the same proportions. We feed corn mainly in Winter and oat chops in Summer."

LIVE STOCK AND DAIRY PRICES.

Nov. 2. Working oxen $250; cows $50; butter, per pound 30; milk, per quart five cents; apples, per barrel $1.50; potatoes, per bushel 65; turnips 40; cabbage, per dozen 35; eggs, 44; chickens (roasters) per pound 26; hay, Timothy, per ton $21. S. M. A.
Bolton, Conn.

Oct. 30. Dairy cows that are near to freshening and nearby springers are moderately changing owners at a price ranging from $80 to $95 per head. The price that is most commonly paid for milk during the six so-called Winter months here in Rochester by dealers is 4½ cents per quart f.o.b. Rochester. Hay is not in over abundance, medium grades selling on the city market loose, bulk loads, at $19 per ton. Corn fodder is a heavy growth, and nearly every dairyman who has a silo has it well filled. Owing to the above conditions I am inclined to believe that the number of desirable dairy cows that will be offered for sale this Fall and early Winter will be comparatively small. J. D. S.
Rochester, N. Y.

Oct. 29. Tomatoes, firsts ⅝ basket 75; peppers 35; cabbage 15 to 30, $3 per 100; carrots 30; cauliflower 90 to $1 per crate to $1.90 per bbl. Squash Golden Hubbard, 10 per basket, three for 25; green $1 per bbl. turnips, ruta bagas 30 to 35 per basket; purple top 20; white potatoes 35 to 45; sweets 50; sugar corn 50 to 75; beans, string, 60 per basket; Limas 90 to $1.15; egg plants 25, $2 per crate, fancy; parsnips 40; onions 75 to 90 per 100 pounds; beets $2 per 100 bunches; spinach 40 per basket; lettuce 85 to $1.25 per hamper; Kieffer pears 25 a basket; quinces $3 to $4 per barrel. Practically no apples are raised here. Western fruit brings from $1 to $1.75 per box. York State apples are from $1.75 to $4 per barrel as to kind and quality. Milk retails here at eight cents per quart.
Barrington, N. J. H. L. B.

Cattaraugus County, N. Y.

WILL you tell us what farmers are receiving for milk and its products in Cattaraugus Co., N. Y., at this time? Is that county reasonably level, or is it rough and stony?

Milk brings $1.60 at the door and $1.65 delivered to the Merrill Soule Co., while cheese sells at 14 cents. In regard to the land, it is stony and of considerable variety in quality. The hill farms are less stony but also less fertile, but strong grass land. The valleys have some fine level land, good for corn, wheat and potatoes. Clover abounds and Alfalfa is being introduced in our section of Cattaraugus Co. All of the hill land is tillable hereabout. People are coming in from nearby States, attracted by the cheaper prices of these farms. K. S. J.
Delevan, N. Y.

I send contract for a period of one year, beginning April 1, 1914. Our contracts are drawn for six months. In regard to the lay of the land, would say that Cattaraugus County is considered hilly although it is nearly all tillable and generally not very stony, yet there are some small stones on all of the upland. My farm lies in a valley that is level, free from stone, and nearly four miles wide.

Oct. 1914	$1.65	per 100 lbs.
Nov. 1914	1.80	per 100 lbs.
Dec. 1914	1.85	per 100 lbs.
Jan. 1915	1.80	per 100 lbs.
Feb. 1915	1.60	per 100 lbs.
Mar. 1915	1.50	per 100 lbs.

Conewango Valley, N. Y. C. E. D.

COMING FARMERS' MEETINGS.

National Grange, annual meeting, Wilmington, Del., November 11-14.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Institute and convention, Lycoming, County Farm Bureau, Williamsport, Pa., November 17-20.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Dover Poultry, Pigeon and Pet Stock Association, tenth annual show, Dover, N. J., Nov. 23-28.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition, Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary, Thomas Deans, 39 Hoyt St., Danbury, Conn.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Ohio-Michigan Land and Live Stock Exposition, Toledo, O., Nov. 22-Dec. 5.

Natural Atmospheric Milking Soothes the Cows

The two side drawings show why the Empire is the gentlest, safest, simplest mechanical milker—why its action is soothing to even nervous cows—why it doesn't cause sore, inflamed teats and udders.

Figure at left shows action of teat cup when gently massaging teat. This is done by *natural* air pressure—*not* compressed air. Figure at right shows teat cup in vacuum period that succeeds massaging. Note the *natural* milk flow.

EMPIRE Mechanical Milker

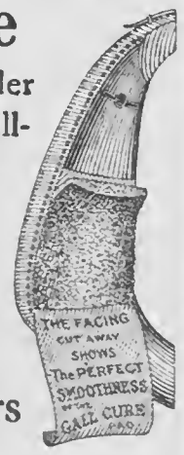
Increases Milk Yield—Decreases Work

The capacity of the double or two cow unit is 20 to 30 cows per hour. One man can operate 1 or 2 double units. Its air tight construction prevents milk contamination by either stable odors or impurities. Write for full description and pictures of Empire Milkers in use in modern dairies everywhere. Also ask us for our offers on our famous Empire Cream Separators, Empire Sta-Rite Engines and Empire Star Feed Mills.

EMPIRE CREAM SEPARATOR COMPANY
Dept. D, Bloomfield, N. J.
Or Dept. D —Branch Offices at Chicago, Ill.; Denver, Colo.; Portland, Ore.; Toronto and Winnipeg, Can.

More Work from Your Horse

He will pull harder and work more willingly if you keep him free from galls.



Honest Wear Gall Cure Collars

prevent and cure galls. The curled hair pad forms a soft smooth cushion right where the draft comes. These collars also last 1 to 2 years longer.

"Honest Wear" Harness

are made of best oak tanned leather—firm, pliable, lasting—stitched with well waxed linen thread—will not rip. Every strap right heft for its work.

Money-Back Guarantee

Defects of harness and collars made good or your money back.

Buy from your Harness Dealer

LOOK FOR THIS LABEL

Write for booklet about Gall Cure Collars

THE OLMSTED CO. Inc., Syracuse, N. Y.

SAVE-THE-HORSE
(Trade Mark Registered.)

HORSES GOING UP

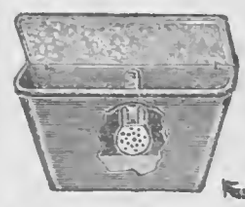
Don't Wait—Make your Horse sound now. It will cost more to buy later, because of the enormous export for European armies. Every horse market is being drawn upon.

GLAD HE STARTED RIGHT

J. B. MARSO, East Aurora, N. Y. Sept. 13, 1914, writes:—"I feel I owe you a debt of gratitude. Last January, as your records will show, I purchased a bottle of Save-The-Horse to treat a bone spavin. I applied as per directions, and to my great delight, I have an effective cure."

We originated the plan of treating horses under **Signed Contract—Bond** to Return Money if Remedy fails on Ringbone—Thoropin—**Spavin** or **Any**—Shoulder, Knee, Ankle, Hoof or Tendon disease. **BUT WRITE** and we will send our **"SAVE-THE-HORSE BOOK"**—Sample Contract and **ADVICE—ALL FREE** to (Horse Owners and Managers—only).

TROY CHEMICAL CO., 24 Commerce Ave., Binghamton, N. Y.
Druggists everywhere sell Save-the-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.



More Milk —better milk, healthier cows, time and money saved, money saved and money made—all from "New Modern" Watering Basins

Pipe Line and Float Tank. Cast iron, round corners. Pays for itself the first year. Also "New Modern" Stanchions, Carriers, etc. "Everything for the barn." Free Catalog. GLOR BROS. & WILLIS MFG. CO., 60-70 Main St., Attica, N.Y.

$3 Package CURES any case or money refunded.
$1 Package CURES ordinary cases.
Mineral Heave Remedy Co., 461 N. Fourth Ave. Pittsburgh, Pa

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is an ANTISEPTIC AND GERMICIDE
[NON-POISONOUS]

Does not blister or remove the hair and horse can be worked. Pleasant to use. $2.00 a bottle, delivered. Describe your case for special instructions and Book 5 K free. ABSORBINE, JR., antiseptic liniment for mankind reduces Strains, Painful, Knotted, Swollen Veins, Milk Leg, Gout. Concentrated—only a few drops required at an application. Price $1 per bottle at dealers or delivered.
W. F. YOUNG, P. D. F., 88 Temple St., Springfield, Mass.

RAW FURS G. I. FOX, 279 Seventh Ave. N. Y. A square deal, liberal assortment, top prices. *Write for price list.*

SKUNK We pay top prices for Skunk, Mink Muskrat, and all raw Furs. Price list free. M. J. JEWETT & SONS, REDWOOD, N. Y. :-: DEPT. 29.

Black Wall Map of the World

The World and the United States At A Glance

A Great Education

At Your Fingers' Tips

This beautiful Wall Map, size 25x39 inches. On one side we have a complete, up-to-the-minute map of the United States in bright colors, showing the Capitols, Railroads, Rivers, large cities, etc. It also shows portraits of our 27 Presidents, and gives their biographies.

On the reverse side we have a map of the world, printed in a deep, ebony black. White and colored lines differentiate countries, rivers, lakes, cities and mountains. You never saw a map as black, as beautiful, as wonderfully enlightening as this map of the world. From this you may in a single day learn more than you could in a year's study of books.

Contrasting with the ebony black of the map are the flags and the coat-of-arms of all nations, in their flashy, exquisite colors. Our own seventeen flags are here in beautiful, bright colors—did you know that the United States had seventeen different flags?

And then, there's that wonderful Bible information. How many books, chapters, verses, words, letters does the Bible contain? How many books are classified as History, Poetry, Law, Prophecy, Epistles? Which books are exactly alike? How many times is the name of our Saviour mentioned? In how many languages is our Bible published?

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The Map will be sent, postpaid, for One New Yearly Subscription, or Twenty 10-Week Trial Subscriptions, or Two Yearly Renewal Subscriptions.

The Rural New-Yorker, 333 West 30th St., N. Y.

THE NATIONAL DAIRY SHOW.

THE National Dairy Show is one of the great exhibitions that has lived up to its name and has become truly national in character. The recent exhibition at Chicago was an immense affair, bewildering in its variety and complete display. This show has become as characteristic as the great English shows which have done so much to improve the live stock industry of Great Britain.

The showing of over 1,500 of America's choicest cattle, and high quality importations numbering now in American herds, were only incidental features of the show compared with the grand showing of men. Keen rivalry in show ring, possibly occasioned jealousies, but men took their medicine. "Some day we may have a typical American breed, it may not be Holstein, Jersey, Guernsey, Ayrshire or Swiss, but when our stock goes to Japan, to South America and Africa, it will not be recognized by inherited names from breed homes in Europe, but will carry honor to American dairy activity," was the forecast of one speaker.

"What is new in breeding." This was the question put to members, officials and judges of breeds at the show. Professor Van Pelt of Iowa answered this question: "The Holstein men have gone to breeding monstrous massive cows. This has been their tendency for several years, and can be overdone. There is a similar tendency among Jersey men and among the other breeds. The small delicate refined type of Jersey is a beautiful creature under blanket in the stall and in the show ring, but more vigorous animals are needed for the farm. Jerseys have reached this extreme and we must be careful not to swing to monstrosities in the next few years. It seems the Guernsey men are right in aiming toward a medium type of animal efficient under farm conditions."

Secretary William H. Caldwell of the Guernsey Association stated: "The dairy cow has to stand as a producer. We consider the Guernsey holds the world's record in economy as well as the championship. The efficient producer is the type of cattle Guernsey men advise in herds."

Secretary Winslow of the Ayrshire Association declared that it was the tendency to have larger and more rugged Ayrshire cows. The Ayrshire does well on limited pastures of mountain districts, or responds to liberal growth of the valley meadow lands." The tendency is for animals that will stand liberal feeding and will reimburse the owner."

"The large rugged cow is the ideal of the Holstein breeder. Men want cows with capacity to produce dairy products. They want cows with vigorous constitutions to enable them to endure the strain of production and reproduction," was the sentiment of speakers at the Holstein banquet at the dairy show.

Jersey cattle men outlined their needs in part at the members' banquet. Meetings should be held to exploit the excellences of the breed. The idea has been successfully used by the Ohio Grange. The short tests were condemned and the toy cow criticised.

"We want to preserve the breed characteristics in the Brown Swiss," was the opinion of M. T. Ayers of the Swiss Association. "We can have coarser small cows, and fine large animals. Our cows range from 1,000 to 1,700 pounds and the bulls from 1,600 to 2,700. These are extreme figures, but the average for cows is 1,400 and for bulls about 1,700 pounds."

Breed Tendencies and Judging Considerations.

JERSEYS.—As far as one could tell by standing beside the ring and watching what was going within, there are certain tendencies which the different breeds are working toward. I heard a number of opinions expressed privately that the judges this year do not seem to be sticking quite so close to the triwedge conformation. I refer here to the judging exhibitions at the National Dairy Show. One would have to qualify even this statement somewhat, for the tendencies in the different breeds are somewhat different, but it was quite noticeable that the first prize animals were somewhat beefier than the general run of those selected last year. In the Jersey breed, the judge placed a large amount of emphasis on the fore-udder, and lack of development here was discounted heavily. This may be accounted for in the fact that the natural tendency of the breed is to have a shallow fore-udder, and the judges placing a large amount of emphasis on this point will tend toward a stronger development in this noticeable weakness.

HOLSTEINS.—In the Holstein breed, some of the animals that walked off first honors last year did the same thing again this show, but others did not, even though in some cases, they were competing against practically the same individuals as last year. This brings up an important consideration that will be spoken of later.

GUERNSEYS AND BROWN SWISS.—In Guernsey circles, there were no noticeable breed tendencies, but these were very well marked in the Brown Swiss. The individuals that were shown in this breed presented a very much improved dairy type and conformation over those shown last year. The same old girl that carried off the grand championship in the cow class this year repeated the same thing for two years back, and she is indeed a superb individual. She lacks the general symmetry of form that is possessed in large measure by the Brown Swiss as a breed, and she is of standard dairy form. Should the men engaged in turning this breed dairyward take this old cow owned by H. W. Ayers as an example of what they are striving for, they will have a breed of exceptional dairy type. This can hardly be said of some of the prize winners in some of the other breeds.

POINTS IN JUDGING.—Now I am done with the discussion of the breed tendencies as displayed at the International. I wish now to point out some judging considerations, but before I commence, let it be perfectly understood that I do not question the sincerity and good judgment of those who took part in the International performance. There are some questions which are not well settled in the minds of the general livestock public as well as myself and I am sure that anyone who can set us aright on these points will be welcome to THE R. N.-Y. circle.

THE SCORE CARD.—In the first place, why isn't the udder of a Holstein just as important an asset as is the udder of the Jersey? You say it is, and then I ask why does the Holstein score card give 10 points for udder, while the Jersey score card allows 40 points for the very same appendage? It looks to me as though the udder of the Holstein should be just as important a point in judging her as the udder of the Jersey. I ask this for information, and will all gladly welcome any enlightenment. That takes us back to what the score card is. As I understand it, the score card is the crystallized opinion of seven or eight men high up in any one breed as to what attributes the perfect cow of that breed should have. This sets up an imaginary cow as an ideal. A dozen different breeders will have the imaginary cow in mind, but your cow will not look exactly like mine, and my cow will not look exactly like the other man's. If I judge the ring, I pick out as the prize-winner the animal that comes the nearest to my ideal. If Jones does the judging, his prize-winners are those animals that conform the closest to his ideal of a perfect cow. Resulting from this basis, blue ribbons will be given to two different cows, and when it comes right down to really telling which one is the best producer, regardless of our judgments, we shall have to try the old cow before a jury composed of the milk scales, Babcock tester, milk record and feed record. These are the real criterions of the cow's value.

JUDGING BY PERFORMANCE.—That vast horde of cows had been brought from all over the countryside and mere men purported to be picking out the best ones in competition. What mockery it was to see this thing going on in the pavilion, turn on your heel and walk upstairs to the University of Missouri exhibit and read this placard:

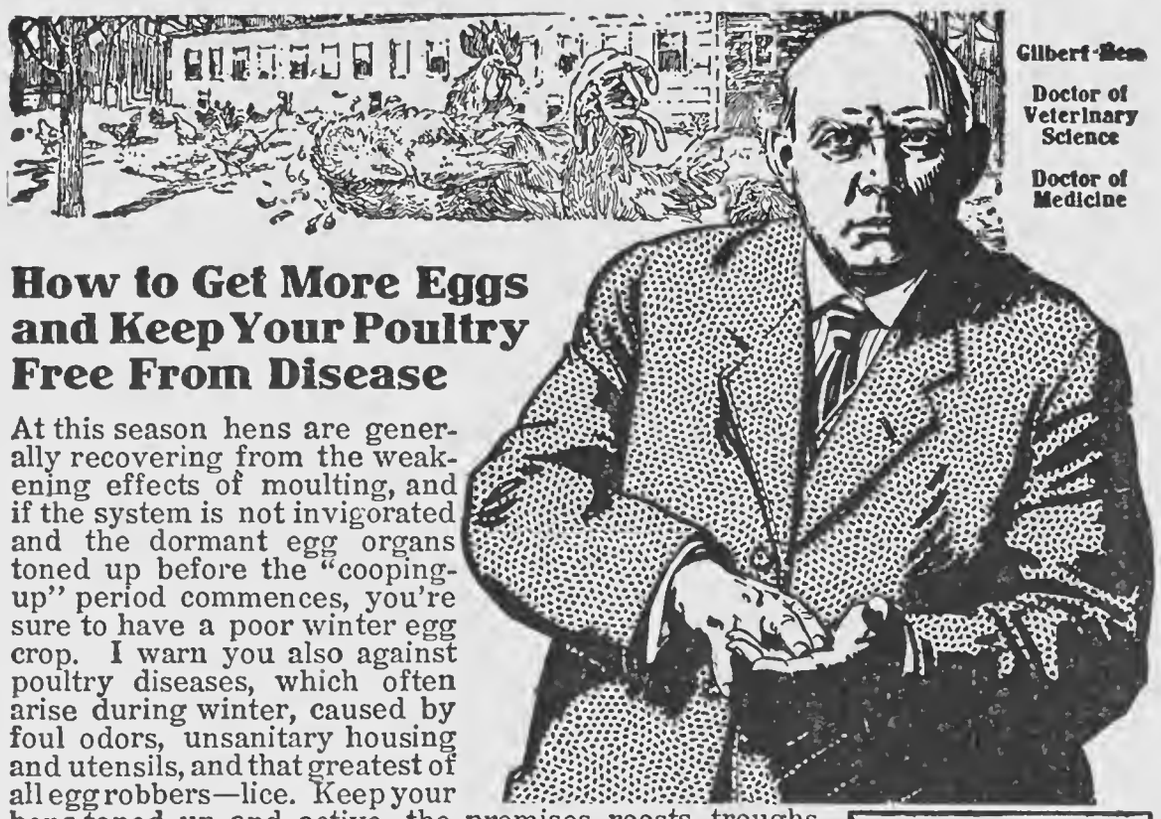
"It pays to test your cows. You cannot tell how much milk a cow will give, or how rich her milk will be by her appearance. The only accurate way to tell what your cows are doing is to weigh and test their milk. (Pictures of two cows). These two cows are half sisters. They are purebred Jerseys. They receive the same kind of care and the same kinds of feed. The figures given are the averages for three years.

	PEDRO'S ELF	UNIVERSITY DAZIE
Value of butter.....	$32.70	$144.90
Cost of feed.....	31.00	62.00
Value of butter above cost of feed.....	1.70	82.90

"Pedro's Elf ate one-half as much feed as the other cow but produced only a little more than one-fourth as much butter. University Dazie ate twice as much feed as the other cow but produced four and one-half times as much butter."

JUDGING BY CONFORMATION.—We need a scientific basis for judging cows if they are to be judged by conformation alone. Polishing the horns is all right, and makes the animals look nicer, but it should not enter in any way into the judging of a dairy animal if one pre-

(*Continued on page 1355.*)



How to Get More Eggs and Keep Your Poultry Free From Disease

At this season hens are generally recovering from the weakening effects of moulting, and if the system is not invigorated and the dormant egg organs toned up before the "cooping-up" period commences, you're sure to have a poor winter egg crop. I warn you also against poultry diseases, which often arise during winter, caused by foul odors, unsanitary housing and utensils, and that greatest of all egg robbers—lice. Keep your hens toned up and active, the premises, roosts, troughs, etc., clean and disinfected and you'll have very little trouble getting a plentiful supply of eggs during winter.

Dr. Hess Poultry Pan-a-ce-a

Makes Poultry Healthy—Makes Hens Lay

Dr. Hess Dip and Disinfectant

Destroys Germs—Deodorizes—Cures Skin Diseases

These two preparations are the result of my lifetime experience as a doctor of veterinary science and a doctor of medicine and a successful poultry raiser. My Pan-a-ce-a will help your hens recover rapidly from the debilitating effects of moulting; it will tone up the dormant egg organs and compel each hen to lay. My Pan-a-ce-a contains *tonics* to aid digestion and appetite, *blood builders* to enrich the blood and *internal antiseptics* to keep the system cleaned and conditioned against disease. One tablespoonful in the mash is enough for thirty fowl at the trifling cost of 1c per day.

Dr. Hess Dip and Disinfectant destroys disease germs, foul odors, and is an effective remedy for parasitic skin diseases. For cleansing pens, stables, barns, outhouses, sinks, drains, troughs, garbage cans, etc, Sprinkle it around the poultry houses, on the roosts, in the cracks—use it wherever there are foul odors, filth, lice and other poultry parasites. It is non-poisonous and non-irritating; always uniform in strength and one gallon makes 75 to100 gallons of solution.

Now read every word of this broad statement:

So sure am I that Dr. Hess Poultry Pan-a-ce-a will shorten the moulting period, make your poultry healthy and your hens lay—that Dr. Hess Dip and Disinfectant will destroy foul odors and disease germs, prevent and cure skin ailments and keep your premises clean and sweet smelling—that I have authorized my dealer in your town to supply you with enough for your poultry, and if these preparations do not do as I claim, return the empty packages and my dealer will refund your money.

The above dependable and scientific preparations are never peddled—sold only by reputable dealers whom you know. Dr. Hess Poultry Pan-a-ce-a, 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50. Except in Canada and the far West. Dr. Hess Dip and Disinfectant is sold in pint bottles, quart and gallon cans, also in barrels.

Dr. Hess Stock Tonic

Taken off pasture, put on dry feed and closely confined, your stock are apt to get out of fix during winter. Some are liable to get constipation, dropsical swellings, stocky legs, but most common and dreaded of all diseases, especially among hogs, is worms—worms. Dr. Hess Stock Tonic will keep your stock toned up, enrich their blood, keep their bowels regular and will rid them of worms. 25-lb. pail $1.60; 100-lb. sack $5.00; smaller packages as low as 50c. Except in Canada, the far West and the South.

Dr. Hess Instant Louse Killer

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks and dust bath. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rosebushes, etc. Comes in handy sifting-top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. I guarantee it.

I have a book about Dr. Hess Poultry Pan-a-ce-a and Dr. Hess Dip and Disinfectant that you may have for the asking.

DR. HESS & CLARK, Ashland, Ohio

MAKE HENS LAY

By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

MANN'S LATEST MODEL Bone Cutter

Cuts all bone with adhering meat and gristle. Never clogs. 10 Days' Free Trial. No money in advance.

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Improved Parcel Post Egg Boxes

SEND 15 CENTS FOR SAMPLE

New Flats and Fillers and Egg Cases

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Orr's Poultry Feeds—For molting hens and laying pullets. Our Digestible mash just fills the bill. Our poultry feed mixtures and straight grains, also cracked goods, are of the utmost in quality. For results use the best goods, and we have them. Send for circular and price list. WM. ORR & SONS, Box 8, Orr's Mills, New York

SHORT WINTER COURSES

In Horticulture
Poultry Husbandry
Dairy Husbandry

Eight weeks—December 30th to February 24th. Schedule of courses furnished on request,

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Feeding Roots: More and Better Milk—Beef Mutton

ALL animals improve in condition and increase their product of flesh, milk, wool, etc., by being fed liberal rations of cut roots. No matter what else you feed, cut roots will improve the ration. They add a zest which means increased consumption of roughage and aid in digestion and assimilation. They put a top finish on market sheep and lambs. They put color and richness in milk and cream and resulting butter.

Banner Root Cutters

for both hand and power, prepare roots in the best possible way. Cut so fine as to prevent all choking of animals. It's done with the **"Non-Choke Curve Cut."** Made in seven sizes. Write for free illustrated booklet. Every animal condition will be improved by feeding a ration of cut roots.

O. E. Thompson & Sons
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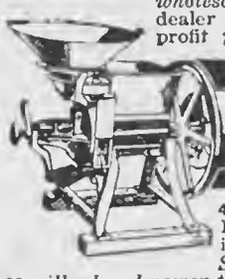
Why go to an implement dealer when you can get such a reliable high grade grinding mill as the Quaker City at *wholesale prices*—the same price as the dealer pays' Buy direct and keep the profit yourself! Investigate the famous



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47 years of success behind the line. Easiest running, most durable, finest improvements. 10 Days' Free Trial—*Send today for new catalog showing 23 mills, hand power to 20 H. P.* Address

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Law for the American Farmer, Green	1.50
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Tho Rural New-Yorker, 333 West 30th St., N. Y.

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A new, practical, valuable text-book, useful to every grower of chickens. Written by one of America's leading poultry experts. Tells exactly how to feed and manage chicks from hatching to weaning, to prevent losses and secure rapid growth.

THE HANDBOOK OF BROODING

points the sure way to chicken-profits. Write today for your free copy. Study it during your spare time and be ready to *successfully grow your chicks* in the future.

We will also tell you about the most economical and effective brooder on earth. Don't add to your brooding equipment until you investigate.

WATSON MANUFACTURING CO.
Drawer 37 Lancaster, Penna.

EAR CORN — WHEAT — OATS — SMALL GRAIN

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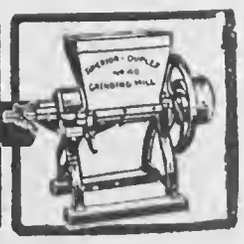

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The Henyard.

THE EGG-LAYING CONTEST.

SATURDAY, Oct. 31, was a perfectly ideal day, and that it was so was well appreciated by the busy crowd at the contest who, after the days "lay" was over, had to get 800 birds out of their houses, into shipping crates, and 1,000 birds into the laying houses, so they might be in position promptly to commence Sunday morning, Nov. 1, laying the eggs which will make a new record. The three highest pens in the contest just closed are so close together that the honors are practically equal. Francis F. Lincoln's pen of White Leghorns win. There can be no question, it seems to me, but that White Leghorns are *as a rule*, the greatest egg producers in the world. If 50 selected pens of every breed were put in competition as egg producers, it is my opinion that the Leghorns would be found to produce the greatest number, though not perhaps the most in value, as the late Fall and early Winter eggs bring much the highest prices. Doubtless the rests which broodiness permits, cause this later egg production, and combined with the fact that the meat value of the American breeds is so much greater, the question of actual profit has yet to be worked out. The feed cost of bringing the larger breeds up to the laying point is undoubtedly greater, because Leghorns will usually begin laying at least a month earlier than the American breeds, and in localities their white eggs command a small premium.

Francis F. Lincoln's White Leghorns laid 2,088 eggs. Mr. Barron's White Wyandottes laid 2,085, and pen No. 42, the "sour milk" pen from Storrs Agricultural Station, laid 2,083. Mr. Barron's White Leghorns which got quite badly behind at the start finally struck their natural gait and crawled up on the winners until they also touched the 2,000 mark and made a score of 2,011.

In the score for the fifty-second, and last, week, the pen that scored first last week with a record of 33 eggs—Glenview Poultry Farm, R. C. Reds—make the same score of 33 again this week, and again take first place. But their total output is 1,478, while A. B. Brundage's S. C. Reds have laid 1,885—407 eggs more. Fred Benton's White P. Rocks tie with Dr. N. W. Sanborn's Buff Wyandottes for second place, each pen laying 29, and Colonial Farms S. C. Reds are third with a score of 28; Merrythought Farm's Wyandottes are fourth with a record of 26. The record for all the birds follows:

	Week	Total
Barred Rocks.		
A. R. Hall, Connecticut	12	1,391
Frank L. Tuttle, Massachusetts	5	1,450
Waveny Farm, Connecticut	12	1,388
J. F. Francais, New York	23	1,696
White P. Rocks.		
Albert T. Lenzen, Massachusetts	18	1,575
F. H. Benton, Connecticut	29	1,578
Storrs Agr. Station, Connecticut	9	1,231
Storrs Agr. Station, Connecticut	13	1,350
Storrs Agr. Station, Connecticut	9	1,458
Storrs Agr. Station, Connecticut	7	1,289
Storrs Agr. Station, Connecticut	..	1,071
Buff P. Rocks.		
A. A. Hall, Connecticut	16	1,540
W. C. Morgan, Jr., Connecticut	21	1,191
White Wyandottes.		
Tom Barron, England	13	2,085
West Mt. Pltry. Yards, Connecticut	9	1,212
Merrythought Farm, Connecticut	11	1,901
Neale Bros., Rhode Island	19	1,918
D. J. Ryan & Son, Connecticut	10	1,379
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	29	1,519
Dr. N. W. Sanborn, Massachusetts	18	1,429
Am. Buff Wyan. Club, New York	21	1,319
H. L. Hamilton, Connecticut	11	1,118
Columbian Wyandottes.		
Nat'l Col. Wy. Club, Massachusetts	10	1,439
Single Comb Reds.		
Robert Seaman, New York	24	1,164
J. S. Gillespie, Connecticut	5	1,358
Dr. J. C. Dingman, New York	20	1,309
Burnham Pltry. Farm, Massachusetts	..	1,015
H. P. Deming, Connecticut	7	1,372
Geo. P. Dearborn, Florida	5	1,479
Dr. J. A. Fritchey, Pennsylvania	16	1,614
Ernest Underhill, New Jersey	11	1,276
W. H. Bunnsted, Connecticut	11	1,039
Pinecrest Orchards, Massachusetts	10	1,567
Harry B. Cook, Connecticut	15	1,383
Colonial Farm, New Hampshire	28	1,467
A. B. Brundage, Connecticut	26	1,885
Rose Comb Reds.		
Glenview Pltry. Farm, Connecticut	33	1,478
P. S. Scoville, Connecticut	9	1,032
White Leghorns.		
Storrs Agr. Station, Connecticut	12	1,583
Storrs Agr. Station, Connecticut	8	1,628
Storrs Agr. Station, Connecticut	4	1,590
Storrs Agr. Station, Connecticut	22	2,083
Storrs Agr. Station, Connecticut	6	1,513
Braeside Pltry. Farm, Pennsylvania	8	1,466
Glenview Pltry. Farm, Connecticut	10	1,546
Manor Pltry. Farm, New York	4	1,474
A. R. Hall, Connecticut	2	1,453
Marwood Pltry. Farm, Pennsylvania	17	1,722
Geo. W. Harris, Connecticut	4	1,256
Bonnie Brook Farm, New York	6	1,704
N. W. Hendryx, Connecticut	..	1,426
J. J. Linehan, Massachusetts	..	1,325
F. F. Lincoln, Connecticut	10	2,088
Cecil Guernsey, New York	9	1,703
Thos. W. Moore, Connecticut	..	1,548
Chas. N. St. John, New York	9	1,512
Chas. W. Sherwood, Connecticut	3	1,429
L. E. Sands, Pennsylvania	2	1,443
Tomoka Pltry. Farm, Connecticut	6	1,334
Venture Pltry. Farm, New York	..	1,150
Mrs. K. E. Woodruff, Connecticut	13	1,619
Windsweep Farm, Connecticut	..	1,232
C. H. Savage, Connecticut	..	1,475
P. G. Platt, Pennsylvania	1	1,685
Heneta Bone Co., New Jersey	..	553
F. M. Peasley, Connecticut	15	1,561
Chas. Heigl, Ohio	3	1,435
Tom Barron, England	16	2,011
Branford Pltry. Farm, Connecticut	9	1,701
James Munn, Massachusetts	..	1,303
Geo. A. Cosgrove, Connecticut	2	1,547
Buff Leghorns.		
Wolverine Pltry. Farm, Michigan	8	1,577
Blue Andalusians.		
E. D. Bird, Connecticut	9	1,348
Buff Orpingtons.		
O. Wilson, West Virginia	6	1,083
White Orpingtons.		
P. A. Demgar, New York	10	1,065
White Laced Red Cornish.		
W. L. R. C. Club, Massachusetts	5	870
Silver Campines.		
W. J. H. Lobel, New Jersey	13	1,335
Hens.		
H. W. Collingwood, New Jersey	4	1,287
Daniel Hine, Connecticut	7	1,194
Daniel Hine, Connecticut	9	1,152
Profitable Poultry, Massachusetts	21	1,359
Profitable Poultry, Massachusetts	10	1,378

GEO. A. COSGROVE.

Hens in Poor Condition.

I HAVE 30 hens which I have been feeding yellow hominy, wheat middlings, bran, beef scrap and some potatoes, all mixed together wetted with sour milk. This I fed them morning and noon with corn and oats at night, also oyster shells. They have a good run with buckwheat out in the yard. I noticed some of them did not look well; after investigating I found there were big gray lice on them. I put kerosene and candle grease mixed together on them, now they have stopped laying and look worse than before. Was the kerosene to blame? G. G.

I do not think it likely that your use of kerosene and grease had anything to do with the condition of your hens. This is the season of the year when hens slack up in laying, or stop entirely and very likely the falling off in production is only natural. You do not mention any definite symptoms of sickness in your flock and lice are pretty sure to be in evidence on all fowls unless great pains have been taken to rid them of the pests. If the fowls have no means of dusting themselves frequently, you should provide them with a good dust bath. M. B. D.

Preventing Soiled Eggs.

ON page 1278 you publish a letter from W. B. with comments by M. B. D. which calls attention to the trouble which nearly all poultrymen have in preventing eggs becoming soiled in the nests. I formerly had the same trouble, but now have practically eliminated it. It is well known that the fouling of hen's nests is mainly due to the hens (and especially pullets) roosting on the nests at night, instead of on their perches over the dropping boards, as they should. I have my nests so arranged that the birds cannot get on the nests in the evening. The nests in my laying houses are underneath the dropping boards, open by hinged doors in front to gather the eggs, while the hens enter the nests from the rear, alighting first on two perches, two inches wide, two inches apart and 10 feet long, the length of each nest section. These perches are fastened together by three white pine battens which are connected with the bottom of the nest by six-inch strap hinges.

During the day these perches form a landing stage to the rear of the nests. When the last gathering of eggs is made at dusk any birds on the nests are driven off and the rear entrance to the nests closed by pulling up and fastening to a peg, a light chain which runs through a hole in the top of the nest front, under the dropping board, to the rear end of the centre batten of the hinged perches. After dark the ring on the end of the chain is released from the peg and the hinged perches drop by their own weight. The hens by this time are on their roosts for the night, and the nests are open whenever the hens are ready to lay. ROBT. MEADE SMITH.

Pennsylvania.

Hens With Bronchitis.

CAN you tell me what ails my poultry? Also what to do to cure the trouble? They cough or sneeze, have a rattling in the throat, look pale and seem to be very sick. They are not roosting in a draft, and are sleeping indoors of nights. I am feeding wheat only, for their grain feed. I keep dry bran before them all the time, with rye once a day for green feed. I fed the chicks wheat through the Summer, also dry bran before them all the time, also fed beef scrap in mash until a short time ago. I discontinued the beef scrap as some of the pullets were beginning to lay and I was afraid that would stop their development. As quick as the trouble appeared, I began to give them a little tincture of iron in the drinking water, but it seemed to do no good. E. A. E.

Missouri.

This trouble may be caused by bronchitis, or inflammation of the larger air tubes, independently of such catarrhal symptoms as running at the nostrils. Such attacks of bronchitis are frequent in the changeable weather of the Fall and are usually mild, vigorous birds recovering in a short time. When severe, the affected fowls may finally succumb to exhaustion, however. Such attacks of bronchitis are characterized by dullness of the affected fowls and a whistling sound during respiration. It is best to isolate the affected birds, giving them warm comfortable quarters and feeding upon soft easily digested food. A teaspoonful of castor oil to which ten drops of spirits of turpentine have been added may be given if it is desired to treat the birds individually. Birds that do not recover promptly should not be kept for breeders. M. B. D.

Double-yolked Eggs Will Hatch—Sometimes.

ON page 1171 you ask "Will double-yolked eggs hatch?" Yes, they will sometimes hatch, but very rarely; the supposed reason for their not hatching being that, usually, but one of the two yolks is fertilized, and the single embryo cannot absorb the two yolks, hence dies before the time for exclusion. One sure case of a double-yolked egg hatching was that of a Light Brahma egg on the farm of Mr. James Rankin, well known as the father of the Pekin duck industry, and this case might have escaped notice but for the fact that the two chicks were articulated together by the tip-joints of their wings. Mr. Rankin carefully separated the united wings, cutting the skin with a sharp knife, and tieing up the two wounds with a bit of cloth and string. Unfortunately the other chicks in the brooder discovered a drop of blood on the end of one of the bandages and pecked at it till they got the bandage loose, and the little victim bled to death; the other chick was saved and grew to maturity, but the wing that had been attached to the twin chick never developed much—it appeared to be withered, and gave the bird a curious lop-sided appearance.

I have heard of one other case of a double-yolked egg hatching twin chicks, but didn't have the opportunity to investigate and satisfy myself of the truth of the story; the Rankin case, however, can be relied upon. A. F. HUNTER.

"I've got just the horse for you," said a liveryman to a German farmer, who was a prospective customer. "He's five years old, sound as a bell, and goes ten miles without stopping." The German shook his head. "Nod for me," he said, "nod for me! I lif eight miles from town out, and mit dot horse I haf to valk back two miles?"—Credit Lost.

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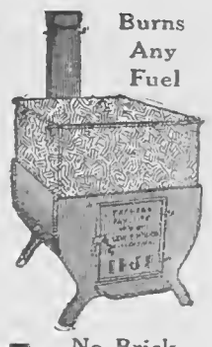

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Utility S. C. White Leghorns—Selected yearling hens, 80c each. $75 per 100. GEO. FROST, Levanna, Cayuga Co., New York

IDLEWILD LEGHORNS—S. C. Brown Leghorn Cockerels, May hatch. Price, $1 each. H. LINDSEY, R. 2, Bryan, Ohio

Gentlemen:

I have received the three premiums; viz. Razor Strop, Levin's Pruner and Farmer's Handy Knife, all of which are better than I had expected. I thank you for them and for your promptness in sending them.

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COLORED MUSCOVY DUCKS—$3 pair; trio, $4. Jessie V. Reynolds, Petersburg, N. Y.

F. AND W. INDIAN RUNNER AND MAMMOTH **Pekin Ducks and Drakes** for sale reasonable. GEO. WILLIAMSON, Flanders, N. J.

White Indian Runner Ducks—from prize-winning stock, cheap, considering quality. English Penciled Runners—large, nicely marked ducks from purebred Waltons. Also a few pairs of colored Muscovies, this year's stock. White Runners won customer first prize at New London, Conn., fair. E. T. GLENDENING, Delhi, N. Y.

Bourbon Red Turkeys—Prize layers. Per pair, $8; Trio, $10. Shipments Nov. 1. Orders booked now. Flona Horning, Ulysses, Pa.

White Holland Turkeys for sale. Blue Ribbon strain, $3 each, or $6 per pair. Mrs. FRED. CRITTENDEN, So. Wareham, Mass.

FOR SALE—**Purebred Bronze Toms**—also Cockerels, S. C. Minorca, W. Orpingtons, Campines. Mr. ALFRED MEAD, Vega, N.Y.

Purebred Bronze Turkey Toms FOR SALE Healthy stock. RALPH B. WARDELL, Sandy Creek, N. Y.

Bronze Turkeys—$8 pair; $11 trio. Mated, not akin. First orders, best turkeys. M. C. DEAN, Falls Village, Connecticut

Practical Barred Rocks—MOST FAMOUS LAYING STRAINS. Real Indian Runners. Breeding stock. Mrs. Andrew Brooks, Auburn, N.Y.

Barred Plymouth Rocks—Vigorous, open-range, utility stock from selected matings. April hatched cockerels, $3 and $4. Pullets, $2 each. CHAS. BISHOP, Cottekill, N. Y.

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Single Comb R. I. Red Cockerels—Strong, healthy birds, March hatched, Austin's strain, price, $3 to $4 each. COOK PARK POULTRY FARM, Ernest Lange, Prop., Moriches, L. I.

Rhode Island Reds—COCKS, COCKERELS, HENS, PULLETS, $2, $3, $5. Dingman's strain. M. Rustin, Monsey, N. Y.

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1000 Single Combed White Leghorn Cockerels and yearling hens. Cheap. Best of stock. JAMES H. OWEN, R. D. No. 4, Newburgh, N. Y.

WHITE S. C. LEGHORN WYANDOTTE **COCKERELS** $1.50 and $2.00. BUTLER TOWNSHIP BOYS' AND GIRLS POULTRY CLUB, RAY FARMER, New Castle, Ohio

S. C. W. LEGHORNS—300 pullets; reasonable. A few fine Golden Campine hen-feathered cockerels and pullets. Moderate prices S. O. HALL, Seville, Ohio

300 White Leghorn Pullets from fine utility strain, $1.25 each. W. E. CATHER, R. 2, Winchester, Va.

FOR SALE—**75 Leghorn Pullets**—April hatched. $1 each. ARTHUR H. PENNY, - Mattituck, N. Y.

100 S. C. Buff Leghorns and LAKENVELDERS. Quick sale. E. SLATE, So. Hammond, N.Y.

PUBLISHER'S DESK

An agent of the Madison Square Company, 25 East 26th Street, New York, approached me recently with the suggestion that he had au houorable square and fair business proposition by which I could make some money. His company had a lot development at or near Bound Brook, N. J. He would deed me one lot free and clear, provided I would write them a testimonial letter like several others which he exhibited and allow the use of my name to induce other sales. In addition I was to pay the company $350 for au adjoining lot, worth $600; and all purchasers except the favored few like myself were to be charged $600 for the lots. My two would cost me only $175 each; and as a special suggestion to my cupidity I had the privilege of reselling at any price I choose. I might even sell them as low as $500 a lot and it did not take long to figure up the profits. He seemed disappointed when I told him I did not want to share in that kind of traffic. and he was really shocked when I told him that to do so, even if I could make the profits, would be a swindle on every person I influenced to buy. My letter would be a lie and a cheat, because others may rely on my judgment; and they would not know that I bought for less than one-third of the price asked them. Besides. I had no ambition to become a sucker myself. I knew right well that I could not get the lots on any pretense for less than they are worth, and I was satisfied that $350 was too much for both of his lots. Some years ago Ostrander developed lots at Lincoln, N. J., in the same section. A Michigan subscriber bought two lots, and paid $195 on them. He had $45 yet to pay, and asked us to look up the lots for him. I got an appraisal of $15 for the lots, but no market for them even at that price. I advised the Michigan investor to lose his $195. and save his $45 yet due. Several other experiences were along the same line and yet this agent carried letters from business men in the city, who undoubtedly paid more for the lots than any reliable appraisal would show them to be worth; but the most discouraging feature of it is that they thoughtlessly uo doubt permitted the use of their names to swindle others. I am not expecting any follow-up call from the Madison Square Company.

What can you tell us about the National Mercantile Company of Vancouver, Canada? They are offering farm loaus in some of the States at three per cent. interest. D. F.
Connecticut.

This is practically the same as the Standard Home Compauy of Alabama scheme, which has been exposed in THE R. N.-Y. for the past four or five years. As a result of that exposure, one of our subscribers in the South secured the complaints from us and turued them over to the local District Attorney and the officers of the company are now under iudictment. It will be remeubered that the Alabama coucern. like the Canada people, make their strong plea on an easy loan at low interest rates. The agents and advertising made it appear that the loan was sure; but the coutract said that the member was entitled to a loan after certain fees had been paid in, and when the member applied for the loan she was told she must wait her turn, and unless she kept ou paying the monthly installment, she would lose what had already been paid iu. A poor woman had paid in some fifty-odd dollars before she learned that she could uot get the loan, and feeling that she had been deceived, she refused to pay in more with no definite assurance that she could ever get the loau. We tried to get her money returned to her, but failed. A similar fate awaits the members of the Canada eoucern; but we have little fear that regular readers of THE R. N.-Y. will get entangled in these or similar schemes.

I wish to take advantage of this occasion to say that my feeble efforts to increase the circulation of THE R. N.-Y. have been made solely as an appreciation of the efforts you are putting forth to take care of *your* flock through the Publisher's Desk. Having been kicked and cuffed around the world since early boyhood, I am probably not much in need of such warnings or assistance, but it is probably that very experience that sometimes makes me think *your own* column is the grandest effort that today appears in print. G. K. B.
New York.

In a footnote the above writer says he writes in personal appreciation and not for publication. It is seldom we publish anything that reaches us under such circumstances, but there is no reasou to suppress this note except the writer's modesty and we think he will excuse us this time in taking liberties with his confidence. I use it because it confirms a conclusion that I long ago reached. That is that the man of broad affairs and information is the first to appreciate the protection that an honest vigilant and fearless publication may afford people with less experience and informatiou. I thiuk the friends of this department will bear us out in the assurance that we are striving for nothing unusual or spectacular. Such an attempt would make a work of this kind ridiculous. It was started with the hope of serving those who did not have the necessary information and means for their own protection. Its ambition is quietly to maintain this service from week to week.

A. and B. Howton, of Halifax, have entered suit in county court to recover $1,000 damages from the E. A. Strout Farm Agency for alleged deceit in misrepresenting a farm in Halifax which the plaintiffs bought through Hugh Agnew, agent at that time for the ageney, for $1,400. Mr. Agnew is made a co-defendant with the Strout Agency. It is alleged that May 28, 1913, they purchased what had been known as the MacLane farm, owned by E. J. and Minnie A. MacLane, for $1,400. The farm was represented to them as containing 95 acres, 500 apple trees in prime condition, and 100,000 feet of timber. They allege that the farm really contains only 65 acres, that there are only 125 old, scraggy, and rotten apple trees not in prime bearing condition and that there is only 25,000 feet of timber on it. The sum of $1,000 is named as the difference between the actual value and the value represented to them.—Vermont Messenger.

A later report states that the case was tried and the jury brought in a verdict for $550 in favor of the Howtons. The jury released the agent, Aguew, from responsibility, evidently holding that the company was responsible for the act of the agent. The burden of the Howtons' testimony seemed to be that they bought the farm relying on the represeutations of the agent and the deseription in the catalogue. It was also testified that the Strout Company sold the farm two years ago to Mr. MacLane, the seller now; and that it was at that time advertised under a differeut descriptiou. All of these trials justify our contention that a party to a contract has redress where misrepresentation can be shown by the principal or his agents, but those who wish to save themselves annoyanee and expense will get reliable iuformation from disinterested parties before they buy, and will then employ an attorney of their own selection to prepare the contract and seeure title to the property.

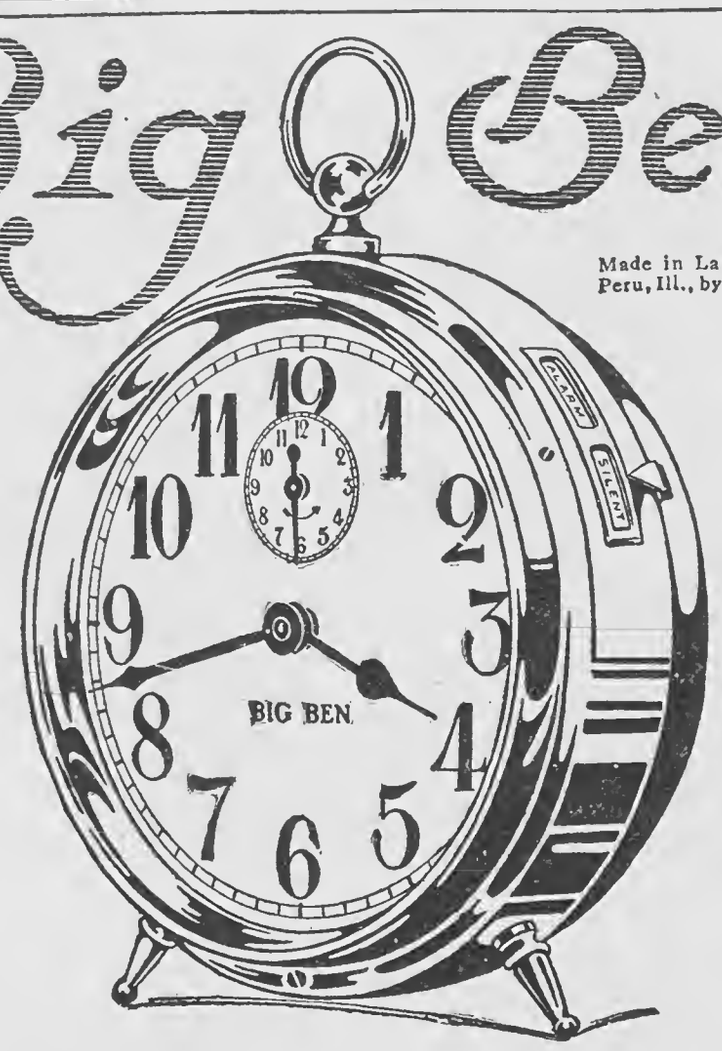
The Supreme Court has declined to direct the New York federal courts to annul the indictment against Jared Flagg, indicted with Daniel H. Morgan, ex-Treasurer of the United States, aud now ou trial in New York, charged with alleged misuse of the mails in selling stocks.—Washington Dispatch.

Flagg ran au investment scheme aud promised one per cent. profit a week, or 52 per cent. profit a year for money seut him for speculatiou in Wall Street. The indictment alleged fraudulent use of the mails, and the evidence showed that he uever used more than 10 to 15 per cent. of the money sent him in his alleged system of speculation in Wall Street, and what operations he did make were at a loss. The local trial resulted in a verdict of guilty on five different counts. We hope the repetition of these records from time to time will finally convince the people that these schemes of quick riches are gotten up not for their enrichment but as a painless process of extracting their hard earnings and frugal savings. J. J. D.

THE railroad station of Meridian, Tex., is about a mile from the business part of the town. One night a sleepy, weary, traveling man said to the darky who was driving him to the hotel: "Old man, why did they put this depot so far from town?" The darky scratched his head in thought and replied: "Waal, boss, I's fo'ced to admit dat I hasn't give de matter s'ficieut cogitation, but jes' jumped up for a answer like dis: I s'pose dey done dat so as to have the depot as near as possible to the railroad."—Credit Lost.

Big Ben

Made in La Salle and Peru, Ill., by Westclox



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He's as strong as an ox—look at his inner vest of tough implement steel, and his outer shield which serves also as his bell.

He puts in a full 24-hour day without a grumble—and he'll go 36 hours at a stretch without rewinding.

He's been working steadily for five years now and he's never worn out, so far as is known.

Hitch him to your sleeping schedule and see how much better the whole farm runs.

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His hands and numerals are big and black—easy to read on dark mornings. He rings two ways—five straight minutes, or every other half minute for ten minutes, as you prefer. You can shut him off in the middle of either ring if you wish.

In fact, his makers think he's the prize clock—the American People certainly have pinned the blue ribbon on him. $2.50 is his price—a pretty small price for a grand champion.

He's on exhibit at your jeweler's. If yours hasn't him, send a money order for 2.50 to *Westclox, LaSalle, Illinois*, and Big Ben comes prepaid to any address in the United States.

(241)

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Lower picture shows the famous Bessemer Fuel Oil Engine. Widely used in irrigation, flour mills, factories, electric light plants, etc. Runs on cheap fuel and crude oils. No batteries or magnetos required; ignition is automatic after starting. 15 to 165 H. P. Special Catalog "O" free.

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This WITTE Saw-rig Saws for 2¢ Per Cord

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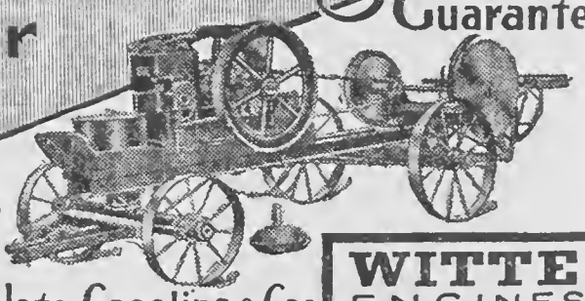

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LET me send you this new complete Saw-rig, to earn its own cost while you pay for it. Or any other WITTE engine on the same reasonable terms.
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Let me send you what hundreds of satisfied users, from Maine to California, say of their earnings.

$5 to $10 a Day Profit

You can do as well with this fine-running rig. Most of my customers never saw one until they got their WITTE outfits, and every one has got along fine, right from the first day.

A regular WITTE engine mounted on an all-steel truck, equipped with detachable steel saw-frame, saw-blade, saw-guard, belt and belt-tightener, seat, foot-rest, chain-brake, muffler and pole. Evenly balanced—smooth running—easy starting—small fuel consumption. Proven good by 27 years' use under the hardest kind of work.

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6 H-P	$173.80
8 H-P	227.10
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H-P	STATIONARY	PORTABLE
2	$ 34.95	$ 40.95
4	69.75	82.80
6	99.35	141.80
8	139.65	190.40
12	219.90	279.80
16	298.80	378.70
22	399.65	483.15

Cash or Easy Terms

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Nov. 6, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

A scarcity of choice creamery has forced the price up one-half cent on this grade, and some slight improvement in market tone is noted in medium grades.

Creamery, extra, above 92 score, lb	34½	@	35
Extra, 92 score	33½	@	34½
Good to Choice	26	@	28
Lower Grades	22	@	24
Storage	27	@	32
State Dairy, best	32	@	33
Common to Good	22	@	28
Ladles	19	@	23
Packing Stock	18	@	22
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 34 cents.
Chicago creamery, 26@32.

CHEESE.

Buyers are very critical, and with receipts large the tone of trade is toward lower prices. The slack demand for milk at many shipping stations in the Utica, N. Y., section has caused many factories to keep open longer than usual.

Whole Milk, fresh, specials	15	@	15¼
Average fancy	14¾	@	15
Under grades	11	@	14
Daisies, Wisconsin	14¼	@	14¾
Skims, specials	13	@	13½
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS.

Storage stocks in this section November 1 were about 3,800,000 dozen in excess of last year. Uniform cases of new-laid white eggs are very scarce, occasional lots bringing up to 55 cents. The general run of gathered stock from good to choice sells from 30 to 36 cents, and storage 24 to 26.

White, choice to fancy, large	52	@	55
Medium to good	40	@	45
Mixed colors, best	38	@	40
Common to good	25	@	30
Western fresh, white	35	@	40
Lower grades	15	@	25
Storage, best	24	@	26
Lower grades	18	@	20

FRESH FRUITS.

The surplus of cull apples has been reduced so that the market is in better condition, with advanced prices of 25 to 50 cents on some varieties. Grapes are in rather light supply, but many showing poor quality and prices irregular; cranberries still very low, as the holiday demand has not begun.

Apples—BenDavis, bbl	1 50	@	2 25
Fall Pippin	1 50	@	3 25
McIntosh	2 00	@	4 00
Jonathan	2 00	@	3 50
Twenty-ounce	1 50	@	2 75
Spitz	1 50	@	2 75
Baldwin	1 50	@	2 50
King	1 50	@	3 00
Greening	2 00	@	3 75
Pears, Anjou, bbl	3 00	@	4 50
Seekel	3 00	@	5 00
Bosc	3 00	@	6 00
Clairgeau	3 00	@	4 50
Sheldon	3 00	@	5 50
Kieffer	1 50	@	2 25
Grapes, 18lb case	50	@	1 00
Niagara, 4lb. bkt	8	@	10
Black, 4lb. bkt	8	@	10
Black, 20lb. bkt	35	@	40
Bulk, ton	30 00	@	38 00
Cranberries, Cape Cod, bbl	2 50	@	5 50
Jersey, Standard crate	4 00	@	4 75

HOPS.

Prime to choice	30	@	32
Common to good	26	@	29
Pacific Coast	12	@	15
Old stock	09	@	10

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

Chestnut market about over. Hickory nuts very scarce.

Chestnuts, Northern, bu	3 00	@	4 50
Southern	50	@	2 00
Hickory Nuts, bu	3 00	@	3 50

BEANS.

Medium and Pea are 15 cents per hundred higher. Red Kidney 25 to 50 cents lower, as export demand is light. Many people are prejudiced against this bean because of the dark color, but it is of high quality and especially good in combination with fried or boiled bacon. Growers of Red Kidney should make an effort to interest local restaurants in this bean, rather than depending so largely on export trade.

Marrow, 100 lbs	5 80	@	6 00
Medium	4 40	@	4 50
Pea	4 30	@	4 45
Red Kidney	5 00	@	5 60
Lima, California	5 90	@	6 00

VEGETABLES.

The potato market is still burdened with low quality stock. Prices remain on the same basis as last week, though there are occasional sales a trifle higher. Sweet potatoes lower, especially southern. Onions in excessive supply and market very weak. Cabbage lower. Celery low. Lettuce running very poor. Peppers from the South scarcely bringing charges. Spinach and squashes selling slowly.

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 50	@	2 00
State, 180 lbs	1 50	@	1 75
Maine, 180 lbs	1 00	@	1 75
Sweet Potatoes, bbl	2 00	@	2 25
Brussels Sprouts, qt	05	@	13
Beets, bbl	1 00	@	1 50
Carrots, bbl	75	@	1 00
Celery, doz	10	@	25
Cauliflower, bbl	50	@	2 75
Cucumbers, bu	1 00	@	2 25
Cabbage, bbl	75	@	1 00
Ton	5 00	@	10 00
Lettuce, half-bbl. basket	25	@	1 50
Onions—Red, bag	75	@	1 00
Yellow	75	@	1 00
Peppers, bbl	30	@	60
Peas, bu	1 00	@	3 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	25	@	60
String Beans, bu	25	@	1 00
Squash, Hubbard, bbl	60	@	75
Marrow	60	@	75
Egg Plants, bu	50	@	75
Tomatoes, box	75	@	1 75

LIVE POULTRY.

Chickens, lb	12½	@	13½
Fowls	13	@	15
Roosters	10	@	10½
Ducks	15	@	17
Geese	13	@	14

DRESSED POULTRY.

For two weeks the market has been overstocked with considerable poultry not good enough for profitable cold storage. Well fattened stock has been put quite largely into freezers to await holiday demand, which will be a fairly safe investment unless fresh stock for Thanksgiving is in large surplus.

Turkeys, choice, lb	18	@	22
Common to good	15	@	17
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Fowls	14	@	17
Ducks, Spring	16	@	18
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Hay declined 50 cents per ton early in the week, but advanced later because of the embargo on shipments of hay from sections where foot and mouth disease is prevalent. Alfalfa has been sold here this year, but the demand is only for the high qualities. Badly cured or otherwise inferior grades are not wanted merely because they are Alfalfa. Straw is $1 lower.

Hay, Timothy, new, No. 1, ton	20 00	@20 50
No. 2	18 00	@19 00
No. 3	15 00	@17 00
Clover mixed	17 00	@18 50
Straw, Rye, choice	13 00	@14 00
Short and tangled	10 00	@11 00

LIVE STOCK.

Native Steers	6 00	@	9 75
Bulls	5 25	@	7 50
Cows	3 25	@	6 50
Calves, prime veal, 100 lb	8 50	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	7 25	@	8 75
Hogs	7 75	@	8 10

GRAIN.

Wheat advanced two to three cents during the week, partly because of the extension of the European War zone. Corn two cents higher and export business active. Oats also higher with heavy sales to Europe.

Wheat, No. 1, Northern Spring	1 18	@	..
No. 2, Red	1 21	@	..
No. 2, Hard Winter	1 17	@	..
Corn, as to quality, bush	83	@	84
Oats, as to weight, bush	49	@	53
Rye	1 00	@	1 05

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest figures noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	55	@	60
Mixed colors, new laid	45	@	50
Ordinary grades	25	@	35
Butter, fancy prints, lb	38	@	40
Tub, choice	30	@	34
Chickens, roasting, lb	25	@	27
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	23	@	25
Friassee, lb	18	@	20
Fowls	18	@	20
Leg of lamb	16	@	18
Lamb chops	18	@	20
Roasting beef	18	@	20
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

*

Our cotton exports during the week amounted to 65,000,000 pounds.

*

Norway buyers are said to be arranging for imports of 25,000 barrels of American apples, the home crop being short.

*

Business failures in this country for the 10 months ending November 1 numbered 12,969, with assets of $155,934,132 and $271,665,747.

*

There are now in this country 7,578 National banks, with authorized capital of $1,072,492,175, and total circulations of $1,121,468,911.

*

The total amount of incorporations in this country during the 10 months ending October 31 was $707,847,000, or about half the amount for same period of the two previous years.

*

Galveston, Texas, has received a cargo of California fruits via Panama Canal. The distance is 2,500 miles greater than by rail. Regular shipments are expected by this longer, yet cheaper, route.

*

In October we coined 8,565,859 pieces, valued at $6,672,051. There were 181,259 $20 gold pieces; 138,500 $10; 5,000 $5; 358,000 $2.50; 62,000 silver halves; 358,000 quarters; 6,400,000 dimes; 1,421,000 nickels, and 100 pennies.

*

As a provisional embargo has been placed on wool shipment from Australia, with the probability of similar action in New Zealand and South Africa, this country faces a shortage for many lines of manufacture. The domestic market is firm and in some cases higher. Recent sales at Boston have been at 23 to 24 cents for unwashed delaine, and 27 for quarter blood combing. There seems a fair probability that some of the embargoed Australian wool will reach our factories as raw material for orders from Great Britain.

Oct. 30. We have had a very fine month in which to do Fall work; some of it was too hot for the time of year. Frosts have been felt very little as yet. Oct. 27 the ground was white with snow; today has been rainy, we need a heavy rain fall for Fall plowing. Apples are a heavy crop in this section and are hardly worth handling; most of them are sold in bulk at 40 cents per cwt. or 20 per bu. A few are barrelling at $1.40 per barrel. Senator Wilsons apple-packing law does not take here as there is too much discrepancy between the price received per barrel and the labor consumed in packing. We believe in an honest pack but we cannot do it for nothing. Potatoes are yielding very heavily from 200 to 300 bushels per acre the price is from 25 to 30. Cabbage has dropped to $5 per ton. Wheat $1; oats 40; corn 90; barley 65; hay $13; Fowls 12; poultry 14; veal 10; hogs 8; lambs 7; butter 28; eggs 30. E. T. B.

Canandaigua, N. Y.

THE DAIRY SHOW.

(*Continued from page 1352.*)

tends to be judging for utility alone, and most of us are raising cattle for the money. The pretense is that the points on the score card are looking toward a utility animal. Obviously they are not, and if portions of the score card are for beauty and others are for utility, why not be perfectly frank and say so? Why not say we want a face dished just so for beauty, instead of pretending that the dish has anything to do with the ability of the animal to produce milk and butterfat economically? The tortuousness of the milk veins and their size varies with the period of lactation. This is probably due to the gradual decrease in blood pressure to the udder as the lactation period progresses. Then, why should a cow that is nearly dry be relegated to fifth or sixth place because her milk veins are not as large or as winding as the cow that came in two weeks ago?

SPRING OF RIB.—Quite a bit of stress is laid upon spring of rib. What makes spring of rib? Is it an inherited quality or does it vary with the condition of the animal? It may be inherited to some degree, but I have a hunch that it varies with the conditioning of the animal. When a slat hammock is empty, it doesn't have much spring of ribs, and they are close together but the moment two or three fat men get into it, the slats have a great bulge and they are farther apart. It looks to me as though this applied to a certain degree with the animal. Fill her up and the spring of rib is increased. Is this reasonable and right? If not, the one who can prove that it isn't has the floor. M.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page. : : : :

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN, 17, studying farming, desires position on well-conducted farm; no experience; willing to learn. D. G., care Rural New-Yorker.

WANTED—March 1, capable married man to work on farm by the year; wife to board help; experienced; references required. C. A. J., care Rural New-Yorker.

WANTED—Position assistant poultryman, would assist with books, or anything on farm; good bookkeeper; strictly temperate; non-smoker. R. H. O., care Rural New-Yorker.

NOTICE—On or about Jan. 1, 1915, a first class farm manager or superintendent will be open for engagement; American, age 39, qualified for any proposition. For particulars address Box 73, Silver Creek, N. Y.

RESPONSIBLE position wanted, Dec. 1; wide experience in farm management and full college training; ability and character attested to by responsible persons; married; 35. Address L., care Rural New-Yorker.

POSITION WANTED—By an agricultural school graduate as superintendent of a farm; understands farm crops, stock, dairying, poultry, farm management; single; best of references. Box Z, care Rural New-Yorker.

WANTED—Position as farm manager, dairy and grain farm, understand all modern methods of farming, butter making, testing, feeding and handling men to best advantage; best reference. Box 218, Stockbridge, Mass.

POSITION WANTED—By an agricultural school graduate as poultryman; understands the care and feeding of chicks and layers in large numbers, mammoth incubators and brooders; five years' experience; single; best of references. Box 74, North Chatham, N. Y.

WANTED—Partner, worker to put $1,000 additional working capital in high-class poultry, truck and fruit farm; 25 acres in wealthy suburb of New York City; home market for everything; high prices; big opportunity for experienced hustler take full charge and half profits. N. A. F., care R. N.-Y.

POSITION WANTED—By working farm foreman, not afraid of hard work, who understands farm, garden, poultry, cattle, with ability to make good; at present employed; would like a change; Scotch, aged 39 years, married, no children. SCOTCHMAN, care A. E. Wheeler, 166 West 23d St., N. Y. C.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans; write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

ALFALFA FOR SALE—Fifty tons first cutting, thirty tons of second cutting, all cut early, well cured, bright and pea green; have sold farm and must dispose of Alfalfa. JOHN McLENNAN, Fayetteville, N. Y.

LIVE OYSTERS in the shell, $2.75 barrel; nice yellow sweet potatoes, $2.50 barrel. Thanksgiving is coming; order now; would exchange few for fancy apples, such as Kings, etc. WM. LORD, East New Market, Md.

GRAPEFRUIT AND ORANGES by express in half or whole boxes, F. G. B. Miami, Fla.; fancy brights at $1.75. Golden Russets at $1.50 per box, with order; delivered prices quoted on request. GEO. B. CELLON, Tropical Grove, Miami, Fla.

FOR SALE—Fully equipped poultry plant in San Joaquin Valley, Calif.; particulars free. O. C., care R. N.-Y.

FOR SALE—Farm 85 acres, 65 wide, cultivation apple and peach orchards, one-half mile of depot and town of 1,000 inhabitants; bargain to quick purchaser. HANSON S. PHILLIPS, Hebron, Md.

IMPROVED small farm in two-crop Virginia region for sale, account husband's death; suitable for peanuts, hogs, truck, grain; New York markets; mild winters. MRS. ELEANOR HURTLEFF, Claremont, Va.

FOR SALE—200 acres dairy, fruit and vegetable farm, one mile from City Hall, sidewalk and electric light to the farm; a good paying proposition or would make an ideal summer resort for city people; full description and price. Address OWNER, Box 277, Montpelier, Vt.

LONG ISLAND FARM FOR SALE—75 acres; one-third cleared, one-third young growth, balance big oak timber; fair buildings, small orchard; adjoins the country home of Chief Justice Bartlett, N. Y. Court of Appeals; 60 miles from N. Y. O. B. ACKERLY, Yonkers, N. Y.

$80 PER ACRE—Productive, highly cultivated 82-acre farm, located at city line, Corry, Erie County, Pa.; good house, fine bank barn, two silos; right at splendid city market, schools, churches, roads, etc., finest water; produces immense hay, ensilage, pasture and other crops. JOHN I. COLEGROVE, Sheffield, Pa.

FINE RIVER FARM FOR SALE—The George Stratton farm, located at South Oxford, Chenango County, New York; situate one mile from Coventry station on the Lackawanna Railroad, and six miles south of Oxford, will be sold at public auction on Thursday, Nov. 12, to close an estate; farm comprises 375 acres, is well watered from springs and has fine buildings all in good condition. The residence cost $6,000 to build, and the cow barn $4,000. Will be sold in two ways, in parcels or as a whole, whichever will bring the greater price. Farm contains 50 acres of timber, consisting of pine, oak and chestnut. Four years will be given for removal of same. Lake Warn is located on the farm. Possession given March 1. For further information address CHARLES W. BROWN, Oxford, N. Y.

I'll Rid Your Stock of Worms

I'll Prove It Before You Pay

I Want You to Know The Value of SAL-VET

—I want you to feed it at my risk—I want to prove to you on your own farm that SAL-VET will rid your stock of worms, put them in healthy condition, easier to keep on no more feed—more profitable in every way—and less liable to disease. I don't want you to send me a penny in advance—just mail the coupon. I'll ship the SAL-VET just as agreed; let you feed it 60 days—and if it does not do what I claim, then I'll cancel the charge. Is not that a fair, open offer?

TRADE MARK

SAL-VET

REG. U.S. PAT. OFF.

The Great Worm Destroyer

The Great Live Stock Conditioner

—is the medicated salt which contains no antimony, fed just as you would feed common salt. There is no dosing—no drenching—no trouble—all animals need it—take to it readily—and so doctor themselves. You will find animals that you do not suspect of having worms just full of them. Stock that have been run-down will take on new vigor, grow thrifty and profitable. Stock kept free from worms will be healthier; will do better, act better, and be in better condition to resist dangerous diseases. As proof of this read a few of the thousands of letters from stockmen who feed SAL-VET—who depend on SAL-VET to help them make greater profits—and to prevent loss.

READ!

"Before I started to feed SAL-VET my hogs were sick, and I had lost six of them, since feeding SAL-VET I have lost none, although some of them were pretty sick before they had access to SAL-VET and had lost their hair. However, they pulled through all right and now have good appetites and are thriving."

ERNEST TRIEBEL,
Route No, 2, Clearwater, Minn.

"After feeding SAL-VET to sheep, hogs, horses and cattle during the past winter, and found it a reliable conditioner and worm destroyer. My stock never looked so healthy and thoroughly conditioned as now."

U. H. SUMMER,
Brownville Jct., Maine.

"My hogs are doing finely; have kept SAL-VET before them for two months and while there has been lots of disease amongst hogs in this section, none of mine have been sick."

GEO. A. ELINE,
Route No. 20, St. Matthews, Ky.

"I have fed SAL-VET to all my stock; it has put them in fine condition, and improved them wonderfully. The cholera has been killing hogs all around my home, but I have not lost a single one. I have never used so effective a remedy."

SANFORD GERST,
South Boston, Va.

"I enclose check in payment of the SAL-VET sent recently. Four times this sum would not begin to pay for the benefit I derived from feeding SAL-VET."

W. H. WALLACE, Franktown, Va.

"I have great faith in SAL-VET. Since feeding it, I can certainly see a great improvement in my stock. I have fed a number of different stock foods and remedies, but have never found any as good as SAL-VET. I am recommending it to my neighbors and others who lost hogs with the cholera."

C. G. FIELD, Hiawatha, Kansas.

READ!

"I am feeding SAL-VET to 750 lambs and about 100 hogs. During this time there has been no sickness whatever among this stock. I consider SAL-VET cheap insurance."

THOS. J. LILLY, Wheeling, Mo.

"SAL-VET is certainly a great medicine. I have been feeding it all winter, so far and since I started, my stock are better than ever before."

ALBERT MEANS, Walthill, Nebr.

"Have been feeding SAL-VET to some of my horses which were very thin and in a run-down condition. They have now picked up in flesh and spirits in spite of the heavy work incident to this time of year."

ELI FURLAND, Artesian, S. D.

"I had a yearling colt which was not doing at all well. I had fed turpentine, tobacco and other worm remedies, but all failed. On the evening of the 19th of February, I gave this colt a dose of SAL-VET and the following day I had plenty of evidence of its value. It is doing the work all right."

HARRY BRENNEMAN,
Rt. No. 5—Ottawa, Ohio.

"I am well pleased with SAL-VET. I never knew a horse could have so many worms and live. SAL-VET surely brings them—big and small. Horses to which SAL-VET is fed, act 100 per cent better, and what we formerly thought was colic and meanness, was nothing but worms and worms."

J. E. TERKEURST,
271 Dauphin St., Mobile, Ala.

"The more I use SAL-VET the better I find it. My sheep and hogs were never so thrifty and healthy as now. We butchered this week, and did not find a single worm, while our neighbors' hogs are wormy and dying. I have been recommending SAL-VET to them and they are now ready to use it too."

WESLEY CHAMBERS, Bussey, Ia.

Look for this Label

on all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sal" this or "Sal" that. Get the original genuine **SAL-VET.**

Fill Out the Coupon Below Today

You take no risk whatever in accepting this no-money-down offer. Just fill out the coupon, tell me how many head of stock you have, and I'll ship enough SAL-VET to last them 60 days. You simply pay the freight charges on arrival, and when the 60 days are up, report results. If SAL-VET has not done all I claim, then I'll cancel the charge, and you won't owe me one penny. Address

Sidney R. Feil, Pres.

The S. R. Feil Co., Mfg. Chemists

Dept. RNY, Cleveland, Ohio

PRICES

40 pounds	$ 2.25
100 pounds	5.00
200 pounds	9.00
300 pounds	13.00
500 pounds	21.12

No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold by peddlers—nor in bulk; only in Trade-Marked SAL-VET packages. Shipments for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

Send No Money-Just the Coupon

THE S. R. FEIL CO., Dept. RNY 11-1114 Cleveland, O.

Ship me enough SAL-VET to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name .....

P. O. .....

Shipping Station ..... State .....

Number of Sheep ..... Hogs ..... Cattle ..... Horses .....

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Cornell University Library 26214

:: Facts About the Land Bank ::

THE literature sent out by the Whitman campaign committee and published in the county papers said that the farmer would be required to pay the loan association, according to the Governor's own figures, $135.86 each year on a loan of $1,000. He must pay this in equal monthly installments. If he fails to make his monthly payments promptly he will be fined. Twelve payments every year must be made regardless of weather, crops, sickness or difficulties of any kind. It also said that the Land Bank will impair the saving and loan associations, and reduce them to the condition of the old national associations through which people lost their money. Will you tell us about this?

New York. H. H. G.

Under the Land Bank system when the interest rate is five per cent., a $1,000 mortgage will be liquidated in about 11 years, on an annual payment of about $110, and not $135, as stated. This includes both interest and payment on the principal. For a 40-year mortgage the annuity would be about $60. Then again, the man who says the payments must be made monthly or suffer a fine either does not know what he is talking about or wilfully misrepresents facts. Under the Land Bank system, payments may be made weekly, monthly, quarterly, semi-annually, or annually.

The average loan now on New York State farms pays six per cent. interest, and if cost of revenue is considered it probably runs above this rate. Some mortgages in the State have been in existance 70 years. When one stands for 40 years, the farmer pays $60 a year for 40 years on every $1,000 of the mortgage, and the face of the mortgage must then be paid in one bulk sum.

In Germany and France the farmer pays 5.2 per cent. per year for 40 years and the mortgage is then wiped out, and the farm is free and clear. What is true of farms is equally true of the town home. The Land Bank system simply tries to bring the German and French cooperative credit system to the farm and the home. We will undoubtedly have to pay a higher rate for a while, because interest rates here are higher, but the higher the rate the greater the advantage from the amortization features. When our system becomes established and the soundness of the Land Bank bonds are appreciated, they ought to sell at as low a rate of interest as national or State bonds, and when they do, the rate of interest to the borrower will be reduced accordingly. This is what the money lenders do not want. It is what attorneys who handle money for loans do not want. Men with money to loan have been able to exact high rates from small farmers and small home owners because large institutions do not care to make these small loans. These loans are made for short periods, and with each renewal there are bonuses for the lender and extra fees for the lawyers. I come pretty near knowing what I am talking about. Last week I wanted a three-year renewal of a mortgage, and the lawyers refused to renew it for less than a bonus of $600. Reinforcing this I have the recollection of bonuses and expenses connected with my father's farm since boyhood.

The money lenders and lawyers who oppose the coöperative credit system are the stumbling blocks that always obstruct the road of progress. Some of them do it cunningly and selfishly; others because they cannot see ahead. Both classes fail to understand that any system that helps the producers and the toilers and builds up the neighborhood in which they live cannot fail to benefit themselves also. Coöperative credits will ultimately benefit these opposing classes in the same measure that it will help the producer and the mechanic; but even if it did not, it would not be any calamity if some of them had to go to work.

It is unfortunate that this coöperative credit movement came up at a time when it figured as an element of politics. As a matter of fact the people recognized no politics in it. The three leading national and State parties recommended it in their platforms. Just before the last national election President Taft advocated it for the whole nation. Governor Glynn's favorable activities resulted in the first coöperative system in New York State that has yet been adopted in this country for mortgage credits. The hysterical opposition was not against the measure or the principle, because the criticisms showed that the critics had not studied either, and understood neither the law nor the principle. In reality the effort to discredit the system was the best assurance of its merits. Knowing its possibilities of good, they feared that it would make votes for Governor Glynn, and for that reason they felt the necessity of opposing it. In reality a Republican Assembly passed the bill creating the Land Bank, under pressure from farmers and home owners of all political tendencies; and a real honest policy would have been to support it and demand their share of credit for it. We make this plain now because some readers are evidently confused by the arguments pro and con for political effect, and we do not want farmers to have any illusions about farm mortgage coöperative credits. A sound safe system of credits cannot be built up in a few months. It cannot show its possibilities short of years of patient development. But the development may begin at once, and benefit will be immediate and substantial. When the Land Bank of the State of New York has developed to its full possibilities the people will appreciate its benefits as they are now unable to do, and Governor Glynn will need no other monument. J. J. D.

SELLING A CARLOAD OF POTATOES.

"Happy Days" in Buffalo.

THE COMMISSION MAN'S DEALINGS.—The past Spring, not feeling satisfied with the difference in price of potatoes offered here by buyers, and those quoted in the Buffalo markets, I wrote to two commission houses in that city, making inquiry as to the actual condition of the market. The next morning I received a telephone call from one of the firms, whom I will call John U. Dont, saying potatoes were worth 85 cents per bushel and that they could handle them to good advantage. The following day, I think, a letter came from the other firm, saying potatoes were worth about 75 cents, but as their business was mostly in fruit they could not handle to good advantage. We sent samples of both varieties to John U. Dont, and began loading the two cars of potatoes. Upon receiving samples John U. Dont wrote us that they could handle the potatoes to good advantage, making as a further inducement the statement that potatoes were worth 85 to 90 cents per bushel. When this letter came I was at the depot waiting for train to Buffalo, the first car already shipped and the second partly loaded. Fortunately the potatoes were not consigned to John U. Dont, as while he appeared to be a clean, honest man himself, his potato business was in charge of a man who leaves anything but pleasant recollections to one struggling in a strange city to do the best he could with his crop. Notwithstanding the fact that he had so recently written us after receiving the samples, that he could handle them to good advantage at 85 to 90 cents per bushel, supposing he had me in a tight place, before he even saw the potatoes in the car, he began finding fault because we had not shipped them the week before, and said that 60 cents was the best they could get for them then. From this would be deducted six cents commission and also cartage, which I think was about three to five cents per bushel. The matter was all treated in a cold, hard, I suppose one might say "business" way, caring nothing for the fact that he had done all he could to get us to ship to him, with his glowing promises, simply assuring me that I would have to take my medicine, which I did, and the one dose from him was enough. It is the operations of such men as this who hurt the commission business, for they are far from being all alike.

THE OUTSIDER AND THE SYSTEM.—I spent over a day visiting large grocery firms, hotels, and then the smaller grocers, and in doing this it was not possible to overlook the system an outsider is up against in going into that market. Of course, it was impossible to consider reaching the consumer direct; in the first place on account of the time required, and next that a license is required to peddle, or still more expense to fight it, and above all the fact that Buffalo women have telephones and use them. I think I am correct in saying that the private telephone exchanges in some of the large department stores in Buffalo, who have grocery branches, have more girls employed in answering calls than are to be found in the telephone exchange in many large towns.

THE FARMERS' MARKET.—Buffalo has its farmers' market, of course, but the small proportion of farm produce that goes direct to the consumer is only too evident. A few large growers have their regular stalls the year round in the smaller market up-town, but as near as I could see, a large part of the stalls were occupied by those who bought their goods. Business in the big open Elk St. market, which is really the only farmers' market there worthy of the name, is mostly over too early in the morning for the majority of the women of Buffalo to be out. The farmers' wagons, auto trucks, the latter much in evidence, were to be found lined up to the curb at 5 A. M. or before, and as one goes down from the hotel before that hour, he is passed by an occasional horse-drawn or auto delivery grocer wagon, heading for the Elk St. market also, but it is a fact that not even all the grocers buy at first hands. The small proportion of the produce sold on the Elk St. market, that goes direct from grower to consumer, is not worth mentioning, judging by what I could see. Jobbers seem to do a good business buying of the growers and delivering to grocers, and the hucksters sell a great deal of it. With such commodities as potatoes, of which such large quantities are used in Buffalo, the proportion sold on the Farmers' Market is probably quite small.

THE CREDIT SYSTEM.—The credit system is at the bottom of the whole trouble in going there a stranger to sell one's own produce. The commission men and jobbers trust the grocers, and the grocers carry the consumer, and the consumer pays the bills. Too large a proportion of the business so far as the cost of living is concerned is done by 'phone and the expensive delivery system. The large department stores and grocers cannot maintain for nothing the long rows of delivery vehicles one sees early in the morning drawn up to the curb or waiting for a load. The man who goes to Buffalo, or perhaps it is the same in any large city, to sell one or two cars of any produce, is under a handicap he has not figured on, for he must, unless his product is scarce and in strong demand, sell cheaper to the grocers than they can buy from the jobbers and commission men, who have been supplying them regularly. As one buyer in the grocery branch of a large department store expressed it, "It would be hardly fair for me to buy this car of potatoes of you, and turn down the man who has been taking care of our business regularly, delivering a load on 20 minutes' notice, sometimes, if I run short, or during freezing weather." And at a time when the grocers were not carrying a large stock, depending on the jobbers and commission men to deliver in small quantities, the problem was especially difficult.

EXPERIENCE WITH HUCKSTERS.—After studying the situation carefully, and being determined to do better than John U. Dont's man on the basis of 50 cents per bushel or less, net, above cartage and commission, I went early one morning with a sample bushel of the potatoes to the Elk St. market, and it seems that in less time than it takes to tell about it, I was surrounded by what now sticks out in memory as a "howling mob." I supposed they were Italians, but they proved to be Jewish hucksters. One man grabbed the bag, threw it into his wagon and I followed. He wanted to see the car of potatoes, but before he could get started there was a partner who had a lot to say and there seemed likely to be a fight. I attempted to withdraw, and I heard them say to one another "fraid," but it was only their way of yelling at the top of their voices, not pleasant to remember. We finally got to the car and sold one of the gang a few bushels and the news seemed to spread, for I had more experience in the next few hours than I care to go through again. In one case I sold a man a few bushels at 75 cents per bushel at the car, and before he got away another bought half the carload at 70 cents. When the other fellow's load was weighed he refused to pay more than 70 cents, as I had sold to "mein brudder" at 70 cents for the big lot, and rather than stand and be yelled at, I let it go. Big Sam who bought the half car kindly warned me against some crooks who wanted the rest of the car, doing it on the sly, however, for while they were near he assured me they were good fellows. He told me, as I afterward learned to be true, that these fellows work in pairs; one goes to the car and gets a load in sacks, and between the car and the public weigh scales as many sacks as they think will not be noticed are transferred to the other wagon. The same crooks were at the public scales as a grocer wagon drove past, and seeing I was a stranger the driver warned me to keep away from them. After Big Sam had given me much valuable information as to these methods of the other fellows, and invited me to his house to attend his daughter's wedding the next day, he proceeded then to try to do me himself in his own and an entirely different way.

THE SQUARE COMMISSION MAN.—That was enough for me, a stranger, single-handed, trying to deal with such people, watching this one and that one, and in danger of being tricked at every turn. I went to James T. Pensquare as we will call him, a commission man highly recommended by the buyer at one of the large department stores, then handling about 1,000 bushels of potatoes per day with his auto truck, and turned over to him to finish delivery of those sold together with the balance of the car, also the second car then on the way, with the result that he proved a friend indeed, for after deducting his commission and cartage he returned to us 75 cents per bushel for the very same potatoes John U. Dont's man would have returned but about 50 cents per bushel. While the experience was anything but pleasant, I was glad to have had it, especially as the returns for the two cars were about $200 more than the local buyers offered, and we now have 1,500 bushels in cellar for which we hope to find a market where we can meet the consumer face to face, if we can find such a place. I. C. R.

LOCAL MILK CONTESTS.

A FEW months ago THE R. N.-Y. suggested local milk contests. The plan was to get the local farmers who supply milk to a town or city to compete for prizes, the object being to increase interest in the local milk supply and encourage the production of clean milk. The first response to this that we have heard of comes from Schuylerville, N. Y. Dr. T. E. Bullard was largely instrumental in organizing such a contest at the Local Grange Fair. Prizes were offered for the best and cleanest milk, and Dr. Bullard was put on the committee which awarded the prizes. The milk had to be at the hall by 11 A. M. There was only one test for its cleanliness, and that was the result of a bacteriological examination. It was thought that the number of bacteria found in a sample of milk at a certain age would be the fairest test of its quality. There were 15 samples submitted, each sample consisting of two bottles. One bottle from each lot was taken to the Warren County Laboratory. All labels or marks were removed, and the milk examined by its number, so that there could be no favoritism through knowledge of the dairymen who produce it. The milk was then examined by scientific methods and the results were reported. Westfield Brothers of Saratoga Springs took first prize, their sample containing only 25,000 colonies of bacteria. C. A. Hall of Greenfield Center came next, with 30,000 colonies. Then came John E. Leonard of Saratoga Springs, and J. M. Eddy of the same place, each with 40,000 colonies, and these two divided the third prize between them. Other samples were nearly as good as these four, and all would rank as high-grade milk. This contest shows that at least some of the milk supplied to Schuylerville patrons is exceptionally good. It forms a first rate way for milkmen and patrons to get together and know each other through the milk, and certainly the man standing well in a contest of this kind wins advertising which is sure to prove very valuable. These local contests ought to be encouraged, and they would make a most interesting feature of many a local fair.

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GROWING ELECTRIC LIGHT AND POWER

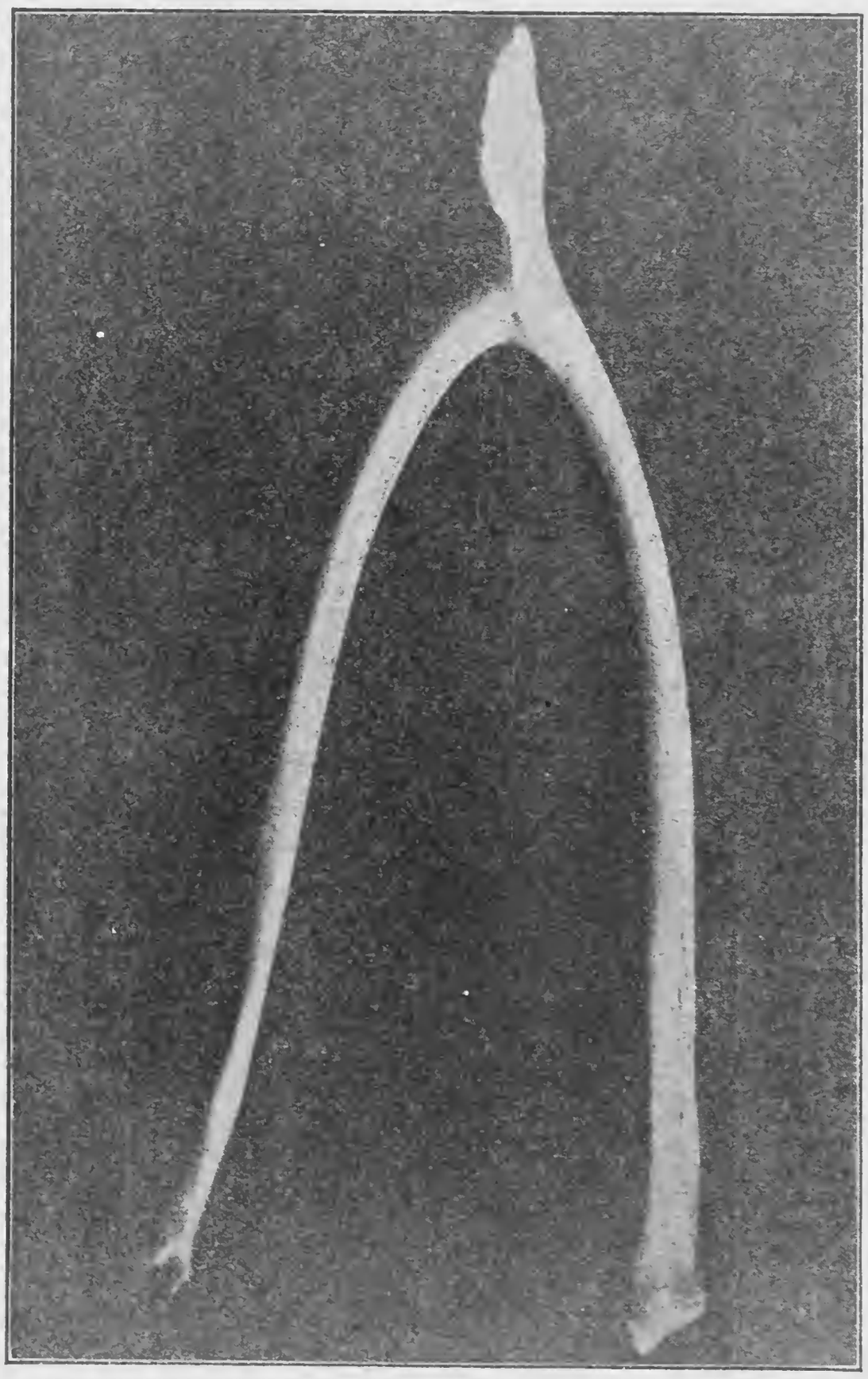
Where Hard Cider Grew Before.

THE IDLE WATER-WHEEL.—One of my neighbors, like many New England farmers, has a water-power "privilege," as they call it here in Massachusetts. It was developed a long time ago, and had fallen into some disrepair; recently it had ground cider, planed lumber, and did other lazy jobs when called on; but usually it was idle. In Winter, however, it was necessary to keep the wheel running slowly, to avoid its being damaged by ice from an accumulation of water seeping from the race, so it really was not paying its keep. His power consisted of a 14-foot fall with a 36-inch turbine wheel of the usual style. In repair it should develop about 35 horse-power. I suggested to him that if he would put his wheel in repair and keep it in running order, I would put in an electric generating plant, so that we two could have electric light for our houses and barns, and such small power as is needed about a farm, for churning, separating, washing machines, etc. He accepted eagerly and at once put his wheel in shape so that it could be depended on to run steadily and deliver power at a certain number of revolutions per minute. This is an absolute necessity for electric light—constant speed.

MATERIAL REQUIRED.—I found a second-hand dynamo in New York, a "compound" machine rated at 110-125 volts, direct current, of 5.75 kilowatts capacity, at 1,550 revolutions per minute. A kilowatt is 1,000 watts; a horsepower is about 750 watts, so this machine was capable of delivering about 8 horsepower without overloading. Modern machines can be overloaded 50 per cent. without harm, and will stand an overload of 100 per cent. for a few minutes. The power required to drive a dynamo depends on the amount of electricity used. One ordinary light requires about 45 foot-pounds motive power to keep the machine going; 12 lights require about 550 foot-pounds, or one horse-power. When a machine is running idle, it requires only enough power to turn the shaft in its bearings. It is good engineering practice, if one had a surplus of water power, to figure on two water horsepower, for every 12 lights, or their equivalent, used. This gives a big margin, and insures steady speed. If the speed goes down the lights go down, and vice versa.

CAPACITY AND COST.—To give another idea of the capacity of this machine, it will light, at normal load, 125 old-style carbon lamps, of 16 candle-power each; or 250 new-style tungsten lamps, of 20 candle power each. This, of course, is greatly in excess of our requirements, but it gave us a big margin to work on, for other purposes. The average farmhouse can use about 12 lamps in house and barn. These 12 lamps will make the place as light as day, and make any ordinary lamp cast a shadow. The machine cost $90, together with the necessary regulating appliances. A machine of half the capacity can be picked up for less than half this sum; and, in cases where a farmer wants light only, he could find a one kilowatt machine, second hand, around $30, that would give him twice the light he needed.

POLES AND WIRES.—My house is 2,000 feet removed from the power plant, and my neighbor's house is 1,000 feet away. We cut telephone poles in our own wood lot and set them, and strung transmission wire, without much difficulty. I used No. 6 weather-proof wire on my line, and he used No. 8 on his. This wire should cost about $19 per 100 pounds weight. As a matter of fact both of us were able to find second-hand wire, so our two lines cost us under $60 complete I wired my own house, and although I had never had experience at this task, I did a job that readily passed insurance inspection. In fact, because of my desire to get things right, I probably did a more careful job than the average electrician would have done, following the insurance-code requirements to the letter. I used the usual wooden moulding, to be had for about two cents a foot. When my house was finished, I gave my neighbor a lesson in the art, and in a day or two we were ready to start the machine and turn on the juice. There had never been electric light in our section, and the neighbors had some doubts as to our ability of turning falling water into light. There is no doubt in their minds now, and they are all following suit, as most of them have antiquated power privileges which they are scouring up for the purpose. The sole excuse for these water wheels living heretofore has been to grind hard cider in the Fall. You can draw your own morals for the new order of things.



Our Wish for You is for Good Luck, Good Spirits and Good Digestion. Fig. 587.

HOUSEKEEPING HELPS.—At first we ran the electric plant only at night. Now, however, we keep it going 24 hours a day, which means that at any hour of the day or night we have an abundance of clean, cool, safe light anywhere we want it; and in addition, our wives have electric irons (which save them walking 10 miles a day on ironing day); electric toasters, electric water boilers, and other "fixings" which the frugal farmer is supposed to be denied. The best thing we have done at my house is to install an electric range, in place of the old wood range. A city friend of mine put in this range at his house, but found the cost of commercial current prohibitive, so he sold me the range for 30 cents on the dollar. It has an oven big enough for four loaves of bread, and three hot plates on top. It confines all the heat to the stove, bakes with marvelous evenness, the "fire" is "built" merely by turning a button, and put out by the same process. It is always ready, makes no ashes, costs nothing to run (as we have more current than we can use) and makes the kitchen a place of joy on a hot Summer day. My neighbor, in addition to lights in his house, has city street lights in his barnyard, and his horse barn and cow barn look like an electric show. When he goes out to do his evening chores, he does not go in the dark. At the kitchen door is a switch, one throw of which makes the barnyard as light as day. Think what this means when a team comes home from town late.

COST INVOLVED.—Now as to the cost of this luxury and convenience. The electric plant—wire, fixtures, dynamo, switchboard, everything, cost $225 for the two houses, and we have enough surplus current to light a dozen houses, and fill farm kitchens with conveniences. That is $225 as the first cost. To keep the plant running 24 hours a day costs only what lubricating oil is consumed. You can figure this for yourself. We can't use more than eight horse-power from the water wheel, by the wildest extravagance in using the "juice." So we belted the jack-shaft back, and run the dynamo from a countershaft. The main shaft runs at 150 revolutions per minute, about one-third speed. The oil cups on the main shaft have to be attended about once a week; and as the dynamo shaft runs in oil, it requires very little attention. Beyond this, the only attention required is to keep the machine clean and free from dust and dirt. Frequently no one sees the machine for two or three days, but it is giving service any minute it is called on. A dynamo is merely a spool of wire rotated between a set of magnets, so there is nothing to wear out; and modern machines are protected by safety fuses, like safety valves on a steam engine, so there is no chance for a fool-killer to damage the machine itself.

POSSIBLE DANGERS.—Now, as to the danger. Electricity to the average man, is a thing of terror There are no barn lanterns to kick over, no kerosene to catch fire—but, there are "live" wires. Let us see how dangerous this live wire is. My farmer friends, once they got used to see me handling bare wires with impunity, wanted to try it themselves. The funny part of it was that their hands were so covered with callouses that they could not feel the current at all. Electricity, at 110 volts, or even 220 volts pressure cannot force its way through dirty fingers. My neighbors in their surprise at not being able to feel any sensation in touching a "live" wire, sandpapered their finger tips. After some trouble, they got them thin enough to feel a little tickle—not one-hundredth as strong as they feel from an ordinary medical battery.

KNOWLEDGE REQUIRED.—As to skilled attendance required. I am the only one who knows anything about the technical part of it, and I know precious little, merely rudiments that I have picked up from books and catalogs. But I am only at my country place four months in the year, so the responsibility for the rest of the time falls on my partner, who doesn't know a watt from the left hind leg of a rabbit. However, the plant has been in operation two years now, with my neighbor and his wife as the electrical experts in charge, and service has been perfect from the first day, Winter and Summer. What I would like to impress on readers of THE R. N.-Y. is that electric service is the cheapest thing on the farm—cheaper than the farm garden—if he has water power. If he has sufficient power—from two to 50 horse-power, according to his requirements—and a steady wheel, he doesn't have to put in an expensive "governor"; if his water wheel is in his front yard, as is frequently the case, the expense of transmission is reduced to practically nothing: incandescent lights are as cheap as lamp chimneys and last longer, don't have to be cleaned or filled, and can't be kicked over, and won't

start a fire. And, lastly, my neighbor and I consider that we have each added at least $1,000 to the value of our farms by the service. I am so proud of our success that I am anxious to see others try it.

Massachusetts. FREDERICK IRVING ANDERSON.

R. N.-Y.—The danger in electric wires, which has been referred to in our pages, exists where leakage from high-powered systems has charged wires or other metals to a dangerous degree. The thing to bear in mind in every electrical system is that all wires must be fully insulated in accordance with insurance requirements. Also, there is a remote danger involved in contact with metal (for example, standing on a hot-air register) while turning on a light or handling a telephone. If, by any accident, the appliance touched had become highly charged, one might thus complete a dangerous circuit.

WHAT FORM OF LIME?

I LIKE very much what you said about the use of lime in one of your recent issues. This evil generation is "seeking after a sign." It wants a recipe for profitable farming, so that it can do it with eyes shut, just as an indifferent cook follows a recipe book, and the farm institutes and county advisers and "social uplift" philanthropists are endeavoring to furnish them recipes for their work. Nobody is paying much attention to teaching the farmer to think for himself and apply general principles, instead of cook book recipes, to the management of his farm. E.

What we said was that a farmer starting out to use lime ought to think and figure for himself. There are "stone" lime, "quick" lime, "lump" and "caustic" lime—all the same. They represent the limestone taken from the quarry and burned in kilns. When this kind of lime takes up water it "slakes," and is variously known as burned lime, agricultural lime, "lime" or hydrate of lime. When the limestone is crushed or ground without being burned, it is known as ground limestone or carbonate of lime. "Hydrated" lime is the quick or lump lime ground to a powder, and carefully slaked by means of a spray of water, so that every particle is acted upon. The chief difference between slaked and hydrated lime is that the latter is very much more carefully treated with water.

Now the agents who sell hydrated lime will tell you their lime is the only one to buy. In the West we have a group of authorities who say you should use nothing but ground limestone. Some of them are quite bitter about this, and are almost ready to send a man to jail for differing with them on this advice. Our idea is that a farmer should figure it out for himself. On our own farm we use about 10 tons of lime each year, and we buy the form which gives us the cheapest pound of lime. We get figures on hydrated, ground limestone and slaked lime. It is some distance from a lime-kiln and the freight is high. The manufacturers give a guaranteed analysis of their lime—we would not touch it if they did not. Then we take the price of each lime delivered at our station, the guaranteed analysis, and find how much a pound of lime costs. In order to get equal results we must use two pounds of ground limestone to one of slaked lime. Our soil is hard and tough, and we plow under green crops each year, and an active form of lime does best. We find that slaked lime, under these conditions, is cheaper than ground limestone. Therefore we buy the slaked, and pay no attention to the people who say we should buy ground limestone or "hydrated" because others do. The quick or lump lime would be cheaper, but our laborers do not handle it well. The only safety for a farmer is to study and find out what he needs, and then figure for himself. This thing of depending upon others to do our thinking and figuring for us is all wrong. We pay them for doing it. We never can be free until we learn to do it ourselves.

DOUBTS THE BUSY BEE'S BUSINESS.

I FIND a number of things to criticize in the article on bees (page 1233). The experiment on the "50-acre orchard about nine miles north of Medina," proves nothing; or rather only that something increased the yield and improved the quality of the fruit. It is my belief that the increased yield and the improved quality would have come if the bees had been sent 50 miles from the orchard and the pruning and spraying had been done as carefully. In our own orchards we have had nearly perfect pollination many years when we did not see a bee in the orchard during the whole time of blossoming. Last Spring we were in the cherry orchard when it was in full bloom, and the matter was brought up by a man who had just published an article on the subject. In 15 or 20 minutes' search we saw perhaps a dozen bees, and I doubt if there were 500 bees in the block (about 1½ acres), but we sold more than 10½ tons of cherries from the same block the following July. To be sure, there were many flies and other insects about the flowers, probably a dozen or more for each flower all the time. For this reason we cannot feel that the honey bee is of special interest to the apple grower in this section.

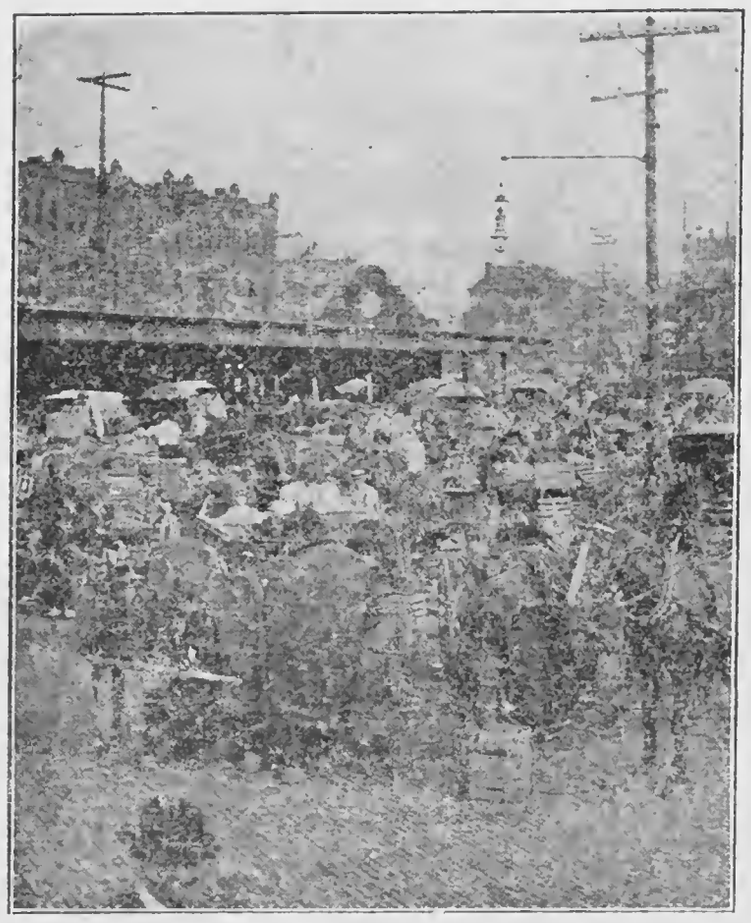
Wayne Co., N. Y. ALFRED C. WEED.

KAINIT AND WHITE GRUBS.

I have seen it stated that kainit, sown on land intended for strawberries, was good to keep away the white grubs. Could you give me any information on that point, and what effect on land planted with potatoes? F. J.

Massachusetts.

This suggestion quite often appears in print, but there is little to it. In order to have effect upon the



IN THE SYRACUSE, N. Y., PUBLIC MARKET. FIG. 588.

insects it will be necessary to use so much of the kainit or salt that it would be unprofitable, or the excess would partly sterilize the soil. Many experiments have demonstrated this. We should not think of planting strawberries on land where white grubs are known to be bad.

SEEDING OVER A POTATO FIELD.

I HAVE just finished digging a three-acre field of potatoes. It is too late to seed it to grass, or to sow a cover crop of any kind, as I wish to seed it to grass or clover of some kind next year. The field is as level as a floor, and the soil is fairly good. I dug the potatoes with a large digger, which has left the ground

A RIOT OF PENNSYLVANIA RYE. FIG. 589.

more mellow than if it had been plowed. I think that I shall let it lie as it is until Spring, then disk it, and harrow it thoroughly, to kill out weed seed, liming it in the meantime; then sow it to what? Is there any grass or clover that I could sow under above condition, that would bring me any crop next year, and remain as a permanent meadow? H. J. I.

We should follow one of two plans. Let the soil alone this Fall. In Spring lime it well and chop it up with the disk. Then sow oats and Canada peas. You may seed Timothy, Red-top and clover with the oats and peas if you like, making a thin seeding of the grain. In this case cut the oats and peas early and cure for hay. The grass will then come on and make a fair, permanent stand; or you can sow the oats and peas alone, thicker than you would if using the grass seed with them. In this case cut the oats and peas for hay and then plow the stubble, fit the soil well, and seed to grass alone in late August or September. By seeding the oats and peas alone and then seeding to grass you will get more hay and a more permanent and stronger meadow, but you will have to do twice as much work at fitting and seeding.

TWO PICTURES.

THE pictures on this page show a scene in the Syracuse, N. Y., public market, and a rye field in Pennsylvania. The Syracuse market is patronized quite freely by farmers, who drive in with their goods and sell, either direct to the consumers or to dealers as they prefer. In many parts of the country this public market has come to be a great help to farmers who are near enough to drive directly in with their goods. Many large towns are still without the public market. Every now and then we see in the papers statements to the effect that certain of these markets have proved failures and should be given up. In every such case that we have investigated, we find these reports have started from the grocers and butchers, and with no particular foundation in fact, and in all cases which we have investigated, the farmers themselves are greatly in favor of the market and would fight hard to retain it.

The other picture shows a sample of rye grown by J. P. Campbell, of Crawford Co., Pa. This is certainly a fine sample of rye. We find many farmers who know nothing about this tough old grain, and who, not having grown it, have formed the idea that it is an inferior crop, not worth bothering with. In our own farming, rye is one of the most valuable crops we have. Near the larger towns and cities there is a fine market for the straw, and the grain also sells readily, or could be ground with corn to make a good feed for work horses. Certainly the rye shown in this picture is big enough. We have great success with rye as a cover crop, and we throw a quantity of seed rye in with every other cover crop seed in the Fall. While it adds little or nothing to the soil except organic matter, it gives a lot of that, and on many of our hard top soils, this is just exactly what we need.

WHY IS THIS SOIL CHEAP?

I AM sending you to-day by express a bag of potatoes. On one acre we dug 500 bushels, 50 per cent. like ones sent you. Can you explain why it is that land like this is offered at from $15 to $20 per acre with fair improvements, and no takers, while through the Middle West and Pacific Coast it is selling for $100 to $125 per acre, and sometimes with no improvements? What is wrong with this section?

Schoharie Co., N. Y. JAS. C. CASKEY.

The potatoes were large and fine. One of them weighed 41 ounces—most of them weighed over a pound. They were remarkably dry and "mealy" for such large tubers. At least a dozen families sampled them, and while the larger tubers had "hollow hearts," they would rank as high-class eating potatoes. In another letter Mr. Caskey adds this:

Potatoes were planted on side hill facing north; sod turned over 30 days before planting. One ton of fertilizer was used; never sprayed; soil was mealy, like the potatoes when boiled with their jackets on. There is considerable stone on land and shale rock. Oats turned out 40 bushels per acre; barley 50; buckwheat 36.

He may well ask why such land sells at $20 or less per acre with few if any buyers! In our own section these potatoes would quickly sell at one dollar per bushel, and such a crop would be worth at least $400 per acre at a cost of perhaps $60. Land which sells for $125 per acre in the Middle West will not average crops which bring $50 per acre. Yet here is $20 land producing 500 bushels of potatoes or 50 bushels of barley. This land is within short hauls of several large manufacturing towns. With modern tools and appliances—think what a first-class farmer could do on such soil. Yet it has little sale. The trouble cannot be in the soil or in the market. Can it be in the spirit or lack of spirit of the people?

WHAT are the dum-dum bullets we read about in war reports? A soft bullet which expands on entering the body, making a hideous wound. First made at the Bengal Arsenal at Calcutta. A dum-dum speech is one that expands in side a man's head—makes him think!

KEEP away from the hen! Keep away from the hen! We print this advice to the know-it-all men who think because some blowhard has been heard to claim that he makes fifty dollars a bird they can rush in without knowing a thing about hens and catch fortune right square on the wing.

WASTE NOTHING AT BUTCHERING TIME.

Farm Pork-Making in Illinois.

PERSONAL EXPERIENCE.—In butchering, various farmers' have various ways, each one no doubt believing his method the best. So it is with myself. Having had many years of experience in the operation, I wish to relate briefly some things which may or may not be of interest to others similarly engaged at this season. For 24 hours previous to killing I withhold all feed from the hogs. When this is done the entrails are less likely to be ruptured than when full, and the work of removing the fat adhering thereto is more conveniently done. When ready to kill I exercise care to avoid all undue excitement. When the animals are quiet at the time of being killed this aids a freer discharge of the blood, any of which if retained in the flesh, prevents successful curing of the meat and causes it to spoil during hot weather. Some men knock their hogs in the head with an axe before sticking, others simply stick them and let them bleed to death, but the method I prefer is to shoot them with a good rifle before sticking, being sure that the first ball fired enters the brain. I think we should be humane in killing hogs and do it as quickly as possible, so as to prevent their suffering. When life is extinct the hog is stuck with a knife of medium length with a keen edge, the knife being inserted just forward of the breast bone and close to it. The blade is then turned and thrust full length toward the tail, being quickly turned from right to left to sever the veins of the neck and avoiding a side or shoulder stick, or other defective work.

PREPARING FOR THE WORK. — Of course before killing everything has been made ready, water heated, gambrels and spreading sticks ready, etc. It is very important to get a good scald, so that the hair can be easily and quickly removed by the scrapers. The water is first brought to the boiling point, then a small quantity of wood ashes is put in, which helps to loosen the hair and remove scurf from the skin. The water is allowed to boil briskly for a few minutes before being used. I am not in favor of guessing at the proper temperature for scalding. I use a thermometer with which the right temperature can be obtained every time For large hogs weighing around 300 pounds 170 degrees F. is about right, for smaller ones the water should not be above 150 or 160 degrees, and then the hogs should not be kept in the water long. Anyone who has had experience knows that it is better to have the water too cold than too hot, for in the former case it may be remedied by adding hotter water, while in the latter case the hair becomes set and the skin cooked tender so that with ordinary scraping the skin comes off.

SCRAPING.—I have a scalding tank with two trace chains across it on which the hog is laid. One end of each chain is fastened on one side of the tank and when the carcass is on the chains two men each holding the free end of a chain, let the hog down into the water, roll the body about three or four times, and then pull it out to air. The process is repeated until the hair "pulls easy." When the hair comes off freely from the legs and ears the scald is sufficient. The carcass is then laid on the platform and the scraping process begun, the legs and head being first cleaned. After the hair is all removed the carcass is hung up by means of a rope and pulley blocks to a firm support previously prepared. The body is washed by drenching it with hot water, and all scurf and stray hairs removed by scraping it down with a keen knife. When this is done the carcass is given a dash of cold water and the scraping continued until the hog is thoroughly clean.

DRESSING.—To remove the entrails with dispatch and cleanliness requires some skill. With a sharp knife I open up the front of the body, taking the greatest care not to cut into the intestines. As the entrails are being removed a large tub is ready to receive them. The fat is removed from the entrails while they are yet warm. The heart, liver, lungs, windpipe and tongue are cut out all together. Having placed a cob or piece of wood in the mouth to keep the jaws apart, and the spread stick halfway down the belly to open the sides plenty of clean cold water is dashed in until the interior is perfectly clean. The carcass is allowed to hang until cold and firm.

CURING.—For dry curing I use the following mixture: For every 100 pounds of meat I take three pounds of coarse salt, two pounds brown sugar, one pound of allspice, two ounces of saltpeter, which is well powdered, and one ounce of carbonate of soda. These are all well mixed together before being applied. I rub the meat first with one pound of honey for every 100 pounds of meat, then rub with about two-thirds of the preparation, until it begins to stick well, which is generally in about seven minutes. The first two days' rubbing is the most important, and unless the meat cures then it is not in a suitable condition. After such rubbing the meat is stacked in a large box, first putting in a thin layer of salt at the bottom. A layer of sides is put on this, with the rind downward, then another layer is crossed on this and so on until all the bacon has been put in. After 24 hours I turn and rub again, adding a little more of the above named mixture, after which turn and rub once in every 48 hours, using a little more of the mixture each time. I place the sides which are on the top to-day on the bottom to-morrow, and so on. After 21 days it is ready for washing, trimming and smoking.

"TEN MINUTES FOR REFRESHMENTS." FIG. 590.

WASHING AND SMOKING.—In washing I place the meat in water just warm enough to bear my hand in, and then brush over with a coarse brush, which removes all fat, sugar, slime, etc. Then place in a tank with clean cool water for 24 hours. This takes out the surplus salt, and renders it mild-cured bacon. Afterwards I hang up in a dry place where there is a good draft. If the days are fine and dry, with a slight breeze of wind, the bacon is generally sufficiently dry in about a week. In trimming the meat the sharp points of the rib bones are sawn off and the remaining part of the fore leg also sawed off level with the shoulder. The knife is then run over the belly part of the rib bones and any loose pieces removed. The sweat skin is scraped off with a sharp knife, and the side is then rubbed over with a little olive oil, which gives it a nice glossy appearance. In smoking the cuts the smoke is conducted to them as cool as possible. The walls of the house are 12 feet high, the meat being hung close to the top, the cuts being about six inches apart. From four to five days' smoking is given, care being taken not to smoke too much, as this greatly affects the flavor of the meat. Hardwood sawdust makes excellent smoke, so do hickory chips also. A small fire is started beneath the meat, a few handfuls of sawdust being placed on it. Then a sheet of iron or something similar is placed on top, which causes the fire to smolder and produce smoke only. After being smoked the meat is placed in calico bags, exercising care to tie them tightly on top, and hung from the ceiling until the weather gets warm. It is then packed away in perfectly dry bran. Some may think I go to unnecessary trouble in the care and handling of the meat, and I will admit that I put a good deal of work on it, but in anything I want the best, and I have never eaten bacon that I liked so well, even that put up by packing houses, as the meat made on my own farm. By treating the meat in the way above described I can if I should wish to do so, keep it for years in good condition. In the care of meat there is a point that should not be lost sight of, and that is maintaining as far as possible an even temperature. Too much heat will cause the fat to melt and turn musty, and if too damp it will sweat and decay.

LARD MAKING.—In refining the lard we use a large iron kettle set over a slow fire. A small amount of water is poured into the kettle, the vessel then being filled to the brim with fat which has been cut in small pieces and washed to free it from blood and other impurities. A lid is placed over the kettle to prevent the entrance of foreign matter, the fat kept simmering for several hours. The cooking must not be hurriedly done. From time to time the fat is stirred and the cooking continued until the contents cease to bubble and become clear. There is still water in the kettle as long as the contents show a cloudy or milky appearance. To refine a kettle of lard thoroughly from six to eight hours' constant cooking is requirel. When the liquid becomes clear the kettle is removed from the fire for the contents to cool. The cracknels are dipped from the kettle, the liquid then being pressed out of them. Small wire sieves are used to prevent any of the fine particles from getting into the lard. The lard is preserved in lard cans which are purchased at the stores for from 15 to 25 cents each. These cans are those used by packing houses, and have, of course, previously held lard. The trimmings of the meat, together with the head, feet, liver and kidneys, are used in making sausage, sour souse and head cheese, all of which is sold to people in town at a good price, except that which is preserved for future use in our home. H. W. U.

English Farmers and War Prices.

HERE is a new idea from the London Gardener's Chronicle regarding farm produce prices:

Complaints having reached the Board of Agriculture and Fisheries that the arrangement under which notices were circulated throughout England and Wales, inviting farmers to make returns of the quantity of produce they have to sell at fair market price for the use of His Majesty's forces, is not working quite satisfactorily, the Board is taking steps, in consultation with the War Office, to constitute in each county or group of counties a Farm Produce County Committee. The committees will consist of leading farmers nominated by the presidents of the Royal Agricultural Society of England, the Central and Associated Chambers of Agriculture, the Farmers' Club and the National Farmers' Union. These committees will invite farmers to submit samples and to quote prices for the various classes of farm produce which they wish to sell for the use of His Majesty's forces, and it is hoped that they will be in a position to take up their duties in some districts in about 10 days' time.

England is now a great war camp, where 1,000,000 men are being drilled and trained for service in Europe. In feeding and equipping these men the English government is evidently trying to get past the middlemen and deal direct with farmers or their organizations. This gives a fine chance for the coöperative societies to act for farmers.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

Well for Cesspool.

I AM moving into a new place; it has city water and some of the conveniences, but not all. Just back of the house is a well 31 feet deep that is not used now the city water is in. The water level in this well does not vary over four or five feet between the driest and the wettest season of the year. The soil in this location is not at all sandy or of a gravel formation; in fact, we are right on the edge of the blue clay belt, and there is no drainage so an ordinary cesspool will work. Would it be possible to put in toilet and bath and use this old well for a cesspool? One contractor who was at the place told me it would be just the thing, but I could not help thinking perhaps he was after a job more than my welfare. It was so contrary to what I had supposed was necessary in a cesspool. This man told me the water level in the well being so constant showed that the liquid matter would drain off and that the top could be cemented on and buried two feet under ground and not need attention in years or a lifetime. Can you tell me anything about it? Also can you tell me if there is any advantage in putting a load of clinkers in the bottom to break up the paper, etc.? R. L. P.

Fords, N. Y.

Any attempt to use this well as a cesspool would probably be ill-advised as an open soil is essential to the success of that method of sewage disposal. By acting as a crude septic tank, the well might serve the purpose for a time, but its efficiency would probably be short-lived. A properly constructed septic tank need not be expensive and would provide a permanent means of disposing of your house sewage. I cannot imagine any purpose which a layer of clinkers would serve in the bottom of a tight well. M. B. D.

Roots in a Well.

DO you think the roots of live forest trees in the bottom of a well would pollute the water, or would they tend to absorb any impurities? C. W. D.

Noank, Conn.

I know of no reason for thinking that tree roots in a well could have any appreciable effect upon the purity of the water. It is true that plant roots absorb from the water with which they come in contact certain elements of plant food, and that they also excrete other substances, probably deleterious to plant life, but that this interchange could materially affect the volume of water in a well seems to me highly improbable, though I know of no studies that have been made to determine this. The water from which plants derive their food is probably that thin film which surrounds all soil particles rather than the soil water which exists in bulk and fills the wells. M. B. D.

Adventures With Plant Lice.

THE past Summer there grew up in a bed on the lawn, a plant of scarlet sage. It was about 3½ feet high and 1½ feet in diameter, and stood alone in a clear place with nothing touching it. At one time about mid-summer, it was simply covered with plant lice and numerous ants. My son tied, tightly, about the stem near the ground, a strip of sticky fly paper, so that no ants could pass up or down. Three or four days later, when my attention was first called to the plant and his experiment, the plant was entirely free from both ants and plant lice. Perhaps two dozen dead lice were sticking to the fly paper, but no ants. What became of them? And was the fly paper the cause of their disappearance? A few young chickens had access to the lawn and they like ants, and ate all that they can reach. Certain small birds, of the warbler family, eat plant lice about here, but I have never known them to demolish them noticeably or to clear a plant of them. E. B. H.

That Congregation of English Sparrows.

IN answer to your query on page 1280 as to how to get rid of the English sparrow, for over 10 years I have tried many devices for exterminating these pests, and I have found the trap designed by Dr. A. K. Fisher, of the Biological Survey, in Washington, D. C., the most efficient. I made one of these traps at a cost of about 90 cents, and hundreds of sparrows have been caught in it. The method of making this trap is shown in Farmer's Bulletin No. 383, issued by the U. S. Department of Agriculture.

Geneva, N. Y. W. W. G.

Conditions here are similar, though perhaps on a smaller scale. When the season's output get together there are multitudinous twitterings in the street trees at nightfall, and in the morning the pavement is littered with their droppings. In Hartford, Conn., large flocks of blackbirds and starlings became a noisy nuisance by making the city trees their roosting place. The city authorities got up a Fourth of July celebration for their benefit (?) in which Roman candles figured largely. The astonished recipients of colored fireballs fled in noisy confusion; after being saluted thus for two or three nights they "vamoosed the ranch" for good. This brilliant strategy or the use of a high-power hose might prove a nightmare to the sparrows. But, like town liquor option, it but moves the pest on to trouble other localities. For several years the writer has fought the pernicious sparrow with poison, nest box-traps, shotgun and air rifle, but with no observable diminution in their numbers. But this Summer I have solved the problem, reduced the unwelcome visitors to a negligible quantity, and cut deep into the town supply. The cage type of trap is the way out. This style of trap is reported to be doing fine work in cleaning up public parks and private grounds. Some patrons have caught 800 and 1,000 sparrows. If one chooses to make their own, Farmer's Bulletin 493 gives drawings and directions for each trap. About the middle of June I built a cage trap of 5-16-inch mesh, 30x15x12 inches, and experimented with swinging doors, modified funnel entrances, etc.; later equipped the trap with tipping chambers, then I literally got the drop on them; 360 were caught in my garden up to October 1, 200 in 3½ weeks, 51 in two days, more than were destroyed by all other means in two years; and I am still getting them whenever a new crowd comes in. But for this effective reduction of the breeding stock next season would have seen us swamped with them. As the birds are caught unharmed any chipping sparrow that gets into the toils is released without other damage than a period of enforced idleness, and a slight ruffling of his feelings and feathers. If A. C. K. will bait his unwelcome lodgers with cracked corn and white bread, and put a cage trap into commission he will get these pests by the hundred, and get rid of the nuisance so that it will never come back, for a dead sparrow is a good sparrow. CHAS. A. BANISTER.

Massachusetts.

Abbreviated Tales.

COVER CROPS.—Early in November the Rhode Island college at Kingston, made the following report on cover crops sown in the cornfield in August:

"From all appearances now Winter vetch is the most valuable crop for that purpose. Despite the abnormally dry Fall we have experienced, this crop, growing in the shade of the corn until a few weeks ago, has now made 16-18 inches of growth in many places. The other legumes planted in like manner, it seems have hardly made more than one-fourth of the growth that the vetch has made. Sweet clover and Alfalfa have made several inches growth. Crimson clover ranks next, and Red clover is hardly noticeable."

This is very satisfactory—far better than we could do this year in New Jersey. The dry weather has held our cover crops back. They will start, however, and partly make up for it next year. Think what this vetch means on that light Rhode Island soil. When it is plowed under next Spring it will be like putting five to eight tons of good manure on each acre.

AN EFFECTIVE "KILLER."—A Pennsylvania reader sends us the following from a local paper:

"Three Holstein cows and four heifers, valued at nearly $2,000, the property of A. O. Shirey, of Williamsport, who owns a stock farm near Linden, are dead, the result of arsenical poisoning, and five others may die. A wash containing arsenic and other ingredients, the formula for which was obtained from a farm magazine, was applied to the sides of the animals to kill insects. The animals licked some of the poison from their hides, and it is believed that more was absorbed through the pores. The mixture was applied at night, and in the morning the seven animals were dead."

We ought to know more about this before forming conclusions. Probably it was a wash for killing lice, in which case tobacco, kerosene emulsion or sulphur and lard would have done the work. This idea of using a poison where animals can lick it up is much like suicide. Sometimes, too, the people who mix such stuff do not follow directions. We have known of cases where people read such directions hastily and used twice as much of some dangerous drug as they should have done. That is why we hesitate to recommend the use of drugs without the advice of a competent authority.

HAY CAPS.—In regard to cow peas and hay caps, will say that we shocked some and covered them with ordinary burlap, such as bran sacks are made of, and weighted them at each corner with one to two pounds weight, and made hooks out of ordinary baling wire. It was a perfect success. We have used burlap for years to cover wheat stacks, and straw remains bright to the very top.

Missouri. W. RIEHL.

NEW YORK STATE NEWS.

FOREST PRODUCTS CONVENTION.—The annual convention of the Empire State Forest Products Association is in session this week (Nov. 12) in New York City. A long list of speakers contributed of their expert knowledge of forestry work that is being conducted in this State and on the legislation that is deemed necessary to protect our forests and conserve their products. Frank L. Moore of Watertown is president of the Forestry Products Association.

STATE FAIR MATTERS.—There is likely to be a change in the administration of State fair affairs after January 1, now that there has been a change in the State administration. It is rumored that a change in the make-up of the State Fair Commission will be made if the Legislature can be induced to look upon the plan favorably, and an entirely new policy of management established. The plan will be to amend the present law to reduce the size of the State Fair Commission and instead of a commission of seven, five appointive and two ex-officio members, there will be a commission of three to consist of a State Fair Commissioner, the Lieut. Governor and the Commissioner of Agriculture.

COMMISSIONER ON TUBERCULOSIS.—The commission appointed by Gov. Glynn some time ago to investigate the extent of tuberculosis in cattle in this State, met for organization last week in Albany when Prof. Theobold Smith of the Rockefeller Institute of New York was chosen president and Dr. Linsly R. Williams, deputy commissioner of health, secretary. Gov. Glynn addressed the meeting and urged that the commission proceed to do some thorough work to stamp out tuberculosis in New York State cattle. The commission is constituted as follows: Dr. Theobold Smith, Rockefeller institute, New York; Dr. Hermann M. Biggs, commissioner of health; Dr. Linsly R. Williams, deputy commissioner of health; Dr. Henry L. K. Shaw, Albany; Seth Low, Bedford Hills; Professor Veranus A. Moore, Ithaca; Albert L. Brockway, Syracuse; Albert Manning, Otisville; V. Everit Macy, Ossining; H. J. Wright, New York; James A. D. S. Findlay, Salisbury Mills; Edward Van Alstyne, Kinderhook; Henry Best, West Sand Lake.

FARM BUREAU MATTERS.—The second annual conference of the Farm Bureau managers of the State will be held in Ithaca Nov. 19-21, and for the three days preceding it there will be a meeting of the Farmers' Institute Normal at Geneva, both of which meetings the Farm Bureau men are expected to attend. On Dec. 7-10 the annual meeting of the State Leaders of Farm Bureau work in 33 Northern States will take place in Chicago. The work in the State is progressing favorably. In two counties, Chemung and Broome, the entire responsibility and management of the Farm Bureaus has been transferred from the Chambers of Commerce to the Farm Improvement Associations which are composed entirely of farmers. In Nassau County, where there are no Granges through which to work the manager has found the teachers of the rural schools ready to coöperate and the schoolhouses have been used for meeting places. F. C. Smith of the Allegany Bureau has conceived of an excellent plan of organizing the work in the county. He secures committeemen from different sections of the town, men who are successful farmers, to coöperate with him in various ways. A potato show will be held this month. Mr. V. B. Blatchley succeeds H. E. Babcock as manager of the Tompkins County Bureau, Mr. Blatchley having been appointed an assistant professor of extension on the college staff and will give his entire time to the State work as assistant to the State director. On October 27 State leader Crocheron of California brought to the State College of Agriculture, on a visit, 20 boys who were winners in club contests in some local high school communities in that State.

ANTI-TUBERCULOSIS MEETING. — A meeting in the interest of the anti-tuberculosis movement in the State was held this week, Nov. 11, in Syracuse in response to a call of the State Charities Aid Association and the State Board of Health. It was a meeting of the general staff, so to speak, to shape future campaigns. The State Grange public health committee is coöperating in the movement.

MUCK LAND CROPS.—The muck land crops of Madison County are the largest in recent years. The onion crop will measure about 480,000 bushels, it is said. Fully half the crop has been shipped from Canastota and vicinity. Prices range from 30 to 35 cents a bushel. Celery has been a good crop and the acreage is somewhat larger than last year. Cabbage is a large crop and is bringing from $5 to $7 a ton. J. W. D.

"GEORGE," said the Titian-haired school marm, "is there any connecting link between the animal kingdom and the vegetable kingdom?" "Yeth, ma'am," answered George promptly, "Hash."—Outdoor Life.

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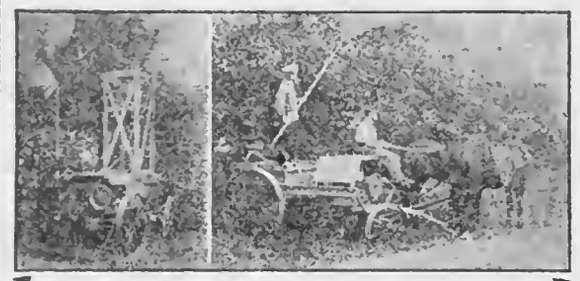

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Successful growers use Brandywine Spawn. Send $1 for enough to cover 30 sq. ft. Free booklet gives instructions anyone can follow.
E. H. JACOB P. O. Box 020 West Chester, Pa.

Training an Airedale Dog.

I LIVE on a main street where lots of autos and cars pass. My Airedale, 10 months old, well trained except he will run at time to play with any child he sees, and at times will follow some particular team he takes a fancy to. I have 29 acres, but only 250 feet frontage. I have never taken him on the street, he will rush out to play and I cannot stop him. I have whipped him, but he cannot be trusted. I have had him on a chain for four weeks. Would you give me some advice in regard to him? What would you do to train him to stay in the yard? H. F. R.
Massachusetts.

If H. F. R. has an Airedale, the Airedale can be taught to mind—the material is in the dog to work with, and the rest is with the master. By nature and by the art of breeding, the Airedale has been endowed with the gifts fitting him to do whatever a dog may be called upon to do, but proper training enables him to do it more easily and better. The Airedale has exceptional brains, consequently easily taught, obedience becomes a habit with him. In training him be sure he knows what you want him to do, and see that he does it. When you call "Come" see that he comes, or to "lie down" see that he does lie down. When the dog misbehaves, such as rushing out on a pike, to follow a team, bark at an auto, especially if you live on a main road, like in my case, the main thoroughfare between New York and Philadelphia where traffic is great, it not only endangers the life of your dog, but tries your patience also. I have no trouble in that respect, my dogs are not permitted to follow my own team or car, their place is home, and home they stay. Teach your dog from puppy up to mind, punish him in the "act" otherwise he will not know for what offense he is being punished.

Don't beat your dog, nor hit him over the head; that causes deafness, broken bones, etc. Smack him on the haunches, or a smart slap under the jaw, and above all a cross tone of voice, as the voice works wonders. The tone of voice make my dogs obey. Don't beat a dog into submission, nor break his spirit, but impress upon him that he is to do just as you say. It is not wise to chain an Airedale, he is too full of life, and as lively as a cricket. If you have any difficulty in training a dog, that has not been made to mind at the start, rather than chain him, make a pen for him out of chicken wire, about 30 feet run. That will give him exercise, as an Airedale is against his nature chained. When you go walking take him with you, he will then soon learn to mind. When you have owned one or more Airedales, you will learn to appreciate their worth. They are the best of watch dogs, are cross, but not savage or vicious. As for fighting, he is slow to take offense, but when once his "dander is up" he is game to the core, and will stay by till the finish. When the Airedale develops to maturity at about a year and a half, he loses his puppy ways, and becomes the practically useful all-around dog. His character is sterling; he is honest, trustworthy, a disposition of the very best.

W. A. L.

Sewage Disposal.

I WISH to build a sewage disposal plant for a small family of three, with one bathroom and general kitchen water. My soil is a sandy loam three or four feet deep; then it is coarse sand for 30 or 40 feet deep. Will you advise what is the best thing to build? What do you say about the system of two compartments made of concrete, square, with tile to carry off the water? What is the best and cheapest system to use, what size and how to build it?
Catskill, N. Y. G. H. P.

The simplest method for disposal of house sewage in such soil as you describe is the ordinary cesspool, or pit, made by excavating a hole six or eight feet across and as deep, or a little deeper; this to be stoned up without mortar to within about two feet of the surface and covered with soil. If such a cesspool can be dug 100 feet or more from any well and on the down-hill side of neighboring wells, it is reasonably safe and many such cesspools are in use. Where it is not practicable to carry house sewage to a safe distance from wells concrete septic tanks with tile disposal systems are becoming very popular and have the advantage of greater safety. They are much more expensive to build, however, and have not entirely superseded ordinary cesspools. They have been frequently described in these columns and are very fully discussed and illustrated in a bulletin entitled "Sewage Disposal for Country Homes," issued by the State College of Agriculture at Ithaca, N. Y. A request will bring this bulletin to any citizen of the State. M. B. D.

Turning Under Corn Fodder.

I HAVE about 1,000 bunches of corn fodder. I keep no cows, only one horse, have hay and straw. While I have not enough manure I had thought of cutting or shredding about 600 to 700 bundles, and hauling it on the sod this Fall to be plowed down in November. I do not pasture the sod, and there is a good aftermath on it. This would help me out considerably. The manure I make, I want to use on the truck. I do not wish to buy any more fertilizers, than I can help, unless it is phosphoric acid and potash, as I have only three years to stay. Corn fodder is plenty and there is not much sale for it. E. R. S.
Pennsylvania.

This plan will work. You will get more available plant food by cutting the stalks and using freely for bedding or mixing with the manure. If you can rot the cut stalks down in a moist pile they will be more like manure, and wet horse manure mixed with them will hasten their decay.

NOTES AND COMMENTS.

THAT $140 AN ACRE FROM CORN.—It must be remembered that the prices for corn, corn stover and hay are much higher in the South than in the North. The long season gives the Southern farmer a great advantage. I have known a crop of over two tons of cow pea hay made an acre after a heavy crop of Winter oats had been taken from the land the same season, and the land then left in Crimson clover for the Winter. [R. N.-Y.—The question on page 1234 was from a New York man about New York land.]

GAME LAWS.—Connecticut farmers seem to be bothered with the deer. Down here we have a foolish law making a close season for rabbits. They are allowed to plunder our gardens all Summer in order that idle men may shoot them in the Fall. There should be no close season for the pests, for no amount of shooting will ever exterminate the prolific rabbit or hare. Many of these game laws benefit no one but the idle loafers that trespass on other men's lands and are just as apt to shoot his cattle or poultry as anything else. Rabbits like deer, are a nuisance to gardeners, and should not be protected. The turkey buzzards which carry the germs of hog cholera over the country are also protected at all seasons, and I have had them flock down and drive the chickens from their food, and have had to drive them off with sticks. In fact I have taken them by the legs and thrown them over the fence, not specially caring whether I damaged them or not.

SHEEP MANURE.—Dr. Jenkins, as you say, puts the matter in a nutshell. I have used the sheep manure as an ingredient in potting soil, and tried it with very poor results in the lettuce frames. For general outdoor purposes there is nothing better than stable manure. I get stable manure delivered on my garden for 75 cents a good one-horse cart load, I suppose nearly half a ton. But our truckers pay $3 a ton on the switch by carloads from New York, and the manure I get is better and has less straw in it, but the supply is too limited for the larger growers, and I get the product of one particular stable where a pair of horses are kept for city hauling. Just now I am covering my garden over thickly with this manure. It will lie on the surface all Winter, covering the vacant spots and mulching the Winter crops of onions and spinach, and will be rotted by Spring without getting heated as it would in a pile. Then, knowing that potash is going to be hard to get and our sandy soil needs it, I took time by the forelock and laid in a supply from the stock the manufacturer had on hand ready made, and had to let the five per cent. of potash it contains go, though he will not sell any potash alone now at all. This fertilizer will be used in the Spring to balance the plant food in the stable manure. The ground where the spinach is growing was stuffed with manure before sowing, but more will do no harm, for the more nitrogenous matter at hand in the soil the finer the leaves of the spinach.

My last sowing of spinach was made the ninth of October. This I hope to get strong enough to winter over for Spring cutting, while the earlier sown is now being cut, and will be for use all through the Winter. The one crop that does not seem to have minded the dry weather is the chard. Now since spinach has come into use, it is no longer needed, and the growth is simply enormous, leaf stalks and leaves fully four feet long. It is now the 16th of October, and we are having a long deferred three-day easterly rain, and not a sign of frost yet. The manure is going on at rate of 50 big cartloads an acre, and the garden will have a splendid Winter blanket. W. F. MASSEY.

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Few things in modern home-life are more *monstrous* in their imposition on the patience, energy and well-being of women than old-fashioned heating devices. They enslave the home-makers with care-taking, litter up the rooms with dirt, damage the furnishings, waste fuel, half-heat the home. If this is current winter history in your house why not investigate the radiator-way of cleanly, healthful, economical heating—by the use of

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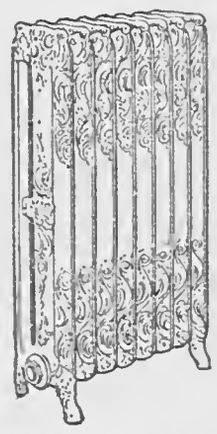

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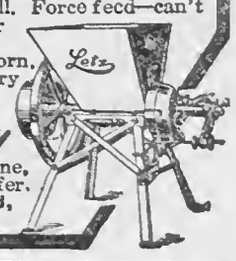

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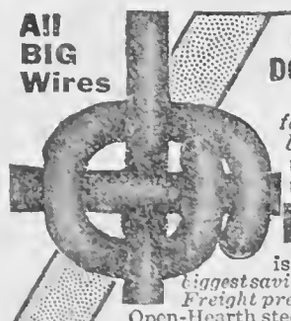

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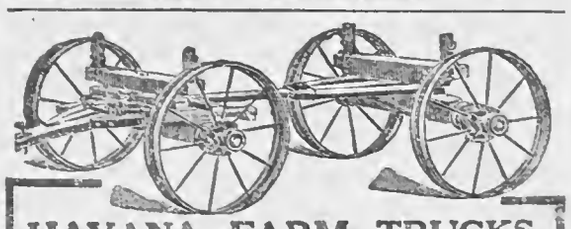

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EVENTS OF THE WEEK.

DOMESTIC.—Fire at the Kansas City, Mo., stock yards, Nov. 7, caused a loss amounting to $125,000.

The thirty-fourth annual convention of the American Federation of Labor opened at Philadelphia, Pa., Nov. 9. The convention will last two weeks. It is expected to bring out sweeping suggestions concerning the work of women and children in the United States and has a large number of women present as delegates of women and children in the various industries.

It was stated, Nov. 9, that a reserve army that will consist of more than 150,000 in five years is being trained by the War Department in coöperation with educational institutions and organizations advocating the upbuilding of a national defence machine. Foremost among the agencies for the establishment of the reserve are the students of military instruction camps, although the National Rifle Association of America, the Army League and other organizations are strong factors in the movement. Students between the ages of eighteen and thirty in universities, colleges and the graduating classes of high schools were trained at the camps during the last Summer, only those physically qualified for military service being enrolled. Army officers are detailed to these camps, and where possible regulars are present to give a touch of realism to the encampment.

The State Department received notice, Nov. 7, that the American liner Kroonland, which had been detained by the British authorities at Gibraltar, had been released and was on her was to Naples. The copper and rubber on the Kroonland, however, were taken off by the British authorities and a prize court is to determine whether the goods are to be confiscated. While the United States Government will probably have a representative at the prize court proceedings as an observer, the burden of defending the copper and rubber taken from the Kroonland lies upon the ship owners and the owners of the goods. Should the prize court declare the goods prizes of war and order them confiscated as contraband destined for the enemy, it is expected the owners will appeal to the State Department, which will then take up the case diplomatically. This case seems likely to be the first test of the British policy of making the ultimate destination of contraband of war the determining factor as to whether it shall be seized or not. The British contend this copper and rubber, consigned to Naples, were really destined for points in Germany.

Richard J. Hartman, who figured in the opera ticket speculation scandal, in New York, last year as president of Tyson & Co., was arrested here, Nov. 10, on the eve of his departure for Europe and lodged in the Tombs prison, charged with the larceny of nearly $700,000 from Mrs. Charlotte L. Mackenzie, widow of James S. Mackenzie, at one time an official in the Singer Sewing Machine Company. According to the information on which Hartman's indictment was secured, his thefts cover a period of three years, during which time he operated with the woman's stocks on the strength of the power of attorney she unwittingly granted him. His speculations have deprived her of her entire fortune, it is alleged.

Reports from Butler Co., Ky., state that the district is terrorized by "night riders," who have been guilty of many outrages.

Henry Siegel, the department store man of New York, under many indictments for larceny in connection with his banking business, was put on trial at Geneseo, N. Y., Nov. 10, feeling against him in New York City being used to obtain change of venue. Ten of the jurors are farmers.

James Powers, head of the Tax Adjustment Bureau of 69 Wall Street, was sentenced by Judge Rufus E. Foster in the United States District Court, at New York, Nov. 11, to serve two years in the Federal penitentiary at Atlanta for using the mails to swindle persons who already had been defrauded in a real estate deal. Powers, it is said, discovered some time ago that a realty company had sold a number of lots under water at Montauk Point, L. I., and that the owners of these lots had not paid their taxes. On the stationery of the Tax Adjustment Bureau he sent these land and water owners a notice that their property would be sold for unpaid taxes unless they sent him $5.86. Thinking that the tax bureau was an official office many of these people, it is said, sent him the money. In all he is said to have taken in between $15,000 and $20,000.

FARM AND GARDEN.—The twentieth annual report of the Granite State Dairymen's Association contains among other interesting matter an article on "More and Better Cows for New Hampshire," by P. A. Campbell, manager of the Balsams Stock Farm, Dixville Notch; also articles on "The Milk Question from the Consumers' Standpoint," by Dr. J. R. Williams, of Rochester, N. Y. and "Summer Forage for the Dairy Cow," by Prof. F. W. Taylor, of New Hampshire College, "Winter Roughage for Dairy Cows," by Dr. J. L. Hills of the Vermont University. The secretary of the association is Fred Rasmussen, Durham, N. H.

The Connecticut Horse Breeders' Association is trying, with the aid of the Boston Chamber of Commerce to induce New England people attending the International Live Stock Show, Chicago, Nov. 28-Dec. 5, to travel together in a special car. Those interested may learn particulars from the president of the above association, Stanton D. Wicks, Pomfret, Conn., or the secretary, H. L. Garrigues, Storrs, Conn.

The cattle quarantine has been extended to New Jersey, Montana, Rhode Island, Kentucky and Delaware, also Canada, though the disease has not yet appeared there. In addition to bovine cattle, dogs, horses, hens, ducks and pigeons are reported infected in one New Jersey case. The Philadelphia stockyards were found to be infected, Nov. 10. Nov. 14 Commissioner Huson raised the quarantine in New York, except on Kings, Queens, Seneca, Wayne and Erie Counties, where the disease still exists.

It was entered on the records at the Nov. 9 session of the hearing in the New York Attorney-General's suit for the annulment of the charters of certain corporations who may be guilty of entering into a monopoly for the manipulation of butter and egg prices that the difference in the price that a farmer got for his eggs in 1913 and the price paid by the consumer was anywhere from 18 to 33 cents a dozen. This statement was reputed to have been made by Henry Dunkak of the firm of Zimmer & Dunkak, 173 Duane Street, and a former president of the Mercantile Exchange, in an interview with an investigator and was reread to Mr. Dunkak when he was on the stand by Deputy Attorney-General Kennedy. The farmer received 17 cents a dozen for his eggs and they cost 23½ cents when they were laid down in New York city. The jobber paid 25 cents for them (it was in December) and the retail dealer handed up 28½ cents when they reached him. Then he sold them to the consumer for from 35 to 50 cents a dozen. Mr. Dunkak testified that the cost to the consumer depended largely upon whether the eggs we e bought in a fancy store or a less pretentious place. Queried as to whether a retailer could mix cold storage with fresh eggs, Mr. Dunkak said he didn't believe he could do it as a regular thing. Howard J. Runyon of J. D. Stout & Co., receivers and jobbers of butter, cheese and eggs, 19 Jay Street, said the profit in his business is about four per cent. gross and two per cent. net. He said conditions have changed in the butter business in the last 10 or 15 years, and cited the installation of separators on the farms as one of the changes.

The Wisconsin College of Agriculture, coöperating with the Potato Growers' Association will hold an annual convention and exhibition at Grand Rapids, Wis., Nov. 18-21.

THE EUROPEAN WAR.—Nov. 7 the forts at Tsing-tao, China, surrendered to the Japanese besiegers, who captured 2,300 prisoners. The Japanese Ambassador at Washington announced that a Japanese-British garrison would occupy the fortress until the end of the war, when the question of returning the territory to China would be considered. .....The British Admiralty confirmed the loss of the cruiser Good Hope in battle off the coast of Chili, Nov. 1, stating that the Monmouth was beached, place not given; the Glasgow and Otranto escaped to the Falkland Islands (British territory).....The German cruiser Yorck was blown up by a mine in a German harbor with the loss of 266 men. .....Nov. 9 the German commerce destroyer Emden was driven ashore and burned in a fight with the Australian cruiser Sydney. The Emden was beached on an island in the Cocos group, southwest of Java. During the past three months the Emden has destroyed British vessels amounting with their cargo to a value of $10,000,000. The Konigsberg, another German cruiser causing great damage to British shipping, was trapped by the British cruiser Chatham when hiding in a shallow river on the coast of German East Africa, where she was bombarded, and then bottled up by sinking colliers acro the river..... Nov. 11 the British torpedo gunboat Niger was sunk by a hostile submarine in the Channel, off Deal, without any loss of life.....Russian forces were reported 10 miles within the East Prussian border, Nov. 10, and they were also in the Province of Posen.....Italy is sending troops to Tripoli, where Italian colonies are threatened by the Bedouins. It is asserted that Turkish and German emissaries are causing trouble..... The Allies are gaining in Belgium, where violent fighting continued Nov. 7, 9, 10. German forces were again bombarded by the Allies' cruisers on the seacoast at Dixmude. The Germans' bombardment of Ypres was reported to cause great destruction. In Alsace the German attack on Ste. Marie Pass is reported to be repulsed.....Nov. 11 the Germans captured Dixmude, but were unable to cross the Yser.....British and French warships have destroyed Dardanelles forts. The Turkish commander at Beirut threatens reprisals on Christians for any Mussulman losses.....A Turkish force is said to have invaded Egypt. The Ottoman fleet has bombarded Poti with heavy damage.

LIMA bean thrashing is being done as fast as the beans are dry enough. The Summer weather being rather cooler than usual, delayed the ripening of the beans on the rich, moist soil, which delays the finishing of the harvest. The culture of the Lima bean began here about 48 years ago. The few seeds, found an ideal soil and climate so they were a great success from the first. The growth of the Lima bean on a commercial basis in this State began here first in Carpinteria Valley, about three-quarters mile from the Pacific Ocean. Their growth has spread from valley to hill soil, along the coast for 200 or more miles. They seem to thrive the best in the moist climate of the ocean. As yet but few insects or other pests have developed to do much harm. So the growth of the Lima bean will be continued. Some of the best soils yield a ton or more per acre, while some of hill and thinner soils yield only one-quarter to half as much. Rich, deep, moist soils are the ideal for the growth of Limas. A large percentage of the Limas grown here go into the seed warehouses, where they are made ready and shipped to Eastern seedsmen. For about 20 years but one variety was grown for the market, the old pole variety we started with. No poles are used here, they run over the ground just as they like to. Since their growth for seed began new varieties have been introduced and developed. Now many of the bush type or short vine kinds are grown. Much careful work in thrashing and handling is required to prevent breaking and splitting, as all such must be cleaned out of the seed beans and sold at a cheap rate.

Carpinteria, Cal. O. N. C.

THE Department of Agriculture tells of a method of burning out the stumps of long-leaf pine, which is used in the Southwest. A trench about eight inches deep is dug around the stump. Then a hole 1½ inch in diameter is bored down from the bottom of the trench into the stump. A small stick of dynamite is exploded in this hole so that the stump is cracked. Then when fire is built in this hole a draft is created which keeps the fire going until the stump is burned out.

COMING FARMERS' MEETINGS.

Maryland Week Exhibition, State Horticultural Society, Maryland Crop Improvement, Dairymen's and Beekeepers' Association, Baltimore, November 16-21.

Institute and convention, Lycoming, County Farm Bureau, Williamsport, Pa., November 17-20.

Annual Show of the Paterson, N. J., Poultry, Pigeon and Pet Stock Association, November 18-21.

Indiana Apple Show, Tomlinson Hall, Indianapolis, Ind., November 18-24.

Dover Poultry, Pigeon and Pet Stock Association, tenth annual show, Dover, N. J., Nov. 23-28.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury, Conn., Inc., nineteenth annual exhibition Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary. Thomas Deans, 39 Hoyt St., Danbury, Conn.

Auburn Poultry Show, State Armory, Auburn, N. Y., Nov. 30-Dec. 5.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Ohio-Michigan Land and Live Stock Exposition, Toledo, O., Nov. 22-Dec. 5.

"PLEASE lidy, will you help a poor man who ain't done nothin' in the way o' work for more'n twelve munce?" "Dear, dear; perhaps I could find you something. What can you do?" "Thank y', lidy, thank y' kindly, mum; ef y' could p'raps give me some washin' ter do, I could take it 'ome to my wife."—London Opinion.

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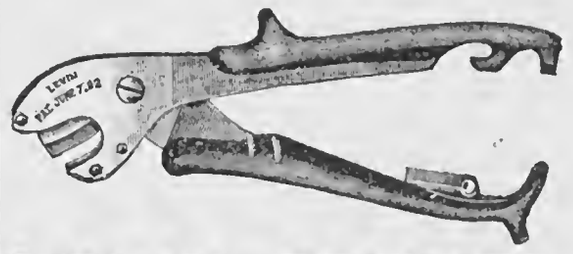

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Keeping Strained Honey.

I HAVE about 60 pounds of extracted honey which I got in a large tin can. Will it be all right and will this honey keep if put in glass jars with tight lids? If not how should it be kept until the family can use it? L. K. B.

Honey will keep in any kind of a container, whether tin or glass. It will not mold, nor will it sour unless it is kept in open vessels exposed to a cold wet atmosphere, under which conditions it will absorb enough moisture from the air to become thin and watery and become sour in time. Glass jars are all right and considerable honey is sold in them, the only objection to their use being that it is usually difficult to keep the honey from oozing out from under the lid.

E. R. R.

"Teachers" For Farm Women.

WHERE are all the farm women, to sit quietly by and hear so much said and read, so much that has been written about farm women? Only the other day I read in some paper what some woman thought was most needed by us, and would you believe it, she thought we should have teachers sent out by the Government to teach us how to cook! I think she spoke of bread as one of the things we particularly needed instruction in, it was rather amusing to me, and I would like to tell you why.

The early part of my life was spent in a large village; later I was, for many years, a teacher in the rural schools. During that time I was entertained by nearly all the families connected with the schools in the various districts where I taught, and for the last eight years I have been a farmer's wife. I am much interested in Grange work and have had an opportunity to visit a good many Granges, thus making a large number of friends among farm women, besides having a chance to know about their ways of living. In all the farm homes where I have been entertained or where I boarded we had good bread and it wasn't baker's either, and the women took pride in their cooking and in serving good wholesome meals, and in keeping their houses clean and orderly. How is it that so many premiums are awarded to farm women at fairs and places where both farm and city women compete if we are such poor cooks? And why do our city friends like to run out on Sunday "to get a good dinner?" I have even had some of mine ask me to bake various things for them when they were preparing to entertain, and wanted everything "to be just right." And yet we need teachers! If you want to eat the very best dinner ever, just go to a Western New York Grange dinner.

A. FARMER'S WIFE.

Take the Wife's Advice.

JANUARY 1st I put a man on my 10-acre farm, under salary, supplying lumber, 720-egg incubator, brooder, and 2,500 eggs. The proposition was that he should get up poultry houses and hatch flock which we estimated would number at least 1,000 pullets laying in October. The result has been 500 pullets and 300 broilers, one house 40x16, one cellar and brooder house over cellar 14x12, four colony houses 12x10 and general clear up of place, which was neglected; no work on land. It is now clear that expenses will not be covered out of 500 hens, and my man states that I must find $1,000 for more buildings and running expenses for one year, to go in bigger, say 2,000 birds in Fall of 1915. I am a city man, my wife most capable, which I am not; ready markets for all produce. Shall I keep the man with the extra risk—or shall we move on the farm and try our own luck with the 500, gradually feeling our way to work? I have set out 200 apple trees this season, and am taking your green crop manuring formulas, having plowed under rye in April—and sowing vetch, etc., among corn in August. Am I safe in expecting 500 hens to produce as follows at least in 12 months: 50,000 eggs, 4,166 dozen at average 30 cents, $1249 gross? G. B.
New England.

Probably the best advice that I can give you is to take the advice of your wife in this matter. She knows you and your circumstances as I do not, and in the poultry business and on the farm the advice and help of a capable wife is worth far more than that any stranger can give. If it is your purpose to make a livelihood from poultry, you will work at a great disadvantage if you attempt to do it at a distance and with hired help. I will not say that it is impossible, but it is certainly highly improbable that you will be able to accomplish it. You have an immense deal to learn, and the only way to learn it is by actively engaging in the business. You should not have expected to produce 1,000 October layers from 2,500 eggs; getting 500 good pullets from that number of eggs is doing well. This is a good start, and under all ordinary circumstances it would be far better to make these pay with the equipment that you now have before investing another $1,000. No, you are not *safe* in expecting 500 hens to lay 100 eggs each during the year; they ought to do it, but dear, dear, how many excuses they can find for neglecting their work! If you are a city man without experience with farm and poultry, you will work at considerable disadvantage in many respects but this disadvantage will be at least partly counterbalanced by your willingness to learn and your eagerness to take advantage of what others can teach you; at the same time my advice to city men in good positions is to go very slowly at burning the bridges behind them as they embark in the poultry business for a livelihood.

M. B. D.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards thier property and their children. There will be direct answers to actual questions and general statements of law.]

Disposing of Property by Will.

I AM going to make a will soon and give all I possess to my only brother absolutely. If my brother dies before I do, can I direct all to be given to my deceased sister's and brother's children, share and share alike, which I would like to do if it would be lawful according to the law of New York State? H. D.
New York.

You may by will legally give all of your property to your brother, with the reservation that in the event that he should die before you, then all your property should go to the children of your deceased sister and brother.

Requirements of Sanitary Code.

I AM writing to see if there is any way to secure justice regarding some of the provisions of the new sanitary code which goes into effect Nov. 16, in this State. According to this "code" it was intended to require a license of every one, everywhere, who sells milk at retail. Also they must have their dairies scored and the grade of milk stamped on the bottle cap. To these requirements no one could justly object but it now develops that only milk "peddlers" are meant while the man with a few cows can sell "any old thing" and go free. This is a manifest injustice. It does not seem right that I be compelled to secure a license while several people in town who keep one to three cows may sell milk without restrictions. What would be the sense of a law allowing anyone to practise medicine without a license so long as he had only a few patients while the skilled physician was required to procure this permission? F. H. T.
New York.

Your position is well taken and your argument well put if your premises are correct. Chapter III of the State Sanitary Code respecting milk and cream provides in part that "*No* corporation, association, firm or *individual* shall sell or offer for sale at retail milk or cream in any city or village without a permit from the health officer thereof, etc." This provision does not seem to limit its scope to *peddlers* merely, but to everyone who sells at retail. And if your local health officer is going to apply it to peddlers only you should lay the whole matter before the State Health Department. The new regulations going into effect November 16, 1914, materially change the present law and among other things provide for the inspection of every farm and dairy where milk and cream is produced for sale.

Right to Property.

IF a widow had four children by the first husband, four by the second husband and if the mother should die, could the first four children claim their mother's third in the property if the second husband was living? This property was accumulated by her second husband? If so, how could it be prevented?
New Jersey. S. J. S.

While the second husband lives, even though his wife die, there would be no distribution of his estate and, of course, the first children could get nothing. The second husband would have to die first to give the wife her dower. This dower of one-third is only for the wife's life, and at her death would go back to the husband's heirs. The mother can always disinherit her children by will and leave her property as she chooses, although in New Jersey she cannot defeat her husband's courtesy.

Verbal Contract; Rental of Farm.

I OWN a farm about 10 miles out of the city which I rent, or let, out on shares. Last year I let the farm out on verbal contract, each of us to buy one-half of the grain and phosphate used, and each to share equally in what the farm produced. My man seems somewhat unreasonable, and says the verbal contract is no good. He also says he can hold one-half of the manure made on the farm and sell it. Will you state if a verbal contract is legal and for how long, and also state if the law in New York State will allow a man taking a farm to work on shares to sell the manure. If the tenant breaks the verbal contract can he be put off of the farm and how? When he took the farm it was mentioned he should have one-half the milk, one-half the hogs, one-half the grain raised, one-half the eggs and chickens and one-half the fruit.
New York. J. W. W.

A *verbal* contract which, by its terms, is not to be performed within a year from its making, is void and cannot be enforced. On the other hand an oral lease of real property for a period not longer than one year is good, and it is a question under which of these rules your agreement comes. In any event your man is as badly off as yourself if there is no contract. He is then a trespasser after you notify him to leave and give him a reasonable time to get off. Thereafter he may be put off by dispossess proceedings. The law recognizes that good farming requires that manure made on the farm be left there, and where there is no agreement otherwise the tenant may not take away any of the manure. There is so much uncertainty on both sides that it would seem under all the circumstances to be a good case to try to come to some amicable arrangement with your man. It will save you both much trouble. M. D.

Trespass.

A CROSSES B's lot; B does not forbid A going and has no signs posted. Can B get a case of trespass against A? 2. A. goes on B's lot and swamp on a road. B says it is all right at the time. Can B bring suit against A and collect damages? A. H. D.
Maine.

1. In a technical sense this is a trespass and B could sue and get damages—probably amounting to no more than six cents. If A crossed the field for a long time and B knew of it and made no objection it would amount to a permission and B could not sue A until he had revoked this tacit permission. 2. B having said it was all right at the time and having given his permission, cannot now sue A for trespass unless A exceeded the permit and did damage.

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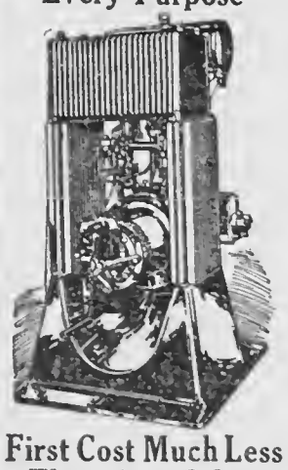

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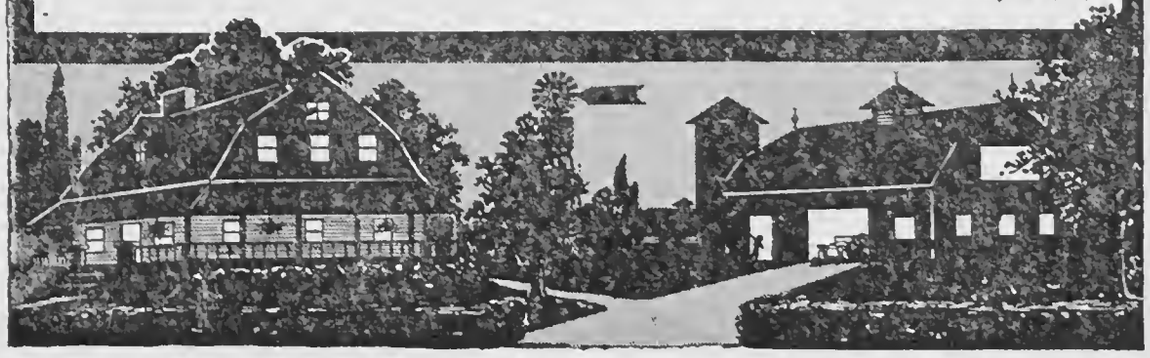

:: Hope Farm ::

THE STORY OF A DAY.

ELECTION.—Election day dawned clear and bright. I once worked for a farmer in the West who called such a day "Republican weather." That was the time they herded the "floaters" up like sheep and stood over them while they voted. Call it what you like, the day was perfect. Merrill had started with a load of apples before I got up. These are lively times with the fruit, and day by day the big wagon goes to the county town smelling like a great bouquet all along the road. A Baldwin from our hills—just beginning to "mellow up"—beats a rose for perfume. We are selling our apples early, for later in the season I expect to see a big share of the nation's crop dumped into this territory. Already I see in New York peddlers selling beautiful Hood River apples at three for five cents. So our crop is elected for early sale by a large majority. We have no trouble in selling it all within 15 miles of the farm. I would rather not ship it away.

RED HENS.—The children were up waiting for me, for important events had happened. We had breakfast together. A simple meal—baked apple, oatmeal, toast, coffee and an egg. Then I must come out and see the new hens. You see I have obtained the pen of R. I. Reds which Dr. J. A. Fritchey had at the egg-laying contest. They were second among Reds—laying 1,614 eggs during the year. The 11 hens had come, and the children were greatly excited over them. I have always wanted to try my hand at developing a good strain of poultry. But why select the Reds? They certainly match the children in one way at least, and I think the public will come back to a general purpose breed. The present craze is for Leghorns, I know, but I think it will be overdone and there will be a great future demand for *meat*. They tell me the Reds are "broody," and some say lazy, but I notice the best of them lay when eggs are bringing highest prices. At any rate the children and I make our bow as "Red" breeders! Philip and I plan a house exactly like those used at the egg-laying contest, and the hens will be fed on the same plan. I want to buy one or two of the finest utility males I can get. If possible I will buy the son or father of some hen with a high certified record and see what we can do. Now please do not come after eggs and stock from this pen, for we have none to sell. This first year will be devoted to starting our flock. At any rate, it would not be fair for us to compete with other breeders in the sale of stock. Our plan is to breed in the best lines we can find and enter a pen of our pullets in the next egg-laying contest. I do not know any better way of showing what you have.

WORK.—While Merrill was gone with his load Philip went at the great mound of apples in the cellar, preparing for the next day. The warm Fall has been bad for the fruit, and the Greenings and Spys begin to show decay. We sort over everything with great care, the idea being to give our customers more than they expected. One of the Italians went into the ditch. We are preparing to pipe water from our hillside spring down to the house. This spring was dug out and a concrete cistern built around it. From this the water will be brought to the house so as to give good pressure. Some day I expect to sell this spring water—at any rate, it will now supply the house and give us a chance to irrigate the garden. This Italian is an old mason, who knows how to do such jobs. The other Italian goes to pulling mangels. The crop is fair. We have let it stand as long as seems safe. Now we pull the roots and throw into piles. A little later the tops will be cut and stored for cow feeding, and the roots put into lime bags for sale and storage.

YOUNG FINANCIERS.—School does not begin until nine o'clock and the children all ask for a job. They are put at pulling mangels. No, the Hope Farm children are not models of industry. They want to earn some money for a special purpose. Our children are not given spending money, but they are paid for their labor. The boys want to buy a bicycle, but Mother tells them they must first show a balance in the savings bank of $50—then they can save for the wheel. The first bank deposit was made four or five years ago. Now one of them has over $50 and another about $48. Thus they are hunting for "jobs" in order to elect that wheel. They pulled mangels until the school bell rung. I peeped into the school room and saw Mother drilling our little folks and some of the neighbors' children—then I went back to study the new hens. I might have had a nomination for Congress in our district this year, but up here on the hills to-day I am satisfied that I stand a better chance for election by these Red hens than I ever could at the hands of my fellow citizens. I have an optimistic friend who figures this way: These 11 hens ought to give you 2,000 eggs. Suppose you sell 20 sittings at $6 each and hatch out and raise 100 each pullets and roosters, and then sell 90 dozen eggs at an average of 30 cents. See what you have:

Sitting eggs	$120
100 pullets at $3	300
100 roosters at $5	500
Eggs	27
Total	$947

I presume that even a Prohibitionist might become intoxicated on figures and still retain his party standing, but this is too much for me. It is not unlikely that more than half of this sum could be obtained from a pen that won first prize at our egg-laying contest. I know that breeders ask $20 and more for a single bird guaranteed to be brother or son of a high-record hen. I have no dreams of any such windfall blowing off the Hope Farm plum tree, but somewhere along this line lies opportunity for some patient young man.

THE FARM.—I try to make it a point to look into every nook and corner on election day. Formerly we always planted trees, but I have given up Fall planting. I well remember the election day when we planted our first orchard. At night I looked to the west and there were those little sticks on the hill standing up against the glowing sky. They looked puny enough that night, yet this Fall we picked over two barrels of apples from some of them. We may be able to elect our hens in much the same way. The farm never looked more promising than it does to-day. The strawberries are clean and have made a fine growth. Both peach and apple trees are loaded with fruit buds in spite of what they gave us this Fall. All over the hill the cover crops are bright and green, and next year we can again plow under the equivalent of eight tons of manure per acre—a free gift in return for our seed and seeding. He who puts his faith in political parties may or may not be elected, but rye, vetch, turnips and lime are sure as the sunrise. The corn fodder is fit, the mangels and carrots are ready—the farm never had greater cause for Thanksgiving. There is no rye growing on the mangel field to be sure, but the little swamp is close by, and we can haul out 30 loads this Winter, compost it with lime and spread it in Spring.

DINNER.—Merrill got back about noon. Tom and Broker, the big gray horses, were tired, and their stalks and grain tasted good to them. We all lined up at dinner and made a tableful—though the first brood has grown too large for the old hen and gone out to work and school. We made an even dozen at dinner. There was a good stew, potatoes, beets, onions, hominy, bread and butter, baked apples and canned peaches. That is all this was in sight when we started. I do not speak of what was in sight when the last child was satisfied. You ought to read in the last *Atlantic Monthly* about the two little colored boys who never seemed to have enough to eat. As a last resort the cook proceeded to "stall" them—that is give them plate after plate until they could not possibly eat more! We never tried that, but even after this great dinner the children filled their pockets with apples before they went back to pulling mangels. I pulled with them for a while, and then went at the apples. There was another big load to go in the morning, and also four barrels to be shipped by freight. Merrill and Philip packed these while I went to vote. Years ago I was president of a campaign club and went around picking up the voters. It is against our laws to do that now, and I am glad of it. I just walked into a booth, marked my ballot and voted. The men I voted for were not elected—except in one case where there was only one candidate—but that was my business, and I had to be satisfied. When I got home the children were lined up for a new job. It seems that I had agreed to show them how to kill peach borers, so I sharpened up our knives and started in. It is getting rather painful for me to get down close to our low-headed trees, but the children crawled under the limbs like cats. I taught them to hunt for the gum and the "sawdust" in it, as sure indication of a borer. When they found the burrow they learned how to cut *down* and not across the trunk until they found the rascal at work. When they get a borer they put him in a bottle as proof of what they have done.

NIGHTFALL.—The November day ends early up among our hills, and there comes a sharp chill in the air as the sun goes low. The children had their early supper of bread and milk, and then ran out for a last look at the Red hens, and the black calf, and for a last round of play. Mother has been writing letters and sewing, and she was glad to come down to sit before my roaring open fire. Merrill went with the freight and voted before he returned. Philip brought up the cow and did the chores. The big wagon was stuffed so full of apples that the side curtains bulged out. It was all ready for the trip. In the early morning Merrill will hitch the grays to it and off they will go through the frosty starlight in order that a dozen households may have apple sauce and pie. The mangels are all out, the ditch is ready for the pipe—and here comes the call for supper. To-night it is baked beans, pot cheese, salad and baked apples.

I have known people who shudder at what they call the "lonely country nights!" No shudder comes to us as we pull down the shades and get ready for the evening. Before my fire as I write the little boys are studying a catalogue and comparing prices of bicycles. Mother is at the telephone chatting with friends who live a dozen miles away. If need be she could reach both of the big girls at school and college over the long distance. I look out into the bright starlight and am thankful that we can have our home up here among the quiet hills and enjoy this second brood of children where they can remain natural little boys and girls. In town and city men and even women are excited and nervous over the election—here among the quiet and lonely hills at the end of our working day we can appreciate Whittier's old-fashioned poem, which so truly pictured the thought of country people in those bitter and trying days of the war:

* * * "We have a country yet
The praise, O God, be thine alone!
Thou givest not for bread a stone;
Thou hast not led us through the night
To blind us with returning light:
Nor through the furnace have we passed,
To perish at its mouth at last.

H. W. C.

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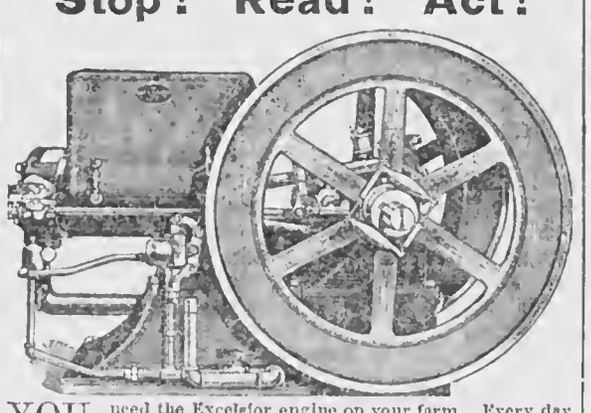

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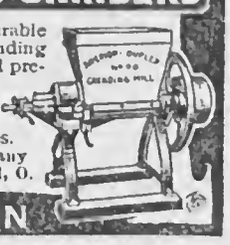

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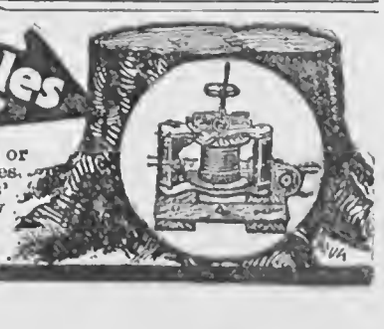
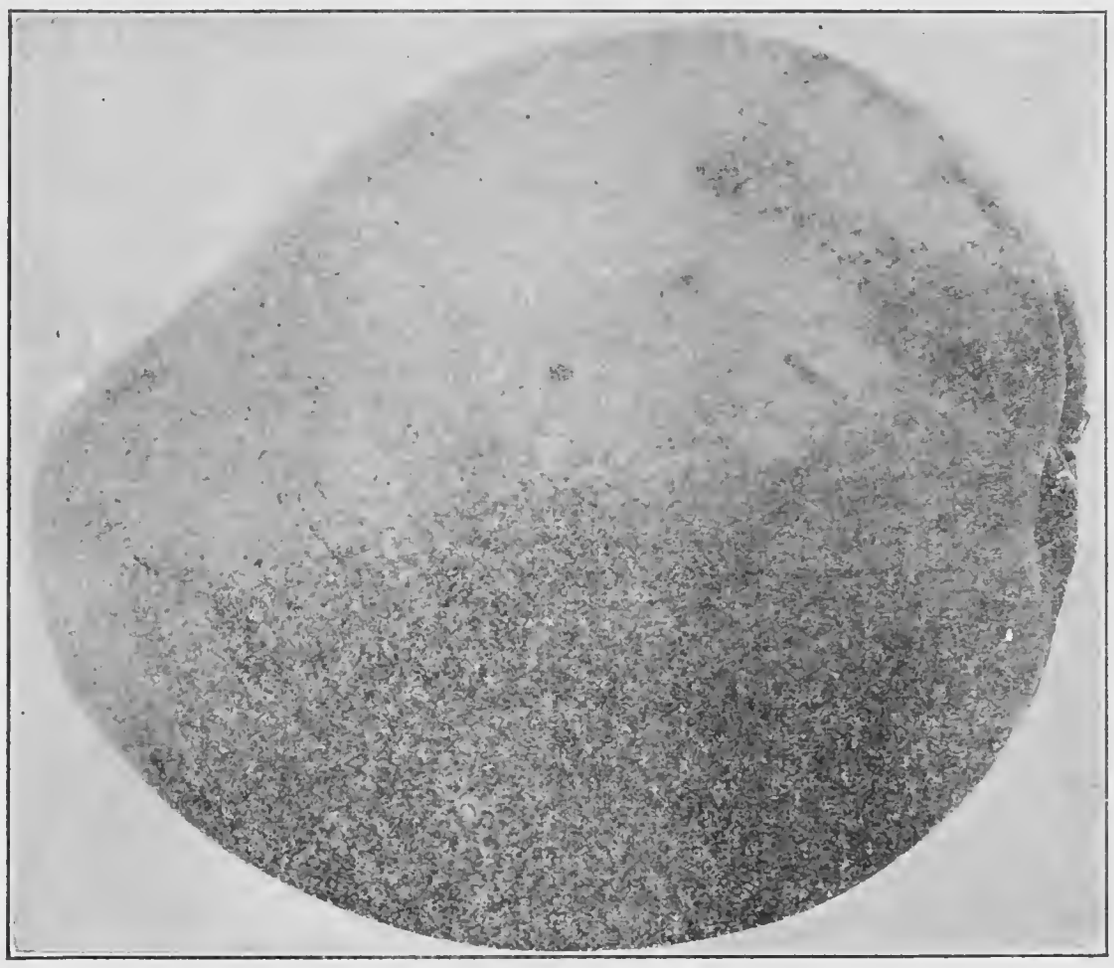


:: Ruralisms ::

THE ROSE MANGO.

THE mango is a tree belonging to the Cashew nut family common throngh India and Malaysia, and now widely introdueed through the West Indies and tropieal Ameriea. It is very variable in shape, size, color and quality; sometimes the fruit is rich and melting, sometimes so stringy and ill-flavored that it is likened to tow soaked in turpentine. The



THE ROSE MANGO, OR MANGA DA ROSA. FIG. 593.

specimen shown in Fig. 593, known as manga da rosa, or rose mango, is a superior form grown on a commereial seale at Pernambueo, and to a less extent along the Brazilian Coast. It is reproduced from a photograph secured during the reeent Brazilian expedition sent out by the Department of Agriculture, which was published in Bulletin No. 99 from the Office of Foreign Seed and Plant Introduction. This rose mango, supposed originally to have come from Mauritius, is a very handsome fruit, deep apricot, overlaid with salmon and flame eolor, the flesh deep yellow. The quality is agreeable, and the fruit has excellent keeping and shipping qualities. The bulletin states that large quantities of this mango are shipped from Pernambuco to Rio Janeiro, and there sold at 65 to 80 cents each.

Mangoes vary in form, some being kidney shaped and some rounded; they weigh from one-fourth to three-fourths of a pound. They are occasionally grown under glass in Europe, both in botanic gardens and private conservatories.

Fruits for Home Use.

WILL you give me a seleetion of the following trees for private use on plot 67x200? Six apple trees; four pears; four peaches; two plums; 10 grapevines. A. T.
Wortendyke, N. J.

The following selections are exeellent varieties for family use, and will be found very satisfactory: Apple: One Early Harvest, one Sweet Bough, one Gravenstein, one Twenty Ounce, one Baldwin, one Winesap. Pears: One Bartlett, one Clapp's Favorite, one Worden Seekel, one Lawrenee. Peach: One Carman, one Elberta, one Mountain Rose, one Iron Mountain. Plums: Lombard, October Purple. Grapes: Two Moore's Early, two Moore's Diamond, two Concord, two Coco, one Worden, one Campbell's Early. K.

Starting a Nut Industry.

THE English walnut is a great industry in some localities for the simple reason that some observing farmer of by-gone ages picked out the best trees from among thousands of wild trees and propagated them. That is the way we got the Baldwin apple, and all our other fruits. You would be rich if you had an orchard of trees like the best Black walnut growing in America, or the best English walnut, or the best hickory, or the best northern pecan, or the best hazel nut, or the best persimmon. The trouble is that we do not yet know where these trees are, but they are probably growing on the farms of some of the readers of this paper. We now know how to propagate these trees, so all that is needed is to find parent trees. Can't you help? If you know of a promising tree, send a description of it and its bearing history, along with some of the nuts to Dr. W. C. Deming, Secretary of the Northern Nut Growers' Association, Georgetown, Conn. You may get one of the $5 prizes that the association is offering for the best hickory, walnut, or hazel tree that is an improvement on those already known. The Northern Nut Growers' Association is doing pioneer work in this line, and the results of the competition will be reported in this paper. J. RUSSELL SMITH.

Immune Chestnuts; Filbert Cuttings.

HAVE the European and Japanese chestnuts been tested thoroughly in respect to the chestnut bark disease, and are they immune? Is the chestnut bark disease the thing that has weakened the chestnut in the South? 2. Will filberts grow readily from cuttings, as stated by some? E. R.
Brownsville, Ore.

1. The European and Japanese species of the chestnut have been tested and found to be less subjeet to the blight than our native species, but they are not immune to it. The disease has existed in China for ages, perhaps, and it was brought here by importing chestnut trees. This disease has spread southwestward from New England and has done untold damage to the cultivated and wild trees as far as Maryland, and is progressing steadily onward. There are several regions in Virginia that are infeeted but efforts are being made to stop the disease. Burning every part of the affeeted trees is the only way to destroy the germs. No trees or scions should be got from any infested region.

2. Filbert eutting may be rooted but with diffieulty. The best way to propagate the plants is by banking up the bushes and inducing them to strike roots, when they may be ent off and transplanted. It is also practieable to grow seedlings and bud or graft them with the approved varieties.

H. E. VAN DEMAN.

Care of Apple Trees.

I HAVE an apple orehard about three years old; trees healthy, but were trimmed to exeess two years ago, and do not bear very well. The ground has not been plowed in four or five years and is in sod now. Would it be well to plow this Fall and crop in Spring? G. H. B.
Jackson, Mich.

An apple orchard that is 30 years old ought to be in good bearing condition and excessive pruning and lack of culture are probably accountable for the scarce fruitage. It would be well to plow the ground this Fall and next Spring begin early to cultivate it with disk and spring-tooth harrows, which should be kept up until August first, going over it after every rain to keep the moisture in the soil. It would be well to spread some stable manure on top of the ground after the plowing and let its substance soak in to add fertility. No crop should be put in until next Fall, when some eover crop like Canada peas or vetch should be sown.

H. E. VAN DEMAN.

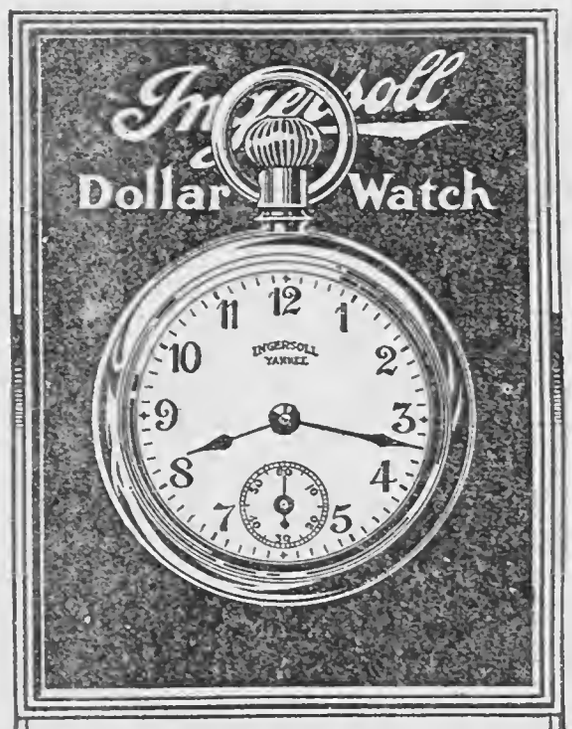
Protecting Your Seeds.

WHEN you put away your seeds this year, try putting a few "moth balls" in with them to prevent the development of weavils, worms and bugs. There are other remedies and good ones, but they are mostly bothersome or dangerous, and also the best of them kill the destructive "critters," but they do not repel the invaders in the first place or avert whatever damage they do before they are killed. Garden pea seed is greatly subjeet to weevil, and other seeds seem to invite destructive bugs and worms, but the moth ball appears to change all this and entirely discourage the pests. Your pea seed need not come out in the Spring full of holes, nor your other seed in bad order, with vitality much reduced. Put your seeds into clean, dry saeks and in each quart of seed of any kind distribute say three moth balls. In smaller packages put one moth ball, of course, or even half of one. The seed does not seem to be injured by the moth balls, but their odor is the most effeetive "keep out" sign for destruetive vermin that I have found.
ROBERT S. DOUBLEDAY.

R. N.-Y.—These moth balls are recommended by gardeners for repelling vine insects. As for weevils a treatment with bisulphide of carbon so often described in THE R. N.-Y., will prove sure death.

The Black Walnut.

I NOTICED an article in a recent issue from M. H. M., Virginia, inquiring about the price and market for Black walnuts. The market and demand should be better for this delicious and valuable nut; the English walnut does not compare with it in flavor, when used in bread and cake, conserves or candy, or when eaten out of hand it is delicious. The difficulty in cracking the Black walnut is it only drawback, but its fine flavor is well worth the extra work. Boost the Black walnut. E. E. B.
Minneapolis, Minn.



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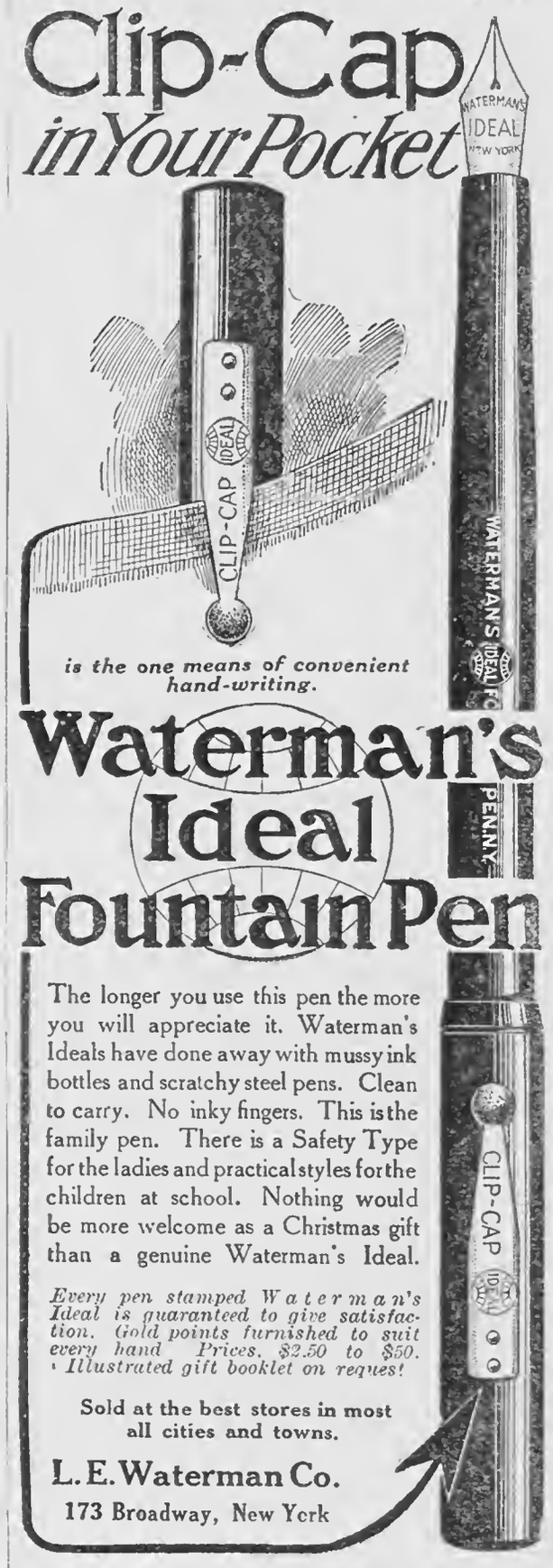

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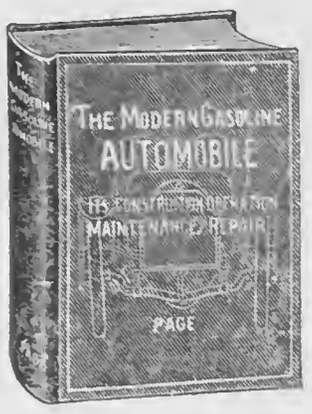

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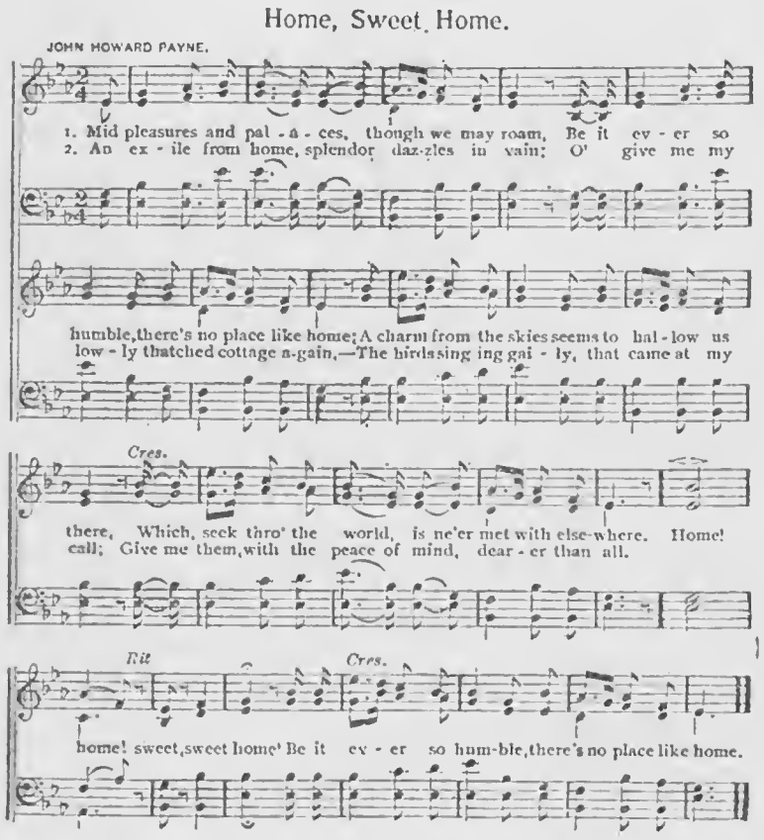


*

AT the request of many readers we print on page 1383 a careful article by Dr. Alexander on the foot and mouth disease. As will be seen, this disease is highly contagious, while not necessarily fatal. Every precaution should be taken to stamp it out promptly and prevent its spread. It should not have been permitted to gain such headway. The daily papers, as usual, are widely trying to create a scare by talking about increased meat prices. Our reports indicate that the quarantine will soon be raised and normal shipments resumed.

*

AT Toronto, Canada, efforts are being made to advertise the apple crop by giving part of it away. Farmers, the Salvation Army and owners of auto trucks combine in this work. The farmers give windfalls, the "Army" provides pickers and distributes, and the trucks bring the fruit to the city. Business men contribute bags. With the apples goes a circular telling how to cook and dry them. While thousands of bushels of fruit rotted on the ground or brought barely 50 cents a barrel consumers in Toronto were paying $3.50 at retail. If this same auto service and distribution could be used for selling apples as well as for giving them away both producer and consumer would be better off.

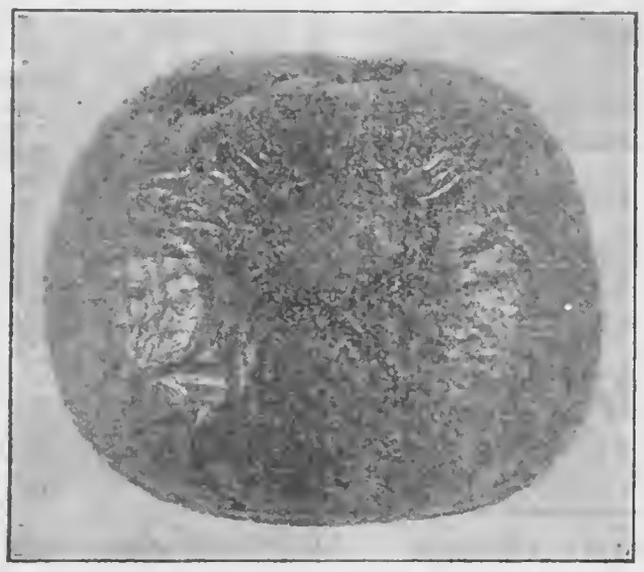
*

CONNECTICUT dairymen and hennen have reason to be thankful this year for the work of their experiment station. The worst disease affecting poultry is white diarrhœa. There are bowel troubles which may result from chills, poor feeding or other causes, but the scourge of bacillary white diarrhœa is a germ disease. It is spread from one fowl to another, and the germ may be put into the egg from the hen and thus developed *into the chick hatched from that egg*. Some hens are infected with the germ—others are not. In a flock of 100 hens from five to 50 or more may contain the germs of this disease and as long as they remain there is danger to both hens and chickens. Safety lies in getting rid of the infected birds. Now the Connecticut Experiment Station has found the germ and perfected a test for detecting it in the hen. A few drops of blood are taken from a vein in the wing and a simple test quickly shows whether the germs are present or not. For a small sum of money the station will test the birds in any Connecticut flock and thus enable the owner to clean his flock absolutely of the disease. It is doubtful if any station in the country has made a more useful or practical application of scientific research than this. Perhaps the chief trouble which dairymen have to contend with is contagious abortion. This is another germ disease—with a certain resemblance to white diarrhœa in some of its details. So long as there is a cow in the herd carrying the germs of this disease there is danger of spreading it to all the other cows. Some cows, like the hens with white diarrhœa, carry the germs, while others do not. Some carry the germs, yet do not suffer the final results. They are like the humans who carry the germs of typhoid fever—not themselves sick, yet a constant menace to all around them. No dairy herd is safe so long as any of the cows carry these contagious germs. The only way to make the herd safe is to get rid of the germ carriers just as is the case of white diarrhœa. Now this abortion germ has been identified and a test devised for it. As with white diarrhœa a small quantity of blood is taken from each animal and submitted to a laboratory test. If the abortion germs are present they are promptly identified and this cow can be taken out of the herd. If they do not appear in the blood the cow is free and the disease could not come from her. The station is prepared to make these tests with hens and cows. It is one of the most interesting and useful services ever offered by the experiment station and right in line with what seems to be the true work of these institutions. If this work could be thoroughly followed out these fearful scourges of hen and cow would disappear from the State.

*

WE do not often use pictures on this page, but now and then the occasion seems to warrant it. Have a look at this apple (exact size, and then read about it:

In this mail I send you a small apple with a large scab, which was offered to tempt my palate at a hotel



last week. Right across the street was a large electric sign reading "Get the Apple Habit." I think the fruit growers in the East should get the packer's pride, and have signs on their farms reading "Get the Grading Habit." It would be the best advertising investment they could make. H. H. ALBERTSON.

We omit the name of the city—it is a large place close to a great fruit growing section. This disgraceful specimen never should have left the orchard. It is not even fit for cider, yet in this year when growers cannot get rid of their best fruit this worthless scab is used to shock and disgust visitors and would-be apple eaters! There is little to be thankful for when such things occur. They injure the trade and the business of the thousands of honest growers and packers who try to give a square deal. Such an apple is the worst possible advertisement for fruit growers.

*

THE produce trade, irrespective of partisanship in politics, is very much tickled over the election of Eugene M. Travis, one of its own members, to the important position of State Comptroller, to succeed William Sohmer, the present Democratic holder of the job. Mr. Travis was bitterly and venomously attacked by THE R. N.-Y. for his attitude on the original Roosevelt bill afterwards amended into the Cole law. The editor of that paper called upon the York State farmers to rise up and smite the ex-Senator. The funny part of it all is that it was the farmer vote that elected Mr. Travis.—Fruitman's Guide.

It is true that for several years Senator Travis fought the bill to regulate the sale of country produce through commission houses, and because of his opposition to the just interests of producers THE R. N.-Y. did not think Mr. Travis entitled to farmers' votes. It is no wonder that the *Fruitman's Guide* should think it "funny" that the farmer vote should elect Mr. Travis under the circumstances, and yet the "funny" part of it is true. THE R. N.-Y. had no personal fight on Senator Travis. He is a pleasant gentleman and a good fighter, but we believe that if farmers ever hope to get fair treatment, they must show a united front in favor of those who treat them fairly and against their enemies. We do not assume to tell farmers how to vote, but it is our business to furnish the information. In this case farmers apparently voted without regard to past records, and the organ of the commission men is entitled to make the most of this victory. If the Senator who takes Mr. Travis's seat works for the commission men as he probably will, he will be sure of their support when he asks for it. We must take lessons from the commission men. They reward their friends and punish their enemies. Their papers think it "funny" that farmers should reward the man who fought them so persistently. We think so, too.

*

IT will mean Thanksgiving to this generation and those to follow if we can put the business of producing hickorynuts on a sound commercial basis. To do this we must have superior parent trees. These have been discovered and named with pecans so that superior varieties can be propagated as simply as Baldwin apple or Elberta peach. We want hickories of superior quality. Where are they? Off in the woods somewhere. He who finds them and makes them known lays the foundation for a great future business. This may seem to you like "the voice of one crying in the wilderness," but some day the hickorynut crop of New England will rank as a great asset.

*

WILL you give me the name of the old gentleman whose picture appeared (sitting by the corn shock husking) on the front cover of THE R. N.-Y., October 31, 1914? It seems such a perfect likeness of one very near to us. We shall consider it a great kindness and favor if you will comply with this request, and if our suspicions are correct shall indeed treasure the picture very highly. MRS. F. N. S.

Somehow this picture has attracted unusual attention. One woman in Central New York says it looks so much like her dead father that she was shocked on opening the paper. A man in Western New York writes thanking the Hope Farm man for having his picture printed. There is a citizen in his town who claims to have seen the Hope Farm man and promptly identifies him in this picture. The truth is that we do not know who the husker is. The picture was bought, in company with others, and printed because it presented a true and homely presentment of farm life. The man husking corn by the shock is typical of hundreds of fine, elderly farmers to whom an Autumn day brings old memories which are reflected in their attitude and expression. No wonder this striking picture made many a man and woman think of father or of some old friend.

*

OF course I want the paper, for reasons that would take too long to state here, and would be only a repetition of what you have so often heard. But one of them is the feeling that you run a paper in which the performances of the average man are chronicled, and the ones that one can reasonably expect to duplicate if he is careful and on the job. I consider that to print the story of the exceptionally expert man, in such a way as to give the impression, that any man can do as well, is the most insidious kind of lying. B. E.
West Virginia.

We have much to be thankful for when we receive such notes as the above. This man gives expression to what we are trying to do with THE R. N.-Y. better than we can do it ourselves. We do try to chronicle the "performances of the average man" because in such performance lies the hope of society or progress. Men who might be ranked above the average give us theory or set us a high example, and those who seem content to rank below the average drag at the wheels and pull back. The great hope of the world—future as well as past—lies in this "performance of the average man" and the possibility of constantly adding a little of quality and power to that performance. True education seems to us one long study of human nature so that we can graft upon it what it can fairly absorb of the world's legacy of wisdom. The "average man" is the citizen to be most thankful for. Do not for an instant imagine that we would belittle the great work of educated and naturally gifted men who rank far above the "average." What they do is glorious and worthy of all respect, but the world will only receive full benefit from their work when it is adapted and simplified so as to become a part of this "performance of the average man."

BREVITIES.

HOW the cows do love carrots, and how the carrots return that love!

SPEAKING of the fruits of the mind—a grouch must be the citrus fruit.

LITTLE museums for trees and shrubs are suggested for New Jersey schools.

PUTTING a dot on the I means letting others tell your good deeds—a blot on the I means talking too much.

REMEMBER that pumpkin pie is a good remedy for kidney trouble. Of course you must take frequent and large doses to get results!

THE latest is a silo, dairy, and hog cholera train in South Dakota. This train carries speakers who talk these three important subjects.

IF you can't afford a turkey—eat a hen. If the hen is out of sight then to poultry say "good night," thank the Lord for what you have and say "Amen."

ON page 1298 we printed a letter from a man who tried to tell the truth about his modest outfit of assets as a farm manager. Already nearly 10 people have come to learn more about him.

WOMAN AND HOME

"According to Jimmy"

A Farm Thanksgiving Story

By Harry Ayres

"GOOD mornin', Mis' Holcomb. Here's some doughnuts Maw sent over. She said to be sure and tell you they ain't very good, 'cause she was so busy about sump'n else she couldn't tend to 'em the way she orter. They're all right though, or she wouldn't a sent 'em. She allers talks thataway."

"No, thank you, Mis' Holcomb, Maw let me eat all I wanted 'fore I come. She said if she let me stuff myself as full as I could hold 'fore I started she'd feel reason'bly sure you'd get all she sent."

"No, I can't come in, 'cause I got to tend my traps. Yes'm, I caught 14 muskrats and three skunks already! I wanted to start a farm with the skunks, but Paw, he sez he never knowed nobody make any money at skunk-farmin' outside the papers; but he's seen several 'at lost what little reppertation they ever had."

"Yes'm, I ain't got no cause to complain. Maw sez she's glad they didn't have to call on the doctor, an' Paw asked me if my legs was hollow. Maw said if they was it was easy to tell which side I inherited 'em from, seein' as me an' him et more'n all the rest put together."

"No'm, it started out to be the worst Thanksgivin' we ever had. I guess Maw must of got out the wrong side o' the bed, 'cause theye wa'nt nothin' right an' she got Paw goin' 'fore he got through washin' up for breakfast after milkin'."

"Jest as Edith brought on the second helpin' o' pancakes Maw sez, 'You goin' to church this mornin', Ezry?' "

"'Well,' Paw sez, 'I thought I would, but after the rakin' over I've had this mornin' I don't feel as much like it as I did. I can think o' lots more to grumble over an' lots less to be thankful for 'n when I got up. Milk ain't bringin' what it orter, considerin' the cost o' feed; taters are a dollar a bushel, but that don't do me no good, seein' as we'll have to buy next Spring. Last year we had taters to burn, an' it was hard work to give 'em away; this year they're out o' sight an' we ain't got enough for ourselves. Last year we didn't have no stock to sell, an' prices were higher'n a kite. This year we got lots to turn off, 'n everybody is givin' 'em away. That's the way it goes! If I was to strike a gold mine on this farm the price o' gold would drop to 10 cents a pound. Then Henry's goin' off has hindered me a lot. He was worth two hired men. I can't think what ailed that boy, lessen it was the way you throwed Bertha Somers at his head.' "

"'Why, Paw, how you do talk,' sez Maw. 'I do think it's sinful to fly in the face o' Providence thataway. If I set out to do it I could think o' lots more to complain of 'n you've got. But I ain't that way! I believe in countin' my blessing's. I got 40 hens in the henhouse, 'n ain't seen a egg in a month. I reckon you folks don't need to look for any Christmas presents from me this year. I'm sure I'm thankful for health an' strength, but if you'd had the neuralgy the way I have this Fall, I guess folks 'd a heard more about it. But I ain't the one to complain! There's Jimmy—five nights hand-runnin' I set up with that boy, an' he with the worst case o' mumps I ever see! An' all I could get out o' you was, that if I wanted to make a martyr out o' myself nothin' nor nobody could stop me!' "

"Paw started to say somethin', but Maw, she drawed in her breath quicklike, an sez, 'Lemme have my say, Ezry, an' then you can have the floor. I know just what you're goin' to say, anyhow, so you might as well save your breath to cool your pancakes.' Then she lit inter me. 'You, Jimmy, a body'd think butter was 10 cents a pound an' syrup as free as water, the way you slap 'em on! Edith, don't fry no more cakes, or your Paw an' Jimmy'll bust. Poor child! She don't eat enough to keep a hummin'-bird alive. I know it ain't Christian-like, but I sometimes feel like wringing Sheldon Whitaker's neck! It wa'nt bad enough for her firm to bust up owin' her eighty dollars hard-earned money an' throwin' her out of a job, but she must come home an' find her feller gallivantin' around with another girl—Edith, *I'm* talkin' now. I know you don't like it mentioned, but *I've* got some spunk left if nobody else ain't.' "

"Me'n the hired man was afraid Paw 'd git the last o' the cakes an' syrup, but he got up from the table when there was

A FARM FAMILY TO BE THANKFUL FOR.

three left yet, an' so I took two an' Sam took the other—Sam got the syrup pitcher first, though, an' he didn't leave me but just the drainin's. Paw went an' laid his hand on Maw's head, an' he sez, 'You know as well as I do, little woman, that Sheldon ain't to blame. Edith's give him the cold shoulder ever since she got the stenography bee in her bonnet, an' I'm afraid you've encouraged her. I'm sorry, 'cause she could go lots further an' fare lots worse. Sheldon's a *man*, an' right down in her heart Edie knows he's the man for her; but bein' a woman she wouldn't own up to it an' won't now, though she's eatin' her heart out 'cause she's afraid another woman 'll get him.' "

"'Well, Ezry,' sez Maw, 'If that ain't the meanest thing I ever heard! An' you her own father, too! If that's the way you feel about it I've nothin' more to say. But it's well she's got a mother to stand up for her—Edith, *I'm* talkin'! Well, go upstairs, if you want to—that's the thanks I get! It does beat me! I tried to help Henry with Bertha all I could an' he left for parts unknown, an' now my daughter's takin' it the same way. Oh, dear! If I only knew that my boy was safe and well I'd feel more like Thanksgivin'."

"When Maw begun to cry Paw put his arms around her an' sez, 'There, there! Little woman, I guess Henry's all right or we'd a heard from him before this, an' Edie'll come out all right too. As soon as Sam gets back from the milk-station we'll all go to church an' try to be thankful, anyway.' "

"Well, Maw'n Edith cleared up the breakfast 'n me an' Paw watered the stock an' cleaned out the stables—leastwise Paw did, 'cause I went to look at my traps an' forgot. Then we all put on our Sunday clothes an' started. Everythin' was all right 'till we got on the State road an' Glenn Phillips scooted by us in his auto."

"Sez Maw, 'If you was as forehanded as Glenn, Ezry, we'd be goin' to church in our car, 'stead o' behind a farm team.' "

"'Well,' Paw sez, 'If I got to foreclose honest, hard-workin' men out o' house an' home an' beat down the price o' farm produce below the cost o' growin' it to ride in a auto I'll take walkin' for mine, though I ain't ashamed to ride behind a four-hund'red-dollar team when they're paid for with good, clean money. As to forehandedness, if Glenn fell into Mud Creek, some fool that ought to know better 'ud fish him out, an' he'd come up with his white shirt all fresh laundered with diamond studs in it, an' one hand 'ud be full o' twenty-dollar gold pieces an' the other full o' first-class mortgages.'

"There was another honk, honk! an' 'Squire Parsons whizzed by.

"'I ain't doin' it to hurt your feelin's,' sez Maw, 'but Cliff Parsons rides in his own car, too, an' I'd like to know what you can say against him.'

"'I can't say nothin' against him,' Paw sez, 'an' less for him. He's neither cold nor hot—not spunk enough to do wrong nor ambition enough to do right. His mission in life is to hang on to what his dad left him an' spend the interest on hisself. How'd you like to change places with his wife?'

"That riled Maw. You know how poor Mis' Parsons has do her contributin' to the church with her hands an' look the other way when the plate comes 'round.

"Yessum, I feel sory for her, too. Everybody does.

"Well, the preacher prayed an' the choir sung, then the preacher read the President's proclamation. Maw nudged Paw an' sez, 'You see, the President believes in Thanksgivin'.'

"'So'd I, if I was gittin' fifty thousand a year,' sez Paw.

"The choir sung again an' the preacher preached 'till I begun to think quittin'-time never would come. Maw commenced to cry again, and Paw patted her hand. When I'd give up expectin' to see that turkey 'till supper-time the preacher stopped preachin' an' went to talkin'. He said they'd now offer out o' their abundance to the poor. Paw an' Maw an' Edith put sump'n in. So did most everybody else except Glenn Phillips an' 'Squire Parsons. They didn't, 'cause I watched 'em.

"Well, we all sung 'America,' an' as we was goin' out Sheldon come up an' asked Edith if he could drive her home. Maw told Paw she'd a-seen him in Halifax afore *she'd* a-gone with him, but Paw said Edie had good sense.

"We stopped for the mail an' there was a letter for Edith from the business institute. Maw said they'd orter be ashamed to write to her after takin' her good money an' then gettin' her a position with a dishonest firm. Paw sez, 'Wait till we hear what's in it, little woman, then we can judge better.'

"Well, sir! when we got home, who do you think come out to meet us? Old Hank! An' all dressed up fit to kill! Seem's if he never would let up huggin' an' kissin' Maw with one hand an' shakin' hands with Paw with the other. Then he started on me, but I skun out with Sam to put the team out. Then Henry called me back.

"When we went in there was a strange lady there. Henry went up to her an' took her hand an' led her to Maw. He sez, 'This is your new daughter, mother—next to yourself, the best little woman in the U. S. A.'

"Maw looked at her kind o' funny for a minute, an' then they flopped into each other's arms an' hugged an' kissed the way women-folks do. When Paw's turn come he shook hands an' kissed her. He sez, 'Welcome, daughter. If you ain't Jim an' Mandy Hubbell's girl I'll have to own up to bein' a Hottentot. Henry, you rascal, I s'picioned you wa'n't makin' them trips to Belfort for the good o' your health, but I never thought o' Jim Hubbell's girl. If you two live as long an' useful an' happy lives as Jim an' Mandy, you'll get what I'm wishin' for you.'

"Well, the turkey was doin' all right, so whilst Maw an' Emily an' Henry pitched in with the dinner, me'n Paw went out to do the noon chores—'cause Sam had gone over home to Thanksgivin'. Paw took along a basket o' apples—like he allers does Thanksgivin' an' Christmas—an' we give a couple apiece to the horses an' cows. Then Sheldon driv up, an' Paw asked him to stay to dinner. He looked at Edith an' she looked at him, an' he said, 'With pleasure.'

"When we come back from puttin' the hoss out Edith an' Emily was thick as molasses an' Hank an' Sheldon had aperns on, ahelpin' with the dinner. I'd only et three apples since breakfast an' I could agot along without so much fuss an' feathers, but finely the table was set an' we set down. But 'stead o' pass'n the food, Paw got up an' looked at Maw. He sez, 'Mary, as for me an' my house, we're going' to offer up thanks. What say, little woman?'

(*Continued on page 1374.*)

Woman and Home

The Deaf Mute.

Written by Fitz Hugh Ludlow after visiting the N. Y. Institution for the Deaf and Dumb.

Scarcely can God's strange restriction
On the lip and on the ear,
By my mind be deemed affliction—
To the sad world coming here.

Where I dwell,—there clamors mortal,
Anger, scorn, detraction, woe.
Thro, the ear's unguarded portal
Throng; in ceaseless overflow.

Here,—God sets His unseen angels
At the gate where earth comes through;
Naught but Heaven's most sweet evangels
Those pure guards let in to you.

Where I dwell,—our thoughts unruly
Have no time to pause and sleep
Till their step beats time more truly
With the march that Love doth keep.

Here—the flying thought, unspoken,
In review floats past the heart.
Where its sting is gently broken
Ere its rapid wing depart.

God hath blessed you in your losses
Silent daughters of His care,
Lifting many bitter crosses
From your shoulders—which we bear.

Tho, no songs your ears are thrilling
Such as move us to delight,
Thoughts unstained by earth are filling
Your soul's chambers day and night.

And to think, to think what glory
Waits you in those wondrous peals,
From the harps of prophets hoary
When God's hand your sense unseals!

The great singers gone before us
Wait to flood your virgin ear
With their unimagined chorus—
As the first sound you shall hear.

The same angel guards that cover
From the world your unjarred sense
Are God's harpers, and they hover,
Waiting with your recompense.

*

The Corn Song.

Heap high the farmer's wintry hoard!
Heap high the golden corn!
No richer gift has Autumn poured
From out her lavish horn!

Let other lands, exulting, glean
The apple from the pine,
The orange from its glossy green,
The cluster from the vine;

We better love the hardy gift
Our rugged vales bestow,
To cheer us when the storm shall drift
Our harvest-fields with snow.

Through vales of grass and meads of flowers,
Our plows their furrows made,
While on the hills the sun and showers
Of changeful April played.

We dropped the seed o'er hill and plain,
Beneath the sun of May,
And frightened from our sprouting grain
The robber crows away.

All through the lone, bright days of June
Its leaves grew green and fair,
And waved in hot mid-Summer's noon
Its soft and yellow hair.

And now, with Autumn's moonlit eves,
Its harvest-time has come,
We pluck away the frosted leaves,
And bear the treasure home.

There, richer than the fabled gift
Apollo showered of old,
Fair hands the broken grain shall sift,
And knead its meal of gold.

Let vapid idlers loll in silk
Around their costly board;
Give us the bowl of samp and milk,
By homespun beauty poured!

Where'er the wide old kitchen hearth
Sends up its smoky curls,
Who will not thank the kindly earth,
And bless our farmer girls!

Then shame on all the proud and vain,
Whose folly laughs to scorn
The blessings of our hardy grain,
Our wealth of golden corn!

But let the good old crop adorn
The hills our fathers trod;
Still let us, for his golden corn,
Send up our thanks to God!

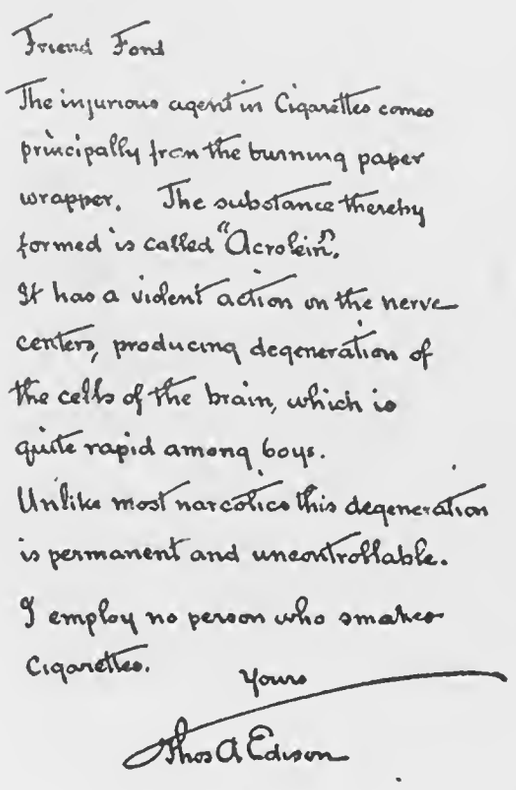
—Whittier.

*

THE University of Wisconsin at Madison is endeavoring to interest the people of that State in community music. A little bulletin, issued by the Extension Division, and costing 10 cents, gives general information about the plan. Good music is a force in civic life. One great source of strength in the wonderful national feeling in Germany is the singing of folk songs. The singing clubs of Denmark helped almost beyond calculation in creating a strong national spirit. Music in the home and in the community or public school has a wonderfully helpful power. It interests young people and brings neighborhoods together for the best purpose. Few things could be finer for the Winter than good neighborhood singing clubs or orchestras. In every community there are natural musicians and good organizers who can get the singers together for practice and training. The Wisconsin University realizes the power for good in such work, and is trying to organize it.

*

IF there is one young person who should feel that he has "much to be thankful for" it is the boy or young man who has conquered the cigarette habit. Next to him should be that boy's mother or sister. The curse of the cigarette is a real thing, and its shadow lies upon many a farm home, where mother and the girls have denied themselves in order that John or James might have an education. The cigarette is putting John and James into a condition of brain and body which will make his education worse than a wasted thing. We would like to have John and James and the rest of the cigarette slaves read this letter from Thomas A. Edison to Henry Ford:


Friend Ford

The injurious agent in Cigarettes comes principally from the burning paper wrapper. The substance thereby formed is called "Acrolein."

It has a violent action on the nerve-centers, producing degeneration of the cells of the brain, which is quite rapid among boys.

Unlike most narcotics this degeneration is permanent and uncontrollable.

I employ no person who smokes Cigarettes.

Yours

Thos A Edison

*

SO far as it is possible to learn from reliable sources manufacturing and trade in Germany goes on much as usual during the war. The factories and farms are in full operation. War prisoners are doing some of the work, but most of the burden has fallen upon the German women. They are literally doing man's work at home and in the factories. Practically all the "observers" who were sent abroad by this country to study European farm conditions, noted that much of the heavy farm work was done by women and girls. Should the war continue for two more years this woman's labor will become *a habit*, and it will have an effect upon the world's industry.

*

THE American Medical Association, in discussing preventive blindness, says:

There are about 300,000 blind people in the United States. It costs about $15,000,000 a year to support them. Probably 75 per cent. of this blindness is due to two causes, namely, sore eyes at birth and neglected eyes during early school life. The first cause can be removed in the simplest manner. All that is necessary is for the doctor or midwife to drop into the eyes of the newly born babe a few drops of a two per cent. solution of nitrate of silver. This will kill the germs that produce the disease which almost fills so many blind asylums.

No one should attempt this except an experienced physician or a trained nurse. Few things are more dangerous than poking substance into the eyes and ears without understanding just what they are expected to do.

*

A DISPATCH from New Jersey tells of a fight between a canary bird and a mouse, in which the former came off victor. The story is that the mouse crawled into the bird's cage as it stood on the table. The mouse was evidently hungry and began to eat up the seeds in the canary bird's dish. The little bird became angry and attacked the mouse, striking it over the head, and in a few seconds had blinded it so that it gave up the fight. After whipping the mouse, the bird flew on its perch and gave a concert of some of its sweetest songs. On general principles it is hard to think of a canary bird, the dear little family pet, in a fight. No one would expect a canary to attack a cat, but given something of its size, and a motive for combating, and it will evidently give a good account of itself.

*

WE think there will be a fair business developed for the future in selling farm canned meat. We have had several articles about this. In many country districts canning the fresh meat is taking the place of salting and smoking to a large extent. The canned beef, pork or chicken is greatly enjoyed and makes an agreeable change from salt pork and ham. In the future there will be a good demand for such meat among city customers. It is one of the articles which can be easily sent by parcel post, and farmers can put such meat on the market at prices which will make it a good bargain. Restaurants and boarding houses will buy such meat for boiling pieces, hash or mince. Many a farm animal now practically given to the butcher can be put into cans and sold at a good profit.

*

THE latest reported "cure" for insanity comes from the osteopaths. They claim that by manipulating certain muscles of the neck the brain is stimulated and put in order so as to help certain forms of depression or mental trouble. The following is offered as conclusive proof of this cure:

Dr. Van Horn Gerdine told of one case of dementia præcox, that of a woman nearly 30, who had been a mental dwarf since she was 14 years old.

"She couldn't get enough blood to her lungs and her brain stopped growing. She couldn't talk and had suffered an entire loss of emotional life. Treatment was given in the region of the neck to restore the nutrition of the blood supply to the brain. Recently her mother visited her, and the patient was so improved that she recognized her mother and embraced her. She talks spontaneously now, and is showing that most human characteristic in women—paying attention to her clothes and running down the dress of other women."

*

EVERYTHING goes by a "score" these days. Babies, cows, fruit and all the rest are judged by a "score card." If this is properly made out and balanced such a "score" is probably as fair as any system of comparison. The latest score card we have seen is one for bread—arranged by the South Dakota Agricultural College. Here it is:

It would be a good plan for housekeepers to score their bread each time after baking, and then attempt to bring up the standard where it is low. A good score card to use is the following:

Flavor	35
Lightness	15
Grain and texture	20
Crust-color, depth texture	10
Crumb-color, moisture	10
Shape and size	10
Total	100

The idea of this private scoring is to see where the bread fails to be perfect and then learn what is most responsible for each quality.

*

THE cause of "votes for women" was helped by the last election. The States of Nevada and Montana voted to give women the ballot, while Ohio, Missouri, Nebraska, North Dakota, and South Dakota voted against the proposition. Generally speaking the liquor interests everywhere lined up against suffrage. This may mean temporary success, but in the long run the cause will be helped if it becomes known that the liquor men oppose it. Unquestionably the feeling against the liquor trade is growing day by day into an undying political hatred which cannot be overcome. In California where women vote, political tickets were cut right and left. Not long since we printed the remarks of a Kansas woman on suffrage. Here is the other side:

You have only asked different farm women most of whom lead a dull existence of household work, if they wanted the vote; and naturally nearly all the answers have been "no," because most of them feel that another straw in the way of work will break the proverbial camel's back, and as long as "John" will do it let him; not knowing that for her the mere fact of the outside interest to be discussed and looked into with perhaps the drive to town to vote would be better than a dose of medicine, even outside of the larger questions involved.

*

OUR women readers write us very freely about their troubles, their hopes for their children and other things which enter their lives. We are glad they do this—glad to have them feel that we will respect their confidences and do our best to help. Now that Winter is coming many household questions come up large and sharp and full of perplexity. One of the hardest things for the farm woman to settle is the money question. The average farmer probably does not quite understand how his wife and daughter feel about this. He provides for the living expenses and relieves the women of financial responsibility. Yet it is hard for him to understand what it means for the women to have even a little money of their very own to spend just as they please. In most cases, such money would be invested to better advantage than he could ever spend it, and there would be a gain in happiness and spirit worth 10 times as much as the money itself. This is why we try to suggest plans for earning some little personal income which the wife may use as her own. It would indeed be a genuine cause for thanksgiving on many a farm if this matter of wife's spending money could be settled.

*

GOV. Glynn of New York believes that the State should attend to the health of all school children—giving free examination of eyes, ears, throat and teeth. There is no question about the wonderful value to the nation which would come from preventing disease. The American Medical Association says that thousands of eyes could be saved every year if eye diseases were detected and cared for in early life:

Dr. Cronin has found that 30 per cent. of school children were two years behind their grades and that 90 per cent. of this is due to eye, ear, nose and throat diseases or defects. He examined 150 defectives in one school and found that 137 of them had ear, nose and throat defects, and that thirteen of them had eye defects. These conditions were relieved and in six months 75 per cent. of the children were re-examined. They were all doing well and were rapidly advancing in school. Their character had also remarkably changed for the better.

We have no doubt of it whatever from our own experience. It is all well enough to say that parents will attend to their own children. They do not. We can point to dozens of intelligent people who have let their children get well started to deafness, throat and eye troubles before they thought of having the little things examined.

*

IT is quite remarkable how men are trying to lay out the future for women. In the *Atlantic Monthly* W. L. George seriously discusses "Uniforms For Women." He shows, or attempts to show, that women spend too much on dressing, and that this leads to envy, waste and immorality. He says the poorer girls and women try to imitate the well-to-do in fashions, and in order to give all women a fair chance to agree he suggests a "fashion" which shall decree this "uniform":

1. For general outdoor wear the coat and skirt is the best, together with a blouse. Lace and insertion should be abandoned, and I feel that the skirt is too long for walking; this month it is certainly too tight to enable a woman to get into an omnibus or railway carriage gracefully. Probable price, complete, $50.

2. For Summer wear, a plain blouse and skirt, not the atrocious blouse ending at the belt, but the beautiful tunic-blouse that falls over the hips. Both blouse and skirt would need to be made of a permanently fixed, plain, and unicolored material. Total cost, $25.

3. If the skirt were shortened, leggings, gaiters, and stockings would have to be standardized; the shoe-buckle, being too costly, would disappear.

4. A fixed type of hat, without feathers or aigrettes, made in straw and trimmed with flowers; produced in scores of thousands, it ought not to cost more than $2.50.

5. A fixed type of evening gown, price, $24 or $32, without any lace or trimmings, sequins, paillettes; without overlays of flimsies of any kind; no voile, no pongee silk, no chiffon, no charmeuse or tulle, no crepe de chine, no muslin, but a stuff of good quality, hanging in straight folds. Jewelry to be banned.

6. The afternoon dress should be completely suppressed; it responds to no need.

7. The total annual cost would be about $150.

Business

The Wife as Bookkeeper.

"OUR farm acount books were bought at the five and 10-cent store, and cost us only a quarter," says Mrs. William Elwell of Otsego County, New York. "These books are guide posts in our home finances. The effort is small and bookkeeping is fascinating. We know where we are at financially, and keeping books has been dollars and cents value. My system may be crude; I am not familiar with practices of the bookkeeper, but my husband and myself are satisfied with our system. It shows us just how we stand with the poultry, the two cows, the household expenses, the receipts from the mail route, and the expenditures in maintaining the little place, feeding the horse, keeping the wagon in shape, and shows us how much we have ahead at the end of the month, and the end of the year. Here is where farmers fail to notice their leaks in the absence of a system of bookkeeping.

"Here is the account of our two cows," Mrs. Elwell said as she turned the pages to the month of March. "This is what the merchant would call a ledger. On the left side of the page I have charged all feed against the cows, and on the right I have credited them with receipts for milk from my customers, for butter sold, and as receipts were light this month, after giving the cows credit for fertilizer, and for milk that we have used this month we have lost 78 cents. My principle of bookkeeping is this: Set down the expenses on the left hand of the middle line of the ledger page, placing the dollars and cents in their proper column, and on the right hand the credits, and I balance at the end of the month, this showed where we stand with the cows. I keep accounts for the hens each month in the same manner, and I know just what they do for us. My husband has a mail route and I keep account of the income, and charge against it the shoeing of the horse, the horse feed and such expenses as might be charged against his work.

"Here is what our cows did last year. We have only a small lot and are compelled to buy our feed. They paid us profit of $73, and we dried one cow too quickly. We had 180 hens and for that year we made $140 profit. These figures may look small to some who figure receipts as profits, and then reach blindly into their purses to meet expenses. We could go further in keeping our household accounts, and charge interest on investment, labor charge, and charge for hired labor, were we operating a farm. We look at it this way: the laboring man has nothing ahead at the end of the year when he pays his house-rent and maintains his family, and at present we are not charging against the cows and poultry the labor charge. Yet improvement in quality of stock repays us for labor.

"We started bookkeeping when first married. My husband and myself discussed our prospects. We figured our annual receipts would be small, as he was at that time working by the day. We began keeping strict account that we might live inside our income, and this has been followed. I am the bookkeeper, and it has kept us from living beyond our income, over-checking our bank account, of spending too recklessly on our poultry and cows. We have learned a lesson which if we carry out later on more land will mean the elimination of the scrub cow and the scrub hen, and the unprofitable crop. Bookkeeping is not hard; get some books and go at it and keep at it. Keep the books handy so every penny received or expended can be readily jotted down in columns so they may be totalled at the end of each month, then keep it up. It will then become a habit, and a habit that pays." W. J.

The Housewives' League and Prices.

THE article in the October number of The Ladies' Home Journal "I will see," by Mrs. Julian Heath, President of The National Housewives' League, should be of interest to farmers. In the main Mrs. Heath's statements are sound, having reason and sense behind them, but her ideas concerning prices for produce seem to me in some instances slightly awry. Mrs. Heath says:

In December, 1912, I read that the apple crop of the United States amounted to more than forty million barrels, one of the largest crops in our history. The quality was excellent. Prices were the lowest in years, and people who never ate apples before could have their fill. But were they having their fill? Not much. The apple was an expensive luxury. Inquiries of farmers brought hundreds of letters saying they would be glad to sell the acreage run of apples at *twenty-five cents a barrel*. Even the most expensive graded apples were offered at one dollar a box.

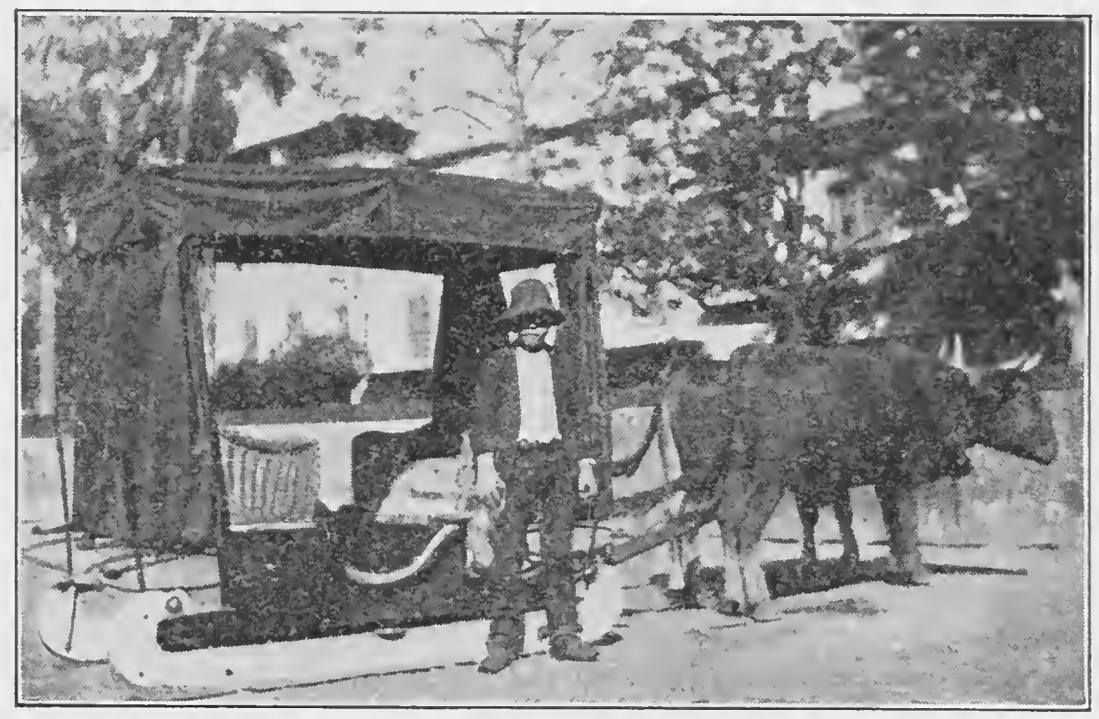
In the market apples were selling at $2.25 a barrel, and the No. 2 grade for $1.50 and $1.75.

These prices do not seem to me exorbitant. As for apples at 25 cents a barrel, that is ridiculous. We have to pay 30 cents for a barrel in which to put the apples. When we consider the cost of picking, packing and shipping, it is plain to us that the farmer (in the Middle States at least) should never receive less than 50 cents a bushel for good apples. Poor apples are not worth the handling. The Housewives' League should consider this side of the question. I believe, however, they are always willing to give the farmer a fair profit.

In regard to eggs, for example, I venture to assert that eggs should never, even when most plentiful, sell for less than 25 or 30 cents a dozen to allow the producer a fair profit. To lay well, chickens must be fed carefully and lavishly. They have a remarkable capacity for grain and feed is high in price. For several months in the year chickens do not lay at all, but they continue to have excellent appetites. When eggs go up to 40, 50 or 60 cents a dozen, the consumer grows angry and determines to do something. He should remember that the farmer who deals directly with the consumer is only making up his losses when the price of eggs goes up. He who deals with the middleman would better give up producing eggs and sell his feed.

You may think this letter is written entirely from the farmer's point of view. This is far from the truth, for we are in a position to know the producer's as well as the consumer's side. My husband is an office man working for a large corporation. He hates indoor work and loves the country and the open air life. To console himself he raises chickens and plants fruit on every available spot on our acre of land. This year we have had from our place about 30 bushels of apples, 25 bushels of excellent potatoes, bushels of grapes—not counted—rhubarb, plums, and many vegetables from our garden plot. I forgot to mention a wonderful crab apple tree which supplies us and all our neighbors with all the jelly we want. The chickens have been a paying investment because we have a large family and use eggs in abundance. We have been able to supply the family needs and to sell a few eggs besides. It will be seen, therefore, that we can sympathize with both the consumer and the producer. Let me say in conclusion that my husband is a great admirer of THE R. N.-Y. and of the Hope Farm man, whose page he always reads first.

New Jersey. M. L. A.



A PUBLIC "JOY RIDE" VEHICLE IN PORTUGAL.

Pin Money Puzzles.

FRUGAL LIVING.—How can we live comfortably and respectably without spending such enormous sums of money? That is the query heard in almost every household. The question is not difficult to answer. It is nothing more nor less than realizing the difference between our wants and our needs. Don't spend money for trifles. Save your money for big things and do without the little ones. There are numberless housewives who have not yet learned that the most exciting game in life is in getting two hundred cents worth of goods for one little, lone dollar. That is what we call "right buying." It doubles the capacity of your income. You feel as though you were a member of the board of trade. When pineapples are a glut on the market then is your time to buy. If there is a cut-price sale in dry goods lay in a supply of staples—not trash. Make one dollar do the work of two; that's the secret. I have the greatest admiration for the girl who can keep a tight rein on her pocketbook, yet have good food and proper clothing. The word "capable" seems to just stick out all over her. Self-denial is one of her virtues. Thrift is founded on self-denial.

THE GROCER'S BILL.—Some years ago, when living was "easy," we were at a family dinner when the subject of "grocery bills" came up. One of the cousins told how his wife was able to set a good table for four and still keep the expenses within one hundred dollars. When it came the hostess's turn to "confess" she put her hand over her eyes and said: "I'm ashamed to tell how much our grocery bill is for a year." We gave her to understand that there was to be no backsliding. "Well," she said, "to be exact, it was $29.63 for the last year." We fairly shrieked at her. "Tell us how you did it." Then she gave us an outline of her plans. Her husband supplied the flour and meat, and she furnished the groceries, bought all the clothing for herself and two little boys with the butter and egg money. She knew the value of a good garden, and they never had to buy a vegetable of any sort. She took advantage of right buying. Early in the Spring when prices were low and the hens were busy she laid in a year's supply of sugar. Then in January she took advantage of the cut prices in muslins and saved a few dollars. They were renters on a farm, and she saw it was up to her to make a start to save for a home. She worked harder than ever, cutting out all her Summer reading but the farm paper, so she could have more time to devote to her poultry. Then she sold milk, butter, lard, berries and finally some vegetables. After a few months she had her business as well organized as any merchant, and it was no more trouble for her to put three or four dollars in the bank every week than it was to wash the dishes. In seven years she had saved one thousand dollars. Now at the end of six years more she has saved another thousand. This with her husband's inheritance will pay for their home. They had good food and good clothing and the boys had a common school education, and they are much happier and more contented than if they had spent that two thousand on a myriad little things and done without a home.

TEACHING SELF-DENIAL.—Not long ago I saw a man and his little son come into a grocery store. Both were dressed with the best possible taste. The little son handed the grocer a nickel for some candy.

"What," said the father. "Spend *all* your money for candy? Then you will have none left. Get only three sticks of candy and you will have two cents to keep in your pocket." The arrangement delighted the boy, for by it he had both money and candy. He also had a lesson in self-denial that would stay with him through life. Children are allowed to spend money too thoughtlessly. Teach a child to ponder over in his mind whether he needs a thing or if he only wants it.

A GIRL'S SAVINGS.—I know several girls who are school teachers who make it a rule to lay away one-half of their wages. Even the small sum of one hundred and fifty dollars a year saved and put in the bank will give a girl a feeling of security, as well as bright visions for the future. One of these girls was married a few years ago, and she had $600 laid up from her school money. Isn't that interesting? Besides, she had dressed well, bought a good piano and several nice pieces of furniture, and had as good times as any girl. Now she has her home nicely furnished and she and her husband manage to save one-third of his wages every month. Her baby girl, a year old, is clad in rompers made from the lower part of the father's percale shirts. This is the kind of thrift that counts. It buys the coal, it pays for some little luxury for the Sunday dinner, and it will in time pay off the mortgage on the home.

MAKING AND SAVING.—Doubtless many of you are saying, "that isn't telling us *how* to make money," but it is. "A penny saved is a penny earned." I believe there is something that each one of us can do—something peculiarly our own—at which we can be successful in earning our own independent spending money. If we will only study the situation and find out what is wanted, what everybody is clamoring for, then that is the thing to do, and do it *well*. Now that old-fashioned quilts are in style again many women are making quite an addition to their income by taking orders and making these beautiful old-fashioned bed coverings. Personally, I love this work and have made three of these of the sewed-on kind for one customer. For an average block 25 cents is charged; this includes setting the quilt together and putting on a border. Then if one can quilt this brings the price of one quilt up close to $15. Whatever you engage in you must work systematically. Have a plan and stick to it. Every worker has need to watch up the fractional currency of time just as much as a school teacher does. Work on schedule time and don't let one thing crowd out another. You can't make housekeeping easy—or if you could what would it amount to? The easy things are not given a reward of merit for their doing.

IDA M. JACKSON.

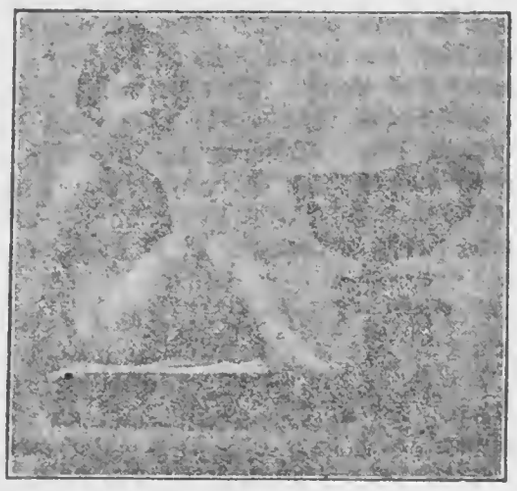
The Netherlands will have five acres at the Panama Exposition for the display of bulbs and rare garden flowers. There is to be a prize of $1,000 for the best variety of rose originated and exhibited at the exposition. Japan will have the most extensive display she has ever presented at a universal exhibition. She will send 150 tons of rare Japanese trees and shrubs for transplanting. One of the noted features at the exposition will be a beautiful statue typifying the pioneer women of California, by the famous sculptor Charles Grafly. The idea was originated by the Woman's Board of the Exposition, but the execution of the plan was given to the Pioneer Mother Monument Association who raised the $25,000 necessary for the project. The school children of California were among the first to contribute to the fund, sending in pennies or nickels, the latter being the largest amount any one child could give.

"Better Babies Contest"

Judging Young Human Stock

By Mrs. Cora Hamilton

THE "BETTER BABIES CONTESTS" started in Binghamton in 1913. It is held under the auspices of the Rest Room Club, Miss Viola Lee, the president, having charge of the Contests. Six days in the week Miss Lee is to be found at the



WEIGHING THE BABY.

Rest Room busily engaged in helping babies to become "better babies" and extending a smiling welcome to all comers. For remember this, the "Better Babies Contest" is not a matter of a few days, but is steady, constant care for all the little ones entered in the contests. Already some are enrolled for another year; parents are waking up to the great advantages secured for the babies by entering them months ahead of the contests.

ENTERING THE BABY.—When you take your baby to be entered its name and age are written down on a card which will serve for a full year's record of baby's growth. Its exact height is recorded, then the little one is undressed and given a thorough examination by Miss Lee, who often finds some physical defect, which otherwise might have gone unsuspected for years until it caused serious trouble, but which, taken in time, is soon remedied, thus giving baby a much better chance when the contest comes; to say nothing of the great gain to it in having any trouble righted before it gains much hold on the child. Miss Lee suggests many things to the mothers that help them wonderfully in the care of their little ones, both as to proper care and feeding, and also how best to correct any trouble discovered by the examination. After the examination, baby is carefully weighed and its exact weight recorded. Once a month for a year it is carefully, measured, weighed and examined, then at the end of a year Miss Lee has a monthly record of baby's progress, and it is wonderful what gain some of the babies have made under her wise care. Just think, all this care and advice free for a year for only the one dollar membership fee, and then at the "Better Babies Contest" which was held in the Broome County Court House Sept. 15-16, each child was examined by four specialists.

SCORING CONTESTANTS.—On first entering the court room, the mother filled out the baby's score card, giving name, age in months, whether bottle or breast fed (or both), how long it was so fed, what its principle food is at the present time, whether it sleeps in the open air or with open windows and how many, sleeps alone or with some one, and who that some one is, its nationality and also its parents' ages and whether it is the first, second, third or fourth child, or more. After the score card is filled out so far, it is given to the mother and she is told to go into Room 1. Here is the first physician and his helper, who takes the score card and fills in the blanks as the doctor tells her. He talks to baby and gets it to do certain little acts, such as looking out of the window when told, recognizing a ball and throwing it, naming different objects on being shown their pictures—such as a horse, cow, cat, dog, etc.—or if it is a very young baby just trying to see if it will grasp at a bright object or turn its head on hearing a sudden sound, recognizing its mother; in fact just giving certain tests according to its age as to its mental development, six months being the youngest age at which they are admitted and five years the oldest.

THE PHYSICAL TEST.—After babies were through in Room 1, they were taken out and undressed and then snugly wrapped up in a kimono, bathrobe or blanket, to await their turn in Room 2. Here Dr Hall was waiting, with two nurses (these nurses are employed by the city schools and spend their whole time looking after the welfare of Binghamton school children under directions of the school physician). One of the nurses steps forward and takes baby and stands him on a table in front of the doctor, if old enough to stand alone, if too young it is laid on a blanket and then its exact height is measured (using the measuring board, same as Miss Lee uses). As the doctor called out the measurements, Nurse No. 2 recorded them on the score card, the length of the arm and leg measured, the distance around the head, chest and abdomen was taken and the thickness of the chest measured. Then

MEASURING THE YOUNG STOCK.

after being carefully weighed baby was wrapped up and given back to mother.

THE SPECIALISTS NEXT.—Next came Room 3, where specialists were waiting to examine the eyes, ears, nose, throat, teeth, etc. Some cases of enlarged tonsils, adenoids, defective teeth and enlarged glands were discovered where the parents were entirely unaware that the child had any such trouble. The specialists gave the parents much good advice on what to do for the child in such a case. Other physicians examined the babies' bodies to make sure that all was right, even their tiny fingers and toes coming in for a share of attention. Their hair and scalp was examined, and each and every point was noted on the score card; also their behavior during the examination, extra marks being given for good nature, while bad temper was the cause of more than one black mark. So mothers, you see that a sunny disposition helps out in many ways; while some babies were laughing and having a fine time, others were yelling themselves black in the face. One mother had two little ones, and as she held the baby the examining physician took the larger child in his lap. Then the fun commenced—of all the kicking, and wiggling and screaming you ever saw! He was one of those fat, jolly doctors with a smile that hardly ever comes off, but it came very near it then. First the little lady was doubled up as if in terrible agony, next minute she would throw herself back and stiffen out, and then kick and yell some more. I rather guess the onlookers enjoyed it more than the doctor by the way the perspiration ran down his face before he got through. Other babies would laugh and play and look at the crying ones to see what was the trouble. Sometimes a number would get crying at once, and as each one cried on a different key, we had lots of music. But the doctors and nurses were so kind and gentle with the little ones that the tears soon disappeared, to be replaced by smiles. Miss Lee was everywhere, first in one room and then in another, to see that everything was as it should be.

THE SCORE CARDS.—After each physician finished his part of the examination he signed his name to the score card under the list of examinations and their results, that his attendant had marked on the cards. After leaving Room 3, babies were dressed, and then on leaving the court room each mother handed the baby's score card to the young lady outside the door. The following week was a busy one for Miss Lee and her helpers, as each score card had to be added up, and the scoring done according to the rules furnished by the Woman's Home Companion. Where last year the highest score of any baby was 95½%, this year a number scored 96, 97 and 98%, and one three-year-old boy, G. Desmond Harter, scored 100% perfect, receiving the bronze medal given by the Woman's Home Companion to the highest scoring boy; also a handsome silver cup given by a local jeweler for highest score, and also first prize in Class 3—a handsome little willow rocker. The girl scoring highest was Mary Crocker, 97½%, seven months old, who also received a bronze medal and silver cup from the same givers, as well as first prize in Class 6—a handsome dress. There were three prizes in each class, besides the extra prizes for the highest scoring boy and girl. There were five classes for boys and five for girls; six months to 12 months, 12 months to 24 months, 24 months to 36 months, 36 months to 48 months, and 48 months to 60 months. The Woman's Home Companion gave each child a pretty certificate for framing, showing they had been entered in the contest and giving the percentage they scored on examination. The certificates are signed by Gertrude B. Lane, editor of the Woman's Home Companion.

THE PRIZE WINNERS.—These certificates and the score cards were given to the mothers September 25, when there was another gathering of the mothers and babies and their friends, this time in the chapel of the First Presbyterian Church, where Dr. Lawrence, the pastor, gave a short address to the mothers and congratulated them on the big advancement the babies had averaged over the previous year. There were 150 babies in the contest, and nearly all of them were present with their mothers and friends. After Dr. Lawrence's address, Miss Lee came forward and was given a hearty

THIS BABY SCORED 95.5.

welcome, the hand-clapping and welcomes showing how near she has grown to the hearts of mothers and babies in the last two years. She spoke for a few minutes, and then Mr. Michaelbach, chairman of the Board of Health, gave an address, and then helped Miss Lee to announce the prize winners. As each winner's name was called the mother carried the baby up front, where it received the prize, and then they were seated in chairs facing the audience. The first prize-winner, little Mary Crocker, seven months old and girl champion in the contest, Mr. Michaelbach held up so everyone could see her, and then before returning her to her mother, gave her a hearty kiss. There were many nice prizes—high chairs, watches, coaster carts, Indian suits, dresses, caps, orders on the photographers for photographs, beautiful dolls, rings, silver spoons, and many others besides the special prizes for the champions, which were bronze medals and silver cups in addition to the first prize in this class. When the 100% perfect baby was stood up on the pulpit so everyone could see him, the audience cheered him till the little fellow began to be frightened, so he was given his prizes and trotted back to his mother.

VALUE OF THE CONTEST.—Many babies were entered which the parents knew were ineligible for the prizes, but they wished them to have the advantages of the examinating specialists' advice, and felt very much satisfied with the results of the examination, as the doctors gave them much good advice which if carefully followed out will put Binghamton in the lead in "Better Babies Contests" next year. Only a few of the children were found to have defects which could not be remedied with proper care while young. During the week of the contest (which by the way was called "Baby Week" in Binghamton) an exhibit was held in a prominent store, showing the proper fitting for the nursery, and a trained nurse was in charge who gave demonstrations of the proper way to bathe and dress the babies.

MRS. LORA HAMILTON.

"Rich Milk."

THE "office boy" of the Holstein-Friesian Register is guilty of the following. If our Jersey or Guernsey poet desires to come back in equal space—it awaits him.

Our Mary had a Holstein cow.
That gave no end of milk;
Does anybody wonder then
That Mary's gowns were silk.

Her dear friends tossed their heads and laughed
(Nice pussies with sharp claws)
They said the milk was horrid thin,
And Mary thick with flaws.

But Mary kept on selling milk,
Her cow soon had a calf;
The calf exchanged for diamonds
Left Mary with the laugh.

The pussies soon drew in their claws;
Each bought a Holstein cow;
They all engaged in selling milk;
All wear silk dresses now.

—The Office Boy.

Things to Think About.

TO clean the dust from wallpaper, buy a roll of cheap cotton batting and go over the paper the first time very gently and a second time with a little pressure.

For living rooms where the paper has become more or less smoked a delicate colored paper can be cleaned by rubbing the paper with the soft part of fresh bread (white).

Very few men today are satisfied for long with ineffective, animated dolls—or animated clothes-horses either. They want their wives to be awake, to get together, to do things, as in their own business they are compelled to do. (From "The Business of Being a Bride" in Good Housekeeping).

"The only saving that really counts today is the saving that comes from wise spending—not bargain-hunting or striving to pay less for things than they are worth, but getting the right things, at right prices and made under right conditions, so that everyone connected with the transaction, from the men and girls at the machine to the children who wear the clothes and eat the food, gets the fullest return from the outlay.....A penny saved instead of a penny properly spent is a penny wasted. Why not remember the parable of the talents, and learn wisdom from it?"

How to Make Tatting.

CAN you give me any information in your paper regarding how to do tatting? C. S.
Tafton, Penn.

Tatting is made with a shuttle which consists of two slender pieces of wood or bone or rubber in shape like diagram. These two pieces are put together, one

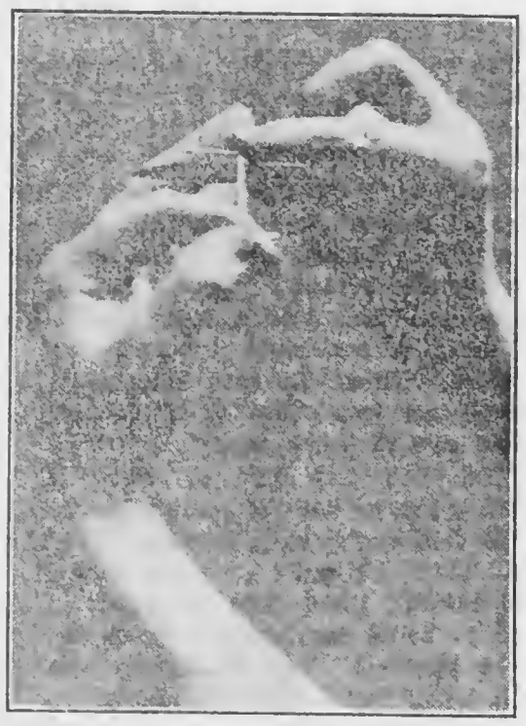
TATTING SHUTTLE.

on each side of a slim straight piece in which there is a hole. To wind, tie the thread through this hole, then begin to wind around that straight piece until the shuttle is full. Then break off thread from spool, leaving an end about 18 inches or two feet long. To start the stitch, hold the shuttle between thumb and first finger of right hand, with the length of shuttle parallel to fingers. Take the end of thread between thumb and first finger of left hand, the end of thread pointing toward one and bring the thread in a loop loosely around all the fingers, holding the two threads side by side, without tying a knot. There are two different

TAKING FIRST STITCH.

stitches in a purl. The first is taken thus: with the thread on left hand as described, and the shuttle in the right, the thread from the shuttle coming on the side next the fingers, take the thread from shuttle over the middle and third finger of right hand, holding it up, next slide shuttle under the thread of loop over left hand, in space between thumb and first finger. Slide the shuttle entirely *under* and then *over* the thread of loop, and bring it toward oneself with a quick pull, which will make a loop over the right hand thread of the two lying side by side on top of the first finger of left hand.

Next, holding the shuttle in the same position but holding the thread *down*,



TAKING SECOND STITCH.

caught over the third finger of right hand, slide the shuttle entirely *over* and then *under* the thread on the left hand and draw toward one with a quick pull. This will make another loop over the right hand thread lying on the finger. This completes one purl. One sees that the different stitches look slightly different.

To make a picot, leave a loop of thread sticking up about one-eighth of an inch between two stitches made by the left hand thread, of course, not by the right hand one.

The simplest form of tatting is made like this. (No. 1). Make four purls, picot; four purls, picot; four purls, picot; four purls; then pull up the thread tight and make a circle, like a thread buttonholed over very tightly. In making the next circle, bring thread up over left hand and start as described for starting the first stitch, holding thread up. Leave about a quarter or three-eighths of an inch of thread between first circle and first stitch of second circle. Now make four purls, fasten to third picot of first circle in this way; with a crochet hook or large pin, draw the thread lying over the first finger of the left hand up through the picot from underneath, then pass the shuttle through it and draw the thread down again. Then make four purls, picot; four purls, picot; four purls. Draw up circle as described before. Repeat this second circle to make any desired length of tatting.

A beginner is very apt to try to make the stitches over the wrong thread, and in that case the circles refuse to draw up. The thread over the left hand is the one to use in making the stitches, the one lying at the left as the two threads lie together when first looped over the hand. In trying to learn, it is a good idea to use a coarse thread, or even yarn, for one can see so much better what she is trying to do, and if possible get some one who already knows how to show the stitches, for one showing will help so much. Learning to make tatting is like learning to ride a bicycle; before mastering the art, every way excepting the right way is easy; and after one has learned it is easier to do it rightly than wrongly.

To make two thread tatting, one winds the shuttle full but does not break the thread from spool, as that thread is also needed. Make a circle in the ordinary way, then hold thread from spool close to the circle with thumb and first finger of left hand and catch the loose end over little finger, winding it around finger so it will stay firm. Use this thread on left hand to make stitches over thread from shuttle, in place of the ordinary loop over left hand, as in one-thread tatting. Using the thread in this manner, make five purls, picot, five purls; draw up stitches as tight as possible. Now make another circle, having the first stitch as close to the last stitch of the loop as possible, and fastening into the third picot of previous circle, as in one-thread tatting. Make another loop with the thread, then another circle as described, and keep on for any desired length of tatting, ending with a circle.

There is on the market a shuttle having a little peak at one end which can be used in place of a crochet hook, and it is a decided improvement. It can probably be found in any large store dealing in such things. Booklets giving patterns are sold by dealers in materials for fancy work. H. P. K.

REMOVING NITRATE OF SILVER STAINS.—For the benefit of any who stain their fingers while dyeing a coat according to the directions of E. A. C., as given on page 1291, or who in handling the solid stick of "lunar caustic" make unsightly black marks upon the hands, let me say that a solution of potassium cyanide will remove the stains without waiting for them to wear off. This latter chemical is a most virulent poison, however, and only the very small quantity of the solution that is needed should be made up at one time, and any that is left over should be at once thrown out where it can do no harm. X. Y. Z.

BOY'S GETTING UP.—What time shall the boy get up for breakfast? For answer the Wisconsin Anti-tuberculosis Association states: "Among other facts this exhibit portrays the model boy getting up at six o'clock in the morning. After taking a little exercise and performing certain necessary ablutions, the youngster eats breakfast. He then walks slowly to school. He is expected to play during the recess hour. When school is out, he runs home for the noon meal. It is entirely true that the average boy walks slowly to school and runs home to dinner.

RYE BREAD.—To one quart of warm water stir in as much wheat flour as will make a smooth batter: stir into it one cake Fleischman's compound yeast dissolved in a cup of lukewarm water, and set it in a warm place to rise; this is called setting a sponge; mix it in some vessel which will hold twice the quantity; in the morning, put three pounds and a half of rye flour into a bowl or tray, make a hollow in the center, pour in the sponge, add a teaspoonful of salt, and make the whole into a smooth dough, with as much warm water as may be necessary; knead it well, cover it, and let it set in a warm place for three hours; then knead it again, and make it into two or three loaves; bake in a quick oven one hour, if made in two loaves; if made in three loaves, somewhat less time will be required for baking. K.

:: Good Words ::

Of course I want the paper, for reasons that would take too long to state here, and would be only a repetition of what you have so often heard. But one of them is the feeling that you run a paper in which the performances of the average man are chronicled, and the ones that one can reasonably expect to duplicate if he is careful and on the job. I consider that to print the true story of the exceptionally expert man, in such a way as to give the impression, that any man can do as well, is the most insidious kind of lying. BLAINE EWING.
West Virginia.

You publish a paper that is so helpful and of value to all that one enjoys doing anything to help others benefit from it. Also you have a large credit balance here for the past favors you have done me and I am only too glad of an opportunity to score something on my side. If there is anything further I can do for you please advise me. J. S. LANGFORD.
New York.

"CLOSER THAN A BROTHER."—The place on which I was brought up and at that time raised enough to winter a dozen head of all kinds of cattle and nearly 50 hens. Today it keeps one old cat, nearly old enough to vote, the grass is sold on the ground for $25. *Selling papers is very much like a fellow when he gets acquainted with a girl. There is no one like her. Experience teaches me that when people become acquainted with one paper, it is a hard task to switch them to something else.* B. S.
Westchester Co., N. Y.

R. N.-Y.—It would be a fine thing for humanity if all men were as constant.

A BUSINESS MAN.—We don't want any premium for working for THE R. N.-Y., for every time we can get a subscriber we feel we are helping ourselves. Every farmer who reads THE R. N.-Y. becomes educated, and our interest lies in that way. We are boosters for our own selfish interests. A. H. G. H.
Niagara Falls, N. Y.

I don't think any man would or could expect more for his $1 per year than you are giving in the line of your paper. H. H.

THREE GENERATIONS.—While I am not engaged at present in farming I am very much interested in the grand old RURAL NEW-YORKER which I have taken for 30 years; my father was a subscriber before I was, and I have a son who is also taking it now. With best wishes for your continued success. F. L. M.
New York.

GOOD "DOPE" FOR A DRUMMER.—I am a traveling salesman and it doesn't seem possible that a farm paper would be of much interest to me. But you have mighty good "dope," and THE R. N.-Y. helps me spend several hours while I am going from place to place. J. J. M.

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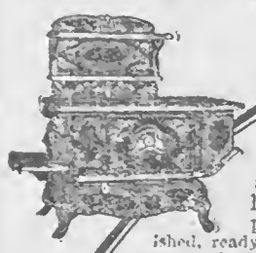

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"According to Jimmy"

(Continued from page 1369)

"'Amen!' sez Maw.

"Then Paw thought o' sumpi'n else, an' he sent me to get Edith's letter, he'd forgot to give her. Paw told her to read it. The first thing come out was a check for eighty dollars an' then a letter 'at said they'd heard she'd lost her position through no fault of her own. After 'vestigatin' they found she'd also been beat out of her pay. Said they couldn't afford to let anything like that happen, so they'd made the firm settle. Said they was glad to do her the little service, as she was one of the brightest students they'd turned out, an' wanted to know if they could get her another position.

"Yessum, they all forgot about dinner but me. I begun to help myself, but Paw sez, 'Just a minute, young man. Edith, you can make up your mind about that position later.'

"'She's made up her mind already,' sez Sheldon. 'I offered her a position as the better half of my family 15 minutes ago an' she accepted. The quicker she enters upon her duties the better I'll like it.'

"'Hooray!' sez Paw. 'Now we'll offer Thanksgivin' to Almighty God from full hearts. My blessin's are many more than I deserve, after the way I have acted this day.'

"Then he bowed his head an' begun. Say, Mis' Holcomb! I wish't you could a heard him. I bet he beat the preacher a mile!

"*Say!* I forgot all about them traps."

:: "Farm Stories" ::

"TWISTY-TOE."

A Thanksgiving Story of the North Country.

By The Brown Owl.

"COME boys, get up! This is the third time I've called you, and it's going to be the last," called Bess, from the foot of the stairs. "The pancakes are almost done and I just *won't* save a single one for you if you're late."

Dick stretched lazily in his warm blankets, as he opened one eye at a time. The window showed a patch of pale gray dawn that announced the approach of a cold stormy November day in the North Country.

The boys' room, over the kitchen, was warm and dimly lighted from the holes in the register around the stove pipe. It was a bit smoky also, but the fragrant odor of hot buckwheat cakes, steaming coffee, and potatoes being warmed up in ham fat, was far from being disagreeable to the always hungry boys. Dick put a foot against the back of his drowsy brother and sent him rolling to the floor, bedclothes and all.

"Hurry up, Will," he said, "let's get down quick, breakfast's ready and Burt 'll just sure fill up on the cakes."

With much pushing and scuffling the boys finally got into their clothes and stumbling noisily downstairs they made a dash across the kitchen for the wash basin.

"What are you boys trying to do, tear the house down?" called father from the dining room.

"No sir, Dick is trying to get to the washdish first," meekly answered Will.

"Come, hurry boys," mother gently urged, as she came out for the coffee pot. "We can't wait for you."

Presently the two boys, their faces not any too dry, their hair combed carefully in front, slid, still giggling, into their places at the table. Burt, a ruddy-faced boy 14, was already at the pancakes, and Bess, a tall pretty girl of 16 was busily helping serve breakfast. Burt and Bess drove to town to high school, while the two boys of 10 and 12 were still going to the district school. Their home, not many miles from the Canadian border, was a plain but comfortable old farmhouse, like many of the neighboring places. It was surrounded by level, fertile meadow lands, rocky rail-fenced pastures, and patches of woodland. When the breakfast was nearly over Mother said:

"I wish you would kill the chickens for me before you start chores, father. There was no time to dress them yesterday, but if I can get at them, at once there will be time for them to get cold before they have to go into the oven."

"Thanksgiving!" The heart of Dick sank with a thump. He hadn't thought of it since he got up, but it was heavy on his mind when he went to bed. Bess and mother were discussing the dinner, father and Burt were talking about fixing the box stall for the colt, so no one noticed that Dick's pancakes were not receiving their usual attention.

Thanksgiving, the day he had been dreading, had come. "Twisty-toe" would have to be killed. There are those who can understand the affection between a boy and a pet rooster. This Rhode Island Red had been singled out by Dick when he found the downy little chick with one toe curled around over another, and from that day Twisty-toe was Dick's chicken, to be fed, petted, and tended to until he became a regular nuisance.

"FARM PRODUCTS!" LEADING UP TO PUMPKIN PIE.

Twisty-toe was always hungry after the manner of his kind, and he had been petted so much by Dick, that if he could not find his friend in the back-yard he would go around and stand near the screen door on the porch and wait. Many a time during the past Summer, Bess, broom in hand, had furiously chased him around into the back-yard. It never did any good, he was soon back.

During the Fall, when chickens were to be either sold or dressed for family use, Dick had managed to have Twisty-toe passed by, usually by saying that he would be a fine big chap for Thanksgiving. Now, he was quite sure nothing could save his pet. After breakfast, mother, going to the woodshed after the scalding pan, encountered Dick, as he rushed in from out of doors.

"Why, Dick, what is it, child," she said, as he saw the look of real terror on his face.

"Oh, mother, please come quick and fix things, so they won't take Twisty-toe!" he cried. "Please mother, I just can't have him killed!" There were tears in his big brown eyes.

Mother set down her pan and went out to where father and Burt were waiting, near the chicken yard, for Dick. Dick trotted comfortably on ahead of mother, with absolute confidence in her being able to fix things satisfactorily.

"Here, Dick," called father, "catch that big fellow there. He is nearly as large as a young turkey."

"Is there another one that same size?" asked mother.

"He's the biggest there is," said Burt.

"Well," said mother, "one would hardly be enough for us today. What if you kill three of the others that are nearer of a size? They are all fat."

Dick shot mother a grateful grin as he flew furiously about after the others. As he passed Twisty-toe he gave the big red back a friendly slap that caused his pet to hop into a corner

It was nearly noon when father and Burt came in from the barn. The day was cold and windy, and the steamy fragrance of the warm kitchen made both father and son sigh with satisfaction. A subdued sizzle from the oven told them that the chickens were baking, and the top of the stove seemed to be covered with kettles and saucepans, each sending forth clouds of steam.

A shout from the window where Dick and Will were playing checkers and munching apples brought Burt to their side.

"Oh just see the side hitch I've got on him now," sang out Dick. "Either way he jumps I'll take three to the king row." Dick was noted for his "side hitches."

Mother and Bess stopped by the players long enough to look and laugh. Burt reached for the remaining apple in the six-quart pan near by, whereupon a delighted shout went up from Will. "The one that takes the last apple has got to go down and fill up the pan." That was one of their own rules, so Burt good-naturedly took up the pan and started down cellar.

"What kind do you want, kids?" he called from the top of the stairs. "Lincoln's Likings for me," called Will. "Flat Dutch for me," said Dick, and he added, "Say, Burt, just look and see if you can't find one from the yellow apple tree and a couple of water-cored Bellflowers."

"Well now see here," said Burt. "What if you come down and do your own hunting."

"Can't do it," answered Dick, "I've got Will headed straight for the double corners and I've got to beat him twice more before dinner."

One o'clock came and mother said: "Come now boys, come father, dinner is ready."

The boys lost no time getting to the table, and mother and Bess, their faces hot but smiling, started to serve up the feast. The chickens were beautifully brown and Dick could see that there was going to be plenty of dressing. The baked potatoes burst at the first touch of the knife. The Hubbard squash made a great mound of yellow. The dish of boiled onions had a large piece of butter, slowly melting away on top. In fact the table seemed full of just the very things mother knew they liked best.

Long before pudding time the boys began to shift uneasily in their chairs and to wish that they had "saved a little more room." But when at last, Bess, having cleared some of the things away, brought in the big pudding and set it in front of mother, Dick spoke the feeling of the family when he said: "Um—the very smell of that pudding, mother, makes me feel's if I could eat it all myself."

Dick scraped the last bit of pudding sauce from his dish, looked at it thoughtfully a moment and then put it down. "I just can't hold it," he said.

"Why don't you go out and run around the house a few times?" said father laughing; "then perhaps you would have room for it."

"I think I will," said Dick, and getting carefully to his feet he found his cap and went out into the yard. He wandered around to the front of the house, and seeing a boy coming up the road he stopped nearby until he should come along. It was Willie Longgo, with hands stuffed in his pockets, and trying to produce a whistle that would sound cheerful at least.

"Where you goin'?" said Dick.

"Oh, up the road a little ways," said Willie. "I thought maybe my uncle might come down today."

"Had yer dinner?" asked Dick.

"Naw, not yet," said the boy. "Pa is goin' over to Jim Collins' after a while an' see if he kin git some pertaters. Pa's goin' to work fer Jim next week, I guess."

The wind was cold, and neither boy cared to stand longer, so Willie moved off up the road and Dick rushed into the house where the rest of the family were still sitting around the dining table.

"Oh, mother," he burst out, Willie Longgo just went by and he hasn't had any dinner."

"I don't doubt it one bit," said mother. "Joe Longgo worked yesterday and the day before that, for Marlin," said father; "but I saw him trying to get home from the village last night, and he didn't look as though he cared whether there was a thing to eat or not for today's dinner."

Exclamations of anger and disgust came from Burt and Bess, and mother sat sad and thoughtful, looking out of the window.

"I don't know what we are going to do with those people," she said finally. "There is plenty of work for both Joe and his wife if they would only do it. There is no need of their living so. The neighbors just clothe those children the year around, and I've said over and over that I would never send any more food over there but—those children."

The eyes of all were on mother's face. Unconsciously she was their leader in everything. Father and children alike looked to her for guidance. She was a tall faded-looking woman, but her face was full of a quiet strength that made her a power for good not only in her own family circle, but in the whole neighborhood as well.

"We'll just have to send them some dinner," she said at last, "and we'll have to send enough so that those children will be sure to get some of it."

Everyone was at work at once helping to have things ready when Willie should come back. During the confusion Dick slipped quietly out of the house, and mother, going into the woodshed for a basket, found him thoughtfully kicking a stick of wood near the woodshed. He ran to climb up for the basket mother wanted, and as he handed it to her he said, almost in a whisper, because he did not dare trust his voice:

"Say, mother, can I give 'em Twisty-toe?"

His face was tear stained and grimy, but mother stooped and kissed it tenderly. "Certainly Dick if you want to," she said gently.

The basket containing a whole roasted chicken, a loaf of bread, over half of the great pudding and a jar of cranberry sauce was waiting for Willie when he straggled aimlessly down the road a little later. Near the foot of the hill, and out of sight of the house, as Willie was taking a delighted peep into the basket, he came upon Dick with a great Rhode Island Red chicken under his arm.

"Hey Willie," he said sternly, "does your father know how to kill a chicken quick, so's it won't hurt?"

"Um—you jest bet he does. He's killed sights of 'em an' knows jest how."

"Well if you're sure, you can have this one. Here, I'll put him under your arm. You needn't pinch him so tight. He's used to being carried, but he don't like to be pinched. You remember what I said, now," said Dick warningly.

"You bet yer life," said Willie as he staggered off with his load.

When Dick returned to the dear familiar kitchen his heart was full of a Thanksgiving that he did not more than half understand. Bess and mother were clearing up the dinner, Burt and father were reading and Will was waiting near the window with the checkerboard all set.

"Come on Dick," he said. "We'll have time for four or five games before we have to cut our beets and turnips for chore time.

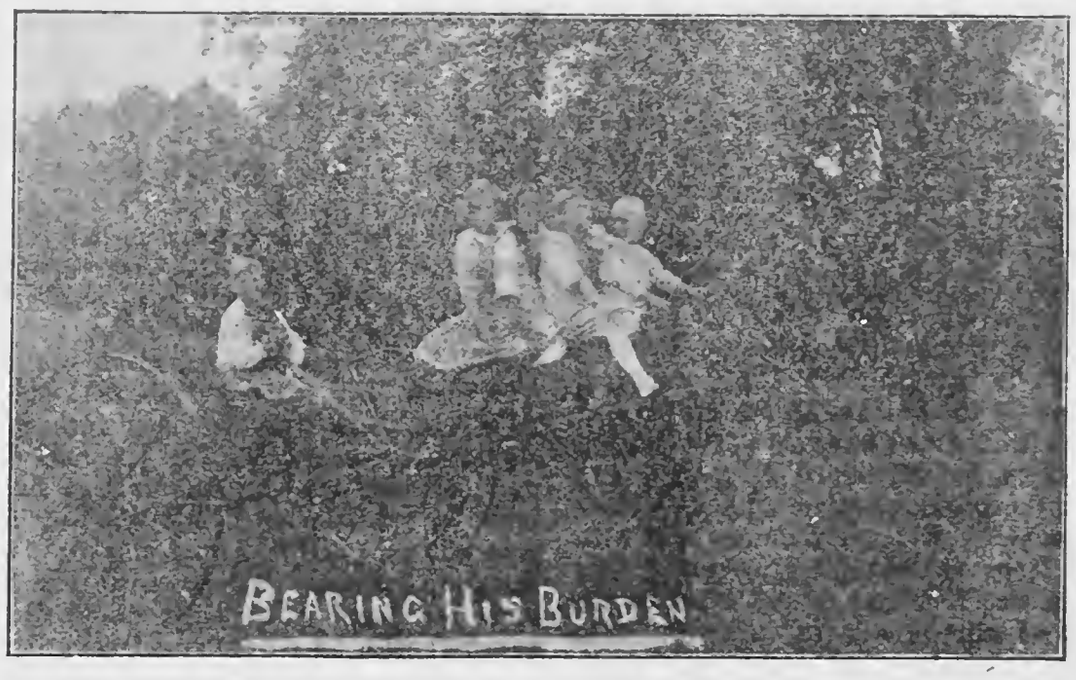
Household Management

On Selfishness and Hobbies.

IN an effort to prove the husband is not selfish when he buys improved machinery for himself and lets the wife go without, an editorial in a farm paper contains the following:

"The home produces nothing. It consumes. The production of the farm is all for the support of the home and while it is the duty of every husband to make the wife's labor as easy and pleasant as possible, the patent washer or bread-mixer will not bring in a penny, while the new horse-rake or mower will."

The writer has snubbed up against men who held similar opinions and has reached some conclusions which may be helpful to other women. The sooner it is realized that it is waste of energy to attempt to alter the opinion of such men the better, but there is always a chance to do something with yourself and when



once fairly interested in that undertaking the wonder will be that there was ever any time for bothering about the other fellow.

First of all take stock of yourself. What do you amount to anyway? Do you take any intelligent thought as to whether you are doing your work in the best way, or whether you are doing what might well be left undone, or leaving undone something essential? Many women ride a hobby, without bit or curb but with whip and spur.

There is the woman that irons everything, even the socks; another sweeps and dusts in season and out. One such woman got broom and dust pan and swept up a trifling bit of litter a caller made, to the latter's discomfiture, although later she laughed and said: "It's just her hobby." Still another woman mends long after the garment ceases to be worth the time spent on it. I counted nine patches on one side of the front of a man's work shirt. I laughingly told the wearer he looked like an animated rag-bag. He smiled sheepishly and said he wanted to see how far she would go. There is the woman who waits on her children when they might better be waiting on her. A four-year-old girl who could dress herself except a few buttons at the middle of her back—even to lacing her shoes and tying the strings in a double bow-knot, an achievement which cost her many patient trials and many an earnest "show me," looked on with disapproval while a visiting aunt dressed two cousins near her own age. A housewife caring night and day for a member of the family through a long and serious illness engaged a girl of 19 to do the house work. The girl said she could bake and cook, but when she came to try, it turned out that her mother had made the baking fire, had seen that the bread was light enough, and so on. So in addition to her duties in the sick room the nurse had to teach the girl to work independently. The mother had made the all too common mistake of doing half the work herself and letting the child take all the credit. It is quite likely that the men who so lightly esteem the home as a producer had such mothers. Whatever the home contributes toward bringing in the penny they take the credit for themselves. If we are honest with ourselves there are few of us who cannot find some unprofitable hobby to dismount.

If women would devote the energy they waste on their particular hobby toward acquiring the labor-saving articles there need not be a bread-maker without a bread-mixer or a washing done without a machine and wringer. And these are but a beginning. Once started you push on and on, seeking other worlds to conquer, and then, some day, you become aware that the other fellow has changed his opinion, and looking back you wonder if he wasn't half right after all. C.

Kitchen Tools; Household Conveniences.

PART I.

SAVING TIME.—While shopping in the house-furnishing department of one of New York's stores I happened to think of Mrs. B. L. C.'s article about simplifying housekeeping, so kept my eyes open with a view to seeing things that would be helpful to the farm housekeeper and would urge all those who can to buy as many as possible of the things I am going to describe, for there isn't one but what would save both time and labor. The first thing that met my eye was perhaps the best of all, for it would save more in time and effort than any other one thing in housekeeping. This was a round, heavy wire dish draining basket, just the size to fit into the ordinary dishpan. In the centre was a fine-meshed wire cup for putting knives, forks and spoons. This is intended for the inside of the rinsing pan and after the dishes are scalded the basket is lifted out and the dishes left to drain and dry. The price is 29 cents, so that if there was a large family, two could be used instead of one. When you think of saving the time it takes to wipe dishes—let alone washing and ironing dish towels—three times a day, year in year out is certainly is worth the effort to get one.

Right alongside of this was a wire dishcloth attached to the handle of a metal dish scraper. Think how convenient that would be when you had a kettle which had had the food burned a little, thus necessitating scraping it off. Price 10 cents.

POTATO RICER.—For a little thing a ricer is really about the most useful. Primarily it is supposed to be used for potatoes. After the potatoes are boiled they are sprinkled with pepper, salt and butter, then put them in this ricer, which makes them look like rice—hence the name. There is a heavy tin perforated bowl held in an iron frame which has a long straight handle and above this is another iron bar with a disk at the end of a rod in the middle which is pressed down on to the potatoes, thus forcing the potatoes through the holes in the bowl. The bowl can be taken out of the frame to wash it. It is just the thing for taking the skins from the cranberry sauce, or apple sauce (do you make your apple sauce that way? If not, try it—wash the apples and cut out any wormy or rotten spots and then stew; when done press through the ricer and sweeten to taste. It is much quicker to do it this way). When making grape jelly or jam, if you have not got a fruit press it is just the thing to use. When cooking Summer squash wash and cut up in small pieces and cook; when done remove seeds and skins by putting through the ricer. After cooking pumpkin put through ricer so as to remove lumps and strings. It seems as if there was no limit to the number of things daily coming up in the cooking line where the ricer saves time and work. The price is only 25 or 35 cents, according to size.

THE LITTLE CHURN.—For the woman who makes her own butter there is a little glass jar with wooden paddle inside that will make three pounds of butter in from four to 10 minutes. Personally I have never used one of these but have friends who have, and they are very enthusiastic over them.

EGG BEATERS.—The rotary egg beater is another saver of time, and I do not think you would find many city housekeepers without one; but I have known several country housekeepers who would only use a fork to beat eggs and cream, saying it was so much better. But that is only a notion, and when there are four or six blades to do the work of one fork there can be no question of the time saved. Price 15 cents up.

FOOD CHOPPERS.—These cost from 98 cents up and are certainly a very great saving of time. If you want hash for breakfast it only takes about three minutes to put onion, meat and potatoes through the chopper and you can have it just as fine or as coarse as you wish, for there are three different-sized cutters that go with even the cheapest of these choppers. And think of how many things you ordinarily chop. While on the subject of hash let me pass along something I learned just a short time ago. We always liked onion in our hash, but invariably the taste of the onions would come up in my throat and the children complained of the same thing. A short time ago a woman told me to fry the onions until brown before I put the potatoes and meat in, and that I would have no further trouble, as the onions needed more cooking than the other things. This I found to be true, and I do the same thing when I make Lyonnaise potatoes which are fried potatoes with onions and chopped parsley.

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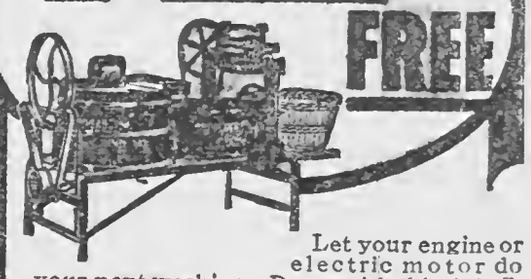

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Dresses for the Girls

Making Over for Winter

By Esther A. Cosse

LIGHT-WEIGHT CLOTHES.—Ideas have changed with the times about the dress of the little women. Formerly they had to have clothes made of heavy materials, the heavier the better, since parents used to think it was necessary to have all heavy clothes. Now young girls wear their ginghams, muslins, or cotton material all Winter, especially for school clothes. Parents in these days

PLAIN GINGHAM DRESS.

have come to realize that what they need are heavy coats, furs, etc. They need a warm jacket under the coat if it is very cold, something to keep their ears and hands warm and then they are ready for any emergency. In fact, some days they wear all their heavy clothes, and the next leave some of them off. If grandmothers could come back to earth and see little folks go out one day bundled to their ears in warm clothes and the next day with just an ordinary coat they would be horrified, and would feel sure that they would be down with pneumonia the next day. But it is not so, since people are now dressing according to the weather. Our seasons are so irregular that this is necessary. If we went out every day with the same amount of clothing for both warm or cold days, many would have pneumonia which can be avoided by dressing for the weather. If little folks wear light-weight clothes when they go to school, they can remove the heavier outer wraps and be comfortable while inside, since the schools are often too warm for the good of the pupils.

LENGTHENING A SKIRT.—Gingham dresses will get too short, but don't throw them away. One way to alter the length of a skirt, is to use the outside skirt as a tunic. From a piece of old or new white material, make a skirt and sew a fold on the bottom to make it long enough for the child. Make the fold about three inches wider than is necessary and the white lining will not show if the little one sits down, as the skirt is apt to draw up a little. If the sleeves are too short or too narrow, insert a piece of the plain material which you are using for the skirt. If the waist is too narrow, cut it up the front and after making a vest or guimpe of either white or colored material, sew the front of the waist to the vest. This will give the necessary width. If the back is too narrow do the same with the back, only cut it up the center back and hem the insert.

ALTERING A DRESS.—Many times a dress is good, but the child has grown tired of its style. To bring it right up to date, take a piece of embroidery or lace, four inches wide and make a pretty little collar which can be sewed to the waist to change the appearance. Measure from the center each side, three inches and make a square corner. Shape it out a little in the neck. Get what is called collar wire, really light weight lace wire and wire it up the center of the back and to each point. Many times we have this wire in the house. Go to an old hat which has been trimmed with a bow of ribbon. Rip out the ribbon wire, if white, and cut one of the wires from the edge. You will find three of these covered wires in the ribbon wire, but one is sufficient to hold a collar. Turn the edges back firmly or they will slip out when they are worn. A tiny tuck is sewed in the lace and the wire run through and tacked on each end. Then sew the collar to the waist. Take the remainder of the yard and a quarter and make cuffs for the sleeves. Perhaps you have a piece of plain material in the house which would match some color in the gingham. Make a pretty belt with two ends, one longer than the other. The ends should be lined and one cut square and the other round. Sometimes the waists are too short, insert a belt of some material and cover it with the plain color just described. Also make collars and cuffs to match.

MAKING OVER.—For silks, woolen or heavy cotton materials, laces and ribbons are used to redecorate the dresses. Many times mother has had a dress which could be made over into a dress for the daughter. These dresses should be carefully ripped apart, cleansed, usually with warm water and white soap, though it is possible to buy special soap for woolen materials. I had a blue silk dress which was satin on one side and like crepe de chine on the other. The satin side was, of course, the right side. The dress was good, but on account of not being used very often soon became out of style, so I decided to make it over for the little girl. She was delighted with the idea of having a new silk dress. So I ripped it

GINGHAM DRESS FINISHED WITH WHITE COLLAR AND SASH.

carefully apart, except the lining, which was large enough for the child, but a little short-waisted. In order to save as much time as possible I washed the lining and put it on a band, which made it right. The silk I also washed, and pressed on the right side while it was wet. I say wet, but it wasn't exactly as it came from the water. I hung it in the shade for 15 minutes, then wrapped it in a towel and in a short time ironed it. By ironing it on the right side it was necessary to use the wrong side, but it was beautiful. All dust and spots were taken out by gently rubbing between my hands while in the lather, but I didn't touch the silk with the soap since it would have spotted it. Then I laid on the pattern. Every piece was pinned to the silk before I started to cut. I found I didn't have quite enough silk, so I tried to match it in color and bought a little velvet and some cream lace. The velvet was used for a fold about the bottom of the skirt and for a dropped girdle with a long end, lined with silk. The lace made the front, lined with a small piece of white net, and the rolling collar, such as was described previously. The little girl had a beautiful dress, and it cost very little for the trimming, or $1 for the entire dress.

ALTERING A COAT.—One of my long coats was made over in the same way, but there was very little work attached to it. The coat was ripped and damped and pressed, which was done by dampening with a wet cloth and ironing on the wet material. Of course, the material used for wetting woolen material should be a cotton that will not shed lint. Old muslin is often used. Then after wetting it thoroughly place it over the cloth and iron, but the iron should never touch the wool, as it will burn and shrink the cloth. As the coat was seamed, the seams were pressed very carefully. The cloth was brown, and after discovering that red was to be a popular color this season I found some pieces of red velvet which had never been used. It was wrinkled, so I heated a flatiron, laid it upside down on a high pan, then placed the wet cloth over it and drew the velvet over it in order to steam out all the creases. When this was done I had enough to make and trim the cuffs and collar. The coat was then lined with the lining which had been used in the large coat, but I had washed and ironed it. When completed the coat was taken to a tailor to have the button holes worked in, which cost me 10 cents for each one of the large ones, and five cents for the small ones.

REMODELED HAT.—The child needed a hat to wear with the coat, so I started out to find something to make her a new hat. From one that had been used the previous season I ripped some black velvet, which I steamed. Then from another I ripped makings and found a frame which after the crown was made a little lower and the brim a little smaller was one of the new rolling sailors. This I covered carefully with the velvet, putting on the top brim first and drawing the edge over the brim to the facing and sewing with a firm stitch. Then I covered the crown. The piece was large enough to cover all the way across and I drew it to the base of the crown and sewed it. I didn't have enough to turn in the edges, but afterward drew around to cover the stitches a narrow piece of black ribbon (No. 5). A tailored bow with four loops finished off this band. The facing was then put in and fitted to the edge. I slipped a wire under the edge and sewed in by stitching back and forth with small stitches under the wire, but with invisible stitches on the top side. The girl was very fond of flowers, so I made some pink poppies from ribbon and silk which I had about the house and used some foliage from flowers which I had. I tore some old flowers apart to get the centers, and backs and the rubber stems. The petals were cut out of silk with rounded edges at the top and measuring 2½ inches. The two pieces were run together on the wrong side and turned inside out. Four of these petals were made for each flower, then sewed

GIRL'S HAT—PLAIN TRIMMING.

to the center and the back slipped on, then the rubber stem drawn over the wire. Two poppies were used and one bud, which was made of the silk to look like a rose bud. These flowers were tacked on the left side. To change off with the flowers I made a bow of ribbon, which I always pinned on with safety pins. The child could then change and saved me the necessity of making two hats. For school, I made a scarf of a piece of fancy ribbon, by sewing fringe on the edge and draped it around the crown. The hat was practical and it didn't make any difference how many times it was knocked to the floor, the trimming was just as I left it. The child didn't come home from school with a bow that was crushed or soiled, but was always as fresh as when new.

Mothers used to think they had to make children's garments big to allow for growth another year. Now they don't do that. Even the hems in the skirts are not doubled under as they used to be, but an ordinary hem is used, and when it gets too short, face it, or if necessary, use a false hem, which is made by stitching on a piece and having the stitching where it is sewed on covering the piecing. Materials are so reasonable and ginghams can be bought in such pretty designs that mothers can make garments of this sort at very small expense.

The Cat and the Door Bell.

A MORE perfect example of worthless feline felicity than Ginger never lived; and yet he lives, and no one suggests that he might better make room for a cat with fewer toes upon his feet and a greater disposition to lay them upon the rats and mice that occasionally show themselves on the place. Topsy, the little black mother of all the other cats upon the farm, is worth many times her weight in steel traps, and the enthusiasm that she annually shows for "better babies," and more of them, makes her rank as almost an expert in eugenics. Big brother Mutt lets few days pass by in which he does not bring to the house some trophy of the chase, and he treads the path as proudly when he has robbed the cradle of an infant mouse as when he carries a rat with tail nearly as long as his own and body that makes its captor hold his head high to keep it from the ground. He couldn't be spared, but Ginger, with black feet that look as though they were encased in padded boxing gloves, was never known to eat any game that was not brought to him, or to display a useful trait of character in any line. When small, he was so full of kinks that Ginger seemed the only name appropriate for him, but in his adulthood he faces life with sublime confidence in three square meals a day, ready provided. Behind that confident, optimistic, smile of his lie some brains, however, and these have probably been the means of prolonging his life, and may do so indefinitely. If he hadn't them how could he have learned that the way to gain entrance to the house was to ring the door bell and wait for some one to open the door? Our sitting-room door is armed with an old-fashioned gong that is struck by pulling down an outside lever. This lever has a porcelain knob on the end, and requires some force to operate it. When about half-grown, Ginger learned in some unknown way that if he would reach up and hook both fore feet over that white knob and then pull down until he heard a loud bang some one would open the door. No one ever made any effort to teach him this, unless it might have been Mutt who stands up and pounds the door knob with one paw when he wants to come in, but, in some way, he certainly learned it and he put his knowledge to good use. Through the Summer a screen door kept him away from the bell, and it was thought that he would probably forget his skill as a bell-ringer. The other night, however, the screen door was fastened back, and it being somewhat cold Ginger evidently wanted to come in and warm his 28 toes. About midnight a loud ring at the door awakened the man of the house and brought him to his feet. Upon opening the door, in strutted Ginger with his everlasting smile and confident purr. He promptly went out again at the back door, however, and the man returned to bed. Nothing again disturbed the family's sleep until about five o'clock in the morning, when the door bell rang. Nobody was fooled this time and nobody went to the door; again the bell rang, and again and again until it was struck six times

GIRL'S HAT CHANGED BY DIFFERENT BOW.

in succession. Maybe there was a neighbor at the door and, if not, such persistence certainly called for recognition. The door was opened, and in gurgled His Inky Blackness and padded his way to the sofa where he knew that a soft blanket lay folded. M. B. D.

Women Help Themselves to Comforts

Getting a Pretty Yard.

THERE is no doubt that farmers, as a rule, are more indifferent to the beauty of the grounds about their homes than they would be if they understood two things; first, that an actual cash value, by no means inconsiderable, is added to their property by pretty surroundings, and, second, that their "women folks" would be much happier and better contented to remain on the farm, if they had flowers and green grass. Anything that tends to depress a woman on a farm, reacts on her husband and family, and the converse is true. The above is for the men. Now for the women.

Men on the farm have become accustomed to women perennially scolding because they do not have pretty yards. Scolding? Well, the Bible says, "He that is often reproved hardeneth his neck." Profane writers have remarked that "the longer you keep an egg or a man in hot water, the harder they become." Did you ever notice that certain "must haves" always come some way or other? Make your beautiful yard a "must have," and stick to it like grim death, never letting go for a day, and you will get it. You need not expect to get it easily. We cannot change old traditions quickly. A good many different strings may have to be pulled before you get what you want. A little psychology is not amiss here—a realization that you must approach a mind in a certain way to produce certain reactions. The first thing is, never lose patience, and never speak crossly about this, no matter how much you may scold about other things. Remember the fable of the sun and the wind, who tried to see which could make the traveller throw aside his mantle, and how the wind tore with all its force, which only made the traveller cling the more tightly to his cloak, while the sun shone on him and melted it off him in a few minutes. The following ways have been tried by different women with more or less success.

1. Cutting out all fancy cooking and giving only the plainest kind of food, which fortunately is nourishing, so one need not feel one is starving a man if he gets beans and corn bread instead of lemon pie and doughnuts. When asked for a different fare, say it is "extra work but you will trade your time for the time of a man in the yard."

2. Getting a woman in the house and letting "him" pay for her while you go out and do the work yourself. You can do it. O, yes, you can. Helen Albee tells how, in her "Hardy Plants for Cottage Gardens," which it would pay you to get. None of you can have as discouraging an outlook as she had, and she conquered and tells how she did it.

3. Stop helping to milk. Let the chickens go, and let "him" buy eggs or go without. Don't raise any more turkeys. Milking is a man's work and you don't get paid a man's wages for doing it. If you did, you could hire a man to make the flower gardens. Turkeys and chickens will do if you can make money enough on them to hire a man for the yard. Otherwise "cut them out" if you want a garden more than anything else.

4. Advertise for a man who understands and loves work in a garden but who is confined to office work in a city and state that he can have board and room in the country for his services in that line. It is astonishing how glad these office and indoor men are to have a chance to get outdoor and country vacations without having it cost them anything. The expense of living in a city on a salary none too large, leaves them little cash for outings.

5. If you can teach anything advertise to exchange lessons for work. Sometimes you can get a foreigner who wishes to learn the language and who would gladly work three months for the sake of thoroughly mastering English correctly.

6. The chances are, if you are like most farmers' wives, that you are boarding hired men and doing a lot of extra work for them. This should be recognized and paid for, either in work on your yard, or in money, so that you can hire the work. Strike on doing something for nothing and claim your right to have those cheerful God-given, beauties, the happy flowers, all about you as you stay in the one spot to which farmers' wives, more than other women are confined. Stick to it that if you are nailed to one spot, you must have that spot beautiful.

ELLEN EAMES DE GRAFF.

Southern Outdoor Flowers for the New York Trade.

WE are often asked for advice as to hardy flowers that may be grown outdoors in the South for the New York flower trade. We cannot suggest that there is any great fortune in this work, but the trade offers possibilities, and may

"THE TRIPLE ENTENTE.

in time develop like the flower-growing in the south of France. A recent query in the *Florists' Review* asked what jonquils, Narcissi and peonies should be grown for this trade in Western Kentucky, and how they should be packed. The following advice was given by F. B., in the *Review*:

As to the most profitable varieties of Narcissi and jonquils to grow outdoors for the wholesale cut flower market, there is only one true jonquil that would probably prove profitable; that is, the campernelle, variety Odorus rugulosus. There seem to be two varieties of this sent out from Holland, the true Rugulosus being much larger than the other and grown on longer stems. The first cost of the bulbs is slight and they increase more rapidly in this country than any other Narcissus of which I know.

Of the trumpet daffodils, Emperor, Empress and Sir Watkin are the three varieties that will prove the most profitable, all things considered. Emperor and Sir Watkin are rather better, possibly, than Empress, because of color, and also because Empress is more subject to disease. As soon as Glory of Leiden can be bought as low as $3 or $4 per hundred, it should prove the most profitable of all, for it seems to be robust and certainly produces a much larger and finer flower than any of the others.

When there is a demand for the light, airy varieties, or for extra early ones, Narcissus incomparabilis Stella, Leedsii type, Duchess of Brabant and Mrs. Langtry are profitable. Barrii conspicuus can be bought cheaply, blooms freely, and usually finds a ready sale, though none of this latter class brings as high a price in most markets as the trumpet daffodils. Of the Poeticus narcissi, N. poeticus ornatus and King Edward VII. are the most profitable. The latter variety is high priced, but, where the market will pay for extra quality, is worth the difference.

It is difficult to name the four best peonies, but undoubtedly P. festiva maxima and Queen Victoria in white, Felix Crousse and Francois Ortegat in red, are as good as any. There are many good pinks of about equal value; P. edulis superba and Rosea superba are the two varieties that are perhaps most widely grown, though Modeste Guerin is better than the latter.

Shippers here, in northern Tennessee, usually do not ship in baskets, but in good, clean boxes, well lined with paper. The blooms are carefully packed and held in place by means of wooden cleats, nailed over the stems in such a way as to hold them down firmly and yet not bruise them. Generally these cleats are put in over every layer of blooms.

THE STUTTERING CHILD.—Dr. Smiley Blanton of Wisconsin University, in an article on speech defects, says:

"It is one of the unfortunate things that stammering and stuttering are considered funny. It would be less perpetually the material for jokes were it better known what a great percent. of this trouble is thus caused by imitation. Sometimes a stuttering child will start a whole school. We should use our influence to prevent characters on the stage from simulating stuttering as a means of getting a laugh. Severe injuries or surgical operations or great fright may induce it. One case is on record where a boy was chased by a vicious hog; in another instance frogs were placed in a child's bed as a practical joke, frightening him so that he became a stutterer. It is essentially a disease of childhood and it is then that the cure is easiest. A few may outgrow the disease, but most untreated cases last on into adult life. As soon as the disease begins the child should be examined by a competent physician or nerve specialist if possible and any abnormal physical condition treated, and the child then placed in the charge of a trained teacher who has had experience in teaching stutterers. The treatment consists mostly in carefully re-educating the child's speech mechanism. With some the cure requires only a few weeks, others much longer. All cases can be cured or greatly helped."

GRASSHOPPERS AS FOOD.—Last year one of the farm papers startled the chicken world with the story of the woman who "put up" several barrels of dried grasshoppers as hen food. Now comes President J. H. Waters of the Kansas Agricultural College: "Dried grasshoppers are used as food in the Philippine Islands. Three thousand tons of grasshoppers were marketed in Manila in a year. Some good and tempting dishes are prepared from them. There is a grasshopper plague every 10 years in the Philippines, and the problem of combating the grasshoppers in a warm climate like the Philippines is more difficult than in countries where cold weather serves as a check. There are many acres of unsettled country which serve as breeding places for the grasshoppers. The method used in capturing the grasshoppers is to organize a drive. A large shallow tank is constructed which has wings of galvanized iron. The tank is filled with kerosene. The natives then start the drive three or four miles away and close in gradually, driving the grasshoppers before them into the tank. The grasshoppers are then dried and sent to market."

HOMES FOR WOMEN.—Years ago it was common to find in every farm home middle-aged women doing part of the work of the household for the sake of a home, or at least very small wages. They were treated well and looked after the household wants as faithfully as though it were their own home. Since coming back to the old farm to live we find very few of these helpers, but we believe there are in cities or larger towns many women who would be happy and contented in such situations; a place where they could have comfortable rooms, good food and light work, light compared to the old days when cheese was made in nearly every farmhouse. This subject might be an interesting one to other families and would be an interesting subject for correspondence through the medium of your good paper. M. B. M.

Connecticut.

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THE RURAL NEW-YORKER, 333 W. 30th St., NEW YORK CITY

An Old-fashioned New England Dinner

Cooking the Turkey and "Fixings"

Reported by Edna S. Knapp

PLANNING THE MEALS.—Mrs. Cook came into her pleasant sitting-room smoothing down the folds of her pretty white apron. Sitting down in her favorite rocking-chair in the bay window she remarked:

"Now I can sit down a minute and rest."

"What would you have, if you had just what you wanted for a Thanksgiving dinner and had to do all the work yourself?" I asked.

"Soup first; we all like it and I make lots of little broths and stews. I'd have oyster crackers with it. Turkey, of course, with dressing, that's the principal thing, don't you think so? For vegetables, have squash baked, shell down, you know, because the flavor is so much richer that way; turnips, onions, we eat those every day in the year; white potatoes, mashed I think; cranberry sauce, jelly is not so good, the best part is in the skins. I think that is vegetables enough. It's a regular nuisance to serve so much, and people don't want it. Sweet potatoes taste a good deal like squash, so I never have them for Thanksgiving. I try to cook something that goes with the dinner, not something you get every day in the week."

"What would you have for bread?"

"Rolls, I think. I've always made a good many," answered Mrs. Cook. "Now about dessert. I always make a plum pudding with hard sauce. Some people have Indian pudding, but we have it once a week anyway, so don't want it for Thanksgiving. You wouldn't need more than one kind of pie; mince pie is too hearty to serve after such a dinner and tastes a good deal like plum pudding. I guess I'd have pumpkin pie and grapes, pears and nuts. I don't believe anybody'd feel like eating an apple after a hearty dinner."

"Would you serve coffee?"

"Yes, I'd have the coffee poured any time during the meal folks wanted it. They used to drink it with their meals but now most people sip their coffee after they're all through."

"Now please tell me how you would cook all these things and how you would manage your work."

"I'd make the pudding the day before, that is early enough in my opinion, and Thanksgiving Day I want the oven for the turkey. I don't care for a steamed pudding. I'd cook the pumpkin the day before and mix up the crust: a pumpkin pie always has a better taste if eaten the day it is made, and who would mind filling a pie or two Thanksgiving morning? You know yourself it isn't any work at all. The cranberry sauce could be made early too." She picked up from the table a yellowed old note book.

"This looks as if it had kept its centennial," she laughed. "Here is my recipe for soup. It is an old timer. Take as much soup from the stock pot as you need, it may be any kind, but nothing is nicer than chicken broth. When I have a fowl, I boil it (parboil) the day before and let it stand over night in the water it was cooked in. That makes it very tender, and the water can be used for broth, you can roast the fowl all right. To the strained stock, add a large cup of mashed potato, season to taste and cook five minutes. I like to add a few bits of vegetable, carrots especially, in their season. Are you fond of carrots?"

"Indeed I'm not. Sister is, father says he dislikes them and then eats them."

"Now, about my rolls. If you follow these directions exactly, you'll have lovely rolls. You have to set them at night, of course, to bake them in the morning. Take a pint of milk scalded and cooled, one teaspoon salt, one tablespoon butter, you ought to melt this in the milk, one tablespoon sugar and half a yeast cake dissolved in one-third cup of lukewarm water and flour to mix. I mix this with a silver knife, set the dough to raise and in the morning roll out about three-eighths of an inch thick, and cut with a round cutter. Press across the center with the handle of the knife, brush with melted butter, butter the edges slightly, too. Fold the rolls over, let them rise a while and bake brown in a hot oven. Now don't they sound good?"

"They certainly do."

She brought out another cook book here; it looked nearly as old as the other one and was worn to holes in places. She continued: "I never use any egg in the turkey dressing. Some put in oysters, I never do, and I don't like to use salt pork. It pays to singe the turkey, you know it has sort of hairs all over it. I like to cut the neck off short and get the crop out that way. I *always* bake my turkeys in a covered pan with a cover that shuts down tight. You don't have to baste it so often and the outside never gets hard. You have to look at it once in a while and baste it, you can

"HE MAY BE THANKFUL FOR GRANDMOTHER."

tell by looking. Try this way for the dressing, you'll have to judge by the size of the turkey how much you need. Use stale soft bread, baker's bread is very good. Season lightly with salt, pepper and onions and thyme. Moisten by tossing in hot butter in the frying pan until it is brown and crisp. That is all you need do."

"Won't that be rather dry?"

"No, certainly not. The steam from the turkey will make it moist enough. It is very delicate. I just boil the onions and mash them, season with salt, pepper and butter, and treat the turnips the same. I always heat the milk for mashed potatoes and beat them up light, they look pretty dotted over with bits of butter. Our favorite way is to take small potatoes, or cut up large ones, and boil them in milk, watching them so they won't break. Then make a white sauce and pour over and serve at once."

"That sauce would want to be pretty thick, wouldn't it, so it wouldn't run on the plate? And wouldn't it be rather a job to watch the potatoes closely at the minute, when you had so much to do?" I asked.

"In that case, maybe we'd better say mashed potato, that is always good." Mrs. Cook answered. "I'm not partial to steamed pudding. Who wants to steam one several hours when you can bake it so much quicker? This is the rule I use. Butter a two-quart pudding dish, split crackers and put in a layer of raisins, dot with butter and sprinkle with cinnamon and nutmeg, then another layer of crackers and continue until the dish is full or nearly full, I mean. You must remember that it swells. Have the last layer of crackers and dotted with butter. Beat two eggs light, dissolve two-thirds of a bowl of sugar and a scant teaspoonful of salt in the milk, about three pints. Add the eggs and pour slowly into the dish so as not to disturb the layers. I fix this over night and put a plate on top to weight it down. Add more milk in the morning, if it is needed. Bake slowly for two or three hours. The sauce is one cup sugar and one-half cup butter creamed and an egg."

"How about the pumpkin pie?"

"Well, to get the real pumpkin flavor, you want to cook the water all out of the pumpkin so it will be dry. The best way is to cook it on top of the stove all day, or you can bake it in the oven shell down like squash. To cook it on the stove, pare the pieces and cut fine and steam until soft, then mash and cook uncovered on back of stove until the water is all out and it is dry and smooth. Have the milk hot for making the pie, you strain the pumpkin, of course, add the usual spice and egg. I always put a tablespoonful of molasses in each pie, it gives a good color and adds to the flavor. I always use lard in my pie crust. Is there anything more you want to know?"

"I don't think you told how you make cranberry sauce. That was extra good for dinner today."

"Well, I must tell you. We had six or seven quarts on our own bog this year, we haven't had any for years. We would have had more but the frost got there first. Wasn't that too bad?"

"It certainly was."

"Make the sauce like this. Put the cranberries in an earthen dish; no other kind will do. Use two cups of sugar to one quart of cranberries. Cover the dish tightly, set it on the stove for about 10 minutes, anyway until the cranberries pop furiously. Then take from the fire still uncovered and set away. Don't uncover them until you want them to eat, the steam does the cooking and that makes the jelly. This is the best way to cook them. I think that is all."

Miss Cook came in from her day's work in school and listened for a moment to our conversation. "You make me hungry!" she said.

Honey As a Substitute For Sugar In Cooking and Preserving.

THE rapid advance of sugar caused many to consider honey as a sweet in the matter of cooking and preserving. Mr. E. R. Root of Ohio, an authority on bees and their products, says: "Cakes, cookies and household delicacies may be kept much longer if honey is used for sweetening in place of sugar or the low-priced syrups. This of course is due to a disposition in honey to absorb moisture." Mr. Root says: "I could tell the housewives about some honey cookies, or honey jumbles as they were called, that were kept for a very long time, in fact so long that I am afraid the ladies would have trouble in believing the statement."

In reply to the question which would arise in every woman's mind regarding removing the sugar requirements from the recipe and using honey, Mr. Root says: "Danger lies in eliminating sugar from a recipe and substituting honey. It is apt to result in failure if no other change is made. The flavor of cakes or cookies made with honey is somewhat different from sugar, and some people may not like the flavor quite as well, while others may appreciate the change. Ginger cookies made with honey have a very different flavor from those made with Orleans molasses, and nine out of ten persons consider the cookies made with honey in the recipe very good."

What about the use of a cheap product?

"The housewife will seek to purchase honey as reasonably as possible. Low price need not indicate impurity, but it does mean usually that honey is darker in color and stronger in flavor than the lighter, milder honey which sells at a higher price. Yet because honey is dark in color it does not mean that it is strong in flavor, but it is true that strong honeys are usually dark in color. One should select for cooking a reasonable priced honey, and one not too strong in flavor. Alfalfa honey is almost always quite light in color, and has a minty, cinnamon-like flavor, which makes it quite desirable for cooking in my way of thinking although some get tired of the minty flavor while others grow suspicious and feel that something has been added."

"Is honey an efficient sweet for preserving?"

"I am very enthusiastic in regard to the use of honey in canning fruit. It is more healthful than cane sugar or New Orleans molasses when put to any use for sweetening. Strawberries or peaches especially when put up with honey retain their natural color longer and acquire richer flavor, approaching more nearly the flavor of the fruit when fresh. One must enjoy strawberries canned with honey to appreciate the richer and more natural taste, and the brilliant red color instead of the usual pale brown. In our home we have used both sugar and honey in putting up, say a bushel of peaches, and it is true that we can pick out the peaches canned with the honey by the brighter color."

The housewife may wonder if the flavor of the honey will survive at the expense of that of the fruit. Regarding this point Mr. Root says: "The flavor of fruit canned with honey is most excellent. Strange as it may seem, the flavor of the honey is not perpetuated to any marked degree. There is some difference, and most people consider the fruit so put up, richer and nicer in every way."

"You may imagine that I lived a happy life for a few weeks, three or four years ago when my wife, my brother's wife and our three sisters were testing out some recipes in which honey supplants the use of sugar. I insisted that I should have samples of everything made with honey, and it was indeed very pleasant."

RODERICK, aged six, became incensed at his mother, and declared he didn't like her any more. His father suggested sending for Uncle Sam to take her away by parcel post. Then Roderick whimpered: "Well, I don't like her, but I need her."—Chicago Tribune.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 1297.*)

"OH, yes—after we make final proof and get out patents we'll be free." And yet, that thought did not give either boy the expected sense of exhilaration. They were not free, for they were tied by invisible cords to that land, to their homes, to their friends, to the country. For the man who has once breathed the Western air, lived the Western life, grown and expanded with the largeness of the plains, can never go back to the circumscribed areas of smaller things and people and places.

The fifth year of land cropping was nearing its completion, and the advertisement for final proof was running in the local papers according to law. The crop on Jim Maynard's land had doubled that on the shale bank that last year. The six gingham aprons given to Nate by the thrasher crew, the first Fall on the plains, had worn themselves out, one by one upon the line near the shanty, and the flapping folds of the last of the six attracted a party of real estate men, who were out ostensibly either to buy or sell land. Nate and Norm made the party welcome to their simple dinner, and after the usual chaffing about the apron, and the usual praise of the good cooking, the men wandered about with apparently aimlessness, lookiug at the land.

"What's the reason the crop on this land is so much lighter than it is over there?" inquired Mr. Measman the leader of the party, crumbling some bits of shale in his fingers as he spoke.

"Oh, I don't know," Nate replied. "My partner, who knows more about soils than I do, says this land would make an ideal cattle range."

"Hmmm! Stony?" inquired Mr. Measman.

"No, you see what it is, just shale—old lake bed there, and the banks are nothing much but shale with a thin veneer of good soil, which has drifted ou from the better land near by. The claim next us is as rich as fruit cake, and the valley there is knee deep in land like lard."

"Curious?" Mr. Measman commented, without interest. "Going to stay here?"

"Oh, I reckon," Nate said easily. "We expect to make final proof pretty soon."

"Own half a section, I suppose!"

"My partner and I own a section, or will when we get our patents."

"You and your partner come out together?" Mr. Measman inquired, apparently by way of making conversation, even though it seemed to bore him.

"Drove out with oxen."

"Plucky! I call that great! And staid here all the time since!"

"Oh, practically, we went away once or twice to work, but we've lived here really."

"I suppose you eat and sleep together, and keep a few old clothes, in the other shanty, to indicate possession," Mr. Measman laughed lightly.

"We've slept," Nate replied laughing, too, "right across the dividing line, unless we've been restless and kicked over to one side."

"Pretty cute!" Mr. Measman remarked with approval. "You don't want to sell out? I buy and sell, you know." There was a keen look in Mr. Meas man's eyes, although his voice was nonchalant, if not bored.

"I guess not—just now," Nate said slowly.

"Good grit, I admire your spirit. It's just such steadfast men who will build up this country and make it one of the grandest in the Union."

"Make it grand!" cried Nate. "It is already made, and made grander and more wonderful than any man can make it or build it, or finish it." Nate flushed, a little, and the two walked back to the edge of the bluff, where Mr. Measman again picked up a handful of loose shale, and crumbled it carelessly.

"If you had that ground up and wet, it would make enough mud pies to satisfy the entire infant output of the world."

The other man coming up just then Mr. Measman turned to Norm lazily. "Got any price on your land?"

"Not just now. We're making final proof soon, and a relinquishment is not worth quite as much as a place with a patent. Want to buy?"

"I'm buying most anything folks want to get rid of, and I judged by what your partner said, you weren't any too satisfied with the agricultural value of your land."

"There is lots better land than this," Norm admitted cheerfully.

Mr. Measman was still crumbling shale. 'I like your pluck," he said. "I just thought I'd like to see you in a better location. See this," he said to one of the other men. "Wouldn't that make great mud pie timber for the kids? They could mould most anything out of it. I'd just like to see them lam into a box of that stuff." Mr. Measman spoke jocularly.

"Take a box," said Nate. "I've made all sorts of chicken dishes out of it, and it holds its own all right."

"No, no... It's too much bother," Mr. Measman protested. "Oh well, if you insist. I suppose I could take a little," and Nate swiftly ran down the bank, with a box, filled it with the finely ground shale, and brought it panting to the buggy.

"Oh, thank you. It's awful foolish lugging that stuff—but kids—" Mr. Measman said apologetically. "You're mighty clever boys. I'll give you ten dollars an acre for your land if you want to sell it. I've taken a great fancy to you—and you could take your money and buy land most anywhere. I could hunt you up a good wheat claim—"

Nate and Norm faced each other, and there was a quick, questioning in the eyes of both.

"Talk it over, and let me know. I'll be in Wetasket tomorrow."

"We'll talk it over," Nate said pleasantly. "It looks like a good chance."

Both boys watched the retreating vehicle as it disappeared over the hill, and then turning without words, they went about their work. It was not until after the evening chores were done, and the frugal supper over, that they seated themselves outside the shanty under the soft sheen of the coming night, that Norm spoke.

"That would be six thousand four hundred dollars," he spoke, as though the suggestion of sale had just been made, and in fact to both there had been no paramount thought. Both had gone over and over again, the idea of sale, the idea of possessing such a sum of money, with which to do as they pleased.

"It's a lot of money," Nate admitted.

"I don't suppose I could have made that much money back there, in a lifetime with Red and Roan, and every day full of work."

"You don't want to go back then?" Nate's voice was even, but questioning.

"Go back!" Norm gasped. "Why, I don't think I could live back there—after this!"

"And yet you don't want to go on here—this way?" Nate was relentless in his probing.

"Oh, I don't know," wearily. "I feel more collapsed facing this idea of selling, than I ever have with any work however, hard or continuous."

"Yet you want the money," Nate summed up grimly. I'm pretty sure we could take the money and go into most any town and make more with it in business—"

"Town!" snorted Norm. "I couldn't live in town, after this," and Norm swept his hand comprehensively towards the broad, beautiful land around him, where he could see their livestock grazing richly in an open space. They could see the coops where their young chickens were sheltered, and just then the cat came and rubbed against Norm, and it seemed as though that gentle touch, proved the balancing straw in the transaction. Norm lifted the cat to his lap, and stroked her gently.

"Say, Nate I'd rather sit here in this broad, open country, and hear this cat purr, than to hear the best singer in the world, cooped up in a city! And I wouldn't trade off one of Red's onyx hoofs for a whole row of candy jars or shelves of commercial calico." With this declaration of independence, Norm rose, and stretched himself to his splendid height and laughed. "I feel free—as free as this prairie wind."

"Yes, we are free," Nate echoed simply. Then both lapsed into silence. Norm moviug about amongst the little living things rapturously; looking to see that the chickens were all right, stroking the calf, and finally depositing the cat in her nest with her ever-present kittens, stroking her, petting her, as though she had been the one, tangible thing which had held him to his own. Then he turned back and the sight of Nate lying in apparent listlessness upon the grass near the shanty, seemed to change the tenor of his thoughts. His exaltation passed away, and something gripped his heart with a sense akin to fear. He scrutinized Nate's face, as he slumped down in a chair near him, and then he lapsed into thought—brooding, anxious thought, if the lines of his face meant anything.

Nate rose to go to his own place for the night. "Good night, old pal," he murmured quietly, and he cast a strange questioning look at Norm.

"Wait! Wait a minute, Nate," Norm spoke hurriedly. "Nate, if you want to go, if you want to sell out, and I can't help but think you do—we'll go. It was just the first thought of chance that unnerved me. I'm one of the kind that get into a rut, and haven't the force of character to get out. I've been thinking more, and there isn't any use to hang on to a piece of almost worthless—" Norm gulped a little as he choked out that traitor word—for what he termed "worthless" seemed just then to be of the highest possible value to him, for it represented to him, everything that had been worth while in all his young life. But he would be true to Nate, for Nate was of still greater value than any mere, material possession could be.

CHAPTER X.

The Grip of the Land.

"Don't get yourself wrought up any," Nate said affectionately, laying his hand on Norm's broad shoulder. "I don't want to sell any more than you do. I just wanted to be sure that you were not sacrificing yourself to please me."

"We've always felt about the same," Norm said, stopping between each word, as though something in his respiratory organs prevented speech. "The more I thought of selling, the worse it seemed to me. If we should sell—we might—drift apart."

"We'll anchor right here then," Nate asserted warmly, clasping Norm's big hand with both his strong, slender ones." We'll stay together, and we'll stay at HOME!"

The two boys walked silently to Nate's shack, and Nate threw his blanket down on the sod, and pillowless he lay down to rest.

"Pleasant dreams, kid," Norm said lightly, because his heart was too full, for anything more. He bent to tuck the blanket over Nate's chest, as he had done probably a thousand times before. He couldn't seem to give up the idea that Nate needed caring for, as he had in the days of their early pal-dom.

"I'm full of pleasant dreams awake," Nate answered, also lightly, but his heart was very full of tenderness for the great fellow who was now striding towards his own place.

"Norm," said Nate the next day," I'm wondering if that fellow, is as much interested in mud-pies, as he tried to make us believe. I would just like to know what he really wanted that soft shale for. They have clay put up on purpose for kids to model with—a good deal better and cleaner too, than this crude product."

"I'm sure Mr. Tibble told me, casually, that Mr. Measman had no children."

"The low-down, lying cur," Nate flamed. "He's got some idea about this land. He knows something that we don't," Nate paused thoughtfully. "Do you remember those troughs I tried to make out of that fine stuff at the base of the hill; they didn't work, but the bowl I made to warm chicken feed, that lasted a long time, and it got fierce hot sometimes too."

"He's bent on something," Norm admitted, thoughtfully. "I lay awake thinking a long time last night."

"I'm sure there isn't anything very valuable about this, it certainly is not gold or silver or mica, but maybe some common stuff that would prove useful. I'm going to find out what."

It was firmly fixed in the minds of both, that Mr. Measman had some ulterior motive in taking that box of shale, and that his nonchalance and apparent boredom were assumed for their benefit. It was not long before Nate had an errand to the cellar, and taking a light, he tried to lift out the stones which had lined his impromptu fireplace and baking pit, only to find that they were immovable. He scraped away all the coals and ashes, which had lain there so long, and placing the light in the bottom of the cavity, he discovered something that made his hands tremulous with excitement.

"Norm, come here," Nate called, and Norm came plunging down the cellar." What's the matter? Your voice souuds as though you had touched a lizard in the dark, or found a—"

Nate stood bending over the pit. Norm too bent closer and closer, then he, too, attempted to lift the lining tones. He struck a match and held it close to the bottom of the little, old, oven.

"It's hard as—"

"It certainly is," Nate agreed. "Maybe we'll get a crop off this land yet."

"Maybe," admitted Norm. "It has yielded some unexpected crops, and it looks as though here might be another.

"It's hoodooed for good," Nate said gaily. "I'm going to send a box of shale to my old boss," and straightaway he made and packed a small box and addressed it to his old employer, Mr. Rodman. He also sent him au explanatory letter, the first since he had left him five years previously.

(*To be continued next month.*)

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PART V.

TYPES OF SHEEP.—There are three distinct types of sheep; each type embraces two or more different breeds. Each type is suited to a certain environment under which it has been developed. Each has its place under our economic conditions to-day, and one of the first things the sheep breeder has to do is to choose the type and breed that he wishes to spend his time upon, and having chosen with care, the thing to do is to stick to that breed. The heavy wooled type has been reared under conditions of sparse and hilly pastures and hence stand grazing well. The fine wooled sheep are of a different form than are the mutton or medium wools. The typical fine wool form is of the same tri-wedge conformation that is so valuable an asset to the dairy animal. It may have other defects of body such as the ewe neck, and the animals are often "pot-bellied," and liable to have cat-hams. Because of the fact that the value of these sheep lies in their staple of wool and not so much in their carcasses, we can condone certain peculiarities of form which would be condemned in the strictly mutton sheep. The general class of fine wooled sheep is the Merino and of this type we have the American and Rambouillet. Increase the surface for wool growing and the possible weight of fleece has been increased. In the case of the fine wooled sheep, the surface for wool production has been increased by breeding for large folds of skin on the neck. These may be five or more in number on the American Merinos, and are called the "apron." The Rambouillets possess less folds of skin and a form more comparable to the mutton type.

There is another type of sheep which has been reared under the heavy lowland pasture conditions of the fertile regions of Great Britain. These sheep are much heavier, their wool is not so dense, though longer, and they are well suited for our lowland pastures. Despite the fact that these sheep have a longer fiber they cannot stand the rigors of a severe Winter so well as the fine-wools because their fleeces are not so dense; i. e., there are not so many fibers growing to the square inch. The wool hangs in ringlets and parts so that the skin of the sheep is exposed to the blasts of Winter and the rains may beat upon an unprotected spot. Exposure, to this class of sheep, means loss. Breeds of this type are the Lincoln, Cotswold and Leicester. The ideal body conformation is "cylindrical" with well joined neck and shoulders, broad, long loins with well developed hind quarters.

The medium wool types of sheep contain such well-known breeds as the Shropshire, Hampshire, Oxford, Southdown and Dorset. Under Central States conditions there is a large demand for sheep that will shear a good weight of fleece, and still give a good mutton carcass. Such conditions are met by these medium wooled breeds. The breeding of a superior medium wooled sheep is a much more painstaking job than to breed either the fine or long wools. In breeding stock it is a fairly easy thing to perpetuate one character such as color, the tri-wedge conformation, or the absence of horns, but when it comes to fixing two of these characters in one individual, the problem becomes more complex. So in breeding the medium wools, it is difficult to get the ideal mutton type well covered with a good quality of wool and perpetuate this through many generations without getting too far over one way or the other.

KEEPING RECORDS.—The most careful shepherds now are practicing a system of record keeping for their individuals, and it is said that these records are just as valuable in picking out the superior animal as are the records of other classes of live stock. It does not seem as though argument is needed to show that these records, when kept carefully and through three or four generations are very valuable. The sheep that will shear 10 to 12 pounds of wool is worth an appreciable amount more than one that will shear seven or eight pounds only. Say, for instance, that a record has been kept of the weights of the lambs borne by different ewes, the weight of fleece they sheared; also, the quality of the fleeces. While feeding will make some difference in the size of the lambs, size is an inherited character and so is quantity and quality of fleece. A sheep breeder in Canada has, through breeding, secured ewes, the bulk of whose offspring are either twins or triplets. Another advantage of keeping records, is that rams may be chosen for the quantity and quality of fleeces they can transmit together with weight of lambs and mutton conformation.

SELECTING THE RAM.—While there are some few flocks of sheep which belong to the strictly wool or mutton types, the big demand is for sheep that produce a medium weight of fleece, and at the same time, the lambs and adults make good mutton. This demand has forced the medium wools into prominence and so we will deal with the choice of a ram from this class, only. The ram should have an open, yet not vicious eye. A good supply of energy is needed, but excess energy is likely to vent itself upon the attendant. The color of the inside of the eyelid is a good indicator as to his internal condition. A rosy pink color is a sign of health, but beware of a pale blue tint. Something is wrong and this is often the presence of stomach worms or intestinal parasites. The muzzle should be fitted with good open nostrils and strong jaws. A good girth around the body behind the forelegs (called the crops), taken together with open nostrils indicate strong breathing apparatus, and since large quantities of oxygen are needed in order to oxidize the food which is burned in the body, these are essential. Another noticeable defect in lots of Chicago lambs is that they are ewe-necked. This knocks off a little in the price which is paid for them and so the ram should have a neck blending well with the shoulders. In selecting the ram remember that the greatest value of the sheep's carcass lies in the loin and hind-quarters. These are inheritable qualities, so the ram should have a long, well-fleshed loin with well muscled hind-quarters if his get are to "top the market." A discriminating market will pay more for a carload of such lambs than for a carload of cat-hammed individuals. The qualities of fleece which we look for in a ram of the medium wool class are the same as those which are to be encouraged in the ewes and these are given below.

REQUISITES OF A GOOD FLEECE.—The character of the wool covering the sheep, together with its density, will be the determining factors which will influence the price paid for the product. Some sheep have a good quality of fiber, but on account of its sparseness on the body, they are unprofitable and not amply protected from the elements. On the other hand, the fiber may be dense yet the character of the wool is such that the value is materially decreased. The way to remedy these conditions is through selection. The medium wool fleece should, in general, be from two to 2½ inches long at shearing time. To examine the fleece, lean over the animal and part the wool on the opposite side, never on the back. The righteous indignation of a showman can easily be excited by parting the wool of his sheep on their backs. This makes an entrance for dirt and rain. Part the wool on the side. Note the amount of oil (yolk), the length and crimp of fiber and its density. These are the things which demand special notice. The yolk is necessary in order to preserve the wool and is also very effective in keeping dirt and foreign matter out of the fleece. It is also a protection against cold weather. Long fibers add to the weight, while the density (number of fibers growing to the square inch) often makes the difference between a seven or eight-pound fleece and an 11 or 12-pound fleece.

Another point which should be noticed is the covering. Some breeds have open faces while others have well wooled faces and legs. This of course, must be suited to the breed one is keeping, but it is a fact that sheep well wooled on the face, under side of the body, and well down on the legs, are better protected from the weather. The wool covering these parts is just as valuable as that on the back and in a flock of 50 sheep makes quite a difference in the weight of fleece. The most noticeable defect of the farm flocks of this country is the absence of wool on these parts, and it could be very easily remedied by selecting rams well covered. While the sheep breeder must be careful not to over-emphasize the fleece to the detriment of the mutton conformation, yet it will bear improvement without deteriorating from the mutton value of the carcass.

AVOID DISEASES AND PARASITES.—There are many diseases which attack sheep. Some of them may be passed on through pasturing upon infected soil. Others may be controlled by prevention rather than cure and still others are controlled only by the judicious use of the knife or ax. When a disease takes hold of a robust sheep, a fight commences—a fight between the white blood corpuscles of the animal body and the disease germs. The feed is a total loss. Precautions against disease are worth infinitely more than barrels of sheep remedies. It is more economical to apply a stock dip than to feed ticks. It takes feed to make the tissue food which is carried throughout the body by the blood, and if ticks suck blood, they suck food, hence it costs money to keep them. The sheep breeder, especially he who breeds the medium wooled types must use extra precautions in his selection of stock to see that he does not lean too far toward the wool conformation and still retains a well-fleshed mutton carcass. These are inheritable characteristics and cannot be altered to a marked extent by feeding. They must come through mating of high-class individuals. Then, after obtaining such superior animals, keep them clean and free from parasites and diseases.

Michigan. I. J. MATHEWS.

LIVE STOCK NOTES AND PRICES.

More Sheep for Ohio.

"SHEEP should be raised on every farm in Ohio." The University gives this advice. Sheep husbandry in the State has two distinct drawbacks, stomach worms and dogs. The fence used by the United States Forest Service in protecting sheep from coyotes is recommended. This fence is built as follows: A strand of barbed wire is stapled to posts at the surface of the ground; three inches above this is placed a 36-inch strip of closely-woven wire fencing, and above this two strands barbed wire. If sheep free from stomach worms are secured, little trouble will be caused by these pests. The worms are small whitish worms that infest the stomachs of the sheep. The lambs become infested by eating grass on which the young worms have crawled. It is recommended that lambs be placed on pasture which has not been occupied by mature sheep. It is advised that 25 or 30 ewes should be found on every Ohio farm. A flock of this size may be kept at small expense, it will clean the farm of weeds, provide a supply of wholesome food, and return to farmer a neat sum from the

A FARM FLOCK LACKING UNIFORMITY.

wool produced. The best roughage for sheep is clover or Alfalfa hay and a few roots. If clover is not available corn fodder supplemented with a little bran or linseed meal is sufficient. When lambs are old enough to eat, give them a little cracked corn where the ewes cannot get it. A small flock of ewes may be pastured during Winter on a wheat or rye field.

Land in Barron County, Wisconsin, has risen in 15 years from $20 to $100 an acre, due to keeping cows, and better cows each year.

THE Nebraska Experiment Station has recently found that cows calving in September and October average 785 pounds more milk than those freshening in April and May.

Two tons of Alfalfa hay contain as much feeding value as 110 bushels of oats. One acre of land produces the Alfalfa, while three acres are required to grow the oats. It costs $8.26 to grow the Alfalfa and $21.03 to grow the oats.

A farmer in Michigan has discontinued the apartment hoghouse. He is using the individual hoghouse, and since the change, he has not had a sick animal. He scatters air-slaked lime wherever the hogs sleep or frequent out of doors, and frequently supplies dry bedding.

Doctor Lowry of Lawrence County, Ohio, claims a world champion grade as producer of heifer calves. Four heifers in 10 months and all are doing well. The cow is a grade Brown Swiss, and the calves by the first service are from Jersey bull, and the second service, from a Holstein.

Oct. 18. Alfalfa, which is the main money crop, $4.50 in the stack. Butterfat, highest, 32½; lowest last Summer, 22. Beef, on foot, 5½ to 6; hogs 8 to 10; eggs 40, have been as low as 20. Potatoes $25 to $30 per ton. Milch cows from $60 to $200. Veal 11 to 12, dressed. Money scarce. C. B. R.

Fallon, Nev.

Oct. 27. As I am situated within nine miles of St. Louis we get close to the retail prices for garden and truck crops. Last year when potatoes were quoted at 75 to 80 cents a bushel in St. Louis we received one dollar delivered to families in five and 10-bushel lots; tomatoes and other things in proportion. We sell our milk at home from six to 10 cents a quart; do not have any cattle except milch cows. E. B. O.

Belleville, Ill.

RELIEF FOR CHOKING COW.—The following is a sure cure for a cow with an apple in the throat. Melt one pint of lard and drench the cow. I will guarantee the apple will go up or down in a minute or two. This is a simple remedy, but sure. H. L. M.

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BURRELL SIMPLEX CHURN & BUTTER WORKER	131.50
" " COOLER	105.00

I will also sell a 4-unit Sharples Milking Machine, including pump, in use 6 months, for $375. Cost, $500.
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The Rural New Yorker, 333 West 30th St., N. Y.

Hindrances to Raising Purebreds.

ONE of the greatest hindrances to keeping purebred stock is that the common lot of farmers keep scrub bulls and let them run with the cows. We have a farm, something over a hundred acres, which is nearly a mile long. Joining us are seven other farms; two of them are rented and one to a dealer in stock. We are gradually changing our herd of grades to purebreds. We began by purchasing a grandson of King Segis and two fine cows of other strains from which we have two calves. In that time we lost the chance for two more through scrub bulls from our neighbors' fields, with all our watchfulness and care.

A man remarked in my presence: "I was not much interested in stock until I was given a purebred bull if I would keep it stabled." In this little section there is but one kept stabled. The cry is "It costs too much and is extra work." The one farmer in this section who keeps his stabled—though his is only a fine grade—says he likes it so much better than running after him and mending fences. What we need is a law that will forbid turning them loose. Some things farmers as well as other people have to learn by compulsion, which, when they have learned, they are glad of. D. S. M.

Cost of a Heifer.

ON page 1226 is an article entitled "The Cost of a Heifer." From a scientific point of view, that may be true, and no doubt is, but to get right down to "brass tacks," and the ordinary farmer's way of doing it, the reading would be more like this: Calf dropped May 3, 1913:

Cost of calf	$2.00
270 quarts skim-milk at 2c. per qt.	5.40
Four and one-half bags calf meal	4.50
One bag ground oats	1.30
Vegetables (small potatoes, pumpkins, etc.)	2.00
One-half ton hay at $12 per ton	6.00
Pasturing, including breeding	3.00
Total	$24.20

We make no account of manure, taking that for labor. These figures are from May 3, 1913, to October 10, 1914, as taken from our farm accounts. This heifer is a grade Jersey, and gives every promise of being a good one, due to freshen April 15, 1915.

If the figures in the article referred to are correct is it any wonder beef is high?

Maine. G. A. W.

Ayrshires Come Back.

THERE has been some little argument as to whether a dairy cow can make a good showing in tests year after year. Some argue that a cow will make one great effort and then fall off—unable to repeat. This was not so with the Ayrshire cow Crimson Rambler 21109 A. R. 61. This cow has made seven consecutive yearly tests. The first began as a two-year-old August 22, 1906; the seventh closed Sept. 24, 1914. Here is her record:

	Lbs. Milk	Lbs. Fat	Lbs. Butter	Average % Fat
Two-year-old class	7,988	277.56	327	3.47
Three-year-old class	8,001	305.21	359	3.81
Four-year-old class	9,036	329.91	388	3.69
Mature class	10,346	383.61	451	3.71
Mature class	12,776	433.95	511	3.4
Mature cass	11,299	393.79	463	3.49
Mature class	11,509	401.91	473	3.49
	70,955	2,525.94	2,972	3.58

This is surely a continuous performance that would delight a milkman. As we figure it this milk would fill a pan 10x15 feet and 6½ feet deep!

Otsego County Dairy Conditions.

Generally considered more than average crops have been harvested. Most silos were filled. Heavy disposals of surplus stock were made last year so farmers are not anxious to sell good milch cows unless more tempting prices are offered than dealers who have lately visited this section are inclined to pay. One man recently sold a mixed dairy of ordinary cows at $35 per head, but selected cows readily bring $50 to $75 each. Dealers have scoured the country for Fall and early Winter springers but farmers set their figures at close margins, so comparatively few are sold. Desirable heifers, springers, are valued at $35 to $50. A dealer asked one of our farmers: "Have you any good cows?" "Yes," replied the farmer, "I have." The dealer next asked: "Do you want to sell some of your good cows?" "I want to keep good cows myself," returned the farmer, who thus expressed a prevailing sentiment. However, fancy prices would still call good cows into market. Shippers have no demand for farrow cows or strippers. Fat beeves are in good demand, but sell more profitably to local meat cutters than in New York markets. Veal calves are high, so many farmers prepare them for market. Interest in dairy butter making is increasing. There is a steady call for dairy butter, which is retailing at 34 cents. Many farmers living at a distance from creamery or station find home manufacture far more profitable than selling the raw product. Borden quotations are dominant here. Several independent creameries follow the Borden schedule. The flat price for the present six month contract is the same as for the corresponding season last year: October, $1.70; November, $1.80; December, $1.80; January, $1.75; February, $1.65; March, $1.60 per cwt. Acceptable score of barn and methods adds 10 cents per cwt., and a butter fat test of 3.8 or better adds 10 cents more per cwt. The local company supplying milk to Oneonta gives better returns, as does also the Sheffield-Farms-Slawson-Decker Co. The latter company is erecting buildings for a new plant at West End, Oneonta. This concern is to open April 1. High standards are required to secure the maximum rates offered by the Sheffield Co., but it is not extra requirements that farmers resent. They do object to the injustice of the consumer in expecting a superior product to be furnished without adequate compensation for extra labor and expense. A lively interest in purebred cattle is gaining throughout the county. Some of our dairymen have an enviable reputation for their purebred herds. C. M.

TESTING CREAM.—An editorial on page 1266 calls attention to the constant friction which is going on between buyers and sellers of milk. The same trouble is constantly present with cream sellers, too. Not long ago an experienced creamery man told me of a "kink" whereby the creameries can keep the test lower than it should be and yet escape detection by their patrons—even those who have a Babcock tester. This is by *measuring* the sample to be tested instead of *weighing* it. Now the richer the cream the lighter it is—or expressed differently, the more bulky it is—consequently a measured sample of high-test cream will necessarily contain less butter fat than a weighed sample. The beauty of this system lies in the fact that nearly all farm testing is done by measuring the sample. Several of the more progressive dairy States have laws requiring the use of weighed samples, but these laws are not always complied with; and in States which have no such laws very little testing by weight is done. Does your creamery measure or weigh the cream samples? Find out and insist on a weighed sample; it means dollars in your pocket. MAURICE FLOYD.

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About Christmas time I will have a deluge of letters asking for boars fit for immediate service. The wise ones are buying now and putting them at once in their permanent quarters, so that Mr. Pig will feel quite at home and have his mind on business when the New Year's rush is on. DON'T DELAY. BUY TODAY

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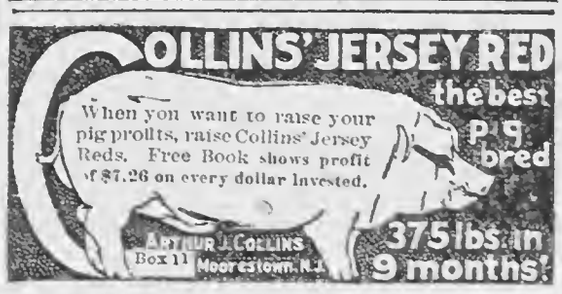

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FEEDING PROBLEMS

Dairy Ration With Alfalfa.

WILL you balance a ration for cows averaging 1000 pounds in weight, giving from 20 to 40 pounds milk a day? My roughage consist of good silage and first-cutting Alfalfa hay of good quality, also have a lot of corn fodder which I would like to feed without affecting the milk flow. For grain I can get dry brewers' grains at $30 per ton, bran $35, dried beet pulp $28, cornmeal $35, gluten $33, oil meal $40 and cottonseed meal $32 per ton. Is it safe to feed Alfalfa hay right after a cow freshens, as this is my first year with Alfalfa?
Connecticut. P. J. C.

I would recommend feeding the corn fodder during the Fall and early Winter, as it gets less palatable and not so easily digested with age. I think I should feed Alfalfa in the morning, corn fodder at noon, and silage at night, after milking. The order, however, is mainly a matter of convenience. Scatter on the silage two pounds each of brewers' dried grains, cottonseed meal and cornmeal. With the Alfalfa and silage feed what the cows will clean up readily. They will probably leave some of the coarser corn stalks, unless the corn is of a small variety. When the corn fodder is gone, feed silage twice daily, 15 to 18 pounds per cow at a feeding with Alfalfa once a day. Feed grain on silage, about four to six pounds daily. There is no danger in feeding Alfalfa hay to a fresh cow if she has had it before freshening.
C. L. M.

Feeding a Work Team.

WOULD you give me a balanced feed for heavy team horses? At present I am feeding six quarts oats and all the hay they will eat per horse; in all 12 quarts of oats besides plenty of good hay, bran mash at times also. The above for two horses. S. J.

It is a mistake to give work horses all the hay they will eat. If allowed free access to well-cured hay, work horses will consume an enormous amount of hay, which is not only expensive but responsible for digestive troubles, and even heaves. A safe rule is to feed 1¼ pounds of grain for each 100 pounds of live weight of the animal, and one pound of hay for each 100 pounds live weight of the animal. It is assumed in this case that the horses are doing average work. In case the work is more strenuous, increase the grain ration, but the quantity of the hay should be substantially the same. The bulk of the hay should be fed at night. In case the animal was receiving 10 pounds of hay per day, three pounds in the morning, and seven pounds at night would be the most satisfactory division of this quantity. The major portion of the grain should be fed at noon, as the animal needs concentrated feed at this time of the day in case he is to work with ease during the balance of the day. To start horses at work in the morning filled to the brim with hay or to repeat this practice at noon, is a system of feeding that is not found in stables where the horses are maintained in the best physical condition and fed with the greatest economy. An excellent grain mixture to be fed at this season of the year would be as follows: 300 pounds oats, 200 pounds shelled or cracked corn, 100 pounds wheat bran.

If the animals are then in flesh the amount could be increased, and it would be well if the animals are out of condition and their coats are not in a fine silky condition to add a small amount of oil meal to the feed daily.

Salt should be available at all times but should not be mixed with the feed. The use of clover or Alfalfa hay makes it possible to get along with a smaller amount of grain. Straight Timothy hay serves its best purpose when fed to work or driving horses. If the animals are doing extra heavy work, it is necessary to increase the amount of grain. On the other hand, it is just as essential to cut the grain ration in half during idle days or holidays. A serious condition exists where animals are fed the same amount of grain and hay each day, regardless of the amount of work that they are performing. F. C. MINKLER.

Ration for Milch Cow.

WILL you give me a ration for a cow now giving about 14 quarts daily? She is due to freshen about next March. We have cornstalks—sweet corn with some ears on mangels, small potatoes, carrots, bran, gluten, oil meal, in fact all sorts of grain, ground and unground. Our stalks, mangels, etc., are grown on the place, while the grains and their products we have to buy. I want to feed cheaply as possible. We also have to buy hay. Would there be any advantage in cutting stalks up like silage? We have a machine which will do that. G. A. C.

A suitable grain mixture for dairy cows with the available feeds as suggested would be as follows: Gluten, 100 pounds; bran 50 pounds; cornmeal 400 pounds; cottonseed meal 100.

A cow giving 30 pounds of 4% milk should be given 7½ pounds of this mixture daily. In addition she should be given what corn fodder she would clean up with relish, and providing the cost of cutting or shredding the fodder was not excessive it would pay well for the labor involved. There is nothing that makes any better bedding for cows than cut cornstalks, and they will pick over the litter much more carefully provided it is shredded. It is assumed that the sweet corn fodder is in the shock, and this may be fed on the same basis as the corn fodder suggested above. Succulence should be provided, by means of mangel-wurzels and carrots, a reasonable amount being a pound of the mangel-wurzels for each pound of milk produced. In this case 30 pounds of mangel-wurzels would supply an abundance of succulence. There is very little feeding value in small potatoes, yet in the absence of succulence as supplied by corn silage or mangel-wurzels, potatoes do increase the flow of milk. They would serve a better purpose in case they were cooked and fed to swine. It would be possible to get along without the use of any hay, in case there was an abundance of corn fodder or sweet corn stalks. In case the supply is limited, it might be well to feed from five to seven pounds of clover or Alfalfa hay per day in addition to the stalks. F. C. MINKLER.
N. J. Experiment Station.

Feeding Sheaf Oats.

WHICH will pay me better—to chop unthrashed oats into two-inch pieces for feeding, or thrash and feed with the long straw? D. S. K.

You do not say what kind of stock the oats are to be fed to, but we presume you will give them to horses. The plan you mention will answer, provided you know how much grain you are giving when you feed the oats. The great trouble in feeding grain of this kind either in the bundle or when chopped up, or in feeding corn without husking, is that unless we thrash out several bundles of the oats we do not know how much grain the stock receives, and we are liable to feed too much or not enough. If you can tell just how much grain a feed of this chopped oats will give, and how much meal you want to add, the plan will work reasonably well, and the horses will probably eat more of the chopped straw than they would if the whole straw was fed them.

Oats for the Calf.

WE had a very peculiar experience with a calf this season. Calf was dropped June 22, and when three days old was taken from the cow, and put on skim-milk, and calf food. It began to scour very badly. We cut out the calf food, and scalded the milk. No improvement. It grew worse if anything. Then we tried hay tea, whole milk, and all sorts of combinations, adding flour and feeding raw eggs, until the poor thing got so weak it could hardly stand, and as a last resort some one suggested rolled oats, made into a porridge. I tried it on a small quantity, made quite thin (about this time could not get any more milk). The calf began to gain, and ceased to scour. As soon as I could, I got more milk and thinned the gruel with it, and the calf would not eat it! From that time, it has not had a drop of milk, and is doing finely. I have fed about one pint of oats to a feed, feeding three times a day. At present I am not feeding quite so much oats, but am giving it at noon, a feed of vegetables, such as pumpkins, squash and small potatoes. I have had the calf hitched out every day on grass, and now it eats anything. The last of this month I shall feed ground oats dry, about a pint to a feed. This is our fourth calf (raised by hand). We lost one last Spring from the scours, which we might have saved if we had fed oats. I. S. C.

AILING ANIMALS.

Indigestion.

I HAVE a horse that coughs up a whitish, slimy fluid, and will not eat when in this condition. Sometimes it is so severe that it resembles vomiting. It has been relieved by dosing with aromatic spirits of ammonia, and does not appear again for a couple of weeks. I am told that it is catarrh of the stomach. Do you think it can be permanently cured? What would you suggest to feed, also prescribe? E. L. H.

The substance referred to probably is chyme from the stomach, and the horse will need more careful feeding. Possibly he bolts his feed without perfect mastication. Feed from a very large box so that the grain will spread out thin on the bottom. You might also mix a few hard peas with the oats to induce chewing. Slightly acidulate the drinking water with dilute hydrochloric acid.

Suppurating Corn.

WHAT can I do for a horse that got gravel in his foot? He became very lame. The blacksmith shod him and put tar and oakum in the foot and a leather under the shoe, said if not better to cut out leather and soak out foot. Is that right? C. E. C.

Horses do not suffer from gravel in the foot. That is a misnomer by the blacksmith for a corn which has come from bruising by the shoe or some such cause, with formation of pus which softens and under-runs the sole. After the affected part has softened and opened gravel or dirt might possibly work in, but not before. The right treatment is to cut away all loose and under-run sole and wall, to expose the diseased tissues, then scrape these and cauterize with a saturated solution of corrosive sublimate, after which cover the parts with a mixture of one dram of iodoform and seven parts of boric acid, absorbent cotton and bandages. The dressing should be renewed once daily. The operation should be performed by a graduate veterinarian.

Mare With Heaves.

I HAVE a mare with heaves; can do light work, good roader. I would like to breed her as she is sound otherwise. Would Fowler's solution or any other heaves remedies be dangerous to give mare in foal? She is on grass now and not working. L. S. M.
New York.

It is a mistake to breed from an unsound mare. The tendency to heaves by many is considered hereditary. That is our belief as we have known many cases in corroboration. All heavy horses have gluttonous appetites and the appetite is hereditary and induces heaves, if much bulky, or dusty, coarse, innutritious fodder is allowed just before working. Fowler's solution, as often prescribed here for heaves, may safely be given in correct doses to a mare in foal.

Obstructed Teat.

A JERSEY cow is a very hard milker. The veterinarian says the milk duct is thick from the udder to the end of teat, and there is no cure. What is your advice? J. Y. H.
Pennsylvania.

Where the entire milk duct is obstructed by thickening its lining membrane the only hope of improvement will come from the daily insertion of sterilized teat plugs, or dilators, which may be ordered through your druggist or veterinarian, from a dealer in veterinary instruments. Were the obstruction merely at the tip of the teat it might be operated upon successfully by means of a teat bistoury.

Lame Calves.

I HAVE some calves that seem to be lame. The trouble seems to be in the hoof. There is a dent in the hoof and it seems to be longer than normal. The calves are healthy and strong, eat well and are in good condition. They are out to pasture in an orchard. When they are feeding they go on their knees.
New York. B. W. B.

Confine the calves to a roomy, airy, well-bedded box stall in a clean stable. Poultice the hoofs with hot flaxseed meal until the calves can stand; then cover them with oakum saturated in a five per cent. solution of coal tar disinfectant and kept in place with bandages. If there is loose or under-run horn on the hoofs it should be cut off before starting the treatment.

Horse With Worms.

A HORSE affected with worms has been out in pasture nearly all the time, and as this pasture is largely marsh grass it is possibly not good for him. Would I better discontinue the pasturing? In advising treatment you say "starve horse at least 12 hours before giving oil and turpentine, then mix sulphur and iron with feed 24 hours afterward. Do you mean that he should have *no food* for 24 hours after taking oil and turpentine or simply that I begin to use the sulphur and iron 24 hours after the oil and turpentine? Would cornstalks do in place of hay and whole corn in place of oats and bran? I have plenty of corn and stalks. W. E. F.
New York.

When a horse has worms he should not pasture on marsh land. The worms are acquired there. Cornstalks are also thought likely to infest a horse with worms. We have no actual evidence to that effect, however, and the corn fodder may safely be used in place of some of the hay. Starve the horse before giving the turpentine and raw linseed oil, and let him have his feed afterward. Start giving the powders 24 hours or so after the oil has been administered. A. S. A.

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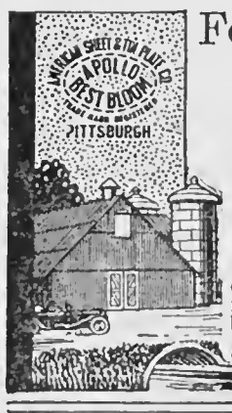

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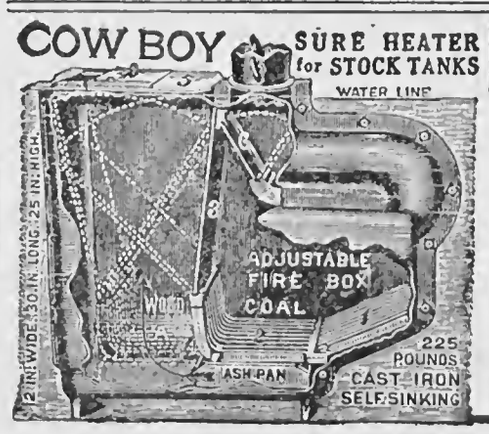

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Contagious foot-and-mouth disease also is known as "contagious aphtha" and is caused by a virus so minute that it never has been seen by the strongest microscope, and passes through a porous filter of porcelain. It therefore is technically termed an "ultra-microscopic" or filterable virus. The virus in its pure state is found in vesicles (blisters) which appear upon the lining membranes of the mouth and tongue and upon the teats and skin of the feet. The vesicles rupture and the fluid they contain may contaminate the milk, or spread the disease to other animals upon pasture, litter, feed, and through the medium of the milk. Hogs generally become affected through the drinking of milk, whey or buttermilk. The disease makes its appearance in from one to five days, after exposure; in rare cases it may remain dormant for 11 days. The attacked animal first shows fever, lack of appetite and drooling of saliva; then the vesicles appear and fever abates. The vesicles rupture in from one to three days, forming raw sores which scab over and gradually heal in from two to three weeks from the time of the attack.

Smacking of the tongue is a characteristic symptom of the disease. Animals become quite lame when the feet are severely attacked. Sheep suffer the most in this way. Hogs also have the foot lesions, but may show vesicles upon the snout. It is possible for horses to be attacked, but that seldom or never occurs.

The virus of the disease always comes from a pre-existing outbreak of the disease and is conveyed in hides, hair, wool, horns, hoofs, litter, feed, and on the boots and clothing of persons. It may also be carried from farm to farm by vermin, dogs, birds and in the air, when dried vesicles powder and blow away. In at least one outbreak in this country it was caused by imported vaccine against smallpox. The disease always is present in some foreign country, hence the enforced quarantine of 60 days upon all cloven-footed animals coming to us from abroad.

While the disease usually runs a mild or benign course and the afflicted animal finally makes a complete recovery, it is not left immune to a second or third attack. Immunity is slight and a cow has been known to suffer three attacks in one year. For these reasons, the extreme infectiousness of the disease and the great economical losses entailed by its rapid spread, the only right way of dealing with an outbreak is instantly to kill all diseased and exposed cloven-footed animals and bury the carcasses deeply in quicklime. Thus the disease is "stamped out" immediately. At the same time the strictest possible quarantine has to be maintained as regards the infected farms, premises and districts and all movement in animals, except for immediate slaughter, has to be stopped by law until the disease has been controlled and all infected places have been thoroughly cleansed and disinfected. These are the control measures at present being enforced by the Bureau of Animal Industry of the Federal Government and the State authorities are joining in their enforcement.

The disease spreads most rapidly in hot weather. Winter weather may retard its spread. Heat quickly kills the virus. Disinfectants also are promptly destructive to the virus, a five per cent. solution of carbolic acid, or compound cresol, or formaldehyde being quickly effective. After cleansing and the free application of such a disinfectant freshmade lime wash should be applied by means of a spray and also used to flood contaminated floors. The pens for cattle, sheep and hogs at the great stockyards of Chicago and other cities are being made sanitary in this way at the present time. When these measures have been enforced quarantine will be raised and marketing resumed. Meanwhile the International Live Stock Exposition which was to be held Nov. 28 to December 6 at Chicago, has been "called off"; but we understand that the exposed and affected cattle of the National Dairy Show at Chicago are under treatment in strict quarantine and will not be slaughtered.

A. S. ALEXANDER, M. D. C.

NEW ENGLAND MILK CONDITIONS.

THERE are at present, in some cases, hazy ideas in regard to the milk zones of New England and how they affect the present milk supply in regard to prices, freight charges, etc. Under the former system of transportation of milk, when the leased car system was used altogether, the freight per car varied according to distance from Boston; that is, a charge of six cents per can was the figure which the contractors charged in sections 17 to 23 miles from Boston, seven cents per can from 23 to 36 miles sections and so on the width of each zone increased as the distance from Boston increased, up to the middle or nine-cent zone, which was 20 miles in width; from this on one cent for every 20 miles was added. These charges were not the actual freight cost, but other charges of expense were reckoned in also to make the cost come up to the official charge of six, seven, nine or whatever the charge might be per zone. The contractor paid so much per year per mile in actual freight per car which would carry a certain amount, usually averaging about 700 8½-quart cans. If more than that amount was carried a greater profit of course amounted to the leasing contractor; if less of course a reduction in profit was the result. The real cost of transportation was usually less than the amount allowed to each zone, be it seven, eight, nine or more, and these other charges made by the contractors make up the difference and render them a profit above actual freight cost. Many schemes of all sorts were thought up to make a little extra profit in all lines of milk handling, which might be a small fraction of a cent per can, yet counted up to large sums in the aggregate.

This system still goes in most cases on milk bought outside this State, but in this State the contractor cannot lease the car, but must pay a certain charge per can, and the railroad mans and runs the cars, and must take any person's milk, whether he send one can or one hundred or more at the same rate per can. If the amount of milk altogether offered on a railroad line is not enough to furnish a regular milk car then the baggage car is used, and these small amounts are not iced as the rule. Formerly the price offered by contractors was for the middle or nine-cent zone, and was one cent per can more in the eight-cent, two cents per can more in the seven-cent, three cents per can more in the six-cent, one cent per can less in the 10-cent, and two cents less in the next further away and so on up to certain distance beyond which the price did not decrease any more, but remained the same.

Now the announced price is for the middle zone section just the same, but does not apply to Massachusetts; that is, at the present time what would be the six-cent zone in Massachusetts is paid no more than the nine-cent zone in New Hampshire. The price paid the former in both is nearly the same, in fact some contractors are paying more in the nine-cent zone in New Hampshire than they pay for the milk they buy in Massachusetts in the old six and seven-cent zones. An illustration of this is as follows: D. Whiting & Sons are reported as paying at Lyndeboro, N. H., 41 and 42 cents per can, distance from Boston being something like 100 miles. In a certain section of Westboro, Mass., about 30 miles from Boston, the C. Brigham Co., one of the Whiting controlled companies, pays about 39 cents per can average price for this Winter's milk. About 70 carloads of milk per day are shipped into the metropolitan district of Boston, 40 in Boston proper; nearly all of this comes from outside Massachusetts.

Ten years ago there were many creameries in Maine, New Hampshire and Vermont, making cheese and butter; now Maine has only two, New Hampshire seven, and Vermont 218 making these products, the rest or over 55 per cent. are shipping milk or cream to Boston. Furthermore, a large share of these are owned or controlled by Boston contractors. It is stated that the Hood people have obtained 25 in Vermont alone since last April, so if their regular supply is withheld or kept out of Boston at any time they can at once obtain a large supply from this source. A study of the above fact proves the only hope of bettering the situation is to coöperate and work with the consumer on a general plan of mutual benefit to both, to produce a product acceptable and satisfactory in all ways possible for the consumer, who will in his turn pay a reasonable price to the producer for the same. To bring this about and cut the cost of transportation and delivery, especially the latter, to a much lower figure than it costs at present, to work along these or similar lines, is the only thing to do, and wise heads are so deciding.

A. E. P.

CONTROLLING BREACHY CATTLE.—I have seen many appliances used, from a heavy pole 10 or 12 feet long tied to a cow's neck, to a rope tying the head to the front foot, but everything I had seen was detrimental to thrift, so I resorted to the following: From a bending factory I got a bob-sleigh runner and dressed it down to the size of a fork handle at the back end, and twice as large at the front; put a staple and ring just at the curve on the outer side and another about two feet back of it, then a strap around the neck through the ring, and a surcingle around the body, just back of the front legs, and through the other ring. The curved heavy end would hang down, and as the cow put her head down to eat or drink it would touch the ground and lop over out of the way, and it did not interfere with eating or lying down, but if she went to a fence it would hit it and surprise her. I never used it on an animal more than a few days before they would give up trying to jump. I loaned it many times and it gave satisfaction in every case, and I think there is nothing more humane or effectual.

E. M. RUSSELL.

Virginia.

Dairymen and Breeders' Meeting.

THE annual meetings of N. Y. State Dairymen's Association and N. Y. State Breeders' Associations will be held at Rochester N. Y., December 15-18. An excellent programme of addresses and exhibits has been prepared. Butter and cheese will be manufactured and a sale of purebred cattle held in connection with the meeting.

This is the great annual gathering of New York live stock men and should attract a large attendance, especially of the younger element.

The secretary of the Association is W. E. Griffith, Madrid, N. Y.

Nov. 9. Fine weather and health good; corn husking has commenced and new corn is coming into the market. Several killing frosts here of late; ideal weather for the farmer; pastures good; stock in fine condition; young Alfalfa looks good. A large acreage of wheat and rye was put out and is looking fine. Late potatoes generally of large size and yielding well. The sorghum crop was good. Hogs selling $6 to $6.50; fowls, 9; eggs, 27; butter, 17 to 24; turkeys, 12; ducks, 8; geese, 6; corn, 50; wheat, $1.02; potatoes, 50. Good work horses and mules in fair demand.

R. S. K.

Boonville, Ind.

"WELL sonny," said the patient druggist to the small boy who had been hanging about the store for half an hour, eagerly eyeing the candy counter, "do you want to buy some candy?" "Course I wanter, but I can't. Mother sent me ter buy soap."—London Evening Standard.

Plaid Kersey Blanket, $1.12

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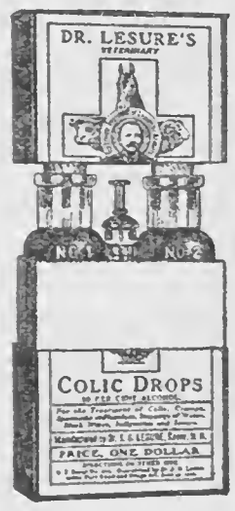

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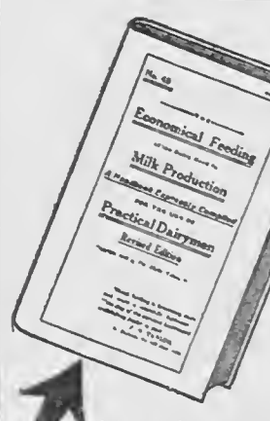
Dr. B. J. Kendall Co. Enosburg Falls, Vt.



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Mineral Heave Remedy Co., 461 Fourth Ave., Pittsburgh, Pa

:: "The Favorite Hens" ::

Six of Them At Work

THE 30 favorite hens reached the Connecticut Agricultural College promptly and safely. By Saturday night at the end of October, they were all comfortably housed in their new quarters, where they proceeded to get acquainted and adapt themselves to the new situation. As is the case when hens or human beings are brought together from the corners of the country to live as a community for a year, leaders or bosses must first be selected. Civilized human beings have been taught to run such things by the majority rule and they settle the matter by ballot, or perhaps it might be said by wire pulling in a caucus. Having settled these matters, the majority of humans settle down to work and proceed to business. The 30 hens seemed to follow a rather different plan. When 10 of them were put together, strangers out of 10 different flocks, they proceeded to scrap and fight each other until the boss was finally selected in this way. In each of these pens therefore there are two or three hens that seem to have established their right to stand by the feed dish or the water fountain whenever they see fit, and the other hens have learned from experience to get out of the way when they see the bosses coming. These things had to be settled first. There was a little blood shed in the Mixed pen, in a contest between the Black Minorca and one of the big Wyandottes, but it was finally settled in favor of the active Minorca These favorite hens were hungry and tired. They went to roost early that first night, and in the morning were stirring about examining their new quarters. They sampled the dry mash, took a bite of charcoal and shells and made themselves generally at home. Several of them began investigating the trap-nests. We went to look at them shortly after Sunday noon and found every nest of the Leghorn pen containing a hen. It looked as if they had started in early to break the world's record, but there was not an egg in any of the nests. These inquisitive creatures were simply trying to spy out every corner of their new house and they had sprung the nest by mistake. They will soon learn, however, what the trap-nests are for, and then they will start on their year's record. The larger proportion of these birds are very good specimens, and we expect that several of them will stand up well in the final year's record. Some of them were evidently laying before they came. It is possible that these birds will now stop laying and proceed to molt or order a new dress in honor of the occasion. That is one disadvantage in sending laying birds to a contest of this kind, for the shock of the new surroundings will sometimes stop their laying and send them to the dressmaker for a light molt. It is too early yet therefore to know about this. We will watch them through the contest. As we see below, five of the Leghorns and one of the Buff Orpingtons had begun to lay; the others are a little slow, but they will come along later. The hens have been named by their owners, and we hope to give their records by name right through the year. You will notice that Beauty, the White Leghorn, is true to name when it comes to putting out the eggs, and we expect a lively record from a number of these favorite hens. We shall all watch their career with interest and the records of their work will be faithfully reported. We print the names of all the hens, even those which have not yet started to lay; the record runs up to the close of Nov. 11.

LEGHORNS—RECORD TO NOV. 11.

Mrs. N. D. Rand, New York, Lucy	0
Mrs. Lewis J. Happich, New York, Lady Hopeful	0
Mrs. V. D. Miller, Ohio, Ann	0
Mrs. A. J. Skellic, New York, Ity	1
Mrs. C. L. Todd, Virginia, Patsy	0
Mrs. Walter Fletcher, New York, Peggy	0
Miss Tillie B. Cloud, Pennsylvania, Peggy	0
Mrs. Josephine Hollenbach, Pennsylvania, Viola	3
Mrs. W. E. Phelps, Pennsylvania, Beauty	4
Mrs. L. E. Hilborn, New York, Madam Tootsey	3

MIXED BREEDS—RECORD TO NOV. 11.

Mrs. F. M. Earl, Connecticut, White Wyandotte, Gladness	0
Mrs. A. N. Conell, New York, White Wyandotte, Dolly	0
Mrs. R. W. Stevens, New York, White Wyandotte, Tilly	0
Mrs. W. S. Walters, Michigan, Barred Rock, Bridgeman Girl	0
Mrs. G. L. Rothgeb, Virginia, Barred Rock, Roxie	0
Misses Osler & Wilcox, New York, Barred Rock, Margnerita	0
Mrs. Robert H. Wood, Elmwood, Little Falls, N. Y., White Rock, Faith	0
Mrs. Joseph di Fabrizio, New Jersey, Black Minorca, Betina	0
Mrs. Emma H. Wood, New York, Buff Orpington, Louisine	2
Mrs. Edwin Walker, Massachusetts, Buff Orpington, Lady Ashby	0

RHODE ISLAND REDS TO NOV. 11.

Mrs. Carrie M. Bliss, Virginia, Pocahontas	0
Mrs. E. S. Marlatt, New Jersey, Polly	0
Mrs. T. Schwenk, Connecticut, Roxy-Lon	0
Miss Ethel A. Pierce, New Hampshire, Lady Pierce	0
Mrs. Samuel O. Travais, New York, Rose	0
Mrs. W. R. Merrick, Massachusetts, Betty M.	0
Miss Edna M. Porter, New York, Betty	0
Mrs. Andrew J. Wilson, Connecticut, Betty	0
Mrs. E. P. Andrews, New York, Golden Lass	0
Mrs. Cecil Farnham, Maine	0

BOSTON MARKETS.

A GENERAL improvement in business conditions has helped the Boston market by making an improved demand for some of its products; a few foreign orders for onions have helped the market on these and boosted the price and demand for them. Good apples are doing better, partly because demand is largely for the best and also because the poorer grades are largely disposed of by this time in various ways; cider, canning, or have deteriorated so as to be unfit to offer for sale. This brings the better grades into use and a satisfied customer is usually a come-back for more. Good Baldwins bring up to $2.50 per barrel; McIntosh $3.50 and $4, other kinds and grades $1.50 to $2.50. Nearby box fruit 50 cents to $1.50; more is sold at the former figure or near it than the latter. Western box fruit $1.25 to $2. Bananas $1.50 to $3 for most sales of yellows, according to size of bananas and size of bunch for yellows; reds $2 up to $4 for fine ones. No improvement in cranberries, which are very low; $1.25 and $1.50 per box and $3.50 to $4.50 per barrel is all that can be worked out of them. Grapes still plenty, but in some cases of poor quality, especially California stock which some claim is caused by damp weather when packed. Prices about same as in the past few weeks. Grapefruit and oranges fairly plenty; a heavy southern crop will keep them so for a while and low prices will be the rule. The former go at $2.25 to $3 per box, the latter $2 and $3 per box for Florida stock and up to $4 for California Valencia. Lemons in good supply and sell at $2.50 up to $5 per box. Pears still in fair demand at good prices, $2 and $3 per box for Seckel, $2.50 and $3.50 for Bosc, Anjou and Sheldon $1.50 and $2.25; common stock for cooking purposes $1 and $1.50. Quince plenty and cheap, native about $2 per box, New York stock $4 per barrel; California stock about same price as native or slightly less.

Potatoes about the same in price, $1.10 and $1.20 per bag but supply is not heavy, and I understand an outside demand is likely at any time, which will move the price upward, perhaps quite a little. Sweets $1 per basket, $2 and $2.50 per barrel. On most other vegetables prices rule good, as supply is not much over demand, in some cases below it. Cabbage up to $1 per barrel for both drumhead and Savoy, with reds going at 85 cents per box. Cauliflower, native $1 per box; New York stock $1.50 per crate. Celery, white and self-blanching, $1 per dozen; Pascal $1.25, and Boston market $1.50 and $1.75. Cucumbers, best, $5.50 per box, others $5, $4.50 and $3.50. Lettuce 40 to 65 per box; squash, marrow, $1 per barrel; turban, Bay State and Hubbard $1 and $1.50 per barrel or per 100 pounds. Tomatoes $3 and $4 per box for ripe, $1.50 for green; hothouse 12½ cents per pound. Turnips, egg and purple-tops, 75 per box; rutabagas $1.25 per bag. Beets 75 cents per box; carrots 75; parsnips $1; radish 75 and $1.

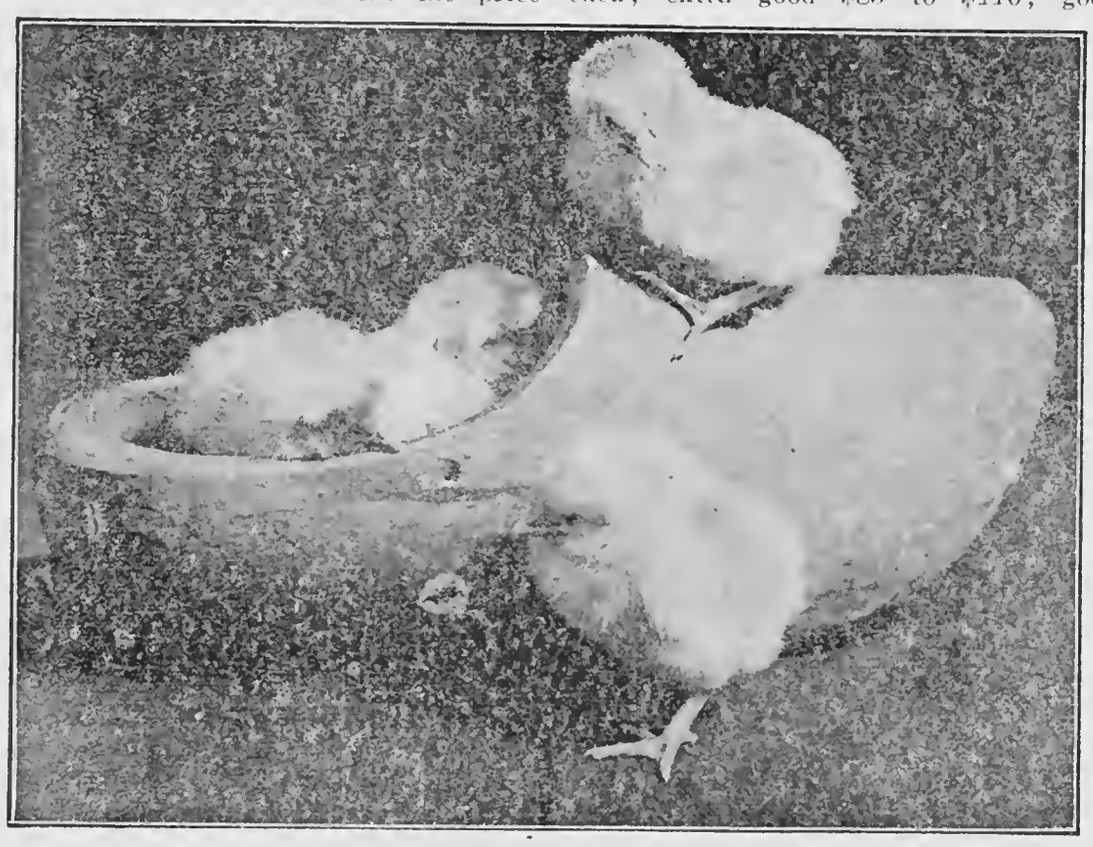
Apple shipments for week of Nov. 1, 13,315 barrels against 23,931 same week last year; total shipments up to date this year, 134,960, against 135,535 last year for same period.

Best butter one-half cent higher than last week; other grades about the same; supply not heavy, neither is demand, and the poorer grades sell slow. Best 36 and 36½ by tub, others 35½, 34½, down to 29 and 30 for fair creamery. Cheese sales slow, with supply plenty for demand, 17½, 16 and 15½ cents are general prices. Eggs very short for native nearby fresh, which bring 58 cents per dozen by case; Western more plenty but not enough so to affect the others; also 9,000 cases of these were shipped to England this week.

Live fowls and chickens 14 cents per pound; roosters 12; dressed fowls 14 to 19; broilers 21; roasting chickens 20 and 22; turkeys 28 and 30 for Northern stock, 22 for western; ducks 16 and 17; geese 20.

Best hay $24 per ton, other grades $16 to $22. Meal $1.61 per bag; oats 56 and 58 per bushel; bran $25; cottonseed meal $26 and $28 per ton; linseed meal $33; gluten $30.

Live hogs 7½ and 8; dressed 9½ and 10; live cattle $4.50 up to $8.75 per cwt.; common milch cows $40 to $60 each; extra good $85 to $110; good yearling heifers $15 and $18 each, two-year-olds $25. Bull, cow and steer hides 13, 14 and 15 cents per pound; calf skins 21. Horse market good for season and sales heavy, partly for home trade and also for export, as horses are in great demand over the water; prices range from $160 up to $450 according to size and soundness. A. E. P.



THEY WILL CROW AND CACKLE LATER.

A Barn Henhouse.

I SEE in the "Hope Farm Notes" mention is made of a barn henhouse. Last Summer I cemented the floor of my south mow, put a floor in about seven feet deep; cut out numerous windows on the south side covering with wire and saving the boards for shutters. Next to the driveway through the barn there is a board wall 2½ feet high, then wire up to floor above. This wire was covered with building paper in September, and the house is a very warm one. It is 14x28 feet, arranged with nests on the sides and no dropping boards.

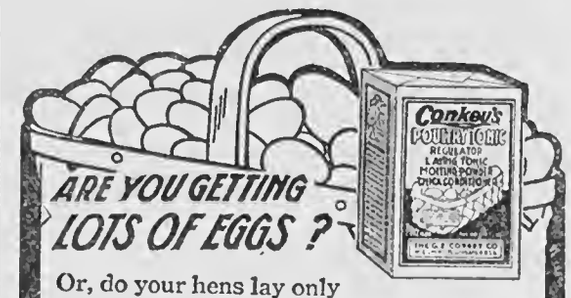
Connecticut. FRANCIS F. LINCOLN.

Poultry and Peanuts.

FOR three successive Fall we have noticed that when our Spanish peanuts are harvested and stacked near the barn, so that our White Plymouth Rocks can help themselves at will, the egg yield falls off. This year they have stopped laying almost entirely. Does this indicate that peanuts are not good for hens, or only that ours get more than is good for them? JOHN B. LEWIS.

Virginia.

Our guess is that a limited feeding on peanuts would help the hens—too many would make them too fat to lay. The peanut is rich in fat or oil and like other peas is relished by poultry. With this constant supply we think these Rocks get too fat!



Or, do your hens lay only when eggs are cheap?
Get the eggs this winter by starting to feed

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Conkey's Poultry Tonic is an all round tonic that helps nature do its work—For this reason it is fine for every bird you own—young chicks, growing stock, molting fowls or laying hens.

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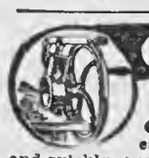

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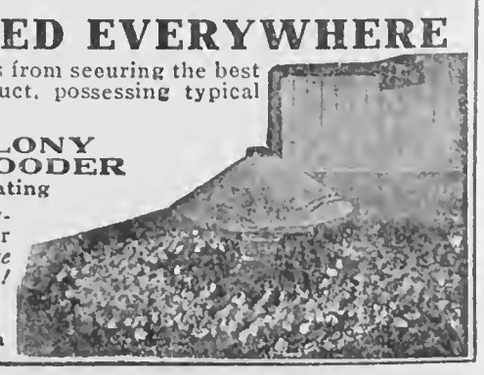


NEWTOWN GIANT INCUBATOR CORPORATION

74 Warsaw Street Harrisonburg, Virginia

The Henyard

THE EGG-LAYING CONTEST.

THE new contest at Storrs starts off with a full 100 pens as against the 82 pens in the last contest. The new breeds entered that were not among last year's competitors are American Dominiques, Light Sussex, Salmon Faverolles, Buttercups, Black Leghorns and R. C. Brown Leghorns. Edward Cam, of England, is in this time with a pen of White Wyandottes and a pen of White Leghorns, his Wyandottes laying 34 and his Leghorns 12 this first week. Thirty of the entrants of the last contest have entered birds again this year, one, the Branford Farms, entering *eight pens*. The highest record made for the week is by the White Leghorns from Windsweep Farm, Connecticut. This pen laid 47 eggs, every bird in the pen laying, one laying seven eggs. There are eight days in this first week, the date of ending the week being changed to Sunday night. A remarkable fact is that H. W. Sanborn's Rhode Island Red pullet No. 2 laid eight eggs in these first eight days, while none of her sisters in the same pen laid at all. White Leghorns also made the second highest record for the week; Albert Sondregger's pen laying 41. Edward Cam's Wyandottes are third, with a score of 34, and O. G. Knight's White Orpingtons fourth with a record of 29. The week's score follows:

	Week.
Barred Rocks.	
Merritt M. Clark, Connecticut	20
Frank L. Tuttle, Massachusetts	7
Francis F. Lincoln, Connecticut	9
White Rocks.	
Albert T. Lenzen, Massachusetts	10
Branford Farms, Connecticut	1
Branford Farms, Connecticut	2
Branford Farms, Connecticut	4
Buff Rocks.	
A. A. Hall, Connecticut	14
White Wyandottes.	
Tom Barron, England	5
Edward Cam, England	31
Merrythought Farm, Connecticut	17
Neale Bros., Rhode Island	16
Mrs. J. D. Beck, Connecticut	3
Mapledale Farm, Connecticut	4
J. F. Byron, Connecticut	23
Buff Wyandottes.	
Dr. N. W. Sanborn, Massachusett..s	17
Columbian Wyandottes.	
Merrythought Farm, Connecticut	8
Rhodo Island Reds.	
Hillview Poultry Farm, Vermont	22
Charles O. Polhemus, New York	5
John Backus, Vermont	8
W. H. Bumstead, Connecticut	13
Pinecrest Orchards, Massachusetts	6
Harry B. Cook, Connecticut	15
Colonial Farm, New Hampshire	10
Storrs Agr. Station—Experimental Pen.	4
Storrs Agr. Station—Experimental Pen.	6
S. G. McLean, Connecticut	7
D. E. Warner, Rhode Isand	8
H. W. Sanborn, Massachusetts	2
Albert R. Ford, Connecticut	
Light Brahmas.	
Storrs Agr. Station—Experimental Pen.	11
Storrs Agr. Station—Experimental Pen.	4
American Dominiques.	
H. B. Hiller, Connecticut	5
White Leghorns.	
George Bowles, Connecticut	4
Ellis W. Bentley, New York	9
N. W. Hendryx, Connecticut	22
Braeside Poultry Farm, Pennsylvania	7
Francis F. Lincoln, Connecticut	21
Merritt M. Clark, Connecticut	22
Elm Poultry Yards, Connecticut	12
Jay H. Ernisse, New York	26
Storrs Agr. Station—Experimental Pen.	21
Storrs Agr. Station—Experimental Pen.	23
Mrs. Rollin S. Woodruff, Connecticut	33
Windsweep Farm, Connecticut	47
James H. Lord, Massachusetts	9
P. G. Platt, Pennsylvania	10
F. M. Peasley, Connecticut	4
Edward Cam, England	12
William H. Lyon, New York	31
A. P. Robinson, New York	7
Manor Poultry Farm, New York	9
Branford Farms, Connecticut	3
Branford Farms, Connecticut	12
Branford Farms, Connecticut	11
Anna Dean Farm, Ohio	8
Rural New-Yorker, New York	9
Albert S. Sonderegger, Connecticut	41
S. J. Rogers, New York	18
Stonelelgh Poultry Farm, Pennsylvania	32
Mrs. W. B. Whitlock, Connecticut	26
James V. Thomas, New York	5
Sunny Acres Poultry Farm, Connecticut	33
R. C. Brown Leghorns.	
The Gale Place, Connecticut	1
Buff Leghorns.	
O. L. Magrey, Connecticut	5
Black Leghorns.	
J. Collinson, Barnacre, England	1
Light Sussex.	
Dr. E. K. Conrad, New Jersey	3
White Orpingtons.	
Obed G. Knight, Rhode Island	29
"Favorite Hens."	
Rural New-Yorker, New York	1

GEO. A. COSGROVE.

Hen Questions.

WILL you give me your opinion on the following questions? 1. Cost per year 100 hens, buying all feed (White Leghorns)? 2. Average number of pullets per hundred chicks (50% or better)? 3. From pullets, raised from chicks bought from reliable poultrymen, what egg average should they have per year (pullets being White Leghorns, feeding not forced to an extreme)? 4. In your opinion, what effect will the present war have on the poultry industry? Will the price of eggs and chickens rise as compared to their feed, or will their price drop. Will the demand increase or decrease? H. D. H.

Niagara Falls, N. Y.

1. Answering above questions as nearly as possible I would say to the first, cost per hen $1.30 to $1.60, according to how much beefscrap and good wheat is fed.

2. General average is about 50% of each, males and females. It is believed by many that a large number of females to each male bird, will produce a larger per cent. of pullets, but so far as I know nothing definite has ever been worked out concerning it.

3. Twelve dozen eggs a year is a good average production, and can only be obtained by good care and good feeding. At the present contest at Storrs, cutting out the pen which has made an abnormally poor record, the average per bird of the Leghorns for 51 weeks is only a fraction over 154 eggs each; while the leading pen in the same contest has produced 17.3 dozen, or 207.8 eggs per hen, in the same time.

4. My *guess* is that the war will not materially affect the price of eggs either way, because we neither import nor export a sufficient quantity to affect the price very much. GEO. A. COSGROVE.

BUFFALO MARKETS.

EGGS are higher and potatoes and onions are a trifle lower. Farmers are getting 30 cents for potatoes and 40 cents for onions. Good-sized cabbage heads sell for three cents retail. Honey is low, 17 to 18 cents per pound, wholesale. Apples are not only of much better quality than formerly, but are selling by name more than ever. The highest wholesale quotation is $2.65 per barrel, with $1.25 for No. 2. The retailer sells Greenings at 50 to 60 cents per bushel, Baldwin at 60 cents, Spy at 75 cents. Butter is quoted at 37 cents down, wholesale, but market retailers do not quote above that price to consumers, with cheese 20 cents retail. Eggs continue rather scarce, at 45 cents wholesale, though the general retail price is not above 30 cents. Oleo in pound packages retails at 23 cents. Grapes are still very plenty and cheap, at $35 per ton for blue, wholesale and 35 cents for 20-pound basket. A red Rogers grape is taking the place of Catawba for late carrying, though there are still plenty of Concords. The California Tokays are as plenty as ever and in perfect condition, retailing in big bunches at eight cents per pound. Peaches an' plums are gone. The showing of pears is poor and only Kieffers are quoted, at 50 to 75 cents a bushel. There are a few others, as for instance Beurre Clairgeau, but not in any quantity. The quince crop is small also and quality poor, retailing at 75 cents per large third-bushel basket. Cabbage is a big crop, the wholesale price being $2 to $3.50 per 100 heads. There is also more cauliflower than usual, good heads retailing at 10 cents each. Some Brussels sprouts are offering at not less than 20 cents per quart, retail. Celery is fine and plenty at 10 cents per small bunch to 40 cents per large bunch wholesale. Lettuce is still cheap at 20 to 30 cents per dozen heads and radishes retail at three bunches for five cents, spinach 15 cents per peck, retail. Cucumbers and tomatoes are beginning to return to hothouse prices, being $1.25 per dozen for the former and 20 cents per pound for the latter. Poultry is scarce, but in light demand, at 23 cents per pound for turkey and 17 cents for fowl dressed, wholesale and 20 cents for turkey and 15 cents for fowl, fancy, live. J. W. C.

CLEANING SOILED EGGS.—We have been helped so many times by suggestions found in your paper, that I would like to return the favor by sending an answer to W. R., who asks in regard to the cleaning of soiled eggs. We have found that a cloth moistened in vinegar will remove the moist stain, much quicker and easier than scouring powder, and does not polish the shell as scouring does. J. L. R.

Vineland, N. J.

SOILED EGGS.—W. R., New York, wants to know how to remove spots from eggs. We have found the best way to remove spots from eggs is to rub with a cloth moistened with a little clear vinegar. Another good solution for cleaning eggs, is one ounce of ammonia and two quarts of water. I have gathered as high as 80 dozen eggs a day in mid-Winter, and of that number there would be a few that would require cleaning. We look for the "Henyard" in THE R. N.-Y. every week, to see how the "hens" are coming in the egg contest. We have a pen of "hens" we are going to run against our Reds and Rocks this Winter.

North New Salem, Mass. E. L. C.

A SMALL boy seated on the curb by a telephone pole, with a tin can by his side, attracted the attention of an old gentleman who happened to be passing. "Going fishing?" the old gentleman inquired good-naturedly. "Nope," the youngster replied. "Take a peek in there." Investigation showed the can to be partly filled with caterpillars of the tussock moth. "What in the world are you doing with them?" "They crawl up trees and eat off the leaves." "So I understand." "Well, I'm fooling a lot of them." "How?" "Sending 'em up this telephone pole."—Judge.

Brood 500 Chicks in One Flock
Save Time, Labor, Fuel and Money

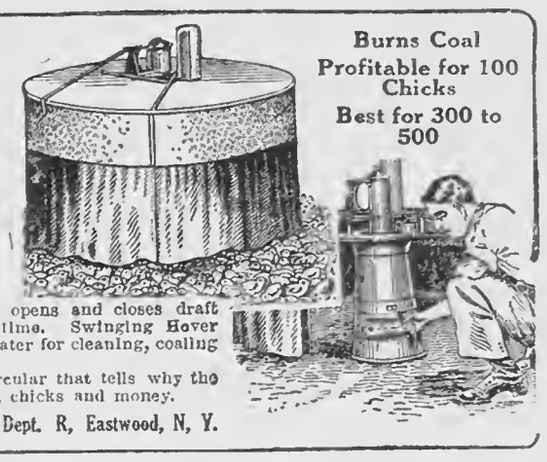
Got all your chicks out early at one time and carry them safely to strong maturity.

Take your eggs to a Candee Custom Hatchery or buy baby chicks there. Then, with a coal-burning Candee Colony Brooder, raise all of them in one flock, in one house, with only one heater, at a cost of a few cents a day for coal.

Healthy Heat—Automatic Heat Control
Coal-Burning—Safe—Sure

Sealed base, cast iron heater—no worry, no danger of loss from fire. Magazine Feed keeps even fire—eliminates guesswork. Thermostat automatically opens and closes draft and holds correct heat all the time. Swinging Hover Section makes it easy to get at heater for cleaning, coaling and shaking down ashes.

Write today for illustrated circular that tells why the Candee will save you labor, fuel, chicks and money.



Burns Coal
Profitable for 100 Chicks
Best for 300 to 500

CANDEE COLONY BROODERS
CAST IRON COAL BURNING-SELF REGULATING

Candee Incubator & Brooder Co., Dept. R, Eastwood, N, Y.

TOM BARRON'S
CONTEST WYANDOTTE PENS
At PA., CONN., MO., are owned by me
"World's greatest winter layers"
LEGHORNS and WYANDOTTES—283—282—260—248
Storrs' Buff Rocks, Vibert-Austin Reds, Ducks and Geese
MORRIS-FARM, R. 4, Bridgeport, Conn.

COLONIAL REDS
We offer finely-bred cockerels for sale, from our best lines for egg production. Strong, rugged birds of pedigreed ancestry. Also pullets and yearling breeding hens of proven value. Honorable treatment guaranteed. Satisfied customers all over the country.
COLONIAL FARM, - Box O, Temple, N. H.

Tom Barron White Wyandottes—Trio, $15. From stock imported last spring from Barron best-laying yards. E. E. LEWIS, Apalachin, New York

R. I. Reds—White Wyandottes—Lt. and Dk. *Brahmas*, Barred *Rocks*, S.C. White and Brown *Leghorns*. Show and utility quality. Bargain list. Breeders free. RIVERDALE POULTRY FARM, Riverdale, N. J.

500 Choice Pullets and Cockerels
Tiffany's Superior Silver Wyandottes, Pekin and Rouen Ducks, sired by winners at America's greatest shows. Free range grown. F. A. Tiffany, Phoenixville, Pa.

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.

FOR SALE—MARCH HATCHED WHITE WYANDOTTE COCKERELS, $2 to $5 each. F. D. JOHNSON, R. No. 1, Boonton, N. J.

6 S. C. RHODE ISLAND RED PULLETS AND COCKEREL, direct from Austin's eggs, $10. ANNA M. JONES, HILLSDALE, NEW YORK

Buff Orpington—Cockerels, Pullets and Hens, Owen strain; also Barred Rock Cockerels. Write, J. I. HERETER, Gettysburg, Pa.

Tom Barron **S.C. White Leghorn Cockerels**
and White Wyandotte cockerels; pullets, out of direct importation, from the World's greatest layers. In splendid vigor. BROOKFIELD POULTRY FARM, R.F.D. 3, Versailles, Ohio

Practical Barred Rocks—MOST FAMOUS LAYING STRAINS. Real Indian Runners. Breeding stock. Mrs. Andrew Brooks, Auburn, N.Y.

Tom Barron's White Leghorns
Imported direct, 280-egg strain. May Cockerels, $2. Yearling hens, $1.50. Trios, $5.
P. F. RAFFERTY, :-: MARLBORO, MASS.

For Sale—A FEW PAIR OF YOUNG **Muscovy Ducks** large, fine birds. $2 a pair. Also several pair Old English Bantams. Hens, great layers. Cockerels as beautiful as Mongolian Pheasants. $2.50 a pair. A yearling registered Percheron Stallion; dark gray. Will mature to 1,800 pounds. Cheap for want of room. Address, THE CASKEY FARMS, Richmondville N.Y.

Tom Barron's White Leghorns
The greatest money-makers of them all. 4 hens, 1 cockerel, $6; 8 hens, 1 cockerel, $10. Also Knlps' R. C. Browns. TROUT BROOK FARM, Hillsdale, N.Y.

Pedigreed Barron Leghorns—Sire's mother laid 258 eggs; grandsire's mother, 248 eggs. Also R. I. Red Cockerels, $2 and $3. Harry B Cook, Orange, Conn.

200,000 S. C. W. LEGHORN BABY CHICKS
for 1915. Seven Hall Mammoth Incubators; 12,000 chicks per week after February 15th; only No. 1, high-class chicks shipped; New England's most profitable breed, the famous "Everlay Strain." Reasonable prices; prompt service. 60-page catalog on request.
THE EVERLAY FARM, - Box 240-E, Methuen, Mass.

POULTRYMEN, ATTENTION
75,000 S. C. W. LEGHORN BABY CHICKS
FREE FROM WHITE DIARRHEA
All breeders tested by Storrs' Station. Free circular. White Leghorn and Pittsfield Barred Rock cockerels. A. B. HALL, Wallingford, Conn.

White Leghorns—YESTERLAID Strain. Pullets lay at 4½ months. Bought by 20 Experiment Stations. All stud males grand-dam record of more than 440 eggs in 2 years. Prices very reasonable. Bring success. Details free
YESTERLAID EGG FARM CO., Dept. 62 Pacific, Mo.

BARRON'S LEGHORNS
Imported direct. 248-260 egg strain. April pullets and cockerels, $3 each. 6 hens of this strain and full blooded cockerel, $10. E. CLAUDE JONES, Hillsdale, N.Y.

S. C. W. LEGHORNS—300 pullets; reasonable. A few fine Golden Campine hen-feathered cockerels and pullets. Moderate prices. S. D. HALL, Seville, Ohio

IF IN NEED OF A LARGE AND HEAVY-LAYING STRAIN OF **S. C. W. LEGHORNS**
Hens, Pullets and Cockerels—none better layers—Write, - J. M. CASE, Gilbon, New York

40 Large April White Leghorn Pullets
$1 each. No culls.
GRAVEL RUN FARM, - Dundee, N. Y.

100 S. C. W. Leghorn Breeding Hens
75c. each.
JOHN LORTON LEE - Carmel, N. Y.

BRED TO LAY—S. C. WHITE LEGHORNS. American, Barron, and half-Barron cockerels for sale. Now is the time to buy. P. G. PLATT, Wallingford, Pa.

Pullets, Yearling Hens, Cocks & Cockerels
in lots to suit purchasers at attractive prices.
MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.

FOR SALE—SINGLE COMBED WHITE LEGHORN PULLETS AND COCKERELS. $1 each. JAMES H. OWEN, R. F. D. 4, Newburgh, N.Y.

R. I. Reds—White Wyandottes—Lt. and Dk. *Brahmas*, Barred *Rocks*, S.C. White and Brown *Leghorns*. Show and utility quality. Bargain list. Breeders free. RIVERDALE POULTRY FARM, Riverdale, N. J.

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F. AND W. INDIAN RUNNER AND MAMMOTH **Pekin Ducks and Drakes** for sale reasonable. GEO. WILLIAMSON, Flanders, N. J.

WHITE HOLLAND TOMS
prize-winning stock.
Mrs. A. L. SPINK, Route 3, Watertown, N. Y.

WHITE HOLLAND TURKEYS—Mrs. E. J. RIDER, Redman, New York

Half Wild, Half Bronze TURKEYS
JOHN D. SMITH, - Walton, N. Y.

Purebred Mammoth Bronze Turkies—Silver Campines and White Wyandottes. Satisfaction Guaranteed. I. A. WHEELER, R. F. D. 2, Maplewood Farm, Massena, N. Y.

BRONZE TURKEYS
bred from 45 lb. toms and 25 lb. hens.
Mrs. FRED EYSAMAN, R. F. D. 13, Moravia, N. Y.

Purebred Bronze Turkey Toms FOR SALE
Healthy stock. RALPH B. WARDELL, Sandy Creek, N. Y.

Bourbon-Red Turkeys FOR SALE—Strong, big kind. Toms, $5 each; hens, $4. First orders get the best ones. Mrs. R. F. BUNDY, - Tazewell, Virginia

Bourbon Red Turkeys—Prize layers. Per pair, $8; Trio, $10. Shipments Nov. 1. Orders booked now. Fiona Horning, Ulysses, Pa.

Bourbon-Red TURKEYS
Hens $3, and toms $4. Milton O. Stickley, Strasburg, Va.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H. A. Souder, Box 29, Sellersville, Pa

Utility S.C. Brown Leghorn Cockerels—$1.50; hens, $1. Utility R. C. Rhode Island Cockerels, $2.
IDA BLOYE, Franklinville, Cattaraugus Co., New York

Utility S. C. White Leghorns—Selected yearling hens, 80c each, $75 per 100. GEO. FROST, Levanna, Cayuga Co., New York

FOR SALE—**Single Comb White Leghorn Cockerels** and YEARLING HENS, $1 each.
GEO. L. FERRIS & SON, - Atwaters, N. Y.

YOUNG'S 200-EGG STRAIN S. C. W. Leghorn April PULLETS, $1. ALTAVISTA FARM, Darlington, Md.

Money in Honey—Bees pay. Easy, interesting work. Latest methods of bee-keeping—simply told in our "Bee Primer." Highly instructive. Send *today* for the book and 6 months' subscription to AMERICAN BEE JOURNAL, Box K, Hamilton, Ill. 25c

Your Neighbors Will Want to Keep Posted

on the Poultry Contest at Storrs, Connecticut. The contest is just beginning. Among the entries is the Rural New-Yorker's pen of Thirty Favorite Hens. The Rural New-Yorker will contain weekly record and comment. Get your neighbors' subscriptions, but first send for Reward List showing articles given for securing subscriptions. A postal will do.

Department "M"
THE RURAL NEW-YORKER
333 West 30th Street, New York City

Publisher's Desk

THE case of Miss Mabel Hastings of Montclair, N. J., against D. B. Cornell, of Great Barrington, Mass., was heard in the superior court at Pittsfield Tuesday. The case is a contract action to recover about $800 which plaintiff claims is due her in connection with the sale of the Bastine property in South Egremont. The jury returned a verdict yesterday afternoon for the plaintiff, Miss Hastings, in the sum of $809. It is understood that an appeal may be taken.—Local Paper.

Our contention about these real estate transactions is being verified in the courts wherever tried; but always with annoyance and expense to the buyer or seller. The way to avoid such annoyance and expense is to get all information in advance from disinterested sources, and then employ a local attorney to draw up the contract and secure title.

Are the North American Accident Insurance policies worth while? Several policies are in force in this section, including my own and I would like to have your opinion of them. C. B. A.
New York.

If the insured can make out a case under his contract, he may, of course, recover; but the policies are very strictly limited, and very skillfully drawn, so that they may not mean just what you might conclude on a casual reading. They are confined largely to such accidents as one is liable to in the city, but seldom occur in the country. The conditions are very technical. For example, the $250 for loss of life, is restricted to loss within 30 days of accident, and death must result from accident independent of all other causes. Most of us have some ailment, acute or chronic, and this would seem to exclude the possibility of a claim. The whole contract is covered with just such technical requirements, and it is difficult to see how a claim could be presented which would not be affected by the restrictions. This is probably necessary in order to write a policy on a small annual premium; but what is the good of a policy unless it protects one in case of an ordinary accident?

Last May an agent of the Herrick Seed Company, Rochester, N. Y., took a small order of trees from my husband. He did not have his glasses and signed without reading the fine print. The agent said the trees would be all of one caliper. In September we wrote the company that we could not use the trees and cancelled the order, but received no reply. The last week of October a bundle of trees was thrown on our lawn from a driver's wagon. We still refused to receive them, but the driver said to heel them in and notify the Herrick Seed Co., as others were doing. We now see that the trees are not of the same caliper, and trees of equal quality could be bought for one-third of the price charged for these. We have just settled in the neighborhood and do not want any litigation, but cannot use the trees. What should we do?
Pennsylvania. G. H. W.

If you had sent your order to a reliable house by mail and afterwards cancelled it, the goods would not have been shipped, and money and trouble would have been saved. Sometimes an order may be safely placed with a responsible agent of a reliable nursery, but unless you know the agent and the house you are taking chances. When such concerns go into court to enforce the payment of such claims, they usually have to meet the representations of their agents, and not infrequently lose their cases.

"All guaranteed five years and backed by 62 years' experience; all shipped on 30 days' free trial. Double the power of other engines of equal weight, runs smoother. Starts easier."

"You will make the best investment of your life if you will send us your order for an engine by return mail. We will give it our careful attention and see that you get an outfit that will be a record breaker and prove a good advertisement for our line in your territory. We maintain that no one who places trust in the integrity of this company will have occasion to regret it."

The above extracts from letter, circulars and advertising of the Temple Pump Company of Chicago, Ill., induced Mr. Prom, of Miami, Florida, to send them an order for a six horse-power Master Workman engine, to be used in driving an irrigation pump. The cost of the engine including some extras, was $153.55. The order was given in April, 1913.

All sorts of difficulties, from the correspondence and the reports of Mr. Prom, seem to have been encountered as soon as attempt was made to operate the engine during which time experienced engineers and operators were called in in an attempt to make it do the work. After becoming satisfied that the engine would not develop sufficient power to operate the pump, suggestions were made to exchange it for a single cylinder engine costing less money than the original. Mr. Prom offered to accept the exchange, the company to pay the freight both ways if the fault were theirs. When the Master Workman engine was returned to the company at Chicago, they set up the claim that the fault was not theirs; that the engine had been taken apart, and improperly assembled and generally abused, and refused to pay the freight. Mr. Prom maintains that the engine was never taken apart, that only the ordinary adjustments were attempted, and that it was handled only by engineers and operators who were entirely familiar with the operation of gasoline engines.

Mr. Prom then complained to the agricultural papers in which the Temple Pump Company advertising appears. After some correspondence they refused him any redress. THE R. N.-Y. does not carry the advertising of the Temple Pump Company, and has refused it for several years because of similar complaints received from other subscribers, but complaint was made, nevertheless, and we attempted an adjustment of it. The company intimated that they would make an adjustment through the papers in which they were advertising, but this has never been done.

The papers carrying the advertising contend that the Temple Pump Company was not to blame in this transaction. We take a different view of their responsibility, but we are always tolerant of the opinions of others. We refer to the transaction at this time that farmers may have understanding of the difficulties sometimes encountered in buying implements on 30-day guarantees. There is often a delay in receiving machinery; frequently delays in getting it set up and arranging conditions just right for a test, and it is not infrequent that the 30 days expire before there is any opportunity to test the implement at all. But if it is held beyond the time the purchaser technically loses his right to return it. In this particular case, when the engine was found unsatisfactory, it might have been returned and freight both ways demanded in addition to the refunding of the purchase price, but the purchaser was first induced by the necessities of his case, and the hope that it would ultimately work, to continue adjustments of it past the 30 days. He was then induced to exchange it for another engine with promise of better results, and he was probably induced to accept this compromise because of the necessity of having an engine promptly to do his work. He yet complains that the new engine is not satisfactory, but that he continued to use it past the limit of time for trial. He insists that the freight on the original engine should be paid by the company under their original guarantee, because it proved unsatisfactory. If he had not consented to an exchange the company were responsible for the freight. While the other publishers agree with the advertiser, THE R. N.-Y. feels that Mr. Prom's contention is right. Naturally the company would prefer to make an exchange rather than to redeem the old engine and assume the freight expenses, and as the first engine at least was a failure, they were responsible for the freight. The Temple Pump Company's present attitude is that they must be the judge in all cases, and if they contend that the failure of the engine to work is due to the carelessness or ignorance of the party, then they are relieved from their guarantee. This position might be tenable if plainly stated at the time the sale is made, but no such provision appears in any of their literature.

THE R. N.-Y. has refused this advertising because of the record the company has made with our subscribers. If we were carrying the advertising at the time of this transaction we would feel the obligation of sending a check to cover the demand from Mr. Prom. We have, under the circumstances, no such obligation, but our people ought to understand the difficulties sometimes encountered in the purchase of goods under the 30 days' trial. If the tradition of the house is right, it does not make any difference what the limit of trial may be; but if the concern is given to technical interpretations of its literature, it is difficult for a farmer to avoid controversy, when anything goes wrong.

Let me join the Anti-Fake Club. I believe that every intelligent man and woman should be made to see that it lies in their power to wipe out fake advertising by limiting the subscriptions to persons who take your stand. P. M.
Maine.

No fake concern can exist except through the encouragement of credulous people, and most of us are credulous at times. The thing to realize is that we must use our influence against their petty robberies. No one person can accomplish much alone; but members acting together can accomplish wonders. Refuse to subscribe for papers that carry their advertising, and let the publishers know why, and we will dispose of a large portion of them. That is the task of the Anti-Fake Club.

On September 25 I sent you receipt for a shipment of three cases of eggs sent to a New York party in February 16. Adams Express Company lost one of the cases of eggs, and I have been seven months trying to get them to settle. I got tired and sent the claim to you, and am greatly surprised to have the claim settled 14 days after it was turned over to you, and I surely am thankful to you for all the trouble. It is wonderful how THE R. N.-Y. can make Adams Express Company come to time and behave themselves, and especially that I not only got my money for the eggs at 45 cents a dozen, but they paid back 27 cents expressage and 6% interest for six months, making my check $14.19. I greatly appreciate your trouble and thank you.
New York. A. P. L.

This is the first time we have had an express company pay interest on a claim. When a matter hangs fire six or seven months for no legitimate reason, the shipper is certainly entitled to interest on his money. This ought to be incorporated in the Interstate Commerce Commission ruling, and we shall offer the suggestion to them. J. J. D.

Certified Milk in Ohio.

"WHERE there is one certified plant now, there will be a dozen, a decade from now," is the opinion of E. G. Scripture of Ohio. "I have been producing certified milk for a short time, two years, and the matter of meeting local demand requires no great expense as compared with the returns. I could sell two or three times my product were I disposed to increase my herd. When I decided to produce better milk, I went to the local board of health, I had them outline their demands, then I modified my dairy equipment to meet these demands, and I found I was getting out of it rather reasonably. After I fitted my buildings, I invited veterinary inspection. Only one of my animals was condemned. I was given a certificate and this certificate not only is an evidence of god healthy cows, but is a leverage on a vigorous business. The advertising value of 'Certified Dairy' on the milk bottle cap is worth the expense. When several doctors advise that the milk of my farm is the best in the locality, mothers are anxious that their children should be reared on this milk. I have only 15 cows, and do not intend increasing my herd, owing to my age, but there is room in the vicinity of every small city, and possibly in every village for a certified plant."

Obstructed Teat.

I HAVE a cow that injured one of her teats in getting over some plank. While it has never been inflamed it has become very hard to get the milk started from it; after it starts it seems to be all right. What can be done? S. R. A.
Kentucky.

Sterilized teat plugs or dilators, to be bought of a dealer in veterinary instruments, or ordered through the druggist, may do away with this condition. If not then it may be found necessary to slit through a stricture or an obstruction or growth at the tip of the teat, by means of a sterilized teat bistoury. This should be done by a trained veterinarian. Without a personal examination we cannot decide just what condition of the teat is present. A. S. A.

Chilly-Weather Comfort

You can laugh at the snow and the winter winds when you're snug and warm in a Clothcraft overcoat.

Light weight, warmth, great durability. That's where pure wool comes in—all Clothcraft Clothes, you know, are *guaranteed* all-wool.

Then, too, there's the fine workmanship. Every little operation in making a suit or overcoat has been perfected in the Clothcraft shops.

Thousands of dollars are saved by this scientific tailoring and put back into fabrics, linings and other additions to quality.

That's why we can offer you such a variety of beautiful Clothcraft patterns in suits and overcoats at $10 to $22.

You'll be specially interested in Clothcraft No. 4130 Blue Serge Special that sells for $18.50.

The Clothcraft Store
(in your town)

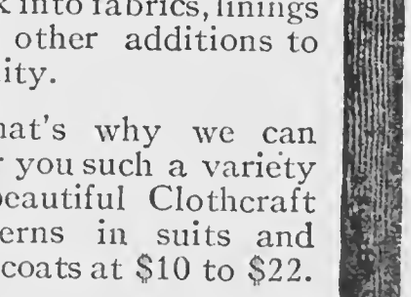
Write to The Joseph & Feiss Co., 635 St. Clair Ave., Cleveland, Ohio, for their new Style Book, a sample of the all-wool fabric used in Clothcraft "4130" and a personal note of introduction to the Clothcraft Store nearest you.

Feed Grinding and Wood Cutting

In the Winter every farmer finds himself beset with numerous jobs—big and small—every-day jobs and occasional ones. This is where an efficient, reliable power plant is a time and money saver.

The "Badger" Engine is made well from start to finish; made to run without interruption; not merely to sell.

It is simple—anybody can run it or adjust it. It is economical, using less gas or gasoline than any engine known. It develops more power than rated. There are many types and sizes of "Badgers" to suit every individual need. Any BADGER is a GOOD engine.



Badger

The "Badger" is always ready to run—Winter or Summer—at an instant's notice. Every part guaranteed for five years unconditionally.

Send for Catalog. Free Engineering lessons sent on receipt of dealer's name.

Address. The Christensen Engineering Co., Milwaukee, Wis.

Or J.B. NORTON CO., Inc., Distributors, 209 Elizabeth St., Utica, N.Y.

GASOLINE ENGINES

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Products, Prices and Trade.

Wholesale Prices at New York.

Week Ending Nov. 13, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

A shortage in receipts and irregular quality in much of the current make have caused an advance of one to two cents on the better grades, fancy lots having wholesaled at 36½ cents. The high prices have called out storage stock, the best bringing 32 to 33 cents.

Creamery, extra, above 92 score, lb	36	@	36½
Extra, 92 score	35	@	35½
Good to Choice	28	@	32
Lower Grades	23	@	25
Storage	27	@	33
State Dairy, best	33	@	34
Common to Good	23	@	29
Ladles	20	@	23
Packing Stock	19	@	22
Process	22	@	26

Elgin, Ill., butter market 33 cents.
Philadelphia, western creamery, 35 cents.
Chicago creamery, 26@33.

CHEESE.

Business is dull, and dealers ready to cut prices where necessary to make sales. But few sales at the top figure are noted, 15 cents covering most high grade trade.

Whole Milk, fresh, specials	15	@	15¼
Average fancy	14¾	@	15
Under grades	11	@	14
Daisies, Wisconsin	14¼	@	14¾
Skims, specials	13	@	13½
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS.

Prices are on the same basis as last week, high qualities being scarce, but medium and under grades moving slowly. A few sales of storage eggs for export are reported.

White, choice to fancy, large	52	@	54
Medium to good	40	@	50
Mixed colors, best	40	@	43
Common to good	25	@	35
Western fresh, white	45	@	48
Lower grades	20	@	30
Storage, best	24	@	26
Lower grades	18	@	20

FRESH FRUITS.

The apple market is somewhat improved, as demand is good and receipts not large. Grapes scarce, but of poor quality and selling slowly.

Apples—BenDavis, bbl	1 75	@	2 25
Fall Pippin	1 75	@	3 25
McIntosh	2 50	@	4 00
Jonathan	2 50	@	3 50
Twenty-ounce	1 50	@	2 75
Spitz	1 50	@	2 75
Baldwin	1 50	@	2 50
King	2 00	@	2 75
Greening	2 00	@	3 75
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 50	@	5 00
Bosc	3 00	@	6 00
Clairgeau	3 00	@	4 50
Sheldon	3 00	@	5 50
Kieffer	1 00	@	2 25
Grapes, 18lb case	1 00	@	1 25
Niagara, 4lb. bkt	8	@	10
Black, 4lb. bkt	8	@	10
Black, 20lb. bkt	35	@	40
Bulk, ton	30 00	@	38 00
Cranberries, Cape Cod, bbl	2 00	@	6 00
Jersey, bbl	4 00	@	4 75

HOPS.

Prime to choice	28	@	30
Common to good	24	@	27
Pacific Coast	11	@	14
Old stock	7	@	9

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

Chestnuts, Northern, bu	2 00	@	4 00
Southern	1 00	@	2 50
Hickory Nuts, bu	2 50	@	3 00

BEANS.

Marrow, 100 lbs	6 10	@	6 50
Medium	4 40	@	4 50
Pea	4 40	@	4 50
Red Kidney	4 50	@	5 75
Lima, California	5 90	@	6 00

VEGETABLES.

Potato supply is still very large and prices unimproved. Cabbage $1 per ton lower. Onions and cauliflower low.

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 50	@	2 00
State, 180 lbs	1 50	@	1 75
Maine, 180 lbs	1 00	@	1 75
Sweet Potatoes, bbl	2 00	@	2 25
Brussels Sprouts, qt	05	@	12
Beets, bbl	1 00	@	1 50
Carrots, bbl	75	@	1 00
Chicory, southern, bbl	1 00	@	1 50
Celery, doz	10	@	25
Cauliflower, bbl	50	@	2 00
Cucumbers, bu	1 00	@	2 00
Cabbage, bbl	75	@	1 00
Ton	5 00	@	9 00
Kale, bbl	50	@	75
Lettuce, half-bbl. basket	25	@	1 50
Onions—Red, bag	60	@	85
Yellow	60	@	90
Peppers, bu	1 00	@	1 50
Peas, bu	75	@	3 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	50	@	1 00
String Beans, bu	1 00	@	2 00
Squash, Hubbard, bbl	60	@	75
Marrow	60	@	75
New, bu	75	@	1 00
Egg Plants, bu	50	@	75
Tomatoes, box	75	@	1 50

LIVE POULTRY.

Chickens, lb	14	@	16
Fowls	14	@	16½
Roosters	10	@	11
Ducks	15	@	20
Geese	14	@	15

DRESSED POULTRY.

The present outlook is that Thanksgiving turkeys will have to be good to bring 20 cents or more at wholesale, though much depends on the weather and the quantity producers hold back for later holiday trade. This early holiday is always a critical time, because of weather uncertainty. A warm, sticky spell raises havoc with dressed poultry. The bulk of the Thanksgiving market demands good quality, so that thin birds would better be held back and put in better condition. Be sure that the animal heat is all out of the birds before packing, otherwise there will be serious loss.

Turkeys, choice, lb	20	@	22
Common to good	15	@	18
Chickens, choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	23	@	24
Fowls	14	@	18
Ducks, Spring	16	@	18
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Hay is scarce because of the restrictions on shipment caused by the cattle quarantine, and prices $2 to $3 per ton above last week.

Hay, Timothy, new, No. 1, ton	23 00	@	24 00
No. 2	21 00	@	22 00
No. 3	19 00	@	20 00
Clover mixed	19 00	@	22 00
Straw, Rye, choice	14 00	@	15 00
Short and tangled	10 00	@	11 00

LIVE STOCK.

Native Steers	6 00	@	10 20
Bulls	5 25	@	7 50
Cows	3 25	@	6 85
Calves, prime veal, 100 lb	10 00	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	7 25	@	8 75
Hogs	7 75	@	8 00

GRAIN.

Wheat exports are large, and prices on some grades five cents higher. Corn exports light and prices unchanged.

Wheat, No. 1, Northern Spring	1 26	@	..
No. 2, Red	1 22	@	..
No. 2, Hard Winter	1 24	@	..
Corn, as to quality, bush	83	@	84
Oats, as to weight, bush	49	@	53
Rye	1 05	@	1 11

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	55	@	60
Mixed colors, new laid	45	@	50
Ordinary grades	25	@	35
Butter, fancy prints, lb	40	@	42
Tub, choice	32	@	36
Chickens, roasting, lb	25	@	27
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	23	@	25
Fricassee, lb	18	@	20
Fowls	18	@	22
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

*

The Government of Holland has decided to take charge, for the time, of all imports of flour, grains and cattle food. Steamers reaching Holland will refuse shipments consigned to private parties there.

*

The citrus orchards of California have 13,000 orange and 3,000,000 lemon trees. Two-thirds of the orange and a trifle more than half the lemon trees are in bearing. The past season 46,267 cars of citrus fruit were shipped from California.

*

In some parts of the west apples are being marketed in bushel sacks. They get somewhat bruised in handling but are satisfactory for quick use, and the lessened packing and shipping expense makes possible a price that offsets the damage.

*

The railroads entering New York are about to cut the free storage of flour from 10 days to five, making storage charges one cent per hundred pounds for each 10 days after the free storage period. The flour men state that as the profit made by the flour wholesaler is small, the added cost of storage will increase the price to the consumer. The argument favoring the new ruling is that the storage privilege is abused but on the other hand it is claimed that a 10-day latitude is necessary to handle the large flour distribution at New York and guard against shortage by storm delay to arrivals.

CROPS AND PRICES.

No. 10. Dairy cows are a drug on the market. I have two nice young Holstein heifers giving good milk; I must sell for beef at seven cents per pound; cannot find a market for milk cows. I usually keep six milch cows, but owing to short crop of hay must sell my two good heifers. Every farmer I know is more or less short of feed, especially hay. Farms are all small, only two in town over a hundred acres. There are two farms for sale, which have been on the market for years.
Eastport, Me. J. A. D.

Nov. 9. Cattle raisers are much concerned over the foot and mouth disease which has invaded the upper part of the State near the Pennsylvania line, the disease being discovered among a herd of cattle shipped to farmers from Lancaster, Pa. The State is now quarantined. Sweet potatoes were a large crop and large quantities are still being shipped to the city markets. They are bringing 25 cents per basket at stations. Total shipments of apples over the Delaware railroad to date for the season 659,085 baskets; pears, 357,591 baskets; tomatoes, 835,945 baskets; sweet potatoes, 78,910 barrels; white potatoes, 195,507 barrels. An agricultural agent has been appointed for Kent County. Farmers are very much interested in this new movement for their benefit, and will soon take hold of the work as soon as they find out the mission of the agent. Plans are under way for holding a Kent County corn show some time in the early Winter. Every farmer is being requested to save out a sample of his corn to enter in this show, as there will be premiums for classes and colors of corn. The yield of corn is larger than for five or six years. New corn on cob bring 56 cents, old corn 80 cents, wheat $1.10; white potatoes 35 cents per basket, butter 30 cents; eggs 28 cents, chickens 13 cents, pork $10, hay $17. Finer Fall weather was never known, there was no killing frost until about the last of October. Early sown wheat is making a luxuriant growth. Several new silos were filled and more will be built next year. Some hogs are dying with cholera
Dover, Del. C. H.

Nov. 9. Milk is running a little higher than heretofore at this time of the year. Most of our milk is going to the Pittsburg milk dealers, and one company is paying $1.65, skim-milk back; another is paying $1.45 for the whole milk. Most of our farmers appear fairly well satisfied with the prospects, and the general tendency seems to be to carry more rather than less cows. We are getting more silos in the community every year, and usually a man who builds a silo winds up by stocking heavier. Without actual figures at hand, I think that there are more cows being shipped into this section this Fall than for some time past, and fewer being shipped out. Our farmers are well provided with feed this Fall, but the general rule is to buy a lot of mill feeds to make up the protein to balance a corn and Timothy ration. We do not raise enough of our own feed, and then we always have a kick on the price of mill feeds. At the sales around us cows are going at lower prices than for several seasons past. A good grade Holstein that would have sold at $110 to $125 last Fall or the year before will go this Fall at about $80 to $85.
Orwell, O. W. H. P.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—Single man to farm 50 acres on shares; fruit extra. M. S. VAN DER VEER, R. F. D. 1, Hightstown, New Jersey.

WANTED—Work driving or handling horses or in cow barn, single, American, 23; life experience. Address H. B., care Rural New-Yorker.

POSITION WANTED—Practical farmer; butter and cottage cheese maker for fancy trade; married, references. C. L. GIVEANS, Vernon, N. J.

WANTED—A woman who for a good home is willing to help with housework in a small family in a beautiful country. M. B. M., care R. N.-Y.

POULTRY EXPERT—Desires position as manager commercial chicken farm; practical experience combined with theoretical knowledge; references furnished. L. A., care R. N.-Y.

PRACTICAL POULTRY MAN, experienced in all branches of poultry work, single, desires position, either as poultryman or assistant; small wages for winter months. POULTRYMAN, care Rural New-Yorker.

POSITION WANTED—About Jan. 1 as farm manager or working foreman, by single American of 25; not a college graduate, but a close student of agriculture, and have a thorough practical knowledge of modern up-to-date farming in all branches; if you want results try me; references exchanged. V. N. E., care Rural New-Yorker.

WANTED—By first-class manager, at present employed managing a large private estate, a position of similar capacity, private or commercial, thoroughly versed in up-to-date farming and thorough-bred stock raising. Capable of managing any large proposition. Highest references. Satisfactory reasons for leaving. Address "SHELDONCROFT," Silver Lake, Pa.

YOUNG MAN, 27, single, wants position as superintendent or head dairyman on private estate; life experience in farming, handling and feeding purebred stock, can do own doctoring, tuberculin and Babcock testing; excellent buttermaker, thoroughly understands certified dairying, raising rotation crops, vegetables and management of help; first-class references. Box B. K., Rural New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Car cheap Clover Hay. A. S. BELL, Ashley, Pa.

CHOICE WINTER APPLES; two dollars per barrel. BENJ. WILLIAMS, Rushford, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans; write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

28 INNCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

ALFALFA FOR SALE—Fifty tons first cutting, thirty tons of second cutting, all cut early, well cured, bright and pea green; have sold farm and must dispose of Alfalfa. JOHN McLENNAN, Fayetteville, N. Y.

GRAPEFRUIT AND ORANGES by express in half or whole boxes, F. O. B. Miami, Fla.; fancy brights at $1.75. Golden Russets at $1.50 per box, with order; delivered prices quoted on request. GEO. B. CELLON, Tropical Grove, Miami, Fla.

FOR SALE—320 acres unirrigated land, fenced, near Lamar, Colorado, $10 per acre, half cash. ALBERT A. CORB, Guilford, Conn.

WANTED TO LEASE—With option to buy, a place about eight acres, bordering pond or stream, near New York City. S. R. E., care R. N.-Y.

AUCTION—Fruit and dairy farm 189 acres; excellent buildings and water; partners selling out Nov. 30. Write WM. W. HALLE, Craryville, N. Y.

SALE of creamery, real property and water privilege; also personal property, in parts. TOWN HALL, Livingston, N. Y. Dec. 4, 1914, at 1 o'clock P. M.

WANTED—To trade 12-apartment brick block in Dorchester, Mass.; yearly rental of $3,200; for good, well-equipped farm. JOHN KING, Stafford Springs, Conn.

FOR SALE—Farm 85 acres, 65 under cultivation apple and peach orchards, one-half mile of depot and town of 1,000 inhabitants; bargain to quick purchaser. HANSON S. PHILLIPS, Hebron, Md.

$80 PER ACRE—Productive, highly cultivated 82-acre farm, located at city line, Corry, Erie County, Pa.; good house, fine bank barn, two silos; right at splendid city, market, schools, churches, roads, etc., finest water; produces immense hay, ensilage, pasture and other crops. JOHN I. COLEGROVE, Sheffield, Pa.

FOR SALE—35 acres; 9 timber, 26 black gravel soil, no stones, 8-room house, barn, sheds, poultry houses, all good as new; land in condition for gardening, trucking, macadam road; telephone line, schools, churches, stores and depot within one mile; price, $4,500. HENRY C. MEYER, R. D. Flanders, Morris Co., New Jersey.

117¾ ACRE ONEIDA COUNTY DAIRY FARM, $4,900; $2,500 cash; balance easy terms; brand new 10-room house, finished oak and cherry, natural; water and sink in kitchen; new cement basement barn, stanchion 20 cows; hay track; plenty other good buildings; $500 worth new, heavy oak furniture; all tools, machinery, etc.; 3½ miles to city and railroad; on crushed stone road. Wish to hear only from those interested. Address owner, NORMAN HOOVER, R. 5, Camden, N. Y.

"BALL-BAND" TRADE MARK

8½ Million Men

Look For That Red Ball Before They Buy

"Ball-Band" Rubber Footwear is worn by eight and one-half million men—and sold by over 50,000 stores. *It has to be good footwear.*

Nobody knows this better than we do. We know that "Ball-Band" Rubber Footwear *must* fit. It must be comfortable to the feet and it must give long, steady wear.

Our rubber is treated and worked by men who have spent their lives in finding ways to make rubber stand more wear. Every spot that gets a bit of extra wear or strain, there we put extra strength. We have to be familiar with every kind of work the man who buys "Ball-Band" is liable to do. Walking, ditching, chopping, climbing, stooping, carrying burdens—all these things throw different strains on different parts of the footwear, and in making "Ball-Band" Rubber Footwear we must take these into consideration.

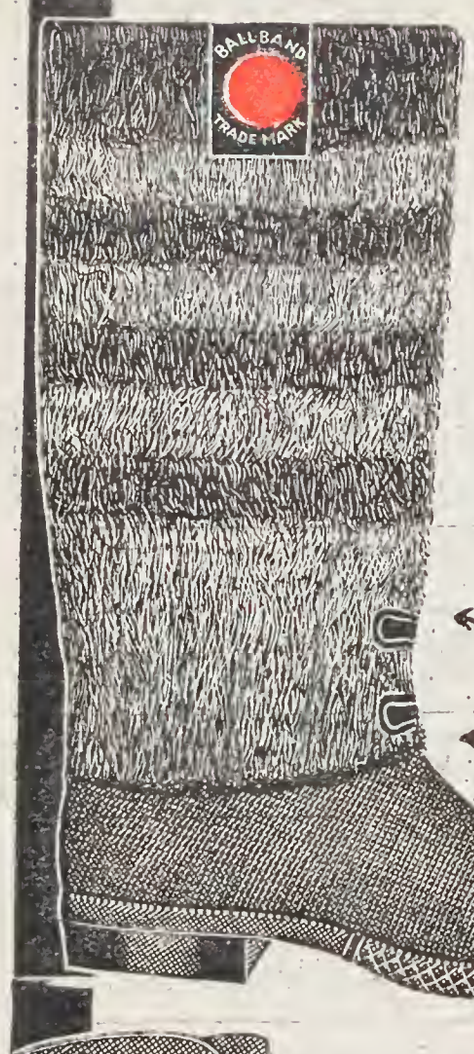
We have spent millions to build up the "Ball-Band" reputation for quality, and it is why we are spending large sums to add to that reputation.

"Ball-Band" Rubber Footwear is sold by 50,000 stores. The Red Ball Sign is in the window and on the goods. Look for it. Be sure it is a bright, round Red Ball, and not a deceiving imitation.

When you buy "Ball-Band" you get *more days wear for your money* than it is possible to get in any other kind.

"BALL-BAND"

TRADE MARK



The "Ball-Band" Coon Tail Knit Boot is knit, not felt, insuring the utmost wear and service. Ours is the only high-grade knit boot of this character on the market. The patented snow excluder keeps out snow, dirt, grain and chaff and keeps the ankles warm. Heavy gum overs to fit. This boot is completely shrunk; it can be washed when dirty—it simply *won't* shrink any more. *Look for the Red Ball on the Straps.*

From HERE to HERE — The knit boot overlaps the rubber

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tells you how to make your rubber footwear last longer. There are many ways that even good rubbers can be innocently ruined. It will pay you to know what they are. Ask us to send you a copy.

If no local merchant can sell you "Ball-Band," write us and tell us his name and we will see that you are fitted.

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333 Water St., Mishawaka, Ind.

"The House That Pays Millions for Quality"

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII. No. 4283. NEW YORK, NOVEMBER 28, 1914. Weekly $1.00 Per Year.

"The Opening of a Chestnut Bur." Fig. 611.

SOY BEANS AND SILAGE CORN.

THE growing of Soy beans with silage corn is one of the happy combinations whereby a leguminous and a non-leguminous crop may be grown together with considerable advantage to the dairyman. It is rapidly becoming a very common practice to grow these two crops together. Owing to a considerable amount of impractical or prejudiced advice or lack of experience on the part of some men who have made a half-hearted attempt to grow this crop, much misinformation has been spread abroad. There are three ways that these two crops may be planted, cared for, and worked into the silo together each of which may be satisfactory.

1. The crop of Soy beans may be planted separately from the corn and cultivated as commonly practiced with ordinary field beans. At the time of filling silo the corn and Soy beans may be cut into the silo alternately using one load of beans to three of corn, or

2. The corn and Soy beans may be planted in alternate rows of two rows of corn to one of beans. This method might mean extra labor at the time of planting though it would not be any extra labor to harvest the crop.

3. The better way and perhaps the most commonly practiced is to mix the Soy beans and seed corn together, using the regular amount of corn and supplement this with three to four quarts of Soy beans per acre. In this method the planting is done at one operation. The two crops are cared for as one, and at harvest time the mixture is harvested with a corn binder and the corn and Soy beans cut together into the silo with no extra labor involved.

The presence of the Soy beans in the silage naturally tends to increase the amount of protein in the silage, an important point for the dairyman to consider. The two crops grow together to no disadvantage. What few plants the binder would fail to pick up would be greedily eaten by the cattle pasturing on the stubble. At planting time it has been noticed that when planting the mixture the Soy beans being somewhat smaller than the corn, tend to run out of the hopper more freely than the corn. Thus at the end of the bout the proportion of corn to Soy bean seed might be varied unless a few extra beans were carried to throw into the hopper. For the Northern States doubtless the variety known as the Medium Early Green, having a green seed, is best suited and most commonly grown. If planted early the Early Green variety will mature seed in northern New York before killing frosts.

Dairymen should not hesitate to try growing Soy beans with their silage corn. The beans will grow well anywhere that corn will grow well. The mixture is a good one and no one should get discouraged or draw conclusions from the experience of one year. Soy beans enrich the soil and the silage.

F. E. ROBERTSON.

R. N.-Y.—We have many reports from farmers who say the Soy beans are good, but not for the silo. These men fill the silo with corn and dry the Soy beans for hay.

GUARANTEEING EGGS FOR HATCHING.

LAST year there were many complaints from purchasers of eggs for incubation. The per cent of fertile eggs was often low, and some of the breeders who sold the eggs felt sure that their stock was vigorous and that the eggs were right. Is there any way of marking such eggs so they can be returned and identified if not right, and should the breeder guarantee a fair per cent. of fertility?

Undoubtedly your inquiry is due to the poor hatches which were so general during the early part of our last hatching season. This condition was caused by the severity of the preceding Winter, probably. It is very difficult to obtain good hatches during the late Winter and early Spring months, especially if the eggs are shipped quite a distance and are exposed to extremes in temperature. There is bound to be much dissatisfaction over results obtained from early hatches. The producer cannot prevent this. Nevertheless, if he cares to guarantee his eggs, it is quite imperative that he mark them in some way so that there will be no question as to their identity. The simplest method for small producers is to write their name in pencil on the shell of the egg. Where eggs are shipped in large quantities, and the time required to mark the eggs becomes an important factor, then a rubber stamp with slightly concave surface, and bearing his name or trademark can be used to mark the eggs quickly after they are placed in their carrier. I refer to a stamp such as commonly used in marking eggs for a special market trade. If it is sufficient merely to insure the delivery of the eggs, then sealed packages can be used, or a common egg case can be sealed with a ribbon of gummed paper which bears some private mark, to prevent duplication.

Under some conditions, especially if the eggs are hatched by hens, the ink ordinarily used for stamping will rub off. This is not the case with pencil marks. Frequently breeders trap-nest their hens, and write the number of the hen's leg-band on the egg, together with the pen number. This is the method practiced at Cornell, and it serves to identify the egg whether it be marketed or incubated.

In my opinion the best way to protect the buyer against low fertility and hatching power in eggs, is to advise him to purchase during the natural and normal hatching season (April and May) when eggs are running high in fertility and strong in germ, rather than to follow the present practice and fad of hatching in the abnormal season of February and March. During these months it is very difficult to get satisfactory hatches, except in our warmer States, and at this time a breeder is very foolish to guarantee good results, and the purchaser is equally foolish to expect them. At the present time the big demand for eggs comes very early in the season, and naturally the breeder endeavors to supply that demand. Conditions are liable to remain as they are until we are able to change the demand for eggs to the normal hatching season.

C. A. ROGERS.

BE FAIR IN PARCEL POST PRICES.

I HAVE been interested in the parcel post since the beginning of the agitation in its favor, and I had hoped that the passage of the bill would be a positive and material benefit to both the consumer and the farmer, but I find that in practice this result has not been accomplished, at least, in this part of the country. After the passage of the act, I had some correspondence with farmers not very remote from the city where I live, and in every instance I found that the attitude of the farmer and his theory of the benefits of the parcel post system were directly opposed to that of the consumer. For instance, the consumer said: *"Now that the parcel post act is in effect, we can get from the farmer our fruits, vegetables, dressed fowls, eggs, etc., with the middleman's profit eliminated, the only expense being the postage, which the farmer ought to be willing to pay."*

Endeavoring to apply this theory personally I found to my surprise the farmer's theory was as follows: *"Now that the parcel post act is in effect, we, the farmers, may reap for ourselves the profit which the middleman has heretofore enjoyed. The consumer ought to be willing to pay us as much as he has been paying the middleman right along."*

In the neighboring city of Providence there are many wholesale fruit and vegetable dealers. In obtaining prices for quite a variety of ordinary fruits and vegetables from farmers within 25 miles of where I live, I found in almost every instance I could purchase the same articles at a lower price from the wholesale dealer and commission house than I could from the farmer. Add to this the fact that the consumer has no selection of the articles shipped, that being done by the farmer himself, and you can readily see that the parcel post is at least a partial failure so far as the elimination of the middleman is concerned. Until some modification or compromise of these conflicting theories of the farmer and the consumer takes place, I see very little to be gained by either one through the introduction of the parcel post. J. L. JENKS.

Rhode Island.

R. N.-Y.—We have heard the same arguments from consumers and from farmers. Both are wrong. There is no reason why a consumer should expect a farmer to sell at retail and charge no more than the wholesalers pay him. Nor can anyone give a reason why the consumer should pay the farmer what he now pays to the middleman. As he now buys the consumer can make some selection and can hold the dealer personally responsible. He cannot do this with a distant farmer. There must be a fair compromise between the two. We have found that 75 per cent. of what the retailers charge gives us at least 30 per cent. more for our goods than we could obtain at wholesale. We have no sympathy with any disposition to "hold up" the consumer to high retail prices. There must be a fair compromise, or there can be no fair argument for using parcel post. These things will come in time. We cannot expect perfection at once.

ARE THE TREES WORTH WHILE?

HERE is rather a new case—at least we have not had it presented in just this form before. One of our readers bought a farm largely because it carried an orchard of about 80 trees. They were good-sized trees of Winter varieties, and this man, who knows little about farming, was told that the fruit from these trees would more than pay the interest on his mortgage, and practically take care of the place for him. After buying the place with this idea in mind, he was told by neighbors that the orchard had been badly injured by careless spraying, putting on the spray solution so strong that it had scorched or destroyed the buds. In Spring these trees made but a poor, feeble appearance, the foliage yellow and scant. They made a puny growth, and gave little or no fruit. Now this man thinks he has been cheated on the same principle as if he had bought a horse which he supposed was sound, only to find him wind-broken or lame when he got him home. This man expected to pay for the farm, or, at least, to take care of the mortgage, out of the income from this orchard, and if the orchard is good for nothing, as he fears, he is prepared to give the farm up rather than lose any more money on it. He wants us to advise him what to do, and whether it is likely that these trees have been permanently injured, or whether it is possible for them to come back. It is easy to see that no one could give even a guess at the matter without a careful examination of the trees. If the trunks are in good condition, and the soil is reasonably suited to them, such trees can usually be revived by pruning, cultivation and spraying. It does not seem probable that the heavy spraying reported has ruined the trees, but the thing for this man to do is to get some expert to study those trees and give him a fair opinion. This is work for the County Adviser or the inspectors from the State Department of Agriculture, and either office would be willing to help. Our advice is to apply to the County Adviser, and also to the Commissioner of Agriculture, at Albany, and ask for expert advice. Agents will come on a request, look these trees over, and give a fair report. This is the kind of service which the Bureau or the Department ought to give, and our friend may be guided by their advice.

A WOMAN AND A FARM.

I WOULD like to get your advice, as I am a woman alone with child 11 years old. I have very little money to work with, but want to live the outdoor life. Could you give me an idea where to buy and what to start with that would be apt to make a sure living? I am healthy and strong; can do any kind of work; am fond of animals and gardening. MRS. F. C.

Long Island.

Think for a moment what a responsibility a stranger takes in giving definite advice in a case of this kind. We know nothing about this woman, and have no means of telling definitely just how she would be likely to succeed on a farm. We do not know whether she has had any experience in farming or gardening, whether she has ever kept poultry or knows of the limitations of country living. No one should take the responsibility of giving direct advice in a case of this kind without further knowledge. It would be a wicked thing to tell such a woman that she is sure to make a good living and more by taking her child out into the country and buying a piece of land. It would be no more than an even chance at best, that she could ever do this. Until we learn more about the exact situation or until we could personally investigate the case, our advice to such a woman would be to try to get a place in the country on some farm or garden, where she could work with her child, and learn something about the business, and also about country living. A strong, healthy woman, as she describes herself to be, ought to be able to get this kind of a position, for good help in the house is hard to obtain in the country. We think it would be possible for her to locate on some fruit or poultry farm, or with some strong gardener, help in the house through the Winter, and in the Spring work more or less out doors with the poultry or crops until she learns enough about the business to know whether she wanted to carry it on or not. In this way she would learn the practical side of the business and probably earn something too. This experience would be a good asset later on. Possibly such actual experience would show her that she did not want to follow country life. On the other hand, it might show her the possibilities of a small farm, and open the way for her to buy or rent one to advantage. Our general advice to those who want to run a farm is to go out first and work as laborers, unless they have already done so, and this advice is offered to all, from the clerk in the store to the graduate of an agricultural college.

THE Agricultural Department Forest Service says: "Range cattle need from eight to 10 gallons of water a day, and sheep from one-half to two gallons, unless there is heavy dew and an abundance of succulent feed. No matter how good the forage on a given area may be, animals must have all the water they need or they will not thrive." This is true of all stock, including humans. Many a man "feels bad" because he does not drink enough pure water.

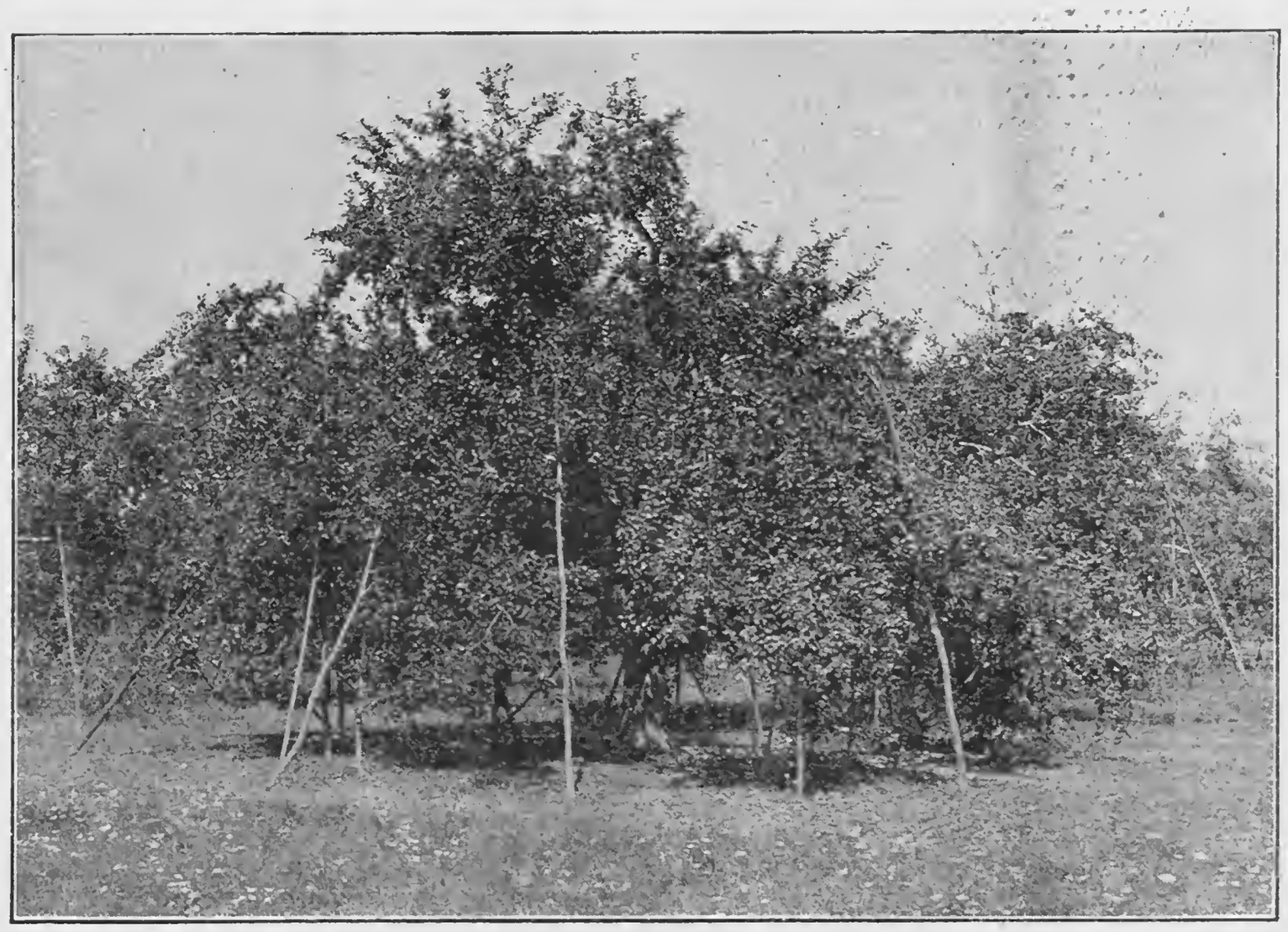
A BUSINESS BALDWIN TREE.

What the Hudson Valley Does in Apple Culture.

DEFECTS IN PRUNING.—The tree shown in Fig. 612, is a Baldwin about 30 years old. It is one of a block of 182 trees planted 35x35 feet, of which 20 are missing from various causes. Standing on the end of a row with a vacant space on one side, it is a little above the average in size and vitality. When I took the orchard in 1909 it was full of dead and diseased wood from scale, canker and collar-rot. We pruned out all the dead and diseased wood and headed the trees back about five feet on top, and thinned them on the sides, working as much as possible from the outside of the tree. The branches were what I call "mule tails." By this I mean that the men in pruning had usually gone up on the main branches and cut the suckers and branches they could reach, leaving a long, naked main limb with a little clump of bearing wood at the end. This system of pruning makes weak branches subject to sunscald and splitting with the weight placed at the end where it can do the most damage.

IMPROVING THE FORM.—We reversed all this. Suckers are allowed to grow on the main limbs and are carefully preserved. We thin them to approximately two feet apart, and head them back half of the season's growth every year. As a rule, in three or four years they change the nature of their growth from the rapid watery growth of the water sprout and become slow growing bearing wood. We thin out and head back from the outside of the tree to let the sun into the center instead of bringing the center out to the sun, and to force the weight of fruit back toward the main trunk as much as possible.

BETTER FRUIT.—The habit of the orchard before 1909 was to bear a very heavy crop of undersized, poorly colored apples every other year. Our aim was to get a fair crop of large red apples every year. The orchard has produced about as follows: 1910, 380 barrels, 2¼ inch and up, and clean; 1911, 500 barrels; 1912, 205 barrels; 1913, 500 barrels; 1914, 419 barrels. That is a fairly uniform production. The pruning acts partly as thinning the fruit does, and while 10 or 12 trees still continue to overbear every other year, the majority are bearing a few nice apples every year. The tree pictured bore 15 barrels in 1913, when the picture was taken, and nine barrels this year, but the difference in size and color often makes the smaller crop the more valuable of the two.



A HUDSON VALLEY BUSINESS BALDWIN TREE. FIG. 612.

SOIL MANAGEMENT.—The soil management has been as follows: Late Fall plowing—in November or December—cultivation once every week or 10 days from early Spring till July 4, and then a cover crop of one-half bushel buckwheat, one-half bushel rye, one quart rape, one-half quart vetch per acre, sown broadcast and harrowed in. This cover crop has never failed to catch and make a heavy growth to turn under and the orchard is gradually coming back to a good state of growth and production.

Columbia Co., N. Y. E. W. MITCHELL.

TYPHOID ON THE FARM.

IT has always been assumed that good health was an accompaniment of farm life and, like stone bruises and freckles, went with the soil. Now, those who are engaged in the occupation of compiling statistics with regard to disease and death tell us that the death rate of cities is falling below that of the open country, or, in other words, that townspeople are living longer than their contemporaries under the open skies. The country doctor confesses to a bit of scepticism with regard to most statistics. He would like to trust them all, but, having seen something of the work of various compilers, he is compelled to take census figures, and the like, with a grain of salt. A single error may not amount to much, but multiply it by thousands and the total is enormous. Did you ever stop to think that if the last census taker didn't get any closer guesses as to the size of your neighbors' flocks than the one you made with regard to your own the size of Uncle Sam's henyard is probably very much over or under estimated? Be that as it may, we are now told that sanitary conditions in well-ordered towns have outstripped in wholesomeness those of the hills, and that we country people are dying sooner, if not oftener, than we should. If this is true, we should bestir ourselves to throw back on the town the onus of being the sapper of health and regain for ourselves the reputation of living up to our privileges in the matter of disease-defying habits.

It is satisfying, and yet a little mortifying as well, to know that many of our most serious diseases are absolutely preventable. Take typhoid fever, for instance, the one particular disease which is now considered characteristically of country, rather than city, origin; it annually slays its thousands, and yet with a care which it is perfectly feasible to take it need not slay any. Until the origin of a disease is known, it is usually impossible successfully to combat it, but when we have traced it to its source we can shut it off right there. We now know that every case of typhoid comes from some preceding case, somewhere, and that it would not have made its appearance had not some one failed to destroy the typhoid germs in the discharges from that preceding case. True, there are a few unfortunate people, known as carriers, who, after recovery, continue to disseminate the germs of this disease for a period of time, but with the proper disposal of the wastes from the human body these need not contaminate the food or drink of others. And it is through food and drink that the germs of typhoid enter our bodies. This has become popularly known and when typhoid breaks out in a family the well usually falls under suspicion. The well may be at fault if it is so situated or constructed that surface water, with its pollution, brought from no one knows where, may obtain access to it, or if some underground channel may carry a portion of the contents of a privy vault into it. But the well on most farms is more safe than the privy, the unscreened, fly-attracting, privy. Here typhoid germs are likely to be found, if anywhere; perhaps deposited there by some chance visitor or by a member of the family with a case of very mild, or "walking" typhoid.

The common house-fly delights in the filth of the privy, and few farmhouses are so well screened that he does not also obtain access to the food of the family. His death-carrying feet leave their unseen prints on butter, pie, and bread, or are perhaps washed in the childrens' bowls of milk. A few germs carried on the dirty feet of a fly rapidly become thousands in number when deposited in warm food or in milk. The responsibility of the fly having become known, its presence, which was once regarded as only a nuisance, is now considered a menace, and intelligent people are forbidding it their premises. Its common breeding places, piles of horse manure, are removed to the fields, and privy vaults are so built and screened that it cannot obtain access to them. Screen doors and windows are now very cheap, and cotton fly netting is still cheaper, so that it is practicable to exclude flies from almost any house if an effort is made to do so. With the passing of the house-fly, typhoid on the farm will diminish and other sources of infection being attended to the coming generation will probably know little of this, the most serious of our fevers.

THE COUNTRY DOCTOR.

SWAMP MUCK AND ITS USES.

I MAIL you a sample of muck of which we have nearby five to six acres, a deposit from two to six feet deep. It looks to me not the common muck, but decomposed vegetable matter. About two feet from the top we found a layer (three-fourths of an inch), of charcoal, just as if a fire had burned the woodland and left part of it. The sample sent was taken four feet from the top down. There is no water at the depth of seven feet now after an eight-weeks' drought, although this muck is very damp. There is no sand or gravel mixed in with it. This muck has been used as a fertilizer by using air-slaked lime with it, and has given good results. The formation of the surface soil is like a giant bowl, never has been cultivated and it is, as all the land here, woodland, pine, oak and maple. This part is cut off now, and has nothing but underbrush on it. The land all around is sand and gravel. Can you give me the value as a fertilizer and how it should be treated as such? R. A. A.

Raymond, N. H.

The "muck" is a sample of brown peat, and from a physical examination seems to be above the average in quality. No one, however, should figure on the values of large quantities of muck without having a careful analysis made. The chief value of muck lies in the nitrogen which it contains. There is very little potash or phosphoric acid as a rule. Samples of muck will run all the way from one-half of 1 per cent. upwards to 3½ per cent. of nitrogen, therefore an accurate analysis is the only safe guide in buying or selling it. This sample would make an excellent absorbent or bedding. On dairy or live stock farms this absorbent value of muck is of great value. Used freely in the stalls or behind the stock it will take up great quantities of the liquid manures, and save large amounts of nitrogen and potash which would otherwise be wasted. The commercial or selling value of such muck is not large. Several firms have tried to put such products on the market, and for a while, through extravagant statements, they have sold some of it. Except for lawns or greenhouses or garden work this muck is not profitable at the high price charged for it, and the chief value of such muck will be for use right on the farm or within a short haul of the deposits. By all means send to the Vermont Experiment Station, at Burlington, Vt., for a copy of their muck and peat bulletin. This gives a very complete statement about this product with many analyses and full description of the best methods of handling. Muck as it comes from the swamp is sour and the nitrogen which it contains is inert and unavailable. It must be sweetened and thoroughly fermented before it will prove of any great value. The best way to handle it is to haul the muck from the swamp and put it in long, narrow piles, where it is to be used in the Spring. To each load of muck scatter about 50 pounds of air-slaked lime as the pile is made up. A good plan is to dump a wagonload over the space about 10 feet long, scatter the lime over this, put another wagonload on top with more lime and so on. If it is possible to throw in an occasional load of horse manure or chicken manure, fermentation is started more rapidly, and the muck will be in better shape. After about three months the pile may be forked over, the workman starting at one end and throwing the muck behind him into a new pile as he forks over the old. To obtain the best results from the muck, a quantity of phosphoric acid and potash should be used along with it, as it is deficient in these elements. Three parts of acid phosphate or ground bone to one part muriate of potash is a good mixture to use with fermented muck. Plow or harrow the muck in and use the chemicals in hill.

To take the squeal out of your wheel apply a bit of grease. It will, of course, give the poor horse Thanksgiving, rest and peace.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

A PEACH TREE-GROWING CONTEST IN BERGEN COUNTY, N. J.

WE have all heard of potato contests, corn contests and tomato contests, but never of a peach tree growing contest, and our schools have welcomed it with great enthusiasm. The largest number of applicants in any one school is 160, and the total number of contestants is over 900. These school children will plant and care for trees during the coming year, and the interest in horticulture thus awakened in their young minds, cannot be computed in dollars and cents.

For some time, broad-minded thoughtful people have felt the need of more work along industrial and agricultural lines among school children. Many of them may at some future time in their lives engage in horticulture, and may thus be taught how to combat insects and fungus growth that have become so injurious to the orchards of today. This contest will be directed by County Farm Demonstrator, L. F. Merrill, who has so efficiently conducted other experiments along these lines, assisted by B. C. Wooster, our County Superintendent of Schools. In this contest, all boys and girls who complete the year's work and hand in their reports and essays at the stated time are eligible to place their trees in competition for the prizes offered. It is expected that sufficient funds can be raised in each school district conducting the contest so that substantial prizes can be offered for the best five trees.

RULES AND REGULATIONS.—1. All boys and girls entering this contest must be in attendance at the school or school district conducting the contest.

2. The contest in each school or district shall be in charge of the supervising principal, principal or teacher of that district, assisted by the County Superintendent of Schools (or his deputy) and the County Demonstrator. These will compose the Contest Committee.

3. Each contestant agrees properly to plant and care for one peach tree, which will be furnished by the committee at a cost to the contestant of about 10 cents.

4. Each contestant further agrees to carry out thoroughly and carefully all instructions given as to the planting, pruning, spraying, fertilizing and cultivating of the tree planted.

5. All work must be done by the contestant.

6. All data asked for in the report blank furnished must be given as accurately as possible. This report is due October 23, 1915.

7. With his report each contestant shall submit an essay of not more than 250 words on "How I Made My Tree Grow."

8. All entries must be made by October 23, 1914, using the entry blanks supplied.

9. In the Fall of 1915 each tree upon which a report has been submitted shall be examined, measured and scored by one or more competent judges appointed by the committee. The scoring shall be based upon the following basis:

1. General thrift and condition of tree	25%
2. Freedom from insects and disease	20%
3. Shape of tree	20%
4. Growth, branches, by measurement	10%
5. Growth, trunk, by measurement	10%
6. Condition of buds	15%

10. The final awards will be made upon the following basis:

1. Score, as determined by judges	50%
2. Report, neatness and completeness	25%
3. Essay	25%

AGNES B. CURTIS.

What Fish to Raise.

WHAT kind of fish for eating purposes do you consider the best to stock a pond with? E. L. H.
Pennsylvania.

Before deciding what fish to plant it is necessary to know the Summer temperature at surface and bottom and the character of the bottom, whether muck, mud, sand, gravel or rock. If there are not fish in the pond and the bottom is muck, or there are no water plants growing there, try some of the water to see if it kills fish taken from a stream nearby. Temperature of the water and character of the bottom decide what fish are best fitted for planting in a pond. Bullheads, pike and large-mouth bass thrive in ponds with mud bottom and rather warm water. Lake trout, Rainbow trout, sunfishes, crappies, Yellow perch, etc., want a sandy or gravelly bottom and moderate temperature. The trouts want the water rather cool. Brook trout and small-mouth bass do best in spring ponds with sandy, gravelly or rocky bottom and cold water. Most of the bullheads, catfish or horn pouts are good eating, especially when taken from clear, cool water. The common bullhead and the Spotted catfish or Mississippi cat are better than the Yellow bullhead or Yellow cat. The pike or pickerel is liked very much in some places and considered rather worse than the carp in others. Large-mouth and small-mouth Black bass are very good eating fish, and easily raised in ponds if the conditions are right. Lake trout and Rainbow trout are very good and Brook trout are very fine, but need more care if best results are obtained.

The sunfishes, crappies, warmouth, Rock bass, strawberry bass, Yellow perch, etc., are good pond fish. They are good eating, will grow to good size if not overstocked and need but little care. Many people like them best of all as pan fish. As game fish, simply for the sport of catching them on light tackle, the trouts, Black bass and pike are the best, although the Spotted catfish puts up a good fight in swift water in the Potomac River.

ALFRED C. WEED.

Destroying Dormant Woodchucks.

IS there any method by which I could get rid of woodchucks during the months that they are asleep in their dens, other than by digging them out?
Kennebunk, Me. H. T.

The following plans have been suggested to us, or have been tried by parties we know. During the Winter the woodchucks are dormant. They may be dug out and killed, but this requires too much expensive labor. One way is to wrap a round stone with cloth or cotton batting, and soak this thoroughly with bisulphide of carbon. This liquid evaporates into a poisonous gas. The stone thus saturated is rolled or pushed down into the hole as far as possible. In some cases a sky rocket is pushed as far as it will go down into the hole, and then lighted as it would be outside, or a gun heavily loaded with powder is discharged down into the hole, after which the hole is thoroughly closed so as to prevent the gases from coming out. In other cases a small stick of dynamite is pushed as far as convenient down into the hole and exploded.

COMING FARMERS' MEETINGS.

Dover Poultry, Pigeon and Pet Stock Association, tenth annual show, Dover, N. J., Nov. 23-28.

Mansfield Poultry Association, Mansfield, Mass., third annual exhibition, Nov. 25-28; L. Faye Howe, secretary.

Western Connecticut Poultry Association of Danbury Conn., Inc., nineteenth annual exhibition Hull's Armory Hall, Danbury, Nov. 26, 27, 28; secretary. Thomas Deans, 39 Hoyt St., Danbury, Conn.

Auburn Poultry Show, State Armory, Auburn, N. Y., Nov. 30-Dec. 5.

Michigan State Horticultural Society, annual meeting, Kalamazoo, Mich., Dec. 1-3.

Michigan State Potato Show and meeting, Kalamazoo, Dec. 3-5.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Connecticut Sheep Breeders' Association, annual meeting, Unity Hall, Hartford, Dec. 15.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

January 9th to 15th, inclusive, 1915, Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Ohio-Michigan Land and Live Stock Exposition, Toledo, O., Nov. 22-Dec. 5.

"For the Land's Sake, use Bowker's Fertilizers; they enrich the earth and those who till it."—*Adv.*

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It costs most farmers from $1.50 to $3 per ton to get ground limestone on their farm. With a Lime-Pulver you can grind your limestone for 50c and save from $1 to $2.50 per ton. In a short time the Lime-Pulver pays for itself.

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The JEFFREY Lime-Pulver is the machine that crushes and pulverizes. It takes big rocks 4 inches thick and 11 inches long and reduces them to powder. Grinds from 2 to 3 tons per hour. The product can be ground coarse or fine. Put it through your spreader without trouble. Crushes rock for road work—grinds corn, tobacco stems, bone, etc. Mounted on wheels—as easily moved as a wagon.

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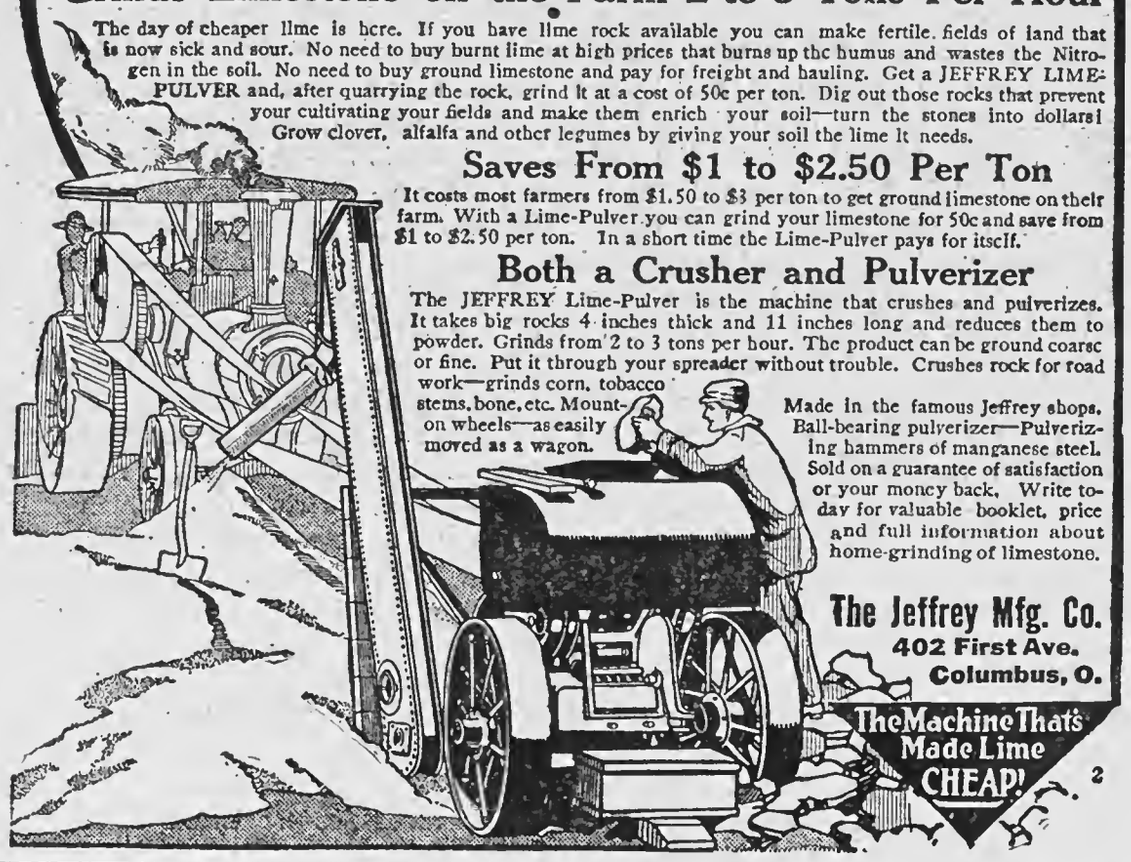

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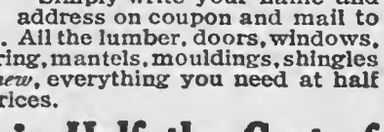

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GERMAN CATTLE BEETS
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Perfection, Ruby and Herbert Raspberries.
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ST. REGIS RASPBERRY PLANTS for sale. Price reasonable. PAUL L. HEGGAN, Waterford, N. J.

St. Regis Raspberry Plants
Plant St. Regis. Don't wait until everybody gets them. They are a money-maker. They come earlier than any others grown in this section, where they originated, and pick until frost. The best of reference. ARTHUR R. HEGGAN, Waterford, N. J.

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My apple trees are extra good, with splendid roots, sturdy trunks, well formed heads, and my prices are low for such fine stock. My book tells more about these trees; you may have a copy if you send me a postal today.
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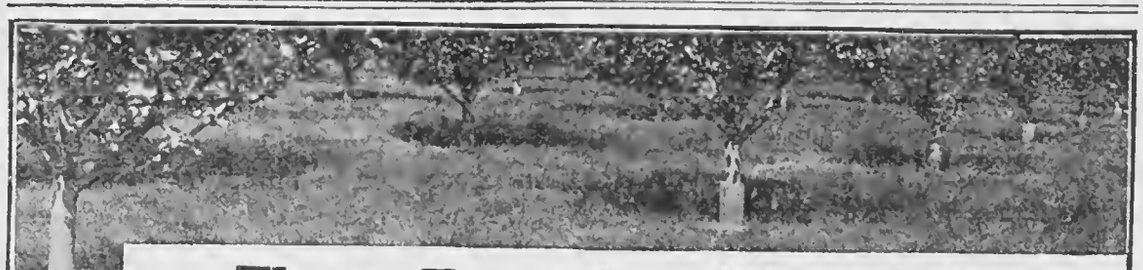

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Protect your trees from gnawing and girdling by rabbits, mice and rodents. Use EXCELSIOR WIRE MESH.

It's fine enough and strong enough to keep away all small animals. You can get it in right sizes for all trees, large or small. A tree protector of real substance—something to last for years. Heavy galvanizing makes it rust proof. A most inexpensive protector. You'll be surprised how little it costs per tree. Write for particulars.

Dept. R, WRIGHT WIRE COMPANY, Worcester, Mass.

The Home Acre.

NOTES FROM A MARYLAND GARDEN.

WINTER TOP-DRESSING.—My garden has now been covered with its Winter blanket of horse stable manure. I find that I get better results from covering the soil with manure in the Fall and letting it lie there all Winter, both on vacant spots and as a mulch to the Winter crops of onions, spinach, etc. It is hard to buy any but fresh manure, and hence it is better to have it on the soil months before planting, so that by Spring it is in better shape to feed the crops. While I usually leave it on the surface of the vacant spots, I am this Fall trying the difference on a small part of the garden with turning it under, though I have had fine results from letting it remain all Winter on top.

LATE SPINACH.—In my last notes I stated that the spinach seed sown in August had failed to germinate in the dry weather. I ran out more rows on the same ground and sowed more seed, and to my surprise by the first week in October all of it was up. October gave us such favorable weather that the spinach has made a wonderful growth, and now in early November I have to thin it out vigorously, and having more than we can possibly consume from the thinning process, the grocers are taking it at five cents a pound. The seeds sown early in October have germinated well, and promise to get strong enough to winter over for Spring cutting. I never sow spinach here in Spring, for by the time the Spring-sown is ready the weather is so warm that it quickly runs to seed, while the late Fall-sown crop is cut by the time the Spring-sown plants would be above ground.

STORING FLOWER ROOTS.—My Dahlia roots have been lifted and placed in a shallow pit and covered with a thick layer of old newspapers and the soli then mounded over them. I find that they keep perfectly in this way and far better than in a cellar. Cannas have been lifted too, and stored with all the soil clinging to them, in the cellar, where there is a hot water boiler. I have kept these buried outside, but they sometimes get too much wet and rot. They do better in the warm cellar, and early in Spring they are divided for planting, and some are potted for starting early.

TURNIP GREENS.—Like all Eastern Shore people, we are fond of turnip greens in Spring, and in this month I turn a furrow from each side over the rows, and they keep very well and sprout early in Spring. Late-sown carrots are treated in the same way and taken up for use at any time during the Winter, for we have more times when the soil is clear of frost than when it is frozen, and the carrots seem to get sweeter left where they grew. Years ago, when I was gardening in a much colder climate in the Northern part of this State near the Pennsylvania line, I took up my carrots and set them in trenches just like those used North for celery, and covered the trenches with boards and straw, and they kept well.

SALSIFY AND PARSNIP we leave where they grew of course, for they are still growing, and will keep growing till Christmas; in fact last Winter, January was so mild that these hardy plants grew and increased through the month. While in the North the salsify and parsnips are among the earliest things sown, I have found that here and southward it is better to sow late. In North Carolina I found that early Spring-sown parsnips and salsify were apt to run to seed at mid-Summer and get spoiled and woody. There I sowed them in July, here I sow them in early June, for their best growth is made during the coolor Fall and early Winter, and while the roots may not get quite so large, they are of far better quality.

RADISHES AND DASHEENS.—The Chinese White Celestial radishes are now well mulched with manure. These grow to an immense size, and are very hardy. Boiled, they are far better to eat than turnips, and make quite a new dish. My crop of dasheens has been lifted. I have not tried any of these, as I have been more intent on increasing the stock, but I think I will try a few this Winter. Mr. Collingwood advises to try them on the dog first, but as I do not keep a dog I shall have to try them myself. The growth of the dasheen is very like that of the ordinary Caladium esculentum, but rather taller. The rootlets of the Caladium are pink and those of the dasheen white. The tubers of the Caladium grow much larger, but do not make as many offsets as the dasheen, and the leaves of the dasheen are rather darker green. But as the tubers of the Caladium are very good cooked, I can see no reason why the dasheens should not be good.

AVOCADO SEED.—A friend has sent me some of the big seed of the avocado or alligator pear. I shall try to sprout some of these in the greenhouse merely to see what they look like and perhaps to grow them a while in pots. But fruiting them in pots is out of the question as they make a tree as large as an apple tree. The corms of the Gladiolus are so hardy here that I frequently have some left in the digging that come up and bloom the next year, and the little sets that get scattered in digging grow like wheat in Spring. As I find that many of these little cormlets fail to grow after keeping all Winter, I am trying sowing them in the late Fall, and will sow some of the hard Canna seed also, believing that the Winter soaking will make them germinate better in Spring. Next Spring will tell how these succeed. W. F. MASSEY.

Maryland.

THE MAIL BAG.

A "Versatile Apple Tree."

THE following report is floating through the papers:

Hart, Mich., Nov. 7.—One of the interesting exhibits at the county fair was a display of 84 varieties of apples picked from a single tree. This exhibit was made by G. W. Haight. Haight has done some experimenting with a tree that was originally a Tallman sweet. He now has the tree grafted to 135 different varieties of apples. This is believed to be the most versatile tree in the country.

Can anyone give the record of a more "versatile" tree than this one?

Taxing Cats.

WE understand that Ocean County, New Jersey, is going to impose upon its citizens a tax of 50 cents for every male and $1 for every female cat that they own. Is it right and proper for a State or county to impose such a tax on its people and protectors of health and property? P. F. J.

Lakewood, N. J.

R. N.-Y.—There must be some mistake about this. The County Clerk of Ocean Co. writes us that he never heard of any such tax. Efforts to impose such a tax have been made in a number of States and towns.

Returns from Grapes.

By 7,570 lbs. grapes, avg. 3 6-7c lb.	$93.38
By 64 qts. grape juice for home use.	
To plowing, pruning, tieing and hoeing 2 times	19.00
To picking, use of team, time to market grapes	100.00
Net profit for use of land	$174.38

Vineyard contains 1¼ acres (by measure). Grapes sold direct to consumer on street and at stand in city market house in Altoona and suburbs, population 75,000. Varieties Concord, Brighton, Worden, Catawba and Niagara. Vineyard is old and was grown up with locust and briars until three years ago. Between grape rows we raised a plentiful supply of all garden truck for two families. H. A. E.

Altoona, Pa.

SLAT AND WIRE FENCE.—I remember to have seen, years ago, a fencing made of lath as pickets secured in order and position with three or four lacings, or weavings, of two strand wires. Because of its vertical flexibility, by which it would conform to uneven ground, the lightness and portability of this fencing, my impression is that it would be quite ideal for yarding very small chicks, affording as it would splendid protection against enemies and against winds, because of the closeness of the laths in their order. Can you give me the information sought, namely if such a fencing is now made anywhere, and if it is by whom?. A. H.

Flushing, N. Y.

R. N.-Y.—Some 25 years ago there was a craze for this kind of fence. Many "machines" for weaving the wire around the slats were advertised and many miles of fence were put up. What has become of them? As the woven wire fences came into use the slats disappeared. Are they still made?

WHAT KIND OF LIGHT FOR YOUR FARM?

The four kinds in the pictures are all in use on modern farms. Three of them are unreliable. Troublesome, unclean, and cause fires.

Electric Light operated by the Edison Electric Light Plant is by far the most practical and economical and the *safest*. The.

Edison Storage Battery

is the *only* one with a four-year guarantee of full-rated capacity. No internal cleanings or testings needed. No repairs or renewals. No waste of time, patience or money.

Write for Catalog M.

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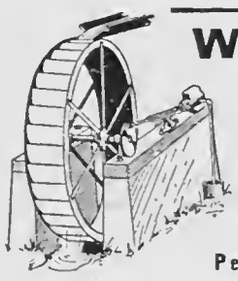
If information regarding complete plants is wanted, CHECK HERE.



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A small brook or spring will furnish free power to supply running water to your house and barn. With a larger stream you can make your own electric lights, saw wood, etc. Send for catalog.

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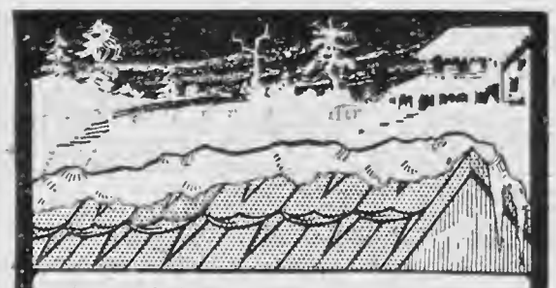
How Crops Grow, Johnson..... 1.50
Celery Culture, Beattle..... .50
Greenhouse Construction, Taft.... 1.50

The Rural New-Yorker, 333 W. 30th St., N. Y.



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Against Storms, Fire and Decay

You can now buy this weather-proof, long-life roofing direct from us at factory prices and save money. It is all ready to put on.

Kanneberg
Metal Shingles
"We Pay the Freight"

They are fire-resisting and proof against rain, snow, cold and heat. They need no repairs, because they do not rot, crack, rust, buckle, curl nor fall off.

Every shingle guaranteed. Made of 28-gauge steel, painted or galvanized, and come single, 8 to sheet or in clusters 2 ft. by any length from 5 ft. to 10 ft.

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Made of selected best grade No. 24 gauge basic open hearth metal with an extra heavy tight COATING OF GALVANIZE and PURE TIN. Write today for price list No. 60. When you buy from us you buy from the manufacturer.

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The World's Greatest
WELL DRILL
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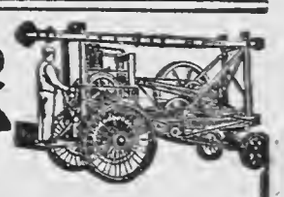

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Excells everywhere for drilling wells, prospecting and blast hole drilling. A great money earner.
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Century Rubber Roofing, best roofing made, GUARANTEED 15, 20 and 25 years, laid down at your railroad station at lowest wholesale prices. Price per roll, FREIGHT PAID on 3 rolls or more,
In N. Y., Pa., Ohio, N. J. & Md. at - - $1.10 (1-ply, 35 lb.)—$1.30 (2-ply, 45 lb.)—$1.50 (3-ply, 55 lb.)
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Low delivered prices to other states on request. These prices for IMMEDIATE shipment. Write for FREE SAMPLES or order direct from this ad. SAVE 25¢ to 40¢. No mill ends. Every roll ONE PIECE, 108 sq. ft. Satisfaction or money back.

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121 C KATHERINE BLDG., EAST ST. LOUIS, ILL.
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NOW, THESE PRICES IN EFFECT!

2 H-P $34.95, 4 H-P $69.75,
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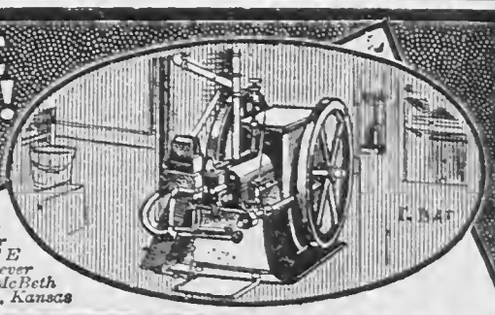

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LET me send you a WITTE ENGINE to earn its cost while you pay for it. It's cheaper than doing without one.
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Sold Only Direct from Factory to User. No matter where you live or what work you have that can be hitched to a belt, you can own a WITTE to better advantage than any other engine. Sizes are 2, 4, 6, 8, 12, 16 and 22 Horse-Power. Styles, **Stationary, Portable, Skidded and Saw-rigs.** Over 27 years in the lead in engine-quality. Better now than ever, with prices that can't be beat.

No need now to do without a good engine, or to take chance on a poor or unknown one, to get a low price. The WITTE fills the bill.

My Free Book I furnish highest standard engines for prices less than asked for rattle-traps. My Free Book explains the inside of engine **selling** as well as **manufacturing.** Write today for my Sales Plan with Easy Terms.

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EVENTS OF THE WEEK.

DOMESTIC.—John T. Hall, said to be the composer of several songs and marches and president of the John T. Hall Music Publishing Company, at 2 Columbus Circle, New York, was arrested, Nov. 13, on a charge of having used the mails to swindle thousands of amateur poets. He was arraigned before United States Commissioner Clarence S. Houghton and released on $5,000 bail. Hall, it is alleged, between August 1 and October 20, conducted a prize lyric contest, in which he offered prizes of $250, $150 and $50. Post Office Inspector Mayhew says Hall turned over the lyrics to the Knickerbocker Harmony Studios, which were then in West 42d St., and that the latter charged the entrants $10 each for writing suitable melodies. Besides running the contest, Inspector Mayhew says that Hall has been promising ama'eur poets—one of them a scrubwomen—large amounts in royalties if they permitted him to arrange the music and business details, paying him from $35 to $40 for the privilege. From his contest Hall is alleged to have realized more than $15,000.

As a result of a federal investigation of the Sanden Electric Company, of 1261 Broadway, makers and distributers of a "cure-all" electric belt, two members of which were indicted in June for fraudulent use of the mails, the Post-office Department has issued a fraud order against the company. The Sanden concern is one of the older industries of its kind in this city to fall into the government net, having done a thriving mail order business here and abroad for more than twenty-five years.

Twelve hundred indictments have been returned in Pike County, Ky., on charges of election frauds, and as many more men are expected to be indicted before the Grand Jury finishes its investigation. A similar inquiry will begin soon in Letcher and other counties, it being alleged that the frauds were general throughout that judicial district in the election two years ago. The investigation is the most sweeping since that in Adams County, Ohio, three years ago, when more than 3,000 voters were disqualified for similar practices.

Five persons were killed and five injured, one seriously, when the general store of Noah Kanaza, at Superior, Pa., was blown up by dynamite, Nov. 15. The store and five dwellings were burned, entailing a loss of $25,000. The dynamiting is believed to have been the work of men who had threatened Kanaza, who is wealthy.

The Federal reserve banks of the new currency system opened Nov. 17. The new system permits the expansion and contraction of the money supply of the country in keeping with the actual needs of business, whereas the old system maintained the same amount of the circulating medium for all seasons and all financial situations. It authorizes the issuance of currency upon the security of commercial paper, with a generously broad definition fixed for this collateral. It provides twelve reserve banks around which the banks of the country are grouped with a central directing authority vested in a governmental body at Washington, the Federal Reserve Board, which can mobilize the resources of any or all of the individual districts to meet any extraordinary need for the circulating medium in any one district. No adequate method of mobilization was provided by the old system. It releases automatically, by decreased reserve requirements, more than $400,000,000 cash and credit reserves. Summarized, the effect of the newly organized system, according to officials in Washington, will be to prevent panics.

Jared Flagg, the 52-per cent. investment broker, was sentenced, Nov. 17, in the U. S. District Court at New York, to 18 months in the Atlanta penitentiary for his frauds. Pending an appeal he was released under $50,000 bail.

The State presented the basis of its case against Henry Siegel, charged with the larceny of $684.05 from the National Bank of Commerce, at Genesco, N. Y., Nov. 17, through the expert testimony of John Flint, a certified public accountant, who after a personal examination of the books of the Fourteenth Street Store said that there were discrepancies amounting to almost $2,000,000 in the credit statement of the store submitted to the bank on February 1, 1913, for a loan of $100,000, which the bank granted. Flint testified that the assets of the store in that statement were overestimated by $359,750.14; that the store's liabilities were understated by $491,748.80, and that the books of the store showed liabilities, undisclosed in the statement, amounting to $1,008,820.08. All told, these discrepancies amounted to $1,860,329.02 for this Siegel concern alone. Flint's examination of the inventory of the Fourteenth Street Store showed that in 1913 fifty-one departments lost nearly $400,000. Only four of the departments showed any profit at all and one of these was a profit of $12.

THE EUROPEAN WAR.—Nov. 13 Premier Asquith announced British casualties up to that date were 57,000. .....Nov. 14 it was reported that two German submarines were destroyed in the English channel.....Premier Asquith asked the House of Commons, Nov. 16, for an additional credit of $1,250,000,000 for war purposes. This is the greatest single demand ever made upon the nation, and in addition to the money already voted in August is equal to a 50 per cent. increase in the national debt. The new amount was voted unanimously in almost record time. The larger part of the $500,000,000 already obtained for war purposes has been expended, Premier Asquith told the House, and Great Britain is now spending $5,000,000 a day. Great Britain has lent to its allies $215,000,000, of which the largest single amount, $50,000,000, was to Belgium. Servia has borrowed $4,000,000. On these two loans no interest accrues until the end of the war. Other loans were made to the self-governing dominions of Canada, South Africa, Australia and New South Wales. Under ordinary conditions these countries would have to borrow their money in the London market.....Nov. 15 it was announced that the British superdreadnaught Audacious had been hit by a German mine, Oct. 27, off the north of Ireland; that her entire crew had been rescued by the White Star liner Olympic and that the Audacious was then sunk by the British authorities to remove her from the track of navigation.....Field Marshal Lord Roberts of Kandahar, known to the whole British Army as "Bobs," died suddenly of pneumonia, Nov. 14, in France. He was retired from active service, his age being 82, but had gone to the front to visit the Indian troops. He was the idol of the British Army, and the recipient of the highest military honors, winning the Victoria Cross in the Indian Mutiny, and distinguishing himself in numerous campaigns in Asia and Africa. .....Severe fighting still continues along the Yser, and there is no further evidence of German advance. Frightful conditions prevail; incessant fighting continues, while snow, severe cold and floods add to the miseries of both troops and refugees.....British light cruisers are again coöperating with the troops, bombarding Belgian coast towns held by the Germans.....Russian reverses are reported at Stalluponen and along the Vistula. It is also reported that Turkish troops defeated the Russians at Koprukol.....An Indian force, assisted by warships, has defeated the Turks at the head of the Persian Gulf.....Nov. 17 Turkish forces fired at a launch from the American cruiser Tennessee at Smyrna. An explanation has been requested by Ambassador Morgenthau.....

FARM AND GARDEN.—The Department of Agriculture has quarantined Clinton and Franklin counties, New York, on account of the existence of powdery scab among potatoes there. This action was taken after a public hearing on the matter held November 13, and became effective on November 16. Technically the Department has quarantined the whole State, but through the cooperation of the local authorities in quarantining the two infected counties it will be possible for the Federal Government to remove all restrictions upon the movement of both table and seed stock from the area outside of these two counties. The provisions of the quarantine are in general identical with those in force in Maine. Potatoes intended for food must be grown in soil that is uninfected and must have been stored away from all diseased stock and must be found upon inspection by Federal authorities to be absolutely free from any traces of powdery scab. They are then tagged and can be moved in interstate commerce.

Pasteurization and other safeguarding methods adopted by the national commission on milk failed of indorsement by the American Association for Study and Prevention of Infant Mortality at its session, Nov. 13. The principal speaker in opposition to the commission's plan was Dr. Henry L. Colt, of Newark, N. J., who said: "My twenty-five years' experience teaches me that medical commission control is not the solution. I have eliminated from my parlance pasteurization and have substituted the word 'refined.' Abroad they cook milk almost universally. In Holland they heat milk to 102 degrees centigrade, for otherwise, they say, they would get typhoid fever from the dikes. We must educate our people to do their refining of milk in the home."

The National Wool Growers Association, in convention at Salt Lake City, Utah, sent resolutions to Secretary Bryan asking him to stop trying to lift the British embargo on Australian, New Zealand and South African wool, claiming the American industry would be injured. The Administration is asked to place a tariff on wool, in view of the closing of woolen mills in Europe, as protection against South American goods.

The Connecticut Sheep Breeders' Association will hold its annual meeting, with attractive speakers and an exhibit of wool and dressed mutton, in Unity Hall, Hartford, Conn., Dec. 15. The public is invited to attend. This is the week the Connecticut State Board of Agriculture usually holds its annual Winter meeting, but they have abandoned their meeting this year for the first time in nearly 50 years.

Dr. Simon Flexner, director of the laboratories of the Rockefeller Institute for Medical Research, is in Chicago to attempt to isolate the germ which causes the hoof-and-mouth disease in cattle, and then to prepare a serum which will immunize cattle in advance. He is working in coöperation with Dr. S. E. Bennett of the United States Bureau of Animal Industry. The quarantine was extended, Nov. 16, to Connecticut and Montana, making 16 States now under quarantine.

STEEL PRICES ARE ADVANCING!

But You Can Still Buy Direct from Our Mill at the Old Price

Steel prices have struck Rock Bottom and are now going up. We bought heavy stocks of raw material at the lowest price in years and now give you the full benefit. This is your opportunity. You will never again be able to

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Grasp this opportunity before our prices must advance! Send at once for our prices, samples of roofing, and complete roofing book giving full line of designs, and instructions for measuring and applying.

We pay the freight and **we guarantee** every sheet to be full weight, first quality, extra-thick, extra-tight galvanized coating—**or it does not cost you a cent.**

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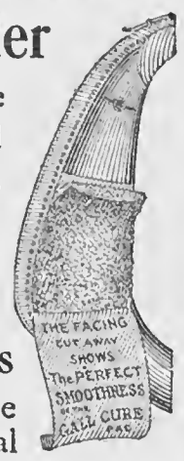
Your Horse will Work Harder

if his shoulders are kept healthy and free from gall sores.

Honest Wear

Gall Cure Collars



prevent and cure galls. The special curled-hair pad eases the "pull" at the shoulder.

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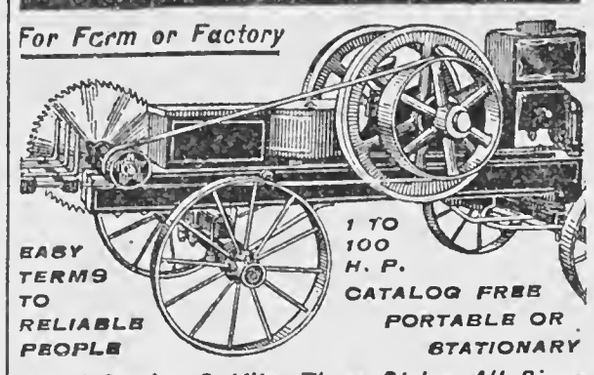

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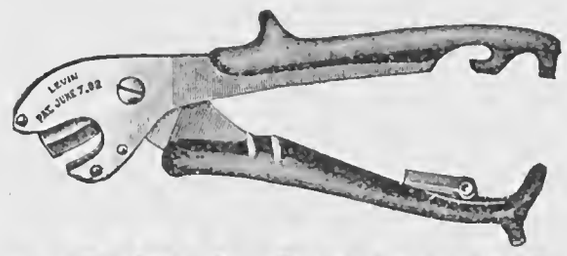

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Soil Improvement Notes

Soot as Fertilizer.

WE are often asked about the value of soot or chimney cleanings as fertilizer. Some of our readers live near factories where this soot can be obtained for little money. It contains considerable nitrogen, and usually fair quantities of lime and phosphoric acid, and is useful for garden crops, although used alone as a fertilizer it would not be very satisfactory. It makes a good dust for putting on melon or squash vines to repel insects. It is also used around cabbage and similar crops for the maggot. Some gardeners who desire to quicken up their land so that they may plant it earlier use the soot to attract the heat. A dressing of soot on the land, a light soil in particular, will warm it up considerably and in some cases give a chance to work it several days in advance of the uncovered soil. The dark color of the soot absorbs the heat on the same principle that the black clothing is found warmer in Winter than the white clothing naturally worn in the Summer.

Value of Filter Bed Deposits.

WHAT is the value of the deposits from the filter beds which receive drainage from city sewers? Would it make a good fertilizer for tobacco? Connecticut. A. E.

The deposits from sewage filter beds are quite uneven in quality. Sometimes, in dry weather, the material is almost a dry skim, which is removed. At other times it must contain 50 per cent. or more of moisture. Without ever having tried it on tobacco, I should not advise its use. It is certainly a fairly good manure for general farm crops, to which I think it should be applied, rather than to tobacco, where so much depends on that obscure thing which we call "quality." E. H. JENKINS.

Sweet Clover.

YOUR correspondent who writes over the initials C. H. K. undertakes to read me a lecture on the value of Sweet clover for Maryland. I have not the slightest objection to his advocating it for Ohio, but down here we have plenty of better forage crops and soil improvers, and as I said, we do not need the Sweet clover. It grows wild here, five or six feet high, along neglected ditch banks and roadsides, and as I have said, I have seen cattle in a field where there was a rank growth of the Melilotus alba along the ditch banks, eating the grass and severely letting the Sweet clover alone. Down here we can grow cow peas in Summer and Crimson clover in Winter, and can make big crops of Soy beans. Where the Crimson clover will not stand the Winter, the Sweet clover will have value, but here, as compared with the crops we can grow of the legume genus, we do not need the Sweet clover, and farmers in colder sections are right in using it, and are perfectly welcome to it so far as we are concerned. We prefer crops that cattle will eat without any starving into it. We can make crops of cow pea hay, which is far better than the Melilotus, and can make Alfalfa too, and cut it three or four times in a season. We can grow a crop of Winter oats heavier than Spring oats are grown in Ohio, and on the same land, the same season, can get a crop of cow pea hay, which the veteran Henry Wallace told the Iowa farmers is as good, ton for ton, as Alfalfa, and after the cow pea hay is cured we can get the same land in Crimson clover for the Winter and turn it under and make a big corn crop in the Spring, sow peas among the corn, and turn them down for a big Winter oat crop in the Fall. And we could not do all this with Sweet clover instead of the peas and Crimson clover. Hence we do not need the Sweet clover, except that where it grows wild it will inoculate the soil for Alfalfa. W. F. MASSEY.

Plants Affected By Lime

THE Geological Survey in referring to lime deposits in this country says:

"Thus, some of the common plants which are stated by the Department of Agriculture to be benefited by lime, are spinach, lettuce, beet, celery, onion, cucumber, cantaloupe, asparagus, cabbage, peanut, rhubarb, pea, pumpkin, bean, tobacco, Alfalfa, clover, barley, wheat, oats, Timothy, gooseberry, currant, orange, quince, and cherry. Indian corn is only slightly benefited. Plants which are said to be slightly injured by lime are cotton, tomato, cowpea, Concord grape, peach, apple, and pear, and those really injured are radish, flax, blackberry, black raspberry, and cranberry."

One of the crops not so well understood in this relation is corn. This crop is usually selected for a sod and lime is frequently used with it. The truth is that corn does not respond to lime, though some flint varieties endure it better than others.

Applying Lime in Fall.

I HAVE ordered a car of burnt lime to use this Fall. I intended to put it on top of the wheat in November (my wheat is up now and looking well) but I have been told that it will burn the phosphate that I have drilled with the wheat; that if I use it as I intended to do I shall get no benefit from the phosphate at all. I would like to use the lime; I thought I might get a better stand of grass in the Spring by using it this Fall. What is your opinion?

Henderson Md. T. P. R.

We never had much success in using lime in this way. Lime ought to be worked into the soil—not left on top. The danger of destroying or "burning" the phosphate will not be great now—some time after seeding—but the chances are that you will not be satisfied with the results of such liming.

WANT TO KNOW.

The Sorghum Sugar Business.

THE price of sugar has gone to 10 cents per pound, and this has started some of us in this section to thinking about sorghum as a partial substitute. I feel sure that you or some of THE R. N.-Y. family can give just the information we want. Are the small horsepower crushers and "cook" pans advertised by the mail order houses satisfactory where the business is carried on on a small scale? If so are copper pans enough better than galvanized iron to justify the added expense? About how many gallons of syrup could be produced per acre on land capable of producing 50 bushels of corn per acre? We have in this section three distinct types of soil, sandy upland (bright tobacco land), red clay upland and alluvial bottom land along the streams. Which kind would be best suited to the production of sorghum for syrup? I have grown sorghum for feed on our red hill land, and it makes a good growth and gets very sweet. I want to start the business in the simplest, most inexpensive way that will produce good syrup. Any suggestions as to best practices in boiling and swimming, "running off" the syrup, etc., will be appreciated, also any information as to growing and handling the crop.

JOHN B. LEWIS.

Brunswick Co., Virginia.

I HAVE a small quantity of medium wool, about 200 pounds, which is hard to dispose of as dealers want larger lots. Can you put me in touch with any mill that will make it up into horse blankets or other goods suitable for farm use, on shares or for pay. G. E. A.

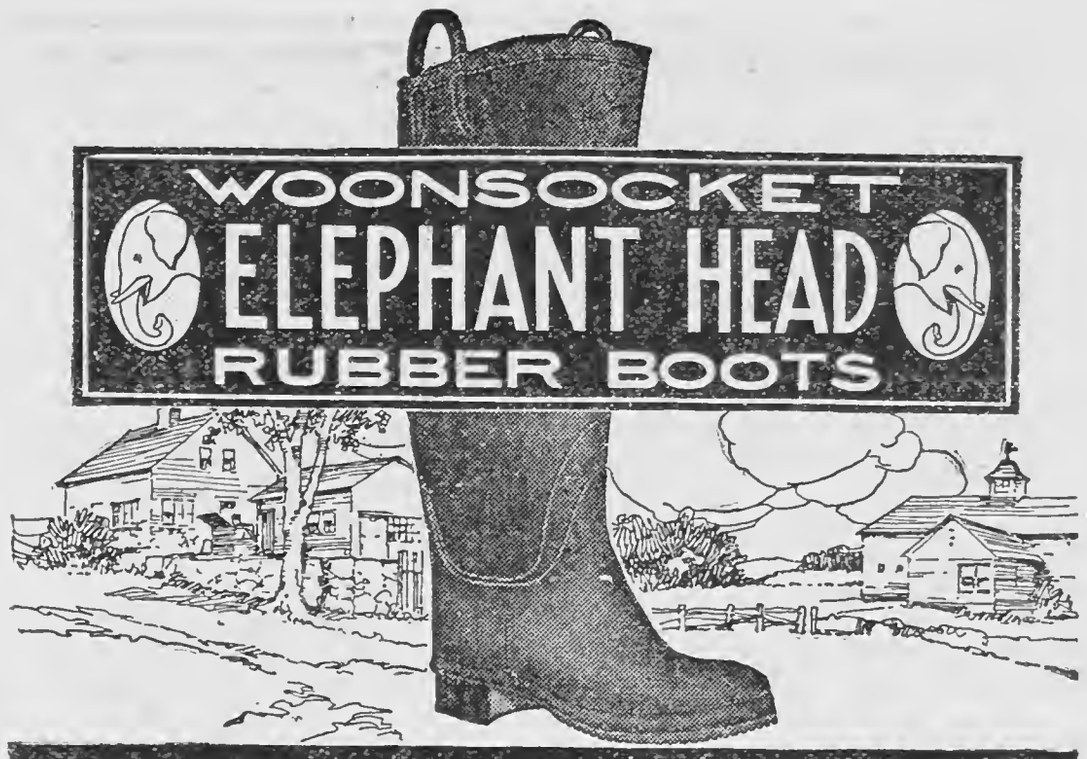
Long Island, N. Y.

Paint Brushes and Hair.

A FEW things not generally known about paint brushes are told by U. S. Consul Johnson of Kingston, Ontario:

"The Canadian paintbrush makers are experiencing difficulty in adjusting selling prices to the present cost of the basic material. Bristles from a semiwild hog of Russia and Siberia and also a black hog of China have advanced 50 per cent. since war was declared, on account of the practical stoppage of shipments from those countries. Other hairs used in brush industry are also scarce. Camel hair is dressed only in Germany; the trade of dressing this very fine and short hair requires great skill. It is not known where it can be secured when the present supply is exhausted. Badger skins from which the badger hair is obtained comes entirely from Russia. The advance in this article is nearly 100 per cent.; in fact, it is not a question of what one has to pay, but whether it can be bought at any figure. Germans and others in and around New York City have been dressing bear hair in large quantities for the past 10 years and as a result the Canadian trade is not obliged to purchase in Europe. Ox hair, generally called Siberian ox hair, comes from the inside of cows' ears. These ears were formerly taken to Germany, where the hair was cut out, the skin used for other purposes, and the gristle of the ear used for gelatine. During the last few years the dressing of cows' ears has been done in the United States."

THE brother aged five years, was taken in to see his new baby sister. Upon viewing the baby's red face, he exclaimed: "Aw, it's an Indian!" The nurse assured him it was not, whereupon he replied: "Well, if it's not an Indian, all I got to say is, then it's spoiled."—Chicago Tribune.



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This concrete milk house, on the dairy farm of O. G. Sherburne, near Coldwater, Mich., was built with the same forms which contractors had used in building two 14x40 silos for Mr. Sherburne. Farmers who are having silos built can profitably use the roof and wall forms for a concrete milk house.

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Hope Farm Notes

THIS week there are so many questions on hand that we ought to answer them as we can:

I notice, on page 1313, "Peaches for Columbia Co., N. Y." your correspondent states, "We shall not put any more peach trees as fillers among apples, as we have become convinced that Wealthy or others of that shape are much better." I am interested in knowing whether this is true because the peaches do not do particularly well in Columbia County, or whether he finds the apple fillers more profitable aside from the fact that peaches do well. J. B. M.
Lodi, N. Y.

I seem to be the "we" in this case. No more peach fillers for me for the following reasons. 1. Peach and apple require different feeding, spraying and handling. We try to force the peach into early bearing, for its life is short at best, while the apples are to remain for years and we prefer a slower solid growth. Forcing the peach not only stimulates the apple, but gives it a poor shape. The big spreading peach tree soon fills out its space and the apple trees begin to climb up straight in the air—just where we do not want them. True, you can cut them back and bring them down, but they will not be well-shaped trees. We have ample evidence of this in our orchard. The Wealthy apple tree makes a thin, rather small, head which does not interfere so much with the permanent trees. It gives us 10 crops or more before it is necessary to cut or dig out. The peach may give five crops. The Wealthy sells well as a Fall apple with us. 2. Spraying. The apple trees must be sprayed at blooming time with some form of poison. Do the best you can, and yet more or less of this spray will be blown upon the peach trees. If you use enough poison to benefit the apple trees your peach trees are burned—in some cases quite severely. There are still other reasons why I do not plant peach and apple together, yet I recognize the fact that some growers argue in favor of the practice. I will let them give their own arguments.

In a general way would you advise sowing rye on muck land, the rye to be plowed under the following Spring, or would you prefer to have the muck lie idle during the Winter, which would subject it to frost action? The muck is now plowed. What would be the advantage of sowing rye under such conditions? H. K. C.
New York.

This question was answered by mail in late October. It is, of course, too late to sow rye now. I should, however, in such a Fall as this, sow rye up to Nov. 1. While it would make but little growth above ground it would fill the soil with its roots, and in this way open it up more than the frost alone would do. Then the rye starting to grow in early Spring would help dry out that muck soil and fit it better for Spring plowing than if there was no living crop on it. Then also the living rye crop plowed under and limed would start ferments in that soil which the muck alone could not do.

I am much interested in the Hope Farm man's endeavor to induce apple growers to advertise their fruit instead of complaining of the badness of the market and indifference of the buyers. I enclose an advertisement to show the method we are following on our farm. I do not think either growers or buyer have yet woke up to all the possibilities of parcel post. In packing for mail we find it advisable to use a corrugated lining paper in the boxes as well as the usual paper and layer board and not put up a pack of more than 120 to the bushel. With smaller apples the box will probably go over the 50 pound limit, though some varieties of course weigh less than others. It is perhaps unnecessary to add that only perfect fruit is packed.

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"Best quality Baldwin or Greening Apples packed in standard Western box, sent post paid on receipt of $2.50, check, stamps or money order. Order now for Thanksgiving and Christmas."

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Massachusetts.

This appeared in a daily paper published in a city of about 100,000 people. Our own advertising is in a town of about 1,500. It has sold all our Baldwin apples already, and I am now trying it with Black Ben Davis—stating exactly what this variety is. I do not see what more we can do to show fruit growers the possibilities of the local town trade. A little advertising right in your home paper will sell most of your goods if you will pack them honestly and well. People write us asking where they can sell their apples when right in their own town are dozens of people who would gladly buy. The local paper is the best place for your local advertising. You can now send 50 pounds by parcel post. Our own fruit is about all sold already, and we could easily have handled 500 barrels more. Why not buy and sell again? We want to make it a strong point that we handle only our own produce—picked and packed here. In the end that will pay us best.

A few years ago there was quite a discussion in THE R. N.-Y. over a statement which the Hope Farm man made about a cow becoming drunk eating apples. Well, that same question came up last night in a class discussion and the teacher vowed that he had seen it. Now as we remember it the scientific men held to the theory that it was an impossibility. We feel from our experience on the farm that such a thing is an utter impossibility, at the same time it is one thing to be convinced a thing is right and another to prove it. If the thing held true with cattle it would be equally true with humans, and from what we have seen in the way of boys eating apples we think most of the boys on farms in the apple section would be confirmed topers by the time they were 18 years old, also with hogs. Our hogs always run in the orchard, and they simply gorged themselves with apples, but there were no tipsy swine, that is sure. C. I.
New York.

The Hope Farm man has his feelings like all the rest. There are two subjects which start these feelings into language, which has to be check-reined and blue-pencilled. One is the thought of the time I bought a couple of bathing suits at a big New York store. These suits were for my two big girls, and at the store I was referred to a couple of "salesladies" who went into close details regarding my purchase. Never again! The other matter is this one of "drunken cows." Some years ago I came home to find the good old family cow flat on the barn floor in a dull stupor. She had filled up on half decayed apples. The hired man had some ice and was packing it around the cows head. Now while I never tasted much rum I know the smell of it, and I know that the stall where that cow lay smelled like the street in the western town where a reformed saloonkeeper smashed in the head of a whiskey barrel. Knowing the habits of the hired man I gave him the discredit until the local cow doctor came and said the cow was "drunk." Then I thought on further examination that an appology was due the hired man.

I mentioned this incident and a number of scientific men scoffed at the idea. The chemists, some of them experts at brewing, said it was impossible—that the temperature of the cow was too high to permit the formation of alcohol and so on. I thought at the time that these gentlemen never saw a cow after a feast on apples, but their scientific guns were too much for me. It was like those great German guns smashing the walls of Antwerp.

Then came our old friend, Dr. Smead, on the other side. He showed that a cow has four stomachs—one of them capable of holding two bushels, more or less, of apples. These apples are not chewed like the rest of the food, but remain in this great paunch at about the temperature suitable for distilling. The chemists told what ought to happen in the laboratory. Dr. Smead told what would most likely happen inside the cow, and I thought he showed the possibility of this alcohol formation. No use comparing a man, a hog or a horse or anything else that carries a single stomach with the cow. Her great paunch or storage tub certainly puts her in a class by herself when it comes to a distillery. I am obliged to confess that I lack the scientific knowledge required to argue with the chemists. At the same time the hired man and I still think that cow was "full"—I reasoning from observation—he arguing from experiences! H. W. C.

AN old lady sat knitting in her armchair when a young girl burst in on her. "Oh, grandma," she said, "father has just fallen off the roof!" "I know, my child," the old lady answered placidly "I saw him pass the window."—London Evening Standard.

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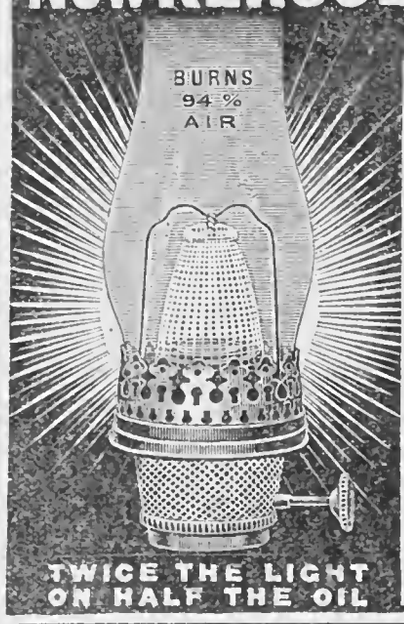

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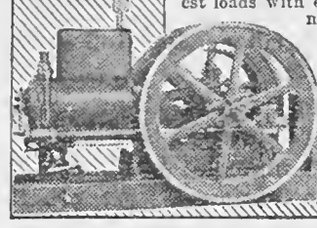

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Ruralisms

NOTES FROM THE FLOWER TRADE.

IT is generally conceded that prices for cut Chrysanthemum flowers will not again reach the high level of former years, as public taste has become educated to refinement of beauty rather than size alone. One large grower told us that his highest price this year was $6 a dozen for the early show blooms, as against $9 in previous years, and this price quickly declined to $4. Up to the middle of November $2 to $3 a dozen for exhibition varieties, and $1.50 down for commercial single-stem stock were average prices in New York. There is an increasing taste for the single, pompon and anemone types, which are cut in sprays, and sold by the bunch. This shows an improvement in public taste, and gives an opportunity for charming effects in decorative work. It is not a get-rich-quick scheme for the grower; these sprays were quoted about the middle of November at 10 cents to 20 cents a bunch in New York, though they were higher earlier in the season. However, every florist heaves a sigh of relief when Chrysanthemums go out, and though a number linger into December, Thanksgiving Day usually marks the end of their formal season. Among single sorts grown commercially are Ceddie Mason, crimson; Mary Richardson, reddish salmon; Margaret Totty, golden yellow; Dorothy Dann, amber; Golden Star, yellow with orange disk; Merstham Gem, old rose with yellow disk; Cecil Denyer, white. Showy anemone pompons are Citrinus, buff; Gladys Spaulding, amber; Garza, large, pure white; Junon, blush pink. There are many fine new varieties in these classes, and among the button-like pompons.

During the height of the Crysanthemum season Gardenias were sold on the streets for 10 cents each, although they were quoted about 60 cents to $1 a dozen wholesale. This beautiful and fragrant flower used to be grown in a moderate temperature, which produced the natural short-stemmed flower resulting from a stocky, shrubby growth, but it is now given more warmth, which results in a large, highly finished bloom that can be cut with a fairly long stem.

Violets, both double and single, were bringing 20 to 40 cents per 100 early in November, and 10-cent bunches were plentiful on the streets of New York, either violets alone, or made up with Sunburst roses. The latter, beautiful rich yellow, were quoted at 50 cents to $5 a hundred, the cheap small buds finding their outlet with the street peddlers.

The list of florists' roses now on the market is much larger than formerly. Among those quoted early in November were Beauty, all the way from 50 cents to $12 a hundred; Killarney 25 cents to $3; Killarney Queen and White Killarney, 25 cents to $4; My Maryland and Richmond 25 cents to $3; Lady Hillington, a beautiful yellow, 50 cents to $4; Prince de Bulgarie the same; Mrs. Aaron Ward 50 cents to $5, Mrs. Charles Russell, 50 cents to $6, and Jonkheer J. L. Mock, one of the newer sorts, 50 cents to $8. These wide price variations are due to quality, for when demand is slow the poorer grades are forced down to the street peddlers' level.

Orchids always hold an aristocratic place though some of them get very plentiful later in the season. Cattleyas were $10 to $20 a hundred, Dendrobiums $20 to $25.

Carnations do not look up in price until after Chrysanthemums are gone; they come into competition in many lines of utility trade, nor are carnations at their best at this season, so they went from $1.50 per 100 down, for the great mass of market flowers.

It is interesting to notice that one courageous New York florist has opened a branch store in the new public market at 130th. St. and North River. Flowers are a noticeable feature of public markets abroad, and should be appreciated by American buyers also.

THE Sunday school teacher had explained the familiar Bible story at length, and then asked Tommy if he expected to be among the sheep or among the goats. "I dunno," said Tommy doubtfully. "How's a feller to tell when his ma calls him a lamb and his pa says he's a confounded kid?"—Melbourne Leader.

PEACH AND APPLE QUESTIONS.

IN the planting of a five-acre apple orchard should I plant mostly of McIntosh, Baldwin, Wagener and Wealthy? How about McIntosh, and how many Delicious can I afford to risk planting? Where shall I buy genuine Delicious trees? 2. What about the J. H. Hale peach for Michigan? What do you know about the Early Elberta peach? The Michigan nursery agents are knocking on the Delicious, the J. H. Hale and the Early Elberta. R. L. J.

Thompsonville, Mich.

1. The varieties of the apple mentioned are all well suited to Northern Michigan. McIntosh is not a late keeper, nor is the Delicious, yet they are both of good quality and color, and the trees bear well. Do not be afraid to plant them both, and I would advise to use them for about half the proposed orchard as the permanent trees, which should be 40 feet apart. The Wagener and Wealthy are both good bearers at an early age, and should be used as fillers in the 20-foot spaces. The trees will not last long because of their heavy bearing. The Delicious trees, as sold by all the nurseries offering them, I believe to be true to name.

2. The J. H. Hale peach is a good one for Michigan, ripening about the same time as Elberta, which it closely resembles. Early Elberta is much the same in every way except that it is earlier and in this respect it is decidedly better for Northern Michigan, where some of the late peaches are not suitable, as I know by many years of observation there.

H. E. VAN DEMAN.

Gulf State Figs.

ADDING some notes or comments to the article "A Fig Proposition—The Latest," (page 1310) would say that it is no doubt a scheme to unload some land. As to the "mule" type fig grown hereabouts, the reasons the fig "is today a back-yard and fence-corner tree" are that every darkey, also the "po' white trash" that cares to, can have a fig tree or more, for they are so easily propogated, begin to bear the first or at least the second year, furthermore are not much subject to insect or bacteria enemies, nor need intensive culture, but simply to be let alone and they will grow like Topsy did. Also Alabama, Mississippi and Louisiana are, at least were, in the thralls and bondage of cotton, rice and sugar cane, and had no time, no inclination, nor incentive to grow figs, nor was the variety (Celeste), mostly grown, adapted to growing on an extensive scale. Also there are very few local canning factories to take care of the fresh fruit. The fig is the fruit par excellence of the Gulf Coast country but wants moist, rich soil and to be let alone. There are many varieties, but the Celeste is mostly grown. Of late years the Magnolia has been planted extensively in the Texas Gulf Coast district, for canning, and in the neighborhood of Jennings, La., the Cary is being grown for shipping north in a fresh state. T. M. R.

Louisiana.

Defective Golden Bantam Corn.

IN my opinion, the "something" which Golden Bantam corn requires (page 1313) is careful selection of the seed for a few generations. This is comparatively a new variety for which the demand is increasing and seedsmen would be even less than usually careful in selecting seed for sale, and even for their own planting might use poorer ears than they would in the case of varieties of which the sale is about the same year after year. If W. P. M. will save his seed, taking only perfect ears from stalks bearing two or more ears, he will find in a few years that Golden Bantam bears fewer defective ears than any variety he can buy from a dealer. ALFRED C. WEED.

New York.

SMITH: "I understand that some of your hens have stopped laying?" Jones: "Two of them have." Smith: "What's the cause?" Jones: "Motor-car."—Stray Stories.

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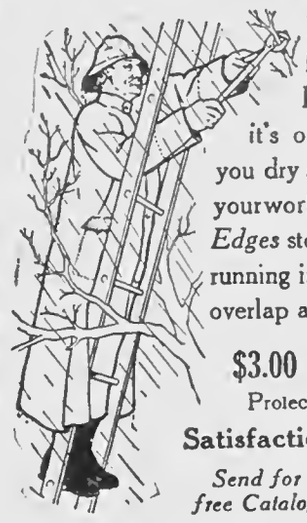

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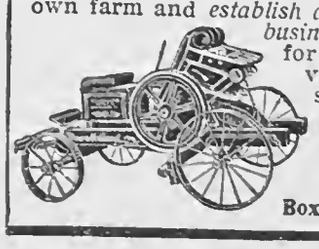

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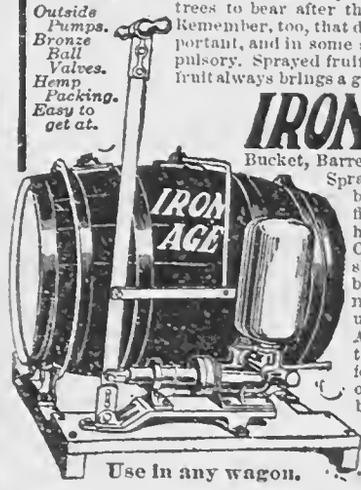

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Established 1850

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IT is quite a common saying at farmers' institutes and other Winter gatherings, that in some milk-producing districts the milk check equals the feed bill, and no more. What they mean is this: Milk farmers are paid once a month by check. Their account at the feed store is charged up until their milk is paid for. When the milk check comes they turn it over to the feed dealer, who gives them the balance if there be any. Now can anyone tell us of actual cases where the monthly milk check is no larger than the feed bill? Can such cases be shown, or is this largely figurative talk put out as an argument against poor stock or poor feeding? If anyone can tell us of actual cases where the feed costs as much as the milk brings in we shall be glad to analyze them.

*

THE farm owner and the farm manager! Should the latter take some of the financial risk and be prepared to make the farm pay or not draw full salary? This is a big question which has come up for discussion, and there are many sides to it. The problem will be of especial interest to young college men who offer their services as farm managers. Following our usual custom in such matters we print the first letter received from a college man endorsing the proposition. Is it fair?

I have completed a four-year course in the agricultural college, following several years of working a small fruit, vegetable and poultry place on shares. My proposition is that acting as working foreman I shall receive the regular hired man's wages, i. e., $300 a year and keep, and half the labor income from the farm, i. e., half the profit from the farm, after paying all cash expenses, and interest on the investment at 5 per cent. This is I think a fair proposition for both sides. I get only wages for manual labor, and then place my knowledge against the investment of the owner, and divide the results. FRANCIS W. WARDLE.

*

A FEW weeks ago you stated that Eastern rye contains garlic and this sells for a low price. Are you sure about this—and do you think it right to say so? S. B. K.

Our authority comes from one of the largest and best milling companies in the East, as follows:

We think, from a price point of view, every effort should be made to eliminate garlic from Eastern rye. For instance, Jersey rye sells here at 80 cents, New York delivered, as against 96 for Western rye, same terms, and only because the Jersey rye contains garlic. The berry is large, and in fact superior to the Western on account of color and weight, but our mills and other handlers cannot use it until such time as the garlic dries and can be blown or screened out. We will send you a sample of Jersey rye containing garlic in a day or so.

So much for the fact. Now is it right to tell the truth about our rye? Let us ask our friend what we or he would gain by silence or denial? He cannot sell his rye for more than the "Jersey" price, while it contains garlic. The only hope to obtain the extra 16 cents a bushel is to clean out this foul stuff.

*

A FEW years ago one of our readers ordered an outfit of apple trees from a New York nursery. He wanted certain high quality varieties and paid a high price for the trees. This year they began to come into bearing, and he knew they were misfits—just what he did not want. So he sent samples of the fruit to this nursery. He received the following, which we do not hesitate to characterize as a fool letter:

We are in receipt of your letter of recent date. In reply will state on account of there being so many varieties of apples, therefore it is as a rule guesswork on the part of most men who pretend to know the names of different varieties of fruit, but we discover it is a splendid variety.

The apple is Ben Davis—there is no question about it—the merest beginner at fruit culture would recognize its shape, its stripes and its sawdust flavor. The ostrich with its head in the sand—kicking at the air—is a Solomon compared with this man who sees a plain Ben Davis and discovers it to be "a splendid variety."

SOME of the big New York stores are offering a good apple free to every purchaser of 10 cents worth of goods. They also sell boxed apples. This is a taking offer, and attracts a long string of customers. There are thousands of country towns where the same thing would work out. Some merchant might handle the crop for several fruit growers, and it would pay to give away 20 per cent. of the apples in order to advertise the rest. And do not hand out the little wormy fruit as samples. Such advertising, right in your town, would dispose of the fruit and boom the merchant's trade. We have no doubt the Western fruit growers are giving away thousands of boxes of apples just to advertise their goods. You must give something in order to take. The Bible tells us "*There is that scattereth and yet increaseth.*"

*

THE Percheron horse breeders and the gasoline tractor makers have been having a discussion regarding the merits of flesh and bone or gas power. They need not worry—there is more than room for both. This European war is wasting horse flesh like smoke. Not only are working horses being destroyed, but the famous breeding herds of Belgium and France are being scattered. The world must look to this country both for working horses and for draft breeding stock. It is doubtful if there are enough good horses and mules in the country to-day to supply the export demand. We think many a farmer will buy a tractor and sell his draft colts at the prices which the latter will bring. War wipes out business habits and prejudices. Up to the Civil War the Devon cattle were very popular in the Gulf States—particularly Georgia. When Sherman marched through the State these beautiful red cattle were slaughtered by the thousand, and the State never went back to beef production. Cotton monopolized farming and the Jersey finally came in as a dairy cow. In like manner war seems likely to injure the business of breeding draft horses in Europe. It will not recover for years, and during that time this country must supply the world with heavy horses.

*

JUST now there is much being said, and no doubt with good cause, relative to the cattle disease that seems to be so prevalent throughout the country. What about deer? Are they not as liable to the disease as cattle, and will they not scatter it over the country pretty thoroughly? They roam at will over our fields and pastures. Massachusetts is one of the quarantined States. I live near the Massachusetts-Connecticut line. One can see from one to four deer almost any day grazing on my Alfalfa and rye. Is there not danger of their bringing the disease to my cattle? H. J. I.
Connecticut.

The disease attacks all cloven-footed animals so that deer are susceptible. If deer feed with affected cattle they will become diseased and spread the disease; not otherwise. In any district where diseased cattle have run the deer would be likely to contract the disease and scatter it all over the country. The disease has been found in Massachusetts and Rhode Island, and this gives a new side to the deer nuisance. There is considerable criticism of the Department of Agriculture for permitting this disease to gain headway. If it was suddenly discovered at Chicago during the National Dairy Show it must have been there or nearby before. Why was it not discovered, and why were the dairymen not notified until their high-priced and rare cattle were sent to be exposed to it?

*

THERE is trouble in New York City over the employment of aliens on public work at digging the new subways. This work is done by contractors who hire their labor as they can. There is a section of the State labor law which bars the employment of men who are not American citizens on public works:

Section 14 of the labor law requires that on public works "only citizens of the United States shall be employed," and that preference shall be given to citizens of this State. Moreover, each contractor is required to keep a list of his employees, in which it shall be shown whether they are native or naturalized, and, if naturalized, when and where they were naturalized. Violations are punishable by fines of from $50 to $500 or from thirty to ninety days' imprisonment, or both, and forfeiture of contract.

This has been the law for 17 years. It was designed evidently to protect American labor by reserving all public work for men who are citizens of this country. Local courts are divided as to whether such a law is constitutional. It has been considered a dead letter for years, and contractors have employed many aliens. There are said to be 18,000 of them now at work in this city. The labor unions now threaten to stop work if contractors do not comply with the law. The usual answer to such threats is that it will be impossible to find native Americans to do this rough work of digging sewers and subways. In the cities this work has gradually fallen to the lot of aliens. The law does not affect farmers.

AT the egg-laying contests, just now starting, it is the general remark that the birds are of a better laying type than in any previous contest. Greater care has been taken in selecting. The visit of Tom Barron and the discussion of utility type have set breeders to thinking and studying as never before, and they are coming nearer agreement regarding the shape and appearance of the utility bird. The "standard" breeders have had things pretty much their own way heretofore. Now "utility" is coming.

*

DO childless professors know more about rearing children than their parents?

That is the hot and indignant question we get from a parent who finds the efficient local school broken up and "consolidated." Why, bless your heart, the "childless professor" usually carries about with him all there is to know about children. It is, however, a case of quantity against quality. His vast store of wisdom is drier than a Ben Davis apple until it is flavored by the real love and experience of father and mother. The "childless professors" are, most of them, doing their best to give us a set of human cogwheels and nothing more for the next generation.

*

A YOUNG man whose home is in Mexico City has for two years conducted a private class in Spanish. His work makes a neat addition to his income, as well as keeps him in constant practice in the Spanish language.

This comes from the Kansas Agricultural College. We shall be asked at once what possible good can ever come from teaching Spanish at an agricultural college? As a matter of fact there are great trade opportunities for us in Mexico and South America which cannot be developed except by agents who are familiar with the Spanish language and character. Over 25 years ago efforts were made to prepare for this great trade. Our people were very willing to sell in their own way and at their own price, but they could not at that time appreciate the fact that the South Americans must be approached in their own language and through a study of their own peculiar habits and views. Americans would not understand these things, but the English, Germans and French saw at once that trade is extended through "human nature." The result was that Europe gained the trade which this country should have had. The Germans have been particularly active in gaining this trade, and their great success led to one of the causes for the present terrible war. If 25 years ago the people of this country had been wise enough to prepare systematically for this South American trade there would not have been an idle factory or an idle farm anywhere near the coast. Our opportunity has now come through the dreadful losses of this war. It is only an opportunity, for our people must follow the business methods of Germany and England if they expect to gain this trade. We think therefore that the study of Spanish at an agricultural college is a wise and useful thing—certainly of equal value to the study of German and French and far more useful than the dead languages.

BREVITIES.

Too much "boosting" leads to "busting."

THE average bedroom is kept far too warm. It ought to be cold and fresh while you sleep.

WE are now told on good authority that continued feeding of ground wheat to horses will cause an irritation of the skin almost equal to mange.

THE Kansas Agricultural College claims that State does not need potash. Well, the rest of the country needs the vast amount of potash in your corncobs if you do not. Cob ashes would bring good money.

NOW Louisiana is to have an "Orange Day"—November 19. You would hardly think of oranges grafted on the boll weevil, yet the ruin wrought by that hideous insect drove Louisiana planters to oranges.

THE Russian government has placed an embargo on all kinds of lumber, to prevent its exportation; walnut lumber, including Circassian walnut, much prized by American furniture makers, is specifically mentioned.

THIS comes from the U. S. Forest Service: "It is said that the German invaders of Belgium, whatever else they may have destroyed, have been careful not to injure park trees. The cavalrymen, so a report goes, are forbidden to tie their horses to trees for fear that the animals will gnaw the bark. Germany was the first nation to apply forestry on a large scale."

THOSE of you who have struggled with quack grass will be interested in these figures from the North Dakota Station. They were trying to see how much quack root must be left in the soil for growth: "Of 16 one-inch pieces six grew; of 26 two-inch pieces 19 grew; of 13 three-inch pieces 12 grew; of 13 four-inch pieces all grew; of eight six-inch pieces all grew.

THERE is often great neglect of the hen while she is molting. That's the time she needs your best care. The New Jersey Station says: "Feathers require considerable fat or oil in their formation; furthermore, the oil in the feed tends to make the new feathers slick and smooth, giving them a bright luster. Oil meal, Soy bean meal and sunflower seeds are among the best materials to supply this much-needed ingredient."

RURAL SAVINGS AND LOAN ASSOCIATION.

THE Rural Saving and Loan Association received its charter from the State last week, and it is now open for business. The charter members are largely those who are connected with THE R. N.-Y. office, but two farmers and one city party have become members. Loans of the money on mortgages of the association can be made only within a radius of 50 miles of the office; but loans on the shares can be made anywhere; and any person, no matter where he or she lives, may become a member.

There are five kinds of shares:

1. Instalment shares, on which the member pays 50 cents a month on each share.

2. Saving shares, on which the member pays in what he likes from time to time, as much or little and as often as he likes, until the payments and earnings amount to $100, when the amount may be withdrawn.

3. Accumulation prepaid shares on which a single payment of not less than $50 per share is made, at the time of subscription. The earnings are added to the payments until the share is worth $100, when it may be withdrawn.

4. Income shares, on which $100 must be paid at the time of subscription. The earnings on these are paid in cash.

5. Juvenile shares, on which minors may pay as much or as little as they elect from time to time.

The accumulations may be withdrawn at any time on a 60-days' notice; but the directors may waive notice, and payment is then made at once. The 60-days' requirement is simply a safeguard in case of withdrawal by a member after an investment of all the funds has been made. In such cases the first collections are used to pay the withdrawing member.

Our ambition is to cover the whole State with these associations, so that every home in the State will be within 50 miles of an association, and consequently within the radius of a loan. The Land Bank will probably be ready for business within a few weeks, and every association will then be in position to get ready money for its members. When the law was passed we hoped to sell the bonds at a very low rate of interest and to make loans on a correspondingly low rate, but the European War scare has made money hard to get, and rates will necessarily be higher than before the war broke out. The beauty of the system is that money can always be had for just what the market rate is at the time. Just now the rate is high; but when it is low the mortgage creditor will get the benefit of it.

We will accept membership in the Rural Association from any quarter by mail in the hope that when the members get acquainted with the system they will withdraw and organize an association in their own neighborhood. We will always be glad to help the work in any such case. J. J. D.

NEW YORK FARM EXHIBIT TRAIN.

A THREE-CAR demonstration train, showing the agricultural possibilities of New York left Albany, N. Y., November 2, and will be on the road until December 16, the route being through New York, Ohio, Indiana and Illinois, stopping at 43 towns, where the public will be admitted to see the exhibits and moving pictures and hear the addresses. One car contains N. Y. State apples, another a variety of N Y. State products, all labelled with the grower's name, yield per acre, and net price to grower, and the third a private car.

In the moving picture exhibit there are 2,000 feet of film, photographed within the last few months, showing farming operations and scenery in the State, and in addition to this 1,000 farm photographs.

The aim of this agricultural special is to show the Middle West an accurate picture of conditions in the Empire State.

THE NATIONAL GRANGE MEETING.

PART I.

THE National Grange met in forty-eighth annual session at Wilmington, Del., on Nov. 11, and adjourned Nov. 20. The work of the past year was reviewed by National Master Oliver Wilson of Illinois, and in point of new Granges organized, namely 490, it was the most successful year since 1873. The finances of the order are also in good condition. It is proposed now to make a permanent investment of $100,000 in bonds of first mortgages and using only the income therefrom for current needs. The receipts last year were about $4,000 more than for 1913, and the total resources are $99,992.34. Mr. Wilson also reviewed the legislative work of the order for the past year and outlined the policies of the Grange for the year to come. Among these policies are increased federal aid for road improvement, conservation of our natural resources, effective regulation and control of all transportation companies, a fair and equitable system of farm credit and national prohibition of the liquor traffic.

Among the multiplicity of questions which the Grange finds interest in and that affect the farmer directly or indirectly, rural farm credits, good roads, financial coöperation, woman suffrage, government ownership of telegraph and telephone and taxation stand out in bold relief. And yet the diversity of opinions on most of these questions is noteworthy, and yet not surprising when it is borne in mind that the Grange covers the entire country, and the interests of one section are by no means the same as those of another. Perhaps the wonder is that the Grange is as successful as it is in defining policies that are capable of being worked out where conditions so radically differ. Take for instance farm credit. The West needs money at a lower rate of interest, because no farmer can afford to pay eight and 10 per cent. and make money if he has to borrow much. The West is therefore particularly interested in the money question. But all sections will agree that it should be possible for the farmer to procure money if he needs it at such rates as will not discourage investments in agriculture. Relative to Government aid in this matter the so-called Buckley-Hollis bill which emanated from the joint committee of the House and Senate, seemed to meet the ideas of the legislative committee of the National Grange the best of any, and yet that did not go so far as would the Grange, for it would insist that more substantial Government aid should be included in the bill to steady interest rates and uphold the market for farm mortgage bonds. No farm credit bill will be acceptable to the National Grange nor meet the fullest needs of agriculture, which places in the hands of private capital the power to make interest rates on mortgage bonds without limitations by federal law.

There is, it seems, a proposition on foot in the Post-office Department to contract the rural mail delivery service to the lowest bidder, as was the case with the star routes, in place of giving fixed salaries to the rural carriers. The Grange declares "its unalterable opposition to this hazardous plan of operating the rural mail delivery system." It also has an idea that all limitations on the amount of deposits in the postal savings banks should be removed and that such deposits should be loaned direct to farmers, thus forming a kind of farm credit system and thus to aid in the establishment of rural credit.

The question of placing greater restrictions on immigration in the future when the European War shall have ended, had the attention of the Grange. The national master, in his opening address said: "The applicant for citizenship should be required to be able to read and write the English language and stand a rigid examination in the Constitution of the United States and that of the State where he seeks naturalization." Perhaps the Grange would not go quite so far as this, but it would throw such safeguards as are needed around naturalization, in order that only the desirable class of immigrants may become citizens of this country.

In 1916 the Golden Jubilee of the organization of the Grange will be celebrated, and it is quite probable that that celebration may take place in New York State in connection with the annual meeting of the National Grange. The fact that the first Subordinate Grange was organized at Fredonia, N. Y., would seem to be one reason why the 1916 session should be held in this State. Proper effort can secure it. A committee will report to the next annual session an outline of program for the 50th anniversary. In this connection it may be said that some suitable memorial to the late Oliver H. Kelley, one of the founders of the order, will be devised, probably a fund for the extension or educational work of the National Grange.

The next session of the National Grange will be held in California, probably at Oakland. J. W. D.

THE NEW YORK APPLE LAW.

NEW YORK apple growers have this year opened a new era in packing their fruit by statute regulations. The new practice has been both criticized and commended. Many growers have failed to accept the provisions of the new law, and have sold in bulk to local dealers. Others have hailed the law with delight as a new means of carrying on their practice for years.

State Inspector Wheaton, of Canandaigua, recently passed through Wayne County, looking after the packing methods in vogue here. He stated that general compliance was being made with the new statute, and that for the first year the results were proving satisfactory. Only one case had been reported under his jurisdiction as coming in repeated violation to the law, and this one may lead to a court affair. Complaint in this case came through a middleman. The packer was traced up and warned, after which a second offence occurred. In one barrel the inspector selected 32 quarts of cider apples. Such infractions of the law, however, have been very rare.

In commenting upon some of the opposition to the new law, B. J. Case, ex-president of the New York State Fruit Growers' Association, made the following statement: "It seems to me, as an apple grower, that this law is one of the best that we have ever had in this State to govern the packing of any food commodity. All it calls for is that apples shall be branded what they are. The great trouble with Western New York apples has been that a lot of inferior apples were placed in the middles of the barrels and the barrels were marked "fancy Western New York apples." This has given our apples a bad name in all markets, and the people who were trying to pack their apples honestly suffered severely from the reputation of all Western New York apples caused by dishonest packing. I cannot see why anyone should object to having his apples marked exactly what they are as to quality and size. According to this law any kind of apples or any quality or size of apples can be packed in barrels and shipped into the market. The only provision is that they shall be marked on the heads of the barrels exactly what they are. It has been the slogan of the Western New York Horticultural Society and the New York State Fruit Growers' Association, that 'there is a market, at a profit, for every apple grown in Western New York, if every apple was put into the grade to which it belonged and sold for what it is.'"

It was hardly anticipated that the new regulatory measures would take effect without some form of protest by growers not alive to their own best interests. The law is established and unless all signs fail will go far to give back to New York fruit its former prestige.

A. H.

The Situation in Evaporated Apples.

AS the season advances more evaporators and cider mills are opening up to care for the great surplus of apple stock. In the market for evaporated fruit there is little activity. Stocks are everywhere more than equal to the demand and quotations are not easy to obtain. To a large extent the present condition is due to the complications in Europe, the natural outlet for a most important bulk of the apples evaporated in the East.

In the face of the present discouragement neither the drier operators nor the dealers are losing faith in the situation. The finished output is rapidly piling up and the warehouses are doing all in their power to care for the receipts. If Europe is not to count as a consumer this season, radical changes must be made to place the crop elsewhere and already steps have been taken to secure these ends. It would appear from communications received from Havre and Hamburg dealers, that the outlook is not at all favorable in Europe. The Havre letter is as follows:

"We do not know what to say with regard to our dried fruit contracts. First of all, we doubt whether you could ship, even if you wanted to. Secondly, we do not know whether we could, under existing circumstances, receive the goods; and, thirdly, we do not know how we could manage to pay for the goods. We have the money here in actual cash, but the banks are unable to help us in any way, and they do not want to take on any business. It is impossible to buy an exchange in America, and we cannot transfer any money to our friends there, as the banks cannot do it. The banks will not give letters of credit, and, under the circumstances, most business is at a standstill. Our friends in America say they cannot sell their exchange on France and ask us to pay in America. So there the matter stands, and, in the meantime, the business has stopped. We cannot communicate with our buyers. Letters to the interior take a week to reach destination and often never reach there at all. Telegrams take about the same time. So we are out of touch altogether with the interior."

A letter from Hamburg, dated September 15, to the California Fruit News, comments as follows on the German situation:

"On account of war, so far as business is concerned, we are in a very unfortunate position and the end cannot be forseen. Personally we have done nothing since the war started. At the outbreak of hostilities a little business was done with dried fruits by dealers who had goods of old crops on hand, and these were sold at fabulously high prices, many sales being made to the War Department. A few cars of the 1914 crop also were received just before the war broke out, but these have already been sold, and people in our line have nothing whatever to do at this time. Most of the young people have gone to the war, and those who have not gone to the front are engaged in Red Cross and other similar service. The situation here is greatly aggravated through our being shut off from other countries, especially America. We can with difficulty correspond and we cannot cable or receive cables at all. Two of our largest houses here got together a few days ago and decided to open a branch in Copenhagen, from which city cable connection can be had with America without hindrance and mail connection is much easier. This idea has not yet become generally known to the trade, and I have only just now received the information confidentially of the prospective establishment of the system. So far as taking care of all contracts is concerned nothing whatever is being said yet. No one will discuss the matter, as it is an international question, and we must necessarily wait and see what other countries do. According to the exact wording of the law in Germany, however, delivery under Fall contracts is possible even after the present difficulties are over. A contract once made cannot be canceled by one party alone. Accordingly it is possible that September-October contracts may yet be delivered in December, should the way be open. The only question is, what position the importers will take on this and whether or not the government will establish a moriatorium in this matter."

To what extent foreign conditions reflect on the home market is shown by the volume of trading. Fancy evaporated stock is quoted at 10 to 10¼ cents with almost no business. Choice rules at 9 to 9½ cents, with very slow movement. Trading for the last few days has been in small lots only. Prime stock is quoted at from 8 to 8½ cents, with movement a little better than the other grades. Futures are doing a little better so far as demand is concerned, but the market is still badly demoralized, and 4½ cents seems to be outside, f. o. b. State for November delivery. Future chops are quoted at 1¼ to 1⅜ cents for prime, loose in barrels, f. o. b. State. No spot goods are available and the only sellers are a few who have scattered small lots to dispose of. Waste is quoted at 95 cents to $1 per hundred pounds loose in barrels, f. o. b. State. Demand for futures is not active, and very little is sold under present conditions. A. H. P.

Ten Months' Export.

DURING the 10 months ending with October, were exported:

	Bushels.	Value.
Corn	8,403,635	$6,578,230
Oats	22,738,564	12,262,465
Wheat	125,189,486	127,536,062
	Pounds.	
Fresh beef	12,494,769	1,647,714
Pickled beef	18,402,761	1,815,626
Bacon	143,313,752	19,801,423
Hams	119,135,714	17,318,125
Lard	356,865,416	39,656,597
Pork	32,200,286	3,543,639
Cotton	2,256,794,570	262,628,680
Flour	262,817,802	44,380,742
	Gallons.	
Gasoline	172,765,067	21,248,660
Fuel oil	585,037,687	15,781,220
Crude oil	104,328,686	4,283,368
Machine oil	162,366,273	21,982,457

Government Crop Report.

THE government estimates in early November give the following crop figures with comparisons, the figures referring to bushels unless otherwise indicated:

	1914.	1913.
Corn	2,705,692,000	2,446,988,000
Wheat	891,950,000	763,380,000
Oats	1,139,741,000	1,121,768,000
Barley	196,568,000	178,189,000
Rye	42,644,000	41,381,000
Buckwheat	17,025,000	13,833,000
Potatoes	406,288,000	331,525,000
Sweet potatoes	56,030,000	59,057,000
Apples	258,682,000	145,410,000
Flaxseed	15,973,000	17,853,000
Hay, tons	68,604,000	64,116,000
Cotton, lbs.	7,341,000,000	6,772,000,000
Tobacco, lbs.	982,715,000	953,734,000

The average per acre yield of corn is 25.8 bushels; wheat, 16.7; buckwheat, 21.4; potatoes, 109.6; sweet potatoes, 94.5; tobacco, 853.8 pounds.

The weights of measured bushels of grains were: Wheat, 58 pounds; oats, 31.5; barley, 46.2.

Average farm prices November 1 were: Corn, 69.7; wheat, 96.2; oats, 42.5; barley, 51.3; rye, 80.6; buckwheat, 88.1; potatoes, 54; sweet potatoes, 76.3; hay, $11.71 ton; apples, 56 cents bushel.

Woman and the Home

From Day to Day

GRACE FOR THANKSGIVING.

For all Thy care and loving kindness, Lord,
Accept our thanks who gather round this board.
We see Thy goodness in each perfect thing:
The sky, the sea, the bird on happy wing,
And every blade that makes the velvet sward.
With hearts and lips in wonderful accord
Do we recount the blessings on us poured,
And lift our voices hymns of praise to sing,
For all Thy care.
Help us to help the needy and ignored;
Teach us mere riches no true peace afford,
And grant to each that he may often bring
Some consciousness of Thee to laboring,
And prove, O Guardian, a worthy ward,
For all Thy care.

—Criterion.

*

A MASSACHUSETTS man tells us that the best baked beans he has ever eaten are prepared by a New Hampshire woman, who uses maple sugar for flavoring, instead of the customary molasses.

*

SOME handsome embroideries for table scarfs, center pieces and cushion tops are worked in combinations of silk and wool; for example, tan or gray linen embroidered with clusters of flowers worked in pink silk, while the foliage is worked in green wool. The silk and yarn are both quite heavy, and the work is very effective. These scarfs and table covers are often bordered with heavy knotted fringe, instead of lace.

*

FRIENDS of THE R. N.-Y. who are unfamiliar with New York often call, during a visit in this city, to ask some question about places of interest or instruction which they wish to visit. Most crop producers are interested in markets and transportation, and they naturally wish to see how commodities are handled here. It is very easy for THE R. N.-Y. to tell them just where to go, and what to look for. Others there are, especially women visitors, who wish to see things of general interest; the great shops, churches, art galleries, museums, etc. We should be very glad to offer help in these lines too—to answer questions about special points of interest, or means of getting to them, whether the inquirer wishes to see Alaskan totem poles or new bonnets, Gobelin tapestries or a fashionable tea-room.

*

CRITICISMS of country schools are frequent, and often quite specific. There is one thing, however, that is noticed in the business correspondence of our subscription department especially and that is the great improvement in standards of writing and diction during the past decade. We mention subscription work especially because much of this correspondence comes from young people, who become interested in it as a means of acquiring a little extra pocket money. Clear legible handwriting, and an observance of business forms in diction, are the rule in such correspondence; and this general excellence becomes more marked year after year. We realize, however, that it is not schools alone that are responsible for this development, but also the wider outlook of rural people due to a variety of causes, including the agricultural press.

*

A REQUEST printed in the New York Sun for a cruller recipe brought the following answer from Bertha B. Stratton of New Jersey:

Break two very fresh eggs into quite a large bowl; one cup of sugar, then beat up the whole. Add three cups of flour, all sifted and light, then beat it again with all of your might; add one teaspoon of ground nutmeg and half teaspoon of salt, three tablespoons melted butter and then you must halt; not a bit more butter or they'll not be light, but soaked and soggy, a sorry sight; now add a coffee cup of milk quite sweet and all together vigorously beat. A secret there is to make them "great," and this is it, as sure as fate: Two teaspoons of baking powder at the last minute should with a fourth cup of flour be lightly stirred in it. On a well floured board roll out half an inch thick, and drop in boiling lard, which will fry them quick. (Cut out with a cutter any shape you desire—round, elliptical, cross legged or like sticks for the fire.) The lard must be fresh and heated just right; test the heat by a piece of bread browned nice and light; while you're counting sixty 'twill brown to a turn, but your crullers are safe, they will not burn. Put only three in at a time, turn them over; when they rise from the bottom and have fried a nice brown. Five dozen 'twill make if you use my direction, and you'll have a fried cake that is nearly perfection.

The Rural Patterns.

When ordering patterns, give number and size of pattern desired. Price of each pattern 10 cents.

The redingote or polonaise dress, 8460A, is shown in a combination of two materials, but one material only may be

used if desired. Pattern 8460A is cut in sizes for 16 and 18 years. For the 16-year size, the dress will require 4 yards of material 27, 36 or 44 inches wide, 3⅛ yards 50 for the polonaise, and 2 yards 44 inches wide for the lower portion of the skirt and the sleeves, 1¾ yards 36 for the upper portion of the skirt.

8313, Girl's dress. Cut in sizes 4, 6 and 8 years. Size 6 requires 1⅜ yards

of 27, 36 or 44 inch material for blouse and 1⅛ yards 27 or 36 inch for skirt and trimming; or 2¼ yards 27 or 36 inch for entire dress. 8343, Child's rompers. Cut in sizes 2, 4 and 6 years. Size 4 requires 2½ yards of 27 or 36 inch material. 8288, Blouse with yoke and sleeves in one. Cut in sizes 34 to 40 bust measure. Size 38 requires 2¼ yards of 36 inch material. 8281, Two-piece skirt. Cut in 22 to 30 waist measure. Size 26 requires 2¾ yards of 36 or 44 inch material for skirt, five-eighths yard 36 or 44 for insets. 7939, Boy's suit. Cut in sizes 2, 4 and 6 years. Size 4 requires 2½ yards of 36 inch material with 1 yard 27 for trimming. 8326, Child's dress. Cut in sizes 2, 4 and 6 years. Size 4 requires 1⅛ yards of 27 or 36 inch material for body portion and 1⅝ yards for skirt; or, 2⅜ yards 36 inch to make of one material.

Books for Girls.

ON page 997 we gave a list of 25 books for boys, endorsed by the New York Board of Education. A number of correspondents have expressed their interest in this list, and have asked for a similar list for girls. We asked the New York Public Library for this girls' list, and the books given below are recommended by this authority:

1. Little Women, by Louisa M. Alcott.
2. Jack and Jill, Alcott.
3. An Old-fashioned Girl, Alcott.
4. Jeanne d'Arc; the Maid of France, by M. R. Bangs.
5. The Secret of the Clan, by Alice Brown.
6. A Little Princess, by F. H. Burnett.
7. The Secret Garden, by F. H. Burnett.
8. Six to Sixteen, by Mrs. Ewing.
9. Nelly's Silver Mine, by Mrs. Helen Hunt Jackson.
10. A Texas Blue Bonnet, by C. E. Jacobs.
11. Lady Jane, by Mrs. C. V. D. Jamison.
12. Mrs. Leicester's School, by Charles and Mary Lamb.
13. The Slowcoach, by E. V. Lucas.
14. The Story of Babette, by R. M. Stuart.
15. Mother Carey's Chickens, by Kate Douglas Wiggin.
16. Rebecca of Sunnybrook Farm, by K. D. Wiggin.
17. The Old Curiosity Shop, by Charles Dickens.
18. The Pipes of Clovis, by G. D. Boylan.

The above are all story books; there are many books of travel, history, nature study and handicraft that are strongly recommended. But it was agreed, by the authorities appealed to, that girls ought to read boys' books too, because many books written especially for girls tend to accentuate the sentimental side to an undesirable degree. We were glad to see our old friend Miss Alcott given a place of honor by modern authority. Among the newer books in the above list, our own favorites are "The Slowcoach," by E. V. Lucas, and "The Secret Garden," by Mrs. Burnett.

To have a memory for benefits, not for offenses these are the two pivots on which friendship may rest strong and abiding, friendships which pass to the greatness of noble minds * * * Be not like those who are more hurt and offended by an unkind word or by a word meant in fun, and which escaped, as it were, from cloister, unlocked for a moment by the tongue—yea, more hurt than they ever were pleased, and comforted by a thousand renewed proofs of loving friendship.—Petrarch.

The American Parlor Lamp makes your home beautiful and comfortable. Lights the entire room with a soft white light, almost as light as day. Easy on the eyes—you can read or sew by the hour and not have the least tinkling of tired eyes or headache.

The American gives a light of 400 candle power and does it for one-third of a cent an hour. Always pleasant to use—no wicks to trim or chimneys to wash—nor is there any smoke or disagreeable odors. Nickel-plated finish, plain white or fancy shades with fringe to match.

NO. P 67

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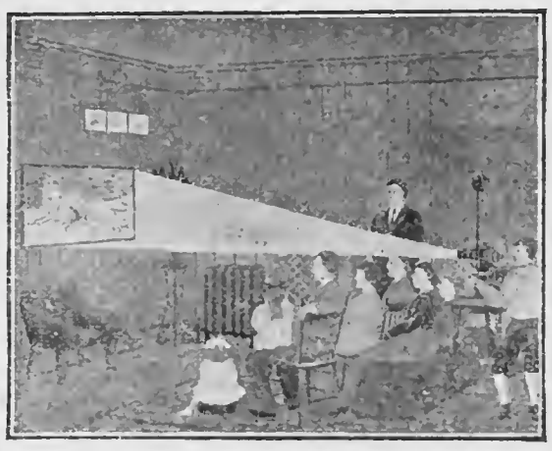

MOVIES AT HOME WINTER EVENINGS. THE WONDER MOTION PICTURE MACHINE. COMBINED FILM PROJECTOR AND STEREOPTICAN. TWO MACHINES IN ONE AT THE PRICE OF ONE. BOX OF FILM FREE WITH EACH MACHINE. $10.00

The WONDER MACHINE is a masterpiece of simplicity. It projects a clear, bright and steady picture. Is always ready for use—can be operated by a child. It projects motion pictures from standard motion picture films, the same as those used in motion picture theaters. Young and old grasp the lesson taught in Motion Pictures. The evenings of the family are made delightfully entertaining and instructive—the home becomes the center of social enjoyment. The Wonder Machine also uses magic lantern slides. It is a stereoptican. It is operated by its own battery or can be connected with electric home current. All machines are guaranteed. These machines make a valuable Christmas gift for the young people. Price, $10. Shipped promptly on order. 50% deposit on all orders, to guarantee shipment.

AGENTS WANTED. APPLY FOR TERRITORY.

THE WONDER MOTION PICTURE CO., 1133 Broadway, New York City

Seen in New York Shops.

NEW blouses introduced as American tailored models are of sheer voile, pleated, with stiff laundered collars. The collars are of the large flaring type, standing up at the back, while the blouse is pleated in fine tucks into a yoke. Another style is of novelty crape, with a high turn-over stock and turn-back cuffs of pique. These blouses are offered at $2 each.

Hats of fine felt with soft crowns have the brim faced with velvet. Among the colors are sand, Dutch blue, fur brown, jasper green and pearl gray; the velvet facing is always black. Fantaisies of monkey fur are fancy hat trimmings of this fur combined with flowers, ostrich feathers or metallic galon; some are really pretty, others grotesque.

Little fur collarettes are among prevailing styles; they fit the neck snug, and may be of fur alone, or of silk or velvet, trimmed with fur. One style seen was a band of moire taffeta about three inches wide with a strip of fitch fur down the center; it was finished at the back with six large outstanding loops of the silk, while a rose was set a little at one side of the front. Most of these collarettes have a flower or a tiny bouquet put at the left side of the throat. A band of maline, with a big fluffy bow at the back is often worn close around the neck with a low collar or décolleté waist. There is always a flower a little towards the left side, on the maline band, and this is a becoming fashion for one with a long neck.

Among the cheaper furs used for coats is hamster, a rather short coarse fur that is dyed in imitation of better skins, though reliable furriers do not seek to deceive the buyer by calling it anything that it is not. The true hamster is a rat-like animal found in Eastern Europe and Asia; it has much the same habits as our native pocket gopher, carrying its food in its cheeks, and storing it in burrows, but the name hamster is given to other nearly allied rodents. A woman's coat of hamster fur costs from about $35 up, and is quite warm and serviceable, though naturally it does not compare with handsomer furs. At present the most fashionable of all furs is blue fox, which has suddenly come into extra popularity again. One of the very good shops recently held a special sale of natural blue fox sets, muffs and neck-pieces, for $175 a set, which was said to be one-third less than the usual price, while dyed blue fox was offered at a special price of $85 a set. Of course dyed blue fox may be bought cheaper than this, while the natural may cost much more than quoted. The finest and silkiest fox furs are quite perishable if given hard or regular wear.

Navy blue, one of the most useful colors in woolen dress goods, is now very much in style for all sorts and conditions of women, also all the other dark shades of blue, known as marine, midnight and men's wear shades. The fabrics are storm and French serge, gabardine, poplin and cheviot, ranging all the way from 50 cents to $3 a yard. Such materials and colors are highly desirable for a one-piece dress, black being usually combined with the blue as trimming or as part of the dress. Bindings of black silk braid are very often used on such dresses.

Attractive jacket suits of wide-wale corduroy have Norfolk coats with a little fur collar, and a wide gored skirt. Many suits are fur-trimmed, some with cuffs and small close collar, or a little square collar standing up at the back, others with a band on the skirt also. The fur band is very rarely put at the foot of the skirt, but is usually from four to eight inches above it. Fitch and skunk-opossum are the leading furs for trimming suits.

Blanket bath robes for every member of the family are now procurable in numerous combinations of soft colors, pink, fawn, blue, lavender and gray, as well as the standard patterns of red, blue and dark gray. Bound with satin ribbon and with or without satin collars, they begin at about $2.50 in girls' sizes, very nice ones in adults sizes costing from about $4.75 up. They add much to Winter comfort, especially where a house is not very well heated.

Colored collar and cuff sets are offered for wear with plain waists of sheer cotton or silk. Many of these have the Elizabethan collar which, while rolling open in a V in front, is laid in up-standing pleats at the back. One pretty set noted was of blue and white striped organdie, edged with a narrow band of white embroidered in white dots. There were deep cuffs to match. Another set was of flesh-colored satin, in the same style. Flesh color is extremely popular in blouses, neck dressings and other accessories.

Steamed Chocolate Pudding; Roast Pig.

WILL you give a recipe for steamed chocolate pudding, also full directions for roasting a pig of about 20 pounds; time required for roasting, etc.
MRS. E. E. W.

Steamed Chocolate Pudding.—Boil one quart of fresh milk and pour over one pint grated bread crumbs, mixed with one-fourth cake grated chocolate, one cup sugar, one cup flour, one cup butter, two teaspoonfuls baking powder sifted into flour, one cup raisins, one cup chopped nuts. Put in a mold, steam two hours, and serve with sauce.

Roast Pig.—A pig weighing 20 pounds is rather large for roasting; the usual weight in the New York market is about 12 to 14 pounds, while Marion Harland recommends one weighing only about seven pounds. However, the usual sucking pig is from four to five weeks old. The 12 to 14-pound pig requires three to three and a half hours in a good oven; the 20-pound pig proportionately longer. Great care would be needed to prevent scorching, and as the cooking progressed it would be necessary to cover it with stiff paper, well buttered, if a covered roaster is not used.

We suppose the pig is already prepared, well cleaned and with the hoofs removed. Put it in cold water for 15 minutes, then wipe dry, inside and out. Make a bread stuffing as for turkey, seasoning highly with onion, sage, salt and pepper, moistening with melted butter and one or two eggs. Or else use hot mashed potato, seasoned as above. Stuff, sew up the opening, then bend the fore legs backward under the pig, and the hind legs forward, and skewer into shape. Put a cob into the mouth to hold it open. Put into a roasting pan, rub with butter, dredge well with flour, and put a little water in the pan. A covered roaster is preferable for cooking the pig, keeping it covered for the first hour and a half; then baste well with the drippings, and cover, leaving slide in cover open. After half an hour the pig may be basted again, and the cover of roaster removed, so as to brown it well. If an open pan is used the oven should be moderate at first, so that the meal is well heated through before it begins to brown, but thorough cooking is needed, and at the usual reckoning of 15 minutes to the pound this would mean five hours for the 20-pound pig.

When dished, arrange the pig in a bed of parsley and celery. Old custom was to put a red apple in the mouth and a wreath of parsley around the neck. In carving, the head is first cut off, then the hams and shoulders, after which it is split down the back and the ribs separated.

Irish Moss Blanc-Mange.

GET five cents worth of Irish moss from the drugstore, wash about one-fourth of this amount in several waters, then place in one quart of milk in double cooker. When moss is thoroughly cooked strain through colander, flavor and set aside till very cold. Serve with sugar and cream. The above is delicious and very nutritious. Do not rub the moss through colander, or blanc-mange would be dark; should be perfectly white. I have used this many years in our family, but have never found it in any of the papers or cook books, so perhaps it will be something new, and hope you and your readers will enjoy it as much as does the writer and family. C. L. L.

R. N.-Y.—This delicate blanc mange is much used in Great Britain, and is often advised for invalids or ailing children, as it is readily digested, and nourishing. Sea moss lemonade, made by boiling this Irish moss in water, straining the moss out, and then seasoning with lemon and sugar, is a soothing drink to one suffering from feverish cold and cough. It is usually an acceptable beverage to a child with measles. A jelly is also made by cooking the moss in water, instead of milk, straining, and then flavoring with lemon and sugar.

Philadelphia Scrapple.

WILL you give a recipe for Philadelphia scrapple? MRS. C. B.

The following recipe for Philadelphia scrapple, given in the Rural Cook Book, was contributed by a Pennsylvania reader: Take a cleaned pig's head and boil until the flesh strips easily from the bones. Remove all the bones and chop fine. Set the liquor in which the meat was boiled aside until cold, take the cake of fat from the surface and return the liquor to the fire. When it boils, put in the chopped meat and season well with pepper and salt. Let it boil again and thicken with cornmeal as you would in making ordinary cornmeal mush, by letting it slip slowly through the fingers to prevent lumps. Cook an hour, stirring constantly at first, afterward putting back on the range in a position to boil gently. When done, pour into a long, square pan, not too deep, and mold. In cold weather this can be kept several weeks. Slice and fry brown in butter or dripping.

Canned Vegetable Soup.

WILL you give us a recipe for the making and canning of a soup exclusively of vegetables? I refer to mixed vegetables, chiefly potato, cabbage tomato, celery, etc. MRS. N. J.

Vegetable soups are quite plentiful, though many of them have a meat or milk base. But we have never canned any, and would be glad to hear from anyone who has had this experience. What is commonly called vegetable soup has a meat stock base, but pea, bean, lentil or tomato soup may be made without meat stock. There are also many cream soups made of vegetables, as celery, salsify, spinach, etc., but these consist largely of milk. Whether they would keep, under domestic canning conditions, is a thing that could only be decided by experience. We should like to hear from housekeepers with this practical knowledge.

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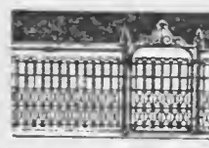

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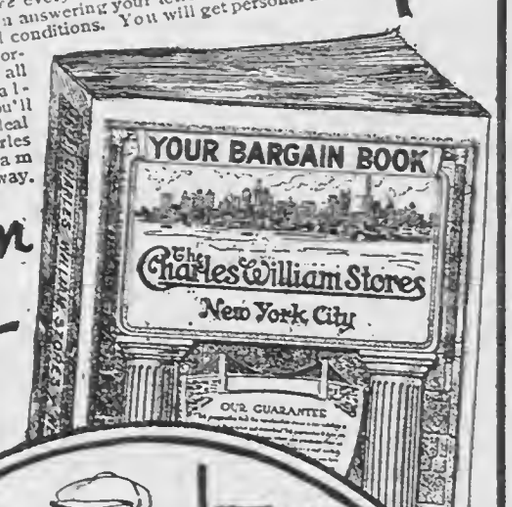

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Live Stock and Dairy

AN ADDITIONAL SHORTHORN RECORD.

NOW that milking Shorthorns are being imported into this country, it is greatly important that the best in every way shall be got out of them as far as this may be possible. As registration stands now in the existing Shorthorn record, the importers of the milking Shorthorn meet with a very serious handicap. It is probably correct to say that more than half the dairy Shorthorns, as they are called in England, are of short pedigrees, so short, that they do not fulfil the requirement of the American record. They find a place in the English Herd Record, as five generations of breeding from purebred Shorthorn sires will admit them to registry in that book.

Now it is a fact that many of the best of those registered Shorthorns have short pedigrees. Many of the very best performances at the pail are of that class. For some of them the highest prices must be paid, or the importer cannot secure them.

Suppose that he purchases these in his search for the very best producers, and that he brings them to America. When they reach our shores they are grades. In England they are purebreds; in America they are grades. That does sound absurd. Cattle are imported because of their superior intrinsic value, and a voyage across the Atlantic will divide that value by two, and in some instances by three, or four. Can anyone imagine a greater handicap than this on the breeding of dual Shorthorns in America? The answer is not valid which would say that they may be bred from existing Shorthorns that are now registered. Of course they can, but the country cannot wait for this. The country is crying out for milking Shorthorn sires, and it cannot get them in anything like a sufficient supply. Shorthorn sires are being sold that in many instances are represented as milking sires when they are not. Neither on the side of the dam or the sire have their ancestors been milked, hence they have no just claim to be classed as milking Shorthorns. So great is the demand for pedigreed Shorthorn bulls in America today of the dual class that it would seem correct to say, if 10,000 such bulls correctly bred were available in America they would not remain unsold for 10 days.

This does not mean that there are no milking Shorthorns in America bred on correct lines. There are some herds, but they are few. They are so few that the sires from these, so to speak do not make a drop in the bucket. Nor does it mean that among herds of pure Shorthorns which suckle their calves, there is not a goodly number that milk with relative freeness, but no adequate measure has been taken of their performance at the pail. They have been allowed to go dry after every calving at the end of seven or eight months, hence in the true sense of the term they are not milking Shorthorns. Nor does it mean that Shorthorns are not superior to the cows of most other breeds in furnishing beef for their calves.

In the absence of another record, or in the absence of some modification in the present record, the breeding of milking Shorthorns in this country will be greatly handicapped. The handicap on importations has already been referred to. But the handicap is more far-reaching. There are in this country very many cows essentially good performers at the pail, but they are not registered and never can be under the existing rules that govern the registration of Shorthorns in this country.

There is no great incentive on the part of the owners to improve them. No matter how many crosses of pure Shorthorn blood they can show they are still grades. It makes no difference how high they may attain in individual excellence or in performance, they are still grades. Now if record were allowed for these, in time very many animals would be able to furnish a pedigree that would entitle them to registration. It is only the necessity for registration that is being discussed. It is too soon to discuss in all details the rules that should govern such registration, but the question may be at least raised at this time, as to whether such an organization should be under the wing of the American Shorthorn Association, or independent of it and separate from it.

In England as is generally known, the registration of milking Shorthorns is in the same record as the registration of Shorthorns of any class. There is a record kept, however, of the performance of the dairy Shorthorn cows as far as the owners may care to have their records published. There would be no great obstacle in the way of having the registration of these cattle conducted by the American Shorthorn Association provided it is in a separate record, and with rules governing the same modified as outlined above. True, some provision has been made for taking care of milk records. An association has been formed to advance the interests of dairy Shorthorns. The reference is to the "Dairy Shorthorn Cattle Club." But the provision thus made as seen by the writer is inadequate. Much more could be said in favor of this proposition.

THOMAS SHAW.

THE WAR AND PUREBRED STOCK.

Aberdeen Angus Cattle; Belgian Horses.

I DO not think the war will affect Aberdeen Angus cattle breeding in this country at all for two reasons. We have almost ceased the importation of that breed of cattle, because we now believe we are doing fully as good work as they are, if not better, and because the war has not, as yet, interfered with the business in Great Britain. I have just returned from France, Belgium and England, where I had spent most of the Summer in an attempt to import horses, and have observed the conditions very closely. I left a fine lot in Belgium and France, not being able to get them out of the country, and now, I presume, they may be nearly all destroyed. From Belgium it is more than probable that there will be no more horses taken for this country in a considerable number of years to come, but we have a very good start in foundation stock, and should go right along breeding good horses, so as to be ready to furnish them with material to build upon when the war is over.

In France the war has not encroached upon the horse-breeding districts, but it is fair to presume that many of the best have been commandeered for war purposes, and we may expect an embargo on exportation from that country after the war, for a sufficiently long time to recoup. Thus we are likely to be given a chance to demonstrate what we can do with material at hand, without exterior aid, and I am satisfied, for it is now time for us to try walking alone in the business, if we are ever to do so. H. M. BROWN.

Highland Co., Ohio.

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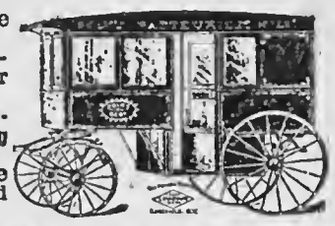

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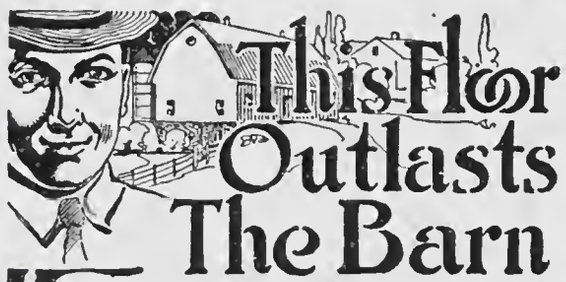

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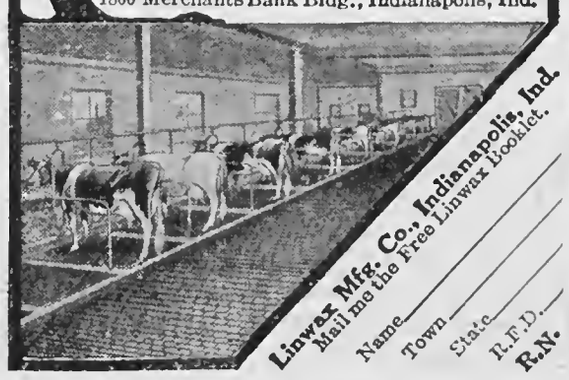

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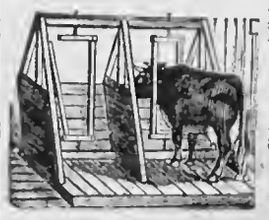

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THE RURAL NEW-YORKER,
333 WEST 30th ST., NEW YORK.

This action will prevent the importation of several hundred head of Jersey cattle this year. How long the embargo will continue, of course, it is impossible for me to say. The Jersey breed in America is now so widely disseminated, and its numbers are so large, that I do not anticipate that this temporary stoppage of importation from the island will have any very serious effect upon the breed in this country. I think that in future some countries, especially Australia and New Zealand, will look to this country for their Jersey stock, not only on account of the United States being more accessible, but because the Jersey breed has been developed to a higher productive standard here than on its native island.

R. M. GOW.

American Jersey Cattle Club.

The Brown Swiss.

IN regard to what effect the European War is likely to have upon the Brown Swiss cattle, I do not see any reason for it affecting our cattle in any way at the present time as we have not been able to import any cattle during the last five or six years. The thing that seems more likely to trouble us is trouble at home, with the foot and mouth disease.

IRA INMAN.

Brown Swiss Cattle Breeders Association.

Outlook for Guernseys.

AS to whether or not the European War is likely to interfere with the Guernseys I am somewhat at a loss to make any statement. It has of course materially lessened the number that will be imported. I sincerely hope that nothing will happen that will affect the Island of Guernsey. Aside from that we have in this country now a very fine representation of the best of the Island, and English strains. I judge that from the standpoint of breeding we would not be materially affected. I think that we have enough to perpetuate the best strains in this country. The war will have nothing of the effect that this unfortunate widespread, area of infection from foot-and-mouth disease will. At the present time all movement of cattle from the Atlantic to Iowa is restricted. The magnificent and valuable cattle which were exhibited at the National Dairy Show, which included the very best of all the breeds, some animals which it had taken years of careful and intelligent breeding to produce, are now under quarantine. It is to be hoped that nothing will happen to them, as their loss would mean an irreparable one to the future of the improved dairy stock husbandry.

WM. H. CALDWELL,

American Guernsey Cattle Club.

Care of One Cow.

WE expect to start keeping a cow, for the first time, about November 1; we have a suitable place for housing her, but our land is somewhat limited. How closely confined to the stable could we expect to keep her? I expect she will freshen about April 1, or possibly a little earlier. We have about 100 square rods of land, beside a small vegetable garden, about evenly divided, one half grass land, rather poor seeding, balance been used for garden. The 100-rod lot is rented for one year, from November 1. I am plowing up the plot used for garden and sowing Winter rye (Oct. 8) to be plowed under. What can we plant on the 50 rods in the Spring that will give the largest returns, in connection with the pasturing of the other 50 rods. We desire, if possible, to support the cow on the 100-rod lot together with such stuff as we may have from the vegetable garden of about 30 rods. Would it be policy to pasture the rye this Winter? What do you know of the Red Polled cows? She is a natural mulley, rather large and dark red.

Plymouth, Mass. W. L. H.

We should give this cow a roomy box stall, say 10 or 12 feet square, and not tie her. Keep her well bedded and give plenty of fresh air. On warm, bright days of Winter let her out in that pasture. We would not pasture the rye this Winter, but let the cow have it in Spring. We should divide the 50 rods into three parts. On one part seed oats and Canada peas early in the Spring. On another third sow fodder corn thickly in the drill—on the other third mangels or carrots. As the oats and peas are fed off sow more fodder corn, and as the corn is cut seed barley and rye, half and half. The Red Polls are good cattle—a combination of beef and dairy. For a family cow we find equal parts cornmeal and wheat bran with a handful of oil meal at a feed very satisfactory.

Purdue Calf Meal.

WE have all heard of the Cornell laying-house, and the latest is the Purdue "calf meal." Indiana must have more cows, and raise more calves. The Hoosier people sell enormous quantities of whole milk, and it has been considered expensive to raise heifer calves. Mr. Lawrence, of the Extension Department, says: "We developed the meal for the dairyman selling milk to the condensery, or retailing his product. If he has skim-milk we advise him to feed it, if he can get 35 or 40 cents for his skim-milk, we advise the calf meal." One pound each hominy, red dog flour, linseed meal and blood meal; if red dog flour is not accessible use wheat middlings. The oil meal should be old process. This meal takes the place of skim-milk. Do not make the change to skim-milk suddenly, feed whole milk until the calf is a week old. The change from milk to the substitute must be gradual. It should be spread over a period of five or six weeks, starting with but an ounce, for the day, diluting with seven times this weight in water. The feed may be increased to three ounces for several days, and then to five ounces until at the end of 30 days the calf is receiving two pounds of calf meal, and the milk is entirely eliminated. It is figured that in mixing seven pounds of water to one of the meal this is equal to the same quantity of skim-milk. With the calf meal is fed ground corn and oats as soon as the calf will eat the mixture dry. Corn silage and Alfalfa or clover hay should be supplied the calves.

Possibilities in Pork.

"THERE never was such a chance afforded our bright men as today in the raising of hogs. They can make more money raising hogs than in any other line of farming. Of course, this means that the young men must give to the raising of hogs the same careful attention as in any other line of business."

This advice is credited to E. T. Cash and it is sensible. In most Eastern States near towns or villages there is fair profit to be made at selling little pigs for others to raise. In many cases there is more in this business than in trying to raise pork.

"Pixey" Cattle.

WILL you ask your readers if there is a breed of cattle known as "Pixey?" I have just bought a young cow and was told she was half-bred Jersey and Pixey. What, if any, are the markings? A. H. A.

New York.

We ask the question herewith. Never heard of the "Pixeys" ourselves. It is probably a local name for some family of native or grade cattle. If there is anything to it some of our readers will know.

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About Christmas time I will have a deluge of letters asking for boars fit for immediate service. The wise ones are buying now and putting them at once in their permanent quarters, so that Mr. Pig will feel quite at home and have his mind on business when the New Year's rush is on. DON'T DELAY. BUY TODAY
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FOR SALE—Guernsey Cows
two 4-years old; bred; minor defects. BULL, born March 4 A. R. breeding; fine. All three for $350. Chance to start herd. TABER & MIGNIN, Castile, New York

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Superintendent Smith of the Geneva Experiment Station says the average production of butter-fat per cow in New York State is about 100 pounds per year. The State College in Ithaca has a cow descended from common stock on one side and from a line of purebred Holstein sires on the other. This cow has produced 479 pounds of fat in a year.

This is interesting as proof that intelligent improvement of grade herds can multiply the butter yield by four and five.

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20 Jersey Heifers and Heifer Calves
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The Henyard.

THE EGG-LAYING CONTEST.

THE second week of the egg-laying contest at Storrs shows a production for the week of nearly a thousand eggs—912 is the count. This is more than double the number laid in the second week last year, but there are 18 more pens in this year's contest. In the first two weeks last year there were 890 eggs laid—in the same period this year 1,663 were laid. Allowing for the larger number of birds, it still looks as if we were making decided progress toward an average increase in egg production by American poultry. Everything that contributes toward this end is certainly worthy of enthusiastic support. It is worthy of note that out of 40 pens of White Leghorns all are laying but three pens. The notion that Leghorns were not good Winter layers, has been pretty thoroughly exploded by the performance of this breed at the different contests. The Yankees are "catching on" as to how this thing is done. Last week the pen of White Leghorns from Windsweep Farm took first place with a score of 47; this week they again take first place with an increased score, viz., 49. That is 10 eggs ahead of the Englishman, Ed Cam, whose White Wyandottes take second place with a score of 39. White Leghorns from Storrs Experimental pen are third with a score of 35. Mr. Cam's birds are making a better start than Mr. Barron's, both the Wyandottes and Leghorns but it's the best at the finish that counts. The week's record follows:

	Week	Total
Barred Rocks.		
Merritt M. Clark, Connecticut	25	45
Frank L. Tuttle, Massachusetts	4	11
Francis F. Lincoln, Connecticut	8	17
Jules J. Francais, New York	5	5
Storrs Agr. Station, Exp. pen, Conn.	..	..
Storrs Agr. Station, Exp. pen, Conn.	..	..
O. A. Foster, California	..	..
White Rocks.		
Albert T. Lenzen, Massachusetts	..	10
Branford Farms, Connecticut	..	1
Branford Farms, Connecticut	..	2
Branford Farms, Connecticut	..	..
Branford Farms, Connecticut	1	5
Buff Rocks.		
A. A. Hall, Connecticut	10	24
White Wyandottes.		
Tom Barron, England	11	16
Edward Cam, England	39	73
Merrythought Farm, Connecticut	17	34
Neale Bros., Rhode Island	19	35
Mrs. J. D. Beck, Connecticut	6	9
Storrs Agr. Station, Exp. pen, Conn.	..	..
Storrs Agr. Station, Exp. pen, Conn.	3	3
Mapledale Farm, Connecticut	3	7
J. F. Byron, Connecticut	15	38
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	21	38
Silver Wyandottes.		
Silver Wyandotte Star, New York	..	..
Columbian Wyandottes.		
Merrythought Farm, Connecticut	13	21
Rhode Island Reds.		
Dr. J. C. Dingman, New York	..	..
Hillview Plty. Farm, Vermont	26	48
Homer P. Deming, Connecticut	..	..
Chas. O. Polhemus, New York	..	2
H. M. Bailey, Connecticut	..	..
John Backus, Vermont	4	9
W. H. Bumsted, Connecticut	5	13
Pinecrest Orchards, Massachusetts	4	17
Harry B. Cook, Connecticut	9	15
Colonial Farm, New Hampshire	24	39
A. B. Brundage, Connecticut	..	..
Storrs Agr. Station, Exp. pen, Conn.	4	14
Storrs Agr. Station, Exp. pen, Conn.	6	10
Rural New-Yorker, New York City	..	..
S. G. McLean, Connecticut	5	11
Springdale Plty. Farm, Connecticut	..	..
D. E. Warner, Rhode Island	6	13
H. W. Sanborn, Massachusetts	9	17
Albert R. Ford, Connecticut	4	6
Light Brahmas.		
Storrs Agr. Station, Exp. pen, Conn.	7	18
Storrs Agr. Station, Exp. pen, Conn.	..	4
American Dominiques.		
H. B. Hiller, Connecticut	6	11
White Leghorns.		
A. B. Hall, Connecticut	6	6
Geo. Bowles, Connecticut	20	24
Ellis W. Bentley, New York	28	37
N. W. Hendryx, Connecticut	6	8
Braeside Poultry Farm, Pennsylvania	8	15
Francis F. Lincoln, Connecticut	26	47
Cecil Guernsey, New York	3	3
Merritt M. Clark, Connecticut	32	54
Chas. N. St. John, New York	2	2
Elm Poultry Yards, Connecticut	9	21
Jay H. Ernisse, New York	12	38
Storrs Agr. Station, Exp. pen, Conn.	28	49
Storrs Agr. Station, Exp. pen, Conn.	35	58
Mrs. Rollin S. Woodruff, Connecticut	12	15
Windsweep Farm, Connecticut	49	96
James H. Lord, Massachusetts	14	23
P. G. Platt, Pennsylvania	22	32
Dictograph Poultry Farm, New York	..	..
F. M. Peasley, Connecticut	12	16
Chas. Heigl, Ohio	2	2
Tom Barron, England	..	..
Edward Cam, England	15	27
Geo. M. McMillan, Missouri	1	1
Wm. H. Lyon, New York	17	20
Happich & Danks, New York	6	6
A. P. Robinson, New York	16	23
Manor Poultry Farm, New York	25	34
Branford Farms, Connecticut	4	7
Branford Farms, Connecticut	16	28
Branford Farms, Connecticut	18	29
Branford Farms, Connecticut	4	4
Anna Dean Farm, Ohio	15	23
Rural New-Yorker, New York City	11	20
A. S. Sondregger, Connecticut	27	68
S. J. Rogers, New York	8	26
Stoneleigh Poultry Farm, Pennsylvania	2	4
Mrs. W. B. Whitlock, Connecticut	30	56
Toth Bros., Connecticut	4	4
James V. Thomas, New York	6	11
Sunny Acres Farm, Connecticut	..	3
R. C. Brown Leghorns.		
The Gale Place, Connecticut	..	1
Buff Leghorns.		
Lakeside Poultry Farm, Michigan	..	..
O. L. Magrey, Connecticut	9	14
Black Leghorns.		
J. Collinson, England	4	5
Silver Campines.		
Uncowa Plty. Yards, Connecticut	..	..
Louis E. Prickett, Connecticut	..	..
Light Sussex.		
Dr. E. K. Conrad, New Jersey	..	3
Salmon Faverolles.		
Doughoregan Farm, Maryland	..	..
White Orpingtons.		
Henry S. Pennock, Florida	..	..
Obed G. Knight, Rhode Island	25	54
B. P. Nase, Connecticut	..	..
Buttercups.		
Chantecleer Plty. Plant, Pennsylvania	..	..
Favorite Hens.		
Rural New-Yorker, New York City	4	5

GEO. A. COSGROVE.

Chicken Pox.

A FAMILIAR disease to those living in the warm climate of the Southern States, but comparatively rare in the North, chicken pox is of interest to poultrymen, who should be able to recognize it when it appears in the flock. It is a readily communicable disease, rapidly spreading in a flock when conditions are favorable. It is caused by the presence of a fungus which gains entrance through the skin of the affected fowl and produces an eruption resembling rough, yellowish warts about the beak, nostrils, eyes and other portions of the head, and in severe cases, extending even to the feathered portions of the body. These wart-like bodies attain full development in from five to 10 days, and typical ones show a central depression similar to that shown in the eruption of smallpox in humans. There may be a discharge of yellowish matter which dries up to form a scab and, later, falls off. When the disease is mild, the health of the bird does not seem to suffer but in more severe cases the plumage becomes rough, flesh and strength are lost and the fowl may die from exhaustion. In pigeons the disease is more severe, the eruptions may extend to the interior of the nostrils and mouth and early death may follow.

Like all contagious diseases, chicken pox should be prevented by isolation of suspicious cases and thorough cleansing and disinfection of utensils and quarters. The spread of the disease is favored by dampness and the accumulation of droppings and filth about the perches. Fowls with diminished resistance because of lowered vitality are more prone to succumb to possible infection than those of abundant vigor. Local treatment consists of anointing the eruption with disinfectant preparations; carbolized vaseline and sulphur ointment being usually recommended. Painting the eruption with tincture of iodine is said by a Southern correspondent to be very efficacious and superior to ointments. M. B. D.

Disinfecting Henhouses and Kennels.

PLEASE tell me of a good and cheap disinfectant to use in keeping dog kennels and chicken houses free of vermin. How often should chicken houses be whitewashed? You cannot whitewash inside of kennels. W. S. R.
Connecticut.

Poultry houses should be whitewashed in the Spring and Fall using four ounces of crude carbolic acid to the gallon of lime wash if it is desired to increase its effectiveness as a vermin destroyer. The limewash alone is a good disinfectant, however. It should be freshly made of unslaked lime. The inside of a kennel may be painted with a solution of crude carbolic acid and kerosene using the former in the proportion of one-fourth of the bulk. It will be necessary to air it thoroughly after using this before confining animals to it and it will retain a wholesomely sanitary odor for some time. M. B. D.

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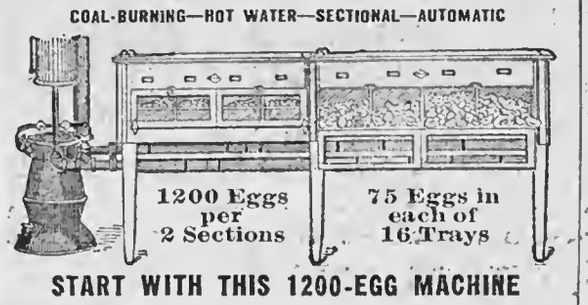

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Write today for our 140-page catalog describing the machine and telling you how to start a custom hatchery business. We furnish cellar plans free.

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By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

MANN'S LATEST MODEL Bone Cutter
Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free Trial.** No money in advance.
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SEND 15 CENTS FOR SAMPLE
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Orr's Poultry Feeds—For molting hens and laying pullets. Our Digestible mash just fills the bill. Our poultry feed mixtures and straight grains, also cracked goods, are of the utmost in quality. For results use the best goods, and we have them. Send for circular and price list.
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MacKellar's Charcoal
For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
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Tom Barron's
WINNING WYANDOTTE PENS
Pa. Contest: Winners in eggs and value; aver. 236. "Baroness V" laid 282 eggs; others, 274, 252.
Conn. Contest: Winners in value; aver. 208½; 2nd Prize in eggs.
Missouri Contest: 2nd Prize. Ilkely; aver. 210.
Barron Leghorns, 284: Buff Rocks, 242; Vibert Reds, 257
Prize Rouens. Big Toulouse Geese
MORRIS-FARM, R. 4, BRIDGEPORT, CONN.

Tom Barron White Wyandottes—Trio, $15. From stock imported last spring from Barron best-laying yards. E. E. LEWIS, Apalachin, New York

500 Choice Pullets and Cockerels
Tiffany's Superior Silver Wyandottes, Pekin and Rouen Ducks, sired by winners at America's greatest shows. Free range grown. F. A. Tiffany, Phoenixville, Pa.

PUREBRED WHITE WYANDOTTE COCKERELS, $2. LLOYD MATTESON, Route 2, Pulaski, N.Y.

Barred Rocks, R. C. Reds CHOICE COCKERELS AND PULLETS at very moderate prices. Orchard range stock. Big, husky, vigorous specimens. Fine shape and color. Bred from best blood lines in the East.
"FOUR ACRES," - - Nutley, N. J.

Twenty-Five Barred Rock Pullets
6 months old, for sale. $1 each. Hedges, Greenville, N.Y.

WHITE CRESTED BLACK POLISH, SILVER SPANGLED HAMBURG, AMERICAN Dominique, Sicilian Buttercup, and Single Comb BLACK MINORCA COCKERELS, $1 each and upwards. Austin Jackson, Mineral Springs, N.Y.

FOR SALE—20 Very Choice Sicilian Buttercup Cockerels at $5 apiece or 5 pullets and cockerel for $25.
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COLONIAL REDS
We offer finely-bred cockerels for sale, from our best lines for egg production. Strong, rugged birds of pedigreed ancestry. Also pullets and yearling breeding hens of proven value. Honorable treatment guaranteed. Satisfied customers all over the country.
COLONIAL FARM, - Box O, Temple, N. H.

R. I. Reds—White Wyandottes—Lt. and Dk. *Brahmas*, Barred *Rocks*, S.C. White and Brown *Leghorns*. Show and utility quality. Bargain list. Breeders free. RIVERDALE POULTRY FARM, Riverdale, N. J.

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N.H.

Tom Barron Leghorn Cockerels
Price, $3 each. These birds are brod from imported Barron cocks and hens of the same breeding as pen No. 42 in the contest just finished at the Connecticut Agricultural College. This breeding is hard to beat for egg production. Our entire flock is free from white diarrhoea. Address, GILBERT FARM, G. B. Treadwell, Supt., Georgetown, Conn.

Tom Barron **S.C. White Leghorn Cockerels**
and White Wyandotte cockerels; pullets, out of direct importation, from the World's greatest layers. In splendid vigor. BROOKFIELD POULTRY FARM, R.F.D. 3, Versailles, Ohio

Tom Barron's White Leghorns
The greatest money-makers of them all. 4 hens, 1 cockerel, $6; 8 hens, 1 cockerel, $10. Also Kulps' R. C. Browns. TROUT BROOK FARM, Hillsdale, N.Y.

BARRON'S LEGHORNS
Imported direct. 248-260 egg strain. April pullets and cockerels, $3 each. 6 hens of this strain and full blooded cockerel, $10. E. CLAUDE JONES, Hillsdale, N.Y.

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75,000 S. C. W. LEGHORN BABY CHICKS
FREE FROM WHITE DIARRHEA
All breeders tested by Storrs' Station. Free circular. White Leghorn and Pittsfield Barred Rock cockerels. A. B. HALL, Wallingford, Conn.

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from our selected strain of S. C. White Leghorn winter layers. April and May hatched. Satisfaction guaranteed. Ramapo Poultry & Fruit Farm, Spring Valley, N. Y.

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100 S. C. W. Leghorn Breeding Hens
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Pullets, Yearling Hens, Cocks & Cockerels
in lots to suit purchasers at attractive prices.
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Cockerels—S.C.W. Leghorns
Fine large and heavy-laying strain. $1 and up.
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43

The Celebrated Hungarian and English **PARTRIDGES AND PHEASANTS**
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S. C. Brown Leghorn Cockerels—Heavy laying strain, $2 each. Mrs. Wm. GENT, R. 1, Clyde, N. Y.

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Delivered Free! Money-back Guarantee!

Foot and Mouth Disease located in more than a dozen states and at the present writing is rapidly spreading. Most rigid quarantine established in Michigan, Indiana, New York, Maryland, Massachusetts, Illinois, Wisconsin, Pennsylvania, Ohio and other states. No animals (except horses) may be shipped out of these states. Chicago stock yards, the largest in the world, temporarily closed down. Spread of disease among valuable herds at National Dairy Show. The great International Live Stock Exposition now called off. Live stock markets upset. Thousands of head of cattle slaughtered and their carcasses buried in quicklime, 5 feet underground. This, in brief, is the situation of the most serious and the most sensational epidemic ever known in this country.

No one can say when this terrible epidemic will end. We sincerely hope and trust that our able government officials will stamp out this terrible disease at the earliest possible moment. But *you must help*. You must do *your* part—do it for *your own profit's sake* and for the sake of farming in general. How? By thoroughly disinfecting your stock, your farm, your yards, your poultry—*everything* on your farm. Foot and Mouth Disease is caused by a germ. When germs are killed quickly diseases are prevented. The

Best way to "Cure" Disease is to Prevent it

Even if your stock is hundreds of miles away from contagious diseases it will pay you mighty well to thoroughly disinfect every part of your farm so *you won't be taking chances*. A good strong safe disinfectant is the cheapest insurance and protection you can buy. It certainly proves the old adage, "An ounce of prevention is worth a pound of cure." It buries big profits *in your pockets* instead of burying your stock in quicklime. Yes Sir! *Now*, more than ever before—*now*, while your cattle are in the barn and not outdoors, *now*, while disease is everywhere, *now*, *while your stock is still free from disease* is the time to use a good disinfectant! And of all, none compare with

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Manufactured by folks who've been making disinfectants for 30 years. It kills germs—the cause of practically all live stock diseases. It is 4½ times as strong as carbolic acid and chloride of lime, and unlike them is absolutely safe to use. It is efficient, inexpensive, convenient and *safe*. It is endorsed by the highest scientific authorities. It acts as a disinfectant, a germicide and an antiseptic. It's so strong and powerful that germs cannot exist wherever it is used. And it not only prevents disease, but is a reliable remedy for many of the common stock ailments, such as ringworm, sores, wounds, scratches, mange, footrot, worms, thrush, sprains, distemper, pink eye, glanders, all skin diseases, excellent in the treatment of cholera, and an unequalled dip for hogs, sheep and cattle.

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How to kill Lice.
What Ringworm is and how to cure it.
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How to cure and prevent Calf Cholera and White Scours.
How to heal sores, wounds and Insect bites.
How to treat Blackleg.
How to cure Footrot.
How to cure Fowels.

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How to rid horses of all Parasitic Troubles.
How to cure Ringworm.
How to remove Intestinal Worms.
How to heal Galls.
How to cure Greaseheel.
How to heal ulcers, skin diseases, bites, boils.
How to relieve sprains, strains, sore cords, stiff joints.
How to cure thrush and proud flesh.
How to treat for Spavin.
How to cure scratches quickly.
How to cure Sitfast and Warts.
How to relieve sprained tendons.
How to relieve Quittor.
How to cure Surfeit.
How to prevent and cure Distemper.
How to cure Quarter Crack.
How to cure Pink Eye.
How to cure Glanders.

Swine

How to rid hogs of Lice.
How to cure Mange.
How to expel Worms.
How to treat for Abortion.
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How to cure Scabby Rash.
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How to cure Eczema.
How to relieve Sore Teats.
How to prevent and treat Hog Cholera.
How to treat for Inflammation of the Joints.
How to relieve Sore Feet.
How to cure Scours.
How to cure Diarrhea.
How to heal wounds, cuts, bruises, etc.

Sheep

How to cure Scab.
How to rid sheep of Ticks, Lice, Maggots, Worms, etc.
How to cure Footrot.
How to properly dip sheep.

Poultry

How to properly dip poultry.
How to cure Roup.
How to cure Gapes.
How to cure Scaly Legs.
How to cure Bumble Foot.
How to cure Cholera.
How to cure Canker.
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How to cure Catarrh.
How to cure Sore Head.

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PUBLISHER'S DESK

JAMES POWERS, of the Tax Adjustment Bureau, 69 Wall street, New York City, was convicted in the United States District Court last week on three counts of an indictment, charging the use of the mails with intent to defraud. He was sentenced to two years' imprisonment in the United States penitentiary at Atlanta on each of the two counts.—City Paper.

During the past year we had many inquiries about the Tax Adjustment Bureau, particularly from investors in lots on Long Island. Powers offered to register the lots for $1.50, with a view to investigation taxes. In some cases he offered an investigation and payment of taxes for $3. Our investigation indicates that he was performing no service whatever, and reports to this effect have been published in this department at various times. The business was even continued during his indictment, and right up to the day of his conviction.

On July 10 I sent Harris W. Jennings, Springdale, Conn., six queen bees, valued at $5, and can get no reply at all.
Connecticut. W. K. R.

We could not get any response from Mr. Jennings either in explanation of the failure to pay for these bees, or why it was not due as stated. The only conclusion is that our people will do better to reject any orders he may send them.

I have much pleasure in advising you that the check for the heifer killed by the Great Northern Railway March 16, has been received, thanks to your persistent efforts. I realize I would have been obliged to put it in the hands of an attorney to get my claim, if it had not been for you. You have made a life member for your paper, as I can endorse THE RURAL NEW-YORKER in the stand it takes for the public benefit. I thank you sincerely, and if there is any bill due, send it along and I will remit. I shall do what I can to extend THE RURAL NEW-YORKER. H. H. H.
Washington.

There is no bill. We have always believed that a wrong to one farmer is an injury to all farmers; and it follows that their protest against a wrong to one is properly expressed through their farm paper. Every man's membership in THE R. N.-Y. family entitles him to the influence of all in a just complaint.

I beg to acknowledge receipt of check in payment of damage claim for eggs which I gave you against the Adams Express Company. I guess the people don't want you to expose them. I gave one dollar for subscription, and will say that your services rendered me have saved me ten times the subscription price; in other words the paper at $10 per year to a business man would be cheap. It surely should be in very house, for almost all houses have some difficulties, and if THE RURAL NEW-YORKER can't eliminate trouble, then I don't know who can.
New Jersey. S. J.

This is a sample of enthusiasm. Unfortunately THE R. N.-Y. cannot eliminate all trouble. Through the influence of its readers it can do a little at times. It does this by being entirely fair to all parties. It never asks of another what it would not grant if it were in the other fellow's place. In that way it inspires confidence, and then sometimes difficulties disappear. The recognition of this spirit of fairness and the evidence of that confidence, is one of the joys of life.

Your article on the Phelps building certificates ought to save your readers a lot of money. Hereabouts we all laugh at the "Great I AM." F. S. C.
Massachusetts.

Coming from a neighbor this is significant. You can't fake all of the people all of the time.

The oxypathor has at last been adjudged a fraud by a court of law. The Federal court at Rutland, Vermont, found the manager of the Oxypathor Company of Buffalo, N. Y., guilty of using the mails to defraud, and he received a sentence of 18 months in the Federal prison at Atlanta, Ga. This scheme seemed to have been operated by several companies which controlled certain territory. Besides the one in Buffalo there was one in New York City, which was driven out of business some time back by the Vigilance Committee of the Advertising Men's League. There was also one in Chicago, and another operated at one time from some point in Pennsylvania.

The oxypathor is a small box filled with sawdust and some other inert matter. It is provided with a cord at each end; and the patient was to attach one string to his head and the other to his feet; the claims were that this would cause an extra amount of oxygen to be forced into the blood, and that a cure would follow. Doctors and chemists who examined the box and analyzed its contents invariably asserted that the matter was inert, and could have no physical effect whatever on the patient. The cost of the instrument was $35. They were sometimes sold under guarantee; but we were never able to get the cash returned. We exposed it several times in the past, but the advertisements appeared quite regularly in papers of high and low degree.

I was recently a prospective victim of the agricultural paper fake. The agent produced a 14-karat, self-filling fountain pen, which I was to have absolutely free, also three farm papers. These I could have by paying the postage provided I would speak a good word for them with my neighbors. I told him at once that I had no time or inclination for canvassing and furthermore that I had all the farm papers I had time to read, including THE R. N.-Y. The agent at once said that THE R. N.-Y. was a good paper, but that his was equally good. He did not press the matter further, and drove away. I am wondering if my mention of your paper was the reason for his desisting so suddenly in his "philanthropic" efforts? A. B. R.
Connecticut.

Papers which do not have a legitimate subscription list are not entitled to second-class postage rates. The law is that any publisher may mail all the papers he pleases provided he attaches a postage stamp, but only papers that have genuine subscribers paid for may be mailed at second-class rates. Papers that are not able to secure a genuine list of paid subscribers sometimes resort to the "free-pen" device to secure a list and second-class mail privileges; but this does not satisfy the law, and if the postal authorities had the record, the papers would not be delivered at pound rates. At best it is a scheme to beat the Federal government on its postal rates. On their own representation these publishers must get all the cost of publication and profits out of the advertisers. It follows that their sole obligation is to the advertisers, and not to the reader. If there is any dispute between the subscriber and the reader the publisher has no choice but to take the side of the advertiser. Such sheets are advertising circulars and should pay the postage rate for that class of matter.

I am almost overwhelmed with inquiries from people throughout the United States as a result of the publicity we have gotten in THE RURAL NEW-YORKER. I had an idea that your publication covered a good section of the extreme Northeast, but letters have reached me from the State of Washington, from Arizona, Virginia, Tennessee, and Kansas. That is going some for circulation, and you are to be congratulated.
Florida. F. M. R.

This general character of THE R. N.-Y. circulation suggested the possibilities of the Subscribers' Exchange. We believe the subscriber in one section could use the surplus of another section with great benefit to both. Ultimately this will come through local farm organizations. It is being done now; but for the present one subscriber can deal with good advantage with another.

Dr. Julian P. Thomas, who has been under Federal indictment for alleged misuse of the mails, failed to put in an appearance when his case was called in the U. S. Court last week, and his bond of $5,000 was declared forfeited by Judge Foster. In 1910 Mr. Thomas was found guilty of violation of the pure food law through his operations with a bread made of uncooked wheat, which he said would cure indigestion. His present difficulty grew out of the Natural Food Company operations. He is president of the company, and it is said his profits were $100 a day. The company made a biscuit, which the doctor said would not only cure indigestion, but enable the patient to reduce the high cost of living by confining him to a sufficient diet of a biscuit, a tomato, and an onion. Some time back some of our people were attracted by the prospectus of the Natural Food Company. Our judgment was rebuked several times because we failed to see the prospect of quick riches and sure health, that Dr. Thomas had promised. The record goes back some four or five years, but those who acted on the information we had at the time, are not now financially concerned with Dr. Thomas' indictment or forfeiture of bail. J. J. D.

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HERE'S the mechanical milker that uses natural methods—*natural* air pressure. It's more gentle—safer—*less expensive*. Doesn't use compressed air. Therefore, requires but one tank and one pipe line. Gently, thoroughly massages the teats by use of *natural* air pressure. Works regularly—keeping cows quiet and contented. Works uniformly—increasing milk yield.

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The capacity of the double or two cow unit is 20 to 30 cows per hour. One man can operate one or two double units. Its use assures quicker, better milking—purer milk—milk free from stable odors or impurities. Write today for full description and pictures of Empire Milkers in use in modern dairies everywhere. Also for our offers on our famous Empire Cream Separators, Sta-Rite Engines and Empire Star Feed Mill.

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Hired man a poor milker—he quits or goes off on a spree—all hands drafted in—hours lost morning and night—teams idle—"got to get back for milking." Just as if there aren't 250,000 cows milked twice a day with

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May we write you the name of your nearest *Hinman* owner neighbor and send you a booklet? A postal will do.

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Get The Latest Modern Silage Methods

Tells you all there is to know about present-day silage feeding—how to build silos. Gives reliable and unbiased facts (we do not sell silos) on every silo built—home made—stave, hoop and octagonal silos—pit, brick, tile, cement, concrete silos—all modifications. Also covers every crop used for silage—41 of them. Here's an entirely new book—264 pages—better than former copies used as text books in colleges. Copyrighted November, 1914. Ten page index. We send it for 10c coin or stamps. Send for this new copy today.

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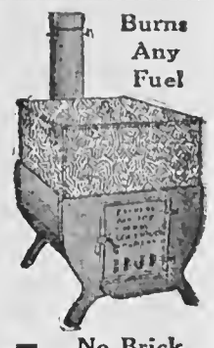

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12-16-20 Gauge Hammerless "Pump" Guns

The Safest Breech-Loading Gun Built!

Six Quick Shots!

The *Marlin* hammerless repeating shotgun is a fine-appearing, beautifully-balanced gun, without any objectionable humps or bumps; no holes on top for gas to blow out through or water to get in; can't freeze up with rain, snow or sleet; its solid steel breech (not a shell of wood) permits a thoroughly symmetrical gun without sacrificing strength or safety; **it is the safest breech-loading shotgun ever built.** Six shots in 12 and 16 gauges; five in 20 gauge.

It is **Hammerless** with **Solid Steel Breech** (inside as well as out)—**Solid Top—Side Ejection—Matted Barrel** (which costs $4.00 extra on other guns)—**Press Button Cartridge Release**—(to remove loaded cartridges quickly from magazine without working through action) **Double Extractors—Take-Down Feature—Trigger and Hammer Safety.** Handles rapidly; guaranteed in shooting ability: price standard **Grade "A" 12-gauge gun, $22.60; 16- or 20-gauge, $24.00.**

Send 3 stamps postage for big catalog describing all *Marlin* repeating shotguns (hammer and hammerless), all *Marlin* repeating rifles, etc. Do it now!

The Marlin Firearms Co.
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Books for Girls....1400
Soen in New York Shops....1401
Steamed Chocolate Pudding; Roast Pig....1401
Irish Moss Blane-Mange....1401
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MISCELLANEOUS.

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Nov. 20, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotels and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

In the latter part of the week there was considerable increase in receipts of fresh creamery, resulting in a drop of one cent. Buyers who usually would have been in the market for this surplus had already stocked up with high scoring storage. The market on lower grades of creamery and dairy is decidedly weak.

Creamery, extra, above 92 score, lb	34½	@	35
Extra, 92 score	33½	@	34
Good to Choice	28	@	32
Lower Grades	23	@	25
Storage	26	@	33
State Dairy, best	32	@	33
Common to Good	23	@	29
Ladies	20	@	22
Packing Stock	19	@	21
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 35 cents.
Chicago creamery, 24@32.

CHEESE.

Business is very light with an increased percentage of poor stock. Prices are cut without hesitation, except on fancy State make. Holders of equally good quality Wisconsin appear ready to meet buyers to move the goods.

Whole Milk, fresh, specials	15½	@	15¾
Average fancy	15	@	15¼
Under grades	11	@	14
Daisies, Wisconsin	14½	@	14¾
Skims, specials	13	@	13⅜
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS

Fancy nearby whites continue scarce, very few being good enough to meet the top price quoted. A great proportion of the supposedly high grade receipts run in value from 34 to 38 cents. Of medium and lower qualities there is considerable surplus. Small movements of storage are noted at prices ranging from 22 to 25 cents.

White, choice to fancy, large	55	@	57
Medium to good	40	@	50
Mixed colors, best	40	@	43
Common to good	25	@	35
Storage, best	24	@	25
Lower grades	18	@	20

FRESH FRUITS.

Apple market is rather quiet, though the best fruit is quite firmly held at top quotations. Business in grapes very dull. Cranberries in heavy surplus and low.

Apples—BenDavis, bbl	1 75	@	2 00
York Imperial	1 75	@	2 50
McIntosh	2 50	@	4 00
Jonathan	2 50	@	3 50
Twenty-ounce	1 50	@	2 75
Spitz	1 75	@	3 00
Baldwin	1 50	@	2 25
King	2 00	@	3 25
Greening	2 00	@	3 75
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 50	@	5 00
Bose	3 00	@	5 50
Sheldon	3 00	@	5 50
Kieffer	1 00	@	2 25
Grapes, Catawba, 4lb bkt	10	@	12
Black, 4lb. bkt	10	@	11
Black, 20lb. bkt	35	@	40
Bulk, ton	30 00	@	38 00
Cranberries, Cape Cod, bbl	2 00	@	5 50
Jersey, bbl	3 50	@	4 00

HOPS.

Prime to choice	27	@	29
Common to good	23	@	26
Pacific Coast	11	@	14
Old stock	7	@	9

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

Chestnuts, Northern, bu	1 50	@	3 00
Southern	1 00	@	2 00
Hickory Nuts, bu	2 50	@	3 00

BEANS.

Prices are 10 to 25 cents per 100 pounds higher on all varieties. There is some activity in the export business on Red Kidney.

Marrow, 100 lbs	6 25	@	6 75
Medium	4 50	@	4 60
Pea	4 50	@	4 60
Red Kidney	4 50	@	5 90
Lima, California	5 90	@	6 00

VEGETABLES.

The potato market is in better condition so far as demand is concerned, but the supplies are still so large that there is no price improvement. Cabbage continues low. Onions doing better, some exports to Europe having been made

Potatoes—Jersey, bbl	1 50	@	1 75
Long Island, bbl	1 50	@	2 00
State, 180 lbs	1 50	@	1 75
Maine, 180 lbs	1 50	@	1 75
Bermuda, bbl	4 00	@	6 50
Sweet Potatoes, bbl	2 00	@	2 50
Brussels Sprouts, qt	06	@	12
Beets, bbl	1 00	@	1 50
Carrots, bbl	75	@	1 00
Chicory, southern, bbl	1 50	@	2 00
Celery, doz	10	@	35
Cauliflower, bbl	75	@	3 00
Cucumbers, bu	1 50	@	2 50
Cabbage, bbl	75	@	1 00
Ton	5 00	@	9 00
Kale, bbl	75	@	85
Lettuce, half-bbl. basket	25	@	1 00
Onions—Red, bag	65	@	1 00
Yellow	90	@	1 15
Peppers, bu	1 00	@	2 00
Peas, bu	75	@	3 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl	75	@	1 00
String Beans, bu	1 00	@	2 50
Squash, Hubbard, bbl	85	@	1 00
Marrow	60	@	75
New, bu	1 00	@	1 50
Egg Plants, bu	1 00	@	3 00
Tomatoes, box	75	@	1 50

LIVE POULTRY.

Chickens, lb	15	@	15½
Fowls	14	@	16
Roosters	10	@	12
Ducks	15	@	20
Geese	14	@	15

DRESSED POULTRY.

At this writing arrivals of freshkilled turkeys have been light. Holders of cold storage stock have been unloading heavily during the week, and a good many retailers have already got their Thanksgiving supplies of frozen turkeys. Roasting chickens rather scarce.

Turkeys, choice, lb	22	@	23
Common to good	15	@	20
Chickens, choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	24	@	25
Fowls	14	@	17
Ducks, Spring	16	@	20
Squabs, doz	1 25	@	3 75

HAY AND STRAW.

Prices have dropped to their level before the disease embargo on shipments was in force. The outlook is for slightly lower prices when the market becomes settled.

Hay, Timothy, No. 1, ton	21 00	@	21 50
No. 2	19 50	@	20 50
No. 3	17 50	@	18 50
Clover mixed	18 00	@	20 00
Straw, Rye	13 00	@	13 50

LIVE STOCK.

Native Steers	6 00	@	10 00
Bulls	5 25	@	7 00
Cows	4 00	@	6 00
Calves, prime veal, 100 lb	10 00	@	13 50
Culls	6 00	@	8 00
Sheep, 100 lbs	4 10	@	5 50
Lambs	8 00	@	10 00
Hogs	7 75	@	8 00

GRAIN.

Wheat is two to three cents higher, partly owing to heavy exports, and partly because of the low grading quality of considerable of the current receipts. Corn is three cents lower. Arrivals of new are increasing, weather having been favorable for curing.

Wheat, No. 1, Northern Spring	1 28	@	..
No. 2, Red	1 25	@	..
No. 2, Hard Winter	1 25	@	..
Corn, as to quality, bush	77	@	81
Oats, as to weight, bush	49	@	53
Rye	1 10	@	1 12

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	55	@	60
Mixed colors, new laid	45	@	50
Ordinary grades	25	@	35
Butter, fancy prints, lb	40	@	42
Tub, choice	32	@	36
Chickens, roasting, lb	25	@	27
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	23	@	25
Fricassee, lb	18	@	20
Fowls	18	@	23
Turkeys	24	@	28
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

Our export of breadstuffs for the 10 months ending with October were $204,216,478, an increase of $33,995,959 over the same period last year. In October alone we shipped 19,000,000 bushels of wheat to Europe.

Orders for 1,000,000 yards of overcoating for France have been placed here at a manufacturing cost of $1 to $1.20 per yard. Specifications for part of the order call for 50 per cent. straight wool and the remainder shoddy or other wool by-products.

*

A Mediterranean steamer with no cargo in the lower hold and 3,000 sheep quartered on one of the upper decks, recently capsized drowning the live stock and 180 passengers. The sea was rough and as the vessel rolled the sheep crowded to one side. While badly listed from this cause the ship was struck by a large wave and upset.

*

The cost of finding the physical valuation of our railroads, as a basis on which to judge whether or not rates should be increased, is estimated at about $50,000,000, $35,000,000 being the railroads share of the work, and the entire $50,000,000 being what the public will pay in one way or another, in addition to whatever increase in fares and freights may be granted. Such an appraisal would be of value but a very short time after its completion, so it would apparently be necessary to make frequent appraisals, or provide a large permanent force of valuation experts and assistants to keep the figures up-to-date.

N. Y. AGRICULTURAL SOCIETY MEETING.

The 75th annual meeting of the N. Y. State Agricultural Society will be held in the assembly parlors of the Capitol, Albany, N. Y., January 20-21.

Dairy Conditions—Prices and Products.

WE have had four years of drought, and to cap the climax had a seven-inch rain in 24 hours, which gave us the highest water ever known, and took everything in the river bottoms; hence we are very short of feed, and a great deal of stock has been shipped out. Good cows sell for about $100. Cream brings 32 cents. Dairymen will carry over all of their cows. WM. RIEHL & SONS.
Washington Co., Mo.

Nov. 9. Most of the milk in this section is made into cheese; some cream is shipped to Milwaukee, while a few separate their milk, make butter and supply private families in Appleton. The latter is our method, supplying private families at five cents per pound above Elgin quotations, also supply buttermilk at five cents per quart. There will be the usual number of cows wintered over this season; only the surplus will be sold. Good grade Guernsey cows bring the most; we realize from $100 to $140 each for what we have to dispose of. Grade Holsteins sell well, but do not bring as much per head as Guernsey cows. The supply of feed is plentiful; had a heavy crop of hay and corn. The majority of the farmers have silos; a great many were erected in the last two years. Quite a few are raising Alfalfa, a crop which does fairly well here. The predominating breed of cows are grade Holstein, with Guernseys next. A very small percentage of the cattle are purebred. A very few of the dairymen weigh and test their milk. In our own herd each and every milking is weighed, and tested monthly. Our cows produce from 325 pounds to 550, of butter a year, and from 5,500 to 11,000 pounds of milk a year. W. G. JAMISON.
Wisconsin.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

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Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN wants work on a farm, cannot milk. Address J. LLOYD DAVIS, Springville, N. Y.

EXPERIENCED FARMER, married, wants position; good dairyman; best references; state wages. K. H., care R. N.-Y.

FARM MANAGER—Open for engagement; thoroughly experienced in fruit and general farming. A. B. C., care R. N.-Y.

EXPERIENCED single man wanted to do bottling and washing in dairy; good wages. QUAKER HILL FARM, Plainfield, N. J.

WANTED—A reliable young man wishes to rent a poultry farm well equipped and stocked; state particulars. R. G., care Rural New-Yorker.

COMMON SENSE EXPERIENCED MANAGER wishes position; salary or shares; married; Cornell training; references. LESTER HAYES, St. Johnsville, N. Y.

POSITION WANTED—As working foreman by agricultural college graduate; understands farm management, fruit, poultry, and general farming; single, good references. Address F. W., care Rural New-Yorker.

FARM MANAGER—Danish, 34, married, no children; college graduate; efficient in all branches; has handled over 100 men successfully; highest character and credentials; absolutely trustworthy, seeks engagement wherein efficient man of highest attainments and efficiency is appreciated. Also single man with equal ability, open for engagement. M. P. MADSEN, 320 Fifth Ave., N. Y. City.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

CHOICE WINTER APPLES; two dollars per barrel. BENJ. WILLIAMS, Rushford, N. Y.

FOR SALE—Carload chestnut fence posts; price reasonable. QUAKER HILL FARM, Plainfield, N. J.

TEN NEW ROBERTSON chain, swing stanchions; never used; $7.50. CARRYL, Whitehouse Station, N. J.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

WANT TO EXCHANGE for four barrels sound winter apples, pair handsome buff Wyandotte poultry. CLIFFORD BEMAN, North Emporia, Va.

FOR SALE—DeLaval Separator No. 15; butter worker, churn, butter-print, used but little; cheap for cash; also maple syrup. C. LANGFORD, Clinton, N. Y.

28 INCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

GRAPEFRUIT AND ORANGES by express in half or whole boxes, F. O. B. Miami, Fla.; fancy brights at $1.75. Golden Russets at $1.50 per box, with order; delivered prices quoted on request. GEO. B. CELLON, Tropical Grove, Miami, Fla.

WANTED to purchase poultry fruit farm; full particulars. FARMER, care R. N.-Y.

100 ACRES—$2,000; good land, houses, orchard and timber; $300 cash, balance $200 a year. B. B. BAGBY, M. D., West Point, Virginia.

SALE of creamery, real property and water privilege; also personal property, in parts. TOWN HALL, Livingston, N. Y. Dec. 4, 1914, at 1 o'clock P. M.

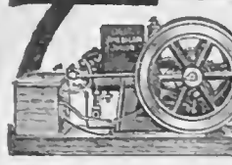
21 ACRE, level, productive farm; nice buildings, only 500 feet from city line of Towanda; finest location in Bradford Co., Pa.; would make a desirable gentleman's place. J. A. JOCOY, Towanda, Pa.

FOR SALE—Farm 85 acres, 65 under cultivation apple and peach orchards, one-half mile of depot and town of 1,000 inhabitants; bargain to quick purchaser. HANSON S. PHILLIPS, Hebron, Md.

FARM 147 acres, productive soil; well watered; good wood lot, handsome 15-room house; prosperous community; best of neighbors; near R. R., churches, schools and stores, $4,000. I. F. GEROW, New Paltz, Ulster Co., R. D. 1, N. Y.

117¾ ACRE ONEIDA COUNTY DAIRY FARM, $4,900; $2,500 cash; balance easy terms; brand new 10-room house, finished oak and cherry, natural; water and sink in kitchen; cement basement barn, stanchion 20 cows; hay track; plenty other good buildings; $500 worth new, heavy oak furniture; all tools, machinery, etc.; 3½ miles to city and railroad; wish to hear only from those interested. Address owner, NORMAN HOOVER, R. 5, Camden, N. Y.

1½ H. P. $29.95



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The body color is Brewster green—always so rich and attractive. It is neatly trimmed with fine hair-line striping of ivory white.

The electric starting and electric lighting equipment is one of the most reliable and best established on the market.

There is also a high tension magneto which is independent of the starting and lighting system and requires no dry cells.

This car rides just like it looks—beautifully. The new, long, improved underslung rear springs give maximum riding comfort under all conditions.

Tires are 33" x 4" all around. Never before has a car at this price come equipped with such large tires.

It seats five adults comfortably, without crowding. It is a big, spacious five-passenger touring car.

It has the famous Overland 30 h. p. motor of remarkable strength, speed, durability and economy, developing more power than you will ever require.

This car at this price is destined to be known as the greatest motor car achievement of the season.

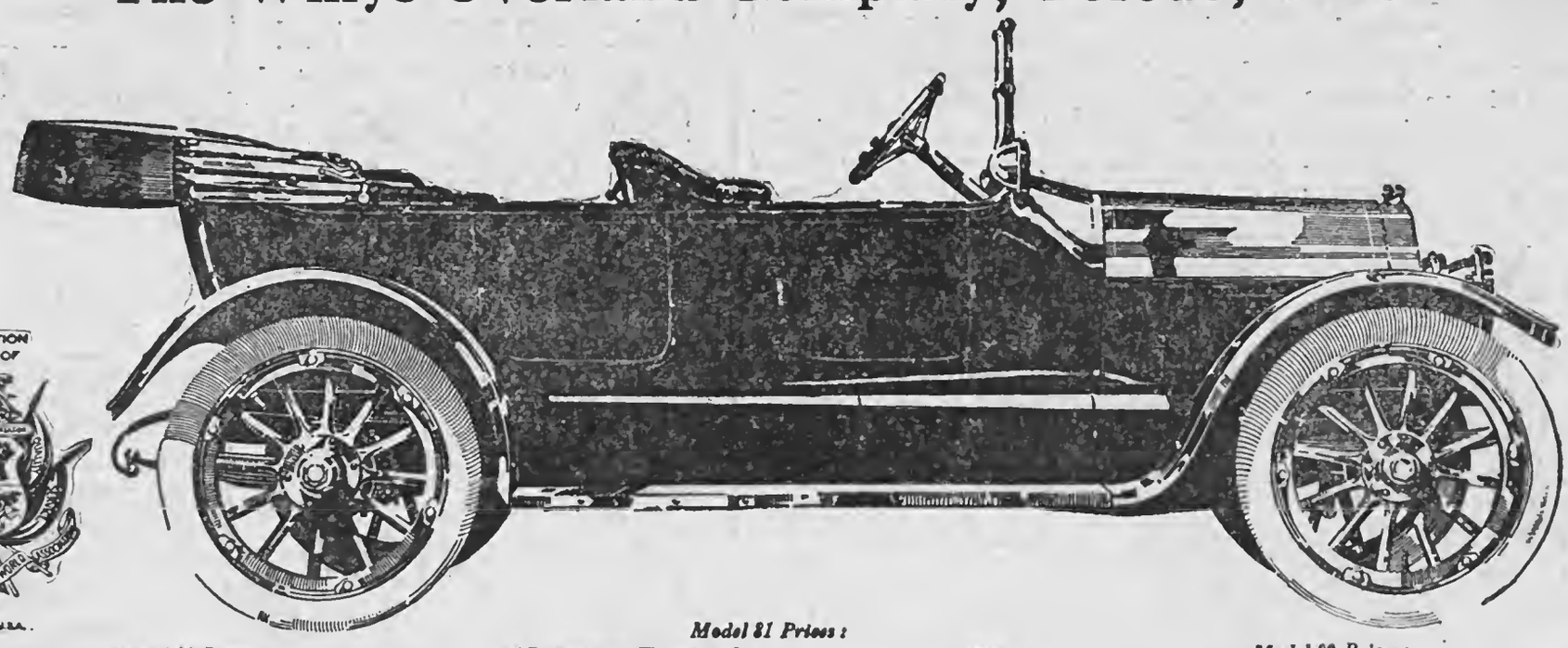
Orders are now being taken for immediate delivery.

Following are a few of the many high-grade features

30 h. p. motor
Stream-line body
Ample room for 5 passengers
Electrically started
Electrically lighted
Electric horn
High-tension magneto
All electric switches on instrument board of cowl dash
Ventilating, rain-vision type windshield
High-grade upholstery
Thermo-syphon cooling
Five bearing crankshaft
Rear axle; floating type
Rear springs; extra long, underslung, 3-4 elliptic
106 inch wheelbase
33 inch x 4 inch tires
Demountable rims
One extra rim
Left-hand drive
Center control
Body color: Brewster green with ivory white striping
Mohair top, top boot, robe rail, foot rest, speedometer, tire carriers, full set of tools, jack and pump.

Handsome catalogue on request. Please address Dept. 127

The Willys-Overland Company, Toledo, Ohio



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CORNELL UNIVERSITY 1914

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. LXXIII. No. 4284. NEW YORK, DECEMBER 5, 1914. WEEKLY $1.00 PER YEAR.

PLANNING FOR THE FARM AUCTION.

How To Make It Pay.

THE RIGHT TIME.—The time of holding an auction should be considered, for this may go a long way in affecting the returns of the sale. The dairy farmer, if his cows freshen in the Spring, and his territory is a Summer dairy section, should wait until Spring before holding his sale. In a section devoted to Winter dairying, the farmer will observe the situation differently. The most disastrous auction the writer attended was on a beautiful October day. Every farmer realized the warm weather could not continue much longer, and he stayed at home. Those who attended the auction were loafers or farmers who were interested only in the social side of the auction and the free luncheon. Auctions timed in seeding time, in the midsummer, in harvest or silo filling or corn-harvesting and husking time are doomed to be in a greater or less measure a failure. If the weather is good the greater will be the shortage in the footings at the close of the sale. If weather is bad, the farmers will get out, face a bad rain or snow and stand around shivering in a big overcoat at a sale rather than lose time. "It is the worst morning we have had this Winter, and I am going to the sale," I told the family, and I hurried around with the chores, and got started for the sale. The roads were drifted, snow came in clouds, and before I had got far I saw by the way the neighbors were turning out there would be some lively competition. Bad weather is oftentimes of assistance to a sale rather than hindrance, for farmers can do nothing, and the social diversion of the sale and the love of the game of buying brings them to it.

ADVERTISING A SALE.—In advertising an auction, don't go at it in a half-hearted way, for advertising brings the business. The local newspaper and the auction bill are the two efficient mediums of publicity, and if the auction is one of dimensions, if there are purebred animals for sale, the farmer should try the live-stock columns of the farm paper. The larger breeders rely on the agricultural press altogether. Many farmers endeavor to get inside a $5 bill in their advertising and their auction printing. If they would increase their appropriation to three or four times the figure I have no doubt that each dollar additional would return them $25 more in the footings at the close of the sale. One of the largest country sales I ever attended was one where the proprietor spent upward of $40 advertising his farm auction, and he secured buyers from several counties. His returns were several hundred dollars in excess of his anticipations. I know another farmer who had arranged for an auction, and he learned there would be another auction within two or three miles of his farm. He could not secure his auctioneer for several weeks again, and he was anxious to clean up the sale. He went ahead, only he used a heavier appropriation for advertising, and his returns more than gratified him. He declared he would be satisfied with $1,200 as total, but when he figured the sale that night with his clerk, the returns amounted to over $1,600.

THE HAND BILL.—Don't try to economize by using a small bill as large as a sheet of writing paper. It doesn't attract attention, and it shows up "small." Have good bills printed, about the size of two pages of this paper opened out. Get the bills printed on good stock. The printer should have some special manila that is excellent for auction work. This manila will last during the life of the bill, and for months after the sale. Don't try to crawl out with a small expenditure by using some material like light newspaper print stock, for the first little wind will tear the bills to pieces. A farmer whom I know tried the cheap thin stock, and within two hours after posting I saw several of his bills torn to shreds.

THE FARM AUCTION. INTERESTING THE CROWD. Fig. 615.

THE AUCTION LUNCH.—Treat the crowd right, and they will treat you right. Have something warm for the visitors when the noon hour comes, and have plenty of it. Don't give a cold hand-out; give the visitors plenty of good hot coffee. Don't give them skim-milk with it, but cream, and plenty of sugar. Give some sandwiches, cheese, and baked beans. It may take a little extra work, but it will pay, and if you can have some good hot coffee on tap from the time the sale starts, give the fellows a chance at it. There is no question about the shortest road to a man's pocketbook is through his stomach at the time of an auction. I know a farm auction that was ruined because the farmer was close on lunch. He hoped to get through by noon, but the crowd came slow, and at noon the guests began inquiring about the refreshments, and then before the sale was completed the crowd had nearly all gone home. The ladies' aid of the church may ask the privilege of serving dinner, and in such case I know it would pay the farmer to pay them for absolutely every person served and give the dinner free, although when the church serves the farmers generally expect to pay. When it comes to selling pure-bred live stock entertainment is essential, automobile service, and in instances entertainment in the home and at the hotel for a day or two pays the proprietor profits. I attended the sale of a certain breeder who gave a banquet at the leading hotel of his town, the first night of the sale, provided entertainment for all visitors, and meals for the day's sale, and it paid him. At the banquet, every one toasted the host because of his hospitality. If you live any distance from the railroad, see that transportation is afforded both to and from the trains. Advertising this will insure visitors from away.

CONDITION OF GOODS.—Have stock and equipment in good condition. The farmer who has the reputation of keeping poor unproductive animals will find his sale will suffer from it. If his tools are poor makeshift arrangements, only the class of buyers who use that kind of tools will be present. They will want time, too, and their credit is about as unstable as the goods they buy. Have the stock in good shape, don't try to deceive. Don't try to cover up a broken casting with paint, or pass over a weak part of a machine or animal; the crowd may discover, and if it does not, some one later will. The auctioneer cannot afford to be tricky, for he has certain advertising value to a sale. If he is known to "strike off" goods at somewhere near their value he can command the buyer's bidding more efficiently than if he has the reputation of working his crowd for the last penny. If you have a good large sale, do not leave the load to one auctioneer, have two. One can cry, while the other will work the crowds for bids. This is the way the live stock men do it, and frequently they have three or four auctioneers. See that the clerk is careful about the paper he takes. Many notes given at auctions are not bankable, others taken altogether must suffer a discount of as high as 50 per cent., and then they are only held as collateral. The banker is very critical about accepting these notes. See the clerk has all paper endorsed by responsible parties, and make the note as solid as if given to a bank. And if you don't advertise, and your equipment is poor, don't blame the auctioneer. W. J.

R. N.-Y.—Farmers visiting in New York will frequently be interested in attending the fruit auctions, several of which are held every business day, and advertised in the morning commercial papers. This comparatively new phase of auction selling has proven a great success in systematic and economical handling of staple fruits. A study of one of these auctions will show the value of grading and brands

DISPOSING OF THE APPLE CROP.

NEWSPAPER ADVERTISING.—I was interested in the Hope Farm Notes about disposing of the apple crop, as we, too, have had some advertising experience. We had a heavy crop last year, being on high ground where the May freeze did not reach us. It being our first year, with about 3,400 bushels of apples, and not much provision for holding the crop, I put a small classified advertisement in one of our Ohio papers, offering apples at $1 per bushel and $5 for a barrel of select fruit, with the result that we had orders for some 1,300 bushels from two insertions of a plain five-line advertisement, and some sales again this year from the same parties.

HOLDING THE CROP.—Our crop this year is not nearly so large, though the crop is more abundant outside of our own and a few other orchards. At present our markets are full of apples selling at 50 to 75 cents per bushel. Having good storage facilities this year we have made no effort to sell many of our apples, except such as would not keep. We let them hang on the trees as long as possible, having finished picking November 7, and most of our stock will keep well in ordinary cellar storage, until February or later. Even now we are getting a dollar per bushel for some of our best apples, because discriminating consumers have learned that our apples are not in the same class as most of those offered here at lower prices, more or less wormy, and poorly graded. We now have about 1,100 bushels of picked apples in bins in well-aired, cold cellars. When the weather gets bad for work outside we plan to sort and grade these, and they will all be sold in our local market in bushel crates, mostly direct to consumers, at good prices, long before the season that they might be kept is over.

NEGLECTED ORCHARDS.—There are few here who pretend to take any particular care of their orchards, and for the most part they are going to ruin faster than the younger trees are growing up. While there has been a considerable crop of apples here, those saved for market purposes are not a burdensome quantity, and only a small part of which our market uses. A good many carloads of bulk apples are being shipped in here now. The older trees here are mostly of the "sky-scraper" kind—hard to pick. Those that drop are badly bruised and used for cider, or go to waste. Being poorly sprayed or not at all, most of them drop, unless picked early. In contrast, we have low-headed trees, and the fruit hangs on well. We have comparatively few cider apples. We usually sell a barrel of fresh cider on our market wagon about once a week when making the rounds among customers, having the barrel on the back of the wagon with a faucet to draw from, for those who call for a gallon or two for drinking fresh, for mince pies, making spreadings, and vinegar, and this keeps the cider apples so well cleaned up that there is no waste. C. WECKESSER.

Wayne Co., O.

THE "WATER WITCH" ANALYZED.

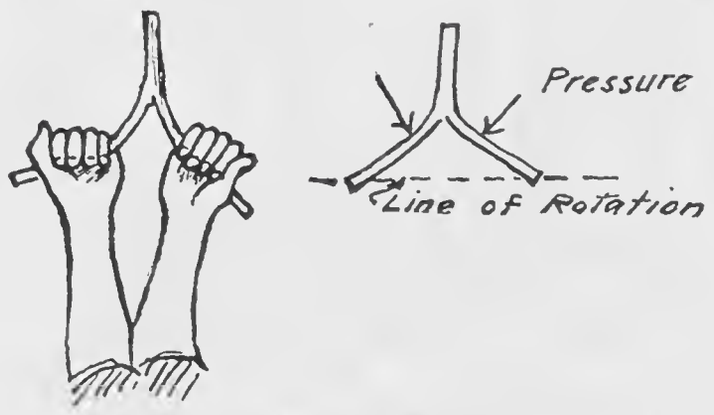
I NOTE "City Ignoramus," on page 204, is in a dilemma when confronted with the "water witch," but think he was too easily "stumped." Usually a little critical analysis will turn a mystery into a commonplace.

In all operations of "water witching" I have witnessed the operator holds the crotched stick in clenched hands with palms turned toward the body and elbows close together. It is an awkward, unnatural position but necessary for successful "witching." A crotch of witch hazel, peach, apple or other wood as suits the individual taste is used. It should be small enough to bend slightly under the fingers.

When operated successfully the free end of the crotch commences to vibrate upon approaching the underground stream, then slowly and irresistably revolves in the grasp until pointing downward, indicating the desired water. Some operators estimate the depth by the bobbing of the twig. At first sight the operations is puzzling, but let us investigate a little.

Hold up your closed fist palm inward. In closing the fingers tightly you will observe that the inner end of the first (at the little finger) moves downward, while the outer end remains stationary. Now you can see what happens when the "witcher" works, as his fingers' close pressure is applied about the middle of the forks from that downward movement of the little finger. If the crotch is held in a vertical position it does not move, but the spring in the forks causes the upright to vibrate, and as soon as it is out of the vertical a lever is in action, and the crotch will rotate around a line between the two fixed ends. The harder one squeezes to keep the twig from turning in the hands, just so much more pressure is applied tending to turn the end downward. If held tightly the bark will be stripped clean from the twig.

If some outside force was really acting on the twig, holding the latter loosely in the hands would only allow more freedom of movement, but as the twig refuses to work under those conditions a "City Ignoramus" might be pardoned for having a few doubts on the matter. The "water witchers" I have seen were all honest in their belief that the instrument worked without effort on their part. They are



THE "WATER WITCH" OUTFIT. FIG. 616.

men naturally gifted in ability to locate water, and the belief that water exists in some locality is involuntarily conveyed to the muscles of the hands, causing the twig to operate.

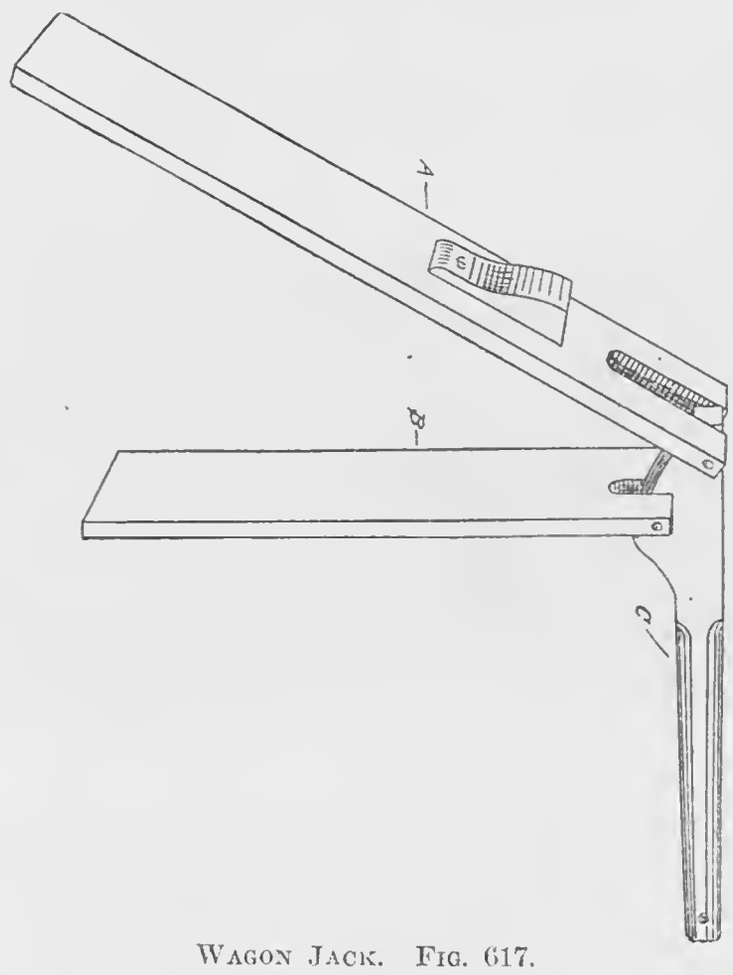
I think I recall an editorial in THE R. N.-Y. wherein the editor expressed himself as unable to decide on the merits of the water witch. That being the case I hope the editor as well as "City Ignoramus" will cut a crotch and try the experiment, proving to his own satisfaction that the water witch is in the same class with the Salem witches of long ago.

Connecticut. LAWRENCE JOHNSON.

A WAGON JACK.

THE ordinary farm wagon, to give the best service, must be kept well lubricated: it makes for easy running and increased wear. Proper lubrication is one of the best horse feeds. Lubrication is too often neglected because of no easy way to apply the grease. It is not at all unusual to see a wagon being "greased" by placing a rail under the axle, and after lifting it up with this lever, blocking it with a piece of board. This is laborious, and consequently the wagon is left to run until it squeaks. I have recently seen a jack that can be made in a short time in any farmer's workshop. The sketch, Fig. 617, shows its construction so plainly that little need be said in regard to it. The one shown was made for light wagons, and for heavier ones would need to be made of heavier material.

It consists essentially of three parts: a piece (A) which carries a support for the axle, (B) which acts as a fulcrum when raising the axle, and the handle



WAGON JACK. FIG. 617.

(C). In use the handle is raised as high as possible and the jack pushed under the wagon until the block on (A) is directly under the axle. The handle is then pushed down and the bolt running through the top of (B) acting as a fulcrum (A) is both pushed forward and raised. The holes in the handle being out of line, the handle locks when in its lowest position. In the drawing (A) is three feet long and 3½ inches wide. The block to support the axle is fastened on by rivets or screws with its top 7½ inches from the top of the piece. A slot is made in the top to accommodate the handle by boring an inch hole through the center of the piece six inches from the top end, and making two parallel saw cuts down to it. A quarter-inch hole is bored through at a point one inch down from the top, through which a bolt is passed to serve as a hinge for the handle. The axle support can be covered with leather, or a piece of old rubber belting to protect the paint on buggies. (B) is made the same width as (A) and in the same way. Its length is two feet four inches. The slot cut in the top is three inches deep. A quarter-inch hole is bored through this at a point one inch from the top to take the bolt that serves as a fulcrum for the handle.

The handle is made from a piece of board two feet two inches in length and four inches wide. This is dressed to 1½ inch wide at each end, and the curved portion shaped as shown. The length of the curved part is nine inches and it is four inches wide at its widest part. The main thing is to get the holes located properly. The first is bored at a point one inch, both from the top and end of the handle. To get the location of the second measure along the top of the handle six inches from the center of the first. Square a line across and bore the hole three inches down from the top edge, and in this line. Put the jack together with a couple of bolts, 3¾x¼ inches. The material used was one inch in thickness. Oak or ash is good for the purpose, but any strong wood will answer. A little study will show how to modify this to fit almost any condition. R. H. SMITH.

Canton, N. Y., Agricultural College.

Overhead Irrigation and Frost Prevention.

PROF. MASSEY'S reply to "L. B. C.," on page 1341, brings up an interesting point I should like to see discussed, namely, overhead irrigation to prevent frost damage to strawberries. I am raising strawberries here on a small scale, and find it very profitable, as late frosts have discouraged many from trying to raise berries, and hence there are few local berries in market. This year's crop averaged me 17 cents per basket delivered to the stores. The two troubles here are droughts and late frosts, and if overhead irrigation will settle both, that remedy is Johnny-on-the-Spot for me. I have already laid plans for an irrigating system of the furrow type of distribution for next year, but shall change directly to the overhead if I can be assured of the two troubles I had feared from such a system: First, lessening the crop by washing away pollen when irrigating to prevent frost damage; second, injury to plants and fruit by scalding from overhead irrigation. At present I protect from frost damage by covering with meadow hay, old burlap, etc., and, of course, this is slow work and only applicable to small areas, in fact, is the limiting factor of our production. I should like very much to get the experience of Prof. Massey and others who have used overhead irrigation on strawberries to protect from frost damage. HAROLD D. PHELPS.

Massachusetts.

R. N.-Y.—Let us have experience in this matter. It is well known that sprinkling or spraying with water will often carry tender plants through a light frost.

Cheap Method of Soil Inoculation.

WE find a number of farmers who realize that a new legume like vetch or Soy beans requires inoculation before it can fully thrive. They object to the cost of the commercial bacteria or of soil from old fields, and therefore lose much benefit from the crop. The *Farm Management Monthly*, of the Department of Agriculture, gives the following account of the way this is managed by some Alabama farmers:

When a new legume is introduced into a locality it often happens that one is uncertain about the land's being inoculated. Many prefer to use soil, from 600 to 800 pounds per acre, from a field in which the legume has been grown successfully. Such fields are rarely within easy driving distance, so that the matter of hauling becomes an item. If, for instance, 600 pounds per acre were to be used on a 20-acre field this would mean six tons of soil to be hauled.

To obviate this expense and trouble a progressive Alabama farmer has adopted the following plan: The year before he sows the whole field he inoculates a strip through the middle and sows this strip to the legume. The remainder of the field might be sown to wheat, oats, or other cover crop. If a good stand results he is sure inoculation is present in the soil covered by the strip. The following season he loads his distributor from the inoculated strip in the center of the field, and then drives to the edge of the field and back, where he refills the machine and drives to the opposite side, continuing the operation until the whole field is covered. In locating the strip to be inoculated the capacity of the distributor should be taken into consideration and the position of the strip so determined that the machine can be driven to the boundary and back to the source of supply without reloading.

"THE Lord loveth a cheerful giver." "Whom the Lord loveth he chasteneth." "Spare the rod and spoil the child."

THERE are not many young people who want to run away from a profitable business. You must make farming pleasant and profitable if you expect the boys to stay with it.

BIG CORN STORIES REVIEWED.

I NEVER saw an article that had more good, hard horse sense in it than the one in reply to G. B., "$140 Per Acre From Corn," page 1234. Corn at 90 cents per bushel, cornstalk silage $2 per ton, corn stover $12 per ton and $20 per ton for cow pea hay may be correct for South Carolina. Our prices here in the mountains of East Tennessee are corn, 60 cents per bushel, corn stover $4 per ton, cow pea hay $12. We make very little silage from cornstalks after the ears have been removed, but $4.50 per ton was what we received last Winter for silage from corn that none estimated less than 65 bushels per acre, the ears went into silo with the stover. Before any man can tell how much profit he was making on land planted to corn that made 100 bushels per acre he must add the cost of plant food removed by the corn crop to the cost to cultivate and harvest the corn; 100 bushels corn will remove:

	Pounds in 100 bushels.		
	Nitrogen.	Phos. Acid	Potash.
Grain	100	17	19
Corn stover	48	6	52
Total.....	148	23	71

The nitrogen at 15 cents per pound would be $22.20; phosphoric acid at three cents, 69 cents; potash at six cents $4.26, or a total of $27.15. Now add this amount to $49.25 and you have $76.30; this from $140 is $63.70 per acre profit. We all know if the corn crop was fed to farm stock and all the manure made therefrom returned to the farmer it might be possible to return to the soil 66⅔, and in some cases 75 per cent. of the plant food removed by the corn crop. And we know also, badly as we dislike to admit it, that as an average for the whole country, north, east and west, as well as south, not over 25 per cent. of the plant food in farm crops, that are fed on the farm, ever sees the field on which it grew, or any other field on the farm.

It may be that some of my R. N.-Y. friends may think 15 cents per pound for nitrogen, three cents for phosphoric acid, and six cents for potash too steep, but nine out of 10 farmers pay more, and when they purchase a complete fertilizer so-called, they pay away yonder more. It would cost us nearer 20 cents for nitrogen and five cents each for potash and phosphoric acid. Yes, sir, you are right. Just such stories as this have led thousands of honest, sober, industrious and frugal men and women to sell out their homes, leave steady employment at fair wages, just to be a back-to-the-landers, with high hopes of getting rich quick; the results we are all too familiar with. We of Crowell Farm are back-to-the-landers, but we went with no such high hopes. Twelve long, hard-working "skimpy" years of our life's best manhood have gone into our fields; each one of them we know by name. We have been fairly successful. Men from a distance have come to see our work, some to ask questions, others to criticize, while others come to "write us up."

I am only a stiff-fingered farmer two score and eleven years young. I get down in the midst of all farm work and fan the clods and weeds; when able, and often when a wee bit of rest would seem to be better. But I never made $140 on an acre of corn, no, not even on an acre of Alfalfa. But we have often made 100 bushels of corn on an average for a whole field. We are now to-day harvesting and housing the corn on a four-acre field that looks as though we are to have 440 bushels of good sound corn for the four acres. O. P. R. FOX.

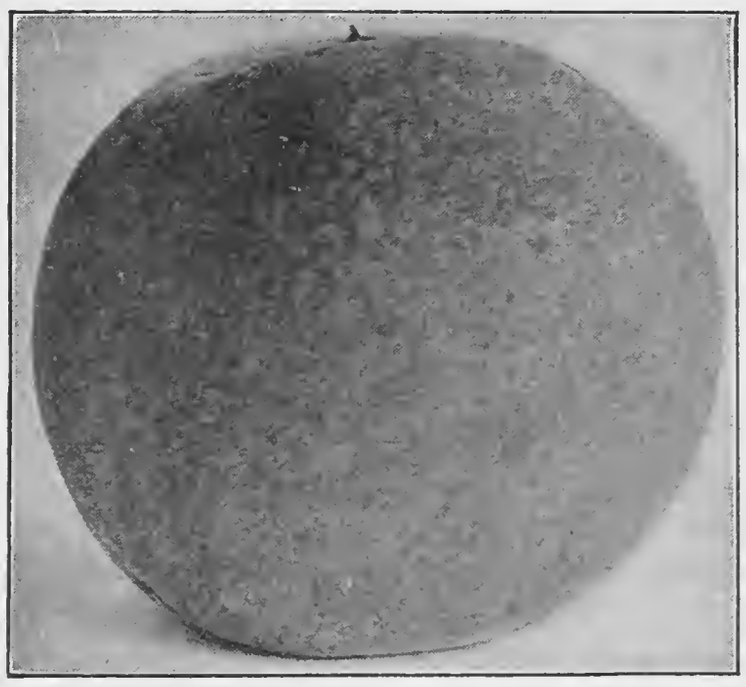
Tennessee.

CITY PEOPLE ON THE FARM.

IT is an odd week when we do not receive at least a dozen letters from would-be back-to-the-landers. There is a new movement away from the city. In a way the European War seems to be partly responsible for this, though in a strange way. Some of these back-to-the-landers have been told that this country must feed Europe, and that every acre of soil must help do this. Every egg, every hen and every potato will be needed, they say. No use telling them that fine potatoes are now selling at the farm for 30 cents a bushel. What does the back-to-the-lander care for that so long as his imagination is free? So they come for impossible advice. They also want to know what to study. Here we can satisfy them. The first thing to commit to memory is Dr. G. F. Warren's pamphlet on "Some Suggestions For City Persons Who Desire To Farm." This is issued by the Cornell Experiment Station at Ithaca, N. Y. It is a sound and sensible statement of the hard facts which one will find in the country. Here is a sample of the straight common sense which fills this pamphlet:

Farming is manual labor. Very few persons make a success of farming who are not workers as well as managers, and these few persons nearly always come up through the labor experience. If a middle-aged person has never learned to do manual labor, such a change is still more difficult. If the members of such a family are very sure that they desire to go to farming, it is safer, if possible, to rent a small place in the country and continue with the city occupation. Some chickens and a cow can be kept, and a garden raised. The family can do most of this work. The small enterprises can be increased, and, if successful after a few years, it may be safe to leave the city work and go to farming.

Another safe method of procedure for a man with a family and small means is to put his money in a savings bank and hire out as a farm hand for at least a year before any of the money is invested in farming. The amount of wages received will not be very large, but the danger of losing the entire capital through premature investment may be avoided. Until an able-bodied person is able to earn good farm wages for some one else, he is certainly not ready to direct a farm for himself—no more so than is a clerk ready to run a grocery store before he can earn good wages as a clerk in that store.

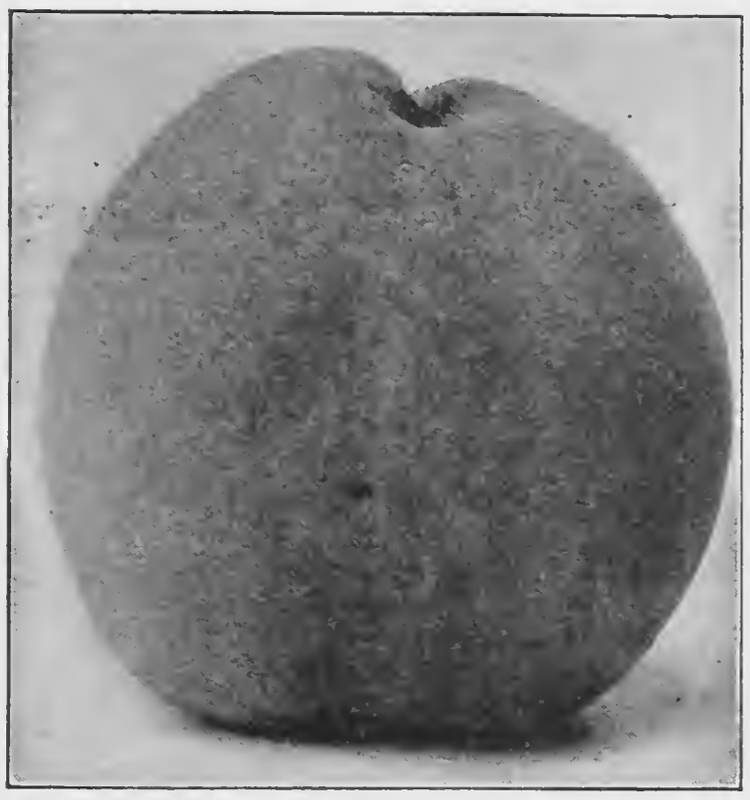


ELROSE PEACH. FIG. 618. See page 1419.

We have been accused of throwing cold water on the hopes of the back-to-the-landers. What would *you* do if you wanted to put out a fire which you knew would destroy your neighbor's property? The writer has gone back to the land twice. We confess that the first trip was a dead and dismal failure, but it gives one the right to say that Dr. Warren's pamphlet is sound.

LIMESTONE AND SLAKED LIME.

THERE ought not to be all this argument about using different forms of lime. The ground limestone men are worst in this respect. You get into trouble right away if you venture to differ with them. Many of them live close to lime quarries where the limestone can be crushed locally, with a short haul to the farm. Some of us must pay high freight rates, and we find that it pays to buy slaked or "quick" lime because we get more actual lime in a ton, and there is no reason why we should pay freight on useless water or carbonic acid! In figuring which form of lime to buy we have reasoned that for immediate results one pound of slaked lime is equal to two pounds of limestone. This statement has been challenged, but a recent experiment at the R. I. Experiment Station shows its truth. Experiments were made in using different forms of lime on mangels and carrots. They used limestone both unsifted as it came from the crusher and also in four different degrees of fineness. Then they used slaked lime—figuring to obtain equal amounts of actual lime in each case. Here is the result, summed up:



KRUMMEL'S OCTOBER PEACH. FIG. 619. See page 1419.

As a general rule, then, it would probably take 200 to 300 pounds of limestone, depending upon its fineness, to produce the same effect the first season as 100 pounds of freshly slaked lime.

Some of the coarse limes gave poor results, but this general conclusion is in line with the advice we have given. It may be said that the ground limestone gives more permanent results. The fact is that most of us, on high-priced land, and spending money freely for chemicals, must have quick results. That is why we use soluble plant food. There are no doubt cases where the slower-acting limes and chemicals would answer, but it is not safe to take results obtained through such methods and apply them directly to other cases where the conditions are entirely different

WHERE TO USE THE MANURE.

I AM undecided as to how to use our stable manure most advantageously. We have a crop rotation consisting chiefly of corn one year, oats or barley seeding with Timothy and clover, which runs three or four years before it is broken up again. We are trying to establish Alfalfa but not with very good results. I am buying a car of ground raw phosphate rock to mix with stable manure, about a pound per cow per day. We also use Soy beans with corn (Leaming) for silage. We inoculate all legumes. I would like your advice as to when to use the manure most advantageously. One farm has its meadows in the Mohawk Valley (Montgomery County), and it often overflows, so that Fall plowing and Winter spreading of manure is inadvisable. On the other farm we have been keeping the manure and spreading it on new seeding after the grain is taken off. On this farm I have been inclined to think it might be wiser to handle it differently. We have used very little commercial fertilizer. Would it pay and what formula would you advise our mixing for grass land? H. A. H.

New York.

In most rotations the manure is put on the sod and plowed under for corn. This crop is thought to be best for utilizing the large amount of organic matter which the sod and the manure contain. Where potatoes come in the rotation, fertilizers, if any are to be used, go on this crop. The plan is to make this "money crop" as large as possible. Where potatoes are not grown and there is much manure used the bulk of it goes on sod for corn, and the chemicals on the grain and grass. The theory of this practice is that corn is the best crop to dispose of the manure and sod, and that the nitrogen in the manure being mostly in an organic form will become available for several years and supply the following crops in the rotation with the help of the chemicals. This plan, of course, means hauling the manure out daily or during the Fall and Winter for spreading on the sod. This means also a fairly level farm, so that the surface wash of water will not take too much of the manure away. Where the meadows are overflowed it would not pay to spread manure during the Fall and Winter. In such case we think it would pay better to compost or pit at least a part of the manure and spread it on the meadows in Spring after danger of flooding is over. A good chemical mixture for such a farm, to use on grain and grass, would be three parts of fine ground bone and one part muriate of potash.

A WELL THAT STAYS FULL.

I HAVE a drilled well 185 feet deep, six-inch casing. The water rises 123 feet, or within 62 feet of surface. When the well was completed it was tested, and could not be lowered. Shortly after being put down we had heavy rains. The water was found to be within two feet of the surface, no doubt surface water. After the windmill was erected and pump started it pumped down to the normal height, 123 feet. This was eight years ago. But it has done this same thing several times. Why does not this water settle down to the normal water level, 123 feet? W. H.

New York.

Any well that yields water is connected with a water-bearing formation from which the water can enter the well with more or less freedom. When the well is not in use the water rises in it to such a level that there is equilibrium between the weight of the water column in the well and the pressure of the water in the rock formation. When water is withdrawn the water level is lowered, and the weight of the water column in the well is diminished. Hence the equilibrium is disturbed and water is forced into the well until the original balance is restored. When a well is pumped the water level is therefore always temporarily lowered, the amount of drawdown depending upon the rate of pumping and upon the freedom with which the water can enter the well. If water is poured into the well the converse process takes place—equilibrium being destroyed by the weight of the water column in the well becoming greater than the pressure of the water outside—and consequently water is forced out of the well into the formation. A well that yields water freely will also dispose of water freely. According to W. H.'s description, his well does not appear to act according to this principle, and without more specific data I am not able to offer an explanation.

GEO. OTIS SMITH.

Director U. S. Geological Survey.

R. N.-Y.—Has any one an explanation to offer??

YOU will see that the Leghorn "favorite hens" at least are doing well. The "Reds" will come along yet.

VAN DEMAN'S FRUIT NOTES.

Wire Gauze Tree Protectors.

HOW close to the tree should wire gauze be, and about how high, as a protection against borers? I should think if it was not tight to the tree the borers could climb up between the tree and gauze. L. P. S.
Lakewood, O.

In applying wire gauze to the base of peach or other fruit trees to prevent the borers from getting in them, it should be of galvanized material, and a very fine mesh. The height should be about 10 inches, and the width sufficient to pass about the trunk and leave a space of an inch or more between the back and the wire. The ends of the little wires should be bent or fastened into the edge of the end of the piece so as to form a closed tube. A wire over the outside at top and bottom is an additional means of security. The bottom should be sunk a little in the ground, and the top stuffed with a little soft grass or excelsior, to fill the space and thus prevent the possibility of the beetles that lay the eggs from getting to the bark to deposit them. Paper wraps are sometimes used, but they are not so durable as the wire gauze nor do they allow the circulation of air nearly so well.

Bosc Pear in Massachusetts.

I WOULD like to have the advice of Mr. Van Deman as to what particular culture and pollination the Bosc pear needs. What pear should be planted with it and would it be profitable to plant compared with the Bartlett or Angouleme in this locality (Southern Massachusetts)? I have about an acre that I wish to plant to pears. The soil is good clay loam. Does a Bartlett need other pears to pollenize? L. W. J.
Rehoboth, Me.

The Bosc pear is not always to be depended on to pollinate its own flowers, although it is not really self-sterile as are some other varieties. But just what varieties are the most suitable to pollinate the Bosc has not been worked out. However, it is almost certain that any standard variety that blooms at the same time with it will serve the desired purpose. The Anjou, Bartlett and Angouleme are profitable and ought to be all right. Bosc should be top-worked on other varieties that are very vigorous and not especially subject to blight, because it is a poor grower and needs the impetus of a strong one that does not readily become diseased. Bartlett bears much better for having other varieties growing near it.

Propagating Nuts; Fertilizing Apples.

WHEN and how should I plant chestnut, oak and black walnut seeds for seedlings to be used in forest planting? Would it be better to plant the nuts in garden and transplant to the woods later? 2. What amount of fertilizer and when apply and what kind should I use for two, three and 15-year-old apple trees?
Port Allegany, Pa. R. C. C.

1. Nuts and acorns of all kinds should never be allowed to get very dry in the Fall or at any time. Nature drops them on the ground and covers them with leaves that keep them moist until they start to grow in the Spring, and then the young seedlings get their water from the soil through their roots. If we will try to follow nature as closely as possible and even improve on her methods in growing forest seedlings we may succeed. The nuts and acorns should be gathered in the Fall as soon as they drop from the trees, and be at once packed in boxes that have holes in the bottom to give good drainage, mixed with damp sand or leaf mold and covered with a wire netting of some kind that will prevent mice from getting in. These boxes should be buried in the earth to their tops and a little trash thrown over them and left to the action of the weather until Spring. When there is the first signs of sprouting of the nuts they should be planted. It is best to plant such forest seeds as nuts and acorns where the trees are to stand, for the seedlings are difficult to transplant. The best of all fertilizers for fruit trees of any age is good stable manure. If this is not available then a mixed commercial fertilizer that contains about one-half acid phosphate, one-quarter muriate or sulphate of potash and one-quarter tankage will be suitable. Trees two to three years old should have five pounds each and those 15 years old 25 pounds each. The time to apply it is not very material, but the early Spring is as good a time for it as any, and may be the best.

H. E. VAN DEMAN.

Cross-Bred Potatoes.

OUR understanding is that in spite of certain claims of potato breeders that they have hybridized or rather crossed different varieties artificiany, this has never been done, although I am not positive that this is true. What is your opinion? V. S. S.

THE R. N.-Y. has referred to this before. But little progress has been made in artificial hybridization or hand pollination of the cultivated potato, but undoubtedly natural cross-fertilization occurs in the field. Even without natural or artificial crossings, potato seedlings uniformly show wide variation. Our cultivated potatoes flower sparingly, and the flowers are often deficient in pollen; if pollen were formed and ripened, and applied to receptive stigmas there seems no reason why complete pollenization should not result. It would seem as though constant tuber propogation had weakened the tendency to form pollen, but that is the only bar to hand pollenization.

THE MAILBAG.

Wintering Salsify.

IN leaving salsify in the ground all Winter should I cover it with dirt or leave the same as parsnips. E. K.

Salsify is entirely hardy, and if it is so desired, may be allowed to stand over Winter in the ground where it grows, with or without a protecting cover of litter. If wanted for Winter use it is better to store it in pits, same as is done with other root crops. Salsify is a good keeper and may be safely stored anywhere that is not wet, nor warm enough to induce growth.

Cement Floor for Granary.

CAN anyone tell me how I can lay a cement floor in my granary without any risk of having the grain spoil next to the floor? C. M. G.
Richville, N. Y.

Unless the soil beneath your granary is unusually wet, a sub-base of field and cobblestones, 10 or 12 inches thick, should protect the floor from undue moisture. If there is danger, however, of moisture coming through the concrete, it may be guarded against by first laying several inches of the concrete floor, then covering it with one or two layers of tarred paper, mopped on with hot tar, after which the floor is completed to the desired thickness. M. B. D.

Buckwheat Straw for Bedding.

I HAVE a lot of buckwheat straw which I intended to use as bedding under the cows and horses. I was told by some of my neighbors that buckwheat straw was very bad to use for bedding, and that it made the cows "lousy."
Centerville Sta., N. Y. J. S.

Buckwheat straw has the reputation of being irritating to the skin of animals bedded with it, particularly that of horses. I have used it for that purpose for some years, however, and shall this Winter. While it cannot, of course, cause lice or parasitic skin disease, I am not at all sure that it is not irritating to the sensitive skin of some animals. One of my horses bedded with it frequently shows a mange-like eruption of the skin in the Spring, but as he has also shown the same condition when buckwheat straw was not used, I do not know how much influence the bedding has had. At any rate, I am not sufficiently convinced of the irritating properties of buckwheat straw to discontinue its use. M. B. D.

Smoke Cure for Skunks.

REGARDING your correspondent's letter, page 1304, would like to add experience for the benefit of others who may sooner or later be in need of it. Thirty years ago I lived in a regular skunk country in Colorado, where during the haying season adventures with skunks were a daily occurrence, plenty and varied, sometimes humorous, always odorous, sometimes exciting, seldom pleasant and most always embarrassing they were. The best, quickest and easiest way to remove the perfume or aftereffects from an encounter with a skunk from inside buildings, clothes provisions, etc., we found a smudge made of green cedar boughs or juniper (cedar preferred). Fumigate the clothes by hanging them up loose around the room or cellar or outhouse. In case the floor is of wood make a fire in an old sheet-iron tub after putting a few inches of dirt in it. After the fire has partly burnt down lay on the green cedar boughs and let her smoke. Close doors and windows but don't let the house catch fire. At that time the county I lived in paid 25 cents bounty for each scalp. They are good eating if you can overcome the prejudice. C. E.
Douglas, Ariz.

"TOMMY," said the Sunday school teacher, who had been giving a lesson on the Baptismal Covenant, "can you tell me the two things necessary to baptism?" "Yes'm," said Tommy, "water and a baby."—Western Mail.

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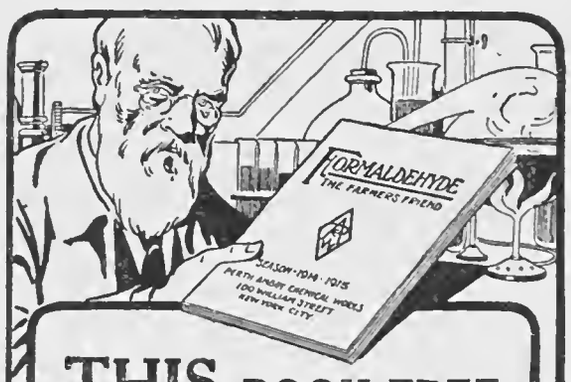

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The Home Acre

DRAINING GARDEN; RHUBARB; ROSES.

I WISH to drain a small piece of land according to the attached diagram. This soil is the worst kind of clay, being that removed from the basement when the house was built, and remains wet until late in the season. Can you give me any information as to what kind of tile to use, whether glazed or unglazed, what size, how low to place same in the ground, how much drop to give it, how to protect the joints so the tile will not clog up, and just how it should be laid? 2. I would also like to know what would be the best way to bring this ground to a high state of fertility, assuming that I have access to a plentiful supply of sand, manure, fertilizers, etc., and that I will not have access to the ground before this year's truck crop is off. I would like to get next year's crop in at the earliest possible date. 3. How often should rhubarb plants be transplanted and how many eyes should be left in each division when transplanting? After transplanting, how long should the plants be left without picking? 4. Next Spring I want to plant some rose bushes and became utterly confused at the different terms applied to them in the catalogues. Can you give me a brief explanation of the difference between the following: Monthly Tea roses, Hybrid Tea roses, Hybrid Perpetual roses, Hardy Perpetual roses, Everblooming roses, dormant roses? Which of these are hardy in our northern climate, which are grafted stock, and which are likely to give the best results in this climate? I desire to plant hardy roses which bloom well, but which are not grafted stock, if it is possible to get this combination. Any information you can give me will be greatly appreciated. H.

Lakewood, O.

1. I believe the plan herewith submitted for draining this plot of ground will meet all the requirements and prove in every way entirely satisfactory. Where the land is heavy clay and retentive of water, I have always found the unglazed horseshoe tile (one foot lengths) give the best satisfaction, as it will draw off the water much more quickly than round tile. It will require 40 feet of five-inch, 38 feet of four-inch and 70 feet of three-inch tile for this piece of work. Dig the trench 15 inches deep at upper end of main line and laterals, with an even fall to a depth of 30 inches at sewer connection at house. When preparing the trench for the tile, make the bottom as even and smooth as possible, and for the three-inch tile place a one-inch spruce or hemlock board five inches wide in the bottom of the trench, six-inch boards for the four-inch tile, and seven-inch boards for the five-inch tile. Keep the line of boards straight, and place the tiles in their respective sections, on top of the boards with the joints fitted evenly together as possible. If a brickyard is in the near vicinity it will pay to haul brickbats and fill in around the tile and over the top of it to a depth of two inches, and over all place a layer of hay about one inch thick. The brickbats will aid very materially in drawing off the water or drawing it to the tile lines, while the hay will prevent the soil from getting into the tile. If brickbats or stone cannot be obtained handily and cheaply for filling in around and over the tile, then use a covering of two inches of hay and fill in with earth.

2. As a means of improving the soil, I would suggest that you apply a large wagonload of coarse strawy manure and spade it under, and then sow it to rye. If possible sow the rye not later than the first of October, applying at the rate of two bushels to the acre. Spade the rye under in the Spring soon as the ground is in good workable condition, but do not attempt to work the soil if it is the least bit sticky, or you will by so doing render it unfit for vegetable cropping for the next two years. Nothing will put clay soil in as bad and unworkable condition as plowing or spading it up when too wet. After the rye has been spaded under, apply 50 to 75 pounds of air-slaked lime and rake it into the soil. If the soil is quite heavy and there seems likely to be much difficulty in keeping it from baking, about two wagonloads of sharp sand will work quite an improvement in rendering it friable and assist in keeping it from baking down hard. It will probably take three years or longer to make this soil over into a good vegetable garden, but by applying coarse stable manure and turning under green crops as outlined above, it can be done. Do not be discouraged if the first year does not turn out satisfactory. The second year will show quite an improvement over the first year, and the third year will show still a greater improvement. It requires time to bring ordinary land up to a good state of fertility and friableness, for the production of good garden crops.

3. Rhubarb may be left undisturbed until it shows a decided falling off in productiveness, which may occur under certain conditions in 10 years, and under more favorable conditions it may not have to be divided for 18 or 20 years. Two to three-eye divisions are probably the best for starting a new plantation, but if the roots are scarce, one eye will answer. If the transplanting is done in the Fall, a few stalks may be picked the following Spring without injury to the plants. A full crop may be taken the second year after transplanting, and every year thereafter until division and re-establishing a new plantation becomes necessary. Mulch the plants well with coarse manure every Fall, and spade under in the Spring. This will be all the fertilizing they will require.

4. Perpetual or Autumn roses are those blooming more than once during the season. Many of them bloom almost continuously from June until cut down by frost. Hybrid Perpetual or Hybrid Remontants are considered by many as the most valuable and perhaps the most beautiful of all the groups of roses, particularly the hardy roses. This group embraces such well-known and highly-prized sorts as Paul Neyron, Clio Baron de Bonstetten, Capt. Hayward, Anne de Diesbach, Alfred Colomb, General Jacqueminot, Hugh Dickson, J. B. Clark, Eugene Furst, Charles Wagner, Gloire de Margottin and many others. All this class are quite hardy and will succeed where the more tender Everblooming sorts fail. Hybrid Tea roses are mostly crosses between the Hybrid Perpetuals and the Everblooming Tea roses. Many fine varieties are in this group, some of them being quite hardy, but I fear not hardy enough in the Lake Erie regions. All are quite constant bloomers, many having a pronounced Tea fragrance. The Hardy Perpetuals are included in this group. Everblooming roses include all groups and varieties that bloom perpetually, such as the Teas, Hybrid Teas, constant blooming Bourbon and China roses, hardy Polyantha or Pompon roses, also the Rugosa species and some of its varieties, and all everblooming climbers. Dormant roses are those that are not in active growth, or have become dormant at the approach of Winter, and are sold or transplanted before growth starts in the Spring of the following season. The Hybrid Perpetuals, Rugosa hybrids, and the Polyantha hybrids will prove hardy in your latitude. You should be able to get the varieties of these three groups on their own roots. K.

Cannas from Seed.

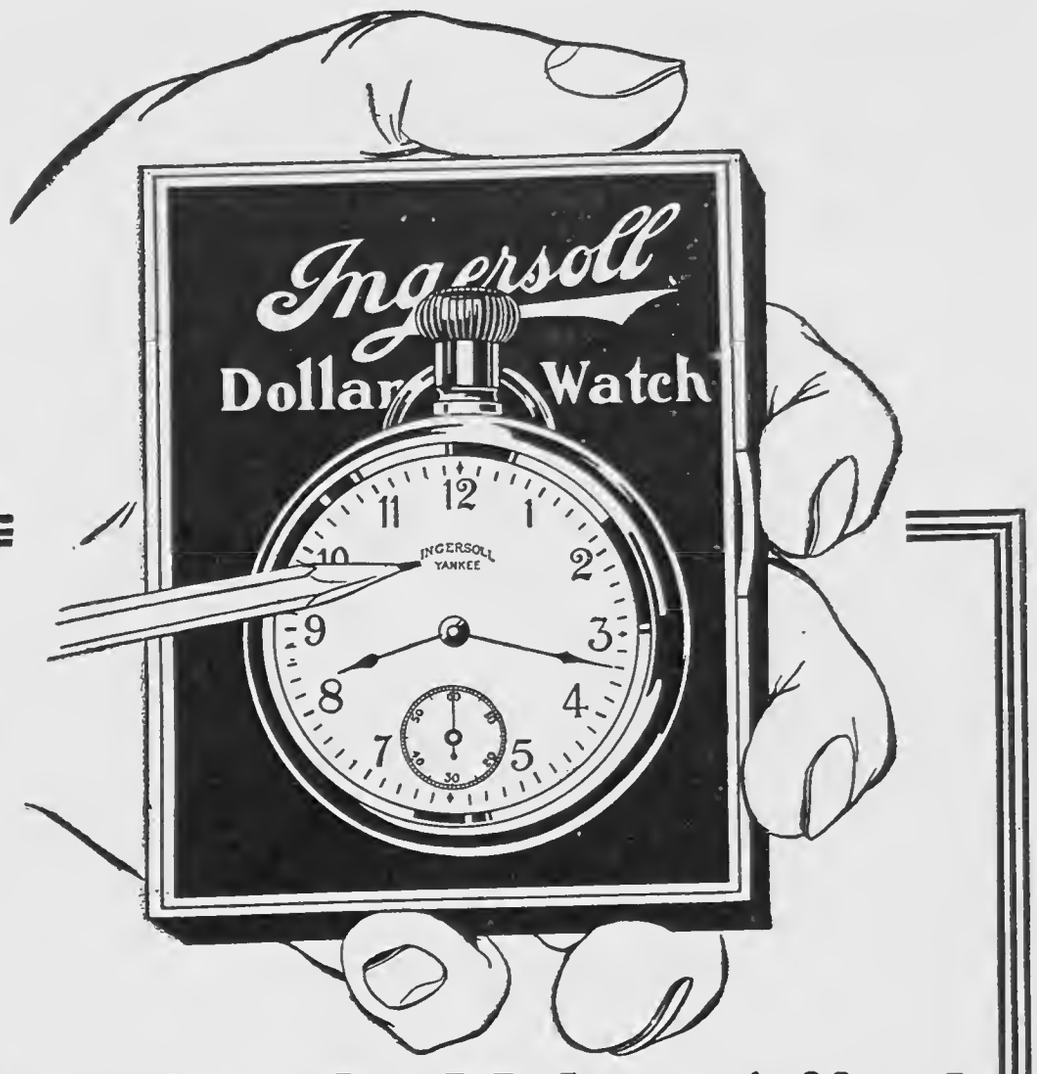
IS it possible to grow Cannas from seed? If so when should the seed be planted? I always understood they were grown from bulbs. J. J.

Closter, N. J.

Canna seeds germinate quite quickly if the hard horny outer covering has a little fissure cut or filed in it, or if they are soaked for 24 hours in warm water. Without these precautions they start very slowly, if at all. In greenhouse culture they are sown in late Winter, with a strong bottom heat, making blooming plants the same season. Under amateur conditions they may be sown in a pan or box set in a warm window, in February or March, or in the hotbed under the same conditions as peppers and eggplants. Commercially, Cannas are almost entirely propagated by division of the fleshy roots, except in raising new varieties, but many amateur gardeners raise them from seed, and thus build up a good stock at very small initial expense, increasing them by division later.

Transferring Wild Bees to Hive.

IN reply to F. M., page 1314, leave the tree uncut until next May 1. Then cut, falling tree gently as possible on brush or by pulley and tackle. Cut out the length of log containing bees and split the same, exposing combs. Bees can be handled then without danger. Fit combs into frames, tying in with string wound round frames. Put in the combs especially containing brood. Sweep bees in front of hive and leave until morning. Next morning early remove hive to position wanted. If a cluster gathers afterward carry in basket to parent hive. Have done this without loss of scarcely a bee. M. J.



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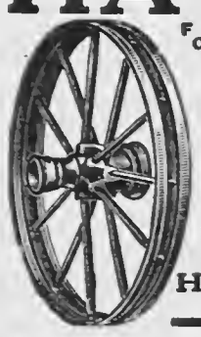

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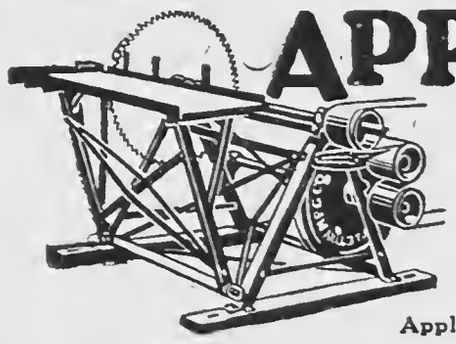

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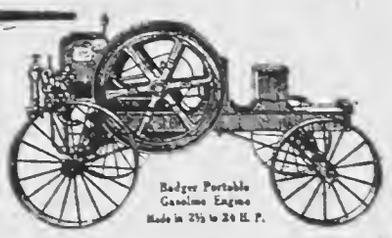

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Soil Improvement Notes

Fertilizers with Ashes.

I CAN get all the hard wood ashes I want for young orchard and garden, virgin soil of good quality. Will nitrate of soda and these ashes make a complete fertilizer? If not what should be added? How much ashes can be safely used? S. D. E.
Roseburg, Ore.

For young trees the ashes and nitrate will answer for that soil. Two tons of ashes to the acre will be about the limit. As the trees come into bearing acid phosphate or fine ground bone should be added.

Value of Wood Ashes.

WITH the apparent scarcity of potash, would not wood ashes make a good substitute? What is the actual value of wood ashes per ton?
So. Attleboro, Mass. S. H. R.

Yes indeed, wood ashes when you can obtain them at a fair price, will supply potash. Here are analyses of various kinds of ashes. Notice how high in potash corncob ash is. The railroad ties evidently carried much sand. The "average" wood ash is the average of more than 700 different samples.

POUNDS IN ONE TON OF ASHES.

	Potash	Phos. Acid	Lime
Brick yard	75	30	500
Corn cob	500	90	140
Cotton seed hulls	400	160	140
Hay and straw	30	20	100
Tree trimmings	100	50	375
Railroad ties	18	10	50
Sawdust	70	160	680
Seaweed	18	6	120
Wood and coal	8	20	50
Average wood	100	32	640

Treatment of Swamp Land.

I HAVE a piece of swamp muck land tiled, drained and nicely fitted for onions next Spring (about five acres). I have 1¼ tons of potash (muriate) that I expect to put on. I can get plenty of rock phosphate. How much should I use per acre of the latter, and would it be better to sow it on the piece and plow in this Fall? I had oats and peas on the piece, cut for hay. We plowed it after cutting in August and it is clean and in fine condition. I do not wish to plow again in the Spring, and any kind of a cover crop would be in the way in fitting it in the Spring. Would it be advisable to sow any nitrate of soda or use any other form of nitrogen? C. H. W.
Michigan.

We have never seen a genuine muck soil that did not respond freely to lime, and especially when onions are grown. We should try lime on this soil and not use any cover crop. The potash will help—all such soils are lacking in that element. As for the raw phosphate rock we doubt if it will be of much benefit to the onions. This rock may give future results in a soil well filled with decaying organic matter, but a crop like onions must have available plant food for its quick and steady growth. For such a crop we should use acid phosphate or fine bone. A small amount of nitrate of soda will pay on the onions to provide soluble nitrogen until the muck has been well fermented.

Manuring Muck Soil.

HOW can I maintain the proper fertility on muck land? My land is black and rich, but won't grow onions as it once did. R. G.
Oberlin, O.

Briefly stated—use lime. Fertilize with potash and phosphoric acid, and use a little nitrate of soda if the crop shows need of nitrogen. Swamp or muck soils are usually quite sour. They are often rich in nitrogen, but this is inert or unavailable to most plants. A few plants like blueberries or Red-top grass can make fair growth on such soils, but most of our cultivated crops will fail unless the soil is sweetened and fermented. Thus the first thing suggested is lime. One ton or more of air-slaked lime should be worked into each acre after plowing. This sweetens the soil and encourages the work of bacteria which would not be available in the sour muck. This fits part of the nitrogen to serve as plant food. In some cases it may pay to use a small quantity of nitrate of soda. Although the soil may contain as much nitrogen as some brands of fertilizer, yet it may not be able to produce a crop until that nitrogen is "cooked" or made over. In such case the crops would show a light color and fail to grow as they should. If then a small quantity of the nitrate is used this soluble form of nitrogen will push the crops along by giving them what they need. These muck soils are always deficient in potash and phosphoric acid. They may give a few good crops without the use of chemicals, but in time they will be needed. Wood ashes, if you can buy at a bargain, will answer or a combination of three parts acid phosphate and one part muriate of potash.

Potash in Stable Manure.

THE Ohio Experiment Station says: "A ton of average farm manure contains more than 10 pounds of potash, not less than ten million tons of such manure, containing a hundred million pounds of potash, is produced during the six Winter months when farm animals are being fed in stables and barnyards in Ohio. The investigations of the Ohio Experiment Station have shown that, when manure lies exposed in an open barnyard for three months, more than half its potash is washed out by the rain. Even when manure was produced under cover the loss when cattle stood on an earth floor was ten per cent. greater than when the floor was cemented. A few Ohio farmers are preventing this waste by feeding under cover on cemented floors and keeping the manure under cover until it can be spread on the field, but it is a conservative estimate that one-fourth of all the potash produced annually in Ohio stables and barnyards, or twenty-five million pounds, is absorbed by the soil under the stable or yard, never to be recovered, or is washed out and carried into the rivers."

Most of this potash is in the stable liquids which are easiest to lose. That is where the value of absorbents comes in.

Crimson Clover as a Cover Crop.

IN New Jersey I am told that Crimson clover is sown in corn at time of last cultivation and plowed under the following Fall or Spring with great benefit. What could be used similarly in the Mohawk Valley? In New Jersey do they plow the Crimson clover under in Fall or Spring? H. A. H.
New York.

You must remember that New Jersey is a long, narrow State, covering a great variety of climate. From Port Jervis to Cape May is 160 miles, and the lower part of New Jersey lies between the bay and the river, so that the climate is tempered and mild. Crimson clover is quite sure as a cover crop up to Philadelphia. Above that city it is more or less of a gamble—doing well one year and failing the next. In our own farm in Bergen County the Crimson comes through to full success about three years in 10. There may be part of a stand in two other years, but at least half the time this clover is killed out in March. It often goes through the Winter with a good growth during the Fall, but the freeze and thaw of March is too much for it. Covering with manure in late Winter will help carry it through, but the crop is not sure north of Philadelphia, and would be less sure in the Mohawk Valley. Hairy vetch and rye will make a far better cover crop. As for plowing under Crimson or other cover crops good judgment is required. These crops take large quantities of water from the soil in Spring. When the season is naturally moist they may grow to full size, and then be plowed under. In a dry season this would not do as the crops would take too much moisture from the soil. It is better, in such case, to plow the crop under early and pack the soil firmly around it.

Panning Out Gold.

I NOTICE an inquiry by J. P. R., on page 1318, regarding how to pan gold, answered by G. H. A. I would judge by the inquiry that J. P. R. knows nothing about gold mining, else he would know that the pan is only used in prospecting and in cleaning up the concentrates of other methods of mining, and is not a practical way to extract gold any more than a spade would be the tool to prepare a field for grain. If J. P. R. is located on a stream with plenty of water all the machinery needed to work it is a set of sluice boxes and flume to carry the water to them in sufficient volume to operate them on any scale he wishes to, the size of flume and boxes regulated by the amount of water available, or the number of men he wants to work at shoveling. The sluice boxes are made simply by nailing boards together one or more boards wide on bottom, one board high on sides, tapering enough so that the lower end will fit in the upper end of next lower box. The number of boxes needed must be regulated by the character of the ground to be washed, the boxes set at such an incline that the water will carry away the dirt and gravel as fast as it is shoveled in. The gold is caught by means of riffles placed in the bottom of the boxes, and are made in various ways to suit the kind of gold being mined. Some of the kinds used are small sticks nailed on a board, leaving about one inch or two between them, or by boring a board full of holes with a larger auger. These are fastened in the bottom of the boxes in a way readily removable for cleaning up. If the gold is very fine he will need to use strips of blankets with a heavy nap or Brussels carpet fastened at the lower end of his riffles, or by using quicksilver which may be held by boring holes not quite through boards placed in for riffles or by silver plates coated with quicksilver placed under a screen that will carry the coarse stuff over, but will allow the fine to run over the plate. If I can give J. P. R. any further information on this subject I will gladly do so, as I have had experience in the different methods of gold mining in Atlin, B. C., Klondike, and on the beach at Cape Nome.
Pennsylvania. W. E. BATES.

Getting Rid of English Sparrows.

I WOULD suggest to A. C. K., Albany, N. Y., to rid his trees of English sparrows that the trees be wired and a lot of electric lights be put in them and a switch handy to work. Then hang several old tin buckets in the trees in a bunch connected with a rope so they can be jerked vigorously and make a great racket. When it is dark enough that the lights will show well switch on the lights and jangle the tinware, and the birds will leave. Switch lights on and off quickly. If birds are disturbed at their roosting places a few times they will leave. Another way is to string two wires close together on a light circuit, and every bird that alights on them will be killed. The wires must be close enough together that the birds' feet will touch both wires and complete the circuit. Being so close they must be stretched very tight and leave a thin piece of mica or porcelain between for insulation. The trouble with this method is it will kill any bird, but you could switch on the power in the evening for a short time. Using this method a board should be kept above the wires as a wet leaf or snow will give you a "short."
Rosebnrg, Ore. S. D. E.

At night, when sparrows are roosting in the trees, take some Roman candles and shoot them off through the trees where they roost. This will scare them so badly that they will leave for a healthier location. Some obstinate cases may require more than one treatment; it has never failed for me yet. A. J. L. W.
Dutchess Co., N. Y.

Try hoisting a cage with the house cat in it at roosting time. I know from experience that nothing will keep the birds away from a cherry tree like fixing a cage among the branches with a cat in it. The same in a strawberry patch; one or two comfortable boxes for cats to shelter in, tie him to limb with a light chain daytimes, nights let him free. J. S.
Florida.

You want a method of driving out sparrows. I was similarly troubled and will give my remedy. They had taken up quarters in two sugar trees along the driveway, and if one left a buggy under them over night it was ready for washing by morning, so I decided to get rid of them. One evening about dark, when they began to come in pretty thick, I took up a station near the trees with my .22 rifle and a box of cartridges and began a general bombardment of the trees. As it grew darker I came closer to the trees until the real flash would go up among the limbs. They are very persistent, at first, but I kept on firing at random until they quit coming in, and I have not been bothered with them since. You may have to give them more than one bombardment if they have been there long, but I believe if kept up a short time it will effectually rout them. If you live in the city you would have to use the blank shells. I have also read of another remedy which consisted of sending up a shower of fireworks in the trees such as small rockets, Roman candles and pinwheels, which I believe would be equally effective and probably would suit your case better.
C. C. MOONEY.

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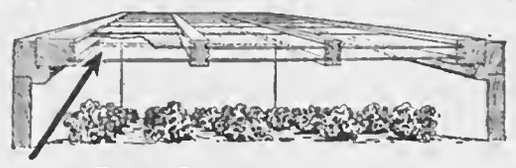

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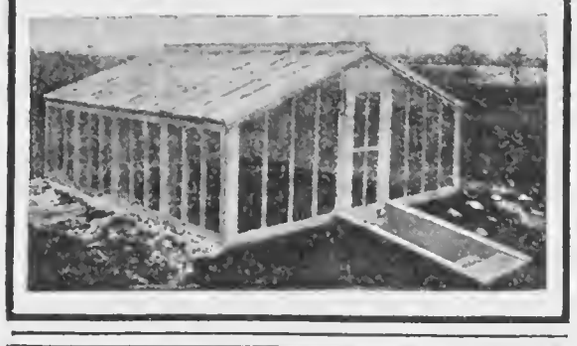

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THE REFERENDUM VOTE IN CALIFORNIA.

[In California women vote and legislation is submitted direct to the people before it finally becomes law. At the last election a number of such questions were submitted to popular vote. One was a plan for an eight-hour working day for all laborers. This was opposed by farmers generally. The question of prohibition was submitted and was opposed by grape growers and fruit men generally. Our conviction is that this plan of submitting such questions to popular vote will gradually spread all over the country. The following note on the California election are from an old resident of that State]:

THE vote in the State was a big one—fully twice as big as at any previous general election for State officers. This was owing to the fact that it was the first time the women had a chance to vote at such election. Then, the ballot was a blanket affair—not so much on account of the number of persons voted for, but owing mainly to the 48 legislative and bond propositions placed before the people. Some of these were initiative, some referendum, and some bond propositions from the Legislature. It was a hard proposition for the election officers to count the result easily; many boards where the vote was large became exhausted and gave up. So in this way the counting of the vote has been slow; in some cases the real result will not be known until the various boards of county supervisors have canvassed the vote, or until it is made up finally by the Secretary of State. But it has been so large in many cases that the result is well known, as, for instance, in the re-election of Gov. Johnson; also, the election of former mayor of San Franc. o, James D. Phelan, to the United States Senate, vice Senator G. C. Perkins, of this city, whose term expires next March. (Here I might remark that Mr. Phelan, while a resident of San Francisco, and a man of various affairs there, is one of California's large land owners, and is progressive. I heard him say that when it did not pay him to raise sugar beets on one of his ranches in northern California he had some of the soil sent to the State University to be analyzed. The result was that acting on the report he received he is now getting $35 per acre for rice where he formerly received but $6 to $9 for sugar beets).

The eight-hour law as to be applied to everybody was beaten badly, as also was the minimum wage law for women. I believe the vote was quite close on the latter. The Prohibition initiative law was badly beaten; this was expected long before the election, as it was said that those who launched it were "too previous." It struck at the vineyardists that Californians are very proud of; also, it was thought that it would hurt San Francisco during the big fair next year. This may be all right; I think it is. But the Prohibitionists should have struck at the saloon; let those who wish to drink in a mild way—as you will surely find folk doing in a cosmopolitan population—do so, if they will. When the Prohibitionists initiated their law, I believe the other side launched a couple of propositions, too, one of which was that no election touching the liquor question could be again enacted within eight years following the last. This carried, though I voted against it. I believe there are some jokers in this law that will make the saloons bolder than ever. The saloons may get wise and behave themselves. I think it better for the politics, etc., of the country if every one of them was put out of business, or strongly restricted and made to keep out of politics; make it a penal offense for a saloonkeeper to use his business as a campaigning place.

The last Legislature passed a good "blue sky" law, so called. The crooks, I guess that's the right word, stalled this bill by putting it up to the people on a referendum petition. And here's where the people get fooled. Too often these propositions are so worded that a large portion of the voters are not skilled enough in the English language or are not lawyers enough, to get a clear conception of the proposition. They are just as apt to vote yes when they really intended to vote the other way. So I am sure in the case of the blue sky law, this is the way that a good law for the people seems to be beaten. This State is badly in need of such a law. If it is beaten at the election just ended it is likely it will be passed again by the Legislature; I trust a way will be found to prevent the crooks from again thwarting its provisions.

I notice that one of the effects of the "dry" election in our two northern neighboring States is that the big brewing interests there that will have to remove or close down, are going to locate in this city or near by. The boards of trade says there are millions in it for us. There may be; I don't think so, as we have enough breweries now. W. A. P.

TOMMY came home from school looking depressed. He presented a little note from teacher. Tommy had been very naughty and needed a serious reprimand. "What did you do?" questioned his mother. "Nothing," was the wailing answer. "She asked a question, and I was the only one who could answer it." "But what was the question?" came mother's puzzled but natural query. "Who put the dead mouse in the drawer of her desk," sobbed Tommy.—Woman's Journal.

CROPS AND PRICES.

Nov. 14. Best horses, from $200 to $250; mules, No. 1, $175 to $200; best milch cows, $65 to $75; beef cattle, 5c. to 6c. per lb.; hogs, 10c. gross weight. Butter, 25; eggs, 25; cabbage, one cent a pound; white beans, 6c. lb., colored, 5c. Irish potatoes, $1.25 bushel; chicken, 10c.
Altapass, N. C. C. H. S.

Nov. 15. A large acreage of Winter wheat was seeded, most of which is looking good Wheat was a fair crop, some pieces being extra good. Oats turned poorer than expected. Corn as a rule is pretty good; late potatoes were a bumper crop, bringing only 30 cents a bushel at the car. Wheat is now $1.05 at the local elevator; oats, 55 cents; beans, $2.10 for pea, $3 for red kidney. Apples sold all the way from $1.25 to $1.75, according to grade and variety, quite a lot of fungus being present; hay is selling for $13 for Timothy, $11 or $12 for mixed hay. Hogs 12 cents dressed; veal, 10 cents live weight; beef from 8 to 11 cents by the quarter; poultry, 14 cents for chickens; turkeys, 24; ducks, 20; geese, 16; all dressed with heads off. There is not much movement of live stock and farm produce at the present time on account of quarantine for the foot and mouth disease in this section of the State. W. E.
Akron, N. Y.

Nov. 13. At present the farmer can get 7½ cents per pound for good cotton. For native corn he is paid $1 per bushel. Hogs on foot bring from 8 to 9 cents, or from 13 to 14 cents dressed; pigs, 10 cents. For good quality beef the farmer is paid about six cents on the hoof, for calves in good condition a little more. Milk retails at 10 cents per quart. Country butter brings 25 to 35 cents for best quality. Fruits and gardening crops are not extensively raised for the market in this immediate vicinity except perhaps asparagus, which, in the early Spring, brings excellent returns when shipped for the Northern markets. Our soil and climate are especially suitable for raising of oats; 75 bushels to the acre is not an unusual yield, but I regret to say that most of the farmers do not apply themselves to oat raising extensively enough, being satisfied with a few acres and buying their seed oats annually at 75 or 85 cents per bushel. J. H. L.
Aiken, S. C.

Nov. 16. Wheat, $1 to $1.05; rye, 87; oats, 48; buckwheat, 70; No. 2 corn, 80; beans, $2.50 to $2.20; hay, $12 to $14; potatoes, 25 to 30; pork, 9 to 9½ dressed, live weight, 7 to 7¼; dressed mutton, 8½ to 9; beef dressed, cows, 8½ to 9; heifers and steers, 11½ to 13; lambs dressed 12½ to 13; poultry, dressed, 18 to 22; live, 10 to 11; roosters, 8; eggs, 28 to 32; butter, 28 to 32. We sell our butter and eggs to customers almost entirely at the retail price at the stores as our customers say they can't get hardly any good butter out of the stores, and lots of eggs that are bad. It seems strange to me that the merchants cannot sell better as to freshness of both. I was at a sale of farm property a short time ago, and the cattle were in bad shape, some Jerseys two years old giving milk, but were poor and scrawny, would not weigh 600 apiece; one went for $50 and the others $55. They were purebred, only not registered; one grade that was larger went for less money, and one Poll Durham went for something like $87. Horses are selling around $125 to $225 and scrubs for any price that they can get. Our State tax commissioners are raising the assessments, more than doubling lots of property. Apples are a poor crop in this part of the country this year, although the best farmers spray three times or more. E. K.
Belding, Mich.

Nov. 13. We do not raise enough in this county, Transylvania, of anything to supply local needs, on account of the vast amount of supplies required by the Summer tourists and by the lumber camps and saw mills, and also on account of the neglect of many of the farms because the men work in the woods. Rye opened at 85c. per bushel; wheat opened at $1.25; corn opened at 75c.; dried beans, mixed, all colors, $2.50 per bushel; hay (a failure this year), $1.50 per 100 lbs.; cabbage, fair-sized heads, five cents each. These prices are to farmers. Sweet and Irish potatoes, both $1 per bushel. Butter, made in an old dash churn, and ripening the cream by pouring hot water into the churn (which you know makes it off-color and puffy), sells at 25 to 30c. per lb., and the pounds are very often "14 ounces." We make no cheese. I have sold no cattle lately, but I am told they are worth 5½c. per lb. on the hoof. Pigs, scrub and mixed breeds, at six weeks old, sell for from $3.50 to $6 per head, but it would be a hard matter to buy a 200-lb. hog at any price. The demand for pigs is always good. As for fruit, we have the finest fruit country here, I believe, in the world. I have seen Buffs or Howards as big as my cupped hands, and I wear a 10½ glove. I have seen the Limbertwig, the Winesap and the Winter John kept in this country out in the fields, like Irish potatoes, with a little straw and dirt over them, until Spring. Yet, owing to the negligence of the farmers, in that they will not prune and they will not spray, and they will not organize, there have been fully 50,000 bushels of apples gone to waste in this county this year—could not be "given away" at 25c. per bushel.
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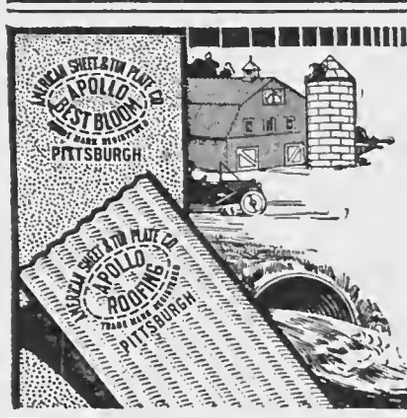

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EVENTS OF THE WEEK.

DOMESTIC.—Seven bodies had been washed ashore at Grand Marais, Mich., 49 miles east of Whitefish, a point on the south shore of Lake Superior, Nov. 20. The schooner Anna Peterson was wrecked near Grand Marais, and it is supposed that the bodies are those of the crew of the lost boat. It is not believed there are any survivors, as the schooner carried a crew of about seven.

Twenty-five stores were burned and a score of families driven from their homes by a fire which destroyed a block front in the business section at Keanshurg, N. J., Nov. 20. The fire did $25,000 damage.

Fire in a tenement house on East Twenty-ninth St., New York, Nov. 22, caused the death of eight persons. There is suspicion that the fire was started by blackmailers. Another woman who saw the fire, but was herself unhurt, died from shock later.

According to the report of the Red Cross just made public, Americans have contributed about $850,000 to the war fnud of the organization. Of this sum New York's share amounts to $352,087. The national society, the report of its officers in Washington states, still has a balance of $265,000 available for future use in the war devastated countries of Europe.

The jury in the Supreme Court at Geneseo, N. Y., where Henry Siegel has been on trial since November 9 for grand larceny growing out of the failure of his department stores, found Siegel guilty, Nov. 23, of a misdemeanor in obtaining credit on false financial statements. The offense is a violation of section 1293 of the Penal Law. This law was passed in 1912. In finding a verdict on this charge the jury took a course outlined by Justice Clark in his final instructions. Justice Clark said he had serious doubts as to the validity of the grand larceny charge and permitted the jury to find Siegel guilty of the less serious offence. Justice Clark sentenced Siegel to pay a fine of $1,000 and serve ten months in the Monroe County penitentiary.

Forty-three survivors were rescued, Nov. 24, from the wrecked steamer Hanalei, which went ashore in a dense fog on Duxbury reef, nine miles north of the Golden Gate, California. Eighteen dead had been either washed ashore at Polinas, or brought to port by the United States revenue cutter McCulloch and the navy tug Iroquois. How many are missing never will be known, for the best available list gives 28 passengers, and the crew numbered 26, a total of 54, whereas the known dead and saved number 61, seven more than are shown on the company's papers.

Barnett Baff, said to have been the largest independent poultry dealer in this section of the country and hounded for years because he would not join "the trust," was killed, Nov 24, in West Washington Market, New York. The two men who committed the murder ran unmolested to an automobile, which was waiting about 20 feet from the corner, jumped in and escaped.

FARM AND GARDEN.—Great Britain has declined to modify in favor of American manufacturers the embargo on exportation of wool from Australia and other British dominions. It had been hoped that after the needs of the British army had been satisfied Americans might be permitted to buy Australian surplus, giving guarantees that neither the wool nor goods made from it would reach Austria or Germany, but the State Department was informed Nov. 20, that for the present at least no exceptions would be made. It is understood that the decision of the British Privy Council as to wool applies also to rubber.

Capt. R. E. Rose, State Chemist of Florida, testified, Nov. 21, at the trial of E. C. Chambers, president of the Chambers Land Company, in the Federal Court at Kansas City, Mo. The defendant is charged with having used the mails to defraud in connection with the sale of Florida lands. By Capt. Rose's evidence the defence attempted to prove that the Everglades land will grow crops without fertilization. A number of exhibits, consisting of all manner of tropical fruits and vegetables, which had been grown, it was said, on the Everglades lands, were introduced as evidence. A number of farmers in the Everglades also testified as to the productivity of the soil there.

Commissioner Huson reported, Nov. 20, that the foot-and-mouth disease was then confined to 13 farms in New York State. No further serious outbreak was expected. The outbreak at Secaucus, N. J., proved to be serious, and Secretary Houston advised Governor Fielder that all infected cattle should be destroyed. Dairymen there have organized to fight this. New cases were discovered, Nov. 22, on two farms in Brooklyn, N. Y.

The annual meeting of the New York State Sheep Breeders' Association will be held in the Seneca Hotel, Rochester, N. Y., on Wednesday, Dec. 16, at 9 A. M.; President J. C. Duncan Lewiston; Secretary-treasurer B. W. Brace, Albion. All members are requested to be present at this meeting as business of importance will require their consideration. The State Breeders' Association will also meet at this time, as well as the State Dairymen's Association.

THE EUROPEAN WAR.—Nov. 18 a naval battle in the Black Sea occurred between Odessa and Sevastopol between the Russian fleet and the Turkish (late German) cruisers Breslau and Goeben, both sides claiming victory.....Nov. 20 was the sixty-third day of the bombardment of Rheims by the Germans. Many civilians have been killed..... Nov. 21 three British aviators made a flight of 250 miles, 120 miles over German territory, and dropped bombs on the German Zeppelin factory at Friedrichshafen, damaging the factory and one Zeppelin. One aviator was captured. .....A German destroyer, S-124, was accidentally sunk by a Danish steamer not far from Copenhagen, and a submarine, the U-18, discovered and rammed off the north coast of Scotland by a British patrol ship. The crews were rescued.....England admits defeat by the Germans in East Africa, with heavy loss.....Turkey claims a victory over the British at El Kantara, near the Suez Canal.....Flooded areas in Flanders are now freezing, and the fighting consists mainly of artillery duels. The Germans are strongly fortifying that part of the Belgian coast held by them. . . . . The bombardment of Zeebrugge, the German naval base on the Belgian coast, by the British fleet is reported to have resulted in setting fire to the town. The Solvay works, near the Bruges ship canal, are now a heap of ruins, and six submarines which were brought there in sections were reduced to twisted iron. . . . . In France the Germans have made several fierce infantry attacks in the Argonne. The French official report says these were all repulsed. Along the rest of the front there has been desultory cannonading.....Nov. 24 a bomb from a German airship fell in front of the American Consulate at Warsaw, but without any casualty.....Desperate fighting continues in the vicinity of Warsaw. It was reported, Nov. 23, that the Germans had lost many prisoners at Kutno, and the Russians had captured Gumbinnen, in Eastern Prussia.....It was reported, Nov. 25, that the German army advancing eastward from Thorn has been split in two and that the Russians have dislodged the Germans from five towns. German official reports say the fighting continues in north and south Poland without decisive result.....The Portuguese Parliament unanimously adopted a resolution, Nov. 24, to take part in the war on the side of the Allies whenever the time is opportune.....Nov. 22 advices from Pretoria stated that two sons of Gen. DeWet, the rebel leader, had surrendered to Union forces, with a portion of his force.....Italy announced, Nov. 24, that if Egypt is threatened by Turkey and the British close the Suez Canal she will take positive action against the Ottoman Government, which she will hold responsible for damaging her interests. Italy will not tolerate the closing of the canal.....A decision of the British Prize Court in the case of the Miramichi, a British ship, which sailed before the outbreak of war from Galveston, with a cargo of wheat, destined for Rotterdam and thence to two German firms, will have an important effect upon American shipping interests. The court upholds the American contention that the cargo was the property of Americans and ordered its release.

FIVE per cent. greater acreage sowed to wheat in Ohio is the estimated increase over the acreage a year ago. It is estimated at nearly two million acres, in exact figures 1,878,267 acres. The growing condition according to the report of the agricultural commission is above average, or placed at 101 per cent. Corn prospects are 93 per cent. or a little below average. Rye acreage is estimated at 134,789 acres, or 94 per cent. of an average and condition is 98 per cent. of normal. The potato crop this year is estimated at 2,500,437 bushels above last year which was seven million bushels.

DEAN Homer C. Price of Ohio State University, gives figures relative to the new three-year course now taking the place of the two-year course in the Ohio College of Agriculture. The total attendance is 156, of which 122 are from farms and 22 from the business world, and 12 did not indicate calling of their parents. Ninety-one students are high school graduates, 16 are from the grades, and the remaining discontinued their high school work during the course, particularly at the end of the second year.

Governor Glynn has appointed Mr. John J. Dillon Commissioner to organize the new Department of Foods and Markets. Of the appointment the Albany Argus says: "Mr. Dillon's appointment is a distinct example of the office seeking the man. For several months Governor Glynn has urged Mr. Dillon to accept the position, because he considered him the best qualified man in the State for the particular duties which must fall upon a Commissioner of Foods and Markets. Mr. Dillon was an enthusiastic advocate of the creation of this Department. It was only after the Governor pointed out that unless the proper man took charge of it, it would fail to achieve the desired ends, that Mr. Dillon accepted.

COMING FARMERS' MEETINGS.

Ohio-Michigan Land and Live Stock Exposition, Toledo, O., Nov. 22-Dec. 5.

Auburn Poultry Show, State Armory Auburn, N. Y., Nov. 30-Dec. 5.

Michigan State Horticultural Society annual meeting, Kalamazoo, Mich., Dec. 1-3.

Michigan State Potato Show and meeting, Kalamazoo, Dec. 3-5.

Second annual seed exposition, Montana Seed Growers' Association, Bozeman, Mont., December 8-10.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Connecticut Sheep Breeders' Association, annual meeting, Unity Hall, Hartford, Dec. 15.

New York State Breeders' Association, New York State Sheep Breeders' Association, New York State Dairymen's Association, annual meetings, Seneca Hotel, Rochester, N. Y., Dec. 16.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

New York State Fruit Growers' Association annual meeting, Rochester, N. Y., Jan. 6-7-8, 1915.

January 9th to 15th, inclusive, 1915 Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Coöperative Associations of the State of New York, second conference, Ithaca, January 13, 14, 15, 1915.

Second annual meeting of the New Hampshire State Department of Agriculture and the thirtieth annual meeting of the Granite State Dairymen's Association, Manchester, N. H., Feb. 10 and 11, 1915. Fred Rasmussen, secretary.

Nov. 23. Garden crops are not raised here, only for home use. Apples, hand picked, 90 cents a barrel. At sales dairy cows $60 to $90; Spring calves $20 to $30; good work horses $200 to $250. The leading crops are beans and sugar beets. Beets a bumper crop; beans poor, 15 bushels an acre; all other crops good. Not much farm land changing hands; land $100 and $125 per acre. A. E. S.
Caro, Mich.

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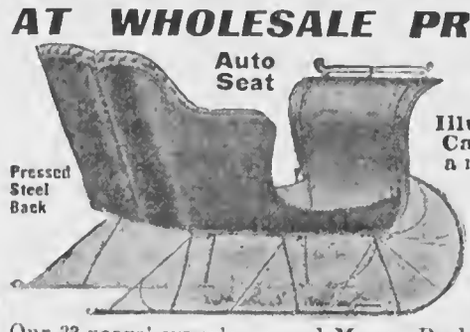

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ONE DOLLAR buys 150 envelopes and letterheads. Cards, tags, labels, either, 125, 50c.; 300, 90c.; 500, $1.40; 1,000, $2.40. We prepay express. Chatham Courier Co., Chatham, N. Y.

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The Rural New-Yorker, 333 West 30th St., N. Y.

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Your telephone instrument, which consists of 130 different parts, is only the entrance way to your share of the vast equipment necessary in making a call.

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That the Bell System combines the maximum of usefulness and economy is proved by the fact that in no other land and under no other management has the telephone become such a servant of the masses.

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One Policy *One System* *Universal Service*

Every Call means a Pair of Wires from Subscriber to Subscriber - however many Calls may be made or however far apart Subscribers may be.

TREMENDOUS WOOD GROWTH.

THE SWAN APPLE.—I am a constant reader of THE R. N.-Y. Among other articles several years ago, I noticed that Mr. Frank J. Schwan, of New York, had a new apple which it was alleged the elder Schwan had brought with him from the old country in the shape of a number of grafts, which he had top-worked on a mature tree, and that he had taken a number of these apples to an apple show in New York State and passed them out as samples to different apple-growers, who had pronounced the apple first-class in every respect, but could not name it. After reading this article a letter was sent to Mr. Schwan, with request that he sell some grafts of the tree. His answer was to the effect that he was propogating all the cuttings that he could make from the tree, and that in future years trees could be bought of this variety if he were successful in propagating. Last Fall another letter was sent to Mr. Schwan and he advised that this Spring, 1914, he would have for sale young trees of this variety, which he then named the Swan apple. In due time an apple tree of this variety, was received here. It was a beautiful young tree, standing about four feet high from ground to the first branches. The tree was planted and trimmed and the cuttings were saved in cold storage until the buds began to push. A Black Ben Davis apple tree growing in the lot whose trunk was about two inches in diameter, had four branches, each of which was cut off at the proper distance from the main trunk and a graft of these buds was put on each of the four branches. An article, on page 1178, describes four months' growth of an apple graft, and in an article, on page 1283, there is another notice of a growth of graft, during the season, of five feet, from a Belleflower bud, set the previous August, the first example showing a growth of three feet three inches, and the second one of five feet, during the season. Each of the grafts of the Swan apple set on the Black Ben Davis, just as the leaf buds were beginning to push on the Black Ben tree last Spring, grew, and each one of these buds on each graft shows a distinct and separate bud growth to the length of six feet six inches, not varying an inch and a half in any one bud's growth. To my mind the result is astonishing.

A REMARKABLE GRAPE GRAFT.—To give you another instance of remarkable growth, in our vineyard here we had a seedling grape which measured an inch and a half in diameter at a height of two inches above the ground. Being worthless as far as the fruit was concerned, it was cut off at an inch above the ground and two grafts of Prof. Munson's Captivator were set in the stump and the grafts treated in accordance with A. S. Fuller's advice for Fall grafting. This Spring the covering was taken off, and owing to the position in which the root was standing, the growth did not push until late, but one of the grafts united and now shows a growth of 16 feet. At the same time another large grapevine having a stump diameter of about an inch and a half was cut off an inch from the ground in the same way, and two grafts of Montclair, seedling grape of Corby's were set and treated in the same way. Both of these grafts united last Spring when they were uncovered in March, and each graft shows a growth of 15 feet six inches to 16 feet. Another grape, the Carman, originated by Prof. Munson, was cut off at the same height from the ground and treated in the same way with the insertion of an Iona graft. This was uncovered in the same way this Spring and now shows a growth of over nine feet. Three Delawares and two Duchess grapes were planted in separate holes with the strong roots of a Dogridge resistant vine beside each, and when they grew to the proper length, one each of the Dogridge shoots was inarched on the three Delawares and two Duchess, and they took admirably in each instance. The Duchess grew to a length of about 15 feet last Summer, and the Delawares to over 10 feet each. In June a Horwath method of budding was practiced on a Dogridge with a Quassaic bud. This bud united and the growth from it is over seven feet at the present writing. Another Dogridge in its green state was decapitated in June about a foot above the ground, and a green graft was taken off a Jefferson and inserted, tied with raffia and covered with ground, and this graft has grown to a length of about eight feet. This account is sent you simply to show what wonderful things nature is capable of doing. It is the most wonderful process, and one to be deeply studied and of absorbing interest.

Pennsylvania. JOHN K. GROSS.

Apple Packers and "Kickers."

WE do no often give name and address in THE R. N.-Y., because most of our people do not want us to do so. Here is one, however, to put on record:

N. T. Willis,
Chappaqua,
N. Y.

The point about Mr. Willis is that he wrote a letter to the New York *Sun*, in which he said he could not find an honest apple grower in the East:

The fraud practised in packing apples is a disgrace to the State. Last Winter I paid $6 for a barrel of Winesaps bearing the name of an up-State packer; paid carting and expressage to my home, 30 miles out of town, and got for my pains and expense about a half bushel of Winesaps, while the rest of the barrel was filled with some miserable little yellowish-green fruit or vegetable unfit to feed to the hogs. Every good apple I got cost me approximately 15 cents.

Then Mr. Willis goes on to tell the old story about Western apples of inferior quality—but well and uniformly packed:

This is only a repetition of previous experiences, and I now buy apples only by the box, the Western kind. They are of inferior flavor to New York apples, not old shoes, clods of dirt and other trash. It is not sympathy the New York State apple packer needs, it is something else.

This is hard language. How much of it is deserved? We handle hundreds of barrels of apples each year—all in barrels or smaller packages direct to the consumer. We make a fair price and endeavor to deliver fair fruit. About 10 per cent. or rather more of our customers are "kickers" who are never satisfied and who seem to think they will lose prestige if they ever admit that the goods are satisfactory. What Mr. Willis says reminds us forcibly of the arguments of our small proportion of "kickers." We have tried the experiment of personally selecting the finest fruit of the entire crop. It makes little difference—these customers fear it will be considered a weakness if they do not "kick" about something. The great majority of our customers are fair and appreciative. We do not know Mr. Willis. No doubt he has fair cause for complaint, but there are two sides to this apple business as with everything else.

Weight of Wood.

IN reply to your query on page 1313, I will say that one cord of dry hickory, or maple wood weighs 4500 pounds; White oak weighs 3850; Beech, Red and Black oak weighs 3250; poplar, chestnut and elm weighs 2350; Northern pine weighs 2000. Green wood weighs 25% more. One pound of coal is equal to 2½ pounds of dry wood of any kind.

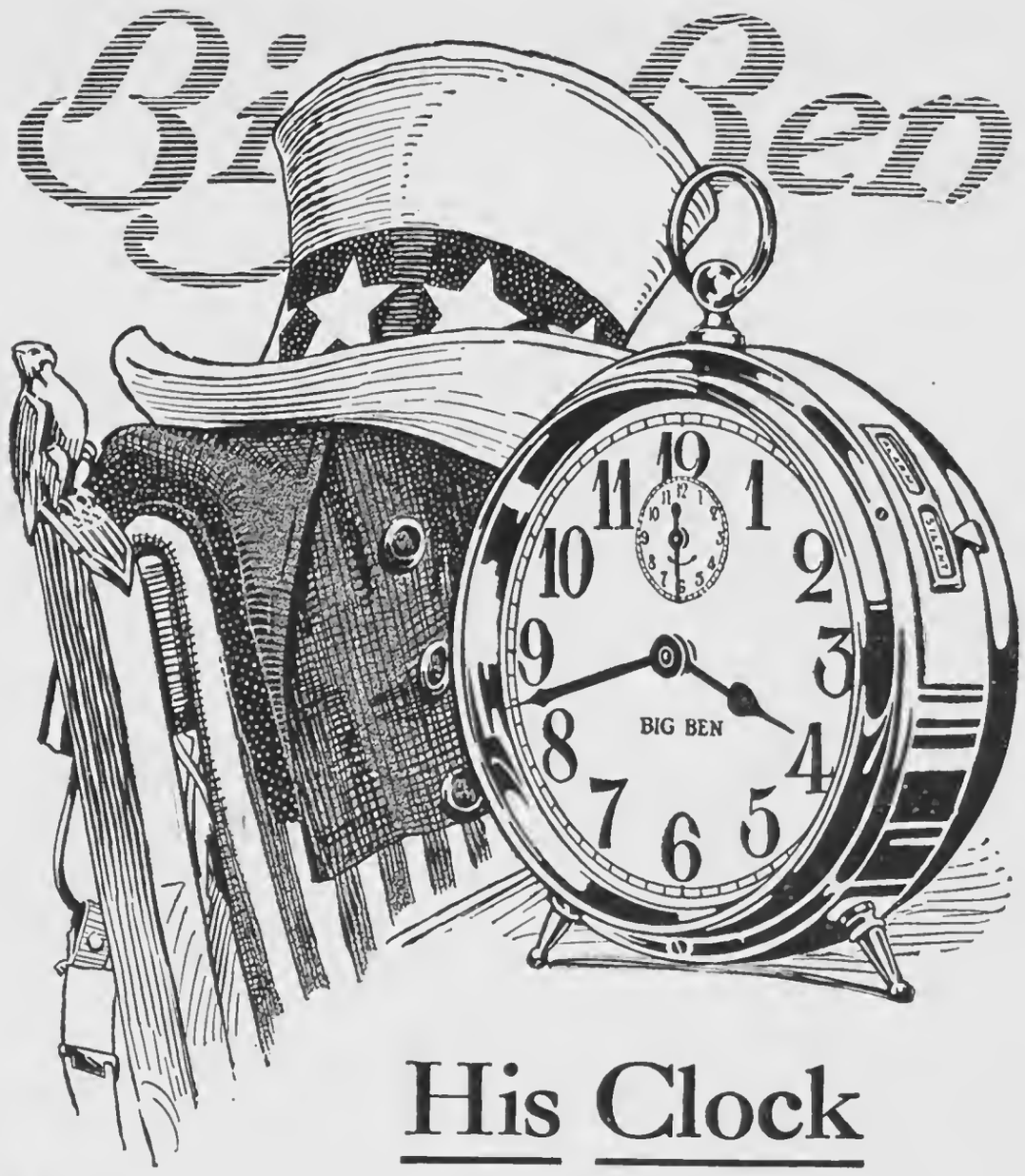
Vermont. EDWIN M. BURDITT.

This information is taken from a book of useful information by William Kent, and is as follows:

Wood when newly felled contains a proportion of moisture which varies very much in different kinds, and in different specimens ranging between 30 and 50 percent, and being on an average about 40 percent. After eight or 12 months ordinary drying in the air, the proportion of moisture is from 20 to 25 percent. The weight of a cord of different woods, throughly air dried, is about as follows: Hickory, or Hard maple 4,500; White oak 3,850; beech—Red and Black oak 3,250; poplar, chestnut and elm 2,350; The average pine 2,000.

New York. C. O. CHASE.

The answer to the question as to the weight of wood on page 1313 can be gotten from the Forest Service, Washington, D. C. The only tables I can find now give the weight of air-dry White oak as 49.94 pounds per cubic foot, and chestnut as 41.20 pounds per cubic foot. According to the size of the sticks and the care taken in piling, wood will run from 30 to 40 to 80 or more cubic feet to the cord. Green timber will weigh from 20 to 40 per cent. more than dry. It would probably be safe to estimate split wood (six-inch face) carefully piled as about 75 cubic feet per cord while limb wood might not be more than one-third as much. ALFRED C. WEED.



His Clock

UNCLE SAM has known Big Ben ever since he was *that high*. Five years ago he chose Big Ben as a likely youngster. Uncle Sam was right—he's made good—he's nationally known.

Big Ben won success in a truly American way—by being on the job every minute of the time. Big Ben has pushed himself ahead by helping others rise.

Uncle Sam asked Santa Claus to buy American goods—suggested "his clock"—*Made by Westclox, La Salle, Illinois,*—and now it's Big Ben for 'most every one on his Christmas list.

Send your "Merry Christmas" by Big Ben—he'll ring it gladly and put heartfelt warmth into his joyous, tuneful greeting.

What's more, his greeting is just as cheerful the next morning, and the next and every *other* morning through the years. He makes his call suit you,—either steady for five minutes or he starts and stops at half minute intervals for ten.

To Uncle Sam, $2.50—in Canada $3.00. If your dealer doesn't stock him a money order addressed, *Big Ben, La Salle, Illinois,* will send him, in a special Christmas package, your card enclosed, and charges paid, whenever and wherever you say

4-BUCKLE One Piece ARCTIC
FOR MEN AND WOMEN, $2.29

Extra quality, very serviceable. Made all in ONE PIECE, with full snow excluding tongue, soles made of best quality pure gum rubber, guaranteed to give lasting service. Tops thoroughly rubberized and lined with pure wool flannel, warranted absolutely waterproof and cold proof. Your local dealer would charge $3.50 and $4.00 for this Arctic. **Send $2.29 to-day** to obtain the greatest value ever offered. We deliver **POSTPAID** to your home. **Men's Sizes, 5 to 13; Women's Sizes, 3 to 8.** Every pair sold with an absolute GUARANTEE of satisfaction or money refunded. State size desired. Catalogue FREE upon request. **A. WEINBERGER & CO., 112-113 South Street, New York. Dept. X**

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Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. **We tan and finish them right;** make them into coats (for men and women), robes, rugs or gloves when ordered.

Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

It tells how to take off and care for hides; how and when **we pay the freight both ways;** about our safe dyeing process which is a tremendous advantage to the customer, especially on **horse hides and calf skins;** about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

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guaranteed to do your work. **Sixty days free trial.** Other sizes as cheap. Pumps, motors and engines. Write for our New Way Selling Plan No. 25
Do It Now
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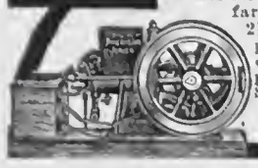

Owing to the war, we are disposing of our big stock of engines built for foreign shipment, at factory cost. This stock includes all sizes of high grade, guaranteed farm engines from 1 to 12 H.P. The 2½ H. P. price named in this ad is proportionate with the low prices on our entire line. Send for details and complete price list. Compare our prices with others. See what we save you. Write today.
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WELL DRILLING MACHINES

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

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When you write advertisers mention The R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

Hope Farm Notes

HAVE you ever had any knowledge of, or experience with the use of hot water for the purpose of destroying peach grubs at the root of the trees? Is it safe and efficient, and if so at what temperature should the water be? I have a large peach orchard, and we failed to get trees grubbed this Fall. I could go over it rapidly with my spraying tanks if hot water is safe. D. J. M.
Ohio.

We have used both hot water and a hot solution of lye. Neither proved very effective until the gum was scraped away from the base of the trees, as the liquid will not enter the cavity freely when this gum is present. Unless the liquid does work down into the passage where the borer hides, it is not particularly effective. In cold weather the hot water cools rapidly, and does not affect the borer seriously. If the gum is scraped away, the hot lye is far more effective; but we find that if we go to the trouble of working off this gum, it is not much more work to dig out the borer and make a thorough job of it. A forcible spraying with a strong lime and sulphur solution, driven around the base of the tree, with some of the dirt removed, will be more effective than either hot water or hot lye.

The Hope Farm man says he intends to advertise Ben Davis apples for sale. I would give a good deal to see what he has to say in offering Ben Davis. S. K.

I suggest that you give what you call a "good deal" to the Belgian sufferers, for here is what we advertised—leaving out price and address:

"BERGEN COUNTY APPLES.—Our Baldwins are all sold. We now have Black Ben Davis. This is a high-colored apple, a good keeper, but not high quality. We pack in scant half barrel baskets. All hand picked. No. 1 is large size—no other difference."

Later we added to this that for 10 cents we would send samples by parcel post. No one has any right to find fault with such an offer. We had about 300 baskets of the apples to dispose of, and they are going quite readily. The Black Ben Davis is a little higher in quality than the original Ben, and the tree is surely a sturdy grower and early bearer. I shall not plant any more, and if any of them are sold the buyer will know just what he is taking. Perhaps S. K. thinks I should advertise Black Ben about as follows:

"A RED FRAUD.—Ben Davis, a combination of cork dust, sawdust and beeswax—treacherously colored with Baldwin red and Northern Spy stripes. Handsome in color but dry as a bone in flesh and taste. Will keep like potatoes and eat like turnips."

Now I think such advertising would attract more attention and sell more apples than our modest statement. The fraud in selling Ben Davis comes in leading customers to think its quality is as high as its color. When they know what to expect they will not find fault and generally say the apple is better than they expected. McIntosh is our apple, but having planted the Black Bens I intend to dispose of them honestly.

THE BELGIANS.—As we come nearer and nearer to Christmas the heart of this great nation goes out to the unhappy people of Belgium. No matter what side one may take in the present fearful war, we can all agree in considering the fearful calamity which has fallen upon this unhappy little nation. Battered and ravaged, burned and robbed, this jewel of a country lies in ruins. Who can think of any sadder Christmas than the one approaching the homeless and destitute Belgian people? It is no wonder that this great country, the only one which can derive any material benefit from the war, should come forward to help this destitute sister nation.

Among other plans suggested is that of bringing children or families to this country. One of our readers offers a house and 25 acres of good land to a worthy family of Belgian refugees. He will provide land, house and outfit—the family to give him one-third of the crop. Many others are trying to organize plans for bringing back shiploads of orphan children to be adopted or cared for here. It seems that many worthy people are willing to take these little ones into their homes and care for them. It seems impossible to express the admiration which Americans have for the brave people who have endured so much for their country.

In all this, however, few seem to have considered it worth while to consult the Belgian people themselves. In a general way it seems as if about all there is to do is to go over and get the children and bring them here. I have talked with intelligent Belgian people who have come to this country, and they all agree that the best thing this nation can do is to help these unfortunate people where they are now—in Holland, France, England and at home. The Belgian people do not want to leave—they do not want the children to go. When the war is over they want to go back and rebuild their beautiful country once more, and they will do it if they can be helped during the present terrible pinch. So many men have been killed or crippled that the value of a human being in Western Europe will be well nigh doubled in the future. Every child and every adult will be needed to wipe out the scars of war and make new homes. In this land with only a few generations at best behind us, we cannot fully understand what country means to this brave and true people. The best of their future is at home, and their great work will come in rebuilding their country when the war is over. It is a noble thing to offer to take these children and care for them, but I fear we do not quite understand the feeling and spirit of the Belgians and their desire to keep all their people together. I would be wiling to help with some of these children, but I do not think this is the best way. I would give all we can of money and clothing and food to care for the destitute where they now are, but I would try and keep the people of this brave little nation together—for the world sadly needs what they will give in the future as the result of their suffering and patriotism. But let us remember them at Christmas in the most substantial way we can.

I have a garden, the soil of which is very hard and stiff. It has been suggested to me that the condition of the soil can be improved by the application of coal ashes. Will you advise me whether or not this is true? If so, should the ashes be sifted or not? If applied, to what extent, that is to what depth? F. D. W.
New York.

The coal ashes contain little or no actual plant food. A ton of anthracite coal contains only about three pounds each of potash, and of phosphoric acid. Unlike wood ashes, coal ashes have no value as a fertilizer. They do, however, have a useful effect upon certain soils. The ashes should be sifted and only the fine dry ash used. Four or five tons to the acre can safely be used. I should plow or spade the ground, then dump on the sifted coal ashes and work them thoroughly into the upper surface. On light sandy soils the ashes work in between the coarse particles of the soil and thus make it more compact and better able to hold water; on the heavy clay soil the fine ashes have the opposite effect. They open such soils, make them more porous and thus fit them better to give up their plant food and sustain crops. This effect of the coal ashes is physical, and when properly used they will make over the soil and render it better able to take care of the crop, but do not think that they add plant food as fertilizers or manures will do. I use such ashes around fruit trees as mulch, or a mound at the base of the trunk.

I want to know the best way to keep Winter apples in an ordinary cellar, whether to leave them in barrels in which they have been shipped, or to lay them out in open bins. C. C. T.
Pennsylvania.

First the cellar. It must be dry and uniform in temperature. I have learned that a cellar with a concrete top is worthless for keeping fruit. So is a cellar where there is a stove or furnace. If the cellar is dry and unheated we open the windows at night and close them by day. Use a thermometer and try to keep the temperature below 40. Packing in open bushel crates or boxes is the best method we have found. The smaller open packages keep better than bins or barrels. They should be looked over now and then and the decayed stock taken out.
H. W. C.

Breeding Pheasants.

ON page 1329 I notice an inquiry in regard to pheasants, and think our experience, of five years may be of interest to some of your readers. Starting with four pairs we have increased our stock to about one hundred birds, and have disposed of a considerable number to fanciers in several States. We have found them easy to raise, hardy, light feeders and a constant source of delight and wonder to our visitors, owing to their brilliant plumage.

Our runs are 12 by 24 feet, entirely inclosed in wire, both sides and top, while in even the most severe weather they have required no other protection than small open-front houses. As they are naturally a wild bird we have found it impractical to keep them in the open, as may be done in the case of domesticated fowl, and this is impossible, in New Jersey, owing to the game laws, under which, when once liberated, they become the property of the State and private ownership ceases. There is a constant demand for the eggs, particularly of the brilliant Mongolian breeds W. B. LLOYD.
New Jersey.

Preventing Trespass.

CAN you tell me what is necessary to be done to keep hunters and fishermen off a farmer's land in New York State? The farm is in Sullivan County, and it is desired to put up signs forbidding hunting, fishing and trespassing. Does the law require the use of any special phraseology? Must the owner file a notice with any public official? I have heard that such signs must not be attached to trees. Is that so? F. M.
Rutherford, N. J.

The land can be simply posted or it can be made a private park; the difference being that the notiees in the latter case must state that the land is a private park and a notice describing the farm and stating that it is established as a private park to propagate and protect fish, birds or quadrupeds must be published once a week for not less than four weeks in a newspaper published in the county where the land is situated. No water that has been stocked with fish by the State since April 17, 1896, can be included in a private park, and fishing cannot be stopped in such water. Trespass on the banks of such a stream or pond can be stopped.

Notices or sign boards not less than one foot square must be conspicuously posted and maintained not less than 40 rods apart close to and along the entire boundary, and there must be at least one such notice on each side and at each corner and where the boundary runs along or under any water the nearest shore within the park shall be considered the boundary for the purpose of posting notices. Any person who trespasses on such lands after the notices have been placed or after having been served in the name of the owner with a written or printed notice containing a description of the premises and warning all persons against hunting, fishing or trespassing thereon is guilty of a misdemeanor and is liable to exemplary damages in the sum of $25 for each offense or trespass to be recovered by the owner of the lands or of hunting or fishing rights thereon with the costs of the action in addition to actual damages, all to be recovered in the same aetion. The consent in writing of such owner to hunt or fish on said lands during the open season is a defense to a prosecution under this law.

The law makes no mention of any special wording of the notices except that the published notices and those served on trespassers must describe the premises and state that trespass is forbidden and in the case of private parks the published notice must state that the park is established for the protection and propagation of fish, birds or quadrupeds. The law simply says that the notices must be placed close to the boundary. It does not mention trees. A. C. W.
Wayne County, N. Y.

Public Land Sales Active.

IT is sometimes stated that all the public lands which have any value have been taken up. Not so. Secretary Lane, in an advance statement from his annual report, calls attention to the fact that since March 4, 1913, settlers have made entry on nearly 20,000,000 acres of public lands—an area equal to that of Connecticut, Massachusetts, New Hampshire, and New Jersey combined. During the same period practically as much more coal and other mineral land of the West has been examined in detail in 40-acre tracts by the Geological Survey, and most of it has been thrown open to settlement or purchase. Some of these lands, such as those which include workable deposits of phosphate or oil, are still withdrawn pending suitable legislation for their disposal or use. Another important activity in public-land classification to which the Secretary calls attention is the designation of lands for entry as "enlarged" or 320-acre homesteads. Designations under this law approved by him cover 33,453,056 acres.

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Ruralisms

MISSOURI FRUIT NOTES.

GOOD PEACH CROP.—The past season was phenomenal, giving us a full crop of peaches following the very heavy one of last year. It was not expected, and a severe frost that struck the trees while in bloom was thought to have made failure certain. However, it was soon discovered that a live embryo could be found now and then and, as usually happens, these sporadic cases finally combined to aggregate a large crop. The droughty Summer seemed to be congenial to the peach. It was too dry for the rot fungus to develop, and the thinning that the frost gave resulted in uncommonly fine specimens of fruit.

MAYFLOWER AND DEWEY.—The first peach to ripen here was the Mayflower about June 25. In common with all its tribe of extra earlies it is too insipid to compare with later sorts, but its extreme earliness and attractive appearance make it a good seller and profitable. Next came the Dewey, July 20, which has made a good record here since it began bearing. It is a large yellow fleshed peach as large as Carman, with yellow skin overlaid with dark crimson, which makes it handsome in appearance; the quality is good, better than any of its season, and it has proved a reliable bearer.

OTHER EARLY SORTS.—The Red Bird has not fruited here, but a Texas friend says that its high color and size makes it a great seller, and that in his section it is paying off mortgages and buying automobiles for its growers. The Early Wheeler, coming in a little later, is another money-maker. It is the largest of the earlies, as large as Elberta, fine color, good shipper, trees sure yielders and vigorous but quality poor. Arp Beauty, he tells me, is the best of the earlies in quality but the color is dull and it runs small unless fruit is well thinned. Following the Dewey here without a break comes the Eureka, a good medium-sized peach on a tree that is claimed to be exceptionally hardy, having withstood 32 deg. below zero. Ripe here July 25. As it goes out there comes in the Alton, a considerably larger peach of fine quality and appearance, a white-fleshed freestone, good shipper. This variety also has a reputation for hardiness and regular bearing, exceeding the Elberta in these respects. Following the Alton closely comes the Belle of Georgia, another favorite kind that never fails to present us with a crop whenever there are any peaches to be found, a heavy bearer of large showy fruit. We prefer it to the Elberta of about the same season.

MID-SEASON.—The Carman comes in rather between the Eureka and Alton and is certainly a fine market peach. About a week later there begins to ripen a peach but little known but which has made a splendid record here. I refer to the Elrose, a creation of the well-known horticulturist J. W. Kerr of Denton, Maryland, deceased, from whom I procured the trees direct. It is a cross between the Elberta and Mountain Rose, hence its name. This variety which comes in as the Carman goes out, is superior to that variety in size, quality and vigor of tree. The Elrose makes a very large peach and in quality is first class. Trees planted 12 years ago with the Carman are showing much greater size of trunk and spread of top than the latter and in consequence yield larger crops. We are much impressed with the Elrose here and regret that it has not been extensively tested.

KRUMMEL'S OCTOBER.—A peach which ripened here for the first time and made a sensation with its size and beauty, is Krummel's October. The young tree set so full of fruit that it had to be thinned of a half bushel. During the dry Summer they remained very small, but after the rains in August they grew rapidly and towards the last of September began to color. By the first of October they appeared fully grown and colored, and a more beautiful crop of peaches I have never seen on a tree. They were uniform in size and equalled the largest specimens that had been seen during the season. A number of them averaged 11 inches in circumference. In brilliancy of color I have never seen them excelled and rarely equalled. The quality, too, was very good. The flesh was a deep yellow, juicy and delicious. For firmness and long-keeping quality they were incomparable. One was accidently dropped on a concrete pavement and no perceptible bruise resulted. For 10 days or more they hung on the tree in the prime of shipping condition, and were not then soft, but if picked and laid away, they would in two or three days become mellow. Our Italian fruit dealers when shown a specimen, offered 2½ cents each and were eager to get them. We sold them $1.70 worth after home requirements.

L. R. JOHNSON.

Cape Girardeau, Co., Mo.

Holiday Decorating Materials.

A MACHINE for winding festoons of holiday greens winds two yards a minute, winding with wire on a core of wire or other material. The machine costs $5.

Holly wreaths of standard size are made on 10-inch wooden rings, wrapped with wire, with four or five bunches of berries. Advance trade quotations the middle of November were $10, $12.50 and $15 per hundred, according to quality and weight. They are packed in cases containing 100 up to 250 wreaths. Sometimes other wild berries are used in making the wreaths, where the holly is poorly berried, but this is rarely satisfactory to the purchaser.

Delaware holly is reported to be very glossy and well-berried this season. Advance quotations were $3 a case; extra quality $4. Cases are 2x2x4 feet. These prices are usually fluctuating.

Boxwood wreaths are sometimes made like the holly, selling for $10 and $12.50 per 100. Boxwood sprays were quoted at 15 cents a pound, or $7.50 a case.

Partridge berries are among the newer offerings, selling for 10 cents a bunch of 50 sprays.

Mistletoe comes quite largely from Virginia, North and South Carolina; it is packed in hampers, barrels and cases, and quoted, advance wholesale prices, at 10 to 15 cents a pound. The hampers hold about 10 pounds.

Ground pine or Lycopodium is sold loose, by the pound, at 12½ cents; wreathing six to 10 cents a pound, according to weight and quality.

Christmas trees from Maine and Vermont were quoted wholesale at 50 cents to $3 each; little trees, 18 to 36 inches high, 25 to 40 cents each. A considerable area now quarantined for moth infection is out of the market for Christmas greens.

Cedar and pine wreaths are made on wire of various sizes; long-leaf pine is sold by the spray.

Iridescent pine cones at 60 cents a pound are among the decorating novelties; they were used a good deal in Autumn work.

Golden Retinispora sprays are new among greens; they are very graceful and feathery, and are offered for 30 cents a pound.

Ruscus or butchers' broom, natural prepared oak sprays, beech sprays and Magnolia leaves, red, green, brown and purple, occupy a distinct place, as their use is not confined to the holiday season, but forms a decorative feature throughout the year. The natural prepared oak leaves are particularly handsome, and were very largely used with Chrysanthemums. We are often asked about marketing these leaves, but are unable to recommend an outlet. One large firm preparing this foliage is located in Indiana, and they appear to rely on nearby stock for supplies. Mature foliage curls very quickly when shipped, and becomes extremely brittle. This prepared foliage looks as though freshly cut, yet remains in condition for decorating use.

E. T. R.

LANCASTER, PA., FLOWER SHOW.—Our local florists' society has just ended a busy week, as we held our first flower show in Lancaster, Nov. 6-7. Our organization is not a large one, about 50 members, and we had many misgivings regarding the outcome; in fact we were rather pessimistic about it. The result far exceeded the expectations of any of us, and was an unqualified success, both as an exhibition and financially. It showed conclusively what can be done if each one helps a little, and all work toward one end. If groups of farmers and truckers could work together in the same manner I feel sure the 35-cent dollar would soon get nearer the 50-cent mark. Though, of course, the 80-cent mark would be better.

Lancaster Co., Pa. ELMER J. WEAVER.

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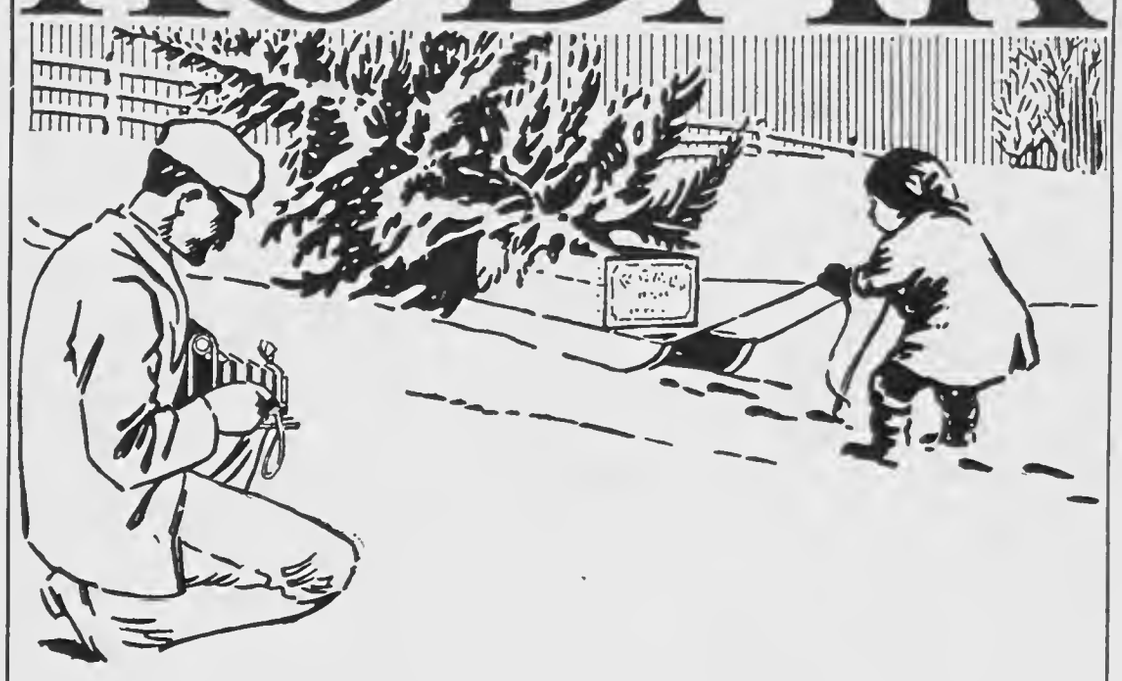

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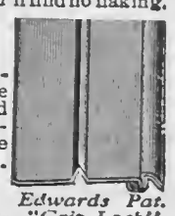

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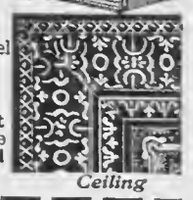

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A WHOLE lot of gentlemen are getting ready to "save the dear old farmer" by selling him some new form of potash. Well, sir, there is just one argument worth listening to. When you get ready to offer available potash for less than five to six cents a pound come forward! Until that time comes—what's the use?

*

THIS is another warning about the so-called "Barron" strain of Leghorns and Wyandottes. Take our advice and breed these strains pure if at all. Do not cross with your American Leghorns if the latter now lay a chalk white egg, and do not buy breeding stock which represents a cross of the two strains. Evidently some of our American breeders bought a cockerel or a few eggs of this Barron stock and have made a cross with the American birds. Now they offer the results of this crossing as pure "Barron" stock, when it is nothing of the sort. Such pullets will make good layers—though the eggs will probably show more or less tint, but they are not what you want as breeders. Make the "papers" of those Barron birds fit like the paper on the wall, or do not use them for breeding!

*

WILL you state clearly the points in the following questions: What is customary for a man working a farm on thirds; the owner finding all implements and horses? Do we find one-third of anything or does he bear all expenses and pay us one-third for work? J. A.
New York.

This calls for explanation a dozen times a year. The usual plan is to divide the business into three parts, real estate, labor and personal property. If the owner furnishes the real estate and the tenant gives the labor they would each receive one-third. The remaining third would be divided in proportion as each contributed to it. If the owner provided all stock, seed, fertilizer and capital, the entire third would come to him. If the tenant provided some of the stock and paid a share of the bills he would receive a share of this third in proportion to what he paid in. This is the basis for figuring such contracts.

*

SUPPOSE all farmers by improved methods of cultivation should increase the output of their farms 25 per cent. or even 10 per cent.; the result would be disastrous in the extreme in the lowering of prices to a non-profitable point.

A writer in the New York *Sun* makes this point, which we have used repeatedly without serious contradiction:

The rest of us, not dependent upon the soil for a living, would enjoy in some degree cheaper flour, corn, cotton, butter, eggs, etc. I say in some degree, because the middleman never gives us the full benefit of the low rates at which he buys farm products, but where does the farmer come in? His efforts to increase the productive capacity of his soil, instead of bringing him reward in the shape of profits, may deprive him of any profits whatever. It is to the interest of the farmers of the country as a whole to curtail production in order to maintain high or at least relatively high prices.

Just now everyone, from the Secretary of the Treasury down to the small storekeeper at the South who "finances" a colored tenant farmer, is trying to compel planters to grow less cotton. In some States laws are contemplated which would make it a misdemeanor to plant a full acreage. Low prices for farm crops will always mean a low grade farming. The railroads are all greatly in favor of increasing the nation's crops. This means more business for them, and at the same time lower prices for farm products. Yet while advocating big crops and low prices for farmers the railroads are demanding higher freight rates for themselves! The farmer will be inclined to take "efficiency" at its college valuation when he sees the railroads, the feed men, the fertilizer men, and the manufacturer making "two blades of grass grow where one grew before." "Efficiency" for all those big interests means making a thing as cheaply as possible, and then curtailing the output so as to hold up the price.

THERE is a model flour mill located at the Kansas Agricultural College—with a capacity of 75 barrels every 24 hours. Wheat is grown on the college farm. The students and faculty have pledged a carload of wheat grown and milled at this college to be sent to relieve the suffering Belgians. The flour sacks will be stamped "Aggie's Best"—in purple and white—the college colors. A noble and characteristic charity! This bread upon the waters will return in the form of cake for Kansas. Over 30 years ago the writer lived in a Colorado town. Wheat was the staple crop, but there was such a tremendous yield that prices were at the bottom, and many a farmer stood to lose his land. A river flood did great damage to Memphis and towns below that city, and there was a call for help. Out of their poverty the farmers contributed a carload of wheat. It was ground at the local mill and sent on without thought of any return. The quality of that flour from Colorado wheat was so superior that as a result of that shipment orders for more came rushing in, and it proved the beginning of a superior and profitable trade.

*

"I'LL sell you the straw stack for $3.50." There were 2½ tons of straw in it. The buyer held off. He said: "I can get a straw stack for hauling it away, but I would rather pay something for this one than go that much further and pull over bad roads." The first farmer had a partly worn-out property, he was paying tribute to fertilizer interests to the extent of nearly $100 a year, and was forgetting a conservative estimate of the value of that 2½-ton straw stack would easily be $6.50, according to fertilizer values. Many men are selling straw from the farm at $5 a ton, hauling it to station over a half a dozen miles of bad roads, and hauling back fertilizer or trading their straw check to even up fertilizer account. The average ton of wheat straw contains 12 pounds of potash, of oat straw 25 pounds. A ton of the straw used as bedding will absorb and hold about 50 pounds more potash—most of which would otherwise be lost in the liquid. In northern New Jersey we often sell rye straw at $20 or more per ton. This may pay, but to let the straw go for less than $10 per ton is robbing the farmer to pay the taxes.

*

WE have expressed our opinion of "stone meal" on various occasions. We do not believe it is worth much more than many common soils found in the State of New Jersey. Mr. C. Schnell, of the Stonemeal Company, still takes his product seriously and he comes back in a long letter which contains the following:

We have unsolicited, un-bought-and-paid-for expert evidence that about 4 per cent. of our potash in the composition is water-soluble, and as a very considerable portion of our potash in silicate of potash, the only form congenial and assimilable to plants and the only form supplied for their use by the All-wise Creator, we are to-day the only concern in this country able to make the inexhaustible masses of potash in our feldspatic rocks available. Therefore we ought to get friendly cooperation from "farmers' friends"; yes, from every patriotic American, instead of sneering, insinuating condemnation. That, however, has always been the lot of missionaries.

The muriate, sulphate, kainit and other forms of available potash so largely used as fertilizers were also supplied by the All-wise Creator! If this "stone meal" contains four per cent. of available potash (which we doubt) that makes it worth about $4 per ton. Now when farmers are charged $30 per ton for this stuff where do they find the other $26 of value? Our agricultural chemists have worked out definite methods of estimating the value of plant food. They say this "stone meal" is worth about $4 per ton. The company selling it asks a farmer to pay $30 for it. It is up to them to explain where the $26 difference in value comes in. As for the claims that this crushed rock will prevent blight, rust or rot, we call that "guff" pure and simple—not worth considering in the light of agricultural science.

*

WHENEVER the price of wheat goes above the average the city man claims that all farmers must be getting rich. He seems to think that wheat is grown on every farm in the country so that all prosper when that grain brings one dollar or more per bushel. The fact is that high prices for wheat and flour prove a hardship to a large proportion of our farmers, because they buy most of the flour they use. In only 18 of the States is the wheat crop large enough to give a surplus above the local requirements, while in 30 States wheat and flour must be brought in from other sections. In the nine States comprising New England, New York, New Jersey and Pennsylvania, there is a yearly deficit of 115,800,000 bushels of wheat below the crop produced in this territory. Years ago New York produced wheat enough to provide flour for her entire population and then had a large supply for export. Now the State requires 45,000,000 bushels each year in addition to what her own soil produces. Of all the Atlantic coast States, from Maine to Florida, only two—Delaware and Maryland—produce a small surplus of wheat. Even Ohio falls short over 6,000,000 bushels. Indiana is the only State left east of the Mississippi that produces any large surplus of wheat. The Northwest has now become the great granary of the continent. Wisconsin, once a great wheat producer, now runs 9,000,000 bushels behind. It is no reflection upon the Eastern farmers that they have given up growing wheat. It is an indication of good management, since they have taken up dairying, fruit growing or the production of more profitable crops. California was once noted as a wheat producing State, but now fruits and nuts pay so much better that 8,000,000 bushels must be brought from other States to meet home requirements. Our opinion is that with higher prices more wheat will be grown in the Eastern States. At present, however, an increased price for wheat and flour means that the Eastern farmer must pay more for his bread and also for his feed, since all feeds rise in price when wheat and corn are high. The average city man cannot grasp the idea that Eastern farming is coming to be a business of specialties. Whereas years ago each farm produced its own bread and meat and a large share of needed fibre now many of them produce some specialty like milk or fruit or vegetables, and with the money thus obtained buy what other farmers also produce as specialties.

*

THERE are all sorts of middlemen. Some farmers sell their produce to commission merchants, other sell them to animals—cows, steers, sheep, hogs or poultry. This thing of selling produce to animals is not well understood—but it is just what a dairy, hog or poultry farmer does. The cow, hog or hen accepts the hay, grain or fodder, and turns it into a cash product. When the commission man gives us a 35-cent dollar we have a name for him, and the other string of handlers which would not look nice in print. What about the friend on four legs or the friend in feathers who gives us a 35-cent dollar? We have this friend under control, while the human middleman is out of our reach. Consider the year's record of those Hope Farm "hens." During the year one of them laid 79 eggs, while another laid 190. It is safe to assume that the poor bird ate as much as the other. From her appearance we should judge she ate more! Yet, in returns compared with the good one this hen gave but a 40-cent dollar. It was really less than that, for the poor bird did her laying when eggs were cheapest. With a flock of that poor character a farmer would lose money on every bushel of grain he fed, while there would be a good profit in selling to the other bird. This difference will run through all kinds of live stock. The Department of Agriculture finds this true in figuring the income and capital of general farming:

Investigations relating to profits in farming show conclusively that the efficiency of the animals to which the crops are fed is one of the most important factors in determining the farmer's net income. This is to be expected, since on many farms in this country the bulk of the crops is in reality sold to the dairy herd or to meat producing animals. If these are of such poor quality that they yield low returns for their feed the income to the farmer must be correspondingly small. Hence, no matter how large the total investment, if the quality of the equipment is deficient financial failure is inevitable.

There is no question about that. A scrub may prove a good individual producer. The chances are 10 to one against her, because no effort has been made to take the failures out of her pedigree. There are 10 chances to one in favor of the purebred because every effort has been made to keep these failures out.

BREVITIES.

FROZEN roots—poor food.

"Back-to-the-landing" seems to be expanding.

UNDER Mendel's law which would carry the dominant principle—a scrub man or a purebred cow?

A FARMER says this new motto, "An apple a day keeps the doctor away" is not correct. The local doctor stops for an apple every time he drives near.

THE time difference between Paris and Washington has been settled as five hours 17 minutes and a fraction over 36½ seconds. In miles the distance is 3,831.

WE have several readers who ask us to tell all about whitewashing with a pump. How make the whitewash and how put it on? What nozzle? How much power?

PARTIES come and parties go—politics work to and fro, but you cannot legislate man into a moral State. He must work it out himself or be left upon the shelf.

THE things of life which all men prize, come unto those who advertise, who come right out where all may see with character and pedigree stamped on the package full and fair. They get the trade and some to spare.

THE war is upsetting all forms of industry in Europe. Formerly wood was used for mine props in English coal pits. Germany declared such wood contraband of war. Now steel tubes from old boilers covered with concrete are being substituted.

NATIONAL GRANGE MEETING.

PART II.

THE closing days of the annual session of the National Grange were occupied with its most important business. Considerable time was given to the discussion of co-operation in buying and selling and the subject was viewed from many and various angles. By common consent certain fundamental principles necessary to successful co-operation were adduced which may be stated as follows: Co-operation should begin with the smaller unit, as, for instance, the subordinate Grange, and work upward to county, State and national co-operation. Confidence must be established in the organization and its management. In co-operative societies each stockholder should have one vote, and not a vote for each share of stock. High-grade products only should be handled and these put upon the market in first-class order; honest packing and grading (as in fruit), absolutely essential. Co-operative organizations should be operated on a cash basis, credit ventures are uncertain. Adequate financial arrangements are absolutely essential. These general principles were incorporated in the report of the committee on co-operation who also recommended the larger use of the parcel post as a means of saving the cost of transportation and the middleman's expenses to a large degree as between producer and consumer. The committee also favored the appointment of a national market commission by the President.

As to ship subsidies and our merchant marine the Grange went on record to the effect that if government funds were to be used to aid in building up an American marine it should be for ships owned and operated by the government and it opposed the expenditure of the peoples' moneys for building of ships to be operated by any corporation for profit. On the general principle that no government franchises shall be granted that are for the enrichment of the few at the expense of all, the Grange is a unit. This applies as well to the conservation of our natural resources. It also emphatically asserts its purpose to support a conservation policy that shall keep and develop for the benefit of all the people all the natural resources not yet surrendered to private ownership and the latter shall be taxed at a fair rate on their full franchise valuation.

Good roads, especially good market roads, are demanded by the Grange for the farmers' benefit primarily. The good roads policy of the National Grange has not been concisely defined heretofore, so it was deemed advisable to formulate what may be styled the National Grange good roads policy, and to that end a committee was appointed which reported later to the session what it also later adopted as the Grange pronunciamento on the subject. It sets forth that the National Grange is the pioneer in national aid for good roads; that the roads needed first are those which put the farmer in close touch with the trading centres: that while scenic roads are desirable, when they can be afforded, market roads are indispensable and that the construction, maintenance and control of these roads shall be kept within the smallest possible unit of population or area consistent with the highest efficiency of administration. The Grange goes on record against "the many bonding schemes advanced by those seeking touring roads, believing the pay-as-you-go policy to be far more business-like." As roads are local affairs their control should remain with the people in whose midst they are located. The Grange directs attention to the grave dangers existing in bureaucratic control and to the fact that much of the good roads sentiment "comes from those who are more anxious to build roads for bonds than sell bonds for roads." The legislative committees of the Grange, both national and State, are urged to use their utmost efforts to secure, first, business roads that will serve the best interests of both producer and consumer.

On schools and education there were some important recommendations. It was held that the boys and girls of the country should be enabled to secure at least a high school education without necessarily leaving their home communities to get it. The unit of administration of our schools should be large enough for the highest efficiency but small enough to secure the largest possible interest and co-operation of the people most directly concerned. Legislation to change the units of administration should be optional rather than mandatory. Courses of study should be such as to combine culture with efficiency and send out graduates "equipped to live a life as well as to make a living." The possibilities offered the Grange and the schools through the provisions of the Smith-Lever law, were called to the attention of the Grange public. The advantages will be enormous, and the extension work in agriculture will be possible to an extent undreamed of before.

The Grange opposed the proposition to let the contracts for carrying the mails on rural roads to the highest bidder. It favored the removal of all limitations from the amounts that may be deposited in postal savings banks and the use of savings funds to make loans to farmers; it recommended uniformity of laws as to methods of assessment of taxes and valuation; it protested against the seating of United States Senators, whose election can be shown to have resulted from the corrupt use of funds or methods of coercion. It approved the proposition to celebrate the fiftieth anniversary of the organization of the Grange at the annual session of 1916. It voted to secure a codification of the tax laws of all the States for use in the Granges for better enlightenment on the subject of taxation. It opposes an amendment to the Federal Constitution giving suffrage to women, and declared it a State matter, although expressing its support of the principle of equal suffrage. It demanded more restrictive laws in regard to immigrants and advocated some rigid educational test; it declared that no farm credit law would be satisfactory to the Grange, nor meet the fullest needs of agriculture, which places in the hands of private capital the power to make interest rates on mortgage bonds without limitations by Federal law; it opposed proportional representation in the National Grange, and it voted to hold the next annual session in California. J. W. D.

New York State Agricultural Society.

THE seventy-fifth annual convention of the New York State Agricultural Society will be held in the assembly parlors of the Capitol in Albany on Wednesday and Thursday, January 20th and 21st. An evening session will be held in the Assembly Chamber on Wednesday evening, and a banquet in one of the hotels is planned as a fitting close of the convention. The banquet will probably be a dollar a plate, and promises to be the largest banquet ever held in the city of Albany. This will be a new departure for the Society, and promises to be very popular. The speeches at the banquet will be brief but numerous, and will cover a wide field of subjects, by both men and women of national reputation.

Another new feature of this convention will be attendance of women. Last year the association broke away from its previous custom and elected a woman, Mrs. Julian Heath, President of the National Housewives' League, as the first vice-president. Mrs. Heath promises the attendance of a large number of her League, and all the women of the State are cordially invited to be present. The farm women are especially invited, and arrangements are being perfected for their entertainment, and committees will be in waiting to see that their comforts are looked after while in the Capitol City. The program for the convention is nearly completed, and men of State and National reputation have accepted invitations to discuss the achievements and needs of the farming interests of the Empire State.

This being the seventy-fifth anniversary of the Association, all the living ex-presidents are expected to be present, and many of them have already promised to come. This convention has got to be one of the features of the calendar for the farmers of the State, and it is intended to make the seventy-fifth anniversary the largest and best in the history of the Society.

New York State News.

PLANNING FOR NEW STATE FAIR.—It is said that there are three plans, at least, for the reorganization of the State Fair management. One idea is to make the Fair a bureau of the State Agricultural Department, the Commissioner to appoint a superintendent of the Fair who shall be responsible to him alone. Another plan is to have a large commission with the Lieutenant-Governor at its head, with representatives from the various agricultural, horticultural, cattle, dairy, sheep, and other societies of the State. These commissioners would draw no salary and the management would be in the hands of a superintendent appointed by the commission. The other plan is to have a commission of three, the Lieutenant-Governor, the Commissioner of Agriculture and a Fair superintendent, the latter to be in constant charge of affairs, and who would be paid a good salary. Legislation on the subject may be expected early in January.

STATE FORESTS AND THE CONSTITUTION.—One of the matters that will be brought to the attention of the constitutional convention next year will be the elimination therefrom of the section which prohibits the removal of any timber from the forest preserve and declares that the preserve shall be forever kept as wild forest lands. Most of the forestry organizations and the State Forestry College are said to be behind the movement. It is estimated that the State is losing a million dollars a year by not using the forest lands "in a reasonable way." The State is expending approximately $85,000 a year in the protection of these forests.

THE EDUCATION CONVENTION.—Addressing the State Teachers' Association Dr. Thomas E. Finnegan, Assistant Commissioner of Education, arraigned the present system governing rural schools and declared in favor of the township unit system, making the town the unit for the administration for school affairs in rural districts. His plan also includes a system of specific instruction for rural school teachers. Dr. A. C. Thompson, principal of the State Normal and Training School, at Brockport, argued for the home-farm school, as he styled it. He would have a rural community buy a good farm centrally located, wherein a school should be established as a community centre, with teachers and others employed of sufficient number to teach the school and do the work of the farm, making it a sort of experiment station for the community's benefit. It could also be made a trade school where the trades that contribute to the needs of the farm could be taught. He believes that such a community school could be made to pay a financial profit. J. W. D.

The Foot-and-Mouth Disease.

THE latest news of the outbreak of foot and mouth disease is encouraging. The Department of Agriculture has raised the quarantine against Canada. They think the quarantine now established is sufficient to stop the movement of infected cattle and the disease can now be held. In New York State the situation is declared to be well in hand. The heaviest single loss was a dairy herd of 289 cattle on Long Island. This entire herd was slaughtered and was appraised at the valuation of $22,500. The disease was found at the Buffalo Stock Yards, which have now been cleaned. Otherwise this disease has been confined to only one or two sections of the State. In view of this the live-stock breeders and owners, in sections of the State where the disease has never been found, ought to be permitted to ship out their stock under fair regulations. The spread of the disease seems to have been checked. It will now be distinctly located in a number of small sections and stamped out. This policy, properly carried out, ought to permit the shipment of stock from districts where the disease was never found. The Department of Agriculture also refers to a rumor which has been circulated in some of the daily papers. These reports were that certain men are at work intentionally spreading the disease, in the hope of interfering with the export of meat for war purposes. Tracing this story down, it came to be a man in Nebraska who claimed to have heard conversations between two men who were equipped with syringes for injecting the germs of the disease. The investigation proved that this report was nothing more than a drunken dream, and this appears to be the foundation of sensational reports given in some of the daily papers. It is a foolish and wicked thing to spread these reports. The disease will now be quickly and promptly eradicated, and the general public has nothing to fear from the disease. It has caused trouble enough to our live-stock breeders, and it should now be promptly and quietly closed up.

The Commission Man's Side.

AT a recent meeting of the Medway Farmers' Club the topic of the evening was: "Is the commission man necessary to the farmer?" and a well-known Boston commission man gave a general talk on the subject, or rather gave an example of some of the problems he meets every day. Most of what he said was good sound sense, true to conditions as they now exist, as the writer well knows, having followed the market in selling farm produce for a number of years. A few of the incidents he related are useful and every-day experiences, some of which we might profit by. A strong point he made, and on which I agree having been caught that way many times myself, is not to try to force too high a price from a buyer, but be satisfied with a reasonable one This should give you fair returns and at the same time does not force up the retail price so as to cut sales and limit the demand at that end as an every-day customer who buys a certain amount regularly at a fair price is much to be preferred to one who comes only occasionally. The latter might pay more for what he bought, yet he would not be near as good a customer as the regular daily buyer at a less price, because what he does not take many times has to be sold for what you can get. This to a chance customer is usually much less than sales to regular customer, and makes the average shrink quite a good deal. Another good point; it pays always to let the commission man know a day or two ahead if possible what you are going to ship him, and also if you are going to have a large increase above what you have been shipping be sure to let him know beforehand, and he can many times place it to better advantage than if he knew nothing about it, until it arrived. This perhaps might be after its best buyers of the day had purchased their supply, in which case it would have to be sold to a chance customer at what he was willing to give, or carried over to the next day. In the latter case two days stock must be sold in one day, which would not naturally help prices or sales, especially when much stuff was coming in every day. At such times the buyer is far more particular to get strictly fresh stuff than when it is not plenty. One or two-days-old stuff is not fresh, and is hard to sell at a low price, and, of course, means very poor or no returns at all to the producer who sent it in.

In another case a commission man had been handling a man's raspberries and making good returns for them. Two of his neighbors, hearing of this, and not being satisfied with what had been returned for theirs by their commission man, sent their pick to the commission man who had made the good returns. The result was all these lots coming when only one was expected, they could not be disposed of to advantage, and a loss all round was the result. The shippers lost by charging more than the difference they expected to gain, and the commission man lost the two new customers and the old one also.

A commission man in Boston was receiving apples which while good in quality were not graded or sorted, but put up, all sizes, in bushel packages. These sold in Boston at 40 to 65 cents per bushel. The commission man took a trip out to this orchard one day and the owner asked about the market conditions, and stated he did not know how to pack his apples properly. He asked the commission man's advice about packing. The commission man said: "I know how they should be graded and packed, but do not know how to do it myself." He was urged to try, however, and did so, but made a failure of the job. He then advised the orchard man to send to the college for an expert to do the packing. This was done, and the apples so packed were shipped in to the commission man. The next morning after they were received at Boston a buyer who had been taking the mixed packed apples at 65 cents or less, balked at paying $1 per box, which the commission man asked for the best grade of sorted apples which, however, were not the largest size apples, but were all of a size and even packed. After some talk, however, the buyer took a certain number of the sorted apples and sent them to his store. In a day or two he returned and asked if any more of those apples were left. If so he wanted all there were, and as many more as he could get. This was pretty good proof that it pays to grade and properly pack all good apples if we want good returns for them, and a steady demand, as a satisfied customer generally comes back and becomes a steady buyer.

A. E. PROCTOR.

Meeting of Co-operative Associations.

THE second conference of the Co-operative Associations of the State of New York will be held in the city of Ithaca on January 13, 14, and 15, 1915. A large attendance of association officers, managers and members is expected to be present.

Invitations have also been accepted by a large number of high-class manufacturers and wholesale dealers in farm supplies to send representatives with a view of establishing trade relations direct with the associations.

The advantages of these co-operative associations are apparent wherever they have been properly organized and managed. At first the farmers of Chautauqua County hesitated about organizing. Several meetings were held before they decided to go ahead in even a limited way, and organized the South Shore Growers' and Shippers' Association, with special reference to the selling of tomatoes. S. J. Cook was fortunately made manager. In all the association handled 1,400 carloads of tomatoes and received one remittance of $90,000. As all the tomatoes were sold through the association there was no competition of one grower with another, and prices were better maintained. Another year the growers will probably handle their grapes in the same way.

Large Exports to War Zone.

SPACE on vessels leaving New York for Europe is in great demand at present, as the railroads reaching this terminal have been crowded with all sorts of war supplies. Thousands of horses and mules are being unloaded from Pennsylvania and New York Central trains. At one time there were 75 carloads of shoes, 60 carloads of knit goods, 100 carloads of saddles and harness, thousands of tons of barbed wire, great quantities of fur coats from Minnesota, 150 cars of auto trucks, and 25 cars of "caterpillar" traction engines. Orders said to be now in the hands of various manufacturers cover a daily output of 800 tons shrapnel material, $20,000,000 worth of vehicles; shoes, $2,000,000; sword and revolver sheaths, $1,000,000, while the West is being scoured for horses suitable for heavy cavalry work. A steel concern in Eastern Pennsylvania is believed to have orders totalling $40,000,000.

WE recently printed a little "poem" on "richer milk" by the Holstein Office Boy. The poets are coming in like bees to reply. Their "poems" will be printed in the Christmas Number.

DRIED swamp muck is a good absorbent to use in the stable gutters, but it makes poor bedding for dairy cows. When they lie upon it they become soiled and dusty, and it is hard to clean them properly. It will do for steers, but not for dairy cows. It is good for the gutters or manure pile.

Woman and the Home

From Day to Day

A CHRISTMAS CAROL.

"What means this glory round our feet,"
The Magi mused, "more bright than morn?"
And voices chanted clear and sweet,
"Today the Prince of Peace is born!"

"What means that star," the shepherds said,
"That brightens through the rocky glen?"
And angels, answering overhead,
Sang, "Peace on earth, good will to men!"

'Tis eighteen hundred years and more
Since those sweet oracles were dumb;
We wait for Him, like them of yore;
Alas, He seems so slow to come!

But it was said, in words of gold
No time or sorrow ne'er shall dim,
That little children might be bold
In perfect trust to come to Him.

All round about our feet shall shine
A light like that the wise men saw,
If we our loving wills incline
To that sweet life which is the law.

So shall we learn to understand
The simple faith of shepherds then,
And, clasping kindly hand in hand,
Sing, "Peace on earth, good will to men!"

And they who do their souls no wrong,
But keep at eve the faith of morn,
Shall daily hear the angel song
"Today the Prince of Peace is born!"

—James Russell Lowell.

*

THE Department of Household Science of the University of Illinois has sent out an interesting bulletin entitled "The Planning of Meals," by Isabel Bevier. Farm housekeepers often feel that dietitians rarely consider the character and variety of food that they find most accessible, when making up their meals. This bulletin, however, includes 12 different menus, using four common articles of food, beef, cabbage, potatoes and apples in a different way each time. There are also comparisons of food values that will be very helpful.

*

PATTERNS for infants' wardrobes are always in style and though we have printed these pattern numbers several times, there are always new readers who have missed seeing them. There is an infant's wardrobe complete (no pattern number) consisting of 16 patterns, the entire outfit costing 40 cents. Another infant's set, pattern No. 7917, includes dress, petticoat, and kimono. A baby's short outfit (no pattern number) including eight patterns, costs 30 cents. Another infant's set, No. 7912, includes dress, coat and cap. In making up baby clothes, there is a sensible tendency toward plainness, fine materials and dainty stitches taking the place of lace and embroidery. Soft-finished fabrics should always be used. Hand-made robes of soft nainsook, trimmed with the finest of feather-stitchings and hand-run tucks, have permanent beauty and refinement and if the busy woman has to run her seams and hems on the machine, that is all the more reason for simple daintiness in the finishing.

The Rural Patterns.

When ordering patterns give number and size desired. Price of each pattern 10 cents.

Pattern 8472A shows a smart tailored coat with cutaway fronts, perforated for two lengths. Cut in sizes 34 to 44 bust measure. For the medium size will be needed 4½ yards 27 inches, 3⅛ yards 36 inches, 2½ yards 44 inches or 2⅛ yards 54 inches wide, with one-eighth yard 28 inches wide for the collar. This is a becoming model for plump women, far more so than a belted coat. 8326, Child's dress. Cut in sizes 2, 4, and 6 years. Size 4 requires 1½ yards of 27 or 36 inch material for body portion and 1⅝ yards for skirt; or, 1⅞ yards of 44 inch to make of one material. 8274A, Girl's dress. Cut in sizes 6, 8 and 10 years. Size 8 requires 1⅝ yards of 36 or 44 inch material for blouse and 1⅜ yards for skirt and trimming. 8345, Girl's dress. Cut in sizes 6, 8 and 10 years. Size 8 requires 2⅞ yards of 36 inch material with three-eighths yard 27 inch for collar and cuffs. 8269, Girl's guimpe dress. Cut in sizes 4, 6 and 8 years. Size 6 requires 2 yards of 27 or 36 inch material for dress with seven-eighths yard for guimpe. 8249, Child's rompers. Cut in sizes 2, 4, and 6 years. Size 4 requires 2¼ yards of 36 inch material with 1⅛ yards 27 inch for trimming.

Seen in New York Shops.

COVERT cloth suits, in sand or putty color, are among the newest fashions. Anyone who remembers the covert coats we all wore 20 years ago knows how well this fabric wears. With dark-colored furs, especially skunk or fox, these light colors are becoming, and particularly so to young women. The covert cloth is always made up very plainly, with mannish tailoring. A very smart style for young women is the "Tommy Atkins," which has a plain full gored skirt, and a belted coat with patch pockets, cut like a field uniform. The coat of another favored model has a pleated

back with deep yoke and loose belt. The skirts are quite short, which is one reason why spats, or boots with cloth tops, fawn, tan or gray, are so popular. With these light-colored suits dark hats of velvet or felt are always worn.

The present vogue for sand and putty color has brought out the same tints in chiffon blouses. While the white blouse always remains in vogue, there is a decided preference for a blouse matching the skirt. Light-weight silks and crapes are favored for plain tailored blouses, but chiffon is the greatest favorite of all. It is usually made up over white or flesh-colored lining. Some of these chiffon waists have surplice straps or yokes of taffeta, with collars of lace, batiste or white taffeta.

Separate dress skirts are to be procured in more variety than ever, for though a commonplace "shirt waist and skirt," is not stylish, there are many occasions when such a skirt is combined very conveniently with a pretty blouse. Among black broadcloth skirts noted were several with a tunic falling from a circular yoke. A dressy model had a full rippled over-drapery banded with skunk-dyed raccoon fur, with rows of tiny velvet buttons down the side. A plain but handsome broadcloth skirt was full, a flaring circular shape attached to a deep charmeuse yoke. Another circular model had a deep yoke pointed at back and front.

"Buy a bale" party cases offered among novelties were of the customary box shape covered with smooth burlap in the natural color, strapped with black, so as to suggest a miniature cotton bale. They were lined with tan-colored moiré, with the usual gilded fittings.

Sanitary woolen underwear is expensive, but a necessary thing to those in a rigorous climate, and also to invalids undergoing fresh air treatment. Prices are said to be lower than last year; separate garments are $2.50 to $4; union suits $4.50 to $6.25. Other all-wool specialties are open-air sleeping outfits, bed socks, knee-warmers and abdominal bands, Many middle-aged and elderly people do not realize how much Winter comfort would be gained by the knee-protectors, which often prevent rheumatic twinges.

All over the world thousands of women are busily knitting soldiers' comforts, and all the New York stores that sell the materials have instructors who will teach purchasers how to knit gloves, socks, mufflers, helmets and abdominal bands. This is a case where, so far, machinery has not superseded hand work. The abdominal bands (cholera bands, they are often called) are knitted into a circle, the center plain garter stitch, with each edge ridged like the top of a stocking, so that they are firm, yet elastic. Any man exposed to exhausting outdoor manual labor in cold and storm, like many farmers, would find this soldier's comfort very desirable.

Boys' mackinaw coats are very "sporty" in all sorts of plaids, both bright and dull colors, with shawl-rolled or convertible collars; they have been offered, in sizes 10 to 17 years, for $6.75.

Fashions in toys, like fashions in dress, show a tendency to return to old times. Elderly women will remember the wooden dolls of long ago, arms, legs, body and head all whittled out, their round wooden faces painted, with rosy cheeks and staring eyes. One of the newest "indestructible" dolls is all of wood, with jointed limbs, and really not very different from the old-style toy, except for its more artistic finish. There are many other new wooden toys that return to old styles, especially funny birds and animals on wheels, intended for the littlest children. Among the soft cloth birds and beasts for the babies are fat and solemn ducks, nearly life size, gaily colored; as beak, feet and all are of cloth there is nothing to hurt a tiny child. Military toys are very plentiful; in addition to the old-fashioned lead soldiers, which have changed but little since Hans Anderson wrote about them, there are modern troops in some sort of composition like papier-mache, with dirigibles and other up-to-date necessities.

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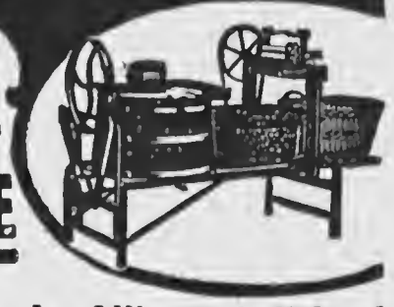

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IN THE WARM HEART OF THE WEST.

PART I.

THE heart of the West had called us, and like the disciples of old, we heeded the call. It was a very new West, when we first stepped forth upon the virgin soil, the soil which had never been harrowed by the plows of Progress, nor trodden by the feet of the white man or woman. Countless buffalo bones strewed the prairies, countless "wallows" and "runs" proved that not long since the great herds of wild creatures had homesteaded the plains and called them their own. The Summer was like one great, glorious picnic, the surprises on every hand, the wonderful flower bloom, the pebbles bright as jewels in the creeks, the upturned sod, the very cream of all creation, and the sundry and divers relics of the aborigines, bits of broken pipes, arrow heads of flint, of steel, stone hammers, and in fact all the strange, wonderful things a new country offers to its devotee.

Came Winter, came the near approach of Christmas, and the sunny plains scarcely touched with snow, stretched into infinity, and the lonesome-hearted knew the broadness of the separation of their own lives from the lives of those they loved. Mrs. Lonesome slipped on her coat, tied a heavy scarf over her head and went out into the great wideness of the prairies. Her feet almost unconsciously carried her to the shack of a neighbor near by at half a mile, as close as a neighbor might be, unless the homestead shacks were built just across contiguous lines. Mrs. Lonesome finding herself at the door of Mrs. Sweet, knocked lightly and entered to the cordial voice calling from within.

"I was just thinking about you, Mrs. Lonesome, and wishing you were here," Mrs. Sweet spoke vibrantly. "Sit down close to me!"

Mrs. Lonesome obeyed, looking wonderingly at the wild array of scraps lying about the little kitchen, which was living room, dining room, general room and all combined in one the real heart of a real home.

"It smells Christmassy here," Mrs. Lonesome volunteered, sniffing the fragrance of spices.

"It is Christmassy," declared Mrs. Sweet. "I believe we are to have the very best Christmas of our whole lives!"

"You are?" wistfully, "why we aren't going to have any Christmas. I told the children a week ago that Santa Claus did not come out to the plains—the chimneys, nothing but stovepipes, are too small!"

"You didn't spoil the children's right to Christmas that way!" protested Mrs. Sweet.

"Well, what could I do? Better to be prepared than hope to the end and then have the very dismallest time—on the day itself!"

"It won't be spoiled. Come over and share our Christmas," Mrs. Sweet paused a moment. "Why couldn't we have a community Christmas? All meet together, each one contribute to the great dinner and—" Mrs. Sweet's eyes were glowing, with the love of all mankind, for unto her had the Child been born, which had saved her from herself.

"That would be great!" agreed Mrs. Lonesome, "but about the tree and the presents?"

"I'm going to have a tree!" declared Mrs. Sweet, although the idea hadn't occurred to her until that very minute. "You'll see! And presents! Look here! Here is a pair of Jim's old trousers, awfully good thick cloth but worn out for him, in spite of many mendings. I was going to cut these up into mittens, and give them around to different ones, but I believe there's enough of the better parts to make Timmy Smith a pair of new little trousers; it's time he had some, he's too big for dresses, but they just can't get him any new clothes!" Mrs. Sweet was joyful.

"I should say! And then there'll be some smaller pieces to cut into small mittens, or slippers! Why, do you know, my old grandmother makes the most delightful slippers from heavy cloth? She has a real pattern, which I will get, and she lines them and sticks pieces of cloth together with cold water flour paste, presses these with hot irons until quite dry, cuts out her sole by a pattern, stitches and stitches and stitches these, until they are very solid, and the slippers are just great for the house or bed slippers, or for the Johns and Jims and Tims to wear after the long days out of doors."

"I have a real mitten pattern," Mrs. Sweet responded and she drew forth a bit of paper, and a moment later a pair of mittens which she had finished. Every stitch she had taken seemed like an ornament to the material, and the seams of the heavy cloth had been "ball-stitched" to a firmness and flatness seen seldom save on the covering of a ball. The mittens had a flaring gauntlet cuff, which was firmly bound, and short bits of feather stitching on the mitten back gave it the look of a real boughten article.

"You did that out of old scraps?" Mrs. Lonesome spoke almost in awe.

"Yes, and thanks be, there are a good many scraps to be used too, in our family, though I do buy skimpily and cut to the extreme limit of economy."

The canvass of the neighborhood followed that same day, and the day following saw women from all points of the compass converging to the home of the Sweets; they must work while the children were in school, and before the early chore time came, and work they did. If one family needed what another had in overabundance it was supplied, and so it went; not a single soul in all that little community of homesteaders, pre-empters or tree claim holders was unthought of. Even the bachelors were remembered and brought into the warmth of the West, and the Christmas spirit hovered over all.

"The tree, the tree!" cried Mrs. Lonesome. "Where is the tree coming from?"

"It's coming," Mrs. Sweet encouraged. "I believe I will tell, it'll be just that much more joy for all of us to get it ready! We're going to make a tree!"

This bomb burst one afternoon shortly before Christmas Day. "Make a tree!" gasped the wondering women.

"Look here!" and Mrs. Sweet led the way to the barn. "Here's the tree!" and she displayed with high pride, a two by four scantling, cut to just go in the door of the shack, and to reach to its very ceiling. "We are going to put on cross pieces, and branches, and we're going to decorate it with green tissue paper—I have some left over from paper flowers I used to make back East."

"Why," cried Mrs. Lonesome, "I've thought of something. Let's take the sticks out of our window shades and use them for branches; we could build up such a tree with them! Then we could use them in our shades after it was all over again!"

"What an idea!" gloried Mrs. Sweet, and Mrs. Jamison cried. "Oh, I've some of the loveliest green cloth, I colored it from an old sheet for carpet rags, and it will help to drape curtain sticks into real life and leafiness!"

"Yes, indeed!" supplied Grandma Patterson, "and why couldn't we collect up a lot of tumbleweeds, and crystallize them with alum, or even dip them in flour? Why, they'd look like Winter, and frost and snow and Christmas!"

"Well, of all things!" came a chorus, and the Christmas tree itself held the attention of all for a few days. The Sweet home was finally given over entirely to it. The children were blindfolded, to lead them through the mystic room where the Christmas tree was growing in a way of its own. Never had a tree been so fearfully and wonderfully made, and never had one so grown out of the very hearts of its creators as did this one, save dozens of others which grew up from the seed of it, for its fame spread far and wide, and the great tide of Christmas good cheer was flooding the hearts of the plains people with the gladness love and peace and good will always bring.

ROSE SEELYE-MILLER.

Variety in Plain Living.

THE bulletin on "The Planning of Meals," by Isabel Bevier, issued by the University of Illinois, gives 12 menus, using, each time, four staple foods, beef, potatoes, cabbage and apples. These staples are cooked differently in each menu, and we think they will be found very suggestive in providing changes from "the same old thing:"

1.—Porterhouse Steak, Mashed Potato, Cabbage Salad with Nuts, Baking Powder Biscuit, Apple Pie, Coffee.

2.—Tongue, Cabbage and Potato Salad, Popovers, Apple Turnovers with Grape, Tea.

3.—Roast Ribs of Beef, Baked Potatoes, Cabbage Salad (Sour Cream Dressing), Plain Bread, Baked Apples with Cream, Coffee.

4.—Creamed Dried Beef, Stuffed Potatoes, Creamed Cabbage with Peppers, Graham Muffins, Brown Betty with Cream, Coffee.

5.—Shepherd's Pie, Creamed Cabbage, White Muffins, Apple Soufflé with Whipped Cream, Cocoa.

6.—Corned Beef, Boiled Potatoes, Boiled Cabbage, Butter Rolls, Apple Pudding, Coffee.

7.—Short Ribs, French Fried Potatoes, Steamed Cabbage, Apple Dumplings and Cream, Graham Gems, Coffee.

8.—Rolled Stuffed Steak, Browned Potatoes, Hot Slaw, Baked Apples, Cream, Jelly, Nuts, Coffee.

9.—Hamburg Steak, Riced Potatoes, Escalloped Cabbage, Graham Bread, Apple Tapioca, Coffee.

10.—Corned Beef Hash, Potatoes with Butter and Parsley, Cabbage au Gratin, Entire Wheat Muffins, Dutch Apple Cake, Lemon Sauce, Tea.

11.—Beef Loaf, Creamed Potatoes, Cold Slaw, Nut Bread, Dutch Apple Cake with Cream, Coffee.

12.—Pan Broiled Flank Steak, Escalloped Potatoes, Fried Cabbage, French Rolls, Apple Short Cake and Cream, Cocoa.

ANOTHER CONNECTICUT ELECTION CAKE.—At night take three cups of milk, two of sugar, one of yeast, eight cups of flour, patent. In the morning, if light, add 2½ cups sugar, two of shortening, two eggs, two nutmegs, or a little cinnamon in place of part the nutmeg, a little soda. Work together, add raisins. Put in tins till light. This makes five loaves. MRS. W. L. D.

POTATO PIE.—Peel and boil enough potatoes for one meal, until tender, drain and mash until smooth, add salt and pepper, butter the size of egg or more if you like, add cream or rich milk until quite thin, or too thin for table use; last but not least two onions cut fine and mixed through the potatoes. Make a rich biscuit dough, roll thin, place a crust in bottom of baking pan, pour the mashed potatoes in crust and place crust over top. Prick with a fork and bake in hot oven. MRS. MAJOR.

"I RECKON," said Farmer Corntossel, "as how mebbe barbed wire ought to be counted as one of the most useful inventions of the age." "For what reason?" "When there's a lot o' work to be done, barbed wire makes it impossible to look on."—Washington Star.

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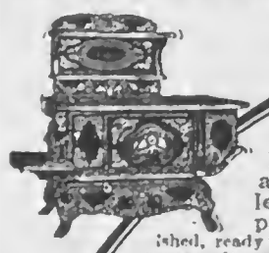
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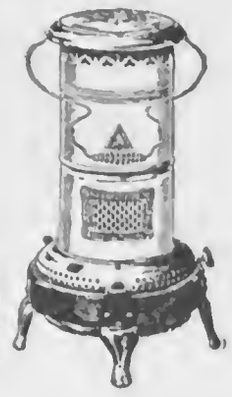
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DAIRYING IN PENNSYLVANIA.

"MOST people think of Pennsylvania as a State whose products are mostly coal and iron," says Mr. Thompson of the Pennsylvania State Extension work," and would be surprised to know that her combined agricultural and dairy products are worth more each year than her total wealth in iron or coal. This State is not generally spoken of as the dairy State, but May Rilma, the queen of the dairy world, was born and raised in Pennsylvania. Among other records held, we find the champion aged Ayrshire cow, the champion two-year-old Ayrshire cow, the champion three-year-old and two-year-old Jersey, aged Brown Swiss and Shorthorn records are also held in the State.

"The first of July, 1914, there were seven cow-testing associations in operation, the first of November there are 13, and to show farmers are interested in the cow-testing work, one illustration suffices: Two cow-testing associations in Bradford County, each split in half, forming two more associations, and further came a fifth separate association formed in that county. There are about five other associations very nearly ready to organize. Among the early associations to be organized were the Chester Valley Co-öperative Farms Association, including some of that county's best herds, another, the Brandywine Association, was formed in Southern Chester County. These were organized about four years ago. It has only been since the county agent movement testing in the Keystone State that new life has been given to the movement. This credit reflects directly upon the county agents, for they have been the most important factor in stimulating interest in cow-testing work.

"The working plan of the association follows: We demand a man with practical dairy training who has attended Winter short or long course at the agricultural college. He visits the farmer one day each month, ariving there in time in the evening, to weigh the milk, taking a sample from each cow, also weighing grain and roughage. During the evening he generally talks dairying with the farmer. In the morning he again weighs milk, grain and roughage, samples the milk, which is tested for butter fat. He then proceeds to figure the amount of butter fat produced per day, which is multiplied by the days in that month giving the total of butter fat produced or milk sold in that month. He also computes at current prices the roughage and grain consumed for the same length of time. This is all noted in the cow-testing association record book, one copy of which is left with the farmer, and the tester keeping the other copy. At the end of the year he sums up the amount of milk produced, total pounds of butter fat and feed production cost. These figures show him whether his cow is profitable or boarder."

CHAMPION AYRSHIRE COW KILNFORD BELLE 3rd.

DAIRYING IN RHODE ISLAND.

YESTERDAY a neighbor sold his herd of Holstein cows at auction, 27 fair-sized cows in all periods of lactation. The average price was $80; the highest cow sold for $145, and the lowest $40. This particular farmer was getting 5½ cents a quart for his milk at the door, but wanted six cents, not being able to receive his price he sold out.

At the regular Fall meeting of the Milk Producers' Association of Rhode Island the price of milk was fixed at six cents a quart at the door. I am unable to tell at present if the members of the Association have been able to get what they wanted. At present there is a great scarcity of milk on the Providence market, due in part to the strike of the milk producers of Connecticut, refusing to send milk at the old price, and also to the extremely dry weather barring the pastures and forcing the farmers to feed inside about one month sooner than usual. However, in our vicinity, I believe the number of cows will not decrease, as most of the farmers are peddling their own milk and must keep up their trade. The hay crop and corn crop were both good, and with many new silos put up last Summer there is plenty of feed. The price of grains remains about the same.

Our local market for cows is Brighton. Cows bought there are loaded in the afternoon of the same day and arrive in Providence or Pawtucket at 8 a. m. the next day. Freight is $1.50 per cow, or $15 for a car. Prices for good milkers range from $90 to $100 and over; at best it is a lottery, as the cows are bagged up for all they can stand, and it is almost impossible sometimes to detect any defect in the udder. For instance a dealer bought a nice young Guernsey cow second calf, for $95, and sold her to the Jew three weeks after for $35. Another bought a splendidly marked Jersey cow (oldish) for $80;—she gave a fine lot of milk for a few days and a month after had to let her go for $35. I could multiply the examples. Some farmers have started to raise calves, and this will likely help to solve the question of better cows, but instead of investing in a good bull and raising calves from their best cows, they buy calves from the large dairies, simply trusting the owner to sell them a good calf. This is of course wrong. At the Fairoaks Farm we had to give up our cream trade for a while, being so very short of milk. We sell pan-raised cream and get 80 cents a quart for it, and we have never been able to supply the demand. For the milk so skimmed we get three cents and will charge four from November first.

Rhode Island. A. PERREGAUX.

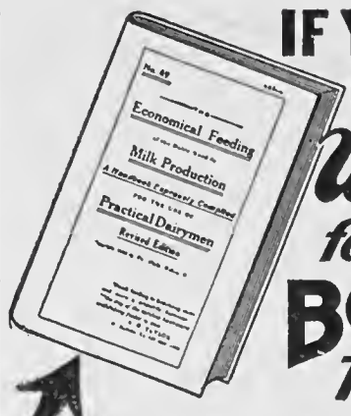
Treatment for Foot-and-mouth Disease.

PEOPLE everywhere are rushing in to tell the authorities what to do in the present outbreak. In the New York Times "A Chemist" suggests bicarbonate of soda:

"In this disease lime water, chalk, bicarbonate of potassa or bicarbonate of soda assists nature in recovering the normal condition. The 'foot-and-mouth disease' being a disease which requires a treatment externally and on a large scale, it is imperative that a remedial agent should be so mild in general action as will allow of the animal being treated very freely with it and that this substance should be practically innocuous if ingested, also that it should be so cheap that it could be used very freely. I, therefore, recommend that 'bicarbonate of soda' be used as a wash for all parts of the affected animals; as a preventive wash for all animals subject to infection; as a wash for all premises, quarters and food vessels in the case in hand; as a preventive on all runways, bridges and roads where infection could be spread; for the hands, clothing, boots, etc., of all attendants. This substance can be mixed with water to a thin cream and sprayed or for treating cattle feet for prevention of contagion they can be walked into a trough of it."

Surely no one would attempt to handle a case of foot-and-mouth disease without the best scientific help he could obtain. We submitted the above to Dr. Alexander, who says:

"Bicarbonate of soda is a fine wash for the mouth, but not at all suitable as a disinfectant. One has to use a five per cent. solution of carbolic acid or formaldehyde. I take no stock in this alkalinity theory. We prefer for the mouth a solution of borax or alum—both simple, safe and satisfactory."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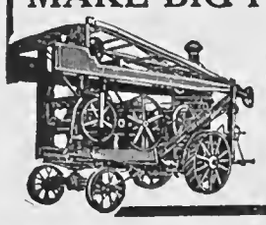
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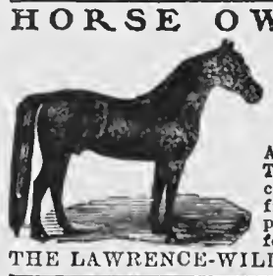
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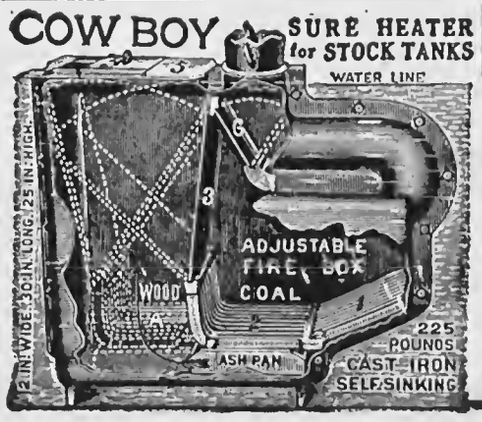

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CORN AND LINSEED FOR HOGS.

IN what proportions should corn and linseed meal be given to hogs, and how many pounds of the combination should be fed per hundred weight of stock that is, to produce the most economical grain? With corn at a dollar a bushel and linseed meal at $40 the ton, and hogs nine cents a pound live weight—the prices prevailing here—what profit might reasonably be expected on an eight-months hog if fed corn and linseed meal according to your reply to my first question? The above applies to dry-lot feeding only, and I name linseed meal because in many experiments it has been found to be the best and cheapest supplementary feed. Replies to the same questions about all the supplementary feeds, including the different kinds of pasturage—if reliable and not theoretical—would be very valuable in a hog book; and it is this kind of a book I should like to find. What is the status at present of inoculation for hog cholera? Also, is there a practicable hog and pig-tight movable fence? E. P. L.

If E. P. L. decides to use ear corn supplemented with linseed meal for swine, the proportion should be 15% of linseed meal on the basis of 100 pounds of corn. The amount to feed would vary materially with the age and purpose of the animal. Cornmeal and oil meal does not make a good combination for growing pigs, a better mixture would be: 100 pounds red dog flour, 100 pounds ground oats, 25 pounds bran, 10 pounds tankage. However, if the inquirer wishes to feed corn and linseed meal, animals under 100 pounds in weight, pastured on forage crops such as Alfalfa, rape or clover, should receive a pound of this mixture for each 100 pounds of live weight. Animals weighing more than 100 pounds should be given all that they will eat and clean up with relish. Digester tankage is a more economical source of protein than oil meal, and is not as laxative.

With corn at a dollar a bushel and linseed meal at $40 a ton, and hogs selling at nine cents a pound, it would be reasonable to expect a profit of $10 on an animal eight months old and weighing 300 pounds. The cost of grains would be substantially reduced in case the animals were pastured on forage crops. Perhaps the one crop that every hog man should grow for forage purposes is Dwarf Essex rape. It supplies protein in an economical and palatable form; the cost of seeding is very small and the plants are vigorous.

There are at least three books that have been published relating to swine production and are listed as follows: "Productive Swine Husbandry," by Prof. Day; "The Book of Swine," by Wm. Dietrich; "The Hog Book," by Dawson.

The use of hog cholera serum is far beyond the experimental stage. It is useful as a preventive and provides insurance at reasonable cost. It is not recommended that the serum be used, unless there is an outbreak of hog cholera in the community. A strict quarantine should be maintained in case cholera prevails. It is possible to check its spread by means of utilizing serum promptly. The double treatment, that is the use of serum and virus simultaneously, establishes permanent immunity in cases where reactions are obtained, but it has been found in some cases that the use of virus has been responsible for the introduction of the disease in the herd in case it is used with serum that does not protect. For this reason the use of virus should be limited to the use of the veterinarian, and it must be definitely known that the serum used is potent, and that it will actually protect. The double treatment is used to the best advantage and with the best results with animals that are given free range and are in a natural, healthy and vigorous condition. It is also suggested by some authorities that there is additional danger from the use of the double treatment during hot weather. It can be used to the best advantage on pigs weighing from 40 to 60 pounds.

I do not know of any practical movable fence for swine. In the West a great many swine growers take the 24-inch field fence, run it across the corn field, fastening the wire to the stalks. This is moved from time to time as the pigs clean up the area that they are hogging down. The expense of constructing a permanent fence for swine is not very great, and the use of the 24-inch field fence with a barb wire at the bottom has given very excellent results. F. C. M.

DAIRY NOTES AND PRICES.

AS to the future prospects of dairying in this country I believe they are good for any energetic young man who understands dairying. I believe that Delaware County, N. Y., will remain in the dairy business, as the land is rough and better adapted to dairying than anything else. I think the milch cow is as profitable as any line of dairying here, although some are doing well raising purebred stock. H. A. A.

Bovina Center N. Y.

FARMERS are fairly well supplied with hay, but nearly all grain is purchased, which is not higher than for the past few years. There is some tendency to increase rather than lessen the number of cows kept, and good cows are selling around $80. These for the most part are brought in by dealers. Several farmers are selling to Sheffield Farms-Slawson-Decker Co., and hiring the milk drawn about five miles; their price being considered more satisfactory for the Winter than butter prices at the local creamery.

Gilboa, N. Y. D. W. S.

The price paid here for milk at wholesale is generally 18 cents per gallon for use in Painesville and for shipment to Cleveland, out of which 1½c. per gallon must be paid for transportation to Cleveland. I feel safe in saying that the number of cows that will be carried through the Winter will be practically the same as for some time past. There are few cows for sale, in fact practically none except poor cows or old ones that have to go for butchering. There is ample feed stored for Winter generally. So far as we are personally concerned we have just quit the cow business. We do not see enough profit in it to justify the work and attention required. The price of milk is too low. The retail price of milk on the other hand is high enough (seemingly to us). If I am not mistaken milk retails in Cleveland at 36 cents, more than double what the farmer nets. H. L. M.

Painesville, O.

Oct. 26. We are receiving 5 cents per hundred pounds of milk more than the best cheese factory in this locality. We are selling to creamery at Dayton and buying back skim-milk at 12½ cents per hundred. May, 1914, $1.18 per hundred; June, 1914, $1.18-1.33 per hundred; July, 1914, $1.24-1.34 per hundred; August, 1914, $1.28-1.35 per hundred; September, 1914, $1.38-1.44 per hundred; October, 1914, $1.46-1.54 per hundred. Most of the farms in Cattaraugus County have more or less rough land; very few are level. Some can all be tilled, others are rough. Level land in the valleys is often wet a good part of the year. Our best farms are rolling, gravel soil; valleys are subject to early frosts, also highest farms.

Dayton, N. Y. F. E. H.

This would hardly be considered a dairy section yet there is some milk produced for local villages and the city of Rochester. I think there is a tendency to reduce the number of dairy cows owing to the low price paid for the milk, the increased value of the cow for beef and the shortage of fodder with high cost of milk-producing grains. We have had a dry Summer for pastures. Farmers have been obliged to feed the cows some fodder the past two months which will materially reduce the fodder supply for Winter feeding. Local villages want milk delivered at 3½ cents a quart. Some shippers get four cents net by sending to Rochester. Cows sell for $60 to $110 apiece. J. E. B.

Brockport N. Y.

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both sexes, all ages, best of blood lines, good individuals. Our sale in August averaged higher than any sale held in the East this year. Breeding and quality did it. We have just purchased of Lucas and Gill, Huntland, Tenn., one of the best herds in the South. It includes their show herd that won first and Championship at Nashville, Tenn., this fall. Get your name in early for our February sale catalogue.

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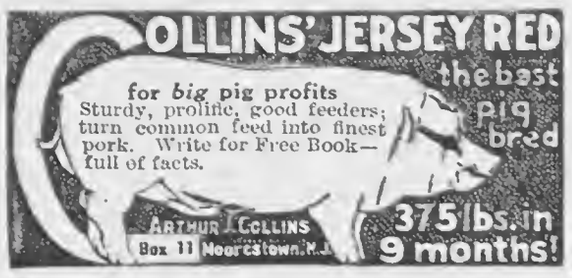

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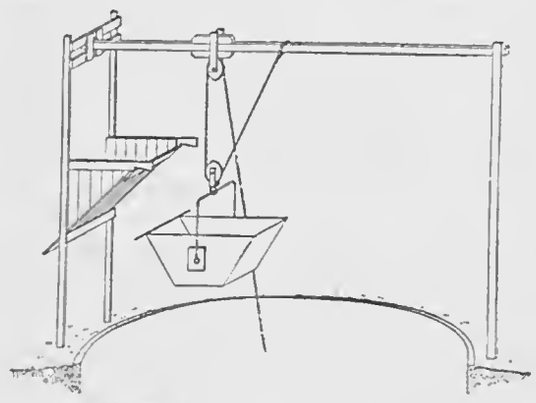
NOTES ABOUT SILAGE.

Easy Methods of Handling Silage.

THE Nebraska Experiment Station advises several conveniences in handling feed from upright, pit and partial pit silos. A handy and easily constructed convenience is the silage cart. Any farmer with saw, hammer, nails and lumber can construct one of these carts. The wheels used may be plow wheels or other small wheels. In constructing the cart the capacity should be considered. It should be borne in mind that loose silage weighs about 18½ pounds the cubic foot.

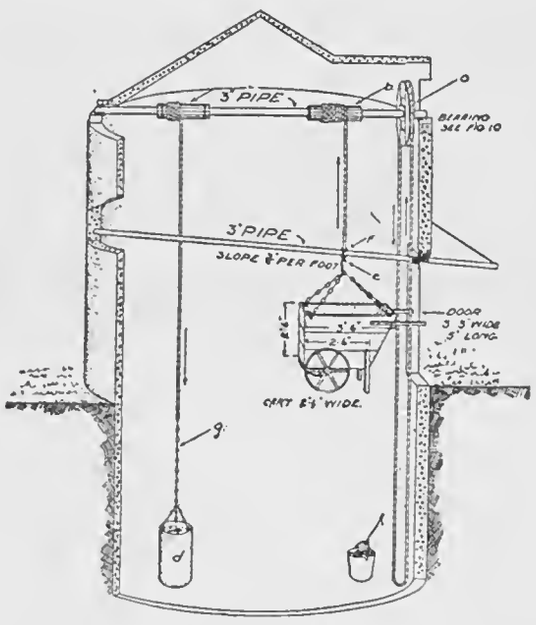
When considerable outside feeding is done a swing track is oftentimes used in the West. This makes it possible to distribute feed in a radius of consider-



HOMEMADE SILAGE LIFT.

able circle. Some farmers use a stationery track. Where twin silos are used, and it is necessary to carry feed to any distance, a U-shaped chute inclining downward toward the wagon and occupying the space between the silos is used. The sides of this chute are angular like a V, but there is a flat bottom.

Perhaps the simpler and more efficient equipment is the commercial hoist. This is built on the plan of the feed or litter carrier with track. It trips, allowing the carrier to descend into the silo. It is drawn up to the track, and slides out



HOISTING CART FROM PIT.

on the carrier to a dumping point. The simplest homemade hand hoist for pit and semi-pit silos is shown in accompanying figure, which is self-explanatory. The rod on the front end of the box catches the handles of the chute; and the pull on the rope, pulls the chute upward and catches the handles, and over it turns the box.

Selling Small Lots of Silage.

IS it possible to keep silage in small quantities, if you have no silo, but a room where you can keep a week's supply? I have four cows; my neighbor has offered to sell me silage during the Winter, as his silo is too large for his small herd. I wish to draw a week's supply at a time if that is possible. I could make a large bin to hold enough so that it would be away from the air. Would that be possible? How much silage is allowed to a cow each day? I have no idea how much I would have to allow for a week for four cows. L. E. P.
Sharon, Conn.

We have a number of reports from people who are buying or selling small quantities of silage. This seems to be a profitable business in some sections. In several cases dairymen sell the silage in this way, to people who keep family cows, or to those who have but a small herd of cattle. The best plan appears to be selling in bags. Grain or clean fertilizer sacks are used, and the silage is dug up and shoveled into these sacks much the same as grain. In this way the silage is easier to handle, keeps better in storage, and is easier to feed out. It keeps in good condition during the cool weather in any cool, airy place, such as would be suitable for roots. The price of such silage is usually figured at about one-third the selling price of high quality hay, and a supply for a week or ten days can usually be kept without trouble in cool weather. A cow of average size will eat from 30 to 40 pounds a day, depending upon her weight, and the amount of milk she is giving. This business of selling silage in small quantities is really a good proposition in many localities where there are a good many family cows, or small dairymen.

Price of Silage.

WHAT is the price of corn silage per ton? B. F. S.
Steuben Co., N. Y.

It seems to be necessary to say over and over that the local price of silage is always comparative. It is worth about 30 per cent. of the price of hay. As this price varies of course the silage will be worth more in one place and less in another. Usually if hay in the mow is worth $12 per ton, silage in the silo would be worth $3.60, or 30 per cent. of the selling price, whatever that is.

Silo Suggestions.

I HAVE had a good deal of experience in filling silos, and have perhaps learned some things that may benefit some of your readers. What I wish to say will pertain to the work inside the silo more than to the field or the machinery.

Be sure that the silo is as near airtight as possible; wooden silos frequently have small openings near the foundation which can be closed with mortar made of clay. To avoid all "air pockets" in the silage careful packing is necessary; be sure to tramp well next to the wall. If you put boys in the silo there is likely to be more play than work. An active 16-year-old boy can manage the distributing pipe all right, but two steady men should do the tramping. The silage will be sure to settle a good deal even with the best of packing, and when the silo is two-thirds full if you can let it settle a day or two you will get more in than if filled in one day. W.
Indiana.

Corn Fodder in Silo.

I SAW an article in THE R. N.-Y. regarding husked corn fodder in the silo. I put seven acres of this on top to fill up three years ago; fodder was cut 1½ inches long with husker. This was wetted from top after each load. Water was hoisted in cans and thrown on with pail. We did not lose this stuff, neither was it good feed. I consider that water in fans is only way to distribute and do a job worth while. Let us remember that to cheat the cow is a bull-head trick. Give her good corn silage, Alfalfa hay and her portion of clean grain, and she will do the rest with good treatment.
Victor, N. Y. J. N. Y.

AILING ANIMALS.

Worms.

I HAVE a nice colt which has worms. Could you tell me what to do for him?
New Jersey. H. S.

Feed the colt generously on crushed oats, wheat bran, cut Alfalfa hay or mixed clover hay. For worms give one heaping teaspoonful of a mixture of equal parts of salt, sulphur and dried sulphate of iron night and morning in the feed for one week; then skip 10 days and repeat. The worms will be killed in the intestines, so that they should not be looked for in the manure. If the worms are small and red in color (blood worms or schlerostoma equinum) they will be found difficult to kill and the generous feeding is imperative to strengthen the colt against the ravages of the pest.

St. John's-wort Poisoning.

WHAT is the St. John's weed and what effect will it have on cattle pasturing in a meadow where it is supposed to be found? Will it poison them at any time or just when it is in bloom? My cattle had been poisoned. Their legs broke out in scabs and were very sore. I would like to pasture the meadow again, but do not know whether it would be safe. H. J. S.

This weed when in blossom causes sores or an eruption on the white skin of the lips, face and legs of horses pasturing infested meadows. The proper treatment is to apply with a brush and rub in once daily a mixture of two ounces of hyposulphite of soda dissolved in a half pint of water to which add when cold half a pint of cottonseed oil and two ounces of sulphur and then shake well. It should make a creamy emulsion.

Weak Horse.

MY horse, 10 or 12 years old, weighing 1,000 pounds up to a year ago was a good all around animal, and a cheerful driver. Then he began to look bad and drive dull. I had his teeth fixed, fed him for worms and later indigestion according to A. S. A.'s instructions I saw in THE R. N.-Y. I had him clipped and took good care of him all last Winter. Early Spring he grew worse, got so he would go to one side on the road, didn't care anything about the touch of a whip, fall back on the halter, hang his head down; didn't drink very well but would eat all right. He looks well now, but seems to be going back again; when he goes on a drive, say 10 or 12 miles, and it is hot, he staggers a little and does not want to go faster than a walk. G. C. E.
Maine.

The horse apparently has been overheated at some time in its life and the treatment we have often prescribed here for ordinary indigestion would not be likely to avail in such a case. He may do better if you give him one dram of fluid extract of nux vomica and half an ounce of Fowler's solution of arsenic night and morning and cut the grain ration in half. Make him work or run out every day and feed lightly. Too much feed seems to aggravate the case. Work him in a breast collar.

Tumors of Udder.

CAN anyone tell me what is the trouble with my brood sow? There is a swelling around one of her teats? It seems like a boil. Sometimes three of these will come up. After awhile they break and pus comes from them. Then they heal over after remaining very red and raw for a few days. I wash the part with a solution of carbolic acid and then rub on a drawing salve. Her pigs were born in February and she was all right until after we turned her out about the last of May. In the barn she had oat straw for bedding. Could that have caused it? I also fed her oat fodder cut green; this together with her regular feed of milk, potatoes and a light feed of grain. E. W.
Vermont.

In such cases the tumors usually are due to invasion of the parts by the ray fungus (actinomyces) which causes also the lumpy jaw conditions in cattle. The best treatment is to cut out the tumors and cauterize the wound, but hogs often die of shock and loss of blood when this is attempted. It is not at all likely that the case will prove curable without the operation; but you might try swabbing once daily with tincture of iodine. It is best not to breed an affected sow.

Balky Broncho.

CAN you give me a little information as to the best way of breaking a broncho mare of balking? She is a good traveler when started but at times it takes one hour to make the start. When harnessed she will stand and make no attempt to go and there is no making her until she just gets ready. She is not green but has not been handled right at the start. J. H. W.
New Jersey.

As a rule it seldom pays to fuss with a broncho of this sort. It is best to let some professional horse-breaker tackle the job of training and even he may not succeed. There is no specific cure. Remedial measures are many. One good one is to throw the horse and "hog-tie" him; then let him lie there for an hour or more. An experience of this sort applied two or three times may suffice. Another plan is to draw the head around to the side and tie the halter rope to the tail to keep the head in that position; then make the horse run around in a circle until he drops. Your neighbors will suggest many additional plans of treatment which may be tried in turn and if all fail let some dealer have the beast.

Shoe Boil; Cough.

HOW can I cure a shoeboil? My horse had a shoeboil the size of an egg when I bought him five years ago; this year it started to increase in size and is now about size of an apple. He has a wide stall. 2. What is good for a cough? I must give something direct, as he will not touch grain containing medicine. J. H. B.
New York.

1. The correct treatment for an established shoeboil is to have it amputated. The operation is simple and but a small scar will remain. A noose of piano wire is put over the neck of the shoeboil and drawn very tight to make the neck as small as possible; then the neck is severed by means of a cherry red-hot hatchet-shaped firing iron, or by means of a knife, to be followed by a hot iron to stop bleeding which will be profuse. Afterward wet the wound three times a day with a mixture of one ounce of sugar of lead, six drams of sulphate of zinc and water one pint. Label the bottle "poison" and shake it well before use. The horse may be put under the effect of chloroform, or some other anesthetic so that the operation will be painless. 2. Cough is simply a symptom of irritation which may be due to any one of a large number of causes. You give no hint as to the probable cause in this case. Possibly heaves is present, but it would be best for you to write again and give full particulars. A. S. A.

"WHY don't you brush your hair?" asked the man of the boy with the frowsy head. "Ain't got no brush." "Why don't you use your father's brush?" "He ain't got no brush." "No brush? Why hasn't he a brush?" "Hain't got no hair."—Melbourne Australasian.

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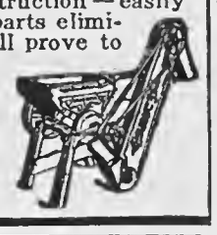

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FEEDING PROBLEMS.

Rye for Ducks and Hogs.

WHAT do you think about feeding rye to ducks? Which is the better way to feed rye to hogs, whole or ground?
C. E. B.

Most kinds of stock will not eat whole rye unless they are forced to do so through hunger. Throw down a handful of mixed grain and the hen will pick out the corn, wheat, buckwheat, or oats, and leave the rye. The best way to dispose of the rye for feeding is to grind it, half and half with either corn or oats, and feed it in a mash or slop. In this way practically all of the rye will be consumed. Hogs will not eat the whole grain of rye. Put them into a rye field and they will eat the grain and break down the straw. They will do much better, however, when the rye and corn are ground together and fed as a slop or as thick mush. The rye is not as good in feeding cattle as corn.

The Use of Frosted Cornstalks.

I FOUND so much to do in the Spring on my newly acquired farm, that I was late in getting my corn planted. Consequently I have only a two-acre field of small stalks and a few nubbins. When cutting time came I was still behind in my work, and as the apples seemed more important than the corn I let it stand. It has now stood uncut through several severe frosts. Would the stalks be harmful to feed to a horse or cow if cut now and stored in the barn? If so, what else could I best do with them? Would they be good to cover my Fall-set strawberry plants? I have started to cut the stalks and put them in the barn, but a neighbor told me that the frosted stalks would be bad to feed any stock. H. S. M.
Connecticut.

Such fodder makes very poor stock food and unless you try to starve them to it the horse and cow would not eat enough to do them any harm. They would simply pick over the stalks, nibble a little here and there, and leave the rest. In some parts of the West where the stalks are left in the field, and the cattle turned into harvest them, there have been cases of injury from eating these stalks, unless the cattle had some kind of laxative food in addition. You can run these stalks through a cutter, and then use them for bedding as an absorbent. The stock will nibble a little of the better portions and leave the rest, which would make a good absorbent and add to the manure. In our own case we should cut these stalks and use them whole for mulching the strawberries. They do quite well for this purpose, as they do not mat down over the plants, and at the same time protect them from being thrown out when the ground freezes and thaws.

Dairy Ration Without Hay.

IS there any combination I can make with chopped straw, molasses, grain and cottonseed meal to take the place of hay for milch cows? In Europe I have seen successful farmers feed chopped straw, pulped mangels and a sprinkling of mill stuff, bringing good results without hay, and think it possible a combination of commodities mentioned might be made satisfactory, even though we have no mangels to put in it. I shall feed corn silage with the proposed combination, but wish to eliminate the hay if possible.
F. P.

It should be remembered that the practice of feeding mangels, straw and oil cake that prevails in Scotland is utilized under a system of dairying that differs materially from that prevailing in this country. The Scottish farmer or cheese-maker does not dairy extensively during the Winter months, but relies chiefly on the luxuriant pasture grass as a source of feed for his animals when they are in full flow of lactation. For the most part the mangels, straw and oil cake are fed to dry cows, or those giving relatively small amounts of milk, for it is rather the exception for the Scottish farmer to have his animals freshen in the Fall. Furthermore, the reason why he is able to utilize the straw, is because mangels furnish an abundance of succulence, and straw is primarily a filler. The high cost of labor in this country, of course prohibits the growing of mangels extensively, and silage being in itself bulky does not require a coarse fodder such as straw to bring about proper digestion of the food. The molasses would no doubt make the straw more palatable, but there is very little food value in oat straw, and I would very much prefer utilizing corn fodder as a source to straight Timothy or even mixed hay, and I am satisfied that the straw-molasses-cottonseed mixture might be used for dairy cows and heifers, provided some corn meal and some corn fodder were added, but I do not think the plan suggested would apply successfully to dairy cows of great capacity or high production. F. C. M.

Dairy Ration.

WILL you give me a balanced ration for a four-year-old Jersey from the following: Mixed hay, some Timothy and Blue grass, also cornstalks, cut up, without corn on. I can buy yellow cornmeal at $1.80 cwt.; wheat bran, $1.45; flour middlings, $1.75; gluten, $1.70; brewers' grains, $1.55; cotton-seed meal, $1.80; old process oil meal, $1.90; distillers' grains, $1.80. F. C.
New York.

For the grain ration feed three pounds cotton-seed meal, two pounds brewers' dried grains, one pound oil meal and one pound bran. A good way to feed the cut corn fodder would be to wet it and then scatter the grain over it. Give all the roughage the cow will eat. It will be well to feed out the corn fodder during the early part of the Winter, as it becomes dry and unpalatable with long keeping. C. L. M.

Ohio Rules for Dairies.

COWS must have a clean bed, fresh water, and be kept clean hereafter in Ohio, according to the rules for dairies issued by the State Dairy and Food Department. If the cow has a swollen jaw, inflamed udder or ulcerated teat or running sore her milk must not be used, and cows known to be afflicted with tuberculosis or any other contagious disease must be removed from dairies. The barn must be on well-drained location, and mud holes, manure piles, or stagnant water within 100 feet is a contamination. The barns must be ventilated by an automatic system or adjustable windows, and at least 300 cubic feet of air space must be provided and two square feet of light for each cow. Manure must be removed daily a distance of not less than 40 feet to preclude the possibility of odors getting back unless sufficient straw, shavings or absorbents are used. Floors must be kept clean by careful sweeping or washing, and an earth floor must not be used, the walls must be free from manure, must be whitewashed or made clean and sanitary or disinfected. Utensils must be of smooth non-absorbent material, the seams of which are flushed smooth with solder. After being washed in cold water, they must be scalded with boiling water or steam and inverted in pure air to drain. Milking must be done in clean suits with clean dry hands and udder of cow must be clean before being milked. As soon as drawn, milk must be removed from stable and cooled to temperature of at least 60 degrees. The milk house shall be located on well-drained land, free from contamination, must be well screened, protected from intrusion of flies, fowls and animals.
W. J.

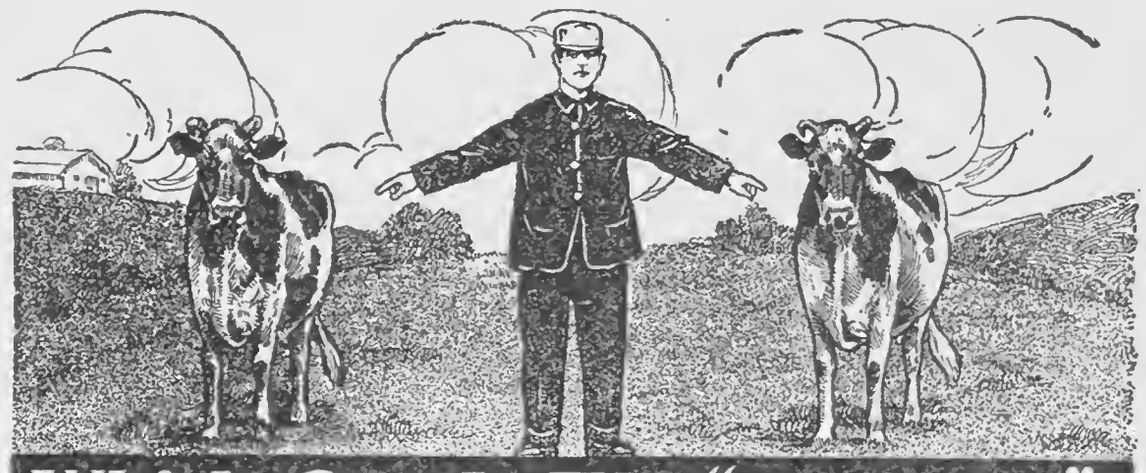
You or the Cow?

"THERE are more men keeping cows than there are cows keeping men." That is a statement a dairy expert made in Chicago and a prominent speaker said: "It takes less than two minutes a day to determine the value of the cow, less time for the herd than you devote to the one or two unproductive animals. This determining process is very simple, the scales and the tester. In the store business we would keep account of losses and gains, and if loss wiped out profit we would be looking for the leak. It might be in bad accounts, and when that person came to us to get trusted for the week's supply of groceries, he would find his name blacklisted, or in dairy language would be classed among boarders. The local merchant would not think of keeping a half dozen families in the community year after year. He would not allow them to run hopelessly large accounts, and at the end of the year tear up the sales slip and let them start all over again imposing on his business abilities, taking out nice slices of profit from productive customers, and forcing him to carry an excessive stock. For my part I would rather have the cow keep me than keep the cow."

ONE authority says: "A dairy cow to be called such should repay her owner for every pound of feed, every hour of labor and also interest on his investment." He makes it clear that the difference between a good and a poor cow, is often merely in difference in feed. He says: "Cows that give milk rich in fat should receive the larger amount of grain. The ration of the dry cow should afford her opportunity to get in good condition for the next lactation period."

THE Holstein-Friesian cow Duchess Hengerveld Korndyke No. 131752 has broken the record for fat production in the senior three-year class of the semi-official yearly division, by producing in 365 consecutive days 903.38 pounds fat from 22,897 pounds milk. She freshened at the age of three years nine months, 19 days. Her sire is Judge Hengerveld De Kol No. 43964; her dam is Duchess De Kol Korndyke No. 52905. She was bred by Mr. O. A. Stubbs, Lewisville, Ind.; and she is now owned by Emblagaard Dairy, Big Bay, Mich.
MALCOLM H. GARDNER.

"DON'T fish go about in schools, papa?" "Yes, Earlie. Why?" "Oh, I was just wondering what would become of the school if some fisherman happened to catch the teacher."—Springfield Republican.



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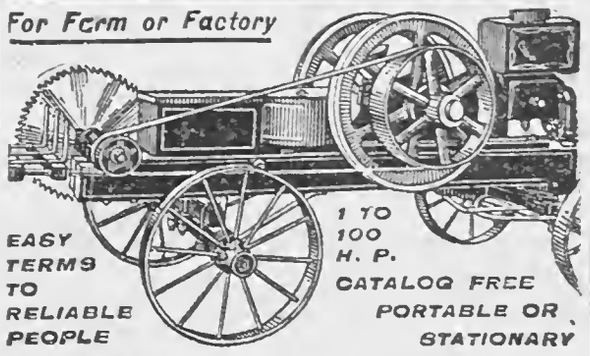

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The Henyard.

Selecting Layers.

THE old theory that a hen is a hen, and that they all look alike, act alike, eat alike and produce the same number of eggs each, has been exploded by the modern system of selecting the best layers by their actual performance at the nest. To keep individual records of a large flock of hens, however, entails such a great amount of detail work that very few people have been willing to devote the necessary labor and expense for this purpose, so the average poultryman is left to rely on his judgment as to which will lay the most eggs in a year. There has been a great deal of discussion over the question of whether there is such a thing as an egg type or not. It is my personal opinion that you might just as well ask if there is a dairy type of cow or a roadster type of horse, as an experienced poultryman or woman can see just as much difference between good laying hens or pullets which will develop into good layers, and those which will not, as a dairyman can see between a good cow and a poor one. Of course to become expert it takes long years of study and practice before reliable results can be assured, but by close observation it is certainly possible to judge fowls for their laying qualities as well as for fancy points.

The first thing to look at in a utility hen is her weight in comparison with her size. She should be heavy, but not extremely large. A Leghorn hen should weigh at least three pounds, and four pounds weight is not objectionable, but either under or over these weights should be avoided as much as possible. The comparatively small hens among the larger breeds are usually better layers than those which are up to standard weight or above.

We have all heard the old story about the prize winners being the best layers—that is, they are supposed by their owners to be when making sales to amateurs at long prices—but since the laying competitions started such methods have gradually become less popular, because purchasers as a rule now want to see what they are getting. Practically all pure-bred cattle are now sold on their records of production or the production of their ancestors, and this is what the poultry business is coming to at a rapid rate, breeders demanding performance instead of plumage, and shape instead of symmetry.

It is not easy to select the best layers in a pen without keeping individual records, but a few suggestions may be helpful to the poultrywomen who are enering birds for the R. N-Y. Hen contest, and others who wish to keep their best stock and discard the drones.

To be a good layer a hen must be a good feeder—able to eat and digest a large amount of feed. This requires a strong vigorous constitution and an active disposition, not inclined to be too nervous or flighty. In shape she should have a long wedge-shaped body carried quite erect, with fairly long legs and neck and a large bright prominent eye. The head should be wide and well shaped, and the pelvic bones thin, sharp and wide apart when in laying condition. High tails are also an indication of strength and laying ability—statements to the contrary by our standard makers notwithstanding.

After all the experience which may be gained by years of study there seems to be some natural intuition necessary to select good layers which is possessed by but few people. Under ordinary conditions it pays to keep individual records of a few of the best hens in a flock, and breed all the males used from the highest producing hens. MRS. C. S. GREENE.

Sktm-milk for Hens.

IN feeding skim-milk to laying hens to take the place of meat scraps, should it be sweet or sour? While I am aware of the fact that sour or buttermilk is the proper way to feed for fattening purposes, on account of the lactic acid it contains, I had always supposed that it should be feed sweet to get the largest food value, until I was advised recently by a person who should be authority to feed it sour. D.

It was first supposed that the milk should be soured before feeding, and that the lactic acid developed in souring was necessary to obtain the beneficial effect, I mean the effect of increased growth and vigor. But there is another effect—highly beneficial—which is due to the lactic acid; and that is the making of conditions in the intestines and the blood of the chick, which are unfavorable for the growth and development of harmful bacteria. Experiments at Storrs, Conn., have shown that chicks hatched from eggs containing the white diarrhœa germs, if fed on sour milk from the start, did not show any signs of that disease; the lactic acid preventing the development of the "bacteria pullorum," the disease germ.

Prof. Hadley at the Agricultural Experiment Station at Kingston, R. I., found that the feeding of sour milk had the same effect in preventing the fatal "blackhead" in turkeys. The harmful bacteria—or bacilli—could not multiply in sufficient numbers to do any harm in the acid condition of the intestines, produced by the sour milk. Later experiments at Storrs seemed to indicate that sweet milk was equally effective, but most likely the sweet milk sours soon in the chick, where the heat is 106 to 107 degrees. Milk is at its best as a feed when it is loppered, and it requires about 80 degrees of heat to produce this. It should not be left in the dishes until it gets foul, dirty, and begins to decay. To prevent little chicks getting into the milk, use shallow graniteware pans about an inch deep, and cover these pans with poultry wire netting. This allows the chicks to dip their beaks into the milk, but prevents their getting daubed up with it, as they will if the milk is not covered. GEO. A. COSGROVE.

Hens Going Light.

WILL you tell me what is wrong with my hens? Last Spring we had 65 hens, we now have 34. Five of these are lame, but they are fat, so I think they are all right for food. Their roost is about three feet high, and they are heavy hens (Barred Rocks) perhaps that accounts for their lameness. Those that died got poor, as if they were starved, but they were fed with other hens that were fat. I shut the poor ones up to fatten; when I thought they ought to be fat, they were as poor as ever. Finally they could not stand and soon died. In the early Summer we fed some corn that was musty; they did not eat much of it, as they had free range. In the Spring we bought four roosters. They were fine birds but after we had them a while, they seemed to walk as if they had sore toes; one of them died. F. P.

Michigan.

These fowls were very likely suffering from the disease known as "going light," an infectious disease which attacks some fowls and by interfering with digestion of their food brings about wasting of the flesh and, finally, death from exhaustion. This disease does not spread rapidly and usually takes only a few of the flock. It can be guarded against by killing affected fowls and destroying their carcasses, while attention is paid to cleanliness of their quarters. If a considerable number of the flock are affected, they should be rigidly culled out and special pains taken to clean and disinfect the living quarters and utensils used. Boiling water for utensils and whitewash for walls, perches, etc., should protect the healthy members of the flock. M. B. D.

Soaking Alfalfa; Feather Eating.

DOES the ordinary short-cut Alfalfa make a satisfactory Winter green food, after being soaked in cold or hot water, and, if so, how is it best prepared? 2. Does a great appetite for eating feathers show a lack of any particular element in the feeding? Some of the half-grown birds are constantly about the place where we dress chickens, and eat largely whenever they get a chance at the feathers. J. F. T.

Short-cut Alfalfa is an excellent green food for Winter use and may be prepared by putting the required amount into a bucket, pouring boiling water over it, covering the bucket with an old blanket or coat and allowing it to stand over night in a warm place. If not eaten readily at first, a little feed may be mixed with it.

2. Feather eating is supposed to indicate a lack of animal food in the diet, but it is also a habit readily acquired by fowls that get a taste of the soft green quills. It is safer to keep the feathers away from the chickens and see that the latter are supplied with animal and green foods. M. B. D.

Removing Stains from Eggs.

IN October a reader asked how to remove stains from market eggs. "Scrubbing with some scouring material," as advised by your question expert hardly fills the bill when it comes to grass stains, besides being hard on weak-shelled eggs. Here is the California commercial egg seller's method. I learned it from an egg peddler whose business it was to travel through our canyons and gather up the eggs from the farmer folk. His profits came from his skill in reducing the promiscuous assortment to order and attractiveness for his city customers, and making the soiled, stained, and stale-looking eggs appear like yesterlaids.

Wash all the loose dirt from the eggs in plenty of clear cold water; place the eggs to drain in a colander. Have ready a saucer of sharp vinegar and a clean white cloth. Every egg that is stained or has a dull, stale appearance wipe with the cloth wet in the vinegar. Little rubbing or vinegar is required unless the stain is very deep. When much vinegar is used on the egg rinse afterwards with a dash of cold water. The philosophy of the method is that the sharp vinegar acts on the lime of the shell, removing an infinitesimal coating from the egg and making it appear as though just from the egg mint. M. RUSSELL JAMES.

AN old colored man was relating to a crony his experiences during a drive down the mountain after dark. He had seen two wild cats fighting. "Dey fought and dey fought," he said, "an' all de time dey wuz a-climbin' up in de air, till by'm by dey wuz clean ovah de treetops." "What wuz dey a-holdin' on tu all de time dey wuz a-climbin', Rastus?" asked the skeptical listener. "Holdin' on tu!" exclaimed Rastus scornfully. "Wy, de top one wuz a-holdin' on to de bottom one, an' de bottom one wuz a-holdin' on to de top one, of course!"—New York Evening Post.

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Cares for 250 Chicks
Needs little attention
No lamps to trim
No ashes, dirt or soot
Absolutely safe
Perfect ventilation
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For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
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When you use this brooder you do not *hope* for good results—you are *sure* that it will raise your chicks. It is not an experiment—it has "made good". Thousands of poultrymen in all parts of the world testify to this. They know because they have tried it! The
NEWTOWN GIANT COLONY BROODER
Coal-Burning, Self-Feeding, Self-Regulating
is the machine for you if you value a record of actual performance above mere claims of efficiency; if you desire to raise the most and best chicks at lowest cost. *Our Brooder Booklet is mighty interesting reading for chick-growers. Send your address today for a free copy.*
NEWTOWN GIANT INCUBATOR CORPORATION
74 Warsaw St., Harrisonburg, Virginia

Get the Eggs NOW While Prices are High
GILBERT HESS, Doctor of Veterinary Science, Doctor of Medicine

This is the time of the year when the price of eggs is high and your hens ought to be making up for the small egg crop during moulting.

But hens need a tonic during the winter months, because the lack of exercise and green stuff and also close confinement impairs the digestion, makes the system sluggish and the egg organs dormant. With the knowledge I have gained in a lifetime experience as a veterinarian, doctor of medicine and successful poultry raiser, I have succeeded in compounding a scientific preparation that will make poultry healthy, make hens lay and keep the egg organs vigorous and active.

Dr. Hess Poultry PAN-A-CE-A

contains ingredients for toning up the digestive system and enriching the blood. It also contains tonics for toning up the dormant egg organs and making hens lay, internal antiseptics for preventing and remedying gapes and other ailments, also bone and shell forming ingredients. Every single ingredient in my Pan-a-ce-a (printed on every package) bears the recommendation of the U. S. Dispensatory and other high authorities. Now read this carefully:

So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy and make your hens lay that I have authorized my dealer in your town to supply you with enough for your flock, and if it does not do as I claim, return the empty packages and get your money back. Buy now on that guarantee.

Sold only by reputable dealers whom you know, never by peddlers. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail $2.50 (except in Canada and the far West). Pan-a-ce-a costs only 1c per day for 30 fowl.

My new poultry book tells all about Pan-a-ce-a. It's free.

DR. HESS & CLARK, Ashland, Ohio

Dr. Hess Stock Tonic
Your cows, horses and hogs are pretty apt to get out of fix during winter, because grain, hay and fodder do not contain the natural laxatives and tonics so abundantly supplied in grass. Lack of exercise is another thing that retards good health.
Dr. Hess Stock Tonic contains tonics that improve the appetite and tone up the digestion, laxatives for regulating the bowels, and vermifuges that will positively expel worms. I guarantee it. 25-lb pail $1.60; 100-lb. sack $5.00; smaller packages as low as 50c (except in Canada, the far West and the South).

Dr. Hess Instant Louse Killer
Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks, or if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, etc., slugs on rose bushes, etc. Comes in handy sifting-top cans, 1 lb. 25c; 3 lbs. 60c (except in Canada and the far West). I guarantee it.

The Henyard.

THE EGG-LAYING CONTEST.

THE third week of the contest at Storrs shows a total output of over a thousand eggs; 1039 is the number laid. Edward Cam's White Wyandottes make the highest score for the week, viz., 46; their total to date being 119. Windsweep Farm's White Leghorns, after taking the highest place for two weeks drop to second place this week with a score of 41; but in the total they outrank all other pens with a record of 137. This is a 65% "lay" which isn't very bad for November. Hillview Farm's R. I. Reds tie with Merritt M. Clark's White Leghorns for third place, each pen laying 37. The results obtained at the different contests, as an indication of whether actual progress is being made in increasing the average egg production of American poultry, are worthy of note. At the contest at Thorndale, Pa., the number of birds has continued the same, viz., five each year. This is now the fourth year—the first two years the record was made at Storrs. Below is the yield for the first three weeks, each year.

	1st year.	2d year.	3d year.	4th year.
First week	91	184	212	342
Second week ..	180	287	295	509
Third week ...	315	474	494	607

These remarkable gains are partly due to increased knowledge as to how to select and prepare the birds for a good start; but the annual reports for the total year's production also show a gain each year, the figures for the last three years being 76,230, 11,016, and 84,210. The gain of over 7,000 eggs the last year, or more than 14 eggs for each hen in the contest, with the lowest mortality ever known—only eight hens dying out of 500—was an accomplishment to be proud of. Tom Barron's White Wyandottes won this Thorndale contest just closed, with an output of 1180 eggs; the record of the five birds: 282, 252, 183, 189, 274. These birds are now the property of Mr. Robert Morris of Connecticut. As Connecticut also has Lincoln's White Leghorns, and A. B. Brundage's S. C. Rhode Island Reds, the Nutmeg State feels inclined to *crow* and call the attention of the rest of the United States to the fact that this is the place to come when they want the best. The week's record follows:

Barred Rocks.	Week	Total
Merritt M. Clark, Connecticut.....	22	67
Frank L. Tuttle, Massachusetts.....	11	22
Francis F. Lincoln, Connecticut.....	10	27
Jules J. Francais, New York.....	8	13
Storrs Agr. Station, Exp. pen, Conn..	..	..
Storrs Agr. Station, Exp. pen, Conn..	..	..
O. A. Foster, California.....	..	..
White Rocks.		
Albert T. Lenzen, Massachusetts.....	..	10
Branford Farms, Connecticut.....	..	1
Branford Farms, Connecticut.....	..	2
Branford Farms, Connecticut.....	..	..
Branford Farms, Connecticut.....	1	6
Buff Rocks.		
A. A. Hall, Connecticut.....	9	33
White Wyandottes.		
Tom Barron, England	6	22
Edward Cam, England.....	46	119
Merrythought Farm, Connecticut.....	19	53
Neale Bros., Rhode Island.....	23	58
Mrs. J. D. Beck, Connecticut.....	10	19
Storrs Agr. Station, Exp. pen, Conn..	..	..
Storrs Agr. Station, Exp. pen, Conn..	4	7
Mapledale Farm, Connecticut.....	3	10
J. F. Byron, Connecticut.....	14	52
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts....	18	56
Silver Wyandottes.		
Silver Wyandotte Star, New York....	..	..
Columbian Wyandottes.		
Merrythought Farm, Connecticut.....	8	29
Rhode Island Reds.		
Dr. J. C. Dingman, New York.....	..	..
Hillview Plty. Farm, Vermont.....	37	85
Homer P. Deming, Connecticut.....	..	..
Chas. O. Polhemus, New York.....	2	2
H. M. Bailey, Connecticut.....	..	..
John Backus, Vermont.....	3	12
W. H. Bumsted, Connecticut.....	10	23
Pinecrest Orchards, Massachusetts....	9	26
Harry B. Cook, Connecticut.....	13	28
Colonial Farm, New Hampshire.....	23	62
A. B. Brundage, Connecticut.....	..	..
Storrs Agr. Station, Exp. pen, Conn..	10	24
Storrs Agr. Station, Exp. pen, Conn..	5	15
Rural New-Yorker, New York City...	4	4
S. G. McLean, Connecticut.....	5	16
Springdale Farm, Connecticut.....	2	2
D. E. Warner, Rhode Island.....	5	18
H. W. Sanborn, Massachusetts.....	15	32
Albert R. Ford, Connecticut.....	4	10
Light Brahmas.		
Storrs Agr. Station, Exp. pen, Conn...	8	26
Storrs Agr. Station, Exp. pen, Conn..	..	4
American Dominiques.		
H. B. Hiller, Connecticut.....	25	36
White Leghorns.		
A. B. Hall, Connecticut.....	10	16
Geo. Bowles, Connecticut.....	26	50
Ellis W. Bentley, New York.....	33	70
Braeside Plty. Farm, Pennsylvania....	11	26
Francis F. Lincoln, Connecticut.....	26	73
Cecil Guernsey, New York.....	6	9
Merritt M. Clark, Connecticut.....	37	91
Chas. N. St. John, New York.....	15	17
Elm Poultry Yards, Connecticut.....	8	29
Jay H. Ernisse, New York.....	8	46
Storrs Agr. Station, Exp. pen, Conn..	25	74
Storrs Agr. Station, Exp. pen, Conn..	36	94
Mrs. Rollin S. Woodruff, Connecticut..	18	33
Windsweep Farm, Connecticut.....	41	137
James H. Lord, Massachusetts..	7	30
P. G. Platt, Pennsylvania.....	29	61
Dictograph Farm, New York.....	..	..
F. M. Peasley, Connecticut.....	19	35
Chas. Heigl, Ohio.....	4	6
Tom Barron, England	3	3
Edward Cam, England	14	41
Geo. M. McMillan, Missouri.....	5	6
Wm. H. Lyon, New York.....	19	39
Happich & Danks, New York.....	7	13
A. P. Robinson, New York.....	22	45
Manor Plty. Farm, New York.....	26	60
Branford Farms, Connecticut.....	4	11
Branford Farms, Connecticut.....	17	45
Branford Farms, Connecticut.....	16	45
Branford Farms, Connecticut.....	8	12
Anna Dean Farm, Ohio.....	9	32
Rural New-Yorker, New York City...	20	40
A. S. Sondregger, Connecticut.....	12	80
S. J. Rogers, New York.....	8	34
Stoneleigh Poultry Farm, Pennsylvania	13	17
Mrs. W. B. Whitlock, Connecticut....	10	66
Toth Bros., Connecticut.....	12	16
James N. Thomas, New York.....	9	20
Sunny Acres Farm, Connecticut.....	2	5
Rose Comb Brown Leghorns.		
The Gale Place, Connecticut.....	..	1
Buff Leghorns.		
Lakeside Plty. Farm, Michigan.....	..	..
O. L. Magrey, Connecticut.....	5	19
Black Leghorns.		
J. Collinson, England	10	15
Silver Campines.		
Uncowa Plty. Yards, Connecticut.....	..	..
Lewis E. Prickett, Connecticut.....	..	..
Light Sussex.		
Dr. E. K. Conrad, New Jersey.....	..	3
Salmon Faverolles.		
Doughoregan Farm, Maryland.....	..	..
White Orpingtons.		
Henry S. Pennock, Florida.....	..	..
Obed S. Knight, Rhode Island.....	25	79
B. P. Nase, Connecticut.....	..	..
Buttercups.		
Chanteeleer Plty. Yards, Pennsylvania	..	..
Favorite Hens.		
Rural New-Yorker, New York City...	3	8

GEO. A. COSGROVE.

New Corn for Poultry.

WILL feeding new corn to pullets or old fowls hinder them from laying? If so, will the effects be the same if the new corn is thoroughly heated each time before feeding? I have heard many opinions on the subject, but have never seen it mentioned in poultry books or papers. R. F. T.

There is nothing deleterious to either pullets or hens in new corn, and there is no occasion for heating it before feeding. It may have acquired a bad reputation from the fact that it becomes available at a time of the year when hens naturally cease laying and also because there is a temptation to make it the exclusive food when it is comparatively abundant and cheap. M. B. D.

Price of Indian Runner Duck Eggs.

WE have heard many varying statements about the prices to be obtained for eggs of Indian Runner ducks in the city markets. These statements vary so that in order to settle it we wrote a large number of egg dealers asking for the facts. Most of them reply that they know little or nothing about these eggs. The following statement comes from Baltimore:

During February, March and April (before Easter) of each year there is a premium on all duck eggs, the White Pekin duck eggs being the favorites. This premium will sometimes be as much as 15 cents per dozen but after Easter the premium very quickly fades away and a discount on duck eggs soon appears, and during the warmer months duck eggs and especially the Indian Runner duck eggs sell at a price under hen eggs. This discount varies from one to three cents per dozen. After the weather warms up and until the following February no one seems to want duck eggs and they are rather a drug on the market and hard to sell even at the discount. We can see no advantage in the Indian Runner duck, though he does outlay the other varieties, as the eggs are at a discount the greater part of the year. Indian Runner duck eggs average quite a little smaller than the eggs of the other varieties of duck. BLATTER BROS.

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Five to six months old, 75c. to $1.25 each.
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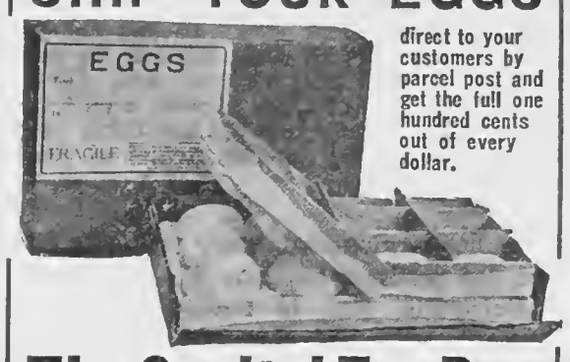

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Prize Rouens. Big Toulouse Geese
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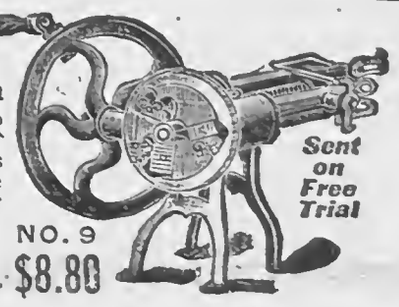

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PUBLISHER'S DESK

E. G. LEWIS of St. Louis, and California, has a new scheme, or to be more exact, an old scheme in a new dress. If you subscribe for his paper and pay for it, or induce your neighbors to subscribe for it and pay for it, he will give you shares in a California oil company. That is not so startling in itself; but if you read the Lewis inducements you must conclude that he is conferring an unusual favor on you, and that sudden riches are to be showered upon you. It is nearly 20 years since Lewis started in the cheap publishing business with an endless chain scheme that was suppressed by the post office authorities. Since then he has launched probably as many as 100 schemes, large and small. His collection on them we would estimate at not less than twelve million dollars, and every cent of it has been a loss to the people who furnished the money. In the past, Lewis' strong pull has been from women; but he has also made some rich hauls from men, and some of them hard-headed men at that. Any man who looks broadly on the Lewis schemes will discover the fake in them, but if he confine himself to one and give Lewis a chance to make explanations, he is in danger. Lewis does not invent new schemes; but he has a wonderful genius for new applications of old ones, and he is plausible enough to discover anyone who is unfamiliar with his record and susceptible to suave mannerisms.

I have just received Lehigh Valley Railroad voucher for $11.03 for the seven barrels of apples shipped to Baltimore September 12, 1912. These apples were 10 days on the road and reported by the commission house as in bad shape, and sold for $1.00 per barrel, when the price for good apples was $2.75. I made claim promptly for the difference, and received reply two years ago that there was no unusual delay and they were not responsible for freight getting to its destination any special time, but it seems you persuaded them different. Many thanks. It seems almost like a dream to be able to follow up an account of that kind and I believe the anti-fake movement is one of the best things that has been started. But we are not to look at big transportation companies as fakes and dead beats, although perhaps they have too much of the "public to be Vanderbilted" attitude, and try to wear farmers out with red tape. I am sending check for renewal and ten weeks trial for a friend. H. A. S.

New York.

We were obliged to unroll considerable red tape before we could get this claim under way for adjustment, and there was no reason why it could not have been paid at any time during the last two years, for the facts were clear and verified all along the line.

I am not going to bite myself, but the inclosed letter may help you protect some of the credible who wolud later come to you with complaints because they get nothing out of something.

New York. F. W. R.

The letter is from an alleged wheat specialist of New York City. He says it is the opportunity of a lifetime for the small investor to get rich through sending money to him to speculate in wheat. He says he is not infallible, and has some losses which he can limit. He says profits are larger than limited losses. He must be a wise man sure; but why limited losses? Why not profits all the time? If he can limit losses, he should prevent them entirely. But why does he want to speculate on a sure thing for you? One would think that he would get rich himself and have done with it. The truth is he can bet that wheat will go higher or lower, and take his chances like anyone else. Flagg went to jail last month for receiving money for alleged speculative purposes, and for using the mails to defraud. He promised one per cent. profit a week, but the investors have not been able to see the profits.

About the first of August I ordered from William K. Hesser of Pottsville, Pa., 36 White Leghorn pullets, 11 weeks old, which he assured me were pullets of quality, and for which I paid 55 cents each, $19.80 for the lot. I received the birds August 5, and a poorer, more stunted, under-sized lot of birds I never saw—not only were they all this, but at least two-thirds of them were cockerels. I wrote him at once about them. In reply to my first letter he said he did not guarantee satisfaction and would do nothing. Since then I can get no reply to my letters. The cockerels after feeding them up for four weeks, I was able to sell for 25 cents each. The pullets were so small I could not sell them at any price, so gave them away to get rid of them. I am out in cash $12.55, to say nothing of feed and express and drayage, which I think Mr. Hesser ought to make good. I may not get anything out of this, but it may be the means of saving some others. R. L. H.

Virginia.

We have exhausted every effort to induce the poultryman, Mr. W. K. Hesser of Pottsville, Pa., to make a fair adjustment with the Virginia subscriber, but our letters have been entirely ignored. The experience of R. L. H. would indicate that Mr. Hesser is a very good poultryman for farmers generally to avoid when looking for breeding stock.

An interesting feature of the creditors meeting was Mr. Haines' proposition to the stockholders. He proposed that each of the 1,500 stockholders secure at least five customers, each to purchase $25 worth of merchandise. This would net them over $1,000,000. He also planned that the present stockholders agree and pay for $100 worth of merchandise to be delivered at some future time. This would give the concern a new start. Cards were passed around for this agreement but few signed.

To the attorney of the creditors Mr. Haines admitted that he could not account for the sum of $50,000 paid in by the stockholders; that he always had absolute control of the company; that he never invested a single penny of his own money in the concern; that he selected his own board of directors from employes and fixed their salaries, and in return they fixed his salary; that the secretary of the company had disappeared; that the concern was in debt $30,000 and that the assets would not begin to reach that deficit.

The concern was promptly put into the hands of a receiver.—Camden, N. Y., Dispatch.

It is time we had some plain talk about transactions of this kind. Three and a half years ago we looked up this concern and published a warning in which we said in issue of June 28, 1911:

"There's Millions in the Haines System" is one of the characteristic expressions of their letters; but not a word or figures as to the actual assets of the concern, or the volume of business done. This proposition has all the earmarks of the promoter's stock selling scheme rather than a legitimate mail order enterprise, and we feel it is hardly necessary to advise our old subscribers to make some better use of their hard-earned savings.

Yet right down to a few weeks ago, farm papers that are now making hysterical denunciations of petty concerns that never advertise, have published illustrated advertising of the Haines' concern. This would be bad enough for papers that made no pretense of clean advertising columns, but some of these actually guarantee the character of the scheme. In this way they induce innocent victims of the scheme, who might be cautious if it were not for their pretended protection. Our advice to the victims now is to put in claims against the publishers who carried this advertising, and if they cannot get redress as we believe they cannot, then we will handle the claim for them without cost. It is about time something were done to stop this pretense of protecting the public by publishers who have no intention or purpose to do so. No publisher could claim he was ignorant of the nature of this concern without admitting that he ought to have a guardian. Haines' record was open to them, and the concern had on its face all the marks of a purely stock-jobbing scheme. What business and advertising was done, served only to pacify the papers and make a showing to attract investments in the stock, as THE R. N.-Y. publicly stated more than three years ago.

Haines' plan of reorganization is characteristic. It is on the old theory that men will send good money after bad in a vain effort to recover what is already lost.

One of the discouraging features of this failure is that the stockholders may not only lose their $144,423, but they may be obliged to make up any loss that creditors would otherwise suffer. The preferred stockholders got a bonus of common stock and attorneys think they may be assessed on this bonus stock to pay the debts of the concern. J. J. D.

MISS BLITHELY (interested in science): "Can one get a shock from a telephone?" Top Spiffkins (intent on ethics): "That depends, my dear young lady, on who is talking at the other end."—Harper's Bazar.

Deleware County, N. Y., Farm Bureau.

DELAWARE COUNTY is making an advancement since the establishment of the Farm Bureau. We have just formed two cow-testing associations with a total of 52 dairies, and have three in operation, making a total of five cow-testing associations that are working in the county at the present time, with a total of 3,200 cows. We also have at the present time three more associations that will start working by January 1, with a total of 2,000 cows, making a grand total of cows under test of 5,200. There seems to be a general awakening among dairymen in regard to this kind of work, and its value is not doubted. F. M. AVERY.

Minnesota as a Dairy State.

FROM grain farming to dairying is the gauntlet run by many States. Western Ohio is passing from the second stage, fat stock production into that of dairying. Minnesota is distinguishing herself as a dairy State. Some interesting dairy facts regarding this State are evidenced in that over 900 creameries are in operation in the State. That young women of the State might become interested in the industry, a department of farm butter making was inaugurated in connection with the dairy department of the State University, a decade ago. During the 10 years the attendance of young women enrolled has grown to 300. Minnesota has won for her high scoring butter 12 out of 14 banners. The State has a unique institution in the way of a State creamery at Albert Lea. This is owned and operated by the State. There is a cow-testing association only five years old, and it has over 5,000 cows under its surveillance. The headquarters of this association are at the University farm at St. Paul, and are under the direction of Professor McKerrow. The efficient training which is afforded by the State dairy school is the foundation of Minnesota's stand as one of the leading commonwealths in producing quality dairy products. Of the 14 banners offered by the National Creamery Butter Maker's Association, with the exception of one having been awarded New York State and another Illinois, the remainder were given Minnesota butter makers. In compiling annual records of dairy cows, Minnesota records the following: Weekly weighing of the cow, weight and butterfat test in milk each milking, pounds and composition of feed at each feed. W. J.

FAKE health certificates have frequently been issued, causing innocent purchasers of diseased cattle in other States financial loss, so that a conference of representatives from Kentucky, Michigan, Pennsylvania, New York and Ohio met at Columbus with the view of adopting a uniform policy in tuberculin testing of cattle. It was agreed that each State prepare a list of approved veterinarians, and these shall be authorized to issue health certificates to cattle they have tested. Such health certificates shall pass cattle in other States without approval of the State Veterinarian; copy of health certificate of local approved veterinarian be filed with State veterinarian. Veterinarians of good character and properly licensed on application will be placed on approved list, and in case of violation of trust or "sharp" practice, name shall be removed from approved list.

In regard to prices of farm products let me commend you for your statement to that South Carolina correspondent in recent date of R. N.-Y. in which you said there was a great difference between estimated values and cash values. As a rule, I believe farmers in making estimate values place them far above cash values. Cash values are what really count. As to prices of farm products around Charlotte, which has a population of some 50,000, prices are usually very staple except for vegetables and small fruits which vary with supply and demand. The following prices paid to farmers are approximately correct: Irish potatoes, $2 per bushel; sweet potatoes, $1; hens, 11 to 12 cents per pound; turkeys, 15 to 17; butter, 20 to 25; eggs, 30 to 32 per dozen; oats, 65; corn, $1. There are no commercial orchard of any size in the vicinity of Charlotte, though both peaches and apples of fine quality bring fancy prices. Fall pears sell readily from 75 cents to $1 per bushel. One township in the county, Berryhill, has become famous for growing watermelons; a few fine specimens weighing from 85 to 95 pounds, bringing the fancy price of from $4 to $5 apiece. These were bought and shipped to friends North, perhaps to your own city. There is good money in good melons around Charlotte. Most of the cattle kept around Charlotte are dairy cows, the product of which furnishes the Charlotte milk supply; one plant handling 700 to 800 gallons per day. Most of the beef supply comes from East Tennessee and western part of this State, there being only two or three small herds of the beef type, Herefords, in the county. The local offering are mostly culls from the dairy herds which the farmers get from $4 to $5 per hundred live weight owing to the quality and condition.

Charlotte, N. C. J. N. B.

Wherever rubber footwear is worn you will see "Ball-Band" Rubber Footwear, with the Red Ball trade mark.

Men look for the Red Ball in Alaska, they look for it in Massachusetts, in Minnesota and in Oregon. In Colorado you see sportsmen with the Red Ball on the knee of their boots. "Ball-Band" Footwear is worn down in the mines of Pennsylvania, up in the woods of Maine and on every farm where dry, comfortable feet make hard work easier.

"BALL (Red) BAND"

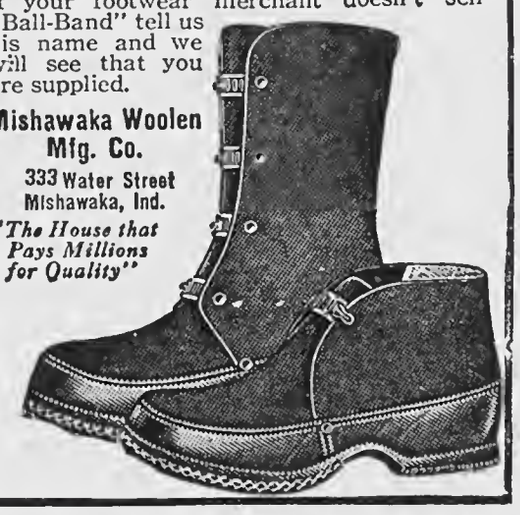
Eight and one-half million men wear "Ball-Band" Rubber Footwear. 50,000 stores sell it. And the reason is that figuring the cost of rubber footwear on the cost per day's wear proves "Ball-Band" the cheapest.

Look for the Red Ball and if you see it you are safe, for you are getting "Ball-Band."

Free Booklet "More Days Wear"

This book tells how to treat your footwear so as to get the most out of it. Write for it. If your footwear merchant doesn't sell "Ball-Band" tell us his name and we will see that you are supplied.

Mishawaka Woolen Mfg. Co.
333 Water Street
Mishawaka, Ind.
"The House that Pays Millions for Quality"



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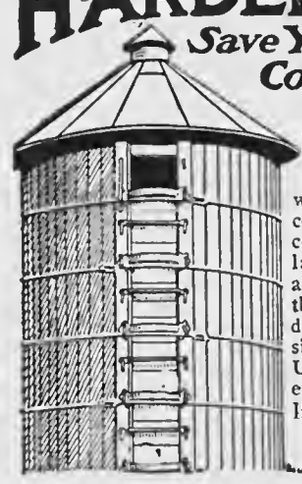

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No deafening racket. Grinds ear corn, alfalfa, screenings and all grain, separate or mixed, swiftly, silently and fine at lowest gas cost. 1 set buhrs grinds 1000-3000 bushels.
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Try this clog-proof mill 10 days on your farm free. Give H. P. of your engine when you write.
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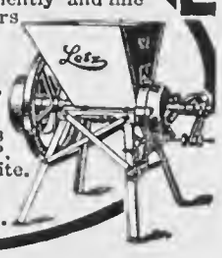

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Nov. 27, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotel and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Prices for the week closed one-half cent higher on top grade of creamery. Business dull in other grades. Danish butter has been arriving here in considerable quantity, recent shipments of 40 tons having sold at prices running from 32 to 34 cents. The butter is lighter and less settled than most of our make. It remained low for the Thanksgiving trade. A few strawberries from California have been received, selling from 25 to 50 cents per pint.

Creamery, extra, above 92 score, lb...	35	@	35½
Extra, 92 score	34	@	34½
Good to Choice	28	@	32
Lower Grades	23	@	25
Storage	26	@	32
State Dairy, best	32	@	33
Common to Good	23	@	29
Ladles	20	@	22
Packing Stock	19	@	21
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 35 cents.
Chicago creamery, 24@32.

CHEESE.

Receipts have been so much smaller that a one-fourth cent advance on best grades has been made. A little export business in Wisconsin twins at 14½ to 15 cents is reported.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15	@	15¼
Under grades	11	@	14
Daisies, Wisconsin	14⅜	@	14¼
Skims, specials	13	@	13¼
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS

The scarcity of fancy new-laid continues, but there is an abundance of medium and a surplus of grades below this. A strong effort is being made to move storage eggs at prices from 24 to 25 cents.

White, choice to fancy, large	56	@	60
Medium to good	40	@	50
Mixed colors, best	43	@	45
Common to good	25	@	35
Storage, best	24	@	25
Lower grades	18	@	20

FRESH FRUITS.

The apple market is in good condition on fruit running above medium in quality, lower grades very weak. As has been noted in previous years, there is heavy damage from slack packed apples. Probably not one shipper out of 10 whose apples are reported slack believes that it is true, as the barrels seem so tight when put up. There should be demonstrations on proper barrelling of apples at every farm institute, coöperative meeting, etc., where apples are a feature. This would mean the saving of many hundred dollars, particularly to small growers.

Apples—BenDavis, bbl.	1 75	@	2 00
York Imperial	1 75	@	2 50
McIntosh	2 50	@	4 00
Jonathan	2 50	@	3 50
Twenty-ounce	1 50	@	2 75
Spitz	1 75	@	3 00
Baldwin	1 75	@	2 25
King	2 00	@	3 25
Greening	2 00	@	3 75
Pears, Anjou, bbl.	3 00	@	4 50
Seckel	5 50	@	5 00
Bose	3 00	@	5 50
Sheldon	3 00	@	5 50
Kieffer	1 00	@	2 75
Grapes, Catawba, 4lb bkt	7	@	9
Black, 4lb. bkt	9	@	10
Black, 20lb. bkt	40	@	45
Bulk, ton	30 00	@	38 00
Cranberries, Cape Cod, bbl.	2 00	@	5 50
Jersey, bbl.	3 50	@	4 00

HOPS.

Prime to choice	26	@	28
Common to good	22	@	25
Pacific Coast	11	@	14
Old stock	7	@	8

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

NUTS.

Chestnuts, Northern, bu.	1 50	@	2 50
Southern	1 00	@	2 00
Hickory Nuts, bu.	2 50	@	3 50

BEANS.

Marrow, 100 lbs	6 70	@	6 75
Medium	4 60	@	4 65
Pea	4 60	@	4 65
Red Kidney	4 50	@	5 75
Lima, California	5 90	@	6 00

VEGETABLES.

Potatoes are still in surplus and low, large quantities wholesaling at 50 cents per bushel. No improvement in cabbage prices. Onions slightly higher, particularly yellow, which are in demand for export.

Potatoes—Jersey, bbl.	1 25	@	1 50
Long Island, bbl.	1 50	@	2 00
State, 180 lbs.	1 50	@	1 65
Maine, 180 lbs.	1 50	@	1 85
Bermuda, bbl.	4 00	@	6 50
Sweet Potatoes, bbl.	2 00	@	3 50
Brussels Sprouts, qt.	06	@	14
Beets, bbl.	1 00	@	1 50
Carrots, bbl.	75	@	1 00
Chicory, southern, bbl.	2 00	@	2 25
Celery, doz.	10	@	40
Cauliflower, bbl.	1 75	@	4 00
Cabbage, bbl.	75	@	1 00
Ton	5 00	@	9 00
Kale, bbl.	60	@	75
Lettuce, half-bbl. basket	25	@	1 00
Onions—Red, bag	1 65	@	1 25
Yellow	1 25	@	1 50
Peppers, bu.	1 00	@	2 00
Radishes, 100 bunches	75	@	1 00
Spinach, bbl.	1 25	@	1 50
String Beans, bu.	1 00	@	3 50
Squash, Hubbard, bbl.	85	@	1 00
Marrow	60	@	75
New, bu.	1 00	@	1 50
Egg Plants, bu.	1 00	@	3 00
Tomatoes, box	75	@	1 50

LIVE POULTRY.

Chickens, lb	13½	@	14½
Fowls	13	@	15
Roosters	10	@	12
Ducks	15	@	18
Geese	14	@	15

DRESSED POULTRY.

During part of the Thanksgiving market choice turkeys were quite scarce. Late receipts Tuesday and Wednesday morning, however, eased down prices on all but fancy, good dry picked wholesaling at 21 to 22 cents. There was only a moderate demand for chickens and fowls, and ducks and geese were lower.

Turkeys, choice, lb	24	@	26
Common to good	16	@	22
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	23	@	24
Fowls	14	@	18
Ducks, Spring	14	@	18
Squabs, doz.	1 25	@	3 75

HAY AND STRAW.

Hay receipts have been large and prices generally 50 cents per ton lower. The N. Y. Central has an embargo on shipments to 33rd and 36th Sts., but is taking track delivery stock.

Hay, Timothy, No. 1, ton	20 50	@	21 00
No. 2	18 50	@	20 00
No. 3	17 50	@	18 50
Clover mixed	18 00	@	20 00
Straw, Rye,	13 00	@	13 50

LIVE STOCK.

Native Steers	6 00	@	10 00
Bulls	5 25	@	7 00
Cows	4 00	@	6 00
Calves, prime veal, 100 lb	10 00	@	13 50
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 50
Lambs	8 00	@	10 00
Hogs	7 75	@	8 00

GRAIN.

All grains lower on good crop reports and favorable Argentine outlook.

Wheat, No. 1, Northern Spring	1 27	@	..
No. 2, Red	1 25	@	..
No. 2, Hard Winter	1 25	@	..
Corn, as to quality, bush.	73	@	75
Oats, as to weight, bush.	49	@	53
Rye	1 10	@	1 12

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz.	60	@	65
Mixed colors, new laid	50	@	55
Ordinary grades	30	@	40
Butter, fancy prints, lb.	40	@	42
Tub, choice	32	@	36
Chickens, roasting, lb.	24	@	23
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb.	23	@	25
Fricassee, lb.	18	@	20
Fowls	18	@	23
Turkeys'	24	@	28
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

In the United States there are 760 Chinese and 2,502 Japanese farmers.

*

Southern men are planning a $100,000,000 corporation to handle and market the cotton crop.

*

The output of the Rhodesian gold mines, for 10 months, ending with October, was 709,810 fine ounces, valued at $13,243,000.

*

The six large sugar beet factories in Northern Colorado have paid growers $3,300,000 for beets this year.

*

The Kansas Board of Agriculture reports 8,870,000 acres sown in Winter wheat, or three per cent. less than last Fall.

*

Pennsylvania has sown about 1,325,20 acres in Winter wheat, or 13,100 more than last Fall. The corn crop of the State, on 1,463,000 acres, was well matured and of good quality. Buckwheat was injured by drought so that only 85 per cent. of an average yield was had. There were 268,000 acres in potatoes, yielding 38,408,000 bushels. The Fall sowing of rye covers about 271,600 acres, 8,400 less than last year.

BUFFALO MARKETS.

SEVERE weather from the middle of November has cut off the local produce supply somewhat, so that prices are going up slowly. Butter has declined slightly and poultry has failed to advance for the holidays, on account of heavy receipts. Cabbage is stronger and apples, potatoes and onions, the three weak points in the produce trade, are now steady, though no higher. Eggs remain strong. The cool weather has held the local grape crop in marketable condition. The last of the home crop sells at 35 cents per 20-pound basket for blue, and 40 cents for white, wholesale, with Catawba a little higher. The feature of the market is the quality of the apples offered. In this heart of the great apple district of the State there has always been occasion for complaint that a great part of the offerings at the retail markets has been of indifferent to inferior fruit, often unnamed. It is no doubt that the big influx of western apples has had much to do with the improvement of the local crop. Fancy Spys retail for 90 cents a bushel, ordinary quality 60. Wholesale prices, $3 a barrel down. Potatoes are not quoted above 47 cents, wholesale, retailing at 60. Onions are 40 to 70 cents wholesale, but the big Spanish ones retail at five cents apiece. Beans are very firm at $3.85 for best marrows. String beans are still plenty at 10 cents a quart, retail. There is some home-grown lettuce at five cents a head retail, but southern is arriving, the price being $4 to $6 a barrel. Cabbage is $2 to $3 per 100 and celery 30 to 40 cents per dozen bunches. Butter is quoted at 36 cents wholesale and the bulk of it is selling for about 35. The retail prices vary widely, what is called best creamery often being retailed at wholesale prices. Eggs still advance, the wholesale price for white fancy now touching 50 cents. Cheese is firm at 17 cents wholesale for fancy. Poultry came near being ruled out on account of the foot-and-mouth disease, but that now appears to be about under control, so that liberal receipts on poultry came in before Thanksgiving, wholesaling at 25 cents for dressed turkey, 21 for live, 18 cents for fancy fowl, dressed and 16 cents live. Ducks are 20 cents dressed, and 16 cents live. J. W. C.

Nov. 23. The past two weeks have been cold and dry. Corn more than half husked. The whole State of Ohio is quarantined on account of the foot-and-mouth disease; farmers cannot sell cattle, sheep or hogs, which makes it very inconvenient at this time of year. Potatoes a little lower, retailing at 75 cents per bushel. Apples all picked, selling at 25 to 40 cents per bushel. Pasture getting short. Wheat has made a fine start, selling at $1.10. Coal hauling mostly done; butter 22; eggs 36; chickens 12; turkeys 15. Very few public sales this Fall. Farmers are beginning to butcher.
Morgan Co., O. W. B. H.

WANTED—WORKING FARMER FOR FARM 150 ACRES near New York. Man of experience who has attended college preferred. Good opportunity. State age, experience and family. Address, FARMER, Box No. 2, R. N.-Y.

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Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

WANTED—A farmer's daughter, of character, for housework. J. O. HALE, Byfield, Mass.

SUPERINTENDENT or farm manager open for position; Agricultural College graduate; highest references; life experience. A. D., care R. N.-Y.

POSITION AS FARM MANAGER wanted by Feb. 15, 1915; practical experience, now taking Cornell course; age, 24. Address K., care R. N.-Y.

POULTRYMEN desiring services of single man of character, farm bred, but inexperienced in poultry at nominal wages. Address X, Rural New-Yorker.

POSITION WANTED—Estate superintendent, experienced, farm, garden, forestry, landscape, road building; references and bond given. D. J. P., care R. N.-Y.

PRACTICAL, intelligent man, married, experienced, wants responsible position on farm, about February or March; best of references. F. K., care of R. N.-Y.

WANTED—Elderly American woman, kind, efficient and trustworthy, to care for an aged lady; good home and pay. Address with reference, Box 2, North Germantown, N. Y.

YOUNG MAN—Understanding poultry, cows, fruit trees, gardening, will exchange services for board during winter; will go anywhere. RALPH C. PARISH, Upper Montclair, N. J.

WANTED—Position as working farm manager by married man; one who thoroughly understands all modern farm machinery, butter making, testing, feeding and raising of stock, all crops in rotation, free to go any time. L. P. V., 870 Holmes Road, Pittsfield, Mass.

WANTED—Working foreman, fifty-acre commercial fruit, dairy and poultry farm, also board one man; desirable location, good house, hard work with salary and share profit, or will rent; must fully understand fruit trees and have best references. Apply with full information and terms, ORCHARD FARM, Peekskill, N. Y.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

MAPLE COVE FARM—Products direct to Consumers. ROUTE 24, Athens, Pa.

PRAIRIE STATE INCUBATORS wanted; latest models only. MONTICELLO EGG FARM, Monticello, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

THREE CARS second cutting Alfalfa; one choice. Two No. 1. IVYWILD ALFALFA FARM, Camillus, N. Y.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

FOR SALE—Two Parsons low down milk wagons, used but short time. HENRY T. FAY, 236 Main Street, Poughkeepsie, N. Y.

28 INCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

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ONE DAVIS CAPPER AND FILLER, 2x6, price $300, cost $700; one De Laval Separator, No. 17, cost $105, has loose pulleys and hand power, price $50; one star Cooler, 19 tube, bye-pass system, so that brine and cold water can both be used at the same time, top and bottom milk containers, cost $200, price $60. All as good as new and in very good working order. CHAS. M. SELTZER, 2001 Green St., Philadelphia, Pa.

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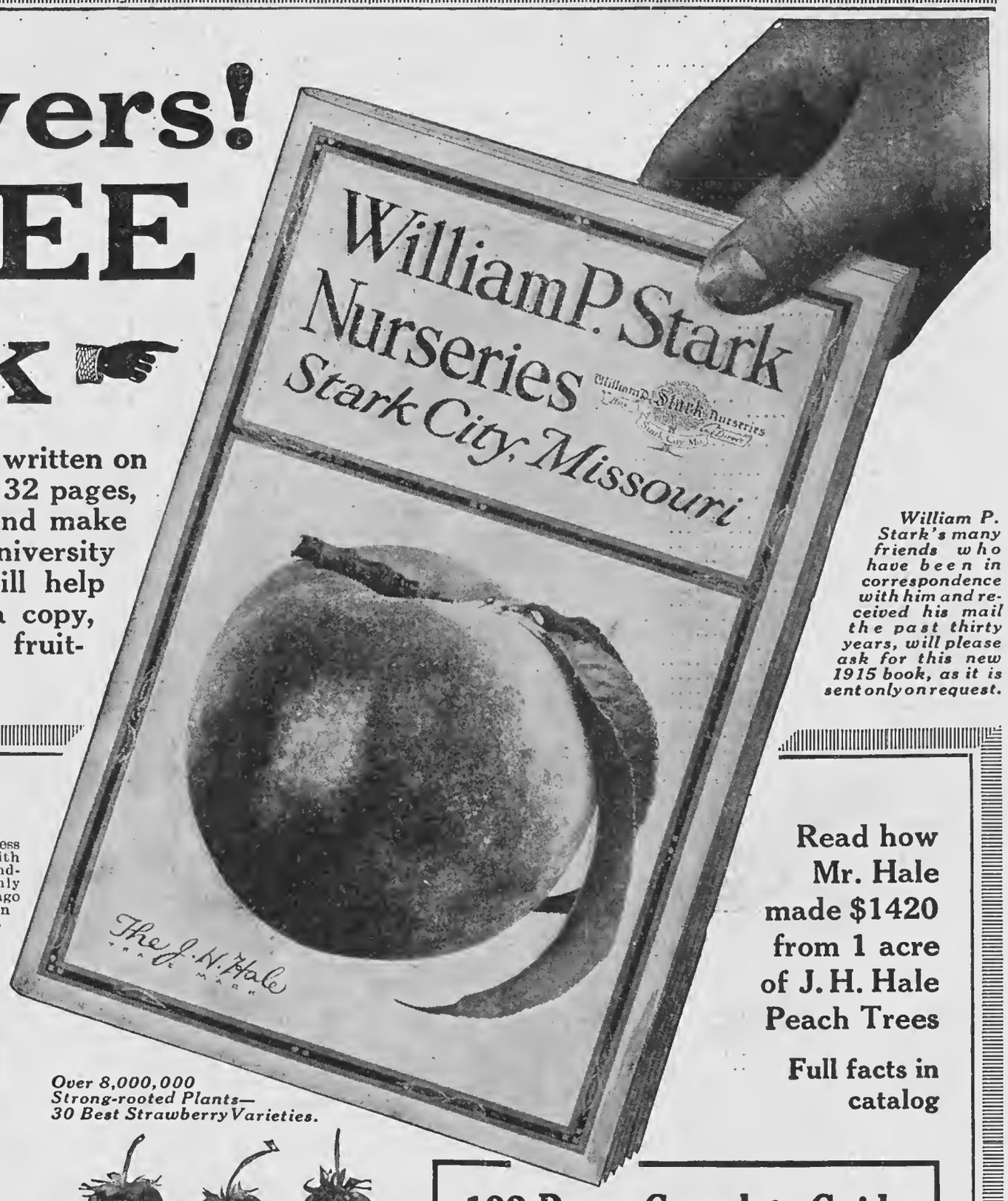

William P. Stark's many friends who have been in correspondence with him and received his mail the past thirty years, will please ask for this new 1915 book, as it is sent only on request.

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Averages ⅓ to ½ larger than Elberta; round shape; golden yellow, crimson blush; solid, firm as cling, yet perfect freestone; long keeper; greatest shipping peach known; fuzzless as an apricot; ideal canner; heavy, dense flesh for drying; ripens 5 days ahead of Elberta; brings 30 to 50% higher prices.

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Warning: Be on your guard against irresponsible persons offering worthless varieties as true J. H. Hale peach trees. Genuine J. H. Hale peach trees, budded from Mr. Hale's bearing orchards obtainable *only* from William P. Stark Nurseries, Stark City, Missouri.

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Meaty, juicy varieties for canning, shipping, drying, jellies, marmalade and sauces. Very hardy. Thrive in all soils; in city yards, poultry pens—everywhere.

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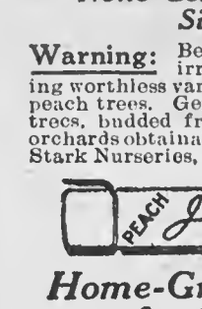

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Including: *Summer*, Livland Raspberry, Yellow Transparent, Wilson Red June, Duchess.

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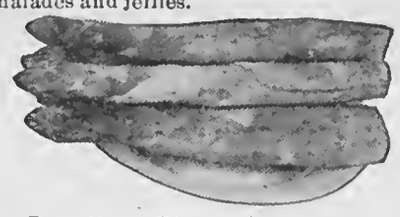

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

December 12, 1914

Five Cents a Copy

DE 12

Why any one interested in farming should go

Here are four plain reasons why you ought to go to the Exposition at San Diego next year. Give them the careful consideration they deserve—everyone of these reasons is figured from your point of view.

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When California celebrates, the Golden State's enthusiasm requires two outlets.

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"How much of my young heart, O Spain, Went out to thee in days of yore!"—*Longfellow.*

1915 All the Year

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HEADQUARTERS FOR EASTERN ALFALFA.

Central New York Alive With It.

PART I.

AREAS IN THE CROP.—Five years ago the writer made a careful investigation of the methods by which Alfalfa was being grown in an annexed district of Syracuse which contained considerable farm land, and in several towns lying not far from that city. In following years these places were revisited, and many other fields were inspected. The results of these investigations were published in THE R. N.-Y. in April, 1910, and September, 1912. In September, 1914, the ground was gone over again, and many other and more distant fields were seen. The area of observation included more than a dozen towns and villages, and a good many of the prominent growers of Alfalfa within 20 miles of Syracuse were interviewed. Most of the growers interviewed are producing Alfalfa on a rather large scale and have had a good deal of experience with it. Quite a number cut from 30 to 60 acres each. A few, who lease part of the land, cut from 100 to 150 acres. Jairus Pierce, an Indian at the Onondaga Reservation, who is 79 years of age, has just seeded 13 acres to Alfalfa, and expects to cut about 30 acres next Summer. Nearly all the growers interviewed have cultivated this crop 15 years or more. Some have grown it from 20 to 25 years and one has been growing it more than 30 years.

SOIL AND LOCATION.—In this section Alfalfa makes itself very much at home. It prefers rather dry land but does well in moist places. It flourishes on hillsides, which are so steep as to make plowing and harvesting extremely difficult, and, if the water does not stand in them for any length of time, it does well in the low places of uneven fields. The plant will not live long in standing water, but it will grow to the extreme edge of a pool. Occasional overflowing does no harm unless it is quickly followed by a hard frost. Alfalfa does well in sunshine or in shade, in loose soils and in hard ground. J. S. Jerome is growing Alfalfa on land that was left idle for 50 years because it was too hard to be cultivated for grain. Naturally it is easier to get a good start, and the yield is larger, in fertile soil than it is on poor land.

PREPARATION.—On some points of Alfalfa culture growers have different opinions, but they are unanimous as to the vital importance of a thorough preparation of the land. The Summer fallow has been tried but little. Under ordinary conditions it is not to be recommended. Careful cultivation of preceding crops in order to free the land from weeds is the universal rule. The majority of the growers interviewed plow eight inches deep. One sometimes plows as deep as 10 inches. All take a great deal of pains in pulverizing the surface and making a fine seed bed.

SEEDING.—The most common method is to sow with oats in the Spring, but barley is sometimes used instead of oats and Alfalfa is occasionally sown on fields that were seeded to wheat the previous Fall. April is considered the best month for sowing Alfalfa. But little Fall seeding is done. The Fall sown seed will start well, but cannot be depended upon to produce a crop. Seeding with Alfalfa alone has not been tried extensively. Thus far the results have not been satisfactory, but two or three growers will test this method further. Sowing grain with Alfalfa tends to keep down weeds. If foul plants appear their growth is checked when the grain is harvested. The grain protects the Alfalfa plants while they are small and weak, and it also quickly returns a crop of considerable value. The cost of seeding with grain is but little greater than it is with Alfalfa alone. The only disadvantage of the practice is seen when the grain is so heavy as to interfere with the growth of the Alfalfa. This can be obviated by using only a moderate quantity of grain. This Summer W. A. Parsons substituted peas for oats when seeding a field to Alfalfa. The peas were cut and left on the ground for a mulch. The result of this experiment remains to be determined.

HOW IT IS DONE.—Alfalfa seeding is largely done with a grass seed attachment to a grain drill. Of the many growers interviewed one uses a wheelbarrow seeder, one broadcasts and does not cover the seed; and two broadcast and then roll lightly, but one of these will use a light harrow at the next sowing in order to give the seed more covering. Only a very few leave the seed uncovered. There is a wide variation in the quantity of seed that is sown. Two growers use only six quarts of Alfalfa seed with four quarts of Timothy per acre, and two others use 16 quarts of Alfalfa seed without Timothy. All seed with oats and all obtain good results. Those who sow Timothy claim that its mixture with Alfalfa makes a better feed for horses, that it will cover the ground if the Alfalfa fails in spots, and that it helps greatly in curing the hay. When grown with grain a fair quantity of seed appears to be eight quarts of Alfalfa and four quarts of Timothy per acre. After the grain is harvested the Alfalfa will make considerable growth, and there will probably be more or less weeds. Most growers leave these plants, but a few clip them rather late in the Fall, though they do not take them from the ground.

CUTTING AND CURING.—A few growers cut only two crops per year, but the great majority get three and a few, in favorable seasons, cut a fourth time. The first cutting is commenced when the plants are in blossom, usually from the first to the tenth of June, the second from the middle to the last of July, and the third according to the conditions of the crop and the weather. This year a large quantity was harvested in the second and third weeks in September. Very late cutting is liable to cause serious injury. Some growers cure the Alfalfa where it was left by the mower, others cure it partly in this way and partly in the windrow, while still others cure it in the cock. The first method admits the use of the tedder and loader and requires the least work. The last method involves the most work, and if caps are used the most expense, but it is considerable protection in bad weather, and it gives the hay a finer and more uniform color than either of the other processes. Several growers have changed their methods, but they have not all changed the same way. Judging from what could be seen in passing in various directions through a large tract of Alfalfa country not more than one-fourth of the total crop is cured in the cock.

YIELD AND PERMANENCE.—Like that of all other crops the yield of Alfalfa varies on different fields and in different seasons. The general range in this section is from three to five tons per acre, but in a good many instances a considerably larger yield has been secured. Under favorable conditions Alfalfa, which has made a good start gradually improves for several seasons. No decline is to be expected in less than eight years, and pretty good crops should be obtained for at least 15 years from the date of seeding. J. S. Jerome has a field that was seeded 14 years ago, and gave two good crops this year; C. D. Andrews has a field which was seeded at the same time which still gives good crops, and Hamlet Worker has a field which has grown 33 crops in 11 years, and the yield in the present year was as good as that in any which had preceded it, although the land had

GOOD ALFALFA ON A FARM IN SANGAMON COUNTY, ILLINOIS. FIG. 624.

received no manure or fertilizer during all this time. On some farms the system of crop rotation requires a considerable part of the Alfalfa land to be plowed once in 10 or 12 years. Plowing a newly-seeded field because its appearance is unsatisfactory is believed to be a mistake. In some cases the seed does not all germinate the first year, and it often requires two or three years for a seeding to become fully established.

WHAT BECOMES OF THE CROP.—Only a small fraction of the Alfalfa grown here can be used at home. Quite a quantity is sold as loose hay in Syracuse, but the bulk of the crop is baled and shipped to Boston, New York, and other points, from which it is distributed to the surrounding dairy regions. Bales range in weight from 100 to 200 pounds. Prices vary at different seasons, and in different years. At this writing loose hay brings $15 to $16, and baled hay $17 to $17.50 per ton. Growers who are in the dairy business feed Alfalfa to their cows. It is the best feed known for dairy cows. If carefully used it is excellent for horses, though occasionally one is found with which it does not agree. The first cutting is preferred for horses and the second and third for cows. Sheep thrive on Alfalfa. E. A. Martin says that all sheep need is Alfalfa and water. A few growers have fed Alfalfa to hogs and a good many have given it to hens. All report good results. There is a wide difference of opinion regarding the use of Alfalfa for pasture. Many growers have not tried it because they think it would be unprofitable. Some who have tried it have found it a decided injury. Others report that on dry ground, if the crop is not fed too close, pasturing does no harm. A few have Alfalfa pastures which are in use from May until October of each year. The animals thrive and the Alfalfa remains vigorous. The writer saw a field which has been pastured for 10 years, and is still in good condition. One grower suggests the division of the pasture into two fields, using them alternately for two weeks at a time. Pasturing Alfalfa on soft ground is to be avoided. Only a few of the men interviewed have tried Alfalfa in the silo. One reports favorably. Others have found it decidedly inferior to corn. The general sentiment is that as some dry food is always needed it is best to fill the silo with corn and feed the Alfalfa dry.

MANURE-LIME-COMMERCIAL FERTILIZER.—Of nine growers whose practice in this respect was learned seven sometimes manure their Alfalfa fields. One manures heavily and one lightly when the seed is sown, and the land is not manured again until it is plowed. Two top-dress lightly every year. One spreads on about 14 loads per acre every three or four years. One relies principally on what is used for the grain and Alfalfa at the time of seeding, but occasionally manures thin spots in the field. Two top-dress every two or three years and one applies a little manure before, but never after, the Alfalfa is three years old. Lime is seldom used on Alfalfa fields. There seems to be enough in the soil. Hamlet Worker, who manures only at the time of seeding, experimented with one ton of lime and 500 pounds of acid phosphate per acre. This was sown in strips and had no appreciable effect upon the Alfalfa or the oats with which it was seeded. He obtained a remarkably fine crop of corn on land that had been in Alfalfa for 10 years. There will be no lack of nitrogen, but it is possible that in time continuous cropping with Alfalfa will deplete the stores of phosphoric acid and potash. To determine whether the time of exhaustion of these elements is near the experiment with some form of fertilizer will be repeated at intervals. Only one instance was found in which lime had been used with marked benefit. In this the yield of a field which had been mowed three years and given only light crops was increased 50 per cent., by the application of two tons of lime per acre. Of three growers who have tested commercial fertilizers one drills in 200 to 250 pounds per acre when seeding, and thinks that it pays, one broadcasts a little when the plants are small, and one has found it useless. J. E. R.

PRACTICAL AGRICULTURAL COLLEGE MEN NEEDED.

"WILL it pay me to secure an agricultural college graduate as manager of my 200-acre New York farm?" a Chicago business man inquired. This business man had been studying the educational exhibits of the agricultural college at the dairy show. "I have studied the matter considerably," he said, "and these are my views. If they are sensible I want your opinion. In mercantile business of some size I have been in touch with classical college men. I will apply the same acid test to agricultural college men on the farm. I do not want a young man who stands at the head of his class. I do not want a young man who is able to complete his agricultural course without financial hardship. I want a young man who has worked for at least part of his agricultural education. I want him to be a young fellow whose father opposed rather than supported his college work. I do not want a fraternity or a society man. Not because I oppose either, but the young man who has unlimited parental support, who goes in for society and for 'frats' will be the fellow who has too big ideas for me. I want my farm to pay its way. That is business. I find that too many young fellows have big ideas when they get out of school. They intend to become rich or prominent suddenly, and they fizzle out. I know one young man who told his classmates at the agricultural college that he intended going back to the farm to do things. He plunged the farm hopelessly in debt before he shelved his high ideas for more practical ones.

"I would be glad to secure a man past 30. My ideal would be a man who had worked out part of his time, one who had attended the agricultural college perhaps a year, then went back on a farm and worked a year or two, and then returned to college. When his funds would become exhausted, he would then go back to the farm, go to testing cows or engage in some practical agricultural work. I would rather have a man who attended the short course each year and worked the remainder of the year on his father's farm, than have the young man who had continued his course without interruption and without hardship. I would rather have taken the young man who hopelessly mortgaged his farm, after he had been to college one semester, than have him the day he graduated. Now, after he has some of the impractical ideas knocked out of him, he might become a valuable farm manager. I want a young man with executive ability. If he has been a renter for a year or so, or managed the home farm conservatively and progressively, he fills my ideal in that direction. It should not be difficult to secure a man of this sort, and possibly my man may not be an agricultural college student, but some young man on a rented farm. In any event the star athlete, the society and fraternity man and the most brilliant student will find opportunities in teaching and demonstration work. Somewhere they tell of the stone the builders rejected which was placed as the headstone of the corner, and he is the fellow some of us want." W. J.

AM I A "RETAIL MILK DEALER?"

I LIVE in an "incorporated village" of about 1,400 inhabitants. We have two milkmen who furnish the people with the "black-and-white" milk, peddling once a day. I have one cow, mixed Guernsey and Jersey, and sell milk to some half dozen of my neighbors, they coming after the milk and paying the same price they would have to pay for the milkman's milk delivered at their door. There are some others who do the same, and some who deliver the milk to their customers. The milkman told me the other day that I must either stop selling milk or take out a license, bottle and label my milk, and have a bacterial test made of it. I want to know if this is true. Must all the little one-cow men go out of business, send their neighbors to the milkman, whose milk they do not like, and many times can't keep for breakfast next morning, or go into all the expense and red tape mentioned? Hasn't a person in our boasted free country a right to sell, or offer for sale, a quart of milk, a jar of butter, a dozen eggs, a chicken, or anything out of his orchard or garden, without taking out a license or going contrary to the law? If not it is high time the women took hold of the voting, for they could certainly do better than that. H. F. K.

Whether or not you are a retail milk dealer, within the meaning of the new sanitary code of New York State, depends not so much upon the number of cows that you keep as upon your purpose in keeping those cows and the disposition that you regularly make of your milk. A strict interpretation of the language of the law would forbid one to sell even a pint of milk to a neighbor without having first taken out a permit from the local health authorities. As the purpose of those who framed the code was not to prevent such neighborly accommodation, however, several "rulings, interpretations and explanations" have been issued by the Commissioner of Health for the purpose of making clear just what the Department is trying to accomplish in the matter.

As you state your own case, you do not come within the provisions of the new law. It is intended that this law shall apply to bona fide milk dealers only, and I think that "dealer" may here be fairly defined as one who produces, or purchases, milk and disposes of it at retail primarily for the business profit in the transaction and the income which it produces. There are other people who produce milk primarily for their own family use, but who, having a surplus above their needs, dispose of this to their neighbors. The number of cows kept or the amount of milk disposed of have less to do with the status of the dealer than the real purpose for which cows are kept. The Commissioner of Health has ruled that "A man with three cows of his own who sells to a few friends, in their own pails, the surplus over his own needs is not a dealer." As few families could use the product of three ordinarily good cows, it would seem evident that one or more of such a number of cows must be kept for the purpose of supplying others; nevertheless, this is the ruling and it serves the purpose, at least, of showing the Commissioner's attitude toward the law. On the other hand, another ruling is that "A farmer who carries milk to a creamery but also sells at retail along the way is a dealer and requires a permit."

The distinction seems to be that in one case milk is produced primarily for family consumption, as vegetables are raised in the garden, but to avoid waste, the surplus is retailed to neighbors, just as a few surplus vegetables might be sold; in the other, milk is produced as a business proposition and its sale serves as one of the chief sources, if not the chief source, of business income.

It must be admitted that there is a fine distinction here that it is difficult to put into words that are not open to contravention; the distinction exists, however, and it is the duty of health officers to apply it to individual cases with the judgment that comes from a knowledge of the circumstances that surround each case. Much is necessarily left to the discretion of health officers, and it may be said for the Department that it is desirous that the law shall be administered in a spirit of fairness and liberality rather than in one of subservience to technicalities.

The law does not require bottling of milk or a bacterial test unless it is sold as "Certified" or "Grade A." The containers of all milk offered for sale must be tagged, however, and in the case of dipped milk the tag showing its grade may be attached to the can, or other receptacle, in which it is kept. For the present, milk will be sold largely under "Grade C," but it is probably the intention of the Department ultimately to abolish this grade and enforce observance of the stricter requirements involved in the higher grades. M. B. D.

POTASH FROM IRON SLAG.

I AM inclosing clipping from the Boston "Transcript" for your comments. I don't quite understand how so large a quantity of potash as will be required to turn out 500 tons of fertilizer a day could have remained undiscovered so long.

"Pittsburg, Pa., Nov. 13 (Special)—The shutting off of the supply of potash from Germany by reason of the European war has resulted in the establishment here of a fertilizer company, capitalized at $1,000,000. About 150 men will be employed in the beginning. The company has a patented process for the manufacture of commercial potash. It will be an important factor in the Pittsburgh district inasmuch as it will use thousands of tons of slag from the steel mills. This slag is ground and mixed with Tennessee phosphate rock and becomes effective and immediately available for fertilizer. The company owns over 500 acres of phosphate rock in Tennessee and will manufacture 500 tons of fertilizer a day." H. W. B.

You may safely discount most of the (special) news items you read in the papers. There are a good many ways of printing concealed advertisements. This year the best trick in the fertilizer business is to talk in some mysterious way about a new source of potash. It is well known that the German mines provide all the available potash now cheap enough to use as fertilizers, but anyone who can make farmers think he has some new supply will stand a chance to reap a harvest!

Chemists know that certain steel interests have a waste product containing small crystals of apatite. This is a hard mineral containing phosphate of lime. Van Slyke says it is probably the original source of phosphorus in all other phosphoric compounds. It is too hard to be of much use in making fertilizers. It is not likely that there is enough potash in this slag from the steel works to amount to much. There are various methods for treating silicates of potash (rocks) so as to make part of this potash available. Our guess is that this fertilizer company is handling this slag and ground rock in some way to make the phosphoric acid more available and simply talking about the potash in order to attract attention to their business!

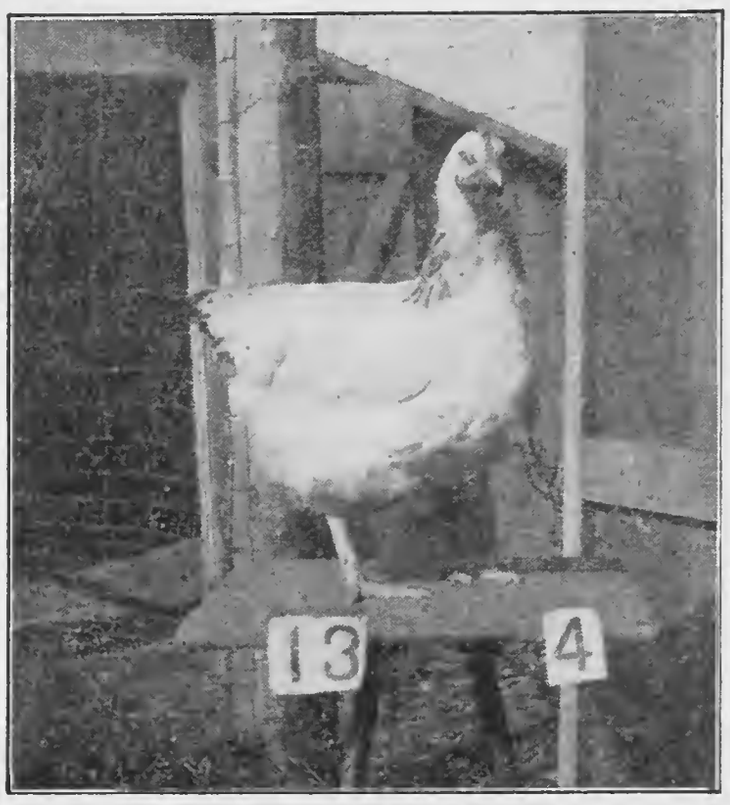
The goods sold by this concern last year were what they called "experimental" and known as "phosphatic lime." There was very little available phosphate in these goods. Their goods this year contain more available phosphoric acid, but the chemists have not yet determined how it is obtained. Samples collected last Spring showed only from six to 10 pounds of potash to the ton. This did not show that they were making the potash in the slag available. It strengthens our suggestion that they are making available phosphoric acid and *talking about potash* in order to sell their goods. We are as eager as anyone can be to find sources of American potash, but when they come with these "patent" methods they must "show us."

THE hens often suffer at this season. As they do not lay the hen man concludes they should not be fed. They need food more than ever now. "He that will not work neither shall he eat" does not apply to the molting hen.

A 286-EGG HEN.

Record Made at the Thorndale, Pa., Contest.

THE picture at Fig. 625 shows a remarkable hen known as Columbian Queen. This hen, a Columbian Plymouth Rock, had a record at the last Thorndale egg contest of 286 eggs in one year. There is no question about this, and we reprodnce at Fig. 626 an engraving of the record which shows just when each egg was laid. This is a form sent out by the managers of the egg-laying contest, and from it the date of each egg laid duriug the year can be noted. A study of this record will show what a remarkable performance this Columbian Queen gave. Surely there were very few lazy days, but she shelled out the eggs consistently. Those who are interested in such matters may figure out the income from this hen. It would be fair to say that in a near-by high-class market, eggs laid from November 1 to Febrnary 1 average 50 cents per dozen. From February 1 to May 1, it would be fair to make an average of 36 cents per dozeu, and our readers will agree that 30 cents per dozen for the remaining months wonld have been a very conservative estimate. On this basis Columbian Qneen produced eggs which, if sold for eating pnrposes on the regular market, would have brought $8.72. Surely this hen had a remarkable earning capacity, but she is worth very much more for breeding purposes. This record was in no respect an accident. Mr. J. M. Jones of Monmouth County, New Jersey, who bred this bird, says that the mother of Columbian Queen was a hen that laid 225 or 229 eggs in one year. He had three hens; one of them laid 225 eggs and the other two each 229. These three birds were bred from a cockerel of the same strain, but his mother had no certified egg record, although she was a good bird. Two of the brothers of Columbian Queen have won first prize at poultry shows, and so it will be seen that this family is full of eggs, and from the breeding of this bird, about all she would be expected to do when given plenty of food would be to shell out eggs. In fact the record of this hen was backed up so thoroughly by pedigree that Mr. Jones was offered $500 for the hen. This shows what is surely coming in the pedigree hen business. After a few generations of selecting and careful testing there will be a demand for these worker hens corresponding to that for cattle with sure performance in their pedigree. Of course there are those who still sneer at the egg contests. Let them keep on sneering—the utility pedigree hen is coming as sure as fate. That, as the boys say, is "some sure!"



COLUMBIAN QUEEN, 286 EGGS IN ONE YEAR. FIG. 625.

The Philadelphia "North American" Third Egg Laying Competition
THORNDALE, PENNA.
November 1, 1913—October 31, 1914

VARIETY Columbian Rocks — RECORD 1ST YEAR — PEN NO. 13
OWNER J. M. Jones, " 2ND " BAND NO. 4
OWNER'S ADDRESS Homerstown, N.J. OWNER'S NO.

1913 & 1914	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL MO.	TOTAL TO DATE
NOV.	X	X	X		X	X	X		X	X	X		X	X	X		X	X	X		X	X	X		X	X	X					23	23
DEC.	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X		27	50
JAN.		X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X		X	X	X		X	X	X	X		X	X	25	75
FEB.	X		X	X	X		X	X	X		X	X	X		X	X			X	X		X	X		X	X	X					19	94
MAR.	X	X	X		X		X	X			X	X		X	X	X	X		X	X	X	X	X		X	X	X	X	X	X		24	118
APR.	X	X	X		X		X	X	X		X	X		X	X	X			X	X	X		X		X	X	X	X	X	X		22	140
MAY	X	X	X			X	X	X	X	X	X	X	X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	26	166
JUNE	X	X			X		X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			24	190
JULY	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	28	218
AUG.		X	X		X	X			X		X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X		23	241
SEPT.	X	X	X	X		X	X	X	X	X	X	X		X	X		X	X	X		X	X	X	X	X			X	X			24	265
OCT.		X	X	X		X	X	X	X		X	X	X	X		X		X		X	X		X	X		X		X	X			21	286

DATE	WEIGHT	DATE	WEIGHT	REMARKS
1913 Nov. 1	5.5	Oct. 31	6.3	
1914 Feb. 1	6.2			A. M. Pollard, Supt.
" May 1	5.7			
" Aug. 1	5.8			

X-Egg
12-Broken Egg
13-Abnormal Egg
B-Broody
C-Released
S-Sick
D-Dead
M-Moult Began

EGG CONTEST RECORD OF COLUMBIAN QUEEN. FIG. 626.

THE FARM MANAGER QUESTION.

YOUR bringing up of the owner-manager problem in the editorial columns on page 1344 leads me to give some ideas on the question derived from personal experience. First of all, it is presumed that the city man farmer is in possession of the record and experience of the prospective "manager" as well as his own estimate of the latter's latent ability. If satisfied thus far he should be willing to pay to begin with just what he would to a superintendent or manager of any non-agricultural business, i. e., compensation on the basis of work done in the same or relative capacity elsewhere. In agricultural work this would certainly mean at the local rate of hired man's wages plus comfortable home qnarters and products of the farm for home use in return for the responsibility assumed. If the prospective manager has been especially successful elsewhere, or brings exceptional experience with his personality, he is entitled to additional compensation to be agreed upon, as in any other business where proved ability is bought and sold.

It is right that the city-man farmer should take all the first year's "risks," as no new superintendent is responsible for work done or undone by a predecessor: such as condition of orchards, amount and condition of grass lands, area in Winter grain, etc., upon which success for the succeeding year so largely depends. Thus it would seem fair to assure the prospective manager of a living wage plus a bonus for proved ability for his first year's endeavors at least. This the city-man farmer may pay at a loss, but it is what he must pay for his own inability or lack of opportunity to fill the job himself.

Now, after the manager has had the chance to "learn" the farm—state of cultivation of the farm, what the cows and other stock are good for, the varieties in and condition of the orchard, the labor situation, and above all, after he has learned his "boss," whether he be a man with a hobby who must be humored, a man decided in his own views about farming it, whether the women members of his household are critically observant of operations and conditions they know little of—then, after this experience, he may in fairness be asked about taking any "risk" with the owner. The city-man farmer has, meanwhile, had the chance to let his man go to some other job if the work did not please him.

COLUMBIAN PLYMOUTH ROCKS AT THORNDALE EGG LAYING CONTEST. FIG. 627.

If, at this time, the matter of "sharing the risks" be brought up the question of expenses to be charged against gross profit is always a nut to crack. Perhaps the farm is capitalized beyond its agricultural value, and interest on an investment no professional farmer would have made must be deducted. Perhaps the show part of the city-man farmer's business has been heavily emphasized. Perhaps pure-bred stock has been held onto because of blood rather than milking qualities. These and many other probabilities may confront a willingness at first thought to share the responsibilities of too big a financial burden.

True, no sound business man buys as an investment pure and simple at present-day prices, a well-situated productive farm which must be managed by some one other than himself, for there are innumerable opportunities for investment not so dependent on the caprices of Nature for their return. So it is either ignorance of the realities of farming, the satisfaction of a hobby, or the natural desire to own a farm, that makes it necessary for the city-man farmer to consider the services of a manager at all. Why, then, should not the city-man farmer take full consequences be they at a profit or a loss? He still holds the option of keeping or firing his manager. Why isn't a good salesman, or a floor manager or an editor asked to "risk" his value in another man's proprietorship? Why ask a farm manager who has double the uncertainties of any other business to contend with—why ask him to take chances by guaranteeing that he can make wages and a profit from another man's business plant? Let the city-man farmer get and pay for ability as elsewhere. If his farm plant won't, for elemental reasons, pay for responsibility and work done by a manager, and a profit for himself, the alternatives are sell out or pay the fiddler!

Massachusetts. ALLEN B. DOGGETT, JR.

R. N.-Y.—Both parties in a farm working proposition must "give and take" until the job settles down to a fair basis of equality. It is a bad thing for either partner to have the best of the bargain as this makes disatisfaction all around.

SEEDSMAN RESPONSIBLE.

"WHAT should the seedsman do? Get behind his non-warranty clause or pay fair damages?" THE R. N.-Y. asks, after citing an instance where, under peculiarly exasperating circumstances, a seedsman was found to have supplied Alsike and clover seed instead of Alfalfa seed, causing damage and loss to the purchaser by the substitution.

I have been the victim of misplaced confidence in nurserymen in the matter of trees, but have never had any serious disappointments with seeds—nothing of great moment. If I should, however, have such experience as was related in THE R. N.-Y. and to which I have referred, I would expect the seedsman to make good, and I believe in such a case I would be justified in insisting on it. Arbitrarily laying down a non-warranty condition does not cover the matter of substitution, and cannot equitably do so. A seedsman might not properly be held accountable for crop failure, because there are so many factors and contingencies. It would not be just to place the burden for failure in that respect upon him. But in the matter of substitution, the responsibility rests upon him, irrespective of whether the substitution is by accident or design. We may charitably assume that it is wholly accidental, without altering the equity in the matter at all.

Making a hypothetical application of the same principle elsewhere we shall be able to see this clearly enough. Suppose, for instance, this seedsman should conclude to go into the business of canning pumpkin. Suppose he should buy from the near-by farmers several carloads of what were supposed to be and were represented to be and were sold for pumpkins, and he should go on with his canning operations only to find that his factory had had worthless gourds furnished it instead of pumpkins, as agreed and paid for, and his product was worthless. Clearly, he would have a perfectly just case for damages against those who had made the substitution of gourds for pumpkins, irrespective of whether the substitution was by accident or design. The customary business theeory of "caveat emptor"—let the buyer beware—would not, I think, or should not hold. Doubtless any court or jury, in awarding damages, would be favorably influenced to some degree in the defendant's favor if it could be clearly shown that the substitution was accidental, but as a simple matter of justice, whatever the legal aspect might be, I cer-

tainly believe the seedsman is responsible, and should be so held, and that he should be made to pay suitable and proper damages. ROBERT S. DOUBLEDAY.

R. N.-Y.—The case of pumpkins and gourds will not hold on the case referred to. The farmer had a good locality. He wanted Alfalfa and spent money freely to get it. Yet it is not sure that Alfalfa will succeed on his farm. There is where the trouble of fixing any damages will come in.

NEW YORK STATE NEWS.

CO-OPERATIVE SOCIETY ORGANIZED.—Under the auspices of Gonverneur Grange a coöperative society has been organized under the State law and will be incorporated soon. Wilber A. Whiting is president and W. H. Storie, secretary. The county deputy of St. Lawrence County now reports a Grange membership in that county of 5,500.

HOBART DAIRYMEN.—The Hobart branch of the Dairymens' League held its annual meeting Nov. 28 and elected Hector W. Cowan president and A. M. Mihalko, secretary. The report of the secretary shows that the farmers of that vicinity have profited greatly by the organization.

CONVICTS WITHDRAWN.—It appears that the working of convicts on the Palenville-Clove highways near Catskill has not been a notable success. It is said that their inability to stand hard work has delayed the construction very much, and their presence has been a constant source of fear to the nearby residents.

HOP GROWERS DISCOURAGED.—It is likely that more hop fields will be plowed up next Spring than ever. The growers are getting discouraged with all the diseases they have to contend with in growing a crop, and the weather was also against them the past season. One hailstorm is said to have destroyed hundreds of acres of hops in Oneida County. The hop men have also been sadly disappointed as to prices. It was thought when the European War broke out that the prices of hops would go up, but that has not been the case, and those who held their crops for 50 cents now find a slow market at 25. The crop on the Pacific coast has been a large one, and with the machinery there used in the harvesting the crop the price is not more than 10 cents a pound. The increased cost of labor here has also made the business less profitable, pickers now receiving from 50 to 60 cents per box instead of 30 to 40 as in the past. This year's crop at Otsego County is said to be the lightest since 1886, when the crop was badly injured by lice.

MORE QUARANTINE.—There was an outbreak of the foot-and-mouth disease in Tompkins County, last week. The towns of Groton, Dryden, and Lansing in Tompkins County; Homer and Cortlandville in Cortland County and Summer Hill and Locke in Cayuga County have been quarantined.

BALED HAY MUST BE MARKED.—A ruling which will interest many farmers was made last week by the State Sealer of Weights and Measures upon an inquiry of a county sealer. It is to the effect that the full name and business address of the presser of the hay must be plainly marked on the weight tag on each bale. The owner and operator of the hay press is responsible for the marking. Every violation of this law is subject to a fine of $5, but if hay is offered for sale on which the correct gross weight is not plainly marked, or which weighs more than five pounds less than the gross weight so marked, the violator is guilty of a misdemeanor.

POWDERY SCAB.—The New York State Shippers' Association has received a report from the Federal inspector sent to Western New York to make examination of potatoes to the effect that there was no trace of scab in that territory. He inspected potato warehouses and cellars in six counties. The association also is said to have had reports from the State Department of Agriculture to the effect that no powdery scab has been found in the State outside Franklin and Clinton Counties. Western New York is estimated to have about 35,000,000 bushels of potatoes this year.

STAMP BILLS LADING.—On Dec. 1 the war tax law went into effect for the purpose of increasing the internal revenue receipts. All shippers are now required to put a one cent stamp on all bills of lading, whether for a carload or a single package. The penalty for not conforming to the law is $50 for each offense.

HERKIMER CO. FARM BUREAU.—At the recent annual meeting of the Herkimer County Farm Bureau the executive committee announced that Chas. A. Taylor of Hancock, Delaware County, would succeed M. E. Chubbuck, who has become manager of the Chemung County Bureau. Mr. Taylor has been at the head of the Hancock High School for three years and has had considerable experience in practical farming. John M. Budlong of Schuyler succeeded W. E. Kay of Herkimer as president of the Farm Bureau Association. Mr. Kay represents the Pomona Grange on the board and James Thompson of Fairfield represents the Board of Supervisors.

J. W. D.

Fertilizer for Melons.

LAST season I failed to make a compost heap for melons, and as a substitute for same used in the hills a fertilizer mixture—3% nitrogen, 8% phosphoric acid and 8% sulphate of potash, which was very highly recommended by our State Experiment Station. I followed their instructions strictly as to its use, but the result was a complete failure of the five acres of melons planted. The fertilizer seemed to destroy, or at least prevented, the seed from germinating. I still have on hand several hundred pounds of this mixture, and while I would not think of using it again directly in the hills, I have thought possibly I could use it with good results by distributing or mixing with the compost heap I am now preparing for next season. Will you advise me as to same? I have been so badly burned this past season with this fertilizer I have no desire to take any more chances on it.

Charlestown, W. Va. G. E. W.

Muskmelons are grown on a large scale. The common practice is to prepare the land in the Fall, and in January or February run out deep furrows five feet apart and fill these half full of stable manure. This is let lie to rot till planting time, and then a fertilizer running 7% ammonia, 6% phosphoric acid and 5% potash is applied on the manure and at rate of 300 to 400 pounds an acre. A furrow is thrown over from each side, and the ridge thus made slightly flattened and the seed sown in continuous row with a garden seed drill. When a stand is secure the plants are thinned to 18 or 20 inches, and just as they start to run about a tablespoonful of nitrate of soda is scattered around each hill. If you planted the seed in direct contact with the fertilizer you used, the caustic nature of the sulphate of potash doubtless did harm. The fertilizer you name is somewhat strong in potash for melons, and I would prefer to have the nitrogen higher and the phosphoric acid all the same, or eight per cent. In fact I think that five per cent. potash is more than melons need. You can use your fertilizer 100 pounds to each ton of stable manure well mixed and then have the compost well covered before planting the seed. W. F. MASSEY.

MAIL BAG.

Muck or Mud.

I WOULD like to haul out some muck this Winter; I have also a shallow lake on the farm. Which do you prefer, the muck or the mud? Also advise me how to handle it. M. K.

Coolbaugh, Pa.

By analysis the muck is worth more than the mud. The mud may contain more *available* plant food, since it represents deposits from the water. A mixture of the two would work well—put in long, narrow piles and well dusted with lime as the piles are made up. Use about 50 pounds of lime to the load.

Value of Mangels.

WILL you give me a fair price for mangel beets, raised in this locality? What price should I obtain for same by the ton? G. P. M.

Plainfield, N. J.

It depends upon supply and demand. For lots of 100 pounds we obtain 75 cents or $9 per ton. In dairy districts the roots bring $6 to $7.50. Where a limited quantity is wanted for hen food the price usually runs at the rate of $12 to $15 per ton.

Lime With Cover Crops.

I HAVE purchased a farm on which is a piece of run-out meadow land. I wish to plow this in the Spring and sow to oats and Canada peas to be turned under green; then seed to buckwheat to be plowed under also, and seed to rye in the Fall. Next Spring (1916) I shall plow under the rye and plant to corn or potatoes. I wish to apply lime to this land. Would it better be applied with the oats and peas, or put on with each crop to be turned under. J. B. A.

Oil City, Pa.

We should use a heavy application of lime when turning under the sod and sowing the oats and peas. This crop can make better use of the lime than either the rye or buckwheat, and it would not pay to make two or three applications. By following this plan you will stuff that soil with organic matter.

Filter in Cistern.

I HAVE a cistern at my barn 10 feet in diameter, eight feet deep, which I wish to pipe to the house. How can I filter it so the water will be suitable for household use (not for drinking or cooking)? How is a brick filter put in? A. E. S.

A filter of brick for a cistern is usually a simple brick wall built across the cistern in such a way as to divide it into two parts, the water running into one side and being taken from the other after it has passed through the bricks. Another method of filtering cistern water is to construct a concrete reservoir of suitable size and fill it with gravel, pulverized charcoal and fine sand in three layers. The water passes through these layers in the order named and is received into a clean chamber from which it is pumped. This filter may be built as part of the cistern or outside, as convenience dictates. As you wish water only for washing purposes, any simple method by which it could be made to pass through a layer of gravel and one of sand would probably be satisfactory; in fact, if the barn cistern is a well protected and clean one, I do not see why the water should not be used directly from it. M. B. D.

Gunning for Woodchucks.

ON page 1392 you advise H. L. to fire a heavily loaded gun into a woodchuck hole as one of the methods to destroy woodchuck. A neighbor of mine did that very thing a few years ago. He lived to tell the tale, and buy a new gun, but he won't try it again. There is but small chance for the gas to expand when a gun is fired in a place like a woodchuck hole, so a burst gun barrel is quite liable to be the result. R. C. G.

R. N.-Y.—Of course we did not intend that the gun should be pushed down into the sand and then fired—but pointed into the hole.

Which System Best?

REGARDING the proposition of an agricultural college graduate to undertake the management of a farm at a salary of $300 per year, board and one-half the profits (net profits?) compare with a common form of contract for tenant farming, viz. the landlord furnishes land and buildings, including house for tenant, and pays for one-half of fertilizers purchased and one-half of foundation stock, if stock farming is practiced. The tenant furnishes all labor, tools and machinery, teams, etc., and pays for half the fertilizers and stock aforementioned. The gross profits are divided half and half. Which would prove the more profitable to the land owner, assuming the tenant and graduate to be both excellent men in their line of work? C. H. CHAPMAN.

New York.

R. N.-Y.—This is a question for general discussion, as there are many sides to it.

Bees and Fruit.

I JUDGE from Mr. Weed's article, page 1360, that he does not like bees. Prof. Waugh, who experimented as a fruit-grower and not as a bee-keeper, proved that bees, as pollenizers, were more reliable and much superior to the wind. He placed panes of glass, covered, I believe, with a viscid fluid, among his trees, in order to catch the wind-blown pollen. As I recall it, the amount so caught was surprisingly insignificant. He also noted that honey-bees were the chief agents of fertilization. I believe that Mr. Weed is very much indebted to the bees for the good crops obtained in the past, and especially for the 10½ tons of cherries mentioned. I think he is mistaken in his figures when he estimates that there were a dozen flies and other insects for each flower, and perhaps less than 500 bees among the 1½ acres of cherry blossoms last Spring. But assuming that he is correct, that does not prove the bee a negligible factor in the perfect pollination. Excellent honey-gatherers (which means good pollenizers) often fill their supers in a quiet, methodical manner that borders on the miraculous. In this locality the bees held high carnival during fruit bloom, and gathered but little surplus after that. After I became a bee-keeper in 1900, a neighbor, who is a close observer, voluntarily told me that he was securing better crops of apples because I had located near him. Since then the testimony of fruit-growers themselves has led me to regard bee-keepers as public benefactors.

Connecticut. JAMES A. SMITH.

Nov. 27. Conditions in this section of Nebraska are unchanged. People are preparing for Winter, but there is no sign that Winter is near. The weather has been dry and warm during November, no storms of any kind for more than a month. Really a good rain is needed before Winter comes. Wheat is looking well as usual. Corn is nearly all in crib and much of it shelled. The price is 60 cents. There are a few farm sales, but not the usual number, as property is not bringing satisfactory prices at auction. Prices of young cattle are on a basis of 6 to 6½ cents a pound; cows are still selling at $50 to $75. Horses are lower than for some time, although there is a brisk demand for a class of medium-weight animals for the British army at $75 to $100. Land sales are too few to mention. Prices of land have not fallen off, but sales have. Prices of produce are: Wheat 98; did reach $1 at one time for part of a day. Corn 60; oats 40; potatoes 65 to 80. Apples 60 to 75 as to variety. Hogs around $6.50 per hundred; eggs 25; butter 25.

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Grafting the Hickory.

CAN you give any information on the propagation of the hickory? There is a hickory in this neighborhood that bears a nut much larger than any other in the vicinity. I have done a good deal of grafting apples, and have successfully budded the peach, but have not been successful with the hickory. I would like to propagate a few trees from this desirable tree. L. H. P.
Ludlow Center, Mass.

This method of grafting the hickory is comparatively simple. Cut terminal twigs in February for scions. Keep them lying on a bed of dry leaves, and covered with the leaves, on the dirt floor of a cold cellar. For stocks, any variety of hickory will do, shagbark, shellbark, pignut, bull nut or pecan. Use stocks from two to six inches in diameter. When the leaves on the stocks are two or three inches long cut the stocks off squarely with a saw, breast high on any point desired. Then cut the scions with a long sloping cut on one side only. Insert the point of this one-sided wedge between the wood and bark of the stock, cut surface of scion toward center of stock, loosening the bark a little at the start if necessary with a knife, and push the scion down the length of its cut surface. Now cover all cut surfaces with grafting wax and tie a paper bag over the whole operation. Scions cut to two buds, one of which is the terminal bud, give good results. After 10 days a peep hole may be made in the bag and the scion watched. As it grows the bag may be torn open as neccessary. The young shoot should soon be tied to some support to prevent breaking off by accident. This method, here barely outlined, has given excellent results. WM. C. DEMING.
Sec'y Northern Nut Growers' Assn.

Sudan Grass.

JUST now there is much talk about Sudan grass—the new fodder crop. The Department of Agriculture recommends it highly for the Southwest, but is doubtful as to its value along the Atlantic coast. The grass appears to be some distant relative of Johnson grass or quack grass, but has no such propensity for spreading underground as these pests indulge. The Sudan grass is having a boom in Texas. We even hear stories of how the seeds of Sudan are accepted in some places for making change! Up through the rich soils of the Mississippi Valley at least as far north as Iowa the Sudan grass is certainly worth trying, for it makes a great crop of fodder on rich soils. We have been considering this grass for our own farm, where the object is to secure as much organic matter as possible for plowing under and raise the needed hay on a small area. Henry Field, the Iowa seedsman, has found this grass a heavy yielder, but he gives this warning:

The trouble with Sudan is that it is so greedy that it will rob everything within reach. One man wrote in the other day asking if he could sow it in his orchard to use as a mulch around the trees. He had the old idea of growing the mulch right on the ground where it was to be used. I told him not to do it, for the Sudan would undoubtedly rob his trees. It will live and thrive under remarkably hard conditions. In fact, I believe it will make a good crop anywhere and under any conditions, but the quality that enables it to do this is its absolute selfishness and greediness. If there is a drop of water or a particle of fertility in the soil within reaching distance, it gets it and keeps it, and the neighbors can take care of themselves.

Our problem has been to find a crop which will give a fair amount of grain and fodder in the orchards without robbing the trees. We have found this in our flint corn with a cover crop seeded at the last cultivation. Evidently the Sudan grass would do more harm than good on our thin hill soils.

Feeding a Raccoon.

WHAT is the best food to feed coons and how often should they be fed? How long does it take a coon to mature? How often do they breed and at what age? How many young do they breed to a litter? F. M. F.
New York.

Raccoons will eat almost anything and it is best to give them quite a variety. Meat should form a rather small part of the food. All kinds of vegetables; beets, carrots, turnips, potatoes, green corn, etc., cut in small pieces and mixed with small amounts of meat, fish, clams, crawfish, etc., would be right. Ordinary table scraps, if fresh, are all right. It is a good rule in feeding most animals to give what will be eaten up clean in about 15 to 20 minutes three times a day.

Little is known of the breeding habits of the raccoon but it is probable that wild ones have the first litter when about a year old and in this region they probably have only one litter of three to five or six in a year. We sometimes see very small coons in the Fall, and it may be that they occasionally breed twice in a season. ALFRED C. WEED.
Wayne County, N. Y.

Chances in Pennsylvania.

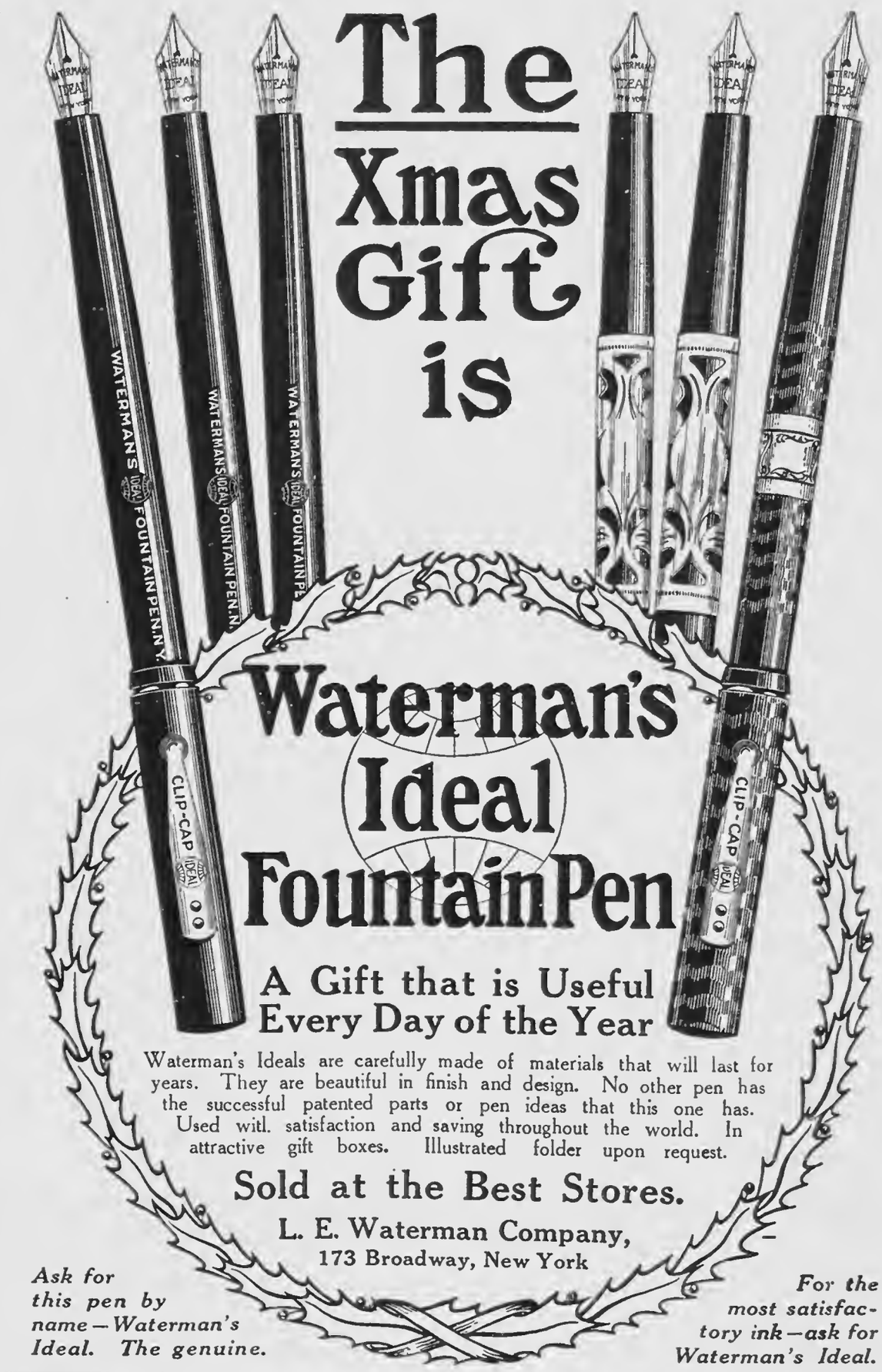
THE letter from a correspondent living in Schoharie County, New York, as to farm values applies to more than one locality in the East. Here in Montgomery Co., Pa., land with excellent farm buildings can be purchased on easy terms, and at figures that would not replace the buildings. The soil is good, and prices of farm products are high; everything that can be raised on the farm can be sold for cash to hucksters who have stalls in various markets in Philadelphia, which city is not over 40 miles from the extreme part of the county. The roads are good, taxes are low, and it is mainly inhabited by a most excellent class of Pennsylvania Germans, who, while mainly using that language, speak English also. The farmhouses are usually built of stone or brick with slate roofs; when built of lumber in most instances have slate roofs and sometimes the siding is the same material. The barns are what as known as Swiss, with a basement and overhang in the rear. Dairying and poultry raising are the main means of support, although fruit and general farming engage the attention of a great many. The soil is ideal for peaches, apples and pears, the crops were on the bumper order this season. There are many creameries where the so-called Philadelphia print butter is made. Butterfat has not gone below 40 cents per pound this season. Milk shippers receive five cents gross, which is nearly 4½ cents net. Eggs bring from 40 to 46 cents at the door. The farms range in size from 15 acres to 60, very rarely going over the last size. I am acquainted with men who have farms as small as three acres on which they are making good livings from poultry. I have traveled all over the United States, also in Europe and South America; we have had large farms in Ulster and Sullivan Counties, N. Y., but this is the country for a man with an inclination to work. Come and see us.
Pennsylvania. H. C. W.

Markets in Boston.

TODAY I visited the produce markets of Boston, with a view to learning selling conditions on this end of the produce business. There are several so-called "markets," Faneuil Hall Market, Clinton Market, Quincy Market, etc., where the commision merchant, offices and storerooms are situated close together; a large number, with a continual hustle and bustle and shifting of produce all about. Often the ground floor is the office and exhibition room, and the basement is the cold storeroom and packing room. Upon the sidewalk are the displays of fruit and all the sorts of produce. Prices are here talked and produce sold. Grocers' teams are backed up to the sidewalk to take away produce; the grocers generally buy tomorrow's produce this afternoon. Some of the teams belong to the commission merchants and are used to cater to the hotel trade.

I noticed especially the manner of displaying the fruit. Boxes and barrels are opened for inspection in gronps. One pile of boxed apples was especially attractive. The apples were large, fancy Maine, polished, neatly packed with paper between each layer and over the top, and upon the outside was a neat placard giving the shipper's name, and the grade, kind and number of apples. A very neat affair, I thought, but I also observed that the boxes had been packed without the supposedly necessary bulge. The man in charge explained to me that a bulge tended to injure tender-skinned apples, and that no bulge was needed to assure tight travelling. I wonder, is this true?

I inquired of the commission man to whom I had been sending hennery eggs this past Summer whether there were good prospects in selling fancy eggs under a brand name, and whether the public desired especially an unwashed egg. To the first question he replied, "No, selling eggs under a brand name would give the grocer who sells them a chance to hurt the name of the brand by careless and slow handling. When eggs are sold on merit as eggs, they will bring a fair price and, when in the hands of the grocer, cease to be a responsibility to the producer." To the second question he replied that eggs were not supposed to be washed anyway, though they might be wiped with a damp rag. He said that washed eggs would not keep at all well, and that there would probably be a demand for an unwashed egg. He suggested the use of vinegar in wiping eggs, as it will remove dirt and leave the shell rough. PHILIP M. MARSH.



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EVENTS OF THE WEEK.

DOMESTIC.—Under a decision by the Appellate Division, in New York, Nov. 27, William R. Hearst will probably have to repay the city about $200,000 in damages after the fireworks explosion in 1902 in Madison Square, when the National Association of Democratic Clubs was celebrating Hearst's election to Congress. Hearst was sued for damages as an individual and as president of the association. His defence was that the exhibition was held on a permit given by the city, and he had no responsibility. Mrs. Margaret V. Shea, whose husband, Denis Shea, was killed, recovered $24,543 against the city. The city used this suit as a test case in suing Hearst, and the Supreme Court decided against him, whereupon he appealed. This appeal the Appellate Division has now dismissed.

New arrangements being completed by the American Commission for Relief in Belgium insure the despatch early in December of one ship of 3,000 tons capacity each day from various ports in this country.

The Supreme Court held, Nov. 30, that the "Jim Crow" car law of Oklahoma, which permits railroads to carry sleepers and dining and chair cars for whites without providing "equal" accommodations for colored travelers, is invalid because it violates the Fourteenth Amendment to the Federal Constitution. The decision means that railroads that go through Southern States will either have to discontinue separate coaches or run coaches for negro citizens and provide equal accommodations at stations and other resting places.

Forty-eight deaths from hunting accidents in Wisconsin, Michigan and Minnesota is the toll in these three States, according to reports received in Chicago, Nov. 30. Reports from correspondents show a death roll of 24 in Wisconsin, 13 in Michigan and 11 in Minnesota. The "big game" hunting season came to a close on the above date.

Chairman Frank P. Walsh of the Federal Commission on Industrial Relations announced, at Denver, Colo., Dec. 1, that the commission would on December 28 begin an investigation of the Rockefeller Foundation. Hearings will be held first in Washington and later in New York city. Walsh said that the investigation was decided upon because the foundation was pointed out by laboring people as one of the chief causes of social unrest. Many persons, he said, question the wisdom and legality of setting aside $100,000,000 to be kept intact and in private hands for 100 years. The commission began its inquiry into the Colorado strike causes, Dec. 2. Gov. Ammons, the first witness, was followed by George A. Carlson, Governor-elect, and John C. Osgood, president of the Victor American Fuel Company.

Mrs. Mathilda Francolini, who earned the title of "Real Estate Queen" a year ago, when the various companies she headed became embroiled with the law, was arrested here Dec. 3, on indictment charging forgery in the second degree. She was arraigned before Judge Mulqueen, who held her in $10,000 bail for trial. Mrs. Francolini induced a woman who owned property in Cedarhurst to sign a paper which she was told, was needed to effect a sale of the property, but which was really a mortgage for $2,500, Mrs. Francolini obtaining the money. The indictment and arrest came after a prolonged investigation into Mrs. Francolini's real estate dealings, and the examination of more than 150 complaints made to the District Attorney by persons who invested their money in her companies. She was the president of several companies, which were absorbed by the Annex Homes Company in September, 1913. This concern went into bankruptcy last September, with liabilities of $790,000 and no assets.

FARM AND GARDEN.—Satisfied that the ravages of the foot-and-mouth disease among cattle have been checked and that the epidemic is now under control, officials of the Bureau of Animal Industry, Nov. 27, determined to begin lifting the quarantine imposed on the cattle markets of various States. An order releasing certain counties in Wisconsin, Illinois and Iowa, which were placed under embargo because of the foot-and-mouth disease, consequently was issued by the Department of Agriculture. It became effective on November 30, and provides that cattle for immediate slaughter may be shipped from the counties named in interstate commerce. Cattle also may be received for feeding purposes, but not shipped out for feeding elsewhere.

The twentieth annual session of the Winter short courses in agriculture will be held at the University of Vermont and State Agricultural College beginning Monday, December 28th, and closing Friday, February 26th. It is intended to cover the study of creamery operations in a broad way and to teach the essential principles and practices of soil management, dairy and other feeding, stock breeding and judging, vegetable gardening, orcharding, forest management, etc. They are open to men and women 18 years of age or older, who have had a common school education. No charge is made for tuition to residents of Vermont. Incidental fees aggregating $10 are the only charge made. Text books cost about $5, working suits about $3. The entire cost of the nine weeks' session need not exceed $65. Parties interested should write for information to Professor A. A. Borland, Morrill Hall, University of Vermont, Burlington, Vermont.

The U. S. Weather Bureau states that a special service given to orchardists and raisers of tobacco, oranges, cranberries, and certain other crops has been rendered by means of frost warnings issued in Spring and Autumn. The growers are kept fully advised as to the dangers of frost and are warned of the necessity of resorting to measures of protection through artificial heating and smudging, or flooding the bogs in the case of cranberries. The establishment of a "Cattle Region Service," through which bulletins containing statements of weather conditions over the stock ranges of the Texas panhandle and adjacent regions are issued, constitutes a new feature of the bureau's work.

The Federation of Jewish Farmers of America held its annual meeting in New York, beginning Nov. 29. The sixth annual report shows that there are about 6,000 Jewish farmers in the United States, 1,000 of whom are in this State. All are prospering. There are 13 farmers' associations, with 63 branches in 11 States. Their aim is to help the Jewish farmer by coöperative methods. A report read by A. D. Wolf, of Centreville Station, secretary of the Coöperative Fire Insurance Company of Sullivan County and Adjacent Counties, showed a decrease of 25 per cent. in fire insurance rates since the organization of the cooperative association. The principal objection Jews have to becoming farmers, one of the delegates said, was the inadequate opportunities of educating their children in their own religion. Coöperation is advocated for transporting produce to local markets. It is planned to have a federation stand at the New York City open market. A paper by Governor Glynn on the "First Farmers' Saving and Loan Association" was read Dec. 1. Calvin J. Huson, Commissioner of Agriculture, John J. Dillon, State Food and Market Commissioner and Edwin F. Howell, directors of the Land Bank, addressed the convention.

Arrangements have been made to hold the second annual State Agricultural Convention in coöperation with the thirtieth annual meeting of the Granite State Dairymen's Association at St. Cecilia Hall, Manchester, N. H., February 10th and 11th, 1915. The first day's program will be under the auspices of the State Department of Agriculture and the second day will be conducted by the Dairymen's Association.

The Massachusetts Fruit Growers' Association will hold its annual convention, Jan. 13, 14, 1915, at Horticultural Hall, Worcester, Mass.; F. Howard Brown, secretary.

With the approval of Gov. Fielder and the State Committee on Tuberculosis Among Animals, the New Jersey State Board of Health, Dec. 1, directed the slaughter of 497 head of cattle affected with the foot-and-mouth disease in New Jersey. This action followed the discovery that under the wording of the act creating the commission on tuberculosis that body is authorized to coöperate with the Federal bureau of animal industry in checking the spread of any contagious or infectious disease. Heretofore it had been supposed generally that the commission was limited in the scope of its work to tuberculosis. The State Board of Health, Dec. 1, declared a quarantine in Salem County and recommended that all public vendues in the southern part of the State be put off for one month.

The quarantine against Canadian potatoes has now been raised. This was laid on Dec. 22 of last year, because a new disease had been found in Canada and the U. S. government determined to keep it out if possible. Now the Canadians may send into this country, potatoes grown from clean seed on land that has not produced a diseased crop. They must be inspected and certified by the government agents. These potatoes will only be admitted through the ports of Boston and New York where government inspectors are located. The quarantine of last year kept many Canadian potatoes out of the country and to that extent helped the market for American stock. It now seems likely that heavy shipments will follow from Canada.

THE EUROPEAN WAR.—Nov. 26 the British battleship Bulwark was destroyed by an explosion at the mouth of the Thames, with a loss of about 800. The cause is unknown.....Two British cargo steamers were destroyed off Havre, Nov. 26, by German submarines. .....A detailed statement issued by the British Board of Trade, Nov. 26, sets forth that after sixteen weeks of war 1,221 German steamers, representing 89.3 per cent. of Germany's mercantile marine, have been captured, detained or have sought refuge in port. In the same period 195 British ships have been removed similarly from the mercantile service, representing 2.9 per cent. of the British mercantile marine.....Nov. 30 it was officially announced that the Kaiser had gone to his army in Poland, where Russia claimed extensive gains, which were denied by Germany. Severe fighting continued near Lodz, where the Germans broke through the Russian lines..... The occupation of Belgrade, after four months of investment, was officially announced in Vienna, Dec. 2, together with the statement that the Servian army is cut off from Nish, Servia's temporary capital. It appears from the news that Servia's resistance is crumbling before vastly superior power, and that great losses in men and a lack of munitions have hastened disaster.....The Italian government is again protesting to Austria concerning drifting mines. A number of casualties have been caused by them along the Italian coast.....King George went to France, Nov. 30, and spent several days with the British troops at the front. British law has not permitted a sovereign to be active on the battlefield for about 170 years, the last king active in war being George II. .....Severe fighting continues in Flanders, with little advantage to either side. Hand to hand fighting of great ferocity has followed the artillery duels. Up to Dec. 3 the Germans had not advanced on the coast.....It was announced, Dec. 2, that Gen. De Wet was captured in South Africa.....With only one dissentient—Herr Liebknecht, Socialist—the German Reichstag voted, Dec. 2, a new war credit of 5,000,000,000 marks ($1,250,000,000).....It was officially announced, Nov. 30, that Germany had paid $256,000 to Luxemburg for damage to fields and crops and $65,000 for damage to streets and buildings.....An Amsterdam paper announced, Nov. 30, that the German Governor of the province of Brabant, which includes Brussels, has called a meeting of Brussels financiers and has told them that Belgium must pay $7,000,000 monthly for the maintenance of the German troops in addition to the war levy of $75,000,000 imposed as a fine "for violations of neutrality by Belgium and losses ensuing therefrom to Germany."....Nov. 20-23 British camel constabulary defeated a dervish force in Somaliland, which is a British protectorate on the northeast coast of Africa, bordering on the Gulf of Aden.

COMING FARMERS' MEETINGS.

New Jersey State Horticultural Society, annual meeting, State Experiment Station, New Brunswick, Dec. 8-10.

Connecticut Sheep Breeders' Association, annual meeting, Unity Hall, Hartford, Dec. 15.

New York State Breeders' Association, New York State Sheep Breeders' Association, New York State Dairymen's Association, annual meetings, Seneca Hotel, Rochester, N. Y., Dec. 16.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 8, 1915, State College, P. O., Penn.

Winter short courses, University of Vermont, Burlington, Dec. 28, 1915 to Febrnary 26, 1915.

New York State Fruit Growers' Association annual meeting, Rochester, N. Y., Jan. 6-7-8, 1915.

January 9th to 15th, inclusive, 1915 Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Massachusetts Fruit Growers' Association annual convention, Horticultural Hall, Worcester, Mass., Jan. 13-14, 1915.

Coöperative Associations of the State of New York, second conference, Utica, January 13, 14, 15, 1915.

Virgina State Horticultural Society, nineteenth annual convention Winchester, Va., January 13-14, 1915.

Second annual meeting of the New Hampshire State Department of Agriculture and the thirtieth annual meeting of the Granite State Dairymen's Association, Manchester, N. H., Feb. 10 and 11, 1915. Fred Rasmussen, Secretary.

New York State Agricultural Society 75th annual convention, the Capitol, Albany, N. Y., Jan. 20-21.

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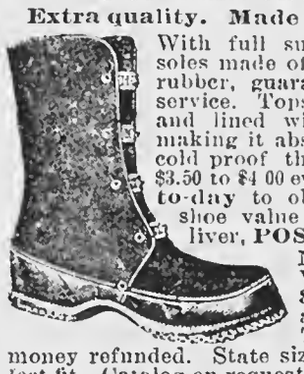

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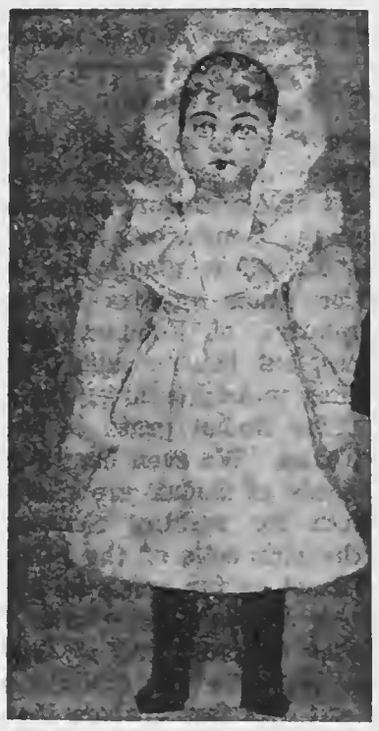

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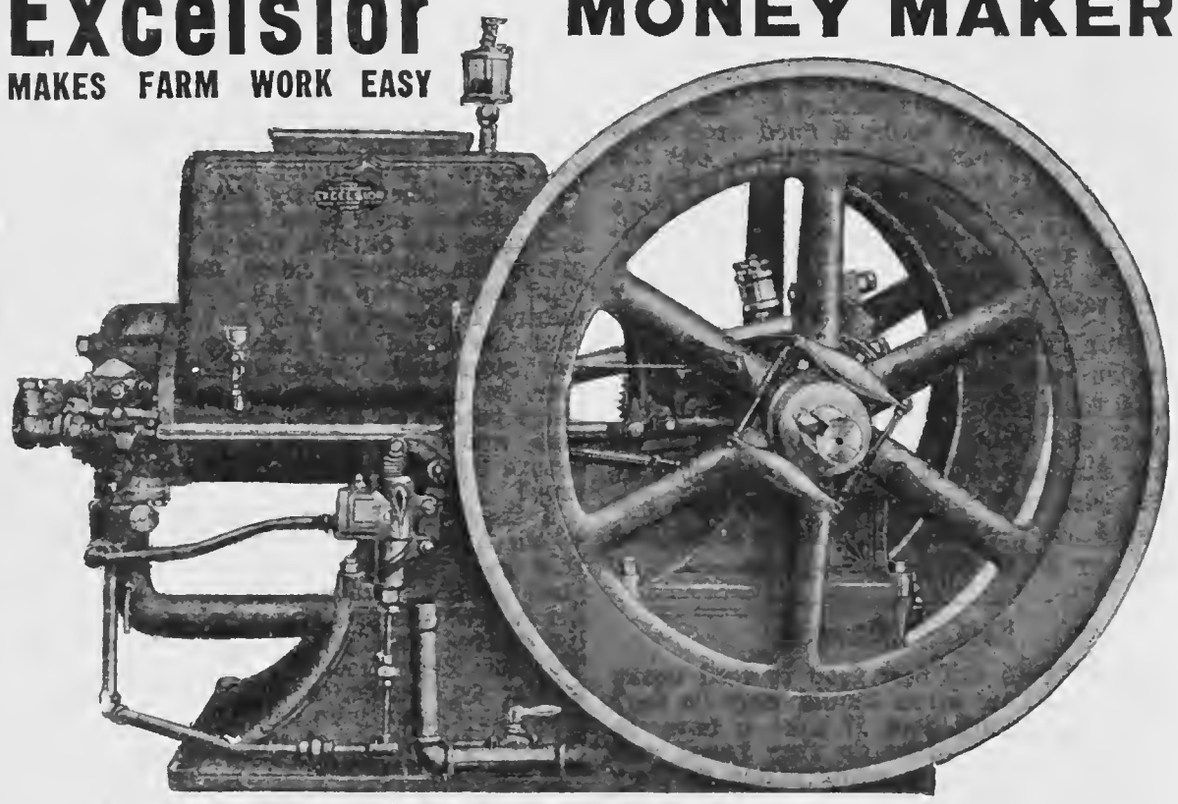

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Construction and Repairs

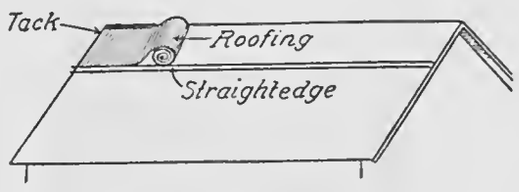
Birch for Rustic Work.

I INTEND to build a rustic fence, also a Summer house. I have some birch trees growing here which I intend to use. Would you tell me when and how I should cut these birch trees so the timber will be ready for use, also what seasoning is necessary? E. K.
Botsford, Conn.

Material for rustic work should be cut when dormant, as it is not likely to be damaged by bark worms. If cut when the sap is up, it is invariably attacked by borers, and in many instances the small wood will be literally eaten up in a year or two. This is particularly true with woods that contain rather a sweet sap, such as hickory, birch, etc. The material requires no seasoning before using; it may be used immediately. In fact it is a distinct advantage to do so, as it is much more easily worked while green and not quite so likely to be split by nails at the joinings. If it is not convenient to use the material while green, it should be stored under cover until needed. K.

How to Lay Roofing.

BEGIN at the top, and strip down the old shingles about three feet, pull the nails and sweep. Measure down the desired distance and lay a straight edge; unroll the roofing inside down. Start straight and tack the upper corner of roofing, and work across. Nail the upper edge according to directions found in roll. Move down the staging, strip down as before, and relay the straight edge, letting the upper edge of the roofing lap



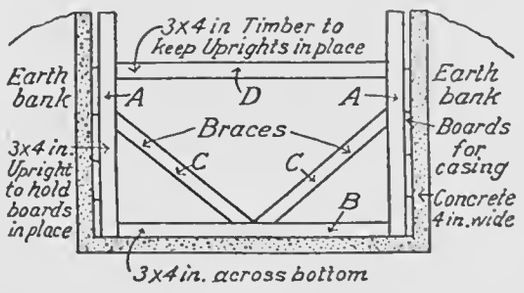
on the first layer until across, then raise the edges, letting the one fall under the other, working back to the beginning.

Before moving the staging, nail on the saddle board. In ripping off the old shingles as above, not much dirt gets through the roof, as the roof is covered about all the time. There should be a double course of shingles at the eaves, or one can shingle higher. By using the straight edge, the roofing is kept from sagging. If the roofing bothers in laying it is because the rolls have leaned instead of standing on end; therefore the roofing will not lie as well nor last as long. J. B. BRYANT.
Maine.

Cistern Construction.

ON page 1237 E. J. W. has an article on a water-proof cistern. Will he state how he arranged the reinforeing bars and give the size? I understand by his article that he added the hydrated lime, but I have a letter from a cement company advising 12 per cent. to replace the same proportion of cement.
Maine. F. C. C.

F. C. C. inquires regarding several omitted features in cistern construction, and states that an authority writes him that 12 per cent. hydrate lime should be used to replace that quantity of cement. I wrote, as previously mentioned, a large



cement company, and their engineer recommended 10 pounds hydrate lime added to each batch of concrete containing one bag cement. This adds so slightly to the cost of the mixture that it is almost negligible, and in our case it certainly produced the results we were after, as cistern is three years in use now. No inside finish of any kind has ever been necessary, and absolutely no water ever seeps through. Our soil is very heavy, and subsoil is a heavy clay, so we did not find any necessity for using reinforcing rods. If soil is sandy or very light and porous in texture reinforcing may be necessary, or at least a heavier wall should be used even up to eight inches if cistern is 10 to 12 feet or more in depth. On two sides our concrete extended two feet above ground, but was afterwards banked up to near top. We placed at corners ⅝-inch round rods bent at angle about 10 and 12 inches apart, and several lighter rods along side, allowing ends to overlap a foot or more. We did not use any vertical rods. If your cistern can be banked up solid to top and your soil is firm you do not need any reinforcing whatever.

The picture shows casing for cistern. After bottom has become slightly solid, place timbers 3x4 inches, *a. a. b., c. c. d.,* in position indicated on each of four sides. The boards 12 inches wide can then be set into place as concrete is filled in on sides. These boards require no nailing as the concrete holds them in place. Be careful to make the framework strong, as sloppy stone and sand concrete exerts a very strong pressure on forms. ELMER J. WEAVER.

Repairing a Leaky Cistern.

SOME of your readers may have a leaky cistern, and I will tell how we repaired ours that had given us trouble for 35 years. Several attempts were made to stop the leak during that time. The water came in at one side right at the bottom, two or three pails daily in a dry time. The cistern had a good, solid dish-shaped bottom, which we covered with stones about three inches in diameter leveling them up with smaller ones and coarse gravel.

Put a piece of pipe eight inches long between the stones just off the old bottom; this should be threaded on upper end and large enough to take suction pipe of pump inside and a little space to spare. Connect the pump with suction inside. Now put on a good heavy coat of cement over the new bottom, made of two parts sand to one part cement, mixed quite thick so it will not run into the spaces between the stones, as these should be kept open for air and water. The space between the large pipe and the suction pipe will let the air out as the water comes in, and if the pump is used occasionally there will be no pressure against the cement while it is hardening, and therefore no air or water will be forced through the cement before it hardens to perpetuate the leak. After the cement is hard, take out the suction pipe, screw a cap on the pipe bedded in the bottom, cut off the suction pipe to correspond to the diminished depth, and the job is done. Of course the first water will be affected by the cement. If the cistern leaked at the side I would bore down on the outside where the water came in, as deep as cistern, and chip a small hole through wall to lead the water to the bottom and proceed as before after repairing the old leak. GEORGE CREHORE.
Ohio.

The Iron-pan Ice Makers.

THE Kansas Agricultural College reviews the old plan of making ice in an iron pan:

"The ice plant is made of galvanized iron and consists of a double tank with an inner tank about 10 feet long, two feet wide, and 12 inches deep. The top of the tank should be slightly wider than the bottom. The inner tank should be divided into six compartments by means of galvanized iron strips. This double tank should be placed near an outdoor pump where the compartments can be easily filled with water. Being exposed on all sides, the water will freeze in from one to three hours. A bucketful of hot water poured into the space between the two tanks will loosen the cakes so that they may be removed. One freezing will give five cakes of ice, each weighing 120 pounds. Fourteen freezings will yield four tons of pure ice, or enough to last an average family for a year. The cakes of ice can be packed away in sawdust in the icehouse or cellar as they are frozen."

During the past 25 years we have had many letters about this plan of ice making. It is possible to freeze the cakes of ice in such a device and where there is no pond it may prove satisfactory. Most of our correspondents seem to regard it as more or less of a plaything.

Saving Wastes in California.

A FEW years ago California was regarded as the land of large ideas. Californians would not have thought of trying to save what Eastern people considered waste. Times are changing, however, and in California as well as elsewhere the little things must be saved and the corners must be cut. For a great many years the piles of sheep manure which accumulated around the old sheep ranches were left untouched, as it did not seem worth while to remove this plant food. There came a time when the price of plant food in the East rose to a point where it paid to grind and ship this sheep manure just as clearly as it paid to mine and ship nitrate of soda from the west coast of South America; thus the waste product took on value. Again, when irrigation was first started in California, there was water enough for all, and few people have heeded to its waste. When the water began to be scarce efforts were made to save it, and whole lines of irrigating ditches are now lined with pitch, clay or concrete to save the waste of water by seepage. One after another of these waste products was utilized. Now comes Bulletin No. 244 of the California Experiment Station on the "Utilization of Waste Oranges." Travelers come back from the west coast and tell us of seeing the ground under the orange trees covered thick with fruit, only a small proportion of the superior fruit being boxed and sent to the market. Now, a chemist has been at work devising a use for this waste fruit, turning it into orange juice, orange wine and orange vinegar, and in this way adding to the value of the fruit crop by making the waste product available. The bulletin gives a very good description of the way these products are handled in order to fit them for the market. This same thing seems to be going on, and vast quantities of food products formerly wasted because they could not be sold in their natural form, are now being worked over and developed so as to give them value.

Developing a Market Day.

WE farmers of this town are talking of getting up a market day, which we hope will give us a chance to dispose of our farm produce and live stock at a fair profit. At the present time we have very poor success trying to dispose of our stock and produce, having no market. The nearest towns are North Adams, Mass., and Brattleboro, Vt., each town being 20 miles away and mountainous roads. We have a railroad 26 miles long, ending in this town; it starts from Hoosac tunnel on Boston and Maine R. R. and the express and freight rates are enormously high, so it is almost impossible to ship goods and make a profit. Can you give us a little information on the farmers' market day, as I understand it has been tried very successfully in other places? The town of Wilmington, Vermont, has a population of 1400 and the village about 300. We depend on our dairy cows and maple syrup for our cash returns and we are trying to raise apples for market, also with rather poor success so far. This Fall we are feeding our apples to stock as we cannot sell them at any price.
Vermont. G. T. C.

R. N.-Y.—This is a case for general discussion and experience. There is no set rule for developing a market day—the conditions and circumstances of the locality must be considered. Here is a section off the main railroad lines and in a country community. There are probably readers of THE R. N.-Y. who have helped develop just such a situation. Will they tell us how they did it?

SMOKEHOUSE ADVICE WANTED.—I am about to build a new smokehouse, and am in the market for ideas along that line. We kill about 20 or 30 hogs, Spring and Fall, and smoke the hams, bacons and shoulders. I have lots of stone and brick on the place.
Maryland. W. W. BRADLEY.

"ENGLISH mutton chops," read the man with the menu. "German fried potatoes, Russian caviar, French peas. Hum! Waiter, I want to be strictly neutral." "Yessir." "Give me a Spanish omelet."—Louisville Courier-Journal.

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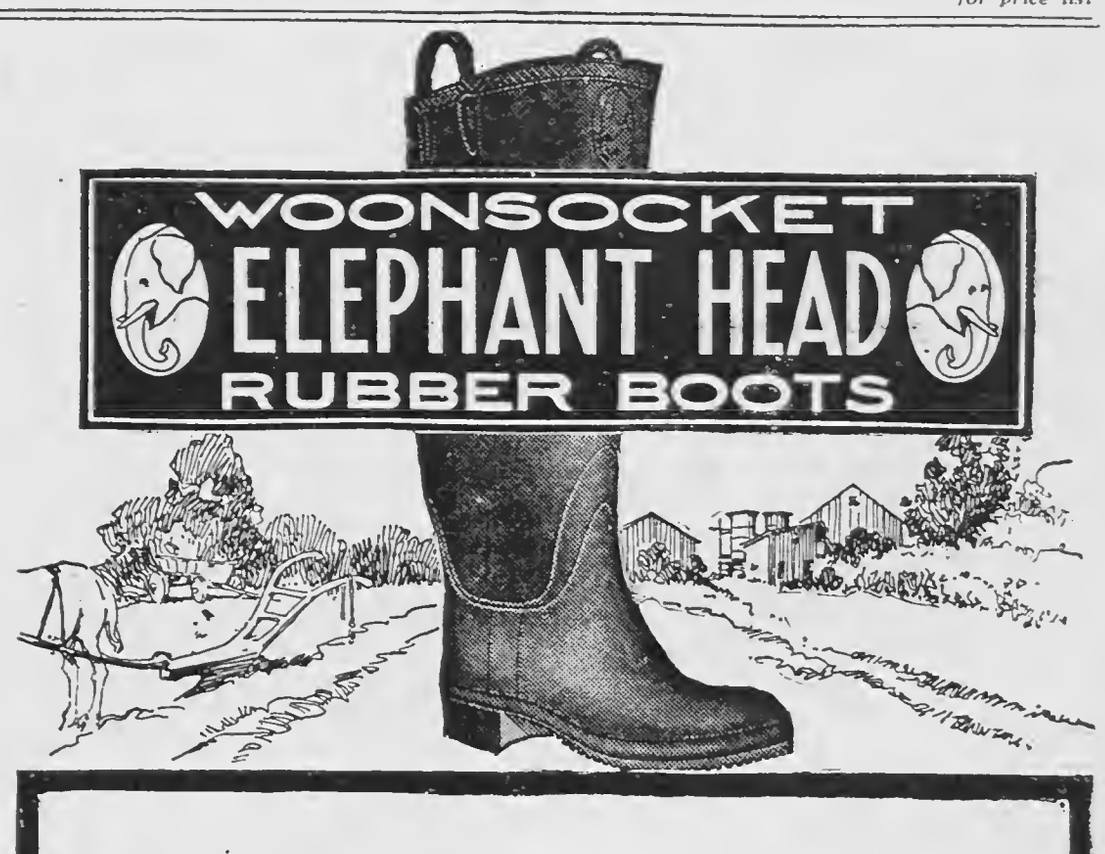

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Hope Farm Notes

I PRINT the following correspondence to show how several people may all look at the same thing and report it differently. Four blind men went to see an elephant. One got hold of his trunk, another handled his leg, and another his side. One was ready to swear the elephant was like a rope, another said he was like a tree, and the third knew he was like a wall. I did think I had made it clear why I entered those "scrubs" in the egg-laying contest, and why they are to be bred. I wish to show, if I can, that by breeding utility stock with a pedigree to such common stock you can increase the egg-laying capacity. Of course you cannot know there has been any improvement unless you can compare actual performance. Yet here we have the following:

I have been greatly interested in the laying contests, especially so in the one just closed. But for the life of me I cannot understand why the Hope Farm man ever entered these mongrels, and now to make matters worse, he is to re-enter them in the coming contest and to *breed from them!* Can it be possible that he is trying to prove to the American farmer, that an ordinary "scrub" hen will lay as many eggs as a purebred hen? Trying to prove that a flock of scrubs will lay as many eggs as a flock of hens that have been bred for generation after generation, for a heavy egg yield? If so is he not doing the purebred hen a great injustice? Is it a fair deal to the men who have spent a lifetime, practically trap-nesting and breeding for heavy egg production? Take Mr. Barron for instance. I believe he claims to have taken 20 years to get his birds where they are today. Would the Hope Farm man take an ordinary dairy cow, and put her in competition with a purebred Holstein, with a great milk record, and think the grade cow would give as much milk as the purebred Holstein? I'll admit that according to the reports of the contest just closed, the "scrubs" did lay more eggs than many of the blue bloods. But that doesn't prove anything. What pen *won* the contest, what pen took the second, third, fourth, fifth prize, etc.? Were they scrubs? Oh no. If you want to prove anything to the American farmer why not take one of those purebred pens that laid fewer eggs than the scrubs, and mate them with a cockerel of their same breed, purchased from one of the owners of a winning pen, and in so doing show the American farmer what really can be done by careful selection and breeding, to make the great American pen "shell out" more eggs?

A. L. VREELAND.

Well sir, I thought I had explained at least a dozen times about all this. I picked up seven very poor specimens—worse than what I see running about on many farms. My plan was to see just what these hens would lay and then see what their daughters, by a high-class cockerel would lay. I would certainly test a poor scrub cow against a fine Holstein. Then I would like to test her daughter by a brother of that fine Holstein. In what better way can we test the value of pure blood? Why does not Mr. Vreeland get into the egg-laying contest with his pureblood stock and prove that they are superior to the scrubs? The fact is that the time has come when hen men want a performance rather than a promise. Just read the following:

That egg-laying contest was a very good thing, not only for those engaged therein, but the public in general, especially that portion that considers "the hens," "scrubs," or whatever you may choose to call them. Although they did not do as much as expected they deported themselves sufficiently to show the public and the hen editors in particular that pedigree is not utility; that much of this fancy strain business is nonsense, that it is the individual and not the "papers" that do the actual business. Perhaps this matter has impressed me more than most others from a sad fact. Years ago my father and myself bred up a flock of hens by a slow and steady process until we had a flock of good utility fowls; good layers, matured well, made good weight, were uniform and hardy. At that time a certain hen fancier in Massachusetts and another in New Jersey came into the limelight and were heralded as the topnotchers, and like many another breeder of fowls, and other live stock we lost our heads with their "get-rich-quick" birds, and invested. We bought pedigree and failure. The following Fall we had a lot of things, some of which made great scores but were minus constitution, some were over-grown, others were crooked-back and twisted-breasted, and the flock dropped from a record of 219 to 160, and some of the physical weaknesses were never eliminated. Therefore with your Reds, my advice is beware of "the card." Use your own good judgment, selecting the good average bird, with a steady eye for a particular type, always remembering it has taken two thousand years to make a very slight improvement even in the human race.

G. L. GORDON.

I have received dozens of letters from people who say they have damaged their flocks by introducing blood from show room or blue ribbon strains. No man in his right mind pays long prices for cattle to improve his herd just because the owner says they are "purebred." The buyer wants to know what performance there is in the pedigree. It is coming to be the same thing with hens.

My "scrubs" beat 20 pens at the egg-laying contest, and if they had been trained to start off as others did they would have been halfway to the head. I have no thought of trying to prove that a scrub hen is better than a purebred hen, but I do expect to show that many of the purebred hens are merely purebred scrubs—barely paying their way as layers, and incapable of improving a farmer's flock! I do not know of any more useful work than a fair demonstration of this.

My scrubs were entered the second year to see if the poor layers would not come back and pay as two-year-olds. I think they will, but I want to find out. I also expect to breed them to a fine utility cockerel with a certified pedigree and enter 10 of their daughters by this cross next year. For contrast I will also breed them to a "dunghill" or to the son of some purebred that we know is a poor layer, and also enter 10 of his daughters from the same hens against the others. Now will Mr. Vreeland suggest any more practical plan for finding whether "pure blood" will improve a flock of farm poultry?

As for my pen of Reds, I am to mate them with the son of a hen that has a certified record of 246 eggs in 301 consecutive days. He may not be of just the color and shape which the show room judges would select, but I use him on the performance of his mother, and if I am not greatly mistaken the hen men of the near future will buy their breeding stock on this principle of performance just as dairymen would buy a herd bull. I think these poultrymen who have spent their lives developing a strain of poultry ought to get right out into an egg-laying contest and show us.

I could pile up proof mountains high to show that hen men are waking up to this proposition of performance in the pedigree. Here is another man who watched the scrubs and saw the point which Mr. Vreeland missed:

I was much interested over the scrubs' egg record. I have some ribbons and prizes from poultry shows to my credit, but several years ago I decided to breed for eggs instead of shape and feathers, and this will account for my sympathy for the "scrubs." E. J. B.

I can readily understand why the fanciers and blue ribbon men have consistently opposed these egg-laying contests. After a few years of these records and of breeding from these winners, the value of utility stock will be made so clear that we shall wonder why we lost so many years in getting going. These Hope Farm scrubs are worth barely $10, but I think they will do their share in putting the true valuation upon tail feathers!

KILLING RABBITS.—The papers have had much to say lately about a boy in New Jersey who shot a rabbit out of season and was sent to jail for doing so. All through our country the rabbits do great injury to fruits and vegetables. They have ruined great blocks of young trees for us. I have heard many questions about the rights of a resident of New Jersey to protect his property when these pests appear. In order to know just where we stand, I wrote the State Fish and Game Commissioners and they tell me that the following section of the law "will give relief."

2. (As amended February 28, 1912.) Nothing in this act shall be so construed as to prevent farmers and fruit growers from trapping rabbits in box traps during the entire year; provided, however, that such trapping shall be done on the property owned or leased for the raising of fruit, vegetables or other produce by the person so trapping; and provided, that the person so trapping shall first have made an affidavit before a justice of the peace that rabbits have injured fruit, vegetables or other produce on his or her premises, and shall have immediately sent the same to the president of the Fish and Game Commission, who, upon the receipt of the said affidavit, shall, in his discretion, issue to said person a permit to so trap, and the person so trapping shall keep the rabbits alive, and notify the Fish and Game Warden of the country, who shall liberate said rabbits in such parts of the State as may be directed by the Board of Fish and Game Commissioners; provided, further, that no person or persons shall be permitted to barter or sell any rabbits so trapped.

There is a bunch of red tape for you, but it seems to be under our laws the only way to handle Mr. Rabbit out of season and escape fine or jail!

TAXES.—Here they are again—one of the sure things of life. This form of Christmas present is never appreciated by the property owner. I will print the tax rate on our farm property and also in the county town in order that others may compare notes.

	Town Property	Farm Property
County tax.....	$ .46	$ .46
County poor.....	.01	.01
State school.....	.27	.27
Borough	1.12	1.00
Library tax.....	.05	....
Special school....	.97	.34
	$2.88	$2.08

I also pay a poll tax of one dollar and a dog tax of 75 cents. The "Borough" tax includes the cost of our local government, roads, etc. My property is now assessed for nearly three times what I paid for it—the increase being largely due to new buildings. Our poor surely do not cost us much. In New Jersey we have no State taxes except for schools, but you will see that our local governments make up for lost time in local assessments. These figures are not printed as any complaint, but for the sake of comparison.

H. W. C.

Forest Planting.

HAVING been a forester I am interested in the Hope Farm man's recent remarks on the planting of trees, and quite agree with some of them. It would have pleased me better if he had said White pine instead of hemlock and spruce, and it is not yet too late to start the planting. In 1903 I sent home some seedlings of White pine which had had one season's growth. These stood two years in the nursery, and in 1905 were planted in an old field where chestnut and Black walnut had been planted four to the rod each way about ten years before. The pines were planted where the other trees had died, or made no growth (some of them were less than six inches tall after 10 years' growth). At present these pines average about 15 feet tall, and are growing in height about tthree feet a year. Farmers in this State can get better trees than we set out by applying to the Conservation Commission at Albany and the price is actual cost.

A. C. W.

Wayne County, N. Y.

Dynamite Drainage.

REGARDING those wet spots referred to on page 1260, one-half stick of 25% dynamite three feet six inches below surface will give relief to wet spots troubling you. The hole can be either pinched or bored with long auger. It should be very well tamped after charge is placed. I have cured hundreds of wet spots by this treatment. Drainage once given, will not have to be repeated.

H. S. J. BRADY.

Pennsylvania.

R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

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Generates and Burns Acetylene Gas

Makes night hunting and fishing greater sport than ever.

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Send us your dealer's name and we will mail you our very instructive booklet, "Knots and How to Tie Them." You should have this. The illustrations show you how to tie many kinds of knots.

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SKUNK We pay top prices for Skunk, Mink Muskrat, and all raw Furs. Price list free. M. J. JEWETT & SONS. REDWOOD, N. Y. :-: DEPT. 29.

Save $1 to $2.50 PER TON on Lime

Ground limestone at the quarry costs from $1 to $1.50 per ton. Freight and hauling makes it cost from $1.50 to $3 delivered on your farm. If you have lime rock available, it's like throwing away money to buy limestone at these prices! For, with a JEFFREY LIME-PULVER on your farm, after quarrying the rock, you can grind it for 50c per ton. You can save from $1 to $2.50 per ton. In a short time the machine has paid for itself. Your farm is free from rock—richer—more productive. You can grow the clover and alfalfa that before refused to thrive. You have lime in a form that's better than burnt lime.

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The Jeffrey Lime-Pulver will take the big rocks—any size up to 4 inches thick and 11 inches long—and grind them to a powder at the rate of from 2 to 3 tons per hour. It's both a crusher and a pulverizer. No need to have two machines—one to crush and one to pulverize. The Lime-Pulver takes the big rocks and grinds them to a fineness that will go through your spreader without the slightest trouble—no clinkers to get in and break it up. You can grind the rock coarser if you desire. But fine grinding is of utmost importance.

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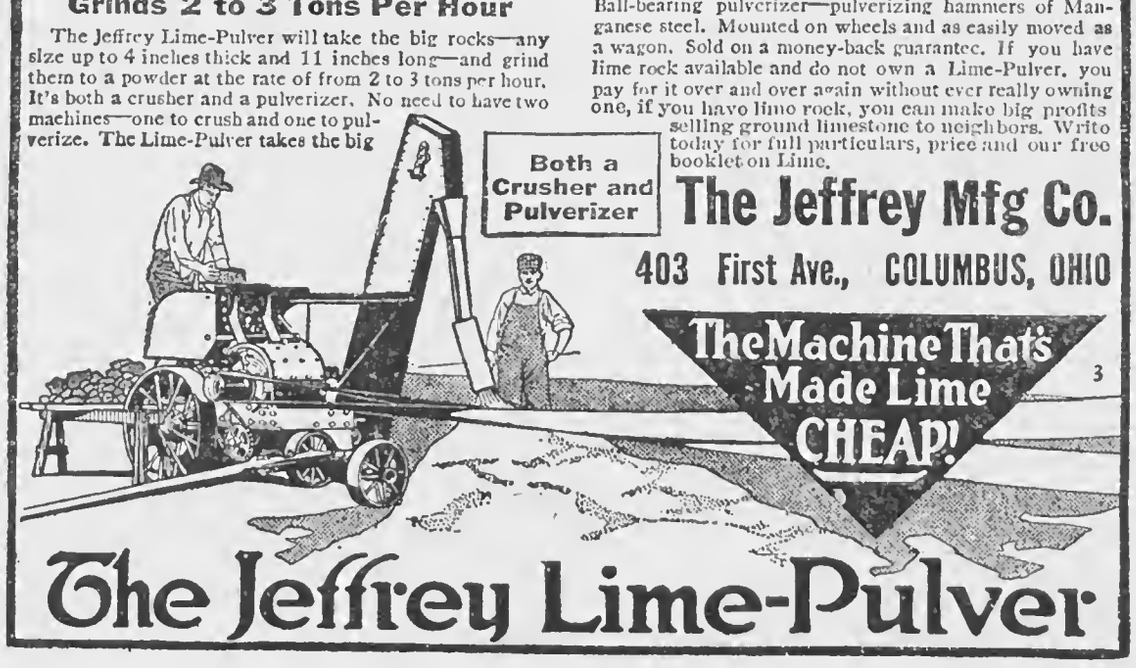

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The Jeffrey Lime-Pulver

Ruralisms

THE TEXAS BELL TOMATO.

SOME years ago a person in Austin, Texas, sent me a paper of tomato seed marked Texas Belle, as a remarkably disease-resisting tomato. In a recent article in a Texas paper Mr. F. T. Ramsey says that the name is Texas Bell, as it was produced by selection by Mrs. Texas Bell of Gonzales County. I grew the tomatoes in North Carolina in soil badly infested with the Southern bacterial blight, and never saw a rotten fruit nor a diseased vine, and the plants went through till frost carrying a load of tomatoes all the time. Since then I have grown them here in Maryland with similar results.

This is a very small tomato of biscuit shape, evidently the result of crossing the small round tomato with a larger one. Its chief value is in its wonderful resistance to all the diseases that attack the tomato, and hence of great value in the South, where the blight is so destructive to tomatoes. The keeping quality of the fruit after it is ripe is another great advantage. One Summer in Raleigh, N. C., I left a lot of the ripe fruits on a bench in an empty greenhouse, and went off for a month's trip at farmers' institutes. On my return I expected to find all the tomatoes decayed and ready to clean out the seed. But to my surprise, while many of them were shrivelled and dried up there were many also perfectly sound and smooth, and not a rotten one.

It seems to me that here is a chance for good work in the breeding of a disease-resistant tomato of a larger size and marketable character, and it is a work that the Southern stations especially might take up. In its present shape the Texas Bell is not a good salable tomato for the Northern markets, though its immense productiveness would make it of value for the making of catsup. Nothing I have ever grown in the shape of a tomato will make a larger number of fruits per plant. The last time I grew them two years ago, having plenty of large tomatoes, the few Texas Bell were let alone, and the fruit was literally in heaps on the ground, and never a rotten tomato was seen. This season I intend to get more seed and grow a few plants for crossing with some larger and more solid tomato to try to produce a larger and more solid tomato with the same resistance to all the rots that affect the tomato. This is about the only improvement we can now hope for in tomatoes, for so far as the character of the fruit is concerned we have about reached the top notch in tomatoes. With a disease resistant tomato of equal quality with the best we now have, there would be an immense gain to growers. The eating quality of the Texas Bell is as good as any, and for cooking they are all right. Few will run much over two inches in diameter: W. F. MASSEY.

Crooked Asparagus; Yellow Eggplants.

WHAT is the cause of asparagus coming up crooked, even growing so under the ground before it shoots up. 2. What is the cause of eggplant turning yellow after being set out.

Bethel, Conn. D. F. C.

1. It would appear that you have some plants of the species Streptopus, mixed in with the variety of Officinalis. The natural inclination of Officinalis is to grow erect and straight; occasionally a stalk will come somewhat twisted or wavy, but such growth is usually caused by some obstruction in the soil, such as stones or other hard substance that the stalk is compelled to go around, which will cause slight distortion or crooked growth of the stalk. The species Streptopus, however, seldom comes straight, the name defines its nature, which is to twist or turn. It is no uncommon thing for this species to produce distorted stalks which are as a rule abruptly bent in the middle, or arched shape, the tops of the stalk returning to the ground. This species will produce mostly crooked stalks, no matter how loose and friable this soil may be.

2. The discoloring of the leaves of eggplant or any other plant, removed from the seed bed, flat or pot, particularly if they have had the protection of glass or protecting cloth, may be attributed to two principal causes, the disturbance of the roots and the change of temperature caused by the removal to the open ground. If the growth is soft, such as will be produced in good soil in a high temperature under glass, any disturbance of the root system or sudden change to a lower temperature or both, will always result in a check of top growth, drooping and finally the turning yellow of the leaves which will drop, a new shoot pushing out at the axil of the leaf when growth has been re-established. In pot-grown plants this condition is not present to so great an extent as in flat or boxed plants, as little root disturbance takes place when the plants are transplanted to the open ground, the change of temperature being about the only disturbing factor, which will cause more or less of the leaves to turn yellow. When field growth has taken place it is natural for the plants to lose their main stalk leaves, branches taking their place. K.

Transplanting Clove Pinks and Peonies.

WHAT is the best time to transplant clove pinks? I have a clump of them and want to put them into a border. 2. When will be the best time to move peonies and what precaution is necessary? S. A. B.

Vineland, N. J.

1. Transplant the pinks very early in the Spring, as soon as the frost is out of the ground. They should be moved before they begin to make new growth. As their favorite situation is in warm soil, free from surface ice, they begin to grow quite early. A protection of snow is very congenial to them, but they always suffer if in a place where ice can form over the crowns.

2. Peonies may be planted in Fall or in early Spring, before growth is made It is generally considered that the best time is from the middle of September to the middle of October, which gives the roots a chance to take hold before the ground freezes. The crowns should be set about two inches below the surface. A deep, rich, moist soil is desirable; the peony is a gross feeder, and abundant moisture is especially necessary during the period of bud formation. Fresh unrotted manure is undesirable, and it is considered good practice to enrich the ground thoroughly the season before planting. After planting a light mulch of well-rotted manure may be given in November, and forked under lightly the following Spring. Liquid manure, given about every 10 days, is desirable during the blooming period.

Treatment of House Plants.

FLOWERS, like people, require fresh air. Ideal conditions of temperature and ventilation for human beings will be found satisfactory for flowers, says M. F. Ahearn, associate professor of horticulture in the Kansas State Agricultural College. It won't hurt plants to have a bath occasionally to remove the dust from the leaves and open up the pores. This is best done by placing the plants in the sink or a tub and spraying the leaves with water. A damp sponge can be used for this purpose. If the leaves on your flowers get yellow and drop off, it is quite possible that you have been overwatering the plant or possibly have been drowning it. Sometimes plants need watering every day, and again once in two days is enough. No exact rule can be given. If you rap your knuckles sharply against the pot and it gives forth a hollow or ringing sound, the plant needs watering. Always water from the top. Use enough water to moisten the soil clear to the bottom of the pot. If any water runs through into the saucer or jardiniere, empty it. This water, if allowed to remain there, will cut off the roots' supply of air. In Winter the plants should not be repotted. The best time to repot is in the Spring. In Winter the roots of many plants lie dormant and the roots should never be disturbed during this period. One of the greatest enemies of plants grown indoors is coal gas. Illuminating gas is nearly as bad. The slightest trace of gas will retard the growth of the new leaves.

"MOTHER," asked Tommy, "is it correct to say you 'water a horse' when he is thirsty?" "Yes, my dear," said his mother. "Well, then," said Tommy, picking up a saucer, "I'm going to milk the cat."—Ladies' Home Journal.

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the ALADDIN on our easy plan. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 lamps the first seven days." Another says: "I disposed of 34 lamps out of 31 calls." Thousands who are coining money endorse the Aladdin just as strongly.

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—the spray that's endorsed the country over as "The one great dormant spray." Mixed 1 to 15, it kills every scale it reaches or you get your money back. Guarantee with every package. It's easily prepared, non-corrosive and non-clogging. 1bbl. equals 3bbls. lime sulphur. Destroys eggs, larvae and fungi in dormant state. Simple, safe, economical. Send for free booklet, "Scalecide, the Tree Saver." Write today, to Dept. N.
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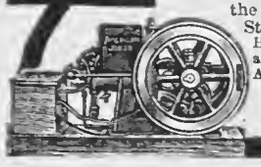
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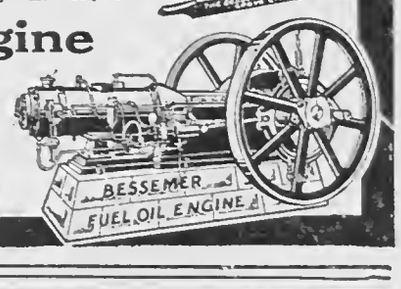

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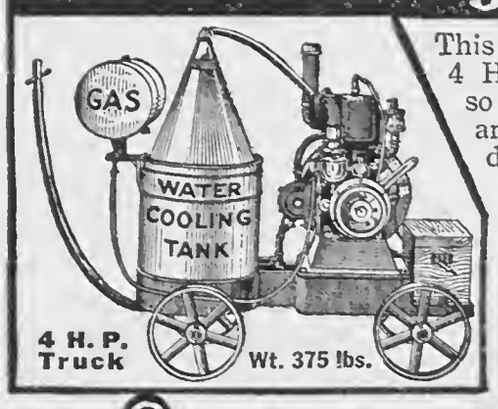

This is the light-weight, quick-action 4 H. P. Truck Outfit that has proved so handy for farm work. **A boy can pull it** around from job to job, yet it easily handles all work up to 4 or 4½ H. P. Pump circulation to water tank on front of truck **prevents overheating,** even on all-day run. Cushman Engines are not cheap engines, but they are **cheap in the long run.** They are built to run without trouble, and are the most useful engines made
For All Farm Work
And For the Binder
Very light weight and steady running permits Cushman Engines to be attached to other machines, such as harvesters and balers, as well as doing all regular stationary jobs. 4 H. P. alone **weighs only 190 lbs.;** 2-cylinder 8 H. P. only 320 lbs. **Throttle governed;** economical of fuel. 4-Cycle. **4 to 20 H. P.** Runs at any speed; speed changed while running.
C. M. Scott, Pawnee City, Nebr., says: "I bought a 4 H. P. Cushman and think it is the **finest engine I ever saw run.** Am grinding shelled corn—can grind 30 bushels per hour with 6-inch buhr grinder. Have seen a great many other engines, but the Cushman has them beat at every turn."
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A National Weekly Journal for Country and Suburban Homes

Established 1850

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HOW do you like this for a motto? *"Never sell anything so poor that you would not buy!"*

*

SINCE the article on electric lighting from water power was printed we have had many questions covering details. They will all be carefully answered. Next week in the monthly Woman and Home magazine there will be a good article on the use of electricity for cooking, heating and household power. We shall do our best to induce country people to harness the water which has so long gone through its lazy course down hill.

*

ONE of the things hard to explain is why seekers after farm wisdom do not have greater faith in local authorities. Week after week we receive questions from the very towns in which our college nd experiment stations are located. Some of these questions are of such a character that only a resident of the home section can answer them. In many cases, in order to be sure, we go to the experiment station within a few miles of the inquirer's home for the facts. Now what is wrong? Do the people want to prove the station's answer or does the station enjoy the reputation of the average prophet?

*

I HAVE an old farm—"an ill-shaped thing, but mine own"—from which I derive much pleasure and now and then a rabbit. Please tell me how to make it pay without work. I don't like work. J. M.

Here is an honest back-to-the-lander. Most of them say they are willing to work long and hard. This man admits that work tires him and he wants pay—without labor. The enthusiastic scientist told the hard-headed farmer that in the future plant food would be so concentrated that he could carry enough to fertilize an acre in his vest pocket. "Well," says the farmer, "when you do that *you will carry the crop from that acre in the other vest pocket!*" When a farm pays you a profit without labor on your part some one else will do the work. We know of cases where farms have been fenced in and rented out as pasture. If there is timber on it this timber can be sold. We know of men who rent hill property to campers. The greatest money returns from a dollar's worth of labor that we have found came from planting apple trees in naturally moist grass land sod, piling the cut grass around them, pruning slightly and keeping them clean of insects and disease.

*

OUR good friend, J. H. Hale, recently made the trip to California and while there addressed the fruit growers at their convention. Hale rightly received an ovation. He carried the wit and wisdom and mellow philosophy of New England—a human nutmeg of the right sort of wood. Among other things Hale carried a pocketful of New England Baldwin apples—some of them from a tree a century old. You know how those Pacific coast people brag about their fruit, yet this is what Parker Earle says about Hale's Baldwins:

"If gray old Connecticut, worn and exhausted by 300 years of farming, can grow such apples as these, right at the doors of the consumers, then let Oregon and Washington look out!"

"Grey old Connecticut!" You spell the word wrong. Cut out your "y" and substitute "a-t," and you have a truer word *great! "Worn and exhausted soil!"* Why, man, did you not know that some of the most productive farming in the world is done in the Connecticut Valley? Did you know that the 10-year average yield of corn in all New England was 39.3 bushels at an average price of 83 cents. This average on the Pacific coast is only 29½ bushels at 70 cents. The average for Illinois is 35½ bushels at 54 cents. "Worn and exhausted" Connecticut stands at the head of the country in average corn yields, with 46 bushels. Did you also know that last year four New England States and New York and Pennsylvania produced 15,912,000 bushels of those beautiful Baldwin apples, and that they have only just begun to know how to do it? Our children will live to see the day when the apple orchards on those hills of gray New England will give larger annual returns than the orchards and vineyards of California. Half a century ago New England could not dream of the possibilities of the Pacific coast. To-day California cannot dream of the possibilities of the upper Atlantic watershed.

*

THE starting of the new Food and Market Department of New York State is one of the most hopeful things that has ever happened to both producers and consumers. It is the direct outcome of the long exposition of the 35-cent dollar. For many years consumers in towns and cities have been held up and forced to pay extortionate prices for their food, while farmers have been systematically robbed and forced to accept a mere pittance with no voice in fixing the price. These evils have long been recognized, and for years we have pointed them out. Now the talk and the thought has crystallized into action. The new department is a fact, and starts at once on a sure foundation to work out a remedy for those market troubles. It faces a large proposition. There must be such an elimination of wasteful and extravagant distribution that the producer will receive more for his goods, while the cost to the consumer is reduced. Both these things must follow if the problem is to be worked out, for the consumer and the producer have interests in common. They must understand their mutual interests and work together.

No one can expect instant relief from the evils of our present system. They have been growing for years—it will take time to organize even plans for changing them. From the start, however, farmers will have a representative in the New York markets. He will develop trade in farm products and look after the interests of shippers. Later it is hoped that farm produce may be sold through this representative at auction or otherwise, with the power of the new department used to see that the money for the goods is promptly paid. The work of this department will be planned wisely and promptly. It needs your help as a producer or a consumer in its efforts to obtain a square deal for both classes. We must develop a strong retail demand for the products of New York farms. Both consumers and producers must help in this. The former must learn to feel a pride in using goods "made in New York." The producer must also take pride in packing and grading his goods so as to suit this trade. This branding and grading is absolutely essential if we are to build up reputation and demand for New York State products. With such brands the consumer may be educated to demand them. The new department will furnish information and help in this grading and packing. We are now in a position to begin to add cent by cent to the 35-cent dollar. The department needs the coöperation of all people who wish to help settle the food and market problems. Help yourself by helping to make it successful.

*

LAST year was the first year I ever owned fruit trees, and, of course, I, being an amateur, did not know just what to do for aphides, as they appeared on peach, plum and apple, etc. Looking up some books on the subject I found three which said to use arsenate of lead, and all agreed that in any strength used in water, would not injure foliage. So I put about 1½ tablespoonfuls in a quart of water and proceeded to rid the trees of aphides. *It did.* I killed one peach and very likely one Baldwin apple and about ruined two plums. O. B.

New York.

Is it possible that any reputable books on entomology advise a strong solution of poison for plant lice? This is the most remarkable advice we have heard of. The plant lice are sucking insects, and are to be killed by oils or other "contact" sprays which reach them from the outside of their bodies. Such a strong poisonous spray would blast young foliage like the hand of death! This may be a case of "take heed how ye hear," for it is true that readers sometimes jump at conclusions. The author who would directly advise such spraying of trees in foliage ought not to be left at large. It is poison for the leaf eaters, but fats or oils for the leaf suckers.

*

HERE is a case which you may well consider. Two farmers offered homemade sausage for sale. These men did hard outdoor work in the cold, and preferred to have a large amount of fat in the sausage. They made it for sale just as they used it at home. There was a good demand for this sausage from people who lived in town. They did not work at hard labor outdoors, and the sausage was too fat to suit them. They wrote and offered kindly criticism—telling what they wanted. One farmer considered such criticism offensive. The sausage suited his family, therefore it was all right—he would not change it. The townspeople stopped buying it. The other man wanted to learn. He sent and bought several pounds of a brand of sausage which city people like, and saw that they wanted more lean meat. He studied it out and gave his customers what they wanted and to-day he cannot begin to fill his orders. This is a small thing, but it stands for a great principle in direct dealing with the consumer. It is your business to give him what he wants. The buyer will decide the quality—not the seller. Unless the buyer can have this privilege he will not deal direct with the producer.

*

NOW here is a word to dairymen. How would you like to make a suitable Christmas present to the dairy business? Suppose you and every other man who makes a living milking cows were to walk right into the grocery store and speak this little piece so that the storekeeper had to understand it!

"I believe in spending my money at home, and building up home trade, but I will not trade with a man who is taking away my chance of making a living. Cut out the oleo and I will trade with you. Otherwise I shall trade elsewhere."

Now would a dairyman be justified in taking such a stand? If he did, and this increased the sale of pure butter, would not more milk be required to make this extra butter? Would not the withdrawal of this milk from the city supply give you a better chance to obtain a fairer price for your milk? Is there any answer?

*

ONE of our readers attended the great potato growers' convention in Wisconsin. When he got home he wrote us as follows:

These conventions of farmers are becoming very common in our State, but there is one very serious fault with them, and that is this: It is the progressive aggressive farmers who attend, the men who are trying individually to do a little better than the ordinary, while the self-conceited, indifferent man who most of all needs the help of these conventions, stays at home and finds fault with the conditions, the weather, the "party in power," etc. Thus it "was, is, and always will be world without end."

Now the question to ask is this: Is it in any way the fault of the organizers of these conventions that the class of farmers mentioned does not attend them? We have often had this question up before. It is the biggest thing in farm education to-day. How can you get out into the highways and byways and "compel them to come in?"

*

FROM the time when first the scientists began to tell us of the wonders of radium we felt sure that some one would come along to apply "radio-activity" to fertilizers. This has finally come in the crushed ores from which radium has been extracted. This crushed ore, used in pot experiments, seems to stimulate plant growth, but raising one plant in a pot is a very different thing from planting an acre. Figuring on the one pot is like arguing that because one hen under constant care makes a profit of $3, therefore 1,000 hens are sure to pay $3,000. There is less radium in this ore advised as a fertilizer than is actually present in an acre of average soil! There is also another substance known as uranium in this ore, and the effect of this substance upon plant life is not yet understood. Our advice is to let these "radio-active" manures alone and confine our activity inside the radius of known chemical knowledge. Let the chemists experiment with Uncle Sam's money. Keep your coin for surer things.

BREVITIES.

SPREAD the truth! Can anyone spread it out too thin?

ANOTHER college novelty is a free correspondence course in concrete making by the West Virginia College.

NOW comes the old demand for smaller coins—two and three-cent pieces. Making exact change means economy.

THE latest thing in "short courses" is a cream tester's course at the South Dakota Agricultural College, lasting four days.

THERE has been a heavy purchase of seed wheat in the South. The crop may be seeded up to January in the lower Gulf States.

WHEN you load a wagon see that the load is evenly distributed. Too much of the load resting on either front or back wheels or to one side will increase the draft.

TIMOTHY is called an exhaustive crop, yet at the North Dakota Station wheat following Timothy was increased over wheat following wheat. One great value of a rotation is the change of soil habits which different crops bring.

NOW they claim in Wisconsin that the annual dairy products of that State are worth more than all imported raw silk or all the combined imports of raw and manufactured wool, or of all the tin, all the iron and steel and all the fertilizers combined as imports. The Wisconsin cow is some animal.

THE FOOD AND MARKETS DEPARTMENT.

A Statement of Its Purposes.

PART I.

THE IDEAL.—The purpose of the Department of Foods and Markets is to find a profitable market for the products of the farms of the State of New York, and at the same time to devise such an economic system of distribution of farm food products that, through the saving, the farmer may receive more and the consumer pay less.

PLANNING THE WORK.—It is proposed to accomplish these results by eliminating waste and extravagance; and by organizing an economic system for the distribution of farm food products to replace the extravagant and wasteful system heretofore in use. The new system begins at the farm. The department will keep the farmer advised as to the demand for different kinds and grades of products, and thus direct him in the production of goods that promise ready sale and best prices. He will be instructed in the proper grading and packing of his products; and he will be assisted in organizing local coöperative associations by which he can develop and supply his local market. The department will keep him advised as to the demand from day to day of metropolitan markets, and of prevailing prices in these markets. This will enable the farmer to ship his surplus products to centers where there is a ready demand and where best prices prevail.

LOCAL ORGANIZATIONS.—It is proposed to organize a local farmers' coöperative association in the territory adjacent to each of the cities and villages throughout the State, and in each city and village itself to provide a closed building to which the farmer may deliver his produce in bulk, just as his milk is now delivered to a creamery; or as his tomatoes are delivered to a cannery. This centre building will serve as a grading and packing house; it will serve as a local market for the city or village in which it is situated; and as a shipping house for the surplus that must find a distant market. If possible it should be located in the centre of the town to accommodate the people; and on a line of railroad so as to ship economically in car lots. When practical, the grading of produce should be done at the farm, but in any event the goods will be subject to inspection on delivery to the local warehouse.

THE LOCAL MARKET.—It is not intended to disturb any local conditions; nor is it necessary to do so. If the housewives go to the local market for their supplies, they should always have the selection of grades of fresh produce at a reasonable price; and the local dealers should be supplied at a price below this to afford him a reasonable profit on goods to supply those housewives who prefer to pay the extra price for convenient buying and home delivery. It will be the aim to keep the local markets supplied with goods of such high quality and commensurate prices that no goods of the same variety could be profitably shipped in from other sections. Local consumption is the best market for the products of the neighboring farms. Practical experience has demonstrated that under a proper system growers can sell direct to consumers at 75 per cent. of the prices ordinarily charged the consumer in retail markets, and at the same time the producer realizes a profit of 30 per cent. above his returns from wholesale markets. It is the ambition of the department to make this direct trade and saving general.

MARKET MANAGEMENT.—These local markets may also receive from other sections shipments of such products as are not produced in the immediate neighborhood for distribution to the local dealers or families of the town. The market will require the service of one competent manager, and such other help as may be required from time to time. This management may be the employers of the coöperative association; and under the control of its board of directors; or if thought advisable, the department may, under the law, license and bond a man to handle the business, and fix the percentage he would be allowed to charge for his services.

STORAGE FACILITIES.—In many sections the volume and quality of products will warrant the erection of cold storage facilities and canning factories, or evaporating plants. These facilities will preserve products that are a little over-ripe for safe shipment. They will absorb surplus products in time of overproduction, and they will utilize many articles of excellent food value that in the raw state could not be shipped at a profit, and are in consequence allowed to rot on the ground.

SETTLING RETURNS.—The returns to the producer are a mere matter of accounting. Produce will be weighed on delivery; and the farmer will receive a memorandum of his delivery and he will be credited for the same on the books of the association, and when the prices prevailing for the day are determined, the credit will be carried out in dollars and cents. The department will furnish the association with price quotations from the principal domestic and foreign markets daily. Settlements will be made at fixed intervals of a week or month; and if funds are required in the meantime any bank will be glad to supply it to an organization doing this kind of business.

SOME ASSOCIATIONS have already been formed to assemble and ship produce. With the increase of such organizations, the development of local markets, and the systematic handling of shipments in general markets greater results must be attained.

DIRECT BUYING.—The department will encourage direct trade of individual farmers with individual consumers where it can be profitably undertaken. It is probable that the department may find a way to furnish information and establish relations that will facilitate this trade between such individual producer and consumer as may be in a position to profit by it.

MEAT PRODUCTION.—The scarcity of meat and the ever-increasing price for that article of food indicate that the eastern farmer can again raise meat producing animals at a profit. Neighborhood associations for the breeding and sale of meat producing animals would greatly help in the development of this industry. They operate very successfully in some of the Western States, and in Europe, particularly in Denmark. The industry was practically driven out of the State by the competition of the Western packers; but they are no longer able to supply the demand. To revive the industry in the State we must find a ready outlet for the product. Here again we get a lesson from Europe. Paris has its abattoirs where any farmer in France may send his fat animals for slaughter by a public official. A regular charge per head is made for the service; and the meat is cared for until sold, and return made to the owner. The department has authority to care for the meat and sell it, and return to the producer. It will probably find a way to provide for the slaughter as soon as the industry attains proportions to justify it.

THE FARMER'S REPRESENTATIVE.—The individual farmer as well as the farm associations will always have a representative in the metropolitan market and in due time in the other important cities of the State. It will be the duty of the Department to keep constantly informed of the conditions of the markets in the large cities of the county and of the foreign demand. This information together with the prices realized on last sales will be made public to the farmers of the State, and special information will be furnished by wire when required. This information should direct the produce to the centres of greatest demand as indicated by the price offered and the available supply. It will enable the farmer to avoid shipments to markets that are already over-supplied and save disappointment and loss.

J. J. D.

Handling Fish.

HERE is a load of haddock as handled on the T wharf at Boston. Large numbers of fishing vessels tie up to this wharf, after which the slippery contents of the holds are hauled up in great baskets, which are dumped into boxes on the scales. After

FISH ON A BOSTON WHARF.

weighing, two men with pitchforks quickly toss the fish into a truck or hand cart, which is then hauled to packinghouse or store. The single fish shown in the truck on right side of picture, was a horse mackerel weighing about 700 pounds. This was handled with a hook like those truckmen use on packing boxes. Fishing off the "banks" in Winter is a cold, disagreeable job, yet those accustomed to it do not appear to mind the discomforts.

The New York Agricultural Society.

THE program for the seventy-fifth annual convention of the New York State Agricultural Society, to be held at Albany January 20-21, 1915, is being made up already, men of national repute having accepted invitations to address the conference. The Housewives' League promise a large attendance of their membership, and the banquet on Thursday evening promises to be an attractive feature. New York farmers and their wives should make this convention a feature of their annual recreation.

Meeting of Co-operative Associations.

LAST week the conference of coöperative associations was in error announced to be held in Ithaca, on January 13, 14, and 15, 1915. The dates are correct, but the place of meeting is Utica, N. Y. Considerable interest is manifested in this meeting. The number of associations has increased since the last conference in August, and considerable progress has been made in development of the business of the associations. A large attendance is expected, but remember that the place of meeting is Utica.

A New Scheme in Trading Stamps.

THE use of trading stamps as a means of advertising has been in vogue for some years. By this system the dealer offers to serve out stamps in proportion to the amount of goods purchased, and when a certain amount has been secured these may be returned and some article obtained as an equivalent for the stamps offered. Usually these agreements are kept, but occasionally the company furnishing the stamps in some distant city fails to make good its agreement with the merchant and the merchant is slow to compensate the holder of a partial set of stamps. Recently we have been treated to a new idea in the way of stamp dealing. By the old system the merchant purchased the stamps and passed them out to his customers as they did the trading. In the new system, which is being worked on farmers exclusively, I think, the farmer is urged to take the stamps and use them when paying for goods purchased, the claim being that the merchant will deduct five per cent. on the bill of goods, taking stamps for the discount instead of cash. So far as this is concerned there is no criticism on the deal in particular if all parties are fully informed regarding it when entered upon. The plan may be a legitimate method of advertising, whatever may be said of it as an economic proposition for the purchaser of the goods.

Now as for the new plan, it seems to have its defects. The canvasser comes along and says that the merchants in town desire to present the farmer with a fine book for keeping his accounts, and at the same time furnish him with information how to best grow various crops, such as Alfalfa, and other productions. He then shows the book, which seems to contain a complete set of blanks similar to those which the State Department of Agriculture got out a few years ago and furnished free to such farmers as would use them. It also contains reprint of certain bulletins from the stations or schools on the growing of crops, all of which are free for the asking. The agent says that his company is coöperating with the railroad, the agricultural department and the schools of agriculture as well as with the merchants in town, all of whom desire to help the farmer. He asks the farmer to sign the contract that he will accept the book from his merchant when it is ready for distribution. He urges the generosity of the merchant in making such a donation, and if the farmer hesitates he assumes an injured tone, because of hesitation in accepting the gift, when it is purely a gift and does not cost a cent.

The real facts are that the contract is an agreement to purchase the book for six dollars and also to receive a small book of trading stamps to the amount of six dollars which the farmer can use when paying for his purchases at the store of the merchant in town, these are to be accepted by the merchant for five per cent. of the purchase at any time, and if all the conditions are carried out the farmer gets back his six dollars when he has traded to the amount of $130. I have traced this to some extent, and have found one merchant who says he is ready to take the stamps as stated. All the others say they have never heard of the scheme or did not agree to go in it. It is fair to say that some of the agents have stated to some of the farmers that the cost is six dollars and the rebate is as stated, but other agents, at other times, have failed to make the correct explanation. There is nothing to prevent the dealer from charging an extra amount for his goods when a part of the price is to be allowed in stamps. Some orders for books have been secured without any explanation further than that first given, that there is nothing for the farmer to pay and that it is a present from the local merchant. It is but a scheme where one ought not to get caught, for he should famliiarize himself with the contract before signing it, but some really good business farmers have signed without reading its provisions. This is the farmer's fault, but it does not excuse the agent nor his methods. It is doubtful if he is giving full value for the six dollars anyway, and if he is it is his duty to state fairly the conditions of the deal.

H. H. LYON.

GRAIN NOTES BY EXPERTS.

BROOMHALL reports European visible supply of wheat as 70,504,000 bushels, an increase of 2,360,000 over previous week.

Corn Trade News states that wheat in the United Kingdom is starting well. In France, seeding except in the war zone has made good progress, but weather is unfavorable, and thrashing returns from the old crop disappointing. Seeding in Russia started well and planted area now covered with snow. Conditions in Austria-Hungary bad, farm work neglected and food supplies high, spot wheat selling recently in Austria at $2.40 per bushel.

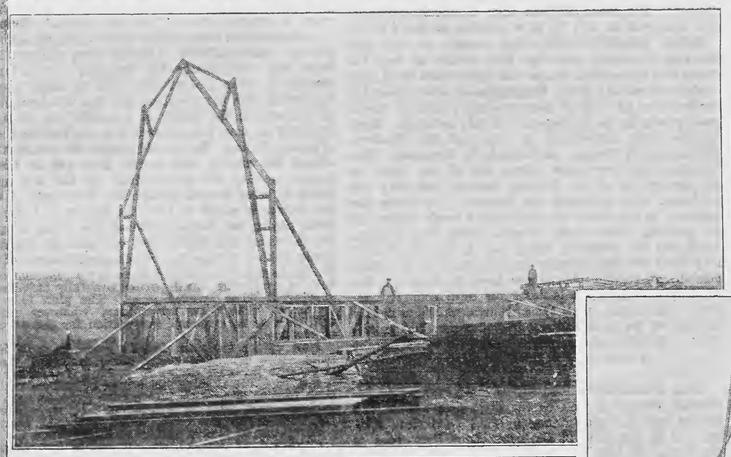
Stocks of principal grains in store in this country are in thousands of bushels.

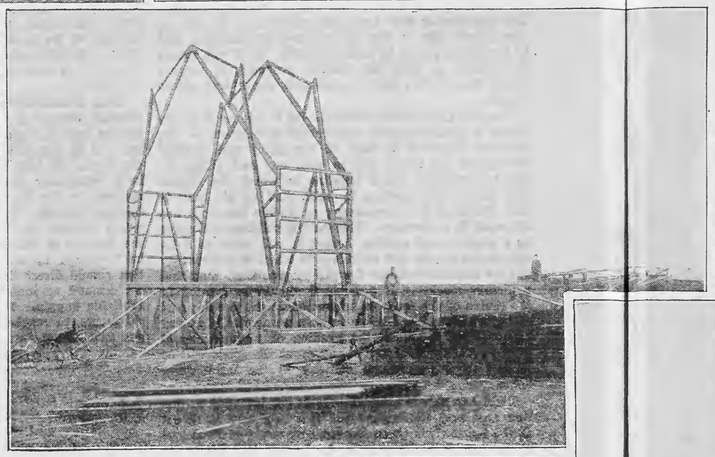
	Wheat	Corn	Oats
New York	3,082	484	1,375
Boston	342	23	3
Philadelphia	1,572	186	500
Baltimore	1,802	137	1,802
New Orleans	3,207	27	151
Galveston	1,775	5	.....
Buffalo	4,662	113	1,916
Toledo	1,906	77	874
Detroit	510	114	48
Chicago	7,277	574	12,573
Milwaukee	218	9	647
Duluth	11,555	.....	1,903
Minneapolis	15,915	30	4,512
St. Louis	3,669	35	485
Kansas City	9,452	8,627	862
Peoria	3	125	1,297
Indianapolis	458	265	415
Omaha	1,118	122	2,278

Rye (1914)—New York, 252,000; Boston, 2,000; Buffalo, 19,000; Toledo, 2,000; Detroit, 23,000; Chicago, 57,000; Milwaukee, 49,000; Duluth, 132,000; Minneapolis, 154,000; Kansas City, 14,000; Omaha, 19,000; on lakes, 187,000. Total, 1,659,000 bushels. Decrease, 339,000.

Rye (1913)—New York, 8,000; Boston, 2,000; Baltimore, 210,000; Buffalo, 65,000; Toledo, 10,000; Detroit, 42,000; Chicago, 386,000; Milwaukee, 330,000; Duluth, 394,000; Minneapolis, 739,000.

IN the recent Woman's Magazine Mrs. Eddy described the library work of the State Educational Department at Albany. A large number of our readers have already applied to the Department for the travelling libraries.





No matter who does your building, do not forget that

James Barn Plan Service

makes it all easy. This service will help you in selecting a proper location for the barn—with reference to drainage, sunlight, distance from other buildings and from the main road, etc.

It will guide you safely in determining the proper size to build for your present use and how to accommodate the larger herd you expect to own some day.

It will tell you how to face the cows—how to arrange the stalls and gutters—what proportions the building should have—placing of windows, ventilating system, etc.

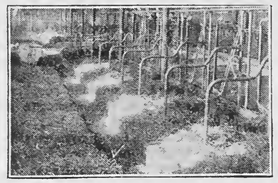
JAMES Barn Plan Service gives the information you need regarding height of walls, location and character of posts, laying of floors and construction of frame.

It gives valuable silo information, and many other facts that any dairy farmer needs when about to build a new barn or remodel the old one.

This JAMES Barn Plan Service Is Free

It is the work of our well-equipped Architectural Department, which we maintain for the benefit of our customers and others interested in good barns.

The services of this department are at your command right now—*free*—whether you expect to build soon or a few years from now.



Please get in touch with us at once. Don't wait until you are ready for the barn—until you need it in a hurry—but enjoy the advantages of our service now and let us help you in every way we can. In getting this service you will have the advice and assistance of W. D. James, who is nationally known as an authority on the designing and equipping of dairy barns.

He was born and raised on a farm—knows dairy conditions in every state—knows just what the dairyman needs in order to get the biggest results at smallest cost and with least trouble.

JAMES Sanitary Barn Equipment

The men back of JAMES Barn Plan Service are the designers and makers of the celebrated JAMES Sanitary Barn Equipment—which includes Stalls, Stanchions, Pens for Cows, Calves and Bulls, Manure and Feed Carriers, Barn Ventilating System, Watering Buckets and other supplies for good barns.

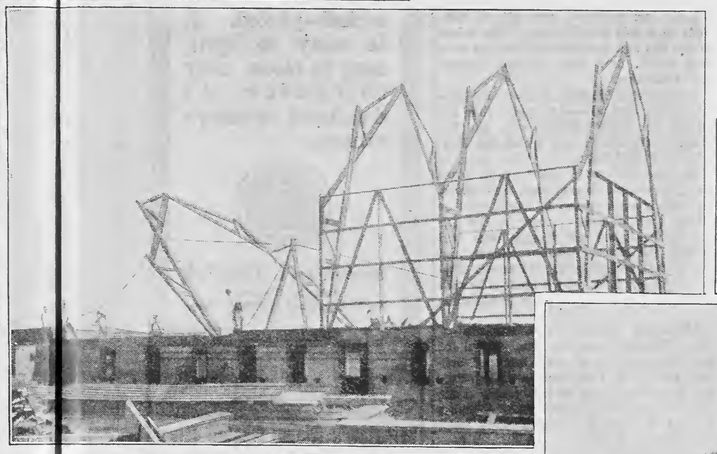
A JAMES planned barn, fitted with JAMES equipment, makes the ideal combination. But no matter whether you are ready to think about equipment or not, let us hear from you in the matter of barn building or remodeling. Tell us when you expect to begin work—how many cows you want to take care of—and the JAMES Barn Plan Service will begin going to you right away. This will give you time to think the matter over—to study what we send you. It will *start* you right, and you need have no fears regarding *success* and *profits* if you accept the help that we are anxious to give you. When you need legal help you go to a good lawyer. When sick, you call in a skilled physician. Why not adopt the same principle when going into the proposition that means nearly *everything* to you from the standpoint of efficiency and profit? If you employ an architect, the JAMES Barn Plan Service will help him. The same is true if your carpenter puts up the barn without an architect's help.

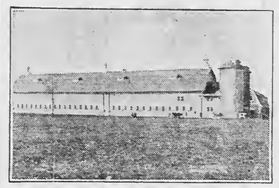
The Sure Way to Have a Good Barn

is to have it designed and equipped by experts who have had so many *barn successes* that they can't go wrong in helping you.

NO MAN can afford to be careless or indifferent in planning his new barn or remodeling the old one. A barn is too important a part of the dairy farmer's work to be given any less than the most *careful* attention throughout the process of building and fitting it for use. Instead of returning you a *profit*—as a *good* barn will—a barn that is not built right or that is incorrectly planned will probably lose money for the owner every day.

It's mighty hard to correct a mistake in a dairy barn that is supposed to provide the comfort, ventilation, light and convenience required. The one safe way is to *avoid* mistakes by putting the job in the hands of men who *know how.*

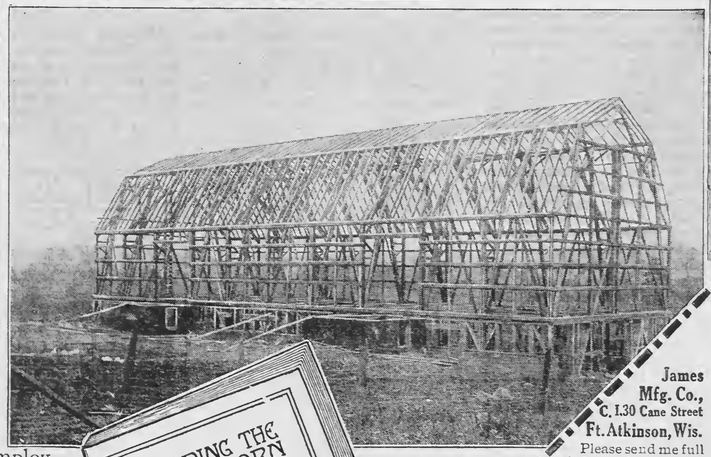




The James Manufacturing Company offers a Barn Plan Service that will help any dairy farmer—any contractor or builder—any architect—in the important work of getting the work *started* right and carrying it on to successful completion.

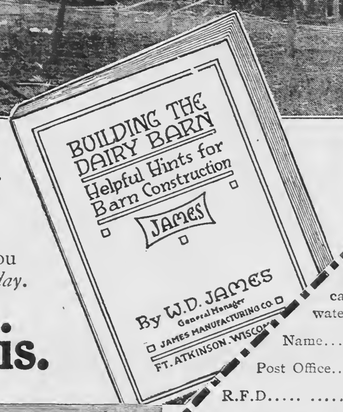
A barn planned the JAMES WAY will make money for the owner every day it is used. It will save time, labor and feed—increase the comfort of the cows and therefore increase their milk production—keep the cows healthier because of proper light and good ventilation—and make all the barn work easier.

You will be proud of a JAMES barn because of its good looks. It will add to the value of your farm. A list of improvements that includes a JAMES barn will always bring an extra price when the farm is traded or sold. A JAMES barn will not only make more money for you, make the work easier, and add to the value of the farm, but it will also add to the value of your herd. The cows show off better—and they *are* better, in every way. And please remember that a *profitable* barn—one that your neighbors will admire—costs no more than one that is filled with mistakes. It's just a case of getting the advice of men who *know* and applying that advice to your gain.



Snd Attached Coupon Today—NOW

Don't delay sending for this service. It costs you nothing—you will thank us later on for having urged you to write. *Do it today.*



James Mfg. Co.,
C. I. 30 Cane Street
Ft. Atkinson, Wis.

Please send me full information regarding JAMES Barn Plan Service—free—and free booklet, "Building the Dairy Barn."

I own..... dairy cows. I expect to build a new barn about .....; remodel..... .....

I will be in the market for stalls.....
stanchions..... .. ...; pens.....;
carriers..... .....; ventilators..... ;
watering buckets.....

Name..... ....

Post Office..... .. ..

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James Manufacturing Co., C. I. 30 Cane Street, Fort Atkinson, Wis.

Woman and the Home

From Day to Day

THE SHEPHERDS.

I.

IT was the shepherds of the fold
First heard the wondrous news,
What time upon the wintry wold
They watched their lambs and ewes.
It was the simple shepherd folk
First heard His angels sing,
When from the deeps of midnight broke
Resplendent plume and wing,
And hill and vale to music woke—
"All hail to Christ the King!"

II.

It was the lowly and the poor
That heard the tidings first,
When on the eyes of swain and boor
God's splendid angels burst.
It was the simple shepherds sped
To seek the Holy Child,
Who found Him in His manger bed
Beside His Mother mild,
While Joseph bent in awe his head
And on the Saviour smiled.

III.

Still, would ye seek His place of birth,
Go search in hut and cot!
Not with the proud or great of earth
He casts His kingly lot.
But 'mid the poor the Saviour seek;
There cradled low He lies.
He hideth still among earth's weak
From undiscerning eyes.
Yea, veileth still His Godhead meek
In simple human guise.

—P. J. Coleman in *The Columbiad.*

*

SOME of our friends, moved by the world-wide penury and distress now existing, tell us that they cannot conscientiously make any Christmas gifts this year. They feel that all they can spare must be devoted to the relief of actual distress, being distributed in what we call charity. There are foolish people whose Christmas giving is purely vanity and ostentation, but a great proportion of us do give, in spite of all that is said to the contrary, because we hope thereby to give happiness to those we love—it is our concrete example of "good will toward men." Those who give from vanity and greed are surely not likely to deny themselves for the needy, and even if they give up their Christmas presents it is not at all probable that they will be shorn of superfluities for the benefit of real sufferers at home or abroad.

As for the rest of us, perhaps we have already scraped together some offering of purest charity for the homeless women, the perishing children, who are the aftermath of pitiless war. We would all like to give more. What would it mean, to cut off our modest Christmas giving? Perhaps there are several young girls, to whom some sheer hand-embroidered handkerchiefs come as a touch of luxury in a drab workaday life. Well, they must do without this year—a thousand other women think the same, and across the Atlantic, a few hardworking girls in the Green Isle must do without an extra pound of tea, or jar of marmalade, that would have gladdened some needy one whose Yuletide cheer is stinted far below what we consider necessity in bountiful America. Again, a regiment of conscientious mothers decide that their little boys and girls must be denied certain longed-for Teddy bears and Billy possums and other friendly beasts that never came out of a menagerie. Trade falls off, and some forlorn little woman here in New York stands in line waiting for the charity order that will provide milk for the fretting baby, and shoes for the youngster who cannot go to school until his poor chilblained feet are taken off the bare pavement.

Some friend who knows all about Adam Smith and all those other powerful intellects who pile up figures may break in right here with a statement that personal extravagance cannot provide healthful trade; that luxuries, whether indulged in by rich or poor, merely divert money from commodities on which national prosperity is founded. This may be true of absolute senseless luxury, whether it means too many jewels for the rich, or too many moving picture shows for the poor. But the sudden cutting off of normal expenditure, unless real need compels it, means hard times for a great many industrious people.

This is going to be a thoughtful Christmas for many of us. We are the most prosperous nation in the world—yet poverty waits round the corner for many a one. Many of us are united by ties of blood or sympathy to the nations now ravaged by war. There never was a time when hope and cheer was more needed by a weary world. If we fail to brighten our own little corner of it—to make home the best place on earth, and family love and courage the best thing in it—how can we ask the world at large to listen once more to the songs of the Nativity, with its assurance of peace on earth, good will to men?

The Rural Patterns.

When ordering patterns give number of pattern and size desired. Price of each pattern, 10 cents.

8468, Dress with plaited tunic for misses or small women. For the 16 year size, the blouse and tunic will require 7½ yards of material 27, 5¾ yards 36,

4¾ yards 44 inches wide, with 1¾ yards of lining material 36 for upper part of skirt, 1¼ yards 27, three-quarters yard 36 or 44, for lower part of skirt and trimming. The width of the skirt at the lower edge is one yard and 24 inches. The pattern 8468 is cut in sizes for 16 and 18 years.

8385, Blouse with vest effect. Cut in sizes 34 to 40 bust measure. Size 38 requires 2½ yards of 36 inch material, with five-eighths yard 36 inch wide for vests, collar and cuffs. 8310, Plain

blouse. Cut in sizes 34 to 42 bust measure. Size 38 requires 2⅜ yards of 36 inch material. 8255, Semi-princesse dress for misses and small women, 14, 16 and 18 years. Size 16 requires 4½ yards of 36 inch material, with one-half yard 27 for collar and cuffs. 7736, Seven-gored skirt. Cut in sizes 22 to 32 waist measure. Size 28 requires 3¾ yards of 36 or 44 inch material. 8457, Three-piece skirt. Cut in sizes 24 to 32 waist measure. Size 28 requires 2⅝ yards of 44 inch material.

Seen in New York Shops.

A NEW military blouse has a shallow little yoke forming shoulder straps, a braid binding, and buttons with braid buttonholes. It has a high turnover stock and set-in sleeves gathered into turn-back cuffs. It is made in sand color chiffon broadcloth, and white or flesh washable satin.

Among the neck ruffs offered are some made of loops of wool yarn, white, black or brown. The loops come close together, and are quite suggestive of feathers; apparently they are made like the borders of some old-fashioned wool mats. They are finished at the ends with loops of satin ribbon. They cost about 75 cents to $1.25. In buying a neck ruff of marabou, be very careful about selecting black; we have never met with any that is "fast color." There may be such, but it is outside our experience; all that we have met with "crocks" badly, so that it soils light fabrics, gloves or the wearer's neck or hands, and saleswomen in good shops tell us it cannot be guaranteed. The natural marabou, dark brown, being nature's own dyeing, is absolutely "fast." For a black ruff maline, chiffon or ostrich feathers are always dependable, and the nice ones this season always have a lining of white.

Among Christmas gifts for men were neat round boxes, each containing one silk crocheted tie, one handkerchief with a deep hem to match the tie, a pair of cuff links and a stickpin of rolled gold. The articles separately are 25 cents each, but the set combined was offered complete in a sale for 50 cents. The colors in the ties and handkerchief borders were dark green, dark blue, brown, crimson and heliotrope.

Very pretty Turkish slippers for bedroom wear cost 50 cents a pair; they are of soft kid, with a double sole, and are made in Constantinople, which the Russians now call Tsargrad. They come in pink, blue, both pale and a bright royal blue, heliotrope, fawn, black and white. The toe is embroidered in tinsel, gold or silver, with a large pompon at the instep. They look as though they had walked out of the Arabian Nights, and would delight any girl. Bathroom slippers of terry cloth, just a stout sole with a toe-piece, are also 50 cents in all sizes.

MOLASSES CANDY.—Two cupfuls of New Orleans molasses, one cupful of granulated sugar, a small lump of butter; boil until it hardens in cold water, add a tablespoonful of vinegar, a scant half teaspoonful of bicarbonate of soda; pour into shallow buttered pans until cool enough to pull.

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THE EDISON ELECTRIC LIGHT PLANT
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When the Big Children Study,
When the Little Children Play,
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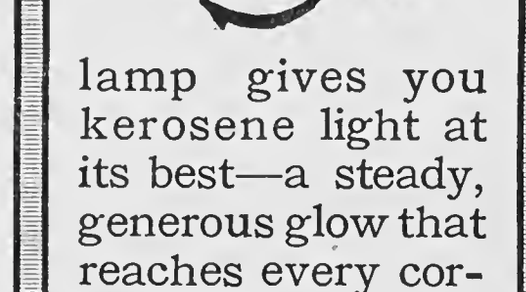

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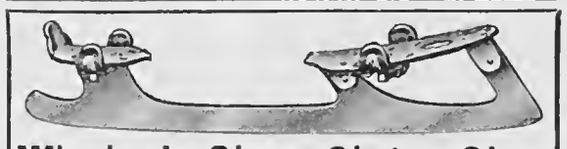

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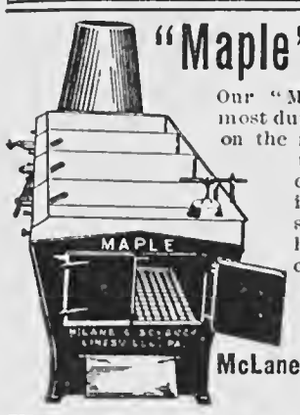

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Solve your Christmas shopping problem

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In the Warm Heart of the West.

PART II.

"I don't suppose there is a turkey within a thousand miles," Mrs. Lonesome averred, a little wave of discouragement sweeping over her.

"No, there isn't, but there are other things just as good. There are prairie chickens, grouse, wild ducks and jack rabbits everywhere, and with a spare rib or two we can make out," declared Mrs. Sweet.

Each family was allotted to bring for the Christmas feast just that which was most convenient to bring, and the feast lacked nothing in quantity nor quality, although some of the seemingly essential Christmas things were lacking. There were pumpkin pies made without eggs, baked fresh on Christmas morning; there was Scotch short bread wonderful for richness and quality, a great cornmeal loaf was steamed over night on Mrs. Patterson's kitchen range, potatoes cooked to flakiness and beaten to a cream and frothy whiteness were furnished by Mrs. Jamison, while various meats, cakes, puddings, etc., came flooding in from all directions. Each one had been allotted to bring a single viand. Instead of that, each brought several, and each one had let herself out to the full limit, to supply some one thing in which she especially excelled. The cost of the feast for each was really no more than a reasonable dinner for her whole family would have been, and the joy of being together, of having the spirit of belonging, was more than all else.

But this is getting ahead of things. The Christmas tree, wonderful in proportions, was decked out in an array never before dreamed of, in any human philosophy. Real candles blazed and spluttered amidst the festive branches of the tree, and the very fact of the alum-crystallized tumbleweeds was an insurance against fire, for alum will not burn to a blaze, anywhere. To be sure only a part of the wonderful tumbleweeds, which were literally small trees in themselves, were crystallized, because the alum didn't hold out, but the candles were located in amongst the crystals, and if they were few, they lit that magical tree to beauty, in the eyes of all beholders. The other tumbleweeds were taken frost damp and dipped in flour, and they presented the appearance of hoar frost itself, caught and kept in spite of blazing fires. The supply of gifts was such that the tree could hardly hold a minor share of them, and the piles beneath the tree were astounding in size, in shape and in the mystical wonder they held. Strings of popcorn were of course draped about the tree, paper flowers glowed where they would do the most good, and one skilful worker had taken some blue clay which had been thrown up by well workers, and molded this into a very good angel shape indeed. It was a marvel of skill, all declared, and when this had been dried and rolled in flour, with a gilt star in a crown, it was placed in the very top of the unique Christmas tree, where it spread its white wings in blessing to all.

The gifts were homely, it is true, but never a "duty" gift held a hundredth part of the delight those simple home-made things did. Children rejoiced in new garments made from old. Little Timmy Smith was immediately dressed in the new trousers supplied by Mrs. Sweet, and sundry and divers other children gloried in the outgrown garments of sundry and divers other children. The old garments had been refurnished and made to look as spick and span as could be. Some were stiff with starch and ironed to immaculateness, while others were pressed into soft folds, that held a weight of love unspeakable. One inventive genius had colored beans and strung them into marvelous necklaces, and hardly a woman or girl there who was not beaded to beauty on that glowing Christmas Eve, out underneath the stars of the low hanging heaven of the plains! The Mother-to-be was furnished forth with a complete outfit, subtracted from things left over, from the stores of the Mothers-who-had-been.

It was, altogether the homeliest Christmas that ever could have been, and yet it was the most joyful, for even the ones who were not "congenial," who were "grouchy," who were "beyond the pale," were gathered into the lovewarmth of the West, and the Child born to that community, the Child of Love, lives on through all the changing years, and time and space has never separated the hearts joined in that holy bond of union forged by the harsh hand of hardship and loss, welded by the hammer of a Fate which had separated them from their own kin, on the anvil of the Christmas thought in the heart of one woman of the plains.

Today the Christmas trees are shipped in by carloads, and the poorest may have a home tree, while cummunity Christmas trees bloom in beauty in the public squares in the plains cities, that all may share the Christmas spirit. Today the churches with light and music, with sparkle of tinsel, and glamor of Christmas goodies, are open to all who will rest for a Christmas hour beneath their arches. Hands have hardened on the plains, eyes have dimmed, and many lives have gone on to a further and better growth beyond the pale of earthly hopes, but the warmth of the West, the heart of the Plains, still broods over all, for "Unto us a Child is born," which has saved us from ourselves!

ROSE SEELYE-MILLER.

To Keep Cider Sweet.

APROPOS of cider keeping, perhaps a little experience will be helpful. Two years ago, the writer visited a farm where cider was plenty. When I left the place a can of so-called boiled cider was given me for use in mince pies. Various things prevented the use of this cider, until it had been kept two years. On opening the can, it was found to be perfectly sweet and tasted almost like fresh cider. The way this was preserved was merely to boil it down one-half, and can it hot as any fruit is canned. For drinking it is fine, and may be reduced as much as it was boiled down if desired. This cider preserved this way is not at all like the old-fashioned boiled cider, which was boiled until like a syrup, in fact the heavier boiled cider is much better for mince pies and such things, but the cider boiled down half with no preservatives added makes a delicious drink, which seems to keep almost indefinitely. The cider must be used before the slightest fermentation takes place, as a little fermentation is apt to prevent the keeping qualities, but cider fresh from the mill can be kept this way.

R. S. M.

Chutney Sauce.

WILL you kindly repeat formula for apple catsup given in your columns a short while ago? MRS. C. L. L.

We gave a recipe for grape catsup recently, but do not recall any recipe for apple catsup, nor are we able to find this in our cook books. Chutney contains apples; this is an old but highly esteemed English recipe, adapted from an Indian formula; it is much appreciated by those who like a hot relish, as it is very peppery:

Chutney.—Eight ounces of tart apples, peeled and cored, eight ounces of peeled tomatoes, eight ounces brown sugar, eight ounces salt, four ounces powdered ginger, four ounces red peppers, two ounces shallots (or onion), two ounces garlic. Pound all together in a mortar (or pass through a chopper set to cut fine) and then put all the materials together in a jar with 2½ pints good vinegar. Place the jar in a warm place, covered, for one month, stirring with a wooden spoon twice every day. At the end of the time pass the chutney through a sieve, and bottle, when it is ready for use. The intense heat of the peppers grows milder with keeping, and the chutney improves and becomes richer in flavor.

EVERTON TOFFEE.—Put one pound of powdered sugar and one teacupful of cold water into a saucepan; when the sugar is dissolved add a quarter of a pound of butter beaten to a cream. Keep stirring the mixture over the fire until it hardens when a little is dropped upon a buttered dish. Just before the toffee is done add a half teaspoonful of lemon flavoring, and pour into a shallow buttered pan to cool. This is a popular English candy.

Cook your whole meal at one time in the

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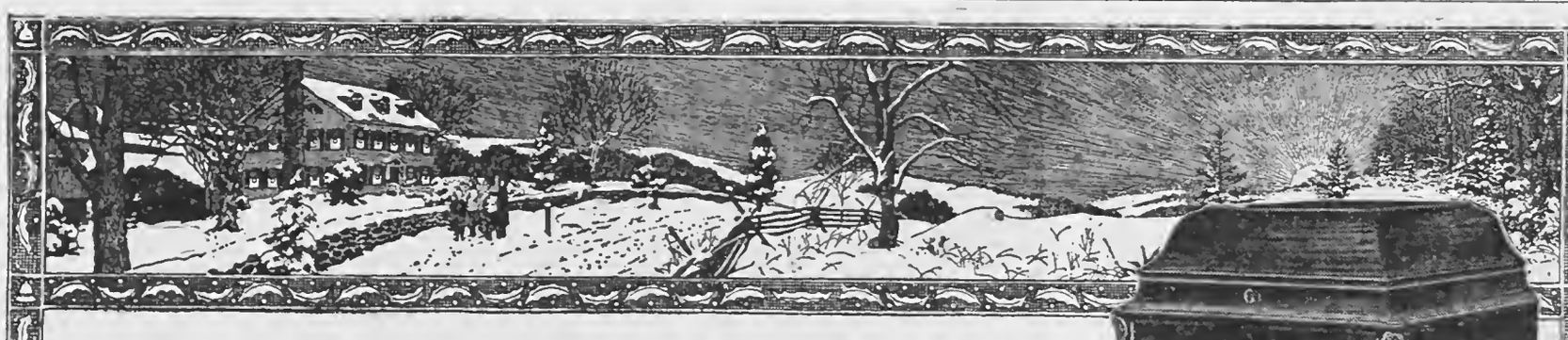

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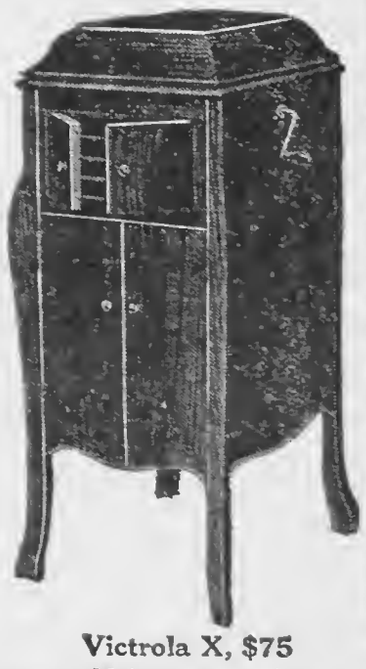


Victrola X, $75
Mahogany or oak

Live Stock and Dairy

MODEL DAIRY BARN.

FIGS. 630 and 631 show a New York State barn which is considered by the farmers in the neighborhood as an ideal one for a 120-acre farm. As shown by the lay-out, it has stanchions for 34 cows with two box stalls which can be used for calves, or cows when calving, The stable is equipped with modern swing stanchions and water buckets between every two cows. The rows of cows face each other, which is the most convenient arrangement for feeding; the manure carrier runs on track behind each row of cows and is dumped directly into the manure spreader in barnyard.

It will be noted that the feed room is most conveniently located for feeding both horses and cows. The silo opens into the alley at the other end of barn and the hay comes from above directly in front of the cows. A block and tackle is used to hoist the feed into the bins above the feed room.

This main barn has cement floors throughout, the cement floor being planked over for the horse stalls only. This plan of barn with variations to suit individual requirements might well be taken as a model by those having building problems to solve. W. D.

Breeders Have Greater Weight than Breed.

"WHICH breed is best?" This question was put to Holstein, Jersey, Guernsey, Ayrshire, and Brown Swiss men at the National Dairy Show. A stock answer which came from unprejudiced men was: "They are all good." One Holstein man declared: "It is little difference whether you keep Holsteins or Jerseys, Guernseys or Ayrshires, or Swiss as far as the man himself is concerned, but the man who tries to keep one breed when his market demands the product of another breed, is in a situation which may run the milk producer aground in the dairy business. A man must be in harmony with public sentiment, and in our town it was for Jersey milk. No other milk would be considered in the local trade, but we now have several good Holstein herds of wide reputation for breeding in the city limits, and by breeding for butterfat, we have turned sentiment in favor of our breed. It took time, and the advertising of our herds, sales of our stock and our annual sales, were indirect advertising which turned people our way. Our city papers gave our pure-bred activities frequent mention and our milk has become equally popular with that of the Island cattle. A man with less money starting in the dairy business should secure cows noted for richness of cream, if this is demanded in his locality, and if any particularly breed is favored he should make that his choice. He cannot afford to attempt to divert public sentiment in favor of his chosen breed."

Another prominent dairyman said: "I would take a rough cow census. If the locality in which I would engage in the business might be a center in which great cows of a certain breed were developed, and sires of note were produced, that would be the breed I would keep, even though I might have some prejudice in favor of some other breed. If I found that Guernseys were popular cows in the community, and that people were developing them as grade herds I would go with the crowd. There is nothing in it for the man who stands alone championing a breed altogether different from that one adopted by his community. Holstein buyers will ignore his Island stock, while they pick up car lots among his neighbors. The lonely breeder is out of the game when it comes to hold a live stock sale of the predominant breed in his locality. If he should attempt to keep Guernseys in a Holstein center, he would be losing a vast amount of valuable advertising which his locality has acquired for its favorites."

From another source came the suggestion: "The progressive policy of the breed in which I might be interested, would have some weight in my choosing or rejecting it. I would consider the possibility of whether or not the breed is backed by aggressive officers and members, and I would carefully consider the activities of the breed association in popularizing the animals I had under consideration." W. J.

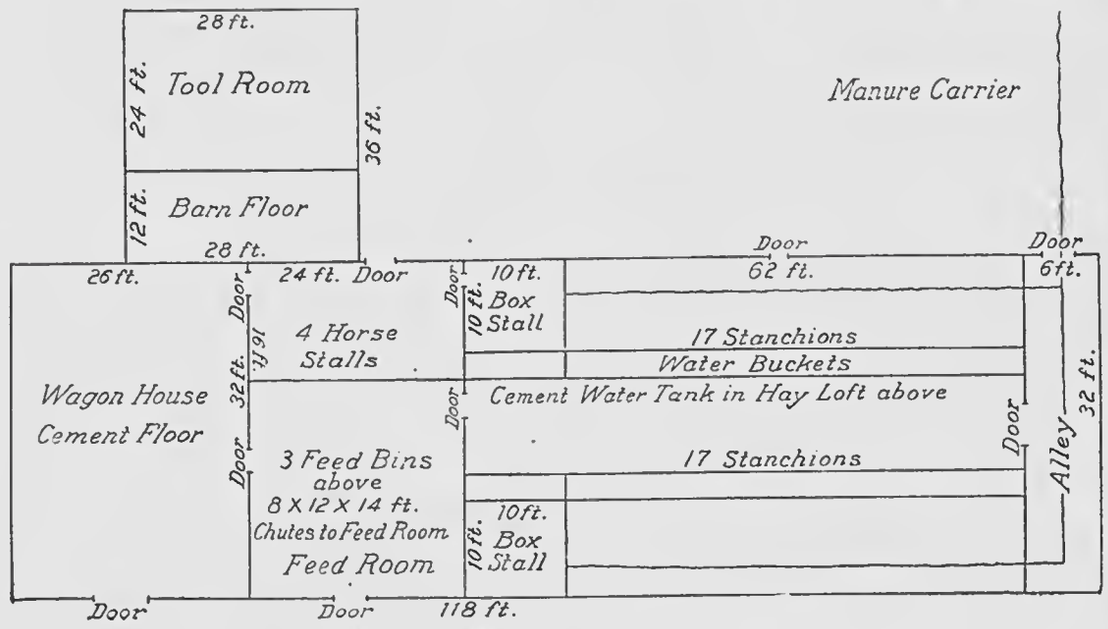
FEEDING PROBLEMS.

Ration for Heifers.

I WOULD like a feeding ration made from rough hay worth $10 a ton, oil meal and cottonseed meal $1.65 per cwt., hominy $1.40, corn $1.60. leaving out the corn if you can or using instead of hominy and would like to know difference if good Timothy is used at $15 a ton or even bought Alfalfa at $21 to $22. This is for heifers. F. W. K.

Ohio.

For a grain ration to use with the rough hay give a mixture of three parts



GROUND PLAN OF MODEL DAIRY BARN. FIG. 630.

by weight of hominy feed, two parts bran and two parts oil meal. I do not know just exactly what your rough hay is, but if it consists of wild grasses cut in good condition it is probably cheaper than Timothy at $15 per ton. If the Alfalfa is of good quality and well cured it is probably about an even thing whether you use Alfalfa or the rough hay at the prices quoted. In feeding Alfalfa leave out the oil meal from the grain ration. Feed three to five pounds of grain daily. C. L. M.

Ration for Butter Making.

WILL you balance a ration for dairy cows, grade Holsteins? I am feeding, for roughage, about 10 pounds corn stover at morning, 10 pounds hay (mixed Timothy) noon, one bushel corn silage at night. For grain I have corn and cob meal, oats, barley and buckwheat; can buy nearly any commercial feedstuff in this locality. I am making butter. C. E. W.

A good grain ration to feed with the above roughage would be four pounds cottonseed meal or oil meal, two pounds corn and cob meal, and one pound each of ground oats and barley. C. L. M.

Ration for Dairy.

WILL you give me a balanced ration for cows? I have oat and pea hay, but it was very rainy at the time it was ready to be cut, and it is matured more than desirable. I have about 15 tons of good mixed hay, about 140 tons of silage, not matured and cared lightly; the ears were in the dough when put in the silo. I pay the following prices per 100 pounds: Ground oats $1.90; meal $1.90; bran $1.50; union feed $1.90; middlings $1.55; mixed feed $1.65; cottonseed $1.80; gluten $1.75; oil meal $1.90; hominy $1.80. I can also get dried brewers' grain or distillers' grain at about these prices. These cows are all grade Guernseys weighing from 800 to 1,000 pounds. I have been feeding a mixture of bran, middlings, gluten, hominy, oil meal, cottonseed and union feed; this has worked well with soiling, but since I began to feed silage and oats or hay they have shrunk. F. P. W.

Connecticut.

Your trouble is not unusual at this time of year when it is necessary to change from soiling crops onto a Winter ration containing less succulence and more indigestible fiber. The grain ration which you are feeding your cows should produce good results, but there is not much milk in over-ripe hay and silage made from poorly-eared corn. To make the best silage the corn should be well eared and just beginning to glaze. When put into the silo in this condition and properly packed it furnishes one of the best Winter feeds for milk production. It has been found, however, that by the addition of about four pounds of dried beet pulp, soaked with all the water it will absorb at least eight hours before feeding, and mixed with the grain ration just before feeding time, the milk flow can be materially increased. Whether it will pay to go to the extra expense or not must be determined by each person individually as circumstances and conditions may seem to warrant. Under ordinary conditions, if it pays to feed a cow at all it pays to feed her well, and if by adding the beet pulp you can decrease the amounts of some of the other equally expensive feeds somewhat it is reasonable to expect that this change would prove to be profitable. C. S. G.

Many of our readers appear interested in building pit silos. As we all know, a pit silo is a hole in the ground plastered or bricked up and then filled with chopped corn or other crops, the same as any other silo. In some parts of the country these pits are quite satisfactory, but the ground has to be dry, with a low water level, in order to make them worth while. The North Dakota Farmers' Institute No. 3 for March, 1914, has issued a very good bulletin on this pit silo. There are plenty of pictures and a very sensible statement of conditions. It is published at Fargo, N. D., and is an interesting pamphlet for those who want to know about the subject.

DAIRY BARN FOR 120-ACRE FARM. FIG. 631.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

Market the Milk

Raise your calves for beef, and get the bigger money to which you are entitled. But do not feed the calf whole milk, with butter fat worth $600 a ton.

You can sell all the mother cow's milk or butter and make your calf pay you 200% profit on its feed, by raising it on

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You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow faster.

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L. C. Beard, Hagerstown, Md., writes: "I can say Blatchford's Calf Meal will pay anyone 100 Pct. that has calves to raise." 2

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"I have used them for more than TWENTY YEARS, and they have given the very best of satisfaction in every way," writes Justus H. Cooley, M.D., Plainfield Sanitarium, Plainfield, N. J.

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Large Guernsey Record.

THE Guernsey breed not only has the greatest butterfat producing cow in the world, based on a yearly official record basis, but the general trend of the records of all cows running for the Advanced Register continues upward. On the last list of 25 cows, to finish a yearly record, there appear 10 cows whose records show a butterfat production of over 500 pounds. Only two of the cows show less than 400 pounds of fat, the lowest record being 333.67, a two-year-old heifer with first calf. Of the 10 records of over 500 pounds of fat, one is 825.90 pounds of fat, another 770.38 pounds of fat another 746.56 pounds of fat; three were between 600 and 700 pounds of fat and five between 500 and 600 pounds of fat. These records are not picked or sorted in any way, but represent the last 25 cows to complete records regardless of age or size of the record, and is an indication of the trend in the Advanced Register work of the Guernsey breed. WM. H. CALDWELL, SEC'Y.

The Lady Hog.

AN advertisement like the following has been appearing in the Sunday papers:

BUY A LADY HOG!
LET HER WORK FOR YOU!

We will care for, feed and breed her for half the profits. You will make big money on her children, grandchildren and great-grandchildren.

$5 OR MORE STARTS YOU!
WE RAISE YOU HOGS ON OUR RANCHES.

The proposition seems to be for you to put up $5. That is the one sure thing about it. The next surest thing is that you are most likely to lose the $5 and the lady hog as well. Too bad that the boomers have taken up Mrs. Brood Sow. She is a lady, and has rooted out many a farm mortgage and grunted many a boy and girl through college. She needs good society and personal care to do this. Boomers and blowhards and exploiters ought to let her alone.

Never Use a Scrub Boar.

THE difference measured in dollars and cents is the difference between profitable and unprofitable pork production. Here is an example. There are two sows on the farm. One is a race horse type of nondescript ancestry. The other is a grade Chester White sow. The second animal is quite typical of the breed, is an easy keeper and a good mother. The first sow was taken to a purebred Chester White boar, the second sow, the better one, to a nondescript boar, inferior in size, and although the owner said it had some grade breeding, its progeny challenges the statement. There are three weeks difference in the ages of the litters. Six pigs from each litter are now on the farm. The older litter is about 11 weeks old. Each litter is now eating the same amount of feed, the older is uniform in size, typical of breed, and easy keepers. They evidence prepotency in the sire. The younger pigs are small, seem to be at a standstill, will weigh one-third less than the older ones, and are making unsatisfactory and unprofitable growth. At the present time there is at least $12 difference in value of the pigs, and $10 can be charged to the poor boar. The difference in the two litters matured would more than maintain a purebred sire on the farm a year. It also shows the value of the purebred sire over the scrub, and in this case the purebred sire cannot be figured at half the drove; it is more nearly 90%. J.

Hot Water and Dressed Hogs.

I NOTE that the cold water cure for scalding hogs has begun the rounds for another season. The writer has attended hog dressings for over 50 years and has yet to see the time that the water was too hot, provided the men were not afraid to move that were on the job, but I have often heard of its being set when in fact it was frozen on, for it is possible to draw a hog from a hot tub onto a platform made of icy plank and move so slowly that the hair will set when a little well directed motion would have left two-thirds of the hair in the tub and a well-dressed hog on the hooks. Therefore my advice is, do not be afraid your water will be too hot, don't be afraid, but willing to work, and don't chase the cider barrel after you get the hog in the tub, but stay on the job and work is the advice of one who has dressed nine hogs before breakfast, with a helper. GEO. L. GORDON.

Potatoes for Hogs.

COULD you tell me the value of potatoes at 35 cents per bushel compared with cornmeal at $1.65 per 100 pounds for feed to hogs weighing 150 pounds? What are potatoes worth for feed for small pigs six or eight weeks old? T. T.

New York.

The feeding value of roots, potatoes, etc., is not large, except for their value as succulence. Potatoes contain approximately 21 per cent. of dry matter, of which the greater part is starch. One hundred pounds of potatoes contain about one pound of digestible protein and 16 pounds of carbohydrates. The same amount of corn contains eight pounds digestible protein and 76 pounds carbohydrates or about eight times the digestible nutrients of potatoes. This would make potatoes worth 21 cents per hundred pounds, as compared with corn at $1.65 per cwt., or possibly 15 cents per bushel. However, as an entire ration, a hog could not consume enough potatoes, on account of their bulk and water content, to make a very rapid growth. Young pigs would not thrive on potatoes unless they were cooked, and then half of their ration should consist of concentrates. Four parts middlings and one part each of cornmeal and oil meal makes a good mixture for young pigs. Cooked potatoes are said to be worth four to five cents a bushel more than raw ones for hogs. A few potatoes, to feed in connection with cornmeal, would be worth much more than the value of their nutrients, because of their aid to digestion. Cornmeal alone is a pretty heavy feed, and if fed for a long time is apt to get a hog's digestion out of order. A bulky feed like potatoes, however, keeps the bowel movement free and the digestion and appetite good.

The same rules apply to the feeding of potatoes and roots to cattle and other stock. As an aid to digestion to stock having only dry roughage a small quantity is quite valuable, though the nutrients they contain may not in themselves be worth the price. As a sole ration they would be altogether too sloppy for horses, cattle or sheep, as well as deficient in nutrients. C. L. M.

Sheep and Belgian Hares.

E. R. S.'s idea, page 1338, of curing mutton is not practical, as anyone living where live sheep are obtainable can get a fresh supply at any time. As for the small farmer or villager keeping a few head, impossible. They must have a large range that is expensively fenced, or competent herders with well-trained dogs; while the eastern owner with a small flock, must ever keep in mind, the well-known sign, "Beware of the dog." The Belgian hare was "boomed" about 16 years ago by unscrupulous persons who made money by spreading broadcast untrue records of the hares' achievements. They then sold for a big price, mongrel rabbits; many of them diseased. The result has keen a "black eye" for the Belgian hare, which the animal does not deserve. But since the price of meat has been soaring, hundreds of people with the "safety first" idea are purchasing breeding stock and I can say, with five years' experience, that another meat animal added to the farm or village home, which will produce such excellent meat as quickly and as cheaply as the Belgian hare, should not be overlooked by anyone, with the few simple requisites at hand for keeping them. P. F. WOODWORTH.

Massachusetts.

IT is reported that a few days ago eight rabbits and 14 guinea pigs were stolen from the Pasteur Laboratories in New York City. These animals were kept for experiment purposes, for testing the effects of various diseases, such as cancer, tuberculosis, or hydrophobia. The rabbits and pigs were stolen and sold to saloon keepers, in exchange for liquor. Happily, as it turned out, none of these animals have been inoculated with the germs of hydrophobia, although they might have easily been, and in this way the disease might have been scattered through the city.

CUSTOMER: "Have you any more of that butter like I got from you last week?" Grocer: "Yes, madam." Customer: "Then give me a pound of another kind."—Boston Evening Transcript.

Blizzard Horse Ice Calks—Have been sold for over 20 years and are the best device yet discovered for preventing the slipping of horses on ice. Agents wanted. **S. W. KENT, Cazenovia, New York**

DAIRY CATTLE

For Sale—150 Cows and Yearlings—Part grades; part registered. **Harry Vail, New Milford, Orange Co., N. Y.**

Ontario Prince Cornucopia—born April 20, 1914. Sire, 35.61 bull; dam, 27.42-lb. daughter of Aaggie Cornucopia Johanna Lad, also with 30 and 365-day records. This royally-bred bull only $250, on account of dark color. Otherwise perfect. Pedigrees ready. **CLOVERDALE FARM, Charlotte, N.Y.**

GUERNSEY BULL—dropped Aug. 12, 1913. Registered and ready for service. **RAY D. LEVAN, R. F. D. 3, Catawissa, Pa.**

For Sale—Two registered Guernsey bull calves sired by Cherry's Reymond of Lewison 2nd. No. 25104. **W. E ROBINSON, Parkers Landing, Pa.**

BUY GUERNSEYS FOR PROFIT

Your investment in GUERNSEYS will return a larger profit than that from any other dairy breed. Write for literature.

GUERNSEY CATTLE CLUB
BOX Y PETERBORO, N. H.

Dogs and Ferrets

Ferrets for Sale—Either color, large or small; mated pairs or dozen lots. Choice stock. **C. H. Keefer & Co., Greenwich, Ohio**

COLLIE PUPS—the intelligent kind. Also Bloodhounds. **NELSON'S, Grove City, Pa.**

Airedale Pups—7-weeks old by a son of Champion Soudan Swiveler. Fine heads, jet black saddles. Tan Markings. **Frank Mead, Amenia, New York**

COLLIE PUPPIES—Sired by Imp. "Ormskirk Sample"; dam, "Nishna Delight." These contain the blood of England's and America's BEST, and will make the very best foundation stock, pets or stock drivers. All are beauties and nicely marked. Sire and dam are grand workers. Price, $8 to $15. **WM. W. KETCH, Cohocton, N. Y.**

DAIRY CATTLE

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. **R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.**

The Jersey

comes into maturity early, is long-lived and is often found making records even to advanced age. She stands above all other breeds for *economic production.* Shall we mail you free a good book on the Jersey?

THE AMERICAN JERSEY CATTLE CLUB, 324 W. 23d St., New York City.

Unquestioned Health

The ninth annual inspection of the Meridale herd by a representative of the New York State Department of Agriculture has just been completed. The entire herd was carefully examined, and every animal of suitable age was subjected to the tuberculin test.

Not a Single Animal was Questioned

This exceptional assurance of health is just now of peculiar value to the purchaser of dairy stock. A few excellent bulls and heifers may be selected from the herd at this time. Full particulars submitted on request.

AYER & McKINNEY
300 Chestnut St., Philadelphia, Pa.

Holstein-Friesian Bull Calves For Sale—Write for special offer. **THE GATES HOMESTEAD FARM, Chittenango, N. Y.**

60 HIGH-GRADE HOLSTEIN YEARLINGS $30 and $35 each. Registered bulls, $35 to $100 each. Heifer and bull calves, ¾ Holstein and ¾ Guernsey, $15 each. **REAGAN BROS., Tully, New York**

READY FOR SERVICE—PRICES, $75.00 to $150.00 Registered Holstein and Jersey Bulls. Splendid individuals with great backing. Best blood in the land. Also younger bull calves. Write for list. **HOMEWOOD FARMS, RYE, N. Y.**

YOUNG HOLSTEIN BULLS—Grandsons of Pontiac Korndyke and King Segis. 3 to 15 months old. A. R. O. dams. $75 to $150. Real Bargains. **IRA S. JARVIS, Riverside Fruit & Stock Farm, Hartwick Seminary, N. Y.**

For Sale—Sir Changeling Mercedes—Grandson of Colantha Johanna Lad. 14 months old. Color—more white than black. Send for special offer and pedigree. **A. H. HAWKINS, Prospect Lake Farm, Goshen, N.Y.**

Thoroughbred Holstein Bull Calves one from A. R. O. DeKol-bred cow, one grandson of Milk and Butter King. Pedigree and diagram on application. Price, at 4 weeks, $25. **H. H. GOSLEE & SON, 85 West Ave., Oneida, New York**

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choicely bred, fine individuals, $30 and upwards. Write us before you buy. Can spare a few heifers. Satisfaction guaranteed. **HILLHURST FARM, F. H. RIVENBURGH, Prop., Munnsville, Madison Co., New York**

East River Grade Holsteins For Sale

75 High Grade Cows just fresh, large producers. 50 cows due to calve this month and next. 40 extra nice heifer calves ten days old, sired by pure blooded bulls, from high producing dams. Registered and grade bulls all ages.

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JOHN B. WEBSTER,
Dept. Y, Cortland, N. Y. *Bell Phone 14-F. 5.*

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Cortland County is clean and hasn't had even a suspicious case. We furnish certificate of health and tuberculin test 300 high-grade Holsteins in our herd. Write for prices.

F. P. SAUNDERS & SON
Springdale Farm, - Cortland, N. Y.

Purebred Registered
HOLSTEIN CATTLE

Here's growth. In 1871 the pioneers of this association held a meeting attended by six people. This year 389 members were present, and 2,864 were represented by proxies. The total membership to May 1, 1914, was 6,500—an increase of 1,107 members (or 17 per cent.) during the year. Since 1909 the registration of Holstein cattle has almost tripled, their average value as shown by average prices at auction has increased nearly $100 per head. This remarkable showing has been made on the absolute demonstrated merit of the breed.

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MARES AND HOLSTEIN CATTLE.
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PONIES—SHETLAND PONIES of quality. Prices reasonable. Write for Fall Catalog to Dept. L.
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SHROPSHIRE RAMS, yearlings and two year olds. Also ewes and ewe lambs from imported sires. **E. E. STEVENS & SON, Wilson, New York**

EWES FOR SALE—30 Shropshire and 20 Southdowns, now being bred to the very best Imported rams, in lots to suit, at reasonable prices. J. C. DUNCAN, Lewiston, N. Y.

High Class Hampshire Bred Ewes EWE LAMBS AND RAMS at bargain prices. Buy before they go into winter quarters. **HASLETT BROS., Seneca, N. Y.**

FOOT AND MOUTH DISEASE NOT ON OUR PLACE
On account of quarantine we are pricing all rams previously advertised at $10 to $15. To be shipped as soon as quarantine is raised. Rams weigh up to 200 lbs. **D. H. TOWNSEND, Lodi, N. Y.**

Special Sale for Nov. and Dec. of
Registered Tunis Sheep
150 head. Both sexes. All ages. Mule-foot pigs, both sexes. Some bred sows. Indian Runner and White Brazilian drakes. White Cochin China Bantam Roosters. Prices low. Write for booklet of information and prices. **J. N. McPHERSON, Scottsville, N. Y.**

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OUROC—NICE PIGS—$10 pair. Pedigreed. Write **S. A. WEAKS, DeGraff, Ohio**

REGISTERED DUROCS—ALL AGES, BOTH SEXES ORCHARD NOOK FARM, C. M. Palmer, Valatie, New York

SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. **C. E. BARNES, Oxford, N. Y.**

Duroc Jersey Red Pigs—Aug. and Sept. farrow. All Pedigreed. No man can sell you a better Pig than these. **J. H. LEWIS & SONS, - CADIZ, OHIO**

FOR SALE—Duroc-Jersey Pigs—registered and transferred. Both sex. Pairs not related. Some sows bred to farrow next March. A few Guernsey bull calves of choicest breeding. **Edward van Alstyne & Son, Sunnyside Farm, Kinderhook, N.Y.**

FOR PURE BRED TAMWORTH SWINE write or visit **WESTVIEW STOCK FARM, R. F. D. No. 1, Winston-Salem, North Carolina**

JERSEY REDS—choice selected pigs, 8 to 10 weeks old, 6 dollars each. Pairs not akin. Also older stock at reasonable prices. **E. L. ALBERTSON, Hope, N. J.**

Large Yorkshire Swine
We are offering a fine lot of LARGE YORKSHIRE Boars, ready for service. These boars have large bone and are true to type. Also have a few young sows of splendid conformation.
HEART'S DELIGHT FARM
CHAZY, -:- -:- NEW YORK

PEDIGREE CHESTER WHITES—Fall boars and sows; special prices. **SCOTT, Stone Ridge, N. Y.**

FOR SALE—Meadowood Chester Whites
1 registered boar—a proven sire of quality, 20 months old, $40.00. 1 registered boar from a prolific strain, 15 months old, $30.00. **Meadowood Farms, Cazenovia, N. Y.**

Reg. P. Chinas Berkshires, C. Whites.

Fine, large strains; all ages, mated not akin. Bred sows service Boars, Jersey and Holstein Calves. Collie Pups, Beagles and Poultry. Write for prices & circulars. Hamilton & Co., Ercildoun, Pa.

BERKSHIRES—8 weeks old, $5.00 **WALTER C. WARD, Grenloch, N. J**

LARGE BERKSHIRES AT HIGHWOOD
Selected animals all ages for sale.
H. C. & H. B. HARPENDING, Dundee, N. Y.

For Sale—Registered Berkshires
all ages, at **ORCHARD DALE FRUIT FARMS** Prices reasonable. Write or come and see. **H. L. BROWN, Carlton, N.Y.**

For Sale—Thoroughbred Berkshire Pigs
of the celebrated Masterpiece strain. Boars and sows now about 6 months old.
E. W. ALLEN, - Erieville, New York

Purebred Berkshire Pigs Cheap—Thrifty, healthy, long-bodied, up-and-coming, choice pigs. Farrowed August 13th. Quality breeding. $12.00 each—for quick sale. **OLD LANDING FARMS, Millsboro, Delaware**

BERKSHIRES
We have the large, thrifty kind, with lots of type, quality and breeding. Write for prices and descriptions. **TOMPKINS FARM, Lansdale, Pa**

Berkshire Boars for Winter Service
About Christmas time I will have a deluge of letters asking for boars fit for immediate service. The wise ones are buying now and putting them at once in their permanent quarters, so that Mr. Pig will feel quite at home and have his mind on business when the New Year's rush is on. **DON'T DELAY. BUY TODAY**
R. Y. BUCKLEY, Woodrow Farm, Broad Axe, Pa.

Immune Berkshires
both sexes, all ages, best of blood lines, good individuals. Our sale in August averaged higher than any sale held in the East this year. Breeding and quality did it. We have just purchased of Lucas and Gill, Huntland, Tenn., one of the best herds in the South. It includes their show herd that won first and Championship at Nashville, Tenn., this fall. Get your name in early for our February sale catalogue.
White Horse Farms, Paoli, Chester County, Pa.

THE "HOT-AIR ARTIST" TALKS.

THERE is one thing we have missed this Summer, and as Winter is approaching we miss it more. That is the effusions from your Madison County, N. Y., hot-air artist. Is he dead, or only sleeping? G. L. G.
Connecticut.

"Hot-air artist!" Now I wonder if our friend knew what a compliment he was paying me when he gave me that name? When I was a very small boy I went to the town fair with my grandfather, and saw a balloon go up for the first time.

"What makes it go up, Grandpa?"

"Hot air. Just plain hot air, my boy. You see when air gets hot, it expands and becomes lighter. So the cool, heavy air crowds under it, and pushes it up. If it were not for hot air we could not live, for the air that we breathe out is impure and if it all stayed down near the earth, after a while it would get so impure that we would be poisoned. But, fortunately, it is warm when we expel it, and it goes up out of the way."

So hot air produces circulation, and if there is any one thing that a newspaper needs, that is it. But, to be serious, "hot air" is not so harmful in a discussion. It sometimes starts the circulation of thought, and then passes harmlessly up out of the way. I have not been sleeping all of the past Summer and Fall, and during some of my waking moments, I have put another cow through an official test. And, by the way, I believe that there would be a great many more cows with good official records if their owners were awake when the cow was ready to be tested.

I believe that an erroneous impression exists (hot air if you please) that a cow must go through an elaborate course of preparation before she can make a creditable test. My cow ran in the pasture right up to calving, and I believe that she was healthier, and therefore got fatter than she would have done if shut up in the stable. "You can't feed fat into milk." (More hot air.) I think we will all agree that when a cow is in good flesh we cannot increase the fat in her milk by feeding. But there is not the slightest doubt that a fat cow will give richer milk than she will if she be poor.

This particular cow (a Holstein) never was a very deep milker, and if I did not use the Babcock tester, I should never have suspected that she would make over three pounds of butter in a day. I was surprised to find that a sample of her milk tested 4.8% fat, and began inquiring as to who was testing in the vicinity. I finally got her in at a place six miles from home, leading her there in the morning, when she was milked out at noon and immediately started on test. Now, here is where your big docile Holstein puts it over the Jersey. Instead of trying to bellow her head off and work herself into nervous prostration because she was away from home, Miss Holstein says: "Why, there seems to be plenty to eat right here. And here is a bucket of water right handy; might as well get busy." So this cow started right out giving 57 pounds of milk a day, testing on an average of 4.6%. How about that old "hot-air" gag that a cow must be kept absolutely quiet, and that only her regular attendant must go near her?

Then, again, this cow was not blanketed and sweated to make her temperature go up, and her fat go out in the milk. On the contrary, the stable was kept so cool that the man in charge complained of the cold.

I think that John Gould of Ohio was father of that extra choice bit of "hot air" that "A cow gets all the exercise she needs chewing her cud." Yet these cows were turned out for exercise every morning, and an attendant kept them continuously moving about the yard.

The cow finally gave 395 pounds of milk testing 22.85 lbs. butter in seven days. Not a big test, but a whole lot better than no record. If she had remained at home, if I could have fed and milked her right along, and I had known just exactly what and how much to feed her, she would, in all probability, have made a better record. But, really, I don't believe that she would have done so much better as some would have us believe.

Now after the "hot air" has risen and blown away from this "effusion" I hope the impression will remain that any man of ordinary judgment can keep a herd of purebred cattle and get good records on a fair share of them if he will not sleep all Summer. J. GRANT MORSE.

Cistern for Barn,

I HAVE 30 head of young stock and think we will have to build a cistern at the barn. About how big should it be, so when filled it would supply them for a couple of months anyway? Would you build round or square? About the inside, does stonework have to be laid and cemented, or could a wooden form be used and cement poured in directly against the earth? What proportion cement and sand, and how much cement would it require? My stock range from yearlings to 2½ years old. How would a cistern be finished over the top for absolute safety, and would it have to be larger on the top than bottom?
Carmel, N. Y. O. V. S.

A cow requires about 12 gallons of water daily, young stock proportionately less. With these figures as a basis, the approximate size of a cistern required to supply a given number of head may be estimated. The frequency with which the supply can be replenished from rains, or other sources, will need to be taken into account and no exact figures can be given. Cisterns may be either round or square, the former shape being somewhat preferable. In either case, an interior form of wood is built and the sides of the excavation are depended upon for the outer form, except in those cases where the soil is of such loose nature that it will not stand. No stone wall is needed where the cistern is built of concrete, and a good proportion for this latter is one part cement, two parts sand and four parts clean gravel or crushed stone; the mixture to be of such consistency as to pour readily. The interior should be finished with a one to two coat of cement mortar. Walls should be at least eight inches thick and, in large cisterns, reinforced with wire or iron rods. Round cisterns may have a cone-shaped top, if desired, the cone to be built over a form of wet sand, and either form of cistern may be covered with a six-inch concrete slab built over a temporary floor of planks so arranged as to cover the cistern and to be removable from the inside, access being gained through a man-hole left in the cover. This concrete cover should be reinforced with heavy wire netting, such as wire fencing, or with iron rods or bars. To ascertain the amount of cement required for the cistern walls and cover, figure out the number of cubic yards in them and allow one and a half barrels of cement to each cubic yard when mixed in the proportions above given. M. B. D.

AILING ANIMALS.

Lameness.

I HAVE a horse that is lame in his shoulder, evidently of long standing. He has been confined most of the time for four months and treated with various liniments but without improvement. In walking he does not bring this foot as far forward as he does the other. What can I do for him? G. H. T.
Connecticut.

We cannot diagnose a mysterious case of lameness without making an examination, but it is quite possible that the shoulder is not the seat of the lameness. If the horse thrusts the foot forward when standing at rest the foot is the seat of the lameness, and we should clip off the hair and blister the coronet (hoofhead) with a cantharidine blister applied two or three times, if necessary, at intervals of two or three weeks. If the horse stands down square on his foot when at rest the shoulder more likely is the seat of the lameness, and you might clip the hair from the shoulder muscles and shoulder joint and blister there.

Garget.

CAN you help me in any way to find out the cause for condition of my cows? They have garget when they are about dry. When they are absolutely dry their udders will swell and give a few spoonfuls of ropy milk. Last Winter they gave a good supply of milk. I made as high as 275 quarts in a day from 15 cows. I fed a well-balanced ration with corn stalks and hay. The past Summer they were fed a small quantity of feed and on pasture, as flow of milk would stop. I gradually stopped feeding. One of these cows has just calved with a fine large calf, and only gives a few quarts of milk; last year gave at least 25 quarts a day. A. P. B.

The cows were not properly "dried off." Milk continued to form after you stopped milking and the milk soured, clotted and caused the swelling or garget. When you wish to dry off a cow put her on a spare pasture and do not give any other feed. Milk her once a day at first and then every other day, leaving a little milk each time, but milking out clean at the slightest sign of inflammation. If the milk persists rub the udder twice daily with a mixture of equal parts of camphorated oil and fluid extract of belladonna leaves. The cow that is not milking well now should not again be bred, as she has had garget.

Stocked Legs.

I HAVE a driving mare 12 years old, weight 1075 pounds, that gets swollen legs around fetlocks. What shall I do for her? For the last month she has sweated more than usual when driven. Seems to be a little out of condition. Coat does not seem right. I feed oats and mixed hay. G. D. S.
New York.

Indigestion apparently is present in the case you describe, as the mare sweats and has an unhealthy coat of hair, as well as the tendency to stocking of the legs when stabled. It is probable that you are feeding too heavily for the amount of work she does. Let her occupy a box stall when in the stable and bed with shavings or sawdust, if she eats straw litter. Do not let her stand a day idle in the stable. Reduce the feed and avoid new oats and new hay. Rub the legs dry each time she comes into the stable; then bandage from feet to knees and hocks. Allow free access to rock salt. Do not give any medicine. If the sweating continues clip the hair from her belly and from the legs above knees and hocks.

Fistula,

DOES fistula leave any injurious after effect on a horse, after being healed up? I am considering buying a five-year-old mare, which has had this trouble, but is otherwise sound. O. H. M.
Delaware.

If the fistula is perfectly healed and the part is not in any way sensitive when handled and not distorted so that it will interfere with proper fitting of the collar, the mare may be bought. A considerable reduction in price should be made on account of the blemish. If the mare has but recently recovered you will have to be more careful in your examination than if she has been well for a long time.

Pin Worms.

I HAVE two young horses troubled with pin worms. What is the treatment? S. J. S.
New York.

These worms inhabit the rectum, and are only injurious by causing irritation which induces tail rubbing. They may be destroyed by injecting two or three quarts of soapy warm water containing a cupful of strong tobacco decoction made by steeping tobacco leaves or stems in boiling water or use a decoction of one ounce of quassia chips to the quart of hot water. Give the injection at night and repeat three times at intervals of two days.

Feeding a Foal.

I HAVE a colt 5½ months old, weaned it two weeks ago. I now feed the colt one quart of wheat bran and three-quarters of a quart of oats dampened, three times a day, mornings and evenings. I did not turn him out much the past two weeks, but will turn him out more as soon as he gets more used to being alone. I noticed that he gets against the wall in the box stall and rubs his tail. What can I do to stop that? A. K.
New York.

Twice a day let the colt take all he cares to clean up of a mixture of equal parts of wheat bran and crushed oats, and gradually substitute whole oats. One has of course first to accustom a foal to such feed. He may also have sweet skim milk to drink, if you have it to spare; but watch that it does not cause scouring. Let him run out doors as much as possible and have free access to the best of hay, as well as grass. Feed carrots as a part ration in Winter and in cold weather he may have a little corn. Let the colt lick rock salt at will. Wash the root of the tail with salt water twice a week. If he continues to rub worms are the probable cause and we should mix in the feed twice daily for a week one heaping teaspoonful of a mixture of two parts salt and one part each of sulphur and dried sulphate of iron, then skip 10 days and repeat.

Colic.

WHAT is a good reliable colic remedy? The animal affected is a good work mare, but keeps thin. We raised our own corn for feed and have plenty of fodder. We also raised a lot of fodder for her, planted the corn after we dug our early potatoes. F. M.
New Jersey.

There are several kinds of colic, and no single remedy is suitable for all. On general principles it usually is safe to give two ounces of turpentine and one ounce of laudanum shaken up in a pint of raw linseed oil. In wind colic omit the laudanum and add a dram of fluid extract of nux vomica. It often is found necessary to tap a bloated horse by means of a trocar and canula.
A. S. A.

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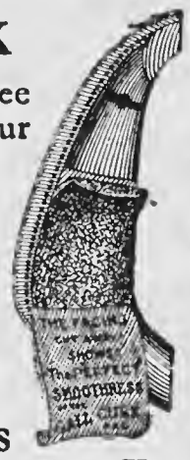

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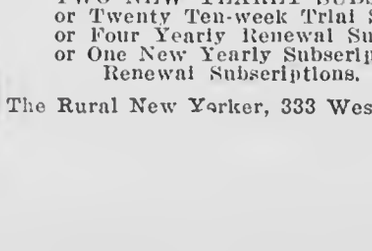
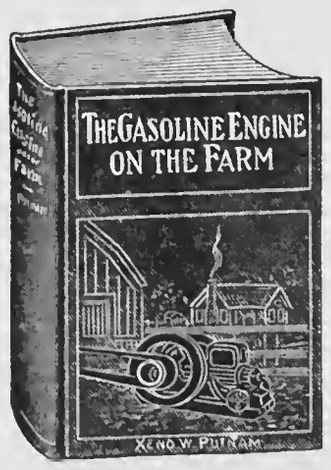


D-12

Wm. Galloway, President, The Wm. Galloway Co., 277 Galloway Station Waterloo, Iowa

THE GASOLINE ENGINE ON THE FARM. Its operation, repair and uses. By Xeno W. Putnam.



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Poultry Questions.

I HAVE raised 50 pullets out of a flock of 100 chicks, White Wyandottes, which are just six months old. About what age should they begin to lay? How should chicks be fed to begin to lay early? I also wanted to raise around 1,000 pullets for laying this coming season; can you give me any information as to breeds, feed and housing, and where I could sell the roosters for broilers, alive if possible. Give me the amount of feed for each hen and the different things to feed at each meal. L. C. R.
Connecticut.

Wyandottes that have been well reared should begin laying at about five months of age though some of the more precocious ones will get an earlier start. To encourage early laying one should begin as soon as the chicks are hatched and feed and care for them in such way that they will make rapid and uninterrupted progress to maturity. To this end, a variety of broken and ground grains should be used and meat or skim-milk, or both, should be fed in generous amounts. Feeding which merely keeps chicks growing produces Spring layers. If you wish to raise 1,000 good pullets you should plan to set about 8,000 eggs. With a 50 to 60 per cent. hatch, something less than a 50 per cent mortality rate, and a pullet production of about one-half the total number of chicks, you could reasonably expect 1,000 desirable pullets in the Fall. The feeding and care of both sexes will be the same until the cockerels have reached a weight of from one and half to two pounds; they may then be sold as broilers through any commission house handling poultry products. To give full details of breeding, feeding, housing and marketing would require a good sized volume. You will find all these things discussed in these columns during the season and any questions that you wish to ask will be gladly answered. For your present flock a mash should be provided and the one used in the laying contest at the Storrs Experiment Station may be recommended. This is 200 pounds wheat bran, 100 pounds cornmeal, 100 pounds gluten feed, 100 pounds ground oats, 75 pounds wheat middlings, 30 pounds meat scrap, 30 pounds fish scrap and 25 pounds of low-grade flour. This is kept constantly before the fowls in open hoppers, being mixed and fed dry. Mixed whole grains are also fed in the litter and the Cornell formula is a good one; 60 pounds corn, 60 pounds wheat, 30 pounds oats and 30 pounds buckwheat. The whole grains are usually fed twice daily, giving about a handful to each fowl. No exact amount can be specified and it is not necessary to follow any formula exactly in mixing. The above are given as good examples of grain combinations, however. In addition, hens should have green food of some kind and grit, crushed oyster shells and perhaps charcoal should be available. An ample supply of water is essential. M. B. D.

Respiratory Trouble.

I AM losing my fowls; can you tell me what the trouble is, and how I can relieve it? The first symptom that I notice is that they gape like little chickens when they have the gapes, and gradually grow worse until their breathing is very difficult and causes a peculiar sound. They have red combs and look perfectly healthy. I examined their throats and there is no inflammation or soreness, but the windpipe is wide open and does not seem to close when they breathe.
Virginia. H. M. V.

There are certain forms of fungi which flourish in warm, damp, weather upon decaying vegetable matter and which are capable, when transferred to the mucous membranes of fowls, of establishing themselves there. These fungus growths may be found in various places along the respiratory tract, sometimes forming circular patches at the opening of the windpipe and choking the fowl very much as gape-worms do in that affection. It may be these patches which you see at the opening of the windpipes in the fowls which you have examined; if so, see if you can remove them by the gentle use of a sliver of wood or toothpick. The treatment is rather preventive than curative. The fowls should have dry quarters, free from musty, moldy, straw or other litter upon which these fungi live and from which they may be inhaled by the birds. If the fungi have found lodgement within the air passages, I know of no practicable measures for their removal. Strong, vigorous fowls are probably much better able to resist these infections than are those of less vitality.
M. B. D.

Open-front Henhouse.

I HAVE had an old chicken house remodeled. The house I speak of has three large windows in it. I am a believer in fresh air for chickens, the same as for human beings and therefore have had the windows removed and the opening covered with chicken wire. The house is equipped with drop boards with perches on top and nests underneath, to which the hen gains access through jumping up in the back. The thermometer often drops below zero in Rockland County, where I live. Friends are laughing at my plan and discouraging me, saying the hens will have frozen feet and will not lay all Winter. A curtain has been put over the perches for the Winter and a drop curtain outside over the opening where the windows were. My stock consists of 70 Plymouth Rocks, all March and April pullets. My intention was to house them all together as soon as the severe weather comes, placing hay and dried leaves for litter with plenty of scratch food. In the morning I feed them with hot mash of middlings, sometimes with scraps, then about 4 P. M. plain oats, or oats soaked in hot water. Is this enough food for chickens housed for the Winter? Will you give me a good mixture for a scratch food and let me know if cracked oyster shells are necessary? E. C. S.
Nanuet, N. Y.

If your remodeled house is wind-tight on all sides but the one with the windows, and is not so long that drafts are formed by the wind blowing through from one window to another, as it probably is not, your plan is a good one, and you will undoubtedly find that your fowls are far healthier and happier than those that your friends confine to tight houses. Be careful that the curtain over the perches does not make the space behind it too nearly airtight and you will probably have very few occasions to drop those over the outside openings. Feeding twice daily is sufficient but it is perhaps better to divide the grain into two feedings, morning and night, so as to induce more exercise while the fowls are hunting for it. If a moist mash is used, my preference would be to make the mid-day meal of it. A good grain ration, as recommended by the Cornell Station, is composed of 60 pounds wheat; 60 pounds corn; 30 pounds oats and 30 pounds buckwheat. Crushed oyster shells are needed unless an ample supply of lime from some other source is provided. M. B. D.

AILING ANIMALS.

Indigestion.

I HAVE a five-year-old colt, run down and very thin, does not seem to gain very fast. I am feeding four quarts three times a day of wheat bran and hominy, one-third wheat bran. Can you tell me what to feed to fatten her?
L. W. B.

Have the teeth attended to by a veterinarian, as it is possible that milk-tooth crowns have not come away and are preventing perfect mastication of feed. Such crowns should be removed and sharp points filed down. It is a mistake to feed ground feed. Feed whole oats and one-ninth part of wheat bran along with best mixed hay. As worms may be present give the filly one ounce of turpentine shaken up in a pint of raw linseed oil, after starving her for 10 hours. Twenty-four hours after the oil mixture has been administered mix in the feed night and morning for a week one tablespoonful of a mixture of equal parts of sulphate of iron, salt and sulphur; then skip 10 days and repeat.

Depraved Appetite.

WHAT is the trouble with my horse? He is a large horse and we feed him well, but if he has no hay to eat steadily all the time he starts to chew off the wood of his manger, and also pieces off any part of the stall he can reach. He chews on all the wood within reach. Is this some sickness? M. E. M.
New York.

The horse is doing too little work and eating too much feed. Work or exercise him daily and never let him stand for a single day idle in the stable. Allow him a roomy box stall when in the stable. Cover exposed manger and partition edges with tin or zinc. Allow free access to rock salt. If he eats his bedding use planing mill shavings or sawdust. Watch for worms in the manure. If they are seen, or if there is a fur of scaly substance around the anus, or streaks of mucus there, give him worm powders in his feed night and morning for a week, then skip 10 days and repeat. Let the powders consist of equal parts of dried sulphate of iron, sulphur and salt and the dose one tablespoonful.

Feeding Sweet Corn; Stumbling Horse.

OWING to the scarcity and low price of horse (field) corn and the abundance and low price of ripe sweet corn, many farmers hereabouts are feeding their horses on ears of sweet corn sprinkling same with salt. Is this a safe practice in your opinion? 2. One of my horses has developed a habit of stumbling and sometimes falling. At times his feet will simply slide from under him. He has been fed well and seems to be in pretty good physical condition. Someone has suggested a tonic. Is nux vomica a good tonic to build a horse up, and if so what is the usual dose when administered in form of powder? E. D. L. E.
New Jersey.

1. Immature sweet corn ears should form but a very small part of the ration for a horse. Fed in considerable quantities such feed will be likely to cause indigestion, or irritation of the skin. Fed suddenly it may cause severe colic. Corn is best fed in Winter, as it is a fat and heat former. Using sound, dry ear corn (field) as a part ration in Summer and Fall combine as follows: Whole oats, 10 parts; ear corn, six parts; wheat bran, three parts. A work horse will require of this one and one-fifth pounds to one and one-third pounds for each hundred pounds of body weight as a day's ration, according to the work he has to do. 2. Have the horse properly shod. Then work or abundantly exercise him every day. Feed plenty of sound, old whole oats. Prefer fluid extract of nux vomica to the powdered drug. Give one dram of it along with half an ounce of Fowler's solution of arsenic night and morning, after a few smaller preliminary doses have been given. Gradually discontinue the medicine as soon as it is not needed.

Weak Calf.

I HAVE a calf, half Jersey and half Holstein, three months old. For the past week she has been too weak to stand up to graze more than 15 minutes at a time, although she has a good appetite, looks healthy and shows no signs of sickness, only weakness. Since she has not been able to graze I have fed her on milk. I have had a veterinarian to treat this calf, but the results have not been satisfactory. Do you think worms are the cause and what would you suggest as a remedy? A. S. T.
Virginia.

The calf should have been well fed on milk and meals, instead of being allowed to graze. The paunch (rumen) of a young calf is not developed for the accommodation of much roughage, and it has to depend largely upon feed which can at once be cared for by the fourth stomach (abomasum) which is the true digestive stomach. The calf has practically been starved and may not recover. At once add to the milk, fed four times a day, a little blood meal and flaxseed jelly, and also allow the calf free access to a mixture of oatmeal, bran and flaxseed meal, or feed calf meal with the milk. A tablespoonful of emulsion of cod liver oil given twice daily would prove beneficial. Medicine is not needed.
A. S. A.

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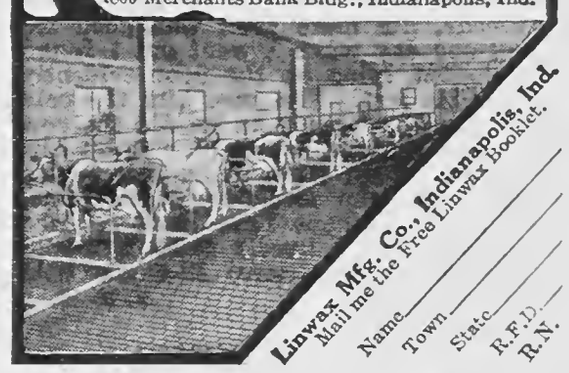

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Cold Water for Bloated Cows.

ON page 1350, E. A. A. asks what he could have done for a calf that bloated. A few years ago my herd of cows came in from pasture one night all well, as far as anything I saw, when I put them in the stanchions. We had nicely started milking when I noticed that the cows near me were acting as if scared at something in front of them. The cows were in two rows facing each other. As I rose to see what the trouble was I heard a cow breathing hard and could see her as soon as I was on my feet with her head down, mouth open and tongue hanging out, while she struggled for breath and seemed about ready to fall. I unlatched the stanchion to let her out, but we couldn't move her. We looked her over and saw she was bloated. I called to my wife, who was out by the house and told her. She came out, looked at her and said: "I believe I would pour some cold water over her." We ran for water and poured pailful after pailful along the cow's back. In a little while she had closed her mouth and was breathing naturally; so we left her and went back to our milking. Pretty soon she backed out of the stanchion and walked out doors. When we finished milking we put her back in the barn, rubbed her partly dry, blanketed her and left her there over night. Next morning the bloat was gone and she was chewing her cud. After this one of our ewes had a lamb in cold weather, so we had to keep them in the barn. The lamb ate with its mother. It grew fast, was pretty greedy, ate more than was good for it and one day when I went out I found him bloated, lying on the floor evidently kicking his last. We gave him the cold water treatment same as we did the cow and it wasn't long before he was up eating again. Both these animals were too far gone to take medicine when found. They might perhaps have been relieved by tapping, but I hardly think it would have removed the cause like the cold water treatment. A. E. H.

Alfred, N. Y.

The Cow-tester Shows Up the Boarder in Iowa.

PETER Peterson of Iowa in four years increased the butter fat of each cow 134 pounds, at an annual expense of $1.50 the cow. Here is a concrete example of where the cow testing association pays. The fourth year of Mr. Peterson's membership in the association he had sufficient increase in butter fat production in his herd to warrant his paying for the service of the tester for the year. Mr. Peterson was not the only man who profited, there were 26 other men. The average annual production of the association when established was not far from 145 pounds the head. Mr. Peterson and his associates were hard to convince of the advisability of paying $1.50 the head for the testing work. He and his neighbors believed they could tell the good cows in their herd, and believed they had practiced eliminating the boarder, as they called the unproductive cow. However the tester showed some grand surprises. Deceptive cows heretofore had survived the block, while, probably, others had produced a bad impression and were sent to the butcher.

Mr. Peterson's brother is one of the members of the association, and he recently decided to sell his grades. His herd numbered 25 cows and 25 heifers, and the cows at the sale averaged $134 a head, which was from $40 to $50 over and above the average value of the mature stock at the time of his entering the association. A buyer of grade stock was at the sale from one of the prominent dairy sections of the State. He paid $90 the head for grade two-year-olds from the tested dams, which was $15 a head more than he was paying for same stock from untested grade herds. In all the second Mr. Peterson profited in his sale, by increase in value of animals, more than enough to pay the tester for two years, while his increased production would easily have paid the tester for the remaining two years of the testing period.

Another saving which about paid the tester for the year has been that in the coöperative buying of feed. Over $700 was saved during the past year, or nearly $1.50 a cow, the cost of testing the animals. The organization of a testing association is simple. Twenty-six men get together, elect officers, figure up the number of cows, arrange for tester, his salary, and charge against each cow her proportion of the expense. The tester spends a day with each farmer, tests the individual cows, and goes the next day to another member in the organization, making the rounds each month. He keeps records of the cows, computes costs, advises in the matter of feeding, and is a dairy expert devoting his entire services to making the cow show up profit or get out of the race. Minnesota has a cow-testing association of over 5,000 dairy cows, the largest in the world.

W. J.

Dynamite for Woodchucks.

I HAVE read an article in "Fruit Grower and Farmer" which says that Mr. Budd suggests a method simple enough, and has nothing to do with blowing the animal to atoms (gophers). He says—take about an inch and a half or two inches of a stick of 40% extra-dynamite and enclose in a bit of rag or several thicknesses of paper; tie this about the end of a fuse 12 or 14 inches long, but do not use a cap. Insert the charge in the hole of the rodent as deep as possible and with a piece of stick pack the dirt around the fuse, leaving an end of the fuse sticking out so that it will light easily. Light the fuse; there will be no explosion, the dynamite will simply burn, throwing out a dense heavy black smoke, filling the hole with poisonous fumes that will kill every animal within. I have not tried this for this purpose: the method looks good to me. Dynamite, when a match is applied, or better and safer, fired with a fuse (without cap) will burn like celluloid, with a fierce flame, and throwing out a heavy black smoke, which I know to be poisonous, and in a confined space, such as a blocked hole, would be very apt to kill anything confined in the area of the hole. I think this method of clearing woodchuck holes would be very effective and am going to give it a practical trial at the first opportunity. Of course it could not be used in a barn or house to eradicate the rats and mice, owing to the flame—but bisulphide can.

My experience is that bisulphide of carbon, put on a pad of absorbent cotton and then put in the hole, the hole being closed, will effectually dispose of Mr. Woodchuck. It is good, of course, for moles, rats, mice, muskrats, etc. I recall one instance particularly where a long stretch of dike has been freed of muskrat; there was great danger of the dike breaking. Dynamite, of course, could not have been used, but the bisulphide was and we entirely cleared them out. I have used this treatment many times, and got results every time.

Pennsylvania. H. S. J. BRADY.

SULPHURIZING WOODCHUCKS.—Some years ago I had good success killing woodchucks (in Summer) with the following: Equal parts gunpowder and sulphur mixed well and wrapped in paper packages of about a tablespoonful each, with about 12 inches of blasting fuse (a light fuse will answer) pushed into the package and all pushed into the burrow. Jam a sod in the mouth of the burrow and light the fuse. The light explosion will force the sulphur fumes through the burrow. I never knew it to fail to kill unless the fuse was too short and the charge blew the sod out. E. S. MILLER.

Long Island.

Nov. 23. Wheat $1.05; oats 45; corn 60 to 70; potatoes from the field 25 to 30; onions 25 to 35; apples scarce. Owing to the quarantine there is nothing selling in hay and live stock except what hogs the butchers buy at eight cents dressed. Before the quarantine, cows sold at sales for $50 to $150. Butterfat now 34; eggs 30. W. E. H.

Bryan, O.

Here are some of the prices we pay for produce here: New-laid eggs, 60; butter 45; apples, any kind, $2.25 a box; turkeys 40 cents a pound; wheat $2.75 per 100 pounds; oats and corn the same; potatoes $2 per 100 pounds. A bunch of about 400 head of cattle sold for $51 a head straight through, a cow and calf bringing $102. The war hasn't affected the price of horses here yet to any extent. D. C. M.

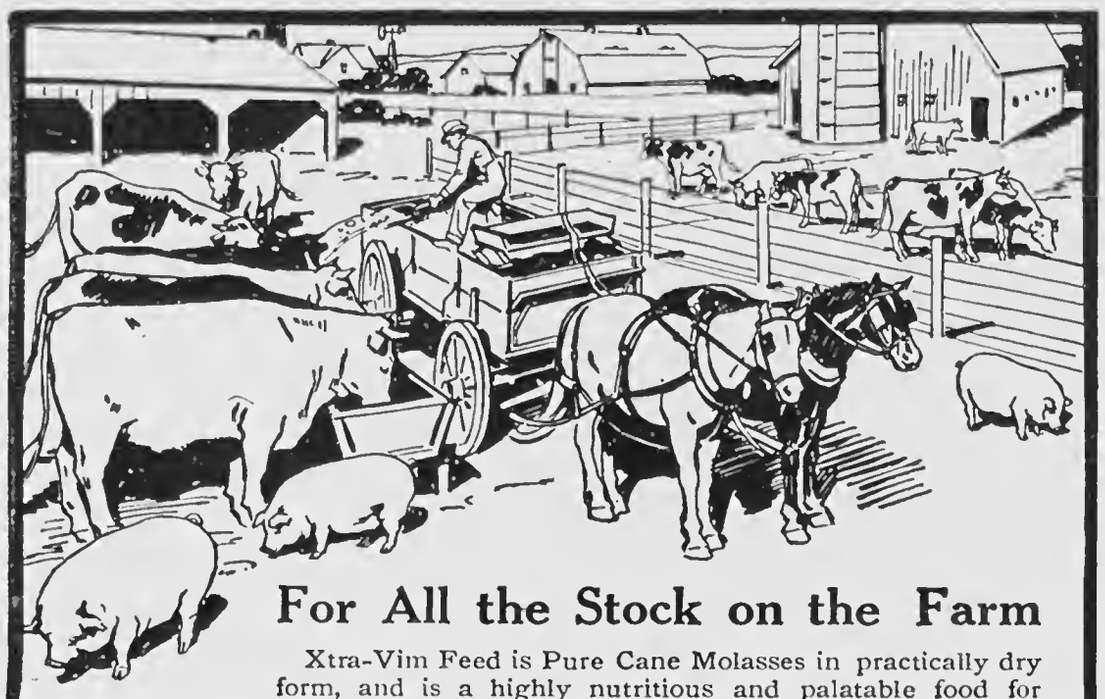
Tuscaua, Nev.

We have in this locality a cheese factory. It has given very poor satisfaction in general; the price of milk has run from $1.04 to $1.33 per cwt. It will average about $1.20 per cwt. Those prices are for 1914; here before it has paid well most of the time. Owing to the low price of milk there have been quite a number of cows for sale, but most of the farmers have disposed of their surplus stock at $40 to $50; springers and new milch cows are bringing $60 to $75. There is plenty of fodder. Hay and corn were a good crop. Silos have been well filled, but there is no grain crop this year, owing to the difficulty in harvesting and gathering the crop. After December 1 there will be some cows for sale, possibly a buyer could pick up a carload, and from indications the cows due to freshen in the Spring will bring about $50 according to age and condition. W. H. H.

Prattsburg, N. Y.

Nov. 23. Live stock, cattle, live, from 3 to 6 per pound; hogs 6 per pound; hogs, dressed, 7½; lambs, dressed, 12; sheep 8; poultry, hens, live, 10 a pound; Springs 12; ducks 11½; geese 12; turkeys, live 16 for fancy. Eggs, all colors, fresh, 30; dairy butter 30; creamery 36. Apples, No. 1, Baldwin, Spy, Kings, Greening and others $2 per barrel. No No. 2 wanted. Canning factories paid 50 cents per 100 pounds for hand picked No. 2 apples. Pears 50 and 75 per bushel. Crab apples 50 to $1.50 per bushel. Plums from 50 to 75 per bushel; grapes from 8 to 12 per fifth basket. Peaches plentiful and good, from 40 cents to $1 per bushel. Beets 60; carrots 50; cabbage 5 per head. turnips 35 and 40; onions 75; beets for stock use 30; carrots for stock 15. Farm crops: wheat $1.05; oats 45; corn 85; corn, new, 75. Beans, white, $1.30; kidney $2.25; hay, No. 1 Timothy, loose, $14; baled $16; mixed hay, loose $10 to $12 per ton; baled $12 to $14. Alfalfa not selling, farmers feeding same, what little there is. Straw baled $6.50 per ton; loose $4.50. Potatoes 30. Good cows sell here from $45 to $80 according to breeds. Horses from $80 to $200 per head; some sold for $500, matched teams. H. N.

Bangor, Mich.



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Military service is not compulsory in Canada, but there is an extra demand for farm labor to replace the many young men who have volunteered for the war. The Government this year is urging farmers to put extra acreage into grain. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or

J. S. CRAWFORD
301 E. Genesee St., Syracuse, N.Y.
Canadian Government Agent.

Running Qualities of Bulls.

"SCRUB bulls are good runners—they run the herd down." Found in the "Brevities" on page 1154.

That this statement is true can hardly be questioned. Time and again practical stock men have found that heifers sired by scrub bulls were noticeably inferior as to the quantity and quality of their product in comparison with like attributes of their dams. I have heard farmers contend that there were some scrub bulls that were worth more than many purebred animals, and while this is true in a few cases, it is not true in so large a number of cases as one may think. It is easy enough for one to think that he has a fine animal in his barn, then go to a fair and think his animal is better than any of those which are exhibited, but when it comes to a real comparison of the two animals, often there is none whatever.

The chief asset of the purebred bull is his ancestry. One must remember when buying bulls that a pedigree is nothing but family history—called genealogy when applied to the science of tracing human pedigrees. As a general thing, a superior scrub bull is a "happenstance," and only is found once in a while. In other words, his ancestry have not been selected at all, much less with any particular characteristic in mind. It often happens that in any particular family, there is often a very superior individual despite the fact that the common run of the family are decidedly below par. Common observation reveals to us that the offspring of this superior individual do not, as a rule, emulate the life of their parent, but rather tend to follow the general average of the family from which he sprang.

The purebred animals are the product of centuries of selection and culling, and is it then any wonder that they are able to transmit more of the desirable characteristics to their get than even a superior though scrub bull? Many of the strains in the various breeds have been selected and bred with a definite aim in mind for, some of them over a hundred years, and hence the heritage of one of these is much greater than that of the animal whose parentage has not been selected.

While it is often the case that a purebred bull is an inferior animal, yet it is the blood back of him that counts. We can say that the scrub bull has no blood back of him. For many decades the dairy breeds generally have been selected for milk capacity, and this has developed the tri-wedge conformation. It is true that a purebred bull of this conformation will put it on more of his calves and more distinctly than will a scrub that only happened to have this form.

Right at this point is where the records of production of ancestors become important. Two bulls may have family history traced back for the same number of years or generations but at that, the records of production are what do the testing. One animal has an ancestry of mediocre producers while the other's ancestry are nearly all high-quality animals. Unquestionably, the latter animal is far the more valuable. If a bull is worth keeping at all, he should be a good one. Of two bulls the same age and size, it costs practically the same amount to care for the poor one as for the good one and so about the only difference between a poor animal and a good one is the first cost. As to the difference in quality which two purebred bulls may actually impart to their offspring, we have the following quotation from Ohio Experiment Station Circular, No. 135, page 81:

One Holstein-Friesian bull used in the Ohio Experiment Station herd increased the average production of his seven daughters 1,299 pounds of milk and 40 pounds of butterfat per year above that of their dams. Forty pounds of fat per year for six years (average producing period) by each of seven cows would be 1,680 pounds of fat; 1,680 pounds at 30 cents per pound, equals $504. This animal cost $100 when a calf.

One Jersey used in the Station herd decreased the average production of his 11 daughters over 700 pounds of milk and over 45 pounds of butterfat per year below that of their dams. Forty-five pounds of fat per year for six years by each of 11 cows would be 2,970 pounds, which at 30 cents per pound would equal $891. The immediate difference in money value of these two bulls on these herds of less than 20 cows each was $1,395.00. Both bulls had an equally good chance to increase the production.

So it appears that there are such things as purebred scrubs. The bull should be tried out first and after he has proven his worth, then care for him in such a way that his hereditary characteristics are not impaired. The practice which some breeders follow of turning off their bulls from low-producing cows and selling them as breeders is lamentable. It is this very thing which is retarding progress in the dairy industry.

I. J. MATHEWS.

The Inheritance of Color in Horses.

BULLETIN 180 from the Kentucky Agricultural Experiment Station will be interesting alike to the practical horse breeder who desires to understand the scientific basis for the transmission of color and to the student of breeding who is interested in any investigations which may throw light upon its problems. The studies here described were undertaken with the idea of ascertaining whether or not color in horses is a "unit character" and so obedient to the Mendelian law of dominants and recessives among unit characters. It was believed that if color could be shown to be a true unit character the way might be opened to an understanding of the transmission of other more important characteristics. As a result of these studies, the author states that color has been shown to obey Mendel's laws and that through their application desired colors may be produced at will. The steps by which these conclusions were reached involve a technical understanding of the laws of Mendelism not usually possessed by the casual reader and not likely to interest him, but the conclusions, themselves, will attract the attention of all careful horse breeders.

The physical basis of heredity rests in small bodies, called chromosomes, within the germ cells of every animal, and every quality whether good or bad, appears to have its own chromosome. It is through the chance union of these chromosomes, or determiners, when the sexes are united that the quality which shall appear in the offspring is determined. Color is found to be a unit character, dependent, like other unit characters, upon the chance union of its chromosomes. It behaves like other Mendelian units, that is, it does not blend and lose its identity but, when recessive, disappears altogether though still retaining its determiners in the germ cells and, thus, its ability to reappear in some future generation. If the laws which govern the transmission of good and bad characters in the horse can be worked out as the author believes that those governing the transmission of color have been worked out, the breeding of horses can be put upon a more scientific basis and this preliminary study of transmission of color will have proved a valuable contribution to that end.

M. B. D.

Truth About Belgian Hares.

ON page 1338, E. R. S. asks about raising Belgian hares for meat once in a while. There is money in Belgian hares if handled right, and I do not think there is any danger of swamping the market, as they are always in demand. I have raised both Belgian hares and rabbits, but know the hares are more profitable than the smaller breeds. I have found them more profitable than poultry, easier to take care of, do not demand all high priced grain, will eat anything a sheep will. I would rather have a hare to eat any time than a chicken. Belgian hares can be raised for a family with very little cost, as they can be fed on potato parings, cabbage leaves and such things that are thrown away, with most families in town. They do not require expensive coops; a dry-goods box will do. They do not require an outside run. A box three feet square will do for a doe and her young until weaning time, although a larger pen is advisable when possible. A trio (two does and a buck) will supply a good-sized family with about all the meat they want, if cared for right. They can be bred six times a year, but it is not advisable to breed over four times. They will produce on an average about eight to a litter.

W. A. P.

Waterloo, N. Y.

Advantages of Thick Cream.

"TIGHTEN up the separator screw." That is the advice a creamery sends out to its patrons, and for part of one year, one man was out a large part of his time tightening the separator cream screw. The following are the advantages: Cream keeps better when thick; does not sour as rapidly as when thin; there is a smaller quantity of cream to handle and cool; it can be cured for the factory more economically; more skim-milk remains at home; the capacity of creamery is increased without increasing its equipment, and when it is necessary to pasteurize cream much less is lost in the process when cream is thick. Further, the farmer saves in transportation charges. With such cream it is possible to produce better quality butter, with a possibility of better price per pound to the farmer for butterfat.

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Hugh Adair, Delhi, N. Y., writes:

"The Empire Mechanical Milker is a wonderful labor-saver. With two units, my 11 year old boy milked 55 cows *alone* all through haying. He was never more than an hour and thirty minutes. Have had no trouble with our cows' teats or udders since we have used the Empire. And my cows are giving more milk than if milked by hand." The

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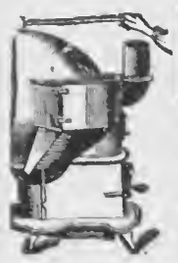

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D. R. Sperry & Co., Batavia, Ill.

The Henyard.

Selling Cockerels as Roasters.

HAVING often read the statement that it was more profitable to keep cockerels until they reach roaster size, than it was to sell them as broilers, I determined this season to learn the facts for myself. Twenty-five White Rock cockerels, hatched April 25, were selected July 13, and then weighed 40 pounds, 11 ounces (an average of one pound, 10 ounces) and at 15 cents per pound live weight were worth $6.08. I would say here that in order to make an even 25 it was necessary to put in three birds that were somewhat smaller than the rest, thus reducing the average. These birds were put into a yard about 40x20 feet in an orchard, and a dry mash (one of the commercial growing feeds) kept before them, in addition to which they were given a mixture of cracked corn, wheat and oats morning and night. Green feed was given every day and a supply of fresh water was always within reach. The picture shown at Fig. 632 was taken the latter part of August.

All of the feed was carefully weighed and up to September 15 they had consumed 105 pounds dry mash, costing $2.36; 61 pounds cracked corn 95 cents; 77½ pounds wheat, $1.37, and 30 pounds oats 30 cents, a total of $4.98.

I then commenced to fatten them by taking away the dry mash and feeding them all they would eat, three times a day of the following fattening mash, mixed rather wet: 60 pounds cornmeal, 20 pounds middlings, 10 pounds linseed meal and 20 pounds beef scraps. This formula was recommended by the Maine Experiment Station, and I have used it for the past five years with very satisfactory results. During the last week, after they had eaten all the mash they were given all the cracked corn they would eat. During the following period they consumed 112 pounds of the fattening mash, costing $2.55, and 11 pounds cracked corn, costing 20 cents; total $2.75.

I sold them September 30; when they weighed 130 pounds (an average of 5 1-5 pounds) and at 15 cents per pound live weight brought me $19.50. The following summary shows the result of the experiment:

COST OF FEED.

105 lbs. dry mash	$2.36
61 lbs. cracked corn	.95
77½ lbs. wheat	1.37
30 lbs. oats	.30
112 lbs. fattening mash	2.55
11 lbs. cracked corn	.20
	$7.73
130 lbs. roasters at 15c per lb.	$19.50
Less cost of feed	7.73
Less value as broilers	$6.08
Gain	$5.69

This is a gain of nearly 23 cents per bird, which seems to me quite worth the extra labor. I think even better results could be obtained where it was possible to give the birds free range until time to fatten. WALTER A. ROBERTS.
Maine.

Standard Poultry Rations.

THERE are so many calls for feeding rations for hens that it seems wise to repeat what we have often given before. We shall keep this standing, or print it every two weeks through the season.

CORNELL RATION FOR LAYERS.

The following whole grain mixture is fed to the flock at Cornell University:

By Weight. Winter.		By Measure. Winter.	
60 lbs.	wheat	32 qts.	wheat
60 "	corn	36 "	corn
30 "	oats	30 "	oats
30 "	buckwheat	20 "	buckwheat

For a dry mash to be kept before the hens all the time this mixture is suggested:

By Weight.
Winter and Summer.

60 lbs.	corn meal
60 "	wheat middlings
30 "	wheat bran
10 "	Alfalfa meal
10 "	oil meal
50 "	beef scrap
1 "	salt

EGG CONTEST RATIONS.

At the egg contest at Storrs, Conn., the following grain mixture is fed:

Coarse wheat bran	200	pounds
Cornmeal	100	"
Gluten feed	100	"
Standard middlings	75	"
Fish scrap	30	"
Beef scrap	30	"
Low grade flour	25	"

There are little boxes holding grit, shells and charcoal which the hens take as they like. There is also provided a "scratch grain" made up as follows:

Cracked corn	60	pounds
Wheat	60	"
Heavy white oats	40	"
Barley	20	"
Kafir corn	10	"
Buckwheat	10	"
Coarse beef scrap	10	"

Better cut this out to be used for reference.

White Eggs; Selecting Pullets.

ON page 1914, Mr. George A. Cosgrove, remarks of Leghorns that: "In localities their white eggs command a small premium." Yesterday, in the New York market, the difference in price between the best brown and white eggs was 14 cents a dozen! This is a premium worth having. The best "hennery whites" were 57 cents and the "hennery browns" were 43. My recollection is that once or twice this season the difference has been as great as 17 cents a dozen. Guess I'll stick to hennery white!

By the way—I have a pen at Storrs this year. Three of the birds (Nos. 483, 486 and 487) are a cross between a full blood Tom Barron cockerel and hens of my own stock. No. 481 is a daughter of "Miracle Mary," my good old hen that THE R. N.-Y. mentioned last Winter. I'm afraid my pen won't be away up top because I am not sufficiently expert to select immature pullets that I believe will lay heavily later on. I had to be sure of my pullets; so I sent birds that I knew were laying. The 10 birds have probably laid 100 eggs already—so that will be their handicap. They laid seven eggs the day before they went to Storrs and only laid four eggs during the first eight days of the contest. I think they will strike their gait pretty soon—when they get used to the trap-nests and accustomed to their new environment. Whatever they do—good or bad—will be a lesson anyhow. GEO. BOWLES.
Connecticut.

A BUNCH OF COCKERELS FOR ROASTERS. FIG. 632.

R. N.-Y.—In Boston and some other cities the brown eggs command a premium nearly as large.

Ventilation for Henhouse.

COULD you assist me in solving my ventilation problem? I have a poultry house 12x15 feet, which is divided into two pens, with three-quarter partition. Three sides of the house are tarpapered, the front of house which faces the South has eight sashes 2x3 feet, arranged so the lower sash, which is one foot above cement floor, is glass, the upper are covered with burlap. The roost is seven feet back from window, and one foot below upper windows. My Leghorns all sneeze and have colds. Is it the fault of my ventilation? Have I too much glass or too much burlap for our Long Island climate? Would you make any change in arrangement of windows?
Long Island. B. K.

The only test for efficiency of ventilation in a poultry house is the condition of the air within it. This should be so dry at all times that moisture will not condense upon the walls and quickly render the litter damp and sticky. If you are keeping the sash in your house closed, the burlap very likely does not afford sufficient ventilation, and it would be better to keep the upper sash partly or entirely open at all times, save during a driving storm or, perhaps, upon an unusually severe Winter night. Dry air, even if very cold, is harmless to warmly clad fowls while warm, moist air is absolutely incompatible with health. I would advise placing the perches as far back from the front as possible and providing a drop curtain which can be lowered in front of them on extremely cold nights. The upper sash can then be left open at practically all times. While fowls should not be exposed to direct drafts particularly while upon their perches, the tendency is to give them too little, rather than too much, fresh air. When the ends and rear wall of a poultry house are made airtight, the front may be made very largely of wire poultry netting to the advantage of the occupants and owner. M. B. D.

Picking Ducks.

CAN someone give me any information as to the best way of picking ducks?

In dry picking, particularly in young ducks, it is difficult to clean-pick without tearing the flesh, and in getting off the very small fuzzy feathers, and I fear to scald them, as the hot water may give the carcass a greasy appearance.
New Jersey. A. H. K.

To dry-pick a duck suspend it by the legs and with a sharp knife cut across the back part of the roof of the mouth to sever the arteries. Then with a short club hit the top of the head sufficiently to stun the bird. Begin to pick immediately in order to get the feathers off before death contracts the muscles. Some pickers sit beside the box for the feathers and hold the neck between the right knee and the box to prevent scattering blood. A pail of water should always be near into which the hand can be occasionally dipped. The feathers stick to the wet hand and are removed much more easily. Hard rubbing with the wet hand will remove much of the down. Professional pickers have knives of good steel and razor sharpness with which to remove the pinfeathers and shave off the down that cannot be removed by hand. If possible visit a professional duck-picker. W. H. H.

ANOTHER HEN RECORD.—On page 1328, I find record from H. B. Smith, from 450 S. C. White Leghorns for one year. Below is my report for eight months for 35 S. C. White Leghorns two and three years old (about one-third three years). Total eggs 2,721, 227¾ dozen, average price, per dozen, 47 cents. Amount received from eggs $106.78; feed $41.51; eggs, per hen, 128; profit, per hen, $1.86. On August 11 of this year I sold the 35 hens and received $14.36, which is included in the amount received. No eggs were sold for hatching or used for this purpose. I feed the Storrs Agricultural Experiment Station formulas with all the cabbage they can eat the year round. My coops are open front with drop curtain. My hens are kept in beginning with the first cold spell until the middle of March. I am a commuter working in New York, and have about two hours each day with a half a day on Saturday to give to the poultry business. I keep no fancy show birds, but breed for the quantity only. I have all May-hatched pullets, numbering 40 which have started to lay. These pullets were handicapped in laying because nearly all had the chicken-pox, which I am glad to state was readily overcome. The reason I kept the three-year-old hens was for the simple reason that I have heard of others having hens considerable older which gave a profit to their owner. C. S. D.
Clifton, N. J.

The department of poultry husbandry at Cornell, is sending out members of the staff to give instructions to poultrymen in culling layers for Winter production and breeding stock. The trips are made in circuits, the arrangements being made in advance. The work is done without charge except for hotel and traveling expenses.

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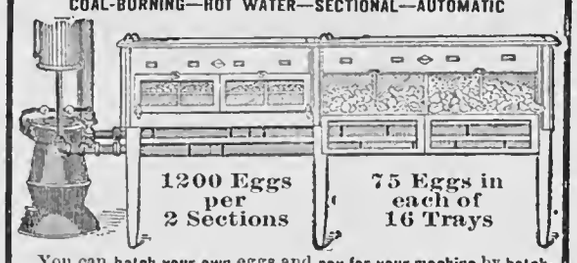

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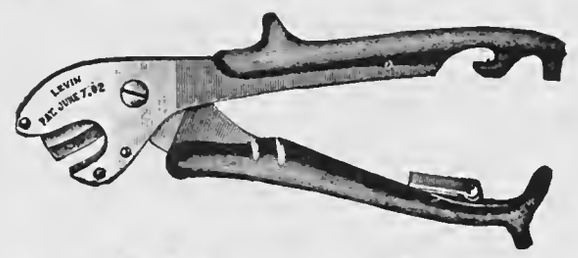

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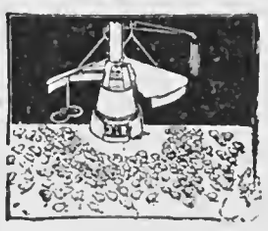

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The Henyard.

THE EGG-LAYING CONTEST.

THE fourth week of the contest, ending Nov. 29, shows a gain of 132 eggs over last week, the total for the week being 1,171. Pen No. 60, Storrs Experimental pen of White Leghorns, laid the highest number, viz., 42; Edward Cam's White Wyandottes being second with 39. Hillview Poultry Farm's Rhode Island Reds laid 38. This distributes the honors for the week among three breeds. The White Leghorns from Windsweep Farm still have the largest total, 172, and their output this week of 35 eggs places them fourth for the week. Edward Cam's White Wyandottes are next in the total; they have laid 158; 12 pens have not laid an egg yet.

A few years ago the fanciers who won premiums at poultry shows were the only ones to obtain large prices for fowls, and naturally great stress was laid on perfection of markings on the feathers, on feathers on the middle toe of some breeds, on total absence of feathers on the legs of other breeds, on the shape of the comb, on the color of the ear-lobes, every one of these things being objects of earnest endeavor, yet none of them were of any real benefit. The egg laying contests have already made a great change in conditions. Now, a man who has bred his birds for egg production and demonstrated at the contests that he really has a strain of fowls that can and do outlay others, can get as much for his birds for breeders, or as much for eggs for hatching, as the fanciers only could get a few years ago, and the point of importance in all this is, that the whole country is benefited by it. The report for the week follows:

	Week	Total
Barred Rocks.		
Merrit M. Clark, Connecticut	24	91
Frank L. Tuttle, Massachusetts	19	41
Francis F. Lincoln, Connecticut	11	38
Jules F. Francais, New York	14	27
Storrs Agr. Station, Exp. pen, Conn.	12	12
Storrs Agr. Station, Exp. pen, Conn.	8	8
O. A. Foster, California	..	..
White Rocks.		
Albert T. Lenzen, Massachusetts	..	10
Branford Farms, Connecticut	..	1
Branford Farms, Connecticut	..	2
Branford Farms, Connecticut	..	..
Branford Farms, Connecticut	8	14
Buff Rocks.		
A. A. Hall, Connecticut	10	43
White Wyandottes.		
Tom Barron, England	6	28
Edward Cam, England	39	158
Merrythought Farm, Connecticut	16	69
Neale Bros., Rhode Island	17	75
Mrs. J. D. Beck, Connecticut	8	27
Storrs Agr. Station, Exp. pen, Conn.	..	..
Storrs Agr. Station, Exp. pen, Conn.	4	11
Mapledale Farm, Connecticut	3	13
J. F. Byron, Connecticut	14	66
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	19	75
Silver Wyandottes.		
Silver Wyandotte Star, New York	..	..
Columbian Wyandottes.		
Merrythought Farm, Connecticut	15	44
Rhode Island Reds.		
Dr. J. C. Dingman, New York	1	1
Hillview Poultry Farm, Vermont	38	128
Homer P. Deming, Connecticut	3	3
Chas. O. Polhemus, New York	..	2
H. M. Bailey, Connecticut	..	..
John Backus, Vermont	7	19
W. H. Bumsted, Connecticut	12	35
Pinecrest Orchards, Massachusetts	17	43
Harry B. Cook, Connecticut	15	43
Colonial Farm, New Hampshire	25	87
A. B. Brundage, Connecticut	..	..
Storrs Agr. Station, Exp. pen, Conn.	15	39
Storrs Agr. Station, Exp. pen, Conn.	5	20
Rural New-Yorker, New York City	2	6
S. G. McLean, Connecticut	6	22
Springdale Poultry Farm, Connecticut	6	8
D. E. Warner, Rhode Island	6	24
H. W. Sanborn, Massachusetts	16	48
Albert R. Ford, Connecticut	3	13
Light Brahmas.		
Storrs Agr. Station, Exp. pen, Conn.	6	32
Storrs Agr. Station, Exp. pen, Conn.	1	5
American Dominiques.		
H. B. Hiller, Connecticut	30	66
White Leghorns.		
A. B. Hall, Connecticut	17	33
Geo. Bowles, Connecticut	17	67
Ellis W. Bentley, New York	24	94
N. W. Hendryx, Connecticut	19	38
Braeside Poultry Farm, Pennsylvania	11	37
Francis F. Lincoln, Connecticut	22	95
Cecil Guernsey, New York	10	19
Merritt M. Clark, Connecticut	32	123
Chas. N. St. John, New York	14	31
Elm Poultry Yards, Connecticut	8	37
Jay H. Ernisse, New York	5	51
Storrs Agr. Station, Exp. pen, Conn.	24	98
Storrs Agr. Station, Exp. pen, Conn.	42	136
Mrs. Rollin S. Woodruff, Connecticut	16	49
Windsweep Farm, Connecticut	35	172
James H. Lord, Massachusetts	..	30
P. G. Platt, Pennsylvania	28	89
Dictograph Farm, New York	..	..
F. M. Peasley, Connecticut	31	66
Chas. Heigl, Ohio	4	10
Tom Barron, England	17	20
Edward Cam, England	11	52
Geo. M. McMillan, Missouri	9	15
W. H. Lyon, New York	21	60
Happich & Danks, New York	16	29
A. P. Robinson, New York	23	68
Manor Poultry Farm, New York	30	90
Branford Farms, Connecticut	9	20
Branford Farms, Connecticut	13	58
Branford Farms, Connecticut	10	55
Branford Farms, Connecticut	8	20
Anna Dean Farm, Ohio	4	36
Rural New-Yorker, New York City	15	55
Albert S. Sondregger, Connecticut	17	97
S. J. Rogers, New York	7	41
Stoneleigh Poultry Farm, Penn.	16	33
Mrs. W. B. Whitlock, Connecticut	9	75
Foth Bros., Connecticut	12	28
James V. Thomas, New York	19	39
Sunny Acres Farm, Connecticut	16	21
R. C. Brown Leghorns.		
The Gale Place, Connecticut	..	1
Buff Leghorns.		
Lakeside Poultry Farm, Michigan	4	4
O. L. Magrey, Connecticut	10	29
Black Leghorns.		
J. Collinson, England	34	49
Silver Campines.		
Uncowa Campine Yards, Connecticut	5	5
Louis E. Prickett, Connecticut	..	..
Light Sussex.		
Dr. E. K. Conrad, New Jersey	..	3
Salmon Favorolles.		
Doughregan Farm, Maryland	..	..
White Orpingtons.		
Henry S. Pennock, Florida	..	..
Obed G. Knight, Rhode Island	11	90
B. P. Nase, Connecticut	..	..
Buttercups.		
Chanticleer Plty. Plant, Pennsylvania	..	..
Favorite Hens.		
Rural New-Yorker, New York City	5	13

GEO. A. COSGROVE.

Poultry and Foot-and-mouth Disease.

IT seems that some of the poultry dealers have claimed that the increase in the price of poultry was due to foot-and-mouth disease. This claim is nonsense. The disease does not affect poultry at all and except upon farms where the disease is actually found the movement of poultry would not be interfered with. The Department of Agriculture makes this statement:

"It is true that when a case of foot-and-mouth disease is found upon a farm that farm is absolutely quarantined by the State or local authorities. No prodnce of any sort can leave it, the owner is not even permitted to drive his horses on the public highway, and in some cases his children are not allowed to go to school until the exposed stock have been done away with and the entire premises thoroughly disinfected. Since the disease, moreover, is readily communicated from farm to farm by cats, dogs, poultry, and human beings, the local authorities exercise their own discretion in determining what restrictions should be placed upon shipments of produce from the area in the immediate vicinity of the infected farm. These areas are so limited in extent, however, that the amount of poultry that may thus be prevented from reaching the market is an inappreciable percentage of the total supply."

Hens With Colds.

WE have a few young pullets of this year, with a new-built coop. Two of them are suffering from a heavy nose-running, both eyes swollen up. What disease is this and what remedy would you suggest? I have been using olive oil for the eyes and that seemed to open them up and also kerosene oil for the nose. They seem to be a little better. Can you suggest any other treatment? MRS. M. F. T.

New Jersey.

These pullets have evidently acquired "colds," or catarrhal inflammation of the nostrils and eyes and it is possible that true roup may be present. A disagreeable, markedly foetid, smell about the discharge from the nostrils and eyes would indicate the presence of the latter disease. In any event, they should be removed from the rest of the flock and kept in a dry, comfortable, place where they may be fed upon soft food and given only water to drink that has had a teaspoonful of permanganate of potash crystals added to each quart. Their heads may be frequently dipped into the same solution. It would be well to add the permanganate crystals to the drinking water of the healthy fowls also, and if there is any suspicion of roup, to clean up and whitewash their quarters and disinfect their utensils with boiling water. Any fowls afflicted with roup should be killed and their carcasses deeply buried. The symptoms of roup in its early stages and those of a hard cold are very similar but the evidently greater severity of the disease and the more offensive odor should distinguish true roup from even a hard cold. M. B. D.

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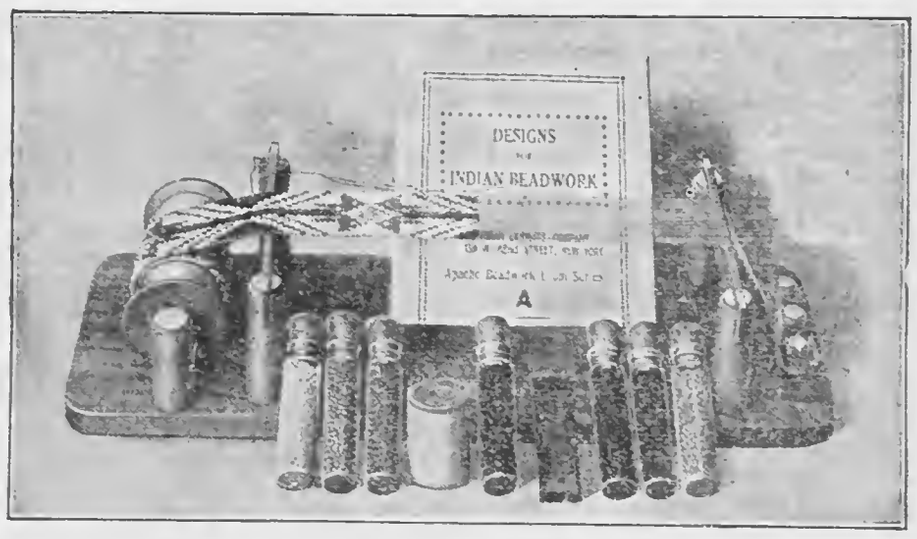

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This refers to the Ingersoll dollar watch advertising. It is the kind of work that tells. If two dozen large national advertisers like Mr. Ingersoll would persistently follow his example fake advertising would disappear from large publications in three months. The publisher has the destiny of fake advertisers in his hands, and large responsible advertisers should use their influence to urge the publisher to his plain duty.

If your station happens to be what is called a *Non-Agency Station*, when ordering goods by freight or express request the shipper to notify you when shipment is made, so that you can be on the lookout for the goods, as the transportation companies assume no responsibility after goods are placed at the station, if there is a station, or beside the track if there is no receiving station. They claim their liability ceases when the goods leave their hands. We have had considerable trouble with complaints growing out of such circumstances, and a little precaution will protect the receiver of goods at such places.

I have your letter with voucher for $10 from the Long Island Railroad Company in payment for damages to goods shipped over their system. The speedy settlement surprised me, as the company, after a "thorough investigation," decided that $3 would pay for all damages. When this was refused they raised it to $5, and I refused that offer, as my claim was just and exactly what it would cost to repair damages. I turned it over to you and settled down for a long wait. Your letter comes as a surprise with this voucher for the full amount. I thank you for your efforts and the satisfactory ending of the case. T. P.

New York.

When we get all the evidence, and the claim is just, we can now get settlements in reasonable time. It hardly takes days where we used to take months.

I shipped eggs on April 28, May 4 and July 28, and the express company failed to deliver two cases. I have asked them to tell me who received them, but they have not done so. Will you take it up with Adams Express Company and see if you can get them to settle? W. W. C.

New York.

The above came to us in August. In November we received the following:

It is with great pleasure I am now able to inform you that through your persistent efforts, payment in full has been received for the two lost shipments of eggs. I feel sure it was your interest that secured the adjustment of this claim.

New York. W. W. C.

On July 8 I bought a pair of horses from William McGeary at the Atlas Stables at 154 East 27th Street, New York City. Mr. McGeary gave me a guarantee on the stationery of the Consolidated Ice Company, specifying that the horses were good workers in single and double harness, and if not as represented could be returned within a month and the money would be returned in full. In driving the horses home both of them broke down and showed evidence of having been doped a short distance from the city, and they were returned to Mr. McGeary at the stables from which they were bought. Mr. McGeary claims that he did not have the ready money and gave me a note for the purchase price. The note is past due and a lawyer in whose hands I placed it for collection has returned it as worthless. N. M.

New York.

The above experience is a typical experience of farmers who come to New York to buy horses and fall in the hands of the horse "gyps." The rule is, these "gyps" purchase the cheapest broken-down horses they can find, dope them up and feed them up until they make a good appearance, and then sell them at what appears to be a bargain price. These "gyps," who are typified by Wm. McGeary, will guarantee money back if not satisfactory, or make any other conditions necessary to make the sale. As their guarantee is worth nothing, they have nothing to lose in giving a written guarantee. Our information is that Mr. McGeary lives at 298 Stuyvesant Ave., Brooklyn, N. Y., in good style; supports an automobile, and lives in apparent ease and luxury. These horse jockeys are always shrewd enough to avoid criminal responsibility in one way or another. Mr. McGeary seems to have done so in this case by offering the note in settlement, and the same having been accepted by the purchaser of the horses, otherwise he would have been subject to prosecution by the District Attorney on the charge of fraud. The experience is valuable only as a warning.

What do you know about the Cavies Distributing Company, Kansas City, Mo.? They say they are members of the National Pet Stock Association, and sell breeding stock of guinea pigs with a guarantee to sell all I raise for me at not less than one dollar a pair. J. W. B.

New Jersey.

We have never known a responsible firm to guarantee to buy the entire products of breeding stock either animal or vegetable; but we have known many irresponsible and fake concerns that made such promises to sell the stock they wished to dispose of. One must bear in mind that a guarantee is good for nothing unless the concern making it is responsible for his contracts, and even then it often happens that it would cost more to enforce the contract than it is worth. Our advice is to forego all of these sure thing profits, where you are obliged to make the first remittance. If there is such a sure thing in the breeding of guinea pigs, why not let the company furnish the breeding stock, and you do the breeding? They could then take back the first products to pay for the stock and buy the balance. We venture to say you could give as good assurances of responsibility as the company can furnish.

I am enclosing you a card of D. B. Cornell Company, Great Barrington, Mass. Please let me know if this company is reliable. They charge a fee of $20 for listing. This leaves me the privilege of selling the farm by giving them 10 days' notice. I would like your opinion of this.

New York. SUBSCRIBER.

Farmers who take our advice will sign no blank contract whatever with real estate agents. If you want them to handle your property write them a letter saying what you want to do, and keep an exact copy of it. We would also advise never to pay an advance fee under any circumstances. It is time enough to pay a fee when the property has been sold and a contract signed with a responsible buyer who makes his first payment to you direct. Agents of the above concern have given receipts to return the fee if the sale was not made within one year; but the owner could not get the money back when the year expired. We have one such claim now.

I enclose a letter from Mr. Savage or his minions. Do you suppose I shall be compelled to pay this demand? Savage failed utterly to keep his part of the agreement, and pays no attention to my letters of explanation. I fed his food according to directions and not only received no benefit but lost my hogs besides. C. O. G.

Iowa.

The letter inclosed reads as follows:

We are just about to prepare our next publication listing for sale all accounts, notes and claims in our hands against delinquent debtors. This list is to be published in the local papers in the community wherein the debtor resides, in addition to being posted in the public places designated for the posting of legal sale notices.

A copy of the list will also be sent to the merchants and business concerns in your town and all surrounding towns besides those all over the country using our service.

The account you owe the International Stock Food Company is listed among other claims, and will have to be published along with the rest. We warned you of this proceeding in a former letter to give you a chance to protect yourself. We are sure you do not want your neighbors and friends to see your name among a list of delinquent debtors, and we are writing to give you an opportunity to pay this claim before this publication is issued and save yourself this notoriety.

We will wait ten days and we urge that you respond promptly and avoid the seriousness of this situation.

Yours very truly,

NORTHWESTERN COLLECTION & ADJUSTMENT CO.

Accompanying this letter was a list of alleged bad debts with the announcement that they would be offered for sale at public auction. We refrain from expressing our opinion of this literature. What our feelings might dictate would hardly look dignified in cold type. If Mr. Savage thinks to build up a trade with farmers on this kind of treatment then the future only can decide the wisdom of his policy.

J. J. D.

BOOK AGENT: Uncle, I'd like to sell you a new cyclopedia. Uncle Swayback: Wa-all, young feller, I'd like ter hev one, but I'm afraid I'm too old to ride the thing.—Melbourne Leader.

THANKSGIVING PRICES IN BOSTON MARKET.

BOSTON market was well supplied with fruit and vegetables, the demand this year not being much above the average demand each week along this line. Oranges, however, were short, contrary to expectation, as a good supply from Florida was expected to be on the market on or before this time. This year, however, these seem to ripen up slowly and most shipments received from there so far have been green. It is also between seasons for California stock to be in large supply, what there is of those bring about $5 per box. Floridas sold at $2.25, $3, $4 and $4.50 per box. Lemons are plenty and cheap for the season; California stock brought $4 per box, foreign stock $2.50 to $3.50. Grape fruit very plenty and cheap at $2 to $2.75 per box. Bananas also very reasonable at $3 for best yellows, others $2.50, $2.25, $1.50 and $1.25 per bunch. Reds $1.50 to $4.25. Cranberries still in large supply, and only fair demand keeps the price at the former low level, $3.50 to $4.50 per barrel and $1.50 to $1.75 per box. Pears fair both in supply and demand; Bosc $2.50 to $3.50 per box; Anjou $1.50 to $1.75; other kinds $2.50 to $3; Native and foreign nuts in good demand at reasonable prices. Naples 14 to 18 per pound; others from 11 to 15, except almonds, which bring around 20. Dates 7 and 8 cents per pound; figs 15.

Apple trade better, as demand is good and supply on hand of best fruit is not heavy and brings good prices. Most of the poor stock is now disposed of and common stock on hand is not much above the demand of same, both these classes are helped by good prices in English markets which are about $2 per barrel above this market and only about $1 per barrel is cost of transportation to same. Up to Nov. 21st the report says 1,028,412 barrels have been shipped against 956,095 for last year. In this market McIntosh sell at $3 to $4 per barrel; Snow, Wolf River and others $2 to $3; Baldwins $2 to $2.50; Greenings about $2; Native box fruit 50 for cooking stock up to $1.50 for fancy sorts; Western box fruit average about $2.

Potatoes not in heavy demand and with a fairly good stock on hand prices are dropping slightly; $1.10 per bag being yard price at this time. Sweets in good demand for certain trade and price is $3 and better per barrel, or $1.35 per basket. Onions doing much better for two reasons, some export trade is developing, and the common stock is now used up, making it necessary to sell from the storage stock for which holders and dealers expect some profit above cost. Connecticut Valley up to $1.50 per 100-lb. bag. Spanish $3.50 per crate; Native box stock, 75 to $1; cabbage, Savoy and drumhead, bring nearly or quite $1 per barrel; red stock 90 per box; cauliflower from California $1.50 per crate. Cucumbers $5.50, $3.50 and $2.50 per box. Celery prices did not change much, 75 and $1 per dozen is the price for white stock with Pascal and Boston Market $1.25 to $1.75. Lettuce 75 per box. Squash, Boston Marrow, 90 and $1 per barrel; turban and Hubbard $1 and $1.25 per hundred pounds. Hothouse tomatoes 20c per pound; Florida stock $2.50 per crate. Turnips 75 and $1 per box for white egg and purple top, rutabaga going at $1.25 per bag. Beets 75 and better per box; carrots 75 to 90; parsnips $1.25; radish 30 per dozen bunches; spinach 65 per box.

Very best butter is not plenty, yet the supply is expected to increase in a few weeks, and as other grades are in rather large supply the price is in buyer's favor, on the latter at from 29 to 32. The former brings 34½ for Western stock while nearby Northern stock brings 35 to 36½. Supply of cheese plenty for demand, with prices from 15½ to 17 on the various grades. Eggs are believed to have reached the top figure for the year, and sales of strictly fresh are rather larger than sales of storage stock at this time. Usually it works the other way and storage stock has a heavy sale at this season; price for latter is 27 to 36, with good grades working off at 40 to 50; best nearby fresh stock 55 to 59.

Turkeys were up in price equal to or better than last year's prices, especially at retail; about 35 per pound was a general price for not very fancy looking birds. Wholesale prices were 24, 25, 26 and 28. Sales of chickens were heavy this year because of turkey prices; these were sold at from 22 down to 15; ducks 18; geese 20. Best dressed beef 14½ per lb.; good 12; others 10 to 11; best lamb 15; good 12½ and 14; veal 16 and 17. Dressed hogs around 10.

Trade in horses is a little dull on all grades, especially on second and third quality horses, with which the market is flooded, and prices rule low in this class, $50 to $100 each are about the figure on them. Good second-hand stock is snapped up at good prices of $250 or thereabouts. The few green ones sold are not much or any above cost figures, and those who can will hold until later, or Spring when prices are expected to jump.

Hay prices hold at about the same level, $23 per ton for best; other grades $22, $20, $18 down to $15. Meal $1.57 per 100-lb. bag; oats 54 to 57 per bushel; cottonseed meal $30 per ton; gluten $33.50; linseed $35; bran $27.50 per ton; Alfalfa meal $24. A. E. P.

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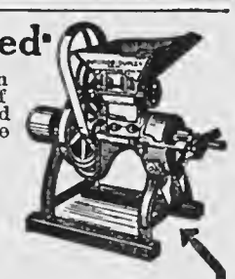

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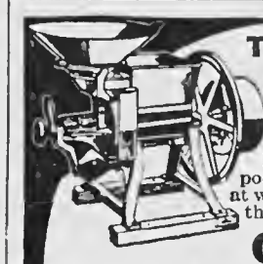

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Dec. 4, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotel and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Prices are running about one cent below last week's figures. On lower grades the decline has been still more.

Creamery, extra, above 92 score, lb	33½	@	34
Extra, 92 score	32½	@	33
Good to Choice	28	@	32
Lower Grades	23	@	25
Storage	26	@	32
State Dairy, best	31	@	32
Common to Good	23	@	28
Ladles	20	@	22
Packing Stock	19	@	21
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 34 cents.
Boston, western creamery, 33.
Chicago creamery, 24@32.

CHEESE.

The market is rather weak, although prices on top grades are held firmly. Stocks in local storages are more than 50,000 boxes in excess of last year.

Whole Milk, fresh, specials	16	@	16¼
Average fancy	15½	@	15¾
Under grades	12	@	14
Daisies, Wisconsin	14¾	@	15¼
Skims, specials	13	@	13½
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS

Nearby white eggs continue scarce, occasional sales above 60 cents being noted. In medium and under grades the market is extremely weak. Fresh gathered stock sells from 25 to 40 cents, and storage mainly 25 to 27 cents.

White, choice to fancy, large	58	@	62
Medium to good	42	@	52
Mixed colors, best	43	@	46
Common to good	25	@	20
Storage, best	28	@	30
Lower grades	18	@	20

FRESH FRUITS.

The apple market is well supplied with fruit running medium and above. Grapes largely in bad condition and selling low. Cranberry trade dull.

Apples—Ben Davis, bbl	1 25	@	1 75
York Imperial	1 75	@	2 50
McIntosh	2 50	@	4 00
Jonathan	2 50	@	3 75
Twenty-ounce	1 50	@	2 75
Spitz	1 75	@	3 00
Baldwin	1 75	@	2 25
King	2 00	@	3 25
Greening	2 00	@	4 00
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 00	@	5 00
Bosc	3 00	@	5 50
Sheldon	3 00	@	5 50
Kieffer	1 00	@	2 75
Grapes, Catawba, 4lb bkt	5	@	7
Black, 4lb. bkt	8	@	10
Black, 20lb. bkt	30	@	45
Bulk, ton	30 00	@	40 00
Cranberries, Cape Cod, bbl	2 00	@	5 00
Jersey, bbl	3 50	@	4 00

HOPS.

Prime to choice	26	@	28
Common to good	22	@	25
Pacific Coast	10	@	14
Old stock	7	@	8

HONEY.

Clover, comb, lb	12	@	16
Extracted, gallon	50	@	90

BEANS.

Marrow, 100 lbs	6 55	@	6 60
Medium	4 65	@	4 70
Pea	4 55	@	4 60
Red Kidney	4 50	@	5 75
Lima, California	5 90	@	6 00

VEGETABLES.

Potato prices remain as for several weeks, mainly 50 to 60 cents per bushel wholesale. The quarantine on imports of Canadian potatoes to this country, established a year ago, because of disease, has been removed. For the present the Canadian stock will be admitted at only two points, New York and Boston, where Federal inspectors will examine all receipts.

Potatoes—Jersey, bbl	1 25	@	1 50
Long Island, bbl	1 75	@	2 00
State, 180 lbs	1 25	@	1 60
Maine, 180 lbs	1 50	@	1 90
Bermuda, bbl	4 00	@	6 50
Sweet Potatoes, bbl	2 00	@	3 25
Brussels Sprouts, qt	3	@	9
Beets, bbl	1 00	@	1 50
Carrots, bbl	75	@	1 00
Chicory, southern, bbl	1 50	@	2 00
Celery, doz	10	@	50
Cauliflower, bbl	1 75	@	4 00
Cabbage, bbl	75	@	1 00
Ton	8 00	@	15 00
Kale, bbl	75	@	85
Lettuce, half-bbl. basket	25	@	1 00
Onions—Red, bag	1 00	@	1 25
Yellow	1 25	@	1 40
Peppers, bu	1 00	@	2 00
Radishes, 100 bunches	25	@	50
Spinach, bbl	50	@	1 25
String Beans, bu	1 50	@	3 50
Squash, Hubbard, bbl	75	@	1 00
Marrow	50	@	75
New, bu	1 00	@	1 50
Egg Plants, bu	1 50	@	2 50

LIVE POULTRY.

Chickens, lb	11	@	13
Fowls	12	@	14
Roosters	9	@	10
Ducks	13	@	14
Geese	12	@	13

DRESSED POULTRY.

The warm, damp weather has put the poultry market in bad condition, supplies that ordinarily would have come through all right, arriving more or less damaged. Demand is light, and whatever is suitable goes to the storage places, and other grades sold at cut prices.

Turkeys, choice, lb	24	@	25
Common to good	15	@	22
Chickens, choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	23	@	24
Fowls	14	@	17
Ducks, Spring	10	@	17
Squabs, doz	1 25	@	5 00

HAY AND STRAW.

Demand for hay is so light that the market is overstocked and weak.

Hay, Timothy, No. 1, ton	20 00	@	21 00
No. 2	17 50	@	19 00
No. 3	16 50	@	17 00
Clover mixed	18 00	@	19 00
Straw, Rye	13 00	@	13 50

LIVE STOCK.

Native Steers	6 75	@	9 00
Bulls	5 25	@	7 25
Cows	2 75	@	6 50
Calves, prime veal, 100 lb	10 00	@	13 00
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 75
Lambs	8 00	@	10 00
Hogs	7 75	@	8 00

GRAIN.

No special change in grain prices, except rye, which is unusually high. This of course applies only to rye free from onion. Nature has given the wild onion a strong grip on the rye crop, as the little sets on the top dry down to the size, appearance and nearly the weight of rye kernels. They readily go through any ordinary rye screen in the fanning mill, and very few are enough to spoil a batch of rye flour. Hence buyers are always on the lookout for onion in rye. The only way to get rid of this pest is to dig it out of the growing crop and burn it—not a serious job where there are only scattering bunches in the field.

Wheat, No. 1, Northern Spring	1 29	@	..
No. 2, Red	1 26	@	..
No. 2, Hard Winter	1 26	@	..
Corn, as to quality, bush	71	@	73
Oats, as to weight, bush	53	@	55
Rye	1 16	@	1 17

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	65	@	70
Mixed colors, new laid	55	@	60
Ordinary grades	30	@	45
Butter, fancy prints, lb	40	@	43
Tub, choice	34	@	38
Chickens, roasting, lb	24	@	23
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	23	@	25
Fricassee, lb	18	@	20
Fowls	18	@	23
Turkeys	24	@	28
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

For the 11 months ending with November, incorporations of $1,000,000, or upwards, each, totaled $789,497,500.

*

We have now 7,584 National banks, with capital of $1,074,074,675, and outstanding circulation of $1,111,999,076.

*

Savings banks were first opened in this country 98 years ago. There are now 10,766,936 depositors with a total of $4,727,403,950.

*

Wheat and flour exports from United States and Canada since July 1 amounted to 160,000,000 bushels; oats, 32,000,000, the latter being 26,000,000 more than for the same time last year.

*

A New York concern recently sent a load of furniture by motor truck to Albany, the total expense being $18 less than by rail shipment, and the goods delivered without scratches or damage ordinarily received in transportation. The running time for the round trip of 348 miles was 30 hours.

*

About three-fourths of the commercial onions in this country are grown in 16 States. The crop this year is figured at 21,600 cars, about one-third being put in storage.

*

This year's grain yields of the prairie provinces of Canada are:

	ACREAGE	YIELD
Wheat	11,125,975	140,261,000
Oats	6,226,571	144,437,000
Barley	1,967,791	35,763,000
Flax	1,004,513	5,738,000

*

Reports from 10 of the largest cabbage-producing States show a crop of 20,000 carloads, one-fourth being stored for Winter sale. This year's yield is about 2,000 carloads above last.

It is a great cry at all farm produce is low, and to a great extent it is. Apples are from 60 to 75 cents per barrel. Potatoes about $1 per barrel; fine veals are bringing 10 cents per pound; pork about 12; butter 36 to 33; turkeys from 22 to 25 live weight. Milk is about $2. Good grade cows run from $70 to $90. Horses are rather quiet. E. F.
Cambridge, N. Y.

Nov. 30. This is not much of a cow section; everything here is tobacco. However, there are some cows kept, selling from $75 to $100. At a recent auction held about five miles from here, cows sold from $80 to $118. Milk for the Hartford market is bringing the farmers 4½ cents per quart for the Winter. Everyone seems to have plenty of feed, especially hay and corn fodder. The foot-and-mouth disease is causing a lot of trouble and worry, but I think our Commissioner of Domestic Animals is doing all he can to stamp it out. There seem to be one or two new cases that are giving the commissioner and his deputies some worry in not being able to trace the source of infection. However, most of the cases have been traced to one carload of cows shipped to Hartford from Brighton, Mass., then sold out among the farmers. W. B. W.
Warehouse Point, Conn.

If You Want The Best Cow Feed Ask Your Dealer For

DISTILLERS

"DEWEY'S" 3 "DRIED" GRAINS

Refuse to accept "Just as good" feeds. Samples and "How to Feed" free. Write
THE DEWEY BROS. CO., Box 544, Blanchester, Ohio

FARMERS: Write me for details and pictures of the most productive 80 acre Farm in Northern New Jersey for $3,800 I have seen in twenty years; live stock and implements will also be sold at private sale or at auction; owner ill and must sell. E. E. SLOCUM, 111 Broadway, New York.

WANTED—Responsible party to take charge of business in each county. New Automatic Combination Tool, combined wire-fence stretcher, post puller, lifting jack, etc. Lifts or pulls 3 tons, weighs 24 pounds. Sells to farmers, shops, teamsters, etc. Descriptive catalogue and terms upon request. HARRAH MANUFACTURING CO., Box M, Bloomfield, Ind.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

EXPERIENCED YOUNG MAN wants work on fruit farm. Address A. T. K., Care Rural New-Yorker.

YOUNG MAN—Capable, reliable, temperate, quick, willing, good penman, desires position in store. References. Box 593, Ticonderoga, N. Y.

YOUNG MAN (23), desires position January 1 on dairy or stock farm; experienced thoroughbred Holsteins. NORMAN DIECKS, Chatham, New Jersey.

COMMON SENSE experienced manager wishes position; salary or shares; married; Cornell training; references. LESTER HAYES, St. Johnsville, N. Y.

SCOTCHMAN—Experienced in all branches of poultry work, single, honest and strictly temperate, desires position either as poultryman or assistant. A. G., Care Rural New-Yorker.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

CHRISTMAS ORANGES, Orange Marmalade, direct to consumer. Sample, 25 cents. H. C. TILLSON, Leesburg, Fla.

CAPONS FOR SALE—Milk fattened, alive, 20 cents a pound; dressed, 28 per pound. ANNA M. JONES, Hillsdale, N. Y.

7-INCH PAPER KNIVES, hand-made; oak, hickory, barberry, huckleberry, apple, red cedar, on hand-painted cards, 25c. KNAPP, Caryville, Mass.

28 INCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

IF YOU WANT the best farm in Oxford, Connecticut, 120 acres, come and see it. Owner, CYRUS J. HULL, Southbury, Conn.

FOR SALE—70-acre orchard farm, 12 acres now in trees; one mile to everything. For further particulars address A. B. LORCOM, W. Farmington, Maine.

WANTED—To rent or work on shares, farm 15 to 20 cows, farmer, aged 49; have team, tools, gasoline engine; good references. FRANK FOWLER, Afton, N. Y.

200 FERTILE ACRES—Bordering beautiful little lake in famous lake region of Central New York, can be bought for cost of improvements. E. W. ALLEN, Auburn, N. Y.

FOR SALE—Virginia farm, 20 acres, 4 acres strawberries, 2 acres of grapes, nice chicken range, grow peanuts, cotton, tobacco. R. T. ARTHUR, Slingerlands, N. Y.

WANTED TO LEASE—Small poultry truck farm, some fruit, near manufacturing town, where man can find steady work year around; rent reasonable. H. B. F., care R. N.-Y.

21 ACRE, level, productive farm; nice buildings, only 500 feet from city line of Towanda; finest location in Bradford Co., Pa.; would make a desirable gentleman's place. J. A. JOCOY, Towanda, Pa.

MONTGOMERY COUNTY FARM FOR SALE—$6,000 property of over 200 acres, for only $3,900; excellent buildings, plenty of wood, some timber, large orchard; $1,000 cash, balance easy terms. W. CROSS, Fultonville, N. Y.

FARM 147 acres, productive soil; well watered; good wood lot, handsome 15-room house; prosperous community; best of neighbors; near R. R., churches, schools and stores. $4,000. I. F. GEROW, New Paltz, Ulster Co., R. D. 1, N. Y.

Standard Fruit Books

Successful Fruit Culture. Maynard	$1.00
The Nursery Book. Bailey	1.50
The Pruning Book. Bailey	1.50
American Fruit Culturist. Thomas	2.50
Citrus Fruits. Hume	2.50
California Fruits. Wickson	3.00
Dwarf Fruit Trees. Waugh	.50
Plums and Plum Culture. Waugh	1.50
Fruit Ranching in British Columbia. Bealby	1.50
Farm and Garden Rule Book	2.00

Live Stock - Poultry

Types and Breeds of Farm Animals. Plumb	$2.00
Principles of Breeding. Davenport	2.50
Swine in America. Coburn	2.50
Diseases of Animals. Mayo	1.50
Farmers' Veterinary Adviser. Law	3.00
Principles and Practice of Poultry Culture. Robinson	2.50
Hens for Profit. Valentine	1.50
Diseases of Poultry. Salmon	.50

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NEW-WAY AUTOMOBILE SCHOOL, 1016 Broadway, Brooklyn, N. Y. Please send free folder telling how I can learn to drive and repair automobiles and how you guarantee license and help me to get a good position in the Spring. (Cut out this ad. and mail today.)
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One Worm-sick Hog

Will Infect Your Entire Herd

Mr. Sidney R. Feil, President of the S. R. Feil Co., is a Registered Pharmacist, a graduate of the Cleveland School of Pharmacy and the National Institute of Pharmacy. He has been engaged in laboratory work for more than 25 years. For many years engaged in compounding veterinary remedies.

Take No Chances

A single worm-sick hog is liable to infect your whole herd. You know that wormy hogs have little vitality and so are easier victims of cholera and swine plague. That scrawny, worm-sick hog — the one with the rough coat, white eyes and harsh cough, is a positive danger to all the rest in your herd. Take no chances. **Feed SAL-VET;**—be assured your hogs are free from these dangerous pests and much less liable to fatal diseases. Let me feed them 60 days on SAL-VET at my risk—let me prove the value of this wonderful worm destroyer and conditioner. Let me prove that you can't afford to be without it. If it fails to do what I claim, it won't cost you a a cent. Thousands have found it so profitable to feed SAL-VET that they feel they cannot afford to be without it. The hog that is wormy usually eats more than it can digest, is ravenous, ill-natured—discontented and unthrifty. It is a profit-eater instead of a profit-maker.

$125 Profit in Four Weeks.

"Four weeks ago, just before I received my SAL-VET, I offered to sell my hogs for $25.00, but could not do so. Since feeding SAL-VET, they have passed many worms, some of them ten inches long, and they made such gains, that I would not sell them now for $150.00"—Dan. MacAloney, Tenney, Minn.

SAL-VET Saved His Hogs.

"Hogs all around me are dying with cholera. We have lost none yet, and all are doing well since feeding SAL-VET."—Frank Bally, Alto Vista, Iowa.

Rid Them of Worms.

"I had a bunch of twenty-eight hogs that coughed continually, and refused to eat. After feeding them SAL-VET a while, the coughing ceased entirely, they recovered their appetites, and grew rapidly."—J. Brennecke, Jackson, Mo.

Gives SAL-VET the Credit.

"Am still feeding SAL-VET to my hogs and sheep all the time. Last week, I was in Chicago with a carload of hogs which had had constant access to SAL-VET—they came within a nickel of the top."—Donald E. E. Asay, Mgr. Burr Oak Farm, Mt. Carroll, Ill.

SAL-VET Saved Their Sheep.

"About the first of September, 1912, our lambs commenced to die, and we lost about 20 head. Finally we went to an old sheep man, and asked him what to do. He said, 'I guess your lambs have stomach worms and you better feed them SAL-VET'; so we ordered one hundred pounds and started feeding it in bran and oats, and in a few days we were convinced that our friend had advised us right, as we found piles of dead worms where the lambs had been at night. We saved 74 head of lambs and could have saved all of them had we only fed SAL-VET sooner. Our lambs gained flesh very fast after they got rid of the worms and we sold 24 bucks at an average of 78 pounds each. SAL-VET is a wonderful remedy as a worm destroyer and tonic and we take pleasure in recommending it to all stock raisers."—Cutler & Hayes, Salem, Ills.

TRADE MARK

SAL-VET

REG. U.S. PAT. OFF.

The Great Worm Destroyer — **Live Stock Conditioner**

Is not a food; it is the medicated salt which contains no antimony—which rids all stock of worms—aids digestion—allowing animals to get the utmost good of rations fed, instead of having the feed absorbed by a myriad of stomach and intestinal worms. I want you to try SAL-VET on your own stock—in your own barn-yard at my risk—I want to prove to you that your hogs will gain faster on no more feed—look better, act better, and be in healthier condition, less liable to disease and sell better. Here is my offer:

Don't Send Any Money—Just the Coupon

Tell me how many head of hogs and other stock you have; I'll ship you enough SAL-VET to last them 60 days. Simply pay the freight on arrival—feed the SAL-VET according to directions. At the end of 60 days report results. If SAL-VET has not done all I claim, I'll cancel the charge—you won't owe me one cent. Here is a chance for you to see with your own eyes, without risking a cent, what this wonderful preparation will do; see it stop your losses from worms; see it save you money — save you feed and make money faster by shortening your feeding period.

SIDNEY R. FEIL, Pres.

The Feil Mfg. Co., Chemists

Dept. RNY CLEVELAND, OHIO

(210)

THE FEIL MFG. CO.,
Dept RNY 12-10-14 Cleveland, Ohio

Ship me enough SAL-VET to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name .....

P. O. .....

Shipping Station .....

State .....

Number of Sheep ..... Hogs .....

Cattle ..... Horses .....

Look for This Label

on top of all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sal" this or "Sal" that. Get the original genuine **SAL-VET.**

PRICES

40 pounds	$ 2.25
100 pounds	5.00
200 pounds	9.00
300 pounds	13.00
500 pounds	21.12

No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold by peddlers nor in bulk; only in Trade-Marked SAL-VET packages. Shipments for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.

THE RURAL NEW-YORKER

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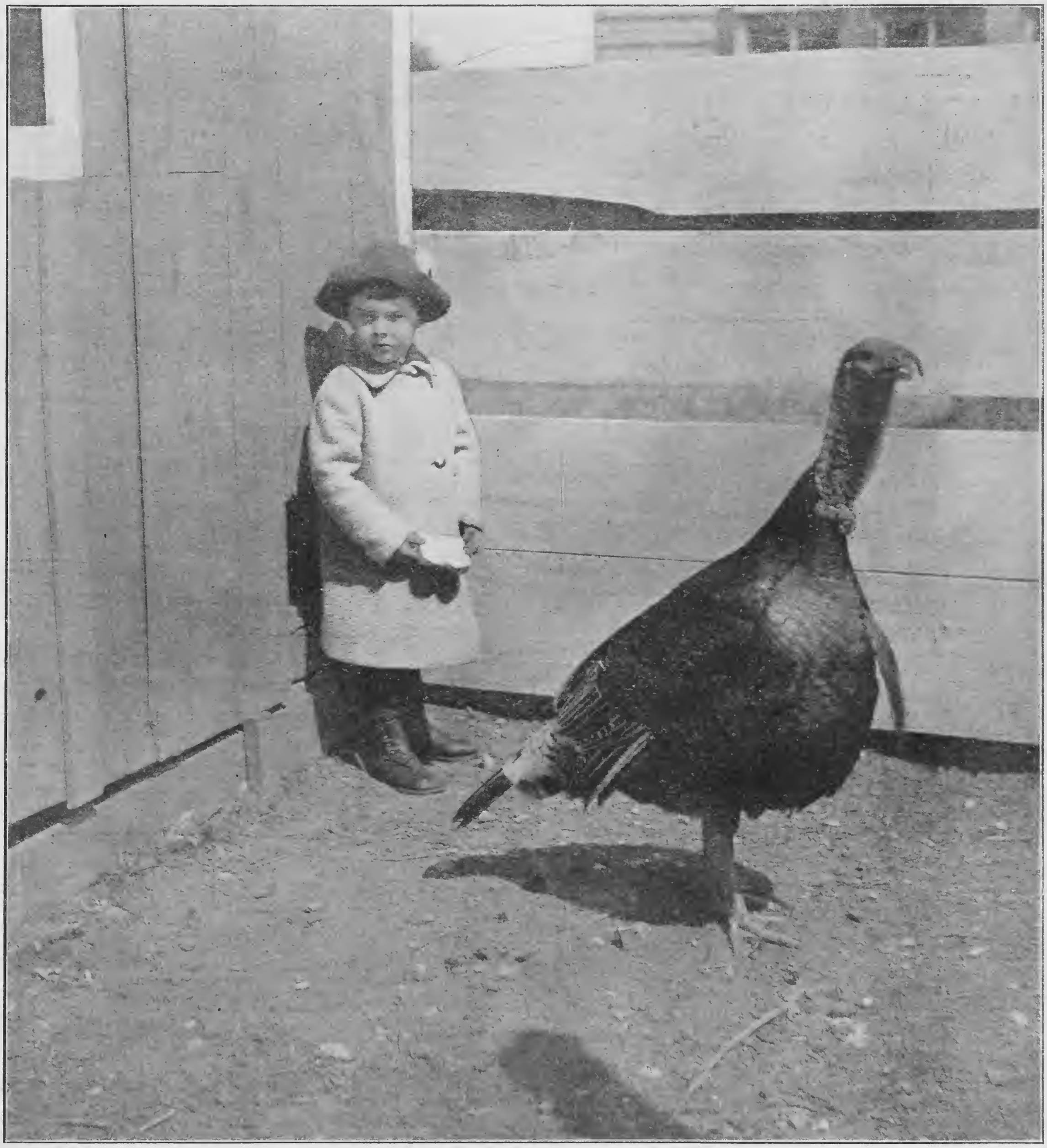

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$1075

Get a Big New Overland For the Big New Year

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The most conservative estimates promise the biggest, best and most prosperous year you have ever had the pleasure and privilege of living through.

So now, as never before, you need a car.

And what is more—*you need an Overland.*

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Regardless of price—it is one of the handsomest cars ever built. The beautiful full stream-line body is one of the most admired designs of the season.

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Regardless of price—it is one of the most convenient cars ever built. It is electrically started and electrically lighted. All of the electric controls are conveniently located on the steering column. You can operate every button without changing your driving position.

Regardless of price—it is one of the most complete cars. There are demountable rims, with one extra, a high-tension magneto, built-in ventilating type windshield, mohair top and boot, magnetic speedometer and curtain box. In fact every modern improvement.

Then remember this—

The first cost is not only considerably less but so is the operating cost. In both directions you save money.

Also remember that every Overland is backed by a world wide service.

So by all means get an Overland—*and get it now.*

Then, and only then, you'll make 1915 just that much bigger, better and more delightful for your whole family.

Act today.

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Motor 35 h. p.
New full stream-line body
Tonneau: longer and wider
Upholstery: deeper and softer
Windshield; rain-vision, ventilating type, built-in
Electric starter
Electric lights
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High-tension magneto; no dry cells necessary
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Demountable rims—one extra
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HEADQUARTERS FOR EASTERN ALFALFA,

Central New York Alive With It.

PART II.

INOCULATION; SWEET CLOVER.—Inoculation as an aid to obtaining a good stand of Alfalfa is seldom needed. Therefore but few growers have tested it. Ordinary methods of seeding seldom even partially fail, but there is an occasional exception. Two cases were heard of in which inoculation was tried, but not thoroughly, without success. One man was found who had paid $50 for chemicals which proved useless, but who continued the old methods until he got his fields well stocked with Alfalfa. One grower got a hill producing good crops, but failed to get a stand in the hollow at its foot until he plowed the whole and dragged some soil from the hill to the low ground. One place was seen in which persistent efforts to start Alfalfa have failed from causes entirely unknown. But in most cases failure to secure a good Alfalfa sod can be traced to the use of land containing weeds or quack grass, or to imperfect preparation of the soil to receive the seed. Sweet clover is not used to inoculate the land for Alfalfa. Its one useful purpose is as forage for bees. It is generally regarded as a weed.

SEED.—Most of the seed used here is obtained from seedsmen in Syracuse. Only one variety is sold. This has been grown for a long time, and gives satisfaction. Very little effort has been made to grow a seed crop. In the few instances regarding which definite information was obtained the returns were too small to allow a profit. It is reported that a man some 10 miles from Syracuse, who goes from place to place to thrash grain, sometimes thrashes Alfalfa, but efforts to get into communication with him, or to find anyone for whom he has thrashed Alfalfa, have failed. The general opinion of Alfalfa growers seem to be that a hay crop will pay much better than a seed crop. It is not certain that the maturing of the seed would not weaken the plants. It is also doubtful whether seed produced here would be as good as that which is grown in the drier climate of some of the Western States.

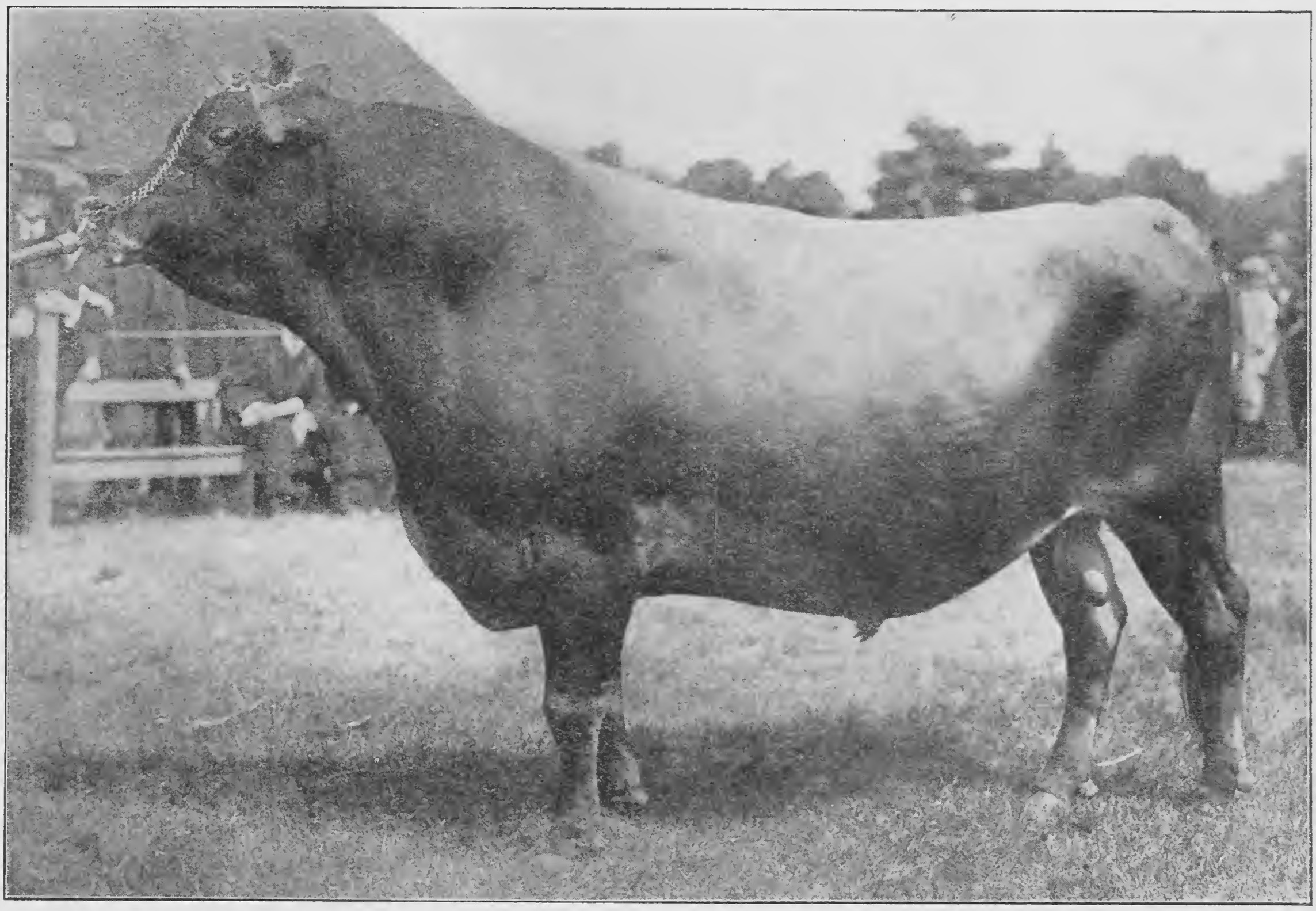
THE DAIRY INTEREST.—It is a curious fact that though Alfalfa furnishes the very best feed for cows giving milk, the dairy interest has declined as the production of Alfalfa has increased. On some farms where 20 or more cows were kept a few years ago there are now only one or two. Quite a number of farmers in Geddes are convinced that there is not only a great saving of labor but that there is also a much larger profit in selling Alfalfa hay than there is in feeding it to cows and selling milk. Still, a good many cows have been retained and some young stock is raised for sale. The Holstein breed predominates. This is an ideal locality for stock raising, and it might well become an important center of the Holstein interest.

KNOWLEDGE—BELIEF.—In various ways Alfalfa is a peculiar plant. The most experienced growers are free to say that they do not know as much about it as they once thought they did. They admit that in some respects their methods do not harmonize with the teachings of certain scientists. They are modest in their claims. But they hold to them rather than accept theories which, however plausible they may be, conflict with the teachings of remarkably successful experience covering a period of from 20 to 30 years. The most remarkable incident of this investigation was a conversation with an Alfalfa grower of considerable experience who holds the ancient belief regarding the influence of the moon upon the results of certain kinds of farm work. He firmly believes that many fields of Alfalfa have been seriously injured, and that some have been destroyed, by cutting the plants in "the old of the moon." While the moon is in this phase he will not mow his Alfalfa no matter how ready it is for the harvest or how fine the weather may be.

THE GENERAL ESTIMATE.—There is no difference of opinion as to the benefit of Alfalfa to its growers. It will not start itself, and it will not take care of itself forever, but it requires less outlay and less work than any other plant which makes anything like equal returns. It is the most permanent, the least exhausting, and the most profitable of the farm crops. Dairymen who have grown it say they "would not think they could make milk without it." A grower who sells hay says that farmers "must grow it or go to the poorhouse," and one of the largest producers gave his estimate of its usefulness by saying that "the man who has an Alfalfa plant growing has a little machine working for him day and night."

A CONSERVATIVE REPORT.—The importance of the crop has not been exaggerated. The writer has been acquainted with Alfalfa for many years. As long ago as it was merely a curiosity in the East he tested it sufficiently to prove that it would be hardy and productive in Western Massachusetts. From that time he kept informed regarding the development of the Alfalfa interest in the country. For several years he has made an annual inspection of a great number of Alfalfa fields in Central New York and of a few in the eastern part of the State where as yet only small areas are given to this crop. The men whose practice has been described and whose opinions have been stated have been producing Alfalfa for many years. There is no "zeal of new converts" on the part of the growers or the writer. The appearance of their farms and homes proves that the growers are prosperous.

J. E. R.



"KARNAK'S NOBLE. THE HEAD OF THE HERD WITH PERFORMANCE IN HIS PEDIGREE. FIG. 633.

"HEAD OF THE HERD."—The great bull shown on this page has what every bull ought to have, "performance in his pedigree." Back of him is a long line of cows which were in their time noted butter-makers. The ability to take butter fat out of grain and fodder was passed on and intensified by generations of these cows and now this bull, their descendant, passes this tendency on to his daughters. With reasonable care and selection they cannot help resembling "father's folks" in their dairy work. That is what performance in the pedigree means, making the daughter "act like father's folks."

THE FOOD AND MARKETS DEPARTMENT.

A Statement of Its Purposes.

PART II.

AUCTION MARKETS.—The department is authorized to establish auction markets in the large cities of the State; to license and bond auctioneers; to cause inspection of food products; to investigate the cost of production and marketing of food products; to hear complaints and take testimony and compel the attendance of witnesses and the production of testimony in hearings, and to enforce the observance of rules established by it for the grading, packing, storage and sale of foodstuffs within the State. The powers are ample to establish an economic and efficient medium for the movement of goods from the producer to the consumer. If the farmer and the city consumer cooperate with the department, farm produce of every kind will flow freely from one to the other at prices regulated by supply and demand. There can be no more prohibitive prices to consumers when the farmer is unable to realize the cost of delivery. If the farmer will pack and ship in accordance with the information furnshed, and if the consumer will make intelligent selections, the problem of distributions ought to be solved through this system. Of course, everything human has its faults. Market conditions sometimes change suddenly; and shipments made and the information furnished by the Department may at times reach an over-supplied market. With perishable products there must always be some risk, but this is all the more reason why the best possible information should be furnished, and experience and care should practically avoid the pitfalls.

ADVERTISING.—When grades and packs are definitely fixed and the brands established, the products of New York State farms will be advertised by the department and a demand created for them with the best trade. There are 300,000 families at the mouth of the Hudson River, that never ask the price of an article of food, if the quality and grade is good enough to satisfy their fancy. The profit of this trade has gone to the men who select and assort the goods. The department proposes to get the benefit of this trade for the men who produce the goods. It will not be the purpose of the department to cause the disturbance of any legitimate existing business; but there must undoubtedly be a readjustment of conditions in the produce markets. Otherwise there would be no reform.

EXTENT OF MARKET.—There will be more and more people to feed three times a day; and more and more food will be required to feed them. It is moreover intended to make food cheaper and more available; and in that way to increase its sale and consumption. Those dealers who are now in the farm produce business may need to change their methods; but they need not suffer from the change. While children are hungry and unnourished in New York City, food products should not be allowed to rot on the farms of the State.

THE MIDDLEMEN.—We must always have middlemen to handle produce and deliver it to the consumer. This is an economic necessity. It is a proper division of labor. Where the necessity of the middleman exists he is as much a producer as the man who works the farm. If the farmer was obliged to cart his produce from Central New York to the metropolitan market, he could seldom sell it for the cost of delivery. If the city man was obliged to go to the farms for his food, he would have no time for anything else and no money to pay for the food. It is an economic division of labor to have railroad employes, truckmen, wholesalers and retailers to deliver the food from the farm to the consumer. While the purveyors are delivering the goods, the farmer is producing them and the consumer is earning the money in other occupations to pay for them.

NEEDLESS EXPENSES.—But while the man who delivers food may be an economic necessity in its production and distribution, an excess of middlemen becomes a wasteful extravagance. For the past 20 years the delivery of goods to the New York City consumer has cost 65 cents of every dollar paid for it. This has reduced the farmer's share to 35 cents. It is believed that the department will be able to change this ratio. Its business will be to discover an economic system for the delivery of farm food products, and to find a means of delivering them within the limit of a reasonable cost. The present lines of both wholesalers and retailers that are required for this service will be encouraged and developed. No legitimate business needs to be disturbed, but an adjustment in some lines will undoubtedly be necessary. Where wasteful methods and duplication are found they must be eliminated and the agents of them diverted to productive distributing activities. Speculation in food products must be done away with.

DISTRIBUTION PROBLEMS.—We must create a free channel for the flow of food products from the farm to the city consumer. There must be delivery agents in it; but it must be free from speculative obstructions. Food that comes to the city properly graded and packed and labeled, should pass through the auctioneer's hands straight to the retailer and from him to the consumer, at a reasonable profit. Again, cold storage space must be provided in the city to save deterioration and waste, and to secure a constant and regular delivery as needed, In some situations wholesalers may be needed to furnish higher grades and particular delivery to classes of retailers. This will be a fancy trade that is willing to pay for quality and convenience; but the great bulk of trade should be disposed of in a single handling.

THE CONSUMER'S SIDE.—This marketing problem is a matter that interests any person who buys food. That involves practically every person in the State. It is not to the interest of the consumers of any particular city that the farmer loses money in shipping his produce to its markets. The city must depend on the country for its food. If the market is unsatisfactory, the farmer refuses to ship to it, or sends it only his poorest products. This results in short supply and compels the consumer to pay higher prices for an inferior article of food. If the prices are so low in the city that the farmer must let his goods rot on the ground, he raises fewer next year or none at all, and the consumer feels the result of this in higher prices. Hence it is to the interest of city consumers that the farmer find a ready market at satisfactory prices so as to encourage him to produce a steady supply of fresh graded food products.

AVOIDING WASTE.—Waste is an economic sin and all sins are harmful. The man who causes waste in time of war or peace is, economically speaking, an enemy of mankind. The man who obstructs the channel of trade, and causes food to rot on the farms while children are dying in the city for lack of sufficient nourishment is quite as responsible for waste as the man who wantonly burns a house. The individual may be part of a system which he cannot control; but the effect is the same. The individual responsibility in that case is simply transferred from the individual to a craft or to the community. Everyone who studies the subject admits the frightful waste in our system of distribution. The State has recognized the necessity of reform in the creation of the Department of Foods and Markets. Hunger produces weaklings, and sickness and crime. These again create orphanages, hospitals and prisons. They are a serious expense to the State. A sound business policy as well as a humanitarian instinct demands that we reform our system of distribution of food products. J. J. D.

MOVING LARGE FOREST TREES.

WILL you give information as to moving native trees and shrubs? I want to move some pines, hemlocks and cedars eight or 10 feet tall, and have been advised to dig around the native trees now, then move when the frost is in the ground, say in February or March. How far from the trunk should I dig the trench, and how can I lift the trees when they are frozen down at the bottom? Can I do the same way with Azaleas, laurel, and other wild shrubs? E. D. C.

Bantam, Conn.

Large evergreens from the forest are difficult to transplant successfully, even under the most favorable conditions; they usually make but few fibrous roots, and when the main roots are severed, as they must be, when moving them with a ball of earth or otherwise, the evaporation of moisture through their evergreen foliage cannot be compensated for through their shortened root system, and the tree dies, literally from thirst. I have serious doubts whether the plan suggested would prove successful with evergreens as large as those mentioned, but as the only probable expense connected with the undertaking is the item of labor, a trial planting should be made, and if the trees should not live the loss would not be great.

Before the ground freezes to any appreciable depth, dig around the trees, leaving a ball of undisturbed soil 30 to 36 inches in diameter, gradually burrowing under the tree to a depth of 18 inches or so, working toward the center from all sides, until the tree is completely undermined, after which fill in around the ball of earth with forest leaves or other coarse litter, up to the level of the surface of the surrounding ground. The tree will probably need anchoring to keep it in a vertical position. When the ball of earth becomes sufficiently frozen it may be pried out with long levers made from saplings, and loaded on a stone boat and transported by horse power to the place it is to be transplanted. The holes for the trees' reception should be prepared before hard freezing sets in and covered with a good layer of forest leaves or straw to prevent freezing. If the ground should become too much frozen to complete the filling in of soil around the trees, leaves or straw may be piled around the trees until the ground is in proper condition to complete the work.

Deciduous trees may be moved in the manner described above with very reasonable assurance of successful outcome. Their tops should be cut back at least one-third. In the removal of large or medium-sized trees from the forest to the home grounds, I prefer the following plan, which I believe is the most practical method for this work.

In early Spring dig a trench around the tree, leaving an undisturbed ball of earth two feet or more in diameter around it, varying the size of the ball according to the size of the tree, going deep enough to sever all the roots running in a horizontal direction, and cutting the end of each root severed, smooth, with a sharp knife or pruning shears. After this fill in the trench with good soil, and do not disturb further until the following Fall for deciduous trees and Spring for evergreens. Having the horizontal roots severed the trees will force out in all directions myriads of fibrous roots, in many instances completely filling the ball of earth, which will hold the soil intact almost as well as if the ground was frozen. At the time of removal the tap roots will have to be located and severed, when the tree, if not too large, may be carefully raised out of the hole by means of strong planks, or in the case of large trees with a block and fall attached to some sort of derrick, and removed to their permanent location in the same manner as directed for those with frozen balls of earth attached. Large and medium-sized forest trees treated in this manner before removal, are very much more likely to grow than by any other method of treatment, particularly evergreens.

Rhododendrons are quite accommodating in their habits, and may be successfully removed from their natural environments to the home grounds almost any time they can be dug. Wild Azaleas are more sensitive to being removed to cultivated ground and none but small plants should be selected for the purpose. The Kalmias (laurel) are very difficult to transplant successfully from the woods to the home grounds, large plants very seldom surviving removal. Small plants, however, may be transplanted with reasonable assurance of success. This transfer should be made in the Spring, and if possible the young plants should be planted in partial shade. After one year under cultivation, they may be as successfully transplanted (all sizes) as the Rhododendron. K.

FERTILIZER FACTS ABOUT FEEDS.

IF I cut a crop and feed to farm stock, and return the manure to the field, how much less humus do I add to it than I would if I plowed the crop under? Can you give the approximate fertilizer value of the common mill feeds after being fed to dairy cows? It seems to me that in order to buy feed intelligently we must know their fertilizer as well as their feeding value.

Jamestown, N. Y. R. L. S.

The following table occurs in Hopkins' "Soil Fertility and Permanent Agriculture":

Food stuffs	Per cent digested of total in food		Dry matter of food recovered in manure	
	Dry matter	Nitrogen	Per cent.	Lbs. per ton
Pasture grasses	71	70	29	580
Red clover, green	66	67	34	680
Alfalfa, green	67	81	33	660
Mixed meadow hay	61	57	39	780
Red clover hay	61	62	39	780
Alfalfa hay	60	74	40	800
Oat straw	48	30	52	1040
Wheat straw	43	11	57	1140
Corn stover	60	45	40	800
Shock corn	63	42	37	740
Corn-and-cob meal	79	52	21	420
Corn ensilage	64	49	36	720
Oats	70	78	30	600
Corn	91	76	9	180
Wheat bran	61	79	39	780

Thus, when Red clover, green, containing one ton of dry matter is eaten, only 680 pounds of the dry matter consumed will be returned to the land in the droppings. When Red clover hay is taken from the field only 780 pounds is returned when a ton is fed. In other words, a ton of clover plowed under will add nearly three times as much organic matter to the soil as can possibly be recovered in the manure if the clover is fed.

The approximate fertilizer value of the common mill feeds can be got at as follows. The Ohio Experiment Station fed 28 steers for six months. The ration consisted of wheat bran, cornmeal, linseed meal, cotton-seed meal, corn silage, corn stover, and mixed hay. Eighty-three per cent. of the nitrogen was recovered, 55.6 per cent. of the phosphorus was recovered and 97.6 of the potassium was recovered. In the table below the results at the Illinois and Pennsylvania experiments are also given:

	Nitrogen recovered	Phosphorus recovered	Potash recovered
Ohio (steers)	83.0%	55.6%	97.6%
Pennsylvania (cows)	84.6%	70.7%	91.0%
Illinois (cows)	80.3%	73.3%	76.0%

In the Pennsylvania and Illinois experiments milk cows consumed the feed so that these figures would be most suitable here. These percentages can be applied to the fertilizing elements contained in the common mill feeds and the result will be the approximate fertilizer value of mill feeds when fed to dairy cows. The fertilizing elements in the common mill feeds are given in Henry's "Feeds and Feeding." Some of these are given below:

Name of feed	Fertilizing constitutents in 1,000 lbs.		
	Nitrogen	Phosphorus	Potash
	LBS.	LBS.	LBS.
Corn meal	14.7	6.3	4.7
Corn-and-cob meal	13.6	5.7	4.7
Gluten feed	40.0	3.7	.4
Hominy feed (chop)	16.8	9.8	4.9
Standard wheat / Middlings (shorts)	27.0	26.3	15.3
Wheat bran	24.6	26.9	15.2
Ground oats	19.7	7.6	5.0
Cotton-seed meal	72.5	30.4	15.8

BOYS' AND GIRLS' CLUB WORK.

Poultry-keeping for Young People.

IN November, 1912, I took up what was called Township demonstration work, in Butler Township, Knox Co., O. The question arose, what was the best line of work for the boys and girls? The land in this township was not very fertile, and I thought the boys would not have much chance in corn club work in competition with the boys who lived in the rich corn lands. I found here quite a number of small farms, and I also found more than the usual number of poultry kept. My idea of the work is, when you find a people engaged in a work that is fairly well adapted to the environment, try development along that line. So I tried organizing a Boys' and Girls' Poultry Club. Four members were secured, three boys and one girl.

On one Saturday, so as not to interfere with their school work, a demonstration poultry house was built at the home of one of the boys (see Fig. 634,) and on another Saturday a house was built at the home of the girl. Here was another idea to teach people to utilize the resources at hand. The parents of the boy wanted to know what was necessary for the building of the house. On looking about we found some rip-rap lumber of various kinds, and an old tumble-down board fence, so that all that was necessary to buy was a roll of three-ply roofing for the roof, a roll of two-ply roofing for lining the inside, a pair of hinges, some one-inch mesh poultry netting and some nails. At the girls' home we got most of the material out of an old building (see Fig. 635), but the girl did not like its appearance, and she soon had the house whitewashed (see Fig. 636). The boys and girls and even their parents seemed somewhat surprised when I told them the hen would not ask what the house was built of or if it was painted. What was necessary to induce the hen to do her best was to make her comfortable and feed her properly.

These boys and girls kept daily records of their flocks on blanks furnished by the Ohio Experiment Station, and made reports monthly to the station. This year 10 more members were added to the club, and at the second annual show 12 of the members exhibited, one of the boys having moved away.

These boys and girls were allowed to keep one of two breeds, Single Comb White Leghorns or White Wyandottes, the object being to restrict the number of breeds and get the whole community united on color. During the year each member's plant is visited and scored, and a prize given for the best flock, yard, building and surroundings.

What good will this work be to the boys and girls? First, through the prizes offered it has resulted in introducing into their flocks some of the best utility blood in the country, and disseminating the best poultry information obtainable. Prof. Jacoby of the Ohio Agricultural College having judged the poultry each year and delivered lectures on poultry keeping. The prizes have been purebred poultry stock, agricultural papers and books.

We think there is a possibility that some of these boys and girls may develop an egg-laying strain that will rival the famous Tom Barron yards. We are having the boys and girls watch the egg-laying contest, especially the records of Hope Farm's scrubs. However, we tell them that while the editor may be experimenting with scrub chickens THE R. N.-Y. is not a scrub paper.

We took a record of nearly every farm in this township, and we found that very few farmers keep any book account of their business. In nearly every case, what information they gave us was from memory. We tried then to get each farmer to keep records of their flocks, thinking that in this enterprise the whole family would be interested, but we could succeed in getting but two families to keep the accounts for a year. In the boys' and girls' club work we are trying to cultivate in them the habit of keeping records of their work.

What we are trying most to do is instill into the minds of these boys and girls a desire to grow up to be efficient men and women, so that into whatever community they may go, that community will be the better because of their being there. We try to teach them that the value of land depends more on the kind of people that live on it than on the kind of soil.

Ohio. CARY W. MONTGOMERY.

WORK OF A GASOLINE ENGINE.

Requirements in Sawing Logs.

HOW large a saw will the ordinary gasoline engine drive through a log that is the length of the stick? Engine of six or eight horse power. A. B. C.
Carmel, N. Y.

If I understand the question you wish to know how large a saw the average six to eight horse-power gasoline engine will drive when used to cut lengthwise through the log. Other factors enter in here

BUILDING A "DEMONSTRATION" POULTRY HOUSE. FIG. 634.

that affect the power required more than the diameter of the saw does, a fast feed on a small saw sometimes requiring more power than a slower feed on a saw of greater diameter. The thickness of the saw also affects the power required, for, of course, the thicker the saw is the more wood it is required to remove from the saw kerf in the form of a dust. Of course, one does not want to go to the other extreme and give the saw so little set that it pinches in the cut.

THIS HOUSE NOT SATISFACTORY TO THE GIRL MEMBER. FIG. 635.

THE HOUSE LOOKS BETTER AFTER WHITEWASHING. FIG. 636.

The speed is also affected by the diameter, the larger the saw the slower the speed at which it is run. A leading saw manufacturer advocates a speed for the cutting edge of around 157 feet per second. To attain this speed a 12-inch saw would have to run at 3,000 revolutions per minute, while a 36-inch saw would have to run at a speed only one-third as great, or 1,000 revolutions per minute. This fact tends to balance up somewhat the power required for the various sized saws when they are to be used under the same conditions.

A saw used for ripping will require more power to operate to full capacity than would a cutting-off saw of the same size—the work is more nearly continuous and there is not the same chance for the engine to store up power in its balance wheels or the balance wheel of the saw, if it has one, that there is with the cutting-off saw with its short rests between cuts. In other words, the rip saw would do a greater amount of work in a 10-hour day than would the cutting-off saw.

The nearest to a parallel case that I now know of is a shingle saw operated by a seven horse-power gasoline engine. This saw is probably 30 inches in diameter. While talking with the owner last Fall I was told that the engine was too light, and that he wished to get a heavier power. Going to the other extreme, I know of a portable sawmill driven by a 20 horse-power gasoline engine that lags pretty badly toward the end of a tough log. It would seem that there was some fault in the adjustment here, however.

To work successfully a gasoline engine must have ample power for the work intended. It has no reserve force to fall back upon in a pinch, as has the horse or steam engine: there is no energy in an available form stored in it, it is converted from the gasoline as fast as used: therefore, while it makes an excellent power as long as it is used within its capacity, an overload even for a short time is disastrous, and it is best to err on the side of safety and have ample power for the work. R. H. SMITH.
Canton Agricultural School.

THE USE OF RAW PHOSPHATE ROCK.

"WHAT are the results and conclusions about the using of rock phosphate on land either with or without manure, as shown by the experiments at the various stations? The makers claim that by sprinkling it on manure before spreading on the fields it is made sufficiently available to give results practically as good as to use the expensive acid phosphate." R. L. N.
Harrington, Del.

In order to make a fair study of this question send for bulletins from the following experiment stations: Illinois, Urbana; Ohio, Wooster; Tennessee, Knoxville; Missouri, Columbia; Michigan, East Lansing; Pennsylvania, State College; Maryland, College Park. If the makers tell you that sprinkling this raw phosphate on manure will make it equal to acid phosphate they are simply giving you a sample of very poor "guff." They know better. Acid phosphate is made by treating this ground phosphate rock with sulphuric acid. There is nothing in the manure to compare with the powerful acid, and experiments have shown that the ground phosphate is little if any changed by the action of the manure.

In the Central West, particularly in Illinois, the ground phosphate is highly recommended by the experiment station and by farmers. It seems to give best results when mixed with the manure and put on strong land well filled with organic matter. Naturally it does not give quick results, but is used mostly in a rotation of clover, Alfalfa and grain, where much organic matter is plowed under, and where a slow, steady gain in fertility is desired. In Ohio the conclusion seems to be that while the raw phosphate gave an increase of crop the acid phosphate gave more, so that a dollar invested in the available acid phosphate was more profitable. In the Atlantic Coast States practically all the chemists and soil experts agree that acid phosphate is more profitable than the raw phosphate. This is due both to the soil and the crops. Our Eastern soils are as a rule thinner, and contain less organic matter than the Western soils. There is also less stable manure on most farms. Our crops, too, are more of the nature of potatoes, fruit or truck, which require a more available form of phosphoric acid than the raw rock can furnish.

WE have known a Thanksgiving dinner of salt pork and bread which hunger made far more tasty than any meal ever served to a millionaire.

MASSACHUSETTS FARMERS MEET.

THE meeting of the Massachusetts State Board of Agriculture for 1914 was held at Worcester, December 1, 2 and 3, and a very instructive, attractive and educational program for each day drew a large attendance. In conjunction with the above meeting was held the Massachusetts apple show, Massachusetts corn show, boys and girls' exhibits of farm and garden products and domestic manufactures, exhibits of the clean milk contest conducted by the State Board of Agriculture and the Massachusetts Dairymen's League with suitable cash awards furnished by a State grant for this purpose, and also a butter and cream show.

Taken all together it was worth going to see and study, and the large attendance showed it was a step in the right direction to have all these attractions and meeting together so everybody who wished could take them all in and go home well paid for time spent by taking new ideas with them to practice and improve on to their advantage. The lectures and debates on poultry, beef production, dairying, truck growing problems, apples, economical milk production, household accounting and canning were to the point and were well received. Many of these lectures were illustrated with stereopticon and motion pictures.

A conference of agricultural organizations on what legislation to ask for the coming session of the State Legislature caused a very lively debate and the general opinion was not to ask for any, and to bring all pressure possible to block all except a few necessary changes or amendments which might be decided necessary after further consideration and study. All agreed it was best to go slow on all and especially on milk bills. It was strongly decided to oppose the repeal of the present deer and other lately-enacted game laws, as it is reported a strong effort from some sources will be made to accomplish this.

The annual meeting of the Massachusetts Dairymen's Association was held directly after the afternoon lecture on the second day and the president, secretary and most of the other officers were re-elected, which means the continuing on of the present year's good work for the coming year also, and if the State grants the money which it probably will if asked to, another clean milk contest will be a feature of next year's program along the lines of this year's success.

The corn and fruit judging caused lots of study as good or extra good exhibits were the rule rather than the exception, and much conferring was indulged in to decide which specimens were the best deserving of the ribbons. While few really perfect ears were there, yet taken as a whole the corn exhibits were really more than good; they were excellent for the present season, which was a bad one for properly pushing the growth and properly maturing the ears. A finer collection of apples it would be hard to find, and much comment on this was heard. It is pretty late in the season to have Gravensteins in good condition to exhibit, yet these were much in evidence and in fine condition, too, and it was stated they had not been in cold storage either, which many considered very remarkable. The Spys were also worthy of mention as all specimens seen there were very fine, as good looking as any Western apples I ever saw. It would not be fair to forget to mention the Blue Pearmain, which was shown of excellent quality, and speaking with Prof. Brooks, of the college, about these he thought it strange so good an apple was not listed as the rule in fruit catalognes. It is really, he said, one of the good old-fashioned apples which was and is good, and it seems a pity not to continue these and the old Pumpkin Sweets, which had a flavor never to be beaten or forgotten.

The samples of strainer cotton through which the milk from the various contestants had been strained showed very little sediment or discoloring as the rule; most of these were very clean which shows there are many clean dairies in Massachusetts. The condition of the milk on exhibition proved this also, as it had all been milked over a week before it was placed on exhibition at the hall. No one could tell if he did not know this that it had been not milked the day before. The butter was all farm made and of excellent quality.

The boys' and girls' exhibits especially of domestic cooking, were very attractive, and received the praise they richly deserved; all of these were very fine. The boys' stock judging contest, which was billed to take place on the afternoon of December 3, was not allowed on account of the foot and mouth disease quarantine. The annual meeting of the Massachusetts milk inspectors was held on the 3d. I attended this expecting to see and hear some lively talk on the subject of milk, but a quieter lot of lambs I never met. At the meeting of about two hours' duration nothing came up to cause a ripple or disturb the quiet. The election of officers and a little other business was all they accomplished; perhaps they were saving their energy for the farmer. A. E. P.

NEW JERSEY HORTICULTURISTS.

CO-OPERATIVE marketing, advertising, spraying experiments, overhead irrigation, the growing of nuts, strawberries and grapes, and spray experiments on potatoes, were features of the program of the fortieth annual meeting of the New Jersey Horticultural Society, at New Brunswick.

A. M. Seabrook, of Cumberland County, who has over 75 acres of his property under overhead irrigation, said: "The installation of the system costs from $125 to $150 an acre, exclusive of pump and mains. Where we did not have the system installed, the crops were less than one-third as great as where the plant is in operation. Overhead irrigation saves cultivation, reduces insect pests, more than doubles the yield, provides for quick succession of crops, and enables the grower to produce vegetables of superior quality."

J. C. Hendrickson, of Monmouth County, said that an abundant rainfall is essential in growing the eggplant. "It is important that the soil should be free from bacterial wilt, and this will persist in the soil four or five years. A rich sandy loam soil is best location, and an old asparagus plot is very good. It should be set in quite damp soil and the earth firmed with the hands, but not too compactly against the stem. Manure should not come in contact with the plant. We use a handful of ground fish or tankage; it is scattered along between the rows, and cultivated in.

Theodore Brown, of Gloucester County, described two blight-resistant varieties of potatoes which were generally planted in his locality. "The Hoosier or Pink Eye will grow under rather adverse conditions," Mr. Brown said, "and another variety is that from Cape May. They have been grown there for 35 years. Their quality is so good that when our markets become acquainted with them they will demand them in preference to other varieties. This latter variety may be planted after the first of July and is very prolific."

Frank Jones of Monmouth County, who is co-operating with the State of New Jersey in spraying experiments on potatoes, said: "There is no mixture which will destroy the flea beetle. I would say it pays better to spray with home mixed rather than the commercial Bordeaux mixture as the home made is applied when hot. The operation of spraying costs 40 cents an acre; with commercial Bordeaux $1.60, the home-mixed $1.15. Arsenate of lead costs 80 cents."

Prof. J. B. Norton, of Washington, described the efforts of the government in producing rust free asparagus. He said in part: "The rust problem will be greatly reduced as soon as we eliminate such old varieties as Moore's Cross-bred, for these are very susceptible and succumb to blight readily. I would not burn over the bed, for it needs all possible humus. We are not only trying to produce a rust resistant asparagus, but we are endeavoring to secure a strain that will yield more to the acre. It is impractical to try to dig out those plants which suffer from rust, as it already has a start of a dozen days. Keep all plants on the edge of the field cut down, as pests inhabit these and spread throughout the field. It will pay the New Jersey growers to put up their asparagus in the same way as the Massachusetts growers, and they will be able to secure the same figures in the Boston market." W. J.

Horse Chestnuts.

WILL you tell me if horse chestnuts have any use? T. R.
Raymond; N. H.

The nuts or fruit of the horse chestnut contain a substance known as esculin, which is sometimes used in preparing medicines for rheumatism or malarial disorders. As most people know also, it is an old-fashioned belief that a horse chestnut carried in the pocket will prevent an attack from rheumatism or hemorrhoids. Needless to say, we do not recommend the horse chestnut for the cure of these troubles, although no harm will be found in carrying the nuts in your pocket. Its use as medicine is insignificant.

Soil for Growing Chestnuts.

PROF. AHEARN of the Kansas Agricultural College tells how to prepare soil compost for growing plants: The way to handle the old pasture for farm crops is to give as good an imitation of this as you can with farm tools:

"A workable soil may be made from loam, sand, and manure, but it will be greatly improved if leaf mold or peat is added. The best loam for plants is made of well-decayed sod taken from a pasture. After the grass has been killed by hard freezes in the Fall, the sod should be cut three or four inches deep and placed in a pile, the grass side down. For the sake of convenience, make the pile three or four feet wide and as high and as long as necessary. Hollow out the top so as to catch the rains. If the year is a dry one, a garden hose may be used to supply the moisture. In the construction of this pile, alternate layers of sod and manure should be used. This compost should be allowed to weather for at least a year, preferably two years, before being used. When ready to be used, it should be chopped and thoroughly mixed with well-rotted manure."

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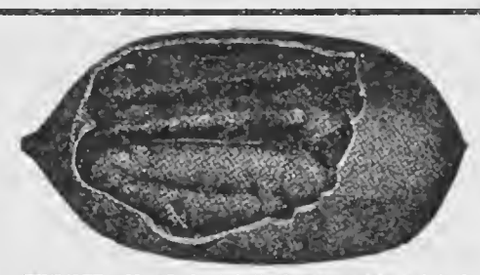

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Christmas Ideas from Europe

THOUGH Europe may be at war, still there are minds which must evolve Christmas ideas, and as long as Paris remains Paris, she must display the little arts and dainty femininities of a beauty loving people.

"But yes, mademoiselle, this is just the thing for the mademoiselle who gives luncheons," I was assured in one of the prettiest shops in Paris. This dear little French morsel of petiteness was showing me a number of delicate shades for the candelabra or candlestick and immediately I thought of a friend who entertains a great deal, and knew I had hit upon the Christmas gift that would please her most, I decided to make these for her myself.

CANDLE SHADES.—One can buy in any of the department stores or shops handling shades of different kinds, wire or paper frames. Get several of these for a set, say three or four. Purchase a very sheer silk of plain color or figured design; for instance, for a violet luncheon for Spring, a faint-hued violet silk may be purchased. After the frame is covered with silk, if you are handy with your brush, paint on the silk shade deep-colored violets and a few leaves. For a rose luncheon, a dainty silk with rosebuds will make exquisite shade-decorations. Any number of wonderful ideas can be worked out from this. One pretty little shade which I saw was made of a delicate old rose silk on a very unique frame, while all around the lower edge of the shade were festooned chains of

DAINTINESS IN CANDLE SHADES.

gold and old rose beads. An exceedingly pretty set of shades was made by winding the wire frame first with narrow strips of silk and then sewing on shirred silk wide and long enough to cover the frame. Over this was placed a covering of gold net and the top and bottom edged with narrow gold lace. Another set of yellow silk shades was singularly attractive. A border of very daintily fashioned chiffon roses of the same yellow was fastened about the top and bottom of the shade and a tiny fringe of black beads gave an exquisite Frenchy touch to this.

HAND-BAG.—The newest thing in hand-bags from Paris is made of a white or black satin or silk corded material with roses appliqued or embroidered upon them. These plain hand-bags may be purchased at any department store at very little expense, if you do not care to make them. Cut roses or wreaths

EMBROIDERED HAND-BAG AND BOUDOIR SLIPPERS.

from a fairly heavy silk or satin, and padding them slightly with cotton, applique them on the front of the bag. These may be embroidered if preferred.

COLLAR AND CUFF SET.—One collar and cuff set that mademoiselle showed me I know appeals also to the American girl. This may be made of the sheerest organdy or net. Procure a good pattern of modish shape and with very little trouble, the edge may be scalloped very dainty. Then embroider little wreaths of forget-me-nots on the collar and cuffs; this may be done in blue and green or any color desired. The collar is wired and when they are finished they would delight the heart of any feminine friend.

BOUDOIR SLIPPERS.—"The very thing for Eloise," I exclaimed and as the ma-

EMBROIDERED COLLAR AND CUFF SET.

demoiselle showed those dainty boudoir slippers I thought of a friend who was preparing her trousseau, and decided at once what I should give her. To make these comfy slippers buy a pair of soles of the correct size and enough ribbon of the desired color to encircle the soles. Join the ends of the ribbon firmly and whipstitch to the soles. At the top of the ribbon, stitch a band of half-inch ribbon and thread with elastic between the ribbon and the band, drawing this snugly about the instep. Then get a piece of white marabou and tack around the top of the slipper, letting it run down the front, part way to the toe, and fasten with a little cluster of roses of the same color as the slipper; or if the slipper is a delicate blue, use roses of a delicate pink. For another suggestion, fashion a pair of dainty "mules"; select a pair of soles of the size desired and to the front, stitch vamps formed of brocaded satin or ribbon. Around the edges of these use either a colored or white marabou or little roses to harmonize. Any of these things may be made as fine or as inexpensively as you choose and in spare moments or evenings before Christmas.

HELEN GARY ALLINGHAM.

The Woman At Law

[Under this heading we shall discuss the legal rights of women, particularly as regards thier property and their children. There will be direct answers to actual questions and general statements of law.]

Return of Deed.

I SOLD a farm of 60 acres about seven years ago, and when the agreed time expired, I could not get my money, so had to foreclose the place. Through a sale in September the place fell back to me. I have just now received a deed that does not correspond with my old deed. Am I entitled to my old deed? Are they duty bound to give it to me?

New York. C. O.

You having given a deed to the purchaser, your title to this property now comes through him, and whether it is good or not depends upon the foreclosure proceedings. The old deed is of no use now; it really belongs to the person to whom you gave it, and you are not entitled to it. The present deed should certainly contain a proper description of the property, whether it corresponds to the old deed or not.

Rights in Wife's Property.

A'S wife has in her name, a farm with all the buildings, tools, machinery, stock, etc., free and clear, in New York State. She wants to make a will leaving everything, unconditional, to her husband, after her death. They have two sons, nearing the age of majority, who are in different vocations. The question is this: If she leaves everything to her husband, can the boys demand any part of the mother's property after her death? Also; in case she made no will at all, would the property go to the husband after her death? A has been informed that if no will was left, the two children would get all the property, under the New York laws, while poor father would or could be, if the children choose, turned out of his home. D. D. D.

New York.

The wife may by will leave all her real and personal property to her husband and the boys would not be entitled to any part. In the absence of the will, at the death of the wife, the husband would have his courtesy of a life interest in the real property which on his death would go in equal shares to the boys; and the personal property would go one-third to the husband and the balance in equal portions to the boys. So, in any event, the husband could not be entirely left out.

EVENTS OF THE WEEK.

DOMESTIC.—Despite assertions by the Standard Oil Company that it is the real owner of the tank steamship Leda, captured on August 8 by the British cruiser Suffolk near Bermuda, the Supreme Court of the colony has declared the ship to be a German, and has condemned her "as a good and lawful prize." The State Department probably will be asked to make representations to the British Government in behalf of the Standard Oil Company, and unless these are successful the ship will be sold at auction. She is a new vessel, worth perhaps half a million dollars. She was owned by the Deutsch Amerikanische Petroleum Gesellschaft, having been built in Germany and hailing from Hamburg. She carried a German master and crew and flew the German flag.

The business section of Ardsley, N. Y., was wiped out, Dec. 6, by a fire which killed a family of four, injured half a dozen men, and burned the homes and total possessions of about 80 persons. The loss is estimated at from $100,000 to $200,000.

The plant of Thomas A. Edison, Inc., where the great wizard worked out practically all of his wonderful inventions, was destroyed by fire, Dec. 9, only three buildings being saved out of 22. The loss as announced by Mr. Edison, is $2,000,000, and is entirely uncovered by insurance. It was located at Orange, N. J. Two lives were lost.

President John McLennon of District No. 5 of the United Mine Workers of America announced, Dec. 7, after a conference with the international officers of the organization, that a resolution would be offered, Dec. 7, to the special convention of the Colorado miners, at Denver, to end the strike. The strikers will return to work under the terms of the three year peace plan outlined by President Wilson and will demand that the Seth Low mediation committee enforce the terms of that proposal.

Thirteen miners were killed at Scranton, Pa., Dec. 9, when one of their number dropped a stick of dynamite while descending into the Tripp shaft of the Lackawanna Coal Company. The explosion destroyed the cage, and the men fell to the bottom of the shaft. One man saved his life by clinging to an iron rod.

A Ninth Avenue local elevated train carrying hundreds of passengers toward their homes in Harlem crashed into an express train standing at the 116th street station, New York, Dec. 9. Two men were instantly killed and in the panic that followed when the wooden cars which bore the brunt of the impact took fire scores were injured.

Dec. 6-7 much damage was done along the Atlantic Coast by storm and high tide. At Seabright, N. J., the estimated loss to property was $150,000. At Sea Gate, on New York Bay, the damage was about $35,000. There was much damage to shipping, and the full damage along the Jersey coast is reckoned at over $1,000,000. A conference has been called to meet at Trenton including important officials and private citizens, to consider means of controlling storm damage on the Jersey shore. The State Legislature last Winter passed a law authorizing seacoast municipalities to issue 40-year bonds to an amount not to exceed $100,000 to build jetties and bulkheads. Many towns have taken advantage of this statute and the walls have been built. But this storm damaged these bulkheads and in many instances washed sections away entirely. In South Jersey more than one set of railroad tracks have been washed away and it has become necessary to change the lines.

THE PRESIDENT'S MESSAGE.—Dec. 8 President Wilson read his message to Congress, national defence being the chief theme. He urged the development of the National Guard, and the training of citizens in the use of arms, but decried the efforts of some citizens to alarm the country over its military unpreparedness. He referred to the immediate need of an adequate merchant marine, the lack of which is now hampering trade, and urged the passage of the pending shipping bill. Referring to rural credits, the President said: "The great subject of rural credits still remains to be dealt with, and it is a matter of deep regret that the difficulties of the subject have seemed to render it impossible to complete a bill for passage at this session." Philippine independence was touched on; the international convention for safety at sea already confirmed by Great Britain and Germany, and awaiting acceptance by the United States; the adequate charting and survey of our coasts, and also the need for economy in government expenditures.

FARM AND GARDEN.—Isaac H. Odell, commission broker of White Plains, N. Y., was fined $500 in New York Special Sessions, Dec. 3, for having condensed milk so impure it exploded. Inspector O'Keefe of the Health Department testified that on October 10 he condemned carboys of milk which Odell stored with the Heermance Storage and Refrigerating Company. The carboys were removed to an offal dock for disposal and there several fermented and burst, he said. According to the testimony the explosive milk shot 50 feet into the air and showered bystanders.

The regulations governing the shipment of hay, straw, and similar articles from States quarantined on account of the foot-and-mouth disease have been modified so that hay cut before August 1, 1913, may be moved freely without reference to the time when it was baled. Hitherto it was required that in addition to being cut before August 1 the hay should have been baled before October 1. The provision, however, that since being cut the hay should have been stored away from all cattle, sheep and swine, remains in force. In the case of hay that has been cut since August 1, or which has not been kept away from contact with any possible source of infection, disinfection under federal supervision is required. This disinfection should be accomplished by fumigation with formaldehyde gas.

The annual meeting of the Oregon State Horticultural Society was held at Medford, December 2-4.

Dec. 7 Senator Pomerene of Ohio introduced a resolution in the Senate directing the Committee on Agriculture and Forestry to investigate and report fully on the extent and efficiency of the recent cattle quarantine. Delegations from Iowa and Ohio have protested vigorously against the quarantine.

Secretary Houston issued an order, Dec. 7, effective at once, under which the Federal quarantine in New York and other States, declared on account of the foot-and-month disease among livestock, has been modified. The effect of the amendment is to permit the interstate movement of all livestock from outside the quarantined area in New York, except the counties of Erie, Niagara, Orleans, Genesee, Monroe, Wayne, Ontario, Seneca, Cayuga, Cortland, Tompkins, Saratoga, Washington, Rensselaer, Albany, Schenectady, Columbia, Suffolk, Nassau, Richmond, Bronx, Kings, Queens, Rockland and Westchester. These counties are still subject to Federal quarantine. The modification will permit the movement of dressed carcasses, hay, straw and similar articles hitherto subjected to quarantine regulations. Similar modifications were made as to Indiana, Michigan and Maryland with certain counties excepted.

Florida farmers are alarmed over the threatened destruction of their grapefruit orchards through the ravages of an Oriental canker, which devours slowly but surely trunk leaf and branch of the trees, and against which, according to the experts of the Department of Agriculture, there seems to be no defence. Thus far the growers have tried to stop the spread of the pest by burning trees it has attacked, but this has proved ineffectual.

Short courses in agriculture will be held at the New Hampshire College, Durham, N. H., as follows: "Renovating Old Fields for Hay and Forage Crops," one week, beginning Jan. 4, 1915; "Grain and Potato Growing," one week, beginning Jan. 11; "Apple Growing," one week, beginning Jan. 18; "Small Fruits and Poultry," one week, beginning Jan. 25; "Farmers' Week Course," one week, beginning Feb. 1; "Course in Dairying," five weeks, beginning Feb. 8.

THE EUROPEAN WAR.—Dec. 3 a hostile aviator dropped bombs upon the Krupp cannon factories at Essen.....Dec. 5 French aviators dropped bombs on the aviation hangars in Freiburg, Germany.....Dec. 7 a German aeroplane dropped bombs on Hazebronck, Belgium, killing several civilians.....The Allies assumed the defensive, Dec. 5-10, on their left wing in Flanders, and on their right in Alsace. The French and British artillery has been much strengthened, and the Allied fleet is cooperating with land forces, Zeebrugge being again bombarded. The French have captured Vermelles, in Northern France, and maintain positions taken in Alsace and Lorraine.....Advices from Rheims Dec. 8 announced further damage to the Cathedral from German bombardment. .....Dec. 8 a British squadron under command of Vice-Admiral Sir Frederick Sturdee, chief of the war staff, engaged a German squadron under Admiral Count von Spee off the Falkland Islands, in the South Atlantic. The armored cruisers Scharnhorst and Gneisenau and the protected cruiser Leipzig, three of the German warships which had been menacing British shipping, and part of the squadron which sank the British cruisers Good Hope and Monmouth in the Pacific on November 1, were destroyed, while the cruisers Dresden and Nurnberg, the two other vessels which composed the German squadron, made off during the fight, the Nurnberg being captured later, the Dresden's fate uncertain. Two colliers were captured. The British loss was very small.....In Poland, Dec. 6, the battle line extended 300 miles. The Russians were then bombarding Cracow. The Germans had secured important successes around Lodz, the Russians evacuating that city.....It was reported, Dec. 10, that the Kaiser was seriously ill at Berlin.....The Boer revolt in South Africa appears to be generally crushed. Gen. De Wet is a prisoner, liable, under existing law, to the death penalty. Gen. Beyers attempted to escape from his captors while crossing a river, and was shot and killed.....Australian and New Zealand troops have been landed in Egypt, where they will complete training for European service.....Japanese veterans in Hawaii have been called to the colors, and it is reported they will be sent to Egypt and India.....Indian troops have defeated Turks in Persian territory.....While it is freely asserted that Italy is prepared to join the Allies, a persistent report states that she has been offered the Trentino, an Austrian province populated by Italians, as the price of neutrality.....Dec. 9 the Servians claimed victories over Austria.

OHIO CROP REPORT.

THE Ohio Agricultural Commission reports thus on the condition of crops December 1, 1914:

Wheat—Compared with an average, 97 per cent.; amount sold as soon as thrashed, 43 per cent.; damaged by Hessian fly, 5 per cent.; damaged by white grub, 1 per cent.

Corn—Area planted in 1914, 2,901,070 acres; estimated average yield per acre, 37 bushels; total estimated production, 107,463,240 bushels; put in silo, 11 per cent.

Clover—Area sown in 1913 cut for seed, 33 per cent.; average ield of seed per acre, 1.59 bushels.

State Average Prices.

	1914.	1 year ago 1913.
Wheat, bushel.....	1.06	.90
Corn	.64	.66
Barley	.68	.65
Oats	.47	.41
Rye	.83	.71
Clover Seed	8.56	7.34
Potatoes	.57	.90
Hay, ton	13.72	12.94

COMING FARMERS' MEETINGS.

Farmers' Week, Pennsylvania State College, December 28, 1914 to January 2, 1915. State College, P. O., Penn.

Winter short courses, University of Vermont, Burlington, Dec. 28, 1914 to February 26, 1915.

New York State Fruit Growers' Association annual meeting, Rochester, N. Y., Jan. 6-7-8, 1915.

January 9th to 15th, inclusive, 1915 Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Massachusetts Fruit Growers' Association annual convention, Horticultural Hall, Worcester, Mass., Jan. 13-14, 1915.

Coöperative Associations of the State of New York, second conference, Utica, January 13, 14, 15, 1915.

Virginia State Horticultural Society, nineteenth annual convention, Winchester, Va., January 13-14, 1915.

Second annual meeting of the New Hampshire State Department of Agriculture and the thirtieth annual meeting of the Granite State Dairymen's Association, Manchester, N. H., Feb. 10 and 11 1915. Fred Rasmussen, Secretary.

New York State Agricultural Society 75th annual convention, the Capitol, Albany, N. Y., Jan. 20-21.

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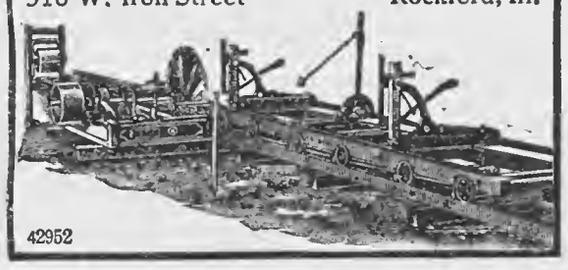

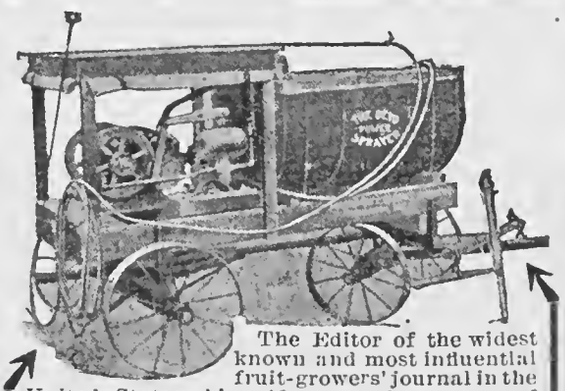

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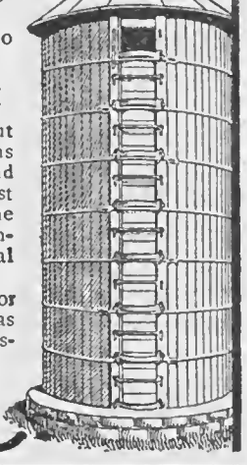

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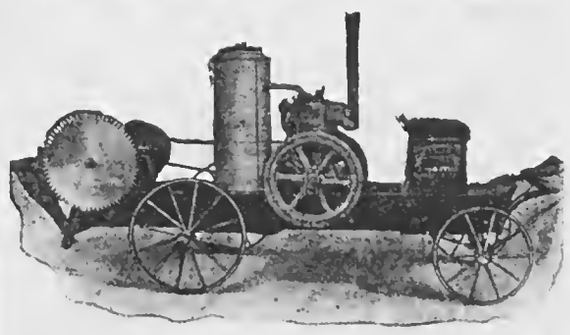

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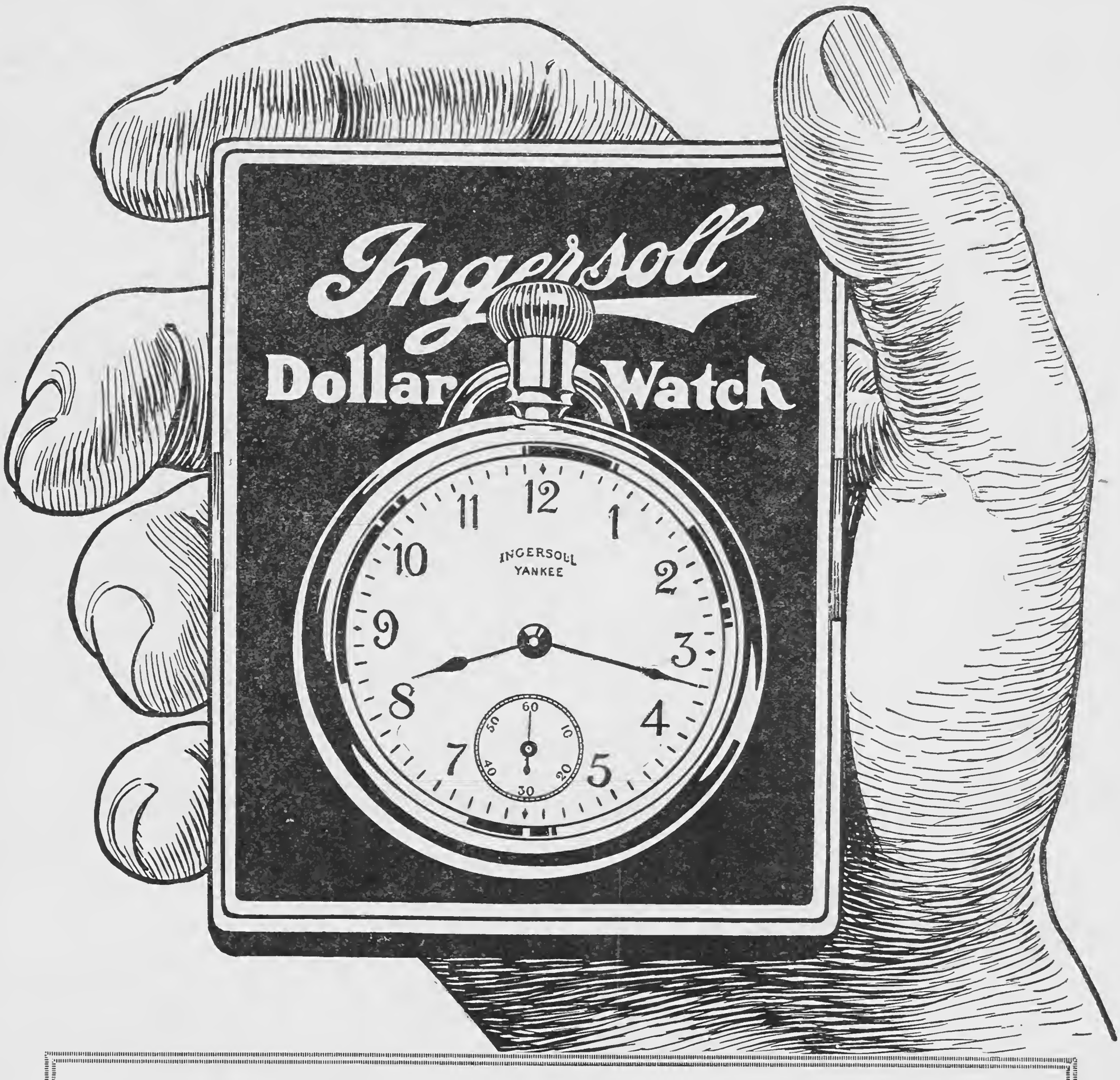

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"At Christmas play and make good cheer
For Christmas comes but once a year."

LOOKING over some old books I found this from "The Farmer's Daily Diet," by Thomas Tusser. It was written about 1560, and has kept alive through 354 years. If you smile at the rhyme ask yourself how many of your own words will be remembered 50 years hence! It is very evident to me to-night that Christmas is coming. We have had our first snowstorm—a little thing just turning to rain—but enough to whiten the ground and relieve the melancholy gray of the landscape. Now is the time to get out the copy of Whittier and read "Snow Bound." My children read it and think they understand, but in these days of electric lights, water conveniences, telephones and all the rest who, without experience, can ride imagination back to one of these big farmhouses on a windy hill, with only one stove, and shut off into solitude by the storm? It was in such lonely places that the true Christmas spirit was bred. It is one of the things that never can be taken out of the human race. Men who call themselves wise and imagine themselves great, may ridicule the old story and think they can turn the world away from it, but they get nowhere in the end. If they think otherwise let them look into this room to-night and watch the group of children. The open fire is blazing up. I am writing on a board laid across the arms of the chair, so as to be close to the fire. The children are scattered about trying to make rude gifts, or figuring what they can buy out of their little hoards. It seems that they have found "Santa Claus" in the dictionary as "the friend of children." That settles it with them, for is not the dictionary the last resort? It is Christmas. *Christmas!* The great beautiful day of all the year, and already on lonely farms and in solitary places, there is a glow and presence in the air which beats down all the arguments of the cynics and the "great thinkers." Before our fire to-night the children and I are sorry for those unhappy wise men who have lost so much out of life. They might well go star hunting as other wise men did before them.

EVERY DAY.—Old Thomas Tusser tells us that this beautiful holiday "comes but once a year." True, there is but one date on the calendar, but I think one great trouble with the world is that we are too ready to agree with old Thomas. I do not believe in airing the Christmas spirit once a year with great parade and show, and then packing it away in the closet with the wedding garment, the family skeleton and several good resolutions. If we are to celebrate the birthday why not also every day as we go along? You see this world of ours is an everyday affair—not a matter of holidays alone, but of plain, common days, during which people need our love and care far more than on the great feast days when all hearts are aglow. It is a standard joke that the attendance at Sunday school for the month before Christmas is abnormal—as the children all look for a present. Some of us who are gray-haired have worked this joke out into a serious practice of life. I do not believe in expensive gifts at Christmas—little tokens of remembrance are far more in keeping with the spirit of the day. I would rather scatter the gifts through the year when they are most needed. Here I know I strike at habit and long-established practice, but that has been done before. It seems to me that something vital comes out of the beautiful holiday when we lead our children to expect so much of material things at Christmas. I would associate the holiday with small tokens of love and give the larger gifts as they are needed through the year. I know how most people regard this. Long ago Shakespeare said:

"At Christmas I no more desire a rose
Than wish a snow in May's new-fangled mirth
But like of each thing that in season grows."

Or Byron who said:

"As soon
Seek roses in December, ice in June."

That was sound enough when he wrote it but what would my lady say to it now? What about the florists with their millions of dollars invested in the flower trade? We have carried May under glass right up to Christmas and in the cold storage houses we have carried Christmas right into May. If we do this with the material things of life why not with the spiritual things—the leader of which is what we call the Christmas spirit? Can we not have something of a Christmas tree in the wet ditch, the hot cornfield or the cold ride to market?

MATURE YEARS.—If I had the power to do so I would hang some Christmas gifts on your tree that would last all through your years. Take the men and women of mature years first. I would have you fully understand the meaning of Emerson's saying:

"*We do not count a man's years until he has nothing else to count.*"

Now the world needs the sum and the essence of your life's experience. People of your age do not need it half so much as the younger generation. It is only through these younger people that you can hope to pass on what the world has given you. The only way you can pass it on is to hold on to something of the spirit of youth. I would like to give you a broader and fairer charity for youth and its ambitions. Too many of us become absorbed in our work or even in our prejudices and cannot realize that life has changed. There are roses now at Christmas and we should not wonder if our children long for them. We agree that we cannot profitably farm now as was done 40 years ago. It may be a part of the Christmas spirit to realize that we cannot handle our children now just as we were handled. My gift to you would be a kindly and broad philosophy which will cut prejudice away from truth as rust is taken from iron. As for the young—have they not *youth*, which we know is the most precious thing of all? Do we not also know that they cannot realize its value until they have lost it? It will not be a popular gift if I tell these young people that I sincerely hope they will be forced to *work hard* for their place in the world and that no one will curse them by leaving them a fortune so that they never will feel the sting of necessity. Some people think there is poison on the sting of necessity. Not so, it carries power—not poison.

"Son, have too much yet still do crave.
I little have and seek no more.
They are but poor, though much they have,
And I am rich with little store.
They poor, I rich; they beg; I give.
They lack, I have; they pine, I live."

THE BETTER WAY.—I could give our farmers no finer present than the convincing thought that we must carry the spirit of "*good will to men*" into every-day life. I think we have now come to the point in history where we realize the business evils which have made the 35-cent dollar possible. It ought to be evident to all of us that we cannot permanently increase the size of this dollar through fraud or fighting or through politics. The remedy lies in the gentler, truer practice of the Christmas spirit. Instead of trying to "do" our neighbor or the man with whom we do business we must give him what is honestly his due. Think of it for a moment. Every business interest which handles and sells our produce is organized. How can we expect as individuals ever to stand for our rights against these powerfully organized interests? How can we ever expect to co-operate with others unless we can learn to carry this Christmas spirit right into every-day life each day in the year? If there is distrust between you and your neighbor so that you cannot co-operate, how can you expect to co-operate successfully with strangers?? My Christmas gift would be the power to realize that we shall not gain our full rights until we trust each other, rise above petty ill feelings and join hands in fair brotherhood.

"*Go put your creed into your deed*" says Emerson, and also this:

"It is as impossible for a man to be cheated by any one but himself, as for a thing to be and not be at the same time."

COMFORT.—Another thing I would hang on your tree if I could is the desire and ability to make your home as comfortable as is possible. Some have the ability but fall down on desire. I think it is the God-given right of every child to have a happy care-free childhood. Denied that his life always lacks an essential. It is just as much a right for mother and the girls to have a comfortable and convenient home with facilities for doing their work. If I could put running water, hot and cold, into every farmhouse, I would wash away more of the trouble of farming than you and I can fight out in 10 years. Let me also put a good garden and lawn by every farmhouse, with roses and vines on the porch and trees about the house and I will increase the character and reputation of farming by 40 per cent. These are the things which we can all do in a small way or on a larger scale, and they will help us more than politics or discussing the war or the tariff at the store. These things all help to make a kindly and happier feeling at home and among neighbors, and this home and neighborly feeling is the foundation of all that we are trying to do as farmers to better our condition. Instead of buying some large present at Christmas why not put a little time each day in fixing the house and grounds so they will make life happier?

FINALLY, THOUGHT.—I would, if I could, put at the top of your tree, right under the star, the bulldog determination to think and reason out your hard problems. The man who gives you a rule and a sign charges you more than it is worth. There is no other farm or problem just like yours and no stranger can give you a complete rule. There are many who can help or suggest but, finally, you must apply the information yourself or live forever in a rut where the wheels of progress will run over. Hand a man a saw and a chisel and hammer and tell him how to make a door. He has the tools, but what sort of a door would he make until he studied it out and learned how? Give a man a general rule of farming and what can he do with it until he reasons it out for himself and applies it to his own conditions? I put this ability to reason and think at the top of the tree because the hand can be made free only through the mind. A man may read and study for years, yet his mind may be like a cellar full of potatoes. There would be a great collection of facts without any cohesive force or vital power. Far better half the reading well thought out and tested. For many years we have been letting lawyers, teachers, politicians and others do our thinking for us. When they gave us false reasoning we followed still because it was hard and unpopular work to reason for ourselves. The world could get on very well if there were a shortage of "high thinkers" for the next half century provided the great middle class of our people could come to think sanely and fearlessly over what there is already in the world. H. W. C.

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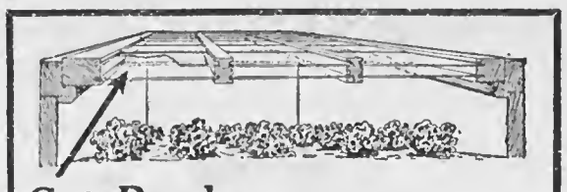

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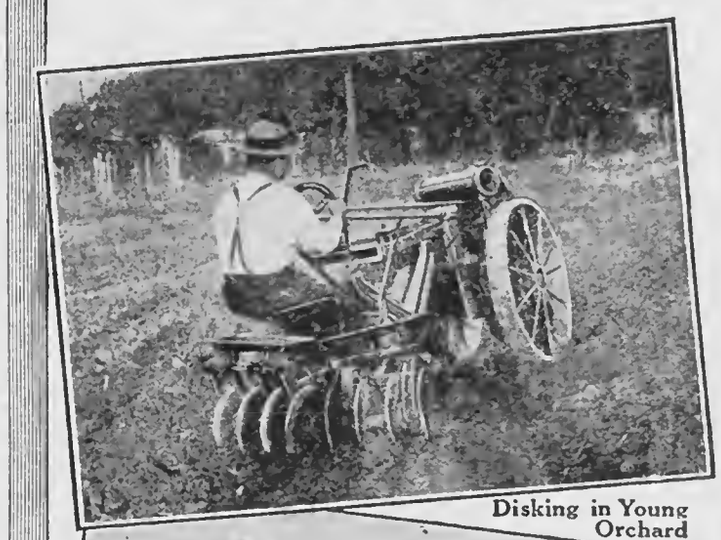

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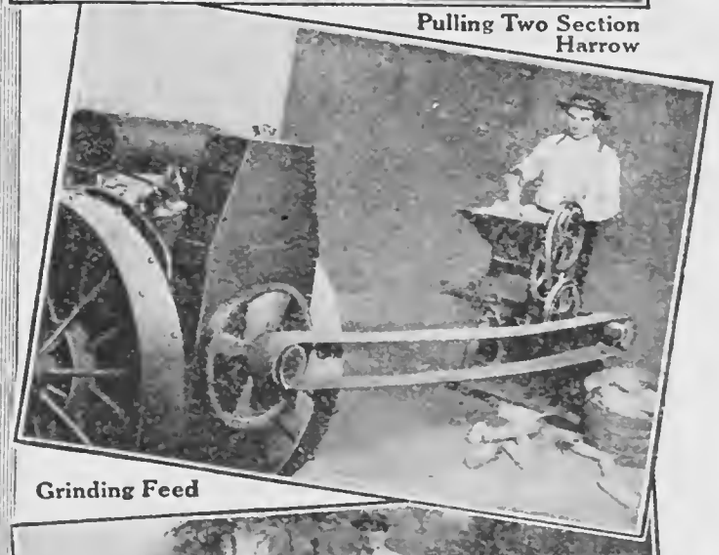

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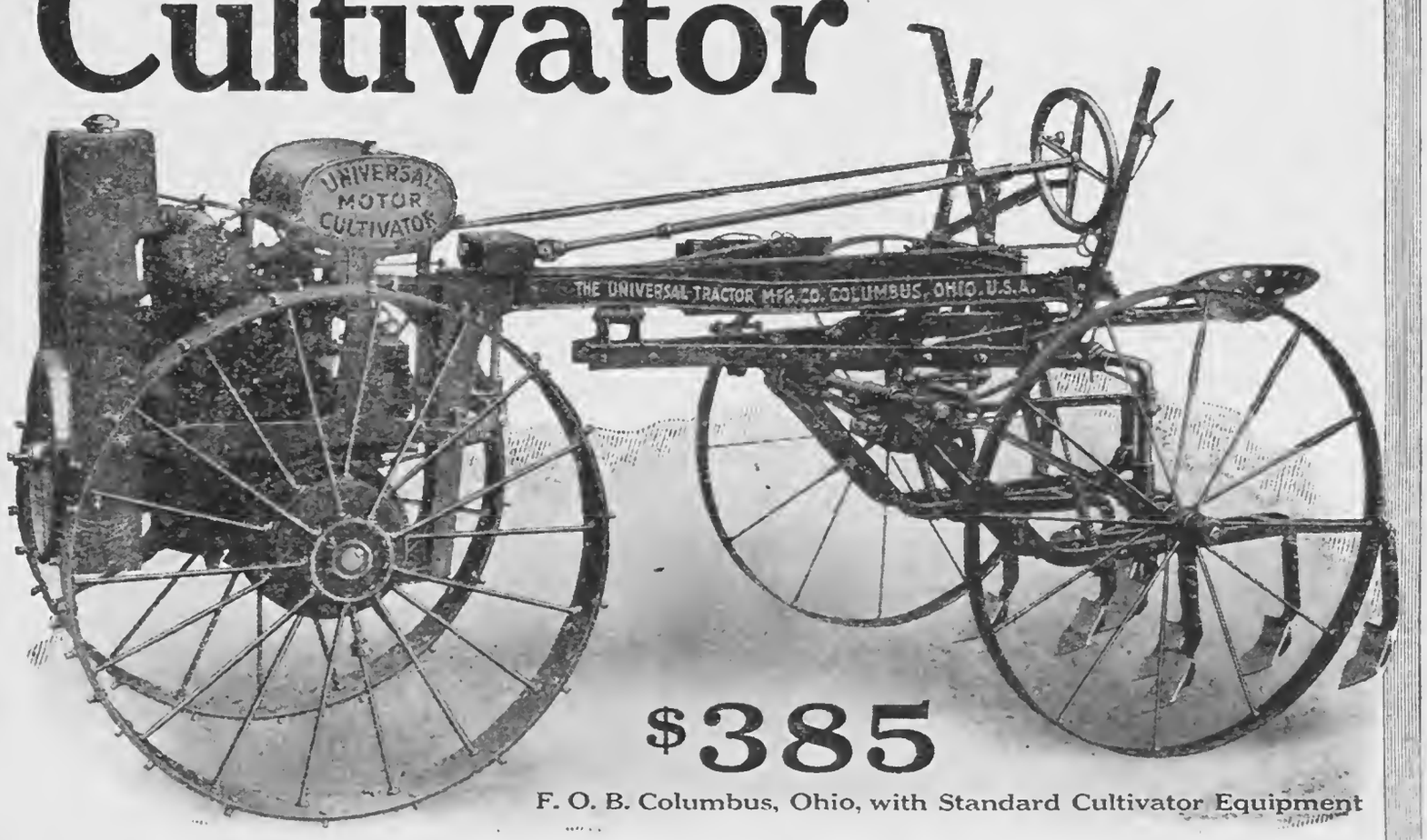

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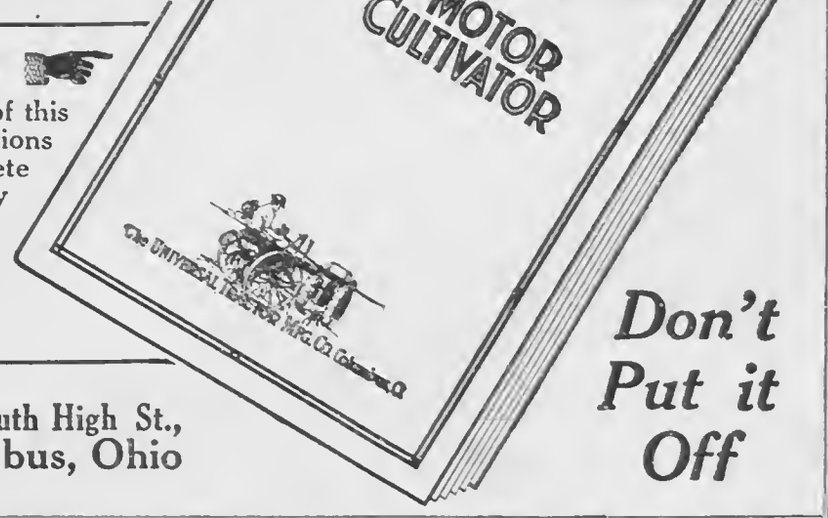

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THEY all were looking for a King
To slay their foes and lift them high;
Thou cam'st, a little baby thing
That made a woman cry.

O Son of Man, to right my lot
Naught but Thy presence can avail;
Yet on the road Thy wheels are not,
Nor on the sea Thy sail.

My how or when Thou wilt not heed,
But come down Thy own secret stair,
That Thou may'st answer all my need—
Yea, every bygone prayer.

—George Macdonald.

THE question of successful free markets in New York City has come down to a contest between the retail storekeepers and the consumers. The butchers and the grocers sell farm produce at high prices. They pay high rents and there are too many of them anyway. The entire system of retailing is extravagant and wasteful, yet the retailers fight to keep it up. The free markets, even as a crude experiment, have already shown that the public may buy their food to far better advantage by cutting out several middlemen. The butchers and grocers plainly see that if this new system is permitted to develop the outcome is sure. The public, once clearly shown that with one useless middleman out of the way, their food becomes cheaper, will demand a revision of the whole system of distribution. This will mean direct trade with only the *necessary* handlers between the consumer and the producer, and both classes benefited. In all this discussion no one who looks at the subject fairly wishes to injure the *needed* handlers of produce. The great effort is to cut out the parasites who fatten upon the share which rightfully belongs to the producer. The New York retailers are trying to kill off the free markets, while the organizations of buyers and labor are fighting for them. Out of the conflict will come education in buying, which is the thing to make direct dealing possible.

THESE articles on Alfalfa growing in Central New York mean far more than you may think at first glance. Wherever Alfalfa thrives prosperity follows. No other plant has so fattened the soil and made so much of history as Alfalfa. The Argentine Republic, in South America, has put itself upon the map almost like a miracle, and Alfalfa is probably more responsible for this wonderful growth than any other single thing. The American desert has been made rich and habitable by Alfalfa and water. It is the surest thing known that any section which systematically encourages the production of Alfalfa on soil well adapted to it has a sure mortgage upon the future. That is one reason why the Alfalfa section through Central New York is to become the great garden spot of the upper Atlantic slope. Its cities and its farms will feel the effect of the great wealth which, year by year, this wonderful plant is bringing to the soil. We believe this thoroughly, yet we do not join those who urge farmers everywhere to grow Alfalfa. We believe there are some, yes, many, sections in New York where the crop will not pay. There are thin, sour lands too far from limekilns or wet, undrained tracts not suited to this remarkable crop. At present the cost of fitting such soils for Alfalfa will prohibit its use, and Soy beans, Alsike clover and vetch will, we believe, pay better. Some useful legume plant may be found adapted to any soil in the State, and its use may in time prepare the soil for the king of them all —Alfalfa!

THE time has come for some one to prepare a thoroughly complete and comprehensive history of American agriculture. What a story that will present to the skilled historian! From the rude beginning at growing corn and beans on abandoned Indian commons to our present marvellous system of crop production! Into that growth is woven the life of a mighty nation: for after all the story of a nation's bread is the vital thing in its history. We hope some one well equipped for the work will take up this history and make it complete.

CHRISTMAS is essentially a children's holiday—founded upon the birth of a little Child, and built out of the pure faith and trusting love of children. We older people perhaps do not realize it but Christmas becomes a happy and helpful holiday in proportion as we go back into childhood, and all that childhood means. Some of us have come to the time when we must live most of our years in memories. We may confine ourselves to our own sad thoughts, or we may live with the world's memories which great writers have preserved in books for us. The future belongs to the child and we who are older can view it hopefully and sweetly only as we can take from children the true, unspoiled view of life. That is why the little child is after all the best and most valuable asset a country can have. That is why a man's children should mean far more to him than all his worldly possessions. This true, unpurchased love and faith of the little child is the greatest thing in the world. The glory of Christmas comes from the fact that at this season we come nearer to realizing it than any other time. And what is this thing about the child which lifts us all at Christmas into a higher and clearer view of happiness? A hopeful trust in others, a confident, unafraid certainty that some wise, higher, loving power will protect and provide! It is after we grow away from care-free childhood that we begin to feel that fraud, fighting, and all the mean and hateful qualities are needed for the struggle of life. Do we not know that men have fought and distrusted and stood apart for all these years, only to find that the plain common people are no match for the strong at such tactics? This Christmas, with its sadness of war, and its curiosity for the future, ought to teach us all the futility of battle and bluff. Can you not see that after all the child's faith is stronger than father's fight? As farmers and as men in the mighty peaceful struggle which is now coming for industrial rights, we must realize this Christmas Day that before we can hope to win we must set the nation an example of true co-operation and honest brotherhood.

IT looks as if the good old apple were to have a fine Christmas present this year. Several persons have written about a report that diluted cider vinegar has been found to be a fine mouth wash and preservative for the teeth. In order to be sure of the matter we consulted one of the most expert dentists in New York. He says that a professor at Columbia College has been working for some years in an effort to learn the cause of tooth decay and a simple means of prevention:

He has found that fruit acids dissolve mucine, and mucine deposited on the teeth forms mucilaginous films, which films hold or envelop the acid product of the bacteria in direct contact with enamel on sheltered portion of the teeth, thus permitting the full chemical action of the acid to go on undisturbed. Now the question we are trying to prove is, if dilute fruit acids, such as cider vinegar, say one part to four of water, will dissolve the envelopes without injury to the tooth substance, and will thus prevent decay of the teeth.

There is nothing sure about it yet, but the outlook is very hopeful. Some excellent results have been obtained but it is not regarded as a full demonstration yet. Should this plan of saving the teeth succeed, as we hope it will, our old friend the apple comes into a new job—as toothbrush and tooth preserver. Instead of scrubbing your teeth with a brush all you have to do is to eat a mellow, raw apple! It cleans the teeth and its gentle acid plays havoc with the bacteria. This thing of using a fine Baldwin or Northern Spy as a toothbrush is the best yet. We must plant more trees to keep up with the market!

THAT article on dairying in New England suggests the way we must all work to relieve the situation in many of the large markets. So long as there is a surplus of milk sent to Boston and the other large cities the dealers and contractors have the advantage, and can dictate prices. Create a shortage in place of a surplus and the advantage shifts to the producers so long as they are organized. Therefore it is good management to use more and more of the milk in creameries for butter or ice cream, as all the milk thus used is kept away from the cities, and to that extent reduces the surplus. The same thing is true of the New York produce market. Vast quantities of food are sent here and then shipped out again, often for sale in a market not 10 miles from the farm, where the food was produced. This great surplus of food enables the dealers to dictate prices. It gives the railroads a double charge for carrying it, and the handlers have about three chances to take their share. One way to overcome this is to see that local markets in towns and cities throughout New York are supplied first of all with local grown produce. Elmira, Utica, Binghamton, and all the rest, are now using products which are grown on New York farms, sent to this city for sale and then sent back to the local market. All this adds to the surplus here, gives the dealers a better chance to dictate prices, and adds greatly to the cost of carrying and handling. Local co-operative clubs for selling and buying will help settle this. The way to relieve this big market is to take care of the local markets first.

HERE is a Christmas present which would be highly appreciated by the farmers north of Trenton, N. J. We want hardy strains of Crimson clover which we may use as manurial crops—seeded in the corn or after Summer crops and plowed under in Spring. The present strains of Crimson clover are doing wonders for the Southern soils, but they are too tender for Northern planting. With us Crimson fails to pass through our hard month of March, nine times in 10. While it more than pays for seed and labor in its Fall growth alone, our farmers want a clover that will live over and grow rapidly in Spring. A hardy Crimson would fill the bill exactly and would save thousands of dollars now spent for plant food. The wise men have found hardy varieties of Alfalfa to suit the North. Now let them play the part of scientific Santa Claus and give us a hardy Crimson clover.

NO one can lay down rules or systems for farming. Each man must work that out for himself, using all the information and experience available and as the farmer's knowledge and ability to think grows so will his management grow and change. E. M. M.

If we could give each of our readers a valuable Christmas present we would select the power to make each and every one of them appreciate and understand the truth of that statement. Sometimes we have people come and ask for a sure rule or "sign." "Do not tell me to figure it out myself," they say. "I want you to do it for me and tell me just exactly what to do." We think more children at school are spoiled and mentally crippled by making their studies easy than in any other way. The little things are not taught to think and reason for themselves, and thus they go through life handcuffed by a cast-iron rule to the habit of depending upon others for original thought. No farmer can succeed by following "signs" or by doing just what others tell him to do. The best teacher gives him the truth of general principles and stimulates him to go on and think out his own problem. Many are called—few are chosen—those few are the thinkers who break free from the slavery of the rule and the "sign."

BREVITIES.

WOOD ashes for sour land.

CULL apples make a good "green food" for poultry.

LET'S organize a society of people who agree never to jump at conclusions.

MAY Santa Claus your presents stack and in your stocking put no tack.

IT surely is a period of life to be called shocking when children get so wise they take no stock in Christmas stocking.

A GREAT world we live in—supplying bullets with which to make orphans and then providing bread for the orphans our bullets have made.

WISCONSIN has a law under which a farmer may have the soil of his farm fully tested for $5. Over 200 farmers applied for this test last year.

"THE hot-air artist from Madison County." Our correspondent on page 1452 wants to hear from this character. There are 16 Madison counties in the country, and no doubt they can all produce "artists" in the heated atmosphere line.

IN a recent issue a reader asked if the old slat and wire fence had proved durable. At least a dozen people have come trying to sell him a fence machine. That is not what he wants—he wants to know if this fence will equal woven wire.

THE neighborhood terror! He or she who purposely spreads abroad the error. Lord knows that all of us stumble on the way, all of us make mistakes. All of us get gay. What's the use of writing down all the little slips? Better far forget them—better close the lips.

WOMAN AND HOME

"Grandpa's Christmas Story"

(As reported by Jimmy)

By Harry Ayres

"HOW-DO, Mis' Holcomb. Maw said I could come over an' play with Harold 'til four o'clock, if you was willin'."

"All right, Harold. Go get your skates, your Maw sez you can."

"*Ain't* they dandies, though. Paw sez Maw got in ahead of him an' told Santy to bring me this dandy mackinaw coat, so he didn't know what to reccermend 'til he happened to notice a nice, smooth piece o' ice below the bridge when he was on the way to the Junction with a load o' calves, so he stepped in an' told Santy he knowed a boy at the third farm beyond the school-house on the West Road 'at would 'preciate a nice pair o' skates."

"Not a bit o' danger, Mis' Holcomb. Paw told Maw if we broke through there ain't enough water in the creek this year to break up a settin' hen."

"Yessum, I allers have a nice Christmas when we go to Aunt Lizzzie's—it was our turn to go out there, this year. She's jist as good cook as Maw is, an' she ain't all the time frettin' for fear you'll eat too much, the way Maw is. Paw sez the on'y way he c'n tell them two women apart is that one is short an' stout an' the other ain't."

"Oh, *him*.—he's allers crackin' jokes. Me an' him an' Maw an' Henry an' Emily went with the team an' Sheldon an' Edith went in his brand-new cutter—say, that mare o' his c'n go like greased lightnin'!"

"Maw told Henry to look at the weather-report when he took the milk to the station an' it said, 'Probably rain. Warmer.' Paw said that meant fair, an' cold enough to freeze the hair off'n the lap-robes. She wanted to take umbrullas an' he said, 'Shucks! Better put in a couple o' extry robes.' She said she knowed we'd get soaked afore we got back, an' he said she was a pessimist o' the purest water. Henry said we might put the unbrellas under the back seat an' sit on the extry robes, so's to be ready for whatever might turn up. Paw sez, 'Henry, if you'd bin in Taft's place you'd a-bin re-elected, you're the greatest harmonizer since William McKinley.'"

"Sure, ma'am, he was the 24th President of the United States—I learnt that in my jography lesson."

"Sheldon an' Edith didn't start 'till a hour after we did, but we hadn't got to the Emerson place 'fore we heard his bells jinglin' behind us. Paw wouldn't turn out for him—jist for fun—so they went round by Gaines's cheese factory an' when we was most to the Payne place there they was cuttin' in ahead of us. 'Whip 'em up, Ezry,' sez Maw, but Paw sez, 'Not me, Mary Ann, I don't relish takin' a hold o' the red-hot end of a poker. That mare could beat 'em that distance on three legs. 'Sides that, I aim to handle this team so's they'll last me 'til I quit farmin' an' take to settin' around tellin' other folks how to do it.' My! How they did laugh at us, though."

"When we got there Uncle Jim took the team an' we all went inside. There was Aunt Sophy, so we knowed Granper an' Grammer was there. They was awful glad to see us—'specially me. Aunt Sophy pertended she didn't know me—I'd growed so. Aunt Lizzie hugged an' kissed me an' cried, like she allers does, 'cause I'm about the same age as her Willie what died."

"Yessum, an' her little girl died too. Maw sez her heart aches for Jim an' Lizzie, they've so lonesome. Uncle Jim allers goes off if anybody mentions 'em an' Aunt Lizzie cries."

"Well, whilst the women-folks was puttin' their things away an' all talkin' to once we men-folks went into the parlor, where Granper an' Grammer was warmin' up after their cold ride. 'Course, they made a lot o' fuss over me, too, an' I was awful glad to see 'em. Pretty soon the rest come in an' I went to the kitchen to see what the prospects was. Gee! They was *everything*. I guess mebbe I couldn't a helped just *tastin'*, but Uncle Jim come in the back way an' when he see me he ask me didn't I want to go out to the barn an' see the critters. Say! He's got the funniest barn you ever see! 'Stead o' puttin' in his hay with a hoss-fork, the way Paw an' Mr. Holcomb does, he drives clear up to the top o' the barn an' dumps it off into the mow. Then he keeps his horses an' cows in the same stable an' the henhouse opens into it, so's the heat from the cows c'n go in. Sez his hens waller in two feet o' dust an' he ain't never seen a chicken-louse in his stable yet. He ain't got no silo, neither. He grows mangels an' turnips an' cuts 'em up in a root-cutter down in a cellar under the stable an' h'ists 'em up in a elevator he made hisself. Sez he c'n make milk cheaper on roots an' fodder an' hay 'n Paw can on silage an' hay an' boughten grain. Paw sez mebbe he can, but *he's* f'm Missouri. Henry sez its a case of every shoemaker to his own last, but I don't see what shoemakers has got to do with farmin'."

"I was glad I went to the barn, 'cause dinner was ready when we went in an' I didn't have to set around an' wait. Soon's we was all set, Granper rose up an' sez, 'Children, let us remember Whose birthday this is. Then he ast the blessin'. We all bowed our heads but Uncle Jim."

"I d'know, ma'am, but I guess it's 'cause he's a infidel."

"No, I d'know what a infidel is, but I bet it's sump'n awful, 'cause Aunt Lizzie allers cries if anybody sez anything about it."

"Well, when Granper got through, Paw sez, 'AMEN.' Uncle Jim looked at him kind o' susprised an' sez, 'What! Is Saul also among the prophets?'"

"'Ever since Thanksgiving,' Paw sez."

"'Kind o' sudden, ain't it?' sez Uncle Jim."

"Granper spoke up—'Mother and I have received many warm tokens of regard from our children today, and we appreciate every one, but the best Christmas gift we have received is that declaration of Ezra's. Jim, you have been a good hnsband to Lizzie and a good son to us. But it grieves us to see how hard you take your trouble. Mother and I have talked it over a good deal, lately, and after we have enjoyed the bountiful and delicious meal before us we will all go into the parlor and I will tell you a true story.'"

THE ENTIRE FAMILY READY FOR SANTA CLAUS.

"Yessum, Granper allers talks like that. When we was comin' home Emily sez: 'What beautiful English Grandpa Martin uses! He would make a fine public speaker.'"

"'Law, child,' Maw sez, 'didn't you know? Granper served three terms in the Legislature.' An' Paw sez, 'Yes, an' the voters o' this district bought a goldbrick when they turned him down for that lawyer from Blankenburg. They got their bridge an' the Blankenburg people got their armory, but the only good the bridge does 'em is to add to the beauty o' the scenery an' I guess the Blankenburg people think they got a white elephant on their hands by this time.'"

"Yessum, I can tell it to you most *exactly* like Granper said it, 'cause I got a good memory—Paw sez so."

"Well, when we went in, Grammer took me up in her lap an' Granper took her hand. All the time he was talkin' he kep' a strokin' an' pattin' it."

"'Children,' he sez. 'When I was a young man my lines fell to me in pleasant places. I didn't have to work hard to pay for my farm as you boys have—better for me, perhaps if I had. It was much larger then than now. Everything I undertook prospered. I said in my heart I shall never be moved. I was blessed with a beautiful and loving wife, a son and heir to carry on the name and position of the Martins and a daughter who gave promise of great beauty. I had reason to be proud, but my pride was the kind that goes before destruction. The Age of Reason was my Bible and Voltaire was my prayer-book. Though the lives of my father and mother and my wife compelled my respect, yet I deemed in my conceit that they were deluded by old-fashioned notions that were doomed to disappear before the light of Reason."

"'At the height of my prosperity I sent in my application to the local lodge—there was only one kind of lodge in those days. I have no doubt it would have been accepted, but, as soon as he heard of it, my father came to see me. He asked me if I knew that no honest man could be a member of that fraternity and an infidel at the same time. I asked him why and he told me. He said that though nothing on earth could give him as much pleasure as to know that I had come back to the belief of my fathers he would rather see his son an infidel than a hypocrite. He would not argue with me—perhaps I might have bested him at that—all he would say was, 'I would rather see my son an infidel than a hypocrite.' That set me to thinking as nothing else could have done."

"'Possibly this might have worn off in time, but, shortly after, our children caught the diphtheria. It had raged all around us, but we had taken every precaution known in those days, and how they contracted it I cannot conceive. Anti-toxins and methods unknown then have since robbed the disease of much of its terror, but then it was a terrible scourge, and the neighborhood was in a panic. Our help left us. Our only way of obtaining supplies was to have some of the bolder neighbors bring them to where the free-delivery box now stands and leave them for me to take after they had withdrawn to a distance, when they would ask after the children and I would tell them what we needed further.

"'At the height of our extremity a preacher, who had a few years before come to our hills from the city for his health, and whom, in the days of my prosperity I had laughed at, came to us to help care for our little ones. To my protests that he owed it to his wife and two little girls to avoid us as the rest did he replied that his wife had sent him and he could trust his little ones to God and her. Mother here can tell you how gentle as a woman he was and did all that possibly could be done. But they died. Then it was I discovered that I had no ground to stand upon. Mother had, and but for her I think I should have gone crazy.

"'Then came the war. I wanted to go, but hated to leave Mother after what she had been through. It was not a conflict between love and duty, but between my duty to my country and my duty to my wife. One day I came across the preacher. As a mere formality I asked him where he was bound for, and he re-

(*Concluded on page 1477.*)

A Prayer.

Lord, not for light in darkness do we pray,
Not that the veil be lifted from our eyes,
Nor that the slow ascension of our day
Be otherwise.

Not for a clearer vision of the things
Whereof the fashioning shall make us great,
Not for remission of the peril and stings
Of time and fate.

Not for a fuller knowledge of the end
Whereto we travel, bruised yet unafraid,
Nor that the little healing that we lend
Shall be repaid.

Not these, O Lord. We would not break the bars
Thy wisdom sets about us; we shall climb
Unfettered to the secrets of the stars
In Thy good time.

We do not crave the high perception swift
When to refrain were well, and when fulfill,
Nor yet the understanding strong to sift
The good from ill.

Not these, O Lord. For these Thou hast revealed.
We know the golden season when to reap
The heavy-fruited treasure of the field,
The hour to sleep.

Not these. We know the hemlock from the rose,
The pure from stained, the noble from the base,
The tranquil holy light of truth that glows
On Pity's face.

We know the paths wherein our feet should press,
Across our hearts are written Thy decrees,
Yet now, O Lord, be merciful to bless
With more than these.

Grant us the will to fashion as we feel,
Grant us the strength to labor as we know,
Grant us the purpose, ribbed and edged with steel,
To strike the blow.

Knowledge we ask not—knowledge Thou has lent,
But, Lord, the will—there lies our bitter need,
Give us to build the deep intent
The deed, the deed.

—John Drinkwater, in London Spectator.

*

A Farmer's Wife on Dogs.

WE were awakened this morning at 4 o'clock by the usual farm chorus: Hens singing, roosters crowing, turkeys "gobbling," robins and orioles "making melody in their hearts," and in the morning. Lambs, too, were bleating, and we noticed the nagging bark of a dog. Investigation showed the sheep and lambs huddled in a tired, terrified bunch on the side of the meadow nearest the house, and two curs harrowing them. A bulldog had a lamb by the throat; one other lamb and a fine ewe so heavily burdened with motherhood that she could run no longer, had been sacrificed. I could have shed bitter tears of sorrow and indignation at the outrage. Of course, we shot at the dogs and did what we could to locate them. There will be a process of "recovering damage," so-called, but looking at the matter in a wider sense there is no reparation. We have made a practice of saving the best ewe lambs with a view to "building up the flock," but what is the use when every farmer's flock is prey to any and every yellow cur in the neighborhood? Every other farm paper we get has an article exploiting "sheep husbandry for the Eastern farmer," and again what's the use? "Farm credits," "farm bureaus," and a lot of other big things are good and desirable no doubt, and will tend to the advancement of agricultural interests, but when will legislative "powers that be" stop studying the moon for a few minutes and attend to the jobs that need doing right under their noses, so to speak? For the sake of the families that keep the dogs and the farmers that would like to keep sheep we want a tax on dogs so high that 90 per cent. of them all through the country will be dispensed with, and the rest counted valuable enough to be cared for and restrained, like a horse or other valuable live stock.

Poor, hard-working people cannot afford to board dogs, so they allow them to go half starved. The great middle class of people can get along without them, and should be obliged to until they can afford to pay for them at the rate they would for a motor boat or automobile. So far as the wealthy men are concerned who want their hunting dogs, and my lady that wants her poodle, let them, too, "pay the fiddler," as they do when they want fancy guns, diamond pendants or other luxuries. A FARMER'S WIFE.

RECENTLY a woman asked advice about buying a small farm. She asked in good faith, and really wants to locate in the country, though she did not wish personal correspondence. There have been already over 20 letters for her. Three men express a more or less well-formed desire to marry her. A dozen people want to sell her a farm—two or three say they can invest her little sum of money to advantage. Such personal problems always bring out a flood of questions. Our plan is to send such letters direct to the party most interested, leaving her to reply as she sees fit. We do not give the address without consent. Some of the writers complain because we will not give this personal address, but a little thought will show them why the party who is most interested should have the right to decide the correspondence. In one case a business man wanted a farmer. Over 50 persons responded. It would have been impossible for this busy man to reply fully to all, yet some of these writers were grieved because we would not give this man's address without his consent.

*

ONE of our readers, a woman in a Pennsylvania town, is greatly troubled because a whiskey company in Kentucky persists in sending her advertising literature soliciting trade. These circulars also come in large number to other people in the same community. This woman, a strong temperance advocate, is greatly annoyed by these circulars, but although she has written the company to stop sending them, they still come. She has written us to know if it is not against the law to mail these whiskey advertisements. She reads in the papers what the government is doing in shutting off fakes and frauds who offer patent medicines or other fraudulent goods. As she believes that whiskey is worse than any of these, she thinks the mails ought to shut out such matter. On referring this to Washington, we received the following brief communication:

> You are informed that there is no law authorizing the exclusion from the mails of whiskey advertisements, as such.
> W. H. LAMAR, Solicitor.

The law, as we understand it, at present permits the mailing of these whiskey advertisements. Under the law the mails can be denied to people who undertake to distribute or advertise a fraud, that is, something which deceives the buyer. Many of us consider whiskey as the crowning fraud of all, but under our present laws, mails continue to carry the advertisements.

*

IF the dollar was all I got out of my farm I'd quit it to-morrow. The joy of winning is the satisfaction of life. Don't concentrate all your energies in making money. Make your lives broader, have something besides work to think of. I've taken more pleasure in producing new varieties of fruit, even though they were commercially valueless, than in all the fruit I've grown for market.

This is taken from a talk by Herbert O. Mead before a Grange meeting in Massachusetts. Mr. Mead is a very successful fruit grower, and he talks gospel truth in the above. There is no finer thought that can come before us at Christmas. Many of us are hard pressed for money, and the future may seem dark at times, but have you ever thought that the only way to rise above and out of the depression is to take some higher ground in thought, and try to make your farm produce something which money with all its power cannot buy?

*

"SUNNY MONDAY" is the latest name for washing day—where you have all the fixtures and power. It is a wonder our enthusiastic friend who tells us of his wonderful electrical kitchen helpers does not mention some device for cleaning the dirt out of clothes by "lightening." We have no doubt that will come in time. In the meantime can you not manage some way to dodge the wash board? The big colored woman who helps with the rougher washing, will not use the machine. She prefers to "scrub 'em out," yet there is nearly always a "misery in de back!"

*

THE question of the relation between the owner and the farm manager is bringing some skeletons out of the closet. Several "managers," who seem to have

"GOOD LITERATURE" LEADS TO A LOSS OF CREAM!

failed, say the worst trouble was caused by the women folks who interfered with suggestions or commands that were not practical. Some of them say the owner or farmer was bossed by his wife and daughters, and the manager could not take orders from a woman. What do the women have to say to that? They are interested parties, and their opinions are worth while.

*

IT is more than remarkable how certain "feminists" are laying down the law to their sisters. The latest is the demand that matrimony and housekeeping be considered a profession. Here is one statement of the case:

> Especially, it seems to me, young women contemplating matrimony should be made to realize that they are choosing a profession, just as they might choose medicine, law, business and so forth. So firmly do I believe this that if it were feasible I should like to see a preparatory course required before granting the certificate to practice the profession of wife and mother, or some sort of an examination passed. It is required in professions far less vital to the welfare of the State.

What sort of an examination would this feminist suggest? Our mothers and grandmothers dignified the "profession" without knowing they had entered one. The modern young woman must have her feet on solid ground or she will be swept away by these floods of advice.

*

A WOMAN, Mrs. Annette Abbott Adams, has been appointed Assistant U. S. Attorney at San Francisco. As women have the ballot in California they ought to take public responsibilities. It is said that the District Attorney in appointing Mrs. Adams said: *"She is the only woman I have ever known who can think on her feet!"* The District Attorney seems to have had a very limited experience. We can easily find him hundreds of farm women who do clear and accurate thinking while walking through their household tasks!

*

"Shades of the Pilgrim Fathers!"

THAT is the opening of a news dispatch from Chicago. It states that roast ostrich took the place of turkey at many a Thanksgiving table:

> According to connoisseurs, the ostrich is a dainty morsel for the banquet board, there being many juicy cuts that are even sweeter than those of the gobbler. The first shipment of ostriches has arrived from a farm in Arizona, and others are to follow. Three restaurants have taken all of the first consignment at prices around 50 cents a pound. The most delicate ostrich will dress about 50 pounds, according to the commission men.

There is little use worrying about the Pilgrim Fathers or their shades. They were practical men, and had they landed in Africa instead of at Plymouth, they would have been thankful for ostrich and made it the "national bird." It is said that the ostrich can digest shingle nails or door knobs. On the homeopathic principle therefore it ought to make "good digestion wait on appetite."

*

A Bread-sponge Sermon.

THE minister's cheery-faced wife found a sermon in her bread-sponge, and she told it to a neighbor, something after this fashion:

"My bread-sponge has risen beautifully, and as I worked it down I thought how much I treated it as God sometimes treats us. I set it in a nice warm place, covering it well and it rose, just as I expected it would. When I found it light and white I pressed it down. I could imagine it saying to me: 'Why! I thought you *wanted* me to rise. Why do you put me back where I was before?'

"Yes, I did want it to rise. It pleased me perfectly. Yet to the sponge, if it could think, it would seem as if I were displeased, and as if its efforts were wasted, or worse. Suppose, then, I assured it that it was doing right, and as I wished. It would, as soon as it was down, begin again to obey its good impulse to rise. Just as it reached its point of perfection, down I press it again. Now what would the sponge think?

"'Am I wrong this time? Was I wrong at first? Am I not wasting my labor? I have accomplished nothing by all my efforts, and apparently have displeased my maker.' But such a soliloquy would be all a mistake. I was pleased—much pleased—with my sponge. The efforts were not wasted, for each time that it rose it was better fitted to be made into light, sweet, nutty loaves. Moreover, if it had not been pressed down at the right time, its efforts would surely have been wasted, for too much continued success in rising would have spoiled it, and caused it to become useless to its maker."

It is more than 25 years since this sermon was preached in the parsonage dining room, and the preacher has long since gone to her rest, but the words have stayed in the memory of her neighbor, who now passes them on for the encouragement of any who may have been "pressed down." MRS. E. F. MILLER.
Vermont.

*

Don't Forget the Poor

IN our zeal for the poor of other lands we are apt to forget that there may be much poverty within our home neighborhoods; possibly even beneath the shadows of our home cities. Two years ago, after the purchase of a new market wagon, we decided to dedicate the wagon by hauling the first load to the poor. We have a list of our own of worthy poor, but in this case we offered to supply to worthy people selected by the King's Daughters' stipulating only that they should not take us to a home where we would find a lot of men playing cards or sleeping off a drunken spree. Of the 20 families we visited all seemed very worthy and surprisingly in need. I had not before believed it possible that so much poverty could be found in our fair city. This year we visited 34 families, a committee of the King's Daughters providing the list with the assistance of the pastors of the two largest churches of the city. We carried a load of apples, potatoes, pears and squash. All those visited were profuse in thanks, but some much more given to expression of it than others. May all who are blessed with a superabundance of any crop, far beyond any possible family needs, find it in their hearts to divide with the worthy poor that with which the Lord has blessed them so abundantly. I am slow to give to those who are poor because they have wasted their earnings for tobacco, strong drink or gambling dens, or to those who are too lazy to work, but there are enough of those who are poor from some other cause such as continued sickness, accidents, lock-outs and strikes. Let those who can aid them gladly. A FARMER.

Early Cucumbers Bring Pin-Money.

EARLY last Spring, when the days began to grow warm, I filled four half-barrels that were lying unused on the south side of the granary, with rich black soil, mixing in plenty of well-rotted manure and tilting them so they would get more of the sun's rays. In each I planted a dozen early cucumber seeds and spread a thin layer of sand over the top. Every day I watered them, and at night, while it was chilly I covered them with an old piece of carpet. The first week of May was cold and snowy, and I had to throw several forkfuls of straw on top of the carpet to protect them during the cold spell. They grew and thrived and by the middle of June I had large, luscious home grown cucumbers, which I had no trouble in disposing of at 10 cents each, and my only trouble was that my supply was not as great as the demand. My little experiment netted me $9.50, and I felt amply repaid for the small amount of extra work they had made me.

North Dakota. MRS. D. R. MERRY.

Home Canning.

FROM the little advertisement you inserted in "Subscribers' Exchange" we have sold to date $25.33 worth of canned goods, besides getting a number of good customers who will no doubt stay with us for years. This was one of the free advertisements you inserted for farm women. MRS. W. A. SMITH.

Our people will remember about this. We inserted the advertisement as an experiment, just to see if our people are buyers. The others all brought fair returns. We are surprised at times that farmers or their wives do not make a greater use of this department. Every issue of THE R. N.-Y. is read by at least 300,000 people—every one of them wanting something, and we doubt if there is any article of common use which could not find a purchaser if fairly presented to our readers. You must not expect the impossible through an advertisement and it may take time to attract attention and inspire confidence, but this "Subscribers' Exchange" really offers a great opportunity to many farmers and their wives to build up a good trade.

A Co-operative Kitchen.

NOT long ago we gave an account of the coöperative store which was organized at Montclair, N. J. This store seems to have given very good satisfaction, and now a new coöperative venture has been started in the same town. About one hundred men and women of Montclair have opened a coöperative kitchen. Their object is to have a place where a regular dinner can be cooked, and either served to the club members if they prefer, or sent out in neat packages to their homes. Recently a sample dinner was served to the shareholders of this kitchen, with the following bill-of-fare.

Julienne Soup
Maryland Chicken
Beans Sweet Potatoes Baked Potatoes
Mushroom Patties
Fruit Salad Cheese Balls
Meringue Coffee

This dinner was a sample of what they call a 50-cent meal. It will be a regular feature of the kitchen, and will be sent out to any of the shareholders at their homes.

Another plan of the kitchen is to serve these dinners in the homes of the shareholders, if they desire it. In such a case the kitchen will send competent people right into the private home to prepare and cook the food and serve it, the shareholders, of course, paying a fair price for all this.

Another feature which this kitchen intends to work out is a plan for training domestic servants. They will take women and girls and train them in cooking and serving a meal, and when they are efficient let them go out to do housework by the day, the week, or the month, as desired. This is a practical plan for solving the domestic help problem, which is a great trial and nuisance in all suburban towns. There is a chance for similar enterprises in almost any town of fair size, or even in country communities. Some businesslike women, or a group of women, can organize a kitchen of this sort, and as soon as they establish a fair reputation for producing good food, and handle it in a businesslike manner, they will have no trouble in obtaining trade. The whole tendency of the times is along the line of this coöperative work, and there is no reason why farm women should not have their share of it.

It is said that on Nov. 28 a party of eight persons took one of these sample dinners from Montclair, N. J. to Philadelphia in packages. The dinner came out of the containers warm and tasty and was a great success.

:: Business ::

Now It Is the Middle-Woman.

THE picture herewith shows a scene quite familiar to many farmers near the line between Rhode Island and Massachusetts. The woman who is driving this outfit has developed a fine trade in eggs and poultry, and light farm produce. She went into the country upon a farm when her husband's health gave out, and probably had the wisdom to see that as a back-to-the-lander she did not have the strength or the weight to pound a living out of the soil. There are different ways, however, of making a living, and this small and refined woman saw

A RHODE ISLAND MARKET WOMAN.

an opportunity to benefit both farmers and consumers by doing a produce business. We might, without disrespect, allude to her as a middlewoman, much desired and exceedingly useful in the community. She drives about through the country picking up poultry products and light high-grade material, and then takes it to Providence and other large cities, where she sells it out to good advantage. The farmers are all pleased to deal with her; she seems to be popular all along the way. Before she left town she was a stenographer, and her pounding the keys of her machine has evidently taught her how to touch the keys of human nature, so as to produce a good business document. This woman is doing well at her business, and she has certainly set us all an example of how to develop a good trade in a new way, and in a new section. There is more money to be made in the future by learning how to reach the consumer direct, than there ever will be in producing larger crops.

A Market for Shirt Waists.

DO you know any place where I could get sewing to do at home, for instance, shirtwaists or something like that? C. F.

Pennsylvania.

This question of earning money at home is one that is of vital importance to farm women and I hesitate to undertake to answer it without knowing the capabilities of the questioner and the condition which prompts the reason thus to earn money. Your own suggestion is a good one. Shirt waists in these times are used by every woman. In fact they are using more today than ever before, and a large number of them would be glad to find some reliable person who would make a waist that would fit and hold together after it was made. Your difficulty would be in finding a market. Are the conditions such that you feel as though you could go among your friends and acquaintances and ask for this type of work? If they are it would seem to me that you could begin there with profit to yourself and satisfaction to them. Gradually your customers would increase by one telling the other and you would probably get all that you could do. This method of securing work has two advantages. First, you know your people and you can be reasonably sure that the garments you make will fit. Second, a considerable portion of what you do could be delivered without incurring the small expense of the parcel post. I understand that the community in which you live is what we term a farming town. If you have friends living too far away to see personally you could solicit the work by letter. In doing that you would need to have them send you the following measurements: The neck, length of sleeve, length of cuff, around wrist, bust, waist and length of waist; also the style of waist desired. I am quite sure as I said at the outset that you will find enough women who want shirt waists to furnish all the work you could do. It will require a little effort to secure customers, but once you have established a trade, if you charge only a reasonable price, they will come back again and again, as they go to a store to buy, and you are likely to find that will bring their friends with them. To build up a trade of this kind is possible, but it will require a little effort on your part to let the people who want your work know that you can and will do it. ESTHER A. COSSE.

A City Ice Box.

IN a recent issue we had a brief account of the public refrigerator in the city of Cleveland, Ohio. There has been some further correspondence about this, and so we print the following from the market master of Cleveland. Women in Cleveland might club together, buy good-sized lots of supplies direct from farmers, and store in this refrigerator until wanted.

There are a great number of people in Cleveland who have stored a crate of eggs or a barrel of apples, and we allow these patrons to take out one-half of any package at the same rate charged ordinarily, but we do not allow them to take out a smaller quantity than this. You can see that it would be impossible to allow people to take out one dozen eggs, or a peck of apples out of a barrel, as it would be too costly to operate under this plan. In most cases, two or three families take advantage of our plan and in this way they can consume one-half of a package to advantage. The rate for eggs is 40 cents per crate per season, meaning from April to February 1st, or 10 cents per month. Apples are 40 cents per barrel for the season, from Oct. 1st to May 1st, or 10 cents per month. We have approximately 300 of these patrons at the present time. CHAS. KAMP.
Market Master.

Trade by Parcel Post.

REFERRING to article on page 1390, under the caption, "Be fair in parcel post prices," I inclose a leaflet published gratis by the postmaster at Washington, D. C. This gives the addresses of the farmers and the prices which they ask for their wares for the next two weeks, otherwise the circular is self-explanatory and needs little comment from me except to say there is range enough in prices with fresh eggs quoted at from 25 to 60 cents per dozen. I am much afraid some of those 25-cent eggs are sold at less than cost. I know eggs produced on our farms just now cost at least $1 per dozen to produce, and I think we produce them as cheaply as anyone can at this time of the year who has to buy grain. I should be very glad to see this Washington experiment duplicated at New York, as I believe it would quickly solve the question of bringing the farmer and consumer together with mutual advantages. F. M. P.

New Jersey.

R. N-Y.—This list will be furnished by the postmaster at Washington, D. C. It contains the names and addresses of 147 people who offer produce for sale by parcel post. This produce includes eggs, poultry, butter, fruit, nuts, vegetables, hams and sausage, flour and cornmeal, pine pillows, pickles, beans, cider, roots and herbs, flowers, oysters and fish, etc. Most of these people are doing a fair trade, the increase depending on the care they take to please customers by packing and grading. Send for this list and study it.

Cat Breeders.

ARE there dealers and breeders in Angora cats and where could I find such. Is there any sale for these cats? I have been told they sell at $15 each when very young. M. E. S.

There are a good many cat breeders—some of them say they do fairly well when the breeding business is a side issue. Very few of them we think, depend on their cats for a living. There is a fair demand for these cats as there is for show or toy dogs. The best way to learn about this business would be to attend the cat and dog shows frequently held in the large cities, and read the papers which represent this industry. No doubt there are women among our readers who handle both cats and dogs.

Home Markets.

I NOTE the remarks of the Hope Farm man on selling in the home market. We have depended on our local market for years. Our city has a population of 9,000, among which are many retired farmers. We advertise in the local papers and sell in direct competition with the Michigan and New York apples which are shipped in by the carload. These sell here at 50 to 75 cents per bushel retail. After allowing for the profit of the retailer, the wholesaler and the jobber, and paying freight how much profit did the grower in Michigan or New York get for his labor and investment? Let fruit growers in each State get together and organize associations for self protection against the organized buyers who refuse to pay decent prices. We also use a small advertisement which we enclose in letters as we have occasion to write on business matters. These lead to sales outside our State and we

Buy "Shady Nook" Apples.
DIRECT FROM ORCHARD TO CELLAR
Orchard Sprayed Five Times. Full Measure. Fine Quality
1000 Bushels of Baldwins
No. 1. 2½ in. to 3 in. in diameter $1.25
No. 2. 1½ in. to 2½ in. in diameter $1.00
No. 3. Off in shape and color 75c
SALOME at the same prices.
Send CASH with your order. Discount on large orders or to those who come to the orchard.
JOHN L. SHAWVER & SON, Bellefontaine, O.
References, Dunn or Bradstreet

ship to Indianapolis, Chicago, Philadelphia and other centers. Yesterday we shipped a lot to Southern Alabama.

JOHN L. SHAWVER.

R. N.-Y.—We print Mr. Shawver's card merely to show others how to do it. There can be no question whatever about the possibilities of the home market and the value of advertising. We must all learn how to do it.

IT is stated that over 50 per cent. of the students at the Kansas Agricultural College are self-supporting—wholly or in large part. These students do all sorts of work to help themselves along.

One of the most novel means of self-support has been adopted by a group of men, each of whom bought a cow. A Manhattan man interested in dairying is giving the students board and room in return for the milk from the animals.

This going through college tied to a cow's tail is an honorable way of getting through. We know of a boy who went through on the income from one sow. This sow's two litters a year gave money enough with what the boy earned to pay his bills. These bills, however, were light weights compared with what young people now consider necessary. We would like to know how many of these students are going through college partly on money which is taken from the needs and desires of sister and mother!

Taking Drudge Out of a Drudgery

Electricity and the Farm Women

ABOLISHING KEROSENE.—The man's part of the job of turning an old water-power cider-mill into an electric light, heat and power plant, ends with putting up the wires and starting the water wheel. This done, he had turned over a priceless servant to the housewife. When I look back over the two years our water wheel has been grinding out electricity instead of hard cider, I give thanks that the one thing it has accomplished above all others, is to lighten and make pleasant the arduous task of housework. It is a good thing for us men—lights the dark barnyard at night, does away with the dangerous dusky barn lantern, grinds our axes and scythes, turns the separator, and gives us bright, fresh, cool light by which to reach our newspapers and books evenings. But what it does for us men is nothing to what it does for the farm wives. In the first place, there are no lamps to clean and fill and tip over any more. When my wife goes upstairs at night, she doesn't stumble round in the dark feeling for a lamp to light. Before she enters that room, she touches a button on the wall in the hall, and the room is bright with light before she gets there. When she puts the supper things away in the cellar, the mere act of opening the cellar door automatically turns a switch that turns on lights in the cellar, lighting its farthest corner, something that never happened before. She doesn't strike a dangerous match to see the inside of a clothes closet. She carries a portable electric light in her hand, knowing that even if she wants to hang it on a hook against her best mull dress, the dress won't catch fire. Downstairs in the kitchen the lights hang from the ceiling, lighting the whole kitchen. She had a light on the wall right over the kitchen table; and it lets her see the inside of the oven. We have lights in all sorts of odd corners, to be turned on with the pressure of a finger—in odd corners which were unknown places at night, before we transformed our water wheel—places we couldn't see into, without a lamp or a candle in our hands. Electric light has literally made over the inside of our house, for the women folks.

IRONING BY WIRE.—Next to light, the best thing we have that is within the means of every farmer who owns a water wheel (or who has a neighbor who is willing to share one) is the electric iron. An electric iron costs from $2.50 to $4. It looks like another iron, except that it has a length of wire coming out from under the handle. This wire connects with any lamp socket, so my wife can use her iron any place in the house. Three minutes after attaching the wire to a lamp socket by the ironing board, the iron is hot, and it stays hot as long as the wire is attached. I don't know how many miles a woman walks, back and forth from the stove, on ironing day. And in addition to changing irons she has to tote wood and keep the stove hot. It is not the best job in the world, keeping the stove hot and blistering one's hands with an old-fashioned iron, on a hot Summer's day. With an electric iron, the housewife doesn't have to tramp, have to stoke, doesn't have any fire at all in the kitchen, to make her fret. If she wants a cup of tea, she turns the iron upside down and uses it for a stove. It boils water for tea, eggs, etc. Our neighbor used her iron in the bedroom last Fall, to heat milk for a sick child.

THE LIGHTNING STOVE.—When dinner time comes she "builds" the fire by turning a button. The oven is hot in 10 minutes; the griddles on top of the stove are hot instantly, for frying, boiling, toasting. This last Summer, our household did its preserving on the electric stove. There are three degrees of heat, to be had by turning a button. When the preserves begin to boil under the first heat, the stove is changed to the "third" heat, which keeps them simmermering slowly all day. You wouldn't know there is a fire in the room when the stove is going. It is a constant source of amazement to callers to see my wife open the oven of this cool stove one could sit on, without discomfort, and take out three or four loaves of beautifully browned bread, or a sponge cake baked with an evenness impossible with the uneven heat of wood or coal.

COST OF STOVE.—This stove costs money at first, I admit. New, it would cost about $85. But there the expense ends. As long as the water of our little river continues to run, and turn the water wheel, the man of the house doesn't have to stoke on a hot day; doesn't have to haul, buck and split firewood; doesn't have to stoke on a hot day; doesn't have to take care of ashes. The wife doesn't have to wait for her oven to get right, or fool with dampers. When she turns the button, she knows her oven *is* right, can't get too hot, or too cool. And what an advantage she has over her city sister, if she is fortunate enough to own a husband who owns an idle water wheel. Her city sister cannot afford this stove, because the commercial price of electricity in our cities is too high. The man I bought my stove from, at a knock-down price, gave it up because it cost his wife $2.50 to cook dinner for four on it, at the commercial price of electricity. It doesn't cost us anything. The river, flowing ceaselessly through the water wheel, tends to all that. If there is a river, or a sizable brook near your house, why not put it to work cooking your dinner, ironing your clothes, doing the washing, lighting the house? If one can't afford this more expensive stove, there are ways of getting around it. For instance, an oven that will bake two loaves of bread can be had for $10 or $12, and little portable stoves that boil and fry, like the top of a cook stove, can be had from $2 to $5. One of these little ovens, a hot griddle and a toaster, could be had for about $15 all told, and would be enough to take care of the cooking of a family of five or six.

THE ELECTRIC CHAFING DISH.—Electric cooking with us goes still farther. For supper, nights, we save more steps for the housewife. We have a little electric stove, nickel-plated, that we can set on the tablecloth, like a chafing dish. It has a cord to attach to the lamp socket that hangs over the table. This little stove costs from $4 to $6, according to the fanciness. It makes the most beautiful toast in the world; and while it is making toast, or frying eggs or griddle cakes on the table, it is broiling three chops at once, in a little grill underneath. This done, it boils water for tea: and later in the evening, when we are sitting in front of the log fire, we drop pop-corn on it, and watch the kernels magically puff up into beautifully white polls. My wife doesn't have to leave the table during the meal. With electricity, she has brought her kitchen into the dining room with her.

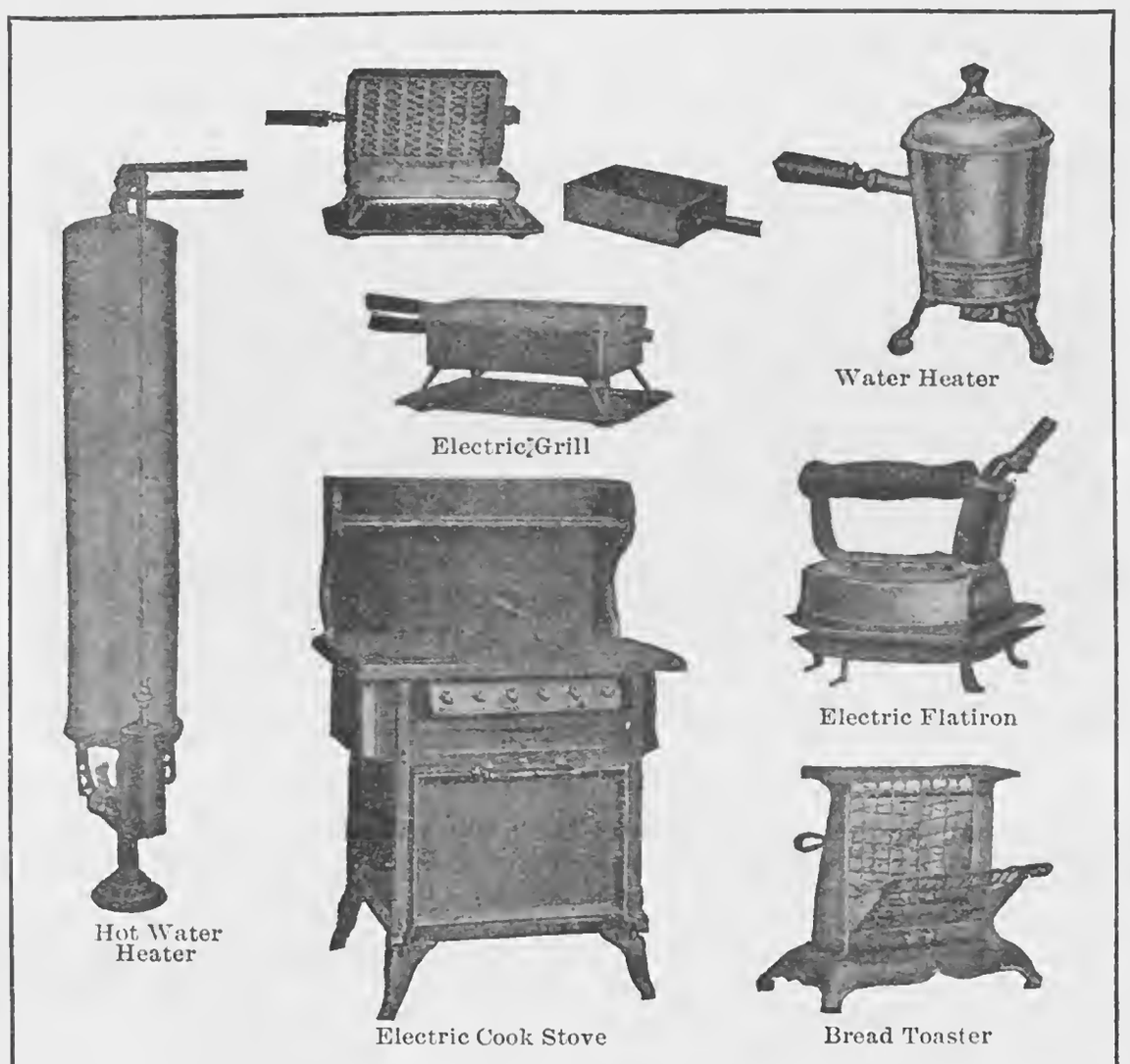
THE WATER HEATER.—The next thing I have promised our kitchen, is an electric water heater on the hot water boiler. It is about as big as a quart can and fits on to the feed pipe of the boiler. It costs about $10. It keeps the 40 gallons of water in the boiler at boiling point day and night, so when dish-washing time comes, steaming water gushes out of the faucets into the sink, heated by unseen hands.

MOTIVE POWER.—Then there is the motor that runs the cream separator. This motor does more than its share of work. It turns the washing machine, grinds the wringer. It has an attachment on one end for sharpening knives, and polishing silver. Some days my wife takes it upstairs (it is a little thing about as big as a Hubbard squash) and it runs the sewing machine. There is another motor that runs the vacuum cleaner (I bought this whole outfit second-hand for $10) so there is no sweeping and dusting in our house, because we don't have any dust.

BATHROOM COMFORTS.—Upstairs in the bath room we have a light burning all night, burning low, for they make electric lights that can be turned up or down like a lamp wick. There is what my wife calls her "finger," a nickel-plated arrangement that looks like a small bicycle pump. If she needs boiling water during the night, or when I need it for shaving, she attaches its cord to a socket, and in 10 seconds she has a tumblerful of water boiling. Then, among our extravagances, we have a vibrator, which is a little electric massage machine. If one has a stiff neck, a lame back, or a sore arm, if one has a headache, or a pain in the side, turn on the vibrator, and it massages the trouble away in a jiffy. This is plain arrant luxury, away off in the country. I suppose there are other things, but I cannot think of them, probably because we have grown so used to them that we cease to think of them as wonderful. When I get my water-boiler attachment, and an electric pump to take the place of my hydraulic ram, and hot-water radiators heated by electricity in every room in the house, I shall begin to think that the little river that flows through our front yard is surely earning its keep.

AN ECONOMICAL SYSTEM.—The beauty of it all is that it costs nothing, except for the instruments themselves. The current is free, something no city person could possibly enjoy. My wife looks clean and cool, and rested; and the maid who does the routine in the kitchen actually hates to come back to the city when we move in the Fall, because she has to give up all these conveniences. I came downstairs early one morning recently and found Mary ironing. Like all old colored women she talks to herself, entertains herself with conversation. She was addressing the iron at this moment. "Iron," she was saying, as I entered, "I suttingly hates to leave you behind!" So if you happen to own a husband who happens to own a waterfall; or if he happens to have a neighbor who is willing to share a waterfall, persuade him to invest some of his savings in an electric plant. It may cost him some money to start, but it will add a thousand dollars in value to his farm for every hundred dollars he spends. But best of all, it takes the drudge out of housework. If he argues that he hasn't got the technical knowledge required to install such a plant, tell him that the readers of THE R. N.-Y. constitute a happy family, among whom there are at least a few of us who can answer questions and tell him how. Besides, all knowledge is bound in books, if one only takes the trouble to find the book.

Massachusetts. F. I. A.



ELECTRIC HOUSEHOLD DEVICES.

KITCHEN ELECTRICITY.—The Kansas Agricultural College suggests the following to housewives who dread the job of cleaning the family silver:

Get a zinc pan. Place a wire mat on the bottom to prevent the silver from resting on the bottom of the pan. Fill the pan with water and add a teaspoonful of soda and a tablespoonful of salt to each quart of water. Allow the silver to soak in this mixture five minutes. Take out the silver, wash and dry it. Oxidized silver should never be cleaned with this method as it will remove the oxidized finish. In case you cannot get a zinc pan, an ordinary dish pan may be used. Place two strips of zinc on opposite sides of the pan. If you cannot get zinc strips use two rows of mason jar lids. Pour in the mixture of salt, soda and water, and then place the silver in the pan, being careful to place the silver so that one end rests on one zinc strip and the other on the second zinc strip. After the silver has been in the water five minutes, it should be taken out, washed and dried. The secret of this way of cleaning is that the salt, soda, and zinc form a weak battery and electricity does the rest.

Household Conveniences

CARPET SWEEPER.—The vacuum cleaning carpet sweepers are of course a great improvement over the ordinary kind as they take up a great deal more dirt. Price $8.25 to $9.50, according to size.

MOP.—This is the regulation mop with a little wringing attachment on it. You simply turn a little handle (similar to the handle on an egg beater) just above where the cloth starts and it wrings out the cloth much dryer than could be done by hand, also much more quickly. The price is only 63 cents, and new cloths can be purchased for 15 cents each, although of course ordinary pieces of heavy cloth could be used just as well. This is a great improvement over the wringers attached to pails and is much less expensive.

WASHING MACHINES.—The best hand-run machine, to my way of thinking, was $6.50. Then there was one at $15 which was very good if you had the proper water pressure. It was run by a little water motor. All you had to do was to attach a small rubber hose (which came with the machine) to the cold water faucet, turn the water on and the round wooden disk with pegs attached which is in the middle of the tub turns around and washes the cloths. The water that is necessary to turn the machine is afterwards utilized to rinse the clothes.

CORNER PROTECTORS.—Last but not least are the corner protectors. These are three-sided brass things fastened with a nail in the centre which are put into corners to keep the dirt out, and until anyone has used them you will not realize how much time is saved when sweeping and dusting by not having to work at corners in rooms and on stairs to get the dust out. They are painted the same color as the woodwork so that you scarcely notice them. Price 35 cents for a box containing one gross.

MRS. FLORENCE BELLE.

"Grandpa's Christmas Story"

(Continued from page 1473)

plied to join the army. I thought he was joking at first—but he wasn't. I tried to argue him out of it by reminding him of his duty to his wife and two little girls. He said that it was on his wife's account he was going—he himself was an Englishman and an alien, but his wife was the last of a family that had fought in the Revolution and in 1812. "What!" I said, "you who are not even a naturalized citizen of this country, feel that it would be cowardly in you not to go when the nation is in peril? Then what in heaven's name am I? If you will wait until tomorrow morning I will either send word that I'm not coming or I will go with you." Then I went straight home. Tell them what you said, Libbie.

"Grammer sez, 'I told him that was what I had been waiting for ever since the President had called for volunteers. I said, "Go, and God be with you.'"

"'Well,' Granper sez, 'we went. That man proved to be as brave in battle as he had been gentle at the bedside of our little ones. His body lies at Gettysburg, but his influence lives in many lives besides mine today.

"'I came home from the war expecting to find a sorrowful wife and a desolate home. Instead I found Libbie cheerful and the house turned upside down by—but hold on; Lizzie and Mary, have we been a good mother and father to you?'"

"They both spoke at once—'The best father and mother that any children ever had.'"

"'Have we ever made any difference between you and Sophy?'"

"'Why, no! Why should you?'"

"'We shouldn't—but I'm coming to that. What I found when I came home was that the preacher's wife had died and no relatives could be found. So mother had taken her two little girls and made them her own. As soon as we could we adopted them legally; and right here I want to say that if those girls had been our own flesh and blood we couldn't have loved them more nor have received more love from them—what say, girls? You are the preacher's children.'"

"Well, sir! Mis' Holcomb, that was the greatest time I ever see! There was Maw an' Aunt Lizzie a huggin' an' kissin' an' cryin' all over Granper an' Grammer. They like to 'a squshed me. I tried to get down, but Grammer wouldn't leggo. Then they had a time with Aunt Sophy—all a cryin' an' smilin' at the same time. Uncle Jim went down on his knees a front o' the stove, with his back towards us, a tryin' to stuff in wood—*with the door shet!* Paw took off his glasses an' commenced to rub 'em with his hankercher.

"When Maw 'n Aunt Lizzie got so they could talk they told Granper 'n Grammer an' Aunt Sophy that if such a thing was possible, they loved 'em more'n ever, now.

"'Jim,' sez Granper, 'If you and Lizzie would adopt those little orphans that Will Potter is trying to support and can't—robbing his own children to keep his sister's out of the county-house—you would be conferring a favor upon him, a larger one upon his over-worked wife and a tremendous one upon yourselves. Judging from my own experience, I should say that they would soon twine around and bind up those poor, bruised, aching hearts of yours. And maybe, Jim, they would bring you back to God.'"

"Sure, ma'am, *she* was willin'. Uncle Jim wouldn't say he would nor he wouldn't. Tried to joke Aunt Lizzie about bein' on'y half a Yankee, with all her braggin'. But he didn't git nowheres."

"Well, no, ma'am, we didn't git no word fum them, but me'n Paw see Nick Van Buren this mornin' an' Nick hollers out, 'Hello! Ezry. Say! D'jer hear about the new addition to Jim Bunce's family? No? They got a pair o' twins—a six-year-old boy an' a four-year old gal. Lizzie's all wrapped up in 'em already.

"'N' say! Whadder yer think? When I come by his place, Jim was puttin' new clabberds on the front of his house—a hammerin' away, licketty-split, *an' whistlin'*. Yes, Sir, Whistlin'!"

"All right, Harold, I'm comin'."

:: "Farm Stories" ::

How Christmas Came to Valley Farm.

SNOW swirled against the windows and drifted high in field and lane. Old and gray, with its burden of a hundred years, the big farmhouse crouched, like a snowdrift itself, close beside the stream. Only the wood smoke curling from its great chimney and the banks of red geraniums glowing in the south windows, showed any sign of human life. Built for the big family that had once made its rooms ring with Christmas cheer, it certainly was a desolate place at holiday time, with big family and cheerful hearts both missing.

So thought the sad-faced little woman who moved listlessly to and fro in the big kitchen.

To-morrow, Christmas would be upon her once more, with its flood of memories, and its pretense of happiness. How she dreaded it! How often it seemed to come since the trouble about Uncle John's will!

Before that ever since she and Jennie had come home to the old house on Christmas Eve, happy brides of the Henderson twins, it had been the golden day of all the year. Across the wide hall lay empty rooms where that other bride had made a home. There, little feet had pattered and baby voices had made music; and, when her own wee son went back to Heaven, Sadie Henderson had tried to forget these other babies were not her own.

Why celebrate the day at all? What mattered anything, since that awful time when John and James had disputed over the will, and James had taken his little brood to the poor upper farm that was his portion.

As she looked out she could see the hilly fields and the bleak comfortless little house which now was home to the blessed babies. Three years since she had cuddled them in her arms; Billy and Betty were school children now, and little Ben had grown out of long dresses all unseen by her!

Her fingers had mechanically kept time to her flying thoughts; the oven door had opened and shut many times and pantry shelves were piled high with mince pies and snowy cakes. Cranberry jelly gleamed in the window; the great turkey lay ready for to-morrow's roasting; crisp loaves of bread added their share to the riot of homely odors that wafted out to the master of the house as he shook off the snow and shut the massive oak door.

"Um-um! Smelled all this clear down below the creek," he said. "I met the preacher just then and he looked so pinched I invited him and his whole family up to help us eat dinner to-morrow."

"But, John! the children—presents."

"Well, I did think of all that, even if I am a man. I just went back to town, and you look on the porch."

As they brought in piles of lumpy bundles, and the snowy tree, and heaps of "Christmas green," as sacks of oranges and boxes of candy appeared as if by magic, and big dolls jostled drums and skates, Sadie felt the hot tears pressing her eyelids. She saw three eager faces, up on the hill; she felt the tense waiting of the trusting little souls for the meager gifts poor crops would make their portion on the morrow.

Dark descended early on the wings of the storm. As Sadie fried the last batch of doughnut men by lamplight, John's voice sounded from the hall:

"Did you happen to keep the kids' red stockings? I've got so much truck I've a notion to fill them and hang them by the fireplace for those lean '*young reverends.*'"

Could she get out those dear, chubby stockings, knit for the three "B's," used once, and forgotten that awful day when they left?

One look at John's face decided her, and the bottom drawer of the old bureau creaked unwillingly open.

John gave a hasty glance into its depths, then huskily muttering something about "seeing to his fires," he fled. How could he have known that those crimson stockings were nestled among the piles of little dresses his one tiny son had never lived to wear?

Wilder and wilder the wind swept down from the hills; the nail heads on the queer old cleated doors, and the iron latches grew white with frost in spite of roaring fires. The wall sweep clock growled out 12 dolefnl strokes as Sadie crept into bed; another Christmas day had come.

Suddenly she found herself sitting up in bed with wildly fluttering heart; had it been minutes or hours since she lay down? Who had called her? Freezing blasts crept in at every crevice; perhaps it was only a thought of those gay geraniums that had crossed the bridge of dreams. Slipping into her warm wrapper she crossed the wide hall, where bulging red stockings hung beside the fire. As she reached the south window her heart stood still with fear; across the wild blizzard a light was signalling from the little house on the hill. Up and down four times; to and fro four times; the very signal she and Jennie had taught the hired hand's wife one Summer, years ago, before they had any telephone! She rushed to the 'phone now, before the tumult of the storm made her remember that the lines had been down all day.

"John! John!" she called. "There is trouble at Jim's; the old signal—look! oh hurry, *hurry!*"

One glance at the wavering light, in its pitiful appeal, and the big man responded. Soon they were battling through the drifts; mounted on the work horses, whose road-breaking experiences stood them in good stead now, they blindly struggled on. Up and up, toward that blinking light; at last, a stretch of hilltop road, wind-swept of snow then, benumbed and breathless, they heard Jim speak, and saw the open door.

"Thank God you saw the light!" said a shaking voice as he took off Sadie's wraps. "Get warm as quick as you can. Jennie is between life and death, and no way to get word to the doctor, and no road he could come over."

"John, go to the children."

All night long death fought for that precious life; all night the little house rocked in the storm's embrace, and husband and sister looked into each others' eyes only to see fear and anguish reflected there. All night long John Henderson sat with Jim's little son against his heart, and the storm that so long had raged there melted away. Just as dawn crept gayly across the hills the wind died down, and as the first pink light of Christmas day shone into that little room it saw Death vanquished, creeping silently away in the shadows of that fearful night. It shone on a mother's wan, but radiant face, and reflected too the joy of the childless mother, to whom the light had called, and who had won from Death the baby cradled in her arms.

Brighter and brighter grew the light, catching the brother-love, rekindled in the two men's hearts, and sunshine flooded every room as the old, but ever new joy of the children over this gift made it Christmas indeed.

As Sadie Henderson stood at the kitchen window the last brief hours seemed to her a miracle. Then she had looked up the hill toward the bleak gray house and along the barren years toward unhappy old age. Now as she gazed across the snow and toward the old house encircled by its fertile fields a little procession came into sight that foretold the happy future better than her thonghts could do.

Mounted on the sturdy farm horses, whose jingling bells could still be heard on the hill, were Bill, Betty and little Ben; behind, arm-in-arm, walked the brothers so long estranged.

The old home would open wide its hospitable doors, and even without a woman's presence, would give Christmas cheer to its own. Each chubby, crimson sock would find its rightful owner, for drifts along every road would keep the preacher's children from knowing all they had missed, and "next week" was to farther repay them for their loss.

And the little woman who yesterday had felt all joyful holidays but mockery, turned, with a full heart, to answer a baby's low cry; while in her ears rang the old refrain: "Peace on earth; good will to men.....For unto us a child is born; unto us a son is given."

ELIZABETH L. GILBERT.

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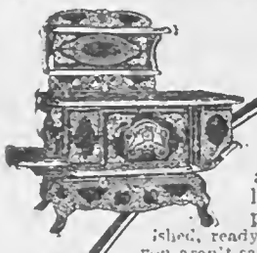
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:: Mary's "Rich Milk" Cow ::

A Heavy Yield

Of Verses from the Dairy Poets

Mary's Little Cow.

ON page 1372 we reprinted a little "poem" entitled "Rich Milk." It was a tribute to the Holstein cow by "The Office-Boy." We invited other

A COUNTRY DAIRY COW.

poets to come forward and tie bouquets on their favorite breeds—and here they are in large numbers.

Mary's Jersey.

Mary had a Jersey cow
With milk so rich in cream
That when she skimmed the golden pans
It fairly made her scream.

She dreamed of riches, comfort, ease,
And all her dreams came true.
Her sales of gilt-edge butter gave
Her all that she could do.

And then the neighbors came around
And bought her surplus calves.
For Mary was a thrifty maid
And ne'er did things by halves.

They everyone went dairying
With "Jerseys" for their motto,
While Mary supervised the sales
And rode round in her auto.

They made as much from butter as
They would have made from milk;
Then turned the skimmed milk into pork
And sported furs and silk.

They sent their products cross the sea
From New York to the Mersey,
And blessed the day that Mary bought
Her first imported Jersey.
—Cream Eater.

"Richest Milk."

They say I need a Holstein cow,
I think I'll buy just four—
One for each corner of the barn;
Kept just within the door.

So if a fire should break out
I'll milk their streams upon it.
The two per cent. of fat, no doubt,
Will help me milk them on it.

Insurance premiums I will save:
Buy gems and silks for Mary.
Sing Holstein praises for a fire
And Guernsey for the dairy.
—The Guernsey Office Boy.

Mary's Married Now.

Our Mary bought a Jersey cow,
Its milk was like fine gold.
Our Mary drove to town each day,
And this fine milk she sold.

The horse she drove, an old black cob,
A very poor horse indeed,
Was soon sold for another horse,
A better and finer steed.

The skeptic friends of Mary's
Looked on with wondering eyes.
For Mary had banked her money,
It now reached enormous size.

Next Mary bought an auto,
And soon another cow.
She did so very nicely
That, of course, she's married now.
—F. W. S.

Jersey Gold.

Our Jersey—we call her "Sunbeam"—
Her points are a dairyman's dream.
But she never gives milk,
And we never wear silk,
For our cow keeps us working in cream.

A visit we had from Aunt Min,
To escape the town's clatter and din.
She smiled at our butter
And proceeded to utter
"You've put too much coloring in."

No coloring there, I averred—
Save such as is done by the herd.
Our Jersey, "Sunbeam,"
And her daughters, give cream,
And our banker will vouch for our word.
—L. C. T.

"Richer Milk."

Mary had a brother, Zeke
(Feed is going higher),
Zeke owned a Jersey, spare and sleek,
And her sire was a purebred sire.

Mary's cow gave lots of milk
(Dry is the pasture's stream),
Zeke's cow gave much less in bulk,
But it was rich, yes rich, in cream.

Mary sold milk to a city man
(Hark; the feed man's laugh),
Zeke set his in a scalded pan,
And he raised—Oh, a beautiful—heifer calf.

Mary drew a monthly check
(Rich is the dusty miller),
Zeke packed butter in a crock,
And got—and jingled—his neighbors' siller.

Mary's gowns are getting worn
(Milk is more than water),
Zeke now toots an auto horn,
And will wed the miller's daughter.
—The Chore Boy.

A Jersey Cow.

My wife and I, we own a cow,
Her name is Margaret;
I want to say a word or two
"Lest we forget!" "Lest we forget!"

Of all the cows that ever lived
The Jerseys are the best;
So just give me a few of them
And you may take the rest.

This little cow's a jewel,
Of purest ray serene;
She beats everything I know
Of the breed they call Holstein.

If one is good, more is better,
Thought her neighbors with a sigh,
They all quit keeping "boarders,"
And have a herd of Guernseys nigh.

The Guernseys are keeping them, now,
In comfort and opulent splendors,
And have paid for better quarters, for
Themselves and their proud possessors.
—Helmer Femrite.

Exit "Black and White."

Farmer Spratt ate no fat,
(His wife had only lean)
But now they eat the best of meat
The world has ever seen.

The Jersey cow he's keeping now,
(Of course she's rather small)
But to give him water in place of milk
She's never had the gall.

Said farmer Spratt to neighbor Rock,
(Who met him driving kine)
"I've sold this stock, they're goin' the block,
No black and white for mine."

"The Jersey cow I'm keeping now,
(She gives both milk and cream)
This silk and satin, upholstered cow
I find is but a dream."
—S. J. B.

"Richer Milk."

Our Guernsey does not give the quarts
Of milk that Mary's Holstein did,
But on the pounds of butterfat,
I'm not afraid to bid.

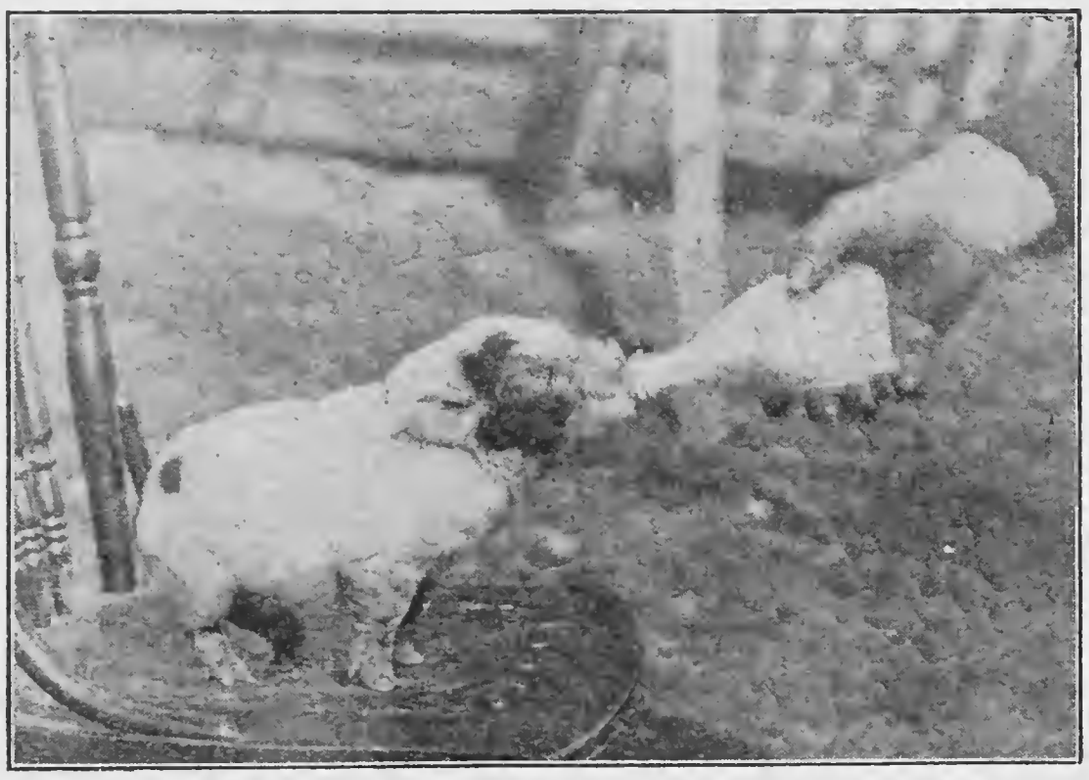
None dare to say the cream is thin,
My land! 'twould make dear Mary scream
To see the golden butter
That we make from Guernsey cream.

Our Guernsey gives the richest milk,
'Tis finer than dear Mary's silk,
Her calf is worth more diamonds rare,
Than ever Mary thought to wear.

On pounds of hay and feed that's eaten,
Her Holstein has our Guernsey beaten;
We'll save enough on buying feed,
To buy the auto that we need.
—"A Guernsey Poet."

When Molly's Old.

Our Molly had a Jersey cow
Whose milk, so rich in cream,
Would all turn into butter,
At least; so it would seem.



AN ARDENT ADVOCATE OF "RICH MILK."

This cow she makes the butter
For all upon the street,
And wins sweet smiles from all girls
I ever chance to meet.

She gives rich milk for all the kids
That on our street doth dwell,
And calves and lambs and little pigs
And other hogs as well.

My wife she owns the business end
And I the consuming part,
And to furnish food for this one end
It almost breaks my heart.

But when my wife a shopping goes,
Her wishes to fulfill.
She don't forget the office boy
That lives at Maple Hill.
—A. C.

Real Milk.

Our Mary had a Guernsey cow,
That gave milk as yellow as gold,
Does anybody wonder how,
Mary's dairy products sold?

Her neighbors cocked their heads and sneered,
"Why be fussing with a toy?"
They said there wasn't half enough milk,
To feed a little boy.

The Guernsey cow soon had a calf,
The prospect of a future herd,
Left Mary with a laugh.
That calf has now become a cow.

So Mary keeps on selling cream,
And by-products of the finest class,
Her products materialize many a dream,
Sounder and saner, than rivals brass.

Soon with her Jersey products
Our Molly bought a car
To take the golden butter to her patrons
Near and far.

One day the Jersey had a calf.
Our Molly thought it over,
Then sold the calf for a fertile farm
And cottonseed and clover.

The Jersey made more butter then;
The butter made more gold.
And Molly has a bank account
And will when she is old.
—The Farmer's Wife.

CHOKING.—"A child four years old, in New York City, recently choked to death on a peanut, which lodged in her throat."—R. N.-Y., page 1290. Serious cases of choking are not uncommon, and it is seldom that people know what to do in such cases, in the absence of a skilled physician; yet relief may be surely and quickly obtained by pouring the white of an egg (raw) down the sufferer's throat. This remedy never fails because the egg will slip down the throat and render the obstruction so smooth that it will readily pass on down. This remedy is just as effective for animals as for human beings. To administer the dose to an animal, however, is not always easy. The correct way is to place the white of the eggs in a bottle, raise the animal's head, thrust the bottle well back and empty.
MAURICE FLOYD.

:: Good Words ::

All the reward that I care for, is to know that I could do something to increase the circulation of THE R. N.-Y. You should have a million subscribers. I would like to help get them if I could, but the farmers here are none too prosperous and a dollar looks big to some of them. They don't know that they get ten dollars for one. A. M. A.
Burdickville, Mich.

I am very glad indeed to send these names to you, and as I have lived here for over 50 years, know many more that I could send if wanted, many of them are farmers, some not, but the paper is one to interest anyone, and I wish it might be in every house. My next birthday will see me 72; I mean to keep track of people and things as far as possible.
West Cheshire Ct. MRS. E. A. A.

I wish you all success; we are very much pleased with your paper.
Caldwell, N. J. MRS. E. F. S.

Your paper is "farm management gospel" to the thousands of farmers, from the man back on the hill farm who has never had what we are pleased to call "opportunities," to the college graduate and millionaire farmers who have had many. E. W. M.
New York.

R. N.-Y.—The power of the gospels lies in the fact that they carry the message of plain simple people often erring and weak as well as wise and strong.

How the Home Department of THE R. N.-Y. has enlarged since I knew it. Reading it is like entering a large and congenial family circle. MRS. S. E.
Massachusetts.

Your paper is worth more to me than the $1 could buy in any other paper, so I don't ask you to give me more than a year's subscription. I am not a farmer, but I can get more than $1 worth out of the poultry department alone.
Michigan. FRED SCHULTZ.

I like the paper dandy; a man sent it to me for a New Year's present last January, and so we will take it again when this year is up. E. W. JOHNSON.
Michigan.

I have nothing but good things to say of your paper. It is clean, sound and correct on almost everything. J. J. C.
Connecticut.

I have been a reader of your paper for a number of years, and think it the best farm paper printed. I very much appreciate the enlarged Woman and Home Department which you issue each month.
Montana. MRS. L. M. SCHRANTZ.

We have found THE R. N.-Y. so complete in every line of our needs that we cannot afford to go any further for advice. We shall not neglect to pass a good word, at least, where ever we can and shall consider we are doubly repaid in advance. A. L. P.
New York.

Quite by accident I took a trial subscription to THE R. N.-Y. at the Randall Fair and have found it so interesting that I am tempted to try my hand at farming. Can I have a little information?

R. N.-Y.—You certainly can—up to the limit of our power to give it.

I could not find fault with you if I tried. I know of no publication that could take the place of THE R. N.-Y. for me. W. C. T.
Virginia.

The issue of Nov. 14 I think is the best ever put out by THE R. N.-Y. since I have been with them. H. E.

I have been a subscriber to THE R. N.-Y. since the year you gave the little Sir Walter Raleigh potato as a premium, with the exception on the years spent in the Northwest, and wouldn't want to do without it now. W. E. B.
Pennsylvania.

A "Stranger" Became a Warm Friend.

I am somewhat of a newcomer in THE R. N.-Y. family. Always a subscriber to and an interested reader of agricultural papers I somehow missed yours, and knew it only by name and an occasional copy that chanced to drift my way, until about a year ago when the "Tribune-Farmer" sold its subscription list to you and it made its appearance in my R. F. D. box. I did not like the change a little bit. It seemed like losing an old and valued friend and acquiring a stranger. I will not attempt to tell how the "stranger" has worked its way up from an indifferent reception to the warmest welcome a paper ever got; the fact is enough. When it comes I do not put all the rest of the mail aside and read it first. I put *it* aside carefully. Then I throw the circular nuisances into the waste basket, read the letters and war news, and the local doings, and whatever else must be read to keep posted. THE R. N.-Y. is kept until the day's work is done, and supper over, and I am free to give my whole attention to the entertainment, the moving picture show of farm life and doings that you give us each week. There is little I "skip" entirely for it is all of things I am doing myself or seeing done or wanting to do. E. T. BAIRD.
Pennsylvania.

The Land of Fulfillment

A Story of Homesteading

By Rose Seelye-Miller

(*Continued from page 1379.*)

THE despatching of the letter, and the shale, was followed closely by the beginning of harvest, and as Nate and Norm worked with several others in this, they were kept busy for many days both early and late. The time came for making their final proof upon the land at the time specified in the advertisement which had been running in the local paper for the allotted time required by law. It seemed to them, and in fact was to most of the settlers a mere form. There was rarely any contesting of claims, and witnesses to prove that the land had been held according to the government law, were accepted without question or demur usually.

Nate and Norm, accompanied by Jim Maynard and Hank Jones, started for Wetasket in high spirits bent upon fulfilling the last requirement, which should entitle them to the patent of the land filed upon. Both boys felt that they had complied faithfully with every requirement of law, and even more, for they had relinquished their pre-emptions filing upon the same land as tree claims, in order to hold them according to the whole law. The Land Office was not yet open when they arrived in Wetasket, so Nate ran over to the postoffice, and came back with consternation written large on his sun-bronzed face.

"See here!" and Nate thrust an official looking document into Norm's hands. "What do you make of that?" Nate was as near incoherent as his friends had ever seen him, for he was invariably, serene and even tempered.

Norm read the notice dazedly, then Hank took it and exploded.

"Why the mean, low-down cuss! That ornery land jumper, James, has filed a contest on part of your land, taking the ground of your non-fulfillment of the federal law."

"That's it," Jim Maynard agreed succinctly. "There'll have to be a hearing, but we can witness for you, and you can go on and make your final proof just the same. He can't prove anything—he can't."

"Leave it to me," Hank urged hotly. "I'll go back and fetch the township to testify in your behalf. I'll get back here before two o'clock this afternoon, the time set for the hearing." So Hank dashed for the livery barn, where the horses had been so recently stabled. Hank started briskly westward, but as soon as he was well on the country road, he wound the lines over the dashboard, and took from his pocket a slip of paper. It was the government requirement for settlers. Hank read it over, carefully noting each item, "Frame dwelling—Land broken," then he stopped to comment—"Who knows which land is whose, and whether or not the cultivated land is all on one fellows claim or on all of them?" Hank inquired of the atmosphere in general. "A well," he read. "I'll bet they haven't any well, they've always watered at the creek! Hmm!" and unwinding the lines again, he sent the young dapples dancing homeward.

Hank rallied the men he wanted for extra witness, and all cheerfully turned from work to help out these friends who were in trouble.

"It's blamed queer that fellow wants that land so bad, it's the poorest land in the country. Probably wants to be bought off with a few hundred," Hank mused.

"Ike," said Hank to a hulking fellow, "You get your little spade and go down the valley, and dig a well. Dig it until the water runs into it, good and plenty—it won't need much digging for all that low land is water soaked from the creek. Then hike over to my claim and take my old windlass, and weather-beaten well-top, and put it up on the new well, and do it quick. Don't say a blamed word to anyone."

"Depend on me," Ike responded heartily and went to do Hank's bidding.

Hank then went to the settlers on the west, and set some of them to making an impromptu survey of the cultivated land to determine whether or not each quarter section had at least the required number of acres. "If it lacks an acre or two on any one of the quarters, then set to work and plow it. Set as many teams to work as you like, but have it done."

The whole township seemed wrought up over the contretemps of Nate and Norm, for the settlers in those days stood by each other tooth and nail, and the would-be claim contester or claim jumper met with no uncertain reward.

True to his word Hank was back in Wetasket at two o'clock in the afternoon, and ready for the hearing. There was a formidable array of complaints arrayed against Nate and Norm.

"Absence for a period of four weeks the first year of settlement."

A second absence of some weeks in Winter, and non-residence during one Winter. Nathan Lee living wholly on the Norman Duane tract of land."

"That Nathan Lee and Norman Duane were holding two quarter sections of land, each with but one residence."

"That the improvements had practically all been put upon only one of the four quarter sections, instead of dividing up the holdings and improvements."

"That the breaking and cultivation had been done almost exclusively upon only one of the quarter sections."

"And furthermore, while the law required a well, no well could be found upon any one of the four quarter sections owned, or claimed by said Nathan Lee, and Norman Duane."

The complaint was taken up clause by clause and sworn to. The first clause, was explained away, because of the necessity for earning a living the first Fall of settlement. The second absence was explained as absolutely necessary to all the settlers of that section, when Norman Duane had gone into Edmonds County to bale and ship hay to save the live stock from starving. The third charge, that Nathan Lee and Norman Duane were both holding two quarter sections of land with but one residence, and illegally, was waived, because the tree claim required no residence.

The fourth, that the improvements were mostly upon one quarter section, was admitted, because of convenience in attending to live stock, etc. All claims having the needful improvements required by law.

The fifth charge: that the breaking and cultivation of land had been done principally upon one quarter section to the exclusion of the others, was met by the counter—that the other land was untillable, having a heavy deposit of shale.

There were twenty men to corroborate all this, but the last and final clause referring to the well, Hank Jones begged to say that a well existed. It might not be known to all the witnesses, but that he knew and would make affidavit, that a well with plenty of water, was located in the valley plat of the contested land. That the well, as far as reasonable survey could make it do so, touched all four quarter sections being located centrally in the valley plat, that constituted a part of all four quarter sections under discussion. That the well while not entirely curbed had a top and a windlass and said top would show use and weathering.

This point was duly sworn to although some of the witnesses were mystified, still they believed that Hank would not swear to anything untrue.

Mr. James, sturdy, stubborn and very much the same as he had been five years earlier, when he had tried to jump the creek claim, was fuming and almost foaming at the mouth, to witness the ease with which all his points of contest were met and sworn against.

The final proof papers were signed, and they were ready to be sent to Washington from whence should come the patent which should entitle Nate and Norm to the land beoynd all cavil and all contest.

"You lied about that well," Mr. James said rancorously to Hank as they met on the street afterwards.

"You lie yourself, if you say I lied. If you want to see it, all you have to do is to follow us out and use your eyes. If I find you sneaking around that land in the dark, I'll shoot you as I'd shoot any other skunk. Moreover, I'm of the opinion that you were hired to do some other man's dirty work and that he is beaten in his low-lived, game of sneak-thief."

"What sort of gaff was you giving about that well?" Norm inquired, as they were going homeward.

"No gaff at all," Hank replied nonchanantly.

"We won't make anything in the long run to swear to a lie," put in Nate. "I think we'd got our papers just as quick—and I'm in for a square deal."

"So'm I," Hank agreed. "And if I'd sworn that there wasn't any well, and if you'd sworn there wasn't any, we'd all sworn to a lie. You'll see, and you'll see the windlass shows some wear. Can't you trust your Christian Aunt, in a little matter like that?" and Hank laughed infectiously.

"We're mightily indebted to you fellows anyway," Norm said, when the procession drove up to his shack.

"Mightily indebted, now and forever," echoed Nate.

"Come on in, boys," invited Hank. "And I'll make you some lemonade, with water out of the best well in the township." Hank took a milk can and trailed off down the hill, followed by an interested crowd. He stalked along until he came to a bend in the creek bank, and there true to his word, stood the weather-beaten windlass, over a well of sparkling water.

"More miracles and mysteries," cried Nate. "Here's to Hank, the beatinest one of all!" and a cheer went up for that gentleman, a cheer neither limited, in numbers nor noise.

It was late when the party broke up and then Hank, meandered down the creek bed, and along the bank, until he came to the weather-beaten windlass, swung over the very shallow well below. He scanned the landscape thoughtfully.

It was after one o'clock, when he heard the sound of wheels upon the prairie road and then the sound grew more muffled as though the wheels were rolling over sod. Back and forth the wheels seemed to go, and finally came to a standstill. Hank waited in expectant silence.

"We've driven about all over the land," said a low voice. "And if there's a well, it's hard to find."

"It's probably just a hole in the creek bed," came Mr. James's voice. "I know the valley plat, and I'll go down and see. If there isn't a well it will impeach the whole testimony."

"If we can get hold of this land," the other voice asserted, "we can get a good round price for it."

There followed the crunching of shale, as somebody, let himself down carefully half the precipitous way, to the valley, and then there came a tumbling rush, and the valley had been reached, rather too quickly to suit Mr. James middle-aged anatomy. In fact, he rolled nearly to the feet of Hank Jones, who merely drew himself up in a tight knot and waited developments. He was truly enjoying himself.

James swearing and rubbing his bruised places, rose and contemplated, viciously, the weather-beaten windlass. "It's all a bluff," he stormed, half aloud, but he swung the bucket high, and bent far over the curb. It was too dark to see, and he dropped a lighted match into the depths, this light revealed to him, instantly the pool below with the water rising within three feet of the top of the well.

"Hades!" he ejaculated, but before he had lifted himself up, Hank Jones with a deft shove, thrust him toppling over the edge of the framework, where he hung for a breath and then lunged into the water below. There was a terrible splashing and gurgling, mingled with imprecations in the well.

"Are you satisfied that there's a well on this land?" Hank asked suavely.

"I'll have it on you for this," Mr. James growled, fairly gnashing his teeth.

"You'll have to get out first," Hank mildly suggested.

"I've had enough of this, now get me out," Mr. James stormed angrily.

"If you'll call this deal off, once and for all, and tell who the critter is who's bought you on to it, I'll leave you and you can get yourself out. But I won't stir a step till you do." Hank said pleasantly, but decisively.

"Haul me out of here," he shuddered, his teeth chattering, and hashing his words up into pieces as he tried to talk.

"Who's your backer?" Hank was grim.

"Give me the rope, I guess my life's worth more to me, than Measman's money."

But Hank did not give him the rope, instead, he gave a piercing whistle, and then called, "Measman, Measman." But no answer came. Then he gave another piercing whistle and several "halloos."

"I guess he's left you," Hank said cheerfully. "Curs don't fight much for each other."

(*To be continued next month.*)

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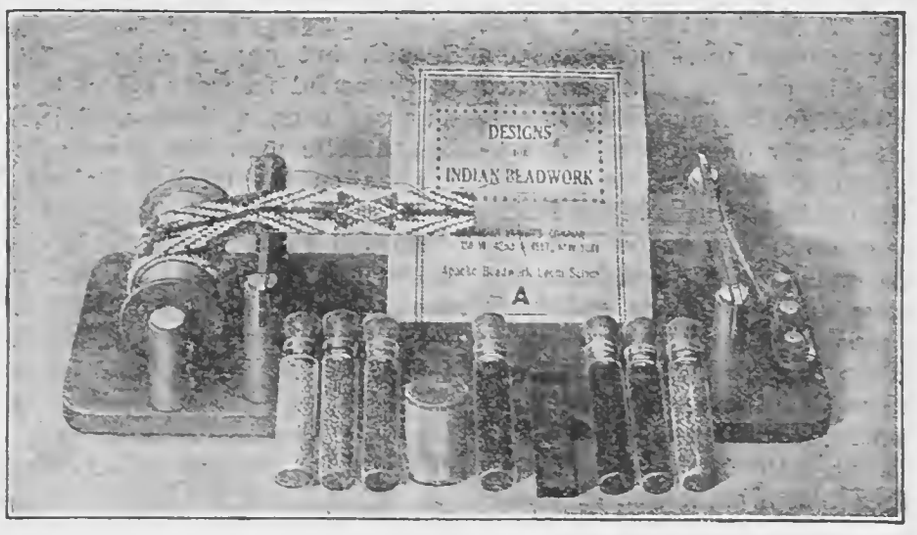

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THE RURAL NEW-YORKER, 333 W. 30th St., NEW YORK CITY

The Christmas Tree

"It blooms one day in all the year,
Not when the roses blow,
But when the leaves are brown and sere,
Or robed in gleaming snow.

"Upon its branches bending low,
All beautiful to see.
Both flower and fruit together grow.
O wondrous Christmas tree!"

EVERYONE who prepares a Christmas tree knows that its chief requisites are the three G's—gaiety, glitter and gifts. Unless it holds the eye by its color and sparkle, and arouses anticipation by the sight of mysterious parcels, small and great, that mean some sort of gift for every beholder, it has not carried out its mission.

The tree itself must be well anchored, and secure against tipping; iron supports are sold in toy departments and hardware stores for this purpose, while wooden blocks or crossed pieces of plank with a large auger hole into which the trunk of the tree is securely fastened, do very well when anchored down with weights. We like the appearance of a large tub for the tree to stand in because it keeps the lower limbs off the ground, and one can show off, in this way, a tree that is not too unwieldy for an ordinary room. It is not difficult to put a brace in the bottom of a tub with an auger hole to receive the trunk, the branches being trimmed up to the right height, then weight the tub with earth or stones. This is absolutely secure; the tub may be draped with evergreens or moss, flecked with cotton batting crystallized with alum to represent snow. If electric lights are used, the batteries are hidden under this trimming. The wires, with their green covering, are disguised by the foliage. An electric outfit with eight lights, red, blue, green and white bulbs, costs $2.50; with 16 lights $5. Batteries are 15 cents each; two are required for eight lights, three for 16. We still think old-fashioned candles, twinkling all over the tree, are the prettiest of all lights, but we believe in "safety first," and they are entirely too dangerous among the inflammable branches, with the further risk of contact with celluloid toys. If electric lights are beyond reach, we would leave the tree unlighted, and depend on color and tinsel for the effect.

Popcorn and cranberries are usually accessible, and are among the prettiest festooning material. Have plenty of both, and also make sugared popcorn into "snowballs," to be hung on the tree by red ribbons. A fashionable candy store on Fifth Avenue had these popcorn balls wrapped in thin paraffin paper and tied with red ribbon for Thanksgiving favors, and they are pretty on the tree. A surprising amount of glitter can be provided by using the liquid gilding sold for fancywork; pine cones are very attractive thus treated, also nuts, while a jack-knife artist can make anchors, hearts and stars from soft pine, which are very effective after a golden bath. These suggestions are not offered to those who can walk into a department store and order whatever they want, without thought of cost, and who thus miss a great deal of wholesome fun.

Strings of tinsel, and the various fancy ornaments, vary little from year to year, whether bought at a big toy shop or at the five and 10 cent store. This year there is a great variety of fruit, apples, pears, oranges lemons and grapes, made of some sparkling composition, and more gorgeous in coloring than the pictures in a nursery agent's catalogue; they are not edible, and may be kept from year to year. Fancy boxes and cornucopias for nuts and candy are quite inexpensive and may also be made at home if one is provided with neat fingers and colored paper. One may also put candy and small gifts in little "prize packages" made to imitate oranges; the package is made round, then wrapped in deep orange crape paper, gathered together at the top, where some leaves of green paper hide the closing. These are very pretty on the tree. The children usually expect to see "Christmas stockings," too, which are quickly made from pink tarlatan, and filled with popcorn. There should, of course, be some candy canes and baskets made of that pink and white striped peppermint candy so dear to children, because no Christmas tree was ever regarded as fully satisfying without them. A roll of crape paper, geranium red, used as wrapping for small parcels, will also add color to the tree, and may also be used to make round "fruit," with green leaves at the top, like the crape paper oranges.

We always prefer to crown the tree with a Christmas star, which may be made of gilded wood or gilt paper over pasteboard. A Santa Claus doll at the foot of the tree, or snuggled away among the branches, is quite easily made, the long robe being red flannel with cotton batting trimming, the rosy face surrounded by a cotton batting beard. With the head of a discarded doll and the contents of the ragbag to furnish a foundation the jolly St. Nicholas may be a real member of the family.

"BOTH FLOWER AND FRUIT TOGETHER GROW."

Some of our friends disapprove of Christmas trees, on the ground that it encourages the destruction of our forests. The fact that thinning is a necessary process of forestry seems to be overlooked, but anyone who disapproves of the graceful fragrant forest tree for this purpose may, without scruple, build up a synthetic tree, like those stout-hearted women on the treeless Dakota prairies, who made the first Christmas tree ever displayed in their district with a scantling for trunk, and the sticks out of their window shades for branches, the bare wood draped with "made-believe" foliage of green paper and carpet rags!

E. T. R.

THE Department of Agriculture at Washington has issued Farmers' Bulletin No. 607 which is of special interest to farm women. It is entitled "The Farm Kitchen as a Workshop," and is written by Miss Anna Barrows, a well-known teacher of domestic economy. Miss Barrows says that the kitchen is the workshop of the home, and she might well have said the most important shop connected with the farm. She says that there are 6,000,000 farm kitchens, and including the relatives and hired helpers, 8,000,000 women spend their working lives inside these kitchens. This shows the necessity of making this kitchen as comfortable and well planned as possible, for it is a serious thing when 8,000,000 women are compelled to work under conditions which do not give them a chance to be truly efficient. It is impossible to give anything like a synopsis of this bulletin. It ought to be read by every woman in the country who is ever expected to get up a tasty meal, do a week's washing or any of the other things which count for so much in household work.

Christmas Presents and Christmas Questions

Household Questions.

[The following questions among others have been answered by Miss Edna S. Knapp. All such questions are welcomed and will receive prompt attention.]

Old Magazines.

WHAT do you do with your old magazines? I have a year's accumulation on hand. W.

We send ours to a friend in the hills. Isn't there someone in your neighborhood who would be glad of them? If not, write to your denominational missionary society.

Crocheted Fascinator.

My mother-in-law lives in the country and is very old-fashioned in her tastes, but very dainty. She wants a fascinator for Christmas. How can I make one and how much does it take? What else could I get or make for her? F. G. B.

Half a pound of Shetland floss is ample for a fascinator. They are usually crocheted in shell stitch. Begin with six chain and put one shell, five double crochet, in the middle, two shell in next row, three in the next and so on. Put a whole, instead of a half shell, at the end of each row, that widens it. Continue until you reach the desired size. For border use 10 chain stitches caught into the edge with a single crochet. Or you can knit one, starting with three stitches and widening at the beginning of every fourth row until you reach 13 inches in width, then narrow once at the beginning of every fourth row. Use the same border as above. Medium gray is a very pretty shade to use.

Why not make a collar and cuff set from a fine hemstitched linen handkerchief? Cut off a strip 1½ inches wide from one side and put on a narrow lawn binding. Then cut other strips for cuffs, so a hemstitched corner will overlap the hemmed end. There will be linen enough left in the center to make more cuffs, if you like. These are old-fashioned but many elderly women still wear them.

A Box of Possibilities.

A dear friend has had a long illness and lives where she can't get many things to entertain her. I want to send her a "Box of Possibilities." Can you help me? H. P. C.

Fancy work materials of various kinds would be best. Have the work commenced and everything needed for its completion included. I wouldn't put in anything that involved too much work. A pretty stamped corset cover or small centerpiece would be nice. Perhaps a tatting shuttle and book of instructions or some skeins of Shetland floss, wood needles and a book on knitting, would be better. Why not get some of the pretty Christmas cards and folders to be tinted by hand and send materials for coloring? I know a museum art student who pays her way doing this. If she is strong enough, start a raffia basket until it is easy to hold and put in materials and directions. You will think of things enough when you begin to pack your box.

Gifts by Mail.

What kind of gifts can be sent in a letter? My friends are at a distance. I want dainty things that are not too much expense or trouble. C. D.

Handkerchiefs, flat tailored bows for neckwear, hair ribbons for young girls, flat little packages of sachet powder, address books, bookmarks, letter openers and many other things can be enclosed in letters. One lady is buying the little books with soap leaves or leaves with face powder and making for each book slip covers of Dresden ribbon, these are very popular with women who travel.

Gifts for the Blind.

What can I give a blind cousin? She wears white aprons, but I have made pretty nearly every kind. W.

If you live near enough, why not send carnations or a thrifty plant with scented leaves? A box of chocolates would be welcome, too. I just saw a little round apron made for a Christmas sale: it had a three-inch circular facing, inside that connecting ovals featherstitched in two shades of yellow. Yellow ribbon was slipped under straps of lingerie tape an inch apart on the band.

Domestic Science Bulletins.

Can you give me a list of Farmers' Bulletins used in schools of domestic science? Should think they would be of great value to housekeepers. M. M.

A Michigan school uses the following in general cooking classes:

535, Sugar and Its Value as Food; 142, Principles of Nutrition and Nutritive Value of Foods; 203, Canned Fruit Preserves and Jellies; 249, Cereal Breakfast Foods; 295, Potatoes and Other Root Crops as Food; 256, Preparation of Vegetables for the Table; 582, Green Vegetables and their Use in the Diet; Eggs and their Uses as Foods; 490, Bacteria in Milk; 413, Care of Milk and its Use in the Home; 363, Use of Milk as Food; 332, Nuts and their Uses as Food.

Ask for Farmers' Bulletins from Division of Publication, U. S. Department of Agriculture.

Dressing for Warmth.

We have bought an old house, once a Colonial tavern. It is lovely in Summer, but cold in Winter. How can I dress to keep comfortable? I haven't much time or money to spend on my problem. N. B.

If you do all your own work you cannot dress without thought of time spent over the stove or doing some heavy work. Try the new double-body union suits. Be sure your corset fits and leaves you free to move easily. Wear medium weight cotton stockings and felt shoes. Make corset covers of outing flannel and a warm petticoat of wash flannel. Use galatea or eden cloth for your house dresses, and keep a wrap of some kind handy if you are chilly when you sit down. The old circular shawl is good for this. Wear wool dresses or flannel shirtwaists in the afternoon. Put a thick rug where you stand much by stove or sink if the floor is cold.

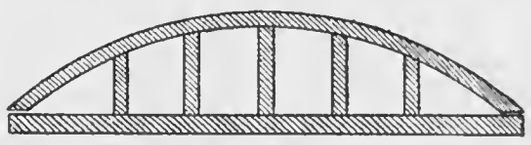
Making a Newport Scarf.

What is a Newport scarf and how do you make one? E. D.

A Newport scarf is a long, narrow knitted affair, 16 to 18 inches wide and about two yards long. It is worn as a shawl in Summer and as a muffler or head scarf in the Winter. Eight skeins of Shetland floss will make one, six skeins of the ground color and two skeins for stripes and fringe. Cast on 100 stitches and knit 12 ridges, 24 rows, plain with the body color. Then join the second color and knit six rows as follows: First row, knit across plain. Second row, seam clear across. Third row, knit one, over, knit one, over; etc. Fourth row, seam two together clear across. Fifth row, knit plain. Sixth row, seam clear across. Repeat both stripes until the desired length is reached, ending with the body color. Add four-inch fringe at each end; the scarf should be 64 inches long.

Sewer System for the Country Home

DIFFICULTIES ENCOUNTERED.—An objection frequently raised by country folks against the installation of bath-room outfits and kitchen sinks—conveniences greatly prized when once established—is that the drainage is very hard to care for. Many farmers remembering their trying experiences with cesspools and underground sinks, have lost faith in the efficiency of rural plumbing and drainage systems. Thanks to a fortunate biological discovery, there is now little need of such distrust; the country



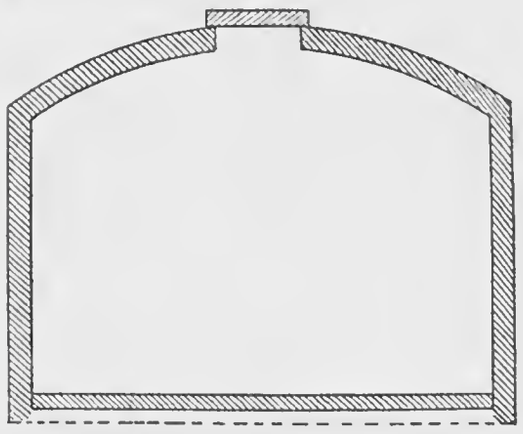
FORM FOR CONCRETE ARCH.

home that utilizes the septic tank can dispose of its house drainage quite as easily as the city home can with its efficient sewer system.

THE SEPTIC TANK.—The purpose of this article is to describe a septic tank established by the writer for the boarding hall of a college located in a town unprovided with a sewer system. This tank has been in operation two years and is giving perfect satisfaction. It easily takes care of the bath-room waste occasioned by 25 boarders, and in addition thereto the sink drainage from the busy kitchen. The janitor estimates that 20 or more barrels daily pass into the tank. Before describing the structure of this tank a few facts concerning septic tanks in general will not be out of place. A septic tank may be defined as a dark, moist, warm chamber in which certain bacteria attack and decompose organic matter. It has been found by analysis that more than 99 per cent. of house drainage is water. When such waste is emptied into a septic tank it is attacked by the bacteria and disintegrated, and other kinds of bacteria, including those harmful to man, are destroyed at the same time. The outflow from the tank consequently is almost wholly water and is quite free from germs and obnoxious gases. This water is, of course, far from being pure, there being considerable odor and a supersaturation of organic and mineral matter; it is, however, much less a pollution agent than before, and not nearly so likely to endanger wells in the immediate vicinity.

PRINCIPLE OF THE TANK.—A septic tank, then, must provide three things: First, an airtight chamber for receiving the house drainage—hereafter called the septic chamber—and in which the particular bacteria may actively carry on the work of decomposition; second, some automatic device for continuously removing the excess water from this chamber; third, an absorption chamber to receive this excess water, and from which it may sink away into the soil. Particular attention should be given to the first and third of the requisite just named, for upon them the success of the septic tank largely depends. If the septic chamber is not warm and airtight the particular bacteria doing the work of decomposition—biologically called anaërobic bacteria—do not thrive and decomposition is incomplete. If the absorption chamber for any reason retains much of its water the circulation through the whole tank is interfered with and its automatic action soon ceases.

GENERAL PLAN.—The tank now to be described shows how all of these needs

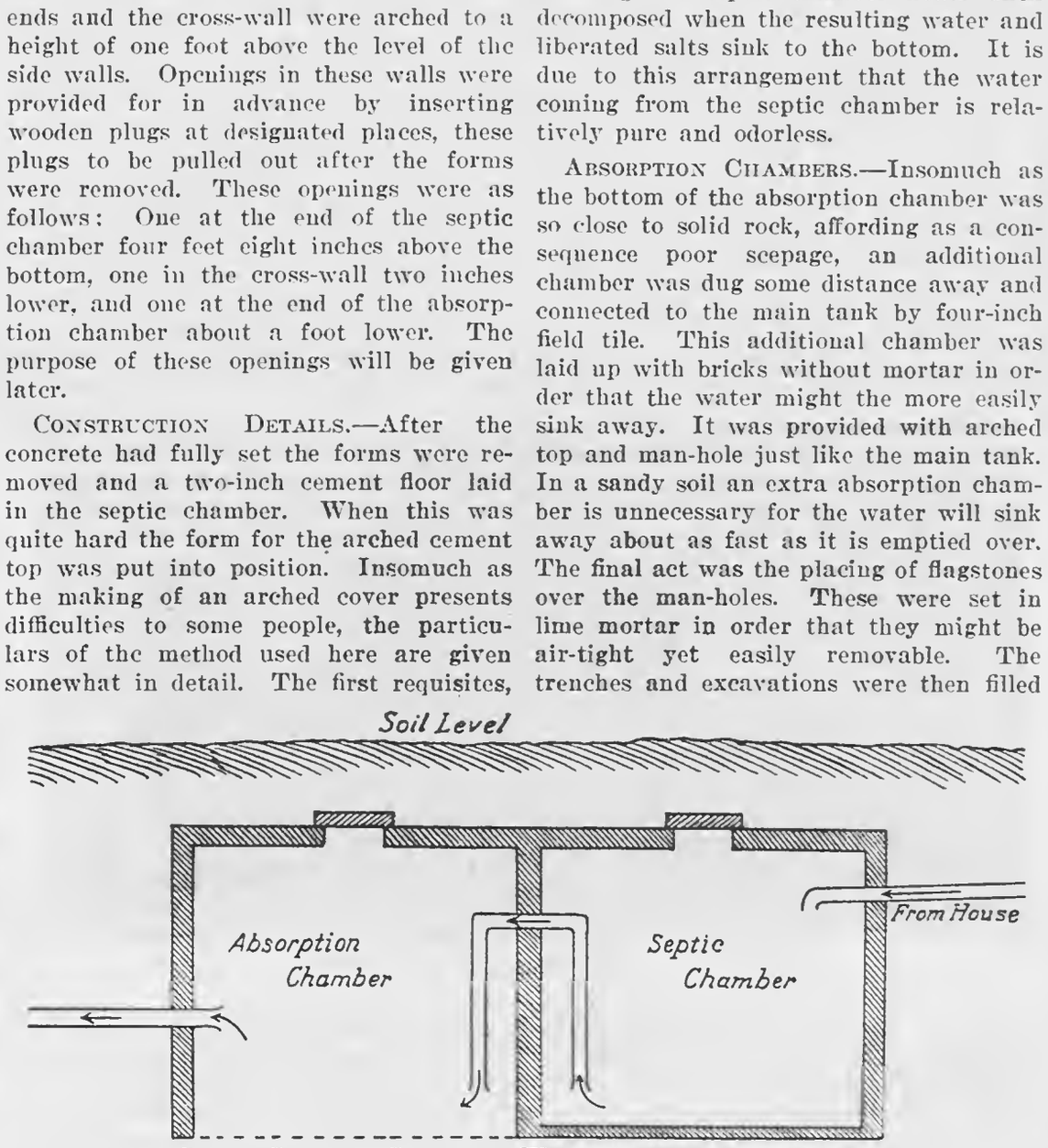


ONE END OF THE SEPTIC TANK.

have been provided for. The accompanying figures—one a vertical lengthwise section, the other a vertical cross-wise section—show how the chambers, cross-wall, inlet pipe, siphon, and outlet to additional absorption chamber were provided for, and enables their arrangement to be seen at a glance. An examination of these figures will greatly assist in understanding the following description:

The tank was located about 30 feet from the house. A space 16 feet long, seven feet wide, seven feet deep, was excavated, the walls being left straight and smooth in order to form an outward wall for the concrete. The original plan had been to dig eight feet, but rock being encountered it was impossible to go deeper than seven. The box structures seven feet five inches long, six feet four inches wide, placed so as to be everywhere four inches from the earth sides, made the forms. Concrete was shoveled in to a depth of five feet, thus forming four-inch side walls and a six-inch cross-wall. The ends and the cross-wall were arched to a height of one foot above the level of the side walls. Openings in these walls were provided for in advance by inserting wooden plugs at designated places, these plugs to be pulled out after the forms were removed. These openings were as follows: One at the end of the septic chamber four feet eight inches above the bottom, one in the cross-wall two inches lower, and one at the end of the absorption chamber about a foot lower. The purpose of these openings will be given later.

CONSTRUCTION DETAILS.—After the concrete had fully set the forms were removed and a two-inch cement floor laid in the septic chamber. When this was quite hard the form for the arched cement top was put into position. Insomuch as the making of an arched cover presents difficulties to some people, the particulars of the method used here are given somewhat in detail. The first requisites,



CROSS SECTION SHOWING WORKING OF SEPTIC TANK.

namely supporting arches, were made by nailing 1x6 boards perpendicularly to the wide face of 2x6 planks. The middle upright was 12 inches high and the others shaded away to three or four near the ends. A flexible board was then bent down upon these uprights and nailed securely to them and to the 2x6 plank at its ends. The result of this is an arch capable of supporting a heavy weight. Eight of these arches were needed for this particular tank. They were supported from below by braced 2x4 pieces, and at such a height that the overlying boards would line up flush with the top of the ends, cross-wall, and sides. The overlying boards were nailed to the arches only sufficiently to keep both in place. Too much nailing would have interfered with their easy removal later. Provision was made in the forms for 14x16-inch manholes into each chamber.

CONCRETE AND PIPE.—The concrete for the top was made rather rich, a mixture of one part cement to four of sand being used. This was laid down to a thickness of five inches at the middle, thus forming a top that has since proved amply strong. After about a week the concrete was sufficiently hard to permit the removal of the form, which was easily pulled down from the inside and removed through the manholes. The conducting pipe from the house to the septic chamber was made of four-inch glazed sewer tile and entered the septic chamber through the opening previously referred to. Its decline, which was about three inches, has proved sufficient to drain the house pipes quite rapidly. A U-tube, made by a local hardware man of four-inch iron soil pipe, is used for conveying the excess water from the septic chamber to the absorption chamber. The figure shows just how it was placed. It was firmly cemented into the opening in the cross-wall previously mentioned and with the open ends down and about eight inches from the bottom. Its action may as well be explained now; when the septic chamber began to fill up with sewage a part rose up in the tube eventually being pushed over by the weight of the excess into the absorption chamber where it was absorbed by the earth. Every additional inflow into the septic chamber causes a recurrence of this process, and so continues as long as the tank is in good working order. The object in placing the U-tube in this inverted position is that it may carry over first the bottom water which is purer. This is due to the fact that all organic matter entering the septic chamber floats until decomposed when the resulting water and liberated salts sink to the bottom. It is due to this arrangement that the water coming from the septic chamber is relatively pure and odorless.

ABSORPTION CHAMBERS.—Insomuch as the bottom of the absorption chamber was so close to solid rock, affording as a consequence poor seepage, an additional chamber was dug some distance away and connected to the main tank by four-inch field tile. This additional chamber was laid up with bricks without mortar in order that the water might the more easily sink away. It was provided with arched top and man-hole just like the main tank. In a sandy soil an extra absorption chamber is unnecessary for the water will sink away about as fast as it is emptied over. The final act was the placing of flagstones over the man-holes. These were set in lime mortar in order that they might be air-tight yet easily removable. The trenches and excavations were then filled in and subsequently seeded to grass: rocks being left to mark the position of the man-holes.

E. V. LAUGHLIN.

Iowa.

Use for Sugar Sacks

WHAT use are we making of the numerous cloth sacks, big and little, which are constantly coming in with sugar, flour, salt, graham flour, etc.?

Instead of cutting the sacks open, ravel the threads with which they are sewed and thus preserve them intact and prevent any threads falling into the contents. Nearly all flour sacks can be used for dish towels, discarding the old and thin ones which shed lint and do not absorb water. Salt sacks are pure white and quite soft after washing. The 10-cent size make good every-day handkerchiefs to be used in time of hard colds. They should be raveled and hemmed on the machine. Sugar sacks are of light weight unbleached muslin. They make useful Summer underwear for children, last fairly well and the only expense is the labor which is not great if the machine is used everywhere possible.

Very serviceable petticoats can be made for school girls by cutting the 25-pound size in half and finishing the bottom with a gingham ruffle. The 25-pound size is just right too, for jelly and cottage cheese bags, and plenty are saved for putting away dried apples, seeds, nuts, etc. Small sacks colored and pieced together make very pretty quilts.

Occasionally one gets a good canvas sack, and these we hail as treasures. Every last one is made into mittens. For Winter I line them with old sweaters, pieces of flannel or any warm material and for handling stone, grain and the like just the one thickness of canvas is sufficient. I have a good pattern and make them on the machine. Several pairs can be made in an hour, and by keeping three or four pairs on hand there is always a dry pair. I make them for the men and children and also my own work mittens, and keep clean ones for hanging out clothes on a freezing day. There are numerous other ways for using them which will suggest themselves, such as for wash cloths, for diapers, for mending lining, bands and facings. One Christmas we hemmed several 10-pound sugar sacks for sheets on the dolls' beds.

MRS. NILES GROVER.

'Obesity Cures."

WE shouldn't speak of curing obesity, however, for obesity isn't a disease except in rare instances. With the exception of the comparatively few cases in which there is some disorder of the nerves governing nutrition, an excess of bodily fat is due either to a natural habit of the body which we call a family trait or to eating more food than the needs of the body require. Some of us are born to be plump just as others are born to be brilliant, and we can no more control our little predisposition than can they, but, just as it is more creditable to be born with a big head than to acquire one, we feel relieved of some responsibility if only our ancestors were portly people. Others, quite a few others in fact, just simply eat too much. If eating were a painful process, and pie were a penance, few of us would be short of breath or wear turndown collars; incidentally, most of us would be out of a job, for supplying others with something to eat and then washing the dishes keeps the world busy. Our body engines require a certain amount of fuel, but a lot of us make the mistake of thinking that we are six-cylinder motors when we are only twins, at best. As a consequence, we pour in gasoline until our pistons become clogged with carbon and our horse power is seriously reduced. The cure for this form of obesity is less food and more active physical exertion. What! You won't take this cure? Well, I didn't think that you would; I was just telling you.

When families run to portliness a little excess of avoirdupois shouldn't worry them; it's hard to keep the beef breeds from putting their food onto the ribs. With reasonable care not to keep their appetite too thoroughly squelched they shouldn't suffer physically no matter how much they differ in form from their ideal of personal beauty. Few of us can look like the stream-line ladies in the corset advertisements and none of us want to look like the pictures of the alleged college youths who are most readily distinguished from the puppies at the other end of the string by the fact that they wear cuffs on their pants.

There are not wanting unprincipled people, however, who appreciate and would capitalize the almost universal desire of feminine hearts to retain the willowy form of youth. Men may be pillowy and content, but the mind of the fair sex upon willowness is bent. These "obesity cure" people may know well that there is no drug or combination of drugs that will safely remove surplus flesh, though there are a number that have an unearned reputation for doing this. True, there are one or two that will remove the flesh, but unless judiciously used, they will also remove the spirit. Realizing that this fact is becoming popularly known, some of these unprincipled people seek dupes by advertising drugless flesh reducers.

It matters little whether the obesity cures are drug or drugless, they are all equally worthless. Upon investigation it will be found that the "cure" consists of a laxative and perhaps some more or less inert drugs; the more dangerous ones are being left out. These are accompanied by directions for dieting and exercise that if followed would result in the loss of some flesh, but when these are discontinued the flesh returns and sometimes brings a little more with it. Few people have the hardihood to stop eating the bread, potatoes and other starchy articles of the daily diet that these directions ban or the persistence to long carry out the systematic and strenuous exercise that is enjoined. If they had they would obtain all possible benefit that the "cure" can bestow, and at no expense. The only cures that these same unprincipled people ever work are possible ones for credulity in fleshy people and leanness in their own pocket books.

M. B. D.

:: Good Things for the Holidays ::

BAKED SQUASH.—Since our grandmothers' time and the days of brick ovens the custom of baking squash whole has fallen away. Yet there is nothing more delicious and as a decorative scheme for the holiday meal it cannot be excelled. Choose either a dark green Hubbard squash, or one of the striped pumpkin colored squashes, like the Delicious or the Boston Marrow. It should weigh from five to eight pounds, according to the number to be served or the place it is expected to fill in the decorative scheme. A good way is to select one that is slightly flattened on the under side so that it will lie firmly on the platter it is to be served on. Trim the ends, wash the outside, and cut out a circular piece about four inches across on the upper side to serve as a lid. Scoop out and scrape clean the inside. If the shell is unusually hard it would be well to score the outside with a very sharp knife in lengthwise sections and once or twice around the squash in even lines, cutting only just through the outer layer and as near invisibly as possible, the pieces to be of the size desired for serving. Place in the oven in a deep covered pan with just a little water in the bottom. This is to keep the squash from drying out too much in the baking process. Bake one to two hours, as seems necessary to cook tender, allow for plenty of time as a little overtime won't hurt it. Keep the cover on and the water renewed until the last half hour. Then remove from the oven. Lift off the lid of the squash and give the whole inside a good sprinkling of salt and a dash of pepper. Then add one-half cup of butter and one cup of brown sugar. Place the lid on and return to the oven. After the butter has had time to melt mix it thoroughly with the sugar and baste the inside of the squash frequently for the next half hour with the mixture, leaving the lid off so that the inner surface can brown just a little. Serve very hot on a large platter surrounded with Christmas snowballs. The latter are made as follows:

Christmas Snowballs.—Take quarters of large tart apples, roll them well in sugar and sprinkle with cinnamon. Then fold about them in the shape of a ball cooked white rice that has been salted, and cooled somewhat. Tie the balls up in little squares of cheese cloth and steam one-half hour. These are delicious served with maple cream made of one cup maple syrup and one cup sweet whipped cream, well blended.

Apple Butter.—Another thing that should by no means be forgotten from the holiday preparations is a supply of apple butter. This can be made in advance, and is delicious for sandwiches or cake fillings, or as a sweet by itself. Contrary to popular belief, sweet or boiled cider, while very desirable as an addition, is not a necessity in making this time-honored and very wholesome appetizer. Peel and slice up three times the bulk of butter desired of tart, quick-cooking apples, free from all gnarliness or blemishes. Put about half the quantity to cook in a large granite pan or kettle, with just a little water. Cover tightly at first. When these are tender add the remaining quantity a few at a time, as it cooks down. When all are cooked in and stirred until it is a smooth, lumpless mass, add sugar and spices to taste. It is more delicate in flavor if nothing is added but a very little cinnamon. Cook slowly, stirring to prevent scorching on the bottom, until it is thick enough so that when a little is placed in a saucer the juice won't separate from the butter. Place in a jar in a cool place and this will keep a long time, if it is possible to keep it from prompt consumption because of its deliciousness.

Here are some wholesome foods to be served for suppers during holiday week or for Sunday night suppers:

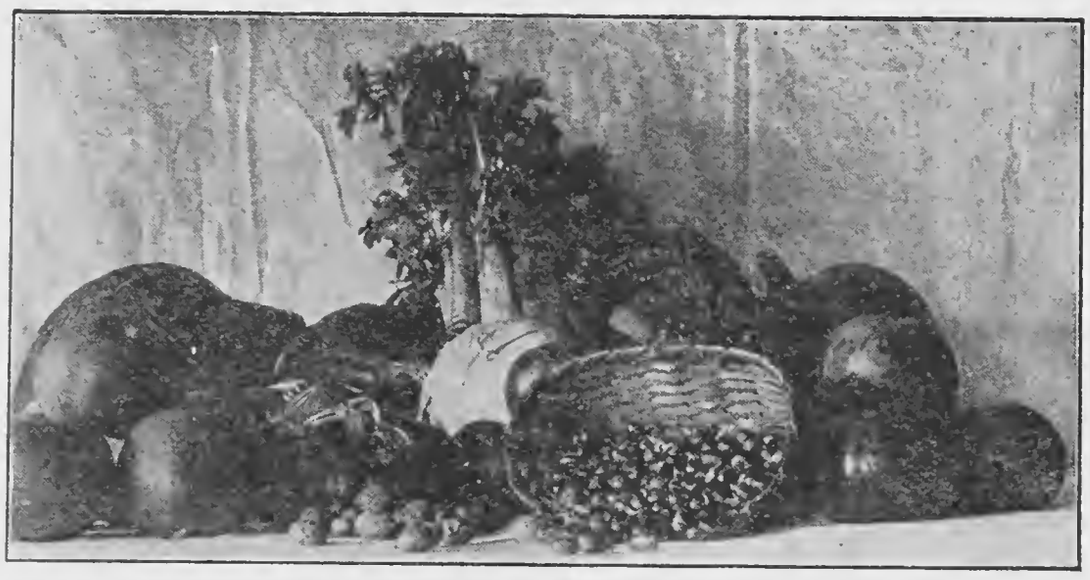
Brown Bread Sandwiches.—Cut long narrow slices of brown bread, and spread with snappy or cream cheese, with a sprinkling of nut meats. Or butter and a filling made of equal parts chopped dates and nut meats.

Cream Celery Soup.—One quart of chicken or beef stock and one quart of milk or two quarts of milk. Cook one-half cup rice in salted water and rub it through a potato masher. Wash and grate one head of celery and rub this through the masher, after cooking tender in a little milk or water. Add to the boiling hot milk, season with one teaspoon of salt, paprika and a dash of nutmeg. Serve hot with toasted croutons or diced bread.

Cabbage Salad.—A quick and delicious salad is made by slicing the cabbage very fine on a slaw cutter, and adding a dressing of equal parts prepared mustard and sweetened whipped cream.

Apple Cake.—A much liked fruit cake for the holidays is best made a week in advance—as it seems to ripen and soften by keeping. Three cups chopped apples cooked for five or ten minutes with one cup molasses. Cool and add one cup shortening, creaming thoroughly. Then add one cup buttermilk, two tablespoonfuls soda, four rather scant cups of flour, one teaspoon each, cloves, nutmeg, cinnamon, one cup raisins, or one-half cup raisins and one-half cup currants. This makes three ordinary loaves. Wrap in oiled paper for a few days. Cover with white boiled icing, or a brown sugar icing, one cup brown sugar boiled with one-half cup sweet milk, or a black chocolate icing. A sprinkling of candied caraway seeds gives it a very festive, old-timey appearance.

MRS. M. G. FEINT.



SOME GOOD THINGS FOR CHRISTMAS.

Intestinal Fat; Scrapple; Blood Pudding.

IT was with much interest we read the instructions concerning butchering as done in Illinois. From a chance conversation I overheard lately I believe all do not render the fat taken from the intestines with satisfactory results. As told on page 1361 the fat is more easily removed while the intestines are yet warm. The fat should then be placed in a kettle with enough water to cover then, a generous handful of salt added. This removes all the blood. The next morning take from this water, wash well in luke-warm water, cut in small pieces, then put with enough water to start cooking, in a kettle on the stove. Over this should be sprinkled almost a teaspoonful of soda. Cook slowly at first, then more rapidly. You will find this white and sweet smelling, but as a precaution should be put in a separate vessel from the leaf lard and used first.

SCRAPPLE.—This seems to be one of the by-products of butchering time which is not very well understood in various communities. In Lancaster County, Pa., it is considered indispensable, and it certainly is fine when made just right. The head, heart, skins from lard and sausage pieces and in fact any trimmings not used for sausage can be made use of. The meat is placed in a boiler with enough water to cover and cooked until the meat is easily separated from the bones, when it is taken from the boiler with the aid of a wire ladle, the bones are all picked out and the meat put through a chopper, put back on the fire with the liquor in which meat was boiled, previously straining this liquor and adding enough water so there are three times as much liquid as meat. After it reaches the boiling point thicken with fine cornmeal and buckwheat or wheat flour in the proportion of three cupfuls cornmeal and one of buckwheat or wheat flour. When the consistency of a rather thick mush season with salt and pepper to suit the taste; then boil, stirring constantly, for it is easily scorched, until the fat seems to rise to the top of the mass. Remove from the fire and pour in pans from which it may be cut in slices and fried like mush.

BLOOD PUDDING.—We have heard this product spoken of, but never until quite recently did I ever see or taste of it. It was made by a little Swedish woman and to me was a decided surprise. About two cupfuls of blood were caught from the hog by the butcher. Care was taken to keep whipping the blood with an egg beater, so it would not coagulate. To this was added eight cupfuls of cold water, then thickened to a very stiff dough with graham flour to which was added two level tablespoons baking powder and one of salt. This was kneaded for some time like bread dough, then pieces the size of a large cup were pinched off and dropped into a large kettle of boiling salted water and boiled like dumplings. When done they were removed from the water into a drip pan and dried slowly in an oven only warm, not real hot. To prepare for the table it was sliced in small thin pieces like dried beef, browned in a pan in which butter or drippings had been heated, when browned, milk enough to form sufficient gravy was poured over all, and the pan was placed back on the stove, where it would simmer slowly. The flour in the pudding forms the thickening. In cold weather these puddings will keep several weeks. K. C. W.

Ohio.

New and Delicious Confections.

ORANGE AND GRAPEFRUIT STRAWS.—These are perfectly delicious and cost only in time and sugar, as they are made only from the skins, which may be saved after using the inside for breakfast, as they have to be washed thoroughly and boiled in several different waters. After washing take a knife and pull off all loose inner white skin and then lay on a breadboard and cut into small pieces about an eighth of an inch wide (I generally cut the skin into quarters before I begin this part of the operation). Then put into a kettle and cover with cold water, and put on to boil; let boil about 10 or 15 minutes, then drain off the water and cover again with cold water, repeating the same process from four to six times—four times generally being enough with oranges and six times with grapefruit, unless the latter is particularly mild. At any rate, they should boil about an hour and a quarter and then be drained. Take granulated sugar and add just enough water to keep it from burning; when melted, put in half or a third of the fruit and cook from half to three-quarters of an hour, or until the white part of the fruit looks clean. After it has boiled about 10 minutes you will notice that the syrup has become very thin. This should be remedied by adding more sugar, generally twice, as the syrup needs to be thick, and at the end the syrup will thread when dropped from a spoon or fork. Have ready a soup plate (any other dish of similar depth will do) filled with granulated sugar and two forks. Take out onto a wire strainer about two tablespoonfuls at a time of the fruit, let drain a few minutes and then roll each piece in the sugar and toss on to another plate or platter. The two forks are used to turn the fruit and transfer it from one plate to another. When the first lot of fruit is finished, put the second lot into the syrup and proceed as before.

Of course if only a small quantity of fruit is fixed at a time it could all be cooked together, but I generally make four or five pounds at a time as it keeps perfectly if put in an air-tight box; and the week I make the candy I use oranges for a short cake and a couple of puddings and have the grapefruit for breakfast so as to get enough skins at one time. They will keep all right in a cold place for about a week. I have made these "straws" for some of our church candy sales and we received 40 cents a pound for them, and no matter how much I made I could always have sold more if we had had it, which shows that it is popular.

The syrup that is left after cooking the fruit can be utilized in several different ways. For instance, shredded cocoanut can be added to it, thus making another kind of candy, as the flavor of the orange or grapefruit skins with the cocoanut is delicious. After cooking the cocoanut in the syrup for about 10 minutes take from the fire and stir until stiff, when it can either be pressed into a square tin lined with paraffin paper and marked off into squares to be broken apart when cold; or dropped by spoonfuls in little mounds onto waxed paper. Or the syrup can be used in making apple sauce.

One time I used the syrup when fixing the refreshments for our club, which is a small one of 12 members. As we are limited to one thing to eat and one thing to drink there is not much to choose from unless you vary the kinds of cake or sandwiches. First I baked a sponge cake mixture in muffin tins; then I cored (with an apple corer) and peeled small apples of uniform size and carefully cooked them in the grapefruit syrup, keeping a cover on the kettle as it made them cook more quickly, so that the apples would be whole when cooked. I put them onto a platter, and set them out to get perfectly cold. In the meantime I chopped some walnut meats (hickory or other nuts would be equally good) and then just half an hour before I expected my company I put a cake on each plate and on top of that an apple, filling the center with chopped pineapple and quince preserve (any kind of jam would be equally good). Over all that I spread sweetened whipped cream and sprinkled it with the chopped nuts. On top I put a red cherry. I served hot coffee with cream with the apples and everybody said the refreshments were the most delicious they had had in a long time. Of course a plain sugar syrup could be used to cook the apples in just as well as not, but if you have the orange or grapefruit syrup it gives the apples a rather unusual flavor.

Cherries and strawberries in season are done the same way, the stems and hulls being left on, and you don't know how delicious they are until you have tried them; and some of New York's best caterers serve them on smart occasions. They charge from 60 to 80 cents a pound. A pound of fondant will generally do a little more than a pound of grapes, and of course if any fondant is left over there are numberless bonbons that can be made out of it.

And right here is a chance for the farm women in the South and West where oranges, grapefruit and Malaga grapes grow and who are near any of the large hotels or resorts to make some money. Put up in attractive boxes holding from one to five pounds, large quantities could be disposed of every week. Boxes could be made of bristol board, plain or decorated in water colors if one was handy with a brush.

It will not come amiss to give a recipe for Turkish delight, which is a most delicious confection also, inasmuch as the inside or juice of the oranges and grapefruits could be utilized in making it if so desired. Soak two heaping tablespoonfuls of gelatine in two-thirds cup cold water for five minutes; put one pound granulated sugar with two-thirds cup cold water on to boil and when it boils add the gelatine and boil slowly for 20 minutes; then add the grated rind and juice of one large orange and one lemon (there should be one-half cup of fruit juice). Wet a square tin dish and pour in the mixture to the depth of one inch. When perfectly firm dip mold in warm water, turn out onto waxed paper, cut into cubes and roll in confectioner's or powdered sugar to which a teaspoon of cornstarch has been added. Different kinds of Turkish delight can, of course, be made by using different fruit juices and different coloring matter.

Marshmallows.—All children and nearly all grown-ups like marshmallows. Take one heaping tablespoon gelatine and soak in 10 tablespoonfuls cold water; boil two cups granulated sugar with 10 tablespoonfuls of water until it threads; then add gelatine to syrup and let stand until partially cooled. Then add a pinch of salt and flavoring to taste and beat with a whip until too stiff, and then with a spoon until soft enough to settle into a sheet. Dust square pans thickly with confectioners' or powdered sugar (with a little starch added) and pour in the candy to about half an inch deep and set in a cool place until thoroughly chilled. Turn out, cut in cubes and roll in powdered sugar.

Maple Fluff.—Two cups of maple or medium brown sugar (if you only have the very dark use one cup granulated and one cup brown sugar) boiled with about half a cup of water until it just hairs, then pour onto the stiffly beaten white of one egg and continue beating until the mixture is stiff enough to mold into different shapes. It can be heaped in little mounds with a spoon or made into a rope and then cut into small pieces, etc. It is also very nice with chopped nuts added to it. MRS. BELLE BEARDSLEY.

:: The Children ::

An Energetic Little Girl.

THIS little girl, Anna Ruth Miller, is the foster daughter of one of our tenants, Mr. and Mrs. J. W. Miller, who have reason to be proud of her success in winning a fine little Shetland pony in a recent subscription contest. The pony

RUTH MILLER AND KIP.

is named "Kip" and it has not only been broken to ride and draw a buggy but it has been trained to do many interesting things. He can go up and down stairs, eat from the table with his fore feet on a chair or a box, say his prayers, etc. Mr. Miller is a born horseman and delights in spending his spare time in caring for his horses, of which he keeps from six to ten. Mrs. Miller is a lover of flowers as may be seen in the picture. They are among the best tenants that we have ever had. May the land find more of the same worthy class who are willing to beautify and adorn the homes they occupy for the express purpose of getting more of the joys of life. They live at "Bellevue Place" and would be delighted to show your readers the interesting things that "Kip" can do.

JOHN L. SHAWVER.

A Young Corn Grower.

THE little picture here given shows what a 12-year-old boy, rather small for his age, did in the School Contest in Cape May County, New Jersey. This boy received the third prize of $5 for his corn, and he is all ready for another contest next year. The fodder shows that he did a good job for his share of the contest. This boy's father, Arthur W. Sykes, is the man we have told about, who has had a varied experience in going back to the land. He went out first with his family, and in order to pay for the farm Mr. Sykes enlisted and served Uncle Sam in the Philippines for several years. There he earned money enough to square up the farm, and in the meantime his wife had been the partner on the job and

A YOUNG CORN GROWER.

carried the farm along. When he got back they were induced to sell their farm and go back to the city, but business there proved a failure, and so they went back to the land again, back to New Jersey, where they are going through the same process of working to pay for that farm and provide a home and a good property. They are doing it too, with the man to earn the cash, and his wife as active manager at home to see that the cash is properly handled and managed. This boy is going to make a corn grower, and the time will come when his variety or strain of corn will be wanted in the seed trade, because it will carry qualities which other growers need.

Three Farm Pets.

THE old fellow in the center (Robinson Crusoe) was a mongrel Barred Rock. The dignified cock-of-the-walk air shown in the picture was acquired in his later years, considerable of the first two years of his farmyard life having been spent in dodging a White Leghorn enemy. Whenever the Barred Rock attempted to crow in sight of his enemy the latter came on a dead run, and the last bar or two of the crow was mutilated. Occasionally he stole around in the front yard, where the other fowls were not allowed, and crowed six or seven times in solitude. In the third year his enemy departed and then Robinson's "palmy days" began. He crowed whenever he pleased, was fed pieces of bread, cake or other knicknacks and developed a philosophy of life near human, as he ate the choice bit himself, and called the hens only when something of which he had doubts—like white beans—was offered.

The White Leghorn hen at the right attracted attention when half-grown by her persistent habit of singing. Throw her a bit of bread or kernel of corn, and as soon as it was swallowed she would sing. An attempt to reach her affections by the victuals route was very successful, as it is with the most of us, and the writer made it a point always to have something good in his pocket. The hen

THREE OLD FRIENDS ON THE FARM.

quickly learned and finally would fly on the feeder's shoulder, riding all about the yard singing so loudly that it attracted the neighbors' attention.

The cat at the left had the usual experience of farm cats, being buried in the haymow, falling into a pitchfork and in other ways losing several of his nine lives, until middle age, when he settled down to a pampered existence. A boarder at the farm, who ate supper alone, developed the bad habit of feeding the cat morsels of meat when in the dining room. The cat soon made the mental connection between the food and supper bell, and raised his voice vigorously if not let in as soon as the bell was rung. He was terribly afraid of thunder and at the first grumble howled dismally and went for the cellar, where he hid behind the furnace until it was over. W. H.

Smart Sayings.

TWO-YEAR-OLD Charlie and his mother were spending the afternoon in the yard. Charlie had been running about in some tall Orchard grass, and came back to his mother when she asked: "Well dear, did you find any kisses for mother?" Charlie answered: "No mamma dere weren't any in blossum, dey was just in bud."

Four-year-old Mabel sat looking intently at her grandpa who is bald and wears a long beard, then burst out with: "Why Grandpa the hair all growed on the wrong place."

Little Gladys' daddy believes in spankings and spankings that give no uncertain sensation—hence Gladys does not care to have her misdemeanors reported to him. One day she shut up the cat in the oven, being one of that kind of children who simply must be doing something. Luckily for the cat, the fire was out, but the oven still warm, so that when Gladys' mother, hearing a scratching sound, took the cat out, it was quite limp. Gladys thinking the cat dead, with mingled emotions of grief for the cat and apprehensions of punishment for herself wailed: "Oh mamma, will Kittie go to Heaven?" Not wishing to hurt the child's feelings her mother said, "Yes, I think so." "Will papa go to Heaven?" "Yes, I think he will too." "Oh mamma, then don't let Snippers (the cat) go, don't. Dig a big hole and put her in it."

Another time her mother wished her to pick up the baby's playthings for him which he had thrown on the floor. Knowing that the little girl was getting tired of the oft-repeated task, she suggested that she play Santa Claus and give the playthings to the baby for presents. Gladys looked at her mother and said: "Say mother, don't you think you are scheming a little?"

GRANGER No. 1.: "Do they have the R. F. D. on your end of the State road?" Granger No. 2: "No, we have the B. R. D." G. No. 1: "What's the B. R. D.? Never seem to have heard of it." G. No. 2: "Why, that's Box Rent Due."

W. W. A.

Knitting for the Soldiers.

What do women knit for the soldiers abroad and how and where do they send finished articles. G. D. P.

The women knit mufflers, hospital stockings, wristers and men's socks. The directions given are endorsed by the Red Cross Society. Articles could be sent to the Red Cross, the Lend a Hand Society or other distributing agencies. The muffler is knit in garter stitch in gray or brown, takes one and a half skeins of Scotch yarn and is done on No. 6 needles. It should be 10 inches wide and four feet long, cast on 45 stitches. An easy hospital stocking is made on No. 4 bone needles, one skein of Scotch yarn will make a pair. Cast on 60 stitches, knit two stitches, seamed two stitches, all across row. Repeat for 17 inches long. Then knit one row, seam one row, knit one row, seam one row. Knit one row, narrow (by knitting two stitches together) every fifth stitch. Seam one row, knit one row, seam one row. Knit one row, narrow every fourth stitch. Seam one row, knit one row, seam one row. Knit one row, narrow every third stitch. Seam one row. Knit one row, narrow every second stitch. Seam one row. Knit one row, narrow every second stitch. Then bind off and sew up with worsted. There is a drop stitch style made on four No. 12 steel needles, also. The directions for men's socks are too long to give here, but will be sent you by mail if you like. Children help by making crutch pads 4x5 inches, rounded at the corners and padded until ¾-inch thick with the inner piece slightly smaller than the outer piece. Turn in the edges and stitch firmly and attach two six-inch tapes on each of the longer edges.

"Now suppose, children, one of your schoolmates should strike you, and the next day you should bring him an apple, that would be one way of returning good for evil," said the Sunday school teacher. A little girl raised her hand. "Well, Elizabeth," said the teacher, "what is it?" "Then," said Elizabeth firmly, "he would strike you again to get another apple." —Ladies' Home Journal.

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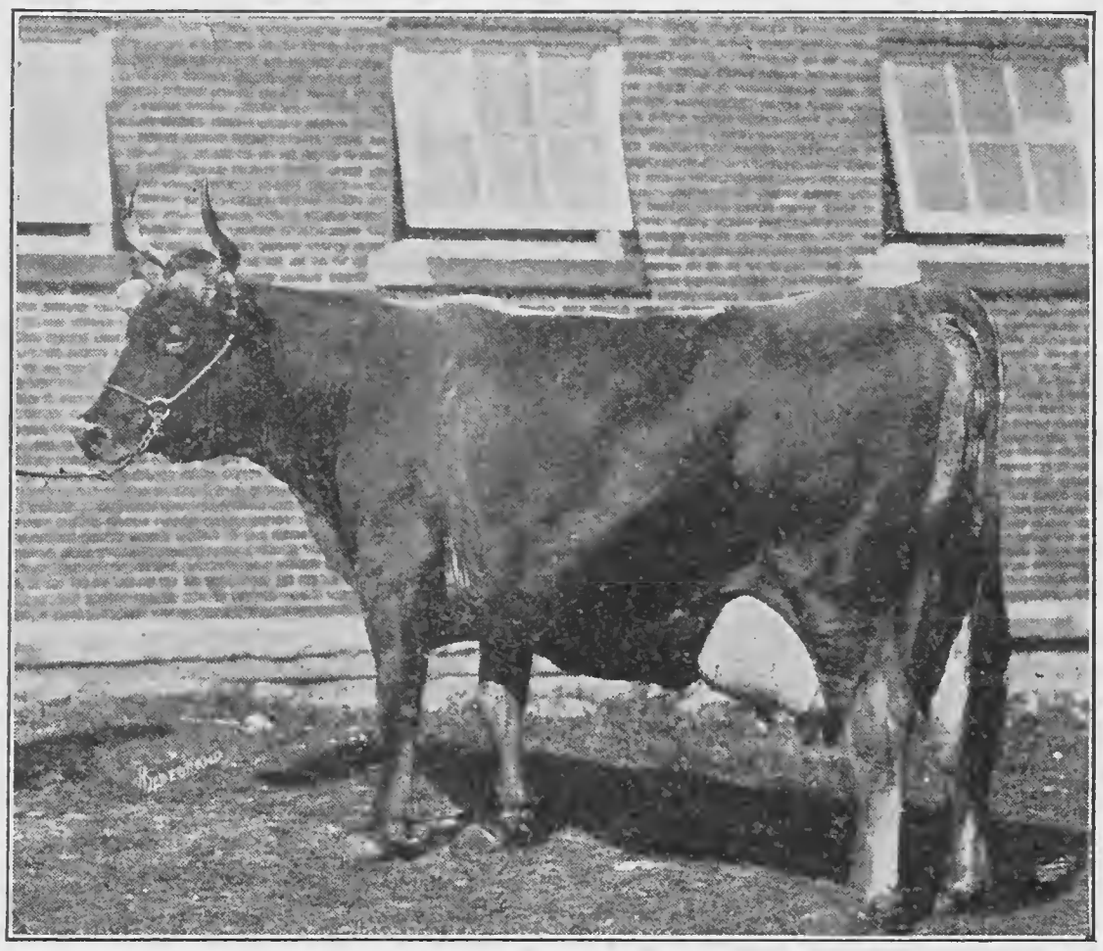
Live Stock and Dairy

SHALL I SELL MILK, BUTTER OR CREAM?

AN ECONOMIC QUESTION.—A farmer writes to a certain farm paper as follows: "I have 28 high-grade Holstein cows. For the month of August they gave me 12,069 pounds milk, which I sold at $1.88 per hundred pounds. If I could get nearly as much by making butter or selling cream I would much rather do that, so that I may have the skim-milk for pigs. The milk averages 3.8 per cent. butterfat." This farmer is beginning to see daylight. The more of such inquiries received and properly answered by farm papers and agricultural colleges the better off the dairy industry will be.

CO-OPERATIVE CREAMERIES.—It would seem that one factor which will help materially to raise the price of wholesale milk in Connecticut is the establishment of co-operative creameries and skimming stations. This would so decrease the supply of milk that the contractors and presumably the consumers would have to pay more for it if a surplus was maintained and the demand supplied. The fact that there does not begin to be high-class butter enough made in the State to supply



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the demand, together with the fact that a large amount of the cream used in our rapidly-growing ice cream business comes from outside the State, warrants the establishment of more good creameries and skimming stations. While it is probably true that the cow population of the State is not large enough, or, at least, so distributed that the desirable amount of creamery business could be done if a large per cent. of the wholesale milk sold in the State could be turned into the creamery weigh can and cream vat, conditions would be greatly improved.

MILK, BUTTER OR CREAM.—Let us suppose the farmer referred to above is located in Connecticut at such a distance from a city as to make the retailing of his milk impossible, but within a reasonable distance of a good creamery. Let us also suppose that regardless of the number of cows kept, he has 10,000 pounds of 3.8 per cent. milk monthly. The farmer really has his choice of selling wholesale milk, making butter on the farm, taking his cream to the creamery where it may be made into butter or ice cream, or sold by the creamery to the ice cream manufacturer. The 10,000 pounds of milk produced monthly equals 4,651 quarts. This would be a production of 120,000 pounds or 55,812 quarts in one year. The average prices paid by the two leading contractors buying milk in the State from April, 1914, to April, 1915, are 3.94 cents and 3.76 cents per quart, or an average for the two of 3.85 cents. In selling his milk the farmer receives in one year $2,148.76.

SKIM-MILK OR BUTTERMILK.—If he skimmed a 35 per cent. cream from his milk he would get 13,028.6 pounds of cream, containing 4,560 pounds fat, which should make, with 18 per cent. overrun, 5,380.8 pounds butter. If he makes this butter on the farm, he will have, in addition to 106,971.4 pounds of skim-milk, 7,647.8 pounds of buttermilk for feeding various classes of live stock. For pig-feeding alone it is generally conceded that 100 pounds of skim-milk or buttermilk is equal in value to a half-bushel of corn. At our present prices of corn 100 pounds of skim-milk or buttermilk must be worth at least 50 cents per hundred. At this price the skim-milk would be worth $534.80, and buttermilk $38.24, making a total of $573.09. He should receive 38 cents a pound for his butter. Allowing three cents per pound for making his receipts from butter would be $1,883.28. This, added to the value of his buttermilk and skim-milk, would give him an income of $2,456.37.

VALUE OF SKIM-MILK.—Every 1,000 pounds of skim-milk contains five pounds nitrogen, 21 pounds phosphoric acid, and two pounds potash, and every 1,000 pounds of buttermilk contains 6.4, 1.7 and 1.6 pounds, respectively of the fertilizing constituents mentioned. In the skim-milk left on the farm there would be 534.8 pounds nitrogen, 224.6 pounds phosphoric acid, and 213.9 pounds potash, all worth, with nitrogen at 20 cents per pound, and phosphoric acid and potash at five cents per pound, $128.89. Since 70 per cent. of the fertilizing value of the skim-milk is recovered in the manure there would be an added income to the farm of $90.22 from the skim-milk. Similarly the buttermilk containing 48.9 pounds nitrogen, 13 pounds phosphoric acid and 12.2 pounds potash, would net the farmer $7.72. Instead of crediting the farmer with this let it go to defray the expense of separator, buttermaking equipment, and possible losses in skimming and churning. Even then the farmer is $307.61 better off making butter than selling milk.

SELLING CREAM.—Since the farmer is located near a creamery he would probably prefer to take his cream to the creamery rather than make it into butter on the farm. If he does this and receives an average price of 36 cents per pound for butter fat, his 4,560 pounds of fat will give him $1,641.60. Thirty-six cents was below the average price paid by some Connecticut creameries last year. He has the skim-milk, but no buttermilk at home on the farm. The skim-milk is found to be worth for feeding $534.85. This added to $1,641.60 equals $2,176.45, or a balance of $27.39 more than the receipts by selling milk. (Right here it may be said that if he only skimmed a 25 per cent. cream, instead of the 35 per cent. cream, he would have 5,212 pounds less skim-milk left on the farm, which would mean a loss of $26.06, not to mention the extra cost of handling and delivering 5,212 pounds more cream.) The value of the fertilizing constituents in the skim-milk will again be left out of consideration.

"POINTS" ON CREAM.—If the farmer takes his cream to the creamery or possibly he may haul his milk to a skimming station near by, and the cream is

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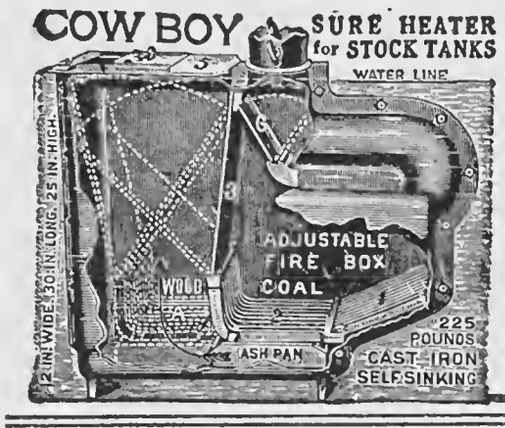

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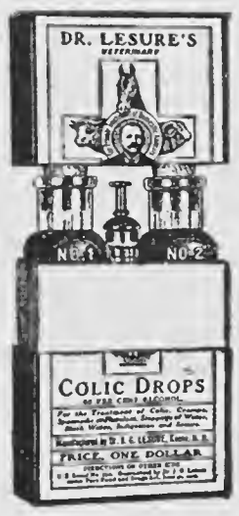

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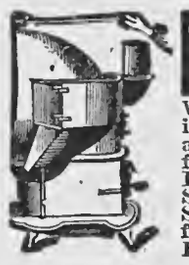

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Agents Wanted Write for descriptive booklet
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A safe, speedy and positive cure. The safest, **Best BLISTER** ever used. Removes all bunches from **Horses.** Impossible to produce scar or blemish. Send for descriptive circulars.
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HORSE OVERSHOES. Sharp-shod, for icy streets, guaranteed to prevent slipping. Buckled on hoof in a minute. Try 4 shoes C.O.D. $3 exp. charges prepaid to you. Here is a chance for live agts. to make big money on this new invention. Write for Agents' prices.
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Blizzard Horse Ice Calks—Have been sold for over 20 years and are the best device yet discovered for preventing the slipping of horses on ice. Agents wanted. **S. W. KENT, Cazenovia, New York**

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"My barn that was **BURNED** was fitted with Crumb's Warriner Stanchions. If it had not been for the ease with which these fasteners were opened I should have lost my cows," writes Mr. Everett Gains, Bernardstown, Mass. Booklet Free.
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HORSE LAME? Use KINDIG'S Famous OINTMENT. A sure cure for bone, bog, and blood spavin, ringbone, curb, soft bunches, splint, etc. 50 cents, postpaid. E. Kindig, Jr., Remedy Co., 4825 Woodland Ave., Phila.

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46

used for making iee eream or sold by the plant for that purpose, the farmer should receive elose to one eent a "point" for his eream, or 35 eents per quart for a 35 per eent. eream. If this was the case, and it eould be sold this way, the year round, whieh might be possible in some eases. the farmer would receive for his 13,028.6 pounds or 6.418 quarts of 35 per eent. eream $2,246.30. The value of the skim-milk, $534.85, added to $2,246.30, makes a grand total of $2,781.15, or $632.39 more than receipts for whole milk. This latter method shows what a neat profit there is in selling eream for iee eream purposes. Of course cream produeed for any purpose must be of good quality to demand top priees. However, when milk is sold wholesale sanitary conditions must be so good that with proper eare the eream is bound to be good. There is a tremendous eall for good eream in this State at the present time.

COMPARISON OF VALUE.—In summing up the reeeipts of our farmer in selling his produet in the different ways mentioned we get the following:

Selling wholesale milk.....	$2,148.76
Selling butter	2,456.37
Selling eream for buttermaking	2,176.45
Selling eream for iee eream making	2,781.15

Another interesting feature is summed up as follows:

Value of fertilizing constituents sold from farm if 70 per cent. are available in the manure.

In selling milk	$112.56
In selling eream	22.34
In selling butter	0.17

FERTILIZER VALUES.—It can be seen that $90.22 worth of fertilizer are kept on the farm when eream is sold, as against none when milk is sold. In selling butter this sum is inereased to $112.32, certainly a good-sized fertilizer bill. This amount of fertilizer added to the farm each year will aeeomplish wonders in giving the farm a fine appearanee by keeping the soil in good condition. The other deeided advantage of selling eream or butter is that one has an abundanee of skim-milk on the farm. This with a good purebred sire should make a man dependent on nobody for good milk and butterfat produeing animals. H. F. J.

AMERICA FOR PERCHERONS.

THE outbreak of the European War, which shut off all importations, according to Secretary Wayne Dinsmore, of the Pereheron Society of America, has undoubtedly oeeasioned the dropping off of registrations. Fall importations being stopped, what otherwise would have been the greatest year in this respeet suffered a deeline of from 9,754 to 9,364 registrations, the year ending with Oetober 31, 1914, compared with the preeeding one. Mr. Dinsmore at the recent Chicago meeting of the Society, called attention to the substantial increase in American-bred stallions and mares. A year ago Indiana stood tenth in the number of mares and stallions purchased, and in this short time she took third plaee in the number of animals purchased, due to efforts of the Indiana Stallion Board, whieh has been active in weeding out grade and unsound animals.

President White, of the Percheron Society, said in part: "Exeept the Percheron alone, the Belgian is the most popular draft horse in America, and with the exception of Belgian studs in Ameriea the raee is almost eliminated. Franee has already prohibited for at least five years the exportation of mares of any breed. We have to-day in this country not less than 100,000 purebred Pereherons, worth approximately $50,000,000. Besides having before us the entire American market it is more than probable that we shall have to supply breeding stock to Canada and Argentina, countries in which Percheron popularity is increasing by leaps and bounds, and even reinvigorate and replenish Freneh stock. We added 880 members during the past year, making our total membership 6,420, and we are now the largest and strongest horse breeding organization in the world. It was found necessary to charge our members a fee for transfers, the entire eessation of imports, a source from which we derived $25,000 annually, having been eut off."

The following officers were re-elected: E. B. White, president; W. S. Corsa, vice-president; C. M. Jones, treasurer; Wayne Dinsmore, secretary. The retiring directors were E. B. White, Leesburg, Va.; C. M. Jones, Plain City, Ohio, and J. M. MeLaughlin, of Dickerson, Md. Nominees brought before the annual meeting were E. B. White, C. M. Jones and A. L. Robison, Jr.

Dishorning Twice; Inbreeding Turkeys.

IS there any danger in eutting a cow's horns off the second time? 2. Can you feed a pig eight weeks old too much corn? 3. Would it do to mate a young gobbler with parent stock? Would it make the young turkeys inferior?

New York. S. L. B.

1. There is no speeial danger in the second operation, provided the docking shears are sharp and disinfeeted. Where second dishorning is necessary the cutting has been done too far from the head at the first operation. 2. Any pig can be fed too much eorn, and overfeeding with eorn is a very common cause of sickness among hogs. An eight-week-old pig should not have a large amount of eorn, but may have cornmeal as a part ration in slop with other meals. New eorn should be fed very sparingly at first, and form but a small part of the ration. Fed otherwise it often kills young pigs. 3. One in-cross may do no harm, but turkeys nowadays are so prone to weakness and disease that it is best, on general prineiples, to mate the hens with a strong, non-akin gobbler. A. S. A.

Ration for Horses.

I AM obliged to buy all feed for four farm horses for two months and more, and it is a very serious item. Would you give a proper ration for horses where feed is bought. I am now feeding a mixture of hominy and bran, half and half, in addition to Alfalfa. I wanted this last for my cattle but can get at no other hay at present.

Pennsylvania. G. W. S.

To preseribe an ideal ration for horses one would have to know their age, condition and the amount of work that they are doing. The universally used grains that seem to fit about all conditions are oats and corn, and if these are available they will probably prove as satisfaetory as anything that you can purchase. Ground together in equal parts, they may be fed in quantity proportioned to the work that the horses are doing. The average farm horse doing ordinary work will keep in good condition on 12 quarts daily of corn and oat chop, but if the work is hard, like continuous plowing, more grain will be needed. There has been considerable prejudice against Alfalfa hay for horses. It is laxative and horses eating it exerete more urine than those on hay from native grasses. There seems to be no evidence, however, that these effects are at all injurious, and various experiment stations, as well as private owners, report exeellent results from Alfalfa hay fed to work horses and eommend its use. M. B. D.

Catching a Hog.

ON page 1225, regarding balky horse, A. S. A. advises W. E. P. to throw him with side lines and "hog-tie" him. Will you explain this hog-tie method? Are all four feet tied together or how does he do it? 2. How would you go to work to snare a hog to eatch him? Is small rope or wire used? C. H. F.

1. By the term "hog-tie" is meant bringing the four feet together and tying them there. The horse is thrown; then the feet are lunched and tied by means of buckling straps. 2. A double hinged hurdle is used to pen the hog into a corner, then a noose of wire or small rope is put around the upper jaw. Medicine may be administered by means of bottle having a bit of strong rubber hose slipped onto the neck; this is thrust into the mouth and the medicine poured in. Another plan is to eut a hole in an old shoe, stick that in the mouth and allow the hog to ehew, then pour the medicine into the shoe. A. S. A.

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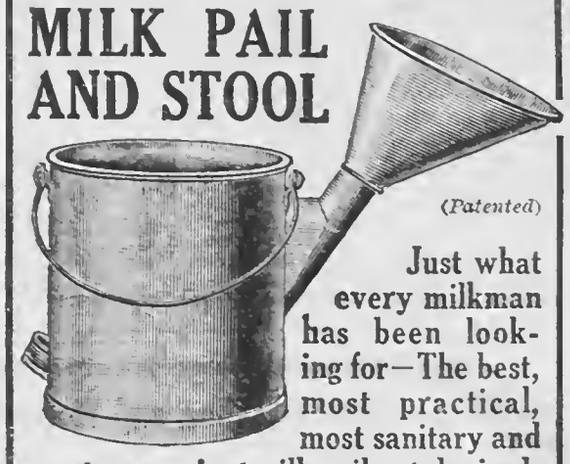

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Airedale Pups—7-weeks old by a son of Champion Soudan Swiveler. Fine heads, jet black saddles. Tan Markings. Frank Mead, Amenia, New York

COLLIE PUPPIES—Sired by Imp. "Ormskirk Sample"; dam, "Nishna Delight." These contain the blood of England's and America's BEST, and will make the very best foundation stock, pets or stock drivers. All are beauties and nicely marked. Sire and dam are grand workers. Price, $8 to $15. WM. W. KETCH, Cohocton, N. Y.

SHEEP

SHROPSHIRE RAMS, yearlings and two year olds. Also ewes and ewe lambs from imported sires. E. E. STEVENS & SON, Wilson, New York

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60 HIGH-GRADE HOLSTEIN YEARLINGS $30 and $35 each. Registered bulls, $35 to $100 each. Heifer and bull calves, ¾ Holstein and ⅞ Guernsey, $15 each. REAGAN BROS., Tully, New York

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75 High Grade Cows just fresh, large producers. 50 cows due to calve this month and next. 40 extra nice heifer calves ten days old, sired by pure blooded bulls, from high producing dams. Registered and grade bulls all ages.
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HOLSTEIN CATTLE

In a bulletin published by the Minnesota Experiment Station, Professor Thomas P. Cooper estimates that a cow that produces only 4,000 pounds of milk per year will cause her owner a loss of $116 during her lifetime.

He figures that a 5,000-pound cow is worth $25; a 6,000-pound cow is worth $67; an 8,000-pound cow is worth $150, and a 10,000-pound cow is worth $230.

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SHELDON FARM REGISTERED DUROCS Pigs of both sex. Bred Sows. Service Boars. Best of breeding. C. E. BARNES, Oxford, N. Y.

FOR PURE BRED TAMWORTH SWINE write or visit WESTVIEW STOCK FARM, R. F. D. No. 1, Winston-Salem, North Carolina

PEDIGREE CHESTER WHITES—Fall boars and sows; special prices. SCOTT, Stone Ridge, N. Y.

O. I. C. WHITES—Have a litter of 10, farrowed July 24th, out of A1 matured stock. Price, $10, at 8 to 10 weeks. Registered. WAYSIDE FARM, Chatham, N. J. Address, A. L. Page, (Owner), 62 Cortlandt St., N. Y. City

FOR SALE—Several very fine litters of White Chesterfield English Pigs, nothing finer 8-weeks old, healthy. Lots of one-half dozen, $30.00. Both sexes. Also fine Winter Potatoes. HORSE SHOE SPRING FARM, Congers, Rockland Co., N.Y.

TWO LARGE LITTERS OF LARGE Chester White PIGS 10 and 12 weeks old. Sired by Spruce Chief, Jr. Mostly sows. $10. Registered. Holstein Bull Calf, grandson of Pontiac Korndyke 103; A. R. O. daughters. Price, $50. Also a son of Pietje Pontiac Spofford, for $35. Papers with both. A few pair White Guineas, $2, and one pair White Chinese Geese, $5. Geo. E. Howell, Spruce Farm, Howells, N. Y.

O. I. C.'s—Chester Whites
Type, quality, breeding and health. Summer and Fall pigs from large sows and boars, prolific and healthy. Registered in Chester White or O. I. C. Record, free. Two months old pigs, $10 each; pairs, $18; trios, $25. Ready to ship.
VICTOR FARMS, Bellvale, Orange Co., N. Y.

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Now ready for Shipment: 100 Registered Chester White Pigs, including a full line 10 weeks old, that can be mated in pairs and trios not akin; also a fine lot 3 to 4, 4 to 5 and 5 to 6 months old. *Write for prices.*

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BERKSHIRES—8 weeks old, $5.00 WALTER C. WARD, Grenloch, N. J

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For Sale—Registered Berkshires all ages, at ORCHARD DALE FRUIT FARMS. Prices reasonable. Write or come and see. H. L. BROWN, Carlton, N. Y.

Purebred Berkshire Pigs Cheap—Thrifty, healthy, long-bodied, up-and-coming, choice pigs. Farrowed August 13th. Quality breeding. $12.00 each—for quick sale. OLD LANDING FARMS, Millsboro, Delaware

BERKSHIRES
We have the large, thrifty kind, with lots of type, quality and breeding. Write for prices and descriptions. TOMPKINS FARM, Lansdale, Pa

Immune Berkshires
both sexes, all ages, best of blood lines, good individuals. Our sale in August averaged higher than any sale held in the East this year. Breeding and quality did it. We have just purchased of Lucas and Gill, Huntland, Tenn., one of the best herds in the South. It includes their show herd that won first and Championship at Nashville, Tenn., this fall. Get your name in early for our February sale catalogue.
White Horse Farms, Paoli, Chester County, Pa.

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We are offering a fine lot of LARGE YORKSHIRE Boars, ready for service. These boars have large bone and are true to type. Also have a few young sows of splendid conformation.
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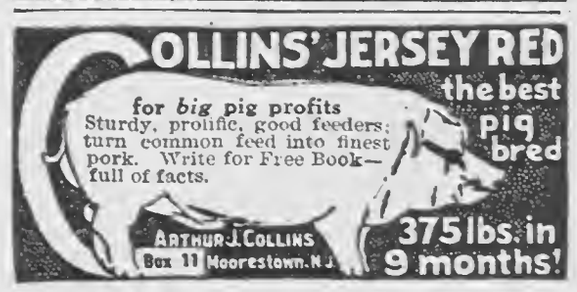

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THE OHIO "CORN BOYS."

Their Visit to New York.

PART I.

[We have told our readers about the great army of boys and girls from Ohio who started out to see the wonders of the Atlantic Coast. These young people had won prizes at growing corn and other crops, and Ohio saw that they had their reward.]

THE PARENTS' VIEW.—Bankers opened their purses, business men offered awards and subscriptions were secured in the neighborhood, enabling 350 boys and girls to make the trip without paying a penny from their own purses. Four hundred more boys raised good corn, sold it to father and from the proceeds paid for the trip. Their fathers paid them well for their effort, and these boys were as proud as the ones who had won prizes. "Our boys and girls will see the city, and they will want to return," the Buckeye farmers said regarding the first corn trip. Secretary Sandles and T. P. Riddle had much of this kind of opposition to face. Some farmers even told the boys they could not spare them from the farms for a week, because there were so many night and morning chores to do. Little of this talk came to the surface this year.

CITY VERSUS FARM.—Of nearly 800 boys and girls on the trip only two were attracted by the glamor and tinsel of the cities. "Would you like to live in Washington, New York or Philadelphia?" was the question asked boy after boy and girl after girl on the trip. The question was put squarely to the older people on the excursion. With the exception of two boys who did not like to milk, and who had automobile ambitions, all said: "No city for me, give me the good old country. I want to get back home, I'm tired. I want to see father and mother, I want to see baby brother," the boys said. I dropped in with the Ohio boys Friday in New York. The boys were bewildered by the mysterious grandeur of New York. As Prof. Harbourt pinned the Buckeye badge to my coat, it brought good luck the whole day long. I caught the spirit of the boys as we walked up Fifth Avenue.

SIGHTS OF THE CITY.—The Bronx was perhaps most interesting. "How old is that buffalo?" the boys shouted as they passed one particularly aged specimen. "He's older than the rocks in the Bronx," the others replied. A grizzly stood on his hind feet with paws on the iron grating and gazed at the Ohio corn growers. The boys and girls gave popcorn to the elephants and they made up faces at an ugly lion. "Forty minutes, I wish I had a week here," the boys said. An hour later the Ohio corn growers were grouped before the City Hall. Mayor Mitchel told them the great city was interested in their corn production, and Ex-Mayor Seth Low said 25,000 people from the Buckeye State lived in New York, and from Ohio comes the stuff that wins. Many boys and girls had tired necks and weary eyes as they looked to the top of the Woolworth Building. Many of these thought the silo at the side of the barn had invaded the sky close to the dead line. All were surprised at attention received on Broadway, where traffic was stopped in respect and to protect the corn boys of Ohio. The trip up the East River, under the old Brooklyn Bridge, the Manhattan and Harlem Bridge, down to the Bay, up the Hudson past Grant's tomb, and the great ocean steamers were sights not to be forgotten by the boys.

"How did the boys act at the tomb of Washington?" was asked Colonel Harbourt. "They took off their hats, and stood in deep reverence," he said. "The boys showed respect for all sacred places, they were quiet, cordial and attentive in the presence of the President, of the Secretary of State, and the old Liberty Bell of Philadelphia produced a profound impression. The Secretary of Agriculture came out and talked to the boys and told them we needed greater production; the population increased by many millions while production stood still.

TIRED SIGHTSEERS.—As night came in New York, the boys and girls were tired. "I do not want to live in the city, I would not come to the city," the boys agreed. "I have seen enough of it. I would rather take the trip than spend a week at the agricultural college; I have seen so much that I am tired. Now I know nothing better than the old home, and two or three good night's sleep," they said. I asked several under whose direction the boys were placed, what the results would be in keeping the boys on the farm. They said: "When boys go to the city, it is because they know nothing of it. They are thoroughly tired of it and the impression will remain throughout their lives.

"I want to get back and see my Shorthorn steers and my pigs," one boy said, as he marched with the crowd from the Hippodrome to the great Pennsylvania station. "I enjoyed the trip, but the farm and the agricultural college for me. I used to think that I wanted to go to the city, but no more for me." One girl said she would rather have gone to the agricultural college this year, than make the trip. This girl is Miss Susan Everett, champion apple girl of Ohio. Miss Everett has been hired to assume the management of an orchard a hundred miles from her home. This she will do the coming Summer after she completes her high school course. Miss Everett said: "I didn't know anything about fruit growing until Professor Harbourt came to our school. We had a two-acre orchard and the trees were in frightful shape. I secured bulletins, and read about fruit growing. Papa questioned my ideas a little bit, but now he comes to me and asks me everything. I would rather stay right on the farm and tend to the little orchard than to live in the city, and we want to know more about apples and fruit." W. J.

AILING ANIMALS.

Lameness.

I HAVE a horse 11 years old, whose right foreleg is somewhat weak. When standing in the barn he keeps it stretched out most of the time, but while working nothing seems to be the matter. He has plenty of exercise; his feed consists of corn and he has oats and bran occasionally for a change. Has salt before him all the time. Can you tell me what the matter is and a remedy?

New Jersey. C. S.

As the horse "points" the foot when at rest you may be sure that the lameness is located there. As the lameness disappears when the horse exercises the trouble may be navicular disease, or the horse may have corns. Without making an examination we cannot make sure what is wrong, but if corns are not found present we should clip the hair from the hoof-head and blister several times at intervals of two or three weeks. Use a mixture of one part of powdered cantharides and three parts of lard as a blister. Rub it in for 15 minutes by the watch and then tie the horse up short so he will not be able to bite or rub the blistered surface. Wash the blister off in three days and then apply a little lard daily. The blister will not injure the hand. If corns are causing the discomfort have them pared down and the walls lowered at the heels so that they will not come in contact with the shoes. Then put on bar shoes and if possible let the horse run on wet pasture. Blistering the hoof-head, as already suggested, helps in chronic cases, to stimulate growth of new sound hoofs with better spread heels.

Weak Cow.

I HAVE a cow that is five years old; she freshened nearly 11 weeks ago, and to all appearances did well until about five weeks ago when one night I found her lying down. She made two or three efforts to get up, but she acted as though she was stiff and did not want to move. A veterinary pronounced it rheumatism, and left medicine for her which I gave as he directed, but she kept getting worse; could hardly get up. A third veterinarian said she had partial paralysis; he prescribed for her, and I have been using his medicine for more than a week. The cow seems a trifle better. She has at times a discharge from her nose of a white slimy appearing stuff. She is growing poor and is gradually drying up. What is your opinion of the case?

Ohio. E. H.

The first thought in such a case should be tuberculosis and the cow should be tested with tuberculin as soon as the weather is moderately cool. The test cannot be properly applied in very hot weather. Meanwhile do not use the milk. We cannot confidently prescribe treatment without making an examination, but if the cow proves to be free of tuberculosis it would be well to give fluid extract of nux vomica in increasing doses. Iron and quinine also would be indicated as tonics. Your veterinarian will supervise such treatment, if she does not react to tuberculin.

Harness Sore.

I HAVE a horse about 18 to 20 years old, good old skate, but with one bad fault. He is used for light loads, not exceeding four miles per day, and even with padded harness develops sores, evidently due to the harness chafing. These sores are slow to heal, and lay old Tom up for weeks more on account of their ugly looks than anything else. What can you recommend in the way of treatment of this evidently tender-skinned animal? F. M.

New York.

The old horse will be likely to renew his youth and regain a sound, plump skin if you feed a quart of blackstrap molasses night and morning, diluted with three quarts of hot water and then stirred up with cornmeal, wheat bran and cut hay. Feed whole oats at noon and long hay at night. Have his teeth attended to by a veterinarian to start the treatment. Toughen the skin by bathing night and morning with strong white oak bark tea, or strong alum water, or a solution of half an ounce of tannic acid to the half gallon of water. Keep harness clean and dry. A. S. A.

A NEW JERSEY Senator tells of a farmhand who philosophizes. One morning the Senator came upon this man feeding the chickens. Alexander stopped him with: "Good mawnin', sah! I been thinkin' this mawnin', and I made up my mind, suh, as I's lookin' at these heah chickens, that they's the usefullest animal they is. You c'n eat 'em 'fo' they's bo'n, and aftah they's daid!"—Washington Star.

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THE NEW ENGLAND MILK SITUATION.

CIRCUMSTANCES seem to be against improvement in the New England milk situation. The Winter proce offered was not what it should have been, and leaves no profit above cost of feed and labor. The general complaint is: "My cows are not doing well. I am feeding heavy, but don't seem to get the milk. What is the reason?" Many good experienced milk producers are asking this question, but no one seems to be able to answer. It certainly is a fact that in this section at least I never saw so little milk coming from all the dairies as at present, and as far as I know this is a general complaint. Just about half of the normal supply is going to Boston at present time from this section. Local retail dealers are below their supply and buying or trying to buy enough extra milk to supply their trade. I had three apply to me in one day to let them have milk and they wanted it for quite a spell; in fact, could not tell how long they might need it, some thought all Winter. In fact the local dealers are suffering much more than the Boston buyers, as the latter can get all they need from their up-country territory, but the local man cannot do that. He must depend on what he can pick up in the neighborhood from small places that do not make a business of milk selling, but keep from one to three cows or so for their own use and make a little butter with their surplus when they have it. In the larger towns within reach of Boston those dealers can in some cases obtain a few cans from the big Boston dealers if they will take the same amount daily, but the Boston dealer seldom does this as an accommodation, but rather to get control of all the market he can, and finally force the retailer to buy his whole supply from him or sell the business to him, whichever way it works out best.

The quarantine ordered by the State Cattle Commissioner, which forbids any movement of cattle without permission on account of the prevalence of the foot and mouth disease, has helped very largely in bringing about the present conditions. Many producers at this season buy one or more fresh cows to keep up their normal supply or increase it as the highest price for wholesale milk of all the year now prevails; that is for the months of November and December about two cents per can above the average season price is paid. This will be balanced later, however, by taking two cents from February and March milk, when the supply usually is much larger than the present months. If the quarantine continues all Winter, and no fresh cows can be bought, it will result in hardship indeed to many producers, who will suffer a loss, which will be difficult to regain. The large producers usually plan to make the most milk in the Winter months and try to have their cows freshen in the early Fall or Winter. These plans do not always work out, however, and many cows have a habit of not coming fresh until mid-Winter, and thus throw our plans out of line. The only remedy in these cases is to go out and buy, but at this time even this remedy is shut off. Up to the present time there have been killed in this State by the Cattle Commission's orders 424 cows, two oxen, 104 swine and 1,267 poultry, also a few sheep and goats. All cattle killed are buried with quicklime to destroy the carcass and germs also. Apparently the spread is now checked, and all known infected sources cleaned up and disinfected. If this proves to be true perhaps the situation may improve in a few weeks, and things assume their normal run. I am very sorry to see so much opposition and indifference to organizing with and assisting the New England Milk Producers' Association to build up a good strong organization. Too many are selfish enough to say, "It does not or will not help me personally. Why should I join unless I shall get some benefit?" The truth is some benefit must accrue to all who assist or join. If this does not show at once it will later, in many little ways, which may not be much in each instance, but really amount to much when summed up. Especially may this be true in forming or improving our laws covering this milk producing question and other lines pertaining to the milk industry. When you help your neighbor to get a better price or get better treatment you help yourself, and help place him where he can later perhaps assist you, and no one can tell the time when he may need some help or a good word spoken for him. Even if one can see no direct benefit at present coming to him by assisting and joining this or a like organization, if he knows it will greatly assist his neighbors he should be willing to take this action for their benefit, but few seem to see it this way. Another point: many expect too much. If they pay a dollar or two to join and then do not get a rise in price right away or during the season, they jump to the conclusion that the officers are not doing all they can, or perhaps they think they are doing nothing at all, or are pocketing the dues paid in or something else just as foolish, when this is not true at all, but these officers are doing the best they can under the circumstances, and they are usually in the position to see things about as they are. Also they must work for the benefit of all, not for each individual. It is team work that counts every time. United we stand, divided we fall, is as true here as anywhere else! A. E. P.

CATTLE showing tendency to beefiness are expensive butter fat producers. There are cows in every grade herd and even among purebreds which evidence the tendency to lay fat on the back rather than deliver it in the pail. The Minnesota Station has computed the cost of production in relation to type. A beef type cow produced a pound of butterfat at the expense of 17½ cents, another cow with less tendency to lay on flesh produced fat at the cost of 15.1 cents, another spare angular cow, but lacking depth of body, produced butterfat at the expense of 14.8 cents, while a fourth cow, a representative of the dairy type, reduced the cost of production to 12.1 cents.

SOME DAY YOU WILL READ

The Breeder's Gazette

YOU MAY BE READY FOR IT NOW

FOR TEN CENTS YOU GAN GET THE BIG HOLIDAY EDITION FOR 1914. For $1 you can get that big double number and 51 regular issues besides. Only you must do it NOW. These prices apply only to points within the United States. Holiday number to Ganada 15c., the year's subscription, $2. The holiday cover is a reproduction in colors of a recent work by a Paris sculptor showing a "diligence"—French stage-coach of the olden days—ploughing along through the show. The five horses in action are of the true Percheron diligence type popular in France before the era of railways. How is this for a "menu"—the Holiday Number feast?

"NATURE'S 'GREAT WHITE WAY,'" by W. L. Nelson, is the opening feature this year. The snowy illustrations by which it is accompanied are of exceptional beauty, and the composition itself will appeal to all who subscribe to the proposition that "God made the country and man made the town."

"THE WORLD'S MEAT SUPPLY, PRESENT AND PROSPECTIVE," by Thomas E. Wilson, who succeeded the late Edward Morris as president of Morris & Co., the great Chicago packers, writes upon a subject of wide public interest at the present time.

"BEEF-MAKING IN THE OLD DOMINION," by Hon. Henry C. Stuart, Governor of Virginia, illustrated with photographs furnished by the writer, is an interesting recital based upon a long and successful experience on the part of the present chief executive of his native state with making beef on corn and bluegrass in the western highlands of the state of Virginia.

"A TARDY RECOGNITION OF THE WORK OF A GREAT PIONEER," by Alvin H. Sanders, is the first installment of a short series of articles in which will be told for the first time the interesting story of Col. Lewis Sanders of Grass Hills, Ky., the first importer of cattle from Europe into the Mississippi Valley, and the founder of live stock competitions this side the Alleghany Mountains. The celebrated importation of 1817 made by Lewis Sanders played a prominent part in laying the foundations of cattle feeding in Ohio, Kentucky, Indiana and Illinois; but until Mr. Sanders fortunately uncovered a store of old letters, books and documents, setting forth the life and character of this great pioneer, history has been silent as to his personality and work.

"THE EFFECT OF THE GREAT WAR UPON FRENCH AND BELGIAN DRAFT HORSE BREEDING," by John Ashton, Continental European correspondent of "The Gazette," and at present attached to the Red Cross service of the French army, gives the results of recent interviews with the leading breeders of the Percheron district in France and with the Belgian Minister of Agriculture. Mr. Ashton secured leave of absence from his post of duty in order to obtain this valuable information.

"LIVE STOCK PICTURES OF THE OLD TIMES," contributed by the noted English animal photographer, G. H. Parsons, carries reproductions of some of the most remarkable existing cattle prints handed down from the preceding generations. Mr. Parsons possesses mezzotint engravings of the original paintings, which were by famous artists, and these he has photographed for reproduction in the Holiday "Gazette." They are quaint, and possess genuine historical value.

"THE STORY OF WHITEHALL SULTAN," by Frank W. Harding, deals with the career of the most noted Shorthorn breeding bull of recent times in the United States. His blood is so widely disseminated that this article has a peculiar value to many people.

"THE MAKING OF A CATTLE BUYER," by Eli Pfaelzer of the Chicago Union Stock Yards, relates to the training essential to success in this calling in the great central markets. Mr. Pfaelzer has grown up in the business himself, and knows whereof he speaks. The article carries an interesting photograph of P. D. Armour III, who has recently become attached to the Armour forces at the Chicago yards, and commenced his education at the bottom of the ladder, learning the buying side of the business in daily contact with the traders in this market.

"A WOMAN'S WAY WITH SHEEP," by Lois McFadden, is interesting not only because it relates the practical experience of a woman in feeding for competition at the International Exposition but because of its interesting observations on the subject of what the women of the farms of this country could really do with sheep if they would only give the matter attention.

"THE MIAMI VALLEY'S GIFT TO THE UNITED STATES," by Ed Klever, is a story of the origin and development of the great American hog in the state of Ohio, written by one of the most successful and experienced swine breeders of the present time.

"THE AMERICAN SADDLE HORSE," by Gen. John B. Castleman of Louisville, is from the pen of the foremost American writer on this subject, and is accompanied by several attractive illustrations, including a full-page picture of the celebrated Astral Klug.

"THE BEST TEN EARS OF CORN IN THE WORLD," by J. D. Harper of Purdue University, tells the story of how the world's championship was won by the grower, an Indiana farmer. This illustrated article will appeal to all who are studying increased corn production.

"THE MANAGEMENT OF A BREEDING HERD," by John Letham, was originally prepared at Mr. Sanders' request for the new book, "The Story of the Herefords," and has already been incorporated in that volume. It is regarded as such a lucid and practical statement of the general principles to be observed that it has been deemed worthy of a place in the Holiday "Gazette."

"THE STORY OF PERFECTION FAIRFAX," by A. C. Huxley, deals mainly with the early history of the bull that is frequently spoken of as the greatest sire of the Hereford breed. It is not without its amusing side, and as Mr. Huxley developed and brought out the bull originally he is in a position to write entertainingly of an animal that has won for himself a permanent high place in Hereford history.

"A DAIRY CATTLE SYMPOSIUM." The secretaries of the leading national associations of breeders of dairy cattle have responded to our request for contributions dealing with the progress of the Holstein-Friesian, the Jersey, the Guernsey, the Ayrshire, the Brown Swiss and the Red Poll during the year now drawing to a close. These interesting statements will be beautifully illustrated.

"THE BULL'S NATURAL ANTIPATHY TO MAN," by Charles Reid, the great Scottish animal photographer, strikes a new vein. It is the narration of an actual experience in photographing a bull in the various attitudes assumed in the act of charging. Needless to say, the photographer and his assistant took some risk in the making of these unusual negatives.

"THE HORSE OF HEAVY DRAFT," by William Prichard, is one of the most instructive narrations of actual experience in the production of draft colts that have ever come to our knowledge. This article carries a message of permanent value to the American farmer.

"EQUIPMENT OF CORNBELT FARMS," by E. T. Robbins, formerly associate editor of "The Gazette," will give to all those who are not already familiar with the facts a good idea of what is really required in the conduct of an up-to-date farm in the Middle West. The question of buildings, implements and general equipment is discussed from the viewpoint of the needs of the practical farmer.

"JEANIE, THE BELLE OF THE RAW," by John Clay, is a story of life on the Scottish Border from the facile pen of a man especially equipped to deal with the types most frequently met with in the farming of that famous district. This is beautifully illustrated with photographs taken in Scotland especially for this article.

"PABLO," by Will C. Barnes, is a story of sheep-herding in the Far West that is in the author's best vein. Mr. Barnes is well known to all readers of "The Gazette" through his occasional communications, as well as through his popular book on "Western Grazing Grounds," published by us last year.

"THE SELECTION AND FITTING OF STEERS FOR SHOW," by Chas. Escher, Jr., presents the result of many years' experience on the part of the most successful breeders and feeders of Aberdeen-Angus prizewinning bullocks. Feeders everywhere will wish to know what he has to say upon this subject.

"WALKING THE CROPS TO MARKET," by J. Brown Hitt of Sangamon county, Illinois, deals with the burning question of maintaining soil fertility in the Middle West through the maintenance of good live stock. Mr. Hitt is the manager of the famous Grove Park estate, and is practically demonstrating the value of cattle in the general scheme of farming.

"THE ROMANCE OF POULTRY KEEPING," by Miller Purvis, author of the standard book on poultry and staff correspondent of "The Gazette." Mr. Purvis is one of the best and most practical writers on this subject in the United States.

THE ILLUSTRATIONS IN THIS NUMBER ALONE ARE WORTH THE YEAR'S SUBSCRIPTION PRICE.

THE GAZETTE has been called by Prof. W. A. HENRY—the Dean of American Agricultural Scientists—"THE FARMER'S GREATEST PAPER." It is vastly broader now than its name indicates. It was established 1881, is published every Thursday and the regular issues range usually from 48 to 68 pages. Address

THE BREEDER'S GAZETTE, Room 1122, 542 South Dearborn Street, CHICAGO

:: "The Favorite Hens" ::

They Have Started Business

THE "Favorite Hens" at the egg-laying contest took their time about starting. That's one thing about a hen which has to be considered; no one can make a hen lay until she gets ready to do so, and there is no use finding fault with her because she doesn't start right in. On the whole, these "Favorite Hens" have made an excellent start. The first one to lay was the big Buff Orpington "Louisine" entered by Mrs. Emma H. Wood, of New York State. "Louisine" laid one of the first eggs which was found at the contest. The rest of the birds in her pen were apparently so much surprised, that they stood back and gave her every opportunity to take the lead. She had laid 14 eggs during the month of November, thus standing at the head of the 30 "Favorite Hens" for that month. She has started in already for December, laying five the first week and bids fair to prove one of the best hens in the entire contest. Her sisters, however, while a little slow at starting, will come forward in time, and who knows but that the final race may resemble that between the hare and the turtle, but it is "hats off" to "Louisine" thus far. The trouble with some of those other hens is the fact that they are still at the milliners, and haven't fully completed their Winter dresses yet. When they finally parade in full costume, we shall hear from them. We endeavored to obtain a good picture of Mrs. Woods to print this month, but unfortunately the one she sent would not make a good engraving. We hope to give a picture of Mrs. Wood later, and there will also be a picture of "Louisine" should she continue her good work.

Record.	November.				Total.
LEGHORNS.					
Mrs. N. D. Rand, New York, Lucy	....	....	....	....	....
Mrs. Lewis J. Happich, New York, Lady Hopeful	....	....	....	....	....
Mrs. N. D. Miller, Ohio, Ann	....	....	....	....	....
Mrs. A. J. Skellie, New York, Ity	....	3	5	3	11
Mrs. C. L. Todd, Virginia, Patsy	....	5	3	4	12
Mrs. Walter Fletcher, New York, Peggy	....	....	....	....	....
Miss Tillie B. Cloud, Pennsylvania, Peggy	....	....	....	....	....
Mrs. Josephine Hollenbach, Pennsylvania, Viola	2	3	4	2	11
Mrs. W. Phelps, Pennsylvania, Beauty	4	0	5	3	12
Mrs. L. E. Hilborn, New York, Madam Tootsey	3	0	3	1	7
MIXED BREEDS.					
Mrs. F. M. Earl, Connecticut, White Wyandotte, Gladness	....	....	....	....	....
Mrs. A. N. Conell, New York, White Wyandotte, Dolly	....	....	....	....	....
Mrs. R. W. Stevens, New York, White Wyandotte, Tilly	....	....	....	....	....
Mrs. W. S. Walters, Michigan, Barred Rock, Bridgeman Girl	....	....	....	....	....
Mrs. G. L. Rothgeb, Virginia, Barred Rock, Roxie	....	....	....	....	....
Misses Osler & Wilcox, New York, Barred Rock, Marguerite	....	....	....	....	....
Mrs. Robert H. Wood, Elmwood, Little Falls, N. Y., White Rock, Faith	....	....	...	....	....
Mrs. Joseph di Fabrizio, New Jersey, Black Minorca, Betina	....	....	....	....	....
Mrs. Emma H. Wood, New York, Buff Orpington, Louisine	1	4	3	5	13
Mrs. Edwin Walker, Massachusetts, Buff Orpington, Lady Ashby	....	....	....	....	....
RHODE ISLAND REDS.					
Mrs. Carrie M. Bliss, Virginia, Pocahontas	....	....	....	....	....
Mrs. E. S. Marlatt, New Jersey, Polly	....	....	4	5	9
Mrs. T. Schwenk, Connecticut, Roxy-Lou	....	....	....	....	....
Miss Ethel A. Pierce, New Hampshire, Lady Pierce	....	....	....	....	....
Mrs Samuel O. Travais, New York, Rose	....	....	....	....	....
Mrs. W. R. Merrick, Massachusetts, Betty M	....	....	....	....	....
Miss Edna M. Porter, New York, Betty	....	....	....	....	....
Mrs. Andrew J. Wilson, Connecticut, Betty	....	....	....	....	....
Mrs. E. P. Andrews, New York, Golden Lass	....	....	....	....	....
Mrs. Cecil Farnham, Maine	....	....	....	....	....

"I have selected the nicest pullet from a flock of 100, hatched the first week in April, also she was the nicest from a pen taken from the same flock which won first at one of our county fairs. I cannot tell, of course, much of her ancestors as I take the largest and those that mature best as breeders. The cockerel which headed flock from which the eggs

Mrs. W. E. Phelps.
Owner of "Beauty."

were used for hatching came from eggs bought from C. H. Wyckoff and Son. A 240-egg machine, first and second testing 23 eggs out, hatch of 204 chicks from which I did not lose any little ones, only by a board dropping on two of them. I shall try to keep her from laying until you are ready for her. I do not use trap-nests and it is something of a puzzle to tell the best layers."

The Leghorn "Patsy" from Mrs. C. L. Todd, of Virginia, also laid a dozen eggs. She did not begin until the second week, but now she is going at a good pace. On Dec. 8 she led the crowd with 19 eggs. Then came the Leghorn pullet "Viola" from Mrs. Joseph Hollenbach, of Pennsylvania. This pullet laid 11 eggs, starting in the first week, and thus far giving a good account of herself—14 eggs to Dec. 8. A picture of Mrs. Hollenbach is shown on this page. She tells us that the cockerel she is holding in her hands is a full brother to "Viola." At the time when we were making the

Mrs. Josephine Hollenbach.
Owner of "Viola."

first arrangement for this contest, we wrote Mrs. Hollenbach about her hens and their breeding, and at that time she sent us the following brief statement about her birds, and how she would select the "Favorite Hen." Thus it appears that "Viola" is her busiest bird. Let us all hope she will keep this busy streak right up.

"I have 16 extra nice pullets hatched out of eggs I got from my winning pen. With this pen I had an old rooster, that is I bred father and daughter together. These 16 pullets were hatched on April 8. They have nice red combs and look as if they would lay any day. Out of these 16 pullets I will pick the busiest one that has a long back. I think a hen must have a long back to lay many eggs and must be busy to gather all the feed required for egg-making. I think tending and feeding has as much to do with egg-getting as anything."

Another excellent Leghorn is "Ity" sent by Mrs. A. J. Skellie of New York. "Ity" also laid 11 eggs, and is good for a great many more before the contest closes. On Dec. 8 her record was 15.

The R. I. Reds made rather a poor start. The first one to get going was "Polly," entered by Mrs. E. S. Marlatt of New Jersey. "Polly" took her time and did nothing at all during the first two weeks. Then she came to the front with nine eggs during the rest of November, beating every other one of the "Favorite Hens" in these two weeks. We rather expect some large returns from "Polly" before she gets through, as Dec. 8 found her with 16 eggs. The first week in December found "Betty M.," from Mrs. W. R. Merrick, with three eggs to her credit, also "Lady Hopeful," a Leghorn from Mrs. L. D. Happich, New York, was true to her name with two eggs. By next month many more of these "Favorite Hens" will be at work, and then we shall have a long list to report. As it is, the Reds and the mixed breeds have been rather slow to start, but we expect them to catch up and show what they are made of during the next few months. The Leghorns have made a remarkably good record. At the end of the first week in December these 10 Leghorns had laid 75 eggs. Out of 40 pens of Leghorns these "Favorite Hens" ranked No. 15. Out of the entire 100 pens in the contest they ranked No. 26. When we consider that these birds were taken from 10 different farms from four different States, and under differing conditions, we consider this a remarkably good record. We also believe that the Reds will show themselves well up to the front before the contest is much older.

The pen of mixed breeds may not do so well, although there are several birds

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The Sure Hatch is a high class machine in every respect. Will keep a hatching temperature in a room cold enough to freeze water. Requires little attention. We send complete instructions for operating and furnish a free copy of our Uncle Sam Poultry Book, which tells you how to run the poultry business for profits. **Let us send you a Sure Hatch, freight paid under our 10-year guarantee, on 60 days trial. Your money back if not as represented.**

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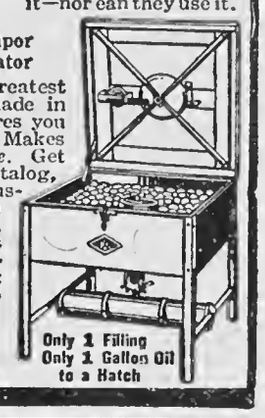

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130 Egg Incubator and Brooder Both for $10

Both Machines Made of California Redwood

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Famous for hatching big, strong chicks that live. Built for lasting service, reliability and economy of operation. Poultry raisers find them practical to operate and profitable to own.

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You can double your egg yield by feeding fresh-cut, raw bone. It contains over four times as much egg-making material as grain and takes the place of bugs and worms in fowls' diet. That's why it gives more eggs—greater fertility, stronger chicks, larger fowls.

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THE BROODER OF PROVEN MERIT

When you use this brooder you do not *hope* for good results—you are *sure* that it will raise your chicks. It is not an experiment—it has "made good". Thousands of poultrymen in all parts of the world testify to this. They know because they have tried it! The

NEWTOWN GIANT COLONY BROODER
Coal-Burning, Self-Feeding, Self-Regulating

is the machine for you if you value a record of actual performance above mere claims of efficiency; if you desire to raise the most and best chicks at lowest cost. *Our Brooder Booklet is mighty interesting reading for chick-growers. Send your address today for a free copy.*

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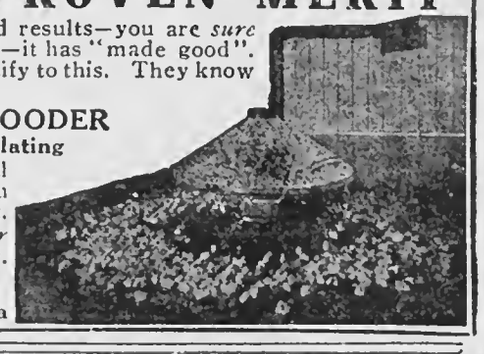

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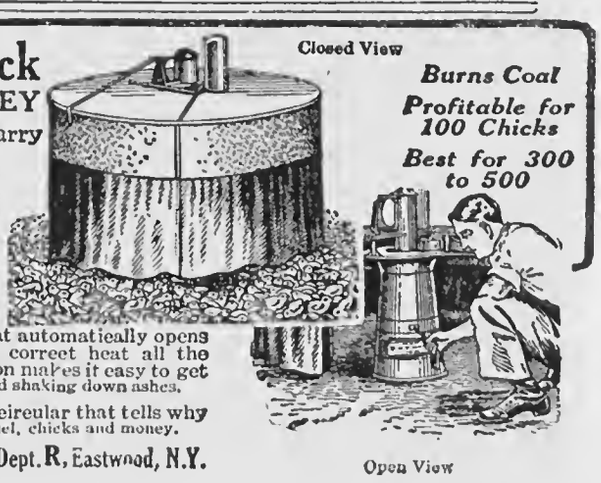


in that pen that will put a great surprise into those trap-nests. This "Favorite Hen" demonstration is attracting as much attention as anything else connected with the contest, and we are planning a few features in the way of prizes to be announced later, which we think will add to the excitement.

THE EGG-LAYING CONTEST.

THE output of eggs continues to increase, this. the fifth week, showing a gain over the previous week of 291 eggs. Every pen of White Leghorns produced eggs this week. Edward Cam's White Wyandottes, which took second place last week, are first this week, with a score of 43. In the total of eggs laid to date Cam's pen are second; Windsweep Farm's White Leghorns still lead with a total of 207 against Cam's Wyandottes, 201. P. G. Platt's White Leghorns are second in the week's score with an output of 40. F. M. Peasley's White Leghorns are third, their score being 37; 13 pens did not lay an egg this week, and nine pens have not produced an egg since this contest began. In the fifth week last year 841 eggs were laid, this year in the same week 1,462 were laid, a gain for the week of 621 eggs. But there are 180 more birds in the contest this year. The week's report follows:

	Week	Total
Barred Rocks..		
Merritt M. Clark, Connecticut	30	121
Frank L. Tuttle, Massachusetts	18	59
Francis L. Lincoln, Connecticut	11	49
Jules J. Francais, New York	20	47
Storrs Agr. Station, Exp. pen, Conn..	19	31
Storrs Agr. Station, Exp. pen, Conn..	15	23
O. A. Foster, California	4	4
White Rocks.		
Albert T. Lenzen, Massachusetts	3	13
Branford Farms, Massachusetts	..	1
Branford Farms, Massachusetts	..	2
Branford Farms, Massachusetts	..	..
Branford Farms, Massachusetts	10	24
Buff Rocks.		
A. A. Hall, Connecticut	9	52
White Wyandottes.		
Tom Barron, England	10	38
Ed. Cam, England	43	201
Merrythought Farm, Connecticut	25	94
Neale Bros., Rhode Island	23	98
Mrs. J. D. Beck, Connecticut	18	45
Storrs Agr. Station, Exp. pen, Conn..	..	..
Storrs Agr. Station, Exp. pen, Conn..	6	17
Mapledale Farm, Connecticut	3	16
J. F. Byron, Connecticut	23	89
Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts	21	96
Silver Wyandottes.		
Silver Wyandotte Star, New York	..	..
Columbian Wyandottes.		
Merrythought Farm, Connecticut	16	60
Rhode Island Reds.		
Dr. J. C. Dingman, New York	4	5
Hillview Poultry Farm, Vermont	35	158
Homer P. Deming, Connecticut	5	8
Chas. O. Polhemus, New York	..	2
H. M. Bailey, Connecticut	1	1
John Backus, Vermont	10	29
W. H. Bumstead, Connecticut	15	50
Pinecrest Orchards, Massachusetts	20	63
Harry B. Cook, Connecticut	15	58
Colonial Farm, New Hampshire	29	116
A. B. Brundage, Connecticut	..	..
Storrs Agr. Station, Exp. pen, Conn..	22	61
Storrs Agr. Station, Exp. pen, Coun..	6	26
Rural New-Yorker, New York City	6	17
S. G. McLean, Connecticut	14	36
Springdale Farm, Connecticut	6	14
D. E. Warner, Rhode Island	5	29
H. W. Sanborn, Massachusetts	27	75
Albert R. Ford, Connecticut	5	18
Light Brahmas.		
Storrs Agr. Station, Exp. pen, Conn..	2	34
Storrs Agr. Station, Exp. pen, Conn..	2	7
American Dominiques.		
H. B. Hiller, Connecticut	34	100
White Leghorns.		
A. B. Hall, Connecticut	17	50
George Bowles, Connecticut	22	89
Ellis W. Bentley, New York	33	127
N. W. Hendryx, Connecticut	31	69
Braeside Poultry Farm, Penn	12	49
Francis F. Lincoln, Connecticut	23	118
Cecil Guernsey, New York	17	36
Merritt M. Clark, Connecticut	34	157
Chas. N. St. John, New York	30	61
Jay H. Ernisse, New York	12	63
Storrs Agr. Station, Exp. pen, Conn..	26	124
Storrs Agr. Station, Exp. pen, Conn..	31	167
Mrs. Rolin S. Woodruff, Connecticut..	20	69
Windsweep Farm, Connecticut	35	207
James H. Lord, Massachusetts	6	36
P. G. Platt, Pennsylvania	40	129
Dictograph Farm, New York	5	5
F. M. Peasley, Connecticut	37	103
Chas. Heigl, Ohio	8	18
Tom Barron, England	25	45
Edward Cam, England	12	64
Geo. M. McMillan, Missouri	12	27
Wm. H. Lyon, New York	32	92
Happich & Danks, New York	18	47
A. P. Robinson, New York	27	95
Manor Poultry Farm, New York	32	122
Branford Farms, Connecticut	3	23
Branford Farms, Connecticut	12	70
Branford Farms, Connecticut	16	71
Branford Farms, Connecticut	9	29
Anna Dean Farm, Ohio	6	42
Rural New-Yorker, New York City..	20	75
A. S. Sondregger, Connecticut	21	118
S. J. Rogers, New York	13	54
Stoneleigh Poultry Farm, Penn	15	48
Mrs. W. B. Whitlock, Connecticut...	18	93
Toth Bros., Connecticut	18	46
James N. Thomas, New York	32	71
Sunny Acres Farm, Connecticut	17	38
Rosecomb Brown Leghorns.		
The Gale Place, Connecticut	1	2
Buff Leghorns.		
Lakeside Poultry Farm, Michigan	3	7
O. L. Magrey, Connecticut	13	42
Black Leghorns.		
J. Collinson, England	30	79
Silver Campines.		
Pucowa Poultry Yards, Conn	7	12
Lewis E. Prickett, Connecticut	..	..
Light Sussex.		
Dr. E. K. Conrad, New Jersey	..	3
Salmon Favorolles.		
Donghoregan Farm, Maryland	..	..
White Orpingtons.		
Henry S. Pennock, Florida	..	..
Obed S. Knight, Rhode Island	10	100
B. P. Nase, Connecticut	..	..
Buttercups.		
Chanticleer Poultry Yards, Penn	..	..
Favorito Hens.		
Rural New-Yorker, New York City...	5	18

GEO. A. COSGROVE.

Egg-bound Hens.

YESTERDAY I killed a young pullet and found in the egg-sack what appeared to be a composition of the color of an egg-yolk in a solid mass, which expanded the egg-sack to a very great degree and prevented the hen from passing the egg. Being afraid to use the meat, I killed and found the same condition in the second hen. J. H. W.
Red Bank, N. J.

It seems to me that for some unknown reason the membrane surrounding the ripened yolk is thinner than usual in these birds, and is either torn before it is shed into the oviduct, or accidentally broken afterward. The heat of the body would then cook the yolks into the solid mass found by G. W. I have had cases where the oviduct had split and the yolks were shed into the abdomen, and cooked there into a solid mass as large as a man's two fists, but I have never known this to happen while the egg was in the oviduct—egg passage. I referred the question to the authorities at Storrs College, and they diagnose it as "egg-bound," and suggest oiling the vent with a feather, and giving the bird a powder composed of one grain calomel and 1½ grain tartar emetic, repeating the dose in two days. Also give lime water to drink. This remedy was published in an English poultry journal some years ago. They also advise manipulating the parts with the finger, using plenty of oil.

Marketing Duck Eggs.

Is there a good market for duck eggs, and if so, where is it best to ship them from Southern New Hampshire, price range, etc.? People here are a little undecided as to whether to enter into the hen or duck business. It has occurred to me that perhaps (everything being equal) if duck eggs can be as readily marketed as hen's eggs, the duck raising end of the business would gradually get ahead of the hen business in all-around profits. Is this the correct view? I. C. R.
New Hampshire.

I would advise hens on general principles. Runner ducks are great layers and individual records have been made that exceed any made by hens, but 300-egg ducks are as scarce as 200-egg hens. Moreover a duck will eat more than a hen. It is my opinion that the profit on any extra eggs would be taken up by extra feed. Ducks' eggs are larger than hens' eggs, are worth more and usually bring a little higher price, but the market is limited. There is a prejudice on the part of most American women against ducks' eggs. You could easily learn of the Boston market for ducks' eggs by inquiry at the markets in that city, and then judge for yourself whether or not it would pay to try the production of ducks' eggs on a commercial scale.
W. H. H.

Pumpkins for Hens.

ARE boiled pumpkins mixed with middlings and cornmeal good for laying hens? A. F. C.
Maine.

Yes, if not fed in excess. This would be a fattening, rather than a laying, ration, however, and should be supplemented by more highly nitrogenous foods, such as oats, wheat, gluten feed, wheat bran and meat products or skim-milk if heavy laying is to be encouraged. In a cold climate and particularly during the Winter a moderate amount of the pumpkin mash might well be used. M. B. D.

Nest Eggs.

WILL you give your experience in regard to the use of nest eggs by farmers and poultrymen? S. G. M.
New York.

Nest eggs have largely gone out of fashion in poultry circles and, except for the guidance of pullets just beginning to lay, I believe that they are seldom used nowadays. It used to be thought that hens would desert nests which were entirely robbed and lay elsewhere. This is to a certain extent true when hens have their liberty to lay about the barns, but in poultry quarters under confinement nest eggs do not seem to be at all needed, and I know of no poultrymen who make a practice of using them.
M. B. D.

CHICK and EGG SHIPPING BOXES Ship chicks or eggs safely in "H & D" Boxes. Chicks cannot smother or sweat. Eggs will not break. Waterproof, sanitary, compact—handy to use. Strong but light. Made of double faced, corrugated jute board. Cut down your express bills—guarantee safe arrival of contents.

"H & D" PARCEL POST SHIPPING BOXES

We make up boxes and cartons for any purpose. Write us what your products weigh, and size package you wish, for special prices. Send for free booklet, **"How to Pack It for Parcel Post."** Also write for free booklet of "H & D" Fireless Brooder.

THE HINDE & DAUCH PAPER CO., Dept. E, Sandusky, Ohio.

Eggs and Baby Chicks

WE ARE NOW BOOKING ORDERS FOR 1915 FOR HATCHING EGGS AND BABY CHICKS AT REASONABLE PRICES

If you are in the poultry business for profit, you have got to have egg producers. You can make money with the right stock, no question about it. We now have on our farm for next season some of the best layers in the country, including

S. C. White Leghorns, Producers of Large White Eggs
Barred Rocks, Excellent Layers
White Wyandottes, Wonderful Layers
S. C. R. I. Reds, Extra Good Layers
Silver Campines Bred direct from English Stock (The Best)

We still have some Barred Rock and Silver Campine cockerels for sale.

MERCER POULTRY FARM,
R. F. D. No. 1 Trenton, N. J., U. S. A.

Belgian Hares—100 just right for next year's breeding. Cheap. Send 5 cents for calendar and booklet. Price list free. PLEASANT VALLEY RABBIT FARM, Georgetown, N. Y.

Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
H. K. BRUNNER, 45 Harrison Street, N. Y.

MacKellar's Charcoal
For Poultry is best. Coarse or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
R. MacKELLAR'S SONS CO., Peekskill, N.Y.

THE MOST ECONOMICAL OF ALL POULTRY FEEDS ON THE MARKET
They are made right; because they are bought right. They are thoroughly dependable, always the same, and always fresh. There is no waste, no bad, musty or sour grain or corn hulls. Everything goes to make eggs, muscle and feathers. They are much more economical than any feeds that you can mix as we have the equipment to thoroughly mix and clean all grain. We have a master in the art of poultry breeding and raising; also thoroughly posted on feeds and grains. There is nothing lacking in the make-up of our feeds. We have customers all over, from the Island of Trinidad, Panama Canal Zone, Bermuda, Canada, and all through the Eastern and Southern States. By sending your orders to us we are benefited and so are you. Send for circular and price list. WM. ORR & SONS, Box 8, Orr's Mills, N.Y.

F. & W. INDIAN RUNNER and MAMMOTH PEKIN DUCKS. Reasonable. Geo. Williamson, Flanders, N. J.

BARGAINS—African, Embden, Toulouse Geese Pekin, Runner, White Muscovy Ducks HUSE FARM Manchester, N. Y.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES. Stock and eggs. 60 page catalogue free. H. A. Souder, Box 29, Sellersville, Pa.

SUPERIOR STRAINS POULTRY, FANCY PIGEONS, SQUABBERS Make money raising squabs. We teach you. POULTRY PIGEON FARM, - Marietta, Pa.

BUTTERCUP COCKERELS—April hatched. Handsome birds. $2.00 each. W. Payne, Ramsey, N. J.

FOR SALE—BARRED PLYMOUTH ROCK COCKERELS, $2; Pullets, $2.50. Very nice stock. Address, CLINTON R. HOUSEL, R. F. D. No. 2, Ringoes, N. J.

For Sale—B. R. Cockerels—Before breeding season, a $5 cockerel for $3, until Jan. 15th only. Money back if not satisfied. A few pullets. All from prize-winning stock bred by us. DR. HAYMAN, - - Doylestown, Pa.

R. C. BLACK MINORCAS—Utility birds at reasonable prices. Satisfaction guaranteed. G A. WILLIAMS, Box 324, Warwick, N. Y.

FOR SALE—HIGH GRADE **Bourbon Red TURKEYS**—for Breeding. Toms and Hens. Also Rhode Island Cockerels and Pullets. Write for particulars. F. M. KERN, Springfield, Indiana

Bourbon Red Turkeys—Toms $4.00. Hens all sold. MILTON O. STICKLEY, STRASBURG, VA.

BOURBON RED TURKEYS for sale. Pure-bred Hens, $4; Toms, $5 each. CASSIE D. TAYLOR, West Alexander, Pa.

FOR SALE—THOROUGHBRED BRONZE TURKEYS from 45-lb. Tom and 25-lb. hens. One 2-year-old tom, $15. MATIE HOWE, R. D. No. 1, Oelanson, N. Y.

FOR SALE—Purebred Bronze Toms at $4.50 and $5.00 each. Also May hatched White Orpington and S. C. Black Minorcas cockerels at $1.50 each. A bargain. Alfred Mead, Vega, N.Y

TURKEYS—500 Bronze, Black, White, Narragansett, Buff, Slate and Bourbon, $4 to $6 until December 15. CLARK BROS., Freeport, Ohio

Mammoth Bronze Turkeys—extra large, with golden bronze finish H. R. BLACKBURN, REINERSVILLE, OHIO

GIANT Prize-Winning BRONZE TURKEYS—bred from 20 to 25-pound hens. Toms, $7.50, $10 $12.50 and $15. Hens, $5 up. SUNNYSIDE FARM, Jonesville, Va.

GiantBronze Toms $7. R. C. Red Pullets, $1 50. H. J. VAN OYKE, Gettysburg, Pa.

Giant Bronze Turkeys—STANDARD QUALITY. C. D KANE, Brasie Corners, N.Y.

White Holland Turkeys—Mrs. ROBERT DAVIS Cumberland, Virginia

Tom Barron **S.C. White Leghorn Cockerels**
and White Wyandotte cockerels; pullets, out of direct importation, from the World's greatest layers. In splendid vigor. BROOKFIELD POULTRY FARM, R.F.D. 3, Versailles, Ohio

TOM BARRON'S **S. C. WHITE LEGHORNS**
IMPORTED DIRECT from his best-laying stock. Also Wyckoff strain. All stock healthy and vigorous and bred to lay. Any number strong chicks or hatching eggs. Fully guaranteed. Choice Cocks and Cockerels. Prices reasonable. Circulars free. R. T. EWING, - - ATLANTIC, PA.

TOM BARRON'S
WINNING WYANDOTTE PENS
PA. CONTEST: WINNERS in eggs and value; aver. 236. "Baroness V" laid 282 eggs; others, 274, 252.
CONN. CONTEST: WINNERS in value; aver. 208½; 2nd Prize in eggs.
MISSOURI CONTEST: 2nd PRIZE, likely; aver. 210. Barron Leghorns, 284; Buff Rocks, 242; Vibert Reds, 257. Prize Rouens. Big Toulouse Geese.
MORRIS-FARM, R. 4, BRIDGEPORT, CONN.

500 Choice Pullets and Cockerels
Tiffany's Superior Silver Wyandottes, Pekin and Rouen Ducks, sired by winners at America's greatest shows. Free range grown. F. A. Tiffany, Phoenixville, Pa.

R. I. REDS, WHITE WYANDOTTES, Light and Dark *Brahmas*, Barred *Rocks*, S. C. White and Brown *Leghorns*. Show and utility quality. Bargain list Breeders free. Hatching Eggs and Chix. RIVERDALE POULTRY FARM, Riverdale, N. J.

COLONIAL REDS
We offer fine pedigreed breeding cockerels, yearling hens of proven value and pullets from our best lines. Booking orders now for hatching eggs and chicks. A pen of our Reds hold highest record for egg production ever made in official laying contest. Average, each bird, 194 eggs. We have satisfied customers in 46 states of the Union. Honorable treatment guaranteed.
COLONIAL FARM, - Box O, Temple, N. H.

Dingman's BEAUTY and UTILITY **S. C. Reds**
Trapnested Reds, pedigree bred for vigor and egg production. Husky March cockerels, pullets, yearling cocks and hens, mated pens and trios at reasonable prices. Several cockerels from 200 egg hens. Shipped on approval. Dr. J. C. DINGMAN, Spring Valley, N. Y

HONE'S CRESCENT STRAIN OF RHODE ISLAND REDS AND MAMMOTH BRONZE TURKEYS
They produce blue ribbon winners as well as superior layers. Why not combine the fancy with the utility and get the highest quality that can be produced. High class exhibition and breeding birds for sale, on approval. D. R. HONE, Crescent Hill Farm, SHARON SPRINGS, NEW YORK

AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.

CHICKS
10 CENTS
S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C. M. Lauver, Box 73, Richfield, Pa.

POULTRYMEN, ATTENTION
75,000 S. C. W. LEGHORN BABY CHICKS
FREE FROM WHITE DIARRHEA
All breeders tested by Storrs' Station. Free circular. White Leghorn and Pittsfield Barred Rock cockerels. A. B. HALL, Wallingford, Conn.

Winter-Laying Leghorns—S.C. Buffs, pedigreed from 219-267 records. Out-laid all Whites for winter months at Missouri Contest. Won at Chicago, Indianapolis, etc. Get blood of "Egg-Bred Winners." Cockerels, $2.50 and $5. Dr. L. Heasley, Box R. N., Oorr, Michigan

S. C. W. Leghorn Cockerels—MADE IN AMERICA. Our strain of Leghorns have been bred 20 years for large production of fancy white eggs. Write for prices. FLOYD Q. WHITE, successor to White & Rice, Yorktown, N. Y.

For Sale—1,000 Pullets and Cockerels
from our selected strain of S. C. White Leghorn winter layers. April and May hatched. Satisfaction guaranteed. Ramapo Poultry & Fruit Farm, Spring Valley, N. Y.

FOR SALE—**Single Comb White Leghorn Cockerels** and YEARLING HENS, $1 each.
GEO. L. FERRIS & SON, - Atwaters, N. Y.

FOR SALE—C. W. Sherwood's heavy laying strain S. C. W. L. 500 pullets fully matured. 1,000 breeding hens. Hatching eggs in season. C. W. SHERWOOD, Saybrook Point, Conn.

BRED TO LAY—S. C. WHITE LEGHORNS, American, Barron, and half-Barron cockerels for sale. Now is the time to buy. P. G. PLATT, Wallingford, Pa.

Pullets, Yearling Hens, Cocks & Cockerels
in lots to suit purchasers at attractive prices.
MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.

Cockerels—S.C.W. Leghorns
large and heavy-laying strain $1 and up.
J. M. CASE, - - Gilboa, N. Y.

Single Comb White Leghorns—Tom Barron's pedigreed strain exclusively. Pullets and cockerels at reasonable prices. M. J. QUACKENBUSH, Nutley, N. J.

FINE WHITE LEGHORN COCKERELS
D.W. Young's prize strain, $3. M. Rauherz, Monroe, N.Y.

200,000 S. C. W. LEGHORN BABY CHICKS
for 1915. Seven Hall Mammoth Incubators; 12,000 chicks per week after February 15th; only No. 1, high-class chicks shipped; New England's most profitable breed, the famous "Everlay Strain." Reasonable prices; prompt service. 60-page catalog on request.
THE EVERLAY FARM, · Box 240-E, Methuen, Mass.

FOR SALE—**S. C. Black Minorca Cockerels**—Northrup and Yama Farms strain. Good birds. G. C. MILLER, Oxford, N. J.

GREAT BARGAINS in hatching eggs and early pullets, for early orders. Reserve them now. Will ship when wanted. Eggs 90% fertile from hens that cost $5, each; 15 for $1. postpaid, $4 per 100, 3 months old pullets, 50 cents each. 4 months old, 60 cents each. Delivered in May and June. These are from prize stock. White Leghorn, White Wyandotte, White and Barred Rock and R. I. Red. Quality talks.
TALKING POULTRY YARDS,
HAINESPORT, NEW JERSEY

Barron's White Leghorns
Six Pullets and Cockerel, May hatch, guaranteed from pen imported direct from Tom Barron, $18. Trio, $9. Also a few pens (8) yearling hens, (Ranecocas strain) and pure Barron Cockerel, $10.
S. W. JONES, - - Hillsdale, N. Y.

Publisher's Desk

THE test of our work for the preceding year always comes about the holiday season. In the average weekly publication the subscription season begins just before Christmas, and a large percentage of the year's renewals come in the latter half of December and the first half of January. The test of the publisher's service comes at this time. Every renewal is a note of confidence. Occasionally there is a discontinuance of a subscription for other causes; but if subscribers refuse to renew in large numbers, the publisher and editor must seek the cause in their own service. Even delayed renewals indicate a lack of enthusiasm for the work being done. A flood of prompt renewals, on the other hand, is the strongest expression of approval of the work of the past and of confidence in the service of the future.

THE R. N.-Y. now approaches its readers once more with a request for judgment. In this pronouncement we must appeal to your charity as well as to your business judgment. Like all human agencies, we have our faults. We are a long way from making a perfect paper. We are seldom, if ever, entirely satisfied with a single issue. We make no claim to perfection in results. It is true that we often feel ourselves that we ought to produce a better and more helpful paper. Our one claim to consideration is that we do the best we know how, and we spare neither time nor work, nor expense in the doing.

Twenty-five years ago farm papers were not run on any high ideal. Many of them—indeed most of them— had a large tendency to exploit the farmer rather than to serve him. Swindling advertising was common: and deceptive advertising disguised in text type was a feature of practically all of them. The farmer had a strong suspicion of the situation. It was not infrequent that he finished the reading of an article with the inquiry, "How much did it cost?"

THE R. N.-Y. had always stood high as an agricultural publication, but it was not entirely free from the general taint of the time. In assuming its management, the two men, publisher and editor, who were from that time on to direct its career, decided to dedicate its columns absolutely as best our judgments and abilities would permit to a real service to the farm and the farmer. We may have erred, and we may have failed; but we have never wavered in our purpose to that end. THE R. N.-Y. is the expression of the best service that Herbert W. Collingwood and John J. Dillon and their aides are able to give the farming interests of this country. If others succeed better and do more it is because of some other factor than honest intention pursued week after week, year after year, with the one dominating purpose to serve the industry in which we were bred, and the men and women by whom we are encouraged and supported.

We have been encouraged to believe that this is the kind of service you want. We started with some twenty-odd thousand paying subscribers. Today they have increased to 160,000. Then the business employed about a dozen people. Today the payroll numbers nearly one hundred. Then a flat-bed press slowly turned out the weekly edition from single sheets that had to be folded and bound by hand or other machinery. Now two perfecting rotary presses take the paper from a roll, and turn out perfectly folded papers at the rate of 12,000 copies an hour. Then the largest edition we ever published was 20 pages. Last year the largest paper was 64 pages. A single issue then required about 1½ tons of paper. Our largest edition now requires about 30 tons; and the average issue takes 20 tons of paper. Then our printing was done by contract on other people's presses. Today our own presses, established at a cost of about $50,000 are turning out the paper. Then we paid $1,200 a year rent in a corner of a large loft in the down-town manufacturing district. Today THE R. N.-Y. occupies its own home in the heart of the business section of the metropolis.

We confess to some pride in this record; but it is not recorded here in any spirit of vanity. This address to you is not a boast, but an appeal. It is an expression of our acknowledgment of your growing confidence in our service and constant encouragement of our work.

We have no right to appeal for the patronage of the farm on any ground, but that of service to it. If you believe that we are trying to give you an honest service, and that THE R. N.-Y. is the inspiration to the farmer and his family that a farm paper should be, and the staunch champion that the interests of the farm demand, then we ask you to continue your coöperation with us in all rightful demands, and especially at this time, give us the convincing evidence of your approval in the prompt renewal of your subscription.

For several years past our regular subscribers have got in the way of sending a yearly subscription of THE RURAL NEW-YORKER as a Christmas present to friends. The custom grew to such an extent that last year we prepared a Special Gift Card, which we mailed to reach the recipient for Christmas or New Years, as directed, with the compliments of the donor. As a result a much larger number of orders were received than ever before. We are prepared to do the same this season. We would not assume to suggest to anyone to make gifts who did not have the purpose to do so, but most of us have more wish and inspiration to remember friends than we have means or time to satisfy. It is often a bother to know just what to send. To such friends we suggest a subscription to THE R. N.-Y. You simply send the name and address and the dollar, and we do the rest for you. This is not only an annual remembrance, every week of the year, the regular visit of the paper will be a reminder of your thought and interest in the person who receives it.

On Feb. 21, 1913, I gave Bradley Bros., of Makanda, Ill., an order for 3,624 strawberry plants, sending check with order to the amount of $14.20 to pay for plants. These plants were guaranteed to be true to name, as you will see from the enclosed guarantee. You will also note the number and name of plants marked on price list (10 varieties). When these plants began bearing last Spring they proved to be all of one variety and that a very poor one for this section. I cultivated the plants well and was expecting a good crop of berries this season, but only got a few small berries, all of the same variety. I have written them several times and they don't answer my letters. W. T. S.

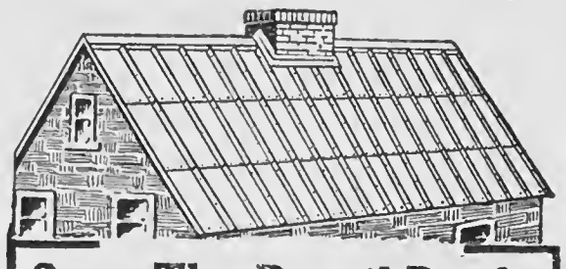
Kentucky.

It will be remembered that Bradley Bros., of Makanda, Ill., advertised last season to send a dozen plants "free" to anyone answering their advertisement. When the reader of the advertisement made application for the "free" plants he was told that the variety offered were female plants and that in order to get a crop of berries he would have to plant an equal number of male plants which they advertised for sale. No one doubts that the buyer would pay for the second lot, all or more than both lots are worth. We are not surprised at the above report regarding any concern that will resort to such a fake scheme as above outlined to sell strawberry plants. For well nigh 20 years we have been obliged to warn our subscribers against Bradley Bros. These brothers have assumed many names during this time, some of which are as follows: Bosky Dell Nursery Company, Jackson County Nursery Company, Bradley & Bradley, Bradley Bros. etc. The season is near at hand when Bradley Bros. will be making an appeal for the trade of fruit growers for the Spring of 1915. The above experience may save other fruit growers from similar annoyances and loss.

The ideal of the Department of Foods and markets is to find a profitable market for the products of the farmers of the State of New York; and at the same time to devise such an economic system of distribution of farm food products that, through the saving, the farmer may receive more and the consumer pay less.

J. J. D.

"I SEE that local option is likely to win out your way." "Yes," replied Uncle Billy Bottletop. "But the fight ain't fair. A man who never uses alcohol generally looks like a good argument, while a regular rumpunisher's liable to be only a horrible example."—Washington Star.



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Buy galvanized steel roofing direct from our Mill at wholesale prices. Get the guaranteed quality at the price of the ordinary grades. We pay the freight.

Easiest to Put On—Outlasts All Others.

Our roofing is the easiest, quickest and cheapest to put on; anyone can do the work; no special tools required. Lasts longest because every sheet is coated by our exclusive process, with our extra-thick and extra-tight galvanized coating. Fire-proof, water-tight, anti-rusting and protects against lightning and the elements. Strengthens an old building and makes it look like new.

GUARANTEED
STEEL ROOFING

We guarantee every sheet to be first quality, open hearth roofing steel, full weight, free from flaws and brand new—or it doesn't cost you a cent.

Don't buy any roofing 'till you get our Free Samples and compare weight and quality with all others. We send freight-paid prices and complete Roofing Book showing all patterns and directions for measuring and applying. Write today.

The Ohio Galvanizing & Mfg. Co.
57 Ann St., Niles, Ohio

MAKE BIG PAY DRILLING WATER WELLS

Our Free Drillers' Book with catalog of Keystone Drills tells how. Many sizes; traction and portable. Easy terms. These machines make good anywhere.

KEYSTONE WATER DRILL CO
Beaver Falls, Pa.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

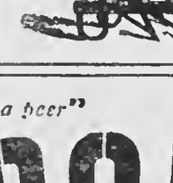
SPREADERS $64.75 UP

RAISE BIGGER CROPS
My New No. 8 Low Down Manure Spreader

used now means bigger crops next year. You know this yourself. Manure spreading time is all the time. This new No. 8 Low-Down Manure Spreader is Galloway's greatest spreader.

Positively the best spreader on earth. Double chain drive, endless apron; force feed; front wheels cut under load; close hitch; lightest draft of any low-down machine. Capacity 60-70 bushels. All steel gear, complete with double-trees and neck-yoke. Flexible rake; high speed beater pulverizes finely any barnyard material. Steel wheels; gears coupled with channel steel, trussed like a steel bridge. Box rests on rear trucks, 42 inches high. Superior in every respect to new fangled freaks of heavy draft that eat you up for repairs, annoy you and kill your horses.

K. K. Fouet, Ashley, Ohio, writes: "Please find draft for spreader received October 5th. Assure you I am more than pleased with same. It has proven all you claim and more. By buying of your company, I saved $21 80 and got just what I was looking after."



My Book "A Streak of Gold" FREE

tells all about handling manure to get the greatest profit. Do not buy a spreader of any make at any price until you have dropped a postal asking for this great book worth $1.00 (costs you nothing) and my BIG SPECIAL SPREADER CATALOG that tells the truth about the spreader business. Mailed free. Get RIGHT on this spreader proposition before you buy.

Wm. Galloway, Pres.
Wm. Galloway Co.
279 Galloway Sta. Waterloo, Iowa

Send For Book On
EMPIRE No. 9 EMPIRE, Jr.

Tells why they last longest—why they do not rot nor sag—why they stay hog-tight and cattle-tight—why they are by far the least expensive fences to buy in the long run. Farmers, everywhere, are investigating fence quality. Users insist on knowing the quality underneath, just as they know how to judge a horse. You cannot fool an experienced buyer with an old horse doped up—polished up—to look like a good horse. You cannot fool an experienced buyer with a poor fence doped up to look like a good fence. A penny postal brings you the money-saving book. Write today.

Bond Steel Post Co., 23 Maumee St., Adrian, Mich.

WELL DRILLING MACHINES

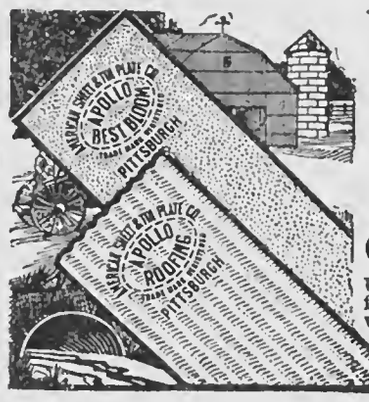
Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

ICE PLOWS

6 sizes, prices $10.72 to $16.90, every plow warranted. Sent on trial. Also tools. Catalog.
WM. H. PRAY, - Verbank, N. Y.

"A product without a peer"



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The Rural New-Yorker

will bring pleasure and knowledge with each issue. What more suitable present could you give at Christmas? We have *Special Gift Cards* which will be mailed to the recipient with your compliments. Send your order now and we will prepare and hold the card till Christmas.

THE RURAL NEW-YORKER
333 West 30th Street
New York City

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Dec. 11, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

	1914.
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotel and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

The quality of fresh receipts is quite irregular, and the proportion of fancy rather small. Business in medium grade creamery is slow; ladles and good packing stock selling well.

Creamery, extra, above 92 score, lb	33½	@	34
Extra, 92 score	32½	@	33
Good to Choice	28	@	32
Lower Grades	23	@	25
Storage	26	@	32
State Dairy, best	31	@	32
Common to Good	23	@	28
Ladles	20	@	23
Packing Stock	19	@	22
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 34 cents.
Boston, western creamery, 33.
Chicago creamery, 24@32.

CHEESE.

The volume of trade is very light, as speculators, especially in Wisconsin make, are asking more than exporters will pay. Some sales of western twins at 15 cents have been made.

Whole Milk, fresh, specials	16	@	16¼
Average fancy	15½	@	15¾
Under grades	12	@	14
Daisies, Wisconsin	14¾	@	15¼
Skims, specials	13	@	13½
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS

Prices remain on practically the same basis as for the past month. An occasional lot of nearby white, large sizes, sells up to 65 cents, but 55 to 60 covers most of this stock. In medium and lower grades the range is very wide, with a surplus of qualities priced around 30 cents. Storage eggs of average grades are being worked off as rapidly as possible.

White, choice to fancy, large	58	@	62
Medium to good	42	@	52
Mixed colors, best	43	@	46
Common to good	25	@	20
Storage, best	28	@	30
Lower grades	18	@	29

FRESH FRUITS.

Apple receipts early in the week were heavy but sales good, so that there is no decline in prices, except on culls. Pears, except Kieffer, are getting scarce, and moved as rapidly as possible. Grapes very low; cranberries plentiful and cheap.

Apples—BenDavis, bbl	1 50	@	2 00
York Imperial	1 75	@	2 50
McIntosh	2 50	@	4 70
Jonathan	2 50	@	3 75
Twenty-ounce	1 50	@	2 50
Spitz	1 75	@	3 57
Baldwin	1 75	@	2 50
King	2 00	@	3 52
Greening	2 00	@	4 00
Box, as to variety,	1 50	@	2 25
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 00	@	5 00
Bosc	3 00	@	5 50
Sheldon	3 00	@	5 50
Kieffer	1 50	@	3 00
Grapes, Catawba, 4lb bkt	5	@	7
Black, 4lb. bkt	8	@	10
Black, 20lb. bkt	30	@	45
Bulk, ton	30 00	@	40 00
Cranberries, Cape Cod, bbl.	2 00	@	5 50
Jersey, bbl	3 50	@	4 00

HOPS.

Prime to choice	26	@	28
Common to good	22	@	25
Pacific Coast	10	@	14
Old stock	7	@	8

HONEY.

Clover, comb, lb	13	@	16
Extracted, gallon	50	@	90

BEANS.

Marrow and medium are down 15 to 20 cents per 100 pounds. A little export business in Red Kidney noted. White Kidney scarce.

Marrow, 100 lbs	6 30	@	6 40
Medium	4 50	@	4 75
Pea	4 40	@	4 50
Red Kidney	4 50	@	5 25
White Kidney	7 15	@	7 25
Yellow Eye	5 15	@	5 25
Lima, California	5 90	@	6 00

VEGETABLES.

The potato market is weak, though there is no special change in prices. Qualities of State and Jersey are running poor. Cabbage lower. Onion market dull. Lettuce in large supply and lower; other salads scarce.

Potatoes—Jersey, bbl.	1 25	@	1 50
Long Island, bbl.	1 75	@	2 00
State, 180 lbs.	1 25	@	1 60
Maine, 180 lbs.	1 50	@	1 90
Bermuda, bbl.	4 00	@	6 00
Sweet Potatoes, bbl.	2 00	@	3 00
Brussels Sprouts, qt.	5	@	10
Beets, bbl.	1 00	@	1 25
Carrots, bbl.	75	@	1 00
Chicory, southern, bbl.	1 50	@	2 00
Celery, doz.	10	@	50
Cauliflower, bbl.	1 00	@	6 00
Cabbage, bbl.	75	@	1 00
Ton	7 00	@	12 00
Horseradish, bbl	4 00	@	5 00
Kale, bbl.	30	@	50
Lettuce, half-bbl. basket	25	@	1 50
Onions—Red, bag	75	@	1 25
Yellow	75	@	1 25
White	1 00	@	1 75
Peppers, bu.	2 50	@	3 50
Radishes, 100 bunches	1 00	@	1 50
Spinach, bbl.	50	@	75
String Beans, bu.	2 00	@	4 50
Squash, Hubbard, bbl.	75	@	1 00
Marrow	50	@	75
New, bu.	1 00	@	1 50
Egg Plants, bu,	1 50	@	3 00

LIVE POULTRY.

Chickens, lb	11	@	14
Fowls	12	@	14
Roosters	9	@	10
Ducks	13	@	15
Geese	12	@	14

DRESSED POULTRY.

Another week of sticky weather has done considerable damage to dry packed shipments. There is an increased demand for fancy turkeys, and speculators are quite active in choice chickens.

Turkeys, choice, lb	24	@	25
Common to good	15	@	22
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	23	@	24
Fowls	14	@	17
Ducks, Spring	10	@	17
Squabs, doz.	1 25	@	4 00

HAY AND STRAW.

Hay market without special change; a fair demand for medium grades of feeding. Straw plentiful.

Hay, Timothy, No. 1, ton	20 00	@	21 00
No. 2	17 50	@	19 00
No. 3	16 50	@	17 00
Clover mixed	18 00	@	19 00
Straw, Rye,	13 00	@	14 00

LIVE STOCK.

Native Steers	6 75	@	9 90
Bulls	5 25	@	6 00
Cows	3 00	@	6 30
Calves, prime veal, 100 lb	10 00	@	13 00
Culls	6 00	@	8 00
Sheep, 100 lbs	4 00	@	5 25
Lambs	8 00	@	9 65
Hogs	7 75	@	8 00

GRAIN.

Wheat has declined slightly in spite of heavy export sales, mainly because of favorable crop reports from Russia and the probability that our crop will exceed early estimates. Corn prices unchanged, with rather slack demand.

Wheat, No. 1, Northern Spring	1 28	@	..
No. 2, Red	1 26	@	..
No. 2, Hard Winter	1 26	@	..
Corn, as to quality, bush	71	@	72
Oats, as to weight, bush	53	@	55
Rye	1 16	@	1 18

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz.	65	@	70
Mixed colors, new laid	55	@	60
Ordinary grades	30	@	45
Butter, fancy prints, lb.	40	@	43
Tub, choice	34	@	38
Chickens, roasting, lb.	24	@	23
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb.	23	@	25
Fricassee, lb.	18	@	20
Fowls	18	@	23
Turkeys	24	@	27
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork Chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

CHRISTMAS GREENS.

Holly, case	2 00	@	2 75
Wreaths, doz.	50	@	1 50
Roping, 100 yds.	1 00	@	1 50

The New York Health Department recently condemned 600,000 pounds of coffee, which had been damaged by water on the trip from South America.

*

Fire losses in this country and Canada for 11 months ending with November amounted to $215,000,000. There were 55 with damage above $100,000, and two of $1,000,000.

*

The wool embargo on shipments from Great Britain has been modified to permit sending merinos to the United States on guarantee that they will not be forwarded to hostile countries.

*

Our trade with Sweden since the war began has doubled as to our imports, and in exports increased from $104,600 in August to nearly $3,000,000 in October. Some of our products in greatest demand there are: Grain, oils, paints and drugs, raw cotton and wool, naval stores, leather, ash and hickory, and tobacco.

*

Because of the tie-up of nearly 5,000,000 tons of shipping, and the recent heavy export demand, freight rates to Europe are more than three times last year's prices on some staples and double on others. Current berth rates to Liverpool are: Grain, bu., 7½ cents; flour, 100 lbs., 26; cotton, 100 lbs., compressed, 75; butter, ton, $15; meats, ton, $7.50; leather, ton, $5.

*

The Government report shows ginning of 13,066,105 bales of cotton up to December 1, or about 1,900,000 bales more than at the same date last year. Ginnings in the principal cotton States follow: Texas, 3,764,694 bales; Georgia, 2,285,607; Alabama, 1,438,389; South Carolina, 1,225,476; Oklahoma, 1,018,287; Mississippi, 986,998; Arkansas, 840,562; North Carolina, 674,135; Louisiana, 381,913; Tennessee, 291,329; Florida, 72,859. In addition to above, Georgia ginned 33,101 bales of Sea Island; Florida, 27,468; and South Carolina 2,422.

THE KICKING COW.—Tell the man who has the kicking cow to secure the cow's head and then take a stout piece of half-inch rope about four feet long, place the middle of it at the middle of the cow's left hind leg, just above the hock joint, bring the ends of the rope between her legs, crossing the ends of the rope, wrap the rope around her right hind leg and tie in a knot easily untied, drawing her right hind leg back far enough so she can be milked. I had to tie a "professional" kicker in that way from April till the next March, when I sold her for beef.

F. S. WEBB.

Subscribers' Exchange

200 FERTILE ACRES—Bordering beautiful little lake in famous lake region of Central New York, can be bought for cost of improvements. E. W. ALLEN, Auburn, N. Y.

235 ACRES fine Steuben County fruit and dairy farm; will sacrifice this month for only $31 an acre, worth nearly double. Address Owner, 41 E. Washington St., Hornell, N. Y.

FOR SALE—Fully equipped poultry and fruit farm, beautiful location, handy to New York and Philadelphia markets; rare bargain. Inquire L. W. A., Rural New-Yorker.

WANTED—To rent with privilege of buying for next Spring, a truck farm of 100 acres in Long Island, within 50 miles of New York, near station. Care of W. A. D., care R. N.-Y.

FARM WANTED—From 100 to 300 acres, not over three miles from a town of not less than 2,000 people; prefer one equipped for dairy; must be good buildings and soil. Box 308, Groton, N. Y.

WILL exchange income property in Hackensack and East Rutherford for farm, having tillable, pasture, woodland, within seventy-five miles New York City, near railroad; want water power or place to build one. 105 Poplar Ave., Hackensack, N. J.

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

YOUNG MAN wants to learn commercial, egg and poultry business. LESTER WAMSLEY, Anthony, R. I.

PRACTICAL, intelligent, experienced, married man desires responsible position on farm. C. L. B., R. N.-Y.

WANTED—At once, strong, reliable young man, single, some experience for general farm work. No liquor. MEADOW FARM, Hartsdale, N. Y.

WANTED—Good German or Danish farmer to work large farm on equal shares; twenty cows, hogs, hay and orchard. H. M. DAVIS, Attica, New York.

POULTRYMAN, married, 26, desires position Jan. 1; best references furnished, capable handling plant any size. GEO. TILTON, Poughquag, N. Y.

YOUNG MAN (23), desires position January 1 on dairy or stock farm; experienced thoroughbred Holsteins. NORMAN DIECKS, Chatham, New Jersey.

WANTED—Position for my farm hand; season's work done; good, all-around worker, strictly sober, honest, reliable. EDW. MORGAN, Plainfield, N. J. R. D. 1.

EXPERIENCED ORCHARDIST—Married, desires position as working manager of modern fruit farm; thoroughly familiar and capable; American, references. SANFORD, care Rural New-Yorker.

POSITION WANTED as manager or superintendent of farm or estate by practical farmer with 16 years' experience; sober, reliable, industrious, careful and well educated; small family; southeastern Pennsylvania preferred. J. HOWARD BROOMELL, Kennett Square, Pa.

FARMER ON SHARES—20 acres, near Camden, N. J., 6 room house, 1,000 peach trees, all kinds of berries, suitable for early garden truck, completely stocked except horses and wagons, which farmer must furnish; prefer man accustomed to marketing his own goods; would consider furnishing breeding hogs as a side line; willing to make weekly advances to reliable man; give full particulars, experience, references, size and age of family in first letter; to man handy with tools I can give considerable work during winter months; excellent opportunity for reliable experienced man. GWILLIAM, 623 S. 6th St., Philadelphia, Pa.

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

FOR SALE—Number twelve, power Mann Bone-cutter; cost new $30; freight prepaid 100 miles for $17.50. CARRYL, White House Sta., N. J.

7-INCH PAPER KNIVES, hand-made; oak, hickory, barberry, huckleberry, apple, red cedar, on hand-painted cards, 25c. KNAPP, Caryville, Mass.

FOR SALE—Avery three-bottom, self-lift engine gang plow; does not fit my tractor and used but a few hours. C. T. WILLSON, Millerton, N. Y.

EXCHANGE—Champion bred Airedales, female pups entitled to registry, for incubator, Brahmas, bronze turkeys, or offer. THE HILL FARM, Cummington, Mass.

28 INCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

GRAPEFRUIT AND ORANGES—By express in half or whole boxes, F. O. B. Miami, Fla., fancy brights at $1.75, Golden Russets at $1.50 per box, with order; delivered prices quoted on request. GEO. B. CELLON, Tropical Grove, Miami, Fla.

WANTED—Good fertile farm with good building, etc.; give full description and price. R., care R. N.-Y.

FOR SALE—Vineland, fully equipped plant, trolley, gas, water systems. Box 40, Rural 2, Millville, N. J.

100 ACRE FARM FOR SALE, with or without milk route, stock and tools, 3 miles from city of 38,000 inhabitants. Particulars inquire P. F., R. N.-Y.

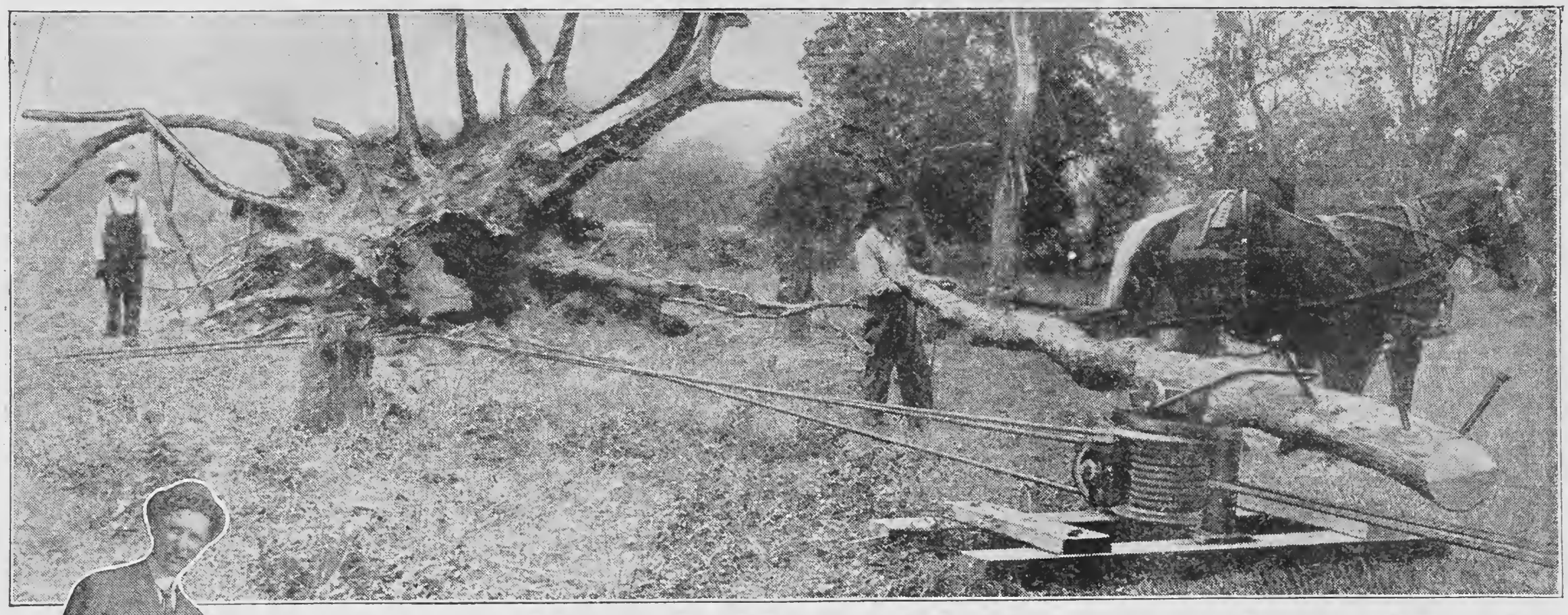
SAFETY FIRST WITH THIS ALL STEEL
UREKA SAWING OUTFIT

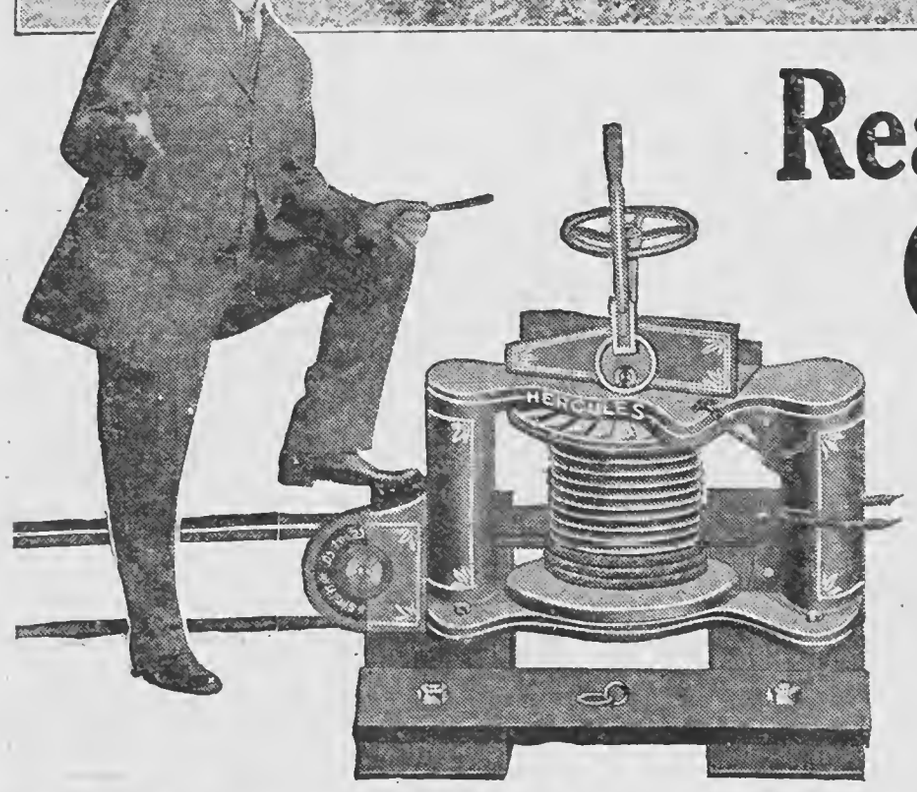
You Need This Money Maker on Your Farm

Easy terms to good farmers.

SAFETY FIRST. The all steel Ureka sawing outfit pictured above, shows the safest and most complete sawing machine ever offered for farm work. Having no wood in its construction, wind or snow does not affect it; no chance for timbers splitting; no chance for parts coming loose and injuring the operator. It is not only a safe machine, but a durable one, but it has the further advantage of being made so that the man behind the saw can do a big day's work with the least possible effort. The construction of the table makes easy sawing possible. It is the result of 18 years' experience in building sawing equipment. The power is the wonderful Excelsior engine, the engine admitted by all as being the best now on the market. You need this outfit on your farm. It is a money maker and a labor saver. You should not sleep another night until you sit down and write for information. If you tell us the size farm you have, we will make you an interesting proposition, but do not delay. Write the letter to-day.

R. CONSOLIDATED GASOLINE ENGINE COMPANY. 202 Fulton St., New York City.





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LET me send you my new, fine, free book at once. I want to show you *proof* of how you can turn each acre of stump land into a double profit the first year, in extra crops and added value of land —by pulling stumps with the Hercules All Steel Triple Power Stump Puller—and how you can make *big Money* in *your spare time* by pulling stumps for *your neighbors* or *by renting* your machine at a *nice fat profit*. My book shows *actual photographs* and prints, *actual letters* from many *owners*, telling of the remarkable feats of the Hercules—how it pulls *any size stump*, *green tree* or *hedge* in less than five minutes—how it easily pulls *an acre a day*. Read how one man increased his land value from $25.00 an acre to $125.00. Read why the Hercules is the *best investment* you can make now. The

Hercules ALL STEEL TRIPLE POWER Stump Puller

is the puller that has the single, double and triple power features, giving you three machines in one. There isn't a stump, green tree or hedge grown that the Hercules won't pull out without straining or breaking any castings. It's the low-down constructed puller that has self-anchoring and stump-anchoring features—the one with double safety ratchets, that insure the absolute safety of men and team. I want to send you a Hercules on

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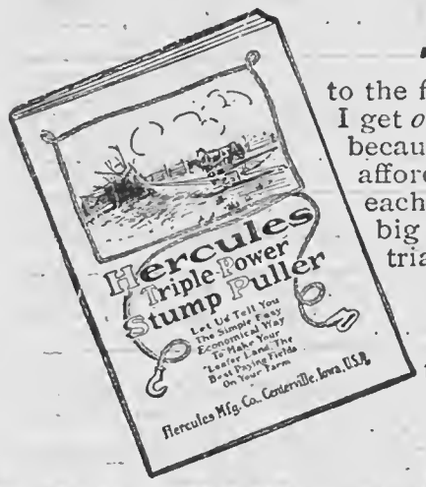
so you can *see* how *powerful* it is and how *easy* it *works*. I want you to *know* for yourself that the all-steel construction means 60% less weight and 400% greater strength than cast-iron or "semi-steel." Besides that, I want to save you big money on the cost. I'm making a



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Just simply send your name and address on the coupon or on a postal so I can send you the convincing facts about the superiority and efficiency and value of the Hercules Stump Puller. Only 5000 of these machines will be sold at this remarkable introductory price, so get your name in now. My new book is a beauty. See the real pictures of big stumps it has pulled out like you would pull weeds. Read the many interesting letters from farmers, lumbermen and land promoters. Stumps, stumps, stumps, pulled out quick, making fortunes for owners of Hercules Stump Pullers. I want you to know the facts. Just

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I'll send the book and price by return mail. I'll tell you the best crops to raise on virgin land where stumps were before. I simply want to get my free book to you at once, so that you can read the remarkable facts about the Hercules All Steel Triple Power Stump Puller and how it does such a splendid work making big profits for owners everywhere. *Mail me the coupon or postal* right now, before you forget, or take down the name and address and write me as soon as you get a postal card. Address me personally,

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HERCULES Portable One-Man Puller For Use Without Team

THE only portable one-man puller on the market. By pulling 100 pounds on the sweep one man can develop a pull of 50,000 pounds on the stump. When stumps are out a 14-year old boy can move puller. No heavy lugging or dragging.

The Hercules Portable excels all other hand machines, because it is so light, strong and easy to handle. It develops more power with 6 ft. lever than any other machine with 10 ft. lever.

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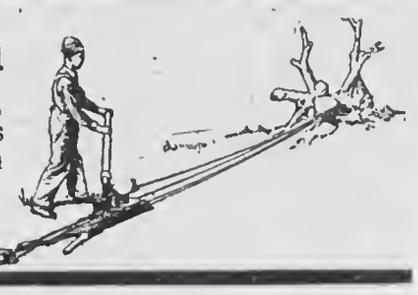

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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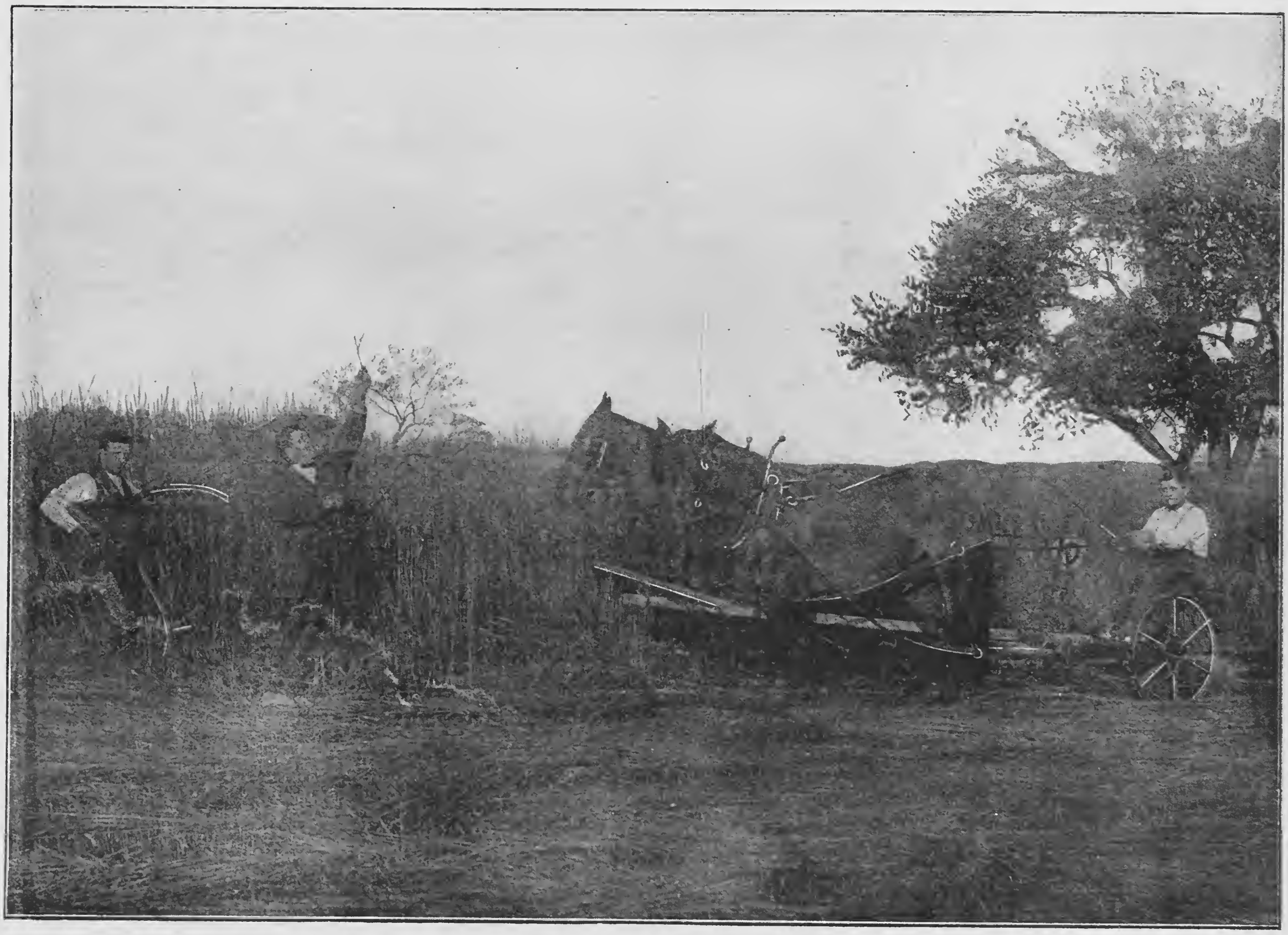
THAT ELECTRIC LIGHT PLANT.

More About Its Convenience.

STORAGE BATTERIES.—There have been a number of inquiries about the article about the electric light plant, in the issue of November 21. These letters ask about storage batteries. I am not an electrical engineer, but I have taken pains to find out a good deal about the practical use of electricity on the farm. Storage batteries of today, while good, are expensive, and perishable. Two years is the average life of a lead battery, with good fortune; four years is the limit of the guarantee on the latest Edison battery. In small installations, they are practical only for electric lighting. Electric stoves and electric motors use too much current. The battery would have to be large, and its cost would be prohibitive for the average farmer. Nevertheless, if I did not have water power, I would put in a gasoline engine, and possibly a storage battery, under certain conditions. There are several makes of engines on the market which generate electricity at low pressure, from 12 to 30 volts, which permits a small battery. These give the best service in the world for electric lighting, but the use of electric irons (the best thing ever invented for a kitchen), electric stoves, and electric motors, is impracticable with them. So if you want only electric light, and haven't water power, and can install the plant near the house, one of these sets is fine.

TRANSMITTING CURRENT.—One man writes me: "There are five of us, living within a quarter of a mile of each other. Would a five horse-power gasoline engine give us enough power for lights all around? Would storage batteries be required?" A quarter of a mile, or even an eighth of a mile, is a long distance to transmit electric current from a storage battery. Wire offers resistance to the passage of electricity, just as iron pipe offers resistance to the passage of water—slows it up. Without a high-voltage battery—say 110 to 125 volts—too much energy would be consumed delivering the current. Twelve or 30-volt batteries would not do it economically. If this engine and battery were in a man's woodshed or barn, together with the engine and dynamo, the battery is all right, but not a quarter of a mile away. The cost of a 110-volt battery big enough to supply five houses would be prohibitive, especially when one considers he will have to replace this battery in two years.

STUDYING THE COST.—But these five neighbors have an alternative. Let them figure how much current they would use, altogether, from dark until bedtime. I should say two or three horse-power of electricity would be more than ample. Let them find out how much gasoline it takes by the hour to keep an engine running under this load; divide the result by five and they would have the cost of electric light. Then when they wanted current for ironing, the engine could run on certain hours on ironing days. I believe it would be very cheap, much cheaper than oil lamps, and much better, of course. There are generating sets, consisting of a gasoline engine directly connected to the dynamo, on the market, that are both cheap and efficient, and require little care. A boy could be the engineer. There is something about things electrical that appeals to a boy. Electricity is more natural to the average boy than going swimming. I know boys of 12 and 14 years, who can learn more about electricity in a week than I can in a year. I don't



A NEW HAMPSHIRE RYE FIELD; AVERAGE HEIGHT SIX FEET. Fig. 656.

know why it is; it is so. Maybe the boy can tell why.

STANDARD VOLTAGE.—Whatever you do, if you can avoid the use of a storage battery, use a machine of standard voltage—that is, a machine that makes electricity at a pressure of from 110 to 125 volts. Engineers who have spent their lives at the task have found this to be the best all-round pressure for domestic uses, and manufacturers who make lamps, stoves, irons and toasters have recognized it, by making all their instruments to fit this voltage.

THE WATER WHEEL.—Those who have water wheels, or can club together with neighbors to put an old water-mill in their neighborhood in commission, have the question solved. Then it is only a question of making sure that the wheel runs steady. Connect your dynamo to the wheel by an endless belt; bring the dynamo up to the rated speed: turn the regulator (supplied with all machines) until the indicating needle touches the right voltage (say 110); and go away and forget it, until time comes to oil it again. It won't need to do anything but spin until you turn on a light in your house or barn. Then automatically, the machine instantly generates just enough current to supply that light —or lights—whether it be one or one hundred. The wires carrying the "juice" from the mill to the house should not be less than No. 8, if the run is less than 1,000 feet; if over 1,000 feet, a bigger wire is better. The wire is of copper, and covered with weather-proofed tape.

SHORT WATER SUPPLIES.—One man says: "I have a stream on my place which dries up in Summer. Otherwise I would put in a plant." If I had a stream on my place that gave me power eight months in the year—the dark months, by the way—I certainly would burn lamps and candles four months, and enjoy electricity for the other eight. Electric lights for eight months is better than oil lamps for 12. Another man says: "I could enlarge my mill pond so as to have enough water during the dry season. Would this be better than to put in a storage battery, so as to run the wheel only part of the time?"

It would, most certainly. If he enlarges his pond, he won't have to throw it away at the end of two years and buy another pond. But if he buys a storage battery, he will have to buy a new one at the end of two years. I suppose the manufacturers of storage batteries will deny this is a disadvantage, but I have talked with engineers who know, and they admit it. The whole thing in a nutshell, for the poor man, is, if you want light only, and have power only part of the time, put in a low-voltage battery to store the "juice." But don't think you can enjoy heat and power too. Small batteries aren't built for that, and big ones are costly.

EXCEPTIONAL CONDITIONS.—The conditions under which we operate our plant are exceptional, I admit. We are on a river on which a steady flow is maintained by means of reservoirs, for power companies down below. The water goes by our house and we put it to work. It earns its keep. It does our lighting and cooking, and small-power jobs —turning separator, grinding axes, pumping water, etc. We are planning to go further. The next thing I do will be to put in an attachment on the kitchen boiler to keep the 40-gallon tank sizzling hot 24 hours a day. Then I am going to put in a hot-water heating plant, with an auxiliary for electric heating of the water. I think about five horse-power will keep the house warm all but the coldest days. Then I can build a wood fire in the fire-pot. But for six months during the Winter, I figure I won't need to burn wood. That heat won't cost me a cent, and I won't have to buck wood and split it, and take care of ashes. It may take more than five horse-power, or it may take less. Whatever it requires, the average water wheel can supply all the power needed, especially in Winter when the river is full.

THAT ELECTRIC PLANT.—"How can I operate my electric plant without storage battery so that the voltage will remain constant, no matter what the load?" P. R. A.

Massachusetts.

By using a "compound-wound" dynamo. This type of machine is self-regulating. There are three types of direct-current machines in general use: First, the series dynamo, used for street lighting, and other purposes where high-voltage is required. This is not to be thought of for a farm plant. Second, shunt-wound dynamo; this machine requires constant attendance, to regulate the voltage to suit the varying loads. If the voltage were right when all lamps were turned on, it would be too heavy when half of them were turned off, would burn them out. If it were right for half the lamps, it would fall too low for all the lamps. A shunt machine is not satisfactory for a farm plant. Third, the compound-wound dynamo. This machine is a combination of the series and the shunt machines, and automatically adjusts itself to the load, therefore it requires no attention as to voltage regulation. A modern compound machine will give the same voltage for one light or 100, therefore it can be run 24 hours a day without attendance.

"What size electric motor would be necessary to do the work of a 12 horse-power steam engine? How many horse-power could an electric line that carries 110 volts produce?" C. J. B.

Pennsylvania.

A 12 horse-power electric motor would do the same work as a 12 horse-power steam engine. Asking how much power a 110-volt line can produce, is like asking how much water a pipe carrying 110 pounds pressure could produce. To determine how much water you could get out of that pipe, you would have to know first how much water was behind the pipe, and second, how big the pipe itself was. The same with electricity. Electricity is generated by dynamo, and a wire leading from a dynamo could not carry any more power than the dynamo could develop. Some dynamos generate over 20,000 horse-power. F. I. A.

A CURSE OF RABBITS.

I HAVE read in THE R. N.-Y. a good deal about rabbits destroying trees and ornamental shrubbery. I had a tree killed by them only a few days ago. They are so thick around here that one could count up a dozen holes inhabited by them on one line fence. There are hunters with dogs around here, but they never have the luck to kill any rabbits, for they stay in holes days, and nights they go out. It is very seldom that I catch a rabbit with a trap. What would a person have to do so that the law could be changed so as to permit the use of ferrets for a short time in the Winter? C. H. M.

New York.

This rabbit question is one of the unfortunate points in the New York game law. The only things that can be said in favor of the rabbit as a game animal are that he is easy to kill and that he cannot be exterminated. If one or two pairs are left alive on each square mile by Spring the supply the next Winter will be as great as usual. Such close hunting as this is, of course, impossible over any extended area even if unlimited use of ferrets is permitted. If it is desirable to please those who may fear they will not be able to kill all they can carry each time they go out it can be done surely by shortening the open season and prohibiting the sale of wild rabbits.

I was living in New Hartford at the time the use of ferrets in Oneida County was stopped, and well remember an article that appeared in a Utica paper at that time. The writer stated that he had hunted all over New Hartford and parts of the neighboring towns, and had not seen a sign of a rabbit. His opinion was that rabbit hunting should be stopped for at least two or three years. At that time I could get rabbits enough for a meal or two every time I went out; that is, on each good tracking snow, without the use of dog or ferret, and usually in much less than a half day. There was then, and I suppose still is, a patch of woods less than five miles from the Utica court house where I never hunted because the rabbits were too numerous. I have seen an area of several square rods tramped down by the rabbits in one night so that hardly a single separate footprint could be found. It was as though a band of sheep had been there.

Now as to relief in this case. The conservation law reads: "The use of ferrets is at all times prohibited, except that the Commission may by resolution permit ferrets to be used in particular counties. The owners or occupants of inclosed or occupied farms and lands or a person duly authorized in writing by such owner or occupant may take, except by use of ferrets, in any manner at any time and in any number varying hares and cottontail rabbits which are injuring their property." Therefore, the first thing to do is to apply to the Conservation Commission for permission to use ferrets in Oneida County. Get all your neighbors and all your farmers' organizations to back you, and even then you will probably fail. While you are trying to get a chance really to fight the rabbits make use of all the means you have to keep them down. Get all your neighbors to authorize you to kill rabbits on their land. Set steel traps in all the rabbit holes, two or three in each entrance to every hole where you feel sure there is a rabbit. Stop up all other holes. Set traps or snares in the holes where they go through fences or under brush heaps. A rabbit almost always uses the same hole in going through a fence. Go out every day there is a tracking snow and try to find out where each rabbit went and what he did. Always have a gun loaded and ready with you on these trips. It takes a great deal of time to make a worth-while reduction in the number of the rabbits on a good feeding ground. I should estimate that it would take not less than 10 days of seven hours each for two men with a good dog and a ferret to kill 50 rabbits in 25 acres of fairly open brush land free from especially hard hunting, such as ledges of rock or large brush piles, if there were only 50 there at the start. A. C. WEED.

FIGURING LUMBER IN STANDING TREES.

I HAVE 350 White oak and 115 Black oak, second growth. I wish to sell these trees as they stand. I have measured them in the tree waist high. I wish to know how many feet of lumber, board measure they contain? The trees are tall, will average two 12-foot logs to the tree. Here is the number of inches: White oak, 7898 inches; Black oak, 7200 inches. Would like it figured separate. The White oak is worth $50 per 1000, Black not so much. F. M. B.

Indiana.

The contents of trees, in board feet, is usually figured by Doyle's rule. This rule is to deduct four inches from the small diameter of the log for slab, squaring one quarter of the remainder and multiplying the result by the length of the log in feet. For example, to find the contents of a 12-foot log, 24 inches in diameter (inside the bark) at the small end.

24 in.—4 in. equals 20 inches.
20 in. by ¼ equals 5 inches.
5x5x12 equals 300 board feet.

Perhaps an easier way to get at the same result is to the state the rule as follows: From a 16-foot log deduct four inches for slab and square the remainder. For longer or shorter logs the contents would be proportioned to the length. In the above case it would be worked out as follows: 24—4 equals 20. 20x20 equals 400, for a 16-foot log. But a 12-foot log is twelve-sixteenths or three-quarters as long as a 16-foot log, therefore this log contains three-quarters of 400 board feet, or 300 board feet. If the log were 20 feet long it would contain 1¼ times 400 feet, or 500 feet.

Not knowing the top diameter of these trees I cannot apply this rule to the case in question. A common way of estimating standing timber is to estimate the length and the top and bottom diameters, and apply Doyle's rule, using the average of both diameters and the whole length of the tree. I have no tables at hand for estimating oak less than 60 feet in height. It seems probable to me that the correspondent has underestimated the height of his trees.

A very useful little book is the "Woodsman's Handbook." Bulletin No. 36 of the Forest Service, U. S. Department of Agriculture. I believe it is free, or at any rate the price would be nominal, and it may be had by addressing the Secretary of Agriculture, Washington, D. C. Of course, timber buyers will not buy timber on the basis of the log scale and the price of first class lumber. There is always some loss through defects that are not visible from the exterior. However, if one knows about how much timber he has, and also the market price for such timber, he will be in a position to talk business. It is a good thing, if possible, to get an experienced person to estimate the timber, for it is difficult for an amateur to estimate heights correctly and diameters without instruments.

CHESTER L. MILLS.

A SENSIBLE BACK-TO-THE-LANDER.

I WORK in a factory, but would like to start on my own account. My idea was to rent a small place close to the town, starting with poultry and maybe a hog, and a few beehives, and continue to work in the factory, so as to feel my way along a while with a view to start farming later on, provided I have the energy and intelligence. I would like your opinion of White Wyandottes, and what kind of an egg they lay, white or tinted? What color would bring the best price around here? W. T.

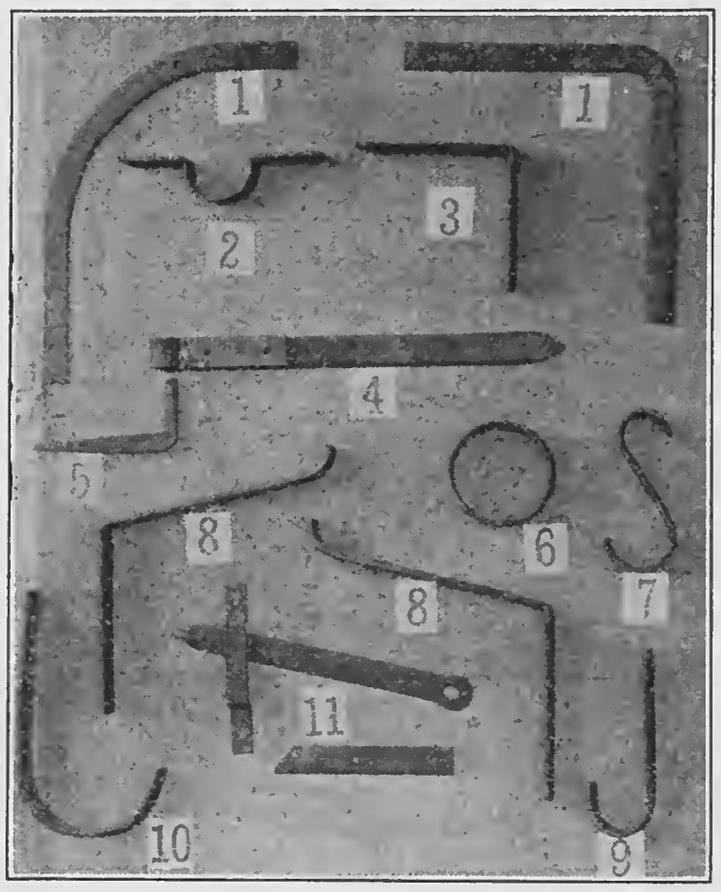
Rhode Island.

This is a very sensible suggestion, and it is to be regretted that more of the back-to-the-landers do not have the same idea about starting. This plan will enable you to find out whether you like living in the country or not. You could figure from what you get out of your rented place whether it would pay you to give up your town job entirely and put your entire time upon the farm. This sensible way of studying the question is to be commended to hundreds who write us about going into the country. What you say about finding out whether you possess the energy and intelligence required to make a living on a farm is excellent and good evidence of the last named quality at least. The White Wyandotte is an excellent breed. If you can get a start with the utility strain and obtain eggs or pullets out of a family noted for egg production, you will be well pleased with the Wyandottes. They lay a tinted egg, but this would not be an objection in your locality. While the New York market prefers the white egg, Boston and the New England cities generally prefer a brown or tinted egg, and will usually pay well for it.

EASY FARM BLACKSMITHING.

PART I.

NECESSARY KNOWLEDGE.—Because automobiles have become so plentiful and driving horses have gone out of use, many a black-



USES FOR OLD WAGON TIRES. FIG. 657.

smith shop lies idle, and the sounds from the village smithy under the spreading chestnut tree are heard no more. Thus many a farmer is forced to go a longer distance to have his blacksmith work done. Think of the time that might be saved if a part, at least, of this work were done at home! Any farmer who has some mechanical ability and who has a small building for a carpenter or repair shop, will do well to purchase a small iron forge and an anvil. He will be surprised at the great number of things that he can do for the farm by keeping the old horseshoes and old wagon tires that were formerly sold to the junkman. In making these easy and useful things for the farm, a knowledge of blacksmithing is not necessary. If you know how to make yourself handy at carpenter work, or if you know something about machine-shop work, or if you have confidence that you can do some of your own farm repairs, then go ahead, for the way is open, and many a dollar may be saved when nothing can be done outside during the stormy days of Winter.

HEATING IRON.—Work iron only at a white heat; use a red heat only for smoothing. Draw out or upset only at a white heat. Keep the iron high in the fire. Keep the fire solid, and rake over a little coke on top. Do not cool off the iron when it is at a white heat. The iron when at a white heat, if suddenly immersed in water, is crystallized, made brittle and unfit for further use. Do not pound the iron when black. It causes crystallization. Any such crystallization is broken by heating the iron red hot and allowing it to get black before cooling in water.

HEATING STEEL.—Have a slow fire with plenty of coke. Keep the steel high in the fire and heat only to a cherry red. Do not allow a scale to form upon the steel when it is in the fire. A scale formed upon the steel in the air does no harm. Cool the steel in the water only after it is black (hardening and tempering are different.) Do not pound the steel when it is black because it breaks the grain or crystallizes it.

FIRE BLACK.—Heat the iron to dark red and let it cool to a black; then dip in oil (fish or sperm) and wipe as dry as possible with cotton waste. Iron treated this way will stand a long time without rusting, even though exposed to the weather or water.

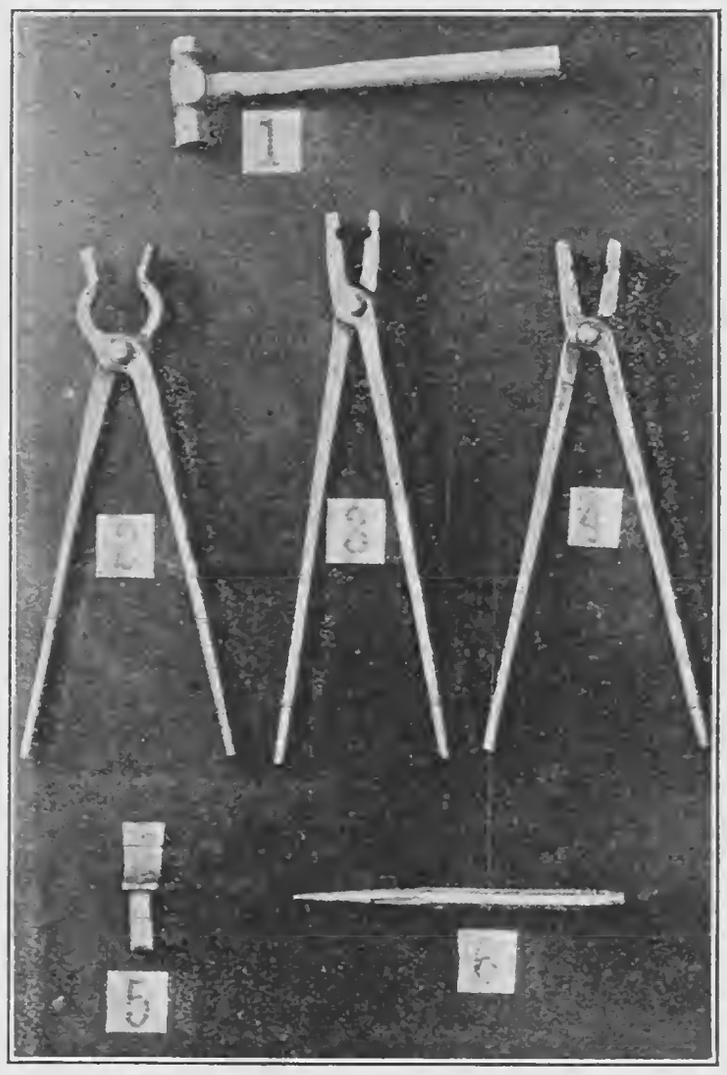
CASE HARDENING.—This is making a steel surface or skin on the outside of the iron. It is done so that it can stand all the better, where the wear and tear comes the greatest. Case-hardening is usually done with a deadly poison. It is placed upon the iron red hot, immersing the whole in water. The poisons generally used are cyanide of potassium and yellow prussiate of potassium. Care must be taken not to let any of the poison get into cuts or remain on the hands. The fumes are also very dangerous to inhale.

MOTTLING.—The same process and same poisons are used, for this process, except dot the iron here and there and swish around quickly in the water. The iron should have been made bright with emery cloth or fine file before heating for mottling.

TOOLS REQUIRED.—Fig. 658 shows the tools which a farmer should have to do plain blacksmithing: 1. A good carriage ironer's hammer, not over two pounds in weight. If anything heavier is needed get a sledge. 2. Tongs for holding square iron from ½ to ¾-inch diameter; very handy for other work. 3. Tongs for holding round iron or octagon steel, ½ to ¾-inch diameter. 4. Tongs for holding ¼ to 7-16-inch diameter, round or square iron. 5. A Hardee for cutting off hot iron or steel. 6. A steel punch about 16 inches long, ¾-inch octagon steel, for punching holes in hot iron. It is expected that any farm where a forge and anvil is worth while, has a good iron vise and a good grindstone. The more tools the better, but it should always be kept in mind that necessity will usually bring whatever equipment is needed.

USES FOR WAGON TIRES.—Fig. 657 shows some of the uses to which old wagon tires may be put. 1. Braces for shafts or wagon bodies. 2. A stake holder for wood or hay wagon. 3. Brace to strengthen any corner. 4. Hinge for barn door or gate. 5. Butt of hinge, made from half a horseshoe to go with No. 4. 6. Welded ring to be used when driving a post or on a beetle. 7. A strong S-hook that can be used for any purpose. 8. A hook to hold harnesses or shovels. Used in pairs or singly. 9. A hook to hold a shovel by the handle. 10. A harness hook. 11. The parts of a latch for a gate.

USES FOR OLD HORSESHOES.—Fig. 659 shows what a blacksmith can do with old horseshoes: 1. Ordinary horseshoe. 2. Horseshoe made to hold the ends of a ladder. 3. Horseshoe ends pointed to drive into a post to hold bars. 4. Butt of gate hinge, made from half a horseshoe. 5. Hook for harnesses, ladders or shovels. 6. Brace for farm wagon body. 7. Square-head bolt made from half a horseshoe. 8. Pin for pole or a longer pin, to help hold in tailboard to tip-cart. 9. S-hook for mending chain. 10. Welded ring, used with chain and crowbar for hitching out cow. 11. Chain hook for stone chain. 12. Parts of a whiffletree; ends made from half a horseshoe, centre from whole shoe; the wooden part of whiffletree sawed from two-inch plank.



TOOLS FOR FARM BLACKSMITHING. FIG. 658.

GARDNER B. WILLIS.

BRINGING BACK NEW HAMPSHIRE LAND.

AS much has been written in regard to the abandonment of New Hampshire farms, giving as a reason the sterility of the soil, and the inability on this account to compete with western production, I take pleasure in sending you a photograph showing what result can be accomplished by proper fertilization and care in growing grain, even on what would be called the most unpromising and sterile soil. I will give a detailed account of how this result was brought about and what other crops by proper rotation added to the four acres devoted to this test. The first crop harvested before any attempt at improvement was made was less than one ton of wild hay and witch grass. Immediately after harvesting the ground was plowed, and well manured with barnyard manure, which was well harrowed in, and seeded with millet about the middle of yielding a crop of five tons about the middle of September. After which the ground was again plowed, harrowed and given another light dressing again with barnyard manure. That Fall it was sown with rye, and seeded down the following Spring with Red clover and Timothy. The rye came up finely and reached an average height of six feet, with a maximum of length seven feet nine inches, as shown in Fig. 656. The yield was 12 tons of rye for the four acres, which was harvested about June 25, and as the field had been seeded down it yielded a second crop of five tons of rye, clover and Timothy, which made fine feed. This is conclusive evidence that the soil of New Hampshire under proper conditions can be made to pay a good profit in itself, as also other industries can be added which will materially add to the income of the farm and dairy product, chiefly the taking of Summer boarder.

Merrimack Co., N. H. ELMER TROMBLY.

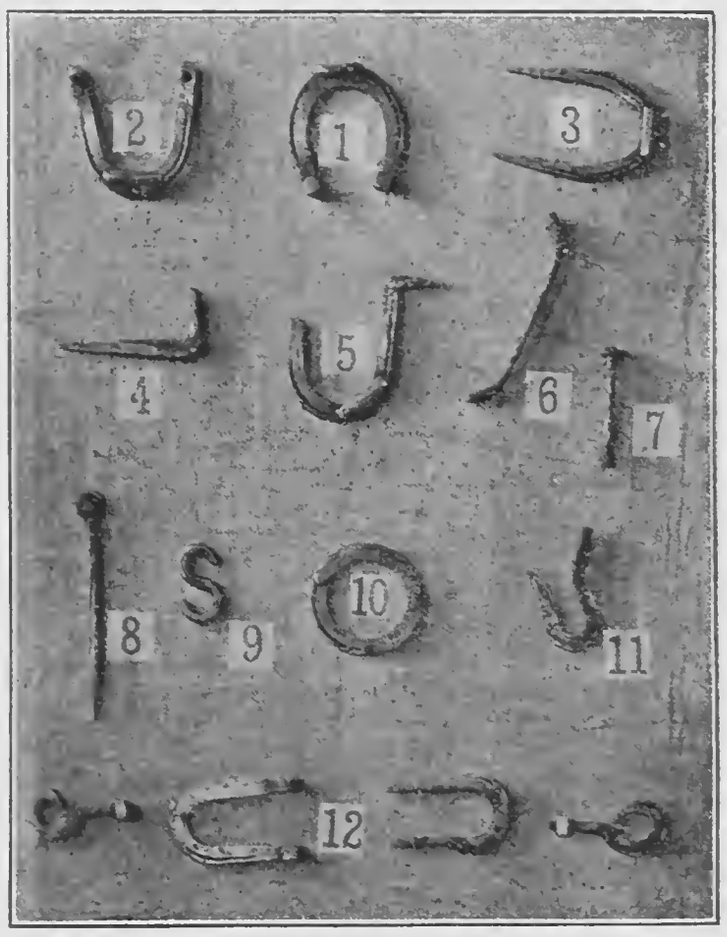
R. N.-Y.—No doubt almost any soil can be made productive by using a liberal dressing of manure. The usual back-to-the-lander has no stock or dairy and it would be difficult to buy manure. He will want to know what to do with that soil in order to grow the fodder from which the manure is made. We have found a good coat of lime on plowed sod well worked in oats and peas with fertilizer a good way to start. Then may come buckwheat and rye to be plowed under with corn to follow them. We know of cases where such land was started with lime, green crops and chemicals and finally worked into rich clover and dairy farm land.

A SHORT COURSE IN AGRICULTURE.

I DESIRE your advice on a question of policy for a young man. This young man is an orphan, 18 years of age, of good stock, has abounding health and strength, is intelligent, clean and steady as a clock. To the age of 15 he lived with his grandmother and aunt in the country; since then has worked for two farmers, this year getting $25 per month and board for the year, always giving satisfaction. He is saving his money and as "the call of the land" is in his veins, he is determined to make farming his life work. I had previously advised him to make the best farm hand he could and work by the year for the best practical farmers (or dairymen, as his tastes run that way) he could find—this as a means of getting his education. But I realize that just at this period of his life, a little special training might be better than all practice in shaping his career, and might make of him a broader man and far better farmer. He has been asking me about a short six-weeks course at Cornell this Winter, and I am at a loss what to advise him. It would mean the loss of nearly $50 in wages in addition to the necessary expenses of the course. He has only a good common school education, but is quick to learn. Now, in view of all the above, what would you advise this young man to do? C. W. V.

New York.

It all depends on the young man. Taking your statement of the case, and knowing nothing more about it, we feel inclined to advise this young man to take the short course at Cornell this Winter. He has adopted the ideal plan of working out as a hired man first—learning the practical side of farming and then building his education upon that. Too many young men work in the other direction—studying at college first and then trying to learn the practical. This plan is much harder than the other. One can graft agriculture upon farming much easier than he can work the reverse practice and use agriculture for the stock. This young man will get a good taste of scientific education in the six weeks and he will be able to decide whether it will pay him to go back and get more. What he gets at Cornell will be worth more than the money he will lose in wages. At the end of it all, however, it is "up to him." Our advice would be to try the short course.



ARTICLES MADE FROM HORSESHOES. FIG. 659.

FARMERS' CLUB

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see whether it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BEES AS POLLEN DISTRIBUTERS.

I HAVE noted some recent comments in THE R. N.-Y. relative to the agency of bees in the polination of orchand fruits and the consequent fruitfulness of the orchard. It is significant that those who have given the matter careful scientific study are practically unanimous on two points namely, that most varieties of orchard fruits require cross-pollination for best results, and that insects, and especially the honey-bee, are by far the most important agents of pollen distribution. The most extensive studies of orchard pollination have been carried on in the West, especially by Prof. Lewis, of the Oregon Experiment Station at Corvallis, who has shown that the pollen is not transmitted through the air to any appreciable extent, and that the great majority of varieties are self-sterile to their own pollen. He has also shown that self-fertile varieties are usually improved by cross-pollination, and that certain varieties are much better pollenizers than others.

My own observations, carried on in the State of Washington during the past three seasons, confirm in a general way the results obtained in Oregon, though there are many differences in detail, indicating that locality and surrounding conditions may influence the fertility of a variety. Furthermore, results differ slightly from season to season in the same locality. It would take too much space to describe specifically any of these experiments. Those interested should go to the original sources of information. I have no doubt that bulletins or circulars on orchard pollination may be obtained upon application to the Director of the Experiment Station at Corvallis, Oregon. My own observations had also been written up in the form of a bulletin which I understand is to be published by the Washington Experiment Station some time during the Winter or Spring. Persons desiring to receive a copy when issued should apply to the Station Director at Pullman, Wash.

New York. W. J. YOUNG.

A SLAT AND WIRE FENCE.

IN reply to A. H., page 1393, I wish to say he does not need any machine to build slat and wire fence, if he will stretch his wires by hand the entire length of fence needed and leave enough for the slats to take up, say 16 inches for every rod of fence. Use three double strands of 14-gauge wire, stretch, and staple tight every four rods; that is, stretch just what you can pull by hand and drive staple tight, then begin at corner, insert slat, and with wooden mallet drive slat up to post. Then take the next slat in one hand and with the other cross the wires once, beginning at top and slip slat down until even with the first one, and drive toward the first slat until you have the spacing the right size. Repeat as before only cross the wires back the other way. If the land is not humpy lay a short piece of board on ground under the slats, which will act as gauge to keep of uniform height. As soon as the fence is completed to the next post, staple at once; the slats will take up the slack wire very fast so that one has to give more slack. To do this take hold of wires about half way from last slat to where the wire is stapled; give a quick, outward jerk, and you will have the slack needed. Repeat as the slats take up the slack. One has to pull staple to allow one to pass with the weaving. It is well where the corners are to have an idle post set in line with fence and about 10 feet off from turn to staple wires to, which allows one to weave up to corner. After a person gets the hang of it he can build 20 rods or more a day, but let me say a few donts.

Don't use lath; they are too thin; use one-half by two inches of any timber handy.

Don't forget to brace the corners well as this fence catches lots of wind.

Don't use less than three double strands of wire; better use four and don't use this fence if you don't want big snow drifts but for a chicken fence or garden where you want to hold the snow it is the best fence yet. It is cheap, durable and looks well, and will turn any kind of stock if well erected, and also it can be made portable by simply twisting the ends of the wires tight when taking the fence down. It will roll up as easily as woven wire fence, and is as light as the same height of fence. G. L. HUEY.

Michigan.

THE FARM MANAGER PROBLEM.

I AM very much interested in the discussion you have opened as to a farm manager's guarantee to make his wages and a reasonable profit for the owner. I have long cherished an ambition something like this. I hope to retire some day with about $10,000 to invest. This I would like to put into a farm; hire a manager who would guarantee to make his wages and six per cent. on my investment, and allow no depreciation in the farm or its equipment. Incidentally I would like to build a home for myself on a corner of the farm and buy my produce from it at first cost. Is such an ambition possible of realization. I greatly appreciate effort to encourage such agreements between owners and managers. CHARLES R. LICHTE.

Pennsylvania.

I was particularly interested in a recent editorial regarding the relations between the city owner of the farm and his tenant. While there is, of course, much to be said on his side, I must confess that I side with the tenant as a result of my observations of the dealings between the two. In my country (Southern Pennsylvania and Maryland) as a rule, the city man buys a run-down property that has, in most cases a splendid view, or a historic house, etc. He then proceeds to lavish money in order to bring the land up quickly. The tenant then finds that most of his time is taken up with hauling fertilizers, etc., the planting of trees and beautifying the grounds. As a result he has very little time in which to do his regular farm work. Without consulting the tenant, the owner will order lime, or some fertilizer when the corn needs cultivation; the hay, cutting, and the wheat harvesting. Sometimes he will buy purebred cows or sheep and place them in the charge of a tenant who is inexperienced, or is only accustomed to caring for scrubs, and then wonders why disaster results. I know of an owner who had his patch where he was trying to get a stand of Alfalfa heavily fertilized with acid phosphate, against the tenants advice, and refusing to top-dress heavily with lime. He now very positively declares that Alfalfa will not succeed in his region. I know a number of young men who would be only too glad to have the opportunity that S. R. mentions in his letter on page 1344. He should have little or no trouble in getting one.

Pennsylvania. C. B. M.

As a farm manager I want to reply to S. R.'s query and editorial comment on page 1344. I believe it is a question of the profitability of his farm. Some city men, by inheritance or unwise purchase, own farming property on which it would be impossible for any man to make interest on investment and good wages for himself. The land may be poor, the buildings too expensive or farm too far from markets. However, the owner has farm on his hands and wants a manager who will do the best he can with it. He offers a good salary realizing that his returns are larger or rather, his loss is less with a good man than a poor one. Can you blame manager for taking such position in a salary, or can you expect him to guarantee a profit where none can be made? However, if farm is all right I would be willing to undertake management as he suggested, if he has good size, fertile land, good cows and convenient markets. Personally I would prefer some cash crops in addition to milk. Under these conditions I would prefer a good proposition on share of net proceeds to an unprofitable farm on a good salary. In former arrangement owner should get man in whom he has confidence and leave details of management to him. L. M. H.

On page 1344, S. R. asks: "Could men be found to take charge of a farm, stocked and machined, and guarantee to make their wages and a fair percentage for the owner?" You say, "Why not?" and so say we. I cannot speak for others, but if S. R. has a farm that has been stocked intelligently, and the soil is in good heart—not run down—with a fair per cent. of tillable land. I will undertake to make it pay a profit over and above all legitimate charges, my wages included, or will manage it for a share of the profits. Most competent farmers own their own farms, but occasionally one has gone to town, tied up his available capital, and when he desires to go back to the soil, cannot buy such a farm as he would be satisfied to cultivate or force his family to live on, and prefers to manage a good farm rather than own a poor one. There are business farmers and professional farmers. From the uniform losses of the city farmers, we surmise that many farm managers belong to the better class, alone. A combination of both brings the maximum of success.

Virginia. H. L. M.

Joseph G. Harrison, of Berlin, Md., widely known as a nurseryman, died December 14, aged 74.

Mr. Harrison was born in 1840 in lower Sussex County, Delaware. In 1883 he and his family moved to North Carolina, and there engaged in the lumber business. He came to Berlin, Md., in 1884 and engaged in fruit growing. He was one of the pioneer orchardists of the peninsula and developed the business to a high degree. Five years later he, with his two sons, Orlando and George A. Harrison, started a small nursery, which has been enlarged from year to year and now is known as Harrisons' Nurseries. For the past twelve years the active management of the business has been in the hands of his two sons, who will continue as heretofore.

COMING FARMERS' MEETINGS.

Farmers' Week, Pennsylvania State College, December 28, 1914, to January 2, 1915, State College, P. O., Penn.

Farmers' Week, New Jersey State College, New Brunswick, December 28-January 2. Rural Life Day, December 28; Soils and Crops Day, December 29; Livestock Day, Dec. 30; Boys' and Girls' Day, Dec. 30; Poultry Day, Dec. 31; Horticultural Day, Jan. 1; Nurserymen's Day, Jan. 2.

Winter short courses, University of Vermont, Burlington, Dec. 28, 1914, to February 26, 1915.

Farmers' Week, West Virginia Agricultural College, Morgantown, Jan. 4-9. Winter short courses open Jan. 4, and continue nine weeks.

Fruit Growers' Association annual meeting, Rochester, N. Y., Jan. 6-7-8, 1915.

January 9th to 15th, inclusive, 1915 Mid-Winter Exposition, State Fair Grounds, Columbus, Ohio, Corn, Apple, Dairy and Poultry Shows combined.

Annual farmers' short course, Purdue University, Lafayette, Ind., Jan. 11-15, 1915.

Massachusetts Fruit Growers' Association annual convention, Horticultural Hall Worcester, Mass., Jan. 13-14, 1915.

Co-operative Associations of the State of New York, second conference, Utica, January 13, 14, 15, 1915.

Virginia State Horticultural Society, nineteenth annual convention, Winchester, Va., January 13-14, 1915.

Georgia State Horticultural Society, Athens, annual meeting, Jan. 19-20.

New York State Agricultural Society 75th annual convention, the Capitol, Albany, N. Y., Jan. 20-21.

Vermont State Poultry Association, eighteenth exhibition, St. Albans, Jan. 19-22; secretary, M. D. Jarvis, St. Albans.

New York State School of Agriculture, Morrisville, Farmers' Week, Jan. 25-29.

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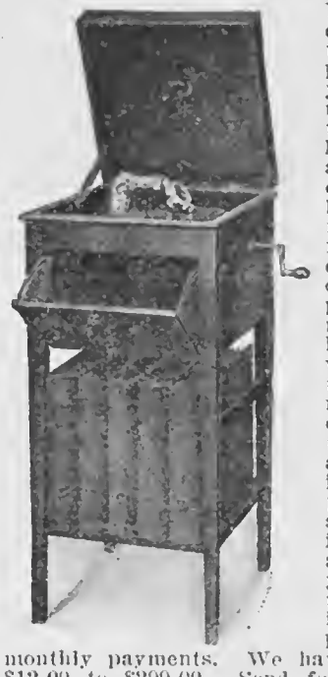

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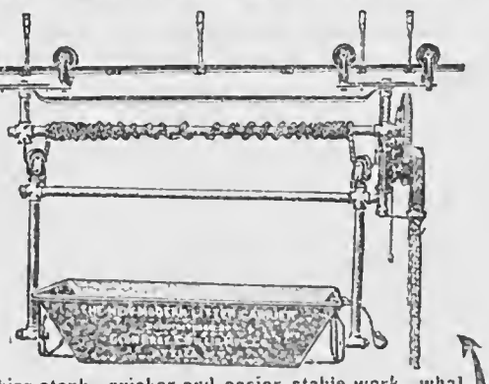

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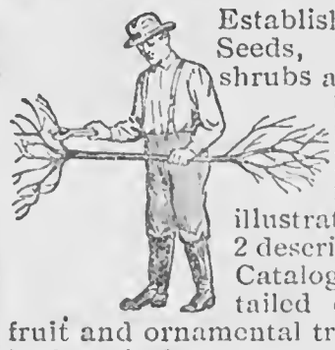

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Strawberries in November.

BY picking the blossoms off the vines of a third of an acre strawberry patch in Northern Michigan this year, the grower put back the picking of the fruit clear out of season, and sold his berries at a price far in advance of the season prices. After this kind of fruit disappeared from the market, the Michigan man picked nearly 800 quarts, and during the first three days of November he harvested and marketed a bushel of the most luscious berries ever brought to this market. They sold at 25 cents a quart basket wholesale. The patch is near Boyne City. This was accomplished from plants set out in May, and the blossoms were picked off until the last part of July. The accompanying picture, Fig. 660, shows the harvest going on in November, and a watermelon and a ripe pumpkin of this year are shown with crates of strawberries that have just been picked from the vines. W. F. Tindall was the grower. J. L. GRAFF.

A PATCH OF NOVEMBER STRAWBERRIES. FIG. 660

Greenhouse Propagation of Blackberries.

CAN blackberries be propagated at this time of year in a greenhouse from root cuttings, and if so what method would you use? B. T. H.

Blackberries can be very readily propagated from root cuttings in the greenhouse during the Winter months. The method of procedure is very simple; it consists in cutting the roots in pieces one and a half to two inches long, which may be forced into growth either in flats or the greenhouse bench. In either case, a depth of about two inches of good soil should be placed in the flat or bench, on which the root cuttings are placed in a thin layer and covered about one inch deep with good soil. If the root cuttings can be given mild bottom heat, the breaking into growth will be somewhat hastened; ordinarily it requires four to five weeks for top growth to appear. When the top growth is three or four inches high the plants should be potted off and carried along in mild heat until Spring, when they can be transferred to the open ground. Nurserymen frequently resort to greenhouse propagation of new and rare sorts, but very rarely propagate under glass the old varieties that sell at a low price. The root cuttings of these are made in the late Fall, packed in small boxes of sand and stored in a cool cellar until Spring, when they are scattered thinly in shallow trenches or furrows and covered about two inches deep. With good clean cultivation they will make good marketable plants by Fall, but not quite as strong as those started in the greenhouse during the Winter. K.

THE OHIO "CORN BOYS."

Their Visit to New York.

PART II.

A TRAVELED FARMER.—I approached a man whom I believed to be a neighbor back in Northeastern Ohio. He looked at me strangely but gave me his name, and I later learned much of interest about him. A farmer boy 45 years old is Charles Bates of Sandusky, Ohio. He has worked out on the farm by month and day all his life, and he just went along with the boys, to be a boy again. This is not his only trip, I was informed, for Mr. Bates out of his earnings has traveled around the world. The trip round the earth cost him over a thousand dollars of his earnings, and "it was worth it," he said.

A FARMER AND HIS TENANTS.—"A day with the corn boys will not be worth while until you see Colonel G. W. Brecount," one of the Commissioners of Agricultural Education said, and Secretary Sandles remarked. "He owns all the land around him." Colonel Brecount was seated on the upper deck of the big ferryboat, talking to one of his tenants. There were six of them on the trip and he paid their way, every cent, and it has paid him. Mr. Brecount was with the boys a year ago, and there was not a happier boy on the trip. The night of his return he invited the tenants and their wives to come in, this time after supper, for when the tenants come to supper in the Brecount home, the picnic and dishwashing last long in the evening. This occasion Mr. Brecount told first to the little folks the interesting things he saw on his trip, and after the little boys and girls were tucked away on the big beds in the Brecount house, the Colonel told of the great things which would interest his men. "You have treated my son and me pretty good," Mr. Brecount said, "and in 1914 I am going to take you all along." Mr. Brecount brought with him more corn boys and girls from Miami County than any other county, 79 boys and girls. Mr. Brecount not only finds time to manage his farms, but he is father not to one boy, but to corn boys and girls all over Miami County.

OTHER NOTABLES.—Arnett Rose, aged 17, of Allen County, Ohio, and twice champion corn grower was a center of admiration among the boys. Rose is a tall sturdy chap, nearly six feet in height, and Lima, Ohio, people gave him a beautiful gold medal for his yield of 153 bushels and 47 pounds of shelled corn to the acre. Merle May, a boy of 14 years, ranked second, with yield of 143 26-56 bushels an acre. Miss Hazel Thompson of Port William was one of the highly honored on the trip because of her leadership among Ohio girls in sewing, cooking, baking and preserving. The boys from the northern part of the State took particular pride in advertising the success of Harold Dester, who lives on the Lake Shore near Cleveland, and who raised 92 bushels of Pride of the North. Farmers in this section said it was not a corn country, but Harold has shown some of the older ones it can be. The men in charge of the excursion are well known in Ohio. Secretary A. P. Sandles is known as the man who brought the rainbow down in the Buckeye State; T. P. Riddle, prominent as a business man of northwestern Ohio, was the first to conceive of the trip. The trains were under the direction of Commissioners S. A. Harbourt, Cleveland, H. L. Goll, Swanton, J. R. Clark, Columbus, Lester H. Ivins, Lebanon, Mrs. J. E. Russell, Sidney, and Mr. W. E. Brecourt, Conover. It was after midnight when the last boy filed through the gates of the great Pennsylvania station in New York all happy in the thought, "I am now bound for Ohio." W. J.

Rental for Farm.

WILL you please advise me as to rent that should be paid on a farm of 75 acres? Eight good milch cows not over five years old are left on the place. Buildings are in good repair. The soil is a sandy gravel and is quite deep. The farm is well kept up and good crops have been harvested. The milk is to be sent to a cheese factory, two miles away. The place is three miles from railroad station. I have to pay water rent and school tax which amounted to $29 this year. C. A. R.
Niagara Co., N. Y.

This question was submitted to a number of farmers in Western New York. They made various estimates regarding the proper rent. These estimates run from $250 to $300 per year, with a fair average of about $275. Farmers generally have difficulty in figuring a cash rental, as most of the farms are rented apparently on shares as a general practice.

"I THOUGHT you told me that this would be a paying investment," grumbled the customer, as he handed over another assessment. "Well," replied the promoter, "you are paying, aren't you?"—Cincinnati Enquirer.

Ground Limestone 50c Per Ton

The day of cheaper lime is here. No need to let your soil stay sick and sour because of the lack of lime if you have lime rock available. No need to let acid land keep you from growing clover or alfalfa. With a Jeffrey Lime Pulver you can grind lime-rock right on your farm at a cost of 50c per ton! This does not include quarrying cost, which varies, but in some sections is almost nothing. Ground limestone is better than burnt lime. It doesn't burn up the humus or waste the Nitrogen in the soil.

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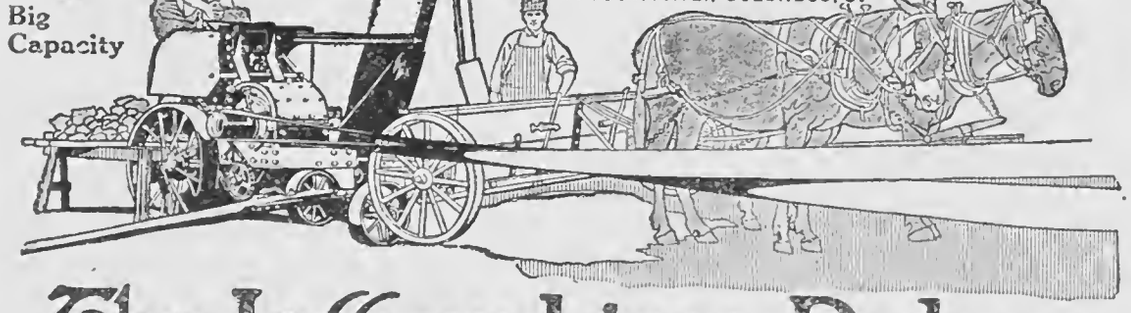
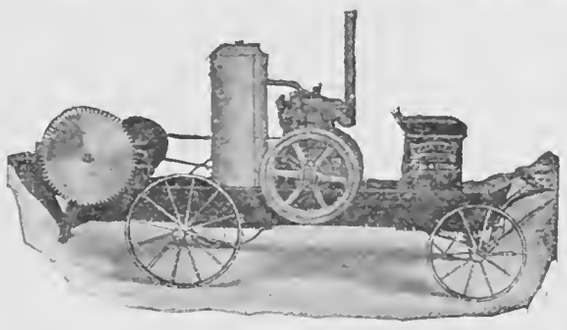


The Jeffrey Lime-Pulver



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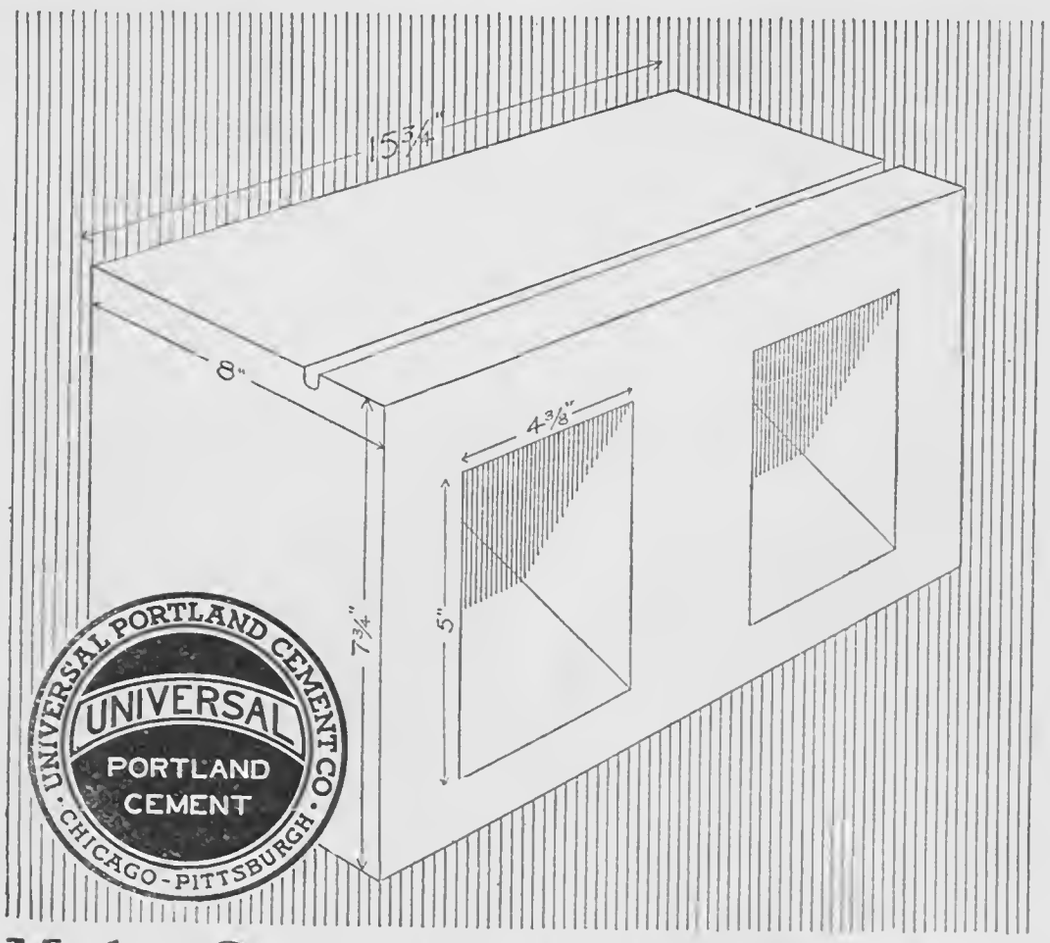

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Your spare time for the next few months may be used in making concrete blocks for a corncrib. You can make the blocks during the winter and build the crib later. By using care you can do concrete work in cold weather.

Every farmer is invited to write us. We will be glad to send free of charge, instructions for making a simple mold for corn crib blocks and instructions for doing concrete work in cold weather. Make your spare time this winter count for something. In cement work of any kind use—

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EVENTS OF THE WEEK.

DOMESTIC.—The New York Stock Exchange opened Dec. 12, after being closed for 19 weeks. The bidding was aggressive and there was an average advance over prices of July 30 of from 6 to 15 points, some stocks showing an increase of 20 to 25 points.

Seven persons were killed and nine injured by a blast of gas which rocked the entire west end of Cleveland, O., Dec. 14, and wrecked a two-story brick apartment and business block. Three families were practically wiped out of existence. The force of the explosion was such that the bodies of the victims were so mutilated that identification was a slow process. The explosion is believed to have resulted from an accumulation of gas from a leaky pipe in the basement.

Dec. 14 conditions at Naco, Ariz., were causing much uneasiness, as Mexican bullets continued to fly across the border. The announcement that Gen. Hill, commanding the Carranzista troops, which hold Naco, Sonora, had received two three-inch field pieces, sent him through the Carranza junta in Washington, has caused an inquiry to be made regarding the extent that arms are now being sent across the border. Although the embargo on arms was never replaced, at a number of customs points officials have simply held up arms and ammunition "pending inquiry."

Fire started Dec. 14 in a large theatre at Wilmington, Del., spreading to other buildings in the business section. Damage amounts to $100,000.

Indictments charging conspiracy to defraud by use of the mails by the sale of fire insurance in fake companies, chartered in Delaware, were found Dec. 15 at Wilmington, Del., by the United States Grand Jury against ex-United States Senator Richard R. Kenney and ex-State Senator Daniel M. Ridgeley, both of Dover, Del.; Frank W. Anthony, Dorchester road, Brooklyn; his son, Claire Webster Authony, 320 Broadway, New York; Harry A. Woodcock, 95 William street, New York; R. Frederic Brennen, of Brooklyn, and Benjamin D. Jacobs, alias Berka Donnell Jacobs, 195 West 109th street, New York. The two Anthonys and Woodcock, through ex-Senator Kenney, their attorney, formed these fake companies: Home Fire Insurance Company, American Fire Insurance Company, Mercantile Fire and Marine Insurance Company and Equitable Fire Insurance Company. The latter had its office here; the three others had headquarters at Dover. Dummy officers and directors were elected, says the indictment. The cases will be called in January. Brennen and Frank W. Anthony are now under $5,000 bail each in New York on this charge. The others have not been apprehended. The promoters, it is said, realized over $100,000 by their operations. Brennen and the two Anthonys, it is said, have served terms at Sing Sing and elsewhere for insurance and other frauds. Ex-Senator Kenney was tried twice in the Federal court at Wilmington in 1897 for alleged complicity with William N. Boggs, paying teller of the First National Bank, Dover, Del., in the embezzlement of $107,000 of the bank's funds. This was when Kenney was Senator. The jury disagreed both times. When the case was called the third time it was nolle prossed.

Seven buildings, a lighter and the barge Valentine were destroyed, Dec. 16, by a fire that started in the shops of McAllister Bros., ship builders, in West New Brighton, Staten Island. The damage is estimated at from $75,000 to $100,000.

THE EUROPEAN WAR.—Reports from Dover tell of an attempt of German submarines to raid that port Dec. 10; guns in the forts are said to have sunk one or more of the vessels.....The Turkish battleship Messudiyeh was torpedoed and sunk by a British submarine in the Dardanelles Dec. 13. The submarine was the B-11. In accomplishing the feat the little vessel dived under five rows of mines. After launching the torpedo which struck the Turkish warship the submarine escaped in spite of fire from the forts and pursuing torpedo boats.....The German cruiser Cormerant is interned for the war period at Guam by the U. S. authorities. .....The German cruiser Dresden left Punta Arenas in the Strait of Magellan. The British cruiser Bristol left also apparently in pursuit.....An official inquiry into the destruction of the British battleship Bulwark at Sheerness, on November 26, shows that the vessel was blown up by an accidental explosion of her magazine.....Dec. 16 a German fleet raided the English coast during a fog, bombarded the cities of Scarborough, Hartlepool and Whitby, on the Yorkshire coast, 310 miles from Helgoland, killed over 74 civilians and soldiers and wounded hundreds, destroyed an immense amount of property and escaped to sea. Men, women and children, of the civilian population, were left dead or wounded, struck without warning while at breakfast or at work. In all, the casualty list totals 224, according to the official estimates, of whom 74 are known to be dead. Three churches were damaged; the gas works and lumber yards at Hartlepool were set afire, and the abbey at Whitby was struck. One church was struck twice during an early communion service. Whitby and Scarborough are both unfortified seaside resorts. This operation of the Germans again brings up The Hague rule regarding the bombardment of undefended towns. Such bombardments are absolutely forbidden by The Hague conventions. Germany, France, Great Britain, Russia, Austria-Hungary, Servia and Turkey all signed these conventions.....Dec. 13-17 the Allies continued to advance in Flanders, having resumed a general offensive movement. Violent fighting has continued in the vicinity of Ypres and Nieuport. French gains are reported in the Argonne and in Alsace, except at Steinbach, where German success was reported.....Reports from Petrograd say that the Russians have won a heavy cavalry engagement southeast of Mlava, and that the Germans are in full retreat on their frontier. The latest official Russian report announces a successful completion of the operations around Mlava, and asserts that the Germans are in retreat. The news from the centre in Poland indicates that the German armies at Lodz and Lowiscz are at a standstill. Germany says of the situation in Poland that the operations in the north are taking their normal course and that there is nothing to report from East Prussia and from southern Poland.....Dec. 14 the Servians recaptured Belgrade after it had been held by the Austrians for 12 days

FARM AND GARDEN.—After due consideration it has been decided to hold the annual farmers' short course at Purdue University, Lafayette, Ind., January 11-15. It had practically been decided to abandon the idea this year on account of the foot and mouth disease. Conditions have improved to such an extent that the faculty have decided to arrange for the farmers' school as usual. One of the most important meetings of the week will be the session of the Indiana Corn Growers' Association. The meetings of the Indiana Dairy Association, Indiana Livestock Breeders' Association, Indiana Poultry Association and the Federation of Agricultural Associations will also be held during the week. One of the greatest features of the week will be Annual Corn Show, held in connection with the Corn Growers' Association.

During the past year the Agricultural Extension Department of the West Virginia College of Agriculture, Morgantown, has tried out the experiment of bringing the rural schools into closer sympathy with the life and interests of the local community, by providing a few district supervisors with funds to carry on community work on Saturdays and throughout the Summer vacation. This work has usually taken the form of corn club work with the boys' tomato growing and canning with the girls, and general community meetings for all.

The New York State School of Agriculture at Morrisville, N. Y., is to stage its best poultry show in connection with the fifth annual farmers' week January 26 to 29. The short course in poultry husbandry will be in session at the same time. This is a six weeks course, beginning January 4. The students will be seen carrying on the work of the poultry plant, such as managing the layers and breeders, killing and dressing roasters and capons, running the incubators, and doing other kinds of, practical work which is a major part of the short course.

The annual meeting of the Georgia State Horticultural Society, at Athens, Ga., Jan. 19-20, will be followed immediately by a meeting of the Georgia Apple Growers' Association.

The twelfth annual meeting of the South Dakota Improved Live Stock and Poultry Breeders' Association will be held in Mitchell the last week in January. The object of this convention is the betterment of live stock and poultry of all kinds within the State. It is the largest of its kind and probably there is more good done during this week for the production of new wealth in South Dakota than through any other association in the State. Fifty or sixty breeders combine and hold a two days' sale. Each man is allowed but a few head in the sale, and the total number to be sold is limited so as to afford each contributor sufficient time to make a few remarks if desired at the ringside. The State provides a large, commodious building, with a heated and electric lighted and comfortably seated sale pavilion. The program will begin on Tuesday evening, January 26, this year. On Wednesday evening a joint program will be held with the Corn and Grain Growers and the State Poultry Breeders' Associations.

A fight was begun before United States Commissioner Matteson, at Providence, R. I., Dec. 16, to prevent the commitment of Col. Frank W. Tillinghast, head of the Republican forces of Rhode Island; Leonard L. Barber and Samuel A. Fenner under the indictments found in New York for conspiracy to defraud the Government out of $500,000 taxes on alleged artificially colored oleomargarine. They were indicted at Providence and their plant was closed. Change of jurisdiction is being fought because of the alleged hardship it would impose on the accused men. Judge Brown reserved decision.

Assistant Secretary Byron R. Newton of the Treasury Department, has given the city authorities of Dallas, Tex., permission to use Federal property there for a free open market. The site is vacant property owned by the Government as site for a new Federal building. The site comprises an entire city square, and is situated near the principal residence section of the city, giving it an ideal location for market purposes. It was purchased by the Government a year ago for $250,000, and in the ordinary procedure would remain unoccupied until the Government is prepared to erect a building there several years hence. In granting permission to the Mayor and council of Dallas to use the site for market purposes it was stipulated that the market should be free and that the city should maintain proper police control of the place and keep it in sanitary condition.

SECRETARY HOUSTON'S REPORT.—In his annual report submitted to the President Dec. 10, the Secretary of Agriculture takes the position in discussing rural credits that there is no emergency which justifies government assistance to farmers directly through the use of government cash or credit. His statement was regarded as indicating the policy of the administration. Secretary Houston points out that the new bank law "takes just and particular knowledge of the farmers' requirements." He suggests that any credit needs of the agricultural community beyond those cared for under the Federal reserve law should be cared for by a system of "co-operative credit associations," financed with private funds, by means of which the combined credit of farming communities could be utilized, and by a system of land mortgage banks, also privately capitalized. In advocating a land mortgage banking system and a system of co-operative credit associations, the report asserts that the use of the funds loaned for productive purposes on the farms covered by the mortgages should be insisted upon. Mr. Houston's report reviews the investigation of the marketing and distribution system, and says that while the study is not sufficiently finished to admit of final conclusions the work thus far shows the need of a reorganization of the distribution process. Secretary Houston asks Congress for an additional emergency appropriation of several million dollars on account of the recent outbreak of the foot and mouth disease among cattle. "The interests at stake are vast," he says, "and justify any reasonable expenditure." The secretary recommends consideration of legislation to establish a permissive warehousing system for grain and cotton. He points out that the warehouse facilities for cotton in the South are not centralized. While the production of grain generally showed a great increase in the crop of 1914, the report points out the production of corn showed no advance, and the meat production showed a distinct decline. The secretary urges farmers to diversify their products, and especially to produce beef, swine and poultry, at least for home consumption.

AN Indian missionary, a visitor to New York, says that an Irish waiter at his hotel became rather confidential one day when things were unusually quiet. "He told me," says the missionary, "that in three years he hoped to return to the Emerald Isle and end his days in peace on the little farm that he was able to call his own—in extent about sixteen acres. Then he went on, 'Besides, yer Riv-rince, I want to go to heaven when I die, and that is impossible from New York.'"—New York Evening Post.

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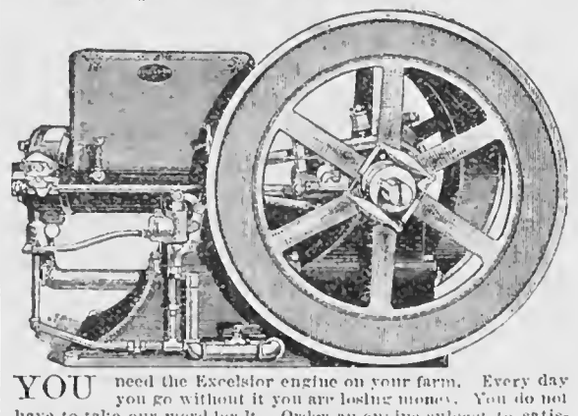

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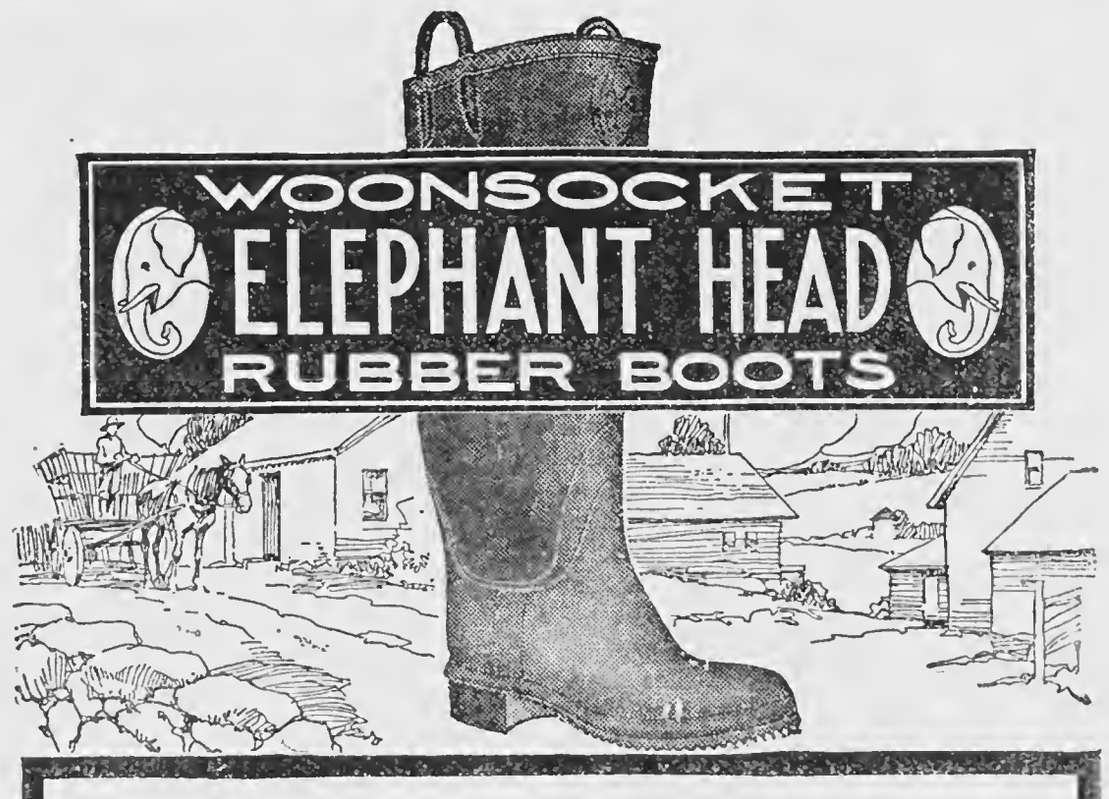

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Soil Fertility Questions

Corncobs as Fertilizer.

ARE broken corn cobs used as a fertilizer of any value to the soil? If so for what crop, and how should they be applied? E. J. E.
Lancaster, Pa.

A ton of corncobs contains eight pounds of nitrogen, two pounds of phosphoric acid and nine pounds of potash—a little less nitrogen than stable manure. This plant food will not be of any use to plants until the cobs decay. Broken cobs would remain in the soil for a year or more without feeding crops, and are thus of little value as a fertilizer. The broken cobs would absorb considerable stable liquids or make a good mulch for fruit trees, but they are too slow to serve as manure.

Lime and Cover Crop.

I AM not a disciple of the theory that lime in some form is a panacea for all or most of the unproductiveness of New England soils. The constant decrease in the average production per acre of the newer lands of the West is not owing to the exhaustion of lime in these soils, but to the rapid waste of humus, with which the soils were originally fully stored. The same is true of the older soils of the Eastern States. Too many farmers are still trying the foolish experiment of producing something from nothing, a practice upon which nature has placed her everlasting embargo.
Connecticut. L. P. C.

R. N.-Y.—That last sentence is everlastingly true. You must remember, however, that in some cases you cannot hope to put humus into the soil at reasonable cost unless you use lime to start manurial crops. We have learned this in trying to build up a tough, hillside soil.

Commercial Value of Manure.

WHAT is chicken manure worth per ton, and what is the best place to dispose of about two tons a week? Is chicken manure, scraped from dropp'ng boards on which lime has been sprinkled, as good as that without lime?
White Haven, Pa. A. C. F.

In most localities the value of chicken manure is comparative, like that of silage. In the case of silage the fairest way is to figure that it is worth, ton for ton, about 30 per cent. of the price charged for hay in the mow. That seems to be the fairest way of estimating its value. In the case of chicken manure, fresh from under the perches, and without too much litter or feathers, it is safe to figure on a value of from three to four times as much as the local prices of stable manure. In most cases it is fairer to figure this way than to estimate the value of plant food which it is thought to contain. On this valuation in our own section such chicken manure would be worth $8 to $10 per ton, but in places where stable manure would bring only a dollar a ton, the chicken manure would be worth between $4 and $5 comparatively, unless you could find some one who would buy it on analysis. Do not under any circumstances whatever use lime or wood ashes on this manure. We have repeatedly given the facts about this. The lime in slaked lime and wood ashes will set free the ammonia in the fresh manure, and in this way you will lose at least one-third of its plant food value. Land plaster, ground phosphate rock, coal ashes or road dust will dry out the manure without loss, but never use lime or wood ashes. The only probable sale for the chicken manure would be to some local farmer or gardener. Why not advertise in a local paper?

Chicken Manure for Alfalfa.

I OWN 160 acres best bottom land, 90 acres in Alfalfa; will produce in ordinary seasons five tons hay per acre. I am getting four or five tons of fresh chicken manure a week delivered free of charge. How should I use this manure? Will it injure the Alfalfa? How much should I spread per acre, and what value is this manure to me, if any? J. A. C.
Winfield, Kan.

In most locations on the Atlantic Coast this manure would be worth $8 to $10 per ton. It is valuable chiefly for its nitrogen. This is the element which the Alfalfa least needs, since it can obtain nitrogen from the air. The chicken manure will stimulate its growth and somewhat increase the yield. When used in the East chicken manure is used mostly on corn or on garden and truck crops when mixed with chemicals. You can use two tons of chicken manure to the acre. If your manure spreader can be gauged to distribute this amount per acre use it. Or you can mix it with two or three times its weight of good soil or dry swamp muck and then distribute. Your Alfalfa will probably need potash and phosphoric acid with the manure. Can you not obtain corn-cob ashes? These are very rich in potash, and if you could use half a ton of the ashes per acre, not with the manure, but separately, you would have a good fertilizer.

Hen Manure for Potatoes.

IS chicken manure good for potatoes? If so, is it better to manure the land where they are to be planted, now in the Fall or in the Spring? F. M.
Connecticut.

Chicken manure is good for any crop. As it is rich in nitrogen it will give best results on these crops which produce mostly above ground—like corn, cabbage or grass. When used for potatoes it would be better to dry and crush the manure fine and mix with chemicals and then use like any fertilizer. Some growers plant the potatoes and drop a handful of the manure on each hill—hoeing it in. We would rather store the manure in a dry place over Winter and use in Spring.

Value of Wood Ashes.

WHAT are hardwood ashes worth a bushel or barrel for fertilizer; also soft-wood ashes? I wish to buy them from my neighbors and furnish each with a barrel to save them in.
New York. C. E. W.

Do not buy plant food by the barrel until you weigh several packages. Figure by the pound. The ton of average hardwood ashes will contain 100 pounds of potash, worth $5, 35 pounds of phosphoric acid, worth $1.75, and 500 pounds of lime, varying in value. The soft-wood ashes will be worth about 80 per cent. of this. Ashes from the average stove or furnace will contain some coal ashes and sand, which reduces their value. Usually a bushel of ashes weighs 40 pounds. Allowing for leaking and waste it is worth about eight cents.

A "Misfit Tree" Case.

I FIND this clipping in a local paper:

"Albion, Nov. 24.—The jury in the action of Watson H. Whipple, of Medina, against the Brown Brothers' Nursery company, of Rochester, returned a verdict at 9:15 last night, awarding a judgment of $405 to the plaintiff. The action was to recover $1,750 damages as a result of having purchased a quantity of peach trees of standard varieties, which, it was charged, proved not true to name."

Can you give us any further particulars about this? J. L.

Here is a statement of the case from the lawyer who tried it for Mr. Whipple:

The amount involved in this action is not so important as the fact that it discloses the position which the nurserymen are going to take in respect to the thousands upon thousands of trees which they have sold throughout this country and which have proven untrue to name. Mr. Whipple is a highly respected man here, and has the confidence of all concerned. Brown Bros. Co. was considered a responsible concern. In the Fall of 1909, Brown Bros. sent a man here by the name of Mull, of good personal appearance and taking manners, who succeeded in selling trees to friends of Mr. Whipple's. Believing that everything was open and above board, Mr. Whipple made a verbal agreement with him to buy his trees. Shortly afterwards, toward evening, he drove to Mr. Whipple's place in great haste, and presented an order to him to sign, stating that the company would not ship the trees on account of having so many orders, unless they had a written order specifying the kinds, to go by. Mr. Whipple, who did not have his glasses with him at the time, took Mr. Mull's statement about the order and signed it.

We brought our action upon the verbal contract which was the real contract, and when shown the paper which he signed, Mr. Whipple testified that his signature to it was secured by fraudulent representation. When the court permitted that question to go to the jury, they then set up the defense that Mr. Mull was only their agent to take orders upon a special order blank and that these orders must be approved by them. In other words, they had turned out upon the community a man whom they had held out as their agent, for the purpose of selling trees, but who, by some secret understanding with them, could only sell their trees upon an order which deprived any man who purchased their trees of any relief in case they proved untrue to name. This also did not work, and the case was submitted to the jury, which found a verdict in favor of the plaintiff.

This order contained the following clause: "Any stock which does not prove to be true to name as labeled, is to be replaced free or purchase price refunded, *but is not further warranted*," in fine print, so fine that an ordinary person could not read it without having the best of light and examining it very closely. At the top of it in large letters was printed the word "ORDER," from which a casual observer would think that it was simply an order to ship certain numbers of articles without any further provision.

The words "Not further warranted" were inserted in this order to cover the decision in Sanford vs. Brown Brothers Co., 119 Supp. 333.

In spite of the position taken by the defendant the plaintiff was successful. There are hundreds and thousands of these trees untrue to name sold throughout this fruit section. Mr. Brown himself on the stand testified that there was not a single tree in this orchard of Mr. Whipple's of the kind purchased by him. After spending five years of his life in cultivating, phosphating and caring for these trees, plaintiff finds himself with a worthless orchard upon his hands.

LEON M. SHERWOOD.

WEATHER AND CROPS.

We are having the longest spell of stormy weather I can recollect for this climate. No cold weather yet to amount to anything. Had fine lettuce from the open garden to-day for dinner, and have not touched that in the frames yet. Salsify is growing faster now than it did in the dry weather of early Fall, and the spinach is rank, and the late-sown spinach intended for Spring cutting is almost large enough to cut now. But with the heavy mulch of stable manure it will go through all right I suppose.
Maryland. W. F. MASSEY.

Dec. 1. The figures given are just what the farmers are receiving at wholesale here. Apples, No. 1, 75c. per bu.; poultry, live, 10 to 12; hogs, live, 5; beef, live, 5; wheat, best, $1.09; corn, 65; oats, 50 at elevators; potatoes, 40; onions, 60. C. D. R.
Battle Creek, Mich.

Nov. 30. Berries are the main thing here. Strawberries and grapes go out through our Fruit Growers' Association; strawberries, 8434 cents per 16-quart case; grapes, five cents per eight-pound basket. This is net all expenses, packages, etc., being deducted. Raspberries, $1.25 per 25-pint case; black raspberries, $1 per 16-quart case; blackberries and dewberries, $1 per 16-quart case, all net, the canners furnishing the cases. We do a little better by contracting these at the cannery. In shipping we receive all the way from $1.10 to $3, after cases, express, "cartage," "moldy"; our average on the season does not do as well. Our eggs we ship to customers in Chicago, four dozen by parcel post, 12 dozen by express; price per dozen from 25 to 40 cents, according to the season, we paying the express. Butter from 25 to 35 here at the store; we ship in cold weather, paying the express, 40 per pound. Hay, $16; corn, 62; rye, 95; wheat, $1.05; oats, 42. This is to each other, none being raised to ship out. Good cows from $60 to $100, and scarce; horses from $150 to $250. Dressed hogs generally brng 10 cents per pound; this year, 6½ to 8; hogs and poultry very cheap, the home butchers taking advantage of this strict quarantine which we are under at the present time.
Bridgman, Mich. N. S. W.

Potatoes were a good crop and sell at 50 cents per bushel in a small way; a large part not sold, no buyers in large lots. Apples were a big crop. Grafted apples sold at all prices from $1 per barrel to $2.50 in a small way; have just sold 20 barrels at $1.50 per barrel on car. Many in first hands and no sale. Cider apples sold for 20 cents per 100 pounds, and 18 cents per 100 pounds at mill or car. Thousands of bushels were left to rot, no sale, and could not pay $1.75 per day to pick them. Hay about $15 at barn and $20 baled. Beef, $9; dressed native not a large amount to be had. Cows, $40 to $75 as to size and quality. Pork, 11½c. dressed; fowls, 12; chicks, 13 to 14 alive. Cornmeal, $1.75 per cwt. Taxes, $2 on $100 of grand list. The high cost of living ought not to be considered high only on pork and beef. Butter, 35. J. H. A.
Cavendish, Vt.

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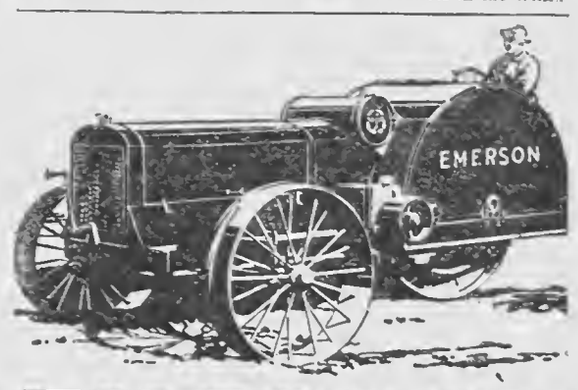

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Hope Farm Notes

REPEATING STRAWBERRIES.—A new reader wants to know if it is true that we raised strawberries, grew potatoes and planted a new lot of berry plants on the same ground in one season. It is, and we see nothing remarkable about it. The strawberry field had been fruited five years. There was a fair crop, but so many weeds had worked in that it did not seem profitable to clean it. So, after picking, the field was plowed, turning the great mass of weeds and vines under. The potatoes were planted by hand—putting the seed pieces right down into the mass of green stuff beneath the surface. These potatoes gave us a fair crop. They were dug in early October. As soon as they were out the soil was dug up with the Cutaway harrow, tilted well, and strong layer plants were set out. They have rooted well and look now as if they would Winter and give us a small crop next year, and go on for three or four years more. There is nothing very remarkable about it. Some gardeners would have grown lettuce between the rows of potatoes and then would have had spinach now growing between the rows of strawberries.

HORSE OR MOTOR.—"I am about to purchase a small farm, and as I must commute to and from the city, I need a conveyance to get to and from railroad station. The question is whether to buy an auto or a horse and rig, the initial cost of auto not to exceed the prime cost of horse and rig. The main use of the farm is for poultry, so that the use of a horse on farm is limited. What is the proper thing to do in this case?"

New York. M. L.

I have never owned a car. Whenever the weather is fit I walk, as I need exercise more than being carried. I think it would depend on a number of things. Are your roads good? On bad roads the horse will get through better. On good roads the car will prove very satisfactory. Do you naturally love a horse? Some people do, and are most happy when driving or caring for him. If a man has real affection for a horse it would be well for him to own one. From your statement I should judge that the car would be more satisfactory. It is a form of slavery to take care of a horse. He must be fed and watered and cleaned and watched, doctored, harnessed and unharnessed, and this is a heavy tax upon a man who does not naturally care much for the beast. Of course, there are objections to the car, and it would be easy to name them, but on the whole I think it would suit your conditions best.

BELGIAN EMIGRANTS.—I have read a great deal about how the American people were going to manage the affairs of the poor Belgians, and about the only sensible one, and the best I have so far run across was the remarks of the Hope Farm man on page 1418; at least, it agrees with my ideas exactly. I would be glad to see a Belgian emigration to this section, but they are not coming. A people that will fight to a finish for their country are going back to it. I have seen it. The people here did not desert the South after the Civil War, when it was bankrupt and in a state of chaos; they went to work to rebuild it and lived on husks and sweat. What they did or did without is known only to themselves, as they did not look for sympathy or ask charity. The Belgians are going to do the same thing, and few will leave, and they will do it quicker, for they will not have to contend with reconstruction and freed slaves, so they will have their job much simplified. What is left of them will have only the devastation of war to contend with, uncomplicated with other problems. I do not look on the Belgians as objects of charity at all, but as entitled to the same assistance as the crew of a wrecked vessel; they need their wants for necessities supplied simply because they cannot supply them under existing conditions, and I think you have hit the nail right square on the head. Belgium is their home and they have fought for it and are going to rebuild it and occupy it again. MARSENA A. PARKER.

Alabama.

Needless to say that expresses my views on the subject. I have observed that some very good people seem to think charity gives them the right to boss those who are to be helped. That takes the heart out of charity. Those who are unfortunate need help, but it should not be rubbed into them. This idea of bringing the Belgian children here, whether their people want them to come or not, does not suit me. I know much about separating children from their people—from personal experience and otherwise. Let us help the Belgian people in their bitter trouble, but encourage them to go back to their own country and rebuild it. I know that what Mr. Parker says about the South is true. After it is all over I do not think any other class of people could have done better work.

ABOUT FEASTING.—Here is a friend who sends me what he calls "a bit of profound wisdom" as a New Year's suggestion:

"Fools make feasts and wise men eat them."—Franklin.

Not always. I have attended some feasts which were prepared by very wise men and women. They were eaten by more or less foolish people. The man of mature years does not show his wisdom by eating his way through a feast. He would be wise if he nibbled a little of it and let the rest go. My judgment would be that 80 per cent. of the people I know eat too much—more than they need and more than is good for them. Of course, I realize that it is not a very popular thing to tell a man he eats too much, and I do not expect many converts to this theory for 1915. If people would only suit their eating to their work or exercise they would be better off, but the habit once formed is hard to break off. For when you come right down to it, eating is a habit rather than the act of supplying a necessity.

MULCHING RASPBERRIES; COAL ASHES.—"I put some well-rotted manure around my red raspberry bushes. An old farmer told me that it would kill them. Part of my garden gets very hard in dry weather. I was going to put sifted hard coal ashes on, and he told me I would make it harder by doing so. Is this true?

New York. E. M. L.

I do not like to put such manure up close around bushes or trees. In warm spells of Winter or Fall I have had some trouble with injuring the bark, and mice also work under it. I would put such manure out several inches away from the bush or tree. Coal ashes are good to pile close around the bush or tree trunk. Sifted coal ashes have helped some of our hard soils by opening or mellowing them. They are not as good as lime or wood ashes for this work, but they help us by opening the soil.

PEACH VARIETIES.—A farmer who lives some six miles from us asked for a selection of peach varieties. After looking up the catalogues he names the following—to be cut down to eight varieties: Mayflower, Red Bird, Arp Beauty, Alton, Hiley, Belle of Georgia, Elrose, Champion, J. H. Hale, Illinois, Niagara, Krummel's October. Then he says:

"You will notice that I did not include any such well-known varieties as Carman, Crawford, Elberta, etc., standards in the neighborhood, because the catalogues describe the varieties chosen in their place, as far superior in quality, size and hardiness. What is your opinion about it?"

I stick to old friends. I have found nothing better than Carman for its season. Mountain Rose does well with us, also Crawford and Salway. Niagara is good, though not a heavy bearer, and Belle of Georgia is excellent, though you do not want too many white peaches. My personal opinion is that J. H. Hale is to replace Elberta. As for buying varieties on the strength of what the catalogues tell you—I thank you, no. It is well to experiment with a few of the new ones, but take my advice and stick to the old reliable varieties which business-like growers plant in your locality. If you were buying clothing, or hardware or anything else which you use in your regular trade, would you take just what the sellers told you without question?

H. W. C.

A PROBLEM IN SWAMP DRAINAGE.

CAN you tell me at what depth tiles should be laid to drain muck land? I have in taking up tile at a little over three feet found living grass roots in them, but this might have been caused by channels made by surface water entering the points from the top soils. In one instance I have found tiles nearly choked by grass roots at a depth of 18 inches. This was a six-inch tile with constantly flowing water. Can you tell me of a plan for draining muck land where the bottom of the trenches to receive the tile is so soft by the time the earth is removed that the soil is puddled, making the tile uneven when laid? Such soils usually have so little incline that tile is of questionable utility when complete. I have thought of a plan of laying tiles in open trenches uncovered for a year, or until a time when the permanent trenches could be prepared alongside with a reasonable certainty of securing a bottom sufficiently hard to get a perfectly smooth surface, solid enough to hold the tiles from tilting up and down. Again, the contour of my land is such that in places the main line of six or eight-inch tile would have to be shallow. I have thought of the plan of placing stones over and around the tile to prevent grass roots from getting a start, but am not sure of the success of the plan, or the tile could be covered with a raised ridge, but as water, sufficient to run a sawmill, courses through during the time of melting snow this plan might not work, as the surplus water might wear away the soil. Is there danger of getting the joints so close, especially in puddled soils, as to prevent the water from entering the joints? I fear this is the case with some of mine, as water stands in holes I have dug as close as three feet to the tiles, and within eight inches of the top. How can I remedy this without relaying the tiles? Is there any advantage in using vitrified sewer pipe over one foot lengths of land tile? I have used sewer pipe in puddled muck land to some extent, so as to insure continuous joints. In exposed situations with little covering is land tile hard enough to prevent breaking and crumbling by frost? I. L. W.

Gardiner, Me.

In all such cases boards should be used in the bottom to lay the tiles on. The longer these boards are the better, as there are less joints. The drain tile length of 12 inches is preferable to any other. A joint between two tiles should never come at a point where the ends of the boards meet. For six and eight-inch tiles a six-inch width of board should be used. An eight-inch would be better. Narrower strips of boards will answer for the smaller sizes of tiles in the laterals. Boards in that character of soil will last almost indefinitely. Never put stones, clay, sand or muck over the top of the tiles, but rather use cinders, damp coal ashes or loam (gravelly loam preferred) to a depth of six or eight inches. A uniform grade should be established where the percentage of grade is low. Three inches fall to the hundred feet will answer, but more is better. As to root growths entering and obstructing the tiles, this sometimes occurs where there is constantly running water in the line, but seldom where the work is properly done and the land is under cultivation. In draining such lands there must necessarily be places where the depth of the drain will be more than in others; 18 inches in a low spot ought to work all right, but in such places after filling in around and over the tiles a board should be placed on the top of the tile to prevent the displacement when the ground is soft. Now as to the erosion caused by the current of the Spring run-off. If this occurs near the outlet, as it often does, a dam or ridge of rocks and stones placed at such a point will allow the water to flow through and over, but will hold back the soil that washes down with the current, until it will fill in and level up that shallow area, thereby giving the drain the proper depth. If this occur along the line farther back in the field a temporary obstruction can be placed at the lower side of the shallow place. This can be made with fine brush, cornstalks or even straw, with a few rocks or large stones to hold it in place, and perhaps some stakes. If the current can be turned aside and around such a spot it is better than to have it following the line of the drain. There is no danger of tile crumbling by frost action where the hard-burned Ohio shale tiles are used. They are hectagonal as to outer surface, and are non-porous. If you cannot get this tile, a hard-burned thin-walled clay tile will answer, but it must be free from lime and impurities, which cause the crumbling where freezing and thawing occurs. Laying the tiles in open temporary trenches would, I believe, be a waste of time. In laying tiles in any soil, I always place the joints as close together as possible. You cannot keep the water out of a tile drain. There are little leaks in the roof every 12 inches, and the water is bound to enter unless clay has been placed over the joints to seal them up. There is some spice in overcoming difficulties, and these are often encountered in drainage work. HENRY E. COX.

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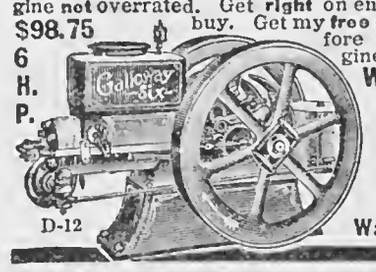

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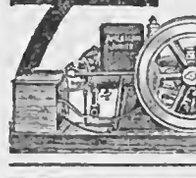

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Ruralisms

ROSETTE IN PECAN TREES.

THE newspapers have stated in the last few years that Edison has said no one knows one billionth part of one per cent. about anything. The bulletin lately published on pecan rosette by the National Government proves it. After years of careful study and many elaborate tests the authors of this bulletin honestly admit that they do not know what causes it, nor what will cure or prevent it. I have had for my constant companions for the last 36 years pecan trees, and while I am no bacteriologist nor entomologist, I have a little common sense, and can shed a little light on this subject.

Six years ago I made the statement before the National Nut Growers' convention that rosette was caused by some bacterial growth upon the roots of the tree. Prof. Gossard said that I was wrong. Upon my return home I at once began to study rosette, and after six years' study I have proved beyond a shadow of a doubt that I was wrong and that Prof. Gossard was right. The most complete refutation of any theory is this. A physician lecturing before a popular audience said that every case of grippe originated from wet feet. A man in the audience interrupted him and said: "You are wrong, sir, for I have two wooden legs, and I have just got well from a very bad case of the grippe." Now I have just as positive proof that rosette is not caused by any growth upon the roots of the tree. It is this. The common wild pecan of Louisiana never suffers from rosette. Yet when the Sehley pecan is budded or grafted upon the wild roots they frequently die of rosette.

There is one bold mis-statement of fact in the Government's bulletin which I wish to correct; that swamp land is entirely exempt from rosette. My groves, which are situated upon swamp lands, have developed several cases of rosette. I have never known a case among my nursery trees.

Now I wish to tell of a few things that I have found out about rosette. The disease is inherent in certain varieties of pecans, and is very similar to locomotor ataxia in the human species. It is not a germ disease at all. It is the lack of sufficient nutrition. Certain varieties have not strong enough digestive organs to assimilate the food under ordinary conditions. Here with me certain varieties are very subject to rosette, and other varieties never have it at all. The Schley trees nearly all die of it, except under very high cultivation. Moneymaker never shows any sign of it. Russell often devolops it, while Carman never does. The common wild pecan of Louisiana never shows a trace of it. Now notice this fact strongly. While the Schley nearly always dies when not properly cultivated, still when very highly cultivated it shows no sign of rosette, and I feel sure that when the scientists get at the bottom of the matter they will see as plainly as I do that rosette is a failure of the pecan to digest its food properly. Certain varieties are naturally dyspeptics. SAM H. JAMES.

Aphis and House Plants.

THIS is the season when the aphis is making its appearance on house plants and in flower and vegetable forcing establishments. There are many varieties of this very troublesome pest. In all cases no matter what variety, or on what plant it is found, the aphis can be overcome by tobacco, whether in the form of dust, smoke, or a decoction made by steeping the refuse tobacco stems from the cigar makers, using one pound of stems to five gallons of water. Just now, the pest has made its appearance the first time this season on the lettuce in the greenhouse. Our method of combat is to apply tobacco smoke about twice a week. We set a number of little earthen pots throughout the greenhouse, fill these with tobacco stems made damp with a little water. We then close up the house tight and light the damp tobacco stems. For the best results the smoke should become so dense that the plants cannot be seen through the glass. It is sometimes almost impossible to dislodge the aphis when it has once completely covered the plants, and for this reason it is necessary to begin with the smoke before the pest has made its appearance. Plants growing in the open that are affected by the aphis are best treated by tobacco dust applied freely after dew or rain. However, in extreme cases, when the pest attacks also the under side of the leaves, it is necessary to apply tobacco in fluid form with a syringe. A. B.

NOTES FROM A MARYLAND GARDEN.

WEATHER AND CROPS.—Down here in southeastern Maryland November gave us but three cloudy days, almost unbroken sunshine and little rain. December is making up for this, for we have just passed through a long northeaster storm with plenty of rain and a minimum temperature of 38. I have three lines of cold frames planted in lettuce for Christmas heading. Two of these have the double-glazed sashes and one the single-glazed. Owing to the continued mild temperature the single-glazed sashes have kept up very well with the double-glazed ones, but with the coming of cold weather the single glass will have to have a night cover, while the others will do without any, and thus save a great deal of labor. In this flat country, between bay and ocean, we have a great sweep of the high winds, and one advantage of the heavy double-glazed sashes is that they never blow off as the lighter sashes will sometimes, if not wedged down. Just now the spinach cutting is going on merrily, and I never had a finer growth, while the late-sown spinach that is intended for Spring cutting will soon be large enough to cut unless the weather turns colder and compels it to go dormant.

FERTILIZERS.—Our Irish potato growers are worried over the prospect of getting no potash, for it is very generally assumed that it is needed in our sandy soil especially for the crops of both Irish and sweet potatoes. Our growers very generally have been using a fertilizer containing 7 per cent. ammonia, 8 per cent. phosphoric acid and 5 per cent. potash. My own opinion is that they have been wasting money in buying so high a percentage of nitrogen for the potato crop and paying $38 a ton for it. This 7 per cent. article gets its nitrogen from fish scrap and nitrate of soda and the presence of the nitrate causes it to cake badly and makes it harder to apply with a mechanical spreader. It makes an admirable fertilizer for leaf crops like spinach, cabbages, etc., but for the root crops a much smaller amount of nitrogen would be needed. With the long-continued and heavy application of fertilizers containing a considerable percentage of potash I am of the opinion that the soil has accumulated a very considerable residue of potash, for the soil will hold on to any unused potash and phosphoric acid while losing nitrates rapidly. I believe therefore that by making a home mixture of cotton-seed meal and acid phosphate the potato growers can do without the potash, since the cotton-seed meal will furnish some potash, while the fish scrap and nitrate of soda do not. A ton of fertilizer made of equal parts of cotton-seed meal and acid phosphate I believe will give better results on the Irish potato crop than the popular seven per cent. goods.

STABLE MANURE.—One potato grower in Accomac County, Va., writes that he is thinking of using the New York stable manure, which will cost him $3.30 per ton delivered at his station three miles away. Now I cannot see that he can make it pay to use fresh manure at this price for the Irish potato crop and have so advised him. Our cantaloupe growers still use the New York manure at the advanced price, and are already putting it in the furrows to lie and rot till planting time. Even for these I believe that a better plan would be to compost the manure now with woods mold and prepare a compost that will be in better shape for using in the Spring than the raw manure will be lying in the furrows. In fact I very much doubt that for any of our truck crops it pays to freight and haul the New York manure on the present high price. I believe that with a good growth of Crimson clover on the land to turn under for the cantaloupes and other crops they would have better and more economical results with good commercial fertilizers. It is true that for some crops the clover would have to be plowed down when not more than half grown, but it has been proven that Crimson clover does the greater part of its nitrogen-fixing in the Fall, and it will pay to grow it as a Winter cover and humus-maker even where it has to be turned early. And for the sweet potato crop it would very profitably take the place of the rakings of the pine forests which are universally hauled out by the Eastern Shore Virginia growers during the Winter to plow under for their sweet potato crop. They would have better organic matter and an abundance of nitrogen for the crop while saving the loss of nitrates in their open soil in the Winter rains.

FALL GROWTH.—Owing to the mild Autumn weather my onion sets, planted in September, have grown almost large enough to use already for green onions, and I hope thta they will winter well. Leeks are in their glory, and they make an excellent substitute for green onions in Winter, for here, where we have about as much open soil in Winter as hard frozen, it is seldom difficult to get the leeks for use or the parsnips, salsify or carrots, all of which we leave where they grew. My Fall-planted sweet peas are now a foot high on the wire trellis, and seem to be perfectly happy. I would have preferred to have had them make less growth, but hope they may come through. The Fall-sown sweet peas usually give us the best bloom, as they come in before the hot weather. In January I expect to plant more. I dig a trench fully 15 inches deep and fill it half full of rotted manure, cover this with soil and plant and cover fully six inches deep, and from this sowing generally get a good bloom. W. F. MASSEY.

Maryland.

SPRING WHEAT.—We have a number of readers who insist that they want to sow Spring wheat in New York State. Our conviction is that Spring wheat is not over 60 per cent. as useful or efficient as Winter wheat. Yet we find people who refuse to accept such opinion. One of the best authorities we know of says this:

"I agree with you that there is no place in New York State where farmers can sow Spring wheat as well as they can Winter wheat. We have tried out Spring wheat very thoroughly in Western New York and not one year out of five is it a success. Under the most favorable conditions, Spring wheat will not give over 10-15 bushels per acre when Winter wheat will produce 25-30. You are correct in your instructions that if these people insist upon sowing Spring wheat, the same preparation and method of sowing as oats is the proper one, they cannot get the wheat in too early in the Spring nor they cannot put it in too well or fertilize it too heavily. There are half a dozen kinds of Spring wheat that are grown in New York State but probably the Early Fyfe is as good as any, but none of them will do as well as Winter wheat sown on the same soil and properly put in."

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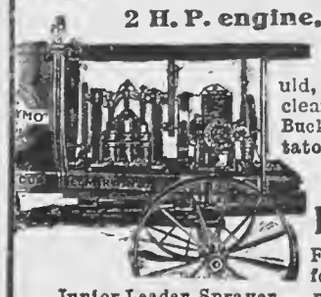

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Established 1850

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CAN any reader give us the facts showing clear and undoubted damage to crops by wild game? We want particularly facts about such damage in New York—they must be clear-cut and exact evidence showing actual loss.

*

THIS question of "misfit" trees is a mighty one for fruit growers. On page 1499 you will find a lawyer's statement of such a case recently tried in Western New York. There has got to be some definite rule for legal action in cases of this sort. We think farmers are now more determined than ever before to carry them through. We have asked the nursery company in this case if they care to make any statement.

*

HERE is one thing about this "farm manager" business. There are a good many farms which do not do enough business to support a "manager." The owner may think so, but when he pays a man simply to "manage" the overhead charges become so heavy that they cave the entire roof in. Such farms need a working foreman—that is, a man with shrewd common sense who can and will do actual farm work with the other men. Do not hunt for a "manager" until you get more than a working foreman can attend to.

*

SOUTH CAROLINA has a remarkable law designed to control the acreage of cotton. It was passed in October. The first section of this law is as follows:

Be it enacted, etc., that it shall be unlawful for any person by himself, his agents or employes, to plant or cultivate in this State in any year, a greater number of acres of land in cotton than one-third of the total acreage of land planted and cultivated in all crops by such person in said year, including grain and Fall-sown crops planted the preceding Fall or Winter.

There is a penalty of $25 to $100 for each and every acre planted in excess of the number mentioned—such penalty to be a lien upon the cotton crop. The object of this remarkable legislation is to cut down the output of cotton and thus help to regulate prices. Of course no one can now tell what its effect will be, or whether the courts would uphold it. We may ask ourselves what we should think if the New York Legislature undertook to penalize us for planting as many peach trees as we saw fit. It merely shows the desperate condition of Southern cotton farming. A canvass of our South Carolina readers indicates strong opposition to the law and the hope that the next Legislature will repeal it.

*

YOU may be interested to know that two years ago I owned two cows and made butter, in fact owned those two only one year, and kept them around on a fruit farm when some of my friends wanted bottled milk. I tried out your theories of soiling and feeding cows, and have increased my herd to 12 cows, three yearling heifers and a registered Guernsey bull advertised in THE R. N.-Y. Now these cows have in the two years fed themselves, bought and paid for the herd, put up a 10x30 silo, paid for a cutter and blower, and many other improvements. Before April, 1912, I never owned a cow, never raised anything but a garden and fruit, and on this farm had no standing grass. My farm contains about 60 acres, the greater and better part of which is filled with fruit. M. C.
Hudson Valley, N. Y.

We print that as indicating what we feel sure is coming in the dairy business. There is to be a readjustment, and it will go on rapidly. Hundreds of farms which have for years been used for milk production are going out of business. Changed market conditions have made it impossible for their owners to keep up with the requirements of milk inspection and pay the increased prices for feed. As these farms pass out of the business, smaller herds of cattle are appearing on fruit and truck farms to supply needed milk. These small herds are usually very choice, containing purebred animals of good breeding. Every fruit grower knows that he must have high class varieties, well adapted to his soil and conditions. He cannot afford to keep scrub trees in bearing, and so he knows that scrub cattle will not pay. On every fruit and truck farm there are many wastes in fruit, cornstalks, cover crops, etc., which may be fed to cows as roughage in milk production. If the herd is kept down to about the limit of this cheap fodder, and only good cows are kept, the milk is produced at a low cost. This dairy addition gives profitable Winter work and much-needed manure. In these times it would hardly be possible for a small herd to earn all that is mentioned above, except where extra good animals are kept, so that the business is a side line for fruit growers or gardeners. There will be much more of this done in the future. It is the coming great change in dairying.

*

NEW YEAR'S GREETING! The year has swung around once more, and the time has come for our little annual talk to readers. It has been a busy year, and it seems to have gone more rapidly than any that have passed before. Busy hours are best. THE R. N.-Y. has gained in size at least. During 1913 we printed 1396 pages with 559 pictures. With the close of this year we show 1512 pages and 661 pictures. We have answered over 20,000 questions by mail in addition to those put into print. As to the quality of this work we must leave that to the judgment of 160,000 and more keen and kindly critical families who follow us each week. One thing we are sure of. Never before during all these long years has the feeling of friendship between the paper and its readers been truer or more beautiful or more enduring than right now as we pass on into another hopeful year. While such friendship and kindly feeling exists we have no misgivings regarding the future, but go hopefully on, sure that our people will go with us. Needless to say that we wish you all the happiest and best that your life can produce in 1915.

It is to be a notable year, and we think one with great opportunities for the American farmer. The world is looking to this country for the necessities of life—bread and meat and clothing. Out of this world necessity will come our great material opportunity. Our farmers will learn how to organize and conduct their business so as to obtain a fairer share of what belongs to them. And the world's necessities are not confined to material things. The awful European War is destroying property and human life, and filling the world with sadness, but it is also doing the impossible—changing human nature. Out of the horror of it all, out of the great national sacrifice, there is growing a more thoughtful and serious France, a more liberal and freer Germany, and a truer and better England. And so this nation, and our farmers in particular, must meet these world's great necessities—not only for the material things of life, but for those greater things "not made with hands." They are charity, brotherhood, fair dealing, self-restraint, and eternal, enduring faith in the power and integrity of the common people.

*

HERE is a problem for you to solve and publish, if you think it will interest any of your readers. The street on which my property is located runs parallel with the Hudson. My neighbor on the opposite side of the street wishes to sell and the purchasers desire me to lease to them the view from their piazza. Should I plant a row of trees along my fence it would obscure the view. The distance is 150 feet, involving about three acres. Land now used for pasture and valued at $500 per acre. What price per year would you charge? I should never interfere with this view unless to build a house, but they do not trust me. H. H. S.
New York.

This is one of the most remarkable propositions we ever had put to us. The general use of flying machines has brought up points of law regarding the use of the air, but the actual value of looking out over a field is surely a new one. We print it to show what a wide range of human life our readers cover and also to see if any such problem has come up before. What would you charge for guaranteeing the right to look across your pasture? Thousands of our readers can look far off across the hills and valleys with no neighbor in sight. It will seem strange to them that people are willing to pay for a lease on scenery!

*

"FARMING is unusually profitable at present as everybody is paying sky-high prices for farm produce."

We find that bit of childish reasoning in the Jersey City Journal—a paper usually very sensible and sound. It is childish reasoning, because any adult ought to know that the price charged for a peck of potatoes by a grocer is no evidence that the farmer who grew those potatoes is prosperous. Today, while city people are paying at least $1.25 a bushel for potatoes, farmers in the interior are selling or trying to sell at 30 cents! These sky-high prices dissolve into thin air before they get to the farmer. For years we have stated that on the average the farmers of this country receive 35 cents of the consumer's dollar and no one has disproved the statement. Usually when retail prices are boomed "sky-high" the farmer receives less than 35 cents. It is surprising that really intelligent papers should continue to argue that high retail prices for food must mean prosperity for farmers. If kerosene went up 10 cents a gallon they could rightly connect it with Standard Oil prosperity. If the street cars doubled their rates we would know the stockholders were more prosperous. In these cases the connection between "sky-high prices" and prosperity is clear and exact, because there are no middlemen to stand between. In the case of high retail prices and farmers there is no such connection because both the consumer and the farmer must feed a lot of parasites in addition to the necessary middleman. Why cannot papers like the Journal see this, and help their readers by pointing out the fact?

*

AT this season of the year we have all sorts of communications from readers. It is a sort of general winding up of the mainspring that keeps the works going. Here is a rather unusual proposition which will interest some of our people:

Please send me a good fish market if you want me to keep on taking this paper. If you can send me a fish market that I can make something in I will send on the money for paper as soon as I can get fresh fish in the Winter. If you cannot send a good place I shall not take this paper any longer. O. T.

Finding fish markets when they are needed is part of our business, and this was sent to one of our big army of helpers. He found the market and told O. T. about it. In his report to us he writes:

I am reminded of the verse that reads, "*He that is greatest among you is servant of all.*" THE RURAL NEW-YORKER is truly a great paper, and it is the spirit of service that has made it great. This man is paying tribute to that greatness, even though he does couple a threat along with his request.

That is a very happy and good-natured turn of this request. We do not regard this as a "threat" at all. It was only a way of showing that this fish market was the most important need—here at the end of the season. We try to meet all our friends with good-natured and helpful service. At this New Year's let us remind you once more that THE R. N.-Y. *has at its command the largest and most complete corps of farm helpers and advisers ever gathered by any paper since the world began!*

BREVITIES.

PUT no claws on Santa Claus.

CHARCOAL for the pigs—all the "stock foods" contain it.

"SOFT soap" is the wax most politicians use in "grafting."

THOSE who live in a progressive age need a strong brake when riding in the stage.

WE should think rye would be a good crop at the South to lead to other kinds of grain.

"BACK to the woods!" is good advice for many a farm or township. Plant trees. Many a hillside should never have been cleared.

THE European War is likely to affect prices for the cranberry crop. Many growers believe the European supply will be badly cut off.

LET us again call attention to the incongruity of giving "loving cups" as prizes for farmers at farm shows. Why not give them the cash?

THE U. S. Geological Survey states that "wild cat" oil promoters are working in Northwest Missouri. There is little hope for profitable oil and gas there.

THE Massachusetts Forestry Association offers as a prize the planting of 50 acres of White pine, to the town which gains first place in a contest for town forests.

THE New Jersey Experiment Statio. finds dynamite very useful in blowing out old orchard trees. Pear trees owing to their peculiar root system are hardest to dislodge.

PROF. KIRKPATRICK of the Connecticut College figures that at this year's egg contest it will be necessary to operate the trap-nest some 200,000 times in order to care for every hen.

A FEW years ago our scientists were scouring Asia and Siberia for hardy varieties of Alfalfa seed. Now a sample of hardy Alfalfa seed has been sent to Turkey for trial.

OUR advice is not to make any New Year's resolutions based on the belief that bad habits can be shed like a hen's feathers. Begin to *dig* them out and keep at the job humbly and silently.

CONCORD, MASS., is celebrated for asparagus culture. One of the cornerstones of successful culture is sowing a cover crop like Crimson clover or vetch in late Summer right in the crop. This, plowed under in Spring, keeps up the humus supply and adds nitrogen.

IF every little brook were to dry up and refuse to run down hill because it is so small, what would become of the big river? If you and your neighbor quit trying to improve conditions because you do not hold high office—what becomes of the country?

LAST year heavy shipments of eggs and poultry were made from China to the Pacific Coast. These became so heavy that American poultry men became dubious. This year these shipments will fall off. They were not all profitable and freight service cannot be had.

N. Y. STATE AGRICULTURAL SOCIETY.

THIS year the New York State Agricultural Society promises to outstrip in attendance all previous annual conventions. It will be the seventy-fifth annual meeting of the society. The program is varied and interesting. It contains names of speakers not before heard in the farm conventions of the State, and the subjects to be discussed are of timely interest and pressing importance.

Two new features are introduced this year. One of them may be said to be actually introduced last year when Mrs. Julian Heath was elected First Vice-President. Women's attendance was then assured as a feature of the meeting for the future. The Housewives' League members will be out in force. Mrs. Heath is President of the National League, and she is preparing for the entertainment of the members at Albany.

The other feature is the banquet on Tuesday evening. This will be a popular dollar-a-plate feast. Farmers and their wives should make it a point to attend this convention. Accommodations may be secured through the committee at hotels or private houses. The Society is doing an aggressive work in the interest of the farm, and every producer in the State should become a member and help direct its influence and energies to the betterment of the agricultural needs of the State.

LONG DISTANCE PANCAKES-

EARLY in October a friend in Columbus, Ga., asked for the address of a miller in New York State from whom he could purchase buckwheat flour, and the price of this flour. Buckwheat flour in his local market cost 6½ cents per pound in small lots, and six cents by the hundredweight. The name of a miller in Tioga Co. was given him and he ordered 200 pounds, paying $3 per hundred for it. Being interested in the outcome of this long distance direct purchase, we asked this friend to tell us the details of the experience. The flour was shipped October 16, and reached him on the 27th, this being considered a short time in transit. The flour was packed in paper bags enclosed in cotton grain sacks, and sent by water from New York City. It arrived in first-class condition, though the paper bags inside the cotton ones were torn. The freight was 61 cents per hundred. He says that they are eating buckwheat cakes twice a day, and that the more they eat the more they want, so the quality was evidently satisfactory. To Northern farmers who are accustomed to thinking of buckwheat flour as strictly a cold weather diet it sounds somewhat strange to read of digging sweet potatoes in Georgia with buckwheat pancakes as the motive power, but the taste, once acquired, is probably never lost. This incident shows what a vast distribution of local products could be made throughout the country if country people could only learn how to get together. We once bought maple syrup in Vermont and buckwheat in New York, and sent them to a reader on the island of Java.

CONDITIONS IN THE COTTON STATES.

THERE can be no doubt that the Gulf or cotton-growing States, are having financial trouble. The great war has interfered with the cotton trade, and cotton is the foundation and the mainspring of Southern business. Money, business, society, all grow on the cotton plant. Yet the present trouble will eventually help the South. Take this note from Alabama:

> One good thing about our hard times, which will be the making over of our farming, is that a farmer can now get money advanced to raise hogs or cattle, wheat, corn, or any crop, which is a new thing. I was talking to a cotton factor a day or so ago, asking if he would advance money on wheat, rice, etc., and he said he would be glad to, or on cattle, and would rather do so to any of his reputable customers than to give them coin on cotton. M. A. P.

For many years the statesmen and wise thinkers of the South have seen the evil results of the farm slavery to cotton, but habit and old prejudice have been too much for them. Now if the money-lenders take a hand and will loan on corn, wheat, cattle or dairying, we shall soon witness changes which half a century of old custom could not change. The seed stores and implement dealers throughout the South report a great demand for grain and grass seeds, and improved tillage tools.

Boston Retail Farmers and Consumers Market.

FOR several years past an agitation has been going on, with much talk but little action, in regard to establishing branch markets or market stands in different sections of the city, so that the people could go to these places and buy green produce, and also milk, butter, dressed poultry and whatever the farmers might bring on. Former Mayor Fitzgerald tried to establish milk depots a few years ago but it was decided this was not practical after studying the subject in all its phases. It remained for the present city head, Mayor James Curley, to push this market question to a head and establish a trial market late this season in the thickly settled south end district where it is handy to get to by thousands of the poorer classes to whom the chance to buy farm produce direct from the grower in retail quantities at wholesale prices is a great boon. It was decided to allow no middleman to get a hold here and control prices in any way. This is a market strictly for the people to buy direct from the farmer wagon in any quantity desired, but all sales must be by weight or numeral count.

Great credit is given and no doubt deserved by the Mayor for the success of this project in the short time it has been running, from September to present time. No charge is made for stands or rather for space for farmer wagons to stand on. The present location will hold about 30 of these comfortably, but 47 were crowded in on the big day of the season one Saturday when many thousand people took advantage of the chance and improved it by buying heavily on this date and also at several others as well. A quantity equal to 3,000 bushels has been disposed of in the best days this season. Saturdays are the best days, weather permitting, for both sellers and buyers. This market is not opened on stormy or bad days, as this market is conducted on vacant land leased to the city and no shelter is provided. This is one bad feature, as buyer and sellers may not always be sure whether there will be any market or not on the days they may plan to go there, and this will have to be worked out later by establishing signal stations in different sections of the city and near-by country, which could be reached by phone and word sent to each as to whether the market would be open this day or not. This plan or something like it might solve to a large extent this trouble, and next year will no doubt bring some system with it which will improve or solve some of the present difficulties. The greatest difficulty at the start was to get the farmers to take heir goods to this market, as many people held the opinion that the consumers would not turn out in sufficient numbers to make it successful. The people came, however, on the first opening day, and as only one or two farmers had had the courage to appear with goods to sell, the enemies of this market project set up the cry "The new market is a failure," but this class cried out too quickly. The farmers woke up and brought in sufficient stuff to supply the buyers, and the buyers kept coming and bought the stuff. Success was assured, and Supt. of Markets Graham and Deputy-Supt. Quinn, on whom the work of bringing abont the result had fallen, felt well pleased and repaid for their hard work in personally canvassing and inducing the farmers to go there and make the trial.

In regard to prices received by the farmers, these have not been large perhaps, but neither has the produce been as the rule of the fancy class, as the trade did not require this, and as a rule could not afford to pay for this class of stuff, but they did buy and pay fair prices for quality of goods. Most of the sellers are satisfied they have done fairly well, and the buying public are sure they have, and this feeling of "I am satisfied" on both sides means a successful continuance of this market next season and probably in future seasons. The city officials are so pleased they intend to enlarge this project and establish in other sections where population requires or would support them other branch markets of a like nature.

Some classes of people in Boston are not pleased at the success of this season's trial, and have planned on several occasions to break up the market with hoodlum gangs, but warnings have been received in time to have police enough on hand to prevent this, and while it is thought this will not be tried again, yet watch will be kept, and any attempt will likely cause trouble for those who try it.

All kinds of vegetables, cheap or common grades of apples, dressed poultry and eggs, have been disposed of there on most days to good advantage. Apples sold at 10 to 20 cents per peck, largely at 10 to 15; this seems perhaps, to many, a very small price, but these were windfall fruit of just fair quality and considering that about 30 cents per bushel was all these would bring at the regular market when they could be sold at all and farmers had to give away or carry home part of their load several times, this price is not so bad after all. We sold onions at the new market at $1-$1.25 per bushel by selling in small lots of a few pounds each; these would only bring 50 to 75 cents in regular market. We sold carrots on about the same proportion. We sold poultry, largely dressed chickens, at about the retail price of these in the different retail markets. The little extra trouble we had in handling or selling in small lots instead of bushels was more than balanced by the extra receipts or prices we received, or about 100 cents on the dollar against the much-quoted 35, which is all many producers receive. A. E. P.

New York State News.

AUTO FINES BELONG TO STATE.—The Attorney-General is investigating the practice common with some justices of the peace, of turning over to the village, town or city treasury the moneys representing fines for speeding and other violations of the highway law. The law is explicit on this point and there would seem to be no good reason for diverting the moneys received for fines from the State treasury. If it is found that violators of the law persist in continuance of the practice, proceedings will be instituted to compel compliance with the law.

POMONA GRANGE MEETINGS.—The annual meetings of the county or Pomona Granges are being held this month. The order seems to be in a most flourishing condition in all sections of the State according to reports from these Granges. The banner Grange county of the State is now Chautauqua with 8030 members, closely followed by Jefferson wtih 8007. Last year Jefferson was in the lead. It takes a half dozen Western States to equal in Grange membership either one of these counties. Fredonia Grange No. 1, alone, has 661 members. These county Granges are cooperating everywhere with the Farm Bureaus in more businesslike methods in farming and making the soil yield better returns.

FORESTRY LECTURES.—The Granges and high schools in and near Ellicottville and also at Gowanda are coöperating in arranging for a series of lectures on forestry which are to be given by representatives of the college of foresrty at Syracuse. In addition to State work local questions, wood lot management, fire protection, etc., will be discussed by the speakers. Prof. W. A. McDonald will be the speaker at most of the meetings.

APPLE HOLDINGS HEAVY.—Large growers and small seem to have faith in future, as regards the apple market. At any rate there is a big stock of apples in storage not only in this State but in all sections where apples are grown to any great extent. It is said that the holdings in this State are equivalent to over 2,500,000 barrels which is nearly 900,000 barrels more than last year at the same time. In New England the quantity does not vary much from last season's holdings. In a general way it may be said that there are 3,000,000 barrels more in storage all over the country now than a year ago.

ONTARIO FRUIT GROWERS.—The ninth annual meeting of the Ontario County Fruit Growers' Association was held at Canandaigua on the 11th inst. Papers were read by Prof. P. J. Parrott of the Geneva Experiment Station, A. C. King of Trumansburg, Paul Work of the College of Agriculture and Samuel Fraser of Geneseo. W. P. Buell of Holcomb was elected president, C. C. McKay of Geneva vice-president, Walter Robson of Hall secretary and W. C. Norton of Victor treasurer.

FISH AND GAME OFFICIALS.—At the final session of the State Fish, Game and Forest League convention at Utica, Geo. A. Lawyer of Watertown was re-elected president, Louis C. Andrews of Elmira secretary and Emerson Stowell of Oswego treasurer. Auburn gets the 1915 convention.

ONONDAGA GRANGERS.—A feature of the recent annual meeting of the Onondaga County Grange were the reports from 84 crop observers in the county. This county has a crop report system of its own which is very helpful to the farmers. A movement was instituted at this meeting to bring both the State and the National Grange meetings to Syracuse in 1916. The National Grange meeting for that year will be the occasion of the observance of the semi-centennial of the organization of the order, and being centrally located as to the East a host of members of the order would attend the ceremonies. Another plan will be submitted to the next annual session of the National Grange for the semi-centennial celebration.

LARGE SHIPMENTS FROM SODUS.—When Sodus, Wayne County, growers shipped more than 300 cars of fruit and other farm produce during November it broke all records for a single month. There were 182 carloads of apples; 56 cars evaporated; 12 cars lettuce; six cars grapes; 19 cars onions; 17 cars canned fruits; 12 cars celery and so on. There were still 500 cars in storage on Dec. 1 divided as follows: 130 cars celery; 300 cars apples; 40 cars onions and 30 cars canned fruit. The price of onions is still creeping upward and one authority says the holders are expecting a dollar, net. Some of the local buyers took hold of the market early at 25 cents per bushel and are reaping a harvest. One firm is reported to have made $10,000 on their purchases from one grower. Growers of the better apples are holding for better prices and practically all the inferior fruit is off the growers' hands. J. W. D.

State Dairymen At Rochester.

THE elimination of exhibition features from New York State Dairymen's Convention, and absence of live stock as result of foot-and-mouth disease situation limited the appeal of the meeting of New York dairymen and breeders held at Rochester, December 15 to 17th. The attendance was smaller than usual yet very select, and the program was commendable and interesting. A show of hands at one session evidenced that about half present were actual milkers, and others were interested in activities of which the dairy cow is the center. The dairymen found the latch string at Rochester hanging out, and a royal welcome was extended, and a sincere invitation for the dairymen and breeders to return was expressed by both Mayor Egerton and Secretary Woodward of the Chamber of Commerce.

President H. C. Elwood of the State Dairymen's Association explained the absence of features from the meeting. He said in part: "We have been obliged to call off the cattle exhibit and cattle sale. What to do was the next question; we had solicited far and wide, the different supply houses to come here and take space and help fill up the large buildings, but we could not feel that it would be wise to continue to ask those men to make a dead exhibit."

Commissioner Calvin J. Huson, President of the State Breeders' Association, said concerning the meeting of the dairymen and live stock men of the State meeting together for first time in the history of the State, "There never was a time when there were greater questions to be considered, or greater issues to be determined. We have several important questions to come before the Legislature, and it is important that the producers of milk should have a voice in determining policies." A full report will follow.

Government Crop Report.

The final estimates of the Department of Agriculture are:

	Acreage	Yield bu.	Farm Val. bu.
Corn	103,435,000	2,762,804,000	.63
Wheat	53,541,000	891,017,000	.986
Oats	38,447,000	1,141,060,000	.438
Barley	7,565,000	194,953,000	.543
Rye	2,541,000	42,779,000	.865
Buckwheat	792,000	10,881,000	.764
Flaxseed	1,885,000	15,559,000	1.26
Rice	693,000	23,649,000	.924
Potatoes	3,708,000	405,921,000	.489
Sweet Potatoes.	603,000	56,574,000	.73
		lbs.	lb.
Cotton	36,722,000	7,983,000,000	.068
Tobacco	1,223,000	1,034,679	.098
		tons	ton
Hay	49,145,000	140,142,000	11.12

The yield of all crops except flaxseed and rice is in excess of last year. In farm value December 1, corn was 5.4 cents lower than last year; wheat, 18.7 cents higher; oats 4.6 higher; barley, .6 cent higher; rye, 23.1 higher; buckwheat, .9 cent higher; flaxseed 6 cents higher; rice, 6-6 higher; potatoes, 19.8 cents lower; sweet potatoes, .4 cent higher; hay, $1.31 per ton lower; cotton, 5.4 cents per lb. lower; tobacco, 3 cents lower.

The final estimate for wheat is about 900,000 bushels under the earlier figures, and corn 30,000,000 bushels under. The rye crop is only 1,398,000 bushles under last year, yet such a large part of the supply is at seaboard points awaiting export that the proportion available at interior points is unusually small, causing an abnormal rise in price.

Woman and the Home

From Day to Day

THE NEW YEAR COMETH.

This is the time of sadness and farewell,
The time of welcome and of new delight,
The old year drifts upon the wind to-night
Into that limbo where the dead years dwell,
From some strange, distant bourne no tongue can tell,
O'er moonlit ways and paved with shining white,
The new, swift-footed year—a vision bright—
Comes at the clamor of the old year's knell!

Time turns his glass! The sands full slowly run,
Freighted, in each dropped grain, with memory—
The failures wrought, the few successes won!
I cry. "O Time, what brings the new for men?"
The brave-tongued bells peal answer back to me.
"A chance to fail; a chance to try again!"

—Charles C. Jones in Lippincott's Magazine.

*

GLASS measuring cups, marked with little ridges to show the quantity, are especially convenient because it is so easy to see just how much one has poured in, especially when one is measuring liquids. Other convenient measuring cups are of tin and agateware.

*

HERE is a simple but well-recommended recipe for maple fudge: One pound maple sugar and one cup milk. Bring to a boil and add a tablespoon of butter. Cook until it becomes brittle when tested in cold water. Remove from the fire, stir vigorously until it begins to granulate around the edge of the kettle and then pour into a buttered pan.

*

AN odd way of cooking eggs entirely new to us, was recently given in the *New York Tribune;* it was called eggs in ball shape. Heat lard very hot in a small kettle, as for crullers, and then stir the fat round and round with a spoon, till it whirls. Drop the eggs in, as if for poaching, one at a time; the whirling motion of the hot fat forms them into balls, and they are quickly browned to a delicate color.

*

THE most practical laundry bag is one made of two yards of cretonne, gathered at the top on to an oval embroidery hoop, a wooden one 10 or 12 inches long. With this oval top one may always throw things in, without trouble, when it is hung up in a convenient closet. Nursery laundry bags sold in the art needlework departments for children's use, are of plain colored linen, ornamented with Mother Goose figures embroidered in outline or cross-stitch. A child is more likely to pick up and put away soiled clothing when provided with a bag for the purpose, thus forming habits of tidiness that mean much in later life.

*

"CANNING clubs in New York State," Parts I, II and III, are issued in the Cornell Reading Course, and will be found valuable not only to those who wish to work into the business commercially, but also to the housekeeper whose canning is only for family use. Part II gives "Principles and Methods of Canning," while Part III is devoted to "Canning Equipment." Part III answers many questions asked by those who wish to begin commercial canning in a small way, while Part II, in addition to the information it gives as to the basic principles of canning, includes many canning recipes. Better study these bulletins during the Winter, and then file them away carefully for the working season next Summer. This brings to mind the utility of filing cases; we wonder how many of our readers make use of this convenience for bulletins and similar reminders. The ordinary letter file, 12x11½x4 inches, is convenient for bulletins; they are then stored alphabetically, and the file placed on a shelf or in a bookcase, where the information so often needed is always accessible, and rarely mislaid.

The Rural Patterns.

In ordering, always give number of pattern and size desired. Price of each pattern 10 *cents.*

8469A shows an attractive redingote gown of serge and satin. It may be made of one material only if desired. For the medium size the gown will require 4½ yards of material 27 inches wide, 3½ yards 36, or 3 yards 44 for

the redingote, with 4½ yards 27, or 3¼ yards 36 or 44 for skirt, sleeves and vest, or 8½ yards 27, or 6¼ yards 36 or 44 with ¾ yard of any width for vest to make as shown in back view. The pattern 8469A is cut in sizes from 34 to 42 inches bust measure.

7971, Infant's Bishop Dress. One size. 7571, Girl's Guimpe with set-in sleeves Perforated for yoke facing in round or square outline or for round or square neck, with long, three-quarter or short sleeves. Sizes, 4 to 12 years. 8371, Gathered Blouse. With long or three-quarter sleeves. Sizes, 34 to 44 bust.

7164, Men's Outing or Negligee Shirt with Coat Closing. With attached turnover cuffs and soft collar or neck-band. Sizes, 34 to 46 breast. 7396, Boy's Outing Shirt. With soft collar or neck-band and separate high collar, with straight or rolled-over cuffs or wristbands, with or without coat opening. Sizes, 12 to 16 years.

Seen in New York Shops.

STOCKINGS having tape-bound button-holes in the top, for the stocking supporter, are a novelty that seems very practical as it will prevent any risk of the ordinary tearing.

Among unusual supplies for florists' use are natural butterflies, moths, beetles and other insects, preserved and mounted upon pins. They are to be used on baskets and other decorative arrangements of flowers.

Women's "anklet leggins" are like a long stocking without a foot. They are meant for wear when driving, motoring, golfing, etc. Knitted in dark wool they cost 98 cents a pair. Any one who can knit the leg of a stocking could make them, and they would be a great comfort on a cold country drive.

A new sort of fuel for chafing dishes is called "solid alcohol;" it is sold in tins that fit into a special lamp. It is said to be safe from risks of accident.

Loose flowing veils of filet or octagon mesh, with borders of velvet or chenille dots, are among new fashions, and are quite becoming. They are worn both with little close toques, and with wider brims. One of the popular toques, usually called the Tipperary, is a small, close, military shape with a narrow line of fur around the top of the crown. A new veil for wear with this is edged with fur to match the hat, the fur edge of the veil being drawn close around the throat. The hat is made of corduroy or velvet in all fashionable new colors. One color much used in millinery is a vivid cerise, rather brighter than American Beauty or Nell rose.

Many of the little girls' styles seem more grown-up than they have been for some years, for they actually have shirt waists and separate skirts. However, there is a great difference between grown-up blouses and the little "Oliver Twist" waists for small girls. Now the shops are selling separate pleated skirts for girls as young as five years, in blue serge and plaid. They are pretty and useful with a middy blouse.

So many fur sets consist of a muff made up with satin or velvet, and a small, close scarf or collarette, that it gives a good opportunity for making over worn furs. One style of muff desirable for making over is a moderate-sized pillow shape with a puff of velvet at each end narrowing into a small band of fur. The neckpiece is a close band with a standing ruche of velvet at the back.

Caps and scarfs to match the sweater are offered in great variety for grown-ups as well as children. The scarfs or mufflers are very useful when driving or motoring and are knitted and woven in silk or wool, and also made in fleecy angora. Some of the sweaters in angora or brushed wool have a fringed sash belt to match the scarf. What are called motor or skating sets consist of the sweater, cap and scarf.

"Dorothy" Shaker cloaks of broadcloth, with silk-lined hoods, are sold for motoring, driving and traveling, also for evening wear.

"Door porters" are the weights or door stops used for holding a door open. They are in vogue again now, and are offered in a great variety of styles, made of brass or iron, as well as decorated figures wth a weighted base. A handsome brass door porter is a dolphin 14 inches high, costing $9.

A plain but very fashionable blouse of putty-colored Georgette crepe has a slight fullness falling from hemstitched shoulders, and long, set-in sleeves gathered into cuffs with pleated ruffles that fall over the hands. A high stock closely buttoned at the front has a turn-over pleating slightly wired at the back. On the front was a trimming of black beads, put on like three military frogs.

The new high neckwear takes many forms, and much of it is very plain. The high stock is finished with all sorts of turnover collars. Some turn down flat at the sides and then flare suddenly upwards at the back. Others have a deep roll section at the back, or a turn-up pleating; some have merely a flaring point at each side. One pretty model of white organdie had deep turn-down points at each side, two deeper points at the back, and a narrow black moire cravat running round it at the base, tied in a little bow between the two deep points at the back. A favorite model is a chemisette with a high rolling collar at the back, while in front two points turn back to show the throat. Tiny buttons, crocheted, satin, pearl, glass and metal, are freely used to trim stocks and chemisettes.

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Cornmeal Recipes and Baked Beans.

LOYAL to New England tradition, I like to have on my Saturday supper table every week in cold weather a pot of beans, hot from the oven, and a steaming loaf of brown bread. For the loaf I generally use the old State of Maine recipe, "Togus brown bread": One cup sweet milk, two cups sour; two cups Indian meal, one cup flour, one-half cup molasses, one heaping teaspoonful soda, one scant teaspoonful salt. Steam three to four hours. The batter is very thin, A variation of the recipe furnished me years ago by Mrs. Nichols of Round Pond, Maine, makes a larger loaf, equally as good: Three cups sweet milk, one cup sour; three cups Indian meal, one cup flour; one cup molasses, one heaping teaspoonful soda, salt. Steam four to five hours. If I have no sweet milk to spare, but have plenty of clabbered milk, I use three cups clabbered milk, one-half cup molasses, two level teaspoonfuls soda, two cups Indian meal, one cup flour, a scant teaspoonful salt. If I happen to have no milk of any kind on hand I use a recipe given me for just such an emergency by Mrs. McFarland of Wiscasset, Maine, and it makes very good bread: Put two cups meal and one cup flour and pinch of salt into mixing bowl, make a little concavity in the mixture at the bottom of the bowl, and pour into it one-half cup molasses. Stir carefully into the molasses one teaspoonful soda and then one tablespoonful vinegar and stir all into the meal and flour. Make the right thickness with cold water. The batter must be a little thicker than the batter of milk-mixed brown breads and must be steamed three to four hours. In any of these recipes one cup of rye meal may be substituted for one of the cups of Indian meal.

To make raisin brown bread use two cups sour milk, no sweet milk nor water; two cups meal, one-half cup flour, one-half cup molasses, one-half cup raisins, one heaping teaspoonful soda, salt, and steam three hours. I steam my brown bread in a well-greased, covered lard pail filled two-thirds full, and set in a steamer over a kettle of boiling water which must be kept boiling all the time the loaf is in, and when it needs renewing, only boiling water must be added. If one has not a steamer, the covered pail of batter may be set on an iron flat-iron rest, or something of the kind placed in the bottom of a kettle of boiling water, the water to be kept to within a few inches of the top of the pail. After the loaf has steamed the proper length of time uncover the pail and invert it over a plate and let it remain a short time, for there is danger of breaking the loaf if one attempts to remove it too soon. A clean string, I find, slices the loaf when hot, better than a knife, as the hot bread is apt to stick to a knife.

The batter for brown bread that is to be used cold for sandwiches should be a little thicker than the "Togus" batter, and it may be steamed if one fancies the shape, in one-pound baking-powder cans, well-greased. Cut the little loaf when cold in circular slices, spread one slice with an appropriate filling and another with softened butter, press the two together and cut in halves.

What is left of the pot of beans Saturday night I warm up, adding a little water, for another meal, and if there is not enough of the loaf left over to heat by a few minutes steaming and serve with the warmed-up beans, it takes but half an hour to mix and bake a "Mrs. Travis johnny cake," which is made by the first recipe for Togus brown bread, substituting one cup of sugar for the half cup of molasses. Halve the recipe and bake the thin batter in two pie tins in a quick oven. This is very fine when properly mixed and quickly baked.

When eggs are cheap I like for breakfast "Dixie spots." Scald as many cups as you like of cornmeal with as much really boiling water as the meal will take up without making a batter, let it cool, then beat in for each cupful of meal used one egg and one tablespoon sugar and a pinch of salt. Thin with milk sufficiently for the batter to spread a little when it is dropped from a spoon and bake slowly on a well-greased griddle, browning both sides a little. I use a slice of fat salt pork to grease the griddle. My experience is that cottonseed oil compounds leave a coating on a griddle that is not easily removed.

I am indebted for my recipe for "toads" to Mrs. E. B. Brown of Rhode Island. They somewhat resemble toads in shape, after frying, and make a good breakfast dish in cold weather for a man who is going to work out of doors all the morning. Scald two cups Indian meal, add one cup flour, one egg, salt, milk enough to enable taking out with spoon. Fry in deep hot fat, and serve as soon as fried.

My recipe for old-fashioned Indian pudding came from a Methodist minister's wife, Mrs. W. W. Ogier, then of Round Pond, Maine. Scald one quart of sweet milk (I think skim-milk, the oldest one can get that is perfectly sweet, is best for this pudding, for it makes a better whey to jelly when cold); mix six tablespoons cornmeal with a little cold milk and pour into the scalding milk, stirring till it thickens. Then pour all into a two-quart baking dish and add one cup molasses, one scant teaspoonful salt, piece of butter size of a walnut and one cup cold milk. Spice with cinnamon and a little ginger. Sweet apples sliced, or raisins improve the pudding. Bake in a medium oven three to four hours. Stir while baking and add another cup of cold milk. To be eaten hot with butter or cold with cream.

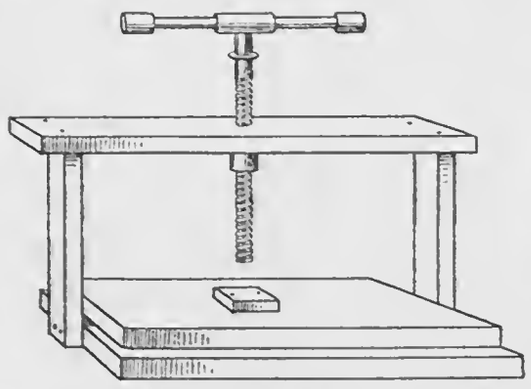
I will end as I begun, with the pot of beans, and give my recipe for baked beans, which turns out a dish that never goes begging. Friday evening, pick over and wash carefully one quart of beans, either the small white pea beans, or better, the old green-eyed variety, and put them to soak in plenty of cold water. Saturday morning, about nine o'clock, rinse the beans in fresh water and put them, without parboiling, into a two-quart covered earthen bean pot, and bury near the top a chunk of salt pork, three-fourths of a pound, well-washed, the rind parred off, preferably a chunk with "a streak o' fat and a streak o' lean." Then add to contents of bean-pot one teaspoonful mustard, one-fourth cup sugar, one-fourth cup of molasses and one to two teaspoonfuls salt, according to the saltness of the pork used. Fill the pot with hot water, put on the cover, set in a moderate oven and bake till the supper hour, adding hot water occasionally to keep the beans just covered. Add water for the last time an hour or so before serving. I bake my beans about nine hours. LOUISE PRINCE FREEMAN.

An Ironing Machine.

AT a cost of from 50 to 75 cents, the boy of the family who is interested in carpentry may make a press that will iron sheets, towels, pillow slips and all flat pieces, over night, without heat or labor. In the construction of the machine, the following materials are required: Three feet of 2x12 plank, five feet of 2x4, a bench screw, eight or 10 twenty-penny spikes, two screws, some pieces of heavy cloth and a few carpet tacks.

UPPER BOARD OF PRESS. FIG. 663.

Saw the 2x12 plank in two—making one piece an inch longer than the other—and cover the smoothest side of each piece with heavy ticking or blanket, tacking the covering snugly around the edges. Lay the longer piece, padded side up, on



THE PRESS COMPLETE. FIG. 664.

the work bench, and spike to the middle of each end an upright of 2x4 14 inches high. (If the bench screw is less than 14 inches long, the uprights should be shorter.)

Exactly in the middle of a two-foot piece of 2x4 bore an auger hole that will admit the bench screw, which latter need not be over an inch in diameter. Lay the nut over the hole and fasten to the 2x4 by screws through the ears. (Fig. 663). (The nut can be reversed and sunk into the 2x4, if the auger hole is made large enough, but this is more trouble.) Now turn the 2x4 over, with the nut down, and spike it to the top of the two uprights.

Next, lay the shorter piece of 2x21 padded side down on the work bench, and nail to the center a block of 2x4, to serve both as a handle and for the end of the screw to bear on. Over the padded sides of both planks tack a second covering of muslin or white blanket, place the padded surfaces together, insert the screw in the cross piece, and the press is done. (Fig. 664).

The pieces to be ironed in the press should be neatly folded as soon as taken from the line. Four or five sheets may be pressed at once, or their equivalent of small things, laid in a regular pile. By this method, sheets, towels, etc., retain their creases better than those pressed with an iron; they also retain the "freshness" which the heat of ironing tends to destroy. Handkerchiefs and napkins, if folded twice, when taken from the line, and left in the press a few hours, may be finished with two or three strokes of the iron, without unfolding or dampening. They are firmly creased and look like new. S. R. QUIGLEY.

Husk Tomatoes.

IN answer to inquiry about husk tomatoes, they are very good preserved with sugar enough to make a moderately thick syrup, with slices of lemon and ginger root to flavor. Seal in cans. I put half beach plums and half husk tomatoes together and canned this year, and they are most delicious. M. F. W.

Canned Tomato Soup.

IN the November 28th issue the recipe for a canned vegetable soup is asked for. I have a good canned tomato soup which will keep all Winter. When a can is opened meat stock may be added or not, as one likes, or a little boiled rice is nice to add. 14 full quarts ripe tomatoes cut up, 14 stalks celery, 14 sprigs parsley, 14 bay leaves, seven onions, 12 cloves, 10 level teaspoons salt, two level teaspoons pepper, seven pepper corns, three-fourth cup sugar. Cook the above three hours and strain; melt ½ pound butter, stir in 1½ even cups flour, mixing it smoothly, add to the other ingredients and return to stove and boil 15 minutes; seal in cans. M. C. K.

Jelly-Making Suggestions.

IF you wish to give apple and quince a beautiful red color use a few sweet apples with each, and cover and cook juice for at least half an hour in oven before adding sugar. Even better results are obtained by cooking these fruits covered in oven before straining. Cook barberries, cranberries and grapes a long time and then again after straining through double cheese cloth bag over night before adding sugar. Do not expect to have clear "quivering" molds of jelly if you boil the fruit and sugar into a preserve. Do not fail to cook juice after straining. Cook but a few minutes after adding sugar, always heating sugar hot in oven. Following these rules your jelly will "jell." B.

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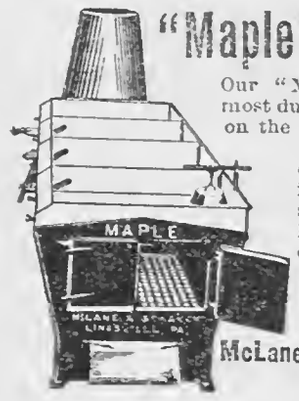

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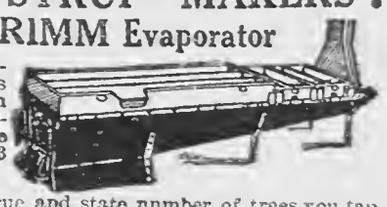

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Yes, waiting for every farmer or farmer's son—any industrious American who is anxious to establish for himself a happy home and prosperity. Canada's hearty invitation this year is more attractive than ever. Wheat is higher but her farm land just as cheap and in the provinces of Manitoba, Saskatchewan and Alberta

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Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

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Canadian Government Agent.

Live Stock and Dairy

THE FRENCH-CANADIAN HORSE.

FOR some time I have been interested in the breed of horses known as Canadian horses or 'Canucks." These horses were once quite common around here; I am anxious to secure one of them.
Barbourville N. Y. R. Y.

The French-Canadian horse is deseended from Norman-French stock, though more or less of mixed breeding, standing generally little more than 15 hands high, and weighing from 900 to 1,100 pounds. He is a very courageous looking animal, with his lion-like mane and his bushy tail and fetlocks. The feet are tough and almost immune from disease. His hardiness and ability to thrive under most adverse conditions are notable characteristies. The writer possesses a half-bred French-Canadian mare now 25 years of age, whieh plowed every day in a team with a four-year-old, last Fall, without any apparent weakness or fatigue.

These animals, aceording to Dr. C. A. Coutre, seeretary of the French-Canadian Stud Book, Quebee, deseended from those sent out from Franee, before the eonquest by Louis XIV, "who liked to do things in a grand way," and sent to Canada only the best animals of the kingdom. "On 16 July, 1665, there were sent to us 20 mares and two stallions from the royal stables. Others were sent us in 1667, including a stallion and two mares for the Ursulines. In 1670 11 mares and a stallion were landed at Quebee; other shipments followed."

The French-Canadian horse is probably the best general-purpose horse raised in Canada. He fills this position to a much greater extent than any other breed. He is fairly speedy but not extreme, though my mare, when younger, would go in less than three minutes to a road wagon. He, however, prefers a reasonable gait. He will go on all day, but does not eare to keep up extreme speed. The Freneh-Canadian crosses well with the Clysdale. I have seen some excellent horses from erosses of the French-Canadian stallion on the grade Clyde mare. For further information communicate with Dr. J. A. Coutre, Societe Generale des Eleveurs de la Provinee de Quebec, 49 Garden street, Quebec, Canada. J. A. MACDONALD.

GOOD AYRSHIRE RECORDS.

Somehow no one seems to think of the Ayrshire cow as a large producer of milk. We speak of her as a good, servieeable animal, active and vigorous, but somehow it is not generally known that there are Ayrshires with heavy records. C. M. Winslow, secretary of the Ayrshire Breeders' Assoeiation, sends out a summary of the advaneed registry for Ayrshires. The following figures give the average of the cows or heifers exeept, of course, the individual record where only one eow is mentioned. It appears from this that the Ayrshire is a heavy producer as well as a very serviceable animal:

Summary of Advanced Registry.

Average yield of milk and butter of all cows and heifers that have qualified for advanced registry to Oetober 1, 1914:

		Lbs. Milk.	Lbs. Butter.	P. C. Fat.
503	Mature eows..	10,576	481	3.81
189	Four-year-olds.	9,692	444	3.9
251	Three-year-olds	9,002	417	3.94
419	Two-year-olds..	7,871	371	4.
1,362	Total cows and heifers	9,339	430	3.91

Average of ten highest reeords in each class:

	Lbs. Milk.	Lbs. Butter.	P. C. Fat.
10 Mature eows	18,841	867	3.9
10 Four-year-olds ...	14,117	652	3.93
10 Three-year-olds ..	14,083	648	3.91
10 Two-year-olds ...	11,957	581	4.14

Individual reeords.

	Lbs. Milk.	Lbs. Butter.	P. C. Fat.
1 Mature eow gave..	23,022	1,080	3.99
1 Four-year-old gave.	17,657	966	4.65
1 Three-year-old gave.	15,121	631	3.55
1 Two-year-old gave.	14,495	644	3.78

WATCH YOUR DAIRY COW.

"WOULD you stand for it year after year?" was the question F. H. Scribner, of Wisconsin, put to farmers in demonstration talk at the Dairy Show, "if your thrasherman would try to economize in fuel and run on just enough steam to turn the separator. No sir, the thrasherman would get orders to go on, if he just fed in fuel enough to turn the wheels. The engine would die when a fraction of eapacity would be approaehed. You would be paying your men for the day's work, your expenses would be just as high for labor, you would be getting only a fraetion in results, while there would be saving a few pennies at the power end of the machine. The thrasherman wouldn't get a job next year, and he wouldn't stand a ehanee among the neighbors."

Mr. Seribner said: "We draw out of the dairy cow in proportion to the amount we put in her. If we put in just enough to keep her going there is nothing eoming out in the bueket. If we heap in a little more fuel, just a shovelful of coal in the case of the thrasherman, we commenee to see results. A good many of us feed and then run away. Good, eareful, judicious, honest feeding is a trade all by itself. We must study every individual in our herd. We must stand by and watch our cows, we must watch them from three points of view, in front, behind and in the middle. From in front I want to watch my cows eat; I want to see them eat with relish; I want to wateh them behind. One morning I notieed no droppings behind a eow. It was a danger signal, and we gave her immediate attention, and in a short time she was baek at her plaee produeing results.

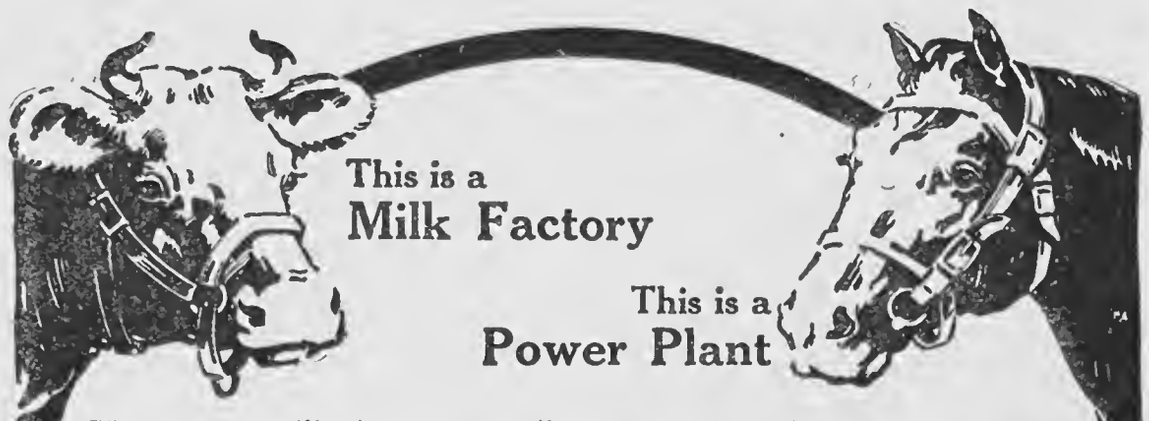
"We want to wateh the middle," Mr. Scribner emphasized with a foreible gesture. "I would not know how to feed my cows, without a milk sheet in the barn. For example, one eow may become a little poor; if so, feed her more eorn, for that will stick to her ribs, or if she is running more to meat, I feed her less eorn, and I have other similar practiees.

W. J.

Cottage Cheese; Buttermilk.

CAN you tell me how cottage eheese is made from separated milk? What price does it retail for, delivered from house to house? Also I should like to know the retail priee of buttermilk delivered the same way? D. B. H.
Vermont.

The skim-milk should sour until loppered. Then heat over water or steam until the whey separates from the curd, and drain through a sieve or colander. The milk should be stirred frequently while heating, and removed as soon as the curd becomes sufficiently firm for draining. Too much heating makes the cheese hard and rubbery. After draining salt to taste. I eannot give the exact amount of salt neeessary but I think it can readily be determined by experiment. A little butter or cream improves the quality of the eheese. I am not familiar with the retail price of cottage cheese, but I should think one should get at least 10 cents per pound, and more if the trade will bear it. Buttermilk retails at three to five cents per quart, sometimes even higher. C. L. M.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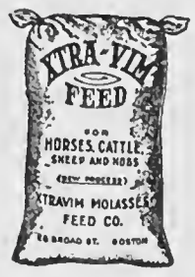
Pure Porto Rican cane molasses and sphagnum moss combined in a new, clean, handy, dry form. Practical stock feeders have proved the high feed values and good conditioning qualities of this combination for all kinds of live stock. Animals love it and thrive on it—make more weight, give more milk, do more work. It is a cheap feed, for it takes the place, weight for weight, of higher-cost feeds, such as corn, oats or chop. Dry to the touch—about like bran—no waste in handling, and eats up clean without "mussing" animal or manger. Try it and watch your animals improve!


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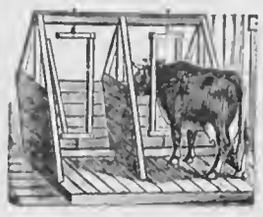
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HOLSTEINS AS BEEF CATTLE.

A HOLSTEIN cow will consume enough food above her own maintenance to produce 1,758 pounds of milk solids or over three times as much as an average beef steer will gain in body weight in one year. Interest is directed to this fact by the Holstein-Friesian Association, and in calling attention to the beef-producing qualities of the breed, they contend that contrary to the general belief, large and profitable beef and milk production are correlated to an astonishing degree. The greater the milk producing qualities, the more perfect the work of assimilation and digestion, the larger and the more economical the gain of body weight when dry, the stronger the constitution, and the more regular the breeding, all of which qualities also tend to make beef producing more profitable.

It is further contended: "A Holstein steer inherits from its dam a capacity for assimilating a quantity of feed which would make the average beef steer sweat merely to look at it. The fact is that while up to about 18 or 20 months of age a Holstein steer will have approximately the same conformation and quality as a beef steer yet after that age he begins to partake more of the dairy form." Reference is made to Iowa results in which Herefords, Angus, Holstein and Jersey steers were compared. "The Holstein steers made an average of $14.87 net profit for the wholesaler, while the Angus averaged $9.25 and the Hereford $5.13. The average cost of a pound Holstein gain was .0712 cents the pound, while that of the Hereford was .076 the pound. Nebraska has found that Holstein gains are very satisfactory. "The principal objection to the Holsteins for production of beef is the fact that they are very slow to fatten and must be kept in the feed lot for a longer time than is ordinarily needed by beef breeds. This could not be a very serious objection to Holsteins for beef, for according to Nebraska's own experiments only 60 per cent. of the Holsteins had to be kept over an extra six weeks in order to have them sufficiently fat for market, while 66 2-3 of the total lot had to be kept over." W. J.

A STATEMENT OF "INBREEDING."

IT is possible that the editor of THE R. N.-Y. remembers seeing a somewhat likely flock of 20 Plymouth Rock hens, when some years ago he was a visitor at the writer's home, and his favorable comments upon their type and appearance. They were notably large, finely marked, robust hens, and in appearance one was about a duplicate of the others, and great layers as their chief recommendation. They traced back to a setting of eggs from a noted flock, and for the succeeding generations, not a drop of fresh blood had been introduced. Every two years, the most promising cockerel had been selected as a mate, and this plan followed year after year. Each year, the birds grew slightly larger, maintaining the most perfect health. Each year when the little chicks appeared, they, with their "mother," were taken to the loft on the big floor over the milking stable, and there fed and cared for, for at least three weeks. There they ate their food, scratched and dusted in the orts, knew no pips, or other chick ills, and went out lusty foragers. When a cockerel, or hen, was killed, the board was graced with abundant and fine meat, nor did it need two birds for a meal. Alas and alack! One morning every hen but one had departed to mingle with the activities of the not distant city, so we are compelled to say that this close in-breeding did cause them to "run out," and actually disappear, but no one can make the lady who cared for them believe that any other plan of maintaining a flock of hens is better than her plan of shutting out the out-crosses, and fresh blood; and breeding from the best you have, when you know that nothing better can be found outside the farm.

Within almost sight of the writer is a herd of Holstein cows, bred exactly the same way, only the hens had a dozen eggs as a foundation; and this herd was started from one cow, and she is therefore the grandmother of all the succeeding generations, which exclusive of all sales, now numbers quite 100 head. The original sire has been retained, and is therefore in his fifteenth year, the actual father of the herd. This herd is calculated to be the finest in the world viewed from any point, or angle, and numbers in its ranks quite a half-dozen of the champion butter fat cows known to official records. It will be noticed that the most intense in-breeding was done in both these cases, but not an instance where it was detrimental, and resulted in damage. Why should there be a prejudice against in-breeding? Like begets like, and if the type and health of the breeding stock is not allowed to deteriorate by unwise and inferior mating, there is no more danger of stock running out than that of our wild animals and birds that nature holds up to the standard by intense in-breeding.

Why not with our hens? Why not keep them purebred of standard color and type? When we introduced new, fresh outside blood, a new influence and heredity is introduced, and just what the "nick" will be, we do not know, and that is where we get the jumbled-up mixture of our common speckled hens, and no breeding will eliminate this mixture. Where fresh blood is introduced, the male can only give the half of what he possesses, practically only a fourth, so that the produce is in reality a purebred grade. Where the breeding is back to the sire, his blood influence is doubled, instead of being diffused. If the ancestors behind this sire are of distinctive qualities, and we keep these qualities in line, instead of diffusing them with fresh blood, fixed qualities become more substantially fixed, and we say that the heredity exhibited is of the most characteristic and transmittible quality.

The law of Mendel's is throwing great light upon the laws of breeding, and has shown that this plan of in-breeding is provocative of all sorts of ills; is without proof, but on the contrary, in the best breeding of hens, stock, horses, dogs, and the like, is found that in-breeding is universally practiced. All close-bred hens do not lay 205 eggs a year, but more do, than do speckled hens, standard bred (inbred) horses do not all trot in 2.01, but more do than mixed bred horses, and so through the list. The tenor of this article is to say that breeding in line such birds as possess the qualities we want, using a male bird of your own hatching that has the points you think superior, each year, and you will if you persist in this have a flock that will have few superiors, and will meet your ideal, though if you breed from only your very best layers, your hens may become in a few generations to have quite distinct formation and appearance from what will be accepted to-day as standard markings, and points, as indicated by the score card! But is there really any law like that of the Medes and Persians in livestock judging, that can know no change?

Ohio. J. G.

LITTLE GIRL (in disgrace, to mother, as she enters nursery): "Do you love me, mummy?" Mother: "Yes, darling." Little Girl: "Do you love me very much?" Mother: "Of course, darling." Little Girl: "Well, I've frown my pudden under the table."—London Punch.

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WANTED: Twenty Holstein Grade Cows Fresh or about to Freshen. Tuberculin certificate required. State number for sale and lowest price. Address
JOHN C. OLEY, Manager
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HOLSTEIN BULLS—Grandsons of Admiral Walker Pietertje, 9 months old, nicely marked. Price, $75. One month old calf, ¾ white. Price, $30. E. E. Stevens & Son, Wilson, N.Y.

Holstein-Friesian Bull Calves For Sale—Write for special offer. THE GATES HOMESTEAD FARM, Chittenango, N. Y.

REGISTERED HOLSTEIN BULL CALVES—Grandsons of King Segis Pontiac and De Kol 2d's, Butter Boy 3d. For further particulars and prices, inquire of C. D. TRACY, MASSENA, NEW YORK

READY FOR SERVICE—PRICES, $75.00 to $150.00 Registered Holstein and Jersey Bulls. Splendid individuals with great backing. Best blood in the land. Also younger bull calves. Write for list. HOMEWOOD FARMS, RYE, N. Y.

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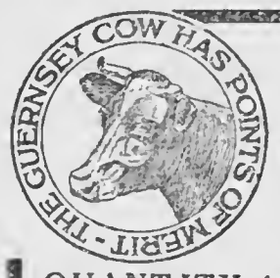

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The sire is half the herd and a good one is more than half. Let us supply the better half of your purebred or grade herd. We have ten princely individuals—6 weeks to 6 months old—at present available for the purpose. Prices, $60 to $350 according to blood. Heifers sold. Inspection invited.
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2 Registered Heifer Calves—1 registered bull not akin, light colored, $250. 50 high grade yearlings, $35 each, registered bulls, $35 to $100 each. Grade heifer calves, ¾ Holstein, $15 each, express paid to your station in lots of 5. Registered and high grade cows at reasonable prices, no foot and mouth disease in this Co. Reagan Bros, Tully, N. Y.

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75 High Grade Cows just fresh, large producers. 50 cows due to calve this month and next. 40 extra nice heifer calves ten days old, sired by pure blooded bulls, from high producing dams. Registered and grade bulls all ages.
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Box 105, Brattleboro, Vt.

FOR PRODUCTION—BREED UP, NOT DOWN—Registered Jersey bull calves, only, from producing dams and highest type sires. R. F. SHANNON, 603 Renshaw Bldg., Pittsburgh, Pa.

Jersey Heifers
My herd of 65 head, tuberculin tested in October. None reacted. Have about 20 head to dispose of. Two years old and under. For particulars apply to
J. Spencer Hosford, Kinderhook, N. Y.

It's different with
The Jersey

The State Dairy Instructor of the State of Maine recently said:
"One of the mysterious things about the dairy business is that a man can conduct a dairy all his life, losing money, and yet make a living."
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Butter Fails to Come.

I have a cow which freshened July 15, 1914, and up to about three weeks ago, she was making about six pounds of butter a week; now for some reason or other I can get no butter from the cream. It simply foams and froths and gets about like whipped cream, but I can in no way gather any butter. She is due to come in next July. C. F. A.
Flanders, N. J.

This question of "Why don't the butter come?" is a frequent one at this time of the year, and is a hard one to answer satisfactorily, because frequently when one has complied, seemingly, with all the requirements, still the butter won't come. Some of the conditions which work against easy churning are too low churning temperature, cows in advanced stage of lactation, and cows eating dry feed. Then, too, the milk from some cows seems to be rather difficult to churn. A thick cream generally churns easier than a thin cream, and well-ripened cream better than sweet or only slightly soured.

Warming the cream to as high as 70 degrees may in some cases be necessary. Care should be taken to stop churning as soon as the butter gathers sufficiently, in order not to make waxy butter. Sometimes, in cold weather, the cream cools off considerably after being put in the churn, and really is not as warm as one thinks. A handful of salt put in the churn when the cream gets thick, will sometimes help. In most cases warming the cream will solve the difficulty.

C. L. M.

AILING ANIMALS.

Worms.

WILL you advise me what to give a colt six months old that passes worms? 2. How best can I wean colt, either gradually or in three or four days? 3. I have a mare five years old that seems to have an itch. She wants to rub herself against something all the while especially after she has been working and gets warmed up a little. Her hair looks rough all the while, and seems to stand on end. She has a large appetite, but is poor in flesh. G. L.
New York.

1. Mix together equal parts of salt, sulphur and dried sulphate of iron and give one teaspoonful of this in the feed twice daily for a week, then skip 10 days and repeat. Feed whole oats and bran along with the best hay. 2. Wean at once and be done with it. The foal must first have learned to eat grain, bran and hay. 3. Wash affected parts with a 1-100 solution of coal tar disinfectant. Have her clipped. Give her worm medicine. That prescribed for the foal will suffice, but the dose is one tablespoonful night and morning for an adult horse. Omit iron if she is in foal. A. S. A.

Indigestion.

I own a fine road horse about 12 years old. He is a fine traveller and well bred and is used only for road purposes. For the last three months, he has not been doing well. He has lost in flesh and the color of his coat, although nearly shed, is not what it was. He rubs the dock of his tail. I have doctored him for worms, but unsuccessfully. I feed oats, bran, corn on ear, equal parts, with a little oil meal; also a good quantity of hay and some grass each day. Would you change the ration, and if so, how? The horse is in good spirits but his coat and flesh do not suit me. C. J. F.
New Jersey.

Have his teeth put in order by a veterinarian. Change the feed, omitting ear corn and grass. Feed whole oats with an addition of one-ninth part of wheat bran. Dampen it at feeding time. Do not feed any commercial salt, but allow free access to rock salt. Allow one pound of oats and bran and one pound of clear Timothy or upland prairie hay per hundred pounds of body weight as a day's ration at first. When he works hard increase the amount of oats and when idle lessen the oats and increase hay. Groom him once a day. Wash the tail clean and when dry pour on and rub in a little of a mixture of equal parts of kerosene and sweet oil. Repeat once a day for three days; then saturate the tail every three days with a creamy mixture of flowers of sulphur and sweet oil. If there is a fur of scaly substance around the anus treat for worms as so often advised here.

Azoturia.

Can you advise us in regard to our horse? We bought a mare last August, nine years old this Spring. She has just had her second attack of azoturia (so called by the veterinarian) since we have had her. Since this last attack she has been stiff in her right hind leg. When I start to back her out of the stall she will step back with her left hind foot and then she cannot seem to get the right one off the floor for a few seconds. After she has started she gets along all right, only once in a while something about it seems to "slump" or give way. The trouble seems to me to be up somewhere near the hip. She was absolutely sound before this trouble. She did not get down at either time she has had this trouble, neither has the muscle perceptibly wasted away because of it. The mare was not accustomed to grain and I fed some whole rye (about one quart) with two quarts whole oats, and Timothy hay. What is the trouble? O. W.
New York.

If azoturia was present it attacked the mare after she had stood for a day or more idle in the stable eating her usual rations, and the urine at time of attack would be the color of strong coffee. In lameness following azoturia the muscles of the region of the thigh, between stifle and hip, waste away and the stifle drops downward when the animal walks. If these symptoms are present clip the hair from the thigh and blister with cantharidine blister at intervals of two or three weeks until she goes sound. If such symptoms are not present it will be necessary to have a graduate veterinarian make an examination and locate the seat of the lameness and prescribe appropriate treatment. A. S. A.

Tail Rubbing.

I HAVE a colt three months old which is always rubbing its tail on posts, and boards. Can you tell me if it is possible this colt has worms of any kind, and what remedy to use? H. V.
New York.

Pin worms in the rectum may cause the irritation, or that may be due to a collection of dandruff substance. Wash the tail clean and then bathe with strong salt water twice a week. Inject into the rectum a quart of soapy water containing half a cupful of decoction of tobacco leaves or stems. Repeat the injection each night if the irritation persists. It would be best to make sure that pin worms are present before giving or continuing the injections. A. S. A.

Urticaria.

I HAVE a colt two years old, weighs about 1,250 to 1,300. Last year he suddenly developed knots all over his body. He went blind, that is, his eyes were shut, but he got all over it before night, and has been all right ever since. What ailed the colt? F. H. S.
Indiana.

The colt had a sudden attack of urticaria (nettle rash or surfeit) which is akin to "hives" of a child. It is caused by a change of feed such as green grass. A light physic should be given and the skin bathed with a solution of one ounce of granular hyposulphite of soda in a quart of soft water. A. S. A.

LIVE STOCK NOTES.

Why not a National Swine Show? This has been the hope of members of the Illinois Swine Breeders' Association. This matter was brought up at a recent meeting of the Illinois Breeders held in Springfield, and a later meeting earlier in December was held further to consider the National Show, which is to be patterned in a measure after the dairy show.

Tilly Alcartra, owned by the A. W. Morris & Sons Corporation, of California, is the new world's champion milk producer. This Holstein cow has 30,452.6 pounds milk to her credit in 365 days. Pieterje 2nd held the world's record milk production for nearly 27 years. February 23, 1888, she completed her year's semi-official test and her record was 30,318½ pounds of milk. Tilly Alcartra was six years old October 2, and she freshened at two and one-half years.

The American Jersey Cattle Club have voted a recent appropriation of $10,000 for the Jersey display at the Panama Pacific Exposition $5,000 had previously been voted in behalf of Jersey interests.

The Kansas Agricultural College has inaugurated a campaign to enlist 20,000 boys and girls in agricultural and homemaking contests. A state organizer has been appointed.

The Sicilian farm laborers are among the poorest paid workers in Europe. Their average weekly wage is less than 50 cents. Girls receive from $25 to $40 a year in Finland, and much of their work is about the dairy and in the field. They do all milking, feeding, and in the short Summers work in the fields.

Hancock County, Ohio, will have a contest supplementing the corn contest in that county. Prizes will be given for the best porker between the age of five and eight months in the Poland China, Berkshire, Chester White and Duroc Jersey classes.

THE Michigan Experiment Station is endeavoring to secure names of farmers who will seed Alfalfa in the Spring. It is intended to secure a carload of seed from the Northwest.

TWENTY California boys have been made happy as the result of their agricultural work. One boy made a profit of $45.44 on nearly three and one-fifth tons of tomatoes grown on one-fifth acre. Another boy cleared $12.76 on a quarter-acre beans which yielded 319 pounds. Another boy made $41.17 on one-fourth acre of potatoes, which yielded 71.7 bushels. Another boy had a net profit of $36.18 on one-eighth acre planted to mixed vegetables.

EDMONTON, Alberta, promises to be the live stock center of Western Canada. An English syndicate has secured a location indicated by the city council as desirable for stock yards. The company has offered the city a free site in the vicinity of the yards for a municipal storage plant, and abattoir.

FIVE hundred cars of table grapes were shipped from Sanger, California, this year, and many more cars are yet to be shipped. The Tulare Co-operative Poultry Association of that State shipped 4,500 dozen eggs during the month of October. In Tulare County $81,000 was paid ont by creameries during the month of October, and the returns for butter fat was from 33 to 37 cents a pound.

THE report comes from Alabama that one hog brought to town and sold a few days ago yielded more than a bale of cotton. It weighed 300 pounds and sold for $41, while the expense of raising it was much less than that of raising a bale of cotton.

Nov. 23. Wheat $1.05; oats 45; rye 80; corn 60; clover seed $7.50; clover and mixed hay $12; Timothy $12.50; Alfalfa $14. Fat hogs $7.25; fat cattle 6 to 7; milch cows $50 to $80. Potatoes 60; apples 70 to 90; butter 28; eggs 30. Live chickens 12 to 14. M. E. H.
Woodstock, O.

BUFFALO MARKETS.

QUOTED wholesale prices are not below 20 and 21 cents for dressed turkeys, 15 and 16 cents for fowls and 15 and 14 cents for ducks and geese but a large lot of dressed ducks and chickens sold at retail on the market for 16 cents, all looking as good as ordinary poultry. Live poultry is four cents lower than dressed. Apples and potatoes have not advanced. Local competition has brought down the Pacific coast apples till a city store now posts a notice offering "fancy table apples at 15 cents a dozen." Apples are $1.50 to $3 per barrel retail, good Seek-No-Furthers retailing at 50 cents a bushel. There is much effort to market them in bulk, to escape the effect of the new packing law, which makes the unbarreled fruit cheap. Potatoes are so dull that some farmers who were busy at other crops and have some still in the ground in December say they shall not dig them unless there is still some fine weather for the work, which is not likely. The wholesale price is not above 45 cents, 60 cents retail. One Erie County farmer reports that he had 12 acres of potatoes, 11 acres of corn, and 30 acres of grapes, all coming ready for harvesting at once, so the potatoes, being least perishable, suffered. The markets are full of celery; the quality is good, large bundles of it retailing for 25 cents, or 8 to 30 cents per dozen wholesale. The price of lettuce is also cut some on account of warm weather, and while the quoted wholesale price is 35 to 40 cents for two-dozen crates and some grocers are holding big heads for 30 cents, others are unloading it in miscellaneous lots for 10 cents. Vegetable oysters also retail for four cents a bunch. There are still some Catawba grapes offered at 12 cents per pony basket, wholesale, but California Tokays of fine quality retail for eight cents a pound. Cranberries are from eight cents down retail. Hubbard squash is as low as it ever was at this time of the year the wholesale price not being above $1 per hundred and the retail two cents a pound. The quality is good. Ordinary vegetables, parsnips, beets and carrots, retail at five cents a measure, string beans at 10 cents a quart, radishes, two bunches for five cents. Butter still sags off not being quoted above 35½ cents wholesale, though some retailers still ask 41 cents. Cheese is steady and unchanged at 17½ cents for best domestic. Eggs are all prices, quoted at 50 cents for fancy wholesale and selling for 30 cents retail. J. W. C.

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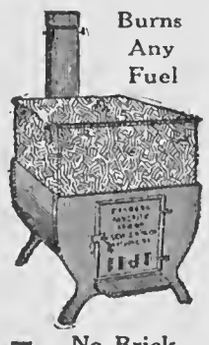
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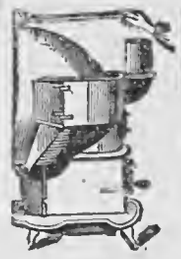
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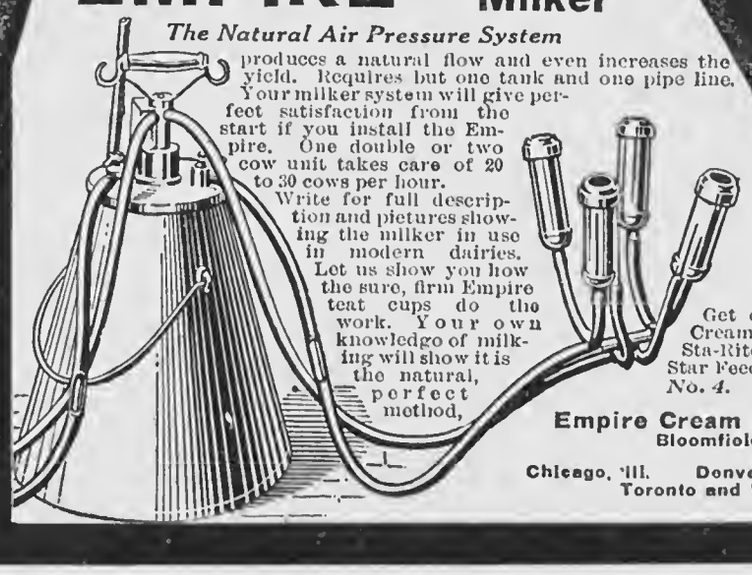
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The Henyard.

THE EGG-LAYING CONTEST.

THE sixth week of the contest at Storrs, ending Dec. 13, shows an egg output of 1,636. This is a gain of 174 eggs over last week, and is 674 more eggs than were laid in the corresponding week last year. The English White Wyandottes, entered by Edward Cam, take the honors again this week, with a score of 42; last week they won first place with a score of 43, and the week previous were second with 39 to their credit. This pen is now the leading pen in the total score, having laid 243 eggs. Windsweep Farm's White Leghorns are second in the total with a score of 221. In the week's score N. W. Hendryx's White Leghorns are second, laying 40 eggs and Storrs Agricultural Station's White Leghorns are third with a record of 37. P. G. Platt's White Leghorns tie with Merritt M. Clark's Barred Rocks, each laying 35, but Colonial Farm's R. I. Reds, beat them by one egg and take fourth place with a score of 36.

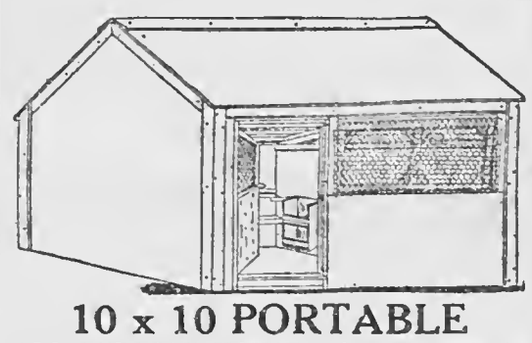
The contest at Mountain Grove, Missouri, closed Dec. 1. All previous records were beaten at this contest. A White Leghorn hen from Nebraska won the contest for high production by laying 286 eggs. Tom Barron's pen of White Leghorns won the grand championship by laying 2,296 eggs. Every bird but one in this pen, laid over 200 eggs. That is, nine birds out of 10 exceed 200 eggs. Mr. Quisenbury asks: "Why is it that some pens have a single bird that makes a very high record, and all the rest below the average?" And he justly says that the "high average of these English pens is due to the years of trap-nesting and selection of the best layers; to careful pedigree records, and matings with an eye to vigor and stamina as well as to high laying records." To which ought to be added, an absolute independence of the artificial "standard" set by the fancier. As the result, many of these English Leghorns have more or less "brassiness" in the plumage, they have large combs and high tails. They are the Leghorns Nature produces when she is not hampered. The trap-nest does not impose any artificial standard of comb or shape, or color, or tail. That this character of high egg production can be fixed so that it becomes the natural habit of the fowls, it seems to me is clearly demonstrated by the records made at all the contests, year after year. And this fact gives actual value above that of ordinary fowls, to male birds that carry this blood pure and unmixed. The week's record follows:

	Barred Rocks.	Week	Total
Merritt M. Clark, Connecticut		35	156
Frank L. Tuttle, Massachusetts		32	91
Francis L. Lincoln, Connecticut		14	63
Jules J. Francais, New York		18	65
Storrs Agr. Station, Exp. pen, Conn.		18	49
Storrs Agr. Station, Exp. pen, Coun.		23	46
O. A. Foster, California		10	14
	White Rocks.		
Albert T. Lenzen, Massachusetts		7	20
Branford Farms, Massachusetts		..	1
Branford Farms, Massachusetts		6	8
Branford Farms, Massachusetts		..	..
Branford Farms, Massachusetts		9	33
	Buff Rocks.		
A. A. Hall, Connecticut		11	63
	White Wyandottes.		
Tom Barron, England		20	58
Ed. Cam, England		42	243
Merrythought Farm, Connecticut		22	116
Neale Bros., Rhode Island		30	128
Mrs. J. D. Beck, Connecticut		24	69
Storrs Agr. Station, Exp. pen, Conn.		6	6
Storrs Agr. Station, Exp. pen, Conn.		7	24
Mapledale Farm, Connecticut		8	24
J. F. Byron, Connecticut		23	112
	Buff Wyandottes.		
Dr. N. W. Sanborn, Massachusetts		19	115
	Silver Wyandottes.		
Silver Wyandotte Star, New York		1	1
	Columbian Wyandottes.		
Merrythought Farm, Connecticut		13	73
	Rhode Island Reds.		
Dr. J. C. Dingman, New York		7	12
Hillview Poultry Farm, Vermont		29	187
Homer P. Deming, Connecticut		12	20
Jules J. Francais, New York		1	3
H. M. Bailey, Connecticut		8	9
John Rackus, Vermont		14	43
W. H. Bumstead, Connecticut		17	67
Pinecrest Orchards, Massachusetts		30	93
Harry B. Cook, Connecticut		26	84
Colonial Farm, New Hampshire		36	152
A. B. Brundage, Connecticut		1	1
Storrs Agr. Station, Exp. pen, Conn.		25	86
Storrs Agr. Station, Exp. pen, Conn.		6	32
Rural New-Yorker, New York City		14	31
S. G. McLean, Connecticut		14	50
Springdale Farm, Connecticut		11	25
D. E. Warner, Rhode Island		7	36
H. W. Sanborn, Massachusetts		33	108
Albert R. Ford, Connecticut		4	22
	Light Brahmas.		
Storrs Agr. Station, Exp. pen, Conn.		1	35
Storrs Agr. Station, Exp. pen, Coun.		7	14
	American Dominiques.		
H. B. Hiller, Connecticut		34	134
	White Leghorns.		
A. B. Hall, Connecticut		21	71
George Bowles, Connecticut		24	113
Ellis W. Bentley, New York		22	149
N. W. Hendryx, Connecticut		40	109
Braeside Poultry Farm, Pennsylvania		25	74
Francis F. Lincoln, Connecticut		19	137
Cecil Guernsey, New York		13	49
Merritt M. Clark, Connecticut		26	183
Chas. N. St. John, New York		28	89
Jay H. Ernisse, New York		19	82
Storrs Agr. Station, Exp. pen, Conn.		37	161
Storrs Agr. Station, Exp. pen, Conn.		25	192
Mrs. Rollin S. Woodruff, Connecticut		15	84
Windsweep Farm, Connecticut		14	221
James H. Lord, Massachusetts		7	43
P. G. Platt, Pennsylvania		35	164
Dictograph Farm, New York		9	14
F. M. Peasley, Connecticut		30	133
Chas. Heigl, Ohio		13	31
Tom Barron, England		32	77
Edward Cam, England		9	73
Geo. M. McMillan, Missouri		9	36
Wm. H. Lyon, New York		26	118
Happich & Danks, New York		20	67
A. P. Robinson, New York		28	123
Manor Poultry Farm, New York		31	153
Branford Farms, Connecticut		7	30
Branford Farms, Connecticut		15	85
Branford Farms, Connecticut		19	90
Branford Farms, Connecticut		11	40
Anna Dean Farm, Ohio		..	42
Rural New-Yorker, New York City		10	85
A. S. Sondregger, Connecticut		27	145
S. J. Rogers, New York		21	75
Steneleigh Poultry Farm, Penn.		19	67
Mrs. W. B. Whitlock, Connecticut		21	114
Toth Bros., Connecticut		22	68
James N. Thomas, New Yirk		33	104
Sunny Acres Farm, Connecticut		26	64
	Rose Comb Brown Leghorns.		
The Gale Place, Connecticut		4	6
	Buff Leghorns.		
Lakeside Poultry Farm, Michigan		3	10
O. L. Magrey, Connecticut		12	54
	Black Leghorns.		
J. Collinson, England		30	109
	Silver Campines.		
Uncowa Poultry Yards, Connecticut		12	24
Lewis E. Prickett, Connecticut		..	..
	Light Sussex.		
Dr. E. K. Conrad, New Jersey		5	8
	Salmon Faverolles.		
Doughoregan Farm, Maryland		..	..
	White Orpingtons.		
Henry S. Pennock, Florida		5	5
Obed S. Knight, Rhode Island		..	100
B. P. Nase, Connecticut		..	..
	Buttercups.		
Chanticleer Poultry Yards, Penn.		..	..
	Favorite Hens.		
Rural New-Yorker, New York City		8	26

GEO. A. COSGROVE.

Keeping Old Hens.

I AM greatly interested in the article of M. B. D., page 1337. I myself sold a flock of yearling Leghorns this Fall because I did not have room for them, but I really believe it would have been better to provide the room for the best hens. It occurs to me that in connection with this question of production at different ages there is a very important point which should be investigated, as much will depend upon its solution as to the comparative value of the pullet and the older hen. That is, at what period of the season does the older hen produce her eggs, at the high-priced or low-priced sason? M. B. D. can doubtlss give us some information upon this question as his records must show. C. R. W.



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PRICE $30

Write for onr free booklet, showing 20 different cuts of portable houses, oat sprouters, coops, etc.

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15 Depot Street, Randolph, Mass.

GREAT BARGAINS in hatching eggs and early pullets, for early orders. Reserve them now. Will ship when wanted. Eggs 90% fertile from hens that cost $5, each; 15 for $1. postpaid, $4 per 100, 3 months old pullets, 50 cents each. 4 months old, 60 cents each. Delivered in May and June. Theso are from prize stock. White Leghorn, White Wyandotte, White and Barred Rock and R. I. Red. Quality talks.
TALKING POULTRY YARDS,
HAINESPORT, NEW JERSEY

C. W. Sherwood's heavy laying strain S. C.W. L. 500 pullets and 500 breeding hens. Hatching eggs and day old chicks from February 1st. C. W. SHERWOOD, Saybrook Point, Conn

S. C.W. Leghorn Cockerels—MADE IN AMERICA. Our strain of Leghorns have been bred 20 years for large production of fancy white eggs. Write for prices. FLOYD Q. WHITE, successor to White & Rice, Yorktown, N. Y.

FINE WHITE LEGHORN COCKERELS
D.W. Young's prize strain, $3. M. Rauhcrz, Monroe, N.Y.

COLONIAL REDS
We offer fine pedigreed breeding cockerels, yearling hens of proven value and pullets from our best lines. Booking orders now for hatching eggs and chicks. A pen of our Reds hold highest record for egg production ever made in official laying contest. Average, each bird, 194 eggs. We have satisfied customers in 46 states of the Union. Honorable treatment guaranteed.
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Trapnested Reds, pedigree bred for vigor and egg production. Husky March cockerels, pullets, yearling cocks and hens, mated pens and trios at reasonable prices. Several cockerels from 200 egg hens. Shipped on approval. Dr. J. C. DINGMAN, Spring Valley, N. Y

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AUSTIN'S 200-EGG STRAIN SINGLE COMB **Rhode Island Reds** standard bred, high record stock, red to the skin. Old and young stock for sale. AUSTIN'S POULTRY FARM, Box 17, CentreHarbor, N. H.

R. I. RED BABY CHICKS—Free from white diarrhea. Order now for Spring delivery. All breeders tested by Storr's Station. Z. N. BEACH, Wallingford, Conn.

S. C. R. I. Red Cockerels, $1.50; Pekin Ducks, $2; Geese, $2.50 up.
C. E. COUTANT, North Windham, Conn.

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direct to your customers by parcel post and get the full one hundred cents out of every dollar.

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is made of strong double-laced corrugated paper with a cotton cloth pocket for each egg—holds large or small eggs firmly—easily filled—no loose parts. Its light weight saves postage. Approved by Railway Mail Service. Just the thing for storekeepers to use in making deliveries. Box could be returned and used indefinitely. Write for full description, or send 25 cents for sample.
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PARCEL POST BOXES
Ship Eggs, Dressed Fowls, Fruit, Butter, etc., by parcel post direct to your customers.
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meet all Government requirements—guarantee safe delivery of products. Made in various shapes and sizes—strong, light and sanitary. Protect contents from heat, cold and moisture. Send today for free booklet, "How to Pack It for Parcel Post."
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Improved Parcel Post Egg Boxes
SEND 15 CENTS FOR SAMPLE
New Flats and Fillers and Egg Cases
CATALOGUE SENT FREE ON REQUEST
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Keep a daily record. How many Eggs a day? Our Daily Record Book for six years—size 8½ x 12, by mail for $1.50.
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140 EGG INCUBATOR CHICK BROODER
Both are made of Calif. Redwood. Both For $10
Incubator is covered with asbestos and galvanized iron; has triple walls, copper tank, nursery, egg tester, thermometer, ready to use. 30 DAYS' TRIAL—money back if not O.K. Write for FREE Catalog Now.
IRONCLAD INCUBATOR CO., Dept. 111 Racine, Wis. (2)

MacKellar's Charcoal
For Poultry is best. Course or fine granulated, also powdered. Buy direct from largest manufacturers of Charcoal Products. Ask for prices and samples. Est. 1844
R. MacKELLAR'S SONS CO., Peekskill, N.Y.

The Celebrated Hungarian and English **PARTRIDGES and PHEASANTS**
Capercailzies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Cranes, Storks, Beautiful Swans, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, and all kinds of birds and animals. WM. J. MACKENSEN, Naturalist, Department 10, Yardley, Pa.

BARGAINS—African, Embden, Toulouse Geese Pekin, Runner, White Muscovy Ducks HUSE FARM Manchester, N. H.

WHITE EMDEN GEESE—Finer than ever, buy your breeders now. Maple Cove Poultry Yards, R. 24, Athens, Pa.

60 Varieties CHICKENS, DUCKS, GEESE, TURKEYS, GUINEAS and HARES Stock and eggs, 60 page catalogue free. H. A. Souder, Box 29, Sellersville, Pa.

WHITE CRESTED BLACK POLISH, SILVER SPANGLED HAMBURG, AMERICAN Dominique, Sicilian Buttercup, and Single Comb BLACK MINORCA COCKERELS, $1 each and upwards. Austin Jackson, Mineral Springs, N.Y.

For Sale—B. R. Cockerels—Before breeding season, a $5 cockerel for $3, until Jan. 15th only. Money back if not satisfied. A few pullets. All from prize-winning stock bred by us. DR. HAYMAN, - - Doylestown, Pa.

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BUTTERCUP COCKERELS—April hatched. Handsome birds. $2.00 each. W. Payne, Ramsey, N. J.

White African Guineas—Not akin. $1.00 each. Charles Abell, Esperance, N. Y.

BRED TO LAY—S. C. WHITE LEGHORNS, American, Barron, and half-Barron cockerels for sale. Now is the time to buy. P. G. PLATT, Wallingford, Pa.

Pullets, Yearling Hens, Cocks & Cockerels in lots to suit purchasers at attractive prices. MAPLE COVE POULTRY YARDS, - R. 24, Athens, Pa.

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PERFECTION AS NEAR AS YET ATTAINED
It will set you right. Successful brooding means your success. Write for onr new illustrated catalogue. It's free. It tells you how we brood and feed.
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DAY-OLD-CHICKS Extraordinary
S. C. White Leghorns
Every Michigan Poultry Farm chick for 1915 will be sired by a male bird the son of a "200 egg" hen, trapnested by the Missouri State Poultry Experiment Station. All records are guaranteed by Prof. Quisenberry, who pronounces the birds the best ever bred. Chicks are from our vigorous bred-to-lay females mated to these splendid males.
Wonderful opportunity. Don't miss it. Send for catalog.
MICHIGAN POULTRY FARM, 610 Willow St., Lansing, Mich.

Barron's White Leghorns
Six Pullets and Cockerel, May hatch, guaranteed from pen imported direct from Tom Barron, $18. Trio, $9. Also a few pens (8) yearling hens, (Rancocas strain) and pure Barron Cockerel, $10.
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Tom Barron **S.C. White Leghorn Cockerels**
and White Wyandotte cockerels; pullets, out of direct importation, from the World's greatest layers. In splendid vigor. BROOKFIELD POULTRY FARM, R.F.D. 3, Versailles, Ohio

CHICKS
10 CENTS
S. C. W. Leghorns. Money back for dead ones. Pamphlet free. C. M. Lauver, Box 73, Richfield, Pa.

POULTRYMEN, ATTENTION
75,000 S. C. W. LEGHORN BABY CHICKS
FREE FROM WHITE DIARRHEA
All breeders tested by Storrs' Station. Free circular. White Leghorn and Pittsfield Barred Rock cockerels. A. B. HALL, Wallingford, Conn.

SPECIAL PRICES ON WHITE HOLLAND TURKEYS. Christmas demand is larger each year. Farmer's should enjoy a profit by raising turkeys. Send post card at once for prices. W. L. BURNETT, MONTGOMERY, N. Y.

White Holland Turkeys—Mrs. ROBERT DAVIS Cumberland, Virginia

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Bred from large, purebred stock, as fine as they grow. Can ship birds not related. M. H. Adams, Livonia, N. Y.

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Bronze Turkeys—Largest strain in U. S. F. B. GARNSEY, Clayton, N. Y

Giant Bronze Toms $7. R. C. Red Pullets, $1.50. H. J. VAN DYKE, Gettysburg, Pa.

FOR SALE—HIGH GRADE **Bourbon Red TURKEYS**—for Breeding Toms and Hens. Also Rhode Island Cockerels and Pullets. Write for particulars. F. M. KERN, Springville, Indiana

BOURBON RED TURKEYS for sale. Pure-bred Hens, $4; Toms, $5 each. CASSIE D. TAYLOR, West Alexander, Pa.

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WINNING WYANDOTTE PENS
PA. CONTEST: WINNERS In eggs and value; aver. 236. "Baroness V" laid 282 eggs; others, 274, 252.
CONN. CONTEST: WINNERS In value; aver. 208½; 2nd Prize in eggs.
MISSOURI CONTEST: 2nd PRIZE. Likely; aver. 210. Barron Leghorns, 284; Buff Rocks, 242; Vibert Reds, 257. Prize Rouens. Big Toulouse Geese.
MORRIS-FARM, R. 4, BRIDGEPORT, CONN.

500 Choice Pullets and Cockerels
Tiffany's Superior Silver Wyandottes, Pekin and Rouen Ducks, sired by winners at America's greatest shows. Free range grown. F. A. Tiffany, Phoenixville, Pa.

40 Large S. C. W. Wyandotte Pullets Now Laying
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WHITE WYANDOTTE COCKERELS from heavy laying trap nested hens. Send for circular. Middlebrook Poultry Farm, Miss Marion I. Moore, Hamburg, N. Y.

R. I. REDS, WHITE WYANDOTTES, Light and Dark *Brahmas*, Barred *Rocks*, S. C. White and Brown *Leghorns*. Show and utility quality. Bargain list Breeders free. Hatching Eggs and Chix. RIVERDALE POULTRY FARM, Riverdale, N. J.

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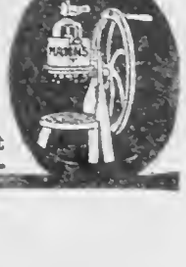
Make Your Hens Lay
Send for and read our book on feeding raw bone. Rich in protein and all other egg elements. Get twice the eggs, more fertile eggs, vigorous chicks, earlier broilers, heavier fowls, bigger profits.
MANN'S LATEST MODEL BONE CUTTER 10 DAYS' FREE TRIAL No money in advance
Makes bone-cutting simple, easy, rapid. Try it and see. Open hopper, automatic feed. Cuts all bone with adhering meat and gristle. Never clogs. Don't buy until you try. Book free. F. W. MANN CO., Box 15, Milford, Mass.



PUBLISHER'S DESK

The *New York Tribune* came out recently with a guarantee of their advertisers. This is a step in the right direction. They are also starting a campaign against the patent medicine evil. The great majority of the patent medicines are believed to be frauds—and dangerous and worthless—leading to greater evil than the original trouble. The *Tribune* has first turned its attention to the so-called "consumption cures." It is estimated that $15,000,000 annually falls into the hands of swindlers on these fakes alone. The consensus of opinion in the medical fraternity is that all patent medicine venders who offer to cure this disease with their nostrums are swindlers; that the only known cure is rest, fresh air and good food under the drection of a competent physician.

Thomas A. Edison obtained an injunction yesterday restraining the Continental Chemical Company from using his name or picture in association with a "neuralgia cure" manufactured by the company called by them "Edison Polyform." The injunction was granted by Judge Rose, in the Federal court.

The Continental Chemical Company's product according to the inventor, is an outgrowth of a compound invented by him in 1879. At the time, said Edison, he believed this compound would cure neuralgia, and the rights were disposed of to a man named McMahon.

McMahon formed a company to handle the remedy, but failed. A Maine concern then took over the "cure" and also failed. Its successor, the Edison Polyform and Manufacturing Company, was enjoined in New Jersey from using the inventor's picture. He has since discovered, Edison asserted yesterday, that the compound has no value as a cure.—Tribune.

If a similar action were taken by prominent people in similar cases the unscrupulous would soon learn they could not cloak their fakes with respectable endorsements. Mr. Edison would make a good member of the Anti-Fake Club.

I see under the heading of Publisher's Desk of November 28 that W. K. R. is another victim of Harris W. Jennings, Springdale, Conn. I received an earnest quick order for 50 complete Langstroth hives. He seemed so honest an sincere I trusted him. Well, to this day I have not heard from him. What do you think can be done? He is the first man I ever dealt with who proved dishonest. I have learned my lesson. W. K. R. is fortunate that he lost only $5. H. J. G.

New York.

There is nothing can be done except perhaps a lawsuit, but the amounts involved are not large enough for that expense. The attention of the Post Office Department should be called to the matter.

If we all lived up to the creed of THE R. N.-Y. there would be no need of jails and hardly any for rulers. Let the good work continue. S. R. A.

Delaware.

That is one of the delicate compliments that comes to us at this season. All creeds are necessarily better than the people who profess them. It is easier to create ideals than to practice them; but so long as we aim at an ideal, we cannot go far wrong.

I come to you for help and advice. I sent, on February 1, 1914, to the Schuiling Rupture Institute, Indianapolis, Ind., $6 for one of their rupture locks, understanding and believing that I got it on 30-day free trial as per their advertising literature and their guarantee sent me as an inducement to order their locks. February 20 I wrote them that the lock did not hold. In reply they sent the same directions that come with the lock. I followed the directions up to the end of the 30 days, and then wrote them that the lock did not hold and I wanted my money, as per their agreement. Mr. Schuiling refuses to return it. J. B.

New York.

The guarantee issued by the Schuiling Rupture Institute, referred to by the above subscriber, reads: "If, after the expiration of the 30 days, it does not come up to our claims, we will refund your money and you may return the rupture lock. What can be more fair than this. Therefore, you should not delay a moment to order the Schuiling rupture lock."

From the statement of the subscriber, he seems to have complied with all the conditions of the 30-day free trial offer. We have taken this case up with the Schuiling Rupture Institute by correspondence, and the proprietor flatly refuses to refund the subscriber's money. It is the contention of Mr. Schuiling that this customer kept the lock beyond the 30 days' limit. From our record of the correspondence, it would seem that he made the demand for his money within 30 days from the time he received it, and at any rate, the literature specifies, after the expiration of the 30 days, and not within the 30 days' limit. The subscriber complained that the truss did not hold 20 days after the date the order was given. We entertain our own opinion as to the sincerity of the proposition, and we have no hesitation in advising patients to consult their local physicians and be governed by their advice, and above all to avoid free offers of every kind.

Dr. Richard C. Flower, swindler par excellence, weak, emaciated and a hopeless victim of morphine, was sentenced to two years in the penitentiary today by Justice Davis in the Criminal Branch of the Supreme Court. Justice Davis said:

"Flower, your career as a thief has been conspicuous. You have brought untold suffering upon many people. I am told you are 70 years old and in poor health. By pleading guilty you have saved the State much expense. But the law demands that some punishment be inflicted upon you."

Flower was arrested in Toronto on Oct. 21, after he had been a fugitive from justice for 11 years. In 1903 he jumped a $23,000 bail bond. He was said to have cleaned up $1,000,000 through his activities as a mining stock swindler and lived in luxurious style. An attempt was made by his victims after his arrest to recover some of their money, but Flower laughed at them and said he had spent it all. Not one penny was ever recovered.—Exchange.

This ought to be final with Dr. Flower. What a record for a man of 70 years! Who will say that his millions and his luxury did not come high? The lesson to us is not alone the loss of the money entrusted to his swindling hands, but the degree of responsibility assumed by credulous victims for the encouragement of evil doings. Naturally the victim may not regard this responsibility very seriously as it affects the rogue; but there can be no question but that either directly or indirectly others besides the promoter are in some degree responsible for the success of swindling schemes.

Here's just a small item for your encouragement. A year or more ago the writer refused to longer receive "Capper's Weekly," a sheet filled with fake advertisements and owned by the present Governor-elect of Kansas. I told him my reason, too, in no uncertain language. January 1st next, at the expiration of my subscriptions to two dailies I intend to order both stopped for the same reason, and *to tell the publishers why*. One of them is the local daily, but luckily there is another one that refuses fake advertisements of almost all kinds, so I will be killing two birds with one stone in this case. The writer hopes to see our Anti-Fake Club big enough some day to deal real blows to these silent partners of the swindlers. Don't bother to acknowledge this. It's simply meant as a word of cheer. J. H. T.

Nebraska.

This correspondent certainly qualifies as a member of the Anti-Fake Club. If THE R. N.-Y. were influenced by selfish motives, it would do nothing to compel the clean-up of the advertising columns of other publications. As the number of clean publications increases, THE R. N.-Y. must be less conspicuous in this particular than it is now, and has been. But the purpose is not and never has been a selfish one. As a member of the publishing fraternity, it does a duty to the public to protect them from fakes and rogues and swindlers: and it also recognizes its obligations in its influence on other publications. We believe the Anti-Fake Club will yet have a membership of a million; and if one-half of them do their duty, publishers will soon find a way to detect and reject fraudulent advertisements. We hope the Governor-elect of Kansas will remove the cause of complaint.

Frederick Nugent had a pet society called the "Iridescent Order of the Iris." Concentration was the keynote. The first act in the concentration was to send $1 for a lucky stone, which at wholesale would be about $5 a gross. For $12.50 they would receive a course in any one of 19 different courses—"How to Be a Hypnotist," "How to Grow Handsome," and "How to Obtain Money For Others to Start in Business," are among the courses offered. Even persons as prejudiced as United States Postal inspectors had to admit that Nugent's swindle was a good one. It is reported there were 1,800 customers scattered throughout the country. Six clerks were helping him when he was arrested for using the mails to defraud. Nugent has been sentenced to 18 months in Atlanta penitentiary. Prof. Frederick, a palmist, and Prof. Jean D. Astro, an astrologist, were also sent to Atlanta for 18 months. J. J. D.

PASTEURIZING MILK.

WOULD you give me information about the pasteurizing of milk? I am a farmer selling milk to the city, and would like to know if it would be practical for me to buy an outfit and cows, and go to selling this kind of milk. The city board of health is the only one that sells this milk in the city at the present. It is sort of charity on their part. Are there any farmers doing this thing in other cities? I do not know what price I could get for this milk; the price the city charges is no higher than eight cents a quart. It is not delivered at this price. I suppose one trouble would be the delivery, as one would have to travel all over the city to different customers. I think if pasteurized milk was offered for sale in the city there would be a good sale for it. Are the outfits too expensive for an individual to use to good advantage. J. D. S.

New York.

I do not, of course, know what demand there may be for pasteurized milk in the city to which you ship, but I think that you may, possibly, have a somewhat mistaken idea of the nature of this product. Pasteurization does not improve clean, wholesome milk; in fact, it would injure such milk. The object of pasteurization is to destroy any harmful germs that may have obtained access to milk through careless handling of it, and it is a necessary measure when milk is known or believed to have been so indifferently handled as to make its purity open to question. As has been said, however, "pure milk is better than purified milk," and it would be better for a milk producer who wishes a special trade to procure such equipment and exercise such care as would give him a reputation for dependably pure milk than to attempt to establish a trade in milk that concededly needed purifying.

Any process that will raise the temperature of milk to 145 degrees F. and maintain it at that temperature for 30 minutes will pasteurize it (N. Y. State Sanitary Code). This may be done on a small scale by setting a bottle of milk in a vessel of boiling water on the kitchen stove or on a commercial scale, by the use of elaborate and expensive steam-heating apparatus. Pasteurization is only part of the process, however; after this is done, the milk must be rapidly cooled to a low temperature and held there until used. Pasteurization destroys only part of the germs in impure milk—the more harmful ones—and those remaining will multiply with greater rapidity than ever if milk that has once been heated is not rapidly cooled. This is due to the fact that heating to some extent destroys the natural germicidal power of raw milk. This latter fact makes it imperative that pasteurized milk shall be placed and kept in only absolutely clean containers; preferably sealed. The impracticability of getting market milk that is absolutely dependable in its purity has led cities to adopt pasteurization as a means of making their milk safe, and it is not unlikely that in the near future some cities will require that all milk below the grade of "Certified" offered for sale shall have been pasturized and placed in sterilized and sealed containers. M. B. D.

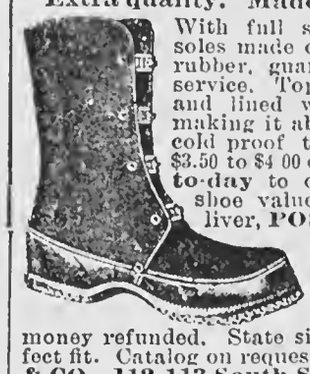
POMPOUS LADY: "Must I put this stamp on myself?" Postoffice Clerk: "Well, you can if you like, but it's usual to put it on the letter."—London Standard.

WHEN you write advertisers mention THE R. N.-Y. and you'll get a quick reply and a "square deal." See guarantee editorial page.

4-BUCKLE One Piece ARCTIC

$2.29—For Men and Women—$2.29

Extra quality. Made all in ONE PIECE.



With full snow excluding tongue, soles made of best quality pure gum rubber, guaranteed to give lasting service. Tops thoroughly rubberized and lined with pure wool flannel, making it absolutely waterproof and cold proof throughout. Retails for $3.50 to $4.00 everywhere. **Send $2.29 to-day** to obtain the greatest overshoe value ever offered. We deliver, **POSTPAID**, to your home. **Men's Sizes, 5 to 13; Women's Sizes, 3 to 8.** Every pair sold with an absolute GUARANTEE of satisfaction or money refunded. State size of shoe to insure perfect fit. Catalog on request. **A. WEINBERGER & CO., 112-113 South St., New York. Dept. X.**

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. **We tan and finish them right;** make them into coats (for men and women), robes, rugs or gloves when ordered.

Your fur goods will cost you less than to buy them, and be worth more. **Our illustrated catalog** gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request.

It tells how to take off and care for hides; how and when **we pay the freight both ways;** about our safe dyeing process which is a tremendous advantage to the customer, especially on **horse hides and calf skins;** about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address.

The Crosby Frisian Fur Company, 571 Lyell Ave., Rochester, N. Y.

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INTERNATIONAL SILOS

strongest built, simplest to put up and easiest operated on the market. Adjustable automatic take-up hoop—continuous open-door front—air-tight door and permanent ladder are some of the unusual features. **The International Silo Co., 118 Main St., Linesville, Pa.**

Unadilla Silos Are Trustworthy

They preserve silage perfectly. Combine best construction, greatest durability and convenience. Easy to erect and keep air-tight. Write today for catalogue. Agents wanted. Address **UNADILLA SILO CO., Box C, Unadilla, N. Y.**

EARN COST THEN PAY. TILE SILO

Chain of Kilns; Atlantic to Rio Grande

Reduces freight cost; fire and frost-proof; weight anchors itself; ample hoopage galvanized; priced at your town; 5 year guaranty; free sample.

Kalamazoo Tank & Silo Co., Kalamazoo, Mich.

Don't Keep Your Cows through the Winter—Make Them Keep You—with HARDER SILOS

Extra profits from big yields of milk; healthier cows from cheap, nourishing silage. Entire corn crop used—none wasted. Uncle Sam uses Harder Silos. Write for catalog. HARDER MFG. CO. Box 11 Cobleskill, N. Y.

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JUST the thing for preserving files of THE RURAL NEW-YORKER. Durable and cheap. Sent postpaid for 25 cents.

The Rural New-Yorker, 333 W. 30th St., N. Y. City.

A Lifetime's Profits

are seriously dependent upon the kind of silo you build. Erect a Natco Imperishable Silo and secure the greatest possible returns from feeding, besides doing away with all expense of painting, adjusting, and repairing—*forever*. The Natco is built of *hollow vitrified clay tile*, which are impervious to air, moisture and frost, reinforced by bands of steel laid in the mortar. Quickly erected, convenient, attractive. There's no investment like the

Natco Imperishable Silo

"The Silo That Lasts for Generations"

It's the structure that never fails, through storms, fire, and sudden changes of weather, to preserve sweet succulent silage that yields the biggest returns in the milk pail and at the stock market. Its absolute dependability and great economy are readily accorded by thousands of Natco owners. Write to nearest branch for list of Natco owners in your State and for our new silo book. Be sure to ask for Catalog L.

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National Fire Proofing Company, Pittsburgh, Pa.

Organized 1889

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Products, Prices and Trade.

Wholesale Prices at New York,

Week Ending Dec. 18, 1914.

MILK.

The Borden milk schedule to producers for the six months beginning with October is as follows. This is per 100 pounds in the 26-cent zone. This is what is known as the "maximum" for milk testing 3.8 to 4.2 per cent. fat, and is 20 cents per 100 pounds above the "flat" rate.

1914.	
October	$2.00
November	2.10
December	2.10
January	2.05
February	1.95
March	1.90

Wholesale prices paid by New York dealers are running $2.01 and $1.91 for B and C. Hotel and restaurants using two to three cans per day are paying five to six cents per quart, single quart prices from bakeries and grocery stores, six to seven cents; delivered milk, nine to 10 cents.

BUTTER.

Prices are without change from last week, but business is dull, and there is some surplus of medium grade creamery. Ladles and packing stock selling well.

Creamery, extra, above 92 score, lb	33½	@	34
Extra, 92 score	32½	@	33
Good to Choice	28	@	32
Lower Grades	28	@	25
Storage	26	@	32
State Dairy, best	31	@	32
Common to Good	23	@	28
Ladles	20	@	23
Packing Stock	19	@	22
Process	22	@	26

Elgin, Ill., butter market 32 cents.
Philadelphia, western creamery, 34 cents.
Boston, western creamery, 33.
Chicago creamery, 24@32.

CHEESE.

The market on most grades of whole milk is one-fourth cent lower. Trade is very quiet and exporters not doing much.

Whole Milk, fresh, specials	15¾	@	16
Average fancy	15½	@	15¾
Under grades	12	@	14
Daisies, Wisconsin	14½	@	15¼
Skims, specials	13	@	13½
Good to choice	11	@	12
Poor to fair	7	@	10

EGGS

Prices on fancy white dropped five cents per dozen. This grade is still comparatively scarce, but the extreme figures asked recently lessened the demand to such an extent that the drop seemed necessary. Storage stock is three cents lower.

White, choice to fancy, large	52	@	53
Medium to good	42	@	50
Mixed colors, best	43	@	46
Common to good	25	@	35
Storage, best	25	@	27
Lower grades	18	@	23

FRESH FRUITS.

The sudden cold snap did some damage to apples in exposed situations, resulting in temporary declines of 25 to 50 cents per barrel. Grapes are about gone. Prices for the season have been low. Fair supplies of strawberries are being received steadily now from Florida and California, wholesaling at upwards of 50 cents per quart.

Apples—BenDavis, bbl	1 50	@	2 00
York Imperial	1 50	@	2 50
McIntosh	2 50	@	4 70
Jonathan	2 50	@	3 75
Twenty-ounce	1 50	@	2 50
Spitz	1 75	@	3 00
Baldwin	1 75	@	2 50
King	2 00	@	3 00
Greening	2 00	@	3 25
Box, as to variety	1 50	@	2 25
Pears, Anjou, bbl	3 00	@	4 50
Seckel	3 50	@	5 00
Bosc	3 00	@	5 50
Sheldon	3 00	@	5 50
Kieffer	1 50	@	2 50
Grapes, Catawba, 4lb bkt	5	@	7
Black, 4lb. bkt	8	@	10
Black, 20lb. bkt	30	@	45
Bulk, ton	30 00	@	40 00
Cranberries, Cape Cod, bbl	2 00	@	5 50
Jersey, bbl	3 50	@	4 00
Strawberries, Fla. qt	50	@	65

HOPS.

Prime to choice	26	@	28
Common to good	22	@	25
Pacific Coast	10	@	15
Old stock	7	@	8

HONEY.

Clover, comb, lb	13	@	16
Extracted, gallon	50	@	80

BEANS.

Marrow are five cents lower and Pea and Red Kidney 10 cents per hundred pounds higher.

Marrow, 100 lbs	6 30	@	6 35
Medium	4 50	@	4 65
Pea	4 55	@	4 60
Red Kidney	5 30	@	5 35
White Kidney	7 15	@	7 25
Yellow Eye	5 15	@	5 25
Lima, California	5 90	@	6 00

VEGETABLES.

Potatoes mainly 10 to 15 cents per barrel lower. The condition in the large markets cause a depressing outlook in many primary points, particularly Maine, where large quantities are in storage. The railroad movement from the Aroostook section is unusually light for this time of year. Best grades of Danish seed cabbage are $2 per ton higher. A Bermuda steamer in this week was so much delayed that the vegetable cargo was damaged. Added to the frosted southern vegetables this made low prices and considerable waste.

Potatoes—Jersey, bbl	1 25	@	1 50
Long Island, bbl	1 75	@	2 00
State, 180 lbs	1 25	@	1 50
Maine, 180 lbs	1 50	@	1 75
Bermuda, bbl	4 00	@	5 50
Sweet Potatoes, bbl	2 00	@	3 00
Brussels Sprouts, qt	6	@	12
Beets, bbl	1 00	@	1 25
Carrots, bbl	75	@	1 00
Chicory, southern, bbl	1 50	@	2 00
Celery, doz	10	@	50
Cauliflower, bbl	1 00	@	9 00
Cabbage, Danish seed, ton	10 00	@	14 00
Domestic seed	7 00	@	9 00
Horseradish, bbl	4 00	@	5 00
Kale, bbl	75	@	85
Lettuce, half-bbl. basket	25	@	1 50
Onions—Red, bag	1 25	@	1 65
Yellow	1 25	@	1 65
White	1 00	@	1 75
Peppers, bu	2 50	@	3 50
Radishes, 100 bunches	1 00	@	2 00
Spinach, bbl	1 25	@	1 75
String Beans, bu	1 50	@	4 50
Squash, Hubbard, bbl	75	@	1 00
Marrow	50	@	75
New, bu	1 00	@	2 00
Egg Plants, bu	1 50	@	3 00

LIVE POULTRY.

Chickens, lb	12	@	14
Fowls	14	@	15
Roosters	9	@	11
Ducks	14	@	15
Geese	12	@	14

DRESSED POULTRY.

The weather is unusually favorable for dry-packed stock, which is always preferred to iced when in condition. At this writing the Christmas trade is only beginning. The outlook is that the supplies of turkeys and choice chickens will be larger than for Thanksgiving.

Turkeys, choice, lb	25	@	26
Common to good	17	@	23
Chickens choice broilers, lb	23	@	25
Squab broilers, pair	50	@	60
Broilers, common to good	19	@	20
Roasters	23	@	24
Fowls	11	@	17
Ducks, Spring	12	@	18
Squabs, doz	1 25	@	4 00

HAY AND STRAW.

The demand for both Timothy and mixed hay is improved. Straw plentiful, especially of low grades.

Hay, Timothy, No. 1, ton	20 00	@	21 00
No. 2	17 50	@	19 00
No. 3	16 50	@	17 00
Clover mixed	18 00	@	19 00
Straw, Rye	13 00	@	15 00

LIVE STOCK.

Native Steers	7 00	@	9 50
Bulls	4 50	@	6 75
Cows	4 50	@	6 50
Calves, prime veal, 100 lb	10 00	@	12 00
Culls	6 00	@	8 00
Sheep, 100 lbs	3 50	@	5 50
Lambs	9 00	@	9 25
Hogs	7 50	@	7 60

GRAIN.

Grain has sold on a generally higher basis than last week, but declined toward the close, mainly because of the war news, indicating a possible slowing up of exports. In the event of a naval battle of much magnitude, part of the present Atlantic patrol might be diverted for use in Europe, leaving the Atlantic without protection for slow merchant vessels.

Wheat, No. 1, Northern Spring	1 81	@	..
No. 2, Red	1 29	@	..
No. 2, Hard Winter	1 29	@	..
Corn, as to quality, bush	73	@	74
Oats, as to weight, bush	53	@	56
Rye	1 15	@	1 16

RETAIL PRICES AT NEW YORK.

These are not the highest or lowest prices noted here, but represent produce of good quality and the buying opportunities of at least half of New York's population.

Eggs, fancy white, doz	60	@	65
Mixed colors, new laid	55	@	58
Ordinary grades	30	@	45
Butter, fancy prints, lb	40	@	43
Tub, choice	34	@	38
Chickens, roasting, lb	26	@	28
Squab broilers, pair	1 00	@	1 25
Broilers, common to good, lb	25	@	26
Fricassee, lb	18	@	20
Fowls	18	@	23
Turkeys	25	@	30
Leg of lamb	18	@	20
Lamb chops	20	@	22
Roasting beef	18	@	22
Stewing beef	12	@	16
Pork chops	18	@	20
Loin of Pork	17	@	20
Round Steak	18	@	22

CHRISTMAS GREENS.

Holly, case	1 75	@	2 25
Wreaths, doz	50	@	1 25
Roping, 100 yds	1 00	@	1 75

A shipment of 330,000 dozen cold storage eggs was sent from Boston to London this week.

*

Missouri's crops this year are valued at $201,500,000, which is $9,000,000 above the five year average.

*

Our total circulation of money October 1 was as follows:

Gold coin	$657,944,193
Silver dollars	70,724,311
Small silver	161,565,114
Gold certificates	931,390,259
Silver certificates	482,892,121
Treasury notes	2,388,789
United States notes	336,974,246
Nat'l Bank notes	1,050,869,196

*

For the year ending June 30, 1914, the Government paid the railroads $50,853,360 for carrying mails. The appropriation for the next fiscal year is $56,188,000.

*

REPORTS received by the Department of Agriculture in 16 leading onion-producing States show that this year the estimated commercial onion crop is 21,623 carloads as compared with 18,934 carloads last year. Last year 6,695 carloads were held in storage at these points for later sale. The estimated number this year is 7,879 carloads. These 16 States produce three-fourths of the onion crop. The cabbage reports from 10 of the leading States show 18,694 carloads were shipped in 1913, and this year 20,390 carloads will be produced. Of the number last year 4,229 were held in storage for later sale, and this year about 4,645 are being placed in storage. The 10 States from which reports were received produce two-thirds of the annual crop.

Ayrshire Breeders' Annual Meeting.

The 40th annual meeting of the Ayrshire Breeders' Association will be held Thursday, January 14, 1915, at Hotel Manhattan, New York, at 2 o'clock P. M. All interested in Ayrshire cattle are invited to attend this meeting. A meeting of the Executive Committee is requested at 10 A. M. in the Hotel Committee Room. The association cordially invites all its members to a banquet to be given by the association in the evening, after the meeting.

C. M. WINSLOW, Secretary.

Brandon, Vt.

Dec. 13. Apples per bbl., $2.50; potatoes per bushel, 50; butter, 35; hogs, dressed, per lb., 11; native beef, dressed, 8 and 9; eggs, 50; beans, Maine yellow eyes, $4. D. M. H.

Ellsworth, Me.

Dec. 7. Good dairy butter only brings 28 to 30c.; potatoes, 50 cents per bushel in a small way (40 f. o. b. car). Fat steers five cents per pound; new milch cows, $40 to $60. Eggs, 42. This is a good farming community but very poor market. L. H. B.

Chester, Vt.

Dec. 15. Cows are from $35 to $75; eggs, 40, at the store. Butter 33 at the grocery, and they get 40. Apples about 50; potatoes, 50; pork, best, 11; honey, 20, wholesale, 25 at retail. I get six cents per quart at the door for milk. Chickens, 16; pigs, $3 four weeks old; hens, 75 to $1. S. K. V.

Cumberland Center, Me.

Dec. 8. Beef by the quarter, 9c.; pork, 11; chickens, 18; calves, live, 6 to 8. Butter, 35; milk, 8½-quart cans on the car, 35 cents for month of November; average for six months, 32 cents. Eggs, 42; potatoes, 50; squash, 2½c. a lb.; cabbage, 1½c.; beets, 2c. per lb. Turnips, 60 cents a bushel; apples, $2 per barrel. W. D. S.

West Rumney, N. H.

Dec. 14. Fall was quite dry until past two weeks, some rain now, quite snow squall. Early sown wheat I think badly affected with insects, crop generally quite good here past season; farmers felt quite encouraged until the foot and mouth disease broke out. As we had no foot and mouth disease in our city I could see no reason why our stock was not inspected and shipped in disinfected cars to any market out of the State. I think the farmers should insist on a law to regulate the shipping and sale of stock out of the State when there is no foot and mouth disease. W. D.

Noble Co., Ill.

YOUNG WIFE: Your mother a fine cook? I don't believe it. I've heard that your father was a chronic dyspeptic. Husband: Well, that's all right; mother learned by practicing on father.—Boston Transcript.

NEW JERSEY GARDEN, FRUIT, STOCK & POULTRY FARMS. We handle the best. A. WARREN DRESSER, Burlington, New Jersey

Subscribers' Exchange

Complying with several suggestions received recently, we open a department here to enable RURAL NEW-YORKER readers to supply each other's wants. If you want to buy or sell or exchange, make it known here. This Rate will be 5 Cents a word, payable in advance. The name and address must be counted as part of the advertisement. Copy must reach us not later than Friday to appear in the following week. No display type used, and only Farm Products, Help and Positions Wanted admitted. For subscribers only. Dealers, jobbers and general manufacturers' announcements not admitted here. Poultry, Eggs and other live stock advertisements will go under proper headings on other pages. Seed and Nursery advertisements will not be accepted for this column.

EXPERIENCED young man (20) wishes position on farm. Box 5, care of Rural New-Yorker.

WANTED—married man to work on dairy farm (board himself), house and garden furnished. D. F. ROBINSON, Pawlet, Vt.

UNMARRIED MAN wants position on commercial poultry farm; experienced. COMMERCIAL, Care Rural New-Yorker, 333 W. 30th St., N. Y. City.

YOUNG MAN, 21, four years' experience and good, dry hand milker, seeks position; best references. CHAS. SAKOVITZ, 984 Myrtle ave., Brooklyn, N. Y.

WANTED—Position as working foreman or manager of farm by single man of experience; several years in institution work. A. Y., care Rural New-Yorker.

WANTED—Position as farm manager; sold farm; understands stock, breeding and raising of all farm crops; married, no children; temperate. Box 4, care R. N.-Y.

UNMARRIED MAN of character; farm reared and some experience in poultry, wants work on poultry farm in Eastern States. Address CLARENCE PARR, Lakehurst, N. J.

MARRIED MAN, no bad habits, at present employed, wishes position to grow vegetables, fruit, flowers, and poultry, and to produce honey for private estate; any part of the country. Address "COMPETENT," care Rural New-Yorker.

SUPERINTENDENT WANTED—Married, about 35 to 40 years of age, strong and at present employed; collewe trained, expert in purebred Holstein cattle, A. R. O. feeding and dairying. Accountant, business capacity; an all-round farmer. MOHEGAN FARM, Peekskill, N. Y.

WANTED—A man to care for and milk 20 cows, milk Grade A; must be a good milker, separate 30-40 quarts per day; feeding skimmed milk to calves and hogs; he must also take care of 2-4 brood sows and young pigs; $30 a month and board for right man. Write E. V. WATSON, Beacon, N. Y

ALFALFA HAY—F. P. ERKENBECK, Fayetteville, N. Y.

WANTED—Power Mann Bone Cutter No. 12. W. D. LARKIN, West Berlin, Mass.

WANTED—Prairie State Incubators, 1912 or 1913 model, 390 eggs. ORO FARM, Congers, N. Y.

NEW HONEY—Basswood or clover in sixty-pound cans. Write for prices. C. A. HATCH, Richland Center, Wis.

APPLES, APPLES, APPLES—For choice sprayed Winter Apples. Please order to-day. C. J. YODER, Grantsville, Md.

CHRISTMAS ORANGES. Orange Marmalade direct to consumer; sample 25 cents. H. C. TILLSON, Leesburg, Fla.

28 INCUBATORS FOR SALE—All models, 260 and 360 eggs, in first-class condition; reasons for selling, am installing a Mammoth machine; write for prices. CHAS. R. STONE, Staatsburg, N. Y.

FOR SALE—150 bushels choice Japanese buckwheat in lots to suit purchaser, 85c. per bushel, sacks included; nothing better when ground for cattle or poultry. THE CASKEY FARMS, Richmondville, N. Y.

FRESH COUNTRY SAUSAGE—Home-made, of superior quality, from specially fattened little milk-and-grain fed pigs; not too highly seasoned; 4 lbs., $1; 8 lbs., $2; postpaid within Third Zone; also hams and bacon ready January at 28c. lb. SANDANONAH FARM, Windham, N. Y.

ANY ONE desiring a fruit and poultry farm address R. T. MILLER, Vineland, N. J.

WANTED—Small, equipped poultry fruit farm; near station; price, full particulars. FARMER, care R. N.-Y.

FOR SALE—Farm 65 acres, good buildings, cheap; to R. R. 10 miles. F. G. SEARS, West Cummington, Mass.

FOR SALE—A good dairy or general purpose farm, 180 acres; good buildings and location; $6,000. PETER GIBBS, Tioga Center, N. Y.

400-ACRE Rensselaer County Dairy Farm; modern equipped home, 20 farm buildings, 3 tenant houses. Owner, L. R. RICKERSON, Mechanicsville, N. Y.

FOR SALE—8 acres, with or without buildings, within 15 minutes' walk of ocean, river and two depots; easy terms. JULIUS ABRAMS, owner, Belmar, N. J.

FOR SALE—At a Great bargain, two 80-acre farms on good terms; extra well located and on good roads and near school and railroads. F. M. KERN, Springville, Indiana.

FARM BUYER write me about the best 170-acre farm in county; five thousand five hundred; investigation means buy. EMERY C. MIX, Justice of the Peace, Willseyville, Tioga Co., N. Y.

FARM FOR SALE, or to let—Large house and barns, 175 acres; easy terms; 100 miles from New York, one mile from railroad, churches, schools, etc. For particulars address C. P. BYINGTON, Ossining, N. Y.

FOR SALE—A small farm of about seven acres, consisting of a variety of fine fruit, enormous asparagus bed, poultry, eight-room cottage, all necessary outbuildings, an abundance of water; situated in the famous and fertile Shenandoah Valley in Virginia. Address J. T. KANE, R. F. D. 2, Berryville, Va.

TO LET—Large brick factory buildings, tenant houses, barns and water power, with wheel and shafting ready for immediate use at Malden Bridge, Columbia County, N. Y.; three miles on State road to Chatham Center, a station on Boston & Albany railroad; nominal rent for first year; also thirty acres of land, if desired. Write for particulars, E. W. RIDER, 50 Court Street, Brooklyn, N. Y.

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DONT PAY Freight on Water

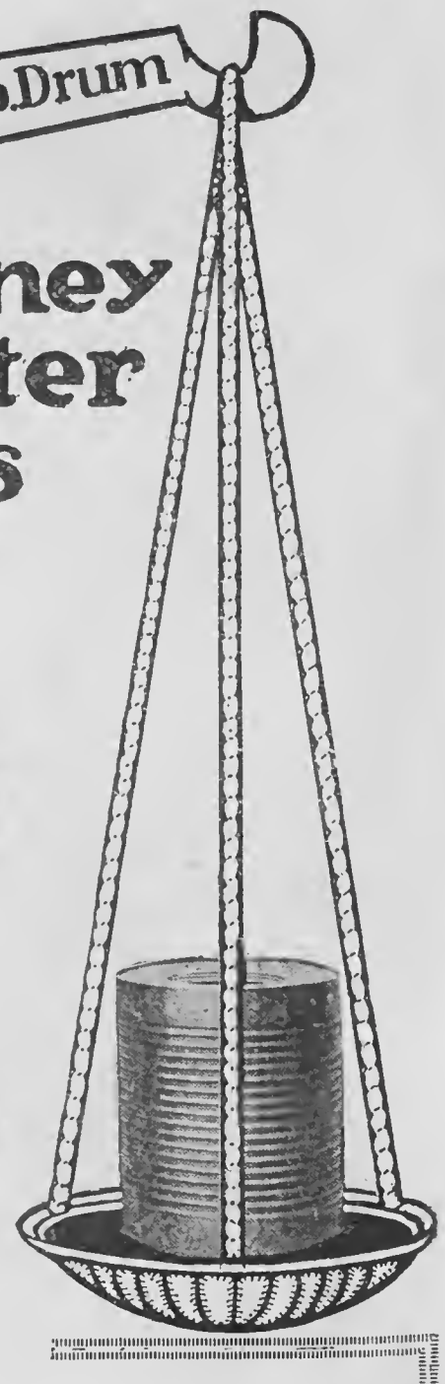
600 lb. Barrel Lot — equal to 100 lb. Drum

Save Money Get Better Results

Spray with Niagara

SOLUBLE SULPHUR COMPOUND

This powdered spray material dissolves instantly in hot or cold water and is the best, and in the long run, the cheapest spray material ever produced



For the Control of San José Scale

Niagara Soluble Sulphur Compound was first placed on the market in 1911, and has met with such tremendous enthusiasm that this season we have just completed a new plant which is capable of producing 60,000 lbs. every 24 hours. In other words, we manufacture and sell an amount of spray material in a single month, which when diluted, will spray 9,000,000 fruit trees of average size.

Read These Twelve Reasons

Why Niagara Soluble Sulphur Compound is the most economical, practical, efficient and convenient spray material for the practical fruit grower.

1—100 pounds of Niagara Soluble Sulphur Compound is equivalent to 600 pounds of commercial lime-sulphur solution. **Why pay freight on water?**

2—A 100-pound drum of NIAGARA SOLUBLE SULPHUR COMPOUND makes more diluted spray material than a barrel of lime-sulphur solution; **reducing the actual cost of material.**

3—NIAGARA SOLUBLE SULPHUR COMPOUND is neat and convenient to handle.

4—NIAGARA SOLUBLE SULPHUR COMPOUND comes in inexpensive metal drums, which when empty may be thrown away; **no money paid out for barrels; no bother returning empty package.**

5—Its powdered form makes **leakage impossible.**

6—NIAGARA SOLUBLE SULPHUR COMPOUND keeps indefinitely anywhere, **and can be held over from one season to another without loss.**

7—NIAGARA SOLUBLE SULPHUR COMPOUND is equal to and has proven many times to be superior to lime-sulphur solution in insecticidal and fungicidal value.

8—A drum of NIAGARA SOLUBLE SULPHUR COMPOUND may be carried in buggy or automobile, making hauling convenient and inexpensive. **One man handles it easily.**

9—NIAGARA SOLUBLE SULPHUR COMPOUND may easily be obtained in small packages. It is put up in 100, 50, 25, 10, 5 and 1 pound cans.

10—NIAGARA SOLUBLE SULPHUR COMPOUND is at least 25% **cheaper** to use than any other material, when it is considered that a 100-pound drum makes 60% more spray than a barrel of lime-sulphur solution; less expense to hauling and handling; no loss from leakage and crystallization; keeps indefinitely and no empty barrel to return.

11—Will not wash off the trees.

12—Leaves a fine waxy finish on fruit.

Read What These Three Experienced Fruit Growers Have to Say

There's a User in Your Neighborhood

Quincy, Ill., Sept. 3, 1914.

Niagara Sprayer Co.,
Middleport, N. Y.

Gentlemen:—

I have used a quantity of your NIAGARA SOLUBLE SULPHUR COMPOUND and have been a large user of old liquid solution. I feel sure the NIAGARA SOLUBLE SULPHUR COMPOUND is at least as good in its effect, very much more convenient to handle, as well as, being cheaper. I will use it exclusively on my 1,200-acre orchard next season.

Yours truly,
C. H. Williamson.

(Mr. Williamson harvested 40,000 barrels of apples this year.)

Kansas City, Mo., Jan. 29, 1914.

Niagara Sprayer Co.,
Middleport, N. Y.

Gentlemen:—

We are very much pleased with NIAGARA SOLUBLE SULPHUR COMPOUND and are very glad, indeed, that we started to use it. The fruit is as clean as a "Hound's Tooth," and is very healthy looking; more so than we have ever been able to obtain from lime-sulphur solution.

Very truly yours,
Mo. Valley Orchard & Live Stock Co.,
Per G. C. Richardson, Gen. Mgr.

(The Missouri Valley orchards consist of over 800 acres of 16-year-old apple orchard.)

Roanoke, Va., Sept. 15, 1914.

Niagara Sprayer Co.,
Middleport, N. Y.

Gentlemen:—

Last spring I sprayed my apple and peach orchards with NIAGARA SOLUBLE SULPHUR COMPOUND, manufactured by you, and it surely did kill all the scale and trees are in a healthy condition. I consider NIAGARA SOLUBLE SULPHUR COMPOUND far superior to the lime and sulphur sprays and will use no other. It is the most convenient and cheapest, and far the best spraying material on the market, and I can cheerfully recommend it to all fruit growers.

Respectfully,
John H. Sampson.

The New Niagara Triplex Power Sprayer proven by actual test the most efficient spray rig on the market to-day, is guaranteed to spray out 7 gallons of liquid per minute, and at the same time maintain a working pressure of 200 to 250 pounds. Is equipped with our famous porcelain lined cylinders, guaranteed for lifetime. The workmanship and materials for this machinery are the best that skill and money can produce.

SEND FOR PRICE LIST AND MACHINERY CATALOG.

Extensive Field experiments under the directions of our experimental and research department has made possible the publication of the following booklets, which contain valuable facts about producing quality fruit. Send the coupon today for those which interest you most.

1—An up-to-the-minute spray calendar, containing live information that will produce results.

2—A scientific bulletin describing actual field experiments, as carried on in our large experimental orchards.

3—General catalog and testimonial booklet, giving the experiences of successful fruit growers all over the country who use NIAGARA SOLUBLE SULPHUR COMPOUND.

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